START 9613503.0161

B09WY3-TMA-694

0045602

TMA

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WESTINGHOUSE HANFORD COMPANY

Results of Analyses For:

GENERAL CHEMISTRY
Case No. 02-019
(TMA/ARLI W.O. Nos. A4-02-019)

METALS & NITRATE/NITRITE
Case No. N4-02-011
(TMA/Skinner & Sherman W.O. Nos. S4-02-076 & S4-02-077)

March 17, 1994

TMA Master Work Order N4-02-011

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GENERAL CHEMISTRY RESULTS

CASE NO. 02-019

Water Sample #s:

B09WY3 B09X09 B09X13

CASE NARRATIVE

Sample B09WY3 (A4-02-019-02A) exhibited a small phosphate peak on injection. The peak is believed to be a carry over from the matrix spike. The sample was reinjected and no phosphate was evident. The second injection was reported on Form I.

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

Maureen Parrish 3/16/94

Maureen Parrish

9613503.0163

000009

TMA Inc. REPORT Work Order # A4-02-019

Received: 02/04/94

Results by Sample

SAMPLE ID B09X09 FRACTION 01A TEST CODE WCCLPL NAME Anions & Wet Chem.

Date & Time Collected 02/01/94 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	8.7	mg/L	0.4
Fluoride	300.0	0.3	mg/L	0.1
Phosphate	300.0	<0.4	mg/L	0.4
Sulfate	300.0	53	mg/L	2
Nitrate Nitrogen	300.0	2.9	mg/L	0.2
Nitrite Nitrogen	300.0	<0.1	mg/L	0.1

FORM I

9613503.0164

000010

TMA Inc. REPORT Work Order # A4-02-019

Received: 02/04/94

Results by Sample

SAMPLE ID B09X09 FRACTION 01C TEST CODE WCCLPL NAME Anions & Wet Chem.

Date & Time Collected 02/01/94 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

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

FORM I

9613503.0165

000011

TMA Inc. REPORT Work Order # A4-02-019

Received: 02/04/94

Results by Sample

SAMPLE ID B09X09 FRACTION 01E TEST CODE WCCLPL NAME Anions & Wet Chem.

Date & Time Collected 02/01/94 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

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

FORM I

9613503.0166

000012

TMA Inc. REPORT Work Order # A4-02-019

Received: 02/04/94

Results by Sample

SAMPLE ID B09WY3 FRACTION 02A TEST CODE WCCLPL NAME Anions & Wet Chem.

Date & Time Collected 02/01/94 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	5.7	mg/L	0.2
Fluoride	300.0	0.1	mg/L	0.1
Phosphate	300.0	<0.4	mg/L	0.4
Sulfate	300.0	25	mg/L	1
Nitrate Nitrogen	300.0	1.8	mg/L	0.2
Nitrite Nitrogen	300.0	<0.1	mg/L	0.1

FORM I

9613503.0167

000013

TMA Inc. REPORT Work Order # A4-02-019

Received: 02/04/94

Results by Sample

SAMPLE ID B09WY3 FRACTION 02C TEST CODE WCCLPL NAME Anions & Wet Chem.

Date & Time Collected 02/01/94 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

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

FORM I

9613503.0168

000014

TMA Inc. REPORT Work Order # A4-02-019

Received: 02/04/94

Results by Sample

SAMPLE ID B09WY3 FRACTION 02E TEST CODE WCCLPL NAME Anions & Wet Chem.

Date & Time Collected 02/01/94 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

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

FORM I

9613503.0169

000015

TMA Inc. REPORT Work Order # A4-02-019

Received: 02/04/94

Results by Sample

SAMPLE ID B09X13 FRACTION 03A TEST CODE WCCLPL NAME Anions & Wet Chem.

Date & Time Collected 02/02/94 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	<0.2	mg/L	0.2
Fluoride	300.0	<0.1	mg/L	0.1
Phosphate	300.0	<0.4	mg/L	0.4
Sulfate	300.0	<1	mg/L	1
Nitrate Nitrogen	300.0	<0.2	mg/L	0.2
Nitrite Nitrogen	300.0	<0.1	mg/L	0.1

FORM I

TMA Inc. REPORT Work Order # A4-02-019

Received: 02/04/94

Results by Sample

SAMPLE ID B09X13 FRACTION 03B TEST CODE WCCLPL NAME Anions & Wet Chem.

Date & Time Collected 02/02/94 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

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

FORM I

TMA Inc. REPORT Work Order # A4-02-019

Received: 02/04/94

Results by Sample

SAMPLE ID B09X13 FRACTION 03C TEST CODE WCCLPL NAME Anions & Wet Chem.

Date & Time Collected 02/02/94 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

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

FORM I

9613503.0172

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WESTINGHOUSE HANFORD COMPANY

Results of Analyses For:

GENERAL CHEMISTRY
Case No. 02-023
(TMA/ARLI W.O. No. A4-02-023)

METALS & NITRATE/NITRITE
Case No. N4-02-023
(TMA/Skinner & Sherman W.O. Nos. S4-02-096,
S4-02-097 & S4-02-098)

March 23, 1994

TMA Master Work Order N4-02-023

GENERAL CHEMISTRY RESULTS

CASE NO. 02-023

Water Sample #s:

B09WY5	B09WY7	B09WY9
B09X11	B09X15	B09X17

CASE NARRATIVE

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

Maureen Parrish 3/22/94

Maureen Parrish

TMA Inc. REPORT Work Order # A4-02-023

Received: 02/08/94 Results by Sample

SAMPLE ID B09WY5 FRACTION 01A TEST CODE WCCLPL NAME Anions & Wet Chem.

Date & Time Collected 02/05/94 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	10.0	mg/L	0.8
Fluoride	300.0	0.2	mg/L	0.1
Phosphate	300.0	<0.4	mg/L	0.4
Sulfate	300.0	73	mg/L	4
Nitrate Nitrogen	300.0	7.8	mg/L	0.8
Nitrite Nitrogen	300.0	<0.1	mg/L	0.1

FORM I

TMA Inc. REPORT Work Order # A4-02-023

Received: 02/08/94

Results by Sample

SAMPLE ID B09WY5 FRACTION 01C TEST CODE WCCLPL NAME Anions & Wet Chem.

Date & Time Collected 02/05/94 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

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

FORM I

TMA Inc. REPORT Work Order # A4-02-023

Received: 02/08/94

Results by Sample

SAMPLE ID B09WY5 FRACTION 01E TEST CODE WCCLPL NAME Anions & Wet Chem.

Date & Time Collected 02/05/94 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

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

FORM I

TMA Inc. REPORT Work Order # A4-02-023

Received: 02/08/94

Results by Sample

SAMPLE ID B09WY7 FRACTION 02A TEST CODE WCCLPL NAME Anions & Wet Chem.

Date & Time Collected 02/05/94 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	5.3	mg/L	0.2
Fluoride	300.0	0.1	mg/L	0.1
Phosphate	300.0	<0.4	mg/L	0.4
Sulfate	300.0	24	mg/L	1
Nitrate Nitrogen	300.0	1.6	mg/L	0.2
Nitrite Nitrogen	300.0	<0.1	mg/L	0.1

FORM I

TMA Inc. REPORT Work Order # A4-02-023

Received: 02/08/94

Results by Sample

SAMPLE ID B09WY7 FRACTION 02C TEST CODE WCCLPL NAME Anions & Wet Chem.

Date & Time Collected 02/05/94 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

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

FORM I

TMA Inc. REPORT Work Order # A4-02-023

Received: 02/08/94

Results by Sample

SAMPLE ID B09WY7 FRACTION 02E TEST CODE WCCLPL NAME Anions & Wet Chem.

Date & Time Collected 02/05/94 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

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

FORM I

TMA Inc. REPORT Work Order # A4-02-023

Received: 02/08/94

Results by Sample

SAMPLE ID B09WY9 FRACTION 03A TEST CODE WCCLPL NAME Anions & Wet Chem.

Date & Time Collected 02/05/94 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	6.6	mg/L	0.2
Fluoride	300.0	0.2	mg/L	0.1
Phosphate	300.0	<0.4	mg/L	0.4
Sulfate	300.0	38	mg/L	1
Nitrate Nitrogen	300.0	4.7	mg/L	0.2
Nitrite Nitrogen	300.0	<0.1	mg/L	0.1

FORM I

TMA Inc. REPORT Work Order # A4-02-023

Received: 02/08/94

Results by Sample

SAMPLE ID B09WY9 FRACTION 03B TEST CODE WCCLPL NAME Anions & Wet Chem.

Date & Time Collected 02/05/94 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

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

FORM I

TMA Inc. REPORT Work Order # A4-02-023

Received: 02/08/94

Results by Sample

SAMPLE ID B09WY9 FRACTION 03C TEST CODE WCCLPL NAME Anions & Wet Chem.

Date & Time Collected 02/05/94 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

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

FORM I

TMA Inc. REPORT Work Order # A4-02-023

Received: 02/08/94 Results by Sample

SAMPLE ID B09X11 FRACTION 04A TEST CODE WCCLPL NAME Anions & Wet Chem.

Date & Time Collected 02/05/94 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	20.2	mg/L	0.8
Fluoride	300.0	0.2	mg/L	0.1
Phosphate	300.0	<0.4	mg/L	0.4
Sulfate	300.0	72	mg/L	4
Nitrate Nitrogen	300.0	4.1	mg/L	0.2
Nitrite Nitrogen	300.0	<0.1	mg/L	0.1

FORM I

TMA Inc. REPORT Work Order # A4-02-023

Received: 02/08/94

Results by Sample

SAMPLE ID B09X11 FRACTION 04B TEST CODE WCCLPL NAME Anions & Wet Chem.

Date & Time Collected 02/05/94 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

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

FORM I

TMA Inc. REPORT Work Order # A4-02-023

Received: 02/08/94

Results by Sample

SAMPLE ID B09X11 FRACTION 04C TEST CODE WCCLPL NAME Anions & Wet Chem.

Date & Time Collected 02/05/94 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

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

FORM I

9613503.0186

000021

TMA Inc. REPORT Work Order # A4-02-023

Received: 02/08/94

Results by Sample

SAMPLE ID B09X15 FRACTION 05A TEST CODE WCCLPL NAME Anions & Wet Chem.

Date & Time Collected 02/05/94 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	<0.2	mg/L	0.2
Fluoride	300.0	<0.1	mg/L	0.1
Phosphate	300.0	<0.4	mg/L	0.4
Sulfate	300.0	<1	mg/L	1
Nitrate Nitrogen	300.0	<0.2	mg/L	0.2
Nitrite Nitrogen	300.0	<0.1	mg/L	0.1

FORM I

TMA Inc. REPORT Work Order # A4-02-023

Received: 02/08/94

Results by Sample

SAMPLE ID B09X15 FRACTION 05B TEST CODE WCCLPL NAME Anions & Wet Chem.

Date & Time Collected 02/05/94 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

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

FORM I

9613503.0188

000023

TMA Inc. REPORT Work Order # A4-02-023

Received: 02/08/94

Results by Sample

SAMPLE ID B09X15 FRACTION 05C TEST CODE WCCLPL NAME Anions & Wet Chem.

Date & Time Collected 02/05/94 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

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

FORM I

TMA Inc. REPORT Work Order # A4-02-023

Received: 02/08/94

Results by Sample

SAMPLE ID B09X17 FRACTION 06A TEST CODE WCCLPL NAME Anions & Wet Chem.

Date & Time Collected 02/05/94 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	<0.2	mg/L	0.2
Fluoride	300.0	<0.1	mg/L	0.1
Phosphate	300.0	<0.4	mg/L	0.4
Sulfate	300.0	<1	mg/L	1
Nitrate Nitrogen	300.0	<0.2	mg/L	0.2
Nitrite Nitrogen	300.0	<0.1	mg/L	0.1

FORM I

TMA Inc. REPORT Work Order # A4-02-023

Received: 02/08/94 Results by Sample

SAMPLE ID B09X17 FRACTION 06B TEST CODE WCCLPL NAME Anions & Wet Chem.

Date & Time Collected 02/05/94 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

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

FORM I

TMA Inc. REPORT Work Order # A4-02-023

Received: 02/08/94 Results by Sample

SAMPLE ID B09X17 FRACTION 06C TEST CODE WCCLPL NAME Anions & Wet Chem.

Date & Time Collected 02/05/94 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

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

FORM I

9613503.0192

TMA

Thermo Analytical Inc.
Skinner & Sherman Laboratories Inc.

QUALITY ENVIRONMENTAL SERVICES

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Report for

TMA/Norcal

WORK ORDER #S402078

Scientific Services Since 1922

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

MS
8/6/96

9613503.0193

 *** T M A *** REPORT Work Order # S4-02-078

Received: 02/05/94 03/15/94 08:56:38

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

ATTEN Dan Steurmer

CLIENT HANFORD NOR SAMPLES 4
COMPANY TMA/NORCAL Hanford
FACILITY Richmond, CA

PREPARED Thermo Analytical, Inc.
BY 300 Second Avenue
P.O. Box 521
Waltham, MA 02254

ATTEN Client Services
PHONE (617) 890-7200

CERTIFIED BY

CONTACT DP

WORK ID N4-02-011
TAKEN By Client
TRANS Fedex
TYPE 3 waters
P.O. # N4-02-011
INVOICE under separate cover

SAMPLE IDENTIFICATION

01 B09WY3
02 B09X09
03 B09X13
03 B09X13D
03 B09X13S
04 LCSW

TEST CODES and NAMES used on this workorder

NO3NO2 Nitrate/Nitrite

TMA
Thermo Analytical Inc.
Skinner & Sherman Laboratories Inc.

This report is rendered upon all of the following conditions: Skinner & Sherman Laboratories, Inc., retains ownership of this report until associated submitted invoice is 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 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.

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

9613503.0194

 *** T M A *** REPORT Work Order # S4-02-078

Received: 02/05/94

Results by Sample

SAMPLE ID B09WY3 SAMPLE # 01 FRACTIONS: A
Date & Time Collected 02/01/94 10:30:00 Category WATER

NO3NO2 2.22
mg N/L

SAMPLE ID B09X09 SAMPLE # 02 FRACTIONS: A
Date & Time Collected 02/01/94 09:38:00 Category WATER

NO3NO2 3.44
mg N/L

SAMPLE ID B09X13 SAMPLE # 03 FRACTIONS: A
Date & Time Collected 02/02/94 09:00:00 Category WATER

NO3NO2 <0.25
mg N/L

SAMPLE ID B09X13D SAMPLE # 03 FRACTIONS: B
Date & Time Collected 02/02/94 09:00:00 Category WATER

NO3NO2 <0.25
mg N/L

SAMPLE ID B09X13S SAMPLE # 03 FRACTIONS: C
Date & Time Collected 02/02/94 09:00:00 Category WATER

NO3NO2 2.14
mg N/L

SAMPLE ID LCSW SAMPLE # 04 FRACTIONS: A
Date & Time Collected not specified Category WATER

NO3NO2 1.98
mg N/L

TMA
Thermo Analytical Inc.
Skinner & Sherman Laboratories Inc.

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1-800-4 LAB TEST FAX (617) 890-3883

9613503.0195

 *** T M A *** REPORT Work Order # S4-02-078

Received: 02/05/94 03/15/94 08:56:38

TMA/NORCAL Hanford

Q U A L I T Y C O N T R O L

MATRIX SPIKE

Sample ID	Sample Result	Spike Added	Spike Result	% Recovery
S402078-03	<0.25 mg/L	2.00 mg/L	2.14 mg/L	107.0

DUPLICATE

Sample ID	Sample Result	Duplicate Result	Relative % Difference
S402078-03	<0.25 mg/L	<0.25 mg/L	not calculable

QUALITY CONTROL SAMPLES

Sample ID	True Value	Found Value	Percent Recovery
LCS	2.00 mg/L	1.98 mg/L	99.0
Prep blank	--	<0.25 mg/L	--

TMA
Thermo Analytical Inc.
Skinner & Sherman Laboratories Inc.

This report is rendered upon all of the following conditions: Skinner & Sherman Laboratories, Inc., retains ownership of this report until associated submitted invoice is 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 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.

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1-800-4 LAB TEST FAX (617) 890-3883

9613503.0196

Received: 02/05/94

Test Methodology

TEST CODE NO3NO2 NAME Nitrate/Nitrite

USEPA Methods for Chemical Analysis of Water and Wastes
(EPA-600/4-79-020), Method 353.2 (modified) -- Colorimetric, Automated
Cadmium Reduction

TMA
Thermo Analytical Inc.
Skinner & Sherman Laboratories Inc.

This report is rendered upon all of the following conditions: Skinner & Sherman Laboratories, Inc., retains ownership of this report until associated submitted invoice is 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 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.

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

9613503.0197

TMA
Thermo Analytical Inc.

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

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March 8, 1994

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

Quality Control Narrative

Scope
Three water samples were submitted to TMA/Skinner & Sherman Laboratories, Inc. on February 5, 1994 from TMA/Norcal. The samples were analyzed for the USEPA CLP metals. The analysis was performed under TMA/Skinner and Sherman work order S402076.

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

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

The matrix spike recovery for aluminum exceeded the control limit requirement.

The laboratory duplicates for aluminum and manganese exceeded the control limit requirments.

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

Respectfully submitted,

TMA/SKINNER & SHERMAN LABORATORIES, INC.

Steven Provencal

Steven R. Provencal
Lead Chemist

MS
8/6/96

WESTINGHOUSE/HANFORD

SAMPLE NUMBER: B09WY3

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: SKINER Case No.: N4-02-011SAS No.: SDG No.: B09WY3

Matrix (soil/water): WATER Lab Sample ID: 02076-01S

Level (low/med): LOW Date Received: 02/05/94

% 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	33.0	B	N*	P
7440-36-0	Antimony	12.2	U		P
7440-38-2	Arsenic	3.0	U		P
7440-39-3	Barium	16.7	B		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	1.7	U		P
7440-70-2	Calcium	41000			P
7440-47-3	Chromium	74.3			P
7440-48-4	Cobalt	2.9	U		P
7440-50-8	Copper	4.9	B		P
7439-89-6	Iron	301			P
7439-92-1	Lead	1.8	U		P
7439-95-4	Magnesium	5220			P
7439-96-5	Manganese	7.3	B	*	P
7439-97-6	Mercury	0.20	U		AV
7440-02-0	Nickel	37.0	B		P
7440-09-7	Potassium	3250	B		P
7782-49-2	Selenium	2.8	U		P
7440-22-4	Silver	2.1	B		P
7440-23-5	Sodium	5260			P
7440-28-0	Thallium	3.7	U		P
7440-62-2	Vanadium	2.6	B		P
7440-66-6	Zinc	19.2	B		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

002

9613503.0199

WESTINGHOUSE/HANFORD

1

SAMPLE NUMBER:

B09X09

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: SKINER Case No.: N4-02-011SAS No.: SDG No.: B09WY3

Matrix (soil/water): WATER Lab Sample ID: 02076-02S

Level (low/med): LOW Date Received: 02/05/94

% 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	15.0	U	N*	P
7440-36-0	Antimony	12.2	U		P
7440-38-2	Arsenic	3.0	U		P
7440-39-3	Barium	39.2	B		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	1.7	U		P
7440-70-2	Calcium	40400			P
7440-47-3	Chromium	157			P
7440-48-4	Cobalt	2.9	U		P
7440-50-8	Copper	1.6	U		P
7439-89-6	Iron	64.9	B		P
7439-92-1	Lead	1.8	U		P
7439-95-4	Magnesium	9210			P
7439-96-5	Manganese	9.7	B	*	P
7439-97-6	Mercury	0.20	U		AV
7440-02-0	Nickel	4.4	U		P
7440-09-7	Potassium	3910	B		P
7782-49-2	Selenium	2.8	U		P
7440-22-4	Silver	2.1	U		P
7440-23-5	Sodium	20800			P
7440-28-0	Thallium	3.7	U		P
7440-62-2	Vanadium	4.2	B		P
7440-66-6	Zinc	17.2	B		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

003

9613503.0200

WESTINGHOUSE/HANFORD

1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B09X13

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

Lab Code: SKINER Case No.: N4-02-011SAS No.: SDG No.: B09WY3

Matrix (soil/water): WATER Lab Sample ID: 02076-03S

Level (low/med): LOW Date Received: 02/05/94

% 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	1240		N*	P
7440-36-0	Antimony	12.2	U		P
7440-38-2	Arsenic	3.0	U		P
7440-39-3	Barium	9.6	B		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	1.7	U		P
7440-70-2	Calcium	1560	B		P
7440-47-3	Chromium	2.5	U		P
7440-48-4	Cobalt	2.9	U		P
7440-50-8	Copper	4.3	B		P
7439-89-6	Iron	103			P
7439-92-1	Lead	2.0	B		P
7439-95-4	Magnesium	210	B		P
7439-96-5	Manganese	46.2		*	P
7439-97-6	Mercury	0.20	U		AV
7440-02-0	Nickel	4.4	U		P
7440-09-7	Potassium	103	B		P
7782-49-2	Selenium	2.8	U		P
7440-22-4	Silver	2.1	U		P
7440-23-5	Sodium	483	B		P
7440-28-0	Thallium	3.7	U		P
7440-62-2	Vanadium	2.4	U		P
7440-66-6	Zinc	17.1	B		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

004

TMA 9613503.0201
Thermo Analytical Inc.

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

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March 8, 1994

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

Quality Control Narrative

Scope
Three water samples were submitted to TMA/Skinner & Sherman Laboratories, Inc. on February 5, 1994 from TMA/Norcal. The samples were analyzed for the USEPA CLP metals. The analysis was performed under TMA/Skinner and Sherman work order S402077.

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

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

The matrix spike recovery for aluminum exceeded the control limit requirement.

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

Respectfully submitted,

TMA/SKINNER & SHERMAN LABORATORIES, INC.

Steven Provencal

Steven R. Provencal
Lead Chemist

MS
8/6/96

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9613505.0202

WESTINGHOUSE/HANFORD

1

SAMPLE NUMBER:

B09WY4

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: SKINER Case No.: N4-02-011SAS No.: SDG No.: B09WY4

Matrix (soil/water): WATER Lab Sample ID: 02077-01S

Level (low/med): LOW Date Received: 02/05/94

% 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	15.0	U	N	P
7440-36-0	Antimony	12.2	U		P
7440-38-2	Arsenic	3.0	U		P
7440-39-3	Barium	16.5	B		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	1.7	U		P
7440-70-2	Calcium	39700			P
7440-47-3	Chromium	13.5			P
7440-48-4	Cobalt	2.9	U		P
7440-50-8	Copper	1.6	U		P
7439-89-6	Iron	13.4	U		P
7439-92-1	Lead	1.8	U		P
7439-95-4	Magnesium	5010			P
7439-96-5	Manganese	3.7	B		P
7439-97-6	Mercury	0.20	U		AV
7440-02-0	Nickel	4.4	U		P
7440-09-7	Potassium	2790	B		P
7782-49-2	Selenium	2.8	U		P
7440-22-4	Silver	2.1	U		P
7440-23-5	Sodium	5100			P
7440-28-0	Thallium	3.7	U		P
7440-62-2	Vanadium	4.6	B		P
7440-66-6	Zinc	9.2	B		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

002

9613503.0203

WESTINGHOUSE/HANFORD

1

SAMPLE NUMBER:

B09X10

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: SKINER Case No.: N4-02-011SAS No.: SDG No.: B09WY4

Matrix (soil/water): WATER Lab Sample ID: 02077-025

Level (low/med): LOW Date Received: 02/05/94

% 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	18.3	B	N	P
7440-36-0	Antimony	13.4	B		P
7440-38-2	Arsenic	3.0	U		P
7440-39-3	Barium	39.4	B		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	1.7	U		P
7440-70-2	Calcium	40600			P
7440-47-3	Chromium	160			P
7440-48-4	Cobalt	2.9	U		P
7440-50-8	Copper	3.4	B		P
7439-89-6	Iron	13.4	U		P
7439-92-1	Lead	3.9			P
7439-95-4	Magnesium	9240			P
7439-96-5	Manganese	3.3	B		P
7439-97-6	Mercury	0.20	U		AV
7440-02-0	Nickel	4.4	U		P
7440-09-7	Potassium	4000	B		P
7782-49-2	Selenium	2.8	U		P
7440-22-4	Silver	2.2	B		P
7440-23-5	Sodium	20900			P
7440-28-0	Thallium	3.7	U		P
7440-62-2	Vanadium	5.6	B		P
7440-66-6	Zinc	12.3	B		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

003

9613503.0204

WESTINGHOUSE/HANFORD

1

SAMPLE NUMBER:

B09X14

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: SKINER Case No.: N4-02-011SAS No.: SDG No.: B09WY4

Matrix (soil/water): WATER Lab Sample ID: 02077-03S

Level (low/med): LOW Date Received: 02/05/94

% 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	15.0	U	N	P
7440-36-0	Antimony	12.2	U		P
7440-38-2	Arsenic	3.0	U		P
7440-39-3	Barium	0.80	U		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	1.7	U		P
7440-70-2	Calcium	83.4	U		P
7440-47-3	Chromium	2.5	U		P
7440-48-4	Cobalt	2.9	U		P
7440-50-8	Copper	1.6	U		P
7439-89-6	Iron	13.4	U		P
7439-92-1	Lead	1.8	U		P
7439-95-4	Magnesium	32.2	U		P
7439-96-5	Manganese	4.2	B		P
7439-97-6	Mercury	0.20	U		AV
7440-02-0	Nickel	4.4	U		P
7440-09-7	Potassium	58.8	U		P
7782-49-2	Selenium	2.8	U		P
7440-22-4	Silver	2.7	B		P
7440-23-5	Sodium	131	B		P
7440-28-0	Thallium	3.7	U		P
7440-62-2	Vanadium	2.4	U		P
7440-66-6	Zinc	11.0	B		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

004

9613503.0205

TMA

Thermo Analytical Inc.
Skinner & Sherman Laboratories Inc.

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Report for

TMA/Norcal

WORK ORDER #S402098

Scientific Services Since 1922

TMA
Thermo Analytical Inc.
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1-800-4 LAB TEST FAX (617) 890-3883

MS
8/6/96

9613503.0206

 *** T M A *** REPORT Work Order # S4-02-098

Received: 02/09/94 Results by Sample

SAMPLE ID B09W5 SAMPLE # 01 FRACTIONS: A
Date & Time Collected 02/05/94 08:55:00 Category WATER

NO3NO2 8.39
mg N/L

SAMPLE ID B09W7 SAMPLE # 02 FRACTIONS: A
Date & Time Collected 02/05/94 08:21:00 Category WATER

NO3NO2 1.75
mg N/L

SAMPLE ID B09W9 SAMPLE # 03 FRACTIONS: A
Date & Time Collected 02/05/94 07:47:00 Category WATER

NO3NO2 4.53
mg N/L

SAMPLE ID B09X11 SAMPLE # 04 FRACTIONS: A
Date & Time Collected 02/05/94 10:01:00 Category WATER

NO3NO2 4.08
mg N/L

SAMPLE ID B09X15 SAMPLE # 05 FRACTIONS: A
Date & Time Collected 02/05/94 11:20:00 Category WATER

NO3NO2 <0.25
mg N/L

SAMPLE ID B09X17 SAMPLE # 06 FRACTIONS: A
Date & Time Collected 02/05/94 11:40:00 Category WATER

NO3NO2 <0.25
mg N/L

SAMPLE ID B09X17D SAMPLE # 06 FRACTIONS: B
Date & Time Collected 02/05/94 11:40:00 Category WATER

NO3NO2 <0.25
mg N/L

TMA
Thermo Analytical Inc.
Skinner & Sherman Laboratories Inc.

This report is rendered upon all of the following conditions: Skinner & Sherman Laboratories, Inc., retains ownership of this report until associated submitted invoice is 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 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.

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9613503.0207

Received: 02/09/94 Results by Sample

SAMPLE ID B09X17S SAMPLE # 06 FRACTIONS: C

Date & Time Collected 02/05/94 11:40:00 Category WATER

NO3NO2 2.00
mg N/L

SAMPLE ID LCSW SAMPLE # 07 FRACTIONS: A

Date & Time Collected not specified Category WATER

NO3NO2 2.00
mg N/L

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9613503.0208

Received: 02/09/94 03/15/94 09:18:00

TMA/NORCAL Hanford

Q U A L I T Y C O N T R O L

MATRIX SPIKE

Sample ID	Sample Result	Spike Added	Spike Result	% Recovery
S402098-06	<0.25 mg/L	2.00 mg/L	2.00 mg/L	100.0

DUPLICATE

Sample ID	Sample Result	Duplicate Result	Relative % Difference
S402098-06	<0.25 mg/L	<0.25 mg/L	not calculable

QUALITY CONTROL SAMPLES

Sample ID	True Value	Found Value	Percent Recovery
LCS	2.00 mg/L	2.00 mg/L	100.0
Prep blank	--	<0.25 mg/L	--

TMA
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9613503.0209

Received: 02/09/94

Test Methodology

TEST CODE NO3NO2 NAME Nitrate/Nitrite

USEPA Methods for Chemical Analysis of Water and Wastes (EPA-600/4-79-020), Method 353.2 (modified) -- Colorimetric, Automated Cadmium Reduction

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

9613503.0210

TMA
Thermo Analytical Inc.

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

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March 11, 1994

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

Quality Control Narrative

Scope
Six water samples were submitted to TMA/Skinner & Sherman Laboratories, Inc. on February 9, 1994 from TMA/Norcal. The samples were analyzed for the USEPA CLP metals. The analysis was performed under TMA/Skinner and Sherman work order S402096.

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

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

The matrix spike recoveries for aluminum and iron exceeded the control limit requirements.

The laboratory duplicates for aluminum and zinc exceeded the control limit requirements.

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

Respectfully submitted,

TMA/SKINNER & SHERMAN LABORATORIES, INC.

Steven Provencal

Steven R. Provencal
Lead Chemist

MS
8/6/96

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9613503.0211

WESTINGHOUSE/HANFORD

1

SAMPLE NUMBER:

B09WY5

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: SKINER Case No.: N4-02-023SAS No.: SDG No.: B09WY5

Matrix (soil/water): WATER Lab Sample ID: 02096-01S

Level (low/med): LOW Date Received: 02/09/94

% 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	49.1	B	N*	P
7440-36-0	Antimony	12.2	U		P
7440-38-2	Arsenic	3.0	U		P
7440-39-3	Barium	59.6	B		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	1.7	U		P
7440-70-2	Calcium	68000			P
7440-47-3	Chromium	110			P
7440-48-4	Cobalt	2.9	U		P
7440-50-8	Copper	7.7	B		P
7439-89-6	Iron	211		N	P
7439-92-1	Lead	2.4	B		P
7439-95-4	Magnesium	12900			P
7439-96-5	Manganese	5.9	B		P
7439-97-6	Mercury	0.20	U		AV
7440-02-0	Nickel	17.6	B		P
7440-09-7	Potassium	7180			P
7782-49-2	Selenium	2.8	U		P
7440-22-4	Silver	2.1	U		P
7440-23-5	Sodium	16400			P
7440-28-0	Thallium	3.7	U		P
7440-62-2	Vanadium	8.8	B		P
7440-66-6	Zinc	47.0		*	P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLOUDY Texture:

Color After: COLORLESS Clarity After: CLOUDY Artifacts:

Comments:

002

9613503.0212

WESTINGHOUSE/HANFORD

1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

809WY7

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

Lab Code: SKINER Case No.: N4-02-023SAS No.: SDG No.: 809WY5

Matrix (soil/water): WATER Lab Sample ID: 02096-02S

Level (low/med): LOW Date Received: 02/09/94

% 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	15.0	U	N*	P
7440-36-0	Antimony	12.2	U		P
7440-38-2	Arsenic	3.6	B		P
7440-39-3	Barium	17.0	B		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	1.7	U		P
7440-70-2	Calcium	40800			P
7440-47-3	Chromium	4.7	B		P
7440-48-4	Cobalt	2.9	U		P
7440-50-8	Copper	2.0	B		P
7439-89-6	Iron	21.0	B	N	P
7439-92-1	Lead	1.8	U		P
7439-95-4	Magnesium	4820	B		P
7439-96-5	Manganese	0.80	U		P
7439-97-6	Mercury	0.20	U		AV
7440-02-0	Nickel	8.1	B		P
7440-09-7	Potassium	2330	B		P
7782-49-2	Selenium	2.8	U		P
7440-22-4	Silver	2.1	U		P
7440-23-5	Sodium	4470	B		P
7440-28-0	Thallium	3.7	U		P
7440-62-2	Vanadium	3.5	B		P
7440-66-6	Zinc	6.1	B	*	P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

003

WESTINGHOUSE/HANFORD

1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

809WY9

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

Lab Code: SKINER Case No.: N4-02-023SAS No.. SDG No.: B09WYS

Matrix (soil/water): WATER Lab Sample ID: 02096-03S

Level (low/med): LOW Date Received: 02/09/94

% 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	15.0	U	N*	P
7440-36-0	Antimony	12.2	U		P
7440-38-2	Arsenic	4.6	B		P
7440-39-3	Barium	29.7	B		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	1.7	U		P
7440-70-2	Calcium	48500			P
7440-47-3	Chromium	29.0			P
7440-48-4	Cobalt	2.9	U		P
7440-50-8	Copper	1.6	U		P
7439-89-6	Iron	56.1	B	N	P
7439-92-1	Lead	1.8	U		P
7439-95-4	Magnesium	10200			P
7439-96-5	Manganese	1.2	B		P
7439-97-6	Mercury	0.20	U		AV
7440-02-0	Nickel	9.0	B		P
7440-09-7	Potassium	5030			P
7782-49-2	Selenium	2.8	U		P
7440-22-4	Silver	2.1	U		P
7440-23-5	Sodium	18400			P
7440-28-0	Thallium	3.7	U		P
7440-62-2	Vanadium	6.0	B		P
7440-66-6	Zinc	7.0	B	*	P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

004

9613503.0214

WESTINGHOUSE/HANFORD

1

SAMPLE NUMBER:

809X11

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: SKINER Case No.: N4-02-023SAS No.: SDG No.: 809WY5

Matrix (soil/water): WATER Lab Sample ID: 02096-04S

Level (low/med): LOW Date Received: 02/09/94

% 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	15.0	U	N*	P
7440-36-0	Antimony	12.2	U		P
7440-38-2	Arsenic	3.0	U		P
7440-39-3	Barium	83.4	B		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	1.7	U		P
7440-70-2	Calcium	53000			P
7440-47-3	Chromium	58.0			P
7440-48-4	Cobalt	2.9	U		P
7440-50-8	Copper	1.6	U		P
7439-89-6	Iron	79.9	B	N	P
7439-92-1	Lead	5.8			P
7439-95-4	Magnesium	11700			P
7439-96-5	Manganese	2.4	B		P
7439-97-6	Mercury	0.20	U		AV
7440-02-0	Nickel	4.4	U		P
7440-09-7	Potassium	3670	B		P
7782-49-2	Selenium	3.9	B		P
7440-22-4	Silver	2.1	U		P
7440-23-5	Sodium	11900			P
7440-28-0	Thallium	3.7	U		P
7440-62-2	Vanadium	3.7	B		P
7440-66-6	Zinc	15.0	B	*	P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

005

9613503.0215

WESTINGHOUSE/HANFORD

1

SAMPLE NUMBER:

B09X15

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: SKINER Case No.: N4-02-023SAS No.: SDG No.: B09WY5

Matrix (soil/water): WATER Lab Sample ID: 02096-05S

Level (low/med): LOW Date Received: 02/09/94

% 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	15.0	U	N*	P
7440-36-0	Antimony	12.2	U		P
7440-38-2	Arsenic	3.0	U		P
7440-39-3	Barium	0.80	U		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	1.7	U		P
7440-70-2	Calcium	83.4	U		P
7440-47-3	Chromium	2.5	U		P
7440-48-4	Cobalt	2.9	U		P
7440-50-8	Copper	1.6	U		P
7439-89-6	Iron	24.9	B	N	P
7439-92-1	Lead	1.8	U		P
7439-95-4	Magnesium	32.2	U		P
7439-96-5	Manganese	1.4	B		P
7439-97-6	Mercury	0.20	U		AV
7440-02-0	Nickel	4.7	B		P
7440-09-7	Potassium	58.8	U		P
7782-49-2	Selenium	2.8	U		P
7440-22-4	Silver	2.1	U		P
7440-23-5	Sodium	60.4	B		P
7440-28-0	Thallium	3.7	U		P
7440-62-2	Vanadium	2.4	U		P
7440-66-6	Zinc	24.9		*	P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

006

9613503.0216

WESTINGHOUSE/HANFORD

1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

809X17

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

Lab Code: SKINER Case No.: N4-02-023SAS No.: SDG No.: 809WY5

Matrix (soil/water): WATER Lab Sample ID: 02096-065

Level (low/med): LOW Date Received: 02/09/94

% 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	306		N*	P
7440-36-0	Antimony	12.2	U		P
7440-38-2	Arsenic	3.0	U		P
7440-39-3	Barium	1.3	B		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	1.7	U		P
7440-70-2	Calcium	363	B		P
7440-47-3	Chromium	2.5	U		P
7440-48-4	Cobalt	2.9	U		P
7440-50-8	Copper	1.6	U		P
7439-89-6	Iron	27.5	B	N	P
7439-92-1	Lead	3.0	B		P
7439-95-4	Magnesium	32.4	B		P
7439-96-5	Manganese	11.6	B		P
7439-97-6	Mercury	0.20	U		AV
7440-02-0	Nickel	4.4	U		P
7440-09-7	Potassium	58.8	U		P
7782-49-2	Selenium	2.8	U		P
7440-22-4	Silver	2.1	U		P
7440-23-5	Sodium	168	B		P
7440-28-0	Thallium	3.7	U		P
7440-62-2	Vanadium	2.4	U		P
7440-66-6	Zinc	24.0		*	P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

007

9613503.0217

TMA
Thermo Analytical Inc.

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

RECORD COPY

MAR 1994
RECEIVED
SDLA

March 11, 1994

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

Quality Control Narrative

Scope
Six water samples were submitted to TMA/Skinner & Sherman Laboratories, Inc. on February 9, 1994 from TMA/Norcal. The samples were analyzed for the USEPA CLP metals. The analysis was performed under TMA/Skinner and Sherman work order S402097.

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

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

The matrix spike recovery for iron exceeded the control limit requirement.

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

Respectfully submitted,

TMA/SKINNER & SHERMAN LABORATORIES, INC.

Steven Provencal

Steven R. Provencal
Lead Chemist

MS
8/6/96

WESTINGHOUSE/HANFORD
1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B09WY6

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

Lab Code: SKINER Case No.: N4-02-023SAS No.: SDG No.: B09WY6

Matrix (soil/water): WATER Lab Sample ID: 02097-01S

Level (low/med): LOW Date Received: 02/09/94

% 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	15.0	U		P
7440-36-0	Antimony	13.5	B		P
7440-38-2	Arsenic	3.1	B		P
7440-39-3	Barium	58.9	B		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	1.7	U		P
7440-70-2	Calcium	72600			P
7440-47-3	Chromium	90.2			P
7440-48-4	Cobalt	2.9	U		P
7440-50-8	Copper	4.1	B		P
7439-89-6	Iron	13.8	B	N	P
7439-92-1	Lead	1.8	U		P
7439-95-4	Magnesium	13700			P
7439-96-5	Manganese	2.4	B		P
7439-97-6	Mercury	0.20	U		AV
7440-02-0	Nickel	7.6	B		P
7440-09-7	Potassium	6740			P
7782-49-2	Selenium	2.8	U		P
7440-22-4	Silver	2.1	U		P
7440-23-5	Sodium	17300			P
7440-28-0	Thallium	3.7	U		P
7440-62-2	Vanadium	5.8	B		P
7440-66-6	Zinc	30.1			P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

002

Comments:

9613503.0219

WESTINGHOUSE/HANFORD

1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B09WY8

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

Lab Code: SKINER Case No.: N4-02-023SAS No.: SDG No.: B09WY6

Matrix (soil/water): WATER Lab Sample ID: 02097-02S

Level (low/med): LOW Date Received: 02/09/94

% 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	15.0	U		P
7440-36-0	Antimony	12.2	U		P
7440-38-2	Arsenic	3.0	U		P
7440-39-3	Barium	15.9	B		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	1.7	U		P
7440-70-2	Calcium	38800			P
7440-47-3	Chromium	2.6	B		P
7440-48-4	Cobalt	2.9	U		P
7440-50-8	Copper	1.6	U		P
7439-89-6	Iron	13.4	U	N	P
7439-92-1	Lead	1.8	U		P
7439-95-4	Magnesium	4670	B		P
7439-96-5	Manganese	0.80	U		P
7439-97-6	Mercury	0.20	U		AV
7440-02-0	Nickel	4.4	U		P
7440-09-7	Potassium	2220	B		P
7782-49-2	Selenium	2.8	U		P
7440-22-4	Silver	2.1	U		P
7440-23-5	Sodium	4400	B		P
7440-28-0	Thallium	3.7	U		P
7440-62-2	Vanadium	4.5	B		P
7440-66-6	Zinc	10.8	B		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

003

9613503.0220

WESTINGHOUSE/HANFORD

1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B09WZ0

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

Lab Code: SKINER Case No.: N4-02-023SAS No.: SDG No.: B09WY6

Matrix (soil/water): WATER Lab Sample ID: 02097-03S

Level (low/med): LOW Date Received: 02/09/94

% 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	15.0	U		P
7440-36-0	Antimony	12.9	B		P
7440-38-2	Arsenic	4.5	B		P
7440-39-3	Barium	29.9	B		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	1.7	U		P
7440-70-2	Calcium	48300			P
7440-47-3	Chromium	25.8			P
7440-48-4	Cobalt	2.9	U		P
7440-50-8	Copper	1.6	U		P
7439-89-6	Iron	13.4	U	N	P
7439-92-1	Lead	1.8	U		P
7439-95-4	Magnesium	10000			P
7439-96-5	Manganese	0.80	U		P
7439-97-6	Mercury	0.20	U		AV
7440-02-0	Nickel	4.4	U		P
7440-09-7	Potassium	4980	B		P
7782-49-2	Selenium	2.8	U		P
7440-22-4	Silver	2.4	B		P
7440-23-5	Sodium	18200			P
7440-28-0	Thallium	3.7	U		P
7440-62-2	Vanadium	7.5	B		P
7440-66-6	Zinc	12.7	B		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

004

9613503.0221

WESTINGHOUSE/HANFORD

1

SAMPLE NUMBER:

B09X12

INORGANIC ANALYSIS DATA SHEET

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-02-0039

Lab Code: SKINER Case No.: N4-02-023SAS No.: SDG No.: B09WY6

Matrix (soil/water): WATER Lab Sample ID: 02097-04S

Level (low/med): LOW Date Received: 02/09/94

% 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	15.0	U		P
7440-36-0	Antimony	12.2	U		P
7440-38-2	Arsenic	3.0	U		P
7440-39-3	Barium	83.2	B		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	1.7	U		P
7440-70-2	Calcium	53500			P
7440-47-3	Chromium	56.4			P
7440-48-4	Cobalt	2.9	U		P
7440-50-8	Copper	1.6	U		P
7439-89-6	Iron	13.4	U	N	P
7439-92-1	Lead	1.8	U		P
7439-95-4	Magnesium	11700			P
7439-96-5	Manganese	1.2	B		P
7439-97-6	Mercury	0.20	U		AV
7440-02-0	Nickel	4.4	U		P
7440-09-7	Potassium	3780	B		P
7782-49-2	Selenium	3.5	B		P
7440-22-4	Silver	2.1	U		P
7440-23-5	Sodium	11900			P
7440-28-0	Thallium	3.7	U		P
7440-62-2	Vanadium	4.7	B		P
7440-66-6	Zinc	17.0	B		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

005

9613503.0222

WESTINGHOUSE/HANFORD

1

SAMPLE NUMBER:

809X16

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: SKINER Case No.: N4-02-023SAS No.: SDG No.: 809WY6

Matrix (soil/water): WATER Lab Sample ID: 02097-05S

Level (low/med): LOW Date Received: 02/09/94

% 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	15.0	U		P
7440-36-0	Antimony	12.2	U		P
7440-38-2	Arsenic	3.0	U		P
7440-39-3	Barium	0.80	U		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	1.7	U		P
7440-70-2	Calcium	92.4	B		P
7440-47-3	Chromium	2.5	U		P
7440-48-4	Cobalt	2.9	U		P
7440-50-8	Copper	1.6	U		P
7439-89-6	Iron	13.4	U	N	P
7439-92-1	Lead	2.7	B		P
7439-95-4	Magnesium	32.2	U		P
7439-96-5	Manganese	4.3	B		P
7439-97-6	Mercury	0.20	U		AV
7440-02-0	Nickel	4.4	U		P
7440-09-7	Potassium	58.8	U		P
7782-49-2	Selenium	2.8	U		P
7440-22-4	Silver	2.1	U		P
7440-23-5	Sodium	148	B		P
7440-28-0	Thallium	3.7	U		P
7440-62-2	Vanadium	2.4	U		P
7440-66-6	Zinc	17.0	B		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

006

9613503.0223

WESTINGHOUSE/HANFORD

1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B09X18

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

Lab Code: SKINER Case No.: N4-02-023SAS No.: SDG No.: B09WY6

Matrix (soil/water): WATER Lab Sample ID: 02097-06S

Level (low/med): LOW Date Received: 02/09/94

% 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	15.0	U		P
7440-36-0	Antimony	12.2	U		P
7440-38-2	Arsenic	3.0	U		P
7440-39-3	Barium	0.80	U		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	1.7	U		P
7440-70-2	Calcium	83.4	U		P
7440-47-3	Chromium	2.5	U		P
7440-48-4	Cobalt	2.9	U		P
7440-50-8	Copper	1.6	U		P
7439-89-6	Iron	13.4	U	N	P
7439-92-1	Lead	1.8	U		P
7439-95-4	Magnesium	32.2	U		P
7439-96-5	Manganese	2.1	B		P
7439-97-6	Mercury	0.20	U		AV
7440-02-0	Nickel	4.4	U		P
7440-09-7	Potassium	130	B		P
7782-49-2	Selenium	2.8	U		P
7440-22-4	Silver	2.1	U		P
7440-23-5	Sodium	84.6	B		P
7440-28-0	Thallium	3.7	U		P
7440-62-2	Vanadium	2.4	U		P
7440-66-6	Zinc	17.4	B		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

007

9613503.0224

TMA
Thermo Analytical Inc.

TMA/Norcal
2030 Wright Avenue
P. O. Box 4040
Richmond, CA 94804-0040
(510) 235-2633 Fax No. (510) 235-0438

MAR 1994
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SDLA

March 11, 1994

Ref: TMA/Norcal N4-02-013-7325

Ms. Briana Colley
Westinghouse Hanford Company
345 Hills Street
Richland, WA 99352

RECORD COPY

Dear Ms. Colley:

Enclosed is the data report for nine water samples received February 4, 1994 and February 8, 1994 from location 100-HR-3. Results are given for gross alpha, gross beta, tritium, and strontium-90 analyses.

The data package is paginated 1 through 198.

Please call if you have any questions concerning this data.

Sincerely,

Julie D. Wose
Manager, Nuclear Programs
TMA/Norcal

JDW/ss

Enclosure: Data Package

9613503.0225

N402013-01

TMA NORCAL
REPORTING GROUP 7325

DATA SHEET

B09WY3

SDG 7325
Contact Dinkar Kharkar
Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N402013-01
Dept sample id 7325-001
Received 02/04/94
Client sample id B09WY3
Location/Matrix 100-HR-3 LIQUID
Collected 02/01/94
Chain of custody id EFL-1111

ANALYTE	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	Alpha	1.4	1.2	1	3	J	80A
Gross Beta	Beta	9.1	1.6	2	4		80B
Tritium	10028-17-8	590	150	200	400		H
Strontium 90	10098-97-2	3.2	0.44	0.6	2		Y

Lab id TMAN
Protocol WHC-HASM
Version Ver 1.0
Form DVD-DS
Version 2.28
Report date 03/11/94

9613503.0226

N402013-04

TMA NORCAL
REPORTING GROUP 7325

DATA SHEET

B09WY5

SDG 7325
Contact Dinkar Kharkar
Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N402013-04
Dept sample id 7325-004
Received 02/08/94
Client sample id B09WY5
Location/Matrix 100-HR-3 LIQUID
Collected 02/05/94
Chain of custody id EFL-1111

ANALYTE	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	Alpha	2.8	1.7	1	3	J	80A
Gross Beta	Beta	8.7	1.6	2	4		80B
Tritium	10028-17-8	3500	260	200	400		H
Strontium 90	10098-97-2	0.061	0.17	0.6	2	U	Y

Lab id TMAN
Protocol WHC-HASM
Version Ver 1.0
Form DVD-DS
Version 2.28
Report date 03/11/94

9613503.0227

N402013-05

TMA NORCAL
REPORTING GROUP 7325

DATA SHEET

B09WY7

SDG 7325
Contact Dinkar Kharkar
Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N402013-05
Dept sample id 7325-005
Received 02/08/94
Client sample id B09WY7
Location/Matrix 100-HR-3 LIQUID
Collected 02/05/94
Chain of custody id EFL-1111

ANALYTE	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	Alpha	0.50	0.95	1	3	U	80A
Gross Beta	Beta	26	2.3	2	4		80B
Tritium	10028-17-8	660	160	200	400		H
Strontium 90	10098-97-2	12	0.72	0.6	2		Y

Lab id TMAN
Protocol WHC-HASM
Version Ver 1.0
Form DVD-DS
Version 2.28
Report date 03/11/94

9613503.0228

N402013-06

TMA NORCAL
REPORTING GROUP 7325

DATA SHEET

B09WY9

SDG	7325	Client	Westinghouse Hanford
Contact	Dinkar Kharkar	Contract	MBH-SVV-069262
Lab sample id	N402013-06	Client sample id	B09WY9
Dept sample id	7325-006	Location/Matrix	100-HR-3 LIQUID
Received	02/08/94	Collected	02/05/94
		Chain of custody id	EFL-1111

ANALYTE	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	Alpha	3.7	1.8	2	3		80A
Gross Beta	Beta	12	1.8	2	4		80B
Tritium	10028-17-8	6000	320	200	400		H
Strontium 90	10098-97-2	1.7	0.79	0.7	2	J	Y

Lab id	TMAN
Protocol	WHC-HASM
Version	Ver 1.0
Form	DVD-DS
Version	2.28
Report date	03/11/94

N402013-02

TMA NORCAL
REPORTING GROUP 7325

DATA SHEET

B09X09

SDG	7325	Client	Westinghouse Hanford
Contact	Dinkar Kharkar	Contract	MBH-SVV-069262
Lab sample id	N402013-02	Client sample id	B09X09
Dept sample id	7325-002	Location/Matrix	100-HR-3 LIQUID
Received	02/04/94	Collected	02/01/94
		Chain of custody id	EFL-1111

ANALYTE	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	Alpha	2.3	1.3	1	3	J	80A
Gross Beta	Beta	3.5	1.5	2	4	J	80B
Tritium	10028-17-8	8700	380	200	400		H
Strontium 90	10098-97-2	-0.19	0.24	0.6	2	U	Y

Lab id	TMAN
Protocol	WHC-HASM
Version	Ver 1.0
Form	DVD-DS
Version	2.28
Report date	03/11/94

9613503.0230

N402013-07

TMA NORCAL
REPORTING GROUP 7325

DATA SHEET

B09X11

SDG 7325
Contact Dinkar Kharkar
Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N402013-07
Dept sample id 7325-007
Received 02/08/94
Client sample id B09X11
Location/Matrix 100-HR-3 LIQUID
Collected 02/05/94
Chain of custody id EFL-1111

ANALYTE	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	Alpha	0.36	1.1	2	3	U	80A
Gross Beta	Beta	3.8	1.5	2	4	J	80B
Tritium	10028-17-8	7200	350	200	400		H
Strontium 90	10098-97-2	-0.21	1.8	0.6	2	U	Y

Lab id TMAN
Protocol WHC-HASM
Version Ver 1.0
Form DVD-DS
Version 2.28
Report date 03/11/94

N402013-03

TMA NORCAL
REPORTING GROUP 7325

DATA SHEET

B09X13

SDG 7325
Contact Dinkar Kharkar
Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N402013-03
Dept sample id 7325-003
Received 02/04/94
Client sample id B09X13
Location/Matrix 100-HR-3 LIQUID
Collected 02/02/94
Chain of custody id EFL-1111

ANALYTE	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	Alpha	0.27	0.96	1	3	U	80A
Gross Beta	Beta	0.61	1.1	2	4	U	80B
Tritium	10028-17-8	45	130	200	400	U	H
Strontium 90	10098-97-2	0.003	0.17	0.5	2	U	Y

Lab id TMAN
Protocol WHC-HASM
Version Ver 1.0
Form DVD-DS
Version 2.28
Report date 03/11/94

9613503.0232

N402013-08

TMA NORCAL
REPORTING GROUP 7325

DATA SHEET

B09X15

SDG 7325
Contact Dinkar Kharkar
Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N402013-08
Dept sample id 7325-008
Received 02/08/94
Client sample id B09X15
Location/Matrix 100-HR-3 LIQUID
Collected 02/05/94
Chain of custody id EFL-1111

ANALYTE	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	Alpha	0.20	0.90	1	3	U	80A
Gross Beta	Beta	-0.90	1.1	2	4	U	80B
Tritium	10028-17-8	-22	120	200	400	U	H
Strontium 90	10098-97-2	-0.099	1.8	0.6	2	U	Y

Lab id TMAN
Protocol WHC-HASM
Version Ver 1.0
Form DVD-DS
Version 2.28
Report date 03/11/94

9613503.0233

N402013-09

TMA NORCAL
REPORTING GROUP 7325

DATA SHEET

B09X17

SDG 7325
Contact Dinkar Kharkar
Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N402013-09
Dept sample id 7325-009
Received 02/08/94
Client sample id B09X17
Location/Matrix 100-HR-3 LIQUID
Collected 02/05/94
Chain of custody id EFL-1111

ANALYTE	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	Alpha	-0.60	0.76	2	3	U	80A
Gross Beta	Beta	-0.20	1.1	2	4	U	80B
Tritium	10028-17-8	37	120	200	400	U	H
Strontium 90	10098-97-2	0.026	1.5	0.7	2	U	Y

Lab id TMAN
Protocol WHC-HASM
Version Ver 1.0
Form DVD-DS
Version 2.28
Report date 03/11/94

9613503.0234

Westinghouse Hanford Company	CHAIN OF CUSTODY

Custody Form Initiator K.F. Donnelson

Company Contact PH BUTCHER

Telephone (509) 376-5045

Project Designation/Sampling Locations 100-HR-3

Collection Date 2-1-94

Ice Chest No. 6WS023

Field Logbook No. EFL-1111 pg 43

Bill of Lading/Airbill No. 2519008712

Offsite Property No. W94-0-0190-35

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks NONE DETECTED

Sample Identification

B09WY3

✓1; 1L; G; WATER; METALS (HNO3 to pH<2) UNFILTERED
✓1; 500mL; G; WATER; ANIONS-F, Cl, SO4, PO4, NO2, NO3
✓1; 500mL; P; WATER; NO2, NO3 (H2SO4 to pH<2)
✓1; 500mL; P; WATER; SULFIDE (ZnAc+NaOH pH>9)
✓1; 250mL; P; WATER; AMMONIA (H2SO4 to pH<2)
✓1; 4L; P; WATER; GROSS ALPHA/BETA, Sr-90 (HNO3 to pH<2)
✓1; 250mL; Gs; WATER; TRITIUM

B09WY4

✓1; 1L; G; WATER; METALS (HNO3 to pH<2) FILTERED

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

Relinquished By	Date	Time	Received By	Date	Time
K.F. Donnelson	2-2-94	0720	AJ Simpson AJ SIMPSON	2/2/94	0720
AJ Simpson AJ SIMPSON	2/2/94	0834	Kermit Blum K. Blum	2-4-94	1200

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments: Fridge 3C 2-1-94 KD 1225

A-6000-407 (12/92) WEF061

9613503.0235

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector K. D. Lee Date Sampled 2-1-94 Time 1030 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B09WY3	1; 1L; G	WATER	METALS (HNO3 to pH<2) UNFILTERED
	1; 500mL; G	WATER	ANIONS-F, Cl, SO4, PO4, NO2, NO3
	1; 500mL; P	WATER	NO2, NO3 (H2SO4 to pH<2)
	1; 500mL; P	WATER	SULFIDE (ZnAc+NaOH pH>9)
	1; 250mL; P	WATER	AMMONIA (H2SO4 to pH<2)
	1; 4L; P	WATER	GROSS ALPHA/BETA, Sr-90 (HNO3 to pH<2)
	1; 250mL; Gs	WATER	TRITIUM
B09WY4	1; 1L; P	WATER	METALS (HNO3 to pH<2) FILTERED
			OPC: W94-0-0190-35
			BOL: 2519008712
			SAF: 94-029

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

Received by _____ Title _____ Date _____

Analysis Required _____ 00 51

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

**Use back of page for additional information, including [illegible]

9613503.0236

Westinghouse Hanford Company

CHAIN OF CUSTODY

Custody Form Initiator K. F. Donnelson

Company Contact PH BUTCHER

Telephone (509) 376-5045

Project Designation/Sampling Locations 100-HR-3

Collection Date 2-1-94

Ice Chest No. GWS023

Field Logbook No. EFL-1111 pg 43

Bill of Lading/Airbill No. 2519008712

Offsite Property No. W94-0-0190-35

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks NONE DETECTED

Sample Identification

B09X09

- ✓1; 1L; G; WATER; METALS (HNO3 to pH<2) UNFILTERED
- ✓1; 500mL; G; WATER; ANIONS-F, Cl, SO4, PO4, NO2, NO3
- ✓1; 500mL; P; WATER; NO2, NO3 (H2SO4 to pH<2)
- ✓1; 500mL; P; WATER; SULFIDE (ZnAc+NaOH pH>9)
- ✓1; 250mL; P; WATER; AMMONIA (H2SO4 to pH<2)
- ✓1; 4L; P; WATER; GROSS ALPHA/BETA, Sr-90 (HNO3 to pH<2)
- ✓1; 250mL; Gs; WATER; TRITIUM

B09X19

- ✓1; 1L; G; WATER; METALS (HNO3 to pH<2) FILTERED

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

Relinquished By	Date	Time	Received By	Date	Time
K. F. Donnelson	2-2-94	0720	AJ Simpson AJ SIMPSON	2/2/94	0720
AJ Simpson AJ SIMPSON	2/2/94	0834	Kermit Blum K. Blum	2-4-94	1200

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments: Fridge 3c 2-1-94 1225 KD

A-6000-407 (12/92) WEF061

9613503.0237

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector K. D. Lee Date Sampled 2-1-94 Time 0938 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B09X09	1; 1L; G	WATER	METALS (HNO3 to pH<2) UNFILTERED
	1; 500mL; G	WATER	ANIONS-F, Cl, SO4, PO4, NO2, NO3
	1; 500mL; P	WATER	NO2, NO3 (H2SO4 to pH<2)
	1; 500mL; P	WATER	SULFIDE (ZnAc+NaOH pH>9)
	1; 250mL; P	WATER	AMMONIA (H2SO4 to pH<2)
	1; 4L; P	WATER	GROSS ALPHA/BETA, Sr-90 (HNO3 to pH<2)
	1; 250mL; Gs	WATER	TRITIUM
B09X10	1; 1L; P	WATER	METALS (HNO3 to pH<2) FILTERED
			OPC: W94-0-0190-35
			BOL: 2519008712
			SAF: 94-029

Field Information**

Special Handling and/or Storage

Possible Sample Hazards

PART II: LABORATORY SECTION

Received by _____ Title _____ Date _____

Analysis Required 00 53

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

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

9613503.0238

Westinghouse Hanford Company	CHAIN OF CUSTODY

Custody Form Initiator K.D. Lee

Company Contact PH BUTCHER

Telephone (509) 376-5045

Project Designation/Sampling Locations 100-HR-3

Collection Date 02/02/94

Ice Chest No. SMC91

Field Logbook No. EFL-1111

Bill of Lading/Airbill No. 2536954411T

Offsite Property No. W94-0-0190-37

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks NONE DETECTED

Sample Identification

B09X13

1; 1L; G; WATER; METALS (HNO3 to pH<2) UNFILTERED
1; 500mL; G; WATER; ANIONS-F, Cl, SO4, PO4, NO2, NO3
1; 500mL; P; WATER; NO2, NO3 (H2SO4 to pH<2)
1; 500mL; P; WATER; SULFIDE (ZnAc+NaOH pH>9)
1; 250mL; P; WATER; AMMONIA (H2SO4 to pH<2)
1; 4L; P; WATER; GROSS ALPHA/BETA, Sr-90 (HNO3 to pH<2)
1; 250mL; Gs; WATER; TRITIUM

B09X14

1; 1L; G; WATER; METALS (HNO3 to pH<2) FILTERED

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

Relinquished By	Date	Time	Received By	Date	Time
K.D. Lee K.D. Lee	02/03/94	0710	AJSIMPSON	2/3/94	0710
AJSimpson	02/03/94	0930	[illegible]	2-4-94	1:00

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments: Samples stored in frig. #3B by K.D. Lee 02/02/94

A-6000-407 (12/92) WEF061

9613503.0239

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector K. D. Lee Date Sampled 02/02/94 Time 0900 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B09X13	1; 1L; G	WATER	METALS (HNO3 to pH<2) UNFILTERED
	1; 500mL; G	WATER	ANIONS-F, Cl, SO4, PO4, NO2, NO3
	1; 500mL; P	WATER	NO2, NO3 (H2SO4 to pH<2)
	1; 500mL; P	WATER	SULFIDE (ZnAc+NaOH pH>9)
	1; 250mL; P	WATER	AMMONIA (H2SO4 to pH<2)
	1; 4L; P	WATER	GROSS ALPHA/BETA, Sr-90 (HNO3 to pH<2)
	1; 250mL; Gs	WATER	TRITIUM
B09X14	1; 1L; P	WATER	METALS (HNO3 to pH<2) FILTERED
			OPC: W94-0-070-37
			BOL: 253645441T
			SAF: 94-029

Field Information**

Special Handling and/or Storage

Possible Sample Hazards

PART II: LABORATORY SECTION

Received by Title Date

Analysis Required

00 55

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

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

9613503.0240

Westinghouse Hanford Company	CHAIN OF CUSTODY

Custody Form Initiator K.F. Donnelson

Company Contact PH BUTCHER

Telephone (509) 376-5045

Project Designation/Sampling Locations 100-HR-3

Collection Date 2-5-94

Ice Chest No. G&08180

Field Logbook No. EFL-0057

Bill of Lading/Airbill No. 2536954530

Offsite Property No. W94-0-0190-40

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks NONE DETECTED

Sample Identification

B09WY5

✓1; 1L; G; WATER; METALS (HNO3 to pH<2) UNFILTERED
✓1; 500mL; G; WATER; ANIONS-F, Cl, SO4, PO4, NO2, NO3
✓1; 500mL; P; WATER; NO2, NO3 (H2SO4 to pH<2)
✓1; 500mL; P; WATER; SULFIDE (ZnAc+NaOH pH>9)
✓1; 250mL; P; WATER; AMMONIA (H2SO4 to pH<2)
✓1; 4L; P; WATER; GROSS ALPHA/BETA, Sr-90 (HNO3 to pH<2)
✓1; 250mL; Gs; WATER; TRITIUM

B09WY6

✓1; 1L; G; WATER; METALS (HNO3 to pH<2) FILTERED

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

Relinquished By	Date	Time	Received By	Date	Time
K.F. Donnelson	2-7-94	0700	L Sweeney / L Sweeney	2-7-94	0700
L Sweeney / L Sweeney	2-7-94	0715	Kermit Blum K. Blum	2-8-94	1440

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments: Fridge #2C 2-5-94 1105 KD

A-6000-407 (12/92) WEF061

9613503.0241

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector: K. D. Lee Date Sampled: 2-5-94 Time: 0855 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B09WY5	1; 1L; G	WATER	METALS (HNO3 to pH<2) UNFILTERED
	1; 500mL; G	WATER	ANIONS-F, Cl, SO4, PO4, NO2, NO3
	1; 500mL; P	WATER	NO2, NO3 (H2SO4 to pH<2)
	1; 500mL; P	WATER	SULFIDE (ZnAc+NaOH pH>9)
	1; 250mL; P	WATER	AMMONIA (H2SO4 to pH<2)
	1; 4L; P	WATER	GROSS ALPHA/BETA, Sr-90 (HNO3 to pH<2)
	1; 250mL; Gs	WATER	TRITIUM
B09WY6	1; 1L; P	WATER	METALS (HNO3 to pH<2) FILTERED
			OPC: W94-0-0190-40
			BOL: 2536954580
			SAF: 94-029

Field Information**

Special Handling and/or Storage

Possible Sample Hazards

PART II: LABORATORY SECTION

Received by Title Date

Analysis Required

57

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

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

A-6000-406(05/90)

9613503.0242

Westinghouse Hanford Company

CHAIN OF CUSTODY

Custody Form Initiator: K.F. Donnelson

Company Contact: PH BUTCHER

Telephone: (509) 376-5045

Project Designation/Sampling Locations: 100-HR-3

Collection Date: 2-5-94

Ice Chest No. GW5130

Field Logbook No. EFL-0057

Bill of Lading/Airbill No.

Offsite Property No. W94-0-0190-40

Method of Shipment: EMERY

Shipped to: TMA

Possible Sample Hazards/Remarks: NONE DETECTED

Sample Identification

B09WY7

- ✓1; 1L; G; WATER; METALS (HNO3 to pH<2) UNFILTERED
- ✓1; 500mL; G; WATER; ANIONS-F, Cl, SO4, PO4, NO2, NO3
- ✓1; 500mL; P; WATER; NO2, NO3 (H2SO4 to pH<2)
- ✓1; 500mL; P; WATER; SULFIDE (ZnAc+NaOH pH>9)
- ✓1; 250mL; P; WATER; AMMONIA (H2SO4 to pH<2)
- ✓1; 4L; P; WATER; GROSS ALPHA/BETA, Sr-90 (HNO3 to pH<2)
- ✓1; 250mL; Gs; WATER; TRITIUM

B09WY8

- ✓1; 1L; G; WATER; METALS (HNO3 to pH<2) FILTERED

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

Relinquished By	Date	Time	Received By	Date	Time
K.F. Donnelson	2-7-94	0700	L Sweeney L Sweeney	2-7-94	0700
L Sweeney L Sweeney	2-7-94	0715	Kermit Blum K. Blum	2-8-94	1440

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments: Fridge #2c 2-5-94 KD 1105

A-6000-407 (12/92) WEF061

9613503.0243

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector K. O. Lee Date Sampled 2-5-94 Time 0821 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B09WY7	1; 1L; G	WATER	METALS (HNO3 to pH<2) UNFILTERED
	1; 500mL; G	WATER	ANIONS-F, Cl, SO4, PO4, NO2, NO3
	1; 500mL; P	WATER	NO2, NO3 (H2SO4 to pH<2)
	1; 500mL; P	WATER	SULFIDE (ZnAc+NaOH pH>9)
	1; 250mL; P	WATER	AMMONIA (H2SO4 to pH<2)
	1; 4L; P	WATER	GROSS ALPHA/BETA, Sr-90 (HNO3 to pH<2)
	1; 250mL; Gs	WATER	TRITIUM
B09WY8	1; 1L; P	WATER	METALS (HNO3 to pH<2) FILTERED
			OPC: W94-0-0190-40
			BOL: 2536954530
			SAF: 94-029

Field Information**

Special Handling and/or Storage

Possible Sample Hazards

PART II: LABORATORY SECTION

Received by Title Date

Analysis Required

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

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

A-6000-406(05/90)

9613503.0244

Westinghouse Hanford Company	CHAIN OF CUSTODY

Custody Form Initiator: K. F. Donnelson

Company Contact: PH BUTCHER

Telephone: (509) 376-5045

Project Designation/Sampling Locations: 100-HR-3

Collection Date: 2-5-94

Ice Chest No.: 87

Field Logbook No.: EFL-0057

Bill of Lading/Airbill No.: 2536954530

Offsite Property No.: W94-0190-40

Method of Shipment: EMERY

Shipped to: TMA

Possible Sample Hazards/Remarks: NONE DETECTED

Sample Identification

B09WY9

✓1; 1L; G; WATER; METALS (HNO3 to pH<2) UNFILTERED
✓1; 500mL; G; WATER; ANIONS-F, Cl, SO4, PO4, NO2, NO3
✓1; 500mL; P; WATER; NO2, NO3 (H2SO4 to pH<2)
✓1; 500mL; P; WATER; SULFIDE (ZnAc+NaOH pH>9)
✓1; 250mL; P; WATER; AMMONIA (H2SO4 to pH<2)
✓1; 4L; P; WATER; GROSS ALPHA/BETA, Sr-90 (HNO3 to pH<2)
✓1; 250mL; Gs; WATER; TRITIUM

B09WZ0

✓1; 1L; G; WATER; METALS (HNO3 to pH<2) FILTERED

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

Relinquished By	Date	Time	Received By	Date	Time
Karl F. Donnelson	2-7-94	0700	AJ Simpson AJ SIMPSON	2/7/94	0700
AJ Simpson AJ SIMPSON	2/7/94	0810	Kermit Blum K. Blum	2-8-94	1440

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments: Fridge #2C KD 2-5-94 1105

00 60

A-6000-407 (12/92) WEF061

9613503.0245

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector K. D. Lee Date Sampled 2-5-94 Time 0747 hours

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

Sample Number	Number and Type of Containers	Type of Sample*	Analysis Requested
B09WY9	1; 1L; G	WATER	METALS (HNO3 to pH<2) UNFILTERED
	1; 500mL; G	WATER	ANIONS-F, Cl, SO4, PO4, NO2, NO3
	1; 500mL; P	WATER	NO2, NO3 (H2SO4 to pH<2)
	1; 500mL; P	WATER	SULFIDE (ZnAc+NaOH pH>9)
	1; 250mL; P	WATER	AMMONIA (H2SO4 to pH<2)
	1; 4L; P	WATER	GROSS ALPHA/BETA, Sr-90 (HNO3 to pH<2)
	1; 250mL; Gs	WATER	TRITIUM
B09WZ0	1; 1L; P	WATER	METALS (HNO3 to pH<2) FILTERED
			OPC: W94-0-0190-40
			BOL: 2536954530
			SAF: 94-029

Field Information**

Special Handling and/or Storage

Possible Sample Hazards

PART II: LABORATORY SECTION

Received by Title Date

Analysis Required

00 61

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

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

A-6000-406(05/90)

9613503.0246

Westinghouse Hanford Company

CHAIN OF CUSTODY

Custody Form Initiator: K. F. Donnelson

Company Contact: PH BUTCHER

Telephone: (509) 376-5045

Project Designation/Sampling Locations: 100-HR-3

Collection Date: 2-5-94

Ice Chest No: GW5130

Field Logbook No. EFL-0057

Bill of Lading/Airbill No. 253495

Offsite Property No. ~~W94-0190-40~~ W94-0-0190-40 2-7-94

Method of Shipment: EMERY

Shipped to: TMA

Possible Sample Hazards/Remarks: NONE DETECTED

Sample Identification

B09X11

- ✓1; 1L; G; WATER; METALS (HNO3 to pH<2) UNFILTERED
- ✓1; 500mL; G; WATER; ANIONS-F, Cl, SO4, PO4, NO2, NO3
- ✓1; 500mL; P; WATER; NO2, NO3 (H2SO4 to pH<2)
- ✓1; 500mL; P; WATER; SULFIDE (ZnAc+NaOH pH>9)
- ✓1; 250mL; P; WATER; AMMONIA (H2SO4 to pH<2)
- ✓1; 4L; P; WATER; GROSS ALPHA/BETA, Sr-90 (HNO3 to pH<2)
- ✓1; 250mL; Gs; WATER; TRITIUM

B09X12

- ✓1; 1L; G; WATER; METALS (HNO3 to pH<2) FILTERED

[ ] Field Transfer of Custody

Chain of Possession (Sign and Print Names)

Relinquished By	Date	Time	Received By	Date	Time
K. F. Donnelson	2-7-94	0700	L Sweeney L Sweeney	2-7-94	0700
L Sweeney L Sweeney	2-7-94	0715	Kermit Blum K. Blum	2-8-94	1440

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments: Fridge #2C 2-5-94 1105 KD

A-6000-407 (12/92) WEF061

9613503.0247

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector K. D. Lee Date Sampled 2-5-94 Time 1001 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B09X11	1; 1L; G	WATER	METALS (HNO3 to pH<2) UNFILTERED
	1; 500mL; G	WATER	ANIONS-F, Cl, SO4, PO4, NO2, NO3
	1; 500mL; P	WATER	NO2, NO3 (H2SO4 to pH<2)
	1; 500mL; P	WATER	SULFIDE (ZnAc+NaOH pH>9)
	1; 250mL; P	WATER	AMMONIA (H2SO4 to pH<2)
	1; 4L; P	WATER	GROSS ALPHA/BETA, Sr-90 (HNO3 to pH<2)
	1; 250mL; Gs	WATER	TRITIUM
B09X12	1; 1L; P	WATER	METALS (HNO3 to pH<2) FILTERED
			OPC: W94-0-0180-40
			BOL: 25369545 30
			SAF: 94-029

Field Information**

Special Handling and/or Storage

Possible Sample Hazards

PART II: LABORATORY SECTION

Received by Title Date

Analysis Required

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

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

A-6000-406(05/90)

9613503.0248

Westinghouse Hanford Company

CHAIN OF CUSTODY

Custody Form Initiator K.F. Donnelson

Company Contact PH BUTCHER

Telephone (509) 376-5045

Project Designation/Sampling Locations 100-HR-3

Collection Date 2-5-94

Ice Chest No. 87

Field Logbook No. EFL-0057

Bill of Lading/Airbill No. 2536954532

Offsite Property No. N94-0-0190-40

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks NONE DETECTED

Sample Identification

B09X15

- ✓1; 1L; G; WATER; METALS (HNO3 to pH<2) UNFILTERED
- ✓1; 500mL; G; WATER; ANIONS-F, Cl, SO4, PO4, NO2, NO3
- ✓1; 500mL; P; WATER; NO2, NO3 (H2SO4 to pH<2)
- ✓1; 500mL; P; WATER; SULFIDE (ZnAc+NaOH pH>9)
- ✓1; 250mL; P; WATER; AMMONIA (H2SO4 to pH<2)
- ✓1; 4L; P; WATER; GROSS ALPHA/BETA, Sr-90 (HNO3 to pH<2)
- ✓1; 250mL; Gs; WATER; TRITIUM

B09X16

- ✓1; 1L; G; WATER; METALS (HNO3 to pH<2) FILTERED

[ ] Field Transfer of Custody

Chain of Possession (Sign and Print Names)

Relinquished By	Date	Time	Received By	Date	Time
K.F. Donnelson	2-7-94	0700	A J Simpson AJ SIMPSON	2/7/94	AJS 2/7/94 ~~0800~~ 0700
A J Simpson AJ SIMPSON	2/7/94	0810	Kermit Blum K. Blum	2-8-94	1440

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments: Fridge #2c KD 1130 2-5-94

A-6000-407 (12/92) WEF061

9613503.0249

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector: K. D. Lee Date Sampled: 2-5-94 Time: 1420 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B09X15	1; 1L; G	WATER	METALS (HNO3 to pH<2) UNFILTERED
	1; 500mL; G	WATER	ANIONS-F, Cl, SO4, PO4, NO2, NO3
	1; 500mL; P	WATER	NO2, NO3 (H2SO4 to pH<2)
	1; 500mL; P	WATER	SULFIDE (ZnAc+NaOH pH>9)
	1; 250mL; P	WATER	AMMONIA (H2SO4 to pH<2)
	1; 4L; P	WATER	GROSS ALPHA/BETA, Sr-90 (HNO3 to pH<2)
	1; 250mL; Gs	WATER	TRITIUM
B09X16	1; 1L; P	WATER	METALS (HNO3 to pH<2) FILTERED
			OPC: W94-0-0190-40
			BOL: 2536954530
			SAF: 94-029

Field Information**

Special Handling and/or Storage

Possible Sample Hazards

PART II: LABORATORY SECTION

Received by Title Date

Analysis Required

AA 65

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

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

A-6000-406(05/90)

9613503.0250

Westinghouse Hanford Company

CHAIN OF CUSTODY

Custody Form Initiator K.F. Donnelson

Company Contact PH BUTCHER

Telephone (509) 376-5045

Project Designation/Sampling Locations 100-HR-3

Collection Date 2-5-94

Ice Chest No. 87

Field Logbook No. EFL-0057

Bill of Lading/Airbill No. 2532954530

Offsite Property No. WCH-0-0190-40

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks NONE DETECTED

Sample Identification

B09X17

- ✓1; 1L; G; WATER; METALS (HNO3 to pH<2) UNFILTERED
- ✓1; 500mL; G; WATER; ANIONS-F, Cl, SO4, PO4, NO2, NO3
- ✓1; 500mL; P; WATER; NO2, NO3 (H2SO4 to pH<2)
- ✓1; 500mL; P; WATER; SULFIDE (ZnAc+NaOH pH>9)
- ✓1; 250mL; P; WATER; AMMONIA (H2SO4 to pH<2)
- ✓1; 4L; P; WATER; GROSS ALPHA/BETA, Sr-90 (HNO3 to pH<2)
- ✓1; 250mL; Gs; WATER; TRITIUM

B09X18

- ✓1; 1L; G; WATER; METALS (HNO3 to pH<2) FILTERED

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

Relinquished By	Date	Time	Received By	Date	Time
Kenl F. Donnelson	2-7-94	0700	A J Simpson AJ SIMPSON	2/7/94	0700
A J Simpson AJ SIMPSON	2/7/94	0810	Kermit Blum K. Blum	2-8-94	1440

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments: Fridge #2C KD 2-5-94 1150

A-6000-407 (12/92) WEF061

9615503.0251

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector K. D. Lee Date Sampled 2-5-94 Time 1140 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B09X17	1; 1L; G	WATER	METALS (HNO3 to pH<2) UNFILTERED
	1; 500mL; G	WATER	ANIONS-F, Cl, SO4, PO4, NO2, NO3
	1; 500mL; P	WATER	NO2, NO3 (H2SO4 to pH<2)
	1; 500mL; P	WATER	SULFIDE (ZnAc+NaOH pH>9)
	1; 250mL; P	WATER	AMMONIA (H2SO4 to pH<2)
	1; 4L; P	WATER	GROSS ALPHA/BETA, Sr-90 (HNO3 to pH<2)
	1; 250mL; Gs	WATER	TRITIUM
B09X19	1; 1L; P	WATER	METALS (HNO3 to pH<2) FILTERED
			OPC: W94-0-0190-40
			BOL: 2536954530
			SAF: 94-029

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

Received by _____ Title _____ Date _____

Analysis Required _____

00 67

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

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

A-6000-406(05/90)

9613503.0252

FORM OF PAYMENT

Check ☐ GBL ☐ FCCOD ☐

Bill to Shipper ☒ Bill to Consignee ☐ Third Party Billing ☐

Shipper's Account Number: 850281585

EMERY WORLDWIDE — A CF Company

SERVICES **

UNITED STATES / CANADA: Same Day (Extra Charges) ☐ AM ☒ PM ☐ Second Day ☐ Saturday Delivery ☐

INTERNATIONAL: Express ☐ Standard Plus ☐ Business Documents ☐ Preferred ☐ Customs Clearance ☐ Standard ☐ Delivery ☐

Date: 02-07-94 | Origin: PSC | Shipment Number: 253695453

From:
WESTINGHOUSE SHIPPING DEPT (509) 376-6665
U.S. DEPARTMENT OF ENERGY C/O
WESTINGHOUSE HANFORD
BLDG 1163
355 STEVENS DRIVE
RICHLAND WA Canada ☐

To:
TMA/NORCAL
TMA/NORCAL
2030 WRIGHT AVENUE
RICHMOND CA USA Canada ☐

Hold for Pick Up ☐

Tariff Dest. | Gateway

Check to Shipper $

EMERY WORLDWIDE will accept Consignee check with all risks being assumed by Shipper, including but not limited to non-payment, fraud and misrepresentation

Customer's Reference Numbers: W81232 PE3A1 W94-0-0190#40 PH BUTCHER

Zip: 99352

Consignee's Account Number: E

Zip: 94804

Description	Pcs.	L	W	H	Total Pieces	Total Weight (In Lbs.)
COOLERS ID: GW$ 130 03#; 87 106# ATER SAMPLES	2	24	16	17	2	209

FOR INFORMATION OR RATES CALL 1-800 44 EMERY (1-800-443-6379)

Declared Value $

253695453 0

Remarks: VERNIGHT DELIVERY IGNATURE SECURITY SERVICE

Zip Ship ☐ — For shipments within the 50 United States, Shipper has the option to check this box and, by checking, agrees that the Zip Ship conditions, described in the area to the right, apply.

Mark if Emery Packaging is used: Urgent Letter 9X12 ☐ Urgent Pack 12X15 ☐

International Shipments: Free Domicile ☐ Commodity Code

Third Party Account Number mandatory for Third Party Billing: E

Third Party Account Number

International Customs Value

International Insurance

Total Transportation Charges

Other Charges/Advance at Origin: OC/AO- $

Terms and Conditions on Back

1-OAK-A

00 68

9613503.0253

EMERY WORLDWIDE — A CF Company

SIGNATURE AND TALLY RECORD

60029-46 (8/89) Litho USA

DATE: 02-07-94 SHIPMENT NO.: 253695453 0 (100)

SHIPPER: WESTINGHOUSE SHIPPING DEPT (509) 376-6665

REFERENCE NO.: W94-0-0190#40

SHIPPER NAME AND ADDRESS	CONSIGNEE NAME AND ADDRESS
WESTINGHOUSE SHIPPING DEPT (509) 376-6665 U.S. DEPARTMENT OF ENERGY C/O U.S. DEPARTMENT OF ENERGY C/O WESTINGHOUSE HANFORD COMPANY 2355 STEVENS DRIVE #1163 BUILDING PO BOX 1970 RICHLAND WA 99352	TMA/BORCAL 2030 WRIGHT AVENUE RICHMOND CA 94804

Pieces	Weight	Description/Marks	Emery Authorization No.
2	209 LBS	COOLER ID: GWS 130 1030#; 87 106# WATER SAMPLES	

EACH PERSON HANDLING OR TAKING CUSTODY OF THIS SHIPMENT MUST SIGN AND COMPLETE THE INFORMATION BELOW

	Name of Person/Company	Transship Point/Destination	Signature of Person Accepting Custody	Time/Date
1.	CR NELSON WESTINGHOUSE HANFORD CO SHIPPING DEPT	RICHLAND WA		
2.				
3.				
4.				
5.				
6.				
7.				
8.				

SPECIAL HANDLING INSTRUCTIONS

CONSIGNEE COPY

9613505.0254

Overnight Delivery

Signature Security Service

Contractor	OFF-SITE PROPERTY CONTROL	CONTROL NUMBER (To be obtained from PROPERTY MANAGEMENT)
WHC		W94-C-0190-40

PART I – TO BE COMPLETED BY ORIGINATOR

Department	Section	Unit
Env. Eng. & Tech.	Geosciences	Geochem & Hydrochem

The following items are to be shipped from ☒ Contractor ☐ Vendor

Routing Emery ☒ Contractor ☐ Vendor

Shipped to
TMA/NORCAL
2030 Wright Ave.
Richmond, CA 94804

Off-site Custodian

Full Title

Quantity	Description (Include Serial and any Government Tag Numbers)	Original Cost
1 103 lbs.	B09WY7, B09WY8, B09X11, B09X12 B09WY5, B09WY6 Sample #: Cooler ID: GWS130 Polycooler with groundwater samples packed in wet ice and vermiculite	N/A
1 106 lbs.	Sample #: B09X15 B09X16 B09WY9 B09WZ0 B09X17 B09X18 Cooler ID: 57 Polycooler with groundwater samples packed in wet ice and vermiculite	N/A

☐ Classified ☒ Unclassified ☐ Shipped Under DOE Contract ☐ Shipped Under Contractor's Use Permit Contract

Necessity for the Off-Site Use of this Property

Sampling supports RI/FS work in the 100 AREA

Bill of lading # 2536954530

CERTIFICATION OF THE RADIATION MONITORING RELEASE MUST BE SECURED THE SAME DAY THAT MATERIAL IS DELIVERED TO SHIPPING.

RM Clearance for Public Release	RM Survey No.	Date
Original	157068	2-7-94

Location of Property (Area & Bldg.)	Contact	Phone
100-HR-3	PH Butcher	(509) 376-5045

Date Ready for Shipment	Cost Code to be Charged	Approximate Date This Property will be Returned
2-7-94	W81232/PE3A1	NA

Originated By	Date	Authorized By	Date
PH Butcher	2-7-94	A Simpson	2/7/94

Signature and Name of Property Control	Custodian Date	Property Management Approval	Date
		JP Hankel	2/7/94

PART II – TO BE COMPLETED BY SHIPPING

Signature of Recipient	Return Order No.	Date Issued	Purchase Order No.	Date Issued
C R Kuo	70			
Date 2-7-94				

DISTRIBUTION

By Originator	Shipping Operation – Sign all Copies and Forward to:
White, Green, Yellow, Pink – Property Management Goldenrod – Retain	White – Property Management Green – Property Control Custodian (Issuing Office) Yellow – Retain Pink – Originator

9613503.0255

VALIDATION SUMMARY

9613503.0256

N402013-01

TMA NORCAL
REPORTING GROUP 7325

DATA SHEET

B09WY3

SDG	7325	Client	Westinghouse Hanford
Contact	Dinkar Kharkar	Contract	MBH-SVV-069262
Lab sample id	N402013-01	Client sample id	B09WY3
Dept sample id	7325-001	Location/Matrix	100-HR-3 LIQUID
Received	02/04/94	Collected	02/01/94
		Chain of custody id	EFL-1111

ANALYTE	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	Alpha	1.4	1.2	1	3	J	80A
Gross Beta	Beta	9.1	1.6	2	4		80B
Tritium	10028-17-8	590	150	200	400	J	H
Strontium 90	10098-97-2	3.2	0.44	0.6	2		Y

RJS 5-12-94

Lab id	TMAN
Protocol	WHC-HASM
Version	Ver 1.0
Form	DVD-DS
Version	2.28
Report date	03/11/94

9615503.0257

N402013-04

TMA NORCAL
REPORTING GROUP 7325

DATA SHEET

B09WY5

SDG	7325	Client	Westinghouse Hanford
Contact	Dinkar Kharkar	Contract	MBH-SVV-069262
Lab sample id	N402013-04	Client sample id	B09WY5
Dept sample id	7325-004	Location/Matrix	100-HR-3 LIQUID
Received	02/08/94	Collected	02/05/94
		Chain of custody id	EFL-1111

ANALYTE	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	Alpha	2.8	1.7	1	3	J	80A
Gross Beta	Beta	8.7	1.6	2	4		80B
Tritium	10028-17-8	3500	260	200	400	J	H
Strontium 90	10098-97-2	0.061	0.17	0.6	2	U	Y

RJS 5.12.94

Lab id	TMAN
Protocol	WHC-HASM
Version	Ver 1.0
Form	DVD-DS
Version	2.28
Report date	03/11/94

9613503.0258

N402013-05

TMA NORCAL
REPORTING GROUP 7325

DATA SHEET

B09WY7

SDG	7325	Client	Westinghouse Hanford
Contact	Dinkar Kharkar	Contract	MBH-SVV-069262
Lab sample id	N402013-05	Client sample id	B09WY7
Dept sample id	7325-005	Location/Matrix	100-HR-3 LIQUID
Received	02/08/94	Collected	02/05/94
		Chain of custody id	EFL-1111

ANALYTE	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	Alpha	0.50	0.95	1	3	U	80A
Gross Beta	Beta	26	2.3	2	4		80B
Tritium	10028-17-8	660	160	200	400	J	H
Strontium 90	10098-97-2	12	0.72	0.6	2		Y

RJS 5.12.94

Lab id	TMAN
Protocol	WHC-HASM
Version	Ver 1.0
Form	DVD-DS
Version	2.28
Report date	03/11/94

9613503.0259

N402013-06

TMA NORCAL
REPORTING GROUP 7325

DATA SHEET

B09WY9

SDG	7325	Client	Westinghouse Hanford
Contact	Dinkar Kharkar	Contract	MBH-SVV-069262
Lab sample id	N402013-06	Client sample id	B09WY9
Dept sample id	7325-006	Location/Matrix	100-HR-3 LIQUID
Received	02/08/94	Collected	02/05/94
		Chain of custody id	EFL-1111

ANALYTE	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	Alpha	3.7	1.8	2	3		80A
Gross Beta	Beta	12	1.8	2	4		80B
Tritium	10028-17-8	6000	320	200	400	J	H
Strontium 90	10098-97-2	1.7	0.79	0.7	2	J	Y

RJS 5.12.94

Lab id	TMAN
Protocol	WHC-HASM
Version	Ver 1.0
Form	DVD-DS
Version	2.28
Report date	03/11/94

9613503.0260

N402013-02

TMA NORCAL
REPORTING GROUP 7325

DATA SHEET

B09X09

SDG	7325	Client	Westinghouse Hanford
Contact	Dinkar Kharkar	Contract	MBH-SVV-069262
Lab sample id	N402013-02	Client sample id	B09X09
Dept sample id	7325-002	Location/Matrix	100-HR-3 LIQUID
Received	02/04/94	Collected	02/01/94
		Chain of custody id	EFL-1111

ANALYTE	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	Alpha	2.3	1.3	1	3	J	80A
Gross Beta	Beta	3.5	1.5	2	4	J	80B
Tritium	10028-17-8	8700	380	200	400	J	H
Strontium 90	10098-97-2	-0.19	0.24	0.6	2	U	Y

RJS 5.12.94

Lab id	TMAN
Protocol	WHC-HASM
Version	Ver 1.0
Form	DVD-DS
Version	2.28
Report date	03/11/94

9613503.0261

N402013-07

TMA NORCAL
REPORTING GROUP 7325

DATA SHEET

B09X11

SDG 7325
Contact Dinkar Kharkar
Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N402013-07
Dept sample id 7325-007
Received 02/08/94
Client sample id B09X11
Location/Matrix 100-HR-3 LIQUID
Collected 02/05/94
Chain of custody id EFL-1111

ANALYTE	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	Alpha	0.36	1.1	2	3	U	80A
Gross Beta	Beta	3.8	1.5	2	4	J	80B
Tritium	10028-17-8	7200	350	200	400	J	H
Strontium 90	10098-97-2	-0.21	1.8	0.6	2	U	Y

RJS 5.12.94

Lab id TMAN
Protocol WHC-HASM
Version Ver 1.0
Form DVD-DS
Version 2.28
Report date 03/11/94

9613503.0262

N402013-03

TMA NORCAL
REPORTING GROUP 7325

DATA SHEET

B09X13

SDG	7325	Client	Westinghouse Hanford
Contact	Dinkar Kharkar	Contract	MBH-SVV-069262
Lab sample id	N402013-03	Client sample id	B09X13
Dept sample id	7325-003	Location/Matrix	100-HR-3 LIQUID
Received	02/04/94	Collected	02/02/94
		Chain of custody id	EFL-1111

ANALYTE	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	Alpha	0.27	0.96	1	3	U	80A
Gross Beta	Beta	0.61	1.1	2	4	U	80B
Tritium	10028-17-8	45	130	200	400	U	H
Strontium 90	10098-97-2	0.003	0.17	0.5	2	U	Y

RJS
5.12.94

Lab id	TMAN
Protocol	WHC-HASM
Version	Ver 1.0
Form	DVD-DS
Version	2.28
Report date	03/11/94

9613503.0265

N402013-08

TMA NORCAL
REPORTING GROUP 7325

DATA SHEET

B09X15

SDG 7325
Contact Dinkar Kharkar
Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N402013-08
Dept sample id 7325-008
Received 02/08/94
Client sample id B09X15
Location/Matrix 100-HR-3 LIQUID
Collected 02/05/94
Chain of custody id EFL-1111

ANALYTE	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	Alpha	0.20	0.90	1	3	U	80A
Gross Beta	Beta	-0.90	1.1	2	4	U	80B
Tritium	10028-17-8	-22	120	200	400	U	H
Strontium 90	10098-97-2	-0.099	1.8	0.6	2	U	Y

RJS 5.12.94

Lab id TMAN
Protocol WHC-HASM
Version Ver 1.0
Form DVD-DS
Version 2.28
Report date 03/11/94

9613503.0264

N402013-09

TMA NORCAL
REPORTING GROUP 7325

DATA SHEET

B09X17

SDG	7325	Client	Westinghouse Hanford
Contact	Dinkar Kharkar	Contract	MBH-SVV-069262
Lab sample id	N402013-09	Client sample id	B09X17
Dept sample id	7325-009	Location/Matrix	100-HR-3 LIQUID
Received	02/08/94	Collected	02/05/94
		Chain of custody id	EFL-1111

ANALYTE	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	Alpha	-0.60	0.76	2	3	U	80A
Gross Beta	Beta	-0.20	1.1	2	4	U	80B
Tritium	10028-17-8	37	120	200	400	U	H
Strontium 90	10098-97-2	0.026	1.5	0.7	2	U	Y

RJS 5/12/94

Lab id	TMAN
Protocol	WHC-HASM
Version	Ver 1.0
Form	DVD-DS
Version	2.28
Report date	03/11/94

9613503.0265

WESTINGHOUSE/HANFORD

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B09WY3

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

Lab Code: SKINER Case No.: N4-02-011SAS No.: SDG No.: B09WY3

Matrix (soil/water): WATER Lab Sample ID: 02076-01S

Level (low/med): LOW Date Received: 02/05/94

% 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	33.0	B	N*	P
7440-36-0	Antimony	12.2	U		P
7440-38-2	Arsenic	3.0	U		P
7440-39-3	Barium	16.7	B		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	1.7	U		P
7440-70-2	Calcium	41000			P
7440-47-3	Chromium	74.3			P
7440-48-4	Cobalt	2.9	U		P
7440-50-8	Copper	4.9	B		P
7439-89-6	Iron	301			P
7439-92-1	Lead	1.8	U		P
7439-95-4	Magnesium	5220			P
7439-96-5	Manganese	7.3	B	*	P
7439-97-6	Mercury	0.20	U		AV
7440-02-0	Nickel	37.0	B		P
7440-09-7	Potassium	3250	B		P
7782-49-2	Selenium	2.8	U		P
7440-22-4	Silver	2.1	B		P
7440-23-5	Sodium	5260			P
7440-28-0	Thallium	3.7	U		P
7440-62-2	Vanadium	2.6	B		P
7440-66-6	Zinc	19.2	B		P
	Cyanide				NR

NV
HWS 5-4-94

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

002

9613503.0266

WESTINGHOUSE/HANFORD

1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B09X09

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

Lab Code: SKINER Case No.: N4-02-011SAS No.: SDG No.: B09WY3

Matrix (soil/water): WATER Lab Sample ID: 02076-02S

Level (low/med): LOW Date Received: 02/05/94

% 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	15.0	U	N*	P
7440-36-0	Antimony	12.2	U		P
7440-38-2	Arsenic	3.0	U		P
7440-39-3	Barium	39.2	B		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	1.7	U		P
7440-70-2	Calcium	40400			P
7440-47-3	Chromium	157			P
7440-48-4	Cobalt	2.9	U		P
7440-50-8	Copper	1.6	U		P
7439-89-6	Iron	64.9	B		P
7439-92-1	Lead	1.8	U		P
7439-95-4	Magnesium	9210			P
7439-96-5	Manganese	9.7	B	*	P
7439-97-6	Mercury	0.20	U		AV
7440-02-0	Nickel	4.4	U		P
7440-09-7	Potassium	3910	B		P
7782-49-2	Selenium	2.8	U		P
7440-22-4	Silver	2.1	U		P
7440-23-5	Sodium	20800			P
7440-28-0	Thallium	3.7	U		P
7440-62-2	Vanadium	4.2	B		P
7440-66-6	Zinc	17.2	B		P
	Cyanide				NR

NV

5-4-94

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

003

9613503.0267

WESTINGHOUSE/HANFORD

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B09X13

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

Lab Code: SKINER Case No.: N4-02-011SAS No.: SDG No.: B09WY3

Matrix (soil/water): WATER Lab Sample ID: 02076-03S

Level (low/med): LOW Date Received: 02/05/94

% 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	1240		N*	P	J,J
7440-36-0	Antimony	12.2	U		P	
7440-38-2	Arsenic	3.0	U		P	
7440-39-3	Barium	9.6	B		P	
7440-41-7	Beryllium	0.30	U		P	
7440-43-9	Cadmium	1.7	U		P	
7440-70-2	Calcium	1560	B		P	U
7440-47-3	Chromium	2.5	U		P	
7440-48-4	Cobalt	2.9	U		P	
7440-50-8	Copper	4.3	B		P	U
7439-89-6	Iron	103			P	U
7439-92-1	Lead	2.0	B		P	
7439-95-4	Magnesium	210	B		P	U,U
7439-96-5	Manganese	46.2		*	P	J
7439-97-6	Mercury	0.20	U		AV	
7440-02-0	Nickel	4.4	U		P	
7440-09-7	Potassium	103	B		P	U
7782-49-2	Selenium	2.8	U		P	
7440-22-4	Silver	2.1	U		P	
7440-23-5	Sodium	483	B		P	U
7440-28-0	Thallium	3.7	U		P	
7440-62-2	Vanadium	2.4	U		P	
7440-66-6	Zinc	17.1	B		P	U,U
	Cyanide				NR	

HMS 5-4-94

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

004

9613503.0268

WESTINGHOUSE/HANFORD

1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B09WY5

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

Lab Code: SKINER Case No.: N4-02-023SAS No.: SDG No.: B09WY5

Matrix (soil/water): WATER Lab Sample ID: 02096-01S

Level (low/med): LOW Date Received: 02/09/94

% 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	49.1	B	N*	P
7440-36-0	Antimony	12.2	U		P
7440-38-2	Arsenic	3.0	U		P
7440-39-3	Barium	59.6	B		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	1.7	U		P
7440-70-2	Calcium	68000			P
7440-47-3	Chromium	110			P
7440-48-4	Cobalt	2.9	U		P
7440-50-8	Copper	7.7	B		P
7439-89-6	Iron	211		N	P
7439-92-1	Lead	2.4	B		P
7439-95-4	Magnesium	12900			P
7439-96-5	Manganese	5.9	B		P
7439-97-6	Mercury	0.20	U		AV
7440-02-0	Nickel	17.6	B		P
7440-09-7	Potassium	7180			P
7782-49-2	Selenium	2.8	U		P
7440-22-4	Silver	2.1	U		P
7440-23-5	Sodium	16400			P
7440-28-0	Thallium	3.7	U		P
7440-62-2	Vanadium	8.8	B		P
7440-66-6	Zinc	47.0		*	P
	Cyanide				NR

ND
AMS
5.5.94

Color Before: COLORLESS Clarity Before: CLOUDY Texture:

Color After: COLORLESS Clarity After: CLOUDY Artifacts:

Comments:

002

9613503.0269

WESTINGHOUSE/HANFORD

1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

809WY7

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

Lab Code: SKINER Case No.: N4-02-023SAS No.: SDG No.: 809WY5

Matrix (soil/water): WATER Lab Sample ID: 02096-02S

Level (low/med): LOW Date Received: 02/09/94

% 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	15.0	U	N*	P
7440-36-0	Antimony	12.2	U		P
7440-38-2	Arsenic	3.6	B		P
7440-39-3	Barium	17.0	B		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	1.7	U		P
7440-70-2	Calcium	40800			P
7440-47-3	Chromium	4.7	B		P
7440-48-4	Cobalt	2.9	U		P
7440-50-8	Copper	2.0	B		P
7439-89-6	Iron	21.0	B	N	P
7439-92-1	Lead	1.8	U		P
7439-95-4	Magnesium	4820	B		P
7439-96-5	Manganese	0.80	U		P
7439-97-6	Mercury	0.20	U		AV
7440-02-0	Nickel	8.1	B		P
7440-09-7	Potassium	2330	B		P
7782-49-2	Selenium	2.8	U		P
7440-22-4	Silver	2.1	U		P
7440-23-5	Sodium	4470	B		P
7440-28-0	Thallium	3.7	U		P
7440-62-2	Vanadium	3.5	B		P
7440-66-6	Zinc	6.1	B	*	P
	Cyanide				NR

ND
JMB
5-5-94

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

003

9615503.0270

WESTINGHOUSE/HANFORD

1

SAMPLE NUMBER:

B09WY9

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: SKINER Case No.: N4-02-023SAS No.: SDG No.: B09WY5

Matrix (soil/water): WATER Lab Sample ID: 02096-03S

Level (low/med): LOW Date Received: 02/09/94

% 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	15.0	U	N*	P
7440-36-0	Antimony	12.2	U		P
7440-38-2	Arsenic	4.6	B		P
7440-39-3	Barium	29.7	B		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	1.7	U		P
7440-70-2	Calcium	48500			P
7440-47-3	Chromium	29.0			P
7440-48-4	Cobalt	2.9	U		P
7440-50-8	Copper	1.6	U		P
7439-89-6	Iron	56.1	B	N	P
7439-92-1	Lead	1.8	U		P
7439-95-4	Magnesium	10200			P
7439-96-5	Manganese	1.2	B		P
7439-97-6	Mercury	0.20	U		AV
7440-02-0	Nickel	9.0	B		P
7440-09-7	Potassium	5030			P
7782-49-2	Selenium	2.8	U		P
7440-22-4	Silver	2.1	U		P
7440-23-5	Sodium	18400			P
7440-28-0	Thallium	3.7	U		P
7440-62-2	Vanadium	6.0	B		P
7440-66-6	Zinc	7.0	B	*	P
	Cyanide				NR

NV

5-5-94

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

004

9613503.0271

WESTINGHOUSE/HANFORD

1

SAMPLE NUMBER:

809X11

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: SKINER Case No.: N4-02-023SAS No.: SDG No.: 809WY5

Matrix (soil/water): WATER Lab Sample ID: 02096-04S

Level (low/med): LOW Date Received: 02/09/94

% 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	15.0	U	N*	P
7440-36-0	Antimony	12.2	U		P
7440-38-2	Arsenic	3.0	U		P
7440-39-3	Barium	83.4	B		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	1.7	U		P
7440-70-2	Calcium	53000			P
7440-47-3	Chromium	58.0			P
7440-48-4	Cobalt	2.9	U		P
7440-50-8	Copper	1.6	U		P
7439-89-6	Iron	79.9	B	N	P
7439-92-1	Lead	5.8			P
7439-95-4	Magnesium	11700			P
7439-96-5	Manganese	2.4	B		P
7439-97-6	Mercury	0.20	U		AV
7440-02-0	Nickel	4.4	U		P
7440-09-7	Potassium	3670	B		P
7782-49-2	Selenium	3.9	B		P
7440-22-4	Silver	2.1	U		P
7440-23-5	Sodium	11900			P
7440-28-0	Thallium	3.7	U		P
7440-62-2	Vanadium	3.7	B		P
7440-66-6	Zinc	15.0	B	*	P
	Cyanide				NR

NV
5-5-94

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

005

9613503.0272

WESTINGHOUSE/HANFORD

SAMPLE NUMBER:

B09X15

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: SKINER Case No.: N4-02-023SAS No.: SDG No.: B09WY5

Matrix (soil/water): WATER Lab Sample ID: 02096-05S

Level (low/med): LOW Date Received: 02/09/94

% 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	15.0	U	N*	P	UJ
7440-36-0	Antimony	12.2	U		P	
7440-38-2	Arsenic	3.0	U		P	
7440-39-3	Barium	0.80	U		P	
7440-41-7	Beryllium	0.30	U		P	
7440-43-9	Cadmium	1.7	U		P	
7440-70-2	Calcium	83.4	U		P	
7440-47-3	Chromium	2.5	U		P	
7440-48-4	Cobalt	2.9	U		P	
7440-50-8	Copper	1.6	U		P	
7439-89-6	Iron	24.9	B	N	P	U
7439-92-1	Lead	1.8	U		P	
7439-95-4	Magnesium	32.2	U		P	
7439-96-5	Manganese	1.4	B		P	U
7439-97-6	Mercury	0.20	U		AV	
7440-02-0	Nickel	4.7	B		P	U
7440-09-7	Potassium	58.8	U		P	
7782-49-2	Selenium	2.8	U		P	
7440-22-4	Silver	2.1	U		P	
7440-23-5	Sodium	60.4	B		P	U,U
7440-28-0	Thallium	3.7	U		P	
7440-62-2	Vanadium	2.4	U		P	
7440-66-6	Zinc	24.9		*	P	UJ
	Cyanide				NR	

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

HMS 5-5-94

Comments:

006

9613503.0273

WESTINGHOUSE/HANFORD

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B09X17

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

Lab Code: SKINER Case No.: N4-02-023SAS No.: SDG No.: B09WY5

Matrix (soil/water): WATER Lab Sample ID: 02096-06S

Level (low/med): LOW Date Received: 02/09/94

% 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	306		N*	P	J,J
7440-36-0	Antimony	12.2	U		P	
7440-38-2	Arsenic	3.0	U		P	
7440-39-3	Barium	1.3	B		P	U,U
7440-41-7	Beryllium	0.30	U		P	
7440-43-9	Cadmium	1.7	U		P	
7440-70-2	Calcium	363	B		P	
7440-47-3	Chromium	2.5	U		P	
7440-48-4	Cobalt	2.9	U		P	
7440-50-8	Copper	1.6	U		P	
7439-89-6	Iron	27.5	B	N	P	U,U
7439-92-1	Lead	3.0	B		P	
7439-95-4	Magnesium	32.4	B		P	U
7439-96-5	Manganese	11.6	B		P	
7439-97-6	Mercury	0.20	U		AV	
7440-02-0	Nickel	4.4	U		P	
7440-09-7	Potassium	58.8	U		P	
7782-49-2	Selenium	2.8	U		P	
7440-22-4	Silver	2.1	U		P	
7440-23-5	Sodium	168	B		P	U,U
7440-28-0	Thallium	3.7	U		P	
7440-62-2	Vanadium	2.4	U		P	
7440-66-6	Zinc	24.0		*	P	UJ
	Cyanide				NR	

BMS 5-5-94

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

007

9613503.0274

WESTINGHOUSE/HANFORD

1

SAMPLE NUMBER:

B09WY4

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: SKINER Case No.: N4-02-011SAS No.: SDG No.: B09WY4

Matrix (soil/water): WATER Lab Sample ID: 02077-01S

Level (low/med): LOW Date Received: 02/05/94

% 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	15.0	U	N	P
7440-36-0	Antimony	12.2	U		P
7440-38-2	Arsenic	3.0	U		P
7440-39-3	Barium	16.5	B		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	1.7	U		P
7440-70-2	Calcium	39700			P
7440-47-3	Chromium	13.5			P
7440-48-4	Cobalt	2.9	U		P
7440-50-8	Copper	1.6	U		P
7439-89-6	Iron	13.4	U		P
7439-92-1	Lead	1.8	U		P
7439-95-4	Magnesium	5010			P
7439-96-5	Manganese	3.7	B		P
7439-97-6	Mercury	0.20	U		AV
7440-02-0	Nickel	4.4	U		P
7440-09-7	Potassium	2790	B		P
7782-49-2	Selenium	2.8	U		P
7440-22-4	Silver	2.1	U		P
7440-23-5	Sodium	5100			P
7440-28-0	Thallium	3.7	U		P
7440-62-2	Vanadium	4.6	B		P
7440-66-6	Zinc	9.2	B		P
	Cyanide				NR

NV

5-4-94

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

002

9613503.0275

WESTINGHOUSE/HANFORD

1

SAMPLE NUMBER:

B09X10

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: SKINER Case No.: N4-02-011SAS No.: SDG No.: B09WY4

Matrix (soil/water): WATER Lab Sample ID: 02077-02S

Level (low/med): LOW Date Received: 02/05/94

% 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	18.3	B	N	P
7440-36-0	Antimony	13.4	B		P
7440-38-2	Arsenic	3.0	U		P
7440-39-3	Barium	39.4	B		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	1.7	U		P
7440-70-2	Calcium	40600			P
7440-47-3	Chromium	160			P
7440-48-4	Cobalt	2.9	U		P
7440-50-8	Copper	3.4	B		P
7439-89-6	Iron	13.4	U		P
7439-92-1	Lead	3.9			P
7439-95-4	Magnesium	9240			P
7439-96-5	Manganese	3.3	B		P
7439-97-6	Mercury	0.20	U		AV
7440-02-0	Nickel	4.4	U		P
7440-09-7	Potassium	4000	B		P
7782-49-2	Selenium	2.8	U		P
7440-22-4	Silver	2.2	B		P
7440-23-5	Sodium	20900			P
7440-28-0	Thallium	3.7	U		P
7440-62-2	Vanadium	5.6	B		P
7440-66-6	Zinc	12.3	B		P
	Cyanide				NR

NT

5.4.94

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

003

9615505.0276

WESTINGHOUSE/HANFORD

1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B09X14

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

Lab Code: SKINER Case No.: N4-02-011SAS No.: SDG No.: B09WY4

Matrix (soil/water): WATER Lab Sample ID: 02077-03S

Level (low/med): LOW Date Received: 02/05/94

% 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	15.0	U	N	P	
7440-36-0	Antimony	12.2	U		P	
7440-38-2	Arsenic	3.0	U		P	
7440-39-3	Barium	0.80	U		P	
7440-41-7	Beryllium	0.30	U		P	
7440-43-9	Cadmium	1.7	U		P	
7440-70-2	Calcium	83.4	U		P	
7440-47-3	Chromium	2.5	U		P	
7440-48-4	Cobalt	2.9	U		P	
7440-50-8	Copper	1.6	U		P	
7439-89-6	Iron	13.4	U		P	
7439-92-1	Lead	1.8	U		P	
7439-95-4	Magnesium	32.2	U		P	
7439-96-5	Manganese	4.2	B		P	UD
7439-97-6	Mercury	0.20	U		AV	
7440-02-0	Nickel	4.4	U		P	
7440-09-7	Potassium	58.8	U		P	
7782-49-2	Selenium	2.8	U		P	
7440-22-4	Silver	2.7	B		P	UD
7440-23-5	Sodium	131	B		P	
7440-28-0	Thallium	3.7	U		P	
7440-62-2	Vanadium	2.4	U		P	
7440-66-6	Zinc	11.0	B		P	UD
	Cyanide				NR	

HMS 5-4-94

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

D Calibration Blanks → Sample < 5x highest Blank

004

FORM I - IN ILM02.1

9613503.0277

WESTINGHOUSE/HANFORD
1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B09WY6

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

Lab Code: SKINER Case No.: N4-02-023SAS No.: SDG No.: B09WY6

Matrix (soil/water): WATER Lab Sample ID: 02097-01S

Level (low/med): LOW Date Received: 02/09/94

% 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	15.0	U		P
7440-36-0	Antimony	13.5	B		P
7440-38-2	Arsenic	3.1	B		P
7440-39-3	Barium	58.9	B		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	1.7	U		P
7440-70-2	Calcium	72600			P
7440-47-3	Chromium	90.2			P
7440-48-4	Cobalt	2.9	U		P
7440-50-8	Copper	4.1	B		P
7439-89-6	Iron	13.8	B	N	P
7439-92-1	Lead	1.8	U		P
7439-95-4	Magnesium	13700			P
7439-96-5	Manganese	2.4	B		P
7439-97-6	Mercury	0.20	U		AV
7440-02-0	Nickel	7.6	B		P
7440-09-7	Potassium	6740			P
7782-49-2	Selenium	2.8	U		P
7440-22-4	Silver	2.1	U		P
7440-23-5	Sodium	17300			P
7440-28-0	Thallium	3.7	U		P
7440-62-2	Vanadium	5.8	B		P
7440-66-6	Zinc	30.1			P
	Cyanide				NR

AV
HMS
5-4-94

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

002

Comments:

9613503.0278

WESTINGHOUSE/HANFORD

1

SAMPLE NUMBER:

B09WY8

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: SKINER Case No.: N4-02-023SAS No.: SDG No.: B09WY6

Matrix (soil/water): WATER Lab Sample ID: 02097-02S

Level (low/med): LOW Date Received: 02/09/94

% 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	15.0	U		P
7440-36-0	Antimony	12.2	U		P
7440-38-2	Arsenic	3.0	U		P
7440-39-3	Barium	15.9	B		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	1.7	U		P
7440-70-2	Calcium	38800			P
7440-47-3	Chromium	2.6	B		P
7440-48-4	Cobalt	2.9	U		P
7440-50-8	Copper	1.6	U		P
7439-89-6	Iron	13.4	U	N	P
7439-92-1	Lead	1.8	U		P
7439-95-4	Magnesium	4670	B		P
7439-96-5	Manganese	0.80	U		P
7439-97-6	Mercury	0.20	U		AV
7440-02-0	Nickel	4.4	U		P
7440-09-7	Potassium	2220	B		P
7782-49-2	Selenium	2.8	U		P
7440-22-4	Silver	2.1	U		P
7440-23-5	Sodium	4400	B		P
7440-28-0	Thallium	3.7	U		P
7440-62-2	Vanadium	4.5	B		P
7440-66-6	Zinc	10.8	B		P
	Cyanide				NR

ND

5-4-94

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

003

9613503.0279

WESTINGHOUSE/HANFORD

1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B09WZ0

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

Lab Code: SKINER Case No.: N4-02-023SAS No.: SDG No.: B09WY6

Matrix (soil/water): WATER Lab Sample ID: 02097-03S

Level (low/med): LOW Date Received: 02/09/94

% 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	15.0	U		P
7440-36-0	Antimony	12.9	B		P
7440-38-2	Arsenic	4.5	B		P
7440-39-3	Barium	29.9	B		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	1.7	U		P
7440-70-2	Calcium	48300			P
7440-47-3	Chromium	25.8			P
7440-48-4	Cobalt	2.9	U		P
7440-50-8	Copper	1.6	U		P
7439-89-6	Iron	13.4	U	N	P
7439-92-1	Lead	1.8	U		P
7439-95-4	Magnesium	10000			P
7439-96-5	Manganese	0.80	U		P
7439-97-6	Mercury	0.20	U		AV
7440-02-0	Nickel	4.4	U		P
7440-09-7	Potassium	4980	B		P
7782-49-2	Selenium	2.8	U		P
7440-22-4	Silver	2.4	B		P
7440-23-5	Sodium	18200			P
7440-28-0	Thallium	3.7	U		P
7440-62-2	Vanadium	7.5	B		P
7440-66-6	Zinc	12.7	B		P
	Cyanide				NR

NV

5-4-94

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

004

FORM I - IN ILM02.1

9613503.0280

WESTINGHOUSE/HANFORD

1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B09X12

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

Lab Code: SKINER Case No.: N4-02-023SAS No.: SDG No.: B09WY6

Matrix (soil/water): WATER Lab Sample ID: 02097-04S

Level (low/med): LOW Date Received: 02/09/94

% 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	15.0	U		P
7440-36-0	Antimony	12.2	U		P
7440-38-2	Arsenic	3.0	U		P
7440-39-3	Barium	83.2	B		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	1.7	U		P
7440-70-2	Calcium	53500			P
7440-47-3	Chromium	56.4			P
7440-48-4	Cobalt	2.9	U		P
7440-50-8	Copper	1.6	U		P
7439-89-6	Iron	13.4	U	N	P
7439-92-1	Lead	1.8	U		P
7439-95-4	Magnesium	11700			P
7439-96-5	Manganese	1.2	B		P
7439-97-6	Mercury	0.20	U		AV
7440-02-0	Nickel	4.4	U		P
7440-09-7	Potassium	3780	B		P
7782-49-2	Selenium	3.5	B		P
7440-22-4	Silver	2.1	U		P
7440-23-5	Sodium	11900			P
7440-28-0	Thallium	3.7	U		P
7440-62-2	Vanadium	4.7	B		P
7440-66-6	Zinc	17.0	B		P
	Cyanide				NR

NV

5-4-94

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

005

FORM I - IN ILM02.1

9613503.0281

WESTINGHOUSE/HANFORD
1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B09X16

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

Lab Code: SKINER Case No.: N4-02-023SAS No.: SDG No.: B09WY6

Matrix (soil/water): WATER Lab Sample ID: 02097-05S

Level (low/med): LOW Date Received: 02/09/94

% 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	15.0	~~U~~		P	~~UJ~~ UJ
7440-36-0	Antimony	12.2	U		P	
7440-38-2	Arsenic	3.0	U		P	
7440-39-3	Barium	0.80	U		P	
7440-41-7	Beryllium	0.30	U		P	
7440-43-9	Cadmium	1.7	U		P	
7440-70-2	Calcium	92.4	B		P	U
7440-47-3	Chromium	2.5	U		P	
7440-48-4	Cobalt	2.9	U		P	
7440-50-8	Copper	1.6	U		P	
7439-89-6	Iron	13.4	~~U~~	N	P	~~J~~ UJ
7439-92-1	Lead	2.7	B		P	
7439-95-4	Magnesium	32.2	U		P	
7439-96-5	Manganese	4.3	B		P	
7439-97-6	Mercury	~~0.20~~	U		AV	
7440-02-0	Nickel	4.4	U		P	
7440-09-7	Potassium	58.8	~~U~~		P	~~J~~ UJ
7782-49-2	Selenium	2.8	U		P	
7440-22-4	Silver	2.1	U		P	
7440-23-5	Sodium	148	B		P	U
7440-28-0	Thallium	3.7	U		P	
7440-62-2	Vanadium	2.4	U		P	
7440-66-6	Zinc	17.0	B		P	U
	Cyanide				NR	

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

HMB 5-4-94

Comments:

006

FORM I - IN ILM02.1

9613503.0282

WESTINGHOUSE/HANFORD

1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B09X18

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

Lab Code: SKINER Case No.: N4-02-023SAS No.: SDG No.: B09WY6

Matrix (soil/water): WATER Lab Sample ID: 02097-06S

Level (low/med): LOW Date Received: 02/09/94

% 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	15.0	~~U~~		P	~~J~~ UJ
7440-36-0	Antimony	12.2	U		P	
7440-38-2	Arsenic	3.0	U		P	
7440-39-3	Barium	0.80	U		P	
7440-41-7	Beryllium	0.30	U		P	
7440-43-9	Cadmium	1.7	U		P	
7440-70-2	Calcium	83.4	U		P	
7440-47-3	Chromium	2.5	U		P	
7440-48-4	Cobalt	2.9	U		P	
7440-50-8	Copper	1.6	U		P	
7439-89-6	Iron	13.4	~~U~~	N	P	~~J~~ UJ
7439-92-1	Lead	1.8	U		P	
7439-95-4	Magnesium	32.2	U		P	
7439-96-5	Manganese	2.1	B		P	
7439-97-6	Mercury	0.20	U		AV	
7440-02-0	Nickel	4.4	U		P	
7440-09-7	Potassium	130	B		P	J
7782-49-2	Selenium	2.8	U		P	
7440-22-4	Silver	2.1	U		P	
7440-23-5	Sodium	84.6	B		P	U
7440-28-0	Thallium	3.7	U		P	
7440-62-2	Vanadium	2.4	U		P	
7440-66-6	Zinc	17.4	B		P	U
	Cyanide				NR	

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

DMS 5-4-94

007

FORM I - IN ILM02.1

9613503.0283

000012

TMA Inc. REPORT Work Order # A4-02-019

Received: 02/04/94

Results by Sample

SAMPLE ID B09WY3 FRACTION 02A TEST CODE WCCLPL NAME Anions & Wet Chem.

Date & Time Collected 02/01/94 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	5.7	mg/L	0.2
Fluoride	300.0	0.1	mg/L	0.1
Phosphate	300.0	<0.4	mg/L	0.4
Sulfate	300.0	25	mg/L	1
Nitrate Nitrogen	300.0	1.8	mg/L	0.2
Nitrite Nitrogen	300.0	<0.1	mg/L	0.1

FORM I

NV 5/18/94 SC

9613503.0284

000013

TMA Inc. REPORT Work Order # A4-02-019

Received: 02/04/94

Results by Sample

SAMPLE ID B09WY3 FRACTION 02C TEST CODE WCCLPL NAME Anions & Wet Chem.

Date & Time Collected 02/01/94 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

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

FORM I

NV 5/18/94 SC

9613503.0285

000014

TMA Inc. REPORT Work Order # A4-02-019

Received: 02/04/94

Results by Sample

SAMPLE ID B09WY3 FRACTION 02E TEST CODE WCCLPL NAME Anions & Wet Chem.

Date & Time Collected 02/01/94 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

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

FORM I

NV 5/19/94 SC

9613503.0286

000009

TMA Inc. REPORT Work Order # A4-02-023

Received: 02/08/94

Results by Sample

SAMPLE ID B09WY5 FRACTION 01A TEST CODE WCCLPL NAME Anions & Wet Chem.

Date & Time Collected 02/05/94 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	10.0	mg/L	0.8
Fluoride	300.0	0.2	mg/L	0.1
Phosphate	300.0	~~0.4U~~	mg/L	0.4
Sulfate	300.0	73	mg/L	4
Nitrate Nitrogen	300.0	7.8	mg/L	0.8
Nitrite Nitrogen	300.0	~~0.1U~~	mg/L	0.1

5/6/94 LD

N.V. 5/17/94 SC

FORM I

9613503.0287

000010

TMA Inc. REPORT Work Order # A4-02-023

Received: 02/08/94

Results by Sample

SAMPLE ID B09WY5 FRACTION 01C TEST CODE WCCLPL NAME Anions & Wet Chem.

Date & Time Collected 02/05/94 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Sulfide	9030	~~1~~ U	mg/L	1

5/6/94 fm

NV

FORM I

9613503.0288

000011

TMA Inc. REPORT Work Order # A4-02-023

Received: 02/08/94

Results by Sample

SAMPLE ID B09WY5 FRACTION 01E TEST CODE WCCLPL NAME Anions & Wet Chem.

Date & Time Collected 02/05/94 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Ammonia Nitrogen	350.3	f0.05U	mg/L	0.05

5/6/94 [illegible]

NV

FORM I

9613503.0289

000012

TMA Inc. REPORT Work Order # A4-02-023

Received: 02/08/94

Results by Sample

SAMPLE ID B09WY7 FRACTION 02A TEST CODE WCCLPL NAME Anions & Wet Chem.

Date & Time Collected 02/05/94 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	5.3	mg/L	0.2
Fluoride	300.0	0.1	mg/L	0.1
Phosphate	300.0	<0.4	mg/L	0.4
Sulfate	300.0	24	mg/L	1
Nitrate Nitrogen	300.0	1.6	mg/L	0.2
Nitrite Nitrogen	300.0	<0.1	mg/L	0.1

5/6/94

N.V.

FORM I

9613503.0290

000013

TMA Inc. REPORT Work Order # A4-02-023

Received: 02/08/94

Results by Sample

SAMPLE ID B09WY7 FRACTION 02C TEST CODE WCCLPL NAME Anions & Wet Chem.

Date & Time Collected 02/05/94 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

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

5/6/94 Em

N.V.

FORM I

9613503.0291

000014

TMA Inc. REPORT Work Order # A4-02-023

Received: 02/08/94

Results by Sample

SAMPLE ID B09WY7 FRACTION 02B TEST CODE WCCLPL NAME Anions & Wet Chem.

Date & Time Collected 02/05/94 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

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

5/6/94
fm
N.V.

FORM I

TMA Inc. REPORT Work Order # A4-02-023

Received: 02/08/94

Results by Sample

SAMPLE ID B09WY9 FRACTION 03A TEST CODE WCCLPL NAME Anions & Wet Chem.

Date & Time Collected 02/05/94 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	6.6	mg/L	0.2
Fluoride	300.0	0.2	mg/L	0.1
Phosphate	300.0	<0.4	mg/L	0.4
Sulfate	300.0	38	mg/L	1
Nitrate Nitrogen	300.0	4.7	mg/L	0.2
Nitrite Nitrogen	300.0	<0.1	mg/L	0.1

5/6/94

N.V.

FORM I

9613503.0293

000016

TMA Inc. REPORT Work Order # A4-02-023

Received: 02/08/94 Results by Sample

SAMPLE ID B09WY9 FRACTION 03B TEST CODE WCCLPL NAME Anions & Wet Chem.

Date & Time Collected 02/05/94 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

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

5/6/94 [illegible]

N.V.

FORM I

9613503.0294

000017

TMA Inc. REPORT Work Order # A4-02-023

Received: 02/08/94

Results by Sample

SAMPLE ID B09WY9 FRACTION 03C TEST CODE WCCLPL NAME Anions & Wet Chem.

Date & Time Collected 02/05/94 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

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

5/6/94 fm

N.V.

FORM I

9613503.0295

000018

TMA Inc. REPORT Work Order # A4-02-023

Received: 02/08/94

Results by Sample

SAMPLE ID B09X11 FRACTION 04A TEST CODE WCCLPL NAME Anions & Wet Chem.

Date & Time Collected 02/05/94 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	20.2	mg/L	0.8
Fluoride	300.0	0.2	mg/L	0.1
Phosphate	300.0	<0.4	mg/L	0.4
Sulfate	300.0	72	mg/L	4
Nitrate Nitrogen	300.0	4.1	mg/L	0.2
Nitrite Nitrogen	300.0	<0.1	mg/L	0.1

5/6/94 fm

N.U.

FORM I

9613503.0296

000019

TMA Inc. REPORT Work Order # A4-02-023

Received: 02/08/94

Results by Sample

SAMPLE ID B09X11 FRACTION 04B TEST CODE WCCLPL NAME Anions & Wet Chem.

Date & Time Collected 02/05/94 Category

5/6/94 sm

N.Y.

ANIONS AND WET CHEMISTRY - LIQUIDS

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

FORM I

9613503.0297

000020

TMA Inc. REPORT Work Order # A4-02-023

Received: 02/08/94

Results by Sample

SAMPLE ID B09X11 FRACTION 04C TEST CODE WCCLPL NAME Anions & Wet Chem.

Date & Time Collected 02/05/94 Category

5/6/94 LM

N.V

ANIONS AND WET CHEMISTRY - LIQUIDS

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

FORM I

9613503.0298

000021

TMA Inc. REPORT Work Order # A4-02-023

Received: 02/08/94

Results by Sample

SAMPLE ID B09X15 FRACTION 05A TEST CODE WCCLPL NAME Anions & Wet Chem.

Date & Time Collected 02/05/94 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	~~0.2~~ U	mg/L	0.2
Fluoride	300.0	~~0.1~~ U	mg/L	0.1
Phosphate	300.0	~~0.4~~ UR	mg/L	0.4
Sulfate	300.0	~~1~~ U	mg/L	1
Nitrate Nitrogen	300.0	~~0.2~~ UR	mg/L	0.2
Nitrite Nitrogen	300.0	~~0.1~~ UR	mg/L	0.1

5/6/94 (LM)

FORM I

9613503.0299

000022

TMA Inc. REPORT Work Order # A4-02-023

Received: 02/08/94

Results by Sample

SAMPLE ID B09X15 FRACTION 05B TEST CODE WCCLPL NAME Anions & Wet Chem.

Date & Time Collected 02/05/94 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Sulfide	9030	~~1~~ U	mg/L	1

5/6/94 LM

FORM I

9613503.0300

000023

TMA Inc. REPORT Work Order # A4-02-023

Received: 02/08/94

Results by Sample

SAMPLE ID B09X15 FRACTION 05C TEST CODE WCCLPL NAME Anions & Wet Chem.

Date & Time Collected 02/05/94 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Ammonia Nitrogen	350.3	<0.05U	mg/L	0.05

5/6/94 Lm

FORM I

9613503.0501

000024

TMA Inc. REPORT Work Order # A4-02-023

Received: 02/08/94

Results by Sample

SAMPLE ID B09X17 FRACTION 06A TEST CODE WCCLPL NAME Anions & Wet Chem.

Date & Time Collected 02/05/94 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	~~0.2~~ U	mg/L	0.2
Fluoride	300.0	~~0.1~~ U	mg/L	0.1
Phosphate	300.0	~~0.4~~ UR	mg/L	0.4
Sulfate	300.0	~~1~~ U	mg/L	1
Nitrate Nitrogen	300.0	~~0.2~~ UR	mg/L	0.2
Nitrite Nitrogen	300.0	~~0.1~~ UR	mg/L	0.1

5/6/94 LM

FORM I

9613503.0302

000025

TMA Inc. REPORT Work Order # A4-02-023

Received: 02/08/94

Results by Sample

SAMPLE ID B09X17 FRACTION 06B TEST CODE WCCLPL NAME Anions & Wet Chem.

Date & Time Collected 02/05/94 Category

5/6/94 LM

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Sulfide	9030	~~1~~ U	mg/L	1

FORM I

9613503.0303

000026

TMA Inc. REPORT Work Order # A4-02-023

Received: 02/08/94

Results by Sample

SAMPLE ID B09X17 FRACTION 06C TEST CODE WCCLPL NAME Anions & Wet Chem.

Date & Time Collected 02/05/94 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Ammonia Nitrogen	350.3	~~<~~0.054	mg/L	0.05

5/6/94 fm

FORM I

9613503.0304

 *** T M A *** REPORT Work Order # S4-02-098

Received: 02/09/94 Results by Sample

5/11/94 (fm)

SAMPLE ID B09WY5 SAMPLE # 01 FRACTIONS: A
Date & Time Collected 02/05/94 08:55:00 Category WATER

NO3NO2 8.38 mg N/L (fm) N.V. 3.385 = 3.38

SAMPLE ID B09WY7 SAMPLE # 02 FRACTIONS: A
Date & Time Collected 02/05/94 08:21:00 Category WATER

NO3NO2 1.75 mg N/L N.V.

SAMPLE ID B09WY9 SAMPLE # 03 FRACTIONS: A
Date & Time Collected 02/05/94 07:47:00 Category WATER

NO3NO2 4.53 mg N/L N.V.

SAMPLE ID B09X11 SAMPLE # 04 FRACTIONS: A
Date & Time Collected 02/05/94 10:01:00 Category WATER

NO3NO2 4.08 mg N/L N.V.

SAMPLE ID B09X15 SAMPLE # 05 FRACTIONS: A
Date & Time Collected 02/05/94 11:20:00 Category WATER

NO3NO2 <0.25 mg N/L U

SAMPLE ID B09X17 SAMPLE # 06 FRACTIONS: A
Date & Time Collected 02/05/94 11:40:00 Category WATER

NO3NO2 <0.25 mg N/L U

SAMPLE ID B09X17D SAMPLE # 06 FRACTIONS: B
Date & Time Collected 02/05/94 11:40:00 Category WATER

NO3NO2 <0.25 mg N/L

TMA
Thermo Analytical Inc.

This report is rendered upon all of the following conditions: Skinner & Sherman Laboratories, Inc., retains ownership of this report until associated submitted invoice is 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 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.

Skinner & Sherman Laboratories Inc. 300 Second Avenue, P.O. Box 521, Waltham, Massachusetts 02254-0521 (617) 890-7200

9613503.0305

000009

TMA Inc. REPORT Work Order # A4-02-019

Received: 02/04/94

Results by Sample

SAMPLE ID B09X09 FRACTION 01A TEST CODE WCCLPL NAME Anions & Wet Chem.

Date & Time Collected 02/01/94 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	8.7	mg/L	0.4
Fluoride	300.0	0.3	mg/L	0.1
Phosphate	300.0	<0.4	mg/L	0.4
Sulfate	300.0	53	mg/L	2
Nitrate Nitrogen	300.0	2.9	mg/L	0.2
Nitrite Nitrogen	300.0	<0.1	mg/L	0.1

FORM I

NV 5/18/94 SC

9613503.0306

000010

TMA Inc. REPORT Work Order # A4-02-019

Received: 02/04/94

Results by Sample

SAMPLE ID B09X09 FRACTION 01C TEST CODE WCCLPL NAME Anions & Wet Chem.

Date & Time Collected 02/01/94 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

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

FORM I

NV 5/18/94 SC

9613503.0307

000011

TMA Inc. REPORT Work Order # A4-02-019

Received: 02/04/94

Results by Sample

SAMPLE ID B09X09 FRACTION 01E TEST CODE WCCLPL NAME Anions & Wet Chem.

Date & Time Collected 02/01/94 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

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

FORM I

NV 5/18/94 SC

9613503.0308

000015

TMA Inc. REPORT Work Order # A4-02-019

Received: 02/04/94

Results by Sample

SAMPLE ID B09X13 FRACTION 03A TEST CODE WCCLPL NAME Anions & Wet Chem.

Date & Time Collected 02/02/94 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	<0.2 U	mg/L	0.2
Fluoride	300.0	<0.1 U	mg/L	0.1
Phosphate	300.0	<0.4 UR	mg/L	0.4
Sulfate	300.0	<1 U	mg/L	1
Nitrate Nitrogen	300.0	<0.2 UR	mg/L	0.2
Nitrite Nitrogen	300.0	<0.1 UR	mg/L	0.1

FORM I

5/18/94 SC

9613503.0309

000016

TMA Inc. REPORT Work Order # A4-02-019

Received: 02/04/94

Results by Sample

SAMPLE ID B09X13 FRACTION 03B TEST CODE WCCLPL NAME Anions & Wet Chem.

Date & Time Collected 02/02/94 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

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

FORM I

5/18/94 SC

9613503.0310

000017

TMA Inc. REPORT Work Order # A4-02-019

Received: 02/04/94

Results by Sample

SAMPLE ID B09X13 FRACTION 03C TEST CODE WCCLPL NAME Anions & Wet Chem.

Date & Time Collected 02/02/94 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Ammonia Nitrogen	350.3	<0.05U	mg/L	0.05

FORM I

5/18/94 SC