9613492.7685
START
B070L7-TMA-237
000002
0045415

CASE NARRATIVE

LABORATORY : TMA/ARLI

CASE : 07-059

CONTRACT ID : WESTINGHOUSE HANFORD COMPANY

SDG RECEIPT DATE : July 27, 1992

OCT 1996 RECEIVED EDMC

1.0 DESCRIPTION OF CASE :

Eight 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
B070L7	A2-07-059-01A	V	WATER	8
B070L7	A2-07-059-01B	SV & P	WATER	
B070M1	A2-07-059-02A	V	WATER	7
B070M1 MS	A2-07-059-02B	V	WATER	7
B070M1 MSD	A2-07-059-02C	V	WATER	7
B070M2	A2-07-059-03A	V	WATER	7
B070M2	A2-07-059-03B	SV & P	WATER	
B070M2 MS	A2-07-059-03C	SV	WATER	
B070M2 MSD	A2-07-059-03D	SV	WATER	
B070M6	A2-07-059-04A	V	WATER	7
B070N2	A2-07-059-05A	V	WATER	7
B070N2	A2-07-059-05B	SV & P	WATER	
B070N2 MS	A2-07-059-05C	P	WATER	
B070N2 MSD	A2-07-059-05D	P	WATER	
B070N6	A2-07-059-06A	V	WATER	7
B072W4	A2-07-059-07A	V	WATER	7
B072W4	A2-07-059-07B	SV & P	WATER	
B072W8	A2-07-059-08A	V	WATER	7

3.0 COMMENTS :

3.1 SHIPPING AND DOCUMENTATION :

The 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. In the analyses of the samples, there was a peak detected between scans 145-148 that has been identified as Carbon Dioxide. The Carbon Dioxide was not reported as a TIC on 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. Both the MS and MSD samples had matrix spike recoveries for 4-Chloro-3-methylphenol and 4-Nitrophenol slightly above the QC limits. The %RPD for these compounds were at and below 5. In accordance with protocol, 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 8/5/92 and was analyzed in accordance with the EPA CLP SOW. The sequence met all of the QC limits specified in the CLP SOW.

The Chromatograms are presented in the manner consistent with the capabilities of the Nelson 2600 Data System which normalizes the largest peak to scale.

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 an conditions of the contract, both technically and for completeness, fc other than the conditions detailed above. Release of the data in thi hardcopy data package and in the computer-readable data submitted c diskette is authorized by the Laboratory Manager or his designee, a verified by the following signatures.

Nicole Roth
CLP Program Manager

Wida Ang
Organics Supervisor

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070L7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07059 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207059-01A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20729B04

Level: (low/med) LOW Date Received: 07/27/92

% Moisture: not dec. ____ Date Analyzed: 07/29/92

GC Column: WIDE ID: 0.530 (mm) Dilution Factor: 1.0

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

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

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	9	BJ
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
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	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
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

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B070L7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07059 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207059-01A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20729B04

Level: (low/med) LOW Date Received: 07/27/92

% Moisture: not dec. ____ Date Analyzed: 07/29/92

GC Column: WIDE ID: 0.530 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

9613492.7690

000007

EPA SAMPLE NO.

B070M1

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07059 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207059-02A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20729B05

Level: (low/med) LOW Date Received: 07/27/92

% Moisture: not dec. ____ Date Analyzed: 07/29/92

GC Column: WIDE ID: 0.530 (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	11	B
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
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	J
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
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

9613492.7691

000008

EPA SAMPLE NO.

B070M1

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07059 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207059-02A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20729B05

Level: (low/med) LOW Date Received: 07/27/92

% Moisture: not dec. ____ Date Analyzed: 07/29/92

GC Column: WIDE ID: 0.530 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

9613492.7692

000009

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070M2

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07059 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207059-03A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20729B08

Level: (low/med) LOW Date Received: 07/27/92

% Moisture: not dec. ____ Date Analyzed: 07/29/92

GC Column: WIDE ID: 0.530 (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	6	BJ
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
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	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
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

9613492.7693

000010
EPA SAMPLE NO.

B070M2

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07059 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207059-03A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20729B08

Level: (low/med) LOW Date Received: 07/27/92

% Moisture: not dec. ____ Date Analyzed: 07/29/92

GC Column: WIDE ID: 0.530 (mm) Dilution Factor: 1.0

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

Number TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 110-54-3	HEXANE	5.77	5	BJ

9613492.7694

000011

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070M6

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07059 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207059-04A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20729B09

Level: (low/med) LOW Date Received: 07/27/92

% Moisture: not dec. ____ Date Analyzed: 07/29/92

GC Column: WIDE ID: 0.530 (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	5	BJ
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
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	J
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
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

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B070M6

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07059 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207059-04A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20729B09

Level: (low/med) LOW Date Received: 07/27/92

% Moisture: not dec. ____ Date Analyzed: 07/29/92

GC Column: WIDE ID: 0.530 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

9613492.7696

000013

EPA SAMPLE NO.

B070N2

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07059 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207059-05A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20729B10

Level: (low/med) LOW Date Received: 07/27/92

% Moisture: not dec. ____ Date Analyzed: 07/29/92

GC Column: WIDE ID: 0.530 (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	5	BJ
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
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	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
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

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B070N2

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07059 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207059-05A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20729B10

Level: (low/med) LOW Date Received: 07/27/92

% Moisture: not dec. ____ Date Analyzed: 07/29/92

GC Column: WIDE ID: 0.530 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

9613492.7698

000015

EPA SAMPLE NO.

B070N6

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07059 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207059-06A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20729B11

Level: (low/med) LOW Date Received: 07/29/92

% Moisture: not dec. ____ Date Analyzed: 07/29/92

GC Column: WIDE ID: 0.530 (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	4	BJ
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
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	J
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
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

9613492.7699

000016

EPA SAMPLE NO.

B070N6

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07059 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207059-06A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20729B11

Level: (low/med) LOW Date Received: 07/29/92

% Moisture: not dec. ____ Date Analyzed: 07/29/92

GC Column: WIDE ID: 0.530 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

9613492.7700

000017

EPA SAMPLE NO.

B072W4

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07059 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207059-07A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20729B12

Level: (low/med) LOW Date Received: 07/27/92

% Moisture: not dec. ____ Date Analyzed: 07/29/92

GC Column: WIDE ID: 0.530 (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	4	BJ
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
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	J
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
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

9613492.7701

000018

EPA SAMPLE NO.

B072W4

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07059 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207059-07A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20729B12

Level: (low/med) LOW Date Received: 07/27/92

% Moisture: not dec. ____ Date Analyzed: 07/29/92

GC Column: WIDE ID: 0.530 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

9613492.7702

000019

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B072W8

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07059 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207059-08A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20729B13

Level: (low/med) LOW Date Received: 07/27/92

% Moisture: not dec. ____ Date Analyzed: 07/29/92

GC Column: WIDE ID: 0.530 (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	4	BJ
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
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	J
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
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

9613492.7705

000020

EPA SAMPLE NO.

B072W8

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07059 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207059-08A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20729B13

Level: (low/med) LOW Date Received: 07/27/92

% Moisture: not dec. ____ Date Analyzed: 07/29/92

GC Column: WIDE ID: 0.530 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

9613492.7704

000021
EPA SAMPLE NO.

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

B070L7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07059 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207059-01B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20731S11

Level: (low/med) LOW Date Received: 07/27/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/29/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/31/92

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

9613492.7705

000022

EPA SAMPLE NO.

B070L7

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07059 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207059-01B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20731S11

Level: (low/med) LOW Date Received: 07/27/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/29/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/31/92

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	4	J
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.

B070L7

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07059 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207059-01B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20731S11

Level: (low/med) LOW Date Received: 07/27/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/29/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/31/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

9613492.7707

000024

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070M2

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07059 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207059-03B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20731S12

Level: (low/med) LOW Date Received: 07/27/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/29/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/31/92

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.

B070M2

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07059 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207059-03B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20731S12

Level: (low/med) LOW Date Received: 07/27/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/29/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/31/92

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

9613492.7709

000026

EPA SAMPLE NO.

B070M2

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07059 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207059-03B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20731S12

Level: (low/med) LOW Date Received: 07/27/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/29/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/31/92

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070N2

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07059 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207059-05B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20731S15

Level: (low/med) LOW Date Received: 07/27/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/29/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/31/92

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.

B070N2

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07059 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207059-05B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20731S15

Level: (low/med) LOW Date Received: 07/27/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/29/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/31/92

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.

B070N2

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07059 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207059-05B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20731S15

Level: (low/med) LOW Date Received: 07/27/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/29/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/31/92

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B072W4

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07059 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207059-07B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20731S16

Level: (low/med) LOW Date Received: 07/27/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/29/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/31/92

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.

B072W4

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07059 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207059-07B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20731S16

Level: (low/med) LOW Date Received: 07/27/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/29/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/31/92

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

9613492.7715

000032
EPA SAMPLE NO.

B072W4

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07059 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207059-07B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20731S16

Level: (low/med) LOW Date Received: 07/27/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/29/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/31/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070L7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07059 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207059-01B

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: 07/27/92

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 07/29/92

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/07/92

Injection Volume: 1.00 (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

9613492.7717

000034

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070M2

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07059 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207059-03B

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

Moisture: _____ decanted: (Y/N) ___ Date Received: 07/27/92

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 07/29/92

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/07/92

Injection Volume: 1.00 (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

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070N2

ab Name: TMA/ARLI Contract: WHC

ab Code: TMALA Case No.: 07059 SAS No.: NA SDG No.: NA

atrix: (soil/water) WATER Lab Sample ID: A207059-05B

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

Moisture: _____ decanted: (Y/N) ___ Date Received: 07/27/92

xtraction: (SepF/Cont/Sonc) CONT Date Extracted: 07/29/92

oncentrated Extract Volume: 10000 (uL) Date Analyzed: 08/07/92

njection Volume: 1.00 (uL) Dilution Factor: 1.00

PC 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

9615492.7719

000036

EPA SAMPLE NO.

B072W4

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

ab Name: TMA/ARLI Contract: WHC

ab Code: TMALA Case No.: 07059 SAS No.: NA SDG No.: NA

atrix: (soil/water) WATER Lab Sample ID: A207059-07B

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

Moisture: _____ decanted: (Y/N) ___ Date Received: 07/27/92

xtraction: (SepF/Cont/Sonc) CONT Date Extracted: 07/29/92

oncentrated Extract Volume: 10000 (uL) Date Analyzed: 08/07/92

njection Volume: 1.00 (uL) Dilution Factor: 1.00

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

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
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

WESTINGHOUSE HANFORD COMPANY

Results of Analyses For:

GENERAL CHEMISTRY
CASE NO. 07-059
(TMA/ARLI Work Order # A2-07-059)

ORGANICS
CASE NO. 07-059
(TMA/ARLI Work Order # A2-07-059)

General Chemistry and Organics results are presented for the following WHC WATER samples(s):

B070L7	B070M1	B070M2
B070M6	B070N2	B070N6
B072W4	B072W8	

Norcal Work Order # N2-07-137

Thermo Analytical Inc.
160 Taylor Street
Monrovia, CA 91016
(818) 357-3247

9613492.7721

000002

Westinghouse Hanford Company

CHAIN OF CUSTODY

ARL I

Custody Form Initiator PH BUTCHER

Company Contact PH BUTCHER

Telephone (509)376-5045

Project Designation/Sampling Locations 100-BC-5

Collection Date 7-23-92

Ice Chest No. 46 STQ

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986936-1

Offsite Property No. W92-0-0533-28

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B070L7

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

~~1, 1L, P, WATER, CLP CYANIDE (NaOH)~~

3, 40ml, Gs, WATER, CLP-VOA

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

1, 1L, P, WATER, ANIONS(IC) (SO4,F,PO4,Cl), COND., pH

~~2, 4L, P, WATER, GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC (U-235/238,Pu-239/240, Am-241), Sr-90, C-14 (HNO3)~~

~~1, 250ml, G, WATER, TRIRIUM~~

~~1, 500ml, P, WATER, ANIONS(NO2,NO3) (H2SO4)~~

1, 1L, G, WATER, ALKALINITY, TOTAL DISSOLVED SOLIDS

1, 500ml, G, WATER, SULFIDE (ZINC ACETATE+NaOH pH>9)

1, 500ml, G, WATER, AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)

~~1, 1L, P, WATER, Tc-99 (HNO3)~~

~~B070M1~~

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

B070M1

3, 40ml, Gs, WATER, CLP-VOA

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: L.D. Walker LD Walker	Received by: K. Trapp / K. Trapp	Date/Time: 7/24/92 1000
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 7-27-92 0800 *
Relinquished by: Kermit Blum 7-27-92	Received by: C. Harris	Date/Time: 7/28/92 9cc
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

* Received @ TMA/NORCAL 7-25-92; opened 7-27-92 · KB

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

9613492.7722

000003

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/27/92 Time ~~1246~~ 1226 hours

Company Contact P. H. Butcher Telephone (509) 376-5045 KT 7/24/92

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
A070L7	~~1; 1L; P; WATER; CLP ICP/AA METALS & MERCURY (HNO3) UNFILTERED~~		
	~~1; 1L; P; WATER; CLP CYANIDE (NaOH)~~		
	3; 40ml; Gs; WATER; CLP-VOA		
	3; 2L; aG; WATER; CLP-SEMI-VOA & PCB/PEST		
	1; 1L; P; WATER; ANIONS (IC) (SO4, F, PO4, Cl), CONDUCTIVITY, pH		
	~~2; 4L; P; WATER; GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC~~		
	~~(U-235/238, Pu-239/240, Am-241), Sr-90 (HNO3)~~		
	~~1; 250 ml; G; WATER; TRITIUM~~		
	~~1; 500 ml; P; WATER; ANIONS (NO3, NO2) (H2SO4)~~		
	1; 1L; G; WATER; ALKALINITY, TOTAL DISSOLVED SOLIDS		
	1; 500 ml; G; WATER; SULFIDE (ZINC ACETATE PLUS NaOH pH>9)		
	1; 500 ml; G; WATER; AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)		
	~~1; 1L; P; WATER; Tc 99 (HCl)~~		
	KT 7/24/92		
A070M8	3, 40ml, Gs, WATER, CLP-VOA		
	KT 7/24/92		
A070M0	~~3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED~~		
			BOL # 250986 836-1
			OPC # WG2-0-0533-28
			TASK # 92-243

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 7-27-92

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

9613492.7723

000004

Westinghouse Hanford Company	CHAIN OF CUSTODY	ARL1

Custody Form Initiator PH BUTCHER

Company Contact PH BUTCHER

Telephone (509)376-5045

Project Designation/Sampling Locations 100-BC-5

Collection Date 7-23-92

Ice Chest No. SML-3

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986830-1

Offsite Property No. W92-0-0533-28

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO 70M2

~~1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) UNFILTERED~~

~~1, 1L, P, WATER, CLP CYANIDE (NaOH)~~

3, 40ml, Gs, WATER, CLP-VOA

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

* 1, 1L, P, WATER, ANIONS(IC) (SO4,F,PO4,Cl), COND., pH

~~2, 4L, P, WATER, GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC (U-235/238,Pu-239/240, Am-241), Sr-90, C-14 (HNO3)~~

~~1, 250ml, G, WATER, TRIRIUM~~

* ~~1, 500ml, P, WATER, ANIONS(NO2,NO3) (H2SO4)~~

1, 1L, G, WATER, ALKALINITY, TOTAL DISSOLVED SOLIDS

1, 500ml, G, WATER, SULFIDE (ZINC ACETATE+NaOH pH>9)

1, 500ml, G, WATER, AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)

~~1, 1L, P, WATER, Tc 99 (HNO3)~~

~~BO 70M5~~

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

BO 70M6

3, 40ml, Gs, WATER, CLP-VOA

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: L.D. Walker LD Walker	Received by: K. Trapp / K. Trapp	Date/Time: 7/24/92 1000
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 7-27-92 0800 **
Relinquished by: 7-27-92 Kermit Blum	Received by: C. Harris	Date/Time: 7/28/92 9
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments: ** Received @ TMA/NORCAL 7-25-92 ; opened 7-27-92 · KB

* Label requesting ANIONS (IC) (SO_4, F, PO_4, Cl) is on 500 ml bottle. Label requesting ANIONS (NO_2, NO_3) is on 1 liter bottle. KB

* Am sending 1 L aliquot for ANIONS as per paperwork / COC - KB

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

9613492.7724

000005

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/24/92 Time 1102 hours

Company Contact P. H. Butcher Telephone (509) 376-5045

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070M2	~~1; 1L; P; WATER; CLP ICP/AA METALS & MERCURY (HNO3) UNFILTERED~~		
	~~1; 1L; P; WATER; CLP CYANIDE (NaOH)~~		
	3; 40ml; Gs; WATER; CLP-VOA		
	3; 2L; aG; WATER; CLP-SEMI-VOA & PCB/PEST		
*	1; 1L; P; WATER; ANIONS (IC) (SO4, F, PO4, Cl), CONDUCTIVITY, pH		
	~~2; 4L; P; WATER; GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC~~		
	~~(U-235/238, Pu-239/240, Am-241), Sr-90 (HNO3)~~		
	~~1; 250 ml; G; WATER; TRITIUM~~		
*	~~1; 500 ml; P; WATER; ANIONS (NO3, NO2) (H2SO4)~~		
	1; 1L; G; WATER; ALKALINITY, TOTAL DISSOLVED SOLIDS		
	1; 500 ml; G; WATER; SULFIDE (ZINC ACETATE PLUS NaOH pH>9)		
	1; 500 ml; G; WATER; AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)		
	~~1; 1L; P; WATER; Tc-99 (HCl)~~		
B070M6	3, 40ml, Gs, WATER, CLP-VOA		
	1 LC 7/24/92		
~~B070M5~~	~~3, 1L, P, WATER, CLP ICP/AA METAL & MERCURY (HNO3) FILTERED~~		
			BOL # 250986836-1
			OPC # W92-0-0533-28
			TASK # 92-243

Field Information**

Special Handling and/or Storage

Possible Sample Hazards

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 7-27-92

Analysis Required

* Note: ANIONS labels on wrong size containers - KB

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

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

A-6000-415 (05/9

9613492.7725

000006

Westinghouse Hanford Company	CHAIN OF CUSTODY	ARL 1

Custody Form Initiator PH BUTCHER

Company Contact PH BUTCHER

Telephone (509)376-5045

Project Designation/Sampling Locations 100-BC-5

Collection Date 7-23-92

Ice Chest No. SML-17

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986836-1

Offsite Property No. W92-0-0533-29

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO70N2

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

~~1, 1L, P, WATER, CLP CYANIDE (NaOH)~~

3, 40ml, Gs, WATER, CLP-VOA

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

1, 1L, P, WATER, ANIONS(IC) (SO4,F,PO4,Cl), COND., pH

~~2, 4L, P, WATER, GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC (U 235/238,Pu 239/240, Am 241), Sr 90, C 14 (HNO3)~~

~~1, 250ml, G, WATER, TRIRIUM~~

~~1, 500ml, P, WATER, ANIONS(NO2,NO3) (H2SO4)~~

1, 1L, G, WATER, ALKALINITY, TOTAL DISSOLVED SOLIDS

1, 500ml, G, WATER, SULFIDE (ZINC ACETATE+NaOH pH>9)

1, 500ml, G, WATER, AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)

~~1, 1L, P, WATER, Tc 99 (HNO3)~~

BO70N5

~~1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) FILTERED~~

BO70N6

3, 40ml, Gs, WATER, CLP-VOA

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: L.D. Walker	Received by: K. Trapp / K. Trapp	Date/Time: 7/24/92 1000
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 7-27-92 0800 *
Relinquished by: Kermit Blum 7-27-92	Received by: C Harris	Date/Time: 7/28/92 900
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

* Received @ TMA / NORCAL 7-25-92; opened 7-27-92 · KB

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

9615492.7726

000007

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/23/92 Time 0940 hours

Company Contact P. H. Butcher Telephone (509) 376-5045

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070N2	~~1; 1L; P; WATER; CLP ICP/AA METALS & MERCURY (HNO3) UNFILTERED~~		
	~~1; 1L; P; WATER; CLP CYANIDE (NaOH)~~		
	3; 40ml; Gs; WATER; CLP-VOA		
	3; 2L; aG; WATER; CLP-SEMI-VOA & PCB/PEST		
	1; 1L; P; WATER; ANIONS (IC) (SO4, F, PO4, Cl), CONDUCTIVITY, pH		
	~~2; 4L; P; WATER; GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC~~		
	~~(U-235/238, Pu-239/240, Am-241), Sr-90 (HNO3)~~		
	~~1; 250 ml; G; WATER; TRITIUM~~		
	~~1; 500 ml; P; WATER; ANIONS (NO3, NO2) (H2SO4)~~		
	1; 1L; G; WATER; ALKALINITY, TOTAL DISSOLVED SOLIDS		
	1; 500 ml; G; WATER; SULFIDE (ZINC ACETATE PLUS NaOH pH>9)		
	1; 500 ml; G; WATER; AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)		
	~~1; 1L; P; WATER; Tc 99 (HCl)~~		
B070N6	3, 40ml, Gs, WATER, CLP-VOA		
~~B070N5~~	~~3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED~~		
			BOL # 250986936-1
			OPC # W92-0-0533-29
			TASK # 92-243

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 7-27-92

Analysis Required _____

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

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

A-6000-435 (05

9613492.7727

000008

Westinghouse Hanford Company	CHAIN OF CUSTODY	ARL1

Custody Form Initiator PH BUTCHER

Company Contact PH BUTCHER

Telephone (509)376-5045

Project Designation/Sampling Locations 100-BC-5

Collection Date 7-23-92

Ice Chest No. SML-30

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250996936-1

Offsite Property No. W92-0-0533-29

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B072W4

~~1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) UNFILTERED~~

~~1, 1L, P, WATER, CLP CYANIDE (NaOH)~~

3, 40ml, Gs, WATER, CLP-VOA

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

1, 1L, P, WATER, ANIONS(IC) (SO4,F,PO4,Cl), COND., pH

~~2, 4L, P, WATER, GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC (U-235/238,Pu-239/240, Am-241), Sr-90, C-14 (HNO3)~~

~~1, 250ml, G, WATER, TRIRIUM~~

~~1, 500ml, P, WATER, ANIONS(NO2,NO3) (H2SO4)~~

1, 1L, G, WATER, ALKALINITY, TOTAL DISSOLVED SOLIDS

1, 500ml, G, WATER, SULFIDE (ZINC ACETATE+NaOH pH>9)

1, 500ml, G, WATER, AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)

~~1, 1L, P, WATER, Tc-99 (HNO3)~~

~~B072W7~~

~~1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) FILTERED~~

B072W8

3, 40ml, Gs, WATER, CLP-VOA

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: L.D Walker	Received by: K. Trapp / K. Trapp	Date/Time: 7/24/92 1000
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 7-27-92 0800 *
Relinquished by: Kermit Blum 7-27-92	Received by: C. Harris	Date/Time: 7/28/92 9
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

* Received @ TMA/Norcal 7-25-92 ; opened 7-27-92 . KB

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

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/23/92 Time 0643 hours

Company Contact P. H. Butcher Telephone (509) 376-5045

Sample Number KT 7/23/92	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
~~A06 B072W4~~	~~3; 1L; P; WATER; CLP-ICP/AA METALS & MERCURY (HNO3) UNFILTERED~~		
	~~4; 1L; P; WATER; CLP-CYANIDE (NaOH)~~		
	3; 40ml; Gs; WATER; CLP-VOA		
	3; 2L; aG; WATER; CLP-SEMI-VOA & PCB/PEST		
	1; 1L; P; WATER; ANIONS (IC) (SO4, F, PO4, Cl), CONDUCTIVITY, pH		
	~~8; 4L; P; WATER; GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC~~		
	~~(U 235/238, Pu 239/240, Am 241), Sr 90 (HNO3)~~		
	~~1; 250 ml; G; WATER; TRITIUM~~		
	~~1; 500 ml; P; WATER; ANIONS (NO3, NO2) (H2SO4)~~		
	1; 1L; G; WATER; ALKALINITY, TOTAL DISSOLVED SOLIDS		
	1; 500 ml; G; WATER; SULFIDE (ZINC ACETATE PLUS NaOH pH>9)		
	1; 500 ml; G; WATER; AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)		
	~~1; 1L; P; WATER; Tc 99 (HCl)~~		
B072W9	3, 40ml, Gs, WATER, CLP-VOA		
	KT 7/24/92		
~~B072W7~~	~~3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED~~		
			BOL # 250786930-1
			OPC # WA2-0-0533-29
			TASK # 92-243

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 7-27-92

Analysis Required _____

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

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

A-6000-436 (05/

SAMPLE LOG-IN SHEET

LAB NAME : THA/ARLI

PAGE : 1 OF 1

RECEIVED BY (PRINT NAME): CAROLE HARRIS

LOG-IN-DATE : 7/28/95

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.: 2521031751
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: 7/28/95
12. Temp of ice chest 4.1 °C
13. Time Recieved: 9:00 AM

SAMPLE TRANSFER

Fraction:

Area #:

By:

On:

EPA SAMPLE #	CORRESPONDING SAMPLE TAG #	CORRESPONDING ASSIGNED LAB #	REMARKS: CONDITION OF SAMPLE SHIPMENT, ETC
	B070L7	AJ07059-01	
	B070M1	AJ07059-02	
	B070M3	AJ07059-03	
	B070M6	AJ07059-04	
	B070N3	AJ07059-05	
	B070N6	AJ07059-06	
	B073W4	AJ07059-07	
	B073W8	AJ07059-08	

* Contact SMO and attach record of resolution

Reviewed By: Logbook No.:

Date: Logbook Page No.:

FORM DC-1

TMA/ARLI
Thermo Analytical Inc.

RADIATION DOSE RATE SURVEY FORM

Date 7/28/92 COMPANY ~~UPRR~~ PG&E OTHER ORD # 252103125/

Surveyor's Name MARK S. MCCRAY

Model No. HP-210 / ESP-1 Model No. AC-3-7 / ESP-1

Serial Nos. 710289 / 02619 Serial Nos. 407726 / 02628

Calibration Date 3/25/92 Calibration Date OUT FOR CALIBRATION

Instrument Calibration Factor 0.280 Instrument Calibration Factor

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, uCi/mL or uCi/g
Background		48.0							
Consistency		7,350	02837						
Smears: PAC, Fix ~~bag~~		33.0							
Reported P,G&E HUMBOLDT				2 sm. each			< .5	pwk	uCi/gm

Comments:

All OK ✓ Approved RWK

Not OK Date 7/28/92

9613492.7731

000012

TMA/ARLI
Thermo Analytical Inc.

RADIATION DOSE RATE SURVEY FORM

Date 7/28/92 COMPANY NORCAL (WHC) OTHER ORD # 252103 1251

Surveyor's Name MARK S. MCCRAY

Model No. HP-210 / ESP-1 Model No. AC-3-7 / ESP-1

Serial Nos. 710289 / 02619 Serial Nos. 407726 / 02628

Calibration Date 3/25/92 Calibration Date OUT FOR CALIBRATION

Instrument Calibration Factor 0.280 Instrument Calibration Factor

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		48.0							
Consistency		7,350	0.2837						
Smears: WHC 001		39.0						NONE	
SML 103		36.0						NONE	
SML 111		37.0						NONE	
Reported (WHC)		24 EA.	each	<50	pCi/gram				

Comments:

All OK ✓ Approved [signature]

Not OK Date 7/28/92

Form: ARLI RA-01
Rev: 06

01/15/92

9613492.7732

000013

FEDERAL EXPRESS

QUESTIONS? CALL 800-238-5355 TOLL FREE

AIRBILL
PACKAGE
TRACKING NUMBER

2521031251

2521031251

RECIPIENT'S COPY

1 Date

From (Your Name, Your Place)

Company

Department/Floor No.

Street Address

City

State

ZIP Required

2 To (Recipient's Name, Your Place)

Company

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
47 ☐ GOVT PACKAGE

Freight Service
☐ OVERNIGHT FREIGHT
80 ☐ TWO DAY FREIGHT

5 DELIVERY AND SPECIAL HANDLING (Check services required)

1 ☐ HOLD FOR PICK-UP
2 ☑ DELIVER WEEKDAY
3 DELIVER SATURDAY ☐
4 ☐ DANGEROUS GOODS
5 ☐
6 ☐ DRY ICE
7 ☐ OTHER SPECIAL SERVICE
8 ☐
9 ☐ SATURDAY PICK-UP
10 ☐
11 ☐
12 ☐ HOLIDAY DELIVERY

6 PACKAGES | WEIGHT in Pounds Only | YOUR DECLARED VALUE

Total | Total 34 | Total 230

DIM SHIPMENT Chargeable Weight

☐ lbs

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 Base Charges

Declared Value Charge

Other

Other

Total Charges

REVISION DATE 6/91

099

PRINTED IN U.S.A.

GENERAL CHEMISTRY RESULTS

CASE NO. 07-059

Water Sample #:

B070L7
B072W4

B070M2

B070N2

CASE NARRATIVE

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

Ernesto Vázquez

Ernesto Vazquez

TMA Inc. REPORT Work Order # A2-07-059

Received: 07/27/92 09/14/92 16:50:07

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: Ernesto Vaiquez
CONTACT: EVV CIH

CLIENT: WHC SAMPLES: 9
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: 100-BC-5
TAKEN: By Westinghouse Staff
TRANS: Federal Express
TYPE: Liquid
P.O. #: N2-07-137-SU-AR
INVOICE: under separate cover

SAMPLE IDENTIFICATION

01	B070L7
01	B070L7 MS
01	B070L7 Duplicate
02	B070M1
02	B070M1 MS
02	B070M1 MSD
03	B070M2
03	B070M2 MS
03	B070M2 MSD
03	B070M2
03	B070M2 MS
03	B070M2
04	B070M6
05	B070N2
05	B070N2 MS
05	B070N2 MSD
05	B070N2
05	B070N2 Duplicate
05	B070N2
05	B070N2 Duplicate
05	B070N2
05	B070N2 Duplicate
06	B070N6
07	B072W4
07	B072W4 MS
07	B072W4

TEST CODES and NAMES used on this workorder

BNCLPW	CLP Semivol. Water
CANCEL	Analysis Cancelled
CL	Chloride
F W	Fluoride in Water
PECLPL	CLP Pesticides Liq.-WH019
PO4 L	Phosphate in Liquids
SO4 W	Sulfate (in Waters)
VOCLPL	CLP Volatile Org.Liq.
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
WPH L	pH of Liquid - WH121
WPO4 L	Phosphate in Liquids
WSO4 L	Sulfate (in Waters)
WSULFI	Sulfide - WH114
W ALK	Alkalinity - WH131
W COD	COD Water - WH132
W COND	Conductivity-Water WH135
W TDS	Dissolved Solids WH128

TMA Inc. REPORT Work Order # A2-07-059

Received: 07/27/92 09/14/92 16:50:07

SAMPLE IDENTIFICATION

07 B072W4

08 B072W8

09 Wet Chemistry Blank

TMA Inc. REPORT Work Order # A2-07-059

Received: 07/27/92

Results by Sample

SAMPLE ID B070L7 FRACTION 01C TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/23/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	9.8	mg/L	0.2
Elect. Conductivity	120.1	323	umho/cm	6
Fluoride	300.0	0.3	mg/L	0.1
Phosphate	300.0	<0.4	mg/L	0.4
pH	150.1	8.0	pH	0.1
Sulfate	300.0	47	mg/L	1

FORM I

TMA Inc. REPORT Work Order # A2-07-059

Received: 07/27/92

Results by Sample

SAMPLE ID B070L7 FRACTION 01D TEST CODE WCCLPL NAME Anions & Wet Chem. - WR043

Date & Time Collected 07/23/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Alkalinity	310.1	108	mg/L	2
Tot. Dissolved Solids	160.1	273	mg/L	5

FORM I

TMA Inc. REPORT Work Order # A2-07-059

Received: 07/27/92 Results by Sample

SAMPLE ID B070L7 FRACTION 01E TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/23/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Sulfide	376.1	<1	mg/L	1

FORM I

TMA Inc. REPORT Work Order # A2-07-059

Received: 07/27/92

Results by Sample

SAMPLE ID B070L7 FRACTION 01F TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/23/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Ammonia Nitrogen	350.3	0.15	mg/L	0.05
COD	410.0	<30	mg/L	30

FORM I

TMA Inc. REPORT Work Order # A2-07-059

Received: 07/27/92

Results by Sample

SAMPLE ID B070M2 FRACTION 03E TEST CODE WCCLPL NAME Anions & Wet Chem. - WM043

Date & Time Collected 07/23/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	9.9	mg/L	0.2
Elect. Conductivity	120.1	325	umho/cm	6
Fluoride	300.0	0.2	mg/L	0.1
Phosphate	300.0	<0.4	mg/L	0.4
pH	150.1	7.9	pH	0.1
Sulfate	300.0	48	mg/L	1

FORM I

9613492.7741

000023

TMA Inc. REPORT Work Order # A2-07-059

Received: 07/27/92

Results by Sample

SAMPLE ID B070M2 FRACTION 03G TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/23/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Alkalinity	310.1	108	mg/L	2
Tot. Dissolved Solids	160.1	268	mg/L	5

FORM I

9613492.7742

000024

TMA Inc. REPORT Work Order # A2-07-059

Received: 07/27/92

Results by Sample

SAMPLE ID B070M2 FRACTION 03M TEST CODE VCCLPL NAME Anions & Wet Chem. - VM043

Date & Time Collected 07/23/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Sulfide	376.1	<1	mg/L	1

FORM I

9613492.7743

TMA Inc. REPORT Work Order # A2-07-059

Received: 07/27/92

Results by Sample

SAMPLE ID B070M2 FRACTION 03I TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 07/23/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Ammonia Nitrogen	350.3	0.19	mg/L	0.05
COD	410.0	<30	mg/L	30

FORM I

TMA Inc. REPORT Work Order # A2-07-059

Received: 07/27/92

Results by Sample

SAMPLE ID B070N2 FRACTION 05E TEST CODE VCCLPL NAME Anions & Wet Chem. - VM043

Date & Time Collected 07/23/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	10.0	mg/L	0.2
Elect. Conductivity	120.1	325	umho/cm	6
Fluoride	300.0	0.3	mg/L	0.1
Phosphate	300.0	<0.4	mg/L	0.4
pH	150.1	8.0	pH	0.1
Sulfate	300.0	49	mg/L	1

FORM I

TMA Inc. REPORT Work Order # A2-07-059

Received: 07/27/92

Results by Sample

SAMPLE ID B070N2 FRACTION 05G TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 07/23/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Alkalinity	310.1	108	mg/L	2
Tot. Dissolved Solids	160.1	257	mg/L	5

FORM I

TMA Inc. REPORT Work Order # A2-07-059

Received: 07/27/92

Results by Sample

SAMPLE ID B070N2 FRACTION 05I TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 07/23/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Sulfide	376.1	<1	mg/L	1

FORM I

TMA Inc. REPORT Work Order # A2-07-059

Received: 07/27/92

Results by Sample

SAMPLE ID B070N2 FRACTION 05J TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 07/23/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Ammonia Nitrogen	350.3	<0.05	mg/L	0.05
COD	410.0	<30	mg/L	30

FORM I

9613492.7748

000030

TMA Inc. REPORT Work Order # A2-07-059

Received: 07/27/92

Results by Sample

SAMPLE ID B072W4 FRACTION 07C TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/23/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	<0.2	mg/L	0.2
Elect. Conductivity	120.1	<6	umho/cm	6
Fluoride	300.0	<0.1	mg/L	0.1
Phosphate	300.0	<0.4	mg/L	0.4
pH	150.1	6.4	pH	0.1
Sulfate	300.0	<1	mg/L	1

FORM I

9613492.7749

TMA Inc. REPORT Work Order # X2-07-059 000031

Received: 07/27/92

Results by Sample

SAMPLE ID B072W4 FRACTION 07D TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 07/23/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Alkalinity	310.1	4	mg/L	2
Tot. Dissolved Solids	160.1	<5	mg/L	5

FORM I

9613492.7750

000032

TMA Inc. REPORT Work Order # A2-07-059

Received: 07/27/92

Results by Sample

SAMPLE ID B072W4 FRACTION 07E TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/23/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Sulfide	376.1	<1	mg/L	1

FORM I

TMA Inc. REPORT Work Order # A2-07-059

Received: 07/27/92

Results by Sample

SAMPLE ID B072W4 FRACTION 07M TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/23/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Ammonia Nitrogen	350.3	0.12	mg/L	0.05
COD	410.0	<30	mg/L	30

FORM I

9613492.7752

000001

11/13

Page 1 Skinner&Sherman REPORT Work Order # S2-07-243

Received: 07/28/92 09/10/92 10:01:42

REPORT TMA/NORCAL
TO 2030 Wright Avenue
Richmond, CA 94804

ATTEN Dan Steurmer

CLIENT HANFORD NOR SAMPLES 5
COMPANY TMA/NORCAL
FACILITY Richmond, CA

PREPARED TMA / Skinner & Sherman Labs.
BY 300 Second Avenue
P.O. Box 521
Waltham, MA 02254

ATTEN Client Services
PHONE (617) 890-7200

CERTIFIED BY

CONTACT DP

WORK ID N2-07-137
TAKEN BY CLIENT
TRANS FED EX# 2521031170
TYPE WATER for NO3NO2
P.O. # N2-07-137
INVOICE under separate cover

SAMPLE IDENTIFICATION

01 B070L7
02 B070M2
03 B070N2
04 B072W4
04 B072W4 DUPL
04 B072W4 SPIKE
05 LCSW

TEST CODES and NAMES used on this workorder

NO3NO2 Nitrate Plus Nitrite

TMA
Thermo Analytical Inc.

This report is rendered upon all of the following conditions: Skinner & Sherman Laboratories, Inc. retains ownership of this report until associated submitted invoice is satisfi
Expert witness services shall be available in conjunction with this report only if prior notification of this potential requirement was made and accepted, before the analysis. Cli
will be responsible for Skinner & Sherman costs and consulting fees if our services are required by subpoena or otherwise in legal proceedings. Total liability is limited to the invo
amount. The results listed refer only to tested samples and applicable parameters. Product endorsement is neither inferred nor implied. Skinner & Sherman Laboratories, Inc. w
exercise due diligence but will not be responsible for lost or destroyed samples or evidence unless client makes appropriate insurance coverage arrangements. Samples are held
thirty days following issuance of report. Samples will be stored at client's expense, if authorized in writing.

Skinner & Sherman Laboratories Inc. 300 Second Avenue, P.O. Box 521, Waltham, Massachusetts 02254-0521 (617) 890-7200
1-800-4 LAB TEST FAX (617) 890-3883

Page 2 Skinner&Sherman REPORT Work Order # S2-07-243

Received: 07/28/92 Results by Sample

SAMPLE ID B070L7 SAMPLE # 01 FRACTIONS: A
Date & Time Collected 07/23/92 12:26:00 Category WATER

NO3NO2 3.04
mg N/L

SAMPLE ID B070M2 SAMPLE # 02 FRACTIONS: A
Date & Time Collected 07/23/92 11:02:00 Category WATER

NO3NO2 3.39
mg N/L

SAMPLE ID B070N2 SAMPLE # 03 FRACTIONS: A
Date & Time Collected 07/23/92 08:40:00 Category WATER

NO3NO2 3.44
mg N/L

SAMPLE ID B072W4 SAMPLE # 04 FRACTIONS: A
Date & Time Collected 07/23/92 06:43:00 Category WATER

NO3NO2 <0.25
mg N/L

SAMPLE ID B072W4 DUPL SAMPLE # 04 FRACTIONS: B
Date & Time Collected 07/23/92 06:43:00 Category WATER

NO3NO2 <0.25
mg N/L

SAMPLE ID B072W4 SPIKE SAMPLE # 04 FRACTIONS: C
Date & Time Collected 07/23/92 06:43:00 Category WATER

NO3NO2 1.50
mg N/L

SAMPLE ID LCSW SAMPLE # 05 FRACTIONS: A
Date & Time Collected not specified Category WATER

NO3NO2 1.89
mg N/L

TMA
Thermo Analytical Inc.

This report is rendered upon all of the following conditions: Skinner & Sherman Laboratories, Inc. retains ownership of this report until associated submitted invoice is satisfi Expert witness services shall be available in conjunction with this report only if prior notification of this potential requirement was made and accepted, before the analysis. Cli will be responsible for Skinner & Sherman costs and consulting fees if our services are required by subpoena or otherwise in legal proceedings. Total liability is limited to the invo amount. The results listed refer only to tested samples and applicable parameters. Product endorsement is neither inferred nor implied. Skinner & Sherman Laboratories, Inc. w exercise due diligence but will not be responsible for lost or destroyed samples or evidence unless client makes appropriate insurance coverage arrangements. Samples are held thirty days following issuance of report. Samples will be stored at client's expense, if authorized in writing.

Skinner & Sherman Laboratories Inc. 300 Second Avenue, P.O. Box 521, Waltham, Massachusetts 02254-0521 (617) 890-7200
1-800-4 LAB TEST FAX (617) 890-3883

TMA/NORCAL

QUALITY CONTROL

MATRIX SPIKE

Sample ID	Sample Result	Spike Added	Spike Result	% Recovery
S207243-04	<0.25 mg/L	2.00 mg/L	1.50 mg/L	75.0

DUPLICATE

Sample ID	Sample Result	Duplicate Result	Relative % Difference
S207243-04	<0.25 mg/L	<0.25 mg/L	not calculable

QUALITY CONTROL SAMPLES

Sample ID	True Value	Found Value	% Recovery
LCS	2.00 mg/L	1.89 mg/L	94.5
Prep Blank	--	<0.25 mg/L	--

TMA
Thermo Analytical Inc.
Skinner & Sherman Laboratories Inc.

This report is rendered upon all of the following conditions: Skinner & Sherman Laboratories, Inc. retains ownership of this report until associated submitted invoice is satisfi
Expert witness services shall be available in conjunction with this report only if prior notification of this potential requirement was made and accepted, before the analysis. Cli
will be responsible for Skinner & Sherman costs and consulting fees if our services are required by subpoena or otherwise in legal proceedings. Total liability is limited to the invo
amount. The results listed refer only to tested samples and applicable parameters. Product endorsement is neither inferred nor implied. Skinner & Sherman Laboratories, Inc. w
exercise due diligence but will not be responsible for lost or destroyed samples or evidence unless client makes appropriate insurance coverage arrangements. Samples are held
thirty days following issuance of report. Samples will be stored at client's expense, if authorized in writing.

300 Second Avenue, P.O. Box 521, Waltham, Massachusetts 02254-0521 (617) 890-7200
1-800-4 LAB TEST FAX (617) 890-3883

Received: 07/28/92

Test Methodology

TEST CODE NO3NO2 NAME Nitrate Plus Nitrite

Methods for Chemical Analysis of Water and Wastes
EPA - 600/4-79-020 March 1979 Method 353.2 (modified)

TMA
Thermo Analytical Inc.
Skinner & Sherman Laboratories Inc.

This report is rendered upon all of the following conditions: Skinner & Sherman Laboratories, Inc. retains ownership of this report until associated submitted invoice is satisfi Expert witness services shall be available in conjunction with this report only if prior notification of this potential requirement was made and accepted, before the analysis. Cli will be responsible for Skinner & Sherman costs and consulting fees if our services are required by subpoena or otherwise in legal proceedings. Total liability is limited to the invo amount. The results listed refer only to tested samples and applicable parameters. Product endorsement is neither inferred nor implied. Skinner & Sherman Laboratories, Inc. v exercise due diligence but will not be responsible for lost or destroyed samples or evidence unless client makes appropriate insurance coverage arrangements. Samples are held thirty days following issuance of report. Samples will be stored at client's expense, if authorized in writing.

300 Second Avenue, P.O. Box 521, Waltham, Massachusetts 02254-0521 (617) 890-7200
1-800-4 LAB TEST FAX (617) 890-3883

9613492.7756

000028

TMA/Skinner & Sherman Labs **SAMPLE LOG-IN**

WORKORDER S207237 CLIENT HANFORD NOR No. SAMPLES:

PROTCL CLP TURNARND 33 Days 4 (Soil) (Water) (Specify Other)

COOLER TEMP: _____ oC, or NA

CUSTODIAN A Benney SDG/BATCH ~~N207137~~ 7/28/92 B.P.

CUSTODY SEAL: PRESENT/ABSENT/INTACT/NOT CLIENT CASE N207137

SHIPER & # FedEx 2501031170 PO/CONTRACT# ↓

TAGS: PRESENT/ABSENT/NA/SEE COC CONTACT D. Sanchez

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

SAMPLE CONTAINERS-INTACT/BROKEN COMMENTS

CLIENT COMMENT? YES/NO

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

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

SHIPMENT DATES 7/28/92

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

N/A

	CLIENT ID	MATRIX	RECEIVED	PH*	TEST(S) & QC	HOLD TIME U
1	B07DL7	water	7/28/92	2.01	NO3, NO2	
2	B07DM2	↓	↓	1.96	↓	
3	B07DN2			2.14		
4	B07DW4	↓	↓	2.27 D,S	↓	
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						

Sampl[illegible] to have Rad-Contam[illegible] NO

Sampl[illegible] amounts of Radioactive [illegible] NO

SUBC[illegible]

REVI[illegible]

* [illegible]

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 100-BC-5

Collection Date 7-23-92

Ice Chest No. 46 STQ

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 2509866936-1

Offsite Property No. W92-0-0533-28

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B07DL7

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) UNFILTERED
1, 1L, P, WATER, CLP-CYANIDE (NaOH)
~~3, 40ml, Gs, WATER, CLP-VOA~~
~~3, 2L, aG, WATER, CLP SEMI-VOA & PCB/PEST~~
~~1, 1L, P, WATER, ANIONS(IC) (SO4,F,PO4,Cl), COND., pH~~
~~2, 4L, P, WATER, GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC (U-235/238,Pu-239/240, Am-241), Sr-90, C-14 (HNO3)~~
~~1, 250ml, G, WATER, TRIRIUM~~
1, 500ml, P, WATER, ANIONS(NO2,NO3) (H2SO4)
~~1, 1L, G, WATER, ALKALINITY, TOTAL DISSOLVED SOLIDS~~
~~1, 500ml, G, WATER, SULFIDE (ZINC ACETATE+NaOH pH>9)~~
~~1, 500ml, G, WATER, AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)~~
~~1, 1L, P, WATER, Tc-99 (HNO3)~~

B07DM0

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) FILTERED

~~B07DM1~~

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

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: L.D. Walker LD Walker	Received by: K. Trapp / K. Trapp	Date/Time: 7/24/92 1000
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 7-27-92 0800 *
Relinquished by: 7-27-92 Kermit Blum	Received by: [illegible]	Date/Time: 7/28/92 9:30
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

* Received @ TMA / NORCAL 7-25-92; opened 7-27-92 · KB

9613492.7758

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/23/92 Time ~~1040~~ 1226 hours KT 7/24/92

Company Contact P. H. Butcher Telephone (509) 376-5045

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070L7	1; 1L, P; WATER; CLP-ICP/AA METALS & MERCURY (HNO_3) UNFILTERED		
	1; 1L; P; WATER; CLP-CYANIDE (NaOH)		
	~~3; 40ml; Gs; WATER; CLP VOA~~		
	~~3; 2L; aG; WATER; CLP SEMI VOA & PCB/PEST~~		
	~~1; 1L; P; WATER; ANIONS (IC) (SO4, F, PO4, Cl), CONDUCTIVITY, pH~~		
	~~2; 4L; P; WATER; GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC~~		
	~~(U-235/238, Pu-239/240, Am-241), Sr-90 (HNO_3)~~		
	~~1; 250 ml; G; WATER; TRITIUM~~		
	1; 500 ml; P; WATER; ANIONS (NO3, NO2) (H_2SO_4)		
	~~1; 1L; G; WATER; ALKALINITY, TOTAL DISSOLVED SOLIDS~~		
	~~1; 500 ml; G; WATER; SULFIDE (ZINC ACETATE PLUS NaOH pH>9)~~		
	~~1; 500 ml; G; WATER; AMMONIA, CHEMICAL OXYGEN DEMAND (H_2SO_4 pH<2)~~		
	~~1; 1L; P; WATER; Tc-99 (HCl)~~		
	KT 7/24/92		
~~B070LQ1~~	~~3, 40ml, Gs, WATER, CLP VOA~~		
	1 KT 7/24/92		
B070M0	~~3~~ 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986 83C-1
			OPC # WG2-0-0533-28
			TASK # 92-243

Field Information**

Special Handling and/or Storage

Possible Sample Hazards

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 7-27-92

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

9613492.7759

000031

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 100-BC-5

Collection Date 7-23-92

Ice Chest No. SML-3

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986836-1

Offsite Property No. W92-0-0533-28

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO 70M2

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) UNFILTERED
1, 1L, P, WATER, CLP-CYANIDE (NaOH)
~~8, 40ml, Gs, WATER, CLP VOA~~
~~8, 2L, aG, WATER, CLP SEMI VOA & PCB/PEST~~
* ~~1, 1L, P, WATER, ANIONS(IC) (SO4,F,PO4,Cl), COND, pH~~
~~2, 4L, P, WATER, GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC (U-235/238,Pu-239/240, Am-241), Sr-90, C-14 (HNO3)~~
~~1, 250ml, G, WATER, TRITIUM~~
* 1, 500ml, P, WATER, ANIONS(NO2,NO3) (H2SO4)
~~1, 1L, G, WATER, ALKALINITY, TOTAL DISSOLVED SOLIDS~~
~~1, 500ml, G, WATER, SULFIDE (ZINC ACETATE+NaOH pH>9)~~
~~1, 500ml, G, WATER, AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)~~
~~1, 1L, P, WATER, Tc-99 (HNO3)~~

BO 70M5

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) FILTERED

~~BO 70M6~~

~~8, 40ml, Gs, WATER, CLP-VOA~~

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: L.D. Walker LD Walker	Received by: K. Trapp / K. Trapp	Date/Time: 7/24/92 1000
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 7-27-92 0800 **
Relinquished by: Kermit Blum 7-27-92	Received by: [illegible]	Date/Time: 7/28/92 9:30
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments: ** Received @ TMA/NORCAL 7-25-92 ; opened 7-27-92 - KB

* Label requesting ANIONS (IC) (SO_4, F, PO_4, Cl) is on 500 ml bottle. Label requesting ANIONS (NO_2, NO_3) is on 1 liter bottle. KB
Am sending 500 ml bottle to S&S for ANIONS 353.2.

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

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/24/92 Time 1102 hour

Company Contact P. H. Butcher Telephone (509) 376-5045

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070M2	1; 1L, P; WATER; CLP-ICP/AA METALS & MERCURY (HNO_3) UNFILTERED		
	1; 1L; P; WATER; CLP-CYANIDE (NaOH)		
	~~3; 40ml; Gs; WATER; CLP-VOA~~		
	~~2; 2L; aG; WATER; CLP-SEMI-VOA & PCB/PEST~~		
*	~~1; 1L; P; WATER; ANIONS (IC) (SO4, F, PO4, Cl), CONDUCTIVITY, pH~~		- 500ML
	~~2; 4L; P; WATER; GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC~~		
	~~(U-235/238, Pu-239/240, Am-241), Sr-90 (HNO_3)~~		
	~~1; 250 ml; G; WATER; TRITIUM~~		
*	1; 500 ml; P; WATER; ANIONS (NO3, NO2) (H2SO4)		- 1L
	~~1; 1L; G; WATER; ALKALINITY, TOTAL DISSOLVED SOLIDS~~		
	~~1; 500 ml; G; WATER; SULFIDE (ZINC ACETATE PLUS NaOH pH>9)~~		
	~~1; 500 ml; G; WATER; AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)~~		
	~~1; 1L; P; WATER; Tc-99 (HCl)~~		
~~B070M6~~	~~3, 40ml, Gs, WATER, CLP-VOA~~		
	1 KC 7/24/92		
B070M5	~~3,~~ 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986836-1
			OPC # W92-0-0533-28
			TASK # 92-243

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 7-27-92

Analysis Required _____

* Note: ANIONS labels on wrong size containers - KB

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

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

A-6000-406 (05/

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 100-BC-5

Collection Date 7-23-92

Ice Chest No. SML-17

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 2509868836-1

Offsite Property No. W92-0-0533-29

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO70N2

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) UNFILTERED
1, 1L, P, WATER, CLP-CYANIDE (NaOH)
~~3, 40ml, Gs, WATER, CLP VOA~~
~~3, 2L, aG, WATER, CLP SEMI VOA & PCB/PEST~~
~~1, 1L, P, WATER, ANIONS(IC) (SO4,F,PO4,Cl), COND., pH~~
~~2, 4L, P, WATER, GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC (U 235/238,Pu 239/240, Am 241), Sr 90, C 14 (HNO3)~~
~~1, 250ml, G, WATER, TRIRIUM~~
1, 500ml, P, WATER, ANIONS(NO2,NO3) (H2SO4)
~~1, 1L, G, WATER, ALKALINITY, TOTAL DISSOLVED SOLIDS~~
~~1, 500ml, G, WATER, SULFIDE (ZINC ACETATE+NaOH pH>9)~~
~~1, 500ml, G, WATER, AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)~~
~~1, 1L, P, WATER, Tc 99 (HNO3)~~

BO70N5

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) FILTERED

~~BO70N6~~

~~3, 40ml, Gs, WATER, CLP VOA~~

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: L.D. Walker	Received by: K. Trapp / K. Trapp	Date/Time: 7/24/92 1000
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 7-27-92 0800 *
Relinquished by: Kermit Blum 7-27-92	Received by: [illegible]	Date/Time: 7/28/92 9:30
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

* Received @ TMA / NORCAL 7-25-92; opened 7-27-92 · KB

9613492.7762

000034

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/23/92 Time 0840 hour

Company Contact P. H. Butcher Telephone (509) 376-5045

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
0070N2	1; 1L, P; WATER; CLP-ICP/AA METALS & MERCURY (HNO_3) UNFILTERED		
	1; 1L; P; WATER; CLP-CYANIDE (NaOH)		
	~~3; 40ml; Gs; WATER; CLP VOA~~		
	~~3; 2L; aG; WATER; CLP SEMI VOA & PCB/PEST~~		
	~~1; 1L; P; WATER; ANIONS (IC) (SO4, F, PO4, Cl), CONDUCTIVITY, pH~~		
	~~2; 4L; P; WATER; GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC~~		
	~~(U 235/238, Pu 239/240, Am 241), Sr 90 (HNO_3)~~		
	~~1; 250 ml; G; WATER; TRITIUM~~		
	1; 500 ml; P; WATER; ANIONS (NO3, NO2)		(H2SO4)
	~~1; 1L; G; WATER; ALKALINITY, TOTAL DISSOLVED SOLIDS~~		
	~~1; 500 ml; G; WATER; SULFIDE (ZINC ACETATE PLUS NaOH pH>9)~~		
	~~1; 500 ml; G; WATER; AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)~~		
	~~1; 1L; P; WATER; Tc-99 (HCl)~~		
~~0070N6~~	~~3, 40ml, Gs, WATER, CLP VOA~~		
0070N5	3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986936-1
			OPC # W92-0-0533-29
			TASK # 92-243

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 7-27-92

Analysis Required _____

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

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

A-6000-406 (0

9613492.7763

000035

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 100-BC-5

Collection Date 7-23-92

Ice Chest No. SML-30

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986936-1

Offsite Property No. W92-0-0533-29

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B072W4

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) UNFILTERED
1, 1L, P, WATER, CLP-CYANIDE (NaOH)
~~3, 40ml, Gs, WATER, CLP VOA~~
~~3, 2L, aG, WATER, CLP SEMI VOA & PCB/PEST~~
~~1, 1L, P, WATER, ANIONS(IC) (SO4,F,PO4,Cl), COND., pH~~
~~3, 4L, P, WATER, GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC (U-235/238,Pu-239/240, Am 241), Sr 90, C 14 (HNO3)~~
~~1, 250ml, G, WATER, TRIRIUM~~
1, 500ml, P, WATER, ANIONS(NO2,NO3) (H2SO4)
~~1, 1L, G, WATER, ALKALINITY, TOTAL DISSOLVED SOLIDS~~
~~1, 500ml, G, WATER, SULFIDE (ZINC ACETATE+NaOH pH>9)~~
~~1, 500ml, G, WATER, AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)~~
~~1, 1L, P, WATER, Tc 99 (HNO3)~~

B072W7

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) FILTERED

~~B072W8~~

~~3, 40ml, Gs, WATER, CLP VOA~~

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: L.D. Walker	Received by: K. Trapp / K. Trapp	Date/Time: 7/24/92 1000
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 7-27-92 0800 *
Relinquished by: Kermit Blum 7-27-92	Received by: [illegible]	Date/Time: 7/28/92 9:30
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

* Received @ TMA/NORCAL 7-25-92 ; opened 7-27-92 . KB

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

9613492.7764

000036

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/23/92 Time 0643 hours

Company Contact P. H. Butcher Telephone (509) 376-5045

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
KT 7/23/92			
B072W4	1; 1L, P; WATER; CLP-ICP/AA METALS & MERCURY (HNO_3) UNFILTERED		
	1; 1L; P; WATER; CLP-CYANIDE (NaOH)		
	~~3; 40ml; Gs; WATER; CLP-VOA~~		
	~~3; 2L; aG; WATER; CLP-SEMI-VOA & PCB/PEST~~		
	~~1; 1L; P; WATER; ANIONS (IC) (SO4, F, PO4, Cl), CONDUCTIVITY, pH~~		
	~~2; 4L; P; WATER; GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC~~		
	~~(U 236/238, Pu 239/240, Am 241), Sr 90 (HNO_3)~~		
	~~1; 250 ml; G; WATER; TRITIUM~~		
	1; 500 ml; P; WATER; ANIONS (NO3, NO2) (H_2SO_4)		
	~~1; 1L; G; WATER; ALKALINITY, TOTAL DISSOLVED SOLIDS~~		
	~~1; 500 ml; G; WATER; SULFIDE (ZINC ACETATE PLUS NaOH pH>9)~~		
	~~1; 500 ml; G; WATER; AMMONIA, CHEMICAL OXYGEN DEMAND (H_2SO_4 pH<2)~~		
	~~1; 1L, P; WATER; Tc 99 (HCl)~~		
~~B072W8~~	~~3, 40ml, Gs, WATER, CLP-VOA~~		
	KT 7/24/92		
B072W7	~~3~~, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986936-1
			OPC # W92-0-0533-29
			TASK # 92-243

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 7-27-92

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

9613492.7765

TMA
Thermo Analytical Inc.

Skinner & Sherman Labs., Inc.
300 Second Avenue
Post Office Box 521
Waltham, MA 02254-0521
(617) 890-7200
FAX (617) 890-3883

SEP 1992
RECEIVED
OSM DMO

September 17, 1992

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

Quality Control Narrative

Scope
Four (4) water samples were submitted to TMA/Skinner & Sherman Laboratories, Inc. on July 28, 1992 from Westinghouse Hanford Company. The samples were analyzed for the USEPA CLP metals and cyanide as indicated on the chain of custody. The analysis was performed under TMA/Skinner and Sherman work order S207239.

Methodology
The samples were prepared, analyzed and reported in accordance with the USEPA Contract Laboratory Program Statement of Work ILM02.

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

The iron laboratory duplicates 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.

David N. Peterson
Assistant Laboratory Manager

RECORD COPY

i 3/19/96 M.H.

9613492.7766

WESTINGHOUSE/HANFORD
1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B070L7

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

Lab Code: SKINER Case No.: N2-07-137SAS No.: SDG No.: B070L7

Matrix (soil/water): WATER Lab Sample ID: 07239-01S

Level (low/med): LOW Date Received: 07/28/92

% 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	23.9	U		P
7440-36-0	Antimony	16.3	U		P
7440-38-2	Arsenic	4.3	B		F
7440-39-3	Barium	20.9	B		P
7440-41-7	Beryllium	1.5	B		P
7440-43-9	Cadmium	2.2	B		P
7440-70-2	Calcium	47700			P
7440-47-3	Chromium	23.2			P
7440-48-4	Cobalt	3.5	U		P
7440-50-8	Copper	4.5	B		P
7439-89-6	Iron	72.6	B	*	P
7439-92-1	Lead	7.9			F
7439-95-4	Magnesium	8580			P
7439-96-5	Manganese	4.4	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	9.4	B		P
7440-09-7	Potassium	5730			P
7782-49-2	Selenium	3.7	U	W	F
7440-22-4	Silver	4.8	U		P
7440-23-5	Sodium	11800			P
7440-28-0	Thallium	1.3	B	W	F
7440-62-2	Vanadium	9.6	B		P
7440-66-6	Zinc	12.2	B		P
	Cyanide	10.0	U		CA

Color Before: \OLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

002

9613492.7767

WESTINGHOUSE/HANFORD
1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B070M2

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

Lab Code: SKINER Case No.: N2-07-137SAS No.: SDG No.: B070L7

Matrix (soil/water): WATER Lab Sample ID: 07239-02S

Level (low/med): LOW Date Received: 07/28/92

% 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	23.9	U		P
7440-36-0	Antimony	16.3	U		P
7440-38-2	Arsenic	2.8	B		F
7440-39-3	Barium	19.6	B		P
7440-41-7	Beryllium	0.70	U		P
7440-43-9	Cadmium	1.5	U		P
7440-70-2	Calcium	50300			P
7440-47-3	Chromium	9.2	B		P
7440-48-4	Cobalt	3.5	U		P
7440-50-8	Copper	4.5	B		P
7439-89-6	Iron	446		*	P
7439-92-1	Lead	4.3		W	F
7439-95-4	Magnesium	7860			P
7439-96-5	Manganese	5.2	B		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	4.4	B		P
7440-09-7	Potassium	5280			P
7782-49-2	Selenium	3.7	U	W	F
7440-22-4	Silver	4.8	U		P
7440-23-5	Sodium	11600			P
7440-28-0	Thallium	0.90	U	W	F
7440-62-2	Vanadium	8.0	B		P
7440-66-6	Zinc	2.9	U		P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

003

9615492.7768

WESTINGHOUSE/HANFORD
1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B070N2

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

Lab Code: SKINER Case No.: N2-07-137SAS No.: SDG No.: B070L7

Matrix (soil/water): WATER Lab Sample ID: 07239-03S

Level (low/med): LOW Date Received: 07/28/92

% 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	23.9	U		P
7440-36-0	Antimony	16.3	U		P
7440-38-2	Arsenic	4.2	B	W	F
7440-39-3	Barium	36.6	B		P
7440-41-7	Beryllium	0.70	U		P
7440-43-9	Cadmium	1.7	B		P
7440-70-2	Calcium	51700			P
7440-47-3	Chromium	13.5			P
7440-48-4	Cobalt	3.5	U		P
7440-50-8	Copper	3.8	U		P
7439-89-6	Iron	28.1	B	*	P
7439-92-1	Lead	2.0	B		F
7439-95-4	Magnesium	7840			P
7439-96-5	Manganese	4.4	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	4.1	B		P
7440-09-7	Potassium	4920	B		P
7782-49-2	Selenium	3.7	U	W	F
7440-22-4	Silver	4.8	U		P
7440-23-5	Sodium	11700			P
7440-28-0	Thallium	0.90	U	W	F
7440-62-2	Vanadium	7.4	B		P
7440-66-6	Zinc	2.9	U		P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

004

9613492.7769

WESTINGHOUSE/HANFORD
1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B072W4

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

Lab Code: SKINER Case No.: N2-07-137SAS No.: SDG No.: B070L7

Matrix (soil/water): WATER Lab Sample ID: 07239-04S

Level (low/med): LOW Date Received: 07/28/92

% 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	23.9	U		P
7440-36-0	Antimony	16.3	U		P
7440-38-2	Arsenic	2.6	U		F
7440-39-3	Barium	4.6	U		P
7440-41-7	Beryllium	0.70	U		P
7440-43-9	Cadmium	1.5	U		P
7440-70-2	Calcium	85.7	B		P
7440-47-3	Chromium	4.9	U		P
7440-48-4	Cobalt	3.5	U		P
7440-50-8	Copper	3.8	U		P
7439-89-6	Iron	7.6	U	*	P
7439-92-1	Lead	2.1	B		F
7439-95-4	Magnesium	40.1	U		P
7439-96-5	Manganese	4.4	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	3.9	U		P
7440-09-7	Potassium	266	U		P
7782-49-2	Selenium	3.7	U		F
7440-22-4	Silver	4.8	U		P
7440-23-5	Sodium	56.4	B		P
7440-28-0	Thallium	0.90	U		F
7440-62-2	Vanadium	2.4	U		P
7440-66-6	Zinc	2.9	U		P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

005

9613492.7770

TMA/Skinner & Sherman Labs SAMPLE LOG-IN
WORKORDER S207239 CLIENT HANFORD NOR No. SAMPLES:
PROTCL CLP TURNARND 33 Days 4
COOLER TEMP: ____oC, or NA (Soil) (Water) (Specify Other
CUSTODIAN A. Benney SDG/BATCH N/A 7/28/92
CUSTODY SEAL: PRESENT/ABSENT/INTACT/NOT CLIENT CASE N2071387
SHIPER & # Fed Ex 252 1031170 PO/CONTRACT# N
TAGS: PRESENT/ABSENT/NA/SEE COC CONTACT D. SANCHEZ
CHAIN OF CUSTODY: PRESENT/ABSENT/NA, # ____ COMMENTS: ____

SAMPLE CONTAINERS-INTACT/BROKEN COMMENTS ____

CLIENT COMMENT? YES/NO ____
SAMPLE LABELS AGREE WITH CHAIN OF CUSTODY INFO? YES/NO (COMMENT)
CLIENT PAPERWORK AGREES WITH SAMPLES & COC? YES /NO (COMMENT)

SHIPMENT DATES 7-28-92
LIST ANY DATE WITH PAPERWORK/SHIPMENT PROBLEMS & SPECIFY THE PROBLEM:

UNfiltered

	CLIENT ID	MATRIX	RECEIVED	PH*	TEST(S) & QC	HOLD TIME U
1	B070L7	water	7/28/92	2.65/10.97	Tm / CN	
2	B070M2	↓	↓	2.44/11.01		
3	B070N2			2.57/10.82		
4	B072W4			2.50/10.50 S,D		
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						

Sampl[illegible] to have Radio[illegible] ion: YES ✓ NO ____
Sampl[illegible] YES ____ NO ✓

175
7/28/92

9613492.7271

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 100-BC-5

Collection Date 7-23-92

Ice Chest No. 46 STQ

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986936-1

Offsite Property No. W92-0-0533-28

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B070L7

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) UNFILTERED
1, 1L, P, WATER, CLP-CYANIDE (NaOH)
~~3, 40ml, Gs, WATER, CLP-VOA~~
~~3, 2L, aG, WATER, CLP SEMI-VOA & PCB/PEST~~
~~1, 1L, P, WATER, ANIONS(IC) (SO4,F,PO4,Cl), COND., pH~~
~~2, 4L, P, WATER, GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC (U-235/238,Pu-239/240, Am-241), Sr-90, C-14 (HNO3)~~
~~1, 250ml, G, WATER, TRIRIUM~~
1, 500ml, P, WATER, ANIONS(NO2,NO3) (H2SO4)
~~1, 1L, G, WATER, ALKALINITY, TOTAL DISSOLVED SOLIDS~~
~~1, 500ml, G, WATER, SULFIDE (ZINC ACETATE+NaOH pH>9)~~
~~1, 500ml, G, WATER, AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)~~
~~1, 1L, P, WATER, Tc-99 (HNO3)~~

B070M0

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) FILTERED

~~B070M1~~

~~3, 40ml, Gs, WATER, CLP VOA~~

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: L.D. Walker LD Walker	Received by: K. Trapp / K. Trapp	Date/Time: 7/24/92 1000
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 7-27-92 0800 *
Relinquished by: Kermit Blum 7-27-92	Received by: [illegible]	Date/Time: 7/28/92 9:30
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

* Received @ TMA / NORCAL 7-25-92; opened 7-27-92 · KB

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

9613492.7772

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/23/92 Time ~~1040~~ 1226 hours KT 7/24/

Company Contact P. H. Butcher Telephone (509) 376-5045

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070L7	1; 1L, P; WATER; CLP-ICP/AA METALS & MERCURY (HNO_3) UNFILTERED		
	1; 1L; P; WATER; CLP-CYANIDE (NaOH)		
	~~3; 40ml; G; WATER; CLP VOA~~		
	~~3; 2L; aG; WATER; CLP SEMI VOA & PCB/PEST~~		
	~~1; 1L; P; WATER; ANIONS (IC) (SO4, F, PO4, Cl), CONDUCTIVITY, pH~~		
	~~2; 4L; P; WATER; GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC~~		
	~~(U-235/238, Pu-239/240, Am-241), Sr-90 (HNO_3)~~		
	~~1; 250 ml; G; WATER; TRITIUM~~		
	1; 500 ml; P; WATER; ANIONS (NO3, NO2) (H_2SO_4)		
	~~1; 1L; G; WATER; ALKALINITY, TOTAL DISSOLVED SOLIDS~~		
	~~1; 500 ml; G; WATER; SULFIDE (ZINC ACETATE PLUS NaOH pH>9)~~		
	~~1; 500 ml; G; WATER; AMMONIA, CHEMICAL OXYGEN DEMAND (H_2SO_4 pH<2)~~		
	~~1; 1L; P; WATER; Tc-99 (HCl)~~		
	KT 7/24/92		
~~B070L8~~	~~3, 40ml, G, WATER, CLP VOA~~		
	1 KT 7/24/92		
B070M0	~~3~~ 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986 83C-1
			OPC # WG2-0-0533-28
			TASK # 92-243

Field Information**

Special Handling and/or Storage

Possible Sample Hazards

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 7-27-92

Analysis Required

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

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

A-6000-106

9615492.7773

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 100-BC-5

Collection Date 7-23-92

Ice Chest No. SML-3

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986836-1

Offsite Property No. W92-0-0533-28

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO 70M2

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) UNFILTERED
1, 1L, P, WATER, CLP-CYANIDE (NaOH)
~~8, 40ml, Gs, WATER, CLP VOA~~
~~8, 2L, aG, WATER, CLP SEMI VOA & PCB/PEST~~
* ~~1, 1L, P, WATER, ANIONS(IC) (SO4,F,PO4,Cl), COND, pH~~
~~2, 4L, P, WATER, GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC (U-235/238,Pu-239/240, Am-241), Sr-90, C-14 (HNO3)~~
~~1, 250ml, G, WATER, TRITIUM~~
* 1, 500ml, P, WATER, ANIONS(NO2,NO3) (H2SO4)
~~1, 1L, G, WATER, ALKALINITY, TOTAL DISSOLVED SOLIDS~~
~~1, 500ml, G, WATER, SULFIDE (ZINC ACETATE+NaOH pH>9)~~
~~1, 500ml, G, WATER, AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)~~
~~1, 1L, P, WATER, Tc-99 (HNO3)~~

BO 70M5

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) FILTERED

~~BO 70M4~~

~~8, 40ml, Gs, WATER, CLP-VOA~~

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: L.D. Walker LD Walker	Received by: K. Trapp / K. Trapp	Date/Time: 7/24/92 1000
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 7-27-92 0800 **
Relinquished by: Kermit Blum 7-27-92	Received by: [illegible]	Date/Time: 7/28/92 9:30
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments: ** Received @ TMA/NORCAL 7-25-92 ; opened 7-27-92 · KB

* Label requesting ANIONS (IC) (SO_4, F, PO_4, Cl) is on 500 ml bottle
Label requesting ANIONS (NO_2, NO_3) is on 1 liter bottle · KB
Am sending 500 ml bottle to S&S for ANIONS 353.2.

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

9613492.7774

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/24/92 Time 1102 hou.

Company Contact P. H. Butcher Telephone (509) 376-5045

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070M2	1; 1L, P; WATER; CLP-ICP/AA METALS & MERCURY (HNO_3) UNFILTERED		
	1; 1L; P; WATER; CLP-CYANIDE (NaOH)		
	~~3; 40ml; Gs; WATER; CLP-VOA~~		
	~~3; 2L; aG; WATER; CLP-SEMI-VOA & PCB/PEST~~		
*	~~1; 1L; P; WATER; ANIONS (IC) (SO4, F, PO4, Cl), CONDUCTIVITY, pH~~ - 500 ml		
	~~2; 4L; P; WATER; GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC~~		
	~~(U 235/238, Pu 239/240, Am 241), Sr-90 (HNO_3)~~		
	~~1; 250 ml; G; WATER; TRITIUM~~		
*	1; 500 ml; P; WATER; ANIONS (NO3, NO2) (H_2SO_4) - 11		
	~~1; 1L; G; WATER; ALKALINITY, TOTAL DISSOLVED SOLIDS~~		
	~~1; 500 ml; G; WATER; SULFIDE (ZINC ACETATE PLUS NaOH pH>9)~~		
	~~1; 500 ml; G; WATER; AMMONIA, CHEMICAL OXYGEN DEMAND (H_2SO_4 pH<2)~~		
	~~1; 1L; P; WATER; Tc 99 (HCl)~~		
~~B070M6~~	~~3, 40ml, Gs, WATER, CLP-VOA~~		
	1 LC 7/24/92		
B070M5	~~3,~~ 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986836-1
			OPC # W92-0-0533-28
			TASK # 92-243

Field Information**

Special Handling and/or Storage

Possible Sample Hazards

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 7-27-92

Analysis Required

* Note: ANIONS labels on wrong size containers - KB

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

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

A-6000-406 (

9613492.7775

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 100-BC-5

Collection Date 7-23-92

Ice Chest No. SML-17

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986836-1

Offsite Property No. W92-0-0533-29

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO70N2

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) UNFILTERED
1, 1L, P, WATER, CLP-CYANIDE (NaOH)
~~3, 40ml, Gs, WATER, CLP VOA~~
~~3, 2L, aG, WATER, CLP SEMI-VOA & PCB/PEST~~
~~1, 1L, P, WATER, ANIONS(IC) (SO4,F,PO4,Cl), COND., pH~~
~~2, 4L, P, WATER, GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC (U 235/238,Pu 239/240, Am 241), Sr 90, C 14 (HNO3)~~
~~1, 250ml, G, WATER, TRITIUM~~
1, 500ml, P, WATER, ANIONS(NO2,NO3) (H2SO4)
~~1, 1L, G, WATER, ALKALINITY, TOTAL DISSOLVED SOLIDS~~
~~1, 500ml, G, WATER, SULFIDE (ZINC ACETATE+NaOH pH>9)~~
~~1, 500ml, G, WATER, AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)~~
~~1, 1L, P, WATER, Tc 99 (HNO3)~~

BO70N5

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) FILTERED

~~BO70N6~~

~~3, 40ml, Gs, WATER, CLP VOA~~

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: LD Walker L.D. Walker	Received by: K. Trapp / K. Trapp	Date/Time: 7/24/92 1000
Relinquished by: K Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 7-27-92 0800 *
Relinquished by: Kermit Blum 7-27-92	Received by: [illegible]	Date/Time: 7/28/92 9:30
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

* Received @ TMA / NORCAL 7-25-92; opened 7-27-92 · KB

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

9613492.7776

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/23/92 Time 0840 hou.

Company Contact P. H. Butcher Telephone (509) 376-5045

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070N2	1; 1L, P; WATER; CLP-ICP/AA METALS & MERCURY (HNO_3) UNFILTERED		
	1; 1L; P; WATER; CLP-CYANIDE (NaOH)		
	~~3; 40ml; Gs; WATER; CLP VOA~~		
	~~3; 2L; aG; WATER; CLP SEMI VOA & PCB/PEST~~		
	~~1; 1L; P; WATER; ANIONS (IC) (SO4, F, PO4, Cl), CONDUCTIVITY, pH~~		
	~~2; 4L; P; WATER; GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC~~		
	~~(U 235/238, Pu 239/240, Am 241), Sr 90 (HNO3)~~		
	~~1; 250 ml; G; WATER; TRITIUM~~		
	1; 500 ml; P; WATER; ANIONS (NO3, NO2) (H2SO4)		
	~~1; 1L; G; WATER; ALKALINITY, TOTAL DISSOLVED SOLIDS~~		
	~~1; 500 ml; G; WATER; SULFIDE (ZINC ACETATE PLUS NaOH pH>9)~~		
	~~1; 500 ml; G; WATER; AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)~~		
	~~1; 1L; P; WATER; Tc-99 (HCl)~~		
~~B070N6~~	~~3, 40ml, Gs, WATER, CLP VOA~~		
B070N5	3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986936-1
			OPC # W92-0-0533-29
			TASK # 92-243

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 7-27-92

Analysis Required _____

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

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

R6800-106

9613492.7777

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 100-BC-5

Collection Date 7-23-92

Ice Chest No. SML-30

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986936-1

Offsite Property No. W92-0-0533-29

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B072W4

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) UNFILTERED
1, 1L, P, WATER, CLP-CYANIDE (NaOH)
~~3, 40ml, Gs, WATER, CLP VOA~~
~~2, 2L, aG, WATER, CLP SEMI VOA & PCB/PEST~~
~~1, 1L, P, WATER, ANIONS(IC) (SO4,F,PO4,Cl), COND., pH~~
~~2, 4L, P, WATER, GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC (U-235/238,Pu-239/240, Am-241), Sr-90, C-14 (HNO3)~~
~~1, 250ml, G, WATER, TRIRIUM~~
1, 500ml, P, WATER, ANIONS(NO2,NO3) (H2SO4)
~~1, 1L, G, WATER, ALKALINITY, TOTAL DISSOLVED SOLIDS~~
~~1, 500ml, G, WATER, SULFIDE (ZINC ACETATE+NaOH pH>9)~~
~~1, 500ml, G, WATER, AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)~~
~~1, 1L, P, WATER, Tc-99 (HNO3)~~

B072W7

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) FILTERED

~~B072W8~~

~~3, 40ml, Gs, WATER, CLP VOA~~

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: L.D. Walker LD Walker	Received by: K. Trapp / K. Trapp	Date/Time: 7/24/92 1000
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 7-27-92 0800 *
Relinquished by: Kermit Blum 7-27-92	Received by: [illegible]	Date/Time: 7/28/92 9:30
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

* Received @ TMA/NORCAL 7-25-92 ; opened 7-27-92 . KB

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

9613492.7778

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/23/92 Time 0643 hour

Company Contact P. H. Butcher Telephone (509) 376-5045

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
KT 7/23/92			
B06 B072W4	1; 1L, P; WATER; CLP-ICP/AA METALS & MERCURY (HNO_3) UNFILTERED		
	1; 1L; P; WATER; CLP-CYANIDE (NaOH)		
	~~3; 40ml; Gs; WATER; CLP-VOA~~		
	~~3; 2L; aG; WATER; CLP-SEMI-VOA & PCB/PEST~~		
	~~1; 1L; P; WATER; ANIONS (IC) (SO4, F, PO4, Cl), CONDUCTIVITY, pH~~		
	~~2; 4L; P; WATER; GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC~~		
	~~(U 235/238, Pu 239/240, Am 241), Sr 90 (HNO_3)~~		
	~~1; 250 ml; G; WATER; TRITIUM~~		
	1; 500 ml; P; WATER; ANIONS (NO3, NO2) (H_2SO_4)		
	~~1; 1L; G; WATER; ALKALINITY, TOTAL DISSOLVED SOLIDS~~		
	~~1; 500 ml; G; WATER; SULFIDE (ZINC ACETATE PLUS NaOH pH>9)~~		
	~~1; 500 ml; G; WATER; AMMONIA, CHEMICAL OXYGEN DEMAND (H_2SO_4 pH<2)~~		
	~~1; 1L; P; WATER; Tc 99 (HCl)~~		
~~B072W8~~	~~3, 40ml, Gs, WATER, CLP VOA~~		
	KT 7/24/92		
B072W7	~~3,~~ 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986936-1
			OPC # WA2-0-0533-29
			TASK # 92-243

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 7-27-92

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/

9613492.7779

TMA
Thermo Analytical Inc.

Skinner & Sherman Labs., Inc.
300 Second Avenue
Post Office Box 521
Waltham, MA 02254-0521
(617) 890-7200
FAX (617) 890-3883

SEP 1992
RECEIVED
OSM DMO

September 17, 1992

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

Quality Control Narrative

Scope
Four (4) water samples were submitted to TMA/Skinner & Sherman Laboratories, Inc. on July 28, 1992 from Westinghouse/Hanford Company. The samples were analyzed for the USEPA CLP Target Analyte List metals. The analysis was performed under TMA/Skinner and Sherman work order S207242.

Methodology
The samples were prepared, analyzed and reported in accordance with the USEPA Contract Laboratory Program Statement of Work ILM02.

Discussion
All quality control requirements were met for the samples with no exceptions.

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

Respectfully submitted,

TMA/SKINNER & SHERMAN LABORATORIES, INC.

David N. Peterson
Assistant Laboratory Manager

RECORD COPY

i 3/19/96 M.H.

WESTINGHOUSE/HANFORD

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B070M0

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

Lab Code: SKINER Case No.: N2-07-137SAS No.: SDG No.: B070M0

Matrix (soil/water): WATER Lab Sample ID: 07242-01S

Level (low/med): LOW Date Received: 07/28/92

% 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	23.9	U		P
7440-36-0	Antimony	16.3	U		P
7440-38-2	Arsenic	4.9	B		F
7440-39-3	Barium	20.9	B		P
7440-41-7	Beryllium	1.2	B		P
7440-43-9	Cadmium	1.5	U		P
7440-70-2	Calcium	48800			P
7440-47-3	Chromium	6.7	B		P
7440-48-4	Cobalt	3.5	U		P
7440-50-8	Copper	3.8	U		P
7439-89-6	Iron	7.6	U		P
7439-92-1	Lead	2.2	U		F
7439-95-4	Magnesium	8690			P
7439-96-5	Manganese	4.4	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	3.9	U		P
7440-09-7	Potassium	5660			P
7782-49-2	Selenium	3.6	U		F
7440-22-4	Silver	4.8	U		P
7440-23-5	Sodium	12100			P
7440-28-0	Thallium	1.6	U		F
7440-62-2	Vanadium	8.4	B		P
7440-66-6	Zinc	4.9	B		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

002

9613492.7781

WESTINGHOUSE/HANFORD

1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B070M5

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

Lab Code: SKINER Case No.: N2-07-137SAS No.: SDG No.: B070M0

Matrix (soil/water): WATER Lab Sample ID: 07242-02S

Level (low/med): LOW Date Received: 07/28/92

% 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	23.9	U		P
7440-36-0	Antimony	16.3	U		P
7440-38-2	Arsenic	3.7	B		F
7440-39-3	Barium	20.9	B		P
7440-41-7	Beryllium	0.70	U		P
7440-43-9	Cadmium	1.5	U		P
7440-70-2	Calcium	50200			P
7440-47-3	Chromium	6.1	B		P
7440-48-4	Cobalt	3.5	U		P
7440-50-8	Copper	3.8	U		P
7439-89-6	Iron	38.7	B		P
7439-92-1	Lead	2.2	U		F
7439-95-4	Magnesium	7810			P
7439-96-5	Manganese	4.4	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	3.9	U		P
7440-09-7	Potassium	5180			P
7782-49-2	Selenium	3.6	U		F
7440-22-4	Silver	4.8	U		P
7440-23-5	Sodium	11600			P
7440-28-0	Thallium	1.6	U		F
7440-62-2	Vanadium	7.4	B		P
7440-66-6	Zinc	2.9	U		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

003

9613492.7782

WESTINGHOUSE/HANFORD

1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B070N5

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

Lab Code: SKINER Case No.: N2-07-137SAS No.: SDG No.: B070M0

Matrix (soil/water): WATER Lab Sample ID: 07242-03S

Level (low/med): LOW Date Received: 07/28/92

% 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	291			P
7440-36-0	Antimony	16.3	U		P
7440-38-2	Arsenic	3.7	B		F
7440-39-3	Barium	43.1	B		P
7440-41-7	Beryllium	0.70	U		P
7440-43-9	Cadmium	1.5	U		P
7440-70-2	Calcium	51500			P
7440-47-3	Chromium	5.5	B		P
7440-48-4	Cobalt	3.5	U		P
7440-50-8	Copper	3.8	U		P
7439-89-6	Iron	7.6	U		P
7439-92-1	Lead	2.2	U		F
7439-95-4	Magnesium	7810			P
7439-96-5	Manganese	17.5			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	3.9	U		P
7440-09-7	Potassium	4790	B		P
7782-49-2	Selenium	3.6	U		F
7440-22-4	Silver	4.8	U		P
7440-23-5	Sodium	11600			P
7440-28-0	Thallium	1.6	U		F
7440-62-2	Vanadium	7.4	B		P
7440-66-6	Zinc	2.9	U		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

004

9613492.7783

WESTINGHOUSE/HANFORD

1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B072W7

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

Lab Code: SKINER Case No.: N2-07-137SAS No.: SDG No.: B070M0

Matrix (soil/water): WATER Lab Sample ID: 07242-04S

Level (low/med): LOW Date Received: 07/28/92

% 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	23.9	U		P
7440-36-0	Antimony	16.3	U		P
7440-38-2	Arsenic	2.4	U		F
7440-39-3	Barium	4.6	U		P
7440-41-7	Beryllium	0.70	U		P
7440-43-9	Cadmium	1.5	U		P
7440-70-2	Calcium	82.4	B		P
7440-47-3	Chromium	4.9	U		P
7440-48-4	Cobalt	3.5	U		P
7440-50-8	Copper	3.8	U		P
7439-89-6	Iron	7.6	U		P
7439-92-1	Lead	2.2	U		F
7439-95-4	Magnesium	40.1	U		P
7439-96-5	Manganese	4.4	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	3.9	U		P
7440-09-7	Potassium	266	U		P
7782-49-2	Selenium	3.6	U		F
7440-22-4	Silver	4.8	U		P
7440-23-5	Sodium	83.1	B		P
7440-28-0	Thallium	1.6	U		F
7440-62-2	Vanadium	2.4	U		P
7440-66-6	Zinc	2.9	U		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

005

9613492.7784

TMA/Skinner & Sherman Labs SAMPLE LOG-IN

WORKORDER 5207242 CLIENT Hanford NOR No. SAMPLES:

PROTCL CLP TURNAROUND 33 Day 4

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

CUSTODIAN A. Benney SDG/BATCH

CUSTODY SEAL: PRESENT/ABSENT/INTACT/NOT CLIENT CASE N207137

SHIPER & # Fed Ex 2521031170 PO/CONTRACT# N

TAGS: PRESENT/ABSENT/NA/SEE COC CONTACT D. SANCHES

CHAIN OF CUSTODY: PRESENT/ABSENT/NA, # N/A COMMENTS: N/A

SAMPLE CONTAINERS-INTACT/BROKEN COMMENTS

CLIENT COMMENT? YES/NO

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

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

SHIPMENT DATES 7/28/92

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

filtered

	CLIENT ID	MATRIX	RECEIVED	PH*	TEST(S) & QC	HOLD TIME U
1	B070M0	water	7/28/92	2.36	TM	
2	B070M5	↓	↓	2.22	↓	
3	B070N5	↓	↓	2.43	↓	
4	B072W7	↓	↓	2.31	D,S ↓	
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						

Samples

Samples

SUBCO

RE

137

9613492.7785

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 100-BC-5

Collection Date 7-23-92

Ice Chest No. 46 STQ

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986936-1

Offsite Property No. W92-0-0533-28

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B07DL7

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) UNFILTERED
1, 1L, P, WATER, CLP-CYANIDE (NaOH)
~~3, 40ml, Gs, WATER, CLP-VOA~~
~~3, 2L, aG, WATER, CLP SEMI-VOA & PCB/PEST~~
~~1, 1L, P, WATER, ANIONS(IC) (SO4,F,PO4,Cl), COND, pH~~
~~2, 4L, P, WATER, GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC (U-235/238,Pu-239/240, Am-241), Sr-90, C-14 (HNO3)~~
~~1, 250ml, G, WATER, TRITIUM~~
1, 500ml, P, WATER, ANIONS(NO2,NO3) (H2SO4)
~~1, 1L, G, WATER, ALKALINITY, TOTAL DISSOLVED SOLIDS~~
~~1, 500ml, G, WATER, SULFIDE (ZINC ACETATE+NaOH pH>9)~~
~~1, 500ml, G, WATER, AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)~~
~~1, 1L, P, WATER, Tc-99 (HNO3)~~

B07DM0

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) FILTERED

~~B07DM1~~

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

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: L.D. Walker LD Walker	Received by: K. Trapp / K. Trapp	Date/Time: 7/24/92 1000
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 7-27-92 0800 *
Relinquished by: Kermit Blum 7-27-92	Received by: [illegible]	Date/Time: 7/28/92 9:30
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

* Received @ TMA / NORCAL 7-25-92; opened 7-27-92 · KB

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

9613492.7786

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/23/92 Time ~~1040~~ 1226 hour KT 7/24/92

Company Contact P. H. Butcher Telephone (509) 376-5045

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070L7	1; 1L, P; WATER; CLP-ICP/AA METALS & MERCURY (HNO_3) UNFILTERED		
	1; 1L; P; WATER; CLP-CYANIDE (NaOH)		
	~~3; 40ml; Gs; WATER; CLP VOA~~		
	~~3; 2L; aG; WATER; CLP SEMI VOA & PCB/PEST~~		
	~~1; 1L; P; WATER; ANIONS (IC) (SO4, F, PO4, Cl), CONDUCTIVITY, pH~~		
	~~2; 4L; P; WATER; GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC~~		
	~~(U 235/238, Pu 239/240, Am 241), Sr-90 (HNO_3)~~		
	~~1; 250 ml; G; WATER; TRITIUM~~		
	1; 500 ml; P; WATER; ANIONS (NO3, NO2) (H_2SO_4)		
	~~1; 1L; G; WATER; ALKALINITY, TOTAL DISSOLVED SOLIDS~~		
	~~1; 500 ml; G; WATER; SULFIDE (ZINC ACETATE PLUS NaOH pH>9)~~		
	~~1; 500 ml; G; WATER; AMMONIA, CHEMICAL OXYGEN DEMAND (H_2SO_4 pH<2)~~		
	~~1; 1L; P; WATER; Tc-99 (HCl)~~		
	KT 7/24/92		
~~B070LQ1~~	~~3, 40ml, Gs, WATER, CLP VOA~~		
	1 KT 7/24/92		
B070M0	~~3~~ 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986 83C-1
			OPC # WG2-0-0533-28
			TASK # 92-243

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 7-27-92

Analysis Required _____

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

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

A-6000-106

9613492.7787

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 100-BC-5

Collection Date 7-23-92

Ice Chest No. SML-3

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986836-1

Offsite Property No. W92-0-0533-28

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO 70M2

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) UNFILTERED
1, 1L, P, WATER, CLP-CYANIDE (NaOH)
~~0, 40ml, Gs, WATER, CLP VOA~~
~~0, 2L, aG, WATER, CLP SEMI VOA & PCB/PEST~~
* ~~1, 1L, P, WATER, ANIONS(IC) (SO4,F,PO4,Cl), COND, pH~~
~~2, 4L, P, WATER, GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC (U-235/238,Pu-239/240, Am-241), Sr-90, C-14 (HNO3)~~
~~1, 250ml, G, WATER, TRIRIUM~~
* 1, 500ml, P, WATER, ANIONS(NO2,NO3) (H2SO4)
~~1, 1L, G, WATER, ALKALINITY, TOTAL DISSOLVED SOLIDS~~
~~1, 500ml, G, WATER, SULFIDE (ZINC ACETATE+NaOH pH>9)~~
~~1, 500ml, G, WATER, AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)~~
~~1, 1L, P, WATER, Tc-99 (HNO3)~~

BO 70M5

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) FILTERED

~~BO 70M6~~

~~0, 40ml, Gs, WATER, CLP-VOA~~

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: L.D. Walker LD Walker	Received by: K. Trapp / K. Trapp	Date/Time: 7/24/92 1000
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 7-27-92 0800 **
Relinquished by: Kermit Blum 7-27-92	Received by: [illegible]	Date/Time: 7/28/92 9:30
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments: ** Received @ TMA/NORCAL 7-25-92 ; opened 7-27-92 - KB

* Label requesting ANIONS (IC) (SO_4, F, PO_4, Cl) is on 500 ml bottle. Label requesting ANIONS (NO_2, NO_3) is on 1 liter bottle. KB
Am sending 500 ml bottle to S&S for ANIONS 353.2.

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

9613492.7788

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/23/92 Time 1102 hours

Company Contact P. H. Butcher Telephone (509) 376-5045

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070M2	1; 1L, P; WATER; CLP-ICP/AA METALS & MERCURY (HNO_3) UNFILTERED		
	1; 1L; P; WATER; CLP-CYANIDE (NaOH)		
	~~3; 40ml; Gs; WATER; CLP-VOA~~		
	~~3; 2L; aG; WATER; CLP-SEMI-VOA & PCB/PEST~~		
*	~~1; 1L; P; WATER; ANIONS (IC) (SO4, F, PO4, Cl), CONDUCTIVITY, pH~~ - 500ML		
	~~2; 4L; P; WATER; GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC~~		
	~~(U 235/238, Pu 239/240, Am 241), Sr 90 (HNO_3)~~		
	~~1; 250 ml; G; WATER; TRITIUM~~		
*	1; 500 ml; P; WATER; ANIONS (NO3, NO2) (H_2SO_4) - 1L		
	~~1; 1L; G; WATER; ALKALINITY, TOTAL DISSOLVED SOLIDS~~		
	~~1; 500 ml; G; WATER; SULFIDE (ZINC ACETATE PLUS NaOH pH>9)~~		
	~~1; 500 ml; G; WATER; AMMONIA, CHEMICAL OXYGEN DEMAND (H_2SO_4 pH<2)~~		
	~~1; 1L; P; WATER; Tc 99 (HCl)~~		
~~B070M6~~	~~3, 40ml, Gs, WATER, CLP-VOA~~		
	1 KC 7/24/92		
B070M5	~~3~~, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986836-1
			OPC # W92-0-0533-28
			TASK # 92-243

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 7-27-92

Analysis Required _____

* Note: ANIONS labels on wrong size containers - KB

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

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

A-6000-406 (05

9613492.7789

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 100-BC-5

Collection Date 7-23-92

Ice Chest No. SML-17

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 2509868 36-1

Offsite Property No. W92-0-0533-29

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO 70N2

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) UNFILTERED
1, 1L, P, WATER, CLP-CYANIDE (NaOH)
~~3, 40ml, G, WATER, CLP-VOA~~
~~3, 2L, aG, WATER, CLP-SEMI-VOA & PCB/PEST~~
~~1, 1L, P, WATER, ANIONS(IC) (SO4,F,PO4,Cl), COND, pH~~
~~2, 4L, P, WATER, GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC (U 235/238,Pu 239/240, Am 241), Sr 90, C 14 (HNO3)~~
~~1, 250ml, G, WATER, TRIRIUM~~
1, 500ml, P, WATER, ANIONS(NO2,NO3) (H2SO4)
~~1, 1L, G, WATER, ALKALINITY, TOTAL DISSOLVED SOLIDS~~
~~1, 500ml, G, WATER, SULFIDE (ZINC ACETATE+NaOH pH>9)~~
~~1, 500ml, G, WATER, AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)~~
~~1, 1L, P, WATER, Tc 99 (HNO3)~~

BO 70N5

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) FILTERED

~~BO 70N6~~

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

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: L.D. Walker L.D. Walker	Received by: K. Trapp / K. Trapp	Date/Time: 7/24/92 1000
Relinquished by: K Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 7-27-92 0800 *
Relinquished by: Kermit Blum 7-27-92	Received by: [illegible]	Date/Time: 7/28/92 9:30
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

* Received @ TMA / NORCAL 7-25-92; opened 7-27-92 - KB

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

9613492.7790

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/23/92 Time 0940 hours

Company Contact P. H. Butcher Telephone (509) 376-5045

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070N2	1; 1L, P; WATER; CLP-ICP/AA METALS & MERCURY (HNO_3) UNFILTERED		
	1; 1L; P; WATER; CLP-CYANIDE (NaOH)		
	~~3; 40ml; Gs; WATER; CLP VOA~~		
	~~3; 2L; aG; WATER; CLP SEMI VOA & PCB/PEST~~		
	~~1; 1L; P; WATER; ANIONS (IC) (SO4, F, PO4, Cl), CONDUCTIVITY, pH~~		
	~~2; 4L; P; WATER; GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC~~		
	~~(U 235/238, Pu 239/240, Am 241), Sr 90 (HNO_3)~~		
	~~1; 250 ml; G; WATER; TRITIUM~~		
	1; 500 ml; P; WATER; ANIONS (NO3, NO2) (H_2SO_4)		
	~~1; 1L; G; WATER; ALKALINITY, TOTAL DISSOLVED SOLIDS~~		
	~~1; 500 ml; G; WATER; SULFIDE (ZINC ACETATE PLUS NaOH pH>9)~~		
	~~1; 500 ml; G; WATER; AMMONIA, CHEMICAL OXYGEN DEMAND (H_2SO_4 pH<2)~~		
	~~1; 1L; P; WATER; Tc-99 (HCl)~~		
~~B070N6~~	~~3, 40ml, Gs, WATER, CLP VOA~~		
B070N5	3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986936-1
			OPC # W92-0-0533-29
			TASK # 92-243

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 7-27-92

Analysis Required _____

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

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

A-6000-406 (

9613492.7791

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 100-BC-5

Collection Date 7-23-92

Ice Chest No. SML-30

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986936-1

Offsite Property No. W92-0-0533-29

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B072W4

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) UNFILTERED
1, 1L, P, WATER, CLP-CYANIDE (NaOH)
~~3, 40ml, Gs, WATER, CLP VOA~~
~~3, 2L, aG, WATER, CLP SEMI-VOA & PCB/PEST~~
~~1, 1L, P, WATER, ANIONS(IC) (SO4,F,PO4,Cl), COND., pH~~
~~3, 4L, P, WATER, GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC (U-235/238,Pu-239/240, Am-241), Sr-90, C-14 (HNO3)~~
~~1, 250ml, G, WATER, TRIRIUM~~
1, 500ml, P, WATER, ANIONS(NO2,NO3) (H2SO4)
~~1, 1L, G, WATER, ALKALINITY, TOTAL DISSOLVED SOLIDS~~
~~1, 500ml, G, WATER, SULFIDE (ZINC ACETATE+NaOH pH>9)~~
~~1, 500ml, G, WATER, AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)~~
~~1, 1L, P, WATER, Tc-99 (HNO3)~~

B072W7

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) FILTERED

~~B072W8~~

~~3, 40ml, Gs, WATER, CLP VOA~~

[] Field Transfer of Custody — Chain of Possession — (Sign and Print Names)

Relinquished by:	Received by:	Date/Time:
L.D. Walker / LD Walker	K. Trapp / K. Trapp	7/24/92 1000
K. Trapp / K. Trapp	Kermit Blum	7-27-92 0800 *
Kermit Blum 7-27-92	[illegible]	7/28/92 9:30

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

* Received @ TMA/NORCAL 7-25-92 ; opened 7-27-92 . KB

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

9613492.1292

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/23/92 Time 0643 hours

Company Contact P. H. Butcher Telephone (509) 376-5045

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
KT 7/23/92			
~~B06~~ B072W4	1; 1L, P; WATER; CLP-ICP/AA METALS & MERCURY (HNO_3) UNFILTERED		
	1; 1L; P; WATER; CLP-CYANIDE (NaOH)		
	~~3; 40ml; Gs; WATER; CLP-VOA~~		
	~~3; 2L; aG; WATER; CLP-SEMI-VOA & PCB/PEST~~		
	~~1; 1L; P; WATER; ANIONS (IC) (SO4, F, PO4, Cl), CONDUCTIVITY, pH~~		
	~~2; 4L; P; WATER; GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC~~		
	~~(U-235/238, Pu-239/240, Am-241), Sr-90 (HNO_3)~~		
	~~1; 250 ml; G; WATER; TRITIUM~~		
	1; 500 ml; P; WATER; ANIONS (NO3, NO2) (H2SO4)		
	~~1; 1L; G; WATER; ALKALINITY, TOTAL DISSOLVED SOLIDS~~		
	~~1; 500 ml; G; WATER; SULFIDE (ZINC ACETATE PLUS NaOH pH>9)~~		
	~~1; 500 ml; G; WATER; AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)~~		
	~~1; 1L; P; WATER; Tc 99 (HCl)~~		
~~B072W8~~	~~3, 40ml, Gs, WATER, CLP-VOA~~		
	KT 7/24/92		
B072W7	~~3,~~ 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250786936-1
			OPC # W92-0-0533-29
			TASK # 92-243

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 7-27-92

Analysis Required _____

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

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

A-6000-406 (0

9613492.7793 B070L7-TMA-237 000001

WESTINGHOUSE HANFORD COMPANY

Results of Analyses For:

GENERAL CHEMISTRY
CASE NO. 07-066
(TMA/ARLI Work Order # A2-07-066)

ORGANICS
CASE NO. 07-066
(TMA/ARLI Work Order # A2-07-066)

General Chemistry and Organics results are presented for the following WHC WATER samples(s):

B072X4	B072X8	B072W9
B072X3	B070L2	B070L6
B070J2	B070J6	B070K7
B070L1	B072S4	B072S8

Norcal Work Order # N2-07-150

Thermo Analytical Inc.
160 Taylor Street
Monrovia, CA 91016
(818) 357-3247

9613492.7794

100-BC-5

000002

ARLI

Westinghouse Hanford Company	CHAIN OF CUSTODY

Custody Form Initiator PH BUTCHER

Company Contact PH BUTCHER

Telephone (509)376-5045

Project Designation/Sampling Locations 100-BC-5

Collection Date 7/24/92

Ice Chest No. SML-95

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250996437-5

Offsite Property No. W92-C-0533-[illegible]

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B072X4

~~1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) UNFILTERED~~

~~1, 1L, P, WATER, CLP-CYANIDE (NaOH)~~

3, 40ml, Gs, WATER, CLP-VOA

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

1, 1L, P, WATER, ANIONS(IC) (SO4,F,PO4,Cl), COND., pH

~~2, 4L, P, WATER, GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC (U-235/238,Pu-239/240, Am-241), Sr-90, C-14 (HNO3)~~

~~1, 250ml, G, WATER, TRIRIUM~~

~~1, 500ml, P, WATER, ANIONS(NO2,NO3) (H2SO4)~~

1, 1L, G, WATER, ALKALINITY, TOTAL DISSOLVED SOLIDS

1, 500ml, G, WATER, SULFIDE (ZINC ACETATE+NaOH pH>9)

1, 500ml, G, WATER, AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)

~~1, 1L, P, WATER, Tc 99 (HNO3)~~

B072X7

~~1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) FILTERED~~

B072X8

3, 40ml, Gs, WATER, CLP-VOA

[] Field Transfer of Custody — Chain of Possession — (Sign and Print Names)

Relinquished by:	Received by:	Date/Time:
[illegible]	K. Trapp / K. Trapp	7/27/92 0900
K. Trapp / K. Trapp	Elby Yamamoto	7/28/92 3:45 PM
Elby Yamamoto 7/28/92 4:45	C. Harris	7/29/92 9am

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

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

9613492.7795

000003

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/24/92 Time 0900 hours

Company Contact P. H. Butcher Telephone (509) 376-5045

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
P072X4	~~1; 1L; P; WATER; CLP-ICP/AA METALS & MERCURY (HNO3) UNFILTERED~~		
	~~1; 1L; P; WATER; CLP-CYANIDE (NaOH)~~		
	3; 40ml; Gs; WATER; CLP-VOA		
	3; 2L; aG; WATER; CLP-SEMI-VOA & PCB/PEST		
	1; 1L; P; WATER; ANIONS (IC) (SO4, F, PO4, Cl), CONDUCTIVITY, pH		
	~~2; 4L; P; WATER; GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC~~		
	~~(U-235/238, Pu-239/240, Am-241), Sr-90 (HNO3)~~		
	~~1; 250 ml; G; WATER; TRITIUM~~		
	~~1; 500 ml; P; WATER; ANIONS (NO3, NO2) (H2SO4)~~		
	1; 1L; G; WATER; ALKALINITY, TOTAL DISSOLVED SOLIDS		
	1; 500 ml; G; WATER; SULFIDE (ZINC ACETATE PLUS NaOH pH>9)		
	1; 500 ml; G; WATER; AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)		
	~~1; 1L; P; WATER; Tc-99 (HCl)~~		
P072X8	3, 40ml, Gs, WATER, CLP-VOA		
	KT 7/27/92		
~~P072X7~~	~~3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED~~		
			BOL # 250986939-5
			OPC # W92-U-0533-3031 KT 7/27/92
			TASK # 92-243

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

Received by Elky Y. Yamamoto Title Sample Control Tech. Date 7/28/92

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)

9613492.7796

000064

Westinghouse Hanford Company	CHAIN OF CUSTODY

Custody Form Initiator PH BUTCHER

Company Contact PH BUTCHER

Telephone (509)376-5045

Project Designation/Sampling Locations 100-BC-5

Collection Date 7/24/92

Ice Chest No. Fry

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250780439-5

Offsite Property No. W92-0-0533-30

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B072W9-

~~1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) UNFILTERED~~

~~1, 1L, P, WATER, CLP-CYANIDE (NaOH)~~

3, 40ml, Gs, WATER, CLP-VOA

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

1, 1L, P, WATER, ANIONS(IC) (SO4,F,PO4,Cl), COND., pH

~~2, 4L, P, WATER, GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC (U-235/238,Pu-239/240, Am-241), Sr-90, C-14 (HNO3)~~

~~1, 250ml, G, WATER, TRIRIUM~~

~~1, 500ml, P, WATER, ANIONS(NO2,NO3) (H2SO4)~~

1, 1L, G, WATER, ALKALINITY, TOTAL DISSOLVED SOLIDS

1, 500ml, G, WATER, SULFIDE (ZINC ACETATE+NaOH pH>9)

1, 500ml, G, WATER, AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)

~~1, 1L, P, WATER, Tc-99 (HNO3)~~

B072X2

~~1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) FILTERED~~

B072X3

3, 40ml, Gs, WATER, CLP-VOA

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: [illegible]	Received by: K. Trapp / K. Trapp	Date/Time: 7/27/92 0900
Relinquished by: K. Trapp / K. Trapp	Received by: Ruby G. Yamamoto	Date/Time: 7/28/92 3:45 PM
Relinquished by: [illegible] 7/28/92	Received by: C. Harris	Date/Time: 7/29/92 CK
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments: B072W9 1VOA VIAL Broken on arrival CH

A-6000-107 (12/90) (EF) WEF061
Chain of Custody

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/24/92 Time 0900 hours

Company Contact P. H. Butcher Telephone (509) 376-5045

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
A072W4	~~1; 1L, P; WATER; CLP-ICP/AA METALS & MERCURY (HNO3) UNFILTERED~~		
	~~1; 1L; P; WATER; CLP-CYANIDE (NaOH)~~		
	3; 40ml; Gs; WATER; CLP-VOA		
	3; 2L; aG; WATER; CLP-SEMI-VOA & PCB/PEST		
	1; 1L; P; WATER; ANIONS (IC) (SO4, F, PO4, Cl), CONDUCTIVITY, pH		
	~~2; 4L; P; WATER; GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC~~		
	~~(U-235/238, Pu-239/240, Am-241), Sr-90 (HNO3)~~		
	~~1; 250 ml; G; WATER; TRITIUM~~		
	~~1; 500 ml; P; WATER; ANIONS (NO3, NO2) (H2SO4)~~		
	1; 1L; G; WATER; ALKALINITY, TOTAL DISSOLVED SOLIDS		
	1; 500 ml; G; WATER; SULFIDE (ZINC ACETATE PLUS NaOH pH>9)		
	1; 500 ml; G; WATER; AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)		
	~~1; 1L; P; WATER; Tc-99 (HCl)~~		
A072X3	3, 40ml, Gs, WATER,	CLP-VOA	
	1 KT 7/27/92		
~~A072X2~~	~~3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED~~		
			BOL # 250986939-5
			OPC # WA2-0-0533-31
			TASK # ~~92-244~~ 92-243 KT 7/27/92

Field Information**

Special Handling and/or Storage

Possible Sample Hazards

PART II: LABORATORY SECTION

Received by Elby G. Yamamoto Title Sample Control Tech Date 7/28/92

Analysis Required

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

9613492.7798

000006

Westinghouse Hanford Company	CHAIN OF CUSTODY	ARL1

Custody Form Initiator PH BUTCHER

Company Contact PH BUTCHER

Telephone (509)376-5045

Project Designation/Sampling Locations 100-BC-5

Collection Date 7/25/92

Ice Chest No. GS-24

Field Logbook No. EFL-1037

Bill of Lading/Airbill No. 250996939-5

Offsite Property No. W92-0-0533-34

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO 7002

~~1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) UNFILTERED~~

~~1, 1L, P, WATER, CLP-CYANIDE (NaOH)~~

3, 40ml, Gs, WATER, CLP-VOA

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

1, 1L, P, WATER, ANIONS(IC) (SO4,F,PO4,Cl), COND., pH

~~2, 4L, P, WATER, GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC (U-235/238,Pu-239/240, Am-241), Sr-90, C-14 (HNO3)~~

~~1, 250ml, G, WATER, TRIRIUM~~

~~1, 500ml, P, WATER, ANIONS(NO2,NO3) (H2SO4)~~

1, 1L, G, WATER, ALKALINITY, TOTAL DISSOLVED SOLIDS

1, 500ml, G, WATER, SULFIDE (ZINC ACETATE+NaOH pH>9)

1, 500ml, G, WATER, AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)

~~1, 1L, P, WATER, Tc-99 (HNO3)~~

~~BO 7005~~

~~1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) FILTERED~~

BO 7006

3, 40ml, Gs, WATER, CLP-VOA

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: C Gilbert C Gilbert	Received by: K. Trapp / K. Trapp	Date/Time: ~~7/25/92~~ 7/27/92 0900
Relinquished by: K. Trapp / K. Trapp	Received by: Elby P. Yamamoto	Date/Time: 7/28/92 3:45 PM
Relinquished by: 7-29-92 Kermit Blum	Received by: C. Harris	Date/Time: 7/30/92 9:00
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

9613492.7799

000007

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/25/92 Time 0837 hours

Company Contact P. H. Butcher Telephone (509) 376-5045

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
✓ B07CL2	~~1; 1L; P; WATER; CLP-ICP/AA METALS & MERCURY (HNO3) UNFILTERED~~		
✓	~~1; 1L; P; WATER; CLP-CYANIDE (NaOH)~~		
✓	3; 40ml; Gs; WATER; CLP-VOA		
✓	3; 2L; aG; WATER; CLP-SEMI-VOA & PCB/PEST		
✓	1; 1L; P; WATER; ANIONS (IC) (SO4, F, PO4, Cl), CONDUCTIVITY, pH		
✓	~~2; 4L; P; WATER; GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC~~		
	~~(U-235/238, Pu-239/240, Am-241), Sr-90 (HNO3)~~		
✓	~~1; 250 ml; G; WATER; TRITIUM~~		
✓	~~1; 500 ml; P; WATER; ANIONS (NO3, NO2) (H2SO4)~~		
✓	1; 1L; G; WATER; ALKALINITY, TOTAL DISSOLVED SOLIDS		
✓	1; 500 ml; G; WATER; SULFIDE (ZINC ACETATE PLUS NaOH pH>9)		
✓	1; 500 ml; G; WATER; AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)		
✓	~~1; 1L; P; WATER; Tc-99 (HCl)~~		
✓ B07CL6	3, 40ml, Gs, WATER, CLP-VOA		
	KT 7/27/92		
✓ ~~B07CL5~~	~~3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED~~		
			BOL # 250986939-5
			OPC # W92-0-0533-34
			TASK # 92-243

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

Received by Elky P. Yamamoto Title Sample Control Tech. Date 7/28/92

Analysis Required _____

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

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

A-6000-415 (05/

9613492.7800

000008

Westinghouse Hanford Company	CHAIN OF CUSTODY	ARL

Custody Form Initiator PH BUTCHER

Company Contact PH BUTCHER

Telephone (509)376-5045

Project Designation/Sampling Locations 100-BC-5

Collection Date 7/25/92

Ice Chest No. Pi

Field Logbook No. EFL-1037

Bill of Lading/Airbill No. 250986939-5

Offsite Property No. W92-0-0533-34

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO 7032

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

~~1, 1L, P, WATER, CLP CYANIDE (NaOH)~~

3, 40ml, Gs, WATER, CLP-VOA

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

1, 1L, P, WATER, ANIONS(IC) (SO4,F,PO4,Cl), COND., pH

~~2, 4L, P, WATER, GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC (U-235/238,Pu-239/240, Am-241), Sr-90, C-14 (HNO3)~~

~~1, 250ml, G, WATER, TRIRIUM~~

~~1, 500ml, P, WATER, ANIONS(NO2,NO3) (H2SO4)~~

1, 1L, G, WATER, ALKALINITY, TOTAL DISSOLVED SOLIDS

1, 500ml, G, WATER, SULFIDE (ZINC ACETATE+NaOH pH>9)

1, 500ml, G, WATER, AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)

~~1, 1L, P, WATER, Tc-99 (HNO3)~~

~~BO 7035~~

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

BO 7036

3, 40ml, Gs, WATER, CLP-VOA

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: Chris Celebrat Chris Celebrat	Received by: K. Trapp / K. Trapp	Date/Time: ~~7/28/92~~ 7/27/92 0900
Relinquished by: K. Trapp / K. Trapp	Received by: Abby A. Yamamoto	Date/Time: 7/28/92 8:45 PM
Relinquished by: Yasmin Blum 7-29-92	Received by: C. Harris	Date/Time: 7/30/92 9:00
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

9613492.7801

000009

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/25/92 Time 0619 hours

Company Contact P. H. Butcher Telephone (509) 376-5045

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
P070J2	~~1; 1L; P; WATER; CLP ICP/AA METALS & MERCURY (HNO3) UNFILTERED~~		
	~~1; 1L; P; WATER; CLP CYANIDE (NaOH)~~		
	3; 40ml; Gs; WATER; CLP-VOA		
	3; 2L; aG; WATER; CLP-SEMI-VOA & PCB/PEST		
	1; 1L; P; WATER; ANIONS (IC) (SO4, F, PO4, Cl), CONDUCTIVITY, pH		
	~~2; 4L; P; WATER; GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC~~		
	~~(U 235/238, Pu 239/240, Am 241), Sr 90 (HNO3)~~		
	~~1; 250 ml; G; WATER; TRITIUM~~		
	~~1; 500 ml; P; WATER; ANIONS (NO3, NO2) (H2SO4)~~		
	1; 1L; G; WATER; ALKALINITY, TOTAL DISSOLVED SOLIDS		
	1; 500 ml; G; WATER; SULFIDE (ZINC ACETATE PLUS NaOH pH>9)		
	1; 500 ml; G; WATER; AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)		
	~~1; 1L; P; WATER; Tc 99 (HCl)~~		
P070J6	3, 40ml, Gs, WATER, CLP-VOA		
	1 KT 7/27/92		
P070J7	~~3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED~~		
			BOL # 250986937-5
			OPC # WG2-0-0533-34
			TASK #

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

Received by Elky P. Yamamoto Title Sample Control Tech. Date 7/28/92

Analysis Required _____

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

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

9613492.7802

000010

Westinghouse Hanford Company

CHAIN OF CUSTODY

ARL1

Custody Form Initiator PH BUTCHER

Company Contact PH BUTCHER

Telephone (509)376-5045

Project Designation/Sampling Locations 100-BC-5

Collection Date 7/25/92

Ice Chest No. Bad

Field Logbook No. EFL-1037

Bill of Lading/Airbill No. 2509806934-5

Offsite Property No. W92- ~~EFL-1037~~ 20

WA2-0-0533-~~33~~

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B07CK7

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

~~1, 1L, P, WATER, CLP CYANIDE (NaOH)~~

3, 40ml, Gs, WATER, CLP-VOA

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

1, 1L, P, WATER, ANIONS(IC) (SO4,F,PO4,Cl), COND., pH

~~2, 4L, P, WATER, GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC (U-235/238,Pu-239/240, Am-241), Sr-90, C-14 (HNO3)~~

~~1, 250ml, G, WATER, TRIRIUM~~

~~1, 500ml, P, WATER, ANIONS(NO2,NO3) (H2SO4)~~

1, 1L, G, WATER, ALKALINITY, TOTAL DISSOLVED SOLIDS

1, 500ml, G, WATER, SULFIDE (ZINC ACETATE+NaOH pH>9)

1, 500ml, G, WATER, AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)

~~1, 1L, P, WATER, Tc-99 (HNO3)~~

~~B07CL6~~

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

B07CL1

3, 40ml, Gs, WATER, CLP-VOA

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: C. Celebuch C. Celebuch	Received by: K. Trapp / K. Trapp	Date/Time: KT ~~7/25/92~~ 7/27/92 0900
Relinquished by: K. Trapp / K. Trapp	Received by: Ebby A. Yamamoto	Date/Time: 7/28/92 3:45 PM
Relinquished by: 7-29-92 Kermit Blum	Received by: C Harris	Date/Time: 7/30/92 9 00
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

9613492.7803

000011

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector: les Walker/Kirby Lee Date Sampled: 7/25/92 Time: 0732 hours

Company Contact: P. H. Butcher Telephone: (509) 376-5045

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070K1	~~1; 1L; P; WATER; CLP-ICP/AA METALS & MERCURY (HNO3) UNFILTERED~~		
	~~1; 1L; P; WATER; CLP CYANIDE (NaOH)~~		
	3; 40ml; Gs; WATER; CLP-VOA		
	3; 2L; aG; WATER; CLP-SEMI-VOA & PCB/PEST		
	1; 1L; P; WATER; ANIONS (IC) (SO4, F, PO4, Cl), CONDUCTIVITY, pH		
	~~2; 4L; P; WATER; GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC~~		
	~~(U 235/238, Pu 239/240, Am 241), Sr 90 (HNO3)~~		
	~~1; 250 ml; G; WATER; TRITIUM~~		
	~~1; 500 ml; P; WATER; ANIONS (NO3, NO2) (H2SO4)~~		
	1; 1L; G; WATER; ALKALINITY, TOTAL DISSOLVED SOLIDS		
	1; 500 ml; G; WATER; SULFIDE (ZINC ACETATE PLUS NaOH pH>9)		
	1; 500 ml; G; WATER; AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)		
	~~1; 1L; P; WATER; Tc-99 (HCl)~~		
B070L1	3, 40ml, Gs, WATER, CLP-VOA		
	1 KT 7/27/92		
~~B070L0~~	~~3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED~~		
			BOL # 250986939-5
			OPC # W92-0-0533-33
			TASK # ~~92-244~~ KT 7/27/92 92-243

Field Information**

Special Handling and/or Storage

Possible Sample Hazards

PART II: LABORATORY SECTION

Received by: Elby G. Yamamoto Title: Sample Control Tech Date: 7/28/92

Analysis Required

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

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

A-6001-1.25

9613492.7804

000012

Westinghouse Hanford Company	CHAIN OF CUSTODY	ARLI

Custody Form Initiator PH BUTCHER

Company Contact PH BUTCHER

Telephone (509)376-5045

Project Designation/Sampling Locations 100-BC-5

Collection Date 7/25/92

Ice Chest No. ~~X~~ KT 7/27/92 #1C

Field Logbook No. EFL-1037

Bill of Lading/Airbill No. 250930029-5

Offsite Property No. W92-0-0533-30

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO 7254

~~2, 1L, P, WATER, CLP ICP/AA METALS & Hg (HNO3) UNFILTERED~~

~~1, 1L, P, WATER, CLP CYANIDE (NaOH)~~

3, 40ml, Gs, WATER, CLP-VOA

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

1, 1L, P, WATER, ANIONS(IC) (SO4,F,PO4,Cl), COND., pH

~~2, 4L, P, WATER, GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC (U 235/238,Pu 239/240, Am 241), Sr 90, C 14 (HNO3)~~

~~1, 250ml, G, WATER, TRIRIUM~~

~~1, 500ml, P, WATER, ANIONS(NO2,NO3) (H2SO4)~~

1, 1L, G, WATER, ALKALINITY, TOTAL DISSOLVED SOLIDS

1, 500ml, G, WATER, SULFIDE (ZINC ACETATE+NaOH pH>9)

1, 500ml, G, WATER, AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)

~~1, 1L, P, WATER, Tc-99 (HNO3)~~

~~BO 7257~~

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

BO 7258

3, 40ml, Gs, WATER, CLP-VOA

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: C Celiberti C.Celiberti ~~CCC~~ CC 7/25/92	Received by: Ken Trapp / Ken Trapp	Date/Time: KT ~~7/25/92~~ 7/27/92 0900
Relinquished by: K. Trapp / K. Trapp	Received by: ELKy A. yamamoto	Date/Time: 7/28/92 3:45 PM
Relinquished by: Kermit Blum 7-29-92	Received by: C. Harris	Date/Time: 7/30/92 9:00
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments: Bubbles on SAMPLES → BO7254 & BO7258 (VOA VIALS) 54 = 1 VOA, 58 = 2 VOA's

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

9613492.7805

000013

Westinghouse Hanford Co.

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled ~~7/24/92~~ 7/27/92 Time 1000 hours

Company Contact P. H. Butcher Telephone (509) 376-5045

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
✓ B072S4	~~1; 1L; P; WATER; CLP-ICP/AA METALS & MERCURY (HNO3) UNFILTERED~~		
✓	~~1; 1L; P; WATER; CLP CYANIDE (NaOH)~~		
✓	3; 40ml; Gs; WATER; CLP-VOA		Bubbles
✓	3; 2L; aG; WATER; CLP-SEMI-VOA & PCB/PEST		
✓	1; 1L; P; WATER; ANIONS (IC) (SO4, F, PO4, Cl), CONDUCTIVITY, pH		
✓	~~2; 4L; P; WATER; GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC~~		
	~~(U 235/238, Pu 239/240, Am 241), Sr 90 (HNO3)~~		
✓	~~1; 250 ml; G; WATER; TRITIUM~~		
✓	~~1; 500 ml; P; WATER; ANIONS (NO3, NO2) (H2SO4)~~		
✓	1; 1L; G; WATER; ALKALINITY, TOTAL DISSOLVED SOLIDS		
✓	1; 500 ml; G; WATER; SULFIDE (ZINC ACETATE PLUS NaOH pH>9)		
✓	1; 500 ml; G; WATER; AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)		
✓	~~1; 1L; P; WATER; Tc 99 (HCl)~~		
✓ B072S8	3, 40ml, Gs, WATER, CLP-VOA		Bubbles
	1 KT 7/27/92		
✓ ~~B072S7~~	~~3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED~~		
			BOL # KT 7/27/92 2509969 40-6
			OPC # W92-0-0533-30
			TASK # ~~92-243~~ KT 7/27/92 ~~92-244~~ 92-243

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

Received by Elby P. Yamamoto Title Sample Control Tech. Date 7/28/92

Analysis Required _____

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

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

A-6000-406 (05/93)

SAMPLE LOG-IN SHEET

LAB NAME : TMA/ARLI PAGE : 1 OF 1

RECEIVED BY (PRINT NAME): Carole HARRIS LOG-IN-DATE : 7/30/98

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.:
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: 7/30/98
12. Temp of ice chest 4.1 °C
13. Time Recieved: 9:00 AM

SAMPLE TRANSFER

Fraction:
Area #:
By:
On:

EPA SAMPLE #	CORRESPONDING SAMPLE TAG #	CORRESPONDING ASSIGNED LAB #	REMARKS: CONDITION OF SAMPLE SHIPMENT, ETC
	B070L5	AZ07060-05	
	B070L6	AZ07060-06	
	B070J5	AZ07060-07	
	B070J6	AZ07060-08	
	B070K7	AZ07060-09	
	B070L1	AZ07060-10	
	B072S4	AZ07060-11	
	B072S8	AZ07060-12	

* Contact SMO and attach record of resolution

Reviewed By: Logbook No.:

Date: Logbook Page No.:

FORM DC-1

TMA/ARLI
Thermo Analytical Inc.

TRK#

RADIATION DOSE RATE SURVEY FORM

Date 7/29/92 COMPANY NORCAL (WHC) OTHER ORD # 2521031122

Surveyor's Name MARK S. McCray

Model No. HP-210 / ESP-1 Model No. AC-3-7 / ESP-1

Serial Nos. 710289 / 02619 Serial Nos. 407726 / 02628

Calibration Date 3/25/92 Calibration Date OUT FOR CALIBRATION

Instrument Calibration Factor 0.280 Instrument Calibration Factor

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		42.0							
Consistency		7,540	0.2911						
Smears: RET LX		51.0						None	
RET LZ		39.0						None	
Exported (WHC) in SA. each < 50 pCi/gram									

Comments:

All OK ✓ Approved [signature]

Not OK Date 7/29/92

TMA/ARLI
Thermo Analytical Inc.

RADIATION DOSE RATE SURVEY FORM

Date 7/30/92 COMPANY NORCAL/WHC OTHER ORD # 2521031822

Surveyor's Name PARK, S McCray

Model No. HP-210 / ESP-1 Model No. AC-3-7 / ESP-1

Serial Nos. 710289 / 02619 Serial Nos. 407726 / 02628

Calibration Date 3/25/92 Calibration Date OUT FOR CALIBRATION

Instrument Calibration Factor 0.280 Instrument Calibration Factor

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 pCi/g
Background		28.0							
Consistency		7,520	0.2903						
Smears "CURLY"		34.0						NONE	
SML-17		23.0							
WHC FRY A-2		41.0							
SML-30		34.0							
SML-3		41.0							
RM#111		30.0							
Reported WHC		5 sm sa. each			< 50			pCi/gram	
	ID#B072PH	TOTAL ACTIVITY			(1.294			nCi/gram)	

Comments:

All OK ✓ Approved [signature]

Not OK Date 7/30/92

9613492 7809

000017

FEDERAL EXPRESS

...NS? CALL 800-238-5355 TOLL FREE

AIRBILL
PACKAGE
TRACKING NUMBER

2521031752

2521031752

Date

RECIPIENT'S COPY

1 From (Your Name) Please Print

Your Phone Number (Very Important)

Company

Department/Floor No

Street Address

City

State

ZIP Required

2 To (Recipient's Name) Please Print

Company

Department

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)

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

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 ☐ GOV'T LETTER
41 ☐ GOV'T PACKAGE

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

5 DELIVERY AND SPECIAL HANDLING (Check services required)

1 ☐ HOLD FOR PICK-UP
2 ☒ DELIVER WEEKDAY
3 DELIVER SATURDAY ☐
4 ☐ DANGEROUS GOODS
5 ☐
6 ☐ DRY ICE
7 ☐ OTHER SPECIAL SERVICE
8 ☐
9 ☐ SATURDAY PICK-UP
10 ☐
11 ☐
12 ☐ HOLIDAY DELIVERY

6 PACKAGES | WEIGHT | YOUR DECLARED VALUE

Total 2 | Total 144 | Total

DIM SHIPMENT Chargeable Weight

☐ _____ lbs

L x W x H =

Received At
1 ☒ Regular Stop
2 ☐ On-Call Stop
3 ☐ Drop Box
4 ☐ [illegible]
5 ☐ Station

7 Release Signature

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

Date/Time Received

FedEx Employee Number

Federal Express Base Charges

Declared Value

Other

Other

Total Charges

REVISION DATE 6/91
PART #117724 FXE
FORM# 0199

099

© 1990-91 FEDEX
PRINTED IN
U.S.A.

SAMPLE LOG-IN SHEET

LAB NAME : TMA/ARLI PAGE : 1 OF 1

RECEIVED BY (PRINT NAME): Carole HARRIS LOG-IN-DATE : 7/29/98

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.: ~~[illegible]~~ 252103175 2
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: 7/29/98
12. Temp of ice chest 4.0 °C
13. Time Recieved: 9:00 AM

SAMPLE TRANSFER

Fraction: _____
Area #: _____
By: _____
On: _____

EPA SAMPLE #	CORRESPONDING SAMPLE TAG #	CORRESPONDING ASSIGNED LAB #	REMARKS: CONDITION OF SAMPLE SHIPMENT, ETC
	B072X4	A2070000 01	
	B072X8	A2070000 02	
	B072W9	A2070000 03	
	B072X3	A2070000 04	

* Contact SMO and attach record of resolution

Reviewed By: _____ Logbook No.: _____

Date: _____ Logbook Page No.: _____

FORM DC-1

DOC2/LOGIN.TBL

GENERAL CHEMISTRY RESULTS

CASE NO. 07-066

Water Sample #:

B072X4	B072W9	B070L2
B070J2	B070K7	B072S4

CASE NARRATIVE

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

Ernesto Vazquez

Ernesto Vazquez

9613492.7812

000021

TMA Inc. REPORT Work Order # A2-07-066

Received: 07/28/92 09/15/92 13:44:42

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: Ernest Voyny

CONTACT: EVV CIH

CLIENT: WHC SAMPLES: 13
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: 100-BC-5
TAKEN: By Westinghouse Staff
TRANS: Federal Express
TYPE: Liquid
P.O. #: N2-07-150-SU-AR
INVOICE: under separate cover

SAMPLE IDENTIFICATION

01	B072X4
02	B072X8
03	B072W9
04	B072X3
05	B070L2
05	B070L2 MS
05	B070L2 MSD
05	B070L2
05	B070L2 MS
05	B070L2 Duplicate
06	B070L6
06	B070L6 MS
06	B070L6 MSD
07	B070J2
07	B070J2 MS
07	B070J2 MSD
07	B070J2
07	B070J2 MS
07	B070J2
07	B070J2 Duplicate
08	B070J6
09	B070K7
09	B070K7 MS
09	B070K7
09	B070K7 Duplicate
09	B070K7

TEST CODES and NAMES used on this workorder

BNCLPW	CLP Semivol. Water
CL	Chloride
F W	Fluoride in Water
PECLPL	CLP Pesticides Liq.-WH019
PO4 L	Phosphate in Liquids
SO4 W	Sulfate (in Waters)
VOCLPL	CLP Volatile Org.Liq.
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
WPH L	pH of Liquid - WH121
WPO4 L	Phosphate in Liquids
WSO4 L	Sulfate (in Waters)
WSULFI	Sulfide - WH114
W ALK	Alkalinity - WH131
W COD	COD Water - WH132
W COND	Conductivity-Water WH135
W TDS	Dissolved Solids WH128

9613492.7813

000022

Received: 07/28/92

TMA Inc. REPORT
09/15/92 13:44:42

Work Order # A2-07-066

	SAMPLE IDENTIFICATION
09	B070K7
09	B070K7 Duplicate
10	B070L1
11	B072S4
11	B072S4 Duplicate
11	B072S4
12	B072S8
13	Wet Chemistry Blank

9613492.7814

000023

TMA Inc. REPORT Work Order # A2-07-066

Received: 07/28/92

Results by Sample

SAMPLE ID B072X4 FRACTION 01C TEST CODE VCCLPL NAME Anions & Wet Chem. - VH043

Date & Time Collected 07/24/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	<0.2	mg/L	0.2
Elect. Conductivity	120.1	<6	umho/cm	6
Fluoride	300.0	<0.1	mg/L	0.1
Phosphate	300.0	<0.4	mg/L	0.4
pH	150.1	5.8	pH	0.1
Sulfate	300.0	<1	mg/L	1

FORM I

Received: 07/28/92

Results by Sample

SAMPLE ID B072X4 FRACTION 01D TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/24/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Alkalinity	310.1	<2	mg/L	2
Tot. Dissolved Solids	160.1	<5	mg/L	5

FORM I

MA Inc. REPORT Work Order # A2-07-066

Received: 07/28/92

Results by Sample

SAMPLE ID B072X4 FRACTION 01E TEST CODE VCCLPL NAME Anions & Wet Chem. - VN043

Date & Time Collected 07/24/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Sulfide	376.1	<1	mg/L	1

FORM I

TMA Inc. REPORT Work Order # A2-07-066

Received: 07/28/92

Results by Sample

SAMPLE ID B072X4 FRACTION 01F TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 07/24/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Ammonia Nitrogen	350.3	<0.05	mg/L	0.05
COD	410.0	<30	mg/L	30

FORM I

9613492.7818

TMA Inc. REPORT Work Order # A2-07-066

Received: 07/28/92 Results by Sample

SAMPLE ID B072W9 FRACTION 03C TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/24/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	<0.2	mg/L	0.2
Elect. Conductivity	120.1	<6	umho/cm	6
Fluoride	300.0	<0.1	mg/L	0.1
Phosphate	300.0	<0.4	mg/L	0.4
pH	150.1	6.4	pH	0.1
Sulfate	300.0	<1	mg/L	1

FORM I

TMA Inc. REPORT Work Order # A2-07-066

Received: 07/28/92 Results by Sample

SAMPLE ID B072W9 FRACTION 03D TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/24/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Alkalinity	310.1	<2	mg/L	2
Tot. Dissolved Solids	160.1	<5	mg/L	5

FORM I

TMA Inc. REPORT Work Order # A2-07-066

Received: 07/28/92

Results by Sample

SAMPLE ID B072W9 FRACTION 03E TEST CODE WCCLPL NAME Anions & Wet Chem. - WM043

Date & Time Collected 07/24/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Sulfide	376.1	<1	mg/L	1

FORM I

TMA Inc. REPORT Work Order # A2-07-066

Received: 07/28/92

Results by Sample

SAMPLE ID B072W9 FRACTION 03F TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 07/24/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Ammonia Nitrogen	350.3	0.05	mg/L	0.05
COD	410.0	<30	mg/L	30

FORM I

XA Inc. REPORT Work Order # A2-07-066

Received: 07/28/92

Results by Sample

SAMPLE ID B070L2 FRACTION 05E TEST CODE VCCLPL NAME Anions & Wet Chem. - VH043

Date & Time Collected 07/25/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	9.9	mg/L	0.2
Elect. Conductivity	120.1	362	umho/cm	6
Fluoride	300.0	0.2	mg/L	0.1
Phosphate	300.0	<0.4	mg/L	0.4
pH	150.1	8.0	pH	0.1
Sulfate	300.0	49	mg/L	1

FORM I

74A Inc. REPORT Work Order # A2-07-066

Received: 07/28/92 Results by Sample

SAMPLE ID B070L2 FRACTION 05F TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/25/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Alkalinity	310.1	108	mg/L	2
Tot. Dissolved Solids	160.1	255	mg/L	5

FORM I

TMA Inc. REPORT Work Order # A2-07-066

Received: 07/28/92

Results by Sample

SAMPLE ID B070L2 FRACTION 05G TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/25/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Sulfide	376.1	<1	mg/L	1

FORM I

T'A Inc. REPORT Work Order # A2-07-066

Received: 07/28/92

Results by Sample

SAMPLE ID B070L2 FRACTION #*p+1X05N TEST CODE WCCLPL NAME Anions & Wet Chem. - WW

Date & Time Collected 07/25/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Ammonia Nitrogen	350.3	0.08	mg/L	0.05
COD	410.0	<30	mg/L	30

FORM I

TMA Inc. REPORT Work Order # A2-87-066

Received: 07/28/92

Results by Sample

SAMPLE ID B070J2 FRACTION 07E TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/25/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	8.0	mg/L	0.2
Elect. Conductivity	120.1	349	umho/cm	6
Fluoride	300.0	0.2	mg/L	0.1
Phosphate	300.0	<0.4	mg/L	0.4
pH	150.1	8.0	pH	0.1
Sulfate	300.0	43	mg/L	1

FORM I

TMA Inc. REPORT Work Order # A2-07-066

Received: 07/28/92

Results by Sample

SAMPLE ID B070J2 FRACTION 07F TEST CODE WCCLPL NAME Anions & Wet Chem. - WW043

Date & Time Collected 07/25/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Alkalinity	310.1	107	mg/L	2
Tot. Dissolved Solids	160.1	227	mg/L	5

FORM I

KA Inc. REPORT Work Order # A2-07-066

Received: 07/28/92

Results by Sample

SAMPLE ID B070J2 FRACTION 07G TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/25/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Sulfide	376.1	<1	mg/L	1

FORM I

Inc. REPORT Work Order # A2-07-066

Received: 07/28/92

Results by Sample

SAMPLE ID B070J2 FRACTION 071 TEST CODE WCCLPL NAME Anions & Wet Chem. - WK043

Date & Time Collected 07/25/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Ammonia Nitrogen	350.3	<0.05	mg/L	0.05
COD	410.0	<30	mg/L	30

FORM I

TMA Inc. REPORT Work Order # A2-07-066

Received: 07/28/92

Results by Sample

SAMPLE ID B070K7 FRACTION 09C TEST CODE WCCLPL NAME Anions & Wet Chem. - WW043

Date & Time Collected 07/25/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	9.5	mg/L	0.2
Elect. Conductivity	120.1	362	umho/cm	6
Fluoride	300.0	0.2	mg/L	0.1
Phosphate	300.0	<0.4	mg/L	0.4
pH	150.1	8.1	pH	0.1
Sulfate	300.0	47	mg/L	1

FORM I

TMA Inc. REPORT Work Order # A2-07-066

Received: 07/28/92

Results by Sample

SAMPLE ID B070K7 FRACTION 09E TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/25/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Alkalinity	310.1	109	mg/L	2
Tot. Dissolved Solids	160.1	267	mg/L	5

FORM I

TMA Inc. REPORT Work Order # A2-07-066

Received: 07/28/92

Results by Sample

SAMPLE ID B070K7 FRACTION 09G TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/25/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Sulfide	376.1	<1	mg/L	1

FORM I

9613492.7833

000042

TMA Inc. REPORT Work Order # A2-07-066

Received: 07/28/92

Results by Sample

SAMPLE ID B070K7 FRACTION 09M TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/25/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Ammonia Nitrogen	350.3	<0.05	mg/L	0.05
COD	410.0	<30	mg/L	30

FORM I

TMA Inc. REPORT Work Order # A2-07-066

Received: 07/28/92

Results by Sample

SAMPLE ID B072S4 FRACTION 11C TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/25/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	11.1	mg/L	0.2
Elect. Conductivity	120.1	366	umho/cm	6
Fluoride	300.0	0.2	mg/L	0.1
Phosphate	300.0	<0.4	mg/L	0.4
pH	150.1	8.0	pH	0.1
Sulfate	300.0	49	mg/L	1

FORM I

XA Inc. REPORT Work Order # A2-07-066

Received: 07/28/92

Results by Sample

SAMPLE ID B072S4 FRACTION 11E TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/25/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Alkalinity	310.1	108	mg/L	2
Tot. Dissolved Solids	160.1	266	mg/L	5

FORM I

TMA Inc. REPORT Work Order # A2-07-066

Received: 07/28/92

Results by Sample

SAMPLE ID B072S4 FRACTION 11F TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/25/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Sulfide	376.1	<1	mg/L	1

FORM I

TMA Inc. REPORT Work Order # A2-07-066

Received: 07/28/92

Results by Sample

SAMPLE ID B072S4 FRACTION 11G TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/25/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Ammonia Nitrogen	350.3	<0.05	mg/L	0.05
COD	410.0	<30	mg/L	30

FORM I

CASE NARRATIVE

LABORATORY : TMA/ARLI

CASE : 07-066

CONTRACT ID : WESTINGHOUSE HANFORD COMPANY

SDG RECEIPT DATE : July 28, 1992

1.0 DESCRIPTION OF CASE :

Twelve 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
B072X4	A2-07-066-01A	V	WATER	7
B072X4	A2-07-066-01B	SV & P	WATER	
B072X8	A2-07-066-02A	V	WATER	7
B072W9	A2-07-066-03A	V	WATER	7
B072W9	A2-07-066-03B	SV & P	WATER	
B072X3	A2-07-066-04A	V	WATER	7
B070L2	A2-07-066-05A	V	WATER	7
B070L2	A2-07-066-05B	SV & P	WATER	7
B070L2 MS	A2-07-066-05C	SV	WATER	
B070L2 MSD	A2-07-066-05D	SV	WATER	
B070L6	A2-07-066-06A	V	WATER	7
B070L6 MS	A2-07-066-06B	V	WATER	7
B070L6 MSD	A2-07-066-06C	V	WATER	7
B070J2	A2-07-066-07A	V	WATER	7
B070J2	A2-07-066-07B	SV & P	WATER	
B070J2 MS	A2-07-066-07C	P	WATER	
B070J2 MSD	A2-07-066-07D	P	WATER	
B070J6	A2-07-066-08A	V	WATER	7
B070K7	A2-07-066-09A	V	WATER	7
B070K7	A2-07-066-09B	SV & P	WATER	
B070L1	A2-07-066-10A	V	WATER	7
B072S4	A2-07-066-11A	V	WATER	7
B072S4	A2-07-066-11B	SV & P	WATER	
B072S8	A2-07-066-12A	V	WATER	7

3.0 COMMENTS :

3.1 SHIPPING AND DOCUMENTATION :

The samples were received and properly documented. Sample B070-7 had 1 of the 3 VOA vials broken upon receipt at TMA/ARLI. Upon receipt at TMA/NORCAL, sample B072S4 had an air bubble in 1 of the 3 VOA vials. Sample B072S8 had air bubbles in 2 of the 3 VOA vials.

3.2 ANALYSIS

3.2.1 VOLATILE ANALYSIS COMMENTS :

LOW LEVEL WATER :

The samples were analyzed within the CLP SOW holding times. In the analyses of the samples, there was a peak detected between scans 145-148 that has been identified as Carbon Dioxide. The Carbon Dioxide was not reported as a TIC on 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. Sample B070L2MSD had a matrix spike recovery for 4-Nitrophenol slightly above the QC limit. In accordance with protocol, 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 8/5/92 and was analyzed in accordance with the EPA CLP SOW. The sequence met all of the QC limits specified in the CLP SOW.

The Chromatograms are presented in the manner consistent with the capabilities of the Nelson 2600 Data System which normalizes the largest peak to scale.

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

Widayat
Wida Ang
Organics Supervisor

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070J2

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207066-07A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20731B21

Level: (low/med) LOW Date Received: 07/28/92

% Moisture: not dec. ____ Date Analyzed: 07/31/92

GC Column: WIDE ID: 0.530 (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	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
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	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
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

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B070J2

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207066-07A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20731B21

Level: (low/med) LOW Date Received: 07/28/92

% Moisture: not dec. ____ Date Analyzed: 07/31/92

GC Column: WIDE ID: 0.530 (mm) Dilution Factor: 1.0

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

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.

B070J6

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207066-08A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20731B22

Level: (low/med) LOW Date Received: 07/28/92

% Moisture: not dec. ____ Date Analyzed: 07/31/92

GC Column: WIDE ID: 0.530 (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	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
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	J
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
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

EPA SAMPLE NO.

B070J6

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207066-08A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20731B22

Level: (low/med) LOW Date Received: 07/28/92

% Moisture: not dec. ____ Date Analyzed: 07/31/92

GC Column: WIDE ID: 0.530 (mm) Dilution Factor: 1.0

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

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.

B070K7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207066-09A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20731B23

Level: (low/med) LOW Date Received: 07/28/92

% Moisture: not dec. ____ Date Analyzed: 07/31/92

GC Column: WIDE ID: 0.530 (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	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
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	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
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

EPA SAMPLE NO.

B070K7

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207066-09A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20731B23

Level: (low/med) LOW Date Received: 07/28/92

% Moisture: not dec. ____ Date Analyzed: 07/31/92

GC Column: WIDE ID: 0.530 (mm) Dilution Factor: 1.0

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

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.

B070L1

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207066-10A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20731B24

Level: (low/med) LOW Date Received: 07/28/92

% Moisture: not dec. ____ Date Analyzed: 07/31/92

GC Column: WIDE ID: 0.530 (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	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
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	J
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
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

EPA SAMPLE NO.

B070L1

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207066-10A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20731B24

Level: (low/med) LOW Date Received: 07/28/92

% Moisture: not dec. ____ Date Analyzed: 07/31/92

GC Column: WIDE ID: 0.530 (mm) Dilution Factor: 1.0

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

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.

B070L2

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207066-05A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20731B17

Level: (low/med) LOW Date Received: 07/28/92

% Moisture: not dec. ____ Date Analyzed: 07/31/92

GC Column: WIDE ID: 0.530 (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	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
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	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
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

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B070L2

ab Name: TMA/ARLI Contract: WHC

ab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

atrix: (soil/water) WATER Lab Sample ID: A207066-05A

ample wt/vol: 5.0 (g/mL) ML Lab File ID: 20731B17

evel: (low/med) LOW Date Received: 07/28/92

Moisture: not dec. ____ Date Analyzed: 07/31/92

C Column: WIDE ID: 0.530 (mm) Dilution Factor: 1.0

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

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.

B070L6

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207066-06A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20731B18

Level: (low/med) LOW Date Received: 07/28/92

% Moisture: not dec. ____ Date Analyzed: 07/31/92

GC Column: WIDE ID: 0.530 (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	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
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	J
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
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

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B070L6

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207066-06A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20731B18

Level: (low/med) LOW Date Received: 07/28/92

% Moisture: not dec. ____ Date Analyzed: 07/31/92

GC Column: WIDE ID: 0.530 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

9613492.2853

000017
EPA SAMPLE NO.

B072S4

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207066-11A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20731B25

Level: (low/med) LOW Date Received: 07/28/92

% Moisture: not dec. ____ Date Analyzed: 07/31/92

GC Column: WIDE ID: 0.530 (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	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
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	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
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

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B072S4

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207066-11A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20731B25

Level: (low/med) LOW Date Received: 07/28/92

% Moisture: not dec. ____ Date Analyzed: 07/31/92

GC Column: WIDE ID: 0.530 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

9613492.7855

000019

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B072S8

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207066-12A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20731B26

Level: (low/med) LOW Date Received: 07/28/92

% Moisture: not dec. ____ Date Analyzed: 07/31/92

GC Column: WIDE ID: 0.530 (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	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
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	J
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
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

9613492.7856

000020
EPA SAMPLE NO.

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

B072S8

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207066-12A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20731B26

Level: (low/med) LOW Date Received: 07/28/92

% Moisture: not dec. ____ Date Analyzed: 07/31/92

GC Column: WIDE ID: 0.530 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

9613492.7857

000021

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B072W9

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207066-03A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20731B15

Level: (low/med) LOW Date Received: 07/28/92

% Moisture: not dec. ____ Date Analyzed: 07/31/92

GC Column: WIDE ID: 0.530 (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	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
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	J
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
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

9613492.7858

000022
EPA SAMPLE NO.

B072W9

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207066-03A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20731B15

Level: (low/med) LOW Date Received: 07/28/92

% Moisture: not dec. ____ Date Analyzed: 07/31/92

GC Column: WIDE ID: 0.530 (mm) Dilution Factor: 1.0

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

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.

B072X3

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207066-04A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20731B16

Level: (low/med) LOW Date Received: 07/28/92

% Moisture: not dec. ____ Date Analyzed: 07/31/92

GC Column: WIDE ID: 0.530 (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	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
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	J
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
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

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B072X3

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207066-04A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20731B16

Level: (low/med) LOW Date Received: 07/28/92

% Moisture: not dec. ____ Date Analyzed: 07/31/92

GC Column: WIDE ID: 0.530 (mm) Dilution Factor: 1.0

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

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.

B072X4

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207066-01A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20731B13

Level: (low/med) LOW Date Received: 07/28/92

% Moisture: not dec. ____ Date Analyzed: 07/31/92

GC Column: WIDE ID: 0.530 (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	10	U
67-64-1	Acetone	12	
75-15-0	Carbon Disulfide	10	U
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	J
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
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

EPA SAMPLE NO.

B072X4

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

ab Name: TMA/ARLI Contract: WHC

ab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

atrix: (soil/water) WATER Lab Sample ID: A207066-01A

ample wt/vol: 5.0 (g/mL) ML Lab File ID: 20731B13

evel: (low/med) LOW Date Received: 07/28/92

Moisture: not dec. ____ Date Analyzed: 07/31/92

C Column: WIDE ID: 0.530 (mm) Dilution Factor: 1.0

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

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.

B072X8

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207066-02A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20731B14

Level: (low/med) LOW Date Received: 07/28/92

% Moisture: not dec. ____ Date Analyzed: 07/31/92

GC Column: WIDE ID: 0.530 (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	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
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	J
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
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

9613492.7864

000028

EPA SAMPLE NO.

B072X8

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207066-02A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20731B14

Level: (low/med) LOW Date Received: 07/28/92

% Moisture: not dec. ____ Date Analyzed: 07/31/92

GC Column: WIDE ID: 0.530 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

9613492.7865

000029

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070J2

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207066-07B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20804S15

Level: (low/med) LOW Date Received: 07/28/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/31/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/04/92

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

9613492.7866

000030

EPA SAMPLE NO.

B070J2

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207066-07B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20804S15

Level: (low/med) LOW Date Received: 07/28/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/31/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/04/92

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

9613492.7867

000031
EPA SAMPLE NO.

B070J2

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207066-07B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20804S15

Level: (low/med) LOW Date Received: 07/28/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/31/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/04/92

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070K7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207066-09B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20804S16

Level: (low/med) LOW Date Received: 07/28/92

% Moisture: ____ decanted: (Y/N) ___ Date Extracted: 07/31/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/04/92

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

9613492.7869

000033

EPA SAMPLE NO.

B070K7

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207066-09B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20804S16

Level: (low/med) LOW Date Received: 07/28/92

% Moisture: ____ decanted: (Y/N) ___ Date Extracted: 07/31/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/04/92

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	11	
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.

B070K7

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207066-09B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20804S16

Level: (low/med) LOW Date Received: 07/28/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/31/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/04/92

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

Number TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown hydrocarbon	5.72	2	BJ

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070L2

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207066-05B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20804S12

Level: (low/med) LOW Date Received: 07/28/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/31/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/04/92

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

9613492.7872

000036

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070L2

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207066-05B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20804S12

Level: (low/med) LOW Date Received: 07/28/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/31/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/04/92

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

9613492.7873

000037

EPA SAMPLE NO.

B070L2

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207066-05B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20804S12

Level: (low/med) LOW Date Received: 07/28/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/31/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/04/92

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

Number TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown hydrocarbon	5.73	2	BJ

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B072S4

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207066-11B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20804S17

Level: (low/med) LOW Date Received: 07/28/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/31/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/04/92

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.

B072S4

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207066-11B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20804S17

Level: (low/med) LOW Date Received: 07/28/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/31/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/04/92

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.

B072S4

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207066-11B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20804S17

Level: (low/med) LOW Date Received: 07/28/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/31/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/04/92

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

Number TICs found: 2

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown hydrocarbon	5.72	2	BJ
2.	Unknown acid	14.02	2	J

9613492.7877

000041

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B072W9

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207066-03B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20804S20

Level: (low/med) LOW Date Received: 07/28/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/29/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/05/92

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.

B072W9

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207066-03B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20804S20

Level: (low/med) LOW Date Received: 07/28/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/29/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/05/92

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

9613492.7879

000043

EPA SAMPLE NO.

B072W9

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207066-03B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20804S20

Level: (low/med) LOW Date Received: 07/28/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/29/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/05/92

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

Number TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown alcohol	6.22	3	J

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B072X4

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207066-01B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20804S19

Level: (low/med) LOW Date Received: 07/28/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/29/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/05/92

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.

B072X4

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207066-01B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20804S19

Level: (low/med) LOW Date Received: 07/28/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/29/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/05/92

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	1	J
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

9613492.7882

000046

EPA SAMPLE NO.

B072X4

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207066-01B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20804S19

Level: (low/med) LOW Date Received: 07/28/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/29/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/05/92

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070J2

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207066-07B

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: 07/28/92

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 07/31/92

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/08/92

Injection Volume: 1.00 (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

9613492.7884

000048

EPA SAMPLE NO.

B070K7

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

ab Name: TMA/ARLI Contract: WHC

ab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

atrix: (soil/water) WATER Lab Sample ID: A207066-09B

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

Moisture: _____ decanted: (Y/N) ___ Date Received: 07/28/92

xtraction: (SepF/Cont/Sonc) CONT Date Extracted: 07/31/92

oncentrated Extract Volume: 10000 (uL) Date Analyzed: 08/08/92

njection Volume: 1.00 (uL) Dilution Factor: 1.00

PC 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

9613492.7885

000049

EPA SAMPLE NO.

B070L2

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207066-05B

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: 07/28/92

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 07/31/92

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/08/92

Injection Volume: 1.00 (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

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B072S4

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207066-11B

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: 07/28/92

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 07/31/92

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/08/92

Injection Volume: 1.00 (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

9613492.7887

000051
EPA SAMPLE NO.

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

B072W9

ab Name: TMA/ARLI Contract: WHC

ab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

atrix: (soil/water) WATER Lab Sample ID: A207066-03B

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

Moisture: _____ decanted: (Y/N) ___ Date Received: 07/28/92

xtraction: (SepF/Cont/Sonc) CONT Date Extracted: 07/29/92

oncentrated Extract Volume: 10000 (uL) Date Analyzed: 08/08/92

.njection Volume: 1.00 (uL) Dilution Factor: 1.00

;PC 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

9613492.7888

000052

EPA SAMPLE NO.

B072X4

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207066-01B

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: 07/28/92

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 07/29/92

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/07/92

Injection Volume: 1.00 (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

9613492.7889

 Skinner&Sherman REPORT Work Order # S2-07-282

Received: 07/30/92 09/21/92 10:34:13

REPORT TMA/NORCAL
TO 2030 Wright Avenue
Richmond, CA 94804

ATTEN Dan Steurmer

CLIENT HANFORD NOR SAMPLES 7
COMPANY TMA/NORCAL
FACILITY Richmond, CA

PREPARED TMA / Skinner & Sherman Labs.
BY 300 Second Avenue
P.O. Box 521
Waltham, MA 02254
ATTEN Client Services
PHONE (617) 890-7200

CERTIFIED BY

CONTACT DP

WORK ID N2-07-150
TAKEN BY CLIENT
TRANS FED EX
TYPE WATERS FOR NO3NO2
P.O. # N2-07-150
INVOICE under separate cover

SAMPLE IDENTIFICATION		
01	B072W9	
02	B072X4	
03	B070L2	
04	B070J2	
05	B070K7	
06	B072S4	
06	B072S4	DUPL
06	B072S4	SPIKE
07	LCSW	

TEST CODES and NAMES used on this workorder

NO3NO2 Nitrate Plus Nitrite

ii 3/19/96 M.H.

TMA
Thermo Analytical Inc.
Skinner & Sherman Laboratories Inc.

This report is rendered upon all of the following conditions: Skinner & Sherman Laboratories, Inc. retains ownership of this report until associated submitted invoice is satisfi Expert witness services shall be available in conjunction with this report only if prior notification of this potential requirement was made and accepted, before the analysis. Cli will be responsible for Skinner & Sherman costs and consulting fees if our services are required by subpoena or otherwise in legal proceedings. Total liability is limited to the invo amount. The results listed refer only to tested samples and applicable parameters. Product endorsement is neither inferred nor implied. Skinner & Sherman Laboratories, Inc. w exercise due diligence but will not be responsible for lost or destroyed samples or evidence unless client makes appropriate insurance coverage arrangements. Samples are held thirty days following issuance of report. Samples will be stored at client's expense, if authorized in writing.

300 Second Avenue, P.O. Box 521, Waltham, Massachusetts 02254-0521 (617) 890-7200
1-800-4 LAB TEST FAX (617) 890-3883

9613492.7890

~~000027~~
000001

Received: 07/30/92 Results by Sample

SAMPLE ID B072W9 SAMPLE # 01 FRACTIONS: A
Date & Time Collected 07/24/92 09:00:00 Category WATER

NO3NO2 <0.25
mg N/L

SAMPLE ID B072X4 SAMPLE # 02 FRACTIONS: A
Date & Time Collected 07/24/92 09:00:00 Category WATER

NO3NO2 <0.25
mg N/L

SAMPLE ID B070L2 SAMPLE # 03 FRACTIONS: A
Date & Time Collected 07/25/92 08:37:00 Category WATER

NO3NO2 0.45
mg N/L

SAMPLE ID B070J2 SAMPLE # 04 FRACTIONS: A
Date & Time Collected 07/25/92 06:19:00 Category WATER

NO3NO2 5.32
mg N/L

SAMPLE ID B070K7 SAMPLE # 05 FRACTIONS: A
Date & Time Collected 07/25/92 07:32:00 Category WATER

NO3NO2 4.64
mg N/L

SAMPLE ID B072S4 SAMPLE # 06 FRACTIONS: A
Date & Time Collected 07/25/92 10:00:00 Category WATER

NO3NO2 4.39
mg N/L

SAMPLE ID B072S4 DUPL SAMPLE # 06 FRACTIONS: B
Date & Time Collected 07/25/92 10:00:00 Category WATER

NO3NO2 4.45
mg N/L

TMA
Thermo Analytical Inc.

This report is rendered upon all of the following conditions: Skinner & Sherman Laboratories, Inc. retains ownership of this report until associated submitted invoice is satisfi
Expert witness services shall be available in conjunction with this report only if prior notification of this potential requirement was made and accepted, before the analysis. Cli
will be responsible for Skinner & Sherman costs and consulting fees if our services are required by subpoena or otherwise in legal proceedings. Total liability is limited to the invo
amount. The results listed refer only to tested samples and applicable parameters. Product endorsement is neither inferred nor implied. Skinner & Sherman Laboratories, Inc. w
exercise due diligence but will not be responsible for lost or destroyed samples or evidence unless client makes appropriate insurance coverage arrangements. Samples are held
thirty days following issuance of report. Samples will be stored at client's expense, if authorized in writing.

Skinner & Sherman Laboratories Inc. 300 Second Avenue, P.O. Box 521, Waltham, Massachusetts 02254-0521 (617) 890-7200
1-800-4 LAB TEST FAX (617) 890-3883

Page 5 Skinner&Sherman REPORT Work Order # S2-07-282

Received: 07/30/92 Test Methodology

TEST CODE NO3NO2 NAME Nitrate Plus Nitrite

Methods for Chemical Analysis of Water and Wastes
EPA - 600/4-79-020 March 1979 Method 353.2 (modified)

TMA
Thermo Analytical Inc.
Skinner & Sherman Laboratories Inc.

This report is rendered upon all of the following conditions: Skinner & Sherman Laboratories, Inc. retains ownership of this report until associated submitted invoice is satisfi Expert witness services shall be available in conjunction with this report only if prior notification of this potential requirement was made and accepted, before the analysis. Cli will be responsible for Skinner & Sherman costs and consulting fees if our services are required by subpoena or otherwise in legal proceedings. Total liability is limited to the inve amount. The results listed refer only to tested samples and applicable parameters. Product endorsement is neither inferred nor implied. Skinner & Sherman Laboratories, Inc. exercise due diligence but will not be responsible for lost or destroyed samples or evidence unless client makes appropriate insurance coverage arrangements. Samples are held thirty days following issuance of report. Samples will be stored at client's expense, if authorized in writing.

300 Second Avenue, P.O. Box 521, Waltham, Massachusetts 02254-0521 (617) 890-7200
1-800-4 LAB TEST FAX (617) 890-3883

037

TMA/Skinner & Sherman Labs SAMPLE LOG-IN
WORKORDER S207282 CLIENT Hanford NOR No. SAMPLES: 6
PROTCL CLP TURNARND 33 Day
COOLER TEMP: 4 oC, or NA (Soil) (Water) (Specify Other
CUSTODIAN B. Prouty SDG/BATCH N/A
CUSTODY SEAL: PRESENT/ABSENT/INTACT/NOT CLIENT CASE N207150
SHIPER & # FedEx PO/CONTRACT# ↓
TAGS: PRESENT/ABSENT/NA/SEE COC CONTACT D. Sanchez
CHAIN OF CUSTODY: PRESENT/ABSENT/NA, # N/A COMMENTS: None

SAMPLE CONTAINERS-INTACT/BROKEN COMMENTS

CLIENT COMMENT? YES/NO
SAMPLE LABELS AGREE WITH CHAIN OF CUSTODY INFO? YES/NO (COMMENT)
CLIENT PAPERWORK AGREES WITH SAMPLES & COC? YES/NO (COMMENT)

SHIPMENT DATES 7/30/92
LIST ANY DATE WITH PAPERWORK/SHIPMENT PROBLEMS & SPECIFY THE PROBLEM:

N/A

	CLIENT ID	MATRIX	RECEIVED	PH*	TEST(S) & QC	HOLD TIME U
1	B072W9	Water	7/30/92	1.80	NO3 NO2	
2	B072X4	↓	↓	1.78	↓	
3	B070L2			1.83		
4	B070J2			1.88		
5	B070K7			1.72		
6	B072S4	↓	↓	1.89	D.S ↓	
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						

Samples are from site known to have Rad-Contamination: YES ✓ NO
Samples have detectable amounts of Radioactive Material: YES NO ✓

SUBCONTRACT: YES/NO TO: DATE:

REVIEWED

complete 7/31/92

* EPA/CLP required Rev 1.6 PAGE: 80

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 100-BC-5

Collection Date 7/24/92

Ice Chest No. Fry

Field Logbook No. EFL-1036 XT 7/27

Bill of Lading/Airbill No. 2509864939-5

Offsite Property No. W92-0-0533-3031

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B072W9

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) UNFILTERED
1, 1L, P, WATER, CLP-CYANIDE (NaOH)
~~2, 40ml, Gs, WATER, CLP VOA~~
~~2, 2L, aG, WATER, CLP SEMI VOA & PCB/PEST~~
~~1, 1L, P, WATER, ANIONS(IC) (SO4,F,PO4,Cl), COND., pH~~
~~2, 4L, P, WATER, GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC (U-235/238,Pu-239/240, Am-241), Sr-90, C-14 (HNO3)~~
~~1, 250ml, G, WATER, TRIRIUM~~
1, 500ml, P, WATER, ANIONS(NO2,NO3) (H2SO4)
~~1, 1L, G, WATER, ALKALINITY, TOTAL DISSOLVED SOLIDS~~
~~1, 500ml, G, WATER, SULFIDE (ZINC ACETATE+NaOH pH>9)~~
~~1, 500ml, G, WATER, AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)~~
~~1, 1L, P, WATER, Tc-99 (HNO3)~~

B072X2

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) FILTERED

~~B072X3~~

~~2, 40ml, Gs, WATER, CLP VOA~~

[] Field Transfer of Custody — Chain of Possession — (Sign and Print Names)

Relinquished by:	Received by:	Date/Time:
[illegible]	K. Trapp/K. Trapp	7/27/92 0900
K. Trapp / K. Trapp	Eby G. Yamamoto	7/28/92 3:45 PM
Kermit Blum 7-29-92	Bart Prine	7/30/92 10:00

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

9613492.7894

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/24/92 Time 0900 hour

Company Contact P. H. Butcher Telephone (509) 376-5045

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
✓ B072W9	1; 1L, P; WATER; CLP-ICP/AA METALS & MERCURY (HNO_3) UNFILTERED		
✓	1; 1L; P; WATER; CLP-CYANIDE (NaOH)		
✓	~~3; 40ml; Gs; WATER; CLP VOA~~		
✓	~~2; 2L; aG; WATER; CLP SEMI VOA & PCB/PEST~~		
✓	~~1; 1L; P; WATER; ANIONS (IC) (SO4, F, PO4, Cl), CONDUCTIVITY, pH~~		
✓	~~2; 4L; P; WATER; GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC~~		
	~~(U 235/238, Pu 239/240, Am 241), Sr 90 (HNO_3)~~		
✓	~~1; 250 ml; G; WATER; TRITIUM~~		
✓	1; 500 ml; P; WATER; ANIONS (NO3, NO2) (H2SO4)		
✓	~~1; 1L; G; WATER; ALKALINITY, TOTAL DISSOLVED SOLIDS~~		
✓	~~1; 500 ml; G; WATER; SULFIDE (ZINC ACETATE PLUS NaOH pH>9)~~		
✓	~~1; 500 ml; G; WATER; AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)~~		
	~~1; 1L; P; WATER; Tc 99 (HCl)~~		
✓ ~~B072X3~~	~~3, 40ml, Gs, WATER, CLP VOA~~		
	1 KT 7/27/92		
✓ B072X2	3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986939-5
			OPC # W92-0-0533-31
			TASK # ~~92-244~~ 92-243 KT 7/27/92

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

Received by Elby G. Yamamoto Title Sample Control Tech Date 7/28/92

Analysis Required _____

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

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

A-5000-125 (

9613492.7895

000040

100-BC-5

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 100-BC-5

Collection Date 7/24/92

Ice Chest No. SML-95

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986939-5

Offsite Property No. W92-0-0533-31

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B072X4

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) UNFILTERED
1, 1L, P, WATER, CLP-CYANIDE (NaOH)
~~2, 40ml, Gs, WATER, CLP-VOA~~
~~3, 2L, aG, WATER, CLP-SEMI-VOA & PCB/PEST~~
~~1, 1L, P, WATER, ANIONS(IC) (SO4,F,PO4,Cl), COND., pH~~
~~2, 4L, P, WATER, GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC (U-235/238,Pu-239/240, Am-241), Sr-90, C-14 (HNO3)~~
~~1, 250ml, G, WATER, TRIRIUM~~
1, 500ml, P, WATER, ANIONS(NO2,NO3) (H2SO4)
~~1, 1L, G, WATER, ALKALINITY, TOTAL DISSOLVED SOLIDS~~
~~1, 500ml, G, WATER, SULFIDE (ZINC ACETATE+NaOH pH>9)~~
~~1, 500ml, G, WATER, AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)~~
~~1, 1L, P, WATER, Tc-99 (HNO3)~~

B072X7

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) FILTERED

~~B072X8~~

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

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: K.D. Lee	Received by: K. Trapp / K. Trapp	Date/Time: 7/27/92 0900
Relinquished by: K. Trapp / K. Trapp	Received by: Elby Yamamoto	Date/Time: 7/28/92 3:45 PM
Relinquished by: Kermit Blum 7-29-92	Received by: Barb Purves	Date/Time: 7/30/92 10:00
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

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/24/92 Time 0900 hour

Company Contact P. H. Butcher Telephone (509) 376-5045

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B072X4	1; 1L, P; WATER; CLP-ICP/AA METALS & MERCURY (HNO_3) UNFILTERED		
	1; 1L; P; WATER; CLP-CYANIDE (NaOH)		
	~~3; 40ml; Gs; WATER; CLP VOA~~		
	~~3; 2L; aG; WATER; CLP SEMI VOA & PCB/PEST~~		
	~~1; 1L; P; WATER; ANIONS (IC) (SO4, F, PO4, Cl), CONDUCTIVITY, pH~~		
	~~2; 4L; P; WATER; GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC~~		
	~~(U 235/238, Pu 239/240, Am 241), Sr 90 (HNO_3)~~		
	~~1; 250 ml; G; WATER; TRITIUM~~		
	1; 500 ml; P; WATER; ANIONS (NO3, NO2) (H_2SO_4)		
	~~1; 1L; G; WATER; ALKALINITY, TOTAL DISSOLVED SOLIDS~~		
	~~1; 500 ml; G; WATER; SULFIDE (ZINC ACETATE PLUS NaOH pH>9)~~		
	~~1; 500 ml; G; WATER; AMMONIA, CHEMICAL OXYGEN DEMAND (H_2SO_4 pH<2)~~		
	~~1; 1L; P; WATER; Tc 99 (HCl)~~		
~~B072X8~~	~~3, 40ml, Gs, WATER, CLP VOA~~		
	KT 7/27/92		
B072X7	3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986939-5
			OPC # W92-0-0533-~~30~~ 31 KT 7/27/
			TASK # 92-243

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

Received by Elby G. Yamamoto Title Sample Control Tech. Date 7/28/92

Analysis Required _____

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

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

A-6000-406

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 100-BC-5

Collection Date 7/25/92

Ice Chest No. GS-24

Field Logbook No. EFL-1037

Bill of Lading/Airbill No. 250996939-5

Offsite Property No. W92-0-0533-34

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO 7002

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) UNFILTERED
1, 1L, P, WATER, CLP-CYANIDE (NaOH)
~~3, 40ml, G, WATER, CLP VOA~~
~~3, 2L, aG, WATER, CLP-SEMI VOA & PCB/PEST~~
~~1, 1L, P, WATER, ANIONS(IC) (SO4,F,PO4,Cl), COND., pH~~
~~2, 4L, P, WATER, GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC (U-235/238,Pu-239/240, Am-241), Sr-90, C-14 (HNO3)~~
~~1, 250ml, G, WATER, TRITIUM~~
1, 500ml, P, WATER, ANIONS(NO2,NO3) (H2SO4)
~~1, 1L, G, WATER, ALKALINITY, TOTAL DISSOLVED SOLIDS~~
~~1, 500ml, G, WATER, SULFIDE (ZINC ACETATE+NaOH pH>9)~~
~~1, 500ml, G, WATER, AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)~~
~~1, 1L, P, WATER, Tc-99 (HNO3)~~

BO 7045

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) FILTERED

~~BO 7046~~

~~3, 40ml, G, WATER, CLP VOA~~

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: C Calibuli C. Calibuli	Received by: K. Trapp / K. Trapp	Date/Time: ~~7/25/92~~ 7/27/92 0900
Relinquished by: K. Trapp / K. Trapp	Received by: Elby H. Yamamoto	Date/Time: 7/28/92 3:45 PM
Relinquished by: 7-29-92 Kermit Bleim	Received by: Beula Prowle	Date/Time: ~~Beula Prowle~~ 7/30/92 10:[illegible]
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 Les Walker/Kirby Lee Date Sampled 7/25/92 Time 0837 hour

Company Contact P. H. Butcher Telephone (509) 376-5045

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
✓ B07QL2	1; 1L, P; WATER; CLP-ICP/AA METALS & MERCURY (HNO_3) UNFILTERED		
✓	1; 1L; P; WATER; CLP-CYANIDE (NaOH)		
	~~3, 40ml, Gs; WATER; CLP VOA~~		
✓	3; ~~2L, aG, WATER, CLP SEMI VOA & PCB/PEST~~		
✓	~~1; 1L; P; WATER; ANIONS (IC) (SO4, F, PO4, Cl), CONDUCTIVITY, pH~~		
✓	~~2; 4L; P; WATER; GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC~~		
	~~(U-235/238, Pu-239/240, Am-241), Sr-90 (HNO_3)~~		
✓	~~1; 250 ml; G; WATER; TRITIUM~~		
✓	1; 500 ml; P; WATER; ANIONS (NO3, NO2) (H2SO4)		
✓	~~1; 1L; G; WATER; ALKALINITY, TOTAL DISSOLVED SOLIDS~~		
✓	~~1; 500 ml; G; WATER; SULFIDE (ZINC ACETATE PLUS NaOH pH>9)~~		
✓	~~1; 500 ml; G;~~ WATER; ~~AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)~~		
✓	~~1; 1L; P; WATER; Tc-99 (HCl)~~		
✓ ~~B07QL6~~	~~3, 40ml, Gs, WATER, CLP VOA~~		
	KT 7/27/92		
✓ B07QL5	~~3~~, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986939-5
			OPC # W92-0-0533-34
			TASK # 92-243

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

Received by Ellen B. Yamamoto Title Sample Control Tech. Date 7/28/92

Analysis Required _____

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

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

A-6000-106 (

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 100-BC-5

Collection Date 7/25/92

Ice Chest No. Billy

Field Logbook No. EFL-1037

Bill of Lading/Airbill No. 2509869939-5

Offsite Property No. W92-0-0533-34

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO 7052

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) UNFILTERED
1, 1L, P, WATER, CLP-CYANIDE (NaOH)
~~3, 40ml, Gs, WATER, CLP VOA~~
~~3, 2L, aG, WATER, CLP-SEMI-VOA & PCB/PEST~~
~~1, 1L, P, WATER, ANIONS(IC) (SO4,F,PO4,Cl), COND, pH~~
~~2, 4L, P, WATER, GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC (U-235/238,Pu-239/240, Am-241), Sr-90, C-14 (HNO3)~~
~~1, 250ml, G, WATER, TRITIUM~~
1, 500ml, P, WATER, ANIONS(NO2,NO3) (H2SO4)
~~1, 1L, G, WATER, ALKALINITY, TOTAL DISSOLVED SOLIDS~~
~~1, 500ml, G, WATER, SULFIDE (ZINC ACETATE+NaOH pH>9)~~
~~1, 500ml, G, WATER, AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)~~
~~1, 1L, P, WATER, Tc-99 (HNO3)~~

BO 7055

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) FILTERED

~~BO 7056~~

~~3, 40ml, Gs, WATER, CLP VOA~~

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: Chris Celebrat Chris Celebrat	Received by: K. Trapp / K. Trapp	Date/Time: ~~7/25/92~~ KT 7/27/92 0900
Relinquished by: K. Trapp / K. Trapp	Received by: Libby M. Yamamoto	Date/Time: 7/28/92 3:45 PM
Relinquished by: Kermit Blum 7-29-92	Received by: Barb Prowel	Date/Time: 7/30/92 10:00
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 Les Walker/Kirby Lee Date Sampled 7/25/92 Time 0619 hou.

Company Contact P. H. Butcher Telephone (509) 376-5045

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
✓ B070J2	1; 1L, P; WATER; CLP-ICP/AA METALS & MERCURY (HNO_3) UNFILTERED		
✓	1; 1L; P; WATER; CLP-CYANIDE (NaOH)		
✓	~~3; 40ml; Gs; WATER; CLP VOA~~		
✓	~~3; 2L; aG; WATER; CLP SEMI VOA & PCB/PEST~~		
✓	~~1; 1L; P; WATER; ANIONS (IC) (SO4, F, PO4, Cl), CONDUCTIVITY, pH~~		
✓	~~2; 4L; P; WATER; GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC~~		
	~~(U 235/238, Pu 239/240, Am 241), Sr 90 (HNO_3)~~		
✓	~~1; 250 ml; G; WATER; TRITIUM~~		
✓	1; 500 ml; P; WATER; ANIONS (NO3, NO2) (H2SO4)		
✓	~~1; 1L; G; WATER; ALKALINITY, TOTAL DISSOLVED SOLIDS~~		
✓	~~1; 500 ml; G; WATER; SULFIDE (ZINC ACETATE PLUS NaOH pH>9)~~		
✓	~~1; 500 ml; G; WATER; AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)~~		
✓	~~1; 1L; P; WATER; Tc 99 (HCl)~~		
✓ ~~B070J6~~	~~3, 40ml, Gs, WATER, CLP VOA~~		
	KT 7/27/92		
✓ B070J5	3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986937-5
			OPC # WA2-0-0533-34
			TASK #

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

Received by Elby B. Yamamoto Title Sample Control Tech. Date 7/28/92

Analysis Required _____

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

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

A-6000-106

9613492.7901

000046

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 100-BC-5

Collection Date 7/25/92

Ice Chest No. Bud

Field Logbook No. EFL-1037

Bill of Lading/Airbill No. 2509869394-5

Offsite Property No. W92- ~~EFL 1037~~ 30

W92-0-0533-33

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B070K7

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) UNFILTERED
1, 1L, P, WATER, CLP-CYANIDE (NaOH)
~~3, 40ml, Gs, WATER, CLP-VOA~~
~~3, 2L, aG, WATER, CLP-SEMI-VOA & PCB/PEST~~
~~1, 1L, P, WATER, ANIONS(IC) (SO4,F,PO4,Cl), COND., pH~~
~~2, 4L, P, WATER, GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC (U-235/238,Pu-239/240, Am-241), Sr-90, C-14 (HNO3)~~
~~1, 250ml, G, WATER, TRITIUM~~
1, 500ml, P, WATER, ANIONS(NO2,NO3) (H2SO4)
~~1, 1L, G, WATER, ALKALINITY, TOTAL DISSOLVED SOLIDS~~
~~1, 500ml, G, WATER, SULFIDE (ZINC ACETATE+NaOH pH>9)~~
~~1, 500ml, G, WATER, AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)~~
~~1, 1L, P, WATER, Tc-99 (HNO3)~~

B070L0

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) FILTERED

~~B070L1~~

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

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: C. Calebeck C. CALEBECK	Received by: K. Trapp / K. Trapp	Date/Time: KT ~~7/25/92~~ 7/27/92 0900
Relinquished by: K. Trapp / K. Trapp	Received by: Ebby Y. Yamamoto	Date/Time: 7/28/92 3:45 PM
Relinquished by: Kermit Blum 7-29-92	Received by: Barb Rowley	Date/Time: 7/30/92 10:00
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

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/25/92 Time 0732 hour

Company Contact P. H. Butcher Telephone (509) 376-5045

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
✓ B070K7	1; 1L, P; WATER; CLP-ICP/AA METALS & MERCURY (HNO_3) UNFILTERED		
✓	1; 1L; P; WATER; CLP-CYANIDE (NaOH)		
✓	~~3, 40ml, Gs, WATER, CLP-VOA~~		
✓	~~3, 2L, aG, WATER, CLP SEMI-VOA & PCB/PEST~~		
✓	~~1, 1L, P, WATER, ANIONS (IC) (SO4, F, PO4, Cl), CONDUCTIVITY, pH~~		
✓	~~2, 4L, P, WATER, GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC~~		
	~~(U-235/238, Pu-239/240, Am-241), Sr-90 (HNO_3)~~		
✓	~~1, 250 ml, G, WATER, TRITIUM~~		
✓	1; 500 ml; P; WATER; ANIONS (NO3, NO2) (H2SO4)		
✓	~~1, 1L, G, WATER, ALKALINITY, TOTAL DISSOLVED SOLIDS~~		
✓	~~1, 500 ml, G, WATER, SULFIDE (ZINC ACETATE PLUS NaOH pH>9)~~		
✓	~~1, 500 ml, G, WATER, AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)~~		
✓	~~1, 1L, P, WATER, Tc 99 (HCl)~~		
✓ ~~B070L1~~	~~3, 40ml, Gs, WATER, CLP-VOA~~		
	KT 7/27/92		
✓ B07010	~~3,~~ 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986939-5
			OPC # W92-0-0533-33
			TASK # ~~92-2444~~ KT 7/27/92 92-243

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

Received by Elby A. Yamamoto Title Sample Control Tech Date 7/28/92

Analysis Required _____

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

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

A-6000-406 (

9615492.7905

000048

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 100-BC-5

Collection Date 7/25/92

Ice Chest No. ~~X~~ KT 7/27/92 #1C

Field Logbook No. EFL-1037

Bill of Lading/Airbill No. 2509969939-5

Offsite Property No. W92-0-0533-30

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO 7254

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) UNFILTERED
1, 1L, P, WATER, CLP-CYANIDE (NaOH)
~~3, 40ml, Gs, WATER, CLP VOA~~
~~3, 2L, aG, WATER, CLP SEMI-VOA & PCB/PEST~~
~~1, 1L, P, WATER, ANIONS(IC) (SO4,F,PO4,Cl), COND., pH~~
~~2, 4L, P, WATER, GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC (U-235/238,Pu-239/240, Am-241), Sr-90, C-14 (HNO3)~~
~~1, 250ml, G, WATER, TRIRIUM~~
1, 500ml, P, WATER, ANIONS(NO2,NO3) (H2SO4)
~~1, 1L, G, WATER, ALKALINITY, TOTAL DISSOLVED SOLIDS~~
~~1, 500ml, G, WATER, SULFIDE (ZINC ACETATE+NaOH pH>9)~~
~~1, 500ml, G, WATER, AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)~~
~~1, 1L, P, WATER, Tc-99 (HNO3)~~

BO 7257

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) FILTERED

~~BO 7288~~

~~3, 40ml, Gs, WATER, CLP VOA~~

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: C Celiberti C.CELIBERTI ~~C.CEL~~ CC 7/25/92	Received by: Ken Trapp / Ken Trapp	Date/Time: KT ~~7/25/92~~ 7/27/92 0900
Relinquished by: K. Trapp / K. Trapp	Received by: Elky A. Yamamoto	Date/Time: 7/28/92 3:45 PM
Relinquished by: Hermit Blum 7-29-92	Received by: Bart Prowse	Date/Time: 7/30/92 10:00
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments: Bubbles on samples → BO7254 & BO7258 (VOA vials)

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

9613492.7904

000049

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled ~~7/24/92~~ 7/27/92 KT 7/27/92 Time 1000 hou

Company Contact P. H. Butcher Telephone (509) 376-5045

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
✓ B072S4	1; 1L; P; WATER; CLP-ICP/AA METALS & MERCURY (HNO_3) UNFILTERED		
✓	1; 1L; P; WATER; CLP-CYANIDE (NaOH)		
✓	~~3; 40ml; Gs; WATER; CLP VOA~~		Bubbles
✓	~~3; 2L; aG; WATER; CLP SEMI-VOA & PCB/PEST~~		
✓	~~1; 1L; P; WATER; ANIONS (IC) (SO4, F, PO4, Cl), CONDUCTIVITY, pH~~		
✓	~~3; 4L; P; WATER; GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC~~		
	~~(U-235/238, Pu-239/240, Am-241), Sr-90 (HNO_3)~~		
✓	~~1; 250 ml; G; WATER; TRITIUM~~		
✓	1; 500 ml; P; WATER; ANIONS (NO3, NO2) (H2SO4)		
✓	~~1; 1L; G; WATER; ALKALINITY, TOTAL DISSOLVED SOLIDS~~		
✓	~~1; 500 ml; G; WATER; SULFIDE (ZINC ACETATE PLUS NaOH pH>9)~~		
✓	~~1; 500 ml; G; WATER; AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)~~		
✓	~~1; 1L; P; WATER; Tc-99 (HCl)~~		
✓ ~~B072S8~~	~~3, 40ml, Gs, WATER, CLP VOA~~		Bubbles
	1 KT 7/27/92		
✓ B072S7	3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # KT 7/27/92 250996940-6
			OPC # W92-0-0533-30
			TASK # ~~92-243~~ KT 7/27/92 ~~92-244~~ 92-243

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

Received by Elby G. Yamamoto Title Sample Control Tech. Date 7/28/92

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

9613492.7905

TMA
Thermo Analytical Inc.

Skinner & Sherman Labs., Inc.
300 Second Avenue
Post Office Box 521
Waltham, MA 02254-0521
(617) 890-7200
FAX (617) 890-3883

RECORD COPY

OCT 1992
RECEIVED
OSM DMO

September 30, 1992

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

Quality Control Narrative

Scope
Six (6) water samples were submitted to TMA/Skinner & Sherman Laboratories, Inc. on July 30, 1992 from Westinghouse Hanford Company. The samples were analyzed for the USEPA CLP metals and cyanide as indicated on the chain of custody. The analysis was performed under TMA/Skinner and Sherman work order S207280.

Methodology
The samples were prepared, analyzed and reported in accordance with the USEPA Contract Laboratory Program Statement of Work ILM02.

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

The selenium digestion spike recovery 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.

David N. Peterson
Assistant Laboratory Manager

i 3/19/96 M.H.

9613492.7906

WESTINGHOUSE/HANFORD
1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B070J2

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

Lab Code: SKINER Case No.: N2-07-150SAS No.: SDG No.: B070J2

Matrix (soil/water): WATER Lab Sample ID: 07280-04S

Level (low/med): LOW Date Received: 07/30/92

% 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	23.9	U		P
7440-36-0	Antimony	16.3	U		P
7440-38-2	Arsenic	2.4	U		F
7440-39-3	Barium	34.0	B		P
7440-41-7	Beryllium	0.70	U		P
7440-43-9	Cadmium	1.5	U		P
7440-70-2	Calcium	47800			P
7440-47-3	Chromium	12.6			P
7440-48-4	Cobalt	3.5	U		P
7440-50-8	Copper	3.8	U		P
7439-89-6	Iron	30.9	B		P
7439-92-1	Lead	3.9			F
7439-95-4	Magnesium	7960			P
7439-96-5	Manganese	4.4	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	3.9	U		P
7440-09-7	Potassium	1790	B		P
7782-49-2	Selenium	3.1	U	WN	F
7440-22-4	Silver	4.8	U		P
7440-23-5	Sodium	10500			P
7440-28-0	Thallium	4.3	U		F
7440-62-2	Vanadium	4.9	B		P
7440-66-6	Zinc	8.2	B		P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

002

9613492.7907

WESTINGHOUSE/HANFORD
1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B070K7

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

Lab Code: SKINER Case No.: N2-07-150SAS No.: SDG No.: B070J2

Matrix (soil/water): WATER Lab Sample ID: 07280-05S

Level (low/med): LOW Date Received: 07/30/92

% 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	23.9	U		P
7440-36-0	Antimony	16.3	U		P
7440-38-2	Arsenic	2.4	U		F
7440-39-3	Barium	34.0	B		P
7440-41-7	Beryllium	0.70	U		P
7440-43-9	Cadmium	1.5	U		P
7440-70-2	Calcium	50800			P
7440-47-3	Chromium	13.2			P
7440-48-4	Cobalt	3.5	U		P
7440-50-8	Copper	3.8	U		P
7439-89-6	Iron	15.8	B		P
7439-92-1	Lead	4.5			F
7439-95-4	Magnesium	6690			P
7439-96-5	Manganese	4.4	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	3.9	U		P
7440-09-7	Potassium	4020	B		P
7782-49-2	Selenium	15.5	U	N	F
7440-22-4	Silver	4.8	U		P
7440-23-5	Sodium	10600			P
7440-28-0	Thallium	4.3	U		F
7440-62-2	Vanadium	7.1	B		P
7440-66-6	Zinc	7.7	B		P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

003

9613492.7908

WESTINGHOUSE/HANFORD
1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B070L2

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

Lab Code: SKINER Case No.: N2-07-150SAS No.: SDG No.: B070J2

Matrix (soil/water): WATER Lab Sample ID: 07280-03S

Level (low/med): LOW Date Received: 07/30/92

% 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	23.9	U		P
7440-36-0	Antimony	16.3	U		P
7440-38-2	Arsenic	3.0	B		F
7440-39-3	Barium	19.8	B		P
7440-41-7	Beryllium	0.70	U		P
7440-43-9	Cadmium	1.5	U		P
7440-70-2	Calcium	49100			P
7440-47-3	Chromium	10.8			P
7440-48-4	Cobalt	3.5	U		P
7440-50-8	Copper	3.8	U		P
7439-89-6	Iron	34.2	B		P
7439-92-1	Lead	4.4			F
7439-95-4	Magnesium	7680			P
7439-96-5	Manganese	4.4	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	3.9	U		P
7440-09-7	Potassium	4590	B		P
7782-49-2	Selenium	3.1	U	WN	F
7440-22-4	Silver	4.8	U		P
7440-23-5	Sodium	11000			P
7440-28-0	Thallium	4.3	U		F
7440-62-2	Vanadium	9.3	B		P
7440-66-6	Zinc	4.6	B		P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

004

9613492.7909

WESTINGHOUSE/HANFORD
1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B072S4

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

Lab Code: SKINER Case No.: N2-07-150SAS No.: SDG No.: B070J2

Matrix (soil/water): WATER Lab Sample ID: 07280-06S

Level (low/med): LOW Date Received: 07/30/92

% 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	29.0	B		P
7440-36-0	Antimony	16.3	U		P
7440-38-2	Arsenic	2.4	U		F
7440-39-3	Barium	8.5	B		P
7440-41-7	Beryllium	0.70	U		P
7440-43-9	Cadmium	1.5	U		P
7440-70-2	Calcium	43900			P
7440-47-3	Chromium	18.0			P
7440-48-4	Cobalt	3.5	U		P
7440-50-8	Copper	3.8	U		P
7439-89-6	Iron	21.6	B		P
7439-92-1	Lead	3.9			F
7439-95-4	Magnesium	9610			P
7439-96-5	Manganese	4.4	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	3.9	U		P
7440-09-7	Potassium	6220			P
7782-49-2	Selenium	15.5	U	N	F
7440-22-4	Silver	4.8	U		P
7440-23-5	Sodium	12600			P
7440-28-0	Thallium	4.3	U		F
7440-62-2	Vanadium	12.0	B		P
7440-66-6	Zinc	4.6	B		P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

005

9613492.7910

WESTINGHOUSE/HANFORD
1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER:

B072W9

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

Lab Code: SKINER Case No.: N2-07-150SAS No.: SDG No.: B070J2

Matrix (soil/water): WATER Lab Sample ID: 07280-01S

Level (low/med): LOW Date Received: 07/30/92

% 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	25.6	B		P
7440-36-0	Antimony	16.3	U		P
7440-38-2	Arsenic	2.4	U		F
7440-39-3	Barium	4.6	U		P
7440-41-7	Beryllium	0.70	U		P
7440-43-9	Cadmium	1.5	U		P
7440-70-2	Calcium	39.8	B		P
7440-47-3	Chromium	4.9	U		P
7440-48-4	Cobalt	3.5	U		P
7440-50-8	Copper	3.8	U		P
7439-89-6	Iron	7.6	U		P
7439-92-1	Lead	3.8		W	F
7439-95-4	Magnesium	40.1	U		P
7439-96-5	Manganese	4.4	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	3.9	U		P
7440-09-7	Potassium	266	U		P
7782-49-2	Selenium	3.1	U	N	F
7440-22-4	Silver	4.8	U		P
7440-23-5	Sodium	94.5	B		P
7440-28-0	Thallium	4.3	U	W	F
7440-62-2	Vanadium	2.4	U		P
7440-66-6	Zinc	6.9	B		P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

006

WESTINGHOUSE/HANFORD
1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER:

B072X4

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

Lab Code: SKINER Case No.: N2-07-150SAS No.: SDG No.: B070J2

Matrix (soil/water): WATER Lab Sample ID: 07280-02S

Level (low/med): LOW Date Received: 07/30/92

% 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	23.9	U		P
7440-36-0	Antimony	16.3	U		P
7440-38-2	Arsenic	48.4			F
7440-39-3	Barium	4.6	U		P
7440-41-7	Beryllium	0.70	U		P
7440-43-9	Cadmium	1.5	U		P
7440-70-2	Calcium	28.4	B		P
7440-47-3	Chromium	4.9	U		P
7440-48-4	Cobalt	3.5	U		P
7440-50-8	Copper	3.8	U		P
7439-89-6	Iron	7.6	U		P
7439-92-1	Lead	53.8			F
7439-95-4	Magnesium	40.1	U		P
7439-96-5	Manganese	4.4	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	3.9	U		P
7440-09-7	Potassium	266	U		P
7782-49-2	Selenium	42.0		SN	F
7440-22-4	Silver	4.8	U		P
7440-23-5	Sodium	32.1	B		P
7440-28-0	Thallium	47.7			F
7440-62-2	Vanadium	2.4	U		P
7440-66-6	Zinc	4.1	B		P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

007

TMA/Skinner & Sherman Labs SAMPLE LOG-IN

WORKORDER S207280 CLIENT Hanford NOR No. SAMPLES:

PROTCL CLP TURNARND 33 Day (Soil) (Water) (Specify Other

COOLER TEMP: 4 oC, or NA

CUSTODIAN B. Prouty SDG/BATCH N/A

CUSTODY SEAL: PRESENT/ABSENT/INTACT/NOT CLIENT CASE N207150

SHIPER & # Fed Ex PO/CONTRACT# ↓

TAGS: PRESENT/ABSENT/NA/SEE COC CONTACT D. Sanchez

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

SAMPLE CONTAINERS-INTACT/BROKEN COMMENTS

CLIENT COMMENT? YES/NO

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

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

SHIPMENT DATES 7/30/92

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

N/A UNFILTERED

	CLIENT ID	MATRIX	RECEIVED	PH*	TEST(S) & QC	HOLD TIME U
1	B072W9	water	7/30/92	1.71.10.09	T.m/CN	CN Due
2	B072X4	↓	↓	1.85/10.97	↓	8/5/92
3	B070L2			1.82/11.03		
4	B070J2			1.81/11.15		Hg Du
5	B070K7			1.82/11.09		8/13/9
6	B072S4	↓	↓	1.80/11.32 D,S	↓	
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						

Samples are from site known to have Rad-Contamination: YES ✓ NO

Samples have detectable amounts of Radioactive Material: YES NO ✓

SUBCONTRACT: YES/NO, TO: DATE:

REVIEWED

complete 7/31/92 BP

* EPA/CLP required Rev 1.6 PAGE: 184

9613492.7913

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 100-BC-5

Collection Date 7/24/92

Ice Chest No. Fry

Field Logbook No. EFL-1036 XT 7/27

Bill of Lading/Airbill No. 2509964939-5

Offsite Property No. W92-0-0533-3021

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B072W9

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) UNFILTERED
1, 1L, P, WATER, CLP-CYANIDE (NaOH)
~~2, 40ml, Gs, WATER, CLP VOA~~
~~2, 2L, aG, WATER, CLP SEMI VOA & PCB/PEST~~
~~1, 1L, P, WATER, ANIONS(IC) (SO4,F,PO4,Cl), COND., pH~~
~~2, 4L, P, WATER, GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC (U-235/238,Pu-239/240, Am-241), Sr-90, C-14 (HNO3)~~
~~1, 250ml, G, WATER, TRIRIUM~~
1, 500ml, P, WATER, ANIONS(NO2,NO3) (H2SO4)
~~1, 1L, G, WATER, ALKALINITY, TOTAL DISSOLVED SOLIDS~~
~~1, 500ml, G, WATER, SULFIDE (ZINC ACETATE+NaOH pH>9)~~
~~1, 500ml, G, WATER, AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)~~
~~1, 1L, P, WATER, Tc-99 (HNO3)~~

B072X2

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) FILTERED

~~B072X3~~

~~2, 40ml, Gs, WATER, CLP VOA~~

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: [illegible]	Received by: K. Trapp / K. Trapp	Date/Time: 7/27/92 0900
Relinquished by: K. Trapp / K. Trapp	Received by: Eldy G. Yamamoto	Date/Time: 7/28/92 3:45 PM
Relinquished by: Kermit Blum 7-29-92	Received by: Barb Prune	Date/Time: 7/30/92 10:00
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

9613492.7914

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/24/92 Time 0900 hours

Company Contact P. H. Butcher Telephone (509) 376-5045

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
✓ B072W9	1; 1L, P; WATER; CLP-ICP/AA METALS & MERCURY (HNO_3) UNFILTERED		
✓	1; 1L; P; WATER; CLP-CYANIDE (NaOH)		
✓	~~3, 40ml, Gs, WATER, CLP VOA~~		
✓	~~2, 2L, aG, WATER, CLP SEMI VOA & PCB/PEST~~		
✓	~~1; 1L; P; WATER; ANIONS (IC) (SO4, F, PO4, Cl), CONDUCTIVITY, pH~~		
✓	~~2; 4L; P; WATER; GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC~~		
	~~(U 235/238, Pu 239/240, Am 241), Sr 90 (HNO_3)~~		
✓	~~1; 250 ml; G; WATER; TRITIUM~~		
✓	1; 500 ml; P; WATER; ANIONS (NO3, NO2) (H2SO4)		
✓	~~1; 1L, G, WATER, ALKALINITY, TOTAL DISSOLVED SOLIDS~~		
✓	~~1; 500 ml; G; WATER; SULFIDE (ZINC ACETATE PLUS NaOH pH>9)~~		
✓	~~1; 500 ml; G; WATER; AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)~~		
	~~1; 1L; P; WATER; Tc 99 (HCl)~~		
✓ ~~B072X3~~	~~3, 40ml, Gs, WATER, CLP VOA~~		
	1 KT 7/27/92		
✓ B072X2	3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986939-5
			OPC # W92-0-0533-31
			TASK # ~~92-244~~ 92-243 KT 7/27/92

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

Received by tlby G. yamamoto Title Sample Control Tech Date 7/28/92

Analysis Required _____

186

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

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

A-5000-125(

9613492.7915

100-BC-5

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 100-BC-5

Collection Date 7/24/92

Ice Chest No. SML-95

Field Logbook No. EFL-1036 31

Bill of Lading/Airbill No. 250986937-5

Offsite Property No. W92-0-0533-~~70~~ 71

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B072X4

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) UNFILTERED
1, 1L, P, WATER, CLP-CYANIDE (NaOH)
~~2, 40ml, Gs, WATER, CLP-VOA~~
~~2, 2L, aG, WATER, CLP-SEMI-VOA & PCB/PEST~~
~~1, 1L, P, WATER, ANIONS(IC) (SO4,F,PO4,Cl), COND., pH~~
~~2, 4L, P, WATER, GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC (U 235/238,Pu 239/240, Am 241), Sr 90, C 14 (HNO3)~~
~~1, 250ml, G, WATER, TRIRIUM~~
1, 500ml, P, WATER, ANIONS(NO2,NO3) (H2SO4)
~~1, 1L, G, WATER, ALKALINITY, TOTAL DISSOLVED SOLIDS~~
~~1, 500ml, G, WATER, SULFIDE (ZINC ACETATE+NaOH pH>9)~~
~~1, 500ml, G, WATER, AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)~~
~~1, 1L, P, WATER, Tc 99 (HNO3)~~

B072X7

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) FILTERED

~~B072X8~~

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

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: [illegible] K.D. [illegible]	Received by: K. Trapp / K. Trapp	Date/Time: 7/27/92 0900
Relinquished by: K. Trapp / K. Trapp	Received by: Elby Yamamoto	Date/Time: 7/28/92 3:45 PM
Relinquished by: Kermit Blum 7-29-92	Received by: Barb Pierce	Date/Time: 7/30/92 10:00
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

9613492.7916

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/24/92 Time 0900 hou

Company Contact P. H. Butcher Telephone (509) 376-5045

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B072X4	1; 1L, P; WATER; CLP-ICP/AA METALS & MERCURY (HNO_3) UNFILTERED		
	1; 1L; P; WATER; CLP-CYANIDE (NaOH)		
	~~3; 40ml; Gs; WATER; CLP VOA~~		
	~~2; 2L; aG; WATER; CLP SEMI VOA & PCB/PEST~~		
	~~1; 1L; P; WATER; ANIONS (IC) (SO4, F, PO4, Cl), CONDUCTIVITY, pH~~		
	~~2; 4L; P; WATER; GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC~~		
	~~(U 235/238, Pu 239/240, Am 241), Sr 90 (HNO_3)~~		
	~~1; 250 ml; G; WATER; TRITIUM~~		
	1; 500 ml; P; WATER; ANIONS (NO3, NO2) (H_2SO_4)		
	~~1; 1L; G; WATER; ALKALINITY, TOTAL DISSOLVED SOLIDS~~		
	~~1; 500 ml; G; WATER; SULFIDE (ZINC ACETATE PLUS NaOH pH>9)~~		
	~~1; 500 ml; G; WATER; AMMONIA, CHEMICAL OXYGEN DEMAND (H_2SO_4 pH<2)~~		
	~~1; 1L; P; WATER; Tc 99 (HCl)~~		
~~B072X8~~	~~3, 40ml, Gs, WATER, CLP VOA~~		
	KT 7/27/92		
B072X7	3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986939-5
			OPC # W92-0-0533-~~30~~ 31 KT 7/27/
			TASK # 92-243

Field Information**

Special Handling and/or Storage

Possible Sample Hazards

PART II: LABORATORY SECTION

Received by Elby G. Yamamoto Title Sample Control Tech. Date 7/28/92

Analysis Required

188

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

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

A-6000-406

9613492.7917

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 100-BC-5

Collection Date 7/25/92

Ice Chest No. GS-24

Field Logbook No. EFL-1037

Bill of Lading/Airbill No. 250996939-5

Offsite Property No. W92-0-0533-34

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO 7002

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) UNFILTERED
1, 1L, P, WATER, CLP-CYANIDE (NaOH)
~~3, 40ml, Gs, WATER, CLP VOA~~
~~3, 2L, aG, WATER, CLP-SEMI-VOA & PCB/PEST~~
~~1, 1L, P, WATER, ANIONS(IC) (SO4,F,PO4,Cl), COND., pH~~
~~2, 1L, P, WATER, GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC (U-235/238,Pu-239/240, Am-241), Sr-90, C-14 (HNO3)~~
~~1, 250ml, G, WATER, TRIRIUM~~
1, 500ml, P, WATER, ANIONS(NO2,NO3) (H2SO4)
~~1, 1L, G, WATER, ALKALINITY, TOTAL DISSOLVED SOLIDS~~
~~1, 500ml, G, WATER, SULFIDE (ZINC ACETATE+NaOH pH>9)~~
~~1, 500ml, G, WATER, AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)~~
~~1, 1L, P, WATER, Tc 99 (HNO3)~~

BO 7045

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) FILTERED

~~BO 7046~~

~~3, 40ml, Gs, WATER, CLP VOA~~

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: C Celibuchi C Celibuchi	Received by: K. Trapp / K. Trapp	Date/Time: ~~7/25/92~~ HZ 7/27/92 0900
Relinquished by: K. Trapp / K. Trapp	Received by: Elby H. Yamamoto	Date/Time: 7/28/92 3:45 PM
Relinquished by: 7-29-92 Kermit Bleum	Received by: Beula Prowle	Date/Time: ~~Beula Prowle~~ 7/30/92 10:
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

9613492.7918

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/25/92 Time 0837 hou

Company Contact P. H. Butcher Telephone (509) 376-5045

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
✓ B07QL2	1; 1L, P; WATER; CLP-ICP/AA METALS & MERCURY (HNO_3) UNFILTERED		
✓	1; 1L; P; WATER; CLP-CYANIDE (NaOH)		
✓	~~3, 40ml; Gs; WATER; CLP VOA~~		
✓	3; ~~2L, aG, WATER, CLP SEMI VOA & PCB/PEST~~		
✓	~~1; 1L; P; WATER; ANIONS (IC) (SO4, F, PO4, Cl), CONDUCTIVITY, pH~~		
✓	~~2; 4L; P; WATER; GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC~~		
	~~(U-235/238, Pu-239/240, Am-241), Sr-90 (HNO_3)~~		
✓	~~1; 250 ml; G; WATER; TRITIUM~~		
✓	1; 500 ml; P; WATER; ANIONS (NO3, NO2) (H_2SO_4)		
✓	~~1; 1L; G; WATER; ALKALINITY, TOTAL DISSOLVED SOLIDS~~		
✓	~~1; 500 ml; G; WATER; SULFIDE (ZINC ACETATE PLUS NaOH pH>9)~~		
✓	~~1; 500 ml; G;~~ WATER; ~~AMMONIA, CHEMICAL OXYGEN DEMAND (H_2SO_4 pH<2)~~		
✓	~~1; 1L; P; WATER; Tc-99 (HCl)~~		
✓ ~~B07QL6~~	~~3, 40ml, Gs, WATER, CLP VOA~~		
	KT 7/27/92		
✓ B07QL5	~~3~~, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986939-5
			OPC # W92-0-0533-34
			TASK # 92-243

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

Received by Elky B. Yamamoto Title Sample Control Tech. Date 7/28/92

Analysis Required _____

190

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

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

A-6000-10

9613492.7919

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 100-BC-5

Collection Date 7/25/92

Ice Chest No. Billy

Field Logbook No. EFL-1037

Bill of Lading/Airbill No. 2509869939-5

Offsite Property No. W92-0-0533-34

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO 7052

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) UNFILTERED
1, 1L, P, WATER, CLP-CYANIDE (NaOH)
~~3, 40ml, Gs, WATER, CLP VOA~~
~~3, 2L, aG, WATER, CLP-SEMI-VOA & PCB/PEST~~
~~1, 1L, P, WATER, ANIONS(IC) (SO4,F,PO4,Cl), COND., pH~~
~~2, 4L, P, WATER, GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC (U-235/238,Pu-239/240, Am-241), Sr-90, C-14 (HNO3)~~
~~1, 250ml, G, WATER, TRITIUM~~
1, 500ml, P, WATER, ANIONS(NO2,NO3) (H2SO4)
~~1, 1L, G, WATER, ALKALINITY, TOTAL DISSOLVED SOLIDS~~
~~1, 500ml, G, WATER, SULFIDE (ZINC ACETATE+NaOH pH>9)~~
~~1, 500ml, G, WATER, AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)~~
~~1, 1L, P, WATER, Tc-99 (HNO3)~~

BO 7055

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) FILTERED

~~BO 7056~~

~~3, 40ml, Gs, WATER, CLP VOA~~

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: Chris Celebrat Chris Celebrat	Received by: K. Trapp / K. Trapp	Date/Time: KT ~~7/25/92~~ 7/27/92 0900
Relinquished by: K. Trapp / K. Trapp	Received by: Abby A. Yamamoto	Date/Time: 7/28/92 3:45 PM
Relinquished by: Kermit Blum 7-29-92	Received by: Barb Prowel	Date/Time: 7/30/92 10:00
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

9613492.7920

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector: Les Walker/Kirby Lee — Date Sampled: 7/25/92 — Time: 0619 hour

Company Contact: P. H. Butcher — Telephone: (509) 376-5045

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
✓ B070J2	1; 1L, P; WATER; CLP-ICP/AA METALS & MERCURY (HNO_3) UNFILTERED		
✓	1; 1L; P; WATER; CLP-CYANIDE (NaOH)		
✓	~~3; 40ml; Gs; WATER; CLP VOA~~		
✓	~~3; 2L; aG; WATER; CLP SEMI VOA & PCB/PEST~~		
✓	~~1; 1L; P; WATER; ANIONS (IC) (SO4, F, PO4, Cl), CONDUCTIVITY, pH~~		
✓	~~2, 4L, P, WATER; GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC~~		
	~~(U 235/238, Pu 239/240, Am 241), Sr 90 (HNO_3)~~		
✓	~~1; 250 ml; G; WATER; TRITIUM~~		
✓	1; 500 ml; P; WATER; ANIONS (NO3, NO2) (H_2SO_4)		
✓	~~1; 1L; G; WATER; ALKALINITY, TOTAL DISSOLVED SOLIDS~~		
✓	~~1; 500 ml; G; WATER; SULFIDE (ZINC ACETATE PLUS NaOH pH>9)~~		
✓	~~1; 500 ml; G; WATER; AMMONIA, CHEMICAL OXYGEN DEMAND (H_2SO_4 pH<2)~~		
✓	~~1; 1L; P; WATER; Tc 99 (HCl)~~		
✓ ~~B070J6~~	~~3, 40ml, Gs, WATER, CLP VOA~~		
	1 KT 7/27/92		
✓ B070J5	3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986937-5
			OPC # WA2-0-0533-34
			TASK #

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

Received by Elby P. Yamamoto — Title Sample Control Tech. — Date 7/28/92

Analysis Required _____

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

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

A-6000-406

9613492.7921

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 100-BC-5

Collection Date 7/25/92

Ice Chest No. Bud

Field Logbook No. EFE-1037

Bill of Lading/Airbill No. ~~Fed~~ 2509869394-5

Offsite Property No. W92- ~~EFE-1037~~ 30 (CC 9/2)

W92-0-0533-~~33~~ (KT)

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B070K7

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) UNFILTERED
1, 1L, P, WATER, CLP-CYANIDE (NaOH)
~~3, 40ml, Gs, WATER, CLP-VOA~~
~~3, 2L, aG, WATER, CLP-SEMI-VOA & PCB/PEST~~
~~1, 1L, P, WATER, ANIONS(IC) (SO4,F,PO4,Cl), COND., pH~~
~~2, 4L, P, WATER, GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC (U-235/238,Pu-239/240, Am-241), Sr-90, C-14 (HNO3)~~
~~1, 250ml, G, WATER, TRIRIUM~~
1, 500ml, P, WATER, ANIONS(NO2,NO3) (H2SO4)
~~1, 1L, G, WATER, ALKALINITY, TOTAL DISSOLVED SOLIDS~~
~~1, 500ml, G, WATER, SULFIDE (ZINC ACETATE+NaOH pH>9)~~
~~1, 500ml, G, WATER, AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)~~
~~1, 1L, P, WATER, Tc-99 (HNO3)~~

B070L0

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) FILTERED

~~B070L1~~

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

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: C. Celebrek C. CELEBREK	Received by: K. Trapp / K. Trapp	Date/Time: ~~7/25/92~~ KT 7/27/92 0900
Relinquished by: K. Trapp / K. Trapp	Received by: Elky A. Yamamoto	Date/Time: 7/28/92 3:45 PM
Relinquished by: Kermit Blum 7-29-92	Received by: Barb Ronli	Date/Time: 7/30/92 10:00
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

9613492.7922

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/25/92 Time 0732 hour

Company Contact P. H. Butcher Telephone (509) 376-5045

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
✓ B070K7	1; 1L, P; WATER; CLP-ICP/AA METALS & MERCURY (HNO_3) UNFILTERED		
✓	1; 1L; P; WATER; CLP-CYANIDE (NaOH)		
✓	~~3, 40ml, Gs, WATER, CLP-VOA~~		
✓	~~3, 2L, aG, WATER, CLP-SEMI-VOA & PCB/PEST~~		
✓	~~1, 1L, P, WATER, ANIONS (IC) (SO4, F, PO4, Cl), CONDUCTIVITY, pH~~		
✓	~~2, 4L, P, WATER, GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC~~		
	~~(U-235/238, Pu-239/240, Am-241), Sr-90 (HNO_3)~~		
✓	~~1, 250 ml, G, WATER, TRITIUM~~		
✓	1; 500 ml; P; WATER; ANIONS (NO3, NO2) (H2SO4)		
✓	~~1, 1L, G, WATER, ALKALINITY, TOTAL DISSOLVED SOLIDS~~		
✓	~~1, 500 ml, G, WATER, SULFIDE (ZINC ACETATE PLUS NaOH pH>9)~~		
✓	~~1, 500 ml, G, WATER, AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)~~		
✓	~~1, 1L, P, WATER, Tc-99 (HCl)~~		
✓ ~~B070L1~~	~~3, 40ml, Gs, WATER, CLP-VOA~~		
	(KT 7/27/92		
✓ B070L0	~~3~~, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986939-5
			OPC # W92-0-0533-33
			TASK # ~~92-2444~~ KT 7/27/92 92-243

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

Received by Elby R. Yamamoto Title Sample Control Tech Date 7/28/92

Analysis Required _____

194

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

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

A-6000-406 (

9613492.7923

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 100-BC-5

Collection Date 7/25/92

Ice Chest No. ~~X~~ KT 7/27/92 #1C

Field Logbook No. EFL-1037

Bill of Lading/Airbill No. 250986979-5

Offsite Property No. W92-0-0533-30

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO 7254

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) UNFILTERED
1, 1L, P, WATER, CLP-CYANIDE (NaOH)
~~3, 40ml, Gs, WATER, CLP VOA~~
~~3, 2L, aG, WATER, CLP SEMI-VOA & PCB/PEST~~
~~1, 1L, P, WATER, ANIONS(IC) (SO4,F,PO4,Cl), COND., pH~~
~~2, 4L, P, WATER, GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC (U-235/238,Pu-239/240, Am-241), Sr-90, C-14 (HNO3)~~
~~1, 250ml, G, WATER, TRIRIUM~~
1, 500ml, P, WATER, ANIONS(NO2,NO3) (H2SO4)
~~1, 1L, G, WATER, ALKALINITY, TOTAL DISSOLVED SOLIDS~~
~~1, 500ml, G, WATER, SULFIDE (ZINC ACETATE+NaOH pH>9)~~
~~1, 500ml, G, WATER, AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)~~
~~1, 1L, P, WATER, Tc-99 (HNO3)~~

BO 7257

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) FILTERED

~~BO 7288~~

~~3, 40ml, Gs, WATER, CLP VOA~~

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: C Celiberti C.CELIBERTI ~~CCE~~ CC 7/25/92	Received by: Ken Trapp / Ken Trapp	Date/Time: KT ~~7/25/92~~ 7/27/92 0900
Relinquished by: K. Trapp / K. Trapp	Received by: Elby A. Yamamoto	Date/Time: 7/28/92 3:45 PM
Relinquished by: Hermit Blum 7-29-92	Received by: Bart Prowse	Date/Time: 7/30/92 10:00
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments: Bubbles on samples → BO7254 & BO7258 (VOA vials)

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

9613492.7924

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled ~~7/24/92~~ 7/27/92 KT 7/27/92 Time 1000 hou

Company Contact P. H. Butcher Telephone (509) 376-5045

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
✓ B072S4	1; 1L, P; WATER; CLP-ICP/AA METALS & MERCURY (HNO_3) UNFILTERED		
✓	1; 1L; P; WATER; CLP-CYANIDE (NaOH)		
✓	~~3; 40ml; Gs; WATER; CLP VOA~~		Bubbles
✓	~~3; 2L; aG; WATER; CLP SEMI-VOA & PCB/PEST~~		
✓	~~1; 1L; P; WATER; ANIONS (IC) (SO4, F, PO4, Cl), CONDUCTIVITY, pH~~		
✓	~~3; 4L; P; WATER; GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC~~		
	~~(U 235/238, Pu 239/240, Am 241), Sr 90 (HNO_3)~~		
✓	~~1; 250 ml; G; WATER; TRITIUM~~		
✓	1; 500 ml; P; WATER; ANIONS (NO3, NO2) (H2SO4)		
✓	~~1; 1L; G; WATER; ALKALINITY, TOTAL DISSOLVED SOLIDS~~		
✓	~~1; 500 ml; G; WATER; SULFIDE (ZINC ACETATE PLUS NaOH pH>9)~~		
✓	~~1; 500 ml; G; WATER; AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)~~		
✓	~~1; 1L; P; WATER; Tc-99 (HCl)~~		
✓ ~~B072S8~~	~~3, 40ml, Gs, WATER, CLP VOA~~		bubbles
	1 KT 7/27/92		
✓ B072S7	3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # KT 7/27/92 250996940-6
			OPC # W92-0-0533-30
			TASK # ~~92-243~~ KT 7/27/92 ~~92-244~~ 92-243

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

Received by Elby B. Yamamoto Title Sample Control Tech. Date 7/28/92

Analysis Required _____

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

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

A-6000-406 (

9613492.7925

TMA
Thermo Analytical Inc.

Skinner & Sherman Labs., Inc.
300 Second Avenue
Post Office Box 521
Waltham, MA 02254-0521
(617) 890-7200
FAX (617) 890-3883

RECORD COPY

OCT 1992
RECEIVED
OSM DMO

September 29, 1992

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

Quality Control Narrative

Scope
Six (6) water samples were submitted to TMA/Skinner & Sherman Laboratories, Inc. on July 30, 1992 from Westinghouse/Hanford Company. The samples were analyzed for the USEPA CLP Target Analyte List metals. The analysis was performed under TMA/Skinner and Sherman work order S207281.

Methodology
The samples were prepared, analyzed and reported in accordance with the USEPA Contract Laboratory Program Statement of Work ILM02.

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

The selenium and thallium digestion spike recovery 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.

David N. Peterson
Assistant Laboratory Manager

i 3/19/96 M.H.

9613492.7926

WESTINGHOUSE/HANFORD
1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B070J5

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

Lab Code: SKINER Case No.: N2-07-150SAS No.: SDG No.: B070J5

Matrix (soil/water): WATER Lab Sample ID: 07281-04S

Level (low/med): LOW Date Received: 07/30/92

% 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	23.9	B		P
7440-36-0	Antimony	16.3	U		P
7440-38-2	Arsenic	2.2	U		F
7440-39-3	Barium	32.6	B		P
7440-41-7	Beryllium	0.70	U		P
7440-43-9	Cadmium	1.5	U		P
7440-70-2	Calcium	48600			P
7440-47-3	Chromium	12.6			P
7440-48-4	Cobalt	3.5	U		P
7440-50-8	Copper	3.3	U		P
7439-89-6	Iron	7.6	U		P
7439-92-1	Lead	2.9	B	W	F
7439-95-4	Magnesium	8120			P
7439-96-5	Manganese	4.4	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	3.9	U		P
7440-09-7	Potassium	1860	B		P
7782-49-2	Selenium	2.8	U	WN	F
7440-22-4	Silver	4.8	U		P
7440-23-5	Sodium	10700			P
7440-28-0	Thallium	1.6	U	WN	F
7440-62-2	Vanadium	4.9	B		P
7440-66-6	Zinc	4.8	B		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

0002

Comments:

9613492.7927

WESTINGHOUSE/HANFORD
1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B070L0

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

Lab Code: SKINER Case No.: N2-07-150SAS No.: SDG No.: B070J5

Matrix (soil/water): WATER Lab Sample ID: 07281-05S

Level (low/med): LOW Date Received: 07/30/92

% 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	23.9	U		P
7440-36-0	Antimony	16.3	U		P
7440-38-2	Arsenic	3.4	B	W	F
7440-39-3	Barium	28.3	B		P
7440-41-7	Beryllium	0.70	U		P
7440-43-9	Cadmium	1.5	U		P
7440-70-2	Calcium	51400			P
7440-47-3	Chromium	10.8			P
7440-48-4	Cobalt	3.5	U		P
7440-50-8	Copper	3.8	U		P
7439-89-6	Iron	7.6	U		P
7439-92-1	Lead	3.7			F
7439-95-4	Magnesium	6710			P
7439-96-5	Manganese	4.4	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	3.9	U		P
7440-09-7	Potassium	3960	B		P
7782-49-2	Selenium	2.8	U	WN	F
7440-22-4	Silver	4.8	U		P
7440-23-5	Sodium	10800			P
7440-28-0	Thallium	1.6	U	WN	F
7440-62-2	Vanadium	4.4	B		P
7440-66-6	Zinc	2.9	U		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

0003

Comments:

9613492.7928

WESTINGHOUSE/HANFORD
1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B070L5

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

Lab Code: SKINER Case No.: N2-07-150SAS No.: SDG No.: B070J5

Matrix (soil/water): WATER Lab Sample ID: 07281-03S

Level (low/med): LOW Date Received: 07/30/92

% 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	23.9	U		P
7440-36-0	Antimony	16.3	U		P
7440-38-2	Arsenic	2.2	U		F
7440-39-3	Barium	18.4	B		P
7440-41-7	Beryllium	0.70	U		P
7440-43-9	Cadmium	1.5	U		P
7440-70-2	Calcium	48800			P
7440-47-3	Chromium	10.2			P
7440-48-4	Cobalt	3.5	U		P
7440-50-8	Copper	3.8	U		P
7439-89-6	Iron	29.8	B		P
7439-92-1	Lead	4.4			F
7439-95-4	Magnesium	7640			P
7439-96-5	Manganese	4.4	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	3.9	U		P
7440-09-7	Potassium	4610	B		P
7782-49-2	Selenium	2.8	U	WN	F
7440-22-4	Silver	4.8	U		P
7440-23-5	Sodium	11300			P
7440-28-0	Thallium	1.6	U	WN	F
7440-62-2	Vanadium	7.1	B		P
7440-66-6	Zinc	12.8	B		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts: 0004

Comments:

9613492.7929

WESTINGHOUSE/HANFORD
1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B072S7

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

Lab Code: SKINER Case No.: N2-07-150SAS No.: SDG No.: B070J5

Matrix (soil/water): WATER Lab Sample ID: 07281-06S

Level (low/med): LOW Date Received: 07/30/92

% 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	23.9	U		P
7440-36-0	Antimony	16.3	U		P
7440-38-2	Arsenic	4.0	B		F
7440-39-3	Barium	11.3	B		P
7440-41-7	Beryllium	0.70	U		P
7440-43-9	Cadmium	1.5	U		P
7440-70-2	Calcium	43900			P
7440-47-3	Chromium	21.0			P
7440-48-4	Cobalt	3.5	U		P
7440-50-8	Copper	3.8	U		P
7439-89-6	Iron	59.3	B		P
7439-92-1	Lead	2.2	U		F
7439-95-4	Magnesium	9600			P
7439-96-5	Manganese	4.4	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	3.9	U		P
7440-09-7	Potassium	6380			P
7782-49-2	Selenium	2.8	U	WN	F
7440-22-4	Silver	4.8	U		P
7440-23-5	Sodium	12600			P
7440-28-0	Thallium	1.6	U	WN	F
7440-62-2	Vanadium	13.1	B		P
7440-66-6	Zinc	2.9	U		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

0005

Comments:

9613492.7930

WESTINGHOUSE/HANFORD
1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B072X2

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

Lab Code: SKINER Case No.: N2-07-150SAS No.: SDG No.: B070J5

Matrix (soil/water): WATER Lab Sample ID: 07281-01S

Level (low/med): LOW Date Received: 07/30/92

% 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	23.9	U		P
7440-36-0	Antimony	16.3	U		P
7440-38-2	Arsenic	2.6	B	W	F
7440-39-3	Barium	4.6	U		P
7440-41-7	Beryllium	0.70	U		P
7440-43-9	Cadmium	1.5	U		P
7440-70-2	Calcium	58.4	B		P
7440-47-3	Chromium	4.9	U		P
7440-48-4	Cobalt	3.5	U		P
7440-50-8	Copper	3.8	U		P
7439-89-6	Iron	7.6	U		P
7439-92-1	Lead	2.2	U		F
7439-95-4	Magnesium	40.1	U		P
7439-96-5	Manganese	4.4	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	3.9	U		P
7440-09-7	Potassium	266	U		P
7782-49-2	Selenium	2.8	U	N	F
7440-22-4	Silver	4.8	U		P
7440-23-5	Sodium	93.3	B		P
7440-28-0	Thallium	1.6	U	WN	F
7440-62-2	Vanadium	2.4	U		P
7440-66-6	Zinc	5.4	B		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

0006

Comments:

WESTINGHOUSE/HANFORD
1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B072X7

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

Lab Code: SKINER Case No.: N2-07-150SAS No.: SDG No.: B070J5

Matrix (soil/water): WATER Lab Sample ID: 07281-02S

Level (low/med): LOW Date Received: 07/30/92

% 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	25.6	B		P
7440-36-0	Antimony	16.3	U		P
7440-38-2	Arsenic	2.2	U	W	F
7440-39-3	Barium	4.6	U		P
7440-41-7	Beryllium	0.70	U		P
7440-43-9	Cadmium	1.5	U		P
7440-70-2	Calcium	40.1	B		P
7440-47-3	Chromium	4.9	U		P
7440-48-4	Cobalt	3.5	U		P
7440-50-8	Copper	3.8	U		P
7439-89-6	Iron	7.6	U		P
7439-92-1	Lead	3.2			F
7439-95-4	Magnesium	40.1	U		P
7439-96-5	Manganese	4.4	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	3.9	U		P
7440-09-7	Potassium	266	U		P
7782-49-2	Selenium	2.8	U	N	F
7440-22-4	Silver	4.8	U		P
7440-23-5	Sodium	77.2	B		P
7440-28-0	Thallium	1.6	U	N	F
7440-62-2	Vanadium	2.4	U		P
7440-66-6	Zinc	3.1	B		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts 0007

Comments:

9613492.7952

TMA/Skinner & Sherman Labs SAMPLE LOG-IN

WORKORDER 5207281 CLIENT HANFORD NW No. SAMPLES: 6 (Soil) (Water) (Specify Other)

PROTCL CLP TURNARND 33 Days

COOLER TEMP: 4 oC, or NA

CUSTODIAN B. Proulx

CUSTODY SEAL: PRESENT/ABSENT/INTACT/NOT

SHIPER & # Fed Ex

TAGS: PRESENT/ABSENT/NA/SEE COC

CHAIN OF CUSTODY: PRESENT/ABSENT/NA, # N/A 7/31/92 BP

SDG/BATCH N/A

CLIENT CASE N207150

PO/CONTRACT# U

CONTACT D. Sanchez

COMMENTS: None

SAMPLE CONTAINERS-INTACT/BROKEN COMMENTS

CLIENT COMMENT? YES/NO

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

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

SHIPMENT DATES 7/30/92

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

Filtered

	CLIENT ID	MATRIX	RECEIVED	PH*	TEST(S) & QC	HOLD TIME UP
1	B072X2	water	7/30/92	1.77	Tm	Hg Due 8/13/92
2	B072X7	↓	↓	1.87	↓	
3	B070L5	↓	↓	1.84	↓	
4	B070J5	↓	↓	1.85	↓	
5	B070L0	↓	↓	1.85	↓	
6	B072S7	↓	↓	1.86	D.S ↓	
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						

Samples are from site known to have Rad-Contamination: YES ___ NO ___

Samples have detectable amounts of Radioactive Material: YES ___ NO ✓

SUBCONTRACT: YES/NO TO: _____ DATE: complete 7/31 BP

REVIEWED _____

* EPA/CLP required Rev 1.6 PAGE: 139

9613492.7955

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 100-BC-5

Collection Date 7/24/92

Ice Chest No. Fry

Field Logbook No. EFL-1036 XT 7127

Bill of Lading/Airbill No. 2509864939-5

Offsite Property No. W92-0-0533-3031

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B072W9

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) UNFILTERED
1, 1L, P, WATER, CLP-CYANIDE (NaOH)
~~2, 40ml, Gs, WATER, CLP VOA~~
~~2, 2L, aG, WATER, CLP SEMI VOA & PCB/PEST~~
~~1, 1L, P, WATER, ANIONS(IC) (SO4,F,PO4,Cl), COND., pH~~
~~2, 4L, P, WATER, GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC (U-235/238,Pu-239/240, Am-241), Sr-90, C-14 (HNO3)~~
~~1, 250ml, G, WATER, TRIRIUM~~
1, 500ml, P, WATER, ANIONS(NO2,NO3) (H2SO4)
~~1, 1L, G, WATER, ALKALINITY, TOTAL DISSOLVED SOLIDS~~
~~1, 500ml, G, WATER, SULFIDE (ZINC ACETATE+NaOH pH>9)~~
~~1, 500ml, G, WATER, AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)~~
~~1, 1L, P, WATER, Tc-99 (HNO3)~~

B072X2

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) FILTERED

~~B072X3~~

~~2, 40ml, Gs, WATER, CLP VOA~~

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: [illegible] K.D. Lee	Received by: K. Trapp / K. Trapp	Date/Time: 7/27/92 0900
Relinquished by: K. Trapp / K. Trapp	Received by: Elby G. Yamamoto	Date/Time: 7/28/92 3:45 PM
Relinquished by: Kermit Blum 7-29-92	Received by: Bart Prune	Date/Time: 7/30/92 10:00
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

:140

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

9613492.7934

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/24/92 Time 0900 hours

Company Contact P. H. Butcher Telephone (509) 376-5045

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
✓ B072W9	1; 1L, P; WATER; CLP-ICP/AA METALS & MERCURY (HNO_3) UNFILTERED		
✓	1; 1L; P; WATER; CLP-CYANIDE (NaOH)		
✓	~~3, 40ml, Gs, WATER, CLP VOA~~		
✓	~~3, 2L, aG; WATER; CLP SEMI VOA & PCB/PEST~~		
✓	~~1; 1L; P; WATER; ANIONS (IC) (SO4, F, PO4, Cl), CONDUCTIVITY, pH~~		
✓	~~2; 4L; P; WATER; GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC~~		
	~~(U 235/238, Pu 239/240, Am 241), Sr 90 (HNO_3)~~		
✓	~~1; 250 ml; G; WATER; TRITIUM~~		
✓	1; 500 ml; P; WATER; ANIONS (NO_3, NO_2) (H_2SO_4)		
✓	~~1; 1L; G; WATER; ALKALINITY, TOTAL DISSOLVED SOLIDS~~		
✓	~~1; 500 ml; G; WATER; SULFIDE (ZINC ACETATE PLUS NaOH pH>9)~~		
✓	~~1; 500 ml; G; WATER; AMMONIA, CHEMICAL OXYGEN DEMAND (H_2SO_4 pH<2)~~		
	~~1; 1L; P; WATER; Tc 99 (HCl)~~		
✓ ~~B072X3~~	~~3, 40ml, Gs, WATER, CLP VOA~~		
	KT 7/27/92		
✓ B072X2	3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO_3) FILTERED		
			BOL # 250986939-5
			OPC # W92-0-0533-31
			TASK # ~~92-244~~ 92-243 KT 7/27/92

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

Received by tlby G. yamamoto Title Sample Control Tech Date 7/28/92

Analysis Required _____

141

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

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

A-6000-136 (

9613492.7935
100-BC-5

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 100-BC-5

Collection Date 7/24/92

Ice Chest No. SML-95

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986939-5

Offsite Property No. W92-0-0533-31

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B072X4

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) UNFILTERED
1, 1L, P, WATER, CLP-CYANIDE (NaOH)
~~3, 40ml, Gs, WATER, CLP-VOA~~
~~3, 2L, aG, WATER, CLP-SEMI-VOA & PCB/PEST~~
~~1, 1L, P, WATER, ANIONS(IC) (SO4,F,PO4,Cl), COND., pH~~
~~2, 4L, P, WATER, GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC (U-235/238,Pu-239/240, Am-241), Sr-90, C-14 (HNO3)~~
~~1, 250ml, G, WATER, TRIRIUM~~
1, 500ml, P, WATER, ANIONS(NO2,NO3) (H2SO4)
~~1, 1L, G, WATER, ALKALINITY, TOTAL DISSOLVED SOLIDS~~
~~1, 500ml, G, WATER, SULFIDE (ZINC ACETATE+NaOH pH>9)~~
~~1, 500ml, G, WATER, AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)~~
~~1, 1L, P, WATER, Tc-99 (HNO3)~~

B072X7

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) FILTERED

~~B072X8~~

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

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: K.D. Lee	Received by: K. Trapp / K. Trapp	Date/Time: 7/27/92 0900
Relinquished by: K. Trapp / K. Trapp	Received by: Elby Yamamoto	Date/Time: 7/28/92 3:45 PM
Relinquished by: Kermit Blum 7-29-92	Received by: Barb Power	Date/Time: 7/30/92 10:00
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

142

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

9613492.7936

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/24/92 Time 0900 hour

Company Contact P. H. Butcher Telephone (509) 376-5045

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B072X4	1; 1L, P; WATER; CLP-ICP/AA METALS & MERCURY (HNO_3) UNFILTERED		
	1; 1L; P; WATER; CLP-CYANIDE (NaOH)		
	~~3; 40ml; Gs; WATER; CLP VOA~~		
	~~3; 2L; aG; WATER; CLP SEMI VOA & PCB/PEST~~		
	~~1; 1L; P; WATER; ANIONS (IC) (SO4, F, PO4, Cl), CONDUCTIVITY, pH~~		
	~~2; 1L; P; WATER; GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC~~		
	~~(U 235/238, Pu 239/240, Am 241), Sr 90 (HNO_3)~~		
	~~1; 250 ml; G; WATER; TRITIUM~~		
	1; 500 ml; P; WATER; ANIONS (NO3, NO2) (H2SO4)		
	~~1; 1L; G; WATER; ALKALINITY, TOTAL DISSOLVED SOLIDS~~		
	~~1; 500 ml; G; WATER; SULFIDE (ZINC AGETATE PLUS NaOH pH>9)~~		
	~~1; 500 ml; G; WATER; AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)~~		
	~~1; 1L; P; WATER; Tc 99 (HCl)~~		
~~B072X8~~	~~3, 40ml, Gs, WATER, CLP VOA~~		
	KT 7/27/92		
B072X7	~~3~~ 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986939-5
			OPC # W92-0-0533-~~30~~ 31 KT 7/27/9
			TASK # 92-243

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

Received by Elby G. Yamamoto Title Sample Control Tech. Date 7/28/92

Analysis Required _____

143

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

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

A-6000-406 (

9615492.7937

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 100-BC-5

Collection Date 7/25/92

Ice Chest No. GS-24

Field Logbook No. EFL-1037

Bill of Lading/Airbill No. 2509969395

Offsite Property No. W92-0-0533-34

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO 7042

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) UNFILTERED
1, 1L, P, WATER, CLP-CYANIDE (NaOH)
~~3, 40ml, Gs, WATER, CLP VOA~~
~~3, 2L, aG, WATER, CLP-SEMI-VOA & PCB/PEST~~
~~1, 1L, P, WATER, ANIONS(IC) (SO4,F,PO4,Cl), COND., pH~~
~~2, 4L, P, WATER, GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC (U-235/238,Pu-239/240, Am-241), Sr-90, C-14 (HNO3)~~
~~1, 250ml, G, WATER, TRIRIUM~~
1, 500ml, P, WATER, ANIONS(NO2,NO3) (H2SO4)
~~1, 1L, G, WATER, ALKALINITY, TOTAL DISSOLVED SOLIDS~~
~~1, 500ml, G, WATER, SULFIDE (ZINC ACETATE+NaOH pH>9)~~
~~1, 500ml, G, WATER, AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)~~
~~1, 1L, P, WATER, Tc 99 (HNO3)~~

BO 7045

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) FILTERED

~~BO 7044~~

~~3, 40ml, Gs, WATER, CLP VOA~~

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: C Celibuch C. Celibucki	Received by: K. Trapp / K. Trapp	Date/Time: ~~7/25/92~~ 7/27/92 0900
Relinquished by: K. Trapp / K. Trapp	Received by: Elby G. Yamamoto	Date/Time: 7/28/92 3:45 PM
Relinquished by: 7-29-92 Kermit Blum	Received by: Bonita Prowle	Date/Time: ~~7/30/92~~ 7/30/92 10
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

:144

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

9613492.2938

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/27/92 Time 0837 hour:

Company Contact P. H. Butcher Telephone (509) 376-5045

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
✓ B07QL2	1; 1L; P; WATER; CLP-ICP/AA METALS & MERCURY (HNO_3) UNFILTERED		
✓	1; 1L; P; WATER; CLP-CYANIDE (NaOH)		
	~~3; 40ml; Gs; WATER; CLP VOA~~		
✓	3; ~~2L; aG; WATER; CLP SEMI VOA & PCB/PEST~~		
✓	~~1; 1L; P; WATER; ANIONS (IC) (SO4, F, PO4, Cl), CONDUCTIVITY, pH~~		
✓	~~2; 4L; P; WATER; GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC~~		
	~~(U-235/238, Pu-239/240, Am-241), Sr-90 (HNO_3)~~		
✓	~~1; 250 ml; G; WATER; TRITIUM~~		
✓	1; 500 ml; P; WATER; ANIONS (NO3, NO2) (H2SO4)		
✓	~~1; 1L; G; WATER; ALKALINITY, TOTAL DISSOLVED SOLIDS~~		
✓	~~1; 500 ml; G; WATER; SULFIDE (ZINC ACETATE PLUS NaOH~~ pH>9)		
✓	~~1; 500 ml; G;~~ WATER; ~~AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)~~		
✓	~~1; 1L; P; WATER; Tc-99 (HCl)~~		
✓ ~~B07QL6~~	~~3, 40ml, Gs, WATER, CLP VOA~~		
	KR 7/27/92		
✓ B07QL5	~~3,~~ 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986939-5
			OPC # W92-0-0533-34
			TASK # 92-243

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

Received by Elky B. Yamamoto Title Sample Control Tech. Date 7/28/92

Analysis Required _____

145

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

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

A-6000-406 (

9613492.7939

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 100-BC-5

Collection Date 7/25/92

Ice Chest No. Billy

Field Logbook No. EFL-1037

Bill of Lading/Airbill No. 2509869939-5

Offsite Property No. W92-0-0533-34

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO 7052

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) UNFILTERED
1, 1L, P, WATER, CLP-CYANIDE (NaOH)
~~3, 40ml, G3, WATER, CLP VOA~~
~~3, 2L, aG, WATER, CLP-SEMI-VOA & PCB/PEST~~
~~1, 1L, P, WATER, ANIONS(IC) (SO4,F,PO4,Cl), COND., pH~~
~~2, 4L, P, WATER, GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC (U-235/238,Pu-239/240, Am-241), Sr-90, C-14 (HNO3)~~
~~1, 250ml, G, WATER, TRITIUM~~
1, 500ml, P, WATER, ANIONS(NO2,NO3) (H2SO4)
~~1, 1L, G, WATER, ALKALINITY, TOTAL DISSOLVED SOLIDS~~
~~1, 500ml, G, WATER, SULFIDE (ZINC ACETATE+NaOH pH>9)~~
~~1, 500ml, G, WATER, AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)~~
~~1, 1L, P, WATER, Tc-99 (HNO3)~~

BO 7055

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) FILTERED

~~BO 7056~~

~~3, 40ml, G3, WATER, CLP VOA~~

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: Chris Celebrat Chris Celebrat	Received by: K. Trapp / K. Trapp	Date/Time: ~~7/25/92~~ 7/27/92 0900
Relinquished by: K. Trapp / K. Trapp	Received by: Abby A. Yamamoto	Date/Time: 7/28/92 3:45 PM
Relinquished by: Kermit Blum 7-29-92	Received by: Barb Prowel	Date/Time: 7/30/92 10:00
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

9613492.7940

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/25/92 Time 0619 hours

Company Contact P. H. Butcher Telephone (509) 376-5045

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
✓ B070J2	1; 1L, P; WATER; CLP-ICP/AA METALS & MERCURY (HNO_3) UNFILTERED		
✓	1; 1L; P; WATER; CLP-CYANIDE (NaOH)		
✓	~~3; 40ml; Gs; WATER; CLP VOA~~		
✓	~~2; 2L; aG; WATER; CLP SEMI VOA & PCB/PEST~~		
✓	~~1; 1L; P; WATER; ANIONS (IC) (SO4, F, PO4, Cl), CONDUCTIVITY, pH~~		
✓	~~2; 4L; P; WATER; GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC~~		
	~~(U 235/238, Pu 239/240, Am 241), Sr 90 (HNO_3)~~		
✓	~~1; 250 ml; G; WATER; TRITIUM~~		
✓	1; 500 ml; P; WATER; ANIONS (NO3, NO2) (H2SO4)		
✓	~~1; 1L; G; WATER; ALKALINITY, TOTAL DISSOLVED SOLIDS~~		
✓	~~1; 500 ml; G; WATER; SULFIDE (ZINC ACETATE PLUS NaOH pH>9)~~		
✓	~~1; 500 ml; G; WATER; AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)~~		
✓	~~1; 1L; P; WATER; Tc 99 (HCl)~~		
✓ ~~B070J6~~	~~3, 40ml, Gs, WATER, CLP VOA~~		
	1 KT 7/27/92		
✓ B070J5	3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986937-5
			OPC # WA2-0-0533-34
			TASK #

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

Received by Elby P. Yamamoto Title Sample Control Tech. Date 7/28/92

Analysis Required _____

147

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

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

A-6000

9613492.7941

Westinghouse Hanford Company	CHAIN OF CUSTODY	S&S

Custody Form Initiator PH BUTCHER

Company Contact PH BUTCHER

Project Designation/Sampling Locations 100-BC-5

Ice Chest No. Bud

Bill of Lading/Airbill No. ~~Bud~~ 2509869394-5

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Telephone (509)376-5045

Collection Date 7/25/92

Field Logbook No. EFL-1037

Offsite Property No. W92- ~~EFL-1037~~ 30

W92-0-0533-~~33~~

Sample Identification

B070K7

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) UNFILTERED
1, 1L, P, WATER, CLP-CYANIDE (NaOH)
~~3, 40ml, Gs, WATER, CLP-VOA~~
~~3, 2L, aG, WATER, CLP-SEMI-VOA & PCB/PEST~~
~~1, 1L, P, WATER, ANIONS(IC) (SO4,F,PO4,Cl), COND., pH~~
~~2, 4L, P, WATER, GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC (U-235/238,Pu-239/240, Am-241), Sr-90, C-14 (HNO3)~~
~~1, 250ml, G, WATER, TRIRIUM~~
1, 500ml, P, WATER, ANIONS(NO2,NO3) (H2SO4)
~~1, 1L, G, WATER, ALKALINITY, TOTAL DISSOLVED SOLIDS~~
~~1, 500ml, G, WATER, SULFIDE (ZINC ACETATE+NaOH pH>9)~~
~~1, 500ml, G, WATER, AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)~~
~~1, 1L, P, WATER, Tc-99 (HNO3)~~

B070L0

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) FILTERED

~~B070L1~~

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

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: C. Celebrezze C. CELEBREZZE	Received by: K. Trapp / K. Trapp	Date/Time: ~~7/25/92~~ KT 7/27/92 0900
Relinquished by: K. Trapp / K. Trapp	Received by: Ebby S. Yamamoto	Date/Time: 7/28/92 3:45 PM
Relinquished by: Kermit Blum 7-29-92	Received by: Barb Prowle	Date/Time: 7/30/92 10:00
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

148

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

9613492.7942

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/25/92 Time 0732 hour

Company Contact P. H. Butcher Telephone (509) 376-5045

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
✓ B070K7	1; 1L, P; WATER; CLP-ICP/AA METALS & MERCURY (HNO_3) UNFILTERED		
✓	1; 1L; P; WATER; CLP-CYANIDE (NaOH)		
✓	~~3; 40ml; Gs; WATER; CLP-VOA~~		
✓	~~3; 2L; aG; WATER; CLP-SEMI-VOA & PCB/PEST~~		
✓	~~1; 1L; P; WATER; ANIONS (IC) (SO4, F, PO4, Cl), CONDUCTIVITY, pH~~		
✓	~~2; 4L; P; WATER; GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC~~		
	~~(U 235/238, Pu 239/240, Am-241), Sr-90 (HNO_3)~~		
✓	~~1; 250 ml; G; WATER; TRITIUM~~		
✓	1; 500 ml; P; WATER; ANIONS (NO3, NO2) (H2SO4)		
✓	~~1; 1L; G; WATER; ALKALINITY, TOTAL DISSOLVED SOLIDS~~		
✓	~~1; 500 ml; G; WATER; SULFIDE (ZINC ACETATE PLUS NaOH pH>9)~~		
✓	~~1; 500 ml; G; WATER; AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)~~		
✓	~~1; 1L; P; WATER; Tc 99 (HCl)~~		
✓ ~~B070L1~~	~~3, 40ml, Gs, WATER, CLP-VOA~~		
	KT 7/27/92		
✓ B070L0	~~3,~~ 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986939-5
			OPC # W92-0-0533-33
			TASK # ~~92-2444~~ KT 7/27/92 92-243

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

Received by Elby R. Yamamoto Title Sample Control Tech Date 7/28/92

Analysis Required _____

149

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

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

A-6000-406

9613492.7943

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 100-BC-5

Collection Date 7/25/92

Ice Chest No. ~~X~~ KT 7/27/92 #1C

Field Logbook No. EFL-1037

Bill of Lading/Airbill No. 250986939-5

Offsite Property No. W92-0-0733-30

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B0 7254

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) UNFILTERED
1, 1L, P, WATER, CLP-CYANIDE (NaOH)
~~3, 40ml, Gs, WATER, CLP VOA~~
~~3, 2L, aG, WATER, CLP SEMI-VOA & PCB/PEST~~
~~1, 1L, P, WATER, ANIONS(IC) (SO4,F,PO4,Cl), COND., pH~~
~~2, 4L, P, WATER, GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC (U-235/238,Pu-239/240, Am-241), Sr-90, C-14 (HNO3)~~
~~1, 250ml, G, WATER, TRITIUM~~
1, 500ml, P, WATER, ANIONS(NO2,NO3) (H2SO4)
~~1, 1L, G, WATER, ALKALINITY, TOTAL DISSOLVED SOLIDS~~
~~1, 500ml, G, WATER, SULFIDE (ZINC ACETATE+NaOH pH>9)~~
~~1, 500ml, G, WATER, AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)~~
~~1, 1L, P, WATER, Tc-99 (HNO3)~~

B0 7257

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) FILTERED

~~B0 7258~~

~~3, 40ml, Gs, WATER, CLP VOA~~

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: C Celiberti C.CELIBERTI ~~C.CEL~~ CC 7/25/92	Received by: Ken Trapp / Ken Trapp	Date/Time: KT ~~7/25/92~~ 7/27/92 0900
Relinquished by: K. Trapp / K. Trapp	Received by: Elky A. Yamamoto	Date/Time: 7/28/92 3:45 PM
Relinquished by: Hermit Blum 7-29-92	Received by: Bart Prowse	Date/Time: 7/30/92 10:00
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments: Bubbles on samples → B07254 & B07258 (VOA vials)

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

150

9613492.7944

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled ~~7/24/92~~ 7/25/92 KT 7/27/92 Time 1000 hour

Company Contact P. H. Butcher Telephone (509) 376-5045

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
✓ B072S4	1; 1L, P; WATER; CLP-ICP/AA METALS & MERCURY (HNO_3) UNFILTERED		
✓	1; 1L; P; WATER; CLP-CYANIDE (NaOH)		
✓	~~3; 40ml; Gs; WATER; CLP VOA~~		Bubbles
✓	~~3; 2L; aG; WATER; CLP SEMI VOA & PCB/PEST~~		
✓	~~1; 1L; P; WATER; ANIONS (IC) (SO4, F, PO4, Cl), CONDUCTIVITY, pH~~		
✓	~~3; 4L; P; WATER; GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC~~		
	~~(U-235/238, Pu-239/240, Am-241), Sr-90 (HNO_3)~~		
✓	~~1; 250 ml; G; WATER; TRITIUM~~		
✓	1; 500 ml; P; WATER; ANIONS (NO3, NO2) (H2SO4)		
✓	~~1; 1L; G; WATER; ALKALINITY, TOTAL DISSOLVED SOLIDS~~		
✓	~~1; 500 ml; G; WATER; SULFIDE (ZINC ACETATE PLUS NaOH pH>9)~~		
✓	~~1; 500 ml; G; WATER; AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)~~		
✓	~~1; 1L; P; WATER; Tc-99 (HCl)~~		
✓ ~~B072S8~~	~~3, 40ml, Gs, WATER, CLP VOA~~		Bubbles
	1 KT 7/27/92		
✓ B072S7	3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # KT 7/27/92 250996940-6
			OPC # WA2-0-0533-30
			TASK # ~~92-243~~ KT 7/27/92 ~~92-244~~ 92-243

Field Information**

Special Handling and/or Storage

Possible Sample Hazards

PART II: LABORATORY SECTION

Received by Elby G. Yamamoto Title Sample Control Tech. Date 7/28/92

Analysis Required

151

*Indicate whether sample is soil, sludge, water, etc.
**Use back of page for additional information relative to sample location.

A-6000-406 (0

SDG 7070 Contact Dinkar P. Kharkar	Client Westinghouse Hanford Contract MBH-SVV-069262

CASE NARRATIVE

1.0 GENERAL

Water sample results from Location 100-BC-5 (TMA/Norcal Group 7070) are reported herein. TMA/Norcal Group 7070 is comprised of the ten samples listed on the Chain-of-Custody documents and is identified as Sample 1 through 10.

1.1 CHAINS-OF-CUSTODY

This report includes data from samples delivered under Chain-of-Custody documents Field Logbook No. EFL-1036 and 1037.

1.2 SAMPLE VOLUME

4 L and 1 L plastic bottles and 250 mL glass bottles containing the samples were received for the analyses.

1.3 MISSING SAMPLES

All samples were accounted for in an undamaged condition.

1.4 HOLDING TIMES

The collection was made between 7/23/92 and 7/25/92 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 7070-11 through 17.

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 and pass the 3 σ protocol limits. The MDA for ^{59}Fe was above the RDL requirement of 30.0 pCi/L because of the short half life of ^{59}Fe. The MDA for all other nuclides meet the RDL requirement.

2.2 BLANKS

MDA's for all the analyses meet the RDL requirements.

001B
11/24/92

SDG 7070 Contact Dinkar P. Kharkar	Client Westinghouse Hanford Contract MBH-SVV-069262

CASE NARRATIVE

2.3 REPLICATES

Results were satisfactory for all replicate analyses. The MDA's for ^{14}C, ^{59}Fe, ^{99}Tc, ^{137}Cs, ^{238}Pu, and ^{241}Am were underlined in the data sheets because the MDA's exceed RDL. The MDA of the replicate of ^{14}C was higher than RDL due to low counting efficiency. The MDA of the original of ^{99}Tc was higher than RDL due to low chemical yield of 40%. The MDA of the replicate of ^{238}Pu was also higher than RDL due to low chemical yield of 41%. The MDA of the replicate of ^{241}Am was 0.052 pCi/L instead of RDL of 0.050 pCi/L. The MDA's of ^{59}Fe for the original and replicate were higher than RDL due to the short half life of ^{59}Fe.

3.0 ANALYTICAL NOTES

3.1 Gross Alpha Analyses: The average MDA for gross alpha was 2.3 ± 1.4 pCi/L Positive gross alpha concentration above RDL was only found in 7070-9. The results of the remaining samples were less than MDA.

3.2 Gross Beta Analyses: The average MDA for gross beta was 2.0 ± 0.34 pCi/L. Positive gross beta concentration above RDL was found in all samples except in 7070-4, 5, and 6.

3.3 Tritium Analyses: The average yield for thirteen analyses was 250 ± 5.5 pCi/L. Positive ^{3}H concentration above RDL was found in all samples except in 7070-4, 5, and 6.

3.4 Carbon-14 Analyses: The average MDA was 41 ± 21 pCi/L. All the results were less than MDA except in 7070-1 and 2. MDA of 7070-2 was above RDL due to low counting efficiency.

3.5 Strontium-90 Analyses: The average yield for thirteen analyses was (77 ± 11%). The lowest yield was 63% and the highest was 84%. The average MDA was 0.63 ± 0.084 pCi/L. Positive ^{90}Sr concentration above RDL was found in 7070-1, 2, 3, 7, 8, and 9.

3.6 Technicium-99 Analyses: The average yield for thirteen analyses was (56 ± 21%). The lowest yield was 36% and the highest was 72%. The average MDA was 3.9 ± 2.3 pCi/L. Positive concentration above RDL was found in all of the samples except in 7070-4, 5, and 6. The MDA's for 7070-1 and 7 were higher than RDL because of low chemical recoveries.

3.7 Uranium-233, 234, 234, and 238 Analyses: The average yield for thirteen analyses was (42 ± 17%). The lowest yield was 27% and the highest was 53%. The average MDA was 0.15 ± 0.062 pCi/L. Positive concentration of ^{234}U and ^{238}U were found in all the samples except in 7070-4, 5, and 6.

001C
TD 11/24/92

SDG 7070	Client Westinghouse Hanford
Contact Dinkar P. Kharkar	Contract MBH-SVV-069262

CASE NARRATIVE

3.8 Plutonium-238, 239/240 Analyses: The average yield for thirteen analyses was (49 ± 22%). The lowest yield was 36% and the highest was 71%. The average MDA was 0.037 ± 0.022 pCi/L. Positive plutonium concentration was not found in any of the samples. Plutonium-238 in the blank was positive due to contamination.

3.9 Americium-241 Analyses: The average yield for fifteen analyses was (64 ± 18%). The lowest yield was 49% and the highest was 77%. The average MDA was 0.031 ± 0.023 pCi/L. Positive americium concentration was not found in any of the samples. All sample results were below MDA.

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

001D
11/24/92

9613492.7948

TMA NORCAL

REPORTING GROUP 7070

DATA SHEET

N207140-08

B070J2

SDG	7070	Client	Westinghouse Hanford
Contact	Dinkar Kharkar	Contract	MBH-SVV-069262
Lab sample id	N207140-08	Client sample id	B070J2
Dept sample id	7070-008	Matrix	WATER
Received	07/23/92	Collected	07/25/92
% moisture		Chain of custody id	EFL-1036

PARAMETER	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	Alpha	1.9	2.9	2.8	3.0	U	80A
Gross Beta	Beta	140	4.8	2.1	4.0		80B
Uranium 233/234		1.1	0.29	0.19	0.20		U
Uranium 235	15117-96-1	0.097	0.097	0.12	0.20	U	U
Uranium 238	7440-61-1	1.1	0.27	0.10	0.20		U
Plutonium 238	13981-16-3	0.010	0.020	0.036	0.050	U	PU
Plutonium 239/240		0	0.005	0.019	0.050	U	PU
Americium 241	14596-10-2	0.006	0.018	0.037	0.050	U	AM
Strontium 90	10098-97-2	44	1.3	0.62	2.0		Y
Technetium 99	14133-76-7	92	9.2	4.7	5.0		TC
Tritium	10028-17-8	3500	280	250	400		H
Carbon 14	14762-75-5	-5.2	19	31	50	UX	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	U		210		U	GAM
Iron 59		U		78	30	U	GAM
Chromium 51	14392-02-0	U		360		U	GAM
Cobalt 60	10198-40-0	U		15	25	U	GAM
Zinc 65	17982-39-3	U		34		U	GAM
Ruthenium 106	13967-48-1	U		130		U	GAM
Cesium 134	17967-70-9	U		15		U	GAM
Cesium 137	10045-97-3	U		14	15	U	GAM
Europium 152	14683-23-9	U		27	40	U	GAM
Europium 154	15585-10-1	U		16	40	U	GAM
Radium 226	13982-67-7	U		26		U	GAM
Thorium 228	14274-82-9	U		20		U	GAM
Thorium 232	7440-29-1	U		59		U	GAM

Lab id	TMAN
Protocol	WHC-HEIS
Version	Ver 1.0
Form	DVD-DS
Version	2.20
Report date	11/09/92

9613492.7949

TMA NORCAL
REPORTING GROUP 7070

DATA SHEET

N207140-09

B070K7

SDG 7070
Contact Dinkar Kharkar
Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N207140-09
Dept sample id 7070-009
Received 07/23/92
% moisture
Client sample id B070K7
Matrix WATER
Collected 07/25/92
Chain of custody id EFL-1036

PARAMETER	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	Alpha	3.1	2.8	2.9	3.0		80A
Gross Beta	Beta	79	3.7	2.1	4.0		80B
Uranium 233/234		0.77	0.20	0.12	0.20		U
Uranium 235	15117-96-1	0.045	0.046	0.087	0.20	U	U
Uranium 238	7440-61-1	0.72	0.18	0.072	0.20		U
Plutonium 238	13981-16-3	-0.005	0.025	0.047	0.050	U	PU
Plutonium 239/240		-0.005	0.005	0.023	0.050	U	PU
Americium 241	14596-10-2	0.005	0.016	0.025	0.050	U	AM
Strontium 90	10098-97-2	22	0.88	0.63	2.0		Y
Technetium 99	14133-76-7	68	3.6	3.6	5.0		TC
Tritium	10028-17-8	2700	260	250	400		H
Carbon 14	14762-75-5	-12	26	43	50	UX	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	U		150		U	GAM
Iron 59		U		73	30	U	GAM
Chromium 51	14392-02-0	U		370		U	GAM
Cobalt 60	10198-40-0	U		13	25	U	GAM
Zinc 65	17982-39-3	U		26		U	GAM
Ruthenium 106	13967-48-1	U		100		U	GAM
Cesium 134	17967-70-9	U		12		U	GAM
Cesium 137	10045-97-3	U		11	15	U	GAM
Europium 152	14683-23-9	U		22	40	U	GAM
Europium 154	15585-10-1	U		14	40	U	GAM
Radium 226	13982-67-7	U		24		U	GAM
Thorium 228	14274-82-9	U		22		U	GAM
Thorium 232	7440-29-1	U		42		U	GAM

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.20
Report date 11/09/92

9613492.7950

N207140-07

TMA NORCAL
REPORTING GROUP 7070

DATA SHEET

B070L2

SDG 7070
Contact Dinkar Kharkar
Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N207140-07
Dept sample id 7070-007
Received 07/23/92
% moisture
Client sample id B070L2
Matrix WATER
Collected 07/25/92
Chain of custody id EFL-1036

PARAMETER	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	Alpha	-0.57	2.3	2.9	3.0	U	80A
Gross Beta	Beta	91	3.9	2.2	4.0		80B
Uranium 233/234		0.59	0.16	0.095	0.20		U
Uranium 235	15117-96-1	0.052	0.063	0.080	0.20	U	U
Uranium 238	7440-61-1	0.54	0.15	0.066	0.20		U
Plutonium 238	13981-16-3	-0.009	0.009	0.043	0.050	U	PU
Plutonium 239/240		0.009	0.009	0.035	0.050	U	PU
Americium 241	14596-10-2	0.009	0.019	0.032	0.050	U	AM
Strontium 90	10098-97-2	26	4.2	0.66	2.0		Y
Technetium 99	14133-76-7	65	4.9	6.6	5.0		TC
Tritium	10028-17-8	3000	260	250	400		H
Carbon 14	14762-75-5	12	22	36	50	UX	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	U		160		U	GAM
Iron 59		U		71	30	U	GAM
Chromium 51	14392-02-0	U		330		U	GAM
Cobalt 60	10198-40-0	U		18	25	U	GAM
Zinc 65	17982-39-3	U		32		U	GAM
Ruthenium 106	13967-48-1	U		100		U	GAM
Cesium 134	17967-70-9	U		12		U	GAM
Cesium 137	10045-97-3	U		12	15	U	GAM
Europium 152	14683-23-9	U		23	40	U	GAM
Europium 154	15585-10-1	U		15	40	U	GAM
Radium 226	13982-67-7	U		23		U	GAM
Thorium 228	14274-82-9	U		20		U	GAM
Thorium 232	7440-29-1	U		49		U	GAM

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.20
Report date 11/09/92

9613492.7951

TMA NORCAL

REPORTING GROUP 7070

DATA SHEET

N207140-01

B070L7

SDG	7070	Client	Westinghouse Hanford
Contact	Dinkar Kharkar	Contract	MBH-SVV-069262
Lab sample id	N207140-01	Client sample id	B070L7
Dept sample id	7070-001	Matrix	WATER
Received	07/23/92	Collected	07/23/92
% moisture		Chain of custody id	EFL-1036

PARAMETER	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	Alpha	1.3	2.3	2.8	3.0	U	80A
Gross Beta	Beta	55	3.1	2.1	4.0		80B
Uranium 233/234		0.60	0.25	0.15	0.20		U
Uranium 235	15117-96-1	0.024	0.049	0.19	0.20	U	U
Uranium 238	7440-61-1	0.34	0.17	0.15	0.20		U
Plutonium 238	13981-16-3	0.005	0.014	0.028	0.050	U	PU
Plutonium 239/240		0.002	0.009	0.017	0.050	U	PU
Americium 241	14596-10-2	0.003	0.021	0.037	0.050	U	AM
Strontium 90	10098-97-2	6.2	1.5	0.69	2.0		Y
Technetium 99	14133-76-7	64	5.2	5.6	5.0		TC
Tritium	10028-17-8	2800	250	240	400		H
Carbon 14	14762-75-5	290	41	44	50	X	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	U		85		U	GAM
Iron 59		U		51	30	U	GAM
Chromium 51	14392-02-0	U		230		U	GAM
Cobalt 60	10198-40-0	U		12	25	U	GAM
Zinc 65	17982-39-3	U		16		U	GAM
Ruthenium 106	13967-48-1	U		74		U	GAM
Cesium 134	17967-70-9	U		9.2		U	GAM
Cesium 137	10045-97-3	U		7.7	15	U	GAM
Europium 152	14683-23-9	U		17	40	U	GAM
Europium 154	15585-10-1	U		11	40	U	GAM
Radium 226	13982-67-7	U		16		U	GAM
Thorium 228	14274-82-9	U		13		U	GAM
Thorium 232	7440-29-1	U		34		U	GAM

Lab id	TMAN
Protocol	WHC-HEIS
Version	Ver 1.0
Form	DVD-DS
Version	2.20
Report date	11/09/92

9613492.7952

TMA NORCAL
REPORTING GROUP 7070

DATA SHEET

N207140-02

B070M2

SDG	7070	Client	Westinghouse Hanford
Contact	Dinkar Kharkar	Contract	MBH-SVV-069262
Lab sample id	N207140-02	Client sample id	B070M2
Dept sample id	7070-002	Matrix	WATER
Received	07/23/92	Collected	07/23/92
% moisture		Chain of custody id	EFL-1036

PARAMETER	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	Alpha	0.38	2.1	2.8	3.0	U	80A
Gross Beta	Beta	48	2.9	1.7	4.0		80B
Uranium 233/234		0.82	0.26	0.19	0.20		U
Uranium 235	15117-96-1	0.042	0.042	0.16	0.20	U	U
Uranium 238	7440-61-1	0.64	0.22	0.13	0.20		U
Plutonium 238	13981-16-3	0.007	0.020	0.033	0.050	U	PU
Plutonium 239/240		0	0.005	0.019	0.050	U	PU
Americium 241	14596-10-2	0.007	0.028	0.047	0.050	U	AM
Strontium 90	10098-97-2	8.1	0.57	0.61	2.0		Y
Technetium 99	14133-76-7	66	5.2	3.0	5.0		TC
Tritium	10028-17-8	2800	260	250	400		H
Carbon 14	14762-75-5	250	38	60	50	X	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	U		170		U	GAM
Iron 59		U		56	30	U	GAM
Chromium 51	14392-02-0	U		260		U	GAM
Cobalt 60	10198-40-0	U		11	25	U	GAM
Zinc 65	17982-39-3	U		21		U	GAM
Ruthenium 106	13967-48-1	U		92		U	GAM
Cesium 134	17967-70-9	U		9.7		U	GAM
Cesium 137	10045-97-3	U		10	15	U	GAM
Europium 152	14683-23-9	U		19	40	U	GAM
Europium 154	15585-10-1	U		11	40	U	GAM
Radium 226	13982-67-7	U		18		U	GAM
Thorium 228	14274-82-9	U		14		U	GAM
Thorium 232	7440-29-1	U		70		U	GAM

Lab id	TMAN
Protocol	WHC-HEIS
Version	Ver 1.0
Form	DVD-DS
Version	2.20
Report date	11/09/92

9613492.7953

N207140-03

TMA NORCAL
REPORTING GROUP 7070

DATA SHEET

B070N2

SDG 7070
Contact Dinkar Kharkar

Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N207140-03
Dept sample id 7070-003
Received 07/23/92
% moisture

Client sample id B070N2
Matrix WATER
Collected 07/23/92
Chain of custody id EFL-1036

PARAMETER	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	Alpha	0.64	2.4	2.6	3.0	U	80A
Gross Beta	Beta	95	3.9	1.9	4.0		80B
Uranium 233/234		0.69	0.19	0.087	0.20		U
Uranium 235	15117-96-1	0.041	0.055	0.11	0.20	U	U
Uranium 238	7440-61-1	0.54	0.17	0.087	0.20		U
Plutonium 238	13981-16-3	-0.003	0.017	0.041	0.050	U	PU
Plutonium 239/240		0	0.006	0.022	0.050	U	PU
Americium 241	14596-10-2	0	0.015	0.030	0.050	U	AM
Strontium 90	10098-97-2	29	1.0	0.57	2.0		Y
Technetium 99	14133-76-7	64	3.5	3.1	5.0		TC
Tritium	10028-17-8	2900	260	250	400		H
Carbon 14	14762-75-5	-1.5	18	34	50	UX	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	U		110		U	GAM
Iron 59		U		49	30	U	GAM
Chromium 51	14392-02-0	U		260		U	GAM
Cobalt 60	10198-40-0	U		8.0	25	U	GAM
Zinc 65	17982-39-3	U		18		U	GAM
Ruthenium 106	13967-48-1	U		74		U	GAM
Cesium 134	17967-70-9	U		8.4		U	GAM
Cesium 137	10045-97-3	U		8.3	15	U	GAM
Europium 152	14683-23-9	U		16	40	U	GAM
Europium 154	15585-10-1	U		10	40	U	GAM
Radium 226	13982-67-7	U		16		U	GAM
Thorium 228	14274-82-9	U		28		U	GAM
Thorium 232	7440-29-1	U		36		U	GAM

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.20
Report date 11/09/92

9613492.7954

TMA NORCAL

REPORTING GROUP 7070

DATA SHEET

N207140-10

B072S4

SDG	7070	Client	Westinghouse Hanford
Contact	Dinkar Kharkar	Contract	MBH-SVV-069262
Lab sample id	N207140-10	Client sample id	B072S4
Dept sample id	7070-010	Matrix	WATER
Received	07/23/92	Collected	07/25/92
% moisture		Chain of custody id	EFL-1036

PARAMETER	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	Alpha	2.2	2.8	3.4	3.0	U	80A
Gross Beta	Beta	33	2.6	2.1	4.0		80B
Uranium 233/234		0.72	0.23	0.15	0.20		U
Uranium 235	15117-96-1	0.048	0.065	0.12	0.20	U	U
Uranium 238	7440-61-1	0.51	0.17	0.10	0.20		U
Plutonium 238	13981-16-3	-0.002	0.014	0.031	0.050	U	PU
Plutonium 239/240		-0.004	0.007	0.019	0.050	U	PU
Americium 241	14596-10-2	0.003	0.010	0.020	0.050	U	AM
Strontium 90	10098-97-2	0.62	0.97	0.66	2.0	U	Y
Technetium 99	14133-76-7	48	4.0	4.4	5.0		TC
Tritium	10028-17-8	1900	230	250	400		H
Carbon 14	14762-75-5	11	24	39	50	UX	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	U		160		U	GAM
Iron 59		U		93	30	U	GAM
Chromium 51	14392-02-0	U		360		U	GAM
Cobalt 60	10198-40-0	U		19	25	U	GAM
Zinc 65	17982-39-3	U		30		U	GAM
Ruthenium 106	13967-48-1	U		110		U	GAM
Cesium 134	17967-70-9	U		13		U	GAM
Cesium 137	10045-97-3	U		13	15	U	GAM
Europium 152	14683-23-9	U		24	40	U	GAM
Europium 154	15585-10-1	U		16	40	U	GAM
Radium 226	13982-67-7	U		23		U	GAM
Thorium 228	14274-82-9	U		21		U	GAM
Thorium 232	7440-29-1	U		50		U	GAM

Lab id	TMAN
Protocol	WHC-HEIS
Version	Ver 1.0
Form	DVD-DS
Version	2.20
Report date	11/09/92

9613492.7955

TMA NORCAL
REPORTING GROUP 7070

DATA SHEET

N207140-04

B072W4

SDG	7070	Client	Westinghouse Hanford
Contact	Dinkar Kharkar	Contract	MBH-SVV-069262
Lab sample id	N207140-04	Client sample id	B072W4
Dept sample id	7070-004	Matrix	WATER
Received	07/23/92	Collected	07/23/92
% moisture		Chain of custody id	EFL-1036

PARAMETER	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	Alpha	0.26	1.1	1.7	3.0	U	80A
Gross Beta	Beta	-0.43	0.98	1.7	4.0	U	80B
Uranium 233/234		0.055	0.066	0.12	0.20	U	U
Uranium 235	15117-96-1	0.027	0.027	0.10	0.20	U	U
Uranium 238	7440-61-1	0.055	0.066	0.084	0.20	U	U
Plutonium 238	13981-16-3	0	0.008	0.030	0.050	U	PU
Plutonium 239/240		0	0.008	0.030	0.050	U	PU
Americium 241	14596-10-2	-0.013	0.015	0.036	0.050	U	AM
Strontium 90	10098-97-2	-0.51	0.85	0.63	2.0	U	Y
Technetium 99	14133-76-7	1.5	2.1	4.0	5.0	U	TC
Tritium	10028-17-8	86	160	250	400	U	H
Carbon 14	14762-75-5	-0.35	16	31	50	UX	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	U		210		U	GAM
Iron 59		U		76	30	U	GAM
Chromium 51	14392-02-0	U		350		U	GAM
Cobalt 60	10198-40-0	U		14	25	U	GAM
Zinc 65	17982-39-3	U		31		U	GAM
Ruthenium 106	13967-48-1	U		120		U	GAM
Cesium 134	17967-70-9	U		13		U	GAM
Cesium 137	10045-97-3	U		12	15	U	GAM
Europium 152	14683-23-9	U		23	40	U	GAM
Europium 154	15585-10-1	U		16	40	U	GAM
Radium 226	13982-67-7	U		22		U	GAM
Thorium 228	14274-82-9	U		19		U	GAM
Thorium 232	7440-29-1	U		52		U	GAM

Lab id	TMAN
Protocol	WHC-HEIS
Version	Ver 1.0
Form	DVD-DS
Version	2.20
Report date	11/09/92

9613492.7956

N207140-05

TMA NORCAL
REPORTING GROUP 7070

DATA SHEET

B072W9

SDG 7070
Contact Dinkar Kharkar
Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N207140-05
Dept sample id 7070-005
Received 07/23/92
% moisture
Client sample id B072W9
Matrix WATER
Collected 07/24/92
Chain of custody id EFL-1036

PARAMETER	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	Alpha	0.035	0.98	1.6	3.0	U	80A
Gross Beta	Beta	0.20	1.2	2.0	4.0	U	80B
Uranium 233/234		0.034	0.069	0.13	0.20	U	U
Uranium 235	15117-96-1	0	0.042	0.16	0.20	U	U
Uranium 238	7440-61-1	0	0.034	0.13	0.20	U	U
Plutonium 238	13981-16-3	0	0.008	0.030	0.050	U	PU
Plutonium 239/240		0	0.008	0.030	0.050	U	PU
Americium 241	14596-10-2	-0.014	0.014	0.037	0.050	U	AM
Strontium 90	10098-97-2	0.055	0.78	0.62	2.0	U	Y
Technetium 99	14133-76-7	3.1	1.1	3.2	5.0	U	TC
Tritium	10028-17-8	280	170	250	400	J	H
Carbon 14	14762-75-5	3.1	24	46	50	UX	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	U		200		U	GAM
Iron 59		U		65	30	U	GAM
Chromium 51	14392-02-0	U		370		U	GAM
Cobalt 60	10198-40-0	U		14	25	U	GAM
Zinc 65	17982-39-3	U		25		U	GAM
Ruthenium 106	13967-48-1	U		110		U	GAM
Cesium 134	17967-70-9	U		14		U	GAM
Cesium 137	10045-97-3	U		13	15	U	GAM
Europium 152	14683-23-9	U		22	40	U	GAM
Europium 154	15585-10-1	U		16	40	U	GAM
Radium 226	13982-67-7	U		22		U	GAM
Thorium 228	14274-82-9	U		19		U	GAM
Thorium 232	7440-29-1	U		51		U	GAM

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.20
Report date 11/09/92

9613492.7957

N207140-06

TMA NORCAL
REPORTING GROUP 7070

DATA SHEET

B072X4

SDG 7070
Contact Dinkar Kharkar
Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N207140-06
Dept sample id 7070-006
Received 07/23/92
% moisture
Client sample id B072X4
Matrix WATER
Collected 07/24/92
Chain of custody id EFL-1036

PARAMETER	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	Alpha	-0.37	0.87	1.6	3.0	U	80A
Gross Beta	Beta	0.20	1.2	2.0	4.0	U	80B
Uranium 233/234		0.043	0.086	0.14	0.20	U	U
Uranium 235	15117-96-1	0	0.035	0.13	0.20	U	U
Uranium 238	7440-61-1	0.043	0.057	0.11	0.20	U	U
Plutonium 238	13981-16-3	0	0.008	0.031	0.050	U	PU
Plutonium 239/240		0	0.008	0.031	0.050	U	PU
Americium 241	14596-10-2	0	0.019	0.044	0.050	U	AM
Strontium 90	10098-97-2	-0.43	0.91	0.74	2.0	U	Y
Technetium 99	14133-76-7	1.5	1.4	3.7	5.0	U	TC
Tritium	10028-17-8	120	160	250	400	U	H
Carbon 14	14762-75-5	-5.6	21	38	50	UX	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	U		110		U	GAM
Iron 59		U		68	30	U	GAM
Chromium 51	14392-02-0	U		350		U	GAM
Cobalt 60	10198-40-0	U		10	25	U	GAM
Zinc 65	17982-39-3	U		18		U	GAM
Ruthenium 106	13967-48-1	U		100		U	GAM
Cesium 134	17967-70-9	U		12		U	GAM
Cesium 137	10045-97-3	U		11	15	U	GAM
Europium 152	14683-23-9	U		20	40	U	GAM
Europium 154	15585-10-1	U		13	40	U	GAM
Radium 226	13982-67-7	U		23		U	GAM
Thorium 228	14274-82-9	U		19		U	GAM
Thorium 232	7440-29-1	U		50		U	GAM

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.20
Report date 11/09/92

9613492.7958

Westinghouse Hanford Company	CHAIN OF CUSTODY

Custody Form Initiator PH BUTCHER

Company Contact PH BUTCHER

Telephone (509)376-5045

Project Designation/Sampling Locations 100-BC-5

Collection Date 7-23-92

Ice Chest No. 46 STQ

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986836-1

Offsite Property No. W92-D-0533-29

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO70L7

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) UNFILTERED
1, 1L, P, WATER, CLP-CYANIDE (NaOH)
3, 40ml, Gs, WATER, CLP-VOA
3, 2L, aG, WATER, CLP-SEMI-VOA & PCB/PEST
1, 1L, P, WATER, ANIONS(IC) (SO4,F,PO4,Cl), COND., pH
2, 4L, P, WATER, GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC (U-235/238,Pu-239/240, Am-241), Sr-90, C-14 (HNO3)
1, 250ml, G, WATER, TRIRIUM
1, 500ml, P, WATER, ANIONS(NO2,NO3) (H2SO4)
1, 1L, G, WATER, ALKALINITY, TOTAL DISSOLVED SOLIDS
1, 500ml, G, WATER, SULFIDE (ZINC ACETATE+NaOH pH>9)
1, 500ml, G, WATER, AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)
1, 1L, P, WATER, Tc-99 (HNO3)

BO70M0

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) FILTERED

BO70M1

3, 40ml, Gs, WATER, CLP-VOA

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: L.D. Walker LD Walker	Received by: K. Trapp / K. Trapp	Date/Time: 7/24/92 1000
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 7-27-92 0800 *
Relinquished by:	Received by:	Date/Time:
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

* Received @ TMA / NORCAL 7-25-92; opened 7-27-92 · KB

000063 11/25/9

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

9613492.7959

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/23/92 Time ~~1040~~ 1226 hour KT 7/24/9

Company Contact P. H. Butcher Telephone (509) 376-5045

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070L7	1; 1L, P; WATER; CLP-ICP/AA METALS & MERCURY (HNO_3) UNFILTERED		
	1; 1L; P; WATER; CLP-CYANIDE (NaOH)		
	3; 40ml; Gs; WATER; CLP-VOA		
	3; 2L; aG; WATER; CLP-SEMI-VOA & PCB/PEST		
	1; 1L; P; WATER; ANIONS (IC) (SO4, F, PO4, Cl), CONDUCTIVITY, pH		
	2; 4L; P; WATER; GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC		
	(U-235/238, Pu-239/240, Am-241), Sr-90 (HNO_3)		
	1; 250 ml; G; WATER; TRITIUM		
	1; 500 ml; P; WATER; ANIONS (NO3, NO2) (H2SO4)		
	1; 1L; G; WATER; ALKALINITY, TOTAL DISSOLVED SOLIDS		
	1; 500 ml; G; WATER; SULFIDE (ZINC ACETATE PLUS NaOH pH>9)		
	1; 500 ml; G; WATER; AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)		
	1; 1L; P; WATER; Tc-99 (HCl)		
	KT 7/24/92		
B070M01	3, 40ml, Gs, WATER, CLP-VOA		
	1 KT 7/24/92		
B070M0	~~3~~ 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986 936-1
			OPC # WG2-0-0533-28
			TASK # 92-243

Field Information**

Special Handling and/or Storage

Possible Sample Hazards

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 7-27-92

Analysis Required

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

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

A-6000-406 (C

9613492.7960

Westinghouse Hanford Company	CHAIN OF CUSTODY

Custody Form Initiator PH BUTCHER

Company Contact PH BUTCHER

Telephone (509)376-5045

Project Designation/Sampling Locations 100-BC-5

Collection Date 7-23-92

Ice Chest No. SML-3

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986836-1

Offsite Property No. W92-0-0533-28

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO 70M2

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) UNFILTERED
1, 1L, P, WATER, CLP-CYANIDE (NaOH)
3, 40ml, Gs, WATER, CLP-VOA
3, 2L, aG, WATER, CLP-SEMI-VOA & PCB/PEST
* 1, 1L, P, WATER, ANIONS(IC) (SO4,F,PO4,Cl), COND., pH
2, 4L, P, WATER, GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC (U-235/238,Pu-239/240, Am-241), Sr-90, C-14 (HNO3)
1, 250ml, G, WATER, TRIRIUM
* 1, 500ml, P, WATER, ANIONS(NO2,NO3) (H2SO4)
1, 1L, G, WATER, ALKALINITY, TOTAL DISSOLVED SOLIDS
1, 500ml, G, WATER, SULFIDE (ZINC ACETATE+NaOH pH>9)
1, 500ml, G, WATER, AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)
1, 1L, P, WATER, Tc-99 (HNO3)

BO 70M5

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) FILTERED

BO 70M6

3, 40ml, Gs, WATER, CLP-VOA

[] Field Transfer of Custody — Chain of Possession — (Sign and Print Names)

Relinquished by:	Received by:	Date/Time:
L.D. Walker LD Walker	K. Trapp / K. Trapp	7/24/92 1000
K. Trapp / K. Trapp	Kermit Blum	7-27-92 0800 **

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments: ** Received @ TMA/Norcal 7-25-92 ; opened 7-27-92 - KB

* Label requesting ANIONS (IC) (SO_4, F, PO_4, Cl) is on 500 ml bottle
Label requesting ANIONS (NO_2, NO_3) is on 1 liter bottle. KB

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

9613492.7961

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/24/92 Time 1102 hour

Company Contact P. H. Butcher Telephone (509) 376-5045

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070M2	1; 1L, P; WATER; CLP-ICP/AA METALS & MERCURY (HNO_3) UNFILTERED		
	1; 1L; P; WATER; CLP-CYANIDE (NaOH)		
	3; 40ml; Gs; WATER; CLP-VOA		
	3; 2L; aG; WATER; CLP-SEMI-VOA & PCB/PEST		
*	1; 1L; P; WATER; ANIONS (IC) (SO4, F, PO4, Cl), CONDUCTIVITY, pH		
	2; 4L; P; WATER; GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC		
	(U-235/238, Pu-239/240, Am-241), Sr-90 (HNO_3)		
	1; 250 ml; G; WATER; TRITIUM		
*	1; 500 ml; P; WATER; ANIONS (NO3, NO2)	(H2SO4)	
	1; 1L; G; WATER; ALKALINITY, TOTAL DISSOLVED SOLIDS		
	1; 500 ml; G; WATER; SULFIDE (ZINC ACETATE PLUS NaOH pH>9)		
	1; 500 ml; G; WATER; AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)		
	1; 1L; P; WATER; Tc-99 (HCl)		
B070M6	3, 40ml, Gs, WATER, CLP-VOA		
	1 KC 7/24/92		
B070M5	3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986836-1
			OPC # W92-0-0533-28
			TASK # 92-243

Field Information**

Special Handling and/or Storage

Possible Sample Hazards

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 7-27-92

Analysis Required

* Note: ANIONS labels on wrong size containers - KB

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

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

000066

A-6000-406 (0

9613492.7962

Westinghouse Hanford Company	CHAIN OF CUSTODY

Custody Form Initiator PH BUTCHER

Company Contact PH BUTCHER

Telephone (509)376-5045

Project Designation/Sampling Locations 100-BC-5

Collection Date 7-23-92

Ice Chest No. SML-17

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 2509868 36-1

Offsite Property No. W92-0-0533-29

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO 70N2

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) UNFILTERED
1, 1L, P, WATER, CLP-CYANIDE (NaOH)
3, 40ml, Gs, WATER, CLP-VOA
3, 2L, aG, WATER, CLP-SEMI-VOA & PCB/PEST
1, 1L, P, WATER, ANIONS(IC) (SO4,F,PO4,Cl), COND., pH
2, 4L, P, WATER, GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC (U-235/238,Pu-239/240, Am-241), Sr-90, C-14 (HNO3)
1, 250ml, G, WATER, TRIRIUM
1, 500ml, P, WATER, ANIONS(NO2,NO3) (H2SO4)
1, 1L, G, WATER, ALKALINITY, TOTAL DISSOLVED SOLIDS
1, 500ml, G, WATER, SULFIDE (ZINC ACETATE+NaOH pH>9)
1, 500ml, G, WATER, AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)
1, 1L, P, WATER, Tc-99 (HNO3)

BO 70N5

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) FILTERED

BO 70N6

3, 40ml, Gs, WATER, CLP-VOA

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: L.D. Walker / L.D. Walker	Received by: K. Trapp / K. Trapp	Date/Time: 7/24/92 1000
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 7-27-92 0800 *
Relinquished by:	Received by:	Date/Time:
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

* Received @ TMA / NORCAL 7-25-92; opened 7-27-92 · KB

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

9613492.7963

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/23/92 Time 0840 hour

Company Contact P. H. Butcher Telephone (509) 376-5045

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070N2	1; 1L; P; WATER; CLP-ICP/AA METALS & MERCURY (HNO_3) UNFILTERED		
	1; 1L; P; WATER; CLP-CYANIDE (NaOH)		
	3; 40ml; Gs; WATER; CLP-VOA		
	3; 2L; aG; WATER; CLP-SEMI-VOA & PCB/PEST		
	1; 1L; P; WATER; ANIONS (IC) (SO4, F, PO4, Cl), CONDUCTIVITY, pH		
	2; 4L; P; WATER; GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC		
	(U-235/238, Pu-239/240, Am-241), Sr-90 (HNO_3)		
	1; 250 ml; G; WATER; TRITIUM		
	1; 500 ml; P; WATER; ANIONS (NO3, NO2) (H2SO4)		
	1; 1L; G; WATER; ALKALINITY, TOTAL DISSOLVED SOLIDS		
	1; 500 ml; G; WATER; SULFIDE (ZINC ACETATE PLUS NaOH pH>9)		
	1; 500 ml; G; WATER; AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)		
	1; 1L; P; WATER; Tc-99 (HCl)		
B070N6	3, 40ml, Gs, WATER, CLP-VOA		
B070N5	3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986936-1
			OPC # W92-0-0533-29
			TASK # 92-243

Field Information**

Special Handling and/or Storage

Possible Sample Hazards

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 7-27-92

Analysis Required

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

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

000068

A-6000-406 (C

9613492.7964

Westinghouse Hanford Company	CHAIN OF CUSTODY

Custody Form Initiator PH BUTCHER

Company Contact PH BUTCHER

Telephone (509)376-5045

Project Designation/Sampling Locations 100-BC-5

Collection Date 7-23-92

Ice Chest No. SML-30

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 2509966936-1

Offsite Property No. W92-0-0533-29

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO72W4

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) UNFILTERED
1, 1L, P, WATER, CLP-CYANIDE (NaOH)
3, 40ml, Gs, WATER, CLP-VOA
3, 2L, aG, WATER, CLP-SEMI-VOA & PCB/PEST
1, 1L, P, WATER, ANIONS(IC) (SO4,F,PO4,Cl), COND., pH
2, 4L, P, WATER, GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC (U-235/238,Pu-239/240, Am-241), Sr-90, C-14 (HNO3)
1, 250ml, G, WATER, TRIRIUM
1, 500ml, P, WATER, ANIONS(NO2,NO3) (H2SO4)
1, 1L, G, WATER, ALKALINITY, TOTAL DISSOLVED SOLIDS
1, 500ml, G, WATER, SULFIDE (ZINC ACETATE+NaOH pH>9)
1, 500ml, G, WATER, AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)
1, 1L, P, WATER, Tc-99 (HNO3)

BO72W7

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) FILTERED

BO72W8

3, 40ml, Gs, WATER, CLP-VOA

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: L.D. Walker LD Walker	Received by: K. Trapp / K. Trapp	Date/Time: 7/24/92 1000
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 7-27-92 0800 *
Relinquished by:	Received by:	Date/Time:
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

* Received @ TMA/NORCAL 7-25-92 ; opened 7-27-92 . KB

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

000069

9613492.7965

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/23/92 Time 0643 hour

Company Contact P. H. Butcher Telephone (509) 376-5045

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
KT 7/23/92			
B06 B072W4	1; 1L, P; WATER; CLP-ICP/AA METALS & MERCURY (HNO_3) UNFILTERED		
	1; 1L; P; WATER; CLP-CYANIDE (NaOH)		
	3; 40ml; Gs; WATER; CLP-VOA		
	3; 2L; aG; WATER; CLP-SEMI-VOA & PCB/PEST		
	1; 1L; P; WATER; ANIONS (IC) (SO4, F, PO4, Cl), CONDUCTIVITY, pH		
	2; 4L; P; WATER; GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC		
	(U-235/238, Pu-239/240, Am-241), Sr-90 (HNO_3)		
	1; 250 ml; G; WATER; TRITIUM		
	1; 500 ml; P; WATER; ANIONS (NO3, NO2) (H2SO4)		
	1; 1L; G; WATER; ALKALINITY, TOTAL DISSOLVED SOLIDS		
	1; 500 ml; G; WATER; SULFIDE (ZINC ACETATE PLUS NaOH pH>9)		
	1; 500 ml; G; WATER; AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)		
	1; 1L; P; WATER; Tc-99 (HCl)		
B072W8	3, 40ml, Gs, WATER, CLP-VOA		
	KT 7/24/92		
B072W7	~~3~~, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250496936-1
			OPC # W92-0-0533-29
			TASK # 92-243

Field Information**

Special Handling and/or Storage

Possible Sample Hazards

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 7-27-92

Analysis Required

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

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

A-6000-406 (0

9613492.7966

Westinghouse Hanford Company	CHAIN OF CUSTODY

Custody Form Initiator PH BUTCHER

Company Contact PH BUTCHER

Telephone (509)376-5045

Project Designation/Sampling Locations 100-BC-5

Collection Date 7/24/92

Ice Chest No. Fry

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 2509864377-5

Offsite Property No. W92-0-0533-3021

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B072W9

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) UNFILTERED
1, 1L, P, WATER, CLP-CYANIDE (NaOH)
3, 40ml, Gs, WATER, CLP-VOA
3, 2L, aG, WATER, CLP-SEMI-VOA & PCB/PEST
1, 1L, P, WATER, ANIONS(IC) (SO4,F,PO4,Cl), COND., pH
2, 4L, P, WATER, GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC (U-235/238,Pu-239/240, Am-241), Sr-90, C-14 (HNO3)
1, 250ml, G, WATER, TRIRIUM
1, 500ml, P, WATER, ANIONS(NO2,NO3) (H2SO4)
1, 1L, G, WATER, ALKALINITY, TOTAL DISSOLVED SOLIDS
1, 500ml, G, WATER, SULFIDE (ZINC ACETATE+NaOH pH>9)
1, 500ml, G, WATER, AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)
1, 1L, P, WATER, Tc-99 (HNO3)

B072X2

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) FILTERED

B072X3

3, 40ml, Gs, WATER, CLP-VOA

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: [illegible]	Received by: K. Trapp / K. Trapp	Date/Time: 7/27/92 0900
Relinquished by: K. Trapp / K. Trapp	Received by: [illegible] G. Yamamoto	Date/Time: 7/28/92 3:45 PM
Relinquished by:	Received by:	Date/Time:
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

9613492.7967

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/24/92 Time 0900 hours

Company Contact P. H. Butcher Telephone (509) 376-5045

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
✓ B072W9	1; 1L, P; WATER; CLP-ICP/AA METALS & MERCURY (HNO_3) UNFILTERED		
✓	1; 1L; P; WATER; CLP-CYANIDE (NaOH)		
✓	3; 40ml; Gs; WATER; CLP-VOA		
✓	3; 2L; aG; WATER; CLP-SEMI-VOA & PCB/PEST		
✓	1; 1L; P; WATER; ANIONS (IC) (SO4, F, PO4, Cl), CONDUCTIVITY, pH		
✓	2; 4L; P; WATER; GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC		
	(U-235/238, Pu-239/240, Am-241), Sr-90 (HNO_3)		
✓	1; 250 ml; G; WATER; TRITIUM		
✓	1; 500 ml; P; WATER; ANIONS (NO3, NO2) (H2SO4)		
✓	1; 1L; G; WATER; ALKALINITY, TOTAL DISSOLVED SOLIDS		
✓	1; 500 ml; G; WATER; SULFIDE (ZINC ACETATE PLUS NaOH pH>9)		
✓	1; 500 ml; G; WATER; AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)		
✓	1; 1L; P; WATER; Tc-99 (HCl)		
✓ B072X3	3, 40ml, Gs, WATER, CLP-VOA		
	1 KT 7/27/92		
✓ B072X2	3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986929-5
			OPC # W92-0-0533-31
			TASK # ~~92-244~~ 92-243 KT 7/27/92

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

Received by Elby G. Yamamoto Title Sample Control Tech Date 7/28/92

Analysis Required _____

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

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

A-6000-406 (0

9613492.7968
100-BC-5

Westinghouse Hanford Company	CHAIN OF CUSTODY

Custody Form Initiator PH BUTCHER

Company Contact PH BUTCHER

Telephone (509)376-5045

Project Designation/Sampling Locations 100-BC-5

Collection Date 7/24/92

Ice Chest No. SML-95

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986939-5

Offsite Property No. W92-0-0533-31

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B072X4

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) UNFILTERED
1, 1L, P, WATER, CLP-CYANIDE (NaOH)
3, 40ml, Gs, WATER, CLP-VOA
3, 2L, aG, WATER, CLP-SEMI-VOA & PCB/PEST
1, 1L, P, WATER, ANIONS(IC) (SO4,F,PO4,Cl), COND., pH
2, 4L, P, WATER, GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC (U-235/238,Pu-239/240, Am-241), Sr-90, C-14 (HNO3)
1, 250ml, G, WATER, TRIRIUM
1, 500ml, P, WATER, ANIONS(NO2,NO3) (H2SO4)
1, 1L, G, WATER, ALKALINITY, TOTAL DISSOLVED SOLIDS
1, 500ml, G, WATER, SULFIDE (ZINC ACETATE+NaOH pH>9)
1, 500ml, G, WATER, AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)
1, 1L, P, WATER, Tc-99 (HNO3)

B072X7

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) FILTERED

B072X8

3, 40ml, Gs, WATER, CLP-VOA

[] Field Transfer of Custody — Chain of Possession — (Sign and Print Names)

Relinquished by:	Received by:	Date/Time:
[illegible] K.D. Lee	K. Trapp / K. Trapp	7/27/92 0900
Relinquished by: K. Trapp / K. Trapp	Received by: Elby Yamamoto	Date/Time: 7/28/92 3:45 PM
Relinquished by:	Received by:	Date/Time:
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

9613492.7969

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/24/92 Time 0900 hour

Company Contact P. H. Butcher Telephone (509) 376-5045

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B072X4	1; 1L, P; WATER; CLP-ICP/AA METALS & MERCURY (HNO_3) UNFILTERED		
	1; 1L; P; WATER; CLP-CYANIDE (NaOH)		
	3; 40ml; Gs; WATER; CLP-VOA		
	3; 2L; aG; WATER; CLP-SEMI-VOA & PCB/PEST		
	1; 1L; P; WATER; ANIONS (IC) (SO4, F, PO4, Cl), CONDUCTIVITY, pH		
	2; 4L; P; WATER; GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC		
	(U-235/238, Pu-239/240, Am-241), Sr-90 (HNO_3)		
	1; 250 ml; G; WATER; TRITIUM		
	1; 500 ml; P; WATER; ANIONS (NO3, NO2) (H_2SO_4)		
	1; 1L; G; WATER; ALKALINITY, TOTAL DISSOLVED SOLIDS		
	1; 500 ml; G; WATER; SULFIDE (ZINC ACETATE PLUS NaOH pH>9)		
	1; 500 ml; G; WATER; AMMONIA, CHEMICAL OXYGEN DEMAND (H_2SO_4 pH<2)		
	1; 1L; P; WATER; Tc-99 (HCl)		
B072X8	3, 40ml, Gs, WATER, CLP-VOA		
	KT 7/27/92		
B072X7	3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250936939-5
			OPC # W92-0-0533-30 31 KT 7/27/92
			TASK # 92-243

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

Received by Elky G. Yamamoto Title Sample Control Tech. Date 7/28/92

Analysis Required _____

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

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

9613492.7970

Westinghouse Hanford Company	CHAIN OF CUSTODY

Custody Form Initiator PH BUTCHER

Company Contact PH BUTCHER

Telephone (509)376-5045

Project Designation/Sampling Locations 100-BC-5

Collection Date 7/25/92

Ice Chest No. GS-24

Field Logbook No. EFL-1037

Bill of Lading/Airbill No. 250996939-5

Offsite Property No. W92-0-0533-34

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO 7042

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) UNFILTERED
1, 1L, P, WATER, CLP-CYANIDE (NaOH)
3, 40ml, Gs, WATER, CLP-VOA
3, 2L, aG, WATER, CLP-SEMI-VOA & PCB/PEST
1, 1L, P, WATER, ANIONS(IC) (SO4,F,PO4,Cl), COND., pH
2, 4L, P, WATER, GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC (U-235/238,Pu-239/240, Am-241), Sr-90, C-14 (HNO3)
1, 250ml, G, WATER, TRIRIUM
1, 500ml, P, WATER, ANIONS(NO2,NO3) (H2SO4)
1, 1L, G, WATER, ALKALINITY, TOTAL DISSOLVED SOLIDS
1, 500ml, G, WATER, SULFIDE (ZINC ACETATE+NaOH pH>9)
1, 500ml, G, WATER, AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)
1, 1L, P, WATER, Tc-99 (HNO3)

BO 7045

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) FILTERED

BO 7046

3, 40ml, Gs, WATER, CLP-VOA

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: C Celiberti C. Celiberti	Received by: K. Trapp / K Trapp	Date/Time: ~~7/25/92~~ 7/27/92 0900
Relinquished by: K. Trapp / K Trapp	Received by: Elby B. Yamamoto	Date/Time: 7/28/92 3:45 PM
Relinquished by:	Received by:	Date/Time:
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

000075

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

9613492.7971

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/25/92 Time 0837 hour

Company Contact P. H. Butcher Telephone (509) 376-5045

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
✓ B07QL2	1; 1L; P; WATER; CLP-ICP/AA METALS & MERCURY (HNO_3) UNFILTERED		
✓	1; 1L; P; WATER; CLP-CYANIDE (NaOH)		
	3; 40ml; Gs; WATER; CLP-VOA		
✓	3; 2L; aG; WATER; CLP-SEMI-VOA & PCB/PEST		
✓	1; 1L; P; WATER; ANIONS (IC) (SO4, F, PO4, Cl), CONDUCTIVITY, pH		
✓	2; 4L; P; WATER; GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC		
	(U-235/238, Pu-239/240, Am-241), Sr-90 (HNO_3)		
✓	1; 250 ml; G; WATER; TRITIUM		
✓	1; 500 ml; P; WATER; ANIONS (NO3, NO2) (H2SO4)		
✓	1; 1L; G; WATER; ALKALINITY, TOTAL DISSOLVED SOLIDS		
✓	1; 500 ml; G; WATER; SULFIDE (ZINC ACETATE PLUS NaOH pH>9)		
✓	1; 500 ml; G; WATER; AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)		
✓	1; 1L; P; WATER; Tc-99 (HCl)		
✓ B07QL6	3, 40ml, Gs, WATER, CLP-VOA		
	KT 7/27/92		
✓ B07QL5	~~3~~, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250985939-5
			OPC # W92-0-0533-34
			TASK # 92-243

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

Received by Elky B. Yamamoto Title Sample Control Tech. Date 7/28/92

Analysis Required _____

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

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

A-6000-406 (0

9615492.7972

Westinghouse Hanford Company	CHAIN OF CUSTODY

Custody Form Initiator PH BUTCHER

Company Contact PH BUTCHER

Telephone (509)376-5045

Project Designation/Sampling Locations 100-BC-5

Collection Date 7/25/92

Ice Chest No. Billy

Field Logbook No. EFL-1057

Bill of Lading/Airbill No. 250986939-5

Offsite Property No. W92-0-0533-34

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO 7052

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) UNFILTERED
1, 1L, P, WATER, CLP-CYANIDE (NaOH)
3, 40ml, Gs, WATER, CLP-VOA
3, 2L, aG, WATER, CLP-SEMI-VOA & PCB/PEST
1, 1L, P, WATER, ANIONS(IC) (SO4,F,PO4,Cl), COND., pH
2, 4L, P, WATER, GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC (U-235/238,Pu-239/240, Am-241), Sr-90, C-14 (HNO3)
1, 250ml, G, WATER, TRIRIUM
1, 500ml, P, WATER, ANIONS(NO2,NO3) (H2SO4)
1, 1L, G, WATER, ALKALINITY, TOTAL DISSOLVED SOLIDS
1, 500ml, G, WATER, SULFIDE (ZINC ACETATE+NaOH pH>9)
1, 500ml, G, WATER, AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)
1, 1L, P, WATER, Tc-99 (HNO3)

BO 7055

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) FILTERED

BO 7056

3, 40ml, Gs, WATER, CLP-VOA

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: Chris Celebrat Chris Celebrat	Received by: K. Trapp / K. Trapp	Date/Time: KT ~~7/25/92~~ 7/27/92 0400
Relinquished by: K. Trapp / K. Trapp	Received by: Abby M. Yamamoto	Date/Time: 7/28/92 3:45 PM
Relinquished by:	Received by:	Date/Time:
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

000077

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

9613492.7973

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/25/92 Time 0619 hours

Company Contact P. H. Butcher Telephone (509) 376-5045

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
✓ B070J2	1; 1L, P; WATER; CLP-ICP/AA METALS & MERCURY (HNO_3) UNFILTERED		
✓	1; 1L; P; WATER; CLP-CYANIDE (NaOH)		
✓	3; 40ml; Gs; WATER; CLP-VOA		
✓	3; 2L; aG; WATER; CLP-SEMI-VOA & PCB/PEST		
✓	1; 1L; P; WATER; ANIONS (IC) (SO4, F, PO4, Cl), CONDUCTIVITY, pH		
✓	2; 4L; P; WATER; GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC		
	(U-235/238, Pu-239/240, Am-241), Sr-90 (HNO_3)		
✓	1; 250 ml; G; WATER; TRITIUM		
✓	1; 500 ml; P; WATER; ANIONS (NO3, NO2) (H2SO4)		
✓	1; 1L; G; WATER; ALKALINITY, TOTAL DISSOLVED SOLIDS		
✓	1; 500 ml; G; WATER; SULFIDE (ZINC ACETATE PLUS NaOH pH>9)		
✓	1; 500 ml; G; WATER; AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)		
✓ ✓	1; 1L; P; WATER; Tc-99 (HCl)		
✓ B070J6	3, 40ml, Gs, WATER, CLP-VOA		
	KT 7/27/92		
✓ B070J5	3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 25098 to 939-5
			OPC # WA2-0-0533-34
			TASK #

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

Received by Elby P. Yamamoto Title Sample Control Tech. Date 7/28/92

Analysis Required _____

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

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

A-6000-406 (0

9613492.7974

Westinghouse Hanford Company	CHAIN OF CUSTODY

Custody Form Initiator PH BUTCHER

Company Contact PH BUTCHER

Project Designation/Sampling Locations 100-BC-5

Ice Chest No. Bad

Bill of Lading/Airbill No. ~~Fed~~ 2509865939-5

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Telephone (509)376-5045

Collection Date 7/25/92

Field Logbook No. EE-1037

Offsite Property No. W92- ~~EE-1037~~ 30

W92-0-0533-~~33~~

Sample Identification

BO70K7

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) UNFILTERED
1, 1L, P, WATER, CLP-CYANIDE (NaOH)
3, 40ml, Gs, WATER, CLP-VOA
3, 2L, aG, WATER, CLP-SEMI-VOA & PCB/PEST
1, 1L, P, WATER, ANIONS(IC) (SO4,F,PO4,Cl), COND., pH
2, 4L, P, WATER, GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC (U-235/238,Pu-239/240, Am-241), Sr-90, C-14 (HNO3)
1, 250ml, G, WATER, TRIRIUM
1, 500ml, P, WATER, ANIONS(NO2,NO3) (H2SO4)
1, 1L, G, WATER, ALKALINITY, TOTAL DISSOLVED SOLIDS
1, 500ml, G, WATER, SULFIDE (ZINC ACETATE+NaOH pH>9)
1, 500ml, G, WATER, AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)
1, 1L, P, WATER, Tc-99 (HNO3)

BO70L0

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) FILTERED

BO70L1

3, 40ml, Gs, WATER, CLP-VOA

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: C. Celebeck C. CELEBECK	Received by: K. Trapp / K. Trapp	Date/Time: ~~7/25/92~~ 7/27/92 0900
Relinquished by: K. Trapp / K. Trapp	Received by: Elby B. Yamamoto	Date/Time: 7/28/92 3:45 PM
Relinquished by:	Received by:	Date/Time:
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

000079

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

9613492.7975

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/25/92 Time 0732 hour

Company Contact P. H. Butcher Telephone (509) 376-5045

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
✓ B070K7	1; 1L, P; WATER; CLP-ICP/AA METALS & MERCURY (HNO_3) UNFILTERED		
✓	1; 1L; P; WATER; CLP-CYANIDE (NaOH)		
✓	3; 40ml; Gs; WATER; CLP-VOA		
✓	3; 2L; aG; WATER; CLP-SEMI-VOA & PCB/PEST		
✓	1; 1L; P; WATER; ANIONS (IC) (SO4, F, PO4, Cl), CONDUCTIVITY, pH		
✓	2; 4L; P; WATER; GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC		
	(U-235/238, Pu-239/240, Am-241), Sr-90 (HNO_3)		
✓	1; 250 ml; G; WATER; TRITIUM		
✓	1; 500 ml; P; WATER; ANIONS (NO3, NO2) (H2SO4)		
✓	1; 1L; G; WATER; ALKALINITY, TOTAL DISSOLVED SOLIDS		
✓	1; 500 ml; G; WATER; SULFIDE (ZINC ACETATE PLUS NaOH pH>9)		
✓	1; 500 ml; G; WATER; AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)		
✓ ✓	1; 1L; P; WATER; Tc-99 (HCl)		
✓ B070L1	3, 40ml, Gs, WATER, CLP-VOA		
	1 KT 7/27/92		
✓ B070L0	~~3~~, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986 939-5
			OPC # W92-0-0533-33
			TASK # ~~92-2444~~ KT 7/27/92 92-243

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

Received by Elby R. Yamamoto Title Sample control Tech Date 7/28/92

Analysis Required _____

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

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

A-6000-406 (

9613492.7976

Westinghouse Hanford Company	CHAIN OF CUSTODY

Custody Form Initiator PH BUTCHER

Company Contact PH BUTCHER

Telephone (509)376-5045

Project Designation/Sampling Locations 100-BC-5

Collection Date 7/25/92

Ice Chest No. ~~X~~ KT 7/27/92 #1C

Field Logbook No. EFL-1037

Bill of Lading/Airbill No. 250980939-5

Offsite Property No. W92-0-0533-30

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO 7254

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) UNFILTERED
1, 1L, P, WATER, CLP-CYANIDE (NaOH)
3, 40ml, Gs, WATER, CLP-VOA
3, 2L, aG, WATER, CLP-SEMI-VOA & PCB/PEST
1, 1L, P, WATER, ANIONS(IC) (SO4,F,PO4,Cl), COND., pH
2, 4L, P, WATER, GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC (U-235/238,Pu-239/240, Am-241), Sr-90, C-14 (HNO3)
1, 250ml, G, WATER, TRIRIUM
1, 500ml, P, WATER, ANIONS(NO2,NO3) (H2SO4)
1, 1L, G, WATER, ALKALINITY, TOTAL DISSOLVED SOLIDS
1, 500ml, G, WATER, SULFIDE (ZINC ACETATE+NaOH pH>9)
1, 500ml, G, WATER, AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)
1, 1L, P, WATER, Tc-99 (HNO3)

BO 7257

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) FILTERED

BO 7258

3, 40ml, Gs, WATER, CLP-VOA

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: C Celiberti C. CELIBERTI 7/25/92	Received by: Ken Trapp / Ken Trapp	Date/Time: KT ~~7/25/92~~ 7/27/92 0900
Relinquished by: K. Trapp / K. Trapp	Received by: Elky P. Yamamoto	Date/Time: 7/28/92 3:45 PM
Relinquished by:	Received by:	Date/Time:
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments: Bubbles on SAMPLES → BO7254 & BO7258 (VOA VIALS)

000081

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

9613492.7977

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled ~~7/24/92~~ 7/27/92 KT 7/27/92 Time 1000 hour

Company Contact P. H. Butcher Telephone (509) 376-5045

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
✓ B07254	1; 1L, P; WATER; CLP-ICP/AA METALS & MERCURY (HNO_3) UNFILTERED		
✓	1; 1L; P; WATER; CLP-CYANIDE (NaOH)		
✓	3; 40ml; Gs; WATER; CLP-VOA		Bubbles
✓	3; 2L; aG; WATER; CLP-SEMI-VOA & PCB/PEST		
✓	1; 1L; P; WATER; ANIONS (IC) (SO4, F, PO4, Cl), CONDUCTIVITY, pH		
✓	2; 4L; P; WATER; GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC		
	(U-235/238, Pu-239/240, Am-241), Sr-90 (HNO_3)		
✓	1; 250 ml; G; WATER; TRITIUM		
✓	1; 500 ml; P; WATER; ANIONS (NO3, NO2) (H2SO4)		
✓	1; 1L; G; WATER; ALKALINITY, TOTAL DISSOLVED SOLIDS		
✓	1; 500 ml; G; WATER; SULFIDE (ZINC ACETATE PLUS NaOH pH>9)		
✓	1; 500 ml; G; WATER; AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)		
✓	1; 1L; P; WATER; Tc-99 (HCl)		
✓ B07258	3, 40ml, Gs, WATER,	CLP-VOA	Bubbles
	1 KT 7/27/92		
✓ B07257	~~3~~, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # ~~2~~ KT 7/27/92 250996940-6
			OPC # W92-0-0533-30
			TASK # ~~92-243~~ KT 7/27/92 ~~92-244~~ 92-243

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

Received by Elby J. Yamamoto Title Sample Control Tech. Date 7/28/92

Analysis Required _____

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

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

000082

A-6000-406 (

9613492.7978

VALIDATION SUMMARY

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070J2

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207066-07A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20731B21

Level: (low/med) LOW Date Received: 07/28/92

% Moisture: not dec. ____ Date Analyzed: 07/31/92

GC Column: WIDE ID: 0.530 (mm) Dilution Factor: 1.0

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

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

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	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
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	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
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

12/21 MM

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B070J2

ab Name: TMA/ARLI Contract: WHC

ab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

atrix: (soil/water) WATER Lab Sample ID: A207066-07A

ample wt/vol: 5.0 (g/mL) ML Lab File ID: 20731B21

evel: (low/med) LOW Date Received: 07/28/92

Moisture: not dec. ____ Date Analyzed: 07/31/92

C Column: WIDE ID: 0.530 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

12/2/92
MM

9613492.7981

000007

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070J6

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207066-08A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20731B22

Level: (low/med) LOW Date Received: 07/28/92

% Moisture: not dec. ____ Date Analyzed: 07/31/92

GC Column: WIDE ID: 0.530 (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	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
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	J
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
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

12/2/9

9613492.7982

000008

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B070J6

ab Name: TMA/ARLI Contract: WHC

ab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

atrix: (soil/water) WATER Lab Sample ID: A207066-08A

ample wt/vol: 5.0 (g/mL) ML Lab File ID: 20731B22

evel: (low/med) LOW Date Received: 07/28/92

Moisture: not dec. ____ Date Analyzed: 07/31/92

C Column: WIDE ID: 0.530 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

12/2/92

FORM I VOA-TIC 3/90

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070K7

ab Name: TMA/ARLI Contract: WHC

ab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

atrix: (soil/water) WATER Lab Sample ID: A207066-09A

ample wt/vol: 5.0 (g/mL) ML Lab File ID: 20731B23

evel: (low/med) LOW Date Received: 07/28/92

Moisture: not dec. ____ Date Analyzed: 07/31/92

C Column: WIDE ID: 0.530 (mm) Dilution Factor: 1.0

oil 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	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
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	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
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

12/2/92

9613492.7984

000010

EPA SAMPLE NO.

B070K7

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207066-09A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20731B23

Level: (low/med) LOW Date Received: 07/28/92

% Moisture: not dec. ____ Date Analyzed: 07/31/92

GC Column: WIDE ID: 0.530 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

12/2/92

9613492.7985

000011

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070L1

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207066-10A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20731B24

Level: (low/med) LOW Date Received: 07/28/92

% Moisture: not dec. ____ Date Analyzed: 07/31/92

GC Column: WIDE ID: 0.530 (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	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
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	J
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
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

12/2/9

9613492.7986

000012

EPA SAMPLE NO.

B070L1

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

ab Name: TMA/ARLI Contract: WHC

ab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

atrix: (soil/water) WATER Lab Sample ID: A207066-10A

ample wt/vol: 5.0 (g/mL) ML Lab File ID: 20731B24

evel: (low/med) LOW Date Received: 07/28/92

Moisture: not dec. ____ Date Analyzed: 07/31/92

C Column: WIDE ID: 0.530 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

12/2/92

9613492.7987

000013

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070L2

ab Name: TMA/ARLI Contract: WHC

ab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

atrix: (soil/water) WATER Lab Sample ID: A207066-05A

ample wt/vol: 5.0 (g/mL) ML Lab File ID: 20731B17

evel: (low/med) LOW Date Received: 07/28/92

Moisture: not dec. ____ Date Analyzed: 07/31/92

C Column: WIDE ID: 0.530 (mm) Dilution Factor: 1.0

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

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

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	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
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	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
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

12/2/92
MM

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B070L2

.b Name: TMA/ARLI Contract: WHC

.b Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

.trix: (soil/water) WATER Lab Sample ID: A207066-05A

.mple wt/vol: 5.0 (g/mL) ML Lab File ID: 20731B17

.vel: (low/med) LOW Date Received: 07/28/92

Moisture: not dec. ____ Date Analyzed: 07/31/92

: Column: WIDE ID: 0.530 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

12/2/92
MM

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070L6

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207066-06A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20731B18

Level: (low/med) LOW Date Received: 07/28/92

% Moisture: not dec. ____ Date Analyzed: 07/31/92

GC Column: WIDE ID: 0.530 (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	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
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	J
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
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

12/2/9

9613492.7990

000016

EPA SAMPLE NO.

B070L6

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

ıb Name: TMA/ARLI Contract: WHC

ıb Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

ıtrix: (soil/water) WATER Lab Sample ID: A207066-06A

ımple wt/vol: 5.0 (g/mL) ML Lab File ID: 20731B18

evel: (low/med) LOW Date Received: 07/28/92

Moisture: not dec. ____ Date Analyzed: 07/31/92

: Column: WIDE ID: 0.530 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

12/2/92

9613492.7991

000017

EPA SAMPLE NO.

B072S4

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207066-11A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20731B25

Level: (low/med) LOW Date Received: 07/28/92

% Moisture: not dec. ____ Date Analyzed: 07/31/92

GC Column: WIDE ID: 0.530 (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	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
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	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
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

12/21

9613492.7992

000018

EPA SAMPLE NO.

B072S4

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

ab Name: TMA/ARLI Contract: WHC

ab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

atrix: (soil/water) WATER Lab Sample ID: A207066-11A

ample wt/vol: 5.0 (g/mL) ML Lab File ID: 20731B25

evel: (low/med) LOW Date Received: 07/28/92

Moisture: not dec. ____ Date Analyzed: 07/31/92

C Column: WIDE ID: 0.530 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

12/2/92
MM

9613492.7993

000019

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B072S8

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207066-12A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20731B26

Level: (low/med) LOW Date Received: 07/28/92

% Moisture: not dec. ____ Date Analyzed: 07/31/92

GC Column: WIDE ID: 0.530 (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	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
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	J
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
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

12/2/9

9613492.7094

000020
EPA SAMPLE NO.

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

B072S8

ab Name: TMA/ARLI Contract: WHC

ab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

atrix: (soil/water) WATER Lab Sample ID: A207066-12A

ample wt/vol: 5.0 (g/mL) ML Lab File ID: 20731B26

evel: (low/med) LOW Date Received: 07/28/92

Moisture: not dec. ____ Date Analyzed: 07/31/92

C Column: WIDE ID: 0.530 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

12/2/92
MM

9613492.7995

000021

EPA SAMPLE NO.

B072W9

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

b Name: TMA/ARLI Contract: WHC

b Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

trix: (soil/water) WATER Lab Sample ID: A207066-03A

mple wt/vol: 5.0 (g/mL) ML Lab File ID: 20731B15

evel: (low/med) LOW Date Received: 07/28/92

Moisture: not dec. ____ Date Analyzed: 07/31/92

: Column: WIDE ID: 0.530 (mm) Dilution Factor: 1.0

oil 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	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
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	J
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
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

12/2/9:

9613492.7996

000022
EPA SAMPLE NO.

B072W9

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

ıb Name: TMA/ARLI Contract: WHC

ıb Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

ıtrix: (soil/water) WATER Lab Sample ID: A207066-03A

ample wt/vol: 5.0 (g/mL) ML Lab File ID: 20731B15

evel: (low/med) LOW Date Received: 07/28/92

Moisture: not dec. ____ Date Analyzed: 07/31/92

C Column: WIDE ID: 0.530 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

12/2/92
MM

9613492.7997

000023

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B072X3

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207066-04A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20731B16

Level: (low/med) LOW Date Received: 07/28/92

% Moisture: not dec. ____ Date Analyzed: 07/31/92

GC Column: WIDE ID: 0.530 (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	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
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	J
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
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

12/2/9

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B072X3

ab Name: TMA/ARLI Contract: WHC

ab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

atrix: (soil/water) WATER Lab Sample ID: A207066-04A

ample wt/vol: 5.0 (g/mL) ML Lab File ID: 20731B16

evel: (low/med) LOW Date Received: 07/28/92

Moisture: not dec. ____ Date Analyzed: 07/31/92

C Column: WIDE ID: 0.530 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

12/2/92

9613492.7999

000025

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B072X4

ab Name: TMA/ARLI Contract: WHC

ab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

atrix: (soil/water) WATER Lab Sample ID: A207066-01A

ample wt/vol: 5.0 (g/mL) ML Lab File ID: 20731B13

evel: (low/med) LOW Date Received: 07/28/92

Moisture: not dec. ____ Date Analyzed: 07/31/92

C Column: WIDE ID: 0.530 (mm) Dilution Factor: 1.0

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

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

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	U
67-64-1	Acetone	12	
75-15-0	Carbon Disulfide	10	U
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	J
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
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

12/2/9

9613492.8000

000026

EPA SAMPLE NO.

B072X4

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

ıb Name: TMA/ARLI Contract: WHC

ıb Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

ıtrix: (soil/water) WATER Lab Sample ID: A207066-01A

ımple wt/vol: 5.0 (g/mL) ML Lab File ID: 20731B13

ɛvel: (low/med) LOW Date Received: 07/28/92

Moisture: not dec. ____ Date Analyzed: 07/31/92

: Column: WIDE ID: 0.530 (mm) Dilution Factor: 1.0

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

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

12/2/92

9613492.8001

000027

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B072X8

ab Name: TMA/ARLI Contract: WHC

ab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

atrix: (soil/water) WATER Lab Sample ID: A207066-02A

ample wt/vol: 5.0 (g/mL) ML Lab File ID: 20731B14

evel: (low/med) LOW Date Received: 07/28/92

Moisture: not dec. ____ Date Analyzed: 07/31/92

C Column: WIDE ID: 0.530 (mm) Dilution Factor: 1.0

oil 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	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
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	J
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
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

12/2/

9613492.8002

000028

EPA SAMPLE NO.

B072X8

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

.b Name: TMA/ARLI Contract: WHC

.b Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

:trix: (soil/water) WATER Lab Sample ID: A207066-02A

:mple wt/vol: 5.0 (g/mL) ML Lab File ID: 20731B14

:vel: (low/med) LOW Date Received: 07/28/92

Moisture: not dec. ____ Date Analyzed: 07/31/92

: Column: WIDE ID: 0.530 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

12/2/92

9613492.8003

000029

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070J2

ab Name: TMA/ARLI Contract: WHC

ab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

atrix: (soil/water) WATER Lab Sample ID: A207066-07B

ample wt/vol: 1000 (g/mL) ML Lab File ID: 20804S15

evel: (low/med) LOW Date Received: 07/28/92

Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/31/92

oncentrated Extract Volume: 1000 (uL) Date Analyzed: 08/04/92

njection Volume: 2.0(uL) Dilution Factor: 1.0

PC 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

12/2/92

9613492.8004

000030

EPA SAMPLE NO.

B070J2

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207066-07B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20804S15

Level: (low/med) LOW Date Received: 07/28/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/31/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/04/92

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

12/2/9?

9613492.8005

000031

EPA SAMPLE NO.

B070J2

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207066-07B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20804S15

Level: (low/med) LOW Date Received: 07/28/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/31/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/04/92

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

12/2/92
WM

9613492.8006

000032

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070K7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207066-09B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20804S16

Level: (low/med) LOW Date Received: 07/28/92

Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/31/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/04/92

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

12/21

9613492.8007

000033

EPA SAMPLE NO.

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

B070K7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207066-09B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20804S16

Level: (low/med) LOW Date Received: 07/28/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/31/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/04/92

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	11	
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

12/2/9

(1) - Cannot be separated from Diphenylamine

9613492.8008

000034

EPA SAMPLE NO.

B070K7

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

ab Name: TMA/ARLI Contract: WHC

ab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

atrix: (soil/water) WATER Lab Sample ID: A207066-09B

ample wt/vol: 1000 (g/mL) ML Lab File ID: 20804S16

evel: (low/med) LOW Date Received: 07/28/92

Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/31/92

oncentrated Extract Volume: 1000 (uL) Date Analyzed: 08/04/92

njection Volume: 2.0 (uL) Dilution Factor: 1.0

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

umber TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown hydrocarbon	5.72	2	~~BJ~~ U

12/2/92

FORM I SV-TIC 3/90

9613492.8009

000035

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070L2

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207066-05B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20804S12

Level: (low/med) LOW Date Received: 07/28/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/31/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/04/92

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

12/2/

9613492.8010

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

000036
EPA SAMPLE NO.

B070L2

ab Name: TMA/ARLI Contract: WHC

ab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

atrix: (soil/water) WATER Lab Sample ID: A207066-05B

ample wt/vol: 1000 (g/mL) ML Lab File ID: 20804S12

evel: (low/med) LOW Date Received: 07/28/92

Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/31/92

oncentrated Extract Volume: 1000 (uL) Date Analyzed: 08/04/92

njection Volume: 2.0(uL) Dilution Factor: 1.0

PC 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

12/2/92

(1) - Cannot be separated from Diphenylamine

9613492.8011

000037

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B070L2

ab Name: TMA/ARLI Contract: WHC

ab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

atrix: (soil/water) WATER Lab Sample ID: A207066-05B

ample wt/vol: 1000 (g/mL) ML Lab File ID: 20804S12

evel: (low/med) LOW Date Received: 07/28/92

Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/31/92

oncentrated Extract Volume: 1000 (uL) Date Analyzed: 08/04/92

njection Volume: 2.0 (uL) Dilution Factor: 1.0

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

umber TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown hydrocarbon	5.73	2	~~B~~ U

12/2/92

FORM I SV-TIC

3/90

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B072S4

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207066-11B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20804S17

Level: (low/med) LOW Date Received: 07/28/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/31/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/04/92

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

12/2/

NM

9613492.8013

000039

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B072S4

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207066-11B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20804S17

Level: (low/med) LOW Date Received: 07/28/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/31/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/04/92

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

12/2/9 MW

9613492.8014

000040

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

B072S4

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207066-11B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20804S17

Level: (low/med) LOW Date Received: 07/28/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/31/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/04/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

Number TICs found: 2

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown hydrocarbon	5.72	2	~~BJ~~ U
2.	Unknown acid	14.02	2	J

12/2/92
MM

9613492.8015

000041

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B072W9

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207066-03B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20804S20

Level: (low/med) LOW Date Received: 07/28/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/29/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/05/92

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

12/2/9
NM

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B072W9

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207066-03B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20804S20

Level: (low/med) LOW Date Received: 07/28/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/29/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/05/92

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

12/2/9

(1) - Cannot be separated from Diphenylamine

9613492.8017

000043

EPA SAMPLE NO.

B072W9

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

ab Name: TMA/ARLI Contract: WHC

ab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

atrix: (soil/water) WATER Lab Sample ID: A207066-03B

ampl wt/vol: 1000 (g/mL) ML Lab File ID: 20804S20

evel: (low/med) LOW Date Received: 07/28/92

Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/29/92

oncentrated Extract Volume: 1000 (uL) Date Analyzed: 08/05/92

njection Volume: 2.0(uL) Dilution Factor: 1.0

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

umber TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown alcohol	6.22	3	J

12/2/92
MM

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B072X4

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207066-01B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20804S19

Level: (low/med) LOW Date Received: 07/28/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/29/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/05/92

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

12/2/9

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B072X4

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207066-01B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20804S19

Level: (low/med) LOW Date Received: 07/28/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/29/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 08/05/92

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

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

CAS NO.	COMPOUND		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	1	J
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

12/21

9613492.8020

000046

EPA SAMPLE NO.

B072X4

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

ab Name: TMA/ARLI Contract: WHC

ab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

atrix: (soil/water) WATER Lab Sample ID: A207066-01B

ample wt/vol: 1000 (g/mL) ML Lab File ID: 20804S19

evel: (low/med) LOW Date Received: 07/28/92

Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/29/92

oncentrated Extract Volume: 1000 (uL) Date Analyzed: 08/05/92

njection Volume: 2.0(uL) Dilution Factor: 1.0

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

umber TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

12/2/92
MM

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070J2

ab Name: TMA/ARLI Contract: WHC

ab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

atrix: (soil/water) WATER Lab Sample ID: A207066-07B

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

Moisture: _____ decanted: (Y/N) ___ Date Received: 07/28/92

xtraction: (SepF/Cont/Sonc) CONT Date Extracted: 07/31/92

oncentrated Extract Volume: 10000 (uL) Date Analyzed: 08/08/92

njection Volume: 1.00 (uL) Dilution Factor: 1.00

PC 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

% RSD for Cal Factors 12-8-9 MM

9613492.8022

000048

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070K7

Name: TMA/ARLI Contract: WHC

Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

rix: (soil/water) WATER Lab Sample ID: A207066-09B

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

loisture: _____ decanted: (Y/N) ___ Date Received: 07/28/92

:raction: (SepF/Cont/Sonc) CONT Date Extracted: 07/31/92

ıcentrated Extract Volume: 10000 (uL) Date Analyzed: 08/08/92

ıection Volume: 1.00 (uL) Dilution Factor: 1.00

: 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	UJ
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	UJ
58-89-9	gamma-BHC (Lindane)	0.050	UJ
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	UJ
72-55-9	4,4'-DDE	0.10	UJ
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	UJ
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	UJ
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

% RSDs for Cal. factor 12-8-92 MM

9613192.8023

000049

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070L2

b Name: TMA/ARLI Contract: WHC

b Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

trix: (soil/water) WATER Lab Sample ID: A207066-05B

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

Moisture: _____ decanted: (Y/N) ___ Date Received: 07/28/92

traction: (SepF/Cont/Sonc) CONT Date Extracted: 07/31/92

ncentrated Extract Volume: 10000 (uL) Date Analyzed: 08/08/92

jection Volume: 1.00 (uL) Dilution Factor: 1.00

C 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	UJ
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	UJ
58-89-9	gamma-BHC (Lindane)	0.050	UJ
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	UJ
72-55-9	4,4'-DDE	0.10	UJ
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	UJ
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	UJ
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

% RSDs for Cal Factors 12-8-92 MM

9613492.8024

000050

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B072S4

b Name: TMA/ARLI Contract: WHC

b Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

trix: (soil/water) WATER Lab Sample ID: A207066-11B

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

Moisture: _____ decanted: (Y/N) ___ Date Received: 07/28/92

traction: (SepF/Cont/Sonc) CONT Date Extracted: 07/31/92

ncentrated Extract Volume: 10000 (uL) Date Analyzed: 08/08/92

jection Volume: 1.00 (uL) Dilution Factor: 1.00

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

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

CAS NO.	COMPOUND		Q
319-84-6	alpha-BHC	0.050	UJ
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	UJ
58-89-9	gamma-BHC (Lindane)	0.050	UJ
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	UJ
72-55-9	4,4'-DDE	0.10	UJ
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	UJ
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	UJ
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

% RSD for Cal-fac 12-8-92 HM

9613492.8025

000051
EPA SAMPLE NO.

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

B072W9

) Name: TMA/ARLI Contract: WHC

) Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

:rix: (soil/water) WATER Lab Sample ID: A207066-03B

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

Moisture: _____ decanted: (Y/N) ___ Date Received: 07/28/92

:raction: (SepF/Cont/Sonc) CONT Date Extracted: 07/29/92

ıcentrated Extract Volume: 10000 (uL) Date Analyzed: 08/08/92

jection Volume: 1.00 (uL) Dilution Factor: 1.00

: 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	UJ
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	UJ
58-89-9	gamma-BHC (Lindane)	0.050	UJ
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	UJ
72-55-9	4,4'-DDE	0.10	UJ
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	UJ
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	UJ
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

% RSDs for Cal. fact 12-8-92 MM

9613492.8026

000052

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B072X4

b Name: TMA/ARLI Contract: WHC

b Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

trix: (soil/water) WATER Lab Sample ID: A207066-01B

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

Moisture: decanted: (Y/N) Date Received: 07/28/92

traction: (SepF/Cont/Sonc) CONT Date Extracted: 07/29/92

ncentrated Extract Volume: 10000 (uL) Date Analyzed: 08/07/92

jection Volume: 1.00 (uL) Dilution Factor: 1.00

C Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

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

CAS NO.	COMPOUND		Q
319-84-6	alpha-BHC	0.050	UJ
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	UJ
58-89-9	gamma-BHC (Lindane)	0.050	UJ
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	UJ
72-55-9	4,4'-DDE	0.10	UJ
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	UJ
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	UJ
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

% RSD for Cal factors 12-8-- HMY

9613492.8027

000048

EPA SAMPLE NO.

B070K7

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

b Name: TMA/ARLI Contract: WHC

b Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

trix: (soil/water) WATER Lab Sample ID: A207066-09B

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

Moisture: _____ decanted: (Y/N) ___ Date Received: 07/28/92

traction: (SepF/Cont/Sonc) CONT Date Extracted: 07/31/92

ncentrated Extract Volume: 10000 (uL) Date Analyzed: 08/08/92

jection Volume: 1.00 (uL) Dilution Factor: 1.00

C 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	UJ
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	UJ
58-89-9	gamma-BHC (Lindane)	0.050	UJ
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	UJ
72-55-9	4,4'-DDE	0.10	UJ
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	UJ
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	UJ
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

12-8-9.
MM

9613492.8028

000049

EPA SAMPLE NO.

B070L2

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

ab Name: TMA/ARLI Contract: WHC

ab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

atrix: (soil/water) WATER Lab Sample ID: A207066-05B

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

Moisture: _____ decanted: (Y/N) ___ Date Received: 07/28/92

xtraction: (SepF/Cont/Sonc) CONT Date Extracted: 07/31/92

oncentrated Extract Volume: 10000 (uL) Date Analyzed: 08/08/92

njection Volume: 1.00 (uL) Dilution Factor: 1.00

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

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

CAS NO.	COMPOUND		Q
319-84-6	alpha-BHC	0.050	UJ
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	UJ
58-89-9	gamma-BHC (Lindane)	0.050	UJ
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	UJ
72-55-9	4,4'-DDE	0.10	UJ
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	UJ
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	UJ
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

12-8-9 MM

9613492.8029

000050

EPA SAMPLE NO.

B072S4

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

ab Name: TMA/ARLI Contract: WHC

ab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

atrix: (soil/water) WATER Lab Sample ID: A207066-11B

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

Moisture: _____ decanted: (Y/N) ___ Date Received: 07/28/92

xtraction: (SepF/Cont/Sonc) CONT Date Extracted: 07/31/92

oncentrated Extract Volume: 10000 (uL) Date Analyzed: 08/08/92

njection Volume: 1.00 (uL) Dilution Factor: 1.00

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

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

CAS NO.	COMPOUND		Q
319-84-6	alpha-BHC	0.050	UJ
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	UJ
58-89-9	gamma-BHC (Lindane)	0.050	UJ
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	UJ
72-55-9	4,4'-DDE	0.10	UJ
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	UJ
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	UJ
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

12-8-9

MY

9613492.8030

000051
EPA SAMPLE NO.

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

B072W9

b Name: TMA/ARLI Contract: WHC

ıb Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

ıtrix: (soil/water) WATER Lab Sample ID: A207066-03B

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

Moisture: _____ decanted: (Y/N) ___ Date Received: 07/28/92

ıtraction: (SepF/Cont/Sonc) CONT Date Extracted: 07/29/92

ɔncentrated Extract Volume: 10000 (uL) Date Analyzed: 08/08/92

ıjection Volume: 1.00 (uL) Dilution Factor: 1.00

PC 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	UJ
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	UJ
58-89-9	gamma-BHC (Lindane)	0.050	UJ
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	UJ
72-55-9	4,4'-DDE	0.10	UJ
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	UJ
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	UJ
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

12-8-92

9613492.8031

000052

EPA SAMPLE NO.

B072X4

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

ab Name: TMA/ARLI Contract: WHC

ab Code: TMALA Case No.: 07066 SAS No.: NA SDG No.: NA

atrix: (soil/water) WATER Lab Sample ID: A207066-01B

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

Moisture: _____ decanted: (Y/N) ___ Date Received: 07/28/92

xtraction: (SepF/Cont/Sonc) CONT Date Extracted: 07/29/92

oncentrated Extract Volume: 10000 (uL) Date Analyzed: 08/07/92

njection Volume: 1.00 (uL) Dilution Factor: 1.00

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

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
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

12-8-9 MM

9613492.8032

WESTINGHOUSE/HANFORD
1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B070J2

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

Lab Code: SKINER Case No.: N2-07-150SAS No.: SDG No.: B070J2

Matrix (soil/water): WATER Lab Sample ID: 07280-04S

Level (low/med): LOW Date Received: 07/30/92

% 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	23.9	U		P
7440-36-0	Antimony	16.3	U		P
7440-38-2	Arsenic	2.4	U		F
7440-39-3	Barium	34.0	B		P
7440-41-7	Beryllium	0.70	U		P
7440-43-9	Cadmium	1.5	U		P
7440-70-2	Calcium	47800			P
7440-47-3	Chromium	12.6	M		P
7440-48-4	Cobalt	3.5	U		P
7440-50-8	Copper	3.8	U		P
7439-89-6	Iron	30.9	~~B~~	U	P
7439-92-1	Lead	3.9	U		F
7439-95-4	Magnesium	7960			P
7439-96-5	Manganese	4.4	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	3.9	U		P
7440-09-7	Potassium	1790	B		P
7782-49-2	Selenium	3.1	U	~~UN~~ J	F
7440-22-4	Silver	4.8	U		P
7440-23-5	Sodium	10500			P
7440-28-0	Thallium	4.3	U		F
7440-62-2	Vanadium	4.9	~~B~~	U	P
7440-66-6	Zinc	8.2	~~B~~	U	P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments: 1/20/93

002

9613492.8033

WESTINGHOUSE/HANFORD
1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B070J5

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

Lab Code: SKINER Case No.: N2-07-150SAS No.: SDG No.: B070J5

Matrix (soil/water): WATER Lab Sample ID: 07281-045

Level (low/med): LOW Date Received: 07/30/92

% 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	25.9	~~B~~	U	P
7440-36-0	Antimony	16.3	U		P
7440-38-2	Arsenic	2.2	U		F
7440-39-3	Barium	32.6	B		P
7440-41-7	Beryllium	0.70	U		P
7440-43-9	Cadmium	1.5	U		P
7440-70-2	Calcium	48600			P
7440-47-3	Chromium	12.6	U		P
7440-48-4	Cobalt	3.5	U		P
7440-50-8	Copper	3.3	U		P
7439-89-6	Iron	7.6	U		P
7439-92-1	Lead	2.9	~~B~~	~~W~~ UJ	F
7439-95-4	Magnesium	8120			P
7439-96-5	Manganese	4.4	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	3.9	U		P
7440-09-7	Potassium	1860	B		P
7782-49-2	Selenium	2.8	U	~~WN~~ J	F
7440-22-4	Silver	4.8	U		P
7440-23-5	Sodium	10700			P
7440-28-0	Thallium	1.6	U	~~WN~~ J	F
7440-62-2	Vanadium	4.9	~~B~~ U		P
7440-66-6	Zinc	4.8	~~B~~ U		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

0002

Comments:

PBD
6/20/93

FORM I - IN ILM02.1

9613492.8034

WESTINGHOUSE/HANFORD
1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B070K7

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

Lab Code: SKINER Case No.: N2-07-150SAS No.: SDG No.: B070J2

Matrix (soil/water): WATER Lab Sample ID: 07280-05S

Level (low/med): LOW Date Received: 07/30/92

% 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	23.9	U		P
7440-36-0	Antimony	16.3	U		P
7440-38-2	Arsenic	2.4	U		F
7440-39-3	Barium	34.0	B		P
7440-41-7	Beryllium	0.70	U		P
7440-43-9	Cadmium	1.5	U		P
7440-70-2	Calcium	50800			P
7440-47-3	Chromium	13.2	U		P
7440-48-4	Cobalt	3.5	U		P
7440-50-8	Copper	3.8	U		P
7439-89-6	Iron	15.8	~~B~~	U	P
7439-92-1	Lead	4.5	U		F
7439-95-4	Magnesium	6690			P
7439-96-5	Manganese	4.4	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	3.9	U		P
7440-09-7	Potassium	4020	B		P
7782-49-2	Selenium	15.5	U	~~N~~ J	F
7440-22-4	Silver	4.8	U		P
7440-23-5	Sodium	10600			P
7440-28-0	Thallium	4.3	U		F
7440-62-2	Vanadium	7.1	~~B~~	U	P
7440-66-6	Zinc	7.7	~~B~~	U	P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

003

PBJ 6/20/93

9613492.8035

WESTINGHOUSE/HANFORD
1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B070L0

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

Lab Code: SKINER Case No.: N2-07-150SAS No.: SDG No.: B070J5

Matrix (soil/water): WATER Lab Sample ID: 07281-05S

Level (low/med): LOW Date Received: 07/30/92

% 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	23.9	U		P
7440-36-0	Antimony	16.3	U		P
7440-38-2	Arsenic	3.4	~~B~~	~~W~~ UJ	F
7440-39-3	Barium	28.3	B		P
7440-41-7	Beryllium	0.70	U		P
7440-43-9	Cadmium	1.5	U		P
7440-70-2	Calcium	51400			P
7440-47-3	Chromium	10.8	U		P
7440-48-4	Cobalt	3.5	U		P
7440-50-8	Copper	3.8	U		P
7439-89-6	Iron	7.6	U		P
7439-92-1	Lead	3.7	U		F
7439-95-4	Magnesium	6710			P
7439-96-5	Manganese	4.4	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	3.9	U		P
7440-09-7	Potassium	3960	B		P
7782-49-2	Selenium	2.8	U	~~WN~~ J	F
7440-22-4	Silver	4.8	U		P
7440-23-5	Sodium	10800			P
7440-28-0	Thallium	1.6	U	~~WN~~ J	F
7440-62-2	Vanadium	4.4	~~B~~ U		P
7440-66-6	Zinc	2.9	U		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

0003

Comments:

PBJ
6/20/93

9613492.8036

WESTINGHOUSE/HANFORD
1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B070L2

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

Lab Code: SKINER Case No.: N2-07-150SAS No.: SDG No.: B070J2

Matrix (soil/water): WATER Lab Sample ID: 07280-03S

Level (low/med): LOW Date Received: 07/30/92

% 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	23.9	U		P
7440-36-0	Antimony	16.3	U		P
7440-38-2	Arsenic	3.0	~~B~~	N	F
7440-39-3	Barium	19.8	~~B~~	N	P
7440-41-7	Beryllium	0.70	U		P
7440-43-9	Cadmium	1.5	U		P
7440-70-2	Calcium	49100			P
7440-47-3	Chromium	10.8	N		P
7440-48-4	Cobalt	3.5	U		P
7440-50-8	Copper	3.8	U		P
7439-89-6	Iron	34.2	~~B~~	N	P
7439-92-1	Lead	4.4	N		F
7439-95-4	Magnesium	7680			P
7439-96-5	Manganese	4.4	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	3.9	U		P
7440-09-7	Potassium	4590	B		P
7782-49-2	Selenium	3.1	U	~~W~~ J	F
7440-22-4	Silver	4.8	U		P
7440-23-5	Sodium	11000			P
7440-28-0	Thallium	4.3	U		F
7440-62-2	Vanadium	9.3	~~B~~	N	P
7440-66-6	Zinc	4.6	~~B~~	N	P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments: BB 6/20/93

004

9613492.8037

WESTINGHOUSE/HANFORD
1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B070L5

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

Lab Code: SKINER Case No.: N2-07-150SAS No.: SDG No.: B070J5

Matrix (soil/water): WATER Lab Sample ID: 07281-03S

Level (low/med): LOW Date Received: 07/30/92

% 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	23.9	U		P
7440-36-0	Antimony	16.3	U		P
7440-38-2	Arsenic	2.2	U		F
7440-39-3	Barium	18.4	B		P
7440-41-7	Beryllium	0.70	U		P
7440-43-9	Cadmium	1.5	U		P
7440-70-2	Calcium	48800			P
7440-47-3	Chromium	10.2	U		P
7440-48-4	Cobalt	3.5	U		P
7440-50-8	Copper	3.8	U		P
7439-89-6	Iron	29.8	~~B~~	U	P
7439-92-1	Lead	4.4	U		F
7439-95-4	Magnesium	7640			P
7439-96-5	Manganese	4.4	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	3.9	U		P
7440-09-7	Potassium	4610	B		P
7782-49-2	Selenium	2.8	U	~~UN~~ J	F
7440-22-4	Silver	4.8	U		P
7440-23-5	Sodium	11300			P
7440-28-0	Thallium	1.6	U	~~UN~~ J	F
7440-62-2	Vanadium	7.1	~~B~~	U	P
7440-66-6	Zinc	12.8	~~B~~	U	P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts: 0004

Comments:

6/30/93

9613492.8038

WESTINGHOUSE/HANFORD
1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B072S4

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

Lab Code: SKINER Case No.: N2-07-150SAS No.: SDG No.: B070J2

Matrix (soil/water): WATER Lab Sample ID: 07280-06S

Level (low/med): LOW Date Received: 07/30/92

% 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	29.0	~~B~~	U	P
7440-36-0	Antimony	16.3	U		P
7440-38-2	Arsenic	2.4	U		F
7440-39-3	Barium	8.5	~~B~~	U	P
7440-41-7	Beryllium	0.70	U		P
7440-43-9	Cadmium	1.5	U		P
7440-70-2	Calcium	43900			P
7440-47-3	Chromium	18.0	U		P
7440-48-4	Cobalt	3.5	U		P
7440-50-8	Copper	3.8	U		P
7439-89-6	Iron	21.6	~~B~~	U	P
7439-92-1	Lead	3.9	U		F
7439-95-4	Magnesium	9610			P
7439-96-5	Manganese	4.4	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	3.9	U		P
7440-09-7	Potassium	6220			P
7782-49-2	Selenium	15.5	U	~~N~~ J	F
7440-22-4	Silver	4.8	U		P
7440-23-5	Sodium	12600			P
7440-28-0	Thallium	4.3	U		F
7440-62-2	Vanadium	12.0	~~B~~	U	P
7440-66-6	Zinc	4.6	~~B~~	U	P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments: PBJ 6/20/93

005

9613492.8039

WESTINGHOUSE/HANFORD
1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B072S7

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

Lab Code: SKINER Case No.: N2-07-150SAS No.: SDG No.: B070J5

Matrix (soil/water): WATER Lab Sample ID: 07281-06S

Level (low/med): LOW Date Received: 07/30/92

% 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	23.9	U		P
7440-36-0	Antimony	16.3	U		P
7440-38-2	Arsenic	4.0	~~B~~ U		F
7440-39-3	Barium	11.3	B		P
7440-41-7	Beryllium	0.70	U		P
7440-43-9	Cadmium	1.5	U		P
7440-70-2	Calcium	43900			P
7440-47-3	Chromium	21.0	U		P
7440-48-4	Cobalt	3.5	U		P
7440-50-8	Copper	3.8	U		P
7439-89-6	Iron	59.3	B		P
7439-92-1	Lead	2.2	U		F
7439-95-4	Magnesium	9600			P
7439-96-5	Manganese	4.4	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	3.9	U		P
7440-09-7	Potassium	6380			P
7782-49-2	Selenium	2.8	U	~~WN~~ J	F
7440-22-4	Silver	4.8	U		P
7440-23-5	Sodium	12600			P
7440-28-0	Thallium	1.6	U	~~WN~~ J	F
7440-62-2	Vanadium	13.1	B		P
7440-66-6	Zinc	2.9	U		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

0005

Comments: PSD 6/20/93

9613492.8040

WESTINGHOUSE/HANFORD
1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B072W9

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

Lab Code: SKINER Case No.: N2-07-150SAS No.: SDG No.: B070J2

Matrix (soil/water): WATER Lab Sample ID: 07280-01S

Level (low/med): LOW Date Received: 07/30/92

% 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	25.6	~~B~~	U	P
7440-36-0	Antimony	16.3	U		P
7440-38-2	Arsenic	2.4	U		F
7440-39-3	Barium	4.6	U		P
7440-41-7	Beryllium	0.70	U		P
7440-43-9	Cadmium	1.5	U		P
7440-70-2	Calcium	39.8	~~B~~	U	P
7440-47-3	Chromium	4.9	U		P
7440-48-4	Cobalt	3.5	U		P
7440-50-8	Copper	3.8	U		P
7439-89-6	Iron	7.6	U		P
7439-92-1	Lead	3.8	U	~~W~~ J	F
7439-95-4	Magnesium	40.1	U		P
7439-96-5	Manganese	4.4	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	3.9	U		P
7440-09-7	Potassium	266	U		P
7782-49-2	Selenium	3.1	U	~~W~~ J	F
7440-22-4	Silver	4.8	U		P
7440-23-5	Sodium	94.5	~~B~~	U	P
7440-28-0	Thallium	4.3	U	~~W~~ J	F
7440-62-2	Vanadium	2.4	U		P
7440-66-6	Zinc	6.9	~~B~~	U	P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments: PBD 6/20/93

006

9613492.0041

WESTINGHOUSE/HANFORD
1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER:

B072X2

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

Lab Code: SKINER Case No.: N2-07-150SAS No.: SDG No.: B070J5

Matrix (soil/water): WATER Lab Sample ID: 07281-01S

Level (low/med): LOW Date Received: 07/30/92

% 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	23.9	U		P
7440-36-0	Antimony	16.3	U		P
7440-38-2	Arsenic	2.6	B	~~N~~ UJ	F
7440-39-3	Barium	4.6	U		P
7440-41-7	Beryllium	0.70	U		P
7440-43-9	Cadmium	1.5	U		P
7440-70-2	Calcium	58.4	~~B~~ U		P
7440-47-3	Chromium	4.9	U		P
7440-48-4	Cobalt	3.5	U		P
7440-50-8	Copper	3.8	U		P
7439-89-6	Iron	7.6	U		P
7439-92-1	Lead	2.2	U		F
7439-95-4	Magnesium	40.1	U		P
7439-96-5	Manganese	4.4	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	3.9	U		P
7440-09-7	Potassium	266	U		P
7782-49-2	Selenium	2.8	U	~~N~~ J	F
7440-22-4	Silver	4.8	U		P
7440-23-5	Sodium	93.3	~~B~~ U		P
7440-28-0	Thallium	1.6	U	~~UN~~ J	F
7440-62-2	Vanadium	2.4	U		P
7440-66-6	Zinc	5.4	~~B~~ U		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

ABJ

Comments: 6/20/93

0006

9613492.8042

WESTINGHOUSE/HANFORD
1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B072X4

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

Lab Code: SKINER Case No.: N2-07-150SAS No.: SDG No.: B070J2

Matrix (soil/water): WATER Lab Sample ID: 07280-02S

Level (low/med): LOW Date Received: 07/30/92

% 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	23.9	U		P
7440-36-0	Antimony	16.3	U		P
7440-38-2	Arsenic	48.4			F
7440-39-3	Barium	4.6	U		P
7440-41-7	Beryllium	0.70	U		P
7440-43-9	Cadmium	1.5	U		P
7440-70-2	Calcium	28.4	~~B~~	U	P
7440-47-3	Chromium	4.9	U		P
7440-48-4	Cobalt	3.5	U		P
7440-50-8	Copper	3.8	U		P
7439-89-6	Iron	7.6	U		P
7439-92-1	Lead	53.8			F
7439-95-4	Magnesium	40.1	U		P
7439-96-5	Manganese	4.4	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	3.9	U		P
7440-09-7	Potassium	266	U		P
7782-49-2	Selenium	42.0		~~SN~~ J	F
7440-22-4	Silver	4.8	U		P
7440-23-5	Sodium	32.1	~~B~~	U	P
7440-28-0	Thallium	47.7			F
7440-62-2	Vanadium	2.4	U		P
7440-66-6	Zinc	4.1	~~B~~	U	P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments: PRD 6/20 RB

007

9613492.8043

WESTINGHOUSE/HANFORD
1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B072X7

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

Lab Code: SKINER Case No.: N2-07-150SAS No.: SDG No.: B070J5

Matrix (soil/water): WATER Lab Sample ID: 07281-02S

Level (low/med): LOW Date Received: 07/30/92

% 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	25.6	~~B~~	U	P
7440-36-0	Antimony	16.3	U		P
7440-38-2	Arsenic	2.2	U	~~N~~ J	F
7440-39-3	Barium	4.6	U		P
7440-41-7	Beryllium	0.70	U		P
7440-43-9	Cadmium	1.5	U		P
7440-70-2	Calcium	40.1	~~B~~	U	P
7440-47-3	Chromium	4.9	U		P
7440-48-4	Cobalt	3.5	U		P
7440-50-8	Copper	3.8	U		P
7439-89-6	Iron	7.6	U		P
7439-92-1	Lead	3.2	U		F
7439-95-4	Magnesium	40.1	U		P
7439-96-5	Manganese	4.4	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	3.9	U		P
7440-09-7	Potassium	266	U		P
7782-49-2	Selenium	2.8	U	~~N~~ J	F
7440-22-4	Silver	4.8	U		P
7440-23-5	Sodium	77.2	~~B~~	U	P
7440-28-0	Thallium	1.6	U	~~N~~ J	F
7440-62-2	Vanadium	2.4	U		P
7440-66-6	Zinc	3.1	~~B~~	U	P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts 0007

Comments: PBD 6/20/93

FORM I - IN ILM02.1

9615492.8044

~~000027~~
000001

Received: 07/30/92 Results by Sample

SAMPLE ID B072W9 SAMPLE # 01 FRACTIONS: A
Date & Time Collected 07/24/92 09:00:00 Category WATER

NO3NO2 <0.25 U
mg N/L

SAMPLE ID B072X4 SAMPLE # 02 FRACTIONS: A
Date & Time Collected 07/24/92 09:00:00 Category WATER

NO3NO2 <0.25 U
mg N/L

SAMPLE ID B070L2 SAMPLE # 03 FRACTIONS: A
Date & Time Collected 07/25/92 08:37:00 Category WATER

NO3NO2 0.45
mg N/L

SAMPLE ID B070J2 SAMPLE # 04 FRACTIONS: A
Date & Time Collected 07/25/92 06:19:00 Category WATER

NO3NO2 5.32
mg N/L

SAMPLE ID B070K7 SAMPLE # 05 FRACTIONS: A
Date & Time Collected 07/25/92 07:32:00 Category WATER

NO3NO2 4.64
mg N/L

SAMPLE ID B072S4 SAMPLE # 06 FRACTIONS: A
Date & Time Collected 07/25/92 10:00:00 Category WATER

NO3NO2 4.39
mg N/L

SAMPLE ID B072S4 DUPL SAMPLE # 06 FRACTIONS: B
Date & Time Collected 07/25/92 10:00:00 Category WATER

NO3NO2 4.45
mg N/L

PBS
6/20/93

TMA
Thermo Analytical Inc.

This report is rendered upon all of the following conditions: Skinner & Sherman Laboratories, Inc. retains ownership of this report until associated submitted invoice Expert witness services shall be available in conjunction with this report only if prior notification of this potential requirement was made and accepted, before the anal will be responsible for Skinner & Sherman costs and consulting fees if our services are required by subpoena or otherwise in legal proceedings. Total liability is limited to amount. The results listed refer only to tested samples and applicable parameters. Product endorsement is neither inferred nor implied. Skinner & Sherman Laboratori exercise due diligence but will not be responsible for lost or destroyed samples or evidence unless client makes appropriate insurance coverage arrangements. Samples thirty days following issuance of report. Samples will be stored at client's expense, if authorized in writing.

Skinner & Sherman Laboratories Inc.
300 Second Avenue, P.O. Box 521, Waltham, Massachusetts 02254-0521 (617) 890-7
1-800-4 LAB TEST FAX (617) 890-3883

TMA Inc. REPORT Work Order # A2-07-066

Received: 07/28/92

Results by Sample

SAMPLE ID B070J2 FRACTION 07E TEST CODE WCCLPL NAME Anions & Wet Chem. - WK043

Date & Time Collected 07/25/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	8.0	mg/L	0.2
Elect. Conductivity	120.1	349	umho/cm	6
Fluoride	300.0	0.2	mg/L	0.1
Phosphate	300.0	<0.4 U	mg/L	0.4
pH	150.1	8.0 J	pH	0.1
Sulfate	300.0	43	mg/L	1

FORM I

TMA Inc. REPORT Work Order # A2-07-066

Received: 07/28/92

Results by Sample

SAMPLE ID B070J2 FRACTION 07F TEST CODE WCCLPL NAME Anions & Wet Chem. - WW043

Date & Time Collected 07/25/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Alkalinity	310.1	107	mg/L	2
Tot. Dissolved Solids	160.1	227	mg/L	5

FORM I

HJ
8/20/92

<A Inc. REPORT Work Order # A2-07-066

Received: 07/28/92 Results by Sample

SAMPLE ID B070J2 FRACTION 07G TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 07/25/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Sulfide	376.1	~~<1~~ U	mg/L	1

FORM I

Inc. REPORT Work Order # A2-07-066

Received: 07/28/92

Results by Sample

SAMPLE ID B070J2 FRACTION 07I TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 07/25/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Ammonia Nitrogen	350.3	<0.05 U	mg/L	0.05
COD	410.0	<30 U	mg/L	30

FORM I

6/20/93

TMA Inc. REPORT Work Order # A2-07-066

Received: 07/28/92

Results by Sample

SAMPLE ID B070K7 FRACTION 09C TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 07/25/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	9.5	mg/L	0.2
Elect. Conductivity	120.1	362	umho/cm	6
Fluoride	300.0	0.2	mg/L	0.1
Phosphate	300.0	<0.4 U	mg/L	0.4
pH	150.1	8.1 J	pH	0.1
Sulfate	300.0	47	mg/L	1

FORM I

PBD
6/20/95

TNA Inc. REPORT Work Order # A2-07-066

Received: 07/28/92

Results by Sample

SAMPLE ID B070K7 FRACTION 09E TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/25/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Alkalinity	310.1	109	mg/L	2
Tot. Dissolved Solids	160.1	267	mg/L	5

FORM I

PBD
6/20/93

TMA Inc. REPORT Work Order # A2-07-066

Received: 07/28/92 Results by Sample

SAMPLE ID B070K7 FRACTION 09G TEST CODE UCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/25/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Sulfide	376.1	~~<1~~ U	mg/L	1

FORM I

PRJ 6/30/93

9613492.8052

000042

ISA Inc. REPORT Work Order # A2-07-066

Received: 07/28/92

Results by Sample

SAMPLE ID B070K7 FRACTION 09N TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/25/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Ammonia Nitrogen	350.3	<0.05 U	mg/L	0.05
COD	410.0	<30 U	mg/L	30

FORM I

BJ 6/20/92

>A Inc. REPORT Work Order # A2-07-066

Received: 07/28/92 Results by Sample

SAMPLE ID B070L2 FRACTION 05E TEST CODE VCCLPL NAME Anions & Wet Chem. - VN043

Date & Time Collected 07/25/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	9.9	mg/L	0.2
Elect. Conductivity	120.1	362	umho/cm	6
Fluoride	300.0	0.2	mg/L	0.1
Phosphate	300.0	<0.4 U	mg/L	0.4
pH	150.1	8.0 J	pH	0.1
Sulfate	300.0	49	mg/L	1

FORM I

PBJ
7/20/92

9613492.8054

000032

TMA Inc. REPORT Work Order # A2-87-066

Received: 07/28/92

Results by Sample

SAMPLE ID B070L2 FRACTION 05F TEST CODE WCCLPL NAME Anions & Wet Chem. - WM043

Date & Time Collected 07/25/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Alkalinity	310.1	108	mg/L	2
Tot. Dissolved Solids	160.1	255	mg/L	5

FORM I

12-7-92

TMA Inc. REPORT Work Order # A2-07-066

Received: 07/28/92

Results by Sample

SAMPLE ID B070L2 FRACTION 05G TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 07/25/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Sulfide	376.1	~~<1~~ N	mg/L	1

FORM I

PBD
4/20/93

T·S Inc. REPORT Work Order # A2-07-066

Received: 07/28/92

Results by Sample

SAMPLE ID B070L2 FRACTION #*p+1X05M TEST CODE VCCLPL NAME Anions & Wet Chem. - WH

Date & Time Collected 07/25/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Ammonia Nitrogen	350.3	0.08	mg/L	0.05
COD	410.0	~~<30~~ 4	mg/L	30

FORM I

PB 6/20/93

9613492.8057

000043

TMA Inc. REPORT Work Order # A2-07-066

Received: 07/28/92

Results by Sample

SAMPLE ID B072S4 FRACTION 11C TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 07/25/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	11.1	mg/L	0.2
Elect. Conductivity	120.1	366	umho/cm	6
Fluoride	300.0	0.2	mg/L	0.1
Phosphate	300.0	<0.4 U	mg/L	0.4
pH	150.1	8.0 J	pH	0.1
Sulfate	300.0	49	mg/L	1

FORM I

PBL
6/20/93

9613492.8058

000044

XA Inc. REPORT Work Order # A2-07-066

Received: 07/28/92

Results by Sample

SAMPLE ID B072S4 FRACTION 11E TEST CODE WCCLPL NAME Anions & Wet Chem. - WM043

Date & Time Collected 07/25/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Alkalinity	310.1	108	mg/L	2
Tot. Dissolved Solids	160.1	266	mg/L	5

FORM I

12-7-92 SC

9613492.8059

000045

TMA Inc. REPORT Work Order # A2-07-066

Received: 07/28/92

Results by Sample

SAMPLE ID B072S4 FRACTION 11F TEST CODE WCCLPL NAME Anions & Wet Chem. - WM043

Date & Time Collected 07/25/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Sulfide	376.1	~~<1~~ N	mg/L	1

FORM I

PAD
6/30/92

9613492.8060

TMA Inc. REPORT Work Order # A2-07-066

Received: 07/28/92

Results by Sample

SAMPLE ID B072S4 FRACTION 11G TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/25/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Ammonia Nitrogen	350.3	<0.05 U	mg/L	0.05
COD	410.0	<30 U	mg/L	30

FORM I

PEN
6/20/92

TMA Inc. REPORT Work Order # A2-07-066

Received: 07/28/92

Results by Sample

SAMPLE ID B072W9 FRACTION ~~03C~~ ~~TEST CODE~~ WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/24/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	<0.2 U	mg/L	0.2
Elect. Conductivity	120.1	<6 U	umho/cm	6
Fluoride	300.0	<0.1 U	mg/L	0.1
Phosphate	300.0	<0.4 U	mg/L	0.4
pH	150.1	6.4 J	pH	0.1
Sulfate	300.0	<1 U	mg/L	1

FORM I

PSB
6/20/93

9613492.8062

000026

TMA Inc. REPORT Work Order # A2-07-066

Received: 07/28/92

Results by Sample

SAMPLE ID B072W9 FRACTION 03D TEST CODE WCCLPL NAME Anions & Wet Chem. - WW043

Date & Time Collected 07/24/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Alkalinity	310.1	<2 U	mg/L	2
Tot. Dissolved Solids	160.1	<5 U	mg/L	5

FORM I

PBD
6/20/93

9613492.8063

TMA Inc. REPORT Work Order # A2-87-066

Received: 07/28/92

Results by Sample

SAMPLE ID 8072W9 FRACTION 03E TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 07/24/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Sulfide	376.1	<1 U	mg/L	1

FORM I

PBD
6/20/93

TMA Inc. REPORT Work Order # A2-07-066

Received: 07/28/92

Results by Sample

SAMPLE ID B072U9 FRACTION 03F TEST CODE UGCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 07/24/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Ammonia Nitrogen	350.3	0.05	mg/L	0.05
COD	410.0	<30 U	mg/L	30

FORM I

PBD
6/20/93

9613492.8065

000023

TMA Inc. REPORT Work Order # A2-07-066

Received: 07/28/92

Results by Sample

SAMPLE ID B072X4 FRACTION 01C ~~TEST CODE VCCLPL~~ NAME Anions & Wet Chem. - VB043

Date & Time Collected 07/24/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	<0.2 U	mg/L	0.2
Elect. Conductivity	120.1	<6 U	umho/cm	6
Fluoride	300.0	<0.1 U	mg/L	0.1
Phosphate	300.0	<0.4 U	mg/L	0.4
pH	150.1	5.8 J	pH	0.1
Sulfate	300.0	<1 U	mg/L	1

FORM I

PRD

6/30/93

9613492.8066

000064

•A Inc. REPORT Work Order # A2-07-066

Received: 07/28/92

Results by Sample

SAMPLE ID B072X4 FRACTION 01D TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/24/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Alkalinity	310.1	~~<2~~ U	mg/L	2
Tot. Dissolved Solids	160.1	~~<5~~ U	mg/L	5

FORM I

PBD
6/20/93

9613492.8067

MA Inc. REPORT Work Order # A2-07-066

Received: 07/28/92

Results by Sample

SAMPLE ID B072X4 FRACTION 01E TEST CODE WCCLPL NAME Anions & Wet Chem. - WB043

Date & Time Collected 07/24/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Sulfide	376.1	~~<1~~ U	mg/L	1

FORM I

PRS
6/2/93

TMA Inc. REPORT Work Order # A2-07-066

Received: 07/28/92 Results by Sample

SAMPLE ID B072X4 FRACTION 01F TEST CODE VCCLPL NAME Anions & Wet Chem. - VH043

Date & Time Collected 07/24/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Ammonia Nitrogen	350.3	<0.05 U	mg/L	0.05
COD	410.0	<30 U	mg/L	30

FORM I

PBD
6/20/93

9613492.8069

000005

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070L7

ab Name: TMA/ARLI Contract: WHC

ab Code: TMALA Case No.: 07059 SAS No.: NA SDG No.: NA

atrix: (soil/water) WATER Lab Sample ID: A207059-01A

ample wt/vol: 5.0 (g/mL) ML Lab File ID: 20729B04

evel: (low/med) LOW Date Received: 07/27/92

Moisture: not dec. ____ Date Analyzed: 07/29/92

C Column: WIDE ID: 0.530 (mm) Dilution Factor: 1.0

oil 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	10 ~~9~~	~~B~~ U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
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	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
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

FORM I VOA 3/90

9613492.8070

000006

EPA SAMPLE NO.

B070L7

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07059 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207059-01A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20729B04

Level: (low/med) LOW Date Received: 07/27/92

% Moisture: not dec. ____ Date Analyzed: 07/29/92

GC Column: WIDE ID: 0.530 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

11/14/92

9613492.8071

000007

EPA SAMPLE NO.

B070M1

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07059 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207059-02A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20729B05

Level: (low/med) LOW Date Received: 07/27/92

% Moisture: not dec. ____ Date Analyzed: 07/29/92

GC Column: WIDE ID: 0.530 (mm) Dilution Factor: 1.0

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

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

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	11	~~B~~ U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
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	J
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
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

9613492.8072

000008

EPA SAMPLE NO.

B070M1

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07059 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207059-02A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20729B05

Level: (low/med) LOW Date Received: 07/27/92

% Moisture: not dec. ____ Date Analyzed: 07/29/92

GC Column: WIDE ID: 0.530 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

11-16-92 SC

9613492.8073

000009

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070M2

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07059 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207059-03A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20729B08

Level: (low/med) LOW Date Received: 07/27/92

% Moisture: not dec. ____ Date Analyzed: 07/29/92

GC Column: WIDE ID: 0.530 (mm) Dilution Factor: 1.0

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

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

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 ~~6~~	~~B~~ 4
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
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	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
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

9613492.8074

000010
EPA SAMPLE NO.

B070M2

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07059 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207059-03A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20729B08

Level: (low/med) LOW Date Received: 07/27/92

% Moisture: not dec. ____ Date Analyzed: 07/29/92

GC Column: WIDE ID: 0.530 (mm) Dilution Factor: 1.0

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

Number TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 110-54-3	HEXANE	5.77	5	BJ

11-16-92 SL

9613492.5075

000011

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070M6

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07059 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207059-04A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20729B09

Level: (low/med) LOW Date Received: 07/27/92

% Moisture: not dec. ____ Date Analyzed: 07/29/92

GC Column: WIDE ID: 0.530 (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	10 ~~5~~	~~BJ~~ 4
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
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	J
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
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

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B070M6

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07059 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207059-04A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20729B09

Level: (low/med) LOW Date Received: 07/27/92

% Moisture: not dec. ____ Date Analyzed: 07/29/92

GC Column: WIDE ID: 0.530 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

11-16-92 SC

9613492.8077

000013

EPA SAMPLE NO.

B070N2

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07059 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207059-05A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20729B10

Level: (low/med) LOW Date Received: 07/27/92

% Moisture: not dec. ____ Date Analyzed: 07/29/92

GC Column: WIDE ID: 0.530 (mm) Dilution Factor: 1.0

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

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

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 ~~5~~	~~BJ~~ U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
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	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
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

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B070N2

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07059 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207059-05A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20729B10

Level: (low/med) LOW Date Received: 07/27/92

% Moisture: not dec. ____ Date Analyzed: 07/29/92

GC Column: WIDE ID: 0.530 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

11-16-92

9613492.8079

000015
EPA SAMPLE NO.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

B070N6

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07059 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207059-06A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20729B11

Level: (low/med) LOW Date Received: 07/29/92

% Moisture: not dec. ____ Date Analyzed: 07/29/92

GC Column: WIDE ID: 0.530 (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	10 ~~4~~	~~B~~ U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
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	J
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
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

11-16-92

9613492.8080

000016

EPA SAMPLE NO.

B070N6

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07059 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207059-06A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20729B11

Level: (low/med) LOW Date Received: 07/29/92

% Moisture: not dec. ____ Date Analyzed: 07/29/92

GC Column: WIDE ID: 0.530 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

9613492.8081

000017

EPA SAMPLE NO.

B072W4

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07059 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207059-07A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20729B12

Level: (low/med) LOW Date Received: 07/27/92

% Moisture: not dec. ____ Date Analyzed: 07/29/92

GC Column: WIDE ID: 0.530 (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	10 ~~4~~	~~B~~ U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
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	J
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
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

9613492.8082

000018
EPA SAMPLE NO.

B072W4

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07059 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207059-07A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20729B12

Level: (low/med) LOW Date Received: 07/27/92

% Moisture: not dec. ____ Date Analyzed: 07/29/92

GC Column: WIDE ID: 0.530 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

11-16-92

9613492.8083

000019

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B072W8

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07059 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207059-08A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20729B13

Level: (low/med) LOW Date Received: 07/27/92

% Moisture: not dec. ____ Date Analyzed: 07/29/92

GC Column: WIDE ID: 0.530 (mm) Dilution Factor: 1.0

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

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

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~~ 4
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
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	J
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
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

11-16-92

9613492.8084

000020

EPA SAMPLE NO.

B072W8

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07059 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207059-08A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20729B13

Level: (low/med) LOW Date Received: 07/27/92

% Moisture: not dec. ____ Date Analyzed: 07/29/92

GC Column: WIDE ID: 0.530 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

11-16-92

9613492.8085

000021
EPA SAMPLE NO.

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

B070L7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07059 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207059-01B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20731S11

Level: (low/med) LOW Date Received: 07/27/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/29/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/31/92

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

11-16-92 SC

9613492.8086

000022

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

B070L7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07059 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207059-01B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20731S11

Level: (low/med) LOW Date Received: 07/27/92

% Moisture: ____ decanted: (Y/N) ___ Date Extracted: 07/29/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/31/92

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	4	J
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

11-16-92

9613492.8087

000023

EPA SAMPLE NO.

B070L7

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07059 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207059-01B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20731S11

Level: (low/med) LOW Date Received: 07/27/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/29/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/31/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

11-16-92

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070M2

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07059 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207059-03B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20731S12

Level: (low/med) LOW Date Received: 07/27/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/29/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/31/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

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
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

11-16-92

9613492.8089

000025

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070M2

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07059 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207059-03B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20731S12

Level: (low/med) LOW Date Received: 07/27/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/29/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/31/92

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

11-16-9256

9613492.8090

000026

EPA SAMPLE NO.

B070M2

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07059 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207059-03B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20731S12

Level: (low/med) LOW Date Received: 07/27/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/29/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/31/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

11-16-92 cf

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070N2

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07059 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207059-05B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20731S15

Level: (low/med) LOW Date Received: 07/27/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/29/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/31/92

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

11-16-92

9613492.8092

000028

1C

SEMIVOLATI.. ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070N2

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07059 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207059-05B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20731S15

Level: (low/med) LOW Date Received: 07/27/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/29/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/31/92

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

11-10 LBC

9613492.8093

000029

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B070N2

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07059 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207059-05B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20731S15

Level: (low/med) LOW Date Received: 07/27/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/29/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/31/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

11-16-92

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B072W4

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07059 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207059-07B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20731S16

Level: (low/med) LOW Date Received: 07/27/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/29/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/31/92

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

9613492.8095

000031

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B072W4

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07059 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207059-07B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20731S16

Level: (low/med) LOW Date Received: 07/27/92

% Moisture: ____ decanted: (Y/N) ___ Date Extracted: 07/29/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/31/92

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

11-16-92

9613492.8096

000032
EPA SAMPLE NO.

B072W4

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07059 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207059-07B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20731S16

Level: (low/med) LOW Date Received: 07/27/92

% Moisture: ____ decanted: (Y/N) ___ Date Extracted: 07/29/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/31/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

11-16-92 SC

9613492.0097

000033

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070L7

b Name: TMA/ARLI Contract: WHC

b Code: TMALA Case No.: 07059 SAS No.: NA SDG No.: NA

trix: (soil/water) WATER Lab Sample ID: A207059-01B

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

Moisture: _____ decanted: (Y/N) ___ Date Received: 07/27/92

traction: (SepF/Cont/Sonc) CONT Date Extracted: 07/29/92

oncentrated Extract Volume: 10000 (uL) Date Analyzed: 08/07/92

jection Volume: 1.00 (uL) Dilution Factor: 1.00

PC 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

9613492.8098

000034

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070M2

ab Name: TMA/ARLI Contract: WHC

ab Code: TMALA Case No.: 07059 SAS No.: NA SDG No.: NA

atrix: (soil/water) WATER Lab Sample ID: A207059-03B

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

Moisture: _____ decanted: (Y/N) ___ Date Received: 07/27/92

xtraction: (SepF/Cont/Sonc) CONT Date Extracted: 07/29/92

oncentrated Extract Volume: 10000 (uL) Date Analyzed: 08/07/92

njection Volume: 1.00 (uL) Dilution Factor: 1.00

PC 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

11-17-9

9613492.8099

000035

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070N2

ab Name: TMA/ARLI Contract: WHC

ab Code: TMALA Case No.: 07059 SAS No.: NA SDG No.: NA

atrix: (soil/water) WATER Lab Sample ID: A207059-05B

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

Moisture: _____ decanted: (Y/N) ___ Date Received: 07/27/92

xtraction: (SepF/Cont/Sonc) CONT Date Extracted: 07/29/92

oncentrated Extract Volume: 10000 (uL) Date Analyzed: 08/07/92

njection Volume: 1.00 (uL) Dilution Factor: 1.00

PC 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

11-16-92

9613492.B100

000036

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B072W4

b Name: TMA/ARLI Contract: WHC

b Code: TMALA Case No.: 07059 SAS No.: NA SDG No.: NA

trix: (soil/water) WATER Lab Sample ID: A207059-07B

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

Moiscure: _____ decanted: (Y/N) ___ Date Received: 07/27/92

traction: (SepF/Cont/Sonc) CONT Date Extracted: 07/29/92

ncentrated Extract Volume: 10000 (uL) Date Analyzed: 08/07/92

jection Volume: 1.00 (uL) Dilution Factor: 1.00

C 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

11-17-9

9613492.8101

WESTINGHOUSE/HANFORD
1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B070L7

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

Lab Code: SKINER Case No.: N2-07-137SAS No.: SDG No.: B070L7

Matrix (soil/water): WATER Lab Sample ID: 07239-01S

Level (low/med): LOW Date Received: 07/28/92

% 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	23.9	U		P
7440-36-0	Antimony	16.3	U		P
7440-38-2	Arsenic	4.3	~~B~~	U	F
7440-39-3	Barium	20.9	~~B~~	U	P
7440-41-7	Beryllium	1.5	~~B~~	U	P
7440-43-9	Cadmium	2.2	~~B~~	U	P
7440-70-2	Calcium	47700			P
7440-47-3	Chromium	23.2			P
7440-48-4	Cobalt	3.5	U		P
7440-50-8	Copper	4.5	~~B~~	U	P
7439-89-6	Iron	72.6	~~B~~	J	P
7439-92-1	Lead	7.9			F
7439-95-4	Magnesium	8580			P
7439-96-5	Manganese	4.4	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	9.4	~~B~~	U	P
7440-09-7	Potassium	5730			P
7782-49-2	Selenium	3.7	U	~~W~~ J	F
7440-22-4	Silver	4.8	U		P
7440-23-5	Sodium	11800			P
7440-28-0	Thallium	1.3	~~B~~	~~W~~ UJ	F
7440-62-2	Vanadium	9.6	~~B~~	U	P
7440-66-6	Zinc	12.2	B		P
	Cyanide	10.0	U		CA

Color Before: \OLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

002

9613492.8102

WESTINGHOUSE/HANFORD
1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B070L7

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

Lab Code: SKINER Case No.: N2-07-137SAS No.: SDG No.: B070L7

Matrix (soil/water): WATER Lab Sample ID: 07239-01S

Level (low/med): LOW Date Received: 07/28/92

% 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	23.9	U	U	P
7440-36-0	Antimony	16.3	U	U	P
7440-38-2	Arsenic	4.3	B	U	F
7440-39-3	Barium	20.9	B	U	P
7440-41-7	Beryllium	1.5	B	U	P
7440-43-9	Cadmium	2.2	B	U	P
7440-70-2	Calcium	47700			P
7440-47-3	Chromium	23.2			P
7440-48-4	Cobalt	3.5	U	U	P
7440-50-8	Copper	4.5	B	U	P
7439-89-6	Iron	72.6	B	J	P
7439-92-1	Lead	7.9			F
7439-95-4	Magnesium	8580			P
7439-96-5	Manganese	4.4	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	9.4	B	U	P
7440-09-7	Potassium	5730			P
7782-49-2	Selenium	3.7	U	UJ	F
7440-22-4	Silver	4.8	U	U	P
7440-23-5	Sodium	11800			P
7440-28-0	Thallium	1.3	B	UJ	F
7440-62-2	Vanadium	9.6	B		P
7440-66-6	Zinc	12.2	B	U	P
	Cyanide	10.0	U	U	CA

12-1-92

Color Before: \OLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

002

9613492.8103

WESTINGHOUSE/HANFORD

1

SAMPLE NUMBER:

B070M0

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: SKINER Case No.: N2-07-137SAS No.: SDG No.: B070M0

Matrix (soil/water): WATER Lab Sample ID: 07242-01S

Level (low/med): LOW Date Received: 07/28/92

% 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	23.9	U		P
7440-36-0	Antimony	16.3	U		P
7440-38-2	Arsenic	4.9	~~B~~	U	F
7440-39-3	Barium	20.9	~~B~~	U	P
7440-41-7	Beryllium	1.2	~~B~~	U	P
7440-43-9	Cadmium	1.5	U		P
7440-70-2	Calcium	48800			P
7440-47-3	Chromium	6.7	~~B~~	U	P
7440-48-4	Cobalt	3.5	U		P
7440-50-8	Copper	3.8	U		P
7439-89-6	Iron	7.6	U		P
7439-92-1	Lead	2.2	U		F
7439-95-4	Magnesium	8690			P
7439-96-5	Manganese	4.4	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	3.9	U		P
7440-09-7	Potassium	5660			P
7782-49-2	Selenium	3.6	U		F
7440-22-4	Silver	4.8	U		P
7440-23-5	Sodium	12100			P
7440-28-0	Thallium	1.6	U		F
7440-62-2	Vanadium	8.4	~~B~~	U	P
7440-66-6	Zinc	4.9	~~B~~	U	P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

002

9613492.8104

WESTINGHOUSE/HANFORD
1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B070M0

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

Lab Code: SKINER Case No.: N2-07-137SAS No.: SDG No.: B070M0

Matrix (soil/water): WATER Lab Sample ID: 07242-01S

Level (low/med): LOW Date Received: 07/28/92

% 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	23.9	U	U	P
7440-36-0	Antimony	16.3	U	U	P
7440-38-2	Arsenic	4.9	B	U	F
7440-39-3	Barium	20.9	B	U	P
7440-41-7	Beryllium	1.2	B	U	P
7440-43-9	Cadmium	1.5	U		P
7440-70-2	Calcium	48800			P
7440-47-3	Chromium	6.7	B	U	P
7440-48-4	Cobalt	3.5	U		P
7440-50-8	Copper	3.8	U		P
7439-89-6	Iron	7.6	U		P
7439-92-1	Lead	2.2	U		F
7439-95-4	Magnesium	8690			P
7439-96-5	Manganese	4.4	U	U	P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	3.9	U		P
7440-09-7	Potassium	5660			P
7782-49-2	Selenium	3.6	U	U	F
7440-22-4	Silver	4.8	U	U	P
7440-23-5	Sodium	12100			P
7440-28-0	Thallium	1.6	U	U	F
7440-62-2	Vanadium	8.4	B	U	P
7440-66-6	Zinc	4.9	B	U	P
	Cyanide				NR

12-2-92

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

002

9613492.8105

WESTINGHOUSE/HANFORD

1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B072W4

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

Lab Code: SKINER Case No.: N2-07-137SAS No.: SDG No.: B070L7

Matrix (soil/water): WATER Lab Sample ID: 07239-04S

Level (low/med): LOW Date Received: 07/28/92

% 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	23.9	U	U	P
7440-36-0	Antimony	16.3	U		P
7440-38-2	Arsenic	2.6	U		F
7440-39-3	Barium	4.6	U		P
7440-41-7	Beryllium	0.70	U		P
7440-43-9	Cadmium	1.5	U		P
7440-70-2	Calcium	85.7	B		P
7440-47-3	Chromium	4.9	U	U	P
7440-48-4	Cobalt	3.5	U	U	P
7440-50-8	Copper	3.8	U	U	P
7439-89-6	Iron	7.6	U	UJ	P
7439-92-1	Lead	2.1	B		F
7439-95-4	Magnesium	40.1	U	U	P
7439-96-5	Manganese	4.4	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	3.9	U		P
7440-09-7	Potassium	266	U		P
7782-49-2	Selenium	3.7	U		F
7440-22-4	Silver	4.8	U		P
7440-23-5	Sodium	56.4	B	U	P
7440-28-0	Thallium	0.90	U		F
7440-62-2	Vanadium	2.4	U		P
7440-66-6	Zinc	2.9	U		P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

005

9613492.8106

WESTINGHOUSE/HANFORD
1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B072W4

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

Lab Code: SKINER Case No.: N2-07-137SAS No.: SDG No.: B070L7

Matrix (soil/water): WATER Lab Sample ID: 07239-04S

Level (low/med): LOW Date Received: 07/28/92

% 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	23.9	U		P
7440-36-0	Antimony	16.3	U		P
7440-38-2	Arsenic	2.6	U		F
7440-39-3	Barium	4.6	U		P
7440-41-7	Beryllium	0.70	U		P
7440-43-9	Cadmium	1.5	U		P
7440-70-2	Calcium	85.7	B		P
7440-47-3	Chromium	4.9	U		P
7440-48-4	Cobalt	3.5	U		P
7440-50-8	Copper	3.8	U		P
7439-89-6	Iron	7.6	U		P
7439-92-1	Lead	2.1	~~B~~	J	F
7439-95-4	Magnesium	40.1	U		P
7439-96-5	Manganese	4.4	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	3.9	U		P
7440-09-7	Potassium	266	U		P
7782-49-2	Selenium	3.7	U		F
7440-22-4	Silver	4.8	U		P
7440-23-5	Sodium	56.4	~~B~~	U	P
7440-28-0	Thallium	0.90	U		F
7440-62-2	Vanadium	2.4	U		P
7440-66-6	Zinc	2.9	U		P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

005

9613492.8107

WESTINGHOUSE/HANFORD

1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B070N5

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

Lab Code: SKINER Case No.: N2-07-137SAS No.: SDG No.: B070M0

Matrix (soil/water): WATER Lab Sample ID: 07242-03S

Level (low/med): LOW Date Received: 07/28/92

% 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	291			P
7440-36-0	Antimony	16.3	~~U~~	U	P
7440-38-2	Arsenic	3.7	~~B~~	U	F
7440-39-3	Barium	43.1	B		P
7440-41-7	Beryllium	0.70	~~U~~	U	P
7440-43-9	Cadmium	1.5	~~U~~	U	P
7440-70-2	Calcium	51500			P
7440-47-3	Chromium	5.5	~~B~~	U	P
7440-48-4	Cobalt	3.5	~~U~~	U	P
7440-50-8	Copper	3.8	~~U~~		P
7439-89-6	Iron	7.6	~~U~~		P
7439-92-1	Lead	2.2	~~U~~		F
7439-95-4	Magnesium	7810			P
7439-96-5	Manganese	17.5			P
7439-97-6	Mercury	0.20	~~U~~	U	CV
7440-02-0	Nickel	3.9	~~U~~	U	P
7440-09-7	Potassium	4790	B		P
7782-49-2	Selenium	3.6	~~U~~	U	F
7440-22-4	Silver	4.8	~~U~~	U	P
7440-23-5	Sodium	11600			P
7440-28-0	Thallium	1.6	~~U~~	U	F
7440-62-2	Vanadium	7.4	~~B~~	U	P
7440-66-6	Zinc	2.9	~~U~~	U	P
	Cyanide				NR

12-1-92

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

004

9613492.8108

WESTINGHOUSE/HANFORD

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B070N5

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

Lab Code: SKINER Case No.: N2-07-137SAS No.: SDG No.: B070M0

Matrix (soil/water): WATER Lab Sample ID: 07242-03S

Level (low/med): LOW Date Received: 07/28/92

% 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	291			P
7440-36-0	Antimony	16.3	U		P
7440-38-2	Arsenic	3.7	~~B~~ U		F
7440-39-3	Barium	43.1	B		P
7440-41-7	Beryllium	0.70	U		P
7440-43-9	Cadmium	1.5	U		P
7440-70-2	Calcium	51500			P
7440-47-3	Chromium	5.5	~~B~~ U		P
7440-48-4	Cobalt	3.5	U		P
7440-50-8	Copper	3.8	U		P
7439-89-6	Iron	7.6	U		P
7439-92-1	Lead	2.2	U		F
7439-95-4	Magnesium	7810			P
7439-96-5	Manganese	17.5			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	3.9	U		P
7440-09-7	Potassium	4790	B		P
7782-49-2	Selenium	3.6	U		F
7440-22-4	Silver	4.8	U		P
7440-23-5	Sodium	11600			P
7440-28-0	Thallium	1.6	U		F
7440-62-2	Vanadium	7.4	~~B~~ U		P
7440-66-6	Zinc	2.9	U		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

004

9613492.8109

WESTINGHOUSE/HANFORD
1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B070N2

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

Lab Code: SKINER Case No.: N2-07-137SAS No.: SDG No.: B070L7

Matrix (soil/water): WATER Lab Sample ID: 07239-03S

Level (low/med): LOW Date Received: 07/28/92

% 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	23.9	U		P
7440-36-0	Antimony	16.3	U		P
7440-38-2	Arsenic	4.2	B		F
7440-39-3	Barium	36.6	B		P
7440-41-7	Beryllium	0.70	U		P
7440-43-9	Cadmium	1.7	B		P
7440-70-2	Calcium	51700			P
7440-47-3	Chromium	13.5			P
7440-48-4	Cobalt	3.5	U		P
7440-50-8	Copper	3.8	U		P
7439-89-6	Iron	28.1	B		P
7439-92-1	Lead	2.0	B		F
7439-95-4	Magnesium	7840			P
7439-96-5	Manganese	4.4	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	4.1	B		P
7440-09-7	Potassium	4920	B		P
7782-49-2	Selenium	3.7	U		F
7440-22-4	Silver	4.8	U		P
7440-23-5	Sodium	11700			P
7440-28-0	Thallium	0.90	U		F
7440-62-2	Vanadium	7.4	B		P
7440-66-6	Zinc	2.9	U		P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

004

9613492.8110

WESTINGHOUSE/HANFORD
1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B070N2

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

Lab Code: SKINER Case No.: N2-07-137SAS No.: SDG No.: B070L7

Matrix (soil/water): WATER Lab Sample ID: 07239-03S

Level (low/med): LOW Date Received: 07/28/92

% 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	23.9	U		P
7440-36-0	Antimony	16.3	U		P
7440-38-2	Arsenic	4.2	~~B~~	~~W~~ UJ	F
7440-39-3	Barium	36.6	B		P
7440-41-7	Beryllium	0.70	U		P
7440-43-9	Cadmium	1.7	~~B~~	U	P
7440-70-2	Calcium	51700			P
7440-47-3	Chromium	13.5			P
7440-48-4	Cobalt	3.5	U		P
7440-50-8	Copper	3.8	U		P
7439-89-6	Iron	28.1	B	~~J~~	P
7439-92-1	Lead	2.0	~~B~~	U	F
7439-95-4	Magnesium	7840			P
7439-96-5	Manganese	4.4	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	4.1	~~B~~	U	P
7440-09-7	Potassium	4920	B		P
7782-49-2	Selenium	3.7	U	~~W~~ J	F
7440-22-4	Silver	4.8	U		P
7440-23-5	Sodium	11700			P
7440-28-0	Thallium	0.90	U	~~W~~ J	F
7440-62-2	Vanadium	7.4	~~B~~	U	P
7440-66-6	Zinc	2.9	U		P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

004

9613492.8111

WESTINGHOUSE/HANFORD

1

SAMPLE NUMBER:

B070M5

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: SKINER Case No.: N2-07-137SAS No.: SDG No.: B070M0

Matrix (soil/water): WATER Lab Sample ID: 07242-02S

Level (low/med): LOW Date Received: 07/28/92

% 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	23.9	U		P
7440-36-0	Antimony	16.3	U		P
7440-38-2	Arsenic	3.7	~~B~~	U	F
7440-39-3	Barium	20.9	~~B~~	U	P
7440-41-7	Beryllium	0.70	U		P
7440-43-9	Cadmium	1.5	U		P
7440-70-2	Calcium	50200			P
7440-47-3	Chromium	6.1	~~B~~	U	P
7440-48-4	Cobalt	3.5	U		P
7440-50-8	Copper	3.8	U		P
7439-89-6	Iron	38.7	B		P
7439-92-1	Lead	2.2	U		F
7439-95-4	Magnesium	7810			P
7439-96-5	Manganese	4.4	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	3.9	U		P
7440-09-7	Potassium	5180			P
7782-49-2	Selenium	3.6	U		F
7440-22-4	Silver	4.8	U		P
7440-23-5	Sodium	11600			P
7440-28-0	Thallium	1.6	U		F
7440-62-2	Vanadium	7.4	~~B~~	U	P
7440-66-6	Zinc	2.9	U		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

003

9613492.8112

WESTINGHOUSE/HANFORD
1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B070M5

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

Lab Code: SKINER Case No.: N2-07-137SAS No.: SDG No.: B070M0

Matrix (soil/water): WATER Lab Sample ID: 07242-02S

Level (low/med): LOW Date Received: 07/28/92

% 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	23.9	U		P
7440-36-0	Antimony	16.3	U		P
7440-38-2	Arsenic	3.7	B		F
7440-39-3	Barium	20.9	B		P
7440-41-7	Beryllium	0.70	U		P
7440-43-9	Cadmium	1.5	U		P
7440-70-2	Calcium	50200			P
7440-47-3	Chromium	6.1	B		P
7440-48-4	Cobalt	3.5	U		P
7440-50-8	Copper	3.8	U		P
7439-89-6	Iron	38.7	B		P
7439-92-1	Lead	2.2	U		F
7439-95-4	Magnesium	7810			P
7439-96-5	Manganese	4.4	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	3.9	U		P
7440-09-7	Potassium	5180			P
7782-49-2	Selenium	3.6	U		F
7440-22-4	Silver	4.8	U		P
7440-23-5	Sodium	11600			P
7440-28-0	Thallium	1.6	U		F
7440-62-2	Vanadium	7.4	B		P
7440-66-6	Zinc	2.9	U		P
	Cyanide				NR

12-1-92

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

003

9613492.8113

WESTINGHOUSE/HANFORD
1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B070M2

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

Lab Code: SKINER Case No.: N2-07-137SAS No.: SDG No.: B070L7

Matrix (soil/water): WATER Lab Sample ID: 07239-02S

Level (low/med): LOW Date Received: 07/28/92

% 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	23.9	U		P
7440-36-0	Antimony	16.3	U		P
7440-38-2	Arsenic	2.8	~~B~~	U	F
7440-39-3	Barium	19.6	~~B~~	U	P
7440-41-7	Beryllium	0.70	U		P
7440-43-9	Cadmium	1.5	U		P
7440-70-2	Calcium	50300			P
7440-47-3	Chromium	9.2	~~B~~	U	P
7440-48-4	Cobalt	3.5	U		P
7440-50-8	Copper	4.5	~~B~~	U	P
7439-89-6	Iron	446		~~W~~ J	P
7439-92-1	Lead	4.3		~~W~~ J	F
7439-95-4	Magnesium	7860			P
7439-96-5	Manganese	5.2	~~B~~	U	P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	4.4	~~B~~	U	P
7440-09-7	Potassium	5280			P
7782-49-2	Selenium	3.7	U	~~W~~ J	F
7440-22-4	Silver	4.8	U		P
7440-23-5	Sodium	11600			P
7440-28-0	Thallium	0.90	U	~~W~~ J	F
7440-62-2	Vanadium	8.0	~~B~~	U	P
7440-66-6	Zinc	2.9	U		P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

003

9613492.0114

WESTINGHOUSE/HANFORD
1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B070M2

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

Lab Code: SKINER Case No.: N2-07-137SAS No.: SDG No.: B070L7

Matrix (soil/water): WATER Lab Sample ID: 07239-02S

Level (low/med): LOW Date Received: 07/28/92

% 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	23.9	U		P
7440-36-0	Antimony	16.3	U		P
7440-38-2	Arsenic	2.8	B	U	F
7440-39-3	Barium	19.6	B	U	P
7440-41-7	Beryllium	0.70	U	U	P
7440-43-9	Cadmium	1.5	U	U	P
7440-70-2	Calcium	50300			P
7440-47-3	Chromium	9.2	B	U	P
7440-48-4	Cobalt	3.5	U	U	P
7440-50-8	Copper	4.5	B	U	P
7439-89-6	Iron	446		J	P
7439-92-1	Lead	4.3		UJ	F
7439-95-4	Magnesium	7860			P
7439-96-5	Manganese	5.2	B	U	P
7439-97-6	Mercury	0.20	U	U	CV
7440-02-0	Nickel	4.4	B	U	P
7440-09-7	Potassium	5280			P
7782-49-2	Selenium	3.7	U	UJ	F
7440-22-4	Silver	4.8	U	U	P
7440-23-5	Sodium	11600			P
7440-28-0	Thallium	0.90	U	UJ	F
7440-62-2	Vanadium	8.0	B	U	P
7440-66-6	Zinc	2.9	U	U	P
	Cyanide	10.0	U	U	CA

12-1-92 SC

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

003

9613492.8115

WESTINGHOUSE/HANFORD

1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B072W7

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

Lab Code: SKINER Case No.: N2-07-137SAS No.: SDG No.: B070M0

Matrix (soil/water): WATER Lab Sample ID: 07242-04S

Level (low/med): LOW Date Received: 07/28/92

% 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	23.9	U	U	P
7440-36-0	Antimony	16.3	U	U	P
7440-38-2	Arsenic	2.4	U	U	F
7440-39-3	Barium	4.6	U	U	P
7440-41-7	Beryllium	0.70	U	U	P
7440-43-9	Cadmium	1.5	U	U	P
7440-70-2	Calcium	82.4	B	U	P
7440-47-3	Chromium	4.9	U	U	P
7440-48-4	Cobalt	3.5	U		P
7440-50-8	Copper	3.8	U		P
7439-89-6	Iron	7.6	U		P
7439-92-1	Lead	2.2	U		F
7439-95-4	Magnesium	40.1	U		P
7439-96-5	Manganese	4.4	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	3.9	U		P
7440-09-7	Potassium	266	U		P
7782-49-2	Selenium	3.6	U		F
7440-22-4	Silver	4.8	U		P
7440-23-5	Sodium	83.1	B	U	P
7440-28-0	Thallium	1.6	U	U	F
7440-62-2	Vanadium	2.4	U	U	P
7440-66-6	Zinc	2.9	U	U	P
	Cyanide				NR

122-4

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

005

9613492.8116

WESTINGHOUSE/HANFORD

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B072W7

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

Lab Code: SKINER Case No.: N2-07-137SAS No.: SDG No.: B070M0

Matrix (soil/water): WATER Lab Sample ID: 07242-04S

Level (low/med): LOW Date Received: 07/28/92

% 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	23.9	U		P
7440-36-0	Antimony	16.3	U		P
7440-38-2	Arsenic	2.4	U		F
7440-39-3	Barium	4.6	U		P
7440-41-7	Beryllium	0.70	U		P
7440-43-9	Cadmium	1.5	U		P
7440-70-2	Calcium	82.4	~~B~~	N	P
7440-47-3	Chromium	4.9	U		P
7440-48-4	Cobalt	3.5	U		P
7440-50-8	Copper	3.8	U		P
7439-89-6	Iron	7.6	U		P
7439-92-1	Lead	2.2	U		F
7439-95-4	Magnesium	40.1	U		P
7439-96-5	Manganese	4.4	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	3.9	U		P
7440-09-7	Potassium	266	U		P
7782-49-2	Selenium	3.6	U		F
7440-22-4	Silver	4.8	U		P
7440-23-5	Sodium	83.1	~~B~~	N	P
7440-28-0	Thallium	1.6	U		F
7440-62-2	Vanadium	2.4	U		P
7440-66-6	Zinc	2.9	U		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

005

TMA Inc. REPORT Work Order # A2-07-059

Received: 07/27/92

Results by Sample

SAMPLE ID B070L7 FRACTION 01C TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/23/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	9.8	mg/L	0.2
Elect. Conductivity	120.1	323	umho/cm	6
Fluoride	300.0	0.3	mg/L	0.1
Phosphate	300.0	<0.4 U	mg/L	0.4
pH	150.1	8.0 J	pH	0.1
Sulfate	300.0	47	mg/L	1

FORM I

PBD
8/20/92

TMA Inc. REPORT Work Order # A2-07-059

Received: 07/27/92 Results by Sample

SAMPLE ID B070L7 FRACTION 01D TEST CODE WCCLPL NAME Anions & Wet Chem. - UM043

Date & Time Collected 07/23/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Alkalinity	310.1	108	mg/L	2
Tot. Dissolved Solids	160.1	273	mg/L	5

FORM I

PRS
6/29/93

9613492.8119

000020

TMA Inc. REPORT Work Order # A2-07-059

eceived: 07/27/92 Results by Sample

AMPLE ID B070L7 FRACTION 01E TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 07/23/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Sulfide	376.1	~~<1~~ U	mg/L	1

FORM I

9613492.8120

UUUU41

TMA Inc. REPORT Work Order # A2-07-059

Received: 07/27/92

Results by Sample

AMPLE ID B070L7 FRACTION 01F TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 07/23/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Ammonia Nitrogen	350.3	0.15	mg/L	0.05
COD	410.0	<30 U	mg/L	30

FORM I

RA
8/20/93

9613492.8121

000022

TMA Inc. REPORT Work Order # A2-07-059

eceived: 07/27/92 Results by Sample

AMPLE ID B070M2 FRACTION 03E TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 07/23/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	9.9	mg/L	0.2
Elect. Conductivity	120.1	325	umho/cm	6
Fluoride	300.0	0.2	mg/L	0.1
Phosphate	300.0	<0.4 U	mg/L	0.4
pH	150.1	7.9 J	pH	0.1
Sulfate	300.0	48	mg/L	1

FORM I

PBJ
6/20/93

9613492.8122

000023

TMA Inc. REPORT Work Order # A2-07-059

Received: 07/27/92

Results by Sample

SAMPLE ID B070M2 FRACTION 03G TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/23/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Alkalinity	310.1	108	mg/L	2
Tot. Dissolved Solids	160.1	268	mg/L	5

FORM I

HBD

9613492.8123

000024

TMA Inc. REPORT Work Order # A2-07-059

eceived: 07/27/92

Results by Sample

AMPLE ID B070M2 FRACTION 03N TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 07/23/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Sulfide	376.1	<1 U	mg/L	1

FORM I

9613492.8124

000025

TMA Inc. REPORT Work Order # A2-07-059

Received: 07/27/92

Results by Sample

AMPLE ID B070M2 FRACTION 031 TEST CODE WCCLPL NAME Anions & Wet Chem. - WM043

Date & Time Collected 07/23/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Ammonia Nitrogen	350.3	0.19	mg/L	0.05
COD	410.0	~~<~~30 U	mg/L	30

FORM I

9613492.8125

000026

TMA Inc. REPORT Work Order # A2-07-059

eceived: 07/27/92 Results by Sample

AMPLE ID B070N2 FRACTION 05E TEST CODE VCCLPL NAME Anions & Wet Chem. - VN043

Date & Time Collected 07/23/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	10.0	mg/L	0.2
Elect. Conductivity	120.1	325	umho/cm	6
Fluoride	300.0	0.3	mg/L	0.1
Phosphate	300.0	<0.4 U	mg/L	0.4
pH	150.1	8.0 J	pH	0.1
Sulfate	300.0	49	mg/L	1

FORM I

PBA
9/20/93

9613492.8126

000027

TMA Inc. REPORT Work Order # A2-07-059

:ceived: 07/27/92 Results by Sample

\MPLE ID B070N2 FRACTION 05G TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 07/23/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Alkalinity	310.1	108	mg/L	2
Tot. Dissolved Solids	160.1	257	mg/L	5

FORM I

RJA
8/20/92

9613492.8127

UUUU60

TMA Inc. REPORT Work Order # A2-07-059

:ceived: 07/27/92 Results by Sample

\MPLE ID B070M2 FRACTION 05I TEST CODE WCCLPL NAME Anions & Wet Chem. - WB043

Date & Time Collected 07/23/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Sulfide	376.1	<1 U	mg/L	1

FORM I

BJ 8/26

9613492.8128

TMA Inc. REPORT Work Order # A2-07-059

eceived: 07/27/92 Results by Sample

AMPLE ID B070N2 FRACTION 05J TEST CODE WCCLPL NAME Anions & Wet Chem. - VN043

Date & Time Collected 07/23/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Ammonia Nitrogen	350.3	<0.05 U	mg/L	0.05
COD	410.0	<30 U	mg/L	30

FORM I

PEJ 7/30/93

9613492.8129

000030

TMA Inc. REPORT Work Order # A2-07-059

eceived: 07/27/92 Results by Sample

AMPLE ID B072W4 FRACTION 07C TEST CODE VCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 07/23/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	<0.2 U	mg/L	0.2
Elect. Conductivity	120.1	<6 U	umho/cm	6
Fluoride	300.0	<0.1 U	mg/L	0.1
Phosphate	300.0	<0.4 U	mg/L	0.4
pH	150.1	6.4 J	pH	0.1
Sulfate	300.0	<1 U	mg/L	1

FORM I

BS 9/30/92

9613492.8130

TMA Inc. REPORT Work Order # X2-07-059 000031

Received: 07/27/92

Results by Sample

SAMPLE ID B072W4 FRACTION 07D TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/23/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Alkalinity	310.1	4	mg/L	2
Tot. Dissolved Solids	160.1	~~<5~~ 11	mg/L	5

FORM I

9613492.8131

000032

TMA Inc. REPORT Work Order # A2-07-059

Received: 07/27/92

Results by Sample

SAMPLE ID B072W4 FRACTION 07E TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/23/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Sulfide	376.1	<1	mg/L	1

FORM I

ABD
6/20/93

9613492.8132

000033

TMA Inc. REPORT Work Order # A2-07-059

Received: 07/27/92 Results by Sample

SAMPLE ID B072W4 FRACTION 07W TEST CODE WCCLPL NAME Anions & Wet Chem. - WW043

Date & Time Collected 07/23/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Ammonia Nitrogen	350.3	0.12	mg/L	0.05
COD	410.0	<30 U	mg/L	30

FORM I

Received: 07/28/92

Results by Sample

SAMPLE ID B070L7 SAMPLE # 01 FRACTIONS: A
Date & Time Collected 07/23/92 12:26:00 Category WATER

NO3NO2 3.04
mg N/L

SAMPLE ID B070M2 SAMPLE # 02 FRACTIONS: A
Date & Time Collected 07/23/92 11:02:00 Category WATER

NO3NO2 3.39
mg N/L

SAMPLE ID B070N2 SAMPLE # 03 FRACTIONS: A
Date & Time Collected 07/23/92 08:40:00 Category WATER

NO3NO2 3.44
mg N/L

SAMPLE ID B072W4 SAMPLE # 04 FRACTIONS: A
Date & Time Collected 07/23/92 06:43:00 Category WATER

NO3NO2 <0.25
mg N/L

SAMPLE ID B072W4 DUPL SAMPLE # 04 FRACTIONS: B
Date & Time Collected 07/23/92 06:43:00 Category WATER

NO3NO2 <0.25
mg N/L

SAMPLE ID B072W4 SPIKE SAMPLE # 04 FRACTIONS: C
Date & Time Collected 07/23/92 06:43:00 Category WATER

NO3NO2 1.50
mg N/L

SAMPLE ID LCSW SAMPLE # 05 FRACTIONS: A
Date & Time Collected not specified Category WATER

NO3NO2 1.89
mg N/L

A-D
-/RO/A3

TMA
Thermo Analytical Inc.

This report is rendered upon all of the following conditions: Skinner & Sherman Laboratories, Inc. retains ownership of this report until associated submitted invoice is s. Expert witness services shall be available in conjunction with this report only if prior notification of this potential requirement was made and accepted, before the analysis will be responsible for Skinner & Sherman costs and consulting fees if our services are required by subpoena or otherwise in legal proceedings. Total liability is limited to the amount. The results listed refer only to tested samples and applicable parameters. Product endorsement is neither inferred nor implied. Skinner & Sherman Laboratories. exercise due diligence but will not be responsible for lost or destroyed samples or evidence unless client makes appropriate insurance coverage arrangements. Samples are thirty days following issuance of report. Samples will be stored at client's expense, if authorized in writing.

Skinner & Sherman Laboratories Inc.
300 Second Avenue, P.O. Box 521, Waltham, Massachusetts 02254-0521 (617) 890-720
1-800-4 LAB TEST FAX (617) 890-3883