START 9713515.1247

B088V0-TMA-488

0046159

TMA

MAY 1993
RECEIVED
SOLA

JAN 1997
RECEIVED
EDMC

WESTINGHOUSE HANFORD COMPANY

Results of Analyses For:

ORGANICS & GENERAL CHEMISTRY
Case No. 04-016
(TMA/ARLI Work Order # A3-04-016)

METALS & NITRATE/NITRITE
Case No. N3-04-009
(TMA/Skinner & Sherman W.O. # S3-04-052, S3-04-053, & S3-04-054)

May 26, 1993

TMA Master Work Order N3-04-009

i 8-19-96

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000002

PAGE 1 TMA/Norcal CHAIN OF CUSTODY ORD # N3-04-009

RCVD: 04/05/93 DUE: 05/05/93 04/05/93 10:16:41 KEEP: 08/03/93 DISP: S

DASH	SAMPLE IDENTIFICATION		STORED	TESTS for FRACTIONS with work in DEPT: SU and CATEGORY						
01A-W	8188.0	UNFILTERED	ARLI	WH018	WH019	WH020	WH043	WH114	WH121	WH122
				WH128	WH131	WH132	WH140			
01C-W	8188.0 MS	UNFILTERED	ARLI	WH018	WH019	WH020	WH043	WH114	WH140	
01D-W	8188.0 MSD	UNFILTERED	ARLI	WH018	WH019	WH020				
01E-W	8188.0 DUP	UNFILTERED	ARLI	WH043	WH114	WH121	WH122	WH128	WH131	WH132
				WH140						
03A-W	8188.0		ARLI	WH018						

RELINQUISHED BY	DATE	TRANSFERRED TO	DATE	RECEIVED BY	DATE
yamamoto	4-5-93	ARLI	4-5-93	C. Harris	4/6/93

9713515.1249

000002A

Westinghouse Hanford Company	CHAIN OF CUSTODY

Custody Form Initiator KD LEE/GG HAMILTON

Company Contact: PH BUTCHER

Telephone (509) 376-5045

Project Designation/Sampling Locations 100-FR-3

Collection Date 4/1/93

Ice Chest No. SML-293

Field Logbook No. EFL-1055

Bill of Lading/Airbill No. 2536954574

Offsite Property No. W93-0-0321-43

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks

Sample Identification

B088V0

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

B088V1

1, 1L, P, WATER; ICP/AA METALS + Hg (HNO3) FILTERED

B088V2

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

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

Relinquished By	Date	Time	Received By	Date	Time
PCCole PCCole	4/1/93	1340	AJSimpson AJ SIMPSON	4/2/93	0733
AJSimpson AJ SIMPSON	4/2/93	0733	[illegible]	4-5-93 *	

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments: FRIG#4

* Received @ TMA/NORCAL 4-3-93 @ 1248; opened 4-5-93 · KB

A-6000-407 (12/92) WEF061

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000002B

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector K. Lee, L. Walker Date Sampled 4/1/93 Time 1109 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B088V0	✓3; 40ml; Gs*;	WATER	CLP-VOA
	✓3; 2L; aG;	WATER	CLP-SEMI VOA & PCB's/PEST
	✓1; 1L; P;	WATER	ANIONS (IC) SO4, F, PO4, Cl/COND/pH
	✓1; 500ml; P;	WATER	ANIONS/NO3-NO2 (H2SO4)
	✓1; 1L; G;	WATER	ALK./TOT. DISSOLVED SOLIDS
	✓1; 500ml; G;	WATER	SULFIDE (add Zinc Acetate+NaOH pH>9)
	✓1; 500ml; G;	WATER	AMMONIA/CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)
	✓1; 1L; P;	WATER	CLP-ICP/AA METALS & Hg (HNO3) UNFILTERED
	✓1; 1L; P;	WATER	CLP-CN (NaOH)
	✓1; 4L; P; & 1; 2L; P	WATER	GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC
	✓12xL		(U-235/238,Pu-239/240, Am-241), Sr-90 (HNO3)
	✓1; 1L; G/P;	WATER	Tc-99 (HCl)
	✓1; 250ml; Gs;	WATER	TRITIUM/C-14
B088V1	✓1; 1L; P;	WATER	CLP-ICP/AA METAL & Hg (HNO3) FILTERED
B088V2	✓3; 40ml; Gs	WATER	CLP-VOA
			OPC: # W93- 0-0321-43
			BOL: # 2536954574
			TASK#: 93-051

Field Information** 45°F, Cloudy, Wind 05 mph

Special Handling and/or Storage

Possible Sample Hazards

PART II: LABORATORY SECTION

Received by [illegible] Title [illegible] Date 4-5-93

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)

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SAMPLE LOG-IN SHEET

LAB NAME : TMS/GRL

PAGE : 1 OF 000003

RECEIVED BY (PRINT NAME): D. WHITAKER

LOG-IN-DATE : 4-6-93

RECEIVED BY (SIGNATURE): D. Whitaker

CASE NUMBER:
SAMPLE DELIVERY GROUP NO.:
SAS NUMBER:

REMARKS:

1. Custody Seal(s) Present/Absent* Intact/Broken
2. Custody Seal Nos:
3. Chain of Custody Records Present/Absent*
4. Traffic Reports or Packing List Present/Absent*
5. Airbill Airbill/Sticker Present/Absent*
6. Airbill No.: 6395890141
7. Sample Tags Present/Absent*
8. Sample Tags Numbers Listed/Not Listed on Chain of Custody
9. Sample Condition: Intact/Broken*/Leaking
10. Does information on custody records, traffic reports, and sample tags agree Yes/No*
11. Date Recieved at Lab: 4-6-93
12. Temp of ice chest SML-293 5 °C
13. Time Recieved: 0930

SAMPLE TRANSFER

Fraction:
Area #:
By:
On:

CPA SAMPLE #	CORRESPONDING SAMPLE TAG #	CORRESPONDING ASSIGNED LAB #	REMARKS: CONDITION OF SAMPLE SHIPMENT, ETC
	B088U0	A304016010	
	B088U2	A304016030	

* Contact SMO and attach record of resolution

Reviewed By: _____ Logbook No.: _____

Date: _____ Logbook Page No.: _____

FORM DC-8

QUESTIONS? CALL 800-238-5355 TOLL FREE.

PACKAGE TRACKING NUMBER 6395890141

6395890141

RECIPIENT'S COPY

1 Date 4-5-93

From (Your Name) Please Print: Sample Control

Your Phone Number (Very Important): 510-235-2633

Department/Floor No.

Company: T M A NORCAL

Street Address: 2030 WRIGHT AVE

City: RICHMOND State: CA ZIP Required: 94804

2 To (Recipient's Name) Please Print: Sample Control

Recipient's Phone Number (Very Important)

Department/Floor No.

Company: Trial Art

Exact Street Address (We Cannot Deliver to P.O. Boxes or P.O. Zip Codes.): 160 Taylor Street

City: Monrovia State: CA ZIP Required: 91016

YOUR INTERNAL BILLING REFERENCE INFORMATION (optional) (First 24 characters will appear on invoice.): 2340 16406

H IF HOLD FOR PICK-UP, Print FEDEX Address Here: Street Address

City State ZIP Required

3 PAYMENT 1 [/] Sender 2 [ ] Bill Recipient's FedEx Acct. No. 3 [ ] Bill 3rd Party FedEx Acct. No. 4 [ ] Bill Credit Card 5 [ ] Credit Check

4 SERVICES (Check only one box)

Priority Overnight (Delivery by next business morning)
11 [/] OTHER PACKAGING
16 [ ] FEDEX LETTER*
12 [ ] FEDEX PAK*
13 [ ] FEDEX BOX
14 [ ] FEDEX TUBE

Standard Overnight (Delivery by next business afternoon)
51 [ ] OTHER PACKAGING
56 [ ] FEDEX LETTER*
52 [ ] FEDEX PAK*
53 [ ] FEDEX BOX
54 [ ] FEDEX TUBE

Economy Two-Day (Delivery by second business day)
30 [ ] ECONOMY*

Government Overnight (Available to authorized users only)
46 [ ] GOV'T LETTER
41 [ ] GOV'T PACKAGE

Freight Service (For packages over 150 lbs.)
70 [ ] OVERNIGHT FREIGHT** (Confirmed requested required)
80 [ ] TWO-DAY FREIGHT**
†Delivery commitment only for some ZIP CODES.
*Declared Value Limit $500
**Call for delivery schedule

5 DELIVERY AND SPECIAL HANDLING (Check services required)

1 [ ] HOLD FOR PICK-UP (FTS in Box 4)
2 [/] DELIVER WEEKDAY
3 DELIVER SATURDAY (Extra charge) [ ]
4 [ ] DANGEROUS GOODS (Extra charge)
5 [ ]
6 [ ] DRY ICE (Package Check Shipper's Declaration acknowledgment)
7 [ ] OTHER SPECIAL SERVICE
8 [ ]
9 [ ] SATURDAY PICK-UP (Extra charge)
10 [ ]
12 [ ] HOLIDAY DELIVERY (If closed) (Extra charge)

6 PACKAGES | WEIGHT (In Pounds Only) | YOUR DECLARED VALUE (See rate)

Total | Total | Total

1 58

DIM SHIPMENT (Chargeable Weight) [ ] lbs.

L x W x H

Number of:
1 [/] Regular Stop 2 [ ] Drop Box
3 [ ] On-Call Stop 4 [ ] B.S.C.
5 [ ] Station

7 Release Signature:

Emp. No. Date

[ ] Cash Received
[ ] Return Shipment
[ ] Third Party [ ] Chg. To Dist. [ ] Chg. To Hold

Street Address

City Zip

Received By: X

Date/Time Received FedEx Employee Number

Federal Express Use

Base Charges

Declared Value Charge

Other 1

Other 2

Total Charges

REVISION DATE 11/92
PART #137204 FXEM 12/92
FORMAT #156

155

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TMA/ARLI
The new Analytical Inc.

RADIATION DOSE RATE SURVEY FORM

Date 4/06/93 COMPANY WORCAL (WHC) OTHER ORD # 6395890141

Surveyor's Name MARK S. McCRAY

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

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

Calibration Date 12/02/93 Calibration Date 2/16/93

Instrument Calibration Factor 0.280 Instrument Calibration Factor 0.190

Sample	Location	HP-210 CPM	HP-210 Factor	HP-210 DPM	AC-3-7 CPM	AC-3-7 Factor	AC-3-7 DPM	Spillage or Breakage?	Activity, dpm/mL or dpm/g
Background		39.0			0				
Consistency		7,470	0.2884		4,098	0.1506			
Sample SML 293		52.0			4.99			None	
Reported (WHC) (5) samples each <50 pCi/gram									

Comments

All OK ✓ Approved MSM

Not OK Date 4/06/93

GENERAL CHEMISTRY RESULTS

CASE NO. 04-016

Water Sample #:

B088V0

CASE NARRATIVE

The holding time for the pH analysis was exceeded. Careful review of the QC analysis indicates that the data is reliable.

Sample B088V0 (A3-04-016-01) yielded a 76.0% recovery for the Phosphate analysis. The low Phosphate recovery compared to our laboratory control sample indicated the presence of a matrix interference.

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

Maureen Parrish

Maureen Parrish

TRA Inc. REPORT Work Order # A3-04-016

Received: 04/05/93 05/18/93 15:19:42

REPORT TO: Westinghouse Hanford Company
2355 Stevens Dr.,MSIN-H4-23
345 Hills Street/3000 Area
Richland, WA 99352
ATTEN: Jeanette Duncan

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

Maureen Parrish
CERTIFIED BY

CONTACT: EVV CIH

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

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

WORK ID: 100-FR-3
TAKEN: By Westinghouse Staff
TRANS: Federal Express
TYPE: Liquid
P.O. #: M3-04-009-SU-AR
INVOICE: under separate cover

SAMPLE IDENTIFICATION

01 B088V0
01 B088V0 MS
01 B088V0 MSD
01 B088V0
01 B088V0 MS
01 B088V0 Duplicate
01 B088V0
01 B088V0 Duplicate
01 B088V0
01 B088V0 MS
01 B088V0 Duplicate
01 B088V0
01 B088V0 MS
01 B088V0 Duplicate
02 B088V2
02 B088V2 MS
02 B088V2 MSD
03 Wet Chemistry Blank
03 Laboratory Control Sample

TEST CODES and NAMES used on this workorder

BNCLPW	CLP Semivol. Water - WH020
PECLPL	CLP Pesticides Liq.
VOCLPL	CLP Volatile Org.Liq.
WCCLPL	Anions & Wet Chem. - WH043
WCLCS	Lab Control Sample Summary
WCL L	Chloride - WH120
WCQCD	Quality Control Summary
WCQCS	Quality Control Summary
WF L	Fluoride in Water
WNH3 L	Ammonia in Water - WH140
WPH L	pH of Liquid - WH121
WPO4 L	Phosphate in Liquids
WSO4 L	Sulfate (in Waters)
WSULFI	Sulfide - WH114
W ALK	Alkalinity - WH131
W COD	COD Water - WH132
W COND	Conductivity-Water WH122
W TDS	Dissolved Solids WH128

TMA Inc. REPORT Work Order # A3-04-016

Received: 04/05/93

Results by Sample

SAMPLE ID B088V0 FRACTION 01E TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 04/01/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	4.6	mg/L	0.2
Fluoride	300.0	0.2	mg/L	0.1
Phosphate	300.0	<0.4	mg/L	0.4
pH	150.1	7.7	pH	0.1
Sulfate	300.0	29	mg/L	1
Elect. Conductivity	120.1	274	umho/cm	6

FORM I

TMA Inc. REPORT Work Order # A3-04-016

Received: 04/05/93

Results by Sample

SAMPLE ID B088V0 FRACTION 01W TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 04/01/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Alkalinity	310.1	89	mg/L	2
Tot. Dissolved Solids	160.1	169	mg/L	5

FORM I

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TMA Inc. REPORT Work Order # A3-04-016

Received: 04/05/93

Results by Sample

SAMPLE ID B088V0 FRACTION 01J TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 04/01/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

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

FORM I

TMA Inc. REPORT Work Order # A3-04-016

Received: 04/05/93

Results by Sample

SAMPLE ID B088V0 FRACTION 01M TEST CODE WCCLPL NAME Anions & Wet Chem. - WR043

Date & Time Collected 04/01/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Ammonia Nitrogen	350.3	<0.05	mg/L	0.05
COD	410.0	<5	mg/L	5

FORM I

CASE NARRATIVE

LABORATORY : TMA/ARLI

CASE : 04-016

CONTRACT ID : WESTINGHOUSE HANFORD COMPANY

SDG RECEIPT DATE : May 5, 1993

1.0 DESCRIPTION OF CASE :

Two water samples were analyzed for TCL Organics- Volatiles, Semivolatiles, and Pesticides/PCBs according to the USEPA Contract Laboratory Program (CLP) Statement of Work for Organic Analysis, Revision OLM01.8.

2.0 SAMPLE LIST :

WESTINGHOUSE ID	LAB ID	ANALYSIS REQUESTED	MATRIX	pH
B088V0	A3-04-016-01A	V	WATER	7
B088V0	A3-04-016-01B	SV & P	WATER	
B088V0 MS	A3-04-016-01C	SV & P	WATER	
B088V0 MSD	A3-04-016-01D	SV & P	WATER	
B088V2	A3-04-016-02A	V	WATER	7
B088V2 MS	A3-04-016-02B	V	WATER	7
B088V2 MSD	A3-04-016-02C	V	WATER	7

3.0 COMMENTS :

3.1 SHIPPING AND DOCUMENTATION :

All of the samples were received unbroken and properly documented.

3.2 ANALYSIS

3.2.1 VOLATILE ANALYSIS COMMENTS :

LOW LEVEL WATER :

The samples were analyzed within the CLP SOW holding times.

All of the QC results were within the limits specified by the EPA CLP SOW.

TUNES :

All BFB tunes are injected directly into GC/MS instrument.

3.2.2 SEMIVOLATILE ANALYSIS COMMENTS :

LOW LEVEL WATER :

The samples were extracted and analyzed within the CLP SOW holding times. The matrix spike recoveries for 4-chloro-3-methylphenol, 4-Nitrophenol and Pentachlorophenol in samples B088V0MS and B088V0MSD were above the QC limits. In accordance with protocol, no further action was required.

All of the other QC results were within the limits specified by the EPA CLP SOW.

3.2.3 PESTICIDE/PCB ANALYSIS COMMENTS :

SEQUENCE NOTES :

The sequence was started on 04/17/93 and was analyzed according to the CLP SOW. The sequence was analyzed by single injection into a dual column system.

All of the QC criteria were within the limits specified by the CLP SOW.

The chromatograms are presented in the manner consistent with the capabilities of the Nelson 2700 Turbochrome Data System which normalizes the largest peak to scale.

SAMPLE NOTES :

LOW LEVEL WATER :

The samples were extracted and analyzed within the CLP SOW holding times. Samples PBLK0406C and B088V0MS and B088V0MSD had TCX surrogate recoveries slightly below the QC limits on the DB-608 column. In accordance with protocol, no further action was required.

All of the other QC results were within the limits specified by CLP SOW.

We certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data in this hardcopy data package and in the computer-readable data submitted on diskette is authorized by the Laboratory Manager or his designee, as verified by the following signatures.

Nicole Roth 5/24/93
Nicole Roth
CLP Program Manager

Widayati 5/25/93
Wida Ang
Organics Manager

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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

000004

EPA SAMPLE NO.

B088V0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04016 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304016-01A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30413B20

Level: (low/med) LOW Date Received: 04/05/93

% Moisture: not dec. ____ Date Analyzed: 04/13/93

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

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

1E

EPA SAMPLE NO.

B088V0

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04016 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304016-01A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30413B20

Level: (low/med) LOW Date Received: 04/05/93

% Moisture: not dec. ____ Date Analyzed: 04/13/93

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

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088V2

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04016 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304016-02A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30413B21

Level: (low/med) LOW Date Received: 04/05/93

% Moisture: not dec. ____ Date Analyzed: 04/13/93

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

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	5	J
67-64-1	Acetone	30	
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

9713515.1265

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B088V2

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04016 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304016-02A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30413B21

Level: (low/med) LOW Date Received: 04/05/93

% Moisture: not dec. ____ Date Analyzed: 04/13/93

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

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088V0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04016 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304016-01B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30413S14

Level: (low/med) LOW Date Received: 04/05/93

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 04/06/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/13/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	25	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088V0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04016 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304016-01B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30413S14

Level: (low/med) LOW Date Received: 04/05/93

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 04/06/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/13/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)Anthracene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	10	U
218-01-9	Chrysene	10	U
117-84-0	Di-n-Octyl Phthalate	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine

9713515.1268

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B088V0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04016 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304016-01B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30413S14

Level: (low/med) LOW Date Received: 04/05/93

% Moisture: ____ decanted: (Y/N) ___ Date Extracted: 04/06/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/13/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088V0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04016 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304016-01B

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: 04/05/93

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 04/06/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/18/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-36-3	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

9713515.1270

 Skinner&Sherman REPORT Work Order # S3-04-054

Received: 04/06/93 05/10/93 14:29:51

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

ATTEN Dan Steurmer

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

ATTEN Client Services
PHONE (617) 890-7200

CERTIFIED BY

CONTACT DP

CLIENT HANFORD NOR SAMPLES 2
COMPANY TMA/NORCAL Hanford
FACILITY Richmond, CA

WORK ID N3-04-009
TAKEN By Client
TRANS Fed Ex
TYPE Water
P.O. # N3-04-009
INVOICE under separate cover

SAMPLE IDENTIFICATION

01 B088V0
01 B088V0 DUPL
01 B088V0 SPIKE
02 LCSW

TEST CODES and NAMES used on this workorder

NO3NO2 Nitrate Plus Nitrite

TMA
Thermo Analytical Inc.
Skinner & Sherman Laboratories Inc.

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

9713515.1271

 Skinner&Sherman REPORT Work Order # S3-04-054

Received: 04/06/93

Results by Sample

SAMPLE ID B088V0 SAMPLE # 01 FRACTIONS: A

Date & Time Collected 04/01/93 Category WATER

NO3NO2 3.65
mg N/L

SAMPLE ID B088V0 DUPL SAMPLE # 01 FRACTIONS: B

Date & Time Collected 04/01/93 Category WATER

NO3NO2 3.68
mg N/L

SAMPLE ID B088V0 SPIKE SAMPLE # 01 FRACTIONS: C

Date & Time Collected 04/01/93 Category WATER

NO3NO2 5.68
mg N/L

SAMPLE ID LCSW SAMPLE # 02 FRACTIONS: A

Date & Time Collected not specified Category WATER

NO3NO2 2.05
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
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9713515.1272

Received: 04/06/93 05/10/93 14:29:51

TMA/NORCAL Hanford

QUALITY CONTROL

MATRIX SPIKE

Sample ID	Sample Result	Spike Added	Spike Result	% Recovery
S304054-01	3.65 mg/L	2.00 mg/L	5.68 mg/L	101.5

DUPLICATE

Sample ID	Sample result	Duplicate Result	Relative % Difference
S304054-01	3.65 mg/L	3.68 mg/L	0.8

QUALITY CONTROL SAMPLES

Sample ID	True Value	Found Value	Percent Recovery
LCS	2.00 mg/L	2.05 mg/L	102.7
Prep blank	--	<0.25 mg/L	--

TMA
Thermo Analytical Inc.

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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

9713515.1273

Received: 04/06/93 Test Methodology

TEST CODE NO3NO2 NAME Nitrate Plus Nitrite

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

TMA
Thermo Analytical Inc.

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

9213515.1274

TMA/Skinner & Sherman Labs SAMPLE LOG-IN
WORKORDER S304054 CLIENT Hanford Nuc No. SAMPLES: 1
PROTCL CLP TURNARND 33 Day (Soil) (Water) (Specify Other
COOLER TEMP: 1 oC, or NA
CUSTODIAN B Prowell SDG/BATCH N/A
CUSTODY SEAL: PRESENT/ABSENT/INTACT/NOT CLIENT CASE U304005
SHIPER & # Fed Ex PO/CONTRACT# L
TAGS: PRESENT/ABSENT/NA/SEE COC CONTACT D. Sanchez
CHAIN OF CUSTODY: PRESENT/ABSENT/NA, # N/A COMMENTS: None

SAMPLE CONTAINERS-INTACT/BROKEN COMMENTS

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

SHIPMENT DATES 4/6/93
LIST ANY DATE WITH PAPERWORK/SHIPMENT PROBLEMS & SPECIFY THE PROBLEM:

N/A

	CLIENT ID	MATRIX	RECEIVED	PH*	TEST(S) & QC	HOLD TIME U
1	B088U0	Water	4/6/93	1.49	0.5 NO3 NO2	
2						
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24						
25						
26						
27						

Samples are from site known to have Rad-Contamination: YES ___ NO ✓
Samples have detectable amounts of Radioactive Material: YES ___ NO ✓

SUBCONTRACT: YES/NO, TO: Compuchem DATE:

REVIEWED 4/6/93 BP

* EPA/CLP required Rev 1.6 PAGE: 81

PAGE 1 TMA/NW 15.1275 CHAIN OF CUSTODY ORD # N3-04-009

RCVD: 04/05/93 DUE: 05/05/93 04/05/93 10:16:27 KEEP: 08/03/93 DISP: S

DASH	SAMPLE IDENTIFICATION			STORED	TESTS for FRACTIONS with work in DEPT: SU and CATEGORY				
01B-W	B088V0		UNFILTERED	S&S	WH007	WH008	WH010	WH011	WH137
01F-W	B088V0	MS	UNFILTERED	S&S	WH007	WH008	WH010	WH011	WH137
01G-W	B088V0	DUP	UNFILTERED	S&S	WH007	WH008	WH010	WH011	WH137
01H-W	L C S			S&S	WH007	WH008	WH010	WH137	
02A-W	B088V1		FILTERED	S&S	WH007	WH008	WH010		
02B-W	B088V1	MS	FILTERED	S&S	WH007	WH008	WH010		
02C-W	B088V1	DUP	FILTERED	S&S	WH007	WH008	WH010		
02D-W	L C S			S&S	WH007	WH008	WH010		

RELEASED BY	DATE	TRANSFERRED TO	DATE	RECEIVED BY	DATE
Yamamoto	4-5-93	Skinner	4-5-93	Barb Prowe	4/6/93

9713515.1276

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

RECEIVED

MAY 1993
RECEIVED
SDLA

May 5, 1993

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

Quality Control Narrative

Scope
One (1) water sample was submitted to TMA/Skinner & Sherman Laboratories, Inc. on April 6, 1993 from TMA/Norcal. The sample was analyzed for the USEPA CLP metals and cyanide. The analysis was performed under TMA/Skinner and Sherman work order S304052.

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

Discussion
All quality control requirements were met for the sample with the following exception:

The selenium digestion spike recovery 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.

David N. Peterson
Assistant Laboratory Manager

8-19-96 SW

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B088V0

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

Lab Code: SKINER Case No.: N3-04-009S4S No.: SDG No.: B088V0

Matrix (soil/water): WATER Lab Sample ID: 04052-01S

Level (low/med): LOW Date Received: 04/06/93

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	80.6	B		P
7440-36-0	Antimony	17.9	U		P
7440-38-2	Arsenic	2.1	B		F
7440-39-3	Barium	37.4	B		P
7440-41-7	Beryllium	0.50	U		P
7440-43-9	Cadmium	1.7	U		P
7440-70-2	Calcium	38900			P
7440-47-3	Chromium	32.7			P
7440-48-4	Cobalt	3.8	U		P
7440-50-8	Copper	4.2	U		P
7439-89-6	Iron	129			P
7439-92-1	Lead	1.6	B		F
7439-95-4	Magnesium	6630			P
7439-96-5	Manganese	3.3	B		P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	7.0	B		P
7440-09-7	Potassium	2060	B		P
7782-49-2	Selenium	3.5	U	WN	F
7440-22-4	Silver	3.8	U		P
7440-23-5	Sodium	5610			P
7440-28-0	Thallium	2.7	U		F
7440-62-2	Vanadium	3.3	U		P
7440-66-6	Zinc	7.6	B		P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

002

9213515.1278

TMA/Skinner & Sherman Labs SAMPLE LOG-IN

WORKORDER S304052 CLIENT Hanford Nor NO. SAMPLES:

PROTCL CLP TURNARND 33 Day

COOLER TEMP: 1 oC, or NA (Soil) (Water) (Specify Other)

CUSTODIAN B Prowix SDG/BATCH N/A

CUSTODY SEAL: PRESENT/ABSENT/INTACT/NOT CLIENT CASE N304009

SHIPER & # fedex PO/CONTRACT# +

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

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

SAMPLE CONTAINERS-INTACT/BROKEN COMMENTS

CLIENT COMMENT? YES/NO

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

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

SHIPMENT DATES 4/6/93

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

N/A UNFILTERED

	CLIENT ID	MATRIX	RECEIVED	PH*	TEST(S) & QC	HOLD TIME UP
1	B088VU	water	4/6/93	1.80/13.62	TMCN	
2						
3						
4						
5						
6						
7						
8						
9						
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14						
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17						
18						
19						
20						
21						
22						
23						
24						
25						143
26						
27						

Samples are from site known to have Rad-Contamination: YES ✓ NO

Samples have detectable amounts of Radioactive Material: YES NO ✓

SUBCONTRACT: YES/NO, TO: complete DATE:

REVIEWED 4/6/93 BP

* EPA/CLP required Rev 1.6 PAGE: 77

TMA[illegible]515.1279 CHAIN OF CUSTODY JOB # [illegible]

RCVD: 04/05/93 DUE: [illegible] 04/05/93 10:16:27 KEEP: [illegible] DISP: S

DASH	SAMPLE IDENTIFICATION			STORED	TESTS for FRACTIONS [illegible] in DEPTH [illegible] and CATEGORY				
01B-W	B088V0		UNFILTERED	S&S	WH007	WH008	WH010	WH011	WH137
01F-W	B088V0	MS	UNFILTERED	S&S	WH007	WH008	WH010	WH011	WH137
01G-W	B088V0	DUP	UNFILTERED	S&S	WH007	WH008	WH010	WH011	WH137
01H-W	L C S			S&S	WH007	WH008	WH010	WH137	
02A-W	B088V1		FILTERED	S&S	WH007	WH008	WH010		
02B-W	B088V1	MS	FILTERED	S&S	WH007	WH008	WH010		
02C-W	B088V1	DUP	FILTERED	S&S	WH007	WH008	WH010		
02D-W	L C S			S&S	WH007	WH008	WH010		

RELEASED BY	DATE	TRANSFERRED TO	DATE	RECEIVED BY	DATE
tyamamoto	4-5-93	Skinner	4-5-93	Barb Pierce	4/6/93

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

9713515.1280

RECORD COPY

MAY 1993
RECEIVED
SDLA

May 5, 1993

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

Quality Control Narrative

Scope
One (1) water sample was submitted to TMA/Skinner & Sherman Laboratories, Inc. on April 6, 1993. The sample was analyzed for the USEPA CLP metals. The analysis was performed under TMA/Skinner and Sherman work order S304053.

Methodology
The sample was 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 exception;

The selenium digestion spike recovery exceeded the control limit requirements.

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

Respectfully submitted,

TMA/SKINNER & SHERMAN LABORATORIES, INC.

David N. Peterson
Assistant Laboratory Manager

1-00 8/19/96

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B088V1

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

Lab Code: SKINER Case No.: N3-04-009SAS No.: SDG No.: B088V1

Matrix (soil/water): WATER Lab Sample ID: 04053-01S

Level (low/med): LOW Date Received: 04/06/93

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	23.5	U		P
7440-36-0	Antimony	17.9	U		P
7440-38-2	Arsenic	2.3	U		F
7440-39-3	Barium	38.7	B		P
7440-41-7	Beryllium	0.50	U		P
7440-43-9	Cadmium	1.7	U		P
7440-70-2	Calcium	40400			P
7440-47-3	Chromium	25.9			P
7440-48-4	Cobalt	3.8	U		P
7440-50-8	Copper	4.2	U		P
7439-89-6	Iron	14.0	B		P
7439-92-1	Lead	1.8	B	W	F
7439-95-4	Magnesium	6840			P
7439-96-5	Manganese	1.8	U		P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	6.1	U		P
7440-09-7	Potassium	2050	B		P
7782-49-2	Selenium	3.3	U	WN	F
7440-22-4	Silver	3.8	U		P
7440-23-5	Sodium	5770			P
7440-28-0	Thallium	2.7	U	W	F
7440-62-2	Vanadium	3.3	U		P
7440-66-6	Zinc	3.4	U		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

002

9713515.1282

TMA/Skinner & Sherman Labs SAMPLE LOG-IN

WORKORDER S304053 CLIENT Hanford Nor No. SAMPLES:

PROTCL CLP TURNARND 33 Day 1

COOLER TEMP: 1 oC, or NA (Soil) (Water) (Specify Other)

CUSTODIAN B. Prindle SDG/BATCH N/A

CUSTODY SEAL: PRESENT/ABSENT/INTACT/NOT CLIENT CASE N304009

SHIPER & # Fedex PO/CONTRACT# ✓

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

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

SAMPLE CONTAINERS-INTACT/BROKEN COMMENTS

CLIENT COMMENT? YES/NO

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

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

SHIPMENT DATES 4/6/93

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

Filtered N/A

	CLIENT ID	MATRIX	RECEIVED	PH*	TEST(S) & QC	HOLD TIME UP
1	B088V1	water	4/6/93	130	DSTM	
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						

103

Samples are from site known to have Rad-Contamination: YES ✓ NO

Samples have detectable amounts of Radioactive Material: YES NO ✓

SUBCONTRACT: YES/NO TO: DATE: 4/6/93

complete BP

REVIEWED

* EPA/CLP required Rev 1.6 PAGE: 76

TMA/Herts) 9715515.1283 CHAIN OF CUSTODY ORD # N3-04-009

04/05/93 DUE: 05/05/93 04/05/93 10:16:27 KEEP: 08/03/93 DISP: S

ASH	SAMPLE IDENTIFICATION			STORED	TESTS for FRACTIONS with work in DEPT: SU and CATEGORY				
01B-W	B088V0		UNFILTERED	S&S	WH007	WH008	WH010	WH011	WH137
01F-W	B088V0	MS	UNFILTERED	S&S	WH007	WH008	WH010	WH011	WH137
01G-W	B088V0	DUP	UNFILTERED	S&S	WH007	WH008	WH010	WH011	WH137
01H-W	L C S			S&S	WH007	WH008	WH010	WH137	
02A-W	B088V1		FILTERED	S&S	WH007	WH008	WH010		
02B-W	B088V1	MS	FILTERED	S&S	WH007	WH008	WH010		
02C-W	B088V1	DUP	FILTERED	S&S	WH007	WH008	WH010		
02D-W	L C S			S&S	WH007	WH008	WH010		

RELEASED BY	DATE	TRANSFERRED TO	DATE	RECEIVED BY	DATE
Yamamoto	4-5-93	Skinner	4-5-93	Back Probe	4/6/93

9713515.1284

B088V0-TMA-488

TMA

RECORD COPY

JUN 1993
RECEIVED
SDLA

WESTINGHOUSE HANFORD COMPANY

Results of Analyses For:

ORGANICS & GENERAL CHEMISTRY
Case No. 04-018
(TMA/ARLI Work Order # A3-04-018)

METALS & NITRATE/NITRITE
Case No. N3-04-022
(TMA/Skinner & Sherman W.O. # S3-04-068, S3-04-069, & S3-04-070)

May 28, 1993

TMA Master Work Order N3-04-022

8/26/96

9715515.1285

DON'T SAY IT --- *Write It!*

DATE: AUGUST 11, 1993

TO: FILE /B088Q0-TMA-485

FROM: PAT REICH

Telephone:

cc:

SUBJECT: VALIDATION REPORT FOR 100-FR-3, SECOND ROUND GROUNDWATER SAMPLING.

THE FINAL VALIDATION REPORT ISSUED BY AT KEARNEY FOR THIS DATA PACKAGE IS FILED IN SDG 9304L088-WES-1128.

PAT REICH

9713515.1286

Westinghouse Hanford Company

NONCONFORMANCE REPORT

1. Page 1 of 1

2. Preprinted No. 050043

QA Log No. EQA-93-071

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

8. Program/Project/Other	9. Safety Class	10. ASME Code Items
100-FR-3/93-051	N/A	☐ Yes ☒ No (If yes, notify authorized inspector)

11. Supplier Name/Address: ENVIRONMENTAL FIELD SAMPLING SERVICES

12. Notification of Potential Occurence Required: ☐ Yes ☒ No

13. Code: Lot/Heat/Serial	14. Lot Size	15. Sample	16. Qty. Acc.	17. Inspection Criteria
N/A	55	55	0	☐ Dwg. ☐ Spec. ☐ Insp. Plan ☒ Other WHC-CM-7-7. EDS.1 SEC 6.3

18. Item	19. Description of Nonconformance (list serial no. where applicable)	22. Disposition, Justification, and Instructions
	THE CHAIN OF CUSTODIES FOR THE FOLLOWING SAMPLES WERE NOT RELINQUISHED BEFORE SENDING TO LABS: TMA: B088T5-T7, B088X5-X7, B088R0-R2, B088W5-W7, B088S5-S7, B08907, B08900, B08902, B08901, B08W0, B08W2 B088X0, B08915-917, B088T0-T2, B088R5-R7, B088Y5-Y7, B08905 B08906, B08934-35, B08901, B08900, B08902, B088W1, B088X1, B088X2. DATACHEM: B08859, B088R9, B088T4, B088T9, B088X9, B08909, B088Y9, B088R4, B08919, B08933, B088W9 CHAIN OF CUSTODY BROKEN	The analysis shall continue for the affected samples. The data shall be appropriatley flagged.

20. Originator's Signature	Date	23. Design Document Change Required?
RC SMITH RClark Smith	4/14/93	☐ Yes, Doc. No. ☒ No

21. Cognizant QA Manager's Signature	Date	24. Corrective Action Required?
[signature]	4-16-93	☐ Yes, No. ☒ No

Disp. App.	25. Cognizant Engineer	Date	26. Technical Rep.	Date	Signature/Org.	Date
	J.W. Robertson [signature]	4/21/93	NA		NA	
	QA Engineer	Date	Signature/Org.	Date	Signature/Org.	Date
	GS CORRIGAN [signature]	4-21-93				

Close

27. Accept _____ Reject _____ Follow on NCR _____

QA/C Personnel _____ Date

A-7310-104 (10/91)

9713515.1287

OFFICE OF SAMPLE MANAGEMENT

RECORD OF DISPOSITION

ROD-93-0100
Record of Disposition No.

DATE: 4/14/93	LABORATORY: TMA/DATACHEM
PROJECT TITLE/NO.: 100-FR-3/93-051	NCR NO.: 050043

SAMPLE IDENTIFICATION NUMBERS:

TMA: B088T5-T7, B088X5-X7, B088R0-R2, B088W5-W7, B088S5-S7, B08907, B088Q0, B088Q2, B08901, B088W0, B088W2, B088X0, B08915-917, B088T0-T2, B088R5-R7, B088Y5-Y7, B08905, B08906, B08934-35, B088Q1, B08900, B08902, B088W1, B088X1-X2.

DATACHEM: B08859, B088R9, B088T4, B088T9, B088X9, B08909, B088Y9, B088R4, B08919, B08933, B088W9.

DESCRIPTION OF EVENT:

The chain-of-custodies were not signed as relinquished by the field samplers. Chain-of-custodies were broken.

DISPOSITION OF SAMPLES:

With concurrence from J.W. Roberts, project engineer, continue with analysis "for information purposes only".

APPROVAL SIGNATURES:

R. C. Smith/ R Clayton Smith — 4/14/93
OSM Project Coordinator (Print/Sign Name) — Date

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

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

9713515.1288

Westinghouse Hanford Company

NONCONFORMANCE REPORT

1. Page 1 of 1

2. Preprinted No. 050039

QA Log No. EQA-93-068

3. P. O., W. O., or Job Control No.	4. System/End Use	5. Item/Material	6. Dwg./Spec./Other No.	7. Rev.
N/A	RI/FS	SAMPLES	B088T0, B088T2	N/A

8. Program/Project/Other	9. Safety Class	10. ASME Code Items
100-FR-3/93-051	N/A	☐ Yes ☒ No (If yes, notify authorized inspector)

11. Supplier Name/Address: ENVIRONMENTAL FIELD SAMPLING SERVICES

12. Notification of Potential Occurence Required: ☐ Yes ☒ No

13. Code: Lot/Heat/Serial	14. Lot Size	15. Sample	16. Qty. Acc.	17. Inspection Criteria
N/A	2	2	0	☐ Dwg. ☐ Spec. ☐ Insp. Plan ☒ Other EEI 5.1, rev 5, Sec 6.2

18. Item	19. Description of Nonconformance (list serial no. where applicable)	22. Disposition, Justification, and Instructions
	CHAIN OF CUSTODY REQUESTS 3 VOLATILE ORGANIC ANALYSIS VIALS, SAMPLE ANALYSIS REQUEST REQUESTS 2 VOLATILE ORGANIC ANALYSIS VIALS; TWO VIALS FOR EACH SAMPLE WERE RECEIVED AT LAB.	The volatile organic analysis shall continue using the two vials. See the attached letter for justification.

20. Originator's Signature: RC SMITH — Date: 4/12/93

23. Design Document Change Required? ☐ Yes, Doc. No. _____ ☒ No

21. Cognizant QA Manager's Signature — Date: 4/12/93

24. Corrective Action Required? ☐ Yes, No. _____ ☒ No

Disp. App.

25. Cognizant Engineer	Date	26. Technical Rep.	Date	Signature/Org.	Date
J.W. Roberts	4/16/93				

QA Engineer	Date	Signature/Org.	Date	Signature/Org.	Date
GS Corrigan	4-16-93	NA		NA	

Close

27. Accept 2 Reject 0 Follow on NCR NA

QA/C Personnel — Date: 4-16-93

A-7310-104 (10/91)

9713515.1289

OFFICE OF SAMPLE MANAGEMENT

RECORD OF DISPOSITION

ROD-93-00095
Record of Disposition No.

DATE: 4/12/93	LABORATORY: TMA
PROJECT TITLE/NO.: 100-FR-3/93-051	NCR NO.:

SAMPLE IDENTIFICATION NUMBERS:

B088T0, B088T2

DESCRIPTION OF EVENT:

Lab received only 2 VOA vials for each sample. C-O-C requested three and SAR requested two.

DISPOSITION OF SAMPLES:

Continue with VOA analysis on the two vials received.

APPROVAL SIGNATURES:

R. C. Smith/ R Clayton Smith — 4/12/93
OSM Project Coordinator (Print/Sign Name) — Date

J. W. Roberts/ J.W. Roberts — 4/14/93
Technical Representative (Print/Sign Name) — Date

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

9713515.1290

DON'T SAY IT — *Write It!*

DATE: 4/15/93

TO: Gary Corrigan

FROM: R. C. Smith RCS

Telephone: 372-2537

cc:

SUBJECT: Volume Requirements for VOA Analysis

According to CLP SOW (OLM01.8, d-15, 1.1), a 5 ml sample aliquot is used for volatile organic analysis. Thus, a single 40 ml vial is sufficient to continue with a VOA analysis. Within a batch of samples, one VOA analysis requires three 40 ml vials for QC purposes. This information should allow disposition of NCRs concerning VOA vials with bubbles.

9713515.1291

QUALITY ASSURANCE

NONCONFORMANCE REPORT DISTRIBUTION

1. FROM:	2. MSIN:	3. DATE:
Environmental Quality Assurance	H4-16	April 12, 1993

4. NCR No.:	5. Initiation, Disposition, or Closure (I, D, C):
050039 / EQA-93-068	I

	6. TO:	MSIN	I	D	C
Cognizant Engineer	J. W. Roberts	H6-02			
Cognizant Quality Engineer	G. S. Corrigan	H4-16			
Originator	R. C. Smith	H4-23			
Q. A. Manager	NA	NA			
Cognizant QE Manager	T. L. Bennington	H4-16			
Facility Manager	NA	NA			
Engineering Records	L. M. McDaniel	H6-08			
Safety	NA	NA			
QSDM	D. P. Trott	L4-86			
Other:					
JCS Package	NA	NA			
Q. C.	NA	NA			
Buyer (Procurement)	NA	NA			
P.O. File (Procurement)	NA	NA			
Vendor File (Procurement)	B. M. Colley	H4-23			
	EQA File	H4-16			
	P. H. Butcher	H6-06			
	J. H. Kessner	H4-23			

7. QST Codes

Subject:	Cause:	Contr. Factor:	PPG:
AD-08	PN-002		NA

8. Responsible Action Party:	Org Code:
J. W. Roberts	81310

A-6000-816 (09/91)

9713515.1292

000001

WESTINGHOUSE HANFORD COMPANY

Results of Analyses For:

GENERAL CHEMISTRY
CASE NO. 04-018
(TMA/ARLI Work Order # A3-04-018)

ORGANICS
CASE NO. 04-018
(TMA/ARLI Work Order # A3-04-018)

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

B088G2	B088Q0
B088W0	B088W2
B088X0	B088X2
B08900	B08902

Norcal Work Order # N3-04-022

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

Date submitted:

5/27/93

9713515.1293

PAGE 1 TMA/Norcal CHAIN OF CUSTODY ORD # N3-04-022 000002

RCVD: 04/06/93 DUE: 05/06/93 04/06/93 12:30:39 KEEP: 08/04/93 DISP: S

DASH	SAMPLE IDENTIFICATION		STORED	TESTS for FRACTIONS with work in DEPT: SU and CATEGORY						
01A-W	B08800	UNFILTERED	ARLI	WH018	WH019	WH020	WH043	WH114	WH121	WH122
				WH128	WH131	WH132	WH140			
02A-W	B08900	UNFILTERED	ARLI	WH018	WH019	WH020	WH043	WH114	WH121	WH122
				WH128	WH131	WH132	WH140			
03A-W	B08800	UNFILTERED	ARLI	WH018	WH019	WH020	WH043	WH114	WH121	WH122
				WH128	WH131	WH132	WH140			
04A-W	B08900	UNFILTERED	ARLI	WH018	WH019	WH020	WH043	WH114	WH121	WH122
				WH128	WH131	WH132	WH140			
04C-W	B08900 MS	UNFILTERED	ARLI	WH018	WH019	WH020	WH043	WH114	WH140	
04D-W	B08900 MSD	UNFILTERED	ARLI	WH019	WH019	WH020				
04E-W	B08900 DUP	UNFILTERED	ARLI	WH043	WH114	WH121	WH122	WH128	WH131	WH132
				WH140						
09A-W	B08802		ARLI	WH018						
10A-W	B08802		ARLI	WH018						
11A-W	B08802		ARLI	WH018						
12A-W	B08902		ARLI	WH018						

RELEASED BY	DATE	TRANSFERRED TO	DATE	RECEIVED BY	DATE
eyamamoto	4-6-93	ARLI	4-6-93	C. Harris	4/7/93

9713515.1294 CD00002A

Westinghouse Hanford Company	CHAIN OF CUSTODY

Custody Form Initiator KD LEE/GG HAMILTON

Company Contact PH BUTCHER

Telephone (509) 376-5045

Project Designation/Sampling Locations 100-FR-3

Collection Date 4/2/93

Ice Chest No. SML-145

Field Logbook No. EFL 1055

Bill of Lading/Airbill No. 2536954684

Offsite Property No. W93-0-0321-44

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks

Sample Identification

B088Q0

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

B088Q1

1, 1L, P, WATER; ICP/AA METALS + Hg (HNO3) FILTERED

B088Q2

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

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

Relinquished By	Date	Time	Received By	Date	Time
[illegible] GG Hamilton	4/29/93	1250	PC Cole PC Cole	PC 4/5/93 ~~0844~~ 4/5/93	0844
			Alonzo Mahy	4/6/93	~~1010~~ 1010

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:
FRIDGE #1

A-6000-407 (12/92) WEF061

9713515.1295

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector K. Lee, L. Walker Date Sampled 4/2/93 Time 1005 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
BO 88QC	3; 40ml; Gs*;	WATER	CLP-VOA
	3; 2L; aG;	WATER	CLP-SEMI VOA & PCB's/PEST
	1; 1L; P;	WATER	ANIONS (IC) SO4, F, PO4, Cl/COND/pH
	1; 500ml; P;	WATER	ANIONS/NO3-NO2 (H2SO4)
	1; 1L; G;	WATER	ALK./TOT. DISSOLVED SOLIDS
	1; 500ml; G;	WATER	SULFIDE (add Zinc Acetate+NaOH pH>9)
	1; 500ml; G;	WATER	AMMONIA/CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)
	1; 1L; P;	WATER	CLP-ICP/AA METALS & Hg (HNO3) UNFILTERED
	1; 1L; P;	WATER	CLP-CN (NaOH)
	1; 4L; P; & 1; 2L; P	WATER	GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC
			(U-235/238,Pu-239/240, Am-241), Sr-90 (HNO3)
	1; 1L; G/P;	WATER	Tc-99 (HCl)
	1; 250ml; Gs;	WATER	TRITIUM/C-14
BO8801	1; 1L; P;	WATER	CLP-ICP/AA METAL & Hg (HNO3) FILTERED
BO 8802	3; 40ml; Gs	WATER	CLP-VOA
			OPC: # W93-0-0321-44
			BOL: # 2536954684
			TASK#: 93-051

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

Received by Alonzo Hutchings Title Sample control tech Date 4/6/93

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)

9713515.1296

000002C

Westinghouse Hanford Company	CHAIN OF CUSTODY

Custody Form Initiator KD LEE/GG HAMILTON

Company Contact PH BUTCHER

Project Designation/Sampling Locations 100-FR-3

Ice Chest No. SMC-119

Bill of Lading/Airbill No. 2536954684

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks

Telephone (509) 376-5045

Collection Date 4-3-93

Field Logbook No. EFL-1054

Offsite Property No. W93-0-0321-45

Sample Identification

BO 88W0

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

BO 88W1

1, 1L, P, WATER; ICP/AA METALS + Hg (HNO3) FILTERED

BO 88W2

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

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

Relinquished By	Date	Time	Received By	Date	Time
C. Celebrate C. Celebrate	4-3-93	1200	PC Cole PC Cole	4/5/93	0846
			Alfonso Rodriguez	4/6/93	1010

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments: Refridg @ 4

A-6000-407 (12/92) WEF061

9713515.1297

0000003D

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector K. Lee, L. Walker Date Sampled 4-3-93 Time 0914 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
BO88W0	3; 40ml; Gs*;	WATER	CLP-VOA
	3; 2L; aG;	WATER	CLP-SEMI VOA & PCB's/PEST
	1; 1L; P;	WATER	ANIONS (IC) SO4, F, PO4, Cl/COND/pH
	1; 500ml; P;	WATER	ANIONS/NO3-NO2 (H2SO4)
	1; 1L; G;	WATER	ALK./TOT. DISSOLVED SOLIDS
	1; 500ml; G;	WATER	SULFIDE (add Zinc Acetate+NaOH pH>9)
	1; 500ml; G;	WATER	AMMONIA/CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)
	1; 1L; P;	WATER	CLP-ICP/AA METALS & Hg (HNO3) UNFILTERED
	1; 1L; P;	WATER	CLP-CN (NaOH)
	1; 4L; P; & 1; 2L; P	WATER	GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC
			(U-235/238,Pu-239/240, Am-241), Sr-90 (HNO3)
	1; 1L; G/P;	WATER	Tc-99 (HCl)
	1; 250ml; Gs;	WATER	TRITIUM/C-14
BO88W1	1; 1L; P;	WATER	CLP-ICP/AA METAL & Hg (HNO3) FILTERED
BO88W2	3; 40ml; Gs	WATER	CLP-VOA
			OPC: # W93- 0-0321-45
			BOL: # 2538954684
			TASK#: 93-051

Field Information** RAIN, Slight Wind, 50°

NA

Special Handling and/or Storage

Possible Sample Hazards

PART II: LABORATORY SECTION

Received by [illegible] Title Sample control tech Date 4/6/93

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)

9713515.1298

000002E

Westinghouse Hanford Company	CHAIN OF CUSTODY

Custody Form Initiator KD LEE/GG HAMILTON

Company Contact PH BUTCHER

Telephone (509) 376-5045

Project Designation/Sampling Locations 100-FR-3

Collection Date 4-3-93

Ice Chest No. SML-217

Field Logbook No. EFL-1054

Bill of Lading/Airbill No. 2536954684

Offsite Property No. W93-0-0321-45

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks

Sample Identification

B0 88X0

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

B0 88X1

1, 1L, P, WATER; ICP/AA METALS + Hg (HNO3) FILTERED

B0 88X2

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

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

Relinquished By	Date	Time	Received By	Date	Time
C. Celebrate C. Celebrate	4/3/93	1200	DC Cole PC Cole	4/5/93	0846
			Alonzo Hatch	4/6/93	1010

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments: Refrid # 4 (VOA's may have Air in them)

A-6000-407 (12/92) WEF061

9713515.1299

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector K. Lee, L. Walker Date Sampled 4-3-93 Time 0740 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B088X0	3; 40ml; Gs*;	WATER	CLP-VOA
	3; 2L; aG;	WATER	CLP-SEMI VOA & PCB's/PEST
	1; 1L; P;	WATER	ANIONS (IC) SO4, F, PO4, Cl/COND/pH
	1; 500ml; P;	WATER	ANIONS/NO3-NO2 (H2SO4)
	1; 1L; G;	WATER	ALK./TOT. DISSOLVED SOLIDS
	1; 500ml; G;	WATER	SULFIDE (add Zinc Acetate+NaOH pH>9)
	1; 500ml; G;	WATER	AMMONIA/CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)
	1; 1L; P;	WATER	CLP-ICP/AA METALS & Hg (HNO3) UNFILTERED
	1; 1L; P;	WATER	CLP-CN (NaOH)
	1; 4L; P; & 1; 2L; P	WATER	GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC
			(U-235/238,Pu-239/240, Am-241), Sr-90 (HNO3)
	1; 1L; G/P;	WATER	Tc-99 (HCl)
	1; 250ml; Gs;	WATER	TRITIUM/C-14
B088X1	1; 1L; P;	WATER	CLP-ICP/AA METAL & Hg (HNO3) FILTERED
B088X2	3; 40ml; Gs	WATER	CLP-VOA
			OPC: # W93-0-0321-45
			BOL: # 2536954684
			TASK#: 93-051

Field Information** Rain, slight wind, 50°

NH

Special Handling and/or Storage

Possible Sample Hazards

PART II: LABORATORY SECTION

Received by [illegible] Title Sample control tech Date 4/6/93

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)

9713515.1300 OCCOO26

Westinghouse Hanford Company

CHAIN OF CUSTODY

Custody Form Initiator KD LEE/GG HAMILTON

Company Contact PH BUTCHER

Telephone (509) 376-5045

Project Designation/Sampling Locations 100-FR-3

Collection Date 4/3/93

Ice Chest No. SML-187

Field Logbook No. EFL1055

Bill of Lading/Airbill No. 2536954684

Offsite Property No. W93-0-0321-44

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks

Sample Identification

B08900

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

B08901

1, 1L, P, WATER; ICP/AA METALS + Hg (HNO3) FILTERED

B08902

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

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

Relinquished By	Date	Time	Received By	Date	Time
KD Lee / GG Hamilton	4/3/93	1200	PC Cole PC Cole	4/5/93	0844
			[illegible]	4/6/93	1010

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

Calm to minor breeze shifting directions occasional smell of exhaust (unavoidable) from compressor Engine (gasoline engine)

FRIG #1

* Anions (IC) / pH aliquot received in this icechest has a label damaged from water & rubbing; ID# cannot be read upon receipt @ TMA/Norcal. KB

A-6000-407 (12/92) WEF061

9713515.1301

0000021H

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector K. Lee, L. Walker Date Sampled 4/3/93 Time 0920 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B08900	3; 40ml; Gs*;	WATER	CLP-VOA
	3; 2L; aG;	WATER	CLP-SEMI VOA & PCB's/PEST
	1; 1L; P;	WATER	ANIONS (IC) SO4, F, PO4, Cl/COND/pH
	1; 500ml; P;	WATER	ANIONS/NO3-NO2 (H2SO4)
	1; 1L; G;	WATER	ALK./TOT. DISSOLVED SOLIDS
	1; 500ml; G;	WATER	SULFIDE (add Zinc Acetate+NaOH pH>9)
	1; 500ml; G;	WATER	AMMONIA/CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)
	1; 1L; P;	WATER	CLP-ICP/AA METALS & Hg (HNO3) UNFILTERED
	1; 1L; P;	WATER	CLP-CN (NaOH)
	1; 4L; P; & 1; 2L; P	WATER	GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC
			(U-235/238,Pu-239/240, Am-241), Sr-90 (HNO3)
	1; 1L; G/P;	WATER	Tc-99 (HCl)
	1; 250ml; Gs;	WATER	TRITIUM/C-14
B08901	1; 1L; P;	WATER	CLP-ICP/AA METAL & Hg (HNO3) FILTERED
B08902	3; 40ml; Gs	WATER	CLP-VOA
			OPC: # W93-0-0321-44
			BOL: # 2536954684
			TASK#: 93-051

Field Information** occasion wind shift brings smell of exhaust to wellhead (gasoline engine) [illegible] 4/3/93

Special Handling and/or Storage

Possible Sample Hazards

PART II: LABORATORY SECTION

Received by Alfonso Gabaly Title Sample control tech Date 4/6/93

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)

9713515.1302

SAMPLE LOG-IN SHEET

LAB NAME: TRA/MRI

PAGE: 1 000003

RECEIVED BY (PRINT NAME): D. WHITTAKER

LOG-IN-DATE: 4-7-93

RECEIVED BY (SIGNATURE): D Whittaker

CASE NUMBER:
SAMPLE DELIVERY GROUP NO.:
SAS NUMBER:

REMARKS:

1. Custody Seal(s) — Present/Absent* Intact/Broken
2. Custody Seal Nos:
3. Chain of Custody Records — Present/Absent*
4. Traffic Reports or Packing List — Present/Absent*
5. Airbill — Airbill/Sticker Present/Absent*
6. Airbill No.: 9597827784
7. Sample Tags — Present/Absent*
8. Sample Tags Numbers — Listed/Not Listed on Chain of Custody
9. Sample Condition: — Intact/Broken*/Leaking
10. Does information on custody records, traffic reports, and sample tags agree — Yes/No*
11. Date Recieved at Lab: 4-7-93
12. Temp of Ice chest SMLT 145 2 °C
13. Time Recieved: 0900

SAMPLE TRANSFER

Fraction:
Area #:
By:
On:

EPA SAMPLE #	CORRESPONDING SAMPLE TAG #	CORRESPONDING ASSIGNED LAB #	REMARKS: CONDITION OF SAMPLE SHIPMENT, ETC
	~~B088P0~~		
	B088P0		
	B088W0	A304018-02A	
	B088X0	A304018-03A	
	B088X2	A304018-11A	

* Contact SMO and attach record of resolution

Reviewed By: _____ Logbook No.: _____

Date: _____ Logbook Page No.: _____

FORM DC-1

9713515.1303

SAMPLE LOG-IN SHEET

LAB NAME: TAL/ARL

PAGE: 1 OF 000004

RECEIVED BY (PRINT NAME): D. WHITAKER

LOG-IN-DATE: 4-7-93

RECEIVED BY (SIGNATURE): D Whitaker

CASE NUMBER:
SAMPLE DELIVERY GROUP NO.:
SAS NUMBER:

REMARKS:

1. Custody Seal(s) Present/Absent* Intact/Broken
2. Custody Seal Nos:
3. Chain of Custody Records Present/Absent*
4. Traffic Reports or Packing List Present/Absent*
5. Airbill Airbill/Sticker Present/Absent*
6. Airbill No.: 6395890130
7. Sample Tags Present/Absent*
8. Sample Tags Numbers Listed/Not Listed on Chain of Custody
9. Sample Condition: Intact/Broken*/Leaking
10. Does information on custody records, traffic reports, and sample tags agree Yes/No*
11. Date Recieved at Lab: 4-7-93
12. Temp of Ice chest SMIL-SMILE 2 °C
13. Time Recieved: 0900

SAMPLE TRANSFER

Fraction:
Area #:
By:
On:

CORRESPONDING			
EPA SAMPLE #	SAMPLE TAG #	ASSIGNED LAB #	REMARKS: CONDITION OF SAMPLE SHIPMENT, ETC
	B088W0	A304018-02A	
	B088X0	A304018-03A	
	B088W2	A304018-11A	

* Contact SMO and attach record of resolution

Reviewed By: Logbook No.:

Date: Logbook Page No.:

FORM DC-3

9713515.1304

SAMPLE LOG-IN SHEET

LAB NAME: TRI/MAS

PAGE: 1 000005

RECEIVED BY (PRINT NAME): D WHITAKER

LOG-IN-DATE: 4-7-93

RECEIVED BY (SIGNATURE): D Whitaker

CASE NUMBER:
SAMPLE DELIVERY GROUP NO.:
SAS NUMBER:

REMARKS:

1. Custody Seal(s) — Present/Absent* Intact/Broken
2. Custody Seal Nos:
3. Chain of Custody Records — Present/Absent*
4. Traffic Reports or Packing List — Present/Absent*
5. Airbill — Airbill/Sticker Present/Absent*
6. Airbill No.: 959782776 775 [illegible]
7. Sample Tags — Present/Absent*
8. Sample Tags Numbers — Listed/Not Listed on Chain of Custody
9. Sample Condition: — Intact/Broken*/Leaking
10. Does information on custody records, traffic reports, and sample tags agree — Yes/No*
11. Date Recieved at Lab: 4-7-93
12. Temp of Ice chest SMC-187 4 °C
13. Time Recieved: 0900

SAMPLE TRANSFER

Fraction:
Area #:
By:
On:

CPA SAMPLE #	CORRESPONDING SAMPLE TAG #	CORRESPONDING ASSIGNED LAB #	REMARKS: CONDITION OF SAMPLE SHIPMENT, ET
	B088X O	A3040180 3A	
	B0889 O	A3040180 4A	
	B08902	A3040181 2A	
	B08960		

* Contact SMO and attach record of resolution

Reviewed By: _____ Logbook No.: _____

Date: _____ Logbook Page No.: _____

FORM SC-1

9713515.1305

SAMPLE LOG-IN SHEET

LAB NAME: TRAVERS

PAGE: 1 000006

RECEIVED BY (PRINT NAME): D. WHITAKER

LOG-IN DATE: 4-7-93

RECEIVED BY (SIGNATURE): D. Whitaker

CASE NUMBER:
SAMPLE DELIVERY GROUP NO.:
SAS NUMBER:

REMARKS:

1. Custody Seal(s) — Present/Absent* Intact/Broken
2. Custody Seal Nos: _____
3. Chain of Custody Records — Present/Absent*
4. Traffic Reports or Packing List — Present/Absent*
5. Airbill — Airbill/Sticker Present/Absent*
6. Airbill No.: 959 7827 766
7. Sample Tags — Present/Absent*
8. Sample Tags Numbers — Listed/Not Listed on Chain of Custody
9. Sample Condition: — Intact/Broken*/Leaking
10. Does information on custody records, traffic reports, and sample tags agree — Yes/No*
11. Date Recieved at Lab: 4-7-93
12. Temp of Ice chest 5mL-217 4 °
13. Time Recieved: 0900

SAMPLE TRANSFER

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

EPA SAMPLE #	CORRESPONDING SAMPLE TAG #	CORRESPONDING ASSIGNED LAB #	REMARKS: CONDITION OF SAMPLE SHIPMENT, ET
	B08900	A304018-04A	
	B08892		
	B08890	A304018-01A	

* Contact SMO and attach record of resolution

Reviewed By: _____ Logbook No.: _____

Date: _____ Logbook Page No.: _____

FORM DC-1

FEDERAL EXPRESS

[redacted]

QUESTIONS? CALL 800-238-5355 TOLL FREE.

AIRBILL PACKAGE TRACKING NUMBER 6395890130

2357M 6395890130

[redacted]

Date 4-6-93

RECIPIENT'S COPY

1 From (Your Name) Please Print: SAMPle control

Your Phone Number (Very Important): 810-235-2633

Company: T M A /NORCAL

Department/Floor No.:

Street Address: 2030 WRIGHT AVE

City: RICHMOND State: CA ZIP (Required): 94804

2 To (Recipient's Name) Please Print: SAMPle control ( )

Recipient's Phone Number (Very Important)

Company: TMA/ARL

Department/Floor No.:

Exact Street Address (We Cannot Deliver to P.O. Boxes or P.O. Zip Codes): 160 Taylor start

City: Monrovia State: CA ZIP Required: 91016

YOUR INTERNAL BILLING REFERENCE INFORMATION (optional) (First 24 characters will appear on invoice.): 2340 6406

H If HOLD FOR PICK-UP, Print FEDEX Address Here

Street Address:

City: State: ZIP Required:

3 PAYMENT 1 [x] Bill Sender 2 [ ] Bill Recipient's FedEx Acct. No. 3 [ ] Bill 3rd Party FedEx Acct. No. 4 [ ] Bill Credit Card 5 [ ] Cash/Check [redacted]

4 SERVICES (Check only one box)

Priority Overnight (Delivery by next business morning)
- 11 [x] OTHER PACKAGING
- 16 [ ] FEDEX LETTER*
- 12 [ ] FEDEX PAK*
- 13 [ ] FEDEX BOX
- 14 [ ] FEDEX TUBE

Standard Overnight (Delivery by next business afternoon)
- 51 [ ] OTHER PACKAGING
- 56 [ ] FEDEX LETTER*
- 52 [ ] FEDEX PAK*
- 53 [ ] FEDEX BOX
- 54 [ ] FEDEX TUBE

Economy Two-Day (Delivery by second business day)
- 30 [ ] ECONOMY*

* Economy Letter rate not available. Minimum charge. One pound minimum rate.

Government Overnight (Requested for selected area only)
- 46 [ ] GOVT LETTER
- 41 [ ] GOVT PACKAGE

Freight Service (for packages over 150 lbs.)
- 70 [ ] OVERNIGHT FREIGHT** (Confirmed reservation required)
- 80 [ ] TWO-DAY FREIGHT**

* Delivery commitment may be later in some areas.

** Declared Value Limit $500. Call for delivery schedule.

5 DELIVERY AND SPECIAL HANDLING (Check services required)
- 1 [ ] HOLD FOR PICK-UP (Fill in Box H)
- 2 [x] DELIVER WEEKDAY
- 3 DELIVER SATURDAY (Extra charge) [ ] (Not available to all locations)
- 4 [ ] DANGEROUS GOODS (Extra charge)
- 5 [ ]
- 6 [x] DRY ICE (Dangerous Goods Shipper's Declaration not required) By lbs. 5 or less x ... lb. 594 =
- 7 [ ] OTHER SPECIAL SERVICE
- 8 [ ]
- 9 [ ] SATURDAY PICK-UP (Extra charge)
- 10 [ ]
- 12 [ ] HOLIDAY DELIVERY (If offered)

PACKAGES	WEIGHT In Pounds Only	YOUR DECLARED VALUE (See right)
Total	Total	Total
4	240	

DIM SHIPMENT (Chargeable Weight) [ ] lbs.

L x W x H

Received At: 1 [x] Regular Stop 2 [ ] Drop Box 3 [ ] On-Call Stop 4 [ ] B.S.C. 5 [ ] Station

7 Release Signature:

Emp. No. Date

[ ] Cash Received
[ ] Return Shipment
[ ] Third Party [ ] Chg. To Del [ ] Chg. To Hold

Street Address

City State Zip

Received By: X

Date/Time Received FedEx Employee Number

Federal Express Use

Base Charges

Declared Value Charge

Other 1

Other 2

Total Charges

REVISION DATE 11/92 PART #137204 FXEM 12/92 FORMAT #155

155

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9713515.1306

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N

MULTIPLE PACKAGE SHIPMENT LABELS

SHIPMENT DATE	4.6.93
MASTER AIRBILL NUMBER	6395890130

2 OF 4 9597827766

DESCRIPTION Ice chest

3 OF 4 9597827775

DESCRIPTION Ice chest

4 OF 4 9597827784

DESCRIPTION Ice chest

___ OF ___ 9597827793

DESCRIPTION

___ OF ___ 9597827802

DESCRIPTION

TERMS AND CONDITIONS

DEFINITIONS

On this Airbill we, our and us refer to Federal Express Corporation, its employees and agents. You and your refer to the sender, its employees and agents.

AGREEMENT TO TERMS

By giving us your package to deliver, you agree to all the terms on this Airbill and in our current Service Guide, which is available on request. If there is a conflict between the current Service Guide and this Airbill, the Service Guide will control. No one is authorized to alter or modify the terms of our Agreement.

RESPONSIBILITY FOR PACKAGING AND COMPLETING AIRBILL

You are responsible for adequately packaging your goods and for properly filling out this Airbill. Omission of the number of packages and weight per package from this Airbill will result in a billing based on our best estimate of the number of packages received from you and an estimated "default" weight per package, as determined and periodically adjusted by us.

AIR TRANSPORTATION TAX INCLUDED

Our basic rate includes a federal tax required by Internal Revenue Code Section 4271 on the air transportation portion of this service.

LIMITATIONS ON OUR LIABILITY AND LIABILITIES NOT ASSUMED

Our liability for loss or damage to your package is limited to your actual damages or $100, whichever is less, unless you pay for and declare a higher authorized value. We do not provide cargo liability insurance, but you may pay an additional charge for each additional $100 of declared value. If you declare a higher value and pay the additional charge, our liability will be the lesser of your declared value or the actual value of your package.

In any event we will not be liable for any damages, whether direct, incidental, special or consequential, in excess of the declared value of a shipment, whether or not Federal Express had knowledge that such damages might be incurred, including, but not limited to, loss of income or profits.

We won't be liable for your acts or omissions, including but not limited to improper or insufficient packing, securing, marking or addressing, or for the acts or omissions of the recipient or anyone else with an interest in the package. Also, we won't be liable if you or the recipient violates any of the terms of our agreement. We won't be liable for loss of or damage to shipments of prohibited items.

We won't be liable for loss, damage or delay caused by events we cannot control, including but not limited to acts of God, perils of the air, weather conditions, acts of public enemies, war, strikes, civil commotions, or acts or omissions of public authorities (including customs and quarantine officials) with actual or apparent authority.

DECLARED VALUE LIMITS

The highest declared value we allow for FedEx Letter and FedEx Pak shipments is $500. For other shipments, the highest declared value we allow is $25,000 unless your package contains items of extraordinary value," in which case the highest declared value we allow is $500. "Items of "extraordinary value," include artwork, jewelry, furs, precious metals, negotiable instruments, and other items listed in our current Service Guide.

If you send more than one package on this Airbill, you may fill in the total declared value for all packages, not to exceed the $100, $500 or $25,000 per package limit described above. (Example: 5 packages can have a total declared value of up to $125,000.)

If more than one package is shipped on this airbill, our liability for loss or damage will be limited to the actual value of the package(s) lost or damaged (not to exceed the lesser of the total declared value or the per package limits described above). You have the responsibility of proving the actual loss or damage.

FILING A CLAIM

ALL CLAIMS MUST BE MADE BY YOU IN WRITING. You must notify us of your claim within strict time limits. (see current Service Guide.)

We'll consider your claim filed if you call and notify our Customer Service Department at 800 238 5355 and notify us in writing as soon as possible.

Within 90 days after you notify us of your claim, you must send us all relevant information about it. We are not obligated to act on any claim until you have paid all transportation charges, and you may not deduct the amount of your claim from those charges.

If the recipient accepts your package without noting any damage on the delivery record, we will assume that the package was delivered in good condition. In order for us to process your claim, you must, to the extent possible, make the original shipping cartons and packing available for inspection.

RIGHT TO INSPECT

We may, at our option, open and inspect your packages prior to or after you give them to us to deliver.

NO C.O.D. SERVICES

NO C.O.D. SERVICES ON THIS AIRBILL. If C.O.D. Service is required, please use a Federal Express C.O.D. airbill for this purpose.

RESPONSIBILITY FOR PAYMENT

Even if you give us different payment instructions, you will always be primarily responsible for all delivery costs, as well as any cost we may incur in either returning your package to you or warehousing it pending disposition.

RIGHT OF REJECTION

We reserve the right to reject a shipment at any time, when such shipment would be likely to cause damage or delay to other shipments, equipment or personnel, or if the transportation of which is prohibited by law or is in violation of any rules contained in this Airbill or our current Service Guide.

MONEY-BACK GUARANTEE

In the event of untimely delivery, Federal Express will at your request and with some limitations, refund or credit all transportation charges. See current Service Guide for further information.

Part # 137204/137205
Rev. 11 92

9713515.1307

9713515.1308

TMA/ARI
Thermo Analytical Inc.

000009

RADIATION DOSE RATE SURVEY FORM

Date 4/7/93 COMPANY TMA/NORCAL (WHC) OTHER ORD # 639589013C

Surveyor's Name MARK S. McCray

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

Serial Nos. 210289 / 02619 Serial Nos. 407726 / 02628

Calibration Date 12/02/93 Calibration Date 2/16/93

Instrument Calibration Factor 0.280 Instrument Calibration Factor 0.190

Sample	Location	HP-210 CPM	HP-210 Factor	HP-210 DPM	AC-3-7 CPM	AC-3-7 Factor	AC-3-7 DPM	Spillage or Breakage?	Activity pCi/mL or pCi/g
Background		32.0			0				
Consumary		7,390	0.2653		5,070	0.1863			
Smear: SML SMILE		97.0			16.0				
SML 217		33.0			1.99				
SML 145		37.0			2.99				
SML 187		47.0			9.97				
Reported (WHC)		20	samples		each	< 50 pCi/g			

Comments

All OK ✓ Approved MSM

Not OK Date 4/7/93

GENERAL CHEMISTRY RESULTS

CASE NO. 04-018

Water Sample #:

B088Q0	B088W0
B088X0	B08900

CASE NARRATIVE

The holding time for the pH and COD analysis was exceeded. Careful review of the QC analysis indicates that the data is reliable.

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

Maureen Parrish

Maureen Parrish

9713515.1310

000011

TMA Inc. REPORT Work Order # A3-04-018

Received: 04/06/93 05/18/93 16:32:54

REPORT TO: Westinghouse Hanford Company
2355 Stevens Dr.,MSIN-H4-23
345 Hills Street/3000 Area
Richland, WA 99352

ATTEN: Jeanette Duncan

PREPARED BY: Thermo Analytical, Inc.
160 Taylor Street
Monrovia, CA 91016

ATTEN: Ms. Carole Harris

PHONE: 818-357-3247

Maureen Parrish
CERTIFIED BY

CONTACT: EVY CIN

CLIENT: WHC SAMPLES: 9

COMPANY: Westinghouse Hanford Company

FACILITY:

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

WORK ID: 100-FR-3

TAKEN: By Westinghouse Staff

TRANS: Federal Express

TYPE: Liquid

P.O. #: N3-04-022-SU-AR

INVOICE: under separate cover

SAMPLE IDENTIFICATION

01	B08890
01	B08890 MS
01	B08890 MSD
01	B08890
01	B08890 MS
01	B08890
01	B08890 Duplicate
01	B08890
01	B08890 MS
01	B08890
01	B08890 MS
02	B08892
02	B08892 MS
02	B08892 MSD
03	B088W0
03	B088W0 MS
03	B088W0 MSD
03	B088W0
03	B088W0 Duplicate
03	B088W0
03	B088W0 Duplicate
03	B088W0
03	B088W0 Duplicate
04	B088W2
05	B088X0
06	B088X2

TEST CODES and NAMES used on this workorder

BNCLPW	CLP Semivol. Water - WH020
PECLPL	CLP Pesticides Liq.
VOCLPL	CLP Volatile Org.Liq.
WCCLPL	Anions & Wet Chem. - WH043
WCLCS	Lab Control Sample Summary
WCL L	Chloride - WH120
WCQCD	Quality Control Summary
WCQCS	Quality Control Summary
WF L	Fluoride in Water
WNH3 L	Ammonia in Water - WH140
WPH L	pH of Liquid - WH121
WPO4 L	Phosphate in Liquids
WSO4 L	Sulfate (in Waters)
WSULFI	Sulfide - WH114
W ALK	Alkalinity - WH131
W COD	COD Water - WH132
W COND	Conductivity-Water WH122
W TDS	Dissolved Solids WH128

9713515.1311

000012

TNA Inc. REPORT Work Order # A3-04-018

Received: 04/06/93 05/18/93 16:32:54

SAMPLE IDENTIFICATION

07 B08900

08 B08902

09 Lab Blank

09 Laboratory Control Sample

TMA Inc. REPORT Work Order # A3-04-018

Received: 04/06/93

Results by Sample

SAMPLE ID B08890 FRACTION 01E TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 04/02/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	10.7	mg/L	0.2
Fluoride	300.0	0.8	mg/L	0.1
Phosphate	300.0	<0.4	mg/L	0.4
pH	150.1	7.8	pH	0.1
Sulfate	300.0	53	mg/L	1
Elect. Conductivity	120.1	458	umho/cm	6

FORM I

9713515.1313

000015

TMA Inc. REPORT Work Order # A3-04-018

Received: 04/06/93

Results by Sample

SAMPLE ID B08800 FRACTION 01G TEST CODE VCCLPL NAME Anions & Wet Chem. - VM043

Date & Time Collected 04/02/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Alkalinity	310.1	163	mg/L	2
Tot. Dissolved Solids	160.1	311	mg/L	5

FORM I

9713515.1314

000016

TMA Inc. REPORT Work Order # A3-04-018

Received: 04/06/93

Results by Sample

SAMPLE ID B08800 FRACTION 01I TEST CODE WCCLPL NAME Anions & Wet Chem. - WR043

Date & Time Collected 04/02/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

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

FORM I

9713515.1315

000017

TMA Inc. REPORT Work Order # A3-04-018

Received: 04/06/93

Results by Sample

SAMPLE ID B08BQ0 FRACTION 01K TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 04/02/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Ammonia Nitrogen	350.3	<0.05	mg/L	0.05
COD	410.0	<5	mg/L	5

FORM I

9713515.1316

000018

TMA Inc. REPORT Work Order # A3-04-018

Received:: 04/06/93

Results by Sample

SAMPLE ID B088V0 FRACTION 03E TEST CODE WCCLPL NAME Anions & Wet Chem. - WK043

Date & Time Collected 04/03/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	17.4	mg/L	0.2
Fluoride	300.0	0.3	mg/L	0.1
Phosphate	300.0	<0.4	mg/L	0.4
pH	150.1	7.9	pH	0.1
Sulfate	300.0	68	mg/L	1
Elect. Conductivity	120.1	556	umho/cm	6

FORM I

TMA Inc. REPORT Work Order # A3-04-018

Received: 04/06/93 Results by Sample

SAMPLE ID B088V0 FRACTION 036 TEST CODE VCCLPL NAME Anions & Wet Chem. - VN043

Date & Time Collected 04/03/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Alkalinity	310.1	176	mg/L	2
Tot. Dissolved Solids	160.1	372	mg/L	5

FORM I

9713515.1318

000020

TMA Inc. REPORT Work Order # A3-04-018

Received: 04/06/93

Results by Sample

SAMPLE ID B088V0 FRACTION 03B TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 04/03/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

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

FORM I

9713515.1319

000021

TMA Inc. REPORT Work Order # A3-04-018

Received: 04/06/93

Results by Sample

SAMPLE ID B088V0 FRACTION 03J TEST CODE VCCLPL NAME Anions & Wet Chem. - VB043

Date & Time Collected 04/03/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Ammonia Nitrogen	350.3	<0.05	mg/L	0.05
COD	410.0	<5	mg/L	5

FORM I

9713515.1320

000022

TMA Inc. REPORT Work Order # A3-04-018

Received: 04/06/93

Results by Sample

SAMPLE ID B088X0 FRACTION 05C TEST CODE WCCLPL NAME Anions & Wet Chem. - WR043

Date & Time Collected 04/03/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	22.8	mg/L	0.2
Fluoride	300.0	0.3	mg/L	0.1
Phosphate	300.0	<0.4	mg/L	0.4
pH	150.1	7.9	pH	0.1
Sulfate	300.0	80	mg/L	1
Elect. Conductivity	120.1	666	umho/cm	6

FORM I

TMA Inc. REPORT Work Order # A3-04-018

Received: 04/06/93

Results by Sample

SAMPLE ID B088X0 FRACTION 05D TEST CODE WCCLPL NAME Anions & Wet Chem. - WK043

Date & Time Collected 04/03/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Alkalinity	310.1	194	mg/L	2
Tot. Dissolved Solids	160.1	438	mg/L	5

FORM I

TMA Inc. REPORT Work Order # A3-04-018

Received: 04/06/93

Results by Sample

SAMPLE ID B088X0 FRACTION 05E TEST CODE WCCLPL NAME Anions & Wet Chem. - WW043

Date & Time Collected 04/03/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

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

FORM I

TMA Inc. REPORT Work Order # A3-04-018

Received: 04/06/93

Results by Sample

SAMPLE ID B088X0 FRACTION 05F TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 04/03/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Ammonia Nitrogen	350.3	<0.05	mg/L	0.05
COD	410.0	<5	mg/L	5

FORM I

TMA Inc. REPORT Work Order # A3-04-018

Received: 04/06/93

Results by Sample

SAMPLE ID B08900 FRACTION 07C TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 04/03/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	9.2	mg/L	0.2
Fluoride	300.0	0.4	mg/L	0.1
Phosphate	300.0	<0.4	mg/L	0.4
pH	150.1	7.3	pH	0.1
Sulfate	300.0	59	mg/L	1
Elect. Conductivity	120.1	1100	umho/cm	6

FORM I

TNA Inc. REPORT Work Order # A3-04-018

Received: 04/06/93 Results by Sample

SAMPLE ID B08900 FRACTION 07D TEST CODE WCCLPL NAME Anions & Vet Chem. - VR043

Date & Time Collected 04/03/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Alkalinity	310.1	513	mg/L	2
Tot. Dissolved Solids	160.1	792	mg/L	5

FORM I

THA Inc. REPORT Work Order # A3-04-018

Received: 04/06/93

Results by Sample

SAMPLE ID B08900 FRACTION 07E TEST CODE WCCLPL NAME Anions & Wet Chem. - WR043

Date & Time Collected 04/03/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

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

FORM I

TMA Inc. REPORT Work Order # A3-04-018

Received: 04/06/93

Results by Sample

SAMPLE ID B08900 FRACTION 07F TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 04/03/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Ammonia Nitrogen	350.3	<0.05	mg/L	0.05
COD	410.0	8	mg/L	5

FORM I

CASE NARRATIVE

LABORATORY : TMA/ARLI

CASE : 04-018

CONTRACT ID : WESTINGHOUSE HANFORD COMPANY

SDG RECEIPT DATE : April 6, 1993

1.0 DESCRIPTION OF CASE :

Eight water samples were analyzed for TCL Organics- Volatiles, Semivolatiles, and Pesticides/PCBs according to the USEPA Contract Laboratory Program (CLP) Statement of Work for Organic Analysis, Revision OLM01.8.

2.0 SAMPLE LIST :

WESTINGHOUSE ID	LAB ID	ANALYSIS REQUESTED	MATRIX	pH
B088Q0	A3-04-018-01A	V	WATER	7
B088Q0	A3-04-018-01B	SV & P	WATER	
B088Q0 MS	A3-04-018-01C	SV	WATER	
B088Q0 MSD	A3-04-018-01D	SV	WATER	
B088Q2	A3-04-018-02A	V	WATER	7
B088Q2 MS	A3-04-018-02B	V	WATER	7
B088Q2 MSD	A3-04-018-02C	V	WATER	7
B088W0	A3-04-018-03A	V	WATER	7
B088W0	A3-04-018-03B	SV & P	WATER	
B088W0 MS	A3-04-018-03C	P	WATER	
B088W0 MSD	A3-04-018-03D	P	WATER	
B088W2	A3-04-018-04A	V	WATER	7
B088X0	A3-04-018-05A	V	WATER	7
B088X0	A3-04-018-05B	SV & P	WATER	
B088X2	A3-04-018-06A	V	WATER	7
B08900	A3-04-018-07A	V	WATER	7
B08900	A3-04-018-07B	SV & P	WATER	
B08902	A3-04-018-08A	V	WATER	7

3.0 COMMENTS :

3.1 SHIPPING AND DOCUMENTATION :

All of the samples were received unbroken and properly documented.

3.2 ANALYSIS

3.2.1 VOLATILE ANALYSIS COMMENTS :

LOW LEVEL WATER :

The samples were analyzed within the CLP SOW holding times.

All of the QC results were within the limits specified by the EPA CLP SOW.

TUNES :

All BFB tunes are injected directly into GC/MS instrument.

3.2.2 SEMIVOLATILE ANALYSIS COMMENTS :

LOW LEVEL WATER :

The samples were extracted and analyzed within the CLP SOW holding times. The matrix spike recoveries for 4-Chloro-3-methylphenol and 4-Nitrophenol in samples B088Q0MS and B088Q0MSD were above the QC limits. Sample B088Q0MSD also had a Pentachlorophenol spike recovery slightly above the QC limits. In accordance with protocol, no further action was required.

All of the other QC results were within the limits specified by the EPA CLP SOW.

3.2.3 PESTICIDE/PCB ANALYSIS COMMENTS :

SEQUENCE NOTES :

The sequence was started on 04/17/93 and was analyzed according to the CLP SOW. The sequence was analyzed by single injection into a dual column system.

All of the QC criteria were within the limits specified by the CLP SOW.

The chromatograms are presented in the manner consistent with the capabilities of the Nelson 2700 Turbochrome Data System which normalizes the largest peak to scale.

SAMPLE NOTES :

LOW LEVEL WATER :

The samples were extracted and analyzed within the CLP SOW holding times. Sample PBLK0408C1 had TCX and DCB surrogate recoveries slightly below the advisory limits. The percent difference between the two GC columns exceeded 25% for TCX. This was due to an interference peak that co-eluted with TCX on the DB-1701 column.

All of the other QC results were within the limits specified by CLP SOW.

We certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data in this hardcopy data package and in the computer-readable data submitted on diskette is authorized by the Laboratory Manager or his designee, as verified by the following signatures.

Nicole Roth 5/27/93
Nicole Roth
CLP Program Manager

Widayati 5/27/93
Wida Ang
Organics Manager

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088Q0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304018-01A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30409R18

Level: (low/med) LOW Date Received: 04/06/93

% Moisture: not dec. ____ Date Analyzed: 04/09/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	2	J
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

9713515.1332

000006

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B088Q0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304018-01A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30409R18

Level: (low/med) LOW Date Received: 04/06/93

% Moisture: not dec. ____ Date Analyzed: 04/09/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

9713515.1333

000007

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088Q2

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304018-02A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30409R19

Level: (low/med) LOW Date Received: 04/06/93

% Moisture: not dec. ____ Date Analyzed: 04/09/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	4	J
67-64-1	Acetone	24	
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B088Q2

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304018-02A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30409R19

Level: (low/med) LOW Date Received: 04/06/93

% Moisture: not dec. ____ Date Analyzed: 04/09/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088W0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304018-03A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30409R23

Level: (low/med) LOW Date Received: 04/06/93

% Moisture: not dec. ____ Date Analyzed: 04/09/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	4	J
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	7	J
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B088W0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304018-03A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30409R23

Level: (low/med) LOW Date Received: 04/06/93

% Moisture: not dec. ____ Date Analyzed: 04/09/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088W2

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304018-04A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30409R24

Level: (low/med) LOW Date Received: 04/06/93

% Moisture: not dec. ____ Date Analyzed: 04/09/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	4	J
67-64-1	Acetone	21	
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B088W2

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304018-04A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30409R24

Level: (low/med) LOW Date Received: 04/06/93

% Moisture: not dec. ____ Date Analyzed: 04/09/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088X0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304018-05A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30409R25

Level: (low/med) LOW Date Received: 04/06/93

% Moisture: not dec. ____ Date Analyzed: 04/09/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	1	J
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	2	J
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B088X0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304018-05A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30409R25

Level: (low/med) LOW Date Received: 04/06/93

% Moisture: not dec. ____ Date Analyzed: 04/09/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

9713515.1341

000015

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088X2

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304018-06A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30409R26

Level: (low/med) LOW Date Received: 04/06/93

% Moisture: not dec. ____ Date Analyzed: 04/10/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	64	
67-64-1	Acetone	49	
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	2	J
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

9713515.1342

000016

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B088X2

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304018-06A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30409R26

Level: (low/med) LOW Date Received: 04/06/93

% Moisture: not dec. ____ Date Analyzed: 04/10/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

9713515.1343

000017

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B08900

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304018-07A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30409R27

Level: (low/med) LOW Date Received: 04/06/93

% Moisture: not dec. ____ Date Analyzed: 04/10/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	2	J
67-64-1	Acetone	9	J
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

9713515.1344

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B08900

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304018-07A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30409R27

Level: (low/med) LOW Date Received: 04/06/93

% Moisture: not dec. ____ Date Analyzed: 04/10/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

9713515.1345

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO. 000019

B08902

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304018-08A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30409R28

Level: (low/med) LOW Date Received: 04/06/93

% Moisture: not dec. ____ Date Analyzed: 04/10/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	8	J
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

9713515.1346

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B08902

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304018-08A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30409R28

Level: (low/med) LOW Date Received: 04/06/93

% Moisture: not dec. ____ Date Analyzed: 04/10/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088Q0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304018-01B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30414S06

Level: (low/med) LOW Date Received: 04/06/93

% Moisture: ____ decanted: (Y/N) ___ Date Extracted: 04/08/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/14/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	25	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088Q0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304018-01B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30414S06

Level: (low/med) LOW Date Received: 04/06/93

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 04/08/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/14/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)Anthracene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	10	U
218-01-9	Chrysene	10	U
117-84-0	Di-n-Octyl Phthalate	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine

9713515.1349

000023

EPA SAMPLE NO.

B088Q0

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304018-01B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30414S06

Level: (low/med) LOW Date Received: 04/06/93

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 04/08/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/14/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

Number TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN HYDROCARBON	5.85	4	J

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088W0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304018-03B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30414S09

Level: (low/med) LOW Date Received: 04/06/93

% Moisture: ____ decanted: (Y/N) ___ Date Extracted: 04/08/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/14/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	25	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088W0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304018-03B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30414S09

Level: (low/med) LOW Date Received: 04/06/93

% Moisture: ____ decanted: (Y/N) ___ Date Extracted: 04/08/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/14/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)Anthracene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	10	U
218-01-9	Chrysene	10	U
117-84-0	Di-n-Octyl Phthalate	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine

9713515.1352

000026

EPA SAMPLE NO.

B088W0

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304018-03B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30414S09

Level: (low/med) LOW Date Received: 04/06/93

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 04/08/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/14/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

Number TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN HYDROCARBON	5.85	6	J

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088X0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304018-05B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30414S10

Level: (low/med) LOW Date Received: 04/06/93

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 04/08/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/14/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	25	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088X0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304018-05B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30414S10

Level: (low/med) LOW Date Received: 04/06/93

% Moisture: ____ decanted: (Y/N) ___ Date Extracted: 04/08/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/14/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

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

CAS NO.	COMPOUND		Q
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)Anthracene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	4	J
218-01-9	Chrysene	10	U
117-84-0	Di-n-Octyl Phthalate	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine

9713515.1355

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B088X0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304018-05B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30414S10

Level: (low/med) LOW Date Received: 04/06/93

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 04/08/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/14/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

Number TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN HYDROCARBON	5.87	6	J

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B08900

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304018-07B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30414S11

Level: (low/med) LOW Date Received: 04/06/93

% Moisture: ____ decanted: (Y/N) ___ Date Extracted: 04/08/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/14/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	25	U

9713515.1357

000031

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

B08900

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304018-07B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30414S11

Level: (low/med) LOW Date Received: 04/06/93

% Moisture: ____ decanted: (Y/N) ___ Date Extracted: 04/08/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/14/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	16	
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)Anthracene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	10	U
218-01-9	Chrysene	10	U
117-84-0	Di-n-Octyl Phthalate	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B08900

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304018-07B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30414S11

Level: (low/med) LOW Date Received: 04/06/93

% Moisture: ____ decanted: (Y/N) ___ Date Extracted: 04/08/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/14/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

Number TICs found: 4

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN HYDROCARBON	5.87	7	J
2.	UNKNOWN COMPOUND	19.05	40	J
3.	UNKNOWN COMPOUND	21.80	81	J
4.	UNKNOWN HYDROCARBON	23.47	3	J

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088Q0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304018-01B

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: 04/06/93

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 04/08/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/18/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-36-3	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088W0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304018-03B

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: 04/06/93

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 04/08/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/18/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-36-3	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088X0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304018-05B

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: 04/06/93

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 04/08/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/18/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-36-3	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B08900

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304018-07B

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: 04/06/93

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 04/08/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/18/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-36-3	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

9713515.1363

000002

Page 1 Skinner&Sherman REPORT Work Order # S3-04-070

Received: 04/07/93 05/10/93 14:31:40

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

ATTEN Dan Steurmer

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

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

ATTEN Client Services
PHONE (617) 890-7200

CERTIFIED BY

CONTACT DP

WORK ID N3-04-022
TAKEN By Client
TRANS Fed Ex
TYPE Water
P.O. # N3-04-022
INVOICE under separate cover

SAMPLE IDENTIFICATION

01 B088Q0
02 B088W0
03 B088X0
04 B08900
04 B08900 DUPL
04 B08900 SPIKE
05 LCSW

TEST CODES and NAMES used on this workorder

NO3NO2 Nitrate Plus Nitrite

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.

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

9713515.1364

000003

 Skinner&Sherman REPORT Work Order # S3-04-070

Received: 04/07/93 Results by Sample

SAMPLE ID B088Q0 SAMPLE # 01 FRACTIONS: A
Date & Time Collected 04/03/93 Category WATER

NO3NO2 4.63
mg N/L

SAMPLE ID B088W0 SAMPLE # 02 FRACTIONS: A
Date & Time Collected 04/03/93 Category WATER

NO3NO2 11.0
mg N/L

SAMPLE ID B088X0 SAMPLE # 03 FRACTIONS: A
Date & Time Collected 04/03/93 Category WATER

NO3NO2 18.2
mg N/L

SAMPLE ID B08900 SAMPLE # 04 FRACTIONS: A
Date & Time Collected 04/03/93 Category WATER

NO3NO2 22.9
mg N/L

SAMPLE ID B08900 DUPL SAMPLE # 04 FRACTIONS: B
Date & Time Collected 04/03/93 Category WATER

NO3NO2 23.2
mg N/L

SAMPLE ID B08900 SPIKE SAMPLE # 04 FRACTIONS: C
Date & Time Collected 04/03/93 Category WATER

NO3NO2 24.7
mg N/L

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

NO3NO2 2.05
mg N/L

TMA
Thermo Analytical Inc.

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

Received: 04/07/93 05/10/93 14:31:40

TMA/NORCAL Hanford

QUALITY CONTROL

MATRIX SPIKE

Sample ID	Sample Result	Spike Added	Spike Result	% Recovery
S304070-04	22.9 mg/L	2.00 mg/L	24.7 mg/L	90.0

DUPLICATE

Sample ID	Sample result	Duplicate Result	Relative % Difference
S304070-04	22.9 mg/L	23.2 mg/L	1.3

QUALITY CONTROL SAMPLES

Sample ID	True Value	Found Value	Percent Recovery
LCS	2.00 mg/L	2.05 mg/L	102.7
Prep blank	--	<0.25 mg/L	--

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

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

Page 4 Skinner&Sherman REPORT Work Order # S3-04-070

Received: 04/07/93 Test Methodology

TEST CODE NO3NO2 NAME Nitrate Plus Nitrite

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

TMA
Thermo Analytical Inc.

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

9213515.1367

000024

TMA/Skinner & Sherman Labs SAMPLE LOG-IN
WORKORDER S304051 CLIENT Hanford Nuc No. SAMPLES:
PROTCL CLP TURNARND 33 Day 1
COOLER TEMP: 1 oC, or NA (Soil) (Water) (Specify Other)
CUSTODIAN B Prouix SDG/BATCH N/A
CUSTODY SEAL: PRESENT/ABSENT/INTACT/NOT CLIENT CASE N304006
SHIPER & # Fed Ex PO/CONTRACT# ⊥
TAGS: PRESENT/ABSENT/NA/SEE COC CONTACT D SANCHEZ
CHAIN OF CUSTODY: PRESENT/ABSENT/NA, # N/A COMMENTS: none

SAMPLE CONTAINERS-INTACT/BROKEN COMMENTS

CLIENT COMMENT? YES/NO
SAMPLE LABELS AGREE WITH CHAIN OF CUSTODY INFO? YES/NO (COMMENT)
CLIENT PAPERWORK AGREES WITH SAMPLES & COC? YES/NO (COMMENT)
Collection dates don't agree Client contacted 4/6/93 BP
SHIPMENT DATES 4/6/93
LIST ANY DATE WITH PAPERWORK/SHIPMENT PROBLEMS & SPECIFY THE PROBLEM:

N/A

	CLIENT ID	MATRIX	RECEIVED	PH*	TEST(S) & QC	HOLD TIME UP
1	B08896	water	4/6/93	1.19	DS NO3 NO2	DLE 4-26-93
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						

Samples are from site known to have Rad-Contamination: YES ✓ NO
Samples have detectable amounts of Radioactive Material: YES NO ✓

SUBCONTRACT: YES/NO, TO: complete DATE:

REVIEWED 4/6/93 BP

* EPA/CLP required Rev 1.6 PAGE: 78

9713515.1368

PAGE 1 TMA/Norcal CHAIN OF CUSTODY ORD # N3-04-022 000025

RCVD: 04/06/93 DUE: 05/06/93 04/06/93 12:30:11 KEEP: 08/04/93 DISP: S

DASH	SAMPLE IDENTIFICATION		STORED	TESTS for FRACTIONS with work in DEPT: SU and CATEGORY				
01B-W	B08BQ0	UNFILTERED	S&S	WH007	WH008	WH010	WH011	WH137
02B-W	B08BW0	UNFILTERED	S&S	WH007	WH008	WH010	WH011	WH137
03B-W	B08BX0	UNFILTERED	S&S	WH007	WH008	WH010	WH011	WH137
04B-W	B08900	UNFILTERED	S&S	WH007	WH008	WH010	WH011	WH137
04F-W	B08900 MS	UNFILTERED	S&S	WH007	WH008	WH010	WH011	WH137
04G-W	B08900 DUP	UNFILTERED	S&S	WH007	WH008	WH010	WH011	WH137
04H-W	L C S		S&S	WH007	WH008	WH010	WH137	
05A-W	B08BQ1	FILTERED	S&S	WH007	WH008	WH010		
06A-W	B08BW1	FILTERED	S&S	WH007	WH008	WH010		
07A-W	B08BX1	FILTERED	S&S	WH007	WH008	WH010		
08A-W	B08901	FILTERED	S&S	WH007	WH008	WH010		
08B-W	B08901 MS	FILTERED	S&S	WH007	WH008	WH010		
08C-W	B08901 DUP	FILTERED	S&S	WH007	WH008	WH010		
08D-W	L C S		S&S	WH007	WH008	WH010		

RELEASED BY	DATE	TRANSFERRED TO	DATE	RECEIVED BY	DATE
Eyamamoto	4-6-93	Skinner	4-6-93	[illegible]	4/7/93

9713515.1369

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

JUN 1993
RECEIVED
SDLA

May 7, 1993

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

Quality Control Narrative

Scope
Four (4) water samples were submitted to TMA/Skinner & Sherman Laboratories, Inc. on April 7, 1993 from TMA/Norcal. The samples were analyzed for the USEPA CLP metals and cyanide as indicated on the chain of custody. The analysis was performed under TMA/Skinner and Sherman work order S304068.

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

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

The selenium digestion spike recovery exceeded the control limit requirements.

The iron laboratory duplicate exceeded the control limit reqiurement.

The barium ICP serial dilution exceeded the control limit requirements.

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

Respectfully submitted,

TMA/SKINNER & SHERMAN LABORATORIES, INC.

David N. Peterson
Assistant Laboratory Manager

i 8/26/96

WESTINGHOUSE/HANFORD

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

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

Lab Code: SKINER Case No.: N3-04-022 SAS No.: SDG No.: B088Q0

SOW No.: ILM02.1

SAMPLE NUMBER:	Lab Sample ID.
B088Q0	04068-01S
B088W0	04068-02S
B088X0	04068-03S
B08900	04068-04S
B08900D	04068-04S2
B08900S	04068-04DS

Were ICP interelement corrections applied? Yes/No YES

Were ICP background corrections applied? Yes/No YES

If yes-were raw data generated before application of background corrections? Yes/No NO

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Steven Provencal Name: Steven R. Provencal

Date: 5/7/93 Title: Lead Chemist

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B088Q0

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

Lab Code: SKINER Case No.: N3-04-022SAS No.: SDG No.: B088Q0

Matrix (soil/water): WATER Lab Sample ID: 04068-01S

Level (low/med): LOW Date Received: 04/07/93

% 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	56.5	B		P
7440-36-0	Antimony	17.9	U		P
7440-38-2	Arsenic	9.4	B		F
7440-39-3	Barium	30.3	B	E	P
7440-41-7	Beryllium	0.50	U		P
7440-43-9	Cadmium	1.7	U		P
7440-70-2	Calcium	33300			P
7440-47-3	Chromium	9.3	B		P
7440-48-4	Cobalt	3.8	U		P
7440-50-8	Copper	4.2	U		P
7439-89-6	Iron	141		*	P
7439-92-1	Lead	1.3	U		F
7439-95-4	Magnesium	11000			P
7439-96-5	Manganese	3.8	B		P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	6.1	U		P
7440-09-7	Potassium	4010	B		P
7782-49-2	Selenium	3.3	U	WN	F
7440-22-4	Silver	3.8	U		P
7440-23-5	Sodium	47500			P
7440-28-0	Thallium	1.2	U	W	F
7440-62-2	Vanadium	19.5	B		P
7440-66-6	Zinc	16.6	B		P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

002

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B088W0

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

Lab Code: SKINER Case No.: N3-04-022SAS No.: SDG No.: B088Q0

Matrix (soil/water): WATER Lab Sample ID: 04068-02S

Level (low/med): LOW Date Received: 04/07/93

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	26.4	B		P
7440-36-0	Antimony	17.9	U		P
7440-38-2	Arsenic	2.5	U		F
7440-39-3	Barium	41.7	B	E	P
7440-41-7	Beryllium	0.50	U		P
7440-43-9	Cadmium	1.7	U		P
7440-70-2	Calcium	79900			P
7440-47-3	Chromium	109			P
7440-48-4	Cobalt	3.8	U		P
7440-50-8	Copper	4.2	U		P
7439-89-6	Iron	83.2	B	*	P
7439-92-1	Lead	1.3	U		F
7439-95-4	Magnesium	10600			P
7439-96-5	Manganese	2.2	B		P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	6.1	U		P
7440-09-7	Potassium	4410	B		P
7782-49-2	Selenium	3.3	U	N	F
7440-22-4	Silver	3.8	U		P
7440-23-5	Sodium	20500			P
7440-28-0	Thallium	1.2	U		F
7440-62-2	Vanadium	5.3	B		P
7440-66-6	Zinc	18.1	B		P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

003

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B088X0

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

Lab Code: SKINER Case No.: N3-04-022SAS No.: SDG No.: B088Q0

Matrix (soil/water): WATER Lab Sample ID: 04068-03S

Level (low/med): LOW Date Received: 04/07/93

% 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	33.5	B		P
7440-36-0	Antimony	17.9	U		P
7440-38-2	Arsenic	2.5	U		F
7440-39-3	Barium	41.7	B	E	P
7440-41-7	Beryllium	0.50	U		P
7440-43-9	Cadmium	1.7	U		P
7440-70-2	Calcium	85200			P
7440-47-3	Chromium	29.4			P
7440-48-4	Cobalt	3.8	U		P
7440-50-8	Copper	4.2	U		P
7439-89-6	Iron	45.2	B	*	P
7439-92-1	Lead	1.5	B		F
7439-95-4	Magnesium	20200			P
7439-96-5	Manganese	2.2	B		P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	6.1	U		P
7440-09-7	Potassium	6290			P
7782-49-2	Selenium	3.3	U	N	F
7440-22-4	Silver	3.8	U		P
7440-23-5	Sodium	23200			P
7440-28-0	Thallium	1.2	U	W	F
7440-62-2	Vanadium	4.4	B		P
7440-66-6	Zinc	17.3	B		P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

004

SAMPLE NUMBER:

B08900

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: SKINER Case No.: N3-04-022SAS No.: SDG No.: B088Q0

Matrix (soil/water): WATER Lab Sample ID: 04068-04S

Level (low/med): LOW Date Received: 04/07/93

% 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	63.2	B		P
7440-36-0	Antimony	17.9	U		P
7440-38-2	Arsenic	2.5	U		F
7440-39-3	Barium	126	B	E	P
7440-41-7	Beryllium	0.50	U		P
7440-43-9	Cadmium	1.7	U		P
7440-70-2	Calcium	134000			P
7440-47-3	Chromium	25.4			P
7440-48-4	Cobalt	3.8	U		P
7440-50-8	Copper	5.2	B		P
7439-89-6	Iron	138		*	P
7439-92-1	Lead	2.2	B	W	F
7439-95-4	Magnesium	34500			P
7439-96-5	Manganese	6.0	B		P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	7.0	B		P
7440-09-7	Potassium	7280			P
7782-49-2	Selenium	3.3	U	WN	F
7440-22-4	Silver	3.8	U		P
7440-23-5	Sodium	59700			P
7440-28-0	Thallium	1.2	U		F
7440-62-2	Vanadium	8.0	B		P
7440-66-6	Zinc	18.1	B		P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

005

9713515.1375

TMA/Skinner & Sherman Labs SAMPLE LOG-IN

WORKORDER S304068 CLIENT Hanford Nav No. SAMPLES:

PROTCL CLP TURNARND 33 Day 4

COOLER TEMP: 2 oC, or NA (Soil) (Water) (Specify Other

CUSTODIAN B. Prouty SDG/BATCH N/A

CUSTODY SEAL: PRESENT/ABSENT/INTACT/NOT CLIENT CASE N304022

SHIPER & # Fed Ex PO/CONTRACT# ↓

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

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

SAMPLE CONTAINERS-INTACT/BROKEN COMMENTS

CLIENT COMMENT? YES/NO

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

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

SHIPMENT DATES 4/7/93

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

UNFILTERED

	CLIENT ID	MATRIX	RECEIVED	PH*		TEST(S) & QC	HOLD TIME U
1	B088Q0	water	4/7/93	1.79	12.50	TM/CN	
2	B088W0	↓	↓	1.77	12.46	↓	
3	B088X0			1.63	12.39		
4	B088900			1.52	12.42 DS		
5	4/7/93 a.r.						
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							142
26							
27							

Samples are from site known to have Rad-Contamination: YES ✓ NO

Samples have detectable amounts of Radioactive Material: YES NO ✓

SUBCONTRACT: YES/NO TO: DATE: Comm MAC BP 4/7/93

REVIEWED

* EPA/CLP required Rev 1.6 PAGE: 86

9713515.1376

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

JUN 1993 RECEIVED SOLA

May 7, 1993

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

Quality Control Narrative

Scope
Four (4) water samples were submitted to TMA/Skinner & Sherman Laboratories, Inc. on April 7, 1993 from TMA/Norcal. The samples were analyzed for the USEPA CLP metals. The analysis was performed under TMA/Skinner and Sherman work order S304069.

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

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

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

Respectfully submitted,

TMA/SKINNER & SHERMAN LABORATORIES, INC.

David N. Peterson
Assistant Laboratory Manager

i 8/26/96

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

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

Lab Code: SKINER Case No.: N3-04-022 SAS No.: SDG No.: B08801

SOW No.: ILM02.1

SAMPLE NUMBER:	Lab Sample ID.
B08801	04069-01S
B088W1	04069-02S
B088X1	04069-03S
B08901	04069-04S
B08901D	04069-04S2
B08901S	04069-04DS

Were ICP interelement corrections applied? Yes/No YES
Were ICP background corrections applied? Yes/No YES
If yes-were raw data generated before application of background corrections? Yes/No NO

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Steven Provencal Name: Steven R. Provencal

Date: 5/7/93 Title: Lead Chemist

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B08801

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

Lab Code: SKINER Case No.: N3-04-022SAS No.: SDG No.: B08801

Matrix (soil/water): WATER Lab Sample ID: 04069-01S

Level (low/med): LOW Date Received: 04/07/93

% 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	31.1	B		P
7440-36-0	Antimony	18.6	U		P
7440-38-2	Arsenic	10.8			F
7440-39-3	Barium	30.4	B		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	34800			P
7440-47-3	Chromium	3.3	U		P
7440-48-4	Cobalt	2.9	U		P
7440-50-8	Copper	7.0	B		P
7439-89-6	Iron	23.2	B		P
7439-92-1	Lead	2.1	B		F
7439-95-4	Magnesium	11400			P
7439-96-5	Manganese	1.4	B		P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	4.2	U		P
7440-09-7	Potassium	4240	B		P
7782-49-2	Selenium	3.3	U	+	F
7440-22-4	Silver	3.3	U		P
7440-23-5	Sodium	48600			P
7440-28-0	Thallium	1.2	U	W	F
7440-62-2	Vanadium	22.9	B		P
7440-66-6	Zinc	9.7	B		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

002

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B088W1

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

Lab Code: SKINER Case No.: N3-04-022SAS No.: SDG No.: B08801

Matrix (soil/water): WATER Lab Sample ID: 04069-02S

Level (low/med): LOW Date Received: 04/07/93

% 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	19.2	U		P
7440-36-0	Antimony	18.6	U		P
7440-38-2	Arsenic	2.5	U		F
7440-39-3	Barium	43.6	B		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	83300			P
7440-47-3	Chromium	104			P
7440-48-4	Cobalt	2.9	U		P
7440-50-8	Copper	7.0	B		P
7439-89-6	Iron	19.4	B		P
7439-92-1	Lead	1.3	U		F
7439-95-4	Magnesium	10900			P
7439-96-5	Manganese	1.7	B		P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	4.2	U		P
7440-09-7	Potassium	4630	B		P
7782-49-2	Selenium	16.5	U	W	F
7440-22-4	Silver	3.3	U		P
7440-23-5	Sodium	21000			P
7440-28-0	Thallium	1.2	U	W	F
7440-62-2	Vanadium	4.4	B		P
7440-66-6	Zinc	7.1	B		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

003

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B088X1

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

Lab Code: SKINER Case No.: N3-04-022SAS No.: SDG No.: B088Q1

Matrix (soil/water): WATER Lab Sample ID: 04069-03S

Level (low/med): LOW Date Received: 04/07/93

% 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	39.8	B		P
7440-36-0	Antimony	18.6	U		P
7440-38-2	Arsenic	2.8	B		F
7440-39-3	Barium	42.8	B		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	90100			P
7440-47-3	Chromium	23.4			P
7440-48-4	Cobalt	2.9	U		P
7440-50-8	Copper	5.9	B		P
7439-89-6	Iron	16.9	B		P
7439-92-1	Lead	1.3	U		F
7439-95-4	Magnesium	21000			P
7439-96-5	Manganese	1.4	B		P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	4.2	U		P
7440-09-7	Potassium	6520			P
7782-49-2	Selenium	3.7	B	W	F
7440-22-4	Silver	3.3	U		P
7440-23-5	Sodium	23800			P
7440-28-0	Thallium	1.2	U		F
7440-62-2	Vanadium	7.1	B		P
7440-66-6	Zinc	4.8	U		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

004

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B08901

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

Lab Code: SKINER Case No.: N3-04-022SAS No.: SDG No.: B08801

Matrix (soil/water): WATER Lab Sample ID: 04069-04S

Level (low/med): LOW Date Received: 04/07/93

% 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	30.3	B		P
7440-36-0	Antimony	18.6	U		P
7440-38-2	Arsenic	4.2	B		F
7440-39-3	Barium	127	B		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	142000			P
7440-47-3	Chromium	16.4			P
7440-48-4	Cobalt	2.9	U		P
7440-50-8	Copper	6.7	B		P
7439-89-6	Iron	20.3	B		P
7439-92-1	Lead	1.3	U		F
7439-95-4	Magnesium	36300			P
7439-96-5	Manganese	3.8	B		P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	4.2	U		P
7440-09-7	Potassium	7730			P
7782-49-2	Selenium	3.3	U	W	F
7440-22-4	Silver	3.3	U		P
7440-23-5	Sodium	62000			P
7440-28-0	Thallium	1.2	U	W	F
7440-62-2	Vanadium	8.0	B		P
7440-66-6	Zinc	25.9			P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

005

9213515.1382

TMA/Skinner & Sherman Labs SAMPLE LOG-IN

WORKORDER S304069 CLIENT Hanford Nar No. SAMPLES:

PROTCL CLP TURNARND 33 Day

COOLER TEMP: 2 oC, or NA (Soil) 4 (Water) (Specify Other)

CUSTODIAN B Proulx SDG/BATCH N/A

CUSTODY SEAL: PRESENT/ABSENT/INTACT/NOT CLIENT CASE N304022

SHIPER & # Fed EX PO/CONTRACT# ↓

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

CHAIN OF CUSTODY: PRESENT/ABSENT/NA, # NA COMMENTS: none

SAMPLE CONTAINERS-INTACT/BROKEN COMMENTS

CLIENT COMMENT? YES/NO

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

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

SHIPMENT DATES 4/7/93

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

bulkhead

	CLIENT ID	MATRIX	RECEIVED	PH*	TEST(S) & QC	HOLD TIME UP
1	B088Q1	water	4/7/93	1.22	TM	
2	B088 W1	↓	↓	1.84	↓	
3	B088 X1			1.4		
4	B088Q01 4/7/93			1.43	DS	
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						134
26						
27						

Samples are from site known to have Rad-Contamination: YES ✓ NO

Samples have detectable amounts of Radioactive Material: YES NO ✓

SUBCONTRACT: YES/NO, TO: DATE: 4/7/93

REVIEWED

* EPA/CLP required Rev 1.6 PAGE: 87

SDG	7179	Client	Westinghouse Hanford
Contact	Dinkar P. Kharkar	Contract	MBH-SVV-069262

CASE NARRATIVE

1.0 GENERAL

Water sample results from 100-FR-3 Location (TMA/Norcal Group 7179) are provided in this report. TMA/Norcal Group 7179 is comprised of the thirteen samples listed on the Chain-of-Custody documents below which are identified as samples 1 through 13.

1.1 CHAINS-OF-CUSTODY

This report includes data from samples delivered under Chain-of-Custody documents Field Logbook No. EFL-1054 and EFL-1055.

1.2 SAMPLE VOLUME

Four L and 1 L plastic bottles and 250 mL glass bottles containing the samples were received for the analyses.

1.3 MISSING SAMPLES

All samples were accounted for in an undamaged condition.

1.4 HOLDING TIMES

Samples were collected between 3/31/93 and 4/06/93 and sample processing was initiated within 180 days of collection.

2.0 QUALITY CONTROL

The internal quality control consisted of one sample each of a laboratory control, a blank, and a replicate. All original analyses were performed with QC samples 7179-14 through 7179-18. The reworks for the plutonium and ^{14}C analyses were performed with QC sample numbers 7179-19 through 21 and 7179-22 through 7179-24, respectively.

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

2.1 LABORATORY CONTROL SAMPLES

The LCS recoveries for gross alpha, $^{239,240}Pu$ and ^{14}C were 70%, 133%, and 73%, respectively and did not pass at the 3 σ protocol limits. The low recovery for gross alpha was due to uneven distribution of the sample on the planchet. The high recovery of $^{239,240}Pu$ is under investigation. We checked the calculations, the aliquot and the spectrum and all looked good. The low recovery of ^{14}C is also under investigation. The LCS recoveries for all other nuclides were satisfactory.

The MDA's of the results for all the nuclides met the RDL requirements.

SDG	7179	Client	Westinghouse Hanford
Contact	Dinkar P. Kharkar	Contract	MBH-SVV-069262

CASE NARRATIVE

2.2 BLANKS

The MDA's of the results for all analyses met RDL requirements. The ^{90}Sr error was underlined because it was larger than both the MDA and the result, implying that the MDA may not be a good estimate of the "real" minimum detectable activity.

2.3 REPLICATES

Results were satisfactory for all replicate analyses except for ^{14}C. The discrepancy in the results for ^{14}C of sample number B088V5 (7179-24) and its original (7179-02) was due to the small aliquot processed for the replicate. The MDA for ^{238}Pu of the original (7179-4) was higher than the RDL due to low chemical recovery.

3.0 ANALYTICAL NOTES

3.1 Gross Alpha Analyses: The average MDA for gross alpha was (3 ± 2) pCi/L. Gross alpha activity above the RDL was found in sample numbers B088Y0, B088X0, and B088R5. The residue on planchets B088YO, B088QO, B088WO, BO88XO, B089O0, and BO88R5 exceeded the nominal residue limits of 5-150 mg. The MDA's met the RDL despite the higher residue. The MDA of sample number B089O0 was higher than the RDL due to the small aliquot taken for analysis.

3.2 Gross Beta Analyses: The average MDA for gross beta was (2 ± 0.9) pCi/L. Gross beta activity above the RDL was found in all samples except in sample number B088X5. Again, the residues on planchets for B088YO, b088QO, B088WO, BO88XO, B089O0, and BO88R5 exceeded the nominal residue limits of 5-150 mg. The aliquot for sample number B089O0 was smaller than the nominal aliquot of 0.300 L.

3.3 Tritium Analyses: The average MDA for sixteen analyses was (200 ± 50) pCi/L. Tritium activity above RDL was found in all of the samples except in sample numbers BO88Q5, BO88Q0, BO88T0, BO88T5, and BO88X5. Sample number BO89O0 was counted for a short time due to high activity in the sample.

3.4 Carbon-14 Analyses: The average MDA for sixteen analyses was (40 ± 30) pCi/L. Carbon-14 activity above the RDL was found in sample numbers BO89O0, and BO88T0.

3.5 Strontium-90 Analyses: The average yield for sixteen analyses was (86 ± 7)%. The lowest yield was 75% and the highest was 91%. The average MDA was (0.8 ± 0.1) pCi/L. Strontium-90 activity above the RDL was found in sample numbers BO88Q5, BO88V0, BO88W0, BO88T0, and BO88T5.

SDG	7179	Client	Westinghouse Hanford
Contact	Dinkar P. Kharkar	Contract	MBH-SVV-069262

CASE NARRATIVE

3.6 Technicium-99 Analyses: The average yield for sixteen analyses was (38 ± 9)%. The lowest yield was 32% and the highest was 47%. The average MDA was (4 ± 1) pCi/L. Technicium-99 activity above the RDL was not found in any of the samples.

3.7 Uranium-233, 234, 238 Analyses: The average yield for sixteen analyses was (59 ± 25)%. The lowest yield was 38% and the highest was 84%. The average MDA was (0.1 ± 0.1) pCi/L. Uranium-233,234 and ^{238}U activity above the RDL was found in all of the samples. The MDA of the result for sample number BO88X0 was higher than the RDL due to low recovery.

3.8 Plutonium-238, 239/240 Analyses: The average yield for sixteen analyses was (40 ± 19%). The lowest yield was 22% and the highest was 53%. The average MDA was (0.06 ± 0.04) pCi/L. Plutonium activity above the RDL was not found in any of the samples. The MDA's of the result for many of the samples were higher than the RDL due to low recovery.

3.9 Americium-241 Analyses: The average yield for sixteen analyses was (64 ± 31)%. The lowest yield was 25% and the highest yield was 85%. The average MDA was (0.04 ± 0.02) pCi/L. Americium activity above the RDL was not found in any of the samples.

3.10 Gamma Scan Analyses: Gamma scan analysis did not find positive concentration of gamma nuclides in any of the samples.

9713515.1386

N304008-06

TMA NORCAL
REPORTING GROUP 7179

DATA SHEET

B088Q0

SDG	7179	Client	Westinghouse Hanford
Contact	Dinkar Kharkar	Contract	MBH-SVV-069262
Lab sample id	N304008-06	Client sample id	B088Q0
Dept sample id	7179-006	Matrix	WATER
Received	04/06/93	Collected	04/02/93
		Chain of custody id	EFL-1055

PARAMETER	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	Alpha	1.4	1.9	2	3	U	80A
Gross Beta	Beta	5.5	1.6	2	4		80B
Uranium 233/234		2.2	0.47	0.1	0.2		U
Uranium 235	15117-96-1	0.083	0.084	0.2	0.2	U	U
Uranium 238	7440-61-1	1.7	0.40	0.1	0.2		U
Plutonium 238	13981-16-3	-0.031	0.039	0.08	0.05	U	PU
Plutonium 239/240		0.004	0.008	0.03	0.05	U	PU
Americium 241	14596-10-2	0.020	0.032	0.05	0.05	U	AM
Strontium 90	10098-97-2	0.16	0.23	0.9	2	U	Y
Technetium 99	14133-76-7	3.1	2.5	4	5	U	TC
Tritium	10028-17-8	170	150	200	400	U	H
Carbon 14	14762-75-5	-9.3	25	40	50	U	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	U		300		U	GAM
Iron 59	14596-12-4	U		40	30	U	GAM
Chromium 51	14392-02-0	U		200		U	GAM
Cobalt 60	10198-40-0	U		20	30	U	GAM
Zinc 65	13982-39-3	U		30		U	GAM
Ruthenium 106	13967-48-1	U		100		U	GAM
Cesium 134	13967-70-9	U		10		U	GAM
Cesium 137	10045-97-3	U		20	20	U	GAM
Cerium 144	14762-78-8	U		70		U	GAM
Europium 152	14683-23-9	U		30	40	U	GAM
Europium 154	15585-10-1	U		20	40	U	GAM
Radium 226	13982-63-3	U		30		U	GAM
Thorium 228	14274-82-9	U		20		U	GAM
Thorium 232	7440-29-1	U		70		U	GAM

Lab id	TMAN
Protocol	WHC-HEIS
Version	Ver 1.0
Form	DVD-DS
Version	2.23
Report date	05/24/93

9713515.1387

N304008-01

TMA NORCAL
REPORTING GROUP 7179

DATA SHEET

B088Q5

SDG 7179
Contact Dinkar Kharkar

Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N304008-01
Dept sample id 7179-001
Received 04/02/93

Client sample id B088Q5
Matrix WATER
Collected 03/31/93
Chain of custody id EFL-1055

PARAMETER	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	Alpha	-0.45	1.4	2	3	U	80A
Gross Beta	Beta	51	2.9	2	4		80B
Uranium 233/234		0.68	0.21	0.2	0.2		U
Uranium 235	15117-96-1	0.034	0.069	0.1	0.2	U	U
Uranium 238	7440-61-1	0.68	0.21	0.1	0.2		U
Plutonium 238	13981-16-3	-0.011	0.046	0.1	0.05	U	PU
Plutonium 239/240		0.006	0.011	0.04	0.05	U	PU
Americium 241	14596-10-2	0	0.005	0.02	0.05	U	AM
Strontium 90	10098-97-2	24	3.7	0.9	2		Y
Technetium 99	14133-76-7	0.070	1.1	3	5	U	TC
Tritium	10028-17-8	320	160	200	400	J	H
Carbon 14	14762-75-5	5.3	32	50	50	U	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	U		200		U	GAM
Iron 59	14596-12-4	U		30	30	U	GAM
Chromium 51	14392-02-0	U		100		U	GAM
Cobalt 60	10198-40-0	U		10	30	U	GAM
Zinc 65	13982-39-3	U		30		U	GAM
Ruthenium 106	13967-48-1	U		100		U	GAM
Cesium 134	13967-70-9	U		10		U	GAM
Cesium 137	10045-97-3	U		10	20	U	GAM
Cerium 144	14762-78-8	U		60		U	GAM
Europium 152	14683-23-9	U		30	40	U	GAM
Europium 154	15585-10-1	U		20	40	U	GAM
Radium 226	13982-63-3	U		20		U	GAM
Thorium 228	14274-82-9	U		20		U	GAM
Thorium 232	7440-29-1	U		60		U	GAM

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.23
Report date 05/24/93

9713515.1388

N304008-10

TMA NORCAL
REPORTING GROUP 7179

DATA SHEET

B088R5

SDG 7179
Contact Dinkar Kharkar
Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N304008-10
Dept sample id 7179-010
Received 04/07/93
Client sample id B088R5
Matrix WATER
Collected 04/05/93
Chain of custody id EFL-1055

PARAMETER	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	Alpha	5.2	3.2	3	3		80A
Gross Beta	Beta	7.4	1.6	2	4		80B
Uranium 233/234		4.0	0.65	0.1	0.2		U
Uranium 235	15117-96-1	0.084	0.068	0.1	0.2	U	U
Uranium 238	7440-61-1	3.0	0.54	0.1	0.2		U
Plutonium 238	13981-16-3	-0.003	0.021	0.04	0.05	U	PU
Plutonium 239/240		-0.005	0.005	0.02	0.05	U	PU
Americium 241	14596-10-2	0.003	0.014	0.03	0.05	U	AM
Strontium 90	10098-97-2	0.10	0.23	0.8	2	U	Y
Technetium 99	14133-76-7	1.1	1.3	3	5	U	TC
Tritium	10028-17-8	8800	390	200	400		H
Carbon 14	14762-75-5	-0.46	19	30	50	U	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	U		200		U	GAM
Iron 59	14596-12-4	U		30	30	U	GAM
Chromium 51	14392-02-0	U		100		U	GAM
Cobalt 60	10198-40-0	U		10	30	U	GAM
Zinc 65	13982-39-3	U		30		U	GAM
Ruthenium 106	13967-48-1	U		100		U	GAM
Cesium 134	13967-70-9	U		10		U	GAM
Cesium 137	10045-97-3	U		10	20	U	GAM
Cerium 144	14762-78-8	U		70		U	GAM
Europium 152	14683-23-9	U		30	40	U	GAM
Europium 154	15585-10-1	U		20	40	U	GAM
Radium 226	13982-63-3	U		30		U	GAM
Thorium 228	14274-82-9	U		20		U	GAM
Thorium 232	7440-29-1	U		60		U	GAM

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
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Version 2.23
Report date 05/24/93

9713515.1389

N304008-11

TMA NORCAL
REPORTING GROUP 7179

DATA SHEET

B088T0

SDG	7179	Client	Westinghouse Hanford
Contact	Dinkar Kharkar	Contract	MBH-SVV-069262
Lab sample id	N304008-11	Client sample id	B088T0
Dept sample id	7179-011	Matrix	WATER
Received	04/07/93	Collected	04/05/93
		Chain of custody id	EFL-1055

PARAMETER	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	Alpha	0.18	0.90	1	3	U	80A
Gross Beta	Beta	9.2	1.6	2	4		80B
Uranium 233/234		0.42	0.12	0.08	0.2		U
Uranium 235	15117-96-1	0.023	0.031	0.06	0.2	U	U
Uranium 238	7440-61-1	0.35	0.093	0.05	0.2		U
Plutonium 238	13981-16-3	-0.011	0.055	0.1	0.05	U	PU
Plutonium 239/240		0.006	0.011	0.04	0.05	U	PU
Americium 241	14596-10-2	0	0.013	0.03	0.05	U	AM
Strontium 90	10098-97-2	2.6	1.8	0.9	2		Y
Technetium 99	14133-76-7	-0.61	1.4	4	5	U	TC
Tritium	10028-17-8	59	140	200	400	U	H
Carbon 14	14762-75-5	120	24	40	50		C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	U		100		U	GAM
Iron 59	14596-12-4	U		30	30	U	GAM
Chromium 51	14392-02-0	U		100		U	GAM
Cobalt 60	10198-40-0	U		10	30	U	GAM
Zinc 65	13982-39-3	U		20		U	GAM
Ruthenium 106	13967-48-1	U		80		U	GAM
Cesium 134	13967-70-9	U		9		U	GAM
Cesium 137	10045-97-3	U		10	20	U	GAM
Cerium 144	14762-78-8	U		50		U	GAM
Europium 152	14683-23-9	U		20	40	U	GAM
Europium 154	15585-10-1	U		10	40	U	GAM
Radium 226	13982-63-3	U		20		U	GAM
Thorium 228	14274-82-9	U		20		U	GAM
Thorium 232	7440-29-1	U		50		U	GAM

Lab id	TMAN
Protocol	WHC-HEIS
Version	Ver 1.0
Form	DVD-DS
Version	2.23
Report date	05/24/93

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N304008-12

TMA NORCAL
REPORTING GROUP 7179

DATA SHEET

B088T5

SDG 7179
Contact Dinkar Kharkar

Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N304008-12
Dept sample id 7179-012
Received 04/08/93

Client sample id B088T5
Matrix WATER
Collected 04/06/93
Chain of custody id EFL-1055

PARAMETER	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	Alpha	0.63	0.97	1	3	U	80A
Gross Beta	Beta	6.7	1.4	2	4		80B
Uranium 233/234		0.24	0.14	0.1	0.2		U
Uranium 235	15117-96-1	0.021	0.042	0.2	0.2	U	U
Uranium 238	7440-61-1	0.23	0.14	0.1	0.2		U
Plutonium 238	13981-16-3	0.006	0.028	0.05	0.05	U	PU
Plutonium 239/240		0.003	0.006	0.02	0.05	U	PU
Americium 241	14596-10-2	0	0.015	0.03	0.05	U	AM
Strontium 90	10098-97-2	2.7	0.53	0.8	2		Y
Technetium 99	14133-76-7	1.6	1.5	4	5	U	TC
Tritium	10028-17-8	19	150	200	400	U	H
Carbon 14	14762-75-5	3.4	19	30	50	U	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	U		200		U	GAM
Iron 59	14596-12-4	U		30	30	U	GAM
Chromium 51	14392-02-0	U		100		U	GAM
Cobalt 60	10198-40-0	U		20	30	U	GAM
Zinc 65	13982-39-3	U		20		U	GAM
Ruthenium 106	13967-48-1	U		90		U	GAM
Cesium 134	13967-70-9	U		10		U	GAM
Cesium 137	10045-97-3	U		10	20	U	GAM
Cerium 144	14762-78-8	U		50		U	GAM
Europium 152	14683-23-9	U		20	40	U	GAM
Europium 154	15585-10-1	U		10	40	U	GAM
Radium 226	13982-63-3	U		20		U	GAM
Thorium 228	14274-82-9	U		20		U	GAM
Thorium 232	7440-29-1	U		50		U	GAM

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.23
Report date 05/24/93

9713515.1391

N304008-05

TMA NORCAL
REPORTING GROUP 7179

DATA SHEET

B088V0

SDG	7179	Client	Westinghouse Hanford
Contact	Dinkar Kharkar	Contract	MBH-SVV-069262
Lab sample id	N304008-05	Client sample id	B088V0
Dept sample id	7179-005	Matrix	WATER
Received	04/05/93	Collected	04/01/93
		Chain of custody id	EFL-1055

PARAMETER	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	Alpha	1.4	1.4	2	3	U	80A
Gross Beta	Beta	14	1.8	2	4		80B
Uranium 233/234		0.40	0.12	0.1	0.2		U
Uranium 235	15117-96-1	0.023	0.031	0.06	0.2	U	U
Uranium 238	7440-61-1	0.50	0.12	0.05	0.2		U
Plutonium 238	13981-16-3	0.003	0.031	0.06	0.05	U	PU
Plutonium 239/240		0.003	0.006	0.02	0.05	U	PU
Americium 241	14596-10-2	0.005	0.016	0.03	0.05	U	AM
Strontium 90	10098-97-2	6.6	2.1	0.8	2		Y
Technetium 99	14133-76-7	1.4	1.6	4	5	U	TC
Tritium	10028-17-8	580	180	200	400		H
Carbon 14	14762-75-5	-12	25	40	50	U	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	U		300		U	GAM
Iron 59	14596-12-4	U		30	30	U	GAM
Chromium 51	14392-02-0	U		100		U	GAM
Cobalt 60	10198-40-0	U		10	30	U	GAM
Zinc 65	13982-39-3	U		30		U	GAM
Ruthenium 106	13967-48-1	U		100		U	GAM
Cesium 134	13967-70-9	U		10		U	GAM
Cesium 137	10045-97-3	U		10	20	U	GAM
Cerium 144	14762-78-8	U		60		U	GAM
Europium 152	14683-23-9	U		30	40	U	GAM
Europium 154	15585-10-1	U		20	40	U	GAM
Radium 226	13982-63-3	U		20		U	GAM
Thorium 228	14274-82-9	U		20		U	GAM
Thorium 232	7440-29-1	U		50		U	GAM

Lab id	TMAN
Protocol	WHC-HEIS
Version	Ver 1.0
Form	DVD-DS
Version	2.23
Report date	05/24/93

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N304008-02

TMA NORCAL
REPORTING GROUP 7179

DATA SHEET

B088V5

SDG 7179
Contact Dinkar Kharkar
Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N304008-02
Dept sample id 7179-002
Received 04/02/93
Client sample id B088V5
Matrix WATER
Collected 03/31/93
Chain of custody id EFL-1054

PARAMETER	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	Alpha	0.72	1.4	2	3	U	80A
Gross Beta	Beta	4.7	1.5	2	4		80B
Uranium 233/234		1.4	0.30	0.1	0.2		U
Uranium 235	15117-96-1	0.11	0.087	0.1	0.2	J	U
Uranium 238	7440-61-1	1.2	0.27	0.1	0.2		U
Plutonium 238	13981-16-3	0.017	0.040	0.07	0.05	U	PU
Plutonium 239/240		-0.003	0.011	0.03	0.05	U	PU
Americium 241	14596-10-2	0.017	0.025	0.04	0.05	U	AM
Strontium 90	10098-97-2	0.003	0.18	0.8	2	U	Y
Technetium 99	14133-76-7	1.5	1.3	3	5	U	TC
Tritium	10028-17-8	560	170	200	400		H
Carbon 14	14762-75-5	-2.1	17	30	50	U	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	U		100		U	GAM
Iron 59	14596-12-4	U		30	30	U	GAM
Chromium 51	14392-02-0	U		100		U	GAM
Cobalt 60	10198-40-0	U		10	30	U	GAM
Zinc 65	13982-39-3	U		20		U	GAM
Ruthenium 106	13967-48-1	U		100		U	GAM
Cesium 134	13967-70-9	U		9		U	GAM
Cesium 137	10045-97-3	U		10	20	U	GAM
Cerium 144	14762-78-8	U		50		U	GAM
Europium 152	14683-23-9	U		20	40	U	GAM
Europium 154	15585-10-1	U		10	40	U	GAM
Radium 226	13982-63-3	U		20		U	GAM
Thorium 228	14274-82-9	U		20		U	GAM
Thorium 232	7440-29-1	U		40		U	GAM

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.23
Report date 05/24/93

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N304008-07

TMA NORCAL
REPORTING GROUP 7179

DATA SHEET

B088W0

SDG	7179	Client	Westinghouse Hanford
Contact	Dinkar Kharkar	Contract	MBH-SVV-069262
Lab sample id	N304008-07	Client sample id	B088W0
Dept sample id	7179-007	Matrix	WATER
Received	04/06/93	Collected	04/03/93
		Chain of custody id	EFL-1055

PARAMETER	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	Alpha	1.7	2.4	3	3	U	80A
Gross Beta	Beta	30	2.4	2	4		80B
Uranium 233/234		2.9	0.46	0.1	0.2		U
Uranium 235	15117-96-1	0.30	0.14	0.1	0.2		U
Uranium 238	7440-61-1	2.5	0.42	0.1	0.2		U
Plutonium 238	13981-16-3	-0.003	0.025	0.05	0.05	U	PU
Plutonium 239/240		-0.005	0.005	0.02	0.05	U	PU
Americium 241	14596-10-2	-0.024	0.022	0.05	0.05	U	AM
Strontium 90	10098-97-2	13	1.6	0.8	2		Y
Technetium 99	14133-76-7	0.16	1.4	4	5	U	TC
Tritium	10028-17-8	5100	310	200	400		H
Carbon 14	14762-75-5	10	24	40	50	U	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	U		200		U	GAM
Iron 59	14596-12-4	U		30	30	U	GAM
Chromium 51	14392-02-0	U		100		U	GAM
Cobalt 60	10198-40-0	U		10	30	U	GAM
Zinc 65	13982-39-3	U		20		U	GAM
Ruthenium 106	13967-48-1	U		100		U	GAM
Cesium 134	13967-70-9	U		10		U	GAM
Cesium 137	10045-97-3	U		10	20	U	GAM
Cerium 144	14762-78-8	U		60		U	GAM
Europium 152	14683-23-9	U		20	40	U	GAM
Europium 154	15585-10-1	U		10	40	U	GAM
Radium 226	13982-63-3	U		20		U	GAM
Thorium 228	14274-82-9	U		20		U	GAM
Thorium 232	7440-29-1	U		70		U	GAM

Lab id	TMAN
Protocol	WHC-HEIS
Version	Ver 1.0
Form	DVD-DS
Version	2.23
Report date	05/24/93

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N304008-08

TMA NORCAL
REPORTING GROUP 7179

DATA SHEET

B088X0

SDG	7179	Client	Westinghouse Hanford
Contact	Dinkar Kharkar	Contract	MBH-SVV-069262
Lab sample id	N304008-08	Client sample id	B088X0
Dept sample id	7179-008	Matrix	WATER
Received	04/06/93	Collected	04/03/93
		Chain of custody id	EFL-1055

PARAMETER	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	Alpha	5.4	2.2	2	3		80A
Gross Beta	Beta	7.8	1.1	1	4		80B
Uranium 233/234		3.9	0.86	0.3	0.2		U
Uranium 235	15117-96-1	0.22	0.19	0.2	0.2		U
Uranium 238	7440-61-1	3.3	0.76	0.2	0.2		U
Plutonium 238	13981-16-3	-0.015	0.030	0.06	0.05	U	PU
Plutonium 239/240		0	0.012	0.03	0.05	U	PU
Americium 241	14596-10-2	0.004	0.021	0.04	0.05	U	AM
Strontium 90	10098-97-2	-0.079	0.23	0.8	2	U	Y
Technetium 99	14133-76-7	0.69	1.3	4	5	U	TC
Tritium	10028-17-8	13000	460	200	400		H
Carbon 14	14762-75-5	17	22	40	50	U	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	U		100		U	GAM
Iron 59	14596-12-4	U		30	30	U	GAM
Chromium 51	14392-02-0	U		100		U	GAM
Cobalt 60	10198-40-0	U		20	30	U	GAM
Zinc 65	13982-39-3	U		20		U	GAM
Ruthenium 106	13967-48-1	U		80		U	GAM
Cesium 134	13967-70-9	U		10		U	GAM
Cesium 137	10045-97-3	U		10	20	U	GAM
Cerium 144	14762-78-8	U		40		U	GAM
Europium 152	14683-23-9	U		20	40	U	GAM
Europium 154	15585-10-1	U		10	40	U	GAM
Radium 226	13982-63-3	U		20		U	GAM
Thorium 228	14274-82-9	U		20		U	GAM
Thorium 232	7440-29-1	U		40		U	GAM

Lab id	TMAN
Protocol	WHC-HEIS
Version	Ver 1.0
Form	DVD-DS
Version	2.23
Report date	05/24/93

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N304008-13

TMA NORCAL
REPORTING GROUP 7179

DATA SHEET

B088X5

SDG	7179	Client	Westinghouse Hanford
Contact	Dinkar Kharkar	Contract	MBH-SVV-069262
Lab sample id	N304008-13	Client sample id	B088X5
Dept sample id	7179-013	Matrix	WATER
Received	04/08/93	Collected	04/06/93
		Chain of custody id	EFL-1055

PARAMETER	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	Alpha	-0.56	1.1	2	3	U	80A
Gross Beta	Beta	2.8	1.2	2	4	J	80B
Uranium 233/234		0.72	0.17	0.1	0.2		U
Uranium 235	15117-96-1	0.043	0.052	0.08	0.2	U	U
Uranium 238	7440-61-1	0.57	0.14	0.07	0.2		U
Plutonium 238	13981-16-3	-0.005	0.014	0.03	0.05	U	PU
Plutonium 239/240		-0.002	0.005	0.02	0.05	U	PU
Americium 241	14596-10-2	-0.003	0.007	0.03	0.05	U	AM
Strontium 90	10098-97-2	0.035	0.62	0.7	2	U	Y
Technetium 99	14133-76-7	0.60	2.4	5	5	U	TC
Tritium	10028-17-8	18	140	200	400	U	H
Carbon 14	14762-75-5	39	20	30	50	J	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	U		200		U	GAM
Iron 59	14596-12-4	U		30	30	U	GAM
Chromium 51	14392-02-0	U		100		U	GAM
Cobalt 60	10198-40-0	U		20	30	U	GAM
Zinc 65	13982-39-3	U		30		U	GAM
Ruthenium 106	13967-48-1	U		100		U	GAM
Cesium 134	13967-70-9	U		20		U	GAM
Cesium 137	10045-97-3	U		10	20	U	GAM
Cerium 144	14762-78-8	U		70		U	GAM
Europium 152	14683-23-9	U		30	40	U	GAM
Europium 154	15585-10-1	U		20	40	U	GAM
Radium 226	13982-63-3	U		30		U	GAM
Thorium 228	14274-82-9	U		20		U	GAM
Thorium 232	7440-29-1	U		60		U	GAM

Lab id	TMAN
Protocol	WHC-HEIS
Version	Ver 1.0
Form	DVD-DS
Version	2.23
Report date	05/24/93

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N304008-03

TMA NORCAL
REPORTING GROUP 7179

DATA SHEET

B088Y0

SDG 7179
Contact Dinkar Kharkar

Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N304008-03
Dept sample id 7179-003
Received 04/02/93

Client sample id B088Y0
Matrix WATER
Collected 03/31/93
Chain of custody id EFL-1055

PARAMETER	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	Alpha	4.3	2.3	3	3		80A
Gross Beta	Beta	8.0	1.1	1	4		80B
Uranium 233/234		2.9	0.52	0.1	0.2		U
Uranium 235	15117-96-1	0.19	0.11	0.1	0.2	J	U
Uranium 238	7440-61-1	2.7	0.51	0.1	0.2		U
Plutonium 238	13981-16-3	-0.015	0.037	0.07	0.05	U	PU
Plutonium 239/240		-0.003	0.012	0.03	0.05	U	PU
Americium 241	14596-10-2	0.006	0.029	0.05	0.05	U	AM
Strontium 90	10098-97-2	0.020	0.19	0.8	2	U	Y
Technetium 99	14133-76-7	1.2	1.6	4	5	U	TC
Tritium	10028-17-8	420	160	200	400		H
Carbon 14	14762-75-5	-3.8	17	30	50	U	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	U		200		U	GAM
Iron 59	14596-12-4	U		30	30	U	GAM
Chromium 51	14392-02-0	U		100		U	GAM
Cobalt 60	10198-40-0	U		10	30	U	GAM
Zinc 65	13982-39-3	U		20		U	GAM
Ruthenium 106	13967-48-1	U		100		U	GAM
Cesium 134	13967-70-9	U		10		U	GAM
Cesium 137	10045-97-3	U		10	20	U	GAM
Cerium 144	14762-78-8	U		50		U	GAM
Europium 152	14683-23-9	U		20	40	U	GAM
Europium 154	15585-10-1	U		10	40	U	GAM
Radium 226	13982-63-3	U		20		U	GAM
Thorium 228	14274-82-9	U		30		U	GAM
Thorium 232	7440-29-1	U		50		U	GAM

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.23
Report date 05/24/93

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N304008-09

TMA NORCAL
REPORTING GROUP 7179

DATA SHEET

B08900

SDG 7179
Contact Dinkar Kharkar

Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N304008-09
Dept sample id 7179-009
Received 04/06/93

Client sample id B08900
Matrix WATER
Collected 04/03/93
Chain of custody id EFL-1055

PARAMETER	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	Alpha	2.8	4.8	5	3	U	80A
Gross Beta	Beta	87	4.8	3	4		80B
Uranium 233/234		6.1	0.89	0.2	0.2		U
Uranium 235	15117-96-1	0.36	0.18	0.1	0.2		U
Uranium 238	7440-61-1	5.3	0.79	0.1	0.2		U
Plutonium 238	13981-16-3	0.017	0.028	0.05	0.05	U	PU
Plutonium 239/240		0.020	0.017	0.03	0.05	U	PU
Americium 241	14596-10-2	0.027	0.034	0.05	0.05	U	AM
Strontium 90	10098-97-2	0.051	0.19	0.8	2	U	Y
Technetium 99	14133-76-7	2.0	1.9	5	5	U	TC
Tritium	10028-17-8	180000	3500	200	400		H
Carbon 14	14762-75-5	330	29	40	50		C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	U		100		U	GAM
Iron 59	14596-12-4	U		20	30	U	GAM
Chromium 51	14392-02-0	U		80		U	GAM
Cobalt 60	10198-40-0	U		8	30	U	GAM
Zinc 65	13982-39-3	U		20		U	GAM
Ruthenium 106	13967-48-1	U		70		U	GAM
Cesium 134	13967-70-9	U		9		U	GAM
Cesium 137	10045-97-3	U		8	20	U	GAM
Cerium 144	14762-78-8	U		40		U	GAM
Europium 152	14683-23-9	U		20	40	U	GAM
Europium 154	15585-10-1	U		10	40	U	GAM
Radium 226	13982-63-3	U		20		U	GAM
Thorium 228	14274-82-9	U		10		U	GAM
Thorium 232	7440-29-1	U		30		U	GAM

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.23
Report date 05/24/93

9713515.1398

N304008-04

TMA NORCAL
REPORTING GROUP 7179

DATA SHEET

B08910

SDG	7179	Client	Westinghouse Hanford
Contact	Dinkar Kharkar	Contract	MBH-SVV-069262
Lab sample id	N304008-04	Client sample id	B08910
Dept sample id	7179-004	Matrix	WATER
Received	04/02/93	Collected	03/31/93
		Chain of custody id	EFL-1054

PARAMETER	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	Alpha	1.3	1.5	2	3	U	80A
Gross Beta	Beta	4.7	1.4	2	4		80B
Uranium 233/234		1.6	0.34	0.1	0.2		U
Uranium 235	15117-96-1	0.15	0.099	0.1	0.2	J	U
Uranium 238	7440-61-1	1.3	0.31	0.1	0.2		U
Plutonium 238	13981-16-3	0.004	0.042	0.08	0.05	U	PU
Plutonium 239/240		0.021	0.025	0.03	0.05	U	PU
Americium 241	14596-10-2	0.015	0.025	0.04	0.05	U	AM
Strontium 90	10098-97-2	-0.11	2.1	0.8	2	U	Y
Technetium 99	14133-76-7	1.6	1.4	4	5	U	TC
Tritium	10028-17-8	620	170	200	400		H
Carbon 14	14762-75-5	6.0	20	30	50	U	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	U		100		U	GAM
Iron 59	14596-12-4	U		30	30	U	GAM
Chromium 51	14392-02-0	U		100		U	GAM
Cobalt 60	10198-40-0	U		10	30	U	GAM
Zinc 65	13982-39-3	U		20		U	GAM
Ruthenium 106	13967-48-1	U		100		U	GAM
Cesium 134	13967-70-9	U		10		U	GAM
Cesium 137	10045-97-3	U		10	20	U	GAM
Cerium 144	14762-78-8	U		50		U	GAM
Europium 152	14683-23-9	U		20	40	U	GAM
Europium 154	15585-10-1	U		10	40	U	GAM
Radium 226	13982-63-3	U		20		U	GAM
Thorium 228	14274-82-9	U		30		U	GAM
Thorium 232	7440-29-1	U		50		U	GAM

Lab id	TMAN
Protocol	WHC-HEIS
Version	Ver 1.0
Form	DVD-DS
Version	2.23
Report date	05/24/93

FORM OF PAYMENT

9713515.1399

GBL ☐ FCCOD ☐

XX Bill to Consignee ☐ Third Party Billing ☐

Shipper's Account Number: 50281585

EMERY WORLDWIDE — A CF Company

SERVICES **

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

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

Date: 04-01-93 Origin: PSC Shipment Number: 253695462 9

INGHOUSE SHIPPING DEPT. (509) 376-6665
DEPARTMENT OF ENERGY C/O
INGHOUSE HANFORD
BLDG 1163
STEVENS DRIVE
HLAND WA

Canada ☐

To:
TMA/NORCAL
TMA/NORCAL
2030 WRIGHT AVENUE
RICHMOND CA

Canada ☐

Hold for Pick Up ☐

Tariff Dest. | Gateway

Check to Shipper $

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

Customer's Reference Numbers: 232 PD3BA W93-0-0321#40, #41 99352

Consignee's Account Number: E 94804

Description	Pcs.	L	W	H	Total Pieces	Total Weight (Lbs.)
OOLERS ID: GARY 84#; 82 81#; SML27 101#; 215 82# WATER SAMPLES	4	11	16	11	4	348

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

Declared Value $

253695462 9

Remarks: NIGHT DELIVERY ATURE SECURITY SERVICE

X 4-1-93

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: ee icile ☐ Commodity Code

Third Party Account Number mandatory for Third Party Billing. Third Party Account Number: E

International Customs Value | International Insurance

harge | Total Transportation Charges | Other Charges/Advance at Origin OC/AO

1-OAK-A

Terms and Conditions on Back

EMERY WORLDWIDE — A CF Company

SIGNATURE AND TALLY RECORD

60029-46 (8/89) Litho USA

DATE: 04-01-93 SHIPMENT NO.: 253 695462 9
SHIPPER: WESTINGHOUSE SHIPPING DEPT. (509) 376-6665
REFERENCE NO.: W93-0-0321 #40 & #41

SHIPPER NAME AND ADDRESS
WESTINGHOUSE SHIPPING DEPT. (509) 376-6665
G2-06 U.S. DEPARTMENT OF ENERGY C/O
WESTINGHOUSE HANFORD COMPANY
2355 STEVENS DRIVE 1163 BUILDING
PO BOX 1970
RICHLAND WA 99352

CONSIGNEE NAME AND ADDRESS
TMA/NORCAL
2030 WRIGHT AVENUE
RICHMOND CA 94804

Pieces	Weight	Description/Marks	Emery Authorization No.
4	348 LBS	WATER SAMPLES COOLER ID: GARY 84#; RM-82 81#; SML27 101#; SML215 82#	

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.				
2.				
3.				
4.				
5.	K MALONEY	PIC		MN 4-2-9
6.		TMA NORCAL		1155 4-2-93
7.				
8.				

80

SPECIAL HANDLING INSTRUCTIONS

CONSIGNEE COPY

27 215 9713515.1400

Overnight delivery

Signature Security Service

Contractor	OFF-SITE PROPERTY CONTROL	CONTROL NUMBER (To be obtained from PROPERTY MANAGEMENT)
WHC		W93-0-03-1-41

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
1 101 lbs.	Sample #: B0088Y0, B0088Y1, B0088Y2 Cooler ID: CML-27 Polycooler with groundwater samples packed in wet ice and vermiculite	N/A
1 lbs.	Sample #: B0088Y0, B0088Y1, B0088Y2 Cooler ID: CML-21 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 # 2[illegible]4629

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
[illegible]	12-13341	1-1-93

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

Date Ready for Shipment	Cost Code to be Charged	Approximate Date This Property will be Returned
4/1/93	H81232/[illegible]3BA	

Originated By	Date	Authorized By	Date
K. Trapp / K. Trapp	4/1/93	K. Trapp / K. Trapp	4/1/93

Signature and Name of Property Control	Custodian Date	Property Management Approval	Date
		[illegible]	4/1/93

PART II – TO BE COMPLETED BY SHIPPING

Signature of Recipient	Return Order No.	Date Issued	Purchase Order No.	Date Issued
[illegible]				
Date 4/1/93				

DISTRIBUTION

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

81

54-3000-479 (09/89)

Overnight delivery 9713545.1401

Signature Security Service

Contractor	OFF-SITE PROPERTY CONTROL	CONTROL NUMBER (To be obtained from PROPERTY MANAGEMENT)
WHC		W93-0-0321-40

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 <1 lbs.	Sample #: B0F4V5 B0F4V6 B0F4V7 Cooler ID: Gary Polycooler with groundwater samples packed in wet ice and vermiculite	N/A
1 <1 lbs.	Sample #: B0F4G5 B0F4G6 B0F4G7 Cooler ID: FM-82 Polycooler with groundwater samples packed in wet ice and vermiculite	N/A

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

Necessity for the Off-Site Use of this Property

Sampling supports RI/FS work in the 100 areas

Bill of lading # [illegible]

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
M H Dillman, CC	D-73343	2-1-93

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

Date Ready for Shipment	Cost Code to be Charged	Approximate Date This Property will be Returned
4/1/93	W81232/TP:FA	

Originated By	Date	Authorized By	Date
K. Trapp / K. Trapp	4/1/93	K. Trapp / K. Trapp	4/1/93

Signature and Name of Property Control	Custodian Date	Property Management Approval	Date
		[illegible]	4/1/93

PART II – TO BE COMPLETED BY SHIPPING

Signature of Recipient	Return Order No.	Date Issued	Purchase Order No.	Date Issued
[illegible]				
Date 4/1/93				

82

DISTRIBUTION

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

54-3000-479 (09/89)

9313515.1402

Signature Security Service

Contractor	OFF-SITE PROPERTY CONTROL	CONTROL NUMBER (To be obtained from PROPERTY MANAGEMENT)
WHC		[illegible]

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 IMA/NORCAL
2030 Wright Ave.
Richmond, CA 94804

Off-site Custodian

Full Title

Quantity	Description (Include Serial and any Government Tag Numbers)	Original Cost
1 lbs.	Sample #: [illegible] Cooler ID: [illegible] Polycooler with groundwater samples packed in wet ice and vermiculite	N/A
1 lbs.	Sample #: [illegible] Cooler ID: [illegible] 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 [illegible]

Bill of lading # [illegible]

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
[illegible]	[illegible]	[illegible]

Location of Property (Area & Bldg.)	Contact	Phone
[illegible]	PH Butcher	(509) 376-5045

Date Ready for Shipment	Cost Code to be Charged	Approximate Date This Property will be Returned
[illegible]	WB1232/[illegible]	

Originated By	Date	Authorized By	Date
[illegible]	[illegible]	[illegible]	[illegible]

Signature and Name of Property Control	Custodian Date	Property Management Approval	Date
		[illegible]	4/1/93

PART II – TO BE COMPLETED BY SHIPPING

Signature of Recipient	Return Order No.	Date Issued	Purchase Order No.	Date Issued
Date 4/1/93				

83

DISTRIBUTION

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

54-3000-479 (09/89)

27 215 9213515.1403

Signature Security Service

Contractor	OFF-SITE PROPERTY CONTROL	CONTROL NUMBER (To be obtained from PROPERTY MANAGEMENT)
WHC		[illegible] 1-41

PART I – TO BE COMPLETED BY ORIGINATOR

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

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

Routing Energy ☐ Contractor ☐ Vendor

Shipped to	Off-site Custodian
IMA/NORCAL 2030 Wright Ave. Richmond, CA 94804	
	Full Title

Quantity	Description (Include Serial and any Government Tag Numbers)	Original Cost
1 [illegible] lbs	Sample #: [illegible] Cooler ID: [illegible] Polycooler with groundwater samples packed in wet ice and vermiculite	N/A
1 [illegible] lbs.	Sample #: [illegible] Cooler ID: [illegible] 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 support: FI/FS work in the [illegible]

Bill of lading # [illegible]

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
[illegible]	[illegible]	[illegible]

Location of Property (Area & Bldg.)	Contact	Phone
[illegible]	PH Butcher	(509) 376-6045

Date Ready for Shipment	Cost Code to be Charged	Approximate Date This Property will be Returned
[illegible]	HB1232/[illegible]	

Originated By	Date	Authorized By	Date
[illegible]	[illegible]	[illegible]	[illegible]

Signature and Name of Property Control	Custodian Date	Property Management Approval	Date
		[illegible]	4/1/93

PART II – TO BE COMPLETED BY SHIPPING

Signature of Recipient	Return Order No	Date Issued	Purchase Order No.	Date Issued
Date [illegible]				

84

DISTRIBUTION

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

54-3000-479 (09/89)

OVERNIGHT DELIVERY 9713515.1404

Signature Security Service

Contractor	OFF-SITE PROPERTY CONTROL	CONTROL NUMBER (To be obtained from PROPERTY MANAGEMENT)
WMC		WA93-0-0371-35

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: TRACHORAL
2030 Wright Ave.
Richmond, CA 94804

Off-site Custodian

Full Title

Quantity	Description (Include Serial and any Government Tag Numbers)	Original Cost
1 lbs	Sample #: [illegible] Cooler ID: [illegible] 7 Polycooler with groundwater samples packed in wet ice and vermiculite	N/A
1 lbs	Sample #: Cooler ID: [illegible] 3/31/93 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

Bill of lading # 25360946 3T

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
[illegible]	[illegible]	

Location of Property (Area & Bldg.)	Contact	Phone
[illegible]	PH Butcher	(503) 378-5045

Date Ready for Shipment	Cost Code to be Charged	Approximate Date This Property will be Returned
3/31/93	WB1233 FC 41A	NA

Originated By	Date	Authorized By	Date
[illegible]	3/31/93	[illegible]	3/31/93

Signature and Name of Property Control	Custodian Date	Property Management Approval	Date
		[illegible]	3/31/93

PART II – TO BE COMPLETED BY SHIPPING

Signature of Recipient	Return Order No.	Date Issued	Purchase Order No.	Date Issued
[illegible]				
Date 3-31-93				

85

DISTRIBUTION

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

54-3000-479 (09/89)

FORM OF PAYMENT

971551 0.1405

GBL ☐ FCCOD ☐

Bill to Consignee ☐ Third Party Billing ☐

Shipper's Account Number 50281585

EMERY WORLDWIDE

A CF Company

SERVICES

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

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

Date 4/-93 Origin PSC Shipment Number 253695457 4

INGHOUSE SHIPPING DEPT. (509) 376-6665
DEPARTMENT OF ENERGY C/O
NGHOUSE HANFORD
BLDG 1163
STEVENS DRIVE
AND WA Canada ☐

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

Hold for Pick Up ☐

Tariff Dest. Gateway

Check to Shipper $

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

Customer's Reference Numbers
232 PD3BA W93-0-0321 #43999352

E Consignee's Account Number 94804

Description	Pcs.	L	W	H	Total Pieces	Total Weight (In Lbs.)
OOLER ID: SML 293 ER SAMPLES	1	14	14	17	1	82

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

Declared Value $

2536954574

Remarks
DAY DELIVERY
TURE SECURITY SERVIC

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 ☒

1-DAK SA

International Shipments ☐ 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-

EMERY WORLDWIDE A CF Company

GNATURE AND TALLY RECORD

-46 (8/89) Litho USA

DATE: 04-02-93 SHIPMENT NO.: 2536954574
SHIPPER: WESTINGHOUSE SHIPPING DEPT. (509) 376-666
REFERENCE NO.: W93-0-0321#43

PPER NAME AND ADDRESS
STINGHOUSE SHIPPING DEPT. (509) 376-6665
-06 U.S. DEPARTMENT OF ENERGY C/O
STINGHOUSE HANFORD COMPANY
55 STEVENS DRIVE 1163 BUILDING
BOX 1970
CHLAND WA 99352

CONSIGNEE NAME AND ADDRESS
TMA NORCAL
2030 WRIGHT AVE
RICHMOND CA 94804

ces	Weight	Description/Marks	Emery Authorization No.
	82 LBS	COOLER ID: SML 293 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
	OAK		1100/03
F. Kepsten Koeppel	Rich TMA Norcal	for F. Kepsten Koeppel	1200/4/3
			88

SPECIAL HANDLING INSTRUCTIONS

CONSIGNEE COPY

9713515.1406

Contractor	OFF-SITE PROPERTY CONTROL	CONTROL NUMBER (To be obtained from PROPERTY MANAGEMENT)
WHC		IN03-0-0521-43

PART I – TO BE COMPLETED BY ORIGINATOR

Department	Section	Unit
Env. Eng. & Tech.	[illegible]	[illegible] & Hydrochem.

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

Routing Energy ☐ Contractor ☐ Vendor

Shipped to	Off-site Custodian
TMA/NORCAL 2030 Wright Ave. Richmond, CA 94804	
	Full Title

Quantity	Description (Include Serial and any Government Tag Numbers)	Original Cost
1 lbs.	Sample #: 50SSV0 50SSV1 50SSV2 Cooler ID: SML-793 Polycooler with groundwater samples packed in wet ice and vermiculite	N/A
1 lbs.	Sample #: Cooler ID: Polycooler with groundwater samples packed in wet ice and vermiculite AJS 4/2/93	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 [illegible] Canyon.

Bill of lading # 253-154574

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

Location of Property (Area & Bldg.)	Contact	Phone
[illegible]	PH Butcher	(509) 376 5041

Date Ready for Shipment	Cost Code to be Charged	Approximate Date This Property will be Returned
4/2/93	WB12332 [illegible]	NA

Originated By	Date	Authorized By	Date
[illegible]	[illegible]		[illegible]

Signature and Name of Property Control	Custodian Date	Property Management Approval	Date
		[illegible]	4/2/93

PART II – TO BE COMPLETED BY SHIPPING

Signature of Recipient	Return Order No.	Date Issued	Purchase Order No.	Date Issued
[illegible]				
Date 4-2-93				

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

89

54-3000-479 (09/89)

FORM OF PAYMENT

9713515.1407

83

GBL ☐ FCCOD ☐

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 ☐ Second Day

Date 4-05-93 Origin

From:

STINGHOUSE SHIPPING DEPT. (509) 376-6665
S. DEPARTMENT OF ENERGY C/O
STINGHOUSE HANFORD
BLDG 1163
59 STEVENS DRIVE
CHLAND WA Canada ☐

To:

TMA/NORCAL
TMA/NORCAL
2030 WRIGHT AVENU
RICHMOND CA Canada ☐

Hold for Pick Up ☐

Customer's Reference Numbers: 1232 P03BA W93-0-0321 #44 99352

Consignee's Account Number: E 94804

Description: COOLER ID: SML 1#5 85#; .187 84#; WMESM#119 90# .217 89# WATER SAMPLES #45

Pcs.	L	W	H	Total Pieces	Total Weight (In lbs.)
4	16	17		4	348

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

Declared Value $

2536954684

Remarks: ERNIGHT DELIVERY GNATURE SECURITY SERVICE

Shipper's Signature X

Zip Ship ☐ For shipments within the 50 United States Shipper has the option to check this box and, by checking, agrees that the Zip Ship conditions, described in the area 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. Third Party Account Number: E

International Customs Value

International Insurance

Total Transportation Charges

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

1-OAK-A

Terms and Conditions on Back

OVERNIGHT DELIVERY 9713515 1408

Signature Security Service

Contractor	OFF-SITE PROPERTY CONTROL	CONTROL NUMBER (To be obtained from PROPERTY MANAGEMENT)
WHC		W93-0-0321-44

PART I – TO BE COMPLETED BY ORIGINATOR

Department	Section	Unit
Env. Eng. & Tech.	Hydrosciences	Hydrochem. & 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 85 lbs.	Sample #: B088Q0, B088Q1, B088Q2 Cooler ID: SML-145 Polycooler with groundwater samples packed in wet ice and vermiculite	N/A
1 84 lbs.	Sample #: B08900, B08901, B08902 Cooler ID: SML-187 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 # 2536954684

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
		4-5-93

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

Date Ready for Shipment	Cost Code to be Charged	Approximate Date This Property will be Returned
4/5/93	W81232/PD3BA	

Originated By	Date	Authorized By	Date
PC Code	4/5/93	B. WHITTEN	4/5/93

Signature and Name of Property Control	Custodian Date	Property Management Approval	Date
			4/5/93

PART II – TO BE COMPLETED BY SHIPPING

Signature of Recipient	Return Order No.	Date Issued	Purchase Order No.	Date Issued
Cliff Miller				
Date 4-5-93				

DISTRIBUTION

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

99

54-3000-479 (09/89)

9713515.1409

Signature Security Service

Contractor	OFF-SITE PROPERTY CONTROL	CONTROL NUMBER (To be obtained from PROPERTY MANAGEMENT)
WHC		W73-0-0321-44

PART I – TO BE COMPLETED BY ORIGINATOR

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

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

Routing Energy ☒ Contractor ☐ Vendor

Shipped to IMA NORCAL
2030 Wright Ave.
Richmond, CA 94804

Off-site Custodian

Full Title

Quantity	Description (Include Serial and any Government Tag Numbers)	Original Cost
1 [illegible] lbs	Sample #: B07QQ, [illegible], B07QZ Cooler ID: [illegible]-145 Polycooler with groundwater samples packed in wet ice and vermiculite	N/A
1 24 lbs	Sample #: B07100, [illegible], B07102 Cooler ID: [illegible]-177 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 [illegible]

Bill of Lading # [illegible]

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

Location of Property (Area & Bldg.)	Contact	Phone
[illegible]	JH Butcher	[illegible]

Date Ready for Shipment	Cost Code to be Charged	Approximate Date This Property will be Returned
4/5/93	WB1202/[illegible]A	

Originated By	Date	Authorized By	Date
[illegible]	4/5/93	[illegible]	4/5/93

Signature and Name of Property Control	Custodian Date	Property Management Approval	Date
		[illegible]	4/5/93

PART II – TO BE COMPLETED BY SHIPPING

Signature of Recipient	Return Order No.	Date Issued	Purchase Order No.	Date Issued
[illegible]				
Date 4-5-93				

DISTRIBUTION

100

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

54-3000-479 (09/89)

EMERY WORLDWIDE

CF Company

3515.1410

SIGNATURE AND TALLY RECORD

60029-46 (8/89) Litho USA

DATE: 05-06-93 SHIPMENT NO.: 255695474 T

SHIPPER: WESTINGHOUSE SHIPPING DEPT. (509) 376-6665

REFERENCE NO.: W93-0-0321#48

SHIPPER NAME AND ADDRESS	CONSIGNEE NAME AND ADDRESS
WESTINGHOUSE SHIPPING DEPT. (509) 376-6665 G2-06 U.S. DEPARTMENT OF ENERGY C/O WESTINGHOUSE HANFORD COMPANY 2355 STEVENS DRIVE 1153 BUILDING PO BOX 1970 RICHLAND WA 99352	DELORES SANCHEZ TMA/NORCAL 2030 WRIGHT AVENUE RICHMOND CA 94804

Pieces	Weight	Description/Marks	Emery Authorization No.
2	169 LBS	WATER SAMPLES COOLER ID: SML 252 83#; SML 292 86#	

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.				
2.				
3.				
4.				
5.	[illegible]	[illegible]	[illegible]	[illegible]
6.	Cogie Mitchell	TMA/NORCAL	[illegible]	10:15 4/7
7.				
8.				

SPECIAL HANDLING INSTRUCTIONS

CONSIGNEE COPY

OVERNIGHT DELIVERY 9713515.1411

Signature Security Seal

Contractor	OFF-SITE PROPERTY CONTROL	CONTROL NUMBER (To be obtained from PROPERTY MANAGEMENT)
LBL		W93-C-0321-98

PART I – TO BE COMPLETED BY ORIGINATOR

Department	Section	Unit
Env. Fac. & Tech.		Hydrogeology

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

Routing Energy ☐ Contractor ☐ Vendor

Shipped to
TMA NORCAL
2020 Wright Ave.
Richmond, CA 94804

Off-site Custodian

Full Title

Quantity	Description (Include Serial and any Government Tag Numbers)	Original Cost
1 83 lbs.	Sample #: BC88K5 BC88K6 BC88K7 BC88K8 BC88K9 RW 4-6-93 BW 4/6/93 Cooler ID: SML-262 Polycooler with groundwater sampler packed in wet ice and vermiculite	N/A
1 86 lbs.	Sample #: BC88T0 BC88T1 BC88T2 BC88T3 BC88T4 RW 4-6-93 BW 4/6/93 Cooler ID: SML-272 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 supporting RI/FS work in the

Bill of Lading # 2536954741T

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
[illegible]	131365	4-6-93

Location of Property (Area & Bldg.)	Contact	Phone
100 TK 3	[illegible]	(300) 378-1045

Date Ready for Shipment	Cost Code to be Charged	Approximate Date This Property will be Returned
4-6-93	981332 FG36A	

Originated By	Date	Authorized By	Date
[illegible] WHITE	4-6-93	[illegible] WHITE	4-6-93

Signature and Name of Property Control	Custodian Date	Property Management Approval	Date
		[illegible]	4/6/93

PART II – TO BE COMPLETED BY SHIPPING

Signature of Recipient	Return Order No.	Date Issued	Purchase Order No.	Date Issued
[illegible]				
Date 4-6-93				

106

DISTRIBUTION

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

54-3000-479 (09/89)

9713515.1412

Contractor	OFF-SITE PROPERTY CONTROL	CONTROL NUMBER (To be obtained from PROPERTY MANAGEMENT)
[illegible]		W93-[illegible]

PART I – TO BE COMPLETED BY ORIGINATOR

Department [illegible]	Section [illegible]	Unit [illegible]

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

Routing [illegible] ☐ Contractor ☐ Vendor

Shipped to	Off-site Custodian
[illegible] Richmond, CA [illegible]	Full Title

Quantity	Description (Include Serial and any Government Tag Numbers)	Original Cost
1 45 lbs.	Sample #: [illegible] 507886 [illegible] [illegible] [illegible] Cooler ID: SML 262 Polycooler with groundwater sample packed in wet ice and vermiculite	N/A
1 76 lbs.	Sample #: [illegible] Cooler ID: [illegible] 372 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 [illegible] work in the [illegible]

Bill of Lading # 3536 [illegible]

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
[illegible]	[illegible]	[illegible]

Location of Property (Area & Bldg.)	Contact	Phone
[illegible]	[illegible]	[illegible]

Date Ready for Shipment	Cost Code to be Charged	Approximate Date This Property will be Returned
[illegible]	[illegible]	

Originated By	Date	Authorized By	Date
[illegible]	[illegible]	[illegible]	[illegible]

Signature and Name of Property Control	Custodian Date	Property Management Approval	Date

PART II – TO BE COMPLETED BY SHIPPING

Signature of Recipient	Return Order No.	Date Issued	Purchase Order No.	Date Issued
[illegible]				
Date [illegible]				

107

DISTRIBUTION

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

54-3000-479 (09/89)

FORM OF PAYMENT

☐ GBL ☐ FCCOD ☐ 9713515.1413

☐ Bill to Consignee ☐ Third Party Billing ☐

50281585

EMERY WORLDWIDE

A CF Company

SERVICE

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

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

Date: 04-07-93 | Origin: PSC | Custom Number: 253695478 3

	To:	Tariff Dest.	Gateway
TINGHOUSE SHIPPING DEPT. (509) 376-6665 . DEPARTMENT OF ENERGY C/O TINGHOUSE HANFORD BLDG 1163 3 STEVENS DRIVE HLAND WA ☐ Canada	TMA/NORCAL TMA/NORCAL 2030 WRIGHT AVENUE RICHMOND CA ☐ Canada	$	

Hold for Pick Up ☐

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

Customer's Reference Numbers: 232 PD3BA W9300-0321#49 | 99352

E Consignee's Account Number: 94804

Description	Pcs.	L	W	H	Total Pieces	Total Weight
LER ID: MAC 84#; 93# WATER SAMPLES	2		16	17	2	177

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

Declared Value: $

2 5 3 6 9 5 4 7 8 3

Remarks: NIGHT DELIVERY ATURE SECURITY SERVICE 4-7-93 X

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

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

International Shipments: ☐ 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- $

1-OAK-A

Terms and Conditions on Back

112

EMERY WORLDWIDE

A CF Company

9713515.1414

SIGNATURE AND TALLY RECORD

29-46 (8/89) Litho USA

DATE: 04-07-93 SHIPMENT NO.: 253695478 3

SHIPPER: WESTINGHOUSE SHIPPING DEPT. (509) 376-5665

REFERENCE NO.: W93-0-0321 #49

SHIPPER NAME AND ADDRESS

WESTINGHOUSE SHIPPING DEPT. (509) 376-5665
W-06 U.S. DEPARTMENT OF ENERGY C/O
WESTINGHOUSE HANFORD COMPANY
255 STEVENS DRIVE 1163 BUILDING
P.O. BOX 1970
RICHLAND WA 99352

CONSIGNEE NAME AND ADDRESS

DELORES SANCHEZ
TMA/NORCAL
2030 WRIGHT AVENUE
RICHMOND CA 94804

Pieces	Weight	Description/Marks	Emery Authorization No.
	177 LBS	COOLER ID: NAC 84#; NOT 93#: 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
K. MALONEY	EWU	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]

SPECIAL HANDLING INSTRUCTIONS

CONSIGNEE COPY

9713515.1415

Stanford Security Service

Contractor	OFF-SITE PROPERTY CONTROL	CONTROL NUMBER (To be obtained from PROPERTY MANAGEMENT)
[illegible]		[illegible]

PART I – TO BE COMPLETED BY ORIGINATOR

Department	Section	Unit
[illegible]	[illegible]	[illegible]

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

Routing ☐ Contractor ☐ Vendor

Shipped to	Off-site Custodian
TIA NORCAL 2020 Wright [illegible] Richmond, CA 94804	
	Full Title

Quantity	Description (Include Serial and any Government Tag Numbers)	Original Cost
1 4 lbs	Sample #[illegible] Cooler ID: [illegible] Polycooler with groundwater sample packed in wet ice and vermiculite	N/A
1 12 lbs.	Sample #[illegible] Cooler ID: [illegible] 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 [illegible]

Bill of Lading # [illegible]

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

Location of Property (Area & Bldg.)	Contact	Phone
	[illegible]	[illegible]

Date Ready for Shipment	Cost Code to be Charged	Approximate Date This Property will be Returned
[illegible]	[illegible]	

Originated By	Date	Authorized By	Date
[illegible]	[illegible]	[illegible] B.WHITTEN	

Signature and Name of Property Control	Custodian Date	Property Management Approval	Date
		[illegible]	[illegible]

PART II – TO BE COMPLETED BY SHIPPING

Signature of Recipient	Return Order No.	Date Issued	Purchase Order No.	Date Issued
Date [illegible]				

DISTRIBUTION

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

114

54-3000-479 (09/89)

Contract 9213515.1416 Signature Security Service

Contractor	OFF-SITE PROPERTY CONTROL	CONTROL NUMBER (To be obtained from PROPERTY MANAGEMENT)
[illegible]		[illegible] C-1981-49

PART I – TO BE COMPLETED BY ORIGINATOR

Department	Section	Unit
[illegible]	[illegible]	[illegible] & Hydrology

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

Routing [illegible] ☐ Contractor ☐ Vendor

Shipped to	Off-site Custodian
TRI, NORCAL 2030 Wright [illegible] Richmond, CA 94804	
	Full Title

Quantity	Description (Include Serial and any Government Tag Numbers)	Original Cost
1 84 lbs	Sample #: [illegible], [illegible], [illegible] Cooler ID: MAC Polycooler with groundwater samples packed in wet ice and vermiculite	N/A
1 93 lbs.	Sample #: B0[illegible]X5, [illegible]X6, [illegible]X7 Cooler ID: NOT 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 [illegible]

Bill of Lading # 2534454783

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
[illegible]	[illegible]	[illegible]

Location of Property (Area & Bldg.)	Contact	Phone
[illegible]	[illegible]	[illegible]

Date Ready for Shipment	Cost Code to be Charged	Approximate Date This Property will be Returned
4/7/93	[illegible] 003BA	

Originated By	Date	Authorized By	Date
[illegible]	4/7/93	B. WHITTEN	
Signature and Name of Property Control	**Custodian Date**	**Property Management Approval**	**Date**
		[illegible]	4/7/93

PART II – TO BE COMPLETED BY SHIPPING

Signature of Recipient	Return Order No.	Date Issued	Purchase Order No.	Date Issued
[illegible]				
Date 4-7-13				

DISTRIBUTION

115

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

54-3000-479 (09/89)

9713515.1417

TMA

RECORD COPY

JUN 1993
RECEIVED
SDLA

WESTINGHOUSE HANFORD COMPANY

Results of Analyses For:

ORGANICS & GENERAL CHEMISTRY
Case No. 04-014
(TMA/ARLI Work Order # A3-04-014)

METALS & NITRATE/NITRITE
Case No. N3-04-004
(TMA/Skinner & Sherman W.O. # S3-04-055, S3-04-056, & S3-04-057)

May 28, 1993

TMA Master Work Order N3-04-004

1 SW 8/22/96

9713515.1418

000001

WESTINGHOUSE HANFORD COMPANY

Results of Analyses For:

GENERAL CHEMISTRY
CASE NO. 04-014
(TMA/ARLI Work Order # A3-04-014)

ORGANICS
CASE NO. 04-014
(TMA/ARLI Work Order # A3-04-014)

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

B08910	B08912
B088Q5	B088Q7
B088V5	B088V7
B088Y0	B088Y2

Norcal Work Order # N3-04-004

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

Date submitted:

5/27/93

9713515.1419

000002

E 1 TMA/Normal CHAIN OF CUSTODY ORD # N3-04-004
RCVD: 04/02/93 DUE: 05/02/93 04/02/93 15:16:34 KEEP: 07/31/93 DISP: S

DASH	SAMPLE IDENTIFICATION		STORED	TESTS for FRACTIONS with work in DEPT: SU and CATEGORY						
01A-W	B0BB11	UNFILTERED	ARLI	WH018	WH019	WH020	WH043	WH114	WH121	WH122
				WH123	WH131	WH132	WH140			
02A-W	B0BB33	UNFILTERED	ARLI	WH018	WH019	WH020	WH043	WH114	WH121	WH122
				WH126	WH131	WH132	WH140			
03A-W	B0BB15	UNFILTERED	ARLI	WH018	WH019	WH020	WH043	WH114	WH121	WH122
				WH126	WH131	WH132	WH140			
04A-W	B0BB11	UNFILTERED	ARLI	WH018	WH019	WH020	WH043	WH114	WH121	WH122
				WH126	WH131	WH132	WH140			
04C-W	B0BB11 MS	UNFILTERED	ARLI	WH018	WH019	WH020	WH043	WH114	WH121	
04D-W	B0BB11 MSD	UNFILTERED	ARLI	WH018	WH019	WH020				
04E-W	B0BB11 DUP	UNFILTERED	ARLI	WH043	WH114	WH121	WH122	WH128	WH131	WH132
				WH140						
09A-W	B0BB12		ARLI	WH018						
10A-W	B0BB37		ARLI	WH018						
11A-W	B0BB17		ARLI	WH018						
12A-W	B0BB12		ARLI	WH018						

RELEASED BY	DATE	TRANSFERRED TO	DATE	RECEIVED BY	DATE
Yyamamoto	4-2-93	HRLI	4-2-93	C Harris	4/5/93

Samples were received 4/3/93
and opened 4/5/93 CH

9713515.1420

-000002A

Westinghouse Hanford Company	CHAIN OF CUSTODY

Custody Form Initiator KD LEE/GG HAMILTON

Company Contact PH BUTCHER

Telephone (509) 376-5045

Project Designation/Sampling Locations 100-FR-3

Collection Date 3/31/93

Ice Chest No. RM-82

Field Logbook No. EFL-1055

Bill of Lading/Airbill No. 2536954629

Offsite Property No. W93-0-0321-40

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks

Sample Identification

B088Q5

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

B088Q6

1, 1L, P, WATER; ICP/AA METALS + Hg (HNO3) FILTERED

B088Q7

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

[] Field Transfer of Custody

Chain of Possession (Sign and Print Names)

Relinquished By	Date	Time	Received By	Date	Time
[illegible]	3/31/93	1440	K. [illegible] / K. Trapp	4/1/93	0851
K. [illegible] / K. Trapp	4/1/93	0952	[illegible]	4/2/93	1115

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

FRIG #4

CC #111

A-6000-407 (12/92) WEF061

VOA on flow side

9713515.1421

000003B

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector K. Lee, L. Walker Date Sampled 3/31/93 Time 1234 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B0 88Q5	3; 40ml; Gs*;	WATER	CLP-VOA
	3; 2L; aG;	WATER	CLP-SEMI VOA & PCB's/PEST
	1; 1L; P;	WATER	ANIONS (IC) SO4, F, PO4, Cl/COND/pH
	1; 500ml; P;	WATER	ANIONS/NO3-NO2 (H2SO4)
	1; 1L; G;	WATER	ALK./TOT. DISSOLVED SOLIDS
	1; 500ml; G;	WATER	SULFIDE (add Zinc Acetate+NaOH pH>9)
	1; 500ml; G;	WATER	AMMONIA/CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)
	1; 1L; P;	WATER	CLP-ICP/AA METALS & Hg (HNO3) UNFILTERED
	1; 1L; P;	WATER	CLP-CN (NaOH)
	1; 4L; P; & 1; 2L; P	WATER	GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC
	12xL		(U-235/238,Pu-239/240, Am-241), Sr-90 (HNO3)
	1; 1L; G/P;	WATER	Tc-99 (HCl)
	1; 250ml; Gs;	WATER	TRITIUM/C-14
B0 88Q6	1; 1L; P;	WATER	CLP-ICP/AA METAL & Hg (HNO3) FILTERED
B0 88Q7	3; 40ml; Gs	WATER	CLP-VOA
			OPC: # W93-0-0321-40
			BOL: # 2576954629
			TASK#: 93-051

Field Information** 50°F, Sunny, Wind 5-7 mph

Special Handling and/or Storage

Possible Sample Hazards

PART II: LABORATORY SECTION

Received by Mary Mahaffy Title Sample control tech Date 4/2/93

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)

9713515.1422

0000020

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector K. Lee, L. Walker Date Sampled 3/31/93 Time 1104 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
BO 88V5	3; 40ml; Gs*;	WATER	CLP-VOA
	3; 2L; aG;	WATER	CLP-SEMI VOA & PCB's/PEST
	1; 1L; P;	WATER	ANIONS (IC) SO4, F, PO4, Cl/COND/pH
	1; 500ml; P;	WATER	ANIONS/NO3-NO2 (H2SO4)
	1; 1L; G;	WATER	ALK./TOT. DISSOLVED SOLIDS
	1; 500ml; G;	WATER	SULFIDE (add Zinc Acetate+NaOH pH>9)
	1; 500ml; G;	WATER	AMMONIA/CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)
	1; 1L; P;	WATER	CLP-ICP/AA METALS & Hg (HNO3) UNFILTERED
	1; 1L; P;	WATER	CLP-CN (NaOH)
	1; 4L; P; & 1; 2L; P	WATER	GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC
	12xL		(U-235/238,Pu-239/240, Am-241), Sr-90 (HNO3)
	1; 1L; G/P;	WATER	Tc-99 (HCl)
	1; 250ml; Gs;	WATER	TRITIUM/C-14
BO 88V6	1; 1L; P;	WATER	CLP-ICP/AA METAL & Hg (HNO3) FILTERED
BO 88V7	3; 40ml; Gs	WATER	CLP-VOA
			OPC: # W93-0-0321-40
			BOL: # 2536954629
			TASK#: 93-051

Field Information**

Special Handling and/or Storage

Possible Sample Hazards

PART II: LABORATORY SECTION

Received by Alonso Mokuleyl Title Sample control tech Date 4/2/93

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)

9713515.1423

000003C

Westinghouse Hanford Company	CHAIN OF CUSTODY

Custody Form Initiator KD LEE/GG HAMILTON

Company Contact PH BUTCHER

Telephone (509) 376-5045

Project Designation/Sampling Locations 100-FR-3

Collection Date 3/31/93

Ice Chest No. Gary

Field Logbook No. EFL-1054

Bill of Lading/Airbill No. 2536954629

Offsite Property No. W93-0-0321-40

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks

Sample Identification

B0 88U5

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

B0 88U6

1, 1L, P, WATER; ICP/AA METALS + Hg (HNO3) FILTERED

B0 88U7

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

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

Relinquished By	Date	Time	Received By	kr Date	Time
[illegible] K.D. Lee	3/31/93	1347	K. Trapp / K. Trapp	4/1/93	0850
K. Trapp / K. Trapp	4/1/93	0950	[illegible]	4/2/93	1155

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments: FRIG. # 1

A-6000-407 (12/92) WEF061

9713515.1424

000002E

Westinghouse Hanford Company	CHAIN OF CUSTODY

Custody Form Initiator KD LEE/GG HAMILTON

Company Contact PH BUTCHER

Telephone (509) 376-5045

Project Designation/Sampling Locations 100-FR-3

Collection Date 3/31/93

Ice Chest No. SML-27

Field Logbook No. EFL-1055

Bill of Lading/Airbill No. 2536954629

Offsite Property No. W93-0-0321-41

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks

Sample Identification

B0 8840

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

B0 8841
~~B0 8840~~
PPB 3/25/93
1, 1L, P, WATER; ICP/AA METALS + Hg (HNO3) FILTERED

B0 8842
3, 40ml, Gs, WATER; CLP-VOA *

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

Relinquished By	Date	Time	Received By	kr Date	Time
[illegible] 3/31/93	3/31/93	1442	K. Trapp / K. Trapp	4/1/93	0953
K. Trapp / K. Trapp	4/1/93	0954	[illegible]	4/2/93	1155

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments: FRG #4

* ID on VOA vials = B0 8842 . KB

A-6000-407 (12/92) WEF061

#40 4c

9713515.1425

0000028F

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector K. Lee, L. Walker Date Sampled 3/31/93 Time 1059 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B0 88Y0	3; 40ml; Gs*;	WATER	CLP-VOA
	3; 2L; aG;	WATER	CLP-SEMI VOA & PCB's/PEST
	1; 1L; P;	WATER	ANIONS (IC) SO4, F, PO4, Cl/COND/pH
	1; 500ml; P;	WATER	ANIONS/NO3-NO2 (H2SO4)
	1; 1L; G;	WATER	ALK./TOT. DISSOLVED SOLIDS
	1; 500ml; G;	WATER	SULFIDE (add Zinc Acetate+NaOH pH>9)
	1; 500ml; G;	WATER	AMMONIA/CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)
	1; 1L; P;	WATER	CLP-ICP/AA METALS & Hg (HNO3) UNFILTERED
	1; 1L; P;	WATER	CLP-CN (NaOH)
	1; 4L; P; & 1; 2L; P	WATER	GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC
	1 x 2L		(U-235/238,Pu-239/240, Am-241), Sr-90 (HNO3)
	1; 1L; G/P;	WATER	Tc-99 (HCl)
	1; 250ml; Gs;	WATER	TRITIUM/C-14
B0 88Y1	1; 1L; P;	WATER	CLP-ICP/AA METAL & Hg (HNO3) FILTERED
B0 88Y2	3; 40ml; Gs	WATER	CLP-VOA
			OPC: # W93- 0-0321-41
			BOL: # 2536954629
			TASK#: 93-051

Field Information** 40°F, Sunny, Wind 0-5mph

Special Handling and/or Storage

Possible Sample Hazards

PART II: LABORATORY SECTION

Received by [illegible] Title SAMPLE CONTROL TECH Date 4/2/93

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)

VOA UP RIGHT

9713515.1426

000002G

Westinghouse Hanford Company	CHAIN OF CUSTODY

Custody Form Initiator KD LEE/GG HAMILTON

Company Contact PH BUTCHER

Telephone (509) 376-5045

Project Designation/Sampling Locations 100-FR-3

Collection Date 3/31/93

Ice Chest No. SML-215

Field Logbook No. EFL-1054

Bill of Lading/Airbill No. 2536954629

Offsite Property No. W93-0-0321-41

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks

Sample Identification

BO 8910

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

BO 8911

1, 1L, P, WATER; ICP/AA METALS + Hg (HNO3) FILTERED

BO 8912

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

[] 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	3/31/93	1347	K. Trapp / K. Trapp	4/1/93	0855
K. Trapp / K. Trapp	4/1/93	0856	[illegible]	4/2/93	1155

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments: FRIG #1

A-6000-407 (12/92) WEF061

9713515.1427

0000024

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector K. Lee, L. Walker Date Sampled 3/31/93 Time 1104 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
BO 8910	3; 40ml; Gs*;	WATER	CLP-VOA
	3; 2L; aG;	WATER	CLP-SEMI VOA & PCB's/PEST
	1; 1L; P;	WATER	ANIONS (IC) SO4, F, PO4, Cl/COND/pH
	1; 500ml; P;	WATER	ANIONS/NO3-NO2 (H2SO4)
	1; 1L; G;	WATER	ALK./TOT. DISSOLVED SOLIDS
	1; 500ml; G;	WATER	SULFIDE (add Zinc Acetate+NaOH pH>9)
	1; 500ml; G;	WATER	AMMONIA/CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)
	1; 1L; P;	WATER	CLP-ICP/AA METALS & Hg (HNO3) UNFILTERED
	1; 1L; P;	WATER	CLP-CN (NaOH)
	1; 4L; P; & 1; 2L; P	WATER	GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC
	1x2L		(U-235/238,Pu-239/240, Am-241), Sr-90 (HNO3)
	1; 1L; G/P;	WATER	Tc-99 (HCl)
	1; 250ml; Gs;	WATER	TRITIUM/C-14
BO 8911	1; 1L; P;	WATER	CLP-ICP/AA METAL & Hg (HNO3) FILTERED
BO 8912	3; 40ml; Gs	WATER	CLP-VOA
			OPC: # W93-0-0321-41
			BOL: # 2936754629
			TASK#: 93-051

Field Information**

Special Handling and/or Storage

Possible Sample Hazards

PART II: LABORATORY SECTION

Received by Alfonso Holady Title Sample control tech Date 4/2/93

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)

9713515.1428

000003

SAMPLE LOG-IN SHEET

LAB NAME: TRL/ARL

PAGE: 1 OF 1

RECEIVED BY (PRINT NAME): D. WHITAKER

LOG-IN DATE: 4-5-93

RECEIVED BY (SIGNATURE):

CASE NUMBER:

SAMPLE DELIVERY GROUP NO.:

SAS NUMBER:

REMARKS:

1. Custody Seal(s) — Present/Absent* Intact/Broken
2. Custody Seal Nos:
3. Chain of Custody Records — Present/Absent*
4. Traffic Reports or Packing List — Present/Absent*
5. Airbill — Airbill/Sticker Present/Absent*
6. Airbill No.: 959782 7732
7. Sample Tags — Present/Absent*
8. Sample Tags Numbers — Listed/Not Listed on Chain of Custody
9. Sample Condition: — Intact/Broken*/Leaking
10. Does information on custody records, traffic reports, and sample tags agree — Yes/No*
11. Date Recieved at Lab: 4-3-93
12. Temp of Ice chest: SML-215 3°C
13. Time Recieved:

NO THERMOMETER

SAMPLE TRANSFER

Fraction:

Area #:

By:

On:

EPA SAMPLE #	SAMPLE TAG #	ASSIGNED LAB #	REMARKS: CONDITION OF SAMPLE SHIPMENT, ETC
	B08870		
	B08896		
	B08910		
	~~B08895~~		
	B08895		
	B08895		
	B08897		
	B08897		

* Contact SMO and attach record of resolution

Reviewed By:

Date:

Logbook No.:

Logbook Page No.:

FORM DC-1

Upon opening a thermometer was placed in the ice chest. MKP

9713515.1429

000004

SAMPLE LOG-IN SHEET

LAB NAME : TRA/MKL

PAGE : 1 OF 1

RECEIVED BY (PRINT NAME): D. WHITAKER

LOG-IN-DATE : 4-5-93

RECEIVED BY (SIGNATURE): D Whitaker

CASE NUMBER:
SAMPLE DELIVERY GROUP NO.:
SAS NUMBER:

REMARKS:

1. Custody Seal(s) — Present/Absent* Intact/Broken
2. Custody Seal Nos:
3. Chain of Custody Records — Present/Absent*
4. Traffic Reports or Packing List — Present/Absent*
5. Airbill — Airbill/Sticker Present/Absent*
6. Airbill No.: 6395890152
7. Sample Tags — Present/Absent*
8. Sample Tags Numbers — Listed/Not Listed on Chain of Custody
9. Sample Condition: — Intact/Broken*/Leaking
10. Does information on custody records, traffic reports, and sample tags agree — Yes/No*
11. Date Recieved at Lab: 4-3-93
12. Temp of Ice chest GARY: 3 * °C
13. Time Recieved:

NO THERMOMETER

SAMPLE TRANSFER

Fraction:
Area #:
By:
On:

CORRESPONDING			
EPA SAMPLE #	SAMPLE TAG #	ASSIGNED LAB #	REMARKS: CONDITION OF SAMPLE SHIPMENT, ETC
	B088V5		
	B08895		
	B08896		
	B08872		
	B08898		
	B088YD		
	B088PD		
	B088N9		

* Contact SMO and attach record of resolution

Reviewed By: Logbook No.:

Date: Logbook Page No.:

* Upon opening a thermometer was placed in the ice chest. mke

FORM DC-1

9713515.1430

000005

SAMPLE LOG-IN SHEET

LAB NAME: TMA/MKI

PAGE: 1 OF 1

RECEIVED BY (PRINT NAME): D. WHITAKER

LOG-IN-DATE: 4-5-93

RECEIVED BY (SIGNATURE): D. Whitaker

CASE NUMBER:
SAMPLE DELIVERY GROUP NO.:
SAS NUMBER:

REMARKS:

1. Custody Seal(s) — Present/Absent* Intact/Broken
2. Custody Seal Nos:
3. Chain of Custody Records — Present/Absent*
4. Traffic Reports or Packing List — Present/Absent*
5. Airbill — Airbill Sticker Present/Absent*
6. Airbill No.: 9597827723
7. Sample Tags — Present/Absent*
8. Sample Tags Numbers — Listed/Not Listed on Chain of Custody
9. Sample Condition: — Intact/Broken*/Leaking
10. Does information on custody records, traffic reports, and sample tags agree — Yes/No* ~~NO THROUGH LAB~~
11. Date Recieved at Lab: 4-3-93
12. Temp of Ice chest SML-27 2°
13. Time Recieved:

SAMPLE TRANSFER

Fraction:
Area #:
By:
On:

EPA SAMPLE #	SAMPLE TAG #	ASSIGNED LAB #	REMARKS: CONDITION OF SAMPLE SHIPMENT, ETC
	B08895		
	B08910		
	B08896		
	B08910		
	B08912		
	B08905		

* Contact SMO and attach record of resolution

Reviewed By: Logbook No.:

Date: Logbook Page No.:

FORM SC-3

9713515.1431

000006

SAMPLE LOG-IN SHEET

LAB NAME: TSL/ARLI

PAGE: 1 OF 1

RECEIVED BY (PRINT NAME): D. WHITAKER

LOG-IN-DATE: 4-5-93

RECEIVED BY (SIGNATURE): D. Whitaker

CASE NUMBER:
SAMPLE DELIVERY GROUP NO.:
SAS NUMBER:

REMARKS:

1. Custody Seal(s) — Present/Absent* Intact/Broken
2. Custody Seal Nos:
3. Chain of Custody Records — Present/Absent*
4. Traffic Reports or Packing List — Present/Absent*
5. Airbill — Airbill/Sticker Present/Absent*
6. Airbill No.: 959782771 4
7. Sample Tags — Present/Absent*
8. Sample Tags Numbers — Listed/Not Listed on Chain of Custody
9. Sample Condition: — Intact/Broken*/Leaking
10. Does information on custody records, traffic reports, and sample tags agree — Yes/No*
11. Date Recieved at Lab: 4-5-93
12. Temp of ice chest: Rm 82 1 °
13. Time Recieved: 0900

SAMPLE TRANSFER

Fraction:
Area #:
By:
On:

EPA SAMPLE #	SAMPLE TAG #	ASSIGNED LAB #	REMARKS: CONDITION OF SAMPLE SHIPMENT, ETC
	B08910		
	B08895		
	B08896		
	B08890		
	~~B088~~		
	B08895		

* Contact SMO and attach record of resolution

Reviewed By: _____ Logbook No.: _____

Date: _____ Logbook Page No.: _____

FORM SC-1

FEDERAL EXPRESS

QUESTIONS? CALL 800-238-5355 TOLL FREE.

AIRBILL PACKAGE TRACKING NUMBER 6395890152

2357M 6395890152

[redacted] 4.293

RECIPIENT'S COPY

1 From (Your Name) Please Print: SAMPLE CONTROL

Your Phone Number (Very Important): 510-235-2633

Company: T M A /NORCAL

Department/Floor No.:

Street Address: 2030 WRIGHT AVE

City: RICHMOND State: CA ZIP Required: 94804

2 To (Recipient's Name) Please Print: SAMPLE CONTROL ( )

Recipient's Phone Number (Very Important):

Company: TMA/ARL

Department/Floor No.:

Exact Street Address (We Cannot Deliver to P.O. Boxes or P.O. Zip Codes.): 160 TAYLOR STREET

City: MONROVIA State: CA ZIP Required: 91016

YOUR INTERNAL BILLING REFERENCE INFORMATION (optional) (First 24 characters will appear on invoice.): 2340-6406

H IF HOLD FOR PICK-UP, Print FEDEX Address Here: Street Address: City: State: ZIP Required:

3 PAYMENT: 1 [X] Bill Sender 2 [ ] Bill Recipient's FedEx Acct. No. 3 [ ] Bill 3rd Party FedEx Acct. No. 4 [ ] Bill Credit Card 5 [ ] Cash/Check [redacted]

4 SERVICES (Check only one box)

Priority Overnight (Delivery by next business morning)
- 11 [X] OTHER PACKAGING
- 16 [ ] FEDEX LETTER*
- 12 [ ] FEDEX PAK*
- 13 [ ] FEDEX BOX
- 14 [ ] FEDEX TUBE

Standard Overnight (Delivery by next business afternoon; Saturday delivery†)
- 51 [ ] OTHER PACKAGING
- 56 [ ] FEDEX LETTER*
- 52 [ ] FEDEX PAK*
- 53 [ ] FEDEX BOX
- 54 [ ] FEDEX TUBE

Economy Two-Day* (Delivery by second business day †)
- 30 [ ] ECONOMY*

*Economy Letter rate not available. Minimum charge: One pound (0.45 kg) rate.

Government Overnight (Available for authorized users only)
- 46 [ ] GOVT LETTER
- 41 [ ] GOVT PACKAGE

Freight Service (for packages over 150 lbs.)
- 70 [ ] OVERNIGHT FREIGHT** (Continued minimum required)
- 80 [ ] TWO-DAY FREIGHT**

† Delivery commitment may be later in some areas. *Declared Value Limit $500. **Call for delivery schedule.

5 DELIVERY AND SPECIAL HANDLING (Check services required)
- 1 [ ] HOLD FOR PICK-UP (Fill in Box H)
- 2 [ ] DELIVER WEEKDAY
- 3 [ ] DELIVER SATURDAY (Extra charge) [X]
- 4 [ ] DANGEROUS GOODS (Extra charge)
- 5 [ ]
- 6 [ ] DRY ICE (Dangerous Goods Shipper's Declaration not required)
- 7 [ ] OTHER SPECIAL SERVICE
- 8 [ ]
- 9 [ ] SATURDAY PICK-UP (Extra charge)
- [ ]
- 12 [ ] HOLIDAY DELIVERY (If offered) (Extra charge)

6

Packages	Weight in Pounds Only	Total Declared Value (See right)
Total 4	Total 272	Total

DIM SHIPMENT (Chargeable Weight) [ ] lbs. L x W x H

Received At: 1 [X] Regular Stop 2 [ ] On-Call Stop 3 [ ] Drop Box 4 [ ] B.S.C. 5 [ ] Station

7 Release Signature:

Emp. No. Date

[ ] Cash Received
[ ] Return Shipment
[ ] Third Party [ ] Chg. To Del [ ] Chg. To Hold

Street Address

City State Zip

Received By: X

Date/Time Received FedEx Employee Number

Federal Express Use

Base Charges	
Declared Value Charge	
Other 1	
Other 2	
Total Charges	

REVISION DATE 11/92 PART #137204 FXEM 12/92 FORMAT #155

155

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9713515.1492

000007

000008

MULTIPLE PACKAGE SHIPMENT LABELS

SHIPMENT DATE	4.2.93
MASTER AIRBILL NUMBER	6395890152

2 OF 4 — 959 7827 734

DESCRIPTION: ice chest

3 OF 4 — 959 7827 723

DESCRIPTION: ice chest

4 OF 4 — 959 7827 732

DESCRIPTION: ice chest

___ OF ___ — 959 7827 741

DESCRIPTION: _____

___ OF ___ — 959 7827 757

DESCRIPTION: _____

DEFINITIONS

On this Airbill we our and us refer to Federal Express Corporation its employees and agents You and your refer to the sender its employees and agents

AGREEMENT TO TERMS

By giving us your package to deliver you agree to all the terms on this Airbill and in our current Service Guide which is available on request If there is a conflict between the current Service Guide and this Airbill the Service Guide will control No one is authorized to alter or modify the terms of our Agreement

RESPONSIBILITY FOR PACKAGING AND COMPLETING AIRBILL

You are responsible for adequately packaging your goods and for properly filling out this Airbill Omission of the number of packages and weight per package from this Airbill will result in a billing based on our best estimate of the number of packages received from you and an estimated "default" weight per package as determined and periodically adjusted by us

AIR TRANSPORTATION TAX INCLUDED

Our basic rate includes a federal tax required by Internal Revenue Code Section 4271 on the air transportation portion of this service

LIMITATIONS ON OUR LIABILITY AND LIABILITIES NOT ASSUMED

Our liability for loss or damage to your package is limited to your actual damages or $100 whichever is less unless you pay for and declare a higher authorized value We do not provide cargo liability insurance, but you may pay an additional charge for each additional $100 of declared value If you declare a higher value and pay the additional charge, our liability will be the lesser of your declared value or the actual value of your package.

In any event we will not be liable for any damages whether direct, incidental, special or consequential in excess of the declared value of a shipment whether or not Federal Express had knowledge that such damages might be incurred including but not limited to, loss of income or profits

We won't be liable for your acts or omissions, including but not limited to improper or insufficient packing, securing, marking or addressing or for the acts or omissions of the recipient or anyone else with an interest in the package Also we won't be liable if you or the recipient violates any of the terms of our agreement We won't be liable for loss of or damage to shipments of prohibited items

We won't be liable for loss damage or delay caused by events we cannot control including but not limited to acts of God, perils of the air weather conditions acts of public enemies, war, strikes, civil commotions, or acts or omissions of public authorities (including customs and quarantine officials) with actual or apparent authority

DECLARED VALUE LIMITS

The highest declared value we allow for FedEx Letter and FedEx Pak shipments is $500 For other shipments, the highest declared value we allow is $25,000 unless your package contains items of "extraordinary value," in which case the highest declared value we allow is $500 Items of extraordinary value," include artwork, jewelry furs precious metals negotiable instruments and other items listed in our current Service Guide

If you send more than one package on this Airbill you may fill in the total declared value for all packages, not to exceed the $100 $500 or $25,000 per package limit described above (Example 5 packages can have a total declared value of up to $125,000)

If more than one package is shipped on this airbill, our liability for loss or damage will be limited to the actual value of the package(s) lost or damaged (not to exceed the lesser of the total declared value or the per package limits described above) You have the responsibility of proving the actual loss or damage

FILING A CLAIM

ALL CLAIMS MUST BE MADE BY YOU IN WRITING You must notify us of your claim within strict time limits See current Service Guide

We'll consider your claim filed if you call and notify our Customer Service Department at 800 238 5355 and notify us in writing as soon as possible

Within 90 days after you notify us of your claim, you must send us all relevant information about it We are not obligated to act on any claim until you have paid all transportation charges and you may not deduct the amount of your claim from those charges

If the recipient accepts your package without noting any damage on the delivery record, we will assume that the package was delivered in good condition In order for us to process your claim, you must, to the extent possible make the original shipping cartons and packing available for inspection

RIGHT TO INSPECT

We may, at our option, open and inspect your packages prior to or after you give them to us to deliver

NO C.O.D. SERVICES

NO C O D SERVICES ON THIS AIRBILL If C O D Service is required please use a Federal Express C O D airbill for this purpose

RESPONSIBILITY FOR PAYMENT

Even if you give us different payment instructions, you will always be primarily responsible for all delivery costs, as well as any cost we may incur in either returning your package to you or warehousing it pending disposition

RIGHT OF REJECTION

We reserve the right to reject a shipment at any time, when such shipment would be likely to cause damage or delay to other shipments, equipment or personnel, or if the transportation of which is prohibited by law or is in violation of any rules contained in this Airbill or our current Service Guide

MONEY-BACK GUARANTEE

In the event of untimely delivery, Federal Express will at your request and with some limitations refund or credit all transportation charges See current Service Guide for further information

Part # 137204/137206
Rev 11/92

9713515.1473

9713515.1434

000009

TMA/ARLI
Thermo Analytical Inc.

RADIATION DOSE RATE SURVEY FORM

Date 4/05/93 COMPANY NORCAL (WHC) OTHER ORD # 6395890152

Surveyor's Name MARK S. McCoy

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

Serial No. 710289 / 02619 Serial No. 907726 / 02628

Calibration Date 12/02/92 Calibration Date 2/16/93

Instrument Calibration Factor 0.280 Instrument Calibration Factor 0.190

Sample	Location	HP-210 CPM	HP-210 Factor	HP-210 DPM	AC-3-7 CPM	AC-3-7 Factor	AC-3-7 DPM	Spillage or Breakage?	Activity pCi/gm or mR/h
Background		35.0			9.97				
Consumer		7,570	0.2922		4,098	0.1596			
Smear SML 215		34.0			9.97			None	
GARY		38.0			9.97			None	
RM 82		42.0			0			None	
SML-27		34.0			0			None	
Reported (WHC)		45	samples each			< 50 pCi/gm			

Comments

All OK ✓ Approved MSM

Not OK Date 4/05/93

GENERAL CHEMISTRY RESULTS

CASE NO. 04-014

Water Sample #:

B088Q5	B088V5
B088Y0	B08910

CASE NARRATIVE

The holding time for the pH analysis was exceeded. Careful review of the QC analysis indicates that the data is reliable.

Sample B088Q5 (A3-04-014-01F) yielded a 68.0% recovery for the Phosphate analysis. The low Phosphate recovery compared to our laboratory control sample indicated the presence of a matrix interference.

The % RPD for the Fluoride analysis reported for water sample B088V5 (A3-04-014-03F) was 28.6%. The results for the sample and duplicate were near the instrument detection limit. These results are acceptable based on the level of the Fluoride concentration.

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

Maureen Parrish

Maureen Parrish

TMA Inc. REPORT Work Order # A3-04-014

Received: 04/02/93 05/17/93 13:42:41

REPORT TO: Westinghouse Hanford Company
2355 Stevens Dr.,MSIN-H4-23
345 Hills Street/3000 Area
Richland, WA 99352

ATTEN: Jeanette Duncan

PREPARED BY: Thermo Analytical, Inc.
160 Taylor Street
Monrovia, CA 91016

ATTEN: Ms. Carole Harris

PHONE: 818-357-3247

Maureen Parrish
CERTIFIED BY

CONTACT: EVV CIH

CLIENT: WHC SAMPLES: 9

COMPANY: Westinghouse Hanford Company

FACILITY:

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

WORK ID: 100-FR-3

TAKEN: By Westinghouse Staff

TRANS: Federal Express

TYPE: Liquid

P.O. #: N3-04-004-SU-AR

INVOICE: under separate cover

SAMPLE IDENTIFICATION

01 B08805
01 B08805 MS
01 B08805 MSD
01 B08805
01 B08805 MS
01 B08805
01 B08805 MS
01 B08805
01 B08805 MS
02 B08807
02 B08807 MS
02 B08807 MSD
03 B088V5
03 B088V5 MS
03 B088V5 MSD
03 B088V5
03 B088V5 Duplicate
03 B088V5
03 B088V5 Duplicate
03 B088V5
03 B088V5 Duplicate
03 B088V5
04 B088V7
05 B088Y0
05 B088Y0 Duplicate
06 B088Y2

TEST CODES and NAMES used on this workorder

BNCLPW	CLP Semivol. Water - WH020
PECLPL	CLP Pesticides Liq.
VOCLPL	CLP Volatile Org.Liq.
WCCLPL	Anions & Wet Chem. - WH043
WCLCS	Lab Control Sample Summary
WCL L	Chloride - WH120
WCQCD	Quality Control Summary
WCQCS	Quality Control Summary
WF L	Fluoride in Water
WNH3 L	Ammonia in Water - WH140
WPH L	pH of Liquid - WH121
WPO4 L	Phosphate in Liquids
WSO4 L	Sulfate (in Waters)
WSULFI	Sulfide - WH114
W ALK	Alkalinity - WH131
W COD	COD Water - WH132
W COND	Conductivity-Water WH122
W TDS	Dissolved Solids WH128

TMA Inc. REPORT

Work Order # A3-04-014

Received: 04/02/93

05/17/93 13:42:41

SAMPLE IDENTIFICATION

07 B08910

08 B08912

09 Lab Blank

09 Lab Control Sample

TMA Inc. REPORT Work Order # A3-04-014

Received: 04/02/93

Results by Sample

SAMPLE ID B08895 FRACTION 01E TEST CODE WCCLPL NAME Anions & Wet Chem. - WW043

Date & Time Collected 03/31/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	2.2	mg/L	0.2
Fluoride	300.0	0.2	mg/L	0.1
Phosphate	300.0	<0.4	mg/L	0.4
pH	150.1	7.8	pH	0.1
Sulfate	300.0	26	mg/L	1
Elect. Conductivity	120.1	271	umho/cm	6

FORM I

9713515.1439

TMA Inc. REPORT Work Order # A3-04-010 000015

Received: 04/02/93

Results by Sample

SAMPLE ID B08805 FRACTION 01G TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 03/31/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Alkalinity	310.1	100	mg/L	2
Tot. Dissolved Solids	160.1	182	mg/L	5

FORM I

TMA Inc. REPORT Work Order # A3-04-014

Received: 04/02/93 Results by Sample

SAMPLE ID B08805 FRACTION 01W TEST CODE WCCLPL NAME Anions & Wet Chem. - VM043

Date & Time Collected 03/31/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

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

FORM I

TMA Inc. REPORT Work Order # A3-04-014

Received: 04/02/93

Results by Sample

SAMPLE ID B08805 FRACTION 01J TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 03/31/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Ammonia Nitrogen	350.3	<0.05	mg/L	0.05
COD	410.0	<5	mg/L	5

FORM I

TMA Inc. REPORT Work Order # A3-04-014

Received: 04/02/93

Results by Sample

SAMPLE ID B088V5 FRACTION 03E TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 03/31/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	6.1	mg/L	0.2
Fluoride	300.0	0.3	mg/L	0.1
Phosphate	300.0	<0.4	mg/L	0.4
pH	150.1	8.0	pH	0.1
Sulfate	300.0	24	mg/L	1
Elect. Conductivity	120.1	360	umho/cm	6

FORM I

TNA Inc. REPORT Work Order # A3-04-014

Receivved: 04/02/93 Results by Sample

SAMPLE ID B088V5 FRACTION 03G TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 03/31/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Alkalinity	310.1	139	mg/L	2
Tot. Dissolved Solids	160.1	256	mg/L	5

FORM I

9713515.1444

000020

TMA Inc. REPORT Work Order # A3-04-014

Received: 04/02/93

Results by Sample

SAMPLE ID B088V5 FRACTION 03I TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 03/31/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

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

FORM I

TMA Inc. REPORT Work Order # A3-04-014

Received: 04/02/93 Results by Sample

SAMPLE ID B088V5 FRACTION 03K TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 03/31/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Ammonia Nitrogen	350.3	<0.05	mg/L	0.05
COD	410.0	<5	mg/L	5

FORM I

TMA Inc. REPORT Work Order # A3-04-014

Received: 04/02/93

Results by Sample

SAMPLE ID B088Y0 FRACTION 05C TEST CODE VCCLPL NAME Anions & Wet Chem. - VN043

Date & Time Collected 03/31/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	15.4	mg/L	0.2
Fluoride	300.0	0.8	mg/L	0.1
Phosphate	300.0	<0.4	mg/L	0.4
pH	150.1	7.6	pH	0.1
Sulfate	300.0	70	mg/L	1
Elect. Conductivity	120.1	701	umho/cm	6

FORM I

TMA Inc. REPORT Work Order # A3-04-014

Received: 04/02/93

Results by Sample

SAMPLE ID B088Y0 FRACTION 05D TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 03/31/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Alkalinity	310.1	193	mg/L	2
Tot. Dissolved Solids	160.1	470	mg/L	5

FORM I

TMA Inc. REPORT Work Order # A3-04-014

Received: 04/02/93

Results by Sample

SAMPLE ID B088Y0 FRACTION 05E TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 03/31/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

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

FORM I

TMA Inc. REPORT Work Order # A3-04-014

Received: 04/02/93

Results by Sample

SAMPLE ID B088Y0 FRACTION 05F TEST CODE VCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 03/31/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Ammonia Nitrogen	350.3	<0.05	mg/L	0.05
COD	410.0	<5	mg/L	5

FORM I

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000026

TMA Inc. REPORT Work Order # A3-04-014

Received: 04/02/93

Results by Sample

SAMPLE ID B08910 FRACTION 07C TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 03/31/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	6.0	mg/L	0.2
Fluoride	300.0	0.3	mg/L	0.1
Phosphate	300.0	<0.4	mg/L	0.4
pH	150.1	8.0	pH	0.1
Sulfate	300.0	23	mg/L	1
Elect. Conductivity	120.1	364	umho/cm	6

FORM I

TMA Inc. REPORT Work Order # A3-04-014

Received: 04/02/93

Results by Sample

SAMPLE ID B08910 FRACTION 07D TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 03/31/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Alkalinity	310.1	139	mg/L	2
Tot. Dissolved Solids	160.1	257	mg/L	5

FORM I

9713515.1452

000028

TMA Inc. REPORT Work Order # A3-04-014

Received: 04/02/93

Results by Sample

SAMPLE ID B08910 FRACTION 07E TEST CODE WCCLPL NAME Anions & Wet Chem. - WM043

Date & Time Collected 03/31/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

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

FORM I

TMA Inc. REPORT Work Order # A3-04-014

Received: 04/02/93

Results by Sample

SAMPLE ID B08910 FRACTION 07F TEST CODE VCCLPL NAME Anions & Wet Chem. - VN043

Date & Time Collected 03/31/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Ammonia Nitrogen	350.3	<0.05	mg/L	0.05
COD	410.0	<5	mg/L	5

FORM I

CASE NARRATIVE

LABORATORY : TMA/ARLI

CASE : 04-014

CONTRACT ID : WESTINGHOUSE HANFORD COMPANY

SDG RECEIPT DATE : April 2, 1993

1.0 DESCRIPTION OF CASE :

Eight water samples were analyzed for TCL Organics- Volatiles, Semivolatiles, and Pesticides/PCBs according to the USEPA Contract Laboratory Program (CLP) Statement of Work for Organic Analysis, Revision OLM01.8.

2.0 SAMPLE LIST :

WESTINGHOUSE ID	LAB ID	ANALYSIS REQUESTED	MATRIX	pH
B088Q5	A3-04-014-01A	V	WATER	7
B088Q5	A3-04-014-01B	SV & P	WATER	
B088Q5 MS	A3-04-014-01C	SV	WATER	
B088Q5 MSD	A3-04-014-01D	SV	WATER	
B088Q7	A3-04-014-02A	V	WATER	7
B088Q7 MS	A3-04-014-02B	V	WATER	7
B088Q7 MSD	A3-04-014-02C	V	WATER	7
B088V5	A3-04-014-03A	V	WATER	7
B088V5	A3-04-014-03B	SV & P	WATER	
B088V5 MS	A3-04-014-03C	P	WATER	
B088V5 MSD	A3-04-014-03D	P	WATER	
B088V7	A3-04-014-04A	V	WATER	7
B088Y0	A3-04-014-05A	V	WATER	7
B088Y0	A3-04-014-05B	SV & P	WATER	
B088Y2	A3-04-014-06A	V	WATER	7
B08910	A3-04-014-07A	V	WATER	7
B08910	A3-04-014-07B	SV & P	WATER	
B08910 RE	A3-04-014-07B	SV	WATER	
B08912	A3-04-014-08A	V	WATER	7

3.0 COMMENTS :

3.1 SHIPPING AND DOCUMENTATION :

All of the samples were received unbroken and properly documented. The Westinghouse Hanford Company Chain of Custody listed sample ID B08Y2; however, the sample labels and the SAR listed the sample ID as B088Y2. The sample was processed as B088Y2.

3.2 ANALYSIS

3.2.1 VOLATILE ANALYSIS COMMENTS :

LOW LEVEL WATER :

The samples were analyzed within the CLP SOW holding times.

All of the QC results were within the limits specified by the EPA CLP SOW.

TUNES :

All BFB tunes are injected directly into GC/MS instrument.

3.2.2 SEMIVOLATILE ANALYSIS COMMENTS :

LOW LEVEL WATER :

The samples were extracted and analyzed within the CLP SOW holding times. The original analysis for sample B08910 yielded zero percent recoveries for all of the acid surrogates. It appears that the acid surrogates were not added prior to sample extraction. The sample was re-extracted 7 days outside of the holding time and has been reported as B08910RE. The acid surrogate recoveries for sample B08910RE were within the QC limits. The results for sample B08910 and B08910RE have been included in this package.

The matrix spike recoveries for 4-Nitrophenol in samples B088Q5MS and B088Q5MSD were above the QC limits. Sample B088Q5MSD also had a Pentachlorophenol spike recovery slightly above the QC limits. In sample B088Q5MS, Bis(2-ethylhexyl)phthalate was detected at a concentration that exceeded the GCMS calibration. Hence, the "E" qualifier. Only a small amount was detected in the unspiked samples and B088Q5MSD. In accordance with protocol, no further action was required.

All of the other QC results were within the limits specified by the EPA CLP SOW.

3.2.3 PESTICIDE/PCB ANALYSIS COMMENTS :

SEQUENCE NOTES :

The sequence was started on 04/17/93 and was analyzed according to the CLP SOW. The sequence was analyzed by single injection into a dual column system.

All of the QC criteria were within the limits specified by the CLP SOW.

The chromatograms are presented in the manner consistent with the capabilities of the Nelson 2700 Turbochrome Data System which normalizes the largest peak to scale.

SAMPLE NOTES :

LOW LEVEL WATER :

The samples were extracted and analyzed within the CLP SOW holding times. Samples PBLK0405C2, B088Y0 and B08910 had a TCX surrogate recovery slightly below the QC limits on the DB-608 column. In accordance with protocol, no further action was required.

All of the other QC results were within the limits specified by CLP SOW.

We certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data in this hardcopy data package and in the computer-readable data submitted on diskette is authorized by the Laboratory Manager or his designee, as verified by the following signatures.

Nicole Roth 5/26/93
Nicole Roth
CLP Program Manager

Widayati
Wida Ang 5/26/93
Organics Manager

9713515.1457

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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088Q5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04014 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304014-01A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30409R03

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: not dec. ____ Date Analyzed: 04/09/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

9713515.1458

000006

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B088Q5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04014 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304014-01A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30409R03

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: not dec. ____ Date Analyzed: 04/09/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088Q7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04014 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304014-02A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30409R04

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: not dec. ____ Date Analyzed: 04/09/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

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

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	3	J
67-64-1	Acetone	25	
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

9713515.1460

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B088Q7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04014 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304014-02A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30409R04

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: not dec. ____ Date Analyzed: 04/09/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088V5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04014 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304014-03A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30409R09

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: not dec. ____ Date Analyzed: 04/09/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	3	J
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B088V5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04014 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304014-03A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30409R09

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: not dec. ____ Date Analyzed: 04/09/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088V7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04014 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304014-04A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30409R10

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: not dec. ____ Date Analyzed: 04/09/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

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

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	3	J
67-64-1	Acetone	26	
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B088V7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04014 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304014-04A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30409R10

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: not dec. ____ Date Analyzed: 04/09/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

9713515.1465

000013

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088Y0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04014 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304014-05A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30409R14

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: not dec. ____ Date Analyzed: 04/09/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	28	
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

9713515.1466

000014

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

B088Y0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04014 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304014-05A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30409R14

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: not dec. ____ Date Analyzed: 04/09/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

9713515.1467

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088Y2

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04014 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304014-06A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30409R13

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: not dec. ____ Date Analyzed: 04/09/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

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

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	3	J
67-64-1	Acetone	28	
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B088Y2

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04014 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304014-06A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30409R13

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: not dec. ____ Date Analyzed: 04/09/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B08910

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04014 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304014-07A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30409R15

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: not dec. ____ Date Analyzed: 04/09/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	9	J
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	3	J
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B08910

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04014 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304014-07A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30409R15

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: not dec. ____ Date Analyzed: 04/09/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B08912

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04014 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304014-08A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30409R16

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: not dec. ____ Date Analyzed: 04/09/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	3	J
67-64-1	Acetone	20	
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B08912

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04014 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304014-08A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30409R16

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: not dec. ____ Date Analyzed: 04/09/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088Q5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04014 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304014-01B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30413S07

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 04/05/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/13/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	25	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088Q5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04014 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304014-01B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30413S07

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 04/05/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/13/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)Anthracene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	14	
218-01-9	Chrysene	10	U
117-84-0	Di-n-Octyl Phthalate	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B088Q5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04014 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304014-01B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30413S07

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 04/05/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/13/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

Number TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN HYDROCARBON	5.87	10	BJ

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088V5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04014 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304014-03B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30413S10

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: ____ decanted: (Y/N) ___ Date Extracted: 04/05/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/13/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	25	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088V5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04014 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304014-03B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30413S10

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: ____ decanted: (Y/N) ___ Date Extracted: 04/05/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/13/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)Anthracene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	10	U
218-01-9	Chrysene	10	U
117-84-0	Di-n-Octyl Phthalate	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine

EPA SAMPLE NO.

B088V5

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04014 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304014-03B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30413S10

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: ____ decanted: (Y/N) ___ Date Extracted: 04/05/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/13/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

Number TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN HYDROCARBON	5.87	7	BJ

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088Y0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04014 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304014-05B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30413S11

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: ____ decanted: (Y/N) ___ Date Extracted: 04/05/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/13/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	25	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088Y0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04014 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304014-05B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30413S11

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: ____ decanted: (Y/N) ___ Date Extracted: 04/05/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/13/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)Anthracene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	10	U
218-01-9	Chrysene	10	U
117-84-0	Di-n-Octyl Phthalate	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B088Y0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04014 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304014-05B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30413S11

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 04/05/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/13/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

Number TICs found: 2

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN HYDROCARBON	5.88	6	BJ
2.	UNKNOWN ALKANE	7.68	4	J

9713515.1402

000030

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B08910

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04014 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304014-07B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30413S12

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: ____ decanted: (Y/N) ___ Date Extracted: 04/05/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/13/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

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

CAS NO.	COMPOUND		Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	25	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B08910

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04014 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304014-07B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30413S12

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: ____ decanted: (Y/N) ___ Date Extracted: 04/05/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/13/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)Anthracene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	10	U
218-01-9	Chrysene	10	U
117-84-0	Di-n-Octyl Phthalate	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B08910

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04014 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304014-07B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30413S12

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 04/05/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/13/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

Number TICs found: 2

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN HYDROCARBON	5.85	7	BJ
2.	UNKNOWN ALKANE	7.68	3	J

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B08910RE

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04014 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304014-07B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30423S03

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: ____ decanted: (Y/N) ___ Date Extracted: 04/14/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/23/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	25	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B08910RE

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04014 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304014-07B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30423S03

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: ____ decanted: (Y/N) ___ Date Extracted: 04/14/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/23/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

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

CAS NO.	COMPOUND		Q
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)Anthracene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	10	U
218-01-9	Chrysene	10	U
117-84-0	Di-n-Octyl Phthalate	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B08910RE

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04014 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304014-07B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30423S03

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: ____ decanted: (Y/N) ___ Date Extracted: 04/14/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/23/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088Q5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04014 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304014-01B

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: 04/02/93

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 04/05/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/18/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-36-3	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088V5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04014 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304014-03B

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: 04/02/93

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 04/05/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/18/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-36-3	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088Y0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04014 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304014-05B

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: 04/02/93

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 04/05/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/18/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-36-3	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B08910

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04014 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304014-07B

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: 04/02/93

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 04/05/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/18/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-36-3	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

9713515.1492

000002

Page 1 Skinner&Sherman REPORT Work Order # S3-04-057

Received: 04/06/93 05/10/93 14:30:23

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

ATTEN Dan Steurmer

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

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

ATTEN Client Services
PHONE (617) 890-7200

CERTIFIED BY

CONTACT DP

WORK ID N3-04-004
TAKEN By Client
TRANS Fed Ex
TYPE Water
P.O. # N3-04-004
INVOICE under separate cover

SAMPLE IDENTIFICATION		TEST CODES and NAMES used on this workorder	
01 B08910		NO3NO2	Nitrate Plus Nitrite
02 B088Q5			
03 B088V5			
04 B088Y0			
04 B088Y0	DUPL		
04 B088Y0	SPIKE		
05 LCSW			

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.

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

Received: 04/06/93 Results by Sample

SAMPLE ID B08910 SAMPLE # 01 FRACTIONS: A
Date & Time Collected 03/31/93 Category WATER

NO3NO2 3.03
mg N/L

SAMPLE ID B08805 SAMPLE # 02 FRACTIONS: A
Date & Time Collected 03/31/93 Category WATER

NO3NO2 2.03
mg N/L

SAMPLE ID B088V5 SAMPLE # 03 FRACTIONS: A
Date & Time Collected 03/31/93 Category WATER

NO3NO2 3.16
mg N/L

SAMPLE ID B088Y0 SAMPLE # 04 FRACTIONS: A
Date & Time Collected 03/31/93 Category WATER

NO3NO2 20.0
mg N/L

SAMPLE ID B088Y0 DUPL SAMPLE # 04 FRACTIONS: B
Date & Time Collected 03/31/93 Category WATER

NO3NO2 20.5
mg N/L

SAMPLE ID B088Y0 SPIKE SAMPLE # 04 FRACTIONS: C
Date & Time Collected 03/31/93 Category WATER

NO3NO2 23.6
mg N/L

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

NO3NO2 2.05
mg N/L

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

TMA
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

Received: 04/06/93 05/10/93 14:30:23

TMA/NORCAL Hanford

QUALITY CONTROL

MATRIX SPIKE

Sample ID	Sample Result	Spike Added	Spike Result	% Recovery
S304057-04	20.0 mg/L	2.00 mg/L	23.6 mg/L	180

DUPLICATE

Sample ID	Sample result	Duplicate Result	Relative % Difference
S304057-04	20.0 mg/L	20.5mg/L	2.5

QUALITY CONTROL SAMPLES

Sample ID	True Value	Found Value	Percent Recovery
LCS	2.00 mg/L	2.05 mg/L	102.7
Prep blank	--	<0.25 mg/L	--

TMA
Thermo Analytical Inc.

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

Received: 04/06/93 Test Methodology

TEST CODE N03N02 NAME Nitrate Plus Nitrite

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

TMA
Thermo Analytical Inc.

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

9713515.1496

000024

TMA/Skinner & Sherman Labs SAMPLE LOG-IN
WORKORDER S3U405U CLIENT Hanford KKW No. SAMPLES: 1
PROTCL CLP TURNARND 33 Day (Soil) (Water) (Specify Other)
COOLER TEMP: 1 oC, or NA
CUSTODIAN B Prowell SDG/BATCH N/A
CUSTODY SEAL: PRESENT/ABSENT/INTACT/NOT CLIENT CASE U3U405S
SHIPER & # Fed Ex PO/CONTRACT# 1
TAGS: PRESENT/ABSENT/NA/SEE COC CONTACT D. Sanchez
CHAIN OF CUSTODY: PRESENT/ABSENT/NA, # N/A COMMENTS: None

SAMPLE CONTAINERS-INTACT/BROKEN COMMENTS

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

SHIPMENT DATES 4/6/93
LIST ANY DATE WITH PAPERWORK/SHIPMENT PROBLEMS & SPECIFY THE PROBLEM:

N/A

	CLIENT ID	MATRIX	RECEIVED	PH*	TEST(S) & QC	HOLD TIME
1	B088U0	Water	4/6/93	1.49	0.5 NO3 NO2	DUE 4-27-9
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						

Samples are from site known to have Rad-Contamination: YES ___ NO ✓
Samples have detectable amounts of Radioactive Material: YES ___ NO ✓

SUBCONTRACT: YES/NO, TO: Compuchem DATE:

REVIEWED 4/6/93 BP

* EPA/CLP required Rev 1.6 PAGE: 81

 9MAN05E15.1497 CHAIN OF CUSTODY ORD # N3-04-004

RCVD: 04/02/93 DUE: 05/02/93 04/02/93 15:16:08 KEEP: 07/31/93 DISP: S

000025

DASH	SAMPLE IDENTIFICATION		STORED	TESTS for FRACTIONS with work in DEPT: SU and CATEGORY				
01B-W	B08910	UNFILTERED	S&S	WH007	WH008	WH010	WH011	WH137
02B-W	B08B05	UNFILTERED	S&S	WH007	WH008	WH010	WH011	WH137
03B-W	B08BV5	UNFILTERED	S&S	WH007	WH008	WH010	WH011	WH137
04B-W	B08BY0	UNFILTERED	S&S	WH007	WH008	WH010	WH011	WH137
04F-W	B08BY0 MS	UNFILTERED	S&S	WH007	WH008	WH010	WH011	WH137
04G-W	B08BY0 DUP	UNFILTERED	S&S	WH007	WH008	WH010	WH011	WH137
04H-W	L C S		S&S	WH007	WH008	WH010	WH137	
05A-W	B08911	FILTERED	S&S	WH007	WH008	WH010		
06A-W	B08BQ6	FILTERED	S&S	WH007	WH008	WH010		
07A-W	B08BV6	FILTERED	S&S	WH007	WH008	WH010		
08A-W	B08BY1	FILTERED	S&S	WH007	WH008	WH010		
08B-W	B08BY1 MS	FILTERED	S&S	WH007	WH008	WH010		
08C-W	B08BY1 DUP	FILTERED	S&S	WH007	WH008	WH010		
08D-W	L C S		S&S	WH007	WH008	WH010		

RELEASED BY	DATE	TRANSFERRED TO	DATE	RECEIVED BY	DATE
Yamamoto	4-5-93	SKINNER	4-5-93	Bob Prole	4/6/93

9713515.1498

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

JUN 1993
RECEIVED
SDLA

May 5, 1993

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

Quality Control Narrative

Scope
Four (4) water samples were submitted to TMA/Skinner & Sherman Laboratories, Inc. on April 6, 1993 from TMA/Norcal. The samples were analyzed for the USEPA CLP metals and cyanide as indicated on the chain of custody. The analysis was performed under TMA/Skinner and Sherman work order S304055.

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

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

Respectfully submitted,

TMA/SKINNER & SHERMAN LABORATORIES, INC.

David N. Peterson
Assistant Laboratory Manager

1 SW 8/22/96

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

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

Lab Code: SKINER Case No.: N3-04-004 SAS No.: SDG No.: B08805

SOW No.: ILM02.1

SAMPLE NUMBER:	Lab Sample ID.
B08805	04055-02S
B088V5	04055-03S
B088Y0	04055-04S
B088Y0D	04055-04S2
B088Y0S	04055-04DS
B08910	04055-01S

Were ICP interelement corrections applied?	Yes/No	YES
Were ICP background corrections applied?	Yes/No	YES
If yes-were raw data generated before application of background corrections?	Yes/No	NO

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Steven Provencal Name: Steven R. Provencal

Date: 5/5/93 Title: Lead Chemist

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B08805

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

Lab Code: SKINER Case No.: N3-04-004SAS No.: SDG No.: B08805

Matrix (soil/water): WATER Lab Sample ID: 04055-02S

Level (low/med): LOW Date Received: 04/06/93

% 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	36.2	B		P
7440-36-0	Antimony	18.4	U		P
7440-38-2	Arsenic	2.3	U	WN	F
7440-39-3	Barium	43.9	B		P
7440-41-7	Beryllium	0.50	U		P
7440-43-9	Cadmium	1.6	U		P
7440-70-2	Calcium	40500			P
7440-47-3	Chromium	2.7	U		P
7440-48-4	Cobalt	2.5	U		P
7440-50-8	Copper	4.6	B		P
7439-89-6	Iron	93.5	B		P
7439-92-1	Lead	1.7	B		F
7439-95-4	Magnesium	6050			P
7439-96-5	Manganese	2.3	B		P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	3.0	U		P
7440-09-7	Potassium	2460	B		P
7782-49-2	Selenium	3.3	U	WN	F
7440-22-4	Silver	3.9	U		P
7440-23-5	Sodium	4060	B		P
7440-28-0	Thallium	1.2	U		F
7440-62-2	Vanadium	2.5	U		P
7440-66-6	Zinc	4.7	U		P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B088V5

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

Lab Code: SKINER Case No.: N3-04-004SAS No.: SDG No.: B088Q5

Matrix (soil/water): WATER Lab Sample ID: 04055-03S

Level (low/med): LOW Date Received: 04/06/93

% 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	37.5	B		P
7440-36-0	Antimony	18.4	U		P
7440-38-2	Arsenic	4.4	B	WN	F
7440-39-3	Barium	23.3	B		P
7440-41-7	Beryllium	0.50	U		P
7440-43-9	Cadmium	1.6	U		P
7440-70-2	Calcium	40800			P
7440-47-3	Chromium	2.7	U		P
7440-48-4	Cobalt	2.5	U		P
7440-50-8	Copper	2.9	U		P
7439-89-6	Iron	27.7	B		P
7439-92-1	Lead	11.8			F
7439-95-4	Magnesium	9570			P
7439-96-5	Manganese	2.2	B		P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	3.0	U		P
7440-09-7	Potassium	4290	B		P
7782-49-2	Selenium	3.3	U	WN	F
7440-22-4	Silver	3.9	U		P
7440-23-5	Sodium	16000			P
7440-28-0	Thallium	1.2	U		F
7440-62-2	Vanadium	9.4	B		P
7440-66-6	Zinc	4.7	U		P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B088Y0

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

Lab Code: SKINER Case No.: N3-04-004SAS No.: SDG No.: B08805

Matrix (soil/water): WATER Lab Sample ID: 04055-04S

Level (low/med): LOW Date Received: 04/06/93

% 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	35.2	B		P
7440-36-0	Antimony	18.4	U		P
7440-38-2	Arsenic	21.6		SN	F
7440-39-3	Barium	43.0	B		P
7440-41-7	Beryllium	0.50	U		P
7440-43-9	Cadmium	1.6	U		P
7440-70-2	Calcium	59100			P
7440-47-3	Chromium	3.7	B		P
7440-48-4	Cobalt	2.5	U		P
7440-50-8	Copper	2.9	U		P
7439-89-6	Iron	31.5	B		P
7439-92-1	Lead	1.5	B		F
7439-95-4	Magnesium	18400			P
7439-96-5	Manganese	1.2	B		P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	3.0	U		P
7440-09-7	Potassium	7250			P
7782-49-2	Selenium	3.3	U	WN	F
7440-22-4	Silver	3.9	U		P
7440-23-5	Sodium	55600			P
7440-28-0	Thallium	1.2	U	W	F
7440-62-2	Vanadium	14.8	B		P
7440-66-6	Zinc	5.1	B		P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

-004

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B08910

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

Lab Code: SKINER Case No.: N3-04-004SAS No.: SDG No.: B08805

Matrix (soil/water): WATER Lab Sample ID: 04055-01S

Level (low/med): LOW Date Received: 04/06/93

% 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	34.7	B		P
7440-36-0	Antimony	18.4	U		P
7440-38-2	Arsenic	5.6	B	WN	F
7440-39-3	Barium	25.2	B		P
7440-41-7	Beryllium	0.50	U		P
7440-43-9	Cadmium	1.6	U		P
7440-70-2	Calcium	40600			P
7440-47-3	Chromium	4.7	B		P
7440-48-4	Cobalt	2.5	U		P
7440-50-8	Copper	10.4	B		P
7439-89-6	Iron	46.6	B		P
7439-92-1	Lead	2.3	B		F
7439-95-4	Magnesium	9550			P
7439-96-5	Manganese	2.6	B		P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	3.0	U		P
7440-09-7	Potassium	4330	B		P
7782-49-2	Selenium	3.3	U	WN	F
7440-22-4	Silver	3.9	U		P
7440-23-5	Sodium	15900			P
7440-28-0	Thallium	1.2	U		F
7440-62-2	Vanadium	11.3	B		P
7440-66-6	Zinc	6.1	B		P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

-005

9213515.1504

TMA/Skinner & Sherman Labs SAMPLE LOG-IN
WORKORDER S304055 CLIENT Hanford Nav No. SAMPLES:
PROTCL CLP TURNARND 33 Day 4
COOLER TEMP: 1 oC, or NA (Soil) (Water) (Specify Other)
CUSTODIAN B Brown SDG/BATCH N/A
CUSTODY SEAL: PRESENT/ABSENT/INTACT/NOT CLIENT CASE N304004
SHIPER & # Fed Ex PO/CONTRACT# ↓
TAGS: PRESENT/ABSENT/NA/SEE COC CONTACT D Snocker
CHAIN OF CUSTODY: PRESENT/ABSENT/NA, # N/A COMMENTS: none

SAMPLE CONTAINERS-INTACT/BROKEN COMMENTS

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

SHIPMENT DATES 4/6/93
LIST ANY DATE WITH PAPERWORK/SHIPMENT PROBLEMS & SPECIFY THE PROBLEM:

UNFILTERED

N/A

	CLIENT ID	MATRIX	RECEIVED	PH*	TEST(S) & QC	HOLD TIME UP
1	B08910	water	4/6/93	1.42/13.12	Tn/CN	
2	B08805	↓	↓	1.36/13.01	↓	
3	B08805	↓	↓	1.89/13.09	↓	
4	B08840	↓	↓	1.21/13.23	DS ↓	
5						
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26						
27						

152

Samples are from site known to have Rad-Contamination: YES ___ NO ✓
Samples have detectable amounts of Radioactive Material: YES ___ NO ✓

SUBCONTRACT: YES/NO, TO: _____ DATE: 4/6/93

REVIEWED _____ Complete BP

* EPA/CLP required Rev 1.6 PAGE: 75

9713515.1505

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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JUN 1993
RECEIVED
SDLA

May 5, 1993

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

Quality Control Narrative

Scope
Four (4) water samples were submitted to TMA/Skinner & Sherman Laboratories, Inc. on April 6, 1993 from TMA/Norcal. The samples were analyzed for the USEPA CLP metals. The analysis was performed under TMA/Skinner and Sherman work order S304056.

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

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

The selenium laboratory duplicate 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.

David N. Peterson
Assistant Laboratory Manager

8/22/96 DW

9713515.1506

WESTINGHOUSE/HANFORD

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

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

Lab Code: SKINER Case No.: N3-04-004 SAS No.: SDG No.: B08806

SOW No.: ILM02.1

SAMPLE NUMBER:	Lab Sample ID.
B08806	04056-02S
B088V6	04056-03S
B088Y1	04056-04S
B088Y1D	04056-04S2
B088Y1S	04056-04DS
B08911	04056-01S

Were ICP interelement corrections applied? Yes/No YES

Were ICP background corrections applied? Yes/No YES

If yes-were raw data generated before application of background corrections? Yes/No NO

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Steven Provencal Name: Steven R. Provencal

Date: 5/5/93 Title: Lead Chemist

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B08806

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

Lab Code: SKINER Case No.: N3-04-004SAS No.: SDG No.: B08806

Matrix (soil/water): WATER Lab Sample ID: 04056-02S

Level (low/med): LOW Date Received: 04/06/93

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	23.5	U		P
7440-36-0	Antimony	17.9	U		P
7440-38-2	Arsenic	3.5	U		F
7440-39-3	Barium	45.2	B		P
7440-41-7	Beryllium	0.50	U		P
7440-43-9	Cadmium	1.7	U		P
7440-70-2	Calcium	39200			P
7440-47-3	Chromium	5.8	U		P
7440-48-4	Cobalt	3.8	U		P
7440-50-8	Copper	4.2	U		P
7439-89-6	Iron	7.4	B		P
7439-92-1	Lead	1.7	B	W	F
7439-95-4	Magnesium	5890			P
7439-96-5	Manganese	1.8	U		P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	6.1	U		P
7440-09-7	Potassium	2150	B		P
7782-49-2	Selenium	2.9	U	W*	F
7440-22-4	Silver	3.8	U		P
7440-23-5	Sodium	3950	B		P
7440-28-0	Thallium	1.2	U	W	F
7440-62-2	Vanadium	3.3	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:

002

9713515.1508

WESTINGHOUSE/HANFORD

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B088V6

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

Lab Code: SKINER Case No.: N3-04-004SAS No.: SDG No.: B088Q6

Matrix (soil/water): WATER Lab Sample ID: 04056-03S

Level (low/med): LOW Date Received: 04/06/93

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	23.5	U		P
7440-36-0	Antimony	17.9	U		P
7440-38-2	Arsenic	3.7	B		F
7440-39-3	Barium	26.4	B		P
7440-41-7	Beryllium	0.50	U		P
7440-43-9	Cadmium	1.7	U		P
7440-70-2	Calcium	40300			P
7440-47-3	Chromium	5.8	U		P
7440-48-4	Cobalt	3.8	U		P
7440-50-8	Copper	4.2	U		P
7439-89-6	Iron	4.8	U		P
7439-92-1	Lead	1.3	U		F
7439-95-4	Magnesium	9520			P
7439-96-5	Manganese	1.8	U		P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	6.1	U		P
7440-09-7	Potassium	4110	B		P
7782-49-2	Selenium	2.9	U	W*	F
7440-22-4	Silver	3.8	U		P
7440-23-5	Sodium	15900			P
7440-28-0	Thallium	1.2	U		F
7440-62-2	Vanadium	11.6	B		P
7440-66-6	Zinc	3.4	U		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

003

9713515.1509

WESTINGHOUSE/HANFORD

1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B088Y1

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

Lab Code: SKINER Case No.: N3-04-004SAS No.: SDG No.: B08806

Matrix (soil/water): WATER Lab Sample ID: 04056-04S

Level (low/med): LOW Date Received: 04/06/93

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	23.5	U		P
7440-36-0	Antimony	17.9	U		P
7440-38-2	Arsenic	10.4			F
7440-39-3	Barium	41.4	B		P
7440-41-7	Beryllium	0.50	U		P
7440-43-9	Cadmium	1.7	U		P
7440-70-2	Calcium	57800			P
7440-47-3	Chromium	5.8	U		P
7440-48-4	Cobalt	3.8	U		P
7440-50-8	Copper	4.2	U		P
7439-89-6	Iron	4.8	U		P
7439-92-1	Lead	2.5	B	W	F
7439-95-4	Magnesium	18200			P
7439-96-5	Manganese	1.8	U		P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	6.1	U		P
7440-09-7	Potassium	6980			P
7782-49-2	Selenium	14.5	U	*	F
7440-22-4	Silver	3.8	U		P
7440-23-5	Sodium	55600			P
7440-28-0	Thallium	1.2	U	W	F
7440-62-2	Vanadium	16.8	B		P
7440-66-6	Zinc	14.0	B		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

004

9713515.1510

WESTINGHOUSE/HANFORD

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B08911

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

Lab Code: SKINER Case No.: N3-04-004SAS No.: SDG No.: B08806

Matrix (soil/water): WATER Lab Sample ID: 04056-01S

Level (low/med): LOW Date Received: 04/06/93

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	24.0	B		P
7440-36-0	Antimony	17.9	U		P
7440-38-2	Arsenic	4.4	B		F
7440-39-3	Barium	23.9	B		P
7440-41-7	Beryllium	0.50	U		P
7440-43-9	Cadmium	1.7	U		P
7440-70-2	Calcium	41400			P
7440-47-3	Chromium	5.8	U		P
7440-48-4	Cobalt	3.8	U		P
7440-50-8	Copper	4.2	U		P
7439-89-6	Iron	7.8	B		P
7439-92-1	Lead	1.3	U		F
7439-95-4	Magnesium	9820			P
7439-96-5	Manganese	1.8	U		P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	6.1	U		P
7440-09-7	Potassium	4330	B		P
7782-49-2	Selenium	2.9	U	W*	F
7440-22-4	Silver	3.8	U		P
7440-23-5	Sodium	16400			P
7440-28-0	Thallium	1.2	U		F
7440-62-2	Vanadium	11.5	B		P
7440-66-6	Zinc	9.1	B		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

005

9213515.1511

TMA/Skinner & Sherman Labs SAMPLE LOG-IN
WORKORDER 5304056 CLIENT Hanford Nav No. SAMPLES:
PROTCL CLP TURNARND 33 Day 4
COOLER TEMP: 1 oC, or NA (Soil) (Water) (Specify Other)
CUSTODIAN D. Proulx SDG/BATCH N/A
CUSTODY SEAL: PRESENT/ABSENT/INTACT/NOT CLIENT CASE N304004
SHIPER & # Fed Ex PO/CONTRACT# ↓
TAGS: PRESENT/ABSENT/NA/SEE COC CONTACT D. Sanchez
CHAIN OF CUSTODY: PRESENT/ABSENT/NA, # N/A COMMENTS: none

SAMPLE CONTAINERS-INTACT/BROKEN COMMENTS

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

SHIPMENT DATES 4/6/93
LIST ANY DATE WITH PAPERWORK/SHIPMENT PROBLEMS & SPECIFY THE PROBLEM:

N/A Filtered

	CLIENT ID	MATRIX	RECEIVED	PH*	TEST(S) & QC	HOLD TIME UP
1	B08911	water	4/6/93	1.17	Tm	
2	B08Q6	↓	↓	1.20	↓	
3	B08U6			1.36		
4	B08Y1			1.18	DS	
5						
6						
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16						
17						
18						
19						
20						
21						
22						
23						
24						
25						124
26						
27						

Samples are from site known to have Rad-Contamination: YES ___ NO ✓
Samples have detectable amounts of Radioactive Material: YES ___ NO ✓

SUBCONTRACT: YES/NO, TO: DATE: 4/6/93

REVIEWED Complete BP

* EPA/CLP required Rev 1.6 PAGE: 73

9713515.1512

TMA

RECORD COPY

JUN 1993
RECEIVED
SDLA

WESTINGHOUSE HANFORD COMPANY

Results of Analyses For:

ORGANICS & GENERAL CHEMISTRY
Case No. 04-025
(TMA/ARLI Work Order # A3-04-025)

METALS & NITRATE/NITRITE
Case No. N3-04-033
(TMA/Skinner & Sherman W.O. # S3-04-116, S3-04-117, & S3-04-118)

June 2, 1993

TMA Master Work Order N3-04-033

i sw 8/22/94

9713515.1513

OFFICE OF SAMPLE MANAGEMENT

RECORD OF DISPOSITION

ROD-93-0100
Record of Disposition No.

DATE: 4/14/93	LABORATORY: TMA/DATACHEM
PROJECT TITLE/NO.: 100-FR-3/93-051	NCR NO.: 050043

SAMPLE IDENTIFICATION NUMBERS:

TMA: B088T5-T7, B088X5-X7, B088R0-R2, B088W5-W7, B088S5-S7, B08907, B088Q0, B088Q2, B08901, B088W0, B088W2, B088X0, B08915-917, B088T0-T2, B088R5-R7, B088Y5-Y7, B08905, B08906, B08934-35, B088Q1, B08900, B08902, B088W1, B088X1-X2.

DATACHEM: B08859, B088R9, B088T4, B088T9, B088X9, B08909, B088Y9, B088R4, B08919, B08933, B088W9.

DESCRIPTION OF EVENT:

The chain-of-custodies were not signed as relinquished by the field samplers. Chain-of-custodies were broken.

DISPOSITION OF SAMPLES:

With concurrence from J.W. Roberts, project engineer, continue with analysis "for information purposes only".

APPROVAL SIGNATURES:

R. C. Smith/ R Clayton Smith — 4/14/93
OSM Project Coordinator (Print/Sign Name) — Date

J. W. Roberts/ J.W. Roberts — 4/14/93
Technical Representative (Print/Sign Name) — Date

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

9713515.1514

Westinghouse Hanford Company

NONCONFORMANCE REPORT

1. Page 1 of 1

2. Preprinted No. 050043

QA Log No. EQA-93-071

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

8. Program/Project/Other	9. Safety Class	10. ASME Code Items
100-FR-3/93-051	N/A	☐ Yes ☒ No (If yes, notify authorized inspector)

11. Supplier Name/Address: ENVIRONMENTAL FIELD SAMPLING SERVICES

12. Notification of Potential Occurence Required: ☐ Yes ☒ No

13. Code: Lot/Heat/Serial	14. Lot Size	15. Sample	16. Qty. Acc.	17. Inspection Criteria
N/A	55	55	0	☐ Dwg. ☐ Spec. ☐ Insp. Plan ☒ Other WHC-CM-7.7. EIIS.1 SEC 6.3

18. Item	19. Description of Nonconformance (list serial no. where applicable)	22. Disposition, Justification, and Instructions
	THE CHAIN OF CUSTODIES FOR THE FOLLOWING SAMPLES WERE NOT RELINQUISHED BEFORE SENDING TO LABS: TMA: B088T5-T7, B088X5-X7, B088R0-R2, B088W5-W7, B088S5-S7, B08907, B08900, B08902, B08901, B088W0, B088W2 B088X0, B08915-917, B088T0-T2, B088R5-R7, B088Y5-Y7, B08905 B08906, B08934-35, B08901, B08900, B08902, B088W1, B088X1, B088X2. DATACHEM: B08859, B088R9, B088T4, B088T9, B088X9, B08909, B088Y9, B088R4, B08919, B08933, B088W9 CHAIN OF CUSTODY BROKEN	The analysis shall continue for the affected samples. The data shall be appropriatley flagged.

20. Originator's Signature	Date	23. Design Document Change Required?
RC SMITH	4/14/93	☐ Yes, Doc. No. ☒ No

21. Cognizant QA Manager's Signature	Date	24. Corrective Action Required?
	4-16-93	☐ Yes, No. ☒ No

Disp. App.	25. Cognizant Engineer	Date	26. Technical Rep.	Date	Signature/Org.	Date
	J.W. Robertson	4/21/93	NA		NA	
	QA Engineer	Date	Signature/Org.	Date	Signature/Org.	Date
	GS Corrigan	4-21-93				

Close 27.

Accept _____ Reject _____ Follow on NCR _____ QA/C Personnel _____ Date

A-7310-104 (10/91)

WESTINGHOUSE HANFORD COMPANY

Results of Analyses For:

GENERAL CHEMISTRY
CASE NO. 04-025
(TMA/ARLI Work Order # A3-04-025)

ORGANICS
CASE NO. 04-025
(TMA/ARLI Work Order # A3-04-025)

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

B088T5	B088T7
B088X5	B088X7

Norcal Work Order # N3-04-033

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

Date submitted:

[illegible]

9713515.1516

000002A

Westinghouse Hanford Company	CHAIN OF CUSTODY

Custody Form Initiator KD LEE/GG HAMILTON

Company Contact PH BUTCHER

Telephone (509) 376-5045

Project Designation/Sampling Locations 100-FR-3

Collection Date 4-6-93

Ice Chest No. MAC

Field Logbook No. EFL-1055

Bill of Lading/Airbill No. 2536954783

Offsite Property No. W93-0-0321-49

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks

Sample Identification

B0 88T5

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

B0 88T6

1, 1L, P, WATER; ICP/AA METALS + Hg (HNO3) FILTERED

B0 88T7

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

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

Relinquished By	Date	Time	Received By	Date	Time
L.D. Walker L.D.Walker	4-6-93	1230	PCLole PCLole	4/7/93	0730
			[illegible]	4/8/93	1140

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments: Samples set in Ref. 4 on 4/6/93 at 1230

A-6000-407 (12/92) WEF061

9713515.1517

0000028

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector K. Lee, L. Walker Date Sampled 4-6-93 Time 0930 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
BO 8875	3; 40ml; Gs*;	WATER	CLP-VOA
	3; 2L; aG;	WATER	CLP-SEMI VOA & PCB's/PEST
	1; 1L; P;	WATER	ANIONS (IC) SO4, F, PO4, Cl/COND/pH
	1; 500ml; P;	WATER	ANIONS/NO3-NO2 (H2SO4)
	1; 1L; G;	WATER	ALK./TOT. DISSOLVED SOLIDS
	1; 500ml; G;	WATER	SULFIDE (add Zinc Acetate+NaOH pH>9)
	1; 500ml; G;	WATER	AMMONIA/CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)
	1; 1L; P;	WATER	CLP-ICP/AA METALS & Hg (HNO3) UNFILTERED
	1; 1L; P;	WATER	CLP-CN (NaOH)
	1; 4L; P; & 1; 2L; P	WATER	GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC
			(U-235/238,Pu-239/240, Am-241), Sr-90 (HNO3)
	1; 1L; G/P;	WATER	Tc-99 (HCl)
	1; 250ml; Gs;	WATER	TRITIUM/C-14
BO 8876	1; 1L; P;	WATER	CLP-ICP/AA METAL & Hg (HNO3) FILTERED
BO 8877	3; 40ml; Gs	WATER	CLP-VOA
			OPC: # W93-0-0321-49
			BOL: # 2531A54783
			TASK#: 93-051

Field Information**

Special Handling and/or Storage

Possible Sample Hazards

PART II: LABORATORY SECTION

Received by Alonzo Mahly Title SAMPLE CONTROL TECH Date 4/4/93

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)

9713515.1518

000002C

Westinghouse Hanford Company	CHAIN OF CUSTODY

Custody Form Initiator KD LEE/GG HAMILTON

Company Contact PH BUTCHER

Telephone (509) 376-5045

Project Designation/Sampling Locations 100-FR-3

Collection Date 4-6-93

Ice Chest No. NOT

Field Logbook No. EFL-1055

Bill of Lading/Airbill No. 2536954783

Offsite Property No. W93-0-0321-49

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks

Sample Identification

B0 88X5

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

B0 88X6

1, 1L, P, WATER; ICP/AA METALS + Hg (HNO3) FILTERED

B0 88X7

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

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

Relinquished By	Date	Time	Received By	Date	Time
LD Walker L.D. Walker	4-6-93	1230	PCCole PCCole	4/7/93	0730
			[illegible]	4/8/93	1140

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments: Samples set in ref. 1 on 4/6/93 at 1230

A-6000-407 (12/92) WEF061

9713515.1519

000002D

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector K. Lee, L. Walker Date Sampled 4-6-93 Time 1040 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
BO 88X5	✓3; 40ml; Gs*;	WATER	CLP-VOA
	✓3; 2L; aG;	WATER	CLP-SEMI VOA & PCB's/PEST
	✓1; 1L; P;	WATER	ANIONS (IC) SO4, F, PO4, Cl/COND/pH
	✓1; 500ml; P;	WATER	ANIONS/NO3-NO2 (H2SO4)
	✓1; 1L; G;	WATER	ALK./TOT. DISSOLVED SOLIDS
	✓1; 500ml; G;	WATER	SULFIDE (add Zinc Acetate+NaOH pH>9)
	✓1; 500ml; G;	WATER	AMMONIA/CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)
	✓1; 1L; P;	WATER	CLP-ICP/AA METALS & Hg (HNO3) UNFILTERED
	✓1; 1L; P;	WATER	CLP-CN (NaOH)
	✓1; 4L; P; & 1; 2L; P	WATER	GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC
			(U-235/238,Pu-239/240, Am-241), Sr-90 (HNO3)
	✓1; 1L; G/P;	WATER	Tc-99 (HCl)
	✓1; 250ml; Gs;	WATER	TRITIUM/C-14
BO 88X6	✓1; 1L; P;	WATER	CLP-ICP/AA METAL & Hg (HNO3) FILTERED
BO88X7	✓3; 40ml; Gs	WATER	CLP-VOA
			OPC: # W93-0-0321-49
			BOL: #2536954783
			TASK#: 93-051

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

Received by Alonzo Mobley Title Sample control tech Date 4/8/93

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)

PAGE 1 THA/Norcal CHAIN OF CUSTODY ORD # NG-04-033

RCVD: 04/08/93 DUE: 05/08/93 04/08/93 14:09:28 KEEP: 08/06/93 DISP: S

DASH	SAMPLE IDENTIFICATION		STORED	TESTS for FRACTIONS with work in DEPT: SU and CATEGORY
01A-W	B088T5	UNFILTERED	ARLI	WH018 WH019 WH020 WH043 WH114 WH121 WH122 WH128 WH131 WH132 WH140
02A-W	B088X5	UNFILTERED	ARLI	WH018 WH019 WH020 WH043 WH114 WH121 WH122 WH128 WH131 WH132 WH140
02C-W	B088X5 MS	UNFILTERED	ARLI	WH018 WH019 WH020 WH043 WH114 WH140
02D-W	B088X5 MSD	UNFILTERED	ARLI	WH018 WH019 WH020
02E-W	B088X5 DUP	UNFILTERED	ARLI	WH043 WH114 WH121 WH122 WH128 WH131 WH132 WH140
05A-W	B088T7		ARLI	WH018
06A-W	B088X7		ARLI	WH018

RELEASED BY	DATE	TRANSFERRED TO	DATE	RECEIVED BY	DATE
Eyamamoto	4-8-93	ARLI	4-8-93	[illegible]	4/9/93

9713515.1521

000003

SAMPLE LOG-IN SHEET

LAB NAME: TMA/HELI

PAGE: 1 OF 1

RECEIVED BY (PRINT NAME): Judith Carlson

LOG-IN-DATE:

RECEIVED BY (SIGNATURE): Judith Carlson

CASE NUMBER:

SAMPLE DELIVERY GROUP NO.:

SAS NUMBER:

REMARKS:

1. Custody Seal(s) — Present/Absent* Intact/Broken
2. Custody Seal Nos:
3. Chain of Custody Records — Present/Absent*
4. Traffic Reports or Packing List — Present/Absent*
5. Airbill — Airbill/Sticker Present/Absent*
6. Airbill No.: 6395890115
7. Sample Tags — Present/Absent*
8. Sample Tags Numbers — Listed/Not Listed on Chain of Custody
9. Sample Condition: — Intact/Broken*/Leaking
10. Does information on custody records, traffic reports, and sample tags agree — Yes/No* Ice chest WHC-33
11. Date Recieved at Lab: 4/9
12. Temp of ice chest: 0 °
13. Time Recieved:

SAMPLE TRANSFER

Fraction:

Area #:

By:

On:

EPA SAMPLE #	CORRESPONDING SAMPLE TAG #	CORRESPONDING ASSIGNED LAB #	REMARKS: CONDITION OF SAMPLE SHIPMENT, ETC
	B088T5	A30402501	
	B088X5	A30402502	
	B088X7	A30402506	

* Contact SMO and attach record of resolution

Reviewed By:

Date:

Logbook No.:

Logbook Page No.:

FORM DC-1

9713515.1522

000064

SAMPLE LOG-IN SHEET

LAB NAME: TAL/NELL

PAGE: 1 OF 1

RECEIVED BY (PRINT NAME): Judith Carlson

LOG-IN-DATE:

RECEIVED BY (SIGNATURE): Judith Carlson

CASE NUMBER:
SAMPLE DELIVERY GROUP NO.:
SAS NUMBER:

REMARKS:

1. Custody Seal(s) — Present/Absent* Intact/Broken
2. Custody Seal Nos:
3. Chain of Custody Records — Present/Absent*
4. Traffic Reports or Packing List — Present/Absent*
5. Airbill — Airbill/Sticker Present/Absent*
6. Airbill No.: 6395890115
7. Sample Tags — Present/Absent*
8. Sample Tags Numbers — Listed/Not Listed on Chain of Custody
9. Sample Condition: — Intact/Broken*/Leaking
10. Does information on custody records, traffic reports, and sample tags agree — Yes/No* ice chest ID=MAC
11. Date Recieved at Lab: 4/9/93
12. Temp of ice chest: 2°C
13. Time Recieved:

SAMPLE TRANSFER

Fraction:
Area #:
By:
On:

CORRESPONDING			
EPA SAMPLE #	SAMPLE TAG #	ASSIGNED LAB #	REMARKS: CONDITION OF SAMPLE SHIPMENT, ETC
	B088X5	A304025-02	
	B088T5	A304025-01	
	B088T7	A304025-05	

* Contact SMO and attach record of resolution

Reviewed By: Logbook No.:

Date: Logbook Page No.:

FORM DC-3

00000

9713515.1523

FEDERAL EXPRESS

QUESTIONS? CALL 800-238-5355 TOLL FREE.

AIRBILL PACKAGE TRACKING NUMBER 6395890115

23574 6395890115

RECIPIENT'S COPY

Date 4-8-93

From (Your Name) Please Print: SAMPLE control

Your Phone Number (Very Important): 310-235-2633

Department/Floor No.

Company: [illegible] MEDICAL

Street Address: 2030 WRIGHT AVE

City: RICHMOND State: CA ZIP Required: 94804

To (Recipient's Name) Please Print: SAMPLE control

Recipient's Phone Number (Very Important): ( )

Department/Floor No.

Company: TMA/AIL.

Exact Street Address (We Cannot Deliver to P.O. Boxes or P.O. Zip Codes.): 160 Taylor street

City: MONROVIA State: CA ZIP Required: 91016.

YOUR INTERNAL BILLING REFERENCE INFORMATION (optional) (First 24 characters will appear on invoice.): 2340 6406

H IF HOLD FOR PICK-UP, Print FEDEX Address Here: Street Address

City State ZIP Required

3 PAYMENT 1 [X] Bill Sender 2 [ ] Bill Recipient's FedEx Acct. No. 3 [ ] Bill 3rd Party FedEx Acct. No. 4 [ ] Bill Credit Card 5 [ ] Cash/Check

4 SERVICES (Check only one box)

Priority Overnight: 11 [X] OTHER PACKAGING; 16 [ ] FEDEX LETTER*; 12 [ ] FEDEX PAK*; 13 [ ] FEDEX BOX; 14 [ ] FEDEX TUBE

Standard Overnight: 51 [ ] OTHER PACKAGING; 56 [ ] FEDEX LETTER*; 52 [ ] FEDEX PAK*; 53 [ ] FEDEX BOX; 54 [ ] FEDEX TUBE

Economy Two-Day: 30 [ ] ECONOMY*

Government Overnight: 46 [ ] GOV'T LETTER; 41 [ ] G.OVT PACKAGE

Freight Service: [ ] OVERNIGHT FREIGHT**; 80 [X] TWO-DAY FREIGHT**

5 DELIVERY AND SPECIAL HANDLING (Check services required)

1 [ ] HOLD FOR PICK-UP (Fill in Box H)
2 [X] DELIVER WEEKDAY
3 DELIVER SATURDAY [ ]
4 [ ] DANGEROUS GOODS
5 [ ]
6 [ ] DRY ICE
7 [ ] OTHER SPECIAL SERVICE
8 [ ]
9 [ ] SATURDAY PICK-UP
[ ]
12 [ ] HOLIDAY DELIVERY

6

PACKAGES	WEIGHT in Pounds Only	YOUR DECLARED VALUE
Total 2	Total 118	Total

DIM SHIPMENT (Chargeable Weight) [ ] lbs. L x W x H

Received At: 1 [ ] Regular Stop 3 [ ] Drop Box 4 [ ] B.S.C. 5 [ ] On-Call Stop 6 [ ] Station

7 Release Signature:

Emp. No. Date

[ ] Cash Received
[ ] Return Shipment
[ ] Third Party [ ] Chg. To Del. [ ] Chg. To Hold

Street Address

City State Zip

Received By: X

Date/Time Received FedEx Employee Number

Federal Express Use

Base Charges

Declared Value Charge

Other 1.

Other 2

Total Charges

REVISION DATE 11/92 PART 013786 PRINT 12/92 FORMAT 0155

155

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9713515.1524

000006

TMA/ARLI
Thermo Analytical Inc.

RADIATION DOSE RATE SURVEY FORM

Date 4/9/93 COMPANY TMA/ARLICAL (WHC) OTHER ORD # 639589011 5

Surveyor's Name MARK S. McClay

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

Serial Nos. 710289 / 02619 Serial Nos. 007726 / 02628

Calibration Date 12/02/92 Calibration Date 2/16/93

Instrument Calibration Factor 0.280 Instrument Calibration Factor 0.190

Sample	Location	HP-210 CPM	HP-210 Factor	HP-210 DPM	AC-3-7 CPM	AC-3-7 Factor	AC-3-7 DPM	Spillage or Breakage?	Activity, pCi/g or pCi/L
Background		25.0			9.97				
Consistency		7,330	0.2830		5,010	0.1841			
Smear MAC		58.0			5.98			None	
WHC 33		45.0			2.99			None	
Reported WHC (10) samples each < 50 pCi/gm									

Comments

All OK ✓ Approved MSM

Not OK Date 4/9/93

GENERAL CHEMISTRY RESULTS

CASE NO. 04-025

Water Sample #:

B088T5 B088X5

CASE NARRATIVE

The holding time for the pH analysis was exceeded. Careful review of the QC analysis indiates that the data is reliable.

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

Maureen Parrish

Maureen Parrish

9713515.1536

000008

TMA Inc. REPORT Work Order # A3-04-025

Received: 04/08/93 05/24/93 13:36:17

REPORT TO: Westinghouse Hanford Company
2355 Stevens Dr.,MSIN-H4-23
345 Hills Street/3000 Area
Richland, WA 99352

ATTEN: Jeanette Duncan

PREPARED BY: Thermo Analytical, Inc.
160 Taylor Street
Monrovia, CA 91016

ATTEN: Ms. Carole Harris
PHONE: 818-357-3247

Maureen Parrish
CERTIFIED BY

CONTACT: EVV CIH

CLIENT: WHC SAMPLES: 5
COMPANY: Westinghouse Hanford Company
FACILITY:

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

WORK ID: 100-FR-3
TAKEN: By Westinghouse Staff
TRANS: Federal Express
TYPE: Liquid
P.O. #: N3-04-033-SU-AR
INVOICE: under separate cover

SAMPLE IDENTIFICATION

01 B088T5
01 B088T5 MS
01 B088T5 MSD
01 B088T5
01 B088T5 MS
01 B088T5
01 B088T5 Duplicate
01 B088T5
01 B088T5 MS
01 B088T5
01 B088T5 MS
02 B088T7
02 B088T7 MS
02 B088T7 MSD
03 B088X5
03 B088X5 MS
03 B088X5 MSD
03 B088X5
03 B088X5 Duplicate
03 B088X5
03 B088X5 Duplicate
03 B088X5
03 B088X5 Duplicate
04 B088X7
05 Wet Chemistry Blank
05 Laboratory Control Sample

TEST CODES and NAMES used on this workorder

BNCLPW	CLP Semivol. Water - WH020
PECLPL	CLP Pesticides Liq.
VOCLPL	CLP Volatile Org.Liq.
WCCLPL	Anions & Wet Chem. - WH043
WCLCS	Lab Control Sample Summary
WCL L	Chloride - WH120
WCQCD	Quality Control Summary
WCQCS	Quality Control Summary
WF L	Fluoride in Water
WNH3 L	Ammonia in Water - WH140
WPH L	pH of Liquid - WH121
WPO4 L	Phosphate in Liquids
WSO4 L	Sulfate (in Waters)
WSULFI	Sulfide - WH114
W ALK	Alkalinity - WH131
W COD	COD Water - WH132
W COND	Conductivity-Water WH122
W TDS	Dissolved Solids WH128

TMA Inc. REPORT Work Order # A3-04-025

Received: 04/08/93 Results by Sample

SAMPLE ID B088T5 FRACTION 01E TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 04/06/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	1.3	mg/L	0.2
Fluoride	300.0	0.2	mg/L	0.1
Phosphate	300.0	<0.4	mg/L	0.4
pH	150.1	8.0	pH	0.1
Sulfate	300.0	14	mg/L	1
Elect. Conductivity	120.1	189	umho/cm	6

FORM I

TMA Inc. REPORT Work Order # A3-04-025

Received: 04/08/93

Results by Sample

SAMPLE ID B088T5 FRACTION 01G TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 04/06/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Alkalinity	310.1	78	mg/L	2
Tot. Dissolved Solids	160.1	121	mg/L	5

FORM I

9713515.1529

000012

TMA Inc. REPORT Work Order # A3-04-025

Received: 04/08/93

Results by Sample

SAMPLE ID B088T5 FRACTION 01I TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 04/06/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

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

FORM I

TMA Inc. REPORT Work Order # A3-04-025

Received: 04/08/93

Results by Sample

SAMPLE ID B088T5 FRACTION 01K TEST CODE WCCLPL NAME Anions & Wet Chem. - WB843

Date & Time Collected 04/06/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Ammonia Nitrogen	350.3	<0.05	mg/L	0.05
COD	410.0	<5	mg/L	5

FORM I

9713515.1531

000014

TMA Inc. REPORT Work Order # A3-04-025

Received: 04/08/93

Results by Sample

SAMPLE ID B088X5 FRACTION 03E TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 04/06/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	1.4	mg/L	0.2
Fluoride	300.0	0.2	mg/L	0.1
Phosphate	300.0	<0.4	mg/L	0.4
pH	150.1	8.0	pH	0.1
Sulfate	300.0	16	mg/L	1
Elect. Conductivity	120.1	202	umho/cm	6

FORM I

9713515.1502

TMA Inc. REPORT Work Order # A3-04-025 020015

Received: 04/08/93

Results by Sample

SAMPLE ID B088X5 FRACTION 03G TEST CODE WCCLPL NAME Anions & Wet Chem. - WB043

Date & Time Collected 04/06/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Alkalinity	310.1	84	mg/L	2
Tot. Dissolved Solids	160.1	141	mg/L	5

FORM I

TMA Inc. REPORT Work Order # A3-04-025

Received: 04/08/93

Results by Sample

SAMPLE ID B088X5 FRACTION 03W TEST CODE WCCLPL NAME Anions & Wet Chem. - WW043

Date & Time Collected 04/06/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

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

FORM I

9713515.1534

TMA Inc. REPORT Work Order # A3-04-025 000017

Received: 04/08/93

Results by Sample

SAMPLE ID B088X5 FRACTION 03J TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 04/06/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Ammonia Nitrogen	350.3	<0.05	mg/L	0.05
COD	410.0	<5	mg/L	5

FORM I

CASE NARRATIVE

LABORATORY : TMA/ARLI

CASE : 04-025

CONTRACT ID : WESTINGHOUSE HANFORD COMPANY

SDG RECEIPT DATE : April 8, 1993

1.0 DESCRIPTION OF CASE :

Four water samples were analyzed for TCL Organics- Volatiles, Semivolatiles, and Pesticides/PCBs according to the USEPA Contract Laboratory Program (CLP) Statement of Work for Organic Analysis, Revision OLM01.8.

2.0 SAMPLE LIST :

WESTINGHOUSE ID	LAB ID	ANALYSIS REQUESTED	MATRIX	pH
B088T5	A3-04-025-01A	V	WATER	7
B088T5	A3-04-025-01B	SV & P	WATER	
B088T5 MS	A3-04-025-01C	SV	WATER	
B088T5 MSD	A3-04-025-01D	SV	WATER	
B088T7	A3-04-025-02A	V	WATER	7
B088T7 MS	A3-04-025-02B	V	WATER	7
B088T7 MSD	A3-04-025-02C	V	WATER	7
B088X5	A3-04-025-03A	V	WATER	7
B088X5 RE	A3-04-025-03A	V	WATER	7
B088X5	A3-04-025-03B	SV & P	WATER	
B088X5 MS	A3-04-025-03C	P	WATER	
B088X5 MSD	A3-04-025-03D	P	WATER	
B088X7	A3-04-025-04A	V	WATER	7

3.0 COMMENTS :

3.1 SHIPPING AND DOCUMENTATION :

All of the samples were received unbroken and properly documented.

3.2 ANALYSIS

3.2.1 VOLATILE ANALYSIS COMMENTS :

LOW LEVEL WATER :

The samples were analyzed within the CLP SOW holding times. The first analysis of sample B088X5 was performed within the holding time. Accidently, the sample was analyzed 3 minutes outside the 12 hours of Instrument Performance Check.

The samples was re-analyzed outside of the holding time and was labeled as B088X5RE. No TCL analytes were detected in the original analysis. In the re-analyzed sample Toluene was detected at 1 ppb.

All of the other QC results were within the limits specified by the EPA CLP SOW.

TUNES :

All BFB tunes are injected directly into GC/MS instrument.

3.2.2 SEMIVOLATILE ANALYSIS COMMENTS :

LOW LEVEL WATER :

The samples were extracted and analyzed within the CLP SOW holding times. The matrix spike recoveries for 4-Nitrophenol in samples B088T5MS and B088T5MSD were above the QC limits. Sample B088T5MSD also had Pentachlorophenol spike recoveries slightly above the QC limits.

The Internal Standard Area count for Perylene-d12 in all samples was above the upper limits. It appears that the Internal Standard Mix used to spike all the samples was not the same as in the standard. No TCL analytes were detected in the samples that referred to Perylene-d12.

All of the other QC results were within the limits specified by the EPA CLP SOW.

3.2.3 PESTICIDE/PCB ANALYSIS COMMENTS :

SEQUENCE NOTES :

The sequence was started on 04/17/93 and was analyzed according to the CLP SOW. The sequence was analyzed by single injection into a dual column system.

All of the QC criteria were within the limits specified by the CLP SOW.

The chromatograms are presented in the manner consistent with the capabilities of the Nelson 2700 Turbochrome Data System which normalizes the largest peak to scale.

SAMPLE NOTES :

LOW LEVEL WATER :

The samples were extracted and analyzed within the CLP SOW holding times. Sample PBLK0409C2 had a TCX surrogate recovery slightly below the QC limits on the DB-608 column.

All of the other QC results were within the limits specified by CLP SOW.

We certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data in this hardcopy data package and in the computer-readable data submitted on diskette is authorized by the Laboratory Manager or his designee, as verified by the following signatures.

Nicole Roth 5/27/93
Nicole Roth
CLP Program Manager

Widayati 5/27/93
Wida Ang
Organics Manager

9713515.1538

000005

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088T5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04025 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304025-01A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30413R05

Level: (low/med) LOW Date Received: 04/08/93

% Moisture: not dec. ____ Date Analyzed: 04/13/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

9713515.1539

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

000006
EPA SAMPLE NO.

B088T5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04025 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304025-01A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30413R05

Level: (low/med) LOW Date Received: 04/08/93

% Moisture: not dec. ____ Date Analyzed: 04/13/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

9713515.1540

000007

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088T7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04025 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304025-02A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30413R06

Level: (low/med) LOW Date Received: 04/08/93

% Moisture: not dec. ____ Date Analyzed: 04/13/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

9713515.1541

1E

000008

EPA SAMPLE NO.

B088T7

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04025 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304025-02A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30413R06

Level: (low/med) LOW Date Received: 04/08/93

% Moisture: not dec. ____ Date Analyzed: 04/13/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

9713515.1542

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

000009

EPA SAMPLE NO.

B088X5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04025 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304025-03A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30412R20

Level: (low/med) LOW Date Received: 04/08/93

% Moisture: not dec. ____ Date Analyzed: 04/12/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

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

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

9713515.1543

1E

EPA SAMPLE NO.

B088X5

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04025 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304025-03A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30412R20

Level: (low/med) LOW Date Received: 04/08/93

% Moisture: not dec. ____ Date Analyzed: 04/12/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

9713515.1544

000011

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088X5RE

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04025 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304025-03A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30419R11

Level: (low/med) LOW Date Received: 04/08/93

% Moisture: not dec. ____ Date Analyzed: 04/19/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	1	J
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

9713515.1545

000012

EPA SAMPLE NO.

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

B088X5RE

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04025 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304025-03A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30419R11

Level: (low/med) LOW Date Received: 04/08/93

% Moisture: not dec. ____ Date Analyzed: 04/19/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088X7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04025 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304025-04A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30417R11

Level: (low/med) LOW Date Received: 04/08/93

% Moisture: not dec. ____ Date Analyzed: 04/17/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

9713515.1547

000014

EPA SAMPLE NO.

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

B088X7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04025 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304025-04A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30417R11

Level: (low/med) LOW Date Received: 04/08/93

% Moisture: not dec. ____ Date Analyzed: 04/17/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

9713515.1548

000015

EPA SAMPLE NO.

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

B088T5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04025 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304025-01B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30504I08

Level: (low/med) LOW Date Received: 04/08/93

% Moisture: ____ decanted: (Y/N) ___ Date Extracted: 04/09/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/04/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	25	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088T5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04025 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304025-01B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30504I08

Level: (low/med) LOW Date Received: 04/08/93

% Moisture: ____ decanted: (Y/N) ___ Date Extracted: 04/09/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/04/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)Anthracene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	10	U
218-01-9	Chrysene	10	U
117-84-0	Di-n-Octyl Phthalate	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine

9713515.1550

000017
EPA SAMPLE NO.

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

B088T5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04025 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304025-01B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30504I08

Level: (low/med) LOW Date Received: 04/08/93

% Moisture: ____ decanted: (Y/N) ___ Date Extracted: 04/09/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/04/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

Number TICs found: 11

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN HYDROCARBON	5.77	3	BJ
2.	UNKNOWN ACID	23.30	7	J
3.	UNKNOWN ALKANE	23.43	2	J
4.	UNKNOWN ALKENE	23.48	2	J
5.	UNKNOWN ALKANE	24.23	3	J
6.	UNKNOWN ACID	24.88	6	J
7.	UNKNOWN ALKANE	25.00	5	J
8.	UNKNOWN ALKANE	25.72	4	J
9.	UNKNOWN ALKANE	26.43	4	J
10.	UNKNOWN ALKANE	27.12	3	J
11.	UNKNOWN ALKANE	27.87	3	J

9713515.1551

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

000018
EPA SAMPLE NO.

B088X5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04025 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304025-03B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30504I11

Level: (low/med) LOW Date Received: 04/08/93

% Moisture: ____ decanted: (Y/N) ___ Date Extracted: 04/09/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/04/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	25	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088X5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04025 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304025-03B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30504I11

Level: (low/med) LOW Date Received: 04/08/93

% Moisture: ____ decanted: (Y/N) ___ Date Extracted: 04/09/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/04/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)Anthracene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	10	U
218-01-9	Chrysene	10	U
117-84-0	Di-n-Octyl Phthalate	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine

9713515.1553

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

000020
EPA SAMPLE NO.

B088X5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04025 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304025-03B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30504I11

Level: (low/med) LOW Date Received: 04/08/93

% Moisture: ____ decanted: (Y/N) ___ Date Extracted: 04/09/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/04/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

Number TICs found: 10

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN HYDROCARBON	5.77	4	BJ
2.	UNKNOWN ACID	23.30	6	J
3.	UNKNOWN ALKENE	23.48	2	J
4.	UNKNOWN ALKANE	24.23	3	J
5.	UNKNOWN HYDROCARBON	24.88	6	J
6.	UNKNOWN ALKANE	25.00	5	J
7.	UNKNOWN ALKANE	25.73	4	J
8.	UNKNOWN ALKANE	26.43	3	J
9.	UNKNOWN ALKANE	27.12	3	J
10.	UNKNOWN ALKANE	27.87	2	J

9713515.1554

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

000021
EPA SAMPLE NO.

B088T5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04025 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304025-01B

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: 04/08/93

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 04/09/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/18/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-36-3	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

9713515.1555

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

000022
EPA SAMPLE NO.

B088X5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04025 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304025-03B

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: 04/08/93

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 04/09/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/18/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-36-3	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

9713515.1556

000002

 Skinner&Sherman REPORT Work Order # S3-04-117

Received: 04/09/93 05/12/93 13:54:23

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

ATTEN Dan Steurmer

CLIENT HANFORD NOR SAMPLES 3
COMPANY TMA/NORCAL Hanford
FACILITY Richmond, CA

PREPARED TMA / Skinner & Sherman Labs.
BY 300 Second Avenue
P.O. Box 521
Waltham, MA 02254
ATTEN Client Services
PHONE (617) 890-7200

CERTIFIED BY

CONTACT DP

WORK ID N3-04-033
TAKEN By Client
TRANS Fedex
TYPE 2 Waters
P.O. # N3-04-033
INVOICE under separate cover

SAMPLE IDENTIFICATION	TEST CODES and NAMES used on this workorder
01 B088T5	NO3NO2 Nitrate Plus Nitrite
02 B088X5	
02 B088X5D	
02 B088X5S	
03 LCSW	

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.

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

Page 2 Skinner&Sherman REPORT Work Order # S3-04-117

Received: 04/09/93 Results by Sample

SAMPLE ID B088T5 SAMPLE # 01 FRACTIONS: A
Date & Time Collected 04/06/93 Category WATER

NO3NO2 0.68
mg N/L

SAMPLE ID B088X5 SAMPLE # 02 FRACTIONS: A
Date & Time Collected 04/06/93 Category WATER

NO3NO2 0.65
mg N/L

SAMPLE ID B088X5D SAMPLE # 02 FRACTIONS: B
Date & Time Collected 04/06/93 Category WATER

NO3NO2 0.65
mg N/L

SAMPLE ID B088X5S SAMPLE # 02 FRACTIONS: C
Date & Time Collected 04/06/93 Category WATER

NO3NO2 2.60
mg N/L

SAMPLE ID LCSW SAMPLE # 03 FRACTIONS: A
Date & Time Collected not specified Category WATER

NO3NO2 2.03
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
1-800-4 LAB TEST FAX (617) 890-3883

TMA/NORCAL Hanford

QUALITY CONTROL

MATRIX SPIKE

Sample ID	Sample Result	Spike Added	Spike Result	% Recovery
S304117-02	0.65 mg/L	2.00 mg/L	2.60 mg/L	97.3

DUPLICATE

Sample ID	Sample Result	Duplicate Result	Relative % Difference
S304117-02	0.65 mg/L	0.65 mg/L	0.0

QUALITY CONTROL SAMPLES

Sample ID	True Value	Found Value	% Recovery
LCS	2.00 mg/L	2.03 mg/L	101.4
Prep blank	--	<0.25 mg/L	--

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

TMA
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

Received: 04/09/93

Test Methodology

TEST CODE NO3NO2 NAME Nitrate Plus Nitrite

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

TMA
Thermo Analytical Inc.
Skinner & Sherman Laboratories Inc.

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

9713515.1560

000018

TMA/Skinner & Sherman Labs SAMPLE LOG-IN
WORKORDER 5304117 CLIENT Hanford Nor No. SAMPLES:
PROTCL CLP TURNARND 33 Days 2
COOLER TEMP: 5 oC, or NA (Soil) (Water) (Specify Other)
CUSTODIAN B Prowle SDG/BATCH NA
CUSTODY SEAL: PRESENT/ABSENT/INTACT/NOT CLIENT CASE N304033
SHIPER & # FedEx PO/CONTRACT# ↓
TAGS: PRESENT/ABSENT/NA/SEE COC CONTACT D Sanchez
CHAIN OF CUSTODY: PRESENT/ABSENT/NA, # N/A COMMENTS: none

SAMPLE CONTAINERS-INTACT/BROKEN COMMENTS

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

SHIPMENT DATES 4/9/93
LIST ANY DATE WITH PAPERWORK/SHIPMENT PROBLEMS & SPECIFY THE PROBLEM:

N/A

	CLIENT ID	MATRIX	RECEIVED	PH*	TEST(S) & QC	HOLD TIME UP
1	B0SBT5	water	4/9/93	1.19	NO3NO2	
2	B0SBA5	↓	↓	1.23	↓	
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						

Samples are from site known to have Rad-Contamination: YES ✓ NO
Samples have detectable amounts of Radioactive Material: YES NO ✓

SUBCONTRACT: YES/NO, TO: DATE: BP

REVIEWED Complete 4/9/93

* EPA/CLP required Rev 1.6 PAGE:

9213515.1561

PAGE 1 TRA/Norcal CHAIN OF CUSTODY ORD # N3-04-033

RCVD: 04/08/93 DUE: 05/08/93 04/08/93 14:09:09 KEEP: 08/06/93 DISP: S

000019

DASH	SAMPLE IDENTIFICATION			STORED	TESTS for FRACTIONS with work in DEPT: SV and CATEGORY				
01B-W	B088T5		UNFILTERED	S&S	WH007	WH008	WH010	WH011	WH137
02B-W	B088X5		UNFILTERED	S&S	WH007	WH008	WH010	WH011	WH137
02F-W	B088X5	MS	UNFILTERED	S&S	WH007	WH008	WH010	WH011	WH137
02G-W	B088X5	DUP	UNFILTERED	S&S	WH007	WH008	WH010	WH011	WH137
02H-W	L C S			S&S	WH007	WH008	WH010	WH137	
03A-W	B088T6		FILTERED	S&S	WH007	WH008	WH010		
04A-W	B088X6		FILTERED	S&S	WH007	WH008	WH010		
04B-W	B088X6	MS	FILTERED	S&S	WH007	WH008	WH010		
04C-W	B088X6	DUP	FILTERED	S&S	WH007	WH008	WH010		
04D-W	L C S			S&S	WH007	WH008	WH010		

RELEASED BY	DATE	TRANSFERRED TO	DATE	RECEIVED BY	DATE
Yamamoto	4-8-93	Skinner	4-8-93	[illegible]	4/9/93

TMA 9713515.1562
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

JUN 1993
RECEIVED
SDLA

May 7, 1993

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

Quality Control Narrative

Scope
Two (2) water samples were submitted to TMA/Skinner & Sherman Laboratories, Inc. on April 9, 1993 from TMA/Norcal. The samples were analyzed for the USEPA CLP metals and cyanide as indicated on the chain of custody. The analysis was performed under TMA/Skinner and Sherman work order S304116.

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

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

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

Respectfully submitted,

TMA/SKINNER & SHERMAN LABORATORIES, INC.

David N. Peterson
Assistant Laboratory Manager

1 30 8/22/96

9713515.1563

WESTINGHOUSE/HANFORD

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

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

Lab Code: SKINER Case No.: N3-04-033 SAS No.: SDG No.: B088T5

SOW No.: ILM02.1

SAMPLE NUMBER:	Lab Sample ID.
B088T5	04116-01S
B088X5	04116-02S
B088X5D	04116-02S2
B088X5S	04116-02DS

Were ICP interelement corrections applied? Yes/No YES

Were ICP background corrections applied? Yes/No YES

If yes-were raw data generated before application of background corrections? Yes/No NO

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Steven Provencal Name: Steven R. Provencal

Date: 5/7/93 Title: Lead Chemist

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B088T5

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

Lab Code: SKINER Case No.: N3-04-033SAS No.: SDG No.: B088T5

Matrix (soil/water): WATER Lab Sample ID: 04116-01S

Level (low/med): LOW Date Received: 04/09/93

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	28.0	B		P
7440-36-0	Antimony	18.6	U		P
7440-38-2	Arsenic	2.2	B		F
7440-39-3	Barium	26.7	B		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	29600			P
7440-47-3	Chromium	7.6	B		P
7440-48-4	Cobalt	2.9	U		P
7440-50-8	Copper	5.2	B		P
7439-89-6	Iron	29.0	B		P
7439-92-1	Lead	2.5	B		F
7439-95-4	Magnesium	3890	B		P
7439-96-5	Manganese	1.8	B		P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	4.2	U		P
7440-09-7	Potassium	2660	B		P
7782-49-2	Selenium	3.5	U	W	F
7440-22-4	Silver	3.3	U		P
7440-23-5	Sodium	3550	B		P
7440-28-0	Thallium	2.7	U	W	F
7440-62-2	Vanadium	2.1	U		P
7440-66-6	Zinc	4.8	U		P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

C02

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B088X5

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

Lab Code: SKINER Case No.: N3-04-033SAS No.: SDG No.: B088T5

Matrix (soil/water): WATER Lab Sample ID: 04116-02S

Level (low/med): LOW Date Received: 04/09/93

% 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	30.3	B		P
7440-36-0	Antimony	18.6	U		P
7440-38-2	Arsenic	1.8	B	W	F
7440-39-3	Barium	31.0	B		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	28400			P
7440-47-3	Chromium	9.4	B		P
7440-48-4	Cobalt	2.9	U		P
7440-50-8	Copper	3.8	B		P
7439-89-6	Iron	47.9	B		P
7439-92-1	Lead	2.4	B		F
7439-95-4	Magnesium	4040	B		P
7439-96-5	Manganese	2.0	B		P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	4.2	U		P
7440-09-7	Potassium	1630	B		P
7782-49-2	Selenium	3.5	U	W	F
7440-22-4	Silver	3.3	U		P
7440-23-5	Sodium	2980	B		P
7440-28-0	Thallium	2.7	U		F
7440-62-2	Vanadium	2.1	U		P
7440-66-6	Zinc	4.8	U		P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

003

9713515.1566

Sampled 4/6/93

TMA/Skinner & Sherman Labs SAMPLE LOG-IN

WORKORDER 5304116 CLIENT Hanford Nav No. SAMPLES:

PROTCL CLP TURNAROUND 33 Day 2 (Soil) (Water) (Specify Other)

COOLER TEMP: 5 oC, or NA

CUSTODIAN B Brown SDG/BATCH NA

CUSTODY SEAL: PRESENT/ABSENT/INTACT/NOT CLIENT CASE N304033

SHIPER & # FedEx PO/CONTRACT# +

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

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

SAMPLE CONTAINERS-INTACT/BROKEN COMMENTS

CLIENT COMMENT? YES/NO

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

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

SHIPMENT DATES 4/9/93

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

N/A UNFILTERED

	CLIENT ID	MATRIX	RECEIVED	PH*	TEST(S) & QC	HOLD TIME UP
1	B0R8T5	water	4/9/93	1.39/12.10	TM/CN	
2	B088X5	+	+	1.43/11.55	DS +	
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						0139
27						

Samples are from site known to have Rad-Contamination: YES ___ NO ✓

Samples have detectable amounts of Radioactive Material: YES ___ NO ___

SUBCONTRACT: YES NO, TO: ___ DATE: 4/9/93 BP

complete

REVIEWED ___

* EPA/CLP required Rev 1.6 PAGE:

9713515.1567

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

JUN 1993
RECEIVED
SDLA

May 7, 1993

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

Quality Control Narrative

Scope
Two (2) water samples were submitted to TMA/Skinner & Sherman Laboratories, Inc. on April 9, 1993 from TMA/Norcal. The samples were analyzed for the USEPA CLP metals. The analysis was performed under TMA/Skinner and Sherman work order S304118.

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 exception:

The selenium digestion spike recovery 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.

David N. Peterson
Assistant Laboratory Manager

i 8/22/96

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

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

Lab Code: SKINER Case No.: N3-04-033 SAS No.: SDG No.: B088T6

SOW No.: ILM02.1

SAMPLE NUMBER:	Lab Sample ID.
B088T6	04118-01S
B088X6	04118-02S
B088X6D	04118-02S2
B088X6S	04118-02DS

Were ICP interelement corrections applied?	Yes/No	YES
Were ICP background corrections applied?	Yes/No	YES
If yes-were raw data generated before application of background corrections?	Yes/No	NO

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Steven Provencal Name: Steven R. Provencal

Date: 5/7/93 Title: Lead Chemist

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B088T6

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

Lab Code: SKINER Case No.: N3-04-033SAS No.: SDG No.: B088T6

Matrix (soil/water): WATER Lab Sample ID: 04118-01S

Level (low/med): LOW Date Received: 04/09/93

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	23.5	U		P
7440-36-0	Antimony	17.9	U		P
7440-38-2	Arsenic	2.5	B	W	F
7440-39-3	Barium	31.2	B		P
7440-41-7	Beryllium	0.50	U		P
7440-43-9	Cadmium	1.7	U		P
7440-70-2	Calcium	27300			P
7440-47-3	Chromium	5.8	U		P
7440-48-4	Cobalt	3.8	U		P
7440-50-8	Copper	4.2	U		P
7439-89-6	Iron	17.2	B		P
7439-92-1	Lead	1.3	B		F
7439-95-4	Magnesium	3910	B		P
7439-96-5	Manganese	1.8	U		P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	6.1	U		P
7440-09-7	Potassium	1500	B		P
7782-49-2	Selenium	3.5	U	WN	F
7440-22-4	Silver	3.8	U		P
7440-23-5	Sodium	2920	B		P
7440-28-0	Thallium	2.6	U	W	F
7440-62-2	Vanadium	3.3	U		P
7440-66-6	Zinc	3.4	U		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

C002

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B088X6

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

Lab Code: SKINER Case No.: N3-04-033SAS No.: SDG No.: B088T6

Matrix (soil/water): WATER Lab Sample ID: 04118-02S

Level (low/med): LOW Date Received: 04/09/93

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	23.5	U		P
7440-36-0	Antimony	17.9	U		P
7440-38-2	Arsenic	2.0	B		F
7440-39-3	Barium	28.6	B		P
7440-41-7	Beryllium	0.50	U		P
7440-43-9	Cadmium	1.7	U		P
7440-70-2	Calcium	29600			P
7440-47-3	Chromium	6.3	B		P
7440-48-4	Cobalt	3.8	U		P
7440-50-8	Copper	4.2	U		P
7439-89-6	Iron	24.7	B		P
7439-92-1	Lead	1.2	U		F
7439-95-4	Magnesium	3900	B		P
7439-96-5	Manganese	1.8	U		P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	6.1	U		P
7440-09-7	Potassium	2700	B		P
7782-49-2	Selenium	3.5	U	WN	F
7440-22-4	Silver	3.8	U		P
7440-23-5	Sodium	3610	B		P
7440-28-0	Thallium	2.6	U	W	F
7440-62-2	Vanadium	3.3	U		P
7440-66-6	Zinc	3.4	U		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

C003

9713515.0571

Sampled 4/6/93

TMA/Skinner & Sherman Labs SAMPLE LOG-IN

WORKORDER 5304118 CLIENT Hanford Nuc No. SAMPLES:

PROTCL CLP TURNARND 33 Days 2

COOLER TEMP: 5 oC, or NA (Soil) (Water) (Specify Other)

CUSTODIAN B Proux SDG/BATCH N/A

CUSTODY SEAL: PRESENT/ABSENT/INTACT/NOT CLIENT CASE N304033

SHIPER & # Fed Ex PO/CONTRACT# ↓

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

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

SAMPLE CONTAINERS-INTACT/BROKEN COMMENTS

CLIENT COMMENT? YES/NO

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

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

SHIPMENT DATES 4/9/93

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

N/A

filtered

	CLIENT ID	MATRIX	RECEIVED	PH*	TEST(S) & QC	HOLD TIME UP
1	B08RT6	water	4/9/93	1.86	TM	
2	B08RX6	↓	↓	1.93	DS ↓	
3						
4						
5						
6						
7						
8						
9						
10						
11						
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13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						

132

Samples are from site known to have Rad-Contamination: YES ✓ NO

Samples have detectable amounts of Radioactive Material: YES NO ✓

SUBCONTRACT: YES/NO, TO: DATE:

REVIEWED complete 4/19/93 - BP

* EPA/CLP required Rev 1.6 PAGE:

9713515.1572

TMA

MASTER COPY

JUN 1993
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SOLA

WESTINGHOUSE HANFORD COMPANY

Results of Analyses For:

ORGANICS & GENERAL CHEMISTRY
Case No. 04-023
(TMA/ARLI Work Order # A3-04-023)

METALS & NITRATE/NITRITE
Case No. N3-04-028
(TMA/Skinner & Sherman W.O. # S3-04-105, S3-04-107, & S3-04-108)

June 3, 1993

TMA Master Work Order N3-04-028

iso 8/21/96

9713515.1523

000002

PAGE 1 TMA/Norcal CHAIN OF CUSTODY ORD # NO-04-028

RCVD: 04/07/93 DUE: 05/07/93 04/07/93 13:32:27 KEEP: 08/05/93 DISP: S

DASH	SAMPLE IDENTIFICATION		STORED	TESTS for FRACTIONS with work in DEPT: SU and CATEGORY						
01A-W	B088R5	UNFILTERED	ARLI	WH018	WH019	WH020	WH043	WH114	WH121	WH122
				WH128	WH131	WH132	WH140			
02A-W	B088T0	UNFILTERED	ARLI	WH018	WH019	WH020	WH043	WH114	WH121	WH122
				WH128	WH131	WH132	WH140			
02C-W	B088T0 MS	UNFILTERED	ARLI	WH018	WH019	WH020	WH043	WH114	WH140	
02D-W	B088T0 MSD	UNFILTERED	ARLI	WH018	WH019	WH020				
02E-W	B088T0 DUP	UNFILTERED	ARLI	WH043	WH114	WH121	WH122	WH128	WH131	WH132
				WH140						
05A-W	B088R7		ARLI	WH018						
06A-W	B088T2		ARLI	WH018						

RELEASED BY	DATE	TRANSFERRED TO	DATE	RECEIVED BY	DATE
Yamamoto	4-7-93	ARLI	4-7-93	[illegible]	4-8-93

9713515.1574

000003A

Westinghouse Hanford Company

CHAIN OF CUSTODY

Custody Form Initiator KD LEE/GG HAMILTON

Company Contact PH BUTCHER

Telephone (509) 376-5045

Project Designation/Sampling Locations 100-FR-3

Collection Date 4-5-93

Ice Chest No. JML-262

Field Logbook No. EFL 1055

Bill of Lading/Airbill No. 2536954747

Offsite Property No. W93-0-0321-48

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks

Sample Identification

BO 88R5

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

BO 88R6

1, 1L, P, WATER; ICP/AA METALS + Hg (HNO3) FILTERED

BO 88R7

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

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

Relinquished By	Date	Time	Received By	Date	Time
G G HAMILTON	4/5/93	1510	B. WHITTEN	4/6/93	0800
			Alpine Fed.	4/7/93	1030

Final Sample Disposition

Disposal Method: | Disposed by: | Date/Time:

Comments:
FR16#1

A-6000-407 (12/92) WEF061

9713515.1515

0000028

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector K. Lee, L. Walker Date Sampled 4/5/93 Time 1000 hours

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

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
30 88R5	✓3; 40ml; Gs*;	WATER	CLP-VOA
	✓3; 2L; aG;	WATER	CLP-SEMI VOA & PCB's/PEST
	✓1; 1L; P;	WATER	ANIONS (IC) SO4, F, PO4, Cl/COND/pH
	✓1; 500ml; P;	WATER	ANIONS/NO3-NO2 (H2SO4)
	✓1; 1L; G;	WATER	ALK./TOT. DISSOLVED SOLIDS
	✓1; 500ml; G;	WATER	SULFIDE (add Zinc Acetate+NaOH pH>9)
	✓1; 500ml; G;	WATER	AMMONIA/CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)
	✓1; 1L; P;	WATER	CLP-ICP/AA METALS & Hg (HNO3) UNFILTERED
	✓1; 1L; P;	WATER	CLP-CN (NaOH)
	✓1; 4L; P; & 1; 2L; P	WATER	GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC
			(U-235/238,Pu-239/240, Am-241), Sr-90 (HNO3)
	✓1; 1L; G/P;	WATER	Tc-99 (HCl)
	✓1; 250ml; Gs;	WATER	TRITIUM/C-14
30 88R6	✓1; 1L; P;	WATER	CLP-ICP/AA METAL & Hg (HNO3) FILTERED
0 88R7	✓3; 40ml; Gs	WATER	CLP-VOA
			OPC: # W93-0-0321-48
			BOL: # 2536954791T
			TASK#: 93-051

Field Information**

Special Handling and/or Storage

Possible Sample Hazards

PART II: LABORATORY SECTION

Received by Alfonso Rabby Title Sample control tech Date 4/7/93

Analysis Required

= VOA rcvd upright =

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

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

A-6000-406(05/90)

9713515.1576

Westinghouse Hanford Company

CHAIN OF CUSTODY

Custody Form Initiator KD LEE/GG HAMILTON

Company Contact PH BUTCHER

Telephone (509) 376-5045

Project Designation/Sampling Locations 100-FR-3

Collection Date 4/5/93

Ice Chest No. SML-292

Field Logbook No. EFL 1055

Bill of Lading/Airbill No. 2536954 74T

Offsite Property No. W93-O-0321-48

Method of Shipment EMERY

Shipped to TMA

Possible Sample Hazards/Remarks

Sample Identification

B088T0

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

B088T1

1, 1L, P, WATER; ICP/AA METALS + Hg (HNO3) FILTERED

B088T2

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

[] Field Transfer of Custody

Chain of Possession (Sign and Print Names)

Relinquished By	Date	Time	Received By	Date	Time
GG Hamilton	4/5/93	1516	B. Whiten	4/6/93	0800
			Alfonso Gabaldon	4/7/93	1030

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

FRIG #1

Received only 2 VOA vials for each sample @ TMA/NORCAL. No bubbles found. KB

A-6000-407 (12/92) WEF061

9713515.1577

0000020

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

PART I: FIELD SECTION

Collector K. Lee, L. Walker Date Sampled 4/5/93 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
08870	2 3; 40ml; Gs*; (BW 4-6-93)	WATER	CLP-VOA (BUBBLE IN SAMPLE)
	3; 2L; aG;	WATER	CLP-SEMI VOA & PCB's/PEST
	1; 1L; P;	WATER	ANIONS (IC) SO4, F, PO4, Cl/COND/pH
	1; 500ml; P;	WATER	ANIONS/NO3-NO2 (H2SO4)
	1; 1L; G;	WATER	ALK./TOT. DISSOLVED SOLIDS
	1; 500ml; G;	WATER	SULFIDE (add Zinc Acetate+NaOH pH>9)
	1; 500ml; G;	WATER	AMMONIA/CHEMICAL OXYGEN DEMAND (H2SO4 pH<2)
	1; 1L; P;	WATER	CLP-ICP/AA METALS & Hg (HNO3) UNFILTERED
	1; 1L; P;	WATER	CLP-CN (NaOH)
	1; 4L; P; & 1; 2L; P	WATER	GROSS ALPHA/BETA, GAMMA SPEC, ALPHA SPEC
			(U-235/238,Pu-239/240, Am-241), Sr-90 (HNO3)
	1; 1L; G/P;	WATER	Tc-99 (HCl)
	1; 250ml; Gs;	WATER	TRITIUM/C-14
08871	1; 1L; P;	WATER	CLP-ICP/AA METAL & Hg (HNO3) FILTERED
08872	2 3; 40ml; Gs (BW 4-6-93)	WATER	CLP-VOA (BUBBLE IN SAMPLE)
			OPC: # W93-0-0321-48
			BOL: # 2536954741T
			TASK#: 93-051

Field Information** _____

Special Handling and/or Storage _____

Possible Sample Hazards _____

PART II: LABORATORY SECTION

Received by Alonzo Mahaffey Title SAMPLE control tech Date 4/7/93

Analysis Required _____

=VOA Rcvd upright=

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

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

A-6000-406(05/90)

000002E

N304028

OFFICE OF SAMPLE MANAGEMENT
RECORD OF DISPOSITION

ROD-93-00095
Record of Disposition No.

DATE: 4/12/93	LABORATORY: TMA
PROJECT TITLE/NO.: 100-FR-3/93-051	NCR NO.:

SAMPLE IDENTIFICATION NUMBERS:

B088T0, B088T2

DESCRIPTION OF EVENT:

Lab received only 2 VOA vials for each sample. C-O-C requested three and SAR requested two.

DISPOSITION OF SAMPLES:

Continue with VOA analysis on the two vials received.

APPROVAL SIGNATURES:

R. C. Smith/ R Clayton Smith — 4/12/93
OSM Project Coordinator (Print/Sign Name) — Date

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

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

9713515.1579

Westinghouse Hanford Company

NONCONFORMANCE REPORT

1. Page 1 of 1

2. Preprinted No. 050039

QA Log No. EQA-93-068

3. P. O., W. O., or Job Control No.	4. System/End Use	5. Item/Material	6. Dwg./Spec./Other No.	7. Rev.
N/A	RI/FS	SAMPLES	B088T0, B088T2	N/A

8. Program/Project/Other	9. Safety Class	10. ASME Code Items
100-FR-3/93-051	N/A	☐ Yes ☒ No (If yes, notify authorized inspector)

11. Supplier Name/Address	12. Notification of Potential Occurence Required
ENVIRONMENTAL FIELD SAMPLING SERVICES	☐ Yes ☒ No

13. Code: Lot/Heat/Serial	14. Lot Size	15. Sample	16. Qty. Acc.	17. Inspection Criteria
N/A	2	2	0	☐ Dwg. ☐ Spec. ☐ Insp. Plan ☒ Other EEI 5.1, rev 5, Sec 6.2

18. Item	19. Description of Nonconformance (list serial no. where applicable)	22. Disposition, Justification, and Instructions
	CHAIN OF CUSTODY REQUESTS 3 VOLATILE ORGANIC ANALYSIS VIALS, SAMPLE ANALYSIS REQUEST REQUESTS 2 VOLATILE ORGANIC ANALYSIS VIALS; TWO VIALS FOR EACH SAMPLE WERE RECEIVED AT LAB.	The volatile organic analysis shall continue using the two vials. See the attached letter for justification.

20. Originator's Signature	Date	23. Design Document Change Required?
RC SMITH RC Smith	4/12/93	☐ Yes, Doc. No. ☒ No

21. Cognizant QA Manager's Signature	Date	24. Corrective Action Required?
[illegible] for	4/12/93	☐ Yes, No. ☒ No

Disp. App.

25. Cognizant Engineer	Date	26. Technical Rep.	Date	Signature/Org.	Date
J.W. Roberts	4/16/93			NA	

QA Engineer	Date	Signature/Org.	Date	Signature/Org.	Date
GS CORRIGAN	4-16-93	NA			

Close

27. Accept 2 Reject 0 Follow on NCR N/A

QA/C Personnel 4-16-93 Date

A-7310-104 (10/91)

9713515.1580

DON'T SAY IT — *Write It!*

DATE: 4/15/93

TO: Gary Corrigan

FROM: R. C. Smith RCS

Telephone: 372-2537

cc:

SUBJECT: Volume Requirements for VOA Analysis

According to CLP SOW (OLM01.8, d-15, 1.1), a 5 ml sample aliquot is used for volatile organic analysis. Thus, a single 40 ml vial is sufficient to continue with a VOA analysis. Within a batch of samples, one VOA analysis requires three 40 ml vials for QC purposes. This information should allow disposition of NCRs concerning VOA vials with bubbles.

9213515.1581

QUALITY ASSURANCE

NONCONFORMANCE REPORT DISTRIBUTION

1. FROM:	2. MSIN:	3. DATE:
Environmental Quality Assurance	H4-16	April 12, 1993

4. NCR No.:	5. Initiation, Disposition, or Closure (I, D, C):
050039 / EQA-93-068	I

	6. TO:	MSIN	I	D	C
Cognizant Engineer	J. W. Roberts	H6-02			
Cognizant Quality Engineer	G. S. Corrigan	H4-16			
Originator	R. C. Smith	H4-23			
Q. A. Manager	NA	NA			
Cognizant QE Manager	T. L. Bennington	H4-16			
Facility Manager	NA	NA			
Engineering Records	L. M. McDaniel	H6-08			
Safety	NA	NA			
QSDM	D. P. Trott	L4-86			
Other: JCS Package	NA	NA			
Q. C.	NA	NA			
Buyer (Procurement)	NA	NA			
P.O. File (Procurement)	NA	NA			
Vendor File (Procurement)	B. M. Colley	H4-23			
	EQA File	H4-16			
	P. H. Butcher	H6-06			
	J. H. Kessner	H4-23			

7. QST Codes

Subject:	Cause:	Contr. Factor:	PPG:
AD-08	PN-002		NA

8. Responsible Action Party:	Org Code:
J. W. Roberts	81310

A-6000-816 (09/91)

9713515.1582

000002F

N3-04-048, -022, 043, -033 -02

OFFICE OF SAMPLE MANAGEMENT

RECORD OF DISPOSITION

ROD-93-0100
Record of Disposition No.

DATE: 4/14/93	LABORATORY: TMA/DATACHEM
PROJECT TITLE/NO.: 100-FR-3/93-051	NCR NO.: 050043

SAMPLE IDENTIFICATION NUMBERS:

TMA: B088T5-T7, B088X5-X7, B088R0-R2, B088W5-W7, B088S5-S7, B08907, B088Q0, B088Q2, B08901, B088W0, B088W2, B088X0, B08915-917, B088T0-T2, B088R5-R7, B088Y5-Y7, B08905, B08906, B08934-35, B088Q1, B08900, B08902, B088W1, B088X1-X2.

DATACHEM: B08859, B088R9, B088T4, B088T9, B088X9, B08909, B088Y9, B088R4, B08919, B08933, B088W9.

DESCRIPTION OF EVENT:

The chain-of-custodies were not signed as relinquished by the field samplers. Chain-of-custodies were broken.

DISPOSITION OF SAMPLES:

With concurrence from J.W. Roberts, project engineer, continue with analysis "for information purposes only".

APPROVAL SIGNATURES:

R. C. Smith/ R Clayton Smith — 4/14/93
OSM Project Coordinator (Print/Sign Name) — Date

J. W. Roberts/ J. W. Roberts — 4/14/93
Technical Representative (Print/Sign Name) — Date

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

9713515.1583

Westinghouse Hanford Company

NONCONFORMANCE REPORT

1. Page 1 of 1

2. Preprinted No. 050043

QA Log No. EQA-93-071

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

8. Program/Project/Other	9. Safety Class	10. ASME Code Items
100-FR-3/93-051	N/A	☐ Yes ☒ No (If yes, notify authorized inspector)

11. Supplier Name/Address: ENVIRONMENTAL FIELD SAMPLING SERVICES

12. Notification of Potential Occurence Required: ☐ Yes ☒ No

13. Code: Lot/Heat/Serial	14. Lot Size	15. Sample	16. Qty. Acc.	17. Inspection Criteria
N/A	55	55	0	☐ Dwg. ☐ Spec. ☐ Insp. Plan ☒ Other WHC-CM-7.7. EDIS.1 SEC 6.3

18. Item	19. Description of Nonconformance (list serial no. where applicable)	22. Disposition, Justification, and Instructions
	THE CHAIN OF CUSTODIES FOR THE FOLLOWING SAMPLES WERE NOT RELINQUISHED BEFORE SENDING TO LABS: TMA: B088T5-T7, B088X5-X7, B088R0-R2, B088W5-W7, B088S5-S7, B08907, B08900, B088Q2, B08901, B088N0, B088W2, B088X0, B08915-917, B088T0-T2, B088R5-R7, B088Y5-Y7, B08905, B08906, B08934-35, B08901, B08900, B08902, B088W1, B088X1, B088X2. DATACHEM: B08859, B088R9, B088T4, B088T9, B088X9, B08909, B088Y9, B089R4, B08919, B08933, B088W9. CHAIN OF CUSTODY BROKEN	The analysis shall continue for the affected samples. The data shall be appropriatley flagged.

20. Originator's Signature	Date	23. Design Document Change Required?
RC SMITH RClayton Smith	4/14/93	☐ Yes, Doc. No. ☒ No

21. Cognizant QA Manager's Signature	Date	24. Corrective Action Required?
[signature]	4-16-93	☐ Yes, No. ☒ No

Disp. App.	25. Cognizant Engineer	Date	26. Technical Rep.	Date	Signature/Org.	Date
	J.W. Robertson [signature]	4/21/93	NA		NA	
	QA Engineer	Date	Signature/Org.	Date	Signature/Org.	Date
	GS CORRIGAN [signature]	4-21-93				

Close 27. Accept _____ Reject _____ Follow on NCR _____ QA/C Personnel _____ Date

A-7310-104 (10/91)

9713515.1584

000003

SAMPLE LOG-IN SHEET

LAB NAME - TRA/ARLI: ARLI

PAGE: 1 OF 1

RECEIVED BY (PRINT NAME): Lisa M. Miller

LOG-IN-DATE: April 8, 1993

RECEIVED BY (SIGNATURE): Lisa M. Miller

CASE NUMBER:
SAMPLE DELIVERY GROUP NO.:
SAS NUMBER:

REMARKS:

1. Custody Seal(s) — Present/Absent* Intact/Broken
2. Custody Seal Nos:
3. Chain of Custody Records — Present/Absent*
4. Traffic Reports or Packing List — Present/Absent*
5. Airbill — Airbill/Sticker Present/Absent*
6. Airbill No.: 6395890126
7. Sample Tags — Present/Absent*
8. Sample Tags Numbers — Listed/Not Listed on Chain of Custody
9. Sample Condition: — Intact/Broken*/Leaking
10. Does information on custody records, traffic reports, and sample tags agree — Yes/No*
11. Date Recieved at Lab: 4/8/93
12. Temp of Ice chest 5 °C
13. Time Recieved: SML-295

SAMPLE TRANSFER

Fraction:
Area #:
By:
On:

CORRESPONDING			
EPA SAMPLE #	SAMPLE TAG #	ASSIGNED LAB #	REMARKS: CONDITION OF SAMPLE SHIPMENT, ETC
	B088R1	A304023-06	
	B088T0	A304023-02	
	B088R5	A304023-01	

* Contact SMO and attach record of resolution

Reviewed By: Logbook No.:

Date: Logbook Page No.:

FORM DC-1

9713515.1505

000004

SAMPLE LOG-IN SHEET

LAB NAME - TRA/ARLI: ARLI

PAGE: 1 OF 1

RECEIVED BY (PRINT NAME): Lisa M. Miller

LOG-IN-DATE: April 8, 1993

RECEIVED BY (SIGNATURE): Lisa M Miller

CASE NUMBER:
SAMPLE DELIVERY GROUP NO.:
SAS NUMBER:

REMARKS:

1. Custody Seal(s) — Present/Absent* Intact/Broken
2. Custody Seal Nos:
3. Chain of Custody Records — Present/Absent*
4. Traffic Reports or Packing List — Present/Absent*
5. Airbill — Airbill/Sticker Present/Absent*
6. Airbill No.: 6395890126
7. Sample Tags — Present/Absent*
8. Sample Tags Numbers — Listed/Not Listed on Chain of Custody
9. Sample Condition: — Intact/Broken*/Leaking
10. Does information on custody records, traffic reports, and sample tags agree — Yes/No*
11. Date Recieved at Lab: 4/8/93
12. Temp of Ice chest SML 262: 4 °C
13. Time Recieved:

SAMPLE TRANSFER

Fraction:
Area #:
By:
On:

CORRESPONDING			
CPA SAMPLE #	SAMPLE TAG #	ASSIGNED LAB #	REMARKS: CONDITION OF SAMPLE SHIPMENT, ETC
	B088R5	A304023-01	
	B088T2	A304023-06	
	B088T0	A304023-02	

* Contact SMO and attach record of resolution

Reviewed By: _____ Logbook No.: _____

Date: _____ Logbook Page No.: _____

FORM SC-3

9713515.1586

000005

TMA/ARI
The new Analytical Inc.

RADIATION DOSE RATE SURVEY FORM

Date 4/08/93 COMPANY TMA/NORCAL (WHC) OTHER ORD # 639589012G

Surveyor's Name MARK S. McCoy

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

Serial No. 710289 / 07619 Serial No. 907726 / 07628

Calibration Date 12/02/92 Calibration Date 2/16/93

Instrument Calibration Factor 0.280 Instrument Calibration Factor 0.190

Sample	Location	HP-210 CPM	HP-210 Factor	HP-210 DPM	AC-3-7 CPM	AC-3-7 Factor	AC-3-7 DPM	Sediment or Brushings?	Activity pCi/gr or pCi/L
Background		35.0			9.97				
Consumery									
Smears SML 295		43.0			3.99			NONE	
SML 1005		57.0			4.99			NONE	
SML 262		42.0			2.99			NONE	
Reported (WHC)	// samples	each			< 50 pCi/gram				

Comments

All OK ✓ Approved MSM

Not OK Date 4/08/93

000000

FEDERAL EXPRESS

QUESTIONS? CALL 800-238-5355 TOLL FREE.

AIRBILL PACKAGE TRACKING NUMBER 6395890126

6395890126

RECIPIENT'S COPY

1 Date 4-7-93

From (Your Name) Please Print: SAMPLE CONTROL

Your Phone Number (Very Important): 610-235-2633

Company: T M A / HIGHCAL

Department/Floor No.

Street Address: 2030 WRIGHT AVE

City: WILMINGTON State: CA ZIP Required: 94804

2 To (Recipient's Name) Please Print: SAMPLE CONTROL

Recipient's Phone Number (Very Important): ( )

Company: TMA/ARL

Department/Floor No.

Exact Street Address (We Cannot Deliver to P.O. Boxes or P.O. Zip Codes.): 160 TAYLOR STREET

City: MONROVIA State: CA ZIP Required: 91016

YOUR INTERNAL BILLING REFERENCE INFORMATION (optional) (First 24 characters will appear on invoice.): 2740 6406

H IF HOLD FOR PICK-UP, Print FEDEX Address Here: Street Address

City State ZIP Required

3 PAYMENT 1 [X] Bill Sender 2 [ ] Bill Recipient's FedEx Acct. No 3 [ ] Bill 3rd Party FedEx Acct. No. 4 [ ] Bill Credit Card

5 Cash/Check

4 SERVICES (Check only one box)

Priority Overnight
- 11 [X] OTHER PACKAGING
- 16 [ ] FEDEX LETTER*
- 12 [ ] FEDEX PAK*
- 13 [ ] FEDEX BOX
- 14 [ ] FEDEX TUBE

Standard Overnight
- 51 [ ] OTHER PACKAGING
- 56 [ ] FEDEX LETTER*
- 52 [ ] FEDEX PAK*
- 53 [ ] FEDEX BOX
- 54 [ ] FEDEX TUBE

Economy Two-Day
- 30 [ ] ECONOMY*

Government Overnight
- 46 [ ] GOVT LETTER
- 44 [ ] GOVT PACKAGE

Freight Service
- 70 [ ] OVERNIGHT FREIGHT**
- 80 [ ] 2ND-DAY FREIGHT**

5 DELIVERY AND SPECIAL HANDLING (Check services required)
- 1 [ ] HOLD FOR PICK-UP
- 2 [X] DELIVER WEEKDAY
- 3 DELIVER SATURDAY [ ]
- 4 [ ] DANGEROUS GOODS
- 5 [ ]
- 6 [ ] DRY ICE
- 7 [ ] OTHER SPECIAL SERVICE
- 8 [ ]
- 9 [ ] SAT/HOLIDAY PICK-UP
- 10 [ ]
- 13 [ ] HOLIDAY DELIVERY

6 PACKAGES | WEIGHT in Pounds (lbs) | YOUR DECLARED VALUE (Dec. optional)

Total | Total 3 160 | Total

DIM SHIPMENT (Chargeable Weight) [ ] lbs. L x W x H

Pickup/Drop Off: 1 [X] Regular Stop 2 [ ] On-Call Stop 3 [ ] Drop Box 4 [ ] B.S.C. 5 [ ] Station

Emp. No. Date

[ ] Cash Received
[ ] Return Shipment
[ ] Third Party [ ] Chg. To Del. [ ] Chg. To Hold

Street Address

City State Zip

Received By: X

Date/Time Received FedEx Employee Number

7 Release Signature:

Federal Express Use
- Base Charges
- Declared Value Charge
- Other 1
- Other 2
- Total Charges

REVISION DATE 11/92 PART #137304 FSEM 12/92 FORMAT #155

155

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9713515-1587

GENERAL CHEMISTRY RESULTS

CASE NO. 04-023

Water Sample #:

B088R5 B088T0

CASE NARRATIVE

Sample B088R5 (A3-04-023-01F) yielded a 78.0% recovery for the Phosphate analysis. The low Phosphate recovery compared to our laboratory control sample indicated the presence of a matrix interference.

The holding time for the pH analysis was exceeded. Careful review of the QC analysis indicates that the data is reliable.

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

Maureen Parrish

Maureen Parrish

9713515.1589

000008

TMA Inc. REPORT Work Order # A3-04-023

Received: 04/07/93 05/21/93 10:39:48

REPORT TO: Westinghouse Hanford Company
2355 Stevens Dr.,MSIN-H4-23
345 Hills Street/3000 Area
Richland, WA 99352

ATTEN: Jeanette Duncan

PREPARED BY: Thermo Analytical, Inc.
160 Taylor Street
Monrovia, CA 91016

ATTEN: Ms. Carole Harris
PHONE: 818-357-3247

Maureen Parrish
CERTIFIED BY

CONTACT: EVV CIH

CLIENT: WHC SAMPLES: 5
COMPANY: Westinghouse Hanford Company
FACILITY:

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

WORK ID: 100-FR-3
TAKEN: By Westinghouse Staff
TRANS: Federal Express
TYPE: Liquid
P.O. #: H3-04-028-SU-AR
INVOICE: under separate cover

SAMPLE IDENTIFICATION

1 B088R5
1 B088R5 MS
1 B088R5 MSD
1 B088R5
1 B088R5 MS
1 B088R5
1 B088R5 Duplicate
1 B088R5
1 B088R5 MS
1 B088R5
1 B088R5 MS
2 B088R7
2 B088R7 MS
2 B088R7 MSD
3 B088T0
3 B088T0 MS
3 B088T0 MSD
3 B088T0
3 B088T0 Duplicate
3 B088T0
3 B088T0 Duplicate
3 B088T0
3 B088T0 Duplicate
4 B088T2
5 Wet Chemistry Blank
5 Laboratory Control Sample

TEST CODES and NAMES used on this workorder

BNCLPW	CLP Semivol. Water - WH020
PECLPL	CLP Pesticides Liq.
VOCLPL	CLP Volatile Org.Liq.
WCCLPL	Anions & Wet Chem. - WH043
WCLCS	Lab Control Sample Summary
WCL L	Chloride - WH120
WCQCD	Quality Control Summary
WCQCS	Quality Control Summary
WF L	Fluoride in Water
WNH3 L	Ammonia in Water - WH140
WPH L	pH of Liquid - WH121
WPO4 L	Phosphate in Liquids
WSO4 L	Sulfate (in Waters)
WSULFI	Sulfide - WH114
W ALK	Alkalinity - WH131
W COD	COD Water - WH132
W COND	Conductivity-Water WH122
W TDS	Dissolved Solids WH128

9713515.1590

000010

TMA Inc. REPORT Work Order # A3-04-023

Received: 04/07/93

Results by Sample

SAMPLE ID B088R5 FRACTION 01E TEST CODE WCCLPL NAME Anions & Wet Chem. - WR043

Date & Time Collected 04/05/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	32.5	mg/L	1.0
Fluoride	300.0	0.3	mg/L	0.1
Phosphate	300.0	<0.4	mg/L	0.4
pH	150.1	7.8	pH	0.1
Sulfate	300.0	98	mg/L	5.0
Elect. Conductivity	120.1	806	umho/cm	6

FORM I

9713515.1591

TNA Inc. REPORT Work Order # A3-04-023 000011

Received: 04/07/93

Results by Sample

SAMPLE ID B088R5 FRACTION 01G TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 04/05/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Alkalinity	310.1	202	mg/L	2
Tot. Dissolved Solids	160.1	517	mg/L	5

FORM I

TNA Inc. REPORT Work Order # A3-04-023

Received: 04/07/93

Results by Sample

SAMPLE ID B088R5 FRACTION 01I TEST CODE WCCLPL NAME Anions & Wet Chem. - WR043

Date & Time Collected 04/05/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

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

FORM I

TRA Inc. REPORT Work Order # A3-04-023

Received: 04/07/93

Results by Sample

SAMPLE ID B088R5 FRACTION 01K TEST CODE WCCLPL NAME Anions & Wet Chem. - VR063

Date & Time Collected 04/05/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Ammonia Nitrogen	350.3	<0.05	mg/L	0.05
COD	410.0	<5	mg/L	5

FORM I

TMA Inc. REPORT Work Order # A3-04-023

Received: 04/07/93 Results by Sample

SAMPLE ID B088T0 FRACTION 03E TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 04/05/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	1.2	mg/L	0.2
Fluoride	300.0	0.2	mg/L	0.1
Phosphate	300.0	<0.4	mg/L	0.4
pH	150.1	7.6	pH	0.1
Sulfate	300.0	12	mg/L	1
Elect. Conductivity	120.1	186	umho/cm	6

FORM I

9713515.1595

000015

TMA Inc. REPORT Work Order # A3-04-023

Received: 04/07/93

Results by Sample

SAMPLE ID B088T0 FRACTION 03G TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 04/05/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Alkalinity	310.1	83	mg/L	2
Tot. Dissolved Solids	160.1	119	mg/L	5

FORM I

TMA Inc. REPORT Work Order # A3-04-023

Received: 04/07/93

Results by Sample

SAMPLE ID B088T0 FRACTION 03H TEST CODE WCCLPL NAME Anions & Wet Chem. - WWD43

Date & Time Collected 04/05/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

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

FORM I

TMA Inc. REPORT Work Order # A3-04-023

:eceived: 04/07/93

Results by Sample

AMPLE ID B088T0 FRACTION 03J TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 04/05/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Ammonia Nitrogen	350.3	<0.05	mg/L	0.05
COD	410.0	<5	mg/L	5

FORM I

CASE NARRATIVE

LABORATORY : TMA/ARLI

CASE : 04-023

CONTRACT ID : WESTINGHOUSE HANFORD COMPANY

SDG RECEIPT DATE : April 7, 1993

1.0 DESCRIPTION OF CASE :

Four water samples were analyzed for TCL Organics- Volatiles, Semivolatiles, and Pesticides/PCBs according to the USEPA Contract Laboratory Program (CLP) Statement of Work for Organic Analysis, Revision OLM01.8.

2.0 SAMPLE LIST :

WESTINGHOUSE ID	LAB ID	ANALYSIS REQUESTED	MATRIX	pH
B088R5	A3-04-023-01A	V	WATER	7
B088R5	A3-04-023-01B	SV & P	WATER	
B088R5 MS	A3-04-023-01C	SV	WATER	
B088R5 MSD	A3-04-023-01D	SV	WATER	
B088R7	A3-04-023-02A	V	WATER	7
B088R7 MS	A3-04-023-02B	V	WATER	7
B088R7 MSD	A3-04-023-02C	V	WATER	7
B088T0	A3-04-023-03A	V	WATER	7
B088T0	A3-04-023-03B	SV & P	WATER	
B088T0 MS	A3-04-023-03C	P	WATER	
B088T0 MSD	A3-04-023-03D	P	WATER	
B088T2	A3-04-023-04A	V	WATER	7

3.0 COMMENTS :

3.1 SHIPPING AND DOCUMENTATION :

All of the samples were received unbroken and properly documented.

3.2 ANALYSIS

3.2.1 VOLATILE ANALYSIS COMMENTS :

LOW LEVEL WATER :

The samples were analyzed within the CLP SOW holding times.

All of the QC results were within the limits specified by the EPA CLP SOW.

TUNES :

All BFB tunes are injected directly into GC/MS instrument.

3.2.2 SEMIVOLATILE ANALYSIS COMMENTS :

LOW LEVEL WATER :

The samples were extracted and analyzed within the CLP SOW holding times. The matrix spike recoveries for 4-Nitrophenol in samples B088R5MS and B088R5MSD were above the QC limits. In accordance with protocol, no further action was required.

All of the other QC results were within the limits specified by the EPA CLP SOW.

3.2.3 PESTICIDE/PCB ANALYSIS COMMENTS :

SEQUENCE NOTES :

The sequence was started on 04/19/93 and was analyzed according to the CLP SOW. The sequence was analyzed by single injection into a dual column system.

Aroclor-1260 and Aroclor-1254 were detected in several samples analyzed during this sequence. Standards for these two Aroclors were injected throughout the sequence for confirmation purposes only. Multiple instrument blanks were injected after the samples with high Aroclor concentration to eliminate any possible carry-over.

All of the QC criteria were within the limits specified by the CLP SOW.

The chromatograms are presented in the manner consistent with the capabilities of the Nelson 2700 Turbochrome Data System which normalizes the largest peak to scale.

SAMPLE NOTES :

LOW LEVEL WATER :

The samples were extracted and analyzed within the CLP SOW holding times. Sample PBLK0408C2 had DCB surrogate recoveries slightly below the QC limits on both GC columns. In accordance with protocol, no further action was required.

All of the other QC results were within the limits specified by CLP SOW.

We certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data in this hardcopy data package and in the computer-readable data submitted on diskette is authorized by the Laboratory Manager or his designee, as verified by the following signatures.

Nicole Roth 6/2/93
Nicole Roth
CLP Program Manager

Widayati 6/2/93
Wida Ang
Organics Manager

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000005

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088R5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04023 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304023-01A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30412R10

Level: (low/med) LOW Date Received: 04/07/93

% Moisture: not dec. ____ Date Analyzed: 04/12/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	1	J
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

9713515.1602

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B088R5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04023 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304023-01A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30412R10

Level: (low/med) LOW Date Received: 04/07/93

% Moisture: not dec. ____ Date Analyzed: 04/12/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

9713515.1603

000007

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088R7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04023 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304023-02A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30412R11

Level: (low/med) LOW Date Received: 04/07/93

% Moisture: not dec. ____ Date Analyzed: 04/12/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	3	J
67-64-1	Acetone	29	
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

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000008

EPA SAMPLE NO.

B088R7

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04023 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304023-02A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30412R11

Level: (low/med) LOW Date Received: 04/07/93

% Moisture: not dec. ____ Date Analyzed: 04/12/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

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000009

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088T0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04023 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304023-03A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30412R14

Level: (low/med) LOW Date Received: 04/07/93

% Moisture: not dec. ____ Date Analyzed: 04/12/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

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000010
EPA SAMPLE NO.

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

B088T0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04023 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304023-03A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30412R14

Level: (low/med) LOW Date Received: 04/07/93

% Moisture: not dec. ____ Date Analyzed: 04/12/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088T2

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04023 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304023-04A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30412R15

Level: (low/med) LOW Date Received: 04/07/93

% Moisture: not dec. ____ Date Analyzed: 04/12/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	15	
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B088T2

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04023 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304023-04A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30412R15

Level: (low/med) LOW Date Received: 04/07/93

% Moisture: not dec. ____ Date Analyzed: 04/12/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

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1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088R5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04023 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304023-01B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30414S13

Level: (low/med) LOW Date Received: 04/07/93

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 04/08/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/14/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	25	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088R5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04023 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304023-01B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30414S13

Level: (low/med) LOW Date Received: 04/07/93

% Moisture: ____ decanted: (Y/N) ___ Date Extracted: 04/08/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/14/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

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

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)Anthracene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	10	U
218-01-9	Chrysene	10	U
117-84-0	Di-n-Octyl Phthalate	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B088R5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04023 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304023-01B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30414S13

Level: (low/med) LOW Date Received: 04/07/93

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 04/08/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/14/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

Number TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN HYDROCARBON	5.85	3	J

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1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088T0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04023 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304023-03B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30414S16

Level: (low/med) LOW Date Received: 04/07/93

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 04/08/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/15/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	25	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088T0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04023 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304023-03B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30414S16

Level: (low/med) LOW Date Received: 04/07/93

% Moisture: ____ decanted: (Y/N) ___ Date Extracted: 04/08/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/15/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)Anthracene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	10	U
218-01-9	Chrysene	10	U
117-84-0	Di-n-Octyl Phthalate	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B088T0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04023 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304023-03B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30414S16

Level: (low/med) LOW Date Received: 04/07/93

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 04/08/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/15/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

9713515.1615

000019

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088R5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04023 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304023-01B

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: 04/07/93

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 04/08/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/21/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

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

CAS NO.	COMPOUND		Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-36-3	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

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000020

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088T0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04023 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304023-03B

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: 04/07/93

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 04/08/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/21/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-36-3	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

9713515.1617

 Skinner&Sherman REPORT Work Order # S3-04-107

Received: 04/08/93 05/12/93 15:55:40

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

ATTEN Dan Steurmer

CLIENT HANFORD NOR SAMPLES 3
COMPANY TMA/NORCAL Hanford
FACILITY Richmond, CA

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

ATTEN Client Services
PHONE (617) 890-7200

CERTIFIED BY

CONTACT DP

WORK ID N3-04-028
TAKEN By Client
TRANS Fed Ex
TYPE Water
P.O. # N3-04-028
INVOICE under separate cover

SAMPLE IDENTIFICATION

01 B088R5
02 B088T0
02 B088T0 DUPL
02 B088T0 SPIKE
03 LCSW

TEST CODES and NAMES used on this workorder

NO3NO2 Nitrate Plus Nitrite

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.

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

9713515.1618

 Skinner&Sherman REPORT Work Order # S3-04-107

Received: 04/08/93

Results by Sample

SAMPLE ID B088R5 SAMPLE # 01 FRACTIONS: A
Date & Time Collected 04/05/93 Category WATER

NO3NO2 20.2
mg N/L

SAMPLE ID B088T0 SAMPLE # 02 FRACTIONS: A
Date & Time Collected 04/05/93 Category WATER

NO3NO2 <0.25
mg N/L

SAMPLE ID B088T0 DUPL SAMPLE # 02 FRACTIONS: B
Date & Time Collected 04/05/93 Category WATER

NO3NO2 <0.25
mg N/L

SAMPLE ID B088T0 SPIKE SAMPLE # 02 FRACTIONS: C
Date & Time Collected 04/05/93 Category WATER

NO3NO2 2.17
mg N/L

SAMPLE ID LCSW SAMPLE # 03 FRACTIONS: A
Date & Time Collected not specified Category WATER

NO3NO2 2.03
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
1-800-4 LAB TEST FAX (617) 890-3883

9713515.1619

 Skinner&Sherman REPORT Work Order # S3-04-107

Received: 04/08/93 05/12/93 15:55:40

TMA/NORCAL Hanford

QUALITY CONTROL

MATRIX SPIKE

Sample ID	Sample Result	Spike Added	Spike Result	% Recovery
S304107-02	<0.25 mg/L	2.00 mg/L	2.17 mg/L	108.3

DUPLICATE

Sample ID	Sample Result	Duplicate Result	Relative % Difference
S304107-02	<0.25 mg/L	<0.25 mg/L	not calculable

QUALITY CONTROL SAMPLES

Sample ID	True Value	Found Value	% Recovery
LCS	2.00 mg/L	2.03 mg/L	101.4
Prep blank	--	<0.25 mg/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
1-800-4 LAB TEST FAX (617) 890-3883

9713515.1600

Received: 04/08/93

Test Methodology

TEST CODE NO3NO2 NAME Nitrate Plus Nitrite

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

This report is tendered 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 analyses. 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 loss or destroyed samples or evidence unless client makes appropriate insurance coverage arrangements. Samples are held for thirty days following issuance of report. Samples will be stored at client's expense, if authorized in writing.

TMA
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

9213515.1621

Sampled 4/5/93

TMA/Skinner & Sherman Labs SAMPLE LOG-IN
WORKORDER 5304107 CLIENT Hanford Nur No. SAMPLES:
PROTCL CLP TURNARND 30 Day 2
COOLER TEMP: 4 oC, or NA (Soil) (Water) (Specify Other)
CUSTODIAN B Brown SDG/BATCH N/A
CUSTODY SEAL: PRESENT/ABSENT/INTACT/NOT CLIENT CASE N304028
SHIPER & # Fed Ex PO/CONTRACT# +
TAGS: PRESENT/ABSENT/NA/SEE COC CONTACT D Sanchez
CHAIN OF CUSTODY: PRESENT/ABSENT/NA, # N/A COMMENTS: none

SAMPLE CONTAINERS-INTACT/BROKEN COMMENTS

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

SHIPMENT DATES 4/8/93
LIST ANY DATE WITH PAPERWORK/SHIPMENT PROBLEMS & SPECIFY THE PROBLEM:

N/A

	CLIENT ID	MATRIX	RECEIVED	PH*	TEST(S) & QC	HOLD TIME UP
1	B08SR5	water	4/8/93	1.29	NO3NO2	due 5-3-93
2	B08STU	+	+	1.23	D.S. +	
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						

Samples are from site known to have Rad-Contamination: YES ___ NO ✓
Samples have detectable amounts of Radioactive Material: YES ___ NO ✓

SUBCONTRACT: YES/NO, TO: DATE:

REVIEWED Comp 4/5/93 BP

* EPA/CLP required Rev 1.6 PAGE:

9713515.1622

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

JUN 1993
RECEIVED
SDLA

May 7, 1993

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

Quality Control Narrative

Scope
Two (2) water samples were submitted to TMA/Skinner & Sherman Laboratories, Inc. on April 8, 1993 from TMA/Norcal. The samples were analyzed for the USEPA CLP metals and cyanide as indicated on the chain of custody. The analysis was performed under TMA/Skinner and Sherman work order S304105.

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 exception:

The selenium digestion spike recovery 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.

David N. Peterson
Assistant Laboratory Manager

1 20 8/21/96

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

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

Lab Code: SKINER Case No.: N3-04-028 SAS No.: SDG No.: B088R5

SOW No.: ILM02.1

SAMPLE NUMBER:	Lab Sample ID.
B088R5	04105-01S
B088T0	04105-02S
B088T0D	04105-02S2
B088T0S	04105-02DS

Were ICP interelement corrections applied? Yes/No YES
Were ICP background corrections applied? Yes/No YES
If yes-were raw data generated before application of background corrections? Yes/No NO

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Steven Provencal Name: Steven R. Provencal

Date: 5/7/93 Title: Lead Chemist

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B088R5

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

Lab Code: SKINER Case No.: N3-04-028SAS No.: SDG No.: B088R5

Matrix (soil/water): WATER Lab Sample ID: 04105-01S

Level (low/med): LOW Date Received: 04/08/93

% 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	19.2	U		P
7440-36-0	Antimony	18.6	U		P
7440-38-2	Arsenic	5.2	B		F
7440-39-3	Barium	52.3	B		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	102000			P
7440-47-3	Chromium	19.7			P
7440-48-4	Cobalt	2.9	U		P
7440-50-8	Copper	4.1	B		P
7439-89-6	Iron	101			P
7439-92-1	Lead	2.1	B		F
7439-95-4	Magnesium	23700			P
7439-96-5	Manganese	1.0	U		P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	4.2	U		P
7440-09-7	Potassium	6390			P
7782-49-2	Selenium	8.5		SN	F
7440-22-4	Silver	3.3	U		P
7440-23-5	Sodium	26500			P
7440-28-0	Thallium	1.2	U	W	F
7440-62-2	Vanadium	6.0	B		P
7440-66-6	Zinc	4.8	U		P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

002

SAMPLE NUMBER:

B088T0

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: SKINER Case No.: N3-04-028SAS No.: SDG No.: B088R5

Matrix (soil/water): WATER Lab Sample ID: 04105-02S

Level (low/med): LOW Date Received: 04/08/93

% 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	19.2	U		P
7440-36-0	Antimony	18.6	U		P
7440-38-2	Arsenic	3.5	U		F
7440-39-3	Barium	34.0	B		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	26700			P
7440-47-3	Chromium	7.1	B		P
7440-48-4	Cobalt	2.9	U		P
7440-50-8	Copper	2.7	U		P
7439-89-6	Iron	58.8	B		P
7439-92-1	Lead	1.4	B		F
7439-95-4	Magnesium	4660	B		P
7439-96-5	Manganese	2.8	B		P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	4.2	U		P
7440-09-7	Potassium	1930	B		P
7782-49-2	Selenium	2.9	U	WN	F
7440-22-4	Silver	3.3	U		P
7440-23-5	Sodium	2810	B		P
7440-28-0	Thallium	1.2	U		F
7440-62-2	Vanadium	2.1	U		P
7440-66-6	Zinc	10.3	B		P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

HD3

9715516.1626

Sampled 4/5/93

TMA/Skinner & Sherman Labs SAMPLE LOG-IN

WORKORDER S304105 CLIENT Hanford Nor No. SAMPLES:

PROTCL 4P TURNARND 33 Day 2 (Soil) (Water) (Specify Other)

COOLER TEMP: 4 oC, or NA

CUSTODIAN Brown SDG/BATCH NA

CUSTODY SEAL: PRESENT/ABSENT/INTACT/NOT CLIENT CASE N304028

SHIPER & # FedEx PO/CONTRACT# —

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

CHAIN OF CUSTODY: PRESENT/ABSENT/NA, # NA COMMENTS: none

SAMPLE CONTAINERS-INTACT/BROKEN COMMENTS

CLIENT COMMENT? YES/NO

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

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

SHIPMENT DATES 4/8/93

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

N/A UNFILTERED

	CLIENT ID	MATRIX	RECEIVED	PH*	TEST(S) & QC	HOLD TIME UP
1	BOBBRS	water	4/8/93	1.76/13.00	TM/CN	
2	BORETO	"	"	1.69/12.10	D.S "	
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						145
26						
27						

Samples are from site known to have Rad-Contamination: YES ✓ NO

Samples have detectable amounts of Radioactive Material: YES NO ✓

SUBCONTRACT: YES/NO, TO: DATE: Complete BP 4/9/93

REVIEWED

* EPA/CLP required Rev 1.6 PAGE:

TMA 9713515.1627
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

JUN 1993 RECEIVED SDLA

May 7, 1993

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

Quality Control Narrative

Scope
Two (2) water samples were submitted to TMA/Skinner & Sherman Laboratories, Inc. on April 8, 1993 from TMA/Norcal. The samples were analyzed for the USEPA CLP metals. The analysis was performed under TMA/Skinner and Sherman work order S304108.

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 exception:

The selenium digestion spike recovery 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.

David N. Peterson
Assistant Laboratory Manager

i sw 8/21/96

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

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

Lab Code: SKINER Case No.: N3-04-028 SAS No.: SDG No.: B088R6

SOW No.: ILM02.1

SAMPLE NUMBER:	Lab Sample ID.
B088R6	04108-01S
B088T1	04108-02S
B088T1D	04108-02S2
B088T1S	04108-02DS

Were ICP interelement corrections applied? Yes/No YES

Were ICP background corrections applied? Yes/No YES

If yes-were raw data generated before application of background corrections? Yes/No NO

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Steven Provencal Name: Steven R. Provencal

Date: 5/7/93 Title: Lead Chemist

SAMPLE NUMBER:

B088R6

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: SKINER Case No.: N3-04-028SAS No.: SDG No.: B088R6

Matrix (soil/water): WATER Lab Sample ID: 04108-01S

Level (low/med): LOW Date Received: 04/08/93

% 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	19.2	U		P
7440-36-0	Antimony	18.6	U		P
7440-38-2	Arsenic	1.6	B		F
7440-39-3	Barium	54.2	B		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	104000			P
7440-47-3	Chromium	18.6			P
7440-48-4	Cobalt	2.9	U		P
7440-50-8	Copper	2.7	U		P
7439-89-6	Iron	8.4	U		P
7439-92-1	Lead	4.6			F
7439-95-4	Magnesium	24200			P
7439-96-5	Manganese	1.0	U		P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	4.2	U		P
7440-09-7	Potassium	6750			P
7782-49-2	Selenium	17.5	U	WN	F
7440-22-4	Silver	3.3	U		P
7440-23-5	Sodium	27100			P
7440-28-0	Thallium	1.2	U		F
7440-62-2	Vanadium	5.4	B		P
7440-66-6	Zinc	4.8	U		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

002

SAMPLE NUMBER:

B088T1

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: SKINER Case No.: N3-04-028SAS No.: SDG No.: B088R6

Matrix (soil/water): WATER Lab Sample ID: 04108-02S

Level (low/med): LOW Date Received: 04/08/93

% 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	19.2	U		P
7440-36-0	Antimony	18.6	U		P
7440-38-2	Arsenic	1.5	U		F
7440-39-3	Barium	32.3	B		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	26900			P
7440-47-3	Chromium	4.0	B		P
7440-48-4	Cobalt	2.9	U		P
7440-50-8	Copper	2.7	U		P
7439-89-6	Iron	10.3	B		P
7439-92-1	Lead	1.8	B		F
7439-95-4	Magnesium	4790	B		P
7439-96-5	Manganese	1.8	B		P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	4.2	U		P
7440-09-7	Potassium	2030	B		P
7782-49-2	Selenium	17.5	U	WN	F
7440-22-4	Silver	3.3	U		P
7440-23-5	Sodium	2850	B		P
7440-28-0	Thallium	1.2	U		F
7440-62-2	Vanadium	2.1	U		P
7440-66-6	Zinc	4.8	U		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

003

9713515.1691

FEDERAL EXPRESS

QUESTIONS? CALL 800-238-5355 TOLL FREE.

AIRBILL
PACKAGE
TRACKING NUMBER

6395890093

6395890093

RECIPIENT'S COPY

1 Date 4-7-93

From (Your Name) Please Print: SAMPLE CONTROL
Your Phone Number (Very Important): (510-235-2633
Company: T/NOPCAL
Department/Floor No.:
Street Address: 2030 WRIGHT AVE
City: RICHMOND State: CA ZIP Required: 94804

2 To (Recipient's Name) Please Print: SAMPLE CONTROL
Recipient's Phone Number (Very Important):
Company: SKINNER & SHERMAN
Department/Floor No.:
Exact Street Address (We Cannot Deliver to P.O. Boxes or P.O. Zip Codes.): 300 SECOND AVENUE
City: WALTHAM State: MA ZIP Required: 02254

YOUR INTERNAL BILLING REFERENCE INFORMATION (optional) (First 24 characters will appear on invoice.): 2340 G40G

H IF HOLD FOR PICK-UP, Print FEDEX Address Here
Street Address:
City: State: ZIP Required:

3 PAYMENT 1 [/] Bill Sender 2 [ ] Bill Recipient's FedEx Acct. No. 3 [ ] Bill 3rd Party FedEx Acct. No. 4 [ ] Bill Credit Card 5 [ ] Cash/Check

4 SERVICES (Check only one box)

Priority Overnight (Delivery by next business morning†)
- 11 [/] OTHER PACKAGING
- 16 [ ] FEDEX LETTER*
- 12 [ ] FEDEX PAK*
- 13 [ ] FEDEX BOX
- 14 [ ] FEDEX TUBE

Standard Overnight (Delivery by next business afternoon. No Saturday delivery†)
- 51 [ ] OTHER PACKAGING
- 56 [ ] FEDEX LETTER*
- 52 [ ] FEDEX PAK*
- 53 [ ] FEDEX BOX
- 54 [ ] FEDEX TUBE

Economy Two-Day* (Delivery by second business day †)
- 30 [ ] ECONOMY*

* Economy Letter rate not available. Minimum charge: One pound economy rate.

Government Overnight (Restricted for authorized users only)
- 46 [ ] GOVT LETTER
- 41 [ ] GOVT PACKAGE

Freight Service (for packages over 150 lbs.)
- 70 [ ] OVERNIGHT FREIGHT** (Confirmed reservation required)
- 80 [ ] TWO-DAY FREIGHT**

† Delivery commitment may be later in some areas.
*Declared Value Limit $500.
**Call for delivery schedule.

5 DELIVERY AND SPECIAL HANDLING (Check services required)
- 1 [ ] HOLD FOR PICK-UP (Fill in Box H)
- 2 [/] DELIVER WEEKDAY
- 3 DELIVER SATURDAY (Extra charge) (Not available to all locations) [ ]
- 4 [ ] DANGEROUS GOODS (Extra charge)
- 5 [ ]
- 6 [ ] DRY ICE Dangerous Goods Shipper's Declaration not required. Dry Ice, 9, UN 1845, X ___ kg. 904 III
- 7 [ ] OTHER SPECIAL SERVICE
- 8 [ ]
- 9 [ ] SATURDAY PICK-UP (Extra charge)
- [ ]
- 12 [ ] HOLIDAY DELIVERY (If offered) (Extra charge)

6

PACKAGES	WEIGHT In Pounds Only	YOUR DECLARED VALUE (See right)
Total	Total 1.33	Total

DIM SHIPMENT (Chargeable Weight) [ ] ___ lbs.
L x W x H

Received At
1 [/] Regular Stop 2 [ ] On-Call Stop 3 [ ] Drop Box 4 [ ] B.S.C. 5 [ ] Station

Emp. No. Date
[ ] Cash Received
[ ] Return Shipment
[ ] Third Party [ ] Chg. To Del. [ ] Chg. To Hold
Street Address
City State Zip
Received By: X Bart Powell
Date/Time Received: 4/8/93 10.30
FedEx Employee Number

7 Release Signature:

Federal Express Use
Base Charges
Declared Value Charge
Other 1
Other 2
Total Charges

REVISION DATE 11/92
PART #137204 FXEM 12/92
FORMAT #155
155

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146

9713515.1632

Sampled 4/5/93

TMA/Skinner & Sherman Labs SAMPLE LOG-IN

WORKORDER S304108 CLIENT Hanford Nor No. SAMPLES: 2

PROTCL CLP TURNARND 33 Day (Soil) (Water) (Specify Other

COOLER TEMP: 4 oC, or NA

CUSTODIAN B Prouk SDG/BATCH N/A

CUSTODY SEAL: PRESENT/ABSENT/INTACT/NOT CLIENT CASE N304028

SHIPER & # Fed Ex PO/CONTRACT# ↓

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

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

SAMPLE CONTAINERS-INTACT/BROKEN COMMENTS

CLIENT COMMENT? YES/NO

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

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

SHIPMENT DATES 4/8/93

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

N/A

	CLIENT ID	MATRIX	RECEIVED	PH*	TEST(S) & QC	HOLD TIME U
1	DOBBR6	water	4/8/93	1.36	TM	
2	DOBBT1	↓	↓	1.48	D.S ↓	
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						.147
27						

Samples are from site known to have Rad-Contamination: YES ✓ NO ___

Samples have detectable amounts of Radioactive Material: YES ___ NO ✓

SUBCONTRACT: YES/NO, TO: _____ DATE: Computer 4/9/93 BP

REVIEWED _____

* EPA/CLP required Rev 1.6 PAGE:

9313515.1603

CHAIN OF CUSTODY ORD # N3-04-028

RCVD: 04/07/93 DUE: 05/07/93 04/07/93 13:32:07 KEEP: 08/05/93 DISP: S

DASH	SAMPLE IDENTIFICATION		STORED	TESTS for FRACTIONS with work in DEPT: SU and CATEGORY				
01B-W	B088R5	UNFILTERED	S&S	WH007	WH008	WH010	WH011	WH137
02B-W	B088T0	UNFILTERED	S&S	WH007	WH008	WH010	WH011	WH137
02F-W	B088T0 MS	UNFILTERED	S&S	WH007	WH008	WH010	WH011	WH137
02G-W	B088T0 DUP	UNFILTERED	S&S	WH007	WH008	WH010	WH011	WH137
02H-W	L C S		S&S	WH007	WH008	WH010	WH137	
03A-W	B088R6	FILTERED	S&S	WH007	WH008	WH010		
04A-W	B088T1	FILTERED	S&S	WH007	WH008	WH010		
04B-W	B088T1 MS	FILTERED	S&S	WH007	WH008	WH010		
04C-W	B088T1 DUP	FILTERED	S&S	WH007	WH008	WH010		
04D-W	L C S		S&S	WH007	WH008	WH010		

RELEASED BY	DATE	TRANSFERRED TO	DATE	RECEIVED BY	DATE
Yamamoto	4-7-93	Skinner	4-7-93	Barb Prul	4/8/93

9713515.1634

VALIDATION SUMMARY

9713515.1635

000040

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088V0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04016 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304016-01A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30413B20

Level: (low/med) LOW Date Received: 04/05/93

% Moisture: not dec. ____ Date Analyzed: 04/13/93

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

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

NV 7-22-93 SC

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B088V0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04016 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304016-01A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30413B20

Level: (low/med) LOW Date Received: 04/05/93

% Moisture: not dec. ____ Date Analyzed: 04/13/93

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

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

NV
7-22-93SC

9713515.1637

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088V2

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04016 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304016-02A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30413B21

Level: (low/med) LOW Date Received: 04/05/93

% Moisture: not dec. ____ Date Analyzed: 04/13/93

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

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	5	J
67-64-1	Acetone	30	
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

NV 7-22-93 SC

9713515.1638

1E

EPA SAMPLE NO. 000618

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

B088V2

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04016 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304016-02A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30413B21

Level: (low/med) LOW Date Received: 04/05/93

% Moisture: not dec. ____ Date Analyzed: 04/13/93

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

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

NV 7-22-93 SC

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088V0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04016 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304016-01B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30413S14

Level: (low/med) LOW Date Received: 04/05/93

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 04/06/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/13/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	25	U

NI 7-22-93 SG

EPA SAMPLE NO.

B088V0

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04016 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304016-01B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30413S14

Level: (low/med) LOW Date Received: 04/05/93

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 04/06/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/13/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)Anthracene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	10	U
218-01-9	Chrysene	10	U
117-84-0	Di-n-Octyl Phthalate	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine

NV 7-23-93 SE

EPA SAMPLE NO.

B088V0

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04016 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304016-01B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30413S14

Level: (low/med) LOW Date Received: 04/05/93

% Moisture: ____ decanted: (Y/N) ___ Date Extracted: 04/06/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/13/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

NV
7-23-93 SC

9713515.1642

EPA SAMPLE NO. 000228

PESTICIDE ORGANICS ANALYSIS DATA SHEET

B088V0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04016 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304016-01B

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: 04/05/93

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 04/06/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/18/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-36-3	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

NV 7-23-93 SC

SAMPLE NUMBER: B088V0

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: SKINER Case No.: N3-04-009SAS No.: SDG No.: B088V0

Matrix (soil/water): WATER Lab Sample ID: 04052-01S

Level (low/med): LOW Date Received: 04/06/93

% 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	80.6	B		P
7440-36-0	Antimony	17.9	U		P
7440-38-2	Arsenic	2.1	B		F
7440-39-3	Barium	37.4	B		P
7440-41-7	Beryllium	0.50	U		P
7440-43-9	Cadmium	1.7	U		P
7440-70-2	Calcium	38900			P
7440-47-3	Chromium	32.7			P
7440-48-4	Cobalt	3.8	U		P
7440-50-8	Copper	4.2	U		P
7439-89-6	Iron	129			P
7439-92-1	Lead	1.6	B		F
7439-95-4	Magnesium	6630			P
7439-96-5	Manganese	3.3	B		P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	7.0	B		P
7440-09-7	Potassium	2060	B		P
7782-49-2	Selenium	3.5	U	WN	F
7440-22-4	Silver	3.8	U		P
7440-23-5	Sodium	5610			P
7440-28-0	Thallium	2.7	U		F
7440-62-2	Vanadium	3.3	U		P
7440-66-6	Zinc	7.6	B		P
	Cyanide	10.0	U		CA

N 1-23-93

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

t002

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B088V1

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

Lab Code: SKINER Case No.: N3-04-009SAS No.: SDG No.: B088V1

Matrix (soil/water): WATER Lab Sample ID: 04053-01S

Level (low/med): LOW Date Received: 04/06/93

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	23.5	U		P
7440-36-0	Antimony	17.9	U		P
7440-38-2	Arsenic	2.3	U		F
7440-39-3	Barium	38.7	B		P
7440-41-7	Beryllium	0.50	U		P
7440-43-9	Cadmium	1.7	U		P
7440-70-2	Calcium	40400			P
7440-47-3	Chromium	25.9			P
7440-48-4	Cobalt	3.8	U		P
7440-50-8	Copper	4.2	U		P
7439-89-6	Iron	14.0	B		P
7439-92-1	Lead	1.8	B	W	F
7439-95-4	Magnesium	6840			P
7439-96-5	Manganese	1.8	U		P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	6.1	U		P
7440-09-7	Potassium	2050	B		P
7782-49-2	Selenium	3.3	U	WN	F
7440-22-4	Silver	3.8	U		P
7440-23-5	Sodium	5770			P
7440-28-0	Thallium	2.7	U	W	F
7440-62-2	Vanadium	3.3	U		P
7440-66-6	Zinc	3.4	U		P
	Cyanide				NR

NV 7-23-93 SL

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

002

9713515.1645

TMA Inc. REPORT Work Order # A3-04-016

Received: 04/05/93

Results by Sample

SAMPLE ID B088V0 FRACTION 01E TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 04/01/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	4.6	mg/L	0.2
Fluoride	300.0	0.2	mg/L	0.1
Phosphate	300.0	<0.4 U	mg/L	0.4
pH	150.1	7.7	pH	0.1
Sulfate	300.0	29	mg/L	1
Elect. Conductivity	120.1	274	umho/cm	6

FORM I

NV
7-23-93 SC

TMA Inc. REPORT Work Order # A3-04-016

Received: 04/05/93 Results by Sample

SAMPLE ID B088V0 FRACTION 01W TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 04/01/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Alkalinity	310.1	89	mg/L	2
Tot. Dissolved Solids	160.1	169	mg/L	5

FORM I

NV
T-23-93 SC

9713515.1647

000011

TMA Inc. REPORT Work Order # A3-04-016

Received: 04/05/93

Results by Sample

SAMPLE ID B088V0 FRACTION 01J TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 04/01/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

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

FORM I

NV 7-23-93 SC

9713515.1648

000012

TMA Inc. REPORT Work Order # A3-04-016

Received: 04/05/93

Results by Sample

SAMPLE ID B088V0 FRACTION 01M TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 04/01/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Ammonia Nitrogen	350.3	<0.05 U	mg/L	0.05
COD	410.0	<5 U	mg/L	5

FORM I

NV 7-23-93 SC

9713515.1649

 Skinner&Sherman REPORT Work Order # S3-04-054

Received: 04/06/93 Results by Sample

SAMPLE ID B088V0 SAMPLE # 01 FRACTIONS: A
Date & Time Collected 04/01/93 Category WATER

NO3NO2 3.65
mg N/L

SAMPLE ID B088V0 DUPL SAMPLE # 01 FRACTIONS: B
Date & Time Collected 04/01/93 Category WATER

NO3NO2 3.68
mg N/L

SAMPLE ID B088V0 SPIKE SAMPLE # 01 FRACTIONS: C
Date & Time Collected 04/01/93 Category WATER

NO3NO2 5.68
mg N/L

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

NO3NO2 2.05
mg N/L

NV 7-23-93 SC

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 [illegible] 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 fees 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 analyzed in accordance with New York State protocol unless indicated. Product endorsement is neither intended nor implied. Skinner & Sherman Laboratories, Inc., will exercise due diligence but will not be responsible for lost or destroyed samples or evidence unless clearly marked [illegible] ments. Samples are held for thirty days following issuance of report. Samples will be stored at client's expense if authorized [illegible]
300 Second Avenue, P.O. Box 521, Waltham, Massachusetts 02254-0521 (617) 890-7220

9713515.1650

N304008-06

TMA NORCAL
REPORTING GROUP 7179

DATA SHEET

B088Q0

SDG 7179
Contact Dinkar Kharkar
Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N304008-06
Dept sample id 7179-006
Received 04/06/93
Client sample id B088Q0
Matrix WATER
Collected 04/02/93
Chain of custody id EFL-1055

PARAMETER	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	Alpha	1.4	1.9	2	3	U J	80A
Gross Beta	Beta	5.5	1.6	2	4		80B
Uranium 233/234		2.2	0.47	0.1	0.2		U
Uranium 235	15117-96-1	0.083	0.084	0.2	0.2	U	U
Uranium 238	7440-61-1	1.7	0.40	0.1	0.2		U
Plutonium 238	13981-16-3	-0.031	0.039	0.08	0.05	U	PU
Plutonium 239/240		0.004	0.008	0.03	0.05	U	PU
Americium 241	14596-10-2	0.020	0.032	0.05	0.05	U	AM
Strontium 90	10098-97-2	0.16	0.23	0.9	2	U	Y
Technetium 99	14133-76-7	3.1	2.5	4	5	U	TC
Tritium	10028-17-8	170	150	200	400	U	H
Carbon 14	14762-75-5	-9.3	25	40	50	U J	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	U		300		U	GAM
Iron 59	14596-12-4	U		40	30	U	GAM
Chromium 51	14392-02-0	U		200		U	GAM
Cobalt 60	10198-40-0	U		20	30	U	GAM
Zinc 65	13982-39-3	U		30		U	GAM
Ruthenium 106	13967-48-1	U		100		U	GAM
Cesium 134	13967-70-9	U		10		U	GAM
Cesium 137	10045-97-3	U		20	20	U	GAM
Cerium 144	14762-78-8	U		70		U	GAM
Europium 152	14683-23-9	U		30	40	U	GAM
Europium 154	15585-10-1	U		20	40	U	GAM
Radium 226	13982-63-3	U		30		U	GAM
Thorium 228	14274-82-9	U		20		U	GAM
Thorium 232	7440-29-1	U		70		U	GAM

ABW 7/23/93

RB 7/28/93

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.23
Report date 05/24/93

9713515.1651

N304008-01

TMA NORCAL
REPORTING GROUP 7179

DATA SHEET

B088Q5

SDG 7179
Contact Dinkar Kharkar

Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N304008-01
Dept sample id 7179-001
Received 04/02/93

Client sample id B088Q5
Matrix WATER
Collected 03/31/93
Chain of custody id EFL-1055

PARAMETER	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	Alpha	-0.45	1.4	2	3	U J	80A
Gross Beta	Beta	51	2.9	2	4		80B
Uranium 233/234		0.68	0.21	0.2	0.2		U
Uranium 235	15117-96-1	0.034	0.069	0.1	0.2	U	U
Uranium 238	7440-61-1	0.68	0.21	0.1	0.2		U
Plutonium 238	13981-16-3	-0.011	0.046	0.1	0.05	~~U~~ K	PU
Plutonium 239/240		0.006	0.011	0.04	0.05	~~U~~ K	PU
Americium 241	14596-10-2	0	0.005	0.02	0.05	U	AM
Strontium 90	10098-97-2	24	3.7	0.9	2		Y
Technetium 99	14133-76-7	0.070	1.1	3	5	U	TC
Tritium	10028-17-8	320	160	200	400	J	H
Carbon 14	14762-75-5	5.3	32	50	50	U J	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	U		200		U	GAM
Iron 59	14596-12-4	U		30	30	U	GAM
Chromium 51	14392-02-0	U		100		U	GAM
Cobalt 60	10198-40-0	U		10	30	U	GAM
Zinc 65	13982-39-3	U		30		U	GAM
Ruthenium 106	13967-48-1	U		100		U	GAM
Cesium 134	13967-70-9	U		10		U	GAM
Cesium 137	10045-97-3	U		10	20	U	GAM
Cerium 144	14762-78-8	U		60		U	GAM
Europium 152	14683-23-9	U		30	40	U	GAM
Europium 154	15585-10-1	U		20	40	U	GAM
Radium 226	13982-63-3	U		20		U	GAM
Thorium 228	14274-82-9	U		20		U	GAM
Thorium 232	7440-29-1	U		60		U	GAM

ABW 7/23/93

RB 7/28/93

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.23
Report date 05/24/93

9713515.1652

N304008-10

TMA NORCAL
REPORTING GROUP 7179

DATA SHEET

B088R5

SDG 7179
Contact Dinkar Kharkar

Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N304008-10
Dept sample id 7179-010
Received 04/07/93

Client sample id B088R5
Matrix WATER
Collected 04/05/93
Chain of custody id EFL-1055

PARAMETER	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	Alpha	5.2	3.2	3	3	J	80A
Gross Beta	Beta	7.4	1.6	2	4		80B
Uranium 233/234		4.0	0.65	0.1	0.2		U
Uranium 235	15117-96-1	0.084	0.068	0.1	0.2	U	U
Uranium 238	7440-61-1	3.0	0.54	0.1	0.2		U
Plutonium 238	13981-16-3	-0.003	0.021	0.04	0.05	U	PU
Plutonium 239/240		-0.005	0.005	0.02	0.05	U	PU
Americium 241	14596-10-2	0.003	0.014	0.03	0.05	U	AM
Strontium 90	10098-97-2	0.10	0.23	0.8	2	U	Y
Technetium 99	14133-76-7	1.1	1.3	3	5	U	TC
Tritium	10028-17-8	8800	390	200	400		H
Carbon 14	14762-75-5	-0.46	19	30	50	U J	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	U		200		U	GAM
Iron 59	14596-12-4	U		30	30	U	GAM
Chromium 51	14392-02-0	U		100		U	GAM
Cobalt 60	10198-40-0	U		10	30	U	GAM
Zinc 65	13982-39-3	U		30		U	GAM
Ruthenium 106	13967-48-1	U		100		U	GAM
Cesium 134	13967-70-9	U		10		U	GAM
Cesium 137	10045-97-3	U		10	20	U	GAM
Cerium 144	14762-78-8	U		70		U	GAM
Europium 152	14683-23-9	U		30	40	U	GAM
Europium 154	15585-10-1	U		20	40	U	GAM
Radium 226	13982-63-3	U		30		U	GAM
Thorium 228	14274-82-9	U		20		U	GAM
Thorium 232	7440-29-1	U		60		U	GAM

ABW 7/23/93

RB 7/28/93

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.23
Report date 05/24/93

9713515.1653

N304008-11

TMA NORCAL
REPORTING GROUP 7179

DATA SHEET

B088T0

SDG 7179
Contact Dinkar Kharkar

Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N304008-11
Dept sample id 7179-011
Received 04/07/93

Client sample id B088T0
Matrix WATER
Collected 04/05/93
Chain of custody id EFL-1055

PARAMETER	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	Alpha	0.18	0.90	1	3	U J	80A
Gross Beta	Beta	9.2	1.6	2	4		80B
Uranium 233/234		0.42	0.12	0.08	0.2		U
Uranium 235	15117-96-1	0.023	0.031	0.06	0.2	U	U
Uranium 238	7440-61-1	0.35	0.093	0.05	0.2		U
Plutonium 238	13981-16-3	-0.011	0.055	0.1	0.05	U R	PU
Plutonium 239/240		0.006	0.011	0.04	0.05	U R	PU
Americium 241	14596-10-2	0	0.013	0.03	0.05	U	AM
Strontium 90	10098-97-2	2.6	1.8	0.9	2		Y
Technetium 99	14133-76-7	-0.61	1.4	4	5	U	TC
Tritium	10028-17-8	59	140	200	400	U	H
Carbon 14	14762-75-5	120	24	40	50	J	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	U		100		U	GAM
Iron 59	14596-12-4	U		30	30	U	GAM
Chromium 51	14392-02-0	U		100		U	GAM
Cobalt 60	10198-40-0	U		10	30	U	GAM
Zinc 65	13982-39-3	U		20		U	GAM
Ruthenium 106	13967-48-1	U		80		U	GAM
Cesium 134	13967-70-9	U		9		U	GAM
Cesium 137	10045-97-3	U		10	20	U	GAM
Cerium 144	14762-78-8	U		50		U	GAM
Europium 152	14683-23-9	U		20	40	U	GAM
Europium 154	15585-10-1	U		10	40	U	GAM
Radium 226	13982-63-3	U		20		U	GAM
Thorium 228	14274-82-9	U		20		U	GAM
Thorium 232	7440-29-1	U		50		U	GAM

ABW 7/23/93

RB 7/28/93

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.23
Report date 05/24/93

9713515.1654

TMA NORCAL
REPORTING GROUP 7179

N304008-12

B088T5

DATA SHEET

SDG 7179
Contact Dinkar Kharkar

Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N304008-12
Dept sample id 7179-012
Received 04/08/93

Client sample id B088T5
Matrix WATER
Collected 04/06/93
Chain of custody id EFL-1055

PARAMETER	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	Alpha	0.63	0.97	1	3	U J	80A
Gross Beta	Beta	6.7	1.4	2	4		80B
Uranium 233/234		0.24	0.14	0.1	0.2		U
Uranium 235	15117-96-1	0.021	0.042	0.2	0.2	U	U
Uranium 238	7440-61-1	0.23	0.14	0.1	0.2		U
Plutonium 238	13981-16-3	0.006	0.028	0.05	0.05	U	PU
Plutonium 239/240		0.003	0.006	0.02	0.05	U	PU
Americium 241	14596-10-2	0	0.015	0.03	0.05	U	AM
Strontium 90	10098-97-2	2.7	0.53	0.8	2		Y
Technetium 99	14133-76-7	1.6	1.5	4	5	U	TC
Tritium	10028-17-8	19	150	200	400	U	H
Carbon 14	14762-75-5	3.4	19	30	50	U J	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	U		200		U	GAM
Iron 59	14596-12-4	U		30	30	U	GAM
Chromium 51	14392-02-0	U		100		U	GAM
Cobalt 60	10198-40-0	U		20	30	U	GAM
Zinc 65	13982-39-3	U		20		U	GAM
Ruthenium 106	13967-48-1	U		90		U	GAM
Cesium 134	13967-70-9	U		10		U	GAM
Cesium 137	10045-97-3	U		10	20	U	GAM
Cerium 144	14762-78-8	U		50		U	GAM
Europium 152	14683-23-9	U		20	40	U	GAM
Europium 154	15585-10-1	U		10	40	U	GAM
Radium 226	13982-63-3	U		20		U	GAM
Thorium 228	14274-82-9	U		20		U	GAM
Thorium 232	7440-29-1	U		50		U	GAM

ABW 7/23/93

RB 1/28/93

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.23
Report date 05/24/93

9713515.1655

TMA NORCAL
REPORTING GROUP 7179

N304008-05

DATA SHEET

B088V0

SDG 7179
Contact Dinkar Kharkar

Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N304008-05
Dept sample id 7179-005
Received 04/05/93

Client sample id B088V0
Matrix WATER
Collected 04/01/93
Chain of custody id EFL-1055

PARAMETER	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	Alpha	1.4	1.4	2	3	U J	80A
Gross Beta	Beta	14	1.8	2	4		80B
Uranium 233/234		0.40	0.12	0.1	0.2		U
Uranium 235	15117-96-1	0.023	0.031	0.06	0.2	U	U
Uranium 238	7440-61-1	0.50	0.12	0.05	0.2		U
Plutonium 238	13981-16-3	0.003	0.031	0.06	0.05	U	PU
Plutonium 239/240		0.003	0.006	0.02	0.05	U	PU
Americium 241	14596-10-2	0.005	0.016	0.03	0.05	U	AM
Strontium 90	10098-97-2	6.6	2.1	0.8	2		Y
Technetium 99	14133-76-7	1.4	1.6	4	5	U	TC
Tritium	10028-17-8	580	180	200	400		H
Carbon 14	14762-75-5	-12	25	40	50	U J	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	U		300		U	GAM
Iron 59	14596-12-4	U		30	30	U	GAM
Chromium 51	14392-02-0	U		100		U	GAM
Cobalt 60	10198-40-0	U		10	30	U	GAM
Zinc 65	13982-39-3	U		30		U	GAM
Ruthenium 106	13967-48-1	U		100		U	GAM
Cesium 134	13967-70-9	U		10		U	GAM
Cesium 137	10045-97-3	U		10	20	U	GAM
Cerium 144	14762-78-8	U		60		U	GAM
Europium 152	14683-23-9	U		30	40	U	GAM
Europium 154	15585-10-1	U		20	40	U	GAM
Radium 226	13982-63-3	U		20		U	GAM
Thorium 228	14274-82-9	U		20		U	GAM
Thorium 232	7440-29-1	U		50		U	GAM

ABW 7/23/93

RB 7/28/93

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.23
Report date 05/24/93

9713515.1656

N304008-02

TMA NORCAL
REPORTING GROUP 7179

DATA SHEET

B088V5

SDG	7179	Client	Westinghouse Hanford
Contact	Dinkar Kharkar	Contract	MBH-SVV-069262
Lab sample id	N304008-02	Client sample id	B088V5
Dept sample id	7179-002	Matrix	WATER
Received	04/02/93	Collected	03/31/93
		Chain of custody id	EFL-1054

PARAMETER	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	Alpha	0.72	1.4	2	3	U J	80A
Gross Beta	Beta	4.7	1.5	2	4		80B
Uranium 233/234		1.4	0.30	0.1	0.2		U
Uranium 235	15117-96-1	0.11	0.087	0.1	0.2	J	U
Uranium 238	7440-61-1	1.2	0.27	0.1	0.2		U
Plutonium 238	13981-16-3	0.017	0.040	0.07	0.05	U	PU
Plutonium 239/240		-0.003	0.011	0.03	0.05	U	PU
Americium 241	14596-10-2	0.017	0.025	0.04	0.05	U	AM
Strontium 90	10098-97-2	0.003	0.18	0.8	2	U	Y
Technetium 99	14133-76-7	1.5	1.3	3	5	U	TC
Tritium	10028-17-8	560	170	200	400		H
Carbon 14	14762-75-5	-2.1	17	30	50	U J	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	U		100		U	GAM
Iron 59	14596-12-4	U		30	30	U	GAM
Chromium 51	14392-02-0	U		100		U	GAM
Cobalt 60	10198-40-0	U		10	30	U	GAM
Zinc 65	13982-39-3	U		20		U	GAM
Ruthenium 106	13967-48-1	U		100		U	GAM
Cesium 134	13967-70-9	U		9		U	GAM
Cesium 137	10045-97-3	U		10	20	U	GAM
Cerium 144	14762-78-8	U		50		U	GAM
Europium 152	14683-23-9	U		20	40	U	GAM
Europium 154	15585-10-1	U		10	40	U	GAM
Radium 226	13982-63-3	U		20		U	GAM
Thorium 228	14274-82-9	U		20		U	GAM
Thorium 232	7440-29-1	U		40		U	GAM

ABW 7/23/93

RB 7/28/93

Lab id	TMAN
Protocol	WHC-HEIS
Version	Ver 1.0
Form	DVD-DS
Version	2.23
Report date	05/24/93

9713515.1657

N304008-07

TMA NORCAL
REPORTING GROUP 7179

DATA SHEET

B088W0

SDG 7179
Contact Dinkar Kharkar

Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N304008-07
Dept sample id 7179-007
Received 04/06/93

Client sample id B088W0
Matrix WATER
Collected 04/03/93
Chain of custody id EFL-1055

PARAMETER	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	Alpha	1.7	2.4	3	3	U J	80A
Gross Beta	Beta	30	2.4	2	4		80B
Uranium 233/234		2.9	0.46	0.1	0.2		U
Uranium 235	15117-96-1	0.30	0.14	0.1	0.2		U
Uranium 238	7440-61-1	2.5	0.42	0.1	0.2		U
Plutonium 238	13981-16-3	-0.003	0.025	0.05	0.05	U	PU
Plutonium 239/240		-0.005	0.005	0.02	0.05	U	PU
Americium 241	14596-10-2	-0.024	0.022	0.05	0.05	U	AM
Strontium 90	10098-97-2	13	1.6	0.8	2		Y
Technetium 99	14133-76-7	0.16	1.4	4	5	U	TC
Tritium	10028-17-8	5100	310	200	400		H
Carbon 14	14762-75-5	10	24	40	50	U J	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	U		200		U	GAM
Iron 59	14596-12-4	U		30	30	U	GAM
Chromium 51	14392-02-0	U		100		U	GAM
Cobalt 60	10198-40-0	U		10	30	U	GAM
Zinc 65	13982-39-3	U		20		U	GAM
Ruthenium 106	13967-48-1	U		100		U	GAM
Cesium 134	13967-70-9	U		10		U	GAM
Cesium 137	10045-97-3	U		10	20	U	GAM
Cerium 144	14762-78-8	U		60		U	GAM
Europium 152	14683-23-9	U		20	40	U	GAM
Europium 154	15585-10-1	U		10	40	U	GAM
Radium 226	13982-63-3	U		20		U	GAM
Thorium 228	14274-82-9	U		20		U	GAM
Thorium 232	7440-29-1	U		70		U	GAM

ABW 7/23/93

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.23
Report date 05/24/93

9713515.1658

N304008-08

TMA NORCAL
REPORTING GROUP 7179

DATA SHEET

B088X0

SDG 7179
Contact Dinkar Kharkar

Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N304008-08
Dept sample id 7179-008
Received 04/06/93

Client sample id B088X0
Matrix WATER
Collected 04/03/93
Chain of custody id EFL-1055

PARAMETER	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	Alpha	5.4	2.2	2	3	J	80A
Gross Beta	Beta	7.8	1.1	1	4		80B
Uranium 233/234		3.9	0.86	0.3	0.2		U
Uranium 235	15117-96-1	0.22	0.19	0.2	0.2		U
Uranium 238	7440-61-1	3.3	0.76	0.2	0.2		U
Plutonium 238	13981-16-3	-0.015	0.030	0.06	0.05	U	PU
Plutonium 239/240		0	0.012	0.03	0.05	U	PU
Americium 241	14596-10-2	0.004	0.021	0.04	0.05	U	AM
Strontium 90	10098-97-2	-0.079	0.23	0.8	2	U	Y
Technetium 99	14133-76-7	0.69	1.3	4	5	U	TC
Tritium	10028-17-8	13000	460	200	400		H
Carbon 14	14762-75-5	17	22	40	50	U J	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	U		100		U	GAM
Iron 59	14596-12-4	U		30	30	U	GAM
Chromium 51	14392-02-0	U		100		U	GAM
Cobalt 60	10198-40-0	U		20	30	U	GAM
Zinc 65	13982-39-3	U		20		U	GAM
Ruthenium 106	13967-48-1	U		80		U	GAM
Cesium 134	13967-70-9	U		10		U	GAM
Cesium 137	10045-97-3	U		10	20	U	GAM
Cerium 144	14762-78-8	U		40		U	GAM
Europium 152	14683-23-9	U		20	40	U	GAM
Europium 154	15585-10-1	U		10	40	U	GAM
Radium 226	13982-63-3	U		20		U	GAM
Thorium 228	14274-82-9	U		20		U	GAM
Thorium 232	7440-29-1	U		40		U	GAM

ABW 7/23/93

RB 7/28/93

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.23
Report date 05/24/93

9713515.1659

N304008-13

TMA NORCAL
REPORTING GROUP 7179

DATA SHEET

B088X5

SDG 7179
Contact Dinkar Kharkar
Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N304008-13
Dept sample id 7179-013
Received 04/08/93
Client sample id B088X5
Matrix WATER
Collected 04/06/93
Chain of custody id EFL-1055

PARAMETER	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	Alpha	-0.56	1.1	2	3	U J	80A
Gross Beta	Beta	2.8	1.2	2	4	J	80B
Uranium 233/234		0.72	0.17	0.1	0.2		U
Uranium 235	15117-96-1	0.043	0.052	0.08	0.2	U	U
Uranium 238	7440-61-1	0.57	0.14	0.07	0.2		U
Plutonium 238	13981-16-3	-0.005	0.014	0.03	0.05	U	PU
Plutonium 239/240		-0.002	0.005	0.02	0.05	U	PU
Americium 241	14596-10-2	-0.003	0.007	0.03	0.05	U R	AM
Strontium 90	10098-97-2	0.035	0.62	0.7	2	U	Y
Technetium 99	14133-76-7	0.60	2.4	5	5	U	TC
Tritium	10028-17-8	18	140	200	400	U	H
Carbon 14	14762-75-5	39	20	30	50	J	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	U		200		U	GAM
Iron 59	14596-12-4	U		30	30	U	GAM
Chromium 51	14392-02-0	U		100		U	GAM
Cobalt 60	10198-40-0	U		20	30	U	GAM
Zinc 65	13982-39-3	U		30		U	GAM
Ruthenium 106	13967-48-1	U		100		U	GAM
Cesium 134	13967-70-9	U		20		U	GAM
Cesium 137	10045-97-3	U		10	20	U	GAM
Cerium 144	14762-78-8	U		70		U	GAM
Europium 152	14683-23-9	U		30	40	U	GAM
Europium 154	15585-10-1	U		20	40	U	GAM
Radium 226	13982-63-3	U		30		U	GAM
Thorium 228	14274-82-9	U		20		U	GAM
Thorium 232	7440-29-1	U		60		U	GAM

RB 7/20/93

NBW 7/23/93

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.23
Report date 05/24/93

9713515.1600

N304008-03

TMA NORCAL
REPORTING GROUP 7179

DATA SHEET

B088Y0

SDG 7179
Contact Dinkar Kharkar

Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N304008-03
Dept sample id 7179-003
Received 04/02/93

Client sample id B088Y0
Matrix WATER
Collected 03/31/93
Chain of custody id EFL-1055

PARAMETER	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	Alpha	4.3	2.3	3	3	J	80A
Gross Beta	Beta	8.0	1.1	1	4		80B
Uranium 233/234		2.9	0.52	0.1	0.2		U
Uranium 235	15117-96-1	0.19	0.11	0.1	0.2	J	U
Uranium 238	7440-61-1	2.7	0.51	0.1	0.2		U
Plutonium 238	13981-16-3	-0.015	0.037	0.07	0.05	U	PU
Plutonium 239/240		-0.003	0.012	0.03	0.05	U	PU
Americium 241	14596-10-2	0.006	0.029	0.05	0.05	U	AM
Strontium 90	10098-97-2	0.020	0.19	0.8	2	U	Y
Technetium 99	14133-76-7	1.2	1.6	4	5	U	TC
Tritium	10028-17-8	420	160	200	400		H
Carbon 14	14762-75-5	-3.8	17	30	50	U J	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	U		200		U	GAM
Iron 59	14596-12-4	U		30	30	U	GAM
Chromium 51	14392-02-0	U		100		U	GAM
Cobalt 60	10198-40-0	U		10	30	U	GAM
Zinc 65	13982-39-3	U		20		U	GAM
Ruthenium 106	13967-48-1	U		100		U	GAM
Cesium 134	13967-70-9	U		10		U	GAM
Cesium 137	10045-97-3	U		10	20	U	GAM
Cerium 144	14762-78-8	U		50		U	GAM
Europium 152	14683-23-9	U		20	40	U	GAM
Europium 154	15585-10-1	U		10	40	U	GAM
Radium 226	13982-63-3	U		20		U	GAM
Thorium 228	14274-82-9	U		30		U	GAM
Thorium 232	7440-29-1	U		50		U	GAM

ABW 7/23/93

RB 7/28/93

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.23
Report date 05/24/93

9713515.1661

N304008-09

TMA NORCAL
REPORTING GROUP 7179

DATA SHEET

B08900

SDG 7179
Contact Dinkar Kharkar

Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N304008-09
Dept sample id 7179-009
Received 04/06/93

Client sample id B08900
Matrix WATER
Collected 04/03/93
Chain of custody id EFL-1055

PARAMETER	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	Alpha	2.8	4.8	5	3	U J	80A
Gross Beta	Beta	87	4.8	3	4		80B
Uranium 233/234		6.1	0.89	0.2	0.2		U
Uranium 235	15117-96-1	0.36	0.18	0.1	0.2		U
Uranium 238	7440-61-1	5.3	0.79	0.1	0.2		U
Plutonium 238	13981-16-3	0.017	0.028	0.05	0.05	U	PU
Plutonium 239/240		0.020	0.017	0.03	0.05	U	PU
Americium 241	14596-10-2	0.027	0.034	0.05	0.05	U	AM
Strontium 90	10098-97-2	0.051	0.19	0.8	2	U	Y
Technetium 99	14133-76-7	2.0	1.9	5	5	U	TC
Tritium	10028-17-8	180000	3500	200	400		H
Carbon 14	14762-75-5	330	29	40	50	J	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	U		100		U	GAM
Iron 59	14596-12-4	U		20	30	U	GAM
Chromium 51	14392-02-0	U		80		U	GAM
Cobalt 60	10198-40-0	U		8	30	U	GAM
Zinc 65	13982-39-3	U		20		U	GAM
Ruthenium 106	13967-48-1	U		70		U	GAM
Cesium 134	13967-70-9	U		9		U	GAM
Cesium 137	10045-97-3	U		8	20	U	GAM
Cerium 144	14762-78-8	U		40		U	GAM
Europium 152	14683-23-9	U		20	40	U	GAM
Europium 154	15585-10-1	U		10	40	U	GAM
Radium 226	13982-63-3	U		20		U	GAM
Thorium 228	14274-82-9	U		10		U	GAM
Thorium 232	7440-29-1	U		30		U	GAM

ABW 7/23/93

RB 7/28/93

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.23
Report date 05/24/93

9713515.1662

TMA NORCAL
REPORTING GROUP 7179

N304008-04

DATA SHEET

B08910

SDG 7179
Contact Dinkar Kharkar

Client Westinghouse Hanford
Contract MBH-SVV-069262

Lab sample id N304008-04
Dept sample id 7179-004
Received 04/02/93

Client sample id B08910
Matrix WATER
Collected 03/31/93
Chain of custody id EFL-1054

PARAMETER	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	Alpha	1.3	1.5	2	3	U J	80A
Gross Beta	Beta	4.7	1.4	2	4		80B
Uranium 233/234		1.6	0.34	0.1	0.2		U
Uranium 235	15117-96-1	0.15	0.099	0.1	0.2	J	U
Uranium 238	7440-61-1	1.3	0.31	0.1	0.2		U
Plutonium 238	13981-16-3	0.004	0.042	0.08	0.05	U	PU
Plutonium 239/240		0.021	0.025	0.03	0.05	U	PU
Americium 241	14596-10-2	0.015	0.025	0.04	0.05	U	AM
Strontium 90	10098-97-2	-0.11	2.1	0.8	2	U	Y
Technetium 99	14133-76-7	1.6	1.4	4	5	U	TC
Tritium	10028-17-8	620	170	200	400		H
Carbon 14	14762-75-5	6.0	20	30	50	U J	C
GAMMA SCAN ANALYTES							
Potassium 40	13966-00-2	U		100		U	GAM
Iron 59	14596-12-4	U		30	30	U	GAM
Chromium 51	14392-02-0	U		100		U	GAM
Cobalt 60	10198-40-0	U		10	30	U	GAM
Zinc 65	13982-39-3	U		20		U	GAM
Ruthenium 106	13967-48-1	U		100		U	GAM
Cesium 134	13967-70-9	U		10		U	GAM
Cesium 137	10045-97-3	U		10	20	U	GAM
Cerium 144	14762-78-8	U		50		U	GAM
Europium 152	14683-23-9	U		20	40	U	GAM
Europium 154	15585-10-1	U		10	40	U	GAM
Radium 226	13982-63-3	U		20		U	GAM
Thorium 228	14274-82-9	U		30		U	GAM
Thorium 232	7440-29-1	U		50		U	GAM

ABW 1/23/93

Lab id TMAN
Protocol WHC-HEIS
Version Ver 1.0
Form DVD-DS
Version 2.23
Report date 05/24/93

RB 7/28/93

9713515.1663

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088Q0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304018-01A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30409R18

Level: (low/med) LOW Date Received: 04/06/93

% Moisture: not dec. ____ Date Analyzed: 04/09/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	2	J
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

NV 7-23-93SC

PBD

9713515.1604

000067

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

B088Q0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304018-01A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30409R18

Level: (low/med) LOW Date Received: 04/06/93

% Moisture: not dec. ____ Date Analyzed: 04/09/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

NW 7-23-93

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088Q2

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304018-02A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30409R19

Level: (low/med) LOW Date Received: 04/06/93

% Moisture: not dec. ____ Date Analyzed: 04/09/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

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

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	4	J
67-64-1	Acetone	24	
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

NV 7-23-93

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B088Q2

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304018-02A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30409R19

Level: (low/med) LOW Date Received: 04/06/93

% Moisture: not dec. ____ Date Analyzed: 04/09/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

NV 7-28-93

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088W0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304018-03A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30409R23

Level: (low/med) LOW Date Received: 04/06/93

% Moisture: not dec. ____ Date Analyzed: 04/09/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

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

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	4	J
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	7	J
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

NW 7-23-93

9713515.1668

000087

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B088W0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304018-03A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30409R23

Level: (low/med) LOW Date Received: 04/06/93

% Moisture: not dec. ____ Date Analyzed: 04/09/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

NU 7-23-93

9713515.1609

000037

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088W2

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304018-04A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30409R24

Level: (low/med) LOW Date Received: 04/06/93

% Moisture: not dec. ____ Date Analyzed: 04/09/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	4	J
67-64-1	Acetone	21	
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

NW 7-23-93

9713515.1670

000038

EPA SAMPLE NO.

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

B088W2

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304018-04A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30409R24

Level: (low/med) LOW Date Received: 04/06/93

% Moisture: not dec. ____ Date Analyzed: 04/09/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

FORM I VOA-TIC

3/90

NV 7-23-93

9713515.1671

000108

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088X0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304018-05A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30409R25

Level: (low/med) LOW Date Received: 04/06/93

% Moisture: not dec. ____ Date Analyzed: 04/09/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	1	J
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	2	J
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

NW 7-23-93 SC

9713515.1672

000109

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B088X0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304018-05A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30409R25

Level: (low/med) LOW Date Received: 04/06/93

% Moisture: not dec. ____ Date Analyzed: 04/09/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

NV 7-23-93

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088X2

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304018-06A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30409R26

Level: (low/med) LOW Date Received: 04/06/93

% Moisture: not dec. ____ Date Analyzed: 04/10/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

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

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	64	
67-64-1	Acetone	49	
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	2	J
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

NV 4-23-93

9713515.1674

000120

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B088X2

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304018-06A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30409R26

Level: (low/med) LOW Date Received: 04/06/93

% Moisture: not dec. ____ Date Analyzed: 04/10/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

NV 7-23-93 SC

9713515.1675

000132

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B08900

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304018-07A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30409R27

Level: (low/med) LOW Date Received: 04/06/93

% Moisture: not dec. ____ Date Analyzed: 04/10/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

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

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	2	J
67-64-1	Acetone	9	J
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

NW 7-23-93

9713515.1676

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

000133

EPA SAMPLE NO.

B08900

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304018-07A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30409R27

Level: (low/med) LOW Date Received: 04/06/93

% Moisture: not dec. ____ Date Analyzed: 04/10/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

NW T23-935C

9713515.1677

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

000143
EPA SAMPLE NO.

B08902

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304018-08A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30409R28

Level: (low/med) LOW Date Received: 04/06/93

% Moisture: not dec. ____ Date Analyzed: 04/10/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

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

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	8	J
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

7-23-93

9713515.1678

000144

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

B08902

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304018-08A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30409R28

Level: (low/med) LOW Date Received: 04/06/93

% Moisture: not dec. ____ Date Analyzed: 04/10/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

NW 7-23-93 SC

9713515.1679

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO. 000211

B088Q0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304018-01B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30414S06

Level: (low/med) LOW Date Received: 04/06/93

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 04/08/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/14/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	25	U

NW 7-23-93 SC

9713515.1680

000212

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088Q0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304018-01B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30414S06

Level: (low/med) LOW Date Received: 04/06/93

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 04/08/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/14/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)Anthracene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	10	U
218-01-9	Chrysene	10	U
117-84-0	Di-n-Octyl Phthalate	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine

NW 7-23-93 SC

9713515.1681

1F

000213

EPA SAMPLE NO.

B088Q0

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304018-01B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30414S06

Level: (low/med) LOW Date Received: 04/06/93

% Moisture: ____ decanted: (Y/N) ___ Date Extracted: 04/08/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/14/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

Number TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN HYDROCARBON	5.85	4	J

NW 7-23-93

9713515.1602

1B

000226

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

B088W0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304018-03B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30414S09

Level: (low/med) LOW Date Received: 04/06/93

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 04/08/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/14/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	25	U

NV 7-23-93 SC

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088W0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304018-03B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30414S09

Level: (low/med) LOW Date Received: 04/06/93

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 04/08/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/14/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)Anthracene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	10	U
218-01-9	Chrysene	10	U
117-84-0	Di-n-Octyl Phthalate	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine

NV 7-23-93

9713515.1604

000228

EPA SAMPLE NO.

B088W0

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304018-03B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30414S09

Level: (low/med) LOW Date Received: 04/06/93

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 04/08/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/14/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

Number TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN HYDROCARBON	5.85	6	J

NW 7-23-93 SC

9713515.1605

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088X0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304018-05B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30414S10

Level: (low/med) LOW Date Received: 04/06/93

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 04/08/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/14/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	25	U

NV 7-23-93

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088X0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304018-05B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30414S10

Level: (low/med) LOW Date Received: 04/06/93

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 04/08/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/14/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)Anthracene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	4	J
218-01-9	Chrysene	10	U
117-84-0	Di-n-Octyl Phthalate	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine

NV 7-23-93

9713515.1607

1F

EPA SAMPLE NO.

B088X0

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304018-05B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30414S10

Level: (low/med) LOW Date Received: 04/06/93

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 04/08/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/14/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

Number TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN HYDROCARBON	5.87	6	J

NN 7-23-93 SG

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B08900

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04018 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304018-07B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30414S11

Level: (low/med) LOW Date Received: 04/06/93

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 04/08/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/14/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	25	U

NV 7-23-93

9213515.1689

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B08900

me: TMA/ARLI Contract: WHC

de: TMALA Case No.: 04018 SAS No.: NA SDG No.: NA

: (soil/water) WATER Lab Sample ID: A304018-07B

wt/vol: 1000 (g/mL) ML Lab File ID: 30414S11

(low/med) LOW Date Received: 04/06/93

ture: _____ decanted: (Y/N) ___ Date Extracted: 04/08/93

trated Extract Volume: 1000 (uL) Date Analyzed: 04/14/93

ion Volume: 2.0 (uL) Dilution Factor: 1.0

eanup: (Y/N) N pH: ____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	16	
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
35-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
36-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
29-00-0	Pyrene	10	U
5-68-7	Butylbenzylphthalate	10	U
1-94-1	3,3'-Dichlorobenzidine	10	U
6-55-3	Benzo(a)Anthracene	10	U
17-81-7	bis(2-Ethylhexyl)Phthalate	10	U
18-01-9	Chrysene	10	U
17-84-0	Di-n-Octyl Phthalate	10	U
05-99-2	Benzo(b)Fluoranthene	10	U
07-08-9	Benzo(k)Fluoranthene	10	U
0-32-8	Benzo(a)Pyrene	10	U
93-39-5	Indeno(1,2,3-cd)Pyrene	10	U
3-70-3	Dibenz(a,h)Anthracene	10	U
91-24-2	Benzo(g,h,i)Perylene	10	U

- Cannot be separated from Diphenylamine

9713515.1690

1F

000260

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

B08900

ab Name: TMA/ARLI Contract: WHC

ab Code: TMALA Case No.: 04018 SAS No.: NA SDG No.: NA

atrix: (soil/water) WATER Lab Sample ID: A304018-07B

ample wt/vol: 1000 (g/mL) ML Lab File ID: 30414S11

evel: (low/med) LOW Date Received: 04/06/93

Moisture: _____ decanted: (Y/N) ___ Date Extracted: 04/08/93

oncentrated Extract Volume: 1000 (uL) Date Analyzed: 04/14/93

njection Volume: 2.0(uL) Dilution Factor: 1.0

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

umber TICs found: 4

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN HYDROCARBON	5.87	7	J
2.	UNKNOWN COMPOUND	19.05	40	J
3.	UNKNOWN COMPOUND	21.80	81	J
4.	UNKNOWN HYDROCARBON	23.47	3	J

7-23-93

9713515.1641

000370

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088Q0

b Name: TMA/ARLI Contract: WHC

b Code: TMALA Case No.: 04018 SAS No.: NA SDG No.: NA

trix: (soil/water) WATER Lab Sample ID: A304018-01B

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

Moisture: _____ decanted: (Y/N) ___ Date Received: 04/06/93

traction: (SepF/Cont/Sonc) CONT Date Extracted: 04/08/93

ncentrated Extract Volume: 10000 (uL) Date Analyzed: 04/18/93

jection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-36-3	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

T23-93L

9713515.1692

1D

EPA SAMPLE NO. 000877

PESTICIDE ORGANICS ANALYSIS DATA SHEET

B088W0

ame: TMA/ARLI Contract: WHC

ode: TMALA Case No.: 04018 SAS No.: NA SDG No.: NA

x: (soil/water) WATER Lab Sample ID: A304018-03B

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

sture: _____ decanted: (Y/N) ___ Date Received: 04/06/93

ction: (SepF/Cont/Sonc) CONT Date Extracted: 04/08/93

ntrated Extract Volume: 10000 (uL) Date Analyzed: 04/18/93

cion Volume: 1.00 (uL) Dilution Factor: 1.00

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

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

CAS NO.	COMPOUND		Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-36-3	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

7-23-93

9713515.1693

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

000384

EPA SAMPLE NO.

B088X0

Name: TMA/ARLI Contract: WHC

Code: TMALA Case No.: 04018 SAS No.: NA SDG No.: NA

trix: (soil/water) WATER Lab Sample ID: A304018-05B

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

Moisture: decanted: (Y/N) Date Received: 04/06/93

traction: (SepF/Cont/Sonc) CONT Date Extracted: 04/08/93

centrated Extract Volume: 10000 (uL) Date Analyzed: 04/18/93

ection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-36-3	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

7-23-93

9713515.1694

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

000389

EPA SAMPLE NO.

B08900

) Name: TMA/ARLI Contract: WHC

) Code: TMALA Case No.: 04018 SAS No.: NA SDG No.: NA

:rix: (soil/water) WATER Lab Sample ID: A304018-07B

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

:oisture: _____ decanted: (Y/N) ___ Date Received: 04/06/93

raction: (SepF/Cont/Sonc) CONT Date Extracted: 04/08/93

centrated Extract Volume: 10000 (uL) Date Analyzed: 04/18/93

ection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-36-3	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

7-23-93

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B088Q0

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

Code: SKINER Case No.: N3-04-022SAS No.: SDG No.: B088Q0

Matrix (soil/water): WATER Lab Sample ID: 04068-01S

Level (low/med): LOW Date Received: 04/07/93

% 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	56.5	B		P
7440-36-0	Antimony	17.9	U		P
7440-38-2	Arsenic	9.4	B		F
7440-39-3	Barium	30.3	B	E	P
7440-41-7	Beryllium	0.50	U		P
7440-43-9	Cadmium	1.7	U		P
7440-70-2	Calcium	33300			P
7440-47-3	Chromium	9.3	B		P
7440-48-4	Cobalt	3.8	U		P
7440-50-8	Copper	4.2	U		P
7439-89-6	Iron	141		*	P
7439-92-1	Lead	1.3	U		F
7439-95-4	Magnesium	11000			P
7439-96-5	Manganese	3.8	B		P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	6.1	U		P
7440-09-7	Potassium	4010	B		P
7782-49-2	Selenium	3.3	U	WN	F
7440-22-4	Silver	3.8	U		P
7440-23-5	Sodium	47500			P
7440-28-0	Thallium	1.2	U	W	F
7440-62-2	Vanadium	19.5	B		P
7440-66-6	Zinc	16.6	B		P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

002

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B088W0

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

Code: SKINER Case No.: N3-04-022SAS No.: SDG No.: B088Q0

ix (soil/water): WATER Lab Sample ID: 04068-02S

l (low/med): LOW Date Received: 04/07/93

lids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	26.4	B		P
7440-36-0	Antimony	17.9	U		P
7440-38-2	Arsenic	2.5	U		F
7440-39-3	Barium	41.7	B	E	P
7440-41-7	Beryllium	0.50	U		P
7440-43-9	Cadmium	1.7	U		P
7440-70-2	Calcium	79900			P
7440-47-3	Chromium	109			P
7440-48-4	Cobalt	3.8	U		P
7440-50-8	Copper	4.2	U		P
7439-89-6	Iron	83.2	B	*	P
7439-92-1	Lead	1.3	U		F
7439-95-4	Magnesium	10600			P
7439-96-5	Manganese	2.2	B		P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	6.1	U		P
7440-09-7	Potassium	4410	B		P
7782-49-2	Selenium	3.3	U	N	F
7440-22-4	Silver	3.8	U		P
7440-23-5	Sodium	20500			P
7440-28-0	Thallium	1.2	U		F
7440-62-2	Vanadium	5.3	B		P
7440-66-6	Zinc	18.1	B		P
	Cyanide	10.0	U		CA

or Before: COLORLESS Clarity Before: CLEAR Texture:

or After: COLORLESS Clarity After: CLEAR Artifacts:

ments:

7-23-93 SL

003

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B088X0

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

Code: SKINER Case No.: N3-04-022SAS No.: SDG No.: B088Q0

ix (soil/water): WATER Lab Sample ID: 04068-03S

l (low/med): LOW Date Received: 04/07/93

lids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	33.5	B		P
7440-36-0	Antimony	17.9	U		P
7440-38-2	Arsenic	2.5	U		F
7440-39-3	Barium	41.7	B	E	P
7440-41-7	Beryllium	0.50	U		P
7440-43-9	Cadmium	1.7	U		P
7440-70-2	Calcium	85200			P
7440-47-3	Chromium	29.4			P
7440-48-4	Cobalt	3.8	U		P
7440-50-8	Copper	4.2	U		P
7439-89-6	Iron	45.2	B	*	P
7439-92-1	Lead	1.5	B		F
7439-95-4	Magnesium	20200			P
7439-96-5	Manganese	2.2	B		P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	6.1	U		P
7440-09-7	Potassium	6290			P
7782-49-2	Selenium	3.3	U	N	F
7440-22-4	Silver	3.8	U		P
7440-23-5	Sodium	23200			P
7440-28-0	Thallium	1.2	U	W	F
7440-62-2	Vanadium	4.4	B		P
7440-66-6	Zinc	17.3	B		P
	Cyanide	10.0	U		CA

or Before: COLORLESS Clarity Before: CLEAR Texture:

or After: COLORLESS Clarity After: CLEAR Artifacts:

ments:

0046

FORM I - IN ILM02.1

NV 7-23-93

SAMPLE NUMBER:

B08900

INORGANIC ANALYSIS DATA SHEET

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

Code: SKINER Case No.: N3-04-022SAS No.: SDG No.: B088Q0

Mx (soil/water): WATER Lab Sample ID: 04068-04S

L (low/med): LOW Date Received: 04/07/93

Lids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	63.2	B		P
7440-36-0	Antimony	17.9	U		P
7440-38-2	Arsenic	2.5	U		F
7440-39-3	Barium	126	B	E	P
7440-41-7	Beryllium	0.50	U		P
7440-43-9	Cadmium	1.7	U		P
7440-70-2	Calcium	134000			P
7440-47-3	Chromium	25.4			P
7440-48-4	Cobalt	3.8	U		P
7440-50-8	Copper	5.2	B		P
7439-89-6	Iron	138		*	P
7439-92-1	Lead	2.2	B	W	F
7439-95-4	Magnesium	34500			P
7439-96-5	Manganese	6.0	B		P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	7.0	B		P
7440-09-7	Potassium	7280			P
7782-49-2	Selenium	3.3	U	WN	F
7440-22-4	Silver	3.8	U		P
7440-23-5	Sodium	59700			P
7440-28-0	Thallium	1.2	U		F
7440-62-2	Vanadium	8.0	B		P
7440-66-6	Zinc	18.1	B		P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

L005

FORM I - IN ILM02.1

NV 7-23-93

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B08801

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

b Code: SKINER Case No.: N3-04-022SAS No.: SDG No.: B08801

trix (soil/water): WATER Lab Sample ID: 04069-01S

vel (low/med): LOW Date Received: 04/07/93

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	31.1	B		P
7440-36-0	Antimony	18.6	U		P
7440-38-2	Arsenic	10.8			F
7440-39-3	Barium	30.4	B		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	34800			P
7440-47-3	Chromium	3.3	U		P
7440-48-4	Cobalt	2.9	U		P
7440-50-8	Copper	7.0	B		P
7439-89-6	Iron	23.2	B		P
7439-92-1	Lead	2.1	B		F
7439-95-4	Magnesium	11400			P
7439-96-5	Manganese	1.4	B		P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	4.2	U		P
7440-09-7	Potassium	4240	B		P
7782-49-2	Selenium	3.3	U	+	F
7440-22-4	Silver	3.3	U		P
7440-23-5	Sodium	48600			P
7440-28-0	Thallium	1.2	U	W	F
7440-62-2	Vanadium	22.9	B		P
7440-66-6	Zinc	9.7	B		P
	Cyanide				NR

lor Before: COLORLESS Clarity Before: CLEAR Texture:

lor After: COLORLESS Clarity After: CLEAR Artifacts:

mments:

002

NV 7-23-93 SC

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B088W1

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

ab Code: SKINER Case No.: N3-04-022SAS No.: SDG No.: B088Q1

atrix (soil/water): WATER Lab Sample ID: 04069-02S

evel (low/med): LOW Date Received: 04/07/93

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	19.2	U		P
7440-36-0	Antimony	18.6	U		P
7440-38-2	Arsenic	2.5	U		F
7440-39-3	Barium	43.6	B		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	83300			P
7440-47-3	Chromium	104			P
7440-48-4	Cobalt	2.9	U		P
7440-50-8	Copper	7.0	B		P
7439-89-6	Iron	19.4	B		P
7439-92-1	Lead	1.3	U		F
7439-95-4	Magnesium	10900			P
7439-96-5	Manganese	1.7	B		P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	4.2	U		P
7440-09-7	Potassium	4630	B		P
7782-49-2	Selenium	16.5	U	W	F
7440-22-4	Silver	3.3	U		P
7440-23-5	Sodium	21000			P
7440-28-0	Thallium	1.2	U	W	F
7440-62-2	Vanadium	4.4	B		P
7440-66-6	Zinc	7.1	B		P
	Cyanide				NR

olor Before: COLORLESS Clarity Before: CLEAR Texture:

olor After: COLORLESS Clarity After: CLEAR Artifacts:

omments:

003

NV 7-23-93 SC

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B088X1

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

Code: SKINER Case No.: N3-04-022SAS No.: SDG No.: B088Q1

rix (soil/water): WATER Lab Sample ID: 04069-03S

el (low/med): LOW Date Received: 04/07/93

olids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	39.8	B		P
7440-36-0	Antimony	18.6	U		P
7440-38-2	Arsenic	2.8	B		F
7440-39-3	Barium	42.8	B		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	90100			P
7440-47-3	Chromium	23.4			P
7440-48-4	Cobalt	2.9	U		P
7440-50-8	Copper	5.9	B		P
7439-89-6	Iron	16.9	B		P
7439-92-1	Lead	1.3	U		F
7439-95-4	Magnesium	21000			P
7439-96-5	Manganese	1.4	B		P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	4.2	U		P
7440-09-7	Potassium	6520			P
7782-49-2	Selenium	3.7	B	W	F
7440-22-4	Silver	3.3	U		P
7440-23-5	Sodium	23800			P
7440-28-0	Thallium	1.2	U		F
7440-62-2	Vanadium	7.1	B		P
7440-66-6	Zinc	4.8	U		P
	Cyanide				NR

lor Before: COLORLESS Clarity Before: CLEAR Texture:

lor After: COLORLESS Clarity After: CLEAR Artifacts:

mments:

004

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B08901

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

b Code: SKINER Case No.: N3-04-022SAS No.: SDG No.: B08801

trix (soil/water): WATER Lab Sample ID: 04069-04S

vel (low/med): LOW Date Received: 04/07/93

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	30.3	B		P
7440-36-0	Antimony	18.6	U		P
7440-38-2	Arsenic	4.2	B		F
7440-39-3	Barium	127	B		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	142000			P
7440-47-3	Chromium	16.4			P
7440-48-4	Cobalt	2.9	U		P
7440-50-8	Copper	6.7	B		P
7439-89-6	Iron	20.3	B		P
7439-92-1	Lead	1.3	U		F
7439-95-4	Magnesium	36300			P
7439-96-5	Manganese	3.8	B		P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	4.2	U		P
7440-09-7	Potassium	7730			P
7782-49-2	Selenium	3.3	U	W	F
7440-22-4	Silver	3.3	U		P
7440-23-5	Sodium	62000			P
7440-28-0	Thallium	1.2	U	W	F
7440-62-2	Vanadium	8.0	B		P
7440-66-6	Zinc	25.9			P
	Cyanide				NR

olor Before: COLORLESS Clarity Before: CLEAR Texture:

olor After: COLORLESS Clarity After: CLEAR Artifacts:

omments:

NV 7-23-93

005

TMA Inc. REPORT Work Order # A3-04-018

ceived: 04/06/93 Results by Sample

MPLE ID B08890 FRACTION 01E TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 04/02/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	10.7	mg/L	0.2
Fluoride	300.0	0.8	mg/L	0.1
Phosphate	300.0	<0.4 U	mg/L	0.4
pH	150.1	7.8	pH	0.1
Sulfate	300.0	53	mg/L	1
Elect. Conductivity	120.1	458	umho/cm	6

FORM I

NV 7-23-93

9713515.1704

000015

TMA Inc. REPORT Work Order # A3-04-018

eived: 04/06/93

Results by Sample

PLE ID B08800 FRACTION 01G TEST CODE VCCLPL NAME Anions & Wet Chem. - VN043

Date & Time Collected 04/02/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Alkalinity	310.1	163	mg/L	2
Tot. Dissolved Solids	160.1	311	mg/L	5

FORM I

NW 7-23-93

9713515.1705

000016

TNA Inc. REPORT Work Order # A3-04-018

ceived: 04/06/93

Results by Sample

MPLE ID B08800 FRACTION 01I TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 04/02/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

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

FORM I

NW 7-23-93 SC

9713515.1706

000017

TMA Inc. REPORT Work Order # A3-04-018

:ceived: 04/06/93

Results by Sample

MPLE ID B08800 FRACTION 01K TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 04/02/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Ammonia Nitrogen	350.3	<0.05 U	mg/L	0.05
COD	410.0	<5 U	mg/L	5

FORM I

NN 7-23-93

9713515.1707

000018

TMA Inc. REPORT Work Order # A3-04-018

eived:: 04/06/93

Results by Sample

PLE ID B088W0 FRACTION 03E TEST CODE WCCLPL NAME Anions & Wet Chem. - WM043

Date & Time Collected 04/03/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	17.4	mg/L	0.2
Fluoride	300.0	0.3	mg/L	0.1
Phosphate	300.0	<0.4 U	mg/L	0.4
pH	150.1	7.9	pH	0.1
Sulfate	300.0	68	mg/L	1
Elect. Conductivity	120.1	556	umho/cm	6

FORM I

NW 7-23-93

TMA Inc. REPORT Work Order # A3-04-018

eived: 04/06/93 Results by Sample

PLE ID B088W0 FRACTION 03G TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 04/03/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Alkalinity	310.1	176	mg/L	2
Tot. Dissolved Solids	160.1	372	mg/L	5

FORM I

NV 7-23-93

9713515.1709

000020

TMA Inc. REPORT Work Order # A3-04-018

:ceived: 04/06/93 Results by Sample

MPLE ID B088V0 FRACTION 03W TEST CODE WCCLPL NAME Anions & Wet Chem. - VN043

Date & Time Collected 04/03/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

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

FORM I

NW 7-23-93

9713515.1710

000021

TMA Inc. REPORT Work Order # A3-04-018

:ived: 04/06/93 Results by Sample

'LE ID B088V0 FRACTION 03J TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 04/03/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Ammonia Nitrogen	350.3	<0.05 U	mg/L	0.05
COD	410.0	<5 U	mg/L	5

FORM I

NW 7-23-93

9713515.1711

000022

TMA Inc. REPORT Work Order # A3-04-018

:eived: 04/06/93

Results by Sample

:PLE ID B088X0 FRACTION 05C TEST CODE VCCLPL NAME Anions & Wet Chem. - VN043

Date & Time Collected 04/03/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	22.8	mg/L	0.2
Fluoride	300.0	0.3	mg/L	0.1
Phosphate	300.0	<0.4 U	mg/L	0.4
pH	150.1	7.9	pH	0.1
Sulfate	300.0	80	mg/L	1
Elect. Conductivity	120.1	666	umho/cm	6

FORM I

NN 7-23-93

TMA Inc. REPORT Work Order # A3-04-018

ceived: 04/06/93 Results by Sample

MPLE ID B088X0 FRACTION 05D TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 04/03/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Alkalinity	310.1	194	mg/L	2
Tot. Dassolved Solids	160.1	438	mg/L	5

FORM I

NV 7-23-93 SC

9713515.1713

000024

TMA Inc. REPORT Work Order # A3-04-018

ceived: 04/06/93

Results by Sample

MPLE ID B088X0 FRACTION 05E TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 04/03/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

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

FORM I

NV 7-23-93

9713515.1714

000025

TMA Inc. REPORT Work Order # A3-04-018

:ceived: 04/06/93

Results by Sample

MPLE ID B088X0 FRACTION 05F TEST CODE WCCLPL NAME Anions & Wet Chem. - VN043

Date & Time Collected 04/03/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Ammonia Nitrogen	350.3	<0.05 U	mg/L	0.05
COD	410.0	<5 U	mg/L	5

FORM I

NV 7-23-93

9713515.1715

000026

TMA Inc. REPORT Work Order # A3-04-018

ceived: 04/06/93

Results by Sample

XPLE ID B08900 FRACTION 07C TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 04/03/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	9.2	mg/L	0.2
Fluoride	300.0	0.4	mg/L	0.1
Phosphate	300.0	~~<~~0.4 U	mg/L	0.4
pH	150.1	7.3	pH	0.1
Sulfate	300.0	59	mg/L	1
Elect. Conductivity	120.1	1100	umho/cm	6

FORM I

NW 7-23-93

TMA Inc. REPORT Work Order # A3-04-018

:eived: 04/06/93 Results by Sample

IPLE ID B08900 FRACTION 07D TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 04/03/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Alkalinity	310.1	513	mg/L	2
Tot. Dissolved Solids	160.1	792	mg/L	5

FORM I

NV 7-23-93

9713515.1717

000028

TMA Inc. REPORT Work Order # A3-04-018

:eived: 04/06/93

Results by Sample

IPLE ID B08900 FRACTION 07E TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 04/03/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

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

FORM I

NV 7-23-93

TMA Inc. REPORT Work Order # A3-04-018

:eived: 04/06/93 Results by Sample

'PLE ID B08900 FRACTION 07F TEST CODE WCCLPL NAME Anions & Wet Chem. - WK043

Date & Time Collected 04/03/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Ammonia Nitrogen	350.3	<0.05 U	mg/L	0.05
COD	410.0	8	mg/L	5

FORM I

9713515.1719

000003

 Skinner&Sherman REPORT Work Order # S3-04-070

Received: 04/07/93 Results by Sample

SAMPLE ID B08800 SAMPLE # 01 FRACTIONS: A
Date & Time Collected 04/03/93 Category WATER

NO3NO2 4.63
mg N/L

SAMPLE ID B088W0 SAMPLE # 02 FRACTIONS: A
Date & Time Collected 04/03/93 Category WATER

NO3NO2 11.0
mg N/L

SAMPLE ID B088X0 SAMPLE # 03 FRACTIONS: A
Date & Time Collected 04/03/93 Category WATER

NO3NO2 18.2
mg N/L

SAMPLE ID B08900 SAMPLE # 04 FRACTIONS: A
Date & Time Collected 04/03/93 Category WATER

NO3NO2 22.9
mg N/L

SAMPLE ID B08900 DUPL SAMPLE # 04 FRACTIONS: B
Date & Time Collected 04/03/93 Category WATER

NO3NO2 23.2
mg N/L

SAMPLE ID B08900 SPIKE SAMPLE # 04 FRACTIONS: C
Date & Time Collected 04/03/93 Category WATER

NO3NO2 24.7
mg N/L

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

NO3NO2 2.05
mg N/L

NW 7-23-93 SC

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.

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

9713515.1720

000005

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088Q5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04014 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304014-01A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30409R03

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: not dec. ____ Date Analyzed: 04/09/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

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

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

FBJ 8/2/93

FORM I VOA 3/90

FBJ

DT 7/21/93

9713515.1781

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.: 000006

B088Q5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04014 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304014-01A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30409R03

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: not dec. ____ Date Analyzed: 04/09/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

DJ 7/21/93

9713515.1722

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088Q7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04014 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304014-02A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30409R04

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: not dec. ____ Date Analyzed: 04/09/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

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

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	3	J
67-64-1	Acetone	25	
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

PB 8/2/93

7/21/93

9713515.1723

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B088Q7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04014 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304014-02A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30409R04

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: not dec. ____ Date Analyzed: 04/09/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

DS 7/21/93

9713515.1724

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088V5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04014 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304014-03A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30409R09

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: not dec. ____ Date Analyzed: 04/09/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	3	J
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

8/2/93

7/21/93

1E

EPA SAMPLE NO.

B088V5

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04014 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304014-03A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30409R09

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: not dec. ____ Date Analyzed: 04/09/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

DA 7/21/93

9713515.1726

000011

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088V7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04014 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304014-04A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30409R10

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: not dec. ____ Date Analyzed: 04/09/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	3	J
67-64-1	Acetone	26	
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

FORM I VOA 3/90

7/21/93

8/2/93

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B088V7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04014 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304014-04A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30409R10

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: not dec. ____ Date Analyzed: 04/09/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

DJT 7/21/93

9713515.1728

000013

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088Y0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04014 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304014-05A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30409R14

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: not dec. ____ Date Analyzed: 04/09/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

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

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	28	
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

8/2/93

FORM I VOA 7/21/93 3/90

9713515.1729

000014

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

B088Y0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04014 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304014-05A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30409R14

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: not dec. ____ Date Analyzed: 04/09/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

DAF 7/21/93

9713515.1730

000015

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088Y2

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04014 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304014-06A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30409R13

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: not dec. ____ Date Analyzed: 04/09/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

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

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	3	J
67-64-1	Acetone	28	
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

7/21/93 8/2/93

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B088Y2

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04014 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304014-06A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30409R13

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: not dec. ____ Date Analyzed: 04/09/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

7/21/93

9713515.1732

000017

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B08910

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04014 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304014-07A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30409R15

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: not dec. ____ Date Analyzed: 04/09/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

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

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	9	J
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	3	J
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

7/21/93

8/2/93

9713515.1793

000018

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B08910

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04014 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304014-07A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30409R15

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: not dec. ____ Date Analyzed: 04/09/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

DJ
7/21/93

9713515.1734

000019

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B08912

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04014 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304014-08A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30409R16

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: not dec. ____ Date Analyzed: 04/09/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

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

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	3	J
67-64-1	Acetone	20	
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

PBJ 8/2/93

FORM I VOA

DJ 7/21/93

3/90

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B08912

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04014 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304014-08A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30409R16

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: not dec. ____ Date Analyzed: 04/09/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

DJ
7/21/93

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088Q5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04014 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304014-01B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30413S07

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: ____ decanted: (Y/N) ___ Date Extracted: 04/05/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/13/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	25	U

7/22/93

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088Q5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04014 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304014-01B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30413S07

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: ____ decanted: (Y/N) ___ Date Extracted: 04/05/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/13/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)Anthracene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	14	
218-01-9	Chrysene	10	U
117-84-0	Di-n-Octyl Phthalate	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine

DJH 7/22/93

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B088Q5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04014 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304014-01B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30413S07

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 04/05/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/13/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

Number TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN HYDROCARBON	5.87	25 ~~10~~	BJ U

DJA
7/22/93

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088V5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04014 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304014-03B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30413S10

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: ____ decanted: (Y/N) ___ Date Extracted: 04/05/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/13/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	25	U

DJ 7/22/93

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088V5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04014 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304014-03B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30413S10

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: ____ decanted: (Y/N) ___ Date Extracted: 04/05/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/13/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)Anthracene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	10	U
218-01-9	Chrysene	10	U
117-84-0	Di-n-Octyl Phthalate	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine

DJ
7/22/93

9713515.1741

000026

EPA SAMPLE NO.

B088V5

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04014 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304014-03B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30413S10

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: ____ decanted: (Y/N) ___ Date Extracted: 04/05/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/13/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

Number TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN HYDROCARBON	5.87	257	BJ U

DJA
7/22/93

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088Y0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04014 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304014-05B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30413S11

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: ____ decanted: (Y/N) ___ Date Extracted: 04/05/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/13/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	25	U

DJ 7/22/93

9713515.1743

000028

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088Y0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04014 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304014-05B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30413S11

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: ____ decanted: (Y/N) ___ Date Extracted: 04/05/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/13/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)Anthracene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	10	U
218-01-9	Chrysene	10	U
117-84-0	Di-n-Octyl Phthalate	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine

DH 7/22/93

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B088Y0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04014 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304014-05B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30413S11

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 04/05/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/13/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

Number TICs found: 2

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN HYDROCARBON	5.88	25~~6~~	BJ U
2.	UNKNOWN ALKANE	7.68	4	J

DJH 7/22/97

9713515.1745

000030

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B08910

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04014 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304014-07B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30413S12

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: ____ decanted: (Y/N) ___ Date Extracted: 04/05/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/13/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

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

CAS NO.	COMPOUND		Q
108-95-2	Phenol	10	UR
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	UR
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	UR
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	UR
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	UR
105-67-9	2,4-Dimethylphenol	10	UR
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	UR
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	UR
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	UR
95-95-4	2,4,5-Trichlorophenol	25	UR
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	25	UR

Do not use this data PAD 8/3/93

DJT 7/2/97

9713515.1746

000031

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B08910

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04014 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304014-07B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30413S12

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: ____ decanted: (Y/N) ___ Date Extracted: 04/05/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/13/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

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

CAS NO.	COMPOUND		Q
100-02-7	4-Nitrophenol	25	UR
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	UR
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	UR
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)Anthracene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	10	U
218-01-9	Chrysene	10	U
117-84-0	Di-n-Octyl Phthalate	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine

DO NOT USE THIS DATA

DH 7/27/93

FORM I SV-2 3/90

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B08910

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04014 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304014-07B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30413S12

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: ____ decanted: (Y/N) ___ Date Extracted: 04/05/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/13/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

Number TICs found: 2

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN HYDROCARBON	5.85	25 ~~7~~	BJ U
2.	UNKNOWN ALKANE	7.68	3	J

DO NOT USE THIS DATA

DY 7/22/93

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B08910RE

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04014 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304014-07B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30423S03

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: ____ decanted: (Y/N) ___ Date Extracted: 04/14/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/23/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

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

CAS NO.	COMPOUND		Q
108-95-2	Phenol	10	U J
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	25	U J

DJH 7/22/93

9713515.1749

000034

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B08910RE

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04014 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304014-07B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30423S03

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: ____ decanted: (Y/N) ___ Date Extracted: 04/14/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/23/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

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

CAS NO.	COMPOUND		Q
100-02-7	4-Nitrophenol	25	U J
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)Anthracene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	10	U
218-01-9	Chrysene	10	U
117-84-0	Di-n-Octyl Phthalate	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine

DJH 7/22/93

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B08910RE

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04014 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304014-07B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30423S03

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: ____ decanted: (Y/N) ___ Date Extracted: 04/14/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/23/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

DJA
7/22/93

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088Q5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04014 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304014-01B

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: 04/02/93

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 04/05/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/18/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-36-3	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

KWS 7/28/95

9713515.1752

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088V5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04014 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304014-03B

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: 04/02/93

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 04/05/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/18/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-36-3	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

KEH 7/26/93

9713515.1753

000038

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088Y0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04014 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304014-05B

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: 04/02/93

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 04/05/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/18/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-36-3	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

KEY 7/26/93

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B08910

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04014 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304014-07B

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: 04/02/93

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 04/05/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/18/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-36-3	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

KLG 7/26/93

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B08805

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

Lab Code: SKINER Case No.: N3-04-004SAS No.: SDG No.: B08805

Matrix (soil/water): WATER Lab Sample ID: 04055-02S

Level (low/med): LOW Date Received: 04/06/93

% 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	36.2	~~B~~		P	U
7440-36-0	Antimony	18.4	U		P	
7440-38-2	Arsenic	2.3	U	WN	F	J
7440-39-3	Barium	43.9	B		P	
7440-41-7	Beryllium	0.50	U		P	
7440-43-9	Cadmium	1.6	U		P	
7440-70-2	Calcium	40500			P	
7440-47-3	Chromium	2.7	U		P	
7440-48-4	Cobalt	2.5	U		P	
7440-50-8	Copper	4.6	~~B~~		P	U
7439-89-6	Iron	93.5	B		P	
7439-92-1	Lead	1.7	B		F	
7439-95-4	Magnesium	6050			P	
7439-96-5	Manganese	2.3	~~B~~		P	U
7439-97-6	Mercury	0.10	U		AV	
7440-02-0	Nickel	3.0	U		P	
7440-09-7	Potassium	2460	B		P	
7782-49-2	Selenium	3.3	U	WN	F	J
7440-22-4	Silver	3.9	U		P	
7440-23-5	Sodium	4060	B		P	
7440-28-0	Thallium	1.2	U		F	
7440-62-2	Vanadium	2.5	U		P	
7440-66-6	Zinc	4.7	U		P	
	Cyanide	10.0	U		CA	

DRW 7/26/93

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

002

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B088V5

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

Lab Code: SKINER Case No.: N3-04-004SAS No.: SDG No.: B088Q5

Matrix (soil/water): WATER Lab Sample ID: 04055-03S

Level (low/med): LOW Date Received: 04/06/93

% 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	37.5	B		P	U
7440-36-0	Antimony	18.4	U		P	
7440-38-2	Arsenic	4.4	B	WN	F	J
7440-39-3	Barium	23.3	B		P	
7440-41-7	Beryllium	0.50	U		P	
7440-43-9	Cadmium	1.6	U		P	
7440-70-2	Calcium	40800			P	
7440-47-3	Chromium	2.7	U		P	
7440-48-4	Cobalt	2.5	U		P	
7440-50-8	Copper	2.9	U		P	
7439-89-6	Iron	27.7	B		P	U
7439-92-1	Lead	11.8			F	
7439-95-4	Magnesium	9570			P	
7439-96-5	Manganese	2.2	B		P	U
7439-97-6	Mercury	0.10	U		AV	
7440-02-0	Nickel	3.0	U		P	
7440-09-7	Potassium	4290	B		P	
7782-49-2	Selenium	3.3	U	WN	F	J
7440-22-4	Silver	3.9	U		P	
7440-23-5	Sodium	16000			P	
7440-28-0	Thallium	1.2	U		F	
7440-62-2	Vanadium	9.4	B		P	U
7440-66-6	Zinc	4.7	U		P	
	Cyanide	10.0	U		CA	

DKW 7/26/93

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

003

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B088Y0

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

Lab Code: SKINER Case No.: N3-04-004SAS No.: SDG No.: B088Q5

Matrix (soil/water): WATER Lab Sample ID: 04055-04S

Level (low/med): LOW Date Received: 04/06/93

% 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	35.2	~~B~~		P	U
7440-36-0	Antimony	18.4	U		P	
7440-38-2	Arsenic	21.6		SN	F	J
7440-39-3	Barium	43.0	B		P	
7440-41-7	Beryllium	0.50	U		P	
7440-43-9	Cadmium	1.6	U		P	
7440-70-2	Calcium	59100			P	
7440-47-3	Chromium	3.7	B		P	
7440-48-4	Cobalt	2.5	U		P	
7440-50-8	Copper	2.9	U		P	
7439-89-6	Iron	31.5	~~B~~		P	U
7439-92-1	Lead	1.5	B		F	
7439-95-4	Magnesium	18400			P	
7439-96-5	Manganese	1.2	~~B~~		P	U
7439-97-6	Mercury	0.10	U		AV	
7440-02-0	Nickel	3.0	U		P	
7440-09-7	Potassium	7250			P	
7782-49-2	Selenium	3.3	U	WN	F	J
7440-22-4	Silver	3.9	U		P	
7440-23-5	Sodium	55600			P	
7440-28-0	Thallium	1.2	U	W	F	J
7440-62-2	Vanadium	14.8	B		P	
7440-66-6	Zinc	5.1	B		P	
	Cyanide	10.0	U		CA	

DKW 7/26/95

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

004

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B08910

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

Lab Code: SKINER Case No.: N3-04-004SAS No.: SDG No.: B08805

Matrix (soil/water): WATER Lab Sample ID: 04055-01S

Level (low/med): LOW Date Received: 04/06/93

% 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	34.7	~~B~~		P	U
7440-36-0	Antimony	18.4	U		P	
7440-38-2	Arsenic	5.6	B	WN	F	J
7440-39-3	Barium	25.2	B		P	
7440-41-7	Beryllium	0.50	U		P	
7440-43-9	Cadmium	1.6	U		P	
7440-70-2	Calcium	40600			P	
7440-47-3	Chromium	4.7	B		P	
7440-48-4	Cobalt	2.5	U		P	
7440-50-8	Copper	10.4	~~B~~		P	U
7439-89-6	Iron	46.6	~~B~~		P	U
7439-92-1	Lead	2.3	B		F	
7439-95-4	Magnesium	9550			P	
7439-96-5	Manganese	2.6	~~B~~		P	U
7439-97-6	Mercury	0.10	U		AV	
7440-02-0	Nickel	3.0	U		P	
7440-09-7	Potassium	4330	B		P	
7782-49-2	Selenium	3.3	U	WN	F	J
7440-22-4	Silver	3.9	U		P	
7440-23-5	Sodium	15900			P	
7440-28-0	Thallium	1.2	U		F	
7440-62-2	Vanadium	11.3	~~B~~		P	U
7440-66-6	Zinc	6.1	B		P	
	Cyanide	10.0	U		CA	

DEW 7/26/93

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

005

9713515.1759

WESTINGHOUSE/HANFORD

1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B08806

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

Lab Code: SKINER Case No.: N3-04-004SAS No.: SDG No.: B08806

Matrix (soil/water): WATER Lab Sample ID: 04056-02S

Level (low/med): LOW Date Received: 04/06/93

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	23.5	U		P
7440-36-0	Antimony	17.9	U		P
7440-38-2	Arsenic	3.5	U		F
7440-39-3	Barium	45.2	B		P
7440-41-7	Beryllium	0.50	U		P
7440-43-9	Cadmium	1.7	U		P
7440-70-2	Calcium	39200			P
7440-47-3	Chromium	5.8	U		P
7440-48-4	Cobalt	3.8	U		P
7440-50-8	Copper	4.2	U		P
7439-89-6	Iron	7.4	~~B~~ U		P
7439-92-1	Lead	1.7	B	W J	F
7439-95-4	Magnesium	5890			P
7439-96-5	Manganese	1.8	U		P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	6.1	U		P
7440-09-7	Potassium	2150	B		P
7782-49-2	Selenium	2.9	U	W*J	F
7440-22-4	Silver	3.8	U		P
7440-23-5	Sodium	3950	B		P
7440-28-0	Thallium	1.2	U	W J	F
7440-62-2	Vanadium	3.3	U		P
7440-66-6	Zinc	17.0	~~B~~ U		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

KLG 7/26/93

002

FORM I - IN ILM02.1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B088V6

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

Lab Code: SKINER Case No.: N3-04-004SAS No.: SDG No.: B088Q6

Matrix (soil/water): WATER Lab Sample ID: 04056-03S

Level (low/med): LOW Date Received: 04/06/93

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	23.5	U		P
7440-36-0	Antimony	17.9	U		P
7440-38-2	Arsenic	3.7	B		F
7440-39-3	Barium	26.4	B		P
7440-41-7	Beryllium	0.50	U		P
7440-43-9	Cadmium	1.7	U		P
7440-70-2	Calcium	40300			P
7440-47-3	Chromium	5.8	U		P
7440-48-4	Cobalt	3.8	U		P
7440-50-8	Copper	4.2	U		P
7439-89-6	Iron	4.8	U		P
7439-92-1	Lead	1.3	U		F
7439-95-4	Magnesium	9520			P
7439-96-5	Manganese	1.8	U		P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	6.1	U		P
7440-09-7	Potassium	4110	B		P
7782-49-2	Selenium	2.9	U	WAJ	F
7440-22-4	Silver	3.8	U		P
7440-23-5	Sodium	15900			P
7440-28-0	Thallium	1.2	U		F
7440-62-2	Vanadium	11.6	B		P
7440-66-6	Zinc	3.4	U		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

KEG 7/26/93

003

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B088Y1

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

Lab Code: SKINER Case No.: N3-04-004SAS No.: SDG No.: B088Q6

Matrix (soil/water): WATER Lab Sample ID: 04056-04S

Level (low/med): LOW Date Received: 04/06/93

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	23.5	U		P
7440-36-0	Antimony	17.9	U		P
7440-38-2	Arsenic	10.4			F
7440-39-3	Barium	41.4	B		P
7440-41-7	Beryllium	0.50	U		P
7440-43-9	Cadmium	1.7	U		P
7440-70-2	Calcium	57800			P
7440-47-3	Chromium	5.8	U		P
7440-48-4	Cobalt	3.8	U		P
7440-50-8	Copper	4.2	U		P
7439-89-6	Iron	4.8	U		P
7439-92-1	Lead	2.5	B	WJ	F
7439-95-4	Magnesium	18200			P
7439-96-5	Manganese	1.8	U		P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	6.1	U		P
7440-09-7	Potassium	6980			P
7782-49-2	Selenium	14.5	U	*J	F
7440-22-4	Silver	3.8	U		P
7440-23-5	Sodium	55600			P
7440-28-0	Thallium	1.2	U	WJ	F
7440-62-2	Vanadium	16.8	B		P
7440-66-6	Zinc	14.0	~~B~~	U	P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

KGH 9/26/93

-004

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B08911

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

Lab Code: SKINER Case No.: N3-04-004SAS No.: SDG No.: B08806

Matrix (soil/water): WATER Lab Sample ID: 04056-01S

Level (low/med): LOW Date Received: 04/06/93

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	24.0	~~B~~	U	P
7440-36-0	Antimony	17.9	U		P
7440-38-2	Arsenic	4.4	B		F
7440-39-3	Barium	23.9	B		P
7440-41-7	Beryllium	0.50	U		P
7440-43-9	Cadmium	1.7	U		P
7440-70-2	Calcium	41400			P
7440-47-3	Chromium	5.8	U		P
7440-48-4	Cobalt	3.8	U		P
7440-50-8	Copper	4.2	U		P
7439-89-6	Iron	7.8	~~B~~	U	P
7439-92-1	Lead	1.3	U		F
7439-95-4	Magnesium	9820			P
7439-96-5	Manganese	1.8	U		P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	6.1	U		P
7440-09-7	Potassium	4330	B		P
7782-49-2	Selenium	2.9	U	W*J	F
7440-22-4	Silver	3.8	U		P
7440-23-5	Sodium	16400			P
7440-28-0	Thallium	1.2	U		F
7440-62-2	Vanadium	11.5	B		P
7440-66-6	Zinc	9.1	~~B~~	U	P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

KEW 4/26/93

005

9713515.1763

000014

TMA Inc. REPORT Work Order # A3-04-814

Received: 04/02/93

Results by Sample

SAMPLE ID B08805 FRACTION 01E TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 03/31/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT	
Chloride	300.0	2.2	mg/L	0.2	
Fluoride	300.0	0.2	mg/L	0.1	
Phosphate	300.0	~~<~~0.4 ~~U~~	mg/L	0.4	R
pH	150.1	7.8	pH	0.1	J
Sulfate	300.0	26	mg/L	1	
Specific Conductance ~~Elect. Conductivity~~	120.1	271	umho/cm	6	J

FORM I

DKW 7/26/93

LM-7/30/93

9713515.1764

TMA Inc. REPORT Work Order # A3-04-010 000015

Received: 04/02/93

Results by Sample

SAMPLE ID B08805 FRACTION 01G TEST CODE WCCLPL NAME Anions & Wet Chem. - WM043

Date & Time Collected 03/31/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT	
Alkalinity	310.1	100	mg/L	2	R
Tot. Dissolved Solids	160.1	182	mg/L	5	

FORM I

DCW
7/26/93

TMA Inc. REPORT Work Order # A3-04-014

Received: 04/02/93

Results by Sample

SAMPLE ID B08805 FRACTION 01W TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 03/31/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

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

FORM I

DEW
7/26/93

9713515.1766

000017

TMA Inc. REPORT Work Order # A3-04-014

Received: 04/02/93

Results by Sample

SAMPLE ID B08805 FRACTION 01J TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 03/31/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT	
Ammonia Nitrogen	350.3	<0.05U	mg/L	0.05	J
COD	410.0	<5 U	mg/L	5	J

FORM I

DKW
7/26/93

LM
7/30/93

TMA Inc. REPORT Work Order # A3-04-014

Received: 04/02/93

Results by Sample

SAMPLE ID B088V5 FRACTION 03E TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 03/31/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT	
Chloride	300.0	6.1	mg/L	0.2	
Fluoride	300.0	0.3	mg/L	0.1	
Phosphate	300.0	~~0.4~~ N	mg/L	0.4	R
pH	150.1	8.0	pH	0.1	J
Sulfate	300.0	24	mg/L	1	
Specific Conductance ~~Elect. Conductivity~~	120.1	360	umho/cm	6	J

FORM I

DEW
7/26/93

TMA Inc. REPORT Work Order # A3-04-014

Received: 04/02/93

Results by Sample

SAMPLE ID B088V5 FRACTION 03G TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 03/31/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Alkalinity	310.1	139	mg/L	2
Tot. Dissolved Solids	160.1	256	mg/L	5

R

FORM I

DTCW 7/26/93

9713515.1769

000020

TMA Inc. REPORT Work Order # A3-04-014

Received: 04/02/93

Results by Sample

SAMPLE ID B088V5 FRACTION 03I TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 03/31/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

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

R

FORM I

DKW 7/26/93

TMA Inc. REPORT Work Order # A3-04-014

Received: 04/02/93 Results by Sample

SAMPLE ID B088V5 FRACTION 03K TEST CODE VCCLPL NAME Anions & Wet Chem. - VR043

Date & Time Collected 03/31/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT	
Ammonia Nitrogen	350.3	<0.05 U	mg/L	0.05	J
COD	410.0	<5 U	mg/L	5	J

FORM I

DKW
7/26/93

LM
7/30/93

TMA Inc. REPORT Work Order # A3-04-014

Received: 04/02/93 Results by Sample

SAMPLE ID B088V5 FRACTION 03K TEST CODE VCCLPL NAME Anions & Wet Chem. - VH043

Date & Time Collected 03/31/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT	
Ammonia Nitrogen	350.3	~~<~~0.05 U	mg/L	0.05	J
COD	410.0	~~<~~5 U	mg/L	5	J

FORM I

DKW
7/26/93

LM
7/30/93

9713515.1771

000022

TRA Inc. REPORT Work Order # A3-04-014

Received: 04/02/93

Results by Sample

SAMPLE ID B088Y0 FRACTION 05C TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 03/31/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT	
Chloride	300.0	15.4	mg/L	0.2	
Fluoride	300.0	0.8	mg/L	0.1	
Phosphate	300.0	~~<0.4~~	mg/L	0.4	R
pH	150.1	7.6	pH	0.1	J
Sulfate	300.0	70	mg/L	1	
Specific Conductance ~~Elect. Conductivity~~	120.1	701	umho/cm	6	J

FORM I

DRW 7/26/93

LM 7/30/93

TMA Inc. REPORT Work Order # A3-04-014

Received: 04/02/93

Results by Sample

SAMPLE ID B088Y0 FRACTION 05D TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 03/31/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Alkalinity	310.1	193	mg/L	2
Tot. Dissolved Solids	160.1	470	mg/L	5

R

FORM I

DRW
7/26/93

TMA Inc. REPORT Work Order # A3-04-014

Received: 04/02/93

Results by Sample

SAMPLE ID B088Y0 FRACTION 05E TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 03/31/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Sulfide	376.1	~~1~~ N	mg/L	1

R

FORM I

DKW 7/26/93

TMA Inc. REPORT Work Order # A3-04-014

Received: 04/02/93

Results by Sample

SAMPLE ID B088Y0 FRACTION 05F TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 03/31/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT	
Ammonia Nitrogen	350.3	~~<~~0.05 U	mg/L	0.05	J
COD	410.0	~~<~~5 U	mg/L	5	J

FORM I

DEW
7/26/93

LM
7/30/93

9713515.1775

C00026

TMA Inc. REPORT Work Order # A3-04-014

Received: 04/02/93

Results by Sample

SAMPLE ID B08910 FRACTION 07C TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 03/31/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT	
Chloride	300.0	6.0	mg/L	0.2	
Fluoride	300.0	0.3	mg/L	0.1	
Phosphate	300.0	~~<~~0.4	mg/L	0.4	R
pH	150.1	8.0	pH	0.1	J
Sulfate	300.0	23	mg/L	1	
Specific Conductance ~~Elect. Conductivity~~	120.1	364	umho/cm	6	J

FORM I

DEW 7/26/93

LM 7/30/93

TMA Inc. REPORT Work Order # A3-04-014

Received: 04/02/93

Results by Sample

SAMPLE ID B08910 FRACTION 07D TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 03/31/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Alkalinity	310.1	139	mg/L	2
Tot. Dissolved Solids	160.1	257	mg/L	5

R

FORM I

DRW
7/06/93

9713515.1777

000028

TMA Inc. REPORT Work Order # A3-04-014

Received: 04/02/93

Results by Sample

SAMPLE ID B08910 FRACTION 07E TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 03/31/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT	
Sulfide	376.1	~~1~~ U	mg/L	1	R

FORM I

DRW
7/26/93

TMA Inc. REPORT Work Order # A3-04-014

Received: 04/02/93

Results by Sample

SAMPLE ID B08910 FRACTION 07F TEST CODE WCCLPL NAME Anions & Wet Chem. - VN043

Date & Time Collected 03/31/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT	
Ammonia Nitrogen	350.3	~~<~~0.05 U	mg/L	0.05	J
COD	410.0	~~<~~5 U	mg/L	5	J

FORM I

DKW
7/26/93

LM
7/30/93

Page 2 Skinner&Sherman REPORT Work Order # S3-04-057

Received: 04/06/93 Results by Sample

SAMPLE ID B08910 SAMPLE # 01 FRACTIONS: A

Date & Time Collected 03/31/93 Category WATER

NO3NO2 3.03 J
mg N/L

SAMPLE ID B08805 SAMPLE # 02 FRACTIONS: A

Date & Time Collected 03/31/93 Category WATER

NO3NO2 2.03 J
mg N/L

SAMPLE ID B088V5 SAMPLE # 03 FRACTIONS: A

Date & Time Collected 03/31/93 Category WATER

NO3NO2 3.16 J
mg N/L

SAMPLE ID B088Y0 SAMPLE # 04 FRACTIONS: A

Date & Time Collected 03/31/93 Category WATER

NO3NO2 20.0 J
mg N/L

SAMPLE ID B088Y0 DUPL SAMPLE # 04 FRACTIONS: B

Date & Time Collected 03/31/93 Category WATER

NO3NO2 20.5
mg N/L

SAMPLE ID B088Y0 SPIKE SAMPLE # 04 FRACTIONS: C

Date & Time Collected 03/31/93 Category WATER

NO3NO2 23.6
mg N/L

SAMPLE ID LCSW SAMPLE # 05 FRACTIONS: A

Date & Time Collected not specified Category WATER

NO3NO2 2.05
mg N/L

DTW 7/14/93

9713515.1780

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

000073
EPA SAMPLE NO.

B088T5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04025 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304025-01A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30413R05

Level: (low/med) LOW Date Received: 04/08/93

% Moisture: not dec. ____ Date Analyzed: 04/13/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

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

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

NW 7-23-93

9713515.1281
1E

EPA SAMPLE NO.

B088T5

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04025 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304025-01A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30413R05

Level: (low/med) LOW Date Received: 04/08/93

% Moisture: not dec. ____ Date Analyzed: 04/13/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

NW 7-23-93

9713515.1782

1A

000080

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

B088T7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04025 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304025-02A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30413R06

Level: (low/med) LOW Date Received: 04/08/93

% Moisture: not dec. ____ Date Analyzed: 04/13/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

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

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

NV 7-23-93 SC

9713515.1783

000081

EPA SAMPLE NO.

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

B088T7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04025 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304025-02A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30413R06

Level: (low/med) LOW Date Received: 04/08/93

% Moisture: not dec. ____ Date Analyzed: 04/13/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

9713515.1704

000087

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088X5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04025 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304025-03A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30412R20

Level: (low/med) LOW Date Received: 04/08/93

% Moisture: not dec. ____ Date Analyzed: 04/12/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

NW 7-23-93

9713515.1705

1E

000088

EPA SAMPLE NO.

B088X5

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04025 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304025-03A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30412R20

Level: (low/med) LOW Date Received: 04/08/93

% Moisture: not dec. ____ Date Analyzed: 04/12/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

9713515.1706

000094

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088X5RE

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04025 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304025-03A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30419R11

Level: (low/med) LOW Date Received: 04/08/93

% Moisture: not dec. ____ Date Analyzed: 04/19/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	1	J
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

NV 7-23-93 SL

9713515.1707

1E

EPA SAMPLE NO.

B088X5RE

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04025 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304025-03A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30419R11

Level: (low/med) LOW Date Received: 04/08/93

% Moisture: not dec. ____ Date Analyzed: 04/19/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

9713515.1708

000103

EPA SAMPLE NO.

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

B088X7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04025 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304025-04A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30417R11

Level: (low/med) LOW Date Received: 04/08/93

% Moisture: not dec. ____ Date Analyzed: 04/17/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

NW 7-23-93

9713515.1789

1E

000104

EPA SAMPLE NO.

B088X7

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04025 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304025-04A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30417R11

Level: (low/med) LOW Date Received: 04/08/93

% Moisture: not dec. ____ Date Analyzed: 04/17/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

9713515.1790

000214

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088T5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04025 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304025-01B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30504I08

Level: (low/med) LOW Date Received: 04/08/93

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 04/09/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/04/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	25	U

NW 7-23-93

9713515.1791

1C

000215

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

B088T5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04025 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304025-01B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30504I08

Level: (low/med) LOW Date Received: 04/08/93

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 04/09/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/04/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)Anthracene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	10	U
218-01-9	Chrysene	10	U
117-84-0	Di-n-Octyl Phthalate	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine

9713515.1792

000216

EPA SAMPLE NO.

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

B088T5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04025 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304025-01B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30504I08

Level: (low/med) LOW Date Received: 04/08/93

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 04/09/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/04/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

Number TICs found: 11

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN HYDROCARBON	5.77	3	BJ
2.	UNKNOWN ACID	23.30	7	J
3.	UNKNOWN ALKANE	23.43	2	J
4.	UNKNOWN ALKENE	23.48	2	J
5.	UNKNOWN ALKANE	24.23	3	J
6.	UNKNOWN ACID	24.88	6	J
7.	UNKNOWN ALKANE	25.00	5	J
8.	UNKNOWN ALKANE	25.72	4	J
9.	UNKNOWN ALKANE	26.43	4	J
10.	UNKNOWN ALKANE	27.12	3	J
11.	UNKNOWN ALKANE	27.87	3	J

9713515.1793

000239

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088X5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04025 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304025-03B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30504I11

Level: (low/med) LOW Date Received: 04/08/93

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 04/09/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/04/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	25	U

NV 7-23-95

9713515.1794

1C

000240

EPA SAMPLE NO.

B088X5

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04025 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304025-03B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30504I11

Level: (low/med) LOW Date Received: 04/08/93

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 04/09/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/04/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)Anthracene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	10	U
218-01-9	Chrysene	10	U
117-84-0	Di-n-Octyl Phthalate	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine

NV 7-23-93

9713515.1795

000241

EPA SAMPLE NO.

B088X5

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04025 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304025-03B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30504I11

Level: (low/med) LOW Date Received: 04/08/93

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 04/09/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/04/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

Number TICs found: 10

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN HYDROCARBON	5.77	4	BJ
2.	UNKNOWN ACID	23.30	6	J
3.	UNKNOWN ALKENE	23.48	2	J
4.	UNKNOWN ALKANE	24.23	3	J
5.	UNKNOWN HYDROCARBON	24.88	6	J
6.	UNKNOWN ALKANE	25.00	5	J
7.	UNKNOWN ALKANE	25.73	4	J
8.	UNKNOWN ALKANE	26.43	3	J
9.	UNKNOWN ALKANE	27.12	3	J
10.	UNKNOWN ALKANE	27.87	2	J

9713515.1796

000360

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088T5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04025 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304025-01B

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: 04/08/93

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 04/09/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/18/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-36-3	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

NV 7-23-93

9713515.1797

000365

EPA SAMPLE NO.

B088X5

PESTICIDE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04025 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304025-03B

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: 04/08/93

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 04/09/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/18/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-36-3	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

NW 7-23-93

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B088T5

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

Lab Code: SKINER Case No.: N3-04-033SAS No.: SDG No.: B088T5

Matrix (soil/water): WATER Lab Sample ID: 04116-01S

Level (low/med): LOW Date Received: 04/09/93

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	28.0	B		P
7440-36-0	Antimony	18.6	U		P
7440-38-2	Arsenic	2.2	B		F
7440-39-3	Barium	26.7	B		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	29600			P
7440-47-3	Chromium	7.6	B		P
7440-48-4	Cobalt	2.9	U		P
7440-50-8	Copper	5.2	B		P
7439-89-6	Iron	29.0	B		P
7439-92-1	Lead	2.5	B		F
7439-95-4	Magnesium	3890	B		P
7439-96-5	Manganese	1.8	B		P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	4.2	U		P
7440-09-7	Potassium	2660	B		P
7782-49-2	Selenium	3.5	U	W	F
7440-22-4	Silver	3.3	U		P
7440-23-5	Sodium	3550	B		P
7440-28-0	Thallium	2.7	U	W	F
7440-62-2	Vanadium	2.1	U		P
7440-66-6	Zinc	4.8	U		P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

C002

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B088X5

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

Lab Code: SKINER Case No.: N3-04-033SAS No.: SDG No.: B088T5

Matrix (soil/water): WATER Lab Sample ID: 04116-02S

Level (low/med): LOW Date Received: 04/09/93

% 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	30.3	B		P
7440-36-0	Antimony	18.6	U		P
7440-38-2	Arsenic	1.8	B	W	F
7440-39-3	Barium	31.0	B		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	28400			P
7440-47-3	Chromium	9.4	B		P
7440-48-4	Cobalt	2.9	U		P
7440-50-8	Copper	3.8	B		P
7439-89-6	Iron	47.9	B		P
7439-92-1	Lead	2.4	B		F
7439-95-4	Magnesium	4040	B		P
7439-96-5	Manganese	2.0	B		P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	4.2	U		P
7440-09-7	Potassium	1630	B		P
7782-49-2	Selenium	3.5	U	W	F
7440-22-4	Silver	3.3	U		P
7440-23-5	Sodium	2980	B		P
7440-28-0	Thallium	2.7	U		F
7440-62-2	Vanadium	2.1	U		P
7440-66-6	Zinc	4.8	U		P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

NW 7-23-95

Comments:

003

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B088T6

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

Lab Code: SKINER Case No.: N3-04-033SAS No.: SDG No.: B088T6

Matrix (soil/water): WATER Lab Sample ID: 04118-01S

Level (low/med): LOW Date Received: 04/09/93

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	23.5	U		P
7440-36-0	Antimony	17.9	U		P
7440-38-2	Arsenic	2.5	B	W	F
7440-39-3	Barium	31.2	B		P
7440-41-7	Beryllium	0.50	U		P
7440-43-9	Cadmium	1.7	U		P
7440-70-2	Calcium	27300			P
7440-47-3	Chromium	5.8	U		P
7440-48-4	Cobalt	3.8	U		P
7440-50-8	Copper	4.2	U		P
7439-89-6	Iron	17.2	B		P
7439-92-1	Lead	1.3	B		F
7439-95-4	Magnesium	3910	B		P
7439-96-5	Manganese	1.8	U		P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	6.1	U		P
7440-09-7	Potassium	1500	B		P
7782-49-2	Selenium	3.5	U	WN	F
7440-22-4	Silver	3.8	U		P
7440-23-5	Sodium	2920	B		P
7440-28-0	Thallium	2.6	U	W	F
7440-62-2	Vanadium	3.3	U		P
7440-66-6	Zinc	3.4	U		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NV 7-23-93

C02

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B088X6

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

Lab Code: SKINER Case No.: N3-04-033SAS No.: SDG No.: B088T6

Matrix (soil/water): WATER Lab Sample ID: 04118-02S

Level (low/med): LOW Date Received: 04/09/93

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	23.5	U		P
7440-36-0	Antimony	17.9	U		P
7440-38-2	Arsenic	2.0	B		F
7440-39-3	Barium	28.6	B		P
7440-41-7	Beryllium	0.50	U		P
7440-43-9	Cadmium	1.7	U		P
7440-70-2	Calcium	29600			P
7440-47-3	Chromium	6.3	B		P
7440-48-4	Cobalt	3.8	U		P
7440-50-8	Copper	4.2	U		P
7439-89-6	Iron	24.7	B		P
7439-92-1	Lead	1.2	U		F
7439-95-4	Magnesium	3900	B		P
7439-96-5	Manganese	1.8	U		P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	6.1	U		P
7440-09-7	Potassium	2700	B		P
7782-49-2	Selenium	3.5	U	WN	F
7440-22-4	Silver	3.8	U		P
7440-23-5	Sodium	3610	B		P
7440-28-0	Thallium	2.6	U	W	F
7440-62-2	Vanadium	3.3	U		P
7440-66-6	Zinc	3.4	U		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NW
N3-04

003

TMA Inc. REPORT Work Order # A3-04-025

Received: 04/08/93

Results by Sample

SAMPLE ID B088T5 FRACTION 01E TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 04/06/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	1.3	mg/L	0.2
Fluoride	300.0	0.2	mg/L	0.1
Phosphate	300.0	<0.4 U	mg/L	0.4
pH	150.1	8.0	pH	0.1
Sulfate	300.0	14	mg/L	1
Elect. Conductivity	120.1	189	umho/cm	6

FORM I

NV 7-23-93

9713515.1803

000011

TMA Inc. REPORT Work Order # A3-04-025

Received: 04/08/93 Results by Sample

SAMPLE ID B088T5 FRACTION 01G TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 04/06/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Alkalinity	310.1	78	mg/L	2
Tot. Dissolved Solids	160.1	121	mg/L	5

FORM I

TMA Inc. REPORT Work Order # A3-04-025

Received: 04/08/93

Results by Sample

SAMPLE ID B088T5 FRACTION 01I TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 04/06/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

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

FORM I

NV 7-23-93

TMA Inc. REPORT Work Order # A3-04-025

Received: 04/08/93

Results by Sample

SAMPLE ID B088T5 FRACTION 01K TEST CODE WCCLPL NAME Anions & Wet Chem. - VE843

Date & Time Collected 04/06/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Ammonia Nitrogen	350.3	<0.05 U	mg/L	0.05
COD	410.0	<5 U	mg/L	5

FORM I

NV 7-23-93

9713515.1806

000014

TMA Inc. REPORT Work Order # A3-04-025

Received: 04/08/93

Results by Sample

SAMPLE ID B088X5 FRACTION 03E TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 04/06/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	1.4	mg/L	0.2
Fluoride	300.0	0.2	mg/L	0.1
Phosphate	300.0	~~<~~0.4 U	mg/L	0.4
pH	150.1	8.0	pH	0.1
Sulfate	300.0	16	mg/L	1
Elect. Conductivity	120.1	202	umho/cm	6

FORM I

NW 7-23-93

9713515.1807

TMA Inc. REPORT Work Order # A3-04-025 020015

Received: 04/08/93

Results by Sample

SAMPLE ID B088X5 FRACTION 03G TEST CODE WCCLPL NAME Anions & Wet Chem. - VH043

Date & Time Collected 04/06/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Alkalinity	310.1	84	mg/L	2
Tot. Dissolved Solids	160.1	141	mg/L	5

FORM I

NN 7-23-93

9713515.1808

TNA Inc. REPORT Work Order # A3-04-025

Received: 04/08/93

Results by Sample

SAMPLE ID B088X5 FRACTION 03N TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 04/06/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

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

FORM I

NW 7-23-93

9713515.1809

TMA Inc. REPORT Work Order # A3-04-025 020017

Received: 04/08/93 Results by Sample

SAMPLE ID B088X5 FRACTION 03J TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 04/06/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Ammonia Nitrogen	350.3	<0.05 U	mg/L	0.05
COD	410.0	<5 U	mg/L	5

FORM I

NV 7-23-93

Page 2 Skinner&Sherman REPORT Work Order # S3-04-117

Received: 04/09/93 Results by Sample

SAMPLE ID B088T5 SAMPLE # 01 FRACTIONS: A
Date & Time Collected 04/06/93 Category WATER

NO3NO2 0.68
mg N/L

SAMPLE ID B088X5 SAMPLE # 02 FRACTIONS: A
Date & Time Collected 04/06/93 Category WATER

NO3NO2 0.65
mg N/L

SAMPLE ID B088X5D SAMPLE # 02 FRACTIONS: B
Date & Time Collected 04/06/93 Category WATER

NO3NO2 0.65
mg N/L

SAMPLE ID B088X5S SAMPLE # 02 FRACTIONS: C
Date & Time Collected 04/06/93 Category WATER

NO3NO2 2.60
mg N/L

SAMPLE ID LCSW SAMPLE # 03 FRACTIONS: A
Date & Time Collected not specified Category WATER

NO3NO2 2.03
mg N/L

NW 7-23-93

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 its invoice is submitted and 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 arrangements for storage of remains. Samples are held for thirty days following issuance of report. Samples will be stored at client's expense, if authorized to do so.

300 Second Avenue, P.O. Box 521, Waltham, Massachusetts 02254-0521 (617) 890-7200
1-800-4LAB TEST FAX (617) 890-7883

9713515.1811

000051

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088R5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04023 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304023-01A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30412R10

Level: (low/med) LOW Date Received: 04/07/93

% Moisture: not dec. ____ Date Analyzed: 04/12/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

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

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	1	J
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

NV 1-23-93

RBD

9713515.1812

000052

EPA SAMPLE NO.

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

B088R5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04023 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304023-01A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30412R10

Level: (low/med) LOW Date Received: 04/07/93

% Moisture: not dec. ____ Date Analyzed: 04/12/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

9713515.1813

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

0000C0

EPA SAMPLE NO.

B088R7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04023 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304023-02A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30412R11

Level: (low/med) LOW Date Received: 04/07/93

% Moisture: not dec. ____ Date Analyzed: 04/12/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

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

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	3	J
67-64-1	Acetone	29	
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

NV 7-23-93

9713515.1814

000061

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

B088R7

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04023 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304023-02A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30412R11

Level: (low/med) LOW Date Received: 04/07/93

% Moisture: not dec. ____ Date Analyzed: 04/12/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

9713515.1815

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

000071
EPA SAMPLE NO.

B088T0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04023 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304023-03A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30412R14

Level: (low/med) LOW Date Received: 04/07/93

% Moisture: not dec. ____ Date Analyzed: 04/12/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

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

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

NV
T-23-93

9713515.1816

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B088T0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04023 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304023-03A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30412R14

Level: (low/med) LOW Date Received: 04/07/93

% Moisture: not dec. ____ Date Analyzed: 04/12/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

9713515.1817

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO. 000078

B088T2

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04023 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304023-04A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30412R15

Level: (low/med) LOW Date Received: 04/07/93

% Moisture: not dec. ____ Date Analyzed: 04/12/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

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

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	15	
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

NV
T23935

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B088T2

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04023 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304023-04A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 30412R15

Level: (low/med) LOW Date Received: 04/07/93

% Moisture: not dec. ____ Date Analyzed: 04/12/93

GC Column: PACK ID: 2.00 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

9713515.1819

000146

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088R5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04023 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304023-01B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30414S13

Level: (low/med) LOW Date Received: 04/07/93

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 04/08/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/14/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	25	U

NV 7-23-93

9713515.1820

1C

000147

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

B088R5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04023 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304023-01B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30414S13

Level: (low/med) LOW Date Received: 04/07/93

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 04/08/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/14/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)Anthracene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	10	U
218-01-9	Chrysene	10	U
117-84-0	Di-n-Octyl Phthalate	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine

NV 7-23-93 SC

9713515.1821

000148

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

B088R5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04023 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304023-01B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30414S13

Level: (low/med) LOW Date Received: 04/07/93

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 04/08/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/14/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

Number TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN HYDROCARBON	5.85	3	J

9713515.1822

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

000161

EPA SAMPLE NO.

B088T0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04023 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304023-03B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30414S16

Level: (low/med) LOW Date Received: 04/07/93

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 04/08/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/15/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	25	U

NV 7-23-93

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B088T0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04023 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304023-03B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30414S16

Level: (low/med) LOW Date Received: 04/07/93

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 04/08/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/15/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)Anthracene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	10	U
218-01-9	Chrysene	10	U
117-84-0	Di-n-Octyl Phthalate	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine

NV 7-23-93

1F

EPA SAMPLE NO.

B088T0

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04023 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304023-03B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30414S16

Level: (low/med) LOW Date Received: 04/07/93

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 04/08/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/15/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

9713515.1825

EPA SAMPLE NO.

B088R5

PESTICIDE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 04023 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A304023-01B

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

Moisture: _____ decanted: (Y/N) ___ Date Received: 04/07/93

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 04/08/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/21/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-36-3	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

NV 7-23-93

9713515.1826

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

000275

EPA SAMPLE NO.

B088T0

b Name: TMA/ARLI Contract: WHC

b Code: TMALA Case No.: 04023 SAS No.: NA SDG No.: NA

trix: (soil/water) WATER Lab Sample ID: A304023-03B

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

Moisture: _____ decanted: (Y/N) ___ Date Received: 04/07/93

traction: (SepF/Cont/Sonc) CONT Date Extracted: 04/08/93

ncentrated Extract Volume: 10000 (uL) Date Analyzed: 04/21/93

jection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-36-3	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

NV 7-23-93 SL

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B088R5

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

Code: SKINER Case No.: N3-04-028SAS No.: SDG No.: B088R5

trix (soil/water): WATER Lab Sample ID: 04105-01S

vel (low/med): LOW Date Received: 04/08/93

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	19.2	U		P
7440-36-0	Antimony	18.6	U		P
7440-38-2	Arsenic	5.2	B		F
7440-39-3	Barium	52.3	B		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	102000			P
7440-47-3	Chromium	19.7			P
7440-48-4	Cobalt	2.9	U		P
7440-50-8	Copper	4.1	B		P
7439-89-6	Iron	101			P
7439-92-1	Lead	2.1	B		F
7439-95-4	Magnesium	23700			P
7439-96-5	Manganese	1.0	U		P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	4.2	U		P
7440-09-7	Potassium	6390			P
7782-49-2	Selenium	8.5		SN	F
7440-22-4	Silver	3.3	U		P
7440-23-5	Sodium	26500			P
7440-28-0	Thallium	1.2	U	W	F
7440-62-2	Vanadium	6.0	B		P
7440-66-6	Zinc	4.8	U		P
	Cyanide	10.0	U		CA

NV 1-23-93

lor Before: COLORLESS Clarity Before: CLEAR Texture:

lor After: COLORLESS Clarity After: CLEAR Artifacts:

mments:

002

SAMPLE NUMBER:

B088T0

INORGANIC ANALYSIS DATA SHEET

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

o Code: SKINER Case No.: N3-04-028SAS No.: SDG No.: B088R5

trix (soil/water): WATER Lab Sample ID: 04105-02S

vel (low/med): LOW Date Received: 04/08/93

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	19.2	U		P
7440-36-0	Antimony	18.6	U		P
7440-38-2	Arsenic	3.5	U		F
7440-39-3	Barium	34.0	B		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	26700			P
7440-47-3	Chromium	7.1	B		P
7440-48-4	Cobalt	2.9	U		P
7440-50-8	Copper	2.7	U		P
7439-89-6	Iron	58.8	B		P
7439-92-1	Lead	1.4	B		F
7439-95-4	Magnesium	4660	B		P
7439-96-5	Manganese	2.8	B		P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	4.2	U		P
7440-09-7	Potassium	1930	B		P
7782-49-2	Selenium	2.9	U	WN	F
7440-22-4	Silver	3.3	U		P
7440-23-5	Sodium	2810	B		P
7440-28-0	Thallium	1.2	U		F
7440-62-2	Vanadium	2.1	U		P
7440-66-6	Zinc	10.3	B		P
	Cyanide	10.0	U		CA

NV 7-23-93

lor Before: COLORLESS Clarity Before: CLEAR Texture:

lor After: COLORLESS Clarity After: CLEAR Artifacts:

mments:

003

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B088R6

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

b Code: SKINER Case No.: N3-04-028SAS No.: SDG No.: B088R6

trix (soil/water): WATER Lab Sample ID: 04108-01S

vel (low/med): LOW Date Received: 04/08/93

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	19.2	U		P
7440-36-0	Antimony	18.6	U		P
7440-38-2	Arsenic	1.6	B		F
7440-39-3	Barium	54.2	B		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	104000			P
7440-47-3	Chromium	18.6			P
7440-48-4	Cobalt	2.9	U		P
7440-50-8	Copper	2.7	U		P
7439-89-6	Iron	8.4	U		P
7439-92-1	Lead	4.6			F
7439-95-4	Magnesium	24200			P
7439-96-5	Manganese	1.0	U		P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	4.2	U		P
7440-09-7	Potassium	6750			P
7782-49-2	Selenium	17.5	U	WN	F
7440-22-4	Silver	3.3	U		P
7440-23-5	Sodium	27100			P
7440-28-0	Thallium	1.2	U		F
7440-62-2	Vanadium	5.4	B		P
7440-66-6	Zinc	4.8	U		P
	Cyanide				NR

NV 7-23-93 SC

olor Before: COLORLESS Clarity Before: CLEAR Texture:

olor After: COLORLESS Clarity After: CLEAR Artifacts:

omments:

002

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B088T1

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

ıb Code: SKINER Case No.: N3-04-028SAS No.: SDG No.: B088R6

ıtrix (soil/water): WATER Lab Sample ID: 04108-02S

·vel (low/med): LOW Date Received: 04/08/93

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	19.2	U		P
7440-36-0	Antimony	18.6	U		P
7440-38-2	Arsenic	1.5	U		F
7440-39-3	Barium	32.3	B		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	26900			P
7440-47-3	Chromium	4.0	B		P
7440-48-4	Cobalt	2.9	U		P
7440-50-8	Copper	2.7	U		P
7439-89-6	Iron	10.3	B		P
7439-92-1	Lead	1.8	B		F
7439-95-4	Magnesium	4790	B		P
7439-96-5	Manganese	1.8	B		P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	4.2	U		P
7440-09-7	Potassium	2030	B		P
7782-49-2	Selenium	17.5	U	WN	F
7440-22-4	Silver	3.3	U		P
7440-23-5	Sodium	2850	B		P
7440-28-0	Thallium	1.2	U		F
7440-62-2	Vanadium	2.1	U		P
7440-66-6	Zinc	4.8	U		P
	Cyanide				NR

NW 7-23-93 CC

ɔlor Before: COLORLESS Clarity Before: CLEAR Texture:

ɔlor After: COLORLESS Clarity After: CLEAR Artifacts:

ɔmments:

003

TMA Inc. REPORT Work Order # A3-04-023

eceived: 04/07/93 Results by Sample

AMPLE ID B088R5 FRACTION 01E TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 04/05/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	32.5	mg/L	1.0
Fluoride	300.0	0.3	mg/L	0.1
Phosphate	300.0	<0.4U	mg/L	0.4
pH	150.1	7.8	pH	0.1
Sulfate	300.0	98	mg/L	5.0
Elect. Conductivity	120.1	806	umho/cm	6

FORM I

NV 7/23/93 SL

9713515.1832

TMA Inc. REPORT Work Order # A3-04-023 000011

ceived: 04/07/93 Results by Sample

MPLE ID B088R5 FRACTION 01G TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 04/05/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Alkalinity	310.1	202	mg/L	2
Tot. Dissolved Solids	160.1	517	mg/L	5

FORM I

MV 7-23-93

TMA Inc. REPORT Work Order # A3-04-023

:eceived: 04/07/93 Results by Sample

AMPLE ID B088R5 FRACTION 01I TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 04/05/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

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

FORM I

INV 7-23-93

9713515.1834

TMA Inc. REPORT Work Order # A3-04-023

Received: 04/07/93

Results by Sample

SAMPLE ID B088R5 FRACTION 01K TEST CODE WCCLPL NAME Anions & Wet Chem. - WW043

Date & Time Collected 04/05/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Ammonia Nitrogen	350.3	<0.05 U	mg/L	0.05
COD	410.0	<5 U	mg/L	5

FORM I

NV 7-23-93

9713515.1805

000014

TMA Inc. REPORT Work Order # A3-04-023

:ceived: 04/07/93 Results by Sample

MPLE ID B088T0 FRACTION 03E TEST CODE WCCLPL NAME Anions & Wet Chem. - WK043

Date & Time Collected 04/05/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	1.2	mg/L	0.2
Fluoride	300.0	0.2	mg/L	0.1
Phosphate	300.0	<0.4 U	mg/L	0.4
pH	150.1	7.6	pH	0.1
Sulfate	300.0	12	mg/L	1
Elect. Conductivity	120.1	186	umho/cm	6

FORM I

NV 7-23-93

9713515.1836

000015

TMA Inc. REPORT Work Order # A3-04-023

ceived: 04/07/93

Results by Sample

MPLE ID B088T0 FRACTION 036 TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 04/05/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Alkalinity	310.1	83	mg/L	2
Tot. Dissolved Solids	160.1	119	mg/L	5

FORM I

NV
7-23-93

TMA Inc. REPORT Work Order # A3-04-023

:ceived: 04/07/93 Results by Sample

AMPLE ID B088T0 FRACTION 03H TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 04/05/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

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

FORM I

NV
4-23-93

TMA Inc. REPORT Work Order # A3-04-023

:ceived: 04/07/93 Results by Sample

MPLE ID B088T0 FRACTION 03J TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 04/05/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Ammonia Nitrogen	350.3	<0.05 U	mg/L	0.05
COD	410.0	<5 U	mg/L	5

FORM I

NV 7-23-93

9713515.1839

 Skinner&Sherman REPORT Work Order # S3-04-107

Received: 04/08/93 Results by Sample

SAMPLE ID B088R5 SAMPLE # 01 FRACTIONS: A
Date & Time Collected 04/05/93 Category WATER

NO3NO2 20.2
mg N/L

SAMPLE ID B088T0 SAMPLE # 02 FRACTIONS: A
Date & Time Collected 04/05/93 Category WATER

NO3NO2 <0.25 U
mg N/L

SAMPLE ID B088T0 DUPL SAMPLE # 02 FRACTIONS: B
Date & Time Collected 04/05/93 Category WATER

NO3NO2 <0.25
mg N/L

SAMPLE ID B088T0 SPIKE SAMPLE # 02 FRACTIONS: C
Date & Time Collected 04/05/93 Category WATER

NO3NO2 2.17
mg N/L

SAMPLE ID LCSW SAMPLE # 03 FRACTIONS: A
Date & Time Collected not specified Category WATER

NO3NO2 2.03
mg N/L

NW 7-23-93

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TMA
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