9613475.2771 START

B06PX5-TMA-210 000002

0045253

Westinghouse Hanford Company

CHAIN OF CUSTODY

ARLI

Custody Form Initiator PH BUTCHER

Company Contact PH BUTCHER

Telephone (509)376-5045

Project Designation/Sampling Locations 200AAMS

Collection Date 6/7/92

Ice Chest No. SAL-143

Field Logbook No. EFL-1033

Bill of Lading/Airbill No. 250986861-4

Offsite Property No. W92-0-0399-28

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B06PX5

3, 40ml, aG, WATER, CLP-VOA *

3, 2L, aG, WATER, SEMI-VOA, PCB/PEST

~~1, 1L, P, WATER, ICP/AA METAL & Hg (HNO3) UNFILTERED~~

3, 1L, P, WATER, TDS, ~~BOD~~, DISOLVED OXYGEN, ANIONS, TSS, ALK

1, 1L, P, WATER, AMMONIA, COD (H2SO4)

~~1, 250ml, aG, WATER, TOC (INCLUDES BICARBONATE/CARBONATE (H2SO4)~~

~~1, 250ml, Gs, WATER, TOX (H2SO4)~~

~~1, 1L, P, WATER, GROSS ALPHA/BETA, GAMMA SCAN (HNO3)~~

~~B06PX6~~

~~1, 1L, P, WATER, ICP/AA METAL & Hg (HNO3) (FILTERED)~~

B06PX7

3, 40ml aG, WATER, CLP-VOA

SEP 1996 RECEIVED EDMC

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: K.D. Lee K.D. Lee	Received by: relinq. to refrigerator	Date/Time: 6/7/92 1335
Relinquished by:	Received by: K. Trapp/K. Trapp	Date/Time: 6/9/92 0901
Relinquished by: K. Trapp/K. Trapp	Received by: Kermit Blum	Date/Time: 6-10-92 1015
Relinquished by: Kermit Blum 6-10-92	Received by: Tody Bennard	Date/Time: 6/11/92 1000

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments: * Received @ TMA/NORCAL w/ AIR bubble in one vial. KB

A-6000-407 (12/90) (EF) WEF061
Chain of Custody

9613475.2772

000003

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST Task = 92-129

PART I: FIELD SECTION

.or Kirby Lee Date Sampled 6/7/92 Time 0945 hours

ompany Contact PH Butcher Telephone (509) 376-5045

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
06PX5	3, Gs, 40ml	W	CLP-VOA (one vial bubble)
	3, aG, 2L	W	Semi-VOA, Pest/PCB
	~~1, P, 1L~~	~~W~~	~~ICP/AA Metals & Hg (HNO3) Unfiltered~~
	3, P, 1L	W	TDS, ~~BOD~~ Dissolved Oxygen, Anions, TSS, ALK
	1, P 1L	W	Ammonia, COD (H_2SO_4)
	~~1, aG, 250ml~~	~~W~~	~~TOC (Includes Bicarbonate / Carbonate) (H_2SO_4)~~
	~~1, Gs, 250ml~~	~~W~~	~~TOX (H_2SO_4)~~
	~~1, P, 1L~~	~~W~~	~~Gross Alpha/Beta, Gamma Scan (HNO_3)~~
~~06PX6~~	~~1, P, 1L~~	~~W~~	~~ICP/AA Metals & Hg (HNO_3) Filtered~~
06PX7	3, 40ml, aG	W	CLP-VOA
			BOL #: 250986861-4
			OPC #: W92-0-0399-28

Field Information**

Special Handling and/or Storage

Possible Sample Hazards

PART II: LABORATORY SECTION

ed by Kermit Blum Title Sample Control Supervisor Date 6-10-92

Analysis Required

9613475.2773

000006

FEDERAL EXPRESS

QUESTIONS? CALL 800-238-5355 TOLL FREE

AIRBILL
PACKAGE
TRACKING NUMBER

2521034460

2521034460

RECIPIENT'S COPY

1 Date

From (Your Name) Please Print

Company

Department/Floor No

Street Address

City

State

ZIP Required

2 To (Recipient's Name) Please Print

Company

Department/Floor No

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

City

State

ZIP Required

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 ☐ 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
- 11 ☒ YOUR PACKAGING
- 16 ☐ FEDEX LETTER *
- 12 ☐ FEDEX PAK *
- 13 ☐ FEDEX BOX
- 14 ☐ FEDEX TUBE

Standard Overnight
- 51 ☐ YOUR PACKAGING
- 56 ☐ FEDEX LETTER *
- 52 ☐ FEDEX PAK *
- 53 ☐ FEDEX BOX
- 54 ☐ FEDEX TUBE

Economy Two-Day
- 30 ☐ ECONOMY

Government Overnight
- 46 ☐ GOVT LETTER
- 41 ☐ GOVT PACKAGE

Freight Service
- 70 ☐ OVERNIGHT FREIGHT **
- 80 ☐ TWO-DAY FREIGHT **

† Delivery commitments may be later in some areas

* Declared value Limit $100

** Subject to Delivery Schedule

5 DELIVERY AND SPECIAL HANDLING (Check services required)

1 ☐ HOLD FOR PICK-UP
2 ☒ DELIVER WEEKDAY
3 DELIVER SATURDAY (Extra charge) (Not available to all locations) ☐
4 ☐ DANGEROUS GOODS
5 ☐
6 ☐ DRY ICE
7 ☐ OTHER SPECIAL SERVICE
8 ☐
9 ☐ SATURDAY PICK-UP (Extra charge)
10 ☐
11 ☐
12 ☐ HOLIDAY DELIVERY (Extra charge)

6 PACKAGES | WEIGHT in Pounds Only | YOUR DECLARED VALUE

Total | Total | Total

1 | 20

DIM SHIPMENT (Chargeable Weight)

☐ _____ lbs

L x W x H =

Received At

☐ 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 | 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 FXEU 4/92
FORMAT #099

099

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9613475.2774

AUG 1992
RECEIVED
OSM DMO

CASE NO. 06-028

DATA SUMMARY REPORT
ORGANICS

PREPARED BY:

TMA ARLI
160 TAYLOR ST.
MONROVIA CA 91016

CASE NARRATIVE

LABORATORY : TMA/ARLI

CASE : 06-028

CONTRACT ID : WESTINGHOUSE HANFORD COMPANY

SDG RECEIPT DATE : June 10, 1992

1.0 DESCRIPTION OF CASE :

Two water 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 OLM01.8.

2.0 SAMPLE LIST :

WESTINGHOUSE ID	LAB ID	ANALYSIS REQUESTED	MATRIX	pH
B06PX5	A2-06-028-01I	V	WATER	8
B06PX5	A2-06-028-01A	SV & P	WATER	
B06PX5 RE	A2-06-028-01A	SV	WATER	
B06PX5 MS	A2-06-028-01B	SV & P	WATER	
B06PX5 MSD	A2-06-028-01C	SV & P	WATER	
B06PX7	A2-06-028-02A	V	WATER	8
B06PX7 MS	A2-06-028-02B	V	WATER	8
B06PX7 MSD	A2-06-028-02C	V	WATER	8

3.0 COMMENTS :

3.1 SHIPPING AND DOCUMENTATION :

All samples were received unbroken and properly documented. One of the three VOA vials for sample B06PX5 was received by TMA/Norcal with an air bubble.

3.2 ANALYSIS

3.2.1 VOLATILE ANALYSIS COMMENTS :

LOW LEVEL WATER :

The samples were analyzed within the CLP SOW holding times. Between scans 102 and 104 a peak identified as carbon dioxide was detected in the sample analyses. This TIC was not reported on the Form 1E.

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. The Base Neutral (BN) surrogate recoveries for the samples, MS, MSD and the blank were above the QC limits. The BN surrogates that were above the limit included Nitrobenzene, 2-Fluorobiphenyl, and the advisory surrogate 1,2-Dichlorobenzene-d4. It has been determined that the BN surrogate lot had become more concentrated over a period of time after the original QC of the lot. The sample was re-extracted out of holding time using a different BN surrogate lot. The results for B06PX5RE were within the QC limits and have been included in this package. There were no TCL analytes detected in either of the sample analyses.

Both the MS and MSD samples had matrix spike recoveries for 4-Nitrophenol that were above the QC limit. Sample B06PX5MSD had a spike recovery for 4-Chloro-3-methylphenol slightly above the QC limit. No further action was required.

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 6/22/92 and was analyzed in accordance with the EPA CLP SOW. The instrument blanks, PEMs and calibration verification standards all met the requirements established by the EPA CLP SOW.

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.

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

Wida Ang
Organics Supervisor

9613475.2778

000005

EPA SAMPLE NO.

B06PX5

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 06028 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A206028-01I

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20612B10

Level: (low/med) LOW Date Received: 06/10/92

% Moisture: not dec. ____ Date Analyzed: 06/12/92

GC Column: WIDE ID: 0.539 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____(uL)

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	BJ
67-64-1	Acetone	18	B
75-15-0	Carbon Disulfide	2	BJ
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	2	BJ
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	2	BJ
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	1	J
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

9613475.2779

000006

EPA SAMPLE NO.

B06PX5

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 06028 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A206028-01I

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20612B10

Level: (low/med) LOW Date Received: 06/10/92

% Moisture: not dec. ____ Date Analyzed: 06/12/92

GC Column: WIDE ID: 0.539 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 2

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 76-13-1	Ethane, 1,1,2-trichloro-1,2,	3.60	16	BJN
2. 110-54-3	Hexane	4.90	17	BJN

9613475.2780

000007

EPA SAMPLE NO.

B06PX7

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 06028 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A206028-02A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20612B11

Level: (low/med) LOW Date Received: 06/10/92

% Moisture: not dec. ____ Date Analyzed: 06/12/92

GC Column: WIDE ID: 0.539 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____(uL)

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	BJ
67-64-1	Acetone	17	B
75-15-0	Carbon Disulfide	1	BJ
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	2	BJ
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	2	BJ
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

9613475.2781

000008

EPA SAMPLE NO.

B06PX7

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 06028 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A206028-02A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20612B11

Level: (low/med) LOW Date Received: 06/10/92

% Moisture: not dec. ____ Date Analyzed: 06/12/92

GC Column: WIDE ID: 0.539 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 2

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 76-13-1	Ethane, 1,1,2-trichloro-1,2,	3.62	15	BJN
2. 110-54-3	Hexane	4.93	16	BJN

9613475.2782

000009
EPA SAMPLE NO.

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

B06PX5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 06028 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A206028-01A

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20619N16

Level: (low/med) LOW Date Received: 06/10/92

% Moisture: ____ decanted: (Y/N) ___ Date Extracted: 06/12/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 06/20/92

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

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
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	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
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	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	25	U

9613475.2785

000010

EPA SAMPLE NO.

B06PX5

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 06028 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A206028-01A

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20619N16

Level: (low/med) LOW Date Received: 06/10/92

% Moisture: ____ decanted: (Y/N) ___ Date Extracted: 06/12/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 06/20/92

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-02-7	4-Nitrophenol	25	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	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	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	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	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	10	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

9613475.2784

000011
EPA SAMPLE NO.

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

B06PX5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 06028 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A206028-01A

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20619N16

Level: (low/med) LOW Date Received: 06/10/92

% Moisture: ____ decanted: (Y/N) ___ Date Extracted: 06/12/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 06/20/92

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

Number TICs found: 3

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown hydrocarbon	4.22	35	BJ
2.	Unknown hydrocarbon	7.37	11	BJ
3.	Unknown ketone	8.90	6	BJ

9613475.2785

000012

EPA SAMPLE NO.

B06PX5RE

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 06028 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A206028-01ARE

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20723N03

Level: (low/med) LOW Date Received: 06/10/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/14/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/23/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

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
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	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
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	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	25	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B06PX5RE

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 06028 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A206028-01ARE

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20723N03

Level: (low/med) LOW Date Received: 06/10/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/14/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/23/92

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-02-7	4-Nitrophenol	25	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	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	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	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	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	10	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

EPA SAMPLE NO.

B06PX5RE

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 06028 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A206028-01ARE

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20723N03

Level: (low/med) LOW Date Received: 06/10/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/14/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/23/92

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

Number TICs found: 6

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown hydrocarbon	4.23	16	J
2.	Unknown hydrocarbon	7.15	6	BJ
3.	Unknown ketone	8.70	4	BJ
4.	Unknown hydrocarbon	34.03	33	J
5.	Unknown hydrocarbon	34.22	240	J
6.	Unknown hydrocarbon	34.50	130	J

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B06PX5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 06028 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A206028-01A

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: 06/10/92

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 06/12/92

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 06/26/92

Injection Volume: 2.50 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: ____ Sulfur Cleanup: (Y/N) N

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
7421-36-3	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

CASE NARRATIVE

LABORATORY : TMA/ARLI

CASE : 06-028

CONTRACT ID : WESTINGHOUSE HANFORD COMPANY

SDG RECEIPT DATE : June 10, 1992

1.0 DESCRIPTION OF CASE :

Two water 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 OLM01.8.

2.0 SAMPLE LIST :

WESTINGHOUSE ID	LAB ID	ANALYSIS REQUESTED	MATRIX	pH
B06PX5	A2-06-028-01I	V	WATER	8
B06PX5	A2-06-028-01A	SV & P	WATER	
B06PX5 RE	A2-06-028-01A	SV	WATER	
B06PX5 MS	A2-06-028-01B	SV & P	WATER	
B06PX5 MSD	A2-06-028-01C	SV & P	WATER	
B06PX7	A2-06-028-02A	V	WATER	8
B06PX7 MS	A2-06-028-02B	V	WATER	8
B06PX7 MSD	A2-06-028-02C	V	WATER	8

3.0 COMMENTS :

3.1 SHIPPING AND DOCUMENTATION :

All samples were received unbroken and properly documented. One of the three VOA vials for sample B06PX5 was received by TMA/Norcal with an air bubble.

3.2 ANALYSIS

3.2.1 VOLATILE ANALYSIS COMMENTS :

LOW LEVEL WATER :

The samples were analyzed within the CLP SOW holding times. Between scans 102 and 104 a peak identified as carbon dioxide was detected in the sample analyses. This TIC was not reported on the Form 1E.

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. The Base Neutral (BN) surrogate recoveries for the samples, MS, MSD and the blank were above the QC limits. The BN surrogates that were above the limit included Nitrobenzene, 2-Fluorobiphenyl, and the advisory surrogate 1,2-Dichlorobenzene-d4. It has been determined that the BN surrogate lot had become more concentrated over a period of time after the original QC of the lot. The sample was re-extracted out of holding time using a different BN surrogate lot. The results for B06PX5RE were within the QC limits and have been included in this package. There were no TCL analytes detected in either of the sample analyses.

Both the MS and MSD samples had matrix spike recoveries for 4-Nitrophenol that were above the QC limit. Sample B06PX5MSD had a spike recovery for 4-Chloro-3-methylphenol slightly above the QC limit. No further action was required.

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 6/22/92 and was analyzed in accordance with the EPA CLP SOW. The instrument blanks, PEMs and calibration verification standards all met the requirements established by the EPA CLP SOW.

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.

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

Wida Ang
Organics Supervisor

9613475.2792

000053
EPA SAMPLE NO.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

B06PX5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 06028 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A206028-01I

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20612B10

Level: (low/med) LOW Date Received: 06/10/92

% Moisture: not dec. ____ Date Analyzed: 06/12/92

GC Column: WIDE ID: 0.539 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____(uL)

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	BJ
67-64-1	Acetone	18	B
75-15-0	Carbon Disulfide	2	BJ
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	2	BJ
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	2	BJ
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	1	J
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

9613475.2793

000054
EPA SAMPLE NO.

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

B06PX5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 06028 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A206028-01I

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20612B10

Level: (low/med) LOW Date Received: 06/10/92

% Moisture: not dec. ____ Date Analyzed: 06/12/92

GC Column: WIDE ID: 0.539 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 2

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 76-13-1	Ethane, 1,1,2-trichloro-1,2,	3.60	16	BJN
2. 110-54-3	Hexane	4.90	17	BJN

9613475.2794

000076

EPA SAMPLE NO.

B06PX7

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 06028 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A206028-02A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20612B11

Level: (low/med) LOW Date Received: 06/10/92

% Moisture: not dec. ____ Date Analyzed: 06/12/92

GC Column: WIDE ID: 0.539 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____(uL)

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	BJ
67-64-1	Acetone	17	B
75-15-0	Carbon Disulfide	1	BJ
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	2	BJ
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	2	BJ
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

9613475.2795

000077
EPA SAMPLE NO.

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

B06PX7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 06028 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A206028-02A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20612B11

Level: (low/med) LOW Date Received: 06/10/92

% Moisture: not dec. ____ Date Analyzed: 06/12/92

GC Column: WIDE ID: 0.539 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 2

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 76-13-1	Ethane, 1,1,2-trichloro-1,2,	3.62	15	BJN
2. 110-54-3	Hexane	4.93	16	BJN

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B06PX5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 06028 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A206028-01A

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20619N16

Level: (low/med) LOW Date Received: 06/10/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 06/12/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 06/20/92

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

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
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	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
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	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	25	U

9613475.2797

000182
EPA SAMPLE NO.

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

B06PX5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 06028 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A206028-01A

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20619N16

Level: (low/med) LOW Date Received: 06/10/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 06/12/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 06/20/92

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-02-7	4-Nitrophenol	25	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	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	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	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	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	10	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

9613475.2798

000183

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B06PX5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 06028 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A206028-01A

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20619N16

Level: (low/med) LOW Date Received: 06/10/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 06/12/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 06/20/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

Number TICs found: 3

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown hydrocarbon	4.22	35	BJ
2.	Unknown hydrocarbon	7.37	11	BJ
3.	Unknown ketone	8.90	6	BJ

9613475.2799

000198
EPA SAMPLE NO.

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

B06PX5RE

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 06028 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A206028-01ARE

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20723N03

Level: (low/med) LOW Date Received: 06/10/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/14/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/23/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

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
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	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
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	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	25	U

9613475.2800

000199

EPA SAMPLE NO.

B06PX5RE

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 06028 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A206028-01ARE

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20723N03

Level: (low/med) LOW Date Received: 06/10/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/14/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/23/92

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-02-7	4-Nitrophenol	25	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	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	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	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	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	10	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.

B06PX5RE

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 06028 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A206028-01ARE

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20723N03

Level: (low/med) LOW Date Received: 06/10/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/14/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/23/92

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

Number TICs found: 6

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown hydrocarbon	4.23	16	J
2.	Unknown hydrocarbon	7.15	6	BJ
3.	Unknown ketone	8.70	4	BJ
4.	Unknown hydrocarbon	34.03	33	J
5.	Unknown hydrocarbon	34.22	240	J
6.	Unknown hydrocarbon	34.50	130	J

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B06PX5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 06028 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A206028-01A

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: 06/10/92

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 06/12/92

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 06/26/92

Injection Volume: 2.50 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: ____ Sulfur Cleanup: (Y/N) N

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
7421-36-3	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

9613475.2803

TMA

AUG 1992
RECEIVED
OSM DMO

WESTINGHOUSE HANFORD COMPANY

Results of Analyses For:

ORGANICS & GENERAL CHEMISTRY
Case No. 06-028
(TMA/ARLI Work Order # A2-06-028)

METALS
Case Nos. N2-06-059
(TMA/Skinner & Sherman W.O. # S2-06-121 & S2-06-122)

August 12, 1992

TMA Master Work Order # N2-06-059

i^ 2/27/96

GENERAL CHEMISTRY RESULTS

CASE NO. 06-028

Water Sample #:

B06PX5

CASE NARRATIVE

No problems were encountered during sample analysis.
All QC results were acceptable.

Ernesto Vazquez

Ernesto Vazquez

9613475.2805

000009

TMA Inc. REPORT Work Order # A2-06-028

Received: 06/10/92 08/10/92 14:37:21

REPORT TO: Westinghouse Hanford Company
2355 Stevens Dr.
Richland,WA,99352
MO-346/200 West/T6-08
ATTEN: Jeanette Duncan

PREPARED BY: Thermo Analytical, Inc.
160 Taylor Street
Monrovia, CA 91016
ATTEN: Ms. Carole Harris
PHONE: 818-357-3247

CERTIFIED BY: Everett Tayg-
CONTACT: EVV CIH

CLIENT: WHC SAMPLES: 3
COMPANY: Westinghouse Hanford Company
FACILITY:

This report is for the sole and exclusive use of the client to whom it is addressed and represents only those samples herein described. Samples not destroyed in testing are retained a maximum of 30 days unless otherwise requested.

WORK ID: 200AAMS
TAKEN: By Westinghouse Staff
TRANS: Federal Express
TYPE: Liquid
P.O. #: N2-06-059 SU AR
INVOICE: under separate cover

SAMPLE IDENTIFICATION

01	B06PX5
01	B06PX5 MS
01	B06PX5 MSD
01	B06PX5
01	B06PX5 MS
01	B06PX5 Duplicate
01	B06PX5
01	B06PX5 Duplicate
01	B06PX5
02	B06PX7
02	B06PX7 MS
02	B06PX7 MSD
03	Wet Chemistry Blank

TEST CODES and NAMES used on this workorder

BNCLPW	CLP Semivol. Water WH020
PECLPL	CLP Pesticides Liq.-WH019
VOCLPL	CLP Volatile Org.Liq.WH018
WCCLPL	Anions & Wet Chem. - WH043
WCL L	Chloride - WH120
WCQCD	Quality Control Summary
WCQCS	Quality Control Summary
WF L	Fluoride in Water
WNH3 L	Ammonia in Water - WH140
WNO2 L	Nitrite (Liquids)
WNO3 L	Nitrate (water)
WPO4 L	Phosphate in Liquids
WSO4 L	Sulfate (in Waters)
W ALK	Alkalinity - WH131
W COD	COD Water - WH132
W DO	Dissolved Oxygen - WH142
W TDS	Dissolved Solids WH128
W TSS	Suspended Solids WH129

TMA Inc. REPORT Work Order # A2-06-028

Received: 06/10/92

Results by Sample

SAMPLE ID B06PX5 FRACTION 01D TEST CODE WCCLPL NAME Anions & Wet Chem. - WM043

Date & Time Collected 06/07/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Fluoride	300	1.4	mg/L	0.1
Chloride	300	4.9	mg/L	0.2
Nitrite	300	<0.1	mg/L	0.1
Nitrate	300	<0.2	mg/L	0.2
Sulfate	300	11	mg/L	1
Phosphate	300	<0.4	mg/L	0.4
Tot. Dissolved Solids	160.1	139	mg/L	NA
Alkalinity	310.1	115	mg/L	2
TSS	160.2	<5	mg/L	5
DO	360.1	7.4	mg/L	0.05

FORM I

TMA Inc. REPORT Work Order # A2-06-028

Received: 06/10/92

Results by Sample

SAMPLE ID B06PX5 FRACTION 01G TEST CODE WCCLPL NAME Anions & Wet Chem. - WM043

Date & Time Collected 06/07/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Ammonia	350.3	0.18	mg/L	0.05
COD	410	<30	mg/L	30

FORM I

9613475.2808

TMA
Thermo Analytical Inc.

300 Second Avenue
Post Office Box 521
Waltham, MA 02254-0521
(617) 890-7200
FAX (617) 890-3883

AUG 1992
RECEIVED
OSM DMO

July 20, 1992

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

Quality Control Narrative

Scope
One (1) water sample was submitted to TMA/Skinner & Sherman Laboratories, Inc. on June 11, 1992 from Westinghouse/Hanford Company. The samples were analyzed for the USEPA CLP Target Analyte List metals. The analysis was performed under Skinner and Sherman work order S206121.

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 selenium and thallium digestion spike recoveries exceeded the control limit requirements.

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

Respectfully submitted,

TMA/SKINNER & SHERMAN LABORATORIES, INC.

(for)

David N. Peterson
Assistant Laboratory Manager

ia 2/22/95

WESTINGHOUSE/HANFORD

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

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

Lab Code: SKINER Case No.: N2-06-059 SAS No.: SDG No.: B06PX5

SOW No.: 7/88

SAMPLE NUMBER:	Lab Sample ID.
B06PX5	06121-01S
B06PX5D	06121-01S2
B06PX5S	06121-01DS

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: 7/20/92 Title: USEPA Data Manager

9613475.2810

WESTINGHOUSE/HANFORD

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER:

B06PX5

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

Lab Code: SKINER Case No.: N2-06-059SAS No.: SDG No.: B06PX5

Matrix (soil/water): WATER Lab Sample ID: 06121-01S

Level (low/med): LOW Date Received: 06/11/92

% 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	22.00	U		P
7440-36-0	Antimony	16.00	U		P
7440-38-2	Arsenic	2.40	U		F
7440-39-3	Barium	13.80	B		P
7440-41-7	Beryllium	1.00	U		P
7440-43-9	Cadmium	2.00	U		P
7440-70-2	Calcium	8110.00			P
7440-47-3	Chromium	3.00	U		P
7440-48-4	Cobalt	3.00	U		P
7440-50-8	Copper	2.00	U		P
7439-89-6	Iron	68.80	B		P
7439-92-1	Lead	1.00	U	W	F
7439-95-4	Magnesium	2510.00	B		P
7439-96-5	Manganese	10.30	B		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	3.00	U		P
7440-09-7	Potassium	8840.00			P
7782-49-2	Selenium	3.60	U	WN	F
7440-22-4	Silver	2.00	U		P
7440-23-5	Sodium	45200.00			P
7440-28-0	Thallium	2.00	U	WN	F
7440-62-2	Vanadium	2.00	U		P
7440-66-6	Zinc	11.00	U		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

9613475.2811

Westinghouse Hanford Company	CHAIN OF CUSTODY	S&S

Custody Form Initiator PH BUTCHER

Company Contact PH BUTCHER

Telephone (509)376-5045

Project Designation/Sampling Locations 200AAMS

Collection Date 6/7/92

Ice Chest No. SML-143

Field Logbook No. EFL-1033

Bill of Lading/Airbill No. 250986861-4

Offsite Property No. W92-0-03991-28

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B06PX5

~~3, 40ml, aG, WATER, CLP-VOA~~

~~3, 2L, aG, WATER, SEMI-VOA, PCB/PEST~~

1, 1L, P, WATER, ICP/AA-METAL & Hg (HNO3) UNFILTERED

~~3, 1L, P, WATER, TDS, BOD, DISOLVED OXYGEN, ANIONS, TSS, ALK~~

~~1, 1L, P, WATER, AMMONIA, COD (H2SO4)~~

~~1, 250ml, aG, WATER, TOC (INCLUDES BICARBONATE/CARBONATE (H2SO4)~~

~~1, 250ml, Gs, WATER, TOX (H2SO4)~~

~~1, 1L, P, WATER, GROSS ALPHA/BETA, GAMMA SCAN (HNO3)~~

B06PX6

1, 1L, P, WATER, ICP/AA METAL & Hg (HNO3) (FILTERED)

~~B06PX7~~

~~3, 40ml aG, WATER, CLP-VOA~~

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: K.D. Lee	Received by: relinq. to refrigerator	Date/Time: 6/7/92 1335
Relinquished by:	Received by: K. Trapp / K. Trapp	Date/Time: 6/9/92 0901
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 6-10-92 1015
Relinquished by: Kermit Blum 6-10-92	Received by: [signature]	Date/Time: 6/11/92 9:30

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

A-6000-407 (12/90) (EF) WEF061
Chain of Custody

9613475.2812

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST Task # 92-128

PART I: FIELD SECTION

.or Kirby Lee — Date Sampled 6/7/92 — Time 0845 hours

Company Contact PH Butcher — Telephone (509) 376-5045

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
30GPX5	~~3, G, 40ml~~	~~W~~	~~CLP VOA (one vial bubble)~~
	~~3, aG, 2L~~	~~W~~	~~Semi VOA, Pest/PCB~~
	1, P, 1L	W	ICP/AA Metals & Hg (HNO_3) Unfiltered
	~~3, P, 1L~~	~~W~~	~~TDS, BOD, Disolved Oxygen, Anions, TSS, Alk~~
	~~1, P, 1L~~	~~W~~	~~Ammonia, COD (H_2SO_4)~~
	~~1, aG, 250ml~~	~~W~~	~~TOC (Includes Bicarbonate/Carbonate) (H_2SO_4)~~
	~~1, G, 250ml~~	~~W~~	~~TOX (H_2SO_4)~~
	~~1, P, 1L~~	~~W~~	~~Gross Alpha/Beta, Gamma Scan (HNO_3)~~
30GPXC	1, P, 1L	W	ICP/AA Metals & Hg (HNO_3) Filtered
~~30GPX7~~	~~3, 40ml, aG~~	~~W~~	~~CLP-VOA~~
			BOL #: 250986861-4
			OPC #: W92-0-0399-28

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

ed by Kermit Blum — Title Sample Control Supervisor — Date 6-10-92

Analysis Required _____

9613475.2813

B06PX5-TMA R

Westinghouse Hanford Company

CHAIN OF CUSTODY

Custody Form Initiator PH BUTCHER

Company Contact PH BUTCHER

Telephone (509)376-5045

Project Designation/Sampling Locations 200AAMS

Collection Date 6/7/92

Ice Chest No. SML-143

Field Logbook No. EFL-1033

Bill of Lading/Airbill No. 2509869614

Offsite Property No. W92-0-0399-28

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B06PX5

3, 40ml, aG, WATER, CLP-VOA *
3, 2L, aG, WATER, SEMI-VOA, PCB/PEST
1, 1L, P, WATER, ICP/AA-METAL & Hg (HNO3) UNFILTERED
3, 1L, P, WATER, TDS, BOD, DISOLVED OXYGEN, ANIONS, TSS, ALK
1, 1L, P, WATER, AMMONIA, COD (H2SO4)
1, 250ml, aG, WATER, TOC(INCLUDES BICARBONATE/CARBONATE (H2SO4)
1, 250ml, Gs, WATER, TOX (H2SO4)
1, 1L, P, WATER, GROSS ALPHA/BETA, GAMMA SCAN (HNO3)

B06PX6

1, 1L, P, WATER, ICP/AA METAL & Hg (HNO3) (FILTERED)

B06PX7

3, 40ml aG, WATER, CLP-VOA

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: K.D. Lee	Received by: relinq. to refrigerator	Date/Time: 6/7/92 1335
Relinquished by:	Received by: K. Trapp / K. Trapp	Date/Time: 6/9/92 0901
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 6-10-92 1015
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments: * Received @ TMA/NORCAL w/ AIR bubble in one vial. KB

A-6000-407 (12/90) (EF) WEF061
Chain of Custody

35
1/22/94

9613475.2814

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST Task # 92-128

PART I: FIELD SECTION

(.or Kirby Lee — Date Sampled 6/7/92 — Time 0945 hours

Company Contact PH Butcher — Telephone (509) 376-5045

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B0GPX5 ✓	3, Gs, 40ml	W	CLP-VOA (one vial bubble)
✓	3, aG, 2L	W	Semi-VOA, Pest/PCB
✓	1, P, 1L	W	ICP/AA Metals & Hg (HNO_3) Unfiltered
✓	3, P, 1L	W	TDS, BOD, Disolved Oxygen, Anions, TSS, ALK
✓	1, P 1L	W	Ammonia, COD (H_2SO_4)
✓	1, aG, 250ml	W	TOC (Includes Bicarbonate / Carbonate) (H_2SO
✓	1, Gs, 250ml	W	TOX (H_2SO_4)
✓ ✓	1, P, 1L	W	Gross Alpha/Beta, Gamma Scan (HNO_3)
B0GPXC ✓	1, P, 1L	W	ICP/AA Metals & Hg (HNO_3) Filtered
B0GPX7 ✓	3, 40mL, aG	W	CLP-VOA
			BOL #: 250986861-4
			OPC #: W92-0-0399-28

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

I ed by Kermit Blum — Title Sample Control Supervisor — Date 6-10-92

Analysis Required _____

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

**Additional information relating to sample location

A-6000-406 (05/90)

9613475.2815

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 28, 1992

SENT BY FEDERAL EXPRESS

Ref. TMA/Norcal N2-06-061-7052

RECORD COPY

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, and gamma scan results for the water sample from 200 AAMS Location, we received 10 June 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 7
Appendices

ia
9/21/

9613475.2816

TMA NORCAL

REPORTING GROUP 7052

SDG 7052
Contact Dinkar Kharkar

SAMPLE SUMMARY

Client Westinghouse Hanford
Contract MBH-SVV-069262

CLIENT SAMPLE ID	MATRIX	CHAIN OF CUSTODY	COLLECTED	RECEIVED	SAMPLE WT/VOL	LAB SAMPLE ID	DEPARTMENT SAMPLE ID	QC BATCH
B06PX5	WATER	EFL-1033	06/07/92	06/10/92		N206061-01	7052-001	7052
Reagent Blank	WATER					N206061-03	7052-003	7052
Lab Control Sample	WATER					N206061-02	7052-002	7052
Replicate (N206061-01)	WATER		06/07/92			N206061-04	7052-004	7052

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-CS
Version 2.15
Report date 08/26/92

9613475.2817

TMA NORCAL

REPORTING GROUP 7052

DATA SHEET

N206061-01

B06PX5

SDG 7052
Contact Dinkar Kharkar

Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N206061-01
Dept sample id 7052-001
Received 06/10/92

Client sample id B06PX5
Matrix WATER
Collected 06/07/92
Chain of custody id EFL-1033

PARAMETER	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	Alpha	0.012	1.4	2.3	3.0	U	80A
Gross Beta	Beta	7.3	1.5	1.8	4.0		80B
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	U		1900		U	GAM
Iron 59		U		810		U	GAM
Chromium 51	14392-02-0	U		3300		U	GAM
Cobalt 60	10198-40-0	U		160		U	GAM
Zinc 65	17982-39-3	U		250		U	GAM
Ruthenium 106	13967-48-1	U		880		U	GAM
Cesium 134	17967-70-9	U		110		U	GAM
Cesium 137	10045-97-3	U		100		U	GAM
Europium 152	14683-23-9	U		150		U	GAM
Europium 154	15585-10-1	U		98		U	GAM
Radium 226	13982-67-7	U		190		U	GAM
Thorium 228	14274-82-9	U		140		U	GAM
Thorium 232	7440-29-1	U		390		U	GAM

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.15
Report date 08/26/92

SDG 7052	Client Westinghouse Hanford
Contact Dinkar P. Kharkar	Contract MBH-SVV-069262

CASE NARRATIVE

1.0 GENERAL

Water sample from Location 200 AAMS (TMA/Norcal Group 7052) is reported herein. TMA/Norcal Group 7052 is comprised of the one sample listed on the Chain-of-Custody documents and is identified as Sample 1.

1.1 CHAINS-OF-CUSTODY

This report includes data from the sample delivered under Chain-of-Custody documents Field Logbook No. EFL-1033.

1.2 SAMPLE VOLUME

A 1 L plastic container was received for the analyses.

1.3 MISSING SAMPLES

The sample was accounted for and was not damaged.

1.4 HOLDING TIMES

The collection was made 6/07/92 and the 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 7052-2, 3, and 4.

The QC samples were prepared and labelled by the quality control officer. Copies of The QC notebook pages are included in the data package.

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SDG 7052	Client Westinghouse Hanford
Contact Dinkar P. Kharkar	Contract MBH-SVV-069262

CASE NARRATIVE

2.1 LABORATORY CONTROL SAMPLES

The recoveries of all analytes are good and pass at the 3 σ control level. The MDA for gross alhpa is 3.4 pCi/L which is above the RDL requirement of 3.0 pCi/L.

2.2 BLANKS

MDA's for gross alpha is 4.5 pCi/L, which is above the RDL requirement of 3.0 pCi/L. The MDA's for the other analyses are within RDL requirements.

2.3 REPLICATES

Results are satisfactory for the replicate analyses. All MDA's are within the average MDA's for the nuclides, except that the MDA for gross alpha is above the RDL requirement of 3.0 pCi/L.

3.0 ANALYTICAL NOTES

3.1 Gross Alpha Analyses: The average MDA for four analyses is 3.3 ± 1.9 pCi/L. The gross alpha concentration is within average MDA. No positive gross alpha is found in the sample.

3.2 Gross Beta Analyses: The average MDA for four analyses is 1.9 ± 0.19 pCi/L. Positive gross beta concentration is found in the sample.

3.3 Gamma Scan Analyses: Gamma scan analysis did not find positive concentration of gamma nuclides.

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