START
9713507.1064
BOSWVI-TMA-142
0045890
TMA
351a

MAY 1992
RECEIVED
OSM DMO

WESTINGHOUSE HANFORD COMPANY

Results of Analyses For:

ORGANICS
Case No. 03-018
(TMA/ARLI Work Order # A2-03-018)

METALS
Case No. N2-03-004 & N2-03-020
(TMA/Skinner & Sherman W.O. # S2-03-024 & S2-03-026)

TMA Master Work Order N2-03-004 & N2-03-020

MAY 4, 1992

NOV 1996
RECEIVED
LDMC

4-12-96
MC

9216507.1065

WESTINGHOUSE HANFORD COMPANY

Results of Analyses For:

ORGANICS
CASE NO. 03-018
(TMA/ARLI Work Order # A2-03-018)

Organics results are presented
for the following WHC samples(s):

B05WV1
B05WV2
B05WT9
B01WT8
B05WN8
B05WN9
B05WP0
B05WV3
B05WV4
B05WP1

Norcal Work Order # N2-03-004
Norcal Work Order # N2-03-020

Thermo Analytical Inc.
160 Taylor Street
Monrovia, Ca. 91016
818-357-3247

CASE NARRATIVE

LABORATORY : TMA/ARLI

CASE : 03-018

CONTRACT ID : WESTINGHOUSE HANFORD COMPANY

SDG RECEIPT DATE : March 6, 1992

1.0 DESCRIPTION OF CASE :

One water sample and nine soil samples were analyzed for TCL Organics-Volatiles, Semivolatiles and Pesticide/PCBs according to the USEPA Contract Laboratory Program (CLP) Statement of Work for Organic Analysis, Revision 2/88.

2.0 SAMPLE LIST :

WESTINGHOUSE ID	LAB ID	ANALYSIS REQUESTED	MATRIX
B05WV1	A2-03-018-01A	V	WATER
B05WV1 MS	A2-03-018-01B	V	WATER
B05WV1 MSD	A2-03-018-01C	V	WATER
B05WV1	A2-03-018-01D	SV & P	WATER
B05WV1 MS	A2-03-018-01E	SV & P	WATER
B05WV1 MSD	A2-03-018-01F	SV & P	WATER
B05WV2	A2-03-018-02A	V	SOIL
B05WV2	A2-03-018-02B	SV & P	SOIL
B05WT9	A2-03-018-03A	V	SOIL
B05WT9	A2-03-018-03B	SV & P	SOIL
B05WN8	A2-03-018-04A	V	SOIL
B05WN8	A2-03-018-04B	SV & P	SOIL
B05WN8 MS	A2-03-018-04C	SV & P	SOIL
B05WN8 MSD	A2-03-018-04D	SV & P	SOIL
B05WN9	A2-03-018-05A	V	SOIL
B05WN9 MS	A2-03-018-05B	V	SOIL
B05WN9 MSD	A2-03-018-05C	V	SOIL
B05WN9	A2-03-018-05D	SV & P	SOIL
B05WP0	A2-03-018-06A	V	SOIL
B05WP0	A2-03-018-06B	SV & P	SOIL
B05WV3	A2-03-018-07A	V	SOIL
B05WV3	A2-03-018-07B	SV & P	SOIL
B05WV4	A2-03-018-08A	V	SOIL
B05WV4	A2-03-018-08B	SV & P	SOIL
B05WP1	A2-03-018-09A	V	SOIL
B05WP1	A2-03-018-09B	SV & P	SOIL
B05WT8	A2-03-018-10A	V	SOIL
B05WT8	A2-03-018-10B	SV & P	SOIL

3.0 COMMENTS :

3.1 SHIPPING AND DOCUMENTATION :

All samples were received unbroken and properly documented. However, two sample containers were received by TMA/ARLI with no sample labels. It was confirmed by TMA/Norcal that both of the containers should be labeled as sample B05WP0.

3.2 ANALYSIS

3.2.1 VOLATILE ANALYSIS COMMENTS :

LOW LEVEL WATER :

The samples were analyzed within the CLP SOW holding times. All of the QC results were within the limits specified by the EPA CLP SOW.

LOW LEVEL SOIL :

All of the samples were analyzed by heated purge and the samples were analyzed within the CLP SOW holding times with the exception of B05WT8. Sample B05WT8 was analyzed one day out of the CLP SOW holding as per Westinghouse Hanford Company ROD-92-00068.

All of the QC results were within the limits specified by the EPA CLP SOW.

TUNES :

All of the BFB tunes are injected directly into the GC/MS instrument.

3.2.2 SEMIVOLATILE ANALYSIS COMMENTS :

LOW LEVEL WATER :

The samples were extracted and analyzed within the CLP SOW holding times. All of the QC results were within the limits specified by the EPA CLP SOW.

LOW LEVEL SOIL :

The samples were extracted and analyzed within the CLP SOW holding times with the exception of sample B05WT8. Sample B05WT8 was extracted one day outside of its holding time as per Westinghouse Hanford Company ROD-92-00068.

All of the QC results were within the limits specified by the EPA CLP SOW.

3.2.3 PESTICIDE/PCB ANALYSIS COMMENTS :

SEQUENCE NOTES :

The sequence was started on 3/18/92 and analyzed in accordance with the EPA CLP SOW.

Half way through the sequence, IND A and IND B were analyzed consecutively to verify that the system was meeting all of the QC criteria. This was necessary since several dirty samples were injected into the system prior to these standards. The IND A and IND B were both used for quantitation and the sequence was maintained according to the protocol.

Due to the limitations of the software used to report 2/88 CLP Protocol Pesticide/PCBs results, the instrument blanks cannot be reported. The instrument blanks were injected in the sequence to insure that the system was not contaminated by the Aroclors that were detected. Instrument blanks were injected at:

00:12	3/19/92	(B31817 and A31817)
04:29	3/19/92	(B31823 and A31823)
08:46	3/19/92	(B31829 and A31829)
16:33	3/19/92	(B31840 and A31840)
17:15	3/19/92	(B31841 and A31841)
20:41	3/19/92	(B31845 and A31845)
21:24	3/19/92	(B31846 and A31846)
22:06	3/19/92	(B31847 and A31847)

After the analysis of the instrument blank at 17:15 on 3/19/92, the sequence was stopped to bake out the columns to reduce the carry over. The sequence was resumed with the next injection at 18:34 on 3/19/92 of EVAL B.

SAMPLE NOTES :

LOW LEVEL WATER :

The samples were extracted and analyzed within the CLP SOW holding times. The spike recovery of gamma-BHC was 1% above the advisory QC limit in sample B05WV1MS. All of the other QC results were within the limits specified by the EPA CLP SOW.

LOW LEVEL SOIL :

The samples were extracted and analyzed within the CLP SOW holding times with the exception of sample B05WT8. Sample B05WT8 was extracted one day outside of its holding time as per Westinghouse Hanford Company ROD-92-00068.

All of the other QC results were with the limits specified by the EPA CLP SOW.

We certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data in this hardcopy data package and in the computer-readable data submitted on diskette is authorized by the Laboratory Manager or his designee, as verified by the following signatures.

Nicole Roth
CLP Program Manager

Dennis D. Wells
Technical Director

9?1550/.1C70

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

000006
EPA SAMPLE NO.

B05WN8

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-04A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20311R07

Level: (low/med) LOW Date Received: 03/02/92

% Moisture: not dec. 5 Date Analyzed: 03/11/92

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	14	B
67-64-1	Acetone	19	B
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	11	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	11	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	11	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (Total)	5	U

9215507.1071

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

000007
EPA SAMPLE NO.

B05WN8

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-04A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20311R07

Level: (low/med) LOW Date Received: 03/02/92

% Moisture: not dec. 5 Date Analyzed: 03/11/92

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B05WN9

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-05A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20311R08

Level: (low/med) LOW Date Received: 03/02/92

% Moisture: not dec. 2 Date Analyzed: 03/11/92

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	16	B
67-64-1	Acetone	35	B
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	3	J
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (Total)	5	U

9215507.1075

000009

EPA SAMPLE NO.

B05WN9

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-05A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20311R08

Level: (low/med) LOW Date Received: 03/02/92

% Moisture: not dec. 2 Date Analyzed: 03/11/92

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

000010
EPA SAMPLE NO.

B05WP0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-06A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20311R11

Level: (low/med) LOW Date Received: 03/02/92

% Moisture: not dec. 1 Date Analyzed: 03/11/92

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	9	B
67-64-1	Acetone	20	B
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (Total)	5	U

9715607_JC75

1E

EPA SAMPLE NO.

B05WP0

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-06A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20311R11

Level: (low/med) LOW Date Received: 03/02/92

% Moisture: not dec. 1 Date Analyzed: 03/11/92

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

9213687.1176

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B05WP1

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-09A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20310R15

Level: (low/med) LOW Date Received: 03/06/92

% Moisture: not dec. 1 Date Analyzed: 03/10/92

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	3	BJ
67-64-1	Acetone	33	B
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	2	J
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (Total)	5	U

9/15507.1077

1E

000013

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

B05WP1

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-09A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20310R15

Level: (low/med) LOW Date Received: 03/06/92

% Moisture: not dec. 1 Date Analyzed: 03/10/92

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown hydrocarbon	29.37	20	J

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B05WT8

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-10A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20313R05

Level: (low/med) LOW Date Received: 03/02/92

% Moisture: not dec. 7 Date Analyzed: 03/13/92

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	9	
67-64-1	Acetone	11	B
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	11	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	11	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	11	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	2	J
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (Total)	5	U

1E

EPA SAMPLE NO.

B05WT8

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-10A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20313R05

Level: (low/med) LOW Date Received: 03/02/92

% Moisture: not dec. 7 Date Analyzed: 03/13/92

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

B05WT9

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-03A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20311R06

Level: (low/med) LOW Date Received: 03/04/92

% Moisture: not dec. 5 Date Analyzed: 03/11/92

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	14	B
67-64-1	Acetone	31	B
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	11	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	11	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	11	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	49	
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (Total)	5	U

9215507 JC81

000017
EPA SAMPLE NO.

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

B05WT9

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-03A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20311R06

Level: (low/med) LOW Date Received: 03/04/92

% Moisture: not dec. 5 Date Analyzed: 03/11/92

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown hydrocarbon	29.42	37	J

9213507.1082

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B05WV1

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A203018-01A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20306B06

Level: (low/med) LOW Date Received: 03/03/92

% Moisture: not dec. ____ Date Analyzed: 03/06/92

Column: (pack/cap) WIDE Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	5	B
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	1	J
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (Total)	5	U

9213502.1083

1E

000019
EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

B05WV1

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A203018-01A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20306B06

Level: (low/med) LOW Date Received: 03/03/92

% Moisture: not dec. ____ Date Analyzed: 03/06/92

Column (pack/cap) WIDE Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

9213507.1C84

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

000020
EPA SAMPLE NO.

B05WV2

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-02A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20311R05

Level: (low/med) LOW Date Received: 03/04/92

% Moisture: not dec. 5 Date Analyzed: 03/11/92

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	13	B
67-64-1	Acetone	41	B
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	11	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	11	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	11	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (Total)	5	U

9213507 1E85

1E

000021
EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

B05WV2

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-02A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20311R05

Level: (low/med) LOW Date Received: 03/04/92

% Moisture: not dec. 5 Date Analyzed: 03/11/92

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown hydrocarbon	29.42	11	J

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

B05WV3

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-07A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20311R12

Level: (low/med) LOW Date Received: 03/05/92

% Moisture: not dec. 9 Date Analyzed: 03/11/92

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	22	B
67-64-1	Acetone	36	B
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	11	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	11	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	11	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	3	J
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (Total)	5	U

EPA SAMPLE NO.

B05WV3

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-07A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20311R12

Level: (low/med) LOW Date Received: 03/05/92

% Moisture: not dec. 9 Date Analyzed: 03/11/92

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B05WV4

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-08A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20311R13

Level: (low/med) LOW Date Received: 03/05/92

% Moisture: not dec. 2 Date Analyzed: 03/11/92

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	B
67-64-1	Acetone	23	B
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (Total)	5	U

9215907.1089

1E

Q00025
EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

B05WV4

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-08A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20311R13

Level: (low/med) LOW Date Received: 03/05/92

% Moisture: not dec. 2 Date Analyzed: 03/11/92

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B05WN8

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-04B

Sample wt/vol: 30.3 (g/mL) G Lab File ID: 20409N02

Level: (low/med) LOW Date Received: 03/02/92

% Moisture: not dec. 5 dec. ____ Date Extracted: 03/11/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/09/92

GPC Cleanup: (Y/N) N pH: 9.3 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	340	U
111-44-4	bis(2-Chloroethyl)Ether	340	U
95-57-8	2-Chlorophenol	340	U
541-73-1	1,3-Dichlorobenzene	340	U
106-46-7	1,4-Dichlorobenzene	340	U
100-51-6	Benzyl Alcohol	340	U
95-50-1	1,2-Dichlorobenzene	340	U
95-48-7	2-Methylphenol	340	U
108-60-1	bis(2-Chloroisopropyl)Ether	340	U
106-44-5	4-Methylphenol	340	U
621-64-7	N-Nitroso-Di-n-Propylamine	340	U
67-72-1	Hexachloroethane	340	U
98-95-3	Nitrobenzene	340	U
78-59-1	Isophorone	340	U
88-75-5	2-Nitrophenol	340	U
105-67-9	2,4-Dimethylphenol	340	U
65-85-0	Benzoic Acid	1700	U
111-91-1	bis(2-Chloroethoxy)methane	340	U
120-83-2	2,4-Dichlorophenol	340	U
120-82-1	1,2,4-Trichlorobenzene	340	U
91-20-3	Naphthalene	340	U
106-47-8	4-Chloroaniline	340	U
87-68-3	Hexachlorobutadiene	340	U
59-50-7	4-Chloro-3-methylphenol	340	U
91-57-6	2-Methylnaphthalene	340	U
77-47-4	Hexachlorocyclopentadiene	340	U
88-06-2	2,4,6-Trichlorophenol	340	U
95-95-4	2,4,5-Trichlorophenol	1700	U
91-58-7	2-Chloronaphthalene	340	U
88-74-4	2-Nitroaniline	1700	U
131-11-3	Dimethyl Phthalate	340	U
208-96-8	Acenaphthylene	340	U

EPA SAMPLE NO.

B05WN8

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-04B

Sample wt/vol: 30.3 (g/mL) G Lab File ID: 20409N02

Level: (low/med) LOW Date Received: 03/02/92

% Moisture: not dec. 5 dec. ____ Date Extracted: 03/11/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/09/92

GPC Cleanup: (Y/N) N pH: 9.3 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1700	U
83-32-9	Acenaphthene	340	U
51-28-5	2,4-Dinitrophenol	1700	U
100-02-7	4-Nitrophenol	1700	U
132-64-9	Dibenzofuran	340	U
121-14-2	2,4-Dinitrotoluene	340	U
606-20-2	2,6-Dinitrotoluene	340	U
84-66-2	Diethylphthalate	340	U
7005-72-3	4-Chlorophenyl-phenylether	340	U
86-73-7	Fluorene	340	U
100-01-6	4-Nitroaniline	1700	U
534-52-1	4,6-Dinitro-2-methylphenol	1700	U
86-30-6	N-Nitrosodiphenylamine (1)	340	U
101-55-3	4-Bromophenyl-phenylether	340	U
118-74-1	Hexachlorobenzene	340	U
87-86-5	Pentachlorophenol	1700	U
85-01-8	Phenanthrene	340	U
120-12-7	Anthracene	340	U
84-74-2	Di-n-Butylphthalate	340	U
206-44-0	Fluoranthene	340	U
129-00-0	Pyrene	340	U
85-68-7	Butylbenzylphthalate	340	U
91-94-1	3,3'-Dichlorobenzidine	690	U
56-55-3	Benzo(a)anthracene	340	U
117-81-7	bis(2-Ethylhexyl)Phthalate	340	U
218-01-9	Chrysene	340	U
117-84-0	Di-n-octyl Phthalate	340	U
205-99-2	Benzo(b)fluoranthene	340	U
207-08-9	Benzo(k)fluoranthene	340	U
50-32-8	Benzo(a)pyrene	340	U
193-39-5	Indeno(1,2,3-cd)Pyrene	340	U
53-70-3	Dibenz(a,h)Anthracene	340	U
191-24-2	Benzo(g,h,i)perylene	340	U

(1) - Cannot be separated from Diphenylamine

EPA SAMPLE NO.

B05WN8

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-04B

Sample wt/vol: 30.3 (g/mL) G Lab File ID: 20409N02

Level: (low/med) LOW Date Received: 03/02/92

% Moisture: not dec. 5 dec. ____ Date Extracted: 03/11/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/09/92

GPC Cleanup: (Y/N) N pH: 9.3 Dilution Factor: 1.00

Number TICs found: 20

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN HYDROCARBON	3.13	940	BJ
2.	UNKNOWN ALKENE	3.92	170	BJ
3.	UNKNOWN HYDROCARBON	4.20	170	BJ
4.	UNKNOWN HYDROCARBON	4.85	170	J
5.	UNKNOWN ALCOHOL	5.15	1600	BJ
6.	UNKNOWN ALCOHOL	5.75	25000	BJ
7.	UNKNOWN ALCOHOL	6.05	310	BJ
8.	UNKNOWN HYDROCARBON	7.22	590	BJ
9.	UNKNOWN HYDROCARBON	7.52	280	J
10.	UNKNOWN KETONE	7.85	350	BJ
11.	UNKNOWN HYDROCARBON	9.09	240	J
12.	UNKNOWN ALCOHOL	9.92	380	J
13.	UNKNOWN PHTHALATE	22.72	310	BJ
14.	UNKNOWN CARBOXYLIC ACID ESTE	25.17	170	J
15.	UNKNOWN CARBOXYLIC ACID ESTE	28.52	13000	J
16.	UNKNOWN ALKANE	29.51	310	J
17.	UNKNOWN ALKANE	31.36	140	J
18.	UNKNOWN ALKANE	31.44	170	J
19.	UNKNOWN ALKANE	33.84	310	J
20.	UNKNOWN ALKANE	37.29	350	J

EPA SAMPLE NO.

B05WN9

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-05D

Sample wt/vol: 30.4 (g/mL) G Lab File ID: 20409N05

Level: (low/med) LOW Date Received: 03/02/92

% Moisture: not dec. 2 dec. Date Extracted: 03/11/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/09/92

GPC Cleanup: (Y/N) N pH: 9.2 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	330	U
111-44-4	bis(2-Chloroethyl)Ether	330	U
95-57-8	2-Chlorophenol	330	U
541-73-1	1,3-Dichlorobenzene	330	U
106-46-7	1,4-Dichlorobenzene	330	U
100-51-6	Benzyl Alcohol	330	U
95-50-1	1,2-Dichlorobenzene	330	U
95-48-7	2-Methylphenol	330	U
108-60-1	bis(2-Chloroisopropyl)Ether	330	U
106-44-5	4-Methylphenol	330	U
621-64-7	N-Nitroso-Di-n-Propylamine	330	U
67-72-1	Hexachloroethane	330	U
98-95-3	Nitrobenzene	330	U
78-59-1	Isophorone	330	U
88-75-5	2-Nitrophenol	330	U
105-67-9	2,4-Dimethylphenol	330	U
65-85-0	Benzoic Acid	1600	U
111-91-1	bis(2-Chloroethoxy)methane	330	U
120-83-2	2,4-Dichlorophenol	330	U
120-82-1	1,2,4-Trichlorobenzene	330	U
91-20-3	Naphthalene	330	U
106-47-8	4-Chloroaniline	330	U
87-68-3	Hexachlorobutadiene	330	U
59-50-7	4-Chloro-3-methylphenol	330	U
91-57-6	2-Methylnaphthalene	330	U
77-47-4	Hexachlorocyclopentadiene	330	U
88-06-2	2,4,6-Trichlorophenol	330	U
95-95-4	2,4,5-Trichlorophenol	1600	U
91-58-7	2-Chloronaphthalene	330	U
88-74-4	2-Nitroaniline	1600	U
131-11-3	Dimethyl Phthalate	330	U
208-96-8	Acenaphthylene	330	U

EPA SAMPLE NO.

B05WN9

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-05D

Sample wt/vol: 30.4 (g/mL) G Lab File ID: 20409N05

Level: (low/med) LOW Date Received: 03/02/92

% Moisture: not dec. 2 dec. ____ Date Extracted: 03/11/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/09/92

GPC Cleanup: (Y/N) N pH: 9.2 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1600	U
83-32-9	Acenaphthene	330	U
51-28-5	2,4-Dinitrophenol	1600	U
100-02-7	4-Nitrophenol	1600	U
132-64-9	Dibenzofuran	330	U
121-14-2	2,4-Dinitrotoluene	330	U
606-20-2	2,6-Dinitrotoluene	330	U
84-66-2	Diethylphthalate	330	U
7005-72-3	4-Chlorophenyl-phenylether	330	U
86-73-7	Fluorene	330	U
100-01-6	4-Nitroaniline	1600	U
534-52-1	4,6-Dinitro-2-methylphenol	1600	U
86-30-6	N-Nitrosodiphenylamine (1)	330	U
101-55-3	4-Bromophenyl-phenylether	330	U
118-74-1	Hexachlorobenzene	330	U
87-86-5	Pentachlorophenol	1600	U
85-01-8	Phenanthrene	330	U
120-12-7	Anthracene	330	U
84-74-2	Di-n-Butylphthalate	330	U
206-44-0	Fluoranthene	330	U
129-00-0	Pyrene	330	U
85-68-7	Butylbenzylphthalate	330	U
91-94-1	3,3'-Dichlorobenzidine	660	U
56-55-3	Benzo(a)anthracene	330	U
117-81-7	bis(2-Ethylhexyl)Phthalate	330	U
218-01-9	Chrysene	330	U
117-84-0	Di-n-octyl Phthalate	330	U
205-99-2	Benzo(b)fluoranthene	330	U
207-08-9	Benzo(k)fluoranthene	330	U
50-32-8	Benzo(a)pyrene	330	U
193-39-5	Indeno(1,2,3-cd)Pyrene	330	U
53-70-3	Dibenz(a,h)Anthracene	330	U
191-24-2	Benzo(g,h,i)perylene	330	U

(1) - Cannot be separated from Diphenylamine

1F

000031
EPA SAMPLE NO.

B05WN9

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-05D

Sample wt/vol: 30.4 (g/mL) G Lab File ID: 20409N05

Level: (low/med) LOW Date Received: 03/02/92

% Moisture: not dec. 2 dec. Date Extracted: 03/11/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/09/92

GPC Cleanup: (Y/N) N pH: 9.2 Dilution Factor: 1.0

Number TICs found: 11

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN HYDROCARBON	3.13	940	BJ
2.	UNKNOWN KETONE	4.77	130	J
3.	UNKNOWN ALCOHOL	5.12	1500	BJ
4.	UNKNOWN ALCOHOL	5.72	26000	BJ
5.	UNKNOWN ALCOHOL	6.02	230	BJ
6.	UNKNOWN HYDROCARBON	7.18	570	BJ
7.	UNKNOWN KETONE	7.80	370	BJ
8.	UNKNOWN ALCOHOL	9.87	170	J
9.	UNKNOWN CARBOXYLIC ACID	19.10	130	J
10.	UNKNOWN PHTHALATE	22.64	340	BJ
11.	UNKNOWN CARBOXYLIC ACID ESTE	28.39	270	J

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B05WP0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-06B

Sample wt/vol: 31.0 (g/mL) G Lab File ID: 20409N06

Level: (low/med) LOW Date Received: 03/02/92

% Moisture: not dec. 1 dec. Date Extracted: 03/11/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/09/92

GPC Cleanup: (Y/N) N pH: 10.0 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	320	U
111-44-4	bis(2-Chloroethyl)Ether	320	U
95-57-8	2-Chlorophenol	320	U
541-73-1	1,3-Dichlorobenzene	320	U
106-46-7	1,4-Dichlorobenzene	320	U
100-51-6	Benzyl Alcohol	320	U
95-50-1	1,2-Dichlorobenzene	320	U
95-48-7	2-Methylphenol	320	U
108-60-1	bis(2-Chloroisopropyl)Ether	320	U
106-44-5	4-Methylphenol	320	U
621-64-7	N-Nitroso-Di-n-Propylamine	320	U
67-72-1	Hexachloroethane	320	U
98-95-3	Nitrobenzene	320	U
78-59-1	Isophorone	320	U
88-75-5	2-Nitrophenol	320	U
105-67-9	2,4-Dimethylphenol	320	U
65-85-0	Benzoic Acid	1600	U
111-91-1	bis(2-Chloroethoxy)methane	320	U
120-83-2	2,4-Dichlorophenol	320	U
120-82-1	1,2,4-Trichlorobenzene	320	U
91-20-3	Naphthalene	320	U
106-47-8	4-Chloroaniline	320	U
87-68-3	Hexachlorobutadiene	320	U
59-50-7	4-Chloro-3-methylphenol	320	U
91-57-6	2-Methylnaphthalene	320	U
77-47-4	Hexachlorocyclopentadiene	320	U
88-06-2	2,4,6-Trichlorophenol	320	U
95-95-4	2,4,5-Trichlorophenol	1600	U
91-58-7	2-Chloronaphthalene	320	U
88-74-4	2-Nitroaniline	1600	U
131-11-3	Dimethyl Phthalate	320	U
208-96-8	Acenaphthylene	320	U

EPA SAMPLE NO.

B05WP0

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-06B

Sample wt/vol: 31.0 (g/mL) G Lab File ID: 20409N06

Level: (low/med) LOW Date Received: 03/02/92

% Moisture: not dec. 1 dec. ____ Date Extracted: 03/11/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/09/92

GPC Cleanup: (Y/N) N pH: 10.0 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1600	U
83-32-9	Acenaphthene	320	U
51-28-5	2,4-Dinitrophenol	1600	U
100-02-7	4-Nitrophenol	1600	U
132-64-9	Dibenzofuran	320	U
121-14-2	2,4-Dinitrotoluene	320	U
606-20-2	2,6-Dinitrotoluene	320	U
84-66-2	Diethylphthalate	320	U
7005-72-3	4-Chlorophenyl-phenylether	320	U
86-73-7	Fluorene	320	U
100-01-6	4-Nitroaniline	1600	U
534-52-1	4,6-Dinitro-2-methylphenol	1600	U
86-30-6	N-Nitrosodiphenylamine (1)	320	U
101-55-3	4-Bromophenyl-phenylether	320	U
118-74-1	Hexachlorobenzene	320	U
87-86-5	Pentachlorophenol	1600	U
85-01-8	Phenanthrene	320	U
120-12-7	Anthracene	320	U
84-74-2	Di-n-Butylphthalate	320	U
206-44-0	Fluoranthene	320	U
129-00-0	Pyrene	320	U
85-68-7	Butylbenzylphthalate	320	U
91-94-1	3,3'-Dichlorobenzidine	650	U
56-55-3	Benzo(a)anthracene	320	U
117-81-7	bis(2-Ethylhexyl)Phthalate	320	U
218-01-9	Chrysene	320	U
117-84-0	Di-n-octyl Phthalate	320	U
205-99-2	Benzo(b)fluoranthene	320	U
207-08-9	Benzo(k)fluoranthene	320	U
50-32-8	Benzo(a)pyrene	320	U
193-39-5	Indeno(1,2,3-cd)Pyrene	320	U
53-70-3	Dibenz(a,h)Anthracene	320	U
191-24-2	Benzo(g,h,i)perylene	320	U

(1) - Cannot be separated from Diphenylamine

1F

EPA SAMPLE NO.

B05WP0

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-06B

Sample wt/vol: 31.0 (g/mL) G Lab File ID: 20409N06

Level: (low/med) LOW Date Received: 03/02/92

% Moisture: not dec. 1 dec. Date Extracted: 03/11/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/09/92

GPC Cleanup: (Y/N) N pH: 10.0 Dilution Factor: 1.0

Number TICs found: 13

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN HYDROCARBON	3.13	520	BJ
2.	UNKNOWN ALKENE	3.85	160	BJ
3.	UNKNOWN HYDROCARBON	4.13	200	BJ
4.	UNKNOWN ALCOHOL	5.13	1600	BJ
5.	UNKNOWN ALCOHOL	5.77	24000	BJ
6.	UNKNOWN ALCOHOL	6.07	330	BJ
7.	UNKNOWN HYDROCARBON	7.25	590	BJ
8.	UNKNOWN KETONE	7.88	360	J
9.	UNKNOWN ALCOHOL	9.14	160	BJ
10.	UNKNOWN CARBOXYLIC ACID	19.22	130	J
11.	UNKNOWN PHTHALATE	22.75	290	BJ
12.	UNKNOWN CARBOXYLIC ACID ESTE	28.52	230	J
13.	UNKNOWN ALKANE	31.41	160	J

1B

EPA SAMPLE NO.

B05WP1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-09B

Sample wt/vol: 31.0 (g/mL) G Lab File ID: 20409N08

Level: (low/med) LOW Date Received: 03/06/92

% Moisture: not dec. 1 dec. Date Extracted: 03/11/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/09/92

GPC Cleanup: (Y/N) N pH: 9.9 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	320	U
111-44-4	bis(2-Chloroethyl)Ether	320	U
95-57-8	2-Chlorophenol	320	U
541-73-1	1,3-Dichlorobenzene	320	U
106-46-7	1,4-Dichlorobenzene	320	U
100-51-6	Benzyl Alcohol	320	U
95-50-1	1,2-Dichlorobenzene	320	U
95-48-7	2-Methylphenol	320	U
108-60-1	bis(2-Chloroisopropyl)Ether	320	U
106-44-5	4-Methylphenol	320	U
621-64-7	N-Nitroso-Di-n-Propylamine	320	U
67-72-1	Hexachloroethane	320	U
98-95-3	Nitrobenzene	320	U
78-59-1	Isophorone	320	U
88-75-5	2-Nitrophenol	320	U
105-67-9	2,4-Dimethylphenol	320	U
65-85-0	Benzoic Acid	1600	U
111-91-1	bis(2-Chloroethoxy)methane	320	U
120-83-2	2,4-Dichlorophenol	320	U
120-82-1	1,2,4-Trichlorobenzene	320	U
91-20-3	Naphthalene	320	U
106-47-8	4-Chloroaniline	320	U
87-68-3	Hexachlorobutadiene	320	U
59-50-7	4-Chloro-3-methylphenol	320	U
91-57-6	2-Methylnaphthalene	320	U
77-47-4	Hexachlorocyclopentadiene	320	U
88-06-2	2,4,6-Trichlorophenol	320	U
95-95-4	2,4,5-Trichlorophenol	1600	U
91-58-7	2-Chloronaphthalene	320	U
88-74-4	2-Nitroaniline	1600	U
131-11-3	Dimethyl Phthalate	320	U
208-96-8	Acenaphthylene	320	U

EPA SAMPLE NO.

B05WP1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-09B

Sample wt/vol: 31.0 (g/mL) G Lab File ID: 20409N08

Level: (low/med) LOW Date Received: 03/06/92

% Moisture: not dec. 1 dec. Date Extracted: 03/11/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/09/92

GPC Cleanup: (Y/N) N pH: 9.9 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1600	U
83-32-9	Acenaphthene	320	U
51-28-5	2,4-Dinitrophenol	1600	U
100-02-7	4-Nitrophenol	1600	U
132-64-9	Dibenzofuran	320	U
121-14-2	2,4-Dinitrotoluene	320	U
606-20-2	2,6-Dinitrotoluene	320	U
84-66-2	Diethylphthalate	320	U
7005-72-3	4-Chlorophenyl-phenylether	320	U
86-73-7	Fluorene	320	U
100-01-6	4-Nitroaniline	1600	U
534-52-1	4,6-Dinitro-2-methylphenol	1600	U
86-30-6	N-Nitrosodiphenylamine (1)	320	U
101-55-3	4-Bromophenyl-phenylether	320	U
118-74-1	Hexachlorobenzene	320	U
87-86-5	Pentachlorophenol	1600	U
85-01-8	Phenanthrene	320	U
120-12-7	Anthracene	320	U
84-74-2	Di-n-Butylphthalate	35	J
206-44-0	Fluoranthene	320	U
129-00-0	Pyrene	320	U
85-68-7	Butylbenzylphthalate	320	U
91-94-1	3,3'-Dichlorobenzidine	650	U
56-55-3	Benzo(a)anthracene	320	U
117-81-7	bis(2-Ethylhexyl)Phthalate	320	U
218-01-9	Chrysene	320	U
117-84-0	Di-n-octyl Phthalate	320	U
205-99-2	Benzo(b)fluoranthene	320	U
207-08-9	Benzo(k)fluoranthene	320	U
50-32-8	Benzo(a)pyrene	320	U
193-39-5	Indeno(1,2,3-cd)Pyrene	320	U
53-70-3	Dibenz(a,h)Anthracene	320	U
191-24-2	Benzo(g,h,i)perylene	320	U

(1) - Cannot be separated from Diphenylamine

EPA SAMPLE NO.

B05WP1

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-09B

Sample wt/vol: 31.0 (g/mL) G Lab File ID: 20409N08

Level: (low/med) LOW Date Received: 03/06/92

% Moisture: not dec. 1 dec. Date Extracted: 03/11/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/09/92

GPC Cleanup: (Y/N) N pH: 9.9 Dilution Factor: 1.0

Number TICs found: 8

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN ALKENE	3.90	160	BJ
2.	UNKNOWN HYDROCARBON	4.18	160	BJ
3.	UNKNOWN ALCOHOL	5.12	1400	BJ
4.	UNKNOWN ALCOHOL	5.72	25000	BJ
5.	UNKNOWN HYDROCARBON	7.18	550	BJ
6.	UNKNOWN KETONE	7.80	330	BJ
7.	UNKNOWN PHTHALATE	22.64	360	J
8.	UNKNOWN CARBOXYLIC ACID ESTE	28.41	330	J

EPA SAMPLE NO. 000038

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

B05WT8

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-10B

Sample wt/vol: 30.9 (g/mL) G Lab File ID: 20409N10

Level: (low/med) LOW Date Received: 03/02/92

% Moisture: not dec. 7 dec. Date Extracted: 03/13/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/09/92

GPC Cleanup: (Y/N) N pH: 8.4 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	340	U
111-44-4	bis(2-Chloroethyl)Ether	340	U
95-57-8	2-Chlorophenol	340	U
541-73-1	1,3-Dichlorobenzene	340	U
106-46-7	1,4-Dichlorobenzene	340	U
100-51-6	Benzyl Alcohol	340	U
95-50-1	1,2-Dichlorobenzene	340	U
95-48-7	2-Methylphenol	340	U
108-60-1	bis(2-Chloroisopropyl)Ether	340	U
106-44-5	4-Methylphenol	340	U
621-64-7	N-Nitroso-Di-n-Propylamine	340	U
67-72-1	Hexachloroethane	340	U
98-95-3	Nitrobenzene	340	U
78-59-1	Isophorone	340	U
88-75-5	2-Nitrophenol	340	U
105-67-9	2,4-Dimethylphenol	340	U
65-85-0	Benzoic Acid	1700	U
111-91-1	bis(2-Chloroethoxy)methane	340	U
120-83-2	2,4-Dichlorophenol	340	U
120-82-1	1,2,4-Trichlorobenzene	340	U
91-20-3	Naphthalene	340	U
106-47-8	4-Chloroaniline	340	U
87-68-3	Hexachlorobutadiene	340	U
59-50-7	4-Chloro-3-methylphenol	340	U
91-57-6	2-Methylnaphthalene	340	U
77-47-4	Hexachlorocyclopentadiene	340	U
88-06-2	2,4,6-Trichlorophenol	340	U
95-95-4	2,4,5-Trichlorophenol	1700	U
91-58-7	2-Chloronaphthalene	340	U
88-74-4	2-Nitroaniline	1700	U
131-11-3	Dimethyl Phthalate	340	U
208-96-8	Acenaphthylene	340	U

EPA SAMPLE NO.

B05WT8

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-10B

Sample wt/vol: 30.9 (g/mL) G Lab File ID: 20409N10

Level: (low/med) LOW Date Received: 03/02/92

% Moisture: not dec. 7 dec. ____ Date Extracted: 03/13/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/09/92

GPC Cleanup: (Y/N) N pH: 8.4 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1700	U
83-32-9	Acenaphthene	340	U
51-28-5	2,4-Dinitrophenol	1700	U
100-02-7	4-Nitrophenol	1700	U
132-64-9	Dibenzofuran	340	U
121-14-2	2,4-Dinitrotoluene	340	U
606-20-2	2,6-Dinitrotoluene	340	U
84-66-2	Diethylphthalate	340	U
7005-72-3	4-Chlorophenyl-phenylether	340	U
86-73-7	Fluorene	340	U
100-01-6	4-Nitroaniline	1700	U
534-52-1	4,6-Dinitro-2-methylphenol	1700	U
86-30-6	N-Nitrosodiphenylamine (1)	340	U
101-55-3	4-Bromophenyl-phenylether	340	U
118-74-1	Hexachlorobenzene	340	U
87-86-5	Pentachlorophenol	1700	U
85-01-8	Phenanthrene	340	U
120-12-7	Anthracene	340	U
84-74-2	Di-n-Butylphthalate	73	BJ
206-44-0	Fluoranthene	340	U
129-00-0	Pyrene	340	U
85-68-7	Butylbenzylphthalate	340	U
91-94-1	3,3'-Dichlorobenzidine	690	U
56-55-3	Benzo(a)anthracene	340	U
117-81-7	bis(2-Ethylhexyl)Phthalate	340	U
218-01-9	Chrysene	340	U
117-84-0	Di-n-octyl Phthalate	340	U
205-99-2	Benzo(b)fluoranthene	340	U
207-08-9	Benzo(k)fluoranthene	340	U
50-32-8	Benzo(a)pyrene	340	U
193-39-5	Indeno(1,2,3-cd)Pyrene	340	U
53-70-3	Dibenz(a,h)Anthracene	340	U
191-24-2	Benzo(g,h,i)perylene	340	U

(1) - Cannot be separated from Diphenylamine

EPA SAMPLE NO.

B05WT8

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-10B

Sample wt/vol: 30.9 (g/mL) G Lab File ID: 20409N10

Level: (low/med) LOW Date Received: 03/02/92

% Moisture: not dec. 7 dec. Date Extracted: 03/13/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/09/92

GPC Cleanup: (Y/N) N pH: 8.4 Dilution Factor: 1.0

Number TICs found: 17

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN HYDROCARBON	3.17	630	J
2.	UNKNOWN ALCOHOL	3.63	770	J
3.	UNKNOWN HYDROCARBON	4.25	38000	BJ
4.	UNKNOWN HYDROCARBON	4.40	3400	BJ
5.	UNKNOWN CYCLOALKANE	4.58	140	J
6.	UNKNOWN ALCOHOL	5.12	1200	J
7.	UNKNOWN ALCOHOL	5.70	21000	BJ
8.	UNKNOWN ALCOHOL	6.02	240	J
9.	UNKNOWN HYDROCARBON	7.18	450	BJ
10.	UNKNOWN KETONE	7.47	420	BJ
11.	UNKNOWN KETONE	7.80	350	BJ
12.	UNKNOWN HYDROCARBON	8.70	140	J
13.	UNKNOWN ALCOHOL	9.02	240	BJ
14.	UNKNOWN HYDROCARBON	9.85	210	J
15.	UNKNOWN CARBOXYLIC ACID	19.07	140	J
16.	UNKNOWN PHTHALATE	22.59	280	BJ
17.	UNKNOWN ALKANE	33.56	420	J

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B05WT9

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-03B

Sample wt/vol: 30.1 (g/mL) G Lab File ID: 20407N05

Level: (low/med) LOW Date Received: 03/04/92

% Moisture: not dec. 5 dec. Date Extracted: 03/11/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/07/92

GPC Cleanup: (Y/N) N pH: 11.2 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	350	U
111-44-4	bis(2-Chloroethyl)Ether	350	U
95-57-8	2-Chlorophenol	350	U
541-73-1	1,3-Dichlorobenzene	350	U
106-46-7	1,4-Dichlorobenzene	350	U
100-51-6	Benzyl Alcohol	350	U
95-50-1	1,2-Dichlorobenzene	350	U
95-48-7	2-Methylphenol	350	U
108-60-1	bis(2-Chloroisopropyl)Ether	350	U
106-44-5	4-Methylphenol	350	U
621-64-7	N-Nitroso-Di-n-Propylamine	350	U
67-72-1	Hexachloroethane	350	U
98-95-3	Nitrobenzene	350	U
78-59-1	Isophorone	350	U
88-75-5	2-Nitrophenol	350	U
105-67-9	2,4-Dimethylphenol	350	U
65-85-0	Benzoic Acid	1700	U
111-91-1	bis(2-Chloroethoxy)methane	350	U
120-83-2	2,4-Dichlorophenol	350	U
120-82-1	1,2,4-Trichlorobenzene	350	U
91-20-3	Naphthalene	350	U
106-47-8	4-Chloroaniline	350	U
87-68-3	Hexachlorobutadiene	350	U
59-50-7	4-Chloro-3-methylphenol	350	U
91-57-6	2-Methylnaphthalene	350	U
77-47-4	Hexachlorocyclopentadiene	350	U
88-06-2	2,4,6-Trichlorophenol	350	U
95-95-4	2,4,5-Trichlorophenol	1700	U
91-58-7	2-Chloronaphthalene	350	U
88-74-4	2-Nitroaniline	1700	U
131-11-3	Dimethyl Phthalate	350	U
208-96-8	Acenaphthylene	350	U

EPA SAMPLE NO.

B05WT9

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-03B

Sample wt/vol: 30.1 (g/mL) G Lab File ID: 20407N05

Level: (low/med) LOW Date Received: 03/04/92

% Moisture: not dec. 5 dec. ____ Date Extracted: 03/11/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/07/92

GPC Cleanup: (Y/N) N pH: 11.2 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1700	U
83-32-9	Acenaphthene	350	U
51-28-5	2,4-Dinitrophenol	1700	U
100-02-7	4-Nitrophenol	1700	U
132-64-9	Dibenzofuran	350	U
121-14-2	2,4-Dinitrotoluene	350	U
606-20-2	2,6-Dinitrotoluene	350	U
84-66-2	Diethylphthalate	350	U
7005-72-3	4-Chlorophenyl-phenylether	350	U
86-73-7	Fluorene	350	U
100-01-6	4-Nitroaniline	1700	U
534-52-1	4,6-Dinitro-2-methylphenol	1700	U
86-30-6	N-Nitrosodiphenylamine (1)	350	U
101-55-3	4-Bromophenyl-phenylether	350	U
118-74-1	Hexachlorobenzene	350	U
87-86-5	Pentachlorophenol	1700	U
85-01-8	Phenanthrene	350	U
120-12-7	Anthracene	350	U
84-74-2	Di-n-Butylphthalate	53	J
206-44-0	Fluoranthene	350	U
129-00-0	Pyrene	350	U
85-68-7	Butylbenzylphthalate	350	U
91-94-1	3,3'-Dichlorobenzidine	690	U
56-55-3	Benzo(a)anthracene	350	U
117-81-7	bis(2-Ethylhexyl)Phthalate	350	U
218-01-9	Chrysene	350	U
117-84-0	Di-n-octyl Phthalate	350	U
205-99-2	Benzo(b)fluoranthene	350	U
207-08-9	Benzo(k)fluoranthene	350	U
50-32-8	Benzo(a)pyrene	350	U
193-39-5	Indeno(1,2,3-cd)Pyrene	350	U
53-70-3	Dibenz(a,h)Anthracene	350	U
191-24-2	Benzo(g,h,i)perylene	350	U

(1) - Cannot be separated from Diphenylamine

1F

EPA SAMPLE NO.

B05WT9

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-03B

Sample wt/vol: 30.1 (g/mL) G Lab File ID: 20407N05

Level: (low/med) LOW Date Received: 03/04/92

% Moisture: not dec. 5 dec. Date Extracted: 03/11/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/07/92

GPC Cleanup: (Y/N) N pH: 11.2 Dilution Factor: 1.0

Number TICs found: 7

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN HYDROCARBON	4.18	140	BJ
2.	UNKNOWN ALCOHOL	5.15	1700	BJ
3.	UNKNOWN ALCOHOL	6.03	280	BJ
4.	UNKNOWN ALCOHOL	7.18	630	J
5.	UNKNOWN ALCOHOL	9.04	170	BJ
6.	UNKNOWN ALCOHOL	9.87	170	J
7.	UNKNOWN PHTHALATE	22.62	310	BJ

EPA SAMPLE NO.

B05WV1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A203018-01D

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20410N03

Level: (low/med) LOW Date Received: 03/03/92

% Moisture: not dec. ____ dec. ____ Date Extracted: 03/06/92

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 04/10/92

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
100-51-6	Benzyl Alcohol	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	bis(2-Chloroisopropyl)Ether	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
65-85-0	Benzoic Acid	50	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	50	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	50	U
131-11-3	Dimethyl Phthalate	10	U
208-96-8	Acenaphthylene	10	U

EPA SAMPLE NO.

B05WV1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A203018-01D

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20410N03

Level: (low/med) LOW Date Received: 03/03/92

% Moisture: not dec. ____ dec. ____ Date Extracted: 03/06/92

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 04/10/92

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	3-Nitroaniline	50	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	50	U
100-02-7	4-Nitrophenol	50	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	50	U
534-52-1	4,6-Dinitro-2-methylphenol	50	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	50	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	20	U
56-55-3	Benzo(a)anthracene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	10	U
218-01-9	Chrysene	10	U
117-84-0	Di-n-octyl Phthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) - Cannot be separated from Diphenylamine

EPA SAMPLE NO.

B05WV1

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A203018-01D

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20410N03

Level: (low/med) LOW Date Received: 03/03/92

% Moisture: not dec. ____ dec. ____ Date Extracted: 03/06/92

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 04/10/92

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.0

Number TICs found: 2

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN ALKENE	3.13	630	BJ
2.	UNKNOWN ALDEHYDE	6.03	12	J

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B05WV2

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-02B

Sample wt/vol: 30.4 (g/mL) G Lab File ID: 20409N04

Level: (low/med) LOW Date Received: 03/04/92

% Moisture: not dec. 5 dec. ____ Date Extracted: 03/11/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/09/92

GPC Cleanup: (Y/N) N pH: 9.9 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	340	U
111-44-4	bis(2-Chloroethyl)Ether	340	U
95-57-8	2-Chlorophenol	340	U
541-73-1	1,3-Dichlorobenzene	340	U
106-46-7	1,4-Dichlorobenzene	340	U
100-51-6	Benzyl Alcohol	340	U
95-50-1	1,2-Dichlorobenzene	340	U
95-48-7	2-Methylphenol	340	U
108-60-1	bis(2-Chloroisopropyl)Ether	340	U
106-44-5	4-Methylphenol	340	U
621-64-7	N-Nitroso-Di-n-Propylamine	340	U
67-72-1	Hexachloroethane	340	U
98-95-3	Nitrobenzene	340	U
78-59-1	Isophorone	340	U
88-75-5	2-Nitrophenol	340	U
105-67-9	2,4-Dimethylphenol	340	U
65-85-0	Benzoic Acid	1700	U
111-91-1	bis(2-Chloroethoxy)methane	340	U
120-83-2	2,4-Dichlorophenol	340	U
120-82-1	1,2,4-Trichlorobenzene	340	U
91-20-3	Naphthalene	340	U
106-47-8	4-Chloroaniline	340	U
87-68-3	Hexachlorobutadiene	340	U
59-50-7	4-Chloro-3-methylphenol	340	U
91-57-6	2-Methylnaphthalene	340	U
77-47-4	Hexachlorocyclopentadiene	340	U
88-06-2	2,4,6-Trichlorophenol	340	U
95-95-4	2,4,5-Trichlorophenol	1700	U
91-58-7	2-Chloronaphthalene	340	U
88-74-4	2-Nitroaniline	1700	U
131-11-3	Dimethyl Phthalate	340	U
208-96-8	Acenaphthylene	340	U

9213507.1C12

EPA SAMPLE NO.

B05WV2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-02B

Sample wt/vol: 30.4 (g/mL) G Lab File ID: 20409N04

Level: (low/med) LOW Date Received: 03/04/92

% Moisture: not dec. 5 dec. Date Extracted: 03/11/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/09/92

GPC Cleanup: (Y/N) N pH: 9.9 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1700	U
83-32-9	Acenaphthene	340	U
51-28-5	2,4-Dinitrophenol	1700	U
100-02-7	4-Nitrophenol	1700	U
132-64-9	Dibenzofuran	340	U
121-14-2	2,4-Dinitrotoluene	340	U
606-20-2	2,6-Dinitrotoluene	340	U
84-66-2	Diethylphthalate	340	U
7005-72-3	4-Chlorophenyl-phenylether	340	U
86-73-7	Fluorene	340	U
100-01-6	4-Nitroaniline	1700	U
534-52-1	4,6-Dinitro-2-methylphenol	1700	U
86-30-6	N-Nitrosodiphenylamine (1)	340	U
101-55-3	4-Bromophenyl-phenylether	340	U
118-74-1	Hexachlorobenzene	340	U
87-86-5	Pentachlorophenol	1700	U
85-01-8	Phenanthrene	340	U
120-12-7	Anthracene	340	U
84-74-2	Di-n-Butylphthalate	340	U
206-44-0	Fluoranthene	340	U
129-00-0	Pyrene	340	U
85-68-7	Butylbenzylphthalate	340	U
91-94-1	3,3'-Dichlorobenzidine	690	U
56-55-3	Benzo(a)anthracene	340	U
117-81-7	bis(2-Ethylhexyl)Phthalate	340	U
218-01-9	Chrysene	340	U
117-84-0	Di-n-octyl Phthalate	340	U
205-99-2	Benzo(b)fluoranthene	340	U
207-08-9	Benzo(k)fluoranthene	340	U
50-32-8	Benzo(a)pyrene	340	U
193-39-5	Indeno(1,2,3-cd)Pyrene	340	U
53-70-3	Dibenz(a,h)Anthracene	340	U
191-24-2	Benzo(g,h,i)perylene	340	U

(1) - Cannot be separated from Diphenylamine

EPA SAMPLE NO.

B05WV2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-02B

Sample wt/vol: 30.4 (g/mL) G Lab File ID: 20409N04

Level: (low/med) LOW Date Received: 03/04/92

% Moisture: not dec. 5 dec. ____ Date Extracted: 03/11/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/09/92

GPC Cleanup: (Y/N) N pH: 9.9 Dilution Factor: 1.0

Number TICs found: 13

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN ALKENE	3.95	140	BJ
2.	UNKNOWN HYDROCARBON	4.23	140	BJ
3.	UNKNOWN ALCOHOL	5.25	1700	BJ
4.	UNKNOWN ALCOHOL	5.88	32000	BJ
5.	UNKNOWN ALCOHOL	6.17	280	BJ
6.	UNKNOWN HYDROCARBON	7.37	620	BJ
7.	UNKNOWN KETONE	8.00	310	BJ
8.	UNKNOWN ALCOHOL	10.09	210	J
9.	UNKNOWN PHTHALATE	22.85	310	BJ
10.	UNKNOWN CARBOXYLIC ACID ESTE	28.61	380	J
11.	UNKNOWN ALKANE	29.62	310	J
12.	UNKNOWN HYDROCARBON	31.54	350	J
13.	UNKNOWN HYDROCARBON	33.91	310	J

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

000050
EPA SAMPLE NO.

B05WV3

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-07B

Sample wt/vol: 30.9 (g/mL) G Lab File ID: 20414N05

Level: (low/med) LOW Date Received: 03/05/92

% Moisture: not dec. 9 dec. Date Extracted: 03/11/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/14/92

GPC Cleanup: (Y/N) N pH: 10.5 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	350	U
111-44-4	bis(2-Chloroethyl)Ether	350	U
95-57-8	2-Chlorophenol	350	U
541-73-1	1,3-Dichlorobenzene	350	U
106-46-7	1,4-Dichlorobenzene	350	U
100-51-6	Benzyl Alcohol	350	U
95-50-1	1,2-Dichlorobenzene	350	U
95-48-7	2-Methylphenol	350	U
108-60-1	bis(2-Chloroisopropyl)Ether	350	U
106-44-5	4-Methylphenol	350	U
621-64-7	N-Nitroso-Di-n-Propylamine	350	U
67-72-1	Hexachloroethane	350	U
98-95-3	Nitrobenzene	350	U
78-59-1	Isophorone	350	U
88-75-5	2-Nitrophenol	350	U
105-67-9	2,4-Dimethylphenol	350	U
65-85-0	Benzoic Acid	1700	U
111-91-1	bis(2-Chloroethoxy)methane	350	U
120-83-2	2,4-Dichlorophenol	350	U
120-82-1	1,2,4-Trichlorobenzene	350	U
91-20-3	Naphthalene	350	U
106-47-8	4-Chloroaniline	350	U
87-68-3	Hexachlorobutadiene	350	U
59-50-7	4-Chloro-3-methylphenol	350	U
91-57-6	2-Methylnaphthalene	350	U
77-47-4	Hexachlorocyclopentadiene	350	U
88-06-2	2,4,6-Trichlorophenol	350	U
95-95-4	2,4,5-Trichlorophenol	1700	U
91-58-7	2-Chloronaphthalene	350	U
88-74-4	2-Nitroaniline	1700	U
131-11-3	Dimethyl Phthalate	350	U
208-96-8	Acenaphthylene	350	U

EPA SAMPLE NO.

B05WV3

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-07B

Sample wt/vol: 30.9 (g/mL) G Lab File ID: 20414N05

Level: (low/med) LOW Date Received: 03/05/92

% Moisture: not dec. 9 dec. ____ Date Extracted: 03/11/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/14/92

GPC Cleanup: (Y/N) N pH: 10.5 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1700	U
83-32-9	Acenaphthene	350	U
51-28-5	2,4-Dinitrophenol	1700	U
100-02-7	4-Nitrophenol	1700	U
132-64-9	Dibenzofuran	350	U
121-14-2	2,4-Dinitrotoluene	350	U
606-20-2	2,6-Dinitrotoluene	350	U
84-66-2	Diethylphthalate	350	U
7005-72-3	4-Chlorophenyl-phenylether	350	U
86-73-7	Fluorene	350	U
100-01-6	4-Nitroaniline	1700	U
534-52-1	4,6-Dinitro-2-methylphenol	1700	U
86-30-6	N-Nitrosodiphenylamine (1)	350	U
101-55-3	4-Bromophenyl-phenylether	350	U
118-74-1	Hexachlorobenzene	350	U
87-86-5	Pentachlorophenol	1700	U
85-01-8	Phenanthrene	350	U
120-12-7	Anthracene	350	U
84-74-2	Di-n-Butylphthalate	350	U
206-44-0	Fluoranthene	350	U
129-00-0	Pyrene	350	U
85-68-7	Butylbenzylphthalate	350	U
91-94-1	3,3'-Dichlorobenzidine	700	U
56-55-3	Benzo(a)anthracene	350	U
117-81-7	bis(2-Ethylhexyl)Phthalate	350	U
218-01-9	Chrysene	350	U
117-84-0	Di-n-octyl Phthalate	350	U
205-99-2	Benzo(b)fluoranthene	350	U
207-08-9	Benzo(k)fluoranthene	350	U
50-32-8	Benzo(a)pyrene	350	U
193-39-5	Indeno(1,2,3-cd)Pyrene	350	U
53-70-3	Dibenz(a,h)Anthracene	350	U
191-24-2	Benzo(g,h,i)perylene	350	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

000052
EPA SAMPLE NO.

B05WV3

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-07B

Sample wt/vol: 30.9 (g/mL) G Lab File ID: 20414N05

Level: (low/med) LOW Date Received: 03/05/92

% Moisture: not dec. 9 dec. ____ Date Extracted: 03/11/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/14/92

GPC Cleanup: (Y/N) N pH: 10.5 Dilution Factor: 1.0

Number TICs found: 17

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN HYDROCARBON	3.13	570	J
2.	UNKNOWN ALKENE	3.92	210	BJ
3.	UNKNOWN HYDROCARBON	4.18	210	BJ
4.	UNKNOWN ALCOHOL	5.12	1700	BJ
5.	UNKNOWN ALCOHOL	5.72	26000	BJ
6.	UNKNOWN ALCOHOL	6.02	390	BJ
7.	UNKNOWN HYDROCARBON	7.17	570	BJ
8.	UNKNOWN HYDROCARBON	7.47	360	J
9.	UNKNOWN KETONE	7.78	360	BJ
10.	UNKNOWN ALCOHOL	9.02	250	BJ
11.	UNKNOWN HYDROCARBON	9.84	360	J
12.	UNKNOWN KETONE	11.22	140	J
13.	UNKNOWN CARBOXYLIC ACID ESTE	19.09	140	BJ
14.	UNKNOWN PHTHALATE	22.64	360	BJ
15.	UNKNOWN CARBOXYLIC ACID ESTE	28.41	320	J
16.	UNKNOWN ALKANE	29.42	210	J
17.	UNKNOWN ALKANE	31.32	320	J

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B05WV4

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-08B

Sample wt/vol: 30.7 (g/mL) G Lab File ID: 20409N07

Level: (low/med) LOW Date Received: 03/05/92

% Moisture: not dec. 2 dec. Date Extracted: 03/11/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/09/92

GPC Cleanup: (Y/N) N pH: 9.9 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	330	U
111-44-4	bis(2-Chloroethyl)Ether	330	U
95-57-8	2-Chlorophenol	330	U
541-73-1	1,3-Dichlorobenzene	330	U
106-46-7	1,4-Dichlorobenzene	330	U
100-51-6	Benzyl Alcohol	330	U
95-50-1	1,2-Dichlorobenzene	330	U
95-48-7	2-Methylphenol	330	U
108-60-1	bis(2-Chloroisopropyl)Ether	330	U
106-44-5	4-Methylphenol	330	U
621-64-7	N-Nitroso-Di-n-Propylamine	330	U
67-72-1	Hexachloroethane	330	U
98-95-3	Nitrobenzene	330	U
78-59-1	Isophorone	330	U
88-75-5	2-Nitrophenol	330	U
105-67-9	2,4-Dimethylphenol	330	U
65-85-0	Benzoic Acid	1600	U
111-91-1	bis(2-Chloroethoxy)methane	330	U
120-83-2	2,4-Dichlorophenol	330	U
120-82-1	1,2,4-Trichlorobenzene	330	U
91-20-3	Naphthalene	330	U
106-47-8	4-Chloroaniline	330	U
87-68-3	Hexachlorobutadiene	330	U
59-50-7	4-Chloro-3-methylphenol	330	U
91-57-6	2-Methylnaphthalene	330	U
77-47-4	Hexachlorocyclopentadiene	330	U
88-06-2	2,4,6-Trichlorophenol	330	U
95-95-4	2,4,5-Trichlorophenol	1600	U
91-58-7	2-Chloronaphthalene	330	U
88-74-4	2-Nitroaniline	1600	U
131-11-3	Dimethyl Phthalate	330	U
208-96-8	Acenaphthylene	330	U

EPA SAMPLE NO.

B05WV4

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-08B

Sample wt/vol: 30.7 (g/mL) G Lab File ID: 20409N07

Level: (low/med) LOW Date Received: 03/05/92

% Moisture: not dec. 2 dec. Date Extracted: 03/11/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/09/92

GPC Cleanup: (Y/N) N pH: 9.9 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1600	U
83-32-9	Acenaphthene	330	U
51-28-5	2,4-Dinitrophenol	1600	U
100-02-7	4-Nitrophenol	1600	U
132-64-9	Dibenzofuran	330	U
121-14-2	2,4-Dinitrotoluene	330	U
606-20-2	2,6-Dinitrotoluene	330	U
84-66-2	Diethylphthalate	330	U
7005-72-3	4-Chlorophenyl-phenylether	330	U
86-73-7	Fluorene	330	U
100-01-6	4-Nitroaniline	1600	U
534-52-1	4,6-Dinitro-2-methylphenol	1600	U
86-30-6	N-Nitrosodiphenylamine (1)	330	U
101-55-3	4-Bromophenyl-phenylether	330	U
118-74-1	Hexachlorobenzene	330	U
87-86-5	Pentachlorophenol	1600	U
85-01-8	Phenanthrene	330	U
120-12-7	Anthracene	330	U
84-74-2	Di-n-Butylphthalate	38	J
206-44-0	Fluoranthene	330	U
129-00-0	Pyrene	330	U
85-68-7	Butylbenzylphthalate	330	U
91-94-1	3,3'-Dichlorobenzidine	660	U
56-55-3	Benzo(a)anthracene	330	U
117-81-7	bis(2-Ethylhexyl)Phthalate	330	U
218-01-9	Chrysene	330	U
117-84-0	Di-n-octyl Phthalate	330	U
205-99-2	Benzo(b)fluoranthene	330	U
207-08-9	Benzo(k)fluoranthene	330	U
50-32-8	Benzo(a)pyrene	330	U
193-39-5	Indeno(1,2,3-cd)Pyrene	330	U
53-70-3	Dibenz(a,h)Anthracene	330	U
191-24-2	Benzo(g,h,i)perylene	330	U

(1) - Cannot be separated from Diphenylamine

9213502.1119

1F

000055

EPA SAMPLE NO.

B05WV4

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-08B

Sample wt/vol: 30.7 (g/mL) G Lab File ID: 20409N07

Level: (low/med) LOW Date Received: 03/05/92

% Moisture: not dec. 2 dec. Date Extracted: 03/11/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/09/92

GPC Cleanup: (Y/N) N pH: 9.9 Dilution Factor: 1.00

Number TICs found: 7

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN ALKENE	3.90	130	BJ
2.	UNKNOWN HYDROCARBON	4.18	170	BJ
3.	UNKNOWN ALKENE	4.90	170	J
4.	UNKNOWN ALCOHOL	5.13	1400	BJ
5.	UNKNOWN ALCOHOL	5.73	23000	BJ
6.	UNKNOWN HYDROCARBON	7.20	500	BJ
7.	UNKNOWN PHTHALATE	22.65	400	BJ

9216507 J120

1D

000056
EPA SAMPLE NO.

PESTICIDE ORGANICS ANALYSIS DATA SHEET

B05WN8

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-04B

Sample wt/vol: 31.0 (g/mL) G Lab File ID:

Level: (low/med) LOW Date Received: 03/02/92

% Moisture: not dec. 5 dec. Date Extracted: 03/11/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 03/20/92

GPC Cleanup: (Y/N) N pH: 9.3 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	8.1	U
319-85-7	beta-BHC	8.1	U
319-86-8	delta-BHC	8.1	U
58-89-9	gamma-BHC (Lindane)	8.1	U
76-44-8	Heptachlor	8.1	U
309-00-2	Aldrin	8.1	U
1024-57-3	Heptachlor epoxide	8.1	U
959-98-8	Endosulfan I	8.1	U
60-57-1	Dieldrin	16	U
72-55-9	4,4'-DDE	16	U
72-20-8	Endrin	16	U
33213-65-9	Endosulfan II	16	U
72-54-8	4,4'-DDD	16	U
1031-07-8	Endosulfan sulfate	16	U
50-29-3	4,4'-DDT	16	U
72-43-5	Methoxychlor	81	U
53494-70-5	Endrin ketone	16	U
5103-71-9	alpha-Chlordane	81	U
5103-74-2	gamma-Chlordane	81	U
8001-35-2	Toxaphene	160	U
12674-11-2	Aroclor-1016	81	U
11104-28-2	Aroclor-1221	81	U
11141-16-5	Aroclor-1232	81	U
53469-21-9	Aroclor-1242	81	U
12672-29-6	Aroclor-1248	81	U
11097-69-1	Aroclor-1254	160	U
11096-82-5	Aroclor-1260	160	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

000057
EPA SAMPLE NO.

B05WN9

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-05D

Sample wt/vol: 30.5 (g/mL) G Lab File ID: _____

Level: (low/med) LOW Date Received: 03/02/92

% Moisture: not dec. 2 dec. __ Date Extracted: 03/11/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 03/20/92

GPC Cleanup: (Y/N) N pH: 9.2 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	8.0	U
319-85-7	beta-BHC	8.0	U
319-86-8	delta-BHC	8.0	U
58-89-9	gamma-BHC (Lindane)	8.0	U
76-44-8	Heptachlor	8.0	U
309-00-2	Aldrin	8.0	U
1024-57-3	Heptachlor epoxide	8.0	U
959-98-8	Endosulfan I	8.0	U
60-57-1	Dieldrin	16	U
72-55-9	4,4'-DDE	16	U
72-20-8	Endrin	16	U
33213-65-9	Endosulfan II	16	U
72-54-8	4,4'-DDD	16	U
1031-07-8	Endosulfan sulfate	16	U
50-29-3	4,4'-DDT	16	U
72-43-5	Methoxychlor	80	U
53494-70-5	Endrin ketone	16	U
5103-71-9	alpha-Chlordane	80	U
5103-74-2	gamma-Chlordane	80	U
8001-35-2	Toxaphene	160	U
12674-11-2	Aroclor-1016	80	U
11104-28-2	Aroclor-1221	80	U
11141-16-5	Aroclor-1232	80	U
53469-21-9	Aroclor-1242	80	U
12672-29-6	Aroclor-1248	80	U
11097-69-1	Aroclor-1254	160	U
11096-82-5	Aroclor-1260	160	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B05WP0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-06B

Sample wt/vol: 30.9 (g/mL) G Lab File ID: _____

Level: (low/med) LOW Date Received: 03/02/92

% Moisture: not dec. 1 dec. __ Date Extracted: 03/11/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 03/20/92

GPC Cleanup: (Y/N) N pH: 10.0 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	7.8	U
319-85-7	beta-BHC	7.8	U
319-86-8	delta-BHC	7.8	U
58-89-9	gamma-BHC (Lindane)	7.8	U
76-44-8	Heptachlor	7.8	U
309-00-2	Aldrin	7.8	U
1024-57-3	Heptachlor epoxide	7.8	U
959-98-8	Endosulfan I	7.8	U
60-57-1	Dieldrin	16	U
72-55-9	4,4'-DDE	16	U
72-20-8	Endrin	16	U
33213-65-9	Endosulfan II	16	U
72-54-8	4,4'-DDD	16	U
1031-07-8	Endosulfan sulfate	16	U
50-29-3	4,4'-DDT	16	U
72-43-5	Methoxychlor	78	U
53494-70-5	Endrin ketone	16	U
5103-71-9	alpha-Chlordane	78	U
5103-74-2	gamma-Chlordane	78	U
8001-35-2	Toxaphene	160	U
12674-11-2	Aroclor-1016	78	U
11104-28-2	Aroclor-1221	78	U
11141-16-5	Aroclor-1232	78	U
53469-21-9	Aroclor-1242	78	U
12672-29-6	Aroclor-1248	78	U
11097-69-1	Aroclor-1254	160	U
11096-82-5	Aroclor-1260	160	U

EPA SAMPLE NO.

B05WP1

PESTICIDE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-09B

Sample wt/vol: 30.7 (g/mL) G Lab File ID: _____

Level: (low/med) LOW Date Received: 03/06/92

% Moisture: not dec. 1 dec. __ Date Extracted: 03/11/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 03/20/92

GPC Cleanup: (Y/N) N pH: 9.9 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	7.9	U
319-85-7	beta-BHC	7.9	U
319-86-8	delta-BHC	7.9	U
58-89-9	gamma-BHC (Lindane)	7.9	U
76-44-8	Heptachlor	7.9	U
309-00-2	Aldrin	7.9	U
1024-57-3	Heptachlor epoxide	7.9	U
959-98-8	Endosulfan I	7.9	U
60-57-1	Dieldrin	16	U
72-55-9	4,4'-DDE	16	U
72-20-8	Endrin	16	U
33213-65-9	Endosulfan II	16	U
72-54-8	4,4'-DDD	16	U
1031-07-8	Endosulfan sulfate	16	U
50-29-3	4,4'-DDT	16	U
72-43-5	Methoxychlor	79	U
53494-70-5	Endrin ketone	16	U
5103-71-9	alpha-Chlordane	79	U
5103-74-2	gamma-Chlordane	79	U
8001-35-2	Toxaphene	160	U
12674-11-2	Aroclor-1016	79	U
11104-28-2	Aroclor-1221	79	U
11141-16-5	Aroclor-1232	79	U
53469-21-9	Aroclor-1242	79	U
12672-29-6	Aroclor-1248	79	U
11097-69-1	Aroclor-1254	160	U
11096-82-5	Aroclor-1260	160	U

9713507.1124

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

000060

EPA SAMPLE NO.

B05WT8

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-10B

Sample wt/vol: 30.8 (g/mL) G Lab File ID:

Level: (low/med) LOW Date Received: 03/02/92

% Moisture: not dec. 7 dec. Date Extracted: 03/13/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 03/20/92

GPC Cleanup: (Y/N) N pH: 8.4 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	8.4	U
319-85-7	beta-BHC	8.4	U
319-86-8	delta-BHC	8.4	U
58-89-9	gamma-BHC (Lindane)	8.4	U
76-44-8	Heptachlor	8.4	U
309-00-2	Aldrin	8.4	U
1024-57-3	Heptachlor epoxide	8.4	U
959-98-8	Endosulfan I	8.4	U
60-57-1	Dieldrin	17	U
72-55-9	4,4'-DDE	17	U
72-20-8	Endrin	17	U
33213-65-9	Endosulfan II	17	U
72-54-8	4,4'-DDD	17	U
1031-07-8	Endosulfan sulfate	17	U
50-29-3	4,4'-DDT	17	U
72-43-5	Methoxychlor	84	U
53494-70-5	Endrin ketone	17	U
5103-71-9	alpha-Chlordane	84	U
5103-74-2	gamma-Chlordane	84	U
8001-35-2	Toxaphene	170	U
12674-11-2	Aroclor-1016	84	U
11104-28-2	Aroclor-1221	84	U
11141-16-5	Aroclor-1232	84	U
53469-21-9	Aroclor-1242	84	U
12672-29-6	Aroclor-1248	84	U
11097-69-1	Aroclor-1254	170	U
11096-82-5	Aroclor-1260	170	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

000061
EPA SAMPLE NO.

B05WT9

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-03B

Sample wt/vol: 30.3 (g/mL) G Lab File ID: _____

Level: (low/med) LOW Date Received: 03/04/92

% Moisture: not dec. 5 dec. __ Date Extracted: 03/11/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 03/20/92

GPC Cleanup: (Y/N) N pH: 11.2 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	8.3	U
319-85-7	beta-BHC	8.3	U
319-86-8	delta-BHC	8.3	U
58-89-9	gamma-BHC (Lindane)	8.3	U
76-44-8	Heptachlor	8.3	U
309-00-2	Aldrin	8.3	U
1024-57-3	Heptachlor epoxide	8.3	U
959-98-8	Endosulfan I	8.3	U
60-57-1	Dieldrin	17	U
72-55-9	4,4'-DDE	17	U
72-20-8	Endrin	17	U
33213-65-9	Endosulfan II	17	U
72-54-8	4,4'-DDD	17	U
1031-07-8	Endosulfan sulfate	17	U
50-29-3	4,4'-DDT	17	U
72-43-5	Methoxychlor	83	U
53494-70-5	Endrin ketone	17	U
5103-71-9	alpha-Chlordane	83	U
5103-74-2	gamma-Chlordane	83	U
8001-35-2	Toxaphene	170	U
12674-11-2	Aroclor-1016	83	U
11104-28-2	Aroclor-1221	83	U
11141-16-5	Aroclor-1232	83	U
53469-21-9	Aroclor-1242	83	U
12672-29-6	Aroclor-1248	83	U
11097-69-1	Aroclor-1254	170	U
11096-82-5	Aroclor-1260	170	U

9213507.1126

000062

EPA SAMPLE NO.

B05WV1

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A203018-01D

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

Level: (low/med) LOW Date Received: 03/03/92

% Moisture: not dec. __ dec. __ Date Extracted: 03/06/92

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 03/20/92

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
5103-71-9	alpha-Chlordane	0.50	U
5103-74-2	gamma-Chlordane	0.50	U
8001-35-2	Toxaphene	1.0	U
12674-11-2	Aroclor-1016	0.50	U
11104-28-2	Aroclor-1221	0.50	U
11141-16-5	Aroclor-1232	0.50	U
53469-21-9	Aroclor-1242	0.50	U
12672-29-6	Aroclor-1248	0.50	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

9213507.1127

1D

000063
EPA SAMPLE NO.

PESTICIDE ORGANICS ANALYSIS DATA SHEET

B05WV2

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-02B

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

Level: (low/med) LOW Date Received: 03/04/92

% Moisture: not dec. 5 dec. __ Date Extracted: 03/11/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 03/20/92

GPC Cleanup: (Y/N) N pH: 9.9 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	8.4	U
319-85-7	beta-BHC	8.4	U
319-86-8	delta-BHC	8.4	U
58-89-9	gamma-BHC (Lindane)	8.4	U
76-44-8	Heptachlor	8.4	U
309-00-2	Aldrin	8.4	U
1024-57-3	Heptachlor epoxide	8.4	U
959-98-8	Endosulfan I	8.4	U
60-57-1	Dieldrin	17	U
72-55-9	4,4'-DDE	17	U
72-20-8	Endrin	17	U
33213-65-9	Endosulfan II	17	U
72-54-8	4,4'-DDD	17	U
1031-07-8	Endosulfan sulfate	17	U
50-29-3	4,4'-DDT	17	U
72-43-5	Methoxychlor	84	U
53494-70-5	Endrin ketone	17	U
5103-71-9	alpha-Chlordane	84	U
5103-74-2	gamma-Chlordane	84	U
8001-35-2	Toxaphene	170	U
12674-11-2	Aroclor-1016	84	U
11104-28-2	Aroclor-1221	84	U
11141-16-5	Aroclor-1232	84	U
53469-21-9	Aroclor-1242	84	U
12672-29-6	Aroclor-1248	84	U
11097-69-1	Aroclor-1254	170	U
11096-82-5	Aroclor-1260	170	U

EPA SAMPLE NO.

B05WV3

PESTICIDE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-07B

Sample wt/vol: 30.5 (g/mL) G Lab File ID: _____

Level: (low/med) LOW Date Received: 03/05/92

% Moisture: not dec. 9 dec. __ Date Extracted: 03/11/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 03/20/92

GPC Cleanup: (Y/N) N pH: 10.5 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	8.6	U
319-85-7	beta-BHC	8.6	U
319-86-8	delta-BHC	8.6	U
58-89-9	gamma-BHC (Lindane)	8.6	U
76-44-8	Heptachlor	8.6	U
309-00-2	Aldrin	8.6	U
1024-57-3	Heptachlor epoxide	8.6	U
959-98-8	Endosulfan I	8.6	U
60-57-1	Dieldrin	17	U
72-55-9	4,4'-DDE	17	U
72-20-8	Endrin	17	U
33213-65-9	Endosulfan II	17	U
72-54-8	4,4'-DDD	17	U
1031-07-8	Endosulfan sulfate	17	U
50-29-3	4,4'-DDT	17	U
72-43-5	Methoxychlor	86	U
53494-70-5	Endrin ketone	17	U
5103-71-9	alpha-Chlordane	86	U
5103-74-2	gamma-Chlordane	86	U
8001-35-2	Toxaphene	170	U
12674-11-2	Aroclor-1016	86	U
11104-28-2	Aroclor-1221	86	U
11141-16-5	Aroclor-1232	86	U
53469-21-9	Aroclor-1242	86	U
12672-29-6	Aroclor-1248	86	U
11097-69-1	Aroclor-1254	170	U
11096-82-5	Aroclor-1260	170	U

9213507 1129

1D

EPA SAMPLE NO.

B05WV4

PESTICIDE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-08B

Sample wt/vol: 30.5 (g/mL) G Lab File ID: _____

Level: (low/med) LOW Date Received: 03/05/92

% Moisture: not dec. 2 dec. __ Date Extracted: 03/11/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 03/20/92

GPC Cleanup: (Y/N) N pH: 9.9 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	8.0	U
319-85-7	beta-BHC	8.0	U
319-86-8	delta-BHC	8.0	U
58-89-9	gamma-BHC (Lindane)	8.0	U
76-44-8	Heptachlor	8.0	U
309-00-2	Aldrin	8.0	U
1024-57-3	Heptachlor epoxide	8.0	U
959-98-8	Endosulfan I	8.0	U
60-57-1	Dieldrin	16	U
72-55-9	4,4'-DDE	16	U
72-20-8	Endrin	16	U
33213-65-9	Endosulfan II	16	U
72-54-8	4,4'-DDD	16	U
1031-07-8	Endosulfan sulfate	16	U
50-29-3	4,4'-DDT	16	U
72-43-5	Methoxychlor	80	U
53494-70-5	Endrin ketone	16	U
5103-71-9	alpha-Chlordane	80	U
5103-74-2	gamma-Chlordane	80	U
8001-35-2	Toxaphene	160	U
12674-11-2	Aroclor-1016	80	U
11104-28-2	Aroclor-1221	80	U
11141-16-5	Aroclor-1232	80	U
53469-21-9	Aroclor-1242	80	U
12672-29-6	Aroclor-1248	80	U
11097-69-1	Aroclor-1254	160	U
11096-82-5	Aroclor-1260	160	U

000002

OFFICE OF SAMPLE MANAGEMENT

RECORD OF DISPOSITION

ROD-92-00068
Record of Disposition No.

DATE: 3/16/92

LABORATORY: TMA

PROJECT TITLE/NO.: 100-HR-1

NCR NO.: B07710

SAMPLE IDENTIFICATION NUMBERS:

B05WT8

DESCRIPTION OF EVENT:

The holding times for sample B05WT8 were missed at the TMA laboratory for VOA, Semi-VOA, and PCBs/Pesticides. The Semi-VOA and PCBs/Pesticides were extracted one day past the holding time.

DISPOSITION OF SAMPLES:

The project coordinator has instructed WHC OSM to have the TMA laboratory analyze sample B05TW8 for VOA, Semi-VOA, and PCBs/Pesticides. The data shall be flagged to denote the missed hold time.

APPROVAL SIGNATURES:

OSM Project Coordinator (Print/Sign Name) — Date 3/16/92

Technical Representative (Print/Sign Name) — Date

Quality Assurance (Print/Sign Name) — Date

OFFICE OF SAMPLE MANAGEMENT

RECORD OF DISPOSITION

ROD-92-00068
Record of Disposition No.
000003
~~000000~~

DATE: 3/16/92	LABORATORY: TMA
PROJECT TITLE/NO.: 100-HR-1	NCR NO.: B07710

SAMPLE IDENTIFICATION NUMBERS:

B05WT8

RECEIVED
APR 6 1992

DESCRIPTION OF EVENT:

The holding times for sample B05WT8 were missed at the TMA laboratory for VOA, Semi-VOA, and PCBs/Pesticides. The Semi-VOA and PCBs/Pesticides were extracted one day past the holding time.

DISPOSITION OF SAMPLES:

The project coordinator has instructed WHC OSM to have the TMA laboratory analyze sample B05TW8 for VOA, Semi-VOA, and PCBs/Pesticides. The data shall be flagged to denote the missed hold time.

APPROVAL SIGNATURES:

OSM Project Coordinator (Print/Sign Name) — Date: 3/16/92

J. M. Ayres — Technical Representative (Print/Sign Name) — Date: 3/19/92

Gracy Corrigan / Gracy Corrigan — Quality Assurance (Print/Sign Name) — Date: 3-26-92

ORIGINAL IN [illegible] 3-2-92

Westinghouse Hanford Company	CHAIN OF CUSTODY

ARL 1
000004
~~00000~~

Custody Form Initiator CM Chanie

Company Contact JD Fancher — Telephone (509) 376-2081

Project Designation/Sampling Locations 100HR-1 Valose Zone Sampling — Collection Date 2-28-92

Ice Chest No. SML-114 & Yearwood — Field Logbook No. WHC-N-5572

Bill of Lading/Airbill No. — Offsite Property No.

Method of Shipment Overnight Air Delivery

Shipped to TMA/NOR(A) 2030 Wright Ave. Richmond Ca. 94804

Possible Sample Hazards/Remarks Maintain at 4°C

BD5WV1

Sample Identification

~~(3)1000ml Gbottle(ICP/AA metals, Hg) Preserved HNO3~~

~~(3)1000ml Gbottle(Cn) " NaOH~~

(3)40ml Gs (VOA)

(3)2360ml aG (Semi-VOA, PCB/PEST)

~~(2)4000ml Pbottle(Gross alpha/beta, Gamma Spec, Sr-90, Tc-99, C-14, U-235/238, Pu-239/240, Am-241~~

CC 2-28-92

☐ Field Transfer of Custody

CHAIN OF POSSESSION (Sign and Print Names)		
Relinquished by: CM Chanie, Cory Chanie	Received by: K. Trapp / K. Trapp	Date/Time: 3/2/92 1214
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 3-3-92 1130 *
Relinquished by: Kermit Blum 3-4-92	Received by: C. Harris	Date/Time: 3/5/92 9
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments: * Icechest containing metals & CN⁻ aliquots lost in transit. Found by Emery Worldwide & delivered to TMA/NORCAL 3-4-92 @ 1145.

A-6000-407 (12/90)

9218687.1135

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

000005

PART I: FIELD SECTION

Collector C. Chance Date Sampled 2/28/92 Time 1300 hours

Company Contact J.D. Fancher Telephone (509) 376-2081

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B05WV1	~~G 3, 1000ml~~ x	~~water~~	~~ICP/AA metals, Hg, CLP~~
	~~G 3, 1000ml~~ xx	~~water~~	~~Cn, CLP~~
	G 3, 40ml	water	CLP; VOA
	aG 3, 2360ml	water	CLP; Semi-VOA, PCB/Pest
	~~P 2, 4000ml~~ xxx	~~water~~	~~Gross Alpha, Gross beta, Gamma Spec, Sr-90, Tc-99, C-14, Alpha Spec, U 235/238, Pu 239/240, Am 241~~
			KFT 3/2/92

Field Information** x Preserved in HNO_3, xx Preserved in NaOH, xxx Preserved in HNO_3

Special Handling and/or Storage Maintain at 4°C

Possible Sample Hazards None observed.

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 3-3-92

Analysis Required

*Indicate whether sample is soil, sludge, water, etc.

**Use back of page for additional information relative to sample location.

A-6000-406 (05/90)

9213507.1154

Westinghouse Hanford Company	CHAIN OF CUSTODY	000006

Custody Form Initiator W.V. SETZER

Company Contact J.D. Fancher Telephone (509)376-2081

Project Designation/Sampling Locations 100-HR-1 Vadose Zone Sampling Collection Date 8-2-92

116-H-7

Ice Chest No. SML 151 Field Logbook No WHC-N-5572

Bill of Lading/Airbill No. Offsite Property No

Method of Shipment Overnight Air Delivery

Shipped to TMA/NORCAL 2030 Wright Ave. Richmond Ca. 94804

Possible Sample Hazards/Remarks Maintain at 4°C

Sample Identification

B05WV2

~~(1)1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am-241)~~

~~(1) 250ml G bottle(ICP/AA metals,Hg)~~

(1) 500 ml aG bottle(Semi-VOA,PCB's/PEST.)

~~(1) 125ml G bottle(Cyanide)~~ 120 WVS 3-2-92

(1) ~~125~~ml G bottle(VOA) 120 WVS 3-2-92

(1)1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am2

(1) 250ml G bottle(ICP/AA metals, Hg)

(1)500 ml aG bottle(Semi-VOA,PCB's/PEST.)

(1) 125ml G bottle(Cyanide) WVS 3-2-92

(1) 125ml G bottle(VOA)

☐ Field Transfer of Custody

CHAIN OF POSSESSION (Sign and Print Names)

Relinquished by:	Received by	Date/Time:
W.V. SETZER W.V. Setzer	Kermit Blum	3-4-92 1200
Relinquished by: Kermit Blum 3-4-92	Received by C. Harris	Date/Time: 3/5/92 9:00
Relinquished by:	Received by	Date/Time:
Relinquished by:	Received by	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

9213507.1155

Westinghouse Hanford Company	CHAIN OF CUSTODY	000007

Custody Form Initiator CMChance

Company Contact J.D. Fancher Telephone (509)376-2081

Project Designation/Sampling Locations 100-HR-1 Vadose Zone Sampling Collection Date 2-28-92

116-H-7

Ice Chest No. SML 151 Field Logbook No WHC-N-557

Bill of Lading/Airbill No. Offsite Property No

Method of Shipment Overnight Air Delivery

Shipped to IMA/NORCAL 2030 Wright Ave. Richmond Ca. 94804

Possible Sample Hazards/Remarks Maintain at 4°C

Sample Identification

B05WT9

~~(1)1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am-241)~~	(1)1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am2
~~(1) 250ml G bottle(ICP/AA metals,Hg)~~	(1) 250ml G bottle(ICP/AA metals, Hg)
(2) 250 ml ~~(1) 500~~ ml aG bottle(Semi-VOA,PCB's/PEST.) JM 2-28-92	(1)500 ml aG bottle(Semi-VOA,PCB's/PEST.) (2-28-92)
~~(1) 125ml G bottle(Cyanide)~~ 120 WDS 3-2-92	(1) 125ml G bottle(Cyanide)
(1) ~~125~~ml G bottle(VOA) 120 WDS 3-2-92	(1) 125ml G bottle(VOA)

☑ Field Transfer of Custody — CHAIN OF POSSESSION — (Sign and Print Names)

Relinquished by:	Received by	Date/Time:
CMChance Cary Chance	Kermit Blum	3-4-92 1200
Relinquished by: Kermit Blum 3-4-92	Received by C. Harris	Date/Time: 3/5/92 9 am
Relinquished by:	Received by	Date/Time:
Relinquished by:	Received by	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

9213507.1156

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST 000008

PART I: FIELD SECTION

Collector W.W. SETZER

Date Sampled BOSW19-2-28-92 BOSWU2 3-3-92 Time ____ hours

Company Contact J.D. Fancher

Telephone (509) 376-2081

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
	1, 120mL G	soil	CLP; VOA
	~~1,~~ 2 ~~500~~ 250mL aG WWS 3-3-92	soil	CLP; semi-VOA, PCB/PEST
	~~1, 1000mL G~~	~~soil~~	~~Gross Alpha, Gross Beta, Gamma~~
BOSW19			~~Spec., U-235/238, Pu-239/240,~~
			~~Sr-90, Tc-99, C-14, Am-241.~~
	~~1, 250mL G~~	~~soil~~	CLP; ICP/AA Metals, ~~Hg~~
	~~1, 120mL G~~	~~soil~~	~~CLP; Cn~~
	1, 120mL G	soil	CLP; VOA
	1, 500mL aG	soil	CLP; semi-VOA, PCB/PEST
	~~1, 1000mL G~~	~~soil~~	~~Gross Alpha, Gross Beta, Gamma~~
BOSWU2			~~Spec., U-235/238, Pu-239/240,~~
			~~Sr-90, Tc-99, C-14, Am-241.~~
	~~1, 250mL G~~	~~soil~~	~~CLP; ICP/AA Metals, Hg~~
	~~1, 120mL G~~	~~soil~~	~~CLP; Cn~~

Field Information** BOTH SAMPLES HAD MORE than 100 counts OVER BACKGROUND WITH LAB RESULTS BEING < .0005 Pici

Special Handling and/or Storage Samples must be maintained at 4 C

Possible Sample Hazards SEE FIELD INFO

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 3-4-92

Analysis Required

*Indicate whether sample is soil, sludge, water, etc.

**Indicate any other information such as sample location

A-6000-406 (05/90)

9213502.1157

Westinghouse Hanford Company

CHAIN OF CUSTODY

000009 F.R.L.I

Custody Form Initiator W.V. SETZER

Company Contact J.D. Fancher Telephone (509)376-2081

Project Designation/Sampling Locations 100-HR-1 Vadose Zone Sampling Collection Date 2-26-92

116-H-9

Ice Chest No. ~~14~~ KFT 2/25/92 SHL-113 Field Logbook No EFL 1014

Bill of Lading/Airbill No. Offsite Property No

Method of Shipment Overnight Air Delivery

Shipped to TMA/NORCAL 2030 Wright Ave. Richmond Ca. 94804

Possible Sample Hazards/Remarks Maintain at 4°C

Sample Identification

B05WN8

~~(1) 1000ml G bottle(Gross Alpha/Beta,Gamma-Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am-241)~~

~~(1) 250ml G bottle(ICP/AA metals,Hg)~~

(1) 500 ml aG bottle(Semi-VOA,PCB's/PEST.)

~~(1) 125ml aG bottle(Cyanide)~~ 120 2-26-92

(1) ~~125~~ 120 ml aG bottle(VOA) WVS 2-26-92

~~B05WN8~~ WVS 2-26-92

(1) 1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am

(1) 250ml G bottle(ICP/AA metals, Hg)

(1) 500 ml aG bottle(Semi-VOA,PCB's/PEST.)

(1) ~~125~~ 120 ml aG bottle(Cyanide) WVS 2-26-92

(1) ~~125~~ 120 ml aG bottle(VOA) 2-26-92

☐ Field Transfer of Custody

CHAIN OF POSSESSION (Sign and Print Names)		
Relinquished by: W.V. SETZER W.V. Setzer	Received by: K. Trapp/K. Trapp	Date/Time: 2/28/92 1022
Relinquished by: K. Trapp/K. Trapp	Received by: Kermit Blum	Date/Time: 3-2-92 ~~3-3-92~~ 0800 *
Relinquished by: Kermit Blum 3-4-92	Received by: C. Harris	Date/Time: 3/5/92 9
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments: * Opened 3-2-92; received @ TMA/Norcal 2-29-92 @ 1300

9215502.1139

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

000010

PART I: FIELD SECTION

Collector W. Setzer

Date Sampled ~~2/27/92~~ 2/26/92 Time ~~1003~~ 1010 hours

Company Contact J.D. Fancher

Telephone (509) 376-2081

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
	1, 120mL G	soil	CLP; VOA
	1, 500mL aG	soil	CLP; semi-VOA, PCB/PEST
	~~1, 1000mL G~~	~~soil~~	~~Gross Alpha, Gross Beta, Gamma~~
B05WN8			~~Spec., U-235/238, Pu-239/240,~~
			~~Sr-90, Tc-99, C-14, Am-241.~~
	~~1, 250mL G~~	~~soil~~	~~CLP; ICP/AA Metals, Hg~~
	~~1, 120mL G~~	~~soil~~	~~CLP; Cn~~
	1, 120mL G	soil	CLP; VOA
	1, 500mL aG	soil	CLP; semi-VOA, PCB/PEST
	~~1, 1000mL G~~	~~soil~~	~~Gross Alpha, Gross Beta, Gamma~~
B05WN9			~~Spec., U-235/238, Pu-239/240,~~
			~~Sr-90, Tc-99, C-14, Am-241.~~
	~~1, 250mL G~~	~~soil~~	~~CLP; ICP/AA Metals, Hg~~
	~~1, 120mL G~~	~~soil~~	~~CLP; Cn~~

Field Information**

Special Handling and/or Storage Samples must be maintained at 4 C

Possible Sample Hazards None observed.

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 3-3-92

Analysis Required

*Indicate whether sample is soil, sludge, water, etc.

**Attach back of page for additional information relative to sample location.

A-6000-406 (05/90)

9213507.1159

Westinghouse Hanford Company

CHAIN OF CUSTODY

000011

Custody Form Initiator C.M. Chance

Company Contact J.D. Fancher

Telephone (509) 376-2081

Project Designation/Sampling Locations 100-HR-1 Vadose Zone Sampling 116-H-9

Collection Date 2/27/92

Ice Chest No. SML-113

Field Logbook No EFL 1014

Bill of Lading/Airbill No.

Offsite Property No

Method of Shipment Overnight Air Delivery

Shipped to TMA/NORCAL 2030 Wright Ave. Richmond Ca. 94804

Possible Sample Hazards/Remarks Maintain at 4°C

Sample Identification

B05WN9	B05WP0
~~(1) 1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr 90,Tc 99,C 14,U 235/238,Pu 239/240Am 241)~~	~~(1) 1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr 90,Tc 99,C 14,U 235/238,Pu 239/240Am 241)~~
~~(1) 250ml G bottle(ICP/AA metals,Hg)~~	~~(1) 250ml G bottle(ICP/AA metals, Hg)~~
(1) 500 ml aG bottle(Semi-VOA,PCB's/PEST.)	(1) 500 ml aG bottle(Semi-VOA,PCB's/PEST.)
~~(1) 125ml G bottle(Cyanide)~~ 120 KFT 2/29/92	~~(1) 125ml G bottle(Cyanide)~~ 120 KFT 2/29/92
(1) ~~125~~ml G bottle(VOA) 120 KFT 2/29/92	(1) ~~125~~ml G bottle(VOA) 120 KFT 2/29/92

☐ Field Transfer of Custody

CHAIN OF POSSESSION (Sign and Print Names)

Relinquished by:	Received by	Date/Time:
C.M. Chance / C.M. Chance	K. Trapp / K. Trapp	2/28/92 1022
K. Trapp / K. Trapp	Kermit Blum	3-2-92 ~~3-3-92~~ KB 0800 *
Kermit Blum 3-4-92	C. Harris	3/5/92 9^00

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments: * Opened 3-2-92; Received @ TMA / Norcal 2-29-92 @ 1300 Sample B05WP0 / ~~not received~~ (GH) 2 Bottles [illegible]

9213507.1140

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST 000012

PART I: FIELD SECTION

Collector W. Setzer Date Sampled ~~2/27/92~~ 1350 Time ~~0955~~ hours

Company Contact J.D. Fancher Telephone (509) 376-2081

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
	1, 120mL G	soil	CLP; VOA
	1, 500mL aG	soil	CLP; semi-VOA, PCB/PEST
	~~1, 1000mL G~~	~~soil~~	~~Gross Alpha, Gross Beta, Gamma~~
B05WP0			~~Spec., U-235/238, Pu-239/240,~~
			~~Sr-90, Tc-99, C-14, Am-241.~~
	~~1, 250mL G~~	~~soil~~	~~CLP; ICP/AA Metals, Hg~~
	~~1, 120mL G~~	~~soil~~	~~CLP; Cn~~
	1, 120mL G	soil	CLP; VOA
	1, 500mL aG	soil	CLP; semi-VOA, PCB/PEST
	~~1, 1000mL G~~	~~soil~~	~~Gross Alpha, Gross Beta, Gamma~~
B05WT8			~~Spec., U-235/238, Pu-239/240,~~
			~~Sr-90, Tc-99, C-14, Am-241.~~
	~~1, 250mL G~~	~~soil~~	~~CLP; ICP/AA Metals, Hg~~
	~~1, 120mL G~~	~~soil~~	~~CLP; Cn~~

Field Information**

Special Handling and/or Storage Samples must be maintained at 4 C

Possible Sample Hazards None observed.

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 3-2-92

Analysis Required

*Indicate whether sample is soil, sludge, water, etc.

**Indicate any additional information relative to sample location.

A-6000-406 (05/90)

Westinghouse Hanford Company

CHAIN OF CUSTODY 000013

Custody Form Initiator C.M. Chance

Company Contact J.D. Fancher

Telephone (509)376-2081

Project Designation/Sampling Locations 100-HR-1 Vadose Zone Sampling 116-H-7

Collection Date 2/27/92

Ice Chest No. SML-113

Field Logbook No.

Bill of Lading/Airbill No.

Offsite Property No.

Method of Shipment Overnight Air Delivery

Shipped to TMA/NORCAL 2030 Wright Ave. Richmond Ca. 94804

Possible Sample Hazards/Remarks Maintain at 4°C

Sample Identification

~~B05WN9~~ KFT 2/28/92

(1) 1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am-241)

(1) 250ml G bottle(ICP/AA metals,Hg)

(1) 500 ml aG bottle(Semi-VOA,PCB's/PEST.)

(1) 125ml G bottle(Cyanide)

(1) 125ml G bottle(VOA)

KFT 2/28/92

B05WT8

~~(1) 1000ml G bottle(Gross Alpha/Beta,Gamma, Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am~~

~~(1) 250ml G bottle(ICP/AA metals, Hg)~~

(1) 500 ml aG bottle(Semi-VOA,PCB's/PEST.)

~~(1) 125ml G bottle(Cyanide)~~ 120 KFT 2/28/92

(1) ~~125~~ml G bottle(VOA) 120 KFT 2/28/92

☑ Field Transfer of Custody

CHAIN OF POSSESSION (Sign and Print Names)		
Relinquished by: C.M. Chance	Received by: K. Trapp / K. Trapp	Date/Time: 2/28/92 1022
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 3-2-92 ~~3-3-92~~ KB 0800 *
Relinquished by: Kermit Blum 3-4-92	Received by: L. Harris	Date/Time: 3/5/92 9a
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Westinghouse Hanford Company

CHAIN OF CUSTODY

000014

ARL1

Custody Form Initiator W.V. SETZER

Company Contact J.D. Fancher

Telephone (509) 376-2081

Project Designation/Sampling Locations 100-HR-1 Vadose Zone Sampling 116-N-7

Collection Date 3-2-92

Ice Chest No. SML-131

Field Logbook No ~~WHC-N-557~~ 2

Bill of Lading/Airbill No 2509866722

Offsite Property No ~~WHC-S-0011~~ #2

Method of Shipment Overnight Air Delivery

Shipped to IMA/NORCAL 2030 Wright Ave. Richmond Ca. 94804

Possible Sample Hazards/Remarks Maintain at 4°C

Sample Identification

B05WV4	B05WV3
~~(1) 1000ml G bottle(Gross Alpha/Beta,Gamma~~	~~(1) 1000ml G bottle(Gross Alpha/Beta,Gamma~~
~~Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240~~Am-241)	~~Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/~~240Am2
~~(1) 250ml G bottle(ICP/AA metals,Hg)~~	~~(1) 250ml G bottle(ICP/AA metals, Hg)~~
(1) 500 ml aG bottle(Semi-VOA,PCB's/PEST.)	(1) 500 ml aG bottle(Semi-VOA,PCB's/PEST.)
120 WVS 3-2-92 ~~(1) 125ml G bottle(Cyanide)~~	120 ~~(1) 125ml G bottle(Cyanide)~~
120 WVS 3-2-92 (1) ~~125~~ml G bottle(VOA)	WVS 120 (1) 125ml G bottle(VOA)

☐ Field Transfer of Custody

CHAIN OF POSSESSION (Sign and Print Names)

Relinquished by:	Received by:	Date/Time:
W.V. SETZER / W.V. Setzer	K. Trapp / K. Trapp	3/4/92 0935
K. Trapp / K. Trapp	Kermit Blum	3-5-92 1100
Kermit Blum 3-5-92	C. Harris	3/6/92 9 am

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector W. Setzer Date Sampled 3/2/92 Time ~~0945~~ 0950 hours

Company Contact J.D. Fancher Telephone (509) 376-2081413

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
	1, 120mL G	soil	CLP; VOA
	1, 500mL aG	soil	CLP; semi-VOA, PCB/PEST
	~~1, 1000mL G~~	~~soil~~	~~Gross Alpha, Gross Beta, Gamma~~
B05WV3			~~Spec., U-235/238, Pu-239/240,~~
			~~Sr-90, Tc-99, C-14, Am-241.~~
	~~1, 250mL G~~	~~soil~~	~~CLP; ICP/AA Metals, Hg~~
	~~1, 120mL G~~	~~soil~~	~~CLP; Cn~~
	1, 120mL G	soil	CLP; VOA
	1, 500mL aG	soil	CLP; semi-VOA, PCB/PEST
	~~1, 1000mL G~~	~~soil~~	~~Gross Alpha, Gross Beta, Gamma~~
B05WV4			~~Spec., U-235/238, Pu-239/240,~~
			~~Sr-90, Tc-99, C-14, Am-241.~~
	~~1, 250mL G~~	~~soil~~	~~CLP; ICP/AA Metals, Hg~~
	~~1, 120mL G~~	~~soil~~	~~CLP; Cn~~

Field Information**

Special Handling and/or Storage Samples must be maintained at 4 C.

Possible Sample Hazards None observed.

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 3-5-92

Analysis Required

*Indicate whether sample is soil, sludge, water, etc.

000016

Westinghouse Hanford Company	CHAIN OF CUSTODY	ARL1

Custody Form Initiator CM Chance

Company Contact J.D. Fancher Telephone (509)376-2081

Project Designation/Sampling Locations 100-HR-1 Vadose Zone Sampling Collection Date 3-4-92

GH 100-H-3

Ice Chest No. SML-60 Field Logbook No. EFL-1014

Bill of Lading/Airbill No. Offsite Property No.

Method of Shipment Overnight Air Delivery

Shipped to TMA/NORCAL 2030 Wright Ave. Richmond Ca. 94804

Possible Sample Hazards/Remarks Maintain at 4°C

Sample Identification

E05WP1	
~~(1)1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am-241)~~	(1)1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am24
~~(1) 250ml G bottle(ICP/AA metals,Hg)~~	(1) 250ml G bottle(ICP/AA metals, Hg)
(1) 500 ml aG bottle(Semi-VOA,PCB's/PEST.)	(1)500 ml aG bottle(Semi-VOA,PCB's/PEST.) CC 3-4-92
~~(1)120ml G bottle(Cyanide)~~	(1) 120ml G bottle(Cyanide)
(1)120ml G bottle(VOA)	(1) 120ml G bottle(VOA)

☑ Field Transfer of Custody — CHAIN OF POSSESSION — (Sign and Print Names)

Relinquished by:	Received by:	Date/Time:
CM Chance / Cory Chance	K. Trapp / K. Trapp	3/5/92 1005
K. Trapp / K. Trapp	Kermit Blum	3-6-92 1115
Kermit Blum 3-9-92	C. Harris	3/10/92 9^00

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector C. Chance Date Sampled 3/4/92 Time 1405 hours

Company Contact J.D. Fancher Telephone (509) 376-2081

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B05WP1	1, 120mL G	soil	CLP; VOA
	1, 500mL aG	soil	CLP; semi-VOA, PCB/PEST
	~~1, 1000mL G~~	~~soil~~	~~Gross Alpha, Gross Beta, Gamma~~
			~~Spec., U-235/238, Pu-239/240,~~
			~~Sr-90, Tc-99, C-14, Am-241.~~
	~~1, 250mL G~~	~~soil~~	~~CLP; ICP/AA Metals, Hg~~
	~~1, 120mL G~~	~~soil~~	~~CLP; Cn~~
	1, 120mL G	soil	CLP; VOA
	1, 500mL aG	soil	CLP; semi-VOA, PCB/PEST
	1, 1000mL G	soil	Gross Alpha, Gross Beta, Gamma
			Spec., U-235/238, Pu-239/240,
			Sr-90, Tc-99, C-14, Am-241.
	1, 250mL G	soil	CLP; ICP/AA Metals, Hg
	1, 120mL G	soil	CLP; Cn
			KFF 3/5/92

Field Information**

Special Handling and/or Storage Samples must be maintained at 4 C.

Possible Sample Hazards None observed.

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 3-6-92

Analysis Required

*Indicate whether sample is soil, sludge, water, etc.

**Use back of page for additional information relative to sample location

A-6000-405 (5/90)

Westinghouse Hanford Company

Hanford Operations and Engineering Contractor for the US Department of Energy
P.O. Box 1970 Richland, Wa. 99352

NONCONFORMANCE REPORT

Page 1 of ____

No. B 07710

1. MFR/ORG: WHC/TMA
ITEM/MATERIAL NAME: N/A
PART NO.: N/A
DRAWING/SPEC. NO.: N/A
REV.: N/A
PROGRAM/PROJECT: 100-HR-1
P.O./W.O. NO.: 92-150
UNUSUAL OCCURRENCE REPORT REQUIRED: ☐ YES ☐ NO
SYSTEM/END USE: N/A
DATE: ____

2. DESCRIPTION OF NONCONFORMANCE

92-150 - (ROD-92-00068)

Sample # B05WT8
Holding times missed for VOA, Semi-VOA, and PCB's/Pesticides. Because it wasn't logged in at TMA until 3/13/92. Sample was received 3/2/92

3. REQUIREMENT VIOLATED | DOCUMENT | REV | ZONE/PARA

Holding time missed (Holding times in accordance with WHC-SD-EN-066, Rev. 0)

ORIGINATOR: Nancy O. Seguin
ORGANIZATION: 12500
DATE: 3/20/92

4. ASME CODE ITEM(s): ☒ NO ☐ YES. NOTIFY AUTHORIZED INSPECTOR.
WHC QAR: NA

5. CAUSE OF NONCONFORMANCE
☐ PROCEDURES ☒ PERSONNEL ☐ MATERIALS
☐ EQUIPMENT ☐ OTHERS
REMARKS:

6. CORRECTIVE ACTION TO ELIMINATE CAUSE

INITIATION DATE: ____ SERIAL NO.: ____
RESPONSIBLE ORG. REP. | TITLE | DATE

7. RECOMMENDED DISPOSITION: ☐ ACCEPT ☐ REJECT ☐ REPAIR ☐ REWORK ☐ OTHER

8A. DISPOSITION JUSTIFICATION AND INSTRUCTIONS

Analysis for VOA, semi-VOA and PCBs/pesticides shall be performed. All affected data shall be flagged for information only.

8B. SUPPLIER ENG.: NA
SUPPLIER QA: NA

9. ADDITIONAL REVIEWS REQUIRED (WHC ONLY) ☐ YES ☐ NO
IF YES, IDENTIFY:

10. DISPOSITION APPROVAL (WHC ONLY)
☐ APPROVED ☐ DISAPPROVED
☐ OTHER (SEE CONTINUATION SHEET)

JM Davis — 29 Sep 92
COGNIZANT ENGINEER — DATE

CS Corriga — 9-29-92
COGNIZANT QA ENGINEER — DATE

AUTHORIZED INSPECTOR REVIEW — DATE

11. ADDITIONAL APPROVALS

NAME	TITLE	DATE	NAME	TITLE	DATE

12. DISPOSITION ACTION COMPLETE

NAME: ____ DATE: ____ QTY. ACCEPT: ____ QTY. REJ.: ____

FOLLOW ON NCR

QA LOG NO. EGH-92-~~030~~ 029 MG 3/31/92

The issuance and acceptance of this request in no way limits or affects the warranty provisions of the order. This request shall not establish a precedent or obligation to accept similar conditions in the future.

FOLLOW-UP LEVEL: A ☐ B ☐ C ☐

9213507.1147

OFFICE OF SAMPLE MANAGEMENT

RECORD OF DISPOSITION

ROD-92-00068
Record of Disposition No.

DATE: 3/16/92	LABORATORY: TMA
PROJECT TITLE/NO.: 100-HR-1	NCR NO.: B07710

SAMPLE IDENTIFICATION NUMBERS:

B05WT8

DESCRIPTION OF EVENT:

The holding times for sample B05WT8 were missed at the TMA laboratory for VOA, Semi-VOA, and PCBs/Pesticides. The Semi-VOA and PCBs/Pesticides were extracted one day past the holding time.

DISPOSITION OF SAMPLES:

The project coordinator has instructed WHC OSM to have the TMA laboratory analyze sample B05TW8 for VOA, Semi-VOA, and PCBs/Pesticides. The data shall be flagged to denote the missed hold time.

APPROVAL SIGNATURES:

Paul N. Pool — 3/16/92
OSM Project Coordinator (Print/Sign Name) — Date

J. M. Ayres — 3/19/92
Technical Representative (Print/Sign Name) — Date

Gary Corrigan — 3-26-92
Quality Assurance (Print/Sign Name) — Date

ADMINISTRATIVE REQUEST

DATE: 3/13/92 TIME: 12^00

FROM: Nicole Roth TMA/ARLT
CLP Program Manager

[redacted]

Assigned to: _____

Date: _____

Time: [redacted]

COMPLETION REQUIRED (check one)

[ ] Earliest convenience

[ ] ASAP, BUT no later than _____

[X] URGENT Must have by Friday March 13, 1992

WORK REQUESTED: Completed by: _____

A WHC sample B05WT8 was not logged into our TMA/ARLT WO# A2-03-018 until today. The sample was received by TMA/Norcal on 3/2/92. Therefore, the CLP SOW VTSR holding time has been missed for this sample's analyses + extractions. The tests are VOA, Semi-VOA, and Pest/PCB.

Please inform WHC and inform us ASAP as to how to proceed with this sample.

9210507.1149

[5] From: Jeffrey M Ayres at ~WHC37 3/16/92 9:51AM (681 bytes: 9 ln)
To: Daniel L Edwards at ~WHC169, Jeffrey M Ayres
cc: Jonathan D Fancher at ~WHC178, Karl N Pool at ~WHC167
Subject: Sample B05WT8

---------- Message Contents ----------

Dan, Please have the lab continue the analysis on the sample with the blown holding time. I also want an NCR (Non-Conformance Report) and a complete explaination for the missed holding time.

Thank you for your attention to this matter. Please call me if you have any questions.

Jeff Ayres, 6-3918

9213502.1150

Westinghouse Hanford Company

NONCONFORMANCE REPORT

1. Page 1 of 1

2. Preprinted No. 050501

QA Log No. EQA-92-103

3. P. O., W. O., or Job Control No.	4. System/End Use	5. Item/Material	6. Dwg./Spec./Other No.	7. Rev.
n/A	RI/FS	n/A	n/A	0

8. Program/Project/Other: Helcm 100-HR-1/92-150

9. Safety Class:

10. ASME Code Items: ☐ Yes ☒ No (If yes, notify authorized inspector)

11. Supplier Name/Address: n/A

12. Notification of Potential Occurence Required: ☐ Yes ☒ No

13. Code: Lot/Heat/Serial	14. Lot Size	15. Sample	16. Qty. Acc.	17. Inspection Criteria
n/A	n/A			☐ Dwg. ☐ Spec. ☐ Insp. Plan ☒ Other CLP SOW (Organic) OLM01

18. Item	19. Description of Nonconformance (list serial no. where applicable)	22. Disposition, Justification, and Instructions
1	Sample B05WV5 holding time was missed. (REF. ROD-92-00111)	Analysis for Semi-VOA PCB/Pesticide was cancel. These are the only analytes with missed holding time and no data will be reported.

20. Originator's Signature: LC McClanahan — Date: 09/14/92

23. Design Document Change Required? ☐ Yes, Doc. No. _____ ☐ No

21. Cognizant QA Manager's Signature: [signature] — Date: 10-8-92

24. Corrective Action Required? ☐ Yes, No. _____ ☐ No

Disp. App.

25. Cognizant Engineer	Date	26. Technical Rep.	Date	Signature/Org.	Date
JM Ayres	14 Oct 92	JM Ayres	14 Oct 92		

QA Engineer	Date	Signature/Org.	Date	Signature/Org.	Date
G.S. Corrigan	10-14-92				

Close

27. Accept NA Reject NA Follow on NCR NA

QA/C Personnel — Date: 10-14-92

A-7310-104 (10/91)

9213687.1151

QUALITY ASSURANCE

NONCONFORMANCE REPORT DISTRIBUTION

1. FROM:	2. MSIN:	3. DATE:
Office of Sample Management	T6-08	10-7-92

4. NCR No.:	5. Initiation, Disposition, or Closure (I, D, C):
050501 / EQA-92-103	

6. TO:			MSIN	I	D	C
Cognizant Engineer	J. M. Ayres	H4-55	H4-55	I		
Cognizant Quality Engineer	G. S. Corrigan	H4-16	H4-16	I		
Originator	L. C. McClanahan	T6-08	T6-08	I		
Q. A. Manager	T. L. Bennington	H4-16	H4-16	I		
Cognizant QE Manager	NA					
Facility Manager	NA					
Engineering Records	L. M. McDaniel	H4-55	H4-55	I		
Safety	NA					
QSDM	Quest	L4-86	L4-86	I		
Other:						
JCS Package	NA					
Q. C.	NA					
Buyer (Procurement)	NA					
P.O. File (Procurement)	NA					
Vendor File (Procurement)	NA					
EQA FILE			H4-16			

7. QST Codes

Subject:	Cause:	Contr. Factor:	PPG:
AD-08	PN-003		

8. Responsible Action Party:	Org Code:
J. M. Ayres	81310

A-6000-816 (09/91)

OFFICE OF SAMPLE MANAGEMENT

RECORD OF DISPOSITION

ROD-92-00111
Record of Disposition No.

DATE: September 14, 1992	LABORATORY: TMA
PROJECT TITLE/NO.: 100-HR-1/92-150	NCR NO.: 050501

SAMPLE IDENTIFICATION NUMBERS:

►► B05WV5

DESCRIPTION OF EVENT:

►► Sample B05WV5 was received at the *TMA Laboratory*, and required semi-VOA and pesticide analysis. The sample holding time expired prior to the analysis being run.

DISPOSITION OF SAMPLES:

►► The ERE project coordinator (Jeff Ayres) approved cancellation of the analysis for semi-VOA and PCB/pesticides.

►► *Note:* NCR B08331 canceled and replaced by NCR 050501.

APPROVAL SIGNATURES:

K. N. Pool — 9/14/92
OSM Project Coordinator (Print/Sign Name) — Date

J. M. Ayres — 9/16/92
Technical Representative (Print/Sign Name) — Date

R W FERUSSE — 9-16-92
Quality Assurance (Print/Sign Name) — Date

9215507.1155

TMA

To: Dan Edwards, OSM-Westinghouse Hanford

From: Dolores Sanchez

Subject: B05WV5 (100-HR-1 Vadose Zone)

Date: April 20, 1992

REQUEST FOR DISPOSITION

We discovered today that we failed to run Semivolatiles and Pesticides on Westinghouse Sample B05WV5. Shall we proceed with analysis even if it is out of holding time? Please advise.

*Has not been extracted.
*34 days past hold time.

cc: Michelle Miller

TMA
Thermo Analytical Inc.

Skinner & Sherman Laboratories Inc.
300 Second Avenue
Post Office Box 521
Waltham, MA 02254-0521

(617) 890-7200 • FAX (617) 890-3883

9213507.1154

April 2, 1992

TMA/NORCAL
2030 Wright Avenue
Richmond, CA 94804
Attention: Dan Stuermer

Quality Control Narrative

Scope
Four (4) soil samples were submitted to TMA/Skinner & Sherman Laboratories, Inc. on March 5, 1992 from Westinghouse/Hanford Company. The sample was analyzed for the USEPA CLP metals and cyanide. The analysis was performed under Skinner and Sherman work order S203024.

Methodology
The samples were prepared, analyzed and reported in accordance with the USEPA Contract Laboratory Program Statement of Work 7/88 (CLP SOW788).

Discussion
All quality control requirements were met for the samples with the following exceptions;

The antimony, silver and thallium digestion spike recoveries exceeded the control limit requirements.

Please feel free to call if there are any questions concerning this package.

Respectfully submitted,

TMA/SKINNER & SHERMAN LABORATORIES, INC.

David N. Peterson
Assistant Laboratory Manager

4-12-96
MC

WESTINGHOUSE/HANFORD

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER:

B05WN8

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N2-03-004SAS No.: SDG No.: B05WN8

Matrix (soil/water): SOIL Lab Sample ID: 03024-04S

Level (low/med): LOW Date Received: 03/05/92

% Solids: 92.9

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	74400.00			P
7440-36-0	Antimony	80.10	U	N	P
7440-38-2	Arsenic	2.10	B	S	F
7440-39-3	Barium	672.00			P
7440-41-7	Beryllium	4.70	B		P
7440-43-9	Cadmium	10.60	B		P
7440-70-2	Calcium	79000.00			P
7440-47-3	Chromium	114.00			P
7440-48-4	Cobalt	86.40	B		P
7440-50-8	Copper	195.00			P
7439-89-6	Iron	184000.00			P
7439-92-1	Lead	7.90		S	F
7439-95-4	Magnesium	50000.00			P
7439-96-5	Manganese	3050.00			P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	132.00			P
7440-09-7	Potassium	13000.00			P
7782-49-2	Selenium	4.00	U		F
7440-22-4	Silver	12.90	U	N	P
7440-23-5	Sodium	2010.00	B		P
7440-28-0	Thallium	0.59	U	N	F
7440-62-2	Vanadium	389.00			P
7440-66-6	Zinc	430.00			P
	Cyanide	5.10	U		AS

Color Before: BROWN Clarity Before: Texture: FINE

Color After: BROWN Clarity After: Artifacts: YES

Comments:
STONES

002

9215607.1156

WESTINGHOUSE/HANFORD

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B05WN9

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N2-03-004SAS No.: SDG No.: B05WN8

Matrix (soil/water): SOIL Lab Sample ID: 03024-01S

Level (low/med): LOW Date Received: 03/05/92

% Solids: 97.9

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	9340.00			P
7440-36-0	Antimony	5.90	U	N	P
7440-38-2	Arsenic	3.20		S	F
7440-39-3	Barium	72.50			P
7440-41-7	Beryllium	0.25	B		P
7440-43-9	Cadmium	0.75	B		P
7440-70-2	Calcium	6320.00			P
7440-47-3	Chromium	11.20			P
7440-48-4	Cobalt	13.40			P
7440-50-8	Copper	34.90			P
7439-89-6	Iron	24200.00			P
7439-92-1	Lead	4.20		S	F
7439-95-4	Magnesium	6700.00			P
7439-96-5	Manganese	280.00			P
7439-97-6	Mercury	0.09	U		CV
7440-02-0	Nickel	28.00			P
7440-09-7	Potassium	600.00	B		P
7782-49-2	Selenium	0.76	U	W	F
7440-22-4	Silver	0.95	U	N	P
7440-23-5	Sodium	721.00	B		P
7440-28-0	Thallium	0.57	U	N	F
7440-62-2	Vanadium	46.70			P
7440-66-6	Zinc	42.20			P
	Cyanide	5.10	U		AS

Color Before: GREY Clarity Before: Texture: FINE

Color After: GREY Clarity After: Artifacts: YES

Comments:
STONES

003

WESTINGHOUSE/HANFORD

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B05WP0

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N2-03-004SAS No.: SDG No.: B05WN8

Matrix (soil/water): SOIL Lab Sample ID: 03024-02S

Level (low/med): LOW Date Received: 03/05/92

% Solids: 98.6

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5010.00			P
7440-36-0	Antimony	6.20	U	N	P
7440-38-2	Arsenic	1.60	B		F
7440-39-3	Barium	73.50			P
7440-41-7	Beryllium	0.26	B		P
7440-43-9	Cadmium	1.10			P
7440-70-2	Calcium	5150.00			P
7440-47-3	Chromium	8.50			P
7440-48-4	Cobalt	6.90	B		P
7440-50-8	Copper	13.10			P
7439-89-6	Iron	13400.00			P
7439-92-1	Lead	2.60		W	F
7439-95-4	Magnesium	3640.00			P
7439-96-5	Manganese	214.00			P
7439-97-6	Mercury	0.09	U		CV
7440-02-0	Nickel	8.00			P
7440-09-7	Potassium	916.00	B		P
7782-49-2	Selenium	0.79	U	W	F
7440-22-4	Silver	0.99	U	N	P
7440-23-5	Sodium	271.00	B		P
7440-28-0	Thallium	0.59	U	WN	F
7440-62-2	Vanadium	36.80			P
7440-66-6	Zinc	32.80			P
	Cyanide	4.90	U		AS

Color Before: GREY Clarity Before: Texture: FINE

Color After: GREY Clarity After: Artifacts: YES

Comments:
STONES

004

WESTINGHOUSE/HANFORD

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER:

B05WT8

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N2-03-004SAS No.: SDG No.: B05WN8

Matrix (soil/water): SOIL Lab Sample ID: 03024-03S

Level (low/med): LOW Date Received: 03/05/92

% Solids: 91.2

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	9070.00			P
7440-36-0	Antimony	6.40	U	N	P
7440-38-2	Arsenic	47.00			F
7440-39-3	Barium	94.90			P
7440-41-7	Beryllium	0.37	B		P
7440-43-9	Cadmium	0.75	B		P
7440-70-2	Calcium	5220.00			P
7440-47-3	Chromium	12.30			P
7440-48-4	Cobalt	9.20	B		P
7440-50-8	Copper	17.00			P
7439-89-6	Iron	19000.00			P
7439-92-1	Lead	540.00		S	F
7439-95-4	Magnesium	4630.00			P
7439-96-5	Manganese	325.00			P
7439-97-6	Mercury	0.09	U		CV
7440-02-0	Nickel	11.80			P
7440-09-7	Potassium	1720.00			P
7782-49-2	Selenium	4.20	U	E	F
7440-22-4	Silver	1.00	U	N	P
7440-23-5	Sodium	182.00	B		P
7440-28-0	Thallium	0.63	U	N	F
7440-62-2	Vanadium	40.00			P
7440-66-6	Zinc	53.10			P
	Cyanide	5.20	U		AS

Color Before: BROWN Clarity Before: Texture: FINE

Color After: BROWN Clarity After: Artifacts: YES

Comments:
STONES

TMA/Skinner & Serman Labs SAMPLE LOG-IN

WORKORDER 92-03-024 CLIENT HANFORD-NOR No. SAMPLES: 4

PROTCL CLP TURNARND

COOLER TEMP: 4 oC, or NA (Soil) (Water) (Specify Other)

CUSTODIAN A. Benney SDG/BATCH N/A

CUSTODY SEAL: PRESENT/ABSENT/INTACT/NOT CLIENT CASE N2-03-004

SHIPER & # Fedex #1414452266 PO/CONTRACT# ↓

TAGS: PRESENT/ABSENT/NA/SEE COC CONTACT Dolores Sanchez

CHAIN OF CUSTODY: PRESENT/ABSENT/NA,# N/A COMMENTS: NONE

SAMPLE CONTAINERS-INTACT/BROKEN COMMENTS

CLIENT COMMENT? YES/NO Samples contain radioactive Material

SAMPLE LABELS AGREE WITH CHAIN OF CUSTODY INFO? YES/NO (COMMENT)

CLIENT PAPERWORK AGREES WITH SAMPLES & COC? YES/NO (COMMENT)

SHIPMENT DATES 3/5/92

LIST ANY DATE WITH PAPERWORK/SHIPMENT PROBLEMS & SPECIFY THE PROBLEM:

N/A

	CLIENT ID	MATRIX	RECEIVED	QC	TEST(S)	HOLD TIME UP
1	B05WN9	SOIL	03/05/92	D,S	TM/CN	CN
2	PC	↓	↓		↓	due
3	T8					3/11/92
4	N8					
5						
6						Hg Due
7						
8						3/23/92
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						

Complete 3/5/92

SUBCONTRACT: YES/NO, TO: DATE:

REVIEWED Rev. 1.4 PAGE

971507 1160

FEDERAL EXPRESS

QUESTIONS? CALL 800-238-5355 TOLL FREE.

AIRBILL PACKAGE TRACKING NUMBER 1414452266

1275M 1414452266

RECIPIENT'S COPY

1 Date 3-4-92

From (Your Name) Please Print: Sample Control

Your Phone Number (Very Important): (510)235-2633

Company: T M A /NORCAL

Department/Floor No.

Street Address: 2030 WRIGHT AVE

City: RICHMOND State: CA ZIP Required: 94804

2 To (Recipient's Name) Please Print: Sample Control

Recipient's Phone Number (Very Important): (617) 890-7200

Company: SKINNER & SHERMAN Laboratories

Department/Floor No.

Exact Street Address (We Cannot Deliver to P.O. Boxes or P.O. Zip Codes.): 300 Second AVE

City: WALTHAM State: MA ZIP Required: 02254-0521

YOUR INTERNAL BILLING REFERENCE INFORMATION (optional) (First 24 characters will appear on invoice.): 2320-6406

H IF HOLD FOR PICK-UP, Print FEDEX Address Here

Street Address

City State ZIP Required

3 PAYMENT 1 [X] Bill Sender 2 [ ] Bill Recipient's FedEx Acct. No. 3 [ ] Bill 3rd Party FedEx Acct. No. 4 [ ] Bill Credit Card 5 [ ] Cash/Check

4 SERVICES (Check only one box)

Priority Overnight (Delivery by next business morning†)
- 11 [X] YOUR PACKAGING
- 16 [ ] FEDEX LETTER *
- 12 [ ] FEDEX PAK *
- 13 [ ] FEDEX BOX
- 14 [ ] FEDEX TUBE

Standard Overnight (Delivery by next business afternoon†)
- 51 [ ] YOUR PACKAGING
- 56 [ ] FEDEX LETTER *
- 52 [ ] FEDEX PAK *
- 53 [ ] FEDEX BOX
- 54 [ ] FEDEX TUBE

Economy Two-Day (Delivery by second business day†)
- 30 [ ] ECONOMY

Government Overnight (Restricted to authorized users only)
- 46 [ ] GOVT LETTER
- 41 [ ] GOVT PACKAGE

Freight Service (for Extra Large or any package over 150 lbs.)
- 70 [ ] OVERNIGHT FREIGHT ** (Contract reservation required)
- 80 [ ] TWO-DAY FREIGHT **

† Delivery commitment may be later in some areas. * Declared Value Limit $100. ** Call for delivery schedule.

5 DELIVERY AND SPECIAL HANDLING (Check services required)
- 1 [ ] HOLD FOR PICK-UP (Fill in Box H)
- 2 [X] DELIVER WEEKDAY
- 3 DELIVER SATURDAY (Extra charge) (Not available to all locations) [ ]
- 4 [ ] DANGEROUS GOODS (Extra charge)
- 5 [ ]
- 6 [ ] DRY ICE ____ Lbs.
- 7 [ ] OTHER SPECIAL SERVICE
- 8 [ ]
- 9 [ ] SATURDAY PICK-UP (Extra charge)
- 10 [ ]
- 11 [ ]
- 12 [ ] HOLIDAY DELIVERY (If offered) (Extra charge)

6

PACKAGES	WEIGHT In Pounds Only	YOUR DECLARED VALUE
1	57	
Total	Total 57	Total

DIM SHIPMENT (Chargeable Weight) [ ] ____ lbs. ____ X ____ X ____ = ____

Received At: 1 [ ] Regular Stop 2 [ ] On-Call Stop 3 [ ] Drop Box 4 [ ] BSC 5 [ ] Station

Emp. No. Date

[ ] Cash Received
[ ] Return Shipment
[ ] Third Party [ ] Chg. To Del [ ] Chg. To Hold

Street Address

City State Zip

Received By: X

Date/Time Received: 3/5/92 9:30 FedEx Employee Number

7 Release Signature:

FedEx Emp. No. Date/Time

Federal Express Use
- Base Charges
- Declared Value Charge
- Other 1
- Other 2
- Total Charges

REVISION DATE 6/91 PART #137204 FX FORMAT #099

099

© 1990-91 PRINTED IN U.S.A.

192

9213507.1161

Westinghouse Hanford Company

CHAIN OF CUSTODY

S & S

Custody Form Initiator C.M. Chance

Company Contact J.D. Fancher

Telephone (509) 376-2081

Project Designation/Sampling Locations 100-HR-1 Vadose Zone Sampling 116-H-9

Collection Date 2/27/92

Ice Chest No. SML-113

Field Logbook No. EFL 1014

Bill of Lading/Airbill No.

Offsite Property No.

Method of Shipment Overnight Air Delivery

Shipped to TMA/NORCAL 2030 Wright Ave. Richmond Ca. 94804

Possible Sample Hazards/Remarks Maintain at 4°C

Sample Identification

B05WN9	B05WP0
~~(1) 1000ml G bottle(Gross Alpha/Beta,Gamma-Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am-241)~~	~~(1) 1000ml G bottle(Gross Alpha/Beta,Gamma-Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am~~2
(1) 250ml G bottle(ICP/AA metals,Hg)	(1) 250ml G bottle(ICP/AA metals, Hg)
~~(1) 500 ml aG bottle(Semi-VOA,PCB's/PEST.)~~	~~(1) 500 ml aG bottle(Semi-VOA,PCB's/PEST.)~~
(1) ~~125~~ 120 ml G bottle(Cyanide) KFT 2/29/92	(1) ~~125~~ 120 ml G bottle(Cyanide) KFT 2/29/92
~~(1) 125ml G bottle(VOA)~~	~~(1) 125ml G bottle(VOA)~~

☒ Field Transfer of Custody

CHAIN OF POSSESSION (Sign and Print Names)

Relinquished by:	Received by:	Date/Time:
CMChance / C.M. Chance	K. Trapp / K. Trapp	2/28/92 1022
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 3-2-92 ~~3-3-92~~ KB 0800 *
Relinquished by: Kermit Blum 3-4-92	Received by: [signature]	Date/Time: 3/5/92 9:30
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments: * Opened 3-2-92; Received @ TMA/Norcal 2-29-92 @ 1300

9214507.1142

Westinghouse Hanford Company	CHAIN OF CUSTODY

Custody Form Initiator C.M. Chance

Company Contact J.D. Fancher — Telephone (509)376-2081

Project Designation/Sampling Locations 100-HR-1 Vadose Zone Sampling — Collection Date 2/27/92

116-H-7

Ice Chest No. SML-113 — Field Logbook No.

Bill of Lading/Airbill No. — Offsite Property No.

Method of Shipment Overnight Air Delivery

Shipped to TMA/NORCAL 2030 Wright Ave. Richmond Ca. 94804

Possible Sample Hazards/Remarks Maintain at 4°C

Sample Identification

~~B05WN9~~ KFT 2/28/92	B05WT8
(1) 1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am-241)	~~(1) 1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am2~~
(1) 250ml G bottle(ICP/AA metals,Hg)	(1) 250ml G bottle(ICP/AA metals, Hg)
(1) 500 ml aG bottle(Semi-VOA,PCB's/PEST.)	~~(1) 500 ml aG bottle(Semi-VOA,PCB's/PEST.)~~
(1) 125ml G bottle(Cyanide)	(1) ~~125~~ 120 ml G bottle(Cyanide) KFT 2/28/92
(1) 125ml G bottle(VOA)	~~(1) 125ml G bottle(VOA)~~

KFT 2/28/92

☑ Field Transfer of Custody — CHAIN OF POSSESSION — (Sign and Print Names)

Relinquished by:	Received by:	Date/Time:
C.M. Chance / C.M. Chance	K. Trapp / K. Trapp	2/28/92 1022
K. Trapp / K. Trapp	Kermit Blum	3-2-92 ~~3-3-92~~ KB 0800 *
Kermit Blum 3-4-92	[signature]	3/5/92 9:30

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments: * Opened 3-2-92; Received at TMA/NORCAL 2-29-92 @ 1300

194

9213507.1165

Westinghouse Hanford Company	CHAIN OF CUSTODY

Custody Form Initiator W.V. SETZER

Company Contact J.D. Fancher — Telephone (509)376-2081

Project Designation/Sampling Locations 100-HR-1 Vadose Zone Sampling — Collection Date 2-26-92

116-H-9

Ice Chest No. ~~14~~ KFT 2/25/92 SML-113 — Field Logbook No. EFL 1014

Bill of Lading/Airbill No. — Offsite Property No.

Method of Shipment Overnight Air Delivery

Shipped to TMA/NORCAL 2030 Wright Ave. Richmond Ca. 94804

Possible Sample Hazards/Remarks Maintain at 4°C

Sample Identification

B05WN8

(1)1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am-241)

(1) 250ml G bottle(ICP/AA metals,Hg)

(1) 500 ml aG bottle(Semi-VOA,PCB's/PEST.)

(1) ~~125~~ 120 mlaG bottle(Cyanide) 2-26-92

(1) ~~125~~ 120 mlaG bottle(VOA) WVS 2-26-92

~~B05WN8~~ WVS 2-26-92

(1)1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am2

(1) 250ml G bottle(ICP/AA metals, Hg)

(1)500 ml aG bottle(Semi-VOA,PCB's/PEST.)

(1) ~~125~~ 120 mlaG bottle(Cyanide) WVS 2-26-92

(1) ~~125~~ 120 mlaG bottle(VOA) 2-26-92

☐ Field Transfer of Custody — CHAIN OF POSSESSION — (Sign and Print Names)

Relinquished by:	Received by:	Date/Time:
W.V. SETZER W.V. Setzer	K. Trapp/K. Trapp	2/28/92 1022
K. Trapp / K. Trapp	Kermit Blum	3-2-92 ~~3-3-92~~ KB 0800 *
		3/5/92 9:30

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments: * Opened 3-2-92; received @ TMA/NORCAL 2-29-92 @ 1300

9214507.1164

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector W. Setzer Date Sampled ~~2/26/92~~ 2/27/92 Time ~~1010~~ 1003 hours

Company Contact J.D. Fancher Telephone (509) 376-2081

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
	~~1, 120mL G~~	~~soil~~	~~CLP; VOA~~
	~~1, 500mL aG~~	soil	CLP: semi-VOA, PCB/PEST
	~~1, 1000mL G~~	~~soil~~	~~Gross Alpha, Gross Beta, Gamma~~
B05WN8			~~Spec., U-235/238, Pu-239/240,~~
			~~Sr-90, Tc-99, C-14, Am-241.~~
	1, 250mL G	soil	CLP; ICP/AA Metals, Hg
	1, 120mL G	soil	CLP; Cn
	~~1, 120mL G~~	~~soil~~	~~CLP; VOA~~
	~~1, 500mL aG~~	~~soil~~	~~CLP; semi-VOA, PCB/PEST~~
	~~1, 1000mL G~~	~~soil~~	~~Gross Alpha, Gross Beta, Gamma~~
B05WN9			~~Spec., U-235/238, Pu-239/240,~~
			~~Sr-90, Tc-99, C-14, Am-241.~~
	1, 250mL G	soil	CLP; ICP/AA Metals, Hg
	1, 120mL G	soil	CLP; Cn

Field Information**

Special Handling and/or Storage Samples must be maintained at 4 C

Possible Sample Hazards None observed.

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 3-2-92

Analysis Required

196

*Indicate whether sample is soil, sludge, water, etc.

9215507.1165

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector W. Setzer

Date Sampled ~~2/27/92~~ 2/27/92 Time ~~0955~~ 1350 hours

Company Contact J.D. Fancher

Telephone (509) 376-2081

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
	~~1, 120mL G~~	~~soil~~	~~CLP: VOA~~
	~~1, 500mL aG~~	~~soil~~	~~CLP: semi-VOA, PCB/PEST~~
	~~1, 1000mL G~~	~~soil~~	~~Gross Alpha, Gross Beta, Gamma~~
B05WP0			~~Spec., U-235/238, Pu-239/240,~~
			~~Sr-90, Tc-99, C-14, Am-241.~~
	1, 250mL G	soil	CLP; ICP/AA Metals, Hg
	1, 120mL G	soil	CLP; Cn
	~~1, 120mL G~~	~~soil~~	~~CLP; VOA~~
	~~1, 500mL aG~~	~~soil~~	~~CLP; semi-VOA, PCB/PEST~~
	~~1, 1000mL G~~	~~soil~~	~~Gross Alpha, Gross Beta, Gamma~~
B05WT8			~~Spec., U-235/238, Pu-239/240,~~
			~~Sr-90, Tc-99, C-14, Am-241.~~
	1, 250mL G	soil	CLP; ICP/AA Metals, Hg
	1, 120mL G	soil	CLP; Cn

Field Information**

Special Handling and/or Storage Samples must be maintained at 4 C

Possible Sample Hazards None observed.

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 3-2-92

Analysis Required

197

*Indicate whether sample is soil, sludge, water, etc.

**Use back of page for additional information relative to sample location.

A-6000-406 (05/90)

9215597.1166

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector W. Setzer Date Sampled 2/27/92 Time 0955 (1350) hours

Company Contact J.D. Fancher Telephone (509) 376-2081

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
	~~1, 120mL G~~	~~soil~~	~~CLP: VOA~~
	~~1, 500mL aG~~	~~soil~~	~~CLP; semi-VOA, PCB/PEST~~
	~~1, 1000mL G~~	~~soil~~	~~Gross Alpha, Gross Beta, Gamma~~
B05WP0			~~Spec., U-235/238, Pu-239/240,~~
			~~Sr-90, Tc-99, C-14, Am-241.~~
	1, 250mL G	soil	CLP; ICP/AA Metals, Hg
	1, 120mL G	soil	CLP; Cn
	~~1, 120mL G~~	~~soil~~	~~CLP; VOA~~
	~~1, 500mL aG~~	~~soil~~	~~CLP; semi-VOA, PCB/PEST~~
	~~1, 1000mL G~~	~~soil~~	~~Gross Alpha, Gross Beta, Gamma~~
B05WT8			~~Spec., U-235/238, Pu-239/240,~~
			~~Sr-90, Tc-99, C-14, Am-241.~~
	1, 250mL G	soil	CLP; ICP/AA Metals, Hg
	1, 120mL G	soil	CLP; Cn

Field Information**

Special Handling and/or Storage Samples must be maintained at 4 C

Possible Sample Hazards None observed.

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 3-2-92

Analysis Required

197

*Indicate whether sample is soil, sludge, water, etc.

**Use back of page for additional information relative to sample location.

A-6000-406 (05/90)

TMA
Thermo Analytical Inc.

Skinner & Sherman Laboratories Inc.
300 Second Avenue
Post Office Box 521
Waltham, MA 02254-0521

(617) 890-7200 • FAX (617) 890-3883

9213607.1167

April 2, 1992

TMA/NORCAL
2030 Wright Avenue
Richmond, CA 94804
Attention: Dan Stuermer

Quality Control Narrative

Scope

Five (5) soil samples and one (1) water sample were submitted to TMA/Skinner & Sherman Laboratories, Inc. on March 5-10, 1992 from Westinghouse/ Hanford Company. The samples were analyzed for the USEPA CLP metals and cyanide. The analysis was performed under Skinner and Sherman work order S203026.

Methodology

The samples were prepared, analyzed and reported in accordance with the USEPA Contract Laboratory Program Statement of Work 7/88 (CLP SOW788).

Discussion

All quality control requirements were met for the samples with the following exceptions:

Soils

The antimony and selenium matrix spike recoveries exceeded the control limit requirements.

The calcium and chromium laboratory duplicates exceeded the control limit requirements.

The zinc ICP serial dilution exceeded the control limit requirements.

Waters

All quality control parameters were met for these samples.

Please feel free to call if there are any questions concerning this package.

Respectfully submitted,

TMA/SKINNER & SHERMAN LABORATORIES, INC.

David N. Peterson
Assistant Laboratory Manager

4-12-96
MC

WESTINGHOUSE/HANFORD

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B05WP1

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N2-03-020 SAS No.: SDG No.: B05WT9

Matrix (soil/water): SOIL Lab Sample ID: 03026-06S

Level (low/med): LOW Date Received: 03/10/92

% Solids: 97.8

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5200.00			P
7440-36-0	Antimony	5.90	U	N	P
7440-38-2	Arsenic	1.30	B		F
7440-39-3	Barium	42.50			P
7440-41-7	Beryllium	0.22	B		P
7440-43-9	Cadmium	0.78	B		P
7440-70-2	Calcium	4990.00		*	P
7440-47-3	Chromium	10.50		*	P
7440-48-4	Cobalt	9.20	B		P
7440-50-8	Copper	12.90			P
7439-89-6	Iron	15900.00			P
7439-92-1	Lead	2.10		W	F
7439-95-4	Magnesium	3690.00			P
7439-96-5	Manganese	231.00			P
7439-97-6	Mercury	0.09	U		CV
7440-02-0	Nickel	9.60			P
7440-09-7	Potassium	739.00	B		P
7782-49-2	Selenium	3.80	U	N	F
7440-22-4	Silver	0.96	U		P
7440-23-5	Sodium	403.00	B		P
7440-28-0	Thallium	0.38	U		F
7440-62-2	Vanadium	47.10			P
7440-66-6	Zinc	39.10		E	P
	Cyanide	5.10	U		AS

Color Before: GREY Clarity Before: Texture: FINE

Color After: GREY Clarity After: Artifacts: YES

Comments:
STONES

WESTINGHOUSE/HANFORD

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B05WT9

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N2-03-020 SAS No.: SDG No.: B05WT9

Matrix (soil/water): SOIL Lab Sample ID: 03026-02S

Level (low/med): LOW Date Received: 03/05/92

% Solids: 86.3

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5330.00			P
7440-36-0	Antimony	6.70	U	N	P
7440-38-2	Arsenic	6.20			F
7440-39-3	Barium	67.20			P
7440-41-7	Beryllium	0.24	B		P
7440-43-9	Cadmium	0.72	B		P
7440-70-2	Calcium	8620.00		*	P
7440-47-3	Chromium	14.60		*	P
7440-48-4	Cobalt	7.50	B		P
7440-50-8	Copper	17.60			P
7439-89-6	Iron	14800.00			P
7439-92-1	Lead	10.90			F
7439-95-4	Magnesium	3520.00			P
7439-96-5	Manganese	249.00			P
7439-97-6	Mercury	0.45			CV
7440-02-0	Nickel	7.30	B		P
7440-09-7	Potassium	692.00	B		P
7782-49-2	Selenium	4.50	U	WN	F
7440-22-4	Silver	1.10	U		P
7440-23-5	Sodium	291.00	B		P
7440-28-0	Thallium	0.45	U		F
7440-62-2	Vanadium	32.70			P
7440-66-6	Zinc	56.20		E	P
	Cyanide	5.80	U		AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: BROWN Clarity After: Artifacts: YES

Comments:
STONES

9213007.1120 WESTINGHOUSE/HANFORD

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: 805WV1

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N2-03-020 SAS No.: SDG No.: 805WT9

Matrix (soil/water): WATER Lab Sample ID: 03026-01S

Level (low/med): LOW Date Received: 03/05/92

% Solids: 0.0

Concentration Units (ug/L or mg/Kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	66.00	U		P
7440-36-0	Antimony	31.00	U		P
7440-38-2	Arsenic	3.40	B	W	F
7440-39-3	Barium	1.00	U		P
7440-41-7	Beryllium	1.00	U		P
7440-43-9	Cadmium	1.00	U		P
7440-70-2	Calcium	92.00	U		P
7440-47-3	Chromium	2.00	U		P
7440-48-4	Cobalt	3.00	U		P
7440-50-8	Copper	7.00	B		P
7439-89-6	Iron	35.00	U		P
7439-92-1	Lead	2.30	B	W	F
7439-95-4	Magnesium	69.00	U		P
7439-96-5	Manganese	1.00	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	4.00	U		P
7440-09-7	Potassium	76.00	U		P
7782-49-2	Selenium	4.00	U		F
7440-22-4	Silver	5.00	U		P
7440-23-5	Sodium	210.00	B		P
7440-28-0	Thallium	2.00	U		F
7440-62-2	Vanadium	3.00	U		P
7440-66-6	Zinc	11.00	U		P
	Cyanide	10.00	U		AS

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

9213502.1171 WESTINGHOUSE/HANFORD

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B05WV2

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N2-03-020SAS No.: SDG No.: B05WT9

Matrix (soil/water): SOIL Lab Sample ID: 03026-03S

Level (low/med): LOW Date Received: 03/05/92

% Solids: 93.6

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5520.00			P
7440-36-0	Antimony	6.10	U	N	P
7440-38-2	Arsenic	2.80			F
7440-39-3	Barium	64.70			P
7440-41-7	Beryllium	0.25	B		P
7440-43-9	Cadmium	0.78	B		P
7440-70-2	Calcium	7110.00		*	P
7440-47-3	Chromium	28.30		*	P
7440-48-4	Cobalt	7.10	B		P
7440-50-8	Copper	23.40			P
7439-89-6	Iron	14400.00			P
7439-92-1	Lead	5.90		S	F
7439-95-4	Magnesium	3780.00			P
7439-96-5	Manganese	245.00			P
7439-97-6	Mercury	1.10			CV
7440-02-0	Nickel	7.60	B		P
7440-09-7	Potassium	778.00	B		P
7782-49-2	Selenium	0.81	U	+N	F
7440-22-4	Silver	0.98	U		P
7440-23-5	Sodium	233.00	B		P
7440-28-0	Thallium	0.40	U		F
7440-62-2	Vanadium	31.70			P
7440-66-6	Zinc	83.10		E	P
	Cyanide	5.20	U		AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: BROWN Clarity After: Artifacts: YES

Comments:
STONES

FORM I - IN Rev.6/89

9215002.1172

WESTINGHOUSE/HANFORD

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: 805WV3

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N2-03-020 SAS No.: SDG No.: 805WT9

Matrix (soil/water): SOIL Lab Sample ID: 03026-04S

Level (low/med): LOW Date Received: 03/06/92

% Solids: 89.4

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6400.00			P
7440-36-0	Antimony	6.90	U	N	P
7440-38-2	Arsenic	1.80	B	S	F
7440-39-3	Barium	62.10			P
7440-41-7	Beryllium	0.25	B		P
7440-43-9	Cadmium	0.85	B		P
7440-70-2	Calcium	7220.00		*	P
7440-47-3	Chromium	21.60		*	P
7440-48-4	Cobalt	8.50	B		P
7440-50-8	Copper	16.60			P
7439-89-6	Iron	15700.00			P
7439-92-1	Lead	3.80			F
7439-95-4	Magnesium	4550.00			P
7439-96-5	Manganese	262.00			P
7439-97-6	Mercury	0.09	U		CV
7440-02-0	Nickel	12.70			P
7440-09-7	Potassium	927.00	B		P
7782-49-2	Selenium	4.20	U	WN	F
7440-22-4	Silver	1.10	U		P
7440-23-5	Sodium	283.00	B		P
7440-28-0	Thallium	0.42	U		F
7440-62-2	Vanadium	36.80			P
7440-66-6	Zinc	44.30		E	P
	Cyanide	5.30	U		AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: BROWN Clarity After: Artifacts: YES

Comments:
STONES

9213502.1123

WESTINGHOUSE/HANFORD

1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B05WV4

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N2-03-020 SAS No.: SDG No.: B05WT9

Matrix (soil/water): SOIL Lab Sample ID: 03026-05S

Level (low/med): LOW Date Received: 03/06/92

% Solids: 98.6

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5210.00			P
7440-36-0	Antimony	5.90	U	N	P
7440-38-2	Arsenic	1.60	B		F
7440-39-3	Barium	43.80			P
7440-41-7	Beryllium	0.21	B		P
7440-43-9	Cadmium	0.52	B		P
7440-70-2	Calcium	3280.00		*	P
7440-47-3	Chromium	13.10		*	P
7440-48-4	Cobalt	6.80	B		P
7440-50-8	Copper	13.50			P
7439-89-6	Iron	13400.00			P
7439-92-1	Lead	2.40			F
7439-95-4	Magnesium	3340.00			P
7439-96-5	Manganese	220.00			P
7439-97-6	Mercury	0.09	U		CV
7440-02-0	Nickel	7.60			P
7440-09-7	Potassium	583.00	B		P
7782-49-2	Selenium	0.80	U	WN	F
7440-22-4	Silver	0.95	U		P
7440-23-5	Sodium	405.00	B		P
7440-28-0	Thallium	0.40	U		F
7440-62-2	Vanadium	34.70			P
7440-66-6	Zinc	40.30		E	P
	Cyanide	4.70	U		AS

Color Before: GREY Clarity Before: Texture: FINE

Color After: GREY Clarity After: Artifacts: YES

Comments:
STONES

FORM I - IN

Rev. 6/89

TMA/Skinner & Serman Labs **SAMPLE LOG-IN**

WORKORDER 92-03-026 CLIENT HANFORD-NOR No. SAMPLES:

PROTCL CLP **TURNARND** 33 days 4 1

COOLER TEMP: 4 oC, or NA (Soil) (Water) (Specify Other)

CUSTODIAN A. Benney SDG/BATCH N/A

CUSTODY SEAL: PRESENT/ABSENT/INTACT/NOT CLIENT CASE N2-03-020

SHIPER & # Fedex # 2126898900 PO/CONTRACT# ↓

TAGS: PRESENT/ABSENT/NA/SEE COC CONTACT Dolores Sanchez

CHAIN OF CUSTODY: PRESENT/ABSENT/NA, # N/A COMMENTS: NONE

SAMPLE CONTAINERS INTACT/BROKEN COMMENTS

CLIENT COMMENT? YES/NO Samples contain radioactive Material

SAMPLE LABELS AGREE WITH CHAIN OF CUSTODY INFO? YES/NO (COMMENT)

CLIENT PAPERWORK AGREES WITH SAMPLES & COC? YES /NO (COMMENT)

SHIPMENT DATES 3/6/92 3/5/92

LIST ANY DATE WITH PAPERWORK/SHIPMENT PROBLEMS & SPECIFY THE PROBLEM:

N/A

	CLIENT ID	MATRIX	RECEIVED	QC	TEST(S)	HOLD TIME UP
1	BOSWV1	WATER	3/5/92	D,S	TM/CN	CN 3/11/92
2	T9	SOIL	↓		↓	
3	V2	↓	↓	D,S	↓	
4	V3	↓	3/6/92		↓	Hg 3/23/92
5	V4	↓	↓		↓	
6	P1	↓	3/10/92		↓	3/4/92
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						

Complete

UPDATED

SUBCONTRACT: YES/NO, TO: DATE:

REVIEWED Rev. 1.4 PAGE

971507_1175

FEDERAL EXPRESS

QUESTIONS? CALL 800-238-5355 TOLL FREE.

AIRBILL
PACKAGE TRACKING NUMBER 2126898900

2126898900

RECIPIENT'S COPY

1 Date 8-5-92

From (Your Name) Please Print: Sample Control
Your Phone Number (Very Important): (510)235-2633
Company: T M A /NORCAL
Department/Floor No.
Street Address: 2030 WRIGHT AVE
City: RICHMOND State: CA ZIP Required: 94804

2 To (Recipient's Name) Please Print: Sample Control
Recipient's Phone Number (Very Important): ( )
Company: Skinner & Shermann Laboratories
Department/Floor No.
Exact Street Address (We Cannot Deliver to P.O. Boxes or P.O. Zip Codes.): 300 SECOND AVENUE
City: WALTHAM State: MA ZIP Required: 02254

YOUR INTERNAL BILLING REFERENCE INFORMATION (optional) (First 24 characters will appear on invoice.): 2320-6406

H IF HOLD FOR PICK-UP, Print FEDEX Address Here
Street Address
City State ZIP Required

3 PAYMENT 1 [X] Bill Sender 2 [ ] Bill Recipient's FedEx Acct. No. 3 [ ] Bill 3rd Party FedEx Acct. No 4 [ ] Bill Credit Card 5 [ ] Cash/Check

4 SERVICES (Check only one box)

Priority Overnight (Delivery by next business morning†)
11 [X] YOUR PACKAGING
16 [ ] FEDEX LETTER *
12 [ ] FEDEX PAK *
13 [ ] FEDEX BOX
14 [ ] FEDEX TUBE

Standard Overnight (Delivery by next business afternoon†)
51 [ ] YOUR PACKAGING
56 [ ] FEDEX LETTER *
52 [ ] FEDEX PAK *
53 [ ] FEDEX BOX
54 [ ] FEDEX TUBE

Economy Two-Day (Delivery by second business day†)
30 [ ] ECONOMY

Government Overnight (Restricted to authorized users only)
46 [ ] GOVT LETTER
41 [ ] GOVT PACKAGE

Freight Service (for Extra Large or any package over 150 lbs.)
70 [ ] OVERNIGHT FREIGHT ** (Confirmed reservation required)
80 [ ] TWO-DAY FREIGHT **
† Delivery commitment may be later in some areas
*Declared Value Limit $100.
**Call for delivery schedule.

5 DELIVERY AND SPECIAL HANDLING (Check services required)
1 [ ] HOLD FOR PICK-UP (Fill in Box H)
2 [X] DELIVER WEEKDAY
3 DELIVER SATURDAY (Extra charge) (Not available to all locations) [ ]
4 [ ] DANGEROUS GOODS (Extra charge)
5 [ ]
6 [ ] DRY ICE ..... Lbs
7 [ ] OTHER SPECIAL SERVICE
8 [ ]
9 [ ] SATURDAY PICK-UP (Extra charge)
10 [ ]
11 [ ]
12 [ ] HOLIDAY DELIVERY (If offered) (Extra charge)

6 PACKAGES | WEIGHT In Pounds Only | YOUR DECLARED VALUE
1 | 13.5
Total 1 | Total 13.5 | Total

DIM SHIPMENT (Chargeable Weight)
[ ] ..... lbs.
___ x ___ x ___ = ___

Received At
1 [X] Regular Stop 3 [ ] Drop Box
2 [ ] On-Call Stop 4 [ ] BSC 5 [ ] Station

Emp. No. Date
[ ] Cash Received
[ ] Return Shipment
[ ] Third Party [ ] Chg. To Del. [ ] Chg. To Hold
Street Address
City State Zip
Received By X
Date/Time Received 3/6/92 FedEx Employee Number 9:30

7 Release Signature:
FedEx Emp. No. Date/Time

Federal Express Use
Base Charges
Declared Value Charge
Other 1
Other 2
Total Charges

REVISION DATE 6/91
PART #137204 EXEM 1/92
FORMAT #099
099
© 1990-91 FEDEX
PRINTED IN U.S.A.

9715307.1176

FEDERAL EXPRESS

QUESTIONS? CALL 800-238-5355 TOLL FREE.

AIRBILL
PACKAGE TRACKING NUMBER 1414452255

1275M 1414452255

RECIPIENT'S COPY

1 Date 3-9-92

From (Your Name) Please Print: Sample Control
Your Phone Number (Very Important): (510)235-2633
Company: T M A /NORCAL
Department/Floor No.
Street Address: 2030 WRIGHT AVE
City: RICHMOND State: CA ZIP Required: 94804

2 To (Recipient's Name) Please Print: Sample Control
Recipient's Phone Number (Very Important): (617)890-7200
Company: Skinner & Sherman Laboratories
Department/Floor No.
Exact Street Address (We Cannot Deliver to P.O. Boxes or P.O. Zip Codes.): 300 Second AVE
City: Waltham, MA State: ZIP Required: 02254-0521

YOUR INTERNAL BILLING REFERENCE INFORMATION (optional) (First 24 characters will appear on invoice.): 2320-6406

H IF HOLD FOR PICK-UP, Print FEDEX Address Here
Street Address
City State ZIP Required

3 PAYMENT 1 [X] Bill Sender 2 [ ] Bill Recipient's FedEx Acct. No. 3 [ ] Bill 3rd Party FedEx Acct. No. 4 [ ] Bill Credit Card 5 [ ] Cash/Check

4 SERVICES (Check only one box)

Priority Overnight (Delivery by next business morning†)
11 [X] YOUR PACKAGING
16 [ ] FEDEX LETTER *
12 [ ] FEDEX PAK *
13 [ ] FEDEX BOX
14 [ ] FEDEX TUBE

Standard Overnight (Delivery by next business afternoon†)
51 [ ] YOUR PACKAGING
56 [ ] FEDEX LETTER *
52 [ ] FEDEX PAK *
53 [ ] FEDEX BOX
54 [ ] FEDEX TUBE

Economy Two-Day (Delivery by second business day†)
30 [ ] ECONOMY

Government Overnight (Restricted for authorized users only)
46 [ ] GOVT LETTER
41 [ ] GOVT PACKAGE

Freight Service (for Extra Large or any package over 150 lbs.)
70 [ ] OVERNIGHT FREIGHT ** (Confirmed reservation required)
80 [ ] TWO-DAY FREIGHT **
† Delivery commitment may be later in some areas.
*Declared Value Limit $100
**Call for delivery schedule.

5 DELIVERY AND SPECIAL HANDLING (Check services required)
1 [ ] HOLD FOR PICK-UP (Fill in Box H)
2 [X] DELIVER WEEKDAY
3 DELIVER SATURDAY (Extra charge) (Not available to all locations) [ ]
4 [ ] DANGEROUS GOODS (Extra charge)
5 [ ]
6 [ ] DRY ICE ____ Lbs
7 [ ] OTHER SPECIAL SERVICE
8 [ ]
9 [ ] SATURDAY PICK-UP (Extra charge)
10 [ ]
11 [ ]
12 [ ] HOLIDAY DELIVERY (If offered) (Extra charge)

6

PACKAGES	WEIGHT In Pounds Only	YOUR DECLARED VALUE
1	12	
Total 1	Total 12	Total

DIM SHIPMENT (Chargeable Weight) [ ] ____ lbs.
____ x ____ x ____ = ____

Received At
1 [ ] Regular Stop 3 [ ] Drop Box
2 [ ] On-Call Stop 4 [ ] BSC 5 [ ] Station

Emp. No. Date
[ ] Cash Received
[ ] Return Shipment
[ ] Third Party [ ] Chg. To Del. [ ] Chg. To Hold
Street Address
City State Zip
Received By: X
Date/Time Received: 3/10/92 FedEx Employee Number: 9:30

7 Release Signature:
FedEx Emp. No. Date/Time

Federal Express Use
Base Charges
Declared Value Charge
Other 1
Other 2
Total Charges

REVISION DATE 6/91
PART #137204 FXEM 9/91
FORMAT #099
099
© 1990-91 FEC
PRINTED IN USA

194

ORIGINAL IN YEARWOOD'S. JAR 3-2-92 S&S

Westinghouse Hanford Company	CHAIN OF CUSTODY

Custody Form Initiator CM Chanie

Company Contact JD Fancher — Telephone (509) 376-2081

Project Designation/Sampling Locations 100HR-1 Vadose Zone Sampling — Collection Date 2-28-92

Ice Chest No. SML-117 & Yearwood — Field Logbook No. WHC-N-5572

Bill of Lading/Airbill No. — Offsite Property No.

Method of Shipment Overnight Air Delivery

Shipped to TMA/NDR(A) 2030 Wright Ave. Richmond Ca. 94804

Possible Sample Hazards/Remarks Maintain at 4°C

B05WV1

Sample Identification

(3) 1000ml G bottle (ICP/AA metals, Hg) Preserved HNO_3

(3) 1000ml G bottle (Cn) " NaOH

~~(3) 40ml G's (VOA)~~

~~(3) 2360ml AG (Semi-VOA, PCB/PEST)~~

~~(2) 4000ml P bottle (Gross alpha/beta, Gamma Spec., Sr-90, Tc-99, C-14, U 235/238, Pu-239/240, Am-241~~

CC 2-28-92

☐ Field Transfer of Custody

CHAIN OF POSSESSION (Sign and Print Names)		
Relinquished by: CM Chanie, Cory Chanie	Received by: K. Trapp / K. Trapp	Date/Time: 3/2/92 1214
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 3-3-92 1130 *
Relinquished by: Kermit Blum 3-4-92	Received by: [signature]	Date/Time: 3/5/92 9:30
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments: * Icechest containing metals & CN^- aliquots lost in transit. Found by Emery Worldwide & delivered to TMA/NORCAL 3-4-92 @ 1145.

195

A-6000-407 (12/90)

9214507.1178

Westinghouse Hanford Company	CHAIN OF CUSTODY

Custody Form Initiator CMChance

Company Contact J.D. Fancher — Telephone (509)376-2081

Project Designation/Sampling Locations 100-HR-1 Vadose Zone Sampling 116-H-7 — Collection Date 2-28-92

Ice Chest No. SML 151 — Field Logbook No. WHC-N-557

Bill of Lading/Airbill No. — Offsite Property No.

Method of Shipment Overnight Air Delivery

Shipped to TMA/NORCAL 2030 Wright Ave. Richmond Ca. 94804

Possible Sample Hazards/Remarks Maintain at 4°C

Sample Identification

B05WT9

~~(1)1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am-241)~~	(1)1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am2
(1) 250ml G bottle(ICP/AA metals,Hg)	(1) 250ml G bottle(ICP/AA metals, Hg)
(2) 250 ml ~~(1) 500 ml aG bottle(Semi-VOA,PCB's/PEST.)~~ JMA 2-28-92	(1)500 ml aG bottle(Semi-VOA,PCB's/PEST.) (2-28-92)
(1) ~~125~~ml G bottle(Cyanide) 120 WDS 3-2-92	(1) 125ml G bottle(Cyanide)
~~(1) 125ml G bottle(VOA)~~ 120 WDS 3-2-92	(1) 125ml G bottle(VOA)

☑ Field Transfer of Custody — CHAIN OF POSSESSION — (Sign and Print Names)

Relinquished by:	Received by:	Date/Time:
CMChance Cory Chance	Kermit Blum	3-4-92 1200
Relinquished by: Kermit Blum 3-4-92	Received by: Arlie B	Date/Time: 3/5/92 9:30
Relinquished by:	Received by:	Date/Time:
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

196

Disposal Method:	Disposed by:	Date/Time:

Comments:

9213507.1179

Westinghouse Hanford Company	CHAIN OF CUSTODY

Custody Form Initiator W.V. SETZER

Company Contact J.D. Fancher Telephone (509)376-2081

Project Designation/Sampling Locations 100-HR-1 Vadose Zone Sampling Collection Date 3-2-92

116-H-7

Ice Chest No. SML 151 Field Logbook No. WHC-N-5572

Bill of Lading/Airbill No. Offsite Property No.

Method of Shipment Overnight Air Delivery

Shipped to TMA/NORCAL 2030 Wright Ave. Richmond Ca. 94804

Possible Sample Hazards/Remarks Maintain at 4°C

Sample Identification

B05WV2

~~(1)1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am-241)~~	(1)1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am2
(1) 250ml G bottle(ICP/AA metals,Hg)	(1) 250ml G bottle(ICP/AA metals, Hg)
~~(1)500 ml aG bottle(Semi-VOA,PCB's/PEST.)~~	(1)500 ml aG bottle(Semi-VOA,PCB's/PEST.)
(1) ~~125~~ 120 WVS 3-2-92 ml G bottle(Cyanide)	(1) 125ml G bottle(Cyanide) WVS 3-2-92
~~(1) 125ml G bottle(VOA)~~ 120 WVS 3-2-92	(1) 125ml G bottle(VOA)

☐ Field Transfer of Custody

CHAIN OF POSSESSION (Sign and Print Names)

Relinquished by:	Received by:	Date/Time:
W.V. SETZER W.V. Setzer	Kermit Blum	3-4-92 1200
Relinquished by: Kermit Blum 3-4-92	Received by: [illegible]	Date/Time: 3/5/92 9:30
Relinquished by:	Received by:	Date/Time:
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

9215507.1180

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector C. Chance Date Sampled 2/28/92 Time 1300 hours

Company Contact J.D. Fancher Telephone (509) 376-2081

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
05WV1	G 3, 1000ml x	Water	TCP/AA metals, Hg, CLP
	G 3, 1000ml xx	Water	Cn, CLP
	~~G 3, 40ml~~	~~Water~~	~~CLP; VOA~~
	~~aG 3, 2360ml~~	~~Water~~	~~CLP; Semi-VOA, PCB/Pest~~
	~~P 2, 4000ml xxx~~	~~Water~~	~~Gross Alpha, Gross beta, Gamma Spec, Sr-90, Tc-99, C-14, Alpha Spec, U 235/238, Pu 239/240, Am 241~~
			KFT 3/2/92

Field Information** x Preserved in HNO_3, xx Preserved in NaOH, xxx Preserved in HNO_3

Special Handling and/or Storage Maintain at 4°C

Possible Sample Hazards None observed.

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 3-3-92

Analysis Required

*Indicate whether sample is soil, sludge, water, etc.

**Use back of page for additional information relative to sample location

A-6000-406 (05/90)

9215602.1181

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector W.V. SETZER Date Sampled ~~BOSWU2B-2-92~~ BOSWU19-2-28-92 Time _____ hours

Company Contact J.D. Fancher Telephone (509) 376-2081

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
	~~1, 120mL G~~	~~soil~~	~~CLP; VOA~~
	~~1, 500mL aG~~ 2 280 WVS 3-3-92	~~soil~~	~~CLP; semi-VOA, PCB/PEST~~
	~~1, 1000mL G~~	~~soil~~	~~Gross Alpha, Gross Beta, Gamma~~
BOSWU19			~~Spec., U-235/238, Pu-239/240,~~
			~~Sr-90, Tc-99, C-14, Am-241.~~
	1, 250mL G	soil	CLP; ICP/AA Metals, Hg
	1, 120mL G	soil	CLP; Cn
	~~1, 120mL G~~	~~soil~~	~~CLP; VOA~~
	~~1, 500mL aG~~	~~soil~~	~~CLP; semi-VOA, PCB/PEST~~
	~~1, 1000mL G~~	~~soil~~	~~Gross Alpha, Gross Beta, Gamma~~
BOSWU2B			~~Spec., U-235/238, Pu-239/240,~~
			~~Sr-90, Tc-99, C-14, Am-241.~~
	1, 250mL G	soil	CLP; ICP/AA Metals, Hg
	1, 120mL G	soil	CLP; Cn

Field Information** BOTH SAMPLES HAD MORE than 100 counts OVER BACKGROUND with LAB RESULTS BEING < .0005 Pici

Special Handling and/or Storage Samples must be maintained at 4 C

Possible Sample Hazards SEE FIELD INFO

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 3-4-92

Analysis Required

199

*Indicate whether sample is soil, sludge, water, etc.

A-6000-406 (05/90)

Westinghouse Hanford Company

CHAIN OF CUSTODY

S&S

Custody Form Initiator W.V. SETZER

Company Contact J.D. Fancher

Telephone (509) 376-2081

Project Designation/Sampling Locations 100-HR-1 Vadose Zone Sampling 116-N-7

Collection Date 3-2-92

Ice Chest No. SML-131

Field Logbook No. WHC-N-557 2

Bill of Lading/Airbill No. 2509866722

Offsite Property No. WA-S-0011#2

Method of Shipment Overnight Air Delivery

Shipped to TMA/NORCAL 2030 Wright Ave. Richmond Ca. 94804

Possible Sample Hazards/Remarks Maintain at 4°C

Sample Identification

B05WV4	B05WV3
~~(1) 1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am-241)~~	~~(1) 1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am2~~
(1) 250ml G bottle(ICP/AA metals,Hg)	(1) 250ml G bottle(ICP/AA metals, Hg)
~~(1) 500 ml aG bottle(Semi-VOA,PCB's/PEST.)~~	~~(1) 500 ml aG bottle(Semi-VOA,PCB's/PEST.)~~
(1) ~~125~~ 120 ml G bottle(Cyanide) WWS 3-2-92	(1) ~~125~~ 120 ml G bottle(Cyanide)
~~(1) 125ml G bottle(VOA)~~ 120 WWS 3-2-92	~~(1) 125ml G bottle(VOA)~~ 120

☐ Field Transfer of Custody

CHAIN OF POSSESSION (Sign and Print Names)

Relinquished by:	Received by:	Date/Time:
W.V. SETZER / W.V. Setzer	K. Trapp / K. Trapp	3/4/92 0935
K. Trapp / K. Trapp	Kermit Blum	3-5-92 1100
Kermit Blum 3-5-92	[illegible]	3/6/92 9:30

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:
		200

Comments:

9213507.1183

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector W. Setzer Date Sampled 3/2/92 Time ~~0945~~ 0950 hours

Company Contact J.D. Fancher Telephone (509) 376-2081413

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
	~~1, 120mL G~~	~~soil~~	~~CLP; VOA~~
	~~1, 500mL aG~~	~~soil~~	~~CLP; semi-VOA, PCB/PEST~~
	~~1, 1000mL G~~	~~soil~~	~~Gross Alpha, Gross Beta, Gamma~~
B05WV3			~~Spec., U-235/238, Pu-239/240,~~
			~~Sr-90, Tc-99, C-14, Am-241.~~
	1, 250mL G	soil	CLP; ICP/AA Metals, Hg
	1, 120mL G	soil	CLP; Cn
	~~1, 120mL G~~	~~soil~~	~~CLP; VOA~~
	~~1, 500mL aG~~	~~soil~~	~~CLP; semi-VOA, PCB/PEST~~
	~~1, 1000mL G~~	~~soil~~	~~Gross Alpha, Gross Beta, Gamma~~
B05WV4			~~Spec., U-235/238, Pu-239/240,~~
			~~Sr-90, Tc-99, C-14, Am-241.~~
	1, 250mL G	soil	CLP; ICP/AA Metals, Hg
	1, 120mL G	soil	CLP; Cn

Field Information** _____

Special Handling and/or Storage Samples must be maintained at 4 C.

Possible Sample Hazards None observed.

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 3-5-92

Analysis Required _____

201

*Indicate whether sample is soil, sludge, water, etc.

**Use back of page for additional information relative to sample location

A-6000-406 (05/90)

9215507.1184

TMA
Thermo Analytical Inc.

TMA/Norcal
2030 Wright Avenue
P. O. Box 4040
Richmond, CA 94804-0040
(510) 235-2633 Fax No. (510) 235-0438

August 7, 1992

SENT BY FEDERAL EXPRESS

Ref. TMA/Norcal N2-03-055-7028

Mr. John Bourgeault
Westinghouse Hanford Company
2355 Stevens Drive
Richland, WA 99352

Dear Mr. Bourgeault:

Enclosed on the Summary Data Section, are the gross alpha, gross beta, ^{14}C, ^{90}Sr, ^{99}Tc, isotopic uranium, isotopic plutonium, ^{241}Am, and gamma scan results for ten soil samples and one water sample from 100-HR-1 Vadose Zone, we received 10 February 1992. The QA/QC results are also given in the Summary Data Section.

Please call if you have any questions concerning this data.

Sincerely,

D. P. Kharkar

Dinkar P. Kharkar, Ph.D.
Manager, Nuclear Programs

DPK/ss

Enclosures: Section 1 through 13
Appendices

AUG 1992
RECEIVED
OSM DMO

4-11-96
MC

N203055A-02

TMA NORCAL

REPORTING GROUPS 7026/7028

DATA SHEET

B05WP7

SDG 7026A
Contact Dinkar Kharkar

Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N203055A-02
Dept sample id 7028A-002
Received 03/10/92

Client sample id B05WP7
Matrix WATER
Collected 03/05/92
Chain of custody id EFL-1014

PARAMETER	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	Alpha	-0.24	0.53	0.96	3.0	U	80A
Gross Beta	Beta	-0.20	0.98	1.7	4.0	U	80B
Uranium 233/234		0.54	0.21	0.13	0.20		U
Uranium 235	15117-96-1	0.020	0.040	0.15	0.20	U	U
Uranium 238	7440-61-1	0.56	0.21	0.13	0.20		U
Plutonium 239/240		0.008	0.012	0.019	0.050	U	PU
Americium 241	14596-10-2	0	0.023	0.056	0.050	U	AM
Strontium 90	10098-97-2	-0.25	1.8	0.84	1.0	U	Y
Technetium 99	14133-76-7	0.79	0.56	1.1	5.0	U	TC
Carbon 14	14762-75-5	-18	44	74	50	U	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2			230		U	GAM
Chromium 51	14392-02-0			3100		U	GAM
Cobalt 60	10198-40-0			16		U	GAM
Zinc 65	17982-39-3			39		U	GAM
Cesium 134	17967-70-9			17		U	GAM
Cesium 137	10045-97-3			14		U	GAM
Radium 226	13982-67-7			28		U	GAM
Thorium 228	14274-82-9			32		U	GAM
Thorium 232	7440-29-1			55		U	GAM

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.14
Report date 08/07/92

TMA NORCAL

REPORTING GROUPS 7026/7028

N203001A-05

DATA SHEET

B05WV1

SDG 7026A
Contact Dinkar Kharkar
Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N203001A-05
Dept sample id 7026A-005
Received 03/02/92
Client sample id B05WV1
Matrix WATER
Collected 02/28/92
Chain of custody id EFL-1014

PARAMETER	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	Alpha	0.095	0.91	1.5	3.0	U	80A
Gross Beta	Beta	0.32	1.1	1.8	4.0	U	80B
Uranium 235	15117-96-1	0.013	0.027	0.10	0.20	U	U
Uranium 238	7440-61-1	0.022	0.022	0.085	0.20	U	U
Plutonium 239/240		-0.006	0.023	0.054	0.050	U	PU
Americium 241	14596-10-2	-0.019	0.019	0.052	0.050	U	AM
Strontium 90	10098-97-2	-0.25	0.33	0.75	1.0	U	Y
Technetium 99	14133-76-7	1.7	2.0	4.9	5.0	U	TC
Carbon 14	14762-75-5	540	79	94	50		C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2			260		U	GAM
Chromium 51	14392-02-0			3400		U	GAM
Cobalt 60	10198-40-0			16		U	GAM
Zinc 65	17982-39-3			38		U	GAM
Cesium 134	17967-70-9			17		U	GAM
Cesium 137	10045-97-3			16		U	GAM
Radium 226	13982-67-7			26		U	GAM
Thorium 228	14274-82-9			23		U	GAM
Thorium 232	7440-29-1			62		U	GAM

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.14
Report date 08/07/92

TMA NORCAL

REPORTING GROUPS 7026/7028

DATA SHEET

N203001-01

B05WN8

SDG	7026	Client	Westinghouse Hanford
Contact	Dinkar Kharkar	Contract	MBH-SVV-069262
Lab sample id	N203001-01	Client sample id	B05WN8
Dept sample id	7026-001	Matrix	SOIL
Received	03/02/92	Collected	02/26/92
		Chain of custody id	EFL-1014

PARAMETER	CAS NO	RESULT pCi/G	2σ ERR (COUNT)	MDA pCi/G	RDL pCi/G	QUALI-FIERS	TEST
Gross Alpha	Alpha	4.9	4.0	4.9	10	J	80A
Gross Beta	Beta	15	4.6	6.3	15		80B
Uranium 235	15117-96-1	0.029	0.029	0.11	0.30	U	U
Uranium 238	7440-61-1	0.47	0.15	0.092	0.30		U
Plutonium 239/240		0.004	0.018	0.034	0.050	U	PU
Americium 241	14596-10-2	0.023	0.037	0.062	0.050	U	AM
Strontium 90	10098-97-2	0.085	0.37	1.1	2.0	U	Y
Technetium 99	14133-76-7	-0.13	0.47	2.1	0.50	U	TC
Carbon 14	14762-75-5	-3.0	5.2	8.8	50	U	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	15	2.9				GAM
Chromium 51	14392-02-0			40		U	GAM
Cobalt 60	10198-40-0			0.23		U	GAM
Zinc 65	17982-39-3			0.58		U	GAM
Cesium 134	17967-70-9			0.21		U	GAM
Cesium 137	10045-97-3			0.21		U	GAM
Radium 226	13982-67-7	0.64	0.31				GAM
Thorium 228	14274-82-9	1.2	0.36				GAM
Thorium 232	7440-29-1	0.75	0.62				GAM

Lab id	TMAN
Protocol	WHC-HEIS
Version	Ver 1.0
Form	DVD-DS
Version	2.14
Report date	08/07/92

TMA NORCAL

REPORTING GROUPS 7026/7028

DATA SHEET

N203001-02

B05WN9

SDG 7026
Contact Dinkar Kharkar
Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N203001-02
Dept sample id 7026-002
Received 03/02/92
Client sample id B05WN9
Matrix SOIL
Collected 02/27/92
Chain of custody id EFL-1014

PARAMETER	CAS NO	RESULT pCi/G	2σ ERR (COUNT)	MDA pCi/G	RDL pCi/G	QUALI-FIERS	TEST
Gross Alpha	Alpha	3.2	3.8	5.1	10	U	80A
Gross Beta	Beta	9.7	3.7	5.1	15	J	80B
Uranium 235	15117-96-1	0	0.065	0.25	0.30	U	U
Uranium 238	7440-61-1	0.19	0.16	0.20	0.30	U	U
Plutonium 239/240		0.024	0.022	0.033	0.050	U	PU
Americium 241	14596-10-2	0.010	0.040	0.072	0.050	U	AM
Strontium 90	10098-97-2	-0.18	0.45	1.2	2.0	U	Y
Technetium 99	14133-76-7	0.23	0.18	0.42	0.50	U	TC
Carbon 14	14762-75-5	2.0	4.9	8.0	50	U	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	11	2.1				GAM
Chromium 51	14392-02-0			30		U	GAM
Cobalt 60	10198-40-0			0.19		U	GAM
Zinc 65	17982-39-3			0.50		U	GAM
Cesium 134	17967-70-9			0.19		U	GAM
Cesium 137	10045-97-3	0.29	0.15				GAM
Radium 226	13982-67-7	0.71	0.31				GAM
Thorium 228	14274-82-9	1.1	0.33				GAM
Thorium 232	7440-29-1	1.1	0.61				GAM
Europium 152	14683-23-9	0.36	0.28				GAM

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.14
Report date 08/07/92

N203001-04

TMA NORCAL

REPORTING GROUPS 7026/7028

DATA SHEET

B05WP0

SDG 7026
Contact Dinkar Kharkar

Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N203001-04
Dept sample id 7026-004
Received 03/02/92

Client sample id B05WP0
Matrix SOIL
Collected 02/27/92
Chain of custody id EFL-1014

PARAMETER	CAS NO	RESULT pCi/G	2σ ERR (COUNT)	MDA pCi/G	RDL pCi/G	QUALI-FIERS	TEST
Gross Alpha	Alpha	3.6	4.7	6.4	10	U	80A
Gross Beta	Beta	12	4.2	5.9	15	J	80B
Uranium 235	15117-96-1	0.015	0.031	0.12	0.30	U	U
Uranium 238	7440-61-1	0.45	0.16	0.098	0.30		U
Plutonium 239/240		0.004	0.025	0.046	0.050	U	PU
Americium 241	14596-10-2	0	0.025	0.047	0.050	U	AM
Strontium 90	10098-97-2	-0.16	0.35	0.85	2.0	U	Y
Technetium 99	14133-76-7	0.17	0.20	0.19	0.50	U	TC
Carbon 14	14762-75-5	-9.3	5.0	8.6	50	U	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	11	1.7				GAM
Chromium 51	14392-02-0			19		U	GAM
Cobalt 60	10198-40-0			0.10		U	GAM
Zinc 65	17982-39-3			0.32		U	GAM
Cesium 134	17967-70-9			0.12		U	GAM
Cesium 137	10045-97-3			0.093		U	GAM
Radium 226	13982-67-7	0.50	0.18				GAM
Thorium 228	14274-82-9	0.73	0.15				GAM
Thorium 232	7440-29-1	0.39	0.32				GAM

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.14
Report date 08/07/92

9713507.U90

CCCC76

N203001-10

TMA NORCAL

REPORTING GROUPS 7026/7028

DATA SHEET

B05WP1

SDG 7026
Contact Dinkar Kharkar

Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N203001-10
Dept sample id 7026-010
Received 03/03/92

Client sample id B05WP1
Matrix SOIL
Collected 03/04/92
Chain of custody id WHC-N-557-2

PARAMETER	CAS NO	RESULT pCi/G	2σ ERR (COUNT)	MDA pCi/G	RDL pCi/G	QUALI-FIERS	TEST
Gross Alpha	Alpha	30	7.6	4.5	10		80A
Gross Beta	Beta	15	4.4	5.7	15		80B
Uranium 235	15117-96-1	0.016	0.032	0.12	0.30	U	U
Uranium 238	7440-61-1	0.58	0.19	0.10	0.30		U
Plutonium 239/240		0.006	0.013	0.025	0.050	U	PU
Americium 241	14596-10-2	0.009	0.034	0.061	0.050	U	AM
Strontium 90	10098-97-2	0.048	0.27	0.85	2.0	U	Y
Technetium 99	14133-76-7	0.52	0.25	1.1	0.50	U	TC
Carbon 14	14762-75-5	3.5	5.9	9.6	50	U	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	9.8	1.6				GAM
Chromium 51	14392-02-0			19		U	GAM
Cobalt 60	10198-40-0	0.38	0.13				GAM
Zinc 65	17982-39-3			0.42		U	GAM
Cesium 134	17967-70-9			0.14		U	GAM
Cesium 137	10045-97-3			0.098		U	GAM
Radium 226	13982-67-7			0.33		U	GAM
Thorium 228	14274-82-9	0.58	0.18				GAM
Thorium 232	7440-29-1	0.44	0.44				GAM
Europium 152	14683-23-9	0.54	0.27				GAM

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.14
Report date 08/07/92

TMA NORCAL

REPORTING GROUPS 7026/7028

DATA SHEET

N203055-01

B05WP5

SDG	7026	Client	Westinghouse Hanford
Contact	Dinkar Kharkar	Contract	MBH-SVV-069262
Lab sample id	N203055-01	Client sample id	B05WP5
Dept sample id	7028-001	Matrix	SOIL
Received	03/10/92	Collected	03/05/92
		Chain of custody id	EFL-1014

PARAMETER	CAS NO	RESULT pCi/G	2σ ERR (COUNT)	MDA pCi/G	RDL pCi/G	QUALI-FIERS	TEST
Gross Alpha	Alpha	-1.7	3.5	6.3	10	U	80A
Gross Beta	Beta	14	4.4	5.9	15	J	80B
Uranium 233/234		0.35	0.19	0.18	0.30		U
Uranium 235	15117-96-1	0	0.056	0.21	0.30	U	U
Uranium 238	7440-61-1	0.44	0.20	0.18	0.30		U
Plutonium 239/240		0	0.005	0.021	0.050	U	PU
Americium 241	14596-10-2	0.011	0.017	0.027	0.050	U	AM
Strontium 90	10098-97-2	0.24	0.41	1.0	2.0	U	Y
Technetium 99	14133-76-7	0.20	0.33	0.76	0.50	U	TC
Carbon 14	14762-75-5	1.8	6.2	10	50	U	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	8.8	1.4				GAM
Chromium 51	14392-02-0			15		U	GAM
Cobalt 60	10198-40-0	0.13	0.10				GAM
Zinc 65	17982-39-3			0.23		U	GAM
Cesium 134	17967-70-9			0.092		U	GAM
Cesium 137	10045-97-3			0.076		U	GAM
Radium 226	13982-67-7	0.45	0.13				GAM
Thorium 228	14274-82-9	0.57	0.13				GAM
Thorium 232	7440-29-1	0.39	0.26				GAM

Lab id	TMAN
Protocol	WHC-HEIS
Version	Ver 1.0
Form	DVD-DS
Version	2.14
Report date	08/07/92

N203001-03

TMA NORCAL

REPORTING GROUPS 7026/7028

DATA SHEET

B05WT8

SDG 7026
Contact Dinkar Kharkar

Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N203001-03
Dept sample id 7026-003
Received 03/02/92

Client sample id B05WT8
Matrix SOIL
Collected 02/27/92
Chain of custody id EFL-1014

PARAMETER	CAS NO	RESULT pCi/G	2σ ERR (COUNT)	MDA pCi/G	RDL pCi/G	QUALI-FIERS	TEST
Gross Alpha	Alpha	2.1	5.5	8.1	10	U	80A
Gross Beta	Beta	18	5.0	6.7	15		80B
Uranium 235	15117-96-1	0.023	0.046	0.18	0.30	U	U
Uranium 238	7440-61-1	0.69	0.25	0.15	0.30		U
Plutonium 239/240		0.026	0.020	0.025	0.050	J	PU
Americium 241	14596-10-2	0.011	0.022	0.035	0.050	U	AM
Strontium 90	10098-97-2	-0.15	0.36	0.86	2.0	U	Y
Technetium 99	14133-76-7	0.15	0.11	0.23	0.50	U	TC
Carbon 14	14762-75-5	-1.5	5.4	9.0	50	U	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	7.2	1.4				GAM
Chromium 51	14392-02-0			15		U	GAM
Cobalt 60	10198-40-0			0.067		U	GAM
Zinc 65	17982-39-3			0.27		U	GAM
Cesium 134	17967-70-9			0.10		U	GAM
Cesium 137	10045-97-3			0.077		U	GAM
Radium 226	13982-67-7	0.29	0.15				GAM
Thorium 228	14274-82-9	0.41	0.13				GAM
Thorium 232	7440-29-1	0.41	0.37				GAM
VARIABLE ZR95		0.56	0.47				GAM

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.14
Report date 08/07/92

TMA NORCAL

REPORTING GROUPS 7026/7028

DATA SHEET

N203001-06

B05WT9

SDG 7026
Contact Dinkar Kharkar

Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N203001-06
Dept sample id 7026-006
Received 03/03/92

Client sample id B05WT9
Matrix SOIL
Collected 02/28/92
Chain of custody id WHC-N-557-2

PARAMETER	CAS NO	RESULT pCi/G	2σ ERR (COUNT)	MDA pCi/G	RDL pCi/G	QUALI-FIERS	TEST
Gross Alpha	Alpha	4.7	5.4	7.0	10	U	80A
Gross Beta	Beta	110	11	15	15		80B
Uranium 235	15117-96-1	0.013	0.052	0.099	0.30	U	U
Uranium 238	7440-61-1	0.47	0.16	0.081	0.30		U
Plutonium 239/240		1.1	0.18	0.068	0.050		PU
Americium 241	14596-10-2	0.54	0.11	0.072	0.050		AM
Strontium 90	10098-97-2	3.2	2.3	0.99	2.0		Y
Technetium 99	14133-76-7	0.33	0.71	1.1	0.50	U	TC
Carbon 14	14762-75-5	33	5.5	7.7	50	J	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	19	2.7				GAM
Chromium 51	14392-02-0			120		U	GAM
Cobalt 60	10198-40-0	14	0.66				GAM
Zinc 65	17982-39-3			3.9		U	GAM
Cesium 134	17967-70-9			0.80		U	GAM
Cesium 137	10045-97-3	11	0.90				GAM
Radium 226	13982-67-7			1.0		U	GAM
Thorium 228	14274-82-9			0.93		U	GAM
Thorium 232	7440-29-1			2.6		U	GAM
Europium 152	14683-23-9	120	2.5				GAM
Europium 154	15585-101	19	1.7				GAM

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.14
Report date 08/07/92

TMA NORCAL

REPORTING GROUPS 7026/7028

DATA SHEET

N203001-07

B05WV2

SDG 7026
Contact Dinkar Kharkar
Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N203001-07
Dept sample id 7026-007
Received 03/03/92
Client sample id B05WV2
Matrix SOIL
Collected 03/02/92
Chain of custody id WHC-N-557-2

PARAMETER	CAS NO	RESULT pCi/G	2σ ERR (COUNT)	MDA pCi/G	RDL pCi/G	QUALI-FIERS	TEST
Gross Alpha	Alpha	5.8	5.3	5.6	10	J	80A
Gross Beta	Beta	160	9.4	6.7	15		80B
Uranium 235	15117-96-1	0.38	0.21	0.20	0.30		U
Uranium 238	7440-61-1	0.68	0.27	0.20	0.30		U
Plutonium 239/240		1.3	0.13	0.021	0.050		PU
Americium 241	14596-10-2	0.72	0.13	0.044	0.050		AM
Strontium 90	10098-97-2	0.93	2.0	0.83	2.0	J	Y
Technetium 99	14133-76-7	0.095	0.30	0.89	0.50	U	TC
Carbon 14	14762-75-5	28	5.7	8.1	50	J	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	33	5.5				GAM
Chromium 51	14392-02-0			210		U	GAM
Cobalt 60	10198-40-0	36	1.6				GAM
Zinc 65	17982-39-3			5.9		U	GAM
Cesium 134	17967-70-9			1.6		U	GAM
Cesium 137	10045-97-3	35	1.6				GAM
Radium 226	13982-67-7			1.9		U	GAM
Thorium 228	14274-82-9			1.7		U	GAM
Thorium 232	7440-29-1			5.1		U	GAM
Europium 152	14683-23-9	260	4.9				GAM
Europium 154	15585-101	37	3.8				GAM

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.14
Report date 08/07/92

TMA NORCAL

REPORTING GROUPS 7026/7028

DATA SHEET

N203001-09

B05WV3

SDG 7026
Contact Dinkar Kharkar

Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N203001-09
Dept sample id 7026-009
Received 03/03/92

Client sample id B05WV3
Matrix SOIL
Collected 03/02/92
Chain of custody id WHC-N-557-2

PARAMETER	CAS NO	RESULT pCi/G	2σ ERR (COUNT)	MDA pCi/G	RDL pCi/G	QUALI-FIERS	TEST
Gross Alpha	Alpha	4.4	4.5	6.0	10	U	80A
Gross Beta	Beta	22	4.5	5.4	15		80B
Uranium 235	15117-96-1	0.018	0.037	0.14	0.30	U	U
Uranium 238	7440-61-1	0.50	0.19	0.12	0.30		U
Plutonium 239/240		0.073	0.027	0.021	0.050		PU
Americium 241	14596-10-2	0.031	0.027	0.043	0.050	U	AM
Strontium 90	10098-97-2	-0.70	1.5	0.88	2.0	U	Y
Technetium 99	14133-76-7	0.26	0.16	0.57	0.50	U	TC
Carbon 14	14762-75-5	-8.1	5.5	9.4	50	U	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	14	2.4				GAM
Chromium 51	14392-02-0			33		U	GAM
Cobalt 60	10198-40-0	0.68	0.17				GAM
Zinc 65	17982-39-3			0.65		U	GAM
Cesium 134	17967-70-9			0.21		U	GAM
Cesium 137	10045-97-3	1.7	0.23				GAM
Radium 226	13982-67-7	0.65	0.20				GAM
Thorium 228	14274-82-9	0.81	0.22				GAM
Thorium 232	7440-29-1			0.90		U	GAM
Europium 152	14683-23-9	4.0	0.65				GAM
Europium 154	15585-101	0.50	0.34				GAM

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.14
Report date 08/07/92

9213507.1496

TMA NORCAL

REPORTING GROUPS 7026/7028

DATA SHEET

000082

N203001-08

B05WV4

SDG 7026
Contact Dinkar Kharkar

Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N203001-08
Dept sample id 7026-008
Received 03/03/92

Client sample id B05WV4
Matrix SOIL
Collected 03/02/92
Chain of custody id WHC-N-557-2

PARAMETER	CAS NO	RESULT pCi/G	2σ ERR (COUNT)	MDA pCi/G	RDL pCi/G	QUALI-FIERS	TEST
Gross Alpha	Alpha	5.9	4.2	4.9	10	J	80A
Gross Beta	Beta	19	4.8	6.4	15		80B
Uranium 235	15117-96-1	0.014	0.027	0.10	0.30	U	U
Uranium 238	7440-61-1	0.53	0.17	0.086	0.30		U
Plutonium 239/240		0.003	0.013	0.030	0.050	U	PU
Americium 241	14596-10-2	0.011	0.029	0.055	0.050	U	AM
Strontium 90	10098-97-2	1.2	0.45	0.93	2.0	J	Y
Technetium 99	14133-76-7	0.22	0.15	0.67	0.50	U	TC
Carbon 14	14762-75-5	34	6.0	8.5	50	J	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	11	1.6				GAM
Chromium 51	14392-02-0			14		U	GAM
Cobalt 60	10198-40-0			0.074		U	GAM
Zinc 65	17982-39-3			0.28		U	GAM
Cesium 134	17967-70-9			0.12		U	GAM
Cesium 137	10045-97-3			0.082		U	GAM
Radium 226	13982-67-7	0.44	0.14				GAM
Thorium 228	14274-82-9	0.46	0.091				GAM
Thorium 232	7440-29-1	0.44	0.35				GAM

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.14
Report date 08/07/92

TMA NORCAL

REPORTING GROUPS 7026/7028

DATA SHEET

N203055-03

B05WV5

SDG 7026
Contact Dinkar Kharkar

Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N203055-03
Dept sample id 7028-003
Received 03/11/92

Client sample id B05WV5
Matrix SOIL
Collected 03/09/92
Chain of custody id WHC-N-557-2

PARAMETER	CAS NO	RESULT pCi/G	2σ ERR (COUNT)	MDA pCi/G	RDL pCi/G	QUALI-FIERS	TEST
Gross Alpha	Alpha	-1.3	5.0	7.9	10	U	80A
Gross Beta	Beta	110	7.8	5.9	15		80B
Uranium 235	15117-96-1	0.031	0.062	0.24	0.30	U	U
Uranium 238	7440-61-1	0.61	0.27	0.20	0.30		U
Plutonium 239/240		0.74	0.10	0.022	0.050		PU
Americium 241	14596-10-2	0.20	0.066	0.035	0.050		AM
Strontium 90	10098-97-2	1.5	2.1	0.92	2.0	J	Y
Technetium 99	14133-76-7	0.25	0.17	0.33	0.50	U	TC
Carbon 14	14762-75-5	2.3	6.6	11	50	U	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	13	2.0				GAM
Chromium 51	14392-02-0			72		U	GAM
Cobalt 60	10198-40-0	2.5	0.31				GAM
Zinc 65	17982-39-3			2.5		U	GAM
Cesium 134	17967-70-9			0.45		U	GAM
Cesium 137	10045-97-3	32	0.83				GAM
Radium 226	13982-67-7			0.72		U	GAM
Thorium 228	14274-82-9			0.64		U	GAM
Thorium 232	7440-29-1			1.5		U	GAM
Europium 152	14683-23-9	54	1.7				GAM
Europium 154	15585-101	5.4	0.87				GAM

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.14
Report date 08/07/92

9213507.1198

TMA NORCAL

REPORTING GROUPS 7026/7028

DATA SHEET

000084

N203055-04

B05WV6

SDG 7026
Contact Dinkar Kharkar

Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N203055-04
Dept sample id 7028-004
Received 03/13/92

Client sample id B05WV6
Matrix SOIL
Collected 03/09/92
Chain of custody id WHC-N-557-2

PARAMETER	CAS NO	RESULT pCi/G	2σ ERR (COUNT)	MDA pCi/G	RDL pCi/G	QUALI-FIERS	TEST
Gross Alpha	Alpha	4.9	4.7	5.5	10	U	80A
Gross Beta	Beta	95	7.5	6.3	15		80B
Uranium 233/234		0	0.072	0.17	0.30	U	U
Uranium 235	15117-96-1	0	0.044	0.17	0.30	U	U
Uranium 238	7440-61-1	0	0.036	0.14	0.30	U	U
Plutonium 239/240		0.58	0.079	0.025	0.050		PU
Americium 241	14596-10-2	0.16	0.054	0.042	0.050		AM
Strontium 90	10098-97-2	1.5	2.1	0.88	2.0	J	Y
Technetium 99	14133-76-7	0.25	0.12	0.23	0.50	J	TC
Carbon 14	14762-75-5	3.4	6.9	11	50	U	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	9.9	1.8				GAM
Chromium 51	14392-02-0			59		U	GAM
Cobalt 60	10198-40-0	1.8	0.27				GAM
Zinc 65	17982-39-3			1.7		U	GAM
Cesium 134	17967-70-9			0.36		U	GAM
Cesium 137	10045-97-3	24	0.72				GAM
Radium 226	13982-67-7			0.54		U	GAM
Thorium 228	14274-82-9	0.95	0.32				GAM
Thorium 232	7440-29-1			1.3		U	GAM
Europium 152	14683-23-9	36	1.3				GAM
Europium 154	15585-101	3.6	0.76				GAM

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.14
Report date 08/07/92

TMA NORCAL

REPORTING GROUPS 7026/7028

DATA SHEET

N203055-05

B05WV8

SDG 7026
Contact Dinkar Kharkar

Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N203055-05
Dept sample id 7028-005
Received 03/13/92

Client sample id B05WV8
Matrix SOIL
Collected 03/09/92
Chain of custody id WHC-N-557-2

PARAMETER	CAS NO	RESULT pCi/G	2σ ERR (COUNT)	MDA pCi/G	RDL pCi/G	QUALI-FIERS	TEST
Gross Alpha	Alpha	6.4	5.0	5.8	10	J	80A
Gross Beta	Beta	92	7.0	5.1	15		80B
Uranium 233/234		0.53	0.22	0.16	0.30		U
Uranium 235	15117-96-1	0.025	0.049	0.19	0.30	U	U
Uranium 238	7440-61-1	0.31	0.17	0.16	0.30		U
Plutonium 239/240		0.64	0.083	0.020	0.050		PU
Americium 241	14596-10-2	0.16	0.047	0.031	0.050		AM
Strontium 90	10098-97-2	6.2	2.7	0.93	2.0		Y
Technetium 99	14133-76-7	0.18	0.078	0.14	0.50	J	TC
Carbon 14	14762-75-5	8.9	6.3	10	50	U	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	13	2.0				GAM
Chromium 51	14392-02-0			58		U	GAM
Cobalt 60	10198-40-0	2.2	0.31				GAM
Zinc 65	17982-39-3			1.8		U	GAM
Cesium 134	17967-70-9			0.35		U	GAM
Cesium 137	10045-97-3	23	0.68				GAM
Radium 226	13982-67-7	0.78	0.47				GAM
Thorium 228	14274-82-9	0.52	0.30				GAM
Thorium 232	7440-29-1			1.3		U	GAM
Europium 152	14683-23-9	34	1.2				GAM
Europium 154	15585-101	3.6	0.81				GAM

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.14
Report date 08/07/92

TMA NORCAL

REPORTING GROUPS 7026/7028

DATA SHEET

N203055-06

B05WV9

SDG 7026
Contact Dinkar Kharkar
Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N203055-06
Dept sample id 7028-006
Received 03/13/92
Client sample id B05WV9
Matrix SOIL
Collected 03/10/92
Chain of custody id WHC-N-557-2

PARAMETER	CAS NO	RESULT pCi/G	2σ ERR (COUNT)	MDA pCi/G	RDL pCi/G	QUALI-FIERS	TEST
Gross Alpha	Alpha	0.86	4.5	6.6	10	U	80A
Gross Beta	Beta	69	6.8	6.6	15		80B
Uranium 233/234		0.62	0.28	0.20	0.30		U
Uranium 235	15117-96-1	0.13	0.13	0.24	0.30	U	U
Uranium 238	7440-61-1	0.23	0.16	0.20	0.30	J	U
Plutonium 239/240		0.33	0.058	0.025	0.050		PU
Americium 241	14596-10-2	0.068	0.036	0.027	0.050		AM
Strontium 90	10098-97-2	5.5	3.2	0.81	2.0		Y
Technetium 99	14133-76-7	0.67	0.20	0.16	0.50		TC
Carbon 14	14762-75-5	-0.48	6.3	10	50	U	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	13	2.1				GAM
Chromium 51	14392-02-0			49		U	GAM
Cobalt 60	10198-40-0	2.0	0.28				GAM
Zinc 65	17982-39-3			1.9		U	GAM
Cesium 134	17967-70-9			0.36		U	GAM
Cesium 137	10045-97-3	11	0.50				GAM
Radium 226	13982-67-7	0.85	0.49				GAM
Thorium 228	14274-82-9	0.44	0.23				GAM
Thorium 232	7440-29-1			1.2		U	GAM
Europium 152	14683-23-9	42	1.2				GAM
Europium 154	15585-101	3.6	0.92				GAM

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.14
Report date 08/07/92

N203055-07

TMA NORCAL

REPORTING GROUPS 7026/7028

DATA SHEET

B05WW0

SDG 7026
Contact Dinkar Kharkar

Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N203055-07
Dept sample id 7028-007
Received 03/16/92

Client sample id B05WW0
Matrix SOIL
Collected 03/11/92
Chain of custody id WHC-N-557-2

PARAMETER	CAS NO	RESULT pCi/G	2σ ERR (COUNT)	MDA pCi/G	RDL pCi/G	QUALI-FIERS	TEST
Gross Alpha	Alpha	2.7	4.0	5.6	10	U	80A
Gross Beta	Beta	16	4.4	5.8	15		80B
Uranium 235	15117-96-1	0.050	0.067	0.13	0.30	U	U
Uranium 238	7440-61-1	0.39	0.14	0.11	0.30		U
Plutonium 239/240		0.063	0.024	0.019	0.050		PU
Americium 241	14596-10-2	0	0.028	0.059	0.050	U	AM
Strontium 90	10098-97-2	1.3	1.7	0.98	2.0	J	Y
Technetium 99	14133-76-7	0.21	0.12	0.23	0.50	U	TC
Carbon 14	14762-75-5	15	7.1	11	50	J	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	10	1.7				GAM
Chromium 51	14392-02-0			17		U	GAM
Cobalt 60	10198-40-0			0.10		U	GAM
Zinc 65	17982-39-3			0.34		U	GAM
Cesium 134	17967-70-9			0.12		U	GAM
Cesium 137	10045-97-3	0.25	0.10				GAM
Radium 226	13982-67-7	0.55	0.20				GAM
Thorium 228	14274-82-9	0.75	0.13				GAM
Thorium 232	7440-29-1	0.89	0.36				GAM
Europium 152	14683-23-9	0.72	0.19				GAM
Europium 154	15585-101	0.34	0.12				GAM

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.14
Report date 08/07/92

N203055-08

TMA NORCAL

REPORTING GROUPS 7026/7028

DATA SHEET

B05WW4

SDG 7026
Contact Dinkar Kharkar

Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N203055-08
Dept sample id 7028-008
Received 03/16/92

Client sample id B05WW4
Matrix SOIL
Collected 03/11/92
Chain of custody id WHC-N-557-2

PARAMETER	CAS NO	RESULT pCi/G	2σ ERR (COUNT)	MDA pCi/G	RDL pCi/G	QUALI-FIERS	TEST
Gross Alpha	Alpha	2.7	5.7	8.6	10	U	80A
Gross Beta	Beta	-2.4	9.1	15	15	U	80B
Uranium 235	15117-96-1	0.043	0.043	0.16	0.30	U	U
Uranium 238	7440-61-1	0.58	0.22	0.14	0.30		U
Plutonium 239/240		0.034	0.020	0.022	0.050	J	PU
Americium 241	14596-10-2	0.006	0.019	0.040	0.050	U	AM
Strontium 90	10098-97-2	-0.081	2.2	0.91	2.0	U	Y
Technetium 99	14133-76-7	-0.76	1.5	4.0	0.50	U	TC
Carbon 14	14762-75-5	0.28	6.4	11	50	U	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	13	1.7				GAM
Chromium 51	14392-02-0			17		U	GAM
Cobalt 60	10198-40-0			0.088		U	GAM
Zinc 65	17982-39-3			0.33		U	GAM
Cesium 134	17967-70-9			0.11		U	GAM
Cesium 137	10045-97-3			0.098		U	GAM
Radium 226	13982-67-7	0.40	0.14				GAM
Thorium 228	14274-82-9	0.53	0.15				GAM
Thorium 232	7440-29-1	0.64	0.47				GAM

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.14
Report date 08/07/92

9213507.1203

000089

N203055-09

TMA NORCAL

REPORTING GROUPS 7026/7028

DATA SHEET

B05WW5

SDG 7026
Contact Dinkar Kharkar

Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N203055-09
Dept sample id 7028-009
Received 03/17/92

Client sample id B05WW5
Matrix SOIL
Collected 03/13/92
Chain of custody id WHC-N-557-2

PARAMETER	CAS NO	RESULT pCi/G	2σ ERR (COUNT)	MDA pCi/G	RDL pCi/G	QUALI-FIERS	TEST
Gross Alpha	Alpha	3.0	3.6	4.8	10	U	80A
Gross Beta	Beta	12	4.6	6.7	15	J	80B
Uranium 235	15117-96-1	0	0.044	0.17	0.30	U	U
Uranium 238	7440-61-1	0.33	0.15	0.14	0.30		U
Plutonium 239/240		0	0.011	0.027	0.050	U	PU
Americium 241	14596-10-2	0.004	0.031	0.060	0.050	U	AM
Strontium 90	10098-97-2	-0.020	1.5	0.90	2.0	U	Y
Technetium 99	14133-76-7	0.14	0.19	0.66	0.50	U	TC
Carbon 14	14762-75-5	4.2	6.4	10	50	U	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	8.9	1.6				GAM
Chromium 51	14392-02-0			16		U	GAM
Cobalt 60	10198-40-0			0.097		U	GAM
Zinc 65	17982-39-3			0.32		U	GAM
Cesium 134	17967-70-9			0.11		U	GAM
Cesium 137	10045-97-3			0.095		U	GAM
Radium 226	13982-67-7	0.37	0.19				GAM
Thorium 228	14274-82-9	0.49	0.16				GAM
Thorium 232	7440-29-1	0.35	0.34				GAM

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.14
Report date 08/07/92

N203055-10

TMA NORCAL

REPORTING GROUPS 7026/7028

DATA SHEET

B05WW6

SDG 7026
Contact Dinkar Kharkar

Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N203055-10
Dept sample id 7028-010
Received 03/19/92

Client sample id B05WW6
Matrix SOIL
Collected 03/16/92
Chain of custody id WHC-N-557-2

PARAMETER	CAS NO	RESULT pCi/G	2σ ERR (COUNT)	MDA pCi/G	RDL pCi/G	QUALI-FIERS	TEST
Gross Alpha	Alpha	1.7	4.4	6.4	10	U	80A
Gross Beta	Beta	16	4.8	6.5	15		80B
Uranium 235	15117-96-1	0	0.069	0.27	0.30	U	U
Uranium 238	7440-61-1	0.54	0.25	0.22	0.30		U
Plutonium 239/240		0	0.013	0.028	0.050	U	PU
Americium 241	14596-10-2	0.002	0.022	0.043	0.050	U	AM
Strontium 90	10098-97-2	-0.76	2.3	1.1	2.0	U	Y
Technetium 99	14133-76-7	0.084	0.18	0.50	0.50	U	TC
Carbon 14	14762-75-5	-0.21	6.2	10	50	U	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	12	1.5				GAM
Chromium 51	14392-02-0			11		U	GAM
Cobalt 60	10198-40-0			0.11		U	GAM
Zinc 65	17982-39-3			0.25		U	GAM
Cesium 134	17967-70-9			0.097		U	GAM
Cesium 137	10045-97-3			0.067		U	GAM
Radium 226	13982-67-7	0.47	0.14				GAM
Thorium 228	14274-82-9	0.50	0.080				GAM
Thorium 232	7440-29-1			0.46		U	GAM

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.14
Report date 08/07/92

9213507.1205

TMA NORCAL

REPORTING GROUPS 7026/7028

DATA SHEET

000091

N203055-11

B05WW7

SDG 7026
Contact Dinkar Kharkar

Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N203055-11
Dept sample id 7028-011
Received 03/19/92

Client sample id B05WW7
Matrix SOIL
Collected 03/16/92
Chain of custody id WHC-N-557-2

PARAMETER	CAS NO	RESULT pCi/G	2σ ERR (COUNT)	MDA pCi/G	RDL pCi/G	QUALI-FIERS	TEST
Gross Alpha	Alpha	3.2	4.4	6.1	10	UX	80A
Gross Beta	Beta	14	4.2	5.4	15	J	80B
Uranium 235	15117-96-1	0	0.048	0.18	0.30	U	U
Uranium 238	7440-61-1	0.50	0.21	0.15	0.30		U
Plutonium 239/240		0.006	0.012	0.028	0.050	U	PU
Americium 241	14596-10-2	-0.033	0.055	0.12	0.050	U	AM
Strontium 90	10098-97-2	-0.24	2.3	1.0	2.0	U	Y
Technetium 99	14133-76-7	0.42	0.40	1.3	0.50	U	TC
Carbon 14	14762-75-5	0.91	5.9	9.7	50	U	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	13	2.0				GAM
Chromium 51	14392-02-0			14		U	GAM
Cobalt 60	10198-40-0			0.11		U	GAM
Zinc 65	17982-39-3			0.31		U	GAM
Cesium 134	17967-70-9			0.16		U	GAM
Cesium 137	10045-97-3			0.10		U	GAM
Radium 226	13982-67-7	0.50	0.18				GAM
Thorium 228	14274-82-9	0.63	0.17				GAM
Thorium 232	7440-29-1			0.61		U	GAM

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.14
Report date 08/07/92

SDG 7028	Client Westinghouse Hanford
Contact Dinkar P. Kharkar	Contract MBH-SVV-069262

CASE NARRATIVE

1.0 GENERAL

Soil and water sample results from Location 100-HR-1 Vadose Zone (TMA/Norcal Groups 7026 and 7028) are reported herein. TMA/Norcal Group 7026 and 7028 are comprised of the twenty-one samples listed on the Chain-of-Custody documents and are identified as Sample 1 through 21. Groups 7026 and 7028 were processed together and the same QC results apply to both sets.

1.1 CHAINS-OF-CUSTODY

This report includes data from the samples delivered under Chain-of-Custody documents Field Logbook No. EFL-1014.

1.2 SAMPLE VOLUME

A 1000 mL bottle of each sample was received for the analyses.

1.3 MISSING SAMPLES

All samples were received in an undamaged condition.

1.4 HOLDING TIMES

The collections were made from 2/26/92 through 3/16/92 and sample processing was initiated within 180 days of collection.

2.0 QUALITY CONTROL

The internal quality control consisted of one sample each of a laboratory control, a blank, and a replicate. All original analyses were performed with QC samples 7026-11 through 14 and 7028-12, 13, 14, 17, and 18.

The QC samples were prepared and labelled by the quality control officer. Copies of The QC notebook pages are included in the data package.

2.1 LABORATORY CONTROL SAMPLES

LCS recoveries for all nuclides were good, except for ^{235}U, which was 131% and the recovery does not pass the 3 σ protocol limits. The MDA's for ^{14}C was 61 pCi/g which does not meet the RDL requirement of 50 pCi/g. The MDA's for ^{99}Tc was 1.2 and 0.90 pCi/g which were above RDL of 0.50 pCi/g. The MDA of ^{241}Am was 0.057 pCi/g instead of 0.050 pCi/g.

2.2 BLANKS

MDA's for all the analyses meet the RDL requirements, except for ^{99}Tc and ^{241}Am. The MDA's for ^{99}Tc and ^{241}Am were (0.9 - 1.3) and 0.14 pCi/g respectively.

SDG 7028	Client Westinghouse Hanford
Contact Dinkar P. Kharkar	Contract MBH-SVV-069262

CASE NARRATIVE

1.0 GENERAL

Soil and water samples results from Location 100-HR-1 Vadose Zone (TMA/Norcal Groups 7026 and 7028) are reported herein. TMA/Norcal Group 7026 and 7028 are comprised of the twenty-one samples listed on the Chain-of-Custody documents and are identified as samples 7026-1 through 10 and 7028-1 through 11. Groups 7026 and 7028 were processed together and the same QC results apply to both sets.

1.1 CHAINS-OF-CUSTODY

This report includes data from the samples delivered under Chain-of-Custody documents Field Logbook No. EFL-1014.

1.2 SAMPLE VOLUME

A 1000 mL bottle of each sample was received for the analyses.

1.3 MISSING SAMPLES

All samples were received in an undamaged condition.

1.4 HOLDING TIMES

The collections were made from 2/26/92 through 3/16/92 and sample processing was initiated within 180 days of collection.

2.0 QUALITY CONTROL

The internal quality control consisted of one sample each of a laboratory control, a blank, and a replicate. All original analyses were performed with QC samples 7026-11 through 14 and 7028-12, 13, 14, 17, and 18.

The QC samples were prepared and labelled by the quality control officer. Copies of The QC notebook pages are included in the data package.

2.1 LABORATORY CONTROL SAMPLES

LCS recoveries for all nuclides were good, except for ^{235}U, which was 131% and the recovery does not pass the 3 σ protocol limits. The MDA's for ^{14}C was 61 pCi/g which does not meet the RDL requirement of 50 pCi/g. The MDA's for ^{99}Tc was 1.2 and 0.90 pCi/g which were above RDL of 0.50 pCi/g. The MDA of ^{241}Am was 0.057 pCi/g instead of 0.050 pCi/g.

2.2 BLANKS

MDA's for all the analyses meet the RDL requirements, except for gross alpha, gross beta, ^{99}Tc, and ^{241}Am. The MDA's for gross alpha, gross beta, ^{99}Tc, and ^{241}Am were 5.0, 5.4, (0.9 - 1.3), and 0.14 pCi/g respectively.

SDG 7028	Client Westinghouse Hanford
Contact Dinkar P. Kharkar	Contract MBH-SVV-069262

CASE NARRATIVE

2.3 REPLICATES

Results were satisfactory for all replicate analyses. The MDA's for ^{239}Pu, ^{241}Am, and ^{99}Tc are underlined in the data sheets because the MDA's exceed RDL, but are within average MDA's of (0.039 ± 0.028), 0.057 ± 0.056, and 1.9 ± 2.3 pCi/g respectively. The MDA for ^{14}C exceed RDL.

3.0 ANALYTICAL NOTES

3.1 Gross Alpha Analyses: Positive gross alpha concentration was found in sample numbers 7026-1, 7, 8, and 10 and 7028-5. The average for the twenty-two soil samples was 6.1 ± 2.6 pCi/g. The average for five water samples was 2.4 ± 3.7 pCi/L.

3.2 Gross Beta Analyses Positive gross beta concentration was found in all samples except 7028-8. The average MDA for the twenty-two soil samples was 6.8 ± 5.4 pCi/g. Positive gross beta concentration was not found in the water samples. The average MDA for five water samples was 3.3 ± 3.9 pCi/L.

3.3 Carbon-14 Analyses: The MDA's for the LCS was underlined because it exceeded the RDL in the sample. This was due to short count times. Positive concentration of ^{14}C was not found in any of the soil samples. Positive ^{14}C concentration was found in water samples 7026-5. The average MDA for five water samples was 62 ± 64 pCi/L.

3.4 Strontium-90 Analyses: The average yield for twenty-two soil analyses was (70 ± 14%). The lowest yield was 50% and the highest was 78%. The average MDA was 0.94 ± 0.20 pCi/g. Positive ^{90}Sr concentration was found in soil sample numbers 7026-6 through 8 and 7028-3 through 7. The average yield for five water samples was (74 ± 9%). No positive ^{90}Sr concentration was found in the water samples.

3.5 Technetium-99 Analyses: The average yield for twenty-six analyses was (46 ± 38%). The lowest yield was 14% and the highest was 78%. The average MDA was 1.0 ± 2.3 pCi/g. Positive ^{99}Tc concentration was not found in the soil and water samples. The average yield for five water samples was (63 ± 9%).

3.6 Uranium-233, 234, 234, and 238 Analyses: The average yield for twenty-four soil analyses was (48 ± 25%). The lowest yield was 22% and the highest was 69%. The average MDA was 0.16 ± 0.010 pCi/g. Concentration above MDA was found in all samples except 7026-2. The average yield for seven water samples was (54 ± 17%).

3.7 Plutonium-238, 239/240 Analyses: The average yield for twenty-two soil analyses was (68 ± 25%). The lowest yield was 45% and the highest was 94%. The average MDA was 0.030 ± 0.024 pCi/g. Positive plutonium concentration was found in sample numbers 7026-6 and 7, and 7028-3 through 6. The average yield for five water samples was (64 ± 23%). No positive concentration of plutonium was found in the water samples.

SDG 7028	Client Westinghouse Hanford
Contact Dinkar P. Kharkar	Contract MBH-SVV-069262

CASE NARRATIVE

3.8 Americium-241 Analyses: The average yield for twenty-two soil analyses was (55 ± 30%). The lowest yield was 21% and the highest was 77%. The average MDA was 0.057 ± 0.056 pCi/g. Positive americium concentration was found in sample numbers 7026-6 and 7, and 7028-3 through 5. The average yield (40 ± 27%). No positive concentration of americium was found in the water samples.

3.9 Gamma Scan Analyses: Gamma scan analysis found positive concentration of ^{60}Co in sample numbers 7026-6,7,9, and 10, and 7028-1, 3, 4, 5, and 6. Positive ^{137}Cs concentration in samples 7026-2, 6, 7, and 9, and 7028-3 through 7. No positive concentration of gamma was found in the water samples.

Westinghouse Hanford Company	CHAIN OF CUSTODY

Custody Form Initiator W.V. SETZER

Company Contact J.D. Fancher Telephone (509)376-2081

Project Designation/Sampling Locations 100-HR-1 Vadose Zone Sampling Collection Date 2-26-92

116-H-9

Ice Chest No. ~~19~~ KFT 2/25/92 SML-113 Field Logbook No. EFL 1014

Bill of Lading/Airbill No. Offsite Property No.

Method of Shipment Overnight Air Delivery

Shipped to TMA/NORCAL 2030 Wright Ave. Richmond Ca. 94804

Possible Sample Hazards/Remarks Maintain at 4°C

Sample Identification

B05WN8

(1)1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am-241)

(1) 250ml G bottle(ICP/AA metals,Hg)

(1) 500 ml aG bottle(Semi-VOA,PCB's/PEST.)

(1) ~~125~~ 120 mlaG bottle(Cyanide) 2-26-92

(1) ~~125~~ 120 mlaG bottle(VOA) WVS 2-26-92

~~B05WN8~~ WVS 2-26-92

(1)1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am2

(1) 250ml G bottle(ICP/AA metals, Hg)

(1)500 ml aG bottle(Semi-VOA,PCB's/PEST.)

(1) ~~125~~ 1200 mlaG bottle(Cyanide) WVS 2-26-92

(1) ~~125~~ 120 mlaG bottle(VOA) 2-26-92

☐ Field Transfer of Custody

CHAIN OF POSSESSION (Sign and Print Names)

Relinquished by:	Received by:	Date/Time:
W.V. SETZER W.V. Setzer	K. Trapp/K. Trapp	2/28/92 1022
K. Trapp/K. Trapp	Kermit Blum	3-2-92 ~~3-3-92~~ KB 0800 *

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments: * Opened 3-2-92; Received @ TMA/NORCAL 2-29-92 @ 1300

000130

9213607.1211

Westinghouse Hanford Company	CHAIN OF CUSTODY

Custody Form Initiator C.M. Chance

Company Contact J.D. Fancher — Telephone (509)376-2081

Project Designation/Sampling Locations 100-HR-1 Vadose Zone Sampling 116-H-9 — Collection Date 2/27/92

Ice Chest No. SML-113 — Field Logbook No. EFL 1014

Bill of Lading/Airbill No. — Offsite Property No.

Method of Shipment Overnight Air Delivery

Shipped to TMA/NORCAL 2030 Wright Ave. Richmond Ca. 94804

Possible Sample Hazards/Remarks Maintain at 4°C

Sample Identification

B05WN9	B05WP0
(1)1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am-241)	(1)1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am2
(1) 250ml G bottle(ICP/AA metals,Hg)	(1) 250ml G bottle(ICP/AA metals, Hg)
(1) 500 ml aG bottle(Semi-VOA,PCB's/PEST.)	(1)500 ml aG bottle(Semi-VOA,PCB's/PEST.)
(1) ~~125~~ 120 KFT 2/29/92 ml G bottle(Cyanide)	(1) ~~125~~ 120 KFT 2/29/92 ml G bottle(Cyanide)
(1) ~~125~~ 120 KFT 2/29/92 ml G bottle(VOA)	(1) ~~125~~ 120 KFT 2/29/92 ml G bottle(VOA)

☐ Field Transfer of Custody — CHAIN OF POSSESSION — (Sign and Print Names)

Relinquished by:	Received by:	Date/Time:
C M Chance / C M Chance	K. Trapp / K. Trapp	2/28/92 1022
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 3-2-92 ~~3-3-92~~ KB 0800 *
Relinquished by:	Received by:	Date/Time:
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments: * Opened 3-2-92; received @ TMA/Norcal 2-29-92 @ 1300

9215507.1212

Westinghouse Hanford Company

CHAIN OF CUSTODY

Custody Form Initiator C.M. Chance

Company Contact J.D. Fancher

Telephone (509)376-2081

Project Designation/Sampling Locations 100-HR-1 Vadose Zone Sampling 116-H-7

Collection Date 2/27/92

Ice Chest No. SML-113

Field Logbook No.

Bill of Lading/Airbill No.

Offsite Property No.

Method of Shipment Overnight Air Delivery

Shipped to TMA/NORCAL 2030 Wright Ave. Richmond Ca. 94804

Possible Sample Hazards/Remarks Maintain at 4°C

Sample Identification

~~B05WN9~~ KFT 2/28/92

(1)1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am-241)

(1) 250ml G bottle(ICP/AA metals,Hg)

(1) 500 ml aG bottle(Semi-VOA,PCB's/PEST.)

(1) 125ml G bottle(Cyanide)

(1) 125ml G bottle(VOA)

KFT 2/28/92

B05WT8

(1)1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am2

(1) 250ml G bottle(ICP/AA metals, Hg)

(1)500 ml aG bottle(Semi-VOA,PCB's/PEST.)

(1) ~~125~~ml G bottle(Cyanide) 120 KFT 2/28/92

(1) ~~125~~ml G bottle(VOA) 120 KFT 2/28/92

☑ Field Transfer of Custody

CHAIN OF POSSESSION (Sign and Print Names)		
Relinquished by: C.M. Chance	Received by: K. Trapp / K. Trapp	Date/Time: 2/28/92 1022
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 3-2-92 ~~3-3-92~~ KB 0800 *
Relinquished by:	Received by:	Date/Time:
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments: * Opened 3-2-92; Received at TMA/NORCAL 2-29-92 @ 1300

9216507.1215

000132

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector W. Setzer Date Sampled 2/26/92 2/27/92 Time 1010 1003 hours

Company Contact J.D. Fancher Telephone (509) 376-2081

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
	1, 120mL G	soil	CLP; VOA
	1, 500mL aG	soil	CLP; semi-VOA, PCB/PEST
	1, 1000mL G	soil	Gross Alpha, Gross Beta, Gamma
B05WN8			Spec., U-235/238, Pu-239/240,
			Sr-90, Tc-99, C-14, Am-241.
	1, 250mL G	soil	CLP; ICP/AA Metals, Hg
	1, 120mL G	soil	CLP; Cn
	1, 120mL G	soil	CLP; VOA
	1, 500mL aG	soil	CLP; semi-VOA, PCB/PEST
	1, 1000mL G	soil	Gross Alpha, Gross Beta, Gamma
B05WN9			Spec., U-235/238, Pu-239/240,
			Sr-90, Tc-99, C-14, Am-241.
	1, 250mL G	soil	CLP; ICP/AA Metals, Hg
	1, 120mL G	soil	CLP; Cn

Field Information** _____

Special Handling and/or Storage Samples must be maintained at 4 C

Possible Sample Hazards None observed.

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 3-2-92

Analysis Required _____

*Indicate whether sample is soil, sludge, water, etc.

2-6000-406 (05/90)

9213507.1214

000133

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector W. Setzer Date Sampled 2/27/92 2/27/92 Time 1350 0955 hours

Company Contact J.D. Fancher Telephone (509) 376-2081

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
	1, 120mL G	soil	CLP; VOA
	1, 500mL aG	soil	CLP; semi-VOA, PCB/PEST
	1, 1000mL G	soil	Gross Alpha, Gross Beta, Gamma
B05WP0			Spec., U-235/238, Pu-239/240,
			Sr-90, Tc-99, C-14, Am-241.
	1, 250mL G	soil	CLP; ICP/AA Metals, Hg
	1, 120mL G	soil	CLP; Cn
	1, 120mL G	soil	CLP; VOA
	1, 500mL aG	soil	CLP; semi-VOA, PCB/PEST
	1, 1000mL G	soil	Gross Alpha, Gross Beta, Gamma
B05WT8			Spec., U-235/238, Pu-239/240,
			Sr-90, Tc-99, C-14, Am-241.
	1, 250mL G	soil	CLP; ICP/AA Metals, Hg
	1, 120mL G	soil	CLP; Cn

Field Information**

Special Handling and/or Storage Samples must be maintained at 4 C

Possible Sample Hazards None observed.

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 3-2-92

Analysis Required

*Indicate whether sample is soil, sludge, water, etc.

**Use back of page for additional information relative to sample location.

A-6000-406 (05/90)

9213507.1215 ORIGINAL IN "YEARWOOD" JAR 3-2-92

Westinghouse Hanford Company

CHAIN OF CUSTODY

000134

Custody Form Initiator CM Chanie

Company Contact JD Fancher Telephone (509) 376-2081

Project Designation/Sampling Locations 100HR-1 Vadose Zone Sampling Collection Date 2-28-92

Ice Chest No. SML-119 & Yearwood Field Logbook No. WHC-N-5572

Bill of Lading/Airbill No. Offsite Property No.

Method of Shipment Overnight Air Delivery

Shipped to TMA/NDR(A) 2030 Wright Ave. Richmond Ca. 94804

Possible Sample Hazards/Remarks Maintain at 4°C

B05WV1

Sample Identification

(3) 1000ml G bottle (ICP/AA metals, Hg) Preserved HNO_3

(3) 1000ml G bottle (Cn) " NaOH

(3) 40ml Gs (VOA)

(3) 2360ml aG (Semi-VOA, PCB/PEST)

(2) 4000ml P bottle (Gross alpha/beta, Gamma Spec., Sr-90, Tc-99, C-14, U-235/238, Pu-239/240, Am-241

CC 2-28-92

☐ Field Transfer of Custody

CHAIN OF POSSESSION (Sign and Print Names)		
Relinquished by: CM Chanie Cory Chanie	Received by: K. Trapp / K. Trapp	Date/Time: 3/2/92 1214
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 3-3-92 1130 *
Relinquished by:	Received by:	Date/Time:
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments: * Icechest containing metals & CN^- aliquots lost in transit. Found by Emery Worldwide & delivered to TMA/NORCAL 3-4-92 @ 1145.

A-6000-407 (12/90)

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

000135

PART I: FIELD SECTION

Collector C. Chance Date Sampled 2/29/92 Time 1300 hours

Company Contact J.D. Fancher Telephone (509) 376-2081

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
305WV1	G 3, 1000ml x	Water	TCP/AA metals, Hg, CLP
	G 3, 1000ml xx	water	Cn, CLP
	Gs 3, 40ml	water	CLP; VOA
	aG 3, 2360ml	water	CLP; Semi-VOA, PCB/Pesx
	P 2, 4000ml xxx	water	Gross Alpha, Gross beta, Gamma Spec,
			Sr-90, Tc-99, C-14, Alpha Spec,
			U 235/238, Pu 239/240, Am 241
			KFT 3/2/92

Field Information** x Preserved in HNO_3, xx Preserved in NaOH, xxx Preserved in HNO_3

Special Handling and/or Storage Maintain at 4°C

Possible Sample Hazards None observed.

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 3-3-92

Analysis Required

*Indicate whether sample is soil, sludge, water, etc.

**Use back of page for additional information relative to sample location.

A-6000-406 (05/90)

Westinghouse Hanford Company

CHAIN OF CUSTODY

000136

Custody Form Initiator CMChance

Company Contact J.D. Fancher

Telephone (509)376-2081

Project Designation/Sampling Locations 100-HR-1 Vadose Zone Sampling 116-H-7

Collection Date 2-28-92

Ice Chest No. SML 151

Field Logbook No. WHC-N-557

Bill of Lading/Airbill No.

Offsite Property No.

Method of Shipment Overnight Air Delivery

Shipped to TMA/NORCAL 2030 Wright Ave. Richmond Ca. 94804

Possible Sample Hazards/Remarks Maintain at 4°C

Sample Identification

B05WT9

(1)1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am-241)

(1) 250ml G bottle(ICP/AA metals,Hg)

(2) 250 ml ~~(1) 500~~ ml aG bottle(Semi-VOA,PCB's/PEST.) JM 2-28-92

(1) ~~125~~ml G bottle(Cyanide) 120 WVS 3-2-92

(1) ~~125~~ml G bottle(VOA) 120 WVS 3-2-92

(1)1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am2

(1) 250ml G bottle(ICP/AA metals, Hg)

(1)500 ml aG bottle(Semi-VOA,PCB's/PEST.) (2-28-92)

(1) 125ml G bottle(Cyanide)

(1) 125ml G bottle(VOA)

☑ Field Transfer of Custody

CHAIN OF POSSESSION (Sign and Print Names)

Relinquished by:	Received by:	Date/Time:
CMChance Cmy Chance	Kermit Blum	3-4-92 1200
Relinquished by:	Received by:	Date/Time:
Relinquished by:	Received by:	Date/Time:
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

9215502.1618

Westinghouse Hanford Company

CHAIN OF CUSTODY

000137

Custody Form Initiator W.V. SETZER

Company Contact J.D. Fancher

Telephone (509)376-2081

Project Designation/Sampling Locations 100-HR-1 Vadose Zone Sampling 116-H-7

Collection Date 3-2-92

Ice Chest No. SML 151

Field Logbook No. WHC-N-5572

Bill of Lading/Airbill No.

Offsite Property No.

Method of Shipment Overnight Air Delivery

Shipped to TMA/NORCAL 2030 Wright Ave. Richmond Ca. 94804

Possible Sample Hazards/Remarks Maintain at 4°C

Sample Identification

B05WV2

(1)1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am-241)

(1) 250ml G bottle(ICP/AA metals,Hg)

(1) 500 ml aG bottle(Semi-VOA,PCB's/PEST.)

(1) ~~125~~ 120 ml G bottle(Cyanide) WVS 3-2-92

(1) ~~125~~ 120 ml G bottle(VOA) WVS 3-2-92

(1)1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am2

(1) 250ml G bottle(ICP/AA metals, Hg)

(1)500 ml aG bottle(Semi-VOA,PCB's/PEST.)

(1) 125ml G bottle(Cyanide) WVS 3-2-92

(1) 125ml G bottle(VOA)

☐ Field Transfer of Custody

CHAIN OF POSSESSION (Sign and Print Names)

Relinquished by:	Received by:	Date/Time:
W.V. SETZER W.V. Setzer	Kermit Blum	3-4-92 1200
Relinquished by:	Received by:	Date/Time:
Relinquished by:	Received by:	Date/Time:
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

9216507 1019

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST 000138

PART I: FIELD SECTION

Collector W.N. SETZER Date Sampled BOSWT9-2-28-92 BOSWU2 3-3-92 Time _____ hours

Company Contact J.D. Fancher Telephone (509) 376-2081

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
	1, 120mL G	soil	CLP; VOA
	~~1~~ 2, ~~500~~ 250mL aG WNS 3-3-92	soil	CLP; semi-VOA, PCB/PEST
	1, 1000mL G	soil	Gross Alpha, Gross Beta, Gamma
BOSWT9			Spec., U-235/238, Pu-239/240,
			Sr-90, Tc-99, C-14, Am-241.
	1, 250mL G	soil	CLP; ICP/AA Metals, Hg
	1, 120mL G	soil	CLP; Cn
	1, 120mL G	soil	CLP; VOA
	1, 500mL aG	soil	CLP; semi-VOA, PCB/PEST
	1, 1000mL G	soil	Gross Alpha, Gross Beta, Gamma
BOSWU2			Spec., U-235/238, Pu-239/240,
			Sr-90, Tc-99, C-14, Am-241.
	1, 250mL G	soil	CLP; ICP/AA Metals, Hg
	1, 120mL G	soil	CLP; Cn

Field Information** BOTH SAMPLES HAD MORE than 100 counts OVER BACKGROUND WITH LAB RESULTS BEING < .0005 Pici

Special Handling and/or Storage Samples must be maintained at 4 C

Possible Sample Hazards SEE FIELD INFO

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 3-4-92

Analysis Required _____

*Indicate whether sample is soil, sludge, water, etc.

**Use back of page for additional information relative to sample location.

A-6000-406 (05/90)

Westinghouse Hanford Company

CHAIN OF CUSTODY

Custody Form Initiator W.V. SETZER

Company Contact J.D. Fancher Telephone (509)376-2081

Project Designation/Sampling Locations 100-HR-1 Vadose Zone Sampling Collection Date 3-2-92

116-N-7

Ice Chest No. SML-131 Field Logbook No. WHC-N-557 2

Bill of Lading/Airbill No. 2509866722 Offsite Property No. WHC-O-0011#2

Method of Shipment Overnight Air Delivery

Shipped to TMA/NORCAL 2030 Wright Ave. Richmond Ca. 94804

Possible Sample Hazards/Remarks Maintain at 4°C

Sample Identification

B05WV4	B05WV3
(1)1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am-241)	(1)1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am2
(1) 250ml G bottle(ICP/AA metals,Hg)	(1) 250ml G bottle(ICP/AA metals, Hg)
(1) 500 ml aG bottle(Semi-VOA,PCB's/PEST.)	(1)500 ml aG bottle(Semi-VOA,PCB's/PEST.)
(1) ~~125~~ 120 ml G bottle(Cyanide) WVS 3-2-92	(1) ~~125~~ 120 ml G bottle(Cyanide)
(1) ~~125~~ 120 ml G bottle(VOA) WVS 3-2-92	(1) ~~125~~ 120 ml G bottle(VOA) WVS

☐ Field Transfer of Custody

CHAIN OF POSSESSION (Sign and Print Names)

Relinquished by:	Received by:	Date/Time:
W.V. SETZER W.V. Setzer	K. Trapp / K. Trapp	3/4/92 0935
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 3-5-92 1100
Relinquished by:	Received by:	Date/Time:
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

9213507.1221

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST 000140

PART I: FIELD SECTION

Collector W. Setzer Date Sampled 3/2/92 Time ~~0945~~ 0950 hours

Company Contact J.D. Fancher Telephone (509) 376-2081413

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
	1, 120mL G	soil	CLP; VOA
	1, 500mL aG	soil	CLP; semi-VOA, PCB/PEST
	1, 1000mL G	soil	Gross Alpha, Gross Beta, Gamma
B05WV3			Spec., U-235/238, Pu-239/240,
			Sr-90, Tc-99, C-14, Am-241.
	1, 250mL G	soil	CLP; ICP/AA Metals, Hg
	1, 120mL G	soil	CLP; Cn
	1, 120mL G	soil	CLP; VOA
	1, 500mL aG	soil	CLP; semi-VOA, PCB/PEST
	1, 1000mL G	soil	Gross Alpha, Gross Beta, Gamma
B05WV4			Spec., U-235/238, Pu-239/240,
			Sr-90, Tc-99, C-14, Am-241.
	1, 250mL G	soil	CLP; ICP/AA Metals, Hg
	1, 120mL G	soil	CLP; Cn

Field Information** _____

Special Handling and/or Storage Samples must be maintained at 4 C.

Possible Sample Hazards None observed.

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 3-5-92

Analysis Required _____

*Indicate whether sample is soil, sludge, water, etc.

**Use back of page for additional information relative to sample location.

A-6000-406 (05/90)

9/15/07 1222

Westinghouse Hanford Company

CHAIN OF CUSTODY

000141

Custody Form Initiator CM Chance

Company Contact J.D. Fancher

Telephone (509)376-2081

Project Designation/Sampling Locations 100-HR-1 Vadose Zone Sampling Bt 11b-H-3

Collection Date 3-4-92

Ice Chest No. SML-60

Field Logbook No. EFL-1014

Bill of Lading/Airbill No.

Offsite Property No.

Method of Shipment Overnight Air Delivery

Shipped to TMA/NORCAL 2030 Wright Ave. Richmond Ca. 94804

Possible Sample Hazards/Remarks Maintain at 4°C

Sample Identification

EOSWP1

(1)1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am-241)

(1) 250ml G bottle(ICP/AA metals,Hg)

(1) 500 ml aG bottle(Semi-VOA,PCB's/PEST.)

(1)120ml G bottle(Cyanide)

(1)120ml G bottle(VOA)

(1)1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am24

(1) 250ml G bottle(ICP/AA metals, Hg)

(1)500 ml aG bottle(Semi-VOA,PCB's/PEST.)

CCJ 3-4-92

(1) 120ml G bottle(Cyanide)

(1) 120ml G bottle(VOA)

☑ Field Transfer of Custody

CHAIN OF POSSESSION (Sign and Print Names)

Relinquished by:	Received by:	Date/Time:
CM Chance / Cory Chance	K. Trapp / K. Trapp	3/5/92 1005
K. Trapp / K. Trapp	Kermit Blum	3-6-92 1115

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

000142

PART I: FIELD SECTION

Collector C. Chance Date Sampled 3/4/92 Time 1405 hours

Company Contact J.D. Fancher Telephone (509) 376-2081

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B05WP1	1, 120mL G	soil	CLP; VOA
	1, 500mL aG	soil	CLP; semi-VOA, PCB/PEST
	1, 1000mL G	soil	Gross Alpha, Gross Beta, Gamma
			Spec., U-235/238, Pu-239/240,
			Sr-90, Tc-99, C-14, Am-241.
	1, 250mL G	soil	CLP; ICP/AA Metals, Hg
	1, 120mL G	soil	CLP; Cn
	1, 120mL G	soil	CLP; VOA
	1, 500mL aG	soil	CLP; semi-VOA, PCB/PEST
	1, 1000mL G	soil	Gross Alpha, Gross Beta, Gamma
			Spec., U-235/238, Pu-239/240,
			Sr-90, Tc-99, C-14, Am-241.
	1, 250mL G	soil	CLP; ICP/AA Metals, Hg
	1, 120mL G	soil	CLP; Cn
			KFT 3/5/92

Field Information**

Special Handling and/or Storage Samples must be maintained at 4 C.

Possible Sample Hazards None observed.

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 3-6-92

Analysis Required

*Indicate whether sample is soil, sludge, water, etc.

**Use back of page for additional information relative to sample location.

A-6000-406 (05/90)

Emergency Contact Date — Overnight Delivery

SHIPPING INST.

SHIP TO: 000143

Company: TMA/Norcal

Address: 2030 Wright Avenue

City, State, Zip: Richmond, CA 94804

Attention: Robert Fox

OFFSITE RADIOACTIVE SHIPMENT RECORD

– EXTERIOR INSPECTION PERMITTED –

No 8350

Contractor: ☐ PNL ☐ KEH ☒ WHC

Site Carrier: W.V. SETZER

PR No. 242-86-8259 | Veh. No. ID 2828

Ship: ☒ Prepaid ☐ Collect Via: ☐ Motor-Rail ☒ Air Psgr. ☐ Excl. Use ☒ Air Cargo ☐ DOE Veh. ☐ Mail ☐ UPS Sur. ☐

SHIPMENT DESCRIPTION

Proper Shipping Name — Radioactive Material, — UN Number

1. Empty Packages ☐ UN 2908
2. Low Specific Activity, n.o.s ☐ UN 2912
3. Limited quantity, n.o.s. ☒ UN 2910
4. N.O.S. ☐ UN 2982
5. Fissile n.o.s. ☐ UN 2918
6. Special Form, n.o.s. ☐ UN 2974
7. Instruments & Articles ☐ UN 2911
8. ☐

Material Form: ☐ Special (A1) ☒ Normal (A2)

Labels Applied: ☐ Empty ☐ Radioactive LSA ☐ White I ☐ Yellow II ☐ Yellow III ☒ None ☐ Danger (Air Cargo) ☐ Secondary

Material Category: ☐ Empty ☐ Low Specific Act. (LSA) ☒ Limited Quantity ☐ Type A Quantity ☐ Type B Quantity ☐ Highway Route Controlled Quantity

For Normal Form Identify:

Physical Form: ☒ Solid ☐ Liquid ☐ Gas

Chemical Form: ☐ Metal ☐ Oxide ☒ Elemental ☐ Nitrate

Other

TYPE PACKAGE: ☒ Strong Tight ☐ Type A ☐ Type B ☐ Type B (U) ☐ Type B (M)

CONSTRUCTION: ☐ Box, FB ☐ Wood ☐ Steel ☐ Drum ☐ Cask ☒ Other Poly COOLER

FISSILE CLASS: ☒ Non Fissile ☐ Fissile Exempt ☐ Fissile I ☐ Fissile II ☐ Fissile III

Grams Fissile

SNM: ☒ No ☐ Yes ☐ <1 gr ☐ Category I ☐ Category II ☐ Category III

ACCOUNTABILITY/SECURITY CONTROL: ☐ Classified ☒ Unclassified

Consignee authorized to receive this qty ☒

Sig. Security Svc. Reg. NA ☐ NA ☒

Pu, EU > 1 g ☐ N/A NU, DU > 1 Kg ☐

Security Escorts Req. ☐ Not. Req. ☒

External Cask Temperature N/A ☒ (Max. 122° F LTL, 180° F Ex. Use) °F

Packaging conforms to appropriate packaging procedure ☐ N/A ☒ Yes

Complies with D. O. T. packaging marking and labeling requirements ☐ N/A ☒ Yes

Container acceptability documented (incl. 7A cert.) ☒ N/A ☐ Yes

Container examined: No evidence of deterioration or damage ☒ Ye

QA Inspection Current ☐ Yes ☒ N/A Seals required ☒ No ☐ Ye

Shipping Doc. NA 49CR Authorization No. NA

No. Pkgs.	Model Package	COC/Spec. No.	Serial No.	Seal No.	Isotopes	Curies/Pkg	T.I.	Gr. Wt
1	Strong tight	NA	NA	NA	MFP	<.0004	NA	57 lb.
	Cooler #	NA	SML 151	SAmple Bottles and Volume	10 BOTTLES	TOTAL:		3980 ml
	Soil samples in glass bottles. Bottles are double-bagged and packed in wet ice surrounded by vermiculite absorbent. This package conforms to the conditions and limitations specified in 49 CFR 173.421 for exempted radioactive material, limited quantit N.O.S. UN2910. Sample # B05WT9, B05WV2							
	(Packager may describe package in detail on one of unused lines above)				TOTAL	<.0004	NA	57 lb.

Originator's Signature: W.V. Setzer | Date: 3-3-92 | Organization: Env. Field Services Group | Complete Cost Code (inc. function): ~~81241~~ 12500 PRIAM

WVS 3-3-92 Larry L. Cole

AREA MONITOR

Surface Dose Rate of Package: ☒ ≤0.5 or ___ mrem/hr (N + βγ)

Dose Rate at 1 Meter from Surface of Package: ☒ ≤0.5 or ___ mrem/hr (N + βγ)

Smears of Outer Container: ☒ ≤22 dpm βγ/cm² ☒ ≤2.2 dpm α/cm²

TRUCK LOAD OR EXCLUSIVE USE: Surface: ☒ ≤ 200 mrem/hr (N + βγ) @ 6 feet: ☒ ≤ 10 mrem/hr (N + βγ) @ Cab or Sleeper ☒ ≤2.0 mrem/hr (N + βγ)

Additional Data and Instructions (inc. Readings on Internal Packaging): Internal ≤ 0.5 mrem/hr βγ

Signature - Radiation Monitoring: Bonnie A. Wodehouse | Bldg. 100 D | Survey No. 111748 | Date 3-3-92

AUTHORIZATION FOR SHIPMENT AND CERTIFICATION

CERTIFIER

AIR TRANSPORT CERTIFICATION ▸ Cargo Only: ☐ Danger Labels Applied

Passenger: ☒ 1. Ltd. Qty. ☒ 3. Research or Medical Diagnosis ☐ 2. ≤3 T.I ☐ 4. Human Medical Research

Pkg. Dimensions: 30" X 18" X 18"

This is to certify that the above named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation, according to the applicable federal, state, local and international regulations for the transportation of hazardous materials.

Authorized Signature ▸ Larry L. Cole Printed Name ▸ Larry L. Cole Date ▸ 3-3-92

APPROVED FOR OFFSITE SHIPMENT

TRAFFIC

B. L. No.	Date Shipped	E. T. A.	Routing		Placards
RMW-7677	3/3/92	3/4/92	FEDX	☐ N/A	☐ Yes ☒ N
Surveyed By	Date	Approved for Shipment		Date	Route Plan
D. Sexton	3-3-92	Westinghouse Hanford Company		3/3/92	☐ Yes ☒

Overnight Delivery

000144

Contractor	OFF-SITE PROPERTY CONTROL	CONTROL NUMBER (To be obtained from PROPERTY MANAGEMENT)
Westinghouse Hanford Company		W92-0-0011 #23

PART I – TO BE COMPLETED BY ORIGINATOR

Department	Section	Unit
Env. Eng. & Geotech.	EFSG	Env. Charac. & Sampling

The following items are to be shipped from ☒ Contractor ☐ Vendor

Routing Air Emery ☒ Contractor ☐ Vendor

Shipped to
TMA/NORCAL
2030 WRIGHT AVE
RICHMOND CA 94804

Off-site Custodian
Robert Fox

Full Title
Project Coordinator

Quantity	Description (Include Serial and any Government Tag Numbers)	Original Cost
SML-113 77 lbs Yearwood 48 lbs	SML-113, Yearwood poly coolers, Contains soil samples that are double-bagged and packed in wet ice and vermiculite. Samples are nonhazardous. Sample #: B05WV1	N/A

☐ Classified ☒ Unclassified ☐ Shipped Under DOE Contract ☐ Shipped Under Contractor's Use Permit Contract

Necessity for the Off-Site Use of this Property

To support drilling and sampling at 100 Areas.

Bill of Lading # 250 986631 5

CERTIFICATION OF THE RADIATION MONITORING RELEASE MUST BE SECURED THE SAME DAY THAT MATERIAL IS DELIVERED TO SHIPPING.

RM Clearance for Public Release	RM Survey No.	Date
[signature]	F12 111716	3-2-92

Location of Property (Area & Bldg.)	Contact	Phone
100 Area	J. D. Fancher	376-208

Date Ready for Shipment	Cost Code to be Charged	Approximate Date This Property will be Returned
3/2/92	PB1AM PB213 12500 81241	N/A

Originated By	Date	Authorized By	Date
Relinquished by [signature]	3/2/92	B.E. Imsis / [signature]	3-2-92
Signature and Name of Property Control	Custodian Date	Property Management Approval	Date
		[signature]	3/2/92

PART II – TO BE COMPLETED BY SHIPPING

Signature of Recipient	Return Order No.	Date Issued	Purchase Order No.	Date Issued
[signature]				
Date 3/6/92 time 1510				

DISTRIBUTION

By Originator	Shipping Operation – Sign all Copies and Forward to:
White, Green, Yellow, Pink – Property Management Goldenrod – Retain	White – Property Management Yellow – Retain Green – Property Control Custodian (Issuing Office) Pink – Originator

54-3000-479 (09/

9215507.1226

000145

Overnight Delivery

Contractor	OFF-SITE PROPERTY CONTROL	CONTROL NUMBER (To be obtained from PROPERTY MANAGEMENT)
Westinghouse Hanford Company		W92-0-0011 #212

PART I – TO BE COMPLETED BY ORIGINATOR

Department	Section	Unit
Env. Eng. & Geotech.	EFSG	Env. Charac. & Sampling

The following items are to be shipped from ☒ Contractor ☐ Vendor

Routing Air Emery ☒ Contractor ☐ Vendor

Shipped to TMA/NORCAL
2030 WRIGHT AVE
RICHMOND CA 94804

Off-site Custodian: Robert Fox

Full Title: Project Coordinator

Quantity	Description (Include Serial and any Government Tag Numbers)	Original Cost
1 67 lbs.	SML-113 poly cooler. Contains soil samples that are double-bagged and packed in wet ice and vermiculite. Samples are nonhazardous. Sample #: B05WN8, B05WN9, B05WT0, B05WT8	N/A

☐ Classified ☒ Unclassified ☐ Shipped Under DOE Contract ☐ Shipped Under Contractor's Use Permit Contract

Necessity for the Off-Site Use of this Property

To support drilling and sampling at 100 Areas.

1 cooler Rec'd 2/29/92
K. M. Koppel

Bill of Lading # 250996674 4

MXC

CERTIFICATION OF THE RADIATION MONITORING RELEASE MUST BE SECURED THE SAME DAY THAT MATERIAL IS DELIVERED TO SHIPPING.

RM Clearance for Public Release	RM Survey No.	Date
	111739	2-28-92

Location of Property (Area & Bldg.)	Contact	Phone
100 Area	J. D. Fancher	376-2081

Date Ready for Shipment	Cost Code to be Charged	Approximate Date This Property will be Returned
2/28/92	PB213 ~~81241~~	N/A

Originated By	Date/Time	Authorized By	Date
K. Trapp		B. E. Innis	2-27-92
Signature and Name of Property Control	Custodian Date	Property Management Approval	Date
			2/28/92

PART II – TO BE COMPLETED BY SHIPPING

Signature of Recipient	Return Order No.	Date Issued	Purchase Order No.	Date Issued
Date 2/28/92 Time 1150				

DISTRIBUTION

By Originator	Shipping Operation – Sign all Copies and Forward to:	
White, Green, Yellow, Pink – Property Management Goldenrod – Retain	White – Property Management Yellow – Retain	Green – Property Control Custodian (Issuing Office) Pink – Originator

54-3000-479 (09/89)

PULL FOR SHPT. NO. TAB

250986674 4 PAGE COPY — 4

000146

FORM OF PAYMENT

Check ☐ GBL ☐ FCCOD ☐

Bill to Shipper [X] Bill to Consignee ☐ Third Party Billing ☐

E Shipper's Account Number 850281585

EMERY WORLDWIDE — A CF Company

SERVICES

UNITED STATES / CANADA: Same Day ☐ AM ☐ Second Day [X] PM ☐ Saturday Delivery ☐

INTERNATIONAL: Express ☐ Preferred ☐ Standard ☐ Business Documents ☐ Customs Clearance ☐ Delivery ☐

Date	Origin	Shipment Number
02-28-92	PSC	250986674 4

From:
WESTINGHOUSE SHIPPING DEPT (509) 376-6665
US DEPARTMENT OF ENERGY C/O
WESTINGHOUSE HANFORD
BLDG 1163
2355 STEVENS DRIVE
RICHLAND WA 99352 Canada ☐

To:
ROBERT FOX
TMA/NORCAL
2030 WRIGHT AVE
RICHMOND CA 94804 Canada ☐

Hold for Pick Up ☐

Tariff Dest. | Gateway

Check to Shipper $

EMERY WORLDWIDE will accept Consignee's check with all risks being assumed by Shipper, including but not limited to non-payment, fraud and misrepresentation.

Customer's Reference Numbers: W12500 PB1AM W92-0-0011 #22

E Consignee's Account Number

Description	Pcs.	L	W	H	Total Pieces	Total Weight (In Lbs.)
1 SML-113 COOLER SOIL SAMPLES W92-0-0011 #22	1	26	15	16	1	67

FOR INFORMATION OR RATES CALL 1-800 44 EMERY (1-800-443-6379)

Declared Value $

250986744

Remarks: SATURDAY DELIVERY

Shipper's Signature X

Zip Ship ☐ For shipments within the 50 United States Shipper has the option to check this box and, by checking, agrees that the Zip Ship conditions, described in the area to the right, apply.

Mark if Emery Packaging is used: Urgent Letter 9X12 ☐ Urgent Pack 12X15 ☐

International Shipments: Free Domicile ☐ Commodity Code

Third Party Account Number mandatory for Third Party Billing. E Third Party Account Number

International Customs Value | International Insurance

Base Charge

Total Transportation Charges | Other Charges/Advance at Origin ☐ OC/AO- $

1 OAK

SAT

Terms and Conditions on Back

PLEASE TYPE OR USE BALL POINT PEN. BEAR DOWN FIRMLY! KEEP MARKS WITHIN BOXES TO ASSURE ACCURACY

FORM NO. 60001-46

9216507.1228

000147

Overnight Delivery

Contractor	OFF-SITE PROPERTY CONTROL	CONTROL NUMBER (To be obtained from PROPERTY MANAGEMENT)
Westinghouse Hanford Company		W92-0~~0~~011 #23

PART I – TO BE COMPLETED BY ORIGINATOR

Department	Section	Unit
Env. Eng. & Geotech.	EFSG	Env. Charac. & Sampling

The following items are to be shipped from ☒ Contractor ☐ Vendor

Routing Air Emery ☒ Contractor ☐ Vendor

Shipped to
TMA/NORCAL
2030 WRIGHT AVE
RICHMOND CA 94804

Off-site Custodian: Robert Fox

Full Title: Project Coordinator

Quantity	Description (Include Serial and any Government Tag Numbers)	Original Cost
SML-113 77 lbs Yearwood 48 lbs.	KFT 3/2/92 SML-113, Yearwood poly coolers. Contains soil samples that are double-bagged and packed in wet ice and vermiculite. Samples are nonhazardous. Sample #: B05WV1	N/A

☐ Classified ☒ Unclassified ☐ Shipped Under DOE Contract ☐ Shipped Under Contractor's Use Permit Contract

Necessity for the Off-Site Use of this Property

To support drilling and sampling at 100 Areas.

Bill of Lading # 250 986631 5

CERTIFICATION OF THE RADIATION MONITORING RELEASE MUST BE SECURED THE SAME DAY THAT MATERIAL IS DELIVERED TO SHIPPING.

RM Clearance for Public Release	RM Survey No	Date
	ER 111746	3-2-92

Location of Property (Area & Bldg.)	Contact	Phone
100 Area	J. D. Fancher	376-2081

Date Ready for Shipment	Cost Code to ~~be charged~~	Approximate Date This Property will be Returned
3/2/92	KFT 3/2/92 PCIAM ~~PB213~~ 12500 ~~S1241~~	N/A

Originated By	Date	Authorized By	Date
K. Trapp Relinquished by K. Trapp	3/2/92	B.F. Innis/B.F. Innis	3-2-92
Signature and Name of Property Control	**Custodian Date**	**Property Management Approval**	**Date**
			3/2/92

PART II – TO BE COMPLETED BY SHIPPING

Signature of Recipient	Return Order No.	Date Issued	Purchase Order No.	Date Issued
Date 3/2/92 time 1510				

DISTRIBUTION

By Originator	Shipping Operation – Sign all Copies and Forward to
White, Green, Yellow, Pink – Property Management Goldenrod – Retain	White – Property Management Yellow – Retain Green – Property Control Custodian (Issuing Office) Pink – Originator

54-3000-479 (09/89)

PULL FOR SHPT. NO. TAB

9713507.1229

CONSIGNEE —PACKAGE COPY — 4

000148

FORM OF PAYMENT

Check ☐ GBL ☐ FCCOD ☐

Bill to Shipper ☒ Bill to Consignee ☐ Third Party Billing ☐

EMERY WORLDWIDE — A CF Company

SERVICES

UNITED STATES / CANADA: Same Day ☐ AM ☐ PM ☐ Second Day ☐ Saturday Delivery ☐

INTERNATIONAL: Express ☐ Preferred ☐ Standard ☐ Business Documents ☐ Customs Clearance ☐ Delivery ☐

E Shipper's Account Number: 850281585

Date: 03-02-92 | Origin: PSC | Shipment Number: 250986631 5

From:
WESTINGHOUSE SHIPPING DEPT (509) 376-6665
US DEPARTMENT OF ENERGY C/O
WESTINGHOUSE HANFORD
BLDG 1163
2355 STEVENS DRIVE
RICHLAND WA
Canada ☐

To:
ROBERT FOX
TMA/NORCAL
2030 WRIGHT AVENUE
RICHMOND CA
Hold for Pick Up ☐ Canada ☐

Tariff Dest. | Gateway

Check to Shipper $

EMERY WORLDWIDE will accept Consignee's check with all risks being assumed by Shipper, including but not limited to non-payment, fraud and misrepresentation.

Customer's Reference Numbers: W12500 P81AM W92-0-0011#23

Zip: 99352

E Consignee's Account Number

Zip: 94804

Description	Dimensions Pcs.	L	W	H	Total Pieces	Total Weight (In Lbs.)
2 COOLERS SML 113 77#; YEARWOOD 48 SOIL SAMPLES 805WV1	2	36	18	17	2	125

W92-0-0011 Rem#23

OVERNIGHT DELIVERY

Shipper's Signature X

Zip Ship ☐
For shipments within the 50 United States Shipper has the option to check this box and, by checking, agrees that the Zip Ship conditions, described in the area to the right, apply.

Mark if Emery Packaging is used: Urgent Letter 9X12 ☒ Urgent Pack 12X15 ☒

FOR INFORMATION OR RATES CALL 1-800 44 EMERY (1-800-443-6379)

Declared Value $

250986631 5

International Shipments: Free Domicile ☐ Commodity Code

Third Party Account Number mandatory for Third Party Billing. E Third Party Account Number

Base Charge

International Customs Value | International Insurance

Total Transportation Charges | Other Charges/Advance at Origin ☐ OC/AO- $

1-OAK-A

Terms and Conditions on Back

PLEASE TYPE OR USE BALL POINT PEN. BEAR DOWN FIRMLY! BOXES WITHIN BOXES TO ASSURE ACCURACY

FORM NO. 60001-46

000149

FEDERAL EXPRESS

QUESTIONS? CALL 800-238-5355 TOLL FREE.

3101510576

AIRBILL PACKAGE TRACKING NUMBER 3101510576

RECIPIENT'S COPY

Date 3-03-92

From (Your Name) Please Print: G.O. BONESS

Your Phone Number (Very Important): (509) 376-7627

Company: U.S. DEPT. OF ENERGY c/o

Department/Floor No.

Street Address: [illegible] HANFORD

(EMERGENCY CONTACT) (PHONE NUMBER) (509-373-3800)

City: [illegible] State: WA ZIP Required

2 To (Recipient's Name) Please Print: ROBERT FOX

Recipient's Phone Number (Very

Company: TMA / NORCAL

Department/F

Exact Street Address (We Cannot Deliver to P.O. Boxes or P.O. Zip Codes.): 2030 WRIGHT AVENUE

City: RICHMOND State: CA ZIP Required: 94804

YOUR INTERNAL BILLING REFERENCE INFORMATION (First 24 characters will appear on invoice.) [illegible]-7677 12500 PRIAN
RADIOACTIVE MATERIAL, EXCEPTED PACKAGE - LIMITED QUANTITY OF MATERIAL
DOT EMERGENCY RESPONSE GUIDE NUMBER 63 ATTACHED

IF HOLD FOR PICK-UP, Print FEDEX Address Here (Not available at all locations)

Street Address

City State ZIP Required

3 PAYMENT 1 [X] Bill Sender 2 [ ] Bill Recipient's FedEx Acct. No. 3 [ ] Bill 3rd Party FedEx Acct. No. 4 [ ] Bill Credit Card 5 [ ] Cash/Check

4 SERVICES (Check only one box)

Priority Overnight (Delivery by next business morning†)	Standard Overnight (Delivery by next business afternoon†)
11 [X]	51 [ ]
Economy Two-Day (Delivery by second business day†)	Government Overnight (Restricted to authorized users only)
30 [ ]	41 [ ]

Freight Service (for Extra Large or any package over 150 lbs.)
70 [ ] OVERNIGHT FREIGHT ** (Confirmed reservation required)
80 [ ] TWO-DAY FREIGHT **
† Delivery commitment may be later in some areas.
*Declared Value Limit $100.
**Call for delivery schedule

INSTRUCTIONS (Mark appropriate boxes)
- Dangerous Goods as per attached Shipper's Declaration [ ]
- Dangerous Goods Shipper's Declaration not required [X]
- Cargo Aircraft only [ ]

DELIVERY AND SPECIAL HANDLING (Check services required)
1 [ ] HOLD FOR PICK-UP (Fill in Box H)
2 [X] DELIVER WEEKDAY
3 DELIVER SATURDAY (Extra charge) (Not available to all locations) [ ]
4 [X] DANGEROUS GOODS (Extra charge)
6 [ ] DRY ICE ____ Lbs.
- Dangerous Goods Shipper's Declaration not required
- Dry Ice, 9, UN 1845,

____ x ____ kg.
7 [ ] OTHER SPECIAL SERVICE
11 [ ] DESCRIPTION
12 [ ] HOLIDAY DELIVERY (If offered) (Extra charge)

PACKAGES	WEIGHT In Pounds Only
1	57
Total 1	Total 57

DIM SHIPMENT (Chargeable Weight) [ ] lbs

Received At: 1 [X] Regular Stop 2 [ ] On Call Stop 3 [ ] Drop Box 4 [ ] BSC 5 [ ] Station

Driver No. Date/Time

Emp. No. Date

[ ] Cash Received
[ ] Return Shipment
[ ] Third Party [ ] Chg. To Del. [ ] Chg. To Hold

Street Address

City State Zip

Received By: X

Date/Time Received FedEx Employee Number

SIGNATURE RELEASE UNAVAILABLE

Federal Express Base Charges
Declared Value C
Other 1
Other 2
Total Charges

REVISION DATE 2/91
PART #137211
FORMAT #069

069

© 1991-91 FEC PRINTED IN USA

9-15907.1231

000150

Overnight Delivery

Contractor	OFF-SITE PROPERTY CONTROL	CONTROL NUMBER (To be obtained from PROPERTY MANAGEMENT)
Westinghouse Hanford Company		~~W92-0-0011 #244~~ W92-0-0623 #60

PART I – TO BE COMPLETED BY ORIGINATOR

Department	Section	Unit
Env. Eng. & Geotech.	EFSG	Env. Charac. & Sampling

The following items are to be shipped from [X] Contractor [ ] Vendor

Routing Air [X] Contractor [ ] Vendor

Shipped to TMA/NORCAL
2030 WRIGHT AVE
RICHMOND CA 94804

Off-site Custodian: Robert Fox

Full Title: Project Coordinator

Quantity	Description (Include Serial and any Government Tag Numbers)	Original Cost
1 45 lbs.	SML-131 poly cooler. Contains soil samples that are double-bagged and packed in wet ice and vermiculite. Samples are nonhazardous. Sample #: B05WW3, B05WW4	N/A

[ ] Classified [X] Unclassified [ ] Shipped Under DOE Contract [ ] Shipped Under Contractor's Use Permit Contract

Necessity for the Off-Site Use of this Property

To support drilling and sampling at 100 Areas.

Bill of Lading # 2509866722

3-9-92

CERTIFICATION OF THE RADIATION MONITORING RELEASE MUST BE SECURED THE SAME DAY THAT MATERIAL IS DELIVERED TO SHIPPING.

RM Clearance for Public Release	RM Survey No.	Date
[signature]	111753	3-4-92

Location of Property (Area & Bldg.)	Contact	Phone
100 Area	J. D. Fancher	376-2081

Date Ready for Shipment	Cost Code to be Charged	Approximate Date This Property will be Returned
3-3-92	PB213 IAM 3-3-92 12500 81241	N/A

Originated By	Date/Time	Authorized By	Date
RELINQUISHED BY R. Tripp / R. Tripp	[illegible]	J. D. Fancher J.D. Fancher	3-3-92
Signature and Name of Property Control	**Custodian Date**	**Property Management Approval**	**Date**
		[signature]	3/4/92

PART II – TO BE COMPLETED BY SHIPPING

Signature of Recipient	Return Order No.	Date Issued	Purchase Order No.	Date Issued
[signature] Date 3-4-92 Time 1253				

DISTRIBUTION

By Originator	Shipping Operation – Sign all Copies and Forward to:
White, Green, Yellow, Pink – Property Management Goldenrod – Retain	White – Property Management Green – Property Control Custodian (Issuing Office) Yellow – Retain Pink – Originator

54-3000-479 (09/89)

FORM OF PAYMENT

Check ☐ GBL ☐ FCCOD ☐

Bill to Shipper ☐ Bill to Consignee ☐ Third Party Billing ☐

EMERY WORLDWIDE — A CF Company

SERVICES

UNITED STATES / CANADA: Same Day ☐ AM ☐ PM ☐ Second Day ☐ Saturday Delivery ☐

INTERNATIONAL: Express ☐ Preferred ☐ Standard ☐ Business Documents ☐ Customs Clearance ☐ Delivery ☐

PULL FOR SHPT. NO. TAB

E Shipper's Account Number: 8502861585

Date: 03-22-02 | Origin: PSC | Shipment Number: 250986672 2

From:
WESTINGHOUSE SHIPPING DEPT (509) 376-6665
US DEPARTMENT OF ENERGY C/O
WESTINGHOUSE HANFORD
BLDG 1163
2355 STEVENS DRIVE
RICHLAND WA ☐ Canada

To:
ROBERT FOX
TMA/NORCAL
2030 WRIGHT AVENUE
RICHMOND CA ☐ Canada
Hold for Pick Up ☐

Tariff Dest. | Gateway

Check to Shipper $

EMERY WORLDWIDE will accept Consignee's check with all risks being assumed by Shipper, including but not limited to non-payment, fraud and misrepresentation.

Customer's Reference Numbers: W12500 PB1AM W92-0-0123#60

Zip: 99352

E Consignee's Account Number: 94804

Description	Dimensions Pcs.	L	W	H	Total Pieces	Total Weight (in Lbs.)
1 POLYCOOLER SML-131 SOIL SAMPLES B05WV3, B05WV4 W92-0-0123#60	1				1	45

FOR INFORMATION OR RATES CALL 1-800 44 EMERY (1-800-443-6379)

Declared Value $

250986672 2

OVERNIGHT DELIVERY

Shipper's Signature X

Zip Ship ☐ For shipments within the 50 United States Shipper has the option to check this box and, by checking, agrees that the Zip Ship conditions, described in the area to the right, apply.

Mark if Emery Packaging is used: Urgent Letter 9X12 ☒ Urgent Pack 12X15 ☒

International Shipments: Free Domicile ☐ Commodity Code

Third Party Account Number mandatory for Third Party Billing. E Third Party Account Number

Base Charge

International Customs Value | International Insurance

Total Transportation Charges | Other Charges/Advance at Origin ☐ OC/AO- $

Terms and Conditions on Back

Y-OAK-A

CONSIGNEE — PACKAGE COPY 4

FORM NO. 60001-46

000151

9215902.1233

Overnight Delivery

000152

Contractor	OFF-SITE PROPERTY CONTROL	CONTROL NUMBER (To be obtained from PROPERTY MANA
Westinghouse Hanford Company		~~WSZ90011~~ WT92-B-02446

PART I – TO BE COMPLETED BY ORIGINATOR

Department	Section	Unit
Env. Eng. & Geotech.	EFSG	Env. Charac. & Samp

The following items are to be shipped from: [x] Contractor [ ] Vendor

Routing: Air [x] Contractor [ ] Vendor

Shipped to:
TMA/NORCAL
2030 WRIGHT AVE
RICHMOND CA 94804

Off-site Custodian: Robert Fox

Full Title: Project Coordinator

Quantity	Description (Include Serial and any Government Tag Numbers)	Origina
1 39 lbs.	SML-10 poly cooler. Contains soil samples that are double-bagged and packed in wet ice and vermiculite. Samples are nonhazardous. Sample #: P05WP1	N/

[ ] Classified [x] Unclassified [ ] Shipped Under DOE Contract [ ] Shipped Under Contractor's Use Permit Contr

Necessity for the Off-Site Use of this Property

To support drilling and sampling at 100 Areas.

Bill of Lading # 350996663

CERTIFICATION OF THE RADIATION MONITORING RELEASE MUST BE SECURED THE SAME DAY THAT MATERIAL IS DELIVERED TO SHIPI

RM Clearance for Public Release	RM Survey No.	Date
E. Pritchard	111757	3-5

Location of Property (Area & Bldg.)	Contact	Phone
100 Area	J. D. Fancher	3

Date Ready for Shipment	Cost Code to be Charged	Approximate Date This Property will be Returned
3/5/92	EB1AMPB213 81241	

Originated By	Date	Authorized By	Dat
[illegible]	[illegible]	B.E. Inniss B.E. Inniss	3-

Signature and Name of Property Control	Custodian Date	Property Management Approval	Dat
		[illegible]	3

PART II – TO BE COMPLETED BY SHIPPING

Signature of Recipient	Return Order No.	Date Issued	Purchase Order No.	Dat
J. Dennont				
Date 3-5-92 Time 1306				

DISTRIBUTION

By Originator	Shipping Operation – Sign all Copies and Forward to:
White, Green, Yellow, Pink – Property Management Goldenrod – Retain	White – Property Management Yellow – Retain Green – Property Control Custodian (Issuin Pink – Originator

54-300

9213507.1234

TMA
Thermo Analytical Inc.

TMA/Norcal
2030 Wright Avenue
P. O. Box 4040
Richmond, CA 94804-0040
(510) 235-2633 Fax No. (510) 235-0438

AUG 1992
RECEIVED
OSM DMO

August 7, 1992

SENT BY FEDERAL EXPRESS

Ref. TMA/Norcal N2-03-001-7026

Mr. John Bourgeault
Westinghouse Hanford Company
2355 Stevens Drive
Richland, WA 99352

Dear Mr. Bourgeault:

Enclosed on the Summary Data Section, are the gross alpha, gross beta, ^{14}C, ^{90}Sr, ^{99}Tc, isotopic uranium, isotopic plutonium, ^{241}Am, and gamma scan results for the soil samples and one water sample from 100-HR-1 Vadose Zone, we received 29 February 1992. The QA/QC results are also given in the Summary Data Section.

Please call if you have any questions concerning this data.

Sincerely,

D.P. Kharkar

Dinkar P. Kharkar, Ph.D.
Manager, Nuclear Programs

DPK/ss

Enclosures: Section 1 through 13
Appendices

4-11-96
MC

TMA NORCAL

REPORTING GROUPS 7026/7028

DATA SHEET

N203055A-02

B05WP7

SDG 7026A
Contact Dinkar Kharkar

Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N203055A-02
Dept sample id 7028A-002
Received 03/10/92

Client sample id B05WP7
Matrix WATER
Collected 03/05/92
Chain of custody id EFL-1014

PARAMETER	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	Alpha	-0.24	0.53	0.96	3.0	U	80A
Gross Beta	Beta	-0.20	0.98	1.7	4.0	U	80B
Uranium 233/234		0.54	0.21	0.13	0.20		U
Uranium 235	15117-96-1	0.020	0.040	0.15	0.20	U	U
Uranium 238	7440-61-1	0.56	0.21	0.13	0.20		U
Plutonium 239/240		0.008	0.012	0.019	0.050	U	PU
Americium 241	14596-10-2	0	0.023	0.056	0.050	U	AM
Strontium 90	10098-97-2	-0.25	1.8	0.84	1.0	U	Y
Technetium 99	14133-76-7	0.79	0.56	1.1	5.0	U	TC
Carbon 14	14762-75-5	-18	44	74	50	U	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2			230		U	GAM
Chromium 51	14392-02-0			3100		U	GAM
Cobalt 60	10198-40-0			16		U	GAM
Zinc 65	17982-39-3			39		U	GAM
Cesium 134	17967-70-9			17		U	GAM
Cesium 137	10045-97-3			14		U	GAM
Radium 226	13982-67-7			28		U	GAM
Thorium 228	14274-82-9			32		U	GAM
Thorium 232	7440-29-1			55		U	GAM

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.14
Report date 08/07/92

TMA NORCAL

REPORTING GROUPS 7026/7028

DATA SHEET

N203001A-05

B05WV1

SDG 7026A
Contact Dinkar Kharkar
Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N203001A-05
Dept sample id 7026A-005
Received 03/02/92
Client sample id B05WV1
Matrix WATER
Collected 02/28/92
Chain of custody id EFL-1014

PARAMETER	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	Alpha	0.095	0.91	1.5	3.0	U	80A
Gross Beta	Beta	0.32	1.1	1.8	4.0	U	80B
Uranium 235	15117-96-1	0.013	0.027	0.10	0.20	U	U
Uranium 238	7440-61-1	0.022	0.022	0.085	0.20	U	U
Plutonium 239/240		-0.006	0.023	0.054	0.050	U	PU
Americium 241	14596-10-2	-0.019	0.019	0.052	0.050	U	AM
Strontium 90	10098-97-2	-0.25	0.33	0.75	1.0	U	Y
Technetium 99	14133-76-7	1.7	2.0	4.9	5.0	U	TC
Carbon 14	14762-75-5	540	79	94	50		C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2			260		U	GAM
Chromium 51	14392-02-0			3400		U	GAM
Cobalt 60	10198-40-0			16		U	GAM
Zinc 65	17982-39-3			38		U	GAM
Cesium 134	17967-70-9			17		U	GAM
Cesium 137	10045-97-3			16		U	GAM
Radium 226	13982-67-7			26		U	GAM
Thorium 228	14274-82-9			23		U	GAM
Thorium 232	7440-29-1			62		U	GAM

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.14
Report date 08/07/92

N203001-01

TMA NORCAL

REPORTING GROUPS 7026/7028

DATA SHEET

B05WN8

SDG 7026
Contact Dinkar Kharkar
Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N203001-01
Dept sample id 7026-001
Received 03/02/92
Client sample id B05WN8
Matrix SOIL
Collected 02/26/92
Chain of custody id EFL-1014

PARAMETER	CAS NO	RESULT pCi/G	2σ ERR (COUNT)	MDA pCi/G	RDL pCi/G	QUALI-FIERS	TEST
Gross Alpha	Alpha	4.9	4.0	4.9	10	J	80A
Gross Beta	Beta	15	4.6	6.3	15		80B
Uranium 235	15117-96-1	0.029	0.029	0.11	0.30	U	U
Uranium 238	7440-61-1	0.47	0.15	0.092	0.30		U
Plutonium 239/240		0.004	0.018	0.034	0.050	U	PU
Americium 241	14596-10-2	0.023	0.037	0.062	0.050	U	AM
Strontium 90	10098-97-2	0.085	0.37	1.1	2.0	U	Y
Technetium 99	14133-76-7	-0.13	0.47	2.1	0.50	U	TC
Carbon 14	14762-75-5	-3.0	5.2	8.8	50	U	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	15	2.9				GAM
Chromium 51	14392-02-0			40		U	GAM
Cobalt 60	10198-40-0			0.23		U	GAM
Zinc 65	17982-39-3			0.58		U	GAM
Cesium 134	17967-70-9			0.21		U	GAM
Cesium 137	10045-97-3			0.21		U	GAM
Radium 226	13982-67-7	0.64	0.31				GAM
Thorium 228	14274-82-9	1.2	0.36				GAM
Thorium 232	7440-29-1	0.75	0.62				GAM

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.14
Report date 08/07/92

TMA NORCAL

REPORTING GROUPS 7026/7028

DATA SHEET

N203001-02

B05WN9

SDG 7026
Contact Dinkar Kharkar

Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N203001-02
Dept sample id 7026-002
Received 03/02/92

Client sample id B05WN9
Matrix SOIL
Collected 02/27/92
Chain of custody id EFL-1014

PARAMETER	CAS NO	RESULT pCi/G	2σ ERR (COUNT)	MDA pCi/G	RDL pCi/G	QUALI-FIERS	TEST
Gross Alpha	Alpha	3.2	3.8	5.1	10	U	80A
Gross Beta	Beta	9.7	3.7	5.1	15	J	80B
Uranium 235	15117-96-1	0	0.065	0.25	0.30	U	U
Uranium 238	7440-61-1	0.19	0.16	0.20	0.30	U	U
Plutonium 239/240		0.024	0.022	0.033	0.050	U	PU
Americium 241	14596-10-2	0.010	0.040	0.072	0.050	U	AM
Strontium 90	10098-97-2	-0.18	0.45	1.2	2.0	U	Y
Technetium 99	14133-76-7	0.23	0.18	0.42	0.50	U	TC
Carbon 14	14762-75-5	2.0	4.9	8.0	50	U	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	11	2.1				GAM
Chromium 51	14392-02-0			30		U	GAM
Cobalt 60	10198-40-0			0.19		U	GAM
Zinc 65	17982-39-3			0.50		U	GAM
Cesium 134	17967-70-9			0.19		U	GAM
Cesium 137	10045-97-3	0.29	0.15				GAM
Radium 226	13982-67-7	0.71	0.31				GAM
Thorium 228	14274-82-9	1.1	0.33				GAM
Thorium 232	7440-29-1	1.1	0.61				GAM
Europium 152	14683-23-9	0.36	0.28				GAM

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.14
Report date 08/07/92

N203001-04

TMA NORCAL

REPORTING GROUPS 7026/7028

DATA SHEET

B05WP0

SDG 7026
Contact Dinkar Kharkar
Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N203001-04
Dept sample id 7026-004
Received 03/02/92
Client sample id B05WP0
Matrix SOIL
Collected 02/27/92
Chain of custody id EFL-1014

PARAMETER	CAS NO	RESULT pCi/G	2σ ERR (COUNT)	MDA pCi/G	RDL pCi/G	QUALI-FIERS	TEST
Gross Alpha	Alpha	3.6	4.7	6.4	10	U	80A
Gross Beta	Beta	12	4.2	5.9	15	J	80B
Uranium 235	15117-96-1	0.015	0.031	0.12	0.30	U	U
Uranium 238	7440-61-1	0.45	0.16	0.098	0.30		U
Plutonium 239/240		0.004	0.025	0.046	0.050	U	PU
Americium 241	14596-10-2	0	0.025	0.047	0.050	U	AM
Strontium 90	10098-97-2	-0.16	0.35	0.85	2.0	U	Y
Technetium 99	14133-76-7	0.17	0.20	0.19	0.50	U	TC
Carbon 14	14762-75-5	-9.3	5.0	8.6	50	U	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	11	1.7				GAM
Chromium 51	14392-02-0			19		U	GAM
Cobalt 60	10198-40-0			0.10		U	GAM
Zinc 65	17982-39-3			0.32		U	GAM
Cesium 134	17967-70-9			0.12		U	GAM
Cesium 137	10045-97-3			0.093		U	GAM
Radium 226	13982-67-7	0.50	0.18				GAM
Thorium 228	14274-82-9	0.73	0.15				GAM
Thorium 232	7440-29-1	0.39	0.32				GAM

Lab id TMAN
Protocol WHC-MEIS
Version Ver 1.0
Form DVD-DS
Version 2.14
Report date 08/07/92

N203001-10

TMA NORCAL

REPORTING GROUPS 7026/7028

DATA SHEET

B05WP1

SDG 7026
Contact Dinkar Kharkar

Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N203001-10
Dept sample id 7026-010
Received 03/03/92

Client sample id B05WP1
Matrix SOIL
Collected 03/04/92
Chain of custody id WHC-N-557-2

PARAMETER	CAS NO	RESULT pCi/G	2σ ERR (COUNT)	MDA pCi/G	RDL pCi/G	QUALI-FIERS	TEST
Gross Alpha	Alpha	30	7.6	4.5	10		80A
Gross Beta	Beta	15	4.4	5.7	15		80B
Uranium 235	15117-96-1	0.016	0.032	0.12	0.30	U	U
Uranium 238	7440-61-1	0.58	0.19	0.10	0.30		U
Plutonium 239/240		0.006	0.013	0.025	0.050	U	PU
Americium 241	14596-10-2	0.009	0.034	0.061	0.050	U	AM
Strontium 90	10098-97-2	0.048	0.27	0.85	2.0	U	Y
Technetium 99	14133-76-7	0.52	0.25	1.1	0.50	U	TC
Carbon 14	14762-75-5	3.5	5.9	9.6	50	U	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	9.8	1.6				GAM
Chromium 51	14392-02-0			19		U	GAM
Cobalt 60	10198-40-0	0.38	0.13				GAM
Zinc 65	17982-39-3			0.42		U	GAM
Cesium 134	17967-70-9			0.14		U	GAM
Cesium 137	10045-97-3			0.098		U	GAM
Radium 226	13982-67-7			0.33		U	GAM
Thorium 228	14274-82-9	0.58	0.18				GAM
Thorium 232	7440-29-1	0.44	0.44				GAM
Europium 152	14683-23-9	0.54	0.27				GAM

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.14
Report date 08/07/92

N203055-01

TMA NORCAL

REPORTING GROUPS 7026/7028

DATA SHEET

B05WP5

SDG 7026
Contact Dinkar Kharkar

Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N203055-01
Dept sample id 7028-001
Received 03/10/92

Client sample id B05WP5
Matrix SOIL
Collected 03/05/92
Chain of custody id EFL-1014

PARAMETER	CAS NO	RESULT pCi/G	2σ ERR (COUNT)	MDA pCi/G	RDL pCi/G	QUALI-FIERS	TEST
Gross Alpha	Alpha	-1.7	3.5	6.3	10	U	80A
Gross Beta	Beta	14	4.4	5.9	15	J	80B
Uranium 233/234		0.35	0.19	0.18	0.30		U
Uranium 235	15117-96-1	0	0.056	0.21	0.30	U	U
Uranium 238	7440-61-1	0.44	0.20	0.18	0.30		U
Plutonium 239/240		0	0.005	0.021	0.050	U	PU
Americium 241	14596-10-2	0.011	0.017	0.027	0.050	U	AM
Strontium 90	10098-97-2	0.24	0.41	1.0	2.0	U	Y
Technetium 99	14133-76-7	0.20	0.33	0.76	0.50	U	TC
Carbon 14	14762-75-5	1.8	6.2	10	50	U	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	8.8	1.4				GAM
Chromium 51	14392-02-0			15		U	GAM
Cobalt 60	10198-40-0	0.13	0.10				GAM
Zinc 65	17982-39-3			0.23		U	GAM
Cesium 134	17967-70-9			0.092		U	GAM
Cesium 137	10045-97-3			0.076		U	GAM
Radium 226	13982-67-7	0.45	0.13				GAM
Thorium 228	14274-82-9	0.57	0.13				GAM
Thorium 232	7440-29-1	0.39	0.26				GAM

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.14
Report date 08/07/92

TMA NORCAL

REPORTING GROUPS 7026/7028

DATA SHEET

N203001-03

B05WT8

SDG 7026
Contact Dinkar Kharkar

Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N203001-03
Dept sample id 7026-003
Received 03/02/92

Client sample id B05WT8
Matrix SOIL
Collected 02/27/92
Chain of custody id EFL-1014

PARAMETER	CAS NO	RESULT pCi/G	2σ ERR (COUNT)	MDA pCi/G	RDL pCi/G	QUALI-FIERS	TEST
Gross Alpha	Alpha	2.1	5.5	8.1	10	U	80A
Gross Beta	Beta	18	5.0	6.7	15		80B
Uranium 235	15117-96-1	0.023	0.046	0.18	0.30	U	U
Uranium 238	7440-61-1	0.69	0.25	0.15	0.30		U
Plutonium 239/240		0.026	0.020	0.025	0.050	J	PU
Americium 241	14596-10-2	0.011	0.022	0.035	0.050	U	AM
Strontium 90	10098-97-2	-0.15	0.36	0.86	2.0	U	Y
Technetium 99	14133-76-7	0.15	0.11	0.23	0.50	U	TC
Carbon 14	14762-75-5	-1.5	5.4	9.0	50	U	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	7.2	1.4				GAM
Chromium 51	14392-02-0			15		U	GAM
Cobalt 60	10198-40-0			0.067		U	GAM
Zinc 65	17982-39-3			0.27		U	GAM
Cesium 134	17967-70-9			0.10		U	GAM
Cesium 137	10045-97-3			0.077		U	GAM
Radium 226	13982-67-7	0.29	0.15				GAM
Thorium 228	14274-82-9	0.41	0.13				GAM
Thorium 232	7440-29-1	0.41	0.37				GAM
VARIABLE ZR95		0.56	0.47				GAM

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.14
Report date 08/07/92

N203001-06

TMA NORCAL

REPORTING GROUPS 7026/7028

DATA SHEET

B05WT9

SDG 7026
Contact Dinkar Kharkar

Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N203001-06
Dept sample id 7026-006
Received 03/03/92

Client sample id B05WT9
Matrix SOIL
Collected 02/28/92
Chain of custody id WHC-N-557-2

PARAMETER	CAS NO	RESULT pCi/G	2σ ERR (COUNT)	MDA pCi/G	RDL pCi/G	QUALI-FIERS	TEST
Gross Alpha	Alpha	4.7	5.4	7.0	10	U	80A
Gross Beta	Beta	110	11	15	15		80B
Uranium 235	15117-96-1	0.013	0.052	0.099	0.30	U	U
Uranium 238	7440-61-1	0.47	0.16	0.081	0.30		U
Plutonium 239/240		1.1	0.18	0.068	0.050		PU
Americium 241	14596-10-2	0.54	0.11	0.072	0.050		AM
Strontium 90	10098-97-2	3.2	2.3	0.99	2.0		Y
Technetium 99	14133-76-7	0.33	0.71	1.1	0.50	U	TC
Carbon 14	14762-75-5	33	5.5	7.7	50	J	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	19	2.7				GAM
Chromium 51	14392-02-0			120		U	GAM
Cobalt 60	10198-40-0	14	0.66				GAM
Zinc 65	17982-39-3			3.9		U	GAM
Cesium 134	17967-70-9			0.80		U	GAM
Cesium 137	10045-97-3	11	0.90				GAM
Radium 226	13982-67-7			1.0		U	GAM
Thorium 228	14274-82-9			0.93		U	GAM
Thorium 232	7440-29-1			2.6		U	GAM
Europium 152	14683-23-9	120	2.5				GAM
Europium 154	15585-101	19	1.7				GAM

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.14
Report date 08/07/92

N203001-07

TMA NORCAL

REPORTING GROUPS 7026/7028

DATA SHEET

B05WV2

SDG 7026
Contact Dinkar Kharkar

Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N203001-07
Dept sample id 7026-007
Received 03/03/92

Client sample id B05WV2
Matrix SOIL
Collected 03/02/92
Chain of custody id WHC-N-557-2

PARAMETER	CAS NO	RESULT pCi/G	2σ ERR (COUNT)	MDA pCi/G	RDL pCi/G	QUALI-FIERS	TEST
Gross Alpha	Alpha	5.8	5.3	5.6	10	J	80A
Gross Beta	Beta	160	9.4	6.7	15		80B
Uranium 235	15117-96-1	0.38	0.21	0.20	0.30		U
Uranium 238	7440-61-1	0.68	0.27	0.20	0.30		U
Plutonium 239/240		1.3	0.13	0.021	0.050		PU
Americium 241	14596-10-2	0.72	0.13	0.044	0.050		AM
Strontium 90	10098-97-2	0.93	2.0	0.83	2.0	J	Y
Technetium 99	14133-76-7	0.095	0.30	0.89	0.50	U	TC
Carbon 14	14762-75-5	28	5.7	8.1	50	J	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	33	5.5				GAM
Chromium 51	14392-02-0			210		U	GAM
Cobalt 60	10198-40-0	36	1.6				GAM
Zinc 65	17982-39-3			5.9		U	GAM
Cesium 134	17967-70-9			1.6		U	GAM
Cesium 137	10045-97-3	35	1.6				GAM
Radium 226	13982-67-7			1.9		U	GAM
Thorium 228	14274-82-9			1.7		U	GAM
Thorium 232	7440-29-1			5.1		U	GAM
Europium 152	14683-23-9	260	4.9				GAM
Europium 154	15585-101	37	3.8				GAM

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.14
Report date 08/07/92

N203001-09

TMA NORCAL

REPORTING GROUPS 7026/7028

DATA SHEET

B05WV3

SDG 7026
Contact Dinkar Kharkar

Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N203001-09
Dept sample id 7026-009
Received 03/03/92

Client sample id B05WV3
Matrix SOIL
Collected 03/02/92
Chain of custody id WHC-N-557-2

PARAMETER	CAS NO	RESULT pCi/G	2σ ERR (COUNT)	MDA pCi/G	RDL pCi/G	QUALI-FIERS	TEST
Gross Alpha	Alpha	4.4	4.5	6.0	10	U	80A
Gross Beta	Beta	22	4.5	5.4	15		80B
Uranium 235	15117-96-1	0.018	0.037	0.14	0.30	U	U
Uranium 238	7440-61-1	0.50	0.19	0.12	0.30		U
Plutonium 239/240		0.073	0.027	0.021	0.050		PU
Americium 241	14596-10-2	0.031	0.027	0.043	0.050	U	AM
Strontium 90	10098-97-2	-0.70	1.5	0.88	2.0	U	Y
Technetium 99	14133-76-7	0.26	0.16	0.57	0.50	U	TC
Carbon 14	14762-75-5	-8.1	5.5	9.4	50	U	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	14	2.4				GAM
Chromium 51	14392-02-0			33		U	GAM
Cobalt 60	10198-40-0	0.68	0.17				GAM
Zinc 65	17982-39-3			0.65		U	GAM
Cesium 134	17967-70-9			0.21		U	GAM
Cesium 137	10045-97-3	1.7	0.23				GAM
Radium 226	13982-67-7	0.65	0.20				GAM
Thorium 228	14274-82-9	0.81	0.22				GAM
Thorium 232	7440-29-1			0.90		U	GAM
Europium 152	14683-23-9	4.0	0.65				GAM
Europium 154	15585-101	0.50	0.34				GAM

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.14
Report date 08/07/92

TMA NORCAL

REPORTING GROUPS 7026/7028

DATA SHEET

N203001-08

B05WV4

SDG 7026
Contact Dinkar Kharkar

Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N203001-08
Dept sample id 7026-008
Received 03/03/92

Client sample id B05WV4
Matrix SOIL
Collected 03/02/92
Chain of custody id WHC-N-557-2

PARAMETER	CAS NO	RESULT pCi/G	2σ ERR (COUNT)	MDA pCi/G	RDL pCi/G	QUALI-FIERS	TEST
Gross Alpha	Alpha	5.9	4.2	4.9	10	J	80A
Gross Beta	Beta	19	4.8	6.4	15		80B
Uranium 235	15117-96-1	0.014	0.027	0.10	0.30	U	U
Uranium 238	7440-61-1	0.53	0.17	0.086	0.30		U
Plutonium 239/240		0.003	0.013	0.030	0.050	U	PU
Americium 241	14596-10-2	0.011	0.029	0.055	0.050	U	AM
Strontium 90	10098-97-2	1.2	0.45	0.93	2.0	J	Y
Technetium 99	14133-76-7	0.22	0.15	0.67	0.50	U	TC
Carbon 14	14762-75-5	34	6.0	8.5	50	J	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	11	1.6				GAM
Chromium 51	14392-02-0			14		U	GAM
Cobalt 60	10198-40-0			0.074		U	GAM
Zinc 65	17982-39-3			0.28		U	GAM
Cesium 134	17967-70-9			0.12		U	GAM
Cesium 137	10045-97-3			0.082		U	GAM
Radium 226	13982-67-7	0.44	0.14				GAM
Thorium 228	14274-82-9	0.46	0.091				GAM
Thorium 232	7440-29-1	0.44	0.35				GAM

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.14
Report date 08/07/92

N203055-03

TMA NORCAL

REPORTING GROUPS 7026/7028

DATA SHEET

B05WV5

SDG 7026
Contact Dinkar Kharkar

Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N203055-03
Dept sample id 7028-003
Received 03/11/92

Client sample id B05WV5
Matrix SOIL
Collected 03/09/92
Chain of custody id WHC-N-557-2

PARAMETER	CAS NO	RESULT pCi/G	2σ ERR (COUNT)	MDA pCi/G	RDL pCi/G	QUALI-FIERS	TEST
Gross Alpha	Alpha	-1.3	5.0	7.9	10	U	80A
Gross Beta	Beta	110	7.8	5.9	15		80B
Uranium 235	15117-96-1	0.031	0.062	0.24	0.30	U	U
Uranium 238	7440-61-1	0.61	0.27	0.20	0.30		U
Plutonium 239/240		0.74	0.10	0.022	0.050		PU
Americium 241	14596-10-2	0.20	0.066	0.035	0.050		AM
Strontium 90	10098-97-2	1.5	2.1	0.92	2.0	J	Y
Technetium 99	14133-76-7	0.25	0.17	0.33	0.50	U	TC
Carbon 14	14762-75-5	2.3	6.6	11	50	U	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	13	2.0				GAM
Chromium 51	14392-02-0			72		U	GAM
Cobalt 60	10198-40-0	2.5	0.31				GAM
Zinc 65	17982-39-3			2.5		U	GAM
Cesium 134	17967-70-9			0.45		U	GAM
Cesium 137	10045-97-3	32	0.83				GAM
Radium 226	13982-67-7			0.72		U	GAM
Thorium 228	14274-82-9			0.64		U	GAM
Thorium 232	7440-29-1			1.5		U	GAM
Europium 152	14683-23-9	54	1.7				GAM
Europium 154	15585-101	5.4	0.87				GAM

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.14
Report date 08/07/92

N203055-04

TMA NORCAL

REPORTING GROUPS 7026/7028

DATA SHEET

B05WV6

SDG 7026
Contact Dinkar Kharkar

Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N203055-04
Dept sample id 7028-004
Received 03/13/92

Client sample id B05WV6
Matrix SOIL
Collected 03/09/92
Chain of custody id WHC-N-557-2

PARAMETER	CAS NO	RESULT pCi/G	2σ ERR (COUNT)	MDA pCi/G	RDL pCi/G	QUALI-FIERS	TEST
Gross Alpha	Alpha	4.9	4.7	5.5	10	U	80A
Gross Beta	Beta	95	7.5	6.3	15		80B
Uranium 233/234		0	0.072	0.17	0.30	U	U
Uranium 235	15117-96-1	0	0.044	0.17	0.30	U	U
Uranium 238	7440-61-1	0	0.036	0.14	0.30	U	U
Plutonium 239/240		0.58	0.079	0.025	0.050		PU
Americium 241	14596-10-2	0.16	0.054	0.042	0.050		AM
Strontium 90	10098-97-2	1.5	2.1	0.88	2.0	J	Y
Technetium 99	14133-76-7	0.25	0.12	0.23	0.50	J	TC
Carbon 14	14762-75-5	3.4	6.9	11	50	U	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	9.9	1.8				GAM
Chromium 51	14392-02-0			59		U	GAM
Cobalt 60	10198-40-0	1.8	0.27				GAM
Zinc 65	17982-39-3			1.7		U	GAM
Cesium 134	17967-70-9			0.36		U	GAM
Cesium 137	10045-97-3	24	0.72				GAM
Radium 226	13982-67-7			0.54		U	GAM
Thorium 228	14274-82-9	0.95	0.32				GAM
Thorium 232	7440-29-1			1.3		U	GAM
Europium 152	14683-23-9	36	1.3				GAM
Europium 154	15585-101	3.6	0.76				GAM

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.14
Report date 08/07/92

N203055-05

TMA NORCAL

REPORTING GROUPS 7026/7028

DATA SHEET

B05WV8

SDG 7026
Contact Dinkar Kharkar

Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N203055-05
Dept sample id 7028-005
Received 03/13/92

Client sample id B05WV8
Matrix SOIL
Collected 03/09/92
Chain of custody id WHC-N-557-2

PARAMETER	CAS NO	RESULT pCi/G	2σ ERR (COUNT)	MDA pCi/G	RDL pCi/G	QUALI-FIERS	TEST
Gross Alpha	Alpha	6.4	5.0	5.8	10	J	80A
Gross Beta	Beta	92	7.0	5.1	15		80B
Uranium 233/234		0.53	0.22	0.16	0.30		U
Uranium 235	15117-96-1	0.025	0.049	0.19	0.30	U	U
Uranium 238	7440-61-1	0.31	0.17	0.16	0.30		U
Plutonium 239/240		0.64	0.083	0.020	0.050		PU
Americium 241	14596-10-2	0.16	0.047	0.031	0.050		AM
Strontium 90	10098-97-2	6.2	2.7	0.93	2.0		Y
Technetium 99	14133-76-7	0.18	0.078	0.14	0.50	J	TC
Carbon 14	14762-75-5	8.9	6.3	10	50	U	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	13	2.0				GAM
Chromium 51	14392-02-0			58		U	GAM
Cobalt 60	10198-40-0	2.2	0.31				GAM
Zinc 65	17982-39-3			1.8		U	GAM
Cesium 134	17967-70-9			0.35		U	GAM
Cesium 137	10045-97-3	23	0.68				GAM
Radium 226	13982-67-7	0.78	0.47				GAM
Thorium 228	14274-82-9	0.52	0.30				GAM
Thorium 232	7440-29-1			1.3		U	GAM
Europium 152	14683-23-9	34	1.2				GAM
Europium 154	15585-101	3.6	0.81				GAM

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.14
Report date 08/07/92

N203055-06

TMA NORCAL

REPORTING GROUPS 7026/7028

DATA SHEET

B05WV9

SDG 7026
Contact Dinkar Kharkar

Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N203055-06
Dept sample id 7028-006
Received 03/13/92

Client sample id B05WV9
Matrix SOIL
Collected 03/10/92
Chain of custody id WHC-N-557-2

PARAMETER	CAS NO	RESULT pCi/G	2σ ERR (COUNT)	MDA pCi/G	RDL pCi/G	QUALI-FIERS	TEST
Gross Alpha	Alpha	0.86	4.5	6.6	10	U	80A
Gross Beta	Beta	69	6.8	6.6	15		80B
Uranium 233/234		0.62	0.28	0.20	0.30		U
Uranium 235	15117-96-1	0.13	0.13	0.24	0.30	U	U
Uranium 238	7440-61-1	0.23	0.16	0.20	0.30	J	U
Plutonium 239/240		0.33	0.058	0.025	0.050		PU
Americium 241	14596-10-2	0.068	0.036	0.027	0.050		AM
Strontium 90	10098-97-2	5.5	3.2	0.81	2.0		Y
Technetium 99	14133-76-7	0.67	0.20	0.16	0.50		TC
Carbon 14	14762-75-5	-0.48	6.3	10	50	U	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	13	2.1				GAM
Chromium 51	14392-02-0			49		U	GAM
Cobalt 60	10198-40-0	2.0	0.28				GAM
Zinc 65	17982-39-3			1.9		U	GAM
Cesium 134	17967-70-9			0.36		U	GAM
Cesium 137	10045-97-3	11	0.50				GAM
Radium 226	13982-67-7	0.85	0.49				GAM
Thorium 228	14274-82-9	0.44	0.23				GAM
Thorium 232	7440-29-1			1.2		U	GAM
Europium 152	14683-23-9	42	1.2				GAM
Europium 154	15585-101	3.6	0.92				GAM

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.14
Report date 08/07/92

N203055-07

TMA NORCAL

REPORTING GROUPS 7026/7028

DATA SHEET

B05WW0

SDG 7026
Contact Dinkar Kharkar
Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N203055-07
Dept sample id 7028-007
Received 03/16/92
Client sample id B05WW0
Matrix SOIL
Collected 03/11/92
Chain of custody id WHC-N-557-2

PARAMETER	CAS NO	RESULT pCi/G	2σ ERR (COUNT)	MDA pCi/G	RDL pCi/G	QUALI-FIERS	TEST
Gross Alpha	Alpha	2.7	4.0	5.6	10	U	80A
Gross Beta	Beta	16	4.4	5.8	15		80B
Uranium 235	15117-96-1	0.050	0.067	0.13	0.30	U	U
Uranium 238	7440-61-1	0.39	0.14	0.11	0.30		U
Plutonium 239/240		0.063	0.024	0.019	0.050		PU
Americium 241	14596-10-2	0	0.028	0.059	0.050	U	AM
Strontium 90	10098-97-2	1.3	1.7	0.98	2.0	J	Y
Technetium 99	14133-76-7	0.21	0.12	0.23	0.50	U	TC
Carbon 14	14762-75-5	15	7.1	11	50	J	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	10	1.7				GAM
Chromium 51	14392-02-0			17		U	GAM
Cobalt 60	10198-40-0			0.10		U	GAM
Zinc 65	17982-39-3			0.34		U	GAM
Cesium 134	17967-70-9			0.12		U	GAM
Cesium 137	10045-97-3	0.25	0.10				GAM
Radium 226	13982-67-7	0.55	0.20				GAM
Thorium 228	14274-82-9	0.75	0.13				GAM
Thorium 232	7440-29-1	0.89	0.36				GAM
Europium 152	14683-23-9	0.72	0.19				GAM
Europium 154	15585-101	0.34	0.12				GAM

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.14
Report date 08/07/92

TMA NORCAL

REPORTING GROUPS 7026/7028

DATA SHEET

N203055-08

B05WW4

SDG 7026
Contact Dinkar Kharkar

Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N203055-08
Dept sample id 7028-008
Received 03/16/92

Client sample id B05WW4
Matrix SOIL
Collected 03/11/92
Chain of custody id WHC-N-557-2

PARAMETER	CAS NO	RESULT pCi/G	2σ ERR (COUNT)	MDA pCi/G	RDL pCi/G	QUALI-FIERS	TEST
Gross Alpha	Alpha	2.7	5.7	8.6	10	U	80A
Gross Beta	Beta	-2.4	9.1	15	15	U	80B
Uranium 235	15117-96-1	0.043	0.043	0.16	0.30	U	U
Uranium 238	7440-61-1	0.58	0.22	0.14	0.30		U
Plutonium 239/240		0.034	0.020	0.022	0.050	J	PU
Americium 241	14596-10-2	0.006	0.019	0.040	0.050	U	AM
Strontium 90	10098-97-2	-0.081	2.2	0.91	2.0	U	Y
Technetium 99	14133-76-7	-0.76	1.5	4.0	0.50	U	TC
Carbon 14	14762-75-5	0.28	6.4	11	50	U	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	13	1.7				GAM
Chromium 51	14392-02-0			17		U	GAM
Cobalt 60	10198-40-0			0.088		U	GAM
Zinc 65	17982-39-3			0.33		U	GAM
Cesium 134	17967-70-9			0.11		U	GAM
Cesium 137	10045-97-3			0.098		U	GAM
Radium 226	13982-67-7	0.40	0.14				GAM
Thorium 228	14274-82-9	0.53	0.15				GAM
Thorium 232	7440-29-1	0.64	0.47				GAM

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.14
Report date 08/07/92

TMA NORCAL

REPORTING GROUPS 7026/7028

DATA SHEET

N203055-09

B05WW5

SDG 7026
Contact Dinkar Kharkar

Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N203055-09
Dept sample id 7028-009
Received 03/17/92

Client sample id B05WW5
Matrix SOIL
Collected 03/13/92
Chain of custody id WHC-N-557-2

PARAMETER	CAS NO	RESULT pCi/G	2σ ERR (COUNT)	MDA pCi/G	RDL pCi/G	QUALI-FIERS	TEST
Gross Alpha	Alpha	3.0	3.6	4.8	10	U	80A
Gross Beta	Beta	12	4.6	6.7	15	J	80B
Uranium 235	15117-96-1	0	0.044	0.17	0.30	U	U
Uranium 238	7440-61-1	0.33	0.15	0.14	0.30		U
Plutonium 239/240		0	0.011	0.027	0.050	U	PU
Americium 241	14596-10-2	0.004	0.031	0.060	0.050	U	AM
Strontium 90	10098-97-2	-0.020	1.5	0.90	2.0	U	Y
Technetium 99	14133-76-7	0.14	0.19	0.66	0.50	U	TC
Carbon 14	14762-75-5	4.2	6.4	10	50	U	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	8.9	1.6				GAM
Chromium 51	14392-02-0			16		U	GAM
Cobalt 60	10198-40-0			0.097		U	GAM
Zinc 65	17982-39-3			0.32		U	GAM
Cesium 134	17967-70-9			0.11		U	GAM
Cesium 137	10045-97-3			0.095		U	GAM
Radium 226	13982-67-7	0.37	0.19				GAM
Thorium 228	14274-82-9	0.49	0.16				GAM
Thorium 232	7440-29-1	0.35	0.34				GAM

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.14
Report date 08/07/92

N203055-10

TMA NORCAL

REPORTING GROUPS 7026/7028

DATA SHEET

B05WW6

SDG 7026
Contact Dinkar Kharkar

Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N203055-10
Dept sample id 7028-010
Received 03/19/92

Client sample id B05WW6
Matrix SOIL
Collected 03/16/92
Chain of custody id WHC-N-557-2

PARAMETER	CAS NO	RESULT pCi/G	2σ ERR (COUNT)	MDA pCi/G	RDL pCi/G	QUALI-FIERS	TEST
Gross Alpha	Alpha	1.7	4.4	6.4	10	U	80A
Gross Beta	Beta	16	4.8	6.5	15		80B
Uranium 235	15117-96-1	0	0.069	0.27	0.30	U	U
Uranium 238	7440-61-1	0.54	0.25	0.22	0.30		U
Plutonium 239/240		0	0.013	0.028	0.050	U	PU
Americium 241	14596-10-2	0.002	0.022	0.043	0.050	U	AM
Strontium 90	10098-97-2	-0.76	2.3	1.1	2.0	U	Y
Technetium 99	14133-76-7	0.084	0.18	0.50	0.50	U	TC
Carbon 14	14762-75-5	-0.21	6.2	10	50	U	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	12	1.5				GAM
Chromium 51	14392-02-0			11		U	GAM
Cobalt 60	10198-40-0			0.11		U	GAM
Zinc 65	17982-39-3			0.25		U	GAM
Cesium 134	17967-70-9			0.097		U	GAM
Cesium 137	10045-97-3			0.067		U	GAM
Radium 226	13982-67-7	0.47	0.14				GAM
Thorium 228	14274-82-9	0.50	0.080				GAM
Thorium 232	7440-29-1			0.46		U	GAM

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.14
Report date 08/07/92

N203055-11

TMA NORCAL

REPORTING GROUPS 7026/7028

DATA SHEET

B05WW7

SDG 7026
Contact Dinkar Kharkar

Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N203055-11
Dept sample id 7028-011
Received 03/19/92

Client sample id B05WW7
Matrix SOIL
Collected 03/16/92
Chain of custody id WHC-N-557-2

PARAMETER	CAS NO	RESULT pCi/G	2σ ERR (COUNT)	MDA pCi/G	RDL pCi/G	QUALI-FIERS	TEST
Gross Alpha	Alpha	3.2	4.4	6.1	10	UX	80A
Gross Beta	Beta	14	4.2	5.4	15	J	80B
Uranium 235	15117-96-1	0	0.048	0.18	0.30	U	U
Uranium 238	7440-61-1	0.50	0.21	0.15	0.30		U
Plutonium 239/240		0.006	0.012	0.028	0.050	U	PU
Americium 241	14596-10-2	-0.033	0.055	0.12	0.050	U	AM
Strontium 90	10098-97-2	-0.24	2.3	1.0	2.0	U	Y
Technetium 99	14133-76-7	0.42	0.40	1.3	0.50	U	TC
Carbon 14	14762-75-5	0.91	5.9	9.7	50	U	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	13	2.0				GAM
Chromium 51	14392-02-0			14		U	GAM
Cobalt 60	10198-40-0			0.11		U	GAM
Zinc 65	17982-39-3			0.31		U	GAM
Cesium 134	17967-70-9			0.16		U	GAM
Cesium 137	10045-97-3			0.10		U	GAM
Radium 226	13982-67-7	0.50	0.18				GAM
Thorium 228	14274-82-9	0.63	0.17				GAM
Thorium 232	7440-29-1			0.61		U	GAM

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.14
Report date 08/07/92

SDG 7026	Client Westinghouse Hanford
Contact Dinkar P. Kharkar	Contract MBH-SVV-069262

CASE NARRATIVE

1.0 GENERAL

Soil and water samples results from Location 100-HR-1 Vadose Zone (TMA/Norcal Groups 7026 and 7028) are reported herein. TMA/Norcal Group 7026 and 7028 are comprised of the twenty-one samples listed on the Chain-of-Custody documents and are identified as samples 7026-1 through 10 and 7028-1 through 11. Groups 7026 and 7028 were processed together and the same QC results apply to both sets.

1.1 CHAINS-OF-CUSTODY

This report includes data from the samples delivered under Chain-of-Custody documents Field Logbook No. EFL-1014.

1.2 SAMPLE VOLUME

A 1000 mL bottle of each sample was received for the analyses.

1.3 MISSING SAMPLES

All samples were received in an undamaged condition.

1.4 HOLDING TIMES

The collections were made from 2/26/92 through 3/16/92 and sample processing was initiated within 180 days of collection.

2.0 QUALITY CONTROL

The internal quality control consisted of one sample each of a laboratory control, a blank, and a replicate. All original analyses were performed with QC samples 7026-11 through 14 and 7028-12, 13, 14, 17, and 18.

The QC samples were prepared and labelled by the quality control officer. Copies of The QC notebook pages are included in the data package.

2.1 LABORATORY CONTROL SAMPLES

LCS recoveries for all nuclides were good, except for ^{235}U, which was 131% and the recovery does not pass the 3 σ protocol limits. The MDA's for ^{14}C was 61 pCi/g which does not meet the RDL requirement of 50 pCi/g. The MDA's for ^{99}Tc was 1.2 and 0.90 pCi/g which were above RDL of 0.50 pCi/g. The MDA of ^{241}Am was 0.057 pCi/g instead of 0.050 pCi/g.

2.2 BLANKS

MDA's for all the analyses meet the RDL requirements, except for gross alpha, gross beta, ^{99}Tc, and ^{241}Am. The MDA's for gross alpha, gross beta, ^{99}Tc, and ^{241}Am were 5.0, 5.4, (0.9 - 1.3), and 0.14 pCi/g respectively.

SDG 7026	Client Westinghouse Hanford
Contact Dinkar P. Kharkar	Contract MBH-SVV-069262

CASE NARRATIVE

2.3 REPLICATES

Results were satisfactory for all replicate analyses. The MDA's for ^{239}Pu, ^{241}Am, and ^{99}Tc are underlined in the data sheets because the MDA's exceed RDL, but are within average MDA's of (0.039 ± 0.028), 0.057 ± 0.056, and 1.9 ± 2.3 pCi/g respectively. The MDA for ^{14}C exceed RDL.

3.0 ANALYTICAL NOTES

3.1 Gross Alpha Analyses: Positive gross alpha concentration was found in sample numbers 7026-1, 7, 8, and 10 and 7028-5. The average for the twenty-two soil samples was 6.1 ± 2.6 pCi/g. The average for five water samples was 2.4 ± 3.7 pCi/L.

3.2 Gross Beta Analyses: Positive gross beta concentration was found in all samples except 7028-8. The average MDA for the twenty-two soil samples was 6.8 ± 5.4 pCi/g. Positive gross beta concentration was not found in the water samples. The average MDA for five water samples was 3.3 ± 3.9 pCi/L.

3.3 Carbon-14 Analyses: The MDA's for the LCS was underlined because it exceeded the RDL in the sample. This was due to short count times. Positive concentration of ^{14}C was not found in any of the soil samples. Positive ^{14}C concentration was found in water samples 7026-5. The average MDA for five water samples was 62 ± 64 pCi/L.

3.4 Strontium-90 Analyses: The average yield for twenty-two soil analyses was (70 ± 14%). The lowest yield was 50% and the highest was 78%. The average MDA was 0.94 ± 0.20 pCi/g. Positive ^{90}Sr concentration was found in soil sample numbers 7026-6 through 8 and 7028-3 through 7. The average yield for five water samples was (74 ± 9%). No positive ^{90}Sr concentration was found in the water samples.

3.5 Technetium-99 Analyses: The average yield for twenty-six analyses was (46 ± 38%). The lowest yield was 14% and the highest was 78%. The average MDA was 1.0 ± 2.3 pCi/g. Positive ^{99}Tc concentration was not found in the soil and water samples. The average yield for five water samples was (63 ± 9%).

3.6 Uranium-233, 234, 234, and 238 Analyses: The average yield for twenty-four soil analyses was (48 ± 25%). The lowest yield was 22% and the highest was 69%. The average MDA was 0.16 ± 0.010 pCi/g. Concentration above MDA was found in all samples except 7026-2. The average yield for seven water samples was (54 ± 17%). No positive concentration of uranium was found in the water samples.

3.7 Plutonium-238, 239/240 Analyses: The average yield for twenty-two soil analyses was (68 ± 25%). The lowest yield was 45% and the highest was 94%. The average MDA was 0.030 ± 0.024 pCi/g. Positive plutonium concentration was found in sample numbers 7026-6 and 7, and 7028-3 through 6. The average yield for five water samples was (64 ± 23%). No positive concentration of plutonium was found in the water samples.

SDG 7026
Contact Dinkar P. Kharkar

Client Westinghouse Hanford
Contract MBH-SVV-069262

CASE NARRATIVE

3.8 Americium-241 Analyses: The average yield for twenty-two soil analyses was (55 ± 30%). The lowest yield was 21% and the highest was 77%. The average MDA was 0.057 ± 0.056 pCi/g. Positive americium concentration was found in sample numbers 7026-6 and 7, and 7028-3 through 5. The average yield (40 ± 27%). No positive concentration of americium was found in the water samples.

3.9 Gamma Scan Analyses: Gamma scan analysis found positive concentration of ^{60}Co in sample numbers 7026-6,7,9, and 10, and 7028-1, 3, 4, 5, and 6. Positive ^{137}Cs concentration in samples 7026-2, 6, 7, and 9, and 7028-3 through 7. No positive concentration of gamma was found in the water samples.

9213507.1259

Westinghouse Hanford Company

CHAIN OF CUSTODY

Custody Form Initiator CMChaney

Company Contact J.D. Fancher

Telephone (509)376-2081

Project Designation/Sampling Locations 100-HR-1 Vadose Zone Sampling 11b-H-3

Collection Date 3-5-92

Ice Chest No. Coleman #64

Field Logbook No. EFL-1014

Bill of Lading/Airbill No.

Offsite Property No.

Method of Shipment Overnight Air Delivery

Shipped to TMA/NORCAL 2030 Wright Ave. Richmond Ca. 94804

Possible Sample Hazards/Remarks Maintain at 4°C

Sample Identification

BDSWP5

(1)1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am-241)

(1) 250ml G bottle(ICP/AA metals,Hg)

(1) 500 ml aG bottle(Semi-VOA,PCB's/PEST.)

(1)120ml G bottle(Cyanide)

(1)120ml G bottle(VOA)

(1)1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am24

(1) 250ml G bottle(ICP/AA metals, Hg)

(1)500 ml aG bottle(Semi-VOA,PCB's/PEST.)

(1) 120ml G bottle(Cyanide) 3-5-92

(1) 120ml G bottle(VOA)

☑ Field Transfer of Custody

CHAIN OF POSSESSION (Sign and Print Names)

Relinquished by:	Received by:	Date/Time:
CMChaney Coy Chaney	K.F. Trapp / K.A. Trapp	3/4/92 1125
K.F. Trapp / K.A. Trapp	Kermit Blum	3-10-92 1130

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector _____ Date Sampled _____ Time _____ hours

Company Contact J.D. Fancher Telephone (509) 376-2081

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B05WP5	1, 120mL G	soil	CLP; VOA
	1, 500mL aG	soil	CLP; semi-VOA, PCB/PEST
	1, 1000mL G	soil	Gross Alpha, Gross Beta, Gamma
			Spec., U-235/238, Pu-239/240,
			Sr-90, Tc-99, C-14, Am-241.
	1, 250mL G	soil	CLP; ICP/AA Metals, Hg
	1, 120mL G	soil	CLP; Cn
	1, 120mL G	soil	CLP; VOA
	1, 500mL aG	soil	CLP; semi-VOA, PCB/PEST
	1, 1000mL G	soil	Gross Alpha, Gross Beta, Gamma
			Spec., U-235/238, Pu-239/240,
			Sr-90, Tc-99, C-14, Am-241.
	1, 250mL G	soil	CLP; ICP/AA Metals, Hg
	1, 120mL G	soil	CLP; Cn
			RFT 3/6/92

Field Information** _____

Special Handling and/or Storage Samples must be maintained at 4 C.

Possible Sample Hazards None observed.

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 3-10-92

Analysis Required _____

*Indicate whether sample is soil, sludge, water, etc.

**Use back of page for additional information relative to sample location.

A-6000-406 (05/9

Westinghouse Hanford Company

CHAIN OF CUSTODY

Custody Form Initiator: WV Setzer/CMChance

Company Contact: J.D. Fancher

Telephone: (509) 376-2081

Project Designation/Sampling Locations: 100-HR-1

Collection Date: 3-5-92

Ice Chest No.: SML-24

Field Logbook No.: EFL 104

Bill of Lading/Airbill No.:

Offsite Property No.:

Method of Shipment: OVERNIGHT AIR SERVICE

Shipped to: TMA/NORCAL

Possible Sample Hazards/Remarks: None detected with field instruments.

Sample Identification

1) B05WP7
3, 1000mL G: CLP; ICP/AA Metals, Hg.
3, 1000mL G: CLP; Cn.
3, 40mL Gs: CLP; VOA.
3, 2360mL aG: CLP; Semi-VOA, PCB/Pest.
2, 4000mL P: Gross Alpha, Gross Beta, Gamma Spec, Sr-90, Tc-99, C-14, U-235/238, Pu 239/240, Am-241.

2. B05WP6 3, 40ml Gs: VOA

[✓] Field Transfer of Custody — Chain of Possession — (Sign and Print Names)

Relinquished by:	Received by:	Date/Time:
CMChance / Cory Chance	K.F. Trapp / K.D. Trapp	3/6/92 1125
K.F. Trapp / K.D. Trapp	Kermit Blum	3-10-92 1130

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

A-6000-407 (12/90) (EF) WEF061
Chain of Custody

9213507.1262

000125

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector C. Chance Date Sampled 3/5/92 Time 1015 hours

Company Contact J.D. Fancher Telephone (509) 376-2081

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B05WP7	3, 40mL Gs	water	CLP; VOA
	3, 2360mL aG	water	CLP; semi-VOA, PCB/PEST
	2, 4000mL P	water	Gross Alpha, Gross Beta, Gamma
			Spec., U-235/238, Pu-239/240,
			Sr-90, Tc-99, C-14, Am-241.
	3, 1000mL G	water	CLP; ICP/AA Metals, Hg
	3, 1000mL G	water	CLP; Cn
B05WP6	3, 40mL aGs	water	CLP; VOA

Field Information**

Special Handling and/or Storage Samples must be maintained at 4 C.

Possible Sample Hazards None observed.

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 3-10-92

Analysis Required

*Indicate whether sample is soil, sludge, water, etc.

**Use back of page for additional information relative to sample location.

A-6000-406 (05/9

9213507.1263

Westinghouse Hanford Company	CHAIN OF CUSTODY

Custody Form Initiator W.V. SETZER/CM Chance

Company Contact J.D. Fancher — Telephone (509) 376-2081

Project Designation/Sampling Locations 100-HR-1 Vadose Zone Sampling — Collection Date 3-9-92

116-H-1

Ice Chest No. SML-124 — Field Logbook No. WHC-N-557 2

Bill of Lading/Airbill No. — Offsite Property No.

Method of Shipment Overnight Air Delivery

Shipped to TMA/NORCAL 2030 Wright Ave. Richmond Ca. 94804

Possible Sample Hazards/Remarks Maintain at 4°C

Sample Identification

B05WV5	~~B05WV6~~ CC3-9-92
(1)1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am-241)	(1)1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am24
(1) 250ml G bottle(ICP/AA metals,Hg)	(1) 250ml G bottle(ICP/AA metals, Hg)
(1) 500 ml aG bottle(Semi-VOA,PCB's/PEST.)	(1)500 ml aG bottle(Semi-VOA,PCB's/PEST.) CC3-9-92
(1)120ml G bottle(Cyanide)	(1) 120ml G bottle(Cyanide)
(1)120ml G bottle(VOA)	(1) 120ml G bottle(VOA)

☑ Field Transfer of Custody — CHAIN OF POSSESSION — (Sign and Print Names)

Relinquished by:	Received by:	Date/Time:
CM Chance Cory Chance	K.F. Trapp / K.D. Trapp	3/10/92 1145
K.F. Trapp / K.D. Trapp	Kermit Blum	3-11-92 1130

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector CM Chance Date Sampled 3-9-92 Time 0905 hours

Company Contact J.D. Fancher Telephone (509) 376-2081

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
	1, 120mL G	soil	CLP; VOA
	1, 500mL aG	soil	CLP; semi-VOA, PCB/PEST
	1, 1000mL G	soil	Gross Alpha, Gross Beta, Gamma
B05WV5			Spec., U-235/238, Pu-239/240,
			Sr-90, Tc-99, C-14, Am-241.
	1, 250mL G	soil	CLP; ICP/AA Metals, Hg
	1, 120mL G	soil	CLP; Cn
	1, 120mL G	soil	CLP; VOA
	1, 500mL aG	soil	CLP; semi-VOA, PCB/PEST
	1, 1000mL G	soil	Gross Alpha, Gross Beta, Gamma
			Spec., U-235/238, Pu-239/240,
		CC 3-9-92	Sr-90, Tc-99, C-14, Am-241.
	1, 250mL G	soil	CLP; ICP/AA Metals, Hg
	1, 120mL G	soil	CLP; Cn

Field Information**

Special Handling and/or Storage Samples must be maintained at 4 C.

Possible Sample Hazards None Detected w/Field instruments

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 3-11-92

Analysis Required

*Indicate whether sample is soil, sludge, water, etc.

**Use back of page for additional information relative to sample location.

A-6000-406 (05/90)

9216302.1365

Westinghouse Hanford Company	CHAIN OF CUSTODY

Custody Form Initiator CM Chance

Company Contact J.D. Fancher — Telephone (509)376-2081

Project Designation/Sampling Locations 100-HR-1 Vadose Zone Sampling 116-H-1 — Collection Date 3-9-92 (1325)

Ice Chest No. SML 153 — Field Logbook No. WHC-N-557 2

Bill of Lading/Airbill No. — ORSR # 15860 WWS 3-12 — ~~Offsite Property No.~~ ~~15875~~ WWS 3-12-92

Method of Shipment Overnight Air Delivery

Shipped to TMA/NORCAL 2030 Wright Ave. Richmond Ca. 94804

Possible Sample Hazards/Remarks Maintain at 4°C

Sample Identification

BD5WV6

(1)1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am-241)	(1)1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am2
(1) 250ml G bottle(ICP/AA metals,Hg)	(1) 250ml G bottle(ICP/AA metals, Hg)
(1) 500 ml aG bottle(Semi-VOA,PCB's/PEST.)	(1)500 ml aG bottle(Semi-VOA,PCB's/PEST.)
(1)120ml G bottle(Cyanide)	(1) 120ml G bottle(Cyanide)
(1)120ml G bottle(VOA)	(1) 120ml G bottle(VOA)

CC 3-9-92

☐ Field Transfer of Custody — CHAIN OF POSSESSION — (Sign and Print Names)

Relinquished by:	Received by:	Date/Time:
CM Chance Cory Chance	Kermit Blum	3-13-92 1030
Relinquished by:	Received by:	Date/Time:
Relinquished by:	Received by:	Date/Time:
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

Westinghouse Hanford Company	CHAIN OF CUSTODY

Custody Form Initiator W.V. SETZER

Company Contact J.D. Fancher — Telephone (509)376-2081

Project Designation/Sampling Locations 100-HR-1 Vadose Zone Sampling 116-H-1 — Collection Date 3-9-92 (1404)

Ice Chest No. SML 153 — Field Logbook No. WHC-N-551 2

Bill of Lading/Airbill No. — OSRS # ~~Offsite Property No.~~ 15860 WNS 3-12-92

Method of Shipment Overnight Air Delivery

Shipped to TMA/NORCAL 2030 Wright Ave. Richmond Ca. 94804

Possible Sample Hazards/Remarks Maintain at 4°C

Sample Identification

B05W08

(1)1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am-241)	(1)1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am24
(1) 250ml G bottle(ICP/AA metals,Hg)	(1) 250ml G bottle(ICP/AA metals, Hg)
(1) 500 ml aG bottle(Semi-VOA,PCB's/PEST.)	(1)500 ml aG bottle(Semi-VOA,PCB's/PEST.)
(1)120ml G bottle(Cyanide)	(1) 120ml G bottle(Cyanide)
(1)120ml G bottle(VOA)	(1) 120ml G bottle(VOA)

☐ Field Transfer of Custody — CHAIN OF POSSESSION — (Sign and Print Names)

Relinquished by:	Received by:	Date/Time:
W.V. SETZER W.V. Setzer	Kermit Blum	3-13-92 1030
Relinquished by:	Received by:	Date/Time:
Relinquished by:	Received by:	Date/Time:
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

9213507.1267

Westinghouse Hanford Company	CHAIN OF CUSTODY

Custody Form Initiator W.V. SETZER/CM Chaney

Company Contact J.D. Fancher — Telephone (509)376-2081

Project Designation/Sampling Locations 100-HR-1 Vadose Zone Sampling 116-H-1 — Collection Date 3-10-92 C0912

Ice Chest No. SML 153 — Field Logbook No. WHC-N-557 2

Bill of Lading/Airbill No. — ~~Offsite Property No.~~ OSRS # 15860

Method of Shipment Overnight Air Delivery

Shipped to TMA/NORCAL 2030 Wright Ave. Richmond Ca. 94804

Possible Sample Hazards/Remarks Maintain at 4°C

Sample Identification

B05WV9

(1)1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am-241)	(1)1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am24
(1) 250ml G bottle(ICP/AA metals,Hg)	(1) 250ml G bottle(ICP/AA metals, Hg)
(1) 500 ml aG bottle(Semi-VOA,PCB's/PEST.)	(1)500 ml aG bottle(Semi-VOA,PCB's/PEST.)
(1)120ml G bottle(Cyanide)	(1) 120ml G bottle(Cyanide)
(1)120ml G bottle(VOA)	(1) 120ml G bottle(VOA)

C 3-10-92

☐ Field Transfer of Custody — CHAIN OF POSSESSION — (Sign and Print Names)

Relinquished by:	Received by:	Date/Time:
W.V. SETZER W.V. Setzer	Kermit Blum	3-13-92 1030
Relinquished by:	Received by:	Date/Time:
Relinquished by:	Received by:	Date/Time:
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

9213507 12n8

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector C M Chance Date Sampled 3-9-92 Time 1325 hours

Company Contact J.D. Fancher Telephone (509) 376-2081

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
	1, 120mL G	soil	CLP; VOA
	1, 500mL aG	soil	CLP; semi-VOA, PCB/PEST
	1, 1000mL G	soil	Gross Alpha, Gross Beta, Gamma
BDSWV6			Spec., U-235/238, Pu-239/240,
			Sr-90, Tc-99, C-14, Am-241.
	1, 250mL G	soil	CLP; ICP/AA Metals, Hg
	1, 120mL G	soil	CLP; Cn
	1, 120mL G	soil	CLP; VOA
	1, 500mL aG	soil	CLP; semi-VOA, PCB/PEST
	1, 1000mL G	soil	Gross Alpha, Gross Beta, Gamma
			Spec., U-235/238, Pu-239/240,
			Sr-90, Tc-99, C-14, Am-241.
	1, 250mL G	soil	CLP; ICP/AA Metals, Hg
	1, 120mL G	soil	CLP; Cn

CC 3-11-92

Field Information** _____

Special Handling and/or Storage Samples must be maintained at 4 C.

Possible Sample Hazards ABOVE 100 cpm OVER BACKGROUND, FIELD OBSERVATION

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 3-13-92

Analysis Required _____

*Indicate whether sample is soil, sludge, water, etc.

**Use back of page for additional information relative to sample location.

A-6000-406 (05/90)

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector W.V. Setzer Date Sampled 3-9-92 Time 1404 hours

Company Contact J.D. Fancher Telephone (509) 376-2081

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
	1, 120mL G	soil	CLP; VOA
	1, 500mL aG	soil	CLP; semi-VOA, PCB/PEST
	1, 1000mL G	soil	Gross Alpha, Gross Beta, Gamma
B05WV8			Spec., U-235/238, Pu-239/240,
			Sr-90, Tc-99, C-14, Am-241.
	1, 250mL G	soil	CLP; ICP/AA Metals, Hg
	1, 120mL G	soil	CLP; Cn
	1, 120mL G	soil	CLP; VOA
	1, 500mL aG	soil	CLP; semi-VOA, PCB/PEST
	1, 1000mL G	soil	Gross Alpha, Gross Beta, Gamma
			Spec., U-235/238, Pu-239/240,
		C 3-11-92	Sr-90, Tc-99, C-14, Am-241.
	1, 250mL G	soil	CLP; ICP/AA Metals, Hg
	1, 120mL G	soil	CLP; Cn

Field Information**

Special Handling and/or Storage Samples must be maintained at 4 C.

Possible Sample Hazards 100 CPM ABOVE BACKGROUND, FIELD OBSERVATION

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 3-13-92

Analysis Required

*Indicate whether sample is soil, sludge, water, etc.

**Use back of page for additional information relative to sample location.

A-6000-406 (05/90)

9215507 1270

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector W.V. Seizer/CM Chanie Date Sampled 3-10-92 Time 0912 hours

Company Contact J.D. Fancher Telephone (509) 376-2081

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
	1, 120mL G	soil	CLP; VOA
	1, 500mL aG	soil	CLP; semi-VOA, PCB/PEST
	1, 1000mL G	soil	Gross Alpha, Gross Beta, Gamma
BOSWV9			Spec., U-235/238, Pu-239/240,
			Sr-90, Tc-99, C-14, Am-241.
	1, 250mL G	soil	CLP; ICP/AA Metals, Hg
	1, 120mL G	soil	CLP; Cn
	1, 120mL G	soil	CLP; VOA
	1, 500mL aG	soil	CLP; semi-VOA, PCB/PEST
	1, 1000mL G	soil	Gross Alpha, Gross Beta, Gamma
			Spec., U-235/238, Pu-239/240,
			Sr-90, Tc-99, C-14, Am-241.
	1, 250mL G	soil	CLP; ICP/AA Metals, Hg
	1, 120mL G	soil	CLP; Cn

C 03-11-92

Field Information**

Special Handling and/or Storage Samples must be maintained at 4 C.

Possible Sample Hazards 100 CPM ABOVE BACKGROUND IN FIELD

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 3-13-92

Analysis Required

*Indicate whether sample is soil, sludge, water, etc.

**Use back of page for additional information relative to sample location.

A-6000-406 (05/9

9213507.1271

Westinghouse Hanford Company

CHAIN OF CUSTODY

Custody Form Initiator: CM Chance

Company Contact: J.D. Fancher — Telephone: (509) 376-2081

Project Designation/Sampling Locations: 100-HR-1 Vadose Zone Sampling 116-H-1 — Collection Date: 3-11-92

Ice Chest No.: SML-115 — Field Logbook No.: WHC-N-572

Bill of Lading/Airbill No.: — Offsite Property No.:

Method of Shipment: Overnight Air Delivery

Shipped to: TMA/NORCAL 2030 Wright Ave. Richmond Ca. 94804

Possible Sample Hazards/Remarks: Maintain at 4°C

Sample Identification

B05WW0	B05WW4
(1)1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am-241)	(1)1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am24
(1) 250ml G bottle(ICP/AA metals,Hg)	(1) 250ml G bottle(ICP/AA metals, Hg)
(1) 500 ml aG bottle(Semi-VOA,PCB's/PEST.)	(1)500 ml aG bottle(Semi-VOA,PCB's/PEST.)
(1)120ml G bottle(Cyanide)	(1) 120ml G bottle(Cyanide)
(1)120ml G bottle(VOA)	(1) 120ml G bottle(VOA)

☑ Field Transfer of Custody — CHAIN OF POSSESSION — (Sign and Print Names)

Relinquished by:	Received by:	Date/Time:
CM Chance / Cory Chance	Kermit Blum	3-16-92 0800 *
Relinquished by:	Received by:	Date/Time:
Relinquished by:	Received by:	Date/Time:
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments: * Received 3-14-92 @ 1600; opened 3-16-92 @ 0800.

9215507.1272

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION B05WW4 3-11-92 1250

Collector C M Chance Date Sampled B05WWD 3-11-92 Time 0815 hours

Company Contact J.D. Fancher Telephone (509) 376-2081

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
	1, 120mL G	soil	CLP; VOA
	1, 500mL aG	soil	CLP; semi-VOA, PCB/PEST
	1, 1000mL G	soil	Gross Alpha, Gross Beta, Gamma
B05WWD			Spec., U-235/238, Pu-239/240,
			Sr-90, Tc-99, C-14, Am-241.
	1, 250mL G	soil	CLP; ICP/AA Metals, Hg
	1, 120mL G	soil	CLP; Cn
	1, 120mL G	soil	CLP; VOA
	1, 500mL aG	soil	CLP; semi-VOA, PCB/PEST
	1, 1000mL G	soil	Gross Alpha, Gross Beta, Gamma
B05WW4			Spec., U-235/238, Pu-239/240,
			Sr-90, Tc-99, C-14, Am-241.
	1, 250mL G	soil	CLP; ICP/AA Metals, Hg
	1, 120mL G	soil	CLP; Cn

Field Information**

Special Handling and/or Storage Samples must be maintained at 4 C.

Possible Sample Hazards None observed.

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 3-16-92

Analysis Required

*Indicate whether sample is soil, sludge, water, etc.

**Use back of page for additional information relative to sample location.

A-6000-406 (05/9

9215507.1273

Westinghouse Hanford Company	CHAIN OF CUSTODY

Custody Form Initiator CMChance

Company Contact J.D. Fancher Telephone (509)376-2081

Project Designation/Sampling Locations 100-HR-1 Vadose Zone Sampling Collection Date 3-13-92

Ice Chest No. Austin Field Logbook No. WHC-N-5572

Bill of Lading/Airbill No. Offsite Property No.

Method of Shipment Overnight Air Delivery

Shipped to TMA/NORCAL 2030 Wright Ave. Richmond Ca. 94804

Possible Sample Hazards/Remarks Maintain at 4°C

Sample Identification

B05WW5 (0907 hrs.)	
(1)1000ml G bottle(Gross Alpha/Beta,Gamma	(1)1000ml G bottle(Gross Alpha/Beta,Gamma
Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am-241)	Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am24
(1) 250ml G bottle(ICP/AA metals,Hg)	(1) 250ml G bottle(ICP/AA metals, Hg)
(1) 500 ml aG bottle(Semi-VOA,PCB's/PEST.)	(1)500 ml aG bottle(Semi-VOA,PCB's/PEST.)
(1)120ml G bottle(Cyanide)	(1) 120ml G bottle(Cyanide) CC 3-13-92
(1)120ml G bottle(VOA)	(1) 120ml G bottle(VOA)

☑ Field Transfer of Custody — CHAIN OF POSSESSION — (Sign and Print Names)

Relinquished by:	Received by:	Date/Time:
CMChance / Cory Chance	K. Trapp / K. Trapp	3/16/92 1007
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 3-17-92 1130
Relinquished by:	Received by:	Date/Time:
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector C. Chance Date Sampled 3/16/92 Time 0907 hours

Company Contact J.D. Fancher Telephone (509) 376-2081

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B05WW5	1, 120mL G	soil	CLP; VOA
	1, 500mL aG	soil	CLP; semi-VOA, PCB/PEST
	1, 1000mL G	soil	Gross Alpha, Gross Beta, Gamma
			Spec., U-235/238, Pu-239/240,
			Sr-90, Tc-99, C-14, Am-241.
	1, 250mL G	soil	CLP; ICP/AA Metals, Hg
	1, 120mL G	soil	CLP; Cn
	1, 120mL G	soil	CLP; VOA
	1, 500mL aG	soil	CLP; semi-VOA, PCB/PEST
	1, 1000mL G	soil	Gross Alpha, Gross Beta, Gamma
			Spec., U-235/238, Pu-239/240,
			Sr-90, Tc-99, C-14, Am-241.
	1, 250mL G	soil	CLP; ICP/AA Metals, Hg
	1, 120mL G	soil	CLP; Cn
			KT 3/16/92

Field Information**

Special Handling and/or Storage Samples must be maintained at 4 C.

Possible Sample Hazards None observed.

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 3-17-92

Analysis Required

*Indicate whether sample is soil, sludge, water, etc.

**Use back of page for additional information relative to sample location.

A-6000-406 (05/90)

9214507.1275

Westinghouse Hanford Company	CHAIN OF CUSTODY

Custody Form Initiator: CMChance

Company Contact: J.D. Fancher

Telephone: (509) 376-2081

Project Designation/Sampling Locations: 100-HR-1

Collection Date: 3-16-92

Ice Chest No.: SML-154

Field Logbook No.: WHC-N-5572

Bill of Lading/Airbill No.:

Offsite Property No.:

Method of Shipment: OVERNIGHT AIR SERVICE

Shipped to: TMA/NORCAL

Possible Sample Hazards/Remarks: None detected with field instruments. Maintain at 4°C

Sample Identification

1) B05WW6
1, 250mL G: CLP; ICP/AA Metals, Hg.
1, 120mL G: CLP; Cn.
1, 120mL G: CLP; VOA.
1, 500mL aG: CLP; Semi-VOA, PCB/Pest.
1, 1000mL G: Gross Alpha, Gross Beta, Gamma Spec, Sr-90, Tc-99, C-14, U-235/238, Pu 239/240, Am-241.

2) B05WW7
1, 250mL G: CLP; ICP/AA Metals, Hg.
1, 120mL G: CLP; Cn.
1, 120mL G: CLP; VOA.
1, 500mL aG: CLP; Semi-VOA, PCB/Pest.
1, 1000mL G: Gross Alpha, Gross Beta, Gamma Spec, Sr-90, Tc-99, C-14, U-235/238, Pu 239/240, Am-241.

3)
1, 250mL G: CLP; ICP/AA Metals, Hg.
1, 120mL G: CLP; Cn.
1, 120mL G: CLP; VOA.
1, 500mL aG: CLP; ~~Semi-VOA~~, PCB/Pest.
1, 1000mL G: ~~Gross Alpha, Gross Beta~~, Gamma Spec, Sr-90, Tc-99, C-14, U-235/238, Pu 239/240, Am-241

[✓] Field Transfer of Custody — Chain of Possession — (Sign and Print Names)

Relinquished by:	Received by:	Date/Time:
CMChance / Cory Chance	K. Trapp / K. Trapp	3/17/92 0803
K. Trapp / K. Trapp	CMChance / Cory Chance	3/18-92 0850
CMChance / Cory Chance	Kermit Blum	3-19-92 1100

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

A-6000-407 (12/90) (EF) WEF061
Chain of Custody

9215507.1276

000139

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector C. Chance Date Sampled 3/16/92 Time 0953 0953 hours

Company Contact J.D. Fancher Telephone (509) 376-2081

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
	1, 120mL G	soil	CLP; VOA
	1, 500mL aG	soil	CLP; semi-VOA, PCB/PEST
	1, 1000mL G	soil	Gross Alpha, Gross Beta, Gamma
B05WW6			Spec., U-235/238, Pu-239/240,
			Sr-90, Tc-99, C-14, Am-241.
	1, 250mL G	soil	CLP; ICP/AA Metals, Hg
	1, 120mL G	soil	CLP; Cn
	1, 120mL G	soil	CLP; VOA
	1, 500mL aG	soil	CLP; semi-VOA, PCB/PEST
	1, 1000mL G	soil	Gross Alpha, Gross Beta, Gamma
B05WW7			Spec., U-235/238, Pu-239/240,
			Sr-90, Tc-99, C-14, Am-241.
	1, 250mL G	soil	CLP; ICP/AA Metals, Hg
	1, 120mL G	soil	CLP; Cn

Field Information**

Special Handling and/or Storage Samples must be maintained at 4 C

Possible Sample Hazards None observed.

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 3-19-92

Analysis Required

*Indicate whether sample is soil, sludge, water, etc.

**Use back of page for additional information relative to sample location.

A-6000-406 (05/90

KT 3/...
~~OVERNIGHT~~ DELIVERY, OVERNIGHT
~~Saturday~~ K 3/6/92

Contractor WESTINGHOUSE HANFORD COMPANY	OFF-SITE PROPERTY CONTROL	CONTROL NUMBER (To be obtained from PROPERTY MANAGEMENT) W92-0-0246 #7

PART I – TO BE COMPLETED BY ORIGINATOR

Department ENV. ENG. & GEOTECH	Section EFSG	Unit ENV. CHARAC. & SAMPLING

The following items are to be shipped from ☑ Contractor ☐ Vendor

Routing AIR EMERY ☑ Contractor ☐ Vendor

Shipped to	Off-site Custodian
TMA/NORCAL 2030 WRIGHT AVE. RICHMOND, CA. 94804	ROBERT FOX
	Full Title PROJECT COORDINATOR

Quantity	Description (Include Serial and any Government Tag Numbers)	Original Cost
1 5[illegible] lbs.	~~Coleman #64~~ SML-24, poly cooler. Contains ~~soil~~ samples that are double-bagged and packed in wet ice and vermiculite. Samples are nonhazardous. Sample #: B05WP7 B05WP6 (SML-24)	N/A
1 41 & 1 lbs	Sample # B05WP5 (Coleman #64) Coleman [illegible] poly cooler. Contains soil samples that are double-bagged and packed in wet ice and vermiculite. Samples are nonhazardous.	N/A

☐ Classified ☑ Unclassified ☐ Shipped Under DOE Contract ☐ Shipped Under Contractor's Use Permit Contract

Necessity for the Off-Site Use of this Property

To support drilling and sampling at 100 Areas.

Bill of Lading: 35099666G7

CERTIFICATION OF THE RADIATION MONITORING RELEASE MUST BE SECURED THE SAME DAY THAT MATERIAL IS DELIVERED TO SHIPPING.

RM Clearance for Public Release	RM Survey No.	Date
[illegible]	111716	3-6-92

Location of Property (Area & Bldg.)	Contact	Phone
100 AREA	J.D. FANCHER	376-2081

Date Ready for Shipment	Cost Code to be Charged	Approximate Date This Property will be Returned
3/6/92	FBIAM 12500	N/A

Originated By K.F. Tiemann	Date / Time	Authorized By	Date
Relinquished By K. Tiemann	3/9/92 0939	B.E. Innis B.E. Innis	3-6-92
Signature and Name of Property Control	Custodian Date	Property Management Approval	Date
		[illegible]	3/9/92

PART II – TO BE COMPLETED BY SHIPPING

Signature of Recipient	Return Order No.	Date Issued	Purchase Order No.	Date Issued
[illegible]				
Date 3-9-92 Time 0925				

DISTRIBUTION

By Originator	Shipping Operation – Sign all Copies and Forward to:
White – Property Management Green – Property Control Custodian (Issuing Office)	

PLEASE TYPE OR USE BALL POINT PEN. BEAR DOWN FIRMLY!
KEEP MARKS WITHIN BOXES TO ASSURE ACCURACY

FORM OF PAYMENT

Check ☐ GBL ☐ FCCOD ☐

Bill to Shipper [XX] Bill to Consignee ☐ Third Party Billing ☐

Shipper's Account Number: E 850281585

EMERY WORLDWIDE — A CF Company

SERVICES

UNITED STATES / CANADA: Same Day ☐; [XX] AM ☐ PM; Second Day ☐ Saturday Delivery

INTERNATIONAL: Express ☐ Preferred ☐ Standard ☐; Business Documents ☐ Customs Clearance ☐ Delivery ☐

Date: 03-09-92 | Origin: PSC | Shipment Number: 250986666 7

PULL FOR SHPT. NO. TAB

From:
WESTINGHOUSE SHIPPING DEPT (509) 376-6665
US DEPARTMENT OF ENERGY C/O
WESTINGHOUSE HANFORD
BLDG 1163
2355 STEVENS DRIVE
RICHLAND WA Canada ☐

To:
ROBERT FOX
TMA/NORCAL
2030 WRIGHT AVENUE
RICHMOND CA Canada ☐ Hold for Pick Up ☐

Tariff Dest. | Gateway

Check to Shipper $

EMERY WORLDWIDE will accept Consignee's check with all risks being assumed by Shipper, including but not limited to non-payment, fraud and misrepresentation.

Customer's Reference Numbers: W12500 PB1AM W92-0-0246#7 | Zip: 99352

E Consignee's Account Number | Zip: 94804

Description	Pcs.	Dimensions L	W	H	Total Pieces	Total Weight (In Lbs.)
2 COOLERS SML24 96# ~~SOIL~~ WATER XXXX SAMPLES B05WP6,B05WP7 COLEMAN #64 41# SOIL ~~B05WP5 W92-0-0246#7~~ OVERNIGHT DELIVERY	2	21	16	17	2	137

FOR INFORMATION OR RATES CALL 1-800 44 EMERY (1-800-443-6379)

Declared Value $

250986666 7

Shipper's Signature X [signature] 3/9/92

Zip Ship ☐ — For shipments within the 50 United States Shipper has the option to check this box and, by checking, agrees that the Zip Ship conditions, described in the area to the right, apply.

Mark if Emery Packaging is used: Urgent Letter 9X12 ☐ Urgent Pack 12X15 ☐

International Shipments: Free Domicile ☐ Commodity Code

Third Party Account Number mandatory for Third Party Billing. E Third Party Account Number

International Customs Value | International Insurance

Base Charge | Total Transportation Charges | Other Charges/Advance at Origin ☐ OC/AO- $

1-OAK-A

Terms and Conditions on Back

CONSIGNEE — PACKAGE COPY — 4

97135071278

0001141

OVERNIGHT DELIVERY 9716597 1279

000142

Contractor: WESTINGHOUSE HANFORD COMPANY	OFF-SITE PROPERTY CONTROL	CONTROL NUMBER (To be obtained from PROPERTY MANAGEMENT) W92-0-0246 #9

PART I – TO BE COMPLETED BY ORIGINATOR

Department	ENV. ENG. & GEOTECH	Section	EFSG	Unit	ENV. CHARAC. & SAMPLING

The following items are to be shipped from ☒ Contractor ☐ Vendor

Routing AIR EMERY ☒ Contractor ☐ Vendor

Shipped to TMA/NORCAL
2030 WRIGHT AVE.
RICHMOND, CA. 94804

Off-site Custodian ROBERT FOX

Full Title PROJECT COORDINATOR

Quantity	Description (Include Serial and any Government Tag Numbers)	Original Cost
1 42 lbs.	SML-124 poly cooler. Contains soil samples that are double-bagged and packed in wet ice and vermiculite. Samples are nonhazardous. Sample #: B05WV5	N/A
	~~poly cooler. Contains soil samples that are double-bagged and packed in wet ice and vermiculite. Samples are nonhazardous. Sample #:~~	N/A KFT 3/10/92

☐ Classified ☐ Unclassified ☐ Shipped Under DOE Contract ☐ Shipped Under Contractor's Use Permit Contract

Necessity for the Off-Site Use of this Property

To support drilling and sampling at 100 Areas.

Bill of Lading: 250996658 I

CERTIFICATION OF THE RADIATION MONITORING RELEASE MUST BE SECURED THE SAME DAY THAT MATERIAL IS DELIVERED TO SHIPPING.

RM Clearance for Public Release	RM Survey No.	Date
G. Patrick	111774	10 MAR '92

Location of Property (Area & Bldg.)	Contact	Phone
100 AREA	J.D. FANCHER	376-2081

Date Ready for Shipment	Cost Code to be Charged	Approximate Date This Property will be Returned
3/10/92	PBIAM 12000	N/A

Originated By / Relinquished By	Date / Time	Authorized By	Date
K.F. Tripp / K.F. Tripp	3/10/92 1422	J.D. Fancher, J.D. Fancher	3/10/92
Signature and Name of Property Control	**Custodian Date**	**Property Management Approval**	**Date**
		[illegible]	3/10/92

PART II – TO BE COMPLETED BY SHIPPING

Signature of Recipient	Return Order No.	Date Issued	Purchase Order No.	Date Issued
Glenn Grant				
Date 3/10/92 Time 1424				

DISTRIBUTION

By Originator	Shipping Operation – Sign all Copies and Forward to:
White, Green, Yellow, Pink – Property Management Goldenrod – Retain	White – Property Management Yellow – Retain Green – Property Control Custodian (Issuing Office) Pink – Originator

54-3000-479 (09/

FORM OF PAYMENT

Check ☐ GBL ☐ FCCOD ☐

Bill to Shipper ☒ Bill to Consignee ☐ Third Party Billing ☐

Shipper's Account Number: E 850281585

EMERY WORLDWIDE — A CF Company

SERVICE

UNITED STATES / CANADA: Same Day ☐ AM ☒ PM ☐ Second Day ☐ Saturday Delivery ☐

INTERNATIONAL: Express ☐ Preferred ☐ Standard ☐

Date: 03-10-92 Origin: PSC Shipment Number: 250986658

From:
WESTINGHOUSE SHIPPING DEPT (509) 376-6665
US DEPARTMENT OF ENERGY C/O
WESTINGHOUSE HANFORD
BLDG 1163
2355 STEVENS DRIVE
RICHLAND WA Canada ☐

To:
ROBERT FOX
TMA/NORCAL
2030 WRIGHT AVE
RICHMOND CA Canada ☐
Hold for Pick Up ☐

Tariff Dest. | Gateway

Check to Shipper $

EMERY WORLDWIDE will accept Consignee's check with all risks being assumed by Shipper, including but not limited to non-payment, fraud and misrepresentation.

Customer's Reference Numbers: W12500 PBIAM W92-0-0246#9

Zip: 99352

Consignee's Account Number: E 94804

Description	Dimensions Pcs	L	W	H	Total Pieces	Total Weight (In Lbs.)
1 SMI-124 COOLER SOIL SAMPLES W92-0-0246#9 B05WV5	1	26	15	15	1	42

Remarks: OVERNIGHT DELIVERY

Shipper's Signature X

Zip Ship ☐ — For shipments within the 50 United States Shipper has the option to check this box and, by checking, agrees that the Zip Ship conditions, described in the area to the right, apply.

Mark if Emery Packaging is used: Urgent Letter 9X12 ☒ Urgent Pack 12X15 ☒

FOR INFORMATION OR RATES CALL 1-800 44 EMERY (1-800-443-6379)

Declared Value $

250986658T

International Shipments: Free Domicile ☐ Commodity Code

Third Party Account Number mandatory for Third Party Billing. Third Party Account Number: E

International Customs Value | International Insurance

Base Charge

Total Transportation Charges

Other Charges/Advance at Origin: OC/AO- $

10AK A

Terms and Conditions on Back

PLEASE TYPE OR USE BALL POINT PEN. BEAR DOWN FIRMLY! KEEP MARKS WITHIN BOXES TO ASSURE ACCURACY

FORM NO. 60001-46

Shipment Record

1A 1B 1C

9713507.1280

000143

FEDERAL EXPRESS

QUESTIONS? CALL 800-238-5355 TOLL FREE.

AIRBILL PACKAGE TRACKING NUMBER 3101510

3101510705

RECIPIENT'S COPY

Date 3-12-92

From (Your Name) Please Print: G.O. BONESS

Your Phone Number (Very Important): (509) 376-7627

Company: U.S. DEPT. OF ENERGY c/o

Department/Floor No.

(EMERGENCY CONTACT PHONE NUMBER 509-373-3880)

Street Address

City: RICHLAND State: WA ZIP Required

To (Recipient's Name) Please Print: ROBERT FOX

Recipient's Phone No. ( )

Company: TMA / NORCAL

Exact Street Address (We Cannot Deliver to P.O. Boxes or P.O. Zip Codes.): 2030 WRIGHT AVENUE

City: RICHMOND State: CA ZIP Required: 9480

YOUR INTERNAL BILLING REFERENCE INFORMATION (First 24 characters will appear on invoice.) RMM-7692 12500 PALAN

RADIOACTIVE MATERIAL, EXCEPTED PACKAGE - LIMITED QUANTITY OF MATERIAL

DOT EMERGENCY RESPONSE GUIDE NUMBER 51 ATTACHED

IF HOLD FOR PICK-UP, Print FEDEX Address Here (Not available at all Street Address

City State ZIP Required

PAYMENT 1 [X] Bill Sender 2 [ ] Bill Recipient's FedEx Acct. No. 3 [ ] Bill 3rd Party FedEx Acct. No. 4 [ ] Bill Credit Card 5 [ ] Cash/Check

SERVICES (Check only one box)

Priority Overnight (Delivery by next business morning†) 11 [X]

Standard Overnight (Delivery by next business afternoon†) 51 [ ]

Economy Two-Day (Delivery by second business day†) 30 [ ]

Government Overnight (Restricted to authorized users only) 41 [ ]

Freight Service (for Extra Large or any package over 150 lbs.)

70 [ ] OVERNIGHT FREIGHT ** (Confirmed reservation required)

80 [ ] TWO-DAY FREIGHT **

† Delivery commitment may be later in some areas.

*Declared Value Limit $100.

**Call for delivery schedule.

INSTRUCTIONS (Mark appropriate boxes)

- Dangerous Goods as per attached Shipper's Declaration [ ]
- Dangerous Goods Shipper's Declaration not required [X]
- Cargo Aircraft only [ ]

DELIVERY AND SPECIAL HANDLING (Check services required)

1 [ ] HOLD FOR PICK-UP (Fill in Box H)

2 [ ] DELIVER WEEKDAY

3 DELIVER SATURDAY (Extra charge) (Not available to all locations) [ ]

4 [X] DANGEROUS GOODS (Extra charge)

6 [ ] DRY ICE ... Lbs.

- Dangerous Goods Shipper's Declaration not required
- Dry Ice, 9, UN 1845,

x kg.

7 [ ] OTHER SPECIAL SERVICE

11 [ ]

12 [ ] HOLIDAY DELIVERY (If offered) (Extra charge)

PACKAGES	WEIGHT In Pounds Only
1	38
Total 1	Total 38

DIM SHIPMENT (Chargeable Weight) [ ] lbs.

Received At: 1 [X] Our Ship 3 [ ] Drop Box 4 [ ] Drop Off 2 [ ] Other Station

FedEx Emp. No. Date/Time

Emp. No. Date

[ ] Cash Received

[ ] Return Shipment

[ ] Third Party [ ] Chg. To Del. [ ] Chg. To Hold

Street Address

City State Zip

Received By: x Kermit Blum

Date/Time Received 3-13-92 FedEx Employee Number 1030

SIGNATURE RELEASE UNAVAILABLE

Fed Base Declar Other Other Total

REVISION PART # FORMAT 06

© 1991-9 PRINTED USA

SHIPPING INST.

SHIP TO: 000145

Company: TMA/Norcal

Address: 2030 Wright Avenue

City, State, Zip: Richmond, CA 94804

Attention: Robert Fox

OFFSITE RADIOACTIVE SHIPMENT RECORD

– EXTERIOR INSPECTION PERMITTED –

15860

Contractor: ☐ PNL ☐ KEH ☒ WHC

Site Carrier: W.V. SETZER

PR No. 242-86-8259 | Veh. No. 102828

Ship: ☒ Prepaid ☐ Collect Via:
☐ Motor-Rail ☒ Air Psgr.
☐ Excl. Use ☒ Air Cargo
☐ DOE Veh. ☐ Mail
☐ UPS Sur. ☐

SHIPMENT DESCRIPTION AND CERTIFICATION

Proper Shipping Name (Radioactive Material,)	UN Number
1. Empty Packages	☐ UN 2908
2. Low Specific Activity, n.o.s	☐ UN 2912
3. Limited quantity, n.o.s.	☒ UN 2910
4. N.O.S.	☐ UN 2982
5. Fissile n.o.s.	☐ UN 2918
6. Special Form, n.o.s.	☐ UN 2974
7. Instruments & Articles	☐ UN 2911
8.	☐

Material Form: ☐ Special (A1) ☒ Normal (A2)

Labels Applied: ☐ Empty ☐ Radioactive LSA ☐ White I ☐ Yellow II ☐ Yellow III ☒ None ☐ Danger (Air Cargo) ☐ Secondary

Material Category: ☐ Empty ☐ Low Specific Act. (LSA) ☒ Limited Quantity ☐ Type A Quantity ☐ Type B Quantity ☐ Highway Route Controlled Quantity

For Normal Form Identify:

Physical Form: ☒ Solid ☐ Liquid ☐ Gas

Chemical Form: ☐ Metal ☐ Oxide ☒ Elemental ☐ Nitrate

Other

TYPE PACKAGE: ☒ Strong Tight ☐ Type A ☐ Type B ☐ Type B (U) ☐ Type B (M)

CONSTRUCTION: ☐ Box, FB ☐ Wood ☐ Steel ☐ Drum ☐ Cask ☒ Other Poly Cooler

FISSILE CLASS: ☒ Non Fissile ☐ Fissile Exempt ☐ Fissile I ☐ Fissile II ☐ Fissile III

Grams Fissile

SNM: ☒ No ☐ Yes ☐ <1 gr ☐ Category I ☐ Category II ☐ Category III

ACCOUNTABILITY/SECURITY CONTROL: ☐ Classified ☒ Unclassified

Consignee authorized to receive this qty ☒

Sig. Security Svc. Req. ☐ NA ☒

~~Pu, EU > 1g~~ ☐ NA ~~NU, DU > 1 Kg~~ ☐

Security Escorts Req. ☐ Not. Req. ☒

External Cask Temperature (Max. 122° F LTL, 180° F Ex. Use) N/A ☒ °F

Packaging conforms to appropriate packaging procedure ☐ N/A ☒ Yes

Complies with D. O. T. packaging marking and labeling requirements ☐ N/A ☒ Yes

Container acceptability documented (incl. 7A cert.) ☒ N/A ☐ Yes

Container examined: No evidence of deterioration or damage ☒ Yes

QA Inspection Current ☐ Yes ☒ N/A Seals required ☒ No ☐ Yes

Shipping Doc. NA 49 CFR 173.421 Authorization No. NA

Eli R. Smith 3/12/92

No. Pkgs.	Model Package	COC/Spec. No.	Serial No.	Seal No.	Isotopes	Curies/Pkg	T. I.	Gr. Wt.
1	Strong tight	NA	NA	NA	MFP	<.0004	NA	38 lb
Cooler # SAL 153			15 Sample Bottles and Volume 5970 mL					
Soil samples in glass bottles. Bottles are double-bagged and packed in wet ice surrounded								
vermiculite absorbent. This package conforms to the conditions and limitations specified i								
49 CFR 173.421 for exempted radioactive material, limited quanitity, NOS UN2910. Sample #								
(Shipper may describe package in detail on one of unused lines above) # B05WV6, B05WV9, B05WV8					TOTAL	<.0004	NA	38 lb

This is to certify that the above named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation, according to the applicable federal, state, local and international regulations for the transportation of hazardous materials.

Certifier's Signature: W.V. Setzer | Date: 3-12-92 | Organization: Env.Field Services Group | Complete Cost Code (inc. end function): ~~81241~~ 12500 PBIAM

Eli R. Smith 3/12/92

AREA MONITOR

Surface Dose Rate of Package: ☒ ≤0.5 or ___ mrem/hr (N + βγ)

Dose Rate at 1 Meter from Surface of Package: ☒ ≤0.5 or ___ mrem/hr (N + βγ)

Smears of Outer Container: ☒ ≤22 dpm βγ/cm² ☒ ≤2.2 dpm α/cm²

TRUCK LOAD OR EXCLUSIVE USE
Surface: ☒ ≤ 200 mrem/hr (N + βγ)
@ 6 feet: ☒ ≤ 10 mrem/hr (N + βγ)
@ Cab or Sleeper ☒ ≤ 2.0 mrem/hr (N + βγ)

Additional Data and Instructions (inc. Readings on Internal Packaging): NONE

Signature - Radiation Monitoring: [signature] | Bldg. N/A | Survey No. ER 111778 | Date 3-12-92

AUTHORIZATION FOR SHIPMENT

APPROVAL

AIR TRANSPORT CERTIFICATION ▸ Cargo Only: ☐ Danger Labels Applied

Passenger: ☒ 1. Ltd. Qty. ☒ 3. Research or Medical Diagnosis ☐ 2. ≤3 T.I ☐ 4. Human Medical Research

Pkg. Dimensions 18" x 13" x 13"

Traffic has inspected and verified preshipment compliance to DOT regulations.

Authorized Signature ▸ Eli R. Smith | Printed Name ▸ Eli R. Smith | Date ▸ 3-12-92

APPROVED FOR OFFSITE SHIPMENT

TRAFFIC

B. L. No. RMW-7692 | Date Shipped 3/12/92 | E.T.A. 3/13/92 | Routing FED X ☐ N/A | Placards ☐ Yes ☒ No

Surveyed By [signature] | Date 3-12-92 | Approved for Shipment Westinghouse Hanford Company: Greg D. Bonen | Date 3/12/92 | Route Plan ☐ Yes ☒ No

EMERG. PHONE (509) 373-3800

54-6000-088 (10/88)

TMA/Norcal
OFF-HOUR RECEIVING OF EPA/CLP SAMPLES

Form: SCP-6-2
Rev. No. 01
Rev. Date: 7/29/91
Page No. _____

CONTAINER ID	RECEIVED		RELINQUISHED		TRANSPORTATION MODE	AIR BILL #	CONTAINER CONDITION		CONTAINER SEAL		HOLDING LOCATION
	DATE	TIME	DATE	TIME			INTACT	NOT INTACT	INTACT	NOT INTACT	
Blue cooler	DATE 3-14-92	TIME	DATE	TIME	EMERY	250-986-653	X		X		Sample Control
	BY B Blyth	4:00	BY								
blue cooler	DATE 3-14-92	TIME	DATE	TIME	Fed Ex	193 9346 065	X		X		Sample Control
	BY		BY								
	DATE	TIME	DATE	TIME							
	BY		BY								
	DATE	TIME	DATE	TIME							
	BY		BY								
	DATE	TIME	DATE	TIME							
	BY		BY								
	DATE	TIME	DATE	TIME							
	BY		BY								
	DATE	TIME	DATE	TIME							
	BY		BY								
	DATE	TIME	DATE	TIME							
	BY		BY								

SAMPCONS.FRM, DOC-01

000146

~~OVERNIGHT~~ DELIVERY Saturday 9713507.1284

000147

Contractor: WESTINGHOUSE HANFORD COMPANY	OFF-SITE PROPERTY CONTROL	CONTROL NUMBER (To be obtained from PROPERTY MANAGEMENT) W92-0-0246 #13

PART I – TO BE COMPLETED BY ORIGINATOR

Department	ENV. ENG. & GEOTECH	Section	EFSG	Unit	ENV. CHARAC. & SAMPLING

The following items are to be shipped from ☐ Contractor ☐ Vendor

Routing AIR EMERY ☐ Contractor ☐ Vendor

Shipped to TMA/NORCAL
2030 WRIGHT AVE.
RICHMOND, CA. 94804

Off-site Custodian ROBERT FOX

Full Title PROJECT COORDINATOR

Quantity	Description (Include Serial and any Government Tag Numbers)	Original Cost
1 61 lbs.	SML-115 poly cooler. Contains soil samples that are double-bagged and packed in wet ice and vermiculite. Samples are nonhazardous. K= 3/13/92 Sample #: B05XV8, ~~B05WVR9~~ K= 3/13/92 B05WW0, B05WW4	N/A

☐ Classified ☒ Unclassified ☐ Shipped Under DOE Contract ☐ Shipped Under Contractor's Use Permit Contract

Necessity for the Off-Site Use of this Property

To support drilling and sampling at 100 Areas.

Bill of Lading: 250986653 5

CERTIFICATION OF THE RADIATION MONITORING RELEASE MUST BE SECURED THE SAME DAY THAT MATERIAL IS DELIVERED TO SHIPPING.

RM Clearance for Public Release	RM Survey No. SIR 111778	Date 3-12-92
Location of Property (Area & Bldg.) 100 AREA	Contact J.D. FANCHER	Phone 376-2081
Date Ready for Shipment 3/11/92	Cost Code to be Charged PB1AM 12500	Approximate Date This Property will be Returned N/A
Originated By K. Trapp Relinquished By K. Trapp	Date 3/13/92 Time 0824	Authorized By Thompson
Signature and Name of Property Control	Custodian Date	Property Management Approval

Date 3/13/92

Date 3/13/92

PART II – TO BE COMPLETED BY SHIPPING

Signature of Recipient Raymond C	Return Order No.	Date Issued	Purchase Order No.	Date Issued
Date 3-13-92 Time 0824				

DISTRIBUTION

By Originator	Shipping Operation – Sign all Copies and Forward to:
White, Green, Yellow, Pink – Property Management Goldenrod – Retain	White – Property Management Yellow – Retain Green – Property Control Custodian (Issuing Office) Pink – Originator

54-3000-479 (09

TMA/Norcal

PAGE ___ OF ___

Dispose Special

ADDITIONAL SAMPLE INFORMATION

PLEASE TYPE OR USE BALL POINT PEN. BEAR DOWN FIRMLY! KEEP MARKS WITHIN BOXES TO ASSURE ACCURACY

1A 1B 1C

FORM NO. 60001-46

FORM OF PAYMENT

Check ☐ GBL ☐ FCCOD ☐

Bill to Shipper ☒ Bill to Consignee ☐ Third Party Billing ☐

Shipper's Account Number: E 850281585

EMERY WORLDWIDE

A CF Company

SERVICES

UNITED STATES / CANADA: Same Day ☐ AM ☒ PM ☐ Second Day ☐ Saturday Delivery ☒

INTERNATIONAL: Express ☐ Preferred ☐ Standard ☐ Business Documents ☐ Customs Clearance ☐ Delivery ☐

Date: 03-12-92 Origin: PSC Shipment Number: 250986653 5

From:
WESTINGHOUSE SHIPPING DEPT (509) 376-6665
US DEPARTMENT OF ENERGY C/O
WESTINGHOUSE HANFORD
BLDG 1163
2355 STEVENS DRIVE
RICHLAND WA Canada ☐

To:
robert fox
TMA/NORCAL
2030 WRIGHT AVENUE Hold for Pick Up ☐
RICHMOND CA Canada ☐

Tariff Dest. Gateway

Check to Shipper $

EMERY WORLDWIDE will accept Consignee's check with all risks being assumed by Shipper, including but not limited to non-payment, fraud and misrepresentation.

Customer's Reference Numbers: W12500 PB1AM W92-0-0246#13

Zip: 99352

E Consignee's Account Number

Zip: 94804

Description	Pcs.	L	W	H	Total Pieces	Total Weight (In Lbs.)
1 SML-115 COOLER SOIL SAMPLES B05XV8, B05WW0, ~~[illegible]~~B05WW4 W92-0-0246#13	1	26	15	14	1	61

FOR INFORMATION OR RATES CALL 1-800 44 EMERY (1-800-443-6379)

Declared Value $

Remarks: ~~OVERNIGHT~~ DELIVERY SATURDAY

Shipper's Signature X 3-13-92

Zip Ship ☐ For shipments within the 50 United States Shipper has the option to check this box and, by checking, agrees that the Zip Ship conditions, described in the area to the right, apply.

Mark if Emery Packaging is used: Urgent Letter 9X12 ☒ Urgent Pack 12X15 ☒

250986653 5

International Shipments: Free Domicile ☐ Commodity Code

Third Party Account Number: Third Party Account Number mandatory for Third Party Billing. E

Base Charge

International Customs Value

International Insurance

Total Transportation Charges

Other Charges/Advance at Origin ☐ OCAO $

1 OAKSAT

Terms and Conditions on Back

PULL FOR SHPT. NO. TAB

CONSIGNEE — PACKAGE COPY — 4

000148

OVERNIGHT DELIVERY 9213507.1286

000149

Contractor WESTINGHOUSE HANFORD COMPANY	OFF-SITE PROPERTY CONTROL	CONTROL NUMBER (To be obtained from PROPERTY MANAGEMENT) W92-0-0246-19

PART I – TO BE COMPLETED BY ORIGINATOR

Department	Section	Unit
ENV. ENG. & GEOTECH	EFSG	ENV. CHARAC. & SAMPLING

The following items are to be shipped from ☒ Contractor ☐ Vendor

Routing AIR EMERY ☒ Contractor ☐ Vendor

Shipped to TMA/NORCAL
2030 WRIGHT AVE.
RICHMOND, CA. 94804

Off-site Custodian: ROBERT FOX

Full Title: PROJECT COORDINATOR

Quantity	Description (Include Serial and any Government Tag Numbers)	Original Cost
1 4 lbs	Austin poly cooler. Contains soil samples that are double-bagged and packed in wet ice and vermiculite. Samples are nonhazardous. Sample #: B05WW5	N/A

☐ Classified ☒ Unclassified ☐ Shipped Under DOE Contract ☐ Shipped Under Contractor's Use Permit Contract

Necessity for the Off-Site Use of this Property

To support drilling and sampling at 100 Areas.

Bill of Lading: 259996636 T

CERTIFICATION OF THE RADIATION MONITORING RELEASE MUST BE SECURED THE SAME DAY THAT MATERIAL IS DELIVERED TO SHIPPING.

RM Clearance for Public Release	RM Survey No.	Date
E. Cutia WAC	111788	16 MAR '92

Location of Property (Area & Bldg.)	Contact	Phone
100 AREA	J.D. FANCHER	376-2081

Date Ready for Shipment	Cost Code to be Charged	Approximate Date This Property will be Returned
3/16/92	FB1AM 12500	N/A

Originated By	Date / Time	Authorized By	Date
K. Trapp Relinquished By K. Trapp	3/16/92 1359	J. T. Fowler J. D. Fancher	3/16/92
Signature and Name of Property Control	Custodian Date	Property Management Approval	Date
			3/16/92

PART II – TO BE COMPLETED BY SHIPPING

Signature of Recipient	Return Order No.	Date Issued	Purchase Order No.	Date Issued
J. Ornauer				
Date 3-16-92 Time 1400				

DISTRIBUTION

By Originator	Shipping Operation – Sign all Copies and Forward to:	
White, Green, Yellow, Pink – Property Management Goldenrod – Retain	White – Property Management Yellow – Retain	Green – Property Control Custodian (Issuing Office) Pink – Originator

54-3000-479 (09/89)

000150

of [redacted]

iner

PULL FOR SHPT. NO. TAB

FORM OF PAYMENT

Check ☐ GBL ☐ FCCOD ☐

Bill to Shipper ☒ Bill to Consignee ☐ Third Party Billing ☐

EMERY WORLDWIDE

A CF Company

SERVICES

UNITED STATES / CANADA: Same Day ☐ AM ☒ Second Day ☐ PM ☐ Saturday Delivery ☐

INTERNATIONAL: Express ☐ Preferred ☐ Standard ☐ Business Documents ☐ Customs Clearance ☐ Delivery ☐

E Shipper's Account Number: 850281585

Date: 03-16-92 | Origin: PSC | Shipment Number: 250986636 T

From:
WESTINGHOUSE SHIPPING DEPT (509) 376-6665
US DEPARTMENT OF ENERGY C/O
WESTINGHOUSE HANFORD
BLDG. 1163
2355 STEVENS DRIVE
RICHLAND WA
Canada ☐

To:
ROBERT FOX
TMA/NORCAL
2030 WRIGHT AVENUE
RICHMOND CA
Hold for Pick Up ☐
Canada ☐

Tariff Dest. | Gateway

Check to Shipper $

EMERY WORLDWIDE will accept Consignee's check with all risks being assumed by Shipper, including but not limited to non-payment, fraud and misrepresentation.

Customer's Reference Numbers: W12500 PB1AM W92-0-0246#19 | 99352

E Consignee's Account Number | Zip: 94804

Description	Pcs.	L	W	H	Total Pieces	Total Weight (In Lbs.)
1 AUSTIN POLYCOOLER SOIL SAMPLES B05WW5 W92-0-0246#19	1				1	41

FOR INFORMATION OR RATES CALL 1-800 44 EMERY (1-800-443-6379)

Declared Value $

250986636T

Remarks: OVERNIGHT ~~DELIVERY~~ DELIVERY

Shipper's Signature X

Zip Ship ☐ — For shipments within the 50 United States Shipper has the option to check this box and, by checking, agrees that the Zip Ship conditions, described in the area to the right, apply.

Mark if Emery Packaging is used: Urgent Letter 9X12 ☒ Urgent Pack 12X15 ☒

International Shipments: Free Domicile ☐ Commodity Code

Third Party Account Number mandatory for Third Party Billing. E Third Party Account Number

Base Charge

International Customs Value | International Insurance

Total Transportation Charges | Other Charges/Advance at Origin ☐ OC/AO- $

1-OAK-A

Terms and Conditions on Back

CONSIGNEE — PACKAGE COPY — 4

PLEASE TYPE OR USE BALL POINT PEN. BEAR DOWN FIRMLY! KEEP MARKS WITHIN BOXES TO ASSURE ACCURACY

FORM NO. 60001-46

OVERNIGHT DELIVERY 9713507.1289

000151

Contractor: WESTINGHOUSE HANFORD COMPANY	OFF-SITE PROPERTY CONTROL	CONTROL NUMBER (To be obtained from PROPERTY MANAGEMENT) W92-0-0246 #22

PART I – TO BE COMPLETED BY ORIGINATOR

Department ENV. ENG. & GEOTECH	Section EFSG	Unit ENV. CHARAC. & SAMPLING

The following items are to be shipped from ☒ Contractor ☐ Vendor

Routing AIR EMERY ☒ Contractor ☐ Vendor

Shipped to TMA/NORCAL
2030 WRIGHT AVE.
RICHMOND, CA. 94804

Off-site Custodian ROBERT FOX

Full Title PROJECT COORDINATOR

Quantity	Description (Include Serial and any Government Tag Numbers)	Original Cost
45lbs	SML-154 poly cooler. Contains soil samples that are double-bagged and packed in wet ice and vermiculite. Samples are nonhazardous. Sample #: B05WW6, B05WW7	N/A

☐ Classified ☒ Unclassified ☐ Shipped Under DOE Contract ☐ Shipped Under Contractor's Use Permit Contract

Necessity for the Off-Site Use of this Property

To support drilling and sampling at 100 Areas.

Bill of Lading: PSC2509866282

CERTIFICATION OF THE RADIATION MONITORING RELEASE MUST BE SECURED THE SAME DAY THAT MATERIAL IS DELIVERED TO SHIPPING.

RM Clearance for Public Release	RM Survey No. FR-111794	Date 3-18-92
Location of Property (Area & Bldg.) 100 AREA	Contact FANCHER	Phone 376-2081
Date Ready for Shipment 3/17/92	Cost Code to be Charged PEIAM 12500	Approximate Date This Property will be Returned N/A
Originated By / Relinquished By 3-18-92	Date 3-18-92 Time	Authorized By J.D. Fancher / Date 3/17/92
Signature and Name of Property Control	Custodian Date	Property Management Approval / Date 3/18/92

PART II – TO BE COMPLETED BY SHIPPING

Signature of Recipient	Return Order No.	Date Issued	Purchase Order No.	Date Issued
Date 3-18-92 Time 11:50				

DISTRIBUTION

By Originator	Shipping Operation – Sign all Copies and Forward to:
White, Green, Yellow, Pink – Property Management Goldenrod – Retain	White – Property Management Yellow – Retain Green – Property Control Custodian (Issuing Office) Pink – Originator

54-3000-479 (09/89)

FORM OF PAYMENT

Check ☐ GBL ☐ FCCOD ☐

Bill to Shipper ☐ Bill to Consignee ☐ Third Party Billing ☐

EMERY WORLDWIDE

A CF Company

SERVICES

UNITED STATES / CANADA: Same Day ☐ AM ☐ PM ☐ Second Day ☐ Saturday Delivery ☐

INTERNATIONAL: Express ☐ Preferred ☐ Standard ☐ Business Documents ☐ Customs Clearance ☐ Delivery ☐

PULL FOR SHPT. NO. TAB

E Shipper's Account Number: 850281585

Date: 03-18-92 Origin: PSC Shipment Number: 250986628 2

From:
WESTINGHOUSE SHIPPING DEPT (509) 376-6665
US DEPARTMENT OF ENERGY C/O
WESTINGHOUSE HANFORD
BLDG 1163
2355 STEVENS DRIVE
RICHLAND WA Canada ☐

To:
ROBERT FOX
TMA/NORCAL
2030 WRIGHT AVENUE
RICHMOND CA Canada ☐
Hold for Pick Up ☐

Tariff Dest. | Gateway

Check to Shipper $

EMERY WORLDWIDE will accept Consignee's check with all risks being assumed by Shipper, including but not limited to non-payment, fraud and misrepresentation.

Customer's Reference Numbers: W12500 PB1AM W92-0-0246#22
Zip: 99352

E Consignee's Account Number
Zip: 94804

Description	Pcs.	L	W	H	Total Pieces	Total Weight (in Lbs.)
1 SML-154 POLYCOOLER SOIL SAMPLES B05WWg, B05WW7 W92-0-0246#22	1	21	16	17	1	45

FOR INFORMATION OR RATES CALL 1-800 44 EMERY (1-800-443-6379)

Declared Value $

250986628 2

Remarks: OVERNIGHT DELIVERY

Shipper's Signature X

Zip Ship ☐ For shipments within the 50 United States Shipper has the option to check this box and, by checking, agrees that the Zip Ship conditions, described in the area to the right, apply.

Mark if Emery Packaging is used: Urgent Letter 9X12 ☐ Urgent Pack 12X15 ☐

International Shipments: Free Domicile ☐ Commodity Code

Third Party Account Number mandatory for Third Party Billing. E Third Party Account Number

Base Charge

International Customs Value | International Insurance

Total Transportation Charges

Other Charges/Advance at Origin ☐ OC/AO- $

1-OAK-A

Terms and Conditions on back

CONSIGNEE — PACKAGE COPY — 4

PLEASE TYPE OR USE BALL POINT PEN. BEAR DOWN FIRMLY! KEEP MARKS WITHIN BOXES TO ASSURE ACCURACY

FORM NO. 6000

000152

TXT

9713507.1290

BOSWVI-TMA-142

TMA

WESTINGHOUSE HANFORD COMPANY

Results of Analyses For:

ORGANICS
Case No. 03-033
(TMA/ARLI Work Order # A2-03-033)

METALS
Case No. N2-03-053
(TMA/Skinner & Sherman W.O. # S2-03-065

TMA Master Work Order N2-03-053

MAY 4, 1992

MAY 1992
RECEIVED
OSM DMO

4-12-97
MC

9215507.1291

WESTINGHOUSE HANFORD COMPANY

Results of Analyses For:

ORGANICS
CASE NO. 03-033
(TMA/ARLI Work Order # A2-03-033)

Organics results are presented
for the following WHC samples(s):

B05WP5
B05WP6
B05WP7
B05WV5

Norcal Work Order # N2-03-053

Thermo Analytical Inc.
160 Taylor Street
Monrovia, Ca. 91016
818-357-3247

Westinghouse Hanford Company

CHAIN OF CUSTODY

ARL1

000002

Custody Form Initiator CMChanie

Company Contact J.D. Fancher

Telephone (509)376-2081

Project Designation/Sampling Locations 100-HR-1 Vadose Zone Sampling 11b-H-3

Collection Date 3-5-92

Ice Chest No. Coleman #64

Field Logbook No. EFL-1014

Bill of Lading/Airbill No.

Offsite Property No.

Method of Shipment Overnight Air Delivery

Shipped to TMA/NORCAL 2030 Wright Ave. Richmond Ca. 94804

Possible Sample Hazards/Remarks Maintain at 4°C

Sample Identification

BDSWP5

~~(1)1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am-241)~~	(1)1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am24
~~(1) 250ml G bottle(ICP/AA metals,Hg)~~	(1) 250ml G bottle(ICP/AA metals, Hg)
(1) 500 ml aG bottle(Semi-VOA,PCB's/PEST.)	(1)500 ml aG bottle(Semi-VOA,PCB's/PEST.)
~~(1)120ml G bottle(Cyanide)~~	(1) 120ml G bottle(Cyanide) CC 3-16-92
(1)120ml G bottle(VOA)	(1) 120ml G bottle(VOA)

☑ Field Transfer of Custody

CHAIN OF POSSESSION (Sign and Print Names)

Relinquished by:	Received by:	Date/Time:
CMChanie Coy Chane	K.F. Trapp / K.A. Trapp	3/6/92 1125
K.F. Trapp / K.A. Trapp	Kermit Blum	3-10-92 1130
Kermit Blum 3-10-92	C. Harris	3-11-92 9:00

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

9215607.1295

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST 000003

PART I: FIELD SECTION

Collector _____ Date Sampled _____ Time _____ hours

Company Contact J.D. Fancher Telephone (509) 376-2081

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B05WP5	1, 120mL G	soil	CLP; VOA
	1, 500mL aG	soil	CLP; semi-VOA, PCB/PEST
	~~1, 1000mL G~~	~~soil~~	~~Gross Alpha, Gross Beta, Gamma~~
			~~Spec., U-235/238, Pu-239/240,~~
			~~Sr-90, Tc-99, C-14, Am-241.~~
	~~1, 250mL G~~	~~soil~~	~~CLP; ICP/AA Metals, Hg~~
	~~1, 120mL G~~	~~soil~~	~~CLP; Cn~~
	1, 120mL G	soil	CLP; VOA
	1, 500mL aG	soil	CLP; semi-VOA, PCB/PEST
	1, 1000mL G	soil	Gross Alpha, Gross Beta, Gamma
			Spec., U-235/238, Pu-239/240,
			Sr-90, Tc-99, C-14, Am-241.
	1, 250mL G	soil	CLP; ICP/AA Metals, Hg
	1, 120mL G	soil	CLP; Cn
			KFT 3/6/92

Field Information** _____

Special Handling and/or Storage Samples must be maintained at 4 C.

Possible Sample Hazards None observed.

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 3-10-92

Analysis Required _____

*Indicate whether sample is soil, sludge, water, etc.

**Use back of page for additional information relative to sample location.

A-6000-406 (05/9

9213507.1294

Westinghouse Hanford Company	CHAIN OF CUSTODY	000004

Custody Form Initiator: W V Setzer/CM Chance

Company Contact: J.D. Fancher

Telephone: (509) 376-2081

Project Designation/Sampling Locations: 100-HR-1

Collection Date: 3-5-92

Ice Chest No.: SML-24

Field Logbook No.: EFL 104

Bill of Lading/Airbill No.:

Offsite Property No.:

Method of Shipment: OVERNIGHT AIR SERVICE

Shipped to: TMA/NORCAL

Possible Sample Hazards/Remarks: None detected with field instruments.

Sample Identification

1) B05WP7 ~~3, 1000mL G: CLP; ICP/AA Metals, Hg.~~
~~3, 1000mL G: CLP; Cn.~~
3, 40mL Gs: CLP; VOA.
3, 2360mL aG: CLP; Semi-VOA, PCB/Pest.
~~2, 4000mL P: Gross Alpha, Gross Beta, Gamma Spec, Sr-90, Tc-99, C-14, U-235/238, Pu-239/240, Am-241.~~

2. B05WP6 3, 40ml Gs: VOA

[✓] Field Transfer of Custody — Chain of Possession — (Sign and Print Names)

Relinquished by:	Received by:	Date/Time:
CM Chance / Cory Chance	K.F. Trapp / K.F. Trapp	3/6/92 1125
K.F. Trapp / K.F. Trapp	Kermit Blum	3-10-92 1130
Kermit Blum 3-10-92	C. Harris	3-11-92 9 00

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

A-6000-407 (12/90) (EF) WEF061
Chain of Custody

9215537 1295

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST 000005

PART I: FIELD SECTION

Collector C. Chance Date Sampled 3/5/92 3/5/92 Time 1015 1015 hours

Company Contact J.D. Fancher Telephone (509) 376-2081

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B05WP7	3, 40mL Gs	water	CLP; VOA
	3, 2360mL aG	water	CLP; semi-VOA, PCB/PEST
	~~2, 4000mL P~~	~~water~~	~~Gross Alpha, Gross Beta, Gamma~~
			~~Spec., U-235/238, Pu-239/240,~~
			~~Sr-90, Tc-99, C-14, Am-241.~~
	~~3, 1000mL G~~	~~water~~	~~CLP; ICP/AA Metals, Hg~~
	~~3, 1000mL G~~	~~water~~	~~CLP; Cn~~
B05WP6	3, 40mL aGs	water	CLP; VOA

Field Information**

Special Handling and/or Storage Samples must be maintained at 4 C.

Possible Sample Hazards None observed.

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 3-10-92

Analysis Required

*Indicate whether sample is soil, sludge, water, etc.

**Use back of page for additional information relative to sample location

A-6000-406 (05/90)

9216507.1296

Westinghouse Hanford Company	CHAIN OF CUSTODY 000006

Custody Form Initiator W.W. Setzer/CM Chance

Company Contact J.D. Fancher Telephone (509)376-2081

Project Designation/Sampling Locations 100-HR-1 Vadose Zone Sampling Collection Date 3-9-92

116-H-1

Ice Chest No. SML-124 Field Logbook No. WHC-N-5572

Bill of Lading/Airbill No. Offsite Property No.

Method of Shipment Overnight Air Delivery

Shipped to TMA/NORCAL 2030 Wright Ave. Richmond Ca. 94804

Possible Sample Hazards/Remarks Maintain at 4°C

Sample Identification

B05WV5	~~B05WV6~~ CC3-9-92
~~(1)1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am-241)~~	(1)1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am24
~~(1) 250ml G bottle(ICP/AA metals,Hg)~~	(1) 250ml G bottle(ICP/AA metals, Hg)
(1) 500 ml aG bottle(Semi-VOA,PCB's/PEST.)	(1)500 ml aG bottle(Semi-VOA,PCB's/PEST.) CC3-9-92
~~(1)120ml G bottle(Cyanide)~~	(1) 120ml G bottle(Cyanide)
(1)120ml G bottle(VOA)	(1) 120ml G bottle(VOA)

☑ Field Transfer of Custody — CHAIN OF POSSESSION — (Sign and Print Names)

Relinquished by:	Received by:	Date/Time:
CM Chance / Cory Chance	K.F. Trapp / K.D. Trapp	3/10/92 1145
K.F. Trapp / K.D. Trapp	Kermit Blum	3-11-92 1130
Kermit Blum 3-11-92	C. Harris	3-12-92 9:00

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST 000007

PART I: FIELD SECTION

Collector CM Chance Date Sampled 3-9-92 Time 0905 hours

Company Contact J.D. Fancher Telephone (509) 376-2081

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
	1, 120mL G	soil	CLP; VOA
	1, 500mL aG	soil	CLP; semi-VOA, PCB/PEST
	~~1, 1000mL G~~	~~soil~~	~~Gross Alpha, Gross Beta, Gamma~~
B05WV5			~~Spec., U-235/238, Pu-239/240,~~
			~~Sr-90, Tc-99, C-14, Am-241.~~
	~~1, 250mL G~~	~~soil~~	~~CLP; ICP/AA Metals, Hg~~
	~~1, 120mL G~~	~~soil~~	~~CLP; Cn~~
	1, 120mL G	soil	CLP; VOA
	1, 500mL aG	soil	CLP; semi-VOA, PCB/PEST
	1, 1000mL G	soil	Gross Alpha, Gross Beta, Gamma
			Spec., U-235/238, Pu-239/240,
		CC 3-9-92	Sr-90, Tc-99, C-14, Am-241.
	1, 250mL G	soil	CLP; ICP/AA Metals, Hg
	1, 120mL G	soil	CLP; Cn

Field Information**

Special Handling and/or Storage Samples must be maintained at 4 C.

Possible Sample Hazards None Detected w/ Field instruments

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 3-11-92

Analysis Required

*Indicate whether sample is soil, sludge, water, etc.

**Use back of page for additional information relative to sample location

CASE NARRATIVE

LABORATORY : TMA/ARLI

CASE : 03-033

CONTRACT ID : WESTINGHOUSE HANFORD COMPANY

SDG RECEIPT DATE : March 11, 1992

1.0 DESCRIPTION OF CASE :

One water sample and two soil samples were analyzed for TCL Organics-Volatiles, Semivolatiles and Pesticide/PCBs according to the USEPA Contract Laboratory Program (CLP) Statement of Work for Organic Analysis, Revision 2/88.

2.0 SAMPLE LIST :

WESTINGHOUSE ID	LAB ID	ANALYSIS REQUESTED	MATRIX
B05WP5	A2-03-033-01A	V	SOIL
B05WP5 MS	A2-03-033-01B	V	SOIL
B05WP5 MSD	A2-03-033-01C	V	SOIL
B05WP5	A2-03-033-01D	SV & P	SOIL
B05WP5 MS	A2-03-033-01E	SV & P	SOIL
B05WP5 MSD	A2-03-033-01F	SV & P	SOIL
B05WP7	A2-03-033-02A	V	WATER
B05WP7	A2-03-033-02B	SV & P	WATER
B05WP7 MS	A2-03-033-02C	SV & P	WATER
B05WP7 MSD	A2-03-033-02D	SV & P	WATER
B05WP6	A2-03-033-03A	V	WATER
B05WP6 MS	A2-03-033-03B	V	WATER
B05WP6 MSD	A2-03-033-03C	V	WATER
B05WV5	A2-03-033-04A	V	SOIL
B05WV5	A2-03-033-04B	CANCELED	SOIL

3.0 COMMENTS :

3.1 SHIPPING AND DOCUMENTATION :

All samples were received unbroken and properly documented.

3.2 ANALYSIS

3.2.1 VOLATILE ANALYSIS COMMENTS :

LOW LEVEL WATER :

The samples were analyzed within the CLP SOW holding times. All of the QC results were within the limits specified by the EPA CLP SOW.

LOW LEVEL SOIL :

The samples were analyzed by heated purge and within the CLP SOW holding times. All of the QC results were within the limits specified by the EPA CLP SOW.

TUNES :

All of the BFB tunes are injected directly into the GC/MS instrument.

3.2.2 SEMIVOLATILE ANALYSIS COMMENTS :

LOW LEVEL WATER :

The samples were extracted and analyzed within the CLP SOW holding times. All of the QC results were within the limits specified by the EPA CLP SOW.

LOW LEVEL SOIL :

The samples were extracted and analyzed within the CLP SOW holding times. All of the QC results were within the limits specified by the EPA CLP SOW.

The extraction and analysis of sample B05WV5 was cancelled by Westinghouse Hanford Company when the extraction holding time was exceeded.

3.2.3 PESTICIDE/PCB ANALYSIS COMMENTS :

SEQUENCE NOTES :

The sequence was started on 3/18/92 and analyzed in accordance with the EPA CLP SOW.

Half way through the sequence, IND A and IND B were analyzed consecutively to verify that the system was meeting all of the QC criteria. This was necessary since several dirty samples were injected into the system prior to these standards. The IND A and IND B were both used for quantitation and the sequence was maintained according to the protocol.

Due to the limitations of the software used to report 2/88 CLP Protocol Pesticide/PCBs results, the instrument blanks cannot be reported. The instrument blanks were injected in the sequence to insure that the system was not contaminated by the Aroclors that were detected. Instrument blanks were injected at:

00:12	3/19/92	(B31817 and A31817)
04:29	3/19/92	(B31823 and A31823)
08:46	3/19/92	(B31829 and A31829)
16:33	3/19/92	(B31840 and A31840)
17:15	3/19/92	(B31841 and A31841)
20:41	3/19/92	(B31845 and A31845)
21:24	3/19/92	(B31846 and A31846)
22:06	3/19/92	(B31847 and A31847)

After the analysis of the instrument blank at 17:15 on 3/19/92, the sequence was stopped to bake out the columns to reduce the carry over. The sequence was resumed with the next injection at 18:34 on 3/19/92 of EVAL B.

SAMPLE NOTES :

LOW LEVEL WATER :

The samples were extracted and analyzed within the CLP SOW holding times. All of the QC results were within the limits specified by the EPA CLP SOW.

LOW LEVEL SOIL :

The samples were extracted and analyzed within the CLP SOW holding times. All of the QC results were within the limits specified by the EPA CLP SOW.

The extraction and analysis of sample B05WV5 was cancelled by Westinghouse Hanford Company when the extraction holding time was exceeded.

We certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data in this hardcopy data package and in the computer-readable data submitted on diskette is authorized by the Laboratory Manager or his designee, as verified by the following signatures.

Nicole Roth
CLP Program Manager

Dennis D. Wells
Technical Director

9215507.1302

000006

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B05WP5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03033 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203033-01A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20312R03

Level: (low/med) LOW Date Received: 03/10/92

% Moisture: not dec. 2 Date Analyzed: 03/12/92

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	3	BJ
67-64-1	Acetone	7	BJ
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	7	
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (Total)	5	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B05WP5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03033 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203033-01A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20312R03

Level: (low/med) LOW Date Received: 03/10/92

% Moisture: not dec. 2 Date Analyzed: 03/12/92

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B05WP6

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03033 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A203033-03A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20313B04

Level: (low/med) LOW Date Received: 03/10/92

% Moisture: not dec. ____ Date Analyzed: 03/13/92

Column: (pack/cap) WIDE Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	B
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	2	BJ
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	2	J
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (Total)	5	U

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

B05WP6

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03033 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A203033-03A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20313B04

Level: (low/med) LOW Date Received: 03/10/92

% Moisture: not dec. ____ Date Analyzed: 03/13/92

Column (pack/cap) WIDE Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B05WP7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03033 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A203033-02A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20313B03

Level: (low/med) LOW Date Received: 03/10/92

% Moisture: not dec. ____ Date Analyzed: 03/13/92

Column: (pack/cap) WIDE Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	7	B
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	2	BJ
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	1	J
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (Total)	5	U

9213507.1507

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

B05WP7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03033 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A203033-02A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20313B03

Level: (low/med) LOW Date Received: 03/10/92

% Moisture: not dec. ____ Date Analyzed: 03/13/92

Column (pack/cap) WIDE Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B05WV5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03033 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203033-04A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20313R03

Level: (low/med) LOW Date Received: 03/11/92

% Moisture: not dec. 6 Date Analyzed: 03/13/92

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	11	
67-64-1	Acetone	13	B
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	11	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	11	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	11	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	14	
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (Total)	5	U

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

B05WV5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03033 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203033-04A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20313R03

Level: (low/med) LOW Date Received: 03/11/92

% Moisture: not dec. 6 Date Analyzed: 03/13/92

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 60-29-7	Ethyl ether	9.75	6.4	J

9216507.1590

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

000014
EPA SAMPLE NO.

B05WP5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03033 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203033-01D

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 20410N07

Level: (low/med) LOW Date Received: 03/10/92

% Moisture: not dec. 3 dec. Date Extracted: 03/18/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/10/92

GPC Cleanup: (Y/N) N pH: 9.9 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	340	U
111-44-4	bis(2-Chloroethyl)Ether	340	U
95-57-8	2-Chlorophenol	340	U
541-73-1	1,3-Dichlorobenzene	340	U
106-46-7	1,4-Dichlorobenzene	340	U
100-51-6	Benzyl Alcohol	340	U
95-50-1	1,2-Dichlorobenzene	340	U
95-48-7	2-Methylphenol	340	U
108-60-1	bis(2-Chloroisopropyl)Ether	340	U
106-44-5	4-Methylphenol	340	U
621-64-7	N-Nitroso-Di-n-Propylamine	340	U
67-72-1	Hexachloroethane	340	U
98-95-3	Nitrobenzene	340	U
78-59-1	Isophorone	340	U
88-75-5	2-Nitrophenol	340	U
105-67-9	2,4-Dimethylphenol	340	U
65-85-0	Benzoic Acid	1600	U
111-91-1	bis(2-Chloroethoxy)methane	340	U
120-83-2	2,4-Dichlorophenol	340	U
120-82-1	1,2,4-Trichlorobenzene	340	U
91-20-3	Naphthalene	340	U
106-47-8	4-Chloroaniline	340	U
87-68-3	Hexachlorobutadiene	340	U
59-50-7	4-Chloro-3-methylphenol	340	U
91-57-6	2-Methylnaphthalene	340	U
77-47-4	Hexachlorocyclopentadiene	340	U
88-06-2	2,4,6-Trichlorophenol	340	U
95-95-4	2,4,5-Trichlorophenol	1600	U
91-58-7	2-Chloronaphthalene	340	U
88-74-4	2-Nitroaniline	1600	U
131-11-3	Dimethyl Phthalate	340	U
208-96-8	Acenaphthylene	340	U

9215507.1311

000015

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B05WP5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03033 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203033-01D

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 20410N07

Level: (low/med) LOW Date Received: 03/10/92

% Moisture: not dec. 3 dec. Date Extracted: 03/18/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/10/92

GPC Cleanup: (Y/N) N pH: 9.9 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1600	U
83-32-9	Acenaphthene	340	U
51-28-5	2,4-Dinitrophenol	1600	U
100-02-7	4-Nitrophenol	1600	U
132-64-9	Dibenzofuran	340	U
121-14-2	2,4-Dinitrotoluene	340	U
606-20-2	2,6-Dinitrotoluene	340	U
84-66-2	Diethylphthalate	230	J
7005-72-3	4-Chlorophenyl-phenylether	340	U
86-73-7	Fluorene	340	U
100-01-6	4-Nitroaniline	1600	U
534-52-1	4,6-Dinitro-2-methylphenol	1600	U
86-30-6	N-Nitrosodiphenylamine (1)	340	U
101-55-3	4-Bromophenyl-phenylether	340	U
118-74-1	Hexachlorobenzene	340	U
87-86-5	Pentachlorophenol	1600	U
85-01-8	Phenanthrene	340	U
120-12-7	Anthracene	340	U
84-74-2	Di-n-Butylphthalate	340	U
206-44-0	Fluoranthene	340	U
129-00-0	Pyrene	340	U
85-68-7	Butylbenzylphthalate	340	U
91-94-1	3,3'-Dichlorobenzidine	680	U
56-55-3	Benzo(a)anthracene	340	U
117-81-7	bis(2-Ethylhexyl)Phthalate	340	U
218-01-9	Chrysene	340	U
117-84-0	Di-n-octyl Phthalate	340	U
205-99-2	Benzo(b)fluoranthene	340	U
207-08-9	Benzo(k)fluoranthene	340	U
50-32-8	Benzo(a)pyrene	340	U
193-39-5	Indeno(1,2,3-cd)Pyrene	340	U
53-70-3	Dibenz(a,h)Anthracene	340	U
191-24-2	Benzo(g,h,i)perylene	340	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B05WP5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03033 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203033-01D

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 20410N07

Level: (low/med) LOW Date Received: 03/10/92

% Moisture: not dec. 3 dec. Date Extracted: 03/18/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/10/92

GPC Cleanup: (Y/N) N pH: 9.9 Dilution Factor: 1.00

Number TICs found: 11

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN HYDROCARBON	3.18	790	J
2.	UNKNOWN ALKENE	3.97	170	J
3.	UNKNOWN HYDROCARBON	4.25	1500	BJ
4.	UNKNOWN ALCOHOL	5.23	1400	BJ
5.	UNKNOWN ALCOHOL	5.85	24000	BJ
6.	UNKNOWN ALCOHOL	6.15	310	J
7.	UNKNOWN HYDROCARBON	7.33	510	BJ
8.	UNKNOWN HYDROCARBON	7.68	210	J
9.	UNKNOWN KETONE	7.98	340	BJ
10.	UNKNOWN ALCOHOL	9.22	140	J
11.	UNKNOWN PHTHALATE	22.89	310	BJ

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B05WP7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03033 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A203033-02B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20410N11

Level: (low/med) LOW Date Received: 03/10/92

% Moisture: not dec. ____ dec. ____ Date Extracted: 03/12/92

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 04/10/92

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
100-51-6	Benzyl Alcohol	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	bis(2-Chloroisopropyl)Ether	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
65-85-0	Benzoic Acid	50	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	50	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	50	U
131-11-3	Dimethyl Phthalate	10	U
208-96-8	Acenaphthylene	10	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B05WP7

Lab Lab Name: TMA/ARLI Contract: WHC

Lab Lab Code: TMALA Case No.: 03033 SAS No.: NA SDG No.: NA

Mat: Matrix: (soil/water) WATER Lab Sample ID: A203033-02B

Sam: Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20410N11

Lev: Level: (low/med) LOW Date Received: 03/10/92

% M: % Moisture: not dec. ____ dec. ____ Date Extracted: 03/12/92

Ext: Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 04/10/92

GPC GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.0

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

Num	CAS NO.	COMPOUND		Q
	99-09-2	3-Nitroaniline	50	U
	83-32-9	Acenaphthene	10	U
	51-28-5	2,4-Dinitrophenol	50	U
	100-02-7	4-Nitrophenol	50	U
	132-64-9	Dibenzofuran	10	U
	121-14-2	2,4-Dinitrotoluene	10	U
	606-20-2	2,6-Dinitrotoluene	10	U
	84-66-2	Diethylphthalate	10	U
	7005-72-3	4-Chlorophenyl-phenylether	10	U
	86-73-7	Fluorene	10	U
	100-01-6	4-Nitroaniline	50	U
	534-52-1	4,6-Dinitro-2-methylphenol	50	U
	86-30-6	N-Nitrosodiphenylamine (1)	10	U
	101-55-3	4-Bromophenyl-phenylether	10	U
	118-74-1	Hexachlorobenzene	10	U
	87-86-5	Pentachlorophenol	50	U
	85-01-8	Phenanthrene	10	U
	120-12-7	Anthracene	10	U
	84-74-2	Di-n-Butylphthalate	6	J
	206-44-0	Fluoranthene	10	U
	129-00-0	Pyrene	10	U
	85-68-7	Butylbenzylphthalate	10	U
	91-94-1	3,3'-Dichlorobenzidine	20	U
	56-55-3	Benzo(a)anthracene	10	U
	117-81-7	bis(2-Ethylhexyl)Phthalate	10	U
	218-01-9	Chrysene	10	U
	117-84-0	Di-n-octyl Phthalate	10	U
	205-99-2	Benzo(b)fluoranthene	10	U
	207-08-9	Benzo(k)fluoranthene	10	U
	50-32-8	Benzo(a)pyrene	10	U
	193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
	53-70-3	Dibenz(a,h)Anthracene	10	U
	191-24-2	Benzo(g,h,i)perylene	10	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B05WP7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03033 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A203033-02B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20410N11

Level: (low/med) LOW Date Received: 03/10/92

% Moisture: not dec. ____ dec. ____ Date Extracted: 03/12/92

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 04/10/92

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.0

Number TICs found: 5

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN HYDROCARBON	3.13	610	BJ
2.	UNKNOWN HYDROCARBON	3.60	14	J
3.	UNKNOWN HYDROCARBON	4.18	130	BJ
4.	UNKNOWN HYDROCARBON	4.28	22	J
5.	UNKNOWN CYCLOALKENE	4.47	16	BJ

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B05WP5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03033 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203033-01D

Sample wt/vol: 30.8 (g/mL) G Lab File ID: _____

Level: (low/med) LOW Date Received: 03/10/92

% Moisture: not dec. 3 dec. __ Date Extracted: 03/18/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 03/20/92

GPC Cleanup: (Y/N) N pH: 9.9 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	8.0	U
319-85-7	beta-BHC	8.0	U
319-86-8	delta-BHC	8.0	U
58-89-9	gamma-BHC (Lindane)	8.0	U
76-44-8	Heptachlor	8.0	U
309-00-2	Aldrin	8.0	U
1024-57-3	Heptachlor epoxide	8.0	U
959-98-8	Endosulfan I	8.0	U
60-57-1	Dieldrin	16	U
72-55-9	4,4'-DDE	16	U
72-20-8	Endrin	16	U
33213-65-9	Endosulfan II	16	U
72-54-8	4,4'-DDD	16	U
1031-07-8	Endosulfan sulfate	16	U
50-29-3	4,4'-DDT	16	U
72-43-5	Methoxychlor	80	U
53494-70-5	Endrin ketone	16	U
5103-71-9	alpha-Chlordane	80	U
5103-74-2	gamma-Chlordane	80	U
8001-35-2	Toxaphene	160	U
12674-11-2	Aroclor-1016	80	U
11104-28-2	Aroclor-1221	80	U
11141-16-5	Aroclor-1232	80	U
53469-21-9	Aroclor-1242	80	U
12672-29-6	Aroclor-1248	80	U
11097-69-1	Aroclor-1254	160	U
11096-82-5	Aroclor-1260	160	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B05WP7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03033 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A203033-02B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

Level: (low/med) LOW Date Received: 03/10/92

% Moisture: not dec. __ dec. __ Date Extracted: 03/12/92

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 03/20/92

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
5103-71-9	alpha-Chlordane	0.50	U
5103-74-2	gamma-Chlordane	0.50	U
8001-35-2	Toxaphene	1.0	U
12674-11-2	Aroclor-1016	0.50	U
11104-28-2	Aroclor-1221	0.50	U
11141-16-5	Aroclor-1232	0.50	U
53469-21-9	Aroclor-1242	0.50	U
12672-29-6	Aroclor-1248	0.50	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

TMA
Thermo Analytical Inc.

Skinner & Sherman Laboratories Inc.
300 Second Avenue
Post Office Box 521
Waltham, MA 02254-0521

(617) 890-7200 • FAX (617) 890-3883

9213507.1318

MAR 1996
RECEIVED
Data
Log In

April 2, 1992

TMA/NORCAL
2030 Wright Avenue
Richmond, CA 94804
Attention: Dan Stuermer

Quality Control Narrative

Scope

Two (2) soil samples and one (1) water sample were submitted to TMA/Skinner & Sherman Laboratories, Inc. on March 11-12, 1992 from Westinghouse/ Hanford Company. The samples were analyzed for the USEPA CLP metals and cyanide. The analysis was performed under Skinner and Sherman work order S203065.

Methodology

The samples were prepared, analyzed and reported in accordance with the USEPA Contract Laboratory Program Statement of Work 7/88 (CLP SOW788).

Discussion

All quality control requirements were met for the samples with the following exceptions:

Soils

The antimony, lead, manganese and selenium matrix spike recoveries exceeded the control limit requirements.

The lead laboratory duplicates exceeded the control limit requirements.

Waters

All quality control parameters were met for these samples.

Please feel free to call if there are any questions concerning this package.

Respectfully submitted,

TMA/SKINNER & SHERMAN LABORATORIES, INC.

David N. Peterson
Assistant Laboratory Manager

4-12-96
MC

9213507.1319

WESTINGHOUSE/HANFORD

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B05WP5

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N2-03-053SAS No.: SDG No.: B05WP5

Matrix (soil/water): SOIL Lab Sample ID: 03065-01S

Level (low/med): LOW Date Received: 03/11/92

% Solids: 98.2

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	4280.00			P
7440-36-0	Antimony	1.60	U	N	P
7440-38-2	Arsenic	1.10	B		F
7440-39-3	Barium	36.70	B		P
7440-41-7	Beryllium	0.52	B		P
7440-43-9	Cadmium	0.20	U		P
7440-70-2	Calcium	4700.00			P
7440-47-3	Chromium	10.20			P
7440-48-4	Cobalt	7.00	B		P
7440-50-8	Copper	22.50			P
7439-89-6	Iron	13500.00			P
7439-92-1	Lead	8.60		*N	F
7439-95-4	Magnesium	3320.00			P
7439-96-5	Manganese	214.00		N	P
7439-97-6	Mercury	0.09	U		CV
7440-02-0	Nickel	8.90			P
7440-09-7	Potassium	562.00	B		P
7782-49-2	Selenium	0.75	U	WN	F
7440-22-4	Silver	0.39	U		P
7440-23-5	Sodium	277.00	B		P
7440-28-0	Thallium	0.57	U		F
7440-62-2	Vanadium	32.10			P
7440-66-6	Zinc	26.20			P
	Cyanide	4.80	U		AS

Color Before: BROWN Clarity Before: Texture: FINE

Color After: BROWN Clarity After: Artifacts: YES

Comments:
STONES

002

9213507.1320

WESTINGHOUSE/HANFORD

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B05WP7

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N2-03-053SAS No.: SDG No.: B05WP5

Matrix (soil/water): WATER Lab Sample ID: 03065-02S

Level (low/med): LOW Date Received: 03/11/92

% Solids: 0.0

Concentration Units (ug/L or mg/Kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	45.70	B		P
7440-36-0	Antimony	8.00	U		P
7440-38-2	Arsenic	2.00	U		F
7440-39-3	Barium	4.00	U		P
7440-41-7	Beryllium	1.00	B		P
7440-43-9	Cadmium	1.40	B		P
7440-70-2	Calcium	321.00	B		P
7440-47-3	Chromium	4.00	U		P
7440-48-4	Cobalt	3.00	U		P
7440-50-8	Copper	5.10	B		P
7439-89-6	Iron	11.00	U		P
7439-92-1	Lead	3.00	B		F
7439-95-4	Magnesium	49.00	U		P
7439-96-5	Manganese	1.00	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	4.00	U		P
7440-09-7	Potassium	130.00	U		P
7782-49-2	Selenium	4.00	U	W	F
7440-22-4	Silver	2.00	U		P
7440-23-5	Sodium	705.00	B		P
7440-28-0	Thallium	3.00	U		F
7440-62-2	Vanadium	2.50	B		P
7440-66-6	Zinc	4.00	U		P
	Cyanide	10.00	U		AS

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

003

9213507.1321

WESTINGHOUSE/HANFORD

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B05WV5

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N2-03-053SAS No.: SDG No.: B05WP5

Matrix (soil/water): SOIL Lab Sample ID: 03065-03S

Level (low/med): LOW Date Received: 03/12/92

% Solids: 93.0

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6710.00			P
7440-36-0	Antimony	1.70	U	N	P
7440-38-2	Arsenic	37.90		S	F
7440-39-3	Barium	72.30			P
7440-41-7	Beryllium	0.77	B		P
7440-43-9	Cadmium	0.21	U		P
7440-70-2	Calcium	4650.00			P
7440-47-3	Chromium	16.00			P
7440-48-4	Cobalt	7.70	B		P
7440-50-8	Copper	19.00			P
7439-89-6	Iron	15800.00			P
7439-92-1	Lead	187.00		N*	F
7439-95-4	Magnesium	4120.00			P
7439-96-5	Manganese	278.00		N	P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	10.80			P
7440-09-7	Potassium	1320.00			P
7782-49-2	Selenium	4.10	U	WN	F
7440-22-4	Silver	0.42	U		P
7440-23-5	Sodium	179.00	B		P
7440-28-0	Thallium	0.61	U		F
7440-62-2	Vanadium	32.00			P
7440-66-6	Zinc	48.70			P
	Cyanide	5.20	U		AS

Color Before: BROWN Clarity Before: Texture: FINE

Color After: BROWN Clarity After: Artifacts: YES

Comments:
STONES

004

TMA/Skinner & Serman Labs **SAMPLE LOG-IN**

WORKORDER 52-03-065 CLIENT HANFORD-NCR No. SAMPLES:

PROTCL CLP TURNARND 33 days 2 1

COOLER TEMP: 4 oC, or NA (Soil) (Water) (Specify Other)

CUSTODIAN A. Benney SDG/BATCH N/A

CUSTODY SEAL: PRESENT/ABSENT/INTACT/NOT CLIENT CASE 52-03-053

SHIPER & # Fedex # 2126575830 PO/CONTRACT# ↓

TAGS: PRESENT/ABSENT/NA/SEE COC CONTACT Dolores Sanchez

CHAIN OF CUSTODY: PRESENT/ABSENT/NA, # N/A COMMENTS: NONE

SAMPLE CONTAINERS-INTACT/BROKEN COMMENTS

CLIENT COMMENT? YES/NO Samples contain radioactive material

SAMPLE LABELS AGREE WITH CHAIN OF CUSTODY INFO? YES/NO (COMMENT)

CLIENT PAPERWORK AGREES WITH SAMPLES & COC? YES /NO (COMMENT)

SHIPMENT DATES 3/11/92 3/12/92

LIST ANY DATE WITH PAPERWORK/SHIPMENT PROBLEMS & SPECIFY THE PROBLEM:

N/A

	CLIENT ID	MATRIX	RECEIVED	QC	TEST(S)	HOLD TIME UP
1	B05WP5	SOIL	3/11/92	D	TM/CN	3/5
2	P7	WATER	↓	S	|	↓
3	↓ V5	SOIL	3/12/92		|	3/1
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						

COMPLETE

SUBCONTRACT: YES/NO, TO: DATE:

REVIEWED Rev. 1.4 PAGE

FEDERAL EXPRESS

QUESTIONS? CALL 800-238-5355 TOLL FREE.

AIRBILL PACKAGE TRACKING NUMBER 2126898830

2048M 2126898830

RECIPIENT'S COPY

1 Date 3-11-92

From (Your Name) Please Print

Your Phone Number (Very Important) (510)235-2033

Company T M A /NORCAL

Department/Floor No.

Street Address 2030 WRIGHT AVE

City RICHMOND State CA ZIP Required 94804

2 To (Recipient's Name) Please Print Sample Control

Recipient's Phone Number (Very Important) (617)890-7200

Company Skinner & Sherman Laboratories

Department/Floor No.

Exact Street Address (We Cannot Deliver to P.O. Boxes or P.O. Zip Codes.) 300 Second Ave

City Waltham State MA ZIP Required 02254-0521

YOUR INTERNAL BILLING REFERENCE INFORMATION (optional) (First 24 characters will appear on invoice.) 2320-6406

H IF HOLD FOR PICK-UP, Print FEDEX Address Here

Street Address

City State ZIP Required

3 PAYMENT 1 [X] Bill Sender 2 [ ] Bill Recipient's FedEx Acct. No. 3 [ ] Bill 3rd Party FedEx Acct. No. 4 [ ] Bill Credit Card 5 [ ] Cash/Check

4 SERVICES (Check only one box)

Priority Overnight (Delivery by next business morning†)
- 11 [X] YOUR PACKAGING
- 16 [ ] FEDEX LETTER *
- 12 [ ] FEDEX PAK *
- 13 [ ] FEDEX BOX
- 14 [ ] FEDEX TUBE

Standard Overnight (Delivery by next business afternoon†)
- 51 [ ] YOUR PACKAGING
- 56 [ ] FEDEX LETTER *
- 52 [ ] FEDEX PAK *
- 53 [ ] FEDEX BOX
- 54 [ ] FEDEX TUBE

Economy Two-Day (Delivery by second business day†)
- 30 [ ] ECONOMY

Government Overnight (Restricted for authorized users only)
- 46 [ ] GOVT LETTER
- 41 [ ] GOVT PACKAGE

Freight Service (for Extra Large or any package over 150 lbs.)
- 70 [ ] OVERNIGHT FREIGHT ** (Confirmed reservation required)
- 80 [ ] TWO-DAY FREIGHT **

† Delivery commitment may be later in some areas. *Declared Value Limit $100 **Call for delivery schedule.

5 DELIVERY AND SPECIAL HANDLING (Check services required)
- 1 [ ] HOLD FOR PICK-UP (Fill in Box H)
- 2 [X] DELIVER WEEKDAY
- 3 DELIVER SATURDAY (Extra charge) (Not available to all locations) [ ]
- 4 [ ] DANGEROUS GOODS (Extra charge)
- 5 [ ]
- 6 [ ] DRY ICE Lbs
- 7 [ ] OTHER SPECIAL SERVICE
- 8 [ ]
- 9 [ ] SATURDAY PICK-UP (Extra charge)
- 10 [ ]
- 11 [ ]
- 12 [ ] HOLIDAY DELIVERY (If offered) (Extra charge)

6

PACKAGES	WEIGHT In Pounds Only	YOUR DECLARED VALUE
1	11	
Total 1	Total 11	Total

DIM SHIPMENT (Chargeable Weight) [ ] _____ lbs.

L x W x H = _____

Received At: 1 [X] Regular Stop 2 [ ] On-Call Stop 3 [ ] Drop Box 4 [ ] BSC 5 [ ] Station

Emp. No. Date

[ ] Cash Received [ ] Return Shipment [ ] Third Party [ ] Chg. To Del. [ ] Chg. To Hold

Street Address

City State Zip

Received By: X

Date/Time Received 3/12/92 9:30 FedEx Employee Number

7 Release Signature:

FedEx Emp. No. Date/Time

Federal Express Use

Base Charges

Declared Value Charge

Other 1

Other 2

Total Charges

REVISION DATE 6/91 PART #137204 FXEM 1/92 FORMAT #099

099

© 1990-91 FEDEX PRINTED IN U.S.A.

9214582.1424

Westinghouse Hanford Company	CHAIN OF CUSTODY S&S

Custody Form Initiator W.V. Setzer / CM Chance

Company Contact J.D. Fancher Telephone (509) 376-2081

Project Designation/Sampling Locations 100-HR-1 Vadose Zone Sampling Collection Date 3-9-92

116-H-1

Ice Chest No. SML-124 Field Logbook No. WHC-N-557 2

Bill of Lading/Airbill No. Offsite Property No.

Method of Shipment Overnight Air Delivery

Shipped to TMA/NORCAL 2030 Wright Ave. Richmond Ca. 94804

Possible Sample Hazards/Remarks Maintain at 4°C

Sample Identification

B05WV5	~~B05WV6~~ CC3-9-92
~~(1)1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am-241)~~	(1)1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am24
(1) 250ml G bottle(ICP/AA metals,Hg)	(1) 250ml G bottle(ICP/AA metals, Hg)
~~(1)500 ml aG bottle(Semi-VOA,PCB's/PEST.)~~	(1)500 ml aG bottle(Semi-VOA,PCB's/PEST.) CC3-9-92
(1)120ml G bottle(Cyanide)	(1) 120ml G bottle(Cyanide)
~~(1)120ml G bottle(VOA)~~	(1) 120ml G bottle(VOA)

☑ Field Transfer of Custody — CHAIN OF POSSESSION — (Sign and Print Names)

Relinquished by:	Received by:	Date/Time:
CM Chance Cory Chance	K.F. Trapp / K.D. Trapp	3/10/92 1145
K.F. Trapp / K.D. Trapp	Kermit Blum	3-11-92 1130
Kermit Blum 3-11-92	[illegible]	3/12/92 9:30

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time: 200

Comments:

9214587.1325

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector CM Chance Date Sampled 3-9-92 Time 0905 hours

Company Contact J.D. Fancher Telephone (509) 376-2081

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
	~~1, 120mL G~~	~~soil~~	~~CLP; VOA~~
	~~1, 500mL aG~~	~~soil~~	~~CLP; semi-VOA, PCB/PEST~~
	~~1, 1000mL G~~	~~soil~~	~~Gross Alpha, Gross Beta, Gamma~~
B05WV5			~~Spec., U-235/238, Pu-239/240,~~
			~~Sr-90, Tc-99, C-14, Am-241.~~
	1, 250mL G	soil	CLP; ICP/AA Metals, Hg
	1, 120mL G	soil	CLP; Cn
	1, 120mL G	soil	CLP; VOA
	1, 500mL aG	soil	CLP; semi-VOA, PCB/PEST
	1, 1000mL G	soil	Gross Alpha, Gross Beta, Gamma
			Spec., U-235/238, Pu-239/240,
		CC 3-9-92	Sr-90, Tc-99, C-14, Am-241.
	1, 250mL G	soil	CLP; ICP/AA Metals, Hg
	1, 120mL G	soil	CLP; Cn

Field Information**

Special Handling and/or Storage Samples must be maintained at 4 C.

Possible Sample Hazards None Detected w/Field instruments

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 3-11-92

Analysis Required

201

*Indicate whether sample is soil, sludge, water, etc.

**Use back of page for additional information relative to sample location

9214502.1426

Westinghouse Hanford Company	CHAIN OF CUSTODY	S&S

Custody Form Initiator CMChanley

Company Contact J.D. Fancher Telephone (509)376-2081

Project Designation/Sampling Locations 100-HR-1 Vadose Zone Sampling 116-H-3 Collection Date 3-5-92

Ice Chest No. Coleman #64 Field Logbook No. EFL-1014

Bill of Lading/Airbill No. Offsite Property No.

Method of Shipment Overnight Air Delivery

Shipped to TMA/NORCAL 2030 Wright Ave. Richmond Ca. 94804

Possible Sample Hazards/Remarks Maintain at 4°C

Sample Identification

BDSWP5

~~(1)1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am-241)~~	(1)1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am24
(1) 250ml G bottle(ICP/AA metals,Hg)	(1) 250ml G bottle(ICP/AA metals, Hg)
~~(1)500 ml aG bottle(Semi-VOA,PCB's/PEST.)~~	(1)500 ml aG bottle(Semi-VOA,PCB's/PEST.)
(1)120ml G bottle(Cyanide)	(1) 120ml G bottle(Cyanide)
~~(1)120ml G bottle(VOA)~~	(1) 120ml G bottle(VOA)

☑ Field Transfer of Custody — CHAIN OF POSSESSION — (Sign and Print Names)

Relinquished by:	Received by:	Date/Time:
CMChanley Cory Chanley	K.F. Trapp / K.F. Trapp	3/6/92 1125
K.F. Trapp / K.F. Trapp	Kermit Blum	3-10-92 1130
Kermit Blum 3-10-92	[illegible]	3/11/92 9:30

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

202

9213502.1327

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector _____ Date Sampled _____ Time _____ hours

Company Contact J.D. Fancher Telephone (509) 376-2081

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B05WP5	~~1, 120mL G~~	~~soil~~	~~CLP; VOA~~
	~~1, 500mL aG~~	~~soil~~	~~CLP; semi-VOA, PCB/PEST~~
	~~1, 1000mL G~~	~~soil~~	~~Gross Alpha, Gross Beta, Gamma~~
			~~Spec., U-235/238, Pu-239/240,~~
			~~Sr-90, Tc-99, C-14, Am-241.~~
	1, 250mL G	soil	CLP; ICP/AA Metals, Hg
	1, 120mL G	soil	CLP; Cn
	1, 120mL G	soil	CLP; VOA
	1, 500mL aG	soil	CLP; semi-VOA, PCB/PEST
	1, 1000mL G	soil	Gross Alpha, Gross Beta, Gamma
			Spec., U-235/238, Pu-239/240,
			Sr-90, Tc-99, C-14, Am-241.
	1, 250mL G	soil	CLP; ICP/AA Metals, Hg
	1, 120mL G	soil	CLP; Cn
			KFT 3/6/92

Field Information** _____

Special Handling and/or Storage Samples must be maintained at 4 C.

Possible Sample Hazards None observed.

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 3-10-92

Analysis Required _____

203

*Indicate whether sample is soil, sludge, water, etc.

**Use back of page for additional information relative to sample location

A-6000-406 (05/90)

9213507.1228

Westinghouse Hanford Company

CHAIN OF CUSTODY

Custody Form Initiator: WV Setzer/CMChance

Company Contact: J.D. Fancher

Telephone: (509) 376-2081

Project Designation/Sampling Locations: 100-HR-1

Collection Date: 3-5-92

Ice Chest No.: SML-24

Field Logbook No.: EFL 104

Bill of Lading/Airbill No.:

Offsite Property No.:

Method of Shipment: OVERNIGHT AIR SERVICE

Shipped to: TMA/NORCAL

Possible Sample Hazards/Remarks: None detected with field instruments.

Sample Identification

1) B05WP7 3, 1000mL G: CLP; ICP/AA Metals, Hg.
3, 1000mL G: CLP; Cn.
~~3, 40mL Gs: CLP; VOA.~~
~~3, 2360mL aG: CLP; Semi-VOA, PCB/Pest.~~
~~2, 4000mL P: Gross Alpha, Gross Beta, Gamma Spec, Sr-90, Tc-99, C-14, U-235/238, Pu-239/240, Am-241.~~

~~2. B05WP6 3, 40ml Gs: VOA~~

[V] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: CMChance Cory Chance	Received by: K.F. Trapp/K.D. Trapp	Date/Time: 3/6/92 1125
Relinquished by: K.F. Trapp/K.D. Trapp	Received by: Kermit Blum	Date/Time: 3-10-92 1130
Relinquished by: Kermit Blum 3-10-92	Received by: [signature]	Date/Time: 3/11/92 9:30
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

A-6000-407 (12/90) (EF) WEF061
Chain of Custody

9213507.1529

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector C. Chance Date Sampled 3/5/92 3/5/92 Time 1015 1015 hours

Company Contact J.D. Fancher Telephone (509) 376-2081

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B05WP7	~~3, 40mL Gs~~	~~water~~	~~CLP; VOA~~
	~~3, 2360mL aG~~	~~water~~	~~CLP; semi-VOA, PCB/PEST~~
	~~2, 4000mL P~~	~~water~~	~~Gross Alpha, Gross Beta, Gamma~~
			~~Spec., U-235/238, Pu-239/240,~~
			~~Sr-90, Tc-99, C-14, Am-241.~~
	3, 1000mL G	water	CLP; ICP/AA Metals, Hg
	3, 1000mL G	water	CLP; Cn
~~B05WP6~~	~~3, 40mL aGs~~	~~water~~	~~CLP; VOA~~

Field Information**

Special Handling and/or Storage Samples must be maintained at 4 C.

Possible Sample Hazards None observed.

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 3-10-92

Analysis Required

205

*Indicate whether sample is soil, sludge, water, etc.

**Use back of page for additional information relative to sample location

9213507.1330

BOSWVI-TMA-142

TMA

MAY 1992
RECEIVED
OSM DMO

WESTINGHOUSE HANFORD COMPANY

Results of Analyses For:

ORGANICS
Case No. 03-051
(TMA/ARLI Work Order # A2-03-051)

METALS
Case No. N2-03-080
(TMA/Skinner & Sherman W.O. # S2-03-087)

TMA Master Work Order N2-03-080

May 14, 1992

4-12-96
MC

9213507.1531

WESTINGHOUSE HANFORD COMPANY

Results of Analyses For:

ORGANICS
CASE NO. 03-051
(TMA/ARLI Work Order # A2-03-051)

Organics results are presented
for the following WHC SOIL samples(s):

B05WV6
B05WV8
B05WV9
B01WW0
B05WW4
B05WW5

Norcal Work Order # N2-03-080

Thermo Analytical Inc.
160 Taylor Street
Monrovia, Ca. 91016
818-357-3247

9213507.1332

Westinghouse Hanford Company

CHAIN OF CUSTODY

000002
A2L1

Custody Form Initiator CM Chance

Company Contact J.D. Fancher

Telephone (509)376-2081

Project Designation/Sampling Locations 100-HR-1 Vadose Zone Sampling
116-H-1

Collection Date 3-9-92
(1325)

Ice Chest No. SML 153

Field Logbook No WHC-N-557 2

Bill of Lading/Airbill No.

ORSR # 15860 WS 3-12-9
~~Offsite Property No~~ ~~15875~~
WWS 3-12-92

Method of Shipment Overnight Air Delivery

Shipped to TMA/NORCAL 2030 Wright Ave. Richmond Ca. 94804

Possible Sample Hazards/Remarks Maintain at 4°C

Sample Identification

BD5WVb

~~(1)1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am-241)~~	(1)1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am24
~~(1) 250ml G bottle(ICP/AA metals,Hg)~~	(1) 250ml G bottle(ICP/AA metals, Hg)
(1) 500 ml aG bottle(Semi-VOA,PCB's/PEST.)	(1)500 ml aG bottle(Semi-VOA,PCB's/PEST.)
~~(1)120ml G bottle(Cyanide)~~	(1) 120ml G bottle(Cyanide)
(1)120ml G bottle(VOA)	(1) 120ml G bottle(VOA)

CC 3-9-92

☐ Field Transfer of Custody

CHAIN OF POSSESSION (Sign and Print Names)

Relinquished by:	Received by:	Date/Time:
CM Chance Cory Chance	Kermit Bleum	3-13-92 1030
Relinquished by: 3-13-92 Kermit Bleum	Received by: C. Harris	Date/Time: 3/19/92 9:00
Relinquished by:	Received by:	Date/Time:
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

000003

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector C M Chance Date Sampled 3-9-92 Time 1325 hours

Company Contact J.D. Fancher Telephone (509) 376-2081

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
	1, 120mL G	soil	CLP; VOA
	1, 500mL aG	soil	CLP; semi-VOA, PCB/PEST
	~~1, 1000mL G~~	~~soil~~	~~Gross Alpha, Gross Beta, Gamma~~
BDSWV6			~~Spec., U-235/238, Pu-239/240,~~
			~~Sr-90, Tc-99, C-14, Am-241.~~
	~~1, 250mL G~~	~~soil~~	~~CLP; ICP/AA Metals, Hg~~
	~~1, 120mL G~~	~~soil~~	~~CLP; Cn~~
	1, 120mL G	soil	CLP; VOA
	1, 500mL aG	soil	CLP; semi-VOA, PCB/PEST
	1, 1000mL G	soil	Gross Alpha, Gross Beta, Gamma
			Spec., U-235/238, Pu-239/240,
			Sr-90, Tc-99, C-14, Am-241.
	1, 250mL G	soil	CLP; ICP/AA Metals, Hg
	1, 120mL G	soil	CLP; Cn

CCC 3-11-92

Field Information**

Special Handling and/or Storage Samples must be maintained at 4 C.

Possible Sample Hazards ABOVE 100 CPM OVER BACKGROUND, FIELD OBSERVATION

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 3-13-92

Analysis Required

*Indicate whether sample is soil, sludge, water, etc.

**Use back of page for additional information relative to sample location

9215507.1334

Westinghouse Hanford Company

CHAIN OF CUSTODY

000004

Custody Form Initiator W.V. SETZER

Company Contact J.D. Fancher

Telephone (509) 376-2081

Project Designation/Sampling Locations 100-HR-1 Vadose Zone Sampling 116-H-1

Collection Date 3-9-92 (1404)

Ice Chest No. SML 153

Field Logbook No. WHC-N-551 2

Bill of Lading/Airbill No.

OSRS # ~~Offsite Property No~~ 15860 WNS 3-12-92

Method of Shipment Overnight Air Delivery

Shipped to TMA/NORCAL 2030 Wright Ave. Richmond Ca. 94804

Possible Sample Hazards/Remarks Maintain at 4°C

Sample Identification

B05W08

~~(1)1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am-241)~~

~~(1) 250ml G bottle(ICP/AA metals,Hg)~~

(1) 500 ml aG bottle(Semi-VOA,PCB's/PEST.)

~~(1)120ml G bottle(Cyanide)~~

(1)120ml G bottle(VOA)

(1)1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am241)

(1) 250ml G bottle(ICP/AA metals, Hg)

(1)500 ml aG bottle(Semi-VOA,PCB's/PEST.)

(1) 120ml G bottle(Cyanide)

(1) 120ml G bottle(VOA)

☐ Field Transfer of Custody

CHAIN OF POSSESSION (Sign and Print Names)

Relinquished by:	Received by:	Date/Time:
W.V. SETZER W.V. Setzer	Kermit Blum	3-13-92 1030
Relinquished by: 3-13-92 Kermit Blum	Received by: C. Harris	Date/Time: 3/17/92 9[illegible]
Relinquished by:	Received by:	Date/Time:
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

9213507.1335

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

000005

PART I: FIELD SECTION

Collector W V. Setzer Date Sampled 3-9-92 Time 1404 hours

Company Contact J.D. Fancher Telephone (509) 376-2081

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
	1, 120mL G	soil	CLP; VOA
	1, 500mL aG	soil	CLP; semi-VOA, PCB/PEST
	~~1, 1000mL G~~	~~soil~~	~~Gross Alpha, Gross Beta, Gamma~~
BOSWVY			~~Spec., U-235/238, Pu-239/240,~~
			~~Sr-90, Tc-99, C-14, Am-241.~~
	~~1, 250mL G~~	~~soil~~	~~CLP; ICP/AA Metals, Hg~~
	~~1, 120mL G~~	~~soil~~	~~CLP; Cn~~
	1, 120mL G	soil	CLP; VOA
	1, 500mL aG	soil	CLP; semi-VOA, PCB/PEST
	1, 1000mL G	soil	Gross Alpha, Gross Beta, Gamma
			Spec., U-235/238, Pu-239/240,
		CC 3-11-92	Sr-90, Tc-99, C-14, Am-241.
	1, 250mL G	soil	CLP; ICP/AA Metals, Hg
	1, 120mL G	soil	CLP; Cn

Field Information**

Special Handling and/or Storage Samples must be maintained at 4 C.

Possible Sample Hazards 100 CPM ABOVE BACKGROUND, FIELD OBSERVATION

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 3-13-92

Analysis Required

*Indicate whether sample is soil, sludge, water, etc.

**Use back of page for additional information relative to sample location

A-6000-406 (5/90)

Westinghouse Hanford Company 9213507.1336

CHAIN OF CUSTODY

000006

Custody Form Initiator W.V. SETZER/CM Chaney

Company Contact J.D. Fancher

Telephone (509) 376-2081

Project Designation/Sampling Locations 100-HR-1 Vadose Zone Sampling 116-H-1

Collection Date 3-10-92 (0912

Ice Chest No. SML 153

Field Logbook No. WHC-N-557 2

Bill of Lading/Airbill No.

~~Offsite Property No.~~ OSRS # 15860

Method of Shipment Overnight Air Delivery

Shipped to TMA/NORCAL 2030 Wright Ave. Richmond Ca. 94804

Possible Sample Hazards/Remarks Maintain at 4°C

Sample Identification

✓ B05W09

~~(1)1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am-241)~~

~~(1) 250ml G bottle(ICP/AA metals,Hg)~~

(1) 500 ml aG bottle(Semi-VOA,PCB's/PEST.)

~~(1) 120ml G bottle(Cyanide)~~

(1) 120ml G bottle(VOA)

(1)1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am241)

(1) 250ml G bottle(ICP/AA metals, Hg)

(1)500 ml aG bottle(Semi-VOA,PCB's/PEST.)

(1) 120ml G bottle(Cyanide)

(1) 120ml G bottle(VOA)

C (3-10-92

☐ Field Transfer of Custody

CHAIN OF POSSESSION (Sign and Print Names)

Relinquished by:	Received by:	Date/Time:
W.V. SETZER W.V. Setzer	Kermit Blum	3-13-92 1030
Relinquished by: Kermit Blum 3-13-92	Received by: C. Harris	Date/Time: 3/13/92 900
Relinquished by:	Received by:	Date/Time:
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

A 6000 107 (12/90)

9213507.1337

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST 000007

PART I: FIELD SECTION

Collector W.V. Seyzer/CM Chanie Date Sampled 3-10-92 Time 0912 hours

Company Contact J.D. Fancher Telephone (509) 376-2081

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
	1, 120mL G	soil	CLP; VOA
	1, 500mL aG	soil	CLP; semi-VOA, PCB/PEST
	~~1, 1000mL G~~	~~soil~~	~~Gross Alpha, Gross Beta, Gamma~~
BDSWV9			~~Spec., U-235/238, Pu-239/240,~~
			~~Sr-90, Tc-99, C-14, Am-241.~~
	~~1, 250mL G~~	~~soil~~	~~CLP; ICP/AA Metals, Hg~~
	~~1, 120mL G~~	~~soil~~	~~CLP; Cn~~
	1, 120mL G	soil	CLP; VOA
	1, 500mL aG	soil	CLP; semi-VOA, PCB/PEST
	1, 1000mL G	soil	Gross Alpha, Gross Beta, Gamma
			Spec., U-235/238, Pu-239/240,
			Sr-90, Tc-99, C-14, Am-241.
	1, 250mL G	soil	CLP; ICP/AA Metals, Hg
	1, 120mL G	soil	CLP; Cn

CJ 3-11-92

Field Information**

Special Handling and/or Storage Samples must be maintained at 4 C.

Possible Sample Hazards 100 CPM ABOVE BACKGROUND IN FIELD

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 3-13-92

Analysis Required

*Indicate whether sample is soil, sludge, water, etc.

**Use back of page for additional information relative to sample location

Westinghouse Hanford Company

9213507.1338

CHAIN OF CUSTODY

000008

Custody Form Initiator: CM Chance

Company Contact: J.D. Fancher

Telephone: (509) 376-2081

Project Designation/Sampling Locations: 100-HR-1 Vadose Zone Sampling 116-H-1

Collection Date: 3-11-92

Ice Chest No.: SML-115

Field Logbook No.: WHC-N-5572

Bill of Lading/Airbill No.:

Offsite Property No.:

Method of Shipment: Overnight Air Delivery

Shipped to: TMA/NORCAL 2030 Wright Ave. Richmond Ca. 94804

Possible Sample Hazards/Remarks: Maintain at 4°C

Sample Identification

BOSWW0	BOSWW4
~~(1)1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am-241)~~	~~(1)1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am241)~~
~~(1) 250ml G bottle(ICP/AA metals,Hg)~~	~~(1) 250ml G bottle(ICP/AA metals, Hg)~~
(1) 500 ml aG bottle(Semi-VOA,PCB's/PEST.)	(1)500 ml aG bottle(Semi-VOA,PCB's/PEST.)
~~(1)120ml G bottle(Cyanide)~~	~~(1) 120ml G bottle(Cyanide)~~
(1)120ml G bottle(VOA)	(1) 120ml G bottle(VOA)

☑ Field Transfer of Custody

CHAIN OF POSSESSION (Sign and Print Names)

Relinquished by:	Received by:	Date/Time:
CM Chance Cory Chance	Kermit Blum	3-16-92 0800 *
Relinquished by: 3-16-92 Kermit Blum	Received by: C. Harris	Date/Time: 3/17/92 9
Relinquished by:	Received by:	Date/Time:
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments: * Received 3-14-92 @ 1600; opened 3-16-92 @ 0800.

9213507.1339

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST 000009

PART I: FIELD SECTION BOSWW4 3-11-92 1250
BOSWWD 3-11-92 0815

Collector C M Chance Date Sampled _____ Time _____ hours

Company Contact J.D. Fancher Telephone (509) 376-2081

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
	1, 120mL G	soil	CLP; VOA
	1, 500mL aG	soil	CLP; semi-VOA, PCB/PEST
	~~1, 1000mL G~~	~~soil~~	~~Gross Alpha, Gross Beta, Gamma~~
BOSWWD			~~Spec., U-235/238, Pu-239/240,~~
			~~Sr-90, Tc-99, C-14, Am-241.~~
	~~1, 250mL G~~	~~soil~~	~~CLP; ICP/AA Metals, Hg~~
	~~1, 120mL G~~	~~soil~~	~~CLP; Cn~~
	1, 120mL G	soil	CLP; VOA
	1, 500mL aG	soil	CLP; semi-VOA, PCB/PEST
	1, 1000mL G	soil	Gross Alpha, Gross Beta, Gamma
BOSWW4			Spec., U-235/238, Pu-239/240,
			Sr-90, Tc-99, C-14, Am-241.
	1, 250mL G	soil	CLP; ICP/AA Metals, Hg
	1, 120mL G	soil	CLP; Cn

Field Information** _____

Special Handling and/or Storage Samples must be maintained at 4 C.

Possible Sample Hazards None observed.

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 3-16-92

Analysis Required _____

*Indicate whether sample is soil, sludge, water, etc.

**Use back of page for additional information relative to sample location

A-6000-406 (05/90)

9213507.1340

Westinghouse Hanford Company

CHAIN OF CUSTODY

000010

Custody Form Initiator C.M. Chance

Company Contact J.D. Fancher

Telephone (509)376-2081

Project Designation/Sampling Locations 100-HR-1 Vadose Zone Sampling

Collection Date 3-13-92

Ice Chest No. Austin

Field Logbook No. WHC-N-5572

Bill of Lading/Airbill No.

Offsite Property No.

Method of Shipment Overnight Air Delivery

Shipped to TMA/NORCAL 2030 Wright Ave. Richmond Ca. 94804

Possible Sample Hazards/Remarks Maintain at 4°C

Sample Identification

B05WW5 (0907 hrs)	
~~(1)1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am-241)~~	(1)1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am241)
~~(1) 250ml G bottle(ICP/AA metals,Hg)~~	(1) 250ml G bottle(ICP/AA metals, Hg)
(1) 500 ml aG bottle(Semi-VOA,PCB's/PEST.)	(1)500 ml aG bottle(Semi-VOA,PCB's/PEST.)
~~(1)120ml G bottle(Cyanide)~~	(1) 120ml G bottle(Cyanide) CC 3-13-92
(1)120ml G bottle(VOA)	(1) 120ml G bottle(VOA)

☑ Field Transfer of Custody

CHAIN OF POSSESSION (Sign and Print Names)

Relinquished by:	Received by:	Date/Time:
C M Chance / Cory Chance	K. Trapp / K. Trapp	3/16/92 1007
K. Trapp / K. Trapp	Kermit Blum	3-17-92 1130
Kermit Blum 3-17-92	C. Harris	3/18/92 9:00

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

9213907.1341

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST 000011

PART I: FIELD SECTION

Collector L. Chance Date Sampled 3/16/92 Time 0907 hours

Company Contact J.D. Fancher Telephone (509) 376-2081

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B05WW5	1, 120mL G	soil	CLP; VOA
	1, 500mL aG	soil	CLP; semi-VOA, PCB/PEST
	~~1, 1000mL G~~	~~soil~~	~~Gross Alpha, Gross Beta~~, Gamma
			~~Spec., U-235/238, Pu-239/240,~~
			~~Sr-90, Tc-99, C-14, Am-241.~~
	~~1, 250mL G~~	~~soil~~	~~CLP; ICP/AA Metals, Hg~~
	~~1, 120mL G~~	~~soil~~	~~CLP; Cn~~
	1, 120mL G	soil	CLP; VOA
	1, 500mL aG	soil	CLP; semi-VOA, PCB/PEST
	1, 1000mL G	soil	Gross Alpha, Gross Beta, Gamma
			Spec., U-235/238, Pu-239/240,
			Sr-90, Tc-99, C-14, Am-241.
	1, 250mL G	soil	CLP; ICP/AA Metals, Hg
	1, 120mL G	soil	CLP; Cn
			KT 3/16/92

Field Information**

Special Handling and/or Storage Samples must be maintained at 4 C.

Possible Sample Hazards None observed.

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 3-17-92

Analysis Required

*Indicate whether sample is soil, sludge, water, etc.

**Use back of page for additional information relative to sample location.

A-6000-406 (05/90)

9213507.1342

000012

TMA/ARLI
Thermo Analytical Inc.

RADIATION DOSE RATE SURVEY FORM

Date 3/15/92 COMPANY WHC (WHC) OTHER ORD # 1414546055

Surveyor's Name LW / K. Kohlberger

Model No. HP-210 / ESP-1 Model No. AC-3-7 / ESP-1

Serial Nos. 710289 / 02619 Serial Nos. 407726 / 02628

Calibration Date out for Recalibration Calibration Date 11/15/92

Instrument Calibration Factor _____ Instrument Calibration Factor 0.177

Sample	Location	HP-210 CPM	HP-210 Factor	HP-210 DPM	AC-3-7 CPM	AC-3-7 Factor	AC-3-7 DPM	Spillage or Breakage?	Activity, nCi/mL or nCi/g
Background					1.0				
Consistency					5070	0.1864			
Smears					0.0		5.1°C	none.	
Reported	WHC	<50 pCi/g.							

Comments:

All OK ✓ Approved DLK

Not OK Date 3/18/92

Form: ARLI RA-01
Rev: 06

01/15/92

9713507.1345

TMA/ARLI
Thermo Analytical Inc.

000013

RADIATION DOSE RATE SURVEY FORM

Date 3/17/92 COMPANY WHC (WHC) OTHER ORD # 1414546044

Surveyor's Name

Model No. HP-210 (27.C) / ESP-1 Model No. AC-3-7 / ESP-1

Serial Nos. 710289 (710238) / 02619 (02628) Serial Nos. 407726 / 02628

Calibration Date See Cal. Check 1/19/91 Calibration Date 1/15/92

Instrument Calibration Factor .0005 (open) .0549 (wind.) Instrument Calibration Factor .177

Sample	Location	HP-210 CPM (open) (270)	HP-210 Factor (270)	HP-210 DPM	AC-3-7 CPM	AC-3-7 Factor	AC-3-7 DPM	Spillage or Breakage?	Activity, nCi/mL or nCi/g
Background		15.0			0.00				
Consistency		25.0			5051	0.1857			
Smears:		16.0			1.0				
Thermo # 2776 - Temp of ice chest = 3.5°C.									
Reported	WHC.	<50pCi/g (Sr)							

Comments:

All OK ✓ Approved [signature]

Not OK Date 3/17/92

Form: ARLI RA-01
Rev: 06

01/15/92

CASE NARRATIVE

LABORATORY : TMA/ARLI

CASE : 03-051

CONTRACT ID : WESTINGHOUSE HANFORD COMPANY

SDG RECEIPT DATE : March 16, 1992

1.0 DESCRIPTION OF CASE :

Six soil samples were analyzed for TCL Organics-Volatiles, Semivolatiles and Pesticide/PCBs according to the USEPA Contract Laboratory Program (CLP) Statement of Work for Organic Analysis, Revision 2/88.

2.0 SAMPLE LIST :

WESTINGHOUSE ID	LAB ID	ANALYSIS REQUESTED	MATRIX
B05WV6	A2-03-051-01A	V	SOIL
B05WV6	A2-03-051-01B	P & SV	SOIL
B05WV8	A2-03-051-02A	V	SOIL
B05WV8 MS	A2-03-051-02B	V	SOIL
B05WV8 MSD	A2-03-051-02C	V	SOIL
B05WV8	A2-03-051-02D	P & SV	SOIL
B05WV9	A2-03-051-03A	V	SOIL
B05WV9	A2-03-051-03B	P & SV	SOIL
B05WV9 MS	A2-03-051-03C	P & SV	SOIL
B05WV9 MSD	A2-03-051-03D	P & SV	SOIL
B05WW0	A2-03-051-04A	V	SOIL
B05WW0	A2-03-051-04B	P & SV	SOIL
B05WW4	A2-03-051-05A	V	SOIL
B05WW4	A2-03-051-05B	P & SV	SOIL
B05WW5	A2-03-051-06A	V	SOIL
B05WW5	A2-03-051-06B	P & SV	SOIL

3.0 COMMENTS :

3.1 SHIPPING AND DOCUMENTATION :

All samples were received unbroken and properly documented.

3.2 ANALYSIS

3.2.1 VOLATILE ANALYSIS COMMENTS :

LOW LEVEL SOIL :

The samples were analyzed by heated purge and within the CLP SOW holding times. All of the QC results were within the limits specified by the EPA CLP SOW.

On 3/23/92 the GCMS was bootstrapped with the year 1993. The analyst has manually corrected the date of analysis and initialed all of the affected raw data.

TUNES :

All of the BFB tunes are injected directly into the GC/MS instrument.

3.2.2 SEMIVOLATILE ANALYSIS COMMENTS :

LOW LEVEL SOIL :

The samples were extracted and analyzed within the CLP SOW holding times. The spike recovery of 2,4-Dinitrotoluene in sample B05WV9MSD was above the QC limit. All of the other QC results were within the limits specified by the EPA CLP SOW.

3.2.3 PESTICIDE/PCB ANALYSIS COMMENTS :

SEQUENCE NOTES :

The sequence was started on 4/1/92 and was analyzed in accordance with the EPA CLP SOW.

On 4/2/92 after the injection made at 16:05, the laboratory experienced a temporary power failure. The data associated with this sample injection was lost and therefore cannot be reported on the Form 8E's. The sample was reinjected at a later time in the sequence.

Due to the limitations of the software used to report 2/88 CLP Protocol Pesticide/PCBs results, the instrument blanks cannot be reported. The instrument blanks were injected in the sequence to insure that the system was not contaminated. Instrument blanks were injected at:

10:19	4/2/92	(B40135 and A40135)
12:27	4/2/92	(B40138 and A40138)
13:10	4/2/92	(B40139 and A40139)

SAMPLE NOTES :

LOW LEVEL SOIL :

The samples were extracted and analyzed within the CLP SOW holding times. The matrix spike recoveries for the MS and MSD samples were all within the advisory QC limits. However, the confirmation column, though not used for quantitation, had a greater percent recovery for gamma-BHC and 4,4'-DDT than the primary column. This appears to be due to a matrix interference that co-elutes with these compounds on the confirmation column while giving complete resolution on the primary column.

All of the QC results were within the limits specified by the EPA CLP SOW.

We certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data in this hardcopy data package and in the computer-readable data submitted on diskette is authorized by the Laboratory Manager or his designee, as verified by the following signatures.

Nicole Roth
CLP Program Manager

Dennis D. Wells
Technical Director

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B05WV6

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03051 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203051-01A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20323R04

Level: (low/med) LOW Date Received: 03/13/92

% Moisture: not dec. 5 Date Analyzed: 03/23/92

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	7	B
67-64-1	Acetone	7	BJ
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	11	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	11	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	11	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	4	J
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (Total)	5	U

9213507.1349

1E

000006
EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

B05WV6

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03051 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203051-01A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20323R04

Level: (low/med) LOW Date Received: 03/13/92

% Moisture: not dec. 5 Date Analyzed: 03/23/92

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

9213507.1349

000007

EPA SAMPLE NO.

B05WV8

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03051 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203051-02A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20323R05

Level: (low/med) LOW Date Received: 03/13/92

% Moisture: not dec. 5 Date Analyzed: 03/23/92

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	6	B
67-64-1	Acetone	15	B
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	11	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	11	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	11	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	1	J
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (Total)	5	U

EPA SAMPLE NO.

B05WV8

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03051 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203051-02A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20323R05

Level: (low/med) LOW Date Received: 03/13/92

% Moisture: not dec. 5 Date Analyzed: 03/23/92

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

9213507.1351

000009

EPA SAMPLE NO.

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

B05WV9

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03051 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203051-03A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20323R06

Level: (low/med) LOW Date Received: 03/13/92

% Moisture: not dec. 3 Date Analyzed: 03/23/92

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	6	B
67-64-1	Acetone	9	BJ
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	2	J
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (Total)	5	U

9213602.1352

1E

000010
EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

B05WV9

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03051 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203051-03A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20323R06

Level: (low/med) LOW Date Received: 03/13/92

% Moisture: not dec. 3 Date Analyzed: 03/23/92

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

9213507.1353

000011

EPA SAMPLE NO.

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

B05WW0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03051 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203051-04A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20323R07

Level: (low/med) LOW Date Received: 03/16/92

% Moisture: not dec. 6 Date Analyzed: 03/23/92

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	5	BJ
67-64-1	Acetone	130	B
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	11	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	11	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	11	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (Total)	5	U

9213507.1354

000012

EPA SAMPLE NO.

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

B05WW0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03051 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203051-04A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20323R07

Level: (low/med) LOW Date Received: 03/16/92

% Moisture: not dec. 6 Date Analyzed: 03/23/92

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

9213502.1355

000013

EPA SAMPLE NO.

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

B05WW4

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03051 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203051-05A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20323R08

Level: (low/med) LOW Date Received: 03/16/92

% Moisture: not dec. 1 Date Analyzed: 03/23/92

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	4	BJ
67-64-1	Acetone	15	B
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (Total)	5	U

9213507.1356

1E

000014
EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

B05WW4

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03051 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203051-05A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20323R08

Level: (low/med) LOW Date Received: 03/16/92

% Moisture: not dec. 1 Date Analyzed: 03/23/92

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B05WW5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03051 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203051-06A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20323R09

Level: (low/med) LOW Date Received: 03/17/92

% Moisture: not dec. 3 Date Analyzed: 03/23/92

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	4	BJ
67-64-1	Acetone	14	B
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (Total)	5	U

9216507.1258

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

000016
EPA SAMPLE NO.

B05WW5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03051 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203051-06A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20323R09

Level: (low/med) LOW Date Received: 03/17/92

% Moisture: not dec. 3 Date Analyzed: 03/23/92

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 2

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown hydrocarbon	8.08	5.2	J
2.	Subst. cyclopentane	29.37	6.2	J

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

B05WV6

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03051 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203051-01B

Sample wt/vol: 30.4 (g/mL) G Lab File ID: 20414N11

Level: (low/med) LOW Date Received: 03/13/92

% Moisture: not dec. 5 dec. ____ Date Extracted: 03/21/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/14/92

GPC Cleanup: (Y/N) N pH: 9.1 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	340	U
111-44-4	bis(2-Chloroethyl)Ether	340	U
95-57-8	2-Chlorophenol	340	U
541-73-1	1,3-Dichlorobenzene	340	U
106-46-7	1,4-Dichlorobenzene	340	U
100-51-6	Benzyl Alcohol	340	U
95-50-1	1,2-Dichlorobenzene	340	U
95-48-7	2-Methylphenol	340	U
108-60-1	bis(2-Chloroisopropyl)Ether	340	U
106-44-5	4-Methylphenol	340	U
621-64-7	N-Nitroso-Di-n-Propylamine	340	U
67-72-1	Hexachloroethane	340	U
98-95-3	Nitrobenzene	340	U
78-59-1	Isophorone	340	U
88-75-5	2-Nitrophenol	340	U
105-67-9	2,4-Dimethylphenol	340	U
65-85-0	Benzoic Acid	1700	U
111-91-1	bis(2-Chloroethoxy)methane	340	U
120-83-2	2,4-Dichlorophenol	340	U
120-82-1	1,2,4-Trichlorobenzene	340	U
91-20-3	Naphthalene	180	J
106-47-8	4-Chloroaniline	340	U
87-68-3	Hexachlorobutadiene	340	U
59-50-7	4-Chloro-3-methylphenol	340	U
91-57-6	2-Methylnaphthalene	42	J
77-47-4	Hexachlorocyclopentadiene	340	U
88-06-2	2,4,6-Trichlorophenol	340	U
95-95-4	2,4,5-Trichlorophenol	1700	U
91-58-7	2-Chloronaphthalene	340	U
88-74-4	2-Nitroaniline	1700	U
131-11-3	Dimethyl Phthalate	340	U
208-96-8	Acenaphthylene	340	U

EPA SAMPLE NO.

B05WV6

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03051 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203051-01B

Sample wt/vol: 30.4 (g/mL) G Lab File ID: 20414N11

Level: (low/med) LOW Date Received: 03/13/92

% Moisture: not dec. 5 dec. ____ Date Extracted: 03/21/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/14/92

GPC Cleanup: (Y/N) N pH: 9.1 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1700	U
83-32-9	Acenaphthene	210	J
51-28-5	2,4-Dinitrophenol	1700	U
100-02-7	4-Nitrophenol	1700	U
132-64-9	Dibenzofuran	130	J
121-14-2	2,4-Dinitrotoluene	340	U
606-20-2	2,6-Dinitrotoluene	340	U
84-66-2	Diethylphthalate	340	U
7005-72-3	4-Chlorophenyl-phenylether	340	U
86-73-7	Fluorene	190	J
100-01-6	4-Nitroaniline	1700	U
534-52-1	4,6-Dinitro-2-methylphenol	1700	U
86-30-6	N-Nitrosodiphenylamine (1)	340	U
101-55-3	4-Bromophenyl-phenylether	340	U
118-74-1	Hexachlorobenzene	340	U
87-86-5	Pentachlorophenol	1700	U
85-01-8	Phenanthrene	1500	
120-12-7	Anthracene	430	
84-74-2	Di-n-Butylphthalate	59	J
206-44-0	Fluoranthene	1800	
129-00-0	Pyrene	1200	
85-68-7	Butylbenzylphthalate	340	U
91-94-1	3,3'-Dichlorobenzidine	690	U
56-55-3	Benzo(a)anthracene	940	
117-81-7	bis(2-Ethylhexyl)Phthalate	340	U
218-01-9	Chrysene	920	
117-84-0	Di-n-octyl Phthalate	340	U
205-99-2	Benzo(b)fluoranthene	890	
207-08-9	Benzo(k)fluoranthene	760	
50-32-8	Benzo(a)pyrene	810	
193-39-5	Indeno(1,2,3-cd)Pyrene	520	
53-70-3	Dibenz(a,h)Anthracene	340	U
191-24-2	Benzo(g,h,i)perylene	410	

(1) - Cannot be separated from Diphenylamine

000019
EPA SAMPLE NO.

B05WV6

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03051 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203051-01B

Sample wt/vol: 30.4 (g/mL) G Lab File ID: 20414N11

Level: (low/med) LOW Date Received: 03/13/92

% Moisture: not dec. 5 dec. ____ Date Extracted: 03/21/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/14/92

GPC Cleanup: (Y/N) N pH: 9.1 Dilution Factor: 1.0

Number TICs found: 20

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN HYDROCARBON	3.17	480	J
2.	UNKNOWN HYDROCARBON	4.17	760	BJ
3.	UNKNOWN HYDROCARBON	5.12	2800	BJ
4.	UNKNOWN ALCOHOL	5.73	40000	BJ
5.	UNKNOWN ALKANE	6.00	350	BJ
6.	UNKNOWN HYDROCARBON	7.13	1000	BJ
7.	UNKNOWN HYDROCARBON	7.43	830	BJ
8.	UNKNOWN KETONE	7.77	590	BJ
9.	UNKNOWN KETONE	8.67	350	J
10.	UNKNOWN HYDROCARBON	9.92	210	J
11.	SUBSTITUTED CARBAZOLE	22.42	240	J
12.	UNKNOWN PHTHALATE	22.59	550	BJ
13.	UNKNOWN POLYAROMATIC HYDROCA	23.57	380	J
14.	UNKNOWN POLYAROMATIC HYDROCA	26.96	620	J
15.	UNKNOWN POLYAROMATIC HYDROCA	27.16	480	J
16.	UNKNOWN CARBOXYLIC ACID ESTE	28.36	660	BJ
17.	UNKNOWN POLYNUCLEAR AROMATIC	28.87	520	J
18.	UNKNOWN ALKANE	33.62	450	J
19.	UNKNOWN POLYNUCLEAR AROMATIC	33.92	1100	J
20.	UNKNOWN POLYNUCLEAR AROMATIC	34.47	480	J

EPA SAMPLE NO.

B05WV8

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03051 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203051-02D

Sample wt/vol: 30.3 (g/mL) G Lab File ID: 20414N10

Level: (low/med) LOW Date Received: 03/13/92

% Moisture: not dec. 5 dec. ____ Date Extracted: 03/21/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/14/92

GPC Cleanup: (Y/N) N pH: 9.2 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	340	U
111-44-4	bis(2-Chloroethyl)Ether	340	U
95-57-8	2-Chlorophenol	340	U
541-73-1	1,3-Dichlorobenzene	340	U
106-46-7	1,4-Dichlorobenzene	340	U
100-51-6	Benzyl Alcohol	340	U
95-50-1	1,2-Dichlorobenzene	340	U
95-48-7	2-Methylphenol	340	U
108-60-1	bis(2-Chloroisopropyl)Ether	340	U
106-44-5	4-Methylphenol	340	U
621-64-7	N-Nitroso-Di-n-Propylamine	340	U
67-72-1	Hexachloroethane	340	U
98-95-3	Nitrobenzene	340	U
78-59-1	Isophorone	340	U
88-75-5	2-Nitrophenol	340	U
105-67-9	2,4-Dimethylphenol	340	U
65-85-0	Benzoic Acid	1700	U
111-91-1	bis(2-Chloroethoxy)methane	340	U
120-83-2	2,4-Dichlorophenol	340	U
120-82-1	1,2,4-Trichlorobenzene	340	U
91-20-3	Naphthalene	340	U
106-47-8	4-Chloroaniline	340	U
87-68-3	Hexachlorobutadiene	340	U
59-50-7	4-Chloro-3-methylphenol	340	U
91-57-6	2-Methylnaphthalene	340	U
77-47-4	Hexachlorocyclopentadiene	340	U
88-06-2	2,4,6-Trichlorophenol	340	U
95-95-4	2,4,5-Trichlorophenol	1700	U
91-58-7	2-Chloronaphthalene	340	U
88-74-4	2-Nitroaniline	1700	U
131-11-3	Dimethyl Phthalate	340	U
208-96-8	Acenaphthylene	340	U

EPA SAMPLE NO.

B05WV8

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03051 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203051-02D

Sample wt/vol: 30.3 (g/mL) G Lab File ID: 20414N10

Level: (low/med) LOW Date Received: 03/13/92

% Moisture: not dec. 5 dec. ____ Date Extracted: 03/21/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/14/92

GPC Cleanup: (Y/N) N pH: 9.2 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1700	U
83-32-9	Acenaphthene	340	U
51-28-5	2,4-Dinitrophenol	1700	U
100-02-7	4-Nitrophenol	1700	U
132-64-9	Dibenzofuran	340	U
121-14-2	2,4-Dinitrotoluene	340	U
606-20-2	2,6-Dinitrotoluene	340	U
84-66-2	Diethylphthalate	340	U
7005-72-3	4-Chlorophenyl-phenylether	340	U
86-73-7	Fluorene	340	U
100-01-6	4-Nitroaniline	1700	U
534-52-1	4,6-Dinitro-2-methylphenol	1700	U
86-30-6	N-Nitrosodiphenylamine (1)	59	J
101-55-3	4-Bromophenyl-phenylether	340	U
118-74-1	Hexachlorobenzene	340	U
87-86-5	Pentachlorophenol	1700	U
85-01-8	Phenanthrene	41	J
120-12-7	Anthracene	340	U
84-74-2	Di-n-Butylphthalate	68	J
206-44-0	Fluoranthene	63	J
129-00-0	Pyrene	48	J
85-68-7	Butylbenzylphthalate	340	U
91-94-1	3,3'-Dichlorobenzidine	690	U
56-55-3	Benzo(a)anthracene	39	J
117-81-7	bis(2-Ethylhexyl)Phthalate	68	J
218-01-9	Chrysene	340	U
117-84-0	Di-n-octyl Phthalate	340	U
205-99-2	Benzo(b)fluoranthene	340	U
207-08-9	Benzo(k)fluoranthene	340	U
50-32-8	Benzo(a)pyrene	340	U
193-39-5	Indeno(1,2,3-cd)Pyrene	340	U
53-70-3	Dibenz(a,h)Anthracene	340	U
191-24-2	Benzo(g,h,i)perylene	340	U

(1) - Cannot be separated from Diphenylamine

EPA SAMPLE NO.

B05WV8

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03051 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203051-02D

Sample wt/vol: 30.3 (g/mL) G Lab File ID: 20414N10

Level: (low/med) LOW Date Received: 03/13/92

% Moisture: not dec. 5 dec. Date Extracted: 03/21/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/14/92

GPC Cleanup: (Y/N) N pH: 9.2 Dilution Factor: 1.00

Number TICs found: 16

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN HYDROCARBON	4.17	760	BJ
2.	UNKNOWN HYDROCARBON	5.10	2800	BJ
3.	UNKNOWN ALCOHOL	5.73	41000	BJ
4.	UNKNOWN ALKANE	5.98	350	BJ
5.	UNKNOWN ALKANE	6.15	170	BJ
6.	UNKNOWN HYDROCARBON	7.13	1000	BJ
7.	UNKNOWN HYDROCARBON	7.43	310	BJ
8.	UNKNOWN KETONE	7.75	310	BJ
9.	UNKNOWN ALCOHOL	8.62	280	BJ
10.	UNKNOWN PHTHALATE	22.59	520	BJ
11.	UNKNOWN ALKANE	24.09	140	J
12.	UNKNOWN ALKANE	25.22	170	J
13.	UNKNOWN AROMATIC	27.02	690	J
14.	UNKNOWN ALKANE	27.37	350	J
15.	UNKNOWN CARBOXYLIC ACID ESTE	28.37	940	BJ
16.	UNKNOWN ALKANE	29.34	450	J

EPA SAMPLE NO.

B05WV9

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03051 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203051-03B

Sample wt/vol: 30.4 (g/mL) G Lab File ID: 20414N12

Level: (low/med) LOW Date Received: 03/13/92

% Moisture: not dec. 3 dec. Date Extracted: 03/21/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/14/92

GPC Cleanup: (Y/N) N pH: 9.4 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	340	U
111-44-4	bis(2-Chloroethyl)Ether	340	U
95-57-8	2-Chlorophenol	340	U
541-73-1	1,3-Dichlorobenzene	340	U
106-46-7	1,4-Dichlorobenzene	340	U
100-51-6	Benzyl Alcohol	340	U
95-50-1	1,2-Dichlorobenzene	340	U
95-48-7	2-Methylphenol	340	U
108-60-1	bis(2-Chloroisopropyl)Ether	340	U
106-44-5	4-Methylphenol	340	U
621-64-7	N-Nitroso-Di-n-Propylamine	340	U
67-72-1	Hexachloroethane	340	U
98-95-3	Nitrobenzene	340	U
78-59-1	Isophorone	340	U
88-75-5	2-Nitrophenol	340	U
105-67-9	2,4-Dimethylphenol	340	U
65-85-0	Benzoic Acid	1600	U
111-91-1	bis(2-Chloroethoxy)methane	340	U
120-83-2	2,4-Dichlorophenol	340	U
120-82-1	1,2,4-Trichlorobenzene	340	U
91-20-3	Naphthalene	340	U
106-47-8	4-Chloroaniline	340	U
87-68-3	Hexachlorobutadiene	340	U
59-50-7	4-Chloro-3-methylphenol	340	U
91-57-6	2-Methylnaphthalene	340	U
77-47-4	Hexachlorocyclopentadiene	340	U
88-06-2	2,4,6-Trichlorophenol	340	U
95-95-4	2,4,5-Trichlorophenol	1600	U
91-58-7	2-Chloronaphthalene	340	U
88-74-4	2-Nitroaniline	1600	U
131-11-3	Dimethyl Phthalate	340	U
208-96-8	Acenaphthylene	340	U

EPA SAMPLE NO.

B05WV9

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03051 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203051-03B

Sample wt/vol: 30.4 (g/mL) G Lab File ID: 20414N12

Level: (low/med) LOW Date Received: 03/13/92

% Moisture: not dec. 3 dec. ____ Date Extracted: 03/21/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/14/92

GPC Cleanup: (Y/N) N pH: 9.4 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1600	U
83-32-9	Acenaphthene	340	U
51-28-5	2,4-Dinitrophenol	1600	U
100-02-7	4-Nitrophenol	1600	U
132-64-9	Dibenzofuran	340	U
121-14-2	2,4-Dinitrotoluene	340	U
606-20-2	2,6-Dinitrotoluene	340	U
84-66-2	Diethylphthalate	340	U
7005-72-3	4-Chlorophenyl-phenylether	340	U
86-73-7	Fluorene	340	U
100-01-6	4-Nitroaniline	1600	U
534-52-1	4,6-Dinitro-2-methylphenol	1600	U
86-30-6	N-Nitrosodiphenylamine (1)	340	U
101-55-3	4-Bromophenyl-phenylether	340	U
118-74-1	Hexachlorobenzene	340	U
87-86-5	Pentachlorophenol	1600	U
85-01-8	Phenanthrene	35	J
120-12-7	Anthracene	340	U
84-74-2	Di-n-Butylphthalate	50	J
206-44-0	Fluoranthene	110	J
129-00-0	Pyrene	85	J
85-68-7	Butylbenzylphthalate	340	U
91-94-1	3,3'-Dichlorobenzidine	670	U
56-55-3	Benzo(a)anthracene	78	J
117-81-7	bis(2-Ethylhexyl)Phthalate	340	U
218-01-9	Chrysene	77	J
117-84-0	Di-n-octyl Phthalate	340	U
205-99-2	Benzo(b)fluoranthene	130	J
207-08-9	Benzo(k)fluoranthene	340	U
50-32-8	Benzo(a)pyrene	61	J
193-39-5	Indeno(1,2,3-cd)Pyrene	340	U
53-70-3	Dibenz(a,h)Anthracene	340	U
191-24-2	Benzo(g,h,i)perylene	340	U

(1) - Cannot be separated from Diphenylamine

EPA SAMPLE NO.

B05WV9

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03051 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203051-03B

Sample wt/vol: 30.4 (g/mL) G Lab File ID: 20414N12

Level: (low/med) LOW Date Received: 03/13/92

% Moisture: not dec. 3 dec. Date Extracted: 03/21/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/14/92

GPC Cleanup: (Y/N) N pH: 9.4 Dilution Factor: 1.0

Number TICs found: 17

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN HYDROCARBON	3.15	540	J
2.	UNKNOWN HYDROCARBON	4.17	850	BJ
3.	UNKNOWN HYDROCARBON	5.12	2800	BJ
4.	UNKNOWN ALCOHOL	5.73	38000	BJ
5.	UNKNOWN ALKANE	5.98	370	BJ
6.	UNKNOWN ALKANE	6.15	200	BJ
7.	UNKNOWN HYDROCARBON	7.13	1000	BJ
8.	UNKNOWN HYDROCARBON	7.43	980	BJ
9.	UNKNOWN KETONE	7.75	470	BJ
10.	UNKNOWN KETONE	8.67	370	J
11.	UNKNOWN KETONE	9.07	170	J
12.	UNKNOWN CARBOXYLIC ACID ESTE	9.82	170	J
13.	UNKNOWN HYDROCARBON	9.92	270	J
14.	SUBST. 1,2,3-PROPANETRIOL	13.49	170	J
15.	UNKNOWN CARBOXYLIC ACID ESTE	19.05	170	J
16.	UNKNOWN PHTHALATE	22.60	510	BJ
17.	UNKNOWN CARBOXYLIC ACID ESTE	28.36	750	BJ

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B05WW0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03051 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203051-04B

Sample wt/vol: 30.3 (g/mL) G Lab File ID: 20414N07

Level: (low/med) LOW Date Received: 03/16/92

% Moisture: not dec. 6 dec. Date Extracted: 03/21/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/14/92

GPC Cleanup: (Y/N) N pH: 9.5 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	350	U
111-44-4	bis(2-Chloroethyl)Ether	350	U
95-57-8	2-Chlorophenol	350	U
541-73-1	1,3-Dichlorobenzene	350	U
106-46-7	1,4-Dichlorobenzene	350	U
100-51-6	Benzyl Alcohol	350	U
95-50-1	1,2-Dichlorobenzene	350	U
95-48-7	2-Methylphenol	350	U
108-60-1	bis(2-Chloroisopropyl)Ether	350	U
106-44-5	4-Methylphenol	350	U
621-64-7	N-Nitroso-Di-n-Propylamine	350	U
67-72-1	Hexachloroethane	350	U
98-95-3	Nitrobenzene	350	U
78-59-1	Isophorone	350	U
88-75-5	2-Nitrophenol	350	U
105-67-9	2,4-Dimethylphenol	350	U
65-85-0	Benzoic Acid	1700	U
111-91-1	bis(2-Chloroethoxy)methane	350	U
120-83-2	2,4-Dichlorophenol	350	U
120-82-1	1,2,4-Trichlorobenzene	350	U
91-20-3	Naphthalene	350	U
106-47-8	4-Chloroaniline	350	U
87-68-3	Hexachlorobutadiene	350	U
59-50-7	4-Chloro-3-methylphenol	350	U
91-57-6	2-Methylnaphthalene	350	U
77-47-4	Hexachlorocyclopentadiene	350	U
88-06-2	2,4,6-Trichlorophenol	350	U
95-95-4	2,4,5-Trichlorophenol	1700	U
91-58-7	2-Chloronaphthalene	350	U
88-74-4	2-Nitroaniline	1700	U
131-11-3	Dimethyl Phthalate	350	U
208-96-8	Acenaphthylene	350	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B05WW0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03051 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203051-04B

Sample wt/vol: 30.3 (g/mL) G Lab File ID: 20414N07

Level: (low/med) LOW Date Received: 03/16/92

% Moisture: not dec. 6 dec. Date Extracted: 03/21/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/14/92

GPC Cleanup: (Y/N) N pH: 9.5 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1700	U
83-32-9	Acenaphthene	350	U
51-28-5	2,4-Dinitrophenol	1700	U
100-02-7	4-Nitrophenol	1700	U
132-64-9	Dibenzofuran	350	U
121-14-2	2,4-Dinitrotoluene	350	U
606-20-2	2,6-Dinitrotoluene	350	U
84-66-2	Diethylphthalate	350	U
7005-72-3	4-Chlorophenyl-phenylether	350	U
86-73-7	Fluorene	350	U
100-01-6	4-Nitroaniline	1700	U
534-52-1	4,6-Dinitro-2-methylphenol	1700	U
86-30-6	N-Nitrosodiphenylamine (1)	350	U
101-55-3	4-Bromophenyl-phenylether	350	U
118-74-1	Hexachlorobenzene	350	U
87-86-5	Pentachlorophenol	1700	U
85-01-8	Phenanthrene	350	U
120-12-7	Anthracene	350	U
84-74-2	Di-n-Butylphthalate	350	U
206-44-0	Fluoranthene	350	U
129-00-0	Pyrene	350	U
85-68-7	Butylbenzylphthalate	350	U
91-94-1	3,3'-Dichlorobenzidine	690	U
56-55-3	Benzo(a)anthracene	350	U
117-81-7	bis(2-Ethylhexyl)Phthalate	350	U
218-01-9	Chrysene	350	U
117-84-0	Di-n-octyl Phthalate	350	U
205-99-2	Benzo(b)fluoranthene	350	U
207-08-9	Benzo(k)fluoranthene	350	U
50-32-8	Benzo(a)pyrene	350	U
193-39-5	Indeno(1,2,3-cd)Pyrene	350	U
53-70-3	Dibenz(a,h)Anthracene	350	U
191-24-2	Benzo(g,h,i)perylene	350	U

(1) - Cannot be separated from Diphenylamine

EPA SAMPLE NO.

B05WW0

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03051 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203051-04B

Sample wt/vol: 30.3 (g/mL) G Lab File ID: 20414N07

Level: (low/med) LOW Date Received: 03/16/92

% Moisture: not dec. 6 dec. Date Extracted: 03/21/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/14/92

GPC Cleanup: (Y/N) N pH: 9.5 Dilution Factor: 1.00

Number TICs found: 15

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN HYDROCARBON	3.17	600	J
2.	UNKNOWN ALKENE	3.95	140	J
3.	UNKNOWN HYDROCARBON	4.22	910	BJ
4.	UNKNOWN HYDROCARBON	5.22	2900	BJ
5.	UNKNOWN ALCOHOL	5.87	41000	BJ
6.	UNKNOWN ALKANE	6.12	460	BJ
7.	UNKNOWN ALKANE	6.28	210	BJ
8.	UNKNOWN HYDROCARBON	7.28	1100	BJ
9.	UNKNOWN HYDROCARBON	7.63	210	J
10.	UNKNOWN KETONE	7.92	250	BJ
11.	UNKNOWN ALCOHOL	8.79	250	BJ
12.	UNKNOWN HYDROCARBON	10.10	210	J
13.	UNKNOWN CARBOXYLIC ACID	19.25	140	BJ
14.	UNKNOWN PHTHALATE	22.79	490	BJ
15.	UNKNOWN CARBOXYLIC ACID ESTE	28.57	460	BJ

1B

EPA SAMPLE NO.

B05WW4

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03051 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203051-05B

Sample wt/vol: 30.5 (g/mL) G Lab File ID: 20414N08

Level: (low/med) LOW Date Received: 03/16/92

% Moisture: not dec. 2 dec. Date Extracted: 03/21/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/14/92

GPC Cleanup: (Y/N) N pH: 9.5 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	330	U
111-44-4	bis(2-Chloroethyl)Ether	330	U
95-57-8	2-Chlorophenol	330	U
541-73-1	1,3-Dichlorobenzene	330	U
106-46-7	1,4-Dichlorobenzene	330	U
100-51-6	Benzyl Alcohol	330	U
95-50-1	1,2-Dichlorobenzene	330	U
95-48-7	2-Methylphenol	330	U
108-60-1	bis(2-Chloroisopropyl)Ether	330	U
106-44-5	4-Methylphenol	330	U
621-64-7	N-Nitroso-Di-n-Propylamine	330	U
67-72-1	Hexachloroethane	330	U
98-95-3	Nitrobenzene	330	U
78-59-1	Isophorone	330	U
88-75-5	2-Nitrophenol	330	U
105-67-9	2,4-Dimethylphenol	330	U
65-85-0	Benzoic Acid	1600	U
111-91-1	bis(2-Chloroethoxy)methane	330	U
120-83-2	2,4-Dichlorophenol	330	U
120-82-1	1,2,4-Trichlorobenzene	330	U
91-20-3	Naphthalene	330	U
106-47-8	4-Chloroaniline	330	U
87-68-3	Hexachlorobutadiene	330	U
59-50-7	4-Chloro-3-methylphenol	330	U
91-57-6	2-Methylnaphthalene	330	U
77-47-4	Hexachlorocyclopentadiene	330	U
88-06-2	2,4,6-Trichlorophenol	330	U
95-95-4	2,4,5-Trichlorophenol	1600	U
91-58-7	2-Chloronaphthalene	330	U
88-74-4	2-Nitroaniline	1600	U
131-11-3	Dimethyl Phthalate	330	U
208-96-8	Acenaphthylene	330	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B05WW4

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03051 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203051-05B

Sample wt/vol: 30.5 (g/mL) G Lab File ID: 20414N08

Level: (low/med) LOW Date Received: 03/16/92

% Moisture: not dec. 2 dec. ____ Date Extracted: 03/21/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/14/92

GPC Cleanup: (Y/N) N pH: 9.5 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1600	U
83-32-9	Acenaphthene	330	U
51-28-5	2,4-Dinitrophenol	1600	U
100-02-7	4-Nitrophenol	1600	U
132-64-9	Dibenzofuran	330	U
121-14-2	2,4-Dinitrotoluene	330	U
606-20-2	2,6-Dinitrotoluene	330	U
84-66-2	Diethylphthalate	330	U
7005-72-3	4-Chlorophenyl-phenylether	330	U
86-73-7	Fluorene	330	U
100-01-6	4-Nitroaniline	1600	U
534-52-1	4,6-Dinitro-2-methylphenol	1600	U
86-30-6	N-Nitrosodiphenylamine (1)	330	U
101-55-3	4-Bromophenyl-phenylether	330	U
118-74-1	Hexachlorobenzene	330	U
87-86-5	Pentachlorophenol	1600	U
85-01-8	Phenanthrene	330	U
120-12-7	Anthracene	330	U
84-74-2	Di-n-Butylphthalate	46	J
206-44-0	Fluoranthene	330	U
129-00-0	Pyrene	330	U
85-68-7	Butylbenzylphthalate	330	U
91-94-1	3,3'-Dichlorobenzidine	660	U
56-55-3	Benzo(a)anthracene	330	U
117-81-7	bis(2-Ethylhexyl)Phthalate	330	U
218-01-9	Chrysene	330	U
117-84-0	Di-n-octyl Phthalate	330	U
205-99-2	Benzo(b)fluoranthene	330	U
207-08-9	Benzo(k)fluoranthene	330	U
50-32-8	Benzo(a)pyrene	330	U
193-39-5	Indeno(1,2,3-cd)Pyrene	330	U
53-70-3	Dibenz(a,h)Anthracene	330	U
191-24-2	Benzo(g,h,i)perylene	330	U

(1) - Cannot be separated from Diphenylamine

1F

EPA SAMPLE NO.

B05WW4

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03051 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203051-05B

Sample wt/vol: 30.5 (g/mL) G Lab File ID: 20414N08

Level: (low/med) LOW Date Received: 03/16/92

% Moisture: not dec. 2 dec. Date Extracted: 03/21/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/14/92

GPC Cleanup: (Y/N) N pH: 9.5 Dilution Factor: 1.0

Number TICs found: 15

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN HYDROCARBON	3.13	540	J
2.	UNKNOWN ALKENE	3.88	170	J
3.	UNKNOWN HYDROCARBON	4.15	940	BJ
4.	UNKNOWN HYDROCARBON	5.10	2900	BJ
5.	UNKNOWN ALCOHOL	5.73	40000	BJ
6.	UNKNOWN ALKANE	5.98	470	BJ
7.	UNKNOWN ALKANE	6.15	200	BJ
8.	UNKNOWN HYDROCARBON	7.13	1000	BJ
9.	UNKNOWN HYDROCARBON	7.43	230	BJ
10.	UNKNOWN KETONE	7.75	200	BJ
11.	UNKNOWN ALCOHOL	8.62	230	BJ
12.	UNKNOWN HYDROCARBON	9.92	170	J
13.	UNKNOWN CARBOXYLIC ACID ESTE	19.05	170	J
14.	UNKNOWN PHTHALATE	22.59	500	BJ
15.	UNKNOWN CARBOXYLIC ACID ESTE	28.36	840	BJ

1B

000032
EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

B05WW5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03051 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203051-06B

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 20414N09

Level: (low/med) LOW Date Received: 03/17/92

% Moisture: not dec. 3 dec. ____ Date Extracted: 03/21/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/14/92

GPC Cleanup: (Y/N) N pH: 9.7 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	340	U
111-44-4	bis(2-Chloroethyl)Ether	340	U
95-57-8	2-Chlorophenol	340	U
541-73-1	1,3-Dichlorobenzene	340	U
106-46-7	1,4-Dichlorobenzene	340	U
100-51-6	Benzyl Alcohol	340	U
95-50-1	1,2-Dichlorobenzene	340	U
95-48-7	2-Methylphenol	340	U
108-60-1	bis(2-Chloroisopropyl)Ether	340	U
106-44-5	4-Methylphenol	340	U
621-64-7	N-Nitroso-Di-n-Propylamine	340	U
67-72-1	Hexachloroethane	340	U
98-95-3	Nitrobenzene	340	U
78-59-1	Isophorone	340	U
88-75-5	2-Nitrophenol	340	U
105-67-9	2,4-Dimethylphenol	340	U
65-85-0	Benzoic Acid	1600	U
111-91-1	bis(2-Chloroethoxy)methane	340	U
120-83-2	2,4-Dichlorophenol	340	U
120-82-1	1,2,4-Trichlorobenzene	340	U
91-20-3	Naphthalene	340	U
106-47-8	4-Chloroaniline	340	U
87-68-3	Hexachlorobutadiene	340	U
59-50-7	4-Chloro-3-methylphenol	340	U
91-57-6	2-Methylnaphthalene	340	U
77-47-4	Hexachlorocyclopentadiene	340	U
88-06-2	2,4,6-Trichlorophenol	340	U
95-95-4	2,4,5-Trichlorophenol	1600	U
91-58-7	2-Chloronaphthalene	340	U
88-74-4	2-Nitroaniline	1600	U
131-11-3	Dimethyl Phthalate	340	U
208-96-8	Acenaphthylene	340	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B05WW5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03051 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203051-06B

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 20414N09

Level: (low/med) LOW Date Received: 03/17/92

% Moisture: not dec. 3 dec. ____ Date Extracted: 03/21/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/14/92

GPC Cleanup: (Y/N) N pH: 9.7 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1600	U
83-32-9	Acenaphthene	340	U
51-28-5	2,4-Dinitrophenol	1600	U
100-02-7	4-Nitrophenol	1600	U
132-64-9	Dibenzofuran	340	U
121-14-2	2,4-Dinitrotoluene	340	U
606-20-2	2,6-Dinitrotoluene	340	U
84-66-2	Diethylphthalate	340	U
7005-72-3	4-Chlorophenyl-phenylether	340	U
86-73-7	Fluorene	340	U
100-01-6	4-Nitroaniline	1600	U
534-52-1	4,6-Dinitro-2-methylphenol	1600	U
86-30-6	N-Nitrosodiphenylamine (1)	340	U
101-55-3	4-Bromophenyl-phenylether	340	U
118-74-1	Hexachlorobenzene	340	U
87-86-5	Pentachlorophenol	1600	U
85-01-8	Phenanthrene	340	U
120-12-7	Anthracene	340	U
84-74-2	Di-n-Butylphthalate	48	J
206-44-0	Fluoranthene	340	U
129-00-0	Pyrene	340	U
85-68-7	Butylbenzylphthalate	340	U
91-94-1	3,3'-Dichlorobenzidine	680	U
56-55-3	Benzo(a)anthracene	340	U
117-81-7	bis(2-Ethylhexyl)Phthalate	340	U
218-01-9	Chrysene	340	U
117-84-0	Di-n-octyl Phthalate	340	U
205-99-2	Benzo(b)fluoranthene	340	U
207-08-9	Benzo(k)fluoranthene	340	U
50-32-8	Benzo(a)pyrene	340	U
193-39-5	Indeno(1,2,3-cd)Pyrene	340	U
53-70-3	Dibenz(a,h)Anthracene	340	U
191-24-2	Benzo(g,h,i)perylene	340	U

(1) - Cannot be separated from Diphenylamine

9115507.1376

1F

EPA SAMPLE NO.

B05WW5

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03051 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203051-06B

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 20414N09

Level: (low/med) LOW Date Received: 03/17/92

% Moisture: not dec. 3 dec. Date Extracted: 03/21/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/14/92

GPC Cleanup: (Y/N) N pH: 9.7 Dilution Factor: 1.00

Number TICs found: 15

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN HYDROCARBON	3.15	510	J
2.	UNKNOWN ALKENE	3.88	170	J
3.	UNKNOWN HYDROCARBON	4.15	960	BJ
4.	UNKNOWN HYDROCARBON	5.10	3200	BJ
5.	UNKNOWN ALCOHOL	5.73	43000	BJ
6.	UNKNOWN ALKANE	5.98	450	BJ
7.	UNKNOWN ALKANE	6.13	210	BJ
8.	UNKNOWN HYDROCARBON	7.13	1200	BJ
9.	UNKNOWN HYDROCARBON	7.43	310	BJ
10.	UNKNOWN KETONE	7.75	240	BJ
11.	UNKNOWN HYDROCARBON	8.60	240	J
12.	UNKNOWN HYDROCARBON	9.92	210	J
13.	UNKNOWN CARBOXYLIC ACID ESTE	19.05	170	J
14.	UNKNOWN PHTHALATE	22.60	510	BJ
15.	UNKNOWN CARBOXYLIC ACID ESTE	28.36	690	BJ

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

000035
EPA SAMPLE NO.

B05WV6

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03051 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203051-01B

Sample wt/vol: 30.2 (g/mL) G Lab File ID: _____

Level: (low/med) LOW Date Received: 03/13/92

% Moisture: not dec. 5 dec. __ Date Extracted: 03/21/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/01/92

GPC Cleanup: (Y/N) N pH: 9.1 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	8.4	U
319-85-7	beta-BHC	8.4	U
319-86-8	delta-BHC	8.4	U
58-89-9	gamma-BHC (Lindane)	8.4	U
76-44-8	Heptachlor	8.4	U
309-00-2	Aldrin	8.4	U
1024-57-3	Heptachlor epoxide	8.4	U
959-98-8	Endosulfan I	8.4	U
60-57-1	Dieldrin	17	U
72-55-9	4,4'-DDE	17	U
72-20-8	Endrin	17	U
33213-65-9	Endosulfan II	17	U
72-54-8	4,4'-DDD	17	U
1031-07-8	Endosulfan sulfate	17	U
50-29-3	4,4'-DDT	17	U
72-43-5	Methoxychlor	84	U
53494-70-5	Endrin ketone	17	U
5103-71-9	alpha-Chlordane	84	U
5103-74-2	gamma-Chlordane	84	U
8001-35-2	Toxaphene	170	U
12674-11-2	Aroclor-1016	84	U
11104-28-2	Aroclor-1221	84	U
11141-16-5	Aroclor-1232	84	U
53469-21-9	Aroclor-1242	84	U
12672-29-6	Aroclor-1248	84	U
11097-69-1	Aroclor-1254	170	U
11096-82-5	Aroclor-1260	170	U

1D

EPA SAMPLE NO.

PESTICIDE ORGANICS ANALYSIS DATA SHEET

B05WV8

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03051 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203051-02D

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

Level: (low/med) LOW Date Received: 03/13/92

% Moisture: not dec. 5 dec. __ Date Extracted: 03/21/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/02/92

GPC Cleanup: (Y/N) N pH: 9.2 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	8.4	U
319-85-7	beta-BHC	8.4	U
319-86-8	delta-BHC	8.4	U
58-89-9	gamma-BHC (Lindane)	8.4	U
76-44-8	Heptachlor	8.4	U
309-00-2	Aldrin	8.4	U
1024-57-3	Heptachlor epoxide	8.4	U
959-98-8	Endosulfan I	8.4	U
60-57-1	Dieldrin	17	U
72-55-9	4,4'-DDE	17	U
72-20-8	Endrin	17	U
33213-65-9	Endosulfan II	17	U
72-54-8	4,4'-DDD	17	U
1031-07-8	Endosulfan sulfate	17	U
50-29-3	4,4'-DDT	17	U
72-43-5	Methoxychlor	84	U
53494-70-5	Endrin ketone	17	U
5103-71-9	alpha-Chlordane	84	U
5103-74-2	gamma-Chlordane	84	U
8001-35-2	Toxaphene	170	U
12674-11-2	Aroclor-1016	84	U
11104-28-2	Aroclor-1221	84	U
11141-16-5	Aroclor-1232	84	U
53469-21-9	Aroclor-1242	84	U
12672-29-6	Aroclor-1248	84	U
11097-69-1	Aroclor-1254	170	U
11096-82-5	Aroclor-1260	170	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

000037
EPA SAMPLE NO.

B05WV9

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03051 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203051-03B

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

Level: (low/med) LOW Date Received: 03/13/92

% Moisture: not dec. 3 dec. __ Date Extracted: 03/21/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/02/92

GPC Cleanup: (Y/N) N pH: 9.4 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	8.2	U
319-85-7	beta-BHC	8.2	U
319-86-8	delta-BHC	8.2	U
58-89-9	gamma-BHC (Lindane)	8.2	U
76-44-8	Heptachlor	8.2	U
309-00-2	Aldrin	8.2	U
1024-57-3	Heptachlor epoxide	8.2	U
959-98-8	Endosulfan I	8.2	U
60-57-1	Dieldrin	16	U
72-55-9	4,4'-DDE	16	U
72-20-8	Endrin	16	U
33213-65-9	Endosulfan II	16	U
72-54-8	4,4'-DDD	16	U
1031-07-8	Endosulfan sulfate	16	U
50-29-3	4,4'-DDT	16	U
72-43-5	Methoxychlor	82	U
53494-70-5	Endrin ketone	16	U
5103-71-9	alpha-Chlordane	82	U
5103-74-2	gamma-Chlordane	82	U
8001-35-2	Toxaphene	160	U
12674-11-2	Aroclor-1016	82	U
11104-28-2	Aroclor-1221	82	U
11141-16-5	Aroclor-1232	82	U
53469-21-9	Aroclor-1242	82	U
12672-29-6	Aroclor-1248	82	U
11097-69-1	Aroclor-1254	160	U
11096-82-5	Aroclor-1260	160	U

EPA SAMPLE NO.

B05WW0

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03051 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203051-04B

Sample wt/vol: 30.2 (g/mL) G Lab File ID: _____

Level: (low/med) LOW Date Received: 03/16/92

% Moisture: not dec. 6 dec. __ Date Extracted: 03/21/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/01/92

GPC Cleanup: (Y/N) N pH: 9.5 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	8.4	U
319-85-7	beta-BHC	8.4	U
319-86-8	delta-BHC	8.4	U
58-89-9	gamma-BHC (Lindane)	8.4	U
76-44-8	Heptachlor	8.4	U
309-00-2	Aldrin	8.4	U
1024-57-3	Heptachlor epoxide	8.4	U
959-98-8	Endosulfan I	8.4	U
60-57-1	Dieldrin	17	U
72-55-9	4,4'-DDE	17	U
72-20-8	Endrin	17	U
33213-65-9	Endosulfan II	17	U
72-54-8	4,4'-DDD	17	U
1031-07-8	Endosulfan sulfate	17	U
50-29-3	4,4'-DDT	17	U
72-43-5	Methoxychlor	84	U
53494-70-5	Endrin ketone	17	U
5103-71-9	alpha-Chlordane	84	U
5103-74-2	gamma-Chlordane	84	U
8001-35-2	Toxaphene	170	U
12674-11-2	Aroclor-1016	84	U
11104-28-2	Aroclor-1221	84	U
11141-16-5	Aroclor-1232	84	U
53469-21-9	Aroclor-1242	84	U
12672-29-6	Aroclor-1248	84	U
11097-69-1	Aroclor-1254	170	U
11096-82-5	Aroclor-1260	170	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

000039
EPA SAMPLE NO.

B05WW4

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03051 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203051-05B

Sample wt/vol: 30.3 (g/mL) G Lab File ID: _____

Level: (low/med) LOW Date Received: 03/16/92

% Moisture: not dec. 1 dec. __ Date Extracted: 03/21/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/02/92

GPC Cleanup: (Y/N) N pH: 9.5 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	8.0	U
319-85-7	beta-BHC	8.0	U
319-86-8	delta-BHC	8.0	U
58-89-9	gamma-BHC (Lindane)	8.0	U
76-44-8	Heptachlor	8.0	U
309-00-2	Aldrin	8.0	U
1024-57-3	Heptachlor epoxide	8.0	U
959-98-8	Endosulfan I	8.0	U
60-57-1	Dieldrin	16	U
72-55-9	4,4'-DDE	16	U
72-20-8	Endrin	16	U
33213-65-9	Endosulfan II	16	U
72-54-8	4,4'-DDD	16	U
1031-07-8	Endosulfan sulfate	16	U
50-29-3	4,4'-DDT	16	U
72-43-5	Methoxychlor	80	U
53494-70-5	Endrin ketone	16	U
5103-71-9	alpha-Chlordane	80	U
5103-74-2	gamma-Chlordane	80	U
8001-35-2	Toxaphene	160	U
12674-11-2	Aroclor-1016	80	U
11104-28-2	Aroclor-1221	80	U
11141-16-5	Aroclor-1232	80	U
53469-21-9	Aroclor-1242	80	U
12672-29-6	Aroclor-1248	80	U
11097-69-1	Aroclor-1254	160	U
11096-82-5	Aroclor-1260	160	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

000040
EPA SAMPLE NO.

B05WW5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03051 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203051-06B

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

Level: (low/med) LOW Date Received: 03/17/92

% Moisture: not dec. 3 dec. __ Date Extracted: 03/21/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/02/92

GPC Cleanup: (Y/N) N pH: 9.7 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	8.2	U
319-85-7	beta-BHC	8.2	U
319-86-8	delta-BHC	8.2	U
58-89-9	gamma-BHC (Lindane)	8.2	U
76-44-8	Heptachlor	8.2	U
309-00-2	Aldrin	8.2	U
1024-57-3	Heptachlor epoxide	8.2	U
959-98-8	Endosulfan I	8.2	U
60-57-1	Dieldrin	16	U
72-55-9	4,4'-DDE	16	U
72-20-8	Endrin	16	U
33213-65-9	Endosulfan II	16	U
72-54-8	4,4'-DDD	16	U
1031-07-8	Endosulfan sulfate	16	U
50-29-3	4,4'-DDT	16	U
72-43-5	Methoxychlor	82	U
53494-70-5	Endrin ketone	16	U
5103-71-9	alpha-Chlordane	82	U
5103-74-2	gamma-Chlordane	82	U
8001-35-2	Toxaphene	160	U
12674-11-2	Aroclor-1016	82	U
11104-28-2	Aroclor-1221	82	U
11141-16-5	Aroclor-1232	82	U
53469-21-9	Aroclor-1242	82	U
12672-29-6	Aroclor-1248	82	U
11097-69-1	Aroclor-1254	160	U
11096-82-5	Aroclor-1260	160	U

TMA
Thermo Analytical Inc.

Skinner & Sherman Laboratories Inc.
300 Second Avenue
Post Office Box 521
Waltham, MA 02254-0521
(617) 890-7200 • FAX (617) 890-3883

MAY 1992
RECEIVED
OSM DMO

April 9, 1992

TMA/NORCAL
2030 Wright Avenue
Richmond, CA 94804
Attention: Dan Stuermer

Quality Control Narrative

Scope
Six (6) soil samples were submitted to TMA/Skinner & Sherman Laboratories, Inc. on March 17, 1992 from Westinghouse/Hanford Company. The samples were analyzed for the USEPA CLP metals and cyanide. The analysis was performed under Skinner and Sherman work order S203087.

Methodology
The samples were prepared, analyzed and reported in accordance with the USEPA Contract Laboratory Program Statement of Work 7/88 (CLP SOW788).

Discussion
All quality control requirements were met for the samples with the following exceptions:

- The antimony and silver digestion spike recoveries exceeded the control limit requirements.
- The duplicate for lead exceeded control limits.

Please feel free to call if there are any questions concerning this package.

Respectfully submitted,

TMA/SKINNER & SHERMAN LABORATORIES, INC.

for

David N. Peterson
Assistant Laboratory Manager

4-12-96
MC

9215607.1384

WESTINGHOUSE/HANFORD

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N2-03-080 SAS No.: SDG No.: B05WV6

SOW No.: 7/88

SAMPLE NUMBER:	Lab Sample ID.
B05WV6	03087-01S
B05WV8	03087-02S
B05WV9	03087-03S
B05WV9D	03087-03S2
B05WV9S	03087-03DS
B05WW0	03087-04S
B05WW4	03087-05S
B05WW5	03087-06S

Were ICP interelement corrections applied? Yes/No YES

Were ICP background corrections applied? Yes/No YES

If yes-were raw data generated before application of background corrections? Yes/No NO

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Kirk Johnson Name: Kirk D. Johnson

Date: 4/9/92 Title: USEPA Data Manager

9215507.1365

WESTINGHOUSE/HANFORD

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B05WV6

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N2-03-080SAS No.: SDG No.: B05WV6

Matrix (soil/water): SOIL Lab Sample ID: 03087-01S

Level (low/med): LOW Date Received: 03/17/92

% Solids: 93.8

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7500.00			P
7440-36-0	Antimony	1.60	U	N	P
7440-38-2	Arsenic	25.30			F
7440-39-3	Barium	74.50			P
7440-41-7	Beryllium	0.56	B		P
7440-43-9	Cadmium	0.20	U		P
7440-70-2	Calcium	5520.00			P
7440-47-3	Chromium	18.90			P
7440-48-4	Cobalt	8.30	B		P
7440-50-8	Copper	19.50			P
7439-89-6	Iron	16900.00			P
7439-92-1	Lead	145.00		S*	F
7439-95-4	Magnesium	4630.00			P
7439-96-5	Manganese	292.00			P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	11.50			P
7440-09-7	Potassium	1270.00			P
7782-49-2	Selenium	0.82	U	EN	F
7440-22-4	Silver	0.40	U		P
7440-23-5	Sodium	207.00	B		P
7440-28-0	Thallium	0.62	U		F
7440-62-2	Vanadium	35.80			P
7440-66-6	Zinc	53.10			P
	Cyanide	5.30	U		AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: BROWN Clarity After: Artifacts: YES

Comments:
STONES

9213507.1386

WESTINGHOUSE/HANFORD

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B05WV8

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N2-03-080SAS No.: SDG No.: B05WV6

Matrix (soil/water): SOIL Lab Sample ID: 03087-02S

Level (low/med): LOW Date Received: 03/17/92

% Solids: 94.4

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5550.00			P
7440-36-0	Antimony	1.60	U	N	P
7440-38-2	Arsenic	7.30			F
7440-39-3	Barium	59.60			P
7440-41-7	Beryllium	0.55	B		P
7440-43-9	Cadmium	0.20	U		P
7440-70-2	Calcium	4120.00			P
7440-47-3	Chromium	17.90			P
7440-48-4	Cobalt	7.40	B		P
7440-50-8	Copper	19.30			P
7439-89-6	Iron	15800.00			P
7439-92-1	Lead	36.90		*	F
7439-95-4	Magnesium	4210.00			P
7439-96-5	Manganese	252.00			P
7439-97-6	Mercury	0.09	U		CV
7440-02-0	Nickel	9.30			P
7440-09-7	Potassium	707.00	B		P
7782-49-2	Selenium	0.83	U	WN	F
7440-22-4	Silver	0.40	U		P
7440-23-5	Sodium	205.00	B		P
7440-28-0	Thallium	0.62	U		F
7440-62-2	Vanadium	32.90			P
7440-66-6	Zinc	45.10			P
	Cyanide	5.20	U		AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: BROWN Clarity After: Artifacts: YES

Comments:
STONES

FORM I - IN Rev.6/89

9215507.1587

WESTINGHOUSE/HANFORD

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B05WV9

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N2-03-0805AS No.: SDG No.: B05WV6

Matrix (soil/water): SOIL Lab Sample ID: 03087-03S

Level (low/med): LOW Date Received: 03/17/92

% Solids: 93.7

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	4800.00			P
7440-36-0	Antimony	1.60	U	N	P
7440-38-2	Arsenic	1.80	B		F
7440-39-3	Barium	52.90			P
7440-41-7	Beryllium	0.20	U		P
7440-43-9	Cadmium	0.20	U		P
7440-70-2	Calcium	3180.00			P
7440-47-3	Chromium	29.60			P
7440-48-4	Cobalt	6.40	B		P
7440-50-8	Copper	20.50			P
7439-89-6	Iron	12700.00			P
7439-92-1	Lead	82.10		S*	F
7439-95-4	Magnesium	3420.00			P
7439-96-5	Manganese	215.00			P
7439-97-6	Mercury	0.09	U		CV
7440-02-0	Nickel	7.90	B		P
7440-09-7	Potassium	509.00	B		P
7782-49-2	Selenium	4.10	U	N	F
7440-22-4	Silver	0.40	U		P
7440-23-5	Sodium	249.00	B		P
7440-28-0	Thallium	0.62	U		F
7440-62-2	Vanadium	32.80			P
7440-66-6	Zinc	38.60			P
	Cyanide	5.10	U		AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: BROWN Clarity After: Artifacts: YES

Comments:
STONES

9213602.1289

WESTINGHOUSE/HANFORD

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B05WW0

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N2-03-080SAS No.: SDG No.: B05WV6

Matrix (soil/water): SOIL Lab Sample ID: 03087-04S

Level (low/med): LOW Date Received: 03/17/92

% Solids: 93.5

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5560.00			P
7440-36-0	Antimony	1.50	U	N	P
7440-38-2	Arsenic	1.20	B		F
7440-39-3	Barium	56.80			P
7440-41-7	Beryllium	0.54	B		P
7440-43-9	Cadmium	0.19	U		P
7440-70-2	Calcium	4330.00			P
7440-47-3	Chromium	12.50			P
7440-48-4	Cobalt	8.10	B		P
7440-50-8	Copper	17.60			P
7439-89-6	Iron	15000.00			P
7439-92-1	Lead	2.80		*	F
7439-95-4	Magnesium	3940.00			P
7439-96-5	Manganese	242.00			P
7439-97-6	Mercury	0.09	U		CV
7440-02-0	Nickel	9.60			P
7440-09-7	Potassium	575.00	B		P
7782-49-2	Selenium	4.20	U	N	F
7440-22-4	Silver	0.39	U		P
7440-23-5	Sodium	399.00	B		P
7440-28-0	Thallium	0.63	U		F
7440-62-2	Vanadium	38.20			P
7440-66-6	Zinc	30.50			P
	Cyanide	5.00	U		AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: BROWN Clarity After: Artifacts: YES

Comments:
STONES

9213507.1389

WESTINGHOUSE/HANFORD

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B05WW4

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N2-03-080SAS No.: SDG No.: B05WV6

Matrix (soil/water): SOIL Lab Sample ID: 03087-05S

Level (low/med): LOW Date Received: 03/17/92

% Solids: 98.1

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5720.00			P
7440-36-0	Antimony	1.60	U	N	P
7440-38-2	Arsenic	1.20	B		F
7440-39-3	Barium	72.50			P
7440-41-7	Beryllium	0.45	B		P
7440-43-9	Cadmium	0.20	U		P
7440-70-2	Calcium	4520.00			P
7440-47-3	Chromium	10.60			P
7440-48-4	Cobalt	9.90	B		P
7440-50-8	Copper	16.90			P
7439-89-6	Iron	18700.00			P
7439-92-1	Lead	2.50		*	F
7439-95-4	Magnesium	4190.00			P
7439-96-5	Manganese	266.00			P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	9.00			P
7440-09-7	Potassium	946.00	B		P
7782-49-2	Selenium	0.77	U	WN	F
7440-22-4	Silver	0.40	U		P
7440-23-5	Sodium	480.00	B		P
7440-28-0	Thallium	0.58	U		F
7440-62-2	Vanadium	51.00			P
7440-66-6	Zinc	39.10			P
	Cyanide	4.70	U		AS

Color Before: BROWN Clarity Before: Texture: FINE

Color After: BROWN Clarity After: Artifacts: YES

Comments:
STONES

9215502.1190

WESTINGHOUSE/HANFORD

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B05WW5

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N2-03-080SAS No.: SDG No.: B05WV6

Matrix (soil/water): SOIL Lab Sample ID: 03087-06S

Level (low/med): LOW Date Received: 03/18/92

% Solids: 97.0

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	4560.00			P
7440-36-0	Antimony	1.60	U	N	P
7440-38-2	Arsenic	1.40	B		F
7440-39-3	Barium	57.60			P
7440-41-7	Beryllium	0.32	B		P
7440-43-9	Cadmium	0.19	U		P
7440-70-2	Calcium	7890.00			P
7440-47-3	Chromium	7.60			P
7440-48-4	Cobalt	6.90	B		P
7440-50-8	Copper	13.60			P
7439-89-6	Iron	12800.00			P
7439-92-1	Lead	2.90		*	F
7439-95-4	Magnesium	3330.00			P
7439-96-5	Manganese	211.00			P
7439-97-6	Mercury	0.09	U		CV
7440-02-0	Nickel	7.40	B		P
7440-09-7	Potassium	766.00	B		P
7782-49-2	Selenium	0.78	U	WN	F
7440-22-4	Silver	0.39	U		P
7440-23-5	Sodium	277.00	B		P
7440-28-0	Thallium	0.58	U		F
7440-62-2	Vanadium	32.20			P
7440-66-6	Zinc	31.70			P
	Cyanide	4.70	U		AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: BROWN Clarity After: Artifacts: YES

Comments:
STONES

9213507.1391

TMA/Skinner & Serman Labs **SAMPLE LOG-IN**

WORKORDER 52-03-087 CLIENT HANFORD-NOR No. SAMPLES:

PROTCL CLP **TURNAROUND** 33 days 5

COOLER TEMP: 4 oC, or NA (Soil) (Water) (Specify Other)

CUSTODIAN A. Benny SDG/BATCH N/A

CUSTODY SEAL: PRESENT/ABSENT/INTACT/NOT CLIENT CASE N2-03-080

SHIPER & # Fedex PO/CONTRACT# i,

TAGS: PRESENT/ABSENT/NA/SEE COC CONTACT Dolores Sanchez

CHAIN OF CUSTODY: PRESENT/ABSENT/NA, # N/A COMMENTS: NONE

SAMPLE CONTAINERS INTACT/BROKEN COMMENTS

CLIENT COMMENT? YES/NO Samples contain Radioactive Material

SAMPLE LABELS AGREE WITH CHAIN OF CUSTODY INFO? YES/NO (COMMENT)

CLIENT PAPERWORK AGREES WITH SAMPLES & COC? YES/NO (COMMENT)

SHIPMENT DATES

LIST ANY DATE WITH PAPERWORK/SHIPMENT PROBLEMS & SPECIFY THE PROBLEM:

N/A

	CLIENT ID	MATRIX	RECEIVED	QC	TEST(S)	HOLD TIME UP
1	B05WV6	SOIL	03/17/92		TM/CN	CN due
2	V8					3/20/92
3	V9			D,S		
4	W0					3/30/92
5	W4					Hg due
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						

Complete 3/17/92

SUBCONTRACT: YES/NO, TO: DATE:

REVIEWED Rev. 1.4 PAGE

715507.192

FEDERAL EXPRESS

QUESTIONS? CALL 800-238-5355 TOLL FREE.

AIRBILL
PACKAGE
TRACKING NUMBER 2126898631

2048M 2126898631

RECIPIENT'S COPY

1 Date 3-16-92

From (Your Name) Please Print

Your Phone Number (Very Important) 510-235-2633

Company T & A /NORCAL

Department/Floor No.

Street Address 2030 WRIGHT AVE

City RICHMOND State CA ZIP Required 94804

2 To (Recipient's Name) Please Print Sample Control

Recipient's Phone Number (Very Important) (617) 890-7200

Company Skinner & Sherman

Department/Floor No.

Exact Street Address (We Cannot Deliver to P.O. Boxes or P.O. Zip Codes.) 300 Second Ave

City Waltham State MA ZIP Required 02254

YOUR INTERNAL BILLING REFERENCE INFORMATION (optional) (First 24 characters will appear on invoice.) 2560-6406

H IF HOLD FOR PICK-UP, Print FEDEX Address Here
Street Address
City State ZIP Required

3 PAYMENT 1 [X] Bill Sender 2 [ ] Bill Recipient's FedEx Acct. No. 3 [ ] Bill 3rd Party FedEx Acct. No. 4 [ ] Bill Credit Card 5 [ ] Cash/Check

4 SERVICES (Check only one box)

Priority Overnight (Delivery by next business morning†)
11 [X] YOUR PACKAGING
16 [ ] FEDEX LETTER *
12 [ ] FEDEX PAK *
13 [ ] FEDEX BOX
14 [ ] FEDEX TUBE

Standard Overnight (Delivery by next business afternoon†)
51 [ ] YOUR PACKAGING
56 [ ] FEDEX LETTER *
52 [ ] FEDEX PAK *
53 [ ] FEDEX BOX
54 [ ] FEDEX TUBE

Economy Two-Day (Delivery by second business day†)
30 [ ] ECONOMY

Government Overnight (Restricted for authorized users only)
46 [ ] GOVT LETTER
41 [ ] GOVT PACKAGE

Freight Service (for Extra Large or any package over 150 lbs.)
70 [ ] OVERNIGHT FREIGHT ** (Contained reservation required)
80 [ ] TWO-DAY FREIGHT **

† Delivery commitment may be later in some areas.
*Declared Value Limit $100.
**Call for delivery schedule.

5 DELIVERY AND SPECIAL HANDLING (Check services required)
1 [ ] HOLD FOR PICK-UP (Fill in Box H)
2 [X] DELIVER WEEKDAY
3 DELIVER SATURDAY (Extra charge) (Not available to all locations) [ ]
4 [ ] DANGEROUS GOODS (Extra charge)
5 [ ]
6 [ ] DRY ICE ____ Lbs
7 [ ] OTHER SPECIAL SERVICE
8 [ ]
9 [ ] SATURDAY PICK-UP (Extra charge)
10 [ ]
11 [ ]
12 [ ] HOLIDAY DELIVERY (If offered) (Extra charge)

6

PACKAGES	WEIGHT In Pounds Only	YOUR DECLARED VALUE
1	32	
Total 1	Total 32	Total

DIM SHIPMENT (Chargeable Weight)
[ ] ____ lbs.
L x W x H =

Received At
1 [X] Regular Stop 3 [ ] Drop Box
2 [ ] On-Call Stop 4 [ ] B.S.C. 5 [ ] Station

Emp. No. Date
[ ] Cash Received
[ ] Return Shipment
[ ] Third Party [ ] Chg. To Del. [ ] Chg. To Hold
Street Address
City State Zip
Received By X
Date/Time Received 3/17/92 FedEx Employee Number 9:30

7 Release Signature:
FedEx Emp. No. Date/Time

Federal Express Use
Base Charges
Declared Value Charge
Other 1
Other 2
Total Charges

REVISION DATE 6/91
PART #137204 FXEM 1/92
FORMAT #099
099

© 1990-91 FEDEX PRINTED IN U.S.A.

1507.1395

FEDERAL EXPRESS

QUESTIONS? CALL 800-238-5355 TOLL FREE

AIRBILL
PACKAGE
TRACKING NUMBER

2126898642

20684 2126898642

Date 3-17-92

RECIPIENT'S COPY

1

From (Your Name) Please Print

Your Phone Number (Very Important) (510)235-2633

Company T M A / NORCAL

Department/Floor No.

Street Address 2030 WRIGHT AVE

City RICHMOND State CA ZIP Required 94804

2

To (Recipient's Name) Please Print Sample Control

Recipient's Phone Number (Very Important) (617) 890-7200

Company Skinner & Sherman Laboratories

Department/Floor No.

Exact Street Address (We Cannot Deliver to P.O. Boxes or P.O. Zip Codes.) 300 Second AVE

City Waltham State MA ZIP Required 02254-0521

YOUR INTERNAL BILLING REFERENCE INFORMATION (optional) (First 24 characters will appear on invoice.)

2320-6406

H IF HOLD FOR PICK-UP, Print FEDEX Address Here

Street Address

City State ZIP Required

3 PAYMENT 1 [X] Bill Sender 2 [ ] Bill Recipient's FedEx Acct. No. 3 [ ] Bill 3rd Party FedEx Acct. No 4 [ ] Bill Credit Card 5 [ ] Cash/Check

4 SERVICES (Check only one box)

Priority Overnight (Delivery by next business morning†)
11 [X] YOUR PACKAGING
16 [ ] FEDEX LETTER *
12 [ ] FEDEX PAK *
13 [ ] FEDEX BOX *
14 [ ] FEDEX TUBE

Standard Overnight (Delivery by next business afternoon†)
51 [ ] YOUR PACKAGING
56 [ ] FEDEX LETTER *
52 [ ] FEDEX PAK *
53 [ ] FEDEX BOX
54 [ ] FEDEX TUBE

Economy Two-Day (Delivery by second business day†)
30 [ ] ECONOMY

Government Overnight (Restricted to authorized users only)
46 [ ] GOVT LETTER
41 [ ] GOVT PACKAGE

Freight Service (for Extra Large or any package over 150 lbs.)
70 [ ] OVERNIGHT FREIGHT ** (Confirmed reservation required)
80 [ ] TWO-DAY FREIGHT **

† Delivery commitment may be later in some areas.
* Declared Value Limit $100
** Call for delivery schedule.

5 DELIVERY AND SPECIAL HANDLING (Check services required)

1 [ ] HOLD FOR PICK-UP (Fill in Box H)
2 [X] DELIVER WEEKDAY
3 DELIVER SATURDAY (Extra charge) (Not available to all locations) [ ]
4 [ ] DANGEROUS GOODS (Extra charge)
5 [ ]
6 [ ] DRY ICE _____ Lbs.
7 [ ] OTHER SPECIAL SERVICE
8 [ ]
9 [ ] SATURDAY PICK-UP (Extra charge)
10 [ ]
11 [ ]
12 [ ] HOLIDAY DELIVERY (If offered) (Extra charge)

6

PACKAGES	WEIGHT In Pounds Only	YOUR DECLARED VALUE
1	12	
Total	Total	Total
1	12	

DIM SHIPMENT (Chargeable Weight)
[ ] _____ lbs.
L x W x H =

Received At
1 [X] Regular Stop 3 [ ] Drop Box
2 [ ] On-Call Stop 4 [ ] B.S.C 5 [ ] Station

Emp. No. Date

[ ] Cash Received
[ ] Return Shipment
[ ] Third Party [ ] Chg. To Del. [ ] Chg. To Hold

Street Address

City State Zip

Received By: X

Date/Time Received 3/18/92 FedEx Employee Number 9:30

7 Release Signature:

FedEx Emp. No Date/Time

Federal Express Use
Base Charges
Declared Value Charge
Other 1
Other 2
Total Charges

REVISION DATE 6/91
PART #137204 FXEM 1/92
FORMAT #099
099

© 1990-91 FEDEX PRINTED IN U.S.A.

9213507.1394

Westinghouse Hanford Company

CHAIN OF CUSTODY

S & S

Custody Form Initiator CM Chance

Company Contact J.D. Fancher

Telephone (509) 376-2081

Project Designation/Sampling Locations 100-HR-1 Vadose Zone Sampling 116-H-1

Collection Date 3-9-92 (1325)

Ice Chest No. SML 153

Field Logbook No. WHC-N-5572

Bill of Lading/Airbill No.

ORSR # 15860 WVS 3-12-

~~Offsite Property No.~~ ~~15875~~ WVS 3-12-92

Method of Shipment Overnight Air Delivery

Shipped to TMA/NORCAL 2030 Wright Ave. Richmond Ca. 94804

Possible Sample Hazards/Remarks Maintain at 4°C

Sample Identification

BD5WV6

~~(1)1000ml G bottle(Gross Alpha/Beta,Gamma-Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am-241)~~	(1)1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am2
(1) 250ml G bottle(ICP/AA metals,Hg)	(1) 250ml G bottle(ICP/AA metals, Hg)
~~(1) 500 ml aG bottle(Semi-VOA,PCB's/PEST.)~~	(1)500 ml aG bottle(Semi-VOA,PCB's/PEST.) CC 3-9-92
(1) 120ml G bottle(Cyanide)	(1) 120ml G bottle(Cyanide)
~~(1)120ml G bottle(VOA)~~	(1) 120ml G bottle(VOA)

☐ Field Transfer of Custody

CHAIN OF POSSESSION (Sign and Print Names)

Relinquished by:	Received by:	Date/Time:
CM Chance Cory Chance	Kermit Blum	3-13-92 1030
Relinquished by: 3-13-92 Kermit Blum	Received by:	Date/Time: 3/17/92 9:30
Relinquished by:	Received by:	Date/Time:
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

156

A 6000-107 (12/90)

9214507.1495

Westinghouse Hanford Company

CHAIN OF CUSTODY

Custody Form Initiator W.V. SETZER

Company Contact J.D. Fancher

Telephone (509)376-2081

Project Designation/Sampling Locations 100-HR-1 Vadose Zone Sampling 116-H-1

Collection Date 3-9-92 (1404)

Ice Chest No. SML 153

Field Logbook No. WHC-N-557 2

Bill of Lading/Airbill No.

OSRS # ~~Offsite Property No.~~ 15860 WNS 3-12-92

Method of Shipment Overnight Air Delivery

Shipped to TMA/NORCAL 2030 Wright Ave. Richmond Ca. 94804

Possible Sample Hazards/Remarks Maintain at 4°C

Sample Identification

B05W08

~~(1)1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am-241)~~	(1)1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am24
(1) 250ml G bottle(ICP/AA metals,Hg)	(1) 250ml G bottle(ICP/AA metals, Hg)
~~(1) 500 ml aG bottle(Semi-VOA,PCB's/PEST.)~~	(1)500 ml aG bottle(Semi-VOA,PCB's/PEST.)
(1)120ml G bottle(Cyanide)	(1) 120ml G bottle(Cyanide)
~~(1)120ml G bottle(VOA)~~	(1) 120ml G bottle(VOA)

☐ Field Transfer of Custody

CHAIN OF POSSESSION (Sign and Print Names)

Relinquished by:	Received by:	Date/Time:
W.V. SETZER W.V. Setzer	Kermit Blum	3-13-92 1030
Relinquished by: Kermit Blum 3-13-92	Received by: [signature]	Date/Time: 3/17/92 9:30
Relinquished by:	Received by:	Date/Time:
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:
Comments:		

157

A 6000-407 (12/90)

Westinghouse Hanford Company

CHAIN OF CUSTODY

Custody Form Initiator: W.V. SETZER / CM Chancy

Company Contact: J.D. Fancher

Telephone: (509) 376-2081

Project Designation/Sampling Locations: 100-HR-1 Vadose Zone Sampling 116-H-1

Collection Date: 3-10-92 (0912)

Ice Chest No.: SML 153

Field Logbook No.: WHC-N-557 2

Bill of Lading/Airbill No.:

~~Offsite Property No.~~ OSRS # 15860

Method of Shipment: Overnight Air Delivery

Shipped to: TMA/NORCAL 2030 Wright Ave. Richmond Ca. 94804

Possible Sample Hazards/Remarks: Maintain at 4°C

Sample Identification

B05WV9

~~(1)1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am-241)~~	(1)1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am24
(1) 250ml G bottle(ICP/AA metals,Hg)	(1) 250ml G bottle(ICP/AA metals, Hg)
~~(1)500 ml aG bottle(Semi-VOA,PCB's/PEST.)~~	(1)500 ml aG bottle(Semi-VOA,PCB's/PEST.)
(1)120ml G bottle(Cyanide)	(1) 120ml G bottle(Cyanide)
~~(1)120ml G bottle(VOA)~~	(1) 120ml G bottle(VOA)

C (3-10-92)

☐ Field Transfer of Custody

CHAIN OF POSSESSION (Sign and Print Names)

Relinquished by:	Received by:	Date/Time:
W.V. SETZER W.V. Setzer	Kermit Blum	3-13-92 1030
Relinquished by: Kermit Blum 3-13-92	Received by: [signature]	Date/Time: 3/17/92 9:30
Relinquished by:	Received by:	Date/Time:
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

158

A 6000-107 (12/90)

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector C M Chance Date Sampled 3-9-92 Time 1325 hours

Company Contact J.D. Fancher Telephone (509) 376-2081

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
	~~1, 120mL G~~	~~soil~~	~~CLP; VOA~~
	~~1, 500mL aG~~	~~soil~~	~~CLP; semi-VOA, PCB/PEST~~
	~~1, 1000mL G~~	~~soil~~	~~Gross Alpha, Gross Beta, Gamma~~
BDSWV6			~~Spec., U-235/238, Pu-239/240,~~
			~~Sr-90, Tc-99, C-14, Am-241.~~
	1, 250mL G	soil	CLP; ICP/AA Metals, Hg
	1, 120mL G	soil	CLP; Cn
	1, 120mL G	soil	CLP; VOA
	1, 500mL aG	soil	CLP; semi-VOA, PCB/PEST
	1, 1000mL G	soil	Gross Alpha, Gross Beta, Gamma
			Spec., U-235/238, Pu-239/240,
			Sr-90, Tc-99, C-14, Am-241.
	1, 250mL G	soil	CLP; ICP/AA Metals, Hg
	1, 120mL G	soil	CLP; Cn

CG 3-11-92

Field Information** _____

Special Handling and/or Storage Samples must be maintained at 4 C.

Possible Sample Hazards ABOVE 100 CPM OVER BACKGROUND, FIELD OBSERVATION

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 3-13-92

Analysis Required _____

159

*Indicate whether sample is soil, sludge, water, etc.

**Use back of page for additional information relative to sample location.

A-6000-406 (05/90)

9213507.1398

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector W.V. Setzer Date Sampled 3-9-92 Time 1404 hours

Company Contact J.D. Fancher Telephone (509) 376-2081

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
	~~1, 120mL G~~	~~soil~~	~~CLP; VOA~~
	~~1, 500mL aG~~	~~soil~~	~~CLP; semi-VOA, PCB/PEST~~
	~~1, 1000mL G~~	~~soil~~	~~Gross Alpha, Gross Beta, Gamma~~
B05WV8			~~Spec., U-235/238, Pu-239/240,~~
			~~Sr-90, Tc-99, C-14, Am-241.~~
	1, 250mL G	soil	CLP; ICP/AA Metals, Hg
	1, 120mL G	soil	CLP; Cn
	1, 120mL G	soil	CLP; VOA
	1, 500mL aG	soil	CLP; semi-VOA, PCB/PEST
	1, 1000mL G	soil	Gross Alpha, Gross Beta, Gamma
			Spec., U-235/238, Pu-239/240,
		CC 3-11-92	Sr-90, Tc-99, C-14, Am-241.
	1, 250mL G	soil	CLP; ICP/AA Metals, Hg
	1, 120mL G	soil	CLP; Cn

Field Information** _____

Special Handling and/or Storage Samples must be maintained at 4 C.

Possible Sample Hazards 100 CPM ABOVE BACKGROUND, FIELD OBSERVATION

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 3-13-92

Analysis Required _____

160

*Indicate whether sample is soil, sludge, water, etc.

**Use back of page for additional information relative to sample location.

A-6000-406 (05/90)

9216507 1799

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector W.V. Setzer/CM Chanie Date Sampled 3-10-92 Time 0912 hours

Company Contact J.D. Fancher Telephone (509) 376-2081

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
	~~1, 120mL G~~	~~soil~~	~~CLP; VOA~~
	~~1, 500mL aG~~	~~soil~~	~~CLP; semi-VOA, PCB/PEST~~
	~~1, 1000mL G~~	~~soil~~	~~Gross Alpha, Gross Beta, Gamma~~
B05WV9			~~Spec., U-235/238, Pu-239/240,~~
			~~Sr-90, Tc-99, C-14, Am-241.~~
	1, 250mL G	soil	CLP; ICP/AA Metals, Hg
	1, 120mL G	soil	CLP; Cn
	1, 120mL G	soil	CLP; VOA
	1, 500mL aG	soil	CLP; semi-VOA, PCB/PEST
	1, 1000mL G	soil	Gross Alpha, Gross Beta, Gamma
			Spec., U-235/238, Pu-239/240,
			Sr-90, Tc-99, C-14, Am-241.
	1, 250mL G	soil	CLP; ICP/AA Metals, Hg
	1, 120mL G	soil	CLP; Cn

CC 3-11-92

Field Information**

Special Handling and/or Storage Samples must be maintained at 4 C.

Possible Sample Hazards 100 CPM ABOVE BACKGROUND IN FIELD

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 3-13-92

Analysis Required

161

*Indicate whether sample is soil, sludge, water, etc.

**Use back of page for additional information relative to sample location.

A-6000-406 (05/90

9214507.1400

Westinghouse Hanford Company	CHAIN OF CUSTODY	S&S

Custody Form Initiator CM Chance

Company Contact J.D. Fancher Telephone (509)376-2081

Project Designation/Sampling Locations 100-HR-1 Vadose Zone Sampling Collection Date 3-11-92

116-H-1

Ice Chest No. SML-115 Field Logbook No. WHC-N-572

Bill of Lading/Airbill No. Offsite Property No.

Method of Shipment Overnight Air Delivery

Shipped to TMA/NORCAL 2030 Wright Ave. Richmond Ca. 94804

Possible Sample Hazards/Remarks Maintain at 4°C

Sample Identification

B05WW0	B05WW4
~~(1)1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am-241)~~	~~(1)1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am24~~
(1) 250ml G bottle(ICP/AA metals,Hg)	(1) 250ml G bottle(ICP/AA metals, Hg)
~~(1)500 ml aG bottle(Semi-VOA,PCB's/PEST.)~~	~~(1)500 ml aG bottle(Semi-VOA,PCB's/PEST.)~~
(1) 120ml G bottle(Cyanide)	(1) 120ml G bottle(Cyanide)
~~(1)120ml G bottle(VOA)~~	~~(1) 120ml G bottle(VOA)~~

☑ Field Transfer of Custody — CHAIN OF POSSESSION — (Sign and Print Names)

Relinquished by:	Received by:	Date/Time:
CM Chance Cory Chance	Kermit Blum	3-16-92 0800 *
Relinquished by: 3-16-92 Kermit Blum	Received by: [illegible]	Date/Time: 3/17/92 9:30
Relinquished by:	Received by:	Date/Time:
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments: * Received 3-14-92 @ 1600; opened 3-16-92 @ 0800.

162

A 6000-407 (12/90)

9213507.1401

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION B05WW4 3-11-92 1250
B05WWD 3-11-92 0815

Collector C M Chance Date Sampled _____ Time _____ hours

Company Contact J.D. Fancher Telephone (509) 376-2081

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
	~~1, 120mL G~~	~~soil~~	~~CLP; VOA~~
	~~1, 500mL aG~~	~~soil~~	~~CLP; semi-VOA, PCB/PEST~~
	~~1, 1000mL G~~	~~soil~~	~~Gross Alpha, Gross Beta, Gamma~~
B05WWD			~~Spec., U-235/238, Pu-239/240,~~
			~~Sr-90, Tc-99, C-14, Am-241.~~
	1, 250mL G	soil	CLP; ICP/AA Metals, Hg
	1, 120mL G	soil	CLP; Cn
	~~1, 120mL G~~	~~soil~~	~~CLP; VOA~~
	~~1, 500mL aG~~	~~soil~~	~~CLP; semi-VOA, PCB/PEST~~
	~~1, 1000mL G~~	~~soil~~	~~Gross Alpha, Gross Beta, Gamma~~
B05WW4			~~Spec., U-235/238, Pu-239/240,~~
			~~Sr-90, Tc-99, C-14, Am-241.~~
	1, 250mL G	soil	CLP; ICP/AA Metals, Hg
	1, 120mL G	soil	CLP; Cn

Field Information** _____

Special Handling and/or Storage Samples must be maintained at 4 C.

Possible Sample Hazards None observed.

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 3-16-92

Analysis Required _____

163

*Indicate whether sample is soil, sludge, water, etc.
**Use back of page for additional information relative to sample location.

A-6000-406 (05/9

9213507.1402

Westinghouse Hanford Company	CHAIN OF CUSTODY	S & S

Custody Form Initiator CMChance

Company Contact J.D. Fancher Telephone (509)376-2081

Project Designation/Sampling Locations 100-HR-1 Vadose Zone Sampling Collection Date 3-13-92

Ice Chest No. Austin Field Logbook No. WHC-N-5572

Bill of Lading/Airbill No. Offsite Property No.

Method of Shipment Overnight Air Delivery

Shipped to TMA/NORCAL 2030 Wright Ave. Richmond Ca. 94804

Possible Sample Hazards/Remarks Maintain at 4°C

Sample Identification

B05WW5 (0907 hrs.)

~~(1)1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am-241)~~	(1)1000ml G bottle(Gross Alpha/Beta,Gamma Spec,Sr-90,Tc-99,C-14,U-235/238,Pu-239/240Am24
(1) 250ml G bottle(ICP/AA metals,Hg)	(1) 250ml G bottle(ICP/AA metals, Hg)
~~(1)500 ml aG bottle(Semi-VOA,PCB's/PEST.)~~	(1)500 ml aG bottle(Semi-VOA,PCB's/PEST.)
(1)120ml G bottle(Cyanide)	(1) 120ml G bottle(Cyanide)
~~(1)120ml G bottle(VOA)~~	(1) 120ml G bottle(VOA)

CC 3-13-92

☑ Field Transfer of Custody — CHAIN OF POSSESSION — (Sign and Print Names)

Relinquished by:	Received by:	Date/Time:
CMChance / Cory Chance	K. Trapp / K. Trapp	3/16/92 1007
K. Trapp / K. Trapp	Kermit Blum	3-17-92 1130
Kermit Blum 3-17-92	[signature]	3-18-92 9:30

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

164

A 6000-107 (12/90)

9214602.1405

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector C. Chance Date Sampled 3/16/92 Time 0907 hours

Company Contact J.D. Fancher Telephone (509) 376-2081

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B05WW5	~~1, 120mL G~~	~~soil~~	~~CLP; VOA~~
	~~1, 500mL aG~~	~~soil~~	~~CLP; semi-VOA, PCB/PEST~~
	~~1, 1000mL G~~	~~soil~~	~~Gross Alpha, Gross Beta, Gamma~~
			~~Spec., U-235/238, Pu-239/240,~~
			~~Sr-90, Tc-99, C-14, Am-241.~~
	1, 250mL G	soil	CLP; ICP/AA Metals, Hg
	1, 120mL G	soil	CLP; Cn
	1, 120mL G	soil	CLP; VOA
	1, 500mL aG	soil	CLP; semi-VOA, PCB/PEST
	1, 1000mL G	soil	Gross Alpha, Gross Beta, Gamma
			Spec., U-235/238, Pu-239/240,
			Sr-90, Tc-99, C-14, Am-241.
	1, 250mL G	soil	CLP; ICP/AA Metals, Hg
	1, 120mL G	soil	CLP; Cn
			KT 3/16/92

Field Information**

Special Handling and/or Storage Samples must be maintained at 4 C.

Possible Sample Hazards None observed.

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 3-17-92

Analysis Required

*Indicate whether sample is soil, sludge, water, etc.

**Use back of page for additional information relative to sample location.

A-6000-406 (05/90)

9213507.1404

BOSWVI-TMA-142

TMA

MAY 1992
RECEIVED
OSM
DMO

WESTINGHOUSE HANFORD COMPANY

Results of Analyses For:

ORGANICS
Case No. 03-077
(TMA/ARLI Work Order # A2-03-077)

METALS
Case No. N2-03-137
SKINNER & SHERMAN Workorder # S2-03-146

TMA Master Work Order #N2-03-137

May 14, 1992

9213507.1405

001A

WESTINGHOUSE HANFORD COMPANY

Results of Analyses For:

ORGANICS
CASE NO. 03-077
(TMA/ARLI Work Order # A2-03-077)

Organics results are presented
for the following WHC SOIL samples(s):

B05WW6
B05WW7

Norcal Work Order # N2-03-137

Thermo Analytical Inc.
160 Taylor Street
Monrovia, Ca. 91016
818-357-3247

9213507.1406

002A

Westinghouse Hanford Company

CHAIN OF CUSTODY

ARL1

Custody Form Initiator: CMChanie

Company Contact: J.D. Fancher

Telephone: (509) 376-2081

Project Designation/Sampling Locations: 100-HR-1

Collection Date: 3-16-92

Ice Chest No.: SML-154

Field Logbook No.: WHC-N-5572

Bill of Lading/Airbill No.:

Offsite Property No.:

Method of Shipment: OVERNIGHT AIR SERVICE

Shipped to: TMA/NORCAL

Possible Sample Hazards/Remarks: None detected with field instruments. Maintain at 4°C

Sample Identification

1) B0SWW6
~~1, 250mL G: CLP; ICP/AA Metals, Hg.~~ X
~~1, 120mL G: CLP; Cn.~~
1, 120mL G: CLP; VOA. X
1, 500mL aG: CLP; Semi-VOA, PCB/Pest. X
~~1, 1000mL G: Gross Alpha, Gross Beta, Gamma Spec, Sr-90, Tc-99, C-14, U-235/238, Pu 239/240, Am-241.~~

2) B0SWW7
~~1, 250mL G: CLP; ICP/AA Metals, Hg.~~ X
~~1, 120mL G: CLP; Cn.~~
1, 120mL G: CLP; VOA. X
1, 500mL aG: CLP; Semi-VOA, PCB/Pest. X
~~1, 1000mL G: Gross Alpha, Gross Beta, Gamma Spec, Sr-90, Tc-99, C-14, U-235/238, Pu 239/240, Am-241.~~

3)
1, 250mL G: CLP; ICP/AA Metals, Hg.
1, 120mL G: CLP; Cn.
1, 120mL G: CLP; VOA.
1, 500mL aG: CLP; Semi-VOA, PCB/Pest.
1, 1000mL G: Gross Alpha, Gross Beta, Gamma Spec, Sr-90, Tc-99, C-14, U-235/238, Pu 239/240, Am-241

[✓] Field Transfer of Custody — Chain of Possession — (Sign and Print Names)

Relinquished by:	Received by:	Date/Time:
CMChanie / Cory Chanie	K. Trapp / K. Trapp	3/17/92 0803
K. Trapp / K. Trapp	CMChanie / Cory Chanie	3/18/92 0850
CMChanie / Cory Chanie	Kermit Blum	3-19-92 1100
3-23-92 Kermit Blum	C. Harris	3/24/92 9 [illegible]

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

A-6000-407 (12/90) (EF) WEF061
Chain of Custody

9213507.1107

003A

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector C. Chance Date Sampled 3/16/92 Time 0953 hours

Company Contact J.D. Fancher Telephone (509) 376-2081

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
	1, 120mL G	soil	CLP; VOA
	1, 500mL aG	soil	CLP; semi-VOA, PCB/PEST
	1, 1000mL G	soil	Gross Alpha, Gross Beta, Gamma
B05WW6			~~Spec., U-235/238, Pu-239/240,~~
			~~Sr-90, Tc-99, C-14, Am-241.~~
	~~1, 250mL G~~	~~soil~~	~~CLP; ICP/AA Metals, Hg~~
	~~1, 120mL G~~	~~soil~~	~~CLP; Cn~~
	1, 120mL G	soil	CLP; VOA
	1, 500mL aG	soil	CLP; semi-VOA, PCB/PEST
	~~1, 1000mL G~~	~~soil~~	~~Gross Alpha, Gross Beta, Gamma~~
B05WW7			~~Spec., U-235/238, Pu-239/240,~~
			~~Sr-90, Tc-99, C-14, Am-241.~~
	~~1, 250mL G~~	~~soil~~	~~CLP; ICP/AA Metals, Hg~~
	~~1, 120mL G~~	~~soil~~	~~CLP; Cn~~

Field Information**

Special Handling and/or Storage Samples must be maintained at 4 C

Possible Sample Hazards None observed

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 3-19-92

Analysis Required

*Indicate whether sample is soil, sludge, water, etc.

**Use back of page for additional information relative to sample location.

A-6000-406 (05/9

9213507.1408

004A

TMA/ARLI
Thermo Analytical Inc.

RADIATION DOSE RATE SURVEY FORM

Date 3/24/92 COMPANY Tetra (WHC) OTHER ORD # 2126899073

Surveyor's Name [illegible]

Model No. HP-210 / ESP-1 Model No. AC-3-7 / ESP-1

Serial Nos. 710289 / 02619 Serial Nos. 407726 / 02628

Calibration Date [illegible] for Recalibration Calibration Date 11/15/92

Instrument Calibration Factor _____ Instrument Calibration Factor 0.177

Sample	Location	HP-210 CPM	HP-210 Factor	HP-210 DPM	AC-3-7 CPM	AC-3-7 Factor	AC-3-7 DPM	Spillage or Breakage?	Activity, nCi/mL or nCi/g
Background					1.0				
Consistency					5030	0.1849			
Smears:	Temp #2276	= 4.2 °C.			0.0			None.	
Repaired (WHC)		B05WW7		1.09E02 pCi/g					0.109 uCi/g
		B05WW6		<50 pCi/g					

Comments:

All OK ✓ Approved [illegible]

Not OK Date 3/24/92

Form: ARLI RA-01 01/15/92

005A

9213507.1409

SAMPLE LOG-IN SHEET

LAB NAME : TMA/ARLI

PAGE : OF

RECEIVED BY (PRINT NAME): CAROLE HARRIS

LOG-IN-DATE : 3/24/92

RECEIVED BY (SIGNATURE): Carole Harris

CASE NUMBER:
SAMPLE DELIVERY GROUP NO.:
SAS NUMBER:

REMARKS:

1. Custody Seal(s) Present/Absent* Intact/Broken
2. Custody Seal Nos:
3. Chain of Custody Records Present/Absent*
4. Traffic Reports or Packing List Present/Absent*
5. Airbill Airbill/Sticker Present/Absent*
6. Airbill No.: 2626899073
7. Sample Tags Present/Absent*
8. Sample Tags Numbers Listed/Not Listed on Chain of Custody
9. Sample Condition: Intact/Broken*/Leaking
10. Does information on custody records, traffic reports, and sample tags agree Yes/No*
11. Date Recieved at Lab: 3/24/92
12. Temp of ice chest 4.2 °C
13. Time Recieved: 9:00 am

EPA SAMPLE #	CORRESPONDING SAMPLE TAG #	CORRESPONDING ASSIGNED LAB #	REMARKS: CONDITION OF SAMPLE SHIPMENT, ETC.
	B05WW6	A2-03-077-01A	
	B05WW7	A2-03-077-02A	

SAMPLE TRANSFER

Fraction:
Area #:
By:
On:

* Contact SMO and attach record of resolution

Reviewed By:

Logbook No.:

Date:

Logbook Page No.:

FORM DC-1

DOC2/LOGIN.TBL

CASE NARRATIVE

LABORATORY : TMA/ARLI

CASE : 03-077

CONTRACT ID : WESTINGHOUSE HANFORD COMPANY

SDG RECEIPT DATE : March 19, 1992

1.0 DESCRIPTION OF CASE :

Two soil samples were analyzed for TCL Organics-Volatiles, Semivolatiles and Pesticide/PCBs according to the USEPA Contract Laboratory Program (CLP) Statement of Work for Organic Analysis, Revision 2/88.

2.0 SAMPLE LIST :

WESTINGHOUSE ID	LAB ID	ANALYSIS REQUESTED	MATRIX
B05WW6	A2-03-077-01A	V	SOIL
B05WW6 MS	A2-03-077-01B	V	SOIL
B05WW6 MSD	A2-03-077-01C	V	SOIL
B05WW6	A2-03-077-01D	P & SV	SOIL
B05WW7	A2-03-077-02A	V	SOIL
B05WW7	A2-03-077-02B	P & SV	SOIL
B05WW7 MS	A2-03-077-02C	P & SV	SOIL
B05WW7 MSD	A2-03-077-02D	P & SV	SOIL

3.0 COMMENTS :

3.1 SHIPPING AND DOCUMENTATION :

All samples were received unbroken and properly documented.

3.2 ANALYSIS

3.2.1 VOLATILE ANALYSIS COMMENTS :

LOW LEVEL SOIL :

The samples were analyzed by heated purge within the CLP SOW holding times. All of the QC results were within the limits specified by the EPA CLP SOW.

TUNES :

All of the BFB tunes are injected directly into the GC/MS instrument.

3.2.2 SEMIVOLATILE ANALYSIS COMMENTS :

LOW LEVEL SOIL :

The samples were extracted and analyzed within the CLP SOW holding times. All of the QC results were within the limits specified by the EPA CLP SOW.

3.2.3 PESTICIDE/PCB ANALYSIS COMMENTS :

SEQUENCE NOTES :

The sequence was started on 4/1/92 and was analyzed in accordance with the EPA CLP SOW.

On 4/2/92 after the injection made at 16:05, the laboratory experienced a temporary power failure. The data associated with this sample injection was lost and therefore cannot be reported on the Form 8E's. The sample was reinjected at a later time in the sequence.

Due to the limitations of the software used to report 2/88 CLP Protocol Pesticide/PCBs results, the instrument blanks cannot be reported. The instrument blanks were injected in the sequence to insure that the system was not contaminated. Instrument blanks were injected at:

10:19	4/2/92	(B40135 and A40135)
12:27	4/2/92	(B40138 and A40138)
13:10	4/2/92	(B40139 and A40139)

SAMPLE NOTES :

LOW LEVEL SOIL :

The samples were extracted and analyzed within the CLP SOW holding times. All of the QC results were within the limits specified by the EPA CLP SOW. However, the confirmation column, though not used for quantitation, had a greater percent recovery for gamma-BHC and Aldrin in both the MS and MSD samples than the primary column. The difference between the two columns for Aldrin is due to a positive interference peak found in the blank as well as the samples. This peak co-elutes with Aldrin on the confirmation column while giving complete resolution on the primary column. The differences in the gamma-BHC quantitation may be due to a positive interference that is responsible for raising the concentration of one polarity column versus another. The positive interference may be matrix interference which co-elutes on one column while giving complete resolution on the other. Or it is possible that a positive interference may be more apparent on one column of a certain polarity versus that of another polarity. At this time the exact cause for the difference between the two columns is not certain.

All of the QC results were within the limits specified by the EPA CLP SOW.

We certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data in this hardcopy data package and in the computer-readable data submitted on diskette is authorized by the Laboratory Manager or his designee, as verified by the following signatures.

Nicole Roth
CLP Program Manager

Dennis D. Wells
Technical Director

9213507.1413

000005

EPA SAMPLE NO.

B05WW6

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03077 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203077-01A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20327R05

Level: (low/med) LOW Date Received: 03/19/92

% Moisture: not dec. 4 Date Analyzed: 03/27/92

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	5	U
67-64-1	Acetone	78	B
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (Total)	5	U

9213507.1414

000006

EPA SAMPLE NO.

B05WW6

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03077 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203077-01A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20327R05

Level: (low/med) LOW Date Received: 03/19/92

% Moisture: not dec. 4 Date Analyzed: 03/27/92

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown cycloalkane	29.34	5.2	J

9213507.1415

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

000007
EPA SAMPLE NO.

B05WW7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03077 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203077-02A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20327R08

Level: (low/med) LOW Date Received: 03/19/92

% Moisture: not dec. 4 Date Analyzed: 03/27/92

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	3	J
67-64-1	Acetone	120	B
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	2	J
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (Total)	5	U

9213507.1416

000008

EPA SAMPLE NO.

B05WW7

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03077 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203077-02A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20327R08

Level: (low/med) LOW Date Received: 03/19/92

% Moisture: not dec. 4 Date Analyzed: 03/27/92

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown cycloalkane	29.34	5.2	J

9213907.1417

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

000009
EPA SAMPLE NO.

B05WW6

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03077 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203077-01D

Sample wt/vol: 30.1 (g/mL) G Lab File ID: 20415N07

Level: (low/med) LOW Date Received: 03/19/92

% Moisture: not dec. 4 dec. ____ Date Extracted: 03/26/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/15/92

GPC Cleanup: (Y/N) N pH: 9.5 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	340	U
111-44-4	bis(2-Chloroethyl)Ether	340	U
95-57-8	2-Chlorophenol	340	U
541-73-1	1,3-Dichlorobenzene	340	U
106-46-7	1,4-Dichlorobenzene	340	U
100-51-6	Benzyl Alcohol	340	U
95-50-1	1,2-Dichlorobenzene	340	U
95-48-7	2-Methylphenol	340	U
108-60-1	bis(2-Chloroisopropyl)Ether	340	U
106-44-5	4-Methylphenol	340	U
621-64-7	N-Nitroso-Di-n-Propylamine	340	U
67-72-1	Hexachloroethane	340	U
98-95-3	Nitrobenzene	340	U
78-59-1	Isophorone	340	U
88-75-5	2-Nitrophenol	340	U
105-67-9	2,4-Dimethylphenol	340	U
65-85-0	Benzoic Acid	1700	U
111-91-1	bis(2-Chloroethoxy)methane	340	U
120-83-2	2,4-Dichlorophenol	340	U
120-82-1	1,2,4-Trichlorobenzene	340	U
91-20-3	Naphthalene	340	U
106-47-8	4-Chloroaniline	340	U
87-68-3	Hexachlorobutadiene	340	U
59-50-7	4-Chloro-3-methylphenol	340	U
91-57-6	2-Methylnaphthalene	340	U
77-47-4	Hexachlorocyclopentadiene	340	U
88-06-2	2,4,6-Trichlorophenol	340	U
95-95-4	2,4,5-Trichlorophenol	1700	U
91-58-7	2-Chloronaphthalene	340	U
88-74-4	2-Nitroaniline	1700	U
131-11-3	Dimethyl Phthalate	340	U
208-96-8	Acenaphthylene	340	U

9213507.1418

000010

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

B05WW6

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03077 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203077-01D

Sample wt/vol: 30.1 (g/mL) G Lab File ID: 20415N07

Level: (low/med) LOW Date Received: 03/19/92

% Moisture: not dec. 4 dec. ____ Date Extracted: 03/26/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/15/92

GPC Cleanup: (Y/N) N pH: 9.5 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1700	U
83-32-9	Acenaphthene	340	U
51-28-5	2,4-Dinitrophenol	1700	U
100-02-7	4-Nitrophenol	1700	U
132-64-9	Dibenzofuran	340	U
121-14-2	2,4-Dinitrotoluene	340	U
606-20-2	2,6-Dinitrotoluene	340	U
84-66-2	Diethylphthalate	340	U
7005-72-3	4-Chlorophenyl-phenylether	340	U
86-73-7	Fluorene	340	U
100-01-6	4-Nitroaniline	1700	U
534-52-1	4,6-Dinitro-2-methylphenol	1700	U
86-30-6	N-Nitrosodiphenylamine (1)	340	U
101-55-3	4-Bromophenyl-phenylether	340	U
118-74-1	Hexachlorobenzene	340	U
87-86-5	Pentachlorophenol	1700	U
85-01-8	Phenanthrene	340	U
120-12-7	Anthracene	340	U
84-74-2	Di-n-Butylphthalate	99	BJ
206-44-0	Fluoranthene	340	U
129-00-0	Pyrene	340	U
85-68-7	Butylbenzylphthalate	340	U
91-94-1	3,3'-Dichlorobenzidine	690	U
56-55-3	Benzo(a)anthracene	340	U
117-81-7	bis(2-Ethylhexyl)Phthalate	340	U
218-01-9	Chrysene	340	U
117-84-0	Di-n-octyl Phthalate	340	U
205-99-2	Benzo(b)fluoranthene	340	U
207-08-9	Benzo(k)fluoranthene	340	U
50-32-8	Benzo(a)pyrene	340	U
193-39-5	Indeno(1,2,3-cd)Pyrene	340	U
53-70-3	Dibenz(a,h)Anthracene	340	U
191-24-2	Benzo(g,h,i)perylene	340	U

(1) - Cannot be separated from Diphenylamine

9213502 1419

1F

000011
EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

B05WW6

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03077 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203077-01D

Sample wt/vol: 30.1 (g/mL) G Lab File ID: 20415N07

Level: (low/med) LOW Date Received: 03/19/92

% Moisture: not dec. 4 dec. ____ Date Extracted: 03/26/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/15/92

GPC Cleanup: (Y/N) N pH: 9.5 Dilution Factor: 1.0

Number TICs found: 12

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN HYDROCARBON	4.08	620	BJ
2.	UNKNOWN HYDROCARBON	5.03	2500	BJ
3.	UNKNOWN HYDROCARBON	5.65	37000	J
4.	UNKNOWN ALKANE	5.92	310	BJ
5.	UNKNOWN ALKANE	6.07	140	BJ
6.	UNKNOWN HYDROCARBON	7.07	930	BJ
7.	UNKNOWN HYDROCARBON	7.37	210	BJ
8.	UNKNOWN KETONE	7.68	170	BJ
9.	UNKNOWN ALCOHOL	8.54	140	J
10.	UNKNOWN CARBOXYLIC ACID	18.97	140	J
11.	UNKNOWN PHTHALATE	22.50	450	BJ
12.	UNKNOWN CARBOXYLIC ACID ESTE	28.26	170	J

9213507.1420

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

000012
EPA SAMPLE NO.

B05WW7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03077 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203077-02B

Sample wt/vol: 30.1 (g/mL) G Lab File ID: 20415N08

Level: (low/med) LOW Date Received: 03/19/92

% Moisture: not dec. 4 dec. Date Extracted: 03/26/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/15/92

GPC Cleanup: (Y/N) N pH: 9.3 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	340	U
111-44-4	bis(2-Chloroethyl)Ether	340	U
95-57-8	2-Chlorophenol	340	U
541-73-1	1,3-Dichlorobenzene	340	U
106-46-7	1,4-Dichlorobenzene	340	U
100-51-6	Benzyl Alcohol	340	U
95-50-1	1,2-Dichlorobenzene	340	U
95-48-7	2-Methylphenol	340	U
108-60-1	bis(2-Chloroisopropyl)Ether	340	U
106-44-5	4-Methylphenol	340	U
621-64-7	N-Nitroso-Di-n-Propylamine	340	U
67-72-1	Hexachloroethane	340	U
98-95-3	Nitrobenzene	340	U
78-59-1	Isophorone	340	U
88-75-5	2-Nitrophenol	340	U
105-67-9	2,4-Dimethylphenol	340	U
65-85-0	Benzoic Acid	1700	U
111-91-1	bis(2-Chloroethoxy)methane	340	U
120-83-2	2,4-Dichlorophenol	340	U
120-82-1	1,2,4-Trichlorobenzene	340	U
91-20-3	Naphthalene	340	U
106-47-8	4-Chloroaniline	340	U
87-68-3	Hexachlorobutadiene	340	U
59-50-7	4-Chloro-3-methylphenol	340	U
91-57-6	2-Methylnaphthalene	340	U
77-47-4	Hexachlorocyclopentadiene	340	U
88-06-2	2,4,6-Trichlorophenol	340	U
95-95-4	2,4,5-Trichlorophenol	1700	U
91-58-7	2-Chloronaphthalene	340	U
88-74-4	2-Nitroaniline	1700	U
131-11-3	Dimethyl Phthalate	340	U
208-96-8	Acenaphthylene	340	U

9213507.1421

1C

000013
EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

B05WW7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03077 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203077-02B

Sample wt/vol: 30.1 (g/mL) G Lab File ID: 20415N08

Level: (low/med) LOW Date Received: 03/19/92

% Moisture: not dec. 4 dec. ____ Date Extracted: 03/26/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/15/92

GPC Cleanup: (Y/N) N pH: 9.3 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1700	U
83-32-9	Acenaphthene	340	U
51-28-5	2,4-Dinitrophenol	1700	U
100-02-7	4-Nitrophenol	1700	U
132-64-9	Dibenzofuran	340	U
121-14-2	2,4-Dinitrotoluene	340	U
606-20-2	2,6-Dinitrotoluene	340	U
84-66-2	Diethylphthalate	340	U
7005-72-3	4-Chlorophenyl-phenylether	340	U
86-73-7	Fluorene	340	U
100-01-6	4-Nitroaniline	1700	U
534-52-1	4,6-Dinitro-2-methylphenol	1700	U
86-30-6	N-Nitrosodiphenylamine (1)	340	U
101-55-3	4-Bromophenyl-phenylether	340	U
118-74-1	Hexachlorobenzene	340	U
87-86-5	Pentachlorophenol	1700	U
85-01-8	Phenanthrene	340	U
120-12-7	Anthracene	340	U
84-74-2	Di-n-Butylphthalate	140	BJ
206-44-0	Fluoranthene	340	U
129-00-0	Pyrene	340	U
85-68-7	Butylbenzylphthalate	340	U
91-94-1	3,3'-Dichlorobenzidine	690	U
56-55-3	Benzo(a)anthracene	340	U
117-81-7	bis(2-Ethylhexyl)Phthalate	340	U
218-01-9	Chrysene	340	U
117-84-0	Di-n-octyl Phthalate	340	U
205-99-2	Benzo(b)fluoranthene	340	U
207-08-9	Benzo(k)fluoranthene	340	U
50-32-8	Benzo(a)pyrene	340	U
193-39-5	Indeno(1,2,3-cd)Pyrene	340	U
53-70-3	Dibenz(a,h)Anthracene	340	U
191-24-2	Benzo(g,h,i)perylene	340	U

(1) - Cannot be separated from Diphenylamine

EPA SAMPLE NO.

B05WW7

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03077 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203077-02B

Sample wt/vol: 30.1 (g/mL) G Lab File ID: 20415N08

Level: (low/med) LOW Date Received: 03/19/92

% Moisture: not dec. 4 dec. Date Extracted: 03/26/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/15/92

GPC Cleanup: (Y/N) N pH: 9.3 Dilution Factor: 1.0

Number TICs found: 14

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN HYDROCARBON	3.13	520	BJ
2.	UNKNOWN ALKENE	3.83	140	J
3.	UNKNOWN HYDROCARBON	4.10	800	BJ
4.	UNKNOWN HYDROCARBON	4.75	240	J
5.	UNKNOWN HYDROCARBON	5.03	2600	BJ
6.	UNKNOWN AMINE	5.67	33000	BJ
7.	UNKNOWN ALKANE	5.92	380	BJ
8.	UNKNOWN ALKANE	6.08	210	BJ
9.	UNKNOWN HYDROCARBON	7.07	860	BJ
10.	UNKNOWN HYDROCARBON	7.37	280	BJ
11.	UNKNOWN KETONE	7.68	210	BJ
12.	UNKNOWN ALCOHOL	8.54	210	J
13.	UNKNOWN CARBOXYLIC ACID ESTE	18.97	170	BJ
14.	UNKNOWN PHTHALATE	22.50	380	BJ

9213507.1423

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

000015
EPA SAMPLE NO.

B05WW6

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03077 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203077-01D

Sample wt/vol: 30.4 (g/mL) G Lab File ID: _____

Level: (low/med) LOW Date Received: 03/19/92

% Moisture: not dec. 4 dec. __ Date Extracted: 03/26/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/02/92

GPC Cleanup: (Y/N) N pH: 9.5 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	8.2	U
319-85-7	beta-BHC	8.2	U
319-86-8	delta-BHC	8.2	U
58-89-9	gamma-BHC (Lindane)	8.2	U
76-44-8	Heptachlor	8.2	U
309-00-2	Aldrin	8.2	U
1024-57-3	Heptachlor epoxide	8.2	U
959-98-8	Endosulfan I	8.2	U
60-57-1	Dieldrin	16	U
72-55-9	4,4'-DDE	16	U
72-20-8	Endrin	16	U
33213-65-9	Endosulfan II	16	U
72-54-8	4,4'-DDD	16	U
1031-07-8	Endosulfan sulfate	16	U
50-29-3	4,4'-DDT	16	U
72-43-5	Methoxychlor	82	U
53494-70-5	Endrin ketone	16	U
5103-71-9	alpha-Chlordane	82	U
5103-74-2	gamma-Chlordane	82	U
8001-35-2	Toxaphene	160	U
12674-11-2	Aroclor-1016	82	U
11104-28-2	Aroclor-1221	82	U
11141-16-5	Aroclor-1232	82	U
53469-21-9	Aroclor-1242	82	U
12672-29-6	Aroclor-1248	82	U
11097-69-1	Aroclor-1254	160	U
11096-82-5	Aroclor-1260	160	U

9213507.1424

000016

EPA SAMPLE NO.

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

B05WW7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03077 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203077-02B

Sample wt/vol: 30.3 (g/mL) G Lab File ID: _____

Level: (low/med) LOW Date Received: 03/19/92

% Moisture: not dec. 4 dec. __ Date Extracted: 03/26/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/02/92

GPC Cleanup: (Y/N) N pH: 9.3 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	8.2	U
319-85-7	beta-BHC	8.2	U
319-86-8	delta-BHC	8.2	U
58-89-9	gamma-BHC (Lindane)	8.2	U
76-44-8	Heptachlor	8.2	U
309-00-2	Aldrin	8.2	U
1024-57-3	Heptachlor epoxide	8.2	U
959-98-8	Endosulfan I	8.2	U
60-57-1	Dieldrin	16	U
72-55-9	4,4'-DDE	16	U
72-20-8	Endrin	16	U
33213-65-9	Endosulfan II	16	U
72-54-8	4,4'-DDD	16	U
1031-07-8	Endosulfan sulfate	16	U
50-29-3	4,4'-DDT	16	U
72-43-5	Methoxychlor	82	U
53494-70-5	Endrin ketone	16	U
5103-71-9	alpha-Chlordane	82	U
5103-74-2	gamma-Chlordane	82	U
8001-35-2	Toxaphene	160	U
12674-11-2	Aroclor-1016	82	U
11104-28-2	Aroclor-1221	82	U
11141-16-5	Aroclor-1232	82	U
53469-21-9	Aroclor-1242	82	U
12672-29-6	Aroclor-1248	82	U
11097-69-1	Aroclor-1254	160	U
11096-82-5	Aroclor-1260	160	U

TMA
Thermo Analytical Inc.

9215507.1425

Skinner & Sherman Laboratories Inc.
300 Second Avenue
Post Office Box 521
Waltham, MA 02254-0521
(617) 890-7200 • FAX (617) 890-3883

MAY 1992
RECEIVED
OSM DMO

April 23, 1992

TMA/NORCAL
2030 Wright Avenue
Richmond, CA 94804
Attention: Dan Stuermer

Quality Control Narrative

Scope
Two (2) soil samples were submitted to TMA/Skinner & Sherman Laboratories, Inc. on March 25, 1992 from Westinghouse/Hanford Company. The sample was analyzed for the USEPA CLP metals and cyanide. The analysis was performed under Skinner and Sherman work order S203146.

Methodology
The samples were prepared, analyzed and reported in accordance with the USEPA Contract Laboratory Program Statement of Work 7/88 (CLP SOW788).

Discussion
All quality control requirements were met for the samples with the following exceptions:

The antimony, and selenium digestion spike recoveries exceeded control limit requirements.

The calcium, chromium, magnesium, manganese and nickel laboratory duplicates exceeded the control limit requirements.

Please feel free to call if there are any questions concerning this package.

Respectfully submitted,

TMA/SKINNER & SHERMAN LABORATORIES, INC.

David N. Peterson
Assistant Laboratory Manager

9215502.1426

WESTINGHOUSE/HANFORD

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B05WW6

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N2-03-137SAS No.: SDG No.: B05WW6

Matrix (soil/water): SOIL Lab Sample ID: 03146-01S

Level (low/med): LOW Date Received: 03/25/92

% Solids: 94.8

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5640.00			P
7440-36-0	Antimony	1.60	U	N	P
7440-38-2	Arsenic	2.00			F
7440-39-3	Barium	55.30			P
7440-41-7	Beryllium	0.35	B		P
7440-43-9	Cadmium	0.20	U		P
7440-70-2	Calcium	11000.00		*	P
7440-47-3	Chromium	17.50		*	P
7440-48-4	Cobalt	7.70	B		P
7440-50-8	Copper	18.40			P
7439-89-6	Iron	14700.00			P
7439-92-1	Lead	4.00			F
7439-95-4	Magnesium	4720.00		*	P
7439-96-5	Manganese	246.00		*	P
7439-97-6	Mercury	0.09	U		CV
7440-02-0	Nickel	19.20		*	P
7440-09-7	Potassium	916.00	B		P
7782-49-2	Selenium	3.90	U	+N	F
7440-22-4	Silver	0.39	U		P
7440-23-5	Sodium	229.00	B		P
7440-28-0	Thallium	0.79	U		F
7440-62-2	Vanadium	34.60			P
7440-66-6	Zinc	35.70			P
	Cyanide	0.52	U		AS

Color Before: BROWN Clarity Before: Texture: FINE

Color After: BROWN Clarity After: Artifacts: YES

Comments:
STONES

FORM I - IN Rev.6/89

02

WESTINGHOUSE/HANFORD

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B05WW7

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N2-03-137SAS No.: SDG No.: B05WW6

Matrix (soil/water): SOIL Lab Sample ID: 03146-02S

Level (low/med): LOW Date Received: 03/25/92

% Solids: 95.2

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	4900.00			P
7440-36-0	Antimony	1.60	U	N	P
7440-38-2	Arsenic	2.10			F
7440-39-3	Barium	69.90			P
7440-41-7	Beryllium	0.34	B		P
7440-43-9	Cadmium	0.19	U		P
7440-70-2	Calcium	9920.00		*	P
7440-47-3	Chromium	19.00		*	P
7440-48-4	Cobalt	7.10	B		P
7440-50-8	Copper	15.80			P
7439-89-6	Iron	12600.00			P
7439-92-1	Lead	3.30			F
7439-95-4	Magnesium	4530.00		*	P
7439-96-5	Manganese	212.00		*	P
7439-97-6	Mercury	0.09	U		CV
7440-02-0	Nickel	24.40		*	P
7440-09-7	Potassium	749.00	B		P
7782-49-2	Selenium	4.00	U	N	F
7440-22-4	Silver	0.39	U		P
7440-23-5	Sodium	193.00	B		P
7440-28-0	Thallium	0.79	U		F
7440-62-2	Vanadium	30.40			P
7440-66-6	Zinc	30.90			P
	Cyanide	0.50	U		AS

Color Before: BROWN Clarity Before: Texture: FINE

Color After: BROWN Clarity After: Artifacts: YES

Comments:
STONES

FORM I - IN Rev.6/89

03

9213502.1428

TMA/Skinner & Serman Labs **SAMPLE LOG-IN**

WORKORDER S203146 CLIENT Hanford Nav No. SAMPLES:

PROTCL CLP TURNARND 33 Days 2

COOLER TEMP: 3 oC, or NA (Soil) (Water) (Specify Other)

CUSTODIAN B Proulx SDG/BATCH

CUSTODY SEAL: PRESENT/ABSENT/INTACT/NOT CLIENT CASE

SHIPER & # Fed Ex PO/CONTRACT# N203137

TAGS: PRESENT/ABSENT/NA/SEE COC CONTACT 8/26/92 BP ~~D. Sanchez~~ D. Steurmer

CHAIN OF CUSTODY: PRESENT/ABSENT/NA, # COMMENTS:

SAMPLE CONTAINERS-INTACT/BROKEN COMMENTS

CLIENT COMMENT? YES/NO Sample Contain Radioactive Material

SAMPLE LABELS AGREE WITH CHAIN OF CUSTODY INFO? YES/NO (COMMENT)

CLIENT PAPERWORK AGREES WITH SAMPLES & COC? YES /NO (COMMENT)

SHIPMENT DATES 3-25-92

LIST ANY DATE WITH PAPERWORK/SHIPMENT PROBLEMS & SPECIFY THE PROBLEM:

	CLIENT ID	MATRIX	RECEIVED	QC	TEST(S)	HOLD TIME UP
1	B05WW6	Soil	3-25-92		TM/CN	CN Due 3-28-92
2	B05WW7	↓	↓	D.S	↓	Hg Due 4-10-9
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						

SUBCONTRACT: YES/NO, TO: DATE:

REVIEWED Rev. 1.4 PAGE

9713507.1429

FEDERAL EXPRESS

QUESTIONS? CALL 800-238-5355 TOLL FREE.

AIRBILL
PACKAGE
TRACKING NUMBER

2126898653

2048* 2126898653

RECIPIENT'S COPY

Date 3-23-92

From (Your Name) Please Print

Your Phone Number (Very important) (619+235-2933

Company T P A INDRCAL

Department/Floor No.

Street Address 2030 WRIGHT AVE

City RICHMOND State CA ZIP Required 94804

To (Recipient's Name) Please Print Sample Control

Recipient's Phone Number (Very Important) (617) 890-7200

Company Skinner & Sherman Laboratories

Department/Floor No.

Exact Street Address (We Cannot Deliver to P.O. Boxes or P.O. Zip Codes.) 300 Second AVE

City Waltham State M.A ZIP Required 02254-0521

YOUR INTERNAL BILLING REFERENCE INFORMATION (optional) (First 24 characters will appear on invoice.) 2370-6406

IF HOLD FOR PICK-UP, Print FEDEX Address Here

Street Address

City State ZIP Required

PAYMENT 1 [X] Bill Sender 2 [ ] Bill Recipient's FedEx Acct. No. 3 [ ] Bill 3rd Party FedEx Acct. No. 4 [ ] Bill Credit Card 5 [ ] Cash/Check

SERVICES (Check only one box)

Priority Overnight (Delivery by next business morning†)
- 11 [X] YOUR PACKAGING
- 16 [ ] FEDEX LETTER *
- 12 [ ] FEDEX PAK *
- 13 [ ] FEDEX BOX
- 14 [ ] FEDEX TUBE

Standard Overnight (Delivery by next business afternoon†)
- 51 [ ] YOUR PACKAGING
- 56 [ ] FEDEX LETTER *
- 52 [ ] FEDEX PAK *
- 53 [ ] FEDEX BOX
- 54 [ ] FEDEX TUBE

Economy Two-Day (Delivery by second business day†)
- 30 [ ] ECONOMY

Government Overnight (Restricted to authorized users only)
- 46 [ ] GOV'T LETTER
- 41 [ ] GOV'T PACKAGE

Freight Service (for Extra Large or any package over 150 lbs.)
- 70 [ ] OVERNIGHT FREIGHT ** (Confirmed reservation required)
- 80 [ ] TWO-DAY FREIGHT **

† Delivery commitment may be later in some areas.
* Declared Value Limit $100
** Call for delivery schedule

DELIVERY AND SPECIAL HANDLING (Check services required)
- 1 [ ] HOLD FOR PICK-UP (Fill in Box H)
- 2 [X] DELIVER WEEKDAY
- 3 DELIVER SATURDAY (Extra charge) (Not available to all locations) [ ]
- 4 [ ] DANGEROUS GOODS (Extra charge)
- 5 [ ]
- 6 [ ] DRY ICE Lbs
- 7 [ ] OTHER SPECIAL SERVICE
- 8 [ ]
- 9 [ ] SATURDAY PICK-UP (Extra charge)
- 10 [ ]
- 11 [ ]
- 12 [ ] HOLIDAY DELIVERY (If offered) (Extra charge)

PACKAGES	WEIGHT In Pounds Only	YOUR DECLARED VALUE
1	10	
Total	Total 1.10	Total

DIM SHIPMENT (Chargeable Weight) [ ] ____ lbs.

____ x ____ x ____ = ____

Received At
- 1 [X] Regular Stop
- 2 [ ] On-Call Stop
- 3 [ ] Drop Box
- 4 [ ] BSC
- 5 [ ] Station

Emp. No. Date

[ ] Cash Received
[ ] Return Shipment
[ ] Third Party [ ] Chg. To Del. [ ] Chg. To Hold

Street Address

City State Zip

Received By X

Date/Time Received 3/24/92 FedEx Employee Number 9580

Release Signature:

FedEx Emp. No. Date/Time

Federal Express Use
- Base Charges
- Declared Value Charge
- Other 1
- Other 2
- Total Charges

REVISION DATE 6/91
PART #137204 FXEM 1/92
FORMAT #099

099

© 1990-91 FEDEX
PRINTED IN U.S.A.

9213507.1430

Westinghouse Hanford Company	CHAIN OF CUSTODY	S&S

Custody Form Initiator: CMChanin

Company Contact: J.D. Fancher — Telephone: (509) 376-2081

Project Designation/Sampling Locations: 100-HR-1 — Collection Date: 3-16-92

Ice Chest No.: SML-154 — Field Logbook No.: WHC-N-5572

Bill of Lading/Airbill No.: — Offsite Property No.:

Method of Shipment: OVERNIGHT AIR SERVICE

Shipped to: TMA/NORCAL

Possible Sample Hazards/Remarks: None detected with field instruments. Maintain at 4°C

Sample Identification

1) B0SWW6
1, 250mL G: CLP; ICP/AA Metals, Hg.
1, 120mL G: CLP; Cn.
~~1, 120mL G: CLP; VOA.~~
~~1, 500mL aG: CLP; Semi-VOA, PCB/Pest.~~
~~1, 1000mL G: Gross Alpha, Gross Beta, Gamma Spec, Sr-90, Tc-99, C-14, U-235/238, Pu 239/240, Am-241.~~

2) B0SWW7
1, 250mL G: CLP; ICP/AA Metals, Hg.
1, 120mL G: CLP; Cn.
~~1, 120mL G: CLP; VOA.~~
~~1, 500mL aG: CLP; Semi-VOA, PCB/Pest.~~
~~1, 1000mL G: Gross Alpha, Gross Beta, Gamma Spec, Sr-90, Tc-99, C-14, U-235/238, Pu 239/240, Am-241.~~

3)
1, 250mL G: CLP; ICP/AA Metals, Hg.
1, 120mL G: CLP; Cn.
1, 120mL G: CLP; VOA.
1, 500mL aG: CLP; ~~Semi-VOA~~, PCB/Pest.
1, 1000mL G: Gross Alpha, ~~Gross Beta~~, Gamma Spec, Sr-90, Tc-99, C-14, U-235/238, Pu 239/240, Am-241

[✓] Field Transfer of Custody — Chain of Possession — (Sign and Print Names)

Relinquished by:	Received by:	Date/Time:
CMChanin / Cory Chanin	K. Trapp / K. Trapp	3/17/92 0803
K. Trapp / K. Trapp	CMChanin / Cory Chanin	3/18/92 0850
CMChanin / Cory Chanin	Kermit Blum	3-19-92 1100
Kermit Blum 3-23-92	[signature]	3/24/92 9:30

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments: Cooler @ 3°C when opened @ Skinner & Sherman

A-6000-407 (12/90) (EF) WEF061
Chain of Custody

9215507.1431

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector C. Chance Date Sampled 3/16/92 Time 0953 hours

Company Contact J.D. Fancher Telephone (509) 376-2081

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
	~~1, 120mL G~~	~~soil~~	~~CLP; VOA~~
	~~1, 500mL aG~~	~~soil~~	~~CLP; semi-VOA, PCB/PEST~~
	~~1, 1000mL G~~	~~soil~~	~~Gross Alpha, Gross Beta, Gamma~~
B05WW6			~~Spec., U-235/238, Pu-239/240,~~
			~~Sr-90, Tc-99, C-14, Am-241.~~
	1, 250mL G	soil	CLP; ICP/AA Metals, Hg
	1, 120mL G	soil	CLP; Cn
	~~1, 120mL G~~	~~soil~~	~~CLP; VOA~~
	~~1, 500mL aG~~	~~soil~~	~~CLP; semi-VOA, PCB/PEST~~
	~~1, 1000mL G~~	~~soil~~	~~Gross Alpha, Gross Beta, Gamma~~
B05WW7			~~Spec., U-235/238, Pu-239/240,~~
			~~Sr-90, Tc-99, C-14, Am-241.~~
	1, 250mL G	soil	CLP; ICP/AA Metals, Hg
	1, 120mL G	soil	CLP; Cn

Field Information** _____

Special Handling and/or Storage Samples must be maintained at 4 C

Possible Sample Hazards None observed.

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 3-19-92

Analysis Required _____

*Indicate whether sample is soil, sludge, water, etc.

**Use back of page for additional information relative to sample location.

A-6000-406 (05/90)

9713507.1432

VALIDATION SUMMARY

9213507.1433

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

000006
EPA SAMPLE NO.

B05WN8

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-04A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20311R07

Level: (low/med) LOW Date Received: 03/02/92

% Moisture: not dec. 5 Date Analyzed: 03/11/92

Column: (pack/cap) PACK Dilution Factor: 1.0

X00945
HR-1
Vad Bore Samp

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

CAS NO.	C		Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	14	~~B~~ U
67-64-1	Acetone	19	~~B~~ U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	11	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	11	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	11	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (Total)	5	U

9-10-92

4/20/92

9213502.1434

1E

000007
EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

B05WN8

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-04A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20311R07

Level: (low/med) LOW Date Received: 03/02/92

% Moisture: not dec. 5 Date Analyzed: 03/11/92

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

9-10-92
MM

FORM I VOA-TIC 1/87 Rev.

9213507.1435

000008

EPA SAMPLE NO.

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

B05WN9

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-05A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20311R08

Level: (low/med) LOW Date Received: 03/02/92

% Moisture: not dec. 2 Date Analyzed: 03/11/92

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	16	~~B~~ U
67-64-1	Acetone	35	~~B~~ U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	3	J
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (Total)	5	U

9-10-92 MY

RD 4/20/93

9213502.1436

1E

000009

EPA SAMPLE NO.

B05WN9

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-05A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20311R08

Level: (low/med) LOW Date Received: 03/02/92

% Moisture: not dec. 2 Date Analyzed: 03/11/92

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

9-10-92
NM

9213502.1437

000010

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B05WP0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-06A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20311R11

Level: (low/med) LOW Date Received: 03/02/92

% Moisture: not dec. 1 Date Analyzed: 03/11/92

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10 ~~9~~	~~B~~ U
67-64-1	Acetone	20	~~B~~
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (Total)	5	U

9-10-92 KM

4/20/

9213507.1438

UUUU11

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

B05WP0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-06A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20311R11

Level: (low/med) LOW Date Received: 03/02/92

% Moisture: not dec. 1 Date Analyzed: 03/11/92

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

9-10-92
MY

9213507.1439

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B05WP1

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-09A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20310R15

Level: (low/med) LOW Date Received: 03/06/92

% Moisture: not dec. 1 Date Analyzed: 03/10/92

Column: (pack/cap) PACK Dilution Factor: 1.0

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

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10 ~~B~~	~~B~~ U
67-64-1	Acetone	33	~~B~~ U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	2	J
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (Total)	5	U

9-10-92

4/20/9

FORM I VOA 1/87 Rev.

9213507.1440

1E

000013

EPA SAMPLE NO.

B05WP1

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-09A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20310R15

Level: (low/med) LOW Date Received: 03/06/92

% Moisture: not dec. 1 Date Analyzed: 03/10/92

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown hydrocarbon	29.37	20	J

9-10-92
MM

9213507.1441

000014

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B05WT8

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-10A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20313R05

Level: (low/med) LOW Date Received: 03/02/92

% Moisture: not dec. 7 Date Analyzed: 03/13/92

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11	U J
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	~~9~~ 11	~~B~~ U J
67-64-1	Acetone	11	~~B~~ U J
75-15-0	Carbon Disulfide	5	U J
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	11	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	11	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	11	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	2	J
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (Total)	5	U

9-10-92 MM

FORM I VOA 1/87 Rev.

PSD 4/20/93

9213507.1442

000015

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B05WT8

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-10A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20313R05

Level: (low/med) LOW Date Received: 03/02/92

% Moisture: not dec. 7 Date Analyzed: 03/13/92

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

9-10-92
MM

9213502.1443

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

000010

EPA SAMPLE NO.

B05WT9

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-03A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20311R06

Level: (low/med) LOW Date Received: 03/04/92

% Moisture: not dec. 5 Date Analyzed: 03/11/92

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	14	~~B~~ U
67-64-1	Acetone	31	~~B~~ U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	11	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	11	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	11	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	49	
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (Total)	5	U

9-10-92 MY

RBD 4/20/93

FORM I VOA 1/87 Rev.

9213502 1444

1E

000017

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

B05WT9

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-03A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20311R06

Level: (low/med) LOW Date Received: 03/04/92

% Moisture: not dec. 5 Date Analyzed: 03/11/92

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown hydrocarbon	29.42	37	J

9-10-92
MY

9215507.1445

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B05WV1

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A203018-01A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20306B06

Level: (low/med) LOW Date Received: 03/03/92

% Moisture: not dec. ____ Date Analyzed: 03/06/92

Column: (pack/cap) WIDE Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	5	B
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	1	J
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (Total)	5	U

9-10-92 MY

BBJ 4/20/93

9213907.1446

1E

000019
EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

B05WV1

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A203018-01A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20306B06

Level: (low/med) LOW Date Received: 03/03/92

% Moisture: not dec. ____ Date Analyzed: 03/06/92

Column (pack/cap) WIDE Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

9-10-92
MM

9213507 1947

1A

000020

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

B05WV2

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-02A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20311R05

Level: (low/med) LOW Date Received: 03/04/92

% Moisture: not dec. 5 Date Analyzed: 03/11/92

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	13	~~B~~ U
67-64-1	Acetone	41	~~B~~ U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	11	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	11	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	11	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (Total)	5	U

9-10-9: MM

FORM I VOA 1/87 Rev.

4/20/93

9713507.1448

1E

000021
EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

B05WV2

ab Name: TMA/ARLI Contract: WHC

ab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

atrix: (soil/water) SOIL Lab Sample ID: A203018-02A

ample wt/vol: 5.0 (g/mL) G Lab File ID: 20311R05

evel: (low/med) LOW Date Received: 03/04/92

Moisture: not dec. 5 Date Analyzed: 03/11/92

olumn (pack/cap) PACK Dilution Factor: 1.0

umber TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown hydrocarbon	29.42	11	J

9-10-92
MM

FORM I VOA-TIC 1/87 Rev.

9216502.1449

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

000022
EPA SAMPLE NO.

B05WV3

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-07A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20311R12

Level: (low/med) LOW Date Received: 03/05/92

% Moisture: not dec. 9 Date Analyzed: 03/11/92

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	22	~~B~~ U
67-64-1	Acetone	36	~~B~~ U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	11	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	11	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	11	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	3	J
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (Total)	5	U

9-10-92 MY

PBS 9/20/93

9213507 1E 1450

000023

EPA SAMPLE NO.

B05WV3

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-07A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20311R12

Level: (low/med) LOW Date Received: 03/05/92

% Moisture: not dec. 9 Date Analyzed: 03/11/92

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

9-10-92
MM

9216507.1451

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B05WV4

ab Name: TMA/ARLI Contract: WHC

ab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

atrix: (soil/water) SOIL Lab Sample ID: A203018-08A

ample wt/vol: 5.0 (g/mL) G Lab File ID: 20311R13

evel: (low/med) LOW Date Received: 03/05/92

Moisture: not dec. 2 Date Analyzed: 03/11/92

olumn: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	~~B~~ U
67-64-1	Acetone	23	~~B~~ U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (Total)	5	U

9-10-92

BD 4/20/95

9213507 1452

1E

Q00025
EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

B05WV4

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-08A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20311R13

Level: (low/med) LOW Date Received: 03/05/92

% Moisture: not dec. 2 Date Analyzed: 03/11/92

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

9-10-92
MY

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B05WN8

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-04B

Sample wt/vol: 30.3 (g/mL) G Lab File ID: 20409N02

Level: (low/med) LOW Date Received: 03/02/92

% Moisture: not dec. 5 dec. ____ Date Extracted: 03/11/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/09/92

GPC Cleanup: (Y/N) N pH: 9.3 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	340	U J
111-44-4	bis(2-Chloroethyl)Ether	340	U
95-57-8	2-Chlorophenol	340	U
541-73-1	1,3-Dichlorobenzene	340	U
106-46-7	1,4-Dichlorobenzene	340	U
100-51-6	Benzyl Alcohol	340	U
95-50-1	1,2-Dichlorobenzene	340	U
95-48-7	2-Methylphenol	340	U
108-60-1	bis(2-Chloroisopropyl)Ether	340	U
106-44-5	4-Methylphenol	340	U
621-64-7	N-Nitroso-Di-n-Propylamine	340	U
67-72-1	Hexachloroethane	340	U
98-95-3	Nitrobenzene	340	U
78-59-1	Isophorone	340	U
88-75-5	2-Nitrophenol	340	U
105-67-9	2,4-Dimethylphenol	340	U
65-85-0	Benzoic Acid	1700	U
111-91-1	bis(2-Chloroethoxy)methane	340	U
120-83-2	2,4-Dichlorophenol	340	U
120-82-1	1,2,4-Trichlorobenzene	340	U
91-20-3	Naphthalene	340	U
106-47-8	4-Chloroaniline	340	U
87-68-3	Hexachlorobutadiene	340	U
59-50-7	4-Chloro-3-methylphenol	340	U
91-57-6	2-Methylnaphthalene	340	U
77-47-4	Hexachlorocyclopentadiene	340	U
88-06-2	2,4,6-Trichlorophenol	340	U
95-95-4	2,4,5-Trichlorophenol	1700	U
91-58-7	2-Chloronaphthalene	340	U
88-74-4	2-Nitroaniline	1700	U
131-11-3	Dimethyl Phthalate	340	U
208-96-8	Acenaphthylene	340	U J

4/20/92

UUUU21

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

B05WN8

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-04B

Sample wt/vol: 30.3 (g/mL) G Lab File ID: 20409N02

Level: (low/med) LOW Date Received: 03/02/92

% Moisture: not dec. 5 dec. ____ Date Extracted: 03/11/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/09/92

GPC Cleanup: (Y/N) N pH: 9.3 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1700	UJ
83-32-9	Acenaphthene	340	U
51-28-5	2,4-Dinitrophenol	1700	U
100-02-7	4-Nitrophenol	1700	U
132-64-9	Dibenzofuran	340	U
121-14-2	2,4-Dinitrotoluene	340	U
606-20-2	2,6-Dinitrotoluene	340	U
84-66-2	Diethylphthalate	340	U
7005-72-3	4-Chlorophenyl-phenylether	340	U
86-73-7	Fluorene	340	U
100-01-6	4-Nitroaniline	1700	U
534-52-1	4,6-Dinitro-2-methylphenol	1700	U
86-30-6	N-Nitrosodiphenylamine (1)	340	U
101-55-3	4-Bromophenyl-phenylether	340	U
118-74-1	Hexachlorobenzene	340	U
87-86-5	Pentachlorophenol	1700	U
85-01-8	Phenanthrene	340	U
120-12-7	Anthracene	340	U
84-74-2	Di-n-Butylphthalate	340	U
206-44-0	Fluoranthene	340	U
129-00-0	Pyrene	340	U
85-68-7	Butylbenzylphthalate	340	U
91-94-1	3,3'-Dichlorobenzidine	690	U
56-55-3	Benzo(a)anthracene	340	U
117-81-7	bis(2-Ethylhexyl)Phthalate	340	U
218-01-9	Chrysene	340	U
117-84-0	Di-n-octyl Phthalate	340	U
205-99-2	Benzo(b)fluoranthene	340	U
207-08-9	Benzo(k)fluoranthene	340	U
50-32-8	Benzo(a)pyrene	340	U
193-39-5	Indeno(1,2,3-cd)Pyrene	340	U
53-70-3	Dibenz(a,h)Anthracene	340	U
191-24-2	Benzo(g,h,i)perylene	340	UJ

(1) - Cannot be separated from Diphenylamine

EPA SAMPLE NO.

B05WN8

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-04B

Sample wt/vol: 30.3 (g/mL) G Lab File ID: 20409N02

Level: (low/med) LOW Date Received: 03/02/92

% Moisture: not dec. 5 dec. ____ Date Extracted: 03/11/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/09/92

GPC Cleanup: (Y/N) N pH: 9.3 Dilution Factor: 1.00

Number TICs found: 20

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN HYDROCARBON	3.13	940	~~BJ~~
2.	UNKNOWN ALKENE	3.92	170	~~BJ~~
3.	UNKNOWN HYDROCARBON	4.20	170	~~BJ~~
4.	UNKNOWN HYDROCARBON	4.85	170	J
5.	UNKNOWN ALCOHOL	5.15	1600	~~BJ~~
6.	UNKNOWN ALCOHOL	5.75	25000	~~BJ~~
7.	UNKNOWN ALCOHOL	6.05	310	~~BJ~~
8.	UNKNOWN HYDROCARBON	7.22	590	~~BJ~~
9.	UNKNOWN HYDROCARBON	7.52	280	J
10.	UNKNOWN KETONE	7.85	350	~~BJ~~
11.	UNKNOWN HYDROCARBON	9.09	240	J
12.	UNKNOWN ALCOHOL	9.92	380	~~J~~
13.	UNKNOWN PHTHALATE	22.72	310	~~BJ~~
14.	UNKNOWN CARBOXYLIC ACID ESTE	25.17	170	J
15.	UNKNOWN CARBOXYLIC ACID ESTE	28.52	13000	J
16.	UNKNOWN ALKANE	29.51	310	J
17.	UNKNOWN ALKANE	31.36	140	J
18.	UNKNOWN ALKANE	31.44	170	J
19.	UNKNOWN ALKANE	33.84	310	J
20.	UNKNOWN ALKANE	37.29	350	J

4/20/93

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B05WN9

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-05D

Sample wt/vol: 30.4 (g/mL) G Lab File ID: 20409N05

Level: (low/med) LOW Date Received: 03/02/92

% Moisture: not dec. 2 dec. ____ Date Extracted: 03/11/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/09/92

GPC Cleanup: (Y/N) N pH: 9.2 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	330	U
111-44-4	bis(2-Chloroethyl)Ether	330	U
95-57-8	2-Chlorophenol	330	U
541-73-1	1,3-Dichlorobenzene	330	U
106-46-7	1,4-Dichlorobenzene	330	U
100-51-6	Benzyl Alcohol	330	U
95-50-1	1,2-Dichlorobenzene	330	U
95-48-7	2-Methylphenol	330	U
108-60-1	bis(2-Chloroisopropyl)Ether	330	U
106-44-5	4-Methylphenol	330	U
621-64-7	N-Nitroso-Di-n-Propylamine	330	U
67-72-1	Hexachloroethane	330	U
98-95-3	Nitrobenzene	330	U
78-59-1	Isophorone	330	U
88-75-5	2-Nitrophenol	330	U
105-67-9	2,4-Dimethylphenol	330	U
65-85-0	Benzoic Acid	1600	U
111-91-1	bis(2-Chloroethoxy)methane	330	U
120-83-2	2,4-Dichlorophenol	330	U
120-82-1	1,2,4-Trichlorobenzene	330	U
91-20-3	Naphthalene	330	U
106-47-8	4-Chloroaniline	330	U
87-68-3	Hexachlorobutadiene	330	U
59-50-7	4-Chloro-3-methylphenol	330	U
91-57-6	2-Methylnaphthalene	330	U
77-47-4	Hexachlorocyclopentadiene	330	U
88-06-2	2,4,6-Trichlorophenol	330	U
95-95-4	2,4,5-Trichlorophenol	1600	U
91-58-7	2-Chloronaphthalene	330	U
88-74-4	2-Nitroaniline	1600	U
131-11-3	Dimethyl Phthalate	330	U
208-96-8	Acenaphthylene	330	U

EPA SAMPLE NO.

B05WN9

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-05D

Sample wt/vol: 30.4 (g/mL) G Lab File ID: 20409N05

Level: (low/med) LOW Date Received: 03/02/92

% Moisture: not dec. 2 dec. ____ Date Extracted: 03/11/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/09/92

GPC Cleanup: (Y/N) N pH: 9.2 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1600	U J
83-32-9	Acenaphthene	330	U
51-28-5	2,4-Dinitrophenol	1600	U
100-02-7	4-Nitrophenol	1600	U
132-64-9	Dibenzofuran	330	U
121-14-2	2,4-Dinitrotoluene	330	U
606-20-2	2,6-Dinitrotoluene	330	U
84-66-2	Diethylphthalate	330	U
7005-72-3	4-Chlorophenyl-phenylether	330	U
86-73-7	Fluorene	330	U
100-01-6	4-Nitroaniline	1600	U
534-52-1	4,6-Dinitro-2-methylphenol	1600	U
86-30-6	N-Nitrosodiphenylamine (1)	330	U
101-55-3	4-Bromophenyl-phenylether	330	U
118-74-1	Hexachlorobenzene	330	U
87-86-5	Pentachlorophenol	1600	U
85-01-8	Phenanthrene	330	U
120-12-7	Anthracene	330	U
84-74-2	Di-n-Butylphthalate	330	U
206-44-0	Fluoranthene	330	U
129-00-0	Pyrene	330	U
85-68-7	Butylbenzylphthalate	330	U
91-94-1	3,3'-Dichlorobenzidine	660	U
56-55-3	Benzo(a)anthracene	330	U
117-81-7	bis(2-Ethylhexyl)Phthalate	330	U
218-01-9	Chrysene	330	U
117-84-0	Di-n-octyl Phthalate	330	U
205-99-2	Benzo(b)fluoranthene	330	U
207-08-9	Benzo(k)fluoranthene	330	U
50-32-8	Benzo(a)pyrene	330	U
193-39-5	Indeno(1,2,3-cd)Pyrene	330	U
53-70-3	Dibenz(a,h)Anthracene	330	U
191-24-2	Benzo(g,h,i)perylene	330	U

(1) - Cannot be separated from Diphenylamine

4/20/93

EPA SAMPLE NO.

B05WN9

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-05D

Sample wt/vol: 30.4 (g/mL) G Lab File ID: 20409N05

Level: (low/med) LOW Date Received: 03/02/92

% Moisture: not dec. 2 dec. ____ Date Extracted: 03/11/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/09/92

GPC Cleanup: (Y/N) N pH: 9.2 Dilution Factor: 1.0

Number TICs found: 11

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN HYDROCARBON	3.13	940	~~BJ~~ U
2.	UNKNOWN KETONE	4.77	130	J
3.	UNKNOWN ALCOHOL	5.12	1500	~~BJ~~ U
4.	UNKNOWN ALCOHOL	5.72	26000	~~BJ~~ U
5.	UNKNOWN ALCOHOL	6.02	230	~~BJ~~ U
6.	UNKNOWN HYDROCARBON	7.18	570	~~BJ~~ U
7.	UNKNOWN KETONE	7.80	370	~~BJ~~ U
8.	UNKNOWN ALCOHOL	9.87	170	J
9.	UNKNOWN CARBOXYLIC ACID	19.10	130	J
10.	UNKNOWN PHTHALATE	22.64	340	~~BJ~~ U
11.	UNKNOWN CARBOXYLIC ACID ESTE	28.39	270	J

PBJ 4/20/95

000032

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B05WP0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-06B

Sample wt/vol: 31.0 (g/mL) G Lab File ID: 20409N06

Level: (low/med) LOW Date Received: 03/02/92

% Moisture: not dec. 1 dec. ____ Date Extracted: 03/11/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/09/92

GPC Cleanup: (Y/N) N pH: 10.0 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	320	U J
111-44-4	bis(2-Chloroethyl)Ether	320	U
95-57-8	2-Chlorophenol	320	U
541-73-1	1,3-Dichlorobenzene	320	U
106-46-7	1,4-Dichlorobenzene	320	U
100-51-6	Benzyl Alcohol	320	U
95-50-1	1,2-Dichlorobenzene	320	U
95-48-7	2-Methylphenol	320	U
108-60-1	bis(2-Chloroisopropyl)Ether	320	U
106-44-5	4-Methylphenol	320	U
621-64-7	N-Nitroso-Di-n-Propylamine	320	U
67-72-1	Hexachloroethane	320	U
98-95-3	Nitrobenzene	320	U
78-59-1	Isophorone	320	U
88-75-5	2-Nitrophenol	320	U
105-67-9	2,4-Dimethylphenol	320	U
65-85-0	Benzoic Acid	1600	U
111-91-1	bis(2-Chloroethoxy)methane	320	U
120-83-2	2,4-Dichlorophenol	320	U
120-82-1	1,2,4-Trichlorobenzene	320	U
91-20-3	Naphthalene	320	U
106-47-8	4-Chloroaniline	320	U
87-68-3	Hexachlorobutadiene	320	U
59-50-7	4-Chloro-3-methylphenol	320	U
91-57-6	2-Methylnaphthalene	320	U
77-47-4	Hexachlorocyclopentadiene	320	U
88-06-2	2,4,6-Trichlorophenol	320	U
95-95-4	2,4,5-Trichlorophenol	1600	U
91-58-7	2-Chloronaphthalene	320	U
88-74-4	2-Nitroaniline	1600	U
131-11-3	Dimethyl Phthalate	320	U
208-96-8	Acenaphthylene	320	U

RD 4/20/92

000035

1c

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B05WP0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-06B

Sample wt/vol: 31.0 (g/mL) G Lab File ID: 20409N06

Level: (low/med) LOW Date Received: 03/02/92

% Moisture: not dec. 1 dec. ____ Date Extracted: 03/11/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/09/92

GPC Cleanup: (Y/N) N pH: 10.0 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1600	U
83-32-9	Acenaphthene	320	U
51-28-5	2,4-Dinitrophenol	1600	U
100-02-7	4-Nitrophenol	1600	U
132-64-9	Dibenzofuran	320	U
121-14-2	2,4-Dinitrotoluene	320	U
606-20-2	2,6-Dinitrotoluene	320	U
84-66-2	Diethylphthalate	320	U
7005-72-3	4-Chlorophenyl-phenylether	320	U
86-73-7	Fluorene	320	U
100-01-6	4-Nitroaniline	1600	U
534-52-1	4,6-Dinitro-2-methylphenol	1600	U
86-30-6	N-Nitrosodiphenylamine (1)	320	U
101-55-3	4-Bromophenyl-phenylether	320	U
118-74-1	Hexachlorobenzene	320	U
87-86-5	Pentachlorophenol	1600	U
85-01-8	Phenanthrene	320	U
120-12-7	Anthracene	320	U
84-74-2	Di-n-Butylphthalate	320	U
206-44-0	Fluoranthene	320	U
129-00-0	Pyrene	320	U
85-68-7	Butylbenzylphthalate	320	U
91-94-1	3,3'-Dichlorobenzidine	650	U
56-55-3	Benzo(a)anthracene	320	U
117-81-7	bis(2-Ethylhexyl)Phthalate	320	U
218-01-9	Chrysene	320	U
117-84-0	Di-n-octyl Phthalate	320	U
205-99-2	Benzo(b)fluoranthene	320	U
207-08-9	Benzo(k)fluoranthene	320	U
50-32-8	Benzo(a)pyrene	320	U
193-39-5	Indeno(1,2,3-cd)Pyrene	320	U
53-70-3	Dibenz(a,h)Anthracene	320	U
191-24-2	Benzo(g,h,i)perylene	320	U

(1) - Cannot be separated from Diphenylamine

RD 4/20/93

IF

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B05WP0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-06B

Sample wt/vol: 31.0 (g/mL) G Lab File ID: 20409N06

Level: (low/med) LOW Date Received: 03/02/92

% Moisture: not dec. 1 dec. Date Extracted: 03/11/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/09/92

GPC Cleanup: (Y/N) N pH: 10.0 Dilution Factor: 1.0

Number TICs found: 13

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN HYDROCARBON	3.13	520	~~BJ~~
2.	UNKNOWN ALKENE	3.85	160	~~BJ~~
3.	UNKNOWN HYDROCARBON	4.13	200	~~BJ~~
4.	UNKNOWN ALCOHOL	5.13	1600	~~BJ~~
5.	UNKNOWN ALCOHOL	5.77	24000	~~BJ~~
6.	UNKNOWN ALCOHOL	6.07	330	~~BJ~~
7.	UNKNOWN HYDROCARBON	7.25	590	~~BJ~~
8.	UNKNOWN KETONE	7.88	360	J
9.	UNKNOWN ALCOHOL	9.14	160	~~BJ~~
10.	UNKNOWN CARBOXYLIC ACID	19.22	130	J
11.	UNKNOWN PHTHALATE	22.75	290	~~BJ~~
12.	UNKNOWN CARBOXYLIC ACID ESTE	28.52	230	J
13.	UNKNOWN ALKANE	31.41	160	J

4/20/93

000035

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B05WP1

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-09B

Sample wt/vol: 31.0 (g/mL) G Lab File ID: 20409N08

Level: (low/med) LOW Date Received: 03/06/92

% Moisture: not dec. 1 dec. Date Extracted: 03/11/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/09/92

GPC Cleanup: (Y/N) N pH: 9.9 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	320	U
111-44-4	bis(2-Chloroethyl)Ether	320	U
95-57-8	2-Chlorophenol	320	U
541-73-1	1,3-Dichlorobenzene	320	U
106-46-7	1,4-Dichlorobenzene	320	U
100-51-6	Benzyl Alcohol	320	U
95-50-1	1,2-Dichlorobenzene	320	U
95-48-7	2-Methylphenol	320	U
108-60-1	bis(2-Chloroisopropyl)Ether	320	U
106-44-5	4-Methylphenol	320	U
621-64-7	N-Nitroso-Di-n-Propylamine	320	U
67-72-1	Hexachloroethane	320	U
98-95-3	Nitrobenzene	320	U
78-59-1	Isophorone	320	U
88-75-5	2-Nitrophenol	320	U
105-67-9	2,4-Dimethylphenol	320	U
65-85-0	Benzoic Acid	1600	U
111-91-1	bis(2-Chloroethoxy)methane	320	U
120-83-2	2,4-Dichlorophenol	320	U
120-82-1	1,2,4-Trichlorobenzene	320	U
91-20-3	Naphthalene	320	U
106-47-8	4-Chloroaniline	320	U
87-68-3	Hexachlorobutadiene	320	U
59-50-7	4-Chloro-3-methylphenol	320	U
91-57-6	2-Methylnaphthalene	320	U
77-47-4	Hexachlorocyclopentadiene	320	U
88-06-2	2,4,6-Trichlorophenol	320	U
95-95-4	2,4,5-Trichlorophenol	1600	U
91-58-7	2-Chloronaphthalene	320	U
88-74-4	2-Nitroaniline	1600	U
131-11-3	Dimethyl Phthalate	320	U
208-96-8	Acenaphthylene	320	U

4/20/93

92150C-1565

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

B05WP1

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-09B

Sample wt/vol: 31.0 (g/mL) G Lab File ID: 20409N08

Level: (low/med) LOW Date Received: 03/06/92

% Moisture: not dec. 1 dec. ____ Date Extracted: 03/11/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/09/92

GPC Cleanup: (Y/N) N pH: 9.9 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1600	U
83-32-9	Acenaphthene	320	U
51-28-5	2,4-Dinitrophenol	1600	U
100-02-7	4-Nitrophenol	1600	U
132-64-9	Dibenzofuran	320	U
121-14-2	2,4-Dinitrotoluene	320	U
606-20-2	2,6-Dinitrotoluene	320	U
84-66-2	Diethylphthalate	320	U
7005-72-3	4-Chlorophenyl-phenylether	320	U
86-73-7	Fluorene	320	U
100-01-6	4-Nitroaniline	1600	U
534-52-1	4,6-Dinitro-2-methylphenol	1600	U
86-30-6	N-Nitrosodiphenylamine (1)	320	U
101-55-3	4-Bromophenyl-phenylether	320	U
118-74-1	Hexachlorobenzene	320	U
87-86-5	Pentachlorophenol	1600	U
85-01-8	Phenanthrene	320	U
120-12-7	Anthracene	320	U
84-74-2	Di-n-Butylphthalate	320 ~~35~~	~~J~~ UJ
206-44-0	Fluoranthene	320	U
129-00-0	Pyrene	320	U
85-68-7	Butylbenzylphthalate	320	U
91-94-1	3,3'-Dichlorobenzidine	650	U
56-55-3	Benzo(a)anthracene	320	U
117-81-7	bis(2-Ethylhexyl)Phthalate	320	U
218-01-9	Chrysene	320	U
117-84-0	Di-n-octyl Phthalate	320	U
205-99-2	Benzo(b)fluoranthene	320	U
207-08-9	Benzo(k)fluoranthene	320	U
50-32-8	Benzo(a)pyrene	320	U
193-39-5	Indeno(1,2,3-cd)Pyrene	320	U
53-70-3	Dibenz(a,h)Anthracene	320	U
191-24-2	Benzo(g,h,i)perylene	320	U

(1) - Cannot be separated from Diphenylamine

FORM I SV-2 1/87 Rev.

PBD 4/20/93

9215507 1469

1F

000037
EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

B05WP1

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-09B

Sample wt/vol: 31.0 (g/mL) G Lab File ID: 20409N08

Level: (low/med) LOW Date Received: 03/06/92

% Moisture: not dec. 1 dec. Date Extracted: 03/11/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/09/92

GPC Cleanup: (Y/N) N pH: 9.9 Dilution Factor: 1.0

Number TICs found: 8

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN ALKENE	3.90	160	~~BJ~~
2.	UNKNOWN HYDROCARBON	4.18	160	~~BJ~~
3.	UNKNOWN ALCOHOL	5.12	1400	~~BJ~~
4.	UNKNOWN ALCOHOL	5.72	25000	~~BJ~~
5.	UNKNOWN HYDROCARBON	7.18	550	~~BJ~~
6.	UNKNOWN KETONE	7.80	330	~~BJ~~
7.	UNKNOWN PHTHALATE	22.64	360	J
8.	UNKNOWN CARBOXYLIC ACID ESTE	28.41	330	J

4

RB 4/20/93

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B05WT8

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-10B

Sample wt/vol: 30.9 (g/mL) G Lab File ID: 20409N10

Level: (low/med) LOW Date Received: 03/02/92

% Moisture: not dec. 7 dec. ____ Date Extracted: 03/13/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/09/92

GPC Cleanup: (Y/N) N pH: 8.4 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	340	U J
111-44-4	bis(2-Chloroethyl)Ether	340	U
95-57-8	2-Chlorophenol	340	U
541-73-1	1,3-Dichlorobenzene	340	U
106-46-7	1,4-Dichlorobenzene	340	U
100-51-6	Benzyl Alcohol	340	U
95-50-1	1,2-Dichlorobenzene	340	U
95-48-7	2-Methylphenol	340	U
108-60-1	bis(2-Chloroisopropyl)Ether	340	U
106-44-5	4-Methylphenol	340	U
621-64-7	N-Nitroso-Di-n-Propylamine	340	U
67-72-1	Hexachloroethane	340	U
98-95-3	Nitrobenzene	340	U
78-59-1	Isophorone	340	U
88-75-5	2-Nitrophenol	340	U
105-67-9	2,4-Dimethylphenol	340	U
65-85-0	Benzoic Acid	1700	U
111-91-1	bis(2-Chloroethoxy)methane	340	U
120-83-2	2,4-Dichlorophenol	340	U
120-82-1	1,2,4-Trichlorobenzene	340	U
91-20-3	Naphthalene	340	U
106-47-8	4-Chloroaniline	340	U
87-68-3	Hexachlorobutadiene	340	U
59-50-7	4-Chloro-3-methylphenol	340	U
91-57-6	2-Methylnaphthalene	340	U
77-47-4	Hexachlorocyclopentadiene	340	U
88-06-2	2,4,6-Trichlorophenol	340	U
95-95-4	2,4,5-Trichlorophenol	1700	U
91-58-7	2-Chloronaphthalene	340	U
88-74-4	2-Nitroaniline	1700	U
131-11-3	Dimethyl Phthalate	340	U
208-96-8	Acenaphthylene	340	U

RB 4/20/92

92150 1C 1466

000039

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

B05WT8

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-10B

Sample wt/vol: 30.9 (g/mL) G Lab File ID: 20409N10

Level: (low/med) LOW Date Received: 03/02/92

% Moisture: not dec. 7 dec. ____ Date Extracted: 03/13/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/09/92

GPC Cleanup: (Y/N) N pH: 8.4 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1700	U J
83-32-9	Acenaphthene	340	U
51-28-5	2,4-Dinitrophenol	1700	U
100-02-7	4-Nitrophenol	1700	U
132-64-9	Dibenzofuran	340	U
121-14-2	2,4-Dinitrotoluene	340	U
606-20-2	2,6-Dinitrotoluene	340	U
84-66-2	Diethylphthalate	340	U
7005-72-3	4-Chlorophenyl-phenylether	340	U
86-73-7	Fluorene	340	U
100-01-6	4-Nitroaniline	1700	U
534-52-1	4,6-Dinitro-2-methylphenol	1700	U
86-30-6	N-Nitrosodiphenylamine (1)	340	U
101-55-3	4-Bromophenyl-phenylether	340	U
118-74-1	Hexachlorobenzene	340	U
87-86-5	Pentachlorophenol	1700	U
85-01-8	Phenanthrene	340	U
120-12-7	Anthracene	340	U J
84-74-2	Di-n-Butylphthalate	340 ~~73~~	~~B~~ UJ
206-44-0	Fluoranthene	340	U J
129-00-0	Pyrene	340	U
85-68-7	Butylbenzylphthalate	340	U
91-94-1	3,3'-Dichlorobenzidine	690	U
56-55-3	Benzo(a)anthracene	340	U
117-81-7	bis(2-Ethylhexyl)Phthalate	340	U
218-01-9	Chrysene	340	U
117-84-0	Di-n-octyl Phthalate	340	U
205-99-2	Benzo(b)fluoranthene	340	U
207-08-9	Benzo(k)fluoranthene	340	U
50-32-8	Benzo(a)pyrene	340	U
193-39-5	Indeno(1,2,3-cd)Pyrene	340	U
53-70-3	Dibenz(a,h)Anthracene	340	U
191-24-2	Benzo(g,h,i)perylene	340	U J

(1) - Cannot be separated from Diphenylamine

PBS 4/20/9

EPA SAMPLE NO.

B05WT8

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-10B

Sample wt/vol: 30.9 (g/mL) G Lab File ID: 20409N10

Level: (low/med) LOW Date Received: 03/02/92

% Moisture: not dec. 7 dec. Date Extracted: 03/13/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/09/92

GPC Cleanup: (Y/N) N pH: 8.4 Dilution Factor: 1.0

Number TICs found: 17

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN HYDROCARBON	3.17	630	J
2.	UNKNOWN ALCOHOL	3.63	770	J
3.	UNKNOWN HYDROCARBON	4.25	38000	~~BJ~~ U
4.	UNKNOWN HYDROCARBON	4.40	3400	~~BJ~~ U
5.	UNKNOWN CYCLOALKANE	4.58	140	J
6.	UNKNOWN ALCOHOL	5.12	1200	J
7.	UNKNOWN ALCOHOL	5.70	21000	~~BJ~~ U
8.	UNKNOWN ALCOHOL	6.02	240	J
9.	UNKNOWN HYDROCARBON	7.18	450	~~BJ~~ U
10.	UNKNOWN KETONE	7.47	420	~~BJ~~ U
11.	UNKNOWN KETONE	7.80	350	~~BJ~~ U
12.	UNKNOWN HYDROCARBON	8.70	140	J
13.	UNKNOWN ALCOHOL	9.02	240	~~BJ~~ U
14.	UNKNOWN HYDROCARBON	9.85	210	J
15.	UNKNOWN CARBOXYLIC ACID	19.07	140	J
16.	UNKNOWN PHTHALATE	22.59	280	~~BJ~~ U
17.	UNKNOWN ALKANE	33.56	420	J

RBD
4/20/93

1B

000041

EPA SAMPLE NO.

B05WT9

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-03B

Sample wt/vol: 30.1 (g/mL) G Lab File ID: 20407N05

Level: (low/med) LOW Date Received: 03/04/92

% Moisture: not dec. 5 dec. ____ Date Extracted: 03/11/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/07/92

GPC Cleanup: (Y/N) N pH: 11.2 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	350	U J
111-44-4	bis(2-Chloroethyl)Ether	350	U
95-57-8	2-Chlorophenol	350	U
541-73-1	1,3-Dichlorobenzene	350	U
106-46-7	1,4-Dichlorobenzene	350	U
100-51-6	Benzyl Alcohol	350	U
95-50-1	1,2-Dichlorobenzene	350	U
95-48-7	2-Methylphenol	350	U
108-60-1	bis(2-Chloroisopropyl)Ether	350	U
106-44-5	4-Methylphenol	350	U
621-64-7	N-Nitroso-Di-n-Propylamine	350	U
67-72-1	Hexachloroethane	350	U
98-95-3	Nitrobenzene	350	U
78-59-1	Isophorone	350	U
88-75-5	2-Nitrophenol	350	U
105-67-9	2,4-Dimethylphenol	350	U
65-85-0	Benzoic Acid	1700	U
111-91-1	bis(2-Chloroethoxy)methane	350	U
120-83-2	2,4-Dichlorophenol	350	U
120-82-1	1,2,4-Trichlorobenzene	350	U
91-20-3	Naphthalene	350	U
106-47-8	4-Chloroaniline	350	U
87-68-3	Hexachlorobutadiene	350	U
59-50-7	4-Chloro-3-methylphenol	350	U
91-57-6	2-Methylnaphthalene	350	U
77-47-4	Hexachlorocyclopentadiene	350	U
88-06-2	2,4,6-Trichlorophenol	350	U
95-95-4	2,4,5-Trichlorophenol	1700	U
91-58-7	2-Chloronaphthalene	350	U
88-74-4	2-Nitroaniline	1700	U
131-11-3	Dimethyl Phthalate	350	U
208-96-8	Acenaphthylene	350	U J

RBD 4/20/93

9213503.1469

000046

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

B05WT9

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-03B

Sample wt/vol: 30.1 (g/mL) G Lab File ID: 20407N05

Level: (low/med) LOW Date Received: 03/04/92

% Moisture: not dec. 5 dec. ____ Date Extracted: 03/11/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/07/92

GPC Cleanup: (Y/N) N pH: 11.2 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1700	U J
83-32-9	Acenaphthene	350	U
51-28-5	2,4-Dinitrophenol	1700	U
100-02-7	4-Nitrophenol	1700	U
132-64-9	Dibenzofuran	350	U
121-14-2	2,4-Dinitrotoluene	350	U
606-20-2	2,6-Dinitrotoluene	350	U
84-66-2	Diethylphthalate	350	U
7005-72-3	4-Chlorophenyl-phenylether	350	U
86-73-7	Fluorene	350	U
100-01-6	4-Nitroaniline	1700	U
534-52-1	4,6-Dinitro-2-methylphenol	1700	U
86-30-6	N-Nitrosodiphenylamine (1)	350	U
101-55-3	4-Bromophenyl-phenylether	350	U
118-74-1	Hexachlorobenzene	350	U
87-86-5	Pentachlorophenol	1700	U
85-01-8	Phenanthrene	350	U
120-12-7	Anthracene	350	U J
84-74-2	Di-n-Butylphthalate	350 ~~53~~	~~J~~ UJ
206-44-0	Fluoranthene	350	U J
129-00-0	Pyrene	350	U
85-68-7	Butylbenzylphthalate	350	U
91-94-1	3,3'-Dichlorobenzidine	690	U
56-55-3	Benzo(a)anthracene	350	U
117-81-7	bis(2-Ethylhexyl)Phthalate	350	U
218-01-9	Chrysene	350	U
117-84-0	Di-n-octyl Phthalate	350	U
205-99-2	Benzo(b)fluoranthene	350	U
207-08-9	Benzo(k)fluoranthene	350	U
50-32-8	Benzo(a)pyrene	350	U
193-39-5	Indeno(1,2,3-cd)Pyrene	350	U
53-70-3	Dibenz(a,h)Anthracene	350	U
191-24-2	Benzo(g,h,i)perylene	350	U J

(1) - Cannot be separated from Diphenylamine

PBD 4/2019

1F

000043
EPA SAMPLE NO.

B05WT9

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-03B

Sample wt/vol: 30.1 (g/mL) G Lab File ID: 20407N05

Level: (low/med) LOW Date Received: 03/04/92

% Moisture: not dec. 5 dec. ____ Date Extracted: 03/11/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/07/92

GPC Cleanup: (Y/N) N pH: 11.2 Dilution Factor: 1.0

Number TICs found: 7

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q	
1.	UNKNOWN HYDROCARBON	4.18	140	~~BJ~~	u
2.	UNKNOWN ALCOHOL	5.15	1700	~~BJ~~	
3.	UNKNOWN ALCOHOL	6.03	280	~~BJ~~	
4.	UNKNOWN ALCOHOL	7.18	630	J	
5.	UNKNOWN ALCOHOL	9.04	170	~~BJ~~	u
6.	UNKNOWN ALCOHOL	9.87	170	J	
7.	UNKNOWN PHTHALATE	22.62	310	~~BJ~~	u

RD 4/20/93

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B05WV1

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A203018-01D

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20410N03

Level: (low/med) LOW Date Received: 03/03/92

% Moisture: not dec. ____ dec. ____ Date Extracted: 03/06/92

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 04/10/92

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
100-51-6	Benzyl Alcohol	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	bis(2-Chloroisopropyl)Ether	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
65-85-0	Benzoic Acid	50	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	50	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	50	U
131-11-3	Dimethyl Phthalate	10	U
208-96-8	Acenaphthylene	10	U

4/20/9

1C

000043

EPA SAMPLE NO.

B05WV1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A203018-01D

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20410N03

Level: (low/med) LOW Date Received: 03/03/92

% Moisture: not dec. ____ dec. ____ Date Extracted: 03/06/92

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 04/10/92

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	3-Nitroaniline	50	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	50	U
100-02-7	4-Nitrophenol	50	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	50	U
534-52-1	4,6-Dinitro-2-methylphenol	50	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	50	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	20	U
56-55-3	Benzo(a)anthracene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	10	U
218-01-9	Chrysene	10	U
117-84-0	Di-n-octyl Phthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) - Cannot be separated from Diphenylamine

RAD 4/20/93

9213507.1473

000040

EPA SAMPLE NO.

B05WV1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A203018-01D

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20410N03

Level: (low/med) LOW Date Received: 03/03/92

Moisture: not dec. ____ dec. ____ Date Extracted: 03/06/92

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 04/10/92

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.0

Number TICs found: 2

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN ALKENE	3.13	630	~~BJ~~ J
2.	UNKNOWN ALDEHYDE	6.03	12	J

RBD 4/20/93

000047

EPA SAMPLE NO.

B05WV2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-02B

Sample wt/vol: 30.4 (g/mL) G Lab File ID: 20409N04

Level: (low/med) LOW Date Received: 03/04/92

% Moisture: not dec. 5 dec. ____ Date Extracted: 03/11/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/09/92

GPC Cleanup: (Y/N) N pH: 9.9 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	340	U J
111-44-4	bis(2-Chloroethyl)Ether	340	U
95-57-8	2-Chlorophenol	340	U
541-73-1	1,3-Dichlorobenzene	340	U
106-46-7	1,4-Dichlorobenzene	340	U
100-51-6	Benzyl Alcohol	340	U
95-50-1	1,2-Dichlorobenzene	340	U
95-48-7	2-Methylphenol	340	U
108-60-1	bis(2-Chloroisopropyl)Ether	340	U
106-44-5	4-Methylphenol	340	U
621-64-7	N-Nitroso-Di-n-Propylamine	340	U
67-72-1	Hexachloroethane	340	U
98-95-3	Nitrobenzene	340	U
78-59-1	Isophorone	340	U
88-75-5	2-Nitrophenol	340	U
105-67-9	2,4-Dimethylphenol	340	U
65-85-0	Benzoic Acid	1700	U
111-91-1	bis(2-Chloroethoxy)methane	340	U
120-83-2	2,4-Dichlorophenol	340	U
120-82-1	1,2,4-Trichlorobenzene	340	U
91-20-3	Naphthalene	340	U
106-47-8	4-Chloroaniline	340	U
87-68-3	Hexachlorobutadiene	340	U
59-50-7	4-Chloro-3-methylphenol	340	U
91-57-6	2-Methylnaphthalene	340	U
77-47-4	Hexachlorocyclopentadiene	340	U
88-06-2	2,4,6-Trichlorophenol	340	U
95-95-4	2,4,5-Trichlorophenol	1700	U
91-58-7	2-Chloronaphthalene	340	U
88-74-4	2-Nitroaniline	1700	U
131-11-3	Dimethyl Phthalate	340	U
208-96-8	Acenaphthylene	340	U

000048
EPA SAMPLE NO.

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

B05WV2

ab Name: TMA/ARLI Contract: WHC

ab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

atrix: (soil/water) SOIL Lab Sample ID: A203018-02B

ample wt/vol: 30.4 (g/mL) G Lab File ID: 20409N04

evel: (low/med) LOW Date Received: 03/04/92

Moisture: not dec. 5 dec. Date Extracted: 03/11/92

xtraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/09/92

PC Cleanup: (Y/N) N pH: 9.9 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1700	U J
83-32-9	Acenaphthene	340	U
51-28-5	2,4-Dinitrophenol	1700	U
100-02-7	4-Nitrophenol	1700	U
132-64-9	Dibenzofuran	340	U
121-14-2	2,4-Dinitrotoluene	340	U
606-20-2	2,6-Dinitrotoluene	340	U
84-66-2	Diethylphthalate	340	U
7005-72-3	4-Chlorophenyl-phenylether	340	U
86-73-7	Fluorene	340	U
100-01-6	4-Nitroaniline	1700	U
534-52-1	4,6-Dinitro-2-methylphenol	1700	U
86-30-6	N-Nitrosodiphenylamine (1)	340	U
101-55-3	4-Bromophenyl-phenylether	340	U
118-74-1	Hexachlorobenzene	340	U
87-86-5	Pentachlorophenol	1700	U
85-01-8	Phenanthrene	340	U
120-12-7	Anthracene	340	U
84-74-2	Di-n-Butylphthalate	340	U
206-44-0	Fluoranthene	340	U
129-00-0	Pyrene	340	U
85-68-7	Butylbenzylphthalate	340	U
91-94-1	3,3'-Dichlorobenzidine	690	U
56-55-3	Benzo(a)anthracene	340	U
117-81-7	bis(2-Ethylhexyl)Phthalate	340	U
218-01-9	Chrysene	340	U
117-84-0	Di-n-octyl Phthalate	340	U
205-99-2	Benzo(b)fluoranthene	340	U
207-08-9	Benzo(k)fluoranthene	340	U
50-32-8	Benzo(a)pyrene	340	U
193-39-5	Indeno(1,2,3-cd)Pyrene	340	U
53-70-3	Dibenz(a,h)Anthracene	340	U
191-24-2	Benzo(g,h,i)perylene	340	U J

(1) - Cannot be separated from Diphenylamine

RD 9/20/

000049

EPA SAMPLE NO.

B05WV2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

ab Name: TMA/ARLI Contract: WHC

ab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

atrix: (soil/water) SOIL Lab Sample ID: A203018-02B

ample wt/vol: 30.4 (g/mL) G Lab File ID: 20409N04

evel: (low/med) LOW Date Received: 03/04/92

Moisture: not dec. 5 dec. ____ Date Extracted: 03/11/92

xtraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/09/92

PC Cleanup: (Y/N) N pH: 9.9 Dilution Factor: 1.0

umber TICs found: 13

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN ALKENE	3.95	140	~~BJ~~
2.	UNKNOWN HYDROCARBON	4.23	140	~~BJ~~
3.	UNKNOWN ALCOHOL	5.25	1700	~~BJ~~
4.	UNKNOWN ALCOHOL	5.88	32000	~~BJ~~
5.	UNKNOWN ALCOHOL	6.17	280	~~BJ~~
6.	UNKNOWN HYDROCARBON	7.37	620	~~BJ~~
7.	UNKNOWN KETONE	8.00	310	~~BJ~~
8.	UNKNOWN ALCOHOL	10.09	210	J
9.	UNKNOWN PHTHALATE	22.85	310	~~BJ~~
10.	UNKNOWN CARBOXYLIC ACID ESTE	28.61	380	J
11.	UNKNOWN ALKANE	29.62	310	J
12.	UNKNOWN HYDROCARBON	31.54	350	J
13.	UNKNOWN HYDROCARBON	33.91	310	J

4/5/93

1B

EPA SAMPLE NO.

B05WV3

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

ıb Name: TMA/ARLI Contract: WHC

ıb Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

ıtrix: (soil/water) SOIL Lab Sample ID: A203018-07B

ımple wt/vol: 30.9 (g/mL) G Lab File ID: 20414N05

evel: (low/med) LOW Date Received: 03/05/92

Moisture: not dec. 9 dec. ____ Date Extracted: 03/11/92

xtraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/14/92

PC Cleanup: (Y/N) N pH: 10.5 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	350	U J
111-44-4	bis(2-Chloroethyl)Ether	350	U
95-57-8	2-Chlorophenol	350	U
541-73-1	1,3-Dichlorobenzene	350	U
106-46-7	1,4-Dichlorobenzene	350	U
100-51-6	Benzyl Alcohol	350	U
95-50-1	1,2-Dichlorobenzene	350	U
95-48-7	2-Methylphenol	350	U
108-60-1	bis(2-Chloroisopropyl)Ether	350	U
106-44-5	4-Methylphenol	350	U
621-64-7	N-Nitroso-Di-n-Propylamine	350	U
67-72-1	Hexachloroethane	350	U
98-95-3	Nitrobenzene	350	U
78-59-1	Isophorone	350	U
88-75-5	2-Nitrophenol	350	U
105-67-9	2,4-Dimethylphenol	350	U
65-85-0	Benzoic Acid	1700	U
111-91-1	bis(2-Chloroethoxy)methane	350	U
120-83-2	2,4-Dichlorophenol	350	U
120-82-1	1,2,4-Trichlorobenzene	350	U
91-20-3	Naphthalene	350	U
106-47-8	4-Chloroaniline	350	U
87-68-3	Hexachlorobutadiene	350	U
59-50-7	4-Chloro-3-methylphenol	350	U
91-57-6	2-Methylnaphthalene	350	U
77-47-4	Hexachlorocyclopentadiene	350	U
88-06-2	2,4,6-Trichlorophenol	350	U
95-95-4	2,4,5-Trichlorophenol	1700	U
91-58-7	2-Chloronaphthalene	350	U
88-74-4	2-Nitroaniline	1700	U
131-11-3	Dimethyl Phthalate	350	U
208-96-8	Acenaphthylene	350	U

4/20/92

EPA SAMPLE NO.

B05WV3

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

ab Name: TMA/ARLI Contract: WHC

ab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

atrix: (soil/water) SOIL Lab Sample ID: A203018-07B

ample wt/vol: 30.9 (g/mL) G Lab File ID: 20414N05

evel: (low/med) LOW Date Received: 03/05/92

Moisture: not dec. 9 dec. Date Extracted: 03/11/92

xtraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/14/92

PC Cleanup: (Y/N) N pH: 10.5 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1700	U J
83-32-9	Acenaphthene	350	U
51-28-5	2,4-Dinitrophenol	1700	U
100-02-7	4-Nitrophenol	1700	U
132-64-9	Dibenzofuran	350	U
121-14-2	2,4-Dinitrotoluene	350	U
606-20-2	2,6-Dinitrotoluene	350	U
84-66-2	Diethylphthalate	350	U
7005-72-3	4-Chlorophenyl-phenylether	350	U
86-73-7	Fluorene	350	U
100-01-6	4-Nitroaniline	1700	U
534-52-1	4,6-Dinitro-2-methylphenol	1700	U
86-30-6	N-Nitrosodiphenylamine (1)	350	U
101-55-3	4-Bromophenyl-phenylether	350	U
118-74-1	Hexachlorobenzene	350	U
87-86-5	Pentachlorophenol	1700	U
85-01-8	Phenanthrene	350	U
120-12-7	Anthracene	350	U
84-74-2	Di-n-Butylphthalate	350	U
206-44-0	Fluoranthene	350	U
129-00-0	Pyrene	350	U
85-68-7	Butylbenzylphthalate	350	U
91-94-1	3,3'-Dichlorobenzidine	700	U
56-55-3	Benzo(a)anthracene	350	U
117-81-7	bis(2-Ethylhexyl)Phthalate	350	U
218-01-9	Chrysene	350	U
117-84-0	Di-n-octyl Phthalate	350	U
205-99-2	Benzo(b)fluoranthene	350	U
207-08-9	Benzo(k)fluoranthene	350	U
50-32-8	Benzo(a)pyrene	350	U
193-39-5	Indeno(1,2,3-cd)Pyrene	350	U
53-70-3	Dibenz(a,h)Anthracene	350	U
191-24-2	Benzo(g,h,i)perylene	350	U

(1) - Cannot be separated from Diphenylamine

1F

000052
EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

B05WV3

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-07B

Sample wt/vol: 30.9 (g/mL) G Lab File ID: 20414N05

Level: (low/med) LOW Date Received: 03/05/92

% Moisture: not dec. 9 dec. ____ Date Extracted: 03/11/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/14/92

GPC Cleanup: (Y/N) N pH: 10.5 Dilution Factor: 1.0

Number TICs found: 17

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN HYDROCARBON	3.13	570	J
2.	UNKNOWN ALKENE	3.92	210	~~BJ~~
3.	UNKNOWN HYDROCARBON	4.18	210	~~BJ~~
4.	UNKNOWN ALCOHOL	5.12	1700	~~BJ~~
5.	UNKNOWN ALCOHOL	5.72	26000	~~BJ~~
6.	UNKNOWN ALCOHOL	6.02	390	~~BJ~~
7.	UNKNOWN HYDROCARBON	7.17	570	~~BJ~~
8.	UNKNOWN HYDROCARBON	7.47	360	J
9.	UNKNOWN KETONE	7.78	360	~~BJ~~
10.	UNKNOWN ALCOHOL	9.02	250	~~BJ~~
11.	UNKNOWN HYDROCARBON	9.84	360	J
12.	UNKNOWN KETONE	11.22	140	J
13.	UNKNOWN CARBOXYLIC ACID ESTE	19.09	140	~~BJ~~
14.	UNKNOWN PHTHALATE	22.64	360	~~BJ~~
15.	UNKNOWN CARBOXYLIC ACID ESTE	28.41	320	J
16.	UNKNOWN ALKANE	29.42	210	J
17.	UNKNOWN ALKANE	31.32	320	J

RBJ 4/20/93

1B

000053
EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

B05WV4

ab Name: TMA/ARLI Contract: WHC

ab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

atrix: (soil/water) SOIL Lab Sample ID: A203018-08B

ample wt/vol: 30.7 (g/mL) G Lab File ID: 20409N07

evel: (low/med) LOW Date Received: 03/05/92

Moisture: not dec. 2 dec. Date Extracted: 03/11/92

xtraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/09/92

PC Cleanup: (Y/N) N pH: 9.9 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	330	U J
111-44-4	bis(2-Chloroethyl)Ether	330	U
95-57-8	2-Chlorophenol	330	U
541-73-1	1,3-Dichlorobenzene	330	U
106-46-7	1,4-Dichlorobenzene	330	U
100-51-6	Benzyl Alcohol	330	U
95-50-1	1,2-Dichlorobenzene	330	U
95-48-7	2-Methylphenol	330	U
108-60-1	bis(2-Chloroisopropyl)Ether	330	U
106-44-5	4-Methylphenol	330	U
621-64-7	N-Nitroso-Di-n-Propylamine	330	U
67-72-1	Hexachloroethane	330	U
98-95-3	Nitrobenzene	330	U
78-59-1	Isophorone	330	U
88-75-5	2-Nitrophenol	330	U
105-67-9	2,4-Dimethylphenol	330	U
65-85-0	Benzoic Acid	1600	U
111-91-1	bis(2-Chloroethoxy)methane	330	U
120-83-2	2,4-Dichlorophenol	330	U
120-82-1	1,2,4-Trichlorobenzene	330	U
91-20-3	Naphthalene	330	U
106-47-8	4-Chloroaniline	330	U
87-68-3	Hexachlorobutadiene	330	U
59-50-7	4-Chloro-3-methylphenol	330	U
91-57-6	2-Methylnaphthalene	330	U
77-47-4	Hexachlorocyclopentadiene	330	U
88-06-2	2,4,6-Trichlorophenol	330	U
95-95-4	2,4,5-Trichlorophenol	1600	U
91-58-7	2-Chloronaphthalene	330	U
88-74-4	2-Nitroaniline	1600	U
131-11-3	Dimethyl Phthalate	330	U
208-96-8	Acenaphthylene	330	U J

4/20/

EPA SAMPLE NO.

B05WV4

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-08B

Sample wt/vol: 30.7 (g/mL) G Lab File ID: 20409N07

Level: (low/med) LOW Date Received: 03/05/92

% Moisture: not dec. 2 dec. ____ Date Extracted: 03/11/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/09/92

GPC Cleanup: (Y/N) N pH: 9.9 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1600	U J
83-32-9	Acenaphthene	330	U
51-28-5	2,4-Dinitrophenol	1600	U
100-02-7	4-Nitrophenol	1600	U
132-64-9	Dibenzofuran	330	U
121-14-2	2,4-Dinitrotoluene	330	U
606-20-2	2,6-Dinitrotoluene	330	U
84-66-2	Diethylphthalate	330	U
7005-72-3	4-Chlorophenyl-phenylether	330	U
86-73-7	Fluorene	330	U
100-01-6	4-Nitroaniline	1600	U
534-52-1	4,6-Dinitro-2-methylphenol	1600	U
86-30-6	N-Nitrosodiphenylamine (1)	330	U
101-55-3	4-Bromophenyl-phenylether	330	U
118-74-1	Hexachlorobenzene	330	U
87-86-5	Pentachlorophenol	1600	U
85-01-8	Phenanthrene	330	U
120-12-7	Anthracene	330	U
84-74-2	Di-n-Butylphthalate	330 ~~38~~	~~J~~ UJ
206-44-0	Fluoranthene	330	U
129-00-0	Pyrene	330	U
85-68-7	Butylbenzylphthalate	330	U
91-94-1	3,3'-Dichlorobenzidine	660	U
56-55-3	Benzo(a)anthracene	330	U
117-81-7	bis(2-Ethylhexyl)Phthalate	330	U
218-01-9	Chrysene	330	U
117-84-0	Di-n-octyl Phthalate	330	U
205-99-2	Benzo(b)fluoranthene	330	U
207-08-9	Benzo(k)fluoranthene	330	U
50-32-8	Benzo(a)pyrene	330	U
193-39-5	Indeno(1,2,3-cd)Pyrene	330	U
53-70-3	Dibenz(a,h)Anthracene	330	U
191-24-2	Benzo(g,h,i)perylene	330	U J

(1) - Cannot be separated from Diphenylamine

EPA SAMPLE NO.

B05WV4

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-08B

Sample wt/vol: 30.7 (g/mL) G Lab File ID: 20409N07

Level: (low/med) LOW Date Received: 03/05/92

% Moisture: not dec. 2 dec. ____ Date Extracted: 03/11/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/09/92

GPC Cleanup: (Y/N) N pH: 9.9 Dilution Factor: 1.00

Number TICs found: 7

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN ALKENE	3.90	130	~~BJ~~
2.	UNKNOWN HYDROCARBON	4.18	170	~~BJ~~
3.	UNKNOWN ALKENE	4.90	170	J
4.	UNKNOWN ALCOHOL	5.13	1400	~~BJ~~
5.	UNKNOWN ALCOHOL	5.73	23000	~~BJ~~
6.	UNKNOWN HYDROCARBON	7.20	500	~~BJ~~
7.	UNKNOWN PHTHALATE	22.65	400	~~BJ~~

u

u

FBA
4/20/92

921502.1483

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

000056
EPA SAMPLE NO.

B05WN8

ab Name: TMA/ARLI Contract: WHC

ab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

atrix: (soil/water) SOIL Lab Sample ID: A203018-04B

ample wt/vol: 31.0 (g/mL) G Lab File ID:

evel: (low/med) LOW Date Received: 03/02/92

Moisture: not dec. 5 dec. Date Extracted: 03/11/92

xtraction: (SepF/Cont/Sonc) SONC Date Analyzed: 03/20/92

PC Cleanup: (Y/N) N pH: 9.3 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	8.1	U
319-85-7	beta-BHC	8.1	U
319-86-8	delta-BHC	8.1	U
58-89-9	gamma-BHC (Lindane)	8.1	U
76-44-8	Heptachlor	8.1	U
309-00-2	Aldrin	8.1	U
1024-57-3	Heptachlor epoxide	8.1	U
959-98-8	Endosulfan I	8.1	U
60-57-1	Dieldrin	16	U
72-55-9	4,4'-DDE	16	U
72-20-8	Endrin	16	U
33213-65-9	Endosulfan II	16	U
72-54-8	4,4'-DDD	16	U
1031-07-8	Endosulfan sulfate	16	U
50-29-3	4,4'-DDT	16	U
72-43-5	Methoxychlor	81	U
53494-70-5	Endrin ketone	16	U
5103-71-9	alpha-Chlordane	81	U
5103-74-2	gamma-Chlordane	81	U
8001-35-2	Toxaphene	160	U
12674-11-2	Aroclor-1016	81	U
11104-28-2	Aroclor-1221	81	U
11141-16-5	Aroclor-1232	81	U
53469-21-9	Aroclor-1242	81	U
12672-29-6	Aroclor-1248	81	U
11097-69-1	Aroclor-1254	160	U
11096-82-5	Aroclor-1260	160	U

9/10/92

ABD 9/20/92

9213507.1484

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

000057
EPA SAMPLE NO.

B05WN9

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-05D

Sample wt/vol: 30.5 (g/mL) G Lab File ID:

Level: (low/med) LOW Date Received: 03/02/92

% Moisture: not dec. 2 dec. Date Extracted: 03/11/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 03/20/92

GPC Cleanup: (Y/N) N pH: 9.2 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	8.0	U
319-85-7	beta-BHC	8.0	U
319-86-8	delta-BHC	8.0	U
58-89-9	gamma-BHC (Lindane)	8.0	U
76-44-8	Heptachlor	8.0	U
309-00-2	Aldrin	8.0	U
1024-57-3	Heptachlor epoxide	8.0	U
959-98-8	Endosulfan I	8.0	U
60-57-1	Dieldrin	16	U
72-55-9	4,4'-DDE	16	U
72-20-8	Endrin	16	U
33213-65-9	Endosulfan II	16	U
72-54-8	4,4'-DDD	16	U
1031-07-8	Endosulfan sulfate	16	U
50-29-3	4,4'-DDT	16	U
72-43-5	Methoxychlor	80	U
53494-70-5	Endrin ketone	16	U
5103-71-9	alpha-Chlordane	80	U
5103-74-2	gamma-Chlordane	80	U
8001-35-2	Toxaphene	160	U
12674-11-2	Aroclor-1016	80	U
11104-28-2	Aroclor-1221	80	U
11141-16-5	Aroclor-1232	80	U
53469-21-9	Aroclor-1242	80	U
12672-29-6	Aroclor-1248	80	U
11097-69-1	Aroclor-1254	160	U
11096-82-5	Aroclor-1260	160	U

9-10-92

PSD 4/20/93

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B05WP0

ab Name: TMA/ARLI Contract: WHC

ab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

atrix: (soil/water) SOIL Lab Sample ID: A203018-06B

ample wt/vol: 30.9 (g/mL) G Lab File ID:

evel: (low/med) LOW Date Received: 03/02/92

Moisture: not dec. 1 dec. Date Extracted: 03/11/92

xtraction: (SepF/Cont/Sonc) SONC Date Analyzed: 03/20/92

PC Cleanup: (Y/N) N pH: 10.0 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	7.8	U
319-85-7	beta-BHC	7.8	U
319-86-8	delta-BHC	7.8	U
58-89-9	gamma-BHC (Lindane)	7.8	U
76-44-8	Heptachlor	7.8	U
309-00-2	Aldrin	7.8	U
1024-57-3	Heptachlor epoxide	7.8	U
959-98-8	Endosulfan I	7.8	U
60-57-1	Dieldrin	16	U
72-55-9	4,4'-DDE	16	U
72-20-8	Endrin	16	U
33213-65-9	Endosulfan II	16	U
72-54-8	4,4'-DDD	16	U
1031-07-8	Endosulfan sulfate	16	U
50-29-3	4,4'-DDT	16	U
72-43-5	Methoxychlor	78	U
53494-70-5	Endrin ketone	16	U
5103-71-9	alpha-Chlordane	78	U
5103-74-2	gamma-Chlordane	78	U
8001-35-2	Toxaphene	160	U
12674-11-2	Aroclor-1016	78	U
11104-28-2	Aroclor-1221	78	U
11141-16-5	Aroclor-1232	78	U
53469-21-9	Aroclor-1242	78	U
12672-29-6	Aroclor-1248	78	U
11097-69-1	Aroclor-1254	160	U
11096-82-5	Aroclor-1260	160	U

9-10-92

4/20/93

9213502.1486

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

000059
EPA SAMPLE NO.

B05WP1

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-09B

Sample wt/vol: 30.7 (g/mL) G Lab File ID: _____

Level: (low/med) LOW Date Received: 03/06/92

% Moisture: not dec. 1 dec. __ Date Extracted: 03/11/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 03/20/92

GPC Cleanup: (Y/N) N pH: 9.9 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	7.9	U
319-85-7	beta-BHC	7.9	U
319-86-8	delta-BHC	7.9	U
58-89-9	gamma-BHC (Lindane)	7.9	U
76-44-8	Heptachlor	7.9	U
309-00-2	Aldrin	7.9	U
1024-57-3	Heptachlor epoxide	7.9	U
959-98-8	Endosulfan I	7.9	U
60-57-1	Dieldrin	16	U
72-55-9	4,4'-DDE	16	U
72-20-8	Endrin	16	U
33213-65-9	Endosulfan II	16	U
72-54-8	4,4'-DDD	16	U
1031-07-8	Endosulfan sulfate	16	U
50-29-3	4,4'-DDT	16	U
72-43-5	Methoxychlor	79	U
53494-70-5	Endrin ketone	16	U
5103-71-9	alpha-Chlordane	79	U
5103-74-2	gamma-Chlordane	79	U
8001-35-2	Toxaphene	160	U
12674-11-2	Aroclor-1016	79	U
11104-28-2	Aroclor-1221	79	U
11141-16-5	Aroclor-1232	79	U
53469-21-9	Aroclor-1242	79	U
12672-29-6	Aroclor-1248	79	U
11097-69-1	Aroclor-1254	160	U
11096-82-5	Aroclor-1260	160	U

9-10 92

FORM I PEST 1/87 Rev.

9213507.1487

1D

000060

EPA SAMPLE NO.

B05WT8

PESTICIDE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-10B

Sample wt/vol: 30.8 (g/mL) G Lab File ID: _____

Level: (low/med) LOW Date Received: 03/02/92

% Moisture: not dec. 7 dec. __ Date Extracted: 03/13/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 03/20/92

GPC Cleanup: (Y/N) N pH: 8.4 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	8.4	U
319-85-7	beta-BHC	8.4	U
319-86-8	delta-BHC	8.4	U
58-89-9	gamma-BHC (Lindane)	8.4	U
76-44-8	Heptachlor	8.4	U
309-00-2	Aldrin	8.4	U
1024-57-3	Heptachlor epoxide	8.4	U
959-98-8	Endosulfan I	8.4	U
60-57-1	Dieldrin	17	U
72-55-9	4,4'-DDE	17	U
72-20-8	Endrin	17	U
33213-65-9	Endosulfan II	17	U
72-54-8	4,4'-DDD	17	U
1031-07-8	Endosulfan sulfate	17	U
50-29-3	4,4'-DDT	17	U
72-43-5	Methoxychlor	84	U
53494-70-5	Endrin ketone	17	U
5103-71-9	alpha-Chlordane	84	U
5103-74-2	gamma-Chlordane	84	U
8001-35-2	Toxaphene	170	U
12674-11-2	Aroclor-1016	84	U
11104-28-2	Aroclor-1221	84	U
11141-16-5	Aroclor-1232	84	U
53469-21-9	Aroclor-1242	84	U
12672-29-6	Aroclor-1248	84	U
11097-69-1	Aroclor-1254	170	U
11096-82-5	Aroclor-1260	170	U

9-10-92 MY

RSD 4/20/93

1D

EPA SAMPLE NO.

PESTICIDE ORGANICS ANALYSIS DATA SHEET

B05WT9

ab Name: TMA/ARLI Contract: WHC

ab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

atrix: (soil/water) SOIL Lab Sample ID: A203018-03B

ample wt/vol: 30.3 (g/mL) G Lab File ID:

evel: (low/med) LOW Date Received: 03/04/92

Moisture: not dec. 5 dec. Date Extracted: 03/11/92

xtraction: (SepF/Cont/Sonc) SONC Date Analyzed: 03/20/92

PC Cleanup: (Y/N) N pH: 11.2 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	8.3	U
319-85-7	beta-BHC	8.3	U
319-86-8	delta-BHC	8.3	U
58-89-9	gamma-BHC (Lindane)	8.3	U
76-44-8	Heptachlor	8.3	U
309-00-2	Aldrin	8.3	U
1024-57-3	Heptachlor epoxide	8.3	U
959-98-8	Endosulfan I	8.3	U
60-57-1	Dieldrin	17	U
72-55-9	4,4'-DDE	17	U
72-20-8	Endrin	17	U
33213-65-9	Endosulfan II	17	U
72-54-8	4,4'-DDD	17	U
1031-07-8	Endosulfan sulfate	17	U
50-29-3	4,4'-DDT	17	U
72-43-5	Methoxychlor	83	U
53494-70-5	Endrin ketone	17	U
5103-71-9	alpha-Chlordane	83	U
5103-74-2	gamma-Chlordane	83	U
8001-35-2	Toxaphene	170	U
12674-11-2	Aroclor-1016	83	U
11104-28-2	Aroclor-1221	83	U
11141-16-5	Aroclor-1232	83	U
53469-21-9	Aroclor-1242	83	U
12672-29-6	Aroclor-1248	83	U
11097-69-1	Aroclor-1254	170	U
11096-82-5	Aroclor-1260	170	U

9-10-92

7/20/92

9213507.1489

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

000062

EPA SAMPLE NO.

B05WV1

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A203018-01D

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

Level: (low/med) LOW Date Received: 03/03/92

Moisture: not dec. __ dec. __ Date Extracted: 03/06/92

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 03/20/92

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.00

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

CAS NO.	COMPOUND		Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
5103-71-9	alpha-Chlordane	0.50	U
5103-74-2	gamma-Chlordane	0.50	U
8001-35-2	Toxaphene	1.0	U
12674-11-2	Aroclor-1016	0.50	U
11104-28-2	Aroclor-1221	0.50	U
11141-16-5	Aroclor-1232	0.50	U
53469-21-9	Aroclor-1242	0.50	U
12672-29-6	Aroclor-1248	0.50	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

9-10-92

PBS 9/20/92

9216507.1490

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

000063
EPA SAMPLE NO.

B05WV2

ab Name: TMA/ARLI Contract: WHC

ab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

atrix: (soil/water) SOIL Lab Sample ID: A203018-02B

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

evel: (low/med) LOW Date Received: 03/04/92

Moisture: not dec. 5 dec. Date Extracted: 03/11/92

xtraction: (SepF/Cont/Sonc) SONC Date Analyzed: 03/20/92

PC Cleanup: (Y/N) N pH: 9.9 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	8.4	U
319-85-7	beta-BHC	8.4	U
319-86-8	delta-BHC	8.4	U
58-89-9	gamma-BHC (Lindane)	8.4	U
76-44-8	Heptachlor	8.4	U
309-00-2	Aldrin	8.4	U
1024-57-3	Heptachlor epoxide	8.4	U
959-98-8	Endosulfan I	8.4	U
60-57-1	Dieldrin	17	U
72-55-9	4,4'-DDE	17	U
72-20-8	Endrin	17	U
33213-65-9	Endosulfan II	17	U
72-54-8	4,4'-DDD	17	U
1031-07-8	Endosulfan sulfate	17	U
50-29-3	4,4'-DDT	17	U
72-43-5	Methoxychlor	84	U
53494-70-5	Endrin ketone	17	U
5103-71-9	alpha-Chlordane	84	U
5103-74-2	gamma-Chlordane	84	U
8001-35-2	Toxaphene	170	U
12674-11-2	Aroclor-1016	84	U
11104-28-2	Aroclor-1221	84	U
11141-16-5	Aroclor-1232	84	U
53469-21-9	Aroclor-1242	84	U
12672-29-6	Aroclor-1248	84	U
11097-69-1	Aroclor-1254	170	U
11096-82-5	Aroclor-1260	170	U

9-10-92

FORM I PEST 1/87 Rev.

9213507.1491

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO. 000064

B05WV3

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-07B

Sample wt/vol: 30.5 (g/mL) G Lab File ID: _____

Level: (low/med) LOW Date Received: 03/05/92

% Moisture: not dec. 9 dec. __ Date Extracted: 03/11/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 03/20/92

GPC Cleanup: (Y/N) N pH: 10.5 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	8.6	U
319-85-7	beta-BHC	8.6	U
319-86-8	delta-BHC	8.6	U
58-89-9	gamma-BHC (Lindane)	8.6	U
76-44-8	Heptachlor	8.6	U
309-00-2	Aldrin	8.6	U
1024-57-3	Heptachlor epoxide	8.6	U
959-98-8	Endosulfan I	8.6	U
60-57-1	Dieldrin	17	U
72-55-9	4,4'-DDE	17	U
72-20-8	Endrin	17	U
33213-65-9	Endosulfan II	17	U
72-54-8	4,4'-DDD	17	U
1031-07-8	Endosulfan sulfate	17	U
50-29-3	4,4'-DDT	17	U
72-43-5	Methoxychlor	86	U
53494-70-5	Endrin ketone	17	U
5103-71-9	alpha-Chlordane	86	U
5103-74-2	gamma-Chlordane	86	U
8001-35-2	Toxaphene	170	U
12674-11-2	Aroclor-1016	86	U
11104-28-2	Aroclor-1221	86	U
11141-16-5	Aroclor-1232	86	U
53469-21-9	Aroclor-1242	86	U
12672-29-6	Aroclor-1248	86	U
11097-69-1	Aroclor-1254	170	U
11096-82-5	Aroclor-1260	170	U

4/30/92

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B05WV4

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203018-08B

Sample wt/vol: 30.5 (g/mL) G Lab File ID:

Level: (low/med) LOW Date Received: 03/05/92

% Moisture: not dec. 2 dec. Date Extracted: 03/11/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 03/20/92

GPC Cleanup: (Y/N) N pH: 9.9 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	8.0	U
319-85-7	beta-BHC	8.0	U
319-86-8	delta-BHC	8.0	U
58-89-9	gamma-BHC (Lindane)	8.0	U
76-44-8	Heptachlor	8.0	U
309-00-2	Aldrin	8.0	U
1024-57-3	Heptachlor epoxide	8.0	U
959-98-8	Endosulfan I	8.0	U
60-57-1	Dieldrin	16	U
72-55-9	4,4'-DDE	16	U
72-20-8	Endrin	16	U
33213-65-9	Endosulfan II	16	U
72-54-8	4,4'-DDD	16	U
1031-07-8	Endosulfan sulfate	16	U
50-29-3	4,4'-DDT	16	U
72-43-5	Methoxychlor	80	U
53494-70-5	Endrin ketone	16	U
5103-71-9	alpha-Chlordane	80	U
5103-74-2	gamma-Chlordane	80	U
8001-35-2	Toxaphene	160	U
12674-11-2	Aroclor-1016	80	U
11104-28-2	Aroclor-1221	80	U
11141-16-5	Aroclor-1232	80	U
53469-21-9	Aroclor-1242	80	U
12672-29-6	Aroclor-1248	80	U
11097-69-1	Aroclor-1254	160	U
11096-82-5	Aroclor-1260	160	U

9-10-92

PBS 4/20/93

WESTINGHOUSE/HANFORD

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B05WP1

b Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

b Code: SKINER Case No.: N2-03-020SAS No.: SDG No.: B05WT9

trix (soil/water): SOIL Lab Sample ID: 03026-06S

vel (low/med): LOW Date Received: 03/10/92

Solids: 97.8

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5200.00			P
7440-36-0	Antimony	5.90	U	~~N~~ J	P
7440-38-2	Arsenic	1.30	~~B~~	N	F
7440-39-3	Barium	42.50			P
7440-41-7	Beryllium	0.22	~~B~~	N	P
7440-43-9	Cadmium	0.78	~~B~~	N	P
7440-70-2	Calcium	4990.00		J	P
7440-47-3	Chromium	10.50		~~*~~ J	P
7440-48-4	Cobalt	9.20	~~B~~	~~J~~ U	P
7440-50-8	Copper	12.90			P
7439-89-6	Iron	15900.00			P
7439-92-1	Lead	2.10		~~N~~ J	F
7439-95-4	Magnesium	3690.00			P
7439-96-5	Manganese	231.00			P
7439-97-6	Mercury	0.09	U		CV
7440-02-0	Nickel	9.60			P
7440-09-7	Potassium	739.00	B		P
7782-49-2	Selenium	3.80	U	~~N~~ J	F
7440-22-4	Silver	0.96	U		P
7440-23-5	Sodium	403.00	B		P
7440-28-0	Thallium	0.38	U		F
7440-62-2	Vanadium	47.10			P
7440-66-6	Zinc	39.10		~~E~~ J	P
	Cyanide	5.10	U		AS

lor Before: GREY Clarity Before: Texture: FINE

lor After: GREY Clarity After: Artifacts: YES

mments:
STONES

10-26-92 SE

PBD 4/20/93

FORM I - IN

WESTINGHOUSE/HANFORD

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B05WT9

Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Code: SKINER Case No.: N2-03-020SAS No.: SDG No.: B05WT9

rix (soil/water): SOIL Lab Sample ID: 03026-02S

el (low/med): LOW Date Received: 03/05/92

olids: 86.3

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5330.00			P
7440-36-0	Antimony	6.70	U	~~N~~ J	P
7440-38-2	Arsenic	6.20			F
7440-39-3	Barium	67.20			P
7440-41-7	Beryllium	0.24	~~B~~	U	P
7440-43-9	Cadmium	0.72	~~B~~	U	P
7440-70-2	Calcium	8620.00		~~*~~ J	P
7440-47-3	Chromium	14.60		~~*~~ J	P
7440-48-4	Cobalt	7.50	~~B~~	U	P
7440-50-8	Copper	17.60			P
7439-89-6	Iron	14800.00			P
7439-92-1	Lead	10.90			F
7439-95-4	Magnesium	3520.00			P
7439-96-5	Manganese	249.00			P
7439-97-6	Mercury	0.45			CV
7440-02-0	Nickel	7.30	~~B~~	U	P
7440-09-7	Potassium	692.00	B		P
7782-49-2	Selenium	4.50	U	~~UN~~ J	F
7440-22-4	Silver	1.10	U		P
7440-23-5	Sodium	291.00	B		P
7440-28-0	Thallium	0.45	U		F
7440-62-2	Vanadium	32.70			P
7440-66-6	Zinc	56.20		~~*~~ J	P
	Cyanide	5.80	U		AS

or Before: BROWN Clarity Before: Texture: MEDIUM

or After: BROWN Clarity After: Artifacts: YES

ments:
STONES

10-26-92 SC

PBD 4/20/93

FORM I - IN Rev 6/89

WESTINGHOUSE/HANFORD

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER:

805WV1

b Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

b Code: SKINER Case No.: N2-03-020SAS No.: SDG No.: 805WT9

trix (soil/water): WATER Lab Sample ID: 03026-01S

vel (low/med): LOW Date Received: 03/05/92

Solids: 0.0

Concentration Units (ug/L or mg/Kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	66.00	U		P
7440-36-0	Antimony	31.00	U		P
7440-38-2	Arsenic	3.40	~~B~~	~~W~~ UJ	F
7440-39-3	Barium	1.00	U		P
7440-41-7	Beryllium	1.00	U		P
7440-43-9	Cadmium	1.00	U		P
7440-70-2	Calcium	92.00	U	J	P
7440-47-3	Chromium	2.00	U	J	P
7440-48-4	Cobalt	3.00	U		P
7440-50-8	Copper	7.00	~~B~~	U	P
7439-89-6	Iron	35.00	U		P
7439-92-1	Lead	2.30	~~B~~	~~W~~ UJ	F
7439-95-4	Magnesium	69.00	U		P
7439-96-5	Manganese	1.00	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	4.00	U		P
7440-09-7	Potassium	76.00	U		P
7782-49-2	Selenium	4.00	U	J	F
7440-22-4	Silver	5.00	U		P
7440-23-5	Sodium	210.00	~~B~~	U	P
7440-28-0	Thallium	2.00	U		F
7440-62-2	Vanadium	3.00	U		P
7440-66-6	Zinc	11.00	U	J	P
	Cyanide	10.00	U		AS

lor Before: COLORLESS Clarity Before: CLEAR Texture:

lor After: COLORLESS Clarity After: CLEAR Artifacts:

mments:

10-26-92SC

RD 4/20/93

FORM I - IN Rev. 6/89

004

WESTINGHOUSE/HANFORD

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER:

B05WV2

Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Code: SKINER Case No.: N2-03-020SAS No.: SDG No.: B05WT9

trix (soil/water): SOIL Lab Sample ID: 03026-03S

vel (low/med): LOW Date Received: 03/05/92

Solids: 93.6

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5520.00			P
7440-36-0	Antimony	6.10	U	~~N~~ J	P
7440-38-2	Arsenic	2.80			F
7440-39-3	Barium	64.70			P
7440-41-7	Beryllium	0.25	~~B~~	U	P
7440-43-9	Cadmium	0.78	~~B~~	U	P
7440-70-2	Calcium	7110.00		~~*~~ J	P
7440-47-3	Chromium	28.30		~~*~~ J	P
7440-48-4	Cobalt	7.10	~~B~~	U	P
7440-50-8	Copper	23.40			P
7439-89-6	Iron	14400.00			P
7439-92-1	Lead	5.90		S	F
7439-95-4	Magnesium	3780.00			P
7439-96-5	Manganese	245.00			P
7439-97-6	Mercury	1.10			CV
7440-02-0	Nickel	7.60	~~B~~	U	P
7440-09-7	Potassium	778.00	B		P
7782-49-2	Selenium	0.81	U	~~*N~~ J	F
7440-22-4	Silver	0.98	U		P
7440-23-5	Sodium	233.00	B		P
7440-28-0	Thallium	0.40	U		F
7440-62-2	Vanadium	31.70			P
7440-66-6	Zinc	83.10		~~*~~ J	P
	Cyanide	5.20	U		AS

lor Before: BROWN Clarity Before: Texture: MEDIUM

lor After: BROWN Clarity After: Artifacts: YES

mments:
STONES

10-26-95 SC

Rpd 4/20/13

FORM I - IN Rev. 6/89

WESTINGHOUSE/HANFORD

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: 805WV3

Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Code: SKINER Case No.: N2-03-020SAS No.: SDG No.: 805WT9

rix (soil/water): SOIL Lab Sample ID: 03026-04S

el (low/med): LOW Date Received: 03/06/92

olids: 89.4

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6400.00			P
7440-36-0	Antimony	6.90	U	~~N~~ J	P
7440-38-2	Arsenic	1.80	~~B~~	~~S~~ U	F
7440-39-3	Barium	62.10			P
7440-41-7	Beryllium	0.25	~~B~~	U	P
7440-43-9	Cadmium	0.85	~~B~~	U	P
7440-70-2	Calcium	7220.00		~~*~~ J	P
7440-47-3	Chromium	21.60		~~*~~ J	P
7440-48-4	Cobalt	8.50	~~B~~	U	P
7440-50-8	Copper	16.60			P
7439-89-6	Iron	15700.00			P
7439-92-1	Lead	3.80			F
7439-95-4	Magnesium	4550.00			P
7439-96-5	Manganese	262.00			P
7439-97-6	Mercury	0.09	U		CV
7440-02-0	Nickel	12.70			P
7440-09-7	Potassium	927.00	B		P
7782-49-2	Selenium	4.20	U	~~WN~~ J	F
7440-22-4	Silver	1.10	U		P
7440-23-5	Sodium	283.00	B		P
7440-28-0	Thallium	0.42	U		F
7440-62-2	Vanadium	36.80			P
7440-66-6	Zinc	44.30		~~E~~ J	P
	Cyanide	5.30	U		AS

lor Before: BROWN Clarity Before: Texture: MEDIUM

lor After: BROWN Clarity After: Artifacts: YES

mments:
STONES

10-26-92SC

PBJ
4/20/92

FORM I - IN Rev. 6/89

WESTINGHOUSE/HANFORD

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B05WV4

b Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

b Code: SKINER Case No.: N2-03-020SAS No.: SDG No.: B05WT9

trix (soil/water): SOIL Lab Sample ID: 03026-05S

vel (low/med): LOW Date Received: 03/06/92

Solids: 98.6

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5210.00			P
7440-36-0	Antimony	5.90	U	~~N~~ J	P
7440-38-2	Arsenic	1.60	~~B~~	N	F
7440-39-3	Barium	43.80			P
7440-41-7	Beryllium	0.21	~~B~~	N	P
7440-43-9	Cadmium	0.52	~~B~~	N	P
7440-70-2	Calcium	3280.00		J	P
7440-47-3	Chromium	13.10		J	P
7440-48-4	Cobalt	6.80	~~B~~	N	P
7440-50-8	Copper	13.50			P
7439-89-6	Iron	13400.00			P
7439-92-1	Lead	2.40			F
7439-95-4	Magnesium	3340.00			P
7439-96-5	Manganese	220.00			P
7439-97-6	Mercury	0.09	U		CV
7440-02-0	Nickel	7.60			P
7440-09-7	Potassium	583.00	B		P
7782-49-2	Selenium	0.80	U	~~WN~~ J	F
7440-22-4	Silver	0.95	U		P
7440-23-5	Sodium	405.00	B		P
7440-28-0	Thallium	0.40	U		F
7440-62-2	Vanadium	34.70			P
7440-66-6	Zinc	40.30		E/J	P
	Cyanide	4.70	U		AS

lor Before: GREY Clarity Before: Texture: FINE

lor After: GREY Clarity After: Artifacts: YES

mments:
STONES

10-26-92

BD 4/20/93

FORM I - IN Rev. 6/89

WESTINGHOUSE/HANFORD

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B05WN8

ab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

ab Code: SKINER Case No.: N2-03-004SAS No.: SDG No.: B05WN8

atrix (soil/water): SOIL Lab Sample ID: 03024-04S

evel (low/med): LOW Date Received: 03/05/92

Solids: 92.9

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	74400.00			P	
7440-36-0	Antimony	80.10	~~UKN~~		P	UJ
7440-38-2	Arsenic	2.10	~~BFS~~		F	U
7440-39-3	Barium	672.00			P	
7440-41-7	Beryllium	4.70	B		P	
7440-43-9	Cadmium	10.60	B		P	
7440-70-2	Calcium	79000.00			P	
7440-47-3	Chromium	114.00			P	
7440-48-4	Cobalt	86.40	B		P	
7440-50-8	Copper	195.00			P	
7439-89-6	Iron	184000.00			P	
7439-92-1	Lead	7.90		S	F	
7439-95-4	Magnesium	50000.00			P	
7439-96-5	Manganese	3050.00			P	
7439-97-6	Mercury	0.10	U		CV	
7440-02-0	Nickel	132.00			P	
7440-09-7	Potassium	13000.00			P	
7782-49-2	Selenium	4.00	U		F	
7440-22-4	Silver	12.90	~~UFN~~		~~P~~	UJ
7440-23-5	Sodium	2010.00	B		P	
7440-28-0	Thallium	0.59	~~UKN~~		~~F~~	U
7440-62-2	Vanadium	389.00			P	
7440-66-6	Zinc	430.00			P	
	Cyanide	5.10	U		AS	

PBJ 4/13/93

Color Before: BROWN Clarity Before: Texture: FINE

Color After: BROWN Clarity After: Artifacts: YES

Comments:
STONES

002

WESTINGHOUSE/HANFORD

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B05WN9

ab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

ab Code: SKINER Case No.: N2-03-004SAS No.: SDG No.: B05WN8

atrix (soil/water): SOIL Lab Sample ID: 03024-01S

evel (low/med): LOW Date Received: 03/05/92

Solids: 97.9

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	9340.00			P
7440-36-0	Antimony	5.90		~~UN~~ (UJ)	P
7440-38-2	Arsenic	3.20		~~S~~ (U)	F
7440-39-3	Barium	72.50			P
7440-41-7	Beryllium	0.25	B		P
7440-43-9	Cadmium	0.75		~~B~~ (U)	P
7440-70-2	Calcium	6320.00			P
7440-47-3	Chromium	11.20			P
7440-48-4	Cobalt	13.40			P
7440-50-8	Copper	34.90			P
7439-89-6	Iron	24200.00			P
7439-92-1	Lead	4.20		S	F
7439-95-4	Magnesium	6700.00			P
7439-96-5	Manganese	280.00			P
7439-97-6	Mercury	0.09	U		CV
7440-02-0	Nickel	28.00			P
7440-09-7	Potassium	600.00	B		P
7782-49-2	Selenium	0.76		~~UKW~~ UJ	F
7440-22-4	Silver	0.95		~~UN~~ UJ	P
7440-23-5	Sodium	721.00	B		P
7440-28-0	Thallium	0.57		~~UN~~ (UJ)	F
7440-62-2	Vanadium	46.70			P
7440-66-6	Zinc	42.20			P
	Cyanide	5.10	U		AS

4/1/93

Color Before: GREY Clarity Before: Texture: FINE

Color After: GREY Clarity After: Artifacts: YES

Comments:
STONES

003

WESTINGHOUSE/HANFORD

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER:

B05WP0

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N2-03-004SAS No.: SDG No.: B05WN8

Matrix (soil/water): SOIL Lab Sample ID: 03024-02S

Level (low/med): LOW Date Received: 03/05/92

% Solids: 98.6

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5010.00			P
7440-36-0	Antimony	6.20	~~U~~ ~~N~~ (UJ)		P
7440-38-2	Arsenic	1.60	~~B~~ (U)		F
7440-39-3	Barium	73.50			P
7440-41-7	Beryllium	0.26	B		P
7440-43-9	Cadmium	1.10	(U)		P
7440-70-2	Calcium	5150.00			P
7440-47-3	Chromium	8.50			P
7440-48-4	Cobalt	6.90	B		P
7440-50-8	Copper	13.10			P
7439-89-6	Iron	13400.00			P
7439-92-1	Lead	2.60	~~W~~ (UJ)		F
7439-95-4	Magnesium	3640.00			P
7439-96-5	Manganese	214.00			P
7439-97-6	Mercury	0.09	U		CV
7440-02-0	Nickel	8.00			P
7440-09-7	Potassium	916.00	B		P
7782-49-2	Selenium	0.79	~~U~~ ~~W~~ (UJ)		F
7440-22-4	Silver	0.99	~~U~~ ~~N~~ (UJ)		P
7440-23-5	Sodium	271.00	B		P
7440-28-0	Thallium	0.59	~~U~~ ~~WN~~ (UJ)		F
7440-62-2	Vanadium	36.80			P
7440-66-6	Zinc	32.80			P
	Cyanide	4.90	U		AS

4/20/92

Color Before: GREY Clarity Before: Texture: FINE

Color After: GREY Clarity After: Artifacts: YES

Comments:
STONES

004

WESTINGHOUSE/HANFORD

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B05WT8

ab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

ab Code: SKINER Case No.: N2-03-004SAS No.: SDG No.: B05WN8

atrix (soil/water): SOIL Lab Sample ID: 03024-03S

evel (low/med): LOW Date Received: 03/05/92

Solids: 91.2

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	9070.00			P
7440-36-0	Antimony	6.40	~~U~~	~~N~~ (UJ)	P
7440-38-2	Arsenic	47.00			F
7440-39-3	Barium	94.90			P
7440-41-7	Beryllium	0.37	B		P
7440-43-9	Cadmium	0.75	~~B~~	(U)	P
7440-70-2	Calcium	5220.00			P
7440-47-3	Chromium	12.30			P
7440-48-4	Cobalt	9.20	B		P
7440-50-8	Copper	17.00			P
7439-89-6	Iron	19000.00			P
7439-92-1	Lead	540.00		S	F
7439-95-4	Magnesium	4630.00			P
7439-96-5	Manganese	325.00			P
7439-97-6	Mercury	0.09	U		CV
7440-02-0	Nickel	11.80			P
7440-09-7	Potassium	1720.00			P
7782-49-2	Selenium	4.20	~~U~~	~~E~~ (R)	F
7440-22-4	Silver	1.00	~~U~~	~~N~~ (UJ)	P
7440-23-5	Sodium	182.00	B		P
7440-28-0	Thallium	0.63	~~U~~	~~N~~ (UJ)	F
7440-62-2	Vanadium	40.00			P
7440-66-6	Zinc	53.10			P
	Cyanide	5.20	U		AS

PBS 4/20

Color Before: BROWN Clarity Before: Texture: FINE

Color After: BROWN Clarity After: Artifacts: YES

Comments:
STONES

WESTINGHOUSE/HANFORD

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B05WN8

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N2-03-004SAS No.: SDG No.: B05WN8

Matrix (soil/water): SOIL Lab Sample ID: 03024-04S

Level (low/med): LOW Date Received: 03/05/92

% Solids: 92.9

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	5840 ~~74400.00~~			P	
7440-36-0	Antimony	6.29 ~~80.10~~	U	N	P	J
7440-38-2	Arsenic	2.10	B	S	F	U
7440-39-3	Barium	52.8 ~~672.00~~			P	
7440-41-7	Beryllium	0.27 ~~4.70~~	B		P	
7440-43-9	Cadmium	0.83 ~~10.60~~	B		P	U
7440-70-2	Calcium	6210 ~~79000.00~~			P	
7440-47-3	Chromium	8.16 ~~114.00~~			P	
7440-48-4	Cobalt	6.77 ~~86.40~~	B		P	
7440-50-8	Copper	15.3 ~~195.00~~			P	
7439-89-6	Iron	14500 ~~184000.00~~			P	
7439-92-1	Lead	7.90		S	F	
7439-95-4	Magnesium	3980 ~~50000.00~~			P	
7439-96-5	Manganese	239 ~~3050.00~~			P	
7439-97-6	Mercury	0.10	U		CV	
7440-02-0	Nickel	10.4 ~~132.00~~			P	
7440-09-7	Potassium	1020 ~~13000.00~~			P	
7782-49-2	Selenium	4.00	U		F	
7440-22-4	Silver	1.02 ~~12.90~~	U	N	P	J
7440-23-5	Sodium	158 ~~2010.00~~	B		P	
7440-28-0	Thallium	0.59	U	N	F	J
7440-62-2	Vanadium	30.6 ~~389.00~~			P	
7440-66-6	Zinc	33.9 ~~430.00~~			P	
	Cyanide	5.10	U		AS	

Form Correction 2/7/94

Color Before: BROWN Clarity Before: Texture: FINE

Color After: BROWN Clarity After: Artifacts: YES

Comments:
STONES

i.e. Cu. 0.07539 mL x 200 mL ÷ 1.06 g ÷ 0.929 (%S) = 15.31 mg/kg

002

N203001-01

TMA NORCAL

REPORTING GROUPS 7026/7028

DATA SHEET

B05WN8

SDG 7026
Contact Dinkar Kharkar
Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N203001-01
Dept sample id 7026-001
Received 03/02/92
Client sample id B05WN8
Matrix SOIL
Collected 02/26/92
Chain of custody id EFL-1014

Analysis Date: 7/20/92

PARAMETER	CAS NO	RESULT pCi/G	2σ ERR (COUNT)	MDA pCi/G	RDL pCi/G	QUALIFIERS	TEST	
Gross Alpha	Alpha	4.9	4.0	4.9	10	UR	80A	MS, MA
Gross Beta	Beta	15	4.6	6.3	15	U	80B	MS
Uranium 235	15117-96-1	0.029	0.029	0.11	0.30	UR	U	LCS
Uranium 238	7440-61-1	0.47	0.15	0.092	0.30	J	U	MS
Plutonium 239/240		0.004	0.018	0.034	0.050	UJ	PU	
Americium 241	14596-10-2	0.023	0.037	0.062	0.050	U	AM	MS
Strontium 90	10098-97-2	0.085	0.37	1.1	2.0	U	Y	
Technetium 99	14133-76-7	-0.13	0.47	2.1	0.50	U	TC	
Carbon 14	14762-75-5	-3.0	5.2	8.8	50	UJ	C	RPD, MS
GAMMA SCAN ANALYTES								
Potassium 40	13966-00-2	15	2.9			J	GAM	
Chromium 51	14392-02-0			40		U	GAM	
Cobalt 60	10198-40-0			0.23		U	GAM	MS
Zinc 65	17982-39-3			0.58		U	GAM	
Cesium 134	17967-70-9			0.21		U	GAM	
Cesium 137	10045-97-3			0.21		U	GAM	
Radium 226	13982-67-7	0.64	0.31				GAM	
Thorium 228	14274-82-9	1.2	0.36				GAM	
Thorium 232	7440-29-1	0.75	0.62				GAM	

RB 12/15

X01369
HR-1
Vad Bore Samp

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.14
Report date 08/07/92

4/20/

N203001-02

TMA NORCAL

REPORTING GROUPS 7026/7028

DATA SHEET

B05WN9

SDG 7026
Contact Dinkar Kharkar

Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N203001-02
Dept sample id 7026-002
Received 03/02/92

Client sample id B05WN9
Matrix SOIL
Collected 02/27/92
Chain of custody id EFL-1014

7/30/92

PARAMETER	CAS NO	RESULT pCi/G	2σ ERR (COUNT)	MDA pCi/G	RDL pCi/G	QUALIFIERS	TEST
Gross Alpha	Alpha	3.2	3.8	5.1	10	~~UJ~~ R	80A
Gross Beta	Beta	9.7	3.7	5.1	15	J	80B
Uranium 235	15117-96-1	0	0.065	0.25	0.30	~~U~~ R	U
Uranium 238	7440-61-1	0.19	0.16	0.20	0.30	UJ	U
Plutonium 239/240		0.024	0.022	0.033	0.050	U	PU
Americium 241	14596-10-2	0.010	0.040	0.072	0.050	U	AM
Strontium 90	10098-97-2	-0.18	0.45	1.2	2.0	U	Y
Technetium 99	14133-76-7	0.23	0.18	0.42	0.50	UJ	TC
Carbon 14	14762-75-5	2.0	4.9	8.0	50	UJ	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	11	2.1			J	GAM
Chromium 51	14392-02-0			30		U	GAM
Cobalt 60	10198-40-0			0.19		U	GAM
Zinc 65	17982-39-3			0.50		U	GAM
Cesium 134	17967-70-9			0.19		U	GAM
Cesium 137	10045-97-3	0.29	0.15				GAM
Radium 226	13982-67-7	0.71	0.31				GAM
Thorium 228	14274-82-9	1.1	0.33				GAM
Thorium 232	7440-29-1	1.1	0.61				GAM
Europium 152	14683-23-9	0.36	0.28				GAM

MS, MS, LCS

MS

RPD, MS

MS

RB 12/18

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.14
Report date 08/07/92

PBD 4/20/7

N203001-04

TMA NORCAL

REPORTING GROUPS 7026/7028

DATA SHEET

B05WP0

SDG	7026	Client	Westinghouse Hanford
Contact	Dinker Kharkar	Contract	MBH-SVV-069262
Lab sample id	N203001-04	Client sample id	B05WP0
Dept sample id	7026-004	Matrix	SOIL
Received	03/02/92	Collected	02/27/92
		Chain of custody id	EFL-1014

Analysis date → 11/12

PARAMETER	CAS NO	RESULT pCi/G	2σ ERR (COUNT)	MDA pCi/G	RDL pCi/G	QUALIFIERS	TEST	
Gross Alpha	Alpha	3.6	4.7	6.4	10	~~UJ~~ R	80A	MS, dbt
Gross Beta	Beta	12	4.2	5.9	15	J	80B	MS
Uranium 235	15117-96-1	0.015	0.031	0.12	0.30	~~UR~~	U	LCS
Uranium 238	7440-61-1	0.45	0.16	0.098	0.30	J	U	
Plutonium 239/240		0.004	0.025	0.046	0.050	UJ	PU	MS
Americium 241	14596-10-2	0	0.025	0.047	0.050	U	AM	
Strontium 90	10098-97-2	-0.16	0.35	0.85	2.0	U	Y	
Technetium 99	14133-76-7	0.17	0.20	0.19	0.50	U	TC	
Carbon 14	14762-75-5	~~-9.3~~	5.0	8.6	50	UJ	C	RPD, MS
GAMMA SCAN ANALYTES								
Potassium 40	13966-00-2	11	1.7			J	GAM	MS
Chromium 51	14392-02-0			19		U	GAM	
Cobalt 60	10198-40-0			0.10		U	GAM	
Zinc 65	17982-39-3			0.32		U	GAM	
Cesium 134	17967-70-9			0.12		U	GAM	
Cesium 137	10045-97-3			0.093		U	GAM	
Radium 226	13982-67-7	0.50	0.18				GAM	
Thorium 228	14274-82-9	0.73	0.15				GAM	
Thorium 232	7440-29-1	0.39	0.32				GAM	

RB 12/18

PBD 4/20/

Lab id	TMAN
Protocol	WHC-HEIS
Version	Ver 1.0
Form	DVD-DS
Version	2.14
Report date	08/07/92

N203001-10

TMA NORCAL

REPORTING GROUPS 7026/7028

DATA SHEET

B05WP1

SDG 7026
Contact Dinkar Kharkar
Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N203001-10
Dept sample id 7026-010
Received 03/03/92
Client sample id B05WP1
Matrix SOIL
Collected 03/04/92
Chain of custody id WHC-N-557-2

Analyze: DKI 7/3/92

PARAMETER	CAS NO	RESULT pCi/G	2σ ERR (COUNT)	MDA pCi/G	RDL pCi/G	QUALIFIERS	TEST
Gross Alpha	Alpha	30	7.6	4.5	10		80A
Gross Beta	Beta	15	4.4	5.7	15		80B
Uranium 235	15117-96-1	0.016	0.032	0.12	0.30		U
Uranium 238	7440-61-1	0.58	0.19	0.10	0.30		U
Plutonium 239/240		0.006	0.013	0.025	0.050	U	PU
Americium 241	14596-10-2	0.009	0.034	0.061	0.050	U	AM
Strontium 90	10098-97-2	0.048	0.27	0.85	2.0	U	Y
Technetium 99	14133-76-7	0.52	0.25	1.1	0.50	U	TC
Carbon 14	14762-75-5	3.5	5.9	9.6	50	U	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	9.8	1.6				GAM
Chromium 51	14392-02-0			19		U	GAM
Cobalt 60	10198-40-0	0.38	0.13				GAM
Zinc 65	17982-39-3			0.42		U	GAM
Cesium 134	17967-70-9			0.14		U	GAM
Cesium 137	10045-97-3			0.098		U	GAM
Radium 226	13982-67-7			0.33		U	GAM
Thorium 228	14274-82-9	0.58	0.18				GAM
Thorium 232	7440-29-1	0.44	0.44				GAM
Europium 152	14683-23-9	0.54	0.27				GAM

MS, elf
MS
LCS
MS
MS
RB RPD 12/18
MS

PRG 1/15/93

AD 4/20/93

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.14
Report date 08/07/92

N203055-01

TMA NORCAL

REPORTING GROUPS 7026/7028

DATA SHEET

B05WP5

SDG 7026
Contact Dinkar Kharkar
Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N203055-01
Dept sample id 7028-001
Received 03/10/92
Client sample id B05WP5
Matrix SOIL
Collected 03/05/92
Chain of custody id EFL-1014

PARAMETER	CAS NO	RESULT pCi/G	2σ ERR (COUNT)	MDA pCi/G	RDL pCi/G	QUALIFIERS	TEST
Gross Alpha	Alpha	-1.7	3.5	6.3	10	U R	80A
Gross Beta	Beta	14	4.4	5.9	15	J	80B
Uranium 233/234		0.35	0.19	0.18	0.30	R	U
Uranium 235	15117-96-1	0	0.056	0.21	0.30	U	U
Uranium 238	7440-61-1	0.44	0.20	0.18	0.30		U
Plutonium 239/240		0	0.005	0.021	0.050	U	PU
Americium 241	14596-10-2	0.011	0.017	0.027	0.050	U	AM
Strontium 90	10098-97-2	0.24	0.41	1.0	2.0	U	Y
Technetium 99	14133-76-7	0.20	0.33	0.76	0.50	U	TC
Carbon 14	14762-75-5	1.8	6.2	10	50	UJ	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	8.8	1.4			J	GAM
Chromium 51	14392-02-0			15		U	GAM
Cobalt 60	10198-40-0	0.13	0.10				GAM
Zinc 65	17982-39-3			0.23		U	GAM
Cesium 134	17967-70-9			0.092		U	GAM
Cesium 137	10045-97-3			0.076		U	GAM
Radium 226	13982-67-7	0.45	0.13				GAM
Thorium 228	14274-82-9	0.57	0.13				GAM
Thorium 232	7440-29-1	0.39	0.26				GAM

MS, alt MS LCS

MS

RB RPD MS 12/13

MS

FD 4/20/93

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.14
Report date 08/07/92

TMA NORCAL

REPORTING GROUPS 7026/7028

DATA SHEET

N203055A-02

B05WP7

SDG	7026A	Client	Westinghouse Hanford
Contact	Dinkar Kharkar	Contract	MBH-SVV-069262
Lab sample id	N203055A-02	Client sample id	B05WP7
Dept sample id	7028A-002	Matrix	WATER
Received	03/10/92	Collected	03/05/92
		Chain of custody id	EFL-1014

FB

7/30/92

PARAMETER	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALIFIERS	TEST
Gross Alpha	Alpha	-0.24	0.53	0.96	3.0	U	80A
Gross Beta	Beta	-0.20	0.98	1.7	4.0	U	80B
Uranium 233/234		0.54	0.21	0.13	0.20		U
Uranium 235	15117-96-1	0.020	0.040	0.15	0.20	U	U
Uranium 238	7440-61-1	0.56	0.21	0.13	0.20	J	U
Plutonium 239/240		0.008	0.012	0.019	0.050	U	PU
Americium 241	14596-10-2	0	0.023	0.056	0.050	U	AM
Strontium 90	10098-97-2	-0.25	1.8	0.84	1.0	U	Y
Technetium 99	14133-76-7	0.79	0.56	1.1	5.0	U	TC
Carbon 14	14762-75-5	-18	44	74	50	U	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2			230		U	GAM
Chromium 51	14392-02-0			3100		U	GAM
Cobalt 60	10198-40-0			16		U	GAM
Zinc 65	17982-39-3			39		U	GAM
Cesium 134	17967-70-9			17		U	GAM
Cesium 137	10045-97-3			14		U	GAM
Radium 226	13982-67-7			28		U	GAM
Thorium 228	14274-82-9			32		U	GAM
Thorium 232	7440-29-1			55		U	GAM

12/18/92

PBD 4/20/93

Lab id	TMAN
Protocol	WHC-HEIS
Version	Ver 1.0
Form	DVD-DS
Version	2.14
Report date	08/07/92

TMA NORCAL

REPORTING GROUPS 7026/7028

DATA SHEET

N203001-03

B05WT8

SDG 7026
Contact Dinker Kharkar
Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N203001-03
Dept sample id 7026-003
Received 03/02/92
Client sample id B05WT8
Matrix SOIL
Collected 02/27/92
Chain of custody id EFL-1014

PARAMETER	CAS NO	RESULT pCi/G	2σ ERR (COUNT)	MDA pCi/G	RDL pCi/G	QUALIFIERS	TEST
Gross Alpha	Alpha	2.1	5.5	8.1	10	U R	80A
Gross Beta	Beta	18	5.0	6.7	15	J	80B
Uranium 235	15117-96-1	0.023	0.046	0.18	0.30	U R	U
Uranium 238	7440-61-1	0.69	0.25	0.15	0.30	J	U
Plutonium 239/240		0.026	0.020	0.025	0.050	J	PU
Americium 241	14596-10-2	0.011	0.022	0.035	0.050	U J	AM
Strontium 90	10098-97-2	-0.15	0.36	0.86	2.0	U	Y
Technetium 99	14133-76-7	0.15	0.11	0.23	0.50	U	TC
Carbon 14	14762-75-5	-1.5	5.4	9.0	50	U J	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	7.2	1.4			J	GAM
Chromium 51	14392-02-0			15		U	GAM
Cobalt 60	10198-40-0			0.067		U	GAM
Zinc 65	17982-39-3			0.27		U	GAM
Cesium 134	17967-70-9			0.10		U	GAM
Cesium 137	10045-97-3			0.077		U	GAM
Radium 226	13982-67-7	0.29	0.15				GAM
Thorium 228	14274-82-9	0.41	0.13				GAM
Thorium 232	7440-29-1	0.41	0.37				GAM
VARIABLE ZR95		0.56	0.47				GAM

MS
LCS
MS
MS
MS
RB 12/18
M

PED 7/20/93

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.14
Report date 08/07/92

N203001-06

TMA NORCAL

REPORTING GROUPS 7026/7028

DATA SHEET

B05WT9

SDG 7026
Contact Dinker Kharkar
Client Westinghouse Hanford
Contract MBN-SVV-069262

Lab sample id N203001-06
Dept sample id 7026-006
Received 03/03/92
Client sample id B05WT9
Matrix SOIL
Collected 02/28/92
Chain of custody id WHC-N-557-2

PARAMETER	CAS NO	RESULT pCi/G	2σ ERR (COUNT)	MDA pCi/G	RDL pCi/G	QUALIFIERS	TEST
Gross Alpha	Alpha	4.7	5.4	7.0	10	UJ2	80A
Gross Beta	Beta	110	11	15	15	J	80B
Uranium 235	15117-96-1	0.013	0.052	0.099	0.30	UR	U
Uranium 238	7440-61-1	0.47	0.16	0.081	0.30		U
Plutonium 239/240		1.1	0.18	0.068	0.050		PU
Americium 241	14596-10-2	0.54	0.11	0.072	0.050		AM
Strontium 90	10098-97-2	3.2	2.3	0.99	2.0		Y
Technetium 99	14133-76-7	0.33	0.71	1.1	0.50	UJ	TC
Carbon 14	14762-75-5	33	5.5	7.7	50	J	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	19	2.7			J	GAM
Chromium 51	14392-02-0			120		U	GAM
Cobalt 60	10198-40-0	14	0.66				GAM
Zinc 65	17982-39-3			3.9		U	GAM
Cesium 134	17967-70-9			0.80		U	GAM
Cesium 137	10045-97-3	11	0.90				GAM
Radium 226	13982-67-7			1.0		U	GAM
Thorium 228	14274-82-9			0.93		U	GAM
Thorium 232	7440-29-1			2.6		U	GAM
Europium 152	14683-23-9	120	2.5				GAM
Europium 154	15585-101	19	1.7				GAM

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.14
Report date 08/07/92

9213507.1542

000066

TMA NORCAL

REPORTING GROUPS 7026/7028

DATA SHEET

N203001A-05

B05WV1

SDG	7026A	Client	Westinghouse Hanford
Contact	Dinkar Kharkar	Contract	MBH-SVV-069262
Lab sample id	N203001A-05	Client sample id	B05WV1
Dept sample id	7026A-005	Matrix	WATER
Received	03/02/92	Collected	02/28/92
		Chain of custody id	EFL-1014

EB analysis 7/30/92 — 1/15/93

PARAMETER	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALIFIERS	TEST
Gross Alpha	Alpha	0.095	0.91	1.5	3.0	~~U~~	80A
Gross Beta	Beta	0.32	1.1	1.8	4.0	U	80B
Uranium 235	15117-96-1	0.013	0.027	0.10	0.20	~~U~~ U	U
Uranium 238	7440-61-1	0.022	0.022	0.085	0.20	U	U
Plutonium 239/240		-0.006	0.023	0.054	0.050	U	PU
Americium 241	14596-10-2	-0.019	0.019	0.052	0.050	U	AM
Strontium 90	10098-97-2	-0.25	0.33	0.75	1.0	U	Y
Technetium 99	14133-76-7	1.7	2.0	4.9	5.0	U	TC
Carbon 14	14762-75-5	540	79	94	50	J	C — RPD, ~~MA~~
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2			260		U	GAM
Chromium 51	14392-02-0			3400		U	GAM
Cobalt 60	10198-40-0			16		U	GAM
Zinc 65	17982-39-3			38		U	GAM
Cesium 134	17967-70-9			17		U	GAM
Cesium 137	10045-97-3			16		U	GAM
Radium 226	13982-67-7			26		U	GAM
Thorium 228	14274-82-9			23		U	GAM
Thorium 232	7440-29-1			62		U	GAM

1/13/92

PBD 4/20/93

Lab id	TMAN
Protocol	WHC-HEIS
Version	Ver 1.0
Form	DVD-DS
Version	2.14
Report date	08/07/92

9213507.1543

000074

TMA NORCAL

REPORTING GROUPS 7026/7028

DATA SHEET

N203001-07

B05WV2

SDG	7026	Client	Westinghouse Hanford
Contact	Dinker Kharkar	Contract	MBH-SVV-069262
Lab sample id	N203001-07	Client sample id	B05WV2
Dept sample id	7026-007	Matrix	SOIL
Received	03/03/92	Collected	03/02/92
		Chain of custody id	WHC-N-557-2

7/30/92

PARAMETER	CAS NO	RESULT pCi/G	2σ ERR (COUNT)	MDA pCi/G	RDL pCi/G	QUALIFIERS	TEST
Gross Alpha	Alpha	5.8	5.3	5.6	10	UJ	80A
Gross Beta	Beta	160	9.4	6.7	15	UJ	80B
Uranium 235	15117-96-1	0.38	0.21	0.20	0.30	UJ	U
Uranium 238	7440-61-1	0.68	0.27	0.20	0.30	UJ	U
Plutonium 239/240		1.3	0.13	0.021	0.050	UJ	PU
Americium 241	14596-10-2	0.72	0.13	0.044	0.050	UJ	AM
Strontium 90	10098-97-2	0.93	2.0	0.83	2.0	J	Y
Technetium 99	14133-76-7	0.095	0.30	0.89	0.50	UJ	TC
Carbon 14	14762-75-5	28	5.7	8.1	50	J	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	33	5.5			UJ	GAM
Chromium 51	14392-02-0			210		U	GAM
Cobalt 60	10198-40-0	36	1.6			U	GAM
Zinc 65	17982-39-3			5.9		U	GAM
Cesium 134	17967-70-9			1.6		U	GAM
Cesium 137	10045-97-3	35	1.6				GAM
Radium 226	13982-67-7			1.9		U	GAM
Thorium 228	14274-82-9			1.7		U	GAM
Thorium 232	7440-29-1			5.1		U	GAM
Europium 152	14683-23-9	260	4.9				GAM
Europium 154	15585-101	37	3.8				GAM

MS, MS, LCS, RBD, RB 12/18

4/20/93

Lab id	TMAN
Protocol	WHC-HEIS
Version	Ver 1.0
Form	DVD-DS
Version	2.14
Report date	08/07/92

TMA NORCAL

REPORTING GROUPS 7026/7028

DATA SHEET

N203001-09

B05WV3

SDG 7026
Contact Dinkar Kharkar
Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N203001-09
Dept sample id 7026-009
Received 03/03/92
Client sample id B05WV3
Matrix SOIL
Collected 03/02/92
Chain of custody id WHC-N-557-2

PARAMETER	CAS NO	RESULT pCi/G	2σ ERR (COUNT)	MDA pCi/G	RDL pCi/G	QUALIFIERS	TEST	
Gross Alpha	Alpha	4.4	4.5	6.0	10	UR	80A	MS, all
Gross Beta	Beta	22	4.5	5.4	15	J	80B	MS
Uranium 235	15117-96-1	0.018	0.037	0.14	0.30	UR	U	LCS
Uranium 238	7440-61-1	0.50	0.19	0.12	0.30	J	U	MS
Plutonium 239/240		0.073	0.027	0.021	0.050	J	PU	MS
Americium 241	14596-10-2	0.031	0.027	0.043	0.050	UJ	AM	MS
Strontium 90	10098-97-2	-0.70	1.5	0.88	2.0	U	Y	MS
Technetium 99	14133-76-7	0.26	0.16	0.57	0.50	U	TC	
Carbon 14	14762-75-5	-8.1	5.5	9.4	50	UJ	C	RPD, MS
GAMMA SCAN ANALYTES								
Potassium 40	13966-00-2	14	2.4			J	GAM	
Chromium 51	14392-02-0			33		U	GAM	
Cobalt 60	10198-40-0	0.68	0.17				GAM	
Zinc 65	17982-39-3			0.65		U	GAM	
Cesium 134	17967-70-9			0.21		U	GAM	MS
Cesium 137	10045-97-3	1.7	0.23				GAM	
Radium 226	13982-67-7	0.65	0.20				GAM	
Thorium 228	14274-82-9	0.81	0.22				GAM	
Thorium 232	7440-29-1			0.90		U	GAM	
Europium 152	14683-23-9	4.0	0.65				GAM	
Europium 154	15585-101	0.50	0.34				GAM	

4/18/93

RBN 4/20/93

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.14
Report date 08/07/92

9213507.1515

006076

TMA NORCAL

REPORTING GROUPS 7026/7028

DATA SHEET

N203001-08

B05WV4

SDG	7026	Client	Westinghouse Hanford
Contact	Dinker Kharkar	Contract	MBH-SVV-069262
Lab sample id	N203001-08	Client sample id	B05WV4
Dept sample id	7026-008	Matrix	SOIL
Received	03/03/92	Collected	03/02/92
		Chain of custody id	WHC-N-557-2

Analyses Date: 8/4/92

PARAMETER	CAS NO	RESULT pCi/G	2σ ERR (COUNT)	MDA pCi/G	RDL pCi/G	QUALIFIERS	TEST
Gross Alpha	Alpha	5.9	4.2	4.9	10	UR	80A
Gross Beta	Beta	19	4.8	6.4	15		80B
Uranium 235	15117-96-1	0.014	0.027	0.10	0.30	UR	U
Uranium 238	7440-61-1	0.53	0.17	0.086	0.30		U
Plutonium 239/240		0.003	0.013	0.030	0.050	U	PU
Americium 241	14596-10-2	0.011	0.029	0.055	0.050	U	AM
Strontium 90	10098-97-2	1.2	0.45	0.93	2.0	J	Y
Technetium 99	14133-76-7	0.22	0.15	0.67	0.50	U	TC
Carbon 14	14762-75-5	34	6.0	8.5	50	J	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	11	1.6				GAM
Chromium 51	14392-02-0			14		U	GAM
Cobalt 60	10198-40-0			0.074		U	GAM
Zinc 65	17982-39-3			0.28		U	GAM
Cesium 134	17967-70-9			0.12		U	GAM
Cesium 137	10045-97-3			0.082		U	GAM
Radium 226	13982-67-7	0.44	0.14				GAM
Thorium 228	14274-82-9	0.46	0.091				GAM
Thorium 232	7440-29-1	0.44	0.35				GAM

MS, MB
MS
LCS
MS
RPD, M
RB 12/18/1
MS

PSD 4/20/93

Lab id	TMAN
Protocol	WHC-HEIS
Version	Ver 1.0
Form	DVD-DS
Version	2.14
Report date	08/07/92

TMA NORCAL

REPORTING GROUPS 7026/7028

DATA SHEET

N203055-03

B05WV5

SDG 7026
Contact Dinkar Kharkar
Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N203055-03
Dept sample id 7028-003
Received 03/11/92
Client sample id B05WV5
Matrix SOIL
Collected 03/09/92
Chain of custody id WHC-N-557-2

PARAMETER	CAS NO	RESULT pCi/G	2σ ERR (COUNT)	MDA pCi/G	RDL pCi/G	QUALIFIERS	TEST	
Gross Alpha	Alpha	-1.3	5.0	7.9	10	UR J	80A	MS, MR
Gross Beta	Beta	110	7.8	5.9	15		80B	MS LCS
Uranium 235	15117-96-1	0.031	0.062	0.24	0.30	UR	U	
Uranium 238	7440-61-1	0.61	0.27	0.20	0.30	J	U	
Plutonium 239/240		0.74	0.10	0.022	0.050		PU	MS
Americium 241	14596-10-2	0.20	0.066	0.035	0.050		AM	
Strontium 90	10098-97-2	1.5	2.1	0.92	2.0	J	Y	MS
Technetium 99	14133-76-7	0.25	0.17	0.33	0.50	UJ	TC	MS
Carbon 14	14762-75-5	2.3	6.6	11	50	UJ	C	MS RPD
GAMMA SCAN ANALYTES								
Potassium 40	13966-00-2	13	2.0			J	GAM	
Chromium 51	14392-02-0			72		U	GAM	
Cobalt 60	10198-40-0	2.5	0.31				GAM	
Zinc 65	17982-39-3			2.5		U	GAM	
Cesium 134	17967-70-9			0.45		U	GAM	
Cesium 137	10045-97-3	32	0.83				GAM	MS
Radium 226	13982-67-7			0.72		U	GAM	
Thorium 228	14274-82-9			0.64		U	GAM	
Thorium 232	7440-29-1			1.5		U	GAM	
Europium 152	14683-23-9	54	1.7				GAM	
Europium 154	15585-101	5.4	0.87				GAM	

12/18

PBJ 7/20/93

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.14
Report date 08/07/92

9213507.1517

TMA NORCAL

REPORTING GROUPS 7026/7028

DATA SHEET

N203055-04

B05WV6

SDG	7026	Client	Westinghouse Hanford
Contact	Dinkar Kharkar	Contract	MBH-SVV-069262
Lab sample id	N203055-04	Client sample id	B05WV6
Dept sample id	7028-004	Matrix	SOIL
Received	03/13/92	Collected	03/09/92
		Chain of custody id	WHC-N-557-2

PARAMETER	CAS NO	RESULT pCi/G	2σ ERR (COUNT)	MDA pCi/G	RDL pCi/G	QUALIFIERS	TEST
Gross Alpha	Alpha	4.9	4.7	5.5	10	UR	80A
Gross Beta	Beta	95	7.5	6.3	15	J	80B
Uranium 233/234		0	0.072	0.17	0.30	UR	U
Uranium 235	15117-96-1	0	0.044	0.17	0.30	UR	U
Uranium 238	7440-61-1	0	0.036	0.14	0.30	UJ	U
Plutonium 239/240		0.58	0.079	0.025	0.050	J	PU
Americium 241	14596-10-2	0.16	0.054	0.042	0.050	J	AM
Strontium 90	10098-97-2	1.5	2.1	0.88	2.0	J	Y
Technetium 99	14133-76-7	0.25	0.12	0.23	0.50	J	TC
Carbon 14	14762-75-5	3.4	6.9	11	50	UJ	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	9.9	1.8				GAM
Chromium 51	14392-02-0			59		U	GAM
Cobalt 60	10198-40-0	1.8	0.27				GAM
Zinc 65	17982-39-3			1.7		U	GAM
Cesium 134	17967-70-9			0.36		U	GAM
Cesium 137	10045-97-3	24	0.72				GAM
Radium 226	13982-67-7			0.54		U	GAM
Thorium 228	14274-82-9	0.95	0.32				GAM
Thorium 232	7440-29-1			1.3		U	GAM
Europium 152	14683-23-9	36	1.3				GAM
Europium 154	15585-101	3.6	0.76				GAM

MC, 44
MS
LCS

MS

RPD/MS
RB
12/18

MS

PBS
4/20/92

Lab id	TMAN
Protocol	WHC-HEIS
Version	Ver 1.0
Form	DVD-DS
Version	2.14
Report date	08/07/92

TMA NORCAL

REPORTING GROUPS 7026/7028

DATA SHEET

N203055-05

B05WV8

SDG	7026	Client	Westinghouse Hanford
Contact	Dinkar Kharkar	Contract	MBH-SVV-069262
Lab sample id	N203055-05	Client sample id	B05WV8
Dept sample id	7028-005	Matrix	SOIL
Received	03/13/92	Collected	03/09/92
		Chain of custody id	WHC-N-557-2

PARAMETER	CAS NO	RESULT pCi/G	2σ ERR (COUNT)	MDA pCi/G	RDL pCi/G	QUALIFIERS	TEST
Gross Alpha	Alpha	6.4	5.0	5.8	10	J R	80A
Gross Beta	Beta	92	7.0	5.1	15		80B
Uranium 233/234		0.53	0.22	0.16	0.30	R	U
Uranium 235	15117-96-1	0.025	0.049	0.19	0.30	R	U
Uranium 238	7440-61-1	0.31	0.17	0.16	0.30		U
Plutonium 239/240		0.64	0.083	0.020	0.050		PU
Americium 241	14596-10-2	0.16	0.047	0.031	0.050		AM
Strontium 90	10098-97-2	6.2	2.7	0.93	2.0	J	Y
Technetium 99	14133-76-7	0.18	0.078	0.14	0.50	J	TC
Carbon 14	14762-75-5	8.9	6.3	10	50	UJ	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	13	2.0				GAM
Chromium 51	14392-02-0			58		U	GAM
Cobalt 60	10198-40-0	2.2	0.31				GAM
Zinc 65	17982-39-3			1.8		U	GAM
Cesium 134	17967-70-9			0.35		U	GAM
Cesium 137	10045-97-3	23	0.68				GAM
Radium 226	13982-67-7	0.78	0.47				GAM
Thorium 228	14274-82-9	0.52	0.30				GAM
Thorium 232	7440-29-1			1.3		U	GAM
Europium 152	14683-23-9	34	1.2				GAM
Europium 154	15585-101	3.6	0.81				GAM

MS, B/D
MS
LCS

MS

RPD, MS
B/D
1/18

J

MS

PBD
4/20/93

Lab id	TMAN
Protocol	WHC-HEIS
Version	Ver 1.0
Form	DVD-DS
Version	2.14
Report date	08/07/92

N203055-06

TMA NORCAL

REPORTING GROUPS 7026/7028

DATA SHEET

B05WV9

SDG	7026	Client	Westinghouse Hanford
Contact	Dinkar Kharkar	Contract	MBH-SVV-069262
Lab sample id	N203055-06	Client sample id	B05WV9
Dept sample id	7028-006	Matrix	SOIL
Received	03/13/92	Collected	03/10/92
		Chain of custody id	WHC-N-557-2

PARAMETER	CAS NO	RESULT pCi/G	2σ ERR (COUNT)	MDA pCi/G	RDL pCi/G	QUALIFIERS	TEST
Gross Alpha	Alpha	0.86	4.5	6.6	10	UB	80A
Gross Beta	Beta	69	6.8	6.6	15		80B
Uranium 233/234		0.62	0.28	0.20	0.30	R	U
Uranium 235	15117-96-1	0.13	0.13	0.24	0.30	R	U
Uranium 238	7440-61-1	0.23	0.16	0.20	0.30	J	U
Plutonium 239/240		0.33	0.058	0.025	0.050		PU
Americium 241	14596-10-2	0.068	0.036	0.027	0.050		AM
Strontium 90	10098-97-2	5.5	3.2	0.81	2.0		Y
Technetium 99	14133-76-7	0.67	0.20	0.16	0.50		TC
Carbon 14	14762-75-5	-0.48	6.3	10	50	UJ	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	13	2.1			J	GAM
Chromium 51	14392-02-0			49		U	GAM
Cobalt 60	10198-40-0	2.0	0.28				GAM
Zinc 65	17982-39-3			1.9		U	GAM
Cesium 134	17967-70-9			0.36		U	GAM
Cesium 137	10045-97-3	11	0.50				GAM
Radium 226	13982-67-7	0.85	0.49				GAM
Thorium 228	14274-82-9	0.44	0.23				GAM
Thorium 232	7440-29-1			1.2		U	GAM
Europium 152	14683-23-9	42	1.2				GAM
Europium 154	15585-101	3.6	0.92				GAM

MS, alt
MS
LCS
MS
RPD
RB 12/18/91
MS

PBJ 4/20/9

Lab id	TMAN
Protocol	WHC-HEIS
Version	Ver 1.0
Form	DVD-DS
Version	2.14
Report date	08/07/92

9713507.1530

000031

N203055-07

TMA NORCAL

REPORTING GROUPS 7026/7028

DATA SHEET

B05WW0

SDG	7026	Client	Westinghouse Hanford
Contact	Dinkar Kharkar	Contract	MBH-SVV-069262
Lab sample id	N203055-07	Client sample id	B05WW0
Dept sample id	7028-007	Matrix	SOIL
Received	03/16/92	Collected	03/11/92
		Chain of custody id	WHC-N-557-2

PARAMETER	CAS NO	RESULT pCi/G	2σ ERR (COUNT)	MDA pCi/G	RDL pCi/G	QUALIFIERS	TEST
Gross Alpha	Alpha	2.7	4.0	5.6	10	UR	80A
Gross Beta	Beta	16	4.4	5.8	15		80B
Uranium 235	15117-96-1	0.050	0.067	0.13	0.30	UR	U
Uranium 238	7440-61-1	0.39	0.14	0.11	0.30		U
Plutonium 239/240		0.063	0.024	0.019	0.050	J	PU
Americium 241	14596-10-2	0	0.028	0.059	0.050	UJ	AM
Strontium 90	10098-97-2	1.3	1.7	0.98	2.0	J	Y
Technetium 99	14133-76-7	0.21	0.12	0.23	0.50	UJ	TC
Carbon 14	14762-75-5	15	7.1	11	50	J	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	10	1.7			J	GAM
Chromium 51	14392-02-0			17		U	GAM
Cobalt 60	10198-40-0			0.10		U	GAM
Zinc 65	17982-39-3			0.34		U	GAM
Cesium 134	17967-70-9			0.12		U	GAM
Cesium 137	10045-97-3	0.25	0.10				GAM
Radium 226	13982-67-7	0.55	0.20				GAM
Thorium 228	14274-82-9	0.75	0.13				GAM
Thorium 232	7440-29-1	0.89	0.36				GAM
Europium 152	14683-23-9	0.72	0.19				GAM
Europium 154	15585-101	0.34	0.12				GAM

ms
ms
LCS
ms
R
RPD
RB 12/18/9
MS

ABJ 4/20/93

Lab id	TMAN
Protocol	WHC-HEIS
Version	Ver 1.0
Form	DVD-DS
Version	2.14
Report date	08/07/92

9213507.1521

000082

TMA NORCAL

REPORTING GROUPS 7026/7028

DATA SHEET

N203055-08

B05WW4

SDG	7026	Client	Westinghouse Hanford
Contact	Dinkar Kharkar	Contract	MBH-SVV-069262
Lab sample id	N203055-08	Client sample id	B05WW4
Dept sample id	7028-008	Matrix	SOIL
Received	03/16/92	Collected	03/11/92
		Chain of custody id	WHC-N-557-2

PARAMETER	CAS NO	RESULT pCi/G	2σ ERR (COUNT)	MDA pCi/G	RDL pCi/G	QUALIFIERS	TEST
Gross Alpha	Alpha	2.7	5.7	8.6	10	U R	80A
Gross Beta	Beta	-2.4	9.1	15	15	U J	80B
Uranium 235	15117-96-1	0.043	0.043	0.16	0.30	U R	U
Uranium 238	7440-61-1	0.58	0.22	0.14	0.30	J	U
Plutonium 239/240		0.034	0.020	0.022	0.050	J	PU
Americium 241	14596-10-2	0.006	0.019	0.040	0.050	U J	AM
Strontium 90	10098-97-2	-0.081	2.2	0.91	2.0	U J	Y
Technetium 99	14133-76-7	-0.76	1.5	4.0	0.50	U J	TC
Carbon 14	14762-75-5	0.28	6.4	11	50	U J	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	13	1.7			J	GAM
Chromium 51	14392-02-0			17		U	GAM
Cobalt 60	10198-40-0			0.088		U	GAM
Zinc 65	17982-39-3			0.33		U	GAM
Cesium 134	17967-70-9			0.11		U	GAM
Cesium 137	10045-97-3			0.098		U	GAM
Radium 226	13982-67-7	0.40	0.14				GAM
Thorium 228	14274-82-9	0.53	0.15				GAM
Thorium 232	7440-29-1	0.64	0.47				GAM

ms, efd
ms
LCS
ms
ms
ms
RAD ms
RB
12/18
RPD
MS

RB 4/20/93

Lab id	TMAN
Protocol	WHC-HEIS
Version	Ver 1.0
Form	DVD-DS
Version	2.14
Report date	08/07/92

9213507.1532

TMA NORCAL

REPORTING GROUPS 7026/7028

N203055-09

DATA SHEET

B05WW5

SDG 7026
Contact Dinkar Kharkar
Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N203055-09
Dept sample id 7028-009
Received 03/17/92
Client sample id B05WW5
Matrix SOIL
Collected 03/13/92
Chain of custody id WHC-N-557-2

PARAMETER	CAS NO	RESULT pCi/G	2σ ERR (COUNT)	MDA pCi/G	RDL pCi/G	QUALI-FIERS	TEST
Gross Alpha	Alpha	3.0	3.6	4.8	10	U R	80A
Gross Beta	Beta	12	4.6	6.7	15	J	80B
Uranium 235	15117-96-1	0	0.044	0.17	0.30	U R	U
Uranium 238	7440-61-1	0.33	0.15	0.14	0.30	J	U
Plutonium 239/240		0	0.011	0.027	0.050	U J	PU
Americium 241	14596-10-2	0.004	0.031	0.060	0.050	U	AM
Strontium 90	10098-97-2	-0.020	1.5	0.90	2.0	U	Y
Technetium 99	14133-76-7	0.14	0.19	0.66	0.50	U	TC
Carbon 14	14762-75-5	4.2	6.4	10	50	U J	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	8.9	1.6			J	GAM
Chromium 51	14392-02-0			16		U	GAM
Cobalt 60	10198-40-0			0.097		U	GAM
Zinc 65	17982-39-3			0.32		U	GAM
Cesium 134	17967-70-9			0.11		U	GAM
Cesium 137	10045-97-3			0.095		U	GAM
Radium 226	13982-67-7	0.37	0.19				GAM
Thorium 228	14274-82-9	0.49	0.16				GAM
Thorium 232	7440-29-1	0.35	0.34				GAM

MS, LH
MS
LCS
MS
RPD, N
RB 12/18
MS

RB 4/30/93

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.14
Report date 08/07/92

TMA NORCAL

REPORTING GROUPS 7026/7028

DATA SHEET

N203055-10

B05WW6

SDG 7026
Contact Dinkar Kharkar
Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N203055-10
Dept sample id 7028-010
Received 03/19/92
Client sample id B05WW6
Matrix SOIL
Collected 03/16/92
Chain of custody id WHC-N-557-2

PARAMETER	CAS NO	RESULT pCi/G	2σ ERR (COUNT)	MDA pCi/G	RDL pCi/G	QUALI-FIERS	TEST
Gross Alpha	Alpha	1.7	4.4	6.4	10	~~U~~	80A
Gross Beta	Beta	16	4.8	6.5	15		80B
Uranium 235	15117-96-1	0	0.069	0.27	0.30	~~U~~	U
Uranium 238	7440-61-1	0.54	0.25	0.22	0.30		U
Plutonium 239/240		0	0.013	0.028	0.050	U	PU
Americium 241	14596-10-2	0.002	0.022	0.043	0.050	U	AM
Strontium 90	10098-97-2	-0.76	2.3	1.1	2.0	U	Y
Technetium 99	14133-76-7	0.084	0.18	0.50	0.50	U	TC
Carbon 14	14762-75-5	-0.21	6.2	10	50	UJ	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	12	1.5				GAM
Chromium 51	14392-02-0			11		U	GAM
Cobalt 60	10198-40-0			0.11		U	GAM
Zinc 65	17982-39-3			0.25		U	GAM
Cesium 134	17967-70-9			0.097		U	GAM
Cesium 137	10045-97-3			0.067		U	GAM
Radium 226	13982-67-7	0.47	0.14				GAM
Thorium 228	14274-82-9	0.50	0.080				GAM
Thorium 232	7440-29-1			0.46		U	GAM

MS, MS
LCS
MS
RPD
MS

Lab id TMAN
Protocol WHC-MEIS
Version Ver 1.0
Form DVD-DS
Version 2.14
Report date 08/07/92

9213507.1524

000085

TMA NORCAL

REPORTING GROUPS 7026/7028

DATA SHEET

N203055-11

B05WW7

SDG	7026	Client	Westinghouse Hanford
Contact	Dinkar Kharkar	Contract	MBH-SVV-069262
Lab sample id	N203055-11	Client sample id	B05WW7
Dept sample id	7028-011	Matrix	SOIL
Received	03/19/92	Collected	03/16/92
		Chain of custody id	WHC-N-557-2

PARAMETER	CAS NO	RESULT pCi/G	2σ ERR (COUNT)	MDA pCi/G	RDL pCi/G	QUALIFIERS	TEST
Gross Alpha	Alpha	3.2	4.4	6.1	10	~~UX~~ R	80A
Gross Beta	Beta	14	4.2	5.4	15	J	80B
Uranium 235	15117-96-1	0	0.048	0.18	0.30	~~U~~ R	U
Uranium 238	7440-61-1	0.50	0.21	0.15	0.30	J	U
Plutonium 239/240		0.006	0.012	0.028	0.050	U	PU
Americium 241	14596-10-2	-0.033	0.055	0.12	0.050	U	AM
Strontium 90	10098-97-2	-0.24	2.3	1.0	2.0	U	Y
Technetium 99	14133-76-7	0.42	0.40	1.3	0.50	U	TC
Carbon 14	14762-75-5	0.91	5.9	9.7	50	U J	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	13	2.0			J	GAM
Chromium 51	14392-02-0			14		U	GAM
Cobalt 60	10198-40-0			0.11		U	GAM
Zinc 65	17982-39-3			0.31		U	GAM
Cesium 134	17967-70-9			0.16		U	GAM
Cesium 137	10045-97-3			0.10		U	GAM
Radium 226	13982-67-7	0.50	0.18				GAM
Thorium 228	14274-82-9	0.63	0.17				GAM
Thorium 232	7440-29-1			0.61		U	GAM

MS, HR
MS
LCS
MS
RPD, m
(PBR)
M

RBD
4/20/93

Lab id	TMAN
Protocol	WHC-HEIS
Version	Ver 1.0
Form	DVD-DS
Version	2.14
Report date	08/07/92

9213507.1525

000006

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B05WP5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03033 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203033-01A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20312R03

Level: (low/med) LOW Date Received: 03/10/92

% Moisture: not dec. 2 Date Analyzed: 03/12/92

Column: (pack/cap) PACK Dilution Factor: 1.0

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

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	5 ~~3~~	BJ
67-64-1	Acetone	10 ~~7~~	BJ
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	7	
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (Total)	5	U

2-3-93 MY

PBD 4/2/91

9213507 1526

000007

EPA SAMPLE NO.

B05WP5

IE

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03033 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203033-01A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20312R03

Level: (low/med) LOW Date Received: 03/10/92

% Moisture: not dec. 2 Date Analyzed: 03/12/92

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

2-3-93
MY

9213502.1527

UUUUUO

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B05WP6

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03033 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A203033-03A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20313B04

Level: (low/med) LOW Date Received: 03/10/92

% Moisture: not dec. ____ Date Analyzed: 03/13/92

Column: (pack/cap) WIDE Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	UJ
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	B
67-64-1	Acetone	10	UJ
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	2	BJ
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	UJ
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	2	J
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (Total)	5	U

FORM I VOA 1/87 Rev.

9213507.1528

1E

000009

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

B05WP6

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03033 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A203033-03A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20313B04

Level: (low/med) LOW Date Received: 03/10/92

% Moisture: not dec. ____ Date Analyzed: 03/13/92

Column (pack/cap) WIDE Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

2-3-93

MM

9213507.1529

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

000010
EPA SAMPLE NO.

B05WP7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03033 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A203033-02A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20313B03

Level: (low/med) LOW Date Received: 03/10/92

% Moisture: not dec. ____ Date Analyzed: 03/13/92

Column: (pack/cap) WIDE Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	UJ
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	7	BJ
67-64-1	Acetone	10	UJ
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	2	BJ
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	UJ
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	1	J
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (Total)	5	U

2-3-93

9213507.1530

1E

EPA SAMPLE NO.

B05WP7

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03033 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A203033-02A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20313B03

Level: (low/med) LOW Date Received: 03/10/92

% Moisture: not dec. ____ Date Analyzed: 03/13/92

Column (pack/cap) WIDE Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

2-3-93
MY

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B05WV5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03033 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203033-04A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20313R03

Level: (low/med) LOW Date Received: 03/11/92

% Moisture: not dec. 6 Date Analyzed: 03/13/92

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	11	U
67-64-1	Acetone	13	~~B~~ U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	11	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	11	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	11	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	14	
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (Total)	5	U

2-3-93

RBD 1/29/93

9213502.1532

000013

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

B05WV5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03033 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203033-04A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20313R03

Level: (low/med) LOW Date Received: 03/11/92

% Moisture: not dec. 6 Date Analyzed: 03/13/92

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 60-29-7	Ethyl ether	9.75	6.4	J

2-3-93

FORM I VOA-TIC 1/87 Rev.

9213507.1533

000014
EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

B05WP5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03033 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203033-01D

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 20410N07

Level: (low/med) LOW Date Received: 03/10/92

% Moisture: not dec. 3 dec. ____ Date Extracted: 03/18/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/10/92

GPC Cleanup: (Y/N) N pH: 9.9 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	340	U J
111-44-4	bis(2-Chloroethyl)Ether	340	U
95-57-8	2-Chlorophenol	340	U
541-73-1	1,3-Dichlorobenzene	340	U
106-46-7	1,4-Dichlorobenzene	340	U
100-51-6	Benzyl Alcohol	340	U
95-50-1	1,2-Dichlorobenzene	340	U
95-48-7	2-Methylphenol	340	U
108-60-1	bis(2-Chloroisopropyl)Ether	340	U
106-44-5	4-Methylphenol	340	U
621-64-7	N-Nitroso-Di-n-Propylamine	340	U
67-72-1	Hexachloroethane	340	U
98-95-3	Nitrobenzene	340	U
78-59-1	Isophorone	340	U
88-75-5	2-Nitrophenol	340	U
105-67-9	2,4-Dimethylphenol	340	U
65-85-0	Benzoic Acid	1600	U
111-91-1	bis(2-Chloroethoxy)methane	340	U
120-83-2	2,4-Dichlorophenol	340	U
120-82-1	1,2,4-Trichlorobenzene	340	U
91-20-3	Naphthalene	340	U
106-47-8	4-Chloroaniline	340	U
87-68-3	Hexachlorobutadiene	340	U
59-50-7	4-Chloro-3-methylphenol	340	U
91-57-6	2-Methylnaphthalene	340	U
77-47-4	Hexachlorocyclopentadiene	340	U
88-06-2	2,4,6-Trichlorophenol	340	U
95-95-4	2,4,5-Trichlorophenol	1600	U
91-58-7	2-Chloronaphthalene	340	U
88-74-4	2-Nitroaniline	1600	U
131-11-3	Dimethyl Phthalate	340	U
208-96-8	Acenaphthylene	340	U

2-3-93 NM

RB 4/20/

9213507.1534

000015

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B05WP5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03033 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203033-01D

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 20410N07

Level: (low/med) LOW Date Received: 03/10/92

% Moisture: not dec. 3 dec. Date Extracted: 03/18/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/10/92

GPC Cleanup: (Y/N) N pH: 9.9 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1600	U
83-32-9	Acenaphthene	340	U
51-28-5	2,4-Dinitrophenol	1600	U
100-02-7	4-Nitrophenol	1600	U
132-64-9	Dibenzofuran	340	U
121-14-2	2,4-Dinitrotoluene	340	U
606-20-2	2,6-Dinitrotoluene	340	U
84-66-2	Diethylphthalate	230	J
7005-72-3	4-Chlorophenyl-phenylether	340	U
86-73-7	Fluorene	340	U
100-01-6	4-Nitroaniline	1600	U
534-52-1	4,6-Dinitro-2-methylphenol	1600	U
86-30-6	N-Nitrosodiphenylamine (1)	340	U
101-55-3	4-Bromophenyl-phenylether	340	U
118-74-1	Hexachlorobenzene	340	U
87-86-5	Pentachlorophenol	1600	U
85-01-8	Phenanthrene	340	U
120-12-7	Anthracene	340	U
84-74-2	Di-n-Butylphthalate	340	U
206-44-0	Fluoranthene	340	U
129-00-0	Pyrene	340	U
85-68-7	Butylbenzylphthalate	340	U
91-94-1	3,3'-Dichlorobenzidine	680	U
56-55-3	Benzo(a)anthracene	340	U
117-81-7	bis(2-Ethylhexyl)Phthalate	340	U
218-01-9	Chrysene	340	U
117-84-0	Di-n-octyl Phthalate	340	U
205-99-2	Benzo(b)fluoranthene	340	U
207-08-9	Benzo(k)fluoranthene	340	U
50-32-8	Benzo(a)pyrene	340	U
193-39-5	Indeno(1,2,3-cd)Pyrene	340	U
53-70-3	Dibenz(a,h)Anthracene	340	U
191-24-2	Benzo(g,h,i)perylene	340	U

(1) - Cannot be separated from Diphenylamine

7-3-93 MM

PBD 4/20/93

9213507.1535

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B05WP5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03033 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203033-01D

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 20410N07

Level: (low/med) LOW Date Received: 03/10/92

% Moisture: not dec. 3 dec. ____ Date Extracted: 03/18/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/10/92

GPC Cleanup: (Y/N) N pH: 9.9 Dilution Factor: 1.00

Number TICs found: 11

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN HYDROCARBON	3.18	790	J
2.	UNKNOWN ALKENE	3.97	170	J
3.	UNKNOWN HYDROCARBON	4.25	1500	~~BJ~~ U
4.	UNKNOWN ALCOHOL	5.23	1400	~~BJ~~ U
5.	UNKNOWN ALCOHOL	5.85	24000	~~BJ~~ U
6.	UNKNOWN ALCOHOL	6.15	310	J
7.	UNKNOWN HYDROCARBON	7.33	510	~~BJ~~ U
8.	UNKNOWN HYDROCARBON	7.68	210	J
9.	UNKNOWN KETONE	7.98	340	~~BJ~~ U
10.	UNKNOWN ALCOHOL	9.22	140	J
11.	UNKNOWN PHTHALATE	22.89	310	~~BJ~~ U

2-3-93 MY

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B05WP7

ab Name: TMA/ARLI Contract: WHC

ab Code: TMALA Case No.: 03033 SAS No.: NA SDG No.: NA

atrix: (soil/water) WATER Lab Sample ID: A203033-02B

ample wt/vol: 1000 (g/mL) ML Lab File ID: 20410N11

evel: (low/med) LOW Date Received: 03/10/92

Moisture: not dec. ____ dec. ____ Date Extracted: 03/12/92

xtraction: (SepF/Cont/Sonc) CONT Date Analyzed: 04/10/92

PC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.0

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

CAS NO.	COMPOUND		Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
100-51-6	Benzyl Alcohol	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	bis(2-Chloroisopropyl)Ether	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
65-85-0	Benzoic Acid	50	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	50	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	50	U
131-11-3	Dimethyl Phthalate	10	U
208-96-8	Acenaphthylene	10	U

2-3-13 NM

4/20/93

9213507.1537

000010

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B05WP7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03033 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A203033-02B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20410N11

Level: (low/med) LOW Date Received: 03/10/92

% Moisture: not dec. ____ dec. ____ Date Extracted: 03/12/92

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 04/10/92

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.0

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

CAS NO.	COMPOUND		Q
99-09-2	3-Nitroaniline	50	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	50	U
100-02-7	4-Nitrophenol	50	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	50	U
534-52-1	4,6-Dinitro-2-methylphenol	50	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	50	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
84-74-2	Di-n-Butylphthalate	6	J
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	20	U
56-55-3	Benzo(a)anthracene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	10	U
218-01-9	Chrysene	10	U
117-84-0	Di-n-octyl Phthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) - Cannot be separated from Diphenylamine

2-3

4/20

9215507.1538

000019

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B05WP7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03033 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A203033-02B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20410N11

Level: (low/med) LOW Date Received: 03/10/92

% Moisture: not dec. ____ dec. ____ Date Extracted: 03/12/92

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 04/10/92

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.0

Number TICs found: 5

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN HYDROCARBON	3.13	610	~~BJ~~ U
2.	UNKNOWN HYDROCARBON	3.60	14	J
3.	UNKNOWN HYDROCARBON	4.18	130	~~BJ~~ U
4.	UNKNOWN HYDROCARBON	4.28	22	J
5.	UNKNOWN CYCLOALKENE	4.47	16	~~BJ~~ U

2-3-9

9213503.1539

1D

000020

EPA SAMPLE NO.

PESTICIDE ORGANICS ANALYSIS DATA SHEET

B05WP5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03033 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203033-01D

Sample wt/vol: 30.8 (g/mL) G Lab File ID: _____

Level: (low/med) LOW Date Received: 03/10/92

% Moisture: not dec. 3 dec. __ Date Extracted: 03/18/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 03/20/92

GPC Cleanup: (Y/N) N pH: 9.9 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	8.0	U
319-85-7	beta-BHC	8.0	U
319-86-8	delta-BHC	8.0	U
58-89-9	gamma-BHC (Lindane)	8.0	U
76-44-8	Heptachlor	8.0	U
309-00-2	Aldrin	8.0	U
1024-57-3	Heptachlor epoxide	8.0	U
959-98-8	Endosulfan I	8.0	U
60-57-1	Dieldrin	16	U
72-55-9	4,4'-DDE	16	U
72-20-8	Endrin	16	U
33213-65-9	Endosulfan II	16	U
72-54-8	4,4'-DDD	16	U
1031-07-8	Endosulfan sulfate	16	U
50-29-3	4,4'-DDT	16	U
72-43-5	Methoxychlor	80	U
53494-70-5	Endrin ketone	16	U
5103-71-9	alpha-Chlordane	80	U
5103-74-2	gamma-Chlordane	80	U
8001-35-2	Toxaphene	160	U
12674-11-2	Aroclor-1016	80	U
11104-28-2	Aroclor-1221	80	U
11141-16-5	Aroclor-1232	80	U
53469-21-9	Aroclor-1242	80	U
12672-29-6	Aroclor-1248	80	U
11097-69-1	Aroclor-1254	160	U
11096-82-5	Aroclor-1260	160	U

2-3-93

PBD 4/20/

9213503 1540

000021

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B05WP7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03033 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A203033-02B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

Level: (low/med) LOW Date Received: 03/10/92

% Moisture: not dec. __ dec. __ Date Extracted: 03/12/92

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 03/20/92

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.00

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

CAS NO.	COMPOUND		Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
5103-71-9	alpha-Chlordane	0.50	U
5103-74-2	gamma-Chlordane	0.50	U
8001-35-2	Toxaphene	1.0	U
12674-11-2	Aroclor-1016	0.50	U
11104-28-2	Aroclor-1221	0.50	U
11141-16-5	Aroclor-1232	0.50	U
53469-21-9	Aroclor-1242	0.50	U
12672-29-6	Aroclor-1248	0.50	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

2-3-93

4/20/93

9213507.1541

WESTINGHOUSE/HANFORD

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B05WP5

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N2-03-053SAS No.: SDG No.: B05WP5

Matrix (soil/water): SOIL Lab Sample ID: 03065-01S

Level (low/med): LOW Date Received: 03/11/92

% Solids: 98.2

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

2/25/93 JW

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	4280.00			P
7440-36-0	Antimony	1.60	U	~~N~~ UJ	P
7440-38-2	Arsenic	1.10	B		F
7440-39-3	Barium	36.70	B		P
7440-41-7	Beryllium	0.52	~~B~~ U		P
7440-43-9	Cadmium	0.20	~~U~~ U		P
7440-70-2	Calcium	4700.00			P
7440-47-3	Chromium	10.20			P
7440-48-4	Cobalt	7.00	B		P
7440-50-8	Copper	22.50			P
7439-89-6	Iron	13500.00			P
7439-92-1	Lead	8.60		~~N~~ J	F
7439-95-4	Magnesium	3320.00			P
7439-96-5	Manganese	214.00		~~N~~ J	P
7439-97-6	Mercury	0.09	U		CV
7440-02-0	Nickel	8.90			P
7440-09-7	Potassium	562.00	B		P
7782-49-2	Selenium	0.75	U	~~WN~~ R	F
7440-22-4	Silver	0.39	U		P
7440-23-5	Sodium	277.00	B		P
7440-28-0	Thallium	0.57	U		F
7440-62-2	Vanadium	32.10			P
7440-66-6	Zinc	26.20			P
	Cyanide	4.80	U		AS

Color Before: BROWN Clarity Before: Texture: FINE

Color After: BROWN Clarity After: Artifacts: YES

Comments:
STONES

002

4/20/

9213507.1542

WESTINGHOUSE/HANFORD

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B05WP7

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N2-03-053SAS No.: SDG No.: B05WP5

Matrix (soil/water): WATER Lab Sample ID: 03065-02S

Level (low/med): LOW Date Received: 03/11/92

% Solids: 0.0

Concentration Units (ug/L or mg/Kg dry weight): UG/L

2/5/93 RD

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	45.70	~~B~~ U		P
7440-36-0	Antimony	8.00	U U		P
7440-38-2	Arsenic	2.00	U		F
7440-39-3	Barium	4.00	U U		P
7440-41-7	Beryllium	1.00	~~B~~ U		P
7440-43-9	Cadmium	1.40	~~B~~ U		P
7440-70-2	Calcium	321.00	B		P
7440-47-3	Chromium	4.00	U		P
7440-48-4	Cobalt	3.00	U		P
7440-50-8	Copper	5.10	~~B~~ U		P
7439-89-6	Iron	11.00	U U		P
7439-92-1	Lead	3.00	~~B~~ U		F
7439-95-4	Magnesium	49.00	U		P
7439-96-5	Manganese	1.00	U U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	4.00	U		P
7440-09-7	Potassium	130.00	U		P
7782-49-2	Selenium	4.00	U	~~W~~ UJ	F
7440-22-4	Silver	2.00	U		P
7440-23-5	Sodium	705.00	B		P
7440-28-0	Thallium	3.00	U		F
7440-62-2	Vanadium	2.50	~~B~~ U		P
7440-66-6	Zinc	4.00	U		P
	Cyanide	10.00	U		AS

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

4/20/93

Comments:

003

FORM I - IN Rev.6/89

9213507.1545

WESTINGHOUSE/HANFORD

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B05WV5

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N2-03-053SAS No.: SDG No.: B05WP5

Matrix (soil/water): SOIL Lab Sample ID: 03065-03S

Level (low/med): LOW Date Received: 03/12/92

% Solids: 93.0

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

2/05/93 fm

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6710.00			P
7440-36-0	Antimony	1.70	U	NW	P
7440-38-2	Arsenic	37.90		S	F
7440-39-3	Barium	72.30			P
7440-41-7	Beryllium	0.77	B	W	P
7440-43-9	Cadmium	0.21	U	W	P
7440-70-2	Calcium	4650.00			P
7440-47-3	Chromium	16.00			P
7440-48-4	Cobalt	7.70	B		P
7440-50-8	Copper	19.00		W	P
7439-89-6	Iron	15800.00			P
7439-92-1	Lead	187.00		NJ	F
7439-95-4	Magnesium	4120.00			P
7439-96-5	Manganese	278.00		NJ	P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	10.80			P
7440-09-7	Potassium	1320.00			P
7782-49-2	Selenium	4.10	U	WNR	F
7440-22-4	Silver	0.42	U		P
7440-23-5	Sodium	179.00	B		P
7440-28-0	Thallium	0.61	U		F
7440-62-2	Vanadium	32.00			P
7440-66-6	Zinc	48.70			P
	Cyanide	5.20	U		AS

BJ 4/20/93

Color Before: BROWN Clarity Before: Texture: FINE

Color After: BROWN Clarity After: Artifacts: YES

Comments:
STONES

004

B05WV1-TMA-142

000000

9213507 1544

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

B05WV6

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: -- SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL X01279 Lab Sample ID: A203051-01A

Sample wt/vol: 5.0 (HR-1 Lab File ID: 20323R04

Level: (low/med) LOW Vad Bore Samp Date Received: 03/13/92

% Moisture: not dec. 5 Date Analyzed: 03/23/92

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	11 ~~7~~	~~B~~ U
67-64-1	Acetone	11 ~~7~~	~~B~~ U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	11	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	11	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	11	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	4	J
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (Total)	5	U

10-26-92SC

9213507.1545

1E

000006
EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

B05WV6

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03051 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203051-01A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20323R04

Level: (low/med) LOW Date Received: 03/13/92

% Moisture: not dec. 5 Date Analyzed: 03/23/92

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

9213592.1546

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B05WV8

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03051 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203051-02A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20323R05

Level: (low/med) LOW Date Received: 03/13/92

% Moisture: not dec. 5 Date Analyzed: 03/23/92

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	11 ~~6~~	~~B~~ 4
67-64-1	Acetone	15	~~B~~ 4
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	11	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	11	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	11	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	1	J
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (Total)	5	U

9-26-92

FORM I VOA 1/87 Rev.

9213502 1E 1547

UUUUUO

EPA SAMPLE NO.

B05WV8

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03051 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203051-02A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20323R05

Level: (low/med) LOW Date Received: 03/13/92

% Moisture: not dec. 5 Date Analyzed: 03/23/92

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

9213502.1548

000009

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B05WV9

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03051 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203051-03A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20323R06

Level: (low/med) LOW Date Received: 03/13/92

% Moisture: not dec. 3 Date Analyzed: 03/23/92

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	~~6~~ 10	~~B~~ U
67-64-1	Acetone	~~9~~ 10	~~BJ~~ U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	2	J
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (Total)	5	U

9213502 1549

1E

000010
EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

B05WV9

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03051 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203051-03A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20323R06

Level: (low/med) LOW Date Received: 03/13/92

% Moisture: not dec. 3 Date Analyzed: 03/23/92

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

9213607 1550

1A

000011

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

B05WW0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03051 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203051-04A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20323R07

Level: (low/med) LOW Date Received: 03/16/92

% Moisture: not dec. 6 Date Analyzed: 03/23/92

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	11 ~~8~~	~~B~~ U
67-64-1	Acetone	130	B
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	11	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	11	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	11	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (Total)	5	U

10-26-92 cc

FORM I VOA 1/87 Rev.

9213507 1E 1551

EPA SAMPLE NO.

B05WW0

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03051 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203051-04A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20323R07

Level: (low/med) LOW Date Received: 03/16/92

% Moisture: not dec. 6 Date Analyzed: 03/23/92

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

9213507.1552

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B05WW4

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03051 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203051-05A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20323R08

Level: (low/med) LOW Date Received: 03/16/92

% Moisture: not dec. 1 Date Analyzed: 03/23/92

Column: (pack/cap) PACK Dilution Factor: 1.0

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

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10 ~~4~~	~~BJ~~ U
67-64-1	Acetone	15	~~B~~ U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (Total)	5	U

10-26-92

EPA SAMPLE NO.

B05WW4

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03051 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203051-05A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20323R08

Level: (low/med) LOW Date Received: 03/16/92

% Moisture: not dec. 1 Date Analyzed: 03/23/92

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

9213502.1554

000015

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B05WW5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03051 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203051-06A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20323R09

Level: (low/med) LOW Date Received: 03/17/92

% Moisture: not dec. 3 Date Analyzed: 03/23/92

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	~~4~~ 10	~~B~~ U
67-64-1	Acetone	14	~~B~~ U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (Total)	5	U

10-26-92

FORM I VOA 1/87 Rev.

9213502 LE 955

000016
EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

B05WW5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03051 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203051-06A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20323R09

Level: (low/med) LOW Date Received: 03/17/92

% Moisture: not dec. 3 Date Analyzed: 03/23/92

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 2

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown hydrocarbon	8.08	5.2	JN
2.	Subst. cyclopentane	29.37	6.2	JN

9213507.1856

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B05WV6

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03051 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203051-01B

Sample wt/vol: 30.4 (g/mL) G Lab File ID: 20414N11

Level: (low/med) LOW Date Received: 03/13/92

% Moisture: not dec. 5 dec. ____ Date Extracted: 03/21/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/14/92

GPC Cleanup: (Y/N) N pH: 9.1 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	340	U
111-44-4	bis(2-Chloroethyl)Ether	340	U
95-57-8	2-Chlorophenol	340	U
541-73-1	1,3-Dichlorobenzene	340	U
106-46-7	1,4-Dichlorobenzene	340	U
100-51-6	Benzyl Alcohol	340	U
95-50-1	1,2-Dichlorobenzene	340	U
95-48-7	2-Methylphenol	340	U
108-60-1	bis(2-Chloroisopropyl)Ether	340	U
106-44-5	4-Methylphenol	340	U
621-64-7	N-Nitroso-Di-n-Propylamine	340	U
67-72-1	Hexachloroethane	340	U
98-95-3	Nitrobenzene	340	U
78-59-1	Isophorone	340	U
88-75-5	2-Nitrophenol	340	U
105-67-9	2,4-Dimethylphenol	340	U
65-85-0	Benzoic Acid	1700	U
111-91-1	bis(2-Chloroethoxy)methane	340	U
120-83-2	2,4-Dichlorophenol	340	U
120-82-1	1,2,4-Trichlorobenzene	340	U
91-20-3	Naphthalene	180	J
106-47-8	4-Chloroaniline	340	U
87-68-3	Hexachlorobutadiene	340	U
59-50-7	4-Chloro-3-methylphenol	340	U
91-57-6	2-Methylnaphthalene	42	J
77-47-4	Hexachlorocyclopentadiene	340	U
88-06-2	2,4,6-Trichlorophenol	340	U
95-95-4	2,4,5-Trichlorophenol	1700	U
91-58-7	2-Chloronaphthalene	340	U
88-74-4	2-Nitroaniline	1700	U
131-11-3	Dimethyl Phthalate	340	U
208-96-8	Acenaphthylene	340	U

10-26-92 SS

PEJ 4/29

000618

EPA SAMPLE NO.

B05WV6

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03051 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203051-01B

Sample wt/vol: 30.4 (g/mL) G Lab File ID: 20414N11

Level: (low/med) LOW Date Received: 03/13/92

% Moisture: not dec. 5 dec. ____ Date Extracted: 03/21/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/14/92

GPC Cleanup: (Y/N) N pH: 9.1 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1700	U
83-32-9	Acenaphthene	210	J
51-28-5	2,4-Dinitrophenol	1700	U
100-02-7	4-Nitrophenol	1700	U
132-64-9	Dibenzofuran	130	J
121-14-2	2,4-Dinitrotoluene	340	U
606-20-2	2,6-Dinitrotoluene	340	U
84-66-2	Diethylphthalate	340	U
7005-72-3	4-Chlorophenyl-phenylether	340	U
86-73-7	Fluorene	190	J
100-01-6	4-Nitroaniline	1700	U
534-52-1	4,6-Dinitro-2-methylphenol	1700	U
86-30-6	N-Nitrosodiphenylamine (1)	340	U
101-55-3	4-Bromophenyl-phenylether	340	U
118-74-1	Hexachlorobenzene	340	U
87-86-5	Pentachlorophenol	1700	U
85-01-8	Phenanthrene	1500	J
120-12-7	Anthracene	430	J
84-74-2	Di-n-Butylphthalate	59	J
206-44-0	Fluoranthene	1800	J
129-00-0	Pyrene	1200	J
85-68-7	Butylbenzylphthalate	340	U
91-94-1	3,3'-Dichlorobenzidine	690	U
56-55-3	Benzo(a)anthracene	940	J
117-81-7	bis(2-Ethylhexyl)Phthalate	340	U
218-01-9	Chrysene	920	J
117-84-0	Di-n-octyl Phthalate	340	U
205-99-2	Benzo(b)fluoranthene	890	J
207-08-9	Benzo(k)fluoranthene	760	J
50-32-8	Benzo(a)pyrene	810	J
193-39-5	Indeno(1,2,3-cd)Pyrene	520	J
53-70-3	Dibenz(a,h)Anthracene	340	U
191-24-2	Benzo(g,h,i)perylene	410	J

(1) - Cannot be separated from Diphenylamine

PBS 4/20/

10-26-

000015
EPA SAMPLE NO.

B05WV6

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03051 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203051-01B

Sample wt/vol: 30.4 (g/mL) G Lab File ID: 20414N11

Level: (low/med) LOW Date Received: 03/13/92

% Moisture: not dec. 5 dec. ____ Date Extracted: 03/21/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/14/92

GPC Cleanup: (Y/N) N pH: 9.1 Dilution Factor: 1.0

Number TICs found: 20

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN HYDROCARBON	3.17	480	J
2.	UNKNOWN HYDROCARBON	4.17	760	~~BJ~~ U
3.	UNKNOWN HYDROCARBON	5.12	2800	~~BJ~~
4.	UNKNOWN ALCOHOL	5.73	40000	~~BJ~~
5.	UNKNOWN ALKANE	6.00	350	~~BJ~~
6.	UNKNOWN HYDROCARBON	7.13	1000	~~BJ~~
7.	UNKNOWN HYDROCARBON	7.43	830	~~BJ~~
8.	UNKNOWN KETONE	7.77	590	~~BJ~~
9.	UNKNOWN KETONE	8.67	350	J
10.	UNKNOWN HYDROCARBON	9.92	210	J
11.	SUBSTITUTED CARBAZOLE	22.42	240	J
12.	UNKNOWN PHTHALATE	22.59	550	~~BJ~~ U
13.	UNKNOWN POLYAROMATIC HYDROCA	23.57	380	J
14.	UNKNOWN POLYAROMATIC HYDROCA	26.96	620	J
15.	UNKNOWN POLYAROMATIC HYDROCA	27.16	480	J
16.	UNKNOWN CARBOXYLIC ACID ESTE	28.36	660	~~BJ~~ U
17.	UNKNOWN POLYNUCLEAR AROMATIC	28.87	520	J
18.	UNKNOWN ALKANE	33.62	450	J
19.	UNKNOWN POLYNUCLEAR AROMATIC	33.92	1100	J
20.	UNKNOWN POLYNUCLEAR AROMATIC	34.47	480	J

10-26-92 SC

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B05WV8

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03051 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203051-02D

Sample wt/vol: 30.3 (g/mL) G Lab File ID: 20414N10

Level: (low/med) LOW Date Received: 03/13/92

% Moisture: not dec. 5 dec. ____ Date Extracted: 03/21/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/14/92

GPC Cleanup: (Y/N) N pH: 9.2 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	340	U J
111-44-4	bis(2-Chloroethyl)Ether	340	U
95-57-8	2-Chlorophenol	340	U
541-73-1	1,3-Dichlorobenzene	340	U
106-46-7	1,4-Dichlorobenzene	340	U
100-51-6	Benzyl Alcohol	340	U
95-50-1	1,2-Dichlorobenzene	340	U
95-48-7	2-Methylphenol	340	U
108-60-1	bis(2-Chloroisopropyl)Ether	340	U
106-44-5	4-Methylphenol	340	U
621-64-7	N-Nitroso-Di-n-Propylamine	340	U
67-72-1	Hexachloroethane	340	U
98-95-3	Nitrobenzene	340	U
78-59-1	Isophorone	340	U
88-75-5	2-Nitrophenol	340	U
105-67-9	2,4-Dimethylphenol	340	U
65-85-0	Benzoic Acid	1700	U
111-91-1	bis(2-Chloroethoxy)methane	340	U
120-83-2	2,4-Dichlorophenol	340	U
120-82-1	1,2,4-Trichlorobenzene	340	U
91-20-3	Naphthalene	340	U
106-47-8	4-Chloroaniline	340	U
87-68-3	Hexachlorobutadiene	340	U
59-50-7	4-Chloro-3-methylphenol	340	U
91-57-6	2-Methylnaphthalene	340	U
77-47-4	Hexachlorocyclopentadiene	340	U
88-06-2	2,4,6-Trichlorophenol	340	U
95-95-4	2,4,5-Trichlorophenol	1700	U
91-58-7	2-Chloronaphthalene	340	U
88-74-4	2-Nitroaniline	1700	U
131-11-3	Dimethyl Phthalate	340	U
208-96-8	Acenaphthylene	340	U J

FORM I SV-1 10-26-92 SC 1/87 Rev.

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B05WV8

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03051 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203051-02D

Sample wt/vol: 30.3 (g/mL) G Lab File ID: 20414N10

Level: (low/med) LOW Date Received: 03/13/92

% Moisture: not dec. 5 dec. ____ Date Extracted: 03/21/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/14/92

GPC Cleanup: (Y/N) N pH: 9.2 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1700	U J
83-32-9	Acenaphthene	340	U
51-28-5	2,4-Dinitrophenol	1700	U
100-02-7	4-Nitrophenol	1700	U
132-64-9	Dibenzofuran	340	U
121-14-2	2,4-Dinitrotoluene	340	U
606-20-2	2,6-Dinitrotoluene	340	U
84-66-2	Diethylphthalate	340	U
7005-72-3	4-Chlorophenyl-phenylether	340	U
86-73-7	Fluorene	340	U
100-01-6	4-Nitroaniline	1700	U
534-52-1	4,6-Dinitro-2-methylphenol	1700	U
86-30-6	N-Nitrosodiphenylamine (1)	59	J
101-55-3	4-Bromophenyl-phenylether	340	U
118-74-1	Hexachlorobenzene	340	U
87-86-5	Pentachlorophenol	1700	U
85-01-8	Phenanthrene	41	J
120-12-7	Anthracene	340	U
84-74-2	Di-n-Butylphthalate	68	J
206-44-0	Fluoranthene	63	J
129-00-0	Pyrene	48	J
85-68-7	Butylbenzylphthalate	340	U
91-94-1	3,3'-Dichlorobenzidine	690	U
56-55-3	Benzo(a)anthracene	39	J
117-81-7	bis(2-Ethylhexyl)Phthalate	68	J
218-01-9	Chrysene	340	U
117-84-0	Di-n-octyl Phthalate	340	U
205-99-2	Benzo(b)fluoranthene	340	U
207-08-9	Benzo(k)fluoranthene	340	U
50-32-8	Benzo(a)pyrene	340	U
193-39-5	Indeno(1,2,3-cd)Pyrene	340	U
53-70-3	Dibenz(a,h)Anthracene	340	U
191-24-2	Benzo(g,h,i)perylene	340	U

(1) - Cannot be separated from Diphenylamine

RBD 4/20/9

000022

EPA SAMPLE NO.

B05WV8

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03051 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203051-02D

Sample wt/vol: 30.3 (g/mL) G Lab File ID: 20414N10

Level: (low/med) LOW Date Received: 03/13/92

% Moisture: not dec. 5 dec. ____ Date Extracted: 03/21/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/14/92

GPC Cleanup: (Y/N) N pH: 9.2 Dilution Factor: 1.00

Number TICs found: 16

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN HYDROCARBON	4.17	760	~~BJ~~ U
2.	UNKNOWN HYDROCARBON	5.10	2800	~~BJ~~
3.	UNKNOWN ALCOHOL	5.73	41000	~~BJ~~
4.	UNKNOWN ALKANE	5.98	350	~~BJ~~
5.	UNKNOWN ALKANE	6.15	170	~~BJ~~
6.	UNKNOWN HYDROCARBON	7.13	1000	~~BJ~~
7.	UNKNOWN HYDROCARBON	7.43	310	~~BJ~~
8.	UNKNOWN KETONE	7.75	310	~~BJ~~
9.	UNKNOWN ALCOHOL	8.62	280	~~BJ~~
10.	UNKNOWN PHTHALATE	22.59	520	~~BJ~~
11.	UNKNOWN ALKANE	24.09	140	J
12.	UNKNOWN ALKANE	25.22	170	J
13.	UNKNOWN AROMATIC	27.02	690	J
14.	UNKNOWN ALKANE	27.37	350	J
15.	UNKNOWN CARBOXYLIC ACID ESTE	28.37	940	~~BJ~~ U
16.	UNKNOWN ALKANE	29.34	450	J

RBD 4/20/93

EPA SAMPLE NO.

B05WV9

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03051 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203051-03B

Sample wt/vol: 30.4 (g/mL) G Lab File ID: 20414N12

Level: (low/med) LOW Date Received: 03/13/92

% Moisture: not dec. 3 dec. ____ Date Extracted: 03/21/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/14/92

GPC Cleanup: (Y/N) N pH: 9.4 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	340	U
111-44-4	bis(2-Chloroethyl)Ether	340	U
95-57-8	2-Chlorophenol	340	U
541-73-1	1,3-Dichlorobenzene	340	U
106-46-7	1,4-Dichlorobenzene	340	U
100-51-6	Benzyl Alcohol	340	U
95-50-1	1,2-Dichlorobenzene	340	U
95-48-7	2-Methylphenol	340	U
108-60-1	bis(2-Chloroisopropyl)Ether	340	U
106-44-5	4-Methylphenol	340	U
621-64-7	N-Nitroso-Di-n-Propylamine	340	U
67-72-1	Hexachloroethane	340	U
98-95-3	Nitrobenzene	340	U
78-59-1	Isophorone	340	U
88-75-5	2-Nitrophenol	340	U
105-67-9	2,4-Dimethylphenol	340	U
65-85-0	Benzoic Acid	1600	U
111-91-1	bis(2-Chloroethoxy)methane	340	U
120-83-2	2,4-Dichlorophenol	340	U
120-82-1	1,2,4-Trichlorobenzene	340	U
91-20-3	Naphthalene	340	U
106-47-8	4-Chloroaniline	340	U
87-68-3	Hexachlorobutadiene	340	U
59-50-7	4-Chloro-3-methylphenol	340	U
91-57-6	2-Methylnaphthalene	340	U
77-47-4	Hexachlorocyclopentadiene	340	U
88-06-2	2,4,6-Trichlorophenol	340	U
95-95-4	2,4,5-Trichlorophenol	1600	U
91-58-7	2-Chloronaphthalene	340	U
88-74-4	2-Nitroaniline	1600	U
131-11-3	Dimethyl Phthalate	340	U
208-96-8	Acenaphthylene	340	U

PRD 4/2019

10-26-92 SC

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B05WV9

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03051 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203051-03B

Sample wt/vol: 30.4 (g/mL) G Lab File ID: 20414N12

Level: (low/med) LOW Date Received: 03/13/92

% Moisture: not dec. 3 dec. ____ Date Extracted: 03/21/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/14/92

GPC Cleanup: (Y/N) N pH: 9.4 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1600	U J
83-32-9	Acenaphthene	340	U
51-28-5	2,4-Dinitrophenol	1600	U
100-02-7	4-Nitrophenol	1600	U
132-64-9	Dibenzofuran	340	U
121-14-2	2,4-Dinitrotoluene	340	U
606-20-2	2,6-Dinitrotoluene	340	U
84-66-2	Diethylphthalate	340	U
7005-72-3	4-Chlorophenyl-phenylether	340	U
86-73-7	Fluorene	340	U
100-01-6	4-Nitroaniline	1600	U
534-52-1	4,6-Dinitro-2-methylphenol	1600	U
86-30-6	N-Nitrosodiphenylamine (1)	340	U
101-55-3	4-Bromophenyl-phenylether	340	U
118-74-1	Hexachlorobenzene	340	U
87-86-5	Pentachlorophenol	1600	U J
85-01-8	Phenanthrene	35	J
120-12-7	Anthracene	340	U J
84-74-2	Di-n-Butylphthalate	50	J
206-44-0	Fluoranthene	110	J
129-00-0	Pyrene	85	J
85-68-7	Butylbenzylphthalate	340	U J
91-94-1	3,3'-Dichlorobenzidine	670	U J
56-55-3	Benzo(a)anthracene	78	J
117-81-7	bis(2-Ethylhexyl)Phthalate	340	U J
218-01-9	Chrysene	77	J
117-84-0	Di-n-octyl Phthalate	340	U J
205-99-2	Benzo(b)fluoranthene	130	J
207-08-9	Benzo(k)fluoranthene	340	U J
50-32-8	Benzo(a)pyrene	61	J
193-39-5	Indeno(1,2,3-cd)Pyrene	340	U J
53-70-3	Dibenz(a,h)Anthracene	340	U J
191-24-2	Benzo(g,h,i)perylene	340	U J

(1) - Cannot be separated from Diphenylamine

PBD 4/20

FORM I SV-2 1/87 Rev.

10-26-1256

9213507.1564

000025

EPA SAMPLE NO.

B05WV9

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03051 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203051-03B

Sample wt/vol: 30.4 (g/mL) G Lab File ID: 20414N12

Level: (low/med) LOW Date Received: 03/13/92

% Moisture: not dec. 3 dec. ____ Date Extracted: 03/21/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/14/92

GPC Cleanup: (Y/N) N pH: 9.4 Dilution Factor: 1.0

Number TICs found: 17

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN HYDROCARBON	3.15	540	J
2.	UNKNOWN HYDROCARBON	4.17	850	~~BJ~~ U
3.	UNKNOWN HYDROCARBON	5.12	2800	~~BJ~~
4.	UNKNOWN ALCOHOL	5.73	38000	~~BJ~~
5.	UNKNOWN ALKANE	5.98	370	~~BJ~~
6.	UNKNOWN ALKANE	6.15	200	~~BJ~~
7.	UNKNOWN HYDROCARBON	7.13	1000	~~BJ~~
8.	UNKNOWN HYDROCARBON	7.43	980	~~BJ~~
9.	UNKNOWN KETONE	7.75	470	~~BJ~~
10.	UNKNOWN KETONE	8.67	370	J
11.	UNKNOWN KETONE	9.07	170	J
12.	UNKNOWN CARBOXYLIC ACID ESTE	9.82	170	J
13.	UNKNOWN HYDROCARBON	9.92	270	J
14.	SUBST. 1,2,3-PROPANETRIOL	13.49	170	J
15.	UNKNOWN CARBOXYLIC ACID ESTE	19.05	170	J
16.	UNKNOWN PHTHALATE	22.60	510	~~BJ~~ U
17.	UNKNOWN CARBOXYLIC ACID ESTE	28.36	750	~~BJ~~ U

10-26-92

9213507.1565

UUUU2D

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

B05WW0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03051 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203051-04B

Sample wt/vol: 30.3 (g/mL) G Lab File ID: 20414N07

Level: (low/med) LOW Date Received: 03/16/92

% Moisture: not dec. 6 dec. ____ Date Extracted: 03/21/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/14/92

GPC Cleanup: (Y/N) N pH: 9.5 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	350	U J
111-44-4	bis(2-Chloroethyl)Ether	350	U
95-57-8	2-Chlorophenol	350	U
541-73-1	1,3-Dichlorobenzene	350	U
106-46-7	1,4-Dichlorobenzene	350	U
100-51-6	Benzyl Alcohol	350	U
95-50-1	1,2-Dichlorobenzene	350	U
95-48-7	2-Methylphenol	350	U
108-60-1	bis(2-Chloroisopropyl)Ether	350	U
106-44-5	4-Methylphenol	350	U
621-64-7	N-Nitroso-Di-n-Propylamine	350	U
67-72-1	Hexachloroethane	350	U
98-95-3	Nitrobenzene	350	U
78-59-1	Isophorone	350	U
88-75-5	2-Nitrophenol	350	U
105-67-9	2,4-Dimethylphenol	350	U
65-85-0	Benzoic Acid	1700	U
111-91-1	bis(2-Chloroethoxy)methane	350	U
120-83-2	2,4-Dichlorophenol	350	U
120-82-1	1,2,4-Trichlorobenzene	350	U
91-20-3	Naphthalene	350	U
106-47-8	4-Chloroaniline	350	U
87-68-3	Hexachlorobutadiene	350	U
59-50-7	4-Chloro-3-methylphenol	350	U
91-57-6	2-Methylnaphthalene	350	U
77-47-4	Hexachlorocyclopentadiene	350	U
88-06-2	2,4,6-Trichlorophenol	350	U
95-95-4	2,4,5-Trichlorophenol	1700	U
91-58-7	2-Chloronaphthalene	350	U
88-74-4	2-Nitroaniline	1700	U
131-11-3	Dimethyl Phthalate	350	U
208-96-8	Acenaphthylene	350	U J

PBJ 4/20

EPA SAMPLE NO.

B05WW0

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03051 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203051-04B

Sample wt/vol: 30.3 (g/mL) G Lab File ID: 20414N07

Level: (low/med) LOW Date Received: 03/16/92

% Moisture: not dec. 6 dec. ____ Date Extracted: 03/21/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/14/92

GPC Cleanup: (Y/N) N pH: 9.5 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1700	U J
83-32-9	Acenaphthene	350	U
51-28-5	2,4-Dinitrophenol	1700	U
100-02-7	4-Nitrophenol	1700	U
132-64-9	Dibenzofuran	350	U
121-14-2	2,4-Dinitrotoluene	350	U
606-20-2	2,6-Dinitrotoluene	350	U
84-66-2	Diethylphthalate	350	U
7005-72-3	4-Chlorophenyl-phenylether	350	U
86-73-7	Fluorene	350	U
100-01-6	4-Nitroaniline	1700	U
534-52-1	4,6-Dinitro-2-methylphenol	1700	U
86-30-6	N-Nitrosodiphenylamine (1)	350	U
101-55-3	4-Bromophenyl-phenylether	350	U
118-74-1	Hexachlorobenzene	350	U
87-86-5	Pentachlorophenol	1700	U
85-01-8	Phenanthrene	350	U
120-12-7	Anthracene	350	U
84-74-2	Di-n-Butylphthalate	350	U
206-44-0	Fluoranthene	350	U
129-00-0	Pyrene	350	U
85-68-7	Butylbenzylphthalate	350	U
91-94-1	3,3'-Dichlorobenzidine	690	U
56-55-3	Benzo(a)anthracene	350	U
117-81-7	bis(2-Ethylhexyl)Phthalate	350	U
218-01-9	Chrysene	350	U
117-84-0	Di-n-octyl Phthalate	350	U
205-99-2	Benzo(b)fluoranthene	350	U
207-08-9	Benzo(k)fluoranthene	350	U
50-32-8	Benzo(a)pyrene	350	U
193-39-5	Indeno(1,2,3-cd)Pyrene	350	U
53-70-3	Dibenz(a,h)Anthracene	350	U
191-24-2	Benzo(g,h,i)perylene	350	U J

(1) - Cannot be separated from Diphenylamine

PB 4/20/9

EPA SAMPLE NO.

B05WW0

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03051 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203051-04B

Sample wt/vol: 30.3 (g/mL) G Lab File ID: 20414N07

Level: (low/med) LOW Date Received: 03/16/92

% Moisture: not dec. 6 dec. ____ Date Extracted: 03/21/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/14/92

GPC Cleanup: (Y/N) N pH: 9.5 Dilution Factor: 1.00

Number TICs found: 15

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN HYDROCARBON	3.17	600	J
2.	UNKNOWN ALKENE	3.95	140	J
3.	UNKNOWN HYDROCARBON	4.22	910	~~BJ~~ U
4.	UNKNOWN HYDROCARBON	5.22	2900	~~BJ~~
5.	UNKNOWN ALCOHOL	5.87	41000	~~BJ~~
6.	UNKNOWN ALKANE	6.12	460	~~BJ~~
7.	UNKNOWN ALKANE	6.28	210	~~BJ~~
8.	UNKNOWN HYDROCARBON	7.28	1100	~~BJ~~
9.	UNKNOWN HYDROCARBON	7.63	210	J
10.	UNKNOWN KETONE	7.92	250	~~BJ~~ U
11.	UNKNOWN ALCOHOL	8.79	250	~~BJ~~ U
12.	UNKNOWN HYDROCARBON	10.10	210	J
13.	UNKNOWN CARBOXYLIC ACID	19.25	140	~~BJ~~ U
14.	UNKNOWN PHTHALATE	22.79	490	~~BJ~~ U
15.	UNKNOWN CARBOXYLIC ACID ESTE	28.57	460	~~BJ~~ U

10-26-92

9215607.1568

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B05WW4

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03051 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203051-05B

Sample wt/vol: 30.5 (g/mL) G Lab File ID: 20414N08

Level: (low/med) LOW Date Received: 03/16/92

% Moisture: not dec. 2 dec. ____ Date Extracted: 03/21/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/14/92

GPC Cleanup: (Y/N) N pH: 9.5 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	330	U J
111-44-4	bis(2-Chloroethyl)Ether	330	U
95-57-8	2-Chlorophenol	330	U
541-73-1	1,3-Dichlorobenzene	330	U
106-46-7	1,4-Dichlorobenzene	330	U
100-51-6	Benzyl Alcohol	330	U
95-50-1	1,2-Dichlorobenzene	330	U
95-48-7	2-Methylphenol	330	U
108-60-1	bis(2-Chloroisopropyl)Ether	330	U
106-44-5	4-Methylphenol	330	U
621-64-7	N-Nitroso-Di-n-Propylamine	330	U
67-72-1	Hexachloroethane	330	U
98-95-3	Nitrobenzene	330	U
78-59-1	Isophorone	330	U
88-75-5	2-Nitrophenol	330	U
105-67-9	2,4-Dimethylphenol	330	U
65-85-0	Benzoic Acid	1600	U
111-91-1	bis(2-Chloroethoxy)methane	330	U
120-83-2	2,4-Dichlorophenol	330	U
120-82-1	1,2,4-Trichlorobenzene	330	U
91-20-3	Naphthalene	330	U
106-47-8	4-Chloroaniline	330	U
87-68-3	Hexachlorobutadiene	330	U
59-50-7	4-Chloro-3-methylphenol	330	U
91-57-6	2-Methylnaphthalene	330	U
77-47-4	Hexachlorocyclopentadiene	330	U
88-06-2	2,4,6-Trichlorophenol	330	U
95-95-4	2,4,5-Trichlorophenol	1600	U
91-58-7	2-Chloronaphthalene	330	U
88-74-4	2-Nitroaniline	1600	U
131-11-3	Dimethyl Phthalate	330	U
208-96-8	Acenaphthylene	330	U J

4/20/92

10-26-92 SC

9/1507 1C

EPA SAMPLE NO.

B05WW4

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03051 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203051-05B

Sample wt/vol: 30.5 (g/mL) G Lab File ID: 20414N08

Level: (low/med) LOW Date Received: 03/16/92

% Moisture: not dec. 2 dec. ____ Date Extracted: 03/21/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/14/92

GPC Cleanup: (Y/N) N pH: 9.5 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1600	U
83-32-9	Acenaphthene	330	U
51-28-5	2,4-Dinitrophenol	1600	U
100-02-7	4-Nitrophenol	1600	U
132-64-9	Dibenzofuran	330	U
121-14-2	2,4-Dinitrotoluene	330	U
606-20-2	2,6-Dinitrotoluene	330	U
84-66-2	Diethylphthalate	330	U
7005-72-3	4-Chlorophenyl-phenylether	330	U
86-73-7	Fluorene	330	U
100-01-6	4-Nitroaniline	1600	U
534-52-1	4,6-Dinitro-2-methylphenol	1600	U
86-30-6	N-Nitrosodiphenylamine (1)	330	U
101-55-3	4-Bromophenyl-phenylether	330	U
118-74-1	Hexachlorobenzene	330	U
87-86-5	Pentachlorophenol	1600	U
85-01-8	Phenanthrene	330	U
120-12-7	Anthracene	330	U
84-74-2	Di-n-Butylphthalate	46	J
206-44-0	Fluoranthene	330	U
129-00-0	Pyrene	330	U
85-68-7	Butylbenzylphthalate	330	U
91-94-1	3,3'-Dichlorobenzidine	660	U
56-55-3	Benzo(a)anthracene	330	U
117-81-7	bis(2-Ethylhexyl)Phthalate	330	U
218-01-9	Chrysene	330	U
117-84-0	Di-n-octyl Phthalate	330	U
205-99-2	Benzo(b)fluoranthene	330	U
207-08-9	Benzo(k)fluoranthene	330	U
50-32-8	Benzo(a)pyrene	330	U
193-39-5	Indeno(1,2,3-cd)Pyrene	330	U
53-70-3	Dibenz(a,h)Anthracene	330	U
191-24-2	Benzo(g,h,i)perylene	330	U

(1) - Cannot be separated from Diphenylamine

4/20/9

9213502 1570

000031
EPA SAMPLE NO.

B05WW4

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03051 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203051-05B

Sample wt/vol: 30.5 (g/mL) G Lab File ID: 20414N08

Level: (low/med) LOW Date Received: 03/16/92

% Moisture: not dec. 2 dec. ____ Date Extracted: 03/21/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/14/92

GPC Cleanup: (Y/N) N pH: 9.5 Dilution Factor: 1.0

Number TICs found: 15

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN HYDROCARBON	3.13	540	J
2.	UNKNOWN ALKENE	3.88	170	J
3.	UNKNOWN HYDROCARBON	4.15	940	~~BJ~~ 4
4.	UNKNOWN HYDROCARBON	5.10	2900	~~BJ~~
5.	UNKNOWN ALCOHOL	5.73	40000	~~BJ~~
6.	UNKNOWN ALKANE	5.98	470	~~BJ~~
7.	UNKNOWN ALKANE	6.15	200	~~BJ~~
8.	UNKNOWN HYDROCARBON	7.13	1000	~~BJ~~
9.	UNKNOWN HYDROCARBON	7.43	230	~~BJ~~
10.	UNKNOWN KETONE	7.75	200	~~BJ~~
11.	UNKNOWN ALCOHOL	8.62	230	~~BJ~~
12.	UNKNOWN HYDROCARBON	9.92	170	J
13.	UNKNOWN CARBOXYLIC ACID ESTE	19.05	170	J
14.	UNKNOWN PHTHALATE	22.59	500	~~BJ~~ 4
15.	UNKNOWN CARBOXYLIC ACID ESTE	28.36	840	~~BJ~~ 4

10-26-92 SC

EPA SAMPLE NO.

B05WW5

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03051 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203051-06B

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 20414N09

Level: (low/med) LOW Date Received: 03/17/92

% Moisture: not dec. 3 dec. ____ Date Extracted: 03/21/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/14/92

GPC Cleanup: (Y/N) N pH: 9.7 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	340	U
111-44-4	bis(2-Chloroethyl)Ether	340	U
95-57-8	2-Chlorophenol	340	U
541-73-1	1,3-Dichlorobenzene	340	U
106-46-7	1,4-Dichlorobenzene	340	U
100-51-6	Benzyl Alcohol	340	U
95-50-1	1,2-Dichlorobenzene	340	U
95-48-7	2-Methylphenol	340	U
108-60-1	bis(2-Chloroisopropyl)Ether	340	U
106-44-5	4-Methylphenol	340	U
621-64-7	N-Nitroso-Di-n-Propylamine	340	U
67-72-1	Hexachloroethane	340	U
98-95-3	Nitrobenzene	340	U
78-59-1	Isophorone	340	U
88-75-5	2-Nitrophenol	340	U
105-67-9	2,4-Dimethylphenol	340	U
65-85-0	Benzoic Acid	1600	U
111-91-1	bis(2-Chloroethoxy)methane	340	U
120-83-2	2,4-Dichlorophenol	340	U
120-82-1	1,2,4-Trichlorobenzene	340	U
91-20-3	Naphthalene	340	U
106-47-8	4-Chloroaniline	340	U
87-68-3	Hexachlorobutadiene	340	U
59-50-7	4-Chloro-3-methylphenol	340	U
91-57-6	2-Methylnaphthalene	340	U
77-47-4	Hexachlorocyclopentadiene	340	U
88-06-2	2,4,6-Trichlorophenol	340	U
95-95-4	2,4,5-Trichlorophenol	1600	U
91-58-7	2-Chloronaphthalene	340	U
88-74-4	2-Nitroaniline	1600	U
131-11-3	Dimethyl Phthalate	340	U
208-96-8	Acenaphthylene	340	U

PBS 4/20/92

9215GC7 1572

IC

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B05WW5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03051 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203051-06B

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 20414N09

Level: (low/med) LOW Date Received: 03/17/92

% Moisture: not dec. 3 dec. ____ Date Extracted: 03/21/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/14/92

GPC Cleanup: (Y/N) N pH: 9.7 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1600	U
83-32-9	Acenaphthene	340	U
51-28-5	2,4-Dinitrophenol	1600	U
100-02-7	4-Nitrophenol	1600	U
132-64-9	Dibenzofuran	340	U
121-14-2	2,4-Dinitrotoluene	340	U
606-20-2	2,6-Dinitrotoluene	340	U
84-66-2	Diethylphthalate	340	U
7005-72-3	4-Chlorophenyl-phenylether	340	U
86-73-7	Fluorene	340	U
100-01-6	4-Nitroaniline	1600	U
534-52-1	4,6-Dinitro-2-methylphenol	1600	U
86-30-6	N-Nitrosodiphenylamine (1)	340	U
101-55-3	4-Bromophenyl-phenylether	340	U
118-74-1	Hexachlorobenzene	340	U
87-86-5	Pentachlorophenol	1600	U
85-01-8	Phenanthrene	340	U
120-12-7	Anthracene	340	U
84-74-2	Di-n-Butylphthalate	48	J
206-44-0	Fluoranthene	340	U
129-00-0	Pyrene	340	U
85-68-7	Butylbenzylphthalate	340	U
91-94-1	3,3'-Dichlorobenzidine	680	U
56-55-3	Benzo(a)anthracene	340	U
117-81-7	bis(2-Ethylhexyl)Phthalate	340	U
218-01-9	Chrysene	340	U
117-84-0	Di-n-octyl Phthalate	340	U
205-99-2	Benzo(b)fluoranthene	340	U
207-08-9	Benzo(k)fluoranthene	340	U
50-32-8	Benzo(a)pyrene	340	U
193-39-5	Indeno(1,2,3-cd)Pyrene	340	U
53-70-3	Dibenz(a,h)Anthracene	340	U
191-24-2	Benzo(g,h,i)perylene	340	U

(1) - Cannot be separated from Diphenylamine

PAN 4/20/92

9213507.1573

1F

EPA SAMPLE NO.

B05WW5

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03051 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203051-06B

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 20414N09

Level: (low/med) LOW Date Received: 03/17/92

% Moisture: not dec. 3 dec. Date Extracted: 03/21/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/14/92

GPC Cleanup: (Y/N) N pH: 9.7 Dilution Factor: 1.00

Number TICs found: 15

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN HYDROCARBON	3.15	510	J
2.	UNKNOWN ALKENE	3.88	170	J
3.	UNKNOWN HYDROCARBON	4.15	960	BJ
4.	UNKNOWN HYDROCARBON	5.10	3200	BJ U
5.	UNKNOWN ALCOHOL	5.73	43000	~~BJ~~
6.	UNKNOWN ALKANE	5.98	450	~~BJ~~
7.	UNKNOWN ALKANE	6.13	210	~~BJ~~
8.	UNKNOWN HYDROCARBON	7.13	1200	~~BJ~~
9.	UNKNOWN HYDROCARBON	7.43	310	~~BJ~~
10.	UNKNOWN KETONE	7.75	240	~~BJ~~
11.	UNKNOWN HYDROCARBON	8.60	240	J
12.	UNKNOWN HYDROCARBON	9.92	210	J
13.	UNKNOWN CARBOXYLIC ACID ESTE	19.05	170	J
14.	UNKNOWN PHTHALATE	22.60	510	~~BJ~~ U
15.	UNKNOWN CARBOXYLIC ACID ESTE	28.36	690	~~BJ~~ U

PBD
4/20/92

9213507 ID 1574

000035
EPA SAMPLE NO.

PESTICIDE ORGANICS ANALYSIS DATA SHEET

B05WV6

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03051 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203051-01B

Sample wt/vol: 30.2 (g/mL) G Lab File ID: _____

Level: (low/med) LOW Date Received: 03/13/92

% Moisture: not dec. 5 dec. __ Date Extracted: 03/21/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/01/92

GPC Cleanup: (Y/N) N pH: 9.1 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	8.4	U
319-85-7	beta-BHC	8.4	U
319-86-8	delta-BHC	8.4	U
58-89-9	gamma-BHC (Lindane)	8.4	U
76-44-8	Heptachlor	8.4	U
309-00-2	Aldrin	8.4	U
1024-57-3	Heptachlor epoxide	8.4	U
959-98-8	Endosulfan I	8.4	U
60-57-1	Dieldrin	17	U
72-55-9	4,4'-DDE	17	U
72-20-8	Endrin	17	U
33213-65-9	Endosulfan II	17	U
72-54-8	4,4'-DDD	17	U
1031-07-8	Endosulfan sulfate	17	U
50-29-3	4,4'-DDT	17	U
72-43-5	Methoxychlor	84	U
53494-70-5	Endrin ketone	17	U
5103-71-9	alpha-Chlordane	84	U
5103-74-2	gamma-Chlordane	84	U
8001-35-2	Toxaphene	170	U
12674-11-2	Aroclor-1016	84	U
11104-28-2	Aroclor-1221	84	U
11141-16-5	Aroclor-1232	84	U
53469-21-9	Aroclor-1242	84	U
12672-29-6	Aroclor-1248	84	U
11097-69-1	Aroclor-1254	170	U
11096-82-5	Aroclor-1260	170	U

10-26-92 SC

FORM I PEST 1/87 Rev.

9213502 1575

1D

EPA SAMPLE NO.

B05WV8

PESTICIDE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03051 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203051-02D

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

Level: (low/med) LOW Date Received: 03/13/92

% Moisture: not dec. 5 dec. __ Date Extracted: 03/21/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/02/92

GPC Cleanup: (Y/N) N pH: 9.2 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	8.4	U J
319-85-7	beta-BHC	8.4	U
319-86-8	delta-BHC	8.4	U
58-89-9	gamma-BHC (Lindane)	8.4	U
76-44-8	Heptachlor	8.4	U
309-00-2	Aldrin	8.4	U
1024-57-3	Heptachlor epoxide	8.4	U
959-98-8	Endosulfan I	8.4	U
60-57-1	Dieldrin	17	U
72-55-9	4,4'-DDE	17	U
72-20-8	Endrin	17	U
33213-65-9	Endosulfan II	17	U
72-54-8	4,4'-DDD	17	U
1031-07-8	Endosulfan sulfate	17	U
50-29-3	4,4'-DDT	17	U
72-43-5	Methoxychlor	84	U
53494-70-5	Endrin ketone	17	U
5103-71-9	alpha-Chlordane	84	U
5103-74-2	gamma-Chlordane	84	U
8001-35-2	Toxaphene	170	U
12674-11-2	Aroclor-1016	84	U
11104-28-2	Aroclor-1221	84	U
11141-16-5	Aroclor-1232	84	U
53469-21-9	Aroclor-1242	84	U
12672-29-6	Aroclor-1248	84	U
11097-69-1	Aroclor-1254	170	U
11096-82-5	Aroclor-1260	170	U

10-26-92 SC

RH 7/20/

9715502.1576

000037

EPA SAMPLE NO.

B05WV9

PESTICIDE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03051 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203051-03B

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

Level: (low/med) LOW Date Received: 03/13/92

% Moisture: not dec. 3 dec. __ Date Extracted: 03/21/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/02/92

GPC Cleanup: (Y/N) N pH: 9.4 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	8.2	U
319-85-7	beta-BHC	8.2	U
319-86-8	delta-BHC	8.2	U
58-89-9	gamma-BHC (Lindane)	8.2	U
76-44-8	Heptachlor	8.2	U
309-00-2	Aldrin	8.2	U
1024-57-3	Heptachlor epoxide	8.2	U
959-98-8	Endosulfan I	8.2	U
60-57-1	Dieldrin	16	U
72-55-9	4,4'-DDE	16	U
72-20-8	Endrin	16	U
33213-65-9	Endosulfan II	16	U
72-54-8	4,4'-DDD	16	U
1031-07-8	Endosulfan sulfate	16	U
50-29-3	4,4'-DDT	16	U
72-43-5	Methoxychlor	82	U
53494-70-5	Endrin ketone	16	U
5103-71-9	alpha-Chlordane	82	U
5103-74-2	gamma-Chlordane	82	U
8001-35-2	Toxaphene	160	U
12674-11-2	Aroclor-1016	82	U
11104-28-2	Aroclor-1221	82	U
11141-16-5	Aroclor-1232	82	U
53469-21-9	Aroclor-1242	82	U
12672-29-6	Aroclor-1248	82	U
11097-69-1	Aroclor-1254	160	U
11096-82-5	Aroclor-1260	160	U

10-26-92

9215507.1577

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

000038
EPA SAMPLE NO.

B05WW0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03051 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203051-04B

Sample wt/vol: 30.2 (g/mL) G Lab File ID: _____

Level: (low/med) LOW Date Received: 03/16/92

% Moisture: not dec. 6 dec. __ Date Extracted: 03/21/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/01/92

GPC Cleanup: (Y/N) N pH: 9.5 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	8.4	U J
319-85-7	beta-BHC	8.4	U
319-86-8	delta-BHC	8.4	U
58-89-9	gamma-BHC (Lindane)	8.4	U
76-44-8	Heptachlor	8.4	U
309-00-2	Aldrin	8.4	U
1024-57-3	Heptachlor epoxide	8.4	U
959-98-8	Endosulfan I	8.4	U
60-57-1	Dieldrin	17	U
72-55-9	4,4'-DDE	17	U
72-20-8	Endrin	17	U
33213-65-9	Endosulfan II	17	U
72-54-8	4,4'-DDD	17	U
1031-07-8	Endosulfan sulfate	17	U
50-29-3	4,4'-DDT	17	U
72-43-5	Methoxychlor	84	U
53494-70-5	Endrin ketone	17	U
5103-71-9	alpha-Chlordane	84	U
5103-74-2	gamma-Chlordane	84	U
8001-35-2	Toxaphene	170	U
12674-11-2	Aroclor-1016	84	U
11104-28-2	Aroclor-1221	84	U
11141-16-5	Aroclor-1232	84	U
53469-21-9	Aroclor-1242	84	U
12672-29-6	Aroclor-1248	84	U
11097-69-1	Aroclor-1254	170	U
11096-82-5	Aroclor-1260	170	U J

10-26-92 SC

BD 4/2 5/.

9215607.1578

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

000039
EPA SAMPLE NO.

B05WW4

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03051 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203051-05B

Sample wt/vol: 30.3 (g/mL) G Lab File ID: _____

Level: (low/med) LOW Date Received: 03/16/92

% Moisture: not dec. 1 dec. __ Date Extracted: 03/21/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/02/92

GPC Cleanup: (Y/N) N pH: 9.5 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	8.0	U J
319-85-7	beta-BHC	8.0	U
319-86-8	delta-BHC	8.0	U
58-89-9	gamma-BHC (Lindane)	8.0	U
76-44-8	Heptachlor	8.0	U
309-00-2	Aldrin	8.0	U
1024-57-3	Heptachlor epoxide	8.0	U
959-98-8	Endosulfan I	8.0	U
60-57-1	Dieldrin	16	U
72-55-9	4,4'-DDE	16	U
72-20-8	Endrin	16	U
33213-65-9	Endosulfan II	16	U
72-54-8	4,4'-DDD	16	U
1031-07-8	Endosulfan sulfate	16	U
50-29-3	4,4'-DDT	16	U
72-43-5	Methoxychlor	80	U
53494-70-5	Endrin ketone	16	U
5103-71-9	alpha-Chlordane	80	U
5103-74-2	gamma-Chlordane	80	U
8001-35-2	Toxaphene	160	U
12674-11-2	Aroclor-1016	80	U
11104-28-2	Aroclor-1221	80	U
11141-16-5	Aroclor-1232	80	U
53469-21-9	Aroclor-1242	80	U
12672-29-6	Aroclor-1248	80	U
11097-69-1	Aroclor-1254	160	U
11096-82-5	Aroclor-1260	160	U

10-26 92 S-

PB 4/20/

9215507.1579

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

000040
EPA SAMPLE NO.

B05WW5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03051 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203051-06B

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

Level: (low/med) LOW Date Received: 03/17/92

% Moisture: not dec. 3 dec. __ Date Extracted: 03/21/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/02/92

GPC Cleanup: (Y/N) N pH: 9.7 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	8.2	U
319-85-7	beta-BHC	8.2	U
319-86-8	delta-BHC	8.2	U
58-89-9	gamma-BHC (Lindane)	8.2	U
76-44-8	Heptachlor	8.2	U
309-00-2	Aldrin	8.2	U
1024-57-3	Heptachlor epoxide	8.2	U
959-98-8	Endosulfan I	8.2	U
60-57-1	Dieldrin	16	U
72-55-9	4,4'-DDE	16	U
72-20-8	Endrin	16	U
33213-65-9	Endosulfan II	16	U
72-54-8	4,4'-DDD	16	U
1031-07-8	Endosulfan sulfate	16	U
50-29-3	4,4'-DDT	16	U
72-43-5	Methoxychlor	82	U
53494-70-5	Endrin ketone	16	U
5103-71-9	alpha-Chlordane	82	U
5103-74-2	gamma-Chlordane	82	U
8001-35-2	Toxaphene	160	U
12674-11-2	Aroclor-1016	82	U
11104-28-2	Aroclor-1221	82	U
11141-16-5	Aroclor-1232	82	U
53469-21-9	Aroclor-1242	82	U
12672-29-6	Aroclor-1248	82	U
11097-69-1	Aroclor-1254	160	U
11096-82-5	Aroclor-1260	160	U

10-26-92 SC

RBD 7/20/

9215507.1580

WESTINGHOUSE/HANFORD

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B05WV6

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N2-03-080SAS No.: SDG No.: B05WV6

Matrix (soil/water): SOIL Lab Sample ID: 03087-01S

Level (low/med): LOW Date Received: 03/17/92

% Solids: 93.8

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7500.00			P
7440-36-0	Antimony	1.60	U	~~N~~U (UJ)	P
7440-38-2	Arsenic	25.30		(J)	F
7440-39-3	Barium	74.50			P
7440-41-7	Beryllium	0.56	B	(U)	P
7440-43-9	Cadmium	0.20	U		P
7440-70-2	Calcium	5520.00			P
7440-47-3	Chromium	18.90	J		P
7440-48-4	Cobalt	8.30	B		P
7440-50-8	Copper	19.50			P
7439-89-6	Iron	16900.00			P
7439-92-1	Lead	145.00		S~~*~~ (J)	F
7439-95-4	Magnesium	4630.00			P
7439-96-5	Manganese	292.00			P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	11.50			P
7440-09-7	Potassium	1270.00			P
7782-49-2	Selenium	0.82	U	E~~N~~ (UJ)	F
7440-22-4	Silver	0.40	U	(U)	P
7440-23-5	Sodium	207.00	B		P
7440-28-0	Thallium	0.62	U		F
7440-62-2	Vanadium	35.80			P
7440-66-6	Zinc	53.10			P
	Cyanide	5.30	U		AS

10/27/92 JM

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: BROWN Clarity After: Artifacts: YES

Comments:
STONES

PJD 4/20/93

002

FORM I - IN Rev.6/89

WESTINGHOUSE/HANFORD

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B05WV8

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N2-03-080SAS No.: SDG No.: B05WV6

Matrix (soil/water): SOIL Lab Sample ID: 03087-02S

Level (low/med): LOW Date Received: 03/17/92

% Solids: 94.4

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5550.00			P
7440-36-0	Antimony	1.60	U	~~(U)~~(UJ)	P
7440-38-2	Arsenic	7.30		(J)	F
7440-39-3	Barium	59.60			P
7440-41-7	Beryllium	0.55	B	(U)	P
7440-43-9	Cadmium	0.20	U		P
7440-70-2	Calcium	4120.00			P
7440-47-3	Chromium	17.90			P
7440-48-4	Cobalt	7.40	B		P
7440-50-8	Copper	19.30			P
7439-89-6	Iron	15800.00			P
7439-92-1	Lead	36.90		~~(J)~~	F
7439-95-4	Magnesium	4210.00			P
7439-96-5	Manganese	252.00			P
7439-97-6	Mercury	0.09	U		CV
7440-02-0	Nickel	9.30			P
7440-09-7	Potassium	707.00	B		P
7782-49-2	Selenium	0.83	U	~~(UJ)~~(UJ)	F
7440-22-4	Silver	0.40	U	(U)	P
7440-23-5	Sodium	205.00	B		P
7440-28-0	Thallium	0.62	U		F
7440-62-2	Vanadium	32.90			P
7440-66-6	Zinc	45.10			P
	Cyanide	5.20	U		AS

10/27/92 (GR)

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: BROWN Clarity After: Artifacts: YES

Comments:
STONES

PAS 4/20/93

WESTINGHOUSE/HANFORD

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B05WV9

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N2-03-080SAS No.: SDG No.: B05WV6

Matrix (soil/water): SOIL Lab Sample ID: 03087-03S

Level (low/med): LOW Date Received: 03/17/92

% Solids: 93.7

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	4800.00			P
7440-36-0	Antimony	1.60	U	N(U)(UJ)	P
7440-38-2	Arsenic	1.80	B	(U)(J)	F
7440-39-3	Barium	52.90			P
7440-41-7	Beryllium	0.20	U	(U)	P
7440-43-9	Cadmium	0.20	U		P
7440-70-2	Calcium	3180.00			P
7440-47-3	Chromium	29.60			P
7440-48-4	Cobalt	6.40	B		P
7440-50-8	Copper	20.50			P
7439-89-6	Iron	12700.00			P
7439-92-1	Lead	82.10		S*(J)	F
7439-95-4	Magnesium	3420.00			P
7439-96-5	Manganese	215.00			P
7439-97-6	Mercury	0.09	U		CV
7440-02-0	Nickel	7.90	B		P
7440-09-7	Potassium	509.00	B		P
7782-49-2	Selenium	4.10	U	N(UJ)	F
7440-22-4	Silver	0.40	U	(U)	P
7440-23-5	Sodium	249.00	B		P
7440-28-0	Thallium	0.62	U		F
7440-62-2	Vanadium	32.80			P
7440-66-6	Zinc	38.60			P
	Cyanide	5.10	U		AS

10/27/92

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: BROWN Clarity After: Artifacts: YES

Comments:
STONES

AJ 4/30/

WESTINGHOUSE/HANFORD

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B05WW0

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N2-03-080SAS No.: SDG No.: B05WV6

Matrix (soil/water): SOIL Lab Sample ID: 03087-04S

Level (low/med): LOW Date Received: 03/17/92

% Solids: 93.5

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5560.00			P
7440-36-0	Antimony	1.50	U	~~X~~(UJ)	P
7440-38-2	Arsenic	1.20	B	(UJ)	F
7440-39-3	Barium	56.80			P
7440-41-7	Beryllium	0.54	B	(U)	P
7440-43-9	Cadmium	0.19	U		P
7440-70-2	Calcium	4330.00			P
7440-47-3	Chromium	12.50			P
7440-48-4	Cobalt	8.10	B		P
7440-50-8	Copper	17.60			P
7439-89-6	Iron	15000.00			P
7439-92-1	Lead	2.80		(J)	F
7439-95-4	Magnesium	3940.00			P
7439-96-5	Manganese	242.00			P
7439-97-6	Mercury	0.09	U		CV
7440-02-0	Nickel	9.60			P
7440-09-7	Potassium	575.00	B		P
7782-49-2	Selenium	4.20	U	~~X~~(UJ)	F
7440-22-4	Silver	0.39	U	(U)	P
7440-23-5	Sodium	399.00	B		P
7440-28-0	Thallium	0.63	U		F
7440-62-2	Vanadium	38.20			P
7440-66-6	Zinc	30.50			P
	Cyanide	5.00	U		AS

10/27/92

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: BROWN Clarity After: Artifacts: YES

Comments:
STONES

PAA 4/20/

WESTINGHOUSE/HANFORD

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B05WW4

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N2-03-080SAS No.: SDG No.: B05WV6

Matrix (soil/water): SOIL Lab Sample ID: 03087-05S

Level (low/med): LOW Date Received: 03/17/92

% Solids: 98.1

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5720.00			P
7440-36-0	Antimony	1.60	U	~~N~~(U)(UJ)	P
7440-38-2	Arsenic	1.20	B	(U)(J)	F
7440-39-3	Barium	72.50			P
7440-41-7	Beryllium	0.45	B	(U)	P
7440-43-9	Cadmium	0.20	U		P
7440-70-2	Calcium	4520.00			P
7440-47-3	Chromium	10.60			P
7440-48-4	Cobalt	9.90	B		P
7440-50-8	Copper	16.90			P
7439-89-6	Iron	18700.00			P
7439-92-1	Lead	2.50		~~N~~J	F
7439-95-4	Magnesium	4190.00			P
7439-96-5	Manganese	266.00			P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	9.00			P
7440-09-7	Potassium	946.00	B		P
7782-49-2	Selenium	0.77	U	~~N~~(UJ)(UJ)	F
7440-22-4	Silver	0.40	U	(U)	P
7440-23-5	Sodium	480.00	B		P
7440-28-0	Thallium	0.58	U		F
7440-62-2	Vanadium	51.00			P
7440-66-6	Zinc	39.10			P
	Cyanide	4.70	U		AS

10/27/92 PW

Color Before: BROWN Clarity Before: Texture: FINE

Color After: BROWN Clarity After: Artifacts: YES

Comments:
STONES

PBD 4/20

FORM I - IN Rev. 6/89

9213507.1585

WESTINGHOUSE/HANFORD

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: 805WW5

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N2-03-080SAS No.: SDG No.: B05WV6

Matrix (soil/water): SOIL Lab Sample ID: 03087-06S

Level (low/med): LOW Date Received: 03/18/92

% Solids: 97.0

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	4560.00			P
7440-36-0	Antimony	1.60	U	~~N~~(U)(UJ)	P
7440-38-2	Arsenic	1.40	B	(UJ)	F
7440-39-3	Barium	57.60			P
7440-41-7	Beryllium	0.32	B	(U)	P
7440-43-9	Cadmium	0.19	U		P
7440-70-2	Calcium	7890.00			P
7440-47-3	Chromium	7.60			P
7440-48-4	Cobalt	6.90	B		P
7440-50-8	Copper	13.60			P
7439-89-6	Iron	12800.00			P
7439-92-1	Lead	2.90		(U)	F
7439-95-4	Magnesium	3330.00			P
7439-96-5	Manganese	211.00			P
7439-97-6	Mercury	0.09	U		CV
7440-02-0	Nickel	7.40	B		P
7440-09-7	Potassium	766.00	B		P
7782-49-2	Selenium	0.78	U	(UJ)(UJ)(UJ)	F
7440-22-4	Silver	0.39	U	(U)	P
7440-23-5	Sodium	277.00	B		P
7440-28-0	Thallium	0.58	U		F
7440-62-2	Vanadium	32.20			P
7440-66-6	Zinc	31.70			P
	Cyanide	4.70	U		AS

10/27/92

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: BROWN Clarity After: Artifacts: YES

Comments:
STONES

PED 4/20/93

9213507.1596

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

000005

EPA SAMPLE NO.

B05WW6

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03077 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203077-01A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20327R05

Level: (low/med) LOW X00944 Date Received: 03/19/92

% Moisture: not dec. 4 HR-1 Date Analyzed: 03/27/92

Column: (pack/cap) PACK Vad Bore Samp Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	5	U
67-64-1	Acetone	78	~~B~~ U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (Total)	5	U

10-26-9?

BBJ 4/20/92

9/15/92 1:57

1E

EPA SAMPLE NO.

B05WW6

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03077 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203077-01A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20327R05

Level: (low/med) LOW Date Received: 03/19/92

% Moisture: not dec. 4 Date Analyzed: 03/27/92

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown cycloalkane	29.34	5.2	JN

10-26-92

9/15/92 1:08

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

000007
EPA SAMPLE NO.

B05WW7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03077 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203077-02A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20327R08

Level: (low/med) LOW Date Received: 03/19/92

% Moisture: not dec. 4 Date Analyzed: 03/27/92

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	3	J
67-64-1	Acetone	120	B
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	2	J
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (Total)	5	U

10-26-c.

4/20/93

9213507.1589

000008

EPA SAMPLE NO.

B05WW7

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03077 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203077-02A

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 20327R08

Level: (low/med) LOW Date Received: 03/19/92

% Moisture: not dec. 4 Date Analyzed: 03/27/92

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown cycloalkane	29.34	5.2	J N

10-26-92 JC

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

000009
EPA SAMPLE NO.

B05WW6

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03077 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203077-01D

Sample wt/vol: 30.1 (g/mL) G Lab File ID: 20415N07

Level: (low/med) LOW Date Received: 03/19/92

% Moisture: not dec. 4 dec. ____ Date Extracted: 03/26/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/15/92

GPC Cleanup: (Y/N) N pH: 9.5 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	340	U
111-44-4	bis(2-Chloroethyl)Ether	340	U
95-57-8	2-Chlorophenol	340	U
541-73-1	1,3-Dichlorobenzene	340	U
106-46-7	1,4-Dichlorobenzene	340	U
100-51-6	Benzyl Alcohol	340	U
95-50-1	1,2-Dichlorobenzene	340	U
95-48-7	2-Methylphenol	340	U
108-60-1	bis(2-Chloroisopropyl)Ether	340	U
106-44-5	4-Methylphenol	340	U
621-64-7	N-Nitroso-Di-n-Propylamine	340	U
67-72-1	Hexachloroethane	340	U
98-95-3	Nitrobenzene	340	U
78-59-1	Isophorone	340	U
88-75-5	2-Nitrophenol	340	U
105-67-9	2,4-Dimethylphenol	340	U
65-85-0	Benzoic Acid	1700	U
111-91-1	bis(2-Chloroethoxy)methane	340	U
120-83-2	2,4-Dichlorophenol	340	U
120-82-1	1,2,4-Trichlorobenzene	340	U
91-20-3	Naphthalene	340	U
106-47-8	4-Chloroaniline	340	U
87-68-3	Hexachlorobutadiene	340	U
59-50-7	4-Chloro-3-methylphenol	340	U
91-57-6	2-Methylnaphthalene	340	U
77-47-4	Hexachlorocyclopentadiene	340	U
88-06-2	2,4,6-Trichlorophenol	340	U
95-95-4	2,4,5-Trichlorophenol	1700	U
91-58-7	2-Chloronaphthalene	340	U
88-74-4	2-Nitroaniline	1700	U
131-11-3	Dimethyl Phthalate	340	U
208-96-8	Acenaphthylene	340	U

 10-26-92SC 4/20/92

EPA SAMPLE NO.

B05WW6

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03077 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203077-01D

Sample wt/vol: 30.1 (g/mL) G Lab File ID: 20415N07

Level: (low/med) LOW Date Received: 03/19/92

% Moisture: not dec. 4 dec. ____ Date Extracted: 03/26/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/15/92

GPC Cleanup: (Y/N) N pH: 9.5 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1700	U
83-32-9	Acenaphthene	340	U
51-28-5	2,4-Dinitrophenol	1700	U
100-02-7	4-Nitrophenol	1700	U
132-64-9	Dibenzofuran	340	U
121-14-2	2,4-Dinitrotoluene	340	U
606-20-2	2,6-Dinitrotoluene	340	U
84-66-2	Diethylphthalate	340	U
7005-72-3	4-Chlorophenyl-phenylether	340	U
86-73-7	Fluorene	340	U
100-01-6	4-Nitroaniline	1700	U
534-52-1	4,6-Dinitro-2-methylphenol	1700	U
86-30-6	N-Nitrosodiphenylamine (1)	340	U
101-55-3	4-Bromophenyl-phenylether	340	U
118-74-1	Hexachlorobenzene	340	U
87-86-5	Pentachlorophenol	1700	U
85-01-8	Phenanthrene	340	U
120-12-7	Anthracene	340	U
84-74-2	Di-n-Butylphthalate	340 ~~95~~	~~B~~ 4
206-44-0	Fluoranthene	340	U
129-00-0	Pyrene	340	U
85-68-7	Butylbenzylphthalate	340	U
91-94-1	3,3'-Dichlorobenzidine	690	U
56-55-3	Benzo(a)anthracene	340	U
117-81-7	bis(2-Ethylhexyl)Phthalate	340	U
218-01-9	Chrysene	340	U
117-84-0	Di-n-octyl Phthalate	340	U
205-99-2	Benzo(b)fluoranthene	340	U
207-08-9	Benzo(k)fluoranthene	340	U
50-32-8	Benzo(a)pyrene	340	U
193-39-5	Indeno(1,2,3-cd)Pyrene	340	U
53-70-3	Dibenz(a,h)Anthracene	340	U
191-24-2	Benzo(g,h,i)perylene	340	U

(1) - Cannot be separated from Diphenylamine

10-26-92 SC

4/20/9

9213503 1592

1F

000011
EPA SAMPLE NO.

B05WW6

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03077 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203077-01D

Sample wt/vol: 30.1 (g/mL) G Lab File ID: 20415N07

Level: (low/med) LOW Date Received: 03/19/92

% Moisture: not dec. 4 dec. ____ Date Extracted: 03/26/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/15/92

GPC Cleanup: (Y/N) N pH: 9.5 Dilution Factor: 1.0

Number TICs found: 12

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN HYDROCARBON	4.08	620	~~BJ~~ U
2.	UNKNOWN HYDROCARBON	5.03	2500	~~BJ~~ U
3.	UNKNOWN HYDROCARBON	5.65	37000	J
4.	UNKNOWN ALKANE	5.92	310	~~BJ~~ U
5.	UNKNOWN ALKANE	6.07	140	~~BJ~~
6.	UNKNOWN HYDROCARBON	7.07	930	~~BJ~~
7.	UNKNOWN HYDROCARBON	7.37	210	~~BJ~~
8.	UNKNOWN KETONE	7.68	170	~~BJ~~
9.	UNKNOWN ALCOHOL	8.54	140	J
10.	UNKNOWN CARBOXYLIC ACID	18.97	140	J
11.	UNKNOWN PHTHALATE	22.50	450	~~BJ~~ U
12.	UNKNOWN CARBOXYLIC ACID ESTE	28.26	170	J

10-26-92 SC

9213507.1B93

000012

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B05WW7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03077 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203077-02B

Sample wt/vol: 30.1 (g/mL) G Lab File ID: 20415N08

Level: (low/med) LOW Date Received: 03/19/92

% Moisture: not dec. 4 dec. ____ Date Extracted: 03/26/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/15/92

GPC Cleanup: (Y/N) N pH: 9.3 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	340	U
111-44-4	bis(2-Chloroethyl)Ether	340	U
95-57-8	2-Chlorophenol	340	U
541-73-1	1,3-Dichlorobenzene	340	U
106-46-7	1,4-Dichlorobenzene	340	U
100-51-6	Benzyl Alcohol	340	U
95-50-1	1,2-Dichlorobenzene	340	U
95-48-7	2-Methylphenol	340	U
108-60-1	bis(2-Chloroisopropyl)Ether	340	U
106-44-5	4-Methylphenol	340	U
621-64-7	N-Nitroso-Di-n-Propylamine	340	U
67-72-1	Hexachloroethane	340	U
98-95-3	Nitrobenzene	340	U
78-59-1	Isophorone	340	U
88-75-5	2-Nitrophenol	340	U
105-67-9	2,4-Dimethylphenol	340	U
65-85-0	Benzoic Acid	1700	U
111-91-1	bis(2-Chloroethoxy)methane	340	U
120-83-2	2,4-Dichlorophenol	340	U
120-82-1	1,2,4-Trichlorobenzene	340	U
91-20-3	Naphthalene	340	U
106-47-8	4-Chloroaniline	340	U
87-68-3	Hexachlorobutadiene	340	U
59-50-7	4-Chloro-3-methylphenol	340	U
91-57-6	2-Methylnaphthalene	340	U
77-47-4	Hexachlorocyclopentadiene	340	U
88-06-2	2,4,6-Trichlorophenol	340	U
95-95-4	2,4,5-Trichlorophenol	1700	U
91-58-7	2-Chloronaphthalene	340	U
88-74-4	2-Nitroaniline	1700	U
131-11-3	Dimethyl Phthalate	340	U
208-96-8	Acenaphthylene	340	U

4/20/92

10-26-92SC

9213507.1594

000013
EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

B05WW7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03077 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203077-02B

Sample wt/vol: 30.1 (g/mL) G Lab File ID: 20415N08

Level: (low/med) LOW Date Received: 03/19/92

% Moisture: not dec. 4 dec. ____ Date Extracted: 03/26/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/15/92

GPC Cleanup: (Y/N) N pH: 9.3 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1700	U
83-32-9	Acenaphthene	340	U
51-28-5	2,4-Dinitrophenol	1700	U
100-02-7	4-Nitrophenol	1700	U
132-64-9	Dibenzofuran	340	U
121-14-2	2,4-Dinitrotoluene	340	U
606-20-2	2,6-Dinitrotoluene	340	U
84-66-2	Diethylphthalate	340	U
7005-72-3	4-Chlorophenyl-phenylether	340	U
86-73-7	Fluorene	340	U
100-01-6	4-Nitroaniline	1700	U
534-52-1	4,6-Dinitro-2-methylphenol	1700	U
86-30-6	N-Nitrosodiphenylamine (1)	340	U
101-55-3	4-Bromophenyl-phenylether	340	U
118-74-1	Hexachlorobenzene	340	U
87-86-5	Pentachlorophenol	1700	U
85-01-8	Phenanthrene	340	U
120-12-7	Anthracene	340	U
84-74-2	Di-n-Butylphthalate	340 ~~140~~	~~B~~ 4
206-44-0	Fluoranthene	340	U
129-00-0	Pyrene	340	U
85-68-7	Butylbenzylphthalate	340	U
91-94-1	3,3'-Dichlorobenzidine	690	U
56-55-3	Benzo(a)anthracene	340	U
117-81-7	bis(2-Ethylhexyl)Phthalate	340	U
218-01-9	Chrysene	340	U
117-84-0	Di-n-octyl Phthalate	340	U
205-99-2	Benzo(b)fluoranthene	340	U
207-08-9	Benzo(k)fluoranthene	340	U
50-32-8	Benzo(a)pyrene	340	U
193-39-5	Indeno(1,2,3-cd)Pyrene	340	U
53-70-3	Dibenz(a,h)Anthracene	340	U
191-24-2	Benzo(g,h,i)perylene	340	U

(1) - Cannot be separated from Diphenylamine

10-26-92

1F

EPA SAMPLE NO.

B05WW7

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03077 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203077-02B

Sample wt/vol: 30.1 (g/mL) G Lab File ID: 20415N08

Level: (low/med) LOW Date Received: 03/19/92

% Moisture: not dec. 4 dec. ____ Date Extracted: 03/26/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/15/92

GPC Cleanup: (Y/N) N pH: 9.3 Dilution Factor: 1.0

Number TICs found: 14

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN HYDROCARBON	3.13	520	~~BJ~~ 4
2.	UNKNOWN ALKENE	3.83	140	J
3.	UNKNOWN HYDROCARBON	4.10	800	~~BJ~~ 4
4.	UNKNOWN HYDROCARBON	4.75	240	J
5.	UNKNOWN HYDROCARBON	5.03	2600	~~BJ~~ 4
6.	UNKNOWN AMINE	5.67	33000	~~BJ~~
7.	UNKNOWN ALKANE	5.92	380	~~BJ~~
8.	UNKNOWN ALKANE	6.08	210	~~BJ~~
9.	UNKNOWN HYDROCARBON	7.07	860	~~BJ~~
10.	UNKNOWN HYDROCARBON	7.37	280	~~BJ~~
11.	UNKNOWN KETONE	7.68	210	~~BJ~~
12.	UNKNOWN ALCOHOL	8.54	210	J
13.	UNKNOWN CARBOXYLIC ACID ESTE	18.97	170	~~BJ~~ 4
14.	UNKNOWN PHTHALATE	22.50	380	~~BJ~~

10-26-92 SC

9213507 1596

1D

000015

EPA SAMPLE NO.

PESTICIDE ORGANICS ANALYSIS DATA SHEET

B05WW6

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03077 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203077-01D

Sample wt/vol: 30.4 (g/mL) G Lab File ID: _____

Level: (low/med) LOW Date Received: 03/19/92

% Moisture: not dec. 4 dec. __ Date Extracted: 03/26/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/02/92

GPC Cleanup: (Y/N) N pH: 9.5 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	8.2	U
319-85-7	beta-BHC	8.2	U
319-86-8	delta-BHC	8.2	U
58-89-9	gamma-BHC (Lindane)	8.2	U
76-44-8	Heptachlor	8.2	U
309-00-2	Aldrin	8.2	U
1024-57-3	Heptachlor epoxide	8.2	U
959-98-8	Endosulfan I	8.2	U
60-57-1	Dieldrin	16	U
72-55-9	4,4'-DDE	16	U
72-20-8	Endrin	16	U
33213-65-9	Endosulfan II	16	U
72-54-8	4,4'-DDD	16	U
1031-07-8	Endosulfan sulfate	16	U
50-29-3	4,4'-DDT	16	U
72-43-5	Methoxychlor	82	U
53494-70-5	Endrin ketone	16	U
5103-71-9	alpha-Chlordane	82	U
5103-74-2	gamma-Chlordane	82	U
8001-35-2	Toxaphene	160	U
12674-11-2	Aroclor-1016	82	U
11104-28-2	Aroclor-1221	82	U
11141-16-5	Aroclor-1232	82	U
53469-21-9	Aroclor-1242	82	U
12672-29-6	Aroclor-1248	82	U
11097-69-1	Aroclor-1254	160	U
11096-82-5	Aroclor-1260	160	U

10-26-92 SC

BJ 4/20/93

9215507.1597

000016

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B05WW7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 03077 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A203077-02B

Sample wt/vol: 30.3 (g/mL) G Lab File ID: _____

Level: (low/med) LOW Date Received: 03/19/92

% Moisture: not dec. 4 dec. __ Date Extracted: 03/26/92

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/02/92

GPC Cleanup: (Y/N) N pH: 9.3 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	8.2	U
319-85-7	beta-BHC	8.2	U
319-86-8	delta-BHC	8.2	U
58-89-9	gamma-BHC (Lindane)	8.2	U
76-44-8	Heptachlor	8.2	U
309-00-2	Aldrin	8.2	U
1024-57-3	Heptachlor epoxide	8.2	U
959-98-8	Endosulfan I	8.2	U
60-57-1	Dieldrin	16	U
72-55-9	4,4'-DDE	16	U
72-20-8	Endrin	16	U
33213-65-9	Endosulfan II	16	U
72-54-8	4,4'-DDD	16	U
1031-07-8	Endosulfan sulfate	16	U
50-29-3	4,4'-DDT	16	U
72-43-5	Methoxychlor	82	U
53494-70-5	Endrin ketone	16	U
5103-71-9	alpha-Chlordane	82	U
5103-74-2	gamma-Chlordane	82	U
8001-35-2	Toxaphene	160	U
12674-11-2	Aroclor-1016	82	U
11104-28-2	Aroclor-1221	82	U
11141-16-5	Aroclor-1232	82	U
53469-21-9	Aroclor-1242	82	U
12672-29-6	Aroclor-1248	82	U
11097-69-1	Aroclor-1254	160	U
11096-82-5	Aroclor-1260	160	U

10-26-92SC

4/20/92

FORM I PEST 1/87 Rev.

9213607.1598

B05WW6 / B05WW7 are field duplicates. Samples were flagged for Ba and K because RPD was out. 4/15/93

NGHOUSE/HANFORD

1

ANALYSIS DATA SHEET

SAMPLE NUMBER

B05WW6

Lab N

Contract: 68-D0-0108

Lab C

2-03-137SAS No.:

SDG No.: B05WW6

Matri

Lab Sample ID: 03146-01S

Level (low/med): LOW

Date Received: 03/25/92

% Solids: 94.8

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5640.00			P
7440-36-0	Antimony	1.60	U	N(U)(UJ)	P
7440-38-2	Arsenic	2.00		(U)	F
7440-39-3	Barium	55.30		J	P
7440-41-7	Beryllium	0.35	B	(U)	P
7440-43-9	Cadmium	0.20	U	(U)	P
7440-70-2	Calcium	11000.00		(J)	P
7440-47-3	Chromium	17.50		(J)	P
7440-48-4	Cobalt	7.70	B		P
7440-50-8	Copper	18.40			P
7439-89-6	Iron	14700.00			P
7439-92-1	Lead	4.00			F
7439-95-4	Magnesium	4720.00		(J)	P
7439-96-5	Manganese	246.00		(J)	P
7439-97-6	Mercury	0.09	U		CV
7440-02-0	Nickel	19.20		(J)	P
7440-09-7	Potassium	916.00	B	J	P
7782-49-2	Selenium	3.90	U	N(J)	F
7440-22-4	Silver	0.39	U	(U)	P
7440-23-5	Sodium	229.00	B		P
7440-28-0	Thallium	0.79	U		F
7440-62-2	Vanadium	34.60			P
7440-66-6	Zinc	35.70			P
	Cyanide	0.52	U		AS

10/27/92

Color Before: BROWN

Clarity Before:

Texture: FINE

Color After: BROWN

Clarity After:

Artifacts: YES

Comments:
STONES

RBD 4/20/93

FORM I - IN

Rev.6/

WESTINGHOUSE/HANFORD

9213507.1599

1

SAMPLE NUMBER:

B05WW7

ANIC ANALYSIS DATA SHEET

Same as B05WW6
RPD for field dups. were out
4/15/93

Lab Name: S ntract: 68-D0-0108

Lab Code: 37SAS No.: SDG No.: B05WW6

Matrix (s Lab Sample ID: 03146-02S

Level (lc Date Received: 03/25/92

% Solids:

Concentration Units (ug/L r mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	4900.00			P
7440-36-0	Antimony	1.60	U	~~J~~(U)(UJ)	P
7440-38-2	Arsenic	2.10		(U)	F
7440-39-3	Barium	69.90		J	P
7440-41-7	Beryllium	0.34	B	(U)	P
7440-43-9	Cadmium	0.19	U	(U)	P
7440-70-2	Calcium	9920.00		~~J~~(J)	P
7440-47-3	Chromium	19.00		~~J~~(J)	P
7440-48-4	Cobalt	7.10	B		P
7440-50-8	Copper	15.80			P
7439-89-6	Iron	12600.00			P
7439-92-1	Lead	3.30			F
7439-95-4	Magnesium	4530.00		~~J~~(J)	P
7439-96-5	Manganese	212.00		~~J~~(J)	P
7439-97-6	Mercury	0.09	U		CV
7440-02-0	Nickel	24.40		~~J~~(J)	P
7440-09-7	Potassium	749.00	B	J	P
7782-49-2	Selenium	4.00	U	N	F
7440-22-4	Silver	0.39	U	(U)	P
7440-23-5	Sodium	193.00	B		P
7440-28-0	Thallium	0.79	U		F
7440-62-2	Vanadium	30.40			P
7440-66-6	Zinc	30.90			P
	Cyanide	0.50	U		AS

10/27/92

Color Before: BROWN Clarity Before: Texture: FINE

Color After: BROWN Clarity After: Artifacts: YES

Comments:
STONES

4/20/93

FORM I - IN Rev.6/89

03