AR TARGET SHEET

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

DOCUMENT # B07K41-TMA-328

EDMC # 45749

SECTION 5 OF 17

CASE NARRATIVE

LABORATORY : TMA/ARLI

CASE : 10-066

CONTRACT ID : WESTINGHOUSE HANFORD COMPANY

SDG RECEIPT DATE : October 23, 1992

1.0 DESCRIPTION OF CASE :

Eight water samples were analyzed for TCL Organics-Volatiles, Semivolatiles, 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
B07KD6	A2-10-066-01A	V	WATER	7
B07KD6	A2-10-066-01B	SV & P	WATER	
B07KD6 MS	A2-10-066-01C	SV	WATER	
B07KD6 MSD	A2-10-066-01D	SV	WATER	
B07KF0	A2-10-066-02A	V	WATER	7
B07KG6	A2-10-066-03A	V	WATER	7
B07KG6	A2-10-066-03B	SV & P	WATER	
B07KG6 MS	A2-10-066-03C	P	WATER	
B07KG6 MSD	A2-10-066-03D	P	WATER	
B07KH0	A2-10-066-04A	V	WATER	7
B07KJ1	A2-10-066-05A	V	WATER	7
B07KJ1	A2-10-066-05B	SV & P	WATER	
B07KJ5	A2-10-066-06A	V	WATER	7
B07KJ5 MS	A2-10-066-06B	V	WATER	7
B07KJ5 MSD	A2-10-066-06C	V	WATER	7
B07KM3	A2-10-066-07A	V	WATER	7
B07KM3	A2-10-066-07B	SV & P	WATER	
B07KM7	A2-10-066-08A	V	WATER	7

3.0 COMMENTS :

3.1 SHIPPING AND DOCUMENTATION :

The samples were received unbroken and properly documented.

1 of the 3 VOA vials for sample B07KF0 had air bubbles.
3 of the 3 VOA vials for sample B07KM7 had air bubbles.

3.2 ANALYSIS

3.2.1 VOLATILE ANALYSIS COMMENTS :

LOW LEVEL WATER :

The samples were analyzed within the CLP SOW holding times.

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

TUNES :

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

3.2.2 SEMIVOLATILE ANALYSIS COMMENTS :

LOW LEVEL WATER :

The samples were extracted and analyzed within the CLP SOW holding times. Samples B07KD6, B07KG6, B07KM3 and B07KD6MS had Terphenyl-d14 surrogate recoveries 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.

PESTICIDE/PCB ANALYSIS :

SEQUENCE NOTES :

The sequence was started on 11/03/92 and analyzed in accordance with the EPA CLP SOW. The sequence was analyzed by single injection into a dual column system. The sequence met all the QC criteria specified in the CLP SOW.

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

SAMPLE NOTES :

LOW LEVEL WATER :

The samples were extracted and analyzed within the CLP SOW holding times.

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

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

Nicole Roth
Nicole Roth
CLP Program Manager

Widayati
Wida Ang
Organics Supervisor

9713504.0845

Westinghouse Hanford Company

NONCONFORMANCE REPORT

1. Page 1 of 1

2. Preprinted No. 051687

QA Log No. EQA-92-122

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	B07K41, B07K46 B07K56, B07K06	N/A	N/A

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

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

13. Code: Lot/Heat/Serial	14. Lot Size	15. Sample	16. Qty. Acc.	17. Inspection Criteria
N/A	1	1	0	☐ Dwg. ☐ Spec. ☐ Insp. Plan ☒ Other SW-846, Chapter 2 ~~of Rev. 1, pg. Two-28~~

18. Item	19. Description of Nonconformance (list serial no. where applicable)	22. Disposition, Justification, and Instructions
	The Sample aliquots for sulfide analysis were preserved with an acid instead of zinc acetate/ sodium hydroxide.	The sample aliquot for sulfide analysis for the items listed in Block 5 shall be discarded, no analysis shall be performed.

20. Originator's Signature	Date	23. Design Document Change Required?
Kurt N. Pool	12/11/92	☐ Yes, Doc. No. ☒ No

21. Cognizant QA Manager's Signature	Date	24. Corrective Action Required?
H Fleming for	1-19-93	☐ Yes, No. ☒ No

Disp. App.			
25. Cognizant Engineer: J.W. Roberts J.W. Roberts	Date 1/26/93	26. Technical Rep.: NA	Date	Signature/Org.: NA	Date
QA Engineer: GS Corrigan Gary Corrigan	Date 1-26-93	Signature/Org.: NA	Date	Signature/Org.: NA	Date

Close

27. Accept 0 Reject 1 Follow on NCR NA

Gary Corrigan 2-2-93

QA/C Personnel Date

7210-104 (12/91)

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B07KD6

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 10066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A210066-01A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 21027B04

Level: (low/med) LOW Date Received: 10/23/92

% Moisture: not dec. ____ Date Analyzed: 10/27/92

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	BJ
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	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

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000006

EPA SAMPLE NO.

B07KD6

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 10066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A210066-01A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 21027B04

Level: (low/med) LOW Date Received: 10/23/92

% Moisture: not dec. ____ Date Analyzed: 10/27/92

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.

B07KF0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 10066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A210066-02A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 21027B05

Level: (low/med) LOW Date Received: 10/23/92

% Moisture: not dec. ____ Date Analyzed: 10/27/92

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

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B07KF0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 10066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A210066-02A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 21027B05

Level: (low/med) LOW Date Received: 10/23/92

% Moisture: not dec. ____ Date Analyzed: 10/27/92

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

9713504.0850

000009

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B07KG6

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 10066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A210066-03A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 21027B06

Level: (low/med) LOW Date Received: 10/23/92

% Moisture: not dec. ____ Date Analyzed: 10/27/92

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	4	BJ
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	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

9713504.0851

000010
EPA SAMPLE NO.

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

B07KG6

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 10066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A210066-03A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 21027B06

Level: (low/med) LOW Date Received: 10/23/92

% Moisture: not dec. ____ Date Analyzed: 10/27/92

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

9713504.0852

000011

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B07KH0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 10066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A210066-04A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 21027B07

Level: (low/med) LOW Date Received: 10/23/92

% Moisture: not dec. ____ Date Analyzed: 10/27/92

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	6	BJ
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

9713504.0853

000012

EPA SAMPLE NO.

B07KH0

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 10066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A210066-04A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 21027B07

Level: (low/med) LOW Date Received: 10/23/92

% Moisture: not dec. ____ Date Analyzed: 10/27/92

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

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000013

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B07KJ1

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 10066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A210066-05A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 21027B08

Level: (low/med) LOW Date Received: 10/23/92

% Moisture: not dec. ____ Date Analyzed: 10/27/92

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

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

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

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	4	BJ
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	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

9713504.0855

000014
EPA SAMPLE NO.

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

B07KJ1

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 10066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A210066-05A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 21027B08

Level: (low/med) LOW Date Received: 10/23/92

% Moisture: not dec. ____ Date Analyzed: 10/27/92

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.

B07KJ5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 10066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A210066-06A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 21027B09

Level: (low/med) LOW Date Received: 10/23/92

% Moisture: not dec. ____ Date Analyzed: 10/27/92

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

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B07KJ5

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 10066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A210066-06A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 21027B09

Level: (low/med) LOW Date Received: 10/23/92

% Moisture: not dec. ____ Date Analyzed: 10/27/92

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

9713504.0858

000017
EPA SAMPLE NO.

B07KM3

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 10066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A210066-07A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 21027B12

Level: (low/med) LOW Date Received: 10/23/92

% Moisture: not dec. ____ Date Analyzed: 10/27/92

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	4	BJ
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	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	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

9213504.0859

000018

EPA SAMPLE NO.

B07KM3

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 10066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A210066-07A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 21027B12

Level: (low/med) LOW Date Received: 10/23/92

% Moisture: not dec. ____ Date Analyzed: 10/27/92

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

9713504.0860

000019

EPA SAMPLE NO.

B07KM7

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 10066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A210066-08A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 21027B13

Level: (low/med) LOW Date Received: 10/23/92

% Moisture: not dec. ____ Date Analyzed: 10/27/92

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	4	BJ
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	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

9713504.0861

000020

EPA SAMPLE NO.

B07KM7

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 10066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A210066-08A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 21027B13

Level: (low/med) LOW Date Received: 10/23/92

% Moisture: not dec. ____ Date Analyzed: 10/27/92

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.

B07KD6

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 10066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A210066-01B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 21029S04

Level: (low/med) LOW Date Received: 10/23/92

% Moisture: ____ decanted: (Y/N) ___ Date Extracted: 10/27/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/29/92

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

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

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B07KD6

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 10066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A210066-01B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 21029S04

Level: (low/med) LOW Date Received: 10/23/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 10/27/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/29/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

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

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B07KD6

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 10066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A210066-01B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 21029S04

Level: (low/med) LOW Date Received: 10/23/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 10/27/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/29/92

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B07KG6

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 10066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A210066-03B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 21029S07

Level: (low/med) LOW Date Received: 10/23/92

% Moisture: ____ decanted: (Y/N) ___ Date Extracted: 10/27/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/29/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

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

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B07KG6

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 10066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A210066-03B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 21029S07

Level: (low/med) LOW Date Received: 10/23/92

% Moisture: ____ decanted: (Y/N) ___ Date Extracted: 10/27/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/29/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

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

(1) - Cannot be separated from Diphenylamine

EPA SAMPLE NO.

B07KG6

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 10066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A210066-03B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 21029S07

Level: (low/med) LOW Date Received: 10/23/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 10/27/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/29/92

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B07KJ1

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 10066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A210066-05B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 21029S08

Level: (low/med) LOW Date Received: 10/23/92

% Moisture: ____ decanted: (Y/N) ___ Date Extracted: 10/27/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/29/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

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

9713504.0869

000028

EPA SAMPLE NO.

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

B07KJ1

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 10066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A210066-05B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 21029S08

Level: (low/med) LOW Date Received: 10/23/92

% Moisture: ____ decanted: (Y/N) ___ Date Extracted: 10/27/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/29/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)Anthracene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	3	BJ
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

9213504.0870

000029

EPA SAMPLE NO.

B07KJ1

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 10066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A210066-05B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 21029S08

Level: (low/med) LOW Date Received: 10/23/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 10/27/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/29/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

9713504.0871

000030

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B07KM3

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 10066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A210066-07B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 21029S09

Level: (low/med) LOW Date Received: 10/23/92

% Moisture: ____ decanted: (Y/N) ___ Date Extracted: 10/27/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/29/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

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

9713504.0872

000031

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B07KM3

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 10066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A210066-07B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 21029S09

Level: (low/med) LOW Date Received: 10/23/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 10/27/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/29/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

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

(1) - Cannot be separated from Diphenylamine

9213504.0873

000032

EPA SAMPLE NO.

B07KM3

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 10066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A210066-07B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 21029S09

Level: (low/med) LOW Date Received: 10/23/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 10/27/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/29/92

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B07KD6

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 10066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A210066-01B

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: 10/23/92

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 10/27/92

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 11/05/92

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

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

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B07KG6

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 10066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A210066-03B

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: 10/23/92

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 10/27/92

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 11/05/92

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

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

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B07KJ1

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 10066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A210066-05B

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: 10/23/92

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 10/27/92

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 11/05/92

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

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

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B07KM3

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 10066 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A210066-07B

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: 10/23/92

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 10/27/92

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 11/05/92

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

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

PAGE 1 TMA/Norcal CHAIN OF CUSTODY ORD # N2-10-193

RCVD: 10/23/92 DUE: 11/22/92 10/23/92 16:15:11 KEEP: 02/20/93 DISP: S

DASH	SAMPLE IDENTIFICATION		STORED	TESTS for FRACTIONS with work in DEPT: SU and CATEGORY
01A-W	B07KD6	UNFILTERED	ARLI	WH018 WH019 WH020 WH043 WH114 WH121 WH122 WH128 WH131 WH132 WH140
02A-W	B07KG6	UNFILTERED	ARLI	WH018 WH019 WH020 WH043 WH114 WH121 WH122 WH128 WH131 WH132 WH140
03A-W	B07KJ1	UNFILTERED	ARLI	WH018 WH019 WH020 WH043 WH114 WH121 WH122 WH128 WH131 WH132 WH140
04A-W	B07KM3	UNFILTERED	ARLI	WH018 WH019 WH020 WH043 WH114 WH121 WH122 WH128 WH131 WH132 WH140
04C-W	B07KM3 MS	UNFILTERED	ARLI	WH018 WH019 WH020 WH043 WH114 WH140
04D-W	B07KM3 MSD	UNFILTERED	ARLI	WH018 WH019 WH020
04E-W	B07KM3 DUP	UNFILTERED	ARLI	WH043 WH114 WH121 WH122 WH128 WH131 WH132 WH140
09A-W	B07KF0		ARLI	WH018 One voa vial has a bubble
10A-W	B07KH0		ARLI	WH018
11A-W	B07KJ5		ARLI	WH018 O
12A-W	B07KM7		ARLI	WH018 Bubbles in all 3 voa vials

RELEASED BY	DATE	TRANSFERRED TO	DATE	RECEIVED BY	DATE
[illegible]	10-23-92	ARLI	10-23-92	[illegible]	10/23/92

97-13504:0879

000003

FEDERAL EXPRESS

QUESTIONS? CALL 800-238-5355 TOLL FREE.

AIRBILL PACKAGE TRACKING NUMBER 518804007

A2-10-66

2237# 5188040071

RECIPIENT'S COPY

1 Date 10-23-92

From (Your Name) Please Print: SAMPLE CONTRACT

Your Phone Number (Very Important): (510) 235-2033

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 CONTRACT

Recipient's Phone Number (Ver

Company: TMA

Department:

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.): 2320 640 6

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)
- 1P [✓] YOUR PACKAGING
- 1 [ ] FEDEX LETTER*
- 2 [ ] FEDEX PAK*
- 13 [ ] FEDEX BOX
- 14 [ ] FEDEX TUBE

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

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

Government Overnight (Available to authorized users only)
- 46 [ ] GOVT LETTER
- 41 [ ] GOVT PACKAGE

Freight Service (for packages over 150 lbs.)
- 70 [ ] OVERNIGHT FREIGHT** (Centralized 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 Lbs.
- 7 [ ] OTHER SPECIAL SERVICE
- 8 [ ]
- 9 [ ] SATURDAY PICK-UP (Extra charge)
- 10 [ ]
- [ ]
- 12 [ ] HOLIDAY DELIVERY (If offered) (Extra charge)

6 PACKAGES / WEIGHT in Pounds Only / YOUR DECLARED VALUE

Total 2 Total 183 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 Nicole Roth

Date/Time Received: 10/24/92 9:00AM FedEx Employee Number

7 Release Signature

Federal Exp
Base Charges
Declared Value
Other 1
Other 2
Total Charges

REVISION DATE 2
PART #137204
FORMAT #126

126

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9713504.0880

000004

TMA/ARLI
Thermo Analytical Inc.

RADIATION DOSE RATE SURVEY FORM

Date 10/26/92 COMPANY NORC (WHC) OTHER ORD # 5188040071

Surveyor's Name MARK S. McCray

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

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

Calibration Date 3/25/92 Calibration Date 8/01/92

Instrument Calibration Factor 0.280 Instrument Calibration Factor 0.188

Sample	Location	HP-210 CPM	HP-210 Factor	HP-210 DPM	AC-3-7 CPM	AC-3-7 Factor	AC-3-7 DPM	Spillage or Breakage?	Activity, uCi/mL or uCi/g
Background		34.0			0				
Consistency		7,400	0.2857		5,006	0.1840			
Smears: GS 24		35.0			2.0				
SML 113		44.0			0				
Reported (WHC)	20 samples each						< 50 pCi/gram		

Comments:

All OK ✓ Approved MRM

Not OK Date 10/26/92

Form: ARLI RA-01
Rev: 06

01/15/92

9713504.0881

SAMPLE LOG-IN SHEET

000005

LAB NAME : TMA/ARLI

PAGE : 1 OF 1

RECEIVED BY (PRINT NAME): Trudy Golub

LOG-IN-DATE :

RECEIVED BY (SIGNATURE): Trudy Golub

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.: 5188040071
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: 10/26/92
12. Temp of ice chest 2.5 °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
	B07KD6	A2-10-66-01	
	B07KF0	A2-10-66-02	one vial has air bubble
	B07KG6	A2-10-66-03	
	B07KH0	A2-10-66-04	
	B07KJ1	A2-10-66-05	
	B07KJ5	A2-10-66-06	
	B07KM3	A2-10-66-07	
	B07KM7	A2-10-66-08	All 3 VOA vials contain bubbles

* Contact SMO and attach record of resolution

Reviewed By:

Logbook No.:

Date:

Logbook Page No.:

FORM DC-1

GENERAL CHEMISTRY RESULTS

CASE NO. 10-066

Water Sample #:

B07KD6 B07KG6 B07KJ1
B07KM3

CASE NARRATIVE

The Sulfide analysis for sample B07KD6 (A2-10-066-01) was cancelled due to a low pH of <2. The cancellation was approved by Westinghouse Hanford Company.

Sample B07KD6 (A2-10-066-01) yielded a 69.0% 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.

Ernesto Vázquez

Ernesto Vazquez

TMA Inc. REPORT Work Order # A2-10-066

Received: 10/23/92 12/16/92 08:47:50

REPORT TO: Westinghouse Hanford Company
2355 Stevens Dr.
Richland,WA,99352
MO-346/200 West/T6-08

ATTEN: Jeanette Duncan

CLIENT: WHC SAMPLES: 9

COMPANY: Westinghouse Hanford Company

FACILITY:

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

ATTEN: Ms. Carole Harris

PHONE: 818-357-3247

CERTIFIED BY: Ernesto Hyppe

CONTACT: EVV CIH

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

WORK ID: 100-BC-5
TAKEN: By Westinghouse Staff
TRANS: By Federal Express
TYPE: Liquid
P.O. #: N2-10-193-SU-AR
INVOICE: under separate cover

SAMPLE IDENTIFICATION

01	B07KD6
01	B07KD6 MS
01	B07KD6 MSD
01	B07KD6
01	B07KD6 MS
01	B07KD6
01	B07KD6 Duplicate
01	B07KD6
01	B07KD6 MS
01	B07KD6
01	B07KD6 MS
02	B07KF0
03	B07KG6
03	B07KG6 MS
03	B07KG6 MSD
03	B07KG6
03	B07KG6 Duplicate
03	B07KG6
03	B07KG6 Duplicate
03	B07KG6
03	B07KG6 Duplicate
04	B07KH0
05	B07KJ1
05	B07KJ1 MS
06	B07KJ5
06	B07KJ5 MS

TEST CODES and NAMES used on this workorder

BNCLPW	CLP Semivol. Water - WH020
CANCEL	Analysis Cancelled
PECLPL	CLP Pesticides Liq.-WH019
SULFID	Sulfide-Dissolved (water)
VOCLPL	CLP Volatile Org.Liq.
WCCLPL	Anions & Wet Chem. - WH043
WCL L	Chloride - WH120
WCQCD	Quality Control Summary
WCQCS	Quality Control Summary
WF L	Fluoride in Water
WNH3 L	Ammonia in Water - WH140
WPH L	pH of Liquid - WH121
WPO4 L	Phosphate in Liquids
WSO4 L	Sulfate (in Waters)
WSULFI	Sulfide - WH114
W ALK	Alkalinity - WH131
W COD	COD Water - WH132
W COND	Conductivity-Water WH135
W TDS	Dissolved Solids WH128

TMA Inc. REPORT Work Order # A2-10-066

Received: 10/23/92 12/18/92 08:49:03

	SAMPLE IDENTIFICATION
06	B07KJ5 MSD
07	B07KM3
08	B07KM7
09	Wet Chemistry Blank

TMA Inc. REPORT Work Order # A2-10-066

Received: 10/23/92

Results by Sample

SAMPLE ID B07KD6 FRACTION 01E TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 10/21/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	6.5	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	8.1	pH	0.1
Sulfate	300.0	35	mg/L	1
Elect. Conductivity	120.1	290	umho/cm	6

FORM I

TMA Inc. REPORT Work Order # A2-10-066

Received: 10/23/92

Results by Sample

SAMPLE ID B07KD6 FRACTION 01G TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 10/21/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Alkalinity	310.1	114	mg/L	2
Tot. Dissolved Solids	160.1	233	mg/L	5

FORM I

TMA Inc. REPORT Work Order # A2-10-066

Received: 10/23/92

Results by Sample

SAMPLE ID B07KD6 FRACTION 01K TEST CODE WCCLPL NAME Anions & Wet Chem. - WM043

Date & Time Collected 10/21/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

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

FORM I

TMA Inc. REPORT Work Order # A2-10-066

Received: 10/23/92

Results by Sample

SAMPLE ID B07KG6 FRACTION 03E TEST CODE WCCLPL NAME Anions & Wet Chem. - VN043

Date & Time Collected 10/21/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	5.9	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	8.0	pH	0.1
Sulfate	300.0	36	mg/L	1
Elect. Conductivity	120.1	319	umho/cm	6

FORM I

TMA Inc. REPORT Work Order # A2-10-066

Received: 10/23/92

Results by Sample

SAMPLE ID B07KG6 FRACTION 03G TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 10/21/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Alkalinity	310.1	119	mg/L	2
Tot. Dissolved Solids	160.1	251	mg/L	5

FORM I

TMA Inc. REPORT Work Order # A2-10-066

Received: 10/23/92

Results by Sample

SAMPLE ID B07KG6 FRACTION 03M TEST CODE VCCLPL NAME Anions & Wet Chem. - VM043

Date & Time Collected 10/21/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

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

FORM I

TMA Inc. REPORT Work Order # A2-10-066

Received: 10/23/92 Results by Sample

SAMPLE ID B07KG6 FRACTION 03J TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Coldected 10/21/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

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

FORM I

TMA Inc. REPORT Work Order # A2-10-066

Received: 10/23/92

Results by Sample

SAMPLE ID B07KJ1 FRACTION 05C TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 10/21/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	9.8	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	8.0	pH	0.1
Sulfate	300.0	49	mg/L	1
Elect. Conductivity	120.1	336	umho/cm	6

FORM I

TMA Inc. REPORT Work Order # A2-10-066

Received: 10/23/92

Results by Sample

SAMPLE ID B07KJ1 FRACTION 05D TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 10/21/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Alkalinity	310.1	109	mg/L	2
Tot. Dissolved Solids	160.1	278	mg/L	5

FORM I

TMA Inc. REPORT Work Order # A2-10-066

Received: 10/23/92

Results by Sample

SAMPLE ID B07KJ1 FRACTION 05E TEST CODE WCCLPL NAME Anions & Wet Chem. - WR043

Date & Time Collected 10/21/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

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

FORM I

TMA Inc. REPORT Work Order # A2-10-066

Received: 10/23/92

Results by Sample

SAMPLE ID B07KJ1 FRACTION 05F TEST CODE WCCLPL NAME Anions & Wet Chem. - WM043

Date & Time Collected 10/21/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

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

FORM I

TMA Inc. REPORT Work Order # A2-10-066

Received: 10/23/92

Results by Sample

SAMPLE ID B07KM3 FRACTION 07C TEST CODE WCCLPL NAME Anions & Wet Chem. - WR043

Date & Time Collected 10/21/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	10.4	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	8.0	pH	0.1
Sulfate	300.0	49	mg/L	1
Elect. Conductivity	120.1	336	umho/cm	6

FORM I

9713504.0897

TMA Inc. REPORT Work Order # A2-10-065 000022

Received: 10/23/92

Results by Sample

SAMPLE ID B07KM3 FRACTION 07D TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected 10/21/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Alkalinity	310.1	109	mg/L	2
Tot. Dissolved Solids	160.1	276	mg/L	5

FORM I

TMA Inc. REPORT Work Order # A2-10-066

Received: 10/23/92

Results by Sample

SAMPLE ID B07KM3 FRACTION 07E TEST CODE WCCLPL NAME Anions & Wet Chem. - WM043

Date & Time Collected 10/21/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

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

FORM I

TMA Inc. REPORT Work Order # A2-10-066

Received: 10/23/92

Results by Sample

SAMPLE ID B07KM3 FRACTION 07F TEST CODE WCCLPL NAME Anions & Wet Chem. - WM043

Date & Time Collected 10/21/92 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

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

FORM I

9713504.0900

000001 2/10/93

Page 1 Skinner&Sherman REPORT Work Order # S2-10-439

Received: 10/23/92 12/11/92 13:46:35

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

ATTEN Dan Steurmer

CLIENT HANFORD NOR SAMPLES 10
COMPANY TMA/NORCAL
FACILITY Richmond, CA

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

ATTEN Client Services
PHONE (617) 890-7200

CERTIFIED BY

CONTACT DP

WORK ID N2-10-193,N2-10-172
TAKEN BY CLIENT
TRANS FED EX
TYPE WATER
P.O. # N2-10-193, N2-10-172
INVOICE under separate cover

SAMPLE IDENTIFICATION

01 B07KD6
02 B07KG6
03 B07KJ1
04 B07KM3
04 B07KM3 DUPL
04 B07KM3 SPIKE
05 B07KF1
06 B07KG1
07 B07K66
08 B07K71
09 B07K91
10 LCSW

TEST CODES and NAMES used on this workorder

NO3NO2 Nitrate Plus Nitrite

TMA
Thermo Analytical Inc.

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

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: 10/23/92

Results by Sample

SAMPLE ID B07KD6 SAMPLE # 01 FRACTIONS: A
Date & Time Collected 10/21/92 Category WATER

NO3NO2 0.68
mg N/L

SAMPLE ID B07KG6 SAMPLE # 02 FRACTIONS: A
Date & Time Collected 10/21/92 Category WATER

NO3NO2 4.40
mg N/L

SAMPLE ID B07KJ1 SAMPLE # 03 FRACTIONS: A
Date & Time Collected 10/21/92 Category WATER

NO3NO2 3.73
mg N/L

SAMPLE ID B07KK3 SAMPLE # 04 FRACTIONS: A
Date & Time Collected 10/21/92 Category WATER

NO3NO2 3.70
mg N/L

SAMPLE ID B07KK3 DUPL SAMPLE # 04 FRACTIONS: B
Date & Time Collected 10/21/92 Category WATER

NO3NO2 3.74
mg N/L

SAMPLE ID B07KK3 SPIKE SAMPLE # 04 FRACTIONS: C
Date & Time Collected 10/21/92 Category WATER

NO3NO2 5.92
mg N/L

SAMPLE ID B07KF1 SAMPLE # 05 FRACTIONS: A
Date & Time Collected 10/20/92 Category WATER

NO3NO2 6.99
mg N/L

TMA
Thermo Analytical Inc.
Skinner & Sherman Laboratories Inc.

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

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

9713504.0902

000003

 Skinner&Sherman REPORT Work Order # S2-10-439

Received: 10/23/92 Results by Sample

SAMPLE ID B07KG1 SAMPLE # 06 FRACTIONS: A
Date & Time Collected 10/20/92 Category WATER

NO3NO2 2.37
mg N/L

SAMPLE ID B07K66 SAMPLE # 07 FRACTIONS: A
Date & Time Collected 10/20/92 Category WATER

NO3NO2 4.67
mg N/L

SAMPLE ID B07K71 SAMPLE # 08 FRACTIONS: A
Date & Time Collected 10/20/92 Category WATER

NO3NO2 3.69
mg N/L

SAMPLE ID B07K91 SAMPLE # 09 FRACTIONS: A
Date & Time Collected 10/20/92 Category WATER

NO3NO2 3.13
mg N/L

SAMPLE ID LCSW SAMPLE # 10 FRACTIONS: A
Date & Time Collected not specified Category WATER

NO3NO2 1.92
mg N/L

TMA
Thermo Analytical Inc.
Skinner & Sherman Laboratories Inc.

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

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

9713504.0903

000037

TMA/Skinner & Sherman Labs SAMPLE LOG-IN

WORKORDER 5210439 CLIENT Hanford Nor No. SAMPLES:

PROTCL CLP TURNARND 33 Days (Soil) 9 (Water) (Specify Othe:

COOLER TEMP: 5 oC, or NA

CUSTODIAN B. Prowell SDG/BATCH N/A

CUSTODY SEAL: PRESENT/ABSENT/INTACT/NOT CLIENT CASE N210193, N210172

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 10-23-92 10-24-92

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

	CLIENT ID	MATRIX	RECEIVED	PH*	TEST(S) & QC	HOLD TIME U
1	B07KD6	water	10-24-92	2.23	NO3 NO2	
2	B07K66			2.21		
3	B07KJ1			2.24		
4	B07KM3			2.26	D.S	
5	B07KF1		10-23-92	2.31		
6	B07KG1			2.30		
7	B07K66			2.41		
8	B07K71			2.10		
9	B07K91			2.00		
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 10/27/92

REVIEWED

Complete 10/27/92

* EPA/CLP required Rev 1.6 PAGE:

9213504.0904

000038

PAGE 1 TMA/Norcal CHAIN OF CUSTODY ORD # N2-10-193

RCVD: 10/23/92 DUE: 11/22/92 10/23/92 16:15:13 KEEP: 02/20/93 DISP: S

DASH	SAMPLE IDENTIFICATION		STORED	TESTS for FRACTIONS with work in DEPT: SU and CATEGORY				
01B-W	B07KD6	UNFILTERED	S&S	WH007	WH008	WH010	WH011	WH137
02B-W	B07KG6	UNFILTERED	S&S	WH007	WH008	WH010	WH011	WH137
03B-W	B07KJ1	UNFILTERED	S&S	WH007	WH008	WH010	WH011	WH137
04B-W	B07KM3	UNFILTERED	S&S	WH007	WH008	WH010	WH011	WH137
04F-W	B07KM3 MS	UNFILTERED	S&S	WH007	WH008	WH010	WH011	WH137
04G-W	B07KM3 DUP	UNFILTERED	S&S	WH007	WH008	WH010	WH011	WH137
04H-W	L C S		S&S	WH007	WH008	WH010	WH137	
05A-W	B07KD9	FILTERED	S&S	WH007	WH008	WH010		
06A-W	B07KG9	FILTERED	S&S	WH007	WH008	WH010		
07A-W	B07KJ4	FILTERED	S&S	WH007	WH008	WH010		
08A-W	B07KM6	FILTERED	S&S	WH007	WH008	WH010		
08B-W	B07KM6 MS	FILTERED	S&S	WH007	WH008	WH010		
08C-W	B07KM6 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
Ryan Amato	10-23-92	SKINNER	10-23-92	[illegible]	10/24/92

9713504.0905

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

SUMMARY DATA REPORT

JAN 1993
RECEIVED
OSM DMO

December 29, 1992

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

Quality Control Narrative

Scope
Nine (9) water samples were submitted to TMA/Skinner & Sherman Laboratories, Inc. on October 23-24, 1992 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 S210437.

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 3/26/96 M.H.

9713504.0906

WESTINGHOUSE/HANFORD

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B07K66

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

Lab Code: SKINER Case No.: N2-10-193$AS No.: SDG No.: B07K66

Matrix (soil/water): WATER Lab Sample ID: 10437-07S

Level (low/med): LOW Date Received: 10/23/92

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	69.2	B		P
7440-36-0	Antimony	14.8	U		P
7440-38-2	Arsenic	2.9	U		F
7440-39-3	Barium	33.2	B		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	1.6	B		P
7440-70-2	Calcium	51100			P
7440-47-3	Chromium	11.0			P
7440-48-4	Cobalt	3.3	B		P
7440-50-8	Copper	1.9	U		P
7439-89-6	Iron	3600			P
7439-92-1	Lead	2.0	U		F
7439-95-4	Magnesium	8480			P
7439-96-5	Manganese	23.2			P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	3.3	B		P
7440-09-7	Potassium	2040	B		P
7782-49-2	Selenium	3.8	U		F
7440-22-4	Silver	3.6	U		P
7440-23-5	Sodium	11300			P
7440-28-0	Thallium	1.3	U		F
7440-62-2	Vanadium	3.4	B		P
7440-66-6	Zinc	12.9	B		P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

002

WESTINGHOUSE/HANFORD
1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B07K71

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

Lab Code: SKINER Case No.: N2-10-193$AS No.: SDG No.: B07K66

Matrix (soil/water): WATER Lab Sample ID: 10437-08S

Level (low/med): LOW Date Received: 10/23/92

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	45.7	B		P
7440-36-0	Antimony	14.8	U		P
7440-38-2	Arsenic	2.9	U	W	F
7440-39-3	Barium	30.8	B		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	1.5	U		P
7440-70-2	Calcium	51900			P
7440-47-3	Chromium	10.5			P
7440-48-4	Cobalt	2.4	B		P
7440-50-8	Copper	1.9	U		P
7439-89-6	Iron	220			P
7439-92-1	Lead	3.1			F
7439-95-4	Magnesium	6860			P
7439-96-5	Manganese	4.2	B		P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	2.6	U		P
7440-09-7	Potassium	4140	B		P
7782-49-2	Selenium	19.0	U		F
7440-22-4	Silver	3.6	U		P
7440-23-5	Sodium	11200			P
7440-28-0	Thallium	1.3	U		F
7440-62-2	Vanadium	5.8	B		P
7440-66-6	Zinc	5.7	U		P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

003

9713504.0908

WESTINGHOUSE/HANFORD

1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B07K91

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

Lab Code: SKINER Case No.: N2-10-193$AS No.: SDG No.: B07K66

Matrix (soil/water): WATER Lab Sample ID: 10437-09S

Level (low/med): LOW Date Received: 10/23/92

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	25.7	B		P
7440-36-0	Antimony	14.8	U		P
7440-38-2	Arsenic	3.6	B	W	F
7440-39-3	Barium	10.5	B		P
7440-41-7	Beryllium	0.40	B		P
7440-43-9	Cadmium	1.5	U		P
7440-70-2	Calcium	45300			P
7440-47-3	Chromium	17.0			P
7440-48-4	Cobalt	1.3	U		P
7440-50-8	Copper	1.9	U		P
7439-89-6	Iron	64.5	B		P
7439-92-1	Lead	2.7	B		F
7439-95-4	Magnesium	10000			P
7439-96-5	Manganese	0.90	U		P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	3.3	B		P
7440-09-7	Potassium	6620			P
7782-49-2	Selenium	19.0	U	W	F
7440-22-4	Silver	3.6	U		P
7440-23-5	Sodium	12900			P
7440-28-0	Thallium	1.3	U		F
7440-62-2	Vanadium	15.2	B		P
7440-66-6	Zinc	10.9	B		P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

004

WESTINGHOUSE/HANFORD
1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B07KD6

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

Lab Code: SKINER Case No.: N2-10-193$AS No.: SDG No.: B07K66

Matrix (soil/water): WATER Lab Sample ID: 10437-01S

Level (low/med): LOW Date Received: 10/24/92

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	19.6	B		P
7440-36-0	Antimony	14.8	U		P
7440-38-2	Arsenic	4.7	B		F
7440-39-3	Barium	8.2	B		P
7440-41-7	Beryllium	0.68	B		P
7440-43-9	Cadmium	1.5	U		P
7440-70-2	Calcium	33200			P
7440-47-3	Chromium	23.1			P
7440-48-4	Cobalt	1.4	B		P
7440-50-8	Copper	3.3	B		P
7439-89-6	Iron	74.6	B		P
7439-92-1	Lead	2.3	B		F
7439-95-4	Magnesium	10200			P
7439-96-5	Manganese	3.2	B		P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	2.6	U		P
7440-09-7	Potassium	6930			P
7782-49-2	Selenium	3.8	U	W	F
7440-22-4	Silver	3.6	U		P
7440-23-5	Sodium	15200			P
7440-28-0	Thallium	1.3	U		F
7440-62-2	Vanadium	28.8	B		P
7440-66-6	Zinc	7.7	B		P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

9713504.0910

WESTINGHOUSE/HANFORD

1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B07KF1

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

Lab Code: SKINER Case No.: N2-10-193$AS No.: SDG No.: B07K66

Matrix (soil/water): WATER Lab Sample ID: 10437-05S

Level (low/med): LOW Date Received: 10/23/92

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	22.1	B		P
7440-36-0	Antimony	14.8	U		P
7440-38-2	Arsenic	4.8	B		F
7440-39-3	Barium	11.4	B		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	1.5	U		P
7440-70-2	Calcium	37100			P
7440-47-3	Chromium	2.6	U		P
7440-48-4	Cobalt	1.3	U		P
7440-50-8	Copper	1.9	U		P
7439-89-6	Iron	17.6	B		P
7439-92-1	Lead	2.8	B		F
7439-95-4	Magnesium	11000			P
7439-96-5	Manganese	0.90	U		P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	2.6	U		P
7440-09-7	Potassium	5910			P
7782-49-2	Selenium	3.8	U	W	F
7440-22-4	Silver	3.6	U		P
7440-23-5	Sodium	21500			P
7440-28-0	Thallium	1.3	U		F
7440-62-2	Vanadium	17.2	B		P
7440-66-6	Zinc	47.0			P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

006

WESTINGHOUSE/HANFORD

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B07KG1

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

Lab Code: SKINER Case No.: N2-10-193$AS No.: SDG No.: B07K66

Matrix (soil/water): WATER Lab Sample ID: 10437-06S

Level (low/med): LOW Date Received: 10/23/92

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	32.2	B		P
7440-36-0	Antimony	14.8	U		P
7440-38-2	Arsenic	3.3	B	W	F
7440-39-3	Barium	19.6	B		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	1.5	U		P
7440-70-2	Calcium	34100			P
7440-47-3	Chromium	2.6	U		P
7440-48-4	Cobalt	1.3	U		P
7440-50-8	Copper	1.9	U		P
7439-89-6	Iron	407			P
7439-92-1	Lead	2.0	U		F
7439-95-4	Magnesium	9100			P
7439-96-5	Manganese	2.7	B		P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	2.6	U		P
7440-09-7	Potassium	5310			P
7782-49-2	Selenium	19.0	U		F
7440-22-4	Silver	3.6	U		P
7440-23-5	Sodium	14100			P
7440-28-0	Thallium	1.3	U		F
7440-62-2	Vanadium	15.2	B		P
7440-66-6	Zinc	5.7	U		P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

WESTINGHOUSE/HANFORD

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B07KG6

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

Lab Code: SKINER Case No.: N2-10-193$AS No.: SDG No.: B07K66

Matrix (soil/water): WATER Lab Sample ID: 10437-02S

Level (low/med): LOW Date Received: 10/24/92

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	27.8	B		P
7440-36-0	Antimony	14.8	U		P
7440-38-2	Arsenic	2.9	B		F
7440-39-3	Barium	43.7	B		P
7440-41-7	Beryllium	0.53	B		P
7440-43-9	Cadmium	1.5	U		P
7440-70-2	Calcium	40000			P
7440-47-3	Chromium	2.6	U		P
7440-48-4	Cobalt	1.9	B		P
7440-50-8	Copper	1.9	U		P
7439-89-6	Iron	51.6	B		P
7439-92-1	Lead	2.8	B		F
7439-95-4	Magnesium	10300			P
7439-96-5	Manganese	1.7	B		P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	2.6	U		P
7440-09-7	Potassium	5360			P
7782-49-2	Selenium	3.8	U	W	F
7440-22-4	Silver	3.6	U		P
7440-23-5	Sodium	17000			P
7440-28-0	Thallium	1.3	U		F
7440-62-2	Vanadium	18.4	B		P
7440-66-6	Zinc	5.7	U		P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

008

WESTINGHOUSE/HANFORD
1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B07KJ1

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

Lab Code: SKINER Case No.: N2-10-193SAS No.: SDG No.: B07K66

Matrix (soil/water): WATER Lab Sample ID: 10437-03S

Level (low/med): LOW Date Received: 10/24/92

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	29.5	B		P
7440-36-0	Antimony	14.8	U		P
7440-38-2	Arsenic	3.2	B	W	F
7440-39-3	Barium	22.9	B		P
7440-41-7	Beryllium	0.39	B		P
7440-43-9	Cadmium	1.5	U		P
7440-70-2	Calcium	52500			P
7440-47-3	Chromium	9.6	B		P
7440-48-4	Cobalt	1.9	B		P
7440-50-8	Copper	1.9	U		P
7439-89-6	Iron	19.7	B		P
7439-92-1	Lead	3.0	B		F
7439-95-4	Magnesium	8160			P
7439-96-5	Manganese	0.90	U		P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	2.6	U		P
7440-09-7	Potassium	4930	B		P
7782-49-2	Selenium	3.8	U	W	F
7440-22-4	Silver	3.6	U		P
7440-23-5	Sodium	11800			P
7440-28-0	Thallium	1.3	U		F
7440-62-2	Vanadium	8.6	B		P
7440-66-6	Zinc	5.7	U		P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

9713504.0914

WESTINGHOUSE/HANFORD

1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B07KM3

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

Lab Code: SKINER Case No.: N2-10-193$AS No.: SDG No.: B07K66

Matrix (soil/water): WATER Lab Sample ID: 10437-04S

Level (low/med): LOW Date Received: 10/24/92

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	22.2	B		P
7440-36-0	Antimony	14.8	U		P
7440-38-2	Arsenic	2.9	U	W	F
7440-39-3	Barium	23.4	B		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	1.5	U		P
7440-70-2	Calcium	52100			P
7440-47-3	Chromium	7.4	B		P
7440-48-4	Cobalt	3.3	B		P
7440-50-8	Copper	1.9	U		P
7439-89-6	Iron	13.6	B		P
7439-92-1	Lead	2.2	B		F
7439-95-4	Magnesium	8090			P
7439-96-5	Manganese	1.9	B		P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	2.6	U		P
7440-09-7	Potassium	4880	B		P
7782-49-2	Selenium	3.8	U	W	F
7440-22-4	Silver	3.6	U		P
7440-23-5	Sodium	11700			P
7440-28-0	Thallium	1.3	U		F
7440-62-2	Vanadium	7.8	B		P
7440-66-6	Zinc	5.7	U		P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

010

9713504.0915

TMA/Skinner & Sherman Labs SAMPLE LOG-IN

WORKORDER 5710437 CLIENT Hanford Nav No. SAMPLES: 9

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

COOLER TEMP: 5 oC, or NA

CUSTODIAN B Prowes SDG/BATCH N/A

CUSTODY SEAL: PRESENT/ABSENT/INTACT/NOT CLIENT CASE N210172, N210193

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 10-23-92 10.24.92

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

UNFILTERED

N/A

	CLIENT ID	MATRIX	RECEIVED	PH*	TEST(S) & QC	HOLD TIME U
1	B07KD6	water	10.24.92	2.07/11.08	TM/CN	
2	B07K66			2.20/11.35		
3	B07KJ1			2.15/11.20		
4	B07KM3			2.10/11.15	O.S	
5	B07KE1		10/23/92	2.08/11.18		
6	B07KG1			1.98/11.20		
7	B07K66			2.12/11.19		
8	B07K71			2.17/11.18		
9	B07K91			2.10/11.22		
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						

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

Samples have detectable amounts of Radioactive Material: YES NO ✓

SUBCONTRACT: YES/NO, TO: DATE:

REVIEWED

Complete 10/27/92

* EPA/CLP required Rev 1.6 PAGE: 3P

9713504.0916

PAGE 1 TMA/Norcal CHAIN OF CUSTODY ORD # N2-10-193

RCVD: 10/23/92 DUE: 11/22/92 10/23/92 16:15:13 KEEP: 02/20/93 DISP: S

DASH	SAMPLE IDENTIFICATION		STORED	TESTS for FRACTIONS with work in DEPT: SU and CATEGORY				
01B-W	B07KD6	UNFILTERED	S&S	WH007	WH008	WH010	WH011	WH137
02B-W	B07KG6	UNFILTERED	S&S	WH007	WH008	WH010	WH011	WH137
03B-W	B07KJ1	UNFILTERED	S&S	WH007	WH008	WH010	WH011	WH137
04B-W	B07KM3	UNFILTERED	S&S	WH007	WH008	WH010	WH011	WH137
04F-W	B07KM3 MS	UNFILTERED	S&S	WH007	WH008	WH010	WH011	WH137
04G-W	B07KM3 DUP	UNFILTERED	S&S	WH007	WH008	WH010	WH011	WH137
04H-W	L C S		S&S	WH007	WH008	WH010	WH137	
05A-W	B07KD9	FILTERED	S&S	WH007	WH008	WH010		
06A-W	B07KG9	FILTERED	S&S	WH007	WH008	WH010		
07A-W	B07KJ4	FILTERED	S&S	WH007	WH008	WH010		
08A-W	B07KM6	FILTERED	S&S	WH007	WH008	WH010		
08B-W	B07KM6 MS	FILTERED	S&S	WH007	WH008	WH010		
08C-W	B07KM6 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
[illegible]	10-23-92	SKINNER	10-23-92	[illegible]	10/24/92

9713504.0917

PAGE 1 TMA/Norcal CHAIN OF CUSTODY ORD # N2-10-172

RCVD: 10/22/92 DUE: 11/21/92 10/22/92 16:27:26 KEEP: 02/19/93 DISP: S

DASH	SAMPLE IDENTIFICATION		STORED	TESTS for FRACTIONS with work in DEPT: SU and CATEGORY				
01B-W	B07KF1	UNFILTERED	S&S	WH007	WH008	WH010	WH011	WH137
02B-W	B07KG1	UNFILTERED	S&S	WH007	WH008	WH010	WH011	WH137
03B-W	B07K66	UNFILTERED	S&S	WH007	WH008	WH010	WH011	WH137
04B-W	B07K71	UNFILTERED	S&S	WH007	WH008	WH010	WH011	WH137
05B-W	B07K91	UNFILTERED	S&S	WH007	WH008	WH010	WH011	WH137
05F-W	B07K91 MS	UNFILTERED	S&S	WH007	WH008	WH010	WH011	WH137
05G-W	B07K91 DUP	UNFILTERED	S&S	WH007	WH008	WH010	WH011	WH137
05H-W	L C S		S&S	WH007	WH008	WH010	WH011	WH137
06A-W	B07KF4	FILTERED	S&S	WH007	WH008	WH010		
07A-W	B07KG4	FILTERED	S&S	WH007	WH008	WH010		
08A-W	B07K69	FILTERED	S&S	WH007	WH008	WH010		
09A-W	B07K74	FILTERED	S&S	WH007	WH008	WH010		
10A-W	B07K94	FILTERED	S&S	WH007	WH008	WH010		
10B-W	B07K94 MS	FILTERED	S&S	WH007	WH008	WH010		
10C-W	B07K94 DUP	FILTERED	S&S	WH007	WH008	WH010		
10D-W	L C S		S&S	WH007	WH008	WH010		

RELEASED BY	DATE	TRANSFERRED TO	DATE	RECEIVED BY	DATE
Lyoncone*	10-22-92	SKINNER	10-22-92	[illegible]	10/23/92

9713504.0918

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

SUMMARY DATA REPORT

JAN 1993
RECEIVED
OSM DMO

December 29, 1992

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

Quality Control Narrative

Scope
Nine (9) water samples were submitted to TMA/Skinner & Sherman Laboratories, Inc. on October 23-24, 1992 from TMA/Norcal. The samples were analyzed for the USEPA CLP Target Analyte List metals. The analysis was performed under TMA/Skinner and Sherman work order S210438.

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

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

The mercury and selenium digestion spike recovery exceeded the control limit requirements.

The chromium and selenium laboratory duplicates exceeded the control limit requirements.

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

Respectfully submitted,

TMA/SKINNER & SHERMAN LABORATORIES, INC.

David N. Peterson
Assistant Laboratory Manager

3/26/96 M.H.

9713504.0919

WESTINGHOUSE/HANFORD

1

SAMPLE NUMBER:

B07K69

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: SKINER Case No.: N2-10-193SAS No.: SDG No.: B07K69

Matrix (soil/water): WATER Lab Sample ID: 10438-07S

Level (low/med): LOW Date Received: 10/23/92

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	27.2	B		P
7440-36-0	Antimony	14.8	U		P
7440-38-2	Arsenic	2.2	U	W	F
7440-39-3	Barium	27.6	B		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	1.5	U		P
7440-70-2	Calcium	47000			P
7440-47-3	Chromium	2.6	U	*	P
7440-48-4	Cobalt	1.3	U		P
7440-50-8	Copper	1.9	U		P
7439-89-6	Iron	32.1	B		P
7439-92-1	Lead	2.2	B		F
7439-95-4	Magnesium	7790			P
7439-96-5	Manganese	2.7	B		P
7439-97-6	Mercury	0.10	U	N	CV
7440-02-0	Nickel	2.6	U		P
7440-09-7	Potassium	1820	B		P
7782-49-2	Selenium	3.6	U	WN*	F
7440-22-4	Silver	3.6	U		P
7440-23-5	Sodium	10400			P
7440-28-0	Thallium	1.3	U		F
7440-62-2	Vanadium	2.5	U		P
7440-66-6	Zinc	6.1	B		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

002

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B07K74

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

Lab Code: SKINER Case No.: N2-10-193$AS No.: SDG No.: B07K69

Matrix (soil/water): WATER Lab Sample ID: 10438-08S

Level (low/med): LOW Date Received: 10/23/92

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	20.5	B		P
7440-36-0	Antimony	14.8	U		P
7440-38-2	Arsenic	2.2	U		F
7440-39-3	Barium	31.5	B		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	1.5	U		P
7440-70-2	Calcium	53600			P
7440-47-3	Chromium	9.2	B	*	P
7440-48-4	Cobalt	2.4	B		P
7440-50-8	Copper	1.9	U		P
7439-89-6	Iron	5.3	B		P
7439-92-1	Lead	2.7	B		F
7439-95-4	Magnesium	7080			P
7439-96-5	Manganese	0.90	U		P
7439-97-6	Mercury	0.10	U	N	CV
7440-02-0	Nickel	2.6	U		P
7440-09-7	Potassium	4250	B		P
7782-49-2	Selenium	3.6	U	WN*	F
7440-22-4	Silver	3.6	U		P
7440-23-5	Sodium	11500			P
7440-28-0	Thallium	1.3	U		F
7440-62-2	Vanadium	5.8	B		P
7440-66-6	Zinc	5.7	U		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

003

WESTINGHOUSE/HANFORD

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B07K94

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

Lab Code: SKINER Case No.: N2-10-193SAS No.: SDG No.: B07K69

Matrix (soil/water): WATER Lab Sample ID: 10438-09S

Level (low/med): LOW Date Received: 10/23/92

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	24.4	B		P
7440-36-0	Antimony	14.8	U		P
7440-38-2	Arsenic	3.4	B	W	F
7440-39-3	Barium	9.3	B		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	1.5	U		P
7440-70-2	Calcium	44800			P
7440-47-3	Chromium	15.7		*	P
7440-48-4	Cobalt	2.4	B		P
7440-50-8	Copper	1.9	U		P
7439-89-6	Iron	8.2	B		P
7439-92-1	Lead	2.0	U		F
7439-95-4	Magnesium	9910			P
7439-96-5	Manganese	1.7	B		P
7439-97-6	Mercury	0.10	U	N	CV
7440-02-0	Nickel	2.6	U		P
7440-09-7	Potassium	6490			P
7782-49-2	Selenium	18.0	U	N*	F
7440-22-4	Silver	3.6	U		P
7440-23-5	Sodium	12900			P
7440-28-0	Thallium	1.3	U		F
7440-62-2	Vanadium	11.5	B		P
7440-66-6	Zinc	5.7	U		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SAMPLE NUMBER:

B07KD9

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: SKINER Case No.: N2-10-193$AS No.: SDG No.: B07K69

Matrix (soil/water): WATER Lab Sample ID: 10438-01S

Level (low/med): LOW Date Received: 10/24/92

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	102	B		P
7440-36-0	Antimony	14.8	U		P
7440-38-2	Arsenic	3.9	B		F
7440-39-3	Barium	9.3	B		P
7440-41-7	Beryllium	0.80	B		P
7440-43-9	Cadmium	1.5	U		P
7440-70-2	Calcium	33900			P
7440-47-3	Chromium	34.0		*	P
7440-48-4	Cobalt	1.9	B		P
7440-50-8	Copper	3.3	B		P
7439-89-6	Iron	81.3	B		P
7439-92-1	Lead	2.0	U		F
7439-95-4	Magnesium	10300			P
7439-96-5	Manganese	1.7	B		P
7439-97-6	Mercury	0.10	U	N	CV
7440-02-0	Nickel	3.2	B		P
7440-09-7	Potassium	7030			P
7782-49-2	Selenium	3.6	U	WN*	F
7440-22-4	Silver	3.6	U		P
7440-23-5	Sodium	15400			P
7440-28-0	Thallium	1.3	U	W	F
7440-62-2	Vanadium	30.0	B		P
7440-66-6	Zinc	5.7	U		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

005

WESTINGHOUSE/HANFORD

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B07KF4

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

Lab Code: SKINER Case No.: N2-10-193$AS No.: SDG No.: B07K69

Matrix (soil/water): WATER Lab Sample ID: 10438-05S

Level (low/med): LOW Date Received: 10/23/92

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	17.5	B		P
7440-36-0	Antimony	14.8	U		P
7440-38-2	Arsenic	4.1	B		F
7440-39-3	Barium	10.7	B		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	1.5	U		P
7440-70-2	Calcium	35900			P
7440-47-3	Chromium	2.6	U	*	P
7440-48-4	Cobalt	1.3	U		P
7440-50-8	Copper	1.9	U		P
7439-89-6	Iron	64.8	B		P
7439-92-1	Lead	2.0	U		F
7439-95-4	Magnesium	10600			P
7439-96-5	Manganese	0.90	U		P
7439-97-6	Mercury	0.10	U	N	CV
7440-02-0	Nickel	2.6	U		P
7440-09-7	Potassium	5700			P
7782-49-2	Selenium	3.6	U	WN*	F
7440-22-4	Silver	3.6	U		P
7440-23-5	Sodium	21000			P
7440-28-0	Thallium	1.3	U		F
7440-62-2	Vanadium	14.8	B		P
7440-66-6	Zinc	6.9	B		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

006

WESTINGHOUSE/HANFORD

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B07KG4

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

Lab Code: SKINER Case No.: N2-10-193SAS No.: SDG No.: B07K69

Matrix (soil/water): WATER Lab Sample ID: 10438-06S

Level (low/med): LOW Date Received: 10/23/92

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	14.7	U		P
7440-36-0	Antimony	14.8	U		P
7440-38-2	Arsenic	3.5	B		F
7440-39-3	Barium	19.4	B		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	1.5	U		P
7440-70-2	Calcium	34600			P
7440-47-3	Chromium	2.6	U	*	P
7440-48-4	Cobalt	1.4	B		P
7440-50-8	Copper	1.9	U		P
7439-89-6	Iron	4.2	B		P
7439-92-1	Lead	3.4			F
7439-95-4	Magnesium	9160			P
7439-96-5	Manganese	0.90	U		P
7439-97-6	Mercury	0.10	U	N	CV
7440-02-0	Nickel	2.6	U		P
7440-09-7	Potassium	5220			P
7782-49-2	Selenium	3.6	U	WN*	F
7440-22-4	Silver	3.6	U		P
7440-23-5	Sodium	14200			P
7440-28-0	Thallium	1.3	U	W	F
7440-62-2	Vanadium	12.7	B		P
7440-66-6	Zinc	5.7	U		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: B07KG9

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

Lab Code: SKINER Case No.: N2-10-193$AS No.: SDG No.: B07K69

Matrix (soil/water): WATER Lab Sample ID: 10438-02S

Level (low/med): LOW Date Received: 10/24/92

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	38.3	B		P
7440-36-0	Antimony	14.8	U		P
7440-38-2	Arsenic	2.7	B		F
7440-39-3	Barium	39.5	B		P
7440-41-7	Beryllium	0.53	B		P
7440-43-9	Cadmium	1.5	U		P
7440-70-2	Calcium	40500			P
7440-47-3	Chromium	2.6	U	*	P
7440-48-4	Cobalt	2.4	B		P
7440-50-8	Copper	1.9	U		P
7439-89-6	Iron	24.8	B		P
7439-92-1	Lead	2.5	B		F
7439-95-4	Magnesium	10000			P
7439-96-5	Manganese	1.0	B		P
7439-97-6	Mercury	0.10	U	N	CV
7440-02-0	Nickel	2.6	U		P
7440-09-7	Potassium	5280			P
7782-49-2	Selenium	3.6	U	WN*	F
7440-22-4	Silver	3.6	U		P
7440-23-5	Sodium	16800			P
7440-28-0	Thallium	1.3	U		F
7440-62-2	Vanadium	17.2	B		P
7440-66-6	Zinc	5.7	U		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

008

SAMPLE NUMBER:

B07KJ4

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: SKINER Case No.: N2-10-193$AS No.: SDG No.: B07K69

Matrix (soil/water): WATER Lab Sample ID: 10438-03S

Level (low/med): LOW Date Received: 10/24/92

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	19.7	B		P
7440-36-0	Antimony	14.8	U		P
7440-38-2	Arsenic	2.2	B		F
7440-39-3	Barium	22.2	B		P
7440-41-7	Beryllium	0.77	B		P
7440-43-9	Cadmium	1.5	U		P
7440-70-2	Calcium	51400			P
7440-47-3	Chromium	8.7	B	*	P
7440-48-4	Cobalt	1.3	U		P
7440-50-8	Copper	1.9	U		P
7439-89-6	Iron	12.6	B		P
7439-92-1	Lead	5.5			F
7439-95-4	Magnesium	7970			P
7439-96-5	Manganese	2.5	B		P
7439-97-6	Mercury	0.10	U	N	CV
7440-02-0	Nickel	2.6	U		P
7440-09-7	Potassium	4790	B		P
7782-49-2	Selenium	3.6	U	N*	F
7440-22-4	Silver	3.6	U		P
7440-23-5	Sodium	11700			P
7440-28-0	Thallium	1.3	U	W	F
7440-62-2	Vanadium	7.4	B		P
7440-66-6	Zinc	5.7	U		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

009

WESTINGHOUSE/HANFORD

1

SAMPLE NUMBER:

B07KM6

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: SKINER Case No.: N2-10-193$AS No.: SDG No.: B07K69

Matrix (soil/water): WATER Lab Sample ID: 10438-04S

Level (low/med): LOW Date Received: 10/24/92

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	30.3	B		P
7440-36-0	Antimony	14.8	U		P
7440-38-2	Arsenic	2.2	U		F
7440-39-3	Barium	24.0	B		P
7440-41-7	Beryllium	0.52	B		P
7440-43-9	Cadmium	1.5	U		P
7440-70-2	Calcium	53200			P
7440-47-3	Chromium	22.3		*	P
7440-48-4	Cobalt	3.8	B		P
7440-50-8	Copper	1.9	U		P
7439-89-6	Iron	68.1	B		P
7439-92-1	Lead	2.0	U		F
7439-95-4	Magnesium	8240			P
7439-96-5	Manganese	5.3	B		P
7439-97-6	Mercury	0.10	U	N	CV
7440-02-0	Nickel	14.1	B		P
7440-09-7	Potassium	4960	B		P
7782-49-2	Selenium	11.0		+N*	F
7440-22-4	Silver	3.6	U		P
7440-23-5	Sodium	12000			P
7440-28-0	Thallium	1.3	U		F
7440-62-2	Vanadium	8.3	B		P
7440-66-6	Zinc	12.9	B		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

010

Sampled 10/20/92

TMA/Skinner & Sherman Labs SAMPLE LOG-IN
WORKORDER S210438 CLIENT Hanford Nor No. SAMPLES:
PROTCL CLP TURNARND 35 Days 9
COOLER TEMP: 5 oC, or NA (Soil) (Water) (Specify Othe
CUSTODIAN B. Prinell SDG/BATCH N/A
CUSTODY SEAL: PRESENT/ABSENT/INTACT/NOT CLIENT CASE N210193, N21017
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 10/27/92 BP
SAMPLE LABELS AGREE WITH CHAIN OF CUSTODY INFO? YES/NO (COMMENT)
CLIENT PAPERWORK AGREES WITH SAMPLES & COC? YES /NO (COMMENT)

SHIPMENT DATES 10-23-92 10-24-92
LIST ANY DATE WITH PAPERWORK/SHIPMENT PROBLEMS & SPECIFY THE PROBLEM:

FILTERED

	CLIENT ID	MATRIX	RECEIVED	PH*	TEST(S) & QC	HOLD TIME
1	B07KD9	water	10-24-92 (10-23-92 BP)	2.00	TM	
2	B07K69	↓	↓	2.06	↓	
3	B07KJ4			2.15		
4	B07KM6		↓	2.10	D.S	
5	B07KF4		10-23-92	2.08		
6	B07KG4		↓	2.17		
7	B07K69			2.14		
8	B07K74	↓	↓	2.15	↓	
9	B07K91	water	10-23-92	2.18	TM	
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						

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

SUBCONTRACT: YES/NO TO: DATE:

REVIEWED

Complete BP 10/27/92

151

* EPA/CLP required Rev 1.6 PAGE:

9713504.0929

PAGE 1 TMA/Norcal CHAIN OF CUSTODY ORD # N2-10-193

RCVD: 10/23/92 DUE: 11/22/92 10/23/92 16:15:13 KEEP: 02/20/93 DISP: S

DASH	SAMPLE IDENTIFICATION		STORED	TESTS for FRACTIONS with work in DEPT: SU and CATEGORY				
01B-W	B07KD6	UNFILTERED	S&S	WH007	WH008	WH010	WH011	WH137
02B-W	B07KG6	UNFILTERED	S&S	WH007	WH008	WH010	WH011	WH137
03B-W	B07KJ1	UNFILTERED	S&S	WH007	WH008	WH010	WH011	WH137
04B-W	B07KM3	UNFILTERED	S&S	WH007	WH008	WH010	WH011	WH137
04F-W	B07KM3 MS	UNFILTERED	S&S	WH007	WH008	WH010	WH011	WH137
04G-W	B07KM3 DUP	UNFILTERED	S&S	WH007	WH008	WH010	WH011	WH137
04H-W	L C S		S&S	WH007	WH008	WH010	WH137	
05A-W	B07KD9	FILTERED	S&S	WH007	WH008	WH010		
06A-W	B07KG9	FILTERED	S&S	WH007	WH008	WH010		
07A-W	B07KJ4	FILTERED	S&S	WH007	WH008	WH010		
08A-W	B07KM6	FILTERED	S&S	WH007	WH008	WH010		
08B-W	B07KM6 MS	FILTERED	S&S	WH007	WH008	WH010		
08C-W	B07KM6 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
Ryan Cumoto	10-23-92	SKINNER	10-23-92	[illegible]	10/24/92

9713504.0930

PAGE 1 TMA/Norcal CHAIN OF CUSTODY ORD # N2-10-172

RCVD: 10/22/92 DUE: 11/21/92 10/22/92 16:27:26 KEEP: 02/19/93 DISP: S

DASH	SAMPLE IDENTIFICATION		STORED	TESTS for FRACTIONS with work in DEPT: SV and CATEGORY				
01B-W	B07KF1	UNFILTERED	S&S	WH007	WH008	WH010	WH011	WH137
02B-W	B07KG1	UNFILTERED	S&S	WH007	WH008	WH010	WH011	WH137
03B-W	B07K66	UNFILTERED	S&S	WH007	WH008	WH010	WH011	WH137
04B-W	B07K71	UNFILTERED	S&S	WH007	WH008	WH010	WH011	WH137
05B-W	B07K91	UNFILTERED	S&S	WH007	WH008	WH010	WH011	WH137
05F-W	B07K91 MS	UNFILTERED	S&S	WH007	WH008	WH010	WH011	WH137
05G-W	B07K91 DUP	UNFILTERED	S&S	WH007	WH008	WH010	WH011	WH137
05H-W	L C S		S&S	WH007	WH008	WH010	WH011	WH137
06A-W	B07KF4	FILTERED	S&S	WH007	WH008	WH010		
07A-W	B07KG4	FILTERED	S&S	WH007	WH008	WH010		
08A-W	B07K69	FILTERED	S&S	WH007	WH008	WH010		
09A-W	B07K74	FILTERED	S&S	WH007	WH008	WH010		
10A-W	B07K94	FILTERED	S&S	WH007	WH008	WH010		
10B-W	B07K94 MS	FILTERED	S&S	WH007	WH008	WH010		
10C-W	B07K94 DUP	FILTERED	S&S	WH007	WH008	WH010		
10D-W	L C S		S&S	WH007	WH008	WH010		

RELEASED BY	DATE	TRANSFERRED TO	DATE	RECEIVED BY	DATE
Lyon Cone	10-22-92	SKINNER	10-22-92	[illegible]	10/23/92