9613491.1952 B070J7-TMA-233 DMC 332

START

OFFICE OF SAMPLE MANAGEMENT

RECORD OF DISPOSITION

ROD-92-00161
Record of Disposition No.

DATE: September 27, 1992 | LABORATORY: TMA

PROJECT TITLE/NO.: 100-BC-5/92-243 | NCR NO.: 050502

SAMPLE IDENTIFICATION NUMBERS:

► B070K0	► B070N0	► B070J0	► B070K5	► B072T7	► B070Q0	► B072T2
B070K1	B070N1	B070J1	B070K6	B072T8	B070Q1	B072T3

DESCRIPTION OF EVENT:

►► The sample identification numbers for the above listed samples for VOA and metals analysis identified on the chain of custody were reversed on the sample analysis request.

DISPOSITION OF SAMPLES:

►► Per P. H. Butcher, the information on the chain of custody is correct.

APPROVAL SIGNATURES:

K. N. Pool — 9/28/92
OSM Project Coordinator (Print/Sign Name) — Date

S. E. Vukelich — 9/30/92
Technical Representative (Print/Sign Name) — Date

N/A
Quality Assurance (Print/Sign Name) — Date

OCT 1996 RECEIVED EDMC

9613491.1953

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 7/18/92

Ice Chest No. SML-79

Field Logbook No. EFL-1636

Bill of Lading/Airbill No. 250996 896-6

Offsite Property No. W92-0-0533-9

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B07017

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)

B07010

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

B07011

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	7/20/92 0901
K. Trapp / K. Trapp	Kermit Blum	7-22-92 1100
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

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector: Les Walker/Kirby Lee — Date Sampled: 7/18/92 — Time: 0845 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070J7	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)		
B070K0	3, 40ml, Gs, WATER, CLP-VOA		
B070K1	1, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986976-6
			OPC # WAL-0-0537-9
			TASK #

Field Information**

Special Handling and/or Storage

Possible Sample Hazards

PART II: LABORATORY SECTION

Received by: Hermit Blum — Title: Sample Control Supervisor — Date: 7-22-92

Analysis Required

* ID's B070K0 & B070K1 were switched - KB

9613491.1955

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 7/18/92

Ice Chest No. SML-118

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986 896-6

Offsite Property No. W92-0-0533-10

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO 70K2

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 70K5

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

BO 70K6

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

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

Relinquished by:	Received by:	Date/Time:
G G Hamilton	K. Trapp / K. Trapp	7/20/92 0901
K. Trapp / K. Trapp	Kermit Blum	7-22-92 1100

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

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

Westinghouse Hanford Company

9613591.1956

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/18/92 Time 0710 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070K2	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)		
B070K5	3, 40ml, Gs, WATER, CLP-VOA		
B070K6	3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986796-5
			OPC # W92-0-0533-10
			TASK #

water

Voa

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 7-22-92

Analysis Required

* ID's B070K5 & B070K6 were switched on this sheet - KB

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

**Attach a copy of any additional information which accompanies the sample.

9613491.1957

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 7/18/92

Ice Chest No. SML-[illegible] 26 WT 7/20/92

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986896-6

Offsite Property No. W92-0-0533-10

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B0 70M7

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)

B0 70N0

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

B0 70N1

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

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

Relinquished by:	Received by:	Date/Time:
[illegible] P.D. Lee	K Trapp / K. Trapp	7/20/92 0901
K. Trapp / K Trapp	Kermit Blum	7-22-92 1100
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

9613491.1458

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/18/92 Time 1020 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B07OM7	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)		
B07ONO	3, 40ml, Gs, WATER, CLP-VOA		
B07ONI	✓ 3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986396-C
			OPC # W92-0-0533-10
			TASK #

Field Information**

Special Handling and/or Storage

Possible Sample Hazards

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 7-22-92

Analysis Required

* ID's B07ONO & B07ONI were switched on this sheet -KB

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

9613401.1959

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 7/18/92

Ice Chest No. SHL-9

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986996-6

Offsite Property No. W92-0-0533-9

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B072T4

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)

B072T7

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

B072T8

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.Cu	K. Trapp / K. Trapp	7/20/92 0900
K. Trapp / K Trapp	Kermit Blum	7-22-92 1100

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

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

Westinghouse Hanford Company

961349 L 1960

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/13/92 Time 1205 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B072T4	✓ 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)		
B072T7	✓ 3, 40ml, Gs, WATER, CLP-VOA		2 bubbles
B072T8	✓ 1, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986995-6
			OPC # W92-0-0533-9
			TASK #

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 7-22-92

Analysis Required _____

* ID's B072T7 & B072T8 were switched on this sheet - KB

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

9613481.1861

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 7/19/92

Ice Chest No. SML-~~74~~ 94 KG 7/20/92

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250936 996-6

Offsite Property No. W92-0-0933-1(

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B0 70H7

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)

B0 70J0

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

B0 70J1

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

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

Relinquished by:	Received by:	Date/Time:
Kirby D. Lee K.D. Lee	K. Trapp / K. Trapp	7/20/92 0901
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 7-22-92 1100
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

9213001 1672

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/17/92 Time 1030 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070H7	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)		
B070J0	✓ 3, 40ml, Gs, WATER, CLP-VOA		metal
B070J1	✓ 3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		sra
			BOL # 250986896-6
			OPC # W92-0-0577-11
			TASK #

Field Information**

Special Handling and/or Storage

Possible Sample Hazards

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 7-22-92

Analysis Required

* ID's B070J0 & B070J1 were switched on this sheet - KB

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

9613491.1963

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 7/19/92

Ice Chest No. SML-99

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250980846-6

Offsite Property No. W92-0-0533-11

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO 70P7

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 70Q0

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

BO 70Q1

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	7/20/92 0900
K. Trapp / K. Trapp	Kermit Blum	7-22-92 1100

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: 7/19/92 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
B070P7 ✓	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)		
B070Q0	3, 40ml, Gs, WATER, CLP-VOA		
B070Q1 ✓	3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986896-6
			UPC # W92-0-0533-11
			TASK #

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

Received by: Kermit Blum Title: Sample Control Supervisor Date: 7-22-92

Analysis Required _____

* ID's B070Q0 & B070Q1 were switched on this sheet - KB

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

9213B1.1965

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 7/19/92

Ice Chest No. SML-122

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250996896-6

Offsite Property No. W92-0-0533-12

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B072S9

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)

B072T2

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

B072T3

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

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

Relinquished by:	Received by:	Date/Time:
Kirby D. Lee K.D. Lee	K. Trapp / K. Trapp	7/20/92 0901
K. Trapp / K. Trapp	Kermit Blum	7-22-92 1100

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

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

Westinghouse Hanford Company 9613491.1966

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/19/92 Time 0728 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B072S9	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)		
B072T2*	3, 40ml, Gs, WATER, CLP-VOA		* SHOULD BE B072T3 / FOR METALS
B072T3*	3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		* FOR VOA
			BOL # 250956896-C
			OPC # WA2-0-0533-12
			TASK #

Field Information**

Special Handling and/or Storage

Possible Sample Hazards

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 7-22-92

Analysis Required

* ID's B072T2 & B072T3 were switched on this sheet - KB

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

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

Westinghouse Hanford Company

9615491.1867

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 7/20/92

Ice Chest No. GGH-1

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986720-8

Offsite Property No. W92-0-0533-LT

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B07002

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)

B07005

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

B07006

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

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: C. Celbik C. Celbik	Received by: K. Trapp / K. Trapp	Date/Time: ~~[illegible]~~ KT 7/21/92 1001
Relinquished by: K Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 7-22-92 1100
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

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/20/92 Time 1010 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B07D02 ✓	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)		
B07D06 ✓	3, 40ml, Gs, WATER, CLP-VOA		
	1 KT 7/10/92		
B07D05 ✓	3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250996920-9
			OPC # W92-0-0533-17
			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 7-22-92

Analysis Required _____

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

9213D1.1869

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 7-20-92

Ice Chest No. SML-106

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986920-8

Offsite Property No. W92-0-0533-17

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO70H2

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)

BO70H5

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

BO70H6

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 L.D. Walker	K. Trapp / K. Trapp	7/21/92 1001
K. Trapp / K. Trapp	Kermit Blum	7-22-92 1100

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

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

Westinghouse Hanford Company

961349 L 1970

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/20/92 Time 0815 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070H2 ✓	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)		
B070H6 ✓	3, 40ml, Gs, WATER, CLP-VOA		
	1 KT 7/20/92		
B070H5 ✓	1, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250496920-5
			OPC # W92-0-0533-17
			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 7-22-92

Analysis Required _____

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

9615491.1971

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 7/20/92

Ice Chest No. SML-163

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986 920-9

Offsite Property No. W92-0-0533-19

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO 70P2

✓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 70P5

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

BO 70P6

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

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: C Celebrate C Celebrate	Received by: K. Trapp / K. Trapp	Date/Time: ~~7/20/92~~ KT 7/21/92 1001
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 7-22-92 1100
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

Westinghouse Hanford Company

9613481.1972

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector: Les Walker/Kirby Lee Date Sampled: 7/20/92 Time: 1450 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B07QP2 ✓	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)		
B07QP6 ✓	3, 40ml, Gs, WATER, CLP-VOA		
	1 [illegible]		
B07QP5 ✓	1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250996920-5
			OPC # WA2-0-0533-18
			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: 7-22-92

Analysis Required

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

9613UP1.1873

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 7/21/92

Ice Chest No. SML-109

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 2509 86 920-8

Offsite Property No. W92-0-0533-18

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B0 70G7

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)

B0 70H0

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

B0 70H1

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

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

Relinquished by:	Received by:	Date/Time:
C. Calibert C. CALIBERT	[illegible]	[illegible] KT 7/21/92
Relinquished by:	Received by: K. Trapp / K. Trapp	Date/Time: 7/21/92 1001
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 7-22-92 1100
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

9615491.1974

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/20/92 Time 1315 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
0T0GT	✓ 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)		
B0T0H1	✓ 3, 40ml, Gs, WATER, CLP-VOA		3 bubbles
	1 KT 7/21/92		
B0T0H0	~~3~~, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986 920-9
			OPC # WA2-0-0533-18
			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 7-22-92

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/

9613491.1979

000001

B070J7-TMA-233

WESTINGHOUSE HANFORD COMPANY

SEP 1992
RECEIVED
OSM DMO

Results of Analyses For:

ORGANICS
CASE NO. 07-047
(TMA/ARLI Work Order # A2-07-047)

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

B070K1	B072T3
B070K6	B070D6
B070N1	B070H6
B072T8	B070P6
B070J1	B070H1
B070Q1	

Norcal Work Order # N2-07-107

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

9613491.1976

ARLI 000002

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 7/18/92

Ice Chest No. SML-73

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250996 896-6

Offsite Property No. W92-0-0533-9

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B07017

~~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)~~

B07OKC

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

B07OKI

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

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

Relinquished by:	Received by:	Date/Time:
K.D. Lee	K. Trapp / K. Trapp	7/20/92 0901
K. Trapp / K. Trapp	Kermit Blum	7-22-92 1100
Eddy Yamamoto 7-22-92	C. Harris	7/23/92 9 00

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

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

9613491.1977

000003

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/18/92 Time 0845 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070J7	~~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)~~		
* B070K0	3, 40ml, Gs, WATER, CLP-VOA		
* B070K1	~~1, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED~~		
			BOL # 250986876-6
			OPC # W9L-0-0533-9
			TASK #

Field Information**

Special Handling and/or Storage

Possible Sample Hazards

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 7-22-92

Analysis Required

* ID's B070K0 & B070K1 were switched - 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

Custody Form Initiator PH BUTCHER

Company Contact PH BUTCHER

Telephone (509)376-5045

Project Designation/Sampling Locations 100-BC-5

Collection Date 7/18/92

Ice Chest No. SML-118

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986896-6

Offsite Property No. W92-0-0533-10

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO 70K2

~~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 70K5

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

BO 70K6

3, 40ml, Gs, WATER, CLP-VOA ✓

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: G G Hamilton	Received by: K. Trapp / K. Trapp	Date/Time: 7/20/92 0901
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 7-22-92 1100
Relinquished by: Eyamamoto 7-22-92	Received by: C. Harris	Date/Time: 7/23/92 900
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

9613491.1979

000005

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/18/92 Time 0710 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070K2	~~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)~~		
B070K5	3, 40ml, Gs, WATER,	CLP-VOA	
B070K6	~~3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED~~		
			BOL # 250986796-6
			OPC # W92-0-0533-10
			TASK #

water

voa

Field Information**

Special Handling and/or Storage

Possible Sample Hazards

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 7-22-92

Analysis Required

* ID's B070K5 & B070K6 were switched on this sheet - KB

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

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

A-6000-405 (2-5-5)

9613491.1980

000006

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 7/18/92

Ice Chest No. SML-~~941~~ 26 [illegible] 7/20/92

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986896-6

Offsite Property No. W92-0-0533-10

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO70M7

~~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)~~

BO70N0

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

BO70N1

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: 7/20/92 0901
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 7-22-92 1100
Relinquished by: Ryan Amoto 7/22/92	Received by: C. Harris	Date/Time: 7/23/92 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

9613491.1981

000007

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 7/18/92

Ice Chest No. SHL-9

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986996-6

Offsite Property No. W92-0-0533-9

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B072T4

~~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)~~

B072T7

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

B072T8

3, 40ml, Gs, WATER, CLP-VOA ✓

[] Field Transfer of Custody

Relinquished by:	Received by:	Date/Time:
[illegible] K.D.Cu	K. Trapp / K. Trapp	7/20/92 0900
K. Trapp / K Trapp	Kermit Blum	7-22-92 1100
Yamamoto 7/22/92	C. Harris	7/23/92 900

Chain of Possession (Sign and Print Names)

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: 7/19/92 Time: 1205 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B072T4 ✓	~~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)~~		
* B072T7	✓ 3, 40ml, Gs, WATER,	CLP-VOA	2 bubbles
* B072T8	✓ ~~1; 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED~~		
			BOL # 250986896-6
			OPC # IN92-O-0533-9
			TASK #

Field Information**

Special Handling and/or Storage

Possible Sample Hazards

PART II: LABORATORY SECTION

Received by: Kermit Blum Title: Sample Control Supervisor Date: 7-22-92

Analysis Required

* ID's B07277 & B07278 were switched on this sheet - 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

Custody Form Initiator PH BUTCHER

Company Contact PH BUTCHER

Telephone (509)376-5045

Project Designation/Sampling Locations 100-BC-5

Collection Date 7/19/92

Ice Chest No. SML-~~44-2~~ 94 KS 7/20/92

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250736 846-6

Offsite Property No. W92-0-0733-11

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B0 70H7

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)~~

B0 70J0

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

B0 70J1

3, 40ml, Gs, WATER, CLP-VOA ✓

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: Kirby W. Lee K.D. Lee	Received by: K. Trapp / K. Trapp	Date/Time: 7/20/92 0901
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 7-22-92 1100
Relinquished by: Yamamoto 7-22-92	Received by: C. Harris	Date/Time: 7/23/92 900
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments: 1 VOA VIAL Sample B070H7 broken while unpacking EH.

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

9613491.1984

000010

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/17/92 Time 1030 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070H7	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)~~		
B070J0	✓ 3, 40ml, Gs, WATER, CLP-VOA		
B070J1	✓ ~~3, 1L, P, WATER, CLP~~-ICP/AA METAL & MERCURY ~~(HNO3) FILTERED~~		
			BOL # 250986896-6
			OPC # W92-0-0537-11
			TASK #

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 7-22-92

Analysis Required _____

* ID's B070J0 & B070J1 were switched on this sheet - KB

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

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

A-6000-406 (05/9

9613491.1985

000011

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 7/14/92

Ice Chest No. SML-88

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250480946-6

Offsite Property No. W92-0-0533-11

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO 70P7

~~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 70Q0

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

BO 70Q1

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: 7/20/92 0901
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 7-22-92 1100
Relinquished by: Yamamoto 7-22-92	Received by: C. Harris	Date/Time: 7/23/92 9a
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 7/17/92 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
B070P7 ✓	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)~~		
* B070Q0 ✓	3, 40ml, Gs, WATER, CLP-VOA		
* B070Q1 ✓	3, ~~1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED~~		
			BOL # 250986896-6
			OPC # W92-0-0533-11
			TASK #

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 7-22-92

Analysis Required _____

* ID's B070Q0 & B070Q1 were switched on this sheet - KB

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

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

A-6000-405 (05/9

9613491.1987

000013

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 7/19/92

Ice Chest No. SML-122

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986896-6

Offsite Property No. W92-0-0533-12

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B072S9

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)~~

B072T2

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

B072T3

3, 40ml, Gs, WATER, CLP-VOA ✓

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

Relinquished by:	Received by:	Date/Time:
Kirby D. Lee K.D. Lee	K. Trapp / K. Trapp	7/20/92 0901
K. Trapp / K. Trapp	Kermit Blum	7-22-92 1100
Yamamoto 7-22-92	C Harris	7/23/92 9:00

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

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

9613491.1988

000014

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/19/92 Time 0728 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B07259	~~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)~~		
* B072T2	3, 40ml, Gs, WATER,	CLP-VOA	* SHOULD BE B072T3 / FOR METALS
* B072T3	~~3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED~~		AF OR VOA
			BOL # 250986896-C
			OPC # W92-0-0533-12
			TASK #

Field Information**

Special Handling and/or Storage

Possible Sample Hazards

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 7-22-92

Analysis Required

* ID's B072T2 & B072T3 were switched on this sheet - KB

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

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

A-6000-406 (05

9613491.1989

000015

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 7/20/92

Ice Chest No. GGH-1

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250956920-8

Offsite Property No. W92-0-0533-17

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO7002

~~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)~~

BO7005

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

BO7006

3, 40ml, Gs, WATER, CLP-VOA ✓

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

Relinquished by:	Received by:	Date/Time:
C. Calbrik C. CALBRIK	K. Trapp / K. Trapp	~~Hrs~~ KT 7/21/92 1001
K. Trapp / K. Trapp	Kermit Blum	7-22-92 1100
tyamamoto 7-22-92	C. Harris	7/23/92 9:00

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

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

9613491.1990

000016

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/20/92 Time 1020 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070D2 ✓	~~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)~~		
B070D6 ✓	3, 40ml, Gs, WATER, CLP-VOA		
	1 KT 7/20/92		
B070D5 ✓	~~3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED~~		
			BOL # 250786720-9
			OPC # W92-0-0533-17
			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 7-22-92

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

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 7-20-92

Ice Chest No. SML-106

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986920-8

Offsite Property No. W92-0-0533-17

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B0 70H2

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)~~

B0 70H5

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

B0 70H6

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: 7/21/92 1001
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 7-22-92 1100
Relinquished by: Eyamamoto 7-22-92	Received by: C. Harris	Date/Time: 7/20/92 900
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

9613491.1992

000018

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/20/92 Time 1015 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070H2 ✓	~~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)~~		
B070H6 ✓	3, 40ml, Gs, WATER, CLP-VOA		
	1 kz 7/20/92		
B070H5 ✓	~~3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED~~		
			BOL # 250986920-8
			OPC # W92-0-0533-17
			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 7-22-92

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

9613491.1993

000019

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 7/20/92

Ice Chest No. SML-163

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250486 920-9

Offsite Property No. W92-C-0533-18

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO 70P2

✓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 70P5

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

BO 70P6

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: ~~7/20/92~~ KT 7/21/92 1001
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 7-22-92 1100
Relinquished by: Yamamoto 7-22-92	Received by: C. Harris	Date/Time: 7/23/92 900
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

9613491.1994

000020

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/20/92 Time 1450 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070P2 ✓	~~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)~~		
B070P6 ✓	3, 40ml, Gs, WATER,	CLP-VOA	
	1 w. 7/21/92		
B070P5 ✓	~~3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED~~		
			BOL # 250986920-8
			OPC # W92-0-0533-18
			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 7-22-92

Analysis Required _____

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

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

A-6000-406 (05/9

Westinghouse Hanford Company	CHAIN OF CUSTODY

Custody Form Initiator PH BUTCHER

Company Contact PH BUTCHER

Telephone (509)376-5045

Project Designation/Sampling Locations 100-BC-5

Collection Date 7/21/92

Ice Chest No. SML-109

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 2509 6920-9

Offsite Property No. W92-0-0533-18

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO 70G7

~~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 70H0~~

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

BO 70H1

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

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: C. Calibeni C. CALIBERI	Received by: 7/21/92	Date/Time: ~~7/21/92~~ KT 7/21/92
Relinquished by:	Received by: K. Trapp / K. Trapp	Date/Time: 7/21/92 1001
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 7-22-92 1100
Relinquished by: Kermit Blum 7-22-92	Received by: C. Harris	Date/Time: 7/23/92

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

9613491.1996

000022

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/20/92 Time 1315 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B0T0G7 ✓	~~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)~~		
B0T0H1 ✓	3, 40ml, Gs, WATER,	CLP-VOA	3 bubbles
	1 KT 7/21/92		
B0T0H0	~~2, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED~~		
			BOL # 250986 920-9
			OPC # WA2-0-0533-18
			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 7-22-92

Analysis Required _____

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

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

A-6000-406 (05/90)

SAMPLE LOG-IN SHEET

LAB NAME : TMA/ARLI PAGE : 1 OF 1

RECEIVED BY (PRINT NAME): CAROLE HARRIS LOG-IN-DATE : 7/23/98

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: 7/23/98
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
	B070K1	AB07047-0	
	B070K6	AB07047-02	
	B070N1	AB07047-03	
	B072T8	AB07047-04	
	B070J1	AB07047-05	
	B070Q1	AB07047-06	
	B072T3	AB07047-07	
	B070D6	AB07047-08	
	B070H6	AB07047-09	
	B070P6	AB07047-10	
	B070H1	AB07047-11	

* Contact SMO and attach record of resolution

Reviewed By: _____ Logbook No.: _____

Date: _____ Logbook Page No.: _____

FORM DC-1

B070H7 1 VOA VIAL WAS BROKEN WHILE UNPACKING.

CASE NARRATIVE

LABORATORY : TMA/ARLI

CASE : 07-047

CONTRACT ID : WESTINGHOUSE HANFORD COMPANY

SDG RECEIPT DATE : July 22, 1992

1.0 DESCRIPTION OF CASE :

Eleven water samples were analyzed for TCL Volatile Organics 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
B070K1	A2-07-047-01A	V	WATER	7
B070K6	A2-07-047-02A	V	WATER	7
B070N1	A2-07-047-03A	V	WATER	7
B072T8	A2-07-047-04A	V	WATER	7
B070J1	A2-07-047-05A	V	WATER	7
B070Q1	A2-07-047-06A	V	WATER	7
B070Q1 MS	A2-07-047-06B	V	WATER	7
B070Q1 MSD	A2-07-047-06C	V	WATER	7
B072T3	A2-07-047-07A	V	WATER	7
B070D6	A2-07-047-08A	V	WATER	7
B070H6	A2-07-047-09A	V	WATER	7
B070P6	A2-07-047-10A	V	WATER	7
B070H1	A2-07-047-11A	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. 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.

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
Nicole Roth
CLP Program Manager

Widayat
Wida Ang
Organics Supervisor

EPA SAMPLE NO.

B070D6

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07047 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207047-08A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20727R12

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: not dec. ____ Date Analyzed: 07/27/92

GC Column: PACK ID: 2.00 (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	28	
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.

B070D6

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07047 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207047-08A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20727R12

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: not dec. ____ Date Analyzed: 07/27/92

GC Column: PACK ID: 2.00 (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.

B070H1

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07047 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207047-11A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20727R14

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: not dec. ____ Date Analyzed: 07/27/92

GC Column: PACK ID: 2.00 (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	1	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.

B070H1

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07047 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207047-11A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20727R14

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: not dec. ____ Date Analyzed: 07/27/92

GC Column: PACK ID: 2.00 (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.

B070H6

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07047 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207047-09A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20727R13

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: not dec. ____ Date Analyzed: 07/27/92

GC Column: PACK ID: 2.00 (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	2	J
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	1	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.

B070H6

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07047 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207047-09A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20727R13

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: not dec. ____ Date Analyzed: 07/27/92

GC Column: PACK ID: 2.00 (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.

B070J1

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07047 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207047-05A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20727R07

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: not dec. ____ Date Analyzed: 07/27/92

GC Column: PACK ID: 2.00 (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	3	J
67-64-1	Acetone	38	
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.

B070J1

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07047 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207047-05A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20727R07

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: not dec. ____ Date Analyzed: 07/27/92

GC Column: PACK ID: 2.00 (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.

B070K1

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07047 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207047-01A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20728R10

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: not dec. ____ Date Analyzed: 07/28/92

GC Column: PACK ID: 2.00 (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	1	BJ
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.

B070K1

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07047 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207047-01A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20728R10

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: not dec. ____ Date Analyzed: 07/28/92

GC Column: PACK ID: 2.00 (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.

B070K6

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07047 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207047-02A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20728R12

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: not dec. ____ Date Analyzed: 07/28/92

GC Column: PACK ID: 2.00 (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	26	
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	BJ
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.

B070K6

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07047 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207047-02A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20728R12

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: not dec. ____ Date Analyzed: 07/28/92

GC Column: PACK ID: 2.00 (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.

B070N1

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07047 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207047-03A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20728R13

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: not dec. ____ Date Analyzed: 07/28/92

GC Column: PACK ID: 2.00 (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	16	
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	1	BJ
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.

B070N1

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07047 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207047-03A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20728R13

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: not dec. ____ Date Analyzed: 07/28/92

GC Column: PACK ID: 2.00 (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.

B070P6

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07047 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207047-10A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20727R15

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: not dec. ____ Date Analyzed: 07/27/92

GC Column: PACK ID: 2.00 (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	2	J
67-64-1	Acetone	21	
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.

B070P6

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07047 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207047-10A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20727R15

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: not dec. ____ Date Analyzed: 07/27/92

GC Column: PACK ID: 2.00 (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

9613491.2016

000124
EPA SAMPLE NO.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

B070Q1

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07047 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207047-06A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20728R15

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: not dec. ____ Date Analyzed: 07/28/92

GC Column: PACK ID: 2.00 (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	1	BJ
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.

B070Q1

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07047 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207047-06A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20728R15

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: not dec. ____ Date Analyzed: 07/28/92

GC Column: PACK ID: 2.00 (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

9613491.2018

000133

EPA SAMPLE NO.

B072T3

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07047 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207047-07A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20727R11

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: not dec. ____ Date Analyzed: 07/27/92

GC Column: PACK ID: 2.00 (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	18	
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

9613491.2019

000134
EPA SAMPLE NO.

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

B072T3

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07047 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207047-07A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20727R11

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: not dec. ____ Date Analyzed: 07/27/92

GC Column: PACK ID: 2.00 (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.

B072T8

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07047 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207047-04A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20728R14

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: not dec. ____ Date Analyzed: 07/28/92

GC Column: PACK ID: 2.00 (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	BJ
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.

B072T8

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07047 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207047-04A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20728R14

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: not dec. ____ Date Analyzed: 07/28/92

GC Column: PACK ID: 2.00 (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

9613491.2022

B07002 A T KEARNEY 10/1/92 1495A

Westinghouse Hanford Company

NONCONFORMANCE REPORT

1. Page 1 of 1

2. Preprinted No. 050502

QA Log No. EQA-92-112

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

8. Program/Project/Other	9. Safety Class	10. ASME Code Items
100-BC-5/92-243	N/A	☐ Yes ☒ No (If yes, notify authorized inspector)

11. Supplier Name/Address	12. Notification of Potential Occurence Required
Thermo Analytical	☐ Yes ☒ No

13. Code: Lot/Heat/Serial	14. Lot Size	15. Sample	16. Qty. Acc.	17. Inspection Criteria
N/A	N/A	N/A	N/A	☐ Dwg. ☐ Spec. ☐ Insp. Plan ☒ Other CM-7-7 EID 5.1

18. Item	19. Description of Nonconformance (list serial no. where applicable)	22. Disposition, Justification, and Instructions
1.	The sample identification numbers for B070K0 B070K5 B070N0 B072T7 B070K1 B070K6 B070N1 B072T8 B070J0 B070Q0 B072T2 B070J1 B070Q1 B072T3 VOA and metals analysis on the sample analysis request form were switched on the chain of custody. (Refer to ROD-92-0016(1)	~~Samples will be analyzed and data flagged~~ Seven pairs of numbers were switched between the CoC and the SAR. The laboratory was directed per the attached ROD to follow the analysis requested on the CoC. The laboratory reported results that correctly correspond to the CoC. Reference attached internal memo 81360-93-TCL-005. Use as is. J.W. Roberts 6/8/93 [signature] 6-8-93

20. Originator's Signature	Date	23. Design Document Change Required?
LC McGanahan	10/07/92	☐ Yes, Doc. No. ☒ No

21. Cognizant QA Manager's Signature	Date	24. Corrective Action Required?
[signature]	12-7-92	☐ Yes, No. ☒ No

Disp. App.

25. Cognizant Engineer	Date	26. Technical Rep.	Date	Signature/Org.	Date
J.W. Roberts [signature]	3/4/93	SE Yukelich			
QA Engineer	Date	Signature/Org.	Date	Signature/Org.	Date
GS CORRIGAN [signature]	3-4-93				

Close

27. Accept 7 Reject 0 Follow on NCR N/A

[signature] 6-8-93
QA/C Personnel Date

A 7310.104 (10/91)

OFFICE OF SAMPLE MANAGEMENT
RECORD OF DISPOSITION

ROD-92-00185
Record of Disposition No.

DATE: November 18, 1992 | LABORATORY: TMA

PROJECT TITLE/NO.: 100-BC-5/92-243 | NCR NO.: N/A

SAMPLE IDENTIFICATION NUMBERS:

- B070F7

DESCRIPTION OF EVENT:

- The Sulfide aliquot for sample B070F7 was crushed in transit to the laboratory..

DISPOSITION OF SAMPLES:

- With concurrence from the customer (J. Roberts), the sample analysis for sulfide has been canceled.

APPROVAL SIGNATURES:

K. N. Pool — Date: 11/18/92
OSM Project Coordinator (Print/Sign Name)

J. W. Roberts — Date: 11/18/92
Technical Representative (Print/Sign Name)

N/A — Date
Quality Assurance (Print/Sign Name)

9613491.2024

DMO

OFFICE OF SAMPLE MANAGEMENT

RECORD OF DISPOSITION

ROD-92-00163
Record of Disposition No.

DATE: September 28, 1992	LABORATORY: TMA
PROJECT TITLE/NO.: 100-BC-5	NCR NO.:

SAMPLE IDENTIFICATION NUMBERS:

- B070F1
- B070F6
- B072V3
- B070P1

DESCRIPTION OF EVENT:

▸▸ The above listed VOA samples were received at the TMA Laboratory with air bubbles in the sample bottles.

DISPOSITION OF SAMPLES:

▸▸ Per Steve Vukelich, the VOA analysis was to be completed. The laboratory was requested to make note of the extent of air bubbles in the samples.

APPROVAL SIGNATURES:

K. N. Pool — 9/28/92
OSM Project Coordinator (Print/Sign Name) — Date

J. W. Roberts — 10/5/92
Technical Representative (Print/Sign Name) — Date

N/A
Quality Assurance (Print/Sign Name) — Date

CASE NARRATIVE

LABORATORY : TMA/ARLI

CASE : 07-045

CONTRACT ID : WESTINGHOUSE HANFORD COMPANY

SDG RECEIPT DATE : July 22, 1992

1.0 DESCRIPTION OF CASE :

Eleven water samples were analyzed for TCL Organics-Volatiles, Semivolitales 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
B070D2	A2-07-046-01A	V	WATER	7
B070D2	A2-07-046-01B	SV & P	WATER	
B070H2	A2-07-046-02A	V	WATER	7
B070H2	A2-07-046-02B	SV & P	WATER	
B070P2	A2-07-046-03A	V	WATER	7
B070P2	A2-07-046-03B	SV & P	WATER	
B070G7	A2-07-046-04A	V	WATER	7
B070G7	A2-07-046-04B	SV & P	WATER	7
B070J7	A2-07-045-01A	V	WATER	7
B070J7	A2-07-045-01B	SV & P	WATER	
B070J7 MS	A2-07-045-01C	SV	WATER	
B070J7 MSD	A2-07-045-01D	SV	WATER	
B070K2	A2-07-045-02A	V	WATER	7
B070K2 MS	A2-07-045-02B	V	WATER	7
B070K2 MSD	A2-07-045-02C	V	WATER	7
B070K2	A2-07-045-02D	SV & P	WATER	
B070M7	A2-07-045-03A	V	WATER	7
B070M7	A2-07-045-03B	SV & P	WATER	
B072T4	A2-07-045-04A	V	WATER	7
B072T4	A2-07-045-04B	SV & P	WATER	
B070H7	A2-07-045-05A	V	WATER	7
B070H7	A2-07-045-05B	SV & P	WATER	
B070P7	A2-07-045-06A	V	WATER	7
B070P7	A2-07-045-06B	SV & P	WATER	
B072S9	A2-07-045-07A	V	WATER	7
B072S9	A2-07-045-07B	SV & P	WATER	
B072S9 MS	A2-07-045-07G	P	WATER	
B072S9 MSD	A2-07-045-07H	P	WATER	

3.0 COMMENTS :

3.1 SHIPPING AND DOCUMENTATION :

The samples were received and properly documented. Sample B070H7 had 1 of the 3 VOA vials broken at TMA/ARLI when unpacking the ice chest.

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. Samples B070G7, B070H2 and B070P2 had surrogate recoveries for Terphenyl-d14 above the QC limit. The high recovery appeared to be due to a tentatively identified compound that has the same mass ion as Terphenyl-d14. The NB library has identified this compound as "Anagyrine". The "Anagyrine" could not be quantitated because it co-elutes with Terphenyl-d14. The spectra for Terphenyl-d14 and "Anagyrine" have been included in this package for each sample as confirmation. The sample extracts were re-injected. The high Terphenyl-d14 recoveries were confirmed. Only the original analyses have been included in this package.

Both the MS and MSD samples had matrix spike recoveries for 4-Chloro-3-methylphenol and 4-Nitrophenol slightly above the QC limits. 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

Widayati
Wida Ang
Organics Supervisor

9613491.2028

000005
EPA SAMPLE NO.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

B070D2

Name: TMA/ARLI Contract: WHC

Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

rix: (soil/water) WATER Lab Sample ID: A207046-01A

ple wt/vol: 5.0 (g/mL) ML Lab File ID: 20729B23

el: (low/med) LOW Date Received: 07/22/92

oisture: not dec. ____ Date Analyzed: 07/29/92

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

il 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	14	B
67-64-1	Acetone	16	
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	2	BJ
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

9613491.2029

000006
EPA SAMPLE NO.

1E
VOLATILE ANICS ANALYSIS DATA SHEET
TENTAT LY IDENTIFIED COMPOUNDS

B070D2

Name: TMA/ARLI Contract: WHC

Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

rix: (soil/water) WATER Lab Sample ID: A207046-01A

nple wt/vol: 5.0 (g/mL) ML Lab File ID: 20729B23

vel: (low/med) LOW Date Received: 07/22/92

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

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

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

umber TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

9613491.2050

000007

EPA SAMPLE NO.

B070G7

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

Name: TMA/ARLI Contract: WHC

Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

rix: (soil/water) WATER Lab Sample ID: A207046-04A

ple wt/vol: 5.0 (g/mL) ML Lab File ID: 20727B16

el: (low/med) LOW Date Received: 07/22/92

oisture: not dec. ____ Date Analyzed: 07/27/92

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

l 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	15	
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

9613491.2031

000008

EPA SAMPLE NO.

B070G7

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

b Name: TMA/ARLI Contract: WHC

b Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

trix: (soil/water) WATER Lab Sample ID: A207046-04A

mple wt/vol: 5.0 (g/mL) ML Lab File ID: 20727B16

vel: (low/med) LOW Date Received: 07/22/92

Moisture: not dec. ____ Date Analyzed: 07/27/92

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

il 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.	Unknown Hydrocarbon	5.42	7	J

9613491.2032

000009

EPA SAMPLE NO.

B070H2

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

Name: TMA/ARLI Contract: WHC

Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

rix: (soil/water) WATER Lab Sample ID: A207046-02A

ple wt/vol: 5.0 (g/mL) ML Lab File ID: 20729B24

el: (low/med) LOW Date Received: 07/22/92

oisture: not dec. ____ Date Analyzed: 07/29/92

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

1 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	18	
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	2	BJ
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

9613491.2033

000010
EPA SAMPLE NO.

B070H2

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

› Name: TMA/ARLI Contract: WHC

› Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

:rix: (soil/water) WATER Lab Sample ID: A207046-02A

nple wt/vol: 5.0 (g/mL) ML Lab File ID: 20729B24

/el: (low/med) LOW Date Received: 07/22/92

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

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

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

umber TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

9613491.2034

000011
EPA SAMPLE NO.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

B070H7

Name: TMA/ARLI Contract: WHC

Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207045-05A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20727B10

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: not dec. ____ Date Analyzed: 07/27/92

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

Gel 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	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

9613491.2035

000012

EPA SAMPLE NO.

B070H7

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Name: TMA/ARLI Contract: WHC

Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207045-05A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20727B10

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: not dec. ____ Date Analyzed: 07/27/92

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.	Unknown Hydrocarbon	5.47	7	J

9613491.2036

000013

1A

VOLATIL GANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070J7

) Name: TMA/ARLI Contract: WHC

) Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

trix: (soil/water) WATER Lab Sample ID: A207045-01A

ple wt/vol: 5.0 (g/mL) ML Lab File ID: 20727B04

vel: (low/med) LOW Date Received: 07/22/92

Moisture: not dec. ____ Date Analyzed: 07/27/92

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

il 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	3	BJ
67-64-1	Acetone	29	
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	2	J
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	3	J
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	2	J
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.

B070J7

Name: TMA/ARLI Contract: WHC

Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

rix: (soil/water) WATER Lab Sample ID: A207045-01A

ple wt/vol: 5.0 (g/mL) ML Lab File ID: 20727B04

el: (low/med) LOW Date Received: 07/22/92

oisture: not dec. ____ Date Analyzed: 07/27/92

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

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

mber 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.

B070K2

b Name: TMA/ARLI Contract: WHC

b Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

trix: (soil/water) WATER Lab Sample ID: A207045-02A

mple wt/vol: 5.0 (g/mL) ML Lab File ID: 20727B05

vel: (low/med) LOW Date Received: 07/22/92

Moisture: not dec. ____ Date Analyzed: 07/27/92

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

il 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	18	
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	2	J
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.

B070K2

Name: TMA/ARLI Contract: WHC

Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

rix: (soil/water) WATER Lab Sample ID: A207045-02A

ple wt/vol: 5.0 (g/mL) ML Lab File ID: 20727B05

el: (low/med) LOW Date Received: 07/22/92

oisture: not dec. ____ Date Analyzed: 07/27/92

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

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

mber TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown Hydrocarbon	5.43	6	J

9613491.2040

000017

EPA SAMPLE NO.

B070M7

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207045-03A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20727B08

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: not dec. ____ Date Analyzed: 07/27/92

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

Gel 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	2	J
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

9613491.2041

000018
EPA SAMPLE NO.

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

B070M7

Name: TMA/ARLI Contract: WHC

Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207045-03A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20727B08

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: not dec. ____ Date Analyzed: 07/27/92

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.	Unknown Hydrocarbon	5.45	7	J

9613491.2042

000019

EPA SAMPLE NO.

1A

VOLATIL GANICS ANALYSIS DATA SHEET

B070P2

Name: TMA/ARLI Contract: WHC

Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

rix: (soil/water) WATER Lab Sample ID: A207046-03A

ple wt/vol: 5.0 (g/mL) ML Lab File ID: 20727B15

el: (low/med) LOW Date Received: 07/22/92

oisture: not dec. ____ Date Analyzed: 07/27/92

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

l 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

9613491.2043

000020

EPA SAMPLE NO.

B070P2

1E

VOLATIL GANICS ANALYSIS DATA SHEET
TENTA LY IDENTIFIED COMPOUNDS

.b Name: TMA/ARLI Contract: WHC

.b Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

.trix: (soil/water) WATER Lab Sample ID: A207046-03A

ımple wt/vol: 5.0 (g/mL) ML Lab File ID: 20727B15

:vel: (low/med) LOW Date Received: 07/22/92

Moisture: not dec. ____ Date Analyzed: 07/27/92

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

ɔil 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.	Unknown Hydrocarbon	5.43	5	J

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070P7

› Name: TMA/ARLI Contract: WHC

› Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

:rix: (soil/water) WATER Lab Sample ID: A207045-06A

ıple wt/vol: 5.0 (g/mL) ML Lab File ID: 20727B11

/el: (low/med) LOW Date Received: 07/22/92

loisture: not dec. ____ Date Analyzed: 07/27/92

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

il 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	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	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	2	J
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	3	J
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

9613491.2045

000022

EPA SAMPLE NO.

B070P7

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

) Name: TMA/ARLI Contract: WHC

) Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

:rix: (soil/water) WATER Lab Sample ID: A207045-06A

ıple wt/vol: 5.0 (g/mL) ML Lab File ID: 20727B11

/el: (low/med) LOW Date Received: 07/22/92

loisture: not dec. ____ Date Analyzed: 07/27/92

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

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

ımber TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown Hydrocarbon	5.47	5	J

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B072S9

b Name: TMA/ARLI Contract: WHC

b Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

trix: (soil/water) WATER Lab Sample ID: A207045-07A

mple wt/vol: 5.0 (g/mL) ML Lab File ID: 20729B22

vel: (low/med) LOW Date Received: 07/22/92

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

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

il 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	9	BJ
67-64-1	Acetone	23	
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	1	BJ
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

1E
VOLATILE ICS ANALYSIS DATA SHEET
TENTA IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B072S9

Name: TMA/ARLI Contract: WHC

Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

rix: (soil/water) WATER Lab Sample ID: A207045-07A

nple wt/vol: 5.0 (g/mL) ML Lab File ID: 20729B22

vel: (low/med) LOW Date Received: 07/22/92

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

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

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

umber TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown Hydrocarbon	5.77	5	J

9613491.2048

000025

EPA SAMPLE NO.

B072T4

1A

VOLATI ANICS ANALYSIS DATA SHEET

b Name: TMA/ARLI Contract: WHC

b Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

trix: (soil/water) WATER Lab Sample ID: A207045-04A

mple wt/vol: 5.0 (g/mL) ML Lab File ID: 20729B21

vel: (low/med) LOW Date Received: 07/22/92

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

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

il 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	13	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	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	2	BJ
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

EPA SAMPLE NO.

B072T4

1E
VOLATILE . GANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

b Name: TMA/ARLI Contract: WHC

b Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

trix: (soil/water) WATER Lab Sample ID: A207045-04A

mple wt/vol: 5.0 (g/mL) ML Lab File ID: 20729B21

vel: (low/med) LOW Date Received: 07/22/92

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

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

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

umber 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.

B070D2

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207046-01B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20728S12

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/26/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/92

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

9613491.2051

000343
EPA SAMPLE NO.

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

B070D2

ab Name: TMA/ARLI Contract: WHC

ab Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

atrix: (soil/water) WATER Lab Sample ID: A207046-01B

ample wt/vol: 1000 (g/mL) ML Lab File ID: 20728S12

evel: (low/med) LOW Date Received: 07/22/92

Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/26/92

oncentrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/92

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	16	
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.

B070D2

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207046-01B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20728S12

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/26/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/92

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

Number TICs found: 3

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown Hydrocarbon	5.70	7	BJ
2.	Unknown Hydrocarbon	6.25	3	BJ
3.	Unknown Ketone	7.08	3	BJ

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070G7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207046-04B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20728S15

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/26/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/92

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.

B070G7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207046-04B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20728S15

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/26/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/92

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

EPA SAMPLE NO.

B070G7

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207046-04B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20728S15

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/26/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/92

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

Number TICs found: 3

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown Hydrocarbon	5.67	9	BJ
2.	Unknown Hydrocarbon	6.22	3	BJ
3.	Unknown Ketone	7.05	4	BJ

9613491.2056

000033
EPA SAMPLE NO.

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

B070H2

b Name: TMA/ARLI Contract: WHC

b Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

trix: (soil/water) WATER Lab Sample ID: A207046-02B

mple wt/vol: 1000 (g/mL) ML Lab File ID: 20728S13

vel: (low/med) LOW Date Received: 07/22/92

Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/26/92

ncentrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/92

jection Volume: 2.0(uL) Dilution Factor: 1.0

C 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.

B070H2

Name: TMA/ARLI Contract: WHC

Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

rix: (soil/water) WATER Lab Sample ID: A207046-02B

ple wt/vol: 1000 (g/mL) ML Lab File ID: 20728S13

el: (low/med) LOW Date Received: 07/22/92

oisture: _____ decanted: (Y/N) ___ Date Extracted: 07/26/92

centrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/92

jection Volume: 2.0(uL) Dilution Factor: 1.0

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

9613491.2058

000035

EPA SAMPLE NO.

B070H2

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

) Name: TMA/ARLI Contract: WHC

) Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

:rix: (soil/water) WATER Lab Sample ID: A207046-02B

nple wt/vol: 1000 (g/mL) ML Lab File ID: 20728S13

vel: (low/med) LOW Date Received: 07/22/92

Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/26/92

ncentrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/92

jection Volume: 2.0 (uL) Dilution Factor: 1.0

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

mber TICs found: 8

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown Hydrocarbon	5.70	9	BJ
2.	Unknown Hydrocarbon	6.27	3	BJ
3.	Unknown Ketone	7.08	4	BJ
4.	Chloro Ethanol isomer	19.58	1900	J
5.	Unknown Hydrocarbon	19.68	3	J
6.	Chloro Ethanol isomer	22.15	11	J
7.	Unknown Alcohol	22.38	8	J
8.	Unknown Alcohol	26.08	8	J

9613491.2059

000036
EPA SAMPLE NO.

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

B070H7

Name: TMA/ARLI Contract: WHC

Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

rix: (soil/water) WATER Lab Sample ID: A207045-05B

ple wt/vol: 1000 (g/mL) ML Lab File ID: 20728S09

el: (low/med) LOW Date Received: 07/22/92

oisture: _____ decanted: (Y/N) ___ Date Extracted: 07/26/92

centrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/92

jection Volume: 2.0(uL) Dilution Factor: 1.0

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.

B070H7

) Name: TMA/ARLI Contract: WHC

) Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

:rix: (soil/water) WATER Lab Sample ID: A207045-05B

nple wt/vol: 1000 (g/mL) ML Lab File ID: 20728S09

vel: (low/med) LOW Date Received: 07/22/92

Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/26/92

ncentrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/92

jection Volume: 2.0(uL) Dilution Factor: 1.0

C 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

EPA SAMPLE NO.

B070H7

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

ab Name: TMA/ARLI Contract: WHC

ab Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

atrix: (soil/water) WATER Lab Sample ID: A207045-05B

ample wt/vol: 1000 (g/mL) ML Lab File ID: 20728S09

evel: (low/med) LOW Date Received: 07/22/92

Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/26/92

oncentrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/92

njection Volume: 2.0(uL) Dilution Factor: 1.0

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

umber TICs found: 3

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown Hydrocarbon	5.70	8	BJ
2.	Unknown Hydrocarbon	6.23	2	BJ
3.	Unknown Ketone	7.00	4	BJ

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070J7

ɔ Name: TMA/ARLI Contract: WHC

ɔ Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

trix: (soil/water) WATER Lab Sample ID: A207045-01B

mple wt/vol: 1000 (g/mL) ML Lab File ID: 20728S03

vel: (low/med) LOW Date Received: 07/22/92

Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/26/92

ncentrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/92

jection Volume: 2.0(uL) Dilution Factor: 1.0

C 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

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070J7

› Name: TMA/ARLI Contract: WHC

› Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

:rix: (soil/water) WATER Lab Sample ID: A207045-01B

nple wt/vol: 1000 (g/mL) ML Lab File ID: 20728S03

/el: (low/med) LOW Date Received: 07/22/92

loisture: _____ decanted: (Y/N) ___ Date Extracted: 07/26/92

ncentrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/92

jection Volume: 2.0(uL) Dilution Factor: 1.0

: 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

EPA SAMPLE NO.

B070J7

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

ɔ Name: TMA/ARLI Contract: WHC

ɔ Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

:rix: (soil/water) WATER Lab Sample ID: A207045-01B

nple wt/vol: 1000 (g/mL) ML Lab File ID: 20728S03

vel: (low/med) LOW Date Received: 07/22/92

loisture: _____ decanted: (Y/N) ___ Date Extracted: 07/26/92

ncentrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/92

jection Volume: 2.0(uL) Dilution Factor: 1.0

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

nber TICs found: 3

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown Hydrocarbon	5.68	7	BJ
2.	Unknown Hydrocarbon	6.22	2	BJ
3.	Unknown Ketone	7.05	4	BJ

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070K2

Name: TMA/ARLI Contract: WHC

Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207045-02B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20728S06

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: ____ decanted: (Y/N) ___ Date Extracted: 07/26/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/92

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

9613491.2066

000043

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070K2

ɔ Name: TMA/ARLI Contract: WHC

ɔ Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

trix: (soil/water) WATER Lab Sample ID: A207045-02B

mple wt/vol: 1000 (g/mL) ML Lab File ID: 20728S06

vel: (low/med) LOW Date Received: 07/22/92

Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/26/92

ncentrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/92

jection Volume: 2.0(uL) Dilution Factor: 1.0

C 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

EPA SAMPLE NO.

B070K2

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

b Name: TMA/ARLI Contract: WHC

b Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

trix: (soil/water) WATER Lab Sample ID: A207045-02B

mple wt/vol: 1000 (g/mL) ML Lab File ID: 20728S06

vel: (low/med) LOW Date Received: 07/22/92

Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/26/92

ncentrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/92

jection Volume: 2.0(uL) Dilution Factor: 1.0

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

mber TICs found: 4

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown Hydrocarbon	5.70	9	BJ
2.	Unknown Hydrocarbon	6.22	2	BJ
3.	Unknown Ketone	7.07	4	BJ
4.	Unknown Compound	21.02	4	J

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070M7

b Name: TMA/ARLI Contract: WHC

b Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

trix: (soil/water) WATER Lab Sample ID: A207045-03B

mple wt/vol: 1000 (g/mL) ML Lab File ID: 20728S07

vel: (low/med) LOW Date Received: 07/22/92

Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/26/92

ncentrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/92

jection Volume: 2.0 (uL) Dilution Factor: 1.0

C 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

9613491.2069

000046
EPA SAMPLE NO.

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

B070M7

ɔ Name: TMA/ARLI Contract: WHC

ɔ Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

trix: (soil/water) WATER Lab Sample ID: A207045-03B

mple wt/vol: 1000 (g/mL) ML Lab File ID: 20728S07

vel: (low/med) LOW Date Received: 07/22/92

Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/26/92

ncentrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/92

jection Volume: 2.0(uL) Dilution Factor: 1.0

'C 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	6	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

9613491.2070

000047
EPA SAMPLE NO.

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

B070M7

b Name: TMA/ARLI Contract: WHC

b Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

trix: (soil/water) WATER Lab Sample ID: A207045-03B

mple wt/vol: 1000 (g/mL) ML Lab File ID: 20728S07

vel: (low/med) LOW Date Received: 07/22/92

Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/26/92

ncentrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/92

jection Volume: 2.0(uL) Dilution Factor: 1.0

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

mber TICs found: 3

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown Hydrocarbon	5.70	8	BJ
2.	Unknown Hydrocarbon	6.23	2	BJ
3.	Unknown Ketone	7.07	4	BJ

9613491.2071

000048
EPA SAMPLE NO.

1B
SEMIVOLATI ORGANICS ANALYSIS DATA SHEET

B070P2

ɔ Name: TMA/ARLI Contract: WHC

ɔ Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

trix: (soil/water) WATER Lab Sample ID: A207046-03B

mple wt/vol: 1000 (g/mL) ML Lab File ID: 20728S14

vel: (low/med) LOW Date Received: 07/22/92

Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/26/92

ncentrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/92

jection Volume: 2.0(uL) Dilution Factor: 1.0

C 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

9613481.2072

000049

EPA SAMPLE NO.

B070P2

1C

SEMIVOLAT ORGANICS ANALYSIS DATA SHEET

b Name: TMA/ARLI Contract: WHC

.b Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

.trix: (soil/water) WATER Lab Sample ID: A207046-03B

:mple wt/vol: 1000 (g/mL) ML Lab File ID: 20728S14

:vel: (low/med) LOW Date Received: 07/22/92

Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/26/92

›ncentrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/92

ıjection Volume: 2.0 (uL) Dilution Factor: 1.0

›C 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

EPA SAMPLE NO.

B070P2

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Name: TMA/ARLI Contract: WHC

Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207046-03B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20728S14

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: ____ decanted: (Y/N) ___ Date Extracted: 07/26/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

Number TICs found: 3 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown Hydrocarbon	5.70	9	BJ
2.	Unknown Hydrocarbon	6.25	3	BJ
3.	Unknown Ketone	7.10	4	BJ

9613491.2074

000051

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070P7

ɔ Name: TMA/ARLI Contract: WHC

ɔ Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

trix: (soil/water) WATER Lab Sample ID: A207045-06B

mple wt/vol: 1000 (g/mL) ML Lab File ID: 20728S10

vel: (low/med) LOW Date Received: 07/22/92

Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/26/92

ncentrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/92

jection Volume: 2.0(uL) Dilution Factor: 1.0

C 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

1C

SEMIVOLATI GANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070P7

b Name: TMA/ARLI Contract: WHC

b Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

trix: (soil/water) WATER Lab Sample ID: A207045-06B

mple wt/vol: 1000 (g/mL) ML Lab File ID: 20728S10

vel: (low/med) LOW Date Received: 07/22/92

Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/26/92

ncentrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/92

jection Volume: 2.0 (uL) Dilution Factor: 1.0

C 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	50	
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.

B070P7

1F
SEMIVOLATI ORGANICS ANALYSIS DATA SHEET
TENTAT..ELY IDENTIFIED COMPOUNDS

› Name: TMA/ARLI Contract: WHC

› Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

:rix: (soil/water) WATER Lab Sample ID: A207045-06B

nple wt/vol: 1000 (g/mL) ML Lab File ID: 20728S10

/el: (low/med) LOW Date Received: 07/22/92

Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/26/92

ncentrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/92

jection Volume: 2.0 (uL) Dilution Factor: 1.0

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

nber TICs found: 4

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown Hydrocarbon	5.70	6	BJ
2.	Unknown Hydrocarbon	6.25	2	BJ
3.	Unknown Ketone	7.07	3	BJ
4.	Chloro Ethanol isomer	19.02	2	J

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B072S9

ɔ Name: TMA/ARLI Contract: WHC

ɔ Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

:rix: (soil/water) WATER Lab Sample ID: A207045-07B

nple wt/vol: 1000 (g/mL) ML Lab File ID: 20728S11

vel: (low/med) LOW Date Received: 07/22/92

Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/26/92

ncentrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/92

jection Volume: 2.0(uL) Dilution Factor: 1.0

: 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

9613491.2078

000055

EPA SAMPLE NO.

B072S9

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

) Name: TMA/ARLI Contract: WHC

) Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

:rix: (soil/water) WATER Lab Sample ID: A207045-07B

ıple wt/vol: 1000 (g/mL) ML Lab File ID: 20728S11

'el: (low/med) LOW Date Received: 07/22/92

foisture: _____ decanted: (Y/N) ___ Date Extracted: 07/26/92

ıcentrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/92

ıection Volume: 2.0(uL) Dilution Factor: 1.0

: 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	52	
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.

B072S9

ɔ Name: TMA/ARLI Contract: WHC

ɔ Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

trix: (soil/water) WATER Lab Sample ID: A207045-07B

mple wt/vol: 1000 (g/mL) ML Lab File ID: 20728S11

vel: (low/med) LOW Date Received: 07/22/92

Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/26/92

ncentrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/92

jection Volume: 2.0(uL) Dilution Factor: 1.0

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

mber TICs found: 4

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown Hydrocarbon	5.72	6	BJ
2.	Unknown Hydrocarbon	6.27	2	BJ
3.	Unknown Ketone	7.10	3	BJ
4.	Chloro Ethanol isomer	19.18	2	J

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B072T4

ɔ Name: TMA/ARLI Contract: WHC

ɔ Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

:rix: (soil/water) WATER Lab Sample ID: A207045-04B

mple wt/vol: 1000 (g/mL) ML Lab File ID: 20728S08

vel: (low/med) LOW Date Received: 07/22/92

Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/26/92

ncentrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/92

jection Volume: 2.0(uL) Dilution Factor: 1.0

C 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.

B072T4

) Name: TMA/ARLI Contract: WHC

) Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

:rix: (soil/water) WATER Lab Sample ID: A207045-04B

ıple wt/vol: 1000 (g/mL) ML Lab File ID: 20728S08

/el: (low/med) LOW Date Received: 07/22/92

foisture: _____ decanted: (Y/N) ___ Date Extracted: 07/26/92

ıcentrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/92

jection Volume: 2.0(uL) Dilution Factor: 1.0

: 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

EPA SAMPLE NO.

B072T4

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

ab Name: TMA/ARLI Contract: WHC

ab Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

atrix: (soil/water) WATER Lab Sample ID: A207045-04B

ample wt/vol: 1000 (g/mL) ML Lab File ID: 20728S08

evel: (low/med) LOW Date Received: 07/22/92

Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/26/92

oncentrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/92

njection Volume: 2.0(uL) Dilution Factor: 1.0

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

umber TICs found: 3

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown Hydrocarbon	5.68	13	BJ
2.	Unknown Hydrocarbon	6.22	3	BJ
3.	Unknown Ketone	7.05	4	BJ

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070D2

Name: TMA/ARLI Contract: WHC

Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

ix: (soil/water) WATER Lab Sample ID: A207046-01B

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

isture: _____ decanted: (Y/N) ___ Date Received: 07/22/92

action: (SepF/Cont/Sonc) CONT Date Extracted: 07/26/92

entrated Extract Volume: 10000 (uL) Date Analyzed: 08/06/92

ction 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	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.

B070G7

Name: TMA/ARLI Contract: WHC

Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207046-04B

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

Moisture: _____ decanted: (Y/N) ___ Date Received: 07/22/92

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 07/26/92

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/06/92

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.

B070H2

Name: TMA/ARLI Contract: WHC

Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

ix: (soil/water) WATER Lab Sample ID: A207046-02B

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

isture: _____ decanted: (Y/N) ___ Date Received: 07/22/92

action: (SepF/Cont/Sonc) CONT Date Extracted: 07/26/92

entrated Extract Volume: 10000 (uL) Date Analyzed: 08/06/92

ction Volume: 1.00 (uL) Dilution Factor: 1.00

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

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070H7

Name: TMA/ARLI Contract: WHC

Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

ix: (soil/water) WATER Lab Sample ID: A207045-05B

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

isture: _____ decanted: (Y/N) ___ Date Received: 07/22/92

action: (SepF/Cont/Sonc) CONT Date Extracted: 07/26/92

entrated Extract Volume: 10000 (uL) Date Analyzed: 08/06/92

ction 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	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.

B070J7

Name: TMA/ARLI Contract: WHC

Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

ix: (soil/water) WATER Lab Sample ID: A207045-01B

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

isture: _____ decanted: (Y/N) ___ Date Received: 07/22/92

action: (SepF/Cont/Sonc) CONT Date Extracted: 07/26/92

entrated Extract Volume: 10000 (uL) Date Analyzed: 08/06/92

ction Volume: 1.00 (uL) Dilution Factor: 1.00

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

1D
PESTICIDE (NICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070K2

Name: TMA/ARLI Contract: WHC

Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

ix: (soil/water) WATER Lab Sample ID: A207045-02D

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

isture: _____ decanted: (Y/N) ___ Date Received: 07/22/92

action: (SepF/Cont/Sonc) CONT Date Extracted: 07/26/92

entrated Extract Volume: 10000 (uL) Date Analyzed: 08/06/92

ction Volume: 1.00 (uL) Dilution Factor: 1.00

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

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070M7

Name: TMA/ARLI Contract: WHC

Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

ix: (soil/water) WATER Lab Sample ID: A207045-03B

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

isture: _____ decanted: (Y/N) ___ Date Received: 07/22/92

action: (SepF/Cont/Sonc) CONT Date Extracted: 07/26/92

entrated Extract Volume: 10000 (uL) Date Analyzed: 08/06/92

ction 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	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

9613491.2090

000067

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070P2

Name: TMA/ARLI Contract: WHC

Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

Matrix (soil/water) WATER Lab Sample ID: A207046-03B

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

Moisture: _____ decanted: (Y/N) ___ Date Received: 07/22/92

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 07/26/92

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/06/92

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.

B070P7

Name: TMA/ARLI Contract: WHC

Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

ix: (soil/water) WATER Lab Sample ID: A207045-06B

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

isture: _____ decanted: (Y/N) ___ Date Received: 07/22/92

action: (SepF/Cont/Sonc) CONT Date Extracted: 07/26/92

entrated Extract Volume: 10000 (uL) Date Analyzed: 08/06/92

ction 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	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.

B072S9

ame: TMA/ARLI Contract: WHC

ode: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

x: (soil/water) WATER Lab Sample ID: A207045-07B

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

sture: _____ decanted: (Y/N) ___ Date Received: 07/22/92

ction: (SepF/Cont/Sonc) CONT Date Extracted: 07/26/92

ntrated Extract Volume: 10000 (uL) Date Analyzed: 08/06/92

tion Volume: 1.00 (uL) Dilution Factor: 1.00

leanup: (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.

B072T4

Name: TMA/ARLI Contract: WHC

Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207045-04B

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

Moisture: _____ decanted: (Y/N) ___ Date Received: 07/22/92

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 07/26/92

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/06/92

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

WESTINGHOUSE HANFORD COMPANY

Results of Analyses For:

GENERAL CHEMISTRY
CASE NO. 07-045 & 07-046
(TMA/ARLI Work Order # A2-07-045 & A2-07-046)

ORGANICS
CASE NO. 07-045
(TMA/ARLI Work Order #A2-07-045)

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

B070J7	B070K1	B070K2
B070K6	B070M7	B070N1
B072T4	B072T8	B070H7
B070J1	B070P7	B070Q1
B072S9	B072T3	
B070P2	B070P6	B070D2
B070D6	B070H2	B070H6
B070G7	B070H1	

Norcal Work Order # N2-07-107

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

9613191.2095

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 7/18/92

Ice Chest No. SML-73

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250996 896-6

Offsite Property No. W92-0-0533-9

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B07037

~~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)~~

B07040

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

B07041

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: 7/20/92 0901
Relinquished by: K. Trapp / K. Trapp	Received by: Bernit Blum	Date/Time: 7-22-92 1100
Relinquished by: Ebby Yamamoto 7-22-92	Received by: C. Harris	Date/Time: 7/23/92 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

9613491.2096

000003

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/18/92 Time 0845 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070J7	~~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)~~		
B070K0	3, 40ml, Gs, WATER, CLP-VOA		
B070K1	~~1, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED~~		
			BOL # 250986976-6
			OPC # W92-0-0533-9
			TASK #

Field Information**

Special Handling and/or Storage

Possible Sample Hazards

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 7-22-92

Analysis Required

* ID's B070K0 & B070K1 were switched - KB

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

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

A-6000-475.05

9613491.2097

000004

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 7/18/92

Ice Chest No. SML-118

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986896-6

Offsite Property No. W92-0-0533-10

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO 70K2

~~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 70K5

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

BO 70K6

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

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: G G Hamilton	Received by: K. Trapp / K. Trapp	Date/Time: 7/20/92 0901
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 7-22-92 1100
Relinquished by: Eyamamoto 7-22-92	Received by: C. Harris	Date/Time: 7/23/92 900
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

9613491.2098

000005

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/18/92 Time 0720 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070K2	~~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)~~		
B070K5	3, 40ml, Gs, WATER, CLP-VOA		metal
B070K6	~~3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED~~		Voa
			BOL # 250986796-6
			OPC # W92-0-0533-10
			TASK #

Field Information**

Special Handling and/or Storage

Possible Sample Hazards

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 7-22-92

Analysis Required

* ID's B070K5 & B070K6 were switched on this sheet - KB

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

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

A-6000-4[illegible]35/9

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 7/18/92

Ice Chest No. SML-~~944~~ 26 7/20/92

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986896-6

Offsite Property No. W92-0-0533-10

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO70M7

~~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)~~

BO70N6

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

BO70N1

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: 7/20/92 0901
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 7-22-92 1100
Relinquished by: Lynn Wiseto 7/22/92	Received by: C. Davis	Date/Time: 7/23/92 9 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 7/18/92 Time 1020 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070M7	✓ ~~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)~~		
B070NO	3, 40ml, Gs, WATER,	CLP-VOA	
B070NI	✓ ~~3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED~~		
			BOL # 250986896-C
			OPC # W92-0-0533-10
			TASK #

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 7-22-92

Analysis Required _____

* ID's B070NO & B070NI were switched on this sheet -KB

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

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

A-6000-405-059

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 7/18/92

Ice Chest No. SML-8

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986996-6

Offsite Property No. W92-0-0533-9

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B072T4

~~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)~~

B072T7

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

B072T8

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. Cu	K. Trapp / K. Trapp	7/20/92 0900
K. Trapp / K. Trapp	Kermit Blum	7-22-92 1100
[illegible] 7/22/92	C. Harris	7/23/92 9:00

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 7/18/92 Time 1205 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B072T4 ✓	~~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)~~		
* B072T7	✓ 3, 40ml, Gs, WATER,	CLP-VOA	2 bubbles
* B072T8	✓ ~~1; 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED~~		
			BOL # 250936996-6
			OPC # WG2-0-0533-9
			TASK #

Field Information**

Special Handling and/or Storage

Possible Sample Hazards

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 7-22-92

Analysis Required

* ID's B07277 & B07278 were switched on this sheet - KB

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

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

A-6000-475 (05

9613491.2103

000010

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 7/19/92

Ice Chest No. SMC-~~94-2~~ 94 KS 7/20/92

Field Logbook No. EFC-1036

Bill of Lading/Airbill No. 250996 896-6

Offsite Property No. W92-0-0533-11

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B0 70H7

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)~~

B0 70J0

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

B0 70J1

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

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: Kirby W. Lee K.D. Lee	Received by: K. Trapp / K. Trapp	Date/Time: 7/20/92 0901
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 7-22-92 1100
Relinquished by: Transmitted to 7-22-92	Received by: C. Harris	Date/Time: 7/23/92 9:00
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments: 1 VOA VIAL Sample B070H7 broken while unpacking CH.

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 7/17/92 Time 1030 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070H7	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)~~		
* B070J0	✓ 3, 40ml, Gs, WATER, CLP-VOA		metal
* B070J1	✓ ~~3, 1L, P, WATER, CLP~~-ICP/AA METAL & MERCURY ~~(HNO3) FILTERED~~		sta
			BOL # 250986896-6
			OPC # W92-0-0537-11
			TASK #

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 7-22-92

Analysis Required _____

* ID's B070J0 & B070J1 were switched on this sheet - KB

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

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

A-6000-426 (05

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 7/14/92

Ice Chest No. SML-88

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250480946-6

Offsite Property No. W92-0-0533-11

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO 70P7

~~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 70Q0

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

BO 70Q1

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: 7/20/92 0901
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 7-22-92 1100
Relinquished by: [illegible] 7-22-92	Received by: C. Davis	Date/Time: 7/23/92 9 00
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

9613491.2106

000013

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/17/92 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
B070P7 ✓	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)~~		
* B070Q0 ✓	3, 40ml, Gs, WATER, CLP-VOA		
* B070Q1 ✓	3, ~~1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED~~		
			BOL # 250986896-6
			OPC # W92-0-0533-11
			TASK #

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 7-22-92

Analysis Required _____

* ID's B070Q0 & B070Q1 were switched on this sheet - KB

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

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

A-6000-475 (05/

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 7/19/92

Ice Chest No. SML-122

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986896-6

Offsite Property No. W92-0-0533-12

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B072S9

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)~~

B072T2

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

B072T3

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

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

Relinquished by:	Received by:	Date/Time:
Kirby D. Lee K.D. Lee	K. Trapp / K. Trapp	7/20/92 0901
K. Trapp / K. Trapp	Kermit Blum	7-22-92 1100
[illegible] 7-22-92	C. Harris	7/23/92 900
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 7/19/92 Time 0728 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B07259	~~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)~~		
* B072T2	3, 40ml, Gs, WATER,	CLP-VOA	* SHOULD BE B072T3 / FOR METALS
* B072T3	~~3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED~~		* FOR VOA
			BOL # 250996896-C
			OPC # W92-0-0533-12
			TASK #

Field Information**

Special Handling and/or Storage

Possible Sample Hazards

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 7-22-92

Analysis Required

* ID's B072T2 & B072T3 were switched on this sheet - KB

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

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

A-6000-405 (05/

SAMPLE LOG-IN SHEET

LAB NAME : TMA/ARLI

PAGE : 1 OF 1

RECEIVED BY (PRINT NAME): CAROLE HARRIS

LOG-IN-DATE : 7/23/98

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.: 7971031225
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: 7/23/98
12. Temp of ice chest 4.1 °C
13. Time Recieved: 9:00 AM

EPA SAMPLE #	CORRESPONDING SAMPLE TAG #	CORRESPONDING ASSIGNED LAB #	REMARKS: CONDITION OF SAMPLE SHIPMENT, ETC
	B070J7	AJ07045-01	
	B070K8	AJ07045-02	
	B070M7	AJ07045-03	
	B072T4	AJ07045-04	
	B070H7	AJ07045-05	*
	B070P7	AJ07045-06	
	B072S9	AJ07045-07	

SAMPLE TRANSFER

Fraction: _____ _____

Area #: _____ _____

By: _____ _____

On: _____ _____

* Contact SMO and attach record of resolution

Reviewed By: _____ Logbook No.: _____

Date: _____ Logbook Page No.: _____

FORM DC-1

* SAMPLE B070H7 1 VOA VIAL WAS BROKEN WHILE UNPACKING

TMA/ARLI
Thermo Analytical Inc.

RADIATION DOSE RATE SURVEY FORM

Date 7/23/92 COMPANY TMA/NORCAL (WHC) OTHER ORD # 2521031225

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		49.0							
Consistency		7,490	0.2891						
Smears: BLUE 1 of 2		35.0						NONE	
BLUE OT		31.0						NONE	
(734) BLUE ROBIN		31.0						NONE	
NAI		43.0						NONE	
Blue OT 1		43.0						NONE	
SML-32		23.0						NONE	
RED #26		34.0						NONE	
BLUE OT 2		46.0						NONE	
BLUE OT III		45.0						NONE	
Reported (WHC)		55	samples each < 50pCi/gram						

Comments:

All OK ✓ Approved [signature]

Not OK Date 7/23/92

9613491.2111

000019

Westinghouse Hanford Company	CHAIN OF CUSTODY

Custody Form Initiator PH BUTCHER

Company Contact PH BUTCHER

Telephone (509)376-5046

Project Designation/Sampling Locations 100-BC-5

Collection Date 7/20/92

Ice Chest No. SML-163

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986 920-9

Offsite Property No. W92-0-0533-19

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO 70P2

✓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 70P5

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

BO 70P6

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

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: C Celebrezzi C CELEBREZZI	Received by: K. Trapp / K. Trapp	Date/Time: ~~7/20/92~~ KT 7/21/92 1001
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 7-22-92 1100
Relinquished by: Kermit Blum 7-22-92	Received by: C. Harris	Date/Time: 7/23/92 900
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 7/20/92 Time 1450 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070P2 ✓	~~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)~~		
B070P6 ✓	3, 40ml, Gs, WATER, CLP-VOA		
	1 KL 7/21/92		
B070P5 ✓	~~3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED~~		
			BOL # 250986920-8
			OPC # W92-0-0533-18
			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 7-22-92

Analysis Required _____

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

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

Westinghouse Hanford Company	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 7/20/92

Ice Chest No. GGH-1

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 2509960920-8

Offsite Property No. W92-0-0533-17

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. Cellich C. Cellich	Received by: K. Trapp / K. Trapp	Date/Time: ~~Hoke~~ KT 7/21/92 1001
Relinquished by: K Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 7-22-92 1100
Relinquished by: [illegible] 7-22-92	Received by: C. Davis	Date/Time: 7/23/92 9:00
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 7/20/92 Time 1020 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070D2 ✓	~~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)~~		
B070D6 ✓	3, 40ml, Gs, WATER,	CLP-VOA	
	1 KT 7/20/92		
B070D5 ✓	~~3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED~~		
			BOL # 250986920-9
			OPC # W92-0-0533-17
			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 7-22-92

Analysis Required _____

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

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

A-6000-403 (05/9

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 7-20-92

Ice Chest No. SML-106

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 2509866920-8

Offsite Property No. W92-0-0533-17

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO70H2

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)~~

BO70H5

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

BO70H6

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: 7/21/92 1001
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 7-22-92 1100
Relinquished by: [illegible] 7-22-92	Received by: C. Davis	Date/Time: 7/23/92 900
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 7/20/92 Time 1015 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070H2 ✓	~~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)~~		
B070H6 ✓	3, 40ml, Gs, WATER,	CLP-VOA	
	1 KJ 7/20/92		
B070H5 ✓	~~3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED~~		
			BOL # 250986920-8
			OPC # W92-0-0533-17
			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 7-22-92

Analysis Required _____

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

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

A-6000-405 (05/5

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 7/21/92

Ice Chest No. SML-109

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986920-9

Offsite Property No. W92-0-0533-18

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO 70G7

~~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 70H0~~

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

BO 70H1

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

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: C. Calibert C. CALIBERT	Received by: ~~Hoffz~~ CL 7/21/92	Date/Time: ~~Hoffz~~ KT 7/21/92
Relinquished by:	Received by: K. Trapp / K. Trapp	Date/Time: 7/21/92 1001
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 7-22-92 1100
Relinquished by: Kermit Blum 7-22-92	Received by: C. Harris	Date/Time: 7/23/92

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 7/20/92 Time 1315 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B0T0G7	✓ ~~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)~~		
B0T0H1	✓ 3, 40ml, Gs, WATER,	CLP-VOA	3 bottles
	1 KT 7/21/92		
B0T0H0	~~3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED~~		
			BOL # 250986920-9
			OPC # W92-0-0533-18
			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 7-22-92

Analysis Required

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

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

A-6000-405 (05/90)

SAMPLE LOG-IN SHEET

LAB NAME : TMA/ARLI

PAGE : 1 OF 1

RECEIVED BY (PRINT NAME): ~~Carole~~ CAROLE HARRIS

LOG-IN-DATE : 7/23/98

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: 7/23/98
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
	B07000	AZ-07-0460	
	B07012	AZ-07-0460	
	B07CP2	AZ-07-0460	
	B07CG7	AZ-07-0460	

* Contact SMO and attach record of resolution

Reviewed By: Logbook No.:

Date: Logbook Page No.:

FORM DC-1

GENERAL CHEMISTRY RESULTS

CASE NO. 07-045

Water Sample #:

B070J7	B070K2	B070M7
B072T4	B070H7	B070P7
B072S9		

CASE NARRATIVE

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

Ernesto Vázquez

Ernesto Vazquez

TMA Inc. REPORT Work Order # A2-07-045

Received: 07/22/92 09/11/92 11:29:02

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 Vazquez
CONTACT: EVV CIH

CLIENT: WHC SAMPLES: 8
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. #: N2-07-107-SU-AR
INVOICE: under separate cover

SAMPLE IDENTIFICATION

01	B070J7
01	B070J7 MS
01	B070J7 MSD
01	B070J7
01	B070J7 Duplicate
02	B070K2
02	B070K2 MS
02	B070K2 MSD
02	B070K2
02	B070K2 MS
03	B070M7
03	B070M7 MS
03	B070M7
04	B072T4
04	B072T4 Duplicate
04	B072T4
05	B070H7
05	B070H7 Duplicate
05	B070H7
06	B070P7
06	B070P7 MS
06	B070P7 MSD
06	B070P7
07	B072S9
07	B072S9 MS
07	B072S9 MSD

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 # A2-07-045

Received: 07/22/92 09/11/92 11:29:02

SAMPLE IDENTIFICATION

07 B072S9 Duplicate

08 Wet Chem Blank

TMA Inc. REPORT Work Order # A2-07-045

Received: 07/22/92

Results by Sample

SAMPLE ID B070J7 FRACTION 01E TEST CODE VCCLPL NAME Anions & Wet Chem. - VN043

Date & Time Collected 07/18/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	8.4	mg/L	0.2
Elect. Conductivity	120.1	365	umho/cm	6
Fluoride	300.0	0.3	mg/L	0.1
Phosphate	300.0	<0.4	mg/L	0.4
pH	150.1	8.1	pH	0.1
Sulfate	300.0	42.7	mg/L	1

FORM I

TMA Inc. REPORT Work Order # A2-07-045

Received: 07/22/92 Results by Sample

SAMPLE ID B070J7 FRACTION 01F TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 07/18/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Tot. Dissolved Solids	160.1	243	mg/L	5
Alkalinity	310.1	110	mg/L	2

FORM I

TMA Inc. REPORT Work Order # A2-07-045

Received: 07/22/92

Results by Sample

SAMPLE ID B070J7 FRACTION 01G TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/18/92 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 # A2-07-045

Received: 07/22/92 Results by Sample

SAMPLE ID B070J7 FRACTION 01W TEST CODE WCCLPL NAME Anions & Wet Chem. - WW043

Date & Time Collected 07/18/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Ammonia	350.3	0.12	mg/L	0.05
COD	410	<30	mg/L	30

FORM I

9613491.2127

TMA Inc. REPORT Work Order # 000037

Received: 07/22/92 Results by Sample

SAMPLE ID B070K2 FRACTION 02E TEST CODE VCCLPL NAME Anions & Wet Chem. - VH043

Date & Time Collected 07/18/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	9.5	mg/L	0.5
Elect. Conductivity	120.1	344	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	51.0	mg/L	1

FORM I

TMA Inc. REPORT Work Order # A2-07-045

Received: 07/22/92

Results by Sample

SAMPLE ID B070K2 FRACTION 02F TEST CODE VCCLPL NAME Anions & Wet Chem. - VN043

Date & Time Collected 07/18/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Tot. Dissolved Solids	160.1	220	mg/L	5
Alkalinity	310.1	95	mg/L	2

FORM I

TMA Inc. REPORT Work Order # A2-07-045

Received: 07/22/92 Results by Sample

SAMPLE ID B070K2 FRACTION 026 TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/18/92 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 # A2-07-045

Received: 07/22/92 Results by Sample

SAMPLE ID B070K2 FRACTION 02H TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/18/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Ammonia	350.3	0.08	mg/L	0.05
COD	410	<30	mg/L	30

FORM I

k Order # A2-07-045 TMA Inc. REPORT Work
Received: 07/22/92 Results by Sample

SAMPLE ID B070M7 FRACTION 03C TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043
Date & Time Collected 07/18/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	9.7	mg/L	0.2
Elect. Conductivity	120.1	366	umho/cm	6
Fluoride	300.0	0.3	mg/L	0.1
Phosphate	300.0	<0.4	mg/L	0.4
pH	150.1	8.1	pH	0.1
Sulfate	300.0	46.4	mg/L	1

FORM I

TMA Inc. REPORT Work Order # A2-07-045

Received: 07/22/92

Results by Sample

SAMPLE ID B070M7 FRACTION 03E TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/18/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Tot. Dissolved Solids	160.1	256	mg/L	5
Alkalinity	310.1	106	mg/L	2

FORM I

TMA Inc. REPORT Work Order # A2-07-045

Received: 07/22/92

Results by Sample

SAMPLE ID B070M7 FRACTION 03F TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/18/92 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 # A2-07-045

Received: 07/22/92

Results by Sample

SAMPLE ID B070M7 FRACTION 03G TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 07/18/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

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

FORM I

TMA Inc. REPORT Work Order # A2-07-045

Received: 07/22/92

Results by Sample

SAMPLE ID B072T4 FRACTION 04C TEST CODE WCCLPL NAME Anions & Wet Chem. - WR043

Date & Time Collected 07/18/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	13.8	mg/L	0.2
Elect. Conductivity	120.1	391	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	55.8	mg/L	1

FORM I

TMA Inc. REPORT Work Order # A2-07-045

Received: 07/22/92

Results by Sample

SAMPLE ID B072T4 FRACTION 04E TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Tiee Collected 07/18/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Tot. Dissolved Solids	160.1	269	mg/L	5
Alkalinity	310.1	112	mg/L	2

FORM I

TMA Inc. REPORT Work Order # A2-07-045

Received: 07/22/92

Results by Sample

SAMPLE ID B072T4 FRACTION 04F TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/18/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

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

FORM I

TRA Inc. REPORT Work Order # A2-07-045

Received: 07/22/92 Results by Sample

SAMPLE ID B072T4 FRACTION 04G TEST CODE WCCLPL NAME Anions & Wet Chem. - WW043

Date & Time Collected 07/18/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

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

FORM I

TMA Inc. REPORT Work Order # A2-07-045

Receivedd: 07/22/92 Results by Sample

SAMPLE ID B070H7 FRACTION 05C TEST CODE VCCLPL NAME Anions & Wet Chem. - VH043

Date & Time Collected 07/18/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	8.9	mg/L	0.2
Elect. Conductivity	120.1	331	umho/cm	6
Fluoride	300.0	0.3	mg/L	0.1
Phosphate	300.0	<0.4	mg/L	0.4
pH	150.1	7.8	pH	0.1
Sulfate	300.0	45.6	mg/L	1

FORM I

TMA Inc. REPORT Work Order # A2-07-045

Received: 07/22/92 Results by Sample

SAMPLE ID B070H7 FRACTION 05D TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/18/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Tot. Dissolved Solids	160.1	228	mg/L	5
Alkalinity	310.1	100	mg/L	2

FORM I

TMA Inc. REPORT Work Order # A2-07-045

Received: 07/22/92

Results by Sample

SAMPLE ID B070W7 FRACTION 05F TEST CODE VCCLPL NAME Anions & Wet Chem. - VW043

Date & Time Collected 07/18/92 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 # A2-07-045

Received: 07/22/92 Results by Sample

SAMPLE ID B070H7 FRACTION 05G TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/18/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Ammonia	350.3	0.08	mg/L	0.05
COD	410	<30	mg/L	30

FORM I

INA Inc. REPORT Work Order # A2-07-045

Received: 07/22/92

Results by Sample

SAMPLE ID B070P7 FRACTION 06C TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 07/19/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	5.3	mg/L	0.2
Elect. Conductivity	120.1	283	umho/cm	6
Fluoride	300.0	0.3	mg/L	0.1
Phosphate	300.0	<0.4	mg/L	0.4
pH	150.1	7.9	pH	0.1
Sulfate	300.0	29.0	mg/L	1

FORM I

Inc. REPORT Work Order # A2-07-045

Received: 07/22/92 Results by Sample

SAMPLE ID B070P7 FRACTION 06D TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 07/19/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Tot. Dissolved Solids	160.1	192	mg/L	5
Alkalinity	310.1	104	mg/L	2

FORM I

Inc. REPORT Work Order # A2-07-045

Received: 07/22/92

Results by Sample

SAMPLE ID B070P7 FRACTION 06E TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 07/19/92 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 # A2-07-045

Received: 07/22/92

Results by Sample

SAMPLE ID B070P7 FRACTION 06N TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/19/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

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

FORM I

9613491.2147

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TMA Inc. REPORT Work Order # A2-07-045 EV9

Received: 07/22/92

Results by Sample

SAMPLE ID B072S9 FRACTION 07C TEST CODE VCCLPL NAME Anions & Wet Chem. - VH043

Date & Time Collected 07/19/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	12.9	mg/L	0.2
Elect. Conductivity	120.1	387	umho/cm	6
Fluoride	300.0	0.3	mg/L	0.1
Phosphate	300.0	<0.4	mg/L	0.4
pH	150.1	7.9	pH	0.1
Sulfate	300.0	57.1	mg/L	1

FORM I

TMA Inc. REPORT Work Order # A2-07-045

Received: 07/22/92 Results by Sample

SAMPLE ID B072S9 FRACTION 07D TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/19/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Tot. Dissolved Solids	160.1	274	mg/L	5
Alkalinity	310.1	112	mg/L	2

FORM I

AA Inc. REPORT Work Order # A2-07-045

Received: 07/22/92 Results by Sample

SAMPLE ID B072S9 FRACTION 07E TEST CODE VCCLPL NAME Anions & Wet Chem. - VN043

Date & Time Collected 07/19/92 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 # A2-07-045

Received: 07/22/92

Results by Sample

SAMPLE ID B072S9 FRACTION 07F TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 07/19/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

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

FORM I

GENERAL CHEMISTRY RESULTS

CASE NO. 07-046

Water Sample #:

B070P2 B070D2 B070H2
B070G7

CASE NARRATIVE

The %RPD of the ammonia analysis for the liquid sample B070D2 (A2-07-046-01H) was 200%. The sample result was below detection limits (<0.05mg/L) and the duplicate result was just at the detection limit (0.06mg/L). These results are acceptable based on the level of the ammonia concentration.

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

Ernesto Vázquez

Ernesto Vazquez

9615481.2152

000100

TMA Inc. REPORT Work Order # A2-07-046

Received: 07/22/92 09/11/92 13:16:04

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 Vazquez

CONTACT EVV

CLIENT WHC SAMPLES 5
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. # N2-07-107-SU-AR
INVOICE under separate cover

A2-07-045 & 046 are batched. All QC was run on A2-07-045.

SAMPLE IDENTIFICATION

01	B070D2
01	B070D2 MS
01	B070D2 Duplicate
01	B070D2 MS
02	B070H2
02	B070H2 Duplicate
03	B070P2
03	B070P2 MS
04	B070G7
04	B070G7 Duplicate
05	Wet Chem Blank

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

TMA Inc. REPORT Work Order # A2-07-046

Received: 07/22/92

Results by Sample

SAMPLE ID B070D2 FRACTION 01C TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 07/20/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	9.2	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	7.9	pH	0.1
Sulfate	300.0	27	mg/L	1

FORM I

TMA Inc. REPORT Work Order # A2-07-046

Received: 07/22/92 Results by Sample

SAMPLE ID B070D2 FRACTION 01D TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/20/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Tot. Dissolved Solids	160.1	218	mg/L	5
Alkalinity	310.1	122	mg/L	2

FORM I

MA Inc. REPORT Work Order # A2-07-046

Received: 07/22/92

Results by Sample

SAMPLE ID B070D2 FRACTION 01E TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 07/20/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

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

FORM I

:-A Inc. REPORT Work Order # A2-07-046

Received: 07/22/92 Results by Sample

SAMPLE ID B070D2 FRACTION 01F TEST CODE WCCLPL NAME Anions & Wet Chem. - WR043

Date & Time Collected 07/20/92 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

Inc. REPORT Work Order # A2-07-046

Received: 07/22/92 Results by Sample

SAMPLE ID B070N2 FRACTION 02C TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 07/20/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	1.6	mg/L	0.2
Elect. Conductivity	120.1	259	umho/cm	6
Fluoride	300.0	0.5	mg/L	0.1
Phosphate	300.0	<0.4	mg/L	0.4
pH	150.1	8.0	pH	0.1
Sulfate	300.0	10	mg/L	1

FORM I

TMA Inc. REPORT Work Order # A2-07-046

Received: 07/22/92 Results by Sample

SAMPLE ID B070H2 FRACTION 02D TEST CODE VCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/20/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Tot. Dissolved Solids	160.1	169	mg/L	5
Alkalinity	310.1	124	mg/L	2

FORM I

TMA Inc. REPORT Work Order # A2-07-046

Received: 07/22/92

Results by Sample

SAMPLE ID B070M2 FRACTION 02E TEST CODE WCCLPL NAME Anions & Wet Chem. - WM043

Date & Time Collected 07/20/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

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

FORM I

IMA Inc. REPORT Work Order # A2-07-046

Received: 07/22/92

Results by Sample

SAMPLE ID B070H2 FRACTION 02F TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/20/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

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

FORM I

Inc. REPORT Work Order # A2-07-046

Received: 07/22/92

Results by Sample

SAMPLE ID B070P2 FRACTION 03C TEST CODE WCCLPL NAME Anions & Wet Chem. - WM043

Date & Time Collected 07/20/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	9.5	mg/L	0.2
Elect. Conductivity	120.1	381	umho/cm	6
Fluoride	300.0	0.3	mg/L	0.1
Phosphate	300.0	<0.4	mg/L	0.4
pH	150.1	8.2	pH	0.1
Sulfate	300.0	47	mg/L	1

FORM I

TMA Inc. REPORT Work Order # A2-07-046

Received: 07/22/92 Results by Sample

SAMPLE ID B070P2 FRACTION 03D TEST CODE WCCLPL NAME Anions & Wet Chem. - WE043

Date & Time Collected 07/20/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

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

FORM I

TMA Inc. REPORT Work Order # A2-07-046

Received: 07/22/92

Results by Sample

SAMPLE ID B070P2 FRACTION 03E TEST CODE WCCLPL NAME Anions & Wet Chem. - WM043

Date & Time Collected 07/20/92 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 # A2-07-046

Received: 07/22/92

Results by Sample

SAMPLE ID B070P2 FRACTION 03F TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/20/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

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

FORM I

Inc. REPORT Work Order # A2-07-046

Received: 07/22/92

Results by Sample

SAMPLE ID B070G7 FRACTION 04C TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 07/21/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	12.7	mg/L	0.2
Elect. Conductivity	120.1	379	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	45	mg/L	1

FORM I

TMA Inc. REPORT Work Order # A2-07-046

Received: 07/22/92

Results by Sample

SAMPLE ID B070G7 FRACTION 04D TEST CODE VCCLPL NAME Anions & Wet Chem. - VN043

Date & Time Collected 07/21/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Tot. Dissolved Solids	160.1	239	mg/L	5
Alkalinity	310.1	101	mg/L	2

FORM I

TMA Inc. REPORT Work Order # A2-07-046

Received: 07/22/92

Results by Sample

SAMPLE ID B070G7 FRACTION 04E TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 07/21/92 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 # A2-07-046

Received: 07/22/92

Results by Sample

SAMPLE ID B070G7 FRACTION 04F TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 07/21/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Ammonia Nitrogen	350.3	0.07	mg/L	0.05
COD	410.0	<30	mg/L	30

FORM I

9613491.2169

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MB 10/16

 Skinner&Sherman REPORT Work Order # S2-07-194

Received: 07/23/92 09/09/92 16:40:23

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

ATTEN Dan Steurmer

CLIENT HANFORD NOR SAMPLES 12
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 N2-07-110
TAKEN By Client
TRANS Fedex #2521031192
TYPE 11 Waters For NO3NO2
P.O. # N2-07-110
INVOICE under separate cover

SAMPLE IDENTIFICATION	
01	B070J7
01	B070J7D
01	B070J7S
02	B070K2
03	B070M7
04	B072T4
05	B070H7
06	B070P7
07	B072S9
08	B070D2
09	B070H2
10	B070P2
11	B070G7
12	LCSW

TEST CODES and NAMES used on this workorder

NO3NO2 Nitrate Plus Nitrite

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 satisfie 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. Clie 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 invoi 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 f 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

Page 2 Skinner&Sherman REPORT Work Order # S2-07-194

Received: 07/23/92 Results by Sample

SAMPLE ID B070J7 SAMPLE # 01 FRACTIONS: A
Date & Time Collected 07/18/92 Category WATER

NO3NO2 4.81
mg N/L

SAMPLE ID B070J7D SAMPLE # 01 FRACTIONS: B
Date & Time Collected 07/18/92 Category WATER

NO3NO2 5.14
mg N/L

SAMPLE ID B070J7S SAMPLE # 01 FRACTIONS: C
Date & Time Collected 07/18/92 Category WATER

NO3NO2 6.97
mg N/L

SAMPLE ID B070K2 SAMPLE # 02 FRACTIONS: A
Date & Time Collected 07/18/92 Category WATER

NO3NO2 4.38
mg N/L

SAMPLE ID B070M7 SAMPLE # 03 FRACTIONS: A
Date & Time Collected 07/18/92 Category WATER

NO3NO2 4.13
mg N/L

SAMPLE ID B072T4 SAMPLE # 04 FRACTIONS: A
Date & Time Collected 07/18/92 Category WATER

NO3NO2 3.66
mg N/L

SAMPLE ID B070H7 SAMPLE # 05 FRACTIONS: A
Date & Time Collected 07/19/92 Category WATER

NO3NO2 2.38
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

Received: 07/23/92 Results by Sample

SAMPLE ID B070P7 SAMPLE # 06 FRACTIONS: A
Date & Time Collected 07/19/92 Category WATER

NO3NO2 1.47
mg N/L

SAMPLE ID B072S9 SAMPLE # 07 FRACTIONS: A
Date & Time Collected 07/19/92 Category WATER

NO3NO2 3.38
mg N/L

SAMPLE ID B070D2 SAMPLE # 08 FRACTIONS: A
Date & Time Collected 07/20/92 Category WATER

NO3NO2 0.66
mg N/L

SAMPLE ID B070H2 SAMPLE # 09 FRACTIONS: A
Date & Time Collected 07/20/92 Category WATER

NO3NO2 <0.25
mg N/L

SAMPLE ID B070P2 SAMPLE # 10 FRACTIONS: A
Date & Time Collected 07/20/92 Category WATER

NO3NO2 3.65
mg N/L

SAMPLE ID B070G7 SAMPLE # 11 FRACTIONS: A
Date & Time Collected 07/20/92 Category WATER

NO3NO2 4.14
mg N/L

SAMPLE ID LCSW SAMPLE # 12 FRACTIONS: A
Date & Time Collected not specified Category WATER

NO3NO2 1.92
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 satisfie 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. Clie 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 invoi amount. The results listed refer only to tested samples and applicable parameters. Product endorsement is neither inferred nor implied. Skinner & Sherman Laboratories, Inc. wi 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 f 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/Skinner & Sherman Labs SAMPLE LOG-IN

WORKORDER SZ-07-194 CLIENT HANFORD-NOR No. SAMPLES:

PROTCL CLP TURNARND 33 day 11

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

CUSTODIAN Benney Antonio SDG/BATCH N/A

CUSTODY SEAL: PRESENT/ABSENT/INTACT/NOT CLIENT CASE NZ-07-110

SHIPER & # PO/CONTRACT# ↓

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

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

SAMPLE CONTAINERS-INTACT/BROKEN COMMENTS

CLIENT COMMENT? YES/NO

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

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

SHIPMENT DATES 7-23-92

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

N/A

	CLIENT ID	MATRIX	RECEIVED	PH*	TEST(S) & QC	HOLD TIME UP
1	B07ØJ7 ~~KZ~~ A.B. 7-27-92	WATER	7-23-92	N/A	NO2NO3	due 8-19-92
2	ØKZ	↓	↓	↓	↓	
3	ØM7					
4	2T4					
5	ØH7					
6	ØP7					
7	259					
8	ØD2					
9	ØH2					
10	ØP2					
11	ØG7					
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						

complete 7-24-92 BB

Samples are from site known to have Rad-Contamination: YES X NO ___

Samples have detectable amounts of Radioactive Material: YES ___ NO X

SUBCONTRACT: YES/NO, TO: ___ DATE: ___

REVIEWED ___

* EPA/CLP required Rev 1.6 PAGE:

9613491.2173

0000

SS-1

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 7/18/92

Ice Chest No. SML-73

Field Logbook No. EFL-1636

Bill of Lading/Airbill No. 250996 896-6

Offsite Property No. W92-0-0533-9

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B07017

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)~~

B07060

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

B07061

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

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

Relinquished by:	Received by:	Date/Time:
K.D. Lee	K. Trapp / K. Trapp	7/20/92 0901
K. Trapp / K. Trapp	Kermit Blum	7-22-92 1100
Y. Yamamoto 7/22/92	[illegible]	7/23/92 10:00

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

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

9613491.2174 0000

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/18/92 Time 0845 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070J7	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)~~		
* B070K0	✓ ~~3, 40ml, Gs, WATER, CLP-VOA~~		
* B070K1	✓ 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986976-6
			OPC # WA2-0-0533-9
			TASK #

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 7-22-92

Analysis Required _____

* ID's B070K0 & B070K1 were switched - KB

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

**Use back of page for additional information relative to sample [illegible]

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 7/18/92

Ice Chest No. SML-118

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986896-6

Offsite Property No. W92-0-0533-10

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO 70K2

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 70K5

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

BO 70K6

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

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: G G Hamilton	Received by: K. Trapp / K. Trapp	Date/Time: 7/20/92 0901
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 7-22-92 1100
Relinquished by: Lyam Amato 7-22-92	Received by: [illegible]	Date/Time: 7/23/92 10:00
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

9613491.2176

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Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/18/92 Time 0720 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070K2	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)~~		
* B070K5	~~3, 40ml, Gs, WATER, CLP VOA~~		metal
* B070K6	3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		VOA
		BOL # 250986 796-6	
		OPC # W92-0-0533-10	
		TASK #	

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 7-22-92

Analysis Required

* ID's B070K5 & B070K6 were switched on this sheet - KB

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

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

A-6000-406 (0

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 7/18/92

Ice Chest No. SML-[illegible] 26 [illegible] 7/20/92

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986896-6

Offsite Property No. W92-0-0533-10

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO70M7

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 DISSOLV~~ED SOLIDS
~~1, 500ml, G, WATER, SULFIDE (ZINC ACETATE+NaOH~~ pH>9)
~~1, 500ml, G, WATER, AMMONIA, CHEMICAL OXYGEN DEMAND (H2~~SO4 pH<2)
~~1, 1L, P, WATER, Tc-99~~ (HNO3)

BO70N0

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

BO70N1

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

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: [illegible] P.D. Lee	Received by: K Trapp / K. Trapp	Date/Time: 7/20/92 0901
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 7-22-92 1100
Relinquished by: Yamamoto 7-22-92	Received by: [illegible]	Date/Time: 7/23/92 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: 7/18/92 Time: 1020 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B07OM7	✓ 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)~~		
* B07ONO	~~3, 40ml, Gs, WATER, CLP-VOA~~		
* B07ONI	✓ 3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986896-6
			OPC # W92-0-0533-10
			TASK #

Field Information**

Special Handling and/or Storage

Possible Sample Hazards

PART II: LABORATORY SECTION

Received by: Kermit Blum Title: Sample Control Supervisor Date: 7-22-92

Analysis Required

* ID's B07ONO & B07ONI were switched on this sheet -KB

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

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

A-6000-406 (0

9615491.2179

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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 7/18/92

Ice Chest No. SML-8

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986896-6

Offsite Property No. W92-0-0533-9

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B072T4

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)~~

B072T7

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

B072T8

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

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: [illegible] K.D. Cu	Received by: K. Trapp / K. Trapp	Date/Time: 7/20/92 0900
Relinquished by: K. Trapp / K Trapp	Received by: Kermit Blum	Date/Time: 7-22-92 1100
Relinquished by: [illegible] amoto 7-22-92	Received by: [illegible]	Date/Time: 7/23/92 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 7/18/92 Time 1205 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B072T4 ✓	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)~~ ✓		
* B072T7	✓ ~~3, 40ml, Gs, WATER, CLP-VOA~~		2 bubbles
* B072T8	✓ ~~3~~ 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986896-6
			OPC # WA92-0-0533-9
			TASK #

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 7-22-92

Analysis Required

* ID's B072T7 & B072T8 were switched on this sheet - KB

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

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

A-6000-406 (0

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 7/19/92

Ice Chest No. SML-~~94~~ 2 94 KG 7/20/92

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986 896-6

Offsite Property No. W92-0-0533-11

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO 70H7

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 70J0

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

BO 70J1

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

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: K.D. Lee K.D. Lee	Received by: K. Trapp / K. Trapp	Date/Time: 7/20/92 0901
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 7-22-92 1100
Relinquished by: Yamamoto 7-22-92	Received by: [illegible]	Date/Time: 7/23/92 10:00
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

9613491.2182

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Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/19/92 Time 1030 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070H7	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)~~		
* B070J0	✓ ~~3, 40ml, Gs, WATER, CLP-VOA~~		metal
* B070J1	✓ 3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		soil
			BOL # 250986896-6
			OPC # W92-0-0537-11
			TASK #

Field Information**

Special Handling and/or Storage

Possible Sample Hazards

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 7-22-92

Analysis Required

* ID's B070J0 & B070J1 were switched on this sheet - KB

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

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

A-6000-406 (0

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 7/19/92

Ice Chest No. SML-88

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250980846-6

Offsite Property No. W92-0-0533-11

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO 70P7

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 70Q0

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

BO 70Q1

~~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	7/20/92 0901
K. Trapp / K. Trapp	Kermit Blum	7-22-92 1100
[illegible] 7-22-92	[illegible]	7/23/92 10:00

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 7/19/92 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
B070P7 ✓	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)~~		
* B070Q0	~~3, 40ml, Gs, WATER, CLP-VOA~~		
* B070Q1 ✓	3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986896-6
			OPC # W92-0-0533-11
			TASK #

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 7-22-92

Analysis Required

* ID's B070Q0 & B070Q1 were switched on this sheet - KB

*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

Custody Form Initiator PH BUTCHER

Company Contact PH BUTCHER

Telephone (509)376-5045

Project Designation/Sampling Locations 100-BC-5

Collection Date 7/19/92

Ice Chest No. SML-122

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986896-6

Offsite Property No. W92-0-0533-12

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B072S9

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)~~

B072T2

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

B072T3

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

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: Kirby D. Lee K.D. Lee	Received by: K. Trapp / K. Trapp	Date/Time: 7/20/92 0901
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 7-22-92 1100
Relinquished by: Yamamoto 7-22-92	Received by: [illegible]	Date/Time: 7/23/92 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

9613491.2186

00000

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/19/92 Time 0728 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B07259	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)~~		
* ~~B072T2~~	~~3, 40ml, Gs, WATER, CLP VOA~~		* SHOULD BE B072T2 / FOR METALS
* B072T3	3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		* FOR VOA
			BOL # 250986896-C
			OPC # W92-0-0533-12
			TASK #

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 7-22-92

Analysis Required _____

* ID's B072T2 & B072T3 were switched on this sheet - KB

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

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

A-6000-406 (C

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 7/20/92

Ice Chest No. GGH-1

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986920-8

Offsite Property No. W92-0-0933-17

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. Celebrik C. Celebrik	Received by: K. Trapp / K. Trapp	Date/Time: ~~7/20/92~~ KT 7/21/92 1001
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 7-22-92 1100
Relinquished by: eyamamoto 7-22-92	Received by: [illegible]	Date/Time: 7/23/92 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 7/20/92 Time 0700 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070D2 ✓	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)~~		
B070D6 ✓	~~3, 40ml, Gs, WATER, CLP-VOA~~		
	1 KT 7/20/92		
B070D5 ✓	3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250786920-9
			OPC # W92-0-0533-17
			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 7-22-92

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

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 7-20-92

Ice Chest No. SML-106

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986920-8

Offsite Property No. W92-0-0933-17

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO 70H2

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 70H5

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

BO 70H6

~~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: 7/21/92 1001
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 7-22-92 1100
Relinquished by: Yamamoto 7-22-92	Received by: [illegible]	Date/Time: 7/23/92 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 7/20/92 Time 0915 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070H2 ✓	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)~~		
B070H6 ✓	~~3, 40ml, Gs, WATER, CLP-VOA~~		
	KR 7/20/92		
B070H5 ✓	~~3~~, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986920-8
			OPC # W92-0-0533-17
			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 7-22-92

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

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 7/20/92

Ice Chest No. SML-163

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986 920-8

Offsite Property No. W92-0-0533-18

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO 70P2

✓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 70P5

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

BO 70P6

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

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: C Celebrucki C CELIBRUCKI	Received by: K. Trapp / K. Trapp	Date/Time: ~~7/20/92~~ KT 7/21/92 1001
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 7-22-92 1100
Relinquished by: Yamamoto 7-22-92	Received by: [illegible]	Date/Time: 7/23/92 10:00
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

9613491.2192

000050

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/20/92 Time 1450 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070P2 ✓	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)~~		
B070P6 ✓	~~3, 40ml, Gs, WATER, CLP-VOA~~		
	1 KT 7/21/92		
B070P5 ✓	~~3~~, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986920-8
			OPC # WA2-0-0533-18
			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 7-22-92

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

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 7/21/92

Ice Chest No. SML-109

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986920-8

Offsite Property No. W92-0-0533-18

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO 70G7

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 70H0

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

BO 70H1

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: [illegible]	Date/Time: ~~7/21/92~~ KT 7/21/92
Relinquished by: [illegible] 7-22-92	Received by: K. Trapp / K. Trapp	Date/Time: 7/21/92 1001
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 7-22-92 1100
Relinquished by:	Received by: [illegible]	Date/Time: 7/23/92 10:00

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 7/20/92 Time 1315 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B0T0G7	✓ 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)~~		
B0T0H1	✓ ~~3, 40ml, Gs, WATER, CLP-VOA~~		3 bubbles
	KT 7/21/92		
B0T0H0	~~2~~, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986 920-9
			OPC # WA2-0-0533-18
			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 7-22-92

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

FEDERAL EXPRESS

QUESTIONS? CALL 800-238-5355 TOLL FREE.

AIRBILL
PACKAGE TRACKING NUMBER 2521031192

2521031192

RECIPIENT'S COPY

Date 7.22.92

1

From (Your Name) Please Print: Sample control

Your Phone Number (Very Important): (310) 235-2633

Company: [illegible] MEDICAL

Department/Floor No.

Street Address: 2030 WRIGHT AVE

City: [illegible] Richmond

State: CA

ZIP Required: 94804

2

To (Recipient's Name) Please Print: Sample control

Recipient's Phone Number (Very Important): ( )

Company: Skinner & Sheehan

Department/Floor No.

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

City: Waltham

State: MA

ZIP Required: 02254

YOUR INTERNAL BILLING REFERENCE INFORMATION (optional) (First 24 characters will appear on invoice.): 2320 6706

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

Street Address

City

State

ZIP Required

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

4 SERVICES (Check only one box)

Priority Overnight (Delivery by next business morning!)	Standard Overnight (Delivery by next business afternoon!)
11 [X] YOUR PACKAGING	51 [ ] YOUR PACKAGING
16 [ ] FEDEX LETTER *	56 [ ] FEDEX LETTER *
12 [ ] FEDEX PAK *	52 [ ] FEDEX PAK *
13 [ ] FEDEX BOX	53 [ ] FEDEX BOX
14 [ ] FEDEX TUBE	54 [ ] FEDEX TUBE
Economy Two-Day (Delivery by second business day!)	**Government Overnight** (Restricted to authorized users only)
30 [ ] ECONOMY	46 [ ] GOVT LETTER
	41 [ ] GOVT PACKAGE

Freight Service (for Extra Large or any package over 150 lbs.)

5 DELIVERY AND SPECIAL HANDLING (Check services required)

1 [ ] HOLD FOR PICK-UP (Fill in Box H)
2 [X] DELIVER WEEKDAY
3 DELIVER SATURDAY (Extra charge) (Not available to all locations) [ ]
4 [ ] DANGEROUS GOODS (Extra charge)
5 [ ]
6 [ ] DRY ICE ..... Lbs
7 [ ] OTHER SPECIAL SERVICE .....
8 [ ]
9 [ ] SATURDAY PICK-UP (Extra charge)
10 [ ]

6

PACKAGES	WEIGHT In Pounds Only	YOUR DECLARED VALUE
Total 2	Total 121	Total

DIM SHIPMENT (Chargeable Weight)

[ ] _____ lbs.

L x W x H = _____

Received At

7 Release

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: 7/23/92

FedEx Employee Number: 9-30

Federal Express Use

Base Charges

Declared Value Charge

Other 1

Other 2

Total Charges

REVISION DATE 6/91
PART #137204 FXEM 4/92
FORMAT #099

099

9613491.2196

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

SEP 1992
RECEIVED
OSM DMO

September 15, 1992

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

Quality Control Narrative

Scope
Eleven (11) water samples were submitted to TMA/Skinner & Sherman Laboratories, Inc. on July 23, 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 S207191.

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 mercury, selenium, and thallium matrix spike recovery exceeded the control limit requirements.

The selenium 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

3-18-96
MC

WESTINGHOUSE/HANFORD
1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER:

B070D2

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

Lab Code: SKINER Case No.: N2-07-110SAS No.: SDG No.: B070D2

Matrix (soil/water): WATER Lab Sample ID: 07191-08S

Level (low/med): LOW Date Received: 07/23/92

% 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	26.3	B		P
7440-36-0	Antimony	16.5	U		P
7440-38-2	Arsenic	3.3	B		F
7440-39-3	Barium	13.6	B		P
7440-41-7	Beryllium	0.40	U		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	34900			P
7440-47-3	Chromium	3.7	U		P
7440-48-4	Cobalt	2.3	U		P
7440-50-8	Copper	2.4	U		P
7439-89-6	Iron	92.9	B		P
7439-92-1	Lead	3.7			F
7439-95-4	Magnesium	12200			P
7439-96-5	Manganese	1.7	B		P
7439-97-6	Mercury	0.20	U	N	CV
7440-02-0	Nickel	6.0	U		P
7440-09-7	Potassium	4370	B		P
7782-49-2	Selenium	3.7	U	WN*	F
7440-22-4	Silver	2.3	U		P
7440-23-5	Sodium	11000			P
7440-28-0	Thallium	1.6	U	WN	F
7440-62-2	Vanadium	21.3	B		P
7440-66-6	Zinc	10.1	U		P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLOUDY Texture:

Color After: COLORLESS Clarity After: CLOUDY Artifacts:

Comments:

002

WESTINGHOUSE/HANFORD

SAMPLE NUMBER:

B070G7

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: SKINER Case No.: N2-07-110SAS No.: SDG No.: B070D2

Matrix (soil/water): WATER Lab Sample ID: 07191-11S

Level (low/med): LOW Date Received: 07/23/92

% 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	52.9	B		P
7440-36-0	Antimony	16.5	U		P
7440-38-2	Arsenic	2.6	U		F
7440-39-3	Barium	18.8	B		P
7440-41-7	Beryllium	0.40	U		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	46600			P
7440-47-3	Chromium	10.5			P
7440-48-4	Cobalt	2.3	U		P
7440-50-8	Copper	2.4	U		P
7439-89-6	Iron	54.5	B		P
7439-92-1	Lead	9.3			F
7439-95-4	Magnesium	11600			P
7439-96-5	Manganese	1.4	B		P
7439-97-6	Mercury	0.20	U	N	CV
7440-02-0	Nickel	6.0	U		P
7440-09-7	Potassium	4370	B		P
7782-49-2	Selenium	3.7	U	WN*	F
7440-22-4	Silver	2.6	B		P
7440-23-5	Sodium	8830			P
7440-28-0	Thallium	1.6	U	WN	F
7440-62-2	Vanadium	3.6	B		P
7440-66-6	Zinc	10.1	U		P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

003

WESTINGHOUSE/HANFORD
1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B070H2

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

Lab Code: SKINER Case No.: N2-07-110SAS No.: SDG No.: B070D2

Matrix (soil/water): WATER Lab Sample ID: 07191-09S

Level (low/med): LOW Date Received: 07/23/92

% 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	413			P
7440-36-0	Antimony	16.5	U		P
7440-38-2	Arsenic	3.0	B		F
7440-39-3	Barium	80.4	B		P
7440-41-7	Beryllium	0.40	U		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	25500			P
7440-47-3	Chromium	46.4			P
7440-48-4	Cobalt	2.3	U		P
7440-50-8	Copper	2.4	U		P
7439-89-6	Iron	1100			P
7439-92-1	Lead	2.9	B		F
7439-95-4	Magnesium	9090			P
7439-96-5	Manganese	186			P
7439-97-6	Mercury	0.20	U	N	CV
7440-02-0	Nickel	34.5	B		P
7440-09-7	Potassium	5670			P
7782-49-2	Selenium	3.7	U	WN*	F
7440-22-4	Silver	2.3	U		P
7440-23-5	Sodium	13900			P
7440-28-0	Thallium	1.6	U	WN	F
7440-62-2	Vanadium	24.8	B		P
7440-66-6	Zinc	335			P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLOUDY Texture:

Color After: COLORLESS Clarity After: CLOUDY Artifacts:

Comments:

004

WESTINGHOUSE/HANFORD

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B070H7

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

Lab Code: SKINER Case No.: N2-07-110SAS No.: SDG No.: B070D2

Matrix (soil/water): WATER Lab Sample ID: 07191-05S

Level (low/med): LOW Date Received: 07/23/92

% 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	153	B		P
7440-36-0	Antimony	16.5	U		P
7440-38-2	Arsenic	2.6	U		F
7440-39-3	Barium	39.8	B		P
7440-41-7	Beryllium	0.40	U		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	41100			P
7440-47-3	Chromium	36.0			P
7440-48-4	Cobalt	2.3	U		P
7440-50-8	Copper	2.4	U		P
7439-89-6	Iron	318			P
7439-92-1	Lead	2.2	U		F
7439-95-4	Magnesium	9990			P
7439-96-5	Manganese	8.4	B		P
7439-97-6	Mercury	0.20	U	N	CV
7440-02-0	Nickel	74.8			P
7440-09-7	Potassium	4100	B		P
7782-49-2	Selenium	3.7	U	WN*	F
7440-22-4	Silver	2.3	U		P
7440-23-5	Sodium	11100			P
7440-28-0	Thallium	1.6	U	WN	F
7440-62-2	Vanadium	6.6	B		P
7440-66-6	Zinc	20.6			P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLOUDY Texture:

Color After: COLORLESS Clarity After: CLOUDY Artifacts:

Comments:

005

WESTINGHOUSE/HANFORD
1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B070J7

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

Lab Code: SKINER Case No.: N2-07-110SAS No.: SDG No.: B070D2

Matrix (soil/water): WATER Lab Sample ID: 07191-01S

Level (low/med): LOW Date Received: 07/23/92

% 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	115	B		P
7440-36-0	Antimony	16.5	U		P
7440-38-2	Arsenic	3.8	B	W	F
7440-39-3	Barium	36.1	B		P
7440-41-7	Beryllium	0.42	B		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	52100			P
7440-47-3	Chromium	9.0	B		P
7440-48-4	Cobalt	2.3	U		P
7440-50-8	Copper	2.7	B		P
7439-89-6	Iron	165			P
7439-92-1	Lead	2.2	U		F
7439-95-4	Magnesium	6570			P
7439-96-5	Manganese	8.8	B		P
7439-97-6	Mercury	0.20	U	N	CV
7440-02-0	Nickel	6.0	U		P
7440-09-7	Potassium	2970	B		P
7782-49-2	Selenium	10.1		SN*	F
7440-22-4	Silver	2.3	U		P
7440-23-5	Sodium	13300			P
7440-28-0	Thallium	1.6	U	WN	F
7440-62-2	Vanadium	3.3	U		P
7440-66-6	Zinc	24.0			P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLOUDY Texture:

Color After: COLORLESS Clarity After: CLOUDY Artifacts:

Comments:

006

WESTINGHOUSE/HANFORD

1

SAMPLE NUMBER:

B070K2

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: SKINER Case No.: N2-07-110SAS No.: SDG No.: B070D2

Matrix (soil/water): WATER Lab Sample ID: 07191-02S

Level (low/med): LOW Date Received: 07/23/92

% 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	73.1	B		P
7440-36-0	Antimony	16.5	U		P
7440-38-2	Arsenic	2.6	U		F
7440-39-3	Barium	37.2	B		P
7440-41-7	Beryllium	0.40	U		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	50200			P
7440-47-3	Chromium	13.8			P
7440-48-4	Cobalt	2.3	U		P
7440-50-8	Copper	2.4	U		P
7439-89-6	Iron	75.9	B		P
7439-92-1	Lead	2.2	U		F
7439-95-4	Magnesium	7580			P
7439-96-5	Manganese	3.3	B		P
7439-97-6	Mercury	0.20	U	N	CV
7440-02-0	Nickel	6.0	U		P
7440-09-7	Potassium	1960	B		P
7782-49-2	Selenium	7.7		SN*	F
7440-22-4	Silver	2.3	U		P
7440-23-5	Sodium	10200			P
7440-28-0	Thallium	1.6	U	WN	F
7440-62-2	Vanadium	3.3	U		P
7440-66-6	Zinc	13.4	B		P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLOUDY Texture:

Color After: COLORLESS Clarity After: CLOUDY Artifacts:

Comments:

007

WESTINGHOUSE/HANFORD

1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B070M7

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

Lab Code: SKINER Case No.: N2-07-110SAS No.: SDG No.: B070D2

Matrix (soil/water): WATER Lab Sample ID: 07191-03S

Level (low/med): LOW Date Received: 07/23/92

% 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	49.1	B		P
7440-36-0	Antimony	16.5	U		P
7440-38-2	Arsenic	2.7	B		F
7440-39-3	Barium	25.5	B		P
7440-41-7	Beryllium	0.40	U		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	50200			P
7440-47-3	Chromium	12.0			P
7440-48-4	Cobalt	2.3	U		P
7440-50-8	Copper	2.4	U		P
7439-89-6	Iron	87.7	B		P
7439-92-1	Lead	2.2	U		F
7439-95-4	Magnesium	7840			P
7439-96-5	Manganese	3.3	B		P
7439-97-6	Mercury	0.20	U	N	CV
7440-02-0	Nickel	6.0	U		P
7440-09-7	Potassium	5610			P
7782-49-2	Selenium	3.7	U	WN*	F
7440-22-4	Silver	2.3	U		P
7440-23-5	Sodium	11600			P
7440-28-0	Thallium	1.6	U	WN	F
7440-62-2	Vanadium	5.1	B		P
7440-66-6	Zinc	47.1			P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLOUDY Texture:

Color After: COLORLESS Clarity After: CLOUDY Artifacts:

Comments:

008

WESTINGHOUSE/HANFORD
1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B070P2

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

Lab Code: SKINER Case No.: N2-07-110SAS No.: SDG No.: B070D2

Matrix (soil/water): WATER Lab Sample ID: 07191-10S

Level (low/med): LOW Date Received: 07/23/92

% 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	33.4	B		P
7440-36-0	Antimony	16.5	U		P
7440-38-2	Arsenic	3.5	B		F
7440-39-3	Barium	31.3	B		P
7440-41-7	Beryllium	0.40	U		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	53200			P
7440-47-3	Chromium	9.0	B		P
7440-48-4	Cobalt	2.3	U		P
7440-50-8	Copper	2.4	U		P
7439-89-6	Iron	16.3	U		P
7439-92-1	Lead	2.2	U		F
7439-95-4	Magnesium	6540			P
7439-96-5	Manganese	1.6	B		P
7439-97-6	Mercury	0.20	U	N	CV
7440-02-0	Nickel	6.0	U		P
7440-09-7	Potassium	4940	B		P
7782-49-2	Selenium	3.7	U	WN*	F
7440-22-4	Silver	2.3	U		P
7440-23-5	Sodium	11300			P
7440-28-0	Thallium	1.6	U	WN	F
7440-62-2	Vanadium	5.1	B		P
7440-66-6	Zinc	10.1	U		P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLOUDY Texture:

Color After: COLORLESS Clarity After: CLOUDY Artifacts:

Comments:

009

WESTINGHOUSE/HANFORD

1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B070P7

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

Lab Code: SKINER Case No.: N2-07-110SAS No.: SDG No.: B070D2

Matrix (soil/water): WATER Lab Sample ID: 07191-06S

Level (low/med): LOW Date Received: 07/23/92

% 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	498			P
7440-36-0	Antimony	16.5	U		P
7440-38-2	Arsenic	3.9	B	W	F
7440-39-3	Barium	17.3	B		P
7440-41-7	Beryllium	0.40	U		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	34500			P
7440-47-3	Chromium	72.3			P
7440-48-4	Cobalt	2.3	U		P
7440-50-8	Copper	4.0	B		P
7439-89-6	Iron	1060			P
7439-92-1	Lead	3.2			F
7439-95-4	Magnesium	8710			P
7439-96-5	Manganese	17.1			P
7439-97-6	Mercury	0.20	U	N	CV
7440-02-0	Nickel	34.2	B		P
7440-09-7	Potassium	5260			P
7782-49-2	Selenium	3.7	U	WN*	F
7440-22-4	Silver	2.3	U		P
7440-23-5	Sodium	9740			P
7440-28-0	Thallium	1.6	U	WN	F
7440-62-2	Vanadium	12.2	B		P
7440-66-6	Zinc	10.4	B		P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLOUDY Texture:

Color After: COLORLESS Clarity After: CLOUDY Artifacts:

Comments:

010

WESTINGHOUSE/HANFORD

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B072S9

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

Lab Code: SKINER Case No.: N2-07-110SAS No.: SDG No.: B070D2

Matrix (soil/water): WATER Lab Sample ID: 07191-07S

Level (low/med): LOW Date Received: 07/23/92

% 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	318			P
7440-36-0	Antimony	16.5	U		P
7440-38-2	Arsenic	2.6	U		F
7440-39-3	Barium	26.4	B		P
7440-41-7	Beryllium	0.42	B		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	49500			P
7440-47-3	Chromium	38.2			P
7440-48-4	Cobalt	2.3	U		P
7440-50-8	Copper	2.4	U		P
7439-89-6	Iron	527			P
7439-92-1	Lead	2.2	U		F
7439-95-4	Magnesium	11200			P
7439-96-5	Manganese	30.2			P
7439-97-6	Mercury	0.20	U	N	CV
7440-02-0	Nickel	13.1	B		P
7440-09-7	Potassium	6400			P
7782-49-2	Selenium	3.7	U	WN*	F
7440-22-4	Silver	2.3	U		P
7440-23-5	Sodium	12800			P
7440-28-0	Thallium	1.6	U	WN	F
7440-62-2	Vanadium	7.4	B		P
7440-66-6	Zinc	26.4			P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLOUDY Texture:

Color After: COLORLESS Clarity After: CLOUDY Artifacts:

Comments:

011

9613491.2207

WESTINGHOUSE/HANFORD

1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B072T4

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

Lab Code: SKINER Case No.: N2-07-110SAS No.: SDG No.: B070D2

Matrix (soil/water): WATER Lab Sample ID: 07191-04S

Level (low/med): LOW Date Received: 07/23/92

% 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	28.6	B		P
7440-36-0	Antimony	16.5	U		P
7440-38-2	Arsenic	2.6	U		F
7440-39-3	Barium	25.3	B		P
7440-41-7	Beryllium	0.40	U		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	49100			P
7440-47-3	Chromium	21.0			P
7440-48-4	Cobalt	2.3	U		P
7440-50-8	Copper	2.4	U		P
7439-89-6	Iron	67.4	B		P
7439-92-1	Lead	2.2	U		F
7439-95-4	Magnesium	11200			P
7439-96-5	Manganese	2.6	B		P
7439-97-6	Mercury	0.20	U	N	CV
7440-02-0	Nickel	6.0	U		P
7440-09-7	Potassium	5990			P
7782-49-2	Selenium	3.7	U	WN*	F
7440-22-4	Silver	2.4	B		P
7440-23-5	Sodium	12200			P
7440-28-0	Thallium	1.6	U	WN	F
7440-62-2	Vanadium	7.7	B		P
7440-66-6	Zinc	67.3			P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLOUDY Texture:

Color After: COLORLESS Clarity After: CLOUDY Artifacts:

Comments:

012

TMA/Skinner & Sherman Labs SAMPLE LOG-IN
WORKORDER 52-07-191 CLIENT HANFORD-NOR No. SAMPLES:
PROTCL CLP TURNARND 33 days 11
COOLER TEMP: 4 oC, or NA (Soil) (Water) (Specify Other
CUSTODIAN Benney, A. SDG/BATCH N/A
CUSTODY SEAL: PRESENT/ABSENT/INTACT/NOT CLIENT CASE NZ-07-110
SHIPER & # Fedex #2521031192 PO/CONTRACT# ↓
TAGS: PRESENT/ABSENT/NA/SEE COC CONTACT Dolores Sanchez
CHAIN OF CUSTODY: PRESENT/ABSENT/NA, # N/A COMMENTS: NONE

SAMPLE CONTAINERS-INTACT/BROKEN COMMENTS

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

SHIPMENT DATES 7.23.92
LIST ANY DATE WITH PAPERWORK/SHIPMENT PROBLEMS & SPECIFY THE PROBLEM:

N/A

	CLIENT ID	MATRIX	RECEIVED	PH*	TEST(S) & QC	HOLD TIME U
1	B07ØJ7	WATER	7/23/92	2.4 / 11.79	TM 3 CN	CN due 7.31.92
2	ØK2	↓	↓	2.2 / 11.83	↓	
3	ØM7			2.3 / 11.97		
4	2T4			2.2 / 11.86		
5	ØH7			2.2 / 11.81		HG due 8.7.92
6	ØP7			2.4 / 11.79		
7	2S9			2.2 / 11.83		
8	ØD2			2.2 / 11.91		
9	ØH2			2.2 / 11.87		
10	ØP2			2.3 / 11.78		
11	ØG7			2.2 / 11.83		
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 X NO ____
Samples have detectable amounts of Radioactive Material: YES ____ NO X

SUBCONTRACT: YES/NO TO: _____ DATE: _____

REVIEWED _____

* EPA/CLP required Rev 1.6 PAGE:

9613491.2209

SS-1

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 7/18/92

Ice Chest No. SML-73

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250996 896-6

Offsite Property No. W92-0-0533-9

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO7037

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)~~

BO7040

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

BO7041

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: 7/20/92 0901
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 7-22-92 1100
Relinquished by: Yamamoto 7/22/92	Received by: [illegible]	Date/Time: 7/23/92 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 7/18/92 Time 0845 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070J7	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)~~		
* B070K0	~~3, 40ml, Gs, WATER, CLP-VOA~~		
* B070K1	1, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986876-6
			OPC # W92-0-0533-9
			TASK #

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

Received by Hermit Blum Title Sample Control Supervisor Date 7-22-92

Analysis Required _____ 188

* ID's B070K0 & B070K1 were switched - KB

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

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

A-6000-406 (9

9613491.2211

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 7/18/92

Ice Chest No. SML-118

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986896-6

Offsite Property No. W92-0-0533-10

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO 70K2

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 70K5

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

BO 70K6

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

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: G G Hamilton	Received by: K. Trapp / K. Trapp	Date/Time: 7/20/92 0901
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 7-22-92 1100
Relinquished by: Lyann Amato 7-22-93	Received by: [illegible]	Date/Time: 7/23/92 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

9613491.2212

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/18/92 Time 0720 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070K2	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)~~		
* B070K5	~~3, 40ml, Gs, WATER, CLP VOA~~		metal
* B070K6	3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		Voa
		BOL # 250986 796-6	
		OPC # W92-0-0533-10	
		TASK #	

Field Information**

Special Handling and/or Storage

Possible Sample Hazards

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 7-22-92

Analysis Required -100

* ID's B070K5 & B070K6 were switched on this sheet - KB

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

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

A-6000-406 (05

9613191.2213

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 7/18/92

Ice Chest No. SML-~~944~~ 26 LT 7/20/92

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 2509868896-6

Offsite Property No. W92-0-0533-10

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO70M7

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 DISSOLV~~ED SOLIDS
~~1, 500ml, G, WATER, SULFIDE (ZINC ACETATE+NaOH~~ pH>9)
~~1, 500ml, G, WATER, AMMONIA, CHEMICAL OXYGEN DEMAND (H2~~SO4 pH<2)
~~1, 1L, P, WATER, Tc 99~~ (HNO3)

BO70N0

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

BO70N1

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

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: [illegible] R.D. Lee	Received by: K. Trapp / K. Trapp	Date/Time: 7/20/92 0901
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 7-22-92 1100
Relinquished by: [illegible] 7-22-92	Received by: [illegible]	Date/Time: 7/23/92 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

9613491.2214

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/18/92 Time 1020 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070M7	✓ 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)~~		
* B070NO	~~3, 40ml, Gs, WATER, CLP-VOA~~		
* B070N1	✓ 3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986896-6
			OPC # W92-0-0533-10
			TASK #

Field Information**

Special Handling and/or Storage

Possible Sample Hazards

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 7-22-92

Analysis Required 192

* ID's B070NO & B070N1 were switched on this sheet -KB

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

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

A-6000-406 (0

9613481.2215

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 7/18/92

Ice Chest No. SML-8

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986896-6

Offsite Property No. W92-0-0533-9

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B072T4

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)~~

B072T7

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

B072T8

3, 40m~~l, Gs, WATER, CLP-VOA~~

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

Relinquished by:	Received by:	Date/Time:
K.D. Lee K.D. Lee	K. Trapp / K. Trapp	7/20/92 0900
K. Trapp / K Trapp	Kermit Blum	7-22-92 1100
Ryan Amoto 7-22-92	[illegible]	7/23/92 10:00

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

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

9613491.2216

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/18/92 Time 1205 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B072T4 ✓	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)~~		
* B072T7	~~✓ 3, 40ml, Gs, WATER, CLP-VOA~~		2 bubbles
* B072T8	✓ ~~3~~ 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986896-6
			OPC # W92-0-0533-9
			TASK #

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 7-22-92

Analysis Required

* ID's B072T7 & B072T8 were switched on this sheet - KB

194

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

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

A-6000-406 (0

9613491.2217

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 7/19/92

Ice Chest No. SML-~~94~~ 2 94 KG 7/20/92

Field Logbook No. EFC-1036

Bill of Lading/Airbill No. 250996 896-6

Offsite Property No. W92-0-0533-11

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B0 70H7

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)~~

B0 70J0

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

B0 70J1

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

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

Relinquished by:	Received by:	Date/Time:
K.D. Lee K.D. Lee	K. Trapp / K. Trapp	7/20/92 0901
K. Trapp / K. Trapp	Kermit Blum	7-22-92 1100
Ryan amoto 7-22-92	[illegible]	7/23/92 10[illegible]

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

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

9613491.2218

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/19/92 Time 1030 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070H7	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)~~		
* B070J0	✓ ~~3, 40ml, Gs, WATER, CLP-VOA~~		metal
* B070J1	✓ 3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		soil
			BOL # 250986896-6
			OPC # W92-0-0537-11
			TASK #

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 7-22-92

Analysis Required _____

* ID's B070J0 & B070J1 were switched on this sheet - KB

~~150~~

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

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

A-6000-406 (05

9613491.2219

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 7/19/92

Ice Chest No. SML-88

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986896-6

Offsite Property No. W92-0-0533-11

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO 70P7

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 70Q0

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

BO 70Q1

~~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: 7/20/92 0901
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 7-22-92 1100
Relinquished by: Ryan amoto 7-22-92	Received by: [illegible]	Date/Time: 7/23/92 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

9613491.2220

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/19/92 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
B070P7 ✓	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)~~		
* B070Q0 ✓	~~3, 40ml, Gs, WATER, CLP-VOA~~		
* B070Q1 ✓	3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986896-6
			OPC # W92-0-0533-11
			TASK #

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 7-22-92

Analysis Required _____

* ID's B070Q0 & B070Q1 were switched on this sheet - KB

198

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

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

A-6000-406 (0

9613491.2221

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 7/19/92

Ice Chest No. SML-122

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986896-6

Offsite Property No. W92-0-0533-12

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B072S9

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)~~

B072T2

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

B072T3

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

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

Relinquished by:	Received by:	Date/Time:
Kirby D. Lee K.D. Lee	K. Trapp / K. Trapp	7/20/92 0901
K. Trapp / K. Trapp	Kermit Blum	7-22-92 1100
Yamamoto 7-22-92	[illegible]	7/23/92 10:00

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

*

-199

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

9613491.2222

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/19/92 Time 0728 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B072S9	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)~~		
* ~~B072T2~~	~~3, 40ml, Gs, WATER, CLP-VOA~~		* SHOULD BE B072T2 / FOR METALS
* B072T3	3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		* FOR VOA
			BOL # 250986896-C
			OPC # WA2-0-0533-12
			TASK #

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 7-22-92

Analysis Required _____

* ID's B072T2 & B072T3 were switched on this sheet - KB

200

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

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

A-6000-406 (0

9613491.2223

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 7/20/92

Ice Chest No. GGH-1

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986920-8

Offsite Property No. W92-0-0533-17

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. Celebrik C. Celebrik	Received by: K. Trapp / K. Trapp	Date/Time: ~~7/20/92~~ KT 7/21/92 1001
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 7-22-92 1100
Relinquished by: eyamamoto 7-22-92	Received by: [illegible]	Date/Time: 7/23/92 10:00
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

201

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

9613491.2224

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/20/92 Time 1010 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070D2 ✓	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)~~		
B070D6 ✓	~~3, 40ml, Gs, WATER, CLP-VOA~~		
	1 KT 7/20/92		
B070D5 ✓	3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250786920-9
			OPC # W92-0-0533-17
			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 7-22-92

Analysis Required _____

202

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

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

A-6000-406 (05

9613491.2225

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 7-20-92

Ice Chest No. SML-106

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986920-8

Offsite Property No. W92-0-0933-17

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO70H2

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)~~

BO70H5

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

BO70H6

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: 7/21/92 1001
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 7-22-92 1100
Relinquished by: Yamamoto 7-22-92	Received by: [illegible]	Date/Time: 7/23/92 10:00
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

203

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

9613491.2226

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/20/92 Time 1015 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070H2 ✓	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)~~		
B070H6 ✓	~~3, 40ml, Gs, WATER, CLP-VOA~~		
	KJ 7/20/92		
B070H5 ✓	~~3~~, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986920-8
			OPC # W92-0-0533-17
			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 7-22-92

Analysis Required

204

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

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

A-6000-406 (05

9613491.2227

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 7/20/92

Ice Chest No. SML-163

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986 920-8

Offsite Property No. W92-0-0533-18

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO 70P2

✓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 70P5

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

BO 70P6

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: ~~7/20/92~~ KT 7/21/92 1001
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 7-22-92 1100
Relinquished by: Yamamoto 7-22-92	Received by: [illegible]	Date/Time: 7/23/92 10:00
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

205

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

9613491.2228

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/20/92 Time 1450 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070P2 ✓	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)~~		
B070P6 ✓	~~3, 40ml, Gs, WATER, CLP-VOA~~		
	KS 7/21/92		
B070P5 ✓	~~3~~, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986920-8
			OPC # W92-0-0533-18
			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 7-22-92

Analysis Required

208

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

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

A-6000-406 (0

9613491.2229

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 7/21/92

Ice Chest No. SML-109

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986920-8

Offsite Property No. W92-0-0533-18

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO 70G7

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, a~~G, 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 70H0

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

BO 70H1

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: ~~7/20/92~~ CC 7.22.92	Date/Time: ~~7/20/92~~ KT 7/21/92
Relinquished by: Ryan Amato 7-22-92	Received by: K. Trapp / K. Trapp	Date/Time: 7/21/92 1001
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 7-22-92 1100
Relinquished by:	Received by: [illegible]	Date/Time: 7/23/92 10:00

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

207

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

9613491.2230

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/20/92 Time ~~1015~~ KT 7/21/92 1315 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B0T0G7	✓ 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)~~		
B0T0H1	✓ ~~3, 40ml, Gs, WATER, CLP-VOA~~		3 bubbles
	1 KT 7/21/92		
B0T0H0	~~3~~, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986 920-9
			OPC # W22-0-0533-18
			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 7-22-92

Analysis Required

~~208~~

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

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

A-6000-406 (05/

9613491.2231

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

SEP 1992
RECEIVED
OSM DMO

September 15, 1992

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

Quality Control Narrative

Scope
Eleven (11) water samples were submitted to TMA/Skinner & Sherman Laboratories, Inc. on July 23, 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 S207197.

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 sample with the following exceptions:

The lead and mercury digestion spike recovery exceeded the control limit requirements.

The lead and mercury 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

3-18-96
MC

WESTINGHOUSE/HANFORD
1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B070D5

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

Lab Code: SKINER Case No.: N2-07-110SAS No.: SDG No.: B070D5

Matrix (soil/water): WATER Lab Sample ID: 07197-08S

Level (low/med): LOW Date Received: 07/23/92

% 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	23.6	B		P
7440-36-0	Antimony	16.5	U		P
7440-38-2	Arsenic	2.4	U		F
7440-39-3	Barium	12.7	B		P
7440-41-7	Beryllium	0.40	U		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	35200			P
7440-47-3	Chromium	3.7	U		P
7440-48-4	Cobalt	2.3	U		P
7440-50-8	Copper	2.4	U		P
7439-89-6	Iron	16.3	U		P
7439-92-1	Lead	1.7	U	N*	F
7439-95-4	Magnesium	12200			P
7439-96-5	Manganese	1.3	U		P
7439-97-6	Mercury	0.20	U	N*	CV
7440-02-0	Nickel	6.0	U		P
7440-09-7	Potassium	4260	B		P
7782-49-2	Selenium	3.6	U	W	F
7440-22-4	Silver	2.3	U		P
7440-23-5	Sodium	11000			P
7440-28-0	Thallium	4.3	U		F
7440-62-2	Vanadium	20.2	B		P
7440-66-6	Zinc	10.1	U		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

002

9613491.2233

WESTINGHOUSE/HANFORD
1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B070H0

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

Lab Code: SKINER Case No.: N2-07-110SAS No.: SDG No.: B070D5

Matrix (soil/water): WATER Lab Sample ID: 07197-11S

Level (low/med): LOW Date Received: 07/23/92

% 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	32.2	B		P
7440-36-0	Antimony	16.5	U		P
7440-38-2	Arsenic	2.7	B	W	F
7440-39-3	Barium	18.1	B		P
7440-41-7	Beryllium	0.40	U		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	46400			P
7440-47-3	Chromium	8.6	B		P
7440-48-4	Cobalt	2.3	U		P
7440-50-8	Copper	2.4	U		P
7439-89-6	Iron	16.3	U		P
7439-92-1	Lead	4.5		WN*	F
7439-95-4	Magnesium	11400			P
7439-96-5	Manganese	1.3	U		P
7439-97-6	Mercury	0.20	U	N*	CV
7440-02-0	Nickel	6.0	U		P
7440-09-7	Potassium	4290	B		P
7782-49-2	Selenium	3.6	U	W	F
7440-22-4	Silver	2.3	U		P
7440-23-5	Sodium	8620			P
7440-28-0	Thallium	4.3	U		F
7440-62-2	Vanadium	3.3	U		P
7440-66-6	Zinc	10.1	U		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

003

WESTINGHOUSE/HANFORD
1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER:

B070H5

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

Lab Code: SKINER Case No.: N2-07-110SAS No.: SDG No.: B070D5

Matrix (soil/water): WATER Lab Sample ID: 07197-09S

Level (low/med): LOW Date Received: 07/23/92

% 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	24.6	B		P
7440-36-0	Antimony	16.5	U		P
7440-38-2	Arsenic	2.4	U		F
7440-39-3	Barium	85.3	B		P
7440-41-7	Beryllium	0.43	B		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	25200			P
7440-47-3	Chromium	3.7	U		P
7440-48-4	Cobalt	2.3	U		P
7440-50-8	Copper	2.4	U		P
7439-89-6	Iron	43.5	B		P
7439-92-1	Lead	2.3	B	N*	F
7439-95-4	Magnesium	8570			P
7439-96-5	Manganese	246			P
7439-97-6	Mercury	0.20	U	N*	CV
7440-02-0	Nickel	6.0	U		P
7440-09-7	Potassium	5630			P
7782-49-2	Selenium	3.6	U	W	F
7440-22-4	Silver	2.3	U		P
7440-23-5	Sodium	14200			P
7440-28-0	Thallium	4.3	U	W	F
7440-62-2	Vanadium	10.5	B		P
7440-66-6	Zinc	82.2			P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

004

9613491.2235

WESTINGHOUSE/HANFORD
1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B070J0

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

Lab Code: SKINER Case No.: N2-07-110SAS No.: SDG No.: B070D5

Matrix (soil/water): WATER Lab Sample ID: 07197-05S

Level (low/med): LOW Date Received: 07/23/92

% 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	17.8	B		P
7440-36-0	Antimony	16.5	U		P
7440-38-2	Arsenic	2.4	U		F
7440-39-3	Barium	38.0	B		P
7440-41-7	Beryllium	0.42	B		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	41300			P
7440-47-3	Chromium	18.0			P
7440-48-4	Cobalt	2.3	U		P
7440-50-8	Copper	2.4	U		P
7439-89-6	Iron	16.3	U		P
7439-92-1	Lead	2.5	B	WN*	F
7439-95-4	Magnesium	9900			P
7439-96-5	Manganese	1.6	B		P
7439-97-6	Mercury	0.20	U	N*	CV
7440-02-0	Nickel	6.0	U		P
7440-09-7	Potassium	3960	B		P
7782-49-2	Selenium	10.7		+	F
7440-22-4	Silver	2.3	U		P
7440-23-5	Sodium	11100			P
7440-28-0	Thallium	4.3	U		F
7440-62-2	Vanadium	7.3	B		P
7440-66-6	Zinc	10.1	U		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

005

9613491.2236

WESTINGHOUSE/HANFORD
1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B070K0

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

Lab Code: SKINER Case No.: N2-07-110SAS No.: SDG No.: B070D5

Matrix (soil/water): WATER Lab Sample ID: 07197-01S

Level (low/med): LOW Date Received: 07/23/92

% 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	17.3	U		P
7440-36-0	Antimony	16.5	U		P
7440-38-2	Arsenic	2.4	U		F
7440-39-3	Barium	33.0	B		P
7440-41-7	Beryllium	0.42	B		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	51600			P
7440-47-3	Chromium	3.7	B		P
7440-48-4	Cobalt	2.3	U		P
7440-50-8	Copper	2.4	U		P
7439-89-6	Iron	28.5	B		P
7439-92-1	Lead	3.8		WN*	F
7439-95-4	Magnesium	6420			P
7439-96-5	Manganese	1.3	U		P
7439-97-6	Mercury	0.25		N*	CV
7440-02-0	Nickel	6.0	U		P
7440-09-7	Potassium	2870	B		P
7782-49-2	Selenium	3.6	U		F
7440-22-4	Silver	2.3	U		P
7440-23-5	Sodium	13100			P
7440-28-0	Thallium	4.3	U		F
7440-62-2	Vanadium	3.3	U		P
7440-66-6	Zinc	10.1	U		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

006

WESTINGHOUSE/HANFORD
1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B070K5

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

Lab Code: SKINER Case No.: N2-07-110SAS No.: SDG No.: B070D5

Matrix (soil/water): WATER Lab Sample ID: 07197-02S

Level (low/med): LOW Date Received: 07/23/92

% 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	26.8	B		P
7440-36-0	Antimony	16.5	U		P
7440-38-2	Arsenic	2.4	U		F
7440-39-3	Barium	36.7	B		P
7440-41-7	Beryllium	0.41	B		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	50500			P
7440-47-3	Chromium	12.4			P
7440-48-4	Cobalt	2.3	U		P
7440-50-8	Copper	2.4	U		P
7439-89-6	Iron	16.3	U		P
7439-92-1	Lead	2.5	B	WN*	F
7439-95-4	Magnesium	7550			P
7439-96-5	Manganese	1.3	U		P
7439-97-6	Mercury	0.20	U	N*	CV
7440-02-0	Nickel	6.0	U		P
7440-09-7	Potassium	1910	B		P
7782-49-2	Selenium	3.6	U		F
7440-22-4	Silver	2.3	U		P
7440-23-5	Sodium	9980			P
7440-28-0	Thallium	4.3	U		F
7440-62-2	Vanadium	3.3	U		P
7440-66-6	Zinc	10.1	U		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

007

WESTINGHOUSE/HANFORD
1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER:

B070N0

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

Lab Code: SKINER Case No.: N2-07-110SAS No.: SDG No.: B070D5

Matrix (soil/water): WATER Lab Sample ID: 07197-03S

Level (low/med): LOW Date Received: 07/23/92

% 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	16.5	U		P
7440-38-2	Arsenic	4.4	B	W	F
7440-39-3	Barium	25.1	B		P
7440-41-7	Beryllium	0.42	B		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	50500			P
7440-47-3	Chromium	6.4	B		P
7440-48-4	Cobalt	2.3	U		P
7440-50-8	Copper	2.4	U		P
7439-89-6	Iron	43.7	B		P
7439-92-1	Lead	2.4	B	WN*	F
7439-95-4	Magnesium	7790			P
7439-96-5	Manganese	1.3	U		P
7439-97-6	Mercury	0.20	U	N*	CV
7440-02-0	Nickel	6.0	U		P
7440-09-7	Potassium	5560			P
7782-49-2	Selenium	3.6	U	W	F
7440-22-4	Silver	2.3	U		P
7440-23-5	Sodium	11500			P
7440-28-0	Thallium	4.3	U		F
7440-62-2	Vanadium	6.2	B		P
7440-66-6	Zinc	10.1	U		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

008

9613491.2239

WESTINGHOUSE/HANFORD
1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B070P5

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

Lab Code: SKINER Case No.: N2-07-110SAS No.: SDG No.: B070D5

Matrix (soil/water): WATER Lab Sample ID: 07197-10S

Level (low/med): LOW Date Received: 07/23/92

% 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	27.7	B		P
7440-36-0	Antimony	16.5	U		P
7440-38-2	Arsenic	3.4	B	W	F
7440-39-3	Barium	30.9	B		P
7440-41-7	Beryllium	0.40	U		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	52600			P
7440-47-3	Chromium	10.9			P
7440-48-4	Cobalt	2.3	U		P
7440-50-8	Copper	2.4	U		P
7439-89-6	Iron	24.8	B		P
7439-92-1	Lead	2.0	B	WN*	F
7439-95-4	Magnesium	6440			P
7439-96-5	Manganese	1.3	U		P
7439-97-6	Mercury	0.20	U	N*	CV
7440-02-0	Nickel	6.0	U		P
7440-09-7	Potassium	4750	B		P
7782-49-2	Selenium	3.6	U	W	F
7440-22-4	Silver	2.3	U		P
7440-23-5	Sodium	11000			P
7440-28-0	Thallium	4.3	U	W	F
7440-62-2	Vanadium	4.7	B		P
7440-66-6	Zinc	10.6	B		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

009

WESTINGHOUSE/HANFORD
1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B070Q0

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

Lab Code: SKINER Case No.: N2-07-110SAS No.: SDG No.: B070D5

Matrix (soil/water): WATER Lab Sample ID: 07197-06S

Level (low/med): LOW Date Received: 07/23/92

% 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	20.9	B		P
7440-36-0	Antimony	16.5	U		P
7440-38-2	Arsenic	2.4	U		F
7440-39-3	Barium	13.2	B		P
7440-41-7	Beryllium	0.40	U		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	33700			P
7440-47-3	Chromium	14.2			P
7440-48-4	Cobalt	2.3	U		P
7440-50-8	Copper	2.4	U		P
7439-89-6	Iron	16.3	U		P
7439-92-1	Lead	2.9	B	N*	F
7439-95-4	Magnesium	8330			P
7439-96-5	Manganese	2.2	B		P
7439-97-6	Mercury	0.20	U	N*	CV
7440-02-0	Nickel	6.0	U		P
7440-09-7	Potassium	5020			P
7782-49-2	Selenium	3.6	U	W	F
7440-22-4	Silver	2.3	U		P
7440-23-5	Sodium	9410			P
7440-28-0	Thallium	4.3	U		F
7440-62-2	Vanadium	8.7	B		P
7440-66-6	Zinc	10.1	U		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

010

WESTINGHOUSE/HANFORD
1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B072T2

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

Lab Code: SKINER Case No.: N2-07-110SAS No.: SDG No.: B070D5

Matrix (soil/water): WATER Lab Sample ID: 07197-07S

Level (low/med): LOW Date Received: 07/23/92

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	22.1	B		P
7440-36-0	Antimony	16.5	U		P
7440-38-2	Arsenic	2.6	B		F
7440-39-3	Barium	21.8	B		P
7440-41-7	Beryllium	0.42	B		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	49100			P
7440-47-3	Chromium	13.1			P
7440-48-4	Cobalt	2.3	U		P
7440-50-8	Copper	2.4	U		P
7439-89-6	Iron	16.3	U		P
7439-92-1	Lead	1.7	U	N*	F
7439-95-4	Magnesium	11000			P
7439-96-5	Manganese	18.8			P
7439-97-6	Mercury	0.20	U	N*	CV
7440-02-0	Nickel	6.0	U		P
7440-09-7	Potassium	6240			P
7782-49-2	Selenium	3.6	U		F
7440-22-4	Silver	2.3	U		P
7440-23-5	Sodium	12600			P
7440-28-0	Thallium	4.3	U		F
7440-62-2	Vanadium	8.4	B		P
7440-66-6	Zinc	10.1	U		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

011

WESTINGHOUSE/HANFORD
1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B072T7

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

Lab Code: SKINER Case No.: N2-07-110SAS No.: SDG No.: B070D5

Matrix (soil/water): WATER Lab Sample ID: 07197-04S

Level (low/med): LOW Date Received: 07/23/92

% 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	17.3	U		P
7440-36-0	Antimony	16.5	U		P
7440-38-2	Arsenic	3.5	B	W	F
7440-39-3	Barium	26.1	B		P
7440-41-7	Beryllium	0.40	U		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	51400			P
7440-47-3	Chromium	12.7			P
7440-48-4	Cobalt	2.3	U		P
7440-50-8	Copper	2.4	U		P
7439-89-6	Iron	20.5	B		P
7439-92-1	Lead	1.8	B	N*	F
7439-95-4	Magnesium	11200			P
7439-96-5	Manganese	3.1	B		P
7439-97-6	Mercury	0.20	U	N*	CV
7440-02-0	Nickel	6.0	U		P
7440-09-7	Potassium	5950			P
7782-49-2	Selenium	3.6	U	W	F
7440-22-4	Silver	2.3	U		P
7440-23-5	Sodium	12100			P
7440-28-0	Thallium	4.3	U		F
7440-62-2	Vanadium	7.3	B		P
7440-66-6	Zinc	17.0	B		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

012

FEDERAL EXPRESS

QUESTIONS? CALL 800-238-5355 TOLL FREE.

AIRBILL
PACKAGE TRACKING NUMBER 2521031192

2120T 2521031192

RECIPIENT'S COPY

1 Date 7.22.92

From (Your Name) Please Print: Sample contact

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

Company: T M A /NORCAL

Department/Floor No.

Street Address: 2030 WRIGHT AVE

City: RICHMOND State: CA ZIP Required: 94804

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

Recipient's Phone Number (Very Important): ( )

Company: SKINNER & SHEEHAN

Department/Floor No.

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

City: WALTHAM State: MA ZIP Required: 02254

YOUR INTERNAL BILLING REFERENCE INFORMATION (optional) (First 24 characters will appear on invoice.): 2320 6706

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 (Delivery by next business morning!!)
- 11 [/] YOUR PACKAGING
- 16 [ ] FEDEX LETTER *
- 12 [ ] FEDEX PAK *
- 13 [ ] FEDEX BOX
- 14 [ ] FEDEX TUBE

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

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

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

Freight Service (for Extra Large or any pkg. Subject over 150 lbs.)

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

6 PACKAGES: Total 2 — WEIGHT in Pounds Only: Total 121 — YOUR DECLARED VALUE: Total

DIM SHIPMENT (Chargeable Weight) [ ] ____ lbs

L x W x H = ____

7 Release

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 7/23/92 FedEx Employee Number 9:30

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

REVISION DATE 8/91
PART #137204 FXEM 4/92
FORMAT #099

099

164

9613491.2244

TMA/Skinner & Sherman Labs SAMPLE LOG-IN

WORKORDER 92-07-197 CLIENT HANFORD-NOR No. SAMPLES:

PROTCL CLP TURNARND 33 days _____ 11 _____

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

CUSTODIAN Benney A. SDG/BATCH N/A

CUSTODY SEAL: PRESENT/ABSENT/INTACT/NOT CLIENT CASE N2-07-110

SHIPER & # Fedex #252103192 PO/CONTRACT# _____

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

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

SAMPLE CONTAINERS INTACT/BROKEN COMMENTS _____

CLIENT COMMENT? YES/NO

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

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

SHIPMENT DATES 7.23.92

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

Field Filtered

	CLIENT ID	MATRIX	RECEIVED	PH*	TEST(S) & QC	HOLD TIME U
1	B07ØKØ	WATER	7.23.92	2.3	TM	Hg due 8.7.92
2	ØK5			2.2		
3	ØNØ			2.1		
4	2T7			2.2		
5	ØJØ			2.2		
6	ØQØ			2.1		
7	2T2			2.2		
8	ØD5			2.1		
9	ØH5			2.2		
10	ØP5			2.2		
11	ØHØ			2.2		
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						

COMPLETE 7.24.92

Samples are from site known to have Rad-Contamination: YES X NO ____

Samples have detectable amounts of Radioactive Material: YES ____ NO X

SUBCONTRACT: YES/NO, TO: _____ DATE: _____

REVIEWED _____

* EPA/CLP required Rev 1.6 PAGE: 165

9613491.2245

SS-1

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 7/18/92

Ice Chest No. SML-73

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250996 896-6

Offsite Property No. W92-0-0533-9

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B07J7

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)~~

B07K0

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

B07K1

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

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

Relinquished by:	Received by:	Date/Time:
K.D. Lee	K. Trapp / K. Trapp	7/20/92 0901
K. Trapp / K. Trapp	Kermit Blum	7-22-92 1100
Yamamoto 7/22/92	[illegible]	7/23/92 10:00

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

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

9613481.2246

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/18/92 Time 0845 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070J7	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)~~		
* ~~B070K0~~	~~3, 40ml, Gs, WATER, CLP-VOA~~		
* B070K1	1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986876-6
			OPC # WA2-0-0533-9
			TASK #

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

Received by Hermit Blum Title Sample Control Supervisor Date 7-22-92

Analysis Required _____

* ID's B070K0 & B070K1 were switched - KB

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

**Use back of page for additional information relating to ...

9613491.2247

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 7/18/92

Ice Chest No. SML-118

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986896-6

Offsite Property No. W92-0-0533-10

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO 70K2

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 70K5

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

BO 70K6

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

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: G G Hamilton	Received by: K. Trapp / K. Trapp	Date/Time: 7/20/92 0901
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 7-22-92 1100
Relinquished by: Lyan Amato 7-22-92	Received by: [illegible]	Date/Time: 7/23/92 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

9613081.2248

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/18/92 Time 0720 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070K2	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)~~		
* B070K5	~~3, 40ml, Gs, WATER, CLP VOA~~		metal
* B070K6	3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		Voa
		BOL # 250986796-6	
		OPC # W92-0-0533-10	
		TASK #	

Field Information**

Special Handling and/or Storage

Possible Sample Hazards

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 7-22-92

Analysis Required

* ID's B070K5 & B070K6 were switched on this sheet - KB

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

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

A-6000-406 (0

9613491.2249

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 7/18/92

Ice Chest No. SML-~~9~~ 26 KT 7/20/92

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986896-6

Offsite Property No. W92-0-0533-10

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO70M7

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 DISSOLV~~ED SOLIDS
~~1, 500ml, G, WATER, SULFIDE (ZINC ACETATE+NaOH~~ pH>9)
~~1, 500ml, G, WATER, AMMONIA, CHEMICAL OXYGEN DEMAND (H2~~SO4 pH<2)
~~1, 1L, P, WATER, Tc-99 (HNO3)~~

BO70N0

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

BO70N1

~~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: 7/20/92 0901
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 7-22-92 1100
Relinquished by: Myamamoto 7-22-92	Received by: [illegible]	Date/Time: 7/23/92 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

9613491.2350

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/18/92 Time 1020 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070M7	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)~~		
* B070N0	~~3, 40ml, Gs, WATER, CLP-VOA~~		
* B070N1	✓ 3, 1L, P, WATER, CLP-ICP/AA METAL &		MERCURY (HNO3) FILTERED
			BOL # 250986896-C
			OPC # W92-0-0533-10
			TASK #

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 7-22-92

Analysis Required _____

* ID's B070N0 & B070N1 were switched on this sheet -KB- 171

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

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

A-6000-406 (05

9613491.2251

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 7/18/92

Ice Chest No. SML-8

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986896-6

Offsite Property No. W92-0-0533-9

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B072T4

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)~~

B072T7

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

B072T8

3, 40m~~l, Gs, WATER, CLP-VOA~~

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

Relinquished by:	Received by:	Date/Time:
[illegible] K.D.Cu	K. Trapp / K. Trapp	7/20/92 0900
K. Trapp / K Trapp	Kermit Blum	7-22-92 1100
[illegible] 7-22-92	[illegible]	7/23/92 10:00

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

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

9613491.2252

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/18/92 Time 1205 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B072T4	✓ 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)~~		
* B072T7	✓ ~~3, 40ml, Gs, WATER, CLP-VOA~~		2 bubbles
* B072T8	✓ ~~3~~ 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986896-6
			OPC # W92-O-0533-9
			TASK #

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 7-22-92

Analysis Required _____

* ID's B072T7 & B072T8 were switched on this sheet - KB 173

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

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

A-6000-406 (0

9613491.2253

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 7/19/92

Ice Chest No. SML-~~44~~ 2 94 KG 7/20/92

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250996 896-6

Offsite Property No. W92-0-0533-11

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO70H7

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)~~

BO70J0

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

BO70J1

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

[] Field Transfer of Custody

Chain of Possession (Sign and Print Names)		
Relinquished by: K.D. Lee K.D. Lee	Received by: K. Trapp / K. Trapp	Date/Time: 7/20/92 0901
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 7-22-92 1100
Relinquished by: Yamamoto 7-22-92	Received by: [illegible]	Date/Time: 7/23/92 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

9613491.2254

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/19/92 Time 1030 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070H7	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)~~		
* B070J0	✓ ~~3, 40ml, Gs, WATER, CLP-VOA~~		metal
* B070J1	✓ 3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		soil
			BOL # 250986896-6
			OPC # W92-0-0537-11
			TASK #

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 7-22-92

Analysis Required _____

* ID's B070J0 & B070J1 were switched on this sheet - KB

175

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

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

A-6000-406 (r

9613491.2255

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 7/19/92

Ice Chest No. SML-88

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986846-6

Offsite Property No. W92-0-0533-11

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO 70P7

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 70Q0

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

BO 70Q1

~~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: 7/20/92 0901
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 7-22-92 1100
Relinquished by: [illegible] 7-22-92	Received by: [illegible]	Date/Time: 7/23/92 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

9613491.2256

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/19/92 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
B070P7 ✓	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)~~		
* B070Q0	~~3, 40ml, Gs, WATER, CLP-VOA~~		
* B070Q1 ✓	3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986896-6
			OPC # W92-0-0533-11
			TASK #

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 7-22-92

Analysis Required

* ID's B070Q0 & B070Q1 were switched on this sheet - KBB

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

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

A-6000-406 I

9613491.2257

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 7/19/92

Ice Chest No. SML-122

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986896-6

Offsite Property No. W92-0-0533-12

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B072S9

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)~~

B072T2

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

B072T3

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

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: Kirby D. Lee K.D. Lee	Received by: K. Trapp / K. Trapp	Date/Time: 7/20/92 0901
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 7-22-92 1100
Relinquished by: Ryamamoto 7-22-92	Received by: [illegible]	Date/Time: 7/23/92 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

9613491.2258

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/19/92 Time 0728 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B072S9	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)~~		
* ~~B072T2~~	~~3, 40ml, Gs, WATER, CLP VOA~~		* SHOULD BE B072T2 / FOR METALS
* B072T3	3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		AF OR VOA
			BOL # 250986896-C
			OPC # WA2-0-0533-12
			TASK #

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 7-22-92

Analysis Required

* ID's B072T2 & B072T3 were switched on this sheet - KB79

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

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

A-6000-406 (0

9613491.2259

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 7/20/92

Ice Chest No. GGH-1

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 2509861920-8

Offsite Property No. W92-0-0533-17

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. Celebik C. Celebik	Received by: K. Trapp / K. Trapp	Date/Time: ~~7/20/92~~ KT 7/21/92 1001
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 7-22-92 1100
Relinquished by: eyamamoto 7-22-92	Received by: [illegible]	Date/Time: 7/23/92 10:00
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

-180

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

9613491.2260

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/20/92 Time 0700 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070D2 ✓	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)~~		
B070D6 ✓	~~3, 40ml, Gs, WATER, CLP-VOA~~		
	1 KT 7/20/92		
B070D5 ✓	3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250786920-9
			OPC # W92-0-0533-17
			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 7-22-92

Analysis Required _____

-181

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

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

A-6000-406 (0

9613491.2261

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 7-20-92

Ice Chest No. SML-106

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 2509866920-8

Offsite Property No. W92-0-0933-17

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO70H2

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)~~

BO70H5

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

BO70H6

~~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: 7/21/92 1001
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 7-22-92 1100
Relinquished by: Yamamoto 7-22-92	Received by: [illegible]	Date/Time: 7/23/92 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

9613191.2262

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/20/92 Time 1015 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070H2 ✓	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)~~		
B070H6 ✓	~~3, 40ml, Gs, WATER, CLP-VOA~~		
	KZ 7/20/92		
B070H5 ✓	~~3~~, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986920-8
			OPC # W92-0-0533-17
			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 7-22-92

Analysis Required

183

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

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

A-6000-406 (0

9613491.7263

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 7/20/92

Ice Chest No. SML-163

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986 920-8

Offsite Property No. W92-0-0533-18

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO 70P2

✓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 70P5

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

BO 70P6

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

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: C Celebrezzi C CELIBRECHI	Received by: K. Trapp / K. Trapp	Date/Time: ~~7/20/92~~ KT 7/21/92 1001
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 7-22-92 1100
Relinquished by: Yamamoto 7-22-92	Received by: [illegible]	Date/Time: 7/23/92 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

9613491.2204

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/20/92 Time 1450 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070P2 ✓	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)~~		
B070P6 ✓	~~3, 40ml, Gs, WATER, CLP-VOA~~		
	1 KL 7/21/92		
B070P5 ✓	~~3~~, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986920-8
			OPC # W92-0-0533-18
			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 7-22-92

Analysis Required _____

185

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

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

A-6000-406 (10

9613491.2265

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 7/21/92

Ice Chest No. SML-109

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 2509806920-8

Offsite Property No. W92-0-0533-18

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO 70G7

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 70H0

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

BO 70H1

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: 7/20/92	Date/Time: ~~7/20/92~~ KT 7/21/92
Relinquished by: Lyan amato 7-22-92	Received by: K. Trapp / K. Trapp	Date/Time: 7/21/92 1001
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 7-22-92 1100
Relinquished by:	Received by: [illegible]	Date/Time: 7/23/92 10:00

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

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

9613491.2266

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/20/92 Time 1315 hours KT 7/20/92

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070G7	✓ 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)~~		
B070H1	✓ ~~3, 40ml, Gs, WATER, CLP-VOA~~		3 bubbles
	KT 7/21/92		
B070H0	~~2~~, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986 920-9
			OPC # WA2-0-0533-18
			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 7-22-92

Analysis Required

187

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

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

A-6000-406 (05/)

9613491.2267

TMA
Thermo Analytical Inc.

TMA/Norcal
2030 Wright Avenue
P. O. Box 4040
Richmond, CA 94804-0040
(510) 235-2633 Fax No. (510) 235-0438

RECORD COPY

OCT 1992
RECEIVED
OSM DMO

October 28, 1992

SENT BY FEDERAL EXPRESS

Ref. TMA/Norcal N2-07-109-7057

Mr. John Bourgeault
Westinghouse Hanford Company
2355 Stevens Drive
Richland, WA 99352

Dear Mr. Bourgeault:

Enclosed on the Summary Data Section, are the gross alpha, gross beta, ^{3}H, ^{14}C, ^{90}Sr, ^{99}Tc, isotopic uranium, isotopic plutonium, ^{241}Am, and gamma scan results for the water samples from 100-BC-5 Location, we received 22 July 1992. The QA/QC results are also given in the Summary Data Section. All ^{14}C results are priliminary pending further investigation.

The Summary Data Section is paginated 1 through 76 and Appendices 1 through 17 are paginated 77 through 977.

Please call if you have any questions concerning this data.

Sincerely,

D. P. Kharkar

Dinkar P. Kharkar, Ph.D.
Manager, Nuclear Programs

DPK/ss

Enclosures: Section 1 and 2
Appendices 1 through 17

3-18-96
MC

9613491.2268

N207109-08

TMA NORCAL
REPORTING GROUPS 7057

DATA SHEET

B070D2

SDG 7057
Contact Dinkar Kharkar
Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N207109-08
Dept sample id 7057-008
Received 07/22/92
% moisture
Client sample id B070D2
Matrix WATER
Collected 07/20/92
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	-0.38	1.4	2.5	3.0	U	80A
Gross Beta	Beta	4.4	1.3	1.7	4.0	B	80B
Uranium 233/234		1.1	0.29	0.11	0.20		U
Uranium 235	15117-96-1	0	0.036	0.14	0.20	U	U
Uranium 238	7440-61-1	0.43	0.16	0.11	0.20		U
Plutonium 238	13981-16-3	0.009	0.014	0.021	0.050	U	PU
Plutonium 239/240		0.002	0.007	0.013	0.050	U	PU
Americium 241	14596-10-2	0	0.008	0.015	0.050	U	AM
Strontium 90	10098-97-2	-0.51	2.3	1.4	2.0	U	Y
Technetium 99	14133-76-7	1.7	2.6	5.0	5.0	U	TC
Tritium	10028-17-8	-70	130	170	400	U	H
Carbon 14	14762-75-5	25	29	47	50	U	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	U		140		U	GAM
Iron 59		U		51	30	U	GAM
Chromium 51	14392-02-0	U		210		U	GAM
Cobalt 60	10198-40-0	U		16	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		12		U	GAM
Cesium 137	10045-97-3	U		9.7	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		19		U	GAM
Thorium 228	14274-82-9	U		15		U	GAM
Thorium 232	7440-29-1	U		41		U	GAM

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.20
Report date 10/28/92

9613491.2269

N207109-12

TMA NORCAL
REPORTING GROUPS 7057

DATA SHEET

B070D7

SDG 7057
Contact Dinkar Kharkar
Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N207109-12
Dept sample id 7057-012
Received 07/23/92
% moisture
Client sample id B070D7
Matrix WATER
Collected 07/21/92
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	1.9	1.8	2.2	3.0	U	80A
Gross Beta	Beta	13	2.2	2.9	4.0	B	80B
Uranium 233/234		1.2	0.31	0.12	0.20		U
Uranium 235	15117-96-1	0.075	0.075	0.14	0.20	U	U
Uranium 238	7440-61-1	0.85	0.24	0.12	0.20		U
Plutonium 238	13981-16-3	0.010	0.014	0.026	0.050	U	PU
Plutonium 239/240		0	0.007	0.026	0.050	U	PU
Americium 241	14596-10-2	0.89	0.13	0.035	0.050		AM
Strontium 90	10098-97-2	0.033	0.23	0.91	2.0	U	Y
Technetium 99	14133-76-7	34	3.3	4.5	5.0		TC
Tritium	10028-17-8	19000	550	180	400		H
Carbon 14	14762-75-5	50	62	99	50	U	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	U		200		U	GAM
Iron 59		U		80	30	U	GAM
Chromium 51	14392-02-0	U		260		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		110		U	GAM
Cesium 134	17967-70-9	U		13		U	GAM
Cesium 137	10045-97-3	U		11	15	U	GAM
Europium 152	14683-23-9	U		21	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		17		U	GAM
Thorium 232	7440-29-1	U		53		U	GAM

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.20
Report date 10/28/92

9613491.2270

N207109-13

TMA NORCAL
REPORTING GROUPS 7057

DATA SHEET

B070F2

SDG 7057
Contact Dinkar Kharkar

Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N207109-13
Dept sample id 7057-013
Received 07/23/92
% moisture

Client sample id B070F2
Matrix WATER
Collected 07/21/92
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	-0.53	1.4	2.5	3.0	U	80A
Gross Beta	Beta	10	1.8	2.2	4.0	B	80B
Uranium 233/234		0.61	0.21	0.15	0.20		U
Uranium 235	15117-96-1	0.020	0.078	0.15	0.20	U	U
Uranium 238	7440-61-1	0.34	0.17	0.12	0.20		U
Plutonium 238	13981-16-3	0.008	0.016	0.025	0.050	U	PU
Plutonium 239/240		0.019	0.016	0.020	0.050	U	PU
Americium 241	14596-10-2	0.018	0.025	0.036	0.050	U	AM
Strontium 90	10098-97-2	0.022	0.20	0.84	2.0	U	Y
Technetium 99	14133-76-7	12	2.5	4.4	5.0		TC
Tritium	10028-17-8	980	170	170	400		H
Carbon 14	14762-75-5	-15	46	77	50	U	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	U		110		U	GAM
Iron 59		U		53	30	U	GAM
Chromium 51	14392-02-0	U		230		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		90		U	GAM
Cesium 134	17967-70-9	U		10		U	GAM
Cesium 137	10045-97-3	U		11	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		19		U	GAM
Thorium 228	14274-82-9	U		19		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 10/28/92

9613491.2271

N207109-16

TMA NORCAL
REPORTING GROUPS 7057

DATA SHEET

B070F7

SDG 7057
Contact Dinkar Kharkar
Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N207109-16
Dept sample id 7057-016
Received 07/24/92
% moisture
Client sample id B070F7
Matrix WATER
Collected 07/22/92
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	2.9	1.8	1.9	3.0	J	80A
Gross Beta	Beta	94	3.1	1.4	4.0	B	80B
Uranium 233/234		0.98	0.28	0.12	0.20		U
Uranium 235	15117-96-1	0.019	0.076	0.15	0.20	U	U
Uranium 238	7440-61-1	0.50	0.20	0.12	0.20		U
Plutonium 238	13981-16-3	0.006	0.017	0.034	0.050	U	PU
Plutonium 239/240		-0.004	0.004	0.020	0.050	U	PU
Americium 241	14596-10-2	0	0.025	0.050	0.050	U	AM
Strontium 90	10098-97-2	0.021	0.23	0.74	2.0	U	Y
Technetium 99	14133-76-7	250	13	5.6	5.0	B	TC
Tritium	10028-17-8	6200	320	170	400		H
Carbon 14	14762-75-5	19	34	55	50	U	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	U		130		U	GAM
Iron 59		U		62	30	U	GAM
Chromium 51	14392-02-0	U		280		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		130		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		15	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		52		U	GAM

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.20
Report date 10/28/92

9613491.2272

N207109-14

TMA NORCAL
REPORTING GROUPS 7057

DATA SHEET

B070G2

SDG	7057	Client	Westinghouse Hanford
Contact	Dinkar Kharkar	Contract	MBH-SVV-069262
Lab sample id	N207109-14	Client sample id	B070G2
Dept sample id	7057-014	Matrix	WATER
Received	07/23/92	Collected	07/21/92
% 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	1.8	2.1	3.0	U	80A
Gross Beta	Beta	51	3.0	2.1	4.0	B	80B
Uranium 233/234		0.65	0.23	0.12	0.20		U
Uranium 235	15117-96-1	0.055	0.074	0.14	0.20	U	U
Uranium 238	7440-61-1	0.49	0.19	0.12	0.20		U
Plutonium 238	13981-16-3	0.013	0.044	0.075	0.050	U	PU
Plutonium 239/240		0	0.009	0.034	0.050	U	PU
Americium 241	14596-10-2	-0.003	0.016	0.035	0.050	U	AM
Strontium 90	10098-97-2	0.43	0.51	0.77	2.0	U	Y
Technetium 99	14133-76-7	100	6.5	5.2	5.0		TC
Tritium	10028-17-8	2900	240	170	400		H
Carbon 14	14762-75-5	4.7	31	51	50	U	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	U		170		U	GAM
Iron 59		U		63	30	U	GAM
Chromium 51	14392-02-0	U		270		U	GAM
Cobalt 60	10198-40-0	U		20	25	U	GAM
Zinc 65	17982-39-3	U		20		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		11	15	U	GAM
Europium 152	14683-23-9	U		23	40	U	GAM
Europium 154	15585-10-1	U		14	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		50		U	GAM

Lab id	TMAN
Protocol	WHC-HEIS
Version	Ver 1.0
Form	DVD-DS
Version	2.20
Report date	10/28/92

N207109-11

TMA NORCAL
REPORTING GROUPS 7057

DATA SHEET

B070G7

SDG 7057
Contact Dinkar Kharkar
Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N207109-11
Dept sample id 7057-011
Received 07/22/92
% moisture
Client sample id B070G7
Matrix WATER
Collected 07/21/92
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	-0.18	1.3	2.2	3.0	U	80A
Gross Beta	Beta	3.5	1.5	2.2	4.0	BJ	80B
Uranium 233/234		0.49	0.16	0.096	0.20		U
Uranium 235	15117-96-1	0.015	0.030	0.12	0.20	U	U
Uranium 238	7440-61-1	0.24	0.10	0.096	0.20		U
Plutonium 238	13981-16-3	0.013	0.017	0.033	0.050	U	PU
Plutonium 239/240		0	0.004	0.017	0.050	U	PU
Americium 241	14596-10-2	0.005	0.018	0.031	0.050	U	AM
Strontium 90	10098-97-2	0.026	1.0	0.78	2.0	U	Y
Technetium 99	14133-76-7	0.66	2.3	8.4	5.0	U	TC
Tritium	10028-17-8	1200	180	170	400		H
Carbon 14	14762-75-5	14	37	59	50	U	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	U		130		U	GAM
Iron 59		U		59	30	U	GAM
Chromium 51	14392-02-0	U		280		U	GAM
Cobalt 60	10198-40-0	U		15	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		11		U	GAM
Cesium 137	10045-97-3	U		10	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		20		U	GAM
Thorium 228	14274-82-9	U		20		U	GAM
Thorium 232	7440-29-1	U		45		U	GAM

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.20
Report date 10/28/92

9613491.2274

N207109-09

TMA NORCAL
REPORTING GROUPS 7057

DATA SHEET

B070H2

SDG 7057
Contact Dinkar Kharkar

Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N207109-09
Dept sample id 7057-009
Received 07/22/92
% moisture

Client sample id B070H2
Matrix WATER
Collected 07/20/92
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	1.0	1.6	2.4	3.0	U	80A
Gross Beta	Beta	0.95	1.4	2.3	4.0	U	80B
Uranium 233/234		0.90	0.28	0.15	0.20		U
Uranium 235	15117-96-1	0.020	0.078	0.15	0.20	U	U
Uranium 238	7440-61-1	0.69	0.24	0.12	0.20		U
Plutonium 238	13981-16-3	-0.007	0.011	0.029	0.050	U	PU
Plutonium 239/240		0.002	0.004	0.014	0.050	U	PU
Americium 241	14596-10-2	-0.010	0.015	0.038	0.050	U	AM
Strontium 90	10098-97-2	0.19	0.26	0.82	2.0	U	Y
Technetium 99	14133-76-7	2.8	1.6	5.3	5.0	U	TC
Tritium	10028-17-8	86	140	180	400	U	H
Carbon 14	14762-75-5	120	160	260	50	U	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	U		250		U	GAM
Iron 59		U		89	30	U	GAM
Chromium 51	14392-02-0	U		320		U	GAM
Cobalt 60	10198-40-0	U		16	25	U	GAM
Zinc 65	17982-39-3	U		35		U	GAM
Ruthenium 106	13967-48-1	U		130		U	GAM
Cesium 134	17967-70-9	U		16		U	GAM
Cesium 137	10045-97-3	U		14	15	U	GAM
Europium 152	14683-23-9	U		28	40	U	GAM
Europium 154	15585-10-1	U		18	40	U	GAM
Radium 226	13982-67-7	U		25		U	GAM
Thorium 228	14274-82-9	U		22		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 10/28/92

9613491.2275

N207109-05

TMA NORCAL
REPORTING GROUPS 7057

DATA SHEET

B070H7

SDG 7057
Contact Dinkar Kharkar
Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N207109-05
Dept sample id 7057-005
Received 07/22/92
% moisture
Client sample id B070H7
Matrix WATER
Collected 07/19/92
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	-0.16	1.5	2.4	3.0	U	80A
Gross Beta	Beta	8.4	1.5	1.7	4.0	B	80B
Uranium 233/234		0.61	0.18	0.090	0.20		U
Uranium 235	15117-96-1	0.029	0.029	0.11	0.20	U	U
Uranium 238	7440-61-1	0.49	0.15	0.090	0.20		U
Plutonium 238	13981-16-3	0.005	0.020	0.034	0.050	U	PU
Plutonium 239/240		0	0.013	0.028	0.050	U	PU
Americium 241	14596-10-2	-0.012	0.012	0.032	0.050	U	AM
Strontium 90	10098-97-2	0.089	0.29	0.94	2.0	U	Y
Technetium 99	14133-76-7	12	3.4	7.0	5.0		TC
Tritium	10028-17-8	14000	460	170	400		H
Carbon 14	14762-75-5	93	43	65	50		C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	U		150		U	GAM
Iron 59		U		55	30	U	GAM
Chromium 51	14392-02-0	U		190		U	GAM
Cobalt 60	10198-40-0	U		16	25	U	GAM
Zinc 65	17982-39-3	U		25		U	GAM
Ruthenium 106	13967-48-1	U		100		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		15	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 10/28/92

9613491.2276

N207109-01

TMA NORCAL
REPORTING GROUPS 7057

DATA SHEET

B070J7

SDG	7057	Client	Westinghouse Hanford
Contact	Dinkar Kharkar	Contract	MBH-SVV-069262
Lab sample id	N207109-01	Client sample id	B070J7
Dept sample id	7057-001	Matrix	WATER
Received	07/22/92	Collected	07/18/92
% 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	-1.1	1.9	2.1	3.0	U	80A
Gross Beta	Beta	160	5.0	2.2	4.0	B	80B
Uranium 233/234		0.81	0.25	0.11	0.20		U
Uranium 235	15117-96-1	0.053	0.070	0.13	0.20	U	U
Uranium 238	7440-61-1	0.62	0.21	0.11	0.20		U
Plutonium 238	13981-16-3	-0.002	0.017	0.035	0.050	U	PU
Plutonium 239/240		-0.002	0.004	0.016	0.050	U	PU
Americium 241	14596-10-2	0.010	0.020	0.031	0.050	U	AM
Strontium 90	10098-97-2	57	2.2	1.6	2.0		Y
Technetium 99	14133-76-7	93	8.4	3.6	5.0		TC
Tritium	10028-17-8	4800	300	180	400		H
Carbon 14	14762-75-5	43	42	65	50	U	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	U		140		U	GAM
Iron 59		U		82	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		28		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		11	15	U	GAM
Europium 152	14683-23-9	U		22	40	U	GAM
Europium 154	15585-10-1	U		15	40	U	GAM
Radium 226	13982-67-7	U		21		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
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Report date	10/28/92

9613491.2377

N207109-02

TMA NORCAL
REPORTING GROUPS 7057

DATA SHEET

B070K2

SDG 7057
Contact Dinkar Kharkar
Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N207109-02
Dept sample id 7057-002
Received 07/22/92
% moisture
Client sample id B070K2
Matrix WATER
Collected 07/18/92
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	0.77	1.6	1.9	3.0	U	80A
Gross Beta	Beta	60	3.4	2.9	4.0	B	80B
Uranium 233/234		1.2	0.28	0.13	0.20		U
Uranium 235	15117-96-1	0.034	0.067	0.13	0.20	U	U
Uranium 238	7440-61-1	0.77	0.24	0.11	0.20		U
Plutonium 238	13981-16-3	0.002	0.011	0.022	0.050	U	PU
Plutonium 239/240		0.007	0.007	0.014	0.050	U	PU
Americium 241	14596-10-2	-0.005	0.021	0.042	0.050	U	AM
Strontium 90	10098-97-2	21	1.0	0.73	2.0		Y
Technetium 99	14133-76-7	68	6.6	7.4	5.0		TC
Tritium	10028-17-8	24000	610	170	400		H
Carbon 14	14762-75-5	130	39	56	50		C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	U		130		U	GAM
Iron 59		U		49	30	U	GAM
Chromium 51	14392-02-0	U		200		U	GAM
Cobalt 60	10198-40-0	U		12	25	U	GAM
Zinc 65	17982-39-3	U		21		U	GAM
Ruthenium 106	13967-48-1	U		89		U	GAM
Cesium 134	17967-70-9	U		9.5		U	GAM
Cesium 137	10045-97-3	U		12	15	U	GAM
Europium 152	14683-23-9	U		19	40	U	GAM
Europium 154	15585-10-1	U		12	40	U	GAM
Radium 226	13982-67-7	U		35		U	GAM
Thorium 228	14274-82-9	U		18		U	GAM
Thorium 232	7440-29-1	U		40		U	GAM

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.20
Report date 10/28/92

9613491.2278

N207109-03

TMA NORCAL
REPORTING GROUPS 7057

DATA SHEET

B070M7

SDG 7057
Contact Dinkar Kharkar
Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N207109-03
Dept sample id 7057-003
Received 07/22/92
% moisture
Client sample id B070M7
Matrix WATER
Collected 07/18/92
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	-0.24	1.8	2.7	3.0	U	80A
Gross Beta	Beta	43	2.9	2.3	4.0	B	80B
Uranium 233/234		0.64	0.23	0.15	0.20		U
Uranium 235	15117-96-1	0.075	0.076	0.14	0.20	U	U
Uranium 238	7440-61-1	0.45	0.16	0.12	0.20		U
Plutonium 238	13981-16-3	0.015	0.015	0.025	0.050	U	PU
Plutonium 239/240		0	0.010	0.028	0.050	U	PU
Americium 241	14596-10-2	-0.003	0.017	0.038	0.050	U	AM
Strontium 90	10098-97-2	1.3	0.33	0.74	2.0	J	Y
Technetium 99	14133-76-7	79	6.5	5.5	5.0		TC
Tritium	10028-17-8	3000	250	180	400		H
Carbon 14	14762-75-5	42	41	64	50	U	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	U		270		U	GAM
Iron 59		U		68	30	U	GAM
Chromium 51	14392-02-0	U		280		U	GAM
Cobalt 60	10198-40-0	U		15	25	U	GAM
Zinc 65	17982-39-3	U		33		U	GAM
Ruthenium 106	13967-48-1	U		130		U	GAM
Cesium 134	17967-70-9	U		14		U	GAM
Cesium 137	10045-97-3	U		14	15	U	GAM
Europium 152	14683-23-9	U		28	40	U	GAM
Europium 154	15585-10-1	U		20	40	U	GAM
Radium 226	13982-67-7	U		29		U	GAM
Thorium 228	14274-82-9	U		21		U	GAM
Thorium 232	7440-29-1	U		65		U	GAM

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.20
Report date 10/28/92

9613491.2279

N207109-17

TMA NORCAL
REPORTING GROUPS 7057

DATA SHEET

B070N7

SDG 7057
Contact Dinkar Kharkar
Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N207109-17
Dept sample id 7057-017
Received 07/24/92
% moisture
Client sample id B070N7
Matrix WATER
Collected 07/22/92
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	2.4	2.2	2.6	3.0	U	80A
Gross Beta	Beta	33	2.4	1.7	4.0	B	80B
Uranium 233/234		0.48	0.28	0.25	0.20		U
Uranium 235	15117-96-1	0.032	0.13	0.25	0.20	U	U
Uranium 238	7440-61-1	0.37	0.22	0.20	0.20		U
Plutonium 238	13981-16-3	0.012	0.012	0.022	0.050	U	PU
Plutonium 239/240		0.014	0.017	0.022	0.050	U	PU
Americium 241	14596-10-2	0.004	0.016	0.031	0.050	U	AM
Strontium 90	10098-97-2	1.0	1.0	0.77	2.0	J	Y
Technetium 99	14133-76-7	57	4.3	4.4	5.0		TC
Tritium	10028-17-8	2700	230	170	400		H
Carbon 14	14762-75-5	-13	33	55	50	U	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	U		260		U	GAM
Iron 59		U		65	30	U	GAM
Chromium 51	14392-02-0	U		350		U	GAM
Cobalt 60	10198-40-0	U		17	25	U	GAM
Zinc 65	17982-39-3	U		36		U	GAM
Ruthenium 106	13967-48-1	U		130		U	GAM
Cesium 134	17967-70-9	U		14		U	GAM
Cesium 137	10045-97-3	U		14	15	U	GAM
Europium 152	14683-23-9	U		26	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		21		U	GAM
Thorium 232	7440-29-1	U		60		U	GAM

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.20
Report date 10/28/92

9613491.2200

N207109-10

TMA NORCAL
REPORTING GROUPS 7057

DATA SHEET

B070P2

SDG 7057
Contact Dinkar Kharkar
Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N207109-10
Dept sample id 7057-010
Received 07/22/92
% moisture
Client sample id B070P2
Matrix WATER
Collected 07/20/92
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	1.7	2.2	2.5	3.0	U	80A
Gross Beta	Beta	75	3.5	1.9	4.0	B	80B
Uranium 233/234		0.84	0.28	0.14	0.20		U
Uranium 235	15117-96-1	0.067	0.089	0.17	0.20	U	U
Uranium 238	7440-61-1	0.66	0.24	0.14	0.20		U
Plutonium 238	13981-16-3	0.002	0.019	0.036	0.050	U	PU
Plutonium 239/240		-0.005	0.009	0.026	0.050	U	PU
Americium 241	14596-10-2	0	0.019	0.037	0.050	U	AM
Strontium 90	10098-97-2	15	2.6	0.89	2.0		Y
Technetium 99	14133-76-7	72	5.1	5.2	5.0		TC
Tritium	10028-17-8	4800	300	180	400		H
Carbon 14	14762-75-5	35	41	65	50	U	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	U		140		U	GAM
Iron 59		U		55	30	U	GAM
Chromium 51	14392-02-0	U		310		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		110		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		22	40	U	GAM
Europium 154	15585-10-1	U		14	40	U	GAM
Radium 226	13982-67-7	U		25		U	GAM
Thorium 228	14274-82-9	U		21		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 10/28/92

9613491.2281

N207109-06

TMA NORCAL
REPORTING GROUPS 7057

DATA SHEET

B070P7

SDG 7057
Contact Dinkar Kharkar
Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N207109-06
Dept sample id 7057-006
Received 07/22/92
% moisture
Client sample id B070P7
Matrix WATER
Collected 07/19/92
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	0.089	1.3	2.0	3.0	U	80A
Gross Beta	Beta	19	1.7	1.7	4.0	B	80B
Uranium 233/234		0.79	0.26	0.16	0.20		U
Uranium 235	15117-96-1	0	0.049	0.19	0.20	U	U
Uranium 238	7440-61-1	0.43	0.21	0.16	0.20		U
Plutonium 238	13981-16-3	-0.003	0.031	0.060	0.050	U	PU
Plutonium 239/240		0	0.012	0.034	0.050	U	PU
Americium 241	14596-10-2	-0.010	0.011	0.025	0.050	U	AM
Strontium 90	10098-97-2	-0.012	1.4	1.0	2.0	U	Y
Technetium 99	14133-76-7	35	4.0	5.6	5.0		TC
Tritium	10028-17-8	6300	330	180	400		H
Carbon 14	14762-75-5	410	53	62	50		C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	U		280		U	GAM
Iron 59		U		62	30	U	GAM
Chromium 51	14392-02-0	U		250		U	GAM
Cobalt 60	10198-40-0	U		13	25	U	GAM
Zinc 65	17982-39-3	U		28		U	GAM
Ruthenium 106	13967-48-1	U		120		U	GAM
Cesium 134	17967-70-9	U		11		U	GAM
Cesium 137	10045-97-3	U		15	15	U	GAM
Europium 152	14683-23-9	U		27	40	U	GAM
Europium 154	15585-10-1	U		17	40	U	GAM
Radium 226	13982-67-7	U		27		U	GAM
Thorium 228	14274-82-9	20	20				GAM
Thorium 232	7440-29-1	U		60		U	GAM

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.20
Report date 10/28/92

9613491.2282

N207109-07

TMA NORCAL
REPORTING GROUPS 7057

DATA SHEET

B072S9

SDG 7057
Contact Dinkar Kharkar
Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N207109-07
Dept sample id 7057-007
Received 07/22/92
% moisture
Client sample id B072S9
Matrix WATER
Collected 07/19/92
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	0.69	1.8	2.5	3.0	U	80A
Gross Beta	Beta	16	2.5	3.3	4.0	B	80B
Uranium 233/234		0.75	0.22	0.14	0.20		U
Uranium 235	15117-96-1	0.018	0.071	0.14	0.20	U	U
Uranium 238	7440-61-1	0.53	0.19	0.11	0.20		U
Plutonium 238	13981-16-3	-0.004	0.015	0.031	0.050	U	PU
Plutonium 239/240		-0.002	0.011	0.025	0.050	U	PU
Americium 241	14596-10-2	0.021	0.019	0.018	0.050	J	AM
Strontium 90	10098-97-2	0.16	0.29	0.94	2.0	U	Y
Technetium 99	14133-76-7	52	4.8	6.6	5.0		TC
Tritium	10028-17-8	2100	210	170	400		H
Carbon 14	14762-75-5	36	42	66	50	U	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	U		150		U	GAM
Iron 59		U		45	30	U	GAM
Chromium 51	14392-02-0	U		240		U	GAM
Cobalt 60	10198-40-0	U		12	25	U	GAM
Zinc 65	17982-39-3	U		27		U	GAM
Ruthenium 106	13967-48-1	U		120		U	GAM
Cesium 134	17967-70-9	U		11		U	GAM
Cesium 137	10045-97-3	U		11	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		22		U	GAM
Thorium 228	14274-82-9	U		21		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 10/28/92

TMA NORCAL

REPORTING GROUPS 7057

DATA SHEET

N207109-04

B072T4

SDG 7057
Contact Dinkar Kharkar
Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N207109-04
Dept sample id 7057-004
Received 07/22/92
% moisture
Client sample id B072T4
Matrix WATER
Collected 07/18/92
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	2.5	2.3	2.6	3.0	U	80A
Gross Beta	Beta	30	2.5	2.1	4.0	B	80B
Uranium 233/234		0.75	0.22	0.14	0.20		U
Uranium 235	15117-96-1	-0.018	0.035	0.14	0.20	U	U
Uranium 238	7440-61-1	0.44	0.15	0.11	0.20		U
Plutonium 238	13981-16-3	0.014	0.023	0.036	0.050	U	PU
Plutonium 239/240		0.003	0.017	0.039	0.050	U	PU
Americium 241	14596-10-2	0.005	0.027	0.049	0.050	U	AM
Strontium 90	10098-97-2	0	1.2	0.80	2.0	U	Y
Technetium 99	14133-76-7	55	8.3	6.1	5.0		TC
Tritium	10028-17-8	2100	210	170	400		H
Carbon 14	14762-75-5	51	34	52	50	U	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	U		180		U	GAM
Iron 59		U		59	30	U	GAM
Chromium 51	14392-02-0	U		250		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		130		U	GAM
Cesium 134	17967-70-9	U		13		U	GAM
Cesium 137	10045-97-3	U		11	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		22		U	GAM
Thorium 232	7440-29-1	U		44		U	GAM

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.20
Report date 10/28/92

9613491.2284

N207109-15

TMA NORCAL
REPORTING GROUPS 7057

DATA SHEET

B072T9

SDG 7057
Contact Dinkar Kharkar
Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N207109-15
Dept sample id 7057-015
Received 07/23/92
% moisture
Client sample id B072T9
Matrix WATER
Collected 07/21/92
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	0.60	1.8	2.7	3.0	U	80A
Gross Beta	Beta	18	2.0	2.1	4.0	B	80B
Uranium 233/234		1.2	0.29	0.099	0.20		U
Uranium 235	15117-96-1	0.047	0.063	0.12	0.20	U	U
Uranium 238	7440-61-1	0.64	0.19	0.099	0.20		U
Plutonium 238	13981-16-3	-0.015	0.017	0.043	0.050	U	PU
Plutonium 239/240		0.004	0.004	0.017	0.050	U	PU
Americium 241	14596-10-2	0.003	0.027	0.050	0.050	U	AM
Strontium 90	10098-97-2	0.26	0.29	0.93	2.0	U	Y
Technetium 99	14133-76-7	25	4.4	7.5	5.0		TC
Tritium	10028-17-8	20000	550	170	400		H
Carbon 14	14762-75-5	-12	69	110	50	U	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	U		250		U	GAM
Iron 59		U		77	30	U	GAM
Chromium 51	14392-02-0	U		320		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		15	15	U	GAM
Europium 152	14683-23-9	U		24	40	U	GAM
Europium 154	15585-10-1	U		18	40	U	GAM
Radium 226	13982-67-7	U		38		U	GAM
Thorium 228	14274-82-9	U		22		U	GAM
Thorium 232	7440-29-1	U		67		U	GAM

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.20
Report date 10/28/92

N207109-18

TMA NORCAL
REPORTING GROUPS 7057

DATA SHEET

B072V4

SDG 7057
Contact Dinkar Kharkar
Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N207109-18
Dept sample id 7057-018
Received 07/24/92
% moisture
Client sample id B072V4
Matrix WATER
Collected 07/22/92
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	1.2	2.0	2.3	3.0	U	80A
Gross Beta	Beta	69	3.4	1.7	4.0	B	80B
Uranium 233/234		0.70	0.24	0.18	0.20		U
Uranium 235	15117-96-1	0.11	0.090	0.17	0.20	U	U
Uranium 238	7440-61-1	0.62	0.23	0.14	0.20		U
Plutonium 238	13981-16-3	-0.006	0.022	0.045	0.050	U	PU
Plutonium 239/240		0.006	0.006	0.021	0.050	U	PU
Americium 241	14596-10-2	-0.016	0.023	0.052	0.050	U	AM
Strontium 90	10098-97-2	0.23	0.41	0.81	2.0	U	Y
Technetium 99	14133-76-7	150	6.7	3.4	5.0		TC
Tritium	10028-17-8	5200	300	170	400		H
Carbon 14	14762-75-5	-17	38	64	50	U	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	U		170		U	GAM
Iron 59		U		48	30	U	GAM
Chromium 51	14392-02-0	U		340		U	GAM
Cobalt 60	10198-40-0	U		16	25	U	GAM
Zinc 65	17982-39-3	U		28		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		10	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		21		U	GAM
Thorium 228	14274-82-9	U		22		U	GAM
Thorium 232	7440-29-1	U		56		U	GAM

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.20
Report date 10/28/92

9613491.2286

N207109-19

TMA NORCAL
REPORTING GROUPS 7057

DATA SHEET

B072V9

SDG 7057
Contact Dinkar Kharkar
Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N207109-19
Dept sample id 7057-019
Received 07/24/92
% moisture
Client sample id B072V9
Matrix WATER
Collected 07/22/92
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	-1.0	1.6	3.0	3.0	U	80A
Gross Beta	Beta	-2.4	0.98	1.8	4.0	U	80B
Uranium 233/234		0.038	0.051	0.097	0.20	U	U
Uranium 235	15117-96-1	0.015	0.031	0.12	0.20	U	U
Uranium 238	7440-61-1	0	0.025	0.097	0.20	U	U
Plutonium 238	13981-16-3	0.002	0.016	0.029	0.050	U	PU
Plutonium 239/240		0	0.003	0.012	0.050	U	PU
Americium 241	14596-10-2	0	0.026	0.046	0.050	U	AM
Strontium 90	10098-97-2	0.16	0.24	0.73	2.0	U	Y
Technetium 99	14133-76-7	2.5	2.6	6.5	5.0	U	TC
Tritium	10028-17-8	110	130	170	400	U	H
Carbon 14	14762-75-5	2.9	34	56	50	U	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	U		150		U	GAM
Iron 59		U		60	30	U	GAM
Chromium 51	14392-02-0	U		310		U	GAM
Cobalt 60	10198-40-0	U		21	25	U	GAM
Zinc 65	17982-39-3	U		27		U	GAM
Ruthenium 106	13967-48-1	U		120		U	GAM
Cesium 134	17967-70-9	U		15		U	GAM
Cesium 137	10045-97-3	U		12	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		22		U	GAM
Thorium 228	14274-82-9	U		20		U	GAM
Thorium 232	7440-29-1	U		45		U	GAM

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.20
Report date 10/28/92

9613491.2287

N207109-20

TMA NORCAL
REPORTING GROUPS 7057

DATA SHEET

B072Y7

SDG 7057
Contact Dinkar Kharkar
Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N207109-20
Dept sample id 7057-020
Received 07/24/92
% moisture
Client sample id B072Y7
Matrix WATER
Collected 07/22/92
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	0.53	2.2	3.0	3.0	U	80A
Gross Beta	Beta	66	3.3	1.8	4.0	B	80B
Uranium 233/234		0.97	0.25	0.11	0.20		U
Uranium 235	15117-96-1	0.017	0.069	0.13	0.20	U	U
Uranium 238	7440-61-1	0.70	0.21	0.11	0.20		U
Plutonium 238	13981-16-3	-0.009	0.030	0.058	0.050	U	PU
Plutonium 239/240		0.003	0.006	0.023	0.050	U	PU
Americium 241	14596-10-2	0.008	0.020	0.033	0.050	U	AM
Strontium 90	10098-97-2	0	0.92	0.76	2.0	U	Y
Technetium 99	14133-76-7	150	7.3	4.4	5.0		TC
Tritium	10028-17-8	5000	300	170	400		H
Carbon 14	14762-75-5	8.8	46	75	50	U	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	U		240		U	GAM
Iron 59		U		88	30	U	GAM
Chromium 51	14392-02-0	U		350		U	GAM
Cobalt 60	10198-40-0	U		18	25	U	GAM
Zinc 65	17982-39-3	U		37		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		15	40	U	GAM
Radium 226	13982-67-7	U		22		U	GAM
Thorium 228	14274-82-9	U		21		U	GAM
Thorium 232	7440-29-1	U		65		U	GAM

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.20
Report date 10/28/92

TMA

SDG 7057	Client Westinghouse Hanford
Contact Dinkar P. Kharkar	Contract MBH-SVV-069262

CASE NARRATIVE

1.0 GENERAL

Water sample results from Location 100-BC-5 (TMA/Norcal Group 7057) are reported herein. TMA/Norcal Group 7057 is comprised of the twenty samples listed on the Chain-of-Custody documents and is identified as Sample 1 through 20.

1.1 CHAINS-OF-CUSTODY

This report includes data from samples delivered under Chain-of-Custody documents Field Logbook No. EFL-1036.

1.2 SAMPLE VOLUME

Four L and 1 L plastic bottles and 250 mL glass containers of each sample 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 7/18/92 and 7/22/92 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 7057-21 through 25.

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 except ^{14}C. The LCS is low (54%). We had problems with ^{14}C determinations. The ^{14}C results are preliminary pending further investigation. The MDA of ^{99}Tc for sample 7057-24 was above RDL due to low chemical recovery. The ^{99}Tc MDA of the other LCS sample meet the RDL requirement.

2.2 BLANKS

MDA's for all the analyses meet the RDL requirements, except for gross alpha which had MDA of 3.3 pCi/L instead of RDL of 3.0 pCi/L due to higher residue on the planchet and ^{99}Tc which had MDA of 7.2 pCi/L due to low chemical recovery (40)%. The gross beta concentration of the blank was higher. Contamination is suspected.

076B
11/24/92

SDG 7057 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 ^{90}Sr and ^{59}Fe are underlined in the data sheets because they exceed RDL due to low chemical yield for ^{90}Sr and due to lower efficiency of the detector for ^{59}Fe The gross beta replicate results did not agree due to difference of residue weights on planchets resulting in variation of counting efficiencies.

3.0 ANALYTICAL NOTES

3.1 Gross Alpha Analyses: The average MDA for gross alpha was 2.4 ± 0.73 pCi/L. Positive gross alpha concentration above RDL was not found in any sample.

3.2 Gross Beta Analyses: The average MDA for gross beta was 2.1 ± 0.90 pCi/L. Positive gross beta concentration was found in all samples except 7057-9, 11, and 19.

3.3 Tritium Analyses: The average MDA for ^{3}H was 170 ± 9.4 pCi/L. Positive ^{3}H concentration was found in all samples except 7057-8, 9, and 19 which had ^{3}H concentration below MDA.

3.4 Carbon-14 Analyses: The average MDA was 70 ± 92 pCi/L. All the ^{14}C results are preliminary.

3.5 Strontium-90 Analyses: The average yield for twenty-three analyses was (73 ± 22%). The lowest yield was 43% and the highest was 85%. The average MDA was 0.88 ± 0.42 pCi/L. Positive ^{90}Sr concentration was found in samples 7057-1, 2, 3, 10, and 17. The remaining sample results were below MDA.

3.6 Technicium-99 Analyses: The average yield for twenty-three analyses was (45 ± 18%). The lowest yield was 32% and the highest was 62%. The average MDA was 5.5 ± 2.6 pCi/L. Positive ^{99}Tc concentration was found in all the samples except 7057-8, 9, 11, and 19 which were below MDA.

3.7 Uranium-233, 234, 234, and 238 Analyses: The average yield for twenty-three analyses was (66 ± 17%). The lowest yield was 40% and the highest was 79%. The average MDA was 0.15 ± 0.06 pCi/L. Positive ^{234}U and ^{238}U concentration were found in all the samples except 7057-19 which was below MDA.

076C
11/24/92

SDG 7057 Contact Dinkar P. Kharkar	Client Westinghouse Hanford Contract MBH-SVV-069262

CASE NARRATIVE

3.8 Plutonium-238, 239/240 Analyses: The average yield for twenty-three analyses was (65 ± 20%). The lowest yield was 48% and the highest was 91%. The average MDA was 0.037 ± 0.027 pCi/L. Positive plutonium concentration was not found in any sample. All sample results were below MDA.

3.9 Americium-241 Analyses: The average yield for twenty-three analyses was (68 ± 31%). The lowest yield was 39% and the highest was 92%. The average MDA was 0.036 ± 0.19 pCi/L. Positive americium concentration was not found in any sample except for 7057-12. All remaining sample results were below MDA.

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

076D
11/24/92

9613491.2291

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 7/18/92

Ice Chest No. SML-73

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250996 896-6

Offsite Property No. W92-0-0533-9

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B07037

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)

B07040

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

B07041

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: 7/20/92 0901
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 7-22-92 1100
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

9613491.2292

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/18/92 Time 0845 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070J7	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)		
* B070K0	3, 40ml, Gs, WATER, CLP-VOA		
* B070K1	1, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986876-6
			OPC # W92-0-0533-9
			TASK #

Field Information**

Special Handling and/or Storage

Possible Sample Hazards

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 7-22-92

Analysis Required

* ID's B070K0 & B070K1 were switched - KB

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

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

078

A-6000-406 (0

9613491.2293

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 7/18/92

Ice Chest No. SML-118

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986896-6

Offsite Property No. W92-0-0533-10

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO 70K2

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 70K5

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

BO 70K6

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

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: G G Hamilton	Received by: K. Trapp / K. Trapp	Date/Time: 7/20/92 0901
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 7-22-92 1100
Relinquished by:	Received by:	Date/Time:
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

070

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

9613491.2204

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/18/92 Time 0720 hour

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070K2	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)		
* B070K5	3, 40ml, Gs, WATER, CLP-VOA		metal
* B070K6	3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		Voa
			BOL # 250986 996-6
			OPC # W92-0-0533-10
			TASK #

Field Information**

Special Handling and/or Storage

Possible Sample Hazards

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 7-22-92

Analysis Required

* ID's B070K5 & B070K6 were switched on this sheet - KB

080

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

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

A-6000-406

9613491.2295

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 7/18/92

Ice Chest No. SML-~~9~~ 26 WT 7/20/92

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986896-6

Offsite Property No. W92-0-0533-10

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO70M7

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)

BO70N0

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

BO70N1

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

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: [signature] R.D. Lee	Received by: K. Trapp / K. Trapp	Date/Time: 7/20/92 0901
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 7-22-92 1100
Relinquished by:	Received by:	Date/Time:
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

081

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

9613491.2296

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/18/92 Time 1020 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070M7	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)		
* B070NO	3, 40ml, Gs, WATER, CLP-VOA		
* B070NI	✓ 3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986896-6
			OPC # W92-0-0533-10
			TASK #

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 7-22-92

Analysis Required _____

* ID's B070NO & B070NI were switched on this sheet -KB

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

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

082

A-6000-406 (0

9613491.2297

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 7/18/92

Ice Chest No. SML-8

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 2509869 96-6

Offsite Property No. W92-0-0533-9

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B072T4

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)

B072T7

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

B072T8

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: 7/20/92 0900
Relinquished by: K. Trapp / K Trapp	Received by: Kermit Blum	Date/Time: 7-22-92 1100
Relinquished by:	Received by:	Date/Time:
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

083

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

9613491.2298

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/18/92 Time 1205 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B072T4 ✓	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)		
* B072T7	✓ 3, 40ml, Gs, WATER, CLP-VOA		2 bubbles
* B072T8	✓ ~~3~~ 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986896-6
			OPC # W92-0-0533-9
			TASK #

Field Information**

Special Handling and/or Storage

Possible Sample Hazards

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 7-22-92

Analysis Required

* ID's B072T7 & B072T8 were switched on this sheet - KB

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

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

084 A-6000-406 (0

9613471.2299

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 7/19/92

Ice Chest No. SML-~~94~~ 2 94 KG 7/20/92

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986 896-6

Offsite Property No. W92-0-0533-11

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B0 70H7

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)

B0 70J0

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

B0 70J1

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

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: K.D. Lee K.D. Lee	Received by: K. Trapp / K. Trapp	Date/Time: 7/20/92 0901
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 7-22-92 1100
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

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/19/92 Time 1030 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070H7	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)		
* B070J0	✓ 3, 40ml, Gs, WATER, CLP-VOA		metal
* B070J1	✓ 3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		sva
			BOL # 250986896-6
			OPC # W92-0-0537-11
			TASK #

Field Information**

Special Handling and/or Storage

Possible Sample Hazards

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 7-22-92

Analysis Required

* ID's B070J0 & B070J1 were switched on this sheet - KB

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

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

086

9613491.2301

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 7/19/92

Ice Chest No. SML-88

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986896-6

Offsite Property No. W92-0-0533-11

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO 70P7

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 70Q0

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

BO 70Q1

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: 7/20/92 0901
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 7-22-92 1100
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

9613491.2112

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/19/92 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
B070P7 ✓	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)		
* B070Q0 ✓	3, 40ml, Gs, WATER, CLP-VOA		
* B070Q1 ✓	3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986896-6
			OPC # W92-0-0533-11
			TASK #

Field Information**

Special Handling and/or Storage

Possible Sample Hazards

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 7-22-92

Analysis Required

* ID's B070Q0 & B070Q1 were switched on this sheet - KB

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

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

088 A-6000-406(

9613091.2913

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 7/19/92

Ice Chest No. SML-122

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986896-6

Offsite Property No. W92-0-0533-12

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B072S9

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)

B072T2

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

B072T3

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

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: Kirby D. Lee K.D. Lee	Received by: K. Trapp / K. Trapp	Date/Time: 7/20/92 0901
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 7-22-92 1100
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

089

9613991.2304

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/19/92 Time 0728 hour

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B072S9	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)		
* B072T2	3, 40ml, Gs, WATER, CLP-VOA		* SHOULD BE B072T3 / FOR METALS
* B072T3	3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		AFOR VOA
			BOL # 250986896-C
			OPC # WA2-0-0533-12
			TASK #

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 7-22-92

Analysis Required _____

* ID's B072T2 & B072T3 were switched on this sheet - KB

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

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

090 A-6000-406

9613491.2505

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 7/20/92

Ice Chest No. GGH-1

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986920-8

Offsite Property No. W92-0-0533-17

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. Celebrik C. Celebrik	Received by: K. Trapp / K. Trapp	Date/Time: ~~Hrs~~ KT 7/21/92 1001
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 7-22-92 1100
Relinquished by:	Received by:	Date/Time:
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

091

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

9613491.2306

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/20/92 Time 1010 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070D2 ✓	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)		
B070D6 ✓	3, 40ml, Gs, WATER, CLP-VOA		
	1 KT 7/20/92		
B070D5 ✓	3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250786920-8
			OPC # W92-0-0533-17
			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 7-22-92

Analysis Required _____

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

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

092

A-6000-406 (C

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 7-20-92

Ice Chest No. SML-106

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986920-8

Offsite Property No. W92-0-0933-17

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO70H2

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)

BO70H5

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

BO70H6

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

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

Relinquished by:	Received by:	Date/Time:
LD Walker L.D. Walker	K. Trapp / K. Trapp	7/21/92 1001
K. Trapp / K. Trapp	Kermit Blum	7-22-92 1100

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

093

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

9613491.2308

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/20/92 Time 1015 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070H2 ✓	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)		
B070H6 ✓	3, 40ml, Gs, WATER, CLP-VOA		
	KZ 7/20/92		
B070H5 ✓	~~3~~, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986920-8
			OPC # W92-0-0533-17
			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 7-22-92

Analysis Required

*Indicate whether sample is soil, sludge, water, etc.
**Use back of page for additional information relative to sample location.

094 A-6000-406 (

9613491.2509

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 7/20/92

Ice Chest No. SML-163

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986 920-9

Offsite Property No. W92-0-0533-19

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO 70P2

- ✓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 70P5

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

BO 70P6

- 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: ~~7/20/92~~ KT 7/21/92 1001
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 7-22-92 1100
Relinquished by:	Received by:	Date/Time:
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

095

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

9613491.2510

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/20/92 Time 1450 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070P2✓	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)		
B070P6✓	3, 40ml, Gs, WATER, CLP-VOA		
	1 KL 7/21/92		
B070P5✓	~~3~~, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986920-8
			OPC # W92-0-0533-18
			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 7-22-92

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

9615191.2511

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 7/21/92

Ice Chest No. SML-109

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986920-8

Offsite Property No. W92-0-0533-18

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO 70G7

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 70H0

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

BO 70H1

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: ~~Holtz~~ CCF 2090	Date/Time: ~~7/20/92~~ KT 7/21/92
Relinquished by:	Received by: K. Trapp / K. Trapp	Date/Time: 7/21/92 1001
Relinquished by: K. Trapp / K. Trapp	Received by: Kermit Blum	Date/Time: 7-22-92 1100
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

097

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

9613491.2312

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/20/92 Time 1315 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070G7 ✓	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)		
B070H1 ✓	3, 40ml, Gs, WATER, CLP-VOA		3 bubbles
	1 KT 7/21/92		
B070H0	~~3~~, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986 920-9
			OPC # W22-0-0533-18
			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 7-22-92

Analysis Required _____

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

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

098 A-6000-406 (

9613491.2313

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 7-21-92

Ice Chest No. SML-80

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 2509869923-0

Offsite Property No. W92-0-0533-20

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B07007

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)

B07070

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

* B07071

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: AJ Simpson AJ Simpson	Date/Time: 7/22/92 0845
Relinquished by: AJ Simpson AJ Simpson	Received by: Kermit Blum	Date/Time: 7-23-92 1130
Relinquished by:	Received by:	Date/Time:
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments: *All 3 vials B07071 received @ TMA/Norcal w/ bubbles - KB

099

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

9613491.2314

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/21/92 Time 0930 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070D7	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)		
B070F1	3, 40ml, Gs, WATER, CLP-VOA		(bubbles all vials)
	KT 7/22/92		
B070F0	8, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 2509869 23-0
			OPC # W92-0-0533-20
			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 7-23-92

Analysis Required

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

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

100

A-6000-406 (0

9613491.2315

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 7-21-92

Ice Chest No. 281

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 2509869923-0

Offsite Property No. W92-0-0533-19

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B070F2

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)

B070F5

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

* B070F6

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: AJ SIMPSON AJ Simpson	Date/Time: 7/22/92 0847
Relinquished by: AJ SIMPSON AJ Simpson	Received by: Kermit Blum	Date/Time: 7-23-92 1130
Relinquished by:	Received by:	Date/Time:
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments: * All 3 vials Received @ TMA/NorCal with air bubbles (B070F6) - KB

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

9614491.2316

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/21/92 Time 1350 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070F2	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 vials 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) (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)		
	KR 7/22/92		
B070F56	3 ~~3~~, 40ml, Gs, WATER,	CLP-VOA	(bubbles All 3 vials)
	1 KR 7/22/92		
B070F5	~~3~~, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986923-0
			OPC # W92-0-0533-19
			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 7-23-92

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

9613491.2317

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 7-21-92

Ice Chest No. SML-113

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986923-0

Offsite Property No. W92-0-0533-19

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO 70G2

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 70G5

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

BO 70G6

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: AJ Simpson *AJ Simpson*	Date/Time: 7/22/92 0845
Relinquished by: AJ Simpson *AJ Simpson*	Received by: Kermit Blum	Date/Time: 7-23-92 1130
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

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/21/92 Time 1140 hour

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070G2	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)		
B070G6	3, 40ml, Gs, WATER, CLP-VOA		
	1 hr 7/22/92		
B070G5	3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986923-0
			OPC # W92-0-0533-19
			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 7-23-92

Analysis Required _____

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

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

 A-6000-406

9613491.2319

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 7-21-92

Ice Chest No. Curly

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986923-0

Offsite Property No. W92-0-0533-20

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B072T9

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)

B072V2

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

* B072V3

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

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: L.D. Walker	Received by: AJ Simpson	Date/Time: 7/22/92 0840
Relinquished by: AMY SIMPSON	Received by:	Date/Time: ~~7/22/92 0840~~ AJS
Relinquished by:	Received by: Kermit Blum	Date/Time: 7-23-92 1130
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments: * Bubbles in one vial B072V3 when received @ TMA/NORCAL - 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 7/21/92 Time 0830 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B072T9	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)		
B072V3	3, 40ml, Gs, WATER, CLP-VOA		(bubbles are v.i.c.)
	KT 7/22/92		
B072V2	3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986 923-0
			OPC # WA2-0-0533-20
			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 7-23-92

Analysis Required

*Indicate whether sample is soil, sludge, water, etc.
**Use back of page for additional information relative to sample location.

9613491.2321

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 7-22-92

Ice Chest No. SML-103

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986825-1

Offsite Property No. W92-0-0533-23

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B0 70F7

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)

B0 70G0

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

B0 70G1

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: AJ SIMPSON AJ Simpson	Date/Time: 7/23/92 0902
Relinquished by: AJ SIMPSON AJ Simpson	Received by: Kermit Blum	Date/Time: 7-24-92 1100
Relinquished by:	Received by:	Date/Time:
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

* Sulfide aliquot for B070F7 received crushed @ TMA/NORCAL - KB

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

9613491.2522

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/22/92 Time 1130 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070F7	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) SAMPLE WAS [illegible]		
	1; 500 ml; G; WATER; AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)		
	1; 1L; P; WATER; Tc-99 (HCl)		
B070G1	3, 40ml, Gs, WATER, CLP-VOA		
	KT 7/23/92		
B070G0	3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986 925-1
			OPC # W92-0-0533-23
			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 7-24-92

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

9613491.2323

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 7-22-92

Ice Chest No. SML-29

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986825-1

Offsite Property No. W92-0-0533-22

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B070N7

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)

B070P0

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

* B070P1

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: AJ SIMPSON AJ Simpson	Date/Time: 7/23/92 0853
Relinquished by: AJ SIMPSON AJ Simpson	Received by: Kermit Blum	Date/Time: 7-24-92 1100
Relinquished by:	Received by:	Date/Time:
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments: * One vial B070P1 received @ TMA/NORCAL with air bubbles - KB

109

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

9613181.2324

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/22/92 Time 1310 hour

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070N7	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)		
B070P1	3, 40ml, Gs, WATER, CLP-VOA		Cone vial bubbles!
	1 KT 7/22/92		
B070P0	3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 2509986825-1
			OPC # WA2-0-0533-22
			TASK # 72-243

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 7-24-92

Analysis Required _____

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

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

110

A-6000-406 (05

9613491.2325

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 7-22-92

Ice Chest No. SML-111

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986825-1

Offsite Property No. W92-0-0533-22

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B072V4

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)

* B072V7

1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) FILTERED SAMPLE I.D # B072Z0

B072V8

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: AJ SIMPSON AJ Simpson	Date/Time: 7/23/92 0857
Relinquished by: AJ SIMPSON AJ Simpson	Received by: Kermit Blum	Date/Time: 7-24-92 1100
Relinquished by:	Received by:	Date/Time:
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

* ~~Did not receive sample B072V7 @ TMA/NORCAL.~~
~~We did receive a sample B072Z0, for metals. KB~~
Correct aliquot was received, intact & properly labeled. KB

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

9613491.2326

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/22/92 Time 0850 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B072V4	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)		
B072V8	3, 40ml, Gs, WATER, CLP-VOA		
	1 KT 7/22/92		
B072V7	3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED # B072Z0)		
			BOL # 2509986825-1
			OPC # WG2-O-0533-22
			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 7-24-92

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

9613191.2327

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 7-22-92

Ice Chest No. 5ML-84

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986825-1

Offsite Property No. W92-0-0533-23

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO72V9

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)

BO72W2

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

BO72W3

~~3~~, 40ml, Gs, WATER, CLP-VOA
2 KT 7/23/92

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: L.D. Walker LD Walker	Received by: AJ Simpson AJ Simpson	Date/Time: 7/23/92 0855
Relinquished by: AJ Simpson AJ Simpson	Received by: Kermit Blum	Date/Time: 7-24-92 1100
Relinquished by:	Received by:	Date/Time:
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

113

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

9613491.2328

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/22/92 Time 1400 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B072V9	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)		
	2 KT 7/23/92		
B072W3	3, 40ml, Gs, WATER, CLP-VOA		
	1 KT 7/22/92		
B072W2	3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250996925-1
			OPC # W92-0-0533-23
			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 7-24-92

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

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 7-22-92

Ice Chest No. 207

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986825-1

Offsite Property No. W92-0-0533-24

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B07227

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)

B07220

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

B07221

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: A J SIMPSON AJ Simpson	Date/Time: 7/23/92 0858
Relinquished by: AJ SIMPSON AJ Simpson	Received by: Kermit Blum	Date/Time: 7-24-92 1100
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

9613491.2350

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/22/92 Time 0950 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B07247	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)		
B07271	3, 40ml, Gs, WATER, CLP-VOA		
	1 kr 7/23/92		
B07270	3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED # B07272		
			BOL # 250986925-1
			OPC # W92-0-0533-24
			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 7-24-92

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/

Overnight delivery

Signature Security Service

Contractor	OFF-SITE PROPERTY CONTROL	CONTROL NUMBER (To be obtained from PROPERTY MANAGEMENT)
WHG		W92-0-0533-20

PART I – TO BE COMPLETED BY ORIGINATOR

Department	Section	Unit
Env. Eng. & Tech.	Geosciences	Hydrology

The following items are to be shipped from ☒ Contractor ☐ Vendor

Routing Emery ☒ Contractor ☐ Vendor

Shipped to
THA/NORCAL
2030 Wright Ave.
Richmond, CA 94804

Off-site Custodian: Dolores Sanchez

Full Title:

Quantity	Description (Include Serial and any Government Tag Numbers)	Original Cost
1 87 lbs.	Sample #: 607DV1, 607DF0, 607DF1 Cooler ID: SHL-50 Polycooler with groundwater samples packed in wet ice and vermiculite	N/A
1 87 lbs.	Sample #: 607279, 607-V2, 607-V3 Cooler ID: Curly Polycooler with groundwater samples packed in wet ice and vermiculite	N/A

☐ Classified ☒ Unclassified ☐ Shipped Under DOE Contract ☐ Shipped Under Contractor's Use Permit Contract

Necessity for the Off-Site Use of this Property
Sampling supports RI/FS work in the 100 Areas.

Bill of Lading #2509569-0

MAC

CERTIFICATION OF THE RADIATION MONITORING RELEASE MUST BE SECURED THE SAME DAY THAT MATERIAL IS DELIVERED TO SHIPPING.

RM Clearance for Public Release	RM Survey No.	Date
TH Hoolenpyle	RO-113431	7-22-92

Location of Property (Area & Bldg)	Contact	Phone
100-HR-3 EC-5 7/22/92	PH Butcher	(509)376-5045

Date Ready for Shipment	Cost Code to be Charged	Approximate Date This Property will be Returned
7/22/92	W81232/EB3DA-PB3D1	

Originated By	Date	Authorized By	Date
PH Butcher	7/22/92	PH Butcher	7/22/92

Signature and Name of Property Control	Custodian Date	Property Management Approval	Date
			7/22/92

PART II – TO BE COMPLETED BY SHIPPING

Signature of Recipient	Return Order No.	Date Issued	Purchase Order No.	Date Issued
S. L. RAYMOND				
Date 7/22/92 Time 1:45 P				

DISTRIBUTION

By Originator	Shipping Operation – Sign all Copies and Forward to:	
White, Green, Yellow, Pink – Property Management Goldenrod – Retain	White – Property Management Yellow – Retain	Green – Property Control Custodian (Issuing Office) Pink – Originator

116A 11/24/92

116-A

54-3000-470 (09/89)

Add-On 91

FORM OF PAYMENT

Check ☐ GBL ☐ FCCO ☐

Bill to Shipper [XX] Bill to Consignee ☐ Third Party Billing ☐

EMERY WORLDWIDE — A CF Company

SERVICES

UNITED STATES / CANADA: Same Day ☐; [XX] AM ☐; PM ☐; Second Day ☐; Saturday Delivery ☐

INTERNATIONAL: Express [X]; Preferred ☐; Standard ☐; Business Documents ☐; Customs Clearance ☐; Delivery ☐

E Shipper's Account Number: 850281585

Date: 07-23-92 | Origin: PSC | Shipment Number: 2509868251 1

From:
WESTINGHOUSE SHIPPING DPT (509) 376-6665
U.S. DEPARTMENT OF ENERGY C/O
WESTINGHOUSE HANFORD
BLDG 1163
2355 STEVENS DRIVE
RICHLAND WA Canada ☐

To:
DELORES SANCHEZ
TMA/NORCAL
2030 WRIGHT AVENUE
RICHMOND CA Canada ☐
Hold for Pick Up ☐

Tariff Dest. | Gateway

Check to Shipper $

EMERY WORLDWIDE will accept Consignee's check with charges being assumed by Shipper, including but not limited to non-payment, fraud and misrepresentation.

Customer's Reference Numbers: 081232 PB3D1 W92-0-0533

Zip: 99352

E Consignee's Account Number

Zip: 94804

Description	Dimensions L	W	Total Pieces	Total Weight (in Lbs.)
#23 & #24 COOLER ID SML 29 89#; SML111 88#; SML103 89# SLB4 90#; 207 110# WATER SAMPLES	5	[illegible]	5	466

FOR INFORMATION OR RATES CALL 1-800 44 EMERY (1-800-443-6379)

Declared Value $

2509868251

Remarks: OVERNIGHT DELIVERY SIGNATURE SECURITY SERVICE

Shipper's Signature X

Zip Ship ☐ For shipments within the 50 United States Shipper has the option to check this box and by checking, agrees that the Zip Ship conditions described in the area on the right, apply.

Mark if Emery Packaging is used: Urgent Letter 9X12 ☐; Urgent Pack 12X15 ☐

International Shipments: Free Domicile ☐; Commodity Code

Third Party Account Number mandatory for Third Party Billing.

Third Party Account Number

International Customs Value

International Insurance

Base Charge

Total Transportation Charges

Other Charges/Advance at Origin: OC/AO ☐ $

1-OAK-A

Terms and Conditions on Back

9613491.2332

8-9-911

9613491.2553

~~B070F7-TMA-238~~

B070S7-TMA-233 TMA

WESTINGHOUSE HANFORD COMPANY

SEP 1992
RECEIVED
OSM DMO

Results of Analyses For:

ORGANICS
Case No. 07-054
(TMA/ARLI Work Order # A2-07-054)

METALS
Case No. N2-07-129
(TMA/Skinner & Sherman W.O. # S2-07-221, S2-07-222, & S2-07-223)

September 21, 1992

TMA Master Work Order N2-07-129

RECORD COPY

9613491.2334

000002

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 7-22-92

Ice Chest No. SML-103

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986825-1

Offsite Property No. W92-0-0533-23

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO 70F7

~~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)~~

~~BO70G~~

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

BO 70G1

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: AJ SIMPSON *AJ Simpson*	Date/Time: 7/23/92 0902
Relinquished by: AJ SIMPSON *AJ Simpson*	Received by: Kermit Blum	Date/Time: 7-24-92 1100
Relinquished by: 7-24-92 Kermit Blum	Received by: Carole Harris	Date/Time: 7/27/92 9:00
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

* Sulfide aliquot for BO70F7 received crushed @ TMA/NORCAL - KB

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

MC

9613491.2335

000003

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/22/92 Time 1130 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070 F7	~~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)~~ sample [illegible]		
	1; 500 ml; G; WATER; AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)		
	~~1; 1L; P; WATER; Tc-99~~ HCl)		
B070G1	3, 40ml, Gs, WATER, CLP-VOA		
	KT 7/23/92		
~~B070G0~~	~~3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED~~		
			BOL # 250986 925-1
			OPC # W92-0-0533-23
			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 7-24-92

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.

9613191.2336

00000

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 7-22-92

Ice Chest No. SML-29

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986825-1

Offsite Property No. W92-0-0533-22

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO70N7

~~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)~~

~~BO70P0~~

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

* BO70P1

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: AJ SIMPSON AJ Simpson	Date/Time: 7/23/92 0853
Relinquished by: AJ SIMPSON AJ Simpson	Received by: Kermit Blum	Date/Time: 7-24-92 1100
Relinquished by: 7-24-92 Kermit Blum	Received by: C. Harris	Date/Time: 7/27/92 9^00
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments: * One vial BO70P1 received @ TMA/NORCAL with air bubbles - KB

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

9613491.2337

000005

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/22/92 Time 1310 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070N7	~~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)~~		
B070P1	3, 40ml, Gs, WATER, CLP-VOA		Cone vial bubbles!
	1 KT 7/22/92		
~~B070P0~~	~~3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED~~		
			BOL # 250986825-1
			OPC # WA2-0-0533-22
			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 7-24-92

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/

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 7-22-92

Ice Chest No. SML-111

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986925-1

Offsite Property No. W92-0-0533-22

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B072V4

~~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)~~

* ~~B072V7~~

~~1, 1L, P, WATER, CLP-ICP/AA METALS & Hg (HNO3) FILTERED~~ SAMPLE I.D # B072Z0

B072V8

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

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: L.D. Walker	Received by: AJ SIMPSON	Date/Time: 7/23/92 0857
Relinquished by: AJ SIMPSON	Received by: Kermit Blum	Date/Time: 7-24-92 1100
Relinquished by: 7-24-92 Kermit Blum	Received by: C. Davis	Date/Time: 7/27/92 9:00
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

* Did not receive sample B072V7 @ TMA / NORCAL. We did receive a sample B072Z0, for metals. KB

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/22/92 Time 0850 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B072V4	~~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)~~		
B072V8	3, 40ml, Gs, WATER, CLP-VOA		
	1 KT 7/22/92		
~~B072V7~~	~~3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED~~ # B072V0)		
			BOL # 2509866825-1
			OPC # WG2-O-0533-22
			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 7-24-92

Analysis Required _____

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

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

9613491.2340

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 7-22-92

Ice Chest No. SML-84

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986825-1

Offsite Property No. W92-0-0533-23

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO72V9

~~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)~~

~~BO72W3~~

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

BO72W3

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

2 KT 7/23/92

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: L.D. Walker LD Walker	Received by: AJ Simpson AJ Simpson	Date/Time: 7/23/92 0855
Relinquished by: AJ Simpson AJ Simpson	Received by: Kermit Blum	Date/Time: 7-24-92 1100
Relinquished by: 7-24-92 Kermit Blum	Received by: C. Nevis	Date/Time: 7/27/92 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

9613491.2341

000009

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/22/92 Time 1400 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B072V9	~~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)~~		
	2 KT 7/23/92		
B072W3	~~3~~, 40ml, Gs, WATER, CLP-VOA		
	1 KT 7/22/92		
~~B072W2~~	~~3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED~~		
			BOL # 250996825-1
			OPC # W92-0-0533-23
			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 7-24-92

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

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 7-22-92

Ice Chest No. 207

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986825-1

Offsite Property No. W92-0-0533-24

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO7227

~~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)~~

BO7220

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

BO7221

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

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: L.D. Walker	Received by: A J SIMPSON	Date/Time: 7/23/92 0858
Relinquished by: AJ SIMPSON	Received by: Kermit Blum	Date/Time: 7-24-92 1100
Relinquished by: 7-24-92 Kermit Blum	Received by: C. Harris	Date/Time: 7/27/92 900
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 7/22/92 Time 0950 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B07247	~~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)~~		
B07271	3, 40ml, Gs, WATER, CLP-VOA		
	kr 7/23/92		
~~B07220~~	~~3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED~~ # B07247		
			BOL # 250986825-1
			OPC # W92-0-0533-24
			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 7-24-92

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.

GENERAL CHEMISTRY RESULTS

CASE NO. 07-054

Water Sample #:

B070F7	B070N7	B072V4
B072V9	B072Y7	

CASE NARRATIVE

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

Ernesto Vazquez

Ernesto Vazquez

TMA Inc. REPORT Work Order # A2-07-054

Received: 07/24/92 09/11/92 15:41:50

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 Vazquez
CONTACT: EVV CIH

CLIENT: WHC SAMPLES: 11
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. #: N2-07-129-SU-AR
INVOICE: under separate cover

SAMPLE IDENTIFICATION

01	B070F7
02	B070G1
02	B070G1 MS
02	B070G1 MSD
03	B070N7
03	B070N7 MS
03	B070N7
03	B070N7 Duplicate
03	B070N7
04	B070P1
05	B072V4
05	B072V4 MS
05	B072V4 MSD
05	B072V4
05	B072V4 Duplicate
05	B072V4
06	B072V8
07	B072V9
07	B072V9 MS
07	B072V9 MSD
07	B072V9
07	B072V9 MS
07	B072V9
08	B072W3
09	B072Y7
09	B072Y7 MS

TEST CODES and NAMES used on this workorder

BNCLPW	CLP Semivol. Water
BROKEN	Samples Broken on Arrival
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

Received: 07/24/92

TMA Inc. REPORT
09/11/92 15:41:50

Work Order # A2-07-054

SAMPLE IDENTIFICATION

09 B072Y7 Duplicate
10 B072Z1
11 Lab Blank

TMA Inc. REPORT Work Order # A2-07-054

Received: 07/24/92

Results by Sample

SAMPLE ID B070F7 FRACTION 01C TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/22/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	6.5	mg/L	0.2
Elect. Conductivity	120.1	314	umho/cm	6
Fluoride	300.0	0.5	mg/L	0.1
Phosphate	300.0	<0.4	mg/L	0.4
pH	150.1	8.0	pH	0.1
Sulfate	300.0	37	mg/L	1

FORM I

TMA Inc. REPORT Work Order # A2-07-054

Received: 07/24/92

Results by Sample

SAMPLE ID B070F7 FRACTION 01D TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/22/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Alkalinity	310.1	110	mg/L	2
Tot. Dissolved Solids	160.1	256	mg/L	5

FORM I

TMA Inc. REPORT Work Order # A2-07-054

Received: 07/24/92 Results by Sample

SAMPLE ID B070F7 FRACTION 01F TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/22/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Ammonia Nitrogen	350.3	1.03	mg/L	0.05
COD	410.0	<30	mg/L	30

FORM I

TMA Inc. REPORT Work Order # A2-07-054

Received: 07/24/92 Results by Sample

SAMPLE ID B070N7 FRACTION 03C TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/22/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	7.0	mg/L	0.2
Elect. Conductivity	120.1	262	umho/cm	6
Fluoride	300.0	0.2	mg/L	0.1
Phosphate	300.0	<0.4	mg/L	0.4
pH	150.1	7.6	pH	0.1
Sulfate	300.0	37	mg/L	1

FORM I

TMA Inc. REPORT Work Order # A2-07-054

Received: 07/24/92

Results by Sample

SAMPLE ID B070N7 FRACTION 03E TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/22/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Alkalinity	310.1	99	mg/L	2
Tot. Dissolved Solids	160.1	218	mg/L	5

FORM I

TMA Inc. REPORT Work Order # A2-07-054

Received: 07/24/92 Results by Sample

SAMPLE ID B070N7 FRACTION 03G TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/22/92 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 # A2-07-054

Received: 07/24/92

Results by Sample

SAMPLE ID B070N7 FRACTION 03H TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/22/92 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 # A2-07-054

Received: 07/24/92 Results by Sample

SAMPLE ID B072V4 FRACTION 05E TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/22/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	7.8	mg/L	0.2
Elect. Conductivity	120.1	318	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	43	mg/L	1

FORM I

TMA Inc. REPORT Work Order # A2-07-054

Received: 07/24/92

Results by Sample

SAMPLE ID B072V4 FRACTION 05G TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/22/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Alkalinity	310.1	114	mg/L	2
Tot. Dissolved Solids	160.1	260	mg/L	5

FORM I

TMA Inc. REPORT Work Order # A2-07-054

Received: 07/24/92 Results by Sample

SAMPLE ID B072V4 FRACTION 05H TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/22/92 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 # A2-07-054

Received: 07/24/92 Results by Sample

SAMPLE ID B072V4 FRACTION 051 TEST CODE WCCLPL NAME Anioons & Wet Chem. - WH043

Date & Time Collected 07/22/92 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 # A2-07-054

Received: 07/24/92

Results by Sample

SAMPLE ID B072V9 FRACTION 07E TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/22/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	<0.2	mg/L	0.2
Elect. Conductivity	120.1	<1	umho/cm	6
Fluoride	300.0	<0.1	mg/L	0.1
Phosphate	300.0	<0.4	mg/L	0.4
pH	150.1	6.3	pH	0.1
Sulfate	300.0	<1	mg/L	1

FORM I

TMA Inc. REPORT Work Order # A2-07-054

Received: 07/24/92

Results by Sample

SAMPLE ID B072V9 FRACTION 07F TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/22/92 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 # A2-07-054

Received: 07/24/92

Results by Sample

SAMPLE ID B072V9 FRACTION 07G TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/22/92 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 # A2-07-054

Received: 07/24/92

Results by Sample

SAMPLE ID B072V9 FRACTION 07I TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/22/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Ammonia Nitrogen	350.3	0.37	mg/L	0.05
COD	410.0	<30	mg/L	30

FORM I

TMA Inc. REPORT Work Order # A2-07-054

Received: 07/24/92

Results by Sample

SAMPLE ID B072Y7 FRACTION 09C TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/22/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	7.8	mg/L	0.2
Elect. Conductivity	120.1	313	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	45	mg/L	1

FORM I

TMA Inc. REPORT Work Order # A2-07-054

Received: 07/24/92 Results by Sample

SAMPLE ID B072Y7 FRACTION 09D TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/22/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Alkalinity	310.1	114	mg/L	2
Tot. Dissolved Solids	160.1	268	mg/L	5

FORM I

TMA Inc. REPORT Work Order # A2-07-054

Received: 07/24/92

Results by Sample

SAMPLE ID B072Y7 FRACTION 09E TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/22/92 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 # A2-07-054

Received: 07/24/92

Results by Sample

SAMPLE ID B072Y7 FRACTION 09F TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/22/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Ammonia Nitrogen	350.3	0.16	mg/L	0.05
COD	410.0	<30	mg/L	30

FORM I

CASE NARRATIVE

LABORATORY : TMA/ARLI

CASE : 07-054

CONTRACT ID : WESTINGHOUSE HANFORD COMPANY

SDG RECEIPT DATE : July 24, 1992

1.0 DESCRIPTION OF CASE :

Ten water samples were analyzed for TCL Organics-Volatiles, Semivolitales 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
B070F7	A2-07-054-01A	V	WATER	7
B070F7	A2-07-054-01B	SV & P	WATER	
B070G1	A2-07-054-02A	V	WATER	7
B070G1 MS	A2-07-054-02B	V	WATER	7
B070G1 MSD	A2-07-054-02C	V	WATER	7
B070N7	A2-07-054-03A	V	WATER	7
B070N7	A2-07-054-03B	SV & P	WATER	
B070P1	A2-07-054-04A	V	WATER	7
B072V4	A2-07-054-05A	V	WATER	7
B072V4	A2-07-054-05B	SV & P	WATER	
B072V4 MS	A2-07-054-05C	SV	WATER	
B072V4 MSD	A2-07-054-05D	SV	WATER	
B072V8	A2-07-054-06A	V	WATER	7
B072V9	A2-07-054-07A	V	WATER	1
B072V9	A2-07-054-07B	SV & P	WATER	
B072V9 MS	A2-07-054-07C	P	WATER	
B072V9 MSD	A2-07-054-07D	P	WATER	
B072W3	A2-07-054-08A	V	WATER	7
B072Y7	A2-07-054-09A	V	WATER	7
B072Y7 RE	A2-07-054-09A	V	WATER	7
B072Y7	A2-07-054-09B	SV	WATER	
B072Z1	A2-07-054-10A	V	WATER	7

3.0 COMMENTS :

3.1 SHIPPING AND DOCUMENTATION :

The samples were received unbroken and properly documented. Sample B070P1 was received at TMA/ARLI with an air bubble in 1 of the 3 VOA vials submitted by Westinghouse Hanford Company.

3.2 ANALYSIS

3.2.1 VOLATILE ANALYSIS COMMENTS :

LOW LEVEL WATER :

The samples were analyzed within the CLP SOW holding times. Sample B072Y7 had a system monitoring compound recovery for Toluene-d8 above the QC limit. The sample was re-analyzed and yielded the same results. The re-analysis has been reported as B072Y7RE and was included in this package.

The matrix spike recoveries for 1,1-Dichloroethene were within the QC limit. However, the %RPD was slightly above the QC limit. In accordance with protocol, no further action was required.

Sample B072V9 had a pH that was measured as 1. The pH was measured again from that VOA vial and was the same. However, the other two VOA vials for B072V9 measured a pH of approximately 7. The analysis of sample B072V9 was only performed on the VOA vial that measured a pH of 1.

All of the other 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. Samples B070F7 and B070N7 had surrogate recoveries for Terphenyl-d14 above the QC limit. The high recovery appeared to be due to an interference peak that co-elutes with Terphenyl-d14.

Sample B072V4MS had a 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

Wida Ang
Organics Supervisor

EPA SAMPLE NO.

B070F7

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07054 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207054-01A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20728R17

Level: (low/med) LOW Date Received: 07/24/92

% Moisture: not dec. ____ Date Analyzed: 07/28/92

GC Column: PACK ID: 2.00 (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.

B070F7

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07054 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207054-01A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20728R17

Level: (low/med) LOW Date Received: 07/24/92

% Moisture: not dec. ____ Date Analyzed: 07/28/92

GC Column: PACK ID: 2.00 (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

EPA SAMPLE NO.

B070G1

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07054 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207054-02A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20728R18

Level: (low/med) LOW Date Received: 07/24/92

% Moisture: not dec. ____ Date Analyzed: 07/28/92

GC Column: PACK ID: 2.00 (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.

B070G1

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07054 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207054-02A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20728R18

Level: (low/med) LOW Date Received: 07/24/92

% Moisture: not dec. ____ Date Analyzed: 07/28/92

GC Column: PACK ID: 2.00 (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.

B070N7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07054 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207054-03A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20728R21

Level: (low/med) LOW Date Received: 07/24/92

% Moisture: not dec. ____ Date Analyzed: 07/28/92

GC Column: PACK ID: 2.00 (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

9613491.2374

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE No. 000010

B070N7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07054 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207054-03A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20728R21

Level: (low/med) LOW Date Received: 07/24/92

% Moisture: not dec. ____ Date Analyzed: 07/28/92

GC Column: PACK ID: 2.00 (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

9613491.2375

000011
EPA SAMPLE NO.

B070P1

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07054 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207054-04A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20728R22

Level: (low/med) LOW Date Received: 07/24/92

% Moisture: not dec. ____ Date Analyzed: 07/28/92

GC Column: PACK ID: 2.00 (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	1	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.

B070P1

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07054 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207054-04A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20728R22

Level: (low/med) LOW Date Received: 07/24/92

% Moisture: not dec. ____ Date Analyzed: 07/28/92

GC Column: PACK ID: 2.00 (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.

B072V4

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07054 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207054-05A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20728R23

Level: (low/med) LOW Date Received: 07/24/92

% Moisture: not dec. ____ Date Analyzed: 07/28/92

GC Column: PACK ID: 2.00 (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.

B072V4

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07054 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207054-05A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20728R23

Level: (low/med) LOW Date Received: 07/24/92

% Moisture: not dec. ____ Date Analyzed: 07/28/92

GC Column: PACK ID: 2.00 (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

EPA SAMPLE NO.

B072V8

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07054 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207054-06A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20728R24

Level: (low/med) LOW Date Received: 07/24/92

% Moisture: not dec. ____ Date Analyzed: 07/28/92

GC Column: PACK ID: 2.00 (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.

B072V8

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07054 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207054-06A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20728R24

Level: (low/med) LOW Date Received: 07/24/92

% Moisture: not dec. ____ Date Analyzed: 07/28/92

GC Column: PACK ID: 2.00 (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

EPA SAMPLE NO.

B072V9

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07054 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207054-07A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20728R25

Level: (low/med) LOW Date Received: 07/24/92

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

GC Column: PACK ID: 2.00 (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.

B072V9

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07054 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207054-07A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20728R25

Level: (low/med) LOW Date Received: 07/24/92

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

GC Column: PACK ID: 2.00 (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

9613491.2383

000019

EPA SAMPLE NO.

B072W3

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07054 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207054-08A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20728R26

Level: (low/med) LOW Date Received: 07/24/92

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

GC Column: PACK ID: 2.00 (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.

B072W3

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07054 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207054-08A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20728R26

Level: (low/med) LOW Date Received: 07/24/92

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

GC Column: PACK ID: 2.00 (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.

B072Y7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07054 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207054-09A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20729R04

Level: (low/med) LOW Date Received: 07/24/92

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

GC Column: PACK ID: 2.00 (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.

B072Y7

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07054 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207054-09A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20729R04

Level. (low/med) LOW Date Received: 07/24/92

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

GC Column: PACK ID: 2.00 (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.

B072Y7RE

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07054 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207054-09A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20729R07

Level: (low/med) LOW Date Received: 07/24/92

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

GC Column: PACK ID: 2.00 (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.

B072Y7RE

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07054 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207054-09A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20729R07

Level: (low/med) LOW Date Received: 07/24/92

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

GC Column: PACK ID: 2.00 (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.

B072Z1

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07054 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207054-10A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20729R05

Level: (low/med) LOW Date Received: 07/24/92

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

GC Column: PACK ID: 2.00 (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	1	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.

B072Z1

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07054 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207054-10A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20729R05

Level: (low/med) LOW Date Received: 07/24/92

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

GC Column: PACK ID: 2.00 (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

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

000027
EPA SAMPLE NO.

B070F7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07054 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207054-01B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20731S03

Level: (low/med) LOW Date Received: 07/24/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/28/92

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

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

B070F7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07054 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207054-01B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20731S03

Level: (low/med) LOW Date Received: 07/24/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/28/92

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.

B070F7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07054 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207054-01B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20731S03

Level: (low/med) LOW Date Received: 07/24/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/28/92

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.

B070N7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07054 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207054-03B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20731S04

Level: (low/med) LOW Date Received: 07/24/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/28/92

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

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

B070N7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07054 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207054-03B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20731S04

Level: (low/med) LOW Date Received: 07/24/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/28/92

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	69	
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.

B070N7

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07054 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207054-03B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20731S04

Level: (low/med) LOW Date Received: 07/24/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/28/92

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.

B072V4

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07054 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207054-05B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20731S05

Level: (low/med) LOW Date Received: 07/24/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/28/92

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.

B072V4

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07054 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207054-05B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20731S05

Level: (low/med) LOW Date Received: 07/24/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/28/92

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

EPA SAMPLE NO.

B072V4

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07054 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207054-05B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20731S05

Level: (low/med) LOW Date Received: 07/24/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/28/92

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: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown hydrocarbon	12.07	3	J

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B072V9

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07054 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207054-07B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20731S08

Level: (low/med) LOW Date Received: 07/24/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/28/92

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

000037
EPA SAMPLE NO.

B072V9

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07054 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207054-07B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20731S08

Level: (low/med) LOW Date Received: 07/24/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/28/92

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

EPA SAMPLE NO.

B072V9

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07054 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207054-07B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20731S08

Level: (low/med) LOW Date Received: 07/24/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/28/92

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.

B072Y7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07054 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207054-09B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20731S09

Level: (low/med) LOW Date Received: 07/24/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/28/92

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

000040
EPA SAMPLE NO.

B072Y7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07054 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207054-09B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20731S09

Level: (low/med) LOW Date Received: 07/24/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/28/92

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

EPA SAMPLE NO.

B072Y7

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07054 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207054-09B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20731S09

Level: (low/med) LOW Date Received: 07/24/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/28/92

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.

B070F7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07054 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207054-01B

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: 07/24/92

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 07/28/92

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.

B070N7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07054 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207054-03B

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: 07/24/92

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 07/28/92

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.

B072V4

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07054 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207054-05B

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: 07/24/92

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 07/28/92

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.

B072V9

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07054 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207054-07B

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: 07/24/92

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 07/28/92

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.

B072Y7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07054 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207054-09B

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: 07/24/92

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 07/28/92

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

9613491.2411

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
Five (5) water samples were submitted to TMA/Skinner & Sherman Laboratories, Inc. on July 27, 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 S207221.

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 cyanide, selenium, and thallium matrix 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

RECORD COPY

3-18-96
MC

WESTINGHOUSE/HANFORD
1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER:

B070F7

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

Lab Code: SKINER Case No.: N207129 SAS No.: SDG No.: B070F7

Matrix (soil/water): WATER Lab Sample ID: 07221-01S

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

% 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	17.3	U		P
7440-36-0	Antimony	16.5	U		P
7440-38-2	Arsenic	6.9	B		F
7440-39-3	Barium	12.5	B		P
7440-41-7	Beryllium	0.40	U		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	36300			P
7440-47-3	Chromium	4.5	B		P
7440-48-4	Cobalt	2.3	U		P
7440-50-8	Copper	4.4	B		P
7439-89-6	Iron	20.9	B		P
7439-92-1	Lead	4.3			F
7439-95-4	Magnesium	10700			P
7439-96-5	Manganese	1.3	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	6.0	U		P
7440-09-7	Potassium	5790			P
7782-49-2	Selenium	2.8	U	N	F
7440-22-4	Silver	2.3	U		P
7440-23-5	Sodium	20900			P
7440-28-0	Thallium	0.90	U	WN	F
7440-62-2	Vanadium	14.3	B		P
7440-66-6	Zinc	58.3			P
	Cyanide	10.0	U	N	CA

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

9613491.2413

WESTINGHOUSE/HANFORD
1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B070N7

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

Lab Code: SKINER Case No.: N207129 SAS No.: SDG No.: B070F7

Matrix (soil/water): WATER Lab Sample ID: 07221-02S

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

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	22.6	B		P
7440-36-0	Antimony	16.5	U		P
7440-38-2	Arsenic	4.2	B		F
7440-39-3	Barium	25.7	B		P
7440-41-7	Beryllium	0.40	U		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	40900			P
7440-47-3	Chromium	20.9			P
7440-48-4	Cobalt	2.3	U		P
7440-50-8	Copper	2.4	U		P
7439-89-6	Iron	226			P
7439-92-1	Lead	4.9			F
7439-95-4	Magnesium	7450			P
7439-96-5	Manganese	2.4	B		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	6.0	U		P
7440-09-7	Potassium	4640	B		P
7782-49-2	Selenium	2.8	U	N	F
7440-22-4	Silver	2.3	U		P
7440-23-5	Sodium	9520			P
7440-28-0	Thallium	0.90	U	WN	F
7440-62-2	Vanadium	4.8	B		P
7440-66-6	Zinc	10.1	U		P
	Cyanide	10.0	U	N	CA

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

WESTINGHOUSE/HANFORD
1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER:

B072V4

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

Lab Code: SKINER Case No.: N207129 SAS No.: SDG No.: B070F7

Matrix (soil/water): WATER Lab Sample ID: 07221-03S

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

% 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	17.3	U		P
7440-36-0	Antimony	16.5	U		P
7440-38-2	Arsenic	4.4	B	M	F
7440-39-3	Barium	23.5	B		P
7440-41-7	Beryllium	0.40	U		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	46000			P
7440-47-3	Chromium	6.0	B		P
7440-48-4	Cobalt	2.3	U		P
7440-50-8	Copper	2.4	B		P
7439-89-6	Iron	68.8	B		P
7439-92-1	Lead	4.1			F
7439-95-4	Magnesium	9840			P
7439-96-5	Manganese	1.8	B		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	6.0	U		P
7440-09-7	Potassium	5530			P
7782-49-2	Selenium	2.8	U	WN	F
7440-22-4	Silver	2.3	U		P
7440-23-5	Sodium	17100			P
7440-28-0	Thallium	1.0	B	WN	F
7440-62-2	Vanadium	9.2	B		P
7440-66-6	Zinc	10.1	U		P
	Cyanide	10.0	U	N	CA

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

004

WESTINGHOUSE/HANFORD
1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B072V9

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

Lab Code: SKINER Case No.: N207129 SAS No.: SDG No.: B070F7

Matrix (soil/water): WATER Lab Sample ID: 07221-04S

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

% 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	17.3	U		P
7440-36-0	Antimony	16.5	U		P
7440-38-2	Arsenic	2.2	U		F
7440-39-3	Barium	1.0	U		P
7440-41-7	Beryllium	0.40	U		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	14.3	U		P
7440-47-3	Chromium	3.7	U		P
7440-48-4	Cobalt	2.3	U		P
7440-50-8	Copper	2.4	U		P
7439-89-6	Iron	16.3	U		P
7439-92-1	Lead	5.0			F
7439-95-4	Magnesium	16.6	U		P
7439-96-5	Manganese	1.3	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	6.0	U		P
7440-09-7	Potassium	77.1	U		P
7782-49-2	Selenium	2.8	U	WN	F
7440-22-4	Silver	2.3	U		P
7440-23-5	Sodium	29.7	U		P
7440-28-0	Thallium	0.90	U	N	F
7440-62-2	Vanadium	3.3	U		P
7440-66-6	Zinc	10.1	U		P
	Cyanide	10.0	U	N	CA

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

WESTINGHOUSE/HANFORD
1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B072Y7

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

Lab Code: SKINER Case No.: N207129 SAS No.: SDG No.: B070F7

Matrix (soil/water): WATER Lab Sample ID: 07221-05S

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

% 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	17.3	U		P
7440-36-0	Antimony	16.5	U		P
7440-38-2	Arsenic	2.2	U	W	F
7440-39-3	Barium	24.1	B		P
7440-41-7	Beryllium	0.40	U		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	45900			P
7440-47-3	Chromium	6.7	B		P
7440-48-4	Cobalt	2.3	U		P
7440-50-8	Copper	2.4	U		P
7439-89-6	Iron	98.3	B		P
7439-92-1	Lead	2.4	B		F
7439-95-4	Magnesium	9890			P
7439-96-5	Manganese	2.4	B		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	8.8	B		P
7440-09-7	Potassium	5600			P
7782-49-2	Selenium	2.8	U	WN	F
7440-22-4	Silver	2.3	U		P
7440-23-5	Sodium	17300			P
7440-28-0	Thallium	0.90	U	WN	F
7440-62-2	Vanadium	10.7	B		P
7440-66-6	Zinc	10.1	U		P
	Cyanide	10.0	U	N	CA

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

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

WORKORDER S207221 CLIENT Hanford Nor No. SAMPLES:

PROTCL CLP **TURNARND** 33 Days _____ 5 _____

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

CUSTODIAN A. Benney SDG/BATCH N/A

CUSTODY SEAL: PRESENT/ABSENT/INTACT/NOT CLIENT CASE N2 07129

SHIPER & # Fed Ex 2521031166 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 7-27-92

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

N/A

	CLIENT ID	MATRIX	RECEIVED	PH*	TEST(S) & QC	HOLD TIME UP
1	B070F7 (UF)	Water	7/27/92	2.23/11.06	Tm /CN	
2	B070N7 (UF)	↓	↓	2.38/11.12	↓	
3	B072V4 (UF)			2.30/11.15		
4	B072V9 (UF)			2.25/11.23		
5	B072y7 (UF)			2.27/11.30	D.S	
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
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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 7/27/92 BP 161

* EPA/CLP required Rev 1.6 PAGE:

9613491.2418

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 7-22-92

Ice Chest No. SML-103

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986825-1

Offsite Property No. W92-0-0533-23

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO 70F7

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 70G0

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

~~BO 70G1~~

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

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: L.D. Walker	Received by: AJ SIMPSON	Date/Time: 7/23/92 0902
Relinquished by: AJ SIMPSON	Received by: Kermit Blum	Date/Time: 7-24-92 1100
Relinquished by: 7-24-92 Kermit Blum	Received by:	Date/Time: 7/27/92 9:20
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

* Sulfide aliquot for BO70F7 received crushed @ TMA/NORCAL - KB

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

9613491.2419

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/22/92 Time 1130 hour

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070F7	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 SP~~EC		
	~~(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)~~		
~~B070G1~~	~~3, 40ml, Gs, WATER, CLP VOA~~		
	KT 7/23/92		
B070G6	3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986 925-1
			OPC # W92-0-0533-23
			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 7-24-92

Analysis Required _____

168

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

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

A-6000-406 (

9615991292

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 7-22-92

Ice Chest No. SML-29

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986925-1

Offsite Property No. W92-0-0533-22

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO70N7

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)~~

BO70P0

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

* ~~BO70P1~~

~~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: AJ SIMPSON AJ Simpson	Date/Time: 7/23/92 0853
Relinquished by: AJ SIMPSON AJ Simpson	Received by: Kermit Blum	Date/Time: 7-24-92 1100
Relinquished by: 7-24-92 Kermit Blum	Received by: [illegible]	Date/Time: 7/27/92 9:30
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments: * One vial B070P1 received @ TMA/NORCAL with air bubbles - KB

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

9613491.2421

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/22/92 Time 1310 hour

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070N7	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)~~		
~~B070P1~~	~~3, 40ml, Gs, WATER, CLP VOA~~		Cone vial bubbles!
	1 KT 7/22/92		
B070P0	3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 2509986825-1
			OPC # W92-0-0533-22
			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 7-24-92

Analysis Required

179

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

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

A-6000-406 (

9613491.2922

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 7-22-92

Ice Chest No. SML-111

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986825-1

Offsite Property No. W92-0-0533-22

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B072V4

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)~~

* ~~B072V7~~ B072V7

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

SAMPLE I.D. is B072Z0

~~B072V8~~

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

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: L.D. Walker LD Walker	Received by: AJ SIMPSON AJ Simpson	Date/Time: 7/23/92 0857
Relinquished by: AJ SIMPSON AJ Simpson	Received by: Kermit Blum	Date/Time: 7-24-92 1100
Relinquished by: 7-24-92 Kermit Blum	Received by: [illegible]	Date/Time: 7/27/92 9:30
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

* ~~Did not receive sample B072V7 @ Tma/Nocent~~

~~We did receive a sample B072Z0, for metals.~~ KB

Correct aliquot was received, intact & properly labeled. KB

171

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

9613191.2923

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/22/92 Time 0850 hour

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B072V4	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~~		
	~~1, 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)~~		
~~B072V7~~	~~3, 40ml, Gs, WATER, CLP VOA~~		
	1 KT 7/22/92		
~~B072V7~~	3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
B072V7			BOL # 2509806825-1
			OPC # WG2-0-0533-22
			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 7-24-92

Analysis Required _____

172

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

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

A-6000-406 (C

9613491.2424

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 7-22-92

Ice Chest No. SML-84

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986925-1

Offsite Property No. W92-0-0533-23

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B072V9

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 SOL~~IDS
~~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)~~

B072W2

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

~~B072W3~~

~~3, 40ml, Gs, WATER, CLP VOA~~
2 KT 7/23/92

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: L.D. Walker LD Walker	Received by: AJ Simpson AJ Simpson	Date/Time: 7/23/92 0855
Relinquished by: AJ Simpson AJ Simpson	Received by: Kermit Blum	Date/Time: 7-24-92 1100
Relinquished by: 7-24-92 Kermit Blum	Received by: [illegible]	Date/Time: 7/24/92 9:30
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

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

9613491.2425

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/22/92 Time 1400 hour

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B072V9	1; 1L, P; WATER; CLP-ICP/AA METALS & MERCURY (HNO_3) 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), 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)~~		
	2 KT 7/23/92		
~~B072W3~~	~~3, 40ml, Gs, WATER, CLP-VOA~~		
	1 KT 7/22/92		
B072W2	3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250996825-1
			OPC # W92-0-0533-23
			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 7-24-92

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

174

9613491.2426

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 7-22-92

Ice Chest No. 207

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986425-1

Offsite Property No. W92-0-0533-24

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B072Y7

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)~~

B072Z0

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

~~B072Z6~~

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

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: L.D. Walker	Received by: A J SIMPSON	Date/Time: 7/23/92 0858
Relinquished by: AJ SIMPSON	Received by: Kermit Blum	Date/Time: 7-24-92 1100
Relinquished by: Kermit Blum 7-24-92	Received by:	Date/Time: 7/27/92 9:30
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

175

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

9613491.2927

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/23/92 Time 0950 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B072Y7	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)~~		
~~B072Z1~~	~~3, 40ml, Gs, WATER, CLP VOA~~		
	kr 7/23/92		
B072Z0	3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED # B072Y7		
			BOL # 250986925-1
			OPC # W92-0-0533-24
			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 7-24-92

Analysis Required _____

176

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

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

A-6000-406 (0

9613491.2428

11/25/92
000001

Page 1 Skinner&Sherman REPORT Work Order # S2-07-223

Received: 07/27/92 09/10/92 10:07:02

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

ATTEN Dan Steurmer

CLIENT HANFORD NOR SAMPLES 6
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 N2-07-129
TAKEN BY CLIENT
TRANS FED EX# 2521031166
TYPE 5 WATERS (NO3NO2)
P.O. # N2-07-129
INVOICE under separate cover

SAMPLE IDENTIFICATION

01 B070F7
02 B070N7
03 B072V4
04 B072V9
05 B072Y7
05 B072Y7 DUPL
05 B072Y7 SPIKE
06 LCS

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 # S2-07-223

Received: 07/27/92 Results by Sample

SAMPLE ID B070F7 SAMPLE # 01 FRACTIONS: A
Date & Time Collected 07/22/92 11:30:00 Category WATER

NO3NO2 4.98
mg N/L

SAMPLE ID B070N7 SAMPLE # 02 FRACTIONS: A
Date & Time Collected 07/22/92 13:10:00 Category WATER

NO3NO2 2.27
mg N/L

SAMPLE ID B072V4 SAMPLE # 03 FRACTIONS: A
Date & Time Collected 07/22/92 08:50:00 Category WATER

NO3NO2 5.04
mg N/L

SAMPLE ID B072V9 SAMPLE # 04 FRACTIONS: A
Date & Time Collected 07/22/92 14:00:00 Category WATER

NO3NO2 <0.25
mg N/L

SAMPLE ID B072Y7 SAMPLE # 05 FRACTIONS: A
Date & Time Collected 07/22/92 08:50:00 Category WATER

NO3NO2 5.20
mg N/L

SAMPLE ID B072Y7 DUPL SAMPLE # 05 FRACTIONS: B
Date & Time Collected 07/22/92 08:50:00 Category WATER

NO3NO2 5.39
mg N/L

SAMPLE ID B072Y7 SPIKE SAMPLE # 05 FRACTIONS: C
Date & Time Collected 07/22/92 08:50:00 Category WATER

NO3NO2 7.19
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 satisfie 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. Clie 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 invoi 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 f 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 3 Skinner&Sherman REPORT Work Order # S2-07-223

Received: 07/27/92 Results by Sample

SAMPLE ID LCS SAMPLE # 06 FRACTIONS: A

Date & Time Collected not specified Category WATER

NO3NO2 1.92

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 satisfie 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. Clie 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 invoi 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 f 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/Skinner & Sherman Labs SAMPLE LOG-IN

WORKORDER 5207223 CLIENT Hanford Wor No. SAMPLES:

PROTCL CLP TURNARND 33 Days 5

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

CUSTODIAN A. Benner SDG/BATCH N/A

CUSTODY SEAL: PRESENT/ABSENT/INTACT/NOT CLIENT CASE N207129

SHIPER & # Fed Ex 2521031166 PO/CONTRACT# d

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

CHAIN OF CUSTODY: PRESENT/ABSENT/NA, # 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 7/27/92

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

N/A

	CLIENT ID	MATRIX	RECEIVED	PH*	TEST(S) & QC	HOLD TIME U
1	B070F7	water	7/27/92	2.34	NO3 NO2	
2	B070N7	↓	↓	2.09	↓	
3	B072V4			2.14		
4	B072V9			2.20		
5	B072Y7			2.16	DS	
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
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19						
20						
21						
22						
23						
24						
25						
26						
27						

Sampl[illegible] site known to have Rad-Contamination: YES [illegible]

Sampl[illegible] measurable amounts [illegible] Material: YES [illegible]

SU[illegible] PO:

[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 7-22-92

Ice Chest No. SML-103

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250996 825-1

Offsite Property No. W92-0-0533-23

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO 70F7

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 70G0

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

~~BO 70G1~~

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

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: L.D. Walker	Received by: AJ SIMPSON	Date/Time: 7/23/92 0902
Relinquished by: AJ SIMPSON	Received by: Kermit Blum	Date/Time: 7-24-92 1100
Relinquished by: 7-24-92 Kermit Blum	Received by:	Date/Time: 7/27/92 9:20
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

* Sulfide aliquot for BO70F7 received crushed @ TMA/NORCAL - KB

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

9613491.2433

000033

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector: Les Walker/Kirby Lee Date Sampled: 7/22/92 Time: 1130 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070F7	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)~~		
~~B070G1~~	~~3, 40ml, Gs, WATER, CLP VOA~~		
	KT 7/23/92		
B070G6	3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986 925-1
			OPC # W92-0-0523-23
			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: 7-24-92

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

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 7-22-92

Ice Chest No. SML-29

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986825-1

Offsite Property No. W92-0-0533-22

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO70N7

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)~~

BO70P0

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

* ~~BO70P1~~

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

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: L.D. Walker LD Walker	Received by: AJ SIMPSON AJ Simpson	Date/Time: 7/23/92 0853
Relinquished by: AJ SIMPSON AJ Simpson	Received by: Kermit Blum	Date/Time: 7-24-92 1100
Relinquished by: 7-24-92 Kermit Blum	Received by: [illegible]	Date/Time: 7/27/92 9:30
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments: * One vial B070P1 received @ TMA/NORCAL with air bubbles - KB

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/22/92 Time 1310 hour

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070N7	1; 1L, P; WATER; CLP-ICP/AA METALS & MERCURY (HNO_3) 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), 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)~~		
~~B070P1~~	~~3, 40ml, Gs, WATER, CLP VOA~~		Cone vial bubbles!
	KT 7/22/92		
B070P0	3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986825-1
			OPC # WA2-0-0533-22
			TASK # 72-243

Field Information**

Special Handling and/or Storage

Possible Sample Hazards

PART II: LABORATORY SECTION

Received by Kermit Blum Title Sample Control Supervisor Date 7-24-92

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

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 7-22-92

Ice Chest No. SML-111

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986825-1

Offsite Property No. W92-0-0533-22

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B072V4

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)~~

* ~~B072V7~~ B072Z0

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

SAMPLE I.D # B072Z0

~~B072V8~~

~~3, 40ml, G3, WATER, CLP VOA~~

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: L.D. Walker	Received by: AJ SIMPSON	Date/Time: 7/23/92 0857
Relinquished by: AJ SIMPSON	Received by: Kermit Blum	Date/Time: 7-24-92 1100
Relinquished by: 7-24-92 Kermit Blum	Received by:	Date/Time: 7/27/92 9:30
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

* Did not receive sample B072V7 @ TMA / Norcal.
We did receive a sample B072Z0, for metals. KB

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

9613491.2457

000037

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/22/92 Time 0850 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B072V4	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~~		
	~~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)~~		
~~B072V5~~	~~3, 40ml, Gs, WATER, CLP VOA~~		
	1 KT 7/22/92		
~~B072V7~~	3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED * B072Z0)		
B072Z0			BOL # 2509986825-1
			OPC # W92-0-0533-22
			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 7-24-92

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 7-22-92

Ice Chest No. 5ML-84

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250996925-1

Offsite Property No. W92-0-0933-23

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO72V9

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, 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)~~

BO72W2

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

~~BO72W3~~

~~3, 40ml, G3, WATER, CLP VOA~~
2 KT 7/23/92

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: L.D. Walker LD Walker	Received by: AJ Simpson AJ Simpson	Date/Time: 7/23/92 0855
Relinquished by: AJ Simpson AJ Simpson	Received by: Kermit Blum	Date/Time: 7-24-92 1100
Relinquished by: Kermit Blum 7-24-92	Received by: [illegible]	Date/Time: 7/24/92 9:30
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 7/22/92 Time 1400 hou.

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B072V9	1; 1L, P; WATER; CLP-ICP/AA METALS & MERCURY (HNO_3) 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), 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)~~		
	2 KT 7/23/92		
~~B072W3~~	~~3; 40ml; Gs; WATER; CLP VOA~~		
	1 KT 7/22/92		
B072W2	3 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250996925-1
			OPC # W92-0-0533-23
			TASK # 92-243

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

Received by Hermit Blum Title Sample Control Supervisor Date 7-24-92

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

9613491.2440

000040

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 7-22-92

Ice Chest No. 207

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986425-1

Offsite Property No. W92-0-0533-24

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO 7297

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 7220

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

~~BO 7221~~

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

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: L. D. Walker	Received by: A J SIMPSON	Date/Time: 7/23/92 0858
Relinquished by: A J SIMPSON	Received by: Kermit Blum	Date/Time: 7-24-92 1100
Relinquished by: Kermit Blum 7-24-92	Received by:	Date/Time: 7/27/92 9:30
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

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

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/23/92 Time 0950 hour

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B07247	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)~~		
~~B07251~~	~~3, 40ml, Gs, WATER, CLP VOA~~		
	kr 7/23/92		
B07250	3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED # B07247		
			BOL # 250996825-1
			OPC # W92-0-0533-24
			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 7-24-92

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

9613481.2442

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
Five (5) water samples were submitted to TMA/Skinner & Sherman Laboratories, Inc. on July 27, 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 S207222.

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 sample with the following exceptions:

The mercury and 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

RECORD COPY

3-18-96
MC

9613491.2443

WESTINGHOUSE/HANFORD
1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B070G0

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

Lab Code: SKINER Case No.: N207129 SAS No.: SDG No.: B070G0

Matrix (soil/water): WATER Lab Sample ID: 07222-01S

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

% 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	17.3	U		P
7440-36-0	Antimony	16.5	U		P
7440-38-2	Arsenic	6.4	B		F
7440-39-3	Barium	10.2	B		P
7440-41-7	Beryllium	0.40	U		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	34300			P
7440-47-3	Chromium	3.7	U		P
7440-48-4	Cobalt	2.3	U		P
7440-50-8	Copper	3.6	B		P
7439-89-6	Iron	41.8	B		P
7439-92-1	Lead	5.0			F
7439-95-4	Magnesium	10200			P
7439-96-5	Manganese	1.3	U		P
7439-97-6	Mercury	0.20	U	N	CV
7440-02-0	Nickel	6.0	U		P
7440-09-7	Potassium	5600			P
7782-49-2	Selenium	3.6	U	N	F
7440-22-4	Silver	2.3	U		P
7440-23-5	Sodium	20100			P
7440-28-0	Thallium	1.6	U		F
7440-62-2	Vanadium	15.7	B		P
7440-66-6	Zinc	63.9			P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:
FILTERED

WESTINGHOUSE/HANFORD

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B070P0

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

Lab Code: SKINER Case No.: N207129 SAS No.: SDG No.: B070G0

Matrix (soil/water): WATER Lab Sample ID: 07222-02S

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

% 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	17.3	U		P
7440-36-0	Antimony	16.5	U		P
7440-38-2	Arsenic	3.0	B		F
7440-39-3	Barium	25.8	B		P
7440-41-7	Beryllium	0.40	U		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	39400			P
7440-47-3	Chromium	18.8			P
7440-48-4	Cobalt	2.3	U		P
7440-50-8	Copper	2.4	U		P
7439-89-6	Iron	16.3	U		P
7439-92-1	Lead	2.2	U		F
7439-95-4	Magnesium	7300			P
7439-96-5	Manganese	1.3	U		P
7439-97-6	Mercury	0.20	U	N	CV
7440-02-0	Nickel	6.0	U		P
7440-09-7	Potassium	4630	B		P
7782-49-2	Selenium	3.6	U	WN	F
7440-22-4	Silver	2.3	U		P
7440-23-5	Sodium	9450			P
7440-28-0	Thallium	1.6	U		F
7440-62-2	Vanadium	5.9	B		P
7440-66-6	Zinc	10.1	U		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:
FILTERED

WESTINGHOUSE/HANFORD

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B072V7

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

Lab Code: SKINER Case No.: N207129 SAS No.: SDG No.: B070G0

Matrix (soil/water): WATER Lab Sample ID: 07222-03S

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

% 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	24.2	B		P
7440-36-0	Antimony	16.5	U		P
7440-38-2	Arsenic	4.6	B		F
7440-39-3	Barium	21.9	B		P
7440-41-7	Beryllium	0.40	U		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	43900			P
7440-47-3	Chromium	3.7	U		P
7440-48-4	Cobalt	2.3	U		P
7440-50-8	Copper	2.4	U		P
7439-89-6	Iron	25.6	B		P
7439-92-1	Lead	2.2	U		F
7439-95-4	Magnesium	9580			P
7439-96-5	Manganese	1.6	B		P
7439-97-6	Mercury	0.20	U	N	CV
7440-02-0	Nickel	6.0	U		P
7440-09-7	Potassium	5480			P
7782-49-2	Selenium	3.6	U	WN	F
7440-22-4	Silver	2.3	U		P
7440-23-5	Sodium	17100			P
7440-28-0	Thallium	1.6	U		F
7440-62-2	Vanadium	9.8	B		P
7440-66-6	Zinc	10.1	U		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:
FILTERED

WESTINGHOUSE/HANFORD
1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER:

B072W2

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

Lab Code: SKINER Case No.: N207129 SAS No.: SDG No.: B070G0

Matrix (soil/water): WATER Lab Sample ID: 07222-04S

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

% 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	17.3	U		P
7440-36-0	Antimony	16.5	U		P
7440-38-2	Arsenic	2.4	U		F
7440-39-3	Barium	1.0	U		P
7440-41-7	Beryllium	0.40	U		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	20.1	B		P
7440-47-3	Chromium	3.7	U		P
7440-48-4	Cobalt	2.3	U		P
7440-50-8	Copper	2.4	U		P
7439-89-6	Iron	16.3	U		P
7439-92-1	Lead	2.2	U		F
7439-95-4	Magnesium	16.6	U		P
7439-96-5	Manganese	1.3	U		P
7439-97-6	Mercury	0.20	U	N	CV
7440-02-0	Nickel	6.0	U		P
7440-09-7	Potassium	77.1	U		P
7782-49-2	Selenium	3.6	U	N	F
7440-22-4	Silver	2.3	U		P
7440-23-5	Sodium	30.6	B		P
7440-28-0	Thallium	1.6	U		F
7440-62-2	Vanadium	3.3	U		P
7440-66-6	Zinc	10.1	U		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:
FILTERED

9613491.2947

WESTINGHOUSE/HANFORD

1

SAMPLE NUMBER:

B072Z0

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: SKINER Case No.: N207129 SAS No.: SDG No.: B070G0

Matrix (soil/water): WATER Lab Sample ID: 07222-05S

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

% 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	21.9	B		P
7440-36-0	Antimony	16.5	U		P
7440-38-2	Arsenic	4.6	B	W	F
7440-39-3	Barium	21.5	B		P
7440-41-7	Beryllium	0.40	U		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	43500			P
7440-47-3	Chromium	4.8	B		P
7440-48-4	Cobalt	2.3	U		P
7440-50-8	Copper	2.4	U		P
7439-89-6	Iron	17.2	B		P
7439-92-1	Lead	2.2	U		F
7439-95-4	Magnesium	9470			P
7439-96-5	Manganese	1.5	B		P
7439-97-6	Mercury	0.20	U	N	CV
7440-02-0	Nickel	6.0	U		P
7440-09-7	Potassium	5310			P
7782-49-2	Selenium	3.6	U	WN	F
7440-22-4	Silver	2.3	U		P
7440-23-5	Sodium	16700			P
7440-28-0	Thallium	1.6	U		F
7440-62-2	Vanadium	10.9	B		P
7440-66-6	Zinc	10.1	U		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:
FILTERED

9613491.2448

TMA/Skinner & Sherman Labs SAMPLE LOG-IN

WORKORDER S207227 CLIENT Hanford Nuc No. SAMPLES: 5

PROTCL CLP TURNARND 33 Day (Soil) (Water) (Specify Other

COOLER TEMP: 4 oC, or NA

CUSTODIAN R. Prouix SDG/BATCH N/A

CUSTODY SEAL: PRESENT/ABSENT/INTACT/NOT CLIENT CASE N207129

SHIPER & # Fed Ex 2521031166 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 7/27/92

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

N/A

	CLIENT ID	MATRIX	RECEIVED	PH*	TEST(S) & QC	HOLD TIME UI
1	B070G0 (F)	water	7/27/92	2.36	TM	
2	B070P0 (F)	↓	↓	2.29	↓	
3	B072Z0 (F)	↓	↓	2.16	↓	
4	B072W2 (F)	↓	↓	2.19	↓	
5	B072Z0 (F)	↓	↓	2.30	D.S ↓	
6						
7						
8						
9						
10						
11						
12						
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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 7/27/92 BP

129

* EPA/CLP required Rev 1.6 PAGE:

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 7-22-92

Ice Chest No. SML-103

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986825-1

Offsite Property No. W92-0-0533-23

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B0 70F7

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 70G0

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

~~B0 70G1~~

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

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: L.D. Walker	Received by: AJ SIMPSON	Date/Time: 7/23/92 0902
Relinquished by: AJ SIMPSON	Received by: Kermit Blum	Date/Time: 7-24-92 1100
Relinquished by: 7-24-92 Kermit Blum	Received by:	Date/Time: 7/27/92 9:30
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

* Sulfide aliquot for B070F7 received crushed @ TMA/NORCAL - KB

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

961349.2450

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/22/92 Time 1130 hour

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070F7	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)~~		
~~B070G1~~	~~3, 40ml, Gs, WATER, CLP VOA~~		
	KT 7/23/92		
B070G6	~~3~~, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986 925-1
			OPC # W92-0-0523-23
			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 7-24-92

Analysis Required

13

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

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

A-6000-406

9613491.2451

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 7-22-92

Ice Chest No. SML-29

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986825-1

Offsite Property No. W92-0-0533-22

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B070N7

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)~~

B070P0

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

* ~~B070P1~~

~~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: AJ SIMPSON AJ Simpson	Date/Time: 7/23/92 0853
Relinquished by: AJ SIMPSON AJ Simpson	Received by: Kermit Blum	Date/Time: 7-24-92 1100
Relinquished by: 7-24-92 Kermit Blum	Received by: [illegible]	Date/Time: 7/27/92 9:30
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments: * One vial B070P1 received @ TMA/NORCAL with air bubbles - KB

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

9613491.2152

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/22/92 Time 1310 hour

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070N7	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)~~		
~~B070P1~~	~~3, 40ml, Gs, WATER, CLP VOA~~		Conc vial bubbles!
	1 KT 7/22/92		
B070P0	3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986825-1
			OPC # W92-0-0533-22
			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 7-24-92

Analysis Required _____

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

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

A-6000-406

9613491.2453

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 7-22-92

Ice Chest No. SML-111

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986925-1

Offsite Property No. W92-0-0533-22

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B072V4

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)~~

* ~~B072V7~~ B072V7

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

SAMPLE I.D # B072Z0

~~B072V8~~

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

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: L.D. Walker	Received by: AJ SIMPSON	Date/Time: 7/23/92 0857
Relinquished by: AJ SIMPSON	Received by: Kermit Blum	Date/Time: 7-24-92 1100
Relinquished by: 7-24-92 Kermit Blum	Received by:	Date/Time: 7/27/92 9:30
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

* ~~Did not receive sample B072V7 @ TMA/Norcat.~~

~~We did receive a sample B072Z0, for metals.~~ KB

Correct aliquot was received, intact & properly labeled. KB

136

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

9613491.2454

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/22/92 Time 0850 hour

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B072V4	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~~		
	~~1, 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)~~		
~~B072V6~~	~~3, 40ml, Gs, WATER, CLP-VOA~~		
	1 KT 7/22/92		
~~B072V7~~	~~3~~ 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED # B072V3)		
B072V7			BOL # 2509866825-1
			OPC # WG2-0-0533-22
			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 7-24-92

Analysis Required _____

137

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

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

A-6000-406 (

9613491.2455

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 7-22-92

Ice Chest No. SML-84

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250996925-1

Offsite Property No. W92-0-0533-23

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO72V9

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 (ZING ACETATE+NaOH pH>9)~~
~~1, 500ml, G, WATER, AMMONIA, CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)~~
~~1, 1L, P, WATER, Tc-99 (HNO3)~~

BO72W2

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

~~BO72W3~~

~~3, 40ml, Gs, WATER, CLP VOA~~
2 KT 7/23/92

[] Field Transfer of Custody

Relinquished by:	Received by:	Date/Time:
L.D. Walker LD Walker	AJ Simpson AJ Simpson	7/23/92 0855
AJ Simpson AJ Simpson	Kermit Blum	7-24-92 1100
Kermit Blum 7-24-92	[illegible]	7/24/92 9:30

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

138

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

9613491.2456

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/22/92 Time 1400 hou

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B072V9	1; 1L, P; WATER; CLP-ICP/AA METALS & MERCURY (HNO_3) 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), 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)~~		
	2 KT 7/23/92		
~~B072W3~~	~~3, 40ml, Gs, WATER, CLP VOA~~		
	1 KT 7/22/92		
B072W2	3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250996825-1
			OPC # W92-0-0533-23
			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 7-24-92

Analysis Required

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

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

A-6000-406 (

9613491.2457

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 7-22-92

Ice Chest No. 207

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986425-1

Offsite Property No. W92-0-0533-24

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B072277

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)~~

B072270

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

~~B072276~~

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

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: L.D. Walker	Received by: A J SIMPSON	Date/Time: 7/23/92 0858
Relinquished by: AJ SIMPSON	Received by: Kermit Blum	Date/Time: 7-24-92 1100
Relinquished by: Kermit Blum 7-24-92	Received by:	Date/Time: 7/27/92 9:30
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

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

9613491.2458

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/22/92 Time 0950 hou:

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B072Y7	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)~~		
~~B072Z1~~	~~3, 40ml, Gs, WATER, CLP VOA~~		
	kr 7/23/92		
B072Z0	3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED # B072Y7		
			BOL # 250986925-1
			OPC # W92-0-0533-24
			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 7-24-92

Analysis Required _____

141

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

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

A-6000-406 (

9613491.2459

~~B070D7 TMA 239~~
B070J7-TMA-233

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

SEP 1992
RECEIVED
OSM DMO

September 15, 1992

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

Quality Control Narrative

Scope
Four (04) water samples were submitted to TMA/Skinner & Sherman Laboratories, Inc. on July 24, 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 S207205.

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 mercury, selenium, and thallium matrix spike recovery exceeded the control limit requirements.

The mercury and selenium 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

3-18-96
MC

WESTINGHOUSE/HANFORD
1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B070D7

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

Lab Code: SKINER Case No.: N2-07-118SAS No.: SDG No.: B070D7

Matrix (soil/water): WATER Lab Sample ID: 07205-01S

Level (low/med): LOW Date Received: 07/24/92

% 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	33.4	B		P
7440-36-0	Antimony	16.5	U		P
7440-38-2	Arsenic	6.4	B		F
7440-39-3	Barium	18.0	B		P
7440-41-7	Beryllium	0.40	U		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	34500			P
7440-47-3	Chromium	8.0	B		P
7440-48-4	Cobalt	2.3	U		P
7440-50-8	Copper	2.4	U		P
7439-89-6	Iron	665			P
7439-92-1	Lead	6.6			F
7439-95-4	Magnesium	10500			P
7439-96-5	Manganese	7.2	B		P
7439-97-6	Mercury	0.25		N*	CV
7440-02-0	Nickel	6.0	U		P
7440-09-7	Potassium	6190			P
7782-49-2	Selenium	3.7	U	*	F
7440-22-4	Silver	2.3	U		P
7440-23-5	Sodium	22500			P
7440-28-0	Thallium	1.6	U	WN	F
7440-62-2	Vanadium	15.6	B		P
7440-66-6	Zinc	58.2			P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

002

WESTINGHOUSE/HANFORD
1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B070F2

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

Lab Code: SKINER Case No.: N2-07-118SAS No.: SDG No.: B070D7

Matrix (soil/water): WATER Lab Sample ID: 07205-02S

Level (low/med): LOW Date Received: 07/24/92

% 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	17.3	U		P
7440-36-0	Antimony	16.5	U		P
7440-38-2	Arsenic	5.2	B		F
7440-39-3	Barium	8.9	B		P
7440-41-7	Beryllium	0.40	U		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	32400			P
7440-47-3	Chromium	23.2			P
7440-48-4	Cobalt	2.3	U		P
7440-50-8	Copper	2.4	U		P
7439-89-6	Iron	72.5	B		P
7439-92-1	Lead	2.2	U		F
7439-95-4	Magnesium	9900			P
7439-96-5	Manganese	1.5	B		P
7439-97-6	Mercury	0.20	U	N*	CV
7440-02-0	Nickel	6.0	U		P
7440-09-7	Potassium	6860			P
7782-49-2	Selenium	3.7	U	*	F
7440-22-4	Silver	2.3	U		P
7440-23-5	Sodium	15100			P
7440-28-0	Thallium	1.6	U	N	F
7440-62-2	Vanadium	25.8	B		P
7440-66-6	Zinc	29.3			P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

003

WESTINGHOUSE/HANFORD
1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B070G2

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

Lab Code: SKINER Case No.: N2-07-118SAS No.: SDG No.: B070D7

Matrix (soil/water): WATER Lab Sample ID: 07205-03S

Level (low/med): LOW Date Received: 07/24/92

% 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	187	B		P
7440-36-0	Antimony	16.5	U		P
7440-38-2	Arsenic	5.9	B		F
7440-39-3	Barium	22.4	B		P
7440-41-7	Beryllium	0.40	U		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	34300			P
7440-47-3	Chromium	4.4	B		P
7440-48-4	Cobalt	2.3	U		P
7440-50-8	Copper	2.4	U		P
7439-89-6	Iron	263			P
7439-92-1	Lead	2.2	U	W	F
7439-95-4	Magnesium	8980			P
7439-96-5	Manganese	17.8			P
7439-97-6	Mercury	0.20	U	N*	CV
7440-02-0	Nickel	9.3	B		P
7440-09-7	Potassium	5330			P
7782-49-2	Selenium	3.7	U	*	F
7440-22-4	Silver	2.3	U		P
7440-23-5	Sodium	14300			P
7440-28-0	Thallium	1.6	U	WN	F
7440-62-2	Vanadium	11.8	B		P
7440-66-6	Zinc	15.0	B		P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

004

9613491.2463

WESTINGHOUSE/HANFORD
1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B072T9

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

Lab Code: SKINER Case No.: N2-07-118SAS No.: SDG No.: B070D7

Matrix (soil/water): WATER Lab Sample ID: 07205-04S

Level (low/med): LOW Date Received: 07/24/92

% 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	180	B		P
7440-36-0	Antimony	16.5	U		P
7440-38-2	Arsenic	5.1	B		F
7440-39-3	Barium	18.9	B		P
7440-41-7	Beryllium	0.40	U		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	34200			P
7440-47-3	Chromium	8.0	B		P
7440-48-4	Cobalt	2.3	U		P
7440-50-8	Copper	2.4	U		P
7439-89-6	Iron	842			P
7439-92-1	Lead	8.6			F
7439-95-4	Magnesium	10300			P
7439-96-5	Manganese	19.7			P
7439-97-6	Mercury	0.20	U	N*	CV
7440-02-0	Nickel	6.0	U		P
7440-09-7	Potassium	6110			P
7782-49-2	Selenium	3.7	U	*	F
7440-22-4	Silver	2.3	U		P
7440-23-5	Sodium	22300			P
7440-28-0	Thallium	1.6	U	N	F
7440-62-2	Vanadium	14.8	B		P
7440-66-6	Zinc	67.2			P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

005

TMA/Skinner & Sherman Labs SAMPLE LOG-IN

WORKORDER 52-07-205 CLIENT HANFORD NOR No. SAMPLES:

PROTCL CLP TURNARND 33 days — (Soil) 4 (Water) (Specify Other

COOLER TEMP: 4 oC, or NA

CUSTODIAN Benney A. SDG/BATCH N/A

CUSTODY SEAL: PRESENT/ABSENT/(INTACT)/NOT CLIENT CASE N2 07-118

SHIPER & # Fedex # 2521031185 PO/CONTRACT# ↓

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

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

SAMPLE CONTAINERS-(INTACT)/BROKEN COMMENTS

CLIENT COMMENT? YES/(NO)

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

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

SHIPMENT DATES 7-24-92

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

N/A

	CLIENT ID	MATRIX	RECEIVED	PH*	TEST(S) & QC	HOLD TIME U
1	B07ØD7	WATER	7-24-92	2.2/11.8	TM & CN	7-21
2	ØF2	↓	↓	2.2/11.7	↓	↓
3	ØG2	↓	↓	2.3/11.7	↓	↓
4	ZT9	↓	↓	2.1/11.8	↓	↓
5						
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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 ___

* EPA/CLP required Rev 1.6 PAGE: 146

9613491.2965

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 7-21-92

Ice Chest No. SML-80

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 2509869923-0

Offsite Property No. W92-0-0533-20

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B0 7007

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)~~

B0 70F0

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

~~* B0 70F1~~

~~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: AJ Simpson AJ Simpson	Date/Time: 7/22/92 0845
Relinquished by: AJ Simpson AJ Simpson	Received by: Kermit Blum	Date/Time: 7-23-92 1130
Relinquished by: 7-23-92 Kermit Blum	Received by: [illegible]	Date/Time: 7/24/92 9:30
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments: * All 3 vials B070F1 received @ TMA/Norcal w/ bubbles - KB

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

9613491.2466

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/21/92 Time 0930 hour

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070D7	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)~~		
~~B070F1~~	~~3, 40ml, Gs, WATER, CLP-VOA~~		~~(bubbles in samples)~~
	KT 7/22/92		
B070F0	8, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 2509869223-6
			OPC # W92-0-0533-20
			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 7-23-92

Analysis Required

148

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

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

A-6000-406

9613491.2967

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 7-21-92

Ice Chest No. 281

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250985923-0

Offsite Property No. W92-0-0533-19

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B070F2

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)~~

B070F5

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

* ~~B070F6~~

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

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: L.D. Walker	Received by: AJ SIMPSON	Date/Time: 7/22/92 0947
Relinquished by: AJ SIMPSON	Received by: Kermit Blum	Date/Time: 7-23-92 1130
Relinquished by: 7-23-92 Kermit Blum	Received by:	Date/Time: 7/24/92 9:30
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments: * All 3 vials Received @ TMA/NorCal with air bubbles (B070F6) - KB

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

9613491.2468

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/21/92 Time 1350 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070F2	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 vial 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) (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 7/22/92		
~~B070F6~~	~~3, 40ml, Gs, WATER, CLP VOA~~		~~(bubbles all 3 vials)~~
	KT 7/22/92		
B070F5	3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 2509869 23-0
			OPC # WA2-0-0533-19
			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 7-23-92

Analysis Required

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

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

150

A-6000-406 (0

9613491.2469

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 7-21-92

Ice Chest No. SML-113

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986923-0

Offsite Property No. W92-0-0533-19

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO 70G2

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)~~

BO 70G5

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

~~BO 70G6~~

~~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: AJ Simpson *AJ Simpson*	Date/Time: 7/22/92 0845
Relinquished by: AJ Simpson *AJ Simpson*	Received by: Kermit Blum	Date/Time: 7-23-92 1130
Relinquished by: 7.23-92 Kermit Blum	Received by: *[illegible]*	Date/Time: 7/24/92 9:30
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

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

9613491.2470

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/21/92 Time 1140 hour

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070G2	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)~~		
~~B070G6~~	~~3, 40ml, Gs, WATER, CLP-VOA~~		
	1 LT 7/22/92		
B070G5	3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250996923-0
			OPC # W92-0-0533-19
			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 7-23-92

Analysis Required

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

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

A-6000-406

9613491.2471

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 7-21-92

Ice Chest No. Curly

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986923-0

Offsite Property No. W92-0-0533-20

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B072T9

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)~~

B072V2

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

~~* B072V3~~

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

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: L.D. Walker	Received by: AJ Simpson	Date/Time: 7/22/92 0840
Relinquished by: AMY SIMPSON	Received by:	Date/Time: ~~7/22/92 0840~~ AJS
Relinquished by:	Received by: Kermit Blum	Date/Time: 7-23-92 1130
Relinquished by: 7-23-92 Kermit Blum	Received by:	Date/Time: 7/24/92 9:30

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments: * Bubbles in one vial B072V3 when received @ TMA/NORCAL - KB

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

9613491.2472

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/21/92 Time 0830 hour

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B072T9	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)~~		
~~B072V3~~	~~3, 40ml, Gs, WATER, CLP-VOA~~		~~(GASES ONLY VOA)~~
	KR 7/22/92		
B072V2	3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986 923-0
			OPC # W02-0-0533-20
			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 7-23-92

Analysis Required

*Indicate whether sample is soil, sludge, water, etc.
**Use back of page for additional information relative to sample location.

A-6000-406

9613491.2473

11/25/92
000001

 Skinner&Sherman REPORT Work Order # S2-07-206

Received: 07/24/92 09/10/92 10:11:31

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 N2-07-118
TAKEN By Client
TRANS Fedex #2521031181
TYPE 4 Waters For NO3NO2
P.O. # N2-07-118
INVOICE under separate cover

SAMPLE IDENTIFICATION

01 B070D7
01 B070D7D
01 B070D7S
02 B070F2
03 B070G2
04 B072T9
05 LCSW

TEST CODES and NAMES used on this workorder

NO3NO2 Nitrate Plus Nitrite

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. Clie
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 invoi
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 f
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: 07/24/92

Results by Sample

SAMPLE ID B070D7 SAMPLE # 01 FRACTIONS: A
Date & Time Collected 07/21/92 Category WATER

NO3NO2 2.69
mg N/L

SAMPLE ID B070D7D SAMPLE # 01 FRACTIONS: B
Date & Time Collected 07/21/92 Category WATER

NO3NO2 2.80
mg N/L

SAMPLE ID B070D7S SAMPLE # 01 FRACTIONS: C
Date & Time Collected 07/21/92 Category WATER

NO3NO2 4.16
mg N/L

SAMPLE ID B070F2 SAMPLE # 02 FRACTIONS: A
Date & Time Collected 07/21/92 Category WATER

NO3NO2 0.67
mg N/L

SAMPLE ID B070G2 SAMPLE # 03 FRACTIONS: A
Date & Time Collected 07/21/92 Category WATER

NO3NO2 2.32
mg N/L

SAMPLE ID B072T9 SAMPLE # 04 FRACTIONS: A
Date & Time Collected 07/21/92 Category WATER

NO3NO2 2.69
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.
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. Clie 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 invoi 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

9613491.2475

000028

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

WORKORDER 92-07-206 CLIENT HANFORD-NOR No. SAMPLES:

PROTCL CLP **TURNARND** 33 days ____ 4 ____

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

CUSTODIAN A. Benney SDG/BATCH N/A

CUSTODY SEAL: PRESENT/ABSENT/INTACT/NOT CLIENT CASE N2-07-115

SHIPER & # ____ PO/CONTRACT# ____

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

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

SAMPLE CONTAINERS INTACT/BROKEN COMMENTS ____

CLIENT COMMENT? YES/NO

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

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

SHIPMENT DATES 7-24-92

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

N/A

	CLIENT ID	MATRIX	RECEIVED	PH*	TEST(S) & QC	HOLD TIME
1	B07ØD7	WATER	7-24-92	N/A	NO3NO2	7-21
2	ØF2					
3	ØG2					
4	2T9					
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19					7-24-92	
20						
21						
22						
23						
24						
25						
26						
27						

complete

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 ____

* EPA/CLP required Rev 1.6 PAGE:

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 7-21-92

Ice Chest No. SML-80

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986923-0

Offsite Property No. W92-0-0533-20

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO 7007

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 7.0F0

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

~~* BO70F1~~

~~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: AJ Simpson AJ Simpson	Date/Time: 7/22/92 0845
Relinquished by: AJ Simpson AJ Simpson	Received by: Kermit Blum	Date/Time: 7-23-92 1130
Relinquished by: 7-23-92 Kermit Blum	Received by: [illegible]	Date/Time: 7/24/92 9:30
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments: * All 3 vials B070F1 received @ TMA/Norcal w/ bubbles - 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 7/21/92 Time 0930 hour

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070D7	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)~~		
~~B070F1~~	~~3, 40ml, Gs, WATER, CLP-VOA~~		~~(bottles all 3 vials)~~
	KT 7/22/92		
B070F0	8, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986923-6
			OPC # W92-0-0533-20
			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 7-23-92

Analysis Required _____

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

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

A-6000-406

9613491.2478

000032

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 7-21-92

Ice Chest No. 281

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 2509865923-0

Offsite Property No. W92-0-0533-19

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B070F2

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)~~

B070F5

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

* ~~B070F6~~

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

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: L.D. Walker	Received by: A J SIMPSON	Date/Time: 7/22/92 0947
Relinquished by: AJ SIMPSON	Received by: Kermit Bleim	Date/Time: 7-23-92 1130
Relinquished by: 7-23-92 Kermit Bleim	Received by:	Date/Time: 7/24/92 9:30
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments: * All 3 vials Received @ TMA/NorCal with air bubbles (B070F6) - 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 7/21/92 Time 1350 hou.

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070F2	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 vials 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) (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)~~		
	KR 7/22/92		
~~B070F6~~	~~3 X, 40ml, Gs, WATER, CLP VOA~~		~~(bubbles, HNO3 vials)~~
	kr 7/22/92		
B070F5	3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986923-0
			OPC # WA2-0-0533-19
			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 7-23-92

Analysis Required _____

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

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

A-6000-406

9613491.2480

000034

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 7-21-92

Ice Chest No. SML-113

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986923-0

Offsite Property No. W92-0-0533-19

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO 70G2

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, 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 70G5

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

~~BO 70G6~~

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

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: L.D. Walker DD Walker	Received by: AJ Simpson AJ Simpson	Date/Time: 7/22/92 0845
Relinquished by: AJ Simpson AJ Simpson	Received by: Kermit Blum	Date/Time: 7-23-92 1130
Relinquished by: 7.23-92 Kermit Blum	Received by: [illegible]	Date/Time: 7/24/92 9:30
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

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

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/21/92 Time 1140 hour

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070G2	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)~~		
~~B070G6~~	~~3, 40ml, Gs, WATER, CLP-VOA~~		
	1 hr 7/21/92		
B070G5	8, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250996923-0
			OPC # W92-0-0533-19
			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 7-23-92

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 7-21-92

Ice Chest No. Curly

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986923-0

Offsite Property No. W92-0-0533-20

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B072T9

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)~~

B072V2

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

~~* B072V3~~

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

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: L.D. Walker	Received by: AJ Simpson	Date/Time: 7/22/92 0840
Relinquished by: AMY SIMPSON	Received by:	Date/Time: ~~7/22/92 0840~~ AJS
Relinquished by:	Received by: Kermit Blum	Date/Time: 7-23-92 1130
Relinquished by: 7-23-92 Kermit Blum	Received by:	Date/Time: 7/24/92 9:30

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments: * Bubbles in one vial B072V3 when received @ TMA/NORCAL - KB

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/21/92 Time 0830 hour

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B072T9	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 AGETATE 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)~~		
~~B072V3~~	~~3, 40ml, Gs, WATER, CLP-VOA~~		~~(Gases, and VOAs)~~
	KT 7/22/92		
B072V2	3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986 923-0
			OPC # IW92-0-0573-20
			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 7-23-92

Analysis Required _____

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

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

A-6000-406

9613491.2484

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

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 24, 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 S207207.

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 sample with the following exceptions:

The lead digestion spike recovery exceeded the control limit requirements.

The lead 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

3-18-96
MC

WESTINGHOUSE/HANFORD
1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B070F0

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

Lab Code: SKINER Case No.: N207118 SAS No.: SDG No.: B070F0

Matrix (soil/water): WATER Lab Sample ID: 07207-01S

Level (low/med): LOW Date Received: 07/24/92

% 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	17.3	U		P
7440-36-0	Antimony	16.5	U		P
7440-38-2	Arsenic	2.4	U	W	F
7440-39-3	Barium	16.1	B		P
7440-41-7	Beryllium	0.40	U		P
7440-43-9	Cadmium	1.5	B		P
7440-70-2	Calcium	32600			P
7440-47-3	Chromium	8.0	B		P
7440-48-4	Cobalt	2.3	U		P
7440-50-8	Copper	2.4	U		P
7439-89-6	Iron	37.8	B		P
7439-92-1	Lead	18.5		*N	F
7439-95-4	Magnesium	9890			P
7439-96-5	Manganese	3.1	B		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	6.0	U		P
7440-09-7	Potassium	5850			P
7782-49-2	Selenium	3.1	U		F
7440-22-4	Silver	2.3	U		P
7440-23-5	Sodium	21400			P
7440-28-0	Thallium	1.6	U		F
7440-62-2	Vanadium	15.2	B		P
7440-66-6	Zinc	13.5	B		P
_____	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

WESTINGHOUSE/HANFORD

SAMPLE NUMBER:

B070F5

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: SKINER Case No.: N207118 SAS No.: SDG No.: B070F0

Matrix (soil/water): WATER Lab Sample ID: 07207-02S

Level (low/med): LOW Date Received: 07/24/92

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	22.1	B		P
7440-36-0	Antimony	16.5	U		P
7440-38-2	Arsenic	2.4	U		F
7440-39-3	Barium	8.7	B		P
7440-41-7	Beryllium	0.40	U		P
7440-43-9	Cadmium	1.5	B		P
7440-70-2	Calcium	32500			P
7440-47-3	Chromium	22.8			P
7440-48-4	Cobalt	2.3	U		P
7440-50-8	Copper	2.4	U		P
7439-89-6	Iron	31.0	B		P
7439-92-1	Lead	2.2	U	N*	F
7439-95-4	Magnesium	9880			P
7439-96-5	Manganese	1.3	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	6.0	U		P
7440-09-7	Potassium	6840			P
7782-49-2	Selenium	3.1	U	W	F
7440-22-4	Silver	2.3	U		P
7440-23-5	Sodium	15100			P
7440-28-0	Thallium	1.6	U		F
7440-62-2	Vanadium	24.7	B		P
7440-66-6	Zinc	10.1	U		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

WESTINGHOUSE/HANFORD
1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B070G5

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

Lab Code: SKINER Case No.: N207118 SAS No.: SDG No.: B070F0

Matrix (soil/water): WATER Lab Sample ID: 07207-03S

Level (low/med): LOW Date Received: 07/24/92

% 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	41.4	B		P
7440-36-0	Antimony	16.5	U		P
7440-38-2	Arsenic	2.4	U	W	F
7440-39-3	Barium	19.5	B		P
7440-41-7	Beryllium	0.40	U		P
7440-43-9	Cadmium	2.8	B		P
7440-70-2	Calcium	34100			P
7440-47-3	Chromium	6.0	B		P
7440-48-4	Cobalt	2.3	U		P
7440-50-8	Copper	2.4	U		P
7439-89-6	Iron	228			P
7439-92-1	Lead	2.2	U	N*	F
7439-95-4	Magnesium	9020			P
7439-96-5	Manganese	2.2	B		P
7439-97-6	Mercury	0.62			CV
7440-02-0	Nickel	6.0	U		P
7440-09-7	Potassium	5360			P
7782-49-2	Selenium	3.1	U	W	F
7440-22-4	Silver	2.3	U		P
7440-23-5	Sodium	14200			P
7440-28-0	Thallium	1.6	U		F
7440-62-2	Vanadium	12.1	B		P
7440-66-6	Zinc	10.1	U		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

WESTINGHOUSE/HANFORD

1

SAMPLE NUMBER:

B072V2

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: SKINER Case No.: N207113 SAS No.: SDG No.: B070F0

Matrix (soil/water): WATER Lab Sample ID: 07207-04S

Level (low/med): LOW Date Received: 07/24/92

% 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	17.3	U		P
7440-36-0	Antimony	16.5	U		P
7440-38-2	Arsenic	2.4	U	W	F
7440-39-3	Barium	16.7	B		P
7440-41-7	Beryllium	0.40	U		P
7440-43-9	Cadmium	1.5	B		P
7440-70-2	Calcium	34200			P
7440-47-3	Chromium	9.2	B		P
7440-48-4	Cobalt	2.3	U		P
7440-50-8	Copper	2.4	U		P
7439-89-6	Iron	80.3	B		P
7439-92-1	Lead	10.0		N*	F
7439-95-4	Magnesium	10400			P
7439-96-5	Manganese	6.8	B		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	6.0	U		P
7440-09-7	Potassium	6140			P
7782-49-2	Selenium	3.1	U	W	F
7440-22-4	Silver	2.5	B		P
7440-23-5	Sodium	22400			P
7440-28-0	Thallium	1.6	U		F
7440-62-2	Vanadium	14.4	B		P
7440-66-6	Zinc	24.8			P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

9613491.2489

TMA/Skinner & Sherman Labs SAMPLE LOG-IN

WORKORDER 92-07-207 CLIENT HANFORD-NOR No. SAMPLES:

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

COOLER TEMP: 4 oC, or NA

CUSTODIAN A-Benny SDG/BATCH N/A

CUSTODY SEAL: PRESENT/ABSENT/INTACT/NOT CLIENT CASE N2-07-118

SHIPER & # Fedex # 2521031181 PO/CONTRACT#

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

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

SAMPLE CONTAINERS: INTACT/BROKEN COMMENTS

CLIENT COMMENT? YES/NO

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

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

SHIPMENT DATES 7-24-92

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

Field Filtered

	CLIENT ID	MATRIX	RECEIVED	PH*	TEST(S) & QC	HOLD TIME
1	B07ØFØ	WATER	7-24-92	2.3	TM	
2	ØFS			7.2		
3	ØG5			2.3		
4	2V2			7.2		
5						
6						
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

* EPA/CLP required Rev 1.6 PAGE: 120

9613491.2490

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 7-21-92

Ice Chest No. SML-80

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 2509869923-0

Offsite Property No. W92-0-0533-20

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B0 7007

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)~~

B0 70F0

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

~~* B0 70F1~~

~~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: AJ Simpson AJ Simpson	Date/Time: 7/22/92 0845
Relinquished by: AJ Simpson AJ Simpson	Received by: Kermit Blum	Date/Time: 7-23-92 1130
Relinquished by: 7-23-92 Kermit Blum	Received by: [illegible]	Date/Time: 7/24/92 9:30
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments: * All 3 vials B070F1 received @ TMA/Norcal w/ bubbles - KB

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

9613491.2491

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/21/92 Time 0930 hour

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070D7	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)~~		
~~B070F1~~	~~3, 40ml, Gs, WATER, CLP-VOA~~		~~(bottles not sent)~~
	KT 7/22/92		
B070F0	8, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986923-6
			OPC # W92-0-0533-20
			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 7-23-92

Analysis Required _____

122

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

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

A-6000-406

9613491.2492

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 7-21-92

Ice Chest No. 281

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250985923-0

Offsite Property No. W92-0-0533-19

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B070F2

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)~~

B070F5

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

* ~~B070F6~~

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

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: L.D. Walker	Received by: AJ SIMPSON	Date/Time: 7/22/92 0947
Relinquished by: AJ SIMPSON	Received by: Kermit Blum	Date/Time: 7-23-92 1130
Relinquished by: 7-23-92 Kermit Blum	Received by:	Date/Time: 7/24/92 9:30
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments: * All 3 vials Received @ TMA/NORCAL with air bubbles (B070F6) - KE

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 7/21/92 Time 1350 hou

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070F2	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 vials 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) (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)~~		
	kr 7/22/92		
~~B070F56~~	~~3, 40ml, Gs, WATER, CLP VOA~~		~~(bubbles in vials)~~
	kr 7/22/92		
B070F5	3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986923-0
			OPC # W92-0-0533-19
			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 7-23-92

Analysis Required _____

124

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

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

A-6000-406

9613491.2494

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 7-21-92

Ice Chest No. SML-113

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986923-0

Offsite Property No. W92-0-0533-19

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO 70G2

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)~~

BO 70G5

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

~~BO 70G6~~

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

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: L.D. Walker DD Walker	Received by: AJ Simpson AJ Simpson	Date/Time: 7/22/92 0845
Relinquished by: AJ Simpson AJ Simpson	Received by: Kermit Blum	Date/Time: 7-23-92 1130
Relinquished by: 7.23-92 Kermit Blum	Received by: [illegible]	Date/Time: 7/24/92 9:30
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

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

9615491.2495

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/21/92 Time 1140 hour

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070G2	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)~~		
~~B070G6~~	~~3, 40ml, Gs, WATER, CLP-VOA~~		
	1 LT 7/22/92		
B070G5	8, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986923-0
			OPC # W92-0-0533-19
			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 7-23-92

Analysis Required

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

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

A-6000-406

9613491.2496

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 7-21-92

Ice Chest No. Curly

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986923-0

Offsite Property No. W92-0-0533-20

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B072T9

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)~~

B072V2

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

~~* B072V3~~

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

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: L.D. Walker	Received by: AJ Simpson	Date/Time: 7/22/92 0840
Relinquished by: AMY SIMPSON	Received by:	Date/Time: ~~7/22/92 0840~~ AJS
Relinquished by:	Received by: Kermit Blum	Date/Time: 7-23-92 1130
Relinquished by: 7-23-92 Kermit Blum	Received by:	Date/Time: 7/24/92 9:30

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments: * Bubbles in one vial B072V3 when received @ TMA/NORCAL - KB

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

9613491.2497

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/21/92 Time 0830 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B072T9	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)~~		
~~B072V3~~	~~3, 40ml, Gs, WATER, CLP-VOA~~		~~(Bubbles and vials)~~
	KT 7/22/92		
B072V2	3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED		
			BOL # 250986 923-0
			OPC # W92-0-0533-20
			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 7-23-92

Analysis Required _____

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

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

A-6000-406

CASE NARRATIVE

LABORATORY : TMA/ARLI

CASE : 07-053

CONTRACT ID : WESTINGHOUSE HANFORD COMPANY

SDG RECEIPT DATE : July 23, 1992

1.0 DESCRIPTION OF CASE :

Eight water samples were analyzed for TCL Organic-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
B070D7	A2-07-053-01A	V	WATER	7
B070D7	A2-07-053-01B	SV & P	WATER	
B070F1	A2-07-053-02A	V	WATER	7
B070F2	A2-07-053-03A	V	WATER	7
B070F2	A2-07-053-03B	SV & P	WATER	
B070F6	A2-07-053-04A	V	WATER	7
B070G2	A2-07-053-05A	V	WATER	7
B070G2	A2-07-053-05B	SV & P	WATER	
B070G2 MS	A2-07-053-05C	SV & P	WATER	
B070G2 MSD	A2-07-053-05D	SV & P	WATER	
B070G6	A2-07-053-06A	V	WATER	7
B070G6 MS	A2-07-053-06B	V	WATER	7
B070G6 MSD	A2-07-053-06C	V	WATER	7
B072T9	A2-07-053-07A	V	WATER	7
B072T9	A2-07-053-07B	SV & P	WATER	
B072V3	A2-07-053-08A	V	WATER	7

3.0 COMMENTS :

3.1 SHIPPING AND DOCUMENTATION :

The samples were received properly documented. All of the VOA vials of samples B070F1 and B070F6 were received at TMA/NORCAL with air bubbles. Sample B070F2 was received with air bubbles in 2 of the 3 VOA vials. Sample B072V3 was received with air bubbles in 1 of the 3 VOA vials. Samples B070F2 and B070F6 each had 1 of the 3 VOA vials received broken at TMA/ARLI.

3.2 ANALYSIS

3.2.1 VOLATILE ANALYSIS COMMENTS :

LOW LEVEL WATER :

The samples were analyzed within the CLP SOW holding times. Between scans 146 - 148 a peak identified as Carbon Dioxide was detected in the sample analyses. This TIC was not reported on the Form IE.

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

TUNES :

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

3.2.2 SEMIVOLATILE ANALYSIS COMMENTS :

LOW LEVEL WATER :

The samples were extracted and analyzed within the CLP SOW holding times. The spike recoveries for 4-Chloro-3-Methylphenol and 4-Nitrophenol in both the MS and MSD samples were slightly above the QC limits. Also, samples B070D7 and B070G2MS had surrogate recoveries for Terphenyl-d14 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 7/29/92 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. The QC results were within the limits specified by the EPA CLP SOW.

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

Nicole Roth
CLP Program Manager

Wida Ang
Organics Supervisor

9613491.2501

000005
EPA SAMPLE NO.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

B070D7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07053 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207053-01A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20728B04

Level: (low/med) LOW Date Received: 07/23/92

% Moisture: not dec. ____ Date Analyzed: 07/28/92

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	4	BJ
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	2	J
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.

B070D7

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07053 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207053-01A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20728B04

Level: (low/med) LOW Date Received: 07/23/92

% Moisture: not dec. ____ Date Analyzed: 07/28/92

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

EPA SAMPLE NO.

B070F1

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07053 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207053-02A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20728B05

Level: (low/med) LOW Date Received: 07/23/92

% Moisture: not dec. ____ Date Analyzed: 07/28/92

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	5	BJ
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

9613491.2504

000008

EPA SAMPLE NO.

B070F1

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07053 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207053-02A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20728B05

Level: (low/med) LOW Date Received: 07/23/92

% Moisture: not dec. ____ Date Analyzed: 07/28/92

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.

B070F2

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07053 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207053-03A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20728B06

Level: (low/med) LOW Date Received: 07/23/92

% Moisture: not dec. ____ Date Analyzed: 07/28/92

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	3	BJ
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.

B070F2

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07053 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207053-03A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20728B06

Level: (low/med) LOW Date Received: 07/23/92

% Moisture: not dec. ____ Date Analyzed: 07/28/92

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.	Unknown hydrocarbon	5.75	5	BJ

9613491.2507

000011
EPA SAMPLE NO.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

B070F6

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07053 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207053-04A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20728B07

Level: (low/med) LOW Date Received: 07/23/92

% Moisture: not dec. ____ Date Analyzed: 07/28/92

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	3	BJ
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.

B070F6

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07053 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207053-04A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20728B07

Level: (low/med) LOW Date Received: 07/23/92

% Moisture: not dec. ____ Date Analyzed: 07/28/92

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.

B070G2

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07053 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207053-05A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20728B08

Level: (low/med) LOW Date Received: 07/23/92

% Moisture: not dec. ____ Date Analyzed: 07/28/92

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	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	3	BJ
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	2	J
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

9613491.2510

000014

EPA SAMPLE NO.

B070G2

1E

VOLATIL NICS ANALYSIS DATA SHEET

TENTA IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07053 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207053-05A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20728B08

Level: (low/med) LOW Date Received: 07/23/92

% Moisture: not dec. ____ Date Analyzed: 07/28/92

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.

B070G6

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07053 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207053-06A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20728B09

Level: (low/med) LOW Date Received: 07/23/92

% Moisture: not dec. ____ Date Analyzed: 07/28/92

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	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	4	BJ
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.

B070G6

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07053 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207053-06A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20728B09

Level: (low/med) LOW Date Received: 07/23/92

% Moisture: not dec. ____ Date Analyzed: 07/28/92

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

9613491.2513

000017

EPA SAMPLE NO.

B072T9

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07053 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207053-07A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20728B12

Level: (low/med) LOW Date Received: 07/23/92

% Moisture: not dec. ____ Date Analyzed: 07/28/92

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	3	BJ
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.

B072T9

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07053 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207053-07A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20728B12

Level: (low/med) LOW Date Received: 07/23/92

% Moisture: not dec. ____ Date Analyzed: 07/28/92

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.

B072V3

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07053 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207053-08A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20728B13

Level: (low/med) LOW Date Received: 07/23/92

% Moisture: not dec. ____ Date Analyzed: 07/28/92

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	5	BJ
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

9613491.2516

000020
EPA SAMPLE NO.

B072V3

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07053 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207053-08A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20728B13

Level: (low/med) LOW Date Received: 07/23/92

% Moisture: not dec. ____ Date Analyzed: 07/28/92

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

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070D7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07053 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207053-01B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20727S03

Level: (low/med) LOW Date Received: 07/23/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/26/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/27/92

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.

B070D7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07053 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207053-01B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20727S03

Level: (low/med) LOW Date Received: 07/23/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/26/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/27/92

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

EPA SAMPLE NO.

B070D7

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07053 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207053-01B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20727S03

Level: (low/med) LOW Date Received: 07/23/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/26/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/27/92

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

Number TICs found: 5

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown hydrocarbon	5.70	8	BJ
2.	Unknown hydrocarbon	6.23	2	BJ
3.	Unknown ketone	7.08	3	BJ
4.	Unknown compound	12.03	3	J
5.	Unknown acid	13.98	2	J

EPA SAMPLE NO.

B070F2

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07053 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207053-03B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20727S04

Level: (low/med) LOW Date Received: 07/23/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/26/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/27/92

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.

B070F2

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07053 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207053-03B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20727S04

Level: (low/med) LOW Date Received: 07/23/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/26/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/27/92

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

EPA SAMPLE NO.

B070F2

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07053 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207053-03B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20727S04

Level: (low/med) LOW Date Received: 07/23/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/26/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/27/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

Number TICs found: 3

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown hydrocarbon	5.70	9	BJ
2.	Unknown hydrocarbon	6.23	3	BJ
3.	Unknown ketone	7.07	4	BJ

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070G2

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07053 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207053-05B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20727S05

Level: (low/med) LOW Date Received: 07/23/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/26/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/27/92

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.

B070G2

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07053 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207053-05B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20727S05

Level: (low/med) LOW Date Received: 07/23/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/26/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/27/92

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

EPA SAMPLE NO.

B070G2

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07053 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207053-05B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20727S05

Level: (low/med) LOW Date Received: 07/23/92

% Moisture: ____ decanted: (Y/N) ___ Date Extracted: 07/26/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/27/92

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

Number TICs found: 3

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown hydrocarbon	5.70	7	BJ
2.	Unknown hydrocarbon	6.23	3	BJ
3.	Unknown ketone	7.08	4	BJ

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B072T9

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07053 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207053-07B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20727S09

Level: (low/med) LOW Date Received: 07/23/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/26/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/27/92

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.

B072T9

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07053 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207053-07B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20727S09

Level: (low/med) LOW Date Received: 07/23/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/26/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/27/92

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	9	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.

B072T9

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07053 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207053-07B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20727S09

Level: (low/med) LOW Date Received: 07/23/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/26/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/27/92

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

Number TICs found: 4

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown hydrocarbon	5.70	8	BJ
2.	Unknown hydrocarbon	6.23	2	BJ
3.	Unknown ketone	7.07	3	BJ
4.	Unknown compound	12.03	3	J

9613491.2529

000033

EPA SAMPLE NO.

B070D7

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

ab Name: TMA/ARLI Contract: WHC

ab Code: TMALA Case No.: 07053 SAS No.: NA SDG No.: NA

atrix: (soil/water) WATER Lab Sample ID: A207053-01B

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

Moisture: _____ decanted: (Y/N) ___ Date Received: 07/23/92

xtraction: (SepF/Cont/Sonc) CONT Date Extracted: 07/26/92

oncentrated Extract Volume: 10000 (uL) Date Analyzed: 07/31/92

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

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070F2

ab Name: TMA/ARLI Contract: WHC

ab Code: TMALA Case No.: 07053 SAS No.: NA SDG No.: NA

atrix: (soil/water) WATER Lab Sample ID: A207053-03B

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

Moisture: _____ decanted: (Y/N) ___ Date Received: 07/23/92

xtraction: (SepF/Cont/Sonc) CONT Date Extracted: 07/26/92

oncentrated Extract Volume: 10000 (uL) Date Analyzed: 07/31/92

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

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070G2

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07053 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207053-05B

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

Moisture: _____ decanted: (Y/N) ___ Date Received: 07/23/92

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 07/26/92

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/31/92

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.

B072T9

ab Name: TMA/ARLI Contract: WHC

ab Code: TMALA Case No.: 07053 SAS No.: NA SDG No.: NA

atrix: (soil/water) WATER Lab Sample ID: A207053-07B

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

Moisture: _____ decanted: (Y/N) ___ Date Received: 07/23/92

xtraction: (SepF/Cont/Sonc) CONT Date Extracted: 07/26/92

oncentrated Extract Volume: 10000 (uL) Date Analyzed: 07/31/92

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

9613491.2533

TMA

RECORD COPY

SEP 1992
RECEIVED
OSM DMO

WESTINGHOUSE HANFORD COMPANY

Results of Analyses For:

ORGANICS & GENERAL CHEMISTRY
Case No. 07-053
(TMA/ARLI Work Order # A2-07-053)

METALS
Case No. N2-07-118
(TMA/Skinner & Sherman W.O. # S2-07-205, S2-07-206, & S2-07-207)

September 21, 1992

TMA Master Work Order # N2-07-118

3-18-96
MC

9613491.2534

000002

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 7-21-92

Ice Chest No. SML-80

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 2509869923-0

Offsite Property No. W92-0-0533-20

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B07007

~~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)~~

~~B07070~~

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

* B07071

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: AJ Simpson AJ Simpson	Date/Time: 7/22/92 0845
Relinquished by: AJ Simpson AJ Simpson	Received by: Kermit Blum	Date/Time: 7-23-92 1130
Relinquished by: 7-23-92 Kermit Blum	Received by: C. Harris	Date/Time: 7/24/92 9 am
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments: *All 3 vials B07071 received @ TMA/Norcal w/ bubbles - KB

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

9615491.2535

000003

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/21/92 Time 0930 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070D7	~~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)~~		
B070F1	3, 40ml, Gs, WATER, CLP-VOA		(bubbles all vials)
	KI 7/22/92		
~~B070F0~~	~~3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED~~		
			BOL # 2509869223-0
			OPC # W92-0-0533-20
			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 7-23-92

Analysis Required

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

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

A-6000-406 (05/9)

9613491.2556

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 7-21-92

Ice Chest No. 281

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250986923-0

Offsite Property No. W92-0-0533-10

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

** B070F2

~~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)~~

~~B070F5~~

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

* B070F6

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: AJ SIMPSON *AJ Simpson*	Date/Time: 7/22/92 0747
Relinquished by: AJ SIMPSON *AJ Simpson*	Received by: Kermit Blum	Date/Time: 7-23-92 1130
Relinquished by: 7-23-92 Kermit Blum	Received by: *C. Harris*	Date/Time: 7/24/92 9[illegible]
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments: * All 3 vials Received @ TMA/NorCal with air bubbles (B070F6) - KB

** B070F2 2 vials have air bubbles - KB

B070F6 1 VOA vial Broken in transit

B070F2 1 VOA vial Broken in transit

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

9613491.2557

000005

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/21/92 Time 1350 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070F2	~~1; 1L; P; WATER; CLP-ICP/AA METALS & MERCURY (HNO3) UNFILTERED~~		
	~~1; 1L; P; WATER; CLP-CYANIDE (NaOH)~~		
	3; 40ml; Gs; WATER; CLP-VOA		(2 vial 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)~~		
	KR 7/22/92		
B070F56	3 ~~3~~, 40ml, Gs, WATER, CLP-VOA		(bubbles all 3 vials)
	1 KR 7/22/92		
~~B070F5~~	~~3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED~~		
			BOL # 250986923-0
			OPC # WA2-0-0533-19
			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 7-23-92

Analysis Required _____

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

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

Westinghouse Hanford Company	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 7-21-92

Ice Chest No. SML-113

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 250936923-0

Offsite Property No. W92-C-0533-19

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

BO 7069

~~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 7066~~

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

BO 7066

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

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: L.D. Walker DD Walker	Received by: AJ Simpson AJ Simpson	Date/Time: 7/22/92 0845
Relinquished by: AJ Simpson AJ Simpson	Received by: Kermit Blum	Date/Time: 7-23-92 1130
Relinquished by: 7-23-92 Kermit Blum	Received by: C. Harris	Date/Time: 7/24/92 9 OC
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

9613491.2639

000007

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/21/92 Time 1140 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B070G2	~~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)~~		
B070G6	3, 40ml, Gs, WATER, CLP-VOA		
	1 LE 7/22/92		
~~B070G5~~	~~3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED~~		
			BOL # 250936923-0
			OPC # W92-0-0533-19
			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 7-23-92

Analysis Required _____

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

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

A-6000-405 (05

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 7-21-92

Ice Chest No. Curly

Field Logbook No. EFL-1036

Bill of Lading/Airbill No. 2509869233-0

Offsite Property No. W92-0-0533-20

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks N/A

Sample Identification

B072T9

~~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)~~

~~B072~~2

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

* B072V3

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

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: L.D. Walker	Received by: AJ Simpson	Date/Time: 7/22/92 0840
Relinquished by: AMY SIMPSON	Received by:	Date/Time: ~~7/22/92 0840~~ AJS
Relinquished by:	Received by: Kermit Blum	Date/Time: 7-23-92 1130
Relinquished by: 7-23-92 Kermit Blum	Received by: C. Harris	Date/Time: 7/24/92 9:10

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments: * Bubbles in one vial B072V3 when received @ TMA/NORCAL - KB

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector Les Walker/Kirby Lee Date Sampled 7/21/92 Time 0830 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B072T9	~~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)~~		
B072V3	3, 40ml, Gs, WATER,	CLP-VOA	(bubbles one vial)
	KJ 7/22/92		
~~B072V2~~	~~3, 1L, P, WATER, CLP-ICP/AA METAL & MERCURY (HNO3) FILTERED~~		
			BOL # 250986 923-0
			OPC # IW92-0-0533-20
			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 7-23-92

Analysis Required

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

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

A-6000-405 (05

TMA/ARLI
Thermo Analytical Inc.

RADIATION DOSE RATE SURVEY FORM

Date 7/24/92 COMPANY LOCAL (WHC) OTHER ORD # 252103240

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		43.0							
Consistency		7490	0.2888						
Smears: SML-46		31.0						NONE	
SMALL BLUE 30		37.0						NONE	
LARGE RED X		39.0						NONE	
SML-118		33.0						NONE	
SML-109		30.0						NONE	
REPORTED (WHC)		35 sA. each		<50 pCi/gram					

All OK ✓ Approved [signature]

Not OK Date 7/24/92

Comments:

Form: ARLI RA-01
Rev: 06

01/15/92

9613491.2543

000011

SAMPLE LOG-IN SHEET

LAB NAME : TMA/ARLI

PAGE : 1 OF 1

RECEIVED BY (PRINT NAME): Carole HARRIS

LOG-IN-DATE : 7/24/92

RECEIVED BY (SIGNATURE): Carole Harris

CASE NUMBER:

SAMPLE DELIVERY GROUP NO.:

SAS NUMBER:

REMARKS:

1. Custody Seal(s) Present/Absent* Intact/Broken
2. Custody Seal Nos:
3. Chain of Custody Records Present/Absent*
4. Traffic Reports or Packing List Present/Absent*
5. Airbill Airbill/Sticker Present/Absent*
6. Airbill No.:
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: 7/24/92
12. Temp of ice chest 40 °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
	B070D7	A2-07-053-01	
	B070F1	A2-07-053-02	
	B070F2	A2-07-053-03	*
	B070F6	A2-07-053-04	* *
	B070G2	A2-07-053-05	
	B070G6	A2-07-053-06	
	B072T9	A2-07-053-07	
	B072V3	A2-07-053-08	

* Contact SMO and attach record of resolution

Reviewed By: Logbook No.:

Date: Logbook Page No.:

FORM DC-1

* B070F6 1 VOA VIAL WAS BROKEN IN TRANS

* B070F2 1 VOA VIAL WAS BROKEN IN TRANSIT

DOC2/LOGIN.TBL

GENERAL CHEMISTRY RESULTS

CASE NO. 07-053

Water Sample #:

B070D7	B070F1	B070F2
B070F6	B070G2	B070G6
B072T9	B072V3	

CASE NARRATIVE

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

Ernesto Vázquez

Ernesto Vazquez

9613491.2545

000015

TMA Inc. REPORT Work Order # A2-07-053

Received: 07/23/92 09/02/92 16:05:37

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 Vazquez

CONTACT: EVV

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. #: N2-07-118-SU-AR
INVOICE: under separate cover

SAMPLE IDENTIFICATION

01	B070D7
01	B070D7 MS
01	B070D7
02	B070F1
03	B070F2
03	B070F2 Duplicate
03	B070F2
04	B070F6
05	B070G2
05	B070G2 MS
05	B070G2 MSD
05	B070G2
05	B070G2 Duplicate
05	B070G2
05	B070G2 MS
05	B070G2
06	B070G6
06	B070G6 MS
06	B070G6 MSD
07	B072T9
07	B072T9 MS
07	B072T9 Duplicate
08	B072V3
09	Wet Chemistry Blank

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

TMA Inc. REPORT Work Order # A2-07-053

Received: 07/23/92 Results by Sample

SAMPLE ID B070D7 FRACTION 01C TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/21/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Fluoride	300	0.6	mg/L	0.1
Chloride	300	10.0	mg/L	0.2
Sulfate	300	36	mg/L	1
Phosphate	300	<0.4	mg/L	0.4
Elect. Conductivity	120.1	359	umho/cm	6
pH	150.1	7.9	pH	0.1

FORM I

TMA Inc. REPORT Work Order # A2-07-053

Received: 07/23/92 Results by Sample

SAMPLE ID B070D7 FRACTION 01E TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/21/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Tot. Dissolved Solids	160.1	238	mg/L	5
Alkalinity	310.1	116	mg/L	2

FORM I

TMA Inc. REPORT Work Order # A2-07-053

Received: 07/23/92

Results by Sample

SAMPLE ID B070D7 FRACTION 01F TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 07/21/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

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

FORM I

TRA Inc. REPORT Work Order # A2-07-053

Received: 07/23/92 Results by Sample

SAMPLE ID B070D7 FRACTION 01G TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 07/21/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Ammonia	350.3	0.12	mg/L	0.05
COD	410	<30	mg/L	30

FORM I

TMA Inc. REPORT Work Order # A2-07-053

Received: 07/23/92 Results by Sample

SAMPLE ID B070F2 FRACTION 03C TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/21/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Fluoride	300	0.4	mg/L	0.1
Chloride	300	5.7	mg/L	0.2
Sulfate	300	34.0	mg/L	1
Phosphate	300	<0.4	mg/L	0.4
Elect. Conductivity	120.1	314	umho/cm	6
pH	150.1	8.1	pH	0.1

FORM I

TMA Inc. REPORT Work Order # A2-07-053

Received: 07/23/92 Results by Sample

SAMPLE ID B070F2 FRACTION 03E TEST CODE VCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 07/21/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Tot. Dissolved Solids	160.1	236	mg/L	5
Alkalinity	310.1	114	mg/L	2

FORM I

TMA Inc. REPORT Work Order # A2-07-053

Received: 07/23/92 Results by Sample

SAMPLE ID B070F2 FRACTION 03F TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 07/21/92 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 # A2-07-053

Received: 07/23/92 Results by Sample

SAMPLE ID B070F2 FRACTION 03G TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/21/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Ammonia	350.3	0.13	mg/L	0.05
COD	410	34	mg/L	30

FORM I

TMA Inc. REPORT Work Order # A2-07-053

Received: 07/23/92

Results by Sample

SAMPLE ID B070G2 FRACTION 05E TEST CODE VCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 07/21/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Fluoride	300	0.3	mg/L	0.1
Chloride	300	5.6	mg/L	0.2
Sulfate	300	23	mg/L	1
Phosphate	300	<0.4	mg/L	0.4
Elect. Conductivity	120.1	306	umho/cm	6
pH	150.1	7.9	pH	0.1

FORM I

TMA Inc. REPORT Work Order # A2-07-053

Received: 07/23/92 Results by Sample

SAMPLE ID B07062 FRACTION 05F TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/21/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Tot. Dissolved Solids	160.1	220	mg/L	5
Alkalinity	310.1	114	mg/L	2

FORM I

TMA Inc. REPORT Work Order # A2-07-053

Received: 07/23/92

Results by Sample

SAMPLE ID B070G2 FRACTION 05W TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/21/92 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 # A2-07-053

Received: 07/23/92 Results by Sample

SAMPLE ID B070G2 FRACTION 05K TEST CODE VCCLPL NAME Anions & Wet Chem. - VM043

Date & Time Collected 07/21/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Ammonia	350.3	0.13	mg/L	0.05
COD	410	<30	mg/L	30

FORM I

TRA Inc. REPORT Work Order # A2-07-053

Received: 07/23/92 Results by Samp

SAMPLE ID B072T9 FRACTION 07C TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/21/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Fluoride	300	0.5	mg/L	0.1
Chloride	300	9.8	mg/L	0.2
Sulfate	300	36	mg/L	1
Phosphate	300	<0.4	mg/L	0.4
Elect. Conductivity	120.1	367	umho/cm	6
pH	150.1	7.9	pH	0.1

FORM I

TMA Inc. REPORT Work Order # A2-07-053

Received: 07/23/92 Results by Sample

SAMPLE ID B072T9 FRACTION 07D TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 07/21/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Tot. Dissolved Solids	160.1	239	mg/L	5
Alkalinity	310.1	118	mg/L	2

FORM I

TMA Inc. REPORT Work Order # A2-07-053

Received: 07/23/92

Results by Sample

SAMPLE ID B072T9 FRACTION 07E TEST CODE VCCLPL NAME Anions & Wet Chem. - VH043

Date & Time Collected 07/21/92 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 # A2-07-053

Received: 07/23/92

Results by Sample

SAMPLE ID B072T9 FRACTION 07F TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/21/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Ammonia	350.3	0.21	mg/L	0.05
COD	410	<30	mg/L	30

FORM I

9613491.2562

000005

EPA SAMPLE NO.

B070D2

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207046-01A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20729B23

Level: (low/med) LOW Date Received: 07/22/92

% 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	14	~~B~~ U
67-64-1	Acetone	16	
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 ~~2~~	~~B~~ 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

9613491.2563

000006
EPA SAMPLE NO.

1E
VOLATILE ANICS ANALYSIS DATA SHEET
TENTAT LY IDENTIFIED COMPOUNDS

B070D2

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207046-01A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20729B23

Level: (low/med) LOW Date Received: 07/22/92

% 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

9613491.2564

000007
EPA SAMPLE NO.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

B070G7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207046-04A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20727B16

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: not dec. ____ Date Analyzed: 07/27/92

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~~	~~B~~ U
67-64-1	Acetone	15	
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.

B070G7

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207046-04A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20727B16

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: not dec. ____ Date Analyzed: 07/27/92

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.	Unknown Hydrocarbon	5.42	7	J

9613491.2566

000009

EPA SAMPLE NO.

B070H2

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207046-02A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20729B24

Level: (low/med) LOW Date Received: 07/22/92

% 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 ~~9~~	~~B~~ 4
67-64-1	Acetone	18	
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 ~~2~~	~~B~~ 4
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

000010
EPA SAMPLE NO.

B070H2

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207046-02A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20729B24

Level: (low/med) LOW Date Received: 07/22/92

% 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

9613491.2568

000011

EPA SAMPLE NO.

B070H7

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207045-05A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20727B10

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: not dec. ____ Date Analyzed: 07/27/92

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~~	~~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

EPA SAMPLE NO.

B070H7

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207045-05A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20727B10

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: not dec. ____ Date Analyzed: 07/27/92

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.	Unknown Hydrocarbon	5.47	7	J

9613491.2570

000013

EPA SAMPLE NO.

B070J7

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207045-01A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20727B04

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: not dec. ____ Date Analyzed: 07/27/92

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 ~~3~~	~~B~~ U
67-64-1	Acetone	29	
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	2	J
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	3	J
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	2	J
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.

B070J7

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207045-01A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20727B04

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: not dec. ____ Date Analyzed: 07/27/92

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

BD 5/20/

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070K2

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207045-02A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20727B05

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: not dec. ____ Date Analyzed: 07/27/92

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~~	~~B~~ 4
67-64-1	Acetone	18	
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	2	J
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.

B070K2

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207045-02A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20727B05

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: not dec. ____ Date Analyzed: 07/27/92

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.	Unknown Hydrocarbon	5.43	6	J

9613491.2574

000017

EPA SAMPLE NO.

B070M7

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207045-03A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20727B08

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: not dec. ____ Date Analyzed: 07/27/92

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 ~~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	2	J
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

9613491.2575

000018
EPA SAMPLE NO.

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

B070M7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207045-03A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20727B08

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: not dec. ____ Date Analyzed: 07/27/92

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.	Unknown Hydrocarbon	5.45	7	J

9613491.2576

000019
EPA SAMPLE NO.

1A
VOLATIL GANICS ANALYSIS DATA SHEET

B070P2

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207046-03A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20727B15

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: not dec. ____ Date Analyzed: 07/27/92

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~~	~~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

9613491.2577

000020

EPA SAMPLE NO.

B070P2

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207046-03A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20727B15

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: not dec. ____ Date Analyzed: 07/27/92

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.	Unknown Hydrocarbon	5.43	5	J

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070P7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207045-06A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20727B11

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: not dec. ____ Date Analyzed: 07/27/92

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 ~~A~~	~~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	2	J
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	3	J
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

9613491.2579

000022

EPA SAMPLE NO.

B070P7

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207045-06A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20727B11

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: not dec. ____ Date Analyzed: 07/27/92

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.	Unknown Hydrocarbon	5.47	5	J

9613491.2580

000023

EPA SAMPLE NO.

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

B072S9

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207045-07A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20729B22

Level: (low/med) LOW Date Received: 07/22/92

% 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 ~~8~~	~~B~~ U
67-64-1	Acetone	23	
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 ~~1~~	~~B~~ 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 TICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B072S9

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207045-07A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20729B22

Level: (low/med) LOW Date Received: 07/22/92

% 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.	Unknown Hydrocarbon	5.77	5	J

BJ 6/20/9

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B072T4

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207045-04A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20729B21

Level: (low/med) LOW Date Received: 07/22/92

% 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	13	~~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 ~~2~~	~~BJ~~ 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

9613491.2585

000026
EPA SAMPLE NO.

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

B072T4

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207045-04A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20729B21

Level: (low/med) LOW Date Received: 07/22/92

% 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

9613491.2584

000036

EPA SAMPLE NO.

B070D6

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07047 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207047-08A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20727R12

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: not dec. ____ Date Analyzed: 07/27/92

GC Column: PACK ID: 2.00 (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	28	
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

12/4/92SC

EPA SAMPLE NO.

B070D6

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case-No.: 07047 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207047-08A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20727R12

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: not dec. ____ Date Analyzed: 07/27/92

GC Column: PACK ID: 2.00 (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

9613491.2586

000047

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070H1

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07047 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207047-11A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20727R14

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: not dec. ____ Date Analyzed: 07/27/92

GC Column: PACK ID: 2.00 (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	1	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

12-5-92

EPA SAMPLE NO.

B070H1

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07047 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207047-11A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20727R14

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: not dec. ____ Date Analyzed: 07/27/92

GC Column: PACK ID: 2.00 (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

12-5-92SC

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070H6

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07047 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207047-09A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20727R13

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: not dec. ____ Date Analyzed: 07/27/92

GC Column: PACK ID: 2.00 (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	2	J
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	1	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

12-1/92 56

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B070H6

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case-No.: 07047 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207047-09A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20727R13

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: not dec. ____ Date Analyzed: 07/27/92

GC Column: PACK ID: 2.00 (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

12-4-92 SC

9613491.2590

00006

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070J1

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07047 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207047-05A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20727R07

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: not dec. ____ Date Analyzed: 07/27/92

GC Column: PACK ID: 2.00 (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	3	J
67-64-1	Acetone	38	
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

12-1-92 SC

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B070J1

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07047 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207047-05A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20727R07

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: not dec. ____ Date Analyzed: 07/27/92

GC Column: PACK ID: 2.00 (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

12-4-92 SC

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070K1

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07047 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207047-01A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20728R10

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: not dec. ____ Date Analyzed: 07/28/92

GC Column: PACK ID: 2.00 (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	1	BJ
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.

B070K1

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07047 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207047-01A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20728R10

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: not dec. ____ Date Analyzed: 07/28/92

GC Column: PACK ID: 2.00 (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.

B070K6

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07047 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207047-02A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20728R12

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: not dec. ____ Date Analyzed: 07/28/92

GC Column: PACK ID: 2.00 (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	26	
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	BJ
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.

B070K6

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07047 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207047-02A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20728R12

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: not dec. ____ Date Analyzed: 07/28/92

GC Column: PACK ID: 2.00 (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

9613491.2596

000100

EPA SAMPLE NO.

B070N1

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07047 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207047-03A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20728R13

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: not dec. ____ Date Analyzed: 07/28/92

GC Column: PACK ID: 2.00 (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	16	
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	1	BJ
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

BK 6/20

9613491.2597

000101

EPA SAMPLE NO.

B070N1

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07047 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207047-03A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20728R13

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: not dec. ____ Date Analyzed: 07/28/92

GC Column: PACK ID: 2.00 (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

9613491.2598

000111

EPA SAMPLE NO.

B070P6

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07047 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207047-10A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20727R15

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: not dec. ____ Date Analyzed: 07/27/92

GC Column: PACK ID: 2.00 (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	2	J
67-64-1	Acetone	21	
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

12-1-0

EPA SAMPLE NO.

B070P6

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07047 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207047-10A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20727R15

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: not dec. ____ Date Analyzed: 07/27/92

GC Column: PACK ID: 2.00 (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

12-1-92SC

9613491.2600

000124
EPA SAMPLE NO.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

B070Q1

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07047 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207047-06A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20728R15

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: not dec. ____ Date Analyzed: 07/28/92

GC Column: PACK ID: 2.00 (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	1	BJ
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.

B070Q1

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07047 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207047-06A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20728R15

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: not dec. ____ Date Analyzed: 07/28/92

GC Column: PACK ID: 2.00 (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

9613491.2602

000133

EPA SAMPLE NO.

B072T3

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07047 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207047-07A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20727R11

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: not dec. ____ Date Analyzed: 07/27/92

GC Column: PACK ID: 2.00 (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	18	
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

11-17-a

9613491.2603

000134
EPA SAMPLE NO.

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

B072T3

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07047 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207047-07A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20727R11

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: not dec. ____ Date Analyzed: 07/27/92

GC Column: PACK ID: 2.00 (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

11-17-92

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B072T8

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07047 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207047-04A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20728R14

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: not dec. ____ Date Analyzed: 07/28/92

GC Column: PACK ID: 2.00 (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	BJ
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.

B072T8

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case-No.: 07047 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207047-04A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 20728R14

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: not dec. ____ Date Analyzed: 07/28/92

GC Column: PACK ID: 2.00 (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

9613491L2606

000027
EPA SAMPLE NO.

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

B070D2

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207046-01B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20728S12

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/26/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/92

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

9613491.2607

000028
EPA SAMPLE NO.

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

B070D2

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207046-01B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20728S12

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/26/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/92

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	16	
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.

B070D2

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207046-01B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20728S12

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/26/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

Number TICs found: 3

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown Hydrocarbon	5.70	7	~~BJ~~ U
2.	Unknown Hydrocarbon	6.25	3	~~BJ~~ U
3.	Unknown Ketone	7.08	3	~~BJ~~ U

11-16

9613491.2609

000030

EPA SAMPLE NO.

B070G7

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207046-04B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20728S15

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/26/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/92

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

9613491.2610

000031

EPA SAMPLE NO.

B070G7

1C

SEMIVOLA ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207046-04B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20728S15

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/26/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/92

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 J
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

EPA SAMPLE NO.

B070G7

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207046-04B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20728S15

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/26/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/92

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

Number TICs found: 3

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown Hydrocarbon	5.67	9	BJ
2.	Unknown Hydrocarbon	6.22	3	BJ
3.	Unknown Ketone	7.05	4	BJ

EPA SAMPLE NO.

B070H2

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207046-02B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20728S13

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: ____ decanted: (Y/N) ___ Date Extracted: 07/26/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/92

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

9613491.2613

000034

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070H2

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207046-02B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20728S13

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/26/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/92

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

9613491.2614

000035

EPA SAMPLE NO.

B070H2

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207046-02B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20728S13

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/26/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/92

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

Number TICs found: 8

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown Hydrocarbon	5.70	9	~~BJ~~ U
2.	Unknown Hydrocarbon	6.27	3	~~BJ~~ U
3.	Unknown Ketone	7.08	4	~~BJ~~ U
4.	Chloro Ethanol isomer	19.58	1900	J
5.	Unknown Hydrocarbon	19.68	3	J
6.	Chloro Ethanol isomer	22.15	11	J
7.	Unknown Alcohol	22.38	8	J
8.	Unknown Alcohol	26.08	8	J

9613491.2615

000036
EPA SAMPLE NO.

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

B070H7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207045-05B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20728S09

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/26/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/92

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

9613491.2616

000037

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070H7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207045-05B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20728S09

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/26/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/92

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

EPA SAMPLE NO.

B070H7

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207045-05B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20728S09

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/26/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/92

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

Number TICs found: 3

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown Hydrocarbon	5.70	8	~~BJ~~ U
2.	Unknown Hydrocarbon	6.23	2	~~BJ~~ U
3.	Unknown Ketone	7.00	4	~~BJ~~ U

9613491.2618

000039

EPA SAMPLE NO.

B070J7

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207045-01B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20728S03

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/26/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/92

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 J
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

11-17-92

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070J7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207045-01B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20728S03

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/26/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/92

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	UJ
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

11-17-92 S

9613491.2620

000041

EPA SAMPLE NO.

B070J7

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207045-01B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20728S03

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/26/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

Number TICs found: 3

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown Hydrocarbon	5.68	7	~~BJ~~ U
2.	Unknown Hydrocarbon	6.22	2	~~BJ~~ U
3.	Unknown Ketone	7.05	4	~~BJ~~ U

11-17-92

9613491.2621

000042

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070K2

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207045-02B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20728S06

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/26/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/92

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

11-17-93

9613491.2622

000043

EPA SAMPLE NO.

B070K2

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207045-02B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20728S06

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/26/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/92

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 J
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

9613491.2623

000044

EPA SAMPLE NO.

B070K2

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207045-02B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20728S06

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/26/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/92

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

Number TICs found: 4

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown Hydrocarbon	5.70	9	~~BJ~~
2.	Unknown Hydrocarbon	6.22	2	~~BJ~~
3.	Unknown Ketone	7.07	4	~~BJ~~
4.	Unknown Compound	21.02	4	J

11-17-92

9613491.2624

000040

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070M7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207045-03B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20728S07

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: ____ decanted: (Y/N) ___ Date Extracted: 07/26/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/92

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 J
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

11-17-92 SC

9613491.2625

000046
EPA SAMPLE NO.

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

B070M7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207045-03B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20728S07

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/26/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/92

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 J
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	6	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

11-17-92 SC

9613491.2626

000047

EPA SAMPLE NO.

B070M7

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207045-03B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20728S07

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/26/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/92

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

Number TICs found: 3

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown Hydrocarbon	5.70	8	~~BJ~~ U
2.	Unknown Hydrocarbon	6.23	2	~~BJ~~ ↓
3.	Unknown Ketone	7.07	4	~~BJ~~ ↓

11-17-92

9613491.2627

000048

EPA SAMPLE NO.

1B

SEMIVOLATI ORGANICS ANALYSIS DATA SHEET

B070P2

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207046-03B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20728S14

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/26/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/92

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

11-17-92

9613491.2628

000049

EPA SAMPLE NO.

B070P2

1C

SEMIVOLAT ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207046-03B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20728S14

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/26/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/92

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 J
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

11-17

EPA SAMPLE NO.

B070P2

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207046-03B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20728S14

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/26/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

Number TICs found: 3

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown Hydrocarbon	5.70	9	~~BJ~~ J
2.	Unknown Hydrocarbon	6.25	3	~~BJ~~ J
3.	Unknown Ketone	7.10	4	~~BJ~~ J

11-17-92

9613491.2630

000051

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070P7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207045-06B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20728S10

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/26/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/92

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

11-12

1C

SEMIVOLATI GANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070P7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207045-06B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20728S10

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/26/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/92

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	50	
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

11-17-93

9613491.2632

000053

EPA SAMPLE NO.

B070P7

1F
SEMIVOLATI ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207045-06B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20728S10

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/26/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

Number TICs found: 4

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown Hydrocarbon	5.70	6	~~BJ~~ U
2.	Unknown Hydrocarbon	6.25	2	~~BJ~~ U
3.	Unknown Ketone	7.07	3	~~BJ~~ U
4.	Chloro Ethanol isomer	19.02	2	JN

11-17-92

9613491.2633

000054

EPA SAMPLE NO.

B072S9

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207045-07B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20728S11

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: ____ decanted: (Y/N) ___ Date Extracted: 07/26/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/92

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

11-17-92

9613491.2634

000055

EPA SAMPLE NO.

B072S9

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207045-07B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20728S11

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/26/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/92

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	52	
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

11-12-92

EPA SAMPLE NO.

B072S9

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207045-07B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20728S11

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/26/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/92

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

Number TICs found: 4

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown Hydrocarbon	5.72	6	BJ
2.	Unknown Hydrocarbon	6.27	2	BJ
3.	Unknown Ketone	7.10	3	BJ
4.	Chloro Ethanol isomer	19.18	2	JN

11-17-92

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B072T4

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207045-04B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20728S08

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: ____ decanted: (Y/N) ___ Date Extracted: 07/26/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/92

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 J
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

11-17-92

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B072T4

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207045-04B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20728S08

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/26/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/92

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 J
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

11-17-0

EPA SAMPLE NO.

B072T4

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A207045-04B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 20728S08

Level: (low/med) LOW Date Received: 07/22/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 07/26/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/28/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

Number TICs found: 3

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown Hydrocarbon	5.68	13	~~BJ~~ 4
2.	Unknown Hydrocarbon	6.22	3	~~BJ~~
3.	Unknown Ketone	7.05	4	~~BJ~~ L

11-17-92

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070D2

b Name: TMA/ARLI Contract: WHC

b Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

trix: (soil/water) WATER Lab Sample ID: A207046-01B

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

Moisture: _____ decanted: (Y/N) ___ Date Received: 07/22/92

traction: (SepF/Cont/Sonc) CONT Date Extracted: 07/26/92

ncentrated Extract Volume: 10000 (uL) Date Analyzed: 08/06/92

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

11-17-92

9613491.2640

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1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070G7

ɔ Name: TMA/ARLI Contract: WHC

ɔ Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

:rix: (soil/water) WATER Lab Sample ID: A207046-04B

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

Moisture: _____ decanted: (Y/N) ___ Date Received: 07/22/92

traction: (SepF/Cont/Sonc) CONT Date Extracted: 07/26/92

ncentrated Extract Volume: 10000 (uL) Date Analyzed: 08/06/92

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	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

R-3-92

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070H2

ıb Name: TMA/ARLI Contract: WHC

ıb Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

ıtrix: (soil/water) WATER Lab Sample ID: A207046-02B

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

Moisture: _____ decanted: (Y/N) ___ Date Received: 07/22/92

xtraction: (SepF/Cont/Sonc) CONT Date Extracted: 07/26/92

ɔncentrated Extract Volume: 10000 (uL) Date Analyzed: 08/06/92

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	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

12-2-9

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070H7

ıb Name: TMA/ARLI Contract: WHC

ıb Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

ıtrix: (soil/water) WATER Lab Sample ID: A207045-05B

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

Moisture: _____ decanted: (Y/N) ___ Date Received: 07/22/92

ctraction: (SepF/Cont/Sonc) CONT Date Extracted: 07/26/92

ɔncentrated Extract Volume: 10000 (uL) Date Analyzed: 08/06/92

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	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

12-2-92

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070J7

ıb Name: TMA/ARLI Contract: WHC

ıb Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

ıtrix: (soil/water) WATER Lab Sample ID: A207045-01B

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

Moisture: _____ decanted: (Y/N) ___ Date Received: 07/22/92

xtraction: (SepF/Cont/Sonc) CONT Date Extracted: 07/26/92

ɔncentrated Extract Volume: 10000 (uL) Date Analyzed: 08/06/92

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	U J
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

1D
PESTICIDE NICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070K2

b Name: TMA/ARLI Contract: WHC

b Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

trix: (soil/water) WATER Lab Sample ID: A207045-02D

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

Moisture: _____ decanted: (Y/N) ___ Date Received: 07/22/92

traction: (SepF/Cont/Sonc) CONT Date Extracted: 07/26/92

ncentrated Extract Volume: 10000 (uL) Date Analyzed: 08/06/92

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 J
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

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070M7

ab Name: TMA/ARLI Contract: WHC

ab Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

atrix: (soil/water) WATER Lab Sample ID: A207045-03B

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

Moisture: _____ decanted: (Y/N) ___ Date Received: 07/22/92

xtraction: (SepF/Cont/Sonc) CONT Date Extracted: 07/26/92

oncentrated Extract Volume: 10000 (uL) Date Analyzed: 08/06/92

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 J
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

9613491.2646

000067

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070P2

b Name: TMA/ARLI Contract: WHC

b Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

trix· (soil/water) WATER Lab Sample ID: A207046-03B

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

Moisture: _____ decanted: (Y/N) ___ Date Received: 07/22/92

:traction: (SepF/Cont/Sonc) CONT Date Extracted: 07/26/92

ncentrated Extract Volume: 10000 (uL) Date Analyzed: 08/06/92

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

11-16-92

9613491.2647

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1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B070P7

ıb Name: TMA/ARLI Contract: WHC

ıb Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

ıtrix: (soil/water) WATER Lab Sample ID: A207045-06B

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

Moisture: _____ decanted: (Y/N) ___ Date Received: 07/22/92

xtraction: (SepF/Cont/Sonc) CONT Date Extracted: 07/26/92

oncentrated Extract Volume: 10000 (uL) Date Analyzed: 08/06/92

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

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B072S9

) Name: TMA/ARLI Contract: WHC

) Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

:rix: (soil/water) WATER Lab Sample ID: A207045-07B

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

Moisture: _____ decanted: (Y/N) ___ Date Received: 07/22/92

:raction: (SepF/Cont/Sonc) CONT Date Extracted: 07/26/92

ıcentrated Extract Volume: 10000 (uL) Date Analyzed: 08/06/92

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	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

12-2-9

1D
PESTICIDE RGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B072T4

ıb Name: TMA/ARLI Contract: WHC

ıb Code: TMALA Case No.: 07045 SAS No.: NA SDG No.: NA

ıtrix: (soil/water) WATER Lab Sample ID: A207045-04B

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

Moisture: _____ decanted: (Y/N) ___ Date Received: 07/22/92

ctraction: (SepF/Cont/Sonc) CONT Date Extracted: 07/26/92

ɔncentrated Extract Volume: 10000 (uL) Date Analyzed: 08/06/92

ıjection 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 J
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

12-26

9613491.2650

WESTINGHOUSE/HANFORD

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B070D2

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

Lab Code: SKINER Case No.: N2-07-110SAS No.: SDG No.: B070D2

Matrix (soil/water): WATER Lab Sample ID: 07191-08S

Level (low/med): LOW Date Received: 07/23/92

% 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	26.3	~~B~~	VI	P
7440-36-0	Antimony	16.5	U		P
7440-38-2	Arsenic	3.3	~~B~~	VI	F
7440-39-3	Barium	13.6	B		P
7440-41-7	Beryllium	0.40	U		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	34900			P
7440-47-3	Chromium	3.7	U		P
7440-48-4	Cobalt	2.3	U		P
7440-50-8	Copper	2.4	U		P
7439-89-6	Iron	92.9	B		P
7439-92-1	Lead	3.7			F
7439-95-4	Magnesium	12200			P
7439-96-5	Manganese	1.7	~~B~~	VI	P
7439-97-6	Mercury	0.20	U	NJ	CV
7440-02-0	Nickel	6.0	U		P
7440-09-7	Potassium	4370	B		P
7782-49-2	Selenium	3.7	~~U~~	~~WN*~~ R	F
7440-22-4	Silver	2.3	U		P
7440-23-5	Sodium	11000			P
7440-28-0	Thallium	1.6	U	~~WN~~ J	F
7440-62-2	Vanadium	21.3	B		P
7440-66-6	Zinc	10.1	U		P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLOUDY Texture:

Color After: COLORLESS Clarity After: CLOUDY Artifacts:

Comments: RM 9/28/92

002

9613491.2651

WESTINGHOUSE/HANFORD
1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B070D5

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

Lab Code: SKINER Case No.: N2-07-110SAS No.: SDG No.: B070D5

Matrix (soil/water): WATER Lab Sample ID: 07197-08S

Level (low/med): LOW Date Received: 07/23/92

% 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	23.6	~~B~~	U	P
7440-36-0	Antimony	16.5	U		P
7440-38-2	Arsenic	2.4	U		F
7440-39-3	Barium	12.7	B		P
7440-41-7	Beryllium	0.40	U		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	35200			P
7440-47-3	Chromium	3.7	U		P
7440-48-4	Cobalt	2.3	U		P
7440-50-8	Copper	2.4	U		P
7439-89-6	Iron	16.3	U		P
7439-92-1	Lead	1.7	U	~~N~~ J	F
7439-95-4	Magnesium	12200			P
7439-96-5	Manganese	1.3	U		P
7439-97-6	Mercury	0.20	U	~~N~~ J	CV
7440-02-0	Nickel	6.0	U		P
7440-09-7	Potassium	4260	B		P
7782-49-2	Selenium	3.6	U	~~N~~ J	F
7440-22-4	Silver	2.3	U		P
7440-23-5	Sodium	11000			P
7440-28-0	Thallium	4.3	U		F
7440-62-2	Vanadium	20.2	B		P
7440-66-6	Zinc	10.1	U		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments PSD 6/21/93

002

9613491.2652

WESTINGHOUSE/HANFORD

1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B070G7

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

Lab Code: SKINER Case No.: N2-07-110SAS No.: SDG No.: B070D2

Matrix (soil/water): WATER Lab Sample ID: 07191-11S

Level (low/med): LOW Date Received: 07/23/92

% 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	52.9	~~B~~	U	P
7440-36-0	Antimony	16.5	U		P
7440-38-2	Arsenic	2.6	U		F
7440-39-3	Barium	18.8	B		P
7440-41-7	Beryllium	0.40	U		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	46600			P
7440-47-3	Chromium	10.5	U		P
7440-48-4	Cobalt	2.3	U		P
7440-50-8	Copper	2.4	U		P
7439-89-6	Iron	54.5	~~B~~	U	P
7439-92-1	Lead	9.3	U		F
7439-95-4	Magnesium	11600			P
7439-96-5	Manganese	1.4	~~B~~	U	P
7439-97-6	Mercury	0.20	U	NJ	CV
7440-02-0	Nickel	6.0	U		P
7440-09-7	Potassium	4370	B		P
7782-49-2	Selenium	3.7	~~B~~	~~WN~~ R	F
7440-22-4	Silver	2.6	~~B~~	U	P
7440-23-5	Sodium	8830			P
7440-28-0	Thallium	1.6	U	~~WN~~ J	F
7440-62-2	Vanadium	3.6	~~B~~	U	P
7440-66-6	Zinc	10.1	U		P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

003

PBD 6/21/93

FORM I - IN ILM02.1

9613491.2653

WESTINGHOUSE/HANFORD
1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B070H0

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

Lab Code: SKINER Case No.: N2-07-110SAS No.: SDG No.: B070D5

Matrix (soil/water): WATER Lab Sample ID: 07197-11S

Level (low/med): LOW Date Received: 07/23/92

% 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	32.2	~~B~~	Y	P
7440-36-0	Antimony	16.5	U		P
7440-38-2	Arsenic	2.7	~~B~~	~~W~~ UJ	F
7440-39-3	Barium	18.1	B		P
7440-41-7	Beryllium	0.40	U		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	46400			P
7440-47-3	Chromium	8.6	~~B~~	Y	P
7440-48-4	Cobalt	2.3	U		P
7440-50-8	Copper	2.4	U		P
7439-89-6	Iron	16.3	U		P
7439-92-1	Lead	4.5		~~W~~* UJ	F
7439-95-4	Magnesium	11400			P
7439-96-5	Manganese	1.3	U		P
7439-97-6	Mercury	0.20	U	~~N~~* J	CV
7440-02-0	Nickel	6.0	U		P
7440-09-7	Potassium	4290	B		P
7782-49-2	Selenium	3.6	U	~~W~~ J	F
7440-22-4	Silver	2.3	U		P
7440-23-5	Sodium	8620			P
7440-28-0	Thallium	4.3	U		F
7440-62-2	Vanadium	3.3	U		P
7440-66-6	Zinc	10.1	U		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

003

PSD
10/20/93

9613491.2654

WESTINGHOUSE/HANFORD

1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B070H2

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

Lab Code: SKINER Case No.: N2-07-110SAS No.: SDG No.: B070D2

Matrix (soil/water): WATER Lab Sample ID: 07191-09S

Level (low/med): LOW Date Received: 07/23/92

% 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	413			P
7440-36-0	Antimony	16.5	U		P
7440-38-2	Arsenic	3.0	~~B~~	U	F
7440-39-3	Barium	80.4	B		P
7440-41-7	Beryllium	0.40	U		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	25500			P
7440-47-3	Chromium	46.4			P
7440-48-4	Cobalt	2.3	U		P
7440-50-8	Copper	2.4	U		P
7439-89-6	Iron	1100			P
7439-92-1	Lead	2.9	~~B~~	U	F
7439-95-4	Magnesium	9090			P
7439-96-5	Manganese	186			P
7439-97-6	Mercury	0.20	U	~~N~~ J	CV
7440-02-0	Nickel	34.5	B		P
7440-09-7	Potassium	5670			P
7782-49-2	Selenium	3.7	~~U~~	~~WN~~* R	F
7440-22-4	Silver	2.3	U		P
7440-23-5	Sodium	13900			P
7440-28-0	Thallium	1.6	U	~~W~~N J	F
7440-62-2	Vanadium	24.8	B		P
7440-66-6	Zinc	335			P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLOUDY Texture:

Color After: COLORLESS Clarity After: CLOUDY Artifacts:

Comments:

PBS
6/21/93

004

FORM I - IN ILM02.1

9613491.2655

WESTINGHOUSE/HANFORD
1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B070H5

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

Lab Code: SKINER Case No.: N2-07-110SAS No.: SDG No.: B070D5

Matrix (soil/water): WATER Lab Sample ID: 07197-09S

Level (low/med): LOW Date Received: 07/23/92

% 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	24.6	~~B~~	U	P
7440-36-0	Antimony	16.5	U		P
7440-38-2	Arsenic	2.4	U		F
7440-39-3	Barium	85.3	~~B~~		P
7440-41-7	Beryllium	0.43	~~B~~	U	P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	25200			P
7440-47-3	Chromium	3.7	U		P
7440-48-4	Cobalt	2.3	U		P
7440-50-8	Copper	2.4	U		P
7439-89-6	Iron	43.5	~~B~~	U	P
7439-92-1	Lead	2.3	~~B~~	~~N*~~ UJ	F
7439-95-4	Magnesium	8570			P
7439-96-5	Manganese	246			P
7439-97-6	Mercury	0.20	U	~~N*~~ J	CV
7440-02-0	Nickel	6.0	U		P
7440-09-7	Potassium	5630			P
7782-49-2	Selenium	3.6	U	~~N~~ J	F
7440-22-4	Silver	2.3	U		P
7440-23-5	Sodium	14200			P
7440-28-0	Thallium	4.3	U	~~N~~ J	F
7440-62-2	Vanadium	10.5	~~B~~	U	P
7440-66-6	Zinc	82.2			P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

PA 1/21/93

004

9613491.2656

WESTINGHOUSE/HANFORD

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B070H7

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

Lab Code: SKINER Case No.: N2-07-110SAS No.: SDG No.: B070D2

Matrix (soil/water): WATER Lab Sample ID: 07191-05S

Level (low/med): LOW Date Received: 07/23/92

% 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	153	B		P
7440-36-0	Antimony	16.5	U		P
7440-38-2	Arsenic	2.6	U		F
7440-39-3	Barium	39.8	B		P
7440-41-7	Beryllium	0.40	U		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	41100			P
7440-47-3	Chromium	36.0			P
7440-48-4	Cobalt	2.3	U		P
7440-50-8	Copper	2.4	U		P
7439-89-6	Iron	318			P
7439-92-1	Lead	2.2	U		F
7439-95-4	Magnesium	9990			P
7439-96-5	Manganese	8.4	B		P
7439-97-6	Mercury	0.20	U	~~N~~ J	CV
7440-02-0	Nickel	74.8			P
7440-09-7	Potassium	4100	B		P
7782-49-2	Selenium	3.7	~~U~~	~~WN~~* R	F
7440-22-4	Silver	2.3	U		P
7440-23-5	Sodium	11100			P
7440-28-0	Thallium	1.6	U	~~WN~~ J	F
7440-62-2	Vanadium	6.6	~~B~~ U		P
7440-66-6	Zinc	20.6			P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLOUDY Texture:

Color After: COLORLESS Clarity After: CLOUDY Artifacts:

Comments:

PB 6/21/93

005

FORM I - IN ILM02.1

9613491.2657

WESTINGHOUSE/HANFORD
1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B070J0

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

Lab Code: SKINER Case No.: N2-07-110SAS No.: SDG No.: B070D5

Matrix (soil/water): WATER Lab Sample ID: 07197-05S

Level (low/med): LOW Date Received: 07/23/92

% 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	17.8	~~B~~	N	P
7440-36-0	Antimony	16.5	U		P
7440-38-2	Arsenic	2.4	U		F
7440-39-3	Barium	38.0	B		P
7440-41-7	Beryllium	0.42	~~B~~	N	P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	41300			P
7440-47-3	Chromium	18.0	N		P
7440-48-4	Cobalt	2.3	U		P
7440-50-8	Copper	2.4	U		P
7439-89-6	Iron	16.3	U		P
7439-92-1	Lead	2.5	~~B~~	~~WN*~~ UJ	F
7439-95-4	Magnesium	9900			P
7439-96-5	Manganese	1.6	~~B~~	N	P
7439-97-6	Mercury	0.20	U	~~N*~~ J	CV
7440-02-0	Nickel	6.0	U		P
7440-09-7	Potassium	3960	B		P
7782-49-2	Selenium	10.7		~~+~~ J	F
7440-22-4	Silver	2.3	U		P
7440-23-5	Sodium	11100			P
7440-28-0	Thallium	4.3	U		F
7440-62-2	Vanadium	7.3	~~B~~	N	P
7440-66-6	Zinc	10.1	U		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

005

FORM I - IN ILM02.1

9613491.2658

WESTINGHOUSE/HANFORD
1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B070J7

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

Lab Code: SKINER Case No.: N2-07-110SAS No.: SDG No.: B070D2

Matrix (soil/water): WATER Lab Sample ID: 07191-01S

Level (low/med): LOW Date Received: 07/23/92

% 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	115	B		P
7440-36-0	Antimony	16.5	U		P
7440-38-2	Arsenic	3.8	~~B~~	~~W~~ UJ	F
7440-39-3	Barium	36.1	B		P
7440-41-7	Beryllium	0.42	~~B~~	U	P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	52100			P
7440-47-3	Chromium	9.0	~~B~~	U	P
7440-48-4	Cobalt	2.3	U		P
7440-50-8	Copper	2.7	~~B~~	U	P
7439-89-6	Iron	165			P
7439-92-1	Lead	2.2	U		F
7439-95-4	Magnesium	6570			P
7439-96-5	Manganese	8.8	B		P
7439-97-6	Mercury	0.20	U	~~N~~ J	CV
7440-02-0	Nickel	6.0	U		P
7440-09-7	Potassium	2970	B		P
7782-49-2	Selenium	10.1		~~SN~~ R	F
7440-22-4	Silver	2.3	U		P
7440-23-5	Sodium	13300			P
7440-28-0	Thallium	1.6	U	~~WN~~ J	F
7440-62-2	Vanadium	3.3	U		P
7440-66-6	Zinc	24.0	U		P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLOUDY Texture:

Color After: COLORLESS Clarity After: CLOUDY Artifacts:

Comments:

PB 9/21/93

006

9613491.2659

WESTINGHOUSE/HANFORD
1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B070K0

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N2-07-110SAS No.: SDG No.: B070D5

Matrix (soil/water): WATER Lab Sample ID: 07197-01S

Level (low/med): LOW Date Received: 07/23/92

% 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	17.3	U		P
7440-36-0	Antimony	16.5	U		P
7440-38-2	Arsenic	2.4	U		F
7440-39-3	Barium	33.0	B		P
7440-41-7	Beryllium	0.42	~~B~~	U	P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	51600			P
7440-47-3	Chromium	3.7	~~B~~	U	P
7440-48-4	Cobalt	2.3	U		P
7440-50-8	Copper	2.4	U		P
7439-89-6	Iron	28.5	~~B~~	U	P
7439-92-1	Lead	3.8		~~WN*~~ UJ	F
7439-95-4	Magnesium	6420			P
7439-96-5	Manganese	1.3	U		P
7439-97-6	Mercury	0.25		~~N*~~ UJ	CV
7440-02-0	Nickel	6.0	U		P
7440-09-7	Potassium	2870	B		P
7782-49-2	Selenium	3.6	U		F
7440-22-4	Silver	2.3	U		P
7440-23-5	Sodium	13100			P
7440-28-0	Thallium	4.3	U		F
7440-62-2	Vanadium	3.3	U		P
7440-66-6	Zinc	10.1	U		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments: PSN 6/21/93

006

9613491.2660

WESTINGHOUSE/HANFORD

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B070K2

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N2-07-110SAS No.: SDG No.: B070D2

Matrix (soil/water): WATER Lab Sample ID: 07191-02S

Level (low/med): LOW Date Received: 07/23/92

% 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	73.1	~~B~~	N	P
7440-36-0	Antimony	16.5	U		P
7440-38-2	Arsenic	2.6	U		F
7440-39-3	Barium	37.2	B		P
7440-41-7	Beryllium	0.40	U		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	50200			P
7440-47-3	Chromium	13.8	N		P
7440-48-4	Cobalt	2.3	U		P
7440-50-8	Copper	2.4	U		P
7439-89-6	Iron	75.9	~~B~~	N	P
7439-92-1	Lead	2.2	U		F
7439-95-4	Magnesium	7580			P
7439-96-5	Manganese	3.3	~~B~~	N	P
7439-97-6	Mercury	0.20	U	~~N~~ J	CV
7440-02-0	Nickel	6.0	U		P
7440-09-7	Potassium	1960	B		P
7782-49-2	Selenium	7.7		~~SN*~~ R	F
7440-22-4	Silver	2.3	U		P
7440-23-5	Sodium	10200			P
7440-28-0	Thallium	1.6	U	~~WN~~ J	F
7440-62-2	Vanadium	3.3	U		P
7440-66-6	Zinc	13.4	~~B~~	N	P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLOUDY Texture:

Color After: COLORLESS Clarity After: CLOUDY Artifacts:

Comments:

007

FBS 6/2/93

FORM I - IN ILM02.1

9613491.2661

WESTINGHOUSE/HANFORD
1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER:

B070K5

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N2-07-110SAS No.: SDG No.: B070D5

Matrix (soil/water): WATER Lab Sample ID: 07197-02S

Level (low/med): LOW Date Received: 07/23/92

% 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	26.8	~~B~~	U	P
7440-36-0	Antimony	16.5	U		P
7440-38-2	Arsenic	2.4	U		F
7440-39-3	Barium	36.7	B		P
7440-41-7	Beryllium	0.41	~~B~~	U	P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	50500			P
7440-47-3	Chromium	12.4	U		P
7440-48-4	Cobalt	2.3	U		P
7440-50-8	Copper	2.4	U		P
7439-89-6	Iron	16.3	U		P
7439-92-1	Lead	2.5	~~B~~	~~WN*~~ UJ	F
7439-95-4	Magnesium	7550			P
7439-96-5	Manganese	1.3	U		P
7439-97-6	Mercury	0.20	U	~~N*~~ J	CV
7440-02-0	Nickel	6.0	U		P
7440-09-7	Potassium	1910	B		P
7782-49-2	Selenium	3.6	U		F
7440-22-4	Silver	2.3	U		P
7440-23-5	Sodium	9980			P
7440-28-0	Thallium	4.3	U		F
7440-62-2	Vanadium	3.3	U		P
7440-66-6	Zinc	10.1	U		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

007

9613491.2662

WESTINGHOUSE/HANFORD

1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B070M7

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N2-07-110SAS No.: SDG No.: B070D2

Matrix (soil/water): WATER Lab Sample ID: 07191-03S

Level (low/med): LOW Date Received: 07/23/92

% 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	49.1	~~B~~	U	P
7440-36-0	Antimony	16.5	U		P
7440-38-2	Arsenic	2.7	~~B~~	U	F
7440-39-3	Barium	25.5	B		P
7440-41-7	Beryllium	0.40	U		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	50200			P
7440-47-3	Chromium	12.0	U		P
7440-48-4	Cobalt	2.3	U		P
7440-50-8	Copper	2.4	U		P
7439-89-6	Iron	87.7	B		P
7439-92-1	Lead	2.2	U		F
7439-95-4	Magnesium	7840			P
7439-96-5	Manganese	3.3	~~B~~	U	P
7439-97-6	Mercury	0.20	U	~~N~~ J	CV
7440-02-0	Nickel	6.0	U		P
7440-09-7	Potassium	5610			P
7782-49-2	Selenium	3.7	~~U~~	~~WN*~~ R	F
7440-22-4	Silver	2.3	U		P
7440-23-5	Sodium	11600			P
7440-28-0	Thallium	1.6	U	WN J	F
7440-62-2	Vanadium	5.1	~~B~~	U	P
7440-66-6	Zinc	47.1	U		P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLOUDY Texture:

Color After: COLORLESS Clarity After: CLOUDY Artifacts:

Comments:

008

FORM I - IN ILM02.1

WESTINGHOUSE/HANFORD
1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B070N0

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N2-07-110SAS No.: SDG No.: B070D5

Matrix (soil/water): WATER Lab Sample ID: 07197-03S

Level (low/med): LOW Date Received: 07/23/92

% 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~~	U	P
7440-36-0	Antimony	16.5	U		P
7440-38-2	Arsenic	4.4	B	~~U~~ J	F
7440-39-3	Barium	25.1	B		P
7440-41-7	Beryllium	0.42	~~B~~	U	P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	50500			P
7440-47-3	Chromium	6.4	~~B~~	U	P
7440-48-4	Cobalt	2.3	U		P
7440-50-8	Copper	2.4	U		P
7439-89-6	Iron	43.7	~~B~~	U	P
7439-92-1	Lead	2.4	~~B~~	~~WN*~~ UJ	F
7439-95-4	Magnesium	7790			P
7439-96-5	Manganese	1.3	U		P
7439-97-6	Mercury	0.20	U	~~N*~~ J	CV
7440-02-0	Nickel	6.0	U		P
7440-09-7	Potassium	5560			P
7782-49-2	Selenium	3.6	U	~~U~~ J	F
7440-22-4	Silver	2.3	U		P
7440-23-5	Sodium	11500			P
7440-28-0	Thallium	4.3	U		F
7440-62-2	Vanadium	6.2	~~B~~	U	P
7440-66-6	Zinc	10.1	U		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments: RJS 9/21/92

008

9613491.2664

WESTINGHOUSE/HANFORD

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B070P2

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N2-07-110SAS No.: SDG No.: B070D2

Matrix (soil/water): WATER Lab Sample ID: 07191-10S

Level (low/med): LOW Date Received: 07/23/92

% 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	33.4	~~B~~	U	P
7440-36-0	Antimony	16.5	U		P
7440-38-2	Arsenic	3.5	~~B~~	U	F
7440-39-3	Barium	31.3	B		P
7440-41-7	Beryllium	0.40	U		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	53200			P
7440-47-3	Chromium	9.0	~~B~~	U	P
7440-48-4	Cobalt	2.3	U		P
7440-50-8	Copper	2.4	U		P
7439-89-6	Iron	16.3	U		P
7439-92-1	Lead	2.2	U		F
7439-95-4	Magnesium	6540			P
7439-96-5	Manganese	1.6	~~B~~	U	P
7439-97-6	Mercury	0.20	U	~~N~~ J	CV
7440-02-0	Nickel	6.0	U		P
7440-09-7	Potassium	4940	B		P
7782-49-2	Selenium	3.7	~~U~~	~~WN*~~ R	F
7440-22-4	Silver	2.3	U		P
7440-23-5	Sodium	11300			P
7440-28-0	Thallium	1.6	U	~~WN~~ J	F
7440-62-2	Vanadium	5.1	~~B~~	U	P
7440-66-6	Zinc	10.1	U		P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLOUDY Texture:

Color After: COLORLESS Clarity After: CLOUDY Artifacts:

Comments:

009

FORM I - IN ILM02.1

9613491.2665

WESTINGHOUSE/HANFORD
1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B070P5

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N2-07-110SAS No.: SDG No.: B070D5

Matrix (soil/water): WATER Lab Sample ID: 07197-10S

Level (low/med): LOW Date Received: 07/23/92

% 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	27.7	~~B~~	U	P
7440-36-0	Antimony	16.5	U		P
7440-38-2	Arsenic	3.4	B	~~W~~ UJ	F
7440-39-3	Barium	30.9	B		P
7440-41-7	Beryllium	0.40	U		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	52600			P
7440-47-3	Chromium	10.9	U		P
7440-48-4	Cobalt	2.3	U		P
7440-50-8	Copper	2.4	U		P
7439-89-6	Iron	24.8	~~B~~	U	P
7439-92-1	Lead	2.0	~~B~~	~~WN~~* UJ	F
7439-95-4	Magnesium	6440			P
7439-96-5	Manganese	1.3	U		P
7439-97-6	Mercury	0.20	U	~~N~~* J	CV
7440-02-0	Nickel	6.0	U		P
7440-09-7	Potassium	4750	B		P
7782-49-2	Selenium	3.6	U	~~N~~ J	F
7440-22-4	Silver	2.3	U		P
7440-23-5	Sodium	11000			P
7440-28-0	Thallium	4.3	U	~~N~~ J	F
7440-62-2	Vanadium	4.7	~~B~~	U	P
7440-66-6	Zinc	10.6	~~B~~	U	P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

009

FORM I - IN ILM02.1

9613491.2666

WESTINGHOUSE/HANFORD

1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B070P7

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N2-07-110SAS No.: SDG No.: B070D2

Matrix (soil/water): WATER Lab Sample ID: 07191-06S

Level (low/med): LOW Date Received: 07/23/92

% 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	498			P
7440-36-0	Antimony	16.5	U		P
7440-38-2	Arsenic	3.9	~~B~~	~~W~~ UJ	F
7440-39-3	Barium	17.3	B		P
7440-41-7	Beryllium	0.40	U		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	34500			P
7440-47-3	Chromium	72.3			P
7440-48-4	Cobalt	2.3	U		P
7440-50-8	Copper	4.0	~~B~~ U		P
7439-89-6	Iron	1060			P
7439-92-1	Lead	3.2	U		F
7439-95-4	Magnesium	8710			P
7439-96-5	Manganese	17.1			P
7439-97-6	Mercury	0.20	U	N J	CV
7440-02-0	Nickel	34.2	B		P
7440-09-7	Potassium	5260			P
7782-49-2	Selenium	3.7	~~U~~	~~WN*~~ R	F
7440-22-4	Silver	2.3	U		P
7440-23-5	Sodium	9740			P
7440-28-0	Thallium	1.6	U	WN J	F
7440-62-2	Vanadium	12.2	~~B~~ U		P
7440-66-6	Zinc	10.4	~~B~~ U		P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLOUDY Texture:

Color After: COLORLESS Clarity After: CLOUDY Artifacts:

Comments:

010

9/21/92

FORM I - IN ILM02.1

9613491.2667

WESTINGHOUSE/HANFORD
1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B070Q0

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N2-07-110SAS No.: SDG No.: B070D5

Matrix (soil/water): WATER Lab Sample ID: 07197-06S

Level (low/med): LOW Date Received: 07/23/92

% 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	20.9	~~B~~	U	P
7440-36-0	Antimony	16.5	U		P
7440-38-2	Arsenic	2.4	U		F
7440-39-3	Barium	13.2	B		P
7440-41-7	Beryllium	0.40	U		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	33700			P
7440-47-3	Chromium	14.2	U		P
7440-48-4	Cobalt	2.3	U		P
7440-50-8	Copper	2.4	U		P
7439-89-6	Iron	16.3	U		P
7439-92-1	Lead	2.9	~~B~~	~~N*~~ UJ	F
7439-95-4	Magnesium	8330			P
7439-96-5	Manganese	2.2	~~B~~	U	P
7439-97-6	Mercury	0.20	U	~~N*~~ J	CV
7440-02-0	Nickel	6.0	U		P
7440-09-7	Potassium	5020			P
7782-49-2	Selenium	3.6	U	~~W~~ J	F
7440-22-4	Silver	2.3	U		P
7440-23-5	Sodium	9410			P
7440-28-0	Thallium	4.3	U		F
7440-62-2	Vanadium	8.7	~~B~~	U	P
7440-66-6	Zinc	10.1	U		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

010

9613491.2668

WESTINGHOUSE/HANFORD
1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B072S9

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N2-07-110SAS No.: SDG No.: B070D2

Matrix (soil/water): WATER Lab Sample ID: 07191-07S

Level (low/med): LOW Date Received: 07/23/92

% 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	318			P
7440-36-0	Antimony	16.5	U		P
7440-38-2	Arsenic	2.6	U		F
7440-39-3	Barium	26.4	B		P
7440-41-7	Beryllium	0.42	~~B~~	U	P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	49500			P
7440-47-3	Chromium	38.2			P
7440-48-4	Cobalt	2.3	U		P
7440-50-8	Copper	2.4	U		P
7439-89-6	Iron	527			P
7439-92-1	Lead	2.2	U		F
7439-95-4	Magnesium	11200			P
7439-96-5	Manganese	30.2			P
7439-97-6	Mercury	0.20	U	~~N~~ J	CV
7440-02-0	Nickel	13.1	~~B~~	U	P
7440-09-7	Potassium	6400			P
7782-49-2	Selenium	3.7	~~U~~	~~WN~~ R	F
7440-22-4	Silver	2.3	U		P
7440-23-5	Sodium	12800			P
7440-28-0	Thallium	1.6	U	~~WN~~ J	F
7440-62-2	Vanadium	7.4	~~B~~	U	P
7440-66-6	Zinc	26.4	U		P
_____	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLOUDY Texture:

Color After: COLORLESS Clarity After: CLOUDY Artifacts:

Comments:

011

FORM I - IN ILM02.1

9613491.2669

WESTINGHOUSE/HANFORD
1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B072T2

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N2-07-110SAS No.: SDG No.: B070D5

Matrix (soil/water): WATER Lab Sample ID: 07197-07S

Level (low/med): LOW Date Received: 07/23/92

% Solids: 0.0

Concentration Units (ug/L or mg/Kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	22.1	~~B~~	U	P
7440-36-0	Antimony	16.5	U		P
7440-38-2	Arsenic	2.6	~~B~~	U	F
7440-39-3	Barium	21.8	B		P
7440-41-7	Beryllium	0.42	~~B~~	U	P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	49100			P
7440-47-3	Chromium	13.1	U		P
7440-48-4	Cobalt	2.3	U		P
7440-50-8	Copper	2.4	U		P
7439-89-6	Iron	16.3	U		P
7439-92-1	Lead	1.7	U	~~N*~~ J	F
7439-95-4	Magnesium	11000			P
7439-96-5	Manganese	18.8			P
7439-97-6	Mercury	0.20	U	~~N*~~ J	CV
7440-02-0	Nickel	6.0	U		P
7440-09-7	Potassium	6240			P
7782-49-2	Selenium	3.6	U		F
7440-22-4	Silver	2.3	U		P
7440-23-5	Sodium	12600			P
7440-28-0	Thallium	4.3	U		F
7440-62-2	Vanadium	8.4	~~B~~	U	P
7440-66-6	Zinc	10.1	U		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

011

9613491.2670

WESTINGHOUSE/HANFORD
1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER:

B072T4

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N2-07-110SAS No.: SDG No.: B070D2

Matrix (soil/water): WATER Lab Sample ID: 07191-04S

Level (low/med): LOW Date Received: 07/23/92

% 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	28.6	~~B~~	U	P
7440-36-0	Antimony	16.5	U		P
7440-38-2	Arsenic	2.6	U		F
7440-39-3	Barium	25.3	B		P
7440-41-7	Beryllium	0.40	U		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	49100			P
7440-47-3	Chromium	21.0			P
7440-48-4	Cobalt	2.3	U		P
7440-50-8	Copper	2.4	U		P
7439-89-6	Iron	67.4	~~B~~	U	P
7439-92-1	Lead	2.2	U		F
7439-95-4	Magnesium	11200			P
7439-96-5	Manganese	2.6	~~B~~	U	P
7439-97-6	Mercury	0.20	U	~~N~~ J	CV
7440-02-0	Nickel	6.0	U		P
7440-09-7	Potassium	5990			P
7782-49-2	Selenium	3.7	~~U~~	~~WN~~* R	F
7440-22-4	Silver	2.4	~~B~~	U	P
7440-23-5	Sodium	12200			P
7440-28-0	Thallium	1.6	U	~~WN~~ J	F
7440-62-2	Vanadium	7.7	~~B~~	U	P
7440-66-6	Zinc	67.3			P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLOUDY Texture:

Color After: COLORLESS Clarity After: CLOUDY Artifacts:

Comments:

012

9613491.2671

WESTINGHOUSE/HANFORD
1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B072T7

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N2-07-110SAS No.: SDG No.: B070D5

Matrix (soil/water): WATER Lab Sample ID: 07197-04S

Level (low/med): LOW Date Received: 07/23/92

% 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	17.3	U		P
7440-36-0	Antimony	16.5	U		P
7440-38-2	Arsenic	3.5	~~B~~	~~W~~ UJ	F
7440-39-3	Barium	26.1	B		P
7440-41-7	Beryllium	0.40	U		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	51400			P
7440-47-3	Chromium	12.7	U		P
7440-48-4	Cobalt	2.3	U		P
7440-50-8	Copper	2.4	U		P
7439-89-6	Iron	20.5	~~B~~	U	P
7439-92-1	Lead	1.8	~~B~~	~~N*~~ UJ	F
7439-95-4	Magnesium	11200			P
7439-96-5	Manganese	3.1	~~B~~	U	P
7439-97-6	Mercury	0.20	U	N* J	CV
7440-02-0	Nickel	6.0	U		P
7440-09-7	Potassium	5950			P
7782-49-2	Selenium	3.6	U	~~W~~ J	F
7440-22-4	Silver	2.3	U		P
7440-23-5	Sodium	12100			P
7440-28-0	Thallium	4.3	U		F
7440-62-2	Vanadium	7.3	~~B~~	U	P
7440-66-6	Zinc	17.0	~~B~~	U	P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

012

TMA Inc. REPORT Work Order # A2-07-045

Receivedd: 07/22/92 Results by Sample

SAMPLE ID B070H7 FRACTION 05C TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 07/18/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	8.9	mg/L	0.2
Elect. Conductivity	120.1	331	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	7.8 R	pH	0.1
Sulfate	300.0	45.6	mg/L	1

FORM I

TMA Inc. REPORT Work Order # A2-07-045

Received: 07/22/92

Results by Sample

SAMPLE ID B070N7 FRACTION 05D TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/18/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Tot. Dissolved Solids	160.1	228	mg/L	5
Alkalinity	310.1	100	mg/L	2

FORM I

12-7-92

9613491.2674

000052

TMA Inc. REPORT Work Order # A2-07-045

Received: 07/22/92

Results by Sample

SAMPLE ID B070N7 FRACTION 05G TEST CODE VCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 07/18/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Ammonia	350.3	0.08	mg/L	0.05
COD	410	~~<30~~ U	mg/L	30

FORM I

PBK
6/2/93

9613491.2675

000051

TMA Inc. REPORT Work Order # A2-07-045

Received: 07/22/92

Results by Sample

SAMPLE ID B070W7 FRACTION 05F TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/18/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Sulfide	376.1	~~<1~~ U	mg/L	1

FORM I

BD 8/20/92

TMA Inc. REPORT Work Order # A2-07-045

Received: 07/22/92 Results by Sample

SAMPLE ID B070J7 FRACTION 01E TEST CODE VCCLPL NAME Anions & Wet Chem. - VM043

Date & Time Collected 07/18/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	8.4	mg/L	0.2
Elect. Conductivity	120.1	365	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	8.1 R	pH	0.1
Sulfate	300.0	42.7	mg/L	1

FORM I

PAB
6/21/95

TMA Inc. REPORT Work Order # A2-07-045

Received: 07/22/92

Results by Sample

SAMPLE ID B070J7 FRACTION 01F TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 07/18/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Tot. Dissolved Solids	160.1	243	mg/L	5
Alkalinity	310.1	110	mg/L	2

FORM I

12-7-92 SC

TMA Inc. REPORT Work Order # A2-07-045

Received: 07/22/92 Results by Sample

SAMPLE ID B070J7 FRACTION 01B TEST CODE WCCLPL NAME Anions & Wet Chem. - WB043

Date & Time Collected 07/18/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Ammonia	350.3	0.12	mg/L	0.05
COD	410	~~<30~~ 41	mg/L	30

FORM I

PGA
6/21/93

9613491.2679

000034

TMA Inc. REPORT Work Order # A2-07-045

Received: 07/22/92

Results by Sample

SAMPLE ID B070J7 FRACTION 01G TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/18/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Sulfide	376.1	~~<1~~ N	mg/L	1

FORM I

PBD
6/21/93

9613491.2680

TMA Inc. REPORT Work Order # ~~A2-07049~~ 000037

Received: 07/22/92 Results by Sample

SAMPLE ID B070K2 FRACTION 02E TEST CODE VCCLPL NAME Anions & Wet Chem. - VH043

Date & Time Collected 07/18/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	9.5	mg/L	0.5
Elect. Conductivity	120.1	344	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	51.0	mg/L	1

FORM I

PSD
6/21/93

TMA Inc. REPORT Work Order # A2-07-045

Received: 07/22/92

Results by Sample

SAMPLE ID B070K2 FRACTION 02F TEST CODE VCCLPL NAME Anions & Wet Chem. - VN043

Date & Time Collected 07/18/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Tot. Dissolved Solids	160.1	220	mg/L	5
Alkalinity	310.1	95	mg/L	2

FORM I

12-7-92

TMA Inc. REPORT Work Order # A2-07-045

Received: 07/22/92 Results by Sample

SAMPLE ID B070K2 FRACTION 02N TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 07/18/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Ammonia	350.3	0.08	mg/L	0.05
COD	410	~~<~~30 U	mg/L	30

FORM I

PBD
67-/23

TMA Inc. REPORT Work Order # A2-07-045

Received: 07/22/92

Results by Sample

SAMPLE ID B070K2 FRACTION 026 TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 07/18/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Sulfide	376.1	~~<1~~ U	mg/L	1

FORM I

PRD
6/21/92

k Order # A2-07-045 TMA Inc. REPORT Work
Received: 07/22/92 Results by Sample

SAMPLE ID B070M7 FRACTION 03C TEST CODE WCCLPL NAME Anions & Wet Chem. - WM043
Date & Time Collected 07/18/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	9.7	mg/L	0.2
Elect. Conductivity	120.1	366	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	8.1 R	pH	0.1
Sulfate	300.0	46.4	mg/L	1

FORM I

PBD
5/21/93

TMA Inc. REPORT Work Order # A2-07-045

Received: 07/22/92

Results by Sample

SAMPLE ID B070M7 FRACTION 03E TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/18/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Tot. Dissolved Solids	160.1	256	mg/L	5
Alkalinity	310.1	106	mg/L	2

FORM I

12-7-92 SC

TMA Inc. REPORT Work Order # A2-07-045

Received: 07/22/92 Results by Sample

SAMPLE ID B070M7 FRACTION 03G TEST CODE VCCLPL NAME Anions & Wet Chem. - VN043

Date & Time Collected 07/18/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Ammonia	350.3	<0.05 U	mg/L	0.05
COD	410	<30 U	mg/L	30

FORM I

PSA
7/31/92

9613491.2687

TMA Inc. REPORT Work Order # A2-07-045

Received: 07/22/92

Results by Sample

SAMPLE ID B070N7 FRACTION 03F TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 07/18/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Sulfide	376.1	~~<1~~ N	mg/L	1

FORM I

PRD
6/21/93

9613491.2688

000053

IMA Inc. REPORT Work Order # A2-07-045

Received: 07/22/92

Results by Sample

SAMPLE ID B070P7 FRACTION 06C TEST CODE UCCLPL NAME Anions & Wet Chem. - UN043

Date & Time Collected 07/19/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	5.3	mg/L	0.2
Elect. Conductivity	120.1	283	umho/cm	6
Fluoride	300.0	0.3	mg/L	0.1
Phosphate	300.0	<0.4 H	mg/L	0.4
pH	150.1	7.9 R	pH	0.1
Sulfate	300.0	29.0	mg/L	1

FORM I

PBA
6/21/93

9613491.2689

Inc. REPORT Work Order # A2-07-045

Received: 07/22/92

Results by Sample

SAMPLE ID B070P7 FRACTION 06D TEST CODE VCCLPL NAME Anions & Wet Chem. - VN043

Date & Time Collected 07/19/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Tot. Dissolved Solids	160.1	192	mg/L	5
Alkalinity	310.1	104	mg/L	2

FORM I

12-7-92 SC

9613491.2690

000056

TMA Inc. REPORT Work Order # A2-07-045

Received: 07/22/92 Results by Sample

SAMPLE ID B070P7 FRACTION 06W TEST CODE WCCLPL NAME Anions & Wet Chem. - WW043

Date & Time Collected 07/19/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Ammonia	350.3	<0.05 U	mg/L	0.05
COD	410	<30 U	mg/L	30

FORM I

RBJ
6/21/92

Inc. REPORT Work Order # A2-07-045

Received: 07/22/92

Results by Sample

SAMPLE ID B070P7 FRACTION 06E TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 07/19/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Sulfide	376.1	~~<1~~ N	mg/L	1

FORM I

PB 6/21/93

9613491.2692

000057 ~~000~~

TMA Inc. REPORT Work Order # A2-07-045 EV9

Received: 07/22/92

Results by Sample

SAMPLE ID B072S9 FRACTION 07C TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 07/19/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	12.9	mg/L	0.2
Elect. Conductivity	120.1	387	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	7.9 R	pH	0.1
Sulfate	300.0	57.1	mg/L	1

FORM I

PBD
6/21/92

9613491.2693

000058

TMA Inc. REPORT Work Order # A2-07-045

Received: 07/22/92

Results by Sample

SAMPLE ID B072S9 FRACTION 07D TEST CODE WCCLPL NAME Anions & Wet Chem. - WM043

Date & Time Collected 07/19/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Tot. Dissolved Solids	160.1	274	mg/L	5
Alkalinity	310.1	112	mg/L	2

FORM I

12-7-92 SC

TMA Inc. REPORT Work Order # A2-07-045

Received: 07/22/92

Results by Sample

SAMPLE ID B072S9 FRACTION 07F TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 07/19/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Ammonia	350.3	<0.05 U	mg/L	0.05
COD	410	<30 U	mg/L	30

FORM I

PBJ
6/21/93

9613491.2695

000059

Inc. REPORT Work Order # A2-07-045

Received: 07/22/92

Results by Sample

SAMPLE ID B072S9 FRACTION 07E TEST CODE VCCLPL NAME Anions & Wet Chem. - VH043

Date & Time Collected 07/19/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Sulfide	376.1	~~<1~~ U	mg/L	1

FORM I

RJ 6/21/93

9613491.2696

000045

TMA Inc. REPORT Work Order # A2-07-045

Received: 07/22/92 Results by Sample

SAMPLE ID B072T4 FRACTION 04C TEST CODE VCCLPL NAME Anions & Wet Chem. - VH043

Date & Time Collected 07/18/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	13.8	mg/L	0.2
Elect. Conductivity	120.1	391	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 R	pH	0.1
Sulfate	300.0	55.8	mg/L	1

FORM I

PBJ
6/21/93

9613491.2697

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TMA Inc. REPORT Work Order # A2-07-045

Received: 07/22/92

Results by Sample

SAMPLE ID B072T4 FRACTION 04E TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Tiee Collected 07/18/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Tot. Dissolved Solids	160.1	269	mg/L	5
Alkalinity	310.1	112	mg/L	2

FORM I

12-7-92 SC

TRA Inc. REPORT Work Order # A2-07-045

Received: 07/22/92 Results by Sample

SAMPLE ID B072T4 FRACTION 04G TEST CODE VCCLPL NAME Anions & Wet Chem. - VB043

Date & Time Collected 07/18/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Ammonia	350.3	<0.05 U	mg/L	0.05
COD	410	<30 U	mg/L	30

FORM I

6/21/92

TMA Inc. REPORT Work Order # A2-07-045

Received: 07/22/92 Results by Sample

SAMPLE ID B072T4 FRACTION 04F TEST CODE WCCLPL NAME Anions & Wet Chem. - WM043

Date & Time Collected 07/18/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Sulfide	376.1	~~<1~~ U	mg/L	1

FORM I

6/21/93

Received: 07/23/92

Results by Sample

SAMPLE ID B070J7 SAMPLE # 01 FRACTIONS: A
Date & Time Collected 07/18/92 Category WATER

NO3NO2 4.81
mg N/L

SAMPLE ID B070J7D SAMPLE # 01 FRACTIONS: B
Date & Time Collected 07/18/92 Category WATER

NO3NO2 5.14
mg N/L

SAMPLE ID B070J7S SAMPLE # 01 FRACTIONS: C
Date & Time Collected 07/18/92 Category WATER

NO3NO2 6.97
mg N/L

SAMPLE ID B070K2 SAMPLE # 02 FRACTIONS: A
Date & Time Collected 07/18/92 Category WATER

NO3NO2 4.38
mg N/L

SAMPLE ID B070M7 SAMPLE # 03 FRACTIONS: A
Date & Time Collected 07/18/92 Category WATER

NO3NO2 4.13
mg N/L

SAMPLE ID B072T4 SAMPLE # 04 FRACTIONS: A
Date & Time Collected 07/18/92 Category WATER

NO3NO2 3.66
mg N/L

SAMPLE ID B070H7 SAMPLE # 05 FRACTIONS: A
Date & Time Collected 07/19/92 Category WATER

NO3NO2 2.38
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 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
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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) 890-72
1-800-4 LAB TEST FAX (617) 890-3883

Received: 07/23/92 Results by Sample

SAMPLE ID B070P7 SAMPLE # 06 FRACTIONS: A
Date & Time Collected 07/19/92 Category WATER

NO3NO2 1.47
mg N/L

SAMPLE ID B072S9 SAMPLE # 07 FRACTIONS: A
Date & Time Collected 07/19/92 Category WATER

NO3NO2 3.38
mg N/L

SAMPLE ID B070D2 SAMPLE # 08 FRACTIONS: A
Date & Time Collected 07/20/92 Category WATER

NO3NO2 0.66
mg N/L

SAMPLE ID B070H2 SAMPLE # 09 FRACTIONS: A
Date & Time Collected 07/20/92 Category WATER

NO3NO2 <0.25 U
mg N/L

SAMPLE ID B070P2 SAMPLE # 10 FRACTIONS: A
Date & Time Collected 07/20/92 Category WATER

NO3NO2 3.65
mg N/L

SAMPLE ID B070G7 SAMPLE # 11 FRACTIONS: A
Date & Time Collected 07/20/92 Category WATER

NO3NO2 4.14
mg N/L

SAMPLE ID LCSW SAMPLE # 12 FRACTIONS: A
Date & Time Collected not specified Category WATER

NO3NO2 1.92
mg N/L

TMA
Thermo Analytical Inc.

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