AR TARGET SHEET

The following document was too large to scan as one unit, therefore it has been broken down into sections.

DOCUMENT # BOB MY 4-TMA-760

EDMC # 45 610

SECTION 2 OF 2

START

9613501.1497

0045610 2/2

APPENDIX H

METALS VALIDATED LABORATORY REPORT FORMS

WESTINGHOUSE/HANFORD

9613501.1498 1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

80BMY4

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D2-0039

Lab Code: SKINER Case No.: N4-05-048SAS No.: SDG No.: 80BMY4

Matrix (soil/water): WATER Lab Sample ID: 05116-01S

Level (low/med): LOW Date Received: 05/12/94

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M	Val Q
7429-90-5	Aluminum	20.9	U		P	
7440-36-0	Antimony	14.7	U		P	
7440-38-2	Arsenic	1.5	~~U~~	~~J~~ U	P	
7440-39-3	Barium	29.6	B		P	
7440-41-7	Beryllium	0.40	U		P	
7440-43-9	Cadmium	1.1	U		P	
7440-70-2	Calcium	55700			P	
7440-47-3	Chromium	47.3			P	
7440-48-4	Cobalt	2.1	U		P	
7440-50-8	Copper	3.6	~~U~~	~~K~~ U	P	
7439-89-6	Iron	83.1	~~B~~	U	P	
7439-92-1	Lead	1.6	~~B~~	~~K~~ BS	P	
7439-95-4	Magnesium	8220			P	
7439-96-5	Manganese	2.6	~~B~~	U	P	
7439-97-6	Mercury	0.20	U		AV	
7440-02-0	Nickel	6.5	~~U~~	~~K~~ U	P	
7440-09-7	Potassium	2700	B		P	
7782-49-2	Selenium	2.1	U		P	
7440-22-4	Silver	3.6	U		P	
7440-23-5	Sodium	7900			P	
7440-28-0	Thallium	2.2	~~U~~	~~K~~ U	P	
7440-62-2	Vanadium	2.2	U		P	
7440-66-6	Zinc	7.1	U	BM 9.30.94	P	
	Cyanide	10.0	U		CA	

olor Before: COLORLESS Clarity Before: CLEAR Texture:

olor After: COLORLESS Clarity After: CLEAR Artifacts:

omments:

BY 8.18.94

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WESTINGHOUSE/HANFORD

9613501.1499 1

SAMPLE NUMBER:

BOBMY5

INORGANIC ANALYSIS DATA SHEET

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D2-0039

Lab Code: SKINER Case No.: N4-05-048SAS No.: SDG No.: BOBMY5

Matrix (soil/water): WATER Lab Sample ID: 05118-01S

Level (low/med): LOW Date Received: 05/12/94

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M	Val Q
7429-90-5	Aluminum	20.9	U		P	
7440-36-0	Antimony	14.7	U		P	
7440-38-2	Arsenic	1.5	~~U~~ UJ		P	UJ
7440-39-3	Barium	29.5	B		P	
7440-41-7	Beryllium	0.40	U		P	
7440-43-9	Cadmium	1.1	U		P	
7440-70-2	Calcium	55700			P	
7440-47-3	Chromium	43.8			P	
7440-48-4	Cobalt	2.1	U		P	
7440-50-8	Copper	3.6	U		P	
7439-89-6	Iron	31.8	~~B~~ U		P	u
7439-92-1	Lead	1.5	U	*	P	
7439-95-4	Magnesium	8090			P	
7439-96-5	Manganese	1.9	~~B~~ ~~UBS~~		P	u
7439-97-6	Mercury	0.20	U	U BM 0-18-71	AV	
7440-02-0	Nickel	6.5	U		P	
7440-09-7	Potassium	2620	B		P	9-24-94
7782-49-2	Selenium	2.1	U		P	
7440-22-4	Silver	3.6	U		P	
7440-23-5	Sodium	7910			P	
7440-28-0	Thallium	2.2	~~U~~ UJ U		P	
7440-62-2	Vanadium	2.2	U		P	
7440-66-6	Zinc	7.1	U	BM 9.30.94	P	
---	Cyanide				NR	

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

BM 8-18-94

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9613601.1500

U.S. EPA - CLP

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

BOBMV2

Lab Name: ITAS KNOXVILLE Contract: HANFORD
Lab Code: ITSTU Case No.: W0536 SAS No.: SDG No.: W0062
Matrix (soil/water): WATER Lab Sample ID: AA8890
Level (low/med): LOW Date Received: 05/13/94
% 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	40.0	U		P	
7440-36-0	Antimony	50.0	U		P	
7440-38-2	Arsenic	9.1	B		F	
7440-39-3	Barium	44.0	B		P	
7440-41-7	Beryllium	1.0	U		P	
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	58500			P	
7440-47-3	Chromium	10.0	U		P	
7440-48-4	Cobalt	10.0	U		P	
7440-50-8	Copper	10.0	~~U~~		P	UJ
7439-89-6	Iron	23.8	~~B~~		P	~~B~~ UJ
7439-92-1	Lead	2.0	U	~~W~~	F	~~UJ~~ UJ
7439-95-4	Magnesium	18400			P	BM
7439-96-5	Manganese	2.0	U		P	9-17-94
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	20.0	U		P	
7440-09-7	Potassium	7180			P	
7782-49-2	Selenium	3.1	B	~~S~~	F	~~BJ~~ No qual BM 9-17-94
7440-22-4	Silver	5.0	U		P	
7440-23-5	Sodium	55300			P	
7440-28-0	Thallium	2.0	U		F	
7440-62-2	Vanadium	17.6	B		P	
7440-66-6	Zinc	11.1	~~B~~		P	U
5955-70-0	Cyanide				NR	

9-7-94

Color Before: COLORLESS Clarity Before: CLEAR Texture:
Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:
TOTAL

FORM I - IN

ILM02.1

8-24-94 WJC

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9613501.1501

U.S. EPA - CLP

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

BOBMV2

Lab Name: ITAS_KNOXVILLE_____ Contract: HANFORD___
Lab Code: ITSTU_ Case No.: WO536 SAS No.: _____ SDG No.: W0062_
Matrix (soil/water): WATER Lab Sample ID: AA8891
Level (low/med): LOW__ Date Received: 05/13/94
% 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_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__				NR
7440-39-3	Barium___				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__				NR
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___				NR
7439-89-6	Iron____				NR
7439-92-1	Lead____				NR
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____				NR
5955-70-0	Cyanide__	10.0	U		AS

Color Before: _____ Clarity Before: _____ Texture: _____
Color After: _____ Clarity After: _____ Artifacts: _____

Comments:
CYANIDE_ONLY.

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8-24-94 (WOC)

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U.S. EPA - CLP

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

BOBMV3

Lab Name: ITAS_KNOXVILLE_____ Contract: HANFORD___
Lab Code: ITSTU_ Case No.: WO536 SAS No.: _____ SDG No.: W0062_
Matrix (soil/water): WATER Lab Sample ID: AA8900
Level (low/med): LOW__ Date Received: 05/13/94
% 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_	40.0	U		P_	
7440-36-0	Antimony_	50.0	U		P_	
7440-38-2	Arsenic__	6.5	B		F_	
7440-39-3	Barium___	42.3	B		P_	
7440-41-7	Beryllium	1.0	U		P_	
7440-43-9	Cadmium__	5.0	U		P_	
7440-70-2	Calcium__	57900			P_	
7440-47-3	Chromium_	10.0	U		P_	
7440-48-4	Cobalt___	10.0	U		P_	
7440-50-8	Copper___	46.7		*	P_	J
7439-89-6	Iron____	10.0	~~U~~		P_	UJ
7439-92-1	Lead____	2.0	U		F_	
7439-95-4	Magnesium	18000			P_	
7439-96-5	Manganese	2.0	U		P_	
7439-97-6	Mercury__	0.20	U		CV	
7440-02-0	Nickel___	20.0	U		P_	
7440-09-7	Potassium	7080			P_	
7782-49-2	Selenium_	3.0	~~B~~	~~WN~~	F_	BJ
7440-22-4	Silver___	5.0	U		P_	
7440-23-5	Sodium___	54000			P_	BM 9-30-94
7440-28-0	Thallium_	2.0	U		F_	
7440-62-2	Vanadium_	17.8	B		P_	
7440-66-6	Zinc____	5.0	U		P_	
5955-70-0	Cyanide__				NR	

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____
Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:
DISSOLVED

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8-24-94 WJC

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

BOBMRO

Lab Name: ITAS_KNOXVILLE_____ Contract: HANFORD/WE
Lab Code: ITSTU_ Case No.: W0538 SAS No.: _____ SDG No.: W0062_
Matrix (soil/water): WATER Lab Sample ID: AA8927
Level (low/med): LOW__ Date Received: 05/13/94
% 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_	40.0	U		P	
7440-36-0	Antimony_	50.0	U		P	
7440-38-2	Arsenic__	2.0	U		F	
7440-39-3	Barium___	20.7	B		P	
7440-41-7	Beryllium	1.0	U		P	
7440-43-9	Cadmium__	5.0	U		P	
7440-70-2	Calcium__	24200			P	
7440-47-3	Chromium_	10.0	U		P	
7440-48-4	Cobalt___	10.0	U		P	
7440-50-8	Copper___	10.0	~~U~~		P	UJ
7439-89-6	Iron____	12.2	~~B~~		P	~~J~~ UJ
7439-92-1	Lead____	2.0	U		F	
7439-95-4	Magnesium	4060	B		P	
7439-96-5	Manganese	2.0	U		P	
7439-97-6	Mercury__	0.20	U		CV	
7440-02-0	Nickel___	20.0	U		P	
7440-09-7	Potassium	1330	~~B~~		P	~~J~~ BJ
7782-49-2	Selenium_	2.0	U	W	F	UJ
7440-22-4	Silver___	5.0	U		P	
7440-23-5	Sodium___	2200	B		P	
7440-28-0	Thallium_	2.0	U		F	
7440-62-2	Vanadium_	10.0	U		P	
7440-66-6	Zinc____	5.7	~~B~~		P	U
5955-70-0	Cyanide__				NR	

AA 9-7-94

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: N/A___
Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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8-24-94 WTC

9613601.1504

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

BOBMRO

Lab Name: ITAS_KNOXVILLE_____ Contract: HANFORD/WE
Lab Code: ITSTU_ Case No.: WO538 SAS No.: _____ SDG No.: W0062_
Matrix (soil/water): WATER Lab Sample ID: AA8928
Level (low/med): LOW__ Date Received: 05/13/94
% 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_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__				NR
7440-39-3	Barium___				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__				NR
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___				NR
7439-89-6	Iron_____				NR
7439-92-1	Lead_____				NR
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc_____				NR
5955-70-0	Cyanide__	10.0	U		AS

Color Before: _____ Clarity Before: _____ Texture: _____
Color After: _____ Clarity After: _____ Artifacts: _____

Comments:
CYANIDE_ONLY.

FORM I - IN

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6/22/94

8-24-94
WJC

9613601.1505

U.S. EPA - CLP

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

BOBMR1

Lab Name: ITAS_KNOXVILLE_____ Contract: HANFORD/WE

Lab Code: ITSTU_ Case No.: W0538 SAS No.: _____ SDG No.: W0062_

Matrix (soil/water): WATER Lab Sample ID: AA8943

Level (low/med): LOW__ Date Received: 05/13/94

% 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_	40.0	U		P_	
7440-36-0	Antimony_	50.0	U		P_	
7440-38-2	Arsenic__	2.0	U		F_	
7440-39-3	Barium__	19.3	B		P_	
7440-41-7	Beryllium	1.0	U		P_	
7440-43-9	Cadmium__	5.0	U		P_	
7440-70-2	Calcium__	23400			P_	
7440-47-3	Chromium_	10.0	U		P_	
7440-48-4	Cobalt___	10.0	U		P_	
7440-50-8	Copper___	10.0	~~U~~	*	P_	UJ
7439-89-6	Iron____	13.1	~~B~~		P_	UJ
7439-92-1	Lead____	2.0	U		F_	
7439-95-4	Magnesium	3860	B		P_	
7439-96-5	Manganese	2.0	U		P_	
7439-97-6	Mercury__	0.20	U		CV	
7440-02-0	Nickel___	20.0	U		P_	
7440-09-7	Potassium	1000	~~U~~		P_	UJ
7782-49-2	Selenium_	2.0	~~U~~	~~WN~~	F_	UJ
7440-22-4	Silver___	5.0	U		P_	
7440-23-5	Sodium___	2140	B		P_	
7440-28-0	Thallium_	2.0	U		F_	
7440-62-2	Vanadium_	10.0	U		P_	
7440-66-6	Zinc____	8.6	~~B~~		P_	U
5955-70-0	Cyanide__				NR	

9-1-94

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: N/A___

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

DISSOLVED.

FORM I - IN

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8-24-94 WJC

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U.S. EPA - CLP

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

BOBMR8

Lab Name: ITAS_KNOXVILLE_____ Contract: HANFORD/WE
Lab Code: ITSTU_ Case No.: W0538 SAS No.: _____ SDG No.: W0062_
Matrix (soil/water): WATER Lab Sample ID: AA8939
Level (low/med): LOW__ Date Received: 05/13/94
% 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_	40.0	U		P_	
7440-36-0	Antimony_	50.0	U		P_	
7440-38-2	Arsenic__	2.0	U		F_	
7440-39-3	Barium___	14.2	B		P_	
7440-41-7	Beryllium	1.0	U		P_	
7440-43-9	Cadmium__	5.0	U		P_	
7440-70-2	Calcium__	20400			P_	
7440-47-3	Chromium_	10.0	U		P_	
7440-48-4	Cobalt___	10.0	U		P_	
7440-50-8	Copper___	10.0	~~U~~		P_	UJ
7439-89-6	Iron____	35.8	~~B~~		P_	U
7439-92-1	Lead____	2.0	U		F_	
7439-95-4	Magnesium	3620	B		P_	
7439-96-5	Manganese	2.4	B		P_	
7439-97-6	Mercury__	0.20	U		CV	
7440-02-0	Nickel___	20.0	U		P_	
7440-09-7	Potassium	1000	~~U~~		P_	UJ
7782-49-2	Selenium_	2.0	~~U~~	~~W~~	F_	UJ BM 9.30.94
7440-22-4	Silver___	5.0	U		P_	
7440-23-5	Sodium___	2730	B		P_	
7440-28-0	Thallium_	2.0	U		F_	
7440-62-2	Vanadium_	10.0	U		P_	
7440-66-6	Zinc____	5.6	~~B~~		P_	U
5955-70-0	Cyanide__				NR	

9-1-94

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: N/A___
Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

8-24-94 WJC

ILM02.1
8 6/21/94

9613601.1507

U.S. EPA - CLP

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

BOBMR8

Lab Name: ITAS_KNOXVILLE_____ Contract: HANFORD/WE
Lab Code: ITSTU_ Case No.: W0538 SAS No.: _____ SDG No.: W0062_
Matrix (soil/water): WATER Lab Sample ID: AA8940
Level (low/med): LOW__ Date Received: 05/13/94
% 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_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__				NR
7440-39-3	Barium__				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__				NR
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___				NR
7439-89-6	Iron____				NR
7439-92-1	Lead____				NR
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____				NR
5955-70-0	Cyanide__	10.0	U		AS

Color Before: _____ Clarity Before: _____ Texture: _____
Color After: _____ Clarity After: _____ Artifacts: _____

Comments:
CYNAIDE_ONLY.

FORM I - IN

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WJG

8 6/22/94

9613501.1508

U.S. EPA - CLP

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

BOBMR9

Lab Name: ITAS KNOXVILLE Contract: HANFORD/WE

Lab Code: ITSTU Case No.: W0538 SAS No.: SDG No.: W0062

Matrix (soil/water): WATER Lab Sample ID: AA8944

Level (low/med): LOW Date Received: 05/13/94

% 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	40.0	U		P	
7440-36-0	Antimony	50.0	U		P	
7440-38-2	Arsenic	2.0	U		F	
7440-39-3	Barium	17.8	B		P	
7440-41-7	Beryllium	1.0	U		P	
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	25900			P	
7440-47-3	Chromium	10.0	U		P	
7440-48-4	Cobalt	10.0	U		P	
7440-50-8	Copper	10.0	~~U~~	*	P	uJ
7439-89-6	Iron	10.0	~~U~~		P	uJ
7439-92-1	Lead	2.0	U		F	
7439-95-4	Magnesium	4580	B		P	
7439-96-5	Manganese	2.0	U		P	
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	20.0	U		P	
7440-09-7	Potassium	1840	~~B~~		P	~~J~~ UJ
7782-49-2	Selenium	2.0	~~U~~	~~WN~~	F	UJ BM 9-30-94
7440-22-4	Silver	5.0	U		P	
7440-23-5	Sodium	3630	B		P	
7440-28-0	Thallium	2.0	U		F	
7440-62-2	Vanadium	10.0	U		P	
7440-66-6	Zinc	5.5	~~B~~		P	u
5955-70-0	Cyanide				NR	

9-7-94

Color Before: COLORLESS Clarity Before: CLEAR Texture: N/A

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

DISSOLVED.

FORM I - IN

ILM02.1

8 6/22/94

8-24-94 WJC

~~000034~~

9613601.1509

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

BOBMT0

Lab Name: ITAS KNOXVILLE Contract: HANFORD
Lab Code: ITSTU Case No.: WO545 SAS No.: SDG No.: W0062
Matrix (soil/water): WATER Lab Sample ID: AA9066
Level (low/med): LOW Date Received: 05/14/94
% 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	40.0	U		P	
7440-36-0	Antimony	50.0	U		P	
7440-38-2	Arsenic	2.1	B		F	
7440-39-3	Barium	25.1	B		P	
7440-41-7	Beryllium	1.0	U		P	
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	29600			P	
7440-47-3	Chromium	11.8			P	
7440-48-4	Cobalt	10.0	U		P	
7440-50-8	Copper	10.0	~~U~~		P	UJ
7439-89-6	Iron	10.0	~~U~~		P	UJ
7439-92-1	Lead	2.0	~~U~~	~~W~~	F	UJ
7439-95-4	Magnesium	3950	B		P	
7439-96-5	Manganese	2.0	U		P	BJ 9-19-94
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	20.0	U		P	
7440-09-7	Potassium	2410	~~B~~		P	BJ
7782-49-2	Selenium	2.8	~~B~~	~~W~~	F	BJ
7440-22-4	Silver	5.0	U		P	
7440-23-5	Sodium	3560	B		P	
7440-28-0	Thallium	2.0	U		F	
7440-62-2	Vanadium	10.0	U		P	
7440-66-6	Zinc	9.0	~~B~~		P	U
5955-70-0	Cyanide				NR	

9-1-94

Color Before: COLORLESS Clarity Before: CLEAR Texture:
Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:
TOTAL

FORM I - IN

ILM02.1

8-24-94 (NOC)

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9613601.1510

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

BOBMT0

Lab Name: ITAS KNOXVILLE Contract: HANFORD
Lab Code: ITSTU Case No.: WO545 SAS No.: SDG No.: W0062
Matrix (soil/water): WATER Lab Sample ID: AA9067
Level (low/med): LOW Date Received: 05/14/94
% 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				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead				NR
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
5955-70-0	Cyanide	10.0	U		AS

Color Before: Clarity Before: Texture:
Color After: Clarity After: Artifacts:

Comments:
CYANIDE_ONLY.

FORM I - IN

ILM02.1

8-24-94
WJC

9613601.1511

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

BOBMT1

Lab Name: ITAS KNOXVILLE Contract: HANFORD
Lab Code: ITSTU Case No.: W0545 SAS No.: SDG No.: W0062
Matrix (soil/water): WATER Lab Sample ID: AA9071
Level (low/med): LOW Date Received: 05/14/94
% 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	40.0	U		P	
7440-36-0	Antimony	50.0	U		P	
7440-38-2	Arsenic	2.0	U		F	
7440-39-3	Barium	43.8	B		P	
7440-41-7	Beryllium	1.0	U		P	
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	79300			P	
7440-47-3	Chromium	15.8			P	
7440-48-4	Cobalt	10.0	U		P	
7440-50-8	Copper	29.9		*	P	J
7439-89-6	Iron	10.0	~~U~~		P	UJ
7439-92-1	Lead	2.0	~~U~~	~~W~~	F	UJ
7439-95-4	Magnesium	19000			P	
7439-96-5	Manganese	2.0	U		P	
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	20.0	U		P	
7440-09-7	Potassium	5290			P	
7782-49-2	Selenium	2.4	~~B~~	~~WN~~	F	BJ BM 9.30.94
7440-22-4	Silver	5.0	U		P	
7440-23-5	Sodium	27000			P	
7440-28-0	Thallium	2.0	U		F	
7440-62-2	Vanadium	10.0	U		P	
7440-66-6	Zinc	5.0	U		P	
5955-70-0	Cyanide				NR	

Color Before: COLORLESS Clarity Before: CLEAR Texture:
Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:
DISSOLVED.

FORM I - IN

ILM02.1

8-24-94 WJC

000317

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9613601.1512

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

BOBMT8

Lab Name: ITAS_KNOXVILLE Contract: HANFORD
Lab Code: ITSTU Case No.: W0545 SAS No.: SDG No.: W0062
Matrix (soil/water): WATER Lab Sample ID: AA9054
Level (low/med): LOW Date Received: 05/14/94
% 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	40.0	U		P	
7440-36-0	Antimony	50.0	U		P	
7440-38-2	Arsenic	2.6	B		F	
7440-39-3	Barium	62.4	B		P	
7440-41-7	Beryllium	1.0	U		P	
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	113000			P	
7440-47-3	Chromium	22.0			P	
7440-48-4	Cobalt	10.0	U		P	
7440-50-8	Copper	10.0	~~U~~		P	UJ
7439-89-6	Iron	27.2	~~B~~		P	~~B~~ UJ
7439-92-1	Lead	2.0	~~U~~	~~W~~	F	~~W~~ UJ
7439-95-4	Magnesium	25900			P	
7439-96-5	Manganese	2.0	U		P	BM 9-30-94
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	20.0	U		P	
7440-09-7	Potassium	6290			P	
7782-49-2	Selenium	2.0	~~U~~	U	F	~~UJ~~ No Qual BM 9-17-94
7440-22-4	Silver	5.0	U		P	
7440-23-5	Sodium	38000		~~BM 9-30-94~~	P	
7440-28-0	Thallium	2.0	U		F	
7440-62-2	Vanadium	10.0	U		P	
7440-66-6	Zinc	5.0	U		P	
5955-70-0	Cyanide				NR	

9-1-94

Color Before: COLORLESS Clarity Before: CLEAR Texture:
Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:
TOTAL.

FORM I - IN

ILM02.1

8-24-94 WTC

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9613601.1513

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

BOBMT8

Lab Name: ITAS_KNOXVILLE_____ Contract: HANFORD___
Lab Code: ITSTU_ Case No.: WO545 SAS No.: _____ SDG No.: W0062_
Matrix (soil/water): WATER Lab Sample ID: AA9055
Level (low/med): LOW__ Date Received: 05/14/94
% 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_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__				NR
7440-39-3	Barium___				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__				NR
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___				NR
7439-89-6	Iron____				NR
7439-92-1	Lead____				NR
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____				NR
5955-70-0	Cyanide__	10.0	U		AS

Color Before: _____ Clarity Before: _____ Texture: _____
Color After: _____ Clarity After: _____ Artifacts: _____

Comments:
CYANIDE_ONLY.

FORM I - IN

ILM02.1

9-24-94
EWJ

9613501.1514

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

BOBMT9

Lab Name: ITAS_KNOXVILLE_____ Contract: HANFORD___
Lab Code: ITSTU_ Case No.: WO545 SAS No.: _____ SDG No.: W0062_
Matrix (soil/water): WATER Lab Sample ID: AA9070
Level (low/med): LOW__ Date Received: 05/14/94
% 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_	40.0	U		P_	
7440-36-0	Antimony_	50.0	U		P_	
7440-38-2	Arsenic__	2.0	U		F_	
7440-39-3	Barium___	28.4	B		P_	
7440-41-7	Beryllium	1.0	U		P_	
7440-43-9	Cadmium__	5.0	U		P_	
7440-70-2	Calcium__	32700	_		P_	
7440-47-3	Chromium_	15.6			P_	
7440-48-4	Cobalt___	10.0	U		P_	
7440-50-8	Copper___	10.0	~~B~~	*	P_	uJ
7439-89-6	Iron_____	37.4	~~B~~		P_	u
7439-92-1	Lead_____	2.0	~~U~~	~~N~~	F_	uJ
7439-95-4	Magnesium	4420	B		P_	
7439-96-5	Manganese	2.0	U		P_	
7439-97-6	Mercury__	0.20	U		CV	7-30-94
7440-02-0	Nickel___	20.0	U		P_	
7440-09-7	Potassium	3980	B		P_	
7782-49-2	Selenium_	2.0	~~U~~	~~N~~	F_	uJ
7440-22-4	Silver___	5.0	U		P_	
7440-23-5	Sodium___	4150	B		P_	
7440-28-0	Thallium_	2.0	U		F_	
7440-62-2	Vanadium_	10.0	U		P_	
7440-66-6	Zinc_____	15.9	~~B~~		P_	u
5955-70-0	Cyanide__		_		NR	

9-7-94

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____
Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:
DISSOLVED.

FORM I - IN

ILM02.1

8-24-94 WJC

9613601.1515

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

BOBMP4

Lab Name: ITAS_KNOXVILLE_____ Contract: HANFORD/WE

Lab Code: ITSTU_ Case No.: W0577 SAS No.: _____ SDG No.: W0062_

Matrix (soil/water): WATER Lab Sample ID: AA9603

Level (low/med): LOW__ Date Received: 05/21/94

% 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_	40.0	U		P_	
7440-36-0	Antimony_	50.0	U		P_	
7440-38-2	Arsenic__	2.0	U		F_	
7440-39-3	Barium___	23.1	B		P_	
7440-41-7	Beryllium	1.0	U		P_	
7440-43-9	Cadmium__	5.0	U		P_	
7440-70-2	Calcium__	26200			P_	
7440-47-3	Chromium_	10.0	U		P_	
7440-48-4	Cobalt___	10.0	U		P_	
7440-50-8	Copper___	10.0	~~U~~		P_	UJ
7439-89-6	Iron____	182			P_	
7439-92-1	Lead____	2.0	U		F_	
7439-95-4	Magnesium	4520	B		P_	
7439-96-5	Manganese	5.3	B		P_	
7439-97-6	Mercury__	0.20	U		CV	
7440-02-0	Nickel___	20.0	U		P_	
7440-09-7	Potassium	1540	~~B~~		P_	~~B~~ BJ
7782-49-2	Selenium_	2.0	~~U~~	~~W~~	F_	UJ
7440-22-4	Silver___	5.0	U		P_	BM 7-30-94
7440-23-5	Sodium___	3050	B		P_	
7440-28-0	Thallium_	2.0	U		F_	
7440-62-2	Vanadium_	10.0	U		P_	
7440-66-6	Zinc____	5.0	U		P_	
5955-70-0	Cyanide__				NR	

GRG 9-2-94

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: N/A___

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

ILM02.1

8 6/24/94

8-24-94 NJC

9613601.1516

U.S. EPA - CLP

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

BOBMP4

Lab Name: ITAS_KNOXVILLE_____ Contract: HANFORD/WE
Lab Code: ITSTU_ Case No.: WO577 SAS No.: _____ SDG No.: W0062_
Matrix (soil/water): WATER Lab Sample ID: AA9604
Level (low/med): LOW__ Date Received: 05/21/94
% 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_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__				NR
7440-39-3	Barium___				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__				NR
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___				NR
7439-89-6	Iron____				NR
7439-92-1	Lead____				NR
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____				NR
5955-70-0	Cyanide__	10.0	U		AS

Color Before: _____ Clarity Before: _____ Texture: _____
Color After: _____ Clarity After: _____ Artifacts: _____

Comments:
CYANIDE_ONLY.

FORM I - IN

ILM02.1
8 6/24/94

8-24-94
WJC

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9613601.1517

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

BOBMP5

Lab Name: ITAS_KNOXVILLE_____ Contract: HANFORD/WE
Lab Code: ITSTU_ Case No.: W0577 SAS No.: _____ SDG No.: W0062_
Matrix (soil/water): WATER Lab Sample ID: AA9607
Level (low/med): LOW__ Date Received: 05/21/94
% 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_	3220			P_	
7440-36-0	Antimony_	50.0	U		P_	
7440-38-2	Arsenic__	2.0	U		F_	
7440-39-3	Barium___	25.7	B		P_	
7440-41-7	Beryllium	1.0	U		P_	
7440-43-9	Cadmium__	5.0	U		P_	
7440-70-2	Calcium__	31800			P_	
7440-47-3	Chromium_	1710			P_	
7440-48-4	Cobalt___	10.7	B		P_	
7440-50-8	Copper___	20.4	~~B~~	*	P_	~~J~~ BJ
7439-89-6	Iron____	5530			P_	~~J~~
7439-92-1	Lead____	2.0	U		F_	
7439-95-4	Magnesium	4500	B		P_	
7439-96-5	Manganese	111			P_	
7439-97-6	Mercury__	0.20	U		CV	
7440-02-0	Nickel___	625			P_	
7440-09-7	Potassium	1360	~~B~~		P_	~~J~~ BJ
7782-49-2	Selenium_	2.0	~~U~~	~~WN~~	F_	UJ BM 9-30-94
7440-22-4	Silver___	5.0	U		P_	
7440-23-5	Sodium___	3070	B		P_	
7440-28-0	Thallium_	2.0	U		F_	
7440-62-2	Vanadium_	10.0	U		P_	
7440-66-6	Zinc____	11.3	~~B~~		P_	u
5955-70-0	Cyanide__				NR	

9-29-94

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: N/A___
Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:
DISSOLVED.

FORM I - IN

ILM02.1

8-24-94 WJC

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U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

BOBMW0

Lab Name: ITAS_KNOXVILLE_____ Contract: HANFORD/WE
Lab Code: ITSTU_ Case No.: W0577 SAS No.: _____ SDG No.: W0062_
Matrix (soil/water): WATER Lab Sample ID: AA9580
Level (low/med): LOW__ Date Received: 05/21/94
% 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_	40.0	U		P_	
7440-36-0	Antimony_	50.0	U		P_	
7440-38-2	Arsenic__	5.1	B		F_	
7440-39-3	Barium__	42.8	B		P_	
7440-41-7	Beryllium	1.0	U		P_	
7440-43-9	Cadmium__	5.0	U		P_	
7440-70-2	Calcium__	60400			P_	
7440-47-3	Chromium_	10.0	U		P_	
7440-48-4	Cobalt___	10.0	U		P_	
7440-50-8	Copper___	10.0	~~U~~		P_	UJ
7439-89-6	Iron____	98.5	B		P_	
7439-92-1	Lead____	2.0	~~U~~	~~W~~	F_	UJ
7439-95-4	Magnesium	20100			P_	
7439-96-5	Manganese	16.2			P_	
7439-97-6	Mercury__	0.20	U		CV	BM 9-30-94
7440-02-0	Nickel___	20.0	U		P_	
7440-09-7	Potassium	6870			P_	
7782-49-2	Selenium_	2.9	~~B~~	~~W~~	F_	BJ
7440-22-4	Silver___	5.0	U		P_	
7440-23-5	Sodium___	70500			P_	
7440-28-0	Thallium_	2.0	U		F_	
7440-62-2	Vanadium_	10.0	U		P_	
7440-66-6	Zinc____	5.0	U		P_	
5955-70-0	Cyanide__				NR	

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: N/A___
Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

ILM02.1
8 6/24/94

8-24-94 WTC

9613601.1519

U.S. EPA - CLP

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

BOBMW0

Lab Name: ITAS_KNOXVILLE_____ Contract: HANFORD/WE

Lab Code: ITSTU_ Case No.: ~~W0577~~ 8 SAS No.: _____ SDG No.: W0062_

Matrix (soil/water): WATER W0629 6/24/94 Lab Sample ID: AB0404

Level (low/med): LOW__ Date Received: 06/08/94

% 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_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__				NR
7440-39-3	Barium__				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__				NR
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___				NR
7439-89-6	Iron____				NR
7439-92-1	Lead____				NR
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____				NR
5955-70-0	Cyanide__	10.0	U		AS

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments:

CLIENT DIDNOT SEND WITH W0577, SO RELOGGED AS W0629.

CYANIDE ONLY.

FORM I - IN

ILM02.1

8 6/24/94

8-24-94 WOC

9613501.1520

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

BOBMW1

Lab Name: ITAS_KNOXVILLE_____ Contract: HANFORD/WE

Lab Code: ITSTU_ Case No.: W0577 SAS No.: _____ SDG No.: W0062_

Matrix (soil/water): WATER Lab Sample ID: AA9583

Level (low/med): LOW__ Date Received: 05/21/94

% 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_	40.0	U		P_	
7440-36-0	Antimony_	50.0	U		P_	
7440-38-2	Arsenic__	5.0	B		F_	
7440-39-3	Barium__	41.7	B		P_	
7440-41-7	Beryllium	1.0	U		P_	
7440-43-9	Cadmium__	5.0	U		P_	
7440-70-2	Calcium__	58400			P_	
7440-47-3	Chromium_	10.0	U		P_	
7440-48-4	Cobalt___	10.0	U		P_	
7440-50-8	Copper___	10.0	~~U~~	*	P_	UJ
7439-89-6	Iron____	34.9	~~B~~		P_	K
7439-92-1	Lead____	2.0	~~U~~	~~W~~	F_	UJ
7439-95-4	Magnesium	19500			P_	
7439-96-5	Manganese	13.5	B		P_	
7439-97-6	Mercury__	0.20	U		CV	BM 9-30-94
7440-02-0	Nickel___	20.0	U		P_	
7440-09-7	Potassium	6330			P_	
7782-49-2	Selenium_	3.2	~~B~~	~~WN~~	F_	BJ
7440-22-4	Silver___	5.0	U		P_	
7440-23-5	Sodium___	68200			P_	
7440-28-0	Thallium_	2.0	U		F_	
7440-62-2	Vanadium_	10.0	U		P_	
7440-66-6	Zinc____	5.0	U		P_	
5955-70-0	Cyanide__				NR	

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: N/A___

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

DISSOLVED.

FORM I - IN

8-24-94 WJC

ILM02.1 2 6/24/94

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9613501.1521

U.S. EPA - CLP

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

BOBMT5

Lab Name: ITAS_KNOXVILLE_____ Contract: HANFORD/WE

Lab Code: ITSTU_ Case No.: WO535 SAS No.: _____ SDG No.: W0055_

Matrix (soil/water): WATER Lab Sample ID: AA8894

Level (low/med): LOW__ Date Received: 05/12/94

% 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_	40.0	U		P_	
7440-36-0	Antimony_	50.0	U		P_	
7440-38-2	Arsenic__	2.3	B		F_	
7440-39-3	Barium___	36.2	B		P_	
7440-41-7	Beryllium	1.0	U		P_	
7440-43-9	Cadmium__	5.0	U		P_	
7440-70-2	Calcium__	77400			P_	
7440-47-3	Chromium_	21.8			P_	
7440-48-4	Cobalt___	10.0	U		P_	
7440-50-8	Copper___	10.0	U		P_	
7439-89-6	Iron_____	19.9	~~B~~		P_	u
7439-92-1	Lead_____	2.0	B		F_	
7439-95-4	Magnesium	17100			P_	
7439-96-5	Manganese	2.0	U		P_	
7439-97-6	Mercury__	0.20	U		CV	
7440-02-0	Nickel___	20.0	U		P_	
7440-09-7	Potassium	5770			P_	
7782-49-2	Selenium_	2.5	~~B~~	W	F_	BJ
7440-22-4	Silver___	5.0	U		P_	
7440-23-5	Sodium___	20500			P_	
7440-28-0	Thallium_	2.0	U		F_	
7440-62-2	Vanadium_	10.0	U		P_	
7440-66-6	Zinc_____	5.0	U		P_	
5955-70-0	Cyanide__				NR	

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: N/A___

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

DISSOLVED.

FORM I - IN

ILM02.1

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8-25-94

9613501.1522

U.S. EPA - CLP

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

BOBMW4

Lab Name: ITAS KNOXVILLE Contract: HANFORD/WE

Lab Code: ITSTU Case No.: W0535 SAS No.: SDG No.: W0055

Matrix (soil/water): WATER Lab Sample ID: AA8876

Level (low/med): LOW Date Received: 05/12/94

% 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	50.6	B		P
7440-36-0	Antimony	50.0	U		P
7440-38-2	Arsenic	2.5	B		F
7440-39-3	Barium	48.2	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	104000			P
7440-47-3	Chromium	10.4			P
7440-48-4	Cobalt	10.0	U		P
7440-50-8	Copper	10.0	U		P
7439-89-6	Iron	10.0	U	*	P
7439-92-1	Lead	2.0	U		F
7439-95-4	Magnesium	25700			P
7439-96-5	Manganese	2.0	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	20.0	U		P
7440-09-7	Potassium	7470			P
7782-49-2	Selenium	2.0	U		F
7440-22-4	Silver	5.0	U		P
7440-23-5	Sodium	32300			P
7440-28-0	Thallium	2.0	U		F
7440-62-2	Vanadium	10.0	U		P
7440-66-6	Zinc	5.0	U		P
5955-70-0	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture: N/A

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

FORM I - IN

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U.S. EPA - CLP

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

BOBMW4

Lab Name: ITAS_KNOXVILLE_____ Contract: HANFORD/WE

Lab Code: ITSTU_ Case No.: WO535 SAS No.: _____ SDG No.: W0055_

Matrix (soil/water): WATER Lab Sample ID: AA8877

Level (low/med): LOW__ Date Received: 05/12/94

% 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_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__				NR
7440-39-3	Barium___				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__				NR
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___				NR
7439-89-6	Iron____				NR
7439-92-1	Lead____				NR
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____				NR
5955-70-0	Cyanide__	10.0	U		AS

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments:

CYANIDE_ONLY.

FORM I - IN

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

BOBMW5

Lab Name: ITAS KNOXVILLE Contract: HANFORD/WE
Lab Code: ITSTU Case No.: W0535 SAS No.: SDG No.: W0055
Matrix (soil/water): WATER Lab Sample ID: AA8895
Level (low/med): LOW Date Received: 05/12/94
% 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	61.6	B		P
7440-36-0	Antimony	50.0	U		P
7440-38-2	Arsenic	2.3	B		F
7440-39-3	Barium	45.1	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	97000			P
7440-47-3	Chromium	11.8			P
7440-48-4	Cobalt	10.0	U		P
7440-50-8	Copper	10.0	U		P
7439-89-6	Iron	114			P
7439-92-1	Lead	2.0	U		F
7439-95-4	Magnesium	23800			P
7439-96-5	Manganese	2.0	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	20.0	U		P
7440-09-7	Potassium	7140			P
7782-49-2	Selenium	2.0	U		F
7440-22-4	Silver	5.0	U		P
7440-23-5	Sodium	29800			P
7440-28-0	Thallium	2.0	U		F
7440-62-2	Vanadium	10.0	U		P
7440-66-6	Zinc	5.0	U		P
5955-70-0	Cyanide				NR

J 9-16-94

Color Before: COLORLESS Clarity Before: CLEAR Texture: N/A
Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:
DISSOLVED.

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U.S. EPA - CLP

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

BOBMR4

Lab Name: ITAS_KNOXVILLE_____ Contract: HANFORD___
Lab Code: ITSTU_ Case No.: W0537 SAS No.: _____ SDG No.: W0055_
Matrix (soil/water): WATER Lab Sample ID: AA8912
Level (low/med): LOW__ Date Received: 05/13/94
% 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_	50.2	B		P_	
7440-36-0	Antimony_	50.0	U		P_	
7440-38-2	Arsenic__	2.0	U		F_	
7440-39-3	Barium___	15.8	B		P_	
7440-41-7	Beryllium	1.0	U		P_	
7440-43-9	Cadmium__	5.0	U		P_	
7440-70-2	Calcium__	22000			P_	
7440-47-3	Chromium_	10.0	U		P_	
7440-48-4	Cobalt___	10.0	U		P_	
7440-50-8	Copper___	10.0	U		P_	
7439-89-6	Iron____	53.3	B	*	P_	u
7439-92-1	Lead____	2.0	U		F_	
7439-95-4	Magnesium	3830	B		P_	
7439-96-5	Manganese	2.0	U		P_	
7439-97-6	Mercury__	0.20	U		CV	
7440-02-0	Nickel___	20.0	U		P_	
7440-09-7	Potassium	1030	B		P_	
7782-49-2	Selenium_	2.0	U		F_	
7440-22-4	Silver___	5.0	U		P_	
7440-23-5	Sodium___	2110	B		P_	
7440-28-0	Thallium_	2.0	U		F_	
7440-62-2	Vanadium_	10.0	U		P_	
7440-66-6	Zinc____	5.1	B		P_	
5955-70-0	Cyanide__				NR	

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____
Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:
TOTAL

FORM I - IN

ILM02.1

BW 8-25-94

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U.S. EPA - CLP

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

BOBMR4

Lab Name: ITAS_KNOXVILLE_____ Contract: HANFORD___
Lab Code: ITSTU_ Case No.: WO537 SAS No.: _____ SDG No.: W0055_
Matrix (soil/water): WATER Lab Sample ID: AA8913
Level (low/med): LOW__ Date Received: 05/13/94
% 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_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__				NR
7440-39-3	Barium___				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__				NR
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___				NR
7439-89-6	Iron____				NR
7439-92-1	Lead____				NR
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____				NR
5955-70-0	Cyanide__	10.0	U		AS

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____
Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:
TOTAL_CYANIDE

FORM I - IN

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9613601.1527 U.S. EPA - CLP

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

BOBMR5

Lab Name: ITAS KNOXVILLE Contract: HANFORD
Lab Code: ITSTU Case No.: W0537 SAS No.: SDG No.: W0055
Matrix (soil/water): WATER Lab Sample ID: AA8916
Level (low/med): LOW Date Received: 05/13/94
% 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	40.0	U		P	
7440-36-0	Antimony	50.0	U		P	
7440-38-2	Arsenic	2.0	U		F	
7440-39-3	Barium	15.4	B		P	
7440-41-7	Beryllium	1.0	U		P	
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	21700			P	
7440-47-3	Chromium	10.0	U		P	
7440-48-4	Cobalt	10.0	U		P	
7440-50-8	Copper	10.0	U		P	
7439-89-6	Iron	25.8	~~B~~		P	U
7439-92-1	Lead	6.2			F	
7439-95-4	Magnesium	3820	B		P	
7439-96-5	Manganese	2.0	U		P	
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	20.0	U		P	
7440-09-7	Potassium	1110	B		P	
7782-49-2	Selenium	2.0	~~U~~	W	F	UJ
7440-22-4	Silver	5.0	U		P	
7440-23-5	Sodium	2180	B		P	
7440-28-0	Thallium	2.0	U		F	
7440-62-2	Vanadium	10.0	U		P	
7440-66-6	Zinc	5.0	U		P	
5955-70-0	Cyanide				NR	

Color Before: COLORLESS Clarity Before: CLEAR Texture:
Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:
DISSOLVED

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U.S. EPA - CLP

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

BOBMS2

Lab Name: ITAS KNOXVILLE Contract: HANFORD/WE
Lab Code: ITSTU Case No.: WO535 SAS No.: SDG No.: W0055
Matrix (soil/water): WATER Lab Sample ID: AA8838
Level (low/med): LOW Date Received: 05/12/94
% 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				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead				NR
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
5955-70-0	Cyanide	10.0	U		AS

Color Before: Clarity Before: Texture:
Color After: Clarity After: Artifacts:

Comments:
CYANIDE ONLY.

FORM I - IN

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

BOBMS3

Lab Name: ITAS KNOXVILLE Contract: HANFORD/WE
Lab Code: ITSTU Case No.: W0535 SAS No.: SDG No.: W0055
Matrix (soil/water): WATER Lab Sample ID: AA8880
Level (low/med): LOW Date Received: 05/12/94
% 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	40.0	U		P	
7440-36-0	Antimony	50.0	U		P	
7440-38-2	Arsenic	3.4	B		F	
7440-39-3	Barium	27.4	B		P	
7440-41-7	Beryllium	1.0	U		P	
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	60500			P	
7440-47-3	Chromium	33.4			P	
7440-48-4	Cobalt	10.0	U		P	
7440-50-8	Copper	10.0	U		P	
7439-89-6	Iron	25.1	~~B~~		P	U
7439-92-1	Lead	2.0	U		F	
7439-95-4	Magnesium	13600			P	
7439-96-5	Manganese	2.0	U		P	
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	20.0	U		P	
7440-09-7	Potassium	4510	B		P	
7782-49-2	Selenium	2.0	~~U~~	W	F	UJ
7440-22-4	Silver	5.0	U		P	
7440-23-5	Sodium	17000			P	
7440-28-0	Thallium	2.0	U		F	
7440-62-2	Vanadium	10.0	U		P	
7440-66-6	Zinc	5.0	U		P	
5955-70-0	Cyanide				NR	

Color Before: COLORLESS Clarity Before: CLEAR Texture: N/A
Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:
DISSOLVED.

FORM I - IN

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

BOBMS6

Lab Name: ITAS KNOXVILLE Contract: HANFORD/WE
Lab Code: ITSTU Case No.: W0535 SAS No.: SDG No.: W0055
Matrix (soil/water): WATER Lab Sample ID: AA8850
Level (low/med): LOW Date Received: 05/12/94
% 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	40.0	U		P	
7440-36-0	Antimony	50.0	U		P	
7440-38-2	Arsenic	2.5	B		F	
7440-39-3	Barium	36.5	B		P	
7440-41-7	Beryllium	1.0	U		P	
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	71800			P	
7440-47-3	Chromium	334			P	
7440-48-4	Cobalt	10.0	U		P	
7440-50-8	Copper	10.0	U		P	
7439-89-6	Iron	23.6	~~B~~	*	P	u
7439-92-1	Lead	2.0	U		F	
7439-95-4	Magnesium	10200			P	
7439-96-5	Manganese	2.0	U		P	
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	20.0	U		P	
7440-09-7	Potassium	3870	B		P	
7782-49-2	Selenium	2.0	~~U~~	W	F	uJ
7440-22-4	Silver	5.0	U		P	
7440-23-5	Sodium	16300			P	
7440-28-0	Thallium	2.0	U		F	
7440-62-2	Vanadium	10.0	U		P	
7440-66-6	Zinc	5.0	U		P	
5955-70-0	Cyanide				NR	

Color Before: COLORLESS Clarity Before: CLEAR Texture: N/A
Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

FORM I - IN

ILM02.1

BM
8-25-94

9613501.1531

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

BOBMS6

Lab Name: ITAS_KNOXVILLE_____ Contract: HANFORD/WE
Lab Code: ITSTU_ Case No.: WO535 SAS No.: _____ SDG No.: W0055_
Matrix (soil/water): WATER Lab Sample ID: AA8851
Level (low/med): LOW__ Date Received: 05/12/94
% 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_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__				NR
7440-39-3	Barium___				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__				NR
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___				NR
7439-89-6	Iron____				NR
7439-92-1	Lead____				NR
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____				NR
5955-70-0	Cyanide__	10.0	U		AS

Color Before: _____ Clarity Before: _____ Texture: _____
Color After: _____ Clarity After: _____ Artifacts: _____

Comments:
CYANIDE_ONLY._____

FORM I - IN

ILM02.1

BM 8-25-94

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U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

BOBMS7

Lab Name: ITAS KNOXVILLE Contract: HANFORD/WE
Lab Code: ITSTU Case No.: W0535 SAS No.: SDG No.: W0055
Matrix (soil/water): WATER Lab Sample ID: AA8881
Level (low/med): LOW Date Received: 05/12/94
% 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	40.0	U		P	
7440-36-0	Antimony	50.0	U		P	
7440-38-2	Arsenic	2.4	B		F	
7440-39-3	Barium	39.4	B		P	
7440-41-7	Beryllium	1.0	U		P	
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	78900			P	
7440-47-3	Chromium	366			P	
7440-48-4	Cobalt	10.0	U		P	
7440-50-8	Copper	10.0	U		P	
7439-89-6	Iron	45.6	~~B~~		P	u
7439-92-1	Lead	2.0	U		F	
7439-95-4	Magnesium	11200			P	
7439-96-5	Manganese	2.0	U		P	
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	20.0	U		P	
7440-09-7	Potassium	4420	B		P	
7782-49-2	Selenium	2.0	~~U~~	W	F	uj
7440-22-4	Silver	5.0	U		P	
7440-23-5	Sodium	17800			P	
7440-28-0	Thallium	2.0	U		F	
7440-62-2	Vanadium	10.0	U		P	
7440-66-6	Zinc	5.8	B		P	
5955-70-0	Cyanide				NR	

Color Before: COLORLESS Clarity Before: CLEAR Texture: N/A
Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:
DISSOLVED.

FORM I - IN

ILM02.1

BVI 8-25-94

9613601.1533

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

BOBMT4

Lab Name: ITAS_KNOXVILLE_____ Contract: HANFORD/WE
Lab Code: ITSTU_ Case No.: W0535 SAS No.: _____ SDG No.: W0055_
Matrix (soil/water): WATER Lab Sample ID: AA8863
Level (low/med): LOW__ Date Received: 05/12/94
% 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_	41.3	B		P_
7440-36-0	Antimony_	50.0	U		P_
7440-38-2	Arsenic__	2.0	U		F_
7440-39-3	Barium___	42.2	B		P_
7440-41-7	Beryllium	1.0	U		P_
7440-43-9	Cadmium__	5.0	U		P_
7440-70-2	Calcium__	92600			P_
7440-47-3	Chromium_	27.1			P_
7440-48-4	Cobalt___	10.0	U		P_
7440-50-8	Copper___	10.0	U		P_
7439-89-6	Iron_____	19.9	~~B~~	*	P_ u
7439-92-1	Lead____	2.0	U		F_
7439-95-4	Magnesium	20700			P_
7439-96-5	Manganese	2.0	U		P_
7439-97-6	Mercury__	0.20	U		CV
7440-02-0	Nickel___	20.0	U		P_
7440-09-7	Potassium	5980			P_
7782-49-2	Selenium_	2.0	U		F_
7440-22-4	Silver___	5.0	U		P_
7440-23-5	Sodium___	24900			P_
7440-28-0	Thallium_	2.0	U		F_
7440-62-2	Vanadium_	10.0	U		P_
7440-66-6	Zinc____	5.0	U		P_
5955-70-0	Cyanide__				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: N/A___
Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

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8-25-94

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1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

BOBMT4

Lab Name: ITAS_KNOXVILLE_____ Contract: HANFORD/WE
Lab Code: ITSTU_ Case No.: W0535 SAS No.: _____ SDG No.: W0055_
Matrix (soil/water): WATER Lab Sample ID: AA8864
Level (low/med): LOW__ Date Received: 05/12/94
% 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_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__				NR
7440-39-3	Barium__				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__				NR
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___				NR
7439-89-6	Iron____				NR
7439-92-1	Lead____				NR
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____				NR
5955-70-0	Cyanide__	10.0	U		AS

Color Before: _____ Clarity Before: _____ Texture: _____
Color After: _____ Clarity After: _____ Artifacts: _____

Comments:
CYANIDE_ONLY.

FORM I - IN

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

BOBMQ6

Lab Name: ITAS KNOXVILLE Contract: HANFORD/WE
Lab Code: ITSTU Case No.: WO534 SAS No.: SDG No.: W0055
Matrix (soil/water): WATER Lab Sample ID: AA8792
Level (low/med): LOW Date Received: 05/11/94
% 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	40.0	U		P	
7440-36-0	Antimony	50.0	U		P	
7440-38-2	Arsenic	2.0	U		F	
7440-39-3	Barium	28.6	B		P	
7440-41-7	Beryllium	1.0	U		P	
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	50800			P	
7440-47-3	Chromium	54.0			P	
7440-48-4	Cobalt	10.0	U		P	
7440-50-8	Copper	10.0	U		P	
7439-89-6	Iron	1420	J	*	P	J
7439-92-1	Lead	2.0	U		F	
7439-95-4	Magnesium	7390			P	
7439-96-5	Manganese	9.0	B		P	
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	20.0	U		P	
7440-09-7	Potassium	2100	B		P	
7782-49-2	Selenium	2.1	B	W	F	BJ
7440-22-4	Silver	5.0	U		P	
7440-23-5	Sodium	6900			P	
7440-28-0	Thallium	2.0	U	W	F	UJ
7440-62-2	Vanadium	10.0	U		P	
7440-66-6	Zinc	10.2	B		P	
	Titanium	3.0	U		P	
5955-70-0	Cyanide				NR	

Color Before: COLORLESS Clarity Before: CLEAR Texture: N/A
Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

FORM I - IN

ILM02.1
8/10/94

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8-25-94

9613601.1536

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

BOBMQ6

Lab Name: ITAS KNOXVILLE Contract: HANFORD/WE
Lab Code: ITSTU Case No.: W0534 SAS No.: SDG No.: W0055
Matrix (soil/water): WATER Lab Sample ID: AA8793
Level (low/med): LOW Date Received: 05/11/94
% 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				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead				NR
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Titanium				NR
5955-70-0	Cyanide	10.0	U		AS

Color Before: Clarity Before: Texture:
Color After: Clarity After: Artifacts:

Comments:
CYANIDE ONLY.

FORM I - IN

ILM02.1
6/10/94

6/18-94

9613501.1537

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

BOBMQ7

Lab Name: ITAS KNOXVILLE Contract: HANFORD/WE
Lab Code: ITSTU Case No.: W0534 SAS No.: SDG No.: W0055
Matrix (soil/water): WATER Lab Sample ID: AA8810
Level (low/med): LOW Date Received: 05/11/94
% 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	40.0	U		P
7440-36-0	Antimony	50.0	U		P
7440-38-2	Arsenic	2.0	U		F
7440-39-3	Barium	27.6	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	51900			P
7440-47-3	Chromium	47.6			P
7440-48-4	Cobalt	10.0	U		P
7440-50-8	Copper	10.0	U		P
7439-89-6	Iron	23.8	~~B~~		P
7439-92-1	Lead	2.4	~~B~~	W	F
7439-95-4	Magnesium	7470			P
7439-96-5	Manganese	2.0	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	20.0	U		P
7440-09-7	Potassium	2400	B		P
7782-49-2	Selenium	2.0	U		F
7440-22-4	Silver	5.0	U		P
7440-23-5	Sodium	7200			P
7440-28-0	Thallium	2.0	U		F
7440-62-2	Vanadium	10.0	U		P
7440-66-6	Zinc	5.0	U		P
	Titanium	3.0	U		P
5955-70-0	Cyanide				NR

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Color Before: COLORLESS Clarity Before: CLEAR Texture: N/A
Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:
DISSOLVED.

FORM I - IN

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8 6/10/94

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8-25-94

9613601.1538

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

BOBMX6

Lab Name: ITAS_KNOXVILLE_____ Contract: HANFORD/WE
Lab Code: ITSTU_ Case No.: WO534 SAS No.: _____ SDG No.: W0055_
Matrix (soil/water): WATER Lab Sample ID: AA8805
Level (low/med): LOW__ Date Received: 05/11/94
% 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_	41.3	B		P_
7440-36-0	Antimony_	50.0	U		P_
7440-38-2	Arsenic__	2.0	U		F_
7440-39-3	Barium__	27.8	B		P_
7440-41-7	Beryllium	1.0	U		P_
7440-43-9	Cadmium__	5.0	U		P_
7440-70-2	Calcium__	52600	_		P_
7440-47-3	Chromium_	44.8			P_
7440-48-4	Cobalt___	10.0	U		P_
7440-50-8	Copper___	10.0	U		P_
7439-89-6	Iron____	40.3	~~B~~	*	P_ u
7439-92-1	Lead____	2.0	U		F_
7439-95-4	Magnesium	7600			P_
7439-96-5	Manganese	2.0	U		P_
7439-97-6	Mercury__	0.20	U		CV
7440-02-0	Nickel___	20.0	U		P_
7440-09-7	Potassium	1710	B		P_
7782-49-2	Selenium_	2.0	U		F_
7440-22-4	Silver___	5.0	U		P_
7440-23-5	Sodium___	7170			P_
7440-28-0	Thallium_	2.0	U		F_
7440-62-2	Vanadium_	10.0	U		P_
7440-66-6	Zinc____	9.4	B		P_
	Titanium_	3.0	U		P_
5955-70-0_	Cyanide__		_		NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: N/A___
Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

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P 6/10/94

BM 000344
8-25-94

9613501.1539

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

BOBMX6

Lab Name: ITAS_KNOXVILLE_____ Contract: HANFORD/WE
Lab Code: ITSTU_ Case No.: WO534 SAS No.: _____ SDG No.: W0055_
Matrix (soil/water): WATER Lab Sample ID: AA8806
Level (low/med): LOW__ Date Received: 05/11/94
% 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_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__				NR
7440-39-3	Barium__				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__				NR
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___				NR
7439-89-6	Iron____				NR
7439-92-1	Lead____				NR
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____				NR
	Titanium_				NR
5955-70-0_	Cyanide__	10.0	U		AS

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: N/A___
Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:
CYANIDE_ONLY.

FORM I - IN

ILM02.1
8 6/10/94

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4-18-94

9613601.1540

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

BOBMX7

Lab Name: ITAS KNOXVILLE Contract: HANFORD/WE
Lab Code: ITSTU Case No.: WO534 SAS No.: SDG No.: W0055
Matrix (soil/water): WATER Lab Sample ID: AA8811
Level (low/med): LOW Date Received: 05/11/94
% 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	46.2	B		P
7440-36-0	Antimony	50.0	U		P
7440-38-2	Arsenic	2.0	U		F
7440-39-3	Barium	27.0	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	52000			P
7440-47-3	Chromium	48.7			P
7440-48-4	Cobalt	10.0	U		P
7440-50-8	Copper	10.0	U		P
7439-89-6	Iron	17.0	~~B~~		P u
7439-92-1	Lead	32.5			F
7439-95-4	Magnesium	7490			P
7439-96-5	Manganese	2.0	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	20.0	U		P
7440-09-7	Potassium	2610	B		P
7782-49-2	Selenium	2.0	U		F
7440-22-4	Silver	5.0	U		P
7440-23-5	Sodium	7020			P
7440-28-0	Thallium	2.0	U		F
7440-62-2	Vanadium	10.0	U		P
7440-66-6	Zinc	24.5			P
	Titanium	3.0	U		P
5955-70-0	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture: N/A
Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:
DISSOLVED.

FORM I - IN

ILM02.1
8/6/90

BM 8-25-94

9613601.1541

WESTINGHOUSE/HANFORD
1

SAMPLE NUMBER:

B0BMY8

INORGANIC ANALYSIS DATA SHEET

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D2-0039

Lab Code: SKINER Case No.: N4-05-098SAS No.: SDG No.: B0BMY8

Matrix (soil/water): WATER Lab Sample ID: 05230-01S

Level (low/med): LOW Date Received: 05/25/94

% 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	U		P	
7440-36-0	Antimony	14.7	U		P	
7440-38-2	Arsenic	1.5	U		P	
7440-39-3	Barium	21.7	~~B~~		P	u gg
7440-41-7	Beryllium	0.40	U		P	
7440-43-9	Cadmium	1.1	U		P	
7440-70-2	Calcium	28600		E	P	J
7440-47-3	Chromium	5.5	~~B~~		P	u
7440-48-4	Cobalt	2.1	U		P	
7440-50-8	Copper	3.9	~~B~~		P	u
7439-89-6	Iron	157			P	u
7439-92-1	Lead	1.6	B		P	
7439-95-4	Magnesium	4420	~~B~~	E	P	~~J~~ BJ gg
7439-96-5	Manganese	3.0	~~B~~		P	u
7439-97-6	Mercury	0.20	U		AV	
7440-02-0	Nickel	6.5	U		P	
7440-09-7	Potassium	1900	B		P	
7782-49-2	Selenium	2.1	U		P	
7440-22-4	Silver	3.6	U		P	
7440-23-5	Sodium	3320	~~B~~	E	P	~~J~~ BJ gg
7440-28-0	Thallium	2.2	U		P	
7440-62-2	Vanadium	2.2	U		P	
7440-66-6	Zinc	7.1	U		P	
	Cyanide	10.0	U		CA	

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

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WESTINGHOUSE/HANFORD
1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER:

B08MY9

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D2-0039

Lab Code: SKINER Case No.: N4-05-098SAS No.: SDG No.: B08MY9

Matrix (soil/water): WATER Lab Sample ID: 05232-01S

Level (low/med): LOW Date Received: 05/25/94

% 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	853		N*	P	J
7440-36-0	Antimony	14.7	U		P	
7440-38-2	Arsenic	1.5	U		P	
7440-39-3	Barium	33.2	~~B~~		P	BJ
7440-41-7	Beryllium	0.40	U		P	
7440-43-9	Cadmium	1.1	U		P	
7440-70-2	Calcium	31400		E	P	J
7440-47-3	Chromium	4.4	~~B~~		P	U
7440-48-4	Cobalt	2.1	U		P	
7440-50-8	Copper	4.6	~~B~~		P	U
7439-89-6	Iron	101			P	U
7439-92-1	Lead	1.5	U		P	
7439-95-4	Magnesium	4780	~~B~~		P	BJ
7439-96-5	Manganese	32.6		*	P	J
7439-97-6	Mercury	0.20	U		AV	
7440-02-0	Nickel	6.5	U		P	
7440-09-7	Potassium	2050	B		P	
7782-49-2	Selenium	2.1	U		P	
7440-22-4	Silver	3.6	U		P	
7440-23-5	Sodium	3710	B		P	
7440-28-0	Thallium	2.2	U		P	
7440-62-2	Vanadium	2.2	U		P	
7440-66-6	Zinc	8.0	B		P	
	Cyanide				NR	

6-27-94 (WJC)

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts: 9-5-94

Comments

000348

7/8/94

FORM I - IN

~~I-IN02.1~~

9613601.1543

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

BOBMW8

Lab Name: ITAS_KNOXVILLE Contract: HANFORD/WE
Lab Code: ITSTU Case No.: W0579 SAS No.: SDG No.: W0068
Matrix (soil/water): WATER Lab Sample ID: AA9616
Level (low/med): LOW Date Received: 05/21/94
% 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	475			P	
7440-36-0	Antimony	50.0	U		P	
7440-38-2	Arsenic	2.6	B		F	
7440-39-3	Barium	112	B		P	
7440-41-7	Beryllium	1.0	U		P	
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	135000			P	
7440-47-3	Chromium	270			P	
7440-48-4	Cobalt	10.0	U		P	
7440-50-8	Copper	10.0	~~U~~	UJ	P	UJ
7439-89-6	Iron	889			P	
7439-92-1	Lead	2.0	U		F	
7439-95-4	Magnesium	37300			P	
7439-96-5	Manganese	17.1			P	
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	86.8			P	
7440-09-7	Potassium	7000			P	
7782-49-2	Selenium	2.0	U		F	
7440-22-4	Silver	5.0	U		P	
7440-23-5	Sodium	59200			P	
7440-28-0	Thallium	2.0	U		F	
7440-62-2	Vanadium	10.0	U		P	
7440-66-6	Zinc	6.0	~~B~~	U	P	U
5955-70-0	Cyanide				NR	

Color Before: COLORLESS Clarity Before: CLEAR Texture: N/A
Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

FORM I - IN

ILM02.1

BM 9-2-94

9 6/24/94

9613601.1544

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

BOBMW8

Lab Name: ITAS_KNOXVILLE_____ Contract: HANFORD/WE
Lab Code: ITSTU_ Case No.: W0579 SAS No.: _____ SDG No.: W0068_
Matrix (soil/water): WATER Lab Sample ID: AA9617
Level (low/med): LOW__ Date Received: 05/21/94
% 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_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__				NR
7440-39-3	Barium___				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__				NR
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___				NR
7439-89-6	Iron____				NR
7439-92-1	Lead____				NR
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____				NR
5955-70-0	Cyanide__	10.0	~~U~~	U N	AS

no Qual BM 9-2-94
Lab Ck Form 9-12-94

Color Before: _____ Clarity Before: _____ Texture: _____
Color After: _____ Clarity After: _____ Artifacts: _____

Comments:
CYANIDE_ONLY.

FORM I - IN

ILM02.1
8 6/27/94

BM 9-2-94

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9613501.1545

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

BOBMW9

Lab Name: ITAS KNOXVILLE Contract: HANFORD/WE
Lab Code: ITSTU Case No.: W0579 SAS No.: SDG No.: W0068
Matrix (soil/water): WATER Lab Sample ID: AA9621
Level (low/med): LOW Date Received: 05/21/94
% 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	121	~~B~~	~~BS~~ B	P
7440-36-0	Antimony	50.0	U		P
7440-38-2	Arsenic	2.1	B	~~BM 9-30-94~~	F
7440-39-3	Barium	112	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	134000			P
7440-47-3	Chromium	82.4			P
7440-48-4	Cobalt	10.0	U		P
7440-50-8	Copper	10.0	~~U~~	UJ	P
7439-89-6	Iron	235		U	P
7439-92-1	Lead	2.0	U		F
7439-95-4	Magnesium	37100			P
7439-96-5	Manganese	4.7	B		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	24.0	B		P
7440-09-7	Potassium	6170			P
7782-49-2	Selenium	2.0	U		F
7440-22-4	Silver	5.0	U		P
7440-23-5	Sodium	59100			P
7440-28-0	Thallium	2.0	U		F
7440-62-2	Vanadium	10.0	U		P
7440-66-6	Zinc	5.0	U		P
5955-70-0	Cyanide				NR

No Qualifier intended BM 9-16-94

Color Before: COLORLESS Clarity Before: CLEAR Texture: N/A
Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

FORM I - IN

ILM02.1

BM 9-2-94

9613601.1546

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

BOBMY0

Lab Name: ITAS_KNOXVILLE_____ Contract: HANFORD/WE
Lab Code: ITSTU_ Case No.: W0579 SAS No.: _____ SDG No.: W0068_
Matrix (soil/water): WATER Lab Sample ID: AA9630
Level (low/med): LOW__ Date Received: 05/21/94
% 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_	67.1	~~B~~	BJ	P_
7440-36-0	Antimony_	50.0	U		P_
7440-38-2	Arsenic__	2.0	U		F_
7440-39-3	Barium___	22.8	B		P_
7440-41-7	Beryllium	1.0	U		P_
7440-43-9	Cadmium__	5.0	U		P_
7440-70-2	Calcium__	26100	_		P_
7440-47-3	Chromium_	53.5			P_
7440-48-4	Cobalt___	10.0	U		P_
7440-50-8	Copper___	10.0	~~U~~	UJ	P_
7439-89-6	Iron_____	246		U	P_
7439-92-1	Lead_____	2.0	U		F_
7439-95-4	Magnesium	4420	B		P_
7439-96-5	Manganese	4.8	B		P_
7439-97-6	Mercury__	0.20	U		CV
7440-02-0	Nickel___	20.0	U		P_
7440-09-7	Potassium	1000	~~U~~	UJ	P_
7782-49-2	Selenium_	2.0	U		F_
7440-22-4	Silver___	5.0	U		P_
7440-23-5	Sodium___	3040	B		P_
7440-28-0	Thallium_	2.0	U		F_
7440-62-2	Vanadium_	10.0	U		P_
7440-66-6	Zinc_____	6.5	~~B~~	U	P_
5955-70-0	Cyanide__		_		NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: N/A___
Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

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8 6/24/94

BM 9-2-94

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9613501.1547

U.S. EPA - CLP

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

BOBMY0

Lab Name: ITAS_KNOXVILLE_____ Contract: HANFORD/WE
Lab Code: ITSTU_ Case No.: WO579 SAS No.: _____ SDG No.: W0068_
Matrix (soil/water): WATER Lab Sample ID: AA9631
Level (low/med): LOW__ Date Received: 05/21/94
% 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_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__				NR
7440-39-3	Barium___				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__				NR
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___				NR
7439-89-6	Iron____				NR
7439-92-1	Lead____				NR
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____				NR
5955-70-0	Cyanide__	10.0	U	N	AS

Color Before: _____ Clarity Before: _____ Texture: _____
Color After: _____ Clarity After: _____ Artifacts: _____

Comments:
CYANIDE_ONLY._____

FORM I - IN

ILM02.1

BM 9-2-94

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U.S. EPA - CLP

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

BOBMY1

Lab Name: ITAS_KNOXVILLE Contract: HANFORD/WE
Lab Code: ITSTU Case No.: W0579 SAS No.: SDG No.: W0068
Matrix (soil/water): WATER Lab Sample ID: AA9635
Level (low/med): LOW Date Received: 05/21/94
% 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	73.4	~~B~~	BJ	P
7440-36-0	Antimony	50.0	U		P
7440-38-2	Arsenic	2.0	U		F
7440-39-3	Barium	21.1	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	24000			P
7440-47-3	Chromium	45.8			P
7440-48-4	Cobalt	10.0	U		P
7440-50-8	Copper	10.0	~~U~~	UJ	P
7439-89-6	Iron	132		U	P
7439-92-1	Lead	2.0	U		F
7439-95-4	Magnesium	4040	B		P
7439-96-5	Manganese	3.3	B		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	20.0	U		P
7440-09-7	Potassium	1000	~~U~~	UJ	P
7782-49-2	Selenium	2.0	U		F
7440-22-4	Silver	5.0	U		P
7440-23-5	Sodium	2730	B		P
7440-28-0	Thallium	2.0	U		F
7440-62-2	Vanadium	10.0	U		P
7440-66-6	Zinc	5.0	U		P
5955-70-0	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture: N/A
Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:
DISSOLVED.

FORM I - IN

ILM02.1
S 6/24/94

BM 9-2-94

9613501.1549

U.S. EPA - CLP

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

BOBMP0

Lab Name: ITAS KNOXVILLE Contract: HANFORD/WE
Lab Code: ITSTU Case No.: W0583 SAS No.: SDG No.: W0068
Matrix (soil/water): WATER Lab Sample ID: AA9710
Level (low/med): LOW Date Received: 05/25/94
% 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	40.0	U		P
7440-36-0	Antimony	50.0	U		P
7440-38-2	Arsenic	10.3			F
7440-39-3	Barium	27.6	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	33000			P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	10.0	U		P
7440-50-8	Copper	10.0	~~U~~	~~UW~~ BM 9-2	P
7439-89-6	Iron	36.6	~~B~~	U	P
7439-92-1	Lead	5.0		U	F
7439-95-4	Magnesium	10800			P
7439-96-5	Manganese	2.0	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	20.0	U		P
7440-09-7	Potassium	3490	B		P
7782-49-2	Selenium	2.0	U		F
7440-22-4	Silver	5.0	U		P
7440-23-5	Sodium	44900			P
7440-28-0	Thallium	2.0	~~U~~	~~UW~~	F
7440-62-2	Vanadium	19.9	B		P
7440-66-6	Zinc	18.2	B		P
5955-70-0	Cyanide				NR

U BM 9-30-94

Color Before: COLORLESS Clarity Before: CLEAR Texture: N/A
Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

FORM I - IN

BM 9-2-94

ILM02.1
S 6/28/94

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9613601.1550

U.S. EPA - CLP

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

BOBMP0

Lab Name: ITAS_KNOXVILLE_____ Contract: HANFORD/WE
Lab Code: ITSTU_ Case No.: WO583 SAS No.: _____ SDG No.: W0068_
Matrix (soil/water): WATER Lab Sample ID: AA9711
Level (low/med): LOW__ Date Received: 05/25/94
% 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_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__				NR
7440-39-3	Barium___				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__				NR
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___				NR
7439-89-6	Iron____				NR
7439-92-1	Lead____				NR
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____				NR
5955-70-0	Cyanide__	10.0	U	N	AS

Color Before: _____ Clarity Before: _____ Texture: _____
Color After: _____ Clarity After: _____ Artifacts: _____

Comments:
CYANIDE_ONLY.

FORM I - IN

ILM02.1
8 6/28/94

BM 9-2-94

9613601.1551

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

BOBMP1

Lab Name: ITAS KNOXVILLE Contract: HANFORD/WE
Lab Code: ITSTU Case No.: WO583 SAS No.: SDG No.: W0068
Matrix (soil/water): WATER Lab Sample ID: AA9715
Level (low/med): LOW Date Received: 05/25/94
% 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	43.6	B		P
7440-36-0	Antimony	50.0	U		P
7440-38-2	Arsenic	10.9			F
7440-39-3	Barium	28.3	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	34800			P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	10.0	U		P
7440-50-8	Copper	10.0	U		P
7439-89-6	Iron	24.1	~~B~~	U	P
7439-92-1	Lead	3.8		U	F
7439-95-4	Magnesium	11300			P
7439-96-5	Manganese	2.0	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	20.0	U		P
7440-09-7	Potassium	4040	B		P
7782-49-2	Selenium	2.1	~~B~~	BJ W	F
7440-22-4	Silver	5.0	U		P
7440-23-5	Sodium	47200			P
7440-28-0	Thallium	2.0	~~U~~	UJ W	F
7440-62-2	Vanadium	22.4	B		P
7440-66-6	Zinc	17.1	B		P
5955-70-0	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture: N/A
Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:
DISSOLVED.

FORM I - IN

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9-2-94

ILM02.1
F 6/26/6

9613501.1552

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

BOBMX2

Lab Name: ITAS_KNOXVILLE_____ Contract: HANFORD/WE
Lab Code: ITSTU_ Case No.: WO583 SAS No.: _____ SDG No.: W0068_
Matrix (soil/water): WATER Lab Sample ID: AA9726
Level (low/med): LOW__ Date Received: 05/25/94
% 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_	40.0	U		P
7440-36-0	Antimony_	50.0	U		P
7440-38-2	Arsenic__	5.7	B		F
7440-39-3	Barium___	32.1	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium__	5.0	U		P
7440-70-2	Calcium__	64600			P
7440-47-3	Chromium_	19.4			P
7440-48-4	Cobalt___	10.0	U		P
7440-50-8	Copper___	10.0	U		P
7439-89-6	Iron_____	34.2	~~B~~	u	P
7439-92-1	Lead_____	3.2		u	F
7439-95-4	Magnesium	16500			P
7439-96-5	Manganese	2.0	U		P
7439-97-6	Mercury__	0.20	U		CV
7440-02-0	Nickel___	20.0	U		P
7440-09-7	Potassium	5090			P
7782-49-2	Selenium_	2.0	U		F
7440-22-4	Silver___	5.0	U		P
7440-23-5	Sodium___	45100			P
7440-28-0	Thallium_	2.0	~~U~~	UJW	F
7440-62-2	Vanadium_	10.0	U		P
7440-66-6	Zinc_____	5.0	U		P
5955-70-0	Cyanide__				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: N/A___
Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

ILM02.1

BM 9-2-94

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U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

BOBMX2

Lab Name: ITAS_KNOXVILLE_____ Contract: HANFORD/WE
Lab Code: ITSTU_ Case No.: WO583 SAS No.: _____ SDG No.: W0068_
Matrix (soil/water): WATER Lab Sample ID: AA9727
Level (low/med): LOW__ Date Received: 05/25/94
% 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_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__				NR
7440-39-3	Barium___				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__				NR
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___				NR
7439-89-6	Iron____				NR
7439-92-1	Lead____				NR
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____				NR
5955-70-0	Cyanide__	10.0	U	N	AS

Color Before: _____ Clarity Before: _____ Texture: _____
Color After: _____ Clarity After: _____ Artifacts: _____

Comments:
CYANIDE_ONLY._____

FORM I - IN

ILM02.1

BM 4-7-94

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

BOBMX3

Lab Name: ITAS_KNOXVILLE Contract: HANFORD/WE
Lab Code: ITSTU Case No.: W0583 SAS No.: SDG No.: W0068
Matrix (soil/water): WATER Lab Sample ID: AA9731
Level (low/med): LOW Date Received: 05/25/94
% 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	40.0	U		P
7440-36-0	Antimony	50.0	U		P
7440-38-2	Arsenic	4.9	B		F
7440-39-3	Barium	33.4	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	64400			P
7440-47-3	Chromium	17.2			P
7440-48-4	Cobalt	10.0	U		P
7440-50-8	Copper	10.0	U		P
7439-89-6	Iron	26.2	~~B~~	u	P
7439-92-1	Lead	2.7	~~B~~	u	F
7439-95-4	Magnesium	16400			P
7439-96-5	Manganese	2.0	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	20.0	U		P
7440-09-7	Potassium	5720			P
7782-49-2	Selenium	2.0	U		F
7440-22-4	Silver	5.0	U		P
7440-23-5	Sodium	45300			P
7440-28-0	Thallium	2.0	~~U~~	uJ W	F
7440-62-2	Vanadium	11.4	B		P
7440-66-6	Zinc	9.1	B		P
5955-70-0	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture: N/A
Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:
DISSOLVED.

FORM I - IN

BM 9-2-94

ILM02.1

9613501.1555

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

B0BMZ2
~~B0BM22~~ JAN 7/1/n

Lab Name: ITAS_KNOXVILLE_____ Contract: HANFORD/WE
Lab Code: ITSTU_ Case No.: W0583 SAS No.: _____ SDG No.: W0068_
Matrix (soil/water): WATER Lab Sample ID: AA9743
Level (low/med): LOW__ Date Received: 05/25/94
% 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_	42.8	B		P_
7440-36-0	Antimony_	50.0	U		P_
7440-38-2	Arsenic__	2.0	U		F_
7440-39-3	Barium___	2.0	U		P_
7440-41-7	Beryllium	1.0	U		P_
7440-43-9	Cadmium__	5.0	U		P_
7440-70-2	Calcium__	93.9	~~B~~	U	P_
7440-47-3	Chromium_	10.0	U		P_
7440-48-4	Cobalt___	10.0	U		P_
7440-50-8	Copper___	10.0	U		P_
7439-89-6	Iron_____	21.0	~~B~~	U	P_
7439-92-1	Lead_____	35.0			F_
7439-95-4	Magnesium	30.0	U		P_
7439-96-5	Manganese	2.0	U		P_
7439-97-6	Mercury__	0.20	U		CV
7440-02-0	Nickel___	20.0	U		P_
7440-09-7	Potassium	1000	U		P_
7782-49-2	Selenium_	2.0	U		F_
7440-22-4	Silver___	5.0	U		P_
7440-23-5	Sodium___	161	B		P_
7440-28-0	Thallium_	2.0	U		F_
7440-62-2	Vanadium_	10.0	U		P_
7440-66-6	Zinc_____	5.0	U		P_
5955-70-0	Cyanide__				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: N/A___
Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

ILM02.1
6/23/94

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9613501.1556

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

BOBM22
~~BOBM22~~ JOR 7/7/95

Lab Name: ITAS_KNOXVILLE_____ Contract: HANFORD/WE
Lab Code: ITSTU_ Case No.: W0583 SAS No.: _____ SDG No.: W0068_
Matrix (soil/water): WATER Lab Sample ID: AA9745
Level (low/med): LOW__ Date Received: 05/25/94
% 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_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__				NR
7440-39-3	Barium___				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__				NR
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___				NR
7439-89-6	Iron____				NR
7439-92-1	Lead____				NR
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____				NR
5955-70-0	Cyanide__	10.0	U	N	AS

Color Before: _____ Clarity Before: _____ Texture: _____
Color After: _____ Clarity After: _____ Artifacts: _____

Comments:
CYANIDE_ONLY.

FORM I - IN

ILM02.1

BM 9-7-94

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9613601.1557

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

BOBMZ3
~~BOBM23~~ JOA 7/7/97

Lab Name: ITAS_KNOXVILLE_____ Contract: HANFORD/WE
Lab Code: ITSTU_ Case No.: WO583 SAS No.: _____ SDG No.: W0068_
Matrix (soil/water): WATER Lab Sample ID: AA9749
Level (low/med): LOW__ Date Received: 05/25/94
% 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_	42.3	B		P
7440-36-0	Antimony_	50.0	U		P
7440-38-2	Arsenic__	2.0	U		F
7440-39-3	Barium__	2.0	U		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium__	6.2			P
7440-70-2	Calcium__	89.4	~~B~~	U	P
7440-47-3	Chromium_	10.0	U		P
7440-48-4	Cobalt___	10.0	U		P
7440-50-8	Copper___	10.0	U		P
7439-89-6	Iron____	18.6	~~B~~	U	P
7439-92-1	Lead____	5.0		~~B~~ U	F BM 9-2-94
7439-95-4	Magnesium	30.0	U		P
7439-96-5	Manganese	2.0	U		P
7439-97-6	Mercury__	0.20	U		CV
7440-02-0	Nickel___	20.0	U		P
7440-09-7	Potassium	1000	U		P
7782-49-2	Selenium_	2.0	U		F
7440-22-4	Silver___	5.0	U		P
7440-23-5	Sodium___	149	B		P
7440-28-0	Thallium_	2.0	U		F
7440-62-2	Vanadium_	10.0	U		P
7440-66-6	Zinc____	8.3	B		P
5955-70-0	Cyanide__				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: N/A___
Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:
DISSOLVED.

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ILM02.1

BM 9-2-94

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

BOBMZ8

Lab Name: ITAS_KNOXVILLE_____ Contract: HANFORD/WE
Lab Code: ITSTU_ Case No.: WO602 SAS No.: _____ SDG No.: W0068_
Matrix (soil/water): WATER Lab Sample ID: AA9929
Level (low/med): LOW__ Date Received: 05/27/94
% 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_	40.0	U		P_
7440-36-0	Antimony_	50.0	U		P_
7440-38-2	Arsenic__	2.0	U		F_
7440-39-3	Barium___	2.0	U		P_
7440-41-7	Beryllium	1.0	U		P_
7440-43-9	Cadmium__	5.0	U		P_
7440-70-2	Calcium__	94.8	~~B~~	u	P_
7440-47-3	Chromium_	10.0	U		P_
7440-48-4	Cobalt___	10.0	U		P_
7440-50-8	Copper___	10.0	U		P_
7439-89-6	Iron____	16.8	B		P_
7439-92-1	Lead____	6.4			F_
7439-95-4	Magnesium	30.0	U		P_
7439-96-5	Manganese	2.0	U		P_
7439-97-6	Mercury__	0.20	U		CV
7440-02-0	Nickel___	20.0	U		P_
7440-09-7	Potassium	1000	U		P_
7782-49-2	Selenium_	2.0	U		F_
7440-22-4	Silver___	5.0	U		P_
7440-23-5	Sodium___	185	~~B~~	u	P_
7440-28-0	Thallium_	2.0	U		F_
7440-62-2	Vanadium_	10.0	U		P_
7440-66-6	Zinc____	5.0	U		P_
5955-70-0	Cyanide__				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: N/A___
Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

BOBMZ8

Lab Name: ITAS_KNOXVILLE_____ Contract: HANFORD/WE
Lab Code: ITSTU_ Case No.: WO602 SAS No.: _____ SDG No.: W0068_
Matrix (soil/water): WATER Lab Sample ID: AA9930
Level (low/med): LOW__ Date Received: 05/27/94
% 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_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__				NR
7440-39-3	Barium___				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__				NR
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___				NR
7439-89-6	Iron____				NR
7439-92-1	Lead____				NR
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____				NR
5955-70-0	Cyanide__	10.0	U	N	AS

Color Before: _____ Clarity Before: _____ Texture: _____
Color After: _____ Clarity After: _____ Artifacts: _____

Comments:
CYANIDE_ONLY.

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ILM02.1
6/28/94

BM 9-2-94

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

BOBMZ9

Lab Name: ITAS_KNOXVILLE_____ Contract: HANFORD/WE
Lab Code: ITSTU_ Case No.: WO602 SAS No.: _____ SDG No.: W0068_
Matrix (soil/water): WATER Lab Sample ID: AA9951
Level (low/med): LOW__ Date Received: 05/27/94
% 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_	40.0	U		P_
7440-36-0	Antimony_	50.0	U		P_
7440-38-2	Arsenic__	2.0	U		F_
7440-39-3	Barium___	2.0	U		P_
7440-41-7	Beryllium	1.0	U		P_
7440-43-9	Cadmium__	5.0	U		P_
7440-70-2	Calcium__	88.3	~~B~~	U	P_
7440-47-3	Chromium_	10.0	U		P_
7440-48-4	Cobalt___	10.0	U		P_
7440-50-8	Copper___	10.0	U		P_
7439-89-6	Iron____	26.9	B		P_
7439-92-1	Lead____	2.0	U		F_
7439-95-4	Magnesium	30.0	U		P_
7439-96-5	Manganese	2.0	U		P_
7439-97-6	Mercury__	0.20	U		CV
7440-02-0	Nickel___	20.0	U		P_
7440-09-7	Potassium	1000	U		P_
7782-49-2	Selenium_	2.0	U		F_
7440-22-4	Silver___	5.0	U		P_
7440-23-5	Sodium___	244	~~B~~	U	P_
7440-28-0	Thallium_	2.0	U		F_
7440-62-2	Vanadium_	10.0	U		P_
7440-66-6	Zinc____	5.0	U		P_
5955-70-0	Cyanide__				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: N/A___
Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:
DISSOLVED.

FORM I - IN

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8 6/29/94

B.W. 9-2-94

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U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

BOBMQ2

Lab Name: ITAS KNOXVILLE Contract: HANFORD/WE
Lab Code: ITSTU Case No.: W0621 SAS No.: SDG No.: W0082
Matrix (soil/water): WATER Lab Sample ID: AB0316
Level (low/med): LOW Date Received: 06/07/94
% 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	40.0	U		P	
7440-36-0	Antimony	50.0	U		P	
7440-38-2	Arsenic	2.0	U		F	
7440-39-3	Barium	49.9	B		P	
7440-41-7	Beryllium	1.0	U		P	
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	92600			P	
7440-47-3	Chromium	19.3			P	
7440-48-4	Cobalt	10.0	U		P	
7440-50-8	Copper	10.0	U		P	
7439-89-6	Iron	17.3	B		P	U 9-9-94
7439-92-1	Lead	5.4		N	F	UJ
7439-95-4	Magnesium	21600			P	
7439-96-5	Manganese	2.0	U		P	
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	20.0	U		P	
7440-09-7	Potassium	5490			P	
7782-49-2	Selenium	2.7	B		F	
7440-22-4	Silver	5.0	U		P	
7440-23-5	Sodium	26300			P	
7440-28-0	Thallium	2.0	U		F	
7440-62-2	Vanadium	10.0	U		P	
7440-66-6	Zinc	20.5			P	U
5955-70-0	Cyanide				NR	

Color Before: COLORLESS Clarity Before: CLEAR Texture: N/A
Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

FORM I - IN

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U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

BOBMQ2

Lab Name: ITAS_KNOXVILLE_____ Contract: HANFORD/WE
Lab Code: ITSTU_ Case No.: W0621 SAS No.: _____ SDG No.: W0082_
Matrix (soil/water): WATER Lab Sample ID: AB0317
Level (low/med): LOW__ Date Received: 06/07/94
% 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_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__				NR
7440-39-3	Barium__				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__				NR
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___				NR
7439-89-6	Iron____				NR
7439-92-1	Lead____				NR
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____				NR
5955-70-0	Cyanide__	10.0	U		AS

Color Before: _____ Clarity Before: _____ Texture: _____
Color After: _____ Clarity After: _____ Artifacts: _____

Comments:
CYANIDE_ONLY._____

FORM I - IN

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U.S. EPA - CLP

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

BOBMQ3

Lab Name: ITAS KNOXVILLE Contract: HANFORD/WE
Lab Code: ITSTU Case No.: W0621 SAS No.: SDG No.: W0082
Matrix (soil/water): WATER Lab Sample ID: AB0320
Level (low/med): LOW Date Received: 06/07/94
% 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	40.0	U		P	
7440-36-0	Antimony	50.0	U		P	
7440-38-2	Arsenic	2.0	U		F	
7440-39-3	Barium	51.0	B		P	
7440-41-7	Beryllium	1.0	U		P	
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	96800			P	
7440-47-3	Chromium	22.8			P	
7440-48-4	Cobalt	10.0	U		P	
7440-50-8	Copper	10.0	U		P	
7439-89-6	Iron	24.4	~~B~~		P	U
7439-92-1	Lead	2.0	~~U~~	N	F	UJ
7439-95-4	Magnesium	22600			P	
7439-96-5	Manganese	2.0	U		P	
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	20.0	U		P	
7440-09-7	Potassium	6510			P	
7782-49-2	Selenium	2.0	U		F	
7440-22-4	Silver	5.0	U		P	
7440-23-5	Sodium	27400			P	
7440-28-0	Thallium	2.0	U		F	
7440-62-2	Vanadium	10.0	U		P	
7440-66-6	Zinc	17.7	~~B~~		P	U
5955-70-0	Cyanide				NR	

Color Before: COLORLESS Clarity Before: CLEAR Texture: N/A
Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:
DISSOLVED.

FORM I - IN

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U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

BOBMP8

Lab Name: ITAS KNOXVILLE Contract: HANFORD/WE
Lab Code: ITSTU Case No.: WO633 SAS No.: SDG No.: W0082
Matrix (soil/water): WATER Lab Sample ID: AB0453
Level (low/med): LOW Date Received: 06/09/94
% 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	77.0	B		P	
7440-36-0	Antimony	50.0	U		P	
7440-38-2	Arsenic	2.0	U		F	
7440-39-3	Barium	33.6	B		P	
7440-41-7	Beryllium	1.0	U		P	
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	47600			P	
7440-47-3	Chromium	10.0	U		P	
7440-48-4	Cobalt	10.0	U		P	
7440-50-8	Copper	10.0	U		P	
7439-89-6	Iron	45.8	~~B~~		P	U
7439-92-1	Lead	2.0	~~U~~	N	F	UJ
7439-95-4	Magnesium	8790			P	
7439-96-5	Manganese	2.6	~~B~~		P	U
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	20.0	U		P	
7440-09-7	Potassium	3410	B		P	
7782-49-2	Selenium	2.0	U		F	
7440-22-4	Silver	5.0	U		P	
7440-23-5	Sodium	5020			P	
7440-28-0	Thallium	2.0	U		F	
7440-62-2	Vanadium	10.0	U		P	
7440-66-6	Zinc	33.2			P	U
5955-70-0	Cyanide				NR	

Color Before: COLORLESS Clarity Before: CLEAR Texture: N/A
Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

FORM I - IN

ILM02.1

5/8/94

~~000088~~
K-24-24

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

BOBMP8

Lab Name: ITAS_KNOXVILLE Contract: HANFORD/WE
Lab Code: ITSTU Case No.: W0633 SAS No.: SDG No.: W0082
Matrix (soil/water): WATER Lab Sample ID: AB0454
Level (low/med): LOW Date Received: 06/09/94
% 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				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead				NR
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
5955-70-0	Cyanide	10.0	U		AS

Color Before: Clarity Before: Texture:
Color After: Clarity After: Artifacts:

Comments:
CYANIDE_ONLY.

FORM I - IN

9613501.1566

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

BOBMP9

Lab Name: ITAS KNOXVILLE Contract: HANFORD/WE
Lab Code: ITSTU Case No.: W0633 SAS No.: SDG No.: W0082
Matrix (soil/water): WATER Lab Sample ID: AB0458
Level (low/med): LOW Date Received: 06/09/94
% 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	46.5	B		P	
7440-36-0	Antimony	50.0	U		P	
7440-38-2	Arsenic	2.0	U		F	
7440-39-3	Barium	31.4	B		P	
7440-41-7	Beryllium	1.0	U		P	
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	45500			P	
7440-47-3	Chromium	10.0	U		P	
7440-48-4	Cobalt	10.0	U		P	
7440-50-8	Copper	10.0	U		P	
7439-89-6	Iron	26.6	~~B~~		P	U
7439-92-1	Lead	2.1	~~B~~	N	F	~~B~~ ~~UJ~~ ~~BU~~ UJ
7439-95-4	Magnesium	8400			P	
7439-96-5	Manganese	2.2	~~B~~		P	U
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	20.0	U		P	
7440-09-7	Potassium	3070	B		P	
7782-49-2	Selenium	2.0	U		F	
7440-22-4	Silver	5.0	U		P	
7440-23-5	Sodium	4790	B		P	
7440-28-0	Thallium	2.0	U		F	
7440-62-2	Vanadium	10.0	U		P	
7440-66-6	Zinc	23.2			P	U
5955-70-0	Cyanide				NR	

Color Before: COLORLESS Clarity Before: CLEAR Texture: N/A
Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:
DISSOLVED.

FORM I - IN

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U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

BOBMV6

Lab Name: ITAS KNOXVILLE Contract: HANFORD/WE
Lab Code: ITSTU Case No.: W0633 SAS No.: SDG No.: W0082
Matrix (soil/water): WATER Lab Sample ID: AB0441
Level (low/med): LOW Date Received: 06/09/94
% 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	77.7	B		P	
7440-36-0	Antimony	50.0	U		P	
7440-38-2	Arsenic	4.5	B		F	
7440-39-3	Barium	25.2	B		P	
7440-41-7	Beryllium	1.0	U		P	
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	55600			P	
7440-47-3	Chromium	10.6			P	
7440-48-4	Cobalt	10.0	U		P	
7440-50-8	Copper	10.0	U		P	
7439-89-6	Iron	30.6	~~B~~		P	U
7439-92-1	Lead	3.6		N	F	~~B~~ UJ 8-30-94
7439-95-4	Magnesium	16800			P	
7439-96-5	Manganese	2.0	U		P	
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	20.0	U		P	
7440-09-7	Potassium	5540			P	
7782-49-2	Selenium	2.4	~~B~~	W	F	BJ 9-25-94
7440-22-4	Silver	5.0	U		P	
7440-23-5	Sodium	51100			P	
7440-28-0	Thallium	2.0	U		F	
7440-62-2	Vanadium	12.0	B		P	
7440-66-6	Zinc	21.6			P	U
5955-70-0	Cyanide				NR	

Color Before: COLORLESS Clarity Before: CLEAR Texture: N/A
Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

FORM I - IN

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1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

BOBMV6

Lab Name: ITAS_KNOXVILLE Contract: HANFORD/WE
Lab Code: ITSTU Case No.: WO633 SAS No.: SDG No.: W0082
Matrix (soil/water): WATER Lab Sample ID: AB0442
Level (low/med): LOW Date Received: 06/09/94
% 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				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead				NR
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
5955-70-0	Cyanide	10.0	U		AS

Color Before: Clarity Before: Texture:
Color After: Clarity After: Artifacts:

Comments:
CYANIDE_ONLY.

FORM I - IN

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

BOBMV7

Lab Name: ITAS_KNOXVILLE_____ Contract: HANFORD/WE
Lab Code: ITSTU_ Case No.: W0633 SAS No.: _____ SDG No.: W0082_
Matrix (soil/water): WATER Lab Sample ID: AB0457
Level (low/med): LOW__ Date Received: 06/09/94
% 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_	42.7	B		P	
7440-36-0	Antimony_	50.0	U		P	
7440-38-2	Arsenic__	4.6	B		F	
7440-39-3	Barium__	24.1	B		P	
7440-41-7	Beryllium	1.0	U		P	
7440-43-9	Cadmium__	5.0	U		P	
7440-70-2	Calcium__	51200			P	
7440-47-3	Chromium_	10.2			P	
7440-48-4	Cobalt___	10.0	U		P	
7440-50-8	Copper___	10.0	U		P	
7439-89-6	Iron____	69.9	~~B~~		P	U
7439-92-1	Lead____	13.7		N	F	J
7439-95-4	Magnesium	15400			P	
7439-96-5	Manganese	2.0	U		P	
7439-97-6	Mercury__	0.20	U		CV	
7440-02-0	Nickel___	20.0	U		P	
7440-09-7	Potassium	5740			P	
7782-49-2	Selenium_	2.0	U		F	
7440-22-4	Silver___	5.0	U		P	
7440-23-5	Sodium___	46500			P	
7440-28-0	Thallium_	2.0	U		F	
7440-62-2	Vanadium_	13.4	B		P	
7440-66-6	Zinc____	16.7	~~B~~		P	U
5955-70-0	Cyanide__				NR	

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: N/A___
Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:
DISSOLVED.

FORM I - IN

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APPENDIX I

GENERAL CHEMISTRY VALIDATED DATA SUMMARY TABLES

9413501.1571

GENERAL CHEMISTRY DATA SUMMARY TABLE

FILE #: VW402.56		HEIS #:	B0BMY4	
		Date:	6-May-94	
		Matrix:	WATER	
Constituent	CAS #	Units	Results	Q
Chloride by IC	16887-00-6	mg/L	9.4	
Fluoride by IC	16984-48-8	mg/L	0.1	
Phosphate by IC	14265-44-2	mg/L	0.4	UR
Nitrate-Nitrite	NO3+NO2-N	mg/L	5.71	
pH	207	pH UNITS	7.8	J
Sulfate by IC	14808-79-8	mg/L	46	
Electric Conductivity	CONDUCTIVITY	UMHOS/CM	379	
Chemical Oxygen Demand	COD	mg/L	30	U
Ammonia Nitrogen	766-41-7	mg/L	0.05	U
Sulfide	18496-25-8	mg/L	1	U
Total Dissolved Solids	TDS	mg/L	238	
Alkalinity	ALKALINITY	mg/L	108	
Total Organic Carbon	TOC	mg/L	1.0	U
Total Organic Halogen	C68	mg/L	0.01	U

shaded areas indicate changes
by the validator
40256TBL.XLS

entered by: CMD
date: 10-4-94

checked by: BM
date: 10-3-94

GENERAL CHEMISTRY DATA SUMMARY TABLE

FILE #: VW 402.61		HEIS #:	B0BMQ9		B0BMY7		B0BMT7		B0BMV5	
		Date:	5/18/94		5/18/94		5/18/94		10-May-94	
		Matrix:	WATER		WATER		WATER		WATER	
Constituent	CAS #	Units	Results	Q	Results	Q	Results	Q	Results	Q
Hydrazine	302-01-2	ug/L	1.0		1.6		1.0		1.0	

FILE #: VW 402.61		HEIS #:	B0BMW7		B0BMS5		B0BMS9		B0BMR3	
		Date:	10-May-94		10-May-94		10-May-94		11-May-94	
		Matrix:	WATER		WATER		WATER		WATER	
Constituent	CAS #	Units	Results	Q	Results	Q	Results	Q	Results	Q
Hydrazine	302-01-2	ug/L	1.0		1.0		3.2		1.0	

FILE #: VW 402.61		HEIS #:	B0BMR7		B0BMS1		B0BMV1		B0BMT3	
		Date:	11-May-94		11-May-94		12-May-94		12-May-94	
		Matrix:	WATER		WATER		WATER		WATER	
Constituent	CAS #	Units	Results	Q	Results	Q	Results	Q	Results	Q
Hydrazine	302-01-2	ug/L	1.6		2.0		2.1		3.2	

entered by: CMO
date: 10/2/94

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checked by: BM
date: 10-3-94

GENERAL CHEMISTRY DATA SUMMARY TABLE

FILE #: VW 402.65		HEIS #:	B0BMQ5		B0BMP7		B0BMQ1		B0BMZ7		B0BNO1		B0BMW3	
		Date:	1-Jun-94		18-May-94		3-Jun-94		20-May-94		25-May-94		19-May-94	
		Matrix:	GDWATER		GDWATER		GDWATER		GDWATER		GDWATER		GDWATER	
Constituent	CAS #	Units	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Hydrazine	302-01-2	ug/L	2.1		1.0		1.6		1.0		1.0		1.6	

FILE #: VW 402.65		HEIS #:	B0BMP3		B0BMX5		B0BMY3		B0BMX1		B0BMZ1	
		Date:	17-May-94		23-May-94		18-May-94		19-May-94		18-May-94	
		Matrix:	GDWATER		GDWATER		GDWATER		GDWATER		GDWATER	
Constituent	CAS #	Units	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Hydrazine	302-01-2	ug/L	1.0	U	1.0		1.0		20		7.8	

entered by: [illegible]
date: 9-26-94

shaded areas indicate changes by the validator
40265TBL.XLS

checked by: [illegible]
date: 9/26/94

GENERAL CHEMISTRY DATA SUMMARY TABLE

FILE #: VW 402.66		HEIS #:	B0BMV2		B0BMR8		B0BMR0	
		Date:	10-May-94		11-May-94		11-May-94	
		Matrix:	WATER		WATER		WATER	
Constituent	CAS #	Units	Results	Q	Results	Q	Results	Q
Fluoride	16984-48-8	mg/l	0.80		0.40	U	0.40	U
Chloride	16884-00-6	mg/l	16		1.5		1.2	
Phosphate	14265-44-2	mg/l	1.0	UR	1.0	UR	1.0	UR
Sulfate	14808-79-8	mg/l	74		13		13	
pH	207	pH units	7.52	J	7.72	J	7.40	J
Nitrite Nitrate	NO_2+NO_3-N	mg/l	18.3		0.45		0.31	
Sulfide	18496-25-8	mg/l	8		23		4	
Specific Conductivity	191	umhos/cm	716		172		186	
Total Organic Carbon	TOC	mg/l	2		1	U	1	U
Total Organic Halogen	C68	ug/L	22		20	U	20	U
Total Dis. Solids	TDS	mg/l	497		113		114	
Chemical Oxygen Demand	COD	mg/l	2		2		2	
Ammonia	7664-41-7	mg/l	1.35		0.1	U	0.1	
Alkalinity	ALKALINITY	mg/l	188		66		78	

FILE #: VW 402.66		HEIS #:	B0BMW0		B0BMT8		B0BMP4	
		Date:	19-May-94		12-May-94		18-May-94	
		Matrix:	WATER		WATER		WATER	
Constituent	CAS #	Units	Results	Q	Results	Q	Results	Q
Fluoride	16984-48-8	mg/l	0.88		0.40	U	0.40	U
Chloride	16884-00-6	mg/l	24		1.5		1.6	
Phosphate	14265-44-2	mg/l	1.0	UR	1.0	UR	1.0	UR
Sulfate	14808-79-8	mg/l	84		18		16	
pH	207	pH units	7.80	J	7.71	J	7.55	J
Nitrite Nitrate	NO_2+NO_3-N	mg/l	28.4		0.92		0.57	
Sulfide	18496-25-8	mg/l	8		6		6	
Specific Conductivity	191	umhos/cm	848		215		199	
Total Organic Carbon	TOC	mg/l	2		1	U	1	U
Total Organic Halogen	C68	ug/L	20	U	20	U	37	
Total Dis. Solids	TDS	mg/l	627		161		166	J
Chemical Oxygen Demand	COD	mg/l	6		1	U	1	
Ammonia	7664-41-7	mg/l	0.21		0.54		0.1	U
Alkalinity	ALKALINITY	mg/l	181		76		70	

Shaded areas indicate changes by the validator
ITC062

entered by: gm
date: 9/20/94

checked by: [illegible]
date: 9-20-94

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GENERAL CHEMISTRY DATA SUMMARY TABLE

FILE #: VW 402.66		HEIS #:	BOBMT0	
		Date:	12-May-94	
		Matrix:	WATER	
Constituent	CAS #	Units	Results	Q
Fluoride	16984-48-8	mg/l	0.40	U
Chloride	16884-00-6	mg/l	38	
Phosphate	14265-44-2	mg/l	1.0	UR
Sulfate	14808-79-8	mg/l	120	
pH	207	pH units	7.55	J
Nitrite Nitrate	NO_2+NO_3-N	mg/l	26	
Sulfide	18496-25-8	mg/l	4	
Specific Conductivity	191	umhos/cm	867	
Total Organic Carbon	TOC	mg/l	2	
Total Organic Halogen	C68	ug/L	20	U
Total Dis. Solids	TDS	mg/l	592	
Chemical Oxygen-Demand	COD	mg/l	1	U
Ammonia	7664-41-7	mg/l	0.1	U
Alkalinity	ALKALINITY	mg/l	204	

Shaded areas indicate changes by the validator
ITC062

entered by: [illegible]
date: 9/20/94

checked by: [illegible]
date: 9-20-[illegible]

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9613501.1576

GENERAL CHEMISTRY DATA SUMMARY TABLE

FILE #: VW402.67		HEIS #:	B0BMQ6		B0BMX6		B0BMS2	
		Date:	6-May-94		6-May-94		10-May-94	
		Matrix:	WATER		WATER		WATER	
Constituent	CAS #	Units	Results	Q	Results	Q	Results	Q
Fluoride	16984-48-8	mg/L	0.5		0.40	U	0.40	U
Chloride	16884-00-6	mg/L	11		10		16	
Phosphate	14265-44-2	mg/L	1.0	UR	1.0	UR	1.0	UR
Sulfate	14808-79-8	mg/L	48		52		62	
Total Organic Halogens	C68	ug/L	20	U	21	J	20	U
Total Organic Carbon	TOC	mg/L	1	U	1	U	2	
Total Dissolved Solids	TDS	mg/L	28	J	29	J	374	J
Sulfide	18496-25-8	mg/L	13		12			
Specific Conductivity	191	umhos/cm	389		387		555	
pH	207	pH units	7.53	J	7.59	J	7.79	J
Nitrate/Nitrite	NO3-NO2-N	mg/L	4.56		4.58		10.1	
Chemical Oxygen Demand	COD	mg/L	1	UJ	1	UJ	4	J
Ammonia	7664-41-7	mg/L	0.1	U	0.1	U	0.2	
Alkalinity	ALKALINITY	mg/L	110	J	110	J	158	J

FILE #: VW402.67		HEIS #:	B0BMS6		B0BMT4		B0BMW4	
		Date:	10-May-94		9-May-94		9-May-94	
		Matrix:	WATER		WATER		WATER	
Constituent	CAS #	Units	Results	Q	Results	Q	Results	Q
Fluoride	16984-48-8	mg/L	1.50		0.40	U	0.50	
Chloride	16884-00-6	mg/L	16		29		19	
Phosphate	14265-44-2	mg/L	2.0	UR	1.0	UR	1.0	UR
Sulfate	14808-79-8	mg/L	69		93		112	
Total Organic Halogens	C68	ug/L	20	U	20	U	20	U
Total Organic Carbon	TOC	mg/L	2		2		2	
Total Dissolved Solids	TDS	mg/L	379	J	476	J	642	J
Sulfide	18496-25-8	mg/L	85		5		5	
Specific Conductivity	191	umhos/cm	602		778		898	
pH	207	pH units	7.73	J	7.72	J	7.66	J
Nitrate Nitrite	NO3-NO2-N	mg/L	9.2		17.6		22.3	
Chemical Oxygen Demand	COD	mg/L	1	UJ	1	UJ	4	J
Ammonia	7664-41-7	mg/L	0.1	U	0.1	U	0.1	U
Alkalinity	ALKALINITY	mg/L	176	J	192	J	258	J

Shaded areas indicate changes by the validator
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entered by: [illegible]
date: 9-26-94

checked by: BM
date: 9-26-94

GENERAL CHEMISTRY DATA SUMMARY TABLE

FILE #: VW402.67		HEIS #:	B0BMR4	
		Date:	11-May-94	
		Matrix:	WATER	
Constituent	CAS #	Units	Results	Q
Fluoride	16984-48-8	mg/L	0.40	U
Chloride	16884-00-6	mg/L	1.3	
Phosphate	14265-44-2	mg/L	1.0	*UR*
Sulfate	14808-79-8	mg/L	12	
Total Organic Halogens	C68	ug/L	20	U
Total Organic Carbon	TOC	mg/L	1	U
Total Dissolved Solids	TDS	mg/L	197	*J*
Sulfide	18496-25-8	mg/L	8	
Specific Conductivity	191	umhos/cm	167	
pH	207	pH units	7.64	*J*
Nitrate Nitrite	NO3-NO2-N	mg/L	0.21	
Chemical Oxygen Demand	COD	mg/L	2	*J*
Ammonia	7664-41-7	mg/L	0.1	U
Alkalinity	ALKALINITY	mg/L	66	*J*

Shaded areas indicate changes by the validator
40267TBL.XLS

entered by: ~~
date: 9-26-94

checked by: BM
date: 9-26-94

GENERAL CHEMISTRY DATA SUMMARY TABLE

FILE #: VW402.71		HEIS #:	B0BMY8	
		Date:	18-May-94	
		Matrix:	WATER	
Constituent	CAS #	Units	Results	Q
Chloride by IC	anions	mg/L	1.1	
Fluoride by IC	anions	mg/L	0.1	
Phosphate by IC	anions	mg/L	0.4	UR
Sulfate by IC	anions	mg/L	15	
Nitrate Nitrite	NO3+NO2-N	mg/L	0.68	
Total Organic Carbon (TOC)	TOC	mg/L	1.0	U
pH	207	PH UNITS	7.6	J
Alkalinity	ALKALINITY	mg/L	80	
Chemical Oxygen Demand	COD	mg/L	30	U
Elect. Conductivity	CONDUCT	umhos/cm	196	
Total Dissolved Solids	TDS	mg/L	64	
Sulfide	18496-25-8	mg/L	1	U
Ammonia Nitrogen		mg/L	0.05	U
Organic Chloride		mg/L	0.01	U
Organic Bromide		mg/L	0.01	U
Organic Fluoride		mg/L	0.01	U

entered by: CMD date: 10-4-94 shaded area means a change by the validator 40271TBL.XLS checked by: BM date: 10-4-94

9613501.1579

GENERAL CHEMISTRY DATA SUMMARY TABLE

FILE #: VW 402.72		HEIS #:	B0BMW8		B0BMY0		B0BMZ2	
		Date:	19-May-94		18-May-94		20-May-94	
		Matrix:	WATER		WATER		WATER	
Constituent	CAS #	Units	Results	Q	Results	Q	Results	Q
Chloride by IC	16984-48-8	mg/L	6.0		1.4		0.4	U
Fluoride by IC	16884-00-6	mg/L	0.4	U	0.4	U	0.4	U
Phosphate by IC	14265-44-2	mg/L	1.0	*UR*	1.0	*UR*	1.0	*UR*
Sulfate by IC	14808-79-8	mg/L	73		17		1.5	U
Sulfide	18496-25-8	mg/L	8		5		3	
Nitrite+ Nitrate	NO2+NO3-N	mg/L	0.88		0.63		0.06	
Total Organic Carbon (TOC)	TOC	mg/L	5		1	U	1	U
pH	207	PH UNITS			7.44	*R*	4.88	*J*
Alkalinity	ALKALINITY	mg/L	482		78		2	U
Ammonia	7664-41-7	mg/L	0.1	U	0.1	U	0.1	U
Chemical Oxygen Demand	COD	mg/L	14		1	U	1	U
Conductivity	191	umhos/cm	1200		202		4	
Total Dissolved Solids	TDS	mg/L	811	*J*	136	*J*	3	*J*
Total Organic Halogens	C68	ug/L	20	U	48	*J*	20	U

FILE #: VW 402.72		HEIS #:	B0BMP0		B0BMX2		B0BMZ8	
		Date:	17-May-94		23-May-94		25-May-94	
		Matrix:	WATER		WATER		WATER	
Constituent	CAS #	Units	Results	Q	Results	Q	Results	Q
Chloride by IC	16984-48-8	mg/L	11		12		0.4	U
Fluoride by IC	16884-00-6	mg/L	0.76		0.5		0.4	U
Phosphate by IC	14265-44-2	mg/L	1.0	*UR*	1.0	*UR*	1.0	*UR*
Sulfate by IC	14808-79-8	mg/L	57		65		1.5	U
Sulfide	18496-25-8	mg/L	40	*J*	19		4	
Nitrite+ Nitrate	NO2+NO3-N	mg/L	4.14		21.2		0.02	U
Total Organic Carbon (TOC)	TOC	mg/L	1	U	2		1	U
pH	207	PH UNITS	7.65	*J*	7.82	*J*	4.65	*J*
Alkalinity	ALKALINITY	mg/L	150		194		4	
Ammonia	7664-41-7	mg/L	0.1	U	0.1	U	0.1	U
Chemical Oxygen Demand	COD	mg/L	5		5		10	
Conductivity	191	umhos/cm	488		702		3	
Total Dissolved Solids	TDS	mg/L	292	*J*	517	*J*	81	*J*
Total Organic Halogens	C68	ug/L	20	U	20	U	22	*J*

shaded area means a change by the validator
40272TBL.XLS

entered by: mm 9-26-94 date: checked by: BM date: 9-26-94

GENERAL CHEMISTRY DATA SUMMARY TABLE

FILE #: VW 402.76		HEIS #:	B0BMQ2		B0BMV6		B0BMP8		B0C1G5	
		Date:	1-Jun-94		6-Jun-94		3-Jun-94		2-Jun-94	
Constituent		Matrix:	WATER		WATER		WATER		WATER	
	CAS #	Units	Results	Q	Results	Q	Results	Q	Results	Q
Alkalinity	ALKALINITY	mg/L	196		202		106			
Chloride by IC	anions	mg/L	29		16.5		4.7			
Fluoride by IC	anions	mg/L	0.4	U	0.4	U	0.4	U		
Phosphate by IC	14265-44-2	mg/L	1.0	UR	1.0	UR	1.0	UR		
Sulfate by IC	anions	mg/L	96		81		66			
Sulfide	18496-25-8	mg/L	4		0.2	U	1.0		4	
Nitrite Nitrate	NO2+NO3-N	mg/L	18.2		13.5		2.73			
Total Organic Carbon (TOC)	TOC	mg/L	2.19		2		1			
pH	207	PH UNITS	7.74	J	7.63	J	7.22	J		
Ammonia	7664-41-7	mg/L	0.1	U	0.2		0.1			
Chemical Oxygen Demand	COD	mg/L	10		10		10			
Specific Conductance	191	umhos/cm	818		658		373			
Total Dissolved Solids	TDS	mg/L	474		466		286		258	
Total Organic Halogens	TOC	ug/L	20	UJ	21	J	20	UJ		

shaded area means a change by the validator

entered by: [illegible] date: 9-26-94 40276TBL.XLS checked by: [illegible] date: 9/26/94

APPENDIX J

GENERAL CHEMISTRY VALIDATED LABORATORY REPORT FORMS

9613601.1582

*** T M A *** REPORT

Work Order # S4-05-117

Received: 05/12/94

Results by Sample

SAMPLE ID B08MY4 SAMPLE # 01 FRACTIONS: A
Date & Time Collected 05/06/94 10:45:00 Category WATER

NO3NO2 5.71
mg N/L

SAMPLE ID B08MY4D SAMPLE # 01 FRACTIONS: B
Date & Time Collected 05/06/94 10:45:00 Category WATER

NO3NO2 5.60
mg N/L

SAMPLE ID B08MY4S SAMPLE # 01 FRACTIONS: C
Date & Time Collected 05/06/94 10:45:00 Category WATER

NO3NO2 7.71
mg N/L

SAMPLE ID LCSW SAMPLE # 02 FRACTIONS: A
Date & Time Collected not specified Category WATER

NO3NO2 2.03
mg N/L

BM
8-18-94

This report is rendered upon all of the following conditions: Skinner & Sherman Laboratories, Inc., retains ownership of this report [illegible] invoice is satisfied. Expert witness services shall be available in conjunction with this report only if prior notification of this poten[illegible] and accepted, before the analysis. Client 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 invoice amount. The results listed refer only to tested samples and applicable parameters. Samples are not analyzed in accordance with New York State protocol unless indicated. Product endorsement is neither inferred nor implied. Skinner & Sherman Laboratories, Inc., will 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 for thirty days following issuance of report. Samples will be stored at client's expense, if authorized in writing.

TMA 002
Thermo Analytical Inc.
Skinner & Sherman Laboratories Inc.
300 Second Avenue, P.O. Box 521, Waltham, Massachusetts 02254-0921 (617) 890-7200
1-800-4LAB TEST FAX (617) 890-3882

9613501.1583

TMA Inc. REPORT Work Order # A4-05-036

Received: 05/11/94

Results by Sample

SAMPLE ID B0BMY4 FRACTION 01J TEST CODE WCCLPL NAME Anions & Wet Chem.

Date & Time Collected 05/06/94 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	9.4	mg/L	0.4
Fluoride	300.0	0.1	mg/L	0.1
Phosphate	300.0	<0.4	mg/L	0.4
pH	9040	7.8	pH	0.1
Sulfate	300.0	46	mg/L	2
Elect. Conductivity	120.1	379	umho/cm	6

UR MW 9-24-94
J

FORM I

BM 12-94
8-~~000032~~

9613501.1584

000010

TMA Inc. REPORT Work Order # A4-05-036

Received: 05/11/94

Results by Sample

SAMPLE ID B0BMY4 FRACTION 01M TEST CODE WCCLPL NAME Anions & Wet Chem.

Date & Time Collected 05/06/94 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Alkalinity	310.1	108	mg/L	2

FORM I

9613601.1585

000011

TMA Inc. REPORT Work Order # A4-05-036

Received: 05/11/94

Results by Sample

SAMPLE ID B0BMY4 FRACTION 010 TEST CODE WCCLPL NAME Anions & Wet Chem.

Date & Time Collected 05/06/94 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Tot. Dissolved Solids	160.1	238	mg/L	5

FORM I

BU
8-18-94

9613601.1586

FORM 1
INORGANIC ANALYSIS DATA SHEET

LAB NAME: Thermo Analytical Inc.
LAB SAMPLE ID: B0BMY4
CASE NO.: N4-05-048
Work ID: 100-FR-3
Matrix: WATER
Receipt Date: 12-May-94
Units: MG/L
% Solids: NA

Analyte	Concentration	Detection Limit	Analysis Date	
TOTAL ORGANIC CARBON	<1.0	1.0	23-May-94	
ORGANIC CHLORIDE	<0.01	0.01	24-May-94	UJ BM 9-7
ORGANIC BROMIDE	<0.01	0.01	24-May-94	UJ
ORGANIC IODIDE	<0.01	0.01	24-May-94	UJ

COMMENTS:

BM 8-18-94

~~003~~ CMW 4-8-94

9613501.1587

TMA Inc. REPORT Work Order # A4-05-036

Received: 05/11/94

Results by Sample

SAMPLE ID B0BMY4 FRACTION 01T TEST CODE WCCLPL NAME Anions & Wet Chem.

Date & Time Collected 05/06/94 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Ammonia Nitrogen	350.3	<0.05	mg/L	0.05
COD	410.1	<30	mg/L	30

FORM I

BH 8-18-94

9613601.1588

000012

TMA Inc. REPORT Work Order # A4-05-036

Received: 05/11/94

Results by Sample

SAMPLE ID B0BMY4 FRACTION 01Q TEST CODE WCCLPL NAME Anions & Wet Chem.

Date & Time Collected 05/06/94 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Sulfide	9030	<1	mg/L	1

FORM I

9413501.1589

ORTEK

ENVIRONMENTAL LABORATORY
1609 Western Avenue P.O. Box 12435 Green Bay, WI 54307-2435
(414) 498-2222
(800) 236-4067
FAX (414) 498-4067

** Certified for Environmental Analytical Services by Wisconsin DNR Laboratory Certification No. 405099530 **

Sample Analysis Report

To: US DEPARTMENT OF ENERGY
C/O WESTINGHOUSE HANFORD
COMPANY
2355 STEVENS DR
RICHLAND WA 99352

Client Phone: 509-376-4388
Client Fax:

Attn: P H BUTCHER

Batch #: 9405181
LIMS #: AA04453
Sample ID: BOBMQ9
Sample Matrix: GROUNDWATER

Date Received: 05/18/94
Date Reported: 06/23/94
Project ID: 100-FR-3

Collection Information

Date-Time-By: 05/06/94 - 10:45 -
Location:

Test/Parameter	Method	Result	MDL/ PQL	Units	Analysis/ Extraction Date	Analyst/ Supervisor Approval
ORGANICS SUPERVISOR APPROVAL		COMPLETE			06/22/94	RTE
HYDRAZINE	ASTM D1385	1.0	1.0	UG/L	06/03/94	SAD

8-23-94 WJC

Signed R J Everson
Lab Director -Rick Everson

Date 6/24/94

9413501.1590

ORTEK

ENVIRONMENTAL LABORATORY
1609 Western Avenue P.O. Box 12435 Green Bay, WI 54307-2435
(414) 498-2222
(800) 236-4067
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Sample Analysis Report

To: US DEPARTMENT OF ENERGY
C/O WESTINGHOUSE HANFORD
COMPANY
2355 STEVENS DR
RICHLAND WA 99352

Client Phone: 509-376-4388
Client Fax:

Attn: P H BUTCHER

Batch #: 9405181
LIMS #: AA04454
Sample ID: BOBMY7
Sample Matrix: GROUNDWATER

Date Received: 05/18/94
Date Reported: 06/23/94
Project ID: 100-FR-3

Collection Information

Date-Time-By: 05/06/94 - 10:45 -
Location:

Test/Parameter	Method	Result	MDL/ PQL	Units	Analysis/ Extraction Date	Analyst/ Supervisor Approval
ORGANICS SUPERVISOR APPROVAL		COMPLETE			06/22/94	RTE
HYDRAZINE	ASTM D1385	1.6	1.0	UG/L	06/03/94	SAD

8-23-94 (WJC)

Signed R. Everson
Lab Director -Rick Everson

Date 6/24/94

9413501.1591

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ENVIRONMENTAL LABORATORY
1609 Western Avenue P.O. Box 12435 Green Bay, WI 54307-2435
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(800) 236-4067
FAX (414) 498-4067

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Sample Analysis Report

To: US DEPARTMENT OF ENERGY
C/O WESTINGHOUSE HANFORD
COMPANY
2355 STEVENS DR
RICHLAND WA 99352

Client Phone: 509-376-4388
Client Fax:

Attn: P H BUTCHER

Batch #: 9405181
LIMS #: AA04455
Sample ID: BOBMT7
Sample Matrix: GROUNDWATER

Date Received: 05/18/94
Date Reported: 06/23/94
Project ID: 100-FR-3

Collection Information

Date-Time-By: 05/09/94 - 13:15 -
Location:

est/Parameter	Method	Result	MDL/ PQL	Units	Analysis/ Extraction Date	Analyst/ Supervisor Approval
RGANICS SUPERVISOR APPROVAL		COMPLETE			06/22/94	RTE
YDRAZINE	ASTM D1385	1.0	1.0	UG/L	06/03/94	SAD

8-23-94 (WJE)

Signed R. Everson
Lab Director -Rick Everson

Date 6/24/94

9413601.1592

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(414) 498-2222
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Green Bay, WI 54307-2435

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Sample Analysis Report

To: US DEPARTMENT OF ENERGY
C/O WESTINGHOUSE HANFORD
COMPANY
2355 STEVENS DR
RICHLAND WA 99352

Attn: P H BUTCHER

Client Phone: 509-376-4388
Client Fax:

Batch #: 9405181
LIMS #: AA04097
Sample ID: BOBMV5
Sample Matrix: GROUNDWATER

Date Received: 05/18/94
Date Reported: 06/23/94
Project ID: 100-FR-3

Collection Information

Date-Time-By: 05/10/94 - 11:06 -
Location:

est/Parameter	Method	Result	MDL/ PQL	Units	Analysis/ Extraction Date	Analyst/ Supervisor Approval
RGANICS SUPERVISOR APPROVAL		COMPLETE			06/22/94	RTE
YDRAZINE	ASTM D1385	1.0	1.0	UG/L	06/03/94	SAD

8-23-94 WJC

Signed R. Everson
Lab Director -Rick Everson

Date 6/24/94

000398
~~000014~~

9413501.1593

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(414) 498-2222
(800) 236-4067
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Sample Analysis Report

To: US DEPARTMENT OF ENERGY
C/O WESTINGHOUSE HANFORD
COMPANY
2355 STEVENS DR
RICHLAND WA 99352

Attn: P H BUTCHER

Client Phone: 509-376-4388
Client Fax:

Batch #: 9405181
LIMS #: AA04098
Sample ID: BOBMW7
Sample Matrix: GROUNDWATER

Date Received: 05/18/94
Date Reported: 06/23/94
Project ID: 100-FR-3

Collection Information

Date-Time-By: 05/09/94 - 09:40 -
Location:

Test/Parameter	Method	Result	MDL/ PQL	Units	Analysis/ Extraction Date	Analyst/ Supervisor Approval
ORGANICS SUPERVISOR APPROVAL		COMPLETE			06/22/94	RTE
HYDRAZINE	ASTM D1385	1.0	1.0	UG/L	06/03/94	SAD

9-24-94 EDT

Signed R. Everson
Lab Director -Rick Everson

Date 6/24/94

ORTEK 9413501.1594
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(414) 498-2222
(800) 236-4067
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Sample Analysis Report

To: US DEPARTMENT OF ENERGY
C/O WESTINGHOUSE HANFORD
COMPANY
2355 STEVENS DR
RICHLAND WA 99352

Attn: P H BUTCHER

Client Phone: 509-376-4388
Client Fax:

Batch #: 9405181
LIMS #: AA04099
Sample ID: BOBMS5
Sample Matrix: GROUNDWATER

Date Received: 05/18/94
Date Reported: 06/23/94
Project ID: 100-FR-3

Collection Information

Date-Time-By: 05/10/94 - 10:00 -
Location:

est/Parameter	Method	Result	MDL/ PQL	Units	Analysis/ Extraction Date	Analyst/ Supervisor Approval
RGANICS SUPERVISOR APPROVAL		COMPLETE			06/22/94	RTE
YDRAZINE	ASTM D1385	1.0	1.0	UG/L	06/03/94	SAD

6-24-94 WJR

Signed R. Everson
Lab Director -Rick Everson

Date 6/24/94

9413501.1595

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FAX (414) 498-4067

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Sample Analysis Report

To: US DEPARTMENT OF ENERGY
C/O WESTINGHOUSE HANFORD
COMPANY
2355 STEVENS DR
RICHLAND WA 99352

Attn: P H BUTCHER

Client Phone: 509-376-4388
Client Fax:

Batch #: 9405181
LIMS #: AA04100
Sample ID: BOBMS9
Sample Matrix: GROUNDWATER

Date Received: 05/18/94
Date Reported: 06/23/94
Project ID: 100-FR-3

Collection Information

Date-Time-By: 05/10/94 - 12:00 -
Location:

Test/Parameter	Method	Result	MDL/ PQL	Units	Analysis/ Extraction Date	Analyst/ Supervisor Approval
ORGANICS SUPERVISOR APPROVAL		COMPLETE			06/22/94	RTE
HYDRAZINE	ASTM D1385	3.2	1.0	UG/L	06/03/94	SAD

8-24-94 (WT

Signed R. Everson
Lab Director -Rick Everson

Date 6/24/94

9413501.1596

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Sample Analysis Report

To: US DEPARTMENT OF ENERGY
C/O WESTINGHOUSE HANFORD
COMPANY
2355 STEVENS DR
RICHLAND WA 99352

Attn: P H BUTCHER

Client Phone: 509-376-4388
Client Fax:

Batch #: 9405181
LIMS #: AA04101
Sample ID: BOBMR3
Sample Matrix: GROUNDWATER

Date Received: 05/18/94
Date Reported: 06/23/94

Project ID: 100-FR-3

Collection Information

Date-Time-By: 05/11/94 - 13:30 -
Location:

Test/Parameter	Method	Result	MDL/ PQL	Units	Analysis/ Extraction Date	Analyst/ Supervisor Approval
ORGANICS SUPERVISOR APPROVAL		COMPLETE			06/22/94	RTE
HYDRAZINE	ASTM D1385	1.0	1.0	UG/L	06/03/94	SAD

8-24-94
(ctx

Signed R. Everson
Lab Director -Rick Everson

Date 6/24/94

9413501.1597

ORTEK

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1609 Western Avenue P.O. Box 12435 Green Bay, WI 54307-2435
(414) 498-2222
(800) 236-4067
FAX (414) 498-4067

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Sample Analysis Report

To: US DEPARTMENT OF ENERGY
C/O WESTINGHOUSE HANFORD
COMPANY
2355 STEVENS DR
RICHLAND WA 99352

Client Phone: 509-376-4388
Client Fax:

Attn: P H BUTCHER

Batch #: 9405181
LIMS #: AA04102
Sample ID: BOBMR7
Sample Matrix: GROUNDWATER

Date Received: 05/18/94
Date Reported: 06/23/94
Project ID: 100-FR-3

Collection Information

Date-Time-By: 05/11/94 - 11:50 -
Location:

Test/Parameter	Method	Result	MDL/ PQL	Units	Analysis/ Extraction Date	Analyst/ Supervisor Approval
ORGANICS SUPERVISOR APPROVAL		COMPLETE			06/22/94	RTE
HYDRAZINE	ASTM D1385	1.6	1.0	UG/L	06/03/94	SAD

8-24-94
WJC

Signed R J Everson
Lab Director -Rick Everson

Date 6/24/94

9413501.1598

ORTEK
ENVIRONMENTAL LABORATORY
1609 Western Avenue P.O. Box 12435 Green Bay, WI 54307-2435
(414) 498
(800) 236
FAX (414) 498-

** Certified for Environmental Analytical Services by Wisconsin DNR Laboratory Certification No. 405099530 **

Sample Analysis Report

To: US DEPARTMENT OF ENERGY
C/O WESTINGHOUSE HANFORD
COMPANY
2355 STEVENS DR
RICHLAND WA 99352

Client Phone: 509-376-4388
Client Fax:

Attn: P H BUTCHER

Batch #: 9405181
LIMS #: AA04103
Sample ID: BOBMS1
Sample Matrix: GROUNDWATER

Date Received: 05/18/94
Date Reported: 06/23/94
Project ID: 100-FR-3

Collection Information

Date-Time-By: 05/11/94 - 09:30 -
Location:

Test/Parameter	Method	Result	MDL/ PQL	Units	Analysis/ Extraction Date	Analyst/ Supervisor Approval
ORGANICS SUPERVISOR APPROVAL		COMPLETE			06/22/94	RTE
HYDRAZINE	ASTM D1385	2.0	1.0	UG/L	06/03/94	SAD

8-24-94
[illegible]

Signed R. Everson
Lab Director -Rick Everson

Date 6/24/94

9413501.1599

ORTEK

ENVIRONMENTAL LABORATORY
1609 Western Avenue P.O. Box 12435 Green Bay, Wi
FAX (

** Certified for Environmental Analytical Services by Wisconsin DNR Laboratory Certification No. 405099530 *

Sample Analysis Report

To: US DEPARTMENT OF ENERGY
C/O WESTINGHOUSE HANFORD
COMPANY
2355 STEVENS DR
RICHLAND WA 99352

Client Phone: 509-376
Client Fax:

Attn: P H BUTCHER

Batch #: 9405181
LIMS #: AA04104
Sample ID: BOBMV1
Sample Matrix: GROUNDWATER

Date Received: 05/18/94
Date Reported: 06/23/94
Project ID: 100-FR-3

Collection Information

Date-Time-By: 05/12/94 - 11:30 -
Location:

Test/Parameter	Method	Result	MDL/ PQL	Units	Analysis/ Extraction Date	Anal Super Approval
ORGANICS SUPERVISOR APPROVAL		COMPLETE			06/22/94	RTE
HYDRAZINE	ASTM D1385	2.1	1.0	UG/L	06/03/94	SAD

8-24-94
(WJC

Signed R. Everson
Lab Director -Rick Everson

Date 6/24/94

ORTEK 9413501.1600

ENVIRONMENTAL LABORATORY
1609 Western Avenue P.O. Box 12435 Green Bay, WI 54307-2435
(414) 498-2222
(800) 236-4067
FAX (414) 498-4067

** Certified for Environmental Analytical Services by Wisconsin DNR Laboratory Certification No. 405099530 **

Sample Analysis Report

To: US DEPARTMENT OF ENERGY
C/O WESTINGHOUSE HANFORD
COMPANY
2355 STEVENS DR
RICHLAND WA 99352

Attn: P H BUTCHER

Client Phone: 509-376-4388
Client Fax:

Batch #: 9405181
LIMS #: AA04105
Sample ID: BOBMT3
Sample Matrix: GROUNDWATER

Date Received: 05/18/94
Date Reported: 06/24/94

Project ID: 100-FR-3

Collection Information

Date-Time-By: 05/12/94 - 09:30 -
Location:

Test/Parameter	Method	Result	MDL/ PQL	Units	Analysis/ Extraction Date	Analyst/ Supervisor Approval
ORGANICS SUPERVISOR APPROVAL		COMPLETE			06/23/94	RTE
HYDRAZINE	ASTM D1385	3.2	1.0	UG/L	06/03/94	SAD

6-24-94
(WJC)

Signed R Everson
Lab Director -Rick Everson

Date 6/24/94

[redacted]

Printed on Recycled Paper

9613601.1602

ORTEK
ENVIRONMENTAL LABORATORY
1609 Western Avenue P.O. Box 12435 Green Bay, WI 54307-2435
(414) 498-2222
(800) 236-4067
FAX (414) 498-4067

** Certified for Environmental Analytical Services by Wisconsin DNR Laboratory Certification No. 405099530 **

Sample Analysis Report

To: US DEPT OF ENERGY
C/O WESTINGHOUSE HANFORD CO
2355 STEVENS DRIVE
RICHLAND WA 99352

Client Phone: 509-372-2537
Client Fax:

Attn: ROBERT C. SMITH

Batch #: 9406091
LIMS #: AA04335
Sample ID: BOBMP7
Sample Matrix: GROUNDWATER

Date Received: 06/09/94
Date Reported: 07/15/94
Project ID: W94-0-0594-32

Collection Information

Date-Time-By: 05/18/94 - 12:00 - KT
Location: 100F

est/Parameter	Method	Result	MDL/ PQL	Units	Analysis/ Extraction Date	Analyst/ Supervisor Approval
RGANICS SUPERVISOR APPROVAL		COMPLETE			07/13/94	RE
YDRAZINE	ASTM D1385	1.0*	1.0	UG/L	06/30/94	SAD

UN OVER HOLD TIME

Rec'd 8-22-94

Signed

Date

Lab Director -Rick Everson

9613601.1603

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(414) 498-2222
(800) 236-4067
FAX (414) 498-4067

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Sample Analysis Report

To: US DEPT OF ENERGY
C/O WESTINGHOUSE HANFORD CO
2355 STEVENS DRIVE
RICHLAND WA 99352

Client Phone: 509-372-2537
Client Fax:

Attn: ROBERT C. SMITH

Batch #: 9406091
LIMS #: AA04336
Sample ID: BOBMQ1
Sample Matrix: GROUNDWATER

Date Received: 06/09/94
Date Reported: 07/15/94
Project ID: W94-0-0594-32

Collection Information

Date-Time-By: 06/03/94 - 12:00 - KT
Location: 100F

est/Parameter	Method	Result	MDL/ PQL	Units	Analysis/ Extraction Date	Analyst/ Supervisor Approval
RGANICS SUPERVISOR APPROVAL		COMPLETE			07/13/94	RE
YDRAZINE	ASTM D1385	1.6	1.0	UG/L	06/30/94	SAD

6-22-94

Signed Date

Lab Director -Rick Everson

9613501.1604

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(414) 498-2222
(800) 236-4067
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Sample Analysis Report

To: US DEPT OF ENERGY
C/O WESTINGHOUSE HANFORD CO
2355 STEVENS DRIVE
RICHLAND WA 99352

Client Phone: 509-372-2537
Client Fax:

Attn: ROBERT C. SMITH

Batch #: 9406091
LIMS #: AA04337
Sample ID: BOBMZ7
Sample Matrix: GROUNDWATER

Date Received: 06/09/94
Date Reported: 07/15/94
Project ID: W94-0-0594-32

Collection Information

Date-Time-By: 05/20/94 - 11:30 - KT
Location: SML

est/Parameter	Method	Result	MDL/ PQL	Units	Analysis/ Extraction Date	Analyst/ Supervisor Approval
RGANICS SUPERVISOR APPROVAL		COMPLETE			07/13/94	RE
YDRAZINE	ASTM D1385	1.0*	1.0	UG/L	06/30/94	SAD

UN OVER HOLD TIME

WJC 8 22 94

Signed Date

Lab Director -Rick Everson

9613601.1605

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Green Bay, WI 54307-2435

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Sample Analysis Report

To: US DEPT OF ENERGY
C/O WESTINGHOUSE HANFORD CO
2355 STEVENS DRIVE
RICHLAND WA 99352

Client Phone: 509-372-2537
Client Fax:

Attn: ROBERT C. SMITH

Batch #: 9406091
LIMS #: AA04338
Sample ID: BOBNO1
Sample Matrix: GROUNDWATER

Date Received: 06/09/94
Date Reported: 07/15/94

Project ID: W94-0-0594-32

Collection Information

Date-Time-By: 05/25/94 - 11:45 - KT
Location: 100F

est/Parameter	Method	Result	MDL/ PQL	Units	Analysis/ Extraction Date	Analyst/ Supervisor Approval
RGANICS SUPERVISOR APPROVAL		COMPLETE			07/13/94	RE
YDRAZINE	ASTM D1385	1.0*	1.0	UG/L	06/30/94	SAD

UN OVER HOLD TIME.

Signed

Date

Lab Director -Rick Everson

000411

[redacted]

9613601.1606

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Sample Analysis Report

To: US DEPT OF ENERGY
C/O WESTINGHOUSE HANFORD CO
2355 STEVENS DRIVE
RICHLAND WA 99352

Client Phone: 509-372-2537
Client Fax:

Attn: ROBERT C. SMITH

Batch #: 9406091
LIMS #: AA04339
Sample ID: BOBMW3
Sample Matrix: GROUNDWATER

Date Received: 06/09/94
Date Reported: 07/15/94

Project ID: W94-0-0594-32

Collection Information

Date-Time-By: 05/19/94 - 09:45 - KT
Location: 100F

st/Parameter	Method	Result	MDL/ PQL	Units	Analysis/ Extraction Date	Analyst/ Supervisor Approval
RGANICS SUPERVISOR APPROVAL		COMPLETE			07 13 94	RE
'DRAZINE	ASTM D1385	1.6*	1.0	UG L	06 30 94	SAD

IN OVER HOLD TIME.

Vit 9-11-94

000412

Signed Date

Lab Director -Rick Everson

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9613601.1607

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(414) 498-2222
(800) 236-4067
FAX (414) 498-4067
Green Bay, WI 54307-2435

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Sample Analysis Report

To: US DEPT OF ENERGY
C/O WESTINGHOUSE HANFORD CO
2355 STEVENS DRIVE
RICHLAND WA 99352

Client Phone: 509-372-2537
Client Fax:

Attn: ROBERT C. SMITH

Batch #: 9406091
LIMS #: AA04340
Sample ID: BOBMP3
Sample Matrix: GROUNDWATER

Date Received: 06/09/94
Date Reported: 07/15/94
Project ID: W94-0-0594-32

Collection Information

Date-Time-By: 05/17/94 - 10:58 - KT
Location: NA

Test/Parameter	Method	Result	MDL/ PQL	Units	Analysis/ Extraction Date	Analyst/ Supervisor Approval
ORGANICS SUPERVISOR APPROVAL		COMPLETE			07/13/94	RE
HYDRAZINE	ASTM D1385	<1.0*	1.0	UG/L	06/30/94	SAD

*OVER HOLD TIME

8-22-94 (WJT)

000413

~~000007~~

Signed Date

Lab Director: Rick Everson

~~000010~~

9613501.1608

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Sample Analysis Report

To: US DEPT OF ENERGY
C/O WESTINGHOUSE HANFORD CO
2355 STEVENS DRIVE
RICHLAND WA 99352

Client Phone: 509-372-2537
Client Fax:

Attn: ROBERT C. SMITH

Batch #: 9406091
LIMS #: AA04341
Sample ID: BOBMX5
Sample Matrix: GROUNDWATER

Date Received: 06/09/94
Date Reported: 07/15/94
Project ID: W94-0-0594-32

Collection Information

Date-Time-By: 05/23/94 - 09:30 - KT
Location: 100F

est/Parameter	Method	Result	MDL/ PQL	Units	Analysis/ Extraction Date	Analyst/ Supervisor Approval
RGANICS SUPERVISOR APPROVAL		COMPLETE			07/13/94	RE
YDRAZINE	ASTM D1385	1.0*	1.0	UG/L	06/30/94	SAD

:IN OVER HOLD TIME.

GJU 9-22-94

000414

~~000003~~

Signed Date

Lab Director -Rick Everson

~~000047~~

9613601.1609

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FAX (414) 498-4067

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Sample Analysis Report

To: US DEPT OF ENERGY
C/O WESTINGHOUSE HANFORD CO
2355 STEVENS DRIVE
RICHLAND WA 99352

Client Phone: 509-372-2537
Client Fax:

Attn: ROBERT C. SMITH

Batch #: 9406091
LIMS #: AA04342
Sample ID: BOBMY3
Sample Matrix: GROUNDWATER

Date Received: 06/09/94
Date Reported: 07/15/94
Project ID: W94-0-0594-32

Collection Information

Date-Time-By: 05/18/94 - 12:00 - KT
Location: 100F

st/Parameter	Method	Result	MDL/ PQL	Units	Analysis/ Extraction Date	Analyst/ Supervisor Approval
GANICS SUPERVISOR APPROVAL		COMPLETE			07 13 94	RE
DRAZINE	ASTM D1385	1.0*	1.0	UG/L	06 30 94	SAD

9 22 94

000415

Signed Date 07-009

Lab Director -Rick Everson

9613601.1610

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(800) 236-4067
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Green Bay, WI 54307-2435

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Sample Analysis Report

To: US DEPT OF ENERGY
C/O WESTINGHOUSE HANFORD CO
2355 STEVENS DRIVE
RICHLAND WA 99352

Client Phone: 509-372-2537
Client Fax:

Attn: ROBERT C.SMITH

Batch #: 9406091
LIMS #: AA04343
Sample ID: BOBMX1
Sample Matrix: GROUNDWATER

Date Received: 06/09/94
Date Reported: 07/15/94
Project ID: W94-0-0594-32

Collection Information

Date-Time-By: 05/19/94 - 11:50 - KT
Location: 100F

st/Parameter	Method	Result	MDL/ PQL	Units	Analysis/ Extraction Date	Analyst/ Supervisor Approval
RGANICS SUPERVISOR APPROVAL		COMPLETE			07 13 94	RE
DRAZINE	ASTM D1385	20*	1.0	UG/L	06 30 94	SAD

N OVER HOLD TIME

8-22 GV DTC

000416

Signed Date

Lab Director -Rick Everson

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9613601.1611

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Sample Analysis Report

To: US DEPT OF ENERGY
C/O WESTINGHOUSE HANFORD CO
2355 STEVENS DRIVE
RICHLAND WA 99352

Client Phone: 509-372-2537
Client Fax:

Attn: ROBERT C. SMITH

Batch #: 9406091
LIMS #: AA04344
Sample ID: BOBMZ1
Sample Matrix: GROUNDWATER

Date Received: 06/09/94
Date Reported: 07/15/94
Project ID: W94-0-0594-32

Collection Information

Date-Time-By: 05/18/94 - 12:00 - KT
Location: 100F

st/Parameter	Method	Result	MDL/ PQL	Units	Analysis/ Extraction Date	Analyst/ Supervisor Approval
RGANICS SUPERVISOR APPROVAL		COMPLETE			07/13/94	RE
YDRAZINE	ASTM D1385	7.8*	1.0	UG/L	06/30/94	SAD

UN OVER HOLD TIME

8-22-94 [illegible]

Signed Date

Lab Director -Rick Everson

9613501.1612

ALKALINITY ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0062
Contract Name:	Westinghouse Hanford	Job Number:	536
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	05/16/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6221	2	U
BOBMV2	AA8886	188	+

+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

8-25-94 WJG

9613501.1613

ALKALINITY ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0062
Contract Name:	Westinghouse Hanford	Job Number:	538
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	05/16/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6221	2	U
BOBMR8	AA8935	66	+
BOBMR0	AA8923	78	+

+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

6-25-94
WJC

9613501.1614

ALKALINITY ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0062
Contract Name:	Westinghouse Hanford	Job Number:	545
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	05/16/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6222	2	U
BOBMT0	AA9062	204	+
BOBMT8	AA9050	76	+

\+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

9613501.1615

ALKALINITY ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0062
Contract Name:	Westinghouse Hanford	Job Number:	577
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	05/27/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6268	2	U
BOBMW0	AA9576	181	+
BOBMP4	AA9599	70	+

\+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

6-25-94 WJC

AMMONIA ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0062
Contract Name:	Westinghouse Hanford	Job Number:	536
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	06/07/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank --	P6286	0.1	U
BOBMV2	AA8889	1.35	+

+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

6-15-94

9613501.1617

AMMONIA ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0062
Contract Name:	Westinghouse Hanford	Job Number:	538
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	06/01/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6261	0.1	U
BOBMR0	AA8926	0.1	+
BOBMR8	AA8938	0.1	U

\+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

9613501.1618

AMMONIA ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0062
Contract Name:	Westinghouse Hanford	Job Number:	545
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	06/07/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6286	0.1	U
BOBMT8	AA9053	0.54	+
BOBMT0	AA9065	0.1	U

\+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

9613601.1619

AMMONIA ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0062
Contract Name:	Westinghouse Hanford	Job Number:	577
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	06/07/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6286	0.1	U
BOBMW0	AA9579	0.21	+
BOBMP4	AA9602	0.1	U

+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

9613501.1620

CHEMICAL OXYGEN DEMAND ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0062
Contract Name:	Westinghouse Hanford	Job Number:	536
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	05/19/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	*	-	-
BOBMV2	AA8889	2	+ ~~B~~ BQ

+ - Positive result.
* - A method blank is not applicable for this analysis.

6-25-94 WSL

9613501.1621

CHEMICAL OXYGEN DEMAND ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0062
Contract Name:	Westinghouse Hanford	Job Number:	538
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	05/19/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	*	-	-
BOBMR8	AA8938	2	+ ~~B~~ BM 5-17-
BOBMR0	AA8926	2	+ ~~B~~

\+ - Positive result.
* - A method blank is not applicable for this analysis.

CHEMICAL OXYGEN DEMAND ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0062
Contract Name:	Westinghouse Hanford	Job Number:	545
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	05/19/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	*	-	-
BOBMT0	AA9065	1	U
BOBMT8	AA9053	1	BM U

9-30-94

U - Compound was analyzed for but not detected. The number is the detection limit for the sample.
* - A method blank is not applicable for this analysis.

9613501.1623

CHEMICAL OXYGEN DEMAND ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0062
Contract Name:	Westinghouse Hanford	Job Number:	577
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	06/07/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	*	-	-
BOBMW0	AA9579	6	+
BOBMP4	AA9602	1	+

\+ - Positive result.
* - A method blank is not applicable for this analysis.

8-25-94

9613501.1624

NITRATE/NITRITE ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0062
Contract Name:	Westinghouse Hanford	Job Number:	536
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	05/25/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6241	0.02	U
BOBMV2	AA8855	18.3	+

+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

8-25-94
WJG

9613601.1625

NITRATE/NITRITE ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0062
Contract Name:	Westinghouse Hanford	Job Number:	538
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	06/07/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6280	0.02	U
BOBMR0	AA8922	0.31	+
BOBMR8	AA8934	0.45	+

\+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

8-1

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9613501.1626

NITRATE/NITRITE ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0062
Contract Name:	Westinghouse Hanford	Job Number:	545
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	06/03/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6280	0.02	U
BOBMT8	AA9049	0.92	+
BOBMT0	AA9061	26	+

\+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

8-25-94
WSO

9613501.1627

NITRATE/NITRITE ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0062
Contract Name:	Westinghouse Hanford	Job Number:	577
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	06/03/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6280	0.02	U
BOBMW0	AA9575	28.4	+
BOBMP4	AA9598	0.57	+

+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

8-25-94
WJC

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9613501.1628

pH ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0062
Contract Name:	Westinghouse Hanford	Job Number:	536
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	standard units	Analysis Date:	05/17/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	*	-	-
BOBMV2	AA8884	7.52	- J

AJ
9/26/94

8-25-94

* - A method blank is not applicable for this analysis.

9613601.1629

pH ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0062
Contract Name:	Westinghouse Hanford	Job Number:	538
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	standard units	Analysis Date:	05/17/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	*	-	-
BOBMR8	AA8933	7.72	- J
BOBMR0	AA8921	7.40	- J

AF
7/21/94

* - A method blank is not applicable for this analysis.

8-25-94
WJC

9613501.1630

pH ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0062
Contract Name:	Westinghouse Hanford	Job Number:	545
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	standard units	Analysis Date:	05/17/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	*	-	-
BOBMT8	AA9048	7.71	- J
BOBMT0	AA9060	7.55	- J

AJ
9/26/94

* - A method blank is not applicable for this analysis.

8-25-94

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9613501.1631

pH ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0062
Contract Name:	Westinghouse Hanford	Job Number:	577
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	standard units	Analysis Date:	05/25/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	*	-	-
BOBMW0	AA9574	7.80	- J
BOBMP4	AA9597	7.55	- J

jif
9/26/94

* - A method blank is not applicable for this analysis.

5-94
000437

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9613601.1632

SPECIFIC CONDUCTIVITY ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0062
Contract Name:	Westinghouse Hanford	Job Number:	536
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	umhos/cm	Analysis Date:	05/19/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6223	1	U
BOBMV2	AA8884	716	+

+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

8-25-94
(WJC)

9613501.1633

SPECIFIC CONDUCTIVITY ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0062
Contract Name:	Westinghouse Hanford	Job Number:	538
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	umhos/cm	Analysis Date:	05/19/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6224	1	U
BOBMR8	AA8933	172	+
BOBMR0	AA8921	186	+

+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

6-25-94 (WJY)

9613501.1634

SPECIFIC CONDUCTIVITY ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0062
Contract Name:	Westinghouse Hanford	Job Number:	545
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	umhos/cm	Analysis Date:	05/19/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6224	1	U
BOBMT0	AA9060	867	+
BOBMT8	AA9048	215	+

+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

8234

WTC

~~000130~~

9613501.1635

SPECIFIC CONDUCTIVITY ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0062
Contract Name:	Westinghouse Hanford	Job Number:	577
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	umhos/cm	Analysis Date:	06/10/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6308	1	U
BOBMW0	AA9574	848	+
BOBMP4	AA9597	199	+

+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

8-25-94
(WJG)

9613501.1636

SULFIDE ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0062
Contract Name:	Westinghouse Hanford	Job Number:	536
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	05/16/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6210	1	U
BOBMV2	AA8888	8	+

+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

8-25-94 (JE)

9613501.1637

SULFIDE ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0062
Contract Name:	Westinghouse Hanford	Job Number:	538
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	05/16/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6211	1	U
BOBMR8	AA8937	23	+
BOBMR0	AA8925	4.0	+

+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

8-25-94

9613501.1638

SULFIDE ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0062
Contract Name:	Westinghouse Hanford	Job Number:	545
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	05/19/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6225	1	U
BOBMT0	AA9064	4	+
BOBMT8	AA9052	6	+

+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

8-25-94

9613501.1639

SULFIDE ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0062
Contract Name:	Westinghouse Hanford	Job Number:	577
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	05/25/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6263	1	U
BOBMW0	AA9578	8	+
BOBMP4	AA9601	6	+

\+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

8-25-94 WJC

9613501.1640

TOTAL DISSOLVED SOLIDS ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0062
Contract Name:	Westinghouse Hanford	Job Number:	536
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	05/16/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6203	1	U
BOBMV2	AA8887	497	+

\+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

6-23-94

9613601.1641

TOTAL DISSOLVED SOLIDS ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0062
Contract Name:	Westinghouse Hanford	Job Number:	538
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	05/16/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6203	I	U
BOBMR0	AA8924	114	+
BOBMR8	AA8936	113	+

\+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

8-15-94 (WSG)

9613601.1642

TOTAL DISSOLVED SOLIDS ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0062
Contract Name:	Westinghouse Hanford	Job Number:	545
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	05/18/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6234	1	U
BOBMT0	AA9063	592	+
BOBMT8	AA9051	161	+

\+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

8-25-94 WTC

9613501.1643

TOTAL DISSOLVED SOLIDS ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0062
Contract Name:	Westinghouse Hanford	Job Number:	577
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	05/26/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6270	1	U
BOBMW0	AA9577	627	+
BOBMP4	AA9600	166	~~+~~ J

+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

8-25-94
WBG

~~000438~~

9613601.1644

TOTAL ORGANIC CARBON ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0062
Contract Name:	Westinghouse Hanford	Job Number:	536
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	05/30/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6279	1	U
BOBMV2	AA8892	2	+

+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

8-25-94 (WJO)

9613601.1645

TOTAL ORGANIC CARBON ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0062
Contract Name:	Westinghouse Hanford	Job Number:	538
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	05/30/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6279	1	U
BOBMR0	AA8929	1	U
BOBMR8	AA8941	1	U

U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

8-25-94 WJC

9613601.1646

TOTAL ORGANIC CARBON ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0062
Contract Name:	Westinghouse Hanford	Job Number:	545
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	05/30/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6279	1	U
BOBMT8	AA9056	1	U
BOBMT0	AA9068	2	+

\+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

8-25-94 (WC)

~~000143~~

9613501.1647

TOTAL ORGANIC CARBON ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0062
Contract Name:	Westinghouse Hanford	Job Number:	577
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	06/14/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6328	1	U
BOBMW0	AA9581	2	+
BOBMP4	AA9605	1	U

+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

8-25-94
ubc

9613501.1648

TOTAL ORGANIC HALOGENS ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0062
Contract Name:	Westinghouse Hanford	Job Number:	536
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	µg/l	Analysis Date:	06/07/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6303	20	U
BOBMV2	AA8893	22	+

+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

8-25-94 (abc)

9613501.1649

TOTAL ORGANIC HALOGENS ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0062
Contract Name:	Westinghouse Hanford	Job Number:	538
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	µg/l	Analysis Date:	06/07/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6303	20	U
BOBMR0	AA8930	20	U
BOBMR8	AA8942	20	U

U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

9613501.1650

TOTAL ORGANIC HALOGENS ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0062
Contract Name:	Westinghouse Hanford	Job Number:	545
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	µg/l	Analysis Date:	06/09/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6304	20	U
BOBMT8	AA9057	20	U
BOBMT0	AA9069	20	U

U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

8-25-94 (WJC)

9613601.1651

TOTAL ORGANIC HALOGENS ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0062
Contract Name:	Westinghouse Hanford	Job Number:	577
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	µg/l	Analysis Date:	06/15/94 & 06/16/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6329	20	U
Method Blank	P6330	20	U
BOBMW0	AA9582	20	U
BOBMP4	AA9606	37	+

Method blank P6329 applies to sample BOBMW0.
Method blank P6330 applies to sample BOBMP4.

+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

8-25-94 (WTC)

9613501.1652

ANION ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0062
Contract Name:	Westinghouse Hanford	Job Number:	538
Client Sample ID:	BOBMR0	Preparation Date:	06/06/94
Lab Sample ID:	AA8921	Analysis Date:	06/06/94
Sample Matrix:	Water	Concentration Units:	mg/l

Compound	Result	Qualifier	Detection Limit
fluoride	0.40	U	0.40
chloride	1.2	+	0.40
phosphate	1.0	~~U~~ UR	1.0
sulfate	13	+	1.5

+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

9613501.1653

ANION ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0062
Contract Name:	Westinghouse Hanford	Job Number:	538
Client Sample ID:	BOBMR8	Preparation Date:	06/06/94
Lab Sample ID:	AA8933	Analysis Date:	06/06/94
Sample Matrix:	Water	Concentration Units:	mg/l

Compound	Result	Qualifier	Detection Limit
fluoride	0.40	U	0.40
chloride	1.5	+	0.40
phosphate	1.0	~~U~~ UR	1.0
sulfate	13	+	1.5

+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

9-8-94 WJC

9613501.1654

ANION ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0062
Contract Name:	Westinghouse Hanford	Job Number:	545
Client Sample ID:	BOBMT8	Preparation Date:	06/06/94
Lab Sample ID:	AA9048	Analysis Date:	06/06/94
Sample Matrix:	Water	Concentration Units:	mg/l

Compound	Result	Qualifier	Detection Limit
fluoride	0.40	U	0.40
chloride	1.5	+	0.40
phosphate	1.0	~~U~~ UR	1.0
sulfate	18	+	1.5

+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

9-8-94 (WSE)

9613501.1655

ANION ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0062
Contract Name:	Westinghouse Hanford	Job Number:	545
Client Sample ID:	BOBMT0	Preparation Date:	06/06/94
Lab Sample ID:	AA9060	Analysis Date:	06/06/94
Sample Matrix:	Water	Concentration Units:	mg/l

Compound	Result	Qualifier	Detection Limit
fluoride	0.40	U	0.40
chloride	38	+	4.0
phosphate	1.0	~~U~~ VR	1.0
sulfate	120	+	15

9-8-94 (ubc)

+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

9613501.1656

ANION ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0062
Contract Name:	Westinghouse Hanford	Job Number:	577
Client Sample ID:	BOBMW0	Preparation Date:	06/13/94
Lab Sample ID:	AA9574	Analysis Date:	06/13/94
Sample Matrix:	Water	Concentration Units:	mg/l

Compound	Result	Qualifier	Detection Limit
fluoride	0.88	+	0.40
chloride	24	+	2.0
phosphate	1.0	~~U~~ UP	1.0
sulfate	84	+	7.5

+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

4.8.94 WOC

9613501.1657

ANION ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0062
Contract Name:	Westinghouse Hanford	Job Number:	536
Client Sample ID:	BOBMV2	Preparation Date:	06/06/94
Lab Sample ID:	AA8884	Analysis Date:	06/06/94
Sample Matrix:	Water	Concentration Units:	mg/l

Compound	Result	Qualifier	Detection Limit
fluoride	0.8	+	0.40
chloride	16	+	4.0
phosphate	~~1.0~~	~~U~~ UR	1.0
sulfate	74	+	1.5

+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

9613501.1658

ANION ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0062
Contract Name:	Westinghouse Hanford	Job Number:	577
Client Sample ID:	BOBMP4	Preparation Date:	06/13/94
Lab Sample ID:	AA9597	Analysis Date:	06/13/94
Sample Matrix:	Water	Concentration Units:	mg/l

Compound	Result	Qualifier	Detection Limit
fluoride	0.40	U	0.40
chloride	1.6	+	0.40
phosphate	1.0	~~U~~ VR	1.0
sulfate	16	+	7.5

9-8-94 (WJC)

+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

9613601.1659

ANION ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0055
Contract Name:	Westinghouse Hanford	Job Number:	534
Client Sample ID:	BOBMQ6	Preparation Date:	05/31/94
Lab Sample ID:	AA8786	Analysis Date:	05/31/94
Sample Matrix:	Water	Concentration Units:	mg/l

Compound	Result	Qualifier	Detection Limit
fluoride	0.5	+	0.40
chloride	11	+	2.0
phosphate	1.0	~~U~~ UR	1.0
sulfate	48	+	7.5

+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

BM
9-6-94

9613501.1660

ANION ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0055
Contract Name:	Westinghouse Hanford	Job Number:	534
Client Sample ID:	BOBMX6	Preparation Date:	05/31/94
Lab Sample ID:	AA8799	Analysis Date:	05/31/94
Sample Matrix:	Water	Concentration Units:	mg/l

Compound	Result	Qualifier	Detection Limit
fluoride	0.40	U	0.40
chloride	10	+	2.0
phosphate	1.0	~~U~~ UR	1.0
sulfate	52	+	7.5

+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

BM 9-6-94

9613601.1661

ANION ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0055
Contract Name:	Westinghouse Hanford	Job Number:	535
Client Sample ID:	BOBMS2	Preparation Date:	06/02/94
Lab Sample ID:	AA8831	Analysis Date:	06/02/94
Sample Matrix:	Water	Concentration Units:	mg/l

Compound	Result	Qualifier	Detection Limit
fluoride	0.40	U	0.40
chloride	16	+	4.0
phosphate	1.0	HUR	1.0
sulfate	62	+	15

+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

BM
2-6-94

9613501.1662

ANION ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0055
Contract Name:	Westinghouse Hanford	Job Number:	535
Client Sample ID:	BOBMS6	Preparation Date:	06/02/94
Lab Sample ID:	AA8844	Analysis Date:	06/02/94
Sample Matrix:	Water	Concentration Units:	mg/l

Compound	Result	Qualifier	Detection Limit
fluoride	1.50	+	0.40
chloride	16	+	2.0
phosphate	2.0	~~U~~ *UR	2.0
sulfate	69	+	7.5

* - Elevated detection limit due to matrix interference.
\+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

BM 9-6-94

9613501.1663

ANION ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0055
Contract Name:	Westinghouse Hanford	Job Number:	535
Client Sample ID:	BOBMT4	Preparation Date:	06/02/94
Lab Sample ID:	AA8857	Analysis Date:	06/02/94
Sample Matrix:	Water	Concentration Units:	mg/l

Compound	Result	Qualifier	Detection Limit
fluoride	0.40	U	0.40
chloride	29	+	2.0
phosphate	1.0	~~+~~ R	1.0
sulfate	93	+	7.5

+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

BM 9-6-94

9613501.1664

ANION ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0055
Contract Name:	Westinghouse Hanford	Job Number:	535
Client Sample ID:	BOBMW4	Preparation Date:	06/02/94
Lab Sample ID:	AA8870	Analysis Date:	06/02/94
Sample Matrix:	Water	Concentration Units:	mg/l

Compound	Result	Qualifier	Detection Limit
fluoride	0.50	+	0.40
chloride	19	+	2.0
phosphate	1.0	BUR	1.0
sulfate	112	+	7.5

\+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

BM
9-6-94

9613501.1665

ANION ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0055
Contract Name:	Westinghouse Hanford	Job Number:	537
Client Sample ID:	BOBMR4	Preparation Date:	06/06/94
Lab Sample ID:	AA8906	Analysis Date:	06/06/94
Sample Matrix:	Water	Concentration Units:	mg/l

Compound	Result	Qualifier	Detection Limit
fluoride	0.40	U	0.40
chloride	1.3	+	0.40
phosphate	1.0	~~U~~ UR	1.0
sulfate	12	+	1.5

+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

BM 9-6-94

9613501.1666

TOTAL ORGANIC HALOGENS ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0055
Contract Name:	Westinghouse Hanford	Job Number:	534
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	µg/l	Analysis Date:	06/03/94

Client Sample ID	Lab Sample ID	Result		Qualifiers
Method Blank	P6291	20		U
BOBMQ6	AA8795	20	~~UR~~	U
BOBMX6	AA8808	21	~~J~~	~~+~~ J

NO Qual
BM
9-7-94

MW
9-18-94

Note: Blank subtraction per method.

+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

BM
9-6-94

9613501.1667

TOTAL ORGANIC HALOGENS ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0055
Contract Name:	Westinghouse Hanford	Job Number:	535
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	µg/l	Analysis Date:	06/06/94

Client Sample ID	Lab Sample ID	Result		Qualifiers
Method Blank	P6302	20		U
BOBMT4	AA8866	20	~~UR~~	U
BOBMW4	AA8879	20	↓	U
BOBMS2	AA8840	20	↓	U
BOBMS6	AA8853	20	↓	U

NO Qual
BM 9-7-94

U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

BM 9-6-94

9613601.1668

TOTAL ORGANIC HALOGENS ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0055
Contract Name:	Westinghouse Hanford	Job Number:	537
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	µg/l	Analysis Date:	06/07/94

Client Sample ID	Lab Sample ID	Result		Qualifiers
Method Blank	P6303	20		U
BOBMR4	AA8915	20	~~U~~ No qual BM 9-7-94	U

U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

BM 9-6-94

9613601.1669

TOTAL ORGANIC CARBON ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0055
Contract Name:	Westinghouse Hanford	Job Number:	534
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	05/24/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6255	1	U
BOBMQ6	AA8794	1 ~~U5~~	U
BOBMX6	AA8807	1 ~~U5~~	U

U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

BM 9-6-94

9613601.1670

TOTAL ORGANIC CARBON ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0055
Contract Name:	Westinghouse Hanford	Job Number:	535
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	05/24/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6255	1	U
BOBMS2	AA8839	2	+
BOBMS6	AA8852	2	+
BOBMT4	AA8865	2	+
BOBMW4	AA8878	2	+

+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

BM 9-6-94

9613501.1671

TOTAL ORGANIC CARBON ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0055
Contract Name:	Westinghouse Hanford	Job Number:	537
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	05/30/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6279	1	U
BOBMR4	AA8914	1 ~~UJ~~	U

no qual. BM 9-7-94

U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

BM 9-6-94

9613501.1672

TOTAL DISSOLVED SOLIDS ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0055
Contract Name:	Westinghouse Hanford	Job Number:	534
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	05/16/94

Client Sample ID	Lab Sample ID	Result		Qualifiers
Method Blank	P6317	1		U
BOBMQ6	AA8789	28	J	+
BOBMX6	AA8802	29	J	+

+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

BM 9-6-94

9613601.1673

TOTAL DISSOLVED SOLIDS ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0055
Contract Name:	Westinghouse Hanford	Job Number:	535
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	05/16/94

Client Sample ID	Lab Sample ID	Result		Qualifiers
Method Blank	P6203	1		U
BOBMS6	AA8847	379	J	+
BOBMW4	AA8873	642		+
BOBMT4	AA8860	476		+
BOBMS2	AA8834	374		+

+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

BM
9-6-94

9613601.1674

TOTAL DISSOLVED SOLIDS ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0055
Contract Name:	Westinghouse Hanford	Job Number:	537
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	05/16/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6203	1	U
BOBMR4	AA8909	197 J	+

+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

BM 9-6-94

9613601.1675

SULFIDE ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0055
Contract Name:	Westinghouse Hanford	Job Number:	534
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	05/16/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6210	1	U
BOBMQ6	AA8790	13	+
BOBMX6	AA8803	12	+

+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

BM
9-6-94

9613501.1676

SULFIDE ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0055
Contract Name:	Westinghouse Hanford	Job Number:	535
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	05/16/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6210	1	U
BOBMW4	AA8874	5	+
BOBMT4	AA8861	5	+
BOBMS6	AA8848	85	+

+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

BA 9-6-94

9613501.1677

SULFIDE ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0055
Contract Name:	Westinghouse Hanford	Job Number:	537
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	05/16/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6211	1	U
BOBMR4	AA8910	8	+

+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

BM 9-6-94

9613501.1678

SPECIFIC CONDUCTANCE ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0055
Contract Name:	Westinghouse Hanford	Job Number:	534
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	umhos/cm	Analysis Date:	05/19/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6223	1	U
BOBMQ6	AA8786	389	+
BOBMX6	AA8799	387	+

+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

BM
9-6-94

9613501.1679

SPECIFIC CONDUCTANCE ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0055
Contract Name:	Westinghouse Hanford	Job Number:	535
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	umhos/cm	Analysis Date:	05/19/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6223	1	U
BOBMW4	AA8870	898	+
BOBMT4	AA8857	778	+
BOBMS2	AA8831	555	+
BOBMS6	AA8844	602	+

\+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

BM 9-6-94

9613601.1680

SPECIFIC CONDUCTANCE ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0055
Contract Name:	Westinghouse Hanford	Job Number:	537
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	umhos/cm	Analysis Date:	05/19/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6223	1	U
BOBMR4	AA8906	167	+

+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

BM 9-6-94

9613601.1681

pH ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0055
Contract Name:	Westinghouse Hanford	Job Number:	534
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	standard units	Analysis Date:	05/17/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	*	-	-
BOBMQ6	AA8786	7.53 J	-
BOBMX6	AA8799	7.59 J	-

* - A method blank is not applicable for this analysis.

BM 9-6-94

~~000153~~

9613501.1682

pH ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0055
Contract Name:	Westinghouse Hanford	Job Number:	535
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	standard units	Analysis Date:	05/17/94

Client Sample ID	Lab Sample ID	Result		Qualifiers
Method Blank	*	-		-
BOBMW4	AA8870	7.66	J	-
BOBMT4	AA8857	7.72		-
BOBMS2	AA8831	7.79		-
BOBMS6	AA8844	7.73		-

* - A method blank is not applicable for this analysis.

BM 8-6-94

9613601.1683

pH ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0055
Contract Name:	Westinghouse Hanford	Job Number:	537
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	standard units	Analysis Date:	05/17/94

Client Sample ID	Lab Sample ID	Result		Qualifiers
Method Blank	*	-		-
BOBMR4	AA8906	7.64	J	-

BM 9-6-94

* - A method blank is not applicable for this analysis.

9613501.1684

NITRATE/NITRITE ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0055
Contract Name:	Westinghouse Hanford	Job Number:	534
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	05/25/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6241	0.02	U
BOBMQ6	AA8787	4.56	+
BOBMX6	AA8800	4.58	+

+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

9613601.1685

NITRATE/NITRITE ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0055
Contract Name:	Westinghouse Hanford	Job Number:	535
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	05/25/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6241	0.02	U
BOBMS2	AA8832	10.1	+
BOBMS6	AA8845	9.2	+
BOBMT4	AA8858	17.6	+
BOBMW4	AA8871	22.3	+

+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

BM 9-6-94

9613501.1686

NITRATE/NITRITE ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0055
Contract Name:	Westinghouse Hanford	Job Number:	537
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	06/03/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6280	0.02	U
BOBMR4	AA8907	0.21	+

+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

BM 9-6-94

9613601.1687

CHEMICAL OXYGEN DEMAND ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0055
Contract Name:	Westinghouse Hanford	Job Number:	534
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	05/19/94

Client Sample ID	Lab Sample ID	Result		Qualifiers
Method Blank	*	-		-
BOBMQ6	AA8791	1	UJ	U
BOBMX6	AA8804	1	↓	U

* - A method blank is not applicable for this analysis.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

BM
9-6-94

9613501.1688

CHEMICAL OXYGEN DEMAND ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0055
Contract Name:	Westinghouse Hanford	Job Number:	535
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	05/19/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	*	-	-
BOBMW4	AA8875	4 ~~UJ~~ J	+
BOBMT4	AA8862	1 UJ	U
BOBMS2	AA8836	4 J	+
BOBMS6	AA8849	1 UJ	U

BM 9-26-94

* - A method blank is not applicable for this analysis.
\+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

9613501.1689

CHEMICAL OXYGEN DEMAND ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0055
Contract Name:	Westinghouse Hanford	Job Number:	537
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	05/19/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	*	-	-
BOBMR4	AA8911	2 J	+

* - A method blank is not applicable for this analysis.
\+ - Positive result.

BM 9-6-94

9613501.1690

AMMONIA ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0055
Contract Name:	Westinghouse Hanford	Job Number:	534
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	05/24/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6248	0.1	U
BOBMQ6	AA8791	0.1	U
BOBMX6	AA8804	0.1	U

U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

BM
9-6-94

~~000144~~

9613601.1691

AMMONIA ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0055
Contract Name:	Westinghouse Hanford	Job Number:	535
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	06/01/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6261	0.1	U
BOBMS2	AA8836	0.2	+
BOBMS6	AA8849	0.1	U
BOBMT4	AA8862	0.1	U
BOBMW4	AA8875	0.1	U

+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

BM 8-6-94

9613501.1692

AMMONIA ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0055
Contract Name:	Westinghouse Hanford	Job Number:	537
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	06/01/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6261	0.1	U
BOBMR4	AA8911	0.1	U

U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

BM

~~000140~~

9613501.1693

ALKALINITY ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0055
Contract Name:	Westinghouse Hanford	Job Number:	534
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	05/16/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6221	2	U
BOBMQ6	AA8788	110 J	+
BOBMX6	AA8801	110 J	+

\+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

9613601.1694

ALKALINITY ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0055
Contract Name:	Westinghouse Hanford	Job Number:	535
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	05/16/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6221	2	U
BOBMW4	AA8872	258 J	+
BOBMT4	AA8859	192	+
BOBMS2	AA8833	158	+
BOBMS6	AA8846	176	+

\+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

BM
9-6-94

9613601.1695

ALKALINITY ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0055
Contract Name:	Westinghouse Hanford	Job Number:	537
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	05/16/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6222	2	U
BOBMR4	AA8908	66 J	+

\+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

BM
9-6-94

9613501.1696

000009

TMA Inc. REPORT Work Order # A4-05-066

Received: 05/24/94

Results by Sample

SAMPLE ID B0BMY8 FRACTION 01J TEST CODE WCCLPL NAME Anions & Wet Chem.

Date & Time Collected 05/18/94 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT	
Chloride	300.0	1.1	mg/L	0.2	
Fluoride	300.0	0.1	mg/L	0.1	
Phosphate	300.0	<0.4	mg/L	0.4	UR
pH	9040	7.6	pH	0.1	J
Sulfate	300.0	15	mg/L	1	
Elect. Conductivity	9050	196	umho/cm	6	

FORM I

6-30-94

9613601.1697

TMA Inc. REPORT Work Order # A4-05-066 000010

Received: 05/24/94

Results by Sample

SAMPLE ID B0BMY8 FRACTION 01M TEST CODE WCCLPL NAME Anions & Wet Chem.

Date & Time Collected 05/18/94 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Alkalinity	310.1	80	mg/L	2

FORM I

6-30-94

9613501.1698

000011

TMA Inc. REPORT Work Order # A4-05-066

Received: 05/24/94

Results by Sample

SAMPLE ID B0BMY8 FRACTION 010 TEST CODE WCCLPL NAME Anions & Wet Chem.

Date & Time Collected 05/18/94 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Tot. Dissolved Solids	160.1	64	mg/L	5

FORM I

9613501.1699

000012

TMA Inc. REPORT Work Order # A4-05-066

Received: 05/24/94

Results by Sample

AMPLE ID B0BMY8 FRACTION 01Q TEST CODE WCCLPL NAME Anions & Wet Chem.

Date & Time Collected 05/18/94 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Sulfide	9030	<1	mg/L	1

FORM I

6-30-94 (JSC)

9613501.1700

000013

TMA Inc. REPORT Work Order # A4-05-066

Received: 05/24/94

Results by Sample

SAMPLE ID B0BMY8 FRACTION 01T TEST CODE WCCLPL NAME Anions & Wet Chem.

Date & Time Collected 05/18/94 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Ammonia Nitrogen	350.3	<0.05	mg/L	0.05
COD	410.1	<30	mg/L	30

FORM I

9613501.1701

 *** T M A *** REPORT Work Order # S4-05-231

Received: 05/25/94 Results by Sample

SAMPLE ID B0BMY8 SAMPLE # 01 FRACTIONS: A
Date & Time Collected 05/18/94 17:00:00 Category WATER

NO3NO2 0.68
mg N/L

SAMPLE ID B0BMY8D SAMPLE # 01 FRACTIONS: B
Date & Time Collected 05/18/94 17:00:00 Category WATER

NO3NO2 0.67
mg N/L

SAMPLE ID B0BMY8S SAMPLE # 01 FRACTIONS: C
Date & Time Collected 05/18/94 17:00:00 Category WATER

NO3NO2 2.66
mg N/L

SAMPLE ID LCSW SAMPLE # 02 FRACTIONS: A
Date & Time Collected not specified Category WATER

NO3NO2 2.11
mg N/L

This report is rendered upon all of the following conditions: Skinner & Sherman Laboratories, Inc., retains ownership of this report until associated submitted invoice is satisfied. 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. Client 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 invoice amount. The results listed refer only to tested samples and applicable parameters. Samples analyzed in accordance with New York State protocol unless indicated. Product endorsement is neither inferred nor implied. Skinner & Sherman Laboratories, Inc., will 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 for thirty days following issuance of report. Samples will be stored at client's expense, if authorized in writing.

TMA
hermo Analytical Inc.
kinner & Sherman Laboratories Inc. 300 Second Avenue, P.O. Box 521 Waltham Massachusetts 0225[redacted]

9613501.1702

FORM 1
INORGANIC ANALYSIS DATA SHEET

LAB NAME: Thermo Analytical Inc.
LAB SAMPLE ID: B0BMY8
CASE NO.: N4-05-098
Work ID: SAF#94-087
Matrix: WATER
Receipt Date: 25-May-94
Units: MG/L
% Solids: NA

Analyte	Concentration	Detection Limit	Analysis Date
TOTAL ORGANIC CARBON	<1.0	1.0	25-May-94
ORGANIC CHLORIDE	<0.01	0.01	25-May-94
ORGANIC BROMIDE	ND(0.01)	0.01	25-May-94
ORGANIC IODIDE	ND(0.01)	0.01	25-May-94

COMMENTS:

~~003~~ CMS 9/8/94

~~000038~~

9613501.1703

ANION ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0068
Contract Name:	Westinghouse Hanford	Job Number:	579
Client Sample ID:	BOBMW8	Preparation Date:	06/13/94
Lab Sample ID:	AA9611	Analysis Date:	06/13/94
Sample Matrix:	Water	Concentration Units:	mg/l

Compound	Result	Qualifier	Detection Limit
fluoride	0.4	U	0.4
chloride	6.0	+	2.0
phosphate	1.0	~~U~~ UR	1.0
sulfate	73	+	7.5

+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

BM 9-7-94

~~000033~~

9613501.1704

ANION ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0068
Contract Name:	Westinghouse Hanford	Job Number:	579
Client Sample ID:	BOBMY0	Preparation Date:	06/13/94
Lab Sample ID:	AA9625	Analysis Date:	06/13/94
Sample Matrix:	Water	Concentration Units:	mg/l

Compound	Result	Qualifier	Detection Limit
fluoride	0.4	U	0.4
chloride	1.4	+	0.4
phosphate	1.0	~~U~~ UR	1.0
sulfate	17	+	7.5

+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

BM
9-7-94

9613501.1705

ANION ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0068
Contract Name:	Westinghouse Hanford	Job Number:	583
Client Sample ID:	BOBMZ2	Preparation Date:	06/06/94
Lab Sample ID:	AA9737	Analysis Date:	06/06/94
Sample Matrix:	Water	Concentration Units:	mg/l

Compound	Result	Qualifier	Detection Limit
fluoride	0.4	U	0.4
chloride	0.4	U	0.4
phosphate	1.0	~~U~~ UR	1.0
sulfate	1.5	U	1.5

\+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

9613501.1706

ANION ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0068
Contract Name:	Westinghouse Hanford	Job Number:	583
Client Sample ID:	BOBMP0	Preparation Date:	06/06/94
Lab Sample ID:	AA9704	Analysis Date:	06/06/94
Sample Matrix:	Water	Concentration Units:	mg/l

Compound	Result	Qualifier	Detection Limit
fluoride	0.76	+	0.4
chloride	11	+	2.0
phosphate	1.0	~~U~~ UR	1.0
sulfate	57	+	7.5

+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

BM
9-7-94

9613501.1707

ANION ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0068
Contract Name:	Westinghouse Hanford	Job Number:	583
Client Sample ID:	BOBMX2	Preparation Date:	06/06/94
Lab Sample ID:	AA9720	Analysis Date:	06/06/94
Sample Matrix:	Water	Concentration Units:	mg/l

Compound	Result	Qualifier	Detection Limit
fluoride	0.5	+	0.4
chloride	12	+	2.0
phosphate	1.0	UUR	1.0
sulfate	65	+	7.5

\+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

BM
9-7-94

9613501.1708

ANION ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0068
Contract Name:	Westinghouse Hanford	Job Number:	602
Client Sample ID:	BOBMZ8	Preparation Date:	06/06/94
Lab Sample ID:	AA9925	Analysis Date:	06/06/94
Sample Matrix:	Water	Concentration Units:	mg/l

Compound	Result	Qualifier	Detection Limit
fluoride	0.40	U	0.40
chloride	0.40	U	0.40
phosphate	1.0	~~U~~ UR	1.0
sulfate	1.5	U	1.5

U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

BM 9-7-94

9613501.1709

TOTAL ORGANIC HALOGENS ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0068
Contract Name:	Westinghouse Hanford	Job Number:	579
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	µg/l	Analysis Date:	06/15/94, 06/16/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6330	20	U
BOBMW8	AA9619	20	U
BOBMY0	AA9633	48	+ J

+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

BM 9-7-94

9613501.1710

TOTAL ORGANIC HALOGENS ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0068
Contract Name:	Westinghouse Hanford	Job Number:	583
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	µg/l	Analysis Date:	06/16/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6330	20	U
BOBMP0	AA9713	20	U
BOBMX2	AA9729	20	U
BOBMZ2	AA9747	20	U

U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

BM 9-7-94

9613501.1711

TOTAL ORGANIC HALOGENS ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0068
Contract Name:	Westinghouse Hanford	Job Number:	602
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	µg/l	Analysis Date:	06/22/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6340	20	U
BOBMZ8	AA9942	22	~~+~~ J

+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

9613501.1712

TOTAL ORGANIC CARBON ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0068
Contract Name:	Westinghouse Hanford	Job Number:	602
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	06/14/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6328	1	U
BOBMZ8	AA9931	1	U

BM
9-7-94

U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

9613501.1713

TOTAL ORGANIC CARBON ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0068
Contract Name:	Westinghouse Hanford	Job Number:	583
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	06/14/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6328	1	U
BOBMP0	AA9712	1	U
BOBMX2	AA9728	2	+
BOBMZ2	AA9746	1	U

+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

BM 8-7-94

9613501.1714

TOTAL ORGANIC CARBON ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0068
Contract Name:	Westinghouse Hanford	Job Number:	579
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	06/14/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6328	1	U
BOBMW8	AA9618	5	+
BOBMY0	AA9632	1	U

+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

BM 9-7-94

9613501.1715

TOTAL DISSOLVED SOLIDS ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0068
Contract Name:	Westinghouse Hanford	Job Number:	602
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	05/31/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6274	1	U
BOBMZ8	AA9939	81	+ J

\+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

BM 9-7-94

9613501.1716

TOTAL DISSOLVED SOLIDS ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0068
Contract Name:	Westinghouse Hanford	Job Number:	583
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	05/26/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6271	1	U
BOBMX2	AA9723	517	~~+~~ J
BOBMZ2	AA9740	3	~~+~~ J
BOBMP0	AA9707	292	~~+~~ J

\+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

9613501.1717

TOTAL DISSOLVED SOLIDS ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0068
Contract Name:	Westinghouse Hanford	Job Number:	579
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	05/26/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6270	1	U
BOBMW8	AA9620	811	+ J
BOBMY0	AA9634	136	+ J

\+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

BM 9-7-94

9613501.1718

SULFIDE ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0068
Contract Name:	Westinghouse Hanford	Job Number:	602
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	05/31/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6277	1	U
BOBMZ8	AA9927	4	+

\+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

BM 9-7-96

SULFIDE ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0068
Contract Name:	Westinghouse Hanford	Job Number:	583
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	05/26/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6265	1	U
BOBMP0	AA9708	40	~~+~~ J
BOBMX2	AA9724	19	+
BOBMZ2	AA9741	3	+

+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

BM 9-7-94

9613501.1720

SULFIDE ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0068
Contract Name:	Westinghouse Hanford	Job Number:	579
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	05/25/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6263	1	U
BOBMW8	AA9614	8	+
BOBMY0	AA9628	5	+

+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

BM 9-7-94

9613501.1721

SPECIFIC CONDUCTIVITY ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0068
Contract Name:	Westinghouse Hanford	Job Number:	602
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	umhos/cm	Analysis Date:	06/10/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6308	1	U
BOBMZ8	AA9925	3	+

+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

BM
9-7-94

9613501.1722

SPECIFIC CONDUCTIVITY ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0068
Contract Name:	Westinghouse Hanford	Job Number:	583
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	umhos/cm	Analysis Date:	06/10/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6308	1	U
BOBMP0	AA9704	488	+
BOBMX2	AA9720	702	+
BOBMZ2	AA9737	4	+

BM 9-7-94

+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

9613501.1723

SPECIFIC CONDUCTIVITY ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0068
Contract Name:	Westinghouse Hanford	Job Number:	579
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	umhos/cm	Analysis Date:	06/10/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6308	1	U
BOBMW8	AA9611	1200	+
BOBMY0	AA9625	202	+

+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

BM 9-7-94

9613501.1724

pH ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0068
Contract Name:	Westinghouse Hanford	Job Number:	602
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	standard units	Analysis Date:	05/31/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	*	-	-
BOBMZ8	AA9925	4.65	J

BM
9-7-94

* - A method blank is not applicable for this analysis.

pH ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0068
Contract Name:	Westinghouse Hanford	Job Number:	579
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	standard units	Analysis Date:	05/25/94, 07/06/94

Client Sample ID	Lab Sample ID	Result		Qualifiers
Method Blank	*	-		-
BOBMW8	AA9611	7.18	J	-
BOBMY0	AA9625	7.44	J	-

* - A method blank is not applicable for this analysis.

9613501.1726

pH ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0068
Contract Name:	Westinghouse Hanford	Job Number:	583
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	standard units	Analysis Date:	05/26/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	*	-	-
BOBMP0	AA9704	7.65	/ J
BOBMZ2	AA9737	4.88	/ J
BOBMX2	AA9720	7.82	/ J

~~BOBMY0~~ BM 9-30-94 ~~9.44~~ ~~R~~

* - A method blank is not applicable for this analysis.

BM 9-1-94

9613501.1727

NITRATE/NITRITE ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0068
Contract Name:	Westinghouse Hanford	Job Number:	602
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	06/03/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6280	0.02	U
BOBMZ8	AA9926	0.02	U

BM
9-7-94

Note: CCB subtracted from sample result.

U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

9613501.1728

NITRATE/NITRITE ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0068
Contract Name:	Westinghouse Hanford	Job Number:	583
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	06/03/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6280	0.02	U
BOBMP0	AA9705	4.14	+
BOBMX2	AA9721	21.2	+
BOBMZ2	AA9738	0.06	+

BM 9-7-94

+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

9613501.1729

NITRATE/NITRITE ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0068
Contract Name:	Westinghouse Hanford	Job Number:	579
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	06/03/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6280	0.02	U
BOBMW8	AA9612	0.88	+
BOBMY0	AA9626	0.63	+

BM 9-7-94

+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

CHEMICAL OXYGEN DEMAND ANALYSIS

Laboratory Name:	ITAS-St. Louis	SDG Number:	W0068
Contract Name:	Westinghouse Hanford	Job Number:	579, 583 & 602
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	06/15/94 & 06/16/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
BOBMY0	5329-011	5	U
BOBMW8	5329-010	15	+
BOBMZ2	5329-017	5	U
BOBMP0	5329-018	5	U
BOBMX2	5329-019	5	U
BOBMZ8	5329-020	10	+

BM 9-7-94 use ITAS-KMO

Sample BOBMY0 was analyzed on June 15, 1994.

Samples BOBMW8, BOBMZ2, BOBMP0, BOBMX2 and BOBMZ8 were analyzed on June 16, 1994.

+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

BM 9-7-94

CHEMICAL OXYGEN DEMAND ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0068
Contract Name:	Westinghouse Hanford	Job Number:	583
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	06/03/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	*	-	-
BOBMX2	AA9725	5	+
BOBMP0	AA9709	5	+
BOBMZ2	AA9742	1	U

+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.
* - A method blank is not applicable for this analysis.

BM 9-7-94

9613501.1732

CHEMICAL OXYGEN DEMAND ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0068
Contract Name:	Westinghouse Hanford	Job Number:	579
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	06/06/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	*	-	-
BOBMY0	AA9629	1	U
BOBMW8	AA9615	14	+

BM 9-7-94

+ - Positive result.
* - A method blank is not applicable for this analysis.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

9613501.1733

AMMONIA ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0068
Contract Name:	Westinghouse Hanford	Job Number:	602
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	06/17/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6334	0.1	U
BOBMZ8	AA9928	0.1	U

BM 9-7-94

U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

AMMONIA ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0068
Contract Name:	Westinghouse Hanford	Job Number:	583
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	06/14/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6315	0.1	U
BOBMP0	AA9709	0.1	U
BOBMZ2	AA9742	0.1	U
BOBMX2	AA9725	0.1	U

U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

BM 9-7-94

9613501.1735

AMMONIA ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0068
Contract Name:	Westinghouse Hanford	Job Number:	579
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	06/14/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6315	0.1	U
BOBMY0	AA9629	0.1	U
BOBMW8	AA9615	0.1	U

U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

BM 9-7-94

9613501.1736

ALKALINITY ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0068
Contract Name:	Westinghouse Hanford	Job Number:	602
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	06/08/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6294	2	U
BOBMZ8	AA9937	4	+

+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

BM 9-7-94

9613501.1737

ALKALINITY ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0068
Contract Name:	Westinghouse Hanford	Job Number:	583
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	05/27/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6268	2	U
BOBMZ2	AA9739	2	U
BOBMP0	AA9706	150	+
BOBMX2	AA9722	194	+

BM 9-7-94

+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

9613501.1738

ALKALINITY ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0068
Contract Name:	Westinghouse Hanford	Job Number:	579
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	05/27/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6268	2	U
BOBMW8	AA9613	482	+
BOBMY0	AA9627	78	+

+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

BM 9-7-94

9613501.1739

ALKALINITY ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0082
Contract Name:	Westinghouse Hanford	Job Number:	621
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	06/08/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6294	2	U
BOBMQ2	AB0312	196	+

\+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

9613501.1740

ALKALINITY ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0082
Contract Name:	Westinghouse Hanford	Job Number:	633
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	06/17/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6333	2	U
BOBMV6	AB0437	202	+
BOBMP8	AB0449	106	+

\+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

9613501.1741

AMMONIA ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0082
Contract Name:	Westinghouse Hanford	Job Number:	621
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	06/17/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6334	0.1	U
BOBMQ2	AB0315	0.1	U

U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

9613501.1742

AMMONIA ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0082
Contract Name:	Westinghouse Hanford	Job Number:	633
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	06/28/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6350	0.1	U
BOBMV6	AB0440	0.2	+
BOBMP8	AB0452	0.1	+

\+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

9613501.1743

CHEMICAL OXYGEN DEMAND ANALYSIS

Laboratory Name:	ITAS-St. Louis	SDG Number:	W0082
Contract Name:	Westinghouse Hanford	Job Number:	621
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	06/16/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
BOBMQ2	5329-016	10	+

+ - Positive result.

6-8-94

~~000063~~

9613501.1744

CHEMICAL OXYGEN DEMAND ANALYSIS

Laboratory Name:	ITAS-St. Louis	SDG Number:	W0082
Contract Name:	Westinghouse Hanford	Job Number:	633
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	06/16/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
BOBMV6	5329-014	10	+
BOBMP8	5329-015	10	+

+ - Positive result.

9613501.1745

NITRATE/NITRITE ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0082
Contract Name:	Westinghouse Hanford	Job Number:	621
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	06/28/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6352	0.02	U
BOBMQ2	AB0311	18.2	+

+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

9-8-94

~~000085~~

9613501.1746

NITRATE/NITRITE ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0082
Contract Name:	Westinghouse Hanford	Job Number:	633
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	06/28/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6352	0.02	U
BOBMV6	AB0436	13.5	+
BOBMP8	AB0448	2.73	+

\+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

9613501.1747

pH ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0082
Contract Name:	Westinghouse Hanford	Job Number:	621
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	standard units	Analysis Date:	06/08/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	*	-	-
BOBMQ2	AB0310	7.74	- J

* - A method blank is not applicable for this analysis.

9613501.1748

pH ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0082
Contract Name:	Westinghouse Hanford	Job Number:	633
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	standard units	Analysis Date:	06/10/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	*	-	-
BOBMV6	AB0435	7.63	- J
BOBMP8	AB0447	7.22	- J

* - A method blank is not applicable for this analysis.

9613501.1749

SPECIFIC CONDUCTIVITY ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0082
Contract Name:	Westinghouse Hanford	Job Number:	621
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	umhos/cm	Analysis Date:	06/10/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6308	1	U
BOBMQ2	AB0310	818	+

+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

mu
6-8-94

9613501.1750

SPECIFIC CONDUCTIVITY ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0082
Contract Name:	Westinghouse Hanford	Job Number:	633
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	umhos/cm	Analysis Date:	06/10/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6308	1	U
BOBMV6	AB0435	658	+
BOBMP8	AB0447	373	+

\+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

9613501.1751

SULFIDE ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0082
Contract Name:	Westinghouse Hanford	Job Number:	621
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	06/08/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6295	1	U
BOBMQ2	AB0314	4	+
BOC1G5	AB0324	4	+

\+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

9613501.1752

SULFIDE ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0082
Contract Name:	Westinghouse Hanford	Job Number:	633
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	06/13/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6306	0.2	U
BOBMV6	AB0439	0.2	U
BOBMP8	AB0451	1.0	+

+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

9613501.1753

TOTAL DISSOLVED SOLIDS ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0082
Contract Name:	Westinghouse Hanford	Job Number:	621
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	06/08/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6296	1	U
BOBMQ2	AB0313	474	+
BOC1G5	AB0323	258	+

\+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

9-8-94

9613501.1754

TOTAL DISSOLVED SOLIDS ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0082
Contract Name:	Westinghouse Hanford	Job Number:	633
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	06/10/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6312	1	U
BOBMV6	AB0438	466	+
BOBMP8	AB0450	286	+

\+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

9613501.1755

TOTAL ORGANIC CARBON ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0082
Contract Name:	Westinghouse Hanford	Job Number:	621
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	06/14/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6328	1	U
BOBMQ2	AB0318	2.19	+

\+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

9-8-94

9613501.1756

TOTAL ORGANIC CARBON ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0082
Contract Name:	Westinghouse Hanford	Job Number:	633
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	mg/l	Analysis Date:	06/28/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6355	1	U
BOBMV6	AB0443	2	+
BOBMP8	AB0455	1	+

\+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

9613501.1757

TOTAL ORGANIC HALOGENS ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0082
Contract Name:	Westinghouse Hanford	Job Number:	621
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	µg/l	Analysis Date:	06/29/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
Method Blank	P6358	20	U
BOBMQ2	AB0319	20	~~U~~ UJ

U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

MW
9-8-94

~~000877~~

9613501.1758

TOTAL ORGANIC HALOGENS ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0082
Contract Name:	Westinghouse Hanford	Job Number:	633
Sample Matrix:	Water	Extraction Date:	N/A
Concentration Units:	µg/l	Analysis Date:	06/30/94

Client Sample ID	Lab Sample ID	Result	Qualifiers
~~Method Blank~~	P6359	20	U
BOBMV6	AB0444	21	~~+~~ J
BOBMP8	AB0456	20	~~U~~ UJ

\+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

9613501.1759

ANION ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0082
Contract Name:	Westinghouse Hanford	Job Number:	621
Client Sample ID:	BOBMQ2	Preparation Date:	06/27/94
Lab Sample ID:	AB0310	Analysis Date:	06/27/94
Sample Matrix:	Water	Concentration Units:	mg/l

Compound	Result	Qualifier	Detection Limit
fluoride	0.4	U	0.4
chloride	29	+	8.0
phosphate	1.0	~~U~~ UR	1.0
sulfate	96	+	15

+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

9-8-94

9613501.1760

ANION ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0082
Contract Name:	Westinghouse Hanford	Job Number:	633
Client Sample ID:	BOBMV6	Preparation Date:	06/27/94
Lab Sample ID:	AB0435	Analysis Date:	06/27/94
Sample Matrix:	Water	Concentration Units:	mg/l

Compound	Result	Qualifier	Detection Limit
fluoride	0.4	U	0.4
chloride	16.5	+	4.0
phosphate	1.0	~~U~~ UR	1.0
sulfate	81	+	15

mm
6-8-94

+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

9613501.1761

ANION ANALYSIS

Laboratory Name:	ITAS-Knoxville	SDG Number:	W0082
Contract Name:	Westinghouse Hanford	Job Number:	633
Client Sample ID:	BOBMP8	Preparation Date:	06/27/94
Lab Sample ID:	AB0447	Analysis Date:	06/27/94
Sample Matrix:	Water	Concentration Units:	mg/l

Compound	Result	Qualifier	Detection Limit
fluoride	0.4	U	0.4
chloride	4.7	+	0.4
phosphate	1.0	~~U~~ UR	1.0
sulfate	66	+	7.5

MW
9-8-94

+ - Positive result.
U - Compound was analyzed for but not detected. The number is the detection limit for the sample.

9613501.1762

APPENDIX K

RADIOCHEMISTRY VALIDATED DATA SUMMARY TABLES

ADIOCHEMICAL DATA SUMMARY TABLE

'402.56	HEIS #:	B0BMY4			B0BMT0		
	Date:	6-May-94			12-May-94		
	Matrix:	WATER			WATER		
t	CAS #	Units	Results	Q	MDA	esults	Q	MDA
a	Alpha	ug/L	4.7		2	11.3		1.51
a	Beta	ug/L	18		2	11.7		2.84
	10028-17-8	ug/L	1400		300	-0.0102	U	0.211
	14762-75-5	ug/L	49	U	60	0.0444	U	0.418
90	10098-97-2	ug/L	2.4	J	0.4	-0.0148	U	0.354
n-99	14133-76-7	ug/L	1.4	U	4	5.03		0.45
33/234	U-233/234	ug/L	2.2		0.2	0.0573	U	0.45
35	15117-96-1	ug/L	0.092	U	0.2	3.69		0.385
38	U-238	ug/L	1.8		0.1	0.774	U	0.947
238	13981-16-3	ug/L	-0.001	U	0.02	5.11		3.55
239/240	PU-239/240	ug/L	0	U	0.008	1.47	U	2.1
-241	14596-10-2	ug/L	0.009	U	0.02	9460		246
	GAMMA SCAN							
	13966-32-0	ug/L	U	U	10	-0.931	U	8.67
-40	13966-00-2	ug/L	U	U	200	-0.772	U	9.33
e-54	13966-31-9	ug/L	U	U	10	0.266	U	7.84
	14596-12-4	ug/L	U	U	40	-17.2	U	43.6
	13891-38-9	ug/L	U	U	20	-16.7	U	25.1
	10198-40-0	ug/L	U	U	20	5.15	U	15.8
4	14681-63-1	ug/L	U	U	10	6.93	U	25.4
-103	13968-53-1	ug/L	U	U	20			
-106	13967-48-1	ug/L	U	U	100			
	13966-06-8	ug/L	U	U	20			
4	13967-70-9	ug/L	U	U	10			
7	10045-97-3	ug/L	U	U	10			
4	14762-78-8	ug/L	U	U	70			
152	14683-23-9	ug/L	U	U	30			
154	15585-10-1	ug/L	U	U	20			
155	14391-16-3	ug/L	U	U	40			
26	13982-63-3	ug/L	U	U	20			
28	15262-20-1	ug/L	U	U	60			
28	14274-82-9	ug/L	U	U	20			
32	7440-29-1	ug/L	U	U	60			

B0BMP4		
18-May-94		
WATER		
esults	Q	MDA
0.623	U	0.757
31.7		2.69
0.0041	U	0.208
0.0422	U	0.253
0.0422	U	0.362
0.357	U	0.439
0.131	U	0.415
0.423	U	0.481
15.9		0.851
-0.563	U	3.55
2.12		2.1
-40.9	U	246
-1.29	U	7.45
7.23	U	11.3
0.625	U	5.95
1.01	U	48
-0.816	U	28.4
1.3	U	14.4
13.9	U	24.3

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TMA 760

checked by: BM
date: 10-3-94

checked by: BM
date: 10-3-94

RADIOCHEMICAL DATA SUMMARY TABLE

FILE #:VW402.66		HEIS #:	B0BMV2			B0BMR0		
		Date:	10-May-94			11-May-94		
Constituent		Matrix:	WATER			WATER		
	CAS #	Units	Results	Q	MDA	Results	Q	MDA
Gross Alpha	ALPHA	pCi/L	6.46		1.52	0.474	U	0.757
Gross Beta	BETA	pCi/L	8.19		2.88	8.58		2.98
Americium 241	14596-10-2	pCi/L	0.0829	U	0.174	-0.00346	U	0.174
Plutonium 238	13981-16-3	pCi/L	-0.0121	U	0.289	-0.0206	U	0.291
Plutonium 239/240	U-239/240	pCi/L	-0.0482	U	0.414	-0.0103	U	0.246
Uranium 234	13966-29-5	pCi/L	3.28		0.411	0.476	U	0.573
Uranium 235	15117-96-1	pCi/L	0.255	U	0.303	-0.0441	U	0.488
Uranium 238DA	U-238	pCi/L	2.26		0.18	0.296	U	0.393
Strontium 90	10098-97-2	pCi/L	0.286	U	1.09	2.63		0.817
Carbon 14	14762-75-5	pCi/L	1.51	U	3.55	-1.13	U	3.55
Technetium 99	14133-76-7	pCi/L	2.43		2.1	2.63		2.1
Tritium	10028-17-8	pCi/L	380		246	-21.4	U	246
GAMMA SCAN								
Cobalt 58	13981-38-9	pCi/L	-0.249	U	8.17	6.39	U	12
Cobalt 60	10198-40-0	pCi/L	1.94	U	8.32	1.31	U	8.15
Cesium 137DA	10045-97-3	pCi/L	2.18	U	6.41	-2.81	U	8.37
Europium 152	14683-23-9	pCi/L	25.1	U	46.4	6.56	U	42.7
Europium 154	15585-10-1	pCi/L	7.47	U	28.1	18	U	29.6
Europium 155	14391-16-3	pCi/L	5.78	U	13.8	2.91	U	13.5
Iron 59	14596-12-4	pCi/L	-2.11	U	22.7	9.22	U	28.8

FILE #:VW402.66		HEIS #:	BOBMR8		
		Date:	11-May-94		
Constituent		Matrix:	WATER		
	CAS #	Units	Results	Q	MDA
Gross Alpha	ALPHA	pCi/L	0.379	U	0.941
Gross Beta	BETA	pCi/L	7.8		2.87
Americium 241	14596-10-2	pCi/L	0.0485	U	0.212
Plutonium 238	13981-16-3	pCi/L	0	U	0.175
Plutonium 239/240	U-239/240	pCi/L	-0.0259	U	0.365
Uranium 234	13966-29-5	pCi/L	0.375	U	0.397
Uranium 235	15117-96-1	pCi/L	0.11	U	0.273
Uranium 238DA	U-238	pCi/L	0.334	U	0.337
Strontium 90	10098-97-2	pCi/L	3.76		0.835
Carbon 14	14762-75-5	pCi/L	-0.586	U	3.55
Technetium 99	14133-76-7	pCi/L	3.34		2.1
Tritium	10028-17-8	pCi/L	-110	U	246
GAMMA SCAN					
Cobalt 58	13981-38-9	pCi/L	3.11	U	10.3
Cobalt 60	10198-40-0	pCi/L	1.31	U	8.51
Cesium 137DA	10045-97-3	pCi/L	-6.75	U	7.96
Europium 152	14683-23-9	pCi/L	0.505	U	32.6
Europium 154	15585-10-1	pCi/L	-2.45	U	15.2
Europium 155	14391-16-3	pCi/L	1.69	U	15.3
Iron 59	14596-12-4	pCi/L	10.8	U	30.5

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date: 10-2-94

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checked by: BM
date: 10-3-94

RADIOCHEMISTRY DATA SUMMARY TABLE

FILE #:VW402.67		HEIS #:	B0BMQ6			B0BMX6		
		Date:	6-May-94			6-May-94		
		Matrix:	WATER			WATER		
Constituent	CAS #	Units	Results	Q	MDA	Results	Q	MDA
Alpha	ALPHA	pCi/L	3.69		0.999	4.36		0.95
Beta	BETA	pCi/L	16.7		3.02	17.6		3.24
Americium-241	14596-10-2	pCi/L	-0.0132	U	0.221	-0.00378	U	0.19
Plutonium-238	13981-16-3	pCi/L	0	U	0.145	-0.0107	U	0.256
Plutonium-239/240	U-239/240	pCi/L	-0.0214	U	0.302	0.0107	U	0.367
Uranium 233/234	U-233/234	pCi/L	2.97		0.313	2.4		0.253
Uranium 235	15117-96-1	pCi/L	0.126	UJ	0.202	0.0304	UJ	0.239
Uranium 238	U-238	pCi/L	1.98		0.236	1.63		0.277
Total Strontium	7440-24-6	pCi/L	7.18		0.788	6.73		0.889
Carbon-14	14762-75-5	pCi/L	3.74		3.51	8.94		3.51
Technetium-99	14133-76-7	pCi/L	0.246	U	2.16	-0.388	U	2.16
Tritium-99	10028-17-8	pCi/L	1330		239	1330		239
Cobalt-58	13981-38-9	pCi/L	0.233	U	8.44	-3.23	U	10.2
Cobalt-60	10198-40-0	pCi/L	-2.74	U	5.54	4.77	U	9.46
Cerium-144	14762-78-8	pCi/L	9.83	U	33.9	20.5	U	32.3
Cesium-137DA	10045-97-3	pCi/L	2.23	U	7.67	-1.89	U	6.89
Europium-152	14683-23-9	pCi/L	-11.2	U	31.4	-13	U	54.4
Europium-154	15585-10-1	pCi/L	9.73	U	20.9	9.65	U	22.7
Europium-155	14391-16-3	pCi/L	-10.7	U	14.05	7.32	U	16.29
Iron-59	14596-12-4	pCi/L	-1.95	U	22.6	8.99	U	21.1
Ruthenium-106DA	13967-48-1	pCi/L	44	U	69.2	-16	U	68.2

FILE #:VW402.67		HEIS #:	B0BMS2			B0BMS6		
		Date:	10-May-94			10-May-94		
		Matrix:	WATER			WATER		
Constituent	CAS #	Units	Results	Q	MDA	Results	Q	MDA
Americium-241	14596-10-2	pCi/L	-0.00413	U	0.208	0.034	U	0.223
Plutonium-239/240	U-239/240	pCi/L	-0.025	U	0.353	0	U	0.125
Plutonium-238	13981-16-3	pCi/L	0	U	0.169	-0.00927	U	0.222
Uranium 233/234	U-233/234	pCi/L	2.61		0.278	4.24		0.295
Uranium 235	15117-96-1	pCi/L	0.274	J	0.214	0.36	J	0.328
Uranium 238	U-238	pCi/L	1.82		0.234	2.41		0.312
Cobalt-60	10198-40-0	pCi/L	-1.11	U	6.6	-2.82	U	7.07
Iron-59	14596-12-4	pCi/L	6.45	U	23.8	-12.1	U	22.5
Europium-152	14683-23-9	pCi/L	-9.74	U	41.8	-8.58	U	33.8
Cobalt-58	13981-38-9	pCi/L	-0.787	U	8.06	2.89	U	9.58
Cesium-137DA	10045-97-3	pCi/L	-3.04	U	6.21	4.36	U	7.43
Ruthenium-106DA	13967-48-1	pCi/L	13.4	U	58	34.4	U	71.1
Cerium-144	14762-78-8	pCi/L	11	U	28.2	-15.1	U	30.1
Europium-154	15585-10-1	pCi/L	8.21	U	24.7	-0.463	U	22
Europium-155	14391-16-3	pCi/L	2.413	U	12.74	-3.16	U	12.9
Alpha	ALPHA	pCi/L	1.35		1.16	8.9		1.33
Beta	BETA	pCi/L	7.16		3.1	30.4		3.21
Total Strontium	7440-24-6	pCi/L	0.0204	U	0.846	9.7		0.738
Carbon-14	14762-75-5	pCi/L	4.12		3.51	7.03		3.51
Technetium-99	14133-76-7	pCi/L	-1.15	U	2.16	-0.748	U	2.16
Tritium-99	10028-17-8	pCi/L	2620		239	14200		239

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entered by: CMD
date: 10-2-94

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checked by: BM
date: 10-3-9

RADIOCHEMISTRY DATA SUMMARY TABLE

FILE #:VW402.67		HEIS #:	B0BMT4			B0BMW4		
		Date:	9-May-94			9-May-94		
		Matrix:	WATER			WATER		
Constituent	CAS #	Units	Results	Q	MDA	Results	Q	MDA
Americium-241	14596-10-2	pCi/L	-0.0141	U	0.337	0.121	U	0.428
Plutonium-239/240	U-239/240	pCi/L	0	U	0.157	-0.00975	U	0.233
Plutonium-238	13981-16-3	pCi/L	-0.0116	U	0.278	0	U	0.132
Uranium 233/234	U-233/234	pCi/L	4.3		0.239	9.73		0.55
Uranium 235	15117-96-1	pCi/L	0.22	UJ	0.271	0.601	J	0.443
Uranium 238	U-238	pCi/L	3.48		0.239	11		0.406
Cobalt-60	10198-40-0	pCi/L	6.06	U	11.8	-2.83	U	7.34
Iron-59	14596-12-4	pCi/L	-23.4	U	20.7	5.34	U	22.6
Europium-152	14683-23-9	pCi/L	0.999	U	46.4	4.72	U	36.3
Cobalt-58	13981-38-9	pCi/L	-1.39	U	8.92	5.4	U	10.3
Cesium-137DA	10045-97-3	pCi/L	-2.59	U	7.24	-1.06	U	7.49
Ruthenium-106DA	13967-48-1	pCi/L	41.2	U	78.6	27.9	U	73.9
Cerium-144	14762-78-8	pCi/L	7.35	U	27.9	0.873	U	29.9
Europium-154	15585-10-1	pCi/L	6.43	U	19.3	9.49	U	24.2
Europium-155	14391-16-3	pCi/L	1.919	U	17.18	-0.441	U	14.43
Alpha	ALPHA	pCi/L	10.1		2.06	17		1.82
Beta	BETA	pCi/L	8.5		3.27	15.8		3.18
Total Strontium	7440-24-6	pCi/L	2.34		0.874	-0.0668	U	0.877
Carbon-14	14762-75-5	pCi/L	10.4		3.51	3.94		3.51
Technetium-99	14133-76-7	pCi/L	-0.587	U	2.16	-0.142	U	2.16
Tritium-99	10028-17-8	pCi/L	10100		239	2520		239

FILE #:VW402.67		HEIS #:	B0BMR4		
		Date:	11-May-94		
		Matrix:	WATER		
Constituent	CAS #	Units	Results	Q	MDA
Americium-241	14596-10-2	pCi/L	-0.0146	U	0.348
Plutonium-239/240	U-239/240	pCi/L	-0.0474	U	0.407
Plutonium-238	13981-16-3	pCi/L	-0.0119	U	0.284
Uranium 233/234	U-233/234	pCi/L	0.444	U	0.47
Uranium 235	15117-96-1	pCi/L	0.0481	UJ	0.377
Uranium 238	U-238	pCi/L	0.449	U	0.454
Cobalt-60	10198-40-0	pCi/L	-0.921	U	7.61
Iron-59	14596-12-4	pCi/L	-1.28	U	18.1
Europium-152	14683-23-9	pCi/L	22.7	U	52
Cobalt-58	13981-38-9	pCi/L	1.57	U	9.8
Cesium-137DA	10045-97-3	pCi/L	2.53	U	6.71
Ruthenium-106DA	13967-48-1	pCi/L	-35.2	U	47.7
Cerium-144	14762-78-8	pCi/L	-7.44	U	25.8
Europium-154	15585-10-1	pCi/L	8.95	U	21
Europium-155	14391-16-3	pCi/L	3.217	U	11.23
Alpha	ALPHA	pCi/L	0.573	U	0.733
Beta	BETA	pCi/L	8.23		2.87
Total Strontium	7440-24-6	pCi/L	2.34		0.795
Carbon-14	14762-75-5	pCi/L	0.833	U	3.51
Technetium-99	14133-76-7	pCi/L	-0.388	U	2.16
Tritium-99	10028-17-8	pCi/L	-32.6	U	239

entered by: CMP
date: 10-2-94

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checked by: BM
date: 10-3-9

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RADIOCHEMISTRY DATA SUMMARY TABLE

FILE #:VW402.71		HEIS #:	B0BMY8		
		Date:	18-May-94		
Constituent		Matrix:	WATER		
	CAS #	Units	Results	Q	MDA
Gross Alpha	ALPHA	pCi/L	1.1	J	1
Gross Beta	BETA	pCi/L	36		2
Tritium	10028-17-8	pCi/L	79	U	300
Carbon 14	14762-75-5	pCi/L	18	U	50
Strontium 90	10098-97-2	pCi/L	19		0.6
Technetium 99	14133-76-7	pCi/L	1.7	U	1
Uranium 233/234	U-233/234	pCi/L	0.58		0.05
Uranium 235	15117-96-1	pCi/L	-0.008	U	0.05
Uranium 238	U-238	pCi/L	0.35		0.03
Plutonium 238	13981-16-3	pCi/L	0.043	J	0.04
Plutonium 239/240	U-239/240	pCi/L	0.003	U	0.03
Americium 241	14596-10-2	pCi/L	0.023	U	0.03
GAMMA SCAN					
Sodium 22	13966-32-0	pCi/L		U	20
Potassium 40	13966-00-2	pCi/L		U	200
Manganese 54	13966-31-9	pCi/L		U	10
Iron 59	14596-12-4	pCi/L		U	40
Cobalt 58	13981-38-9	pCi/L		U	20
Cobalt 60	10198-40-0	pCi/L		U	20
Niobium 94	14681-63-1	pCi/L		U	10
Ruthenium 103	13968-53-1	pCi/L		U	20
Ruthenium 106	13967-48-1	pCi/L		U	100
Tin 113	13966-06-8	pCi/L		U	20
Cesium 134	13967-70-9	pCi/L		U	20
Cesium 137	10045-97-3	pCi/L		U	10
Cerium 144	14762-78-8	pCi/L		U	70
Europium 152	14683-23-9	pCi/L		U	30
Europium 154	15585-10-1	pCi/L		U	20
Europium 155	14391-16-3	pCi/L		U	40
Radium 226	13982-63-3	pCi/L		U	30
Radium 228	15262-20-1	pCi/L		U	60
Thorium 228	14274-82-9	pCi/L		U	20
Thorium 232	7440-29-1	pCi/L		U	60

shaded areas show changes by validator

entered by: date: 40271TBL.XLS checked by: BM date: 10.3.94

9413501.1769

RADIOCHEMISTRY ANALYSIS RESULTS TABLE

FILE #:VW402.72		HEIS #:	B0BMW8			B0BMY0			B0BMZ2		
		Date:	20-May-94			20-May-94			24-May-94		
Constituent		Matrix:	WATER			WATER			WATER		
	CAS #	Units	Results	Q	MDA	Results	Q	MDA	Results	Q	MDA
Gross Alpha	ALPHA	pCi/L	13.6		3.30	1.37		0.788	-0.101	U	0.661
Gross Beta	BETA	pCi/L	79.7		3.16	36.2		3.13	0.504	U	2.76
Tritium	10028-17-	pCi/L	98300		238	83.8	U	238	55.8	U	238
Carbon-14	14762-75-	pCi/L	252		4.72	0.113	U	4.72	0.0901	U	4.72
Strontium-90	0098-97-2	pCi/L	-0.137	U	1.01	17.4		0.757	0.176	U	0.790
Uranium 234	U-233/234	pCi/L	0.282	UJ	0.355	7.66	R	0.288	0.139	UJ	0.276
Uranium 235	5117-96-1	pCi/L	0.0448	UJ	0.244	0.130	UR	0.260	310	UJ	0.292
Uranium 238	U-238	pCi/L	0.312	J	0.244	5.91	R	0.301	-0.00827	UJ	0.236
Plutonium-238	3981-16-3	pCi/L	0.00	U	0.145	0.00	U	0.180	0.00	U	0.196
Plutonium-239/240	U-239/240	pCi/L	0.00	U	0.145	0.252	U	0.318	-145	U	0.346
Americium-241	4596-10-2	pCi/L	-0.0143	U	0.298	0.0431	U	0.338	0.112	U	0.234
Technetium-99	4133-76-7	pCi/L	3.97	U	2.16	-0.426	U	2.16	-1.16	U	2.16
GAMMA SCAN											
Iron-59	4596-12-4	pCi/L	-11.8	U	26.2	9.62	U	25.1	9.66	U	24.5
Cobalt-58	3981-38-9	pCi/L	0.185	U	10.5	4.98	U	11.0	-3.57	U	8.04
Cobalt-60	0198-40-0	pCi/L	-6.57	U	6.43	-0.924	U	7.45	0.343	U	8.58
Cesium-137	0045-97-3	pCi/L	4.11	U	9.69	0.804	U	6.93	0.798	U	5.96
Europium-152	4683-23-9	pCi/L	-3.08	U	18.5	-0.608	U	16.9	7.79	U	19.5
Europium-154	5585-10-1	pCi/L	8.05	U	30.3	-5.98	U	25.9	9.50	U	25.2
Europium-155	4391-16-3	pCi/L	-1.92	U	14.7	-3.43	U	13.2	5.31	U	14.9
REANALYSIS RESULTS											
Uranium 234	U-233/234	pCi/L				0.496	J	0.292			
Uranium 235	5117-96-1	pCi/L				0.0910	UJ	0.258			
Uranium 238	U-238	pCi/L				0.480	J	0.344			

FILE #:VW402.72		HEIS #:	B0BMX2			B0BMP0			B0BMZ8		
		Date:	20-May-94			20-May-94			20-May-94		
Constituent		Matrix:	WATER			WATER			WATER		
	CAS #	Units	Results	Q	MDA	Results	Q	MDA	Results	Q	MDA
Gross Alpha	ALPHA	pCi/L	8.87		1.61	2.62		1.29	396	U	0.659
Gross Beta	BETA	pCi/L	10.3		3.07	8.55		3.02	7.55	U	2.70
Tritium	10028-17-	pCi/L	15000		238	182	U	238	70.7	U	238
Carbon-14	14762-75-	pCi/L	4.55	U	4.72	1.49	U	4.72	1.42	U	4.72
Strontium-90	0098-97-2	pCi/L	-0.123	U	1.02	0.248	U	0.790	0.377	U	0.774
Uranium 234	U-233/234	pCi/L	5.80	J	0.193	2.73	J	0.364	-0.0331	UJ	0.333
Uranium 235	5117-96-1	pCi/L	0.136	UJ	0.219	0.113	UJ	0.281	-0.00828	UJ	0.236
Uranium 238	U-238	pCi/L	3.63	J	0.239	1.63	J	0.347	0.199	UJ	0.236
Plutonium-238	3981-16-3	pCi/L	-259	U	0.366	0.00	U	0.159	0.00	U	0.192
Plutonium-239/240	U-239/240	pCi/L	0.116	U	0.309	0.0469	U	0.280	0.00	U	0.192
Americium-241	4596-10-2	pCi/L	0.0673	U	0.294	-0.0191	U	0.318	0.0516	U	0.226
Technetium-99	4133-76-7	pCi/L	-0.493	U	2.16	-0.0834	U	2.16	-0.909	U	2.16
GAMMA SCAN											
Iron-59	4596-12-4	pCi/L	-4.12	U	16.5	-1.88	U	27.7	-10.8	U	23.6
Cobalt-58	3981-38-9	pCi/L	1.15	U	9.92	4.41	U	10.2	5.60	U	11.4
Cobalt-60	0198-40-0	pCi/L	2.86	U	8.78	94.5	U	7.27	-5.96	U	7.15
Cesium-137	0045-97-3	pCi/L	1.84	U	7.35	0.585	U	8.02	-2.46	U	8.71
Europium-152	4683-23-9	pCi/L	-2.13	U	16.7	-3.30	U	17.5	-3.54	U	17.0
Europium-154	5585-10-1	pCi/L	-3.73	U	23.6	6.26	U	29.9	-1.61	U	21.5
Europium-155	4391-16-3	pCi/L	-5.03	U	12.2	0.369	U	15.7	1.37	U	16.2

shaded areas show changes by validator

entered by: CMO date: 10-4-94 40272TB4.XLS checked by: BM date: 10.3.94

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RADIOCHEMISTRY ANALYSIS RESULTS TABLE

FILE #:VW402.76		HEIS #:	B0BMQ2			B0BMV6			B0BMP8		
		Date:	1-Jun-94			6-Jun-94			3-Jun-94		
Constituent		Matrix:	WATER			WATER			WATER		
	CAS #	Units	Results	Q	MDA	Results	Q	MDA	Results	Q	MDA
Gross Alpha	ALPHA	pCi/L	8.07		2.12	4.47		1.54	0.920	U	1.16
Gross Beta	BETA	pCi/L	9.01		2.98	1.08	U	2.99	22.5		2.78
Americium 241	4596-10-2	pCi/L	0.0437	U	0.238	0.113	U	0.321	0.100	U	0.136
Plutonium 238	3981-16-3	pCi/L	-0.0226	U	0.320	0.0733	U	0.199	-0.0298	U	0.421
Plutonium 239/40	U-239/240	pCi/L	0.102	U	0.270	-0.1470	U	0.351	-0.0149	U	0.356
Uranium 234	U-233/234	pCi/L	3.82		0.294	-2.92	UR	48.7	0.769	UR	6.03
Uranium 235	5117-96-1	pCi/L	0.104	UJ	0.294	-0.730	UR	36.7	-0.0904	UR	4.55
Uranium 238 DA	U-238	pCi/L	3.14		0.393	-4.38	UR	54.1	-0.542	UR	6.70
Strontium 90	0098-97-2	pCi/L	0.0403	U	0.800	0.640	U	0.777	184		0.905
Carbon 14	4762-75-5	pCi/L	8.45		3.54	0.451	U	3.54	1.89	U	3.54
Technetium 99	4133-76-7	pCi/L	0.531	U	2.11	2.21		2.11	2.96		2.09
Tritium	0028-17-8	pCi/L	10500		253	602		253	726		253
REANALYSIS DATA											
Uranium 234	U-233/234	pCi/L				3.21	J	0.236	48.5	J	0.308
Uranium 235	5117-96-1	pCi/L				0.07366	U	0.209	0.164	U	0.217
Uranium 238	U-238	pCi/L				2.73		0.278	60.3		0.199
GAMMA SCAN											
Cobalt 58	3981-38-9	pCi/L	3.64	U	12.3	-2.23	U	10.7	-2.52	U	8.31
Cobalt 60	0198-40-0	pCi/L	-3.53	U	9.94	4.84	U	9.60	-1.85	U	10.2
Cesium 137	0045-97-3	pCi/L	1.07	U	6.77	-3.44	U	6.56	1.09	U	7.92
Europium 152	4683-23-9	pCi/L	13.0	U	20.8	-13.6	U	14.9	-0.103	U	15.9
Europium 154	5585-10-1	pCi/L	2.09	U	27.0	5.18	U	24.6	-6.73	U	22.5
Europium 155	4391-16-3	pCi/L	1.70	U	16.7	-4.46	U	14.4	-2.96	U	11.6
Iron 59	4596-12-4	pCi/L	5.16	U	27.5	-5.92	U	23.3	-6.40	U	27.6

shaded areas show changes by validator

entered by: date: 40276TBL.XLS checked by: BM date: 10-3-9

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APPENDIX L

RADIOCHEMISTRY VALIDATED LABORATORY REPORT FORMS

9613501.1774

MA NORCAL

SAMPLE DELIVERY GROUP 7377

N405050-01

BOBMY4

DATA SHEET

SDG 7377 Client Westinghouse Hanford
Contact N. Joseph Verville Contract MBH-SVV-069262

Lab sample id N405050-01 Client sample id BOBMY4
Dept sample id 7377-001 Location/Matrix 199-F5-6 LIQUID
Received 05/11/94 Collected 05/06/94
Chain of custody id EFL-1055

ANALYTE	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	Alpha	4.7	2.1	2	3		80A
Gross Beta	Beta	18	2.0	2	4		80B
Tritium	10028-17-8	1400	220	300	400		H
Carbon 14	14762-75-5	49	36	60	100	U	C
Strontium 90	10098-97-2	2.4	22	0.4	2		Y
Technetium 99	14133-76-7	1.4	1.5	4	5	U	TC
Uranium 233/234		2.2	0.50	0.2	0.2		U
Uranium 235	15117-96-1	0.092	0.093	0.2	0.2	U	U
Uranium 238		1.8	0.45	0.1	0.2		U
Plutonium 238	13981-16-3	-0.001	0.008	0.02	0.05	U	PU
Plutonium 239/240		0	0.002	0.008	0.05	U	PU
Americium 241	14596-10-2	0.009	0.013	0.02	0.05	U	AM
GAMMA SCAN ANALYTES							
Sodium 22	13966-32-0	U		10		U	GAM
Potassium 40	13966-00-2	U		200		U	GAM
Manganese 54	13966-31-9	U		10		U	GAM
Iron 59	14596-12-4	U		40	30	U	GAM
Cobalt 58	13981-38-9	U		20	20	U	GAM
Cobalt 60	10198-40-0	U		20	20	U	GAM
Niobium 94	14681-63-1	U		10		U	GAM
Ruthenium 103	13968-53-1	U		20		U	GAM
Ruthenium 106	13967-48-1	U		100		U	GAM
Tin 113	13966-06-8	U		20		U	GAM
Cesium 134	13967-70-9	U		10		U	GAM
Cesium 137	10045-97-3	U		10	20	U	GAM
Cerium 144	14762-78-8	U		70		U	GAM
Europium 152	14683-23-9	U		30	40	U	GAM
Europium 154	15585-10-1	U		20	40	U	GAM

10/4/94

Lab id TMAN
Protocol WHC-HASM
Version Ver 1.0
Form DVD-DS
Version 2.30
Report date 06/24/94

9613501.1772 NORCAL

SAMPLE DELIVERY GROUP 7377

N405050-01

DATA SHEET, cont

B0BMY4

SDG	7377	Client	Westinghouse Hanford
Contact	N. Joseph Verville	Contract	MBH-SVV-069262
Lab sample id	N405050-01	Client sample id	B0BMY4
Dept sample id	7377-001	Location/Matrix	199-F5-6 LIQUID
Received	05/11/94	Collected	05/06/94
		Chain of custody id	EFL-1055

ANALYTE	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Europium 155	14391-16-3	U		40	40	U	GAM
Radium 226	13982-63-3	U		20		U	GAM
Radium 228	15262-20-1	U		60		U	GAM
Thorium 228	14274-82-9	U		20		U	GAM
Thorium 232	7440-29-1	U		60		U	GAM

G 7441

AJ
5/11/94

Lab id	TMAN
Protocol	WHC-HASM
Version	Ver 1.0
Form	DVD-DS
Version	2.30
Report date	06/24/96

9613501.1773

IT ANALYTICAL SERVICES
RICHLAND, WA
(509) 375-3131

SAMPLE RESULTS

LAB NAME:	ITAS-RICHLAND	SDG:	W0062
LAB SAMPLE ID:	40529201	MATRIX:	WATER
WHC ID:	B0BMT8	DATE RECEIVED:	5/13/94

ISOTOPE	RESULT	COUNTING ERROR (2s)	TOTAL ERROR (2s)	MDA	REPORT UNIT	YIELD	METHOD NUMBER
AM-241	U -3.56E-03	7.12E-03	7.14E-03	1.79E-01	pCi/L	81.60%	RD3302
PU-238	U -1.33E-02	2.65E-02	2.66E-02	3.17E-01	pCi/L	63.00%	RD3209
PU239/40	U 0.00E+00	0.00E+00	1.99E-01	1.79E-01	pCi/L	63.00%	RD3209
U-234	1.10E+00	6.77E-01	6.99E-01	5.08E-01	pCi/L	40.90%	RD3234
U-235	U 1.88E-01	2.89E-01	2.91E-01	4.66E-01	pCi/L	40.90%	RD3234
U-238DA	1.20E+00	7.07E-01	7.32E-01	5.08E-01	pCi/L	40.90%	RD3234
CO-58	U 3.53E+00	5.49E+00	5.50E+00	1.13E+01	pCi/L	N/A	RD3219
CO-60	U 1.91E+00	3.97E+00	3.98E+00	8.51E+00	pCi/L	N/A	RD3219
CS-137DA	U 1.19E+00	2.23E+00	2.23E+00	5.29E+00	pCi/L	N/A	RD3219
EU-152	U -1.41E+01	1.98E+01	1.98E+01	3.07E+01	pCi/L	N/A	RD3219
EU-154	U 5.72E+00	1.06E+01	1.06E+01	2.45E+01	pCi/L	N/A	RD3219
EU-155	U 6.13E-01	9.04E+00	9.04E+00	1.54E+01	pCi/L	N/A	RD3219
FE-59	U 8.35E+00	1.07E+01	1.08E+01	2.44E+01	pCi/L	N/A	RD3219
ALPHA	U 8.43E-01	6.09E-01	6.22E-01	9.21E-01	pCi/L	100.00%	RD3222
BETA	4.04E+00	1.60E+00	1.62E+00	2.86E+00	pCi/L	100.00%	RD3222
TOTAL STRONTIUM	U 7.68E-02	3.03E-01	3.04E-01	7.70E-01	pCi/L	100.00%	RD3204
C-14	U 1.19E+00	1.53E+00	3.19E+00	3.55E+00	pCi/L	100.00%	RD3263
TC-99	5.87E+00	1.06E+00	4.42E+00	2.10E+00	pCi/L	95.10%	ITAS-IT-RS-0001
TRITIUM	U -2.52E+01	1.04E+02	2.01E+02	2.46E+02	pCi/L	97.30%	RD3205

Number of Results: 19

MW 6-25-94

9613501.1774

IT ANALYTICAL SERVICES
RICHLAND, WA
(509) 375-3131

SAMPLE RESULTS

LAB NAME:	ITAS-RICHLAND	SDG:	W0062
LAB SAMPLE ID:	40529202	MATRIX:	WATER
WHC ID:	B0BMT0	DATE RECEIVED:	5/13/94

ISOTOPE	RESULT	COUNTING ERROR (2s)	TOTAL ERROR (2s)	MDA	REPORT UNIT	YIELD	METHOD NUMBER
AM-241	U -1.02E-02	1.17E-02	1.18E-02	2.11E-01	pCi/L	85.90%	RD3302
PU-238	U 4.44E-02	1.54E-01	1.54E-01	4.18E-01	pCi/L	56.40%	RD3209
PU239/40	U -1.48E-02	2.96E-02	2.97E-02	3.54E-01	pCi/L	56.40%	RD3209
U-234	5.03E+00	1.31E+00	1.51E+00	4.50E-01	pCi/L	49.40%	RD3234
U-235	U 5.73E-02	1.71E-01	1.71E-01	4.50E-01	pCi/L	49.40%	RD3234
U-238DA	3.69E+00	1.12E+00	1.25E+00	3.85E-01	pCi/L	49.40%	RD3234
CO-58	U -9.31E-01	4.75E+00	4.75E+00	8.67E+00	pCi/L	N/A	RD3219
CO-60	U -7.72E-01	4.99E+00	4.99E+00	9.33E+00	pCi/L	N/A	RD3219
CS-137DA	U 2.66E-01	4.29E+00	4.29E+00	7.84E+00	pCi/L	N/A	RD3219
EU-152	U -1.72E+01	2.66E+01	2.67E+01	4.36E+01	pCi/L	N/A	RD3219
EU-154	U -1.67E+01	1.71E+01	1.72E+01	2.51E+01	pCi/L	N/A	RD3219
EU-155	U 5.15E+00	8.49E+00	8.50E+00	1.58E+01	pCi/L	N/A	RD3219
FE-59	U 6.93E+00	1.18E+01	1.18E+01	2.54E+01	pCi/L	N/A	RD3219
ALPHA	1.13E+01	2.71E+00	2.89E+00	1.51E+00	pCi/L	100.00%	RD3222
BETA	1.17E+01	2.11E+00	2.26E+00	2.84E+00	pCi/L	100.00%	RD3222
TOTAL STRONTIUM	U 7.74E-01	4.52E-01	4.89E-01	9.47E-01	pCi/L	75.40%	RD3204
C-14	5.11E+00	1.60E+00	3.30E+00	3.55E+00	pCi/L	100.00%	RD3263
TC-99	U 1.47E+00	9.26E-01	4.06E+00	2.10E+00	pCi/L	95.10%	ITAS-IT-RS-0001
TRITIUM	9.46E+03	2.89E+02	8.43E+02	2.46E+02	pCi/L	97.30%	RD3205

Number of Results: 19

8-25-94

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IT ANALYTICAL SERVICES
RICHLAND, WA
(509) 375-3131

SAMPLE RESULTS

LAB NAME:	ITAS-RICHLAND	SDG:	W0062
LAB SAMPLE ID:	40544601	MATRIX:	WATER
WHC ID:	B0BMW0	DATE RECEIVED:	5/20/94

ISOTOPE	RESULT	COUNTING ERROR (2s)	TOTAL ERROR (2s)	MDA	REPORT UNIT	YIELD	METHOD NUMBER
AM-241 U	-1.44E-02	1.44E-02	1.46E-02	2.40E-01	pCi/L	80.80%	RD3302
PU-238 U	0.00E+00	0.00E+00	2.19E-01	1.97E-01	pCi/L	57.20%	RD3209
PU239/40 U	-1.46E-02	2.91E-02	2.92E-02	3.49E-01	pCi/L	57.20%	RD3209
U-234	2.34E+00	8.31E-01	8.96E-01	4.47E-01	pCi/L	57.70%	RD3234
U-235 U	1.33E-01	2.05E-01	2.06E-01	3.30E-01	pCi/L	57.70%	RD3234
U-238DA	1.80E+00	7.23E-01	7.67E-01	3.30E-01	pCi/L	57.70%	RD3234
CO-58 U	-2.23E+00	4.78E+00	4.78E+00	7.82E+00	pCi/L	N/A	RD3219
CO-60 U	-1.38E+00	2.34E+00	2.35E+00	4.06E+00	pCi/L	N/A	RD3219
CS-137DA U	2.87E-01	3.72E+00	3.72E+00	7.12E+00	pCi/L	N/A	RD3219
EU-152 U	3.25E+00	1.65E+01	1.65E+01	3.65E+01	pCi/L	N/A	RD3219
EU-154 U	1.04E+01	7.89E+00	7.96E+00	2.24E+01	pCi/L	N/A	RD3219
EU-155 U	7.30E+00	6.52E+00	6.56E+00	1.28E+01	pCi/L	N/A	RD3219
FE-59 U	3.11E+00	7.66E+00	7.67E+00	1.75E+01	pCi/L	N/A	RD3219
ALPHA	6.78E+00	2.18E+00	2.26E+00	1.67E+00	pCi/L	100.00%	RD3222
BETA	9.23E+00	2.04E+00	2.14E+00	3.10E+00	pCi/L	100.00%	RD3222
TOTAL STRONTIUM U	2.67E-01	3.29E-01	3.37E-01	7.79E-01	pCi/L	100.00%	RD3204
C-14 U	-5.86E-01	1.51E+00	3.15E+00	3.55E+00	pCi/L	100.00%	RD3263
TC-99	2.92E+00	9.66E-01	4.18E+00	2.10E+00	pCi/L	95.10%	ITAS-IT-RS-0001
TRITIUM	9.80E+02	1.34E+02	2.56E+02	2.46E+02	pCi/L	97.30%	RD3205

Number of Results: 19

8-25-94

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Rev. 00

IT ANALYTICAL SERVICES
RICHLAND, WA
(509) 375-3131

SAMPLE RESULTS

LAB NAME:	ITAS-RICHLAND	SDG:	W0062
LAB SAMPLE ID:	40544602	MATRIX:	WATER
WHC ID:	B0BMP4	DATE RECEIVED:	5/20/94

ISOTOPE		RESULT	COUNTING ERROR (2s)	TOTAL ERROR (2s)	MDA	REPORT UNIT	YIELD	METHOD NUMBER
AM-241	U	-4.13E-03	8.26E-03	8.28E-03	2.08E-01	pCi/L	70.40%	RD3302
PU-238	U	4.22E-02	1.08E-01	1.08E-01	2.53E-01	pCi/L	79.00%	RD3209
PU239/40	U	-4.22E-02	4.22E-02	4.26E-02	3.62E-01	pCi/L	79.00%	RD3209
U-234	U	3.57E-01	3.49E-01	3.52E-01	4.39E-01	pCi/L	53.60%	RD3234
U-235	U	1.31E-01	2.21E-01	2.22E-01	4.15E-01	pCi/L	53.60%	RD3234
U-238DA	U	4.23E-01	3.82E-01	3.87E-01	4.81E-01	pCi/L	53.60%	RD3234
CO-58	U	-1.29E+00	4.18E+00	4.18E+00	7.45E+00	pCi/L	N/A	RD3219
CO-60	U	7.23E+00	4.17E+00	4.23E+00	1.13E+01	pCi/L	N/A	RD3219
CS-137DA	U	6.25E-01	2.84E+00	2.84E+00	5.95E+00	pCi/L	N/A	RD3219
EU-152	U	1.01E+00	2.40E+01	2.40E+01	4.80E+01	pCi/L	N/A	RD3219
EU-154	U	-8.16E-01	1.48E+01	1.48E+01	2.84E+01	pCi/L	N/A	RD3219
EU-155	U	1.30E+00	8.47E+00	8.47E+00	1.44E+01	pCi/L	N/A	RD3219
FE-59	U	1.39E+01	8.81E+00	8.92E+00	2.43E+01	pCi/L	N/A	RD3219
ALPHA	U	6.23E-01	5.03E-01	5.12E-01	7.57E-01	pCi/L	100.00%	RD3222
BETA		3.17E+01	2.94E+00	3.70E+00	2.69E+00	pCi/L	100.00%	RD3222
TOTAL STRONTIUM		1.59E+01	1.19E+00	4.17E+00	8.51E-01	pCi/L	89.90%	RD3204
C-14	U	-5.63E-01	1.51E+00	3.15E+00	3.55E+00	pCi/L	100.00%	RD3263
TC-99		2.12E+00	9.42E-01	4.11E+00	2.10E+00	pCi/L	95.10%	ITAS-IT-RS-0001
TRITIUM	U	-4.09E+01	1.02E+02	1.99E+02	2.46E+02	pCi/L	97.30%	RD3205

Number of Results: 19

MW 8-25-94

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IT ANALYTICAL SERVICES
RICHLAND, WA
(509) 375-3131

SAMPLE RESULTS

LAB NAME:	ITAS-RICHLAND	SDG:	W0062
LAB SAMPLE ID:	40521801	MATRIX:	WATER
WHC ID:	B0BMV2	DATE RECEIVED:	5/11/94

ISOTOPE		RESULT	COUNTING ERROR (2s)	TOTAL ERROR (2s)	MDA	REPORT UNIT	YIELD	METHOD NUMBER
AM-241	U	8.29E-02	1.22E-01	1.23E-01	1.74E-01	pCi/L	84.20%	RD3302
PU-238	U	-1.21E-02	2.41E-02	2.42E-02	2.89E-01	pCi/L	69.20%	RD3209
PU239/40	U	-4.82E-02	4.82E-02	4.87E-02	4.14E-01	pCi/L	69.20%	RD3209
U-234		3.28E+00	9.39E-01	1.04E+00	4.11E-01	pCi/L	62.80%	RD3234
U-235	U	2.55E-01	2.66E-01	2.68E-01	3.03E-01	pCi/L	62.80%	RD3234
U-238DA		2.26E+00	7.74E-01	8.35E-01	1.80E-01	pCi/L	62.80%	RD3234
CO-58	U	-2.49E-01	4.29E+00	4.29E+00	8.17E+00	pCi/L	N/A	RD3219
CO-60	U	1.94E+00	3.59E+00	3.60E+00	8.32E+00	pCi/L	N/A	RD3219
CS-137DA	U	2.18E+00	2.90E+00	2.91E+00	6.41E+00	pCi/L	N/A	RD3219
EU-152	U	2.51E+01	1.67E+01	1.69E+01	4.64E+01	pCi/L	N/A	RD3219
EU-154	U	7.47E+00	1.30E+01	1.30E+01	2.81E+01	pCi/L	N/A	RD3219
EU-155	U	5.78E+00	7.37E+00	7.40E+00	1.38E+01	pCi/L	N/A	RD3219
FE-59	U	-2.11E+00	1.24E+01	1.24E+01	2.27E+01	pCi/L	N/A	RD3219
ALPHA		6.46E+00	2.03E+00	2.12E+00	1.52E+00	pCi/L	100.00%	RD3222
BETA		8.19E+00	1.90E+00	1.99E+00	2.88E+00	pCi/L	100.00%	RD3222
TOTAL STRONTIUM	U	2.86E-01	4.55E-01	4.60E-01	1.09E+00	pCi/L	63.30%	RD3204
C-14	U	1.51E+00	1.54E+00	3.20E+00	3.55E+00	pCi/L	100.00%	RD3263
TC-99		2.43E+00	9.46E-01	4.13E+00	2.10E+00	pCi/L	95.10%	ITAS-IT-RS-0001
TRITIUM		3.80E+02	1.19E+02	2.23E+02	2.46E+02	pCi/L	97.30%	RD3205

Number of Results: 19

mw 8-25-94

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Rev. 00

IT ANALYTICAL SERVICES
RICHLAND, WA
(509) 375-3131

SAMPLE RESULTS

LAB NAME:	ITAS-RICHLAND	SDG:	W0062
LAB SAMPLE ID:	40524401	MATRIX:	WATER
WHC ID:	B0BMR0	DATE RECEIVED:	5/12/94

ISOTOPE		RESULT	COUNTING ERROR (2s)	TOTAL ERROR (2s)	MDA	REPORT UNIT	YIELD	METHOD NUMBER
AM-241	U	-3.46E-03	6.92E-03	6.94E-03	1.74E-01	pCi/L	84.00%	RD3302
PU-238	U	-2.06E-02	2.91E-02	2.93E-02	2.91E-01	pCi/L	80.90%	RD3209
PU239/40	U	-1.03E-02	2.06E-02	2.06E-02	2.46E-01	pCi/L	80.90%	RD3209
U-234	U	4.76E-01	4.19E-01	4.25E-01	5.73E-01	pCi/L	52.90%	RD3234
U-235	U	-4.41E-02	3.34E-02	3.40E-02	4.88E-01	pCi/L	52.90%	RD3234
U-238DA	U	2.96E-01	3.16E-01	3.19E-01	3.93E-01	pCi/L	52.90%	RD3234
CO-58	U	6.39E+00	5.40E+00	5.44E+00	1.20E+01	pCi/L	N/A	RD3219
CO-60	U	1.31E+00	3.79E+00	3.79E+00	8.51E+00	pCi/L	N/A	RD3219
CS-137DA	U	-2.81E+00	4.95E+00	4.95E+00	8.37E+00	pCi/L	N/A	RD3219
EU-152	U	6.56E+00	1.90E+01	1.90E+01	4.27E+01	pCi/L	N/A	RD3219
EU-154	U	1.80E+01	1.08E+01	1.10E+01	2.96E+01	pCi/L	N/A	RD3219
EU-155	U	2.91E+00	8.00E+00	8.01E+00	1.35E+01	pCi/L	N/A	RD3219
FE-59	U	9.22E+00	1.37E+01	1.38E+01	2.88E+01	pCi/L	N/A	RD3219
ALPHA	U	4.74E-01	4.58E-01	4.63E-01	7.57E-01	pCi/L	100.00%	RD3222
BETA		8.58E+00	1.93E+00	2.02E+00	2.98E+00	pCi/L	100.00%	RD3222
TOTAL STRONTIUM		2.63E+00	5.61E-01	8.68E-01	8.17E-01	pCi/L	91.20%	RD3204
C-14	U	-1.13E+00	1.50E+00	3.14E+00	3.55E+00	pCi/L	100.00%	RD3263
TC-99		2.63E+00	9.70E-01	4.16E+00	2.10E+00	pCi/L	95.10%	ITAS-IT-RS-0001
TRITIUM	U	-2.14E+01	1.04E+02	2.01E+02	2.46E+02	pCi/L	97.30%	RD3205

Number of Results: 19

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IT ANALYTICAL SERVICES
RICHLAND, WA
(509) 375-3131

SAMPLE RESULTS

LAB NAME:	ITAS-RICHLAND	SDG:	W0062
LAB SAMPLE ID:	40524402	MATRIX:	WATER
WHC ID:	B0BMR8	DATE RECEIVED:	5/12/94

ISOTOPE	RESULT	COUNTING ERROR (2s)	TOTAL ERROR (2s)	MDA	REPORT UNIT	YIELD	METHOD NUMBER
AM-241 U	-4.85E-02	1.06E-01	1.06E-01	2.12E-01	pCi/L	68.90%	RD3302
PU-238 U	0.00E+00	0.00E+00	1.94E-01	1.75E-01	pCi/L	64.50%	RD3209
PU239/40 U	-2.59E-02	3.66E-02	3.68E-02	3.65E-01	pCi/L	64.50%	RD3209
U-234 U	3.75E-01	3.17E-01	3.21E-01	3.97E-01	pCi/L	69.80%	RD3234
U-235 U	1.10E-01	1.69E-01	1.70E-01	2.73E-01	pCi/L	69.80%	RD3234
U-238DA U	3.34E-01	2.93E-01	2.97E-01	3.37E-01	pCi/L	69.80%	RD3234
CO-58 U	3.11E+00	4.70E+00	4.71E+00	1.03E+01	pCi/L	N/A	RD3219
CO-60 U	1.31E+00	3.79E+00	3.79E+00	8.51E+00	pCi/L	N/A	RD3219
CS-137DA U	-6.75E+00	5.30E+00	5.35E+00	7.96E+00	pCi/L	N/A	RD3219
EU-152 U	5.05E-01	1.70E+01	1.70E+01	3.26E+01	pCi/L	N/A	RD3219
EU-154 U	-2.45E+00	7.66E+00	7.66E+00	1.52E+01	pCi/L	N/A	RD3219
EU-155 U	1.69E+00	8.74E+00	8.75E+00	1.53E+01	pCi/L	N/A	RD3219
FE-59 U	1.08E+01	1.41E+01	1.42E+01	3.05E+01	pCi/L	N/A	RD3219
ALPHA U	3.79E-01	4.83E-01	4.86E-01	9.41E-01	pCi/L	100.00%	RD3222
BETA	7.80E+00	1.84E+00	1.92E+00	2.87E+00	pCi/L	100.00%	RD3222
TOTAL STRONTIUM	3.76E+00	6.39E-01	1.15E+00	8.35E-01	pCi/L	93.40%	RD3204
C-14 U	-5.86E-01	1.51E+00	3.15E+00	3.55E+00	pCi/L	100.00%	RD3263
TC-99	3.34E+00	1.00E+00	4.21E+00	2.10E+00	pCi/L	95.10%	ITAS-IT-RS-0001
TRITIUM U	-1.10E+02	1.01E+02	1.97E+02	2.46E+02	pCi/L	97.30%	RD3205

Number of Results: 19

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IT ANALYTICAL SERVICES
RICHLAND, WA
(509) 375-3131

SAMPLE RESULTS

LAB NAME: ITAS-RICHLAND
SDG NO.: W0055
LAB SAMPLE ID: 40517101
MATRIX: WATER
WHC ID: B0BMQ6
DATE RECEIVED 5/9/94
REPORTING UNITS: pCi/L

ISOTOPE	RESULT	COUNTING ERROR (2s)	TOTAL ERROR (2s)	MDA	YIELD	METHOD NUMBER
AM-241	U -1.32E-02	1.32E-02	1.34E-02	2.21E-01	0.878	RD3302
PU239,40	U -2.14E-02	3.02E-02	3.04E-02	3.02E-01	0.78	RD3209
PU-238	U 0.00E+00	0.00E-00	1.60E-01	1.45E-01	0.78	RD3209
U-234	2.97E+00	7.29E-01	8.16E-01	3.13E-01	0.943	RD3234
U-235	1.26E-01	1.54E-01	1.54E-01	2.02E-01	0.943	RD3234
U-238DA	1.98E+00	5.93E-01	6.42E-01	2.36E-01	0.943	RD3234
CO-60	U -2.74E+00	3.46E-00	3.47E-00	5.54E+00	N/A	RD3219
FE-59	U -1.95E+00	1.21E-01	1.21E-01	2.26E+01	N/A	RD3219
EU-152	U -1.12E+01	1.81E-01	1.81E-01	3.14E+01	N/A	RD3219
CO-58	U 2.33E-01	4.32E-00	4.32E+00	8.44E+00	N/A	RD3219
CS-137DA	U 2.23E+00	3.78E-00	3.78E+00	7.67E+00	N/A	RD3219
RU-106DA	U 4.40E+01	2.99E-01	3.02E-01	6.92E+01	N/A	RD3219
CE-144	U 9.83E+00	1.85E-01	1.86E+01	3.39E+01	N/A	RD3219
EU-154	U 9.73E+00	7.35E+00	7.42E+00	2.09E+01	N/A	RD3219
ALPHA	3.69E+00	1.21E-00	1.30E+00	9.99E-01	1	~~RD3222~~
BETA	1.67E+01	2.43E+00	2.69E+00	3.02E+00	1	~~RD3222~~
TOTAL-SR	7.18E+00	6.19E-01	1.89E+00	7.88E-01	0.871	RD3204
C-14	3.74E+00	1.56E+00	3.21E-00	3.51E+00	1	RD3263
TC-99	U 2.46E-01	9.29E-01	4.22E+00	2.16E+00	0.951	ITAS-IT-RS-0001
TRITIUM	1.33E+03	1.41E+02	2.69E+02	2.39E+02	0.973	RD3205
E-0155	-12.7			14.05		RD3219

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DS
6/27/94

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IT ANALYTICAL SERVICES
RICHLAND, WA
(509) 375-3131

SAMPLE RESULTS

LAB NAME: ITAS-RICHLAND
SDG NO.: W0055
LAB SAMPLE ID: 40517102
MATRIX: WATER
WHC ID: B08MX6
DATE RECEIVED 5/9/94
REPORTING UNITS: pCi/L

ISOTOPE	RESULT	COUNTING ERROR (2s)	TOTAL ERROR (2s)	MDA	YIELD	METHOD NUMBER
AM-241	U -3.78E-03	7.55E-03	7.57E-03	1.90E-01	0.77	RD3302
PU239/40	U 1.07E-02	1.15E-01	1.15E-01	3.67E-01	0.78	RD3209
PU-238	U -1.07E-02	2.14E-02	2.15E-02	2.56E-01	0.78	RD3209
U-234	2.40E-00	6.57E-01	7.21E-01	2.53E-01	0.932	RD3234
U-235	U 3.04E-02	9.06E-02	9.06E-02	2.39E-01	0.932	RD3234
U-238DA	1.63E-00	5.44E-01	5.80E-01	2.77E-01	0.932	RD3234
CO-60	U 4.77E-00	3.37E-00	3.41E-00	9.46E-00	N/A	RD3219
FE-59	U 8.99E-00	7.34E+00	7.39E-00	2.11E-01	N/A	RD3219
EU-152	U -1.30E-01	3.08E+01	3.08E-01	5.44E+01	N/A	RD3219
CO-58	U -3.23E-00	6.10E+00	6.10E-00	1.02E+01	N/A	RD3219
CS-137DA	U -1.89E-00	4.08E+00	4.09E-00	6.89E+00	N/A	RD3219
RU-106DA	U -1.60E+01	3.92E+01	3.92E-01	6.82E+01	N/A	RD3219
CE-144	U 2.05E-01	1.61E+01	1.62E-01	3.23E+01	N/A	RD3219
EU-154	U 9.65E+00	7.88E+00	7.94E-00	2.27E+01	N/A	RD3219
ALPHA	4.36E+00	1.30E+00	1.42E-00	9.50E-01	1	~~RD3222~~ 321
BETA	1.76E+01	2.54E+00	2.80E-00	3.24E+00	1	~~RD3222~~
TOTAL-SR	6.73E-00	6.18E-01	1.76E-00	8.89E-01	0.832	RD3204 DS 6/27
C-14	8.94E-00	1.64E+00	3.35E-00	3.51E-00	1	RD3263
TC-99	U -3.88E-01	9.26E-01	4.17E+00	2.16E+00	0.951	ITAS-IT-RS-0001
TRITIUM	1.33E+03	1.41E+02	2.69E+02	2.39E+02	0.973	RD3205
CL-35	7.32			16.25		RD3219

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IT ANALYTICAL SERVICES
RICHLAND, WA
(509) 375-3131

SAMPLE RESULTS

LAB NAME: ITAS-RICHLAND
SDG NO.: W0055
LAB SAMPLE ID: 40521601
MATRIX: WATER
WHC ID: B0BMS2
DATE RECEIVED 5/11/94
REPORTING UNITS: pCi/L

ISOTOPE	RESULT	COUNTING ERROR (2s)	TOTAL ERROR (2s)	MDA	YIELD	METHOD NUMBER
AM-241	U -4.13E-03	8.27E-03	8.29E-03	2.08E-01	0.703	RD3302
PU239/40	U -2.50E-02	3.54E-02	3.56E-02	3.53E-01	0.667	RD3209
PU-238	U 0.00E+00	0.00E+00	1.88E-01	1.69E-01	0.667	RD3209
U-234	2.61E+00	7.03E-01	7.75E-01	2.78E-01	0.887	RD3234
J U-235	J 2.74E-01	2.30E-01	2.33E-01	2.14E-01	0.887	RD3234
U-238DA	1.82E+00	5.87E-01	6.29E-01	2.34E-01	0.887	RD3234
CO-60	U -1.11E+00	3.83E+00	3.83E+00	6.60E+00	N/A	RD3219
FE-59	U 6.45E+00	1.13E+01	1.13E+01	2.38E+01	N/A	RD3219
EU-152	U -9.74E+00	2.33E+01	2.33E+01	4.18E+01	N/A	RD3219
CO-58	U -7.87E-01	4.59E+00	4.59E+00	8.06E+00	N/A	RD3219
CS-137DA	U -3.04E+00	3.83E+00	3.84E+00	6.21E+00	N/A	RD3219
RU-106DA	U 1.34E+01	2.77E+01	2.77E+01	5.80E+01	N/A	RD3219
CE-144	U 1.10E+01	1.51E+01	1.51E+01	2.82E+01	N/A	RD3219
EU-154	U 8.21E+00	1.06E+01	1.06E+01	2.47E+01	N/A	RD3219
ALPHA	1.35E+00	8.75E-01	8.88E-01	1.16E+00	1	~~RD3222~~ 321
BETA	7.16E+00	1.92E+00	1.99E+00	3.10E+00	1	~~RD3222~~ DS
TOTAL-SR	U 2.04E-02	1.91E-01	1.91E-01	8.46E-01	0.83	RD3204 Gla
C-14	4.12E+00	1.56E+00	3.22E+00	3.51E+00	1	RD3263
TC-99	U -1.15E+00	9.08E-01	4.12E+00	2.16E+00	0.951	ITAS-IT-RS-0001
TRITIUM	2.62E+03	1.71E+02	3.51E+02	2.39E+02	0.973	RD3205
EU 155	2.413			12.74		RD 3219

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IT ANALYTICAL SERVICES
RICHLAND, WA
(509) 375-3131

SAMPLE RESULTS

LAB NAME: ITAS-RICHLAND
SDG NO.: W0055
LAB SAMPLE ID: 40521602
MATRIX: WATER
WHC ID: B0BMS6
DATE RECEIVED 5/11/94
REPORTING UNITS: pCi/L

ISOTOPE	RESULT	COUNTING ERROR (2s)	TOTAL ERROR (2s)	MDA	YIELD	METHOD NUMBER
AM-241	U 3.40E-02	9.04E-02	9.05E-02	2.23E-01	0.812	RD3302
PU239/40	U 0.00E+00	0.00E+00	1.39E-01	1.25E-01	0.899	RD3209
PU-238	U -9.27E-03	1.86E-02	1.86E-02	2.22E-01	0.899	RD3209
U-234	4.24E+00	9.70E-01	1.12E+00	2.95E-01	0.754	RD3234
U-235	3.60E-01	2.93E-01	2.97E-01	3.28E-01	0.754	RD3234
U-238DA	2.41E+00	7.34E-01	7.99E-01	3.12E-01	0.754	RD3234
CO-60	U -2.82E+00	4.54E+00	4.54E+00	7.07E+00	N/A	RD3219
FE-59	U -1.21E+01	1.45E+01	1.46E+01	2.25E+01	N/A	RD3219
EU-152	U -8.58E+00	1.88E+01	1.88E+01	3.38E+01	N/A	RD3219
CO-58	U 2.89E+00	4.67E+00	4.67E+00	9.58E+00	N/A	RD3219
CS-137DA	U 4.36E+00	3.28E+00	3.30E+00	7.43E+00	N/A	RD3219
RU-106DA	U 3.44E+01	3.42E+01	3.44E+01	7.11E+01	N/A	RD3219
CE-144	U -1.51E+01	1.92E+01	1.92E+01	3.01E+01	N7A	RD3219
EU-154	U -4.63E-01	1.12E+01	1.12E+01	2.20E+01	N/A	RD3219
ALPHA	8.90E+00	2.08E+00	2.30E+00	1.33E+00	1	~~RD3222~~ 3214
BETA	3.04E+01	3.12E+00	3.80E+00	3.21E+00	1	~~RD3222~~
TOTAL-SR	9.70E+00	6.91E-01	2.56E+00	7.38E-01	0.929	RD3204 DS 6/21/94
C-14	7.03E+00	1.61E+00	3.30E+00	3.51E+00	1	RD3263
TC-99	U -7.48E-01	9.24E-01	4.15E+00	2.16E+00	0.951	ITAS-IT-RS-0001
TRITIUM	1.42E+04	3.39E-02	1.18E+03	2.39E-02	0.973	RD3205
EU 155	-3.16			12.90		RD3219

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IT ANALYTICAL SERVICES
RICHLAND, WA
(509) 375-3131

SAMPLE RESULTS

LAB NAME: ITAS-RICHLAND
SDG NO.: W0055
LAB SAMPLE ID: 40521603
MATRIX: WATER
WHC ID: B0BMT4
DATE RECEIVED 5/11/94
REPORTING UNITS: pCi/L

ISOTOPE	RESULT	COUNTING ERROR (2s)	TOTAL ERROR (2s)	MDA	YIELD	METHOD NUMBER
AM-241	U -1.41E-02	2.81E-02	2.82E-02	3.37E-01	0.517	RD3302
PU239/40	U 0.00E+00	0.00E+00	1.74E-01	1.57E-01	0.718	RD3209
PU-238	U -1.16E-02	2.32E-02	2.33E-02	2.78E-01	0.718	RD3209
U-234	4.30E+00	9.09E-01	1.06E+00	2.39E-01	0.87	RD3234
U-235	U 2.20E-01	2.15E-01	2.17E-01	2.71E-01	0.87	RD3234
U-238DA	3.48E+00	8.18E-01	9.28E-01	2.39E-01	0.87	RD3234
CO-60	U 6.06E+00	5.03E+00	5.07E+00	1.18E+01	N/A	RD3219
FE-59	U -2.34E+01	1.61E+01	1.63E+01	2.07E+01	N/A	RD3219
EU-152	U 9.99E-01	2.37E+01	2.37E+01	4.64E+01	N/A	RD3219
CO-58	U -1.39E+00	4.95E+00	4.95E+00	8.92E+00	N/A	RD3219
CS-137DA	U -2.59E+00	4.34E+00	4.35E+00	7.24E+00	N/A	RD3219
RU-106DA	U 4.12E+01	3.58E+01	3.60E+01	7.86E+01	N/A	RD3219
CE-144	U 7.35E+00	1.52E+01	1.52E+01	2.79E+01	N/A	RD3219
EU-154	U 6.43E+00	6.43E+00	6.46E+00	1.93E+01	N/A	RD3219
ALPHA	1.01E+01	2.65E+00	2.79E+00	2.06E+00	1	~~RD3222~~ 3214
BETA	8.50E+00	2.07E+00	2.15E+00	3.27E+00	1	~~RD3222~~ DJ 6/27
TOTAL-SR	2.34E+00	3.96E-01	6.97E-01	8.74E-01	0.833	RD3204
C-14	1.04E+01	1.66E+00	3.40E+00	3.51E+00	1	RD3263
TC-99	U -5.87E-01	9.23E-01	4.16E+00	2.16E+00	0.951	ITAS-IT-RS-0001
TRITIUM	1.01E+04	2.91E+02	8.77E+02	2.39E+02	0.973	RD3205
EU-155	1.919			17.18		RD3219

IT ANALYTICAL SERVICES
RICHLAND, WA
(509) 375-3131

SAMPLE RESULTS

LAB NAME: ITAS-RICHLAND
SDG NO.: W0055
LAB SAMPLE ID: 40521604
MATRIX: WATER
WHC ID: B0BMW4
DATE RECEIVED 5/11/94
REPORTING UNITS: pCi/L

ISOTOPE	RESULT	COUNTING ERROR (2s)	TOTAL ERROR (2s)	MDA	YIELD	METHOD NUMBER
AM-241	U 1.21E-01	2.19E-01	2.20E-01	4.28E-01	0.479	RD3302
PU239/40	U -9.75E-03	1.95E-02	1.96E-02	2.33E-01	0.854	RD3209
PU-238	U 0.00E+00	0.00E+00	1.46E-01	1.32E-01	0.854	RD3209
U-234	9.73E+00	1.87E+00	2.39E+00	5.50E-01	0.469	RD3234
U-235	6.01E-01	4.71E-01	4.80E-01	4.43E-01	0.469	RD3234
U-238DA	1.10E+01	1.98E+00	2.60E+00	4.06E-01	0.469	RD3234
CO-60	U -2.83E+00	4.54E+00	4.55E+00	7.34E+00	N/A	RD3219
FE-59	U 5.34E+00	1.09E+01	1.09E+01	2.26E+01	N/A	RD3219
EU-152	U 4.72E+00	1.64E+01	1.64E+01	3.63E+01	N/A	RD3219
CO-58	U 5.40E+00	4.59E+00	4.62E+00	1.03E+01	N/A	RD3219
CS-137DA	U -1.06E+00	4.39E+00	4.39E+00	7.49E+00	N/A	RD3219
RU-106DA	U 2.79E+01	3.87E+01	3.88E+01	7.39E+01	N/A	RD3219
CE-144	U 8.73E-01	1.79E+01	1.79E+01	2.99E+01	N/A	RD3219
EU-154	U 9.49E+00	1.08E+01	1.09E+01	2.42E+01	N/A	RD3219
ALPHA	1.70E+01	3.37E+00	3.67E+00	1.82E+00	1	~~RD3222~~ 3214
BETA	1.58E+01	2.46E+00	2.69E+00	3.18E+00	1	~~RD3222~~ D3
TOTAL-SR	U -6.68E-02	1.84E-01	1.85E-01	8.77E-01	0.761	RD3204
C-14	3.94E+00	1.56E+00	3.21E+00	3.51E+00	1	RD3263
TC-99	U -1.42E-01	9.24E-01	4.19E+00	2.16E+00	0.951	ITAS-IT-RS-0001
TRITIUM	2.52E+03	1.70E+02	3.45E+02	2.39E+02	0.973	RD3205

CE 155 -,441 14.43 RD3219

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IT ANALYTICAL SERVICES
RICHLAND, WA
(509) 375-3131

SAMPLE RESULTS

LAB NAME: ITAS-RICHLAND
SDG NO.: W0055
LAB SAMPLE ID: 40524201
MATRIX: WATER
WHC ID: B0BMR4
DATE RECEIVED 5/12/94
REPORTING UNITS: pCi/L

ISOTOPE	RESULT	COUNTING ERROR (2s)	TOTAL ERROR (2s)	MDA	YIELD	METHOD NUMBER
AM-241	U -1.46E-02	2.91E-02	2.92E-02	3.48E-01	0.499	RD3302
PU239/40	U -4.74E-02	4.74E-02	4.79E-02	4.07E-01	0.703	RD3209
PU-238	U -1.19E-02	2.37E-02	2.38E-02	2.84E-01	0.703	RD3209
U-234	U 4.44E-01	3.75E-01	3.81E-01	4.70E-01	0.59	RD3234
U-235	U 4.81E-02	1.43E-01	1.43E-01	3.77E-01	0.59	RD3234
U-238DA	U 4.49E-01	3.75E-01	3.81E-01	4.54E-01	0.59	RD3234
CO-60	U -9.21E-01	4.09E+00	4.09E+00	7.61E+00	N/A	RD3219
FE-59	U -1.28E+00	9.24E+00	9.24E+00	1.81E+01	N/A	RD3219
EU-152	U 2.27E+01	2.22E+01	2.23E+01	5.20E+01	N/A	RD3219
CO-58	U 1.57E+00	5.03E+00	5.04E+00	9.80E+00	N/A	RD3219
CS-137DA	U 2.53E+00	2.98E+00	2.99E+00	6.71E+00	N/A	RD3219
RU-106DA	U -3.52E+01	3.14E-01	3.16E+01	4.77E+01	N/A	RD3219
CE-144	U -7.44E+00	1.61E+01	1.61E+01	2.58E+01	N/A	RD3219
EU-154	U 8.95E+00	7.31E+00	7.36E+00	2.10E+01	N/A	RD3219
ALPHA	U 5.73E-01	4.75E-01	4.83E-01	7.33E-01	1	~~RD3222~~ 3214 6/27/94
BETA	8.23E-00	1.88E+00	1.97E+00	2.87E+00	1	~~RD3222~~
TOTAL-SR	2.34E+00	3.68E-01	7.09E-01	7.95E-01	0.974	RD3204
C-14	U 8.33E-01	1.51E+00	3.13E+00	3.51E+00	1	RD3263
TC-99	U -3.88E-01	9.34E-01	4.18E+00	2.16E+00	0.951	ITAS-IT-RS-0001
TRITIUM	U -3.26E+01	9.99E+01	1.90E+02	2.39E+02	.975	RD3205

62.155 3.217 11.23 RD3219

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TMA NORCAL

SAMPLE DELIVERY GROUP 7383

N405100-01

DATA SHEET

B0BMY8

SDG 7383 Client Westinghouse Hanford
Contact N. Joseph Verville Contract MBH-SVV-069262

Lab sample id N405100-01 Client sample id B0BMY8
Dept sample id 7383-001 Location/Matrix 100 F LIQUID
Received 05/24/94 Collected 05/18/94
Chain of custody id EFL-1055

ANALYTE	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	Alpha	1.1	0.99	1	3	J	80A
Gross Beta	Beta	36	2.6	2	4		80B
Tritium	10028-17-8	79	170	300	400	U	H
Carbon 14	14762-75-5	18	27	50	100	U	C
Strontium 90	10098-97-2	19	1.0	0.6	2		Y
Technetium 99	14133-76-7	1.7	0.64	1	5	~~BJ~~ U	TC
Uranium 233/234		0.58	0.10	0.05	0.2		U
Uranium 235	15117-96-1	-0.008	0.016	0.05	0.2	U	U
Uranium 238		0.35	0.070	0.03	0.2		U
Plutonium 238	13981-16-3	0.043	0.027	0.04	0.05	J	PU
Plutonium 239/240		0.003	0.016	0.03	0.05	U	PU
Americium 241	14596-10-2	0.023	0.020	0.03	0.05	U	AM
GAMMA SCAN ANALYTES							
Sodium 22	13966-32-0	U		20		U	GAM
Potassium 40	13966-00-2	U		200		U	GAM
Manganese 54	13966-31-9	U		10		U	GAM
Iron 59	14596-12-4	U		40	30	U	GAM
Cobalt 58	13981-38-9	U		20	20	U	GAM
Cobalt 60	10198-40-0	U		20	20	U	GAM
Niobium 94	14681-63-1	U		10		U	GAM
Ruthenium 103	13968-53-1	U		20		U	GAM
Ruthenium 106	13967-48-1	U		100		U	GAM
Tin 113	13966-06-8	U		20		U	GAM
Cesium 134	13967-70-9	U		20		U	GAM
Cesium 137	10045-97-3	U		10	20	U	GAM
Cerium 144	14762-78-8	U		70		U	GAM
Europium 152	14683-23-9	U		30	40	U	GAM
Europium 154	15585-10-1	U		20	40	U	GAM

Lab id TMAN
Protocol WHC-HASM
Version Ver 1.0
Form DVD-DS
Version 2.30
Report date 07/22/94

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SAMPLE DELIVERY GROUP 7383

N405100-01

DATA SHEET, cont

B0BMY8

SDG 7383 Client Westinghouse Hanford
Contact N. Joseph Verville Contract MBH-SVV-069262

Lab sample id N405100-01 Client sample id B0BMY8
Dept sample id 7383-001 Location/Matrix 100 F LIQUID
Received 05/24/94 Collected 05/18/94
Chain of custody id EFL-1055

ANALYTE	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Europium 155	14391-16-3	U		40	40	U	GAM
Radium 226	13982-63-3	U		30		U	GAM
Radium 228	15262-20-1	U		60		U	GAM
Thorium 228	14274-82-9	U		20		U	GAM
Thorium 232	7440-29-1	U		60		U	GAM

8-25-94

Lab id TMAN
Protocol WHC-HASM
Version Ver 1.0
Form DVD-DS
Version 2.30
Report date 07/22/94

9/27/94

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IT ANALYTICAL SERVICES
RICHLAND, WA
(509) 375-3131

Rev. 00

SAMPLE RESULTS

LAB NAME:	ITAS-RICHLAND	SDG:	W0068
LAB SAMPLE ID:	40550903	MATRIX:	WATER
CLIENT ID:	B0BMZ2	DATE RECEIVED:	5/24/94

Qualifier	ISOTOPE		RESULT	COUNTING ERROR (2s)	TOTAL ERROR (2s)	MDA	REPORT UNIT	YIELD	METHOD NUMBER
	AM-241	U	1.12E-01	1.65E-01	1.66E-01	2.34E-01	pCi/L	62.50%	RD3302
	PU-238	U	0.00E+00	0.00E+00	2.17E-01	1.96E-01	pCi/L	57.60%	RD3209
	PU239/40	U	-1.45E-02	2.89E-02	2.90E-02	3.46E-01	pCi/L	57.60%	RD3209
UJ	U-234	U	1.39E-01	1.80E-01	1.81E-01	2.76E-01	pCi/L	80.60%	RD3234
UJ	U-235	U	3.10E-02	1.05E-01	1.05E-01	2.92E-01	pCi/L	80.60%	RD3234
UJ	U-238DA	U	-8.27E-03	1.17E-02	1.18E-02	2.36E-01	pCi/L	80.60%	RD3234
	CO-58	U	-3.57E+00	5.00E+00	5.01E+00	8.04E+00	pCi/L	N/A	RD3219
	CO-60	U	3.43E-01	4.29E+00	4.29E+00	8.58E+00	pCi/L	N/A	RD3219
	CS-137DA	U	7.98E-01	2.96E+00	2.96E+00	5.96E+00	pCi/L	N/A	RD3219
	EU-152	U	7.79E+00	1.08E+01	1.08E+01	1.95E+01	pCi/L	N/A	RD3219
	EU-154	U	9.50E+00	1.08E+01	1.09E+01	2.52E+01	pCi/L	N/A	RD3219
	EU-155	U	5.31E+00	8.39E+00	8.40E+00	1.49E+01	pCi/L	N/A	RD3219
	FE-59	U	9.66E+00	1.04E+01	1.04E+01	2.45E+01	pCi/L	N/A	RD3219
	ALPHA	U	-1.01E-01	2.02E-01	2.03E-01	6.61E-01	pCi/L	100.00%	RD3214
	BETA	U	5.04E-01	1.27E+00	1.27E+00	2.76E+00	pCi/L	100.00%	RD3214
	STRONTIUM	U	1.76E-01	3.24E-01	3.27E-01	7.90E-01	pCi/L	95.60%	RD3204
	C-14	U	9.01E-02	1.51E+00	3.15E+00	4.72E+00	pCi/L	100.00%	RD3263
	TC-99	U	-1.16E+00	9.13E-01	4.09E+00	2.16E+00	pCi/L	95.10%	ITAS-IT-RS-0001
	TRITIUM	U	5.58E+01	1.04E+02	1.97E+02	2.38E+02	pCi/L	97.30%	RD3205

Number of Results: 19

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IT ANALYTICAL SERVICES
RICHLAND, WA
(509) 375-3131

Rev. 00

SAMPLE RESULTS

LAB NAME:	ITAS-RICHLAND	SDG:	W0068
LAB SAMPLE ID:	40544802	MATRIX:	WATER
CLIENT ID:	B0BMY0	DATE RECEIVED:	5/20/94

	ISOTOPE		RESULT	COUNTING ERROR (2s)	TOTAL ERROR (2s)	MDA	REPORT UNIT	YIELD	METHOD NUMBER
	AM-241	U	4.31E-02	1.28E-01	1.29E-01	3.38E-01	pCi/L	57.30%	RD3302
	PU-238	U	0.00E+00	0.00E+00	1.99E-01	1.80E-01	pCi/L	62.80%	RD3209
	PU239/40	U	2.52E-01	2.67E-01	2.70E-01	3.18E-01	pCi/L	62.80%	RD3209
R	U-234		7.66E+00	1.22E+00	1.56E+00	2.88E-01	pCi/L	85.70%	RD3234
UR	U-235	~~U~~	1.30E-01	1.69E-01	1.70E-01	2.60E-01	pCi/L	85.70%	RD3234
R	U-238DA		5.91E+00	1.07E+00	1.31E+00	3.01E-01	pCi/L	85.70%	RD3234
MW 8.28.94	CO-58	U	4.98E+00	4.87E+00	4.89E+00	1.10E+01	pCi/L	N/A	RD3219
	CO-60	U	-9.24E-01	4.10E+00	4.10E+00	7.45E+00	pCi/L	N/A	RD3219
	CS-137DA	U	8.04E-01	3.63E+00	3.63E+00	6.93E+00	pCi/L	N/A	RD3219
	EU-152	U	-6.08E-01	9.34E+00	9.34E+00	1.69E+01	pCi/L	N/A	RD3219
	EU-154	U	-5.98E+00	1.47E+01	1.47E+01	2.59E+01	pCi/L	N/A	RD3219
	EU-155	U	-3.43E+00	8.41E+00	8.41E+00	1.32E+01	pCi/L	N/A	RD3219
	FE-59	U	9.62E+00	1.09E+01	1.09E+01	2.51E+01	pCi/L	N/A	RD3219
	ALPHA		1.37E+00	6.97E-01	7.26E-01	7.88E-01	pCi/L	100.00%	RD3214
	BETA		3.62E+01	3.20E+00	4.09E+00	3.13E+00	pCi/L	100.00%	RD3214
	STRONTIUM		1.74E+01	1.20E+00	4.79E+00	7.57E-01	pCi/L	100.00%	RD3204
	C-14	U	1.13E-01	1.51E+00	3.15E+00	4.72E+00	pCi/L	100.00%	RD3263
	TC-99	U	-4.26E-01	9.33E-01	4.14E+00	2.16E+00	pCi/L	95.10%	ITAS-IT-RS-0001
	TRITIUM	U	8.38E+01	1.05E+02	1.98E+02	2.38E+02	pCi/L	97.30%	RD3205

Number of Results: 19

Reviewed by Chemistry

			MDA	
U234	.4963		.292	UJ
U235	.0910	U	.258	UJ
U238	.4797		.344	J

MW 8.29.94

CMP 7/19/

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IT ANALYTICAL SERVICES
RICHLAND, WA
(509) 375-3131

Rev. 00

SAMPLE RESULTS

LAB NAME:	ITAS-RICHLAND	SDG:	W0068
LAB SAMPLE ID:	40544801	MATRIX:	WATER
CLIENT ID:	B0BMW8	DATE RECEIVED:	5/20/94

	ISOTOPE	RESULT	COUNTING ERROR (2s)	TOTAL ERROR (2s)	MDA	REPORT UNIT	YIELD	METHOD NUMBER
	AM-241	U -1.43E-02	1.65E-02	1.67E-02	2.98E-01	pCi/L	60.90%	RD3302
	PU-238	U 0.00E+00	0.00E+00	1.61E-01	1.45E-01	pCi/L	77.90%	RD3209
	PU239/40	U 0.00E+00	0.00E+00	1.61E-01	1.45E-01	pCi/L	77.90%	RD3209
UJ	U-234	2.82E-01	2.63E-01	2.65E-01	3.55E-01	pCi/L	78.10%	RD3234
UJ	U-235	4.48E-02	1.07E-01	1.08E-01	2.44E-01	pCi/L	78.10%	RD3234
J	U-238DA	3.12E-01	2.62E-01	2.65E-01	2.44E-01	pCi/L	78.10%	RD3234
	CO-58	U 1.85E-01	5.63E+00	5.63E+00	1.05E+01	pCi/L	N/A	RD3219
	CO-60	U -6.57E+00	4.92E+00	4.97E+00	6.43E+00	pCi/L	N/A	RD3219
	CS-137DA	U 4.11E+00	4.74E+00	4.76E+00	9.69E+00	pCi/L	N/A	RD3219
	EU-152	U -3.08E+00	1.07E+01	1.07E+01	1.85E+01	pCi/L	N/A	RD3219
	EU-154	U 8.05E+00	1.40E+01	1.41E+01	3.03E+01	pCi/L	N/A	RD3219
	EU-155	U -1.92E+00	9.42E+00	9.43E+00	1.47E+01	pCi/L	N/A	RD3219
	FE-59	U -1.18E+01	1.65E+01	1.66E+01	2.62E+01	pCi/L	N/A	RD3219
	ALPHA	1.36E+01	3.87E+00	4.13E+00	3.30E+00	pCi/L	100.00%	RD3214
	BETA	7.97E+01	4.74E+00	7.31E+00	3.16E+00	pCi/L	100.00%	RD3214
	STRONTIUM	U -1.37E-01	3.69E-01	3.71E-01	1.01E+00	pCi/L	70.40%	RD3204
	C-14	2.52E+02	3.80E+00	1.36E+01	4.72E+00	pCi/L	100.00%	RD3263
U	TC-99	3.97E+00	9.92E-01	4.47E+00	2.16E+00	pCi/L	95.10%	ITAS-IT-RS-0001
	TRITIUM 5-25-94	9.83E+04	8.56E+02	7.29E+03	2.38E+02	pCi/L	97.30%	RD3205

Number of Results: 19

000597 [redacted] CMP 9/19/

682A-6-93

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Rev. 00

IT ANALYTICAL SERVICES
RICHLAND, WA
(509) 375-3131

SAMPLE RESULTS

LAB NAME:	ITAS-RICHLAND	SDG:	W0068
LAB SAMPLE ID:	40550902	MATRIX:	WATER
CLIENT ID:	B0BMX2	DATE RECEIVED:	5/24/94

	ISOTOPE		RESULT	COUNTING ERROR (2s)	TOTAL ERROR (2s)	MDA	REPORT UNIT	YIELD	METHOD NUMBER
	AM-241	U	6.73E-02	1.47E-01	1.47E-01	2.94E-01	pCi/L	49.60%	RD3302
	PU-238	U	-2.59E-02	3.66E-02	3.68E-02	3.66E-01	pCi/L	64.50%	RD3209
	PU239/40	U	1.16E-01	1.85E-01	1.86E-01	3.09E-01	pCi/L	64.50%	RD3209
J	U-234		5.80E+00	1.05E+00	1.28E+00	1.93E-01	pCi/L	86.90%	RD3234
UJ	U-235	~~U~~	1.36E-01	1.66E-01	1.67E-01	2.19E-01	pCi/L	86.90%	RD3234
J	U-238DA		3.63E+00	8.36E-01	9.53E-01	2.39E-01	pCi/L	86.90%	RD3234
	CO-58	U	1.15E+00	5.17E+00	5.17E+00	9.92E+00	pCi/L	N/A	RD3219
	CO-60	U	2.86E+00	3.97E+00	3.98E+00	8.78E+00	pCi/L	N/A	RD3219
	CS-137DA	U	1.84E+00	3.82E+00	3.82E+00	7.35E+00	pCi/L	N/A	RD3219
	EU-152	U	-2.13E+00	9.53E+00	9.53E+00	1.67E+01	pCi/L	N/A	RD3219
	EU-154	U	-3.73E+00	1.29E+01	1.29E+01	2.36E+01	pCi/L	N/A	RD3219
	EU-155	U	-5.03E+00	8.24E+00	8.25E+00	1.22E+01	pCi/L	N/A	RD3219
	FE-59	U	-4.12E+00	9.11E+00	9.12E+00	1.65E+01	pCi/L	N/A	RD3219
	ALPHA		8.87E+00	2.30E+00	2.46E+00	1.61E+00	pCi/L	100.00%	RD3214
	BETA		1.03E+01	2.09E+00	2.22E+00	3.07E+00	pCi/L	100.00%	RD3214
	STRONTIUM	U	-1.23E-01	3.70E-01	3.71E-01	1.02E+00	pCi/L	67.00%	RD3204
	C-14	U	4.55E+00	1.58E+00	3.27E+00	4.72E+00	pCi/L	100.00%	RD3263
	TC-99	U	-4.93E-01	9.30E-01	4.14E+00	2.16E+00	pCi/L	95.10%	ITAS-IT-RS-0001
	TRITIUM		1.15E+04	3.06E+02	9.78E+02	2.38E+02	pCi/L	97.30%	RD3205

Number of Results: 19

682A-6-93

9613501.1793

IT ANALYTICAL SERVICES
RICHLAND, WA
(509) 375-3131

SAMPLE RESULTS

LAB NAME:	ITAS-RICHLAND	SDG:	W0068
LAB SAMPLE ID:	40550901	MATRIX:	WATER
CLIENT ID:	B0BMP0	DATE RECEIVED:	5/24/94

ISOTOPE	RESULT	COUNTING ERROR (2s)	TOTAL ERROR (2s)	MDA	REPORT UNIT	YIELD	METHOD NUMBER
AM-241 U	-1.91E-02	1.91E-02	1.93E-02	3.18E-01	pCi/L	61.00%	RD3302
PU-238 U	0.00E+00	0.00E+00	1.76E-01	1.59E-01	pCi/L	71.20%	RD3209
PU239/40 U	4.69E-02	1.19E-01	1.20E-01	2.80E-01	pCi/L	71.20%	RD3209
J U-234	2.73E+00	8.24E-01	9.04E-01	3.64E-01	pCi/L	67.90%	RD3234
UJ U-235 U	1.13E-01	1.74E-01	1.75E-01	2.81E-01	pCi/L	67.90%	RD3234
J U-238DA	1.63E+00	6.39E-01	6.76E-01	3.47E-01	pCi/L	67.90%	RD3234
CO-58 U	4.41E+00	4.70E+00	4.72E+00	1.02E+01	pCi/L	N/A	RD3219
CO-60 U	9.45E-01	3.29E+00	3.29E+00	7.27E+00	pCi/L	N/A	RD3219
CS-137DA U	5.85E-01	4.34E+00	4.34E+00	8.02E+00	pCi/L	N/A	RD3219
EU-152 U	-3.30E+00	1.07E+01	1.07E+01	1.75E+01	pCi/L	N/A	RD3219
EU-154 U	6.26E+00	1.51E+01	1.51E+01	2.99E+01	pCi/L	N/A	RD3219
EU-155 U	3.69E-01	9.25E+00	9.25E+00	1.57E+01	pCi/L	N/A	RD3219
FE-59 U	-1.88E+00	1.53E+01	1.53E+01	2.77E+01	pCi/L	N/A	RD3219
ALPHA	2.62E+00	1.18E+00	1.21E+00	1.29E+00	pCi/L	100.00%	RD3214
BETA	8.55E+00	1.96E+00	2.05E+00	3.02E+00	pCi/L	100.00%	RD3214
STRONTIUM U	2.48E-01	3.35E-01	3.41E-01	7.90E-01	pCi/L	97.30%	RD3204
C-14	1.49E+00	1.53E+00	3.18E+00	4.72E+00	pCi/L	100.00%	RD3263
TC-99 U	-8.34E-01	9.13E-01	4.11E+00	2.16E+00	pCi/L	95.10%	ITAS-IT-RS-0001
TRITIUM U	1.82E+02	1.08E+02	2.03E+02	2.38E+02	pCi/L	97.30%	RD3205

Number of Results: 19

682A-6-93

9613501.1794

IT ANALYTICAL SERVICES
RICHLAND, WA
(509) 375-3131

SAMPLE RESULTS

LAB NAME:	ITAS-RICHLAND	SDG:	W0068
LAB SAMPLE ID:	40557301	MATRIX:	WATER
CLIENT ID:	B0BMZ8	DATE RECEIVED:	5/26/94

	ISOTOPE		RESULT	COUNTING ERROR (2s)	TOTAL ERROR (2s)	MDA	REPORT UNIT	YIELD	METHOD NUMBER
	AM-241	U	5.16E-02	1.13E-01	1.13E-01	2.26E-01	pCi/L	64.70%	RD3302
	PU-238	U	0.00E+00	0.00E+00	2.13E-01	1.92E-01	pCi/L	58.80%	RD3209
	PU239/40	U	0.00E+00	0.00E+00	2.13E-01	1.92E-01	pCi/L	58.80%	RD3209
	U-234		-3.31E-02	2.34E-02	2.38E-02	3.33E-01	pCi/L	80.50%	RD3234
	U-235		-8.28E-03	1.17E-02	1.18E-02	2.36E-01	pCi/L	80.50%	RD3234
	U-238DA		1.99E-01	2.07E-01	2.09E-01	2.36E-01	pCi/L	80.50%	RD3234
	CO-58	U	5.60E+00	5.07E+00	5.10E+00	1.14E+01	pCi/L	N/A	RD3219
	CO-60	U	-5.96E+00	5.06E+00	5.09E+00	7.15E+00	pCi/L	N/A	RD3219
	CS-137DA	U	-2.46E+00	5.06E+00	5.06E+00	8.71E+00	pCi/L	N/A	RD3219
	EU-152	U	-3.54E+00	9.79E+00	9.80E+00	1.70E+01	pCi/L	N/A	RD3219
	EU-154	U	-1.61E+00	1.16E+01	1.16E+01	2.15E+01	pCi/L	N/A	RD3219
	EU-155	U	1.37E+00	9.78E+00	9.78E+00	1.62E+01	pCi/L	N/A	RD3219
	FE-59	U	-1.08E+01	1.51E+01	1.51E+01	2.36E+01	pCi/L	N/A	RD3219
	ALPHA	U	3.96E-02	2.63E-01	2.63E-01	6.59E-01	pCi/L	100.00%	RD3214
	BETA	U	7.55E-01	1.27E+00	1.27E+00	2.70E+00	pCi/L	100.00%	RD3214
	STRONTIUM	U	3.77E-01	3.41E-01	3.55E-01	7.74E-01	pCi/L	100.00%	RD3204
	C-14	U	1.42E+00	1.53E+00	3.18E+00	4.72E+00	pCi/L	100.00%	RD3263
	TC-99	U	-9.09E-01	9.10E-01	4.10E+00	2.16E+00	pCi/L	95.10%	ITAS-IT-RS-0001
	TRITIUM	U	7.07E+01	1.04E+02	1.97E+02	2.38E+02	pCi/L	97.30%	RD3205

Number of Results: 19

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9613501.1795

IT ANALYTICAL SERVICES
RICHLAND, WA
(509) 375-3131

SAMPLE RESULTS

LAB NAME:	ITAS-RICHLAND	SDG:	W0082
LAB SAMPLE ID:	40607201	MATRIX:	WATER
CLIENT ID:	B0BMQ2	DATE RECEIVED:	6/6/94

	ISOTOPE		RESULT	COUNTING ERROR (2s)	TOTAL ERROR (2s)	MDA	REPORT UNIT	YIELD	METHOD NUMBER
	AM-241		4.37E-02	1.05E-01	1.05E-01	2.38E-01	pCi/L	74.20%	RD3302
	PU-238	U	-2.26E-02	3.20E-02	3.22E-02	3.20E-01	pCi/L	73.80%	RD3209
	PU239/40	U	1.02E-01	1.61E-01	1.62E-01	2.70E-01	pCi/L	73.80%	RD3209
	U-234		3.82E+00	9.51E-01	1.08E+00	2.94E-01	pCi/L	70.60%	RD3234
U	U-235	~~U~~	1.04E-01	1.68E-01	1.68E-01	2.94E-01	pCi/L	70.60%	RD3234
	U-238DA		3.14E+00	8.67E-01	9.64E-01	3.93E-01	pCi/L	70.60%	RD3234
	CO-58	U	3.64E+00	6.15E+00	6.16E+00	1.23E+01	pCi/L	N/A	RD3219
	CO-60	U	-3.53E+00	6.10E+00	6.11E+00	9.94E+00	pCi/L	N/A	RD3219
	CS-137DA	U	1.07E+00	3.42E+00	3.42E+00	6.77E+00	pCi/L	N/A	RD3219
	EU-152	U	1.30E+01	1.06E+01	1.07E+01	2.08E+01	pCi/L	N/A	RD3219
	EU-154	U	2.09E+00	1.43E+01	1.43E+01	2.70E+01	pCi/L	N/A	RD3219
	EU-155	U	1.70E+00	9.31E+00	9.31E+00	1.67E+01	pCi/L	N/A	RD3219
	FE-59	U	5.16E+00	1.34E+01	1.34E+01	2.75E+01	pCi/L	N/A	RD3219
	ALPHA		8.07E+00	2.42E+00	2.51E+00	2.12E+00	pCi/L	100.00%	RD3214
	BETA		9.01E+00	1.98E+00	2.08E+00	2.98E+00	pCi/L	100.00%	RD3214
	STRONTIUM	U	4.03E-02	2.35E-01	2.35E-01	8.00E-01	pCi/L	88.80%	RD3204
	C-14		8.45E+00	1.64E+00	3.38E+00	3.54E+00	pCi/L	100.00%	RD3263
	TC-99	U	5.31E-01	9.20E-01	4.05E+00	2.11E+00	pCi/L	95.10%	ITAS-IT-RS-0001
	TRITIUM		1.05E+04	2.93E+02	9.27E+02	2.53E+02	pCi/L	97.70%	RD3205

Number of Results: 19

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Rev. 00

IT ANALYTICAL SERVICES
RICHLAND, WA
(509) 375-3131

SAMPLE RESULTS

LAB NAME:	ITAS-RICHLAND	SDG:	W0082
LAB SAMPLE ID:	40613701	MATRIX:	WATER
CLIENT ID:	B0BMV6	DATE RECEIVED:	6/8/94

	ISOTOPE		RESULT	COUNTING ERROR (2s)	TOTAL ERROR (2s)	MDA	REPORT UNIT	YIELD	METHOD NUMBER
	AM-241	U	1.13E-01	1.83E-01	1.84E-01	3.21E-01	pCi/L	63.40%	RD3302
	PU-238	U	7.33E-02	1.47E-01	1.47E-01	1.99E-01	pCi/L	56.90%	RD3209
	PU239/40	U	-1.47E-02	2.93E-02	2.94E-02	3.51E-01	pCi/L	56.90%	RD3209
UR	U-234	~~U~~	-2.92E+00	2.92E+00	6.59E+00	4.87E+01	pCi/L	0.50%	RD3234
UR	U-235	~~U~~	-7.30E-01	1.46E+00	2.08E+00	3.67E+01	pCi/L	0.50%	RD3234
UR	U-238DA	~~U~~	-4.38E+00	3.58E+00	9.55E+00	5.41E+01	pCi/L	0.50%	RD3234
	CO-58	U	-2.23E+00	6.14E+00	6.14E+00	1.07E+01	pCi/L	N/A	RD3219
	CO-60	U	4.84E+00	3.42E+00	3.46E+00	9.60E+00	pCi/L	N/A	RD3219
	CS-137DA	U	-3.44E+00	4.45E+00	4.46E+00	6.56E+00	pCi/L	N/A	RD3219
	EU-152	U	-1.36E+01	1.04E+01	1.05E+01	1.49E+01	pCi/L	N/A	RD3219
	EU-154	U	5.18E+00	1.08E+01	1.08E+01	2.46E+01	pCi/L	N/A	RD3219
	EU-155	U	-4.46E+00	8.53E+00	8.55E+00	1.44E+01	pCi/L	N/A	RD3219
	FE-59	U	-5.92E+00	1.41E+01	1.42E+01	2.33E+01	pCi/L	N/A	RD3219
	ALPHA		4.47E+00	1.77E+00	1.82E+00	1.54E+00	pCi/L	100.00%	RD3214
	BETA	U	1.08E+00	1.43E+00	1.43E+00	2.99E+00	pCi/L	100.00%	RD3214
	STRONTIUM	U	6.40E-01	2.88E-01	3.31E-01	7.77E-01	pCi/L	93.20%	RD3204
	C-14	U	4.51E-01	1.52E+00	3.16E+00	3.54E+00	pCi/L	100.00%	RD3263
	TC-99		2.21E+00	9.43E-01	4.10E+00	2.53E+02	pCi/L	95.10%	ITAS-IT-RS-0001
	TRITIUM		6.02E+02	1.26E+02	2.49E+02	2.53E+02	pCi/L	97.70%	RD3205

Tc99 MDA: 2.11

Number of Results: 19

J	U234		3.206E00	.7346	.832	.236	pCi/L	99.6%	RD3234
	U235	U	7.366E-02	.1189	.1193	.209			
	U238	U	2.752E00	.6802	.7574	.278			

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IT ANALYTICAL SERVICES
RICHLAND, WA
(509) 375-3131

SAMPLE RESULTS

LAB NAME:	ITAS-RICHLAND	SDG:	W0082
LAB SAMPLE ID:	40613702	MATRIX:	WATER
CLIENT ID:	B0BMP8	DATE RECEIVED:	6/8/94

	ISOTOPE		RESULT	COUNTING ERROR (2s)	TOTAL ERROR (2s)	MDA	REPORT UNIT	YIELD	METHOD NUMBER
	AM-241	U	1.00E-01	1.42E-01	1.43E-01	1.36E-01	pCi/L	76.60%	RD3302
	PU-238	U	-2.98E-02	4.22E-02	4.24E-02	4.21E-01	pCi/L	56.00%	RD3209
	PU239/40	U	-1.49E-02	2.98E-02	2.99E-02	3.56E-01	pCi/L	56.00%	RD3209
UR	U-234	U	7.69E-01	2.29E+00	2.32E+00	6.03E+00	pCi/L	3.70%	RD3234
UR	U-235	U	-9.04E-02	1.81E-01	1.86E-01	4.55E+00	pCi/L	3.70%	RD3234
UR	U-238DA	U	-5.42E-01	4.43E-01	5.17E-01	6.70E+00	pCi/L	3.70%	RD3234
	CO-58	U	-2.52E+00	4.92E+00	4.92E+00	8.31E+00	pCi/L	N/A	RD3219
	CO-60	U	-1.85E+00	5.81E+00	5.81E+00	1.02E+01	pCi/L	N/A	RD3219
	CS-137DA	U	1.09E+00	4.07E+00	4.07E+00	7.92E+00	pCi/L	N/A	RD3219
	EU-152	U	-1.03E+01	1.04E+01	1.05E+01	1.59E+01	pCi/L	N/A	RD3219
	EU-154	U	-6.73E+00	1.29E+01	1.29E+01	2.25E+01	pCi/L	N/A	RD3219
	EU-155	U	-2.96E+00	7.20E+00	7.21E+00	1.16E+01	pCi/L	N/A	RD3219
	FE-59	U	-6.40E+00	1.57E+01	1.57E+01	2.76E+01	pCi/L	N/A	RD3219
	ALPHA	U	9.20E-01	7.21E-01	7.31E-01	1.16E+00	pCi/L	100.00%	RD3214
	BETA		2.25E+01	2.59E+00	3.04E+00	2.78E+00	pCi/L	100.00%	RD3214
	STRONTIUM		1.84E+02	3.23E+00	4.52E+01	9.05E-01	pCi/L	83.30%	RD3204
	C-14	U	1.89E+00	1.54E+00	3.19E+00	3.54E+00	pCi/L	100.00%	RD3263
	TC-99		2.96E+00	9.72E-01	4.16E+00	2.53E+02	pCi/L	95.10%	ITAS-IT-RS-0001
	TRITIUM		7.26E+02	1.29E+02	2.55E+02	2.09E+00	pCi/L	97.70%	RD3205

Tc99 MDA = 2.09
H3 253 MDA

Number of Results: 19

J U234	.4845	.3028	.3086	.308	pCi/L	95.6%	RD3234
U235	.1638	.1747	.1758	.217			
U238	.6030	.3264	.3344	.199			

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MW

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APPENDIX M

FIELD QC

RELATIVE PERCENT DIFFERENCE FOR FIELD QC

Validator: B. MORRIS
Date: 9-29-94

Constituent	CRQL	SAMPLE BOBMP4	DUPLICATE BOBMY0	RPD
Semivolatiles		0	0	NC
Pesticides/PCBs		0	0	NC
Volatiles-- all non-detect except the following:				
Acetone	10	4	17	123.8%
Methylene Chloride	10	0	3	200.0%

RELATIVE PERCENT DIFFERENCE FOR FIELD QC

Validator: B. MORRIS
Date: 9-29-94

Constituent	CRQL	SAMPLE BOBMP4	SPLIT BOBMY8	RPD
Semivolatiles		0	0	NC
Pesticides/PCBs		0	0	NC
Volatiles-- all non-detect except the following:				
Acetone	10	4	0	200.0%

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Organics

RELATIVE PERCENT DIFFERENCE FOR FIELD QC

Validator: B. MORRIS
Date: 9-29-94

Constituent	CRQL	SAMPLE BOBMQ6	DUPLICATE BOBMX6	RPD
Semivolatiles		0	0	NC
Pesticides/PCBs		0	0	NC
Volatiles-- all non-detect except the following:				
Acetone	10	16	7	78.3%
Methylene Chloride	10	2	1	66.7%
Chloroform	10	1	1	0.0%

RELATIVE PERCENT DIFFERENCE FOR FIELD QC

Validator: B. MORRIS
Date: 9-29-94

Constituent	CRQL	SAMPLE BOBMQ6	SPLIT BOBMY4	RPD
Semivolatiles-- all non-detect except the following:				
bis(2-Ethylhexyl)Phthal	10	0	2	200.0%
Pesticides/PCBs		0	0	NC
Volatiles-- all non-detect except the following:				
Acetone	10	16	0	200.0%
Methylene Chloride	10	2	1	66.7%
Chloroform	10	1	1	0.0%

RELATIVE PERCENT DIFFERENCE FOR FIELD QC

Validator: B. MORRIS
Date: 9-29-94

Constituent		CRDL	SAMPLE BOBMQ6	DUPLICATE BOBMX6	RPD
Aluminum	ug/L	200	0	41.3	200.0%
Antimony	ug/L	60	0	0	NC
Arsenic	ug/L	10	0	0	NC
Barium	ug/L	200	28.6	27.8	2.8%
Beryllium	ug/L	5	0	0	NC
Cadmium	ug/L	5	0	0	NC
Calcium	ug/L	5000	50800	52600	3.5%
Chromium	ug/L	10	54.0	44.8	18.6%
Cobalt	ug/L	50	0	0	NC
Copper	ug/L	25	0	0	NC
Iron	ug/L	100	1420	40.3	189.0%
Lead	ug/L	3	0	0	NC
Magnesium	ug/L	5000	7390	7600	2.8%
Manganese	ug/L	15	9.0	0	200.0%
Mercury	ug/L	0.2	0	0	NC
Nickel	ug/L	40	0	0	NC
Potassium	ug/L	5000	2100	1710	20.5%
Selenium	ug/L	5	2.1	0	200.0%
Silver	ug/L	10	0	0	NC
Sodium	ug/L	5000	6900	7170.0	3.8%
Thallium	ug/L	10	0	0	NC
Vanadium	ug/L	50	0	0	NC
Zinc	ug/L	20	10.2	9.4	8.2%
Titanium	ug/L	3	0	0	NC
Cyanide	ug/L	10	0	0	NC

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Metals

RELATIVE PERCENT DIFFERENCE FOR FIELD QC

Validator: B. MORRIS
Date: 9-29-94

Constituent		CRDL	SAMPLE BOBMQ6	SPLIT BOBMY4	RPD
Aluminum	ug/L	200	0	0	NC
Antimony	ug/L	60	0	0	NC
Arsenic	ug/L	10	0	0	NC
Barium	ug/L	200	28.6	29.6	3.4%
Beryllium	ug/L	5	0	0	NC
Cadmium	ug/L	5	0	0	NC
Calcium	ug/L	5000	50800	55700	9.2%
Chromium	ug/L	10	54.0	47.3	13.2%
Cobalt	ug/L	50	0	0	NC
Copper	ug/L	25	0	0	NC
Iron	ug/L	100	1420	83.1	177.9%
Lead	ug/L	3	0	1.6	200.0%
Magnesium	ug/L	5000	7390	8220	10.6%
Manganese	ug/L	15	9.0	2.6	110.3%
Mercury	ug/L	0.2	0	0	NC
Nickel	ug/L	40	0	0	NC
Potassium	ug/L	5000	2100	2700	25.0%
Selenium	ug/L	5	2.1	0	200.0%
Silver	ug/L	10	0	0	NC
Sodium	ug/L	5000	6900	7900	13.5%
Thallium	ug/L	10	0	0	NC
Vanadium	ug/L	50	0	0	NC
Zinc	ug/L	20	10.2	0	200.0%
Titanium	ug/L	3	0	0	NC
Cyanide	ug/L	10	0	0	NC

9613501.1803 Metals

RELATIVE PERCENT DIFFERENCE FOR FIELD QC

Validator: B. MORRIS
Date: 9-29-94

Constituent		CRDL	SAMPLE BOBMP4	DUPLICATE BOBMY0	RPD
Aluminum	ug/L	200	0	67.1	200.0%
Antimony	ug/L	60	0	0	NC
Arsenic	ug/L	10	0	0	NC
Barium	ug/L	200	23.1	22.8	1.3%
Beryllium	ug/L	5	0	0	NC
Cadmium	ug/L	5	0	0	NC
Calcium	ug/L	5000	26200	26100	0.4%
Chromium	ug/L	10	0	53.5	200.0%
Cobalt	ug/L	50	0	0	NC
Copper	ug/L	25	0	0	NC
Iron	ug/L	100	182	246.0	29.9%
Lead	ug/L	3	0	0	NC
Magnesium	ug/L	5000	4520	4420	2.2%
Manganese	ug/L	15	5.3	4.8	9.9%
Mercury	ug/L	0.2	0	0	NC
Nickel	ug/L	40	0	0	NC
Potassium	ug/L	5000	1540	0	200.0%
Selenium	ug/L	5	0	0	NC
Silver	ug/L	10	0	0	NC
Sodium	ug/L	5000	3050	3040.0	0.3%
Thallium	ug/L	10	0	0	NC
Vanadium	ug/L	50	0	0	NC
Zinc	ug/L	20	0	6.5	200.0%
Cyanide	ug/L	10	0	0	NC

9613501.1804 Metals

RELATIVE PERCENT DIFFERENCE FOR FIELD QC

Validator: B. MORRIS
Date: 9-29-94

Constituent		CRDL	SAMPLE BOBMP4	SPLIT BOBMY8	RPD
Aluminum	ug/L	200	0	0	NC
Antimony	ug/L	60	0	0	NC
Arsenic	ug/L	10	0	0	NC
Barium	ug/L	200	23.1	21.7	6.3%
Beryllium	ug/L	5	0	0	NC
Cadmium	ug/L	5	0	0	NC
Calcium	ug/L	5000	26200	28600	8.8%
Chromium	ug/L	10	0	5.5	200.0%
Cobalt	ug/L	50	0	0	NC
Copper	ug/L	25	0	3.9	200.0%
Iron	ug/L	100	182	157	14.7%
Lead	ug/L	3	0	1.6	200.0%
Magnesium	ug/L	5000	4520	4420	2.2%
Manganese	ug/L	15	5.3	3.0	55.4%
Mercury	ug/L	0.2	0	0	NC
Nickel	ug/L	40	0	0	NC
Potassium	ug/L	5000	1540	1900	20.9%
Selenium	ug/L	5	0	0	NC
Silver	ug/L	10	0	0	NC
Sodium	ug/L	5000	3050	3320	8.5%
Thallium	ug/L	10	0	0	NC
Vanadium	ug/L	50	0	0	NC
Zinc	ug/L	20	0	0	NC
Cyanide	ug/L	10	0	0	NC

RELATIVE PERCENT DIFFERENCE FOR FIELD QC

Validator: B. MORRIS
Date: 9-29-94

Constituent	IDL	SAMPLE BOBMP4	DUPLICATE BOBMY0	RPD
Chloride by IC	0.40	1.6	1.4	13.3%
Fluoride by IC	0.40	0	0	NC
Phosphate by IC	1.0	0	0	NC
Sulfate by IC	7.5	16	17	6.1%
Sulfide	1	6	5	18.2%
Nitrite+Nitrate	0.02	0.57	0.63	10.0%
TOC	1	1	1	0.0%
pH	N/A	7.55	7.44	1.5%
Alkalinity	2	70	78	10.8%
Ammonia	0.1	0.1	0.1	0.0%
COD	1	1	1	0.0%
Conductivity	1	199	202	1.5%
TDS	1	166	136	19.9%
TOX	20	37	48	25.9%

Constituent		IDL	SAMPLE BOBMP4	SPLIT BOBMY8	RPD
Chloride by IC	mg/L	0.40	1.6	1.1	37.0%
Fluoride by IC	mg/L	0.40	0	0.10	200.0%
Phosphate by IC	mg/L	1.0	0	0	NC
Sulfate by IC	mg/L	7.5	16	15	6.5%
Sulfide	mg/L	1	6	0	200.0%
Nitrite+Nitrate	mg/L	0.02	0.57	0.68	17.6%
TOC	mg/L	1	1	0	200.0%
pH	pH	N/A	7.55	7.60	0.7%
Alkalinity	mg/L	2	70	80	13.3%
Ammonia	mg/L	0.1	0.1	0	200.0%
COD	mg/L	1	1	0	200.0%
Conductivity	umho/cm	1	199	196	1.5%
TDS	mg/L	1	166	64	88.7%
TOX	mg/L	20	37	0	200.0%

Constituent		IDL	SAMPLE BOBMQ6	DUPLICATE BOBMX6	RPD
Chloride by IC	mg/L	0.40	11	10	9.5%
Fluoride by IC	mg/L	0.40	0.5	0	200.0%
Phosphate by IC	mg/L	1.0	0	0	NC
Sulfate by IC	mg/L	7.5	48	52	8.0%
Sulfide	mg/L	1	13	12	8.0%
Nitrite+Nitrate	mg/L	0.02	4.56	4.58	0.4%
TOC	mg/L	1	0	0	NC
pH	pH	N/A	7.53	7.59	0.8%
Alkalinity	mg/L	2	110	110	0.0%
Ammonia	mg/L	0.1	0	0	NC
COD	mg/L	1	0	0	NC
Conductivity	umho/cm	1	389	387	0.5%
TDS	mg/L	1	28	29	3.5%
TOX	mg/L	20	0	21	200.0%

Constituent		IDL	SAMPLE BOBMQ6	SPLIT BOBMY4	RPD
Chloride by IC	mg/L	0.40	11	9.4	15.7%
Fluoride by IC	mg/L	0.40	0.5	0.1	133.3%
Phosphate by IC	mg/L	1.0	0	0	NC
Sulfate by IC	mg/L	7.5	48	46	4.3%
Sulfide	mg/L	1	6	0	200.0%
Nitrite+Nitrate	mg/L	0.02	0.57	5.71	163.7%
TOC	mg/L	1	1	0	200.0%
pH	pH	N/A	7.55	7.80	3.3%
Alkalinity	mg/L	2	70	108	42.7%
Ammonia	mg/L	0.1	0.1	0	200.0%
COD	mg/L	1	1	0	200.0%
Conductivity	umho/cm	1	199	379	62.3%
TDS	mg/L	1	166	238	35.6%
TOX	mg/L	20	37	0	200.0%

9613501.1807 Hydrazine

RELATIVE PERCENT DIFFERENCE FOR FIELD QC

Validator: B. MORRIS
Date: 9-29-94

Constituent		IDL	SAMPLE BOBMP7	DUPLICATE BOBMY3	RPD
Hydrazine	ug/L	1.0	0	0	NC

Constituent		IDL	SAMPLE BOBMP7	SPLIT BOBMZ1	RPD
Hydrazine	ug/L	1.0	0	7.8	200.0%

Constituent		IDL	SAMPLE BOBMQ9	SPLIT BOBMY7	RPD
Hydrazine	ug/L	1.0	0	1.6	200.0%

9613501.1808 Radiochemistry

RELATIVE PERCENT DIFFERENCE FOR FIELD QC

Validator: B. MORRIS
Date: 9-29-94

Constituent		RDL	SAMPLE BOBMQ6	DUPLICATE BOBMX6	RPD
Alpha	pCi/L	3	3.69	4.36	16.6%
Beta	pCi/L	4	16.7	17.6	5.2%
Tritium	pCi/L	400	1330	1330	0.0%
C14	pCi/L	200	3.74	8.94	82.0%
Sr90	pCi/L	2	7.18	6.73	6.5%
U234	pCi/L	1	2.97	2.40	21.2%
U235	pCi/L	1	0	0	NC
U238	pCi/L	1	1.98	1.63	19.4%
Pu238	pCi/L	1	0	0	NC
Pu239/40	pCi/L	1	0	0	NC
Am241	pCi/L	1	0	0	NC
Tc99	pCi/L	15	0	0	NC
Gamma	pCi/L		0	0	NC

RELATIVE PERCENT DIFFERENCE FOR FIELD QC

Validator: B. MORRIS
Date: 9-29-94

Constituent		RDL	SAMPLE BOBMQ6	SPLIT BOBMY4	RPD
Alpha	pCi/L	3	3.69	4.70	24.1%
Beta	pCi/L	4	16.7	18.0	7.5%
Tritium	pCi/L	400	1330	1400	5.1%
C14	pCi/L	200	3.74	0	200.0%
Sr90	pCi/L	2	7.18	2.40	99.8%
U234	pCi/L	1	2.97	2.20	29.8%
U235	pCi/L	1	0	0	NC
U238	pCi/L	1	1.98	1.80	9.5%
Pu238	pCi/L	1	0	0	NC
Pu239/40	pCi/L	1	0	0	NC
Am241	pCi/L	1	0	0	NC
Tc99	pCi/L	15	0	0	NC
Gamma	pCi/L		0	0	NC

9613501.1809 Radiochemistry

RELATIVE PERCENT DIFFERENCE FOR FIELD QC

Validator: B. MORRIS
Date: 9-29-94

Constituent		RDL	SAMPLE BOBMP4	DUPLICATE BOBMY0	RPD
Alpha	pCi/L	3	0	1.37	200.0%
Beta	pCi/L	4	31.7	36.2	13.3%
Tritium	pCi/L	400	0	0	NC
C14	pCi/L	200	0	0	NC
Sr90	pCi/L	2	15.9	17.4	9.0%
U234	pCi/L	1	0	7.66	200.0%
U235	pCi/L	1	0	0.130	200.0%
U238	pCi/L	1	0	5.91	200.0%
Pu238	pCi/L	1	0	0	NC
Pu239/40	pCi/L	1	0	0	NC
Am241	pCi/L	1	0	0	NC
Tc99	pCi/L	15	2.12	0	200.0%
Gamma	pCi/L		0	0	NC

RELATIVE PERCENT DIFFERENCE FOR FIELD QC

Validator: B. MORRIS
Date: 9-29-94

Constituent		RDL	SAMPLE BOBMP4	SPLIT BOBMY8	RPD
Alpha	pCi/L	3	0	1.1	200.0%
Beta	pCi/L	4	31.7	36	12.7%
Tritium	pCi/L	400	0	0	NC
C14	pCi/L	200	0	0	NC
Sr90	pCi/L	2	15.9	19.0	17.8%
U234	pCi/L	1	0	0.58	200.0%
U235	pCi/L	1	0	0	NC
U238	pCi/L	1	0	0.35	200.0%
Pu238	pCi/L	1	0	0.043	200.0%
Pu239/40	pCi/L	1	0	0	NC
Am241	pCi/L	1	0	0	NC
Tc99	pCi/L	15	2.12	1.7	22.0%
Gamma	pCi/L		0	0	NC

9613501.1810

BHI-00108
Rev. 00

Validation Summary Report for the 100-FR-3 Operable Unit Round 5 Groundwater Sampling

Environmental Excellence
HANFORD

Prepared for the U.S. Department of Energy
Office of Environmental Restoration and
Waste Management

Bechtel Hanford, Inc.
Richland, Washington

Approved for Public Release

9613501_1811

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DISCLM-2.CHP (1-91)

9613501.1812

BHI-00108
REV: 00
OU: 100-FR-3
TSD: N/A
ERA: N/A

APPROVAL PAGE

Title of Document: VALIDATION SUMMARY REPORT FOR THE 100-FR-3 OPERABLE UNIT ROUND 5 GROUNDWATER SAMPLING

Author(s): R. L. Biggerstaff

Approval: R. L. Biggerstaff, Remedial Action Projects

R L Biggerstaff — 12/14/94

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BHI-DIS dk 12/15/94

TOTAL PAGES: 128

9613501.1815

BHI-00108
Rev. 00

Validation Summary Report for the 100-FR-3 Operable Unit Round 5 Groundwater Sampling

Author
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Date Published
December 1994

HANFORD

Prepared for the U.S. Department of Energy
Office of Environmental Restoration and
Waste Management

Bechtel Hanford, Inc.
Richland, Washington

Approved for Public Release

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1.0 INTRODUCTION

This report presents a summary of data validation results on groundwater samples collected for the 100-FR-3 Round 5 Groundwater Project.

The analyses performed for this project consisted of:

- Volatiles;
- Semivolatiles;
- Pesticides/PCBs;
- Metals: ICP + arsenic, lead, selenium, thallium, and mercury (filtered and unfiltered);
- General chemistry parameters: selected anions (fluoride, chloride, sulfate, phosphate), conductivity, pH, total dissolved solids, alkalinity, sulfide, ammonia, cyanide, total organic carbon, total organic halides, hydrazine, and nitrate + nitrite;
- Radiochemistry: gross alpha, gross beta, uranium-235/238, plutonium-239/240, americium-241, strontium-90, tritium, technetium-99, carbon-14, and gamma spectroscopy.

The sample analyses were conducted by the ORTEK, IT and TMA analytical laboratories.

As required by WHC contract number MVV-SVV-243789, data validation was conducted using Westinghouse data validation procedures (WHC 1993), in which 20% of the sample results were verified for transcription errors against the raw data and validated, with analytical results qualified accordingly. At the completion of validation and verification of each data package, a data validation summary was prepared and transmitted with the original documentation to Hanford Analytical Services (HAS) for inclusion in the project QA record. Tables 2.1, 3.1, 4.1, 5.1, 6.1, and 7.1 provide a summary and explanation of all qualifiers applied to the validated metals, chemistry, and radiochemistry results, respectively. Table 1.2 provides information concerning the data packages which were validated and verified.

Eight sections, including this introduction, comprise this report. Sections 2 through 7 provide summaries of the validation of volatile organics, semivolatilte organics, pesticides/PCBs, metals, general chemistry, and radiochemistry parameters, respectively. Section 8 provides a list of references used to prepare this report. Appendixes A through G of this report include validated data summary tables.

1.1 OBJECTIVES AND SCOPE

The objectives of this project were to validate 20% of the samples against defined laboratory performance (calibrations, blanks, spikes, duplicates and control samples) and verify all sample results by calculation and comparison to reported values. In addition, this

report provides a summary of the data in terms of defined laboratory performance criteria and project-specific data quality objectives to assure the data is acceptable for use in the 100-FR-3 Groundwater Monitoring Project. For purposes of this report, the validated results were reviewed against the following data quality indicators:

- Precision of laboratory and field duplicate measurements;
- Accuracy in terms of laboratory spikes, control samples, laboratory and field blanks and proper reporting;
- Representativeness in terms of field duplicate analyses;
- Completeness in terms of compliance with holding times, the percentage of valid measurements versus the total number of measurements performed and correctness of results; and
- Comparability in terms for split samples and reporting units.

Table 1.3 summarizes the qualifiers applied to each analysis data quality category.

1.2 SAMPLES AND ANALYSES VALIDATED

Table 1.2 provides a cross-reference list of all samples validated including data package tracking numbers, HEIS sample ID numbers, sample dates, sample type and analyses performed.

Table 1.1 Glossary of Data Reporting Qualifiers.

U- Indicates the compound or analyte was analyzed for and not detected in the sample. The value reported is the sample quantitation limit corrected for sample dilution and moisture content by the laboratory.

UJ- Indicates the compound or analyte was analyzed for and not detected in the sample. Due to a QC deficiency identified during data validation, the associated quantitation limit is an estimate.

J- Indicates the compound or analyte was analyzed for and detected. The associated concentration is an estimate, but the data are usable for decision making purposes.

BJ- Applied to inorganic analyses only. Indicates the analyte concentration was greater than the IDL but less than the CRDL and is considered an estimated value.

R- Indicates the compound or analyte was analyzed for, detected, and due to an identified QC deficiency the data are unusable.

UR- Indicates the compound or analyte was analyzed for and not detected in the sample. Additionally, the data are unusable due to an identified QC deficiency.

JN- Indicates a tentatively identified compound (TIC) that has been determined to be valid in terms of identification and quantitation.

UJN- Indicates a tentatively identified compound (TIC) that has been determined to be presumptive and valid (JN) in terms of identification and quantitation and has been qualified as undetected (U) due to associated blank contamination.

NJ- Indicates presumptive evidence of a compound at an estimated value. The data may not be valid for some specific application (i.e., usable for decision making purposes).

N- Indicates presumptive evidence of a compound. The data may not be valid for some specific applications (i.e., usable for decision making purposes).

Table 1.2 100-FR-3 Round 5 Groundwater Data Validation, List of Samples Validated.
(Page 1 of 5)

Data Package ID	Sample ID	Sample Date	Sample Type/ Well Number	Analysis
B0BMQ5-ORK-004	B0BMP3	17-May-94	INVESTIGATIVE/ 1-F1-2	GENERAL CHEMISTRY
B0BMQ5-ORK-004	B0BMP7	18-May-94	INVESTIGATIVE/ 1-F5-1	GENERAL CHEMISTRY
B0BMQ5-ORK-004	B0BMQ1	3-Jun-94	INVESTIGATIVE/ 1-F5-3	GENERAL CHEMISTRY
B0BMQ5-ORK-004	B0BMQ5	1-Jun-94	INVESTIGATIVE/ 1-F5-4	GENERAL CHEMISTRY
B0BMQ5-ORK-004	B0BMV9	6-Jun-94	INVESTIGATIVE/ 1-F7-2	GENERAL CHEMISTRY
B0BMQ5-ORK-004	B0BMX1	19-May-94	INVESTIGATIVE/ 1-F8-3	GENERAL CHEMISTRY
B0BMQ5-ORK-004	B0BMX5	23-May-94	INVESTIGATIVE/ 1-F8-4	GENERAL CHEMISTRY
B0BMQ5-ORK-004	B0BMY3	18-May-94	DUPLICATE/ 1-F5-1	GENERAL CHEMISTRY
B0BMQ5-ORK-004	B0BMZ1	18-May-94	SPLIT/ 1-F5-1	GENERAL CHEMISTRY
B0BMQ5-ORK-004	B0BMZ7	20-May-94	EQUIPMENT BLANK/ NA	GENERAL CHEMISTRY
B0BMQ5-ORK-004	B0BN01	25-May-94	EQUIPMENT BLANK/ NA	GENERAL CHEMISTRY
B0BMQ9-ORK-003	B0BMQ9	6-May-94	INVESTIGATIVE/ 1-F5-6	GENERAL CHEMISTRY
B0BMQ9-ORK-003	B0BMR3	11-May-94	INVESTIGATIVE/ 1-F5-42	GENERAL CHEMISTRY
B0BMQ9-ORK-003	B0BMR7	11-May-94	INVESTIGATIVE/ 1-F5-43A	GENERAL CHEMISTRY
B0BMQ9-ORK-003	B0BMS1	11-May-94	INVESTIGATIVE/ 1-F5-44	GENERAL CHEMISTRY
B0BMQ9-ORK-003	B0BMS5	10-May-94	INVESTIGATIVE/ 1-F5-45	GENERAL CHEMISTRY
B0BMQ9-ORK-003	B0BMS9	10-May-94	INVESTIGATIVE/ 1-F5-46	GENERAL CHEMISTRY
B0BMQ9-ORK-003	B0BMT3	12-May-94	INVESTIGATIVE/ 1-F5-47	GENERAL CHEMISTRY
B0BMQ9-ORK-003	B0BMT7	9-May-94	INVESTIGATIVE/ 1-F5-48	GENERAL CHEMISTRY
B0BMQ9-ORK-003	B0BMV1	12-May-94	INVESTIGATIVE/ 1-F6-1	GENERAL CHEMISTRY
B0BMQ9-ORK-003	B0BMV5	10-May-94	INVESTIGATIVE/ 1-F7-1	GENERAL CHEMISTRY
B0BMQ9-ORK-003	B0BMW7	9-May-94	INVESTIGATIVE/ 1-F8-2	GENERAL CHEMISTRY
B0BMQ9-ORK-003	B0BMX9	6-May-1994 ANALYSES CANCELLED	DUPLICATE/ 1-F8-6	GENERAL CHEMISTRY

Table 1.2 100-FR-3 Round 5 Groundwater Data Validation, List of Samples Validated.
(Page 2 of 5)

Data Package ID	Sample ID	Sample Date	Sample Type/ Well Number	Analysis
B0BMQ9-ORK-003	B0BMY7	6-May-94	SPLIT/ 1-F5-1	GENERAL CHEMISTRY
B0BMY4-TMA-760	B0BMY4	6-May-94	SPLIT/ 1-F5-6	VOA, SVOA, PEST/PCB, METALS. GENERAL CHEMISTRY, RADIOCHEMISTRY
B0BMY4-TMA-760	B0BMY5	6-May-94	SPLIT/ 1-F5-6	METALS
B0BMY4-TMA-760	B0BMY6	6-May-94	SPLIT/ 1-F5-6	VOA
B0BMY8-TMA-779	B0BMY8	18-May-94	SPLIT/ 1-F5-1	VOA, SVOA, PEST/PCB, METALS. GENERAL CHEMISTRY, RADIOCHEMISTRY
B0BMY8-TMA-779	B0BMY9	18-May-94	SPLIT/ 1-F5-1	METALS
B0BMY8-TMA-779	B0BMZ0	18-May-94	SPLIT/ 1-F5-1	VOA
W0055-ITC-060	B0BMQ6	6-May-94	INVESTIGATIVE/ 1-F5-6	VOA, SVOA, PEST/PCB, METALS. GENERAL CHEMISTRY, RADIOCHEMISTRY
W0055-ITC-060	B0BMQ7	6-May-94	INVESTIGATIVE/ 1-F5-6	METALS
W0055-ITC-060	B0BMQ8	6-May-94	INVESTIGATIVE/ 1-F5-6	VOA
W0055-ITC-060	B0BMR4	11-May-94	INVESTIGATIVE/ 1-F5-43A	VOA, SVOA, PEST/PCB, METALS. GENERAL CHEMISTRY, RADIOCHEMISTRY
W0055-ITC-060	B0BMR5	11-May-94	INVESTIGATIVE/ 1-F5-43A	METALS
W0055-ITC-060	B0BMR6	11-May-94	INVESTIGATIVE/ 1-F5-43A	VOA
W0055-ITC-060	B0BMS2	5/10/1994 METALS/SULFIDE CANCELLED	INVESTIGATIVE/ 1-F5-45	VOA, SVOA, PEST/PCB, METALS. GENERAL CHEMISTRY, RADIOCHEMISTRY
W0055-ITC-060	B0BMS3	10-May-94	INVESTIGATIVE/ 1-F5-45	METALS
W0055-ITC-060	B0BMS4	10-May-94	INVESTIGATIVE/ 1-F5-45	VOA
W0055-ITC-060	B0BMS6	10-May-94	INVESTIGATIVE/ 1-F5-46	VOA, SVOA, PEST/PCB, METALS. GENERAL CHEMISTRY, RADIOCHEMISTRY
W0055-ITC-060	B0BMS7	10-May-94	INVESTIGATIVE/ 1-F5-46	METALS
W0055-ITC-060	B0BMT4	9-May-94	INVESTIGATIVE/ 1-F5-48	VOA, SVOA, PEST/PCB, METALS. GENERAL CHEMISTRY, RADIOCHEMISTRY
W0055-ITC-060	B0BMT5	9-May-94	INVESTIGATIVE/ 1-F5-48	METALS
W0055-ITC-060	B0BMT6	9-May-94	INVESTIGATIVE/ 1-F5-48	VOA
W0055-ITC-060	B0BMW4	9-May-94	INVESTIGATIVE/ 1-F8-2	VOA, SVOA, PEST/PCB, METALS. GENERAL CHEMISTRY, RADIOCHEMISTRY
W0055-ITC-060	B0BMW5	9-May-94	INVESTIGATIVE/ 1-F8-2	METALS

Table 1.2 100-FR-3 Round 5 Groundwater Data Validation, List of Samples Validated. (Page 3 of 5)

Data Package ID	Sample ID	Sample Date	Sample Type/ Well Number	Analysis
W0055-ITC-060	B0BMW6	9-May-94	INVESTIGATIVE/ 1-F8-2	VOA
W0055-ITC-060	B0BMX6	6-May-94	INVESTIGATIVE/ 1-F8-6	VOA, SVOA, PEST/PCB, METALS. GENERAL CHEMISTRY, RADIOCHEMISTRY
W0055-ITC-060	B0BMX7	6-May-94	DUPLICATE/ 1-F8-6	METALS
W0055-ITC-060	B0BMX8	6-May-94	DUPLICATE/ 1-F8-6	VOA
W0062-ITC-062	B0BMP4	18-May-94	INVESTIGATIVE/ 1-F5-1	VOA, SVOA, PEST/PCB, METALS. GENERAL CHEMISTRY, RADIOCHEMISTRY
W0062-ITC-062	B0BMP5	18-May-94	INVESTIGATIVE/ 1-F5-1	METALS
W0062-ITC-062	B0BMP6	18-May-94	INVESTIGATIVE/ 1-F5-1	VOA
W0062-ITC-062	B0BMR0	11-May-94	INVESTIGATIVE/ 1-F5-42	VOA, SVOA, PEST/PCB, METALS. GENERAL CHEMISTRY, RADIOCHEMISTRY
W0062-ITC-062	B0BMR1	11-May-94	INVESTIGATIVE/ 1-F5-42	METALS
W0062-ITC-062	B0BMR2	11-May-94	INVESTIGATIVE/ 1-F5-42	VOA
W0062-ITC-062	B0BMR8	11-May-94	INVESTIGATIVE/ 1-F5-44	VOA, SVOA, PEST/PCB, METALS. GENERAL CHEMISTRY, RADIOCHEMISTRY
W0062-ITC-062	B0BMR9	11-May-94	INVESTIGATIVE/ 1-F5-44	METALS
W0062-ITC-062	B0BMS0	11-May-94	INVESTIGATIVE/ 1-F5-44	VOA
W0062-ITC-062	B0BMT0	12-May-94	INVESTIGATIVE/ 1-F5-47	VOA, SVOA, PEST/PCB, METALS. GENERAL CHEMISTRY, RADIOCHEMISTRY
W0062-ITC-062	B0BMT1	12-May-94	INVESTIGATIVE/ 1-F5-47	METALS
W0062-ITC-062	B0BMT2	12-May-94	INVESTIGATIVE/ 1-F5-47	VOA
W0062-ITC-062	B0BMT8	12-May-94	INVESTIGATIVE/ 1-F6-1	VOA, SVOA, PEST/PCB, METALS. GENERAL CHEMISTRY, RADIOCHEMISTRY
W0062-ITC-062	B0BMT9	12-May-94	INVESTIGATIVE/ 1-F6-1	METALS
W0062-ITC-062	B0BMV0	12-May-94	INVESTIGATIVE/ 1-F6-1	VOA
W0062-ITC-062	B0BMV2	10-May-94	INVESTIGATIVE/ 1-F7-1	VOA, SVOA, PEST/PCB, METALS. GENERAL CHEMISTRY, RADIOCHEMISTRY
W0062-ITC-062	B0BMV3	10-May-94	INVESTIGATIVE/ 1-F7-1	METALS
W0062-ITC-062	B0BMV4	10-May-94	INVESTIGATIVE/ 1-F7-1	VOA
W0062-ITC-062	B0BMW0	19-May-94	INVESTIGATIVE/ 1-F7-3	VOA, SVOA, PEST/PCB, METALS. GENERAL CHEMISTRY, RADIOCHEMISTRY
W0062-ITC-062	B0BMW1	19-May-94	INVESTIGATIVE/ 1-F7-3	METALS

Table 1.2 100-FR-3 Round 5 Groundwater Data Validation, List of Samples Validated. (Page 4 of 5)

Data Package ID	Sample ID	Sample Date	Sample Type/ Well Number	Analysis
W0062-ITC-062	B0BMW2	19-May-94	INVESTIGATIVE/ 1-F7-3	VOA
W0068-ITC-079	B0BMP0	17-May-94	INVESTIGATIVE/ 1-F1-2	VOA, SVOA, PEST/PCB, METALS. GENERAL CHEMISTRY, RADIOCHEMISTRY
W0068-ITC-079	B0BMP1	17-May-94	INVESTIGATIVE/ 1-F1-2	METALS
W0068-ITC-079	B0BMP2	17-May-94	INVESTIGATIVE/ 1-F1-2	VOA
W0068-ITC-079	B0BMW8	19-May-94	INVESTIGATIVE/ 1-F8-3	VOA, SVOA, PEST/PCB, METALS. GENERAL CHEMISTRY, RADIOCHEMISTRY
W0068-ITC-079	B0BMW9	19-May-94	INVESTIGATIVE/ 1-F8-3	METALS
W0068-ITC-079	B0BMX0	19-May-94	INVESTIGATIVE/ 1-F8-3	VOA
W0068-ITC-079	B0BMX2	23-May-94	INVESTIGATIVE/ 1-F8-4	VOA, SVOA, PEST/PCB, METALS. GENERAL CHEMISTRY, RADIOCHEMISTRY
W0068-ITC-079	B0BMX3	23-May-94	INVESTIGATIVE/ 1-F8-4	METALS
W0068-ITC-079	B0BMX4	23-May-94	INVESTIGATIVE/ 1-F8-4	VOA
W0068-ITC-079	B0BMY0	18-May-94	DUPLICATE/ 1-F5-F	VOA, SVOA, PEST/PCB, METALS. GENERAL CHEMISTRY, RADIOCHEMISTRY
W0068-ITC-079	B0BMY1	18-May-94	DUPLICATE/ 1-F5-1	METALS
W0068-ITC-079	B0BMY2	18-May-94	DUPLICATE/ 1-F5-1	VOA
W0068-ITC-079	B0BMZ2	20-May-94	EQUIPMENT BLANK/ NA	VOA, SVOA, PEST/PCB, METALS. GENERAL CHEMISTRY, RADIOCHEMISTRY
W0068-ITC-079	B0BMZ3	20-May-94	EQUIPMENT BLANK/ NA	METALS
W0068-ITC-079	B0BMZ6	20-May-94	EQUIPMENT BLANK/ NA	VOA
W0068-ITC-079	B0BMZ8	25-May-94	EQUIPMENT BLANK/ NA	VOA, SVOA, PEST/PCB, METALS. GENERAL CHEMISTRY, RADIOCHEMISTRY
W0068-ITC-079	B0BMZ9	25-May-94	EQUIPMENT BLANK/ NA	METALS
W0068-ITC-079	B0BN00	25-May-94	EQUIPMENT BLANK/ NA	VOA
W0082-ITC-096	B0BMP8	3-Jun-94	INVESTIGATIVE/ 1-F5-3	VOA, SVOA, PEST/PCB, METALS. GENERAL CHEMISTRY, RADIOCHEMISTRY
W0082-ITC-096	B0BMP9	3-Jun-94	INVESTIGATIVE/ 1-F5-3	METALS
W0082-ITC-096	B0BMQ0	3-Jun-94	INVESTIGATIVE/ 1-F5-3	VOA
W0082-ITC-096	B0BMQ2	1-Jun-94	INVESTIGATIVE/ 1-F5-4	VOA, SVOA, PEST/PCB, METALS. GENERAL CHEMISTRY, RADIOCHEMISTRY
W0082-ITC-096	B0BMQ3	1-Jun-94	INVESTIGATIVE/ 1-F5-4	METALS

Table 1.2 100-FR-3 Round 5 Groundwater Data Validation, List of Samples Validated.
(Page 5 of 5)

Data Package ID	Sample ID	Sample Date	Sample Type/ Well Number	Analysis
W0082-ITC-096	B0BMQ4	1-Jun-94	INVESTIGATIVE/ 1-F5-4	VOA
W0082-ITC-096	B0BMV6	6-Jun-94	INVESTIGATIVE/ 1-F7-2	VOA, SVOA, PEST/PCB, METALS. GENERAL CHEMISTRY, RADIOCHEMISTRY
W0082-ITC-096	B0BMV7	6-Jun-94	INVESTIGATIVE/ 1-F7-2	METALS
W0082-ITC-096	B0BMV8	6-Jun-94	INVESTIGATIVE/ 1-F7-2	VOA
W0082-ITC-096	B0C1G5	2-Jun-94	INVESTIGATIVE/ 1-F1-2	VOA, SVOA, PEST/PCB, METALS. GENERAL CHEMISTRY, RADIOCHEMISTRY
W0082-ITC-096	BOBMN8	6-Jun-94	METHOD BLANK/ 1-F7-2	VOA
W0082-ITC-096	BOBMN9	6-Jun-94	METHOD BLANK/ 1-F7-2	VOA

Table 1.3 Data Quality Objectives.

SDG	VW#		Number of Determinations	Number of Determinations Rejected	% Rejected	% Complete
BOBMY4-TMA-760	40256	General Chemistry	16	0	0%	100%
W0062-ITC-062	40266	General Chemistry	98	0	0%	100%
W0062-ITC-062	40267	General Chemistry	98	7	7%	93%
BOBMY4-TMA-779	40271	General Chemistry	16	1	6%	94%
WOO68-ITC-079	40272	General Chemistry	84	7	8%	92%
W0082-ITC-096	40276	General Chemistry	44	3	7%	93%
BOBMY4-TMA-760	40256	Inorganics	47	0	0%	100%
W0062-ITC-062	40266	Inorganics	329	0	0%	100%
W0055-ITC-060	40267	Inorganics	306	0	0%	100%
BOBMY8-TMA-779	40271	Inorganics	47	0	0%	100%
W0068-ITC-079	40272	Inorganics	282	0	0%	100%
WOO82-ITC-096	40276	Inorganics	164	0	0%	100%
BOBMY4-TMA-760	40256	Pesticides/PCBs	28	0	0%	100%
W0062-ITC-062	40266	Pesticides/PCBs	196	0	0%	100%
W0055-ITC-060	40267	Pesticides/PCBs	196	0	0%	100%
BOBMY8-TMA-779	40271	Pesticides/PCBs	28	0	0%	100%
W0068-ITC-079	40272	Pesticides/PCBs	168	0	0%	100%
W0082-ITC-096	40276	Pesticides/PCBs	112	0	0%	100%
BOBMY4-TMA-760	40256	Radiochemistry	32	0	0%	100%
WOO62-ITC-062	40266	Radiochemistry	133	0	0%	100%
W0055-ITC-060	40267	Radiochemistry	147	0	0%	100%
BOBMY8-TMA-779	40271	Radiochemistry	32	0	0%	100%
WOO68-ITC-079	40272	Radiochemistry	114	0	0%	100%
W0082-ITC-096	40276	Radiochemistry	57	0	0%	100%
BOBMY4-TMA-760	40256	Semivolatiles	65	0	0%	100%
WOO62-ITC-062	40266	Semivolatiles	448	0	0%	100%
W0055-ITC-060	40267	Semivolatiles	445	0	0%	100%
BOBMY8-TMA-779	40271	Semivolatiles	65	0	0%	100%
W0068-ITC-079	40272	Semivolatiles	390	0	0%	100%
W0082-ITC-096	40276	Semivolatiles	256	0	0%	100%
BOBMY4-TMA-760	40256	Volatiles	66	0	0%	100%
WOO62-ITC-062	40266	Volatiles	462	0	0%	100%
W0055-ITC-060	40267	Volatiles	462	0	0%	100%
BOBMY8-TMA-779	40271	Volatiles	66	0	0%	100%
W0068-ITC-079	40272	Volatiles	495	0	0%	100%
W0082-ITC-096	40276	Volatiles	297	0	0%	100%
BOBMQ9-ORK-003	40261	General Chemistry	13	0	0%	100%
BOBMQ5-ORK-004	40265	General Chemistry	11	0	0%	100%
100FR-3		OVERALL	6325	18	0.3%	99.7%

2.0 VOLATILE ORGANIC DATA VALIDATION SUMMARY

2.1 SUMMARY

This section presents a summary of the volatile organic data validation results and review against the Work Plan (DOE-RL 1992). Where appropriate, major deficiencies are identified which required qualification of data as unusable (R for detects, UR for non-detects) and minor deficiencies are identified which resulted in qualification of associated data as estimated (J for detected values, and UJ for non-detected values) or non-detect (U) due to blank contamination. Table 1.2 shows the data package identification, HEIS sample ID numbers, sample collection date, sample type, and analyses performed.

Precision

- Goals for precision were met.

Accuracy

- Goals for accuracy were met.

Representativeness

- Field duplicate RPD values were acceptable with the exception of acetone. The field duplicate results are summarized in Appendix G.

Completeness

- Overall 1848 determinations were reported. Out of the 1848 results reported, zero (0) results were determined to be unusable. All volatile organic results were deemed valid. This results in a completeness of 100% for precision and accuracy, which meets the program requirement of 90%.

Comparability

- All results were reported in common units (μg/L) facilitating comparison of the data.

Table 2.1 100-FR-3 Qualification Summary. (Page 1 of 2)

Volatile Organic Blanks

SDG	VW#	ANALYTE	TYPE	QUALIFIER	SAMPLES AFFECTED	REASON
W0062-ITC-062	40266	acetone	MINOR	10U	BOBMP4, BOBMR0, BOBMR8, BOBMT0, BOBMT2, BOBMT8, BOBMV0, BOBMW2, BOBMV2, BOBMW0	The method blank was positive with sample results <10X the associated blank value and <CRQL.
W0062-ITC-062	40266	acetone	MINOR	U	BOBMR2, BOBMV4, BOBMP6, BOBMS0	The method blank was positive with sample results <10X the associated blank value.
W0062-ITC-062	40266	methylene chloride	MINOR	10U	BOBMR2, BOBMR8, BOBMS0, BOBMT0, BOBMT8, BOBMV0, BOBMV4	The method blank was positive with sample results <10X the associated blank value and <CRQL.
W0062-ITC-062	40266	methylene chloride	MINOR	U	BOBMV2	The method blank was positive with sample results <10X the associated blank value.
W0055-ITC-060	40267	2-butanone	MINOR	10U	BOBMS4	The method blank positive result <CRDL.
W0055-ITC-060	40267	2-hexanone	MINOR	10U	BOBMX8	The method blank positive result <CRDL.
W0055-ITC-060	40267	acetone	MINOR	10U	BOBMX6, BOBMW4, BOBMR4, BOBMS6	The method blank positive result <CRDL.
W0055-ITC-060	40267	acetone	MINOR	U	BOBMQ6, BOBMQ8, BOBMS4, BOBMS8, BOBMT6, BOBMR6, BOBMS2, BOBMT4, BOBMW6	The method blank positive result >CRDL and <10X blank.
W0055-ITC-060	40267	methylene chloride	MINOR	10U	BOBMS2, BOBMS3, BOBMS4, BOBMR4, BOBMR5, BOBMR6, BOBMX6, BOBMX7, BOBMX8, BOBMQ6, BOBMQ7, BOBMQ8, BOBMS6, BOBMS7, BOBMS8, BOBMT4, BOBMT5, BOBMT6, BOBMW4, BOBMW5, BOBMW6	The method blank positive result <CRDL.
W0068-ITC-079	40272	acetone	MINOR	U	BOBMZ8, BOBNO0	The method blank was positive with sample results <10x the associated blank value.
W0068-ITC-079	40272	methylene chloride	MINOR	10U	BOBMZ8, BOBN00	The method blank was positive with sample results <10X the associated blank value and <CRQL.
W0082-ITC-096	40276	acetone	MINOR	10U/U	BOBMQ2, BOBMQ4, BOBMV6, BOBMV8, BOBMN8, BOBMN9, BOBMP8, BOBMQ0	The method blank was positive with sample results <10X the associate blank value.
W0082-ITC-096	40276	chloroform	MINOR	10U	BOBMQ2, BOBMQ4, BOBMV6, BOBMV8, BOBMN8, BOBMN9, BOBMP8, BOBMQ0	The method blank was positive with sample results <10X the associated blank value and <CRQL.
W0082-ITC-096	40276	methylene chloride	MINOR	U	BOBMQ2, BOBMQ4, BOBMV6, BOBMV8, BOBMN8, BOBMN9, BOBMP8, BOBMQ0	The method blank was positive with sample results <10X the associated blank value.

Table 2.1 100-FR-3 Qualification Summary. (Page 2 of 2)

Volatile Organic
Calibration

SDG	VW#	ANALYTE	TYPE	QUALIFIER	SAMPLES AFFECTED	REASON
W0068-ITC-079	40272	1,1,1-trichloroethane	MINOR	UJ	BOBMZ8, BOBN00	Continuing calibration %D exceeded acceptance criteria.
W0068-ITC-079	40272	1,1,2,2-tetrachloroethane	MINOR	UJ	BOBMZ6, BOBMZ2, BOBMX4, BOBMX2, BOBMP2, BOBMP0	Continuing calibration %D exceeded acceptance criteria.
W0068-ITC-079	40272	carbon tetrachloride	MINOR	UJ	BOBMZ8, BOBN00	Continuing calibration %D exceeded acceptance criteria.
W0068-ITC-079	40272	vinyl chloride	MINOR	UJ	BOBMW8, BOBMX0, BOBMY0, BOBMY2, BOBMZ6, BOBMZ2, BOBMX4, BOBMX2, BOBMP2, BOBMP0	Continuing calibration %D exceeded acceptance criteria.
W0082-ITC-096	40276	1,1,1-trichloroethane	MINOR	UJ	BOBMQ2, BOBMQ4, BOBMV6, BOBMV8, BOBMN8, BOBMN9, BOBMP8, BOBMQ0	Continuing calibration %D exceeded acceptance criteria.
W0082-ITC-096	40276	carbon tetrachloride	MINOR	UJ	BOBMQ2, BOBMQ4, BOBMV6, BOBMV8, BOBMN8, BOBMN9, BOBMP8, BOBMQ0	Continuing calibration %D exceeded acceptance criteria.

Volatile Organic
Hold Time

SDG	VW#	ANALYTE	TYPE	QUALIFIER	SAMPLES AFFECTED	REASON
W0068-ITC-079	40272	All reported analytes	MINOR	J/UJ	BOBMP0,BOBMP2	Hold time exceeded by <2 times.

Volatile Organic
Other

SDG	VW#	ANALYTE	TYPE	QUALIFIER	SAMPLES AFFECTED	REASON
W0068-ITC-079	40272	acetone	MINOR	5J	BOBMP0	The value was incorrectly reported as non-detect.

Volatile Organic
Tentatively Identivied Compounds (TICs)

SDG	VW#	ANALYTE	TYPE	QUALIFIER	SAMPLES AFFECTED	REASON
W0055-ITC-060	40267	unknown @ RT 9.15	MINOR	JN	BOBMX8	Identified as a valid result based upon data validation procedures
W0062-ITC-062	40266	unknown @ RT 2.00	MINOR	JN	BOBMP4, BOBMW0	Identified as a valid result based upon data validation procedures
W0062-ITC-062	40266	unknown Alkane @ RT 16.27	MINOR	JN	BOBMW0	Identified as a valid result based upon data validation procedures
W0082-ITC-096	40276	unknown Alkane @ RT 4.70	MINOR	JN	BOBMN9	Identified as a valid result based upon data validation procedures

3.0 SEMIVOLATILE ORGANIC DATA VALIDATION SUMMARY

3.1 SUMMARY

This section presents a summary of the semivolatile organic data validation results and review against the Work Plan (DOE-RL 1992). Where appropriate, major deficiencies are identified which required qualification of data as unusable (R for detects, UR for non-detects) and minor deficiencies are identified which resulted in qualification of associated data as estimated (J for detected values, and UJ for non-detected values) or non-detect (U) due to blank contamination. Table 1.2 shows the data package identification, HEIS sample ID numbers, sample collection date, sample type, and analyses performed.

Precision

- Goals for precision were met with the exception of 1,3-dichlorobenzene, 1,4-dichlorobenzene, 1,2-dichlorobenzene, hexachloroethane, hexachlorobutadiene, and hexachlorocyclopentadiene.

Accuracy

- Goals for accuracy were met with the exception of 1,3-dichlorobenzene, 1,4-dichlorobenzene, 1,2-dichlorobenzene, hexachloroethane, hexachlorobutadiene, hexachlorocyclopentadiene, 2,4-dinitrophenol, 2-nitrophenol, and 4-nitrophenol.

Representativeness

- Field duplicate RPD values were acceptable. The field duplicate results are summarized in Appendix G.

Completeness

- Overall 1679 determinations were reported. Out of the 1679 results reported, no results were determined to be unusable. All semivolatile organic results were deemed valid. This results in a completeness of 100% for precision and accuracy, which meets the program requirement of 90%.

- The holding time was not met for sample BOBMP0.

Comparability

- All results were reported in common units (μg/L) facilitating comparison of the data.

Table 3.1 100-FR-Qualification Summary. (Page 1 of 2)

Semivolatile Organic
Accuracy

SDG	VW#	ANALYTE	TYPE	QUALIFIER	SAMPLES AFFECTED	REASON
BOBMY8-TMA-779	40271	1,3-dichlorobenzene, 1,4-dichlorobenzene, 1,2-dichlorobenzene, hexachloroethane, hexachlorobutadiene, hexachlorocyclopentadiene	MINOR	UJ	BOBMY8	The MSD recovery was less than the control limit.
W0068-ITC-079	40272	2,4-dinitrophenol	MINOR	UJ	BOBMW8, BOBMY0, BOBMP0, BOBMX2, BOBMZ2, BOBMZ8	The MS/MSD recoveries were >80%.
W0068-ITC-079	40272	2-nitrophenol	MINOR	UJ	BOBMW8, BOBMY0, BOBMP0, BOBMX2, BOBMZ2, BOBMZ8	The MS/MSD recoveries were >80%.
W0068-ITC-079	40272	4-nitrophenol	MINOR	UJ	BOBMW8, BOBMY0, BOBMP0, BOBMX2, BOBMZ2, BOBMZ8	The MS/MSD recoveries were >80%.

Semivolatile Organic
Blanks

SDG	VW#	ANALYTE	TYPE	QUALIFIER	SAMPLES AFFECTED	REASON
BOBMY4-TMA-760	40256	unknown ketone	MINOR	U	BOBMY4	The method blank was positive with sample results <10X the associated blank value.

Semivolatile Organic
Calibration

SDG	VW#	ANALYTE	TYPE	QUALIFIER	SAMPLES AFFECTED	REASON
BOBMY4-TMA-760	40256	2-nitroaniline	MINOR	UJ	BOBMY4	Continuing calibration %D exceeded acceptance criteria.
BOBMY4-TMA-760	40256	4-nitrophenol	MINOR	UJ	BOBMY4	Continuing calibration %D exceeded acceptance criteria.
BOBMY4-TMA-760	40256	hexachlorobenzene	MINOR	UJ	BOBMY4	Continuing calibration %D exceeded acceptance criteria.
W0055-ITC-060	40267	benzo(k)fluoranthene	MINOR	UJ	BOBMS2, BOBMS3, BOBMS4, BOBMR4, BOBMR5, BOBMR6, BOBMX6, BOBMX7, BOBMX8, BOBMQ6, BOBMQ7, BOBMQ8, BOBMS6, BOBMS7, BOBMS8, BOBMT4, BOBMT5, BOBMT6, BOBMW4, BOBMW5, BOBMW6	% RSD > 20.5.
W0055-ITC-060	40267	chrysene	MINOR	UJ	BOBMS2, BOBMS3, BOBMS4, BOBMR4, BOBMR5, BOBMR6, BOBMX6, BOBMX7, BOBMX8, BOBMQ6, BOBMQ7, BOBMQ8, BOBMS6, BOBMS7, BOBMS8, BOBMT4, BOBMT5, BOBMT6, BOBMW4, BOBMW5, BOBMW6	% RSD > 20.5.
W0055-ITC-060	40267	fluoranthene	MINOR	UJ	BOBMS2, BOBMS3, BOBMS4, BOBMR4, BOBMR5, BOBMR6, BOBMX6, BOBMX7, BOBMX8, BOBMQ6, BOBMQ7, BOBMQ8, BOBMS6, BOBMS7, BOBMS8, BOBMT4, BOBMT5, BOBMT6, BOBMW4, BOBMW5, BOBMW6	%D > 25.

Semivolatile Organic
Calibration (continued)

SDG	VW#	ANALYTE	TYPE	QUALIFIER	SAMPLES AFFECTED	REASON
W0068-ITC-079	40272	4-methlyphenol	MINOR	UJ	BOBMW8, BOBMY0, BOBMP0, BOBMX2, BOBMZ2, BOBMZ8	Initial calibration RSD exceeded acceptance criteria.

Table 3.1 100-FR-Qualification Summary. (Page 2 of 2)

W0068-ITC-079	40272	chrysene	MINOR	UJ	BOBMW8, BOBMY0, BOBMP0, BOBMX2, BOBMZ2,	Continuing calibration %D exceeded acceptance criteria.
W0068-ITC-079	40272	N-nitroso-di-n-propylamine	MINOR	UJ	BOBMZ8	Continuing calibration %D exceeded acceptance criteria.
W0068-ITC-079	40272	pyrene	MINOR	UJ	BOBMW8, BOBMY0, BOBMP0, BOBMX2, BOBMZ2,	Continuing calibration %D exceeded acceptance criteria.
W0082-ITC-096	40276	hexachlorobenzene	MINOR	UJ	BOBMP8, BOBMQ2, BOBMV6, BOCIG5	Continuing calibration %D exceeded acceptance criteria.

Semivolatile Organic
Hold Time

SDG	VW#	ANALYTE	TYPE	QUALIFIER	SAMPLES AFFECTED	REASON
W0055-ITC-060	40267	All reported analytes	MINOR	UJ	BOBMX6, BOBMQ6	Hold time exceeded.

Semivolatile Organic
Precision

SDG	VW#	ANALYTE	TYPE	QUALIFIER	SAMPLES AFFECTED	REASON
BOBMY8-TMA-779	40271	1,3-dichlorobenzene, 1,4-dichlorobenzene, 1,2-dichlorobenzene, hexachloroethane, hexachlorobutadiene, hexachlorocyclopentadiene	MINOR	UJ	BOBMY8	Duplicate criteria not met.

Semivolatile Organic
Tentatively Identified Compounds (TICs)

SDG	VW#	ANALYTE	TYPE	QUALIFIER	SAMPLES AFFECTED	REASON
W0055-ITC-060	40267	trichloro-1-propene @ RT 5.40, 5.42	MINOR	JN	BOBMT4 BOBMS2	Identified as a valid result based upon data validation procedures
W0055-ITC-060	40267	unknown @ RT 17.37	MINOR	JN	BOBMR4	Identified as a valid result based upon data validation procedures
W0055-ITC-060	40267	unknown @ RT 6.25	MINOR	JN	BOBMT4	Identified as a valid result based upon data validation procedures
W0068-ITC-079	40272	unknown @ RT 11.92, 14.63 and 19.35	MINOR	JN	BOBMW8	Identified as a valid result based upon data validation procedures
BOBMY4-TMA-760	40256	unknown keytone @ RT 5.67	MINOR	UJN	BOBMY4	Identified as a valid result based upon data validation procedures
W0062-ITC-062	40256	unknown @ RT 6.15	MINOR	JN	BOBMT0	Identified as a valid result based upon data validation procedures

4.0 PESTICIDES/PCBs DATA VALIDATION SUMMARY

4.1 SUMMARY

This section presents a summary of the pesticides/PCBs data validation results and review against the Work Plan (DOE-RL 1992). Where appropriate, major deficiencies are identified which required qualification of data as unusable (R for detects, UR for non-detects) and minor deficiencies are identified which resulted in qualification of associated data as estimated (J for detected values, and UJ for non-detected values) or non-detect (U) due to blank contamination. Table 1.2 shows the data package identification, HEIS sample ID numbers, sample collection date, sample type, and analyses performed.

Precision

- Goals for precision were met.

Accuracy

- Goals for accuracy were met.

Representativeness

- Field duplicate RPD values were acceptable. The field duplicate results are summarized in Appendix G.

Completeness

- Overall 728 determinations were reported. Out of the 728 results reported, there were no results determined to be unusable. All results for pesticides/PCBs were deemed valid. This results in a completeness of 100% for precision and accuracy, which meets the program requirement of 90%.

Comparability

- All results were reported in common units (μg/L) facilitating comparison of the data.

Table 4.1 100-FR-3 Qualification Summary.

Pesticides/PCBs
Calibration

SDG	VW#	ANALYTE	TYPE	QUALIFIER	SAMPLES AFFECTED	REASON
W0068-ITC-079	40272	4,4'-DDD	MINOR	UJ	BOBMW8, BOBMX2, BOBMY0, BOBMZ2, BOBMZ8, BOBMP0	Initial calibration RSD exceeded acceptance criteria.
W0068-ITC-079	40272	dieldrin	MINOR	UJ	BOBMZ8	Initial calibration RSD exceeded acceptance criteria.
W0068-ITC-079	40272	endrin ketone	MINOR	UJ	BOBMZ8	Initial calibration RSD exceeded acceptance criteria.
W0068-ITC-079	40272	heptachlor	MINOR	UJ	BOBMW8, BOBMX2, BOBMY0, BOBMZ2, BOBMZ8, BOBMP0	Initial calibration RSD exceeded acceptance criteria.
W0068-ITC-079	40272	heptachlor epoxide	MINOR	UJ	BOBMW8, BOBMX2, BOBMY0, BOBMZ2, BOBMZ8, BOBMP0	Initial calibration RSD exceeded acceptance criteria.

Pesticides/PCBs
Hold Time

SDG	VW#	ANALYTE	TYPE	QUALIFIER	SAMPLES AFFECTED	REASON
W0055-ITC-060	40267	All reported analytes	MINOR	UJ	BOBMX6, BOBMQ6	Hold time exceeded.
W0068-ITC-079	40272	All reported analytes	MINOR	UJ	BOBMP0	Hold time exceeded.

5.0 METALS DATA VALIDATION SUMMARY

5.1 SUMMARY

This section presents a summary of the metals data validation results and review against the Work Plan (DOE-RL 1988). Where appropriate, major deficiencies are identified which required qualification of data as unusable (R for detects, UR for non-detects) and minor deficiencies are identified which resulted in qualification of associated data as estimated (J for detected values greater than the CRDL, BJ for detected values less than the CRDL but greater than the IDL, and UJ for non-detected values) or non-detect (U) due to blank contamination. Table 1.2 shows the data package identification, HEIS sample ID numbers, sample collection date, sample type, and analyses performed.

Precision

- Laboratory duplicate RPD results were acceptable with the exception of minor exceedances for iron, aluminum, barium, lead, manganese, calcium, magnesium, and sodium.

- Laboratory graphite furnace atomic absorption (GFAA) duplicate injections were acceptable for results greater than the IDL.

Accuracy

- Matrix spike recoveries were acceptable with the exception of lead, selenium, and aluminum.

- Graphite furnace AA analytical spike recoveries were acceptable with the exception of lead, selenium, and thallium.

- Laboratory control standard recoveries were acceptable.

Representativeness

- Field duplicate RPD values were acceptable with the exception of chromium, calcium, iron, manganese, and nickel. The field duplicate results are summarized in Appendix G.

Completeness

- Overall 1175 determinations were reported. Out of the 1175 results reported, there were no results determined to be unusable. All inorganic results were deemed valid. This results in a completeness of 100% for precision and accuracy, which meets the program requirement of 90%.

Comparability

- All results were reported in common units (μg/L) facilitating comparison of the data.

Table 5.1 100-FR-3 Qualification Summary. (Page 1 of 3)

Inorganics
Accuracy

SDG	VW#	ANALYTE	TYPE	QUALIFIER	SAMPLES AFFECTED	REASON
W0062-ITC-062	40266	lead	MINOR	BJ/UJ	BOBMT0, BOBMT1, BOBMT8, BOBMT9, BOBMW0, BOBMW1, BOBMV2	The analytical spike recovery was outside the limit of 85 - 115%.
W0062-ITC-062	40266	selenium	MINOR	BJ/UJ	BOBMV3, BOBMR0, BOBMR1, BOBMR8, BOBMR9, BOBMT0, BOBMT1, BOBMP4, BOBMP5, BOBMW0, BOBMW1	The analytical spike recovery was outside the limit of 85 - 115%.
W0062-ITC-062	40266	selenium	MINOR	BJ/UJ	BOBMV3, BOBMR1, BOBMR9, BOBMT1, BOBMT9, BOBMP5, BOBMW1	The MS recovery was <75%.
W0055-ITC-060	40267	lead	MINOR	BJ	BOBMQ7	The analytical spike recovery was outside the limit of 85 - 115%.
W0055-ITC-060	40267	selenium	MINOR	BJ	BOBMT5, BOBMQ6	The analytical spike recovery was outside the limit of 85 - 115%.
W0055-ITC-060	40267	selenium	MINOR	UJ	BOBMR5, BOBMS3, BOBMS6, BOBMS7	The analytical spike recovery was outside the limit of 85 - 115%.
W0055-ITC-060	40267	thallium	MINOR	UJ	BOBMQ6	The analytical spike recovery was outside the limit of 85 - 115%.
BOBMY8-TMA-779	40271	aluminum	MINOR	J	BOBMY9	The MS recovery was <75%.
W0068-ITC-079	40272	selenium	MINOR	BJ	BOBMP1	The analytical spike recovery was outside the limit of 85 - 115%.
W0068-ITC-079	40272	thallium	MINOR	UJ	BOBMP0, BOBMP1, BOBMX2, BOBMX3	The analytical spike recovery was outside the limit of 85 - 115%.
W0082-ITC-096	40276	lead	MINOR	J/UJ	BOBMQ2, BOBMQ3, BOBMP8, BOBMP9, BOBMV6, BOBMV7	The MS/MSD recoveries were between 30 and 75%.
W0082-ITC-096	40276	selenium	MINOR	J	BOBMV6	The analytical spike recovery was outside the limit of 85 - 115%.

Inorganics
Blanks

SDG	VW#	ANALYTE	TYPE	QUALIFIER	SAMPLES AFFECTED	REASON
BOBMY4-TMA-760	40256	arsenic	MINOR	UJ	BOBMY5	The calibration and/or preparation blank was positive with sample results <10x the blank.
BOBMY4-TMA-760	40256	iron	MINOR	U	BOBMY4, BOBMY5	The calibration and/or preparation blank was positive with sample results <10x the blank.
BOBMY4-TMA-760	40256	manganese	MINOR	U	BOBMY4, BOBMY5	The calibration and/or preparation blank was positive with sample results <10x the blank.
W0062-ITC-062	40266	copper	MINOR	BJ/J	BOBMV3, BOBMT1, BOBMP5	The negative preparation and/or calibration blanks had absolute values >IDL but <CRDL.

Table 5.1 100-FR-3 Qualification Summary. (Page 2 of 3)

Inorganics
Blanks (continued)

SDG	VW#	ANALYTE	TYPE	QUALIFIER	SAMPLES AFFECTED	REASON
W0062-ITC-062	40266	copper	MINOR	UJ	BOBMV2, BOBMR0, BOBMR1, BOBMR8, BOBMR9, BOBMT0, BOBMT8, BOBMT9, BOBMP4, BOBMW0, BOBMW1	The negative preparation and/or calibration blanks had absolute values >IDL but <CRDL.
W0062-ITC-062	40266	iron	MINOR	U	BOBMR8, BOBMT9, BOBMW1	The calibration and/or preparation blank was positive with sample results <10x the blank.
W0062-ITC-062	40266	iron	MINOR	UJ	BOBMV3, BOBMR9, BOBMT0, BOBMT1, BOBMV2, BOBMR0, BOBMR1, BOBMT8	The negative preparation and/or calibration blanks had absolute values >IDL but <CRDL.
W0062-ITC-062	40266	potassium	MINOR	BJ/J	BOBMR0, BOBMR9, BOBMT0, BOBMP4, BOBMP5	The negative preparation and/or calibration blanks had absolute values >IDL but <CRDL.
W0062-ITC-062	40266	potassium	MINOR	UJ	BOBMR1, BOBMR8	The negative preparation and/or calibration blanks had absolute values >IDL but <CRDL.
W0062-ITC-062	40266	zinc	MINOR	U	BOBMV2, BOBMR0, BOBMR1, BOBMR8, BOBMR9, BOBMT0, BOBMT9, BOBMP5,	The calibration and/or preparation blank was positive with sample results <10x the blank.
W0055-ITC-060	40267	iron	MINOR	U	BOBMQ7, BOBMR4, BOBMS3, BOBMS6, BOBMS7, BOBMT4, BOBMT5, BOBMX6, BOBMX7, BOBMR5	The calibration and/or preparation blank was positive with sample results <10x the blank.
BOBMY8-TMA-779	40271	chromium copper iron barium	MINOR	U	BOBMY9	The calibration and/or preparation blank was positive with sample results <10x the blank.
BOBMY8-TMA-779	40271	chromium copper iron manganese barium	MINOR	U	BOBMY8	The calibration and/or preparation blank was positive with sample results <10x the blank.
W0068-ITC-079	40272	aluminum	MINOR	BJ	BOBMY0, BOBMY1	The negative preparation and/or calibration blanks had absolute values >IDL but <CRDL.
W0068-ITC-079	40272	calcium	MINOR	U	BOBMZ2, BOBMZ3, BOBMZ8, BOBMZ9	The calibration and/or preparation blank was positive with sample results <10x the blank.
W0068-ITC-079	40272	copper	MINOR	UJ	BOBMW8, BOBMW9, BOBMY0, BOBMY1	The negative preparation and/or calibration blanks had absolute values >IDL but <CRDL.

Table 5.1 100-FR-3 Qualification Summary. (Page 3 of 3)

W0068-ITC-079	40272	iron	MINOR	U	BOBMW9, BOBMY0, BOBMY1, BOBMP0, BOBMP1, BOBMX2, BOBMX3, BOBMZ2, BOBMZ3	The calibration and/or preparation blank was positive with sample results <10x the blank.

Inorganics
Blanks (continued)

SDG	VW#	ANALYTE	TYPE	QUALIFIER	SAMPLES AFFECTED	REASON
W0068-ITC-079	40272	lead	MINOR	U	BOBMP0, BOBMP1, BOBMX2, BOBMX3, BOBMZ3	The calibration and/or preparation blank was positive with sample results <10x the blank.
W0068-ITC-079	40272	potassium	MINOR	UJ	BOBMY0, BOBMY1	The negative preparation and/or calibration blanks had absolute values >IDL but <CRDL.
W0068-ITC-079	40272	sodium	MINOR	U	BOBMZ8, BOBMZ9	The calibration and/or preparation blank was positive with sample results <10x the blank.
W0068-ITC-079	40272	zinc	MINOR	U	BOBMW8, BOBMY0,	The calibration and/or preparation blank was positive with sample results <10x the blank.
W0082-ITC-096	40276	iron	MINOR	U	BOBMQ2, BOBMQ3, BOBMP8, BOBMP9, BOBMV6, BOBMV7	The calibration and/or preparation blank was positive with sample results <10x the blank.
W0082-ITC-096	40276	lead	MINOR	U	BOBMQ2, BOBMP9, BOBMV6	The calibration and/or preparation blank was positive with sample results <10x the blank.
W0082-ITC-096	40276	zinc	MINOR	U	BOBMQ2, BOBMQ3, BOBMP8, BOBMP9, BOBMV6, BOBMV7	The calibration and/or preparation blank was positive with sample results <10x the blank.

Inorganics
Precision

SDG	VW#	ANALYTE	TYPE	QUALIFIER	SAMPLES AFFECTED	REASON
W0055-ITC-060	40267	iron	MINOR	J	BOBMQ6, BOBMW5	Duplicate criteria not met.
BOBMY8-TMA-779	40271	aluminum manganese barium	MINOR	BJ/J	BOBMY9	Duplicate criteria not met.
BOBMY8-TMA-779	40271	calcium magnesium	MINOR	BJ/J	BOBMY9	Duplicate criteria not met.
BOBMY8-TMA-779	40271	calcium magnesium sodium	MINOR	BJ/J	BOBMY8	Serial dilution >10% difference.
BOBMY4-TMA-760	40256	lead	MINOR	BJ	BOBMY4	Duplicate criteria not met.

Table 5.2 Field Duplicate Precision Summary. (Page 1 of 6)

RELATIVE PERCENT DIFFERENCE

LATA No.: 100-FR-3 Date: MC Webb

LABORATORY: ORK Validator: 26-Sep-94

Constituent	Sample IDs	Original (Sample) concentration	Duplicate concentration	RPD
		OS	D	
Hydrazine	B0BMY3/M97	1.00	1.00	0.0%

Table 5.2 Field Duplicate Precision Summary. (Page 2 of 6)

RELATIVE PERCENT DIFFERENCE

LATA No.: 100-FR-3 Date: MC Webb

LABORATORY: ITC Validator: 26-Sep-94

Constituent	Sample ID	Original (Sample) concentration OS	Duplicate concentration D	RPD
VOA	B0BMY0/MP4	NON-DETECT	NON-DETECT	NC
SVA	B0BMY0/MP4	NON-DETECT	NON-DETECT	NC
PEST/PCB	B0BMY0/MP4	NON-DETECT	NON-DETECT	NC
VOA	B0BMY2/MP6	NON-DETECT	NON-DETECT	NC

Table 5.2 Field Duplicate Precision Summary. (Page 3 of 6)

RELATIVE PERCENT DIFFERENCE

LATA No.: 100-FR-3 Date: MC Webb

LABORATORY: ITC Validator: 26-Sep-94

Constituent	CRDL µg/L	Sample ID	Original (Sample) concentration OS	Duplicate concentration D	RPD
Aluminum	200	B0BMY0/MP4	67.10	40.00	NC
Antimony	60	B0BMY0/MP4	50.00	50.00	0.0%
Arsenic	10	B0BMY0/MP4	2.00	2.00	0.0%
Barium	200	B0BMY0/MP4	22.80	23.00	0.9%
Beryllium	5	B0BMY0/MP4	1.00	1.00	0.0%
Cadmium	5	B0BMY0/MP4	5.00	5.00	0.0%
Calcium	5000	B0BMY0/MP4	26100.00	26200.00	0.4%
Chromium	10	B0BMY0/MP4	53.50	10.00	137.0%
Cobalt	50	B0BMY0/MP4	10.00	10.00	0.0%
Copper	25	B0BMY0/MP4	10.00	10.00	0.0%
Iron	100	B0BMY0/MP4	246.00	182.00	<CRDL
Lead	3	B0BMY0/MP4	2.00	2.00	0.0%
Magnesium	5000	B0BMY0/MP4	4420.00	4520.00	2.2%
Manganese	15	B0BMY0/MP4	4.80	5.30	9.9%
Mercury	0.2	B0BMY0/MP4	0.20	0.20	0.0%
Nickel	40	B0BMY0/MP4	20.00	20.00	0.0%
Potassium	5000	B0BMY0/MP4	1000.00	1540.00	NC
Selenium	5	B0BMY0/MP4	2.00	2.00	0.0%
Silver	10	B0BMY0/MP4	5.00	5.00	0.0%
Sodium	5000	B0BMY0/MP4	3040.00	3050.00	0.3%
Thallium	10	B0BMY0/MP4	2.00	2.00	0.0%
Vanadium	50	B0BMY0/MP4	10.00	10.00	0.0%
Zinc	20	B0BMY0/MP4	6.50	5.00	NC
Cyanide	10	B0BMY2/MP6	10.00	10.00	0.0%

Table 5.2 Field Duplicate Precision Summary. (Page 4 of 6)

RELATIVE PERCENT DIFFERENCE

LATA No.: 100-FR-3 Date: MC Webb

LABORATORY: ITC Validator: 26-Sep-94

Constituent	CRDL µg/L	Sample ID	Original (Sample) concentration OS	Duplicate concentration D	RPD
Aluminum	200	B0BMY1/MP5	73.40	3200.00	NC
Antimony	60	B0BMY1/MP5	50.00	50.00	NC
Arsenic	10	B0BMY1/MP5	2.00	2.00	NC
Barium	200	B0BMY1/MP5	21.10	25.70	NC
Beryllium	5	B0BMY1/MP5	10.00	1.00	NC
Cadmium	5	B0BMY1/MP5	5.00	5.00	NC
Calcium	5000	B0BMY1/MP5	245000.00	31800.00	154.0%
Chromium	10	B0BMY1/MP5	45.80	1710.00	189.6%
Cobalt	50	B0BMY1/MP5	10.00	10.70	NC
Copper	25	B0BMY1/MP5	10.00	20.40	NC
Iron	100	B0BMY1/MP5	132.00	5530.00	190.7%
Lead	3	B0BMY1/MP5	2.00	2.00	NC
Magnesium	5000	B0BMY1/MP5	4040.00	4500.00	NC
Manganese	15	B0BMY1/MP5	3.30	111.00	188.5%
Mercury	0.2	B0BMY1/MP5	0.20	0.20	NC
Nickel	40	B0BMY1/MP5	20.00	625.00	187.6%
Potassium	5000	B0BMY1/MP5	1000.00	1360.00	NC
Selenium	5	B0BMY1/MP5	2.00	2.00	NC
Silver	10	B0BMY1/MP5	5.00	5.00	NC
Sodium	5000	B0BMY1/MP5	2730.00	3070.00	NC
Thallium	10	B0BMY1/MP5	2.00	2.00	NC
Vanadium	50	B0BMY1/MP5	10.00	10.00	NC
Zinc	20	B0BMY1/MP5	5.00	11.30	NC

Table 5.2 Field Duplicate Precision Summary. (Page 5 of 6)

RELATIVE PERCENT DIFFERENCE

LATA No.: 100-FR-3 Date: MC Webb

LABORATORY: ITC Validator: 26-Sep-94

Constituent	Sample ID	Original (Sample) concentration	Duplicate concentration	RPD
		OS	D	
Chloride by IC	B0BMY0/MP4	1.40	0.40	NC
Fluoride by IC	B0BMY0/MP4	0.40	1.60	NC
Phosphate by IC	B0BMY0/MP4	1.00	1.00	0.0%
Sulfate by IC	B0BMY0/MP4	17.00	16.00	6.1%
Sulfide	B0BMY0/MP4	5.00	6.00	18.2%
Nitrate+Nitrite	B0BMY0/MP4	0.63	0.57	10.0%
TOC	B0BMY0/MP4	1.00	1.00	0.0%
pH	B0BMY0/MP4	7.44	7.55	1.5%
Alkalinity	B0BMY0/MP4	78.00	70.00	10.8%
Ammonia	B0BMY0/MP4	0.10	0.10	0.0%
COD	B0BMY0/MP4	1.00	1.00	0.0%
Conductivity	B0BMY0/MP4	202.00	199.00	1.5%
TDS	B0BMY0/MP4	136.00	166.00	19.9%
TOX	B0BMY0/MP4	48.00	37.00	25.9%

Table 5.2 Field Duplicate Precision Summary. (Page 6 of 6)

RELATIVE PERCENT DIFFERENCE

LATA No.: 100-FR-3 Date: MC Webb

LABORATORY: ITC Validator: 26-Sep-94

Constituent	Sample ID	Original (Sample) concentration	Duplicate concentration	RPD
		OS	D	
Alpha	B0BMY0/MP4	1.37	NON-DETECT	NC
Beta	B0BMY0/MP4	36.20	31.70	13.3%
Tritium	B0BMY0/MP4	NON-DETECT	NON-DETECT	NC
C-14	B0BMY0/MP4	NON-DETECT	NON-DETECT	NC
Sr-90	B0BMY0/MP4	17.40	15.90	9.0%
U-234	B0BMY0/MP4	7.66	NON-DETECT	*
U-235	B0BMY0/MP4	0.13	NON-DETECT	*
U-238	B0BMY0/MP4	5.91	NON-DETECT	*
Pu-238	B0BMY0/MP4	NON-DETECT	NON-DETECT	NC
Pu-239/40	B0BMY0/MP4	NON-DETECT	NON-DETECT	NC
Am-241	B0BMY0/MP4	NON-DETECT	NON-DETECT	NC
Tc-99	B0BMY0/MP4	NON-DETECT	2.12	NC
Gamma nuclides	B0BMY0/MP4	NON-DETECT	NON-DETECT	NC

*The U-iso results for B0BMY0 are REJECTED

6.0 GENERAL CHEMISTRY DATA VALIDATION SUMMARY

6.1 SUMMARY

This section presents a summary of the general chemistry data validation results and review against the work plan (DOE-RL 1993). Where appropriate, major deficiencies are identified which required qualification of the data as unusable (R for detects, UR for non-detects) and minor deficiencies are identified which resulted in qualification of associated data as estimated (J for detected values, UJ for non-detected values) or non-detect (U) due to blank contamination. Table 1.2 shows the data package identification, HEIS sample ID numbers, sample collection date, sample type, and analyses performed.

Precision

- Laboratory duplicate RPD results were acceptable for all analyses with the exception of TOX.

Accuracy

- Laboratory control sample recoveries were acceptable for all data packages with the exception of alkalinity and COD.

- Matrix spike recoveries were acceptable for all data packages with the exception of TOX.

Representativeness

- Field duplicates for general chemistry were acceptable with the exception of TOX, Chloride, Sulfide, Nitrate + Nitrite, Alkalinity, Fluoride, Hydrazine, and TDS.

Completeness

- Overall 380 determinations were reported. Out of the 380 results reported, 18 results were determined to be unusable leaving 362 results which were deemed valid. This results in a completeness of 95% for precision and accuracy, which meets the program requirement of 90%.

Comparability

- All results were reported in common units for each type of analysis, facilitating comparison of results.

Table 6.1 100-FR-3 Qualification Summary. (Page 1 of 3)

General Chemistry
Accuracy

SDG	VW#	ANALYTE	TYPE	QUALIFIER	SAMPLES AFFECTED	REASON
W0055-ITC-060	40267	alkalinity	MINOR	J	BOBMS2, BOBMS3, BOBMS4, BOBMR4, BOBMR5, BOBMR6, BOBMX6, BOBMX7, BOBMX8, BOBMQ6, BOBMQ7, BOBMQ8, BOBMS6, BOBMS7, BOBMS8, BOBMT4, BOBMT5, BOBMT6, BOBMW4, BOBMW5, BOBMW6	No LCS or blank spike was analyzed.
W0055-ITC-060	40267	COD	MINOR	J/UJ	BOBMR4, BOBMW4, BOBMS2, BOBMT4, BOBMS6, BOBMQ6, BOBMX6	No LCS or blank spike was analyzed.
W0068-ITC-079	40272	Total Organic Halogens	MINOR	J	BOBMY0, BOBMZ8	The MS/MSD recoveries were >125% .
W0082-ITC-096	40276	Total Organic Halogens	MINOR	J/UJ	BOBMQ2, BOBMV6, BOBMP8	The MS/MSD recoveries were between 30 and 75%.

General Chemistry
Hold Time

SDG	VW#	ANALYTE	TYPE	QUALIFIER	SAMPLES AFFECTED	REASON
BOBMY4-TMA-760	40256	phosphate-IC	**MAJOR**	**UR**	BOBMY4	Hold time exceeded by >2 times with sample results non-detect.
BOBMY4-TMA-760	40256	pH	MINOR	J	BOBMY4	Hold time exceeded.
W0062-ITC-062	40266	phosphate-IC	**MAJOR**	**UR**	BOBMP4, BOBMP5, BOBMP6, BOBMV2, BOBMV3, BOBMV4, BOBMR0, BOBMR1, BOBMR2, BOBMR8, BOBMR9, BOBMS0, BOBMT8, BOBMT9, BOBMV0, BOBMT0, BOBMT1, BOBMT2, BOBMW0, BOBMW1, BOBMW2	Hold time exceeded by >2 times with sample results non-detect.
W0062-ITC-062	40266	pH	MINOR	J	BOBMP4, BOBMP5, BOBMP6, BOBMV2, BOBMV3, BOBMV4, BOBMR0, BOBMR1, BOBMR2, BOBMR8, BOBMR9, BOBMS0, BOBMT8, BOBMT9, BOBMV0, BOBMT0, BOBMT1, BOBMT2, BOBMW0, BOBMW1, BOBMW2	Hold time exceeded.
W0062-ITC-062	40266	TDS	MINOR	J	BOBMP4	Hold time exceeded by <2 times.
W0055-ITC-060	40267	phosphate-IC	**MAJOR**	**UR**	BOBMS2, BOBMS3, BOBMS4, BOBMR4, BOBMR5, BOBMR6, BOBMX6, BOBMX7, BOBMX8, BOBMQ6, BOBMQ7, BOBMQ8, BOBMS6, BOBMS7, BOBMS8, BOBMT4, BOBMT5, BOBMT6, BOBMW4, BOBMW5, BOBMW6	Hold time exceeded by >2 times with sample results non-detect.

Table 6.1 100-FR-3 Qualification Summary. (Page 2 of 3)

W0055-ITC-060	40267	pH	MINOR	J	BOBMS2, BOBMS3, BOBMS4, BOBMR4, BOBMR5, BOBMR6, BOBMX6, BOBMX7, BOBMX8, BOBMQ6, BOBMQ7, BOBMQ8, BOBMS6, BOBMS7, BOBMS8, BOBMT4, BOBMT5, BOBMT6, BOBMW4, BOBMW5, BOBMW6	Hold time exceeded.

Table 6.1 100-FR-3 Qualification Summary. (Page 3 of 3)

General Chemistry
Hold Time (continued)

SDG	VW#	ANALYTE	TYPE	QUALIFIER	SAMPLES AFFECTED	REASON
BOBMY8-TMA-779	40271	phosphate-IC	MAJOR	UR	BOBMY8	Hold time exceeded by >2 times with sample results non-detect.
BOBMY8-TMA-779	40271	pH	MINOR	J	BOBMY8	Hold time exceeded.
W0068-ITC-079	40272	phosphate-IC	MAJOR	UR	BOBMW8, BOBMYO, BOBMZ2, BOBMP0, BOBMX2, BOBMZ8	Hold time exceeded by >2 times with sample results non-detect.
W0068-ITC-079	40272	pH	MINOR	J	BOBMZ2, BOBMP0, BOBMX2, BOBMZ8, BOBMY0, BOBMW8	Hold time exceeded by <2 times.
W0068-ITC-079	40272	sulfide	MINOR	J	BOBMP0	Hold time exceeded by <2 times.
W0068-ITC-079	40272	TDS	MINOR	J	BOBMP0, BOBMY0	Hold time exceeded.
W0082-ITC-096	40276	phosphate-IC	MAJOR	UR	BOBMQ2, BOBMV6, BOBMP8	Hold time exceeded by >2 times with sample results non-detect.
W0082-ITC-096	40276	pH	MINOR	J	BOBMQ2, BOBMV6, BOBMP8	Hold time exceeded.

General Chemistry
Other

SDG	VW#	ANALYTE	TYPE	QUALIFIER	SAMPLES AFFECTED	REASON
W0055-ITC-060	40267	alkalinity	MINOR	J	BOBMS2, BOBMS3, BOBMS4, BOBMR4, BOBMR5, BOBMR6, BOBMX6, BOBMX7, BOBMX8, BOBMQ6, BOBMQ7, BOBMQ8, BOBMS6, BOBMS7, BOBMS8, BOBMT4, BOBMT5, BOBMT6, BOBMW4, BOBMW5, BOBMW6	No initial check of titrant normality was performed.
W0055-ITC-060	40267	TDS	MINOR	J	BOBMS2, BOBMS3, BOBMS4, BOBMR4, BOBMR5, BOBMR6, BOBMX6, BOBMX7, BOBMX8, BOBMQ6, BOBMQ7, BOBMQ8, BOBMS6, BOBMS7, BOBMS8, BOBMT4, BOBMT5, BOBMT6, BOBMW4, BOBMW5, BOBMW6	No analytical balance check was performed.
W0068-ITC-079	40272	TDS	MINOR	J	BOBMW8, BOBMYO, BOBMZ2, BOBMP0, BOBMX2, BOBMZ8	No analytical balance check was performed.

General Chemistry
Precision

SDG	VW#	ANALYTE	TYPE	QUALIFIER	SAMPLES AFFECTED	REASON
W0055-ITC-060	40267	Total Organic Halogens	MINOR	J	BOBMX6	Duplicate criteria not met.

7.0 RADIOCHEMISTRY DATA VALIDATION SUMMARY

7.1 SUMMARY

This section presents a summary of the radiochemistry data validation results and review against the work plan (DOE-RL 1994). Where appropriate, major deficiencies are identified which required qualification of the data as unusable (R for detects, UR for non-detects) and minor deficiencies are identified which resulted in qualification of associated data as estimated (J for detected values, UJ for non-detected values). Table 1.2 shows the data package identification, HEIS sample ID numbers, sample collection date, sample type, and analyses performed.

Precision

- Laboratory duplicate RPD results were acceptable for data packages with the exception of strontium-90, uranium-234, uranium-235, and uranium-238.

Accuracy

- Chemical recoveries were acceptable for samples with the exception of uranium-234, uranium-235, and uranium-238.

- Laboratory control sample recoveries were acceptable for all results with the exception of uranium-234, uranium-235, and uranium-238.

Representativeness

- Field duplicate precision was acceptable with the exception of strontium-90, U-234, and U-238.

Completeness

- Overall, 515 water samples were validated for radiochemistry with 515 results reported. Out of the 515 results reported, zero (0) results were determined to be unusable leaving 515 results which were deemed valid. This results in a completeness of 100% which meets the work plan objective of 90% for precision and accuracy (DOE-RL 1993).

Comparability

- All results were reported in common units [picocuries per liter (PCi/L, or micrograms per liter (μg/L)] facilitating comparison of results.

Table 7.1 100-FR-3 Qualification Summary.

Radiochemistry
Accuracy

SDG	VW#	ANALYTE	TYPE	QUALIFIER	SAMPLES AFFECTED	REASON
W0055-ITC-060	40267	uranium-235	MINOR	J	BOBMS2, BOBMS6, BOBMW4	The LCS recovery was outside the limit of 75 - 125%.
W0055-ITC-060	40267	uranium-235	MINOR	UJ	BOBMQ6, BOBMX6, BOBMT4, BOBMR4	The LCS recovery was outside the limit of 75 - 125%.
W0068-ITC-079	40272	uranium-235	MINOR	J/UJ	BOBMW8, BOBMP0, BOBMX2, BOBMZ2, BOBMZ8	The LCS recovery was outside the limit of 75 - 125%.
W0082-ITC-096	40276	uranium-234	MINOR	J	BOBMV6, BOBMP8 reanalysis results	The LCS recovery was outside the limit of 75 - 125%.
W0082-ITC-096	40276	uranium-235	MINOR	UJ	BOBMQ2	The LCS recovery was outside the limit of 75 - 125%.

Radiochemistry
Blanks

SDG	VW#	ANALYTE	TYPE	QUALIFIER	SAMPLES AFFECTED	REASON
BOBMY8-TMA-779	40271	technetium-99	MINOR	U	BOBMY8	The method blank was positive with sample results <5X the associated blank value.
W0068-ITC-079	40272	technetium-99	MINOR	U	BOBMW8	The method blank was positive with sample results <5X the associated blank value.

Radiochemistry
Precision

SDG	VW#	ANALYTE	TYPE	QUALIFIER	SAMPLES AFFECTED	REASON
BOBMY4-TMA-760	40256	strontium-90	MINOR	J	BOBMY4	Duplicate criteria not met.
W0068-ITC-079	40272	uranium-234 uranium-235 uranium-238	MINOR	J/UJ	BOBMW8, BOBMP0, BOBMX2, BOBMZ2, BOBMZ8	No duplicate performed in batch.

8.0 REFERENCES

WHC 1993, *Data Validation Procedures for Chemical Analyses*, WHC-SD-EN-SPP-002, Rev. 2, Westinghouse Hanford Company, Richland, Washington.

WHC 1993, *Data Validation Procedures for Radiochemical Analyses*, WHC-SD-EN-SPP-001, Rev. 1, Westinghouse Hanford Company, Richland, Washington.

DOE 1992, *Remedial Investigation/Feasibility Study for the 100-FR-3 Operable Unit*, DOE/RL 91-53, Rev. 1, Department of Energy-Hanford, Richland, Washington.

APPENDIX A

VOLATILE ORGANIC VALIDATED DATA SUMMARY TABLES

FILE#:VW402.56		HEIS #:	B0BMY4		B0BMY6	
		Date:	6-May-94		6-May-94	
		Matrix:	WATER		WATER	
Constituent	CAS #	Units	Results	Q		
Chloromethane	74-87-3	µg/L	10	U	10	U
Bromomethane	74-83-9	µg/L	10	U	10	U
Vinyl Chloride	75-01-4	µg/L	10	U	10	U
Chloroethane	75-00-3	µg/L	10	U	10	U
Methylene Chloride	75-09-2	µg/L	1	J	10	U
Acetone	67-64-1	µg/L	10	U	10	U
Carbon Disulfide	75-15-0	µg/L	10	U	10	U
1,1-Dichloroethene	75-35-4	µg/L	10	U	10	U
1,1-Dichloroethane	75-34-3	µg/L	10	U	10	U
1,2-Dichloroethene	540-59-0	µg/L	10	U	10	U
Chloroform	67-66-3	µg/L	1	J	10	U
1,2-Dichloroethane	107-06-2	µg/L	10	U	10	U
2-Butanone	78-93-3	µg/L	10	U	10	U
1,1,1-Trichloroethane	71-55-6	µg/L	10	U	10	U
Carbon Tetrachloride	56-23-5	µg/L	10	U	10	U
Bromodichloromethane	75-27-4	µg/L	10	U	10	U
1,2-Dichloropropane	78-87-5	µg/L	10	U	10	U
cis-1,3-Dichlorpropene	10061-01-5	µg/L	10	U	10	U
Trichloroethene	79-01-6	µg/L	10	U	10	U
Dibromochloromethane	124-48-1	µg/L	10	U	10	U
1,1,2-Trichloroethane	79-00-5	µg/L	10	U	10	U
Benzene	71-43-2	µg/L	10	U	10	U
trans-1,3-Dichloropropene	10061-02-6	µg/L	10	U	10	U
Bromoform	75-25-2	µg/L	10	U	10	U
4-Methyl-2-pentanone	108-10-1	µg/L	10	U	10	U
2-Hexanone	591-78-6	µg/L	10	U	10	U
Tetrachloroethene	127-18-4	µg/L	10	U	10	U
1,1,2,2-Tetrachloroethane	79-34-5	µg/L	10	U	10	U
Toluene	108-88-3	µg/L	10	U	10	U
Chlorobenzene	108-90-7	µg/L	10	U	10	U
Ethylbenzene	100-41-4	µg/L	10	U	10	U
Styrene	100-42-5	µg/L	10	U	10	U
Xylene (Total)	1330-20-7	µg/L	10	U	10	U

entered by: [illegible]
date: 6-26-94

shaded areas indicate changes by the validator
TMA760

checked by: [illegible]
7/26/94

FILE #:VW402.66		HEIS #:	B0BMP4		B0BMP6		B0BMR0		B0BMR2	
		Date:	18-May-94		18-May-94		11-May-94		11-May-94	
		Matrix:	WATER		WATER		WATER		WATER	
Constituent	CAS #	Units	Results	Q	Results	Q	Results	Q	Results	Q
Chloromethane	74-87-3	µg/L	10	U	10	U	10	U	10	U
Bromomethane	74-83-9	µg/L	10	U	10	U	10	U	10	U
Vinyl Chloride	75-01-4	µg/L	10	U	10	U	10	U	10	U
Chloroethane	75-00-3	µg/L	10	U	10	U	10	U	10	U
Methylene Chloride	75-09-2	µg/L	10	U	1	J	10	U	10	U
Acetone	67-64-1	µg/L	10	U	10	U	10	U	14	U
Carbon Disulfide	75-15-0	µg/L	10	U	10	U	10	U	10	U
1,1-Dichloroethene	75-35-4	µg/L	10	U	10	U	10	U	10	U
1,1-Dichloroethane	75-34-3	µg/L	10	U	10	U	10	U	10	U
1,2-Dichloroethene (total)	540-59-0	µg/L	10	U	10	U	10	U	10	U
Chloroform	67-66-3	µg/L	10	U	10	U	10	U	10	U
1,2-Dichloroethane	107-06-2	µg/L	10	U	10	U	10	U	10	U
2-Butanone	78-93-3	µg/L	10	U	10	U	10	U	2	J
1,1,1-Trichloroethane	71-55-6	µg/L	10	U	10	U	10	U	10	U
Carbon Tetrachloride	56-23-5	µg/L	10	U	10	U	10	U	10	U
Bromodichloromethane	75-27-4	µg/L	10	U	10	U	10	U	10	U
1,2-Dichloropropane	78-87-5	µg/L	10	U	10	U	10	U	10	U
cis-1,3-Dichloropropene	10061-01-5	µg/L	10	U	10	U	10	U	10	U
Trichloroethene	79-01-6	µg/L	10	U	10	U	10	U	10	U
Dibromochloromethane	124-48-1	µg/L	10	U	10	U	10	U	10	U
1,1,2-Trichloroethane	79-00-5	µg/L	10	U	10	U	10	U	10	U
Benzene	71-43-2	µg/L	10	U	10	U	10	U	10	U
trans-1,3-Dichloropropene	10061-02-6	µg/L	10	U	10	U	10	U	10	U
Bromoform	75-25-2	µg/L	10	U	10	U	10	U	10	U
4-Methyyl-2-Pentanone	110-75-8	µg/L	10	U	10	U	10	U	10	U
2-Hexanone	591-78-6	µg/L	10	U	10	U	10	U	10	U
Tetrachloroethene	127-18-4	µg/L	10	U	10	U	10	U	10	U
1,1,2,2-Tetrachloroethane	79-34-5	µg/L	10	U	10	U	10	U	10	U
Toluene	108-88-3	µg/L	10	U	10	U	10	U	10	U
Chlorobenzene	108-90-7	µg/L	10	U	10	U	10	U	10	U
Ethylbenzene	100-41-4	µg/L	10	U	10	U	10	U	10	U
Styrene	100-42-5	µg/L	10	U	10	U	10	U	10	U
Xylene (Total)	1330-20-7	µg/L	10	U	10	U	10	U	10	U

entered by: BM
date: 9-17-94

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by validator ITC062

checked by: BM
date: 9-17-94
KMO 9-20-94

FILE #:VW402.66		HEIS #:	BOBMR8		BOBMS0		BOBMT0		BOBMT2	
		Date:	11-May-94		11-May-94		12-May-94		12-May-94	
		Matrix:	WATER		WATER		WATER		WATER	
Constituent	CAS #	Units	Results	Q	Results	Q	Results	Q	Results	Q
Chloromethane	74-87-3	µg/L	10	U	10	U	10	U	10	U
Bromomethane	74-83-9	µg/L	10	U	10	U	10	U	10	U
Vinyl Chloride	75-01-4	µg/L	10	U	10	U	10	U	10	U
Chloroethane	75-00-3	µg/L	10	U	10	U	10	U	10	U
Methylene Chloride	75-09-2	µg/L	10	U	10	U	10	U	1	J
Acetone	67-64-1	µg/L	10	U	14	U	10	U	10	U
Carbon Disulfide	75-15-0	µg/L	10	U	10	U	10	U	10	U
1,1-Dichloroethene	75-35-4	µg/L	10	U	10	U	10	U	10	U
1,1-Dichloroethane	75-34-3	µg/L	10	U	10	U	10	U	10	U
1,2-Dichloroethene (total)	540-59-0	µg/L	10	U	10	U	10	U	10	U
Chloroform	67-66-3	µg/L	10	U	10	U	10	U	10	U
1,2-Dichloroethane	107-06-2	µg/L	10	U	10	U	10	U	10	U
2-Butanone	78-93-3	µg/L	10	U	2	J	10	U	10	U
1,1,1-Trichloroethane	71-55-6	µg/L	10	U	10	U	10	U	10	U
Carbon Tetrachloride	56-23-5	µg/L	10	U	2	J	10	U	10	U
Bromodichloromethane	75-27-4	µg/L	10	U	10	U	10	U	10	U
1,2-Dichloropropane	78-87-5	µg/L	10	U	10	U	10	U	10	U
cis-1,3-Dichloropropene	10061-01-5	µg/L	10	U	10	U	10	U	10	U
Trichloroethene	79-01-6	µg/L	10	U	10	U	10	U	10	U
Dibromochloromethane	124-48-1	µg/L	10	U	10	U	10	U	10	U
1,1,2-Trichloroethane	79-00-5	µg/L	10	U	10	U	10	U	10	U
Benzene	71-43-2	µg/L	10	U	10	U	10	U	10	U
trans-1,3-Dichloropropene	10061-02-6	µg/L	10	U	10	U	10	U	10	U
Bromoform	75-25-2	µg/L	10	U	10	U	10	U	10	U
4-Methyyl-2-Pentanone	110-75-8	µg/L	10	U	10	U	10	U	10	U
2-Hexanone	591-78-6	µg/L	10	U	10	U	10	U	10	U
Tetrachloroethene	127-18-4	µg/L	10	U	10	U	10	U	10	U
1,1,2,2-Tetrachloroethane	79-34-5	µg/L	10	U	10	U	10	U	10	U
Toluene	108-88-3	µg/L	10	U	10	U	10	U	10	U
Chlorobenzene	108-90-7	µg/L	10	U	10	U	10	U	10	U
Ethylbenzene	100-41-4	µg/L	10	U	10	U	10	U	10	U
Styrene	100-42-5	µg/L	10	U	10	U	10	U	10	U
Xylene (Total)	1330-20-7	µg/L	10	U	10	U	10	U	10	U

entered by: BM
date: 9-17-94

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by validator ITC062

checked by: BM
date: 9-17-94
9-20-94

FILE #:VW402.66		HEIS #:	B0BMT8		B0BMV0		B0BMV2		B0BMV4	
		Date:	12-May-94		12-May-94		10-May-94		10-May-94	
		Matrix:	WATER		WATER		WATER		WATER	
Constituent	CAS #	Units	Results	Q	Results	Q	Results	Q	Results	Q
Chloromethane	74-87-3	µg/L	10	U	10	U	10	U	10	U
Bromomethane	74-83-9	µg/L	10	U	10	U	10	U	10	U
Vinyl Chloride	75-01-4	µg/L	10	U	10	U	10	U	10	U
Chloroethane	75-00-3	µg/L	10	U	10	U	10	U	10	U
Methylene Chloride	75-09-2	µg/L	10	U	10	U	10	U	10	U
Acetone	67-64-1	µg/L	10	U	10	U	10	U	14	U
Carbon Disulfide	75-15-0	µg/L	10	U	10	U	10	U	10	U
1,1-Dichloroethene	75-35-4	µg/L	10	U	10	U	10	U	10	U
1,1-Dichloroethane	75-34-3	µg/L	10	U	10	U	10	U	10	U
1,2-Dichloroethene (total)	540-59-0	µg/L	10	U	10	U	10	U	10	U
Chloroform	67-66-3	µg/L	10	U	10	U	10	U	31	
1,2-Dichloroethane	107-06-2	µg/L	10	U	10	U	10	U	10	U
2-Butanone	78-93-3	µg/L	10	U	10	U	10	U	2	J
1,1,1-Trichloroethane	71-55-6	µg/L	10	U	10	U	10	U	10	U
Carbon Tetrachloride	56-23-5	µg/L	20		1	J	10	U	36	
Bromodichloromethane	75-27-4	µg/L	10	U	10	U	10	U	10	U
1,2-Dichloropropane -	78-87-5	µg/L	10	U	10	U	10	U	10	U
cis-1,3-Dichloropropene	10061-01-5	µg/L	10	U	10	U	10	U	10	U
Trichloroethene	79-01-6	µg/L	10	U	10	U	20		10	U
Dibromochloromethane	124-48-1	µg/L	10	U	10	U	10	U	10	U
1,1,2-Trichloroethane	79-00-5	µg/L	10	U	10	U	10	U	10	U
Benzene	71-43-2	µg/L	10	U	10	U	10	U	10	U
trans-1,3-Dichloropropene	10061-02-6	µg/L	10	U	10	U	10	U	10	U
Bromoform	75-25-2	µg/L	10	U	10	U	10	U	10	U
4-Methyyl-2-Pentanone	110-75-8	µg/L	10	U	10	U	10	U	10	U
2-Hexanone	591-78-6	µg/L	10	U	10	U	10	U	10	U
Tetrachloroethene	127-18-4	µg/L	10	U	10	U	10	U	4	J
1,1,2,2-Tetrachloroethane	79-34-5	µg/L	10	U	10	U	10	U	10	U
Toluene	108-88-3	µg/L	10	U	10	U	10	U	10	U
Chlorobenzene	108-90-7	µg/L	10	U	10	U	10	U	10	U
Ethylbenzene	100-41-4	µg/L	10	U	10	U	10	U	10	U
Styrene	100-42-5	µg/L	10	U	10	U	10	U	10	U
Xylene (Total)	1330-20-7	µg/L	10	U	10	U	10	U	10	U

entered by: BM
date: 9-17-94

shaded areas show changes
by validator ITC062

checked by: BM
date: 9-17-
9-20-94

FILE #:VW402.76		HEIS #:	B0BMN8		B0BMN9		B0BMP8		B0BMQ0		B0BMQ2	
		Date:	6-Jun-94		6-Jun-94		3-Jun-94		3-Jun-94		1-Jun-94	
Constituent		Matrix:	WATER		WATER		WATER		WATER		WATER	
	CAS #	Units	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Chloromethane	74-87-3	µg/L	10	U	10	U	10	U	10	U	10	U
Bromomethane	74-83-9	µg/L	10	U	10	U	10	U	10	U	10	U
Vinyl Chloride	75-01-4	µg/L	10	U	10	U	10	U	10	U	10	U
Chloroethane	75-00-3	µg/L	10	U	10	U	10	U	10	U	10	U
Methylene Chloride	75-09-2	µg/L	28	U	27	U	23	U	27	U	27	U
Acetone	67-64-1	µg/L	23	U	34	U	10	U	15	U	15	U
Carbon Disulfide	75-15-0	µg/L	10	U	10	U	10	U	10	U	10	U
1,1-Dichloroethene	75-35-4	µg/L	10	U	10	U	10	U	10	U	10	U
1,1-Dichloroethane	75-34-3	µg/L	10	U	10	U	10	U	10	U	10	U
1,2-Dichloroethene (total)	540-59-0	µg/L	10	U	10	U	10	U	10	U	10	U
Chloroform	67-66-3	µg/L	10	U	10	U	10	U	10	U	10	U
1,2-Dichloroethane	107-06-2	µg/L	10	U	10	U	10	U	10	U	10	U
2-Butanone	78-93-3	µg/L	10	U	10	U	10	U	10	U	10	U
1,1,1-Trichloroethane	71-55-6	µg/L	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
Carbon Tetrachloride	56-23-5	µg/L	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
Bromodichloromethane	75-27-4	µg/L	10	U	10	U	10	U	10	U	10	U
1,2-Dichloropropane	78-87-5	µg/L	10	U	10	U	10	U	10	U	10	U
cis-1,3-Dichloropropene	061-01-5	µg/L	10	U	10	U	10	U	10	U	10	U
Trichloroethene	79-01-6	µg/L	10	U	10	U	10	U	10	U	2	J
Dibromochloromethane	124-48-1	µg/L	10	U	10	U	10	U	10	U	10	U
1,1,2-Trichloroethane	79-00-5	µg/L	10	U	10	U	10	U	10	U	10	U
Benzene	71-43-2	µg/L	10	U	10	U	10	U	10	U	10	U
trans-1,3-Dichloropropene	061-02-6	µg/L	10	U	10	U	10	U	10	U	10	U
Bromoform	75-25-2	µg/L	10	U	10	U	10	U	10	U	10	U
4-Methyl-2-pentanone	108-10-1	µg/L	10	U	10	U	10	U	10	U	10	U
2-Hexanone	591-78-6	µg/L	10	U	10	U	10	U	10	U	10	U
Tetrachloroethene	127-18-4	µg/L	10	U	10	U	10	U	10	U	10	U
1,1,2,2-Tetrachloroethane	79-34-5	µg/L	10	U	10	U	10	U	10	U	10	U
Toluene	108-88-3	µg/L	10	U	10	U	10	U	10	U	10	U
Chlorobenzene	108-90-7	µg/L	10	U	10	U	10	U	10	U	10	U
Ethylbenzene	100-41-4	µg/L	10	U	10	U	10	U	10	U	10	U
Styrene	100-42-5	µg/L	10	U	10	U	10	U	10	U	10	U
Xylene (Total)	330-20-7	µg/L	10	U	10	U	10	U	10	U	10	U

entered by: [illegible] date: 9/26/94

shaded areas indicate changes by validator
40276TBL.XLS

checked by: [illegible] date: 9/26/9

FILE #:VW402.67		HEIS #:	B0BMQ6		B0BMQ8		B0BMX6	
		Date:	6-May-94		6-May-94		6-May-94	
		Matrix:	WATER		WATER		WATER	
Constituent	CAS #	Units	Results	Q	Results	Q	Results	Q
Chloromethane	74-87-3	µg/L	10	U	10	U	10	U
Bromomethane	74-83-9	µg/L	10	U	10	U	10	U
Vinyl Chloride	75-01-4	µg/L	10	U	10	U	10	U
Chloroethane	75-00-3	µg/L	10	U	10	U	10	U
Methylene Chloride	75-09-2	µg/L	*10*	*U*	*10*	*U*	*10*	*U*
Acetone	67-64-1	µg/L	16	*U*	13	*U*	*10*	*U*
Carbon Disulfide	75-15-0	µg/L	10	U	10	U	10	U
1,1-Dichloroethene	75-35-4	µg/L	10	U	10	U	10	U
1,1-Dichloroethane	75-34-3	µg/L	10	U	10	U	10	U
1,2-Dichloroethene (total)	540-59-0	µg/L	10	U	10	U	10	U
Chloroform	67-66-3	µg/L	1	J	10	U	1	J
1,2-Dichloroethane	107-06-2	µg/L	10	U	10	U	10	U
2-Butanone	78-93-3	µg/L	10	U	2	J	10	U
1,1,1-Trichloroethane	71-55-6	µg/L	10	U	10	U	10	U
Carbon Tetrachloride	56-23-5	µg/L	10	U	10	U	10	U
Bromodichloromethane	75-27-4	µg/L	10	U	10	U	10	U
1,2-Dichloropropane	78-87-5	µg/L	10	U	10	U	10	U
cis-1,3-Dichloropropene	10061-01-5	µg/L	10	U	10	U	10	U
Trichloroethene	79-01-6	µg/L	10	U	10	U	10	U
Dibromochloromethane	124-48-1	µg/L	10	U	10	U	10	U
1,1,2-Trichloroethane	79-00-5	µg/L	10	U	10	U	10	U
Benzene	71-43-2	µg/L	10	U	10	U	10	U
trans-1,3-Dichloropropene	10061-02-6	µg/L	10	U	10	U	10	U
Bromoform	75-25-2	µg/L	10	U	10	U	10	U
4-Methyyl-2-Pentanone	108-10-1	µg/L	10	U	10	U	10	U
2-Hexanone	591-78-6	µg/L	10	U	10	U	10	U
Tetrachloroethene	127-18-4	µg/L	10	U	10	U	10	U
1,1,2,2-Tetrachloroethane	79-34-5	µg/L	10	U	10	U	10	U
Toluene	108-88-3	µg/L	10	U	10	U	10	U
Chlorobenzene	108-90-7	µg/L	10	U	10	U	10	U
Ethylbenzene	100-41-4	µg/L	10	U	10	U	10	U
Styrene	100-42-5	µg/L	10	U	10	U	10	U
Xylene (Total)	1330-20-7	µg/L	10	U	10	U	10	U

entered by: [illegible]
date: 6-26-94

shaded areas indicate changesby validator
40267TBL.XLS

checked by: BM
date: 9-26-94

FILE #:VW402.67		HEIS #:	B0BMR4		B0BMR6	
		Date:	11-May-94		11-May-94	
		Matrix:	WATER		WATER	
Constituent	CAS #	Units	Results	Q	Results	Q
Chloromethane	74-87-3	µg/L	10	U	10	U
Bromomethane	74-83-9	µg/L	10	U	10	U
Vinyl Chloride	75-01-4	µg/L	10	U	10	U
Chloroethane	75-00-3	µg/L	10	U	10	U
Methylene Chloride	75-09-2	µg/L	***10***	***U***	***10***	***U***
Acetone	67-64-1	µg/L	***10***	***U***	17	***U***
Carbon Disulfide	75-15-0	µg/L	10	U	10	U
1,1-Dichloroethene	75-35-4	µg/L	10	U	10	U
1,1-Dichloroethane	75-34-3	µg/L	10	U	10	U
1,2-Dichloroethene (total)	540-59-0	µg/L	10	U	10	U
Chloroform	67-66-3	µg/L	10	U	10	U
1,2-Dichloroethane	107-06-2	µg/L	10	U	10	U
2-Butanone	78-93-3	µg/L	10	U	2	J
1,1,1-Trichloroethane	71-55-6	µg/L	10	U	10	U
Carbon Tetrachloride	56-23-5	µg/L	7	J	6	J
Bromodichloromethane	75-27-4	µg/L	10	U	10	U
1,2-Dichloropropane	78-87-5	µg/L	10	U	10	U
cis-1,3-Dichloropropene	10061-01-5	µg/L	10	U	10	U
Trichloroethene	79-01-6	µg/L	10	U	10	U
Dibromochloromethane	124-48-1	µg/L	10	U	10	U
1,1,2-Trichloroethane	79-00-5	µg/L	10	U	10	U
Benzene	71-43-2	µg/L	10	U	10	U
trans-1,3-Dichloropropene	10061-02-6	µg/L	10	U	10	U
Bromoform	75-25-2	µg/L	10	U	10	U
4-Methyyl-2-Pentanone	108-10-1	µg/L	10	U	10	U
2-Hexanone	591-78-6	µg/L	10	U	10	U
Tetrachloroethene	127-18-4	µg/L	1	J	10	U
1,1,2,2-Tetrachloroethane	79-34-5	µg/L	10	U	10	U
Toluene	108-88-3	µg/L	10	U	10	U
Chlorobenzene	108-90-7	µg/L	10	U	10	U
Ethylbenzene	100-41-4	µg/L	10	U	10	U
Styrene	100-42-5	µg/L	10	U	10	U
Xylene (Total)	1330-20-7	µg/L	10	U	10	U

entered by: [illegible]
date: 9-26-94

shaded areas indicate changesby validator
40267TBL.XLS

checked by: BM
date: 9-26-94

FILE #:VW402.67		HEIS #:	B0BMX8		B0BMS2		B0BMS4	
		Date:	6-May-94		10-May-94		10-May-94	
		Matrix:	WATER		WATER		WATER	
Constituent	CAS #	Units	Results	Q	Results	Q	Results	Q
Chloromethane	74-87-3	µg/L	10	U	10	U	10	U
Bromomethane	74-83-9	µg/L	10	U	10	U	10	U
Vinyl Chloride	75-01-4	µg/L	10	U	10	U	10	U
Chloroethane	75-00-3	µg/L	10	U	10	U	10	U
Methylene Chloride	75-09-2	µg/L	10	U	10	U	10	U
Acetone	67-64-1	µg/L	56	B	12	U	26	U
Carbon Disulfide	75-15-0	µg/L	10	U	10	U	10	U
1,1-Dichloroethene	75-35-4	µg/L	10	U	10	U	10	U
1,1-Dichloroethane	75-34-3	µg/L	10	U	10	U	10	U
1,2-Dichloroethene (total)	540-59-0	µg/L	10	U	10	U	10	U
Chloroform	67-66-3	µg/L	10	U	8	J	10	U
1,2-Dichloroethane	107-06-2	µg/L	10	U	10	U	10	U
2-Butanone	78-93-3	µg/L	6	J	1	J	10	U
1,1,1-Trichloroethane	71-55-6	µg/L	10	U	10	U	10	U
Carbon Tetrachloride	56-23-5	µg/L	10	U	10	U	10	U
Bromodichloromethane	75-27-4	µg/L	10	U	10	U	10	U
1,2-Dichloropropane	78-87-5	µg/L	10	U	10	U	10	U
cis-1,3-Dichloropropene	10061-01-5	µg/L	10	U	10	U	10	U
Trichloroethene	79-01-6	µg/L	10	U	4	J	10	U
Dibromochloromethane	124-48-1	µg/L	10	U	10	U	10	U
1,1,2-Trichloroethane	79-00-5	µg/L	10	U	10	U	10	U
Benzene	71-43-2	µg/L	10	U	10	U	10	U
trans-1,3-Dichloropropene	10061-02-6	µg/L	10	U	10	U	10	U
Bromoform	75-25-2	µg/L	10	U	10	U	10	U
4-Methyyl-2-Pentanone	108-10-1	µg/L	10	U	10	U	10	U
2-Hexanone	591-78-6	µg/L	10	U	10	U	10	U
Tetrachloroethene	127-18-4	µg/L	10	U	10	U	10	U
1,1,2,2-Tetrachloroethane	79-34-5	µg/L	10	U	10	U	10	U
Toluene	108-88-3	µg/L	10	U	10	U	10	U
Chlorobenzene	108-90-7	µg/L	10	U	10	U	10	U
Ethylbenzene	100-41-4	µg/L	10	U	10	U	10	U
Styrene	100-42-5	µg/L	10	U	10	U	10	U
Xylene (Total)	1330-20-7	µg/L	10	U	10	U	10	U

entered by: ~
date: 9-26-94

shaded areas indicate changesby validator
40267TBL.XLS

checked by: BM
date: 9-26-94

FILE #:VW402.67		HEIS #:	B0BMS6		B0BMS8		B0BMT4	
		Date:	10-May-94		10-May-94		9-May-94	
		Matrix:	WATER		WATER		WATER	
Constituent	CAS #	Units	Results	Q	Results	Q	Results	Q
Chloromethane	74-87-3	µg/L	10	U	10	U	10	U
Bromomethane	74-83-9	µg/L	10	U	10	U	10	U
Vinyl Chloride	75-01-4	µg/L	10	U	10	U	10	U
Chloroethane	75-00-3	µg/L	10	U	10	U	10	U
Methylene Chloride	75-09-2	µg/L	***10***	***U***	***10***	***U***	***10***	***U***
Acetone	67-64-1	µg/L	***10***	***U***	14	***U***	15	***U***
Carbon Disulfide	75-15-0	µg/L	10	U	10	U	10	U
1,1-Dichloroethene	75-35-4	µg/L	10	U	10	U	10	U
1,1-Dichloroethane	75-34-3	µg/L	10	U	10	U	10	U
1,2-Dichloroethene (total)	540-59-0	µg/L	10	U	10	U	10	U
Chloroform	67-66-3	µg/L	7	J	10	U	1	J
1,2-Dichloroethane	107-06-2	µg/L	10	U	10	U	10	U
2-Butanone	78-93-3	µg/L	10	U	2	J	10	U
1,1,1-Trichloroethane	71-55-6	µg/L	10	U	10	U	10	U
Carbon Tetrachloride	56-23-5	µg/L	10	U	10	U	10	U
Bromodichloromethane	75-27-4	µg/L	10	U	10	U	10	U
1,2-Dichloropropane	78-87-5	µg/L	10	U	10	U	10	U
cis-1,3-Dichloropropene	10061-01-5	µg/L	10	U	10	U	10	U
Trichloroethene	79-01-6	µg/L	2	J	10	U	2	J
Dibromochloromethane	124-48-1	µg/L	10	U	10	U	10	U
1,1,2-Trichloroethane	79-00-5	µg/L	10	U	10	U	10	U
Benzene	71-43-2	µg/L	10	U	10	U	10	U
trans-1,3-Dichloropropene	10061-02-6	µg/L	10	U	10	U	10	U
Bromoform	75-25-2	µg/L	10	U	10	U	10	U
4-Methyyl-2-Pentanone	108-10-1	µg/L	10	U	10	U	10	U
2-Hexanone	591-78-6	µg/L	10	U	10	U	10	U
Tetrachloroethene	127-18-4	µg/L	10	U	10	U	10	U
1,1,2,2-Tetrachloroethane	79-34-5	µg/L	10	U	10	U	10	U
Toluene	108-88-3	µg/L	10	U	10	U	10	U
Chlorobenzene	108-90-7	µg/L	10	U	10	U	10	U
Ethylbenzene	100-41-4	µg/L	10	U	10	U	10	U
Styrene	100-42-5	µg/L	10	U	10	U	10	U
Xylene (Total)	1330-20-7	µg/L	10	U	10	U	10	U

entered by: [illegible]
date: 5-26-94

shaded areas indicate changesby validator
40267TBL.XLS

checked by: BM
date: 9-26-94

FILE #:VW402.67		HEIS #:	B0BMT6		B0BMW4		B0BMW6	
		Date:	9-May-94		9-May-94		9-May-94	
		Matrix:	WATER		WATER		WATER	
Constituent	CAS #	Units	Results	Q	Results	Q	Results	Q
Chloromethane	74-87-3	µg/L	10	U	10	U	10	U
Bromomethane	74-83-9	µg/L	10	U	10	U	10	U
Vinyl Chloride	75-01-4	µg/L	10	U	10	U	10	U
Chloroethane	75-00-3	µg/L	10	U	10	U	10	U
Methylene Chloride	75-09-2	µg/L	***10***	***U***	***10***	***U***	***10***	***U***
Acetone	67-64-1	µg/L	13	***U***	***10***	***U***	12	***U***
Carbon Disulfide	75-15-0	µg/L	10	U	10	U	10	U
1,1-Dichloroethene	75-35-4	µg/L	10	U	10	U	10	U
1,1-Dichloroethane	75-34-3	µg/L	10	U	10	U	10	U
1,2-Dichloroethene (total)	540-59-0	µg/L	10	U	10	U	10	U
Chloroform	67-66-3	µg/L	10	J	10	U	10	U
1,2-Dichloroethane	107-06-2	µg/L	10	U	10	U	10	U
2-Butanone	78-93-3	µg/L	4	J	10	U	3	J
1,1,1-Trichloroethane	71-55-6	µg/L	10	U	10	U	10	U
Carbon Tetrachloride	56-23-5	µg/L	10	U	10	U	10	U
Bromodichloromethane	75-27-4	µg/L	10	U	10	U	10	U
1,2-Dichloropropane	78-87-5	µg/L	10	U	10	U	10	U
cis-1,3-Dichloropropene	10061-01-5	µg/L	10	U	10	U	10	U
Trichloroethene	79-01-6	µg/L	10	U	10	U	10	U
Dibromochloromethane	124-48-1	µg/L	10	U	10	U	10	U
1,1,2-Trichloroethane	79-00-5	µg/L	10	U	10	U	10	U
Benzene	71-43-2	µg/L	10	U	10	U	10	U
trans-1,3-Dichloropropene	10061-02-6	µg/L	10	U	10	U	10	U
Bromoform	75-25-2	µg/L	10	U	10	U	10	U
4-Methyyl-2-Pentanone	108-10-1	µg/L	10	U	10	U	10	U
2-Hexanone	591-78-6	µg/L	10	U	10	U	10	U
Tetrachloroethene	127-18-4	µg/L	10	U	10	U	10	U
1,1,2,2-Tetrachloroethane	79-34-5	µg/L	10	U	10	U	10	U
Toluene	108-88-3	µg/L	10	U	10	U	10	U
Chlorobenzene	108-90-7	µg/L	10	U	10	U	10	U
Ethylbenzene	100-41-4	µg/L	10	U	10	U	10	U
Styrene	100-42-5	µg/L	10	U	10	U	10	U
Xylene (Total)	1330-20-7	µg/L	10	U	10	U	10	U

entered by: [illegible]
date: 9-26-94

shaded areas indicate changesby validator
40267TBL.XLS

checked by: BM
date: 9-26-94

FILE #:VW402.71		HEIS #:	BOBMY8		B0BMZ0	
		Date:	18-May-94		18-May-94	
Constituent		Matrix:	WATER		WATER	
	CAS #	Units	Results	Q	Results	Q
Chloromethane	74-87-3	µg/L	10	U	10	U
Bromomethane	74-83-9	µg/L	10	U	10	U
Vinyl Chloride	75-01-4	µg/L	10	U	10	U
Chloroethane	75-00-3	µg/L	10	U	10	U
Methylene Chloride	75-09-2	µg/L	10	U	10	U
Acetone	67-64-1	µg/L	10	U	10	U
Carbon Disulfide	75-15-0	µg/L	10	U	10	U
1,1-Dichloroethene	75-35-4	µg/L	10	U	10	U
1,1-Dichloroethane	75-34-3	µg/L	10	U	10	U
1,2-Dichloroethene (total)	540-59-0	µg/L	10	U	10	U
Chloroform	67-66-3	µg/L	10	U	10	U
1,2-Dichloroethane	107-06-2	µg/L	10	U	10	U
2-Butanone	78-93-3	µg/L	10	U	10	U
1,1,1-Trichloroethane	71-55-6	µg/L	10	U	10	U
Carbon Tetrachloride	56-23-5	µg/L	10	U	10	U
Bromodichloromethane	75-27-4	µg/L	10	U	10	U
1,2-Dichloropropane	78-87-5	µg/L	10	U	10	U
cis-1,3-Dichloropropene	0061-01-5	µg/L	10	U	10	U
Trichloroethene	79-01-6	µg/L	10	U	10	U
Dibromochloromethane	124-48-1	µg/L	10	U	10	U
1,1,2-Trichloroethane	79-00-5	µg/L	10	U	10	U
Benzene	71-43-2	µg/L	10	U	10	U
trans-1,3-Dichloropropene	0061-02-6	µg/L	10	U	10	U
Bromoform	75-25-2	µg/L	10	U	10	U
4-Methyl-2-pentanone	108-10-1	µg/L	10	U	10	U
2-Hexanone	591-78-6	µg/L	10	U	10	U
Tetrachloroethene	127-18-4	µg/L	10	U	10	U
1,1,2,2-Tetrachloroethane	79-34-5	µg/L	10	U	10	U
Toluene	108-88-3	µg/L	10	U	10	U
Chlorobenzene	108-90-7	µg/L	10	U	10	U
Ethylbenzene	100-41-4	µg/L	10	U	10	U
Styrene	100-42-5	µg/L	10	U	10	U
Xylene (Total)	1330-20-7	µg/L	10	U	10	U

entered by: CMS
date: 9/7/94

shaded areas show changes by validator
TMA779.XLS

checked by: [illegible] date: [illegible]

FILE #:VW402.72		HEIS #:	B0BMP0		B0BMP2		B0BMW8	
		Date:	17-May-94		17-May-94		19-May-94	
Constituent		Matrix:	WATER		WATER		WATER	
	CAS #	Units	Results	Q	Results	Q	Results	Q
Chloromethane	74-87-3	µg/L	10	UJ	10	UJ	10	U
Bromomethane	74-83-9	µg/L	10	UJ	10	UJ	10	U
Vinyl Chloride	75-01-4	µg/L	10	UJ	10	UJ	10	UJ
Chloroethane	75-00-3	µg/L	10	UJ	10	UJ	10	U
Methylene Chloride	75-09-2	µg/L	10	UJ	1	J	2	J
Acetone	67-64-1	µg/L	5	J	12	J	11	
Carbon Disulfide	75-15-0	µg/L	10	UJ	10	UJ	10	U
1,1-Dichloroethene	75-35-4	µg/L	10	UJ	10	UJ	10	U
1,1-Dichloroethane	75-34-3	µg/L	10	UJ	10	UJ	10	U
1,2-Dichloroethene (total)	40-59-0	µg/L	10	UJ	10	UJ	10	U
Chloroform	67-66-3	µg/L	10	UJ	10	UJ	10	U
1,2-Dichloroethane	07-06-2	µg/L	10	UJ	10	UJ	10	U
2-Butanone	78-93-3	µg/L	10	UJ	10	UJ	10	U
1,1,1-Trichloroethane	71-55-6	µg/L	10	UJ	10	UJ	10	U
Carbon Tetrachloride	56-23-5	µg/L	10	UJ	10	UJ	10	U
Bromodichloromethane	75-27-4	µg/L	10	UJ	10	UJ	10	U
1,2-Dichloropropane	78-87-5	µg/L	10	UJ	10	UJ	10	U
cis-1,3-Dichloropropene	61-01-5	µg/L	10	UJ	10	UJ	10	U
Trichloroethene	79-01-6	µg/L	10	UJ	10	UJ	10	U
Dibromochloromethane	24-48-1	µg/L	10	UJ	10	UJ	10	U
1,1,2-Trichloroethane	79-00-5	µg/L	10	UJ	10	UJ	10	U
Benzene	71-43-2	µg/L	10	UJ	10	UJ	10	U
trans-1,3-Dichloropropene	61-02-6	µg/L	10	UJ	10	UJ	10	U
Bromoform	75-25-2	µg/L	10	UJ	10	UJ	10	U
4-Methyl-2-pentanone	08-10-1	µg/L	10	UJ	10	UJ	10	U
2-Hexanone	91-78-6	µg/L	10	UJ	10	UJ	10	U
Tetrachloroethene	27-18-4	µg/L	10	UJ	10	UJ	10	U
1,1,2,2-Tetrachloroethane	79-34-5	µg/L	10	UJ	10	UJ	10	U
Toluene	08-88-3	µg/L	10	UJ	10	UJ	10	U
Chlorobenzene	08-90-7	µg/L	10	UJ	10	UJ	10	U
Ethylbenzene	00-41-4	µg/L	10	UJ	10	UJ	10	U
Styrene	00-42-5	µg/L	10	UJ	10	UJ	10	U
Xylene (Total)	30-20-7	µg/L	10	UJ	10	UJ	10	U

entered by: BM
date: 9.15.94

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ITC079.XLS

checked by: [illegible]
date: 9-14-94

FILE #:VW402.72		HEIS #:	B0BMX0		B0BMX2		B0BMX4	
		Date:	19-May-94		23-May-94		23-May-94	
Constituent		Matrix:	WATER		WATER		WATER	
	CAS #	Units	Results	Q	Results	Q	Results	Q
Chloromethane	74-87-3	µg/L	10	U	10	U	10	U
Bromomethane	74-83-9	µg/L	10	U	10	U	10	U
Vinyl Chloride	75-01-4	µg/L	10	UJ	10	UJ	10	UJ
Chloroethane	75-00-3	µg/L	10	U	10	U	10	U
Methylene Chloride	75-09-2	µg/L	2	J	10	U	1	J
Acetone	67-64-1	µg/L	18		10		14	
Carbon Disulfide	75-15-0	µg/L	10	U	10	U	10	U
1,1-Dichloroethene	75-35-4	µg/L	10	U	10	U	10	U
1,1-Dichloroethane	75-34-3	µg/L	10	U	10	U	10	U
1,2-Dichloroethene (total)	40-59-0	µg/L	10	U	10	U	10	U
Chloroform	67-66-3	µg/L	10	U	10	U	10	U
1,2-Dichloroethane	07-06-2	µg/L	10	U	10	U	10	U
2-Butanone	78-93-3	µg/L	10	U	10	U	10	U
1,1,1-Trichloroethane	71-55-6	µg/L	10	U	10	U	10	U
Carbon Tetrachloride	56-23-5	µg/L	10	U	10	U	10	U
Bromodichloromethane	75-27-4	µg/L	10	U	10	U	10	U
1,2-Dichloropropane	78-87-5	µg/L	10	U	10	U	10	U
cis-1,3-Dichloropropene	61-01-5	µg/L	10	U	10	U	10	U
Trichloroethene	79-01-6	µg/L	10	U	2	J	10	U
Dibromochloromethane	24-48-1	µg/L	10	U	10	U	10	U
1,1,2-Trichloroethane	79-00-5	µg/L	10	U	10	U	10	U
Benzene	71-43-2	µg/L	10	U	10	U	10	U
trans-1,3-Dichloropropene	61-02-6	µg/L	10	U	10	U	10	U
Bromoform	75-25-2	µg/L	10	U	10	U	10	U
4-Methyl-2-pentanone	08-10-1	µg/L	10	U	10	U	10	U
2-Hexanone	91-78-6	µg/L	10	U	10	U	10	U
Tetrachloroethene	27-18-4	µg/L	10	U	10	U	10	U
1,1,2,2-Tetrachloroethane	79-34-5	µg/L	10	U	10	UJ	10	UJ
Toluene	08-88-3	µg/L	10	U	10	U	10	U
Chlorobenzene	08-90-7	µg/L	10	U	10	U	10	U
Ethylbenzene	00-41-4	µg/L	10	U	10	U	10	U
Styrene	00-42-5	µg/L	10	U	10	U	10	U
Xylene (Total)	30-20-7	µg/L	10	U	10	U	10	U

entered by: BM
date: 9.15.94

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checked by: [illegible]
date: 4-19-4

FILE #:VW402.72		HEIS #:	B0BMY0		B0BMZ6		B0BMY2	
		Date:	18-May-94		20-May-94		18-May-94	
Constituent		Matrix:	WATER		WATER		WATER	
	CAS #	Units	Results	Q	Results	Q	Results	Q
Chloromethane	74-87-3	µg/L	10	U	10	U	10	U
Bromomethane	74-83-9	µg/L	10	U	10	U	10	U
Vinyl Chloride	75-01-4	µg/L	10	UJ	10	UJ	10	UJ
Chloroethane	75-00-3	µg/L	10	U	10	U	10	U
Methylene Chloride	75-09-2	µg/L	3	J	1	J	3	J
Acetone	67-64-1	µg/L	17		12		15	
Carbon Disulfide	75-15-0	µg/L	10	U	10	U	10	U
1,1-Dichloroethene	75-35-4	µg/L	10	U	10	U	10	U
1,1-Dichloroethane	75-34-3	µg/L	10	U	10	U	10	U
1,2-Dichloroethene (total)	40-59-0	µg/L	10	U	10	U	10	U
Chloroform	67-66-3	µg/L	10	U	10	U	10	U
1,2-Dichloroethane	07-06-2	µg/L	10	U	10	U	10	U
2-Butanone	78-93-3	µg/L	10	U	10	U	10	U
1,1,1-Trichloroethane	71-55-6	µg/L	10	U	10	U	10	U
Carbon Tetrachloride	56-23-5	µg/L	10	U	10	U	10	U
Bromodichloromethane	75-27-4	µg/L	10	U	10	U	10	U
1,2-Dichloropropane	78-87-5	µg/L	10	U	10	U	10	U
cis-1,3-Dichloropropene	61-01-5	µg/L	10	U	10	U	10	U
Trichloroethene	79-01-6	µg/L	10	U	10	U	10	U
Dibromochloromethane	24-48-1	µg/L	10	U	10	U	10	U
1,1,2-Trichloroethane	79-00-5	µg/L	10	U	10	U	10	U
Benzene	71-43-2	µg/L	10	U	10	U	10	U
trans-1,3-Dichloropropene	61-02-6	µg/L	10	U	10	U	10	U
Bromoform	75-25-2	µg/L	10	U	10	U	10	U
4-Methyl-2-pentanone	08-10-1	µg/L	10	U	10	U	10	U
2-Hexanone	91-78-6	µg/L	10	U	10	U	10	U
Tetrachloroethene	27-18-4	µg/L	10	U	10	U	10	U
1,1,2,2-Tetrachloroethane	79-34-5	µg/L	10	U	10	UJ	10	U
Toluene	08-88-3	µg/L	10	U	10	U	10	U
Chlorobenzene	08-90-7	µg/L	10	U	10	U	10	U
Ethylbenzene	00-41-4	µg/L	10	U	10	U	10	U
Styrene	00-42-5	µg/L	10	U	10	U	10	U
Xylene (Total)	30-20-7	µg/L	10	U	10	U	10	U

entered by: BM
date: 9-15-94

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checked by: ml
date: 9-14-94

FILE #:VW402.72		HEIS #:	B0BMZ2		B0BMZ8		B0BNO0	
		Date:	20-May-94		25-May-94		25-May-94	
Constituent		Matrix:	WATER		WATER		WATER	
	CAS #	Units	Results	Q	Results	Q	Results	Q
Chloromethane	74-87-3	µg/L	10	U	10	U	10	U
Bromomethane	74-83-9	µg/L	10	U	10	U	10	U
Vinyl Chloride	75-01-4	µg/L	10	*UJ*	10	U	10	U
Chloroethane	75-00-3	µg/L	10	U	10	U	10	U
Methylene Chloride	75-09-2	µg/L	1	J	*10*	*U*	*10*	*U*
Acetone	67-64-1	µg/L	7	J	14	*U*	14	*U*
Carbon Disulfide	75-15-0	µg/L	10	U	10	U	10	U
1,1-Dichloroethene	75-35-4	µg/L	10	U	10	U	10	U
1,1-Dichloroethane	75-34-3	µg/L	10	U	10	U	10	U
1,2-Dichloroethene (total)	540-59-0	µg/L	10	U	10	U	10	U
Chloroform	67-66-3	µg/L	10	U	10	U	10	U
1,2-Dichloroethane	107-06-2	µg/L	10	U	10	U	10	U
2-Butanone	78-93-3	µg/L	10	U	10	U	10	U
1,1,1-Trichloroethane	71-55-6	µg/L	10	U	10	*UJ*	10	*UJ*
Carbon Tetrachloride	56-23-5	µg/L	10	U	10	*UJ*	10	*UJ*
Bromodichloromethane	75-27-4	µg/L	10	U	10	U	10	U
1,2-Dichloropropane	78-87-5	µg/L	10	U	10	U	10	U
cis-1,3-Dichloropropene	0061-01-5	µg/L	10	U	10	U	10	U
Trichloroethene	79-01-6	µg/L	10	U	10	U	10	U
Dibromochloromethane	124-48-1	µg/L	10	U	10	U	10	U
1,1,2-Trichloroethane	79-00-5	µg/L	10	U	10	U	10	U
Benzene	71-43-2	µg/L	10	U	10	U	10	U
trans-1,3-Dichloropropene	0061-02-6	µg/L	10	U	10	U	10	U
Bromoform	75-25-2	µg/L	10	U	10	U	10	U
4-Methyl-2-pentanone	108-10-1	µg/L	10	U	10	U	10	U
2-Hexanone	591-78-6	µg/L	10	U	10	U	10	U
Tetrachloroethene	127-18-4	µg/L	10	U	10	U	10	U
1,1,2,2-Tetrachloroethane	79-34-5	µg/L	10	*UJ*	10	U	10	U
Toluene	108-88-3	µg/L	10	U	10	U	10	U
Chlorobenzene	108-90-7	µg/L	10	U	10	U	10	U
Ethylbenzene	100-41-4	µg/L	10	U	10	U	10	U
Styrene	100-42-5	µg/L	10	U	10	U	10	U
Xylene (Total)	1330-20-7	µg/L	10	U	10	U	10	U

entered by: ~~
date: 9-26-94

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40272TBL.XLS

checked by: BM
date: 9-26-94

FILE #:VW402.66		HEIS #:	B0BMW0		B0BMW2	
		Date:	19-May-94		12-May-94	
		Matrix:	WATER		WATER	
Constituent	CAS #	Units	Results	Q	Results	Q
Chloromethane	74-87-3	µg/L	10	U	10	U
Bromomethane	74-83-9	µg/L	10	U	10	U
Vinyl Chloride	75-01-4	µg/L	10	U	10	U
Chloroethane	75-00-3	µg/L	10	U	10	U
Methylene Chloride	75-09-2	µg/L	10	U	1	J
Acetone	67-64-1	µg/L	10	U	10	U
Carbon Disulfide	75-15-0	µg/L	10	U	10	U
1,1-Dichloroethene	75-35-4	µg/L	10	U	10	U
1,1-Dichloroethane	75-34-3	µg/L	10	U	10	U
1,2-Dichloroethene (total)	540-59-0	µg/L	10	U	10	U
Chloroform	67-66-3	µg/L	10	U	10	U
1,2-Dichloroethane	107-06-2	µg/L	10	U	10	U
2-Butanone	78-93-3	µg/L	10	U	10	U
1,1,1-Trichloroethane	71-55-6	µg/L	10	U	10	U
Carbon Tetrachloride	56-23-5	µg/L	10	U	10	U
Bromodichloromethane	75-27-4	µg/L	10	U	10	U
1,2-Dichloropropane	78-87-5	µg/L	10	U	10	U
cis-1,3-Dichloropropene	10061-01-5	µg/L	10	U	10	U
Trichloroethene	79-01-6	µg/L	3	J	10	U
Dibromochloromethane	124-48-1	µg/L	10	U	10	U
1,1,2-Trichloroethane	79-00-5	µg/L	10	U	10	U
Benzene	71-43-2	µg/L	10	U	10	U
trans-1,3-Dichloropropene	10061-02-6	µg/L	10	U	10	U
Bromoform	75-25-2	µg/L	10	U	10	U
4-Methyyl-2-Pentanone	110-75-8	µg/L	10	U	10	U
2-Hexanone	591-78-6	µg/L	10	U	10	U
Tetrachloroethene	127-18-4	µg/L	10	U	10	U
1,1,2,2-Tetrachloroethane	79-34-5	µg/L	10	U	10	U
Toluene	108-88-3	µg/L	10	U	10	U
Chlorobenzene	108-90-7	µg/L	10	U	10	U
Ethylbenzene	100-41-4	µg/L	10	U	10	U
Styrene	100-42-5	µg/L	10	U	10	U
Xylene (Total)	1330-20-7	µg/L	10	U	10	U

entered by: [illegible] date: 9/26/94

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checked by: [illegible] date: 9/26/94

FILE #:VW402.76		HEIS #:	B0BMQ4		B0BMV6		B0BMV8	
		Date:	1-Jun-94		6-Jun-94		6-Jun-94	
Constituent		Matrix:	WATER		WATER		WATER	
	CAS #	Units	Results	Q	Results	Q	Results	Q
Chloromethane	74-87-3	µg/L	10	U	10	U	10	U
Bromomethane	74-83-9	µg/L	10	U	10	U	10	U
Vinyl Chloride	75-01-4	µg/L	10	U	10	U	10	U
Chloroethane	75-00-3	µg/L	10	U	10	U	10	U
Methylene Chloride	75-09-2	µg/L	24	U	23	U	24	U
Acetone	67-64-1	µg/L	20	U	10	U	24	U
Carbon Disulfide	75-15-0	µg/L	10	U	10	U	10	U
1,1-Dichloroethene	75-35-4	µg/L	10	U	1	J	10	J
1,1-Dichloroethane	75-34-3	µg/L	10	U	10	U	10	U
1,2-Dichloroethene (total)	540-59-0	µg/L	10	U	10	U	10	U
Chloroform	67-66-3	µg/L	10	U	10	U	10	U
1,2-Dichloroethane	107-06-2	µg/L	10	U	10	U	10	U
2-Butanone	78-93-3	µg/L	10	U	10	U	10	U
1,1,1-Trichloroethane	71-55-6	µg/L	10	UJ	10	UJ	10	UJ
Carbon Tetrachloride	56-23-5	µg/L	10	UJ	10	UJ	10	UJ
Bromodichloromethane	75-27-4	µg/L	10	U	10	U	10	U
1,2-Dichloropropane	78-87-5	µg/L	10	U	10	U	10	U
cis-1,3-Dichloropropene	061-01-5	µg/L	10	U	10	U	10	U
Trichloroethene	79-01-6	µg/L	10	U	6	J	10	U
Dibromochloromethane	124-48-1	µg/L	10	U	10	U	10	U
1,1,2-Trichloroethane	79-00-5	µg/L	10	U	10	U	10	U
Benzene	71-43-2	µg/L	10	U	2	J	10	U
trans-1,3-Dichloropropene	061-02-6	µg/L	10	U	10	U	10	U
Bromoform	75-25-2	µg/L	10	U	10	U	10	U
4-Methyl-2-pentanone	108-10-1	µg/L	10	U	10	U	10	U
2-Hexanone	591-78-6	µg/L	10	U	10	U	10	U
Tetrachloroethene	127-18-4	µg/L	10	U	10	U	10	U
1,1,2,2-Tetrachloroethane	79-34-5	µg/L	10	U	10	U	10	U
Toluene	108-88-3	µg/L	10	U	2	J	10	U
Chlorobenzene	108-90-7	µg/L	10	U	2	J	10	U
Ethylbenzene	100-41-4	µg/L	10	U	10	U	10	U
Styrene	100-42-5	µg/L	10	U	10	U	10	U
Xylene (Total)	330-20-7	µg/L	10	U	10	U	10	U

entered by: [illegible] date: 9-26-94

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40276TBL.XLS

checked by: [illegible] date: 9/26/94

APPENDIX B

SEMIVOLATILE ORGANIC VALIDATED DATA SUMMARY TABLES

FILE #:VW402.56		HEIS #:	B0BMY4	
		Date:	6-May-94	
		Matrix:	WATER	
Constituent	CAS #	Units	Results	Q
Phenol	108-95-2	µg/L	10	U
bis(2-Chloroethyl) ether	111-44-4	µg/L	10	U
2-Chlorophenol	95-57-8	µg/L	10	U
1,3-Dichlorobenzene	541-73-1	µg/L	10	U
1,4-Dichlorobenzene	106-46-7	µg/L	10	U
1,2-Dichlorobenzene	95-50-1	µg/L	10	U
2-Methylphenol	95-48-7	µg/L	10	U
2,2'-oxybis (1-Chloropropane)	108-60-1	µg/L	10	U
4-Methylphenol	106-44-5	µg/L	10	U
N-Nitroso-Di-n-propylamine	621-64-7	µg/L	10	U
Hexachloroethane	97-72-1	µg/L	10	U
Nitrobenzene	98-95-3	µg/L	10	U
Isophorone	78-59-1	µg/L	10	U
2-Nitrophenol	88-75-5	µg/L	10	U
2,4-Dimethylphenol	105-67-9	µg/L	10	U
bis(2-Chloroethoxy) methane	111-91-1	µg/L	10	U
2,4-Dichlorophenol	120-83-2	µg/L	10	U
1,2,4-Trichlorobenzene	120-82-1	µg/L	10	U
Naphthalene	91-20-3	µg/L	10	U
4-Chloroaniline	106-47-8	µg/L	10	U
Hexachlorobutadiene	87-68-3	µg/L	10	U
4-Chloro-3-Methylphenol	59-50-7	µg/L	10	U
2-Methylnaphthalene	91-57-6	µg/L	10	U
Hexachlorocyclopentadiene	77-47-4	µg/L	10	U
2,4,6-Trichlorophenol	88-06-2	µg/L	10	U
2,4,5-Trichlorophenol	95-95-4	µg/L	25	U
2-Chloronaphthalene	91-58-7	µg/L	10	U
2-Nitroaniline	88-74-4	µg/L	25	UJ
Dimethylphthalate	131-11-3	µg/L	10	U
Acenaphthylene	208-96-8	µg/L	10	U
3-Nitroaniline	99-09-2	µg/L	25	U
Acenaphthene	83-32-9	µg/L	10	U
2,4-Dinitrophenol	51-28-5	µg/L	25	U
4-Nitrophenol	100-02-7	µg/L	25	UJ
Dibenzofuran	132-64-9	µg/L	10	U
2,4-Dinitrotoluene	121-14-2	µg/L	10	U
2,6-Dinitrotoluene	606-20-2	µg/L	10	U
Diethylphthalate	84-66-2	µg/L	10	U
4-Chlorophenyl-phenylether	7005-72-3	µg/L	10	U
Fluorene	86-73-7	µg/L	10	U
4-Nitroaniline	100-01-6	µg/L	25	U
4,6-Dinitro-2-methylphenol	534-52-1	µg/L	25	U
N-Nitrosodiphenylamine (1)	86-30-6	µg/L	10	U
4-Bromophenyl-phenylether	101-55-3	µg/L	10	U
Hexachlorobenzene	118-74-1	µg/L	10	UJ

entered by: [illegible]
date: 9-26-94

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checked by: [illegible]
date: 9/26/94

FILE #:VW402.56		HEIS #:	B0BMY4	
		Date:	6-May-94	
		Matrix:	WATER	
Constituent	CAS #	Units	Results	Q
Pentachlorophenol	87-86-5	µg/L	25	U
Phenanthrene	85-01-8	µg/L	10	U
Anthracene	120-12-7	µg/L	10	U
Carbazole	86-74-8	µg/L	10	U
Di-n-butylphthalate	84-74-2	µg/L	10	U
Fluoranthene	206-44-0	µg/L	10	U
Pyrene	129-00-0	µg/L	10	U
Butylbenzylphthalate	85-68-7	µg/L	10	U
3,3'-Dichlorobenzidine	91-94-1	µg/L	10	U
Benzo(a) anthracene	56-55-3	µg/L	10	U
bis(2-ethylhexyl) phthalate	117-81-7	µg/L	2	J
Chrysene	218-01-9	µg/L	10	U
Di-n-octylphthalate	117-84-0	µg/L	10	U
Benzo(b) fluoranthene	205-99-2	µg/L	10	U
Benzo(k) fluoranthene	207-08-9	µg/L	10	U
Benzo(a) pyrene	50-32-8	µg/L	10	U
Indeno(1,2,3-cd) pyrene	193-39-5	µg/L	10	U
Dibenz(a,h) Anthracene	53-70-3	µg/L	10	U
Benzo(g,h,i) Perylene	191-24-2	µg/L	10	U
UNKNOWN KETONE	1	ug/L	2	U

entered by: [illegible]
date: 9.26.94

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checked by: [illegible]
date: 9/26/94

FILE #:VW402.66		HEIS #:	80BMP4		80BMR0		80BMR8		80BMT0		80BMT8	
		Date:	18-May-94		11-May-94		11-May-94		12-May-94		12-May-94	
		Matrix:	WATER		WATER		WATER		WATER		WATER	
Constituent	CAS #	Units	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Phenol	108-95-2	µg/L	10	U	10	U	10	U	10	U	10	U
bis (2-Chloroethyl) ether	111-44-4	µg/L	10	U	10	U	10	U	10	U	10	U
2-Chlorophenol	95-57-8	µg/L	10	U	10	U	10	U	10	U	10	U
1,3-Dichlorobenzene	541-73-1	µg/L	10	U	10	U	10	U	10	U	10	U
1,4-Dichlorobenzene	106-46-7	µg/L	10	U	10	U	10	U	10	U	10	U
1,2-Dichlorobenzene	95-50-1	µg/L	10	U	10	U	10	U	10	U	10	U
2-Methylphenol	95-48-7	µg/L	10	U	10	U	10	U	10	U	10	U
2,2'-oxybis (1-Chloropropane)	108-60-1	µg/L	10	U	10	U	10	U	10	U	10	U
4-Methylphenol	106-44-5	µg/L	10	U	10	U	10	U	10	U	10	U
N-Nitroso-Di-n-propylamine	621-64-7	µg/L	10	U	10	U	10	U	10	U	10	U
Hexachloroethane	97-72-1	µg/L	10	U	10	U	10	U	10	U	10	U
Nitrobenzene	98-95-3	µg/L	10	U	10	U	10	U	10	U	10	U
Isophorone	78-59-1	µg/L	10	U	10	U	10	U	10	U	10	U
2-Nitrophenol	88-75-5	µg/L	10	U	10	U	10	U	10	U	10	U
2,4-Dimethylphenol	105-67-9	µg/L	10	U	10	U	10	U	10	U	10	U
bis (2-chloroethoxy) methane	111-91-1	µg/L	10	U	10	U	10	U	10	U	10	U
2,4-Dichlorophenol	120-83-2	µg/L	10	U	10	U	10	U	10	U	10	U
1,2,4-Trichlorobenzene	120-82-1	µg/L	10	U	10	U	10	U	10	U	10	U
Naphthalene	91-20-3	µg/L	10	U	10	U	10	U	10	U	10	U
4-Chloroaniline	106-47-8	µg/L	10	U	10	U	10	U	10	U	10	U
Hexachlorobutadiene	87-68-3	µg/L	10	U	10	U	10	U	10	U	10	U
4-Chloro-3-methylphenol	59-50-7	µg/L	10	U	10	U	10	U	10	U	10	U
2-Methylnaphthalene	91-57-6	µg/L	10	U	10	U	10	U	10	U	10	U
Hexachlorocyclopentadiene	77-47-4	µg/L	10	U	10	U	10	U	10	U	10	U
2,4,6-Trichlorophenol	88-06-2	µg/L	10	U	10	U	10	U	10	U	10	U
2,4,5-Trichlorophenol	95-95-4	µg/L	25	U	25	U	25	U	25	U	25	U
2-Chloronaphthalene	91-58-7	µg/L	10	U	10	U	10	U	10	U	10	U
2-Nitroaniline	88-74-4	µg/L	25	U	25	U	25	U	25	U	25	U
Dimethylphthalate	131-11-3	µg/L	10	U	10	U	10	U	10	U	10	U
Acenaphthylene	208-96-8	µg/L	10	U	10	U	10	U	10	U	10	U
2,6-Dinitrotoluene	121-14-2	µg/L	10	U	10	U	10	U	10	U	10	U
3-Nitroaniline	99-09-2	µg/L	25	U	25	U	25	U	25	U	25	U
Acenaphthene	83-32-9	µg/L	10	U	10	U	10	U	10	U	10	U
2,4-Dinitrophenol	51-28-5	µg/L	25	U	25	U	25	U	25	U	25	U
Dibenzofuran	132-64-9	µg/L	25	U	25	U	25	U	25	U	25	U
Dibenzofuran	132-64-9	µg/L	10	U	10	U	10	U	10	U	10	U
2,4-Dinitrotoluene	121-14-2	µg/L	10	U	10	U	10	U	10	U	10	U
Diethylphthalate	84-66-2	µg/L	10	U	10	U	10	U	10	U	10	U
4-Chlorophenyl-phenylether	7005-72-3	µg/L	10	U	10	U	10	U	10	U	10	U
Fluorene	86-73-7	µg/L	10	U	10	U	10	U	10	U	10	U
4-Nitroaniline	100-01-6	µg/L	25	U	25	U	25	U	25	U	25	U
4,6-Dinitro-2-Methylphenol	534-52-1	µg/L	25	U	25	U	25	U	25	U	25	U
N-Nitrosodiphenylamine (1)	86-30-6	µg/L	10	U	10	U	10	U	10	U	10	U
4-Bromophyl-phenylether	101-55-3	µg/L	10	U	10	U	10	U	10	U	10	U
Hexachlorobenzene	118-74-1	µg/L	10	U	10	U	10	U	10	U	10	U
Pentachlorophenol	87-86-5	µg/L	25	U	25	U	25	U	25	U	25	U
Phenanthrene	85-01-8	µg/L	10	U	10	U	10	U	10	U	10	U
Anthracene	120-12-7	µg/L	10	U	10	U	10	U	10	U	10	U
Carbazole	85-74-8	µg/L	10	U	10	U	10	U	10	U	10	U
Di-n-Butylphthalate	84-74-2	µg/L	10	U	10	U	10	U	10	U	10	U
Fluroanthene	206-44-0	µg/L	10	U	10	U	10	U	10	U	10	U
Pyrene	129-00-0	µg/L	10	U	10	U	10	U	10	U	10	U
Butylebenzylphthalate	85-68-7	µg/L	10	U	10	U	10	U	10	U	10	U
3,3'-Dichlorobenzidine	91-94-1	µg/L	10	U	10	U	10	U	10	U	10	U
Benzo (a) Anthracene	56-55-3	µg/L	10	U	10	U	10	U	10	U	10	U
Chrysene	218-01-9	µg/L	10	U	10	U	10	U	10	U	10	U
bis (2-Ethylhexyl) Phthalate	117-81-7	µg/L	10	U	5	J	10	U	10	U	10	U
Di-n-Octyle Phthalate	117-81-7	µg/L	10	U	10	U	10	U	10	U	10	U
Benzo (b) Fluoranthene	205-99-2	µg/L	10	U	10	U	10	U	10	U	10	U
Benzo (k) Fluoranthene	207-08-9	µg/L	10	U	10	U	10	U	10	U	10	U
Benzo (k) Pyrene	50-32-8	µg/L	10	U	10	U	10	U	10	U	10	U
Indeno (1,2,3-cd) Pyrene	193-39-5	µg/L	10	U	10	U	10	U	10	U	10	U
Dibenze (a,h) Anthracene	53-70-3	µg/L	10	U	10	U	10	U	10	U	10	U
Benzo (g,h,i) Perylene	191-247-2	µg/L	10	U	10	U	10	U	10	U	10	U

entered by: BM date: 9-17-94 shaded areas indicate changes by the validator ITC062

checked by: BM date: 9-17-94

9-20-94

FILE #:VW402.66		HEIS #:	B0BMV2		B0BMW0	
		Date:	6-May-94		19-May-94	
		Matrix:	WATER		WATER	
Constituent	CAS #	Units	Results	Q	Results	Q
Phenol	108-95-2	µg/L	10	U	10	U
bis (2-Chloroethyl) ether	111-44-4	µg/L	10	U	10	U
2-Chlorophenol	95-57-8	µg/L	10	U	10	U
1,3-Dichlorobenzene	541-73-1	µg/L	10	U	10	U
1,4-Dichlorobenzene	106-46-7	µg/L	10	U	10	U
1,2-Dichlorobenzene	95-50-1	µg/L	10	U	10	U
2-Methylphenol	95-48-7	µg/L	10	U	10	U
2,2'-oxybis (1-Chloropropane)	108-60-1	µg/L	10	U	10	U
4-Methylphenol	106-44-5	µg/L	10	U	10	U
N-Nitroso-Di-n-propylamine	621-64-7	µg/L	10	U	10	U
Hexachloroethane	97-72-1	µg/L	10	U	10	U
Nitrobenzene	98-95-3	µg/L	10	U	10	U
Isophorone	78-59-1	µg/L	10	U	10	U
2-Nitrophenol	88-75-5	µg/L	10	U	10	U
2,4-Dimethylphenol	105-67-9	µg/L	10	U	10	U
bis (2-chloroethoxy) methane	111-91-1	µg/L	10	U	10	U
2,4-Dichlorophenol	120-83-2	µg/L	10	U	10	U
1,2,4-Trichlorobenzene	120-82-1	µg/L	10	U	10	U
Naphthalene	91-20-3	µg/L	10	U	10	U
4-Chloroaniline	106-47-8	µg/L	10	U	10	U
Hexachlorobutadiene	87-68-3	µg/L	10	U	10	U
4-Chloro-3-methylphenol	59-50-7	µg/L	10	U	10	U
2-Methylnaphthalene	91-57-6	µg/L	10	U	10	U
Hexachlorocyclopentadiene	77-47-4	µg/L	10	U	10	U
2,4,6-Trichlorophenol	88-06-2	µg/L	10	U	10	U
2,4,5-Trichlorophenol	95-95-4	µg/L	25	U	25	U
2-Chloronaphthalene	91-58-7	µg/L	10	U	10	U
2-Nitroaniline	88-74-4	µg/L	25	U	25	U
Dimethylphthalate	131-11-3	µg/L	10	U	10	U
Acenaphthylene	208-96-8	µg/L	10	U	10	U
2,6-Dinitrotoluene	121-14-2	µg/L	10	U	10	U
3-Nitroaniline	99-09-2	µg/L	25	U	25	U
Acenaphthene	83-32-9	µg/L	10	U	10	U
2,4-Dinitrophenol	51-28-5	µg/L	25	U	25	U
Dibenzofuran	132-64-9	µg/L	25	U	25	U
Dibenzofuran	132-64-9	µg/L	10	U	10	U
2,4-Dinitrotoluene	121-14-2	µg/L	10	U	10	U
Diethylphthalate	84-66-2	µg/L	10	U	10	U
4-Chlorophenyl-phenylether	7005-72-3	µg/L	10	U	10	U
Fluorene	86-73-7	µg/L	10	U	10	U
4-Nitroaniline	100-01-6	µg/L	25	U	25	U
4,6-Dinitro-2-Methylphenol	534-52-1	µg/L	25	U	25	U
N-Nitrosodiphenylamine (1)	86-30-6	µg/L	10	U	10	U
4-Bromophyl-phenylether	101-55-3	µg/L	10	U	10	U
Hexachlorobenzene	118-74-1	µg/L	10	U	10	U
Pentachlorophenol	87-86-5	µg/L	25	U	25	U
Phenanthrene	85-01-8	µg/L	10	U	10	U
Anthracene	120-12-7	µg/L	10	U	10	U
Carbazole	85-74-8	µg/L	10	U	10	U
Di-n-Butylphthalate	84-74-2	µg/L	10	U	10	U
Fluroanthene	206-44-0	µg/L	10	U	10	U
Pyrene	129-00-0	µg/L	10	U	10	U
Butylebenzylphthalate	85-68-7	µg/L	10	U	10	U
3,3'-Dichlorobenzidine	91-94-1	µg/L	10	U	10	U
Benzo (a) Anthracene	56-55-3	µg/L	10	U	10	U
Chrysene	218-01-9	µg/L	10	U	10	U
bis (2-Ethylhexyl) Phthalate	117-81-7	µg/L	2	J	10	U
Di-n-Octyle Phthalate	117-81-7	µg/L	10	U	10	U
Benzo (b) Fluoranthene	205-99-2	µg/L	10	U	10	U
Benzo (k) Fluoranthene	207-08-9	µg/L	10	U	10	U
Benzo (k) Pyrene	50-32-8	µg/L	10	U	10	U
Indeno (1,2,3-cd) Pyrene	193-39-5	µg/L	10	U	10	U
Dibenze (a,h) Anthracene	53-70-3	µg/L	10	U	10	U
Benzo (g,h,i) Perylene	191-247-2	µg/L	10	U	10	U

checked by: BM date: 9-17-94
mw 9-20-94

entered by: BM date: 9-17-94 shaded areas indicate changes by the validator ITC062

FILE #:VW402.67		HEIS #:	B0BMQ6		B0BMX6		B0BMS2	
		Date:	6-May-94		6-May-94		10-May-94	
		Matrix:	WATER		WATER		WATER	
Constituent	CAS #	Units	Results	Q	Results	Q	Results	Q
Phenol	108-95-2	µg/L	10	UJ	10	UJ	10	U
bis (2-Chloroethyl) ether	111-44-4	µg/L	10	UJ	10	UJ	10	U
2-Chlorophenol	95-57-8	µg/L	10	UJ	10	UJ	10	U
1,3-Dichlorobenzene	541-73-1	µg/L	10	UJ	10	UJ	10	U
1,4-Dichlorobenzene	106-46-7	µg/L	10	UJ	10	UJ	10	U
1,2-Dichlorobenzene	95-50-1	µg/L	10	UJ	10	UJ	10	U
2-Methylphenol	95-48-7	µg/L	10	UJ	10	UJ	10	U
2,2'-oxybis (1-Chloropropane)	108-60-1	µg/L	10	UJ	10	UJ	10	U
4-Methylphenol	106-44-5	µg/L	10	UJ	10	UJ	10	U
N-Nitroso-Di-n-propylamine	621-64-7	µg/L	10	UJ	10	UJ	10	U
Hexachloroethane	67-72-1	µg/L	10	UJ	10	UJ	10	U
Nitrobenzene	98-95-3	µg/L	10	UJ	10	UJ	10	U
Isophorone	78-59-1	µg/L	10	UJ	10	UJ	10	U
2-Nitrophenol	88-75-5	µg/L	10	UJ	10	UJ	10	U
2,4-Dimethylphenol	105-67-9	µg/L	10	UJ	10	UJ	10	U
bis (2-chloroethoxy) methane	111-91-1	µg/L	10	UJ	10	UJ	10	U
2,4-Dichlorophenol	120-83-2	µg/L	10	UJ	10	UJ	10	U
1,2,4-Trichlorobenzene	120-82-1	µg/L	10	UJ	10	UJ	10	U
Naphthalene	91-20-3	µg/L	10	UJ	10	UJ	10	U
4-Chloroaniline	106-47-8	µg/L	10	UJ	10	UJ	10	U
Hexachlorobutadiene	87-68-3	µg/L	10	UJ	10	UJ	10	U
4-Chloro-3-methylphenol	59-50-7	µg/L	10	UJ	10	UJ	10	U
2-Methylnaphthalene	91-57-6	µg/L	10	UJ	10	UJ	10	U
Hexachlorocyclopentadiene	77-47-4	µg/L	10	UJ	10	UJ	10	U
2,4,6-Trichlorophenol	88-06-2	µg/L	10	UJ	10	UJ	10	U
2,4,5-Trichlorophenol	95-95-4	µg/L	25	UJ	25	UJ	25	U
2-Chloronaphthalene	91-58-7	µg/L	10	UJ	10	UJ	10	U
2-Nitroaniline	88-74-4	µg/L	25	UJ	25	UJ	25	U
Dimethylphthalate	131-11-3	µg/L	10	UJ	10	UJ	10	U
Acenaphthylene	208-96-8	µg/L	10	UJ	10	UJ	10	U
2,6-Dinitrotoluene	606-20-2	µg/L	10	UJ	10	UJ	10	U
3-Nitroaniline	99-09-2	µg/L	25	UJ	25	UJ	25	U
Acenaphthene	83-32-9	µg/L	10	UJ	10	UJ	10	U
2,4-Dinitrophenol	51-28-5	µg/L	25	UJ	25	UJ	25	U
4-Nitrophenol	100-02-7	µg/L	25	UJ	25	UJ	25	U
Dibenzofuran	132-64-9	µg/L	10	UJ	10	UJ	10	U
2,4-Dinitrotoluene	121-14-2	µg/L	10	UJ	10	UJ	10	U
Diethylphthalate	84-66-2	µg/L	10	UJ	10	UJ	10	U
4-Chlorophenyl-phenylether	7005-72-3	µg/L	10	UJ	10	UJ	10	U
Fluorene	86-73-7	µg/L	10	UJ	10	UJ	10	U
4-Nitroaniline	100-01-6	µg/L	25	UJ	25	UJ	25	U
4,6-Dinitro-2-Methylphenol	534-52-1	µg/L	25	UJ	25	UJ	25	U
N-Nitrosodiphenylamine (1)	86-30-6	µg/L	10	UJ	10	UJ	10	U
4-Bromophyl-phenylether	101-55-3	µg/L	10	UJ	10	UJ	10	U
Hexachlorobenzene	118-74-1	µg/L	10	UJ	10	UJ	10	U
Pentachlorophenol	87-86-5	µg/L	25	UJ	25	UJ	25	U

shaded areas indicate changes by the validator
ITC060.XLS

checked by: [illegible]
date: [illegible]

entered by: BM
date: 10-3-94

FILE #:VW402.67		HEIS #:	B0BMQ6		B0BMX6		B0BMS2	
		Date:	6-May-94		6-May-94		10-May-94	
		Matrix:	WATER		WATER		WATER	
Constituent	CAS #	Units	Results	Q	Results	Q	Results	Q
Phenanthrene	85-01-8	µg/L	10	UJ	10	UJ	10	U
Anthracene	120-12-7	µg/L	10	UJ	10	UJ	10	U
Carbazole	86-74-8	µg/L	10	UJ	10	UJ	10	U
Di-n-Butylphthalate	84-74-2	µg/L	10	UJ	10	UJ	10	U
Fluroanthene	206-44-0	µg/L	10	UJ	10	UJ	10	UJ
Pyrene	129-00-0	µg/L	10	UJ	10	UJ	10	U
Butylebenzylphthalate	85-68-7	µg/L	10	UJ	10	UJ	10	U
3,3'-Dichlorobenzidine	91-94-1	µg/L	10	UJ	10	UJ	10	U
Benzo (a) Anthracene	56-55-3	µg/L	10	UJ	10	UJ	10	U
Chrysene	218-01-9	µg/L	10	UJ	10	UJ	10	UJ
bis (2-Ethylhexyl) Phthalate	117-81-7	µg/L	10	UJ	10	UJ	10	U
Di-n-Octyle Phthalate	117-84-0	µg/L	10	UJ	10	UJ	10	U
Benzo (b) Fluoranthene	205-99-2	µg/L	10	UJ	10	UJ	10	U
Benzo (k) Fluoranthene	207-08-9	µg/L	10	UJ	10	UJ	10	UJ
Benzo (a) Pyrene	50-32-8	µg/L	10	UJ	10	UJ	10	U
Indeno (1,2,3-cd) Pyrene	193-39-5	µg/L	10	UJ	10	UJ	10	U
Dibenze (a,h) Anthracene	53-70-3	µg/L	10	UJ	10	UJ	10	U
Benzo (g,h,i) Perylene	191-247-2	µg/L	10	UJ	10	UJ	10	U

shaded areas indicate changes by the validator
ITC060.XLS

entered by: BM
date: 10-3-94

checked by: WJC
date: 10-4-94

FILE #:VW402.67		HEIS #:	B0BMS6		B0BMT4		B0BMW4	
		Date:	10-May-94		9-May-94		9-May-94	
		Matrix:	WATER		WATER		WATER	
Constituent	CAS #	Units	Results	Q	Results	Q	Results	Q
Phenol	108-95-2	µg/L	10	U	10	U	10	U
bis (2-Chloroethyl) ether	111-44-4	µg/L	10	U	10	U	10	U
2-Chlorophenol	95-57-8	µg/L	10	U	10	U	10	U
1,3-Dichlorobenzene	541-73-1	µg/L	10	U	10	U	10	U
1,4-Dichlorobenzene	106-46-7	µg/L	10	U	10	U	10	U
1,2-Dichlorobenzene	95-50-1	µg/L	10	U	10	U	10	U
2-Methylphenol	95-48-7	µg/L	10	U	10	U	10	U
2,2'-oxybis (1-Chloropropane)	108-60-1	µg/L	10	U	10	U	10	U
4-Methylphenol	106-44-5	µg/L	10	U	10	U	10	U
N-Nitroso-Di-n-propylamine	621-64-7	µg/L	10	U	10	U	10	U
Hexachloroethane	67-72-1	µg/L	10	U	10	U	10	U
Nitrobenzene	98-95-3	µg/L	10	U	10	U	10	U
Isophorone	78-59-1	µg/L	10	U	10	U	10	U
2-Nitrophenol	88-75-5	µg/L	10	U	10	U	10	U
2,4-Dimethylphenol	105-67-9	µg/L	10	U	10	U	10	U
bis (2-chloroethoxy) methane	111-91-1	µg/L	10	U	10	U	10	U
2,4-Dichlorophenol	120-83-2	µg/L	10	U	10	U	10	U
1,2,4-Trichlorobenzene	120-82-1	µg/L	10	U	10	U	10	U
Naphthalene	91-20-3	µg/L	10	U	10	U	10	U
4-Chloroaniline	106-47-8	µg/L	10	U	10	U	10	U
Hexachlorobutadiene	87-68-3	µg/L	10	U	10	U	10	U
4-Chloro-3-methylphenol	59-50-7	µg/L	10	U	10	U	10	U
2-Methylnaphthalene	91-57-6	µg/L	10	U	10	U	10	U
Hexachlorocyclopentadiene	77-47-4	µg/L	10	U	10	U	10	U
2,4,6-Trichlorophenol	88-06-2	µg/L	10	U	10	U	10	U
2,4,5-Trichlorophenol	95-95-4	µg/L	25	U	25	U	25	U
2-Chloronaphthalene	91-58-7	µg/L	10	U	10	U	10	U
2-Nitroaniline	88-74-4	µg/L	25	U	25	U	25	U
Dimethylphthalate	131-11-3	µg/L	10	U	10	U	10	U
Acenaphthylene	208-96-8	µg/L	10	U	10	U	10	U
2,6-Dinitrotoluene	606-20-2	µg/L	10	U	10	U	10	U
3-Nitroaniline	99-09-2	µg/L	25	U	25	U	25	U
Acenaphthene	83-32-9	µg/L	10	U	10	U	10	U
2,4-Dinitrophenol	51-28-5	µg/L	25	U	25	U	25	U
4-Nitrophenol	100-02-7	µg/L	25	U	25	U	25	U
Dibenzofuran	132-64-9	µg/L	10	U	10	U	10	U
2,4-Dinitrotoluene	121-14-2	µg/L	10	U	10	U	10	U
Diethylphthalate	84-66-2	µg/L	10	U	10	U	10	U
4-Chlorophenyl-phenylether	7005-72-3	µg/L	10	U	10	U	10	U
Fluorene	86-73-7	µg/L	10	U	10	U	10	U
4-Nitroaniline	100-01-6	µg/L	25	U	25	U	25	U
4,6-Dinitro-2-Methylphenol	534-52-1	µg/L	25	U	25	U	25	U
N-Nitrosodiphenylamine (1)	86-30-6	µg/L	10	U	10	U	10	U
4-Bromophyl-phenylether	101-55-3	µg/L	10	U	10	U	10	U
Hexachlorobenzene	118-74-1	µg/L	10	U	10	U	10	U
Pentachlorophenol	87-86-5	µg/L	25	U	25	U	25	U

shaded areas indicate changes by the validator
40267TBL.XLS

entered by: [illegible]
date: 9-26-94

checked by: BM
date: 9-26-94

FILE #:VW402.67		HEIS #:	B0BMS6		B0BMT4		B0BMW4	
		Date:	6-May-94		6-May-94		10-May-94	
		Matrix:	WATER		WATER		WATER	
Constituent	CAS #	Units	Results	Q	Results	Q	Results	Q
Phenanthrene	85-01-8	µg/L	10	U	10	U	10	U
Anthracene	120-12-7	µg/L	10	U	10	U	10	U
Carbazole	86-74-8	µg/L	10	U	10	U	10	U
Di-n-Butylphthalate	84-74-2	µg/L	10	U	10	U	10	U
Fluroanthene	206-44-0	µg/L	10	UJ	10	UJ	10	UJ
Pyrene	129-00-0	µg/L	10	U	10	U	10	U
Butylebenzylphthalate	85-68-7	µg/L	10	U	10	U	10	U
3,3'-Dichlorobenzidine	91-94-1	µg/L	10	U		U	10	U
Benzo (a) Anthracene	56-55-3	µg/L	10	U	10	U	10	U
Chrysene	218-01-9	µg/L	10	UJ	10	UJ	10	UJ
bis (2-Ethylhexyl) Phthalate	117-81-7	µg/L	10	U	4	J	3	J
Di-n-Octyle Phthalate	117-84-0	µg/L	10	U	10	U	10	U
Benzo (b) Fluoranthene	205-99-2	µg/L	10	U	10	U	10	U
Benzo (k) Fluoranthene	207-08-9	µg/L	10	UJ	10	UJ	10	UJ
Benzo (a) Pyrene	50-32-8	µg/L	10	U	10	U	10	U
Indeno (1,2,3-cd) Pyrene	193-39-5	µg/L	10	U	10	U	10	U
Dibenze (a,h) Anthracene	53-70-3	µg/L	10	U	10	U	10	U
Benzo (g,h,i) Perylene	191-247-2	µg/L	10	U	10	U	10	U

shaded areas indicate changes by the validator
40267TBL.XLS

entered by: [illegible]
date: 9-26-94

checked by: BM
date: 9-26-94

FILE #:VW402.67		HEIS #:	B0BMR4	
		Date:	11-May-94	
		Matrix:	WATER	
Constituent	CAS #	Units	Results	Q
Phenol	108-95-2	µg/L	10	U
bis (2-Chloroethyl) ether	111-44-4	µg/L	10	U
2-Chlorophenol	95-57-8	µg/L	10	U
1,3-Dichlorobenzene	541-73-1	µg/L	10	U
1,4-Dichlorobenzene	106-46-7	µg/L	10	U
1,2-Dichlorobenzene	95-50-1	µg/L	10	U
2-Methylphenol	95-48-7	µg/L	10	U
2,2'-oxybis (1-Chloropropane)	108-60-1	µg/L	10	U
4-Methylphenol	106-44-5	µg/L	10	U
N-Nitroso-Di-n-propylamine	621-64-7	µg/L	10	U
Hexachloroethane	67-72-1	µg/L	10	U
Nitrobenzene	98-95-3	µg/L	10	U
Isophorone	78-59-1	µg/L	10	U
2-Nitrophenol	88-75-5	µg/L	10	U
2,4-Dimethylphenol	105-67-9	µg/L	10	U
bis (2-chloroethoxy) methane	111-91-1	µg/L	10	U
2,4-Dichlorophenol	120-83-2	µg/L	10	U
1,2,4-Trichlorobenzene	120-82-1	µg/L	10	U
Naphthalene	91-20-3	µg/L	10	U
4-Chloroaniline	106-47-8	µg/L	10	U
Hexachlorobutadiene	87-68-3	µg/L	10	U
4-Chloro-3-methylphenol	59-50-7	µg/L	10	U
2-Methylnaphthalene	91-57-6	µg/L	10	U
Hexachlorocyclopentadiene	77-47-4	µg/L	10	U
2,4,6-Trichlorophenol	88-06-2	µg/L	10	U
2,4,5-Trichlorophenol	95-95-4	µg/L	25	U
2-Chloronaphthalene	91-58-7	µg/L	10	U
2-Nitroaniline	88-74-4	µg/L	25	U
Dimethylphthalate	131-11-3	µg/L	10	U
Acenaphthylene	208-96-8	µg/L	10	U
2,6-Dinitrotoluene	606-20-2	µg/L	10	U
3-Nitroaniline	99-09-2	µg/L	25	U
Acenaphthene	83-32-9	µg/L	10	U
2,4-Dinitrophenol	51-28-5	µg/L	25	U
4-Nitrophenol	100-02-7	µg/L	25	U
Dibenzofuran	132-64-9	µg/L	10	U
2,4-Dinitrotoluene	121-14-2	µg/L	10	U
Diethylphthalate	84-66-2	µg/L	10	U
4-Chlorophenyl-phenylether	7005-72-3	µg/L	10	U
Fluorene	86-73-7	µg/L	10	U
4-Nitroaniline	100-01-6	µg/L	25	U
4,6-Dinitro-2-Methylphenol	534-52-1	µg/L	25	U
N-Nitrosodiphenylamine (1)	86-30-6	µg/L	10	U
4-Bromophyl-phenylether	101-55-3	µg/L	10	U
Hexachlorobenzene	118-74-1	µg/L	10	U
Pentachlorophenol	87-86-5	µg/L	25	U

shaded areas indicate changes by the validator
40267TBL.XLS

entered by: [illegible]
date: 9-26-94

checked by: BM
date: 9-26-94

FILE #:VW402.67		HEIS #:	B0BMR4	
		Date:	11-May-94	
		Matrix:	WATER	
Constituent	CAS #	Units	Results	Q
Phenanthrene	85-01-8	µg/L	10	U
Anthracene	120-12-7	µg/L	10	U
Carbazole	86-74-8	µg/L	10	U
Di-n-Butylphthalate	84-74-2	µg/L	10	U
Fluroanthene	206-44-0	µg/L	10	UJ
Pyrene	129-00-0	µg/L	10	U
Butylebenzylphthalate	85-68-7	µg/L	10	U
3,3'-Dichlorobenzidine	91-94-1	µg/L	10	U
Benzo (a) Anthracene	56-55-3	µg/L	10	U
Chrysene	218-01-9	µg/L	10	UJ
bis (2-Ethylhexyl) Phthalate	117-81-7	µg/L	3	J
Di-n-Octyle Phthalate	117-84-0	µg/L	10	U
Benzo (b) Fluoranthene	205-99-2	µg/L	10	U
Benzo (k) Fluoranthene	207-08-9	µg/L	10	UJ
Benzo (a) Pyrene	50-32-8	µg/L	10	U
Indeno (1,2,3-cd) Pyrene	193-39-5	µg/L	10	U
Dibenze (a,h) Anthracene	53-70-3	µg/L	10	U
Benzo (g,h,i) Perylene	191-247-2	µg/L	10	U

shaded areas indicate changes by the validator
40267TBL.XLS

entered by: [illegible]
date: 9-26-94

checked by: BM
date: 9-26-94

FILE #:VW402.71		HEIS #:	B0BMY8	
		Date:	24-May-94	
Constituent		Matrix:	WATER	
	CAS #	Units	Results	Q
Phenol	108-95-2	µg/L	10	U
Bis (2-Chloroethyl) ether	111-44-4	µg/L	10	U
2-Chlorophenol	95-57-8	µg/L	10	U
1,3-Dichlorobenzene	541-73-1	µg/L	10	UJ
1,4-Dichlorobenzene	106-46-7	µg/L	10	UJ
1,2-Dichlorobenzene	95-50-1	µg/L	10	UJ
2-Methylphenol	95-48-7	µg/L	10	U
2,2'-oxybis (1-Chloropropane)	108-60-1	µg/L	10	U
4-Methylphenol	106-44-5	µg/L	10	U
N-Nitroso-Di-n-propylamine	621-64-7	µg/L	10	U
Hexachloroethane	67-72-1	µg/L	10	UJ
Nitrobenzene	98-95-3	µg/L	10	U
Isophorone	78-59-1	µg/L	10	U
2-Nitrophenol	88-75-5	µg/L	10	U
2,4-Dimethylphenol	105-67-9	µg/L	10	U
Bis (2-chloroethoxy) methane	111-91-1	µg/L	10	U
2,4-Dichlorophenol	120-83-2	µg/L	10	U
1,2,4-Trichlorobenzene	120-82-1	µg/L	10	U
Naphthalene	91-20-3	µg/L	10	U
4-Chloroaniline	106-47-8	µg/L	10	U
Hexachlorobutadiene	87-68-3	µg/L	10	UJ
4-Chloro-3-methylphenol	59-50-7	µg/L	10	U
2-Methylnaphthalene	91-57-6	µg/L	10	U
Hexachlorocyclopentadiene	77-47-4	µg/L	10	UJ
2,4,6-Trichlorophenol	88-06-2	µg/L	10	U
2,4,5-Trichlorophenol	95-95-4	µg/L	25	U
2-Chloronaphthalene	91-58-7	µg/L	10	U
2-Nitroaniline	88-74-4	µg/L	25	U
Dimethylphthalate	131-11-3	µg/L	10	U
Acenaphthylene	208-96-8	µg/L	10	U
3-Nitroaniline	99-09-2	µg/L	25	U
Acenaphthene	83-39-2	µg/L	10	U
2,4-Dinitrophenol	51-28-5	µg/L	25	U
4-Nitrophenol	100-02-7	µg/L	25	U
Dibenzofuran	132-64-9	µg/L	10	U
2,4-Dinitrotoluene	121-14-2	µg/L	10	U
2,6-Dinitrotoluene	606-20-2	µg/L	10	U
Diethylphthalate	84-66-2	µg/L	10	U
4-Chloropheyl-phenylether	005-72-3	µg/L	10	U
Fluorene	86-73-7	µg/L	10	U
4-Nitroaniline	100-01-6	µg/L	25	U
4,6-Dinitro-2-Methylphenol	534-52-1	µg/L	25	U
N-Nitrosodiphenylamine (1)	86-30-6	µg/L	10	U
4-Bromophyl-phenylether	101-55-3	µg/L	10	U
Hexachlorobenzene	118-74-1	µg/L	10	U
Pentachlorophenol	87-86-5	µg/L	25	U
Phenanthrene	85-01-8	µg/L	10	U

shaded areas show changes by validator

entered by CMS date: 9/7/94 TMA779.XLS checked by date

FILE #:VW402.71		HEIS #:	B0BMY8	
		Date:	24-May-94	
Constituent		Matrix:	WATER	
	CAS #	Units	Results	Q
Anthracene	120-12-7	µg/L	10	U
Carbazole	85-74-8	µg/L	10	U
Di-n-Butylphthalate	84-74-2	µg/L	10	U
Fluroanthene	206-44-0	µg/L	10	U
Pyrene	129-00-0	µg/L	10	U
Butylebenzylphthalate	85-68-7	µg/L	10	U
3,3'-Dichlorobenzidine	91-94-1	µg/L	10	U
Benzo (a) Anthracene	56-55-3	µg/L	10	U
Bis (2-Ethylhexyl) Phthalate	117-81-7	µg/L	10	U
Chrysene	218-01-9	µg/L	10	U
Di-n-Octyle Phthalate	117-81-7	µg/L	10	U
Benzo (b) Fluoranthene	205-99-2	µg/L	10	U
Benzo (k) Fluoranthene	207-08-9	µg/L	10	U
Benzo (a) Pyrene	50-32-8	µg/L	10	U
Indeno (1,2,3-cd) Pyrene	193-39-5	µg/L	10	U
Dibenze (a,h) Anthracene	53-70-3	µg/L	10	U
Benzo (g,h,i) Perylene	91-247-2	µg/L	10	U

shaded areas show changes by validator

entered by: CMS date: 9/7/94 TMA779.XLS

checked by: AF date: 9/7/94

FILE #:VW402.72		HEIS #:	B0BMP0		B0BMW8		B0BMX2		B0BMY0		B0BMZ2		B0BMZ8	
		Date:	17-May-94		19-May-94		23-May-94		18-May-94		20-May-94		25-May-94	
Constituent		Matrix:	WATER		WATER		WATER		WATER		WATER		WATER	
	CAS #	Units	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Phenol	108-95-2	µg/L	10	UJ	10	U	10	U	10	U	10	U	10	U
Bis (2-Chloroethyl) ether	111-44-4	µg/L	10	UJ	10	U	10	U	10	U	10	U	10	U
2-Chlorophenol	95-57-8	µg/L	10	UJ	10	U	10	U	10	U	10	U	10	U
1,3-Dichlorobenzene	541-73-1	µg/L	10	UJ	10	U	10	U	10	U	10	U	10	U
1,4-Dichlorobenzene	106-46-7	µg/L	10	UJ	10	U	10	U	10	U	10	U	10	U
1,2-Dichlorobenzene	95-50-1	µg/L	10	UJ	10	U	10	U	10	U	10	U	10	U
2-Methylphenol	95-48-7	µg/L	10	UJ	10	U	10	U	10	U	10	U	10	U
2,2'-oxybis (1-Chloropropane)	108-60-1	µg/L	10	UJ	10	U	10	U	10	U	10	U	10	U
4-Methylphenol	106-44-5	µg/L	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
N-Nitroso-Di-n-propylamine	621-64-7	µg/L	10	UJ	10	U	10	U	10	U	10	U	10	UJ
Hexachloroethane	97-72-1	µg/L	10	UJ	10	U	10	U	10	U	10	U	10	U
Nitrobenzene	98-95-3	µg/L	10	UJ	10	U	10	U	10	U	10	U	10	U
Isophorone	78-59-1	µg/L	10	UJ	10	U	10	U	10	U	10	U	10	U
2-Nitrophenol	88-75-5	µg/L	10	UJ	10	U	10	U	10	U	10	U	10	U
2,4-Dimethylphenol	105-67-9	µg/L	10	UJ	10	U	10	U	10	U	10	U	10	U
Bis (2-chloroethoxy) methane	111-91-1	µg/L	10	UJ	10	U	10	U	10	U	10	U	10	U
2,4-Dichlorophenol	120-83-2	µg/L	10	UJ	10	U	10	U	10	U	10	U	10	U
1,2,4-Trichlorobenzene	120-82-1	µg/L	10	UJ	10	U	10	U	10	U	10	U	10	U
Naphthalene	91-20-3	µg/L	10	UJ	10	U	10	U	10	U	10	U	10	U
4-Chloroaniline	106-47-8	µg/L	10	UJ	10	U	10	U	10	U	10	U	10	U
Hexachlorobutadiene	87-68-3	µg/L	10	UJ	10	U	10	U	10	U	10	U	10	U
4-Chloro-3-methylphenol	59-50-7	µg/L	10	UJ	10	U	10	U	10	U	10	U	10	U
2-Methylnaphthalene	91-57-6	µg/L	10	UJ	10	U	10	U	10	U	10	U	10	U
Hexachlorocyclopentadiene	77-47-4	µg/L	10	UJ	10	U	10	U	10	U	10	U	10	U
2,4,6-Trichlorophenol	88-06-2	µg/L	10	UJ	10	U	10	U	10	U	10	U	10	U
2,4,5-Trichlorophenol	95-95-4	µg/L	25	UJ	25	U	25	U	25	U	25	U	25	U
2-Chloronaphthalene	91-58-7	µg/L	10	UJ	10	U	10	U	10	U	10	U	10	U
2-Nitroaniline	88-74-4	µg/L	25	UJ	25	U	25	U	25	U	25	U	25	U
Dimethylphthalate	131-11-3	µg/L	10	UJ	10	U	10	U	10	U	10	U	10	U
Acenaphthylene	208-96-8	µg/L	10	UJ	10	U	10	U	10	U	10	U	10	U
2,6-Dinitrotoluene	606-20-2	µg/L	10	UJ	10	U	10	U	10	U	10	U	10	U
3-Nitroaniline	99-09-2	µg/L	25	UJ	25	U	25	U	25	U	25	U	25	U
Acenaphthene	83-39-2	µg/L	10	UJ	10	U	10	U	10	U	10	U	10	U
2,4-Dinitrophenol	51-28-5	µg/L	25	UJ	25	UJ	25	UJ	25	UJ	25	UJ	25	UJ
4-Nitrophenol	100-02-7	µg/L	25	UJ	25	UJ	25	UJ	25	UJ	25	UJ	25	UJ
Dibenzofuran	132-64-9	µg/L	10	UJ	10	U	10	U	10	U	10	U	10	U
2,4-Dinitrotoluene	121-14-2	µg/L	10	UJ	10	U	10	U	10	U	10	U	10	U
Diethylphthalate	84-66-2	µg/L	10	UJ	10	U	10	U	10	U	10	U	10	U
4-Chloropheyl-phenylether	005-72-3	µg/L	10	UJ	10	U	10	U	10	U	10	U	10	U
Fluorene	86-73-7	µg/L	10	UJ	10	U	10	U	10	U	10	U	10	U
4-Nitroaniline	100-01-6	µg/L	25	UJ	25	U	25	U	25	U	25	U	25	U
4,6-Dinitro-2-Methylphenol	534-52-1	µg/L	25	UJ	25	U	25	U	25	U	25	U	25	U
N-Nitrosodiphenylamine (1)	86-30-6	µg/L	10	UJ	10	U	10	U	10	U	10	U	10	U
4-Bromophyl-phenylether	101-55-3	µg/L	10	UJ	10	U	10	U	10	U	10	U	10	U
Hexachlorobenzene	118-74-1	µg/L	10	UJ	10	U	10	U	10	U	10	U	10	U
Pentachlorophenol	87-86-5	µg/L	25	UJ	25	U	25	U	25	U	25	U	25	U
Phenanthrene	85-01-8	µg/L	10	UJ	10	U	10	U	10	U	10	U	10	U
Anthracene	120-12-7	µg/L	10	UJ	10	U	10	U	10	U	10	U	10	U
Carbazole	85-74-8	µg/L	10	UJ	10	U	10	U	10	U	10	U	10	U
Di-n-Butylphthalate	84-74-2	µg/L	10	UJ	10	U	10	U	10	U	10	U	10	U
Fluroanthene	206-44-0	µg/L	10	UJ	10	U	10	U	10	U	10	U	10	U
Pyrene	129-00-0	µg/L	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ	10	U
Butylebenzylphthalate	85-68-7	µg/L	10	UJ	10	U	10	U	10	U	10	U	10	U
3,3'-Dichlorobenzidine	91-94-1	µg/L	10	UJ	10	U	10	U	10	U	10	U	10	U
Benzo (a) Anthracene	56-55-3	µg/L	10	UJ	10	U	10	U	10	U	10	U	10	U

entered by: CMD date: 10-2-94

shaded areas indicates changes by validator
40272TB2.XLS

checked by: BM date: 10-3-94

FILE #:VW402.72		HEIS #:	B0BMP0		B0BMW8		B0BMX2		B0BMY0		B0BMZ2		B0BMZ8	
		Date:	17-May-94		19-May-94		23-May-94		18-May-94		20-May-94		25-May-94	
Constituent		Matrix:	WATER		WATER		WATER		WATER		WATER		WATER	
	CAS #	Units	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Chrysene	218-01-9	µg/L	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ	10	U
Bis (2-Ethylhexyl) Phthalate	117-81-7	µg/L	10	UJ	10	U	10	U	10	U	10	U	10	U
Di-n-Octyle Phthalate	117-81-7	µg/L	10	UJ	10	U	10	U	10	U	10	U	10	U
Benzo (b) Fluoranthene	205-99-2	µg/L	10	UJ	10	U	10	U	10	U	10	U	10	U
Benzo (k) Fluoranthene	207-08-9	µg/L	10	UJ	10	U	10	U	10	U	10	U	10	U
Benzo (a) Pyrene	50-32-8	µg/L	10	UJ	10	U	10	U	10	U	10	U	10	U
Indeno (1,2,3-cd) Pyrene	193-39-5	µg/L	10	UJ	10	U	10	U	10	U	10	U	10	U
Dibenze (a,h) Anthracene	53-70-3	µg/L	10	UJ	10	U	10	U	10	U	10	U	10	U
Benzo (g,h,i) Perylene	91-247-2	µg/L	10	UJ	10	U	10	U	10	U	10	U	10	U

entered by: CMD date: 10-2-94

shaded areas indicates changes by validator
40272TB2.XLS

checked by: BM date: 10-3-94

FILE #:VW402.76		HEIS #:	B0BMP8		B0BMQ2		B0BMV6		B0C1G5	
		Date:	3-Jun-94		1-Jun-94		6-Jun-94		2-Jun-94	
Constituent		Matrix:	WATER		WATER		WATER		WATER	
	CAS #	Units	Results	Q	Results	Q	Results	Q	Results	Q
Phenol	108-95-2	µg/L	10	U	10	U	10	U	10	U
Bis (2-Chloroethyl) ether	111-44-4	µg/L	10	U	10	U	10	U	10	U
2-Chlorophenol	95-57-8	µg/L	10	U	10	U	10	U	10	U
1,3-Dichlorobenzene	541-73-1	µg/L	10	U	10	U	10	U	10	U
1,4-Dichlorobenzene	106-46-7	µg/L	10	U	10	U	10	U	10	U
1,2-Dichlorobenzene	95-50-1	µg/L	10	U	10	U	10	U	10	U
2-Methylphenol	95-48-7	µg/L	10	U	10	U	10	U	10	U
2,2'-oxybis (1-Chloropropane)	108-60-1	µg/L	10	U	10	U	10	U	10	U
4-Methylphenol	106-44-5	µg/L	10	U	10	U	10	U	10	U
N-Nitroso-Di-n-propylamine	621-64-7	µg/L	10	U	10	U	10	U	10	U
Hexachloroethane	97-72-1	µg/L	10	U	10	U	10	U	10	U
Nitrobenzene	98-95-3	µg/L	10	U	10	U	10	U	10	U
Isophorone	78-59-1	µg/L	10	U	10	U	10	U	10	U
2-Nitrophenol	88-75-5	µg/L	10	U	10	U	10	U	10	U
2,4-Dimethylphenol	105-67-9	µg/L	10	U	10	U	10	U	10	U
Bis (2-chloroethoxy) methane	111-91-1	µg/L	10	U	10	U	10	U	10	U
2,4-Dichlorophenol	120-83-2	µg/L	10	U	10	U	10	U	10	U
1,2,4-Trichlorobenzene	120-82-1	µg/L	10	U	10	U	10	U	10	U
Naphthalene	91-20-3	µg/L	10	U	10	U	10	U	10	U
4-Chloroaniline	106-47-8	µg/L	10	U	10	U	10	U	10	U
Hexachlorobutadiene	87-68-3	µg/L	10	U	10	U	10	U	10	U
4-Chloro-3-methylphenol	59-50-7	µg/L	10	U	10	U	10	U	10	U
2-Methylnaphthalene	91-57-6	µg/L	10	U	10	U	10	U	10	U
Hexachlorocyclopentadiene	77-47-4	µg/L	10	U	10	U	10	U	10	U
2,4,6-Trichlorophenol	88-06-2	µg/L	10	U	10	U	10	U	10	U
2,4,5-Trichlorophenol	95-95-4	µg/L	25	U	25	U	25	U	25	U
2-Chloronaphthalene	91-58-7	µg/L	10	U	10	U	10	U	10	U
2-Nitroaniline	88-74-4	µg/L	25	U	25	U	25	U	25	U
Dimethylphthalate	131-11-3	µg/L	10	U	10	U	10	U	10	U
Acenaphthylene	208-96-8	µg/L	10	U	10	U	10	U	10	U
2,6-Dinitrotoluene	606-20-2	µg/L	10	U	10	U	10	U	10	U
3-Nitroaniline	99-09-2	µg/L	25	U	25	U	25	U	25	U
Acenaphthene	83-32-9	µg/L	10	U	10	U	10	U	10	U
2,4-Dinitrophenol	51-28-5	µg/L	25	U	25	U	25	U	25	U
4-Nitrophenol	100-02-7	µg/L	25	U	25	U	25	U	25	U
Dibenzofuran	132-64-9	µg/L	10	U	10	U	10	U	10	U
2,4-Dinitrotoluene	121-14-2	µg/L	10	U	10	U	10	U	10	U
Diethylphthalate	84-66-2	µg/L	10	U	10	U	10	U	10	U
4-Chloropheyl-phenylether	7005-72-3	µg/L	10	U	10	U	10	U	10	U
Fluorene	86-73-7	µg/L	10	U	10	U	10	U	10	U
4-Nitroaniline	100-01-6	µg/L	25	U	25	U	25	U	25	U
4,6-Dinitro-2-Methylphenol	534-52-1	µg/L	25	U	25	U	25	U	25	U
N-Nitrosodiphenylamine (1)	86-30-6	µg/L	10	U	10	U	10	U	10	U
4-Bromophyl-phenylether	101-55-3	µg/L	10	U	10	U	10	U	10	U
Hexachlorobenzene	118-74-1	µg/L	10	UJ	10	UJ	10	UJ	10	UJ
Pentachlorophenol	87-86-5	µg/L	25	U	25	U	25	U	25	U
Phenanthrene	85-01-8	µg/L	10	U	10	U	10	U	10	U

entered by: [illegible] date: 4-22-94

shaded areas show changes by validator
40276TBL.XLS

checked by: [illegible] date: 9/26/94

FILE #:VW402.76		HEIS #:	B0BMP8		B0BMQ2		B0BMV6		B0C1G5	
		Date:	3-Jun-94		1-Jun-94		6-Jun-94		2-Jun-94	
Constituent		Matrix:	WATER		WATER		WATER		WATER	
	CAS #	Units	Results	Q	Results	Q	Results	Q	Results	Q
Anthracene	120-12-7	µg/L	10	U	10	U	10	U	10	U
Carbazole	85-74-8	µg/L	10	U	10	U	10	U	10	U
Di-n-Butylphthalate	84-74-2	µg/L	10	U	10	U	10	U	10	U
Fluroanthene	206-44-0	µg/L	10	U	10	U	10	U	10	U
Pyrene	129-00-0	µg/L	10	U	10	U	10	U	10	U
Butylebenzylphthalate	85-68-7	µg/L	10	U	10	U	10	U	10	U
3,3'-Dichlorobenzidine	91-94-1	µg/L	10	U	10	U	10	U	10	U
Benzo (a) Anthracene	56-55-3	µg/L	10	U	10	U	10	U	10	U
Chrysene	218-01-9	µg/L	10	U	10	U	10	U	10	U
Bis (2-Ethylhexyl) Phthalate	117-81-7	µg/L	10	U	10	U	10	U	10	U
Di-n-Octyle Phthalate	117-81-7	µg/L	10	U	10	U	10	U	10	U
Benzo (b) Fluoranthene	205-99-2	µg/L	10	U	10	U	10	U	10	U
Benzo (k) Fluoranthene	207-08-9	µg/L	10	U	10	U	10	U	10	U
Benzo (a) Pyrene	50-32-8	µg/L	10	U	10	U	10	U	10	U
Indeno (1,2,3-cd) Pyrene	193-39-5	µg/L	10	U	10	U	10	U	10	U
Dibenze (a,h) Anthracene	53-70-3	µg/L	10	U	10	U	10	U	10	U
Benzo (g,h,i) Perylene	191-247-2	µg/L	10	U	10	U	10	U	10	U

shaded areas show changes by validator
40276TBL.XLS

entered by: [illegible] date: 9.26.94

checked by: [illegible] date: 9/26/94

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APPENDIX C

PESTICIDES/PCBs VALIDATED DATA SUMMARY TABLES

FILE #:VW402.56		HEIS #:	B0BMY4	
		Date:	6-May-94	
		Matrix:	WATER	
Constituent	CAS #	Units	Results	Q
alpha-BHC	319-84-6	µg/L	0.050	U
beta-BHC	319-85-7	µg/L	0.050	U
delta-BHC	319-86-8	µg/L	0.050	U
gamma-BHC (Lindane)	58-89-9	µg/L	0.050	U
Heptachlor	76-44-8	µg/L	0.050	U
Aldrin	309-00-2	µg/L	0.050	U
Heptachlor Epoxide	1024-57-3	µg/L	0.050	U
Endosulfan I	959-98-8	µg/L	0.050	U
Dieldrin	60-57-1	µg/L	0.10	U
4,4'-DDE	72-55-9	µg/L	0.10	U
Endrin	72-20-8	µg/L	0.10	U
Endosulfan II	33213-65-9	µg/L	0.10	U
4,4'-DDD	72-54-8	µg/L	0.10	U
Endosulfan Sulfate	1031-07-8	µg/L	0.10	U
4,4'-DDT	50-29-3	µg/L	0.10	U
Methoxychlor	72-43-5	µg/L	0.50	U
Endrin Ketone	53494-70-5	µg/L	0.10	U
Endrin Aldehyde	7421-93-4	µg/L	0.10	U
alpha-Chlordane	5103-71-9	µg/L	0.050	U
gamma-Chlordane	5103-74-2	µg/L	0.050	U
Toxaphene	8001-35-2	µg/L	5.0	U
Aroclor-1016	12674-11-2	µg/L	1.0	U
Aroclor-1221	11104-28-2	µg/L	2.0	U
Aroclor-1232	11141-16-5	µg/L	1.0	U
Aroclor-1242	53469-21-9	µg/L	1.0	U
Aroclor-1248	12672-29-6	µg/L	1.0	U
Aroclor-1254	11097-69-1	µg/L	1.0	U
Aroclor-1260	11096-82-5	µg/L	1.0	U

shaded areas indicate a changes by the validator
TMA 760

entered by: [illegible]
date: 5-26-94

checked by: [illegible]
date: 9/26/94

FILE #:VW402.66		HEIS #:	B0BMP4		B0BMR0		B0BMR8		B0BMT0	
		Date:	18-May-94		11-May-94		11-May-94		12-May-94	
		Matrix:	WATER		WATER		WATER		WATER	
Constituent	CAS #	Units	Results	Q	Results	Q	Results	Q	Results	Q
alpha-BHC	319-84-6	µg/L	0.050	U	0.050	U	0.050	U	0.050	U
beta-BHC	319-85-7	µg/L	0.050	U	0.050	U	0.050	U	0.050	U
delta-BHC	319-86-8	µg/L	0.050	U	0.050	U	0.050	U	0.050	U
gamma-BHC (Lindane)	58-89-9	µg/L	0.050	U	0.050	U	0.050	U	0.050	U
Heptachlor	76-44-8	µg/L	0.050	U	0.050	U	0.050	U	0.050	U
Aldrin	309-00-2	µg/L	0.050	U	0.050	U	0.050	U	0.050	U
Heptachlor epoxide	1024-57-3	µg/L	0.050	U	0.050	U	0.050	U	0.050	U
Endosulfan I	959-98-8	µg/L	0.050	U	0.050	U	0.050	U	0.050	U
Dieldrin	60-57-1	µg/L	0.10	U	0.10	U	0.10	U	0.10	U
4,4'-DDE	72-55-9	µg/L	0.10	U	0.10	U	0.10	U	0.10	U
Endrin	72-20-8	µg/L	0.10	U	0.10	U	0.10	U	0.10	U
Endosulfan II	33213-65-9	µg/L	0.10	U	0.10	U	0.10	U	0.10	U
4,4'-DDD	72-54-8	µg/L	0.10	U	0.10	U	0.10	U	0.10	U
Endosulfan sulfate	1031-07-8	µg/L	0.10	U	0.10	U	0.10	U	0.10	U
4,4'-DDT	50-29-3	µg/L	0.10	U	0.10	U	0.10	U	0.10	U
Methoxychlor	72-43-5	µg/L	0.05	U	0.05	U	0.50	U	0.50	U
Endrin ketone	53494-70-5	µg/L	0.10	U	0.10	U	0.10	U	0.10	U
Endrin aldehyde	7421-93-4	µg/L	0.10	U	0.10	U	0.10	U	0.10	U
alpha-Chlordane	5103-71-9	µg/L	0.050	U	0.050	U	0.050	U	0.050	U
gamma-Chlordane	51003-74-2	µg/L	0.050	U	0.050	U	0.050	U	0.050	U
Toxaphene	8001-35-2	µg/L	5.0	U	5.0	U	5.0	U	5.0	U
Aroclor-1016	12674-11-2	µg/L	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor-1221	11104-28-2	µg/L	2.0	U	2.0	U	2.0	U	2.0	U
Aroclor-1232	11141-16-5	µg/L	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor-1242	53469-21-9	µg/L	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor-1248	12672-29-6	µg/L	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor-1254	11097-69-1	µg/L	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor-1260	11096-82-5	µg/L	1.0	U	1.0	U	1.0	U	1.0	U

entered by: Jm
date: 9/20/94

Shaded areas indicate changes by the validator.
40266DST.XLS

checked by: [illegible]
date: 9-20-94

FILE #:VW402.66		HEIS #:	B0BMT8		B0BMV2		B0BMW0	
		Date:	12-May-94		6-May-94		19-May-94	
		Matrix:	WATER		WATER		WATER	
Constituent	CAS #	Units	Results	Q	Results	Q	Results	Q
alpha-BHC	319-84-6	µg/L	0.050	U	0.050	U	0.050	U
beta-BHC	319-85-7	µg/L	0.050	U	0.050	U	0.050	U
delta-BHC	319-86-8	µg/L	0.050	U	0.050	U	0.050	U
gamma-BHC (Lindane)	58-89-9	µg/L	0.050	U	0.050	U	0.050	U
Heptachlor	76-44-8	µg/L	0.050	U	0.050	U	0.050	U
Aldrin	309-00-2	µg/L	0.050	U	0.050	U	0.050	U
Heptachlor epoxide	1024-57-3	µg/L	0.050	U	0.050	U	0.050	U
Endosulfan I	959-98-8	µg/L	0.050	U	0.050	U	0.050	U
Dieldrin	60-57-1	µg/L	0.10	U	0.10	U	0.10	U
4,4'-DDE	72-55-9	µg/L	0.10	U	0.10	U	0.10	U
Endrin	72-20-8	µg/L	0.10	U	0.10	U	0.10	U
Endosulfan II	33213-65-9	µg/L	0.10	U	0.10	U	0.10	U
4,4'-DDD	72-54-8	µg/L	0.10	U	0.10	U	0.10	U
Endosulfan sulfate	1031-07-8	µg/L	0.10	U	0.10	U	0.10	U
4,4'-DDT	50-29-3	µg/L	0.10	U	0.10	U	0.10	U
Methoxychlor	72-43-5	µg/L	0.50	U	0.50	U	0.50	U
Endrin ketone	53494-70-5	µg/L	0.10	U	0.10	U	0.10	U
Endrin aldehyde	7421-93-4	µg/L	0.10	U	0.10	U	0.10	U
alpha-Chlordane	5103-71-9	µg/L	0.050	U	0.050	U	0.050	U
gamma-Chlordane	51003-74-2	µg/L	0.050	U	0.050	U	0.050	U
Toxaphene	8001-35-2	µg/L	5.0	U	5.0	U	5.0	U
Aroclor-1016	12674-11-2	µg/L	1.0	U	1.0	U	1.0	U
Aroclor-1221	11104-28-2	µg/L	2.0	U	2.0	U	2.0	U
Aroclor-1232	11141-16-5	µg/L	1.0	U	1.0	U	1.0	U
Aroclor-1242	53469-21-9	µg/L	1.0	U	1.0	U	1.0	U
Aroclor-1248	12672-29-6	µg/L	1.0	U	1.0	U	1.0	U
Aroclor-1254	11097-69-1	µg/L	1.0	U	1.0	U	1.0	U
Aroclor-1260	11096-82-5	µg/L	1.0	U	1.0	U	1.0	U

entered by: gm
date: 9/20/94

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40266DST.XLS

checked by: [illegible]
date: 9-20-94

FILE #:VW402.67		HEIS #:	B0BMQ6		B0BMR4		B0BMS2		B0BMS6	
		Date:			11-May-94		10-May-94		10-May-94	
		Matrix:	WATER		WATER		WATER		WATER	
Constituent	CAS #	Units	Results	Q	Results	Q	Results	Q	Results	Q
alpha-BHC	319-84-6	µg/L	0.050	UJ	0.050	U	0.050	U	0.050	U
beta-BHC	319-85-7	µg/L	0.050	UJ	0.050	U	0.050	U	0.050	U
delta-BHC	319-86-8	µg/L	0.050	UJ	0.050	U	0.050	U	0.050	U
gamma-BHC (Lindane)	58-89-9	µg/L	0.050	UJ	0.050	U	0.050	U	0.050	U
Heptachlor	76-44-8	µg/L	0.050	UJ	0.050	U	0.050	U	0.050	U
Aldrin	309-00-2	µg/L	0.050	UJ	0.050	U	0.050	U	0.050	U
Heptachlor epoxide	1024-57-3	µg/L	0.050	UJ	0.050	U	0.050	U	0.050	U
Endosulfan I	959-98-8	µg/L	0.050	UJ	0.050	U	0.050	U	0.050	U
Dieldrin	60-57-1	µg/L	0.10	UJ	0.10	U	0.10	U	0.10	U
4,4'-DDE	72-55-9	µg/L	0.10	UJ	0.10	U	0.10	U	0.10	U
Endrin	72-20-8	µg/L	0.10	UJ	0.10	U	0.10	U	0.10	U
Endosulfan II	33213-65-9	µg/L	0.10	UJ	0.10	U	0.10	U	0.10	U
4,4'-DDD	72-54-8	µg/L	0.10	UJ	0.10	U	0.10	U	0.10	U
Endosulfan sulfate	1031-07-8	µg/L	0.10	UJ	0.10	U	0.10	U	0.10	U
4,4'-DDT	50-29-3	µg/L	0.10	UJ	0.10	U	0.10	U	0.10	U
Methoxychlor	72-43-5	µg/L	0.50	UJ	0.50	U	0.50	U	0.50	U
Endrin ketone	53494-70-5	µg/L	0.10	UJ	0.10	U	0.10	U	0.10	U
Endrin aldehyde	7421-93-4	µg/L	0.10	UJ	0.10	U	0.10	U	0.10	U
alpha-Chlordane	5103-71-9	µg/L	0.050	UJ	0.050	U	0.050	U	0.050	U
gamma-Chlordane	51003-74-2	µg/L	0.050	UJ	0.050	U	0.050	U	0.050	U
Toxaphene	8001-35-2	µg/L	5.0	UJ	5.0	U	5.0	U	5.0	U
Aroclor-1016	12674-11-2	µg/L	1.0	UJ	1.0	U	1.0	U	1.0	U
Aroclor-1221	11104-28-2	µg/L	2.0	UJ	2.0	U	2.0	U	2.0	U
Aroclor-1232	11141-16-5	µg/L	1.0	UJ	1.0	U	1.0	U	1.0	U
Aroclor-1242	53469-21-9	µg/L	1.0	UJ	1.0	U	1.0	U	1.0	U
Aroclor-1248	12672-29-6	µg/L	1.0	UJ	1.0	U	1.0	U	1.0	U
Aroclor-1254	11097-69-1	µg/L	1.0	UJ	1.0	U	1.0	U	1.0	U
Aroclor-1260	11096-82-5	µg/L	1.0	UJ	1.0	U	1.0	U	1.0	U

entered by: BM
date: 10-3-94

Shaded areas indicate changes by the validator.
ITC060.XLS

checked by: WJC
date: 10-11-94

FILE #:VW402.67		HEIS #:	B0BMT4		B0BMW4		B0BMX6	
		Date:	9-May-94		9-May-94		6-May-94	
		Matrix:	WATER		WATER		WATER	
Constituent	CAS #	Units	Results	Q	Results	Q	Results	Q
alpha-BHC	319-84-6	µg/L	0.050	U	0.050	U	0.050	U
beta-BHC	319-85-7	µg/L	0.050	U	0.050	U	0.050	U
delta-BHC	319-86-8	µg/L	0.050	U	0.050	U	0.050	U
gamma-BHC (Lindane)	58-89-9	µg/L	0.050	U	0.050	U	0.050	U
Heptachlor	76-44-8	µg/L	0.050	U	0.050	U	0.050	U
Aldrin	309-00-2	µg/L	0.050	U	0.050	U	0.050	U
Heptachlor epoxide	1024-57-3	µg/L	0.050	U	0.050	U	0.050	U
Endosulfan I	959-98-8	µg/L	0.050	U	0.050	U	0.050	U
Dieldrin	60-57-1	µg/L	0.10	U	0.10	U	0.10	U
4,4'-DDE	72-55-9	µg/L	0.10	U	0.10	U	0.10	U
Endrin	72-20-8	µg/L	0.10	U	0.10	U	0.10	U
Endosulfan II	33213-65-9	µg/L	0.10	U	0.10	U	0.10	U
4,4'-DDD	72-54-8	µg/L	0.10	U	0.10	U	0.10	U
Endosulfan sulfate	1031-07-8	µg/L	0.10	U	0.10	U	0.10	U
4,4'-DDT	50-29-3	µg/L	0.10	U	0.10	U	0.10	U
Methoxychlor	72-43-5	µg/L	0.50	U	0.50	U	0.50	U
Endrin ketone	53494-70-5	µg/L	0.10	U	0.10	U	0.10	U
Endrin aldehyde	7421-93-4	µg/L	0.10	U	0.10	U	0.10	U
alpha-Chlordane	5103-71-9	µg/L	0.050	U	0.050	U	0.050	U
gamma-Chlordane	51003-74-2	µg/L	0.050	U	0.050	U	0.050	U
Toxaphene	8001-35-2	µg/L	5.0	U	5.0	U	5.0	U
Aroclor-1016	12674-11-2	µg/L	1.0	U	1.0	U	1.0	U
Aroclor-1221	11104-28-2	µg/L	2.0	U	2.0	U	2.0	U
Aroclor-1232	11141-16-5	µg/L	1.0	U	1.0	U	1.0	U
Aroclor-1242	53469-21-9	µg/L	1.0	U	1.0	U	1.0	U
Aroclor-1248	12672-29-6	µg/L	1.0	U	1.0	U	1.0	U
Aroclor-1254	11097-69-1	µg/L	1.0	U	1.0	U	1.0	U
Aroclor-1260	11096-82-5	µg/L	1.0	U	1.0	U	1.0	U

entered by: RM
date: 10-3-94

Shaded areas indicate changes by the validator.
ITC060.XLS

checked by: WJC.
date: 10-4-94

FILE #:VW402.71		HEIS #:	BOBMY8	
		Date:	18-May-94	
Constituent		Matrix:	WATER	
	CAS #	Units	Results	Q
alpha-BHC	319-84-6	µg/L	0.050	U
beta-BHC	319-85-7	µg/L	0.050	U
delta-BHC	319-86-8	µg/L	0.050	U
gamma-BHC (Lindane)	58-89-9	µg/L	0.050	U
Heptachlor	76-44-8	µg/L	0.050	U
Aldrin	309-00-2	µg/L	0.050	U
Heptachlor Epoxide	1024-57-3	µg/L	0.050	U
Endosulfan I	959-98-8	µg/L	0.050	U
Dieldrin	60-57-1	µg/L	0.10	U
4,4'-DDE	72-55-9	µg/L	0.10	U
Endrin	72-20-8	µg/L	0.10	U
Endosulfan II	33213-65-9	µg/L	0.10	U
4,4'-DDD	72-54-8	µg/L	0.10	U
Endosulfan Sulfate	1031-07-8	µg/L	0.10	U
4,4'-DDT	50-29-3	µg/L	0.10	U
Methoxychlor	72-43-5	µg/L	0.50	U
Endrin Ketone	53494-70-5	µg/L	0.10	U
Endrin Aldehyde	7421-93-4	µg/L	0.10	U
alpha-Chlordane	5103-71-9	µg/L	0.050	U
gamma-Chlordane	5103-74-2	µg/L	0.050	U
Toxaphene	8001-35-2	µg/L	5.0	U
Aroclor-1016	12674-11-2	µg/L	1.0	U
Aroclor-1221	11104-28-2	µg/L	2.0	U
Aroclor-1232	11141-16-5	µg/L	1.0	U
Aroclor-1242	53469-21-9	µg/L	1.0	U
Aroclor-1248	12672-29-6	µg/L	1.0	U
Aroclor-1254	11097-69-1	µg/L	1.0	U
Aroclor-1260	11096-82-5	µg/L	1.0	U

shaded areas show changes by validator

entered by: CMJ date: 9/7/94 TMA779.XLS checked by: AJ date:

FILE #:VW402.72		HEIS #:	BOBMP0		BOBMW8		BOBMX2		BOBMY0		BOBMZ2	
		Date:	17-May-94		19-May-94		23-May-94		18-May-94		20-May-94	
Constituent		Matrix:	WATER		WATER		WATER		WATER		WATER	
	CAS #	Units	Results	Q	Results	Q	Results	Q	Results	Q	Result	Q
alpha-BHC	319-84-6	µg/L	0.050	UJ	0.050	U	0.050	U	0.050	U	0.050	U
beta-BHC	319-85-7	µg/L	0.050	UJ	0.050	U	0.050	U	0.050	U	0.050	U
delta-BHC	319-86-8	µg/L	0.050	UJ	0.050	U	0.050	U	0.050	U	0.050	U
gamma-BHC (Lindane)	58-89-9	µg/L	0.050	UJ	0.050	U	0.050	U	0.050	U	0.050	U
Heptachlor	76-44-8	µg/L	0.050	UJ	0.050	UJ	0.050	UJ	0.050	UJ	0.050	UJ
Aldrin	309-00-2	µg/L	0.050	UJ	0.050	U	0.050	U	0.050	U	0.050	U
Heptachlor Epoxide	1024-57-3	µg/L	0.050	UJ	0.050	UJ	0.050	UJ	0.050	UJ	0.050	UJ
Endosulfan I	959-98-8	µg/L	0.050	UJ	0.050	U	0.050	U	0.050	U	0.050	U
Dieldrin	60-57-1	µg/L	0.10	UJ	0.10	U	0.10	U	0.10	U	0.10	U
4,4'-DDE	72-55-9	µg/L	0.10	UJ	0.10	U	0.10	U	0.10	U	0.10	U
Endrin	72-20-8	µg/L	0.10	UJ	0.10	U	0.10	U	0.10	U	0.10	U
Endosulfan II	3213-65-9	µg/L	0.10	UJ	0.10	U	0.10	U	0.10	U	0.10	U
4,4'-DDD	72-54-8	µg/L	0.10	UJ	0.10	UJ	0.10	UJ	0.10	UJ	0.10	UJ
Endosulfan Sulfate	1031-07-8	µg/L	0.10	UJ	0.10	U	0.10	U	0.10	U	0.10	U
4,4'-DDT	50-29-3	µg/L	0.10	UJ	0.10	U	0.10	U	0.10	U	0.10	U
Methoxychlor	72-43-5	µg/L	0.50	UJ	0.50	U	0.50	U	0.50	U	0.50	U
Endrin Ketone	3494-70-5	µg/L	0.10	UJ	0.10	U	0.10	U	0.10	U	0.10	U
Endrin Aldehyde	7421-93-4	µg/L	0.10	UJ	0.10	U	0.10	U	0.10	U	0.10	U
alpha-Chlordane	5103-71-9	µg/L	0.050	UJ	0.050	U	0.050	U	0.050	U	0.050	U
gamma-Chlordane	5103-74-2	µg/L	0.050	UJ	0.050	U	0.050	U	0.050	U	0.050	U
Toxaphene	8001-35-2	µg/L	5.0	UJ	5.0	U	5.0	U	5.0	U	5.0	U
Aroclor-1016	2674-11-2	µg/L	1.0	UJ	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor-1221	1104-28-2	µg/L	2.0	UJ	2.0	U	2.0	U	2.0	U	2.0	U
Aroclor-1232	1141-16-5	µg/L	1.0	UJ	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor-1242	3469-21-9	µg/L	1.0	UJ	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor-1248	2672-29-6	µg/L	1.0	UJ	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor-1254	1097-69-1	µg/L	1.0	UJ	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor-1260	1096-82-5	µg/L	1.0	UJ	1.0	U	1.0	U	1.0	U	1.0	U

shaded areas show changes by validator

entered by: BM date: 9.15.94 ITC079.XLS checked by: [illegible] date: 9-19-9

FILE #:VW402.72		HEIS #:	BOBMZ8	
		Date:	25-May-94	
Constituent		Matrix:	WATER	
	CAS #	Units	Results	Q
alpha-BHC	319-84-6	µg/L	0.050	U
beta-BHC	319-85-7	µg/L	0.050	U
delta-BHC	319-86-8	µg/L	0.050	U
gamma-BHC (Lindane)	58-89-9	µg/L	0.050	U
Heptachlor	76-44-8	µg/L	0.050	UJ
Aldrin	309-00-2	µg/L	0.050	U
Heptachlor Epoxide	1024-57-3	µg/L	0.050	UJ
Endosulfan I	959-98-8	µg/L	0.050	U
Dieldrin	60-57-1	µg/L	0.10	UJ
4,4'-DDE	72-55-9	µg/L	0.10	U
Endrin	72-20-8	µg/L	0.10	U
Endosulfan II	3213-65-9	µg/L	0.10	U
4,4'-DDD	72-54-8	µg/L	0.10	UJ
Endosulfan Sulfate	1031-07-8	µg/L	0.10	U
4,4'-DDT	50-29-3	µg/L	0.10	U
Methoxychlor	72-43-5	µg/L	0.50	U
Endrin Ketone	3494-70-5	µg/L	0.10	UJ
Endrin Aldehyde	7421-93-4	µg/L	0.10	U
alpha-Chlordane	5103-71-9	µg/L	0.050	U
gamma-Chlordane	5103-74-2	µg/L	0.050	U
Toxaphene	8001-35-2	µg/L	5.0	U
Aroclor-1016	2674-11-2	µg/L	1.0	U
Aroclor-1221	1104-28-2	µg/L	2.0	U
Aroclor-1232	1141-16-5	µg/L	1.0	U
Aroclor-1242	3469-21-9	µg/L	1.0	U
Aroclor-1248	2672-29-6	µg/L	1.0	U
Aroclor-1254	1097-69-1	µg/L	1.0	U
Aroclor-1260	1096-82-5	µg/L	1.0	U

shaded areas show changes by validator

entered by: BM date: 9.15.94 ITC079.XLS checked by: [illegible] date: 9-15

FILE #: 402.76		HEIS #:	BOBMP8		BOBMQ2		BOBMV6		BOC1G5	
		Date:	3-Jun-94		1-Jun-94		6-Jun-94		2-Jun-94	
Constituent		Matrix:	WATER		WATER		WATER		WATER	
	CAS #	Units	Results	Q	Results	Q	Results	Q	Results	Q
alpha-BHC	319-84-6	µg/L	0.050	U	0.050	U	0.050	U	0.050	U
beta-BHC	319-85-7	µg/L	0.050	U	0.050	U	0.050	U	0.050	U
delta-BHC	319-86-8	µg/L	0.050	U	0.050	U	0.050	U	0.050	U
gamma-BHC (Lindane)	58-89-9	µg/L	0.050	U	0.050	U	0.050	U	0.050	U
Heptachlor	76-44-8	µg/L	0.050	U	0.050	U	0.050	U	0.050	U
Aldrin	309-00-2	µg/L	0.050	U	0.050	U	0.050	U	0.050	U
Heptachlor Epoxide	1024-57-3	µg/L	0.050	U	0.050	U	0.050	U	0.050	U
Endosulfan I	959-98-8	µg/L	0.050	U	0.050	U	0.050	U	0.050	U
Dieldrin	60-57-1	µg/L	0.10	U	0.10	U	0.10	U	0.10	U
4,4'-DDE	72-55-9	µg/L	0.10	U	0.10	U	0.10	U	0.10	U
Endrin	72-20-8	µg/L	0.10	U	0.10	U	0.10	U	0.10	U
Endosulfan II	33213-65-9	µg/L	0.10	U	0.10	U	0.10	U	0.10	U
4,4'-DDD	72-54-8	µg/L	0.10	U	0.10	U	0.10	U	0.10	U
Endosulfan Sulfate	1031-07-8	µg/L	0.10	U	0.10	U	0.10	U	0.10	U
4,4'-DDT	50-29-3	µg/L	0.10	U	0.10	U	0.10	U	0.10	U
Methoxychlor	72-43-5	µg/L	0.50	U	0.50	U	0.50	U	0.50	U
Endrin Ketone	53494-70-5	µg/L	0.10	U	0.10	U	0.10	U	0.10	U
Endrin Aldehyde	7421-93-4	µg/L	0.10	U	0.10	U	0.10	U	0.10	U
alpha-Chlordane	5103-71-9	µg/L	0.050	U	0.050	U	0.050	U	0.050	U
gamma-Chlordane	5103-74-2	µg/L	0.050	U	0.050	U	0.050	U	0.050	U
Toxaphene	8001-35-2	µg/L	5.0	U	5.0	U	5.0	U	5.0	U
Aroclor-1016	12674-11-2	µg/L	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor-1221	11104-28-2	µg/L	2.0	U	2.0	U	2.0	U	2.0	U
Aroclor-1232	11141-16-5	µg/L	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor-1242	53469-21-9	µg/L	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor-1248	12672-29-6	µg/L	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor-1254	11097-69-1	µg/L	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor-1260	11096-82-5	µg/L	1.0	U	1.0	U	1.0	U	1.0	U

shaded areas indicate a change by the validator

entered by: [illegible] date: 9-26-96 40276TBL.XLS checked by: [illegible] date: 9/26/96

APPENDIX D

METALS VALIDATED DATA SUMMARY TABLES

FILE #:VW402.56		HEIS #:	B0BMY4		B0BMY5	
		Date:	6-May-94		6-May-94	
		Matrix:	WATER		WATER	
Constituent	CAS #	Units	Results	Q	Results	Q
Aluminum	7429-90-5	ug/L	20.9	U	20.9	U
Antimony	7440-36-0	ug/L	14.7	U	14.7	U
Arsenic	7440-38-2	ug/L	1.5	U	1.5	UJ
Barium	7440-39-3	ug/L	29.6	B	29.5	B
Beryllium	7440-41-7	ug/L	0.40	U	0.40	U
Cadmium	7440-43-9	ug/L	1.1	U	1.1	U
Calcium	7440-70-2	ug/L	55700		55700	
Chromium	7440-47-3	ug/L	47.3		43.8	
Cobalt	7440-48-4	ug/L	2.1	U	2.1	U
Copper	7440-50-8	ug/L	3.6	U	3.6	U
Iron	7439-89-6	ug/L	83.1	U	31.8	U
Lead	7439-92-1	ug/L	1.6	B	1.5	U
Magnesium	7439-95-4	ug/L	8220		8090	
Manganese	7439-96-5	ug/L	2.6	U	1.9	U
Mercury	7439-97-6	ug/L	0.2	U	0.2	U
Nickel	7440-02-0	ug/L	6.5	U	6.5	U
Potassium	7440-09-7	ug/L	2700	B	2620	B
Selenium	7782-49-2	ug/L	2.1	U	2.1	U
Silver	7440-22-4	ug/L	3.6	U	3.6	U
Sodium	7440-23-5	ug/L	7900		7910	
Thallium	7440-28-0	ug/L	2.2	U	2.2	U
Vanadium	7440-62-2	ug/L	2.2	U	2.2	U
Zinc	7440-66-6	ug/L	7.1	U	7.1	U
Cyanide	CYANIDE	ug/L	10	U		

entered by: [illegible]
date: 9-26-94

Shaded areas indicate changes by the validator TMA760

checked by: [illegible]
date: 9/26/94

FILE#:VW402.66		HEIS #:	B0BMV2		B0BMV3		B0BMR0		B0BMR1		B0BMR8		B0BMR9		B0BMT0	
		Date:	6-May-94		6-May-94		11-May-94		11-May-94		11-May-94		11-May-94		12-May-94	
		Matrix:	WATER		WATER		WATER		WATER		WATER		WATER		WATER	
Constituent	CAS #	Units	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Aluminum	7429-90-5	ug/L	40.0	U	40.0	U	40.0	U	40.0	U	40.0	U	40.0	U	40.0	U
Antimony	7440-36-0	ug/L	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Arsenic	7440-38-2	ug/L	9.1	B	6.5	B	2.0	U	2.0	U	2.0	U	2.0	U	2.1	B
Barium	7440-39-3	ug/L	44.0	B	42.3	B	20.7	B	19.3	B	14.2	B	17.8	B	25.1	B
Beryllium	7440-41-7	ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Cadmium	7440-43-9	ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Calcium	7440-70-2	ug/L	58500		57900		24200		23400		20400		25900		29600	
Chromium	7440-47-3	ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	11.8	
Cobalt	7440-48-4	ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Copper	7440-50-8	ug/L	10.0	UJ	46.7	J	10.0	UJ	10.0	UJ	10.0	UJ	10.0	UJ	10.0	UJ
Iron	7439-89-6	ug/L	23.8	UJ	10.0	UJ	12.2	UJ	13.1	UJ	35.8	U	10.0	UJ	10.0	UJ
Lead	7439-92-1	ug/L	2.0	UJ	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	UJ
Magnesium	7439-95-4	ug/L	18400		18000		4060	B	3860	B	3620	B	4580	B	3950	B
Manganese	7439-96-5	ug/L	2.0	U	2.0	U	2.0	U	2.0	U	2.4	B	2.0	U	2.0	U
Mercury	7439-97-6	ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
Nickel	7440-02-0	ug/L	20.0	U	20.0	U	20.0	U	20.0	U	20.0	U	20.0	U	20.0	U
Potassium	7440-09-7	ug/L	7180		7080		1330	BJ	1000	UJ	1000	UJ	1840	BJ	2410	BJ
Selenium	7782-49-2	ug/L	3.1	B	3.0	BJ	2.0	UJ	2.0	UJ	2.0	UJ	2.0	UJ	2.8	BJ
Silver	7440-22-4	ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Sodium	7440-23-5	ug/L	55300		54000		2200	B	2140	B	2730	B	3630	B	3560	B
Thallium	7440-28-0	ug/L	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
Vanadium	7440-62-2	ug/L	17.6	B	17.8	B	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Zinc	7440-66-6	ug/L	11.1	U	5.0	U	5.7	U	8.6	B	5.6	U	5.5	U	9.0	U
Cyanide	5955-70-0	ug/L	10.0	U			10.0	U			10.0	U			10.0	U

FILE#:VW402.66		HEIS #:	B0BMT1		B0BMT8		B0BMT9		B0BMP4		B0BMP5		B0BMW0		B0BMW1	
		Date:	12-May-94		12-May-94		12-May-94		18-May-94		18-May-94		19-May-94		19-May-94	
		Matrix:	WATER		WATER		WATER		WATER		WATER		WATER		WATER	
Constituent	CAS #	Units	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Aluminum	7429-90-5	ug/L	40.0	U	40.0	U	40.0	U	40.0	U	3220		40.0	U	40.0	U
Antimony	7440-36-0	ug/L	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Arsenic	7440-38-2	ug/L	2.0	U	2.6	B	2.0	U	2.0	U	2.0	U	5.1	B	5.0	B
Barium	7440-39-3	ug/L	43.8	B	62.4	B	28.4	B	23.1	B	25.7	B	42.8	B	41.7	B
Beryllium	7440-41-7	ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Cadmium	7440-43-9	ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Calcium	7440-70-2	ug/L	79300		113000		32700		26200		31800		60400		58400	
Chromium	7440-47-3	ug/L	15.8		22.0		15.6		10.0	U	1710		10.0	U	10.0	U
Cobalt	7440-48-4	ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.7	B	10.0	U	10.0	U
Copper	7440-50-8	ug/L	29.9	J	10.0	UJ	10.0	UJ	10.0	UJ	20.4	BJ	10.0	UJ	10.0	UJ
Iron	7439-89-6	ug/L	10.0	UJ	27.2	UJ	37.4	U	182		5530		98.5	B	34.9	U
Lead	7439-92-1	ug/L	2.0	UJ	2.0	UJ	2.0	UJ	2.0	U	2.0	U	2.0	UJ	2.0	UJ
Magnesium	7439-95-4	ug/L	19000		25900		4420	B	4520	B	4500	B	20100		19500	
Manganese	7439-96-5	ug/L	2.0	U	2.0	U	2.0	U	5.3	B	111		16.2		13.5	B
Mercury	7439-97-6	ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
Nickel	7440-02-0	ug/L	20.0	U	20.0	U	20.0	U	20.0	U	625		20.0	U	20.0	U
Potassium	7440-09-7	ug/L	5290		6290		3980	B	1540	BJ	1360	BJ	6870		6330	
Selenium	7782-49-2	ug/L	2.4	BJ	2.0	U	2.0	UJ	2.0	UJ	2.0	UJ	2.9	B	3.2	BJ
Silver	7440-22-4	ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Sodium	7440-23-5	ug/L	27000		38000		4150	B	3050	B	3070	B	70500		68200	
Thallium	7440-28-0	ug/L	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
Vanadium	7440-62-2	ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Zinc	7440-66-6	ug/L	5.0	U	5.0	U	15.9	U	5.0	U	11.3	U	5.0	U	5.0	U
Cyanide	5955-70-0	ug/L			10.0	U			10.0	U			10.0	U		

entered by: CMO date: 10-2-94

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checked by: BM date: 10-3-94

FILE#:VW402.67		HEIS #:	B0BMT5		B0BMW4		B0BMW5		B0BMR4		B0BMR5	
		Date:	9-May-94		9-May-94		9-May-94		11-May-94		11-May-94	
		Matrix:	WATER		WATER		WATER		WATER		WATER	
Constituent	CAS #	Units	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Aluminum	7429-90-5	ug/L	40.0	U	50.6	B	61.6	B	50.2	B	40.0	U
Antimony	7440-36-0	ug/L	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Arsenic	7440-38-2	ug/L	2.3	B	2.5	B	2.3	B	2.0	U	2.0	U
Barium	7440-39-3	ug/L	36.2	B	48.2	B	45.1	B	15.8	B	15.4	B
Beryllium	7440-41-7	ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Cadmium	7440-43-9	ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Calcium	7440-70-2	ug/L	77400		104000		97000		22000		21700	
Chromium	7440-47-3	ug/L	21.8		10.4		11.8		10.0	U	10.0	U
Cobalt	7440-48-4	ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Copper	7440-50-8	ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Iron	7439-89-6	ug/L	19.9	U	10.0	U	114	J	53.3	U	25.8	U
Lead	7439-92-1	ug/L	2.0	B	2.0	U	2.0	U	2.0	U	6.2	
Magnesium	7439-95-4	ug/L	17100		25700		23800		3830	B	3820	B
Manganese	7439-96-5	ug/L	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
Mercury	7439-97-6	ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
Nickel	7440-02-0	ug/L	20.0	U	20.0	U	20.0	U	20.0	U	20.0	U
Potassium	7440-09-7	ug/L	5770		7470		7140		1030	B	1110	B
Selenium	7782-49-2	ug/L	2.5	BJ	2.0	U	2.0	U	2.0	U	2.0	UJ
Silver	7440-22-4	ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Sodium	7440-23-5	ug/L	20500		32300		29800		2110	B	2180	B
Thallium	7440-28-0	ug/L	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
Vanadium	7440-62-2	ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Zinc	7440-66-6	ug/L	5.0	U	5.0	U	5.0	U	5.1	B	5.0	U
Cyanide	5955-70-0	ug/L			10.0	U			10.0	U		

entered by: [illegible]
date: 9-26-94T

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checked by: [illegible]
date: 9-26-94

FILE#:VW402.67		HEIS #:	B0BMS2		B0BMS3		B0BMS6		B0BMS7		B0BMT4	
		Date:	10-May-94		10-May-94		10-May-94		10-May-94		9-May-94	
		Matrix:	WATER		WATER		WATER		WATER		WATER	
Constituent	CAS #	Units	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Aluminum	7429-90-5	ug/L			40.0	U	40.0	U	40.0	U	41.3	B
Antimony	7440-36-0	ug/L			50.0	U	50.0	U	50.0	U	50.0	U
Arsenic	7440-38-2	ug/L			3.4	B	2.5	B	2.4	B	2.0	U
Barium	7440-39-3	ug/L			27.4	B	36.5	B	39.4	B	42.2	B
Beryllium	7440-41-7	ug/L			1.0	U	1.0	U	1.0	U	1.0	U
Cadmium	7440-43-9	ug/L			5.0	U	5.0	U	5.0	U	5.0	U
Calcium	7440-70-2	ug/L			60500		71800		78900		92600	
Chromium	7440-47-3	ug/L			33.4		334		366		27.1	
Cobalt	7440-48-4	ug/L			10.0	U	10.0	U	10.0	U	10.0	U
Copper	7440-50-8	ug/L			10.0	U	10.0	U	10.0	U	10.0	U
Iron	7439-89-6	ug/L			25.1	U	23.6	U	45.6	U	19.9	U
Lead	7439-92-1	ug/L			2.0	U	2.0	U	2.0	U	2.0	U
Magnesium	7439-95-4	ug/L			13600		10200		11200		20700	
Manganese	7439-96-5	ug/L			2.0	U	2.0	U	2.0	U	2.0	U
Mercury	7439-97-6	ug/L			0.20	U	0.20	U	0.20	U	0.20	U
Nickel	7440-02-0	ug/L			20.0	U	20.0	U	20.0	U	20.0	U
Potassium	7440-09-7	ug/L			4510	B	3870	B	4420	B	5980	
Selenium	7782-49-2	ug/L			2.0	UJ	2.0	UJ	2.0	UJ	2.0	U
Silver	7440-22-4	ug/L			5.0	U	5.0	U	5.0	U	5.0	U
Sodium	7440-23-5	ug/L			17000		16300		17800		24900	
Thallium	7440-28-0	ug/L			2.0	U	2.0	U	2.0	U	2.0	U
Vanadium	7440-62-2	ug/L			10.0	U	10.0	U	10.0	U	10.0	U
Zinc	7440-66-6	ug/L			5.0	U	5.0	U	5.8	B	5.0	U
Cyanide	5955-70-0	ug/L	10.0	U			10.0	U			10.0	U

entered by: [illegible]
date: 9-26-94

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checked by: BM
date: 9-26-94

FILE#:VW402.67		HEIS #:	B0BMQ6		B0BMQ7		B0BMX6		B0BMX7	
		Date:	6-May-94		6-May-94		6-May-94		6-May-94	
		Matrix:	WATER		WATER		WATER		WATER	
Constituent	CAS #	Units	Results	Q	Results	Q	Results	Q	Results	Q
Aluminum	7429-90-5	ug/L	40.0	U	40.0	U	41.3	B	46.2	B
Antimony	7440-36-0	ug/L	50.0	U	50.0	U	50.0	U	50.0	U
Arsenic	7440-38-2	ug/L	2.0	U	2.0	U	2.0	U	2.0	U
Barium	7440-39-3	ug/L	28.6	B	27.6	B	27.8	B	27.0	B
Beryllium	7440-41-7	ug/L	1.0	U	1.0	U	1.0	U	1.0	U
Cadmium	7440-43-9	ug/L	5.0	U	5.0	U	5.0	U	5.0	U
Calcium	7440-70-2	ug/L	50800		51900		52600		52000	
Chromium	7440-47-3	ug/L	54.0		47.6		44.8		48.7	
Cobalt	7440-48-4	ug/L	10.0	U	10.0	U	10.0	U	10.0	U
Copper	7440-50-8	ug/L	10.0	U	10.0	U	10.0	U	10.0	U
Iron	7439-89-6	ug/L	1420	J	23.8	U	40.3	U	17.0	U
Lead	7439-92-1	ug/L	2.0	U	2.4	BJ	2.0	U	32.5	
Magnesium	7439-95-4	ug/L	7390		7470		7600		7490	
Manganese	7439-96-5	ug/L	9.0	B	2.0	U	2.0	U	2.0	U
Mercury	7439-97-6	ug/L	0.20	U	0.20	U	0.20	U	0.20	U
Nickel	7440-02-0	ug/L	20.0	U	20.0	U	20.0	U	20.0	U
Potassium	7440-09-7	ug/L	2100	B	2400	B	1710	B	2610	B
Selenium	7782-49-2	ug/L	2.1	BJ	2.0	U	2.0	U	2.0	U
Silver	7440-22-4	ug/L	5.0	U	5.0	U	5.0	U	5.0	U
Sodium	7440-23-5	ug/L	6900		7200		7170		7020	
Thallium	7440-28-0	ug/L	2.0	UJ	2.0	U	2.0	U	2.0	U
Vanadium	7440-62-2	ug/L	10.0	U	10.0	U	10.0	U	10.0	U
Zinc	7440-66-6	ug/L	10.2	B	5.0	U	9.4	B	24.5	
Titanium	7440-32-6	ug/L	3.0	U	3.0	U	3.0	U	3.0	U
Cyanide	5955-70-0	ug/L	10.0	U			10.0	U		

entered by: [illegible]
date: 9-26-94

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checked by: BM
date: 9-26-94

FILE#:VW402.71		HEIS #:	B0BMY8		B0BMY9	
		Date:	18-May-94		18-May-94	
Constituent		Matrix:	WATER		WATER	
	CAS #	Units	Results	Q	Results	Q
Aluminum	7429-90-5	ug/L	20.9	U	853	J
Antimony	7440-36-0	ug/L	14.7	U	14.7	U
Arsenic	7440-38-2	ug/L	1.5	U	1.5	U
Barium	7440-39-3	ug/L	21.7	U	33.2	BJ
Beryllium	7440-41-7	ug/L	0.40	U	0.40	U
Cadmium	7440-43-9	ug/L	1.1	U	1.1	U
Calcium	7440-70-2	ug/L	28600	J	31400	J
Chromium	7440-47-3	ug/L	5.5	U	4.4	U
Cobalt	7440-48-4	ug/L	2.1	U	2.1	U
Copper	7440-50-8	ug/L	3.9	U	4.6	U
Iron	7439-89-6	ug/L	157	U	101	U
Lead	7439-92-1	ug/L	1.6	B	1.5	U
Magnesium	7439-95-4	ug/L	4420	BJ	4780	BJ
Manganese	7439-96-5	ug/L	3.0	U	32.6	J
Mercury	7439-97-6	ug/L	0.20	U	0.20	U
Nickel	7440-02-0	ug/L	6.5	U	6.5	U
Potassium	7440-09-7	ug/L	1900	B	2050	B
Selenium	7782-49-2	ug/L	2.1	U	2.1	U
Silver	7440-22-4	ug/L	3.6	U	3.6	U
Sodium	7440-23-5	ug/L	3320	BJ	3710	B
Thallium	7440-28-0	ug/L	2.2	U	2.2	U
Vanadium	7440-62-2	ug/L	2.2	U	2.2	U
Zinc	7440-66-6	ug/L	7.1	U	8.0	B
Cyanide	5955-70-0	ug/L	10.0	U		

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entered by: CMO date: 10/2/94 40271TBL.XLS checked by: BM

date: 10-3-94

FILE#:VW402.72		HEIS #:	B0BMW8		B0BMW9		B0BMY0		B0BMY1		B0BMP0		B0BMP1	
		Date:	19-May-94		19-May-94		18-May-94		18-May-94		17-May-94		17-May-94	
Constituent		Matrix:	WATER		WATER		WATER		WATER		WATER		WATER	
	CAS #	Units	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Aluminum	429-90-5	ug/L	475		121	BJ	67.1	BJ	73.4	BJ	40.0	U	43.6	B
Antimony	440-36-0	ug/L	50	U	50	U	50.0	U	50.0	U	50.0	U	50.0	U
Arsenic	440-38-2	ug/L	2.6	B	2.1	B	2.0	U	2.0	U	10.3		10.9	
Barium	440-39-3	ug/L	112	B	112	B	22.8	B	21.1	B	27.6	B	28.3	B
Beryllium	440-41-7	ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Cadmium	440-43-9	ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Calcium	440-70-2	ug/L	135000		134000		26100		24000		33000		34800	
Chromium	440-47-3	ug/L	270		82.4		53.5		45.8		10.0	U	10.0	U
Cobalt	440-48-4	ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Copper	440-50-8	ug/L	10.0	UJ	10.0	UJ	10.0	UJ	10.0	UJ	10.0	U	10.0	U
Iron	439-89-6	ug/L	889		235	U	246	U	132	U	36.6	U	24.1	U
Lead	439-92-1	ug/L	2.0	U	2.0	U	2.0	U	2.0	U	5.0	U	3.8	U
Magnesium	439-95-4	ug/L	37300		37100		4420	B	4040	B	10800		11300	
Manganese	439-96-5	ug/L	17.1		4.7	B	4.8	B	3.3	B	2.0	U	2.0	U
Mercury	439-97-6	ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
Nickel	440-02-0	ug/L	86.8		24.0	B	20.0	U	20.0	U	20.0	U	20.0	U
Potassium	440-09-7	ug/L	7000		6170		1000	UJ	1000	UJ	3490	B	4040	B
Selenium	782-49-2	ug/L	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.1	BJ
Silver	440-22-4	ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Sodium	440-23-5	ug/L	59200		59100		3040	B	2730	B	44900		47200	
Thallium	440-28-0	ug/L	2.0	U	2.0	U	2.0	U	2.0	U	2.0	UJ	2.0	UJ
Vanadium	440-62-2	ug/L	10.0	U	10.0	U	10.0	U	10.0	U	19.9	B	22.4	B
Zinc	440-66-6	ug/L	6.0	U	5.0	U	6.5	U	5.0	U	18.2	B	17.1	B
Cyanide	955-70-0	ug/L	10.0	U			10.0	U			10.0	U		

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entered by: date: ITC079.XLS checked by: BN date: 10-3-94

FILE#:VW402.72		HEIS #:	BOBMX2		BOBMX3		BOBMZ2		BOBMZ3		BOBMZ8		BOBMZ9	
		Date:	23-May-94		23-May-94		20-May-94		20-May-94		25-May-94		25-May-94	
Constituent		Matrix:	WATER		WATER		WATER		WATER		WATER		WATER	
	CAS #	Units	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Aluminum	429-90-5	ug/L	40.0	U	40.0	U	42.8	B	42.3	B	40.0	U	40.0	U
Antimony	440-36-0	ug/L	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Arsenic	440-38-2	ug/L	5.7	B	4.9	B	2.0	U	2.0		2.0	U	2.0	U
Barium	440-39-3	ug/L	32.1	B	33.4	B	2.0	U	2.0	U	2.0	U	2.0	U
Beryllium	440-41-7	ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Cadmium	440-43-9	ug/L	5.0	U	5.0	U	5.0	U	6.2		5.0	U	5.0	U
Calcium	440-70-2	ug/L	64600		64400		93.9	U	89.4	U	94.8	U	88.3	U
Chromium	440-47-3	ug/L	19.4		17.2		10.0	U	10.0	U	10.0	U	10.0	U
Cobalt	440-48-4	ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Copper	440-50-8	ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Iron	439-89-6	ug/L	34.2	U	26.2	U	21.0	U	18.6	U	16.8	B	26.9	B
Lead	439-92-1	ug/L	3.2	U	2.7	U	35.0		5.0	U	6.4		2.0	U
Magnesium	439-95-4	ug/L	16500		16400	U	30.0	U	30.0	U	30.0	U	30.0	U
Manganese	439-96-5	ug/L	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
Mercury	439-97-6	ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
Nickel	440-02-0	ug/L	20.0	U	20.0	U	20.0	U	20.0	U	20.0	U	20.0	U
Potassium	440-09-7	ug/L	5090		5720		1000	U	1000	U	1000	U	1000	U
Selenium	782-49-2	ug/L	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
Silver	440-22-4	ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Sodium	440-23-5	ug/L	45100		45300		161	B	149	B	185	U	244	U
Thallium	440-28-0	ug/L	2.0	UJ	2.0	UJ	2.0	U	2.0	U	2.0	U	2.0	U
Vanadium	440-62-2	ug/L	10.0	U	11.4	B	10.0	U	10.0	U	10.0	U	10.0	U
Zinc	440-66-6	ug/L	5.0	U	9.1	B	5.0	U	8.3	B	5.0	U	5.0	U
Cyanide	955-70-0	ug/L	10.0	U			10.0	U			10.0	U		

shaded areas show changes by validator

entered by: BM date: 9.15.94 ITC079.XLS checked by: bed date: 9-19-9.

FILE#:VW402.76		HEIS #:	B0BMQ2		B0BMQ3		B0BMP8		B0BMP9		B0BMV6		B0BMV7	
		Date:	1-Jun-94		1-Jun-94		3-Jun-94		3-Jun-94		6-Jun-94		6-Jun-94	
Constituent		Matrix:	WATER		WATER		WATER		WATER		WATER		WATER	
	CAS #	Units	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Aluminum	429-90-5	ug/L	40.0	U	40.0	U	77.0	B	46.5	B	77.7	B	42.7	B
Antimony	440-36-0	ug/L	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Arsenic	440-38-2	ug/L	2.0	U	2.0	U	2.0	U	2.0	U	4.5	B	4.6	B
Barium	440-39-3	ug/L	49.9	B	51.0	B	33.6	B	31.4	B	25.2	B	24.1	B
Beryllium	440-41-7	ug/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Cadmium	440-43-9	ug/L	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Calcium	440-70-2	ug/L	92600		96800		47600		45500		55600		51200	
Chromium	440-47-3	ug/L	19.3		22.8		10.0	U	10.0	U	10.6		10.2	
Cobalt	440-48-4	ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Copper	440-50-8	ug/L	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Iron	439-89-6	ug/L	17.3	UJ	24.4	UJ	45.8	UJ	26.6	UJ	30.6	UJ	69.9	UJ
Lead	439-92-1	ug/L	5.4	UJ	2.0	UJ	2.0	UJ	2.1	UJ	3.6	UJ	13.7	UJ
Magnesium	439-95-4	ug/L	21600		22600		8790		8400		16800		15400	
Manganese	439-96-5	ug/L	2.0	U	2.0	U	2.6	UJ	2.2	UJ	2.0	U	2.0	U
Mercury	439-97-6	ug/L	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
Nickel	440-02-0	ug/L	20.0	U	20.0	U	20.0	B	20.0	U	20.0	U	20.0	U
Potassium	440-09-7	ug/L	5490		6510		3410	U	3070	B	5540		5740	
Selenium	782-49-2	ug/L	2.7	B	2	U	2.0	U	2.0	U	2.4	BJ	2.0	U
Silver	440-22-4	ug/L	5.0	U	5.0	U	5.0		5.0	U	5.0	U	5.0	U
Sodium	440-23-5	ug/L	26300		27400		5020	U	4790	B	51100		46500	
Thallium	440-28-0	ug/L	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
Vanadium	440-62-2	ug/L	10.0	U	10.0	U	10.0	U	10.0	U	12.0	B	13.4	B
Zinc	440-66-6	ug/L	20.5	UJ	17.7	UJ	33.2	UJ	23.2	UJ	21.6	UJ	16.7	UJ
Cyanide	955-70-0	ug/L	10.0	U			10	U			10.0	U		

entered by: JM date: 9/26/94

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40276TBL.XLS

checked by: [illegible] date: 9-26-94

APPENDIX E

GENERAL CHEMISTRY VALIDATED DATA SUMMARY TABLES

FILE #: VW402.56		HEIS #:	B0BMY4	
		Date:	6-May-94	
		Matrix:	WATER	
Constituent	CAS #	Units	Results	Q
Chloride by IC	16887-00-6	mg/L	9.4	
Fluoride by IC	16984-48-8	mg/L	0.1	
Phosphate by IC	14265-44-2	mg/L	0.4	UR
Nitrate-Nitrite	NO3+NO2-N	mg/L	5.71	
pH	207	pH UNITS	7.8	J
Sulfate by IC	14808-79-8	mg/L	46	
Electric Conductivity	CONDUCTIVITY	UMHOS/CM	379	
Chemical Oxygen Demand	COD	mg/L	30	U
Ammonia Nitrogen	766-41-7	mg/L	0.05	U
Sulfide	18496-25-8	mg/L	1	U
Total Dissolved Solids	TDS	mg/L	238	
Alkalinity	ALKALINITY	mg/L	108	
Total Organic Carbon	TOC	mg/L	1.0	U
Total Organic Halogen	C68	mg/L	0.01	U

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by the validator
40256TBL.XLS

checked by: BM
date: 10-3-94

entered by: CMD
date: 10-4-94

FILE #: VW 402.61		HEIS #:	B0BMQ9		B0BMY7		B0BMT7		B0BMV5	
		Date:	5/18/94		5/18/94		5/18/94		10-May-94	
		Matrix:	WATER		WATER		WATER		WATER	
Constituent	CAS #	Units	Results	Q	Results	Q	Results	Q	Results	Q
Hydrazine	302-01-2	ug/L	1.0		1.6		1.0		1.0	

FILE #: VW 402.61		HEIS #:	B0BMW7		B0BMS5		B0BMS9		B0BMR3	
		Date:	10-May-94		10-May-94		10-May-94		11-May-94	
		Matrix:	WATER		WATER		WATER		WATER	
Constituent	CAS #	Units	Results	Q	Results	Q	Results	Q	Results	Q
Hydrazine	302-01-2	ug/L	1.0		1.0		3.2		1.0	

FILE #: VW 402.61		HEIS #:	B0BMR7		B0BMS1		B0BMV1		B0BMT3	
		Date:	11-May-94		11-May-94		12-May-94		12-May-94	
		Matrix:	WATER		WATER		WATER		WATER	
Constituent	CAS #	Units	Results	Q	Results	Q	Results	Q	Results	Q
Hydrazine	302-01-2	ug/L	1.6		2.0		2.1		3.2	

entered by: CMD
date: 10/2/94

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40261TBL.XLS

checked by: BM
date: 10-3-94

FILE #: VW 402.65		HEIS #:	B0BMQ5		B0BMP7		B0BMQ1		B0BMZ7		B0BNO1		B0BMW3	
		Date:	1-Jun-94		18-May-94		3-Jun-94		20-May-94		25-May-94		19-May-94	
		Matrix:	GDWATER		GDWATER		GDWATER		GDWATER		GDWATER		GDWATER	
Constituent	CAS #	Units	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Hydrazine	302-01-2	ug/L	2.1		1.0		1.6		1.0		1.0		1.6	

FILE #: VW 402.65		HEIS #:	B0BMP3		B0BMX5		B0BMY3		B0BMX1		B0BMZ1	
		Date:	17-May-94		23-May-94		18-May-94		19-May-94		18-May-94	
		Matrix:	GDWATER		GDWATER		GDWATER		GDWATER		GDWATER	
Constituent	CAS #	Units	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Hydrazine	302-01-2	ug/L	1.0	U	1.0		1.0		20		7.8	

entered by: [illegible]
date: 9-26-94

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40265TBL.XLS

checked by: [illegible]
date: 9/26/94

FILE #: VW 402.66		HEIS #:	B0BMV2		B0BMR8		B0BMR0	
		Date:	10-May-94		11-May-94		11-May-94	
		Matrix:	WATER		WATER		WATER	
Constituent	CAS #	Units	Results	Q	Results	Q	Results	Q
Fluoride	16984-48-8	mg/l	0.80		0.40	U	0.40	U
Chloride	16884-00-6	mg/l	16		1.5		1.2	
Phosphate	14265-44-2	mg/l	1.0	UR	1.0	UR	1.0	UR
Sulfate	14808-79-8	mg/l	74		13		13	
pH	207	pH units	7.52	J	7.72	J	7.40	J
Nitrite Nitrate	NO_2+NO_3-N	mg/l	18.3		0.45		0.31	
Sulfide	18496-25-8	mg/l	8		23		4	
Specific Conductivity	191	umhos/cm	716		172		186	
Total Organic Carbon	TOC	mg/l	2		1	U	1	U
Total Organic Halogen	C68	ug/L	22		20	U	20	U
Total Dis. Solids	TDS	mg/l	497		113		114	
Chemical Oxygen Demand	COD	mg/l	2		2		2	
Ammonia	7664-41-7	mg/l	1.35		0.1	U	0.1	
Alkalinity	ALKALINITY	mg/l	188		66		78	

FILE #: VW 402.66		HEIS #:	B0BMW0		B0BMT8		B0BMP4	
		Date:	19-May-94		12-May-94		18-May-94	
		Matrix:	WATER		WATER		WATER	
Constituent	CAS #	Units	Results	Q	Results	Q	Results	Q
Fluoride	16984-48-8	mg/l	0.88		0.40	U	0.40	U
Chloride	16884-00-6	mg/l	24		1.5		1.6	
Phosphate	14265-44-2	mg/l	1.0	UR	1.0	UR	1.0	UR
Sulfate	14808-79-8	mg/l	84		18		16	
pH	207	pH units	7.80	J	7.71	J	7.55	J
Nitrite Nitrate	NO_2+NO_3-N	mg/l	28.4		0.92		0.57	
Sulfide	18496-25-8	mg/l	8		6		6	
Specific Conductivity	191	umhos/cm	848		215		199	
Total Organic Carbon	TOC	mg/l	2		1	U	1	U
Total Organic Halogen	C68	ug/L	20	U	20	U	37	
Total Dis. Solids	TDS	mg/l	627		161		166	J
Chemical Oxygen Demand	COD	mg/l	6		1	U	1	
Ammonia	7664-41-7	mg/l	0.21		0.54		0.1	U
Alkalinity	ALKALINITY	mg/l	181		76		70	

Shaded areas indicate changes by the validator
ITC062

checked by: [illegible]
date: 9-20-94

entered by: [illegible]
date: 9/20/94

FILE #: VW 402.66		HEIS #:	BOBMTO	
		Date:	12-May-94	
		Matrix:	WATER	
Constituent	CAS #	Units	Results	Q
Fluoride	16984-48-8	mg/l	0.40	U
Chloride	16884-00-6	mg/l	38	
Phosphate	14265-44-2	mg/l	1.0	UJR
Sulfate	14808-79-8	mg/l	120	
pH	207	pH units	7.55	J
Nitrite Nitrate	NO_2+NO_3-N	mg/l	26	
Sulfide	18496-25-8	mg/l	4	
Specific Conductivity	191	umhos/cm	867	
Total Organic Carbon	TOC	mg/l	2	
Total Organic Halogen	C68	ug/L	20	U
Total Dis. Solids	TDS	mg/l	592	
Chemical Oxygen-Demand	COD	mg/l	1	U
Ammonia	7664-41-7	mg/l	0.1	U
Alkalinity	ALKALINITY	mg/l	204	

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ITC062

entered by: Jm
date: 9/20/94

checked by: km
date: 9-20-94

FILE #: VW402.67		HEIS #:	B0BMQ6		B0BMX6		B0BMS2	
		Date:	6-May-94		6-May-94		10-May-94	
		Matrix:	WATER		WATER		WATER	
Constituent	CAS #	Units	Results	Q	Results	Q	Results	Q
Fluoride	16984-48-8	mg/L	0.5		0.40	U	0.40	U
Chloride	16884-00-6	mg/L	11		10		16	
Phosphate	14265-44-2	mg/L	1.0	UR	1.0	UR	1.0	UR
Sulfate	14808-79-8	mg/L	48		52		62	
Total Organic Halogens	C68	ug/L	20	U	21	J	20	U
Total Organic Carbon	TOC	mg/L	1	U	1	U	2	
Total Dissolved Solids	TDS	mg/L	28	J	29	J	374	J
Sulfide	18496-25-8	mg/L	13		12			
Specific Conductivity	191	umhos/cm	389		387		555	
pH	207	pH units	7.53	J	7.59	J	7.79	J
Nitrate/Nitrite	NO3-NO2-N	mg/L	4.56		4.58		10.1	
Chemical Oxygen Demand	COD	mg/L	1	UJ	1	UJ	4	J
Ammonia	7664-41-7	mg/L	0.1	U	0.1	U	0.2	
Alkalinity	ALKALINITY	mg/L	110	J	110	J	158	J

FILE #: VW402.67		HEIS #:	B0BMS6		B0BMT4		B0BMW4	
		Date:	10-May-94		9-May-94		9-May-94	
		Matrix:	WATER		WATER		WATER	
Constituent	CAS #	Units	Results	Q	Results	Q	Results	Q
Fluoride	16984-48-8	mg/L	1.50		0.40	U	0.50	
Chloride	16884-00-6	mg/L	16		29		19	
Phosphate	14265-44-2	mg/L	2.0	UR	1.0	UR	1.0	UR
Sulfate	14808-79-8	mg/L	69		93		112	
Total Organic Halogens	C68	ug/L	20	U	20	U	20	U
Total Organic Carbon	TOC	mg/L	2		2		2	
Total Dissolved Solids	TDS	mg/L	379	J	476	J	642	J
Sulfide	18496-25-8	mg/L	85		5		5	
Specific Conductivity	191	umhos/cm	602		778		898	
pH	207	pH units	7.73	J	7.72	J	7.66	J
Nitrate Nitrite	NO3-NO2-N	mg/L	9.2		17.6		22.3	
Chemical Oxygen Demand	COD	mg/L	1	UJ	1	UJ	4	J
Ammonia	7664-41-7	mg/L	0.1	U	0.1	U	0.1	U
Alkalinity	ALKALINITY	mg/L	176	J	192	J	258	J

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checked by: BM
date: 9-26-94

entered by: [illegible]
date: 9-26-94

FILE #: VW402.67		HEIS #:	B0BMR4	
		Date:	11-May-94	
		Matrix:	WATER	
Constituent	CAS #	Units	Results	Q
Fluoride	16984-48-8	mg/L	0.40	U
Chloride	16884-00-6	mg/L	1.3	
Phosphate	14265-44-2	mg/L	1.0	UR
Sulfate	14808-79-8	mg/L	12	
Total Organic Halogens	C68	ug/L	20	U
Total Organic Carbon	TOC	mg/L	1	U
Total Dissolved Solids	TDS	mg/L	197	J
Sulfide	18496-25-8	mg/L	8	
Specific Conductivity	191	umhos/cm	167	
pH	207	pH units	7.64	J
Nitrate Nitrite	NO3-NO2-N	mg/L	0.21	
Chemical Oxygen Demand	COD	mg/L	2	J
Ammonia	7664-41-7	mg/L	0.1	U
Alkalinity	ALKALINITY	mg/L	66	J

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40267TBL.XLS

entered by: ~~
date: 9-26-94

checked by: BM
date: 9-26-94

FILE #: VW402.71		HEIS #:	B0BMY8	
		Date:	18-May-94	
		Matrix:	WATER	
Constituent	CAS #	Units	Results	Q
Chloride by IC	anions	mg/L	1.1	
Fluoride by IC	anions	mg/L	0.1	
Phosphate by IC	anions	mg/L	0.4	
Sulfate by IC	anions	mg/L	15	
Nitrate Nitrite	NO3+NO2-N	mg/L	0.68	
Total Organic Carbon (TOC)	TOC	mg/L	1.0	U
pH	207	PH UNITS	7.6	
Alkalinity	ALKALINITY	mg/L	80	
Chemical Oxygen Demand	COD	mg/L	30	U
Elect. Conductivity	CONDUCT	umhos/cm	196	
Total Dissolved Solids	TDS	mg/L	64	
Sulfide	18496-25-8	mg/L	1	U
Ammonia Nitrogen		mg/L	0.05	U
Organic Chloride		mg/L	0.01	U
Organic Bromide		mg/L	0.01	U
Organic Fluoride		mg/L	0.01	U

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entered by: CMD date: 10-4-94 40271TBL.XLS checked by: BM date: 10-4-94

FILE #: VW 402.72		HEIS #:	B0BMW8		B0BMY0		B0BMZ2	
		Date:	19-May-94		18-May-94		20-May-94	
		Matrix:	WATER		WATER		WATER	
Constituent	CAS #	Units	Results	Q	Results	Q	Results	Q
Chloride by IC	16984-48-8	mg/L	6.0		1.4		0.4	U
Fluoride by IC	16884-00-6	mg/L	0.4	U	0.4	U	0.4	U
Phosphate by IC	14265-44-2	mg/L	1.0	UR	1.0	UR	1.0	UR
Sulfate by IC	14808-79-8	mg/L	73		17		1.5	U
Sulfide	18496-25-8	mg/L	8		5		3	
Nitrite+ Nitrate	NO2+NO3-N	mg/L	0.88		0.63		0.06	
Total Organic Carbon (TOC)	TOC	mg/L	5		1	U	1	U
pH	207	PH UNITS			7.44	R	4.88	J
Alkalinity	ALKALINITY	mg/L	482		78		2	U
Ammonia	7664-41-7	mg/L	0.1	U	0.1	U	0.1	U
Chemical Oxygen Demand	COD	mg/L	14		1	U	1	U
Conductivity	191	umhos/cm	1200		202		4	
Total Dissolved Solids	TDS	mg/L	811	J	136	J	3	J
Total Organic Halogens	C68	ug/L	20	U	48	J	20	U

FILE #: VW 402.72		HEIS #:	B0BMP0		B0BMX2		B0BMZ8	
		Date:	17-May-94		23-May-94		25-May-94	
		Matrix:	WATER		WATER		WATER	
Constituent	CAS #	Units	Results	Q	Results	Q	Results	Q
Chloride by IC	16984-48-8	mg/L	11		12		0.4	U
Fluoride by IC	16884-00-6	mg/L	0.76		0.5		0.4	U
Phosphate by IC	14265-44-2	mg/L	1.0	UR	1.0	UR	1.0	UR
Sulfate by IC	14808-79-8	mg/L	57		65		1.5	U
Sulfide	18496-25-8	mg/L	40	J	19		4	
Nitrite+ Nitrate	NO2+NO3-N	mg/L	4.14		21.2		0.02	U
Total Organic Carbon (TOC)	TOC	mg/L	1	U	2		1	U
pH	207	PH UNITS	7.65	J	7.82	J	4.65	J
Alkalinity	ALKALINITY	mg/L	150		194		4	
Ammonia	7664-41-7	mg/L	0.1	U	0.1	U	0.1	U
Chemical Oxygen Demand	COD	mg/L	5		5		10	
Conductivity	191	umhos/cm	488		702		3	
Total Dissolved Solids	TDS	mg/L	292	J	517	J	81	J
Total Organic Halogens	C68	ug/L	20	U	20	U	22	J

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FILE #: VW 402.76		HEIS #:	B0BMQ2		B0BMV6		B0BMP8		B0C1G5	
		Date:	1-Jun-94		6-Jun-94		3-Jun-94		2-Jun-94	
Constituent		Matrix:	WATER		WATER		WATER		WATER	
	CAS #	Units	Results	Q	Results	Q	Results	Q	Results	Q
Alkalinity	ALKALINITY	mg/L	196		202		106			
Chloride by IC	anions	mg/L	29		16.5		4.7			
Fluoride by IC	anions	mg/L	0.4	U	0.4	U	0.4	U		
Phosphate by IC	14265-44-2	mg/L	1.0	UR	1.0	UR	1.0	UR		
Sulfate by IC	anions	mg/L	96		81		66			
Sulfide	18496-25-8	mg/L	4		0.2	U	1.0		4	
Nitrite Nitrate	NO2+NO3-N	mg/L	18.2		13.5		2.73			
Total Organic Carbon (TOC)	TOC	mg/L	2.19		2		1			
pH	207	PH UNITS	7.74	J	7.63	J	7.22	J		
Ammonia	7664-41-7	mg/L	0.1	U	0.2		0.1			
Chemical Oxygen Demand	COD	mg/L	10		10		10			
Specific Conductance	191	umhos/cm	818		658		373			
Total Dissolved Solids	TDS	mg/L	474		466		286		258	
Total Organic Halogens	TOC	ug/L	20	UJ	21	J	20	UJ		

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40276TBL.XLS

entered by: [illegible] date: 5-26-94

checked by: [illegible] date: 9/26/94

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APPENDIX F

RADIOCHEMISTRY VALIDATED DATA SUMMARY TABLES

FILE #:VW402.56		HEIS #:	B0BMY4		
		Date:	6-May-94		
		Matrix:	WATER		
Constituent	CAS #	Units	Results	Q	MDA
Gross Alpha	Alpha	ug/L	4.7		2
Gross Beta	Beta	ug/L	18		2
Tritium	10028-17-8	ug/L	1400		300
Carbon-14	14762-75-5	ug/L	49	U	60
Strontium-90	10098-97-2	ug/L	2.4	J	0.4
Technetium-99	14133-76-7	ug/L	1.4	U	4
Uranium-233/234	U-233/234	ug/L	2.2		0.2
Uranium-235	15117-96-1	ug/L	0.092	U	0.2
Uranium-238	U-238	ug/L	1.8		0.1
Plutonium-238	13981-16-3	ug/L	-0.001	U	0.02
Plutonium-239/240	PU-239/240	ug/L	0	U	0.008
Americium-241	14596-10-2	ug/L	0.009	U	0.02
		GAMMA SCAN			
Sodium-22	13966-32-0	ug/L	U	U	10
Potassium-40	13966-00-2	ug/L	U	U	200
Manganese-54	13966-31-9	ug/L	U	U	10
Iron-59	14596-12-4	ug/L	U	U	40
Cobalt-58	13891-38-9	ug/L	U	U	20
Cobalt-60	10198-40-0	ug/L	U	U	20
Niobium-94	14681-63-1	ug/L	U	U	10
Ruthenium-103	13968-53-1	ug/L	U	U	20
Ruthenium-106	13967-48-1	ug/L	U	U	100
Tin-113	13966-06-8	ug/L	U	U	20
Cesium-134	13967-70-9	ug/L	U	U	10
Cesium-137	10045-97-3	ug/L	U	U	10
Cerium-144	14762-78-8	ug/L	U	U	70
Europium-152	14683-23-9	ug/L	U	U	30
Europium-154	15585-10-1	ug/L	U	U	20
Europium-155	14391-16-3	ug/L	U	U	40
Radium-226	13982-63-3	ug/L	U	U	20
Radium-228	15262-20-1	ug/L	U	U	60
Thorium-228	14274-82-9	ug/L	U	U	20
Thorium-232	7440-29-1	ug/L	U	U	60

entered by: [illegible]
date: 10-3-94

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TMA 760

checked by: BM
date: 10-3-94

FILE #:VW402.66		HEIS #:	B0BMT8			B0BMT0		
		Date:	12-May-94			12-May-94		
Constituent		Matrix:	WATER			WATER		
	CAS #	Units	Results	Q	MDA	Results	Q	MDA
Gross Alpha	ALPHA	pCi/L	0.843	U	0.921	11.3		1.51
Gross Beta	BETA	pCi/L	4.04		2.86	11.7		2.84
Americium 241	14596-10-2	pCi/L	-0.00356	U	0.179	-0.0102	U	0.211
Plutonium 238	13981-16-3	pCi/L	-0.0133	U	0.317	0.0444	U	0.418
Plutonium 239/240	U-239/240	pCi/L	0	U	0.179	-0.0148	U	0.354
Uranium 234	13966-29-5	pCi/L	1.1		0.508	5.03		0.45
Uranium 235	15117-96-1	pCi/L	0.188	U	0.466	0.0573	U	0.45
Uranium 238DA	U-238	pCi/L	1.2		0.508	3.69		0.385
Strontium 90	10098-97-2	pCi/L	0.0768	U	0.77	0.774	U	0.947
Carbon 14	14762-75-5	pCi/L	1.19	U	3.55	5.11		3.55
Technetium 99	14133-76-7	pCi/L	5.87		2.1	1.47	U	2.1
Tritium	10028-17-8	pCi/L	-25.2	U	246	9460		246
GAMMA SCAN								
Cobalt 58	13981-38-9	pCi/L	3.53	U	11.3	-0.931	U	8.67
Cobalt 60	10198-40-0	pCi/L	1.91	U	8.51	-0.772	U	9.33
Cesium 137DA	10045-97-3	pCi/L	1.19	U	5.29	0.266	U	7.84
Europium 152	14683-23-9	pCi/L	-14.1	U	30.7	-17.2	U	43.6
Europium 154	15585-10-1	pCi/L	5.72	U	24.5	-16.7	U	25.1
Europium 155	14391-16-3	pCi/L	0.613	U	15.4	5.15	U	15.8
Iron 59	14596-12-4	pCi/L	8.35	U	24.4	6.93	U	25.4

FILE #:VW402.66		HEIS #:	B0BMW0			B0BMP4		
		Date:	19-May-94			18-May-94		
Constituent		Matrix:	WATER			WATER		
	CAS #	Units	Results	Q	MDA	Results	Q	MDA
Gross Alpha	ALPHA	pCi/L	6.78		1.67	0.623	U	0.757
Gross Beta	BETA	pCi/L	9.23		3.1	31.7		2.69
Americium 241	14596-10-2	pCi/L	-0.0144	U	0.24	-0.0041	U	0.208
Plutonium 238	13981-16-3	pCi/L	0	U	0.197	0.0422	U	0.253
Plutonium 239/240	U-239/240	pCi/L	-0.0146	U	0.349	-0.0422	U	0.362
Uranium 234	13966-29-5	pCi/L	2.34		0.447	0.357	U	0.439
Uranium 235	15117-96-1	pCi/L	0.133	U	0.33	0.131	U	0.415
Uranium 238DA	U-238	pCi/L	1.8		0.33	0.423	U	0.481
Strontium 90	10098-97-2	pCi/L	0.267	U	0.779	15.9		0.851
Carbon 14	14762-75-5	pCi/L	-0.586	U	3.55	-0.563	U	3.55
Technetium 99	14133-76-7	pCi/L	2.92		2.1	2.12		2.1
Tritium	10028-17-8	pCi/L	980		246	-40.9	U	246
GAMMA SCAN								
Cobalt 58	13981-38-9	pCi/L	-2.23	U	7.82	-1.29	U	7.45
Cobalt 60	10198-40-0	pCi/L	-1.38	U	4.06	7.23	U	11.3
Cesium 137DA	10045-97-3	pCi/L	0.287	U	7.12	0.625	U	5.95
Europium 152	14683-23-9	pCi/L	3.25	U	36.5	1.01	U	48
Europium 154	15585-10-1	pCi/L	10.4	U	22.4	-0.816	U	28.4
Europium 155	14391-16-3	pCi/L	7.3	U	12.8	1.3	U	14.4
Iron 59	14596-12-4	pCi/L	3.11	U	17.5	13.9	U	24.3

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date: 10-3-94

FILE #:VW402.66		HEIS #:	B0BMV2			B0BMR0		
		Date:	10-May-94			11-May-94		
Constituent		Matrix:	WATER			WATER		
	CAS #	Units	Results	Q	MDA	Results	Q	MDA
Gross Alpha	ALPHA	pCi/L	6.46		1.52	0.474	U	0.757
Gross Beta	BETA	pCi/L	8.19		2.88	8.58		2.98
Americium 241	14596-10-2	pCi/L	0.0829	U	0.174	-0.00346	U	0.174
Plutonium 238	13981-16-3	pCi/L	-0.0121	U	0.289	-0.0206	U	0.291
Plutonium 239/240	U-239/240	pCi/L	-0.0482	U	0.414	-0.0103	U	0.246
Uranium 234	13966-29-5	pCi/L	3.28		0.411	0.476	U	0.573
Uranium 235	15117-96-1	pCi/L	0.255	U	0.303	-0.0441	U	0.488
Uranium 238DA	U-238	pCi/L	2.26		0.18	0.296	U	0.393
Strontium 90	10098-97-2	pCi/L	0.286	U	1.09	2.63		0.817
Carbon 14	14762-75-5	pCi/L	1.51	U	3.55	-1.13	U	3.55
Technetium 99	14133-76-7	pCi/L	2.43		2.1	2.63		2.1
Tritium	10028-17-8	pCi/L	380		246	-21.4	U	246
GAMMA SCAN								
Cobalt 58	13981-38-9	pCi/L	-0.249	U	8.17	6.39	U	12
Cobalt 60	10198-40-0	pCi/L	1.94	U	8.32	1.31	U	8.15
Cesium 137DA	10045-97-3	pCi/L	2.18	U	6.41	-2.81	U	8.37
Europium 152	14683-23-9	pCi/L	25.1	U	46.4	6.56	U	42.7
Europium 154	15585-10-1	pCi/L	7.47	U	28.1	18	U	29.6
Europium 155	14391-16-3	pCi/L	5.78	U	13.8	2.91	U	13.5
Iron 59	14596-12-4	pCi/L	-2.11	U	22.7	9.22	U	28.8

FILE #:VW402.66		HEIS #:	BOBMR8		
		Date:	11-May-94		
Constituent		Matrix:	WATER		
	CAS #	Units	Results	Q	MDA
Gross Alpha	ALPHA	pCi/L	0.379	U	0.941
Gross Beta	BETA	pCi/L	7.8		2.87
Americium 241	14596-10-2	pCi/L	0.0485	U	0.212
Plutonium 238	13981-16-3	pCi/L	0	U	0.175
Plutonium 239/240	U-239/240	pCi/L	-0.0259	U	0.365
Uranium 234	13966-29-5	pCi/L	0.375	U	0.397
Uranium 235	15117-96-1	pCi/L	0.11	U	0.273
Uranium 238DA	U-238	pCi/L	0.334	U	0.337
Strontium 90	10098-97-2	pCi/L	3.76		0.835
Carbon 14	14762-75-5	pCi/L	-0.586	U	3.55
Technetium 99	14133-76-7	pCi/L	3.34		2.1
Tritium	10028-17-8	pCi/L	-110	U	246
GAMMA SCAN					
Cobalt 58	13981-38-9	pCi/L	3.11	U	10.3
Cobalt 60	10198-40-0	pCi/L	1.31	U	8.51
Cesium 137DA	10045-97-3	pCi/L	-6.75	U	7.96
Europium 152	14683-23-9	pCi/L	0.505	U	32.6
Europium 154	15585-10-1	pCi/L	-2.45	U	15.2
Europium 155	14391-16-3	pCi/L	1.69	U	15.3
Iron 59	14596-12-4	pCi/L	10.8	U	30.5

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FILE #:VW402.67		HEIS #:	B0BMQ6			B0BMX6		
		Date:	6-May-94			6-May-94		
		Matrix:	WATER			WATER		
Constituent	CAS #	Units	Results	Q	MDA	Results	Q	MDA
Alpha	ALPHA	pCi/L	3.69		0.999	4.36		0.95
Beta	BETA	pCi/L	16.7		3.02	17.6		3.24
Americium-241	14596-10-2	pCi/L	-0.0132	U	0.221	-0.00378	U	0.19
Plutonium-238	13981-16-3	pCi/L	0	U	0.145	-0.0107	U	0.256
Plutonium-239/240	U-239/240	pCi/L	-0.0214	U	0.302	0.0107	U	0.367
Uranium 233/234	U-233/234	pCi/L	2.97		0.313	2.4		0.253
Uranium 235	15117-96-1	pCi/L	0.126	UJ	0.202	0.0304	UJ	0.239
Uranium 238	U-238	pCi/L	1.98		0.236	1.63		0.277
Total Strontium	7440-24-6	pCi/L	7.18		0.788	6.73		0.889
Carbon-14	14762-75-5	pCi/L	3.74		3.51	8.94		3.51
Technetium-99	14133-76-7	pCi/L	0.246	U	2.16	-0.388	U	2.16
Tritium-99	10028-17-8	pCi/L	1330		239	1330		239
Cobalt-58	13981-38-9	pCi/L	0.233	U	8.44	-3.23	U	10.2
Cobalt-60	10198-40-0	pCi/L	-2.74	U	5.54	4.77	U	9.46
Cerium-144	14762-78-8	pCi/L	9.83	U	33.9	20.5	U	32.3
Cesium-137DA	10045-97-3	pCi/L	2.23	U	7.67	-1.89	U	6.89
Europium-152	14683-23-9	pCi/L	-11.2	U	31.4	-13	U	54.4
Europium-154	15585-10-1	pCi/L	9.73	U	20.9	9.65	U	22.7
Europium-155	14391-16-3	pCi/L	-10.7	U	14.05	7.32	U	16.29
Iron-59	14596-12-4	pCi/L	-1.95	U	22.6	8.99	U	21.1
Ruthenium-106DA	13967-48-1	pCi/L	44	U	69.2	-16	U	68.2

FILE #:VW402.67		HEIS #:	B0BMS2			B0BMS6		
		Date:	10-May-94			10-May-94		
		Matrix:	WATER			WATER		
Constituent	CAS #	Units	Results	Q	MDA	Results	Q	MDA
Americium-241	14596-10-2	pCi/L	-0.00413	U	0.208	0.034	U	0.223
Plutonium-239/240	U-239/240	pCi/L	-0.025	U	0.353	0	U	0.125
Plutonium-238	13981-16-3	pCi/L	0	U	0.169	-0.00927	U	0.222
Uranium 233/234	U-233/234	pCi/L	2.61		0.278	4.24		0.295
Uranium 235	15117-96-1	pCi/L	0.274	UJ	0.214	0.36	J	0.328
Uranium 238	U-238	pCi/L	1.82		0.234	2.41		0.312
Cobalt-60	10198-40-0	pCi/L	-1.11	U	6.6	-2.82	U	7.07
Iron-59	14596-12-4	pCi/L	6.45	U	23.8	-12.1	U	22.5
Europium-152	14683-23-9	pCi/L	-9.74	U	41.8	-8.58	U	33.8
Cobalt-58	13981-38-9	pCi/L	-0.787	U	8.06	2.89	U	9.58
Cesium-137DA	10045-97-3	pCi/L	-3.04	U	6.21	4.36	U	7.43
Ruthenium-106DA	13967-48-1	pCi/L	13.4	U	58	34.4	U	71.1
Cerium-144	14762-78-8	pCi/L	11	U	28.2	-15.1	U	30.1
Europium-154	15585-10-1	pCi/L	8.21	U	24.7	-0.463	U	22
Europium-155	14391-16-3	pCi/L	2.413	U	12.74	-3.16	U	12.9
Alpha	ALPHA	pCi/L	1.35		1.16	8.9		1.33
Beta	BETA	pCi/L	7.16		3.1	30.4		3.21
Total Strontium	7440-24-6	pCi/L	0.0204	U	0.846	9.7		0.738
Carbon-14	14762-75-5	pCi/L	4.12		3.51	7.03		3.51
Technetium-99	14133-76-7	pCi/L	-1.15	U	2.16	-0.748	U	2.16
Tritium-99	10028-17-8	pCi/L	2620		239	14200		239

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checked by: BM
date: 10-3-94

FILE #:VW402.67		HEIS #:	B0BMT4			B0BMW4		
		Date:	9-May-94			9-May-94		
		Matrix:	WATER			WATER		
Constituent	CAS #	Units	Results	Q	MDA	Results	Q	MDA
Americium-241	14596-10-2	pCi/L	-0.0141	U	0.337	0.121	U	0.428
Plutonium-239/240	U-239/240	pCi/L	0	U	0.157	-0.00975	U	0.233
Plutonium-238	13981-16-3	pCi/L	-0.0116	U	0.278	0	U	0.132
Uranium 233/234	U-233/234	pCi/L	4.3		0.239	9.73		0.55
Uranium 235	15117-96-1	pCi/L	0.22	UJ	0.271	0.601	J	0.443
Uranium 238	U-238	pCi/L	3.48		0.239	11		0.406
Cobalt-60	10198-40-0	pCi/L	6.06	U	11.8	-2.83	U	7.34
Iron-59	14596-12-4	pCi/L	-23.4	U	20.7	5.34	U	22.6
Europium-152	14683-23-9	pCi/L	0.999	U	46.4	4.72	U	36.3
Cobalt-58	13981-38-9	pCi/L	-1.39	U	8.92	5.4	U	10.3
Cesium-137DA	10045-97-3	pCi/L	-2.59	U	7.24	-1.06	U	7.49
Ruthenium-106DA	13967-48-1	pCi/L	41.2	U	78.6	27.9	U	73.9
Cerium-144	14762-78-8	pCi/L	7.35	U	27.9	0.873	U	29.9
Europium-154	15585-10-1	pCi/L	6.43	U	19.3	9.49	U	24.2
Europium-155	14391-16-3	pCi/L	1.919	U	17.18	-0.441	U	14.43
Alpha	ALPHA	pCi/L	10.1		2.06	17		1.82
Beta	BETA	pCi/L	8.5		3.27	15.8		3.18
Total Strontium	7440-24-6	pCi/L	2.34		0.874	-0.0668	U	0.877
Carbon-14	14762-75-5	pCi/L	10.4		3.51	3.94		3.51
Technetium-99	14133-76-7	pCi/L	-0.587	U	2.16	-0.142	U	2.16
Tritium-99	10028-17-8	pCi/L	10100		239	2520		239

FILE #:VW402.67		HEIS #:	B0BMR4		
		Date:	11-May-94		
		Matrix:	WATER		
Constituent	CAS #	Units	Results	Q	MDA
Americium-241	14596-10-2	pCi/L	-0.0146	U	0.348
Plutonium-239/240	U-239/240	pCi/L	-0.0474	U	0.407
Plutonium-238	13981-16-3	pCi/L	-0.0119	U	0.284
Uranium 233/234	U-233/234	pCi/L	0.444	U	0.47
Uranium 235	15117-96-1	pCi/L	0.0481	UJ	0.377
Uranium 238	U-238	pCi/L	0.449	U	0.454
Cobalt-60	10198-40-0	pCi/L	-0.921	U	7.61
Iron-59	14596-12-4	pCi/L	-1.28	U	18.1
Europium-152	14683-23-9	pCi/L	22.7	U	52
Cobalt-58	13981-38-9	pCi/L	1.57	U	9.8
Cesium-137DA	10045-97-3	pCi/L	2.53	U	6.71
Ruthenium-106DA	13967-48-1	pCi/L	-35.2	U	47.7
Cerium-144	14762-78-8	pCi/L	-7.44	U	25.8
Europium-154	15585-10-1	pCi/L	8.95	U	21
Europium-155	14391-16-3	pCi/L	3.217	U	11.23
Alpha	ALPHA	pCi/L	0.573	U	0.733
Beta	BETA	pCi/L	8.23		2.87
Total Strontium	7440-24-6	pCi/L	2.34		0.795
Carbon-14	14762-75-5	pCi/L	0.833	U	3.51
Technetium-99	14133-76-7	pCi/L	-0.388	U	2.16
Tritium-99	10028-17-8	pCi/L	-32.6	U	239

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FILE #:VW402.71		HEIS #:	B0BMY8		
		Date:	18-May-94		
Constituent		Matrix:	WATER		
	CAS #	Units	Results	Q	MDA
Gross Alpha	ALPHA	pCi/L	1.1	J	1
Gross Beta	BETA	pCi/L	36		2
Tritium	10028-17-8	pCi/L	79	U	300
Carbon 14	14762-75-5	pCi/L	18	U	50
Strontium 90	10098-97-2	pCi/L	19		0.6
Technetium 99	14133-76-7	pCi/L	1.7	U	1
Uranium 233/234	U-233/234	pCi/L	0.58		0.05
Uranium 235	15117-96-1	pCi/L	-0.008	U	0.05
Uranium 238	U-238	pCi/L	0.35		0.03
Plutonium 238	13981-16-3	pCi/L	0.043	J	0.04
Plutonium 239/240	U-239/240	pCi/L	0.003	U	0.03
Americium 241	14596-10-2	pCi/L	0.023	U	0.03
GAMMA SCAN					
Sodium 22	13966-32-0	pCi/L		U	20
Potassium 40	13966-00-2	pCi/L		U	200
Manganese 54	13966-31-9	pCi/L		U	10
Iron 59	14596-12-4	pCi/L		U	40
Cobalt 58	13981-38-9	pCi/L		U	20
Cobalt 60	10198-40-0	pCi/L		U	20
Niobium 94	14681-63-1	pCi/L		U	10
Ruthenium 103	13968-53-1	pCi/L		U	20
Ruthenium 106	13967-48-1	pCi/L		U	100
Tin 113	13966-06-8	pCi/L		U	20
Cesium 134	13967-70-9	pCi/L		U	20
Cesium 137	10045-97-3	pCi/L		U	10
Cerium 144	14762-78-8	pCi/L		U	70
Europium 152	14683-23-9	pCi/L		U	30
Europium 154	15585-10-1	pCi/L		U	20
Europium 155	14391-16-3	pCi/L		U	40
Radium 226	13982-63-3	pCi/L		U	30
Radium 228	15262-20-1	pCi/L		U	60
Thorium 228	14274-82-9	pCi/L		U	20
Thorium 232	7440-29-1	pCi/L		U	60

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entered by: date: 40271TBL.XLS checked by: BM date: 10-3-94

FILE #:VW402.72		HEIS #:	B0BMW8			B0BMY0			B0BMZ2		
		Date:	20-May-94			20-May-94			24-May-94		
Constituent		Matrix:	WATER			WATER			WATER		
	CAS #	Units	Results	Q	MDA	Results	Q	MDA	Results	Q	MDA
Gross Alpha	ALPHA	pCi/L	13.6		3.30	1.37		0.788	-0.101	U	0.661
Gross Beta	BETA	pCi/L	79.7		3.16	36.2		3.13	0.504	U	2.76
Tritium	10028-17-	pCi/L	98300		238	83.8	U	238	55.8	U	238
Carbon-14	14762-75-	pCi/L	252		4.72	0.113	U	4.72	0.0901	U	4.72
Strontium-90	0098-97-2	pCi/L	-0.137	U	1.01	17.4		0.757	0.176	U	0.790
Uranium 234	U-233/234	pCi/L	0.282	UJ	0.355	7.66	R	0.288	0.139	UJ	0.276
Uranium 235	5117-96-1	pCi/L	0.0448	UJ	0.244	0.130	UR	0.260	310	UJ	0.292
Uranium 238	U-238	pCi/L	0.312	J	0.244	5.91	R	0.301	-0.00827	UJ	0.236
Plutonium-238	3981-16-3	pCi/L	0.00	U	0.145	0.00	U	0.180	0.00	U	0.196
Plutonium-239/240	U-239/240	pCi/L	0.00	U	0.145	0.252	U	0.318	-145	U	0.346
Americium-241	4596-10-2	pCi/L	-0.0143	U	0.298	0.0431	U	0.338	0.112	U	0.234
Technetium-99	4133-76-7	pCi/L	3.97	UJ	2.16	-0.426	U	2.16	-1.16	U	2.16
GAMMA SCAN											
Iron-59	4596-12-4	pCi/L	-11.8	U	26.2	9.62	U	25.1	9.66	U	24.5
Cobalt-58	3981-38-9	pCi/L	0.185	U	10.5	4.98	U	11.0	-3.57	U	8.04
Cobalt-60	0198-40-0	pCi/L	-6.57	U	6.43	-0.924	U	7.45	0.343	U	8.58
Cesium-137	0045-97-3	pCi/L	4.11	U	9.69	0.804	U	6.93	0.798	U	5.96
Europium-152	4683-23-9	pCi/L	-3.08	U	18.5	-0.608	U	16.9	7.79	U	19.5
Europium-154	5585-10-1	pCi/L	8.05	U	30.3	-5.98	U	25.9	9.50	U	25.2
Europium-155	4391-16-3	pCi/L	-1.92	U	14.7	-3.43	U	13.2	5.31	U	14.9
REANALYSIS RESULTS											
Uranium 234	U-233/234	pCi/L				0.496	J	0.292			
Uranium 235	5117-96-1	pCi/L				0.0910	UJ	0.258			
Uranium 238	U-238	pCi/L				0.480	J	0.344			

FILE #:VW402.72		HEIS #:	B0BMX2			B0BMP0			B0BMZ8		
		Date:	20-May-94			20-May-94			20-May-94		
Constituent		Matrix:	WATER			WATER			WATER		
	CAS #	Units	Results	Q	MDA	Results	Q	MDA	Results	Q	MDA
Gross Alpha	ALPHA	pCi/L	8.87		1.61	2.62		1.29	396	U	0.659
Gross Beta	BETA	pCi/L	10.3		3.07	8.55		3.02	7.55	U	2.70
Tritium	10028-17-	pCi/L	15000		238	182	U	238	70.7	U	238
Carbon-14	14762-75-	pCi/L	4.55	U	4.72	1.49	U	4.72	1.42	U	4.72
Strontium-90	0098-97-2	pCi/L	-0.123	U	1.02	0.248	U	0.790	0.377	U	0.774
Uranium 234	U-233/234	pCi/L	5.80	J	0.193	2.73	J	0.364	-0.0331	UJ	0.333
Uranium 235	5117-96-1	pCi/L	0.136	UJ	0.219	0.113	UJ	0.281	-0.00828	UJ	0.236
Uranium 238	U-238	pCi/L	3.63	J	0.239	1.63	J	0.347	0.199	UJ	0.236
Plutonium-238	3981-16-3	pCi/L	-259	U	0.366	0.00	U	0.159	0.00	U	0.192
Plutonium-239/240	U-239/240	pCi/L	0.116	U	0.309	0.0469	U	0.280	0.00	U	0.192
Americium-241	4596-10-2	pCi/L	0.0673	U	0.294	-0.0191	U	0.318	0.0516	U	0.226
Technetium-99	4133-76-7	pCi/L	-0.493	U	2.16	-0.0834	U	2.16	-0.909	U	2.16
GAMMA SCAN											
Iron-59	4596-12-4	pCi/L	-4.12	U	16.5	-1.88	U	27.7	-10.8	U	23.6
Cobalt-58	3981-38-9	pCi/L	1.15	U	9.92	4.41	U	10.2	5.60	U	11.4
Cobalt-60	0198-40-0	pCi/L	2.86	U	8.78	94.5	U	7.27	-5.96	U	7.15
Cesium-137	0045-97-3	pCi/L	1.84	U	7.35	0.585	U	8.02	-2.46	U	8.71
Europium-152	4683-23-9	pCi/L	-2.13	U	16.7	-3.30	U	17.5	-3.54	U	17.0
Europium-154	5585-10-1	pCi/L	-3.73	U	23.6	6.26	U	29.9	-1.61	U	21.5
Europium-155	4391-16-3	pCi/L	-5.03	U	12.2	0.369	U	15.7	1.37	U	16.2

entered by: CMO date: 10-4-94 shaded areas show changes by validator 40272TB4.XLS checked by: BM date: 10.3.94

FILE #:VW402.76		HEIS #:	B0BMQ2			B0BMV6			B0BMP8		
		Date:	1-Jun-94			6-Jun-94			3-Jun-94		
Constituent		Matrix:	WATER			WATER			WATER		
	CAS #	Units	Results	Q	MDA	Results	Q	MDA	Results	Q	MDA
Gross Alpha	ALPHA	pCi/L	8.07		2.12	4.47		1.54	0.920	U	1.16
Gross Beta	BETA	pCi/L	9.01		2.98	1.08	U	2.99	22.5		2.78
Americium 241	4596-10-2	pCi/L	0.0437	U	0.238	0.113	U	0.321	0.100	U	0.136
Plutonium 238	3981-16-3	pCi/L	-0.0226	U	0.320	0.0733	U	0.199	-0.0298	U	0.421
Plutonium 239/40	U-239/240	pCi/L	0.102	U	0.270	-0.1470	U	0.351	-0.0149	U	0.356
Uranium 234	U-233/234	pCi/L	3.82		0.294	-2.92	UR	48.7	0.769	UR	6.03
Uranium 235	5117-96-1	pCi/L	0.104	UJ	0.294	-0.730	UR	36.7	-0.0904	UR	4.55
Uranium 238 DA	U-238	pCi/L	3.14		0.393	-4.38	UR	54.1	-0.542	UR	6.70
Strontium 90	0098-97-2	pCi/L	0.0403	U	0.800	0.640	U	0.777	184		0.905
Carbon 14	4762-75-5	pCi/L	8.45		3.54	0.451	U	3.54	1.89	U	3.54
Technetium 99	4133-76-7	pCi/L	0.531	U	2.11	2.21		2.11	2.96		2.09
Tritium	0028-17-8	pCi/L	10500		253	602		253	726		253
REANALYSIS DATA											
Uranium 234	U-233/234	pCi/L				3.21	UJ	0.236	48.5	J	0.308
Uranium 235	5117-96-1	pCi/L				0.07366	U	0.209	0.164	U	0.217
Uranium 238	U-238	pCi/L				2.73		0.278	60.3		0.199
GAMMA SCAN											
Cobalt 58	3981-38-9	pCi/L	3.64	U	12.3	-2.23	U	10.7	-2.52	U	8.31
Cobalt 60	0198-40-0	pCi/L	-3.53	U	9.94	4.84	U	9.60	-1.85	U	10.2
Cesium 137	0045-97-3	pCi/L	1.07	U	6.77	-3.44	U	6.56	1.09	U	7.92
Europium 152	4683-23-9	pCi/L	13.0	U	20.8	-13.6	U	14.9	-0.103	U	15.9
Europium 154	5585-10-1	pCi/L	2.09	U	27.0	5.18	U	24.6	-6.73	U	22.5
Europium 155	4391-16-3	pCi/L	1.70	U	16.7	-4.46	U	14.4	-2.96	U	11.6
Iron 59	4596-12-4	pCi/L	5.16	U	27.5	-5.92	U	23.3	-6.40	U	27.6

shaded areas show changes by validator

entered by: date: 40276TBL.XLS checked by: BM date: 10-3-9

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APPENDIX G

FIELD QC

Organics

RELATIVE PERCENT DIFFERENCE FOR FIELD QC

Validator: B. MORRIS
Date: 9-29-94

Constituent	CRQL	SAMPLE BOBMP4	DUPLICATE BOBMY0	RPD
Semivolatiles		0	0	NC
Pesticides/PCBs		0	0	NC
Volatiles-- all non-detect except the following:				
Acetone	10	4	17	123.8%
Methylene Chloride	10	0	3	200.0%

RELATIVE PERCENT DIFFERENCE FOR FIELD QC

Validator: B. MORRIS
Date: 9-29-94

Constituent	CRQL	SAMPLE BOBMP4	SPLIT BOBMY8	RPD
Semivolatiles		0	0	NC
Pesticides/PCBs		0	0	NC
Volatiles-- all non-detect except the following:				
Acetone	10	4	0	200.0%

Metals

RELATIVE PERCENT DIFFERENCE FOR FIELD QC

Validator: B. MORRIS
Date: 9-29-94

Constituent		CRDL	SAMPLE BOBMQ6	DUPLICATE BOBMX6	RPD
Aluminum	ug/L	200	0	41.3	200.0%
Antimony	ug/L	60	0	0	NC
Arsenic	ug/L	10	0	0	NC
Barium	ug/L	200	28.6	27.8	2.8%
Beryllium	ug/L	5	0	0	NC
Cadmium	ug/L	5	0	0	NC
Calcium	ug/L	5000	50800	52600	3.5%
Chromium	ug/L	10	54.0	44.8	18.6%
Cobalt	ug/L	50	0	0	NC
Copper	ug/L	25	0	0	NC
Iron	ug/L	100	1420	40.3	189.0%
Lead	ug/L	3	0	0	NC
Magnesium	ug/L	5000	7390	7600	2.8%
Manganese	ug/L	15	9.0	0	200.0%
Mercury	ug/L	0.2	0	0	NC
Nickel	ug/L	40	0	0	NC
Potassium	ug/L	5000	2100	1710	20.5%
Selenium	ug/L	5	2.1	0	200.0%
Silver	ug/L	10	0	0	NC
Sodium	ug/L	5000	6900	7170.0	3.8%
Thallium	ug/L	10	0	0	NC
Vanadium	ug/L	50	0	0	NC
Zinc	ug/L	20	10.2	9.4	8.2%
Titanium	ug/L	3	0	0	NC
Cyanide	ug/L	10	0	0	NC

Metals

RELATIVE PERCENT DIFFERENCE FOR FIELD QC

Validator: B. MORRIS
Date: 9-29-94

Constituent		CRDL	SAMPLE BOBMQ6	SPLIT BOBMY4	RPD
Aluminum	ug/L	200	0	0	NC
Antimony	ug/L	60	0	0	NC
Arsenic	ug/L	10	0	0	NC
Barium	ug/L	200	28.6	29.6	3.4%
Beryllium	ug/L	5	0	0	NC
Cadmium	ug/L	5	0	0	NC
Calcium	ug/L	5000	50800	55700	9.2%
Chromium	ug/L	10	54.0	47.3	13.2%
Cobalt	ug/L	50	0	0	NC
Copper	ug/L	25	0	0	NC
Iron	ug/L	100	1420	83.1	177.9%
Lead	ug/L	3	0	1.6	200.0%
Magnesium	ug/L	5000	7390	8220	10.6%
Manganese	ug/L	15	9.0	2.6	110.3%
Mercury	ug/L	0.2	0	0	NC
Nickel	ug/L	40	0	0	NC
Potassium	ug/L	5000	2100	2700	25.0%
Selenium	ug/L	5	2.1	0	200.0%
Silver	ug/L	10	0	0	NC
Sodium	ug/L	5000	6900	7900	13.5%
Thallium	ug/L	10	0	0	NC
Vanadium	ug/L	50	0	0	NC
Zinc	ug/L	20	10.2	0	200.0%
Titanium	ug/L	3	0	0	NC
Cyanide	ug/L	10	0	0	NC

Metals

RELATIVE PERCENT DIFFERENCE FOR FIELD QC

Validator: B. MORRIS
Date: 9-29-94

Constituent		CRDL	SAMPLE BOBMP4	DUPLICATE BOBMY0	RPD
Aluminum	ug/L	200	0	67.1	200.0%
Antimony	ug/L	60	0	0	NC
Arsenic	ug/L	10	0	0	NC
Barium	ug/L	200	23.1	22.8	1.3%
Beryllium	ug/L	5	0	0	NC
Cadmium	ug/L	5	0	0	NC
Calcium	ug/L	5000	26200	26100	0.4%
Chromium	ug/L	10	0	53.5	200.0%
Cobalt	ug/L	50	0	0	NC
Copper	ug/L	25	0	0	NC
Iron	ug/L	100	182	246.0	29.9%
Lead	ug/L	3	0	0	NC
Magnesium	ug/L	5000	4520	4420	2.2%
Manganese	ug/L	15	5.3	4.8	9.9%
Mercury	ug/L	0.2	0	0	NC
Nickel	ug/L	40	0	0	NC
Potassium	ug/L	5000	1540	0	200.0%
Selenium	ug/L	5	0	0	NC
Silver	ug/L	10	0	0	NC
Sodium	ug/L	5000	3050	3040.0	0.3%
Thallium	ug/L	10	0	0	NC
Vanadium	ug/L	50	0	0	NC
Zinc	ug/L	20	0	6.5	200.0%
Cyanide	ug/L	10	0	0	NC

Metals

RELATIVE PERCENT DIFFERENCE FOR FIELD QC

Validator: B. MORRIS
Date: 9-29-94

Constituent		CRDL	SAMPLE BOBMP4	SPLIT BOBMY8	RPD
Aluminum	ug/L	200	0	0	NC
Antimony	ug/L	60	0	0	NC
Arsenic	ug/L	10	0	0	NC
Barium	ug/L	200	23.1	21.7	6.3%
Beryllium	ug/L	5	0	0	NC
Cadmium	ug/L	5	0	0	NC
Calcium	ug/L	5000	26200	28600	8.8%
Chromium	ug/L	10	0	5.5	200.0%
Cobalt	ug/L	50	0	0	NC
Copper	ug/L	25	0	3.9	200.0%
Iron	ug/L	100	182	157	14.7%
Lead	ug/L	3	0	1.6	200.0%
Magnesium	ug/L	5000	4520	4420	2.2%
Manganese	ug/L	15	5.3	3.0	55.4%
Mercury	ug/L	0.2	0	0	NC
Nickel	ug/L	40	0	0	NC
Potassium	ug/L	5000	1540	1900	20.9%
Selenium	ug/L	5	0	0	NC
Silver	ug/L	10	0	0	NC
Sodium	ug/L	5000	3050	3320	8.5%
Thallium	ug/L	10	0	0	NC
Vanadium	ug/L	50	0	0	NC
Zinc	ug/L	20	0	0	NC
Cyanide	ug/L	10	0	0	NC

General Chemistry

RELATIVE PERCENT DIFFERENCE FOR FIELD QC

Validator: B. MORRIS
Date: 9-29-94

Constituent	IDL	SAMPLE BOBMP4	DUPLICATE BOBMY0	RPD
Chloride by IC	0.40	1.6	1.4	13.3%
Fluoride by IC	0.40	0	0	NC
Phosphate by IC	1.0	0	0	NC
Sulfate by IC	7.5	16	17	6.1%
Sulfide	1	6	5	18.2%
Nitrite+Nitrate	0.02	0.57	0.63	10.0%
TOC	1	1	1	0.0%
pH	N/A	7.55	7.44	1.5%
Alkalinity	2	70	78	10.8%
Ammonia	0.1	0.1	0.1	0.0%
COD	1	1	1	0.0%
Conductivity	1	199	202	1.5%
TDS	1	166	136	19.9%
TOX	20	37	48	25.9%

Constituent		IDL	SAMPLE BOBMP4	SPLIT BOBMY8	RPD
Chloride by IC	mg/L	0.40	1.6	1.1	37.0%
Fluoride by IC	mg/L	0.40	0	0.10	200.0%
Phosphate by IC	mg/L	1.0	0	0	NC
Sulfate by IC	mg/L	7.5	16	15	6.5%
Sulfide	mg/L	1	6	0	200.0%
Nitrite+Nitrate	mg/L	0.02	0.57	0.68	17.6%
TOC	mg/L	1	1	0	200.0%
pH	pH	N/A	7.55	7.60	0.7%
Alkalinity	mg/L	2	70	80	13.3%
Ammonia	mg/L	0.1	0.1	0	200.0%
COD	mg/L	1	1	0	200.0%
Conductivity	umho/cm	1	199	196	1.5%
TDS	mg/L	1	166	64	88.7%
TOX	mg/L	20	37	0	200.0%

General Chemistry

Constituent		IDL	SAMPLE BOBMQ6	DUPLICATE BOBMX6	RPD
Chloride by IC	mg/L	0.40	11	10	9.5%
Fluoride by IC	mg/L	0.40	0.5	0	200.0%
Phosphate by IC	mg/L	1.0	0	0	NC
Sulfate by IC	mg/L	7.5	48	52	8.0%
Sulfide	mg/L	1	13	12	8.0%
Nitrite+Nitrate	mg/L	0.02	4.56	4.58	0.4%
TOC	mg/L	1	0	0	NC
pH	pH	N/A	7.53	7.59	0.8%
Alkalinity	mg/L	2	110	110	0.0%
Ammonia	mg/L	0.1	0	0	NC
COD	mg/L	1	0	0	NC
Conductivity	umho/cm	1	389	387	0.5%
TDS	mg/L	1	28	29	3.5%
TOX	mg/L	20	0	21	200.0%

Constituent		IDL	SAMPLE BOBMQ6	SPLIT BOBMY4	RPD
Chloride by IC	mg/L	0.40	11	9.4	15.7%
Fluoride by IC	mg/L	0.40	0.5	0.1	133.3%
Phosphate by IC	mg/L	1.0	0	0	NC
Sulfate by IC	mg/L	7.5	48	46	4.3%
Sulfide	mg/L	1	6	0	200.0%
Nitrite+Nitrate	mg/L	0.02	0.57	5.71	163.7%
TOC	mg/L	1	1	0	200.0%
pH	pH	N/A	7.55	7.80	3.3%
Alkalinity	mg/L	2	70	108	42.7%
Ammonia	mg/L	0.1	0.1	0	200.0%
COD	mg/L	1	1	0	200.0%
Conductivity	umho/cm	1	199	379	62.3%
TDS	mg/L	1	166	238	35.5%
TOX	mg/L	20	37	0	200.0%

Hydrazine

RELATIVE PERCENT DIFFERENCE FOR FIELD QC

Validator: B. MORRIS
Date: 9-29-94

Constituent		IDL	SAMPLE BOBMP7	DUPLICATE BOBMY3	RPD
Hydrazine	ug/L	1.0	0	0	NC

Constituent		IDL	SAMPLE BOBMP7	SPLIT BOBMZ1	RPD
Hydrazine	ug/L	1.0	0	7.8	200.0%

Constituent		IDL	SAMPLE BOBMQ9	SPLIT BOBMY7	RPD
Hydrazine	ug/L	1.0	0	1.6	200.0%

Radiochemistry

RELATIVE PERCENT DIFFERENCE FOR FIELD QC

Validator: B. MORRIS
Date: 9-29-94

Constituent		RDL	SAMPLE BOBMQ6	DUPLICATE BOBMX6	RPD
Alpha	pCi/L	3	3.69	4.36	16.6%
Beta	pCi/L	4	16.7	17.6	5.2%
Tritium	pCi/L	400	1330	1330	0.0%
C14	pCi/L	200	3.74	8.94	82.0%
Sr90	pCi/L	2	7.18	6.73	6.5%
U234	pCi/L	1	2.97	2.40	21.2%
U235	pCi/L	1	0	0	NC
U238	pCi/L	1	1.98	1.63	19.4%
Pu238	pCi/L	1	0	0	NC
Pu239/40	pCi/L	1	0	0	NC
Am241	pCi/L	1	0	0	NC
Tc99	pCi/L	15	0	0	NC
Gamma	pCi/L		0	0	NC

RELATIVE PERCENT DIFFERENCE FOR FIELD QC

Validator: B. MORRIS
Date: 9-29-94

Constituent		RDL	SAMPLE BOBMQ6	SPLIT BOBMY4	RPD
Alpha	pCi/L	3	3.69	4.70	24.1%
Beta	pCi/L	4	16.7	18.0	7.5%
Tritium	pCi/L	400	1330	1400	5.1%
C14	pCi/L	200	3.74	0	200.0%
Sr90	pCi/L	2	7.18	2.40	99.8%
U234	pCi/L	1	2.97	2.20	29.8%
U235	pCi/L	1	0	0	NC
U238	pCi/L	1	1.98	1.80	9.5%
Pu238	pCi/L	1	0	0	NC
Pu239/40	pCi/L	1	0	0	NC
Am241	pCi/L	1	0	0	NC
Tc99	pCi/L	15	0	0	NC
Gamma	pCi/L		0	0	NC

Radiochemistry

RELATIVE PERCENT DIFFERENCE FOR FIELD QC

Validator: B. MORRIS
Date: 9-29-94

Constituent		RDL	SAMPLE BOBMP4	DUPLICATE BOBMY0	RPD
Alpha	pCi/L	3	0	1.37	200.0%
Beta	pCi/L	4	31.7	36.2	13.3%
Tritium	pCi/L	400	0	0	NC
C14	pCi/L	200	0	0	NC
Sr90	pCi/L	2	15.9	17.4	9.0%
U234	pCi/L	1	0	7.66	200.0%
U235	pCi/L	1	0	0.130	200.0%
U238	pCi/L	1	0	5.91	200.0%
Pu238	pCi/L	1	0	0	NC
Pu239/40	pCi/L	1	0	0	NC
Am241	pCi/L	1	0	0	NC
Tc99	pCi/L	15	2.12	0	200.0%
Gamma	pCi/L		0	0	NC

RELATIVE PERCENT DIFFERENCE FOR FIELD QC

Validator: B. MORRIS
Date: 9-29-94

Constituent		RDL	SAMPLE BOBMP4	SPLIT BOBMY8	RPD
Alpha	pCi/L	3	0	1.1	200.0%
Beta	pCi/L	4	31.7	36	12.7%
Tritium	pCi/L	400	0	0	NC
C14	pCi/L	200	0	0	NC
Sr90	pCi/L	2	15.9	19.0	17.8%
U234	pCi/L	1	0	0.58	200.0%
U235	pCi/L	1	0	0	NC
U238	pCi/L	1	0	0.35	200.0%
Pu238	pCi/L	1	0	0.043	200.0%
Pu239/40	pCi/L	1	0	0	NC
Am241	pCi/L	1	0	0	NC
Tc99	pCi/L	15	2.12	1.7	22.0%
Gamma	pCi/L		0	0	NC

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