ENCLOSURE 4

ADVANCED NUCLEAR FUELS CORPORATION

2101 HORN RAPIDS ROAD, PO BOX 130, RICHLAND, WA 99352-0130
(509) 375-8100 TELEX 5-2878

REGULATORY COMPLIANCE

August 6, 1990
CWM:90:115

bc: RG Frain w/o
JW Fredericks w/o
SR Lockhaven w/o
WE Stavig w/o
File/LB

U.S. Department of Energy
Attn: Mr. Bob Stewart
Environmental Restoration Division
Richland Operations Office
P. O. Box 550
Richland, WA 99352

Dear Mr. Stewart:

HYDROLOGY AND GROUNDWATER ANALYTICAL DATA

The purpose of this letter is to transmit certain hydrology and groundwater analytical data as previously agreed by the Department of Energy (DOE) and Advanced Nuclear Fuels Corporation (ANF). Figure I displays the location of and identifies the various test wells in the ANF grid system. Table I tabulates the Lambert Grid coordinate for each test well and the elevation above mean sea level of the water table as measured at each well. There are also two additional enclosures which are an analytical data sheet from Northwest Health Services, Inc., and analytical data and quality assurance information from Pacific Northwest Environmental Laboratories (PNEL) (seven packages). The PNEL analytical data consists of the following items:

- Inorganic Sample Data
- Cyanide Sample Data
- Volatile Data Package
- Semi-volatile Data Package
- Pesticide Data Package
- Data Summary Package
- Floppy Disk Data Package

There are certain radioanalyses which are not complete as yet. That data will be forwarded when received.

Very truly yours,

CW Malody

Charles W. Malody, Manager

jrs

MAY 1991
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EDMC

FIGURE 1

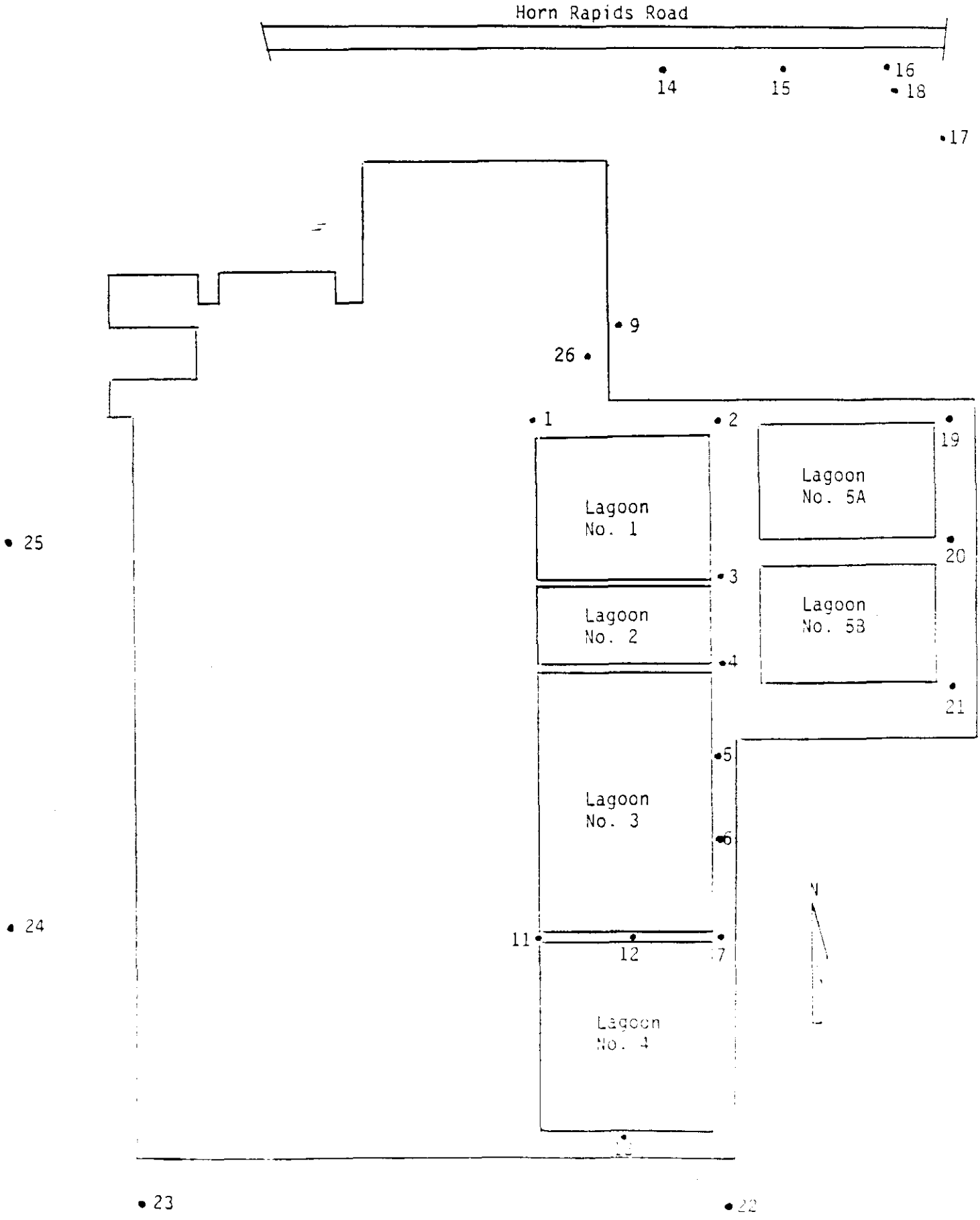
Horn Rapids Road
14
15
16
18
17
9
26
1
2
19
Lagoon No. 1
Lagoon No. 5A
25
20
3
Lagoon No. 2
Lagoon No. 5B
4
21
5
Lagoon No. 3
6
N
24
11
12
7
Lagoon No. 4
23
22

TABLE 1

ANF Well No.	Location (Lambert Grid)		Elevation of Water Table Above Mean Sea Level (7/19/90)
1	N372769.0	E2303158.0	353.50
2	N372769.0	E2303443.0	353.52
3	N372526.5	E2303443.0	353.55
4	N372385.0	E2303443.0	353.56
5	N372255.0	E2303443.0	353.59
6	N372141.0	E2303443.0	353.62
7	N371966.7	E2303443.0	353.57
9	N372941.0	E2303289.0	353.53
11	N371981.0	E2303182.0	353.58
12	N371986.0	E2303306.8	353.65
13	N371713.7	E2303306.8	353.62
14	N373448.0	E2303389.5	353.35
15	N373443.9	E2303529.0	353.36
16	N373447.4	E2303693.7	353.29
19	N372774.2	E2303767.2	353.42
20	N372581.4	E2303767.2	353.53
21	N372371.7	E2303767.7	353.57
22	N371586.1	E2303410.0	353.63
23	N371555.1	E2302498.8	353.75
24	N372116.9	E2302281.9	353.71
25	N372619.6	E2302040.7	353.88
26	N372884.2	E2303261.6	353.53

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JUN 1 2 1990

REGULATORY COMPLIANCE

NHS, INC.
805 Goethals Drive • Richland, WA 99352 • (509) 943-0802
a subsidiary of Hanford Environmental Health Foundation

June 11, 1990

CO# 90-0376

Advanced Nuclear Fuels
2101 Horn Rapids Rd.
Richland, WA 99352

Attn: Steve Lockhaven

WATER ANALYSIS OF TEST WELLS

The water samples received May 24, 1990, have been analyzed for anions, turbidity and coliform in accordance with Standard Methods for the Examination of Water and Wastewater, 16th Ed. Results follow:

SAMPLE ID	PARAMETER	RESULT
Test Well #14	Turbidity	<2 NTU
	Fluoride	4.4 µg/mL
	Chloride	33.1 µg/mL
	NO_3-N	79.5 µg/mL
	Sulfate	81.7 µg/mL
	coliform	<2 colonies/100mL
Test Well #15	Turbidity	<2 NTU
	Fluoride	11.5 µg/mL
	Chloride	16.3 µg/mL
	NO_3-N	61.4 µg/mL
	Sulfate	111.4 µg/mL
	coliform	<2 colonies/100mL
Test Well #16	Turbidity	18.5 NTU
	Fluoride	3.9 µg/mL
	Chloride	9.9 µg/mL
	NO_3-N	42.7 µg/mL
	Sulfate	51.4 µg/mL
	coliform	<2 colonies/100mL

No nitrite (<0.06 mg/L NO_2-N) or phosphate (<0.5 mg/L) was found in any of the samples.

If you have any questions concerning this report, please contact NHS, Inc.

S. J. Crowner
NHS, Inc.

NO_3-N limit = 10 mg/mL

Fluoride limit = 4 mg/mL

Coliform limit = zero

Sulfate limit = 250 mg/mL

Chloride limit = [illegible]

NATIONAL EXPRESS LABORATORIES, INC.
NATEX
Pacific Northwest Environmental Laboratory, Inc.
3820 159th Avenue, N.E.
Redmond, WA 98052
(206) 885-0083
FAX (206) 867-2214

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JUL 2 1990
REGULATORY COMPLIANCE

TO: Steven Lockhaven, Advanced Nuclear Fuels Corp.

FROM: Jim Goeben

DATE: July 20, 1990

SUBJECT: REPLACEMENT OF INORGANIC ANALYSES DATA PACKAGE COVER PAGE

Attached find a replacement Cover Page for the Inorganic Analyses Data Package for PNELI Case 2468 submitted on July 6, 1990.

Please replace the originally submitted, appropriately numbered, page with the attached.

Thank you for your assistance.

CYANIDE

There were no anomalies associated with the preparation or analyses of these samples.

Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designee, as verified by the following signature.

Sincerely,

\NAR-2468
Enclosures

PACIFIC NORTHWEST ENVIRONMENTAL LABORATORY

METHOD REFERENCE

Analytical Methods for Volatiles	Environmental Protection Agency, Contract Laboratory Program, Organic Statement of Work, Exhibit-D, February 1988.
Analytical Methods for Semi-Volatiles	Environmental Protection Agency, Contract Laboratory Program, Organic Statement of Work, Exhibit-D, February 1988.
Analytical Methods for Pesticides/PCBs	Environmental Protection Agency, Contract Laboratory Program, Organic Statement of Work, Exhibit-D, February 1988.
Inductively Coupled Plasma-Atomic Emission Spectrometric Method	Environmental Protection Agency, Contract Laboratory Program, Inorganic Statement of Work, Exhibit-D, February 1988.
Cold Vapor Methods for Mercury Analysis	Environmental Protection Agency, Contract Laboratory Program, Inorganic Statement of Work, Exhibit-D, February 1988.
Atomic Absorption Methods, Furnace Technique	Environmental Protection Agency, Contract Laboratory Program, Inorganic Statement of Work, Exhibit-D, February 1988.
Methods for Cyanide Analysis	Environmental Protection Agency, Contract Laboratory Program, Inorganic Statement of Work, Exhibit-D, February 1988.

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COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: G S E L I Contract:

Lab Code: GULF Case No.: SAS No.: SDG No.: A4681d

SOW No.: 7/88

Analysis	EPA Sample No.	PNEL Lab Sample ID	GSEL Lab Sample ID.	Client ID
dissolved Metals	A4681d	2468-01F	EGQ-02	well #14
Dup	A4681dD		EGQ-02D	
Spike	A4681dS		EGQ-02S	
Total Metals	A4681t	2468-01E	EGQ-01	
Dup	A4681tD		EGQ-01D	
Spike	A4681tS		EGQ-01S	
dissolved Metals	A4682d	2468-02F	EGQ-04	well #15
total Metals	A4682t	2468-02E	EGQ-03	well #15
dissolved Metals	A4683d	2468-03F	EGQ-06	well #16
total Metals	A4683t	2468-03E	EGQ-05	well #16

Were ICP interelement corrections applied? Yes/No NO

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

Comments:

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

Signature: S. Denise Jerome Name: 7/3/90 S. Denise Jerome

Date: 7/3/90 Title: Water Quality Manager

004001

NATIONAL EXPRESS LABORATORIES, INC.

NATEX

Pacific Northwest Environmental Laboratory, Inc.
3820 159th Avenue, N.E.
Redmond, WA 98052
(206) 885-0083
FAX (206) 867-2214

July 6, 1990

Steven Lockhaven
Advanced Nuclear Fuels Corp.
2101 Horn Rapids Road
Richland WA 99352

NARRATIVE FOR PNEL 2468
Submission from Pacific Northwest Environmental Laboratory

Enclosed are data summary sheets and supporting documentation for the four samples received on June 6, 1990 of the R26230 project. The field identification numbers, corresponding lab identification numbers, and dates collected are listed below.

FIELD ID	LAB ID	DATE COLLECTED
Well #14	2468-01	06-04-90
Well #15	2468-02	06-04-90
Well #16	2468-03	06-04-90
PNEL Trip Blanks	2468-04	06-04-90

Listed below are anomalies and narratives associated with the receipt and/or analysis of these samples.

VOLATILES

No problems were encountered during the analysis of these samples.

SEMIVOLATILES

No problems were encountered during the extraction and analysis of these samples and their associated QC.

PEST/PCB

This case consistes of 3 water samples and QC. No target compounds were found above the CRQL and no anomalies noted.

INORGANIC

Pre-digestion spike was out of control for silver, a post-digestion spike was run.

No other problems were encountered.

PACIFIC NORTHWEST ENVIRONMENTAL LABORATORY

DATA REPORTING QUALIFIERS

Some of these qualifiers may appear in this analytical data report. Soil samples are analyzed and reported on a dry weight basis unless otherwise noted.

ORGANICS QUALIFIERS

A - This flag indicates that a TIC is a suspected aldol-condensation product.

B - Indicates compound was found in the associated blank as well as in the sample.

C - This flag applies to pesticide results where the identification has been confirmed by GC/MS.

D - This flag identifies all compounds identified in an analysis at a secondary dilution factor.

E - This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis.

J - Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicate the presence of a target compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.

M - Indicates value is taken from a medium level analysis.

ND- Not detected. Detection limit shown in parentheses.

NQ- Not quantitated as...

U - Indicates compound was analyzed for but not detected at the given detection limit. The sample quantitation limit was corrected for dilution and for percent moisture, when applicable.

X - Other specific flags and footnotes may be required to properly define the results. If more than two qualifiers are required for a sample result, the "X" flag combines several flags, as needed. For instance, the "X" flag might combine the "A," "B," and "D" flags for some sample.

* - Indicates spiked compounds used for MS/MSD analysis.

INORGANICS QUALIFIERS

NA- Relative percent difference calculation is not applicable to analytes when not detected.

NC- Not calculated when analyte is not detected.

NS- Not calculated when sample concentration of analyte exceeds spike level by a factor of four or more.

U - Indicates that analyte was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

INORGANICS METHOD QUALIFIERS

CV- Manual Cold Vapor AA

F - FURNACE AA

P - ICP

PNELI

CHAIN-OF-CUSTODY / REQUEST FOR ANALYSIS

Control No.

Laboratory Contact: Susan M Winter

Client Name: Advanced Nuclear Fuels

Send Lab Report To: ANF

Client Number:

Bill To: Advanced nuclear Fuels
2101 Horn Rapids Rd.
Richland WA 99352

Date Report Required:

Client Contact: Steve Lockhaven

PO No.: R 26230

Client Contact Phone: (509) 375-8228

Carrier No.:

PNEL 2468

	Sample Number	Sample Location and Description	Date Collected	Time Collected	Sample Matrix	Number of Containers	VOA 8240	BNA 8270	Pest/PCB 8080	Cyanide	Total Metals	Diss. Metals	Comments
1	14	well #14 water	6-4-90	12:00	water	19	✓	✓	✓	✓	✓	✓	sample ok
2	15	well #15 water	6-4-90	13:00	water	7	✓	✓	✓	✓	✓	✓	↓
3	16	well #16 water	6-4-90	14:00	water	7	✓	✓	✓	✓	✓	✓	↓
							A	B	C	D	E	F	
4	PNEL	Trip Blanks											1 of 4 has Airbubble
										~~C~~	~~E~~	~~F~~	PJ 6/6/90
										~~D~~	~~D~~	~~D~~	

Special Instructions: Possible Sample Hazards:

Was Preservative Used? No ☐ Yes ☒ What Kind? What Analysis?

1. Relinquished By	Steve Lockhaven	Date 6-5-90	Time 09:00	Received By		Date	Time
2. Relinquished By	Airborne	Date 6/6/90	Time 1015	Received By	[illegible]	Date 6/6/90	Time 1015
3. Relinquished By		Date	Time	Received By		Date	Time
4. Relinquished By		Date	Time	Received By		Date	Time

DATA SUMMARY PACKAGE

A. Inorganics Data Summary

1) Analysis Data Sheets
   - o Form I - IN

2) Method Blank Summary
   - o Form III - IN

3) Spike Sample Data Sheets
   - o Form V (Part 1) - IN
   - o Form V (Part 2) - IN

4) Duplicate Data Sheets
   - o Form VI - IN

5) Laboratory Control Sample
   - o Form VII - IN

B. Organics Data Summary by Fraction

1) Analysis Data Sheets
   - o Form I
   - o Form I - TIC

2) Surrogate Recovery Data Sheets
   - o Form II

3) MS/MSD Recovery Data Sheets
   - o Form III

4) Method Blank Summary
   - o Form IV

5) Method Blank Analysis Data Sheets
   - o Form I
   - o Form I - TIC

6) Internal Standard Area Data - VOA, Semi-VOA Only
   - o Form VIII

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1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

A4681t

Lab Name: G S E L I Contract:

Lab Code: GULF Case No.: SAS No.: SDG No.: A4681d

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

Level (low/med): TOT Date Received: 06/08/90

% 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	251			P
7440-36-0	Antimony	32.0	U		P
7440-38-2	Arsenic	5.5	B		F
7440-39-3	Barium	181	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	4.0	B		P
7440-70-2	Calcium	99700			P
7440-47-3	Chromium	4.0	U		P
7440-48-4	Cobalt	12.3	B		P
7440-50-8	Copper	13.8	B		P
7439-89-6	Iron	437		E*	P
7439-92-1	Lead	3.7			F
7439-95-4	Magnesium	26000			P
7439-96-5	Manganese	1.0	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	19.2	B		P
7440-09-7	Potassium	18000		E	P
7782-49-2	Selenium	2.0	U		F
7440-22-4	Silver	7.8	B	N	P
7440-23-5	Sodium	40900		E	P
7440-28-0	Thallium	3.0	U	W	F
7440-62-2	Vanadium	34.5	B		P
7440-66-6	Zinc	244		N*	P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

000002

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

A4681d

Lab Name: G S E L I Contract:

Lab Code: GULF Case No.: SAS No.: SDG No.: A4681d

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

Level (low/med): DIS Date Received: 06/08/90

% 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	147	B		P
7440-36-0	Antimony	32.0	U		P
7440-38-2	Arsenic	4.7	B		F
7440-39-3	Barium	185	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	2.0	U		P
7440-70-2	Calcium	95800			P
7440-47-3	Chromium	4.0	U		P
7440-48-4	Cobalt	8.0	U		P
7440-50-8	Copper	11.7	B		P
7439-89-6	Iron	7.0	B		P
7439-92-1	Lead	2.2	B	W	F
7439-95-4	Magnesium	24200			P
7439-96-5	Manganese	1.0	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	22.9	B		P
7440-09-7	Potassium	17800		E	P
7782-49-2	Selenium	2.0	U		F
7440-22-4	Silver	7.1	B	N	P
7440-23-5	Sodium	41100		E	P
7440-28-0	Thallium	3.0	U	W	F
7440-62-2	Vanadium	33.4	B		P
7440-66-6	Zinc	92.8			P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

000001

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

A4682t

Lab Name: G S E L I Contract:

Lab Code: GULF Case No.: SAS No.: SDG No.: A4681d

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

Level (low/med): TOT Date Received: 06/08/90

% 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	338			P
7440-36-0	Antimony	32.0	U		P
7440-38-2	Arsenic	5.2	B	W	F
7440-39-3	Barium	104	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	2.0	U		P
7440-70-2	Calcium	55400			P
7440-47-3	Chromium	4.0	U		P
7440-48-4	Cobalt	13.4	B		P
7440-50-8	Copper	15.9	B		P
7439-89-6	Iron	778		E*	P
7439-92-1	Lead	2.3	B		F
7439-95-4	Magnesium	16400			P
7439-96-5	Manganese	4.7	B		P
7439-97-6	Mercury	1.1		M	CV
7440-02-0	Nickel	16.0	B		P
7440-09-7	Potassium	14600		E	P
7782-49-2	Selenium	2.0	U		F
7440-22-4	Silver	7.2	B	N	P
7440-23-5	Sodium	38700		E	P
7440-28-0	Thallium	3.0	U		F
7440-62-2	Vanadium	28.2	B		P
7440-66-6	Zinc	75.5		N*	P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

000004

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

A4682d

Lab Name: G S E L I Contract:

Lab Code: GULF Case No.: SAS No.: SDG No.: A4681d

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

Level (low/med): DIS Date Received: 06/08/90

% 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	105	B		P
7440-36-0	Antimony	32.0	U		P
7440-38-2	Arsenic	4.8	B	W	F
7440-39-3	Barium	106	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	2.0	U		P
7440-70-2	Calcium	55700			P
7440-47-3	Chromium	4.0	U		P
7440-48-4	Cobalt	21.2	B		P
7440-50-8	Copper	10.4	B		P
7439-89-6	Iron	5.0	U		P
7439-92-1	Lead	1.0	U	W	F
7439-95-4	Magnesium	17000			P
7439-96-5	Manganese	1.0	U		P
7439-97-6	Mercury	1.5		M	CV
7440-02-0	Nickel	16.0	B		P
7440-09-7	Potassium	14200		E	P
7782-49-2	Selenium	2.0	U		F
7440-22-4	Silver	6.8	B	N	P
7440-23-5	Sodium	37100		E	P
7440-28-0	Thallium	3.0	U		F
7440-62-2	Vanadium	27.8	B		P
7440-66-6	Zinc	72.2			P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

000003

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

A4683t

Lab Name: G S E L I Contract:

Lab Code: GULF Case No.: SAS No.: SDG No.: A4681d

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

Level (low/med): TOT Date Received: 06/08/90

% 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	118	B		P
7440-36-0	Antimony	43.8	B		P
7440-38-2	Arsenic	3.4	B	W	F
7440-39-3	Barium	91.9	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	2.6	B		P
7440-70-2	Calcium	52100			P
7440-47-3	Chromium	4.0	U		P
7440-48-4	Cobalt	18.2	B		P
7440-50-8	Copper	13.1	B		P
7439-89-6	Iron	5570		E*	P
7439-92-1	Lead	2.0	B		F
7439-95-4	Magnesium	14500			P
7439-96-5	Manganese	85.6			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	21.5	B		P
7440-09-7	Potassium	9460		E	P
7782-49-2	Selenium	2.0	U		F
7440-22-4	Silver	6.4	B	N	P
7440-23-5	Sodium	19000		E	P
7440-28-0	Thallium	3.0	U		F
7440-62-2	Vanadium	47.7	B		P
7440-66-6	Zinc	191		N*	P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

000006

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

A4683d

Lab Name: G S E L I Contract:

Lab Code: GULF Case No.: SAS No.: SDG No.: A4681d

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

Level (low/med): DIS Date Received: 06/08/90

% 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	90.7	B		P
7440-36-0	Antimony	32.0	U		P
7440-38-2	Arsenic	3.0	U		F
7440-39-3	Barium	77.2	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	2.0	U		P
7440-70-2	Calcium	50600			P
7440-47-3	Chromium	4.0	U		P
7440-48-4	Cobalt	11.7	B		P
7440-50-8	Copper	15.2	B		P
7439-89-6	Iron	2300			P
7439-92-1	Lead	1.0	U		F
7439-95-4	Magnesium	14600			P
7439-96-5	Manganese	126			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	10.0	U		P
7440-09-7	Potassium	9280		E	P
7782-49-2	Selenium	2.0	U		F
7440-22-4	Silver	12.8		N	P
7440-23-5	Sodium	19100		E	P
7440-28-0	Thallium	3.0	U		F
7440-62-2	Vanadium	31.8	B		P
7440-66-6	Zinc	55.4			P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

000005

U.S. EPA - CLP

3
BLANKS

Lab Name: G S E L I Contract:

Lab Code: GULF Case No.: SAS No.: SDG No.: A4681d

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum	49.4	B	130.0	B	168.3	B	63.9	B	160.2	B	P
Antimony	32.0	U	32.0	U	32.0	U	52.4	B	32.0	U	P
Arsenic	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U	F
Barium	3.0	U	12.6	B	6.3	B	11.8	B	9.3	B	P
Beryllium	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	P
Cadmium	3.7	B	4.8	B	2.0	U	2.0	U	3.9	B	P
Calcium	14.0	U	14.0	U	14.2	B	14.0	U	20.1	B	P
Chromium	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U	P
Cobalt	13.9	B	9.8	B	8.0	U	20.6	B	16.7	B	P
Copper	2.0	U	2.3	B	4.5	B	10.1	B	11.2	B	P
Iron	-15.8	B	5.0	U	21.9	B	-7.9	B	11.4	B	P
Lead					-1.2	B	1.0	U			F
Magnesium	53.1	B	45.0	U	69.4	B	45.0	U	45.0	U	P
Manganese	-6.1	B	1.0	U	1.0	U	-5.1	B	-9.9	B	P
Mercury	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	CV
Nickel	19.5	B	16.1	B	14.8	B	35.9	B	22.5	B	P
Potassium	180.8	B	75.0	U	75.0	U	97.2	B	476.8	B	P
Selenium	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	F
Silver	7.5	B	4.6	B	8.3	B	3.0	B	4.3	B	P
Sodium	-35.9	B	-41.1	B	-113.4	B	-124.1	B	-51.4	B	P
Thallium	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U	F
Vanadium	24.4	B	42.3	B	39.5	B	24.9	B	33.4	B	P
Zinc	-5.6	B	-8.5	B	-11.0	B	-10.9	B	-9.4	B	P
Cyanide											

000007

U.S. EPA - CLP

3
BLANKS

Lab Name: G S E L I Contract:

Lab Code: GULF Case No.: SAS No.: SDG No.: A4681d

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum			37.0	U	37.0	U					P
Antimony			32.0	U	40.8	B					P
Arsenic			3.0	U							F
Barium			10.0	B	8.6	B					P
Beryllium			1.0	U							P
Cadmium			2.0	U	2.0	U					P
Calcium			14.0	U							P
Chromium											
Cobalt			15.1	B	21.4	B					P
Copper			16.7	B							P
Iron			-6.1	B							P
Lead			-1.4	B							P
Magnesium			51.0	B							P
Manganese			-5.2	B							P
Mercury											
Nickel			25.4	B	26.2	B					P
Potassium			90.5	B							P
Selenium			2.0	U							P
Silver			6.5	B	3.4	B					P
Sodium			-105.4	B							P
Thallium			3.0	U							P
Vanadium			31.6	B							P
Zinc			-11.4	B							P
Cyanide											

000008

U.S. EPA - CLP

5A
SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

A4681tS

Lab Name: G S E L I Contract:

Lab Code: GULF Case No.: SAS No.: SDG No.: A4681d

Matrix (soil/water): WATER Level (low/med): TOT
% Solids for Sample: 0.0

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

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum	75-125	1872.5000		250.9000		2000.00	81.1		P
Antimony	75-125	463.5000		32.0000	U	500.00	92.7		P
Arsenic	75-125	43.6400		5.4600	B	40.00	95.4		F
Barium	75-125	2085.3000		181.1000	B	2000.00	95.2		P
Beryllium	75-125	45.1000		1.0000	U	50.00	90.2		P
Cadmium	75-125	49.4000		4.0000	B	50.00	90.8		P
Calcium									NR
Chromium	75-125	198.8000		4.0000	U	200.00	99.4		P
Cobalt	75-125	455.2000		12.3000	B	500.00	88.6		P
Copper	75-125	232.8000		13.8000	B	250.00	87.6		P
Iron	75-125	1410.8000		437.0000		1000.00	97.4		P
Lead	75-125	25.4900		3.6600		20.00	109.2		F
Magnesium									NR
Manganese	75-125	478.1000		1.0000	U	500.00	95.6		P
Mercury	75-125	0.8034		0.2000	U	1.00	80.3		CV
Nickel	75-125	493.9000		19.2000	B	500.00	94.9		P
Potassium									NR
Selenium	75-125	10.0750		2.0000	U	10.00	100.8		F
Silver	75-125	39.3000		7.8000	B	50.00	63.0	N	P
Sodium									NR
Thallium	75-125	47.1100		3.0000	U	50.00	94.2		F
Vanadium	75-125	462.4000		34.5000	B	500.00	85.8		P
Zinc	75-125	512.6000		243.5000		500.00	53.8	N	P
Cyanide									NR

Comments:

000009

U.S. EPA - CLP

5A
SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

A4681dS

Lab Name: G S E L I Contract:

Lab Code: GULF Case No.: SAS No.: SDG No.: A4681d

Matrix (soil/water): WATER Level (low/med): DIS
% Solids for Sample: 0.0

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

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum	75-125	1981.4000		147.1000	B	2000.00	91.7		P
Antimony	75-125	475.2000		32.0000	U	500.00	95.0		P
Arsenic	75-125	40.3400		4.7200	B	40.00	89.0		F
Barium	75-125	2045.2000		185.0000	B	2000.00	93.0		P
Beryllium	75-125	44.8000		1.0000	U	50.00	89.6		P
Cadmium	75-125	48.7000		2.0000	U	50.00	97.4		P
Calcium									NR
Chromium	75-125	202.4000		4.0000	U	200.00	101.2		P
Cobalt	75-125	470.7000		8.0000	U	500.00	94.1		P
Copper	75-125	237.0000		11.7000	B	250.00	90.1		P
Iron	75-125	1039.5000		7.0000	B	1000.00	103.2		P
Lead	75-125	25.6950		2.1650	B	20.00	117.6		F
Magnesium									NR
Manganese	75-125	469.8000		1.0000	U	500.00	94.0		P
Mercury	75-125	0.8034		0.2000	U	1.00	80.3		CV
Nickel	75-125	498.9000		22.9000	B	500.00	95.2		P
Potassium									NR
Selenium	75-125	10.6200		2.0000	U	10.00	106.2		F
Silver	75-125	36.1000		7.1000	B	50.00	58.0	N	P
Sodium									NR
Thallium	75-125	47.5900		3.0000	U	50.00	95.2		F
Vanadium	75-125	487.0000		33.4000	B	500.00	90.7		P
Zinc	75-125	585.6000		92.8000		500.00	98.6		P
Cyanide									NR

Comments:

000010

U.S. EPA - CLP

5B
POST DIGEST SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

A4681dA

Lab Name: G S E L I Contract:

Lab Code: GULF Case No.: SAS No.: SDG No.: A4681d

Matrix (soil/water): WATER Level (low/med): DIS

Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum									NR
Antimony									NR
Arsenic									NR
Barium									NR
Beryllium									NR
Cadmium									NR
Calcium									NR
Chromium									NR
Cobalt									NR
Copper									NR
Iron									NR
Lead									NR
Magnesium									NR
Manganese									NR
Mercury									NR
Nickel									NR
Potassium									NR
Selenium									NR
Silver		64.70		7.10	B	50.0	115.2		P
Sodium									NR
Thallium									NR
Vanadium									NR
Zinc									NR
Cyanide									NR

Comments:

000011

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6
DUPLICATES

EPA SAMPLE NO.

A4681tD

Lab Name: G S E L I Contract:

Lab Code: GULF Case No.: SAS No.: SDG No.: A4681d

Matrix (soil/water): WATER Level (low/med): TOT

% Solids for Sample: 0.0 % Solids for Duplicate: 0.0

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

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum	200.0	250.9000		125.0000	B	67.0		P
Antimony		32.0000	U	32.0000	U			P
Arsenic		5.4600	B	4.8500	B	11.8		P
Barium		181.1000	B	188.7000	B	4.1		P
Beryllium		1.0000	U	1.0000	U			P
Cadmium		4.0000	B	2.0000	B	66.7		P
Calcium		99655.2000		101088.0000		1.4		P
Chromium		4.0000	U	4.0000	U			P
Cobalt		12.3000	B	17.0000	B	32.1		P
Copper		13.8000	B	20.8000	B	40.5		P
Iron	100.0	437.0000		331.0000		27.6	*	P
Lead	3.0	3.6600		2.5700	B	35.0		P
Magnesium		26015.3000		25910.1000		0.4		P
Manganese		1.0000	U	1.0000	U			P
Mercury		0.2000	U	0.2000	U			CV
Nickel		19.2000	B	21.7000	B	12.2		P
Potassium	5000.0	17984.1000		18334.3000		1.9		P
Selenium		2.0000	U	2.0000	U			F
Silver		7.8000	B	6.4000	B	19.7		P
Sodium		40897.5000		40940.8000		0.1		P
Thallium		3.0000	U	3.0000	U			F
Vanadium		34.5000	B	36.9000	B	6.7		P
Zinc	20.0	243.5000		79.5000		101.5	*	P
Cyanide								

000012

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6
DUPLICATES

EPA SAMPLE NO.

A4681dD

Lab Name: G S E L I Contract:

Lab Code: GULF Case No.: SAS No.: SDG No.: A4681d

Matrix (soil/water): WATER Level (low/med): DIS

% Solids for Sample: 0.0 % Solids for Duplicate:

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

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum		147.1000	B	124.0000	B	17.0		P
Antimony		32.0000	U	32.0000	U			P
Arsenic		4.7200	B	4.8900	B	3.5		P
Barium		185.0000	B	175.8000	B	5.1		P
Beryllium		1.0000	U	1.0000	U			P
Cadmium		2.0000	U	2.7000	B	200.0		P
Calcium		95835.7000		101704.3000		5.9		P
Chromium		4.0000	U	4.0000	U			P
Cobalt		8.0000	U	15.1000	B	200.0		P
Copper		11.7000	B	14.6000	B	22.1		P
Iron		7.0000	B	5.0000	U	200.0		P
Lead		2.1650	B	2.2550	B	4.1		P
Magnesium	5000.0	24208.3000		25881.9000		6.7		P
Manganese		1.0000	U	1.0000	U			P
Mercury		0.2000	U	0.2000	U			CV
Nickel		22.9000	B	16.1000	B	34.9		P
Potassium	5000.0	17812.3000		18354.9000		3.0		P
Selenium		2.0000	U	2.0000	U			P
Silver		7.1000	B	4.0000	B	55.9		P
Sodium		41064.0000		41861.4000		1.9		P
Thallium		3.0000	U	3.0000	U			P
Vanadium		33.4000	B	31.8000	B	4.9		P
Zinc	20.0	92.8000		82.6000		11.6		P
Cyanide								

000013

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7

LABORATORY CONTROL SAMPLE

Lab Name: G S E L I Contract:

Lab Code: GULF Case No.: SAS No.: SDG No.: A4681d

Solid LCS Source: UNLVQUAL0287

Aqueous LCS Source: 82-48-SPK

Analyte	Aqueous (ug/L) True	Found	%R	Solid (mg/kg) True	Found	C	Limits	%R
Aluminum	2000.0	1608.50	80.4					
Antimony	500.0	385.20	77.0					
Arsenic	40.0	40.91	102.3					
Barium	2000.0	1489.40	74.5					
Beryllium	50.0	44.40	88.8					
Cadmium	50.0	39.00	78.0					
Calcium		28.00						
Chromium	200.0	177.70	88.8					
Cobalt	500.0	380.50	76.1					
Copper	250.0	229.20	91.7					
Iron	1000.0	941.40	94.1					
Lead	20.0	22.66	113.3					
Magnesium		31.50						
Manganese	500.0	419.60	83.9					
Mercury	1.0	0.91	91.0					
Nickel	500.0	402.50	80.5					
Potassium								
Selenium	10.0	10.78	107.8					
Silver	50.0	40.20	80.4					
Sodium								
Thallium	50.0	53.54	107.1					
Vanadium	500.0	449.30	89.9					
Zinc	500.0	458.70	91.7					
Cyanide								

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

WELL14

Lab Name: PACIFIC NW ENV LABORATORY Contract:

Lab Code: PNEL Case No.: SAS No.: SDG No.: R26230

Matrix (soil/water): WATER Lab Sample ID: 2468-01D

Level (low/med): LOW Date Received: 06/06/90

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead				NR
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide	10.0	U		C

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

000015

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

WELL15

Lab Name: PACIFIC NW ENV LABORATORY Contract:

Lab Code: PNEL Case No.: SAS No.: SDG No.: R26230

Matrix (soil/water): WATER Lab Sample ID: 2468-02D

Level (low/med): LOW Date Received: 06/06/90

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead				NR
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide	10.0	U		C

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

000016

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

WELL16

Lab Name: PACIFIC NW ENV LABORATORY Contract:

Lab Code: PNEL Case No.: SAS No.: SDG No.: R26230

Matrix (soil/water): WATER Lab Sample ID: 2468-03D

Level (low/med): LOW Date Received: 06/06/90

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead				NR
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide	10.0	U		C

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

000017

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3
BLANKS

Lab Name: PACIFIC NW ENV LABORATORY Contract:

Lab Code: PNEL Case No.: SAS No.: SDG No.: R26230

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum											
Antimony											
Arsenic											
Barium											
Beryllium											
Cadmium											
Calcium											
Chromium											
Cobalt											
Copper											
Iron											
Lead											
Magnesium											
Manganese											
Mercury											
Nickel											
Potassium											
Selenium											
Silver											
Sodium											
Thallium											
Vanadium											
Zinc											
Cyanide	10.0	U	10.0	U	10.0	U			10.0	U	C

000018

U.S. EPA - CLP

5A
SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

WELL14S

Lab Name: PACIFIC NW ENV LABORATORY Contract:

Lab Code: PNEL Case No.: SAS No.: SDG No.: R26230

Matrix (soil/water): WATER Level (low/med): LOW
% Solids for Sample: 0.0

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

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum									NR
Antimony									NR
Arsenic									NR
Barium									NR
Beryllium									NR
Cadmium									NR
Calcium									NR
Chromium									NR
Cobalt									NR
Copper									NR
Iron									NR
Lead									NR
Magnesium									NR
Manganese									NR
Mercury									NR
Nickel									NR
Potassium									NR
Selenium									NR
Silver									NR
Sodium									NR
Thallium									NR
Vanadium									NR
Zinc									NR
Cyanide	75-125	93.5800		10.0000	U	100.00	93.6		P

Comments:

000019

U.S. EPA - CLP

5B
POST DIGEST SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

A

Lab Name: PACIFIC NW ENV LABORATORY Contract:

Lab Code: PNEL Case No.: SAS No.: SDG No.: R26230

Matrix (soil/water): Level (low/med):

Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum									NR
Antimony									NR
Arsenic									NR
Barium									NR
Beryllium									NR
Cadmium									NR
Calcium									NR
Chromium									NR
Cobalt									NR
Copper									NR
Iron									NR
Lead									NR
Magnesium									NR
Manganese									NR
Mercury									NR
Nickel									NR
Potassium									NR
Selenium									NR
Silver									NR
Sodium									NR
Thallium									NR
Vanadium									NR
Zinc									NR
Cyanide									NR

Comments:

U.S. EPA - CLP

6
DUPLICATES

EPA SAMPLE NO.

WELL14D

Lab Name: PACIFIC NW ENV LABORATORY Contract:

Lab Code: PNEL Case No.: SAS No.: SDG No.: R26230

Matrix (soil/water): WATER Level (low/med): LOW

% Solids for Sample: 0.0 % Solids for Duplicate: 0.0

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

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum								
Antimony								
Arsenic								
Barium								
Beryllium								
Cadmium								
Calcium								
Chromium								
Cobalt								
Copper								
Iron								
Lead								
Magnesium								
Manganese								
Mercury								
Nickel								
Potassium								
Selenium								
Silver								
Sodium								
Thallium								
Vanadium								
Zinc								
Cyanide		10.0000	U	10.0000	U			E

000021

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

WELL_14

Lab Name: PNELI_____ Contract: R26230_____

Lab Code: PNELI__ Case No.: 2468__ SAS No.: _____ SDG No.: WELL_1

Matrix: (soil/water) WATER_ Lab Sample ID: 2468-01A_____

Sample wt/vol: __5.0 (g/mL) ML__ Lab File ID: B4501_____

Level: (low/med) LOW___ Date Received: 06/06/90

% Moisture: not dec. ____ Date Analyzed: 06/14/90

Column: (pack/cap) PACK__ Dilution Factor: 1.0_____

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	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	7	
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	22	
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (total)	5	U

000022

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

WELL_14

Lab Name: PNELI_____ Contract: R26230_____

Lab Code: PNELI__ Case No.: 2468__ SAS No.: _____ SDG No.: WELL_1

Matrix: (soil/water) WATER_ Lab Sample ID: 2468-01A_____

Sample wt/vol: __5.0 (g/mL) ML__ Lab File ID: B4501_____

Level: (low/med) LOW___ Date Received: 06/06/90

% Moisture: not dec. ____ Date Analyzed: 06/14/90

Column (pack/cap) PACK__ Dilution Factor: 1.0_____

Number TICs found: __0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

000023

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

WELL_14MS

Lab Name: PNELI_____ Contract: R26230_____

Lab Code: PNELI__ Case No.: 2468__ SAS No.: _____ SDG No.: WELL_1

Matrix: (soil/water) WATER_ Lab Sample ID: 2468-01AMS___

Sample wt/vol: __5.0 (g/mL) ML__ Lab File ID: B4502_____

Level: (low/med) LOW___ Date Received: 06/06/90

% Moisture: not dec. ____ Date Analyzed: 06/14/90

Column: (pack/cap) PACK__ Dilution Factor: 1.0_____

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	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	7	
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (total)	5	U

000024

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

WELL_14MSD

Lab Name: PNELI_____ Contract: R26230_____

Lab Code: PNELI__ Case No.: 2468__ SAS No.: _____ SDG No.: WELL_1

Matrix: (soil/water) WATER_ Lab Sample ID: 2468-01AMSD__

Sample wt/vol: __5.0 (g/mL) ML__ Lab File ID: B4503_____

Level: (low/med) LOW___ Date Received: 06/06/90

% Moisture: not dec. ____ Date Analyzed: 06/14/90

Column: (pack/cap) PACK__ Dilution Factor: 1.0_____

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	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	7	
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (total)	5	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

WELL_15

Lab Name: PNELI_____ Contract: R26230_____

Lab Code: PNELI__ Case No.: 2468__ SAS No.: _____ SDG No.: WELL_1

Matrix: (soil/water) WATER_ Lab Sample ID: 2468-02A_____

Sample wt/vol: __5.0 (g/mL) ML__ Lab File ID: B4504_____

Level: (low/med) LOW___ Date Received: 06/06/90

% Moisture: not dec. ____ Date Analyzed: 06/14/90

Column: (pack/cap) PACK__ Dilution Factor: 1.0_____

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	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	58	
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (total)	5	U

000026

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

WELL_15

Lab Name: PNELI_____ Contract: R26230_____

Lab Code: PNELI__ Case No.: 2468__ SAS No.: _____ SDG No.: WELL_1

Matrix: (soil/water) WATER_ Lab Sample ID: 2468-02A_____

Sample wt/vol: __5.0 (g/mL) ML__ Lab File ID: B4504_____

Level: (low/med) LOW___ Date Received: 06/06/90

% Moisture: not dec. ____ Date Analyzed: 06/14/90

Column (pack/cap) PACK__ Dilution Factor: 1.0_____

Number TICs found: __0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

000027

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

WELL_16

Lab Name: PNELI_____ Contract: R26230_____

Lab Code: PNELI__ Case No.: 2468__ SAS No.: _____ SDG No.: WELL_1

Matrix: (soil/water) WATER_ Lab Sample ID: 2468-03A_____

Sample wt/vol: __5.0 (g/mL) ML__ Lab File ID: B4505_____

Level: (low/med) LOW___ Date Received: 06/06/90

% Moisture: not dec. ____ Date Analyzed: 06/14/90

Column: (pack/cap) PACK__ Dilution Factor: 1.0_____

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	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	53	
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (total)	5	U

000028

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

WELL_16

Lab Name: PNELI_____ Contract: R26230_____

Lab Code: PNELI__ Case No.: 2468__ SAS No.: _____ SDG No.: WELL_1

Matrix: (soil/water) WATER_ Lab Sample ID: 2468-03A_____

Sample wt/vol: __5.0 (g/mL) ML__ Lab File ID: B4505_____

Level: (low/med) LOW___ Date Received: 06/06/90

% Moisture: not dec. ____ Date Analyzed: 06/14/90

Column (pack/cap) PACK__ Dilution Factor: 1.0_____

Number TICs found: __0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

000029

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TRIP_BLANK

Lab Name: PNELI_____ Contract: R26230_____

Lab Code: PNELI__ Case No.: 2468__ SAS No.: _____ SDG No.: WELL_1

Matrix: (soil/water) WATER_ Lab Sample ID: 2468-04_____

Sample wt/vol: __5.0 (g/mL) ML__ Lab File ID: B4500_____

Level: (low/med) LOW___ Date Received: 06/06/90

% Moisture: not dec. ____ Date Analyzed: 06/14/90

Column: (pack/cap) PACK__ Dilution Factor: 1.0_____

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	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (total)	5	U

000030

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TRIP_BLANK

Lab Name: PNELI_____ Contract: R26230_____

Lab Code: PNELI__ Case No.: 2468__ SAS No.: _____ SDG No.: WELL_1

Matrix: (soil/water) WATER_ Lab Sample ID: 2468-04_____

Sample wt/vol: __5.0 (g/mL) ML__ Lab File ID: B4500_____

Level: (low/med) LOW___ Date Received: 06/06/90

% Moisture: not dec. ____ Date Analyzed: 06/14/90

Column (pack/cap) PACK__ Dilution Factor: 1.0_____

Number TICs found: __0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

000031

2A
WATER VOLATILE SURROGATE RECOVERY

Lab Name: PNELI_____ Contract: R26230_____ _____

Lab Code: PNELI__ Case No.: 2468__ SAS No.: _____ SDG No.: WELL_1

	EPA SAMPLE NO.	S1 (TOL) #	S2 (BFB) #	S3 (DCE) #	OTHER	TOT OUT
01	TRIP_BLANK	101	101	101	0	0
02	WELL_14	100	102	101	0	0
03	WELL_15	98	101	102	0	0
04	WELL_16	100	100	100	0	0
05	WELL_14MS	99	102	100	0	0
06	WELL_14MSD	97	101	98	0	0
07	METHOD_BLANK	98	97	98	0	0

		QC LIMITS
S1 (TOL)	= Toluene-d8	(88-110)
S2 (BFB)	= Bromofluorobenzene	(86-115)
S3 (DCE)	= 1,2-Dichloroethane-d4	(76-114)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

000032

FORM II VOA-1 1/87 Rev.

3A

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: PNELI_____ Contract: R26230_____ _____

Lab Code: PNELI__ Case No.: 2468__ SAS No.: _____ SDG No.: WELL_1

Matrix Spike - EPA Sample No.: WELL_14_____ ____

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene_____	50.0	0	43.1	86	61-145
Trichloroethene_____	50.0	21.6	64.7	86	71-120
Benzene_____	50.0	0	51.0	102	76-127
Toluene_____	50.0	0	50.4	101	76-125
Chlorobenzene_____	50.0	0	51.3	103	75-130

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene_____	50.0	43.2	86	0	14	61-145
Trichloroethene_____	50.0	65.3	87	-1	14	71-120
Benzene_____	50.0	52.5	105	-3	11	76-127
Toluene_____	50.0	50.4	101	0	13	76-125
Chlorobenzene_____	50.0	52.5	105	-2	13	75-130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: __0 out of __5 outside limits _ _

Spike Recovery: __0 out of _10 outside limits _ __

COMMENTS:

000033

4A

VOLATILE METHOD BLANK SUMMARY

Lab Name: PNELI_____ Contract: R26230_____ _____

Lab Code: PNELI__ Case No.: 2468__ SAS No.: _____ SDG No.: WELL_1

Lab File ID: B4499_____ Lab Sample ID: VBLKB1_____

Date Analyzed: 06/14/90 Time Analyzed: 1120____

Matrix: (soil/water) WATER_ Level: (low/med) LOW___

Instrument ID: VOA2____ ____

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	TRIP_BLANK	2468-04	B4500	1219
02	WELL_14	2468-01A	B4501	1306
03	WELL_15	2468-02A	B4504	1603
04	WELL_16	2468-03A	B4505	1659
05	WELL_14MS	2468-01AMS	B4502	1416
06	WELL_14MSD	2468-01AMSD	B4503	1509

COMMENTS:

000034

FORM IV VOA

1/87 Rev.

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

METHOD_BLANK

Lab Name: PNELI_____ Contract: R26230_____

Lab Code: PNELI__ Case No.: 2468__ SAS No.: _____ SDG No.: WELL_1

Matrix: (soil/water) WATER_ Lab Sample ID: VBLKB1_____

Sample wt/vol: __5.0 (g/mL) ML__ Lab File ID: B4499_____

Level: (low/med) LOW___ Date Received: _____

% Moisture: not dec. ____ Date Analyzed: 06/14/90

Column: (pack/cap) PACK__ Dilution Factor: 1.0_____

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	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (total)	5	U

000035

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

METHOD_BLANK

Lab Name: PNELI_____ Contract: R26230_____

Lab Code: PNELI__ Case No.: 2468__ SAS No.: _____ SDG No.: WELL_1

Matrix: (soil/water) WATER_ Lab Sample ID: VBLKB1_____

Sample wt/vol: __5.0 (g/mL) ML__ Lab File ID: 84499_____

Level: (low/med) LOW___ Date Received: _____

% Moisture: not dec. ____ Date Analyzed: 06/14/90

Column (pack/cap) PACK__ Dilution Factor: 1.0_____

Number TICs found: __0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

000036

8A

VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: PNELI_____ Contract: R26230_____ _____

Lab Code: PNELI__ Case No.: 2468__ SAS No.: _____ SDG No.: WELL_1

Lab File ID (Standard): B4498_____ Date Analyzed: 06/14/90

Instrument ID: VOA2____ Time Analyzed: 1015____

Matrix:(soil/water) WATER_ Level:(low/med) LOW___ Column:(pack/cap) PACK__

		IS1(BCM) AREA	#	RT	IS2(DFB) AREA	#	RT	IS3(CBZ) AREA	#	RT
	12 HOUR STD	106000		11.94	424000		22.52	344000		27.29
	UPPER LIMIT	212000			848000			688000		
	LOWER LIMIT	53000			212000			172000		
	EPA SAMPLE NO.									
01	TRIP_BLANK	88100		11.97	378000		22.52	305000		27.32
02	WELL_14	86100		11.92	366000		22.52	301000		27.32
03	WELL_15	79700		11.94	338000		22.52	281000		27.32
04	WELL_16	79100		11.94	339000		22.54	277000		27.29
05	WELL_14MS	84400		11.94	351000		22.54	284000		27.31
06	WELL_14MSD	82800		11.94	342000		22.52	281000		27.32
07	METHOD_BLANK	94400		11.94	401000		22.52	324000		27.29

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag internal standard area values with an asterisk

000037

FORM VIII VOA

1/87 Rev.

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

WELL_14

Lab Name: PNELI_____ Contract: R26230_____

Lab Code: PNELI__ Case No.: 2468__ SAS No.: _____ SDG No.: WELL_1

Matrix: (soil/water) WATER_ Lab Sample ID: 2468-01_____

Sample wt/vol: 1050_ (g/mL) ML__ Lab File ID: AD619_____

Level: (low/med) LOW___ Date Received: 06/06/90

% Moisture: not dec. ____ dec. ____ Date Extracted: 06/11/90

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 06/22/90

GPC Cleanup: (Y/N) N__ pH: _____ Dilution Factor: 1.00____

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
100-51-6	Benzyl alcohol	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	bis(2-Chloroisopropyl)ether	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
65-85-0	Benzoic Acid	48	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	48	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	48	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U

000038

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

WELL_14

Lab Name: PNELI_____ Contract: R26230_____

Lab Code: PNELI__ Case No.: 2468__ SAS No.: _____ SDG No.: WELL_1

Matrix: (soil/water) WATER_ Lab Sample ID: 2468-01_____

Sample wt/vol: 1050_ (g/mL) ML__ Lab File ID: AD619_____

Level: (low/med) LOW___ Date Received: 06/06/90

% Moisture: not dec. ____ dec. ____ Date Extracted: 06/11/90

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 06/22/90

GPC Cleanup: (Y/N) N__ pH: _____ Dilution Factor: 1.00____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L_	Q
99-09-2	3-Nitroaniline	48	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	48	U
100-02-7	4-Nitrophenol	48	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-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	48	U
534-52-1	4,6-Dinitro-2-methylphenol	48	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	48	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
84-74-2	Di-n-butylphthalate	3	J
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	17	U
56-55-3	Benzo(a)anthracene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	15	
218-01-9	Chrysene	10	U
117-84-0	Di-n-octylphthalate	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

000039

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

WELL_14

Lab Name: PNELI_____ Contract: R26230_____

Lab Code: PNELI__ Case No.: 2468__ SAS No.: _____ SDG No.: WELL_1

Matrix: (soil/water) WATER_ Lab Sample ID: 2468-01_____

Sample wt/vol: 1050_ (g/mL) ML__ Lab File ID: AD619_____

Level: (low/med) LOW___ Date Received: 06/06/90

% Moisture: not dec. ____ dec. ____ Date Extracted: 06/11/90

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 06/22/90

GPC Cleanup: (Y/N) N__ pH: _____ Dilution Factor: 1.00____

Number TICs found: __0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

000040

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

WELL_14MS

Lab Name: PNELI_____ Contract: R26230_____

Lab Code: PNELI__ Case No.: 2468__ SAS No.: _____ SDG No.: WELL_1

Matrix: (soil/water) WATER_ Lab Sample ID: 2468-01MS____

Sample wt/vol: 1050_ (g/mL) ML__ Lab File ID: AD620_____

Level: (low/med) LOW___ Date Received: 06/06/90

% Moisture: not dec. ____ dec. ____ Date Extracted: 06/11/90

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 06/22/90

GPC Cleanup: (Y/N) N__ pH: _____ Dilution Factor: 1.00____

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
100-51-6	Benzyl alcohol	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	bis(2-Chloroisopropyl)ether	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
65-85-0	Benzoic Acid	48	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	48	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	48	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U

000041

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

WELL_14MS

Lab Name: PNELI_____ Contract: R26230_____

Lab Code: PNELI__ Case No.: 2468__ SAS No.: _____ SDG No.: WELL_1

Matrix: (soil/water) WATER_ Lab Sample ID: 2468-01MS____

Sample wt/vol: 1050_ (g/mL) ML__ Lab File ID: AD620_____

Level: (low/med) LOW___ Date Received: 06/06/90

% Moisture: not dec. ____ dec. ____ Date Extracted: 06/11/90

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 06/22/90

GPC Cleanup: (Y/N) N__ pH: _____ Dilution Factor: 1.00____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L_	Q
99-09-2	3-Nitroaniline	48	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	48	U
100-02-7	4-Nitrophenol	48	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-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	48	U
534-52-1	4,6-Dinitro-2-methylphenol	48	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	48	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	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	19	U
56-55-3	Benzo(a)anthracene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	13	
218-01-9	Chrysene	10	U
117-84-0	Di-n-octylphthalate	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

000042

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

WELL_14MSD

Lab Name: PNELI_____ Contract: R26230_____

Lab Code: PNELI__ Case No.: 2468__ SAS No.: _____ SDG No.: WELL_1

Matrix: (soil/water) WATER_ Lab Sample ID: 2468-01MSD___

Sample wt/vol: 1050_ (g/mL) ML__ Lab File ID: AD621_____

Level: (low/med) LOW___ Date Received: 06/06/90

% Moisture: not dec. ____ dec. ____ Date Extracted: 06/11/90

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 06/23/90

GPC Cleanup: (Y/N) N__ pH: _____ Dilution Factor: 1.00____

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
100-51-6	Benzyl alcohol	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	bis(2-Chloroisopropyl)ether	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
65-85-0	Benzoic Acid	48	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	48	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	48	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U

000043

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

WELL_14MSD

Lab Name: PNELI_____ Contract: R26230_____

Lab Code: PNELI__ Case No.: 2468__ SAS No.: _____ SDG No.: WELL_1

Matrix: (soil/water) WATER_ Lab Sample ID: 2468-01MSD___

Sample wt/vol: 1050_ (g/mL) ML__ Lab File ID: AD621_____

Level: (low/med) LOW___ Date Received: 06/06/90

% Moisture: not dec. ____ dec. ____ Date Extracted: 06/11/90

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 06/23/90

GPC Cleanup: (Y/N) N__ pH: _____ Dilution Factor: 1.00____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L_	Q
99-09-2	3-Nitroaniline	48	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	48	U
100-02-7	4-Nitrophenol	48	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-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	48	U
534-52-1	4,6-Dinitro-2-methylphenol	48	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	48	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
84-74-2	Di-n-butylphthalate	2	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	17	U
56-55-3	Benzo(a)anthracene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	16	
218-01-9	Chrysene	10	U
117-84-0	Di-n-octylphthalate	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

000044

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

WELL_15

Lab Name: PNELI_____ Contract: R26230_____

Lab Code: PNELI__ Case No.: 2468__ SAS No.: _____ SDG No.: WELL_1

Matrix: (soil/water) WATER_ Lab Sample ID: 2468-02_____

Sample wt/vol: 1050_ (g/mL) ML__ Lab File ID: AD62I_____

Level: (low/med) LOW___ Date Received: 06/06/90

% Moisture: not dec. ____ dec. ____ Date Extracted: 06/11/90

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 06/23/90

GPC Cleanup: (Y/N) N__ pH: _____ Dilution Factor: 1.00____

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
100-51-6	Benzyl alcohol	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	bis(2-Chloroisopropyl)ether	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
65-85-0	Benzoic Acid	48	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	48	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	48	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U

000045

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

WELL_15

Lab Name: PNELI_____ Contract: R26230_____

Lab Code: PNELI__ Case No.: 2468__ SAS No.: _____ SDG No.: WELL_1

Matrix: (soil/water) WATER_ Lab Sample ID: 2468-02_____

Sample wt/vol: 1050_ (g/mL) ML__ Lab File ID: AD622_____

Level: (low/med) LOW___ Date Received: 06/06/90

% Moisture: not dec. ____ dec. ____ Date Extracted: 06/11/90

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 06/23/90

GPC Cleanup: (Y/N) N__ pH: _____ Dilution Factor: 1.00____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L_	Q
99-09-2	3-Nitroaniline	48	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	48	U
100-02-7	4-Nitrophenol	48	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-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	48	U
534-52-1	4,6-Dinitro-2-methylphenol	48	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	48	U
85-01-8	Phenanthrene	10	J
120-12-7	Anthracene	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	19	U
56-55-3	Benzo(a)anthracene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	21	
218-01-9	Chrysene	10	U
117-84-0	Di-n-octylphthalate	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

000046

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

WELL_15

Lab Name: PNELI_____ Contract: RZ6230_____

Lab Code: PNELI__ Case No.: 2468__ SAS No.: _____ SDG No.: WELL_1

Matrix: (soil/water) WATER_ Lab Sample ID: 2468-02_____

Sample wt/vol: 1050_ (g/mL) ML__ Lab File ID: AD622_____

Level: (low/med) LOW___ Date Received: 06/06/90

% Moisture: not dec. ____ dec. ____ Date Extracted: 06/11/90

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 06/23/90

GPC Cleanup: (Y/N) N__ pH: _____ Dilution Factor: 1.00____

Number TICs found: __1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	27.07	130	BJ

000047

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

WELL_1G

Lab Name: PNELI_____ Contract: R26230_____

Lab Code: PNELI__ Case No.: 2468__ SAS No.: _____ SDG No.: WELL_1

Matrix: (soil/water) WATER_ Lab Sample ID: 2468-03_____

Sample wt/vol: 1050_ (g/mL) ML__ Lab File ID: AD627_____

Level: (low/med) LOW___ Date Received: 06/06/90

% Moisture: not dec. ____ dec. ____ Date Extracted: 06/11/90

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 06/25/90

GPC Cleanup: (Y/N) N__ pH: _____ Dilution Factor: 1.00____

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
100-51-6	Benzyl alcohol	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	bis(2-Chloroisopropyl)ether	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
65-85-0	Benzoic Acid	48	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	48	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	48	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U

000048

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

WELL_16

Lab Name: PNELI_____ Contract: R26230_____

Lab Code: PNELI__ Case No.: 2468__ SAS No.: _____ SDG No.: WELL_1

Matrix: (soil/water) WATER_ Lab Sample ID: 2468-03_____

Sample wt/vol: 1050_ (g/mL) ML__ Lab File ID: AD627_____

Level: (low/med) LOW___ Date Received: 06/06/90

% Moisture: not dec. ____ dec. ____ Date Extracted: 06/11/90

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 06/25/90

GPC Cleanup: (Y/N) N__ pH: _____ Dilution Factor: 1.00____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L_	Q
99-09-2	3-Nitroaniline	48	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	48	U
100-02-7	4-Nitrophenol	48	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-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	48	U
534-52-1	4,6-Dinitro-2-methylphenol	48	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	48	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
84-74-2	Di-n-butylphthalate	4	J
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	27	
218-01-9	Chrysene	10	U
117-84-0	Di-n-octylphthalate	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

000039

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

WELL_16

Lab Name: PNELI_____ Contract: R26230_____

Lab Code: PNELI__ Case No.: 2468__ SAS No.: _____ SDG No.: WELL_1

Matrix: (soil/water) WATER_ Lab Sample ID: 2468-03_____

Sample wt/vol: 1050_ (g/mL) ML__ Lab File ID: AD627_____

Level: (low/med) LOW___ Date Received: 06/06/90

% Moisture: not dec. ____ dec. ____ Date Extracted: 06/11/90

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 06/25/90

GPC Cleanup: (Y/N) N__ pH: _____ Dilution Factor: 1.00____

Number TICs found: __6

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 29588770	Cyclohexanol, 4-chloro-, tra	10.87	66	J
2.	UNKNOWN	11.62	68	J
3.	UNKNOWN	14.59	27	J
4.	UNKNOWN	26.84	110	BJ
5.	UNKNOWN	28.59	36	BJ
6.	UNKNOWN	30.31	11	BJ

000050

2C
WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: PNELI_____ Contract: R26230_____ _____

Lab Code: PNELI__ Case No.: 2468__ SAS No.: _____ SDG No.: R26230

	EPA SAMPLE NO.	S1 (NBZ) #	S2 (FBP) #	S3 (TPH) #	S4 (PHL) #	S5 (2FP) #	S6 (TBP) #	OTHER	TOT OUT
01	WELL_14	63	59	72	56	56	62	0	0
02	WELL_15	73	68	82	61	58	68	0	0
03	WELL_16	79	67	80	26	20 *	20	0	1
04	WELL_14MS	65	64	77	56	55	69	0	0
05	WELL_14MSD	69	67	77	58	56	70	0	0
06	METHOD_BLANK	69	63	77	62	34	45	0	0

		QC LIMITS
S1 (NBZ)	= Nitrobenzene-d5	(35-114)
S2 (FBP)	= 2-Fluorobiphenyl	(43-116)
S3 (TPH)	= Terphenyl	(33-141)
S4 (PHL)	= Phenol-d5	(10-94)
S5 (2FP)	= 2-Fluorophenol	(21-100)
S6 (TBP)	= 2,4,6-Tribromophenol	(10-123)

Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogates diluted out

000051

FORM II SV-1 1 87 Rev.

3C

WATER SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: PNELI_____ Contract: R26230_____ _____

Lab Code: PNELI__ Case No.: 2468__ SAS No.: _____ SDG No.: WELL_1

Matrix Spike - EPA Sample No.: WELL_14_____ ____

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC.
Phenol	190	0	106	56	12- 89
2-Chlorophenol	190	0	115	61	27-123
1,4-Dichlorobenzene	95.0	0	45.6	48	36 97
N-Nitroso-di-n-prop.(1)	95.0	0	56.0	59	41 116
1,2,4-Trichlorobenzene	95.0	0	50.5	53	39 98
4-Chloro-3-methylphenol	190	0	119	63	23 97
Acenaphthene	95.0	0	58.9	62	46-118
4-Nitrophenol	190	0	124	65	10- 80
2,4-Dinitrotoluene	95.0	0	56.0	59	24- 96
Pentachlorophenol	190	0	104	55	9-103
Pyrene	95.0	0	65.4	69	26-127

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Phenol	190	109	57	-2	42	12- 89
2-Chlorophenol	190	116	61	0	40	27-123
1,4-Dichlorobenzene	95.0	45.8	48	0	28	36 97
N-Nitroso-di-n-prop.(1)	95.0	59.1	62	-5	38	41 116
1,2,4-Trichlorobenzene	95.0	51.5	54	-2	28	39 98
4-Chloro-3-methylphenol	190	120	63	0	42	23 97
Acenaphthene	95.0	60.4	64	-3	31	46-118
4-Nitrophenol	190	131	69	-6	50	10- 80
2,4-Dinitrotoluene	95.0	59.3	62	-5	38	24- 96
Pentachlorophenol	190	135	71	-15	50	9-103
Pyrene	95.0	63.1	66	4	31	26-127

(1) N-Nitroso-di-n-propylamine

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: __0 out of _11 outside limits _ __
Spike Recovery: __0 out of _22 outside limits _

COMMENTS:

000052

4B

SEMIVOLATILE METHOD BLANK SUMMARY

Lab Name: PNELI_____ Contract: R26230_____ _____

Lab Code: PNELI__ Case No.: 2468__ SAS No.: _____ SDG No.: WELL_1

Lab File ID: AD596_____ Lab Sample ID: 2468-MB_____

Date Extracted: 06/11/90 Extraction:(SepF/Cont/Sonc) CONT

Date Analyzed: 06/21/90 Time Analyzed: 1425____

Matrix: (soil/water) WATER_ Level:(low/med) LOW___

Instrument ID: BNA1____ ____

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	WELL_14	2468-01	AD619	06/22/90
02	WELL_15	2468-02	AD622	06/23/90
03	WELL_16	2468-03	AD627	06/25/90
04	WELL_14MS	2468-01MS	AD620	06/22/90
05	WELL_14MSD	2468-01MSD	AD621	06/23/90

COMMENTS: 2464,68,70,74-MB
INST.ID:BNA1

000053

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

METHOD_BLANK

Lab Name: PNELI_____ Contract: R26230_____

Lab Code: PNELI__ Case No.: 2468__ SAS No.: _____ SDG No.: WELL_1

Matrix: (soil/water) WATER_ Lab Sample ID: 2468-MB_____

Sample wt/vol: 1000_ (g/mL) ML__ Lab File ID: AD596_____

Level: (low/med) LOW___ Date Received: _____

% Moisture: not dec. ____ dec. ____ Date Extracted: 06/11/90

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 06/21/90

GPC Cleanup: (Y/N) N__ pH: _____ Dilution Factor: 1.0_____

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
100-51-6	Benzyl alcohol	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	bis(2-Chloroisopropyl)ether	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
65-85-0	Benzoic Acid	50	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	50	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	50	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U

000054

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

METHOD_BLANK

Lab Name: PNELI_____ Contract: R26230_____

Lab Code: PNELI__ Case No.: Z468__ SAS No.: _____ SDG No.: WELL_1

Matrix: (soil/water) WATER_ Lab Sample ID: Z468-MB_____

Sample wt/vol: 1000_ (g/mL) ML__ Lab File ID: AD596_____

Level: (low/med) LOW___ Date Received: _____

% Moisture: not dec. ____ dec. ____ Date Extracted: 06/11/90

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 06/21/90

GPC Cleanup: (Y/N) N__ pH: _____ Dilution Factor: 1.0_____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L_	Q
99-09-2	3-Nitroaniline	50	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	50	U
100-02-7	4-Nitrophenol	50	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-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	50	U
534-52-1	4,6-Dinitro-2-methylphenol	50	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	50	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	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	20	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-octylphthalate	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

000055

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

METHOD_BLANK

Lab Name: PNELI_____ Contract: R26230_____

Lab Code: PNELI__ Case No.: 2468__ SAS No.: _____ SDG No.: WELL_1

Matrix: (soil/water) WATER_ Lab Sample ID: 2468-MB_____

Sample wt/vol: 1000_ (g/mL) ML__ Lab File ID: AD596_____

Level: (low/med) LOW___ Date Received: _____

% Moisture: not dec. ____ dec. ____ Date Extracted: 06/11/90

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 06/21/90

GPC Cleanup: (Y/N) N__ pH: _____ Dilution Factor: 1.0_____

Number TICs found: __6

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN HYDROCARBON	26.07	10	J
2.	UNKNOWN	26.94	170	J
3.	UNKNOWN	27.87	14	J
4.	UNKNOWN	28.69	84	J
5.	UNKNOWN	29.54	10	J
6.	UNKNOWN	30.29	28	J

000056

8B

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: PNELI_____ Contract: R26230_____ _____

Lab Code: PNELI__ Case No.: 2468__ SAS No.: _____ SDG No.: WELL_1

Lab File ID (Standard): AD595_____ Date Analyzed: 06/21/90

Instrument ID: BNA1____ Time Analyzed: 1338____

		IS1 (DCB) AREA	#	RT	IS2 (NPT) AREA	#	RT	IS3 (ANT) AREA	#	RT
	12 HOUR STD	87300		10.69	235000		13.89	141000		18.39
	UPPER LIMIT	134600			470000			282000		
	LOWER LIMIT	33650			117500			70500		
	EPA SAMPLE NO.									
01	METHOD_BLANK	70500		10.69	238000		13.87	143000		18.39

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag internal standard area values with an asterisk

000057

FORM VIII SV-1 1 87 Rev.

8B

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: PNELI_____ Contract: R26230_____ _____

Lab Code: PNELI__ Case No.: 2468__ SAS No.: _____ SDG No.: WELL_1

Lab File ID (Standard): AD608_____ Date Analyzed: 06/22/90

Instrument ID: BNA1____ Time Analyzed: 1957____

		IS1 (DCB) AREA #	RT	IS2 (NPT) AREA #	RT	IS3 (ANT) AREA #	RT
	12 HOUR STD	43200	10.67	151000	13.87	83100	18.35
	UPPER LIMIT	86400		302000		166200	
	LOWER LIMIT	21600		75500		41550	
	EPA SAMPLE NO.						
01	WELL_14	70500	10.64	239000	13.82	131000	18.34
02	WELL_15	53800	10.62	184000	13.82	103000	18.34
03	WELL_14MS	48200	10.64	161000	13.82	91000	18.34
04	WELL_14MSD	53100	10.64	181000	13.82	101000	18.34

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

UPPER LIMIT = + 100% of internal standard area.
LOWER LIMIT = - 50% of internal standard area.

Column used to flag internal standard area values with an asterisk

000058

FORM VIII SV-1

1/87 Rev.

8B

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: PNELI_____ Contract: R26230_____ _____

Lab Code: PNELI__ Case No.: 2468__ SAS No.: _____ SDG No.: WELL_1

Lab File ID (Standard): AD626_____ Date Analyzed: 06/25/90

Instrument ID: BNA1____ Time Analyzed: 1558____

		IS1 (DCB) AREA #	RT	IS2 (NPT) AREA #	RT	IS3 (ANT) AREA #	RT
	12 HOUR STD	38600	10.57	136000	13.77	79700	18.27
	UPPER LIMIT	77200		272000		159400	
	LOWER LIMIT	19300		68000		39850	
	EPA SAMPLE NO.						
01	WELL_16	43300	10.57	150000	13.77	87500	18.27

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag internal standard area values with an asterisk

000059

FORM VIII SV-1

1/87 Rev.

8C

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: PNELI_____ Contract: R26230_____ _____

Lab Code: PNELI__ Case No.: 2468__ SAS No.: _____ SDG No.: WELL_1

Lab File ID (Standard): AD595_____ Date Analyzed: 06/21/90

Instrument ID: BNA1____ Time Analyzed: 1333____

		IS4 (PHN) AREA #	RT	IS5 (CRY) AREA #	RT	IS6 (PRY) AREA #	RT
	12 HOUR STD	253000	22.14	194000	28.96	119000	32.77
	UPPER LIMIT	506000		388000		238000	
	LOWER LIMIT	126500		97000		59500	
	EPA SAMPLE NO.						
01	METHOD_BLANK	256000	22.14	177000	28.94	123000	32.74

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

UPPER LIMIT = + 100% of internal standard area.
LOWER LIMIT = - 50% of internal standard area.

Column used to flag internal standard area values with an asterisk

000060

FORM VIII SV-2

1/87 Rev.

8C

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: PNELI_____ Contract: R26230_____ _____

Lab Code: PNELI__ Case No.: 2468__ SAS No.: _____ SDG No.: WELL_1

Lab File ID (Standard): AD608_____ Date Analyzed: 06/22/90

Instrument ID: BNA1____ Time Analyzed: 1357____

		IS4(PHN) AREA #	RT	IS5(CRY) AREA #	RT	IS6(PRY) AREA #	RT
	12 HOUR STD	141000	22.12	104000	28.92	66500	32.71
	UPPER LIMIT	282000		208000		133000	
	LOWER LIMIT	70500		52000		33250	
	EPA SAMPLE NO.						
01	WELL_14	224000	22.09	146000	28.89	107000	32.67
02	WELL_15	179000	22.07	124000	28.89	87000	32.67
03	WELL_14MS	159000	22.09	103000	28.87	73900	32.66
04	WELL_14MSD	178000	22.09	118000	28.87	83200	32.67

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

UPPER LIMIT = + 100% of internal standard area.
LOWER LIMIT = - 50% of internal standard area.

Column used to flag internal standard area values with an asterisk

FORM VIII SV-2

1/87 Rev.

000061

8C

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: PNELI_____ Contract: R26230_____ _____

Lab Code: PNELI__ Case No.: 2468__ SAS No.: _____ SDG No.: WELL_1

Lab File ID (Standard): AD626_____ Date Analyzed: 06/25/90

Instrument ID: BNA1____ Time Analyzed: 1558____

		IS4 (PHN) AREA #	RT	IS5 (CRY) AREA #	RT	IS6 (PRY) AREA #	RT
	12 HOUR STD	145000	22.02	124000	28.84	94700	32.62
	UPPER LIMIT	290000		248000		189400	
	LOWER LIMIT	72500		62000		47350	
	EPA SAMPLE NO.						
01	WELL_16	164000	22.00	130000	28.82	91900	32.57

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag internal standard area values with an asterisk

000062

FORM VIII SV-2

1/87 Rev.

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

2468-01

Lab Name: PNELI Contract: _____

Lab Code: PNELI Case No.: 2468 SAS No.: _____ SDG No.: WELL14

Matrix: (soil/water) WATER Lab Sample ID: 2468-01

Sample wt/vol: 1050 (g/mL) ML Lab File ID: _____

Level: (low/med) LOW Date Received: 06/06/90

% Moisture: not dec. __ dec. __ Date Extracted: 06/11/90

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 06/20/90

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.048	U
319-85-7	beta-BHC	0.048	U
319-86-8	delta-BHC	0.048	U
58-89-9	gamma-BHC (Lindane)	0.048	U
76-44-8	Heptachlor	0.048	U
309-00-2	Aldrin	0.048	U
1024-57-3	Heptachlor epoxide	0.048	U
959-98-8	Endosulfan I	0.048	U
60-57-1	Dieldrin	0.095	U
72-55-9	4,4'-DDE	0.095	U
72-20-8	Endrin	0.095	U
33213-65-9	Endosulfan II	0.095	U
72-54-8	4,4'-DDD	0.095	U
1031-07-8	Endosulfan sulfate	0.095	U
50-29-3	4,4'-DDT	0.095	U
72-43-5	Methoxychlor	0.48	U
53494-70-5	Endrin ketone	0.095	U
5103-71-9	alpha-Chlordane	0.48	U
5103-74-2	gamma-Chlordane	0.48	U
8001-35-2	Toxaphene	0.95	U
12674-11-2	Aroclor-1016	0.48	U
11104-28-2	Aroclor-1221	0.48	U
11141-16-5	Aroclor-1232	0.48	U
53469-21-9	Aroclor-1242	0.48	U
12672-29-6	Aroclor-1248	0.48	U
11097-69-1	Aroclor-1254	0.95	U
11096-82-5	Aroclor-1260	0.95	U

000063

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

2468-01MS

Lab Name: PNELI Contract: _____

Lab Code: PNELI Case No.: 2468 SAS No.: _____ SDG No.: WELL14

Matrix: (soil/water) WATER Lab Sample ID: 2468-01MS

Sample wt/vol: 1050 (g/mL) ML Lab File ID: _____

Level: (low/med) LOW Date Received: 06/06/90

% Moisture: not dec. __ dec. __ Date Extracted: 06/11/90

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 06/20/90

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.048	U
319-85-7	beta-BHC	0.048	U
319-86-8	delta-BHC	0.048	U
58-89-9	gamma-BHC (Lindane)	0.048	U
76-44-8	Heptachlor	0.048	U
309-00-2	Aldrin	0.048	U
1024-57-3	Heptachlor epoxide	0.048	U
959-98-8	Endosulfan I	0.048	U
60-57-1	Dieldrin	0.095	U
72-55-9	4,4'-DDE	0.095	U
72-20-8	Endrin	0.095	U
33213-65-9	Endosulfan II	0.095	U
72-54-8	4,4'-DDD	0.095	U
1031-07-8	Endosulfan sulfate	0.095	U
50-29-3	4,4'-DDT	0.095	U
72-43-5	Methoxychlor	0.48	U
53494-70-5	Endrin ketone	0.095	U
5103-71-9	alpha-Chlordane	0.48	U
5103-74-2	gamma-Chlordane	0.48	U
8001-35-2	Toxaphene	0.95	U
12674-11-2	Aroclor-1016	0.48	U
11104-28-2	Aroclor-1221	0.48	U
11141-16-5	Aroclor-1232	0.48	U
53469-21-9	Aroclor-1242	0.48	U
12672-29-6	Aroclor-1248	0.48	U
11097-69-1	Aroclor-1254	0.95	U
11096-82-5	Aroclor-1260	0.95	U

000064

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

2468-01MSD

Lab Name: PNELI Contract: _____

Lab Code: PNELI Case No.: 2468 SAS No.: _____ SDG No.: WELL14

Matrix: (soil/water) WATER Lab Sample ID: 2468-01MSD

Sample wt/vol: 1040 (g/mL) ML Lab File ID: _____

Level: (low/med) LOW Date Received: 06/06/90

% Moisture: not dec. __ dec. __ Date Extracted: 06/11/90

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 06/20/90

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.048	U
319-85-7	beta-BHC	0.048	U
319-86-8	delta-BHC	0.048	U
58-89-9	gamma-BHC (Lindane)	0.048	U
76-44-8	Heptachlor	0.048	U
309-00-2	Aldrin	0.048	U
1024-57-3	Heptachlor epoxide	0.048	U
959-98-8	Endosulfan I	0.048	U
60-57-1	Dieldrin	0.096	U
72-55-9	4,4'-DDE	0.096	U
72-20-8	Endrin	0.096	U
33213-65-9	Endosulfan II	0.096	U
72-54-8	4,4'-DDD	0.096	U
1031-07-8	Endosulfan sulfate	0.096	U
50-29-3	4,4'-DDT	0.096	U
72-43-5	Methoxychlor	0.48	U
53494-70-5	Endrin ketone	0.096	U
5103-71-9	alpha-Chlordane	0.48	U
5103-74-2	gamma-Chlordane	0.48	U
8001-35-2	Toxaphene	0.96	U
12674-11-2	Aroclor-1016	0.48	U
11104-28-2	Aroclor-1221	0.48	U
11141-16-5	Aroclor-1232	0.48	U
53469-21-9	Aroclor-1242	0.48	U
12672-29-6	Aroclor-1248	0.48	U
11097-69-1	Aroclor-1254	0.96	U
11096-82-5	Aroclor-1260	0.96	U

000065

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

2468-02

Lab Name: PNELI Contract: _____

Lab Code: PNELI Case No.: 2468 SAS No.: _____ SDG No.: WELL14

Matrix: (soil/water) WATER Lab Sample ID: 2468-02

Sample wt/vol: 1050 (g/mL) ML Lab File ID: _____

Level: (low/med) LOW Date Received: 06/06/90

% Moisture: not dec. __ dec. __ Date Extracted: 06/11/90

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 06/20/90

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 1.00

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

CAS NO.	COMPOUND	Q
319-84-6	alpha-BHC	0.048 U
319-85-7	beta-BHC	0.048 U
319-86-8	delta-BHC	0.048 U
58-89-9	gamma-BHC (Lindane)	0.048 U
76-44-8	Heptachlor	0.048 U
309-00-2	Aldrin	0.048 U
1024-57-3	Heptachlor epoxide	0.048 U
959-98-8	Endosulfan I	0.048 U
60-57-1	Dieldrin	0.095 U
72-55-9	4,4'-DDE	0.095 U
72-20-8	Endrin	0.095 U
33213-65-9	Endosulfan II	0.095 U
72-54-8	4,4'-DDD	0.095 U
1031-07-8	Endosulfan sulfate	0.095 U
50-29-3	4,4'-DDT	0.095 U
72-43-5	Methoxychlor	0.48 U
53494-70-5	Endrin ketone	0.095 U
5103-71-9	alpha-Chlordane	0.48 U
5103-74-2	gamma-Chlordane	0.48 U
8001-35-2	Toxaphene	0.95 U
12674-11-2	Aroclor-1016	0.48 U
11104-28-2	Aroclor-1221	0.48 U
11141-16-5	Aroclor-1232	0.48 U
53469-21-9	Aroclor-1242	0.48 U
12672-29-6	Aroclor-1248	0.48 U
11097-69-1	Aroclor-1254	0.95 U
11096-82-5	Aroclor-1260	0.95 U

000066

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

2468-03

Lab Name: PNELI Contract: _____

Lab Code: PNELI Case No.: 2468 SAS No.: _____ SDG No.: WELL14

Matrix: (soil/water) WATER Lab Sample ID: 2468-03

Sample wt/vol: 1050 (g/mL) ML Lab File ID: _____

Level: (low/med) LOW Date Received: 06/06/90

% Moisture: not dec. __ dec. __ Date Extracted: 06/11/90

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 06/19/90

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.048	U
319-85-7	beta-BHC	0.048	U
319-86-8	delta-BHC	0.048	U
58-89-9	gamma-BHC (Lindane)	0.048	U
76-44-8	Heptachlor	0.048	U
309-00-2	Aldrin	0.048	U
1024-57-3	Heptachlor epoxide	0.048	U
959-98-8	Endosulfan I	0.048	U
60-57-1	Dieldrin	0.095	U
72-55-9	4,4'-DDE	0.095	U
72-20-8	Endrin	0.095	U
33213-65-9	Endosulfan II	0.095	U
72-54-8	4,4'-DDD	0.095	U
1031-07-8	Endosulfan sulfate	0.095	U
50-29-3	4,4'-DDT	0.095	U
72-43-5	Methoxychlor	0.48	U
53494-70-5	Endrin ketone	0.095	U
5103-71-9	alpha-Chlordane	0.48	U
5103-74-2	gamma-Chlordane	0.48	U
8001-35-2	Toxaphene	0.95	U
12674-11-2	Aroclor-1016	0.48	U
11104-28-2	Aroclor-1221	0.48	U
11141-16-5	Aroclor-1232	0.48	U
53469-21-9	Aroclor-1242	0.48	U
12672-29-6	Aroclor-1248	0.48	U
11097-69-1	Aroclor-1254	0.95	U
11096-82-5	Aroclor-1260	0.95	U

000067

2E
WATER PESTICIDE SURROGATE RECOVERY

Lab Name: PNELI_____ Contract: _____

Lab Code: PNELI__ Case No.: 2468__ SAS No.: _____ SDG No.: WELL14

	EPA SAMPLE NO.	S1 (DBC)#	OTHER
01	PBLK01	117	0
02	2468-01	124	0
03	2468-02	119	0
04	2468-03	113	0
05	2468-01MS	117	0
06	2468-01MSD	106	0

ADVISORY
QC LIMITS
(24-154)

S1 (DBC) = Dibutlychlorendate

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

000068

FORM II PEST-1

1/87 Rev.

3E

WATER PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: PNELI_____ Contract: _____

Lab Code: PNELI__ Case No.: 2468__ SAS No.: _____ SDG No.: WELL14

Matrix Spike - EPA Sample No.: 2468-01____

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC.
gamma-BHC (Lindane)____	0.190	0	0.132	69	56-123
Heptachlor_____	0.190	0	0.194	102	40-131
Aldrin_____	0.190	0	0.184	97	40-120
Dieldrin_____	0.476	0	0.428	90	52-126
Endrin_____	0.476	0	0.549	115	56-121
4,4'-DDT_____	0.476	0	0.712	150 *	38-127

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
gamma-BHC (Lindane)____	0.191	0.128	67	3	15	56-123
Heptachlor_____	0.191	0.179	94	8	20	40-131
Aldrin_____	0.191	0.167	87	11	22	40-120
Dieldrin_____	0.478	0.390	82	9	18	52-126
Endrin_____	0.478	0.506	106	8	21	56-121
4,4'-DDT_____	0.478	0.585	122	21	27	38-127

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: __0 out of __6 outside limits
Spike Recovery: __1 out of _12 outside limits

COMMENTS:

000069

4C

PESTICIDE METHOD BLANK SUMMARY

Lab Name: PNELI_____ Contract: _____

Lab Code: PNELI__ Case No.: 2468__ SAS No.: _____ SDG No.: WELL14

Lab Sample ID: 2468-MB_____ Lab File ID: _____

Matrix:(soil/water) WATER Level:(low/med) LOW__

Date Extracted: 06/11/90 Extraction:(SepF/Cont/Sonc) CONT_

Date Analyzed (1): 06/19/90 Date Analyzed (2): 06/19/90

Time Analyzed (1): 2014____ Time Analyzed (2): 2014____

Instrument ID (1): GCMA____ Instrument ID (2): GCMB____

GC Column ID (1): DB-608____ GC Column ID (2): DB-1701___

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	2468-01	2468-01	06/20/90	06/20/90
02	2468-02	2468-02	06/20/90	06/20/90
03	2468-03	2468-03	06/19/90	06/19/90
04	2468-01MS	2468-01MS	06/20/90	06/20/90
05	2468-01MSD	2468-01MSD	06/20/90	06/20/90

COMMENTS:

000070

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PBLK01

Lab Name: PNELI Contract: _____

Lab Code: PNELI Case No.: 2468 SAS No.: _____ SDG No.: WELL14

Matrix: (soil/water) WATER Lab Sample ID: 2468-MB

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

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. __ dec. __ Date Extracted: 06/11/90

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 06/19/90

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 1.00

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

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

000071