UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
230 SOUTH DEARBORN ST.
CHICAGO, ILLINOIS 60604

US EPA RECORDS CENTER REGION 5
557613

REPLY TO THE ATTENTION OF:

FIT Inspection Date: February, 20, 1990

CERCLIS Site Name: Philo Plant

Site Address: Philo, Ohio, 43371

Recipient Information: Ohio Power Company c/o Ray E. Wright P.E.
Name
Environmental Affairs Director
Title
301 Cleveland Ave. S.W., P.O. Box 24400
Street Address
Canton Ohio 44701
City State Zip Code
(216) 438-7136
Telephone Number

Ecology and Environment, Inc. has been retained by the United States Environmental Protection Agency (U.S. EPA) under contract 68-01-7347 for the purpose of evaluating sites under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA), and the Superfund Amendments and Reauthorization Act (SARA).

A copy of the report regarding the inspection conducted at the above-referenced property will be forwarded by the U.S. EPA within 6 months. If a copy of the inspection report is not received within 6 months of the inspection date noted above, a written request may be sent to the U.S. EPA representative indicated below.

It is essential to include the U.S. EPA Identification Number listed below to ensure that your request is properly referenced.

U.S. EPA Identification Number OHD980423347

Address requests to:

William Messenger, Chief
Pre-Remedial Unit (5HR11)
United States Environmental Protection Agency
230 South Dearborn Street
Chicago, Illinois 60604
(312) 353-1057

Distribution:
White: FIT Site File; TDD No.: F05-8805-020 ; PAN: F01408285B
Yellow: Recipient
Pink: U.S. EPA

# RECEIPT FOR SAMPLES

U.S. EPA, 230 S. Dearborn St., Chicago, IL 60604

U. S. EPA ID NO [illegible]

PROJ. ACCT. NO. F0H0828SB

TDD F05-8805-020

FACILITY/OCCUPANT NAME [illegible]

FACILITY/OCCUPANT ADDRESS [illegible]

SPLIT SAMPLES ACCEPTED(✓) DECLINED( )

| SAMPLE NUMBER | DATE | TIME | SPLIT SAMPLES (✓) | OTR# | ITR# | DESCRIPTION OF SAMPLE LOCATIONS | SEMIVOLATILES | PESTICIDES/PCBS | VOLATILES | METALS | CYANIDE | | | MATRIX |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 51 | [illegible] | 1415 | ✓ | [illegible] | [illegible] | 51 | X | X | X | X | X | | | SOIL |
| 52 | [illegible] | 1430 | ✓ | [illegible] | [illegible] | 52 | X | X | X | X | X | | | SOIL |
| 53 | [illegible] | 1431 | ✓ | [illegible] | [illegible] | 53 | X | X | X | X | X | | | SOIL |
| 54 | 2/20/90 | 1500 | ✓ | [illegible] | [illegible] | 54 | X | X | X | X | X | | | SOIL |
| 55 | 2/20/90 | 1530 | ✓ | EJT [illegible] | HEAT 20 | 55 | X | X | X | X | X | | | SOIL |
| 56 | 2/20/90 | 1600 | ✓ | EJT 64 | HEAT 25 | 56 | X | X | X | X | X | | | SOIL |
| 57 | 2/20/90 | 1615 | ✓ | EJT 65 | HEAT 26 | 57 | X | X | X | X | X | | | SOIL |
| 58 | 2/20/90 | 1630 | ✓ | EJT 69 | HEAT 27 | 58 | X | X | X | X | X | | | SOIL |
| ~~59~~ | | | | | | ~~59~~ | ~~X~~ | ~~X~~ | ~~X~~ | ~~X~~ | ~~X~~ | | | ~~SOIL~~ |
| ~~510~~ | | | | | | ~~510~~ | ~~X~~ | ~~X~~ | ~~X~~ | ~~X~~ | ~~X~~ | | | ~~SOIL~~ |

TRANSFERRED BY

(Signature) [illegible] (Date) 2/20/90 (Time) 5:00 PM

RECEIVED BY:

(Signature) (Date) (Time)

TITLE TELEPHONE

DISTRIBUTION
WHITE: FIT SITE FILE
YELLOW: FACILITY/OCCUPANT
GREEN: FIT SAMPLE MANAGEMENT
PINK: U.S. EPA

# RECEIPT FOR SAMPLES

U.S. EPA, 230 S. Dearborn St., Chicago, IL 60604

U. S. EPA ID NO OHD980423347

PROJ. ACCT. NO. FOH08285B

TDD F05-8805-020

SPLIT SAMPLES ACCEPTED(✓) DECLINED( )

FACILITY/OCCUPANT NAME Philo Plant - Ohio Power

FACILITY/OCCUPANT ADDRESS Philo, Ohio, 43371

| SAMPLE NUMBER | DATE | TIME | SPLIT SAMPLES (✓) | OTR# | ITR# | DESCRIPTION OF SAMPLE LOCATIONS | SEMIVOLATILES | PESTICIDES/PCBS | VOLATILES | METALS | CYANIDE | | | MATRIX |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S1 | 2/20/90 | 1415 | ✓ | EJJ 62 | MEHT 20 | S1 | X | X | X | X | X | | | SOIL |
| S2 | 2/20/90 | 1430 | ✓ | EJJ 63 | MEHT 21 | S2 | X | X | X | X | X | | | SOIL |
| S3 | 2/20/90 | 1430 | ✓ | EJJ 64 | MEHT 22 | S3 | X | X | X | X | X | | | SOIL |
| S4 | 2/20/90 | 1500 | ✓ | EJJ 65 | MEHT 23 | S4 | X | X | X | X | X | | | SOIL |
| S5 | 2/20/90 | 1550 | ✓ | EJJ 66 | MEHT 24 | S5 | X | X | X | X | X | | | SOIL |
| S6 | 2/20/90 | 1600 | ✓ | EJJ 67 | MEHT 25 | S6 | X | X | X | X | X | | | SOIL |
| S7 | 2/20/90 | 1615 | ✓ | EJJ 68 | MEHT 26 | S7 | X | X | X | X | X | | | SOIL |
| S8 | 2/20/90 | 1630 | ✓ | EJJ 69 | MEHT 27 | S8 | X | X | X | X | X | | | SOIL |
| H.A. ~~S9~~ | | | | | | ~~S9~~ | X | X | X | X | X | | | ~~SOIL~~ H.A. |
| H.A. ~~S10~~ | | | | | | ~~S10~~ | X | X | X | X | X | | | ~~SOIL~~ H.A. |

TRANSFERED BY

(Signature) [signature] (Date) 2/20/90 (Time) 5:00 PM

RECEIVED BY:

(Signature) [signature] (Date) 2/20/90 (Time) 5:00 PM

TITLE

TELEPHONE

DISTRIBUTION
WHITE: FIT SITE FILE
YELLOW: FACILITY/OCCUPANT
GREEN: FIT SAMPLE MANAGEMENT
PINK: U.S. EPA

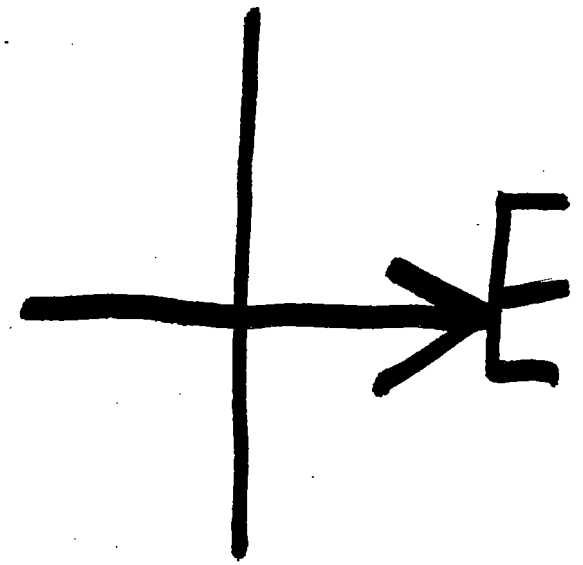
SITE Philo Plant

CITY Philo STATE Ohio

SAMPLE S1

DATE 2-20-90

TIME 1415



SITE Philo Plant

CITY Philo STATE Ohio

SAMPLE S2

DATE 2-20-90

TIME 1430

E

SITE Philo Plant

CITY Philo STATE Ohio

SAMPLE S3

DATE 2-20-90

TIME 1430

SITE Philo Plant

CITY Philo STATE Ohio

SAMPLE S4

DATE 2-20-90

TIME 1500

SITE Philo Plant

CITY Philo STATE Ohio

SAMPLE S5

DATE 2-20-90

TIME 1550

recycled paper

SITE Philo Plant

CITY Philo STATE Ohio

SAMPLE S6

DATE 2-20-90

TIME 1600

SITE Philo Plant

CITY Philo STATE Ohio

SAMPLE S7

DATE 2-20-90

TIME 1615

SITE Philo Plant

CITY Philo STATE Ohio

SAMPLE S8

N

DATE 2-20-90

TIME 1630

SITE Philo Plant

CITY Philo STATE Ohio

SAMPLE S9

DATE 2-20-90

TIME

SITE Philo Plant

CITY Philo STATE Ohio

SAMPLE S10

DATE 2-20-90

TIME

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DATE 2-20-90

TIME

SITE Philo Plant

CITY Philo STATE Ohio

SAMPLE S

DATE 2-20-90

TIME

SAMPLE DESCRIPTION

SITE NAME/TDD# Philo Plant (SIA) / F05-8805-020

CASE NUMBER 13622

SAMPLE #/STATION LOCATION S1

SAMPLING DATE Feb. 20, 1990 SAMPLING TIME 1415

ORGANIC TRAFFIC NUMBER EJJ62

INORGANIC TRAFFIC NUMBER MEHT 20

| BOTTLE | ANALYSIS | TAG NUMBERS | LOT NUMBER |
|---|---|---|---|
| 8oz. | heavy metals; CN | 5-083776 | 9276023 |
| 8oz. | extractables | 5-083777 | ↓ |
| 4oz. | VOA | 5-083778 | D9297023 |
| 4oz. | VOA | 5-083779 | ↓ |
| | | | |
| | | | |
| | | | |

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: Black Ash

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: None

INSTRUMENT READINGS N/A

pH ↓

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# Philo Plant (SIA) / F05-8805-020

CASE NUMBER 13622

SAMPLE #/STATION LOCATION S2

SAMPLING DATE Feb. 20, 1990 SAMPLING TIME 1430

ORGANIC TRAFFIC NUMBER EJJ 63

INORGANIC TRAFFIC NUMBER MEHT 21

| BOTTLE | ANALYSIS | TAG NUMBERS | LOT NUMBER |
|---|---|---|---|
| 8oz. | heavy metals; CN | 5-083780 | 9276023 |
| 8oz. | extractables | 5-083781 | ↓ |
| 4oz. | VOA | 5-083782 | D9297023 |
| 4oz. | VOA | 5-083783 | ↓ |
| | | | |
| | | | |
| | | | |

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: Black Ash

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: None

INSTRUMENT READINGS N/A

pH

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# Philo Plant (SIA) / F05-8805-020

CASE NUMBER 13622

SAMPLE #/STATION LOCATION S3

SAMPLING DATE Feb. 20, 1990 SAMPLING TIME 1430

ORGANIC TRAFFIC NUMBER EJJ 64

INORGANIC TRAFFIC NUMBER MEHT 22

| BOTTLE | ANALYSIS | TAG NUMBERS | LOT NUMBER |
|---|---|---|---|
| 8oz. | heavy metals & CN | 5-083784 | 9276023 |
| 8oz. | extractables | 5-083785 | ↓ |
| 4oz. | VOA | 5-083786 | D9297023 |
| 4oz. | VOA | 5-083787 | ↓ |
| | | | |
| | | | |
| | | | |

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: Black Ash

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: None

INSTRUMENT READINGS N/A

pH ↓

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# Philo Plant (SIA) / F05-8805-020

CASE NUMBER 13622

SAMPLE #/STATION LOCATION S4

SAMPLING DATE Feb. 20, 1990 SAMPLING TIME 1500

ORGANIC TRAFFIC NUMBER EJJ65

INORGANIC TRAFFIC NUMBER MEHT23

| BOTTLE | ANALYSIS | TAG NUMBERS | LOT NUMBER |
|---|---|---|---|
| 8oz. | heavy metals & CN | 5-083788 | 9276023 |
| 8oz. | extractables | 5-083789 | ↓ |
| 4oz. | VOA | 5-083790 | D9297023 |
| 4oz. | VOA | 5-083791 | ↓ |
| | | | |
| | | | |
| | | | |

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: Brown quartz sand

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: None

INSTRUMENT READINGS N/A

pH ↓

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# Philo Plant (SIA) / F05 - 8805 -023

CASE NUMBER 13622

SAMPLE #/STATION LOCATION SS

SAMPLING DATE Feb. 20, 1990 SAMPLING TIME 1550

ORGANIC TRAFFIC NUMBER EJJ 66

INORGANIC TRAFFIC NUMBER MEHT 24

| BOTTLE | ANALYSIS | TAG NUMBERS | LOT NUMBER |
|---|---|---|---|
| 8oz. | heavy metals & CN | 5-083792 | 9276023 |
| 8oz. | extractables | 5-083793 | ↓ |
| 4oz. | VOA | 5-083794 | D9297023 |
| 4oz. | VOA | 5-083795 | ↓ |
| | | | |
| | | | |
| | | | |

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: Black Fine Fly Ash

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: None

INSTRUMENT READINGS N/A

pH ↓

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# Philo Plant (SIA) / F05-8805-020

CASE NUMBER 13622

SAMPLE #/STATION LOCATION S6

SAMPLING DATE Feb. 20, 1990 SAMPLING TIME 1600

ORGANIC TRAFFIC NUMBER EJJ67

INORGANIC TRAFFIC NUMBER MEHT25

| BOTTLE | ANALYSIS | TAG NUMBERS | LOT NUMBER |
|---|---|---|---|
| 8oz. | heavy metals; CN | 5-083796 | 9276023 |
| 8oz. | extractables | 5-083797 | ↓ |
| 4oz. | VOA | 5-083798 | D9297023 |
| 4oz. | VOA | 5-083799 | ↓ |
| | | | |
| | | | |
| | | | |

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: Tan Silt

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: None

INSTRUMENT READINGS N/A

pH ↓

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# Philo Plant (SIA) / F05-8805-020

CASE NUMBER 13622

SAMPLE #/STATION LOCATION S7

SAMPLING DATE Feb. 20, 1990 SAMPLING TIME 1615

ORGANIC TRAFFIC NUMBER EJJ 68

INORGANIC TRAFFIC NUMBER MEHT26

| BOTTLE | ANALYSIS | TAG NUMBERS | LOT NUMBER |
|---|---|---|---|
| 8oz. | heavy metals & CN | 5-083800 | 9276023 |
| 8oz. | extractables | 5-083801 | ↓ |
| 4oz. | VOA | 5-083802 | D9297023 |
| 4oz. | VOA | 5-083803 | ↓ |
| | | | |
| | | | |
| | | | |

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: Tan Sand (Quartz)

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: None

INSTRUMENT READINGS N/A

pH

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# Philo Plant (SIA) / FOS-8805-020

CASE NUMBER 13622

SAMPLE #/STATION LOCATION S8

SAMPLING DATE Feb. 20, 1990 SAMPLING TIME 1630

ORGANIC TRAFFIC NUMBER EJJ 69

INORGANIC TRAFFIC NUMBER MEHT 27

| BOTTLE | ANALYSIS | TAG NUMBERS | LOT NUMBER |
|---|---|---|---|
| 8oz. | heavy metals; CN | 5-083804 | 9276023 |
| 8oz. | extractables | 5-083805 | ↓ |
| 4oz. | VOA | 5-083806 | 09297023 |
| 4oz. | VOA | ~~5-8~~ 5-083807 | ↓ |
| | | | |
| | | | |
| | | | |

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: Tan Quartz Sand

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: None

INSTRUMENT READINGS N/A

pH ↓

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# Philo Plant (SIA)

CASE NUMBER 13622

SAMPLE #/STATION LOCATION S9

SAMPLING DATE Feb. 20, 1990 SAMPLING TIME NOT COLLECTED!

ORGANIC TRAFFIC NUMBER EJJ 70

INORGANIC TRAFFIC NUMBER MEHT 28

| BOTTLE | ANALYSIS | TAG NUMBERS | LOT NUMBER |
|---|---|---|---|
| 8oz. | heavy metals & CN | 5-083808 | N/A |
| 8oz. | extractables | 5-083809 | ↓ |
| 4oz. | VOA | 5-083810 | ↓ |
| 4oz. | VOA | 5-083811 | ↓ |
| | | | |
| | | | |
| | | | |

PHYSICAL DESCRIPTION AT TIME OF COLLECTION:

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: None

INSTRUMENT READINGS N/A

pH ↓

CONDUCTIVITY ↓

TEMPERATURE ↓

SAMPLE DESCRIPTION

SITE NAME/TDD# Philo Plant (SIA)

CASE NUMBER 13622

SAMPLE #/STATION LOCATION S10

SAMPLING DATE Feb. 20, 1990 SAMPLING TIME NOT COLLECTED!

ORGANIC TRAFFIC NUMBER EJJ 71

INORGANIC TRAFFIC NUMBER MEHJ 29

| BOTTLE | ANALYSIS | TAG NUMBERS | LOT NUMBER |
|---|---|---|---|
| 8oz. | heavy metals; CN | 5-083812 | N/A |
| 8oz. | extractables | 5-083813 | ↓ |
| 4oz. | VOA | 5-083814 | ↓ |
| 4oz. | VOA | 5-083815 | ↓ |
| | | | |
| | | | |
| | | | |

PHYSICAL DESCRIPTION AT TIME OF COLLECTION:

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: None

INSTRUMENT READINGS N/A

pH ↓

CONDUCTIVITY ↓

TEMPERATURE ↓

FEDERAL EXPRESS

USE THIS AIRBILL FOR DOMESTIC SHIPMENTS WITHIN THE CONTINENTAL U.S.A., ALASKA AND HAWAII.
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QUESTIONS? CALL 800-238-5355 TOLL FREE.

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24M 6454148400

SENDER'S COPY

Sender's Federal Express Account Number: 1270-9910-3

Date: 2-20-90

1 From (Your Name) Please Print: Henry E. Adamiak

Your Phone Number (Very Important): (312) 663-9415

Company: ECOLOGY & ENVIRONMENT

Department/Floor No.:

Street Address: 5634 NORTHWEST HWY

City: CHICAGO State: IL ZIP Required: 60646

2 To (Recipient's Name) Please Print: Lawi Rotella

Recipient's Phone Number (Very Important): (513) 782-4600

Company: PEI Associates, Inc.

Department/Floor No.:

Exact Street Address (We Cannot Deliver to P.O. Boxes or P.O. Zip + Codes.): 11499 Chester Rd.

City: Cincinnati State: Ohio ZIP Required: 45246

YOUR INTERNAL BILLING REFERENCE INFORMATION (First 24 characters will appear on invoice.): FT1305-05, FOH0828SBI + 24

H IF HOLD FOR PICK-UP, Print FEDEX Address Here
Street Address:
City: State: ZIP Required:

3 PAYMENT 1 [ ] Bill Sender 2 [ ] Bill Recipient's FedEx Acct. No. 3 [X] Bill 3rd Party FedEx Acct. No. 4 [ ] Bill Credit Card
5 [ ] Cash 0200-7751-4 Expiration Date

4 SERVICES (Check only one box)

Priority Overnight Service (Delivery by next business morning†)
11 [X] YOUR PACKAGING
16 [ ] FEDEX LETTER *
12 [ ] FEDEX PAK *
13 [ ] FEDEX BOX
14 [ ] FEDEX TUBE

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

Economy Service (formerly Standard Air) (Delivery by second business day†)
30 [ ] ECONOMY SERVICE

Heavyweight Service (for Extra Large or any package over 150 lbs.)
70 [ ] HEAVYWEIGHT **
80 [ ] DEFERRED HEAVYWEIGHT **

† Delivery commitment may be later in some areas.
* Declared Value Limit $100.
** Call for delivery schedule.

DELIVERY AND SPECIAL HANDLING
1 [ ] HOLD FOR PICK-UP (Fill in Box H)
2 [X] DELIVER WEEKDAY
3 DELIVER SATURDAY (Extra charge) (Not available to all locations) [ ]
4 [ ] DANGEROUS GOODS (Extra charge) (CSS not available for Dangerous Goods Shipments)
5 [ ] CONSTANT SURVEILLANCE SVC. (CSS) (Extra charge) (Release Signature Not Applicable)
6 [ ] DRY ICE _____ Lbs
7 [ ] OTHER SPECIAL SERVICE _____
8 [ ]
9 [ ] SATURDAY PICK-UP (Extra charge)
10 [ ]
11 [ ] DESCRIPTION
12 [ ] HOLIDAY DELIVERY (If offered) (Extra charge)

| PACKAGES | WEIGHT In Pounds Only | YOUR DECLARED VALUE (See right) | OVER SIZE |
|---|---|---|---|
| 1 | 62 | | |
| Total 1 | Total 62 | Total | |

DIM SHIPMENT (Heavyweight Services Only) [ ] _____ lbs.

Received At
1 [ ] Regular Stop 3 [ ] Drop Box
2 [ ] On-Call Stop 4 [ ] BSC 5 [X] Station

FedEx Emp. No. 111084 Date/Time 2/20 1757

SERVICE CONDITIONS, DECLARED VALUE AND LIMIT OF LIABILITY

Use of this airbill constitutes your agreement to the service conditions in our current Service Guide, available upon request. See back of sender's copy of this airbill for information.

We will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, and document your actual loss for a timely claim. Maximum amount limitations found in the current Federal Express Service Guide apply. Your right to recover from Federal Express for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of $100 or the declared value specified to the left. Recovery cannot exceed actual documented loss.

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

Sender authorizes Federal Express to deliver this shipment without obtaining a delivery signature and shall indemnify and hold harmless Federal Express from any claims resulting therefrom.

5 Release Signature:

Federal Express Base Charges
Declared Value Charge
Other
Other
Total Charges

REVISION DATE 11/89
PART #101831 FREE
FORMAT #014
014
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United States Environmental Protection Agency
Contract Laboratory Program Sample Management Office
PO Box 818 Alexandria, VA 22313
703-557-2490 FTS 557-2490

EPA

# Organic Traffic Report
(For CLP Use Only)

Case Number: 13622
SAS No. (if applicable): N/A

1. Type of Activity (Check one): ENF, ER, ESI, NPLD, O&M, PA, RA, RD, RIFS, SI, ST, STPA, STSI, Other (Specify)

2. Region Number: V
Sampling Co.: FEIT
Sampler (Name): Henry E. Adamiak

4. Date Shipped: 2/20/90
Airbill Number: 6454148400
Carrier: F

5. Sample Description (Enter in Column A)
1. Surface Water
2. Ground Water
3. Leachate
4. Rinsate
5. Soil/Sediment
6. Oil (SAS)
7. Waste (SAS)
8. Other (SAS) (Specify)

Non-Superfund Program: N/A
Site Name: Philo Plant (SIA)
City, State: Philo, Ohio
Site Spill ID: N/A

3. Ship To:
PEI Associates, Inc.
11499 Chester Rd.
Cincinnati, Ohio, 45246
Attn. Lauri Rotella

Triple volume required for matrix spike/duplicate aqueous sample.

Ship medium and high concentration samples in paint cans.

See reverse for additional instructions.

| CLP Sample Number (From labels) | (A) Sample Description (From box 1) | (B) Concentration L=low M=med H=high | (C) RAS Analysis VOA | BNA | Pest/PCB | (D) Special Handling | (E) Station Location | (F) Date/Time of Sample Collection | (G) Corresponding CLP Inorganic Sample Number |
|---|---|---|---|---|---|---|---|---|---|
| EJJ 62 | 5 | L | ✓ | ✓ | ✓ | | S1 | 2/20/90/1415 | MEHT 20 |
| EJJ 63 | 5 | L | ✓ | ✓ | ✓ | | S2 | 2/20/90/1430 | MEHT 21 |
| EJJ 64 | 5 | L | ✓ | ✓ | ✓ | | S3 | 2/20/90/1430 | MEHT 22 |
| EJJ 65 | 5 | L | ✓ | ✓ | ✓ | | S4 | 2/20/90/1500 | MEHT 23 |
| EJJ 66 | 5 | L | ✓ | ✓ | ✓ | | S5 | 2/20/90/1550 | MEHT 24 |
| EJJ 67 | 5 | L | ✓ | ✓ | ✓ | | S6 | 2/20/90/1600 | MEHT 25 |
| EJJ 68 | 5 | L | ✓ | ✓ | ✓ | | S7 | 2/20/90/1615 | MEHT 26 |
| EJJ 69 | 5 | L | ✓ | ✓ | ✓ | | S8 | 2/20/90/1630 | MEHT 27 |
| H.A. ~~EJJ 70~~ | ~~5~~ | ~~L~~ | ~~✓~~ | ~~✓~~ | ~~✓~~ | | ~~S9~~ | | ~~MEHT 28~~ H.A. |
| H.A. ~~EJJ 71~~ | ~~5~~ | ~~L~~ | ~~✓~~ | ~~✓~~ | ~~✓~~ | | ~~S10~~ | | ~~MEHT 29~~ H.A. |

Shipment (is) / ~~is not~~ H.A. complete.

EPA Form 9110-2 (8-88) Replaces EPA Form 2075-7, which may be used. Blue - SMO Copy Pink - Region Copy White - Lab Copy for Return to SMO Yellow - Lab Copy

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

REGION 5
230 South Dearborn Street
Chicago, Illinois 60604

# CHAIN OF CUSTODY RECORD

PROJ. NO.: FOH0828 SB
PROJECT NAME: F05-8805-020 #13622
SAMPLERS: (Signature) Henry S. Ahl

Cooler #: 113

| STA. NO. | DATE | TIME | COMP. | GRAB | STATION LOCATION | NO. OF CONTAINERS | 8oz (extractables) | 4oz. (VOA) | | | | | REMARKS: Tag Numbers | Low Conc. Matrix |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EJJ 62 | 2/20/90 | 1415 | | ✓ | 51 | 3 | 1 | 2 | | | | | 5-083777 → 5-083779 | Soil |
| EJJ 63 | 2/20/90 | 1430 | | ✓ | 52 | 3 | 1 | 2 | | | | | 5-083781 → 5-083783 | Soil |
| EJJ 64 | 2/20/90 | 1430 | | ✓ | 53 | 3 | 1 | 2 | | | | | 5-083785 → 5-083787 | Soil |
| EJJ 65 | 2/20/90 | 1500 | | ✓ | 54 | 3 | 1 | 2 | | | | | 5-083789 → 5-083791 | Soil |
| EJJ 66 | 2/20/90 | 1550 | | ✓ | 55 | 3 | 1 | 2 | | | | | 5-083793 → 5-083795 | Soil |
| EJJ 67 | 2/20/90 | 1600 | | ✓ | 56 | 3 | 1 | 2 | | | | | 5-083797 → 5-083799 | Soil |
| EJJ 68 | 2/20/90 | 1115 | | ✓ | 57 | 3 | 1 | 2 | | | | | 5-083801 → 5-083803 | Soil |
| EJJ 69 | 2/20/90 | 1130 | | ✓ | 58 | 3 | 1 | 2 | | | | | 5-083805 → 5-083807 | Soil |
| ~~EJJ 70~~ | ~~2/20/90~~ | | | | ~~59~~ | ~~3~~ | ~~1~~ | ~~2~~ | | | | | ~~5-083809 → 5-083811~~ | ~~Soil~~ |
| ~~EJJ 71~~ | ~~2/20/90~~ | | | | ~~510~~ | ~~3~~ | ~~1~~ | ~~2~~ | | | | | ~~5-083813 → 5-083815~~ | ~~Soil~~ |

Lot# 8oz - 9276023
4oz - D9297023
(OTR in cooler # 113)

| Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Relinquished by: (Signature) | Date / Time | Received by: (Signature) |
|---|---|---|---|---|---|
| Henry S. Ahl | 2/20/90 1800 | | | | |
| Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Relinquished by: (Signature) | Date / Time | Received by: (Signature) |
| | | | | | |
| Relinquished by: (Signature) | Date / Time | Received for Laboratory by: (Signature) | Date / Time | Remarks: Shipped Fed Ex to PEI Airbill - 6454148400 Custody Seals - 167783 and 167784 | |

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EPA

# Inorganic Traffic Report
(For CLP Use Only)

Case Number: 13622
SAS No. (if applicable): N/A

1. Type of Activity (Check one): ENF, ER, ESI, NPLD, O&M, PA, RA, RD, RIFS, [X] SI, ST, STPA, STSI, Other (Specify)

2. Region Number: V
Sampling Co.: FIT
Sampler (Name): Henry E. Adamick

4. Date Shipped: 2/20/90
Airbill Number: 6454148422
Carrier: F

Non-Superfund Program: N/A
Site Name: Philo Plant (SIA)
City, State: Philo, Ohio
Site Spill ID: N/A

3. Ship To: Vegas Analytical Labs, Inc.
3894 Schiff Drive
Las Vegas, Nev., 89103
Attn. Ajit Joshi

Double volume required for matrix spike/duplicate aqueous sample.

Ship medium and high concentration samples in paint cans.

See reverse for additional instructions.

5. Sample Description (Enter in Column A)
1. Surface Water
2. Ground Water
3. Leachate
4. Rinsate
5. Soil/Sediment
6. Oil (SAS)
7. Waste (SAS)
8. Other (SAS) (Specify)

| CLP Sample Number (From labels) | (A) Sample Description (From box 1) | (B) Concentration L=low M=med H=high | (C) RAS Analysis: Total Metals | (C) RAS Analysis: Cyanide | (D) Special Handling | (E) Station Location | (F) Date/Time of Sample Collection | (G) Corresponding Organic Sample Number |
|---|---|---|---|---|---|---|---|---|
| MEHT 20 | 5 | L | ✓ | ✓ | | S1 | 2/20/90/1415 | EJJ 62 |
| MEHT 21 | 5 | L | ✓ | ✓ | | S2 | 2/20/90/1430 | EJJ 63 |
| MEHT 22 | 5 | L | ✓ | ✓ | | S3 | 2/20/90/1430 | EJJ 64 |
| MEHT 23 | 5 | L | ✓ | ✓ | | S4 | 2/20/90/1500 | EJJ 65 |
| MEHT 24 | 5 | L | ✓ | ✓ | | S5 | 2/20/90/1550 | EJJ 66 |
| MEHT 25 | 5 | L | ✓ | ✓ | | S6 | 2/20/90/1600 | EJJ 67 |
| MEHT 26 | 5 | L | ✓ | ✓ | | S7 | 2/20/90/1615 | EJJ 68 |
| MEHT 27 | 5 | L | ✓ | ✓ | | S8 | 2/20/90/1630 | EJJ 69 |
| H.A. ~~MEHT 28~~ | ~~5~~ | ~~L~~ | ~~✓~~ | ~~✓~~ | | ~~S9~~ | ~~2/20/90/~~ | ~~EJJ 70~~ H.A. |
| H.A. ~~MEHT 29~~ | ~~5~~ | ~~L~~ | ~~✓~~ | ~~✓~~ | | ~~S10~~ | ~~2/20/90/~~ | ~~EJJ 71~~ H.A. |

Shipment (is)/~~is not~~ H.A. complete.

EPA Form 0110-1 (9-88) Replaces EPA Form 2075-8 which may be used. Green - SMO Copy Pink - Region Copy White - Lab Copy for Return to SMO Yellow - Lab Copy

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

REGION 5
230 South Dearborn Street
Chicago, Illinois 60604

# CHAIN OF CUSTODY RECORD

PROJ. NO.: F0HC8285B
PROJECT NAME: F05-8805-020 #13622
SAMPLERS: (Signature) [signature]

COOLER #: 166

| STA. NO. | DATE | TIME | COMP. | GRAB | STATION LOCATION | NO. OF CONTAINERS | 802 (heavy metals) (10) | | | | | | | REMARKS: Tag Numbers | Low Conc. Matrix |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MCHT 20 | 2/20/90 | 1115 | | ✓ | S1 | 1 | 1 | | | | | | | 5-083776 | Soil |
| MCHT 21 | 2/20/90 | 1130 | | ✓ | S2 | 1 | 1 | | | | | | | 5-083780 | Soil |
| MCHT 22 | 2/20/90 | [illegible] | | ✓ | S3 | 1 | 1 | | | | | | | 5-083784 | Soil |
| MCHT 23 | 2/20/90 | [illegible] | | ✓ | S4 | 1 | 1 | | | | | | | 5-083788 | Soil |
| MCHT 24 | 2/20/90 | 1550 | | ✓ | S5 | 1 | 1 | | | | | | | 5-083792 | Soil |
| MCHT 25 | 2/20/90 | [illegible] | | ✓ | S6 | 1 | 1 | | | | | | | 5-083796 | Soil |
| MCHT 26 | 2/20/90 | [illegible] | | ✓ | S7 | 1 | 1 | | | | | | | 5-083800 | Soil |
| MCHT 27 | 2/20/90 | 1120 | | ✓ | S8 | 1 | 1 | | | | | | | 5-083804 | Soil |
| ~~MCHT 28~~ | ~~2/20/90~~ | | | | ~~S9~~ | ~~1~~ | ~~1~~ | | | | | | | ~~5-083808~~ | ~~Soil~~ |
| ~~MCHT 29~~ | ~~2/20/90~~ | | | | ~~S10~~ | ~~1~~ | ~~1~~ | | | | | | | ~~5-083812~~ | ~~Soil~~ |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | Lot # 802. - 9276023 | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | ~~ET~~ NA (ITR in cooler #166) | |

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|---|---|---|---|---|---|
| [signature] | 2/20/90 1800 | | | | |
| Relinquished by: (Signature) | Date / Time | Received by: (Signature) | Relinquished by: (Signature) | Date / Time | Received by: (Signature) |
| | | | | | |
| Relinquished by: (Signature) | Date / Time | Received for Laboratory by: (Signature) | Date / Time | Remarks: Shipped Fed Ex to Vegas<br>Airbill – 6454148422<br>Custody Seals – 167781 and 167782 | |

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05-03781

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Reynoldsburg Ohio Field Office
6950-H Americana Parkway
Reynoldsburg, Ohio 43068-4115

IN REPLY REFER TO:

FILED

**FEDERALLY LISTED ENDANGERED, THREATENED & PROPOSED SPECIES; OHIO**
**4-1-94**

| NAME/STATUS | COUNTIES OF CURRENT, RECENT (c. 25 years) AND POSSIBLE DISTRIBUTION |
|---|---|
| Indiana bat (E)<br>*Myotis sodalis* | Adams, Allen, Ashland, Ashtabula, Auglaize, Brown, Butler, Champaign, Clark, Clermont, Clinton, Columbiana, Crawford, Cuyahoga, Darke Defiance, Delaware, Erie, Fairfield, Fayette, Franklin, Fulton, Geauga, Greene, Hamilton, Hancock, Hardin, Henry, Highland, Hocking, Holmes, Huron, Knox, Lake, Licking, Logan, Lorain, Lucas, Madison, Mahoning, Marion, Medina, Mercer, Miami, Montgomery, Morrow, Ottawa, Paulding, Perry, Pickaway, Pike, Portage, Preble, Putnam, Richland, Ross, Sandusky, Scioto, Seneca, Shelby, Stark, Summit, Trumbull, Union, Van Wert, Warren, Wayne, Williams, Wood, Wyandot |
| Bald eagle (E)<br>*Haliaeetus leucocephalus* | Ashtabula(N), Delaware(N), Erie(N&W), Geauga(N), Hamilton(W), Holmes, Lake, Lorain, Lucas(N&W), Mahoning, Mercer, Ottawa(N&W), Portage(N), Sandusky(N&W), Seneca(N), Summit, Trumbull(N), Wyandot(N) |
| Peregrine falcon (E)<br>*Falco peregrinus* | Cuyahoga(N), Franklin(N), Hamilton(N), Lucas(N), Montgomery(N), Summit(H) |
| Piping plover (E)<br>*Charadrius melodus* | Cuyahoga |
| Scioto madtom (E)<br>*Noturus trautmani* | Franklin, Madison, Pickaway, Union |
| Purple cat's paw pearly mussel (E)<br>*Epioblasma obliquata obliquata* | Coshocton |
| Northern riffleshell (E)<br>*Epioblasma torulosa rangiana* | Franklin, Madison, Pickaway, Williams |
| Fanshell (E)<br>*Cyprogenia stegaria* (=*C. irrorata*) | Coshocton, Morgan, Washington |
| Clubshell mussel (E)<br>*Pleurobema clava* | Adams, Ashtabula, Coshocton, Defiance, Delaware, Fairfield, Franklin, Greene, Madison, Pickaway, Trumbull, Tuscarawas, Union, Williams |

| | |
|---|---|
| White cat's paw pearly mussel (E)<br>Epioblasma obliquata perobliqua | Williams |
| Pink mucket pearly mussel (E)<br>Lampsilis abrupta<br>(= L. orbiculata) | Gallia, Morgan, Washington, Lawrence, Meigs |
| Mitchell's satyr (E)<br>Neonympha mitchelli mitchelli | Portage |
| Karner blue (E)<br>Lycaeides melissa samuelis | Lucas |
| Running buffalo clover (E)<br>Trifolium stoloniferum | Brown, Butler, Clermont, Hamilton, Montgomery, Warren |
| Lakeside daisy (T)<br>Hymenoxys herbacea<br>(Formerly H. acaulis var. glabra) | Erie, Ottawa |
| Northern monkshood (T)<br>Aconitum noveboracense | Portage, Summit |
| Eastern prairie fringed orchid (T)<br>Platanthera leucophaea | Clark, Holmes, Lucas, Ottawa, Sandusky, Wayne |
| Virginia spiraea (E)<br>Spirea virginiana | Scioto |
| Lake Erie water snake (PT)<br>Nerodia sipedon insularum | Ottawa, Erie |
| Northern copperbelly water snake (PT)<br>Nerodia erythrogaster neglecta | Defiance, Hardin, Williams |
| Hines emerald dragonfly (PE)<br>Somatochlora hineana | Logan, Lucas, Williams |

STATUS CODES:

E = Endangered
T = Threatened
N = Nest site
H = Hack site
W = Winter use site
PE = Proposed to be listed as Federally endangered
PT = Proposed to be listed as Federally threatened

FILED

# SCREENING SITE INSPECTION REPORT
FOR
OHIO POWER CO., PHILO PLANT
PHILO, OHIO
U.S. EPA ID: OHD980423347
SS ID: NONE
TDD: F05-8805-020
PAN: F0H0828SB

MARCH 28, 1991


ecology and environment, inc.
111 WEST JACKSON BLVD., CHICAGO, ILLINOIS 60604, TEL. 312-663-9415
International Specialists in the Environment


recycled paper

TABLE OF CONTENTS


| Section | | Page |
|---|---|---|
| 1 | INTRODUCTION | 1-1 |
| 2 | SITE BACKGROUND | 2-1 |
| | 2.1 INTRODUCTION | 2-1 |
| | 2.2 SITE DESCRIPTION | 2-1 |
| | 2.3 SITE HISTORY | 2-1 |
| 3 | SCREENING SITE INSPECTION PROCEDURES AND FIELD OBSERVATIONS | 3-1 |
| | 3.1 INTRODUCTION | 3-1 |
| | 3.2 SITE REPRESENTATIVE INTERVIEW | 3-1 |
| | 3.3 RECONNAISSANCE INSPECTION | 3-1 |
| | 3.4 SAMPLING PROCEDURES | 3-4 |
| 4 | ANALYTICAL RESULTS | 4-1 |
| 5 | DISCUSSION OF MIGRATION PATHWAYS | 5-1 |
| | 5.1 INTRODUCTION | 5-1 |
| | 5.2 GROUNDWATER | 5-1 |
| | 5.3 SURFACE WATER | 5-3 |
| | 5.4 AIR | 5-4 |
| | 5.5 FIRE AND EXPLOSION | 5-5 |
| | 5.6 DIRECT CONTACT | 5-5 |
| 6 | REFERENCES | 6-1 |

Table of Contents (Cont.)


| Appendix | | Page |
|---|---|---|
| A | SITE 4-MILE RADIUS MAP | A-1 |
| B | U.S. EPA FORM 2070-13 | B-1 |
| C | FIT SITE PHOTOGRAPHS | C-1 |
| D | U.S. EPA TARGET COMPOUND LIST AND TARGET ANALYTE LIST QUANTITATION/DETECTION LIMITS | D-1 |
| E | WELL LOGS OF THE AREA OF THE SITE | E-1 |

## LIST OF FIGURES


| Figure | | Page |
|---|---|---|
| 2-1 | Site Location | 2-2 |
| 3-1 | Site Features | 3-3 |
| 3-2 | On-Site Soil/Sediment Sampling Locations | 3-5 |
| 3-3 | Off-Site Soil/Sediment Sampling Locations | 3-7 |

## LIST OF TABLES


| Table | | Page |
|---|---|---|
| 4-1 | Results of Chemical Analysis of FIT-Collected Soil/Sediment Samples | 4-2 |

# 1. INTRODUCTION

Ecology and Environment, Inc., Field Investigation Team (FIT) was tasked by the United States Environmental Protection Agency (U.S. EPA) to conduct a screening site inspection (SSI) of the Ohio Power Co., Philo Plant (Philo Plant) site under contract number 68-01-7347.

The site was initially discovered in June 1971, when Ohio Power Company filed an application with the Army Corps of Engineers for a permit to discharge wastewater (Ohio Environmental Protection Agency [OEPA] 1976). The Army Corps of Engineers subsequently turned over Ohio Power Company's application to OEPA for its consideration. In 1972, OEPA treated Ohio Power Company's application as an application for a National Pollutant Discharge Elimination System [NPDES] permit.

The site was evaluated in the form of a preliminary assessment (PA) that was submitted to U.S. EPA. The PA was prepared by Lori Marsh of the Southeast District Office of OEPA and is dated September 23, 1987.

FIT prepared an SSI work plan for the Philo Plant site under technical directive document (TDD) F05-8805-020, issued on May 12, 1988. The SSI work plan was approved by U.S. EPA on January 19, 1990. The SSI of the Philo Plant site was conducted on February 20, 1990, under amended TDD F05-8805-020, issued on February 6, 1990.

The FIT SSI included an interview with site representatives, a reconnaissance inspection of the site, and the collection of six soil samples and four sediment samples.

The purposes of an SSI have been stated by U.S. EPA in a directive outlining Pre-Remedial Program strategies. The directive states:

> All sites will receive a screening SI to 1) collect additional data beyond the PA to enable a more refined preliminary HRS [Hazard Ranking System] score, 2) establish priorities among sites most likely to qualify for the NPL [National Priorities List], and 3) identify the most critical data requirements for the listing SI step. A screening SI will not have rigorous data quality objectives (DQOs). Based on the refined preliminary HRS score and other technical judgement factors, the site will then either be designated as NFRAP [no further remedial action planned], or carried forward as an NPL listing candidate. A listing SI will not automatically be done on these sites, however. First, they will go through a management evaluation to determine whether they can be addressed by another authority such as RCRA [Resource Conservation and Recovery Act].... Sites that are designated NFRAP or deferred to other statutes are not candidates for a listing SI.
>
> The listing SI will address all the data requirements of the revised HRS using field screening and NPL level DQOs. It may also provide needed data in a format to support remedial investigation work plan development. Only sites that appear to score high enough for listing and that have not been deferred to another authority will receive a listing SI. (U.S. EPA 1988)

U.S. EPA Region V has also instructed FIT to identify sites during the SSI that may require removal action to remediate an immediate human health or environmental threat.

# 2. SITE BACKGROUND

## 2.1 INTRODUCTION

This section presents information obtained from SSI work plan preparation, the site representative interview, and the reconnaissance inspection of the site.

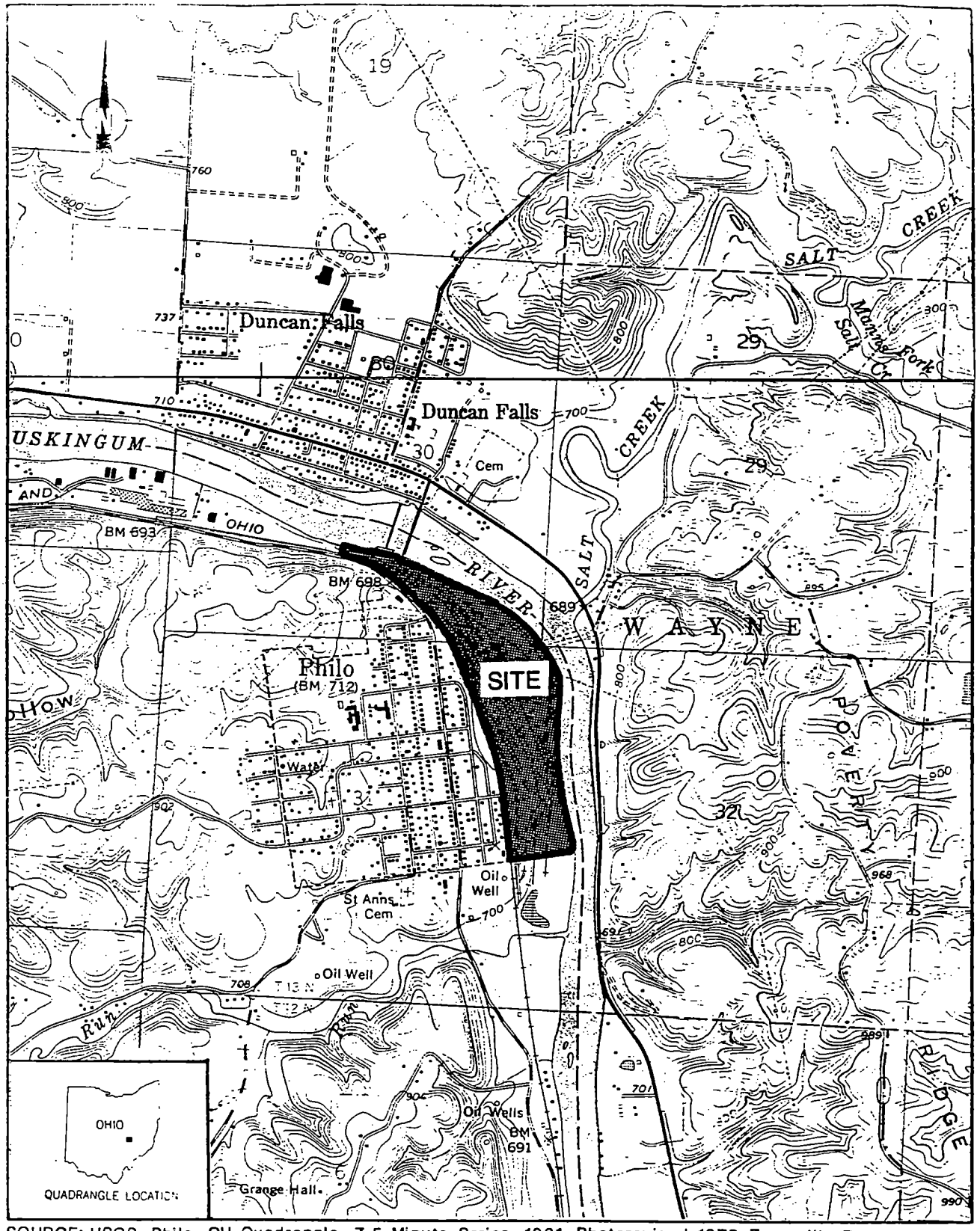
## 2.2 SITE DESCRIPTION

The Philo Plant site is an inactive coal-fired steam electrical power generating facility. The site facility, which has since been demolished, was operated by Ohio Power Company, which is part of the American Electric Power (AEP) system. During its years of operation, the facility was referred to as the "Philo Plant." The site is approximately 114.7 acres in size and is located immediately east of the town of Philo, Ohio, in Harrison Township, Muskingum County (SE1/4NE1/4NE1/4 sec. 31, T.13N., R.12W.). The Philo Plant site is located in a primarily residential area and is bordered on the east by the Muskingum River and on the west by County Road 6 (see Figure 2-1 for site location). The site is located on a wide, level floodplain.

A 4-mile radius map of the Philo Plant site is provided in Appendix A.

## 2.3 SITE HISTORY

The Philo Plant site is currently owned by the Ohio Power Company. The Ohio Power Company operated an electrical power generating facility from October 1924 until May 31, 1975. The facility burned coal in order to generate the steam necessary to drive the turbines that generate




SOURCE: USGS, Philo, OH Quadrangle, 7.5 Minute Series, 1961, Photorevised 1975; Zanesville East, OH Quadrangle, 7.5 Minute Series, 1961, Photorevised 1972 and 1975.

SCALE

0 0.5 1 MILE

FIGURE 2-1 SITE LOCATION

electricity. Water from the Muskingum River was used as cooling water and then discharged back to the river through two discharge points (Wright and Sheets 1990). On-site disposal pits were filled with burnt coal ash. Two bottom ash pits and one fly ash disposal area were operated on-site. An outfall from the two bottom ash pits and an outfall from the fly ash disposal area, both to the Muskingum River, existed on-site. The disposal pits were unlined and uncapped (Wright and Sheets 1990).

The Ohio Power Company closed the facility in 1975 because of the high costs required to modernize the facility in order to bring it into compliance with the Clean Air Act of 1970. Demolition of on-site buildings began shortly thereafter (Wright and Sheets 1990). The Ohio Power Company had a 1972-issued NPDES permit for an on-site synchronous condenser (number B004*AD). As of the date of the SSI, no known remedial or enforcement actions have been taken regarding the Philo Plant site.

# 3. SCREENING SITE INSPECTION PROCEDURES AND FIELD OBSERVATIONS

## 3.1 INTRODUCTION

This section outlines procedures and observations of the SSI of the Philo Plant site. Individual subsections address the site representative interview, reconnaissance inspection, and sampling procedures. Rationales for specific FIT activities are also provided. The SSI was conducted in accordance with the U.S. EPA-approved work plan.

The U.S. EPA Potential Hazardous Waste Site Inspection Report (Form 2070-13) for the Philo Plant site is provided in Appendix B.

## 3.2 SITE REPRESENTATIVE INTERVIEW

Tracy Gray, FIT team leader, conducted an interview with site representatives Ray E. Wright, Environmental Director, AEP, and Danal Sheets, AEP. David Bily of FIT was also present. The interview was conducted on February 20, 1990, at 10:00 a.m. at AEP's office in Zanesville, Ohio. The site representative interview was conducted to gather information that would aid FIT in conducting SSI activities.

## 3.3 RECONNAISSANCE INSPECTION

Following the site representative interview, FIT conducted a reconnaissance inspection of the Philo Plant site and surrounding area in accordance with Ecology and Environment, Inc. (E & E), health and safety guidelines. The reconnaissance inspection began at approximately 1:00 p.m. on February 20, 1990, and included a walk-through of the site to determine appropriate health and safety requirements for conducting on-site activities and to make observations to aid in characterizing the

site. FIT also determined sampling locations during the reconnaissance inspection. FIT was accompanied by the site representatives during the reconnaissance inspection.

Reconnaissance Inspection Observations. The Philo Plant site is an irregularly shaped parcel of land located in the floodplain of the Muskingum River. The site is bordered on the east and north by the Muskingum River, and on the south by a tributary of the Muskingum River. County Road 6 and the town of Philo are situated to the west of the site (see Figure 3-1 for site features).

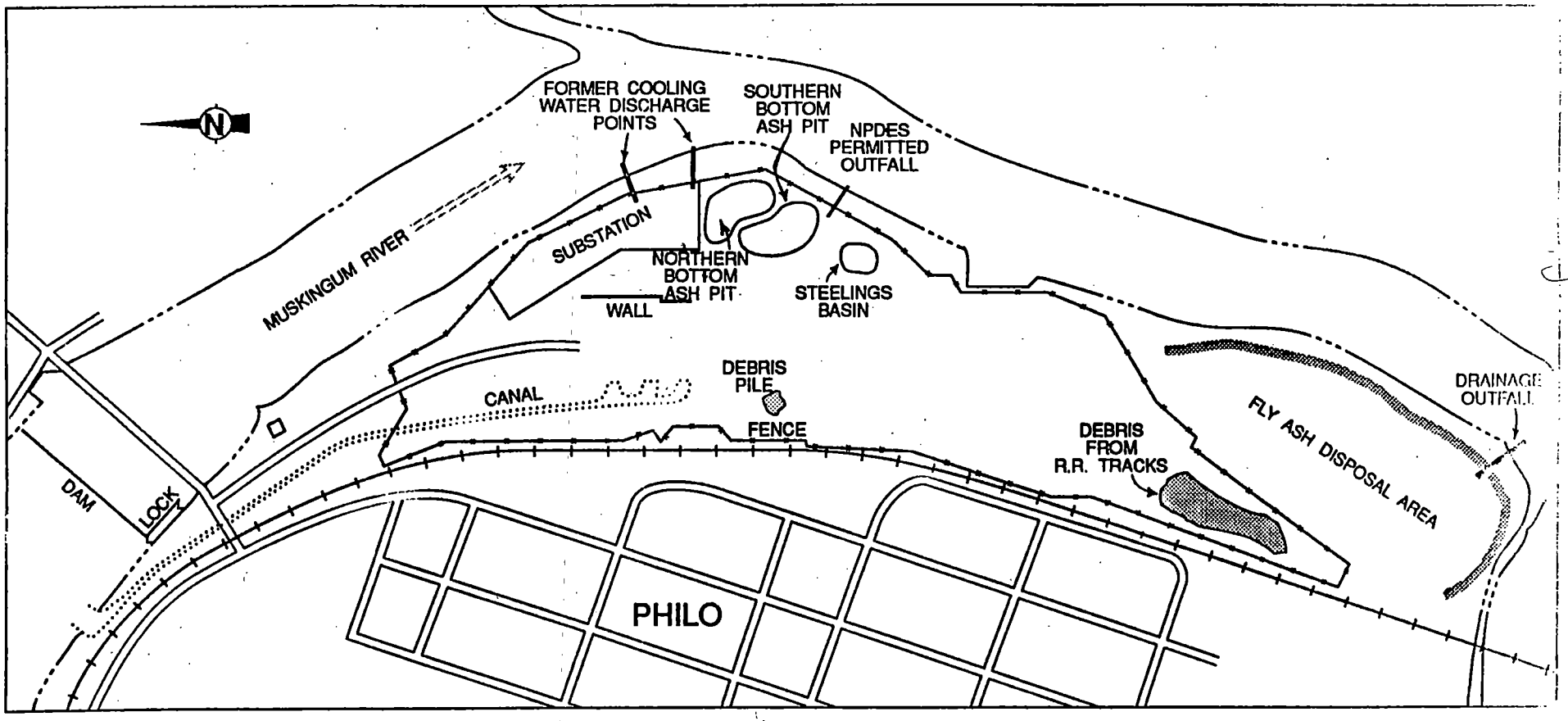
Except for a fly ash disposal area in the southeast portion of the site, the site is completely fenced. A locked entrance gate is located along the northern site boundary. A paved access road extends south through the site entrance for approximately 800 feet. Access to the fly ash disposal area is limited by the Muskingum River on the east and the Muskingum River tributary on the south.

A lock and dam are located in the Muskingum River at a point approximately 1,300 feet northwest of the site. An underground canal extends south from a point 500 feet north of the dam to approximately midway through the Philo Plant site.

The Ohio Power Company currently maintains a substation on-site for the transformation and distribution of electricity. The substation is located in the northeast portion of the site and is completely surrounded by a fence. There are two former cooling water discharge points located under the substation area.

The entire site is covered with coarse, heavy ash. No buildings or other structures, except for the substation and a brick wall just west of the substation, were present on-site.

Two dry bottom ash pits are situated immediately south of the substation. Some vegetation was present in the northern bottom ash pit. An NPDES outfall is located immediately south of the southern bottom ash pit. A steelings basin is located south of the bottom ash pits and was observed to contain water. The intended use of this basin is unknown. A debris pile exists to the west of the bottom ash disposal pits. The debris included bricks, tires, and rocks. An office building had formerly been located in this area. The fly ash disposal area is situated in the extreme southeastern end of the site. The southern




SCALE

0 200 400 600 800 1,000 FEET

FIGURE 3-1 SITE FEATURES

part of the site also contains debris from demolished railroad tracks.

FIT photographs from the SSI of the Philo Plant site are provided in Appendix C.

## 3.4 SAMPLING PROCEDURES

Samples were collected by FIT at locations selected during the reconnaissance inspection to determine whether U.S. EPA Target Compound List (TCL) compounds or Target Analytes List (TAL) analytes were present at the site. The TCL and TAL are included with corresponding quantitation/detection limits in Appendix D.

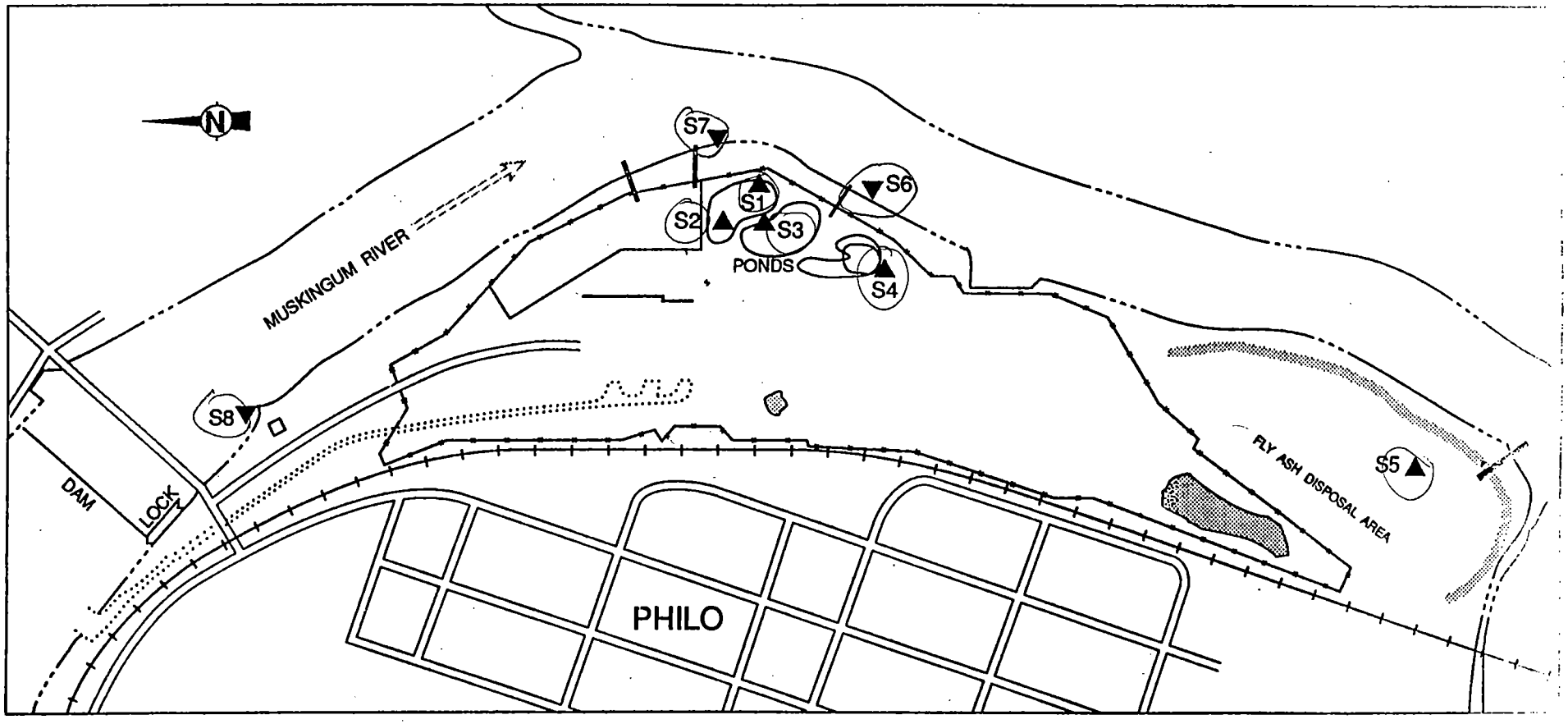
On February 20, 1990, FIT collected five soil samples and three sediment samples. On February 21, 1990, FIT collected a potential background soil sample and a potential background sediment sample. The site representatives accepted offered portions of the February 20, 1990, FIT-collected on-site samples.

Soil/Sediment Sampling Procedures. All soil/sediment samples were surface grab samples collected at depths of 0 to 6 inches. Soil samples S1, S2, S3, and S4 were collected from the area of the bottom ash pits. These samples were collected to determine whether TCL compounds and/or TAL analytes were present in the bottom ash pits, and, if so, whether they were migrating from the pits to the surrounding area.

Soil sample S1 was collected from near the NPDES outfall located just south of the bottom ash pits (see Figure 3-2 for on-site soil/sediment sampling locations). Soil sample S2 was collected from the southwest corner of the northern bottom ash pit. Soil sample S3 was collected from an area of higher ground between the two bottom ash pits. Soil sample S4 was collected from a slope that leads down to the steelings basin, which is lower in elevation than the rest of the site.

Soil sample S5 was collected from the center of the fly ash disposal area. Sample S5 was collected to determine whether TCL compounds and/or TAL analytes were present in this area.

Samples S6, S7, and S8 were sediment samples collected from the west bank of the Muskingum River. These samples were collected to determine whether TCL compounds and/or TAL analytes had migrated from the two bottom ash pits to the river and were transported downstream. Sediment sample S6 was collected downstream of the bottom ash pits, near




SCALE

0 200 400 600 800 1,000 FEET

LEGEND

▲ SOIL SAMPLE

▼ SEDIMENT SAMPLE

FIGURE 3-2 ON-SITE SOIL/SEDIMENT SAMPLING LOCATIONS

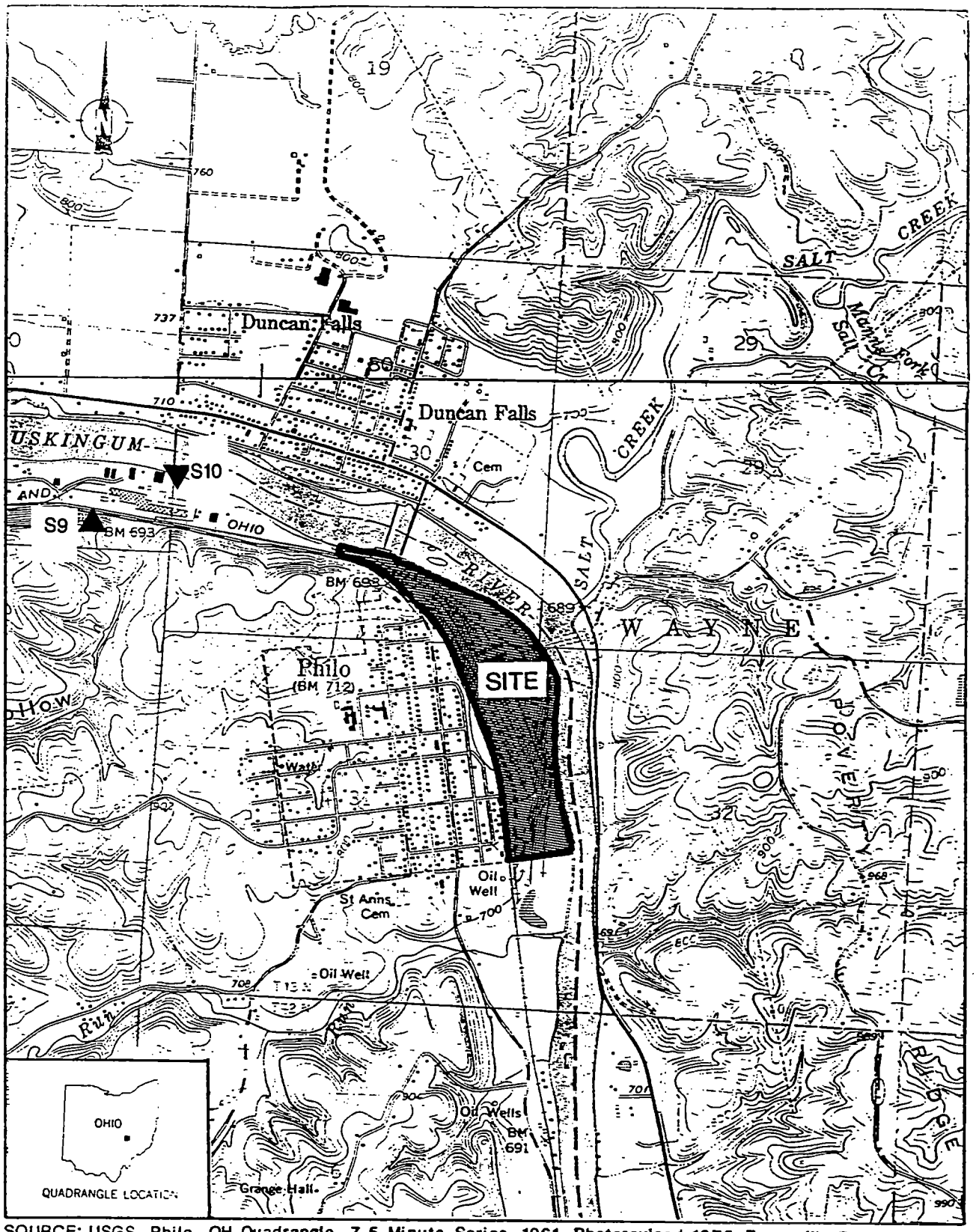
the west bank of the river. Sample S7 was collected near the southern cooling water discharge point. Sediment sample S8 was collected at a location approximately 2,200 feet upstream of the cooling water discharge point.

Samples S9 and S10 were collected off-site at locations approximately 1/2 mile west of the western site boundary (see Figure 3-3 for off-site soil/sediment sampling locations). Soil sample S9 was collected at a location 1,000 feet south of the Muskingum River, just off County Road 6. Sediment sample S10 was collected at a location near the east bank of the Muskingum River. These two samples were collected as potential background samples.

All of the soil/sediment samples were collected using standard E & E operating procedures (E & E 1987). The ground surface was first cleared of vegetation, stones, twigs, and other foreign matter using the appropriate sampling equipment. All samples were collected using a hand trowel. The sample material was then placed into a stainless steel bowl and transferred to samples bottles, using a stainless steel spoon. In all cases, the volatile organic portions of the samples were collected first, with minimal disturbance of the sample material.

Standard E & E decontamination procedures were adhered to during the collection of all soil/sediment samples. The procedures included the scrubbing of all equipment (e.g., hand trowel, bowl, and spoons) with a solution of detergent (Alconox) and distilled water, and triple-rinsing the equipment with distilled water before the collection of each sample (E & E 1987). All soil/sediment samples were packaged and shipped in accordance with U.S. EPA-required procedures.

As directed by U.S. EPA, all soil/sediment samples were analyzed using the U.S. EPA Contract Laboratory Program (CLP).




SOURCE: USGS, Philo, OH Quadrangle, 7.5 Minute Series, 1961, Photorevised 1975; Zanesville East, OH Quadrangle, 7.5 Minute Series, 1961, Photorevised 1972 and 1975.

SCALE

0 0.5 1 MILE

LEGEND

SOIL SEDIMENT

FIGURE 3-3 OFF-SITE SOIL/SEDIMENT SAMPLING LOCATIONS

# 4. ANALYTICAL RESULTS

This section presents results of the chemical analysis of FIT-collected soil/sediment samples for TCL compounds and TAL analytes. All samples were analyzed for volatile organics, semivolatile organics, pesticides/polychlorinated biphenyls (PCBs), metals, and cyanides. Complete chemical analysis results of FIT-collected soil/sediment samples are provided in Table 4-1. In addition, significant tentatively identified compounds (TICs) detected in the analysis of FIT-collected soil/sediment samples are also provided in Table 4-1.

Quantitation/detection limits used in the analysis of soil/sediment samples are provided in Appendix D.

The analytical data for the chemical analysis of soil/sediment samples collected for this SSI have been reviewed by U.S. EPA for compliance with terms of CLP, and the review has been approved by U.S. EPA. The analytical data have also been reviewed by FIT for validity and usability. Any additions, deletions, or changes to the data have been incorporated in the chemical analysis results tables presented in this section.

# 5. DISCUSSION OF MIGRATION PATHWAYS

## 5.1 INTRODUCTION

This section presents discussions of data and information pertaining to potential migration pathways and targets of TCL compounds and TAL analytes that are possibly attributable to the Philo Plant site.

The five migration pathways of concern discussed are groundwater, surface water, air, fire and explosion, and direct contact.

## 5.2 GROUNDWATER

Although the groundwater in the area of the Philo Plant site was not sampled, there appears to be a potential for TCL compounds and TAL analytes to migrate from the site to groundwater in the vicinity of the site, based on the following information.

- Methylene chloride was detected at levels greater than five times the detection limit in on-site soil samples S1, S2, S3, S4, and S5 (see Appendix D). Background soil sample S9 contained no detectable level of methylene chloride (see Table 4-1 for results of chemical analysis of FIT-collected soil/sediment samples).

- Toluene was detected at levels greater than five times the detection limit (5 µg/kg) in on-site soil samples S1, S2, S3, and S5. Background soil sample S9 contained no detectable level of toluene.

- 2-methylnaphthalene was detected at a level greater than five times the detection limit (330 µg/kg) in on-site soil sample S2. Background soil sample S9 contained no detectable level of 2-methylnaphthalene.

- Mercury was detected at levels greater than five times the detection limit (0.008 mg/kg) in on-site soil samples S1, S2, S3, S4, and S5, and in on-site sediment samples S6, S7, and S8. Background soil sample S9 and sediment sample S10 contained no detectable levels of mercury.

- The major constituent in samples S1, S2, S3, and S5 was ash; therefore, contaminants detected in these four samples can be attributed to the site.

- Fly ash and bottom ash were deposited on-site (Wright and Sheets 1990).

- TAL analytes, including all heavy metals, and TCL compounds, including polyaromatic hydrocarbons, may be present in fly ash (E & E 1989).

- The fly ash disposal area is unlined and uncapped (Wright and Sheets 1990).

- A TIC was detected in sample S1.

The presence, distribution, and movement of groundwater below the Philo Plant site is primarily controlled by the Muskingum River. Because the site is located in the floodplain of the Muskingum River, the surface layer consists of soil, clay, silt, sand, and gravel deposits (United States Geological Survey [USGS] 1961). The depth to bedrock varies in the area of the site from 5 to 30 feet, although in some areas the bedrock may be as deep as 100 feet (see Appendix E for well logs of the area of the site). The bedrock consists of Pennsylvanian-age sandstone and shale layers, with some limestone and coal beds (Walker

1962). Most local wells, as well as municipal wells for the city of Duncan Falls and the town of Philo, draw water from a sand and gravel aquifer that lies above the bedrock (Peyton 1989; Pletcher 1989; Walker 1962). This highly permeable sand and gravel aquifer is located directly under the site with the depth to water as shallow as 20 feet (see Appendix E). This aquifer constitutes the aquifer of concern (AOC). Based on the geologic origin and geographic location of the AOC, which is the same as the Muskingum River, it is assumed that the groundwater flow direction is to the south-southeast.

The city of Duncan Falls is served by the East Muskingum Water Authority System. These municipal wells are located approximately 1 1/2 miles northwest of the site (see Appendix A) and are approximately 70 feet deep (Peyton 1989). The municipal water for the town of Philo is supplied by the Philo Water Department. Philo municipal wells are located approximately 1/4 mile south of the site (Pletcher 1989) and are approximately 60 feet deep (Walker 1962). Some private wells in the area of the site are located more than 1 mile away from the Muskingum River. These wells are drilled into the bedrock; however, they typically yield less than 2 gallons of water per minute (Walker 1962).

The potential target population of groundwater contamination is therefore approximately 8,300 persons. This population includes the approximately 6,200 persons who obtain drinking water from the East Muskingum Water Authority System (Peyton 1989), the approximately 1,000 persons who obtain water from the Philo Water Department (Pletcher 1989), and the approximately 1,100 persons in Duncan Falls who obtain water from private wells (Peyton 1989). The total of 1,100 persons using private wells was calculated by counting houses on a United States Geological Survey (USGS) topographic map (USGS 1961) and multiplying this number (177) by a persons-per-household value of 2.77 for Muskingum County (U.S. Bureau of the Census 1982).

## 5.3 SURFACE WATER

The Philo Plant site is adjacent to the Muskingum River. No surface water samples were collected from the river; however, four sediment samples were collected. A potential exists for TCL compounds

and TAL analytes detected on-site to migrate to surface water based on the following information.

- Mercury was detected at levels greater than five times the detection limit (0.008 mg/kg) in sediment samples S6, S7, and S8. The background sediment sample did not contain mercury above the detection limit.

- Waste disposed of on-site is alleged to have been fly ash and bottom ash (Wright and Sheets 1990).

- TAL analytes, including all heavy metals, may be present in fly ash (E & E 1989).

- Although the site representatives claimed that no flooding occurs on-site (Wright and Sheets 1990), the site is located on the floodplain of the Muskingum River.

- A canal that is no longer used could potentially flood and transport waste to the river.

- The fly ash disposal area and the bottom ash pits are unlined and uncapped (Wright and Sheets 1990).

Because there are no surface water intakes from the Muskingum River within 3 miles downstream of the site, no surface water target populations were calculated; however, people that use the river for recreational purposes may be exposed to on-site contaminants that migrate off-site via the Muskingum River (Dewey 1989).

## 5.4 AIR

A release of TCL compounds or TAL analytes to the air was not documented during the SSI of the Philo Plant site. During the reconnaissance inspection, FIT site-entry instruments (HNu, oxygen meter, explosimeter, radiation monitor, and hydrogen cyanide monitor) did not

detect levels above background concentrations at the site. In accordance with the U.S. EPA-approved work plan, further air monitoring was not conducted by FIT.

A potential does not exist for TCL compounds and TAL analytes to migrate from the site via windblown particulates based on the nature of the ash itself, which is coarse and heavy.

## 5.5 FIRE AND EXPLOSION

According to federal, state, and local file information reviewed by FIT, and an interview with Troy Hertman, fireman for the Philo Fire Department, no documentation exists of an incident of fire or explosion at the site (Hertman 1990). According to FIT observations and site-entry equipment readings, no potential for fire or explosion existed at the site at the time of the SSI.

## 5.6 DIRECT CONTACT

According to federal, state, and local file information reviewed by FIT, observations made during the SSI, and the interview with the site representatives, no incidents of direct contact with TCL compounds or TAL analytes at the Philo Plant site have been documented.

There is a potential for direct contact based on the following information.

- TCL compounds and TAL analytes were detected in samples collected from the on-site disposal areas at above background concentrations.

- The fly ash disposal area and the bottom ash pits are uncapped and unlined.

- The residential area nearest to the site is the town of Philo, which is approximately 500 feet west of the site (USGS 1961).

The population within a 1-mile radius of the site potentially affected through direct contact with TAL analytes at the site is approximately 2,000 persons. This population was calculated by counting houses within a 1-mile radius of the site on a USGS topographic map (USGS 1961) and multiplying this number by a persons-per-household value of 2.77 (U.S. Bureau of the Census 1982).

# 6. REFERENCES


Dewey, Ken, October 2, 1989, Industrial Wastewater Group Member, OEPA, telephone conversation, contacted by Henry Adamiak of E & E.

E & E, 1987, Quality Assurance Project Plan Region V FIT Conducted Site Inspections, Chicago, Illinois.

_____, January 20, 1989, office memorandum, from E & E Analytical Services Department, Re: Waste fly ash at the Philo Plant site.

Hertman, Troy, July 3, 1990, fireman, Philo Fire Department, telephone conversation, contacted by Rod Hackler of E & E.

OEPA, October 12, 1976, Director's Journal.

Peyton, Roger, October 5, 1989, Superintendent, East Muskingum Water Authority, telephone conversation, contacted by Henry Adamiak of E & E.

Pletcher, Robert, October 3, 1989, Superintendent, Philo Water Department, telephone conversation, contacted by Henry Adamiak of E & E.

U.S. Bureau of the Census, 1982, 1980 Census of Population, Characteristics of the Population, General Population Characteristics, Ohio, Washington, D.C.

U.S. EPA, February 12, 1988, Office of Solid Waste and Emergency Response, Pre-Remedial Strategy for Implementing SARA, Directive number 9345.2-01, Washington, D.C.

_____, January 10, 1990, Screening Site Inspection Work Plan, for the Philo Plant site, U.S. EPA ID: OHD980423347, prepared by Henry Adamiak of E & E.

USGS, 1961, photorevised 1975, Philo, Ohio Quadrangle, 7.5 Minute Series: 1:24,000.

Walker, A. C., 1962, Underground Water Resources, Muskingum River Basin, Ohio Department of Natural Resources, Division of Water.

Wright, Ray E., and Danal Sheets, February 20, 1990, site representative interview, conducted by Tracy Gray of E & E.

5680:3

# APPENDIX A

## SITE 4-MILE RADIUS MAP

# APPENDIX B

## U.S. EPA FORM 2070-13

EPA

# POTENTIAL HAZARDOUS WASTE SITE
## SITE INSPECTION REPORT
### PART 1 - SITE LOCATION AND INSPECTION INFORMATION

**I. IDENTIFICATION**

| 01 STATE | 02 SITE NUMBER |
|---|---|
| OH | OHD980423347 |

**II. SITE NAME AND LOCATION**

| 01 SITE NAME (Legal, common, or descriptive name of site) | 02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER |
|---|---|
| Ohio Power Co., Philo Plant | Philo Generating Station, Philo, Ohio |

| 03 CITY | 04 STATE | 05 ZIP CODE | 06 COUNTY | 07 COUNTY CODE | 08 CONG DIST |
|---|---|---|---|---|---|
| Philo | OH | 43771 | Muskingum | 119 | 10 |

| 09 COORDINATES LATITUDE | LONGITUDE |
|---|---|
| 39° 51' 20" | 81° 54' 10" |

10 TYPE OF OWNERSHIP (Check one)
☐ A. PRIVATE ☐ B. FEDERAL _____ ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL
■ F. OTHER Public Utility ☐ G. UNKNOWN

**III. INSPECTION INFORMATION**

| 01 DATE OF INSPECTION (MONTH DAY YEAR) | 02 SITE STATUS | 03 YEARS OF OPERATION (BEGINNING YEAR, ENDING YEAR) |
|---|---|---|
| 2, 20, 90 | ☐ ACTIVE ■ INACTIVE | 1924 , 1975 ___ UNKNOWN |

04 AGENCY PERFORMING INSPECTION (Check all that apply)
☐ A. EPA ■ B. EPA CONTRACTOR Ecology & Environment (Name of firm) ☐ C. MUNICIPAL ☐ D. MUNICIPAL CONTRACTOR _____ (Name of firm)
☐ E. STATE ☐ F. STATE CONTRACTOR _____ (Name of firm) ☐ G. OTHER _____ (Specify)

| 05 CHIEF INSPECTOR | 06 TITLE | 07 ORGANIZATION | 08 TELEPHONE NO |
|---|---|---|---|
| Tracy Gray | Chemical Engineer | E & E | (312) 663-9415 |

| 09 OTHER INSPECTORS | 10 TITLE | 11 ORGANIZATION | 12 TELEPHONE NO. |
|---|---|---|---|
| David Bily | Geologist | E & E | (312) 663-9415 |
| Nazeer Uddin | Marine Geologist | E & E | (312) 663-9415 |
| Henry Adamiak | Civil Engineer | E & E | (312) 663-9415 |
| Jeff Swano | Environmental Economist | E & E | (312) 663-9415 |
| | | | ( ) |

| 13 SITE REPRESENTATIVES INTERVIEWED | 14 TITLE | 15 ADDRESS | 16 TELEPHONE NO |
|---|---|---|---|
| Ray E. Wright | Environmental Director | 113 N. 5 St. Zanesville, OH | (614) 452-5461 |
| Danal Sheets | Unknown | 113 N. 5 St. Zanesville, OH | (614) 452-5461 |
| | | | ( ) |
| | | | ( ) |
| | | | ( ) |
| | | | ( ) |
| | | | |

| 17 ACCESS GAINED BY (Check one) | 18 TIME OF INSPECTION | 19 WEATHER CONDITIONS |
|---|---|---|
| ■ PERMISSION ☐ WARRANT | 1:00 p.m. | high 40's °F ; Sunny |

**IV. INFORMATION AVAILABLE FROM**

| 01 CONTACT | 02 OF (Agency/Organization) | 03 TELEPHONE NO. |
|---|---|---|
| Brian Blair | SEDO of OEPA | (614) 385-8501 |

| 04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM | 05 AGENCY | 06 ORGANIZATION | 07 TELEPHONE NO. | 08 DATE (MONTH DAY YEAR) |
|---|---|---|---|---|
| Rod Hackler | US EPA | E & E | (312) 663-9415 | 7, 23, 90 |

EPA FORM 2070-13 (7-81)

EPA

# POTENTIAL HAZARDOUS WASTE SITE
## SITE INSPECTION REPORT
## PART 2 - WASTE INFORMATION

**I. IDENTIFICATION**

| 01 STATE | 02 SITE NUMBER |
|---|---|
| OH | OHD980423347 |

**II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS**

**01 PHYSICAL STATES** (Check all that apply)

- ■ A SOLID
- ■ B POWDER, FINES
- ☐ C SLUDGE
- ☐ D OTHER _____ (Specify)
- ☐ E SLURRY
- ☐ F LIQUID
- ☐ G GAS

**02 WASTE QUANTITY AT SITE** (Measures of waste quantities must be independent)

TONS Unknown
CUBIC YARDS Unknown
NO OF DRUMS Unknown

**03 WASTE CHARACTERISTICS** (Check all that apply)

- ■ A TOXIC
- ☐ B CORROSIVE
- ☐ C RADIOACTIVE
- ■ D PERSISTENT
- ■ E SOLUBLE
- ☐ F INFECTIOUS
- ☐ G FLAMMABLE
- ☐ H IGNITABLE
- ☐ I HIGHLY VOLATILE
- ☐ J EXPLOSIVE
- ☐ K REACTIVE
- ☐ L INCOMPATIBLE
- ☐ M NOT APPLICABLE

**III. WASTE TYPE**

| CATEGORY | SUBSTANCE NAME | 01 GROSS AMOUNT | 02 UNIT OF MEASURE | 03 COMMENTS |
|---|---|---|---|---|
| SLU | SLUDGE | | | |
| OLW | OILY WASTE | | | |
| SOL | SOLVENTS | | | |
| PSD | PESTICIDES | | | |
| OCC | OTHER ORGANIC CHEMICALS | Unknown | | |
| IOC | INORGANIC CHEMICALS | Unknown | | See section 4 in narrative |
| ACD | ACIDS | | | |
| BAS | BASES | | | |
| MES | HEAVY METALS | Unknown | | |

**IV. HAZARDOUS SUBSTANCES** (See Appendix for most frequently cited CAS Numbers)

| 01 CATEGORY | 02 SUBSTANCE NAME | 03 CAS NUMBER | 04 STORAGE/DISPOSAL METHOD | 05 CONCENTRATION | 06 MEASURE OF CONCENTRATION |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |
| | See Table 4-1 in narrative | | | | |
| | | | | | |
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**V. FEEDSTOCKS** (See Appendix for CAS Numbers)

| CATEGORY | 01 FEEDSTOCK NAME | 02 CAS NUMBER | CATEGORY | 01 FEEDSTOCK NAME | 02 CAS NUMBER |
|---|---|---|---|---|---|
| FDS | Coal | Unknown | FDS | | |
| FDS | | | FDS | | |
| FDS | | | FDS | | |
| FDS | | | FDS | | |

**VI. SOURCES OF INFORMATION** (Cite specific references, e.g., state files, sample analysis, reports)

FIT site inspection of 2/20/90

FIT files: Region V

EPA FORM 2070-13 (7-81)

EPA

# POTENTIAL HAZARDOUS WASTE SITE
## SITE INSPECTION REPORT
### PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: OH
02 SITE NUMBER: OHD 980423347

## II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ■ A. GROUNDWATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) — ■ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 8000
04 NARRATIVE DESCRIPTION

see subsection 5.2

01 ■ B. SURFACE WATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) — ■ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: Unknown
04 NARRATIVE DESCRIPTION

See section 5.3

01 ☐ C. CONTAMINATION OF AIR — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____
04 NARRATIVE DESCRIPTION

see subsection 5.4

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____
04 NARRATIVE DESCRIPTION

see subsection 5.5

01 ■ E. DIRECT CONTACT — 02 ☐ OBSERVED (DATE: _____) — ■ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 2000
04 NARRATIVE DESCRIPTION

see subsection 5.6

01 ■ F. CONTAMINATION OF SOIL — 02 ■ OBSERVED (DATE: 2/20/90) — ☐ POTENTIAL — ☐ ALLEGED
03 AREA POTENTIALLY AFFECTED: 114.7 (Acres)
04 NARRATIVE DESCRIPTION

see table 4-1

01 ■ G. DRINKING WATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) — ■ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 8000
04 NARRATIVE DESCRIPTION

see subsection 5.2

01 ☐ H. WORKER EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
03 WORKERS POTENTIALLY AFFECTED: _____
04 NARRATIVE DESCRIPTION

the plant is not Active

01 ☑ I. POPULATION EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____
04 NARRATIVE DESCRIPTION

See subsection 5.4

EPA

# POTENTIAL HAZARDOUS WASTE SITE
## SITE INSPECTION REPORT
### PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

**I. IDENTIFICATION**

| 01 STATE | 02 SITE NUMBER |
|---|---|
| OH | OHD980423347 |

**II. HAZARDOUS CONDITIONS AND INCIDENTS** (Continued)

01 ■ J DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE _____) — ■ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Various grasses and small trees may incorporate TAL Analytes that were detected in soils on site.

01 ■ K DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE _____) — ■ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION (Include name(s) of species)

Potential exists by consumption of contaminated flora

01 ■ L CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE: _____) — ■ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION

The potential exists if contaminated flora and fauna become part of the food chain.

01 ■ M UNSTABLE CONTAINMENT OF WASTES (Spills, Runoff, Standing liquids, Leaking drums) — 02 ■ OBSERVED (DATE 2/20/90) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

The ash was left uncovered.

01 ☐ N DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION

None reported or observed

01 ☐ O CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION

None reported or observed

01 ☐ P ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION

site is fenced

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

None

**III. TOTAL POPULATION POTENTIALLY AFFECTED:** ~8000

**IV. COMMENTS**

Migration Routes of concern are groundwater and surface water.

**V. SOURCES OF INFORMATION** (Cite specific references, e.g., state files, sample analysis, reports)

FIT site inspection of 2/20/90
FIT files: Region V

EPA

# POTENTIAL HAZARDOUS WASTE SITE
## SITE INSPECTION
### PART 4 - PERMIT AND DESCRIPTIVE INFORMATION

**I. IDENTIFICATION**

| 01 STATE | 02 SITE NUMBER |
|---|---|
| OH | OHD980423347 |

**II. PERMIT INFORMATION**

| 01 TYPE OF PERMIT ISSUED (Check all that apply) | 02 PERMIT NUMBER | 03 DATE ISSUED | 04 EXPIRATION DATE | 05 COMMENTS |
|---|---|---|---|---|
| ■ A NPDES | B 004 *AD | Oct 12, 1976 | July 20, 1981 | Synchronous Condenser Operation |
| ☐ B UIC | | | | |
| ☐ C AIR | | | | |
| ☐ D RCRA | | | | |
| ☐ E RCRA INTERIM STATUS | | | | |
| ☐ F SPCC PLAN | | | | |
| ☐ G STATE (Specify) | | | | |
| ☐ H LOCAL (Specify) | | | | |
| ☐ I OTHER (Specify) | | | | |
| ☐ J NONE | | | | |

**III. SITE DESCRIPTION**

| 01 STORAGE/DISPOSAL (Check all that apply) | 02 AMOUNT | 03 UNIT OF MEASURE |
|---|---|---|
| ■ A SURFACE IMPOUNDMENT | Unknown | |
| ■ B PILES | Unknown | |
| ☐ C DRUMS, ABOVE GROUND | | |
| ☐ D TANK, ABOVE GROUND | | |
| ☐ E TANK, BELOW GROUND | | |
| ☐ F. LANDFILL | | |
| ☐ G LANDFARM | | |
| ☐ H OPEN DUMP | | |
| ☐ I. OTHER (Specify) | | |

04 TREATMENT (Check all that apply)

- ☐ A INCENERATION
- ☐ B UNDERGROUND INJECTION
- ☐ C. CHEMICAL PHYSICAL
- ☐ D BIOLOGICAL
- ☐ E. WASTE OIL PROCESSING
- ☐ F. SOLVENT RECOVERY
- ☐ G. OTHER RECYCLING RECOVERY
- ■ H OTHER UNKNOWN (Specify)

05 OTHER

☐ A BUILDINGS ON SITE

None

06 AREA OF SITE

114.7 (Acres)

07 COMMENTS

None

**IV. CONTAINMENT**

01 CONTAINMENT OF WASTES (Check one)

☐ A ADEQUATE, SECURE ☐ B. MODERATE ■ C. INADEQUATE, POOR ☐ D INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DIKING, LINERS, BARRIERS, ETC.

Disposal Areas are unlined and uncapped

**V. ACCESSIBILITY**

01 WASTE EASILY ACCESSIBLE: ☐ YES ■ NO

02 COMMENTS The site is fenced and the entrance is locked. See Subsection 3.3 in narrative

**VI. SOURCES OF INFORMATION** (Cite specific references, e.g. state files, sample analysis, reports)

FIT site inspection on 2/20/90

FIT files: Region V

EPA FORM 2070-13 (7-81)

EPA

# POTENTIAL HAZARDOUS WASTE SITE
## SITE INSPECTION REPORT
### PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

**I. IDENTIFICATION**

| 01 STATE | 02 SITE NUMBER |
|---|---|
| OH | OHD980423347 |

## II. DRINKING WATER SUPPLY

**01 TYPE OF DRINKING SUPPLY** (Check all applicable)

| | SURFACE | WELL |
|---|---|---|
| COMMUNITY | A. ☐ | B. ■ |
| NON-COMMUNITY | C. ☐ | D. ■ |

**02 STATUS**

| ENDANGERED | AFFECTED | MONITORED |
|---|---|---|
| A ☐ | B. ☐ | C ■ |
| D ☐ | E ☐ | F. ☐ |

**03 DISTANCE TO SITE**

A. 1/4 (mi)
B. 1/10 (mi)

## III. GROUNDWATER

**01 GROUNDWATER USE IN VICINITY** (Check one)

■ A. ONLY SOURCE FOR DRINKING ☐ B. DRINKING (Other sources available) COMMERCIAL, INDUSTRIAL, IRRIGATION (No other water sources available) ☐ C. COMMERCIAL, INDUSTRIAL, IRRIGATION (Alternate other sources available) ☐ D. NOT USED, UNUSEABLE

**02 POPULATION SERVED BY GROUND WATER** 8000

**03 DISTANCE TO NEAREST DRINKING WATER WELL** 1/10 (mi)

| 04 DEPTH TO GROUNDWATER | 05 DIRECTION OF GROUNDWATER FLOW | 06 DEPTH TO AQUIFER OF CONCERN | 07 POTENTIAL YIELD OF AQUIFER | 08 SOLE SOURCE AQUIFER |
|---|---|---|---|---|
| 20 (ft) | South | 15 (ft) | 500+ (gpd) | ☐ YES ■ NO |

**09 DESCRIPTION OF WELLS** (Including usage, depth, and location relative to population and buildings)

See well logs (Appendix E)

**10 RECHARGE AREA**
■ YES ☐ NO
COMMENTS: Muskingum River

**11 DISCHARGE AREA**
■ YES ☐ NO
COMMENTS: Muskingum River

## IV. SURFACE WATER

**01 SURFACE WATER USE** (Check one)

■ A. RESERVOIR, RECREATION, DRINKING WATER SOURCE ☐ B. IRRIGATION, ECONOMICALLY IMPORTANT RESOURCES ☐ C. COMMERCIAL, INDUSTRIAL ☐ D. NOT CURRENTLY USED

**02 AFFECTED (POTENTIALLY AFFECTED) BODIES OF WATER**

| NAME: | AFFECTED | DISTANCE TO SITE |
|---|---|---|
| Muskingum River | ☐ | border of site (mi) |
| | ☐ | (mi) |
| | ☐ | (mi) |

## V. DEMOGRAPHIC AND PROPERTY INFORMATION

**01 TOTAL POPULATION WITHIN**

| ONE (1) MILE OF SITE | TWO (2) MILES OF SITE | THREE (3) MILES OF SITE |
|---|---|---|
| A. 2000 NO. OF PERSONS | B. 2400 NO. OF PERSONS | C. 2800 NO. OF PERSONS |

**02 DISTANCE TO NEAREST POPULATION** 1/10 (mi)

**03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE** 900

**04 DISTANCE TO NEAREST OFF-SITE BUILDING** 150 ft. ~~(mi)~~

**05 POPULATION WITHIN VICINITY OF SITE** (Provide narrative description of nature of population within vicinity of site, e.g. rural, village, density suburban, urban area)

See subsection 2.2

EPA

# POTENTIAL HAZARDOUS WASTE SITE
## SITE INSPECTION REPORT
### PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION

| 01 STATE | 02 SITE NUMBER |
|---|---|
| OH | OHD980423347 |

## VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

☐ A $10^{-6} - 10^{-8}$ cm/sec ☐ B. $10^{-4} - 10^{-6}$ cm/sec ☐ C. $10^{-4} - 10^{-3}$ cm/sec ■ D GREATER THAN $10^{-3}$ cm/sec

02 PERMEABILITY OF BEDROCK (Check one)

☐ A IMPERMEABLE (Less than $10^{-6}$ cm/sec) ☐ B. RELATIVELY IMPERMEABLE ($10^{-4} - 10^{-6}$ cm/sec) ■ C RELATIVELY PERMEABLE ($10^{-2} - 10^{-4}$ cm/sec) ☐ D VERY PERMEABLE (Greater than $10^{-2}$ cm/sec)

| 03 DEPTH TO BEDROCK | 04 DEPTH OF CONTAMINATED SOIL ZONE | 05 SOIL pH |
|---|---|---|
| 75 (ft) | Unknown (ft) | Unknown |

| 06 NET PRECIPITATION | 07 ONE YEAR 24 HOUR RAINFALL | 08 SLOPE SITE SLOPE | DIRECTION OF SITE SLOPE | TERRAIN AVERAGE SLOPE |
|---|---|---|---|---|
| 6.3 (in) | 2.4 (in) | 4.0 % | East | 4.0 % |

09 FLOOD POTENTIAL

SITE IS IN N/A YEAR FLOODPLAIN

10 ☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

N/A

11 DISTANCE TO WETLANDS (5 acre minimum)

ESTUARINE A. >1 (mi) OTHER B. >1 (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)

>1 (mi)

ENDANGERED SPECIES N/A

13 LAND USE IN VICINITY

DISTANCE TO:

| COMMERCIAL/INDUSTRIAL | RESIDENTIAL AREAS, NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES | AGRICULTURAL LANDS PRIME AG LAND | AG LAND |
|---|---|---|---|
| A. 1/10 (mi) | B. 1/10 (mi) | C. Unknown (mi) | D. Unknown (mi) |

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

See 4-mile radius map (Appendix A)

## VII. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

FIT site inspection of 2/20/90

FIT files: Region V

EPA

# POTENTIAL HAZARDOUS WASTE SITE
## SITE INSPECTION REPORT
## PART 6 - SAMPLE AND FIELD INFORMATION

**I. IDENTIFICATION**

| 01 STATE | 02 SITE NUMBER |
|---|---|
| OH | OHD980423347 |

**II. SAMPLES TAKEN**

| SAMPLE TYPE | 01 NUMBER OF SAMPLES TAKEN | 02 SAMPLES SENT TO | 03 ESTIMATED DATE RESULTS AVAILABLE |
|---|---|---|---|
| GROUNDWATER | | | |
| SURFACE WATER | | | |
| WASTE | | | |
| AIR | | | |
| RUNOFF | | | |
| SPILL | | | |
| SOIL | 8 | See Subsection 3.4 | |
| VEGETATION | | | |
| OTHER | | | |

**III. FIELD MEASUREMENTS TAKEN**

| 01 TYPE | 02 COMMENTS |
|---|---|
| HNU | No readings above background; 0ppm |
| $O_2$ meter | No readings above or below background; 21% |
| Explosimeter | No readings above background; 0% LEL |
| Radiation meter | No Alarm sounded; < 0.1 milliREM/hr |
| Monitox CN detector | No readings above background; 0ppm |

**IV. PHOTOGRAPHS AND MAPS**

01 TYPE ■ GROUND ☐ AERIAL

02 IN CUSTODY OF Ecology & Environment (Name of organization or individual)

03 MAPS ■ YES ☐ NO

04 LOCATION OF MAPS FIT: Region V Chicago

**V. OTHER FIELD DATA COLLECTED** (Provide narrative description)

Photos taken on-site during inspection

**VI. SOURCES OF INFORMATION** (Cite specific references, e.g., state files, sample analysis, reports)

FIT site inspection of 2/20/90

Fit files: Region V

EPA FORM 2070-13 (7-81)

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# POTENTIAL HAZARDOUS WASTE SITE
## SITE INSPECTION REPORT
### PART 7 - OWNER INFORMATION

**I. IDENTIFICATION**

| 01 STATE | 02 SITE NUMBER |
|---|---|
| OH | OHD980423347 |

**II. CURRENT OWNER(S)**

| 01 NAME | 02 D+B NUMBER | 03 STREET ADDRESS (P.O. Box, RFD #, etc.) | 04 SIC CODE | 05 CITY | 06 STATE | 07 ZIP CODE |
|---|---|---|---|---|---|---|
| Ohio Power Co. | Unknown | 113 N. 5th St. | Unknown | Zanesville | OH | Unknown |
| N/A | | | | | | |
| | | | | | | |
| N/A | | | | | | |
| N/A | | | | | | |

**PARENT COMPANY** (If applicable)

| 08 NAME | 09 D+B NUMBER | 10 STREET ADDRESS (P.O. Box, RFD #, etc.) | 11 SIC CODE | 12 CITY | 13 STATE | 14 ZIP CODE |
|---|---|---|---|---|---|---|
| American Electric Power | Unknown | Unknown | Unknown | Zanesville | OH | Unknown |
| N/A | | | | | | |
| | | | | | | |
| N/A | | | | | | |
| N/A | | | | | | |

**III. PREVIOUS OWNER(S)** (List most recent first)

| 01 NAME | 02 D+B NUMBER | 03 STREET ADDRESS (P.O. Box, RFD #, etc.) | 04 SIC CODE | 05 CITY | 06 STATE | 07 ZIP CODE |
|---|---|---|---|---|---|---|
| Unknown | | | | | | |
| N/A | | | | | | |
| N/A | | | | | | |
| N/A | | | | | | |

**IV. REALTY OWNER(S)** (If applicable; list most recent first)

| 01 NAME | 02 D+B NUMBER | 03 STREET ADDRESS (P.O. Box, RFD #, etc.) | 04 SIC CODE | 05 CITY | 06 STATE | 07 ZIP CODE |
|---|---|---|---|---|---|---|
| N/A | | | | | | |
| N/A | | | | | | |
| N/A | | | | | | |
| N/A | | | | | | |

**V. SOURCES OF INFORMATION** (Cite specific references, e.g., state files, sample analysis, reports)

FIT Site inspection on 2/20/90
FIT files : Region V

EPA FORM 2070-13 (7-81)

EPA

# POTENTIAL HAZARDOUS WASTE SITE
## SITE INSPECTION REPORT
### PART 8 - OPERATOR INFORMATION

| I. IDENTIFICATION | |
|---|---|
| 01 STATE | 02 SITE NUMBER |
| OH | OHD980423347 |

## II. CURRENT OPERATOR (Provide if different from owner)

| | |
|---|---|
| 01 NAME: Ohio Power Co. | 02 D+B NUMBER: Unknown |
| 03 STREET ADDRESS (P.O. Box, RFD #, etc.): 113 N. 5th St | 04 SIC CODE: Unknown |
| 05 CITY: Zanesville | 06 STATE: OH |
| 07 ZIP CODE: Unknown | |
| 08 YEARS OF OPERATION: 51 years | 09 NAME OF OWNER: Ohio Power Co. |

## OPERATOR'S PARENT COMPANY (If applicable)

| | |
|---|---|
| 10 NAME: American Electric Power | 11 D+B NUMBER: Unknown |
| 12 STREET ADDRESS (P.O. Box, RFD #, etc.): Unknown | 13 SIC CODE: Unknown |
| 14 CITY: Zanesville | 15 STATE: OH |
| 16 ZIP CODE: Unknown | |

## III. PREVIOUS OPERATOR(S) (List most recent first; provide only if different from owner)

| | |
|---|---|
| 01 NAME: Unknown | 02 D+B NUMBER: |
| 03 STREET ADDRESS (P.O. Box, RFD #, etc.): | 04 SIC CODE: |
| 05 CITY: | 06 STATE: |
| 07 ZIP CODE: | |
| 08 YEARS OF OPERATION: | 09 NAME OF OWNER DURING THIS PERIOD: |

## PREVIOUS OPERATORS' PARENT COMPANIES (If applicable)

| | |
|---|---|
| 10 NAME: Unknown | 11 D+B NUMBER: |
| 12 STREET ADDRESS (P.O. Box, RFD #, etc.): | 13 SIC CODE: |
| 14 CITY: | 15 STATE: |
| 16 ZIP CODE: | |

| | |
|---|---|
| 01 NAME: N/A | 02 D+B NUMBER: |
| 03 STREET ADDRESS (P.O. Box, RFD #, etc.): | 04 SIC CODE: |
| 05 CITY: | 06 STATE: |
| 07 ZIP CODE: | |
| 08 YEARS OF OPERATION: | 09 NAME OF OWNER DURING THIS PERIOD: |

| | |
|---|---|
| 10 NAME: N/A | 11 D+B NUMBER: |
| 12 STREET ADDRESS (P.O. Box, RFD #, etc.): | 13 SIC CODE: |
| 14 CITY: | 15 STATE: |
| 16 ZIP CODE: | |

| | |
|---|---|
| 01 NAME: N/A | 02 D+B NUMBER: |
| 03 STREET ADDRESS (P.O. Box, RFD #, etc.): | 04 SIC CODE: |
| 05 CITY: | 06 STATE: |
| 07 ZIP CODE: | |
| 08 YEARS OF OPERATION: | 09 NAME OF OWNER DURING THIS PERIOD: |

| | |
|---|---|
| 10 NAME: N/A | 11 D+B NUMBER: |
| 12 STREET ADDRESS (P.O. Box, RFD #, etc.): | 13 SIC CODE: |
| 14 CITY: | 15 STATE: |
| 16 ZIP CODE: | |

## IV. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

FIT site inspection of 2/20/90

FIT files: Region V

EPA FORM 2070-13 (7-81)

EPA

# POTENTIAL HAZARDOUS WASTE SITE
## SITE INSPECTION REPORT
### PART 9 - GENERATOR/TRANSPORTER INFORMATION

**I. IDENTIFICATION**

| 01 STATE | 02 SITE NUMBER |
|---|---|
| OH | OHD 980423347 |

**II. ON-SITE GENERATOR**

| 01 NAME | 02 D+B NUMBER |
|---|---|
| Ohio Power Co. | Unknown |

| 03 STREET ADDRESS (P.O. Box, RFD #, etc.) | 04 SIC CODE |
|---|---|
| 113 N. 5th St. | Unknown |

| 05 CITY | 06 STATE | 07 ZIP CODE |
|---|---|---|
| Zanesville | OH | Unknown |

**III. OFF-SITE GENERATOR(S)**

| 01 NAME | 02 D+B NUMBER | 01 NAME | 02 D+B NUMBER |
|---|---|---|---|
| None | | N/A | |
| 03 STREET ADDRESS (P.O. Box, RFD #, etc.) | 04 SIC CODE | 03 STREET ADDRESS (P.O. Box, RFD #, etc.) | 04 SIC CODE |
| | | | |
| 05 CITY / 06 STATE | 07 ZIP CODE | 05 CITY / 06 STATE | 07 ZIP CODE |
| | | | |
| 01 NAME | 02 D+B NUMBER | 01 NAME | 02 D+B NUMBER |
| N/A | | N/A | |
| 03 STREET ADDRESS (P.O. Box, RFD #, etc.) | 04 SIC CODE | 03 STREET ADDRESS (P.O. Box, RFD #, etc.) | 04 SIC CODE |
| | | | |
| 05 CITY / 06 STATE | 07 ZIP CODE | 05 CITY / 06 STATE | 07 ZIP CODE |
| | | | |

**IV. TRANSPORTER(S)**

| 01 NAME | 02 D+B NUMBER | 01 NAME | 02 D+B NUMBER |
|---|---|---|---|
| None | | N/A | |
| 03 STREET ADDRESS (P.O. Box, RFD #, etc.) | 04 SIC CODE | 03 STREET ADDRESS (P.O. Box, RFD #, etc.) | 04 SIC CODE |
| | | | |
| 05 CITY / 06 STATE | 07 ZIP CODE | 05 CITY / 06 STATE | 07 ZIP CODE |
| | | | |
| 01 NAME | 02 D+B NUMBER | 01 NAME | 02 D+B NUMBER |
| N/A | | N/A | |
| 03 STREET ADDRESS (P.O. Box, RFD #, etc.) | 04 SIC CODE | 03 STREET ADDRESS (P.O. Box, RFD #, etc.) | 04 SIC CODE |
| | | | |
| 05 CITY / 06 STATE | 07 ZIP CODE | 05 CITY / 06 STATE | 07 ZIP CODE |
| | | | |

**V. SOURCES OF INFORMATION** (Cite specific references, e.g., state files, sample analysis, reports)

FIT site inspection of 2/20/90

FIT files: Region V

EPA FORM 2070-13 (7-81)

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# POTENTIAL HAZARDOUS WASTE SITE
## SITE INSPECTION REPORT
## PART 10 - PAST RESPONSE ACTIVITIES

| I. IDENTIFICATION | |
|---|---|
| 01 STATE | 02 SITE NUMBER |
| OH | OHD980423347 |

**II. PAST RESPONSE ACTIVITIES**

01 ☐ A. WATER SUPPLY CLOSED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION N/A

01 ☐ B. TEMPORARY WATER SUPPLY PROVIDED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION N/A

01 ☐ C. PERMANENT WATER SUPPLY PROVIDED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION N/A

01 ☐ D. SPILLED MATERIAL REMOVED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION N/A

01 ☐ E. CONTAMINATED SOIL REMOVED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION N/A

01 ☐ F. WASTE REPACKAGED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION N/A

01 ☐ G. WASTE DISPOSED ELSEWHERE — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION N/A

01 ☐ H. ON SITE BURIAL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION N/A

01 ☐ I. IN SITU CHEMICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION N/A

01 ☐ J. IN SITU BIOLOGICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION N/A

01 ☐ K. IN SITU PHYSICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION N/A

01 ☐ L. ENCAPSULATION — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION N/A

01 ☐ M. EMERGENCY WASTE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION N/A

01 ☐ N. CUTOFF WALLS — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION N/A

01 ☐ O. EMERGENCY DIKING SURFACE WATER DIVERSION — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION N/A

01 ☐ P. CUTOFF TRENCHES/SUMP — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION N/A

01 ☐ Q. SUBSURFACE CUTOFF WALL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION N/A

EPA

# POTENTIAL HAZARDOUS WASTE SITE
## SITE INSPECTION REPORT
### PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION

| 01 STATE | 02 SITE NUMBER |
|---|---|
| OH | OHD980423347 |

II PAST RESPONSE ACTIVITIES (continued)

01 ☐ R. BARRIER WALLS CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION N/A

01 ☐ S. CAPPING/COVERING — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION N/A

01 ☐ T. BULK TANKAGE REPAIRED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION N/A

01 ☐ U. GROUT CURTAIN CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION N/A

01 ☐ V. BOTTOM SEALED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION N/A

01 ☐ W. GAS CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION N/A

01 ☐ X. FIRE CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION N/A

01 ☐ Y. LEACHATE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION N/A

01 ☐ Z. AREA EVACUATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION N/A

01 ☒ 1. ACCESS TO SITE RESTRICTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION N/A

01 ☐ 2. POPULATION RELOCATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION N/A

01 ☐ 3. OTHER REMEDIAL ACTIVITIES — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

NONE

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

FIT site inspection of 2/20/90
FIT files : Region V

EPA FORM 2070-13 (7-81)

# APPENDIX C

# FIT SITE PHOTOGRAPHS

EPA

# POTENTIAL HAZARDOUS WASTE SITE
## SITE INSPECTION REPORT
### PART 11 - ENFORCEMENT INFORMATION

| I. IDENTIFICATION | |
|---|---|
| 01 STATE | 02 SITE NUMBER |
| OH | OHD980423347 |

## II. ENFORCEMENT INFORMATION

01 PAST REGULATORY ENFORCEMENT ACTION ☐ YES ■ NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY/ENFORCEMENT ACTION

## III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

FIT site inspection of 2/29/90
FIT files: Region V

EPA FORM 2070-13 (7-81)

# APPENDIX D

## U.S. EPA TARGET COMPOUND LIST AND TARGET ANALYTE LIST QUANTITATION/DETECTION LIMITS

# ADDENDUM A

## ROUTINE ANALYTICAL SERVICES
## CONTRACT REQUIRED DETECTION AND QUANTITATION LIMITS

# APPENDIX E

## WELL LOGS OF THE AREA OF THE SITE

Table A (Cont.)

CONTRACT LABORATORY PROGRAM
TARGET ANALYTE LIST (TAL)
INORGANIC DETECTION LIMITS

| Compound | Procedure | Detection Limits Water (µg/L) | Detection Limits Soil Sediment Sludge (mg/kg) |
|---|---|---|---|
| aluminum | ICP | 200 | 40 |
| antimony | furnace | 60 | 2.4 |
| arsenic | furnace | 10 | 2 |
| barium | ICP | 200 | 40 |
| beryllium | ICP | 5 | 1 |
| cadmium | ICP | 5 | 1 |
| calcium | ICP | 5,000 | 1,000 |
| chromium | ICP | 10 | 2 |
| cobalt | ICP | 50 | 10 |
| copper | ICP | 25 | 5 |
| iron | ICP | 100 | 20 |
| lead | furnace | 5 | 1 |
| magnesium | ICP | 5,000 | 1,000 |
| manganese | ICP | 15 | 3 |
| mercury | cold vapor | 0.2 | 0.008 |
| nickel | ICP | 40 | 8 |
| potassium | ICP | 5,000 | 1,000 |
| selenium | furnace | 5 | 1 |
| silver | ICP | 10 | 2 |
| sodium | ICP | 5,000 | 1,000 |
| thallium | furnace | 10 | 2 |
| tin | ICP | 40 | 8 |
| vanadium | ICP | 50 | 10 |
| zinc | ICP | 20 | 4 |
| cyanide | color | 10 | 2 |

3767:1

Contract Laboratory Program
Target Compound List
Quantitation Limits

| COMPOUND | CAS # | WATER | SOIL SEDIMENT SLUDGE |
|---|---|---|---|
| Chloromethane | 74-87-3 | 10 ug/L | 10 ug/Kg |
| Bromomethane | 74-83-9 | 10 | 10 |
| Vinyl chloride | 75-01-4 | 10 | 10 |
| Chloroethane | 75-00-3 | 10 | 10 |
| Methylene chloride | 75-09-2 | 5 | 5 |
| Acetone | 67-64-1 | 10 | 5 |
| Carbon disulfide | 75-15-0 | 5 | 5 |
| 1,1-dichloroethene | 75-35-4 | 5 | 5 |
| 1,1-dichloroethane | 75-34-3 | 5 | 5 |
| 1,2-dichloroethene (total) | 540-59-0 | 5 | 5 |
| Chloroform | 67-66-3 | 5 | 5 |
| 1,2-dichloroethane | 107-06-2 | 5 | 5 |
| 2-butanone (MEK) | 78-93-3 | 10 | 10 |
| 1,1,1-trichloroethane | 71-55-6 | 5 | 5 |
| Carbon tetrachloride | 56-23-5 | 5 | 5 |
| Vinyl acetate | 108-05-4 | 10 | 10 |
| Bromodichloromethane | 75-27-4 | 5 | 5 |
| 1,2-dichloropropane | 78-87-5 | 5 | 5 |
| cis-1,3-dichloropropene | 10061-01-5 | 5 | 5 |
| Trichloroethene | 79-01-6 | 5 | 5 |
| Dibromochloromethane | 124-48-1 | 5 | 5 |
| 1,1,2-trichloroethane | 79-00-5 | 5 | 5 |
| Benzene | 71-43-2 | 5 | 5 |
| Trans-1,3-dichloropropene | 10061-02-6 | 5 | 5 |
| Bromoform | 75-25-2 | 5 | 5 |
| 4-Methyl-2-pentanone | 108-10-1 | 10 | 10 |
| 2-Hexanone | 591-78-6 | 10 | 10 |
| Tetrachloroethene | 127-18-4 | 5 | 5 |
| Tolene | 108-88-3 | 5 | 5 |
| 1,1,2,2-tetrachloroethane | 79-34-5 | 5 | 5 |
| Chlorobenzene | 108-90-7 | 5 | 5 |
| Ethyl benzene | 100-41-4 | 5 | 5 |
| Styrene | 100-42-5 | 5 | 5 |
| Xylenes (total) | 1330-20-7 | 5 | 5 |

Table A
Contract Laboratory Program
Target Compound List
Semivolatiles Quantitation Limits

| COMPOUND | CAS # | WATER | SOIL SEDIMENT SLUDGE |
|---|---|---|---|
| Phenol | 108-95-2 | 10 ug/L | 330 ug/Kg |
| bis(2-Chloroethyl) ether | 111-44-4 | 10 | 330 |
| 2-Chlorophenol | 95-57-8 | 10 | 330 |
| 1,3-Dichlorobenzene | 541-73-1 | 10 | 330 |
| 1,4-Dichlorobenzene | 106-46-7 | 10 | 330 |
| Benzyl Alcohol | 100-51-6 | 10 | 330 |
| 1,2-Dichlorobenzene | 95-50-1 | 10 | 330 |
| 2-Methylphenol | 95-48-7 | 10 | 330 |
| bis(2-Chloroisopropyl) ether | 108-60-1 | 10 | 330 |
| 4-Methylphenol | 106-44-5 | 10 | 330 |
| N-Nitroso-di-n-dipropylamine | 621-64-7 | 10 | 330 |
| Hexachloroethane | 67-72-1 | 10 | 330 |
| Nitrobenzene | 98-95-3 | 10 | 330 |
| Isophorone | 78-59-1 | 10 | 330 |
| 2-Nitrophenol | 88-75-5 | 10 | 330 |
| 2,4-Dimethylphenol | 105-67-9 | 10 | 330 |
| Benzoic Acid | 65-85-0 | 50 | 1600 |
| bis(2-Chloroethoxy) methane | 111-91-1 | 10 | 330 |
| 2,4-Dichlorophenol | 120-83-2 | 10 | 330 |
| 1,2,4-Trichlorobenzene | 120-82-1 | 10 | 330 |
| Naphthalene | 91-20-3 | 10 | 330 |
| 4-Chloroaniline | 106-47-8 | 10 | 330 |
| Hexachlorobutadiene | 87-68-3 | 10 | 300 |
| 4-Chloro-3-methylphenol | 59-50-7 | 10 | 330 |
| 2-Methylnaphthalene | 91-57-6 | 10 | 330 |
| Hexachlorocyclopentadiene | 77-47-4 | 10 | 330 |
| 2,4,6-Trichlorophenol | 88-06-2 | 10 | 330 |
| 2,4,5-Trichlorophenol | 95-95-4 | 50 | 1600 |
| 2-Chloronaphthalene | 91-58-7 | 10 | 330 |
| 2-Nitroaniline | 88-74-4 | 50 | 1600 |
| Dimethylphthalate | 131-11-3 | 10 | 330 |
| Acenaphthylene | 208-96-8 | 10 | 330 |
| 2,6-Dinitrotoluene | 606-20-2 | 10 | 330 |
| 3-Nitroaniline | 99-09-2 | 50 | 1600 |
| Acenaphthene | 83-32-9 | 10 | 330 |
| 2,4-Dinitrophenol | 51-28-5 | 50 | 1600 |
| 4-Nitrophenol | 100-02-7 | 50 | 1600 |
| Dibenzofuran | 132-64-9 | 10 | 330 |
| 2,4-Dinitrotoluene | 121-14-2 | 10 | 330 |
| Diethylphthalate | 84-66-2 | 10 | 330 |
| 4-Chlorophenyl-phenyl ether | 7005-72-3 | 10 | 330 |

Table A
Contract Laboratory Program
Target Compound List
Semivolatiles Quantitation Limits

| COMPOUND | CAS # | WATER | SOIL SLUDGE SEDIMENT |
|---|---|---|---|
| Fluorene | 86-73-7 | 10 ug/L | 330 ug/Kg |
| 4-Nitroaniline | 100-01-6 | 50 | 1600 |
| 4,6-Dinitro-2-methylphenol | 534-52-1 | 50 | 1600 |
| N-nitrosodiphenylamine | 86-30-6 | 10 | 330 |
| 4-Bromophenyl-phenylether | 101-55-3 | 10 | 330 |
| Hexachlorobenzene | 118-74-1 | 10 | 330 |
| Pentachlorophenol | 87-86-5 | 50 | 1600 |
| Phenanthrene | 85-01-8 | 10 | 330 |
| Anthracene | 120-12-7 | 10 | 330 |
| Di-n-butylphthalate | 84-74-2 | 10 | 330 |
| Fluoranthene | 206-44-0 | 10 | 330 |
| Pyrene | 129-00-0 | 10 | 330 |
| Butylbenzylphthalate | 85-68-7 | 10 | 330 |
| 3,3'-Dichlorobenzidine | 91-94-1 | 20 | 660 |
| Benzo(a)anthracene | 56-55-3 | 10 | 330 |
| Chrysene | 218-01-9 | 10 | 330 |
| bis(2-Ethylhexyl)phthalate | 117-81-7 | 10 | 330 |
| Di-n-octylphthalate | 117-84-0 | 10 | 330 |
| Benzo(b)fluoranthene | 205-99-2 | 10 | 330 |
| Benzo(k)fluoranthene | 207-08-9 | 10 | 330 |
| Benzo(a)pyrene | 50-32-8 | 10 | 330 |
| Indeno(1,2,3-cd)pyrene | 193-39-5 | 10 | 330 |
| Dibenz(a,h)anthracene | 53-70-3 | 10 | 330 |
| Benzo(g,h,i)perylene | 191-24-2 | 10 | 330 |

Table A
Contract Laboratory Program
Target Compound List
Pesticide and PCB Quantitation Limits

| COMPOUND | CAS # | WATER | SOIL SEDIMENT SLUDGE |
|---|---|---|---|
| alpha-BHC | 319-84-6 | 0.05 ug/L | 8 ug/Kg |
| beta-BHC | 319-85-7 | 0.05 | 8 |
| delta-BHC | 319-86-8 | 0.05 | 8 |
| gamma-BHC (Lindane) | 58-89-9 | 0.05 | 8 |
| Heptachlor | 76-44-8 | 0.05 | 8 |
| Aldrin | 309-00-2 | 0.05 | 8 |
| Heptachlor epoxide | 1024-57-3 | 0.05 | 8 |
| Endosulfan I | 959-98-8 | 0.05 | 8 |
| Dieldrin | 60-57-1 | 0.10 | 16 |
| 4,4'-DDE | 72-55-9 | 0.10 | 16 |
| Endrin | 72-20-8 | 0.10 | 16 |
| Endosulfan II | 33213-65-9 | 0.10 | 16 |
| 4,4'-DDD | 72-54-8 | 0.10 | 16 |
| Endosulfan sulfate | 1031-07-8 | 0.10 | 16 |
| 4,4'-DDT | 50-29-3 | 0.10 | 16 |
| Methoxychlor (Mariate) | 72-43-5 | 0.5 | 80 |
| Endrin ketone | 53494-70-5 | 0.10 | 16 |
| alpha-Chlordane | 5103-71-9 | 0.5 | 80 |
| gamma-chlordane | 5103-74-2 | 0.5 | 80 |
| Toxaphene | 8001-35-2 | 1.0 | 160 |
| AROCLOR-1016 | 12674-11-2 | 0.5 | 80 |
| AROCLOR-1221 | 11104-28-2 | 0.5 | 80 |
| AROCLOR-1232 | 11141-16-5 | 0.5 | 80 |
| AROCLOR-1242 | 53469-21-9 | 0.5 | 80 |
| AROCLOR-1248 | 12672-29-6 | 0.5 | 80 |
| AROCLOR-1254 | 11097-69-1 | 1.0 | 160 |
| AROCLOR-1260 | 11096-82-5 | 1.0 | 160 |

# WEL LOG AND DRILLING RE RT

WL2 ORIGINAL

NO CARBON PAPER NECESSARY— ELF-TRANSCRIBING

State of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Water
65 S. Front St., Rm. 815 Phone (614) 469-2646
Columbus, Ohio 43215

445147

County Muskingum Township Harrison Section of Township

Owner Dick Mill Address Route 1, Philo, Ohio 43771

Location of property 1½ Miles North West of Philo, Ohio

## CONSTRUCTION DETAILS

Casing diameter 7" Length of casing 37'

Type of screen Length of screen

Type of pump

Capacity of pump

Depth of pump setting

Date of completion July 20, 1973

## BAILING OR PUMPING TEST
(Specify one by circling)

Test Rate 4 G.P.M. Duration of test 6 hrs

Drawdown 160 ft. Date

Static level-depth to water 255 ft.

Quality (clear, cloudy, taste, odor) Clear

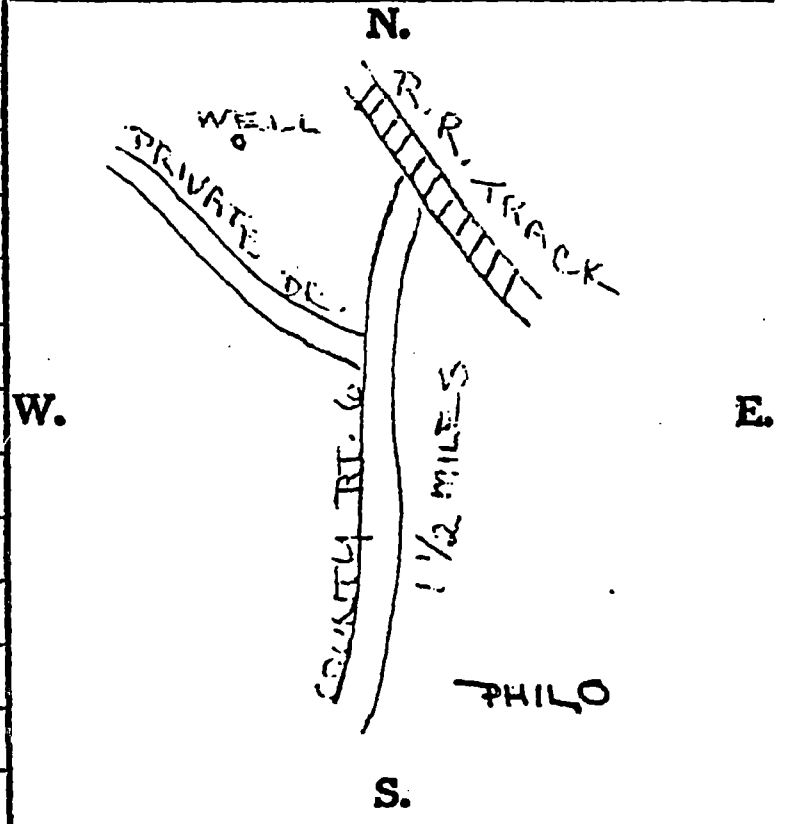
Pump installed by

## WELL LOG*

| Formations Sandstone, shale, limestone, gravel and clay | From | To |
|---|---|---|
| Soil | 0 Feet | 3 Ft. |
| Brown Clay | 3 | 12 |
| Gray Clay | 12 | 18 |
| Gray Shale | 18 | 22 |
| Gray Sandy Shale | 22 | 31 |
| Gray Sand Rock | 31 | 37 |
| Gray Sandy Shale | 37 | 57 |
| Red Sahle | 67 | 62 |
| Brown Sandy Shale | 62 | 68 |
| Showing of Gas | 62 | 68 |
| Gray Sandy Shale | 68 | 73 |
| Brown Sandy Shale | 73 | 84 |
| Gray Sandy Shale | 84 | 92 |

## SKETCH SHOWING LOCATION

Locate in reference to numbered State Highways, St. Intersections, County roads, etc.




Drilling Firm Suburban Drilling Company Date July 25, 1973

Address 1950 East Pike, Zanesville, O. Signed B. N. White

*If additional space is needed to complete well log, use next consecutive numbered form.

# WELL LOG AND DRILLING REPORT

WL1

State of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Water
1562 W. First Avenue
Columbus 12, Ohio

PLEASE USE PENCIL OR TYPEWRITER DO NOT USE INK.

No 295303

County Muskingum Township Harrison Section of Township

Owner Ohio Power Address Philo Ohio

Location of property Philo Ohio

## CONSTRUCTION DETAILS

Casing diameter 38" x 16 Length of casing 55'0

Type of screen Layne Length of screen 10'0

Type of pump ?

Capacity of pump 400 G.P.M.

Depth of pump setting ?

Date of completion 5-1-63

## BAILING OR PUMPING TEST

Pumping Rate 400 G.P.M. Duration of test 8 hrs.

Drawdown 16'0 ft. Date 5-1-63

Static level-depth to water 38'0 ft.

Quality (clear, ~~cloudy, taste, odor~~)

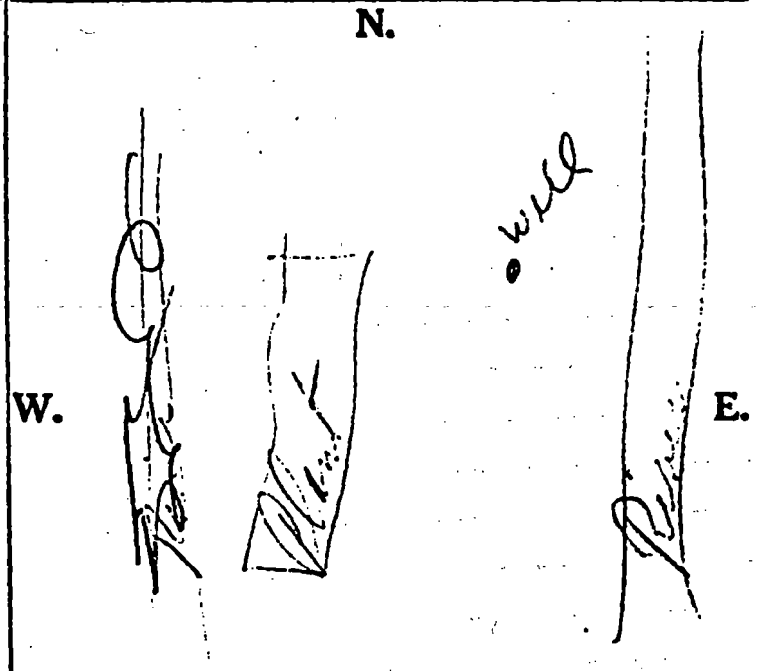
Pump installed by ?

## WELL LOG

| Formations Sandstone, shale, limestone, gravel and clay | From | To |
|---|---|---|
| Top soil | 0 Feet | 5 Ft. |
| Cinders | 5'0 | 15'0 |
| Sand & Gravel | 15'0 | 20'0 |
| Yellow clay | 20'0 | 40'0 |
| Yellow sand | 40'0 | 55'0 |
| Yellow silt & clay | 55'0 | 65'0 |
| | 65'0 | 66'0 |

## SKETCH SHOWING LOCATION

Locate in reference to numbered State Highways, St. Intersections, County roads, etc.




See reverse side for instructions

Drilling Firm Layne Ohio Co Date 6-4-63

Address Mt. Pleasant Signed [illegible]

Permit No. _____

NO CARBON PAPER NECESSARY – SELF-TRANSCRIBING

# WELL LOG AND DRILLING REPORT

State of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Water
Fountain Square
Columbus, Ohio 43224

ORIGINAL

536130

WL4

COUNTY Muskingum TOWNSHIP Harrison SECTION OF TOWNSHIP _____

OWNER Gary Harding ADDRESS 7120 Old River Rd Philo

LOCATION OF PROPERTY 7120 Old River Road Philo

## CONSTRUCTION DETAILS

Casing diameter 6 3/8 OD Length of casing 46

Type of screen _____ Length of screen _____

Type of pump _____

Capacity of pump _____

Depth of pump setting _____

Date of completion _____

## BAILING OR PUMPING TEST
(specify one by circling)

Test rate 20 gpm Duration of test 2 hrs

Drawdown 29 ft Date _____

Static level (depth to water) 25 ft

Quality (clear, cloudy, taste, odor) Clear

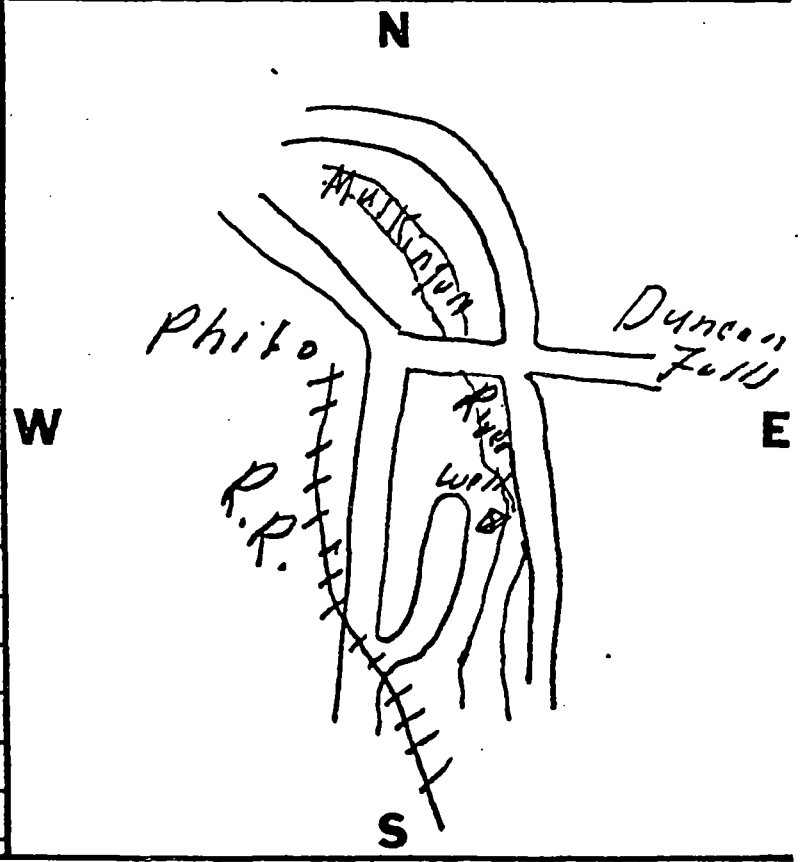
Pump installed by None Set

## WELL LOG*

| Formations: sandstone, shale, limestone, gravel, clay | From | To |
|---|---|---|
| Brown Shale | 0 ft | 3 ft |
| Clay | 3 | 7 |
| Fine Sand | 7 | 24 |
| Sand & Gravel | 24 | 44 |
| Water at | 43 | |
| Total Depth | 44 | |

## SKETCH SHOWING LOCATION

Locate in reference to numbered state highways, street intersections, county roads, etc.




DRILLING FIRM Anderson Drlg

ADDRESS 113 So Willow Dr. Zanesville

DATE Aug 11 79

SIGNED Robert Anderson

*If additional space is needed to complete well log, use next consecutive numbered form.

WL3

PLEASE USE PENCIL OR TYPEWRITER DO NOT USE INK

State of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Water
1562 W. First Avenue
Columbus 12, Ohio

Nº 318886

County Muskingum Township Harrison Section of Township

Owner Wilmer L Clapper Address Rt. # 1 Philo

Location of property 1½ Mile West of Philo on County Rt. 68

## CONSTRUCTION DETAILS

Casing diameter 6 5/8 Length of casing 19'4"

Type of screen None Length of screen

Type of pump None Set

Capacity of pump

Depth of pump setting

Date of completion

## BAILING OR PUMPING TEST

Pumping Rate ½ G.P.M. Duration of test 2 hrs.

Drawdown 114 ft. Date Dec 12-64

Static level-depth to water 74 ft.

Quality (clear, cloudy, taste, odor) Cloudy

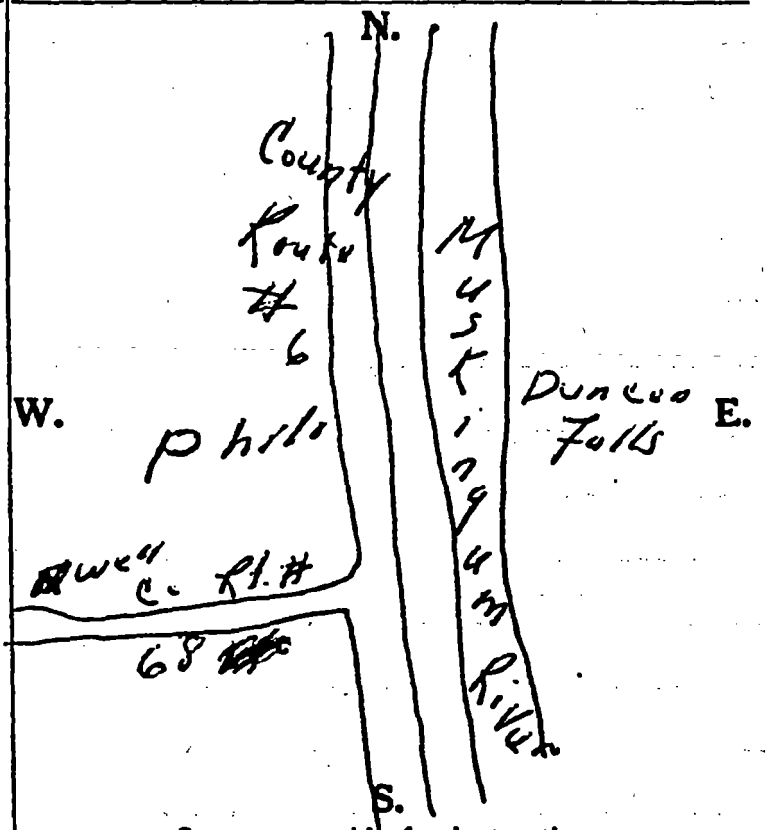
Pump installed by

## WELL LOG

| Formations Sandstone, shale, limestone, gravel and clay | From | To |
|---|---|---|
| Brown Shale | 0 Feet | 3 Ft. |
| Red Clay | 3 | 7 |
| Red Rock | 7 | 18 |
| Limestone | 18 | 67 |
| Gray Shale | 67 | 75 |
| Soft Gray Shale | 75 | 82 |
| Coal | 82 | 85 |
| Sand Rock | 85 | 87 |
| Gray Sandy Shale | 87 | 99 |
| Red Rock | 99 | 106 |
| Gray Sandy Shale | 106 | 114 |
| Water at | 98 | |
| Total Depth | 114 | |

## SKETCH SHOWING LOCATION

Locate in reference to numbered State Highways, St. Intersections, County roads, etc.




See reverse side for instructions

Drilling Firm Anderson Water Dr'g Date Dec 12-1964

Address Rt. #2 Willow Dr. Zanesville

Signed Robert Anderson

# WELL LOG AND DRILLING REPORT

WL6

ORIGINAL

State of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Water
1562 W. First Avenue
Columbus, Ohio 43212

PLEASE USE PENCIL OR TYPEWRITER
DO NOT USE INK

№ 352615

County Muskingum Township WAYNE Section of Township 30

Owner Duncan Falls Ass., Inc Address Duncan Falls, Ohio

Location of property On South side of East Roemer Street in Duncan Falls, Ohio

## CONSTRUCTION DETAILS

Casing diameter 12 3/4" Length of casing 98'6"

Type of screen 304 Stainless Length of screen 10'

Type of pump Turbine

Capacity of pump 200 GPM @ 183'

Depth of pump setting 91'

Date of completion 9-3-66

## BAILING OR PUMPING TEST

Pumping Rate 200 G.P.M. Duration of test 24 hrs.

Drawdown 4½'-5' ft. Date 9-2-66

Static level-depth to water 65' ft.

Quality (clear, cloudy, taste, odor) clear no odor

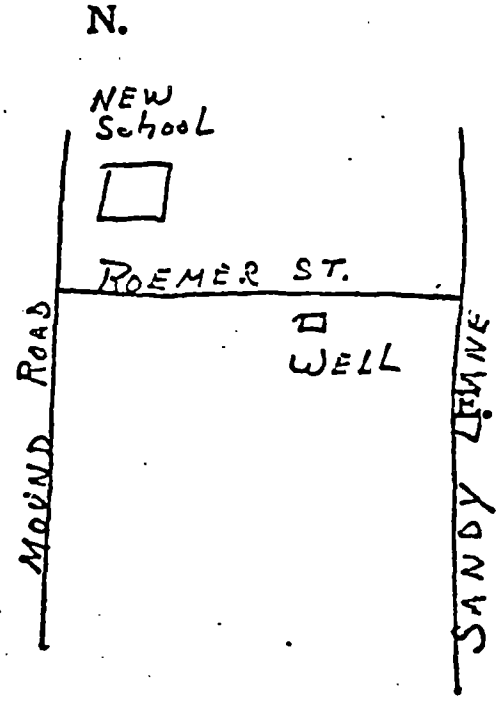
Pump installed by Driller

## WELL LOG*

| Formations Sandstone, shale, limestone, gravel and clay | From | To |
|---|---|---|
| sand & Gravel | 0 Feet | 105 Ft. |
| water after 65' | | |

## SKETCH SHOWING LOCATION

Locate in reference to numbered State Highways, St. Intersections, County roads, etc.




See reverse side for instructions

Drilling Firm R.C. Ramsey Date 9-5-66

Address R.4 6 Zanesville, Ohio Signed R C Ramsey

*If additional space is needed to complete well log, use next consecutive numbered form.

# WE' ' LOG AND DRILLING REPORT

WL5 ORIG.

462146

NO CARBON PAPER NECESSARY— SELF-TRANSCRIBING

State of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Water
65 S. Front St., Rm. 815 Phone (614) 469-2646
Columbus, Ohio 43215

County Muskingum Township Harrison Section of Township

Owner Muskingum River Park Area Address P.O. Box 2806; Zanes., Oh. 43701

Location of property Philo Locktender's House, Philo, Ohio 43771

## CONSTRUCTION DETAILS

Casing diameter 6-5/8" Length of casing 34'

Type of screen Slots Length of screen 2'

Type of pump

Capacity of pump

Depth of pump setting

Date of completion 11/6/75

## BAILING OR PUMPING TEST
(Specify one by circling)

Test Rate 2 G.P.M. Duration of test 2 hrs.

Drawdown 73 ft. Date 11/3/75

Static level-depth to water 21' ft.

Quality (clear, cloudy, taste, odor) Clear

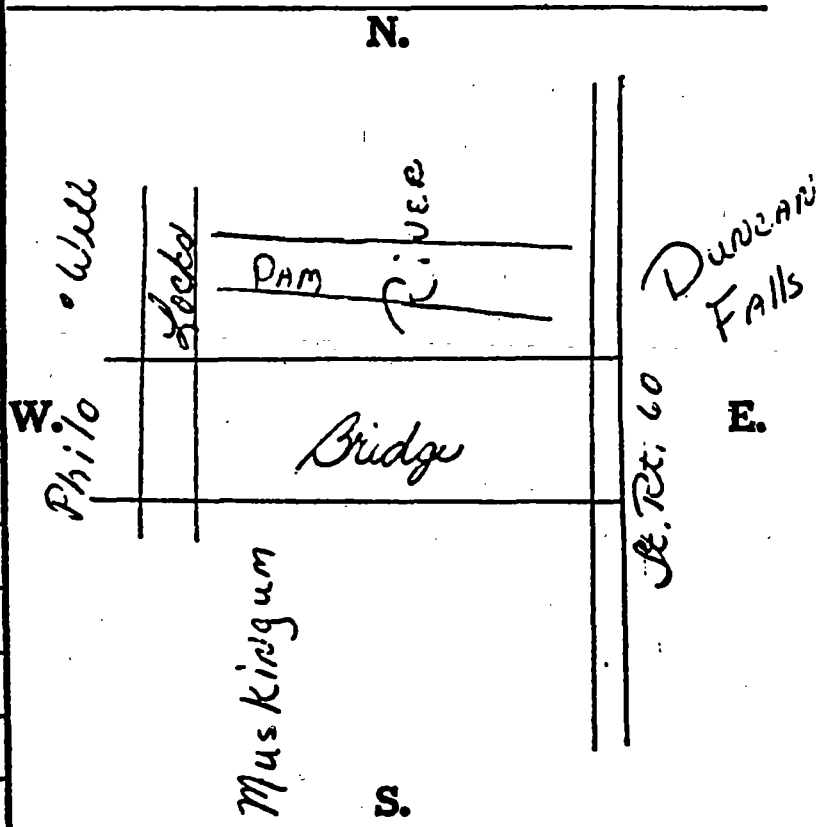
Pump installed by

## WELL LOG*

| Formations Sandstone, shale, limestone, gravel and clay | From | To |
|---|---|---|
| Top | 0 Feet | 3 Ft. |
| Brown Clay | 3 | 7 |
| Brown Sand | 7 | 17 |
| Brown Sand & Sm. Gravel | 17 | 22 |
| Brown Sand | 22 | 27 |
| Gray Shale | 27 | 33 |
| Gray Sandy Shale | 33 | 56 |
| Gray Shale | 56 | 65 |
| Coal Blossom | 65 | 69 |
| Showing of Coal | 69 | 71 |
| Gray Shale | 71 | 75 TD |
| 1 GPM at 28' | | |
| 1 GPM at 61' | | |

## SKETCH SHOWING LOCATION

Locate in reference to numbered State Highways, St. Intersections, County roads, etc.




Drilling Firm Suburban Drilling Co., Inc. Date November 14, 1975

Address 1950 East Pike
Zanesville, Ohio 43701

Signed Bill H. White
(TR)

*If additional space is needed to complete well log, use next consecutive numbered form.

15-001
LOCATED

WL 8

# WELL LOG AND DRILLING REPORT

NO. 95560

County Muskingum Township Harrison Section of Township 31

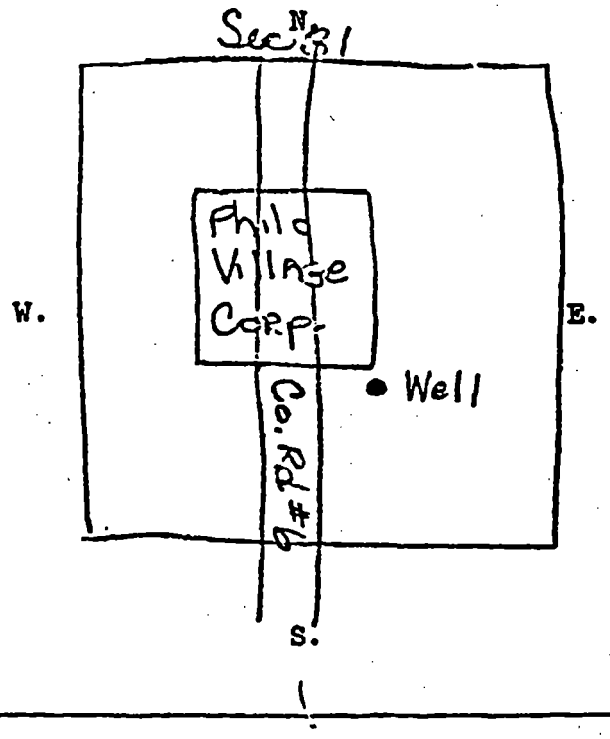
Owner Philo Village Corp. Address Philo, Ohio

Location of property 400' S. of Philo Corp. limits near Co. Rd. #6

| CONSTRUCTION DETAILS | BAILING OR PUMPING TEST |
|---|---|
| Casing diameter 10" Length of casing 70' | Pumping rate 75 G.P.M. |
| Type of screen Johnson 60 slot Length of screen 10' | Duration of test 38 1/2 Hrs. |
| Type of pump Deming Turbine | Drawdown 17 ft. Date |
| Capacity of pump 50 GPM | Developed capacity 75 GPM |
| Depth of pump setting 70' | Static level - depth to water 52 Ft. |
| Date of completion | Pump installed by |

| WELL LOG | From | To |
|---|---|---|
| Formation | | |
| Fine Sand & Loam | 0 | 47 |
| Sand & Fine Gravel | 47 | 50 |
| Fine Sand | 50 | 65 |
| Sand & Fine Gravel | 65 | 80 |
| Total depth 80' | | |

SKETCH SHOWING LOCATION




Drilling Firm S.M. Ebersbach Date July 18, 1952

Address 2195 East Pike Zanesville, Ohio Copied by J.C.

# WELL LOG AND DRILLING REPORT

Municipal

State of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Water
1562 W. First Avenue
Columbus, Ohio 43212

PLEASE USE PENCIL OR TYPEWRITER
DO NOT USE INK

No 360970

WL7

County Muskingum Township Harrison Section of Township

Owner Village of Philo, Address Philo, Ohio

Location of property ¼ Mile South of Philo, on Co. Rd. 6

## CONSTRUCTION DETAILS

Casing diameter 10" Length of casing 42'

Type of screen Slots Length of screen 5'

Type of pump

Capacity of pump

Depth of pump setting

Date of completion June 24, 1967

## BAILING OR PUMPING TEST

Bailed @ Pumping Rate 60 G.P.M. Duration of test hrs.

Drawdown 7 ft. Date

Static level-depth to water 11 ft.

Quality (clear, cloudy, taste, odor) Clear

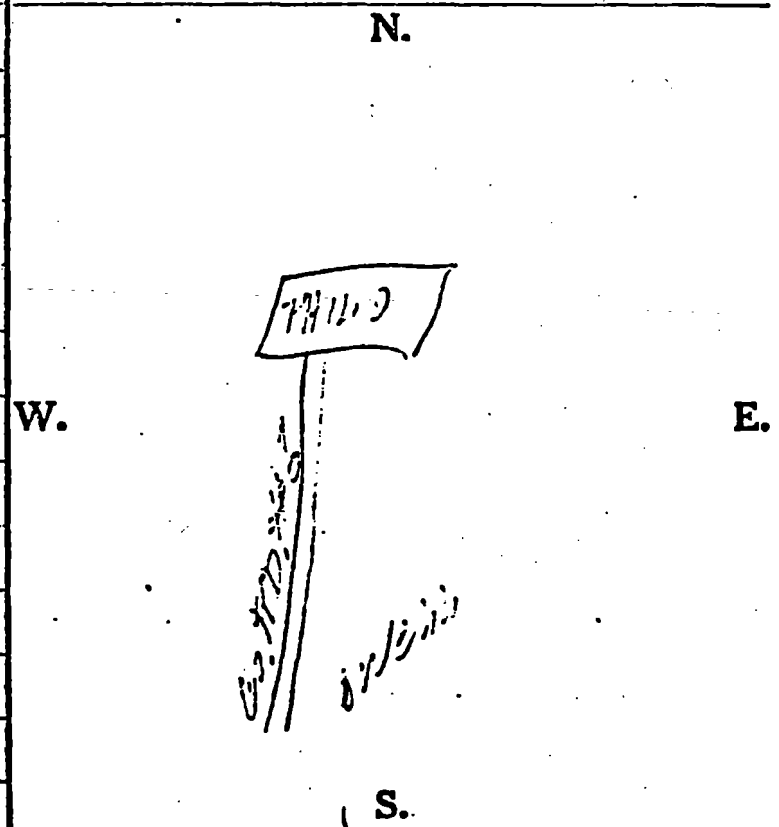
Pump installed by

## WELL LOG*

| Formations Sandstone, shale, limestone, gravel and clay | From | To |
|---|---|---|
| and Gravel | 0 Feet | 36Ft. |
| 3 Ft. Bridge in Bottom | | |

## SKETCH SHOWING LOCATION

Locate in reference to numbered State Highways, St. Intersections, County roads, etc.




See reverse side for instructions

Drilling Firm Suburban Drilling Co. Date June 26, 1967

Address 1950 E. Pike, Zanesville, Ohio Signed B. H. White

*If additional space is needed to complete well log, use next consecutive numbered form.

SUMMARY OF CREEL SURVEY RESULTS
INLAND SUMMER CREELS
1988
AND THE 90% CONFIDENCE INTERVAL
FOR THE ESTIMATES

3 Muskingum River

Location Code

| GRID | TYPE | ANGLER HOURS | BLUE GILLS | OTHER SUNF. | L.MTH BASS | OTHER BASS (Spotted & smallmouth) | CRAP. IES | CRAP BLK | CRAP WHT | JUNK FISH (rough fish/carp/suckers) | SOX FISH (white suckers) | CATF. GEN. (flathead & bullheads) | CHN. CATS | WHITE BASS | MORON FISH | STIZO FISH (Hyb. striped bass, Walleye, Saugeye, Sauger) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | KEPT | | | | | | | | | | | | | | | |
| | ESTIMATE | 10438 | 100 | 55 | 0 | 10 | 0 | 0 | 0 | 1318 | 0 | 27 | 1231 | 25 | 0 | 69 |
| | + OR - | 1475 | 61 | 63 | 0 | 17 | 0 | 0 | 0 | 704 | 0 | 31 | 431 | 34 | 0 | 77 |
| | RELE | | | | | | | | | | | | | | | |
| | ESTIMATE | 10438 | 536 | 36 | 250 | 625 | 243 | 0 | 0 | 1694 | 0 | 51 | 470 | 64 | 0 | 136 |
| | + OR - | 1475 | 561 | 36 | 211 | 401 | 270 | 0 | 0 | 523 | 0 | 41 | 216 | 77 | 0 | 140 |
| K+R | | | 636 | 91 | 250 | 635 | 243 | 0 | 0 | 3012 | 0 | 78 | 1701 | 89 | 0 | 205 |
| 2 | KEPT | | | | | | | | | | | | | | | |
| | ESTIMATE | 12761 | 98 | 19 | 91 | 160 | 106 | 0 | 0 | 2741 | 14 | 177 | 1623 | 474 | 24 | 242 |
| | + OR - | 1668 | 69 | 21 | 21 | 149 | 58 | 0 | 0 | 1363 | 0 | 101 | 640 | 309 | 42 | 175 |
| | RELE | | | | | | | | | | | | | | | |
| | ESTIMATE | 12761 | 523 | 279 | 180 | 651 | 225 | 0 | 0 | 8418 | 0 | 61 | 797 | 4965 | 1398 | 197 |
| | + OR - | 1668 | 313 | 249 | 128 | 429 | 141 | 0 | 0 | 2542 | 0 | 52 | 297 | 7386 | 1204 | 113 |
| K+R | | | 621 | 298 | 271 | 811 | 331 | 0 | 0 | 11159 | 14 | 238 | 2420 | 5440 | 1422 | 439 |
| 3 | KEPT | | | | | | | | | | | | | | | |
| | ESTIMATE | 6367 | 128 | 21 | 0 | 172 | 0 | 0 | 0 | 166 | 0 | 6 | 356 | 0 | 0 | 0 |
| | + OR - | 1174 | 124 | 19 | 0 | 147 | 0 | 0 | 0 | 76 | 0 | 11 | 321 | 0 | 0 | 0 |
| | RELE | | | | | | | | | | | | | | | |
| | ESTIMATE | 6367 | 328 | 55 | 46 | 1108 | 213 | 0 | 0 | 586 | 0 | 0 | 248 | 0 | 0 | 71 |
| | + OR - | 1174 | 365 | 89 | 38 | 767 | 181 | 0 | 0 | 239 | 0 | 0 | 167 | 0 | 0 | 176 |
| K+R | | | 456 | 76 | 46 | 1280 | 213 | 0 | 0 | 752 | 0 | 6 | 604 | 0 | 0 | 71 |
| 4 | KEPT | | | | | | | | | | | | | | | |
| | ESTIMATE | 9386 | 0 | 0 | 0 | 0 | 17 | 0 | 0 | 468 | 0 | 291 | 554 | 0 | 0 | 0 |

Devola

Lowell

Mike Greenlee
ODNR 1995

SUMMARY OF CREEL SURVEY RESULTS
INLAND SUMMER CREELS
1988
AND THE 90% CONFIDENCE INTERVAL
FOR THE ESTIMATES

| GRID | TYPE | ANGLER HOURS | BLUE GILLS | OTHER SUNF. | L.MTH BASS | OTHER BASS | CRAP. IES | CRAP BLK | CRAP WHT | JLNK FISH | SOX FISH | CATF. GEN. | CHN. CATS | WHITE BASS | MORON FISH | STIZO FISH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | + OR - | 1480 | 0 | 0 | 0 | 0 | 27 | 0 | 0 | 434 | 0 | 220 | 380 | 0 | 0 | 0 |
| 4 | RELE | | | | | | | | | | | | | | | |
| | ESTIMATE | 9386 | 245 | 94 | 38 | 90 | 108 | 0 | 0 | 2223 | 0 | 112 | 1721 | 38 | 0 | 125 |
| | + OR - | 1480 | 208 | 104 | 43 | 90 | 122 | 0 | 0 | 1019 | 0 | 90 | 746 | 44 | 0 | 98 |
| | K+R | | 245 | 94 | 38 | 90 | 125 | 0 | 0 | 2691 | 0 | 403 | 2275 | 38 | 0 | 125 |
| 5 | KEPT | | | | | | | | | | | | | | | |
| | ESTIMATE | 6886 | 658 | 53 | 85 | 349 | 298 | 0 | 0 | 240 | 0 | 4 | 234 | 0 | 0 | 0 |
| | + OR - | 1196 | 858 | 50 | 145 | 527 | 54 | 0 | 0 | 243 | 0 | 7 | 131 | 0 | 0 | 0 |
| | RELE | | | | | | | | | | | | | | | |
| | ESTIMATE | 6886 | 1051 | 150 | 136 | 1893 | 271 | 0 | 0 | 551 | 0 | 0 | 410 | 53 | 0 | 0 |
| | + OR - | 1196 | 1680 | 163 | 126 | 635 | 49 | 0 | 0 | 836 | 0 | 0 | 321 | 53 | 0 | 0 |
| | K+R | | 1709 | 203 | 221 | 2242 | 569 | 0 | 0 | 791 | 0 | 4 | 644 | 53 | 0 | 0 |
| 6 | KEPT | | | | | | | | | | | | | | | |
| | ESTIMATE | 5385 | 11 | 0 | 54 | 99 | 29 | 0 | 0 | 208 | 0 | 26 | 830 | 34 | 5 | 11 |
| | + OR - | 827 | 15 | 0 | 44 | 77 | 29 | 0 | 0 | 151 | 0 | 26 | 493 | 34 | 9 | 12 |
| | RELE | | | | | | | | | | | | | | | |
| | ESTIMATE | 5385 | 77 | 7 | 78 | 255 | 35 | 0 | 0 | 1301 | 0 | 17 | 437 | 31 | 22 | 95 |
| | + OR - | 827 | 70 | 16 | 55 | 167 | 33 | 0 | 0 | 677 | 0 | 17 | 247 | 38 | 31 | 66 |
| | K+R | | 88 | 7 | 132 | 354 | 64 | 0 | 0 | 1509 | 0 | 43 | 1267 | 65 | 27 | 106 |
| 7 | KEPT | | | | | | | | | | | | | | | |
| | ESTIMATE | 8928 | 55 | 0 | 21 | 216 | 0 | 0 | 0 | 36 | 0 | 70 | 457 | 0 | 5 | 36 |
| | + OR - | 1311 | 50 | 0 | 26 | 252 | 0 | 0 | 0 | 31 | 0 | 47 | 288 | 0 | 7 | 40 |

+ CATCH BY LOCATION

BEV

SUMMARY OF CREEL SURVEY RESULTS
INLAND SUMMER CREELS
1988
AND THE 90% CONFIDENCE INTERVAL
FOR THE ESTIMATES

| GRID | TYPE | ANGLER HOURS | BLUE GILLS | OTHER SUNF. | L.MTH BASS | OTHER BASS | CRAP. IES | CRAP BLK | CRAP WHT | JUNK FISH | SOX FISH | CATF. GEN. | CHN. CATS | WHITE BASS | MORON FISH | STIZO FISH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7 | RELE | | | | | | | | | | | | | | | |
| | ESTIMATE | 8928 | 5 | 11 | 127 | 2859 | 0 | 0 | 0 | 168 | 0 | 47 | 643 | 5 | 10 | 5 |
| | + OR - | 1311 | 8 | 18 | 126 | 1814 | 0 | 0 | 0 | 140 | 0 | 38 | 310 | 9 | 18 | 7 |
| | K+R | | 60 | 11 | 148 | 3075 | 0 | 0 | 0 | 204 | 0 | 117 | 1100 | 5 | 15 | 41 |
| 8 | KEPT | | | | | | | | | | | | | | | |
| | ESTIMATE | 6425 | 0 | 0 | 0 | 18 | 14 | 0 | 0 | 83 | 0 | 4 | 1400 | 10 | 0 | 59 |
| | + OR - | 1114 | 0 | 0 | 0 | 23 | 27 | 0 | 0 | 57 | 0 | 8 | 733 | 12 | 0 | 81 |
| LAKE CHUTE | RELE | | | | | | | | | | | | | | | |
| | ESTIMATE | 6425 | 12 | 0 | 56 | 562 | 4 | 0 | 0 | 77 | 0 | 4 | 1475 | 27 | 0 | 10 |
| | + OR - | 1114 | 13 | 0 | 71 | 871 | 8 | 0 | 0 | 51 | 0 | 7 | 1198 | 33 | 0 | 12 |
| | K+R | | 12 | 0 | 56 | 580 | 18 | 0 | 0 | 160 | 0 | 8 | 2875 | 37 | 0 | 69 |
| 9 | KEPT | | | | | | | | | | | | | | | |
| | ESTIMATE | 6925 | 0 | 0 | 5 | 298 | 0 | 0 | 0 | 89 | 0 | 68 | 595 | 0 | 0 | 0 |
| | + OR - | 1122 | 0 | 0 | 7 | 167 | 0 | 0 | 0 | 120 | 0 | 62 | 523 | 0 | 0 | 0 |
| | RELE | | | | | | | | | | | | | | | |
| | ESTIMATE | 6925 | 0 | 5 | 53 | 3347 | 0 | 0 | 0 | 265 | 0 | 74 | 248 | 5 | 0 | 0 |
| | + OR - | 1122 | 0 | 8 | 98 | 1222 | 0 | 0 | 0 | 164 | 0 | 74 | 159 | 7 | 0 | 0 |
| | K+R | | 0 | 5 | 58 | 3645 | 0 | 0 | 0 | 354 | 0 | 142 | 843 | 5 | 0 | 0 |
| 10 | KEPT | | | | | | | | | | | | | | | |
| STICKPORT | ESTIMATE | 4113 | 0 | 4 | 0 | 37 | 0 | 0 | 0 | 57 | 0 | 0 | 177 | 2 | 0 | 89 |
| | + OR - | 849 | 0 | 7 | 0 | 32 | 0 | 0 | 0 | 48 | 0 | 0 | 111 | 3 | 0 | 125 |

SUMMARY OF CREEL SURVEY RESULTS
INLAND SUMMER CREELS
1988
AND THE 90% CONFIDENCE INTERVAL
FOR THE ESTIMATES

| GRID | TYPE | ANGLER HOURS | BLUE GILLS | OTHER SUNF. | L.MTH BASS | OTHER BASS | CRAP. IES | CRAP BLK | CRAP WHT | JUNK FISH | SOX FISH | CATF. GEN. | CHN. CATS | WHITE BASS | MORON FISH | STIZO FISH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 Stockport | RELE | | | | | | | | | | | | | | | |
| | ESTIMATE | 4113 | 0 | 0 | 0 | 140 | 0 | 0 | 0 | 157 | 0 | 16 | 301 | 0 | 0 | 10 |
| | + OR - | 849 | 0 | 0 | 0 | 145 | 0 | 0 | 0 | 108 | 0 | 26 | 164 | 0 | 0 | 13 |
| | K+R | | 0 | 4 | 0 | 177 | 0 | 0 | 0 | 214 | 0 | 16 | 478 | 2 | 0 | 99 |
| 11 | KEPT | | | | | | | | | | | | | | | |
| | ESTIMATE | 9140 | 0 | 0 | 7 | 176 | 0 | 0 | 0 | 136 | 0 | 31 | 130 | 0 | 0 | 11 |
| | + OR - | 1305 | 0 | 0 | 12 | 155 | 0 | 0 | 0 | 119 | 0 | 39 | 106 | 0 | 0 | 14 |
| | RELE | | | | | | | | | | | | | | | |
| | ESTIMATE | 9140 | 0 | 0 | 0 | 1490 | 0 | 0 | 0 | 142 | 0 | 19 | 423 | 0 | 0 | 0 |
| | + OR - | 1305 | 0 | 0 | 0 | 774 | 0 | 0 | 0 | 114 | 0 | 27 | 213 | 0 | 0 | 0 |
| | K+R | | 0 | 0 | 7 | 1666 | 0 | 0 | 0 | 278 | 0 | 50 | 553 | 0 | 0 | 11 |
| 12 | KEPT | | | | | | | | | | | | | | | |
| | ESTIMATE | 8854 | 0 | 27 | 9 | 67 | 0 | 0 | 0 | 378 | 0 | 13 | 535 | 0 | 0 | 127 |
| | + OR - | 1244 | 0 | 45 | 15 | 91 | 0 | 0 | 0 | 232 | 0 | 15 | 414 | 0 | 0 | 141 |
| Philo McConnellsville | RELE | | | | | | | | | | | | | | | |
| | ESTIMATE | 8854 | 0 | 9 | 0 | 257 | 0 | 0 | 0 | 144 | 0 | 7 | 241 | 0 | 6 | 0 |
| | + OR - | 1244 | 0 | 21 | 0 | 375 | 0 | 0 | 0 | 134 | 0 | 4 | 114 | 0 | 10 | 0 |
| | K+R | | 0 | 36 | 9 | 324 | 0 | 0 | 0 | 522 | 0 | 20 | 776 | 0 | 6 | 127 |
| 13 | KEPT | | | | | | | | | | | | | | | |
| | ESTIMATE | 7257 | 0 | 0 | 2 | 66 | 0 | 0 | 0 | 25 | 0 | 8 | 362 | 0 | 0 | 0 |
| | + OR - | 1222 | 0 | 0 | 4 | 89 | 0 | 0 | 0 | 30 | 0 | 13 | 256 | 0 | 0 | 0 |

SUMMARY OF CREEL SURVEY RESULTS
INLAND SUMMER CREELS
1988

AND THE 90% CONFIDENCE INTERVAL
FOR THE ESTIMATES

| GRID | TYPE | ANGLER HOURS | BLUE GILLS | OTHER SUNF. | L.MTH BASS | OTHER BASS | CRAP IES | CRAP BLK | CRAP WHT | JUNK FISH | SOX FISH | CATF. GEN. | CHN. CATS | WHITE BASS | MORON FISH | STIZO FISH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 13 | RELE | | | | | | | | | | | | | | | |
| | ESTIMATE | 7257 | 0 | 0 | 0 | 805 | 0 | 0 | 0 | 14 | 0 | 6 | 29 | 0 | 0 | 0 |
| | + OR - | 1222 | 0 | 0 | 0 | 487 | 0 | 0 | 0 | 17 | 0 | 9 | 36 | 0 | 0 | 0 |
| | K+R | | 0 | 0 | 2 | 871 | 0 | 0 | 0 | 39 | 0 | 14 | 391 | 0 | 0 | 0 |
| 14 | KEPT | | | | | 425-120 | | | | | | | | | | |
| | ESTIMATE | 7102 | 4 | 3 | 4 9 | 97 | 20 | 0 | 0 | 362 343 | 0 | 34 | 727 | 6 | 0 | 37 1,379 |
| | + OR - | 1186 | 7 | 6 | 7 | 90 | 26 | 0 | 0 | 232 | 0 | 30 | 278 | 10 | 0 | 41 |
| | RELE | | | | | | | | | | | | | | | |
| | ESTIMATE | 7102 | 0 | 0 | 3 | 11 | 0 | 0 | 0 | 158 | 0 | 0 | 54 | 0 | 0 | 0 |
| | + OR - | 1186 | 0 | 0 | 7 | 12 | 0 | 0 | 0 | 99 | 0 | 0 | 46 | 0 | 0 | 0 |
| | K+R | | 4 | 3 | 7 | 108 | 20 | 0 | 0 | 520 | 0 | 34 | 781 | 6 | 0 | 37 |
| 15 | KEPT | | | | | 413 1,034 | | | | | | | | | | |
| | ESTIMATE | 7905 | 0 | 0 | 5 10 | 827 | 0 | 0 | 0 | 84 | 0 | 0 | 135 | 0 | 0 | 0 1,883 |
| | + OR - | 1573 | 0 | 0 | 11 | 515 | 0 | 0 | 0 | 84 | 0 | 0 | 125 | 0 | 0 | 0 |
| | RELE | | | | | | | | | | | | | | | |
| | ESTIMATE | 7905 | 0 | 0 | 0 | 1892 | 0 | 0 | 0 | 54 | 0 | 0 | 27 | 0 | 0 | 0 |
| | + OR - | 1573 | 0 | 0 | 0 | 1352 | 0 | 0 | 0 | 47 | 0 | 0 | 35 | 0 | 0 | 0 |
| | K+R | | 0 | 0 | 5 | 2719 | 0 | 0 | 0 | 138 | 0 | 0 | 162 | 0 | 0 | 0 |
| 16 | KEPT | | | | | 642.5=195 | | | | | | | | | | |
| | ESTIMATE | 5342 | 0 | 39 | 13 | 156 | 543 | 0 | 0 | 451 | 0 | 6 | 209 | 0 | 0 | 0 1,043 |
| | + OR - | 910 | 0 | 64 | 21 | 164 | 648 | 0 | 0 | 386 | 0 | 9 | 166 | 0 | 0 | 0 |
| | | | | | | 78×2.5=195 | | | | | | | | | | |
| | | | | | | 78×1.5=117 | | | | | | | | | | |

Philo

Philo Rel

+241 ZIMM

4589 → 4,600

SUMMARY OF CREEL SURVEY RESULTS
INLAND SUMMER CREELS
1988
AND THE 90% CONFIDENCE INTERVAL
FOR THE ESTIMATES

| GRID | TYPE | ANGLER HOURS | BLUE GILLS | OTHER SUNF. | L.MTH BASS | OTHER BASS | CRAP. IES | CRAP BLK | CRAP WHT | JUNK FISH | SOX FISH | CATF. GEN. | CHN. CATS | WHITE BASS | MORON FISH | STIZO FISH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 16 | RELE | | | | | | | | | | | | | | | |
| | ESTIMATE | 5342 | 0 | 0 | 108 | 53 | 9 | 0 | 0 | 114 | 0 | 0 | 218 | 0 | 0 | 6 |
| | + OR - | 910 | 0 | 0 | 205 | 56 | 15 | 0 | 0 | 180 | 0 | 0 | 185 | 0 | 0 | 11 |
| K+R | | | 0 | 39 | 121 | 209 | 552 | 0 | 0 | 565 | 0 | 6 | 427 | 0 | 0 | 6 |
| | | | | | | 14x2.5 = 35 | | | | | | | | | | |
| 17 | KEPT | | | | 12.5 | 14x1.5 21 | | | | | | | | | | |
| | ESTIMATE | 8064 | 0 | 0 | 5 | 27 | 0 | 0 | 0 | 40 | 0 | 25 | 150 | 0 | 0 | 0 |
| | + OR - | 1388 | 0 | 0 | 11 | 36 | 0 | 0 | 0 | 33 | 0 | 35 | 66 | 0 | 0 | 0 |
| | RELE | | | | | | | | | | | | | | | |
| | ESTIMATE | 8064 | 0 | 0 | 4 | 249 | 0 | 0 | 0 | 82 | 0 | 0 | 112 | 0 | 0 | 0 |
| | + OR - | 1388 | 0 | 0 | 9 | 184 | 0 | 0 | 0 | 55 | 0 | 0 | 109 | 0 | 0 | 0 |
| K+R | | | 0 | 0 | 9 | 276 | 0 | 0 | 0 | 122 | 0 | 25 | 262 | 0 | 0 | 0 |
| 18 | KEPT | | | | | | | | | | | | | | | |
| | ESTIMATE | 8872 | 14 | 27 | 0 | 161 | 12 | 0 | 0 | 217 | 0 | 88 | 421 | 0 | 0 | 14 |
| | + OR - | 1092 | 22 | 41 | 0 | 139 | 22 | 0 | 0 | 133 | 0 | 55 | 163 | 0 | 0 | 22 |
| | RELE | | | | | | | | | | | | | | | |
| | ESTIMATE | 8872 | 0 | 0 | 27 | 114 | 12 | 0 | 0 | 60 | 0 | 0 | 129 | 0 | 0 | 0 |
| | + OR - | 1092 | 0 | 0 | 50 | 125 | 16 | 0 | 0 | 54 | 0 | 0 | 95 | 0 | 0 | 0 |
| K+R | | | 14 | 27 | 27 | 275 | 24 | 0 | 0 | 277 | 0 | 88 | 550 | 0 | 0 | 14 |
| 19 | KEPT | | | | | | | | | | | | | | | |
| | ESTIMATE | 9912 | 118 | 0 | 0 | 0 | 11 | 0 | 0 | 115 | 0 | 0 | 31 | 0 | 0 | 24 |
| | + OR - | 1285 | 242 | 0 | 0 | 0 | 17 | 0 | 0 | 175 | 0 | 0 | 55 | 0 | 0 | 48 |

223.5 vs 284

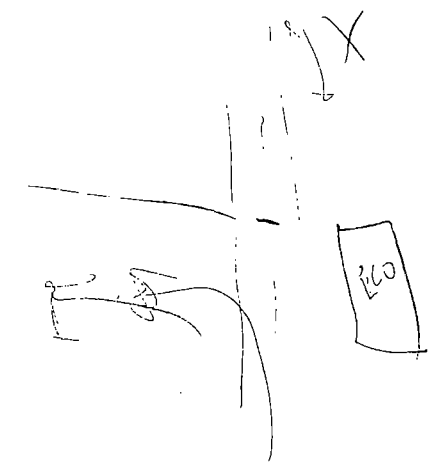
SUMMARY OF CREEL SURVEY RESULTS
INLAND SUMMER CREELS
1988

AND THE 90% CONFIDENCE INTERVAL
FOR THE ESTIMATES

| GRID | TYPE | ANGLER HOURS | BLUE GILLS | OTHER SUNF. | L.MTH BASS | OTHER BASS | CRAP. IES | CRAP BLK | CRAP WHT | JUNK FISH | SOX FISH | CATF. GEN. | CHN. CATS | WHITE BASS | MORON FISH | STIZO FISH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 19 | RELE | | | | | | | | | | | | | | | |
| | ESTIMATE | 9912 | 292 | 24 | 39 | 139 | 194 | 0 | 0 | 83 | 0 | 0 | 478 | 0 | 0 | 108 |
| | + OR - | 1285 | 195 | 49 | 65 | 125 | 212 | 0 | 0 | 37 | 0 | 0 | 324 | 0 | 0 | 164 |
| | K+R | | 410 | 24 | 39 | 139 | 205 | 0 | 0 | 198 | 0 | 0 | 509 | 0 | 0 | 132 |
| 20 | KEPT | | | | | | | | | | | | | | | |
| | ESTIMATE | 31035 | 1130 | 46 | 42 | 27 | 303 | 0 | 0 | 201 | 0 | 261 | 1556 | 16 | 0 | 371 |
| | + OR - | 3785 | 908 | 81 | 37 | 33 | 201 | 0 | 0 | 102 | 0 | 191 | 634 | 28 | 0 | 228 |
| | RELE | | | | | | | | | | | | | | | |
| | ESTIMATE | 31035 | 229 | 16 | 18 | 187 | 219 | 0 | 0 | 769 | 0 | 579 | 1716 | 0 | 0 | 728 |
| | + OR - | 3785 | 231 | 23 | 23 | 91 | 320 | 0 | 0 | 514 | 0 | 412 | 605 | 0 | 0 | 416 |
| | K+R | | 1359 | 62 | 60 | 214 | 522 | 0 | 0 | 970 | 0 | 840 | 3272 | 16 | 0 | 1099 |
| 21 | KEPT | | | | | | | | | | | | | | | |
| | ESTIMATE | 11336 | 0 | 0 | 0 | 166 | 149 | 0 | 0 | 76 | 0 | 37 | 594 | 0 | 0 | 0 |
| | + OR - | 1946 | 0 | 0 | 0 | 153 | 220 | 0 | 0 | 59 | 0 | 38 | 247 | 0 | 0 | 0 |
| | RELE | | | | | | | | | | | | | | | |
| | ESTIMATE | 11336 | 0 | 0 | 0 | 1051 | 119 | 0 | 0 | 77 | 0 | 88 | 194 | 0 | 0 | 0 |
| | + OR - | 1946 | 0 | 0 | 0 | 689 | 176 | 0 | 0 | 88 | 0 | 103 | 154 | 0 | 0 | 0 |
| | K+R | | 0 | 0 | 0 | 1217 | 268 | 0 | 0 | 153 | 0 | 125 | 788 | 0 | 0 | 0 |
| 22 | KEPT | | | | | | | | | | | | | | | |
| | ESTIMATE | 7480 | 10 | 138 | 0 | 453 | 126 | 0 | 0 | 25 | 0 | 70 | 227 | 0 | 0 | 0 |
| | + OR - | 1196 | 18 | 157 | 0 | 441 | 146 | 0 | 0 | 40 | 0 | 65 | 187 | 0 | 0 | 0 |

Gills

FILED



ODNR 1995

# WELL LOG AND DRILLING REPORT

ORIGINAL

PLEASE USE PENCIL
OR TYPEWRITER
DO NOT USE INK.

State of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Water
1562 W. First Avenue
Columbus 12, Ohio

Nº 295303

County Muskingum Township Harrison Section of Township

Owner Ohio Power Address Philo Ohio

Location of property Philo Ohio

## CONSTRUCTION DETAILS

Casing diameter 38" x 36 Length of casing 55'0

Type of screen Layne Length of screen 10'0

Type of pump ?

Capacity of pump 900 G.P.M.

Depth of pump setting ?

Date of completion 5-1-63

## BAILING OR PUMPING TEST

Pumping Rate 400 G.P.M. Duration of test 8 hrs.

Drawdown 16'0 ft. Date 5-1-63

Static level-depth to water 38'-0 ft.

Quality (clear, ~~cloudy, taste, odor~~)

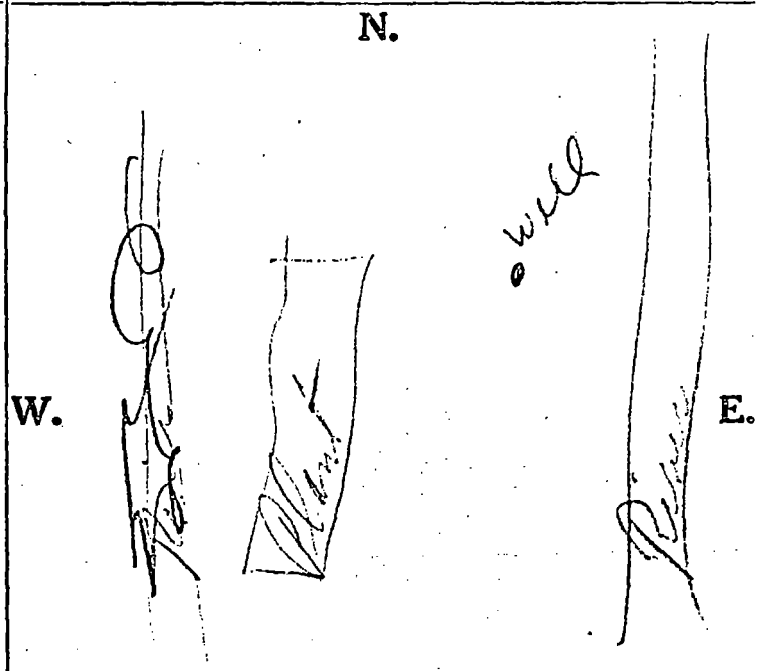
Pump installed by ?

## WELL LOG

| Formations Sandstone, shale, limestone, gravel and clay | From | To |
|---|---|---|
| Top soil | 0 Feet | 5 Ft. |
| Cinders | 5'-0 | 15'-0 |
| Sand & Gravel | 15'0 | 20'-0 |
| Yellow clay | 20'0 | 40'-0 |
| Yellow Sand | 40'-0 | 55'-0 |
| Yellow silt, | 55'0 | 65'-0 |
| clay. | 65'-0 | 66'-0 |

## SKETCH SHOWING LOCATION

Locate in reference to numbered State Highways, St. Intersections, County roads, etc.




See reverse side for instructions

Drilling Firm Layne Ohio Co Date 6-4-63

Address Mt. P. Ohio Signed [illegible]

# WELL LOG AND DRILLING REPORT

W12

ORIGINAL

NO CARBON PAPER NECESSARY— SELF-TRANSCRIBING

State of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Water
65 S. Front St., Rm. 815 Phone (614) 469-2646
Columbus, Ohio 43215

445147

County Muskingum Township Harrison Section of Township

Owner Dick Mill Address Route 1, Philo, Ohio 43771

Location of property 1½ Miles North West of Philo, Ohio

## CONSTRUCTION DETAILS

Casing diameter 7" Length of casing 37'

Type of screen Length of screen

Type of pump

Capacity of pump

Depth of pump setting

Date of completion July 20, 1973

## BAILING OR PUMPING TEST
(Specify one by circling)

Test Rate 4 G.P.M. Duration of test 6 hrs

Drawdown 160 4 ft. Date

Static level-depth to water 255 ft.

Quality (clear, cloudy, taste, odor) Clear

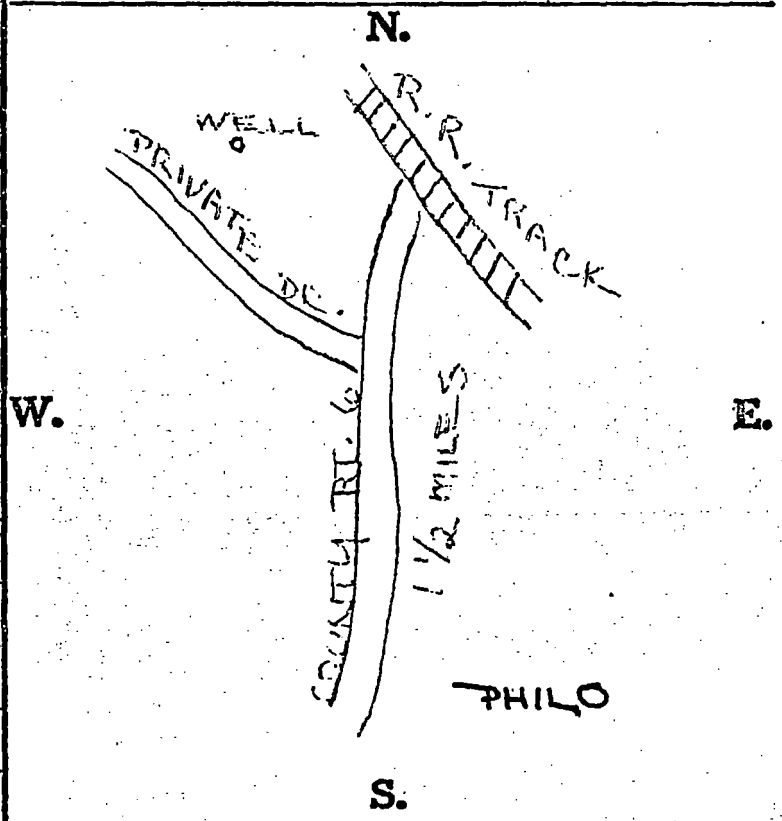
Pump installed by

## WELL LOG*

| Formations Sandstone, shale, limestone, gravel and clay | From | To |
|---|---|---|
| Top Soil | 0 Feet | 3 Ft. |
| Brown Clay | 3 | 12 |
| Gray Clay | 12 | 18 |
| Gray Shale | 18 | 22 |
| Gray Sandy Shale | 22 | 31 |
| Gray Sand Rock | 31 | 37 |
| Gray Sandy Shale | 37 | 57 |
| Red Sahle | 67 | 62 |
| Brown Sandy Shale | 62 | 68 |
| Showing of Gas | 62 | 68 |
| Gray Sandy Shale | 68 | 73 |
| Brown Sandy Shale | 73 | 84 |
| Gray Sandy Shale | 84 | 92 |

## SKETCH SHOWING LOCATION

Locate in reference to numbered State Highways, St. Intersections, County roads, etc.




Drilling Firm Suburban Drilling Company Date July 25, 1973

Address 1950 East Pike, Zanesville, O. Signed B. N. White

*If additional space is needed to complete well log, use next consecutive numbered form.

# WELL LOG AND DRILLING REPORT

ORIGINAL

NO CARBON PAPER NECESSARY— SELF-TRANSCRIBING

State of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Water
65 S. Front St., Rm. 815 Phone (614) 469-2646
Columbus, Ohio 43215

445148
Page 2

County Muskingum Township Harrison Section of Township

Owner Dick Mill Address Route 1, Philo, Ohio 43771

Location of property 1½ Miles N.W. of Philo, Ohio

## CONSTRUCTION DETAILS

Casing diameter Length of casing

Type of screen Length of screen

Type of pump

Capacity of pump

Depth of pump setting

Date of completion

## BAILING OR PUMPING TEST
(Specify one by circling)

Test Rate G.P.M. Duration of test hrs

Drawdown ft. Date

Static level-depth to water ft.

Quality (clear, cloudy, taste, odor)

Pump installed by

## WELL LOG*

| Formations Sandstone, shale, limestone, gravel and clay | From | To |
|---|---|---|
| | 0 Feet | Ft. |
| Gray Sandy Shale | 92 | 106 |
| Gray Sand Rock | 106 | 122 |
| White Sand Rock | 122 | 202 |
| W Gray Shale | 202 | 217 |
| Gray Sandy Shale | 217 | 225 |
| Gray Shal4 | 225 | 236 |
| Gray Sandy Shale | 236 | 290 |
| Gray Lime Stone | 290 | 296 |
| Gray Sandy Shale | 296 | 318 |
| White Sand Rock | 318 | 360 |
| Water | 348 | |
| | | |

## SKETCH SHOWING LOCATION

Locate in reference to numbered State Highways, St. Intersections, County roads, etc.

N.

W. E.

S.

900±
360
540±

Drilling Firm Suburban Wlrs. Date 7-25-73

Address Zanesville Signed

*If additional space is needed to complete well log, use next consecutive numbered form.

# WELL LOG AND DRILLING REPORT

ORIGINAL

PLEASE USE PENCIL OR TYPEWRITER DO NOT USE INK.

State of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Water
1562 W. First Avenue
Columbus 12, Ohio

WL3

No. 318886

County Muskingum Township Harrison Section of Township

Owner Wilmer L Clapper Address Rt. # 1 Philo

Location of property 1½ Mile West of Philo on County Rt. 68

## CONSTRUCTION DETAILS

Casing diameter 6 5/8 Length of casing 19'4"

Type of screen None Length of screen

Type of pump None Set

Capacity of pump

Depth of pump setting

Date of completion

## BAILING OR PUMPING TEST

Pumping Rate 2 G.P.M. Duration of test 2 hrs.

Drawdown 114 ft. Date Dec 12-64

Static level-depth to water 74 ft.

Quality (clear, cloudy, taste, odor) Cloudy

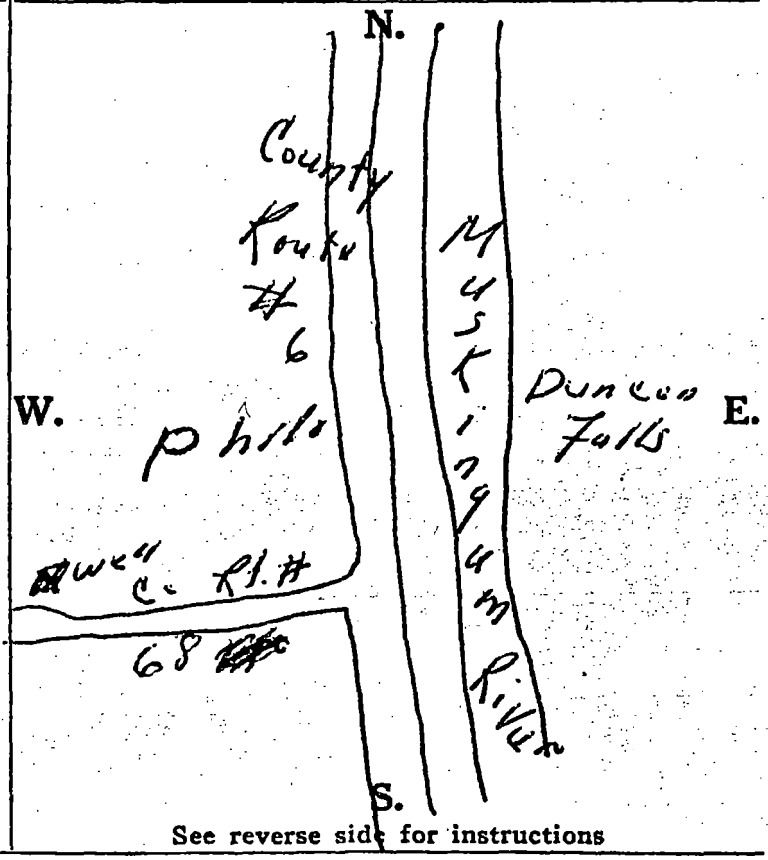
Pump installed by

## WELL LOG

| Formations Sandstone, shale, limestone, gravel and clay | From | To |
|---|---|---|
| Brown Shale | 0 Feet | 3 Ft. |
| Red Clay | 3 | 7 |
| Red Rock | 7 | 18 |
| Limestone | 18 | 67 |
| Gray Shale | 67 | 75 |
| Soft Gray Shale | 75 | 82 |
| Coal | 82 | 85 |
| Sand Rock | 85 | 87 |
| Gray Sandy Shale | 87 | 99 |
| Red Rock | 99 | 106 |
| Gray Sandy Shale | 106 | 114 |
| Water at | 98 | |
| Total Depth | 114 | |

## SKETCH SHOWING LOCATION

Locate in reference to numbered State Highways, St. Intersections, County roads, etc.




See reverse side for instructions

Drilling Firm Anderson Water Dr. Co. Date Dec 12-1964

Address Rt. #2 Willow Dr. Zanesville Signed Robert Anderson

# WELL LOG AND DRILLING REPORT

ORIGINAL

OUT OF 4 MILE RADIUS

464031

NO CARBON PAPER NECESSARY— SELF-TRANSCRIBING

State of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Water
65 S. Front St., Rm. 815 Phone (614) 469-2646
Columbus, Ohio 43215

County Muskingum Township ~~Franklin~~ Harrison Section of Township

Owner O.J. Bagley Address Rt. 1, Philo, Ohio

Location of property 2 miles south of St. Rt. 555, on Co. Rd. 6

## CONSTRUCTION DETAILS

Casing diameter 6 5/8 Length of casing 17

Type of screen Length of screen

Type of pump Jet

Capacity of pump

Depth of pump setting

Date of completion

## BAILING OR PUMPING TEST
(Specify one by circling)

Test Rate 2 G.P.M. Duration of test hrs.

Drawdown ft. Date

Static level-depth to water 18 ft.

Quality (clear, cloudy, taste, odor)

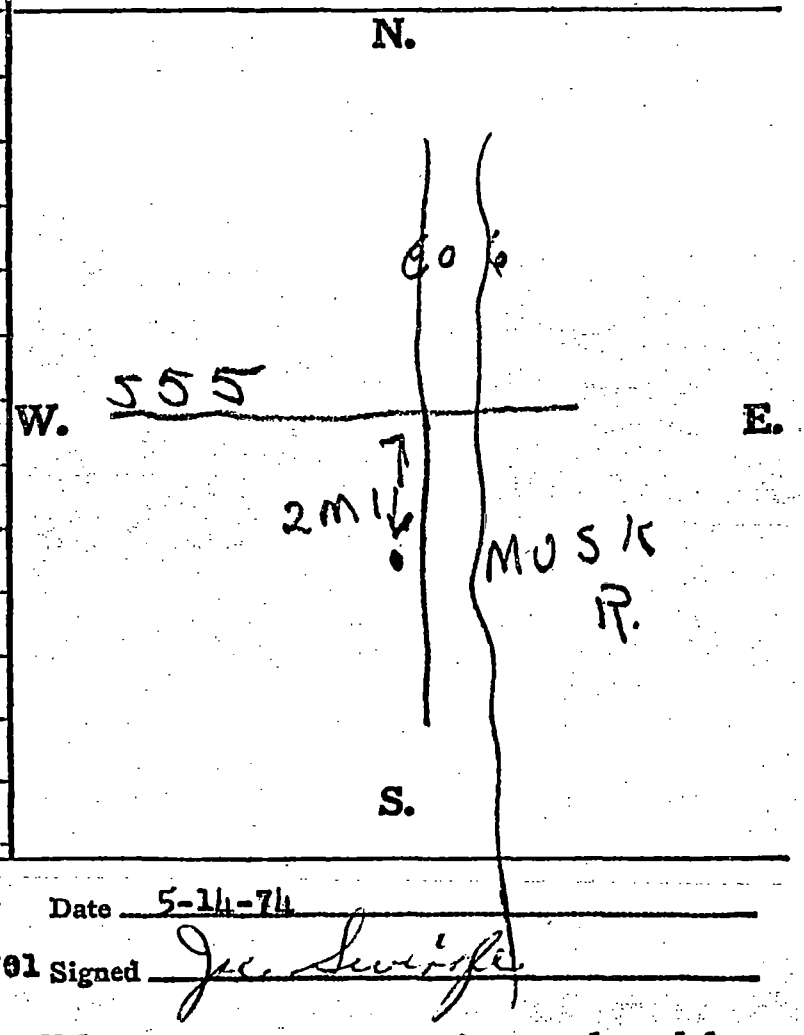
Pump installed by Owner

## WELL LOG*

| Formations Sandstone, shale, limestone, gravel and clay | From | To |
|---|---|---|
| Surface | 0 Feet | 3 Ft. |
| Sand | 3 | 15 |
| Sandstone | 15 | 37 |
| Water 27 ft. | | |

## SKETCH SHOWING LOCATION

Locate in reference to numbered State Highways, St. Intersections, County roads, etc.




Drilling Firm Swingle Water Well Drilling Date 5-14-74

Address Route 7, Zanesville, Ohio 43701 Signed Joe Swingle

*If additional space is needed to complete well log, use next consecutive numbered form.

County Permit No.

NO CARBON PAPER NECESSARY– SELF-TRANSCRIBING

# WELL LOG AND DRILLING REPORT

State of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Water
Fountain Square
Columbus, Ohio 43224

ORIGINAL

536130

WL4

COUNTY Muskingum TOWNSHIP Harrison SECTION OF TOWNSHIP

OWNER Gary Harding ADDRESS 7120 Old River Rd Philo

LOCATION OF PROPERTY 7120 Old River Road Philo

## CONSTRUCTION DETAILS

Casing diameter 6 3/4 OD Length of casing 46

Type of screen Length of screen

Type of pump

Capacity of pump

Depth of pump setting

Date of completion

## BAILING OR PUMPING TEST
(specify one by circling)

Test rate 20 gpm Duration of test 2 hrs

Drawdown 29 ft Date

Static level (depth to water) 25 ft

Quality (clear, cloudy, taste, odor) Clear

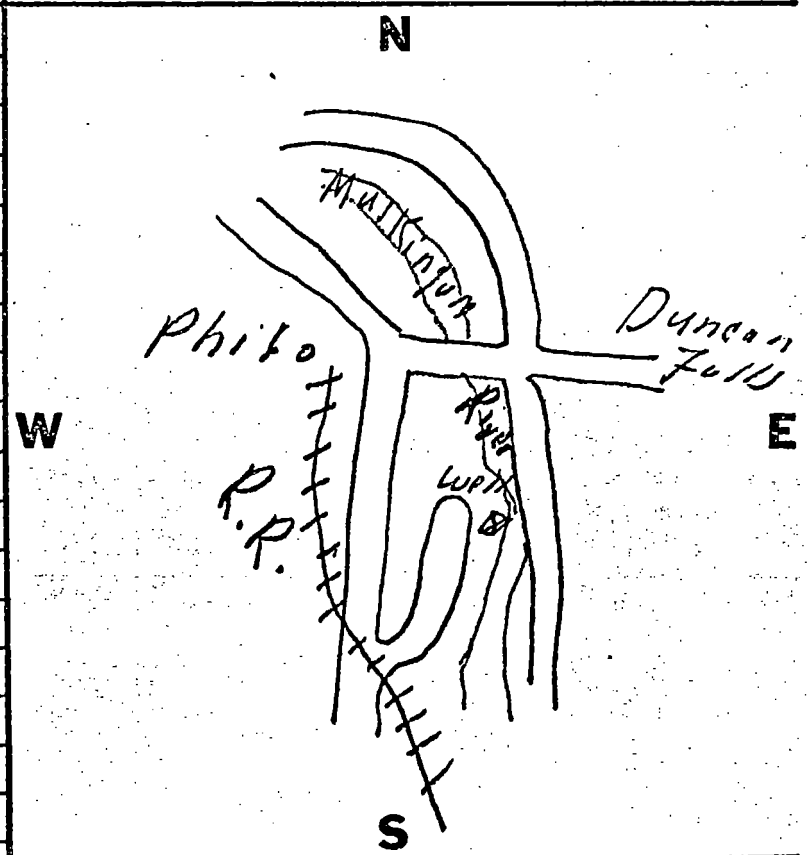
Pump installed by None Set

## WELL LOG*

| Formations: sandstone, shale, limestone, gravel, clay | From | To |
|---|---|---|
| Brown Shale | 0 ft | 3 ft |
| Clay | 3 | 7 |
| Fine Sand | 7 | 24 |
| Sand + Gravel | 24 | 44 |
| Water at | 43 | |
| Total Depth | 44 | |

## SKETCH SHOWING LOCATION

Locate in reference to numbered state highways, street intersections, county roads, etc.




DRILLING FIRM Anderson Drlg DATE July 11 79

ADDRESS 113 So Willow Dr. Zanesville SIGNED Robert Anderson

*If additional space is needed to complete well log, use next consecutive numbered form.

# WELL LOG AND DRILLING REPORT

ORIGINAL

NO CARBON PAPER NECESSARY— SELF-TRANSCRIBING

State of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Water
65 S. Front St., Rm. 815 Phone (614) 469-2646
Columbus, Ohio 43215

462146
WL5

County Muskingum Township Harrison Section of Township

Owner Muskingum River Park Area Address P.O. Box 2806; Zanes., Oh. 43701

Location of property Philo Locktender's House, Philo, Ohio 43771

## CONSTRUCTION DETAILS

Casing diameter 6-5/8" Length of casing 34'
Type of screen Slots Length of screen 2'
Type of pump
Capacity of pump
Depth of pump setting
Date of completion 11/6/75

## BAILING OR PUMPING TEST
(Specify one by circling)

Test Rate 2 G.P.M. Duration of test 2 hrs.
Drawdown 73 ft. Date 11/3/75
Static level-depth to water 21' ft.
Quality (clear, cloudy, taste, odor) Clear

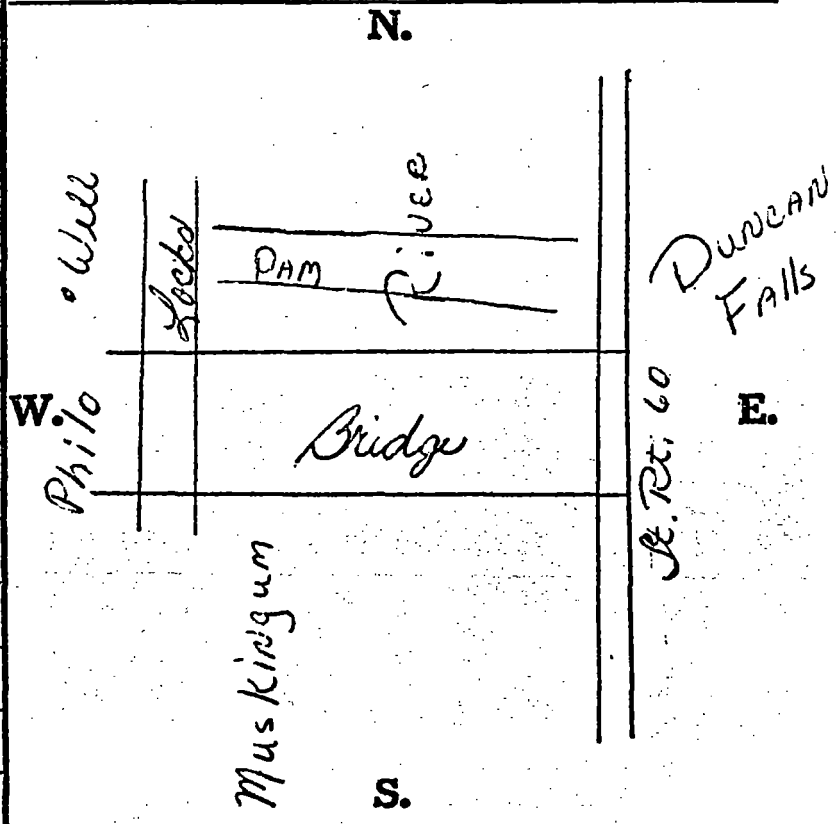
Pump installed by

## WELL LOG*

| Formations Sandstone, shale, limestone, gravel and clay | From | To |
|---|---|---|
| Top | 0 Feet | 3 Ft. |
| Brown Clay | 3 | 7 |
| Brown Sand | 7 | 17 |
| Brown Sand & Sm. Gravel | 17 | 22 |
| Brown Sand | 22 | 27 |
| Gray Shale | 27 | 33 |
| Gray Sandy Shale | 33 | 56 |
| Gray Shale | 56 | 65 |
| Coal Blossom | 65 | 69 |
| Showing of Coal | 69 | 71 |
| Gray Shale | 71 | 75 TD |
| 1 GPM at 28' | | |
| 1 GPM at 61' | | |

## SKETCH SHOWING LOCATION

Locate in reference to numbered State Highways, St. Intersections, County roads, etc.




Drilling Firm Suburban Drilling Co., Inc. Date November 14, 1975

Address 1950 East Pike
Zanesville, Ohio 43701

Signed Bill H. White
(TK)

*If additional space is needed to complete well log, use next consecutive numbered form.

# WELL LOG AND DRILLING REPORT

ORIGINAL

NO CARBON PAPER NECESSARY— SELF-TRANSCRIBING

State of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Water
65 S. Front St., Rm. 815 Phone (614) 469-2646
Columbus, Ohio 43215

462148

County Muskingum Township Harrison Section of Township

Owner Philo Water Works Address P.O. Box 134 Philo, Ohio 43771

Location of property 1 Mile South of Philo on Co. Rd. #6

## CONSTRUCTION DETAILS

Casing diameter 10' Length of casing 38'
Type of screen Stainless Length of screen 20'
Type of pump
Capacity of pump
Depth of pump setting
Date of completion 11/10/75

## BAILING OR PUMPING TEST
(Specify one by circling)

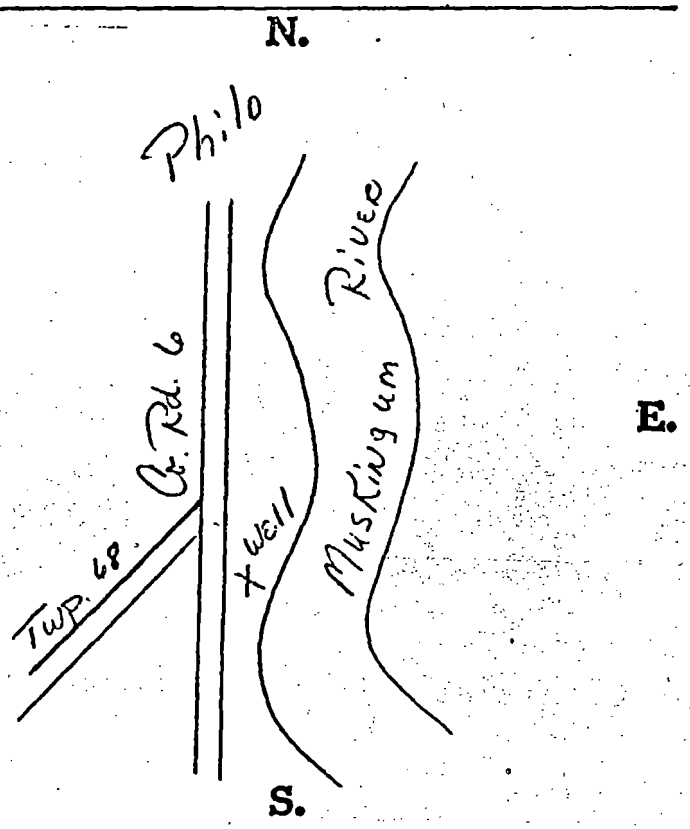
Test Rate 500 + G.P.M. Duration of test hrs.
Drawdown NBD ft. Date 11/7/75
Static level-depth to water 10' ft.
Quality (clear, cloudy, taste, odor) Clear
Pump installed by

## WELL LOG*

| Formations Sandstone, shale, limestone, gravel and clay | From | To |
|---|---|---|
| Top | 0 Feet | 6 Ft. |
| Brown Clay | 6 | 12 |
| Brown Silt | 12 | 18 |
| Brown Sant & Sm. Grave | 18 | 23 |
| Brown Sand | 23 | 31 |
| Gray Sand & Water | 31 | 50 |
| Gray Shale | 50 | 51 |
| Water at 18' | | |
| Water at 35' | | |

## SKETCH SHOWING LOCATION

Locate in reference to numbered State Highways, St. Intersections, County roads, etc.




Drilling Firm Suburban Drilling Co., Inc. Date December 16, 1975

Address 1950 East Pike
Zanesville, Ohio 43701

Signed Bill White
(ek)

*If additional space is needed to complete well log, use next consecutive numbered form.

# WELL LOG AND DRILLING REPORT

ORIGINAL

State of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Water
1562 W. First Avenue
Columbus, Ohio 43212

PLEASE USE PENCIL OR TYPEWRITER

DO NOT USE INK.

№ 352615

County Muskingum Township WAYNE Section of Township 30

Owner Duffields Ass., Inc Address Duncan Falls, Ohio

Location of property On South side of East Roemer Street in Duncan Falls, Ohio

## CONSTRUCTION DETAILS

Casing diameter 12 3/4" Length of casing 98'6"

Type of screen 304 Stainless Length of screen 10'

Type of pump Turbine

Capacity of pump 200 GPM @ 183'

Depth of pump setting 91'

Date of completion 9-3-66

## BAILING OR PUMPING TEST

Pumping Rate 200 G.P.M. Duration of test 24 hrs.

Drawdown 4½'-5' ft. Date 9-2-66

Static level-depth to water 65' ft.

Quality (clear, cloudy, taste, odor) clear no odor.

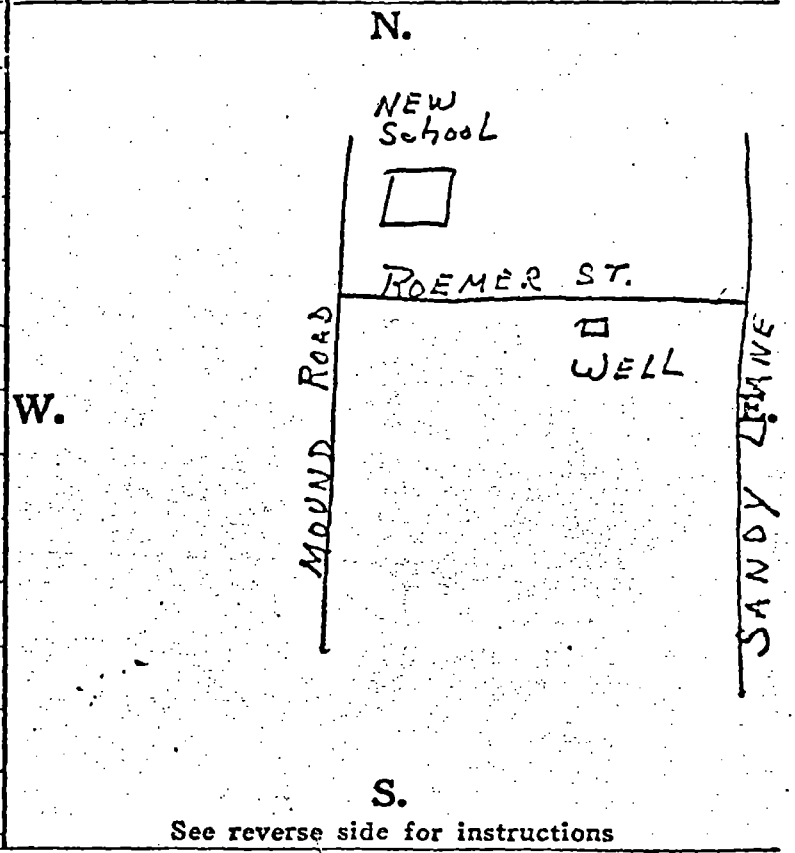
Pump installed by Driller

## WELL LOG*

| Formations Sandstone, shale, limestone, gravel and clay | From | To |
|---|---|---|
| Sand & Gravel | 0 Feet | 105 Ft. |
| water after 65' | | |

## SKETCH SHOWING LOCATION

Locate in reference to numbered State Highways, St. Intersections, County roads, etc.




See reverse side for instructions

Drilling Firm R.C. Ramsey Date 9-5-66

Address RH 6 Zanesville, Oh Signed R C Ramsey

*If additional space is needed to complete well log, use next consecutive numbered form.

Industrial

# WELL LOG AND DRILLING REPORT

NO. 295303

County MUSKINGUM Township HARRISON Section of Township

Owner OHIO POWER Address PHILO, OHIO

Location of property PHILO, OHIO

## CONSTRUCTION DETAILS

Casing diameter 38 x 26 Length of casing 55

Type of screen Layre Length of screen 10

Type of pump

Capacity of pump 400 gpm

Depth of pump setting

Date of completion 5-1-63

## BAILING OR PUMPING TEST

Pumping rate 400 G.P.M.

Duration of test 8 Hrs.

Drawdown 16 ft. Date 5-1-63

Static level - depth to water 38 Ft.

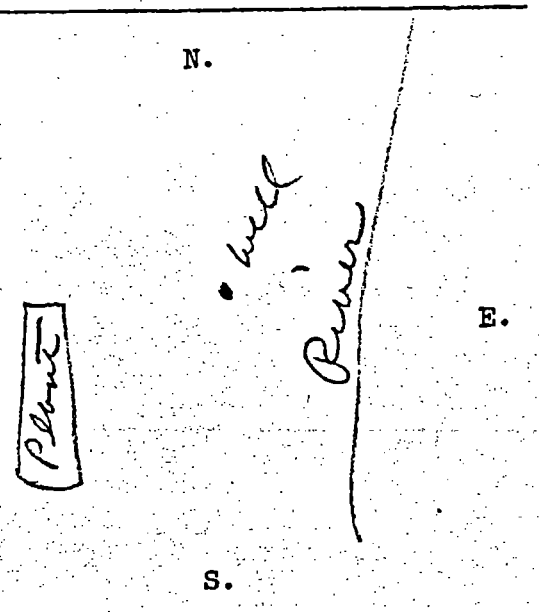
Quality

Pump installed by

## WELL LOG

| Formation | From | To |
|---|---|---|
| Top soil | 0 | 5 |
| Cinders | 5 | 15 |
| Sand & gravel | 15 | 20 |
| Yellow clay | 20 | 40 |
| Yellow sand | 40 | 55 |
| Yellow S & G | 55 | 65 |
| Clay | 65 | 66 |

## SKETCH SHOWING LOCATION




Drilling Firm Layne Ohio Date 6-4-63

Address Columbus, O. Copied by RH (6/7/63)

Industrial

18-6
LOCATED

# WELL LOG AND DRILLING REPORT

NO. 119521

County Muskingum Township Harrison Section of Township

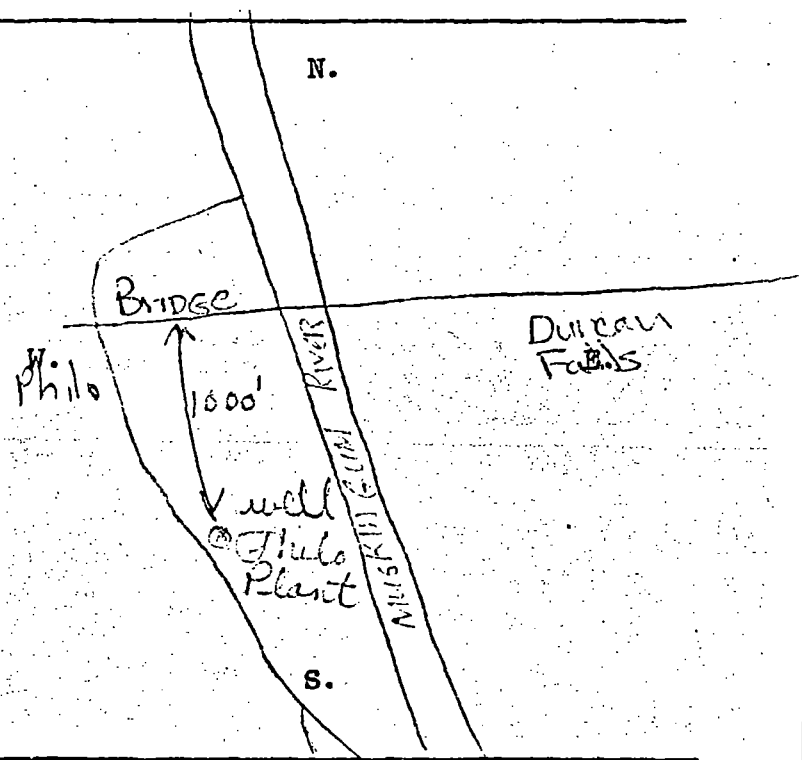
Owner Ohio Power Co. Address Philo, Ohio

Location of property Philo, Ohio

| CONSTRUCTION DETAILS | BAILING OR PUMPING TEST |
|---|---|
| Casing diameter 13" Length of casing 52' | Pumping rate 300 G.P.M. |
| Type of screen Brass Length of screen 15' | Duration of test 10 Hrs. |
| Type of pump Turbine | Drawdown 5 ft. Date 12-13-55 |
| Capacity of pump 300 GPM at 220 | Developed capacity 600 GPM at 10' DD |
| Depth of pump setting 61' | Static level - depth to water 40'6" Ft. |
| Date of completion | Pump installed by Ohio Power Co. |

| WELL LOG | | |
|---|---|---|
| Formation | From | To |
| Top Filled Soil | 0 | 3 |
| Filled cinders Original top soil before cinder fill | 3 | 28 |
| Sand & Gravel | 28 | 65 |
| Blue Shale | 65 | 67 |
| Well to be tested to 300 GPM for 10 yrs. when Ohio Power installs pump. | | |

SKETCH SHOWING LOCATION




Drilling Firm M.L. Dutro Date Nov. 2, 1955

Address 144 1/2 S. 6th St. Zanesville, Ohio Copied by j.c.

# WELL LOG AND DRILLING REPORT

Municipal ORIGINAL

State of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Water
1562 W. First Avenue
Columbus, Ohio 43212

PLEASE USE PENCIL OR TYPEWRITER

DO NOT USE INK.

№ 350851

County Muskingum Township Blue Rock Section of Township

Owner Corp. of Philo Address Philo, Ohio

Location of property Philo, Ohio

## CONSTRUCTION DETAILS

Casing diameter 5" Length of casing 49'

Type of screen Length of screen

Type of pump

Capacity of pump

Depth of pump setting

Date of completion June 11, 1966

## BAILING OR PUMPING TEST

Pumping Rate 30 G.P.M. Duration of test hrs.

Drawdown 18 ft. Date June 11, 1966

Static level-depth to water 8 ft.

Quality (clear, cloudy, taste, odor) Clear

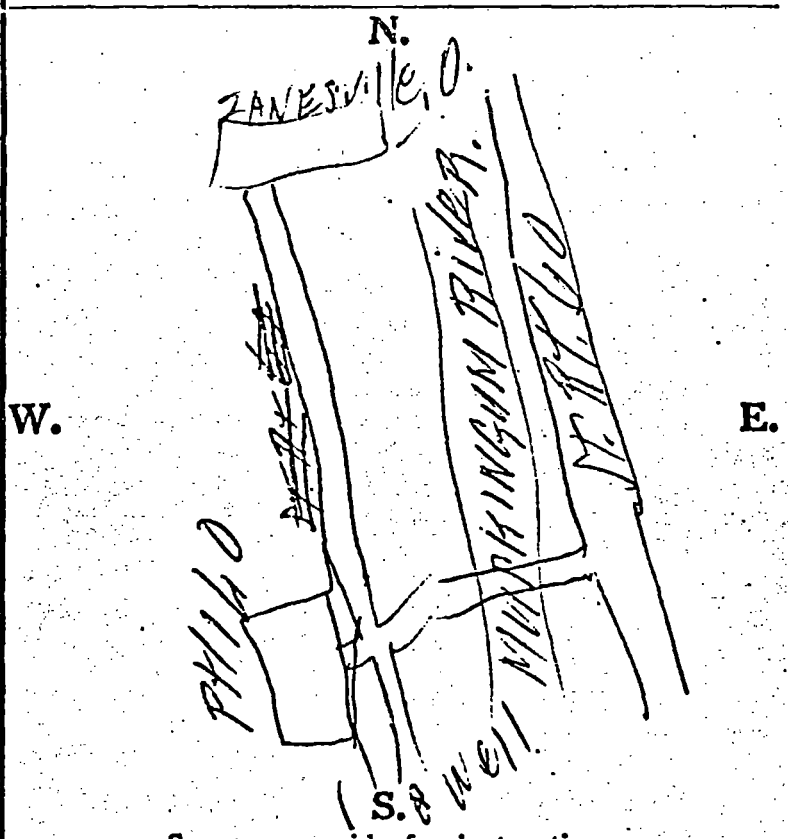
Pump installed by

## WELL LOG*

| Formations Sandstone, shale, limestone, gravel and clay | From | To |
|---|---|---|
| Top | 0 Feet | 5 Ft. |
| Sand, Silty | 5 | 17 |
| Brown Sand | 17 | 32 |
| Brown Sand & Gravel | 32 | 40 |
| Gray Sand & Gravel- Broken Sand Rock | 40 | 45 |
| Fine Gray Sand & Gravel | 45 | 48 |
| Gray Sandy Broken Sand Rock | 48 | 49 |
| Fire Clay | 49 | 51 |
| (Water @ 10'-Test Well) | | |

## SKETCH SHOWING LOCATION

Locate in reference to numbered State Highways, St. Intersections, County roads, etc.




See reverse side for instructions

Drilling Firm Suburban Drilling Co. Date June 14, 1966

Address 1950 E. Pike, Zanesville, Ohio Signed B. H. White B. H. White

*If additional space is needed to complete well log, use next consecutive numbered form.

# WELL LOG AND DRILLING REPORT

ORIGINAL

Municipal

State of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Water
1562 W. First Avenue
Columbus, Ohio 43212

PLEASE USE PENCIL OR TYPEWRITER

DO NOT USE INK.

№ 360970

W17

County Muskingum Township Harrison Section of Township

Owner Village of Philo, Address Philo, Ohio

Location of property ¼ Mile South of Philo, on Co. Rd. 6

## CONSTRUCTION DETAILS

Casing diameter 10" Length of casing 42'

Type of screen Slots Length of screen 5'

Type of pump

Capacity of pump

Depth of pump setting

Date of completion June 24, 1967

## BAILING OR PUMPING TEST

Bailed @ Pumping Rate 60 G.P.M. Duration of test hrs.

Drawdown 7 ft. Date

Static level-depth to water 11 ft.

Quality (clear, cloudy, taste, odor) Clear

Pump installed by

## WELL LOG*

| Formations Sandstone, shale, limestone, gravel and clay | From | To |
|---|---|---|
| and & Gravel | 0 Feet | 36Ft. |
| 3 Ft. Bridge in Bottom | | |

## SKETCH SHOWING LOCATION

Locate in reference to numbered State Highways, St. Intersections, County roads, etc.

See reverse side for instructions

Drilling Firm Suburban Drilling Co. Date June 26, 1967

Address 1950 E. Pike, Zanesville, Ohio Signed B. H. White

*If additional space is needed to complete well log, use next consecutive numbered form.

Industrial

15-207
LOCATED

WL 6

# WELL LOG AND DRILLING REPORT

NO. 95560

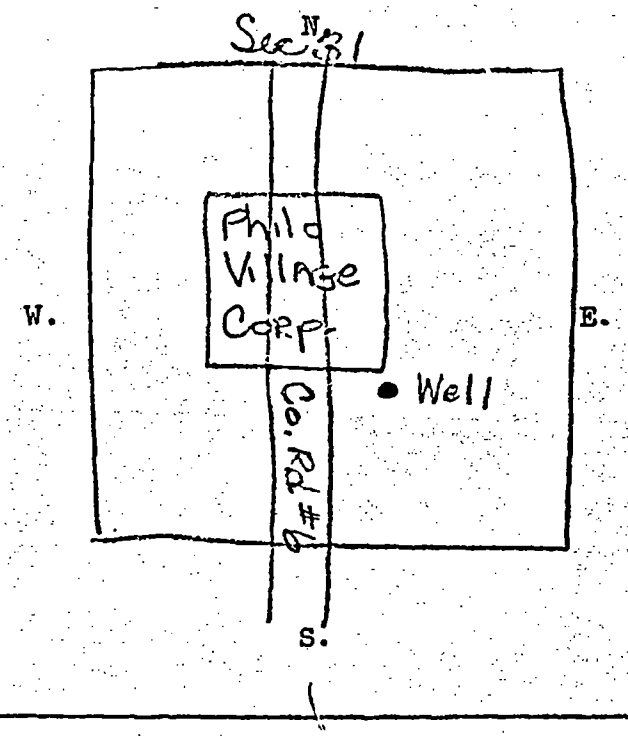
County Muskingum Township Harrison Section of Township 31

Owner Philo Village Corp. Address Philo, Ohio

Location of property 400' S. of Philo Corp. limits near Co. Rd. #6

| CONSTRUCTION DETAILS | BAILING OR PUMPING TEST |
|---|---|
| Casing diameter 10" Length of casing 70' | Pumping rate 75 G.P.M. |
| Type of screen Johnson 60 slot Length of screen 10' | Duration of test 38 1/2 Hrs. |
| Type of pump Deming Turbine | Drawdown 17 ft. Date |
| Capacity of pump 50 GPM | Developed capacity 75 GPM |
| Depth of pump setting 70' | Static level - depth to water 52 Ft. |
| Date of completion | Pump installed by |

| WELL LOG | | | SKETCH SHOWING LOCATION |
|---|---|---|---|
| Formation | From | To | |
| Fine Sand & Loam | 0 | 47 | |
| Sand & Fine Gravel | 47 | 50 | |
| Fine Sand | 50 | 65 | |
| Sand & Fine Gravel | 65 | 80 | |
| Total depth 80' | | | |




Drilling Firm S.M. Ebersbach Date July 18, 1952

Address 2195 East Pike Zanesville, Ohio Copied by J.C.

Municipal

LOCATED

# WELL LOG AND DRILLING REPORT

NO. 94539

County Muskingum Township Harrison Section of Township

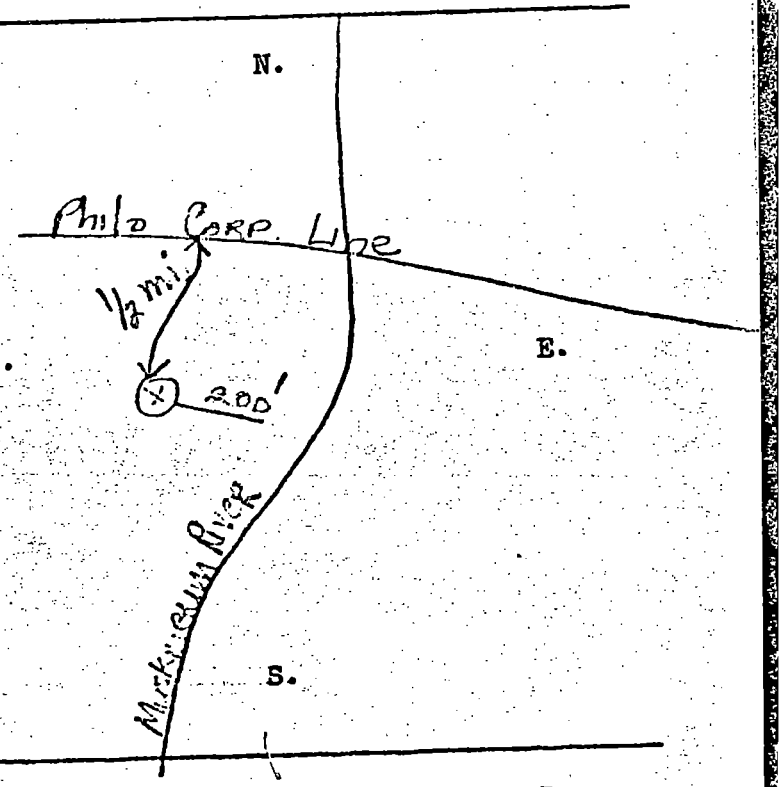
Owner Village of Philo, Ohio Address Water Works

Location of property 1/ 2mi. S. of Philo Corp. line

| CONSTRUCTION DETAILS | BAILING OR PUMPING TEST |
|---|---|
| Casing diameter 10" Length of casing 53' | Pumping rate 194 G.P.M. |
| Type of screen Everdu Length of screen 8' | Duration of test 14 Hrs. |
| Type of pump Turbine | Drawdown 8 ft. Date |
| Capacity of pump 150 GPM at 300' head | Developed capacity 200 GPM |
| Depth of pump setting 50' | Static level - depth to water 26 Ft. |
| Date of completion | Pump installed by ML Dutro |

| WELL LOG | | |
|---|---|---|
| Formation | From | To |
| Top Soil | 0 | 10 |
| Sand | 10 | 61 |

SKETCH SHOWING LOCATION




Drilling Firm M.L. Dutro Date July 22, 1953

Address 144 1/2 S. 6th. Copied by j.c.

# WELL LOG AND DRILLING REPORT

ORIGINAL

State of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Water
1562 W. First Avenue,
Columbus, Ohio 43212

Municipal
No. 350882

PLEASE USE PENCIL OR TYPEWRITER

DO NOT USE INK.

County Muskingum Township Harrison Section of Township

Owner Corp. of Philo Address Philo, Ohio

Location of property 4 Mile South of Philo, Ohio- Co. Rd. #9

## CONSTRUCTION DETAILS

Casing diameter 10" / Length of casing 41'

Type of screen 1/8" Slots Length of screen 5'

Type of pump

Capacity of pump

Depth of pump setting

Date of completion July 30, 1966

## BAILING OR PUMPING TEST

Pumping Rate 140 G.P.M. Duration of test 4 hrs.

Drawdown 9 ft. Date July 29, 1966

Static level-depth to water 0 ft.

Quality (clear, cloudy, taste, odor) Clear

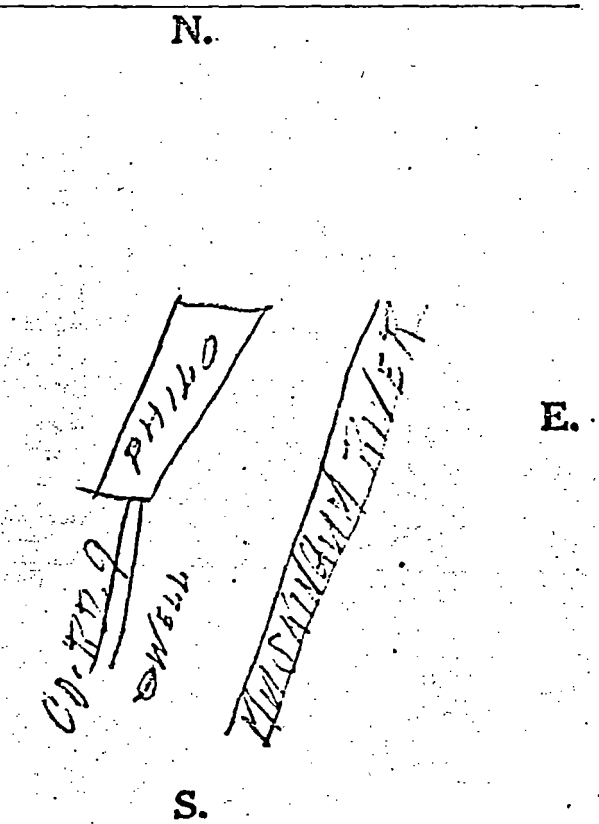
Pump installed by

## WELL LOG*

| Formations Sandstone, shale, limestone, gravel and clay | From | To |
|---|---|---|
| Sand & Gravel | 0 Feet | 40Ft. |
| (Water at 10 Ft.) | | |

## SKETCH SHOWING LOCATION

Locate in reference to numbered State Highways, St. Intersections, County roads, etc.




See reverse side for instructions

Drilling Firm Suburban Drilling Co. Date Nov. 1, 1966

Address 1950 E. Pike, Zanesville, Ohio Signed B. H. White

*If additional space is needed to complete well log, use next consecutive numbered form.

Municipal

17-
LOCATED

# WELL LOG AND DRILLING REPORT

NO. 193903

County Muskingum Township Harrison Section of Township 5

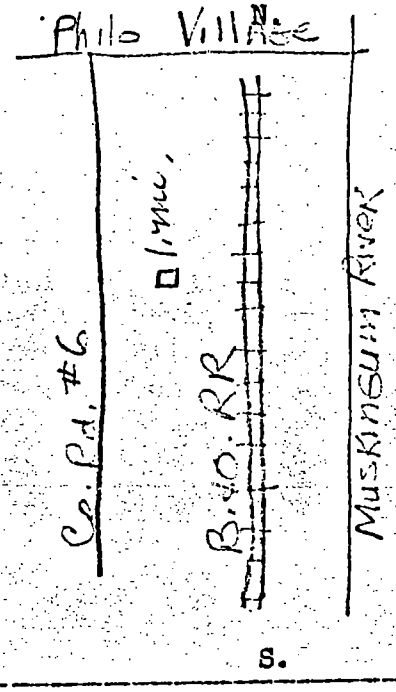
Owner Philo Village Address Philo, Ohio

Location of property On E. side of Co. Rd. #6 approx. 1 mi. S. of Philo, O.

| CONSTRUCTION DETAILS | BAILING OR PUMPING TEST |
|---|---|
| Casing diameter 10" Length of casing 54' | Pumping rate 225 G.P.M. |
| Type of screen Johnson WW Length of screen 8' | Duration of test 26 hrs. |
| Type of pump Turbine | Drawdown 13 ft. Date 3-19-57 |
| Capacity of pump 150 GPM at. 315' Head | Developed capacity 225 GPM by pump |
| Depth of pump setting 49' | Static level - depth to water 25 ft. |
| Date of completion 3-15-57 | Pump installed by Driller to test well and removed. |

| WELL LOG | | |
|---|---|---|
| Formation | From | To |
| Sandy Loam | 0 | 5 |
| Brown Sand & Gravel | 5 | 52 |
| Gray Sand & Gravel | 52 | 60 |
| Water after 26' | | |

SKETCH SHOWING LOCATION




Drilling Firm R.C. Ramsey Date 3-30-57

Address Rt. 6 Zanesville, Ohio Copied by j.c.

# WELL LOG AND DRILLING REPORT

WL9

ORIGINAL

State of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Water
1562 W. First Avenue
Columbus, Ohio 43212

PLEASE USE PENCIL OR TYPEWRITER

DO NOT USE INK.

№ 345935

Designated #7 Well

County Muskingum Township Harrison Section of Township

Owner Ohio Ferro-Alloys Corp. Address Philo Ohio

Location of property 60 Ft West of Muskingum River & 1½ Mi South of R. 555

## CONSTRUCTION DETAILS

Casing diameter 26" x 16" Length of casing 41' 4"

Type of screen Bronze Length of screen 20'

Type of pump Deep Well Turbine

Capacity of pump Test.

Depth of pump setting 52 Ft

Date of completion Nov. 12 - 1968

## BAILING OR PUMPING TEST

Pumping Rate 800 G.P.M. Duration of test 8 ~~hrs.~~ hrs.

Drawdown 12 ft. Date Nov. 12 - 1968

Static level-depth to water 19 ft.

Quality (clear, cloudy, taste, odor)

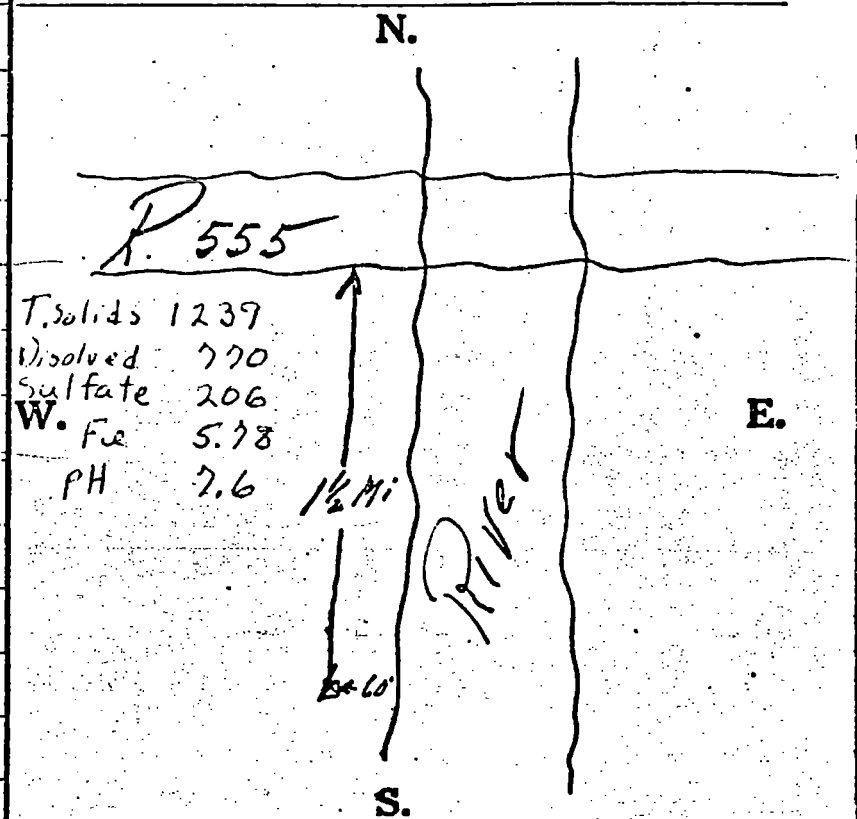
Pump installed by Bob Harrold

## WELL LOG*

| Formations Sandstone, shale, limestone, gravel and clay | From | To |
|---|---|---|
| Clay + Stones | 0 Feet | 18 Ft. |
| Gravel + Sand | 18 | 27 |
| Sand + Gravel | 27 | 36 |
| Sand | 36 | 45 |
| Sand + Gravel | 45 | 47 |
| Sand | 47 | 50 |
| Sand + Gravel | 50 | 67 |

## SKETCH SHOWING LOCATION

Locate in reference to numbered State Highways, St. Intersections, County roads, etc.




See reverse side for instructions

Drilling Firm The Ohio Drilling Co. Date JAN. 10 - 1969

Address Massillon Ohio Signed J. H. Wilson

*If additional space is needed to complete well log, use next consecutive numbered form.

# WELL LOG AND DRILLING REPORT

ORIGINAL

NO CARBON PAPER NECESSARY— SELF-TRANSCRIBING

State of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Water
65 S. Front St., Rm. 815 Phone (614) 469-2646
Columbus, Ohio 43215

No. 401673

Designated #8 well

County Muskingum Township Harrison Section of Township 2

Owner Ohio Ferro Alloy Corp Address Philo, Ohio

Location of property 50' West of Muskingum River 1½ miles South Rte 555

## CONSTRUCTION DETAILS

Casing diameter 24"x16" Length of casing 72"

Type of screen Fiberglass Length of screen 20'

Type of pump Turbine Test.

Capacity of pump 1200 gpm.

Depth of pump setting 45ft.

Date of completion Oct 5 1970

## BAILING OR PUMPING TEST
(Specify one by circling)

Test Rate 1000 G.P.M. Duration of test 8 hrs.

Drawdown 13 ft. Date 10/10/70

Static level-depth to water 12½" ft.

Quality (clear, cloudy, taste, odor) Clear

Pump installed by —

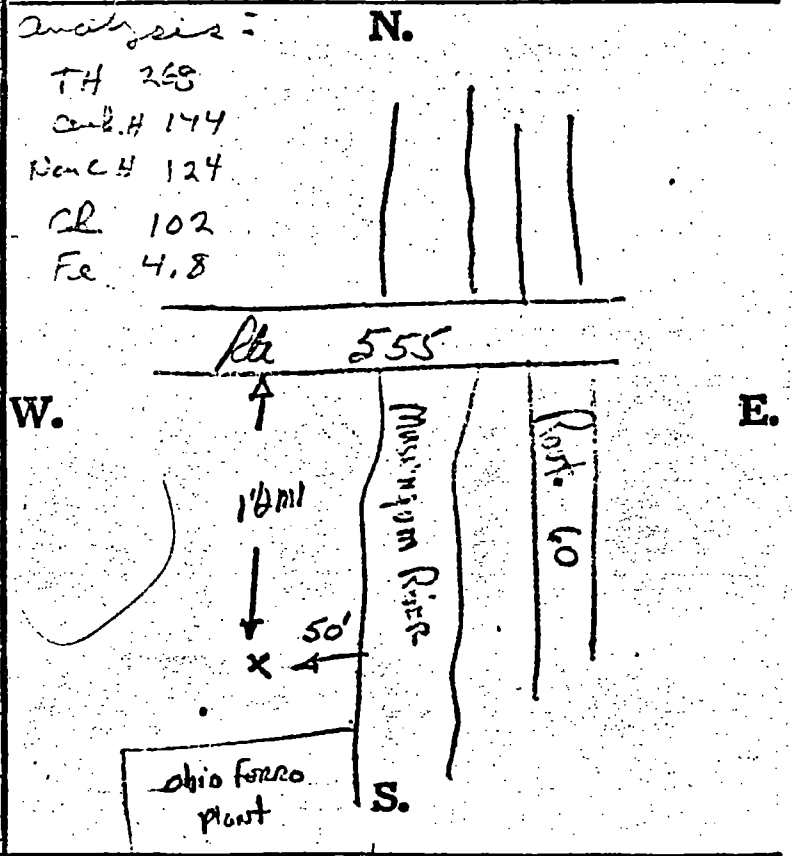
## WELL LOG*

| Formations Sandstone, shale, limestone, gravel and clay | From | To |
|---|---|---|
| Fill | 0 Feet | 8 Ft. |
| Sand, gravel & stones | 8 | 30' |
| Sand, gravel & clay | 30 | 38' |
| Sand & gravel, some clay | 38' | 47' |
| Sandy gravel | 47' | 67' |

## SKETCH SHOWING LOCATION

Locate in reference to numbered State Highways, St. Intersections, County roads, etc.

Analysis:
TH 268
Calc.H 144
Non CH 124
Cl 102
Fe 4.8




Drilling Firm The Ohio Drilling Co. Date January 15, 1971

Address Massillon, Ohio Signed [illegible]

*If additional space is needed to complete well log, use next consecutive numbered form.

PROVISIONAL RECORDS, SUBJECT TO REVISION

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

2GW

# WATER ANALYSIS

Location Philo, Ohio (1 mile West)(S½ sec. 10)(Harrison Twp.) County Muskingum
Source Drilled well No. 8 Depth (ft) 67 Diam (in.)
Cased to (ft) Date drilled October 1970 Point of coll. Tap on pump
Owner Ohio Ferro Alloy, Canton, Ohio
Treatment Use Industrial
WBF Sand and gravel, 47-67 WL 13.6 ft. below land surface Yield 1000 GPM pump
Temp (°C) Appear. when coll. Clear
Collected July 20, 1972 By Dave Johe
Remarks

| | mg/l | me/l | | mg/l | me/l |
|---|---|---|---|---|---|
| Silica ($SiO_2$) | 9.6 | -- | Bicarbonate ($HCO_3$) | 208 | 3.41 |
| Aluminum (Al) | | | Carbonate ($CO_3$) | 0 | .00 |
| Iron (Fe) (ug/l) | 2800 | -- | | | |
| Manganese (Mn) (ug/l) | 1200 | -- | Sulfate ($SO_4$) | 130 | 2.71 |
| | | | Chloride (Cl) | 120 | 3.38 |
| | | | Fluoride (F) | .5 | .03 |
| | | | | | |
| Calcium (Ca) | 100 | 4.99 | | | |
| Magnesium (Mg) | 23 | 1.89 | Nitrate ($NO_3$) | .0 | .00 |
| Sodium (Na) | 60 | 2.61 | Nitrate ($NO_3$-N) | .0 | |
| Potassium (K) | 6.0 | .15 | | | |
| | | | | | |
| Total | | 9.64 | Total | | 9.53 |

| | mg/l | | |
|---|---|---|---|
| | | Specific conductance (micromhos at 25° C) | 922 |
| Dissolved solids: Calculated | 555 | pH | 7.5 |
| Residue on evaporation at 180° C | 592 | Color | 1 |
| Hardness as $CaCO_3$ | 340 | | |
| Noncarbonate | 170 | | |
| | | | |
| | | | |

ab. No. Col 63403 Field No. Project OHIO NAT RES Q GW

PROVISIONAL RECORDS, SUBJECT TO REVISION

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

2GW

# WATER ANALYSIS

Location Lagoon, Ohio (North)(SE¼ sec. 9)(Drush Creek Twp.) County Huskingum
Source Drilled well Depth (ft) Diam (in.)
Cased to (ft) Date drilled Point of coll. Tap
Owner Unknown, "Trailer well"
Treatment Use Domestic
WBF WL Yield
Temp (°C) Appear. when coll. Clear
Collected July 20, 1972 By Dave Johe
Remarks Sampled after pumping 10 min.

| | mg/l | me/l | | mg/l | me/l |
|---|---|---|---|---|---|
| Silica ($SiO_2$) | 13 | -- | Bicarbonate ($HCO_3$) | 279 | 4.57 |
| Aluminum (Al) | | | Carbonate ($CO_3$) | 0 | .00 |
| Iron (Fe) (ug/l) | 24,000 | -- | | | |
| Manganese (Mn) (ug/l) | 2,200 | -- | Sulfate ($SO_4$) | 670 | 13.95 |
| | | | Chloride (Cl) | 6.0 | .17 |
| | | | Fluoride (F) | 1.0 | .05 |
| | | | | | |
| Calcium (Ca) | 240 | 11.98 | | | |
| Magnesium (Mg) | 75 | 6.17 | Nitrate ($NO_3$) | .0 | .00 |
| Sodium (Na) | 27 | 1.17 | Nitrate ($NO_3$-N) | .0 | |
| Potassium (K) | 2.9 | .07 | | | |
| | | | | | |
| Total | | 19.39 | Total | | 18.74 |

| | mg/l | | |
|---|---|---|---|
| | | Specific conductance (micromhos at 25° C) | 1,500 |
| Dissolved solids: | | | |
| Calculated | 1,200 | pH | 7.2 |
| Residue on evaporation at 180° C | 1,310 | | |
| | | Color | 0 |
| Hardness as $CaCO_3$ | 910 | | |
| Noncarbonate | 680 | | |
| | | | |
| | | | |

Lab. No. Col 63404 Field No. Project OHIO NAT RES Q GW

## SAMPLE DESCRIPTION

SITE NAME/TDD# Philo Plant (SIA) / F05-8805-020

CASE NUMBER 13622

SAMPLE #/STATION LOCATION S1

SAMPLING DATE Feb. 20, 1990 SAMPLING TIME 1415

ORGANIC TRAFFIC NUMBER EJJ62

INORGANIC TRAFFIC NUMBER MEHT 20

| BOTTLE | ANALYSIS | TAG NUMBERS | LOT NUMBER |
|---|---|---|---|
| 8oz. | heavy metals; CN | 5-083776 | 9276023 |
| 8oz. | extractables | 5-083777 | ↓ |
| 4oz. | VOA | 5-083778 | D9297023 |
| 4oz. | VOA | 5-083779 | ↓ |
| | | | |
| | | | |
| | | | |

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: Black Ash

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: None

INSTRUMENT READINGS N/A

pH ↓

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# Philo Plant (SIA) / F05-8805-020

CASE NUMBER 13622

SAMPLE #/STATION LOCATION S2

SAMPLING DATE Feb. 20, 1990 SAMPLING TIME 1430

ORGANIC TRAFFIC NUMBER EJJ 63

INORGANIC TRAFFIC NUMBER MEHT 21

| BOTTLE | ANALYSIS | TAG NUMBERS | LOT NUMBER |
|---|---|---|---|
| 8oz. | heavy metals, CN | 5-083780 | 9276023 |
| 8oz. | extractables | 5-083781 | ↓ |
| 4oz. | VOA | 5-083782 | D9297023 |
| 4oz. | VOA | 5-083783 | ↓ |
| | | | |
| | | | |
| | | | |

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: Black Ash

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: None

INSTRUMENT READINGS N/A

pH

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# Philo Plant (SIA) / F05-8805-020

CASE NUMBER 13622

SAMPLE #/STATION LOCATION S3

SAMPLING DATE Feb. 20, 1990 SAMPLING TIME 1430

ORGANIC TRAFFIC NUMBER EJJ 64

INORGANIC TRAFFIC NUMBER MEHT 22

| BOTTLE | ANALYSIS | TAG NUMBERS | LOT NUMBER |
|---|---|---|---|
| 8oz. | heavy metals; CN | 5-083784 | 9276023 |
| 8oz. | extractables | 5-083785 | ↓ |
| 4oz. | VOA | 5-083786 | D9297023 |
| 4oz. | VOA | 5-083787 | ↓ |
| | | | |
| | | | |
| | | | |

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: Black Ash

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: None

INSTRUMENT READINGS N/A

pH

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# Philo Plant (SIA) / F05-8805-020

CASE NUMBER 13622

SAMPLE #/STATION LOCATION S4

SAMPLING DATE Feb. 20, 1990 SAMPLING TIME 1500

ORGANIC TRAFFIC NUMBER EJJ65

INORGANIC TRAFFIC NUMBER MEHT23

| BOTTLE | ANALYSIS | TAG NUMBERS | LOT NUMBER |
|---|---|---|---|
| 8oz. | heavy metals & CN | 5-083788 | 9276023 |
| 8oz. | extractables | 5-083789 | ↓ |
| 4oz. | VOA | 5-083790 | D9297023 |
| 4oz. | VOA | 5-083791 | ↓ |
| | | | |
| | | | |
| | | | |

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: Brown quartz sand

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: None

INSTRUMENT READINGS N/A

pH

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# Philo Plant (SIA) / F05 - 8805 -023

CASE NUMBER 13622

SAMPLE #/STATION LOCATION SS

SAMPLING DATE Feb. 20, 1990 SAMPLING TIME 1550

ORGANIC TRAFFIC NUMBER EJJ 66

INORGANIC TRAFFIC NUMBER MEHT 24

| BOTTLE | ANALYSIS | TAG NUMBERS | LOT NUMBER |
|---|---|---|---|
| 8oz. | heavy metals, CN | 5-083792 | 9276023 |
| 8oz. | extractables | 5-083793 | ↓ |
| 4oz. | VOA | 5-083794 | D9297023 |
| 4oz. | VOA | 5-083795 | ↓ |
| | | | |
| | | | |
| | | | |

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: Black Fine Fly Ash

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: None

INSTRUMENT READINGS N/A

pH

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# Philo Plant (SIA) / F05-8805-020

CASE NUMBER 13622

SAMPLE #/STATION LOCATION S6

SAMPLING DATE Feb. 20, 1990 SAMPLING TIME 1600

ORGANIC TRAFFIC NUMBER EJJ67

INORGANIC TRAFFIC NUMBER MEHT25

| BOTTLE | ANALYSIS | TAG NUMBERS | LOT NUMBER |
|---|---|---|---|
| 8oz. | heavy metals; CN | 5-083796 | 9276023 |
| 8oz. | extractables | 5-083797 | ↓ |
| 4oz. | VOA | 5-083798 | D9297023 |
| 4oz. | VOA | 5-083799 | ↓ |
| | | | |
| | | | |
| | | | |

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: Tan Silt

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: None

INSTRUMENT READINGS N/A

pH

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# Philo Plant (SIA) / F05-8805-020

CASE NUMBER 13622

SAMPLE #/STATION LOCATION S7

SAMPLING DATE Feb. 20, 1990 SAMPLING TIME 1615

ORGANIC TRAFFIC NUMBER EJJ 68

INORGANIC TRAFFIC NUMBER MEHT26

| BOTTLE | ANALYSIS | TAG NUMBERS | LOT NUMBER |
|---|---|---|---|
| 8oz. | heavy metals, CN | 5-083800 | 9276023 |
| 8oz. | extractables | 5-083801 | ↓ |
| 4oz. | VOA | 5-083802 | D9297023 |
| 4oz. | VOA | 5-083803 | ↓ |
| | | | |
| | | | |
| | | | |

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: Tan Sand (Quartz)

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: None

INSTRUMENT READINGS N/A

pH

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# Philo Plant (SIA) / FOS-8805-020

CASE NUMBER 13622

SAMPLE #/STATION LOCATION S8

SAMPLING DATE Feb. 20, 1990 SAMPLING TIME 1630

ORGANIC TRAFFIC NUMBER EJJ 69

INORGANIC TRAFFIC NUMBER MEHT 27

| BOTTLE | ANALYSIS | TAG NUMBERS | LOT NUMBER |
|---|---|---|---|
| 8oz. | heavy metals; CN | 5-083804 | 9276023 |
| 8oz. | extractables | 5-083805 | ↓ |
| 4oz. | VOA | 5-083806 | 09297023 |
| 4oz. | VOA | ~~5-8~~ 5-083807 | ↓ |
| | | | |
| | | | |
| | | | |

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: Tan Quartz Sand

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: None

INSTRUMENT READINGS N/A

pH ↓

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# Philo Plant (SIA)

CASE NUMBER 13622

SAMPLE #/STATION LOCATION S9

SAMPLING DATE Feb. 20, 1990 SAMPLING TIME NOT COLLECTED!

ORGANIC TRAFFIC NUMBER EJJ 70

INORGANIC TRAFFIC NUMBER MEHT 28

| BOTTLE | ANALYSIS | TAG NUMBERS | LOT NUMBER |
|---|---|---|---|
| 8oz. | heavy metals & CN | 5-083808 | N/A |
| 8oz. | extractables | 5-083809 | ↓ |
| 4oz. | VOA | 5-083810 | ↓ |
| 4oz. | VOA | 5-083811 | ↓ |
| | | | |
| | | | |
| | | | |

PHYSICAL DESCRIPTION AT TIME OF COLLECTION:

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: None

INSTRUMENT READINGS N/A

pH ↓

CONDUCTIVITY ↓

TEMPERATURE ↓

SAMPLE DESCRIPTION

SITE NAME/TDD# Philo Plant (SIA)

CASE NUMBER 13622

SAMPLE #/STATION LOCATION S10

SAMPLING DATE Feb. 20, 1990 SAMPLING TIME NOT COLLECTED!

ORGANIC TRAFFIC NUMBER EJJ 71

INORGANIC TRAFFIC NUMBER MEHJ 29

| BOTTLE | ANALYSIS | TAG NUMBERS | LOT NUMBER |
|---|---|---|---|
| 8oz. | heavy metals; CN | 5-083812 | N/A |
| 8oz. | extractables | 5-083813 | ↓ |
| 4oz. | VOA | 5-083814 | ↓ |
| 4oz. | VOA | 5-083815 | ↓ |
| | | | |
| | | | |
| | | | |

PHYSICAL DESCRIPTION AT TIME OF COLLECTION:

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: None

INSTRUMENT READINGS N/A

pH ↓

CONDUCTIVITY ↓

TEMPERATURE ↓

ecology and environment, inc.
111 WEST JACKSON BLVD., CHICAGO, ILLINOIS 60604, TEL. 312-663-9415
International Specialists in the Environment

CRL Receipt Date 3/22 FIT Receipt Date 4/10 Review Completed 4/11/90

TO: Dwayne

FROM: Mary Gzyra

SUBJECT: Phillips Alt - Ohio Power

PAN: OH0828SB (1 hour charged for review) Case # 13622

Sample Description

| Organics (VOA, ABN, Pest/PCB) | | Inorganics (Metals, Cyanide) | |
|---|---|---|---|
| # | Low Soil | # 8 | Low Soil |
| | Low Water | | Low Water |
| | Drinking Water | | Drinking Water |
| | Other | | Other |

Project Data Status ✓ Completed!!

Incomplete, awaiting

FIT Data Review Findings:

***Check Data Sheets for Transcription Errors***

✓ Compounds were detected in sample(s); see enclosed sheet.

Book No. 9 Page No. Date Sampled 2/20

0759:2

recycled paper

3 4/11/90

Table 4- (Cont.)

| Physical State* | Waste Characteristics** | Category*** | SI Memo | Sample Collection Information and Parameters | Sample Number 1 MEHT 20 | 2 21 | 3 22 | 4 23 | 5 24 | 6 25 | 7 26 | 8 27 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Analyte Detected (values in mg/kg or µg/L) | | | | | | | | | | | | |
| Solid | A,D | MES | CSC/CWC | aluminum | 6260 | 17100 | 6950 | 9110 | 27000 | 9540 | 11300 | 4990 | | | | |
| Solid | A,D | MES | HM | antimony | | | | | | | | 6.8 JNB | | | | |
| Solid | A,D | MES | HM | arsenic | 12.4 JN | 46.3 JN | 7.4 JN | 28.6 JN | 81.2 JN | 10.8 JN | 14.3 JN | 11.7 JN | | | | |
| Solid | A,D | MES | CSC/CWC | barium | 46.8 | 238 | 41.3 B | 97.8 | 143 | 120 | 128 | 61.8 | | | | |
| Solid | A,D | MES | M | beryllium | 2.5 J | 5.0 | 2.6 J | 2.9 J | 8.6 | 4.2 | 4.2 | 3.1 J | | | | |
| Solid | A,D | MES | HM | cadmium | 1.7 | 3.7 | 1.6 | 1.1 B | 2.3 | 2.2 | | | | | | |
| Solid | D | MES | CSC/CWC | calcium | 1160 | 1340 B | 596 B | 196 JB | 4170 | 15100 | 13600 | 2280 | | | | |
| Solid | A,D | MES | HM | chromium | 20 | 50.8 | 16.3 | 20 | 44 | 23.8 | 25.4 | 13.3 | | | | |
| Solid | A,D | MES | HM | cobalt | 6.0 JB | 23.1 | 5.3 JB | 8.2 JB | 16.2 | 22.3 | 21.3 | 12.4 B | | | | |
| Solid | A,D | MES | HM | copper | 26.2 JE | 297 JE | 13.8 JE | 35.2 JE | 39.4 JE | 27.8 JE | 26.7 JE | 15.5 JE | | | | |
| Solid | A,D | MES | HM,CSC;CWC | iron | 20000 | 24800 | 19700 | 45300 | 46800 | 29100 | 30500 | 20600 | | | | |
| Solid | A,D | MES | HM | lead | 10.4 | 99.7 | 5.3 | 15.9 | 19.7 | 22.3 | 22.6 | 13.1 | | | | |
| Solid | A,D | MES | CSC/CWC | magnesium | 539 B | 1810 | 404 B | 1840 | 1460 | 3280 | 3360 | 1180 B | | | | |
| Solid | A,D | MES | HM | manganese | 75.7 | 1540 | 26.9 | 178 | 359 | 1660 | 1590 | 954 | | | | |
| Liquid | A,D | MES | HM | mercury | 0.11 | 0.59 | 0.64 | 0.13 | 0.13 | 0.16 | 0.15 | 0.13 | | | | |
| Solid | A,D | MES | HM | nickel | 5.4 B | 50.9 | 5.6 B | 17.4 | 37 | 42.2 | 41.1 | 22.7 | | | | |
| Solid | D | MES | CSC,CWC | potassium | 1110 | 2630 | 1080 | 1770 | 3390 | 1240 B | 1610 | 680 B | | | | |
| Solid | A,D | MES | M | selenium | | 2.1 | | 0.60 B | | | | | | | | |
| Solid | A,D | MES | HM | silver | 2.1 B | 2.4 B | 2.1 B | 2.2 B | 1.9 B | 2.4 B | 1.9 B | 1.6 B | | | | |
| Solid | D | MES | CSC,CWC | sodium | 238 B | 342 B | 159 B | 145 B | 399 B | 138 B | 150 B | 108 B | | | | |
| Solid | A,D | MES | HM | thallium | 1.8 B | 6.0 | 1.3 B | 2.0 B | 6.4 | 1.6 B | 1.9 B | 1.4 B | | | | |
| Solid | A,D | MES | HM | vanadium | 13.8 | 53.8 | 15.4 | 35.6 | 72.4 | 25.1 | 27.1 | 15 | | | | |
| Solid | A,D | MES | CWL,CSC,HM | zinc | 26.6 | 285 | 20 | 82.7 | 107 | 174 | 171 | 89.9 | | | | |
| Solid | A | IOC | IOC | cyanide | | | | | | | | | | | | |

— Not detected.

Table 4- (Cont.)

| COMPOUND QUALIFIERS | DEFINITION | INTERPRETATION |
|---|---|---|
| U | Indicates compound was analyzed for but not detected. | Compound was not detected at or above the CRQL. |
| J | Indicates an estimated value. | Compound value may be semiquantitative. |
| UJ | Quantitation limit is estimated due to a quality control (QC) protocol. | Compound was not detected if value is at CRQL, e.g., 10U UJ. If a value is reported with a UJ above CRQL and it is <5x blank concentration (10x for common laboratory artifacts), the compound is detected but may be a laboratory artifact and not attributable to the sample. |
| C | This flag applies to pesticide results where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/µL in the final extract shall be confirmed by GC/MS. | Compound was confirmed by GC/MS and is quantitative. Use pesticide/PCB listed value. |
| B | This flag is used when the compound is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action. | Compound value may be semiquantitative if it is <5x the blank concentration (<10x the blank concentrations for common laboratory artifacts: phthalates, methylene chloride, acetone, toluene, 2-butanone). |
| E | This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis. This flag will not apply to pesticides/PCBs analyzed by GC/EC methods. | Compound value may be semiquantitative. There should be another analysis with a D qualifier, which is to be used. |
| D | This flag identifies all compounds identified in an analysis at a secondary dilution factor. | Alerts data user to a possible change in the CRQL. Data is quantitative. |
| A | This flag indicates that a TIC is a suspected aldol-condensation product. | Alerts data user of a laboratory artifact in the TICs only. |
| R | Results are unusable due to a major violation of QC protocol. | Compound value is not usable. |

| ANALYTE QUALIFIERS | | DEFINITION | INTERPRETATION |
|---|---|---|---|
| E | E | Estimated or not reported due to interference. See laboratory narrative. | Analyte or element was not detected, or value may be semiquantitative. |
| S | S | Analysis by Method of Standard Additions. | Value is quantitative. |
| R | N | Spike recoveries outside QC protocols, which indicates a possible matrix problem. Data may be biased high or low. See spike results and laboratory narrative. | Value may be quantitative or semi-quantitative. |
| * | * | Duplicate value outside QC protocols which indicates a possible matrix problem. | Value may be quantitative or semiquantitative. |
| + | + | Correlation coefficient for standard additions is less than 0.995. See review and laboratory narrative. | Data value may be biased. |
| [ ] | B | Value is real, but is above instrument DL and below CRDL. | Value may be quantitative or semi-quantitative. |
| UJ | | DL is estimated because of a QC protocol. DL is possibly above or below CRDL. | Compound or element was not detected. |
| J | | Value is above CRDL and is an estimated value because of a QC protocol. | Value may be semiquantitative. |
| U | U | Compound was analyzed for but not detected. | Compound was not detected at or above the CRDL. |
| | M | Duplicate injection precision not met. | Value may be semiquantitative. |
| | W | Post-digestion spike for furnace AA analysis is out of control limits (35-115%), while sample absorbance is <50% of spike absorbance. | Value may be semiquantitative. |
| | R | Results are unusable due to a major violation of QC protocols. | Analyte value is not usable. |

Source: Ecology and Environment, Inc. 1989.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 4.9.90

SUBJECT: Review of Region V CLP Data Received for Review on March 22, 1990 4/10/90

FROM: Curtis Ross, Director (5SCRL)
Central Regional Laboratory Jay Thakkar

TO: Data User: Rit

We have reviewed the data for the following case(s).

SITE NAME: Pluto Plant OHIO Power (OH) SMO Case No. 13622

EPA Data Set No. SF 7018 No. of Samples: 8 D.U./Activity Numbers YFA/YFA02

CRL No. 90F609890-97

SMO Traffic No. MeHT 26-27

CLP Laboratory: Vegas Hrs. Required for Review: 3.5 +2.5 +.5 mF 4/6/90

Following are our findings.

The laboratory's portion of case 13622 contains 8 low level soil samples assayed for total metals and total cyanide. The following page lists the out of control audits and the possible effects on the data.

(( See Next Page ))

DKruse

( ) Data are acceptable for use.
(X) Data are acceptable for use with qualifications noted above.
( ) Data are preliminary - pending verification by Contractor Laboratory.
( ) Data are unacceptable.

cc: Dr. Alfred Haeberer/Joan Fisk/Gary Ward, EPA Support Services
Ross K. Robeson, EMSL-Las Vegas
Don Trees, CLP Sample Management Office

**LABORATORY: VEGAS** **CASE: 13622**

**ICAP Analyses:** The matrix spike recovery for Sb(32.6%) indicates a low bias for MEHT27 which is estimated(J) for Sb. All remaining Sb data are estimated(UJ) due to possible elevation of the detection limits.

The preparation blank was found to contain Cu(4.16 mg/kg). The serial dilution audit for Cu(63.9%) is out of control. Cu results for MEHT22 and 27 are estimated(J) due to contamination and interference. All remaining Cu data are estimated(J) due to interference.

The preparation blank and calibration blanks were found to contain: Be(0.48 mg/kg, 3.5 ug/l), Ca(65.7 mg/kg), and Co(1.24 mg/kg, 10.3 ug/l). The following results are estimated(J) due to contamination: Be in MEHT20, 22, 23, and 27; Ca in MEHT23; and Co in MEHT20, 22, and 23.

**GFAA Analyses:** The duplicate audit(24.6% RPD) and the matrix spike recovery(CRDL) for As were flagged by the lab. The duplicate audit does not exceed the technical criteria for soils(2X CRDL). All As data are estimated(J) due to low bias.

**Other Qualifiers:** The Hg result for MEHT27 was corrected by the reviewer. All Hg data are acceptable.

All CN data that are less than IDL were calculated incorrectly by the lab. CN results on forms 1, 5 and 6 were corrected by the reviewer. All CN data are now acceptable.

Reviewed by: Duane Kruse

Date: 4/3/90

D Kruse

# QC EXCEPTION SUMMARY REPORT

CASE # 13622
DATA SET # 2018
LAB Q.C.#
DATE: 4/2/90

SITE Philo Plant
LAB Vegas
REVIEWED BY J. Krause

MATRIX: Soil
CONC. : Low
MATRIX :
CONC. :

WATER SAMPLE SPK.
WATER SAMPLE DUP.
SOIL SAMPLE SPK.
SOIL SAMPLE DUP.

| | OVERALL CASE QC | | | | | | | | | MATRIX SPECIFIC QC | | | | | | SAMPLE SPECIFIC QC | | FIELD QC | | | REGIONAL QC | | | OTHER/ COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Holding Time | Cal Blanks | Ind Calver | Contin Calver | Prep Blk AQ | Prep Blk SOL | ICS %R | LCS % AQ | LCS % SOL | Sal Dup RPD | Sal Spk %R | AQ Dup RPD | AQ Spk %R | Ser Dilu AQ | Ser Dilu SOL | GFAA Dup | GFAA Spike | Blank | Dup RPD | Spike %R | Blnd Blank | Blnd Spike %R | Spike Sample RPD | |
| Aluminum | | | | | | | | | | | | | | | | | | | | | | | | |
| Antimony | | | | | | | | | | | | | 32.6 | | | | | | | | | | | |
| Arsenic | | | | | | | | | | 26.6 | | | 66.0 | | | | | | | | | | | |
| Barium | | | | | | | | | | | | | | | | | | | | | | | | |
| Beryllium | | 3.5 | | | | | | | | | | | | | | | | | | | | | | |
| Cadmium | | | | | | | | | | | | | | | | | | | | | | | | |
| Calcium | | | | | | 65.7 | | | | | | | | | | | | | | | | | | |
| Chromium | | | | | | | | | | | | | | | | | | | | | | | | |
| Cobalt | | | | | | 1.24 | | | | | | | | | | | | | | | | | | |
| Copper | | | | | | 4.16 | | | | | | | | | 63.9 | | | | | | | | | |
| Iron | | | | | | | | | | | | | | | | | | | | | | | | |
| Lead | | | | | | | | | | | | | | | | | | | | | | | | |
| Magnesium | | | | | | | | | | | | | | | | | | | | | | | | |
| Manganese | | | | | | | | | | | | | | | | | | | | | | | | |
| Mercury | | | | | | | | | | | | | | | | | | | | | | | | |
| Nickel | | | | | | | | | | | | | | | | | | | | | | | | |
| Potassium | | | | | | | | | | | | | | | | | | | | | | | | |
| Selenium | | | | | | | | | | | | | | | | | | | | | | | | |
| Silver | | | | | | 1.7 | | | | | | | | | | | | | | | | | | |
| Sodium | | | | | | | | | | | | | | | | | | | | | | | | |
| Thallium | | | | | | | | | | | | | | | | | | | | | | | | |
| Tin | | | | | | | | | | | | | | | | | | | | | | | | |
| Vanadium | | | | | | | | | | | | | | | | | | | | | | | | |
| Zinc | | | | | | | | | | | | | | | | | | | | | | | | |
| Cyanide | | | | | | | | | | | | | | | | | | | | | | | | |

No field QC

DPO: [ ] ACTION [X] FYI Region 5

## INORGANIC REGIONAL DATA ASSESSMENT SUMMARY

CASE NO. 13622 LABORATORY Vegas

SDG NO. MEHT20 DATA USER FFT

SOW 7/88 REVIEW COMPLETION DATE 4/3/90

NO. OF SAMPLES _____ WATER 8 SOIL _____ OTHER -

REVIEWER [ ] ESD [X] ESAT [ ] OTHER, CONTRACT/CONTRACTOR _____

| | ICP | AA | Hg | CYANIDE |
|---|---|---|---|---|
| 1. HOLDING TIMES | O | | | |
| 2. INITIAL CALIBRATIONS | O | | | |
| 3. CONTINUING CALIBRATIONS | O | | | |
| 4. FIELD BLANKS ('F' = not applicable) | F | | | |
| 5. LABORATORY BLANKS | X | O | | |
| 6. ICS | O | | | |
| 7. LCS | O | O | | |
| 8. DUPLICATE ANALYSIS | O | O | O | O |
| 9. MATRIX SPIKE | X | M | O | O |
| 10. MSA | | O | | |
| 11. SERIAL DILUTION | X | | | |
| 12. SAMPLE VERIFICATION | O | | | |
| 13. REGIONAL QC ('F' = not applicable) | F | | | |
| 14. OVERALL ASSESSMENT | X | M | O | O |

O = No problems or minor problems that do not affect data usability.
X = No more than *about* 5% of the data points are qualified as either estimated or unusable.
M = More than *about* 5% of the data points are qualified as estimated.
Z = More than *about* 5% of the data points are qualified as unusable.

DPO ACTION ITEMS: All CN results less than IDL were incorrectly calculated by the lab.

AREAS OF CONCERN: _____

U.S. EPA - CLP

1

# COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: VEGAS ANALYTICAL LABS INC Contract: 68-W8-0081

Lab Code: VEGAS Case No.: 13622 SAS No.: SDG No.: MEHT20

SOW NO.: 7/88

| EPA Sample No. | Lab Sample ID. |
|---|---|
| MEHT20 | VALI 20 |
| MEHT20D | VALI 20D |
| MEHT20S | VALI 20S |
| MEHT21 | VALI 21 |
| MEHT22 | VALI 22 |
| MEHT23 | VALI 23 |
| MEHT24 | VALI 24 |
| MEHT25 | VALI 25 |
| MEHT26 | VALI 26 |
| MEHT27 | VALI 27 |

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

Comments:

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

Signature: BMJoshi Name: B. M. Joshi

Date: 3/21/90 Title: Lab. Manager

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO. 2

MEHT20

Lab Name: VEGAS ANALYTICAL LABS INC Contract: 68-W8-0081

Lab Code: VEGAS Case No.: 13622 SAS No.: SDG No.: MEHT20

Matrix (Soil/Water): SOIL Lab Sample ID: VALI 20

Level (Low/Med): LOW Date Received: 02/21/90

% Solids: 90.2

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

| CAS NO. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 6260.00 | | | P |
| 7440-36-0 | Antimony | 4.10 | U | N | P |
| 7440-38-2 | Arsenic | 12.40 | | N* | F |
| 7440-39-3 | Barium | 46.80 | | | P |
| 7440-41-7 | Beryllium | 2.50 | | | P |
| 7440-43-9 | Cadmium | 1.70 | | | P |
| 7440-70-2 | Calcium | 1160.00 | | | P |
| 7440-47-3 | Chromium | 20.00 | | | P |
| 7440-48-4 | Cobalt | 6.00 | B | | P |
| 7440-50-8 | Copper | 26.20 | | E | P |
| 7439-89-6 | Iron | 20000.00 | | | P |
| 7439-92-1 | Lead | 10.40 | | | F |
| 7439-95-4 | Magnesium | 539.00 | B | | P |
| 7439-96-5 | Manganese | 75.70 | | | P |
| 7439-97-6 | Mercury | 0.11 | | | CV |
| 7440-02-0 | Nickel | 5.40 | B | | P |
| 7440-09-7 | Potassium | 1110.00 | | | P |
| 7482-49-2 | Selenium | 0.48 | U | | F |
| 7440-22-4 | Silver | 2.10 | B | | P |
| 7440-23-5 | Sodium | 238.00 | B | | P |
| 7440-28-0 | Thallium | 1.80 | B | | F |
| 7440-62-2 | Vanadium | 13.80 | | | P |
| 7440-66-6 | Zinc | 26.60 | | | P |
| --------- | Cyanide | ~~2.20~~ 0.55 | U | | C |

Color Before: BROWN Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments :

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

3

EPA SAMPLE NO.

MEHT21

Lab Name: VEGAS ANALYTICAL LABS INC Contract: 68-W8-0081

Lab Code: VEGAS Case No.: 13622 SAS No.: SDG No.: MEHT20

Matrix (Soil/Water): SOIL Lab Sample ID: VALI 21

Level (Low/Med): LOW Date Received: 02/21/90

% Solids: 67.4

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

| CAS NO. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 17100.00 | | | P |
| 7440-36-0 | Antimony | 5.30 | U | N | P |
| 7440-38-2 | Arsenic | 46.30 | | N* | F |
| 7440-39-3 | Barium | 238.00 | | | P |
| 7440-41-7 | Beryllium | 5.00 | | | P |
| 7440-43-9 | Cadmium | 3.70 | | | P |
| 7440-70-2 | Calcium | 1340.00 | B | | P |
| 7440-47-3 | Chromium | 50.80 | | | P |
| 7440-48-4 | Cobalt | 23.10 | | | P |
| 7440-50-8 | Copper | 297.00 | | E | P |
| 7439-89-6 | Iron | 74800.00 | | | P |
| 7439-92-1 | Lead | 99.70 | | | F |
| 7439-95-4 | Magnesium | 1810.00 | | | P |
| 7439-96-5 | Manganese | 1540.00 | | | P |
| 7439-97-6 | Mercury | 0.59 | | | CV |
| 7440-02-0 | Nickel | 50.90 | | | P |
| 7440-09-7 | Potassium | 2630.00 | | | P |
| 7482-49-2 | Selenium | 2.10 | | | F |
| 7440-22-4 | Silver | 2.40 | B | | P |
| 7440-23-5 | Sodium | 342.00 | B | | P |
| 7440-28-0 | Thallium | 6.00 | | | F |
| 7440-62-2 | Vanadium | 53.80 | | | P |
| 7440-66-6 | Zinc | 285.00 | | | P |
| --------- | Cyanide | 10X 0.73 ~~2.90~~ | U | | C |

Color Before: BROWN Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: Artifacts:

Comments :

U.S. EPA - CLP

4

1

EPA SAMPLE NO.

INORGANIC ANALYSES DATA SHEET

MEHT22

Lab Name: VEGAS ANALYTICAL LABS INC Contract: 68-W8-0081

Lab Code: VEGAS Case No.: 13622 SAS No.: SDG No.: MEHT20

Matrix (Soil/Water): SOIL Lab Sample ID: VALI 22

Level (Low/Med): LOW Date Received: 02/21/90

% Solids: 93.4

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

| CAS NO. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 6950.00 | | | P |
| 7440-36-0 | Antimony | 4.00 | U | N | P |
| 7440-38-2 | Arsenic | 7.40 | | N* | F |
| 7440-39-3 | Barium | 41.30 | B | | P |
| 7440-41-7 | Beryllium | 2.60 | | | P |
| 7440-43-9 | Cadmium | 1.60 | | | P |
| 7440-70-2 | Calcium | 596.00 | B | | P |
| 7440-47-3 | Chromium | 16.30 | | | P |
| 7440-48-4 | Cobalt | 5.30 | B | | P |
| 7440-50-8 | Copper | 13.80 | | E | P |
| 7439-89-6 | Iron | 19700.00 | | | P |
| 7439-92-1 | Lead | 5.30 | | | F |
| 7439-95-4 | Magnesium | 404.00 | B | | P |
| 7439-96-5 | Manganese | 26.90 | | | P |
| 7439-97-6 | Mercury | 0.64 | | | CV |
| 7440-02-0 | Nickel | 5.60 | B | | P |
| 7440-09-7 | Potassium | 1080.00 | | | P |
| 7482-49-2 | Selenium | 0.45 | U | | F |
| 7440-22-4 | Silver | 2.10 | B | | P |
| 7440-23-5 | Sodium | 159.00 | B | | P |
| 7440-28-0 | Thallium | 1.30 | B | | F |
| 7440-62-2 | Vanadium | 15.40 | | | P |
| 7440-66-6 | Zinc | 20.00 | | | P |
| --------- | Cyanide | DX 0.53 ~~2.10~~ | U | | C |

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts:

Comments :

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

5

EPA SAMPLE NO.

MEHT23

Lab Name: VEGAS ANALYTICAL LABS INC Contract: 68-W8-0081

Lab Code: VEGAS Case No.: 13622 SAS No.: SDG No.: MEHT20

Matrix (Soil/Water): SOIL Lab Sample ID: VALI 23

Level (Low/Med): LOW Date Received: 02/21/90

% Solids: 76.3

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

| CAS NO. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 9110.00 | | | P |
| 7440-36-0 | Antimony | 4.70 | U | N | P |
| 7440-38-2 | Arsenic | 28.60 | | N* | F |
| 7440-39-3 | Barium | 97.80 | | | P |
| 7440-41-7 | Beryllium | 2.90 | | | P |
| 7440-43-9 | Cadmium | 1.10 | B | | P |
| 7440-70-2 | Calcium | 196.00 | B | | P |
| 7440-47-3 | Chromium | 20.00 | | | P |
| 7440-48-4 | Cobalt | 8.20 | B | | P |
| 7440-50-8 | Copper | 35.20 | | E | P |
| 7439-89-6 | Iron | 45300.00 | | | P |
| 7439-92-1 | Lead | 15.90 | | | F |
| 7439-95-4 | Magnesium | 1840.00 | | | P |
| 7439-96-5 | Manganese | 178.00 | | | P |
| 7439-97-6 | Mercury | 0.13 | | | CV |
| 7440-02-0 | Nickel | 17.40 | | | P |
| 7440-09-7 | Potassium | 1770.00 | | | P |
| 7482-49-2 | Selenium | 0.60 | B | | F |
| 7440-22-4 | Silver | 2.20 | B | | P |
| 7440-23-5 | Sodium | 145.00 | B | | P |
| 7440-28-0 | Thallium | 2.00 | B | | F |
| 7440-62-2 | Vanadium | 35.60 | | | P |
| 7440-66-6 | Zinc | 82.70 | | | P |
| --------- | Cyanide | AX 0.05 ~~2.60~~ | U | | C |

Color Before: BROWN Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: Artifacts:

Comments :

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

6

EPA SAMPLE NO.

MEHT24

Lab Name: VEGAS ANALYTICAL LABS INC Contract: 68-W8-0081

Lab Code: VEGAS Case No.: 13622 SAS No.: SDG No.: MEHT20

Matrix (Soil/Water): SOIL Lab Sample ID: VALI 24

Level (Low/Med): LOW Date Received: 02/21/90

% Solids: 75.7

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

| CAS NO. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 27000.00 | | | P |
| 7440-36-0 | Antimony | 4.70 | U | N | P |
| 7440-38-2 | Arsenic | 81.20 | | N* | F |
| 7440-39-3 | Barium | 143.00 | | | P |
| 7440-41-7 | Beryllium | 8.60 | | | P |
| 7440-43-9 | Cadmium | 2.30 | | | P |
| 7440-70-2 | Calcium | 4170.00 | | | P |
| 7440-47-3 | Chromium | 44.00 | | | P |
| 7440-48-4 | Cobalt | 16.20 | | | P |
| 7440-50-8 | Copper | 39.40 | | E | P |
| 7439-89-6 | Iron | 46800.00 | | | P |
| 7439-92-1 | Lead | 19.70 | | | F |
| 7439-95-4 | Magnesium | 1460.00 | | | P |
| 7439-96-5 | Manganese | 359.00 | | | P |
| 7439-97-6 | Mercury | 0.13 | | | CV |
| 7440-02-0 | Nickel | 37.00 | | | P |
| 7440-09-7 | Potassium | 3390.00 | | | P |
| 7482-49-2 | Selenium | 0.56 | U | | F |
| 7440-22-4 | Silver | 1.90 | B | | P |
| 7440-23-5 | Sodium | 399.00 | B | | P |
| 7440-28-0 | Thallium | 6.40 | | | F |
| 7440-62-2 | Vanadium | 72.40 | | | P |
| 7440-66-6 | Zinc | 107.00 | | | P |
| --------- | Cyanide | 0.06 ~~2.60~~ | U | | C |

Color Before: BROWN Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: Artifacts:

Comments :

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1

INORGANIC ANALYSES DATA SHEET

7

EPA SAMPLE NO.

MEHT25

Lab Name: VEGAS ANALYTICAL LABS INC Contract: 68-W8-0081

Lab Code: VEGAS Case No.: 13622 SAS No.: SDG No.: MEHT20

Matrix (Soil/Water): SOIL Lab Sample ID: VALI 25

Level (Low/Med): LOW Date Received: 02/21/90

% Solids: 62.0

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

| CAS NO. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 9540.00 | | | P |
| 7440-36-0 | Antimony | 6.10 | U | N | P |
| 7440-38-2 | Arsenic | 10.80 | | N* | F |
| 7440-39-3 | Barium | 120.00 | | | P |
| 7440-41-7 | Beryllium | 4.20 | | | P |
| 7440-43-9 | Cadmium | 2.20 | | | P |
| 7440-70-2 | Calcium | 15100.00 | | | P |
| 7440-47-3 | Chromium | 23.80 | | | P |
| 7440-48-4 | Cobalt | 22.30 | | | P |
| 7440-50-8 | Copper | 27.80 | | E | P |
| 7439-89-6 | Iron | 29100.00 | | | P |
| 7439-92-1 | Lead | 22.30 | | | F |
| 7439-95-4 | Magnesium | 3280.00 | | | P |
| 7439-96-5 | Manganese | 1660.00 | | | P |
| 7439-97-6 | Mercury | 0.16 | | | CV |
| 7440-02-0 | Nickel | 42.20 | | | P |
| 7440-09-7 | Potassium | 1240.00 | B | | P |
| 7482-49-2 | Selenium | 0.68 | U | | F |
| 7440-22-4 | Silver | 2.40 | B | | P |
| 7440-23-5 | Sodium | 138.00 | B | | P |
| 7440-28-0 | Thallium | 1.60 | B | | F |
| 7440-62-2 | Vanadium | 25.10 | | | P |
| 7440-66-6 | Zinc | 174.00 | | | P |
| --------- | Cyanide | 0.80 ~~3.20~~ | U | | C |

Color Before: BROWN Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: Artifacts:

Comments :

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

8

EPA SAMPLE NO.

MEHT26

Lab Name: VEGAS ANALYTICAL LABS INC Contract: 68-W8-0081

Lab Code: VEGAS Case No.: 13622 SAS No.: SDG No.: MEHT20

Matrix (Soil/Water): SOIL Lab Sample ID: VALI 26

Level (Low/Med): LOW Date Received: 02/21/90

% Solids: 66.4

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

| CAS NO. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 11300.00 | | | P |
| 7440-36-0 | Antimony | 5.50 | U | N | P |
| 7440-38-2 | Arsenic | 14.30 | | N* | F |
| 7440-39-3 | Barium | 128.00 | | | P |
| 7440-41-7 | Beryllium | 4.20 | | | P |
| 7440-43-9 | Cadmium | 1.20 | U | | P |
| 7440-70-2 | Calcium | 13600.00 | | | P |
| 7440-47-3 | Chromium | 25.40 | | | P |
| 7440-48-4 | Cobalt | 21.30 | | | P |
| 7440-50-8 | Copper | 26.70 | | E | P |
| 7439-89-6 | Iron | 30500.00 | | | P |
| 7439-92-1 | Lead | 22.60 | | | F |
| 7439-95-4 | Magnesium | 3360.00 | | | P |
| 7439-96-5 | Manganese | 1590.00 | | | P |
| 7439-97-6 | Mercury | 0.15 | | | CV |
| 7440-02-0 | Nickel | 41.10 | | | P |
| 7440-09-7 | Potassium | 1610.00 | | | P |
| 7482-49-2 | Selenium | 0.65 | U | | F |
| 7440-22-4 | Silver | 1.90 | B | | P |
| 7440-23-5 | Sodium | 150.00 | B | | P |
| 7440-28-0 | Thallium | 1.90 | B | | F |
| 7440-62-2 | Vanadium | 27.10 | | | P |
| 7440-66-6 | Zinc | 171.00 | | | P |
| --------- | Cyanide | 0.74 ~~3.00~~ | U | | C |

Color Before: BROWN Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: Artifacts:

Comments :

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

9

EPA SAMPLE NO.

MEHT27

Lab Name: VEGAS ANALYTICAL LABS INC Contract: 68-W8-0081

Lab Code: VEGAS Case No.: 13622 SAS No.: SDG No.: MEHT20

Matrix (Soil/Water): SOIL Lab Sample ID: VALI 27

Level (Low/Med): LOW Date Received: 02/21/90

% Solids: 74.2

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

| CAS NO. | Analyte | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 4990.00 | | | P |
| 7440-36-0 | Antimony | 6.80 | B | N | P |
| 7440-38-2 | Arsenic | 11.70 | | N* | F |
| 7440-39-3 | Barium | 61.80 | | | P |
| 7440-41-7 | Beryllium | 3.10 | | | P |
| 7440-43-9 | Cadmium | 1.00 | U | | P |
| 7440-70-2 | Calcium | 2280.00 | | | P |
| 7440-47-3 | Chromium | 13.30 | | | P |
| 7440-48-4 | Cobalt | 12.40 | B | | P |
| 7440-50-8 | Copper | 15.50 | | E | P |
| 7439-89-6 | Iron | 20600.00 | | | P |
| 7439-92-1 | Lead | 13.10 | | | F |
| 7439-95-4 | Magnesium | 1180.00 | B | | P |
| 7439-96-5 | Manganese | 954.00 | | | P |
| 7439-97-6 | Mercury | 0.13 | ~~U~~ | OK | CV |
| 7440-02-0 | Nickel | 22.70 | | | P |
| 7440-09-7 | Potassium | 680.00 | B | | P |
| 7482-49-2 | Selenium | 0.57 | U | | F |
| 7440-22-4 | Silver | 1.60 | B | | P |
| 7440-23-5 | Sodium | 108.00 | B | | P |
| 7440-28-0 | Thallium | 1.40 | B | | F |
| 7440-62-2 | Vanadium | 15.00 | | | P |
| 7440-66-6 | Zinc | 89.90 | | | P |
| --------- | Cyanide | OK 0.61 ~~2.70~~ | U | | C |

Color Before: BROWN Clarity Before: Texture: FINE

Color After: COLORLESS Clarity After: Artifacts:

Comments :

3
BLANKS



Lab Name :VEGAS ANALYTICAL LABS INC Contract: 68-W8-0081

Lab Code: VEGAS Case No.: 13622 SAS No.: SDG No.: MEHT20

Preparation Blank Matrix (soil/water): SOIL

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

| Analyte | Initial Calib. Blank (ug/L) | C | Continuing Calibration Blank (ug/L) 1 | C | 2 | C | 3 | C | Prepa-ration Blank | C | M |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 61.4 | B | 78.7 | B | 94.3 | B | 105.5 | B | 18.860 | B | P |
| Antimony | 19.0 | U | 19.0 | U | 19.0 | U | 19.0 | U | 3.800 | U | P |
| Arsenic | 3.0 | U | 3.0 | U | 3.0 | U | 3.0 | U | 0.660 | U | F |
| Barium | 10.0 | U | 10.0 | U | 10.0 | U | 10.0 | U | 2.000 | U | P |
| Beryllium | 2.5 | B | 2.9 | B | 3.5 | B | 1.4 | B | 0.480 | B | P |
| Cadmium | 4.0 | U | 4.0 | U | 4.0 | U | 4.0 | U | 0.800 | U | P |
| Calcium | 25.5 | B | 101.3 | B | 66.4 | B | 34.9 | B | 65.740 | B | P |
| Chromium | 5.0 | U | 5.0 | U | 5.0 | U | 5.0 | U | 1.000 | U | P |
| Cobalt | 8.2 | B | 5.0 | U | 6.2 | B | 10.3 | B | 1.240 | B | P |
| Copper | -6.3 | B | 2.0 | U | 2.1 | B | 2.0 | U | 4.160 | B | P |
| Iron | 9.0 | U | 9.0 | U | 9.0 | U | 9.0 | U | 5.220 | B | P |
| Lead | 1.0 | U | 1.0 | U | 1.0 | U | 1.0 | U | 0.220 | U | F |
| Magnesium | 30.0 | U | 30.0 | U | 30.0 | U | 30.0 | U | 16.980 | B | P |
| Manganese | 1.0 | U | -1.2 | B | -1.4 | B | -1.4 | B | -0.240 | B | P |
| Mercury | 0.2 | U | 0.2 | U | 0.2 | U | | | 0.100 | U | CV |
| Nickel | 19.0 | U | 19.0 | U | 19.0 | U | 19.0 | U | 3.800 | U | P |
| Potassium | 795.0 | U | 795.0 | U | 795.0 | U | 795.0 | U | 159.000 | U | P |
| Selenium | 2.0 | U | 2.0 | U | -2.3 | B | 2.0 | U | 0.440 | U | F |
| Silver | 4.9 | B | 8.6 | B | 3.7 | B | 8.6 | B | 1.720 | B | P |
| Sodium | 62.0 | U | 62.0 | U | 62.0 | U | 62.0 | U | 14.080 | B | P |
| Thallium | 2.0 | U | 2.0 | U | 2.0 | U | 2.0 | U | 0.440 | U | F |
| Vanadium | 4.0 | U | 4.0 | U | 4.0 | U | 4.0 | U | 0.800 | U | P |
| Zinc | 3.0 | U | 3.0 | U | 6.8 | B | 3.0 | U | 3.680 | B | P |
| Cyanide | 10.0 | U | 10.0 | U | 10.0 | U | | | 0.5 ~~2.000~~ DX ~~0.5~~ | U | C |

3
BLANKS



Lab Name :VEGAS ANALYTICAL LABS INC Contract: 68-W8-0081

Lab Code: VEGAS Case No.: 13622 SAS No.: SDG No.: MEHT20

Preparation Blank Matrix (soil/water): SOIL

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

| Analyte | Initial Calib. Blank (ug/L) | C | Continuing Calibration Blank (ug/L) 4 | C | 5 | C | 6 | C | Prepa-ration Blank | C | M |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Aluminum | | | 105.5 | B | | | | | | | P |
| Antimony | | | 19.0 | U | | | | | | | P |
| Arsenic | | | 3.0 | U | 3.0 | U | | | | | F |
| Barium | | | 10.0 | U | | | | | | | P |
| Beryllium | | | 3.2 | B | | | | | | | P |
| Cadmium | | | 4.0 | U | | | | | | | P |
| Calcium | | | 124.3 | B | | | | | | | P |
| Chromium | | | 5.0 | U | | | | | | | P |
| Cobalt | | | 5.0 | U | | | | | | | P |
| Copper | | | 2.0 | U | | | | | | | P |
| Iron | | | 9.0 | U | | | | | | | P |
| Lead | | | 1.4 | B | 1.1 | B | | | | | F |
| Magnesium | | | 30.0 | U | | | | | | | P |
| Manganese | | | -1.6 | B | | | | | | | P |
| Mercury | | | | | | | | | | | NR |
| Nickel | | | 19.0 | U | | | | | | | P |
| Potassium | | | 795.0 | U | | | | | | | P |
| Selenium | | | 2.0 | U | 2.0 | U | | | | | F |
| Silver | | | 8.6 | B | | | | | | | P |
| Sodium | | | 62.0 | U | | | | | | | P |
| Thallium | | | 2.0 | U | 2.0 | U | | | | | F |
| Vanadium | | | 4.0 | U | | | | | | | P |
| Zinc | | | 3.0 | U | | | | | | | P |
| Cyanide | | | | | | | | | | | NR |

U.S. EPA - CLP



5A
SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

MEHT20S

Lab Name: VEGAS ANALYTICAL LABS INC Contract: 68-W8-0081

Lab Code: VEGAS Case No.: 13622 SAS No.: SDG No.: MEHT20

Matrix (Soil/Water): SOIL Level (low/med): LOW

% Solids For Sample: 90.2

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

| Analyte | Control Limit %R | Spiked Sample Result (SSR) | C | Sample Result (SR) | C | Spike Added (SA) | %R | Q | M |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | | | | | | | | | NR |
| Antimony | 75-125 | 35.4550 | | 4.1303 | U | 108.69 | 32.6 | N | P |
| Arsenic | 75-125 | 18.2213 | | 12.4256 | | 8.78 | 66.0 | N | F |
| Barium | 75-125 | 506.6302 | | 46.8023 | | 434.76 | 105.8 | | P |
| Beryllium | 75-125 | 14.0646 | | 2.4782 | | 10.87 | 106.6 | | P |
| Cadmium | 75-125 | 11.9125 | | 1.6738 | | 10.87 | 94.2 | | P |
| Calcium | | | | | | | | | NR |
| Chromium | 75-125 | 70.2796 | | 19.9557 | | 43.48 | 115.7 | | P |
| Cobalt | 75-125 | 127.8423 | | 5.9780 | B | 108.69 | 112.1 | | P |
| Copper | 75-125 | 76.3445 | | 26.1728 | | 54.35 | 92.3 | | P |
| Iron | | | | | | | | | NR |
| Lead | 75-125 | 15.0600 | | 10.4498 | | 4.39 | 105.0 | | F |
| Magnesium | | | | | | | | | NR |
| Manganese | 75-125 | 207.7953 | | 75.6489 | | 108.69 | 121.6 | | P |
| Mercury | 75-125 | 0.6652 | | 0.1114 | | 0.55 | 99.9 | | CV |
| Nickel | 75-125 | 133.9072 | | 5.4128 | B | 108.69 | 118.2 | | P |
| Potassium | | | | | | | | | NR |
| Selenium | 75-125 | 2.2832 | | 0.4830 | U | 2.20 | 104.0 | | F |
| Silver | 75-125 | 11.6951 | | 2.1521 | B | 10.87 | 87.8 | | P |
| Sodium | | | | | | | | | NR |
| Thallium | 75-125 | 11.7670 | | 1.8002 | B | 10.98 | 90.8 | | F |
| Vanadium | 75-125 | 130.3639 | | 13.8255 | | 108.69 | 107.2 | | P |
| Zinc | 75-125 | 148.9066 | | 26.5858 | | 108.69 | 112.5 | | P |
| Cyanide | 75-125 | 4.5297 | | ~~2.2129~~ 0.5532 | U | 5.53 | 81.9 | | C |

Comments :

U.S. EPA - CLP



5B
POST DIGEST SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

MEHT20A

Lab Name: VEGAS ANALYTICAL LABS INC Contract: 68-W8-0081

Lab Code: VEGAS Case No.: 13622 SAS No.: SDG No.: MEHT20

Matrix (Soil/Water): SOIL Level (low/med): LOW

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 | | 123.60 | | 19.00 | U | 120.0 | 103.0 | | P |
| 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.

MEHT20D

Lab Name: VEGAS ANALYTICAL LABS INC Contract: 68-W8-0081

Lab Code: VEGAS Case No.: 13622 SAS No.: SDG No.: MEHT20

Matrix (Soil/Water): SOIL Level (low/med): LOW

% Solids for Sample: 90.2 % Solids for Duplicate: 90.2

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

| Analyte | Control Limit | Sample (S) | C | Duplicate (D) | C | RPD | Q | M |
|---|---|---|---|---|---|---|---|---|
| Aluminum | | 6263.2496 | | 6365.5245 | | 1.6 | | P |
| Antimony | | 4.1303 | U | 4.1711 | U | | | P |
| Arsenic | 2.2 | 12.4256 | | 9.5058 | | 26.6 | * | F |
| Barium | 43.5 | 46.8023 | | 49.7464 | | 6.1 | | P |
| Beryllium | 1.1 | 2.4782 | | 2.7003 | | 8.6 | | P |
| Cadmium | 1.1 | 1.6738 | | 1.4270 | | 15.9 | | P |
| Calcium | 1086.9 | 1158.9279 | | 1234.6820 | | 6.3 | | P |
| Chromium | | 19.9557 | | 21.5143 | | 7.5 | | P |
| Cobalt | | 5.9780 | B | 5.4005 | B | 10.1 | | P |
| Copper | 5.4 | 26.1728 | | 23.5121 | | 10.7 | | P |
| Iron | | 20048.3897 | | 21730.2151 | | 8.0 | | P |
| Lead | | 10.4498 | | 9.9449 | | 5.0 | | F |
| Magnesium | | 539.2374 | B | 763.9569 | B | 34.5 | | P |
| Manganese | | 75.6489 | | 78.7908 | | 4.1 | | P |
| Mercury | 0.1 | 0.1114 | | 0.1114 | | 0.0 | | CV |
| Nickel | | 5.4128 | B | 7.5959 | B | 33.6 | | P |
| Potassium | 1086.9 | 1105.7346 | | 1323.7251 | | 17.9 | | P |
| Selenium | | 0.4830 | U | 0.4830 | U | | | F |
| Silver | 2.2 | 2.1521 | B | 2.2832 | | 5.9 | | P |
| Sodium | | 237.5114 | B | 245.2416 | B | 3.2 | | P |
| Thallium | | 1.8002 | B | 1.5806 | B | 13.0 | | F |
| Vanadium | 10.9 | 13.8255 | | 19.0995 | | 32.0 | | P |
| Zinc | | 26.5858 | | 26.7173 | | 0.5 | | P |
| Cyanide | | 0.55 ~~2.2129~~ | U | 0.55 ~~2.2085~~ | U | | | C |

10
INSTRUMENT DETECTION LIMITS (QUARTERLY)



Lab Name: VEGAS ANALYTICAL LABS INC Contract: 68-W8-0081

Lab Code: VEGAS Case No.: 13622 SAS No.: SDG No.: MEHT20

ICP ID Number: VALI P1 Date: 01/19/90

Flame AA ID Number: VALI F2

Furnace AA ID Number: VALI F1

| Analyte | Wave-length (nm) | Back-ground | CRDL (ug/L) | IDL (ug/L) | M |
|---|---|---|---|---|---|
| Aluminum | 308.21 | | 200 | 13.0 | P |
| Antimony | 206.83 | | 60 | 19.0 | P |
| Arsenic | 193.70 | BS | 10 | 3.0 | F |
| Barium | 493.40 | | 200 | 10.0 | P |
| Beryllium | 313.04 | | 5 | 1.0 | P |
| Cadmium | 228.80 | | 5 | 4.0 | P |
| Calcium | 317.93 | | 5000 | 24.0 | P |
| Chromium | 267.72 | | 10 | 5.0 | P |
| Cobalt | 228.62 | | 50 | 5.0 | P |
| Copper | 324.75 | | 25 | 2.0 | P |
| Iron | 259.94 | | 100 | 9.0 | P |
| Lead | 220.36 | BS | 3 | 1.0 | F |
| Magnesium | 279.08 | | 5000 | 30.0 | P |
| Manganese | 257.61 | | 15 | 1.0 | P |
| Mercury | 253.70 | | .2 | 0.2 | CV |
| Nickel | 231.60 | | 40 | 19.0 | P |
| Potassium | 766.49 | | 5000 | 795.0 | P |
| Selenium | 196.03 | BS | 5 | 2.0 | F |
| Silver | 328.07 | | 10 | 3.0 | P |
| Sodium | 588.99 | | 5000 | 62.0 | P |
| Thallium | 190.86 | BS | 10 | 2.0 | F |
| Vanadium | 292.40 | | 50 | 4.0 | P |
| Zinc | 213.86 | | 20 | 3.0 | P |

Comments :

**ecology and environment, inc.**

111 WEST JACKSON BLVD., CHICAGO, ILLINOIS 60604, TEL. 312-663-9415

International Specialists in the Environment

CRL Receipt Date 3/28 FIT Receipt Date 4/6 Review Completed 4/9/90

TO: Greg

FROM: Mary Gzyra

SUBJECT: Phillips Plant - Ohio Power

PAN: OH0828SB (1 hour charged for review) Case # 13622

Sample Description

| Organics (VOA, ABN, Pest/PCB) | | Inorganics (Metals, Cyanide) | |
|---|---|---|---|
| # 8 | Low Soil | # | Low Soil |
| | Low Water | | Low Water |
| | Drinking Water | | Drinking Water |
| | Other | | Other |

Project Data Status _____ Completed!!

✓ Incomplete, awaiting Still Waiting.

FIT Data Review Findings:

***Check Data Sheets for Transcription Errors***

_____ Compounds were detected in sample(s); see enclosed sheet.

Book No. 9 Page No. _____ Date Sampled 2/20

0759:2

recycled paper

Table 4-__
RESULTS OF CHEMICAL ANALYSIS OF
FIT-COLLECTED _____ SAMPLES

4/9/90

| Physical State* | Waste Characteristics** | Category*** | SI Memo | Sample Collection Information and Parameters / Compound Detected (values in µg/L or µg/kg) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Date | | | | | | | | | | | | |
| | | | | Time | | | | | | | | | | | | |
| | | | | Well Depth (Feet) | | | | | | | | | | | | |
| | | | | CEL Log Number | | | | | | | | | | | | |
| | | | | CLP Organic Traffic Report Number | EJJ 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | | | | |
| | | | | CLP Inorganic Traffic Report Number | | | | | | | | | | | | |
| | | | | Temperature (°C) | | | | | | | | | | | | |
| | | | | Specific Conductivity (µmhos/cm) | | | | | | | | | | | | |
| | | | | pH | | | | | | | | | | | | |
| | | | | Volatile Organics | | | | | | | | | | | | |
| Gas | A,D,G,I | OCC | HH | chloromethane | | | | | | | | | | | | |
| Gas | A,D,G,I | OCC | HH | bromomethane | | | | | | | | | | | | |
| Gas | A,D,G,I | OCC | HH | vinyl chloride | | | | | | | | | | | | |
| Gas | A,D,G,I | OCC | HH | chloroethane | | | | | | | | | | | | |
| Liquid | A,D,H,I | SOL | HH,CLA | methylene chloride | 30 | 240 J | 110 J | 41 | 170 J | 19 | 23 | 22 | | | | |
| Liquid | E,H,I,A | SOL | K,CLA | acetone | | | | | | | | | | | | |
| Liquid | A,H,I | SOL | SH | carbon disulfide | 2 J | 5 J | 2 J | 3 J | 3 J | 3 J | | | | | | |
| Liquid | A,D,G,I | SOL | HH | 1,1-dichloroethene | | | | | | | | | | | | |
| Liquid | A,D,H,G | SOL | HH | 1,1-dichloroethane | | | | | | | | | | | | |
| Liquid | A,D,G | SOL | HH | 1,2-dichloroethene (total) | | | | | | | | | | | | |
| Liquid | A,D | SOL | HH | chloroform | | | | | | | | | | | | |
| Liquid | A,D,G | SOL | HH | 1,2-dichloroethane | | | | | | | | | | | | |
| Liquid | A,E,G | SOL | K,CLA | 2-butanone (MEK) | | | | | | | | | | | | |
| Liquid | A,D | SOL | HH | 1,1,1-trichloroethane | | | | | | | | | | | | |
| Liquid | A,D | SOL | HH | carbon tetrachloride | | | | | | | | | | | | |
| Liquid | A,D,G | SOL | HYD | vinyl acetate | | | | | | | | | | | | |
| Liquid | A,D | OCC | HH | bromodichloromethane | | | | | | | | | | | | |
| Liquid | A,D,G | SOL | HH | 1,2-dichloropropane | | | | | | | | | | | | |
| Liquid | A,D,G | SOL | HH | cis-1,3-dichloropropene | | | | | | | | | | | | |
| Liquid | A,D,G,B | SOL | HH | trichloroethene | | | | | 4 J | | | | | | | |
| Liquid | A,D | OCC | HH | dibromochloromethane | | | | | | | | | | | | |
| Liquid | A,D | SOL | HH | 1,1,2-trichloroethane | | | | | | | | | | | | |
| Liquid | A,G | SOL | A | benzene | | | | | | | | | | | | |
| Liquid | A,D,G | SOL | HH | trans-1,3-dichloropropene | | | | | | | | | | | | |
| Liquid | A,D | SOL | HH,CLA | bromoform | | | | | | | | | | | | |
| Liquid | A,E,G | SOL | K,CLA | 4-methyl-2-pentanone | | | | | | | | | | | | |
| Liquid | A,E,G | SOL | K | 2-hexanone | | | | | | | | | | | | |
| Liquid | A,D | SOL | HH | tetrachloroethene | | | | | 14 J | | | | | | | |
| Liquid | A,G,E | SOL | A,CLA | toluene | 26 J | 150 J | 79 J | 23 J | 140 J | | 5 J | 2 J | | | | |
| Liquid | A,D,E | SOL | HH | 1,1,2,2-tetrachloroethane | | | | | | | | | | | | |
| Liquid | A,D,G | SOL | HA | chlorobenzene | | | | | | | | | | | | |
| Liquid | A,G | SOL | A | ethylbenzene | | | | | | | | | | | | |
| Liquid | A,D,G | OCC | A | styrene | | | | | | | | | | | | |
| Liquid | A,G | SOL | A | xylenes (total) | | | | | | | | | | | | |

Table 4- (Cont.)

| Physical State* | Waste Characteristics** | Category*** | SI Memo | Sample Collection Information and Parameters | Sample Number 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Semivolatile Organics | | | | | | | | | | | | |
| S, thick l | A,B,E | OCC | P | phenol | | | | | | | | | | | | |
| Liquid | A,D,B | OCC | HH | bis(2-chloroethyl)ether | | | | | | | | | | | | |
| Liquid | A,D,B | OCC | P | 2-chlorophenol | | | | | | | | | | | | |
| Liquid | A,D,H | SOL | HA | 1,3-dichlorobenzene | | | | | | | | | | | | |
| Solid | A,D,H | OCC | HA | 1,4-dichlorobenzene | | | | | | | | | | | | |
| Liquid | A,D,H | SOL | A | benzyl alcohol | | | | | | | | | | | | |
| Liquid | A,D,H | OCC | HA | 1,2-dichlorobenzene | | | | | | | | | | | | |
| Liquid | A,B | OCC | P | 2-methylphenol | | | | | | | | | | | | |
| | A,D | OCC | HH | bis(2-chloroisopropyl)ether | | | | | | | | | | | | |
| Liquid | A,B | OCC | P | 4-methylphenol | | | | | | | | | | | | |
| | A | OCC | H-Amine | n-nitroso-di-n-dipropylamine | | | | | | | | | | | | |
| Solid | A,D | OCC | HH | hexachloroethane | | | | | | | | | | | | |
| Liquid | A,D | OCC | NA | nitrobenzene | | | | | | | | | | | | |
| Liquid | A,D | OCC | H | isophorone | | | | | | | | | | | | |
| Solid | A,D | OCC | P | 2-nitrophenol | | | | | | | | | | | | |
| Solid | A,B | OCC | P | 2,4-dimethylphenol | | | | | | | | | | | | |
| Solid | A | OCC | A | benzoic acid | | | | | | | | | | | | |
| | A,D | OCC | HH | bis(2-chloroethoxy)methane | | | | | | | | | | | | |
| Liquid | A,D | OCC | P | 2,4-dichlorophenol | | | | | | | | | | | | |
| Liquid | A,D | OCC | HA | 1,2,4-trichlorobenzene | | | | | | | | | | | | |
| Solid | A | OCC | PAH | naphthalene | 130 J | 1300 | 130 J | | | | | | | | | |
| Solid | A,D | OCC | HH | 4-chloroaniline | | | | | | | | | | | | |
| Liquid | A,D,B | OCC | HH | hexachlorobutadiene | | | | | | | | | | | | |
| Solid | A,D | OCC | P | 4-chloro-3-methylphenol | | | | | | | | | | | | |
| Liquid | A,D | OCC | PAH | 2-methylnaphthalene | 220 J | 1900 | 150 J | | | | | | | | | |
| Liquid | A,D,B | OCC | HH | hexachlorocyclopentadiene | | | | | | | | | | | | |
| Solid | A,D | OCC | P | 2,4,6-trichlorophenol | | | | | | | | | | | | |
| Solid | A,D | OCC | P | 2,4,5-trichlorophenol | | | | | | | | | | | | |
| Liquid | A,D | OCC | PAH | 2-chloronaphthalene | | | | | | | | | | | | |
| Solid | A,D | OCC | NH | 2-nitroaniline | | | | | | | | | | | | |
| Liquid | A,D | OCC | PH,CLA | dimethylphthalate | | | | | | | | | | | | |
| Solid | A,D | OCC | PAH | acenaphthylene | | | | | | | | | | | | |
| Solid | A,D | OCC | NA | 2,6-dinitrotoluene | | | | | | | | | | | | |
| Solid | A,D | OCC | NH | 3-nitroaniline | | | | | | | | | | | | |
| Solid | A,D | OCC | PAH | acenaphthene | | | | | | | | | | | | |
| Solid | A,D,G | OCC | P | 2,4-dinitrophenol | | | | | | | | | | | | |
| Solid | A,D | OCC | P | 4-nitrophenol | | | | | | | | | | | | |
| Solid | A,D | OCC | A | dibenzofuran | | 410 J | | | | | | | | | | |
| Solid | A,D | OCC | NA | 2,4-dinitrotoluene | | | | | | | | | | | | |
| Liquid | A,D | OCC | PH | diethylphthalate | | | | | | 230 J | | | | | | |
| | A,D | OCC | HH | 4-chlorophenyl-phenylether | | | | | | | | | | | | |
| Solid | A,D | OCC | PAH | fluorene | | | | | | | | | | | | |
| Solid | A,D,E | OCC | NH | 4-nitroaniline | | | | | | | | | | | | |
| Solid | A,D | OCC | P | 4,6-dinitro-2-methylphenol | | | | | | | | | | | | |
| Solid | A,D | OCC | NH | n-nitrosodiphenylamine | | | | | | | | | | | | |
| Liquid | A,D | OCC | HH | 4-bromophenyl-phenylether | | | | | | | | | | | | |
| Solid | A,D | OCC | HA | hexachlorobenzene | | | | | | | | | | | | |
| Solid | A,D | OCC | P | pentachlorophenol | | | | | | | | | | | | |
| Solid | A,D | OCC | PAH | phenanthrene | 130 J | 980 | 110 J | | | | 100 J | | | | | |

Table 4- (Cont.)

| Physical State* | Waste Characteristics** | Category*** | SI Memo | Sample Collection Information and Parameters | Sample Number 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Semivolatile Organics, Cont. | | | | | | | | | | | | |
| Solid | A,D | OCC | PAH | anthracene | | 130 J | | | | | | | | | | |
| Liquid | A,D | OCC | PH,CLA | di-n-butylphthalate | 97 J | 170 J | | 100 J | | 150 J | 130 J | 130 J | | | | |
| Solid | A,D | OCC | PAH | fluoranthene | | 610 J | | | | | | | | | | |
| Solid | A,D | OCC | PAH | pyrene | | 650 J | | | | | 120 J | | | | | |
| Liquid | A,D | OCC | PH,CLA | butylbenzylphthalate | | | | | | | | | | | | |
| | A,D | OCC | HA | 3,3'-dichlorobenzidine | | | | | | | | | | | | |
| Solid | A,D | OCC | PAH | benzo[a]anthracene | | 460 J | | | | | | | | | | |
| Solid | A,D | OCC | PAH | chrysene | | 530 J | | | | | | | | | | |
| Liquid | A,D | OCC | PH,CLA | bis(2-ethylhexyl)phthalate | 120 J | 270 J | 95 J | | | 290 J | 150 J | | | | | |
| Liquid | A,D | OCC | PH,CLA | di-n-octylphthalate | | | | | | | | | | | | |
| Solid | A,D | OCC | PAH | benzo[b]fluoranthene | | 400 J | | | | | | | | | | |
| Solid | A,D | OCC | PAH | benzo[k]fluoranthene | | 280 J | | | | | | | | | | |
| Solid | A,D,K,L | OCC | PAH | benzo[a]pyrene | | | | | | | | | | | | |
| Solid | A,D | OCC | PAH | indeno[1,2,3-cd]pyrene | | | | | | | | | | | | |
| Solid | A,D | OCC | PAH | dibenzo[a,h]anthracene | | | | | | | | | | | | |
| Solid | A,D | OCC | PAH | benzo[q,h,i]perylene | | | | | | | | | | | | |
| | | | | Pesticides/PCBs | | | | | | | | | | | | |
| Solid | A,D | PSD | PEST | alpha BHC | | | | | | | | | | | | |
| Solid | A,D | PSD | PEST | beta BHC | | | | | | | | | | | | |
| Solid | A,D | PSD | PEST | delta BHC | | | | | | | | | | | | |
| Solid | A,D | PSD | PEST | gamma BHC (Lindane) | | | | | | | | | | | | |
| Solid | A,D | PSD | PEST | Heptachlor | | | | | | | | | | | | |
| Solid | A,D | PSD | PEST | Aldrin | | | | | | | | | | | | |
| Solid | A,D | PSD | PEST | Heptachlor epoxide | | | | | | | | | | | | |
| Solid | A,D | PSD | PEST | Endosulfan I | | | | | | | | | | | | |
| Solid | A,D,E | PSD | PEST | Dieldrin | | | | | | | | | | | | |
| Solid | A,D | PSD | PEST | 4,4'-DDE | | | | | | | | | | | | |
| Solid | A,D | PSD | PEST | Endrin | | | | | | | | | | | | |
| Solid | A,D | PSD | PEST | Endosulfan II | | | | | | | | | | | | |
| Solid | A,D | PSD | PEST | 4,4'-DDD | | | | | | | | | | | | |
| Solid | A,D | PSD | PEST | Endosulfan sulfate | | | | | | | | | | | | |
| Solid | A,D | PSD | PEST | 4,4'-DDT | | | | | | | | | | | | |
| Solid | A,D | PSD | PEST | Methoxychlor (Mariate) | | | | | | | | | | | | |
| Solid | A,D | PSD | PEST | Endrin ketone | | | | | | | | | | | | |
| Solid | A,D | PSD | PEST | alpha Chlordane | | | | | | | | | | | | |
| Solid | A,D | PSD | PEST | gamma Chlordane | | | | | | | | | | | | |
| Solid | A,D | PSD | PEST | Toxaphene | | | | | | | | | | | | |
| Liquid | A,D | OCC | PCB | Aroclor 1016 | | | | | | | | | | | | |
| Liquid | A,D | OCC | PCB | Aroclor 1221 | | | | | | | | | | | | |
| Liquid | A,D | OCC | PCB | Aroclor 1232 | | | | | | | | | | | | |
| Liquid | A,D | OCC | PCB | Aroclor 1242 | | | | | | | | | | | | |
| Liquid | A,D | OCC | PCB | Aroclor 1248 | | | | | | | | | | | | |
| Liquid | A,D | OCC | PCB | Aroclor 1254 | | | | | | | | | | | | |
| Liquid | A,D | OCC | PCB | Aroclor 1260 | | | | | | | | | | | | |

Table 4- (Cont.)

| COMPOUND QUALIFIERS | DEFINITION | INTERPRETATION |
|---|---|---|
| U | Indicates compound was analyzed for but not detected. | Compound was not detected at or above the CRQL. |
| J | Indicates an estimated value. | Compound value may be semiquantitative. |
| UJ | Quantitation limit is estimated due to a quality control (QC) protocol. | Compound was not detected if value is at CRQL, e.g., 10U UJ. If a value is reported with a UJ above CRQL and it is <5x blank concentration (10x for common laboratory artifacts), the compound is detected but may be a laboratory artifact and not attributable to the sample. |
| C | This flag applies to pesticide results where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/µL in the final extract shall be confirmed by GC/MS. | Compound was confirmed by GC/MS and is quantitative. Use pesticide/PCB listed value. |
| B | This flag is used when the compound is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action. | Compound value may be semiquantitative if it is <5x the blank concentration (<10x the blank concentrations for common laboratory artifacts: phthalates, methylene chloride, acetone, toluene, 2-butanone). |
| E | This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis. This flag will <u>not</u> apply to pesticides/PCBs analyzed by GC/EC methods. | Compound value may be semiquantitative. There should be another analysis with a D qualifier, which is to be used. |
| D | This flag identifies all compounds identified in an analysis at a secondary dilution factor. | Alerts data user to a possible change in the CRQL. Data is quantitative. |
| A | This flag indicates that a TIC is a suspected aldol-condensation product. | Alerts data user of a laboratory artifact in the TICs only. |
| R | Results are unusable due to a major violation of QC protocol. | Compound value is not usable. |

| ANALYTE QUALIFIERS | | DEFINITION | INTERPRETATION |
|---|---|---|---|
| E | E | Estimated or not reported due to interference. See laboratory narrative. | Analyte or element was not detected, or value may be semiquantitative. |
| S | S | Analysis by Method of Standard Additions. | Value is quantitative. |
| R | N | Spike recoveries outside QC protocols, which indicates a possible matrix problem. Data may be biased high or low. See spike results and laboratory narrative. | Value may be quantitative or semi-quantitative. |
| * | * | Duplicate value outside QC protocols which indicates a possible matrix problem. | Value may be quantitative or semiquantitative. |
| + | + | Correlation coefficient for standard additions is less than 0.995. See review and laboratory narrative. | Data value may be biased. |
| [ ] | B | Value is real, but is above instrument DL and below CRDL. | Value may be quantitative or semi-quantitative. |
| UJ | | DL is estimated because of a QC protocol. DL is possibly above or below CRDL. | Compound or element was not detected. |
| J | | Value is above CRDL and is an estimated value because of a QC protocol. | Value may be semiquantitative. |
| U | U | Compound was analyzed for but not detected. | Compound was not detected at or above the CRDL. |
| | M | Duplicate injection precision not met. | Value may be semiquantitative. |
| | W | Post-digestion spike for furnace AA analysis is out of control limits (35-115%), while sample absorbance is <50% of spike absorbance. | Value may be semiquantitative. |
| | R | Results are unusable due to a major violation of QC protocols. | Analyte value is not usable. |

Source: Ecology and Environment, Inc. 1989.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

4/6/90

DATE: 4/6/90

SUBJECT: Review of Region V CLP Data
Received for Review on 28 March 1990

FROM: Curtis Ross, Director (5SCRL) Patrick J. Chuille for
Central Regional Laboratory

TO: Data User: FIT

We have reviewed the data for the following case(s).

SITE NAME: Philo Plant-Ohio Power SMO Case No. 13622

EPA Data Set No. SF7018 No. of Samples: 8 D.U./Activity Numbers TFA1TFA102

CRL No. 90FG09590-97

SMO Traffic No. EJJ62-69

CLP Laboratory: PEI Hrs. Required for Review: 8hrs +1=9

Following are our findings.

This review covers the results of 8 Soil Samples for RAS Organic Analysis.

Qualifiers And Calibration outliers Are noted on the following pages of the review narrative.

John Vosinko 4/3/90
Roy F. Weston/ESAT

( ) Data are acceptable for use.
(✓) Data are acceptable for use with qualifications noted above.
( ) Data are preliminary - pending verification by Contractor Laboratory.
( ) Data are unacceptable.

cc: Dr. Alfred Haeberer/Joan Fisk/Gary Ward, EPA Support Services
Ross K. Robeson, EMSL-Las Vegas
Dir. Tasks, CLP/Sample Management Office

Region V

# ORGANIC REGIONAL DATA ASSESSMENT

CASE NO. 13622

SITE Philo Plant - Ohio Power

LABORATORY PEI

NO. OF SAMPLES/ MATRIX 8/Soil

SDG # EJJ62

REVIEWER (IF NOT ESD) ESAT

SOW# 2/88

REVIEWER'S NAME John Vasinko

DPO: ACTION _____ FYI _____

COMPLETION DATE 4/3/90

## DATA ASSESSMENT SUMMARY

| | | VOA | BNA | PEST | OTHER |
|---|---|---|---|---|---|
| 1. | HOLDING TIMES | O | O | O | |
| 2. | GC/MS TUNE/INSTR. PERFORM. | O | O | — | |
| 3. | CALIBRATIONS | O | O | O | |
| 4. | BLANKS | O | O | O | |
| 5. | SURROGATES | O | O | O | |
| 6. | MATRIX SPIKE/DUP | O | O | O | |
| 7. | OTHER QC | — | — | — | |
| 8. | INTERNAL STANDARDS | X | O | O | |
| 9. | COMPOUND IDENTIFICATION | — | — | — | |
| 10. | SYSTEM PERFORMANCE | — | — | — | |
| 11. | OVERALL ASSESSMENT | O | O | O | |

O = Data had no problems/or qualified due to minor problems.
M = Data qualified due to major problems.
Z = Data unacceptable.
X = Problems, but do not affect data.

ACTION ITEMS:

AREAS OF CONCERN: The semi-volatile samples (EJJ62, EJJ63, EJJ64, EJJ65, EJJ66, EJJ67) All report large numbers of TIC compounds.

NOTABLE PERFORMANCE:

DATA QUALIFIERS

Contractor: PEI

Case 13622

Below is a summary of the out-of-control audits and the possible effect on the data for this case:

(1) Holding Times

All Volatile Samples exceeded the 10 day hold time, from the time of Sampling to the time of Analysis by the following days; EJJ62, 3days; EJJ63, 1day; EJJ63Re, 3days; EJJ64, 1day; EJJ64, 3days; EJJ65, 3days; EJJ66, 1day; EJJ66 Re, 3 days; EJJ67, 3days; EJJ68, 3days; EJJ69, 3days. Therefore, in the Above listed Samples the Aromatic compounds; (Benzene, Toluene, chlorobenzene, Ethylbenzene, Styrene, total Xylene) Should be flagged (J) AS estimated for positive results And non-detects should be flagged (UJ).

(2) GC/MS tuning

All (BFB) And (DFTPP) tuning criteria have been Achieved.

(3) Calibration

The Volatile and Semi-volatile Outliers for the initial And continuing calibrations Are noted on the calibration outlier forms which follows. Also No outliers were noted for the pesticide fraction

(4) Blanks

A) Volatile

The volatile blank (VB/K01) reports detectable Amounts of Acetone, 2-Butanone And 2-HexAnone. The Samples Associated with blank (EJJ63, EJJ64, EJJ66) All report detectable Amounts Acetone And 2-butanone

Reviewed by: John Vasinko

Phone: (312) 353-8309

Date: 4/3/90

DATA QUALIFIERS

Contractor: PEI

Case 13622

Below is a summary of the out-of-control audits and the possible effect on the data for this case:

(4) Blanks (cont.)
At concentrations less than 10 times the amount found in the blank. Therefore, in the samples (EJJ 63, EJJ 64, EJJ 66) the compounds Acetone and 2-butanone have been flagged (U) as undetected.

The Volatile blank (VBIKA5) reports detectable amounts Acetone. The samples associated with this blank: (EJJ 67, EJJ 68, EJJ 62, EJJ 65, EJJ 66 Re) All report detectable amounts of Acetone at concentrations less than 10 times the amount found in the blank. Therefore, in the samples listed above Acetone has been flagged (U) as undetected.

B) Semi-Volatile
The Semi-Volatile blank (SBIKY7) reports No detectable amounts of contamination

C) Pesticide
The Pesticide blank (PBIKY7) reports No detectable amounts of contamination.

(5) Surrogate Recovery
A) Volatile
The Volatile samples (EJJ 63, EJJ 64, EJJ 66, EJJ 63 Re, EJJ 64 Re, EJJ 66 Re) All report high recoveries for the surrogate Toluene-D8 and low recoveries for the surrogate BromoFluorobenzene. Therefore, in the samples listed above All positive results should be flagged (J) as estimated and non-detects should be flagged (UJ).

Reviewed by: John Vasinko
Phone: (312) 353-8309
Date: 4/2/90

DATA QUALIFIERS

Contractor: PEI

Case 13622

Below is a summary of the out-of-control audits and the possible effect on the data for this case:

(5) Surrogate Recovery (cont.)

B) Semi-Volatile

The Semi-volatile sample (EJJ65MSD) reports a high recovery for the base/Neutral Surrogate Terphenyl-d14 Since only one Surrogate is out-side of the Q.C. limits No Action is to be taken with the above listed Sample.

C) pesticide

The pesticide samples (EJJ68, EJJ69) report high recoveries for the Surrogate Dibutylchlorendate. These high recoveries are due, in my professional judgement, to co-elution with a unknown compound(s). Therefore, No Action is to be taken.

(6) Matrix Spike/Matrix Spike duplicate

A) Volatile (EJJ69)

The Volatile matrix spike and Matrix spike duplicate reports all recoveries and RPD values to be well within Q.C. limits.

B) Semi-volatile (EJJ65 MS/MSD)

The Semi-volatile matrix spike and Matrix Spike duplicate reports high recoveries for the compound 2,4-Dinitrotoluene. The above listed out-of-control conditions are, in my professional judgement, sample specific and should have no effect on the unspiked samples. Therefore, No Action is to be taken with the unspiked samples with the exception of sample (EJJ65). In sample (EJJ65) the compound 2,4-Dinitrotoluene should be flagged (J) as estimated if positive and (UJ) if not detected.

Reviewed by: John Vasinko

Phone: (312) 353-8309

Date: 4/3/90

DATA QUALIFIERS

Contractor: PEI

Case 13622

Below is a summary of the out-of-control audits and the possible effect on the data for this case:

(6) Matrix Spike/Matrix Spike duplicate

c) Pesticide (EJJ65 MS/MSD)

The Pesticide matrix spike reports high recoveries for the compounds gamma-BHC, Dieldrin, Endrin and 4,4'-DDT. The matrix spike duplicate reports high recoveries for the compounds gamma-BHC, Dieldrin and 4,4'-DDT. The above listed out-of-control conditions are, in my professional judgement, sample specific and should have no effect on the unspiked samples. Therefore, no action is to be taken with the unspiked samples with the exception of sample (EJJ65). In sample (EJJ65) the compounds gamma-BHC, Dieldrin, Endrin, and 4,4'-DDT should be flagged (J) as estimated for positive results and (UJ) for non-detects.

(7) Field Duplicate

No field duplicates or field blanks were supplied with this dataset.

(8) Internal Standard Performance

A) Volatile

The volatile samples (EJJ63, EJJ66; EJJ63RE, EJJ64RE, EJJ66RE) report all internal standard area counts to be outside of the Q.C. limits. Therefore, in the samples listed above, all positive results should be flagged (J) as estimated and non-detects should be flagged (UJ).

The volatile sample (EJJ64RE) reports low area counts for the internal standards 1,4-Difluorobenzene, and Chlorobenzene-D5.

Reviewed by: John Vasinko

Phone: (312) 353-8309

Date: 4/3/90

DATA QUALIFIERS

Contractor: PEI

Case 13622

Below is a summary of the out-of-control audits and the possible effect on the data for this case:

(8) Internal Standard performance (cont.)
Therefore, in the Sample (EJJ64 RE) for compounds quantitated by the internal standards 1,4-Difluorobenzene And chloro-benzene-D5 (see Attached list) should be flagged (J) AS estimated for positive results And (UJ) for non-detects.

The volatile Sample (EJJ64) reports low Area counts for the internal standard chlorobenzene-d5. Therefore, in the Sample (EJJ64) for compounds quantitated by the internal standard chlorobenzene-d5 (see Attached list) should be flagged (J) AS estimated for positive results And (UJ) for non-detects.

B) Semi-volatile
All Semi-volatile Samples report All internal standard AreAS to be well within Q.C. limits.

(9) Compound Quantitation And reported detection limits
The Analytical results for this case have been calculated correctly based on the Appropriate internal standard, quantitation ion And relative responce factor. Also, the CRQL's have been Adjusted to reflect the Sample size, dilution factor And percent moisture of the Sample.

(10) Additional Case Specific Problems
The Semi-volatile Samples (EJJ62, EJJ63, EJJ64, EJJ65, EJJ66, EJJ67) All report large numbers of Tic compounds.

Reviewed by: John Vasinko
Phone: (312) 353-8309
Date: 4/3/90

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V
CALIBRATION OUTLIERS
VOLATILE HSL COMPOUNDS

CASE/SAS # 13622 CONTRACTOR PET

| Instrument # Y | Init. Cal. | | | Cont. Cal. | | | Cont. Cal. | | | Cont. Cal. | | | Cont. Cal. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DATE/TIME: | 3/5/90 9:09 | | | | | | | | | | | | | | |
| | RF | %RSD | * | RF | %D | * | RF | %D | * | RF | %D | * | RF | %D | * |
| Chloromethane | | | | | | | | | | | | | | | |
| Bromomethane | | | | | | | | | | | | | | | |
| Vinyl Chloride | | | | | | | | | | | | | | | |
| Chloroethane | | | | | | | | | | | | | | | |
| Methylene Chloride | | | | | | | | | | | | | | | |
| Acetone | 1.387 | 30.9 | J | | | | | | | | | | | | |
| Carbon Disulfide | | | | | | | | | | | | | | | |
| 1,1-Dichloroethane | | | | | | | | | | | | | | | |
| 1,1-Dichloroethene | | | | | | | | | | | | | | | |
| Trans-1,2-Dichloroethene | | | | | | | | | | | | | | | |
| Chloroform | | | | | | | | | | | | | | | |
| 2-Butanone | | | | | | | | | | | | | | | |
| 1,2-Dichloroethane | | | | | | | | | | | | | | | |
| 1,1,1-Trichloroethane | | | | | | | | | | | | | | | |
| Carbon Tetrachloride | | | | | | | | | | | | | | | |
| Vinyl Acetate | | | | | | | | | | | | | | | |
| Bromodichloromethane | | | | | | | | | | | | | | | |
| 1,2-Dichloropropane | | | | | | | | | | | | | | | |
| Trans-1,3-Dichloropropene | | | | | | | | | | | | | | | |
| Trichloroethene | | | | | | | | | | | | | | | |
| Dibromochloromethane | | | | | | | | | | | | | | | |
| 1,1,2-Trichloroethane | | | | | | | | | | | | | | | |
| Benzene | | | | | | | | | | | | | | | |
| cis-1,3-Dichloropropene | | | | | | | | | | | | | | | |
| 2-Chloroethylvinylether | | | | | | | | | | | | | | | |
| Bromoform | | | | | | | | | | | | | | | |
| 4-Methyl-2-Pentanone | | | | | | | | | | | | | | | |
| 2-Hexanone | | | | | | | | | | | | | | | |
| Tetrachloroethene | | | | | | | | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | | | | | | | | | | | | | | | |
| Toluene | | | | | | | | | | | | | | | |
| Chlorobenzene | | | | | | | | | | | | | | | |
| Ethylbenzene | | | | | | | | | | | | | | | |
| Styrene | | | | | | | | | | | | | | | |
| m-Xylene | | | | | | | | | | | | | | | |
| o/p-Xylene | | | | | | | | | | | | | | | |

AFFECTED SAMPLES:

| |
|---|
| VBKA5 |
| EJJ67 |
| EJJ68 |
| EJJ69 |
| EJJ69 MS/MSD |
| EJJ62 |
| EJJ63 RE |
| EJJ64 RE |
| EJJ65 |
| EJJ66 RE |

Reviewer's Initials/Date: J.V. 4/3/90

* These flags should be applied to the analytes on the sample data sheets.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V
CALIBRATION OUTLIERS
VOLATILE HSL COMPOUNDS

CASE/SAS # 13622 CONTRACTOR PEI

| Instrument # H | Init. Cal. | | | Cont. Cal. | | | Cont. Cal. | | | Cont. Cal. | | | Cont. Cal. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DATE/TIME: | 3/3/90 1204 | | | | | | | | | | | | | | |
| | RF | %RSD | * | RF | %D | * | RF | %D | * | RF | %D | * | RF | %D | * |
| Chloromethane | | | | | | | | | | | | | | | |
| Bromomethane | | | | | | | | | | | | | | | |
| Vinyl Chloride | | | | | | | | | | | | | | | |
| Chloroethane | | | | | | | | | | | | | | | |
| Methylene Chloride | | | | | | | | | | | | | | | |
| Acetone | | | | | | | | | | | | | | | |
| Carbon Disulfide | | | | | | | | | | | | | | | |
| 1,1-Dichloroethane | | | | | | | | | | | | | | | |
| 1,1-Dichloroethene | | | | | | | | | | | | | | | |
| Trans-1,2-Dichloroethene | | | | | | | | | | | | | | | |
| Chloroform | | | | | | | | | | | | | | | |
| 2-Butanone | | | | | | | | | | | | | | | |
| 1,2-Dichloroethane | | | | | | | | | | | | | | | |
| 1,1,1-Trichloroethane | | | | | | | | | | | | | | | |
| Carbon Tetrachloride | | | | | | | | | | | | | | | |
| Vinyl Acetate | | | | | | | | | | | | | | | |
| Bromodichloromethane | | | | | | | | | | | | | | | |
| 1,2-Dichloropropane | | | | | | | | | | | | | | | |
| Trans-1,3-Dichloropropene | | | | | | | | | | | | | | | |
| Trichloroethene | | | | | | | | | | | | | | | |
| Dibromochloromethane | | | | | | | | | | | | | | | |
| 1,1,2-Trichloroethane | | | | | | | | | | | | | | | |
| Benzene | | | | | | | | | | | | | | | |
| cis-1,3-Dichloropropene | | | | | | | | | | | | | | | |
| 2-Chloroethylvinylether | | | | | | | | | | | | | | | |
| Bromoform | | | | | | | | | | | | | | | |
| 4-Methyl-2-Pentanone | | | | | | | | | | | | | | | |
| 2-Hexanone | | | | | | | | | | | | | | | |
| Tetrachloroethene | | | | | | | | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | | | | | | | | | | | | | | | |
| Toluene | | | | | | | | | | | | | | | |
| Chlorobenzene | | | | | | | | | | | | | | | |
| Ethylbenzene | | | | | | | | | | | | | | | |
| Styrene | | | | | | | | | | | | | | | |
| m-Xylene | | | | | | | | | | | | | | | |
| o/p-Xylene | | | | | | | | | | | | | | | |

AFFECTED SAMPLES:

| |
|---|
| V81K01 |
| EJJ63 |
| EJJ64 |
| EJJ66 |

Reviewer's Initials/Date: JV, 4/3/90

* These flags should be applied to the analytes on the sample data sheets.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V
CALIBRATION OUTLIERS
SEMIVOLATILE HSL COMPOUNDS
(Page 1)

CASE/SAS # 13622 CONTRACTOR PEI

| Instrument # N | Init. Cal. | | | Cont. Cal. | | | Cont. Cal. | | | Cont. Cal. | | | Cont. Cal. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DATE/TIME: | 3/9/90 1026 | | | 3/10/90 7:48 | | | 3/12/90 946 | | | 3/14/90 8:33 | | | | | |
| | RF | %RSD | * | RF | %D | * | RF | %D | * | RF | %D | * | RF | %D | * |
| Phenol | | | | | | | | | | | | | | | |
| bis(-2-Chloroethyl)Ether | | | | | | | | | | | | | | | |
| 2-Chlorophenol | | | | | | | | | | | | | | | |
| 1,3-Dichlorobenzene | | | | | | | | | | | | | | | |
| 1,4-Dichlorobenzene | | | | | | | | | | | | | | | |
| Benzyl Alcohol | | | | | | | | | | | | | | | |
| 1,2-Dichlorobenzene | | | | | | | | | | | | | | | |
| 2-Methylphenol | | | | | | | | | | | | | | | |
| bis(2-chloroisopropyl)Ether | | | | | | | | | | | | | | | |
| 4-Methylphenol | | | | | | | | | | | | | | | |
| N-Nitroso-Di-n-Propylamine | | | | | | | | | | | | | | | |
| Hexachloroethane | | | | | | | | | | | | | | | |
| Nitrobenzene | | | | | | | | | | | | | | | |
| Isophorone | | | | | | | | | | | | | | | |
| 2-Nitrophenol | | | | | | | | | | | | | | | |
| 2,4-Dimethylphenol | | | | | | | | | | | | | | | |
| Benzoic Acid | | | | | | | | | | | | | | | |
| bis(2-Chloroethoxy)Methane | | | | | | | | | | | | | | | |
| 2,4-Dichlorophenol | | | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | | | | | | | | | | | | | | | |
| Naphthalene | | | | | | | | | | | | | | | |
| 4-Chloroaniline | | | | | | | | | | | | | | | |
| Hexachlorobutadiene | | | | | | | | | | | | | | | |
| 4-Chloro-3-Methylphenol | | | | | | | | | | | | | | | |
| 2-Methylnaphthalene | | | | | | | | | | | | | | | |
| Hexachlorocyclopentadiene | | | | | | | | | | | | | | | |
| 2,4,6-Trichlorophenol | | | | | | | | | | | | | | | |
| 2,4,5-Trichlorophenol | | | | | | | | | | | | | | | |
| 2-Chloronaphthalene | | | | | | | | | | | | | | | |
| 2-Nitroaniline | | | | | | | | | | | | | | | |
| Dimethyl Phthalate | | | | | | | | | | | | | | | |
| Acenaphthylene | | | | | | | | | | | | | | | |
| 3-Nitroaniline | | | | | | | | | | | | | | | |
| Acenaphthene | | | | | | | | | | | | | | | |
| 2,4-Dinitrophenol | | | | | | | | | | | | | | | |
| 4-Nitrophenol | 196 | | | 229 | 30.3 | J | | | | 244 | 39.1 | J | | | |
| Dibenzofuran | | | | | | | | | | | | | | | |

AFFECTED SAMPLES:

| | | | |
|---|---|---|---|
| SAIK47 | EJJ60 | EJJ67 | EJJ63 |
| EJJ62 | EJJ65MS | | |
| EJJ64 | EJJ65MSD | | |
| EJJ66 | EJJ68 | | |
| | EJJ69 | | |

Reviewer Initials/Date: J.V. 4/3/90

* These flags should be applied to the analytes on the sample data sheets.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V
CALIBRATION OUTLIERS
SEMIVOLATILE HSL COMPOUNDS
Page 2

CASE/SAS # 13622 CONTRACTOR PEI

| Instrument # N | Init. Cal. | | | Cont. Cal. | | | Cont. Cal. | | | Cont. Cal. | | | Cont. Cal. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DATE/TIME: | 3/9/90 1026 | | | 3/12/90 1148 | | | 3/13/90 946 | | | 3/14/90 8:33 | | | | | |
| | RF | %RSD | * | RF | %D | * | RF | %D | * | RF | %D | * | RF | %D | * |
| 2,4-Dinitrotoluene | | | | | | | | | | | | | | | |
| 2,6-Dinitrotoluene | | | | | | | | | | | | | | | |
| Diethylphthalate | | | | | | | | | | | | | | | |
| 4-Chlorophenyl-phenylether | | | | | | | | | | | | | | | |
| Fluorene | | | | | | | | | | | | | | | |
| 4-Nitroaniline | | | | | | | | | | | | | | | |
| 4,6-Dinitro-2-Methylphenol | | | | | | | | | | | | | | | |
| N-Nitrosodiphenylamine | | | | | | | | | | | | | | | |
| 4-Bromophenyl-phenylether | | | | | | | | | | | | | | | |
| Hexachlorobenzene | | | | | | | | | | | | | | | |
| Pentachlorophenol | | | | | | | | | | | | | | | |
| Phenanthrene | | | | | | | | | | | | | | | |
| Anthracene | | | | | | | | | | | | | | | |
| Di-n-Butylphthalate | | | | | | | | | | | | | | | |
| Fluoranthene | | | | | | | | | | | | | | | |
| Pyrene | | | | | | | | | | | | | | | |
| Butylbenzylphthalate | | | | | | | | | | | | | | | |
| Benzo(a)Anthracene | | | | | | | | | | | | | | | |
| bis(2-Ethylhexyl)Phthalate | | | | | | | | | | | | | | | |
| Chrysene | | | | | | | | | | | | | | | |
| Di-n-Octyl Phthalate | | | | | | | | | | | | | | | |
| Benzo(b)Fluoranthene | | | | | | | | | | | | | | | |
| Benzo(k)Fluoranthene | | | | | | | | | | | | | | | |
| Benzo(a)Pyrene | | | | | | | | | | | | | | | |
| Indeno(1,2,3-cd)Pyrene | | | | | | | | | | | | | | | |
| Dibenz(a,h)Anthracene | | | | | | | | | | | | | | | |
| Benzo(g,h,i)Perylene | | | | | | | | | | | | | | | |

SEE PAGE 1 FOR AFFECTED SAMPLES.

* These flags should be applied to the analytes on the sample data sheets.

Reviewer's Initials/Date: J. Vasinko 4/3/90

8/87

# DATA REPORTING QUALIFIERS

For reporting results to EPA, the following result qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

VALUE - If the result is a value greater than or equal to the detection limit, report the value.

U - Indicates compound was analyzed but not detected. The sample quantitation limit must be corrected for dilution and for percent moisture. For example, 10 U for phenol in water if the sample final volume is the protocol-specified final volume. If a 1 to 10 dilution of extract is necessary, the reported limit is 100 U. For a soil sample, the value must also be adjusted for percent moisture. For example, if the sample had 24% moisture and a 1 to 10 dilution factor, the sample quantitation limit for phenol (330 U) would be corrected to:

$$\frac{(330\ U)}{D} \times df \qquad \text{where } D = \frac{100 - \%\ \text{moisture}}{100}$$

and df = dilution factor

$$\text{at 24\% moisture, } D = \frac{100-24}{100} = 0.76$$

$$\frac{(330\ U)}{.76} \times 10 = 4300\ U$$ rounded to the appropriate number of significant figures

For soil sample subjected to GPC clean-up procedures, the CRQL is also multiplied by 2, to account for the fact that only half of the extract is recovered.

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 compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero. For example, if the sample quantitation limit is 10 ug/L, but a concentration is 3 ug/L is calculated, report it as 3J. The sample quantitation limit must be adjusted for both dilution and percent moisture as discussed for the U flag, so that if a sample with 24% moisture and a 1 to 10 dilution factor has a calculated concentration of 300 ug/L and a sample quantitation limit of 430 ug/kg, report the concentration as 300J on Form I.

C - This flag applies to pesticide results where the identification has been confirmed by GC/MS. Single component pesticides $\geq$10 ng/ul in the final extract shall be confirmed by GC/MS.

B - This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action. This flag must be used for a TIC as well as for a positively identified TCL compound.

E - This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis. This flag will not apply to pesticides/PCBs analyzed by GC/EC methods. If one or more compounds have a response greater than full scale, the sample or extract must be diluted and re-analyzed according to the specifications. All such compounds with a response greater than full scale should have the concentration flagged with an "E" on the Form I for the original analysis. If the dilution of the extract causes any compounds identified in the first analysis to be below the calibration range in the second analysis, then the results of both analyses shall be reported on separate Forms I. The Form I for the diluted sample shall have the "DL" suffix appended to the sample number.

D - This flag identifies all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is re-analyzed at a higher dilution factor, as in the "E" flag above, the "DL" suffix is appended to the sample number on the Form I for the diluted sample and all concentration values reported on that Form I are flagged with the "D" flag.

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

X - Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the Sample Data Summary Package and the Case Narrative. If more than one is required, use "Y" and "Z", as needed. If more than five qualifiers are required for a sample result, use the "X" flag to combine several flags, as needed. For instance, the "X" flag might combine the "A", "B", and "D" flags for some sample.

## *TABLE 4

### VOLATILE INTERNAL STANDARDS WITH CORRESPONING TCL ANALYTES ASSIGNED FOR QUANTITATION

| Bromochloromethane | 1,4-Difluorobenzene | Chlorobenzene-$d_5$ |
|---|---|---|
| Chloromethane | 2- Butanone | 2-Hexanone |
| Bromomethane | 1,1,1-Trichloroethane | 4-Methyl-2-Pentanone |
| *Vinyl Chloride | Carbon Tetrachloride | Tetrachloroethene |
| Chloroethane | Vinyl Acetate | 1,1,2,2-Tetrachloroethane |
| Methylene Chloride | Bromodichloromethane | *Toluene |
| Acetone | *1,2-Dichloropropane | Chlorobenzene |
| Carbon Disulfide | trans-1,3-Dichloropropane | *Ethylbenzene |
| *1,1-Dichloroethene | Trichloroethene | Styrene |
| 1,1-Dichloroethane | Dibromochloromethane | Xylene (total) |
| 1,2-Dichloroethene (total) | 1,1,2-Trichloroethane | Bromofluorobenzene (surr) |
| *Chloroform | Benzene | Toluene-$d_8$ (surr) |
| 1,2-Dichloroethane | cis-1,3-Dichloropropene | |
| 1,2-Dichloroethane-$d_4$ (surr) | Bromoform | |

(surr) = surrogate compound
*Calibration check compounds

### SEMIVOLATILE INTERNAL STANDARDS WITH CORRESPONDING TCL ANALYTES ASSIGNED FOR QUANTITATION

| 1,4-Dichlorobenzene-$d_4$ | Naphthalene-$d_8$ | Acenaphthene-$d_{10}$ | Phenanthrene-$d_{10}$ | Chrysene-$d_{12}$ |
|---|---|---|---|---|
| Phenol | Nitrobenzene | Hexachlorocyclopentadiene | 4,6-Dinitro-2-methylphenol | Pyrene |
| bis(2-Chloroethyl) ether | Isophorone | 2,4,6-Trichlorophenol | N-nitrosodiphenylamine | Butylbenzyl Phthalate |
| 2-Chlorophenol | 2-Nitrophenol | 2,4,5-Trichlorophenol | 1,2-Diphenylhydrazine | 3,3'-Dichlorobenzidine |
| 1,3-Dichlorobenzene | 2,4-Dimethylphenol | 2-Chloronaphthalene | 4-Bromophenyl Phenyl Ether | Benzo(a)anthracene |
| 1,4-Dichlorobenzene | Benzoic acid | 2-Nitroaniline | Hexachlorobenzene | bis(2-ethylhexyl Phthalate |
| Benzyl Alcohol | bis(2-Chloroethoxy)methane | Dimethyl Phthalate | Pentachlorophenol | Chrysene |
| 1,2-Dichlorobenzene | 2,4-Dichlorophenol | Acenaphthylene | Phenanthrene | Terphenyl-$d_{14}$ (surr) |
| 2-Methylphenol | 1,2,4-Trichlorobenzene | 3-Nitroaniline | Anthracene | |
| bis(2-Chloroisopropyl)ether | Naphthalene | Acenaphthene | Di-n-butyl Phthalate | |
| 4-Methylphenol | 4-Chloroaniline | 2,4-Dinitrophenol | Fluoranthene | |
| N-nitroso-Di-n-propylamine | Hexachlorobutadiene | 4-Nitrophenol | | |
| Hexachloroethane | 4-Chloro-3-methylphenol | Dibenzofuran | | |
| 2-Fluorophenol (surr) | 2-Methylnaphthalene | 2,4-Dinitrotoluene | | |
| Phenol-$d_6$ (surr) | Nitrobenzene-$d_5$ (surr) | 2,6-Dinitrotoluene | | |
| | | Diethyl Phthalate | | |
| | | 4-Chlorophenyl-phenyl ether | | |
| | | Fluorene | | |
| | | 4-Nitroaniline | | |
| | | 2-Fluorobiphenyl (surr) | | |
| | | 2,4,6-Tribromo Phenol (surr) | | |

| Perylene-$d_{12}$ |
|---|
| Di-n-octyl Phthalate |
| Benzo(b)fluoranthene |
| Benzo(k)fluoranthene |
| Benzo(a)pyrene |
| Indeno(1,2,3-cd) pyrene |
| Dibenz(a,h) anthracene |
| Benzo(g,h,i) |

rr = surrogate compound

Superfund 7018 CENTRAL REGIONAL LABORATORY SAMPLE DATA REPORT

MAR 1 1990

# ORGANICS/INORGANICS

THIS FORM IS TO BE USED FOR SAMPLES SENT TO CONTRACT ONLY

Log In date 3-2-90
due date 5/12/90

SE NUMBER/SAS No. 13622 SITE NAME Philo Plant - Ohio River LABORATORY PET / Negas DATE SHIPPED 2/20/90

PERFUND DU NUMBER TFA102 EPA RPM or OSC (S.M.S.) (CES) CERCUS NUMBER 0HD980423347 PAGE 1 OF 1

TIVITY NUMBER ZZ

| CRL LOG NUMBER | ORGANIC TRAFFIC REPORT NUMBER or SAS Packing List No. | INORGANIC TRAFFIC REPORT NUMBER or SAS Packing List No. | WATER OR LIQUIDS: ACID-BASE NEUTRAL CPDS ORGANIC SCAN UG/L TOX17374 | VOLATILE ORGANIC ANALYSIS ORGANIC SCAN UG/L TOX17344 | WATER POLYCHLORINATED BIPHENYLS UG/L PCB 17144 | WATER CHLORINATED PESTICIDES UG/L PEST17134 | TOTAL METALS IN WATER UG/L MET111 | WATER CYANIDE UG/L MIN7010 | NITRATE/NITRITE UG/L MIN7294 | AMMONIA UG/L MIN7254 | RESIDUE, FILTERABLE TDS MG/L MIN7020 | RESIDUE, NONFILT TSS MG/L MIN7272 | SEDIMENTS or SOILS: ACID-BASE NEUTRAL CPDS ORGANIC SCAN UG/KG TOX17372 | VOLATILE ORGANIC ANALYSIS ORGANIC SCAN UG/KG TOX17422 | SEDIMENTS POLYCHLORINATED BIPHENYLS UG/KG PCB17427 | SEDIMENT CHLORINATED PESTICIDES UG/KG 171222 | TOTAL METALS UG/KG MET413 | CYANIDE UG/KG MIN4010 | OF TOXICITY METALS UG/KG | AMMONIA UG/KG MIN4703 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2FG09590 | EJJ 62 | MFHT 20 | | | | | | | | | | | X | X | X | X | X | X | | |
| 91 | 63 | 21 | | | | | | | | | | | | | | | | | | |
| 92 | 64 | 22 | | | | | | | | | | | | | | | | | | |
| 93 | 65 | 23 | | | | | | | | | | | | | | | | | | |
| 94 | 66 | 24 | | | | | | | | | | | | | | | | | | |
| 95 | 67 | 25 | | | | | | | | | | | | | | | | | | |
| 96 | 68 | 26 | | | | | | | | | | | | | | | | | | |
| 97 | 69 | 27 | | | | | | | | | | | | | | | | | | |

United States Environmental Protection Agency
Contract Laboratory Program Sample Management Office
PO Box 818 Alexandria, VA 22313
703-557-2490 FTS 557-2490

# Organic Traffic Report
*(For CLP Use Only)*

Case Number: 12122
SAS No. (if applicable): N/A

1. Sample Description *(Enter in Column A)*
1. Surface Water
2. Ground Water
3. Leachate
4. Rinsate
5. Soil/Sediment
6. Oil (SAS)
7. Waste (SAS)
8. Other (SAS) *(Specify)* N/A

2. Region Number: V
Sampling Co.: FJT
Sampler (Name): Henry F. Adamiak
3. Ship To: [illegible] Associates Inc. [illegible] Road [illegible] Cincinnati, Ohio 45246 Attn: Larry Rotella

4. Date Shipped: [illegible]/90
Airbill Number: 6454148460
Carrier: F

Triple volume required for matrix spike/duplicate aqueous sample.
Ship medium and high concentration samples in paint cans.
See reverse for additional instructions.

5. Date Received: 2-21-90
Received by: Dawn Webber
Laboratory Contract Number: 68-D9-0037
Unit Price: 825.00
6. Transfer to:
Date Received:
Received by:
Contract Number:
Price:

| CLP Sample Number (From labels) | (A) Sample Description (From box 1) | (B) Concentration L=low M=med H=high | (C) RAS Analysis VOA | BNA | Pest/PCB | (D) Special Handling | (E) Station Location | (F) Date/Time of Sample Collection | (G) Corresponding CLP Inorganic Sample Number | (H) Sample Condition on Receipt | (I) High Conc. Phases (Check below) Solid | Water—MIS Liq. | Non Water—MIS Liq. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JJ 62 | 5 | L | ✓ | ✓ | ✓ | | S1 | [illegible]/1115 | MEHT 20 | All samples were | | | |
| JJ 63 | 5 | L | ✓ | ✓ | ✓ | | S2 | [illegible]/1130 | MEHT 21 | received in good | | | |
| JJ 64 | 5 | L | ✓ | ✓ | ✓ | | S3 | [illegible]/1130 | MEHT 22 | Tags all matched | | | |
| JJ 65 | 5 | L | ✓ | ✓ | ✓ | | S4 | [illegible]/1500 | MEHT 23 | properly | | | |
| JJ 66 | 5 | L | ✓ | ✓ | ✓ | | S5 | [illegible]/1550 | MEHT 24 | Tags were intact and | | | |
| JJ 67 | 5 | L | ✓ | ✓ | ✓ | | S6 | [illegible]/1600 | MEHT 25 | attached to cooler. | | | |
| JJ 68 | 5 | L | ✓ | ✓ | ✓ | | S7 | [illegible]/1615 | MEHT 26 | 2-21-90 | | | |
| JJ 69 | 5 | L | ✓ | ✓ | ✓ | Last Sample in this | S8 | [illegible]/1630 | MEHT 27 | Dawn Webber | | | |
| ~~JJ 70~~ | ~~5~~ | ~~L~~ | ~~✓~~ | ~~✓~~ | ~~✓~~ | | ~~S9~~ | | ~~MEHT 28~~ | | | | |
| ~~JJ 71~~ | ~~5~~ | ~~L~~ | ~~✓~~ | ~~✓~~ | ~~✓~~ | | ~~S10~~ | | ~~MEHT 29~~ | | | | |
| | Shipment (15) | | | | | not complete. | | | | | | | |

EPA Form 9110-2 (9-88) Replaces EPA Form 2075-7, which may be used. Blue - SMO Copy Pink - Region Copy White - Lab Copy for Return to SMO Yellow - Lab Copy

00005

March 27, 1990

1
No page 2

**PEI ASSOCIATES, INC.**
11499 CHESTER ROAD
CINCINNATI, OHIO 45246
(513) 782-4700
TELECOPIER (513) 782-4807

Mr. Emmanuel Nocon
U.S. EPA Contract Lab Program
Sample Management Office (SMO)
209 Madison St., Suite 200
Alexandria, VA 22314

Re: Contract No. 68-D9-0037
PN 3791
Case Narrative for Case ~~13662~~ 13622, SDG EJJ62
SOW: 2/88

CHC 3/27

US EPA ... LAB.

Dear Emmanuel:

Enclosed is the data package for the above SDG, whose eight soil samples were received February 21, 1990. The SMO sample numbers are EJJ62-69. The samples were analyzed for the full TCL.

The volatile fractions of samples EJJ63, EJJ64, and EJJ66 had high recoveries of surrogate 1, low recoveries of surrogate 2, and low area counts for some or all of the internal standards. They were reanalyzed with virtually identical results, proving the matrix effects. Two analyses are payable for each of these samples.

A few pesticides were outside the retention time windows in the confirmation analysis. None of them were being confirmed.

The enclosed sheet describing limitations in the Format B and Extrel software is an integral part of this case narrative.

Please call me if you have any questions.

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 his designee, as verified by the following signature.

Craig H. Caldwell 3/27/90

Sincerely,

PEI/IT

Craig 3/27

Craig H. Caldwell
Laboratory Manager

## LIMITATIONS IN EPA-SUPPLIED FORMAT B SOFTWARE

The EPA-supplied Format B software has several limitations which make full compliance with some contract requirements impossible. These limitations are described below.

The software does not allow the entry of Lab Sample ID's for standards for the various forms. CCS has flagged us for failure to enter them. However, page B-22 of the SOW says that the lab sample ID is an "optional. . . internal identifier [which] may be reported". CCS should not penalize us for not making an optional entry that we couldn't make if we wanted to.

The EPA Sample No.'s for standards as printed on the forms do not match those on the diskette, as the software appends an eighth (non-printing) character.

## LIMITATIONS IN EXTREL MASS LISTING PROGRAM

The Extrel Mass Spectral Data System software contains a "bug" which leads to potential discrepancies between the mass listing it produces and the Form V generated by the EPA-supplied Format B software.

When scan averaging is used to produce the mass spectrum for BFB or DFTPP, an apparent rounding error occurs which leads to differences between the two outputs mentioned above.

The Extrel mass listing also does not display any mass with a relative intensity of less than 0.5% Relative Abundance with respect to the largest peak in the spectrum. Peaks less than 0.5% Relative Abundance are, however, printed on the Form V by the Format B software. This is most often seen with low intensity ions such as m/z 68 and m/z 173.

The EPA-supplied Format B public domain software uses the raw data as acquired by the data system without performing averaging or rounding during calculations. The only rounding it performs is done on the final values to be entered on the Form V. Because of this, the values printed on the Form V should be regarded as the "true" abundance for all ions in the spectrum.

2B

SOIL VOLATILE SURROGATE RECOVERY

Lab Name: PEI Contract: 68-D9-0037

Lab Code: PEI Case No.: 13622 SAS No.: SDG No.: EJJ62

Level: (low/med) LOW

| | EPA SAMPLE NO. | S1 (TOL)# | S2 (BFB)# | S3 (DCE)# | OTHER | TOT OUT |
|---|---|---|---|---|---|---|
| 1 | VBLK01 | 102 | 93 | 96 | | 0 |
| 2 | EJJ63 | 224 * | 36 * | 97 | | 2 |
| 3 | EJJ64 | 180 * | 39 * | 94 | | 2 |
| 4 | EJJ66 | 304 * | 25 * | 94 | | 2 |
| 5 | | | | | | |
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| 30 | | | | | | |

| | QC LIMITS |
|---|---|
| S1 (TOL) = Toluene-d8 | (81-117) |
| S2 (BFB) = Bromofluorobenzene | (74-121) |
| S3 (DCE) = 1,2-Dichloroethane-d4 | (70-121) |

# Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out



FORM II VOA-2 1/87 Rev.

2B

SOIL VOLATILE SURROGATE RECOVERY

000013

Lab Name: PEI Contract: 68-D9-0037

Lab Code: PEI Case No.: 13622 SAS No.: SDG No.: EJJ62

Level: (low/med) LOW

| | EPA SAMPLE NO. | S1 (TOL)# | S2 (BFB)# | S3 (DCE)# | OTHER | TOT OUT |
|---|---|---|---|---|---|---|
| 1 | VBLKA5 | 99 | 101 | 94 | | 0 |
| 2 | EJJ67 | 104 | 90 | 84 | | 0 |
| 3 | EJJ68 | 105 | 88 | 85 | | 0 |
| 4 | EJJ69 | 96 | 97 | 83 | | 0 |
| 5 | EJJ69MS | 95 | 96 | 85 | | 0 |
| 6 | EJJ69MSD | 99 | 94 | 84 | | 0 |
| 7 | EJJ62 | 102 | 90 | 85 | | 0 |
| 8 | EJJ63 RE | 148 * | 63 * | 85 | | 2 |
| 9 | EJJ64 RE | 136 * | 65 * | 80 | | 2 |
| 10 | EJJ65 | 107 | 88 | 79 | | 0 |
| 11 | EJJ66 RE | 206 * | 49 * | 76 | | 2 |
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| 30 | | | | | | |

| | | QC LIMITS |
|---|---|---|
| S1 (TOL) | = TOLUENE-D8 | (81-117) |
| S2 (BFB) | = BROMOFLUOROBENZENE | (74-121) |
| S3 (DCE) | = 1,2-DICHLOROETHANE-D4 | (70-121) |

# Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out



FORM II VOA-2 1/87 Rev.

2D

# SOIL SEMIVOLATILE SURROGATE RECOVERY

000228

Lab Name: PEI Contract: 68-D9-0037

Lab Code: PEI Case No.: 13622 SAS No.: SDG No.: EJJ62

Level: (low/med) LOW

| | EPA SAMPLE NO. | S1 (NBZ)# | S2 (FBP)# | S3 (TPH)# | S4 (PHL)# | S5 (2FP)# | S6 (TBP)# | OTHER | TOT OUT |
|---|---|---|---|---|---|---|---|---|---|
| 1 | SBLKY7 | 59 | 61 | 72 | 55 | 53 | 58 | | 0 |
| 2 | EJJ62 | 65 | 64 | 73 | 58 | 61 | 69 | | 0 |
| 3 | EJJ64 | 89 | 86 | 99 | 82 | 86 | 91 | | 0 |
| 4 | EJJ66 | 90 | 86 | 109 | 80 | 82 | 98 | | 0 |
| 5 | EJJ65 | 84 | 82 | 122 | 77 | 72 | 71 | | 0 |
| 6 | EJJ65MS | 85 | 88 | 114 | 89 | 84 | 93 | | 0 |
| 7 | EJJ65MSD | 89 | 93 | 144 * | 92 | 86 | 95 | | 1 |
| 8 | EJJ68 | 89 | 87 | 119 | 87 | 96 | 111 | | 0 |
| 9 | EJJ69 | 92 | 88 | 124 | 90 | 93 | 104 | | 0 |
| 10 | EJJ67 | 83 | 80 | 95 | 79 | 69 | 75 | | 0 |
| 11 | EJJ63 | 97 | 91 | 97 | 87 | 87 | 115 | | 0 |
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| | | QC LIMITS |
|---|---|---|
| S1 (NBZ) | = Nitrobenzene-d5 | (23-120) |
| S2 (FBP) | = 2-Fluorobiphenyl | (30-115) |
| S3 (TPH) | = Terphenyl-d14 | (18-137) |
| S4 (PHL) | = Phenol-d6 | (24-113) |
| S5 (2FP) | = 2-Fluorophenol | (25-121) |
| S6 (TBP) | = 2,4,6-Tribromophenol | (19-122) |

# Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out



FORM II SV-2 1/87 Rev.

2F

# SOIL PESTICIDE SURROGATE RECOVERY

000530

Lab Name: PEI Contract: 68-D9-0032

Lab Code: PEI Case No.: 13622 SAS No.: SDG No.: EJJ62

Level:(low/med) LOW

| | EPA SAMPLE NO. | S1 (DBC)# | OTHER |
|---|---|---|---|
| 1 | PBLKY7 | 128 | |
| 2 | EJJ62 | 106 | |
| 3 | EJJ63 | 140 | |
| 4 | EJJ64 | 105 | |
| 5 | EJJ65 | 99 | |
| 6 | EJJ65MS | 141 | |
| 7 | EJJ65MSD | 120 | |
| 8 | EJJ66 | 118 | |
| 9 | EJJ67 | 108 | |
| 10 | EJJ68 | 200 * | |
| 11 | EJJ69 | 172 * | |
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ADVISORY
QC LIMITS
(20-150)

S1 (DBC) = DBC

# Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out



FORM II PEST-2 1/87 Rev.

# SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: PEI Contract: 68-D9-0037

Lab Code: PEI Case No.: 13622 SAS No.: SDG No.: EJJ62

Matrix Spike - EPA Sample No.: EJJ69 Level:(low/med) LOW

| COMPOUND | SPIKE ADDED (UG/KG) | SAMPLE CONCENTRATION (UG/KG) | MS CONCENTRATION (UG/KG) | MS % REC # | QC LIMITS REC. |
|---|---|---|---|---|---|
| 1,1-DICHLOROETHENE | 69. | 0. | 60. | 86 | 59-172 |
| TRICHLOROETHENE | 69. | 0. | 68. | 98 | 62-137 |
| BENZENE | 69. | 0. | 64. | 92 | 66-142 |
| TOLUENE | 69. | 2. | 66. | 93 | 59-139 |
| CHLOROBENZENE | 69. | 0. | 65. | 94 | 60-133 |

| COMPOUND | SPIKE ADDED (UG/KG) | MSD CONCENTRATION (UG/KG) | MSD % REC # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| 1,1-DICHLOROETHENE | 69. | 59. | 85 | 2 | 22 | 59-172 |
| TRICHLOROETHENE | 69. | 70. | 100 | 2 | 22 | 62-137 |
| BENZENE | 69. | 67. | 97 | 5 | 21 | 66-142 |
| TOLUENE | 69. | 69. | 97 | 5 | 21 | 59-139 |
| CHLOROBENZENE | 69. | 65. | 93 | 1 | 21 | 60-133 |

# 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:

3D

# SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: PEI Contract: 68-D9-0037

Lab Code: PEI Case No.: 13622 SAS No.: SDG No.: EJJ62

Matrix Spike - EPA Sample No.: EJJ65 Level: (low/med) LOW

| COMPOUND | SPIKE ADDED (UG/KG) | SAMPLE CONCENTRATION (UG/KG) | MS CONCENTRATION (UG/KG) | MS % REC | # | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| Phenol | 17096. | 0. | 12578. | 74 | | 26- 90 |
| 2-Chlorophenol | 17096. | 0. | 12589. | 74 | | 25-102 |
| 1,4-Dichlorobenzene | 8548. | 0. | 6765. | 79 | | 28-104 |
| N-Nitroso-di-n-prop. (1) | 8548. | 0. | 4894. | 57 | | 41-126 |
| 1,2,4-Trichlorobenzene | 8548. | 0. | 6381. | 75 | | 38-107 |
| 4-Chloro-3-methylphenol | 17096. | 0. | 13170. | 77 | | 26-103 |
| Acenaphthene | 8548. | 0. | 7185. | 84 | | 31-137 |
| 4-Nitrophenol | 17096. | 0. | 13272. | 78 | | 11-114 |
| 2,4-Dinitrotoluene | 8548. | 0. | 8006. | 94 | * | 28- 89 |
| Pentachlorophenol | 17096. | 0. | 16561. | 97 | | 17-109 |
| Pyrene | 8548. | 0. | 7863. | 92 | | 35-142 |

| COMPOUND | SPIKE ADDED (UG/KG) | MSD CONCENTRATION (UG/KG) | MSD % REC | # | % RPD | # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|---|---|
| Phenol | 17113. | 12503. | 73 | | 1 | | 35 | 26- 90 |
| 2-Chlorophenol | 17113. | 12861. | 75 | | 2 | | 50 | 25-102 |
| 1,4-Dichlorobenzene | 8556. | 6822. | 80 | | 1 | | 27 | 28-104 |
| N-Nitroso-di-n-prop. (1) | 8556. | 5042. | 59 | | 3 | | 38 | 41-126 |
| 1,2,4-Trichlorobenzene | 8556. | 6411. | 75 | | 0 | | 23 | 38-107 |
| 4-Chloro-3-methylphenol | 17113. | 12767. | 75 | | 3 | | 33 | 26-103 |
| Acenaphthene | 8556. | 7245. | 85 | | 1 | | 19 | 31-137 |
| 4-Nitrophenol | 17113. | 13524. | 79 | | 2 | | 50 | 11-114 |
| 2,4-Dinitrotoluene | 8556. | 7918. | 93 | * | 1 | | 47 | 28- 89 |
| Pentachlorophenol | 17113. | 16255. | 95 | | 2 | | 47 | 17-109 |
| Pyrene | 8556. | 9614. | 112 | | 20 | | 36 | 35-142 |

(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: 2 out of 22 outside limits

COMMENTS:

3F

# SOIL PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: PEI Contract: 68-D9-0037

Lab Code: PEI Case No.: 13622 SAS No.: SDG No.: EJJ62

Matrix Spike - EPA Sample No.: EJJ65 Level:(low/med) LOW

| COMPOUND | SPIKE ADDED (UG/KG) | SAMPLE CONCENTRATION (UG/KG) | MS CONCENTRATION (UG/KG) | MS % REC # | QC LIMITS REC. |
|---|---|---|---|---|---|
| gamma-BHC | 68.38 | .00 | 108.67 | 159 * | 46-127 |
| Heptachlor | 68.38 | .00 | 68.30 | 100 | 35-130 |
| Aldrin | 68.38 | .00 | 76.34 | 112 | 34-132 |
| Dieldrin | 170.96 | .00 | 251.41 | 147 * | 31-134 |
| Endrin | 170.96 | .00 | 247.65 | 145 * | 42-139 |
| 4,4'-DDT | 170.96 | .00 | 285.23 | 167 * | 23-134 |

| COMPOUND | SPIKE ADDED (UG/KG) | MSD CONCENTRATION (UG/KG) | MSD % REC # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| gamma-BHC | 68.45 | 104.86 | 153 * | 4 | 50 | 46-127 |
| Heptachlor | 68.45 | 62.49 | 91 | 9 | 31 | 35-130 |
| Aldrin | 68.45 | 73.95 | 108 | 3 | 43 | 34-132 |
| Dieldrin | 171.13 | 232.26 | 136 * | 8 | 38 | 31-134 |
| Endrin | 171.13 | 228.82 | 134 | 8 | 45 | 42-139 |
| 4,4'-DDT | 171.13 | 251.91 | 147 * | 13 | 50 | 23-134 |

# 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: 7 out of 12 outside limits

COMMENTS:

4A

VOLATILE METHOD BLANK SUMMARY

000015

Lab Name: PEI Contract: 68-D9-0037

Lab Code: PEI Case No.: 13622 SAS No.: SDG No.: EJJ62

Lab File ID: VBLK01 Lab Sample ID: VBLK01

Date Analyzed: 3/ 3/90 Time Analyzed: 15:38

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

Instrument ID: ____H

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

| | EPA SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | TIME ANALYZED |
|---|---|---|---|---|
| 1 | EJJ63 | X0-02-168-02B | EJJ63 | 22:07 |
| 2 | EJJ64 | X0-02-168-03B | EJJ64 | 22:40 |
| 3 | EJJ66 | X0-02-168-05B | EJJ66 | 23:47 |
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COMMENTS:



FORM IV VOA 1/87 Rev.

4A

VOLATILE METHOD BLANK SUMMARY

000016

Lab Name: PEI Contract: 68-D9-0037

Lab Code: PEI Case No.: 13622 SAS No.: SDG No.: EJJ62

Lab File ID: VBLKA5 Lab Sample ID: VBLKA5

Date Analyzed: 3/ 5/90 Time Analyzed: 12:08

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

Instrument ID: ____Y

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

| | EPA SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | TIME ANALYZED |
|---|---|---|---|---|
| 1 | EJJ67 | X0-02-168-06B | EJJ67 | 12:43 |
| 2 | EJJ68 | X0-02-168-07B | EJJ68 | 13:18 |
| 3 | EJJ69 | X0-02-168-08B | EJJ69 | 13:53 |
| 4 | EJJ69MS | X0-02-168-08B | EJJ69MS | 14:28 |
| 5 | EJJ69MSD | X0-02-168-08B | EJJ69MSD | 15:04 |
| 6 | EJJ62 | X0-02-168-01B | EJJ62RE | 16:52 |
| 7 | EJJ63 RE | X0-02-168-02B | EJJ63RE | 17:28 |
| 8 | EJJ64 RE | X0-02-168-03B | EJJ64RE | 18:03 |
| 9 | EJJ65 | X0-02-168-04B | EJJ65RE | 18:38 |
| 10 | EJJ66 RE | X0-02-168-05B | EJJ66RE | 19:13 |
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COMMENTS:

# SEMIVOLATILE METHOD BLANK SUMMARY

Lab Name: PEI Contract: 68-D9-0037

Lab Code: PEI Case No.: 13622 SAS No.: SDG No.: EJJ62

Lab File ID: SBLKY7 Lab Sample ID: SBLKY7

Date Extracted: 2/26/90 Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 3/ 9/90 Time Analyzed: 18:40

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

Instrument ID: ____N

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

| | EPA SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED |
|---|---|---|---|---|
| 1 | EJJ62 | X0-02-168-01A | EJJ62 | 3/ 9/90 |
| 2 | EJJ64 | X0-02-168-03A | EJJ64 | 3/ 9/90 |
| 3 | EJJ66 | X0-02-168-05A | EJJ66 | 3/ 9/90 |
| 4 | EJJ65 | X0-02-168-04A | EJJ65 | 3/12/90 |
| 5 | EJJ65MS | X0-02-168-04A | EJJ65MS | 3/12/90 |
| 6 | EJJ65MSD | X0-02-168-04A | EJJ65MSD | 3/12/90 |
| 7 | EJJ68 | X0-02-168-07A | EJJ68 | 3/12/90 |
| 8 | EJJ69 | X0-02-168-08A | EJJ69 | 3/12/90 |
| 9 | EJJ67 | X0-02-168-06A | EJJ67RE | 3/13/90 |
| 10 | EJJ63 | X0-02-168-02A | EJJ63RE2 | 3/14/90 |
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COMMENTS:

4C

# PESTICIDE METHOD BLANK SUMMARY

000532

Lab Name: PEI Contract: 68-D9-0037

Lab Code: PEI Case No.: 13622 SAS No.: SDG No.: EJJ62

Lab Sample ID: PBLKY7 Lab File ID: JJPBY007

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

Date Extracted: 2/26/90 Extraction: (SepF/Cont/Sonc) SON

Date Analyzed (1): 3/ 4/90 Date Analyzed (2): 3/11/90

Time Analyzed (1): 7:37 Time Analyzed (2): 14:55

Instrument ID (1): _ W Instrument ID (2): _ U

GC Column ID (1): 2100 GC Column ID (2): 22502401

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

| | EPA SAMPLE NO. | LAB SAMPLE ID | DATE ANALYZED 1 | DATE ANALYZED 2 |
|---|---|---|---|---|
| 1 | EJJ62 | X0-02-168-01A | 3/ 4/90 | 3/11/90 |
| 2 | EJJ63 | X0-02-168-02A | 3/ 4/90 | 3/11/90 |
| 3 | EJJ64 | X0-02-168-03A | 3/ 4/90 | |
| 4 | EJJ65 | X0-02-168-04A | 3/ 4/90 | |
| 5 | EJJ65MS | X0-02-168-04A | 3/ 4/90 | |
| 6 | EJJ65MSD | X0-02-168-04A | 3/ 4/90 | |
| 7 | EJJ66 | X0-02-168-05A | 3/ 4/90 | |
| 8 | EJJ67 | X0-02-168-06A | 3/ 4/90 | |
| 9 | EJJ68 | X0-02-168-07A | 3/ 4/90 | 3/11/90 |
| 10 | EJJ69 | X0-02-168-08A | 3/ 5/90 | |
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Comments:



FORM IV PEST 1/87 Rev.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK01

Lab Name: PEI Contract: 68-D9-0037

Lab Code: PEI Case No.: 13622 SAS No.: SDG No.: EJJ62

Matrix: (soil/water) SOIL Lab Sample ID: VBLK01

Sample wt/vol: 5.000 (g/mL) G Lab File ID: VBLK01

Level: (low/med) LOW Date Received: 0/ 0/ 0

% Moisture: not dec. 0. Date Analyzed: 3/ 3/90

Column: (pack/cap) CAP Dilution Factor: 1.00

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | 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 | 20. | |
| 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 | 22. | |
| 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. | J |
| 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 |

1E

EPA SAMPLE NO.

000205

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

VBLK01

Lab Name: PEI Contract: 68-D9-0037

Lab Code: PEI Case No.: 13622 SAS No.: SDG No.: EJJ62

Matrix: (soil/water) SOIL Lab Sample ID: VBLK01

Sample wt/vol: 5.000 (g/mL) G Lab File ID: VBLK01

Level: (low/med) LOW Date Received: 0/ 0/ 0

% Moisture: not dec. 0. Date Analyzed: 3/ 3/90

Column: (pack/cap) CAP Dilution Factor: 1.00

Number TICs found: 0

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

| | CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

000215

VBLKA5

Lab Name: PEI Contract: 68-D9-0037

Lab Code: PEI Case No.: 13622 SAS No.: SDG No.: EJJ62

Matrix: (soil/water) SOIL Lab Sample ID: VBLKA5

Sample wt/vol: 5.000 (g/mL) G Lab File ID: VBLKA5

Level: (low/med) LOW Date Received: 0/ 0/ 0

% Moisture: not dec. 0. Date Analyzed: 3/ 5/90

Column: (pack/cap) CAP Dilution Factor: 1.00

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | 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 | 4. | J |
| 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 |

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

000216

VBLKA5

Lab Name: PEI Contract: 68-D9-0037

Lab Code: PEI Case No.: 13622 SAS No.: SDG No.: EJJ62

Matrix: (soil/water) SOIL Lab Sample ID: VBLKA5

Sample wt/vol: 5.000 (g/mL) G Lab File ID: VBLKA5

Level: (low/med) LOW Date Received: 0/ 0/ 0

% Moisture: not dec. 0. Date Analyzed: 3/ 5/90

Column: (pack/cap) CAP Dilution Factor: 1.00

Number TICs found: 0

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

| | CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
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000502

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLKY7

Lab Name: PEI Contract: 68-D9-0037

Lab Code: PEI Case No.: 13622 SAS No.: SDG No.: EJJ62

Matrix: (soil/water) SOIL Lab Sample ID: SBLKY7

Sample wt/vol: 30.1 (g/mL) G Lab File ID: SBLKY7

Level: (low/med) LOW Date Received: 0/ 0/ 0

% Moisture: not dec. 0. dec. _____ Date Extracted: 2/26/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 3/ 9/90

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

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 108-95-2 | Phenol | 660. | U |
| 111-44-4 | bis(2-Chloroethyl)ether | 660. | U |
| 95-57-8 | 2-Chlorophenol | 660. | U |
| 541-73-1 | 1,3-Dichlorobenzene | 660. | U |
| 106-46-7 | 1,4-Dichlorobenzene | 660. | U |
| 100-51-6 | Benzyl alcohol | 660. | U |
| 95-50-1 | 1,2-Dichlorobenzene | 660. | U |
| 95-48-7 | 2-Methylphenol | 660. | U |
| 108-60-1 | bis(2-Chloroisopropyl)ether | 660. | U |
| 106-44-5 | 4-Methylphenol | 660. | U |
| 621-64-7 | N-Nitroso-di-n-propylamine | 660. | U |
| 67-72-1 | Hexachloroethane | 660. | U |
| 98-95-3 | Nitrobenzene | 660. | U |
| 78-59-1 | Isophorone | 660. | U |
| 88-75-5 | 2-Nitrophenol | 660. | U |
| 105-67-9 | 2,4-Dimethylphenol | 660. | U |
| 65-85-0 | Benzoic acid | 3200. | U |
| 111-91-1 | bis(2-Chloroethoxy)methane | 660. | U |
| 120-83-2 | 2,4-Dichlorophenol | 660. | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 660. | U |
| 91-20-3 | Naphthalene | 660. | U |
| 106-47-8 | 4-Chloroaniline | 660. | U |
| 87-68-3 | Hexachlorobutadiene | 660. | U |
| 59-50-7 | 4-Chloro-3-methylphenol | 660. | U |
| 91-57-6 | 2-Methylnaphthalene | 660. | U |
| 77-47-4 | Hexachlorocyclopentadiene | 660. | U |
| 88-06-2 | 2,4,6-Trichlorophenol | 660. | U |
| 95-95-4 | 2,4,5-Trichlorophenol | 3200. | U |
| 91-58-7 | 2-Chloronaphthalene | 660. | U |
| 88-74-4 | 2-Nitroaniline | 3200. | U |
| 131-11-3 | Dimethylphthalate | 660. | U |
| 208-96-8 | Acenaphthylene | 660. | U |
| 606-20-2 | 2,6-Dinitrotoluene | 660. | U |

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

~~000503~~

SBLKY7

Lab Name: PEI Contract: 68-D9-0037

Lab Code: PEI Case No.: 13622 SAS No.: SDG No.: EJJ62

Matrix: (soil/water) SOIL Lab Sample ID: SBLKY7

Sample wt/vol: 30.1 (g/mL) G Lab File ID: SBLKY7

Level: (low/med) LOW Date Received: 0/ 0/ 0

% Moisture: not dec. 0. dec. _____ Date Extracted: 2/26/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 3/ 9/90

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

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 99-09-2 | 3-Nitroaniline | 3200. | U |
| 83-32-9 | Acenaphthene | 660. | U |
| 51-28-5 | 2,4-Dinitrophenol | 3200. | U |
| 100-02-7 | 4-Nitrophenol | 3200. | U |
| 132-64-9 | Dibenzofuran | 660. | U |
| 121-14-2 | 2,4-Dinitrotoluene | 660. | U |
| 84-66-2 | Diethylphthalate | 660. | U |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 660. | U |
| 86-73-7 | Fluorene | 660. | U |
| 100-01-6 | 4-Nitroaniline | 3200. | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 3200. | U |
| 86-30-6 | N-Nitrosodiphenylamine (1) | 660. | U |
| 101-55-3 | 4-Bromophenyl-phenylether | 660. | U |
| 118-74-1 | Hexachlorobenzene | 660. | U |
| 87-86-5 | Pentachlorophenol | 3200. | U |
| 85-01-8 | Phenanthrene | 660. | U |
| 120-12-7 | Anthracene | 660. | U |
| 84-74-2 | Di-n-butylphthalate | 660. | U |
| 206-44-0 | Fluoranthene | 660. | U |
| 129-00-0 | Pyrene | 660. | U |
| 85-68-7 | Butylbenzylphthalate | 660. | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | 1300. | U |
| 56-55-3 | Benzo(a)anthracene | 660. | U |
| 218-01-9 | Chrysene | 660. | U |
| 117-81-7 | bis(2-Ethylhexyl)phthalate | 660. | U |
| 117-84-0 | Di-n-octylphthalate | 660. | U |
| 205-99-2 | Benzo(b)fluoranthene | 660. | U |
| 207-08-9 | Benzo(k)fluoranthene | 660. | U |
| 50-32-8 | Benzo(a)pyrene | 660. | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 660. | U |
| 53-70-3 | Dibenz(a,h)anthracene | 660. | U |
| 191-24-2 | Benzo(g,h,i)perylene | 660. | U |

(1) - Cannot be separated from diphenylamine

1F

EPA SAMPLE NO.
000504

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SBLKY7

Lab Name: PEI Contract: 68-D9-0037

Lab Code: PEI Case No.: 13622 SAS No.: SDG No.: EJJ62

Matrix: (soil/water) SOIL Lab Sample ID: SBLKY7

Sample wt/vol: 30.1 (g/mL) G Lab File ID: SBLKY7

Level: (low/med) LOW Date Received: 0/ 0/ 0

% Moisture: not dec. 0. dec. _____ Date Extracted: 2/26/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 3/ 9/90

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

Number TICs found: 2

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

| | CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|---|
| 1. | - - | UNKNOWN | 8.57 | 900. | J A |
| 2. | - - | UNKNOWN | 8.78 | 300. | J A |
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000668

EPA SAMPLE NO.

PBLKY7

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

Lab Name: PEI Contract: 68-D9-0037

Lab Code: PEI Case No.: 13622 SAS No.: SDG No.: EJJ62

Matrix: (soil/water) SOIL Lab Sample ID: PBLKY7

Sample wt/vol: 30.1 (g/mL) G Lab File ID: JJPBY007

Level: (low/med) LOW Date Received: 0/ 0/ 0

% Moisture: not dec. 0. dec._____ Date Extracted: 2/26/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 3/ 4/90

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

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 319-84-6 | alpha-BHC | 16. | U |
| 319-85-7 | beta-BHC | 16. | U |
| 319-86-8 | delta-BHC | 16. | U |
| 58-89-9 | gamma-BHC | 16. | U |
| 76-44-8 | Heptachlor | 16. | U |
| 309-00-2 | Aldrin | 16. | U |
| 1024-57-3 | Heptachlor epoxide | 16. | U |
| 959-98-8 | Endosulfan I | 16. | U |
| 60-57-1 | Dieldrin | 32. | U |
| 72-55-9 | 4,4'-DDE | 32. | U |
| 72-20-8 | Endrin | 32. | U |
| 33213-65-9 | Endosulfan II | 32. | U |
| 72-54-8 | 4,4'-DDD | 32. | U |
| 1031-07-8 | Endosulfan sulfate | 32. | U |
| 50-29-3 | 4,4'-DDT | 32. | U |
| 72-43-5 | Methoxychlor | 160. | U |
| 53494-70-5 | Endrin ketone | 32. | U |
| 5103-71-9 | alpha-Chlordane | 160. | U |
| 5103-74-2 | gamma-Chlordane | 160. | U |
| 8001-35-2 | Toxaphene | 320. | U |
| 12674-11-2 | Aroclor-1016 | 160. | U |
| 11104-28-2 | Aroclor-1221 | 160. | U |
| 11141-16-5 | Aroclor-1232 | 160. | U |
| 53469-21-9 | Aroclor-1242 | 160. | U |
| 12672-29-6 | Aroclor-1248 | 160. | U |
| 11097-69-1 | Aroclor-1254 | 320. | U |
| 11096-82-5 | Aroclor-1260 | 320. | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EJJ62

Lab Name: PEI Contract: 68-D9-0037

Lab Code: PEI Case No.: 13622 SAS No.: SDG No.: EJJ62

Matrix: (soil/water) SOIL Lab Sample ID: X0-02-168-01B

Sample wt/vol: 5.000 (g/mL) G Lab File ID: EJJ62RE

Level: (low/med) LOW Date Received: 2/21/90

% Moisture: not dec. 9. Date Analyzed: 3/ 5/90

Column: (pack/cap) CAP Dilution Factor: 1.00

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 74-87-3 | CHLOROMETHANE | 11. | U |
| 74-83-9 | BROMOMETHANE | 11. | U |
| 75-01-4 | VINYL CHLORIDE | 11. | U |
| 75-00-3 | CHLOROETHANE | 11. | U |
| 75-09-2 | METHYLENE CHLORIDE | 30 | |
| 67-64-1 | ACETONE | 53 | ~~BNU~~ |
| 75-15-0 | CARBON DISULFIDE | 2. | J |
| 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 | 11. | U |
| 71-55-6 | 1,1,1-TRICHLOROETHANE | 5. | U |
| 56-23-5 | CARBON TETRACHLORIDE | 5. | U |
| 108-05-4 | VINYL ACETATE | 11. | 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 | 11. | U |
| 591-78-6 | 2-HEXANONE | 11. | U |
| 127-18-4 | TETRACHLOROETHENE | 5. | U |
| 79-34-5 | 1,1,2,2-TETRACHLOROETHANE | 5. | U |
| 108-88-3 | TOLUENE | 26. | |
| 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 |

SWS 4/3/90

1E

EPA SAMPLE NO.

EJJ62

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: PEI Contract: 68-D9-0037

Lab Code: PEI Case No.: 13622 SAS No.: SDG No.: EJJ62

Matrix: (soil/water) SOIL Lab Sample ID: XO-02-168-01B

Sample wt/vol: 5.000 (g/mL) G Lab File ID: EJJ62RE

Level: (low/med) LOW Date Received: 2/21/90

% Moisture: not dec. 9. Date Analyzed: 3/ 5/90

Column: (pack/cap) CAP Dilution Factor: 1.00

Number TICs found: 3

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

| | CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|---|
| 1. | 75-71-8 | DICHLORDIFLUOROMETHANE | .83 | 100. | J |
| 2. | - - | UNKNOWN | 10.88 | 7. | J |
| 3. | - - | UNKNOWN | 11.62 | 4. | J |
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000033

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EJJ63

Lab Name: PEI Contract: 68-D9-0037

Lab Code: PEI Case No.: 13622 SAS No.: SDG No.: EJJ62

Matrix: (soil/water) SOIL Lab Sample ID: X0-02-168-02B

Sample wt/vol: 5.000 (g/mL) G Lab File ID: EJJ63

Level: (low/med) LOW Date Received: 2/21/90

% Moisture: not dec. 30. Date Analyzed: 3/ 3/90

Column: (pack/cap) CAP Dilution Factor: 1.00

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 14. | U |
| 74-83-9 | Bromomethane | 14. | U |
| 75-01-4 | Vinyl Chloride | 14. | U |
| 75-00-3 | Chloroethane | 14. | U |
| 75-09-2 | Methylene Chloride | 240. | |
| 67-64-1 | Acetone | 19. | ~~B~~ U |
| 75-15-0 | Carbon Disulfide | 5. | J |
| 75-35-4 | 1,1-Dichloroethene | 7. | U |
| 75-34-3 | 1,1-Dichloroethane | 7. | U |
| 540-59-0 | 1,2-Dichloroethene (total) | 7. | U |
| 67-66-3 | Chloroform | 7. | U |
| 107-06-2 | 1,2-Dichloroethane | 7. | U |
| 78-93-3 | 2-Butanone | 9. | ~~B~~ U |
| 71-55-6 | 1,1,1-Trichloroethane | 7. | U |
| 56-23-5 | Carbon Tetrachloride | 7. | U |
| 108-05-4 | Vinyl Acetate | 14. | U |
| 75-27-4 | Bromodichloromethane | 7. | U |
| 78-87-5 | 1,2-Dichloropropane | 7. | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 7. | U |
| 79-01-6 | Trichloroethene | 7. | U |
| 124-48-1 | Dibromochloromethane | 7. | U |
| 79-00-5 | 1,1,2-Trichloroethane | 7. | U |
| 71-43-2 | Benzene | 7. | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 7. | U |
| 75-25-2 | Bromoform | 7. | U |
| 108-10-1 | 4-Methyl-2-Pentanone | 14. | U |
| 591-78-6 | 2-Hexanone | 14. | U |
| 127-18-4 | Tetrachloroethene | 7. | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 7. | U |
| 108-88-3 | Toluene | 150. | |
| 108-90-7 | Chlorobenzene | 7. | U |
| 100-41-4 | Ethylbenzene | 7. | U |
| 100-42-5 | Styrene | 7. | U |
| 1330-20-7 | Xylene (total) | 7. | U |

J.J. 4/3/90

1E

000034 EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EJJ63

Lab Name: PEI Contract: 68-D9-0037

Lab Code: PEI Case No.: 13622 SAS No.: SDG No.: EJJ62

Matrix: (soil/water) SOIL Lab Sample ID: X0-02-168-02B

Sample wt/vol: 5.000 (g/mL) G Lab File ID: EJJ63

Level: (low/med) LOW Date Received: 2/21/90

% Moisture: not dec. 30. Date Analyzed: 3/ 3/90

Column: (pack/cap) CAP Dilution Factor: 1.00

Number TICs found: 2

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

| CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|
| 1. - - | UNKNOWN HYDROCARBON | 8.05 | 8. | J |
| 2. - - | UNKNOWN HYDROCARBON | 9.57 | 10. | J |
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

| EJJ63 RE |
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Lab Name: PEI Contract: 68-D9-0037

Lab Code: PEI Case No.: 13622 SAS No.: SDG No.: EJJ62

Matrix: (soil/water) SOIL Lab Sample ID: X0-02-16B-02B

Sample wt/vol: 5.000 (g/mL) G Lab File ID: EJJ63RE

Level: (low/med) LOW Date Received: 2/21/90

% Moisture: not dec. 30. Date Analyzed: 3/ 5/90

Column: (pack/cap) CAP Dilution Factor: 1.00

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 74-87-3 | CHLOROMETHANE | 14. | U |
| 74-83-9 | BROMOMETHANE | 14. | U |
| 75-01-4 | VINYL CHLORIDE | 14. | U |
| 75-00-3 | CHLOROETHANE | 14. | U |
| 75-09-2 | METHYLENE CHLORIDE | 120. | |
| 67-64-1 | ACETONE | 14. | U |
| 75-15-0 | CARBON DISULFIDE | 5. | J |
| 75-35-4 | 1,1-DICHLOROETHENE | 7. | U |
| 75-34-3 | 1,1-DICHLOROETHANE | 7. | U |
| 540-59-0 | 1,2-DICHLOROETHENE (TOTAL) | 7. | U |
| 67-66-3 | CHLOROFORM | 7. | U |
| 107-06-2 | 1,2-DICHLOROETHANE | 7. | U |
| 78-93-3 | 2-BUTANONE | 14. | U |
| 71-55-6 | 1,1,1-TRICHLOROETHANE | 7. | U |
| 56-23-5 | CARBON TETRACHLORIDE | 7. | U |
| 108-05-4 | VINYL ACETATE | 14. | U |
| 75-27-4 | BROMODICHLOROMETHANE | 7. | U |
| 78-87-5 | 1,2-DICHLOROPROPANE | 7. | U |
| 10061-01-5 | CIS-1,3-DICHLOROPROPENE | 7. | U |
| 79-01-6 | TRICHLOROETHENE | 7. | U |
| 124-48-1 | DIBROMOCHLOROMETHANE | 7. | U |
| 79-00-5 | 1,1,2-TRICHLOROETHANE | 7. | U |
| 71-43-2 | BENZENE | 7. | U |
| 10061-02-6 | TRANS-1,3-DICHLOROPROPENE | 7. | U |
| 75-25-2 | BROMOFORM | 7. | U |
| 108-10-1 | 4-METHYL-2-PENTANONE | 14. | U |
| 591-78-6 | 2-HEXANONE | 14. | U |
| 127-18-4 | TETRACHLOROETHENE | 7. | U |
| 79-34-5 | 1,1,2,2-TETRACHLOROETHANE | 7. | U |
| 108-88-3 | TOLUENE | 130. | |
| 108-90-7 | CHLOROBENZENE | 7. | U |
| 100-41-4 | ETHYLBENZENE | 7. | U |
| 100-42-5 | STYRENE | 7. | U |
| 1330-20-7 | XYLENE (TOTAL) | 7. | U |

1E

EPA SAMPLE NO. 00019

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EJJ63 RE

Lab Name: PEI Contract: 68-D9-0037

Lab Code: PEI Case No.: 13622 SAS No.: SDG No.: EJJ62

Matrix: (soil/water) SOIL Lab Sample ID: XO-02-168-02B

Sample wt/vol: 5.000 (g/mL) G Lab File ID: EJJ63RE

Level: (low/med) LOW Date Received: 2/21/90

% Moisture: not dec. 30. Date Analyzed: 3/ 5/90

Column: (pack/cap) CAP Dilution Factor: 1.00

Number TICs found: 1

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

| CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|
| 1. - - | UNKNOWN | 10.85 | 20. | J |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
JJJJ37

EJJ64

Lab Name: PEI  Contract: 68-D9-0037

Lab Code: PEI  Case No.: 13622  SAS No.:  SDG No.: EJJ62

Matrix: (soil/water) SOIL  Lab Sample ID: XO-02-168-03B

Sample wt/vol: 5.000 (g/mL) G  Lab File ID: EJJ64

Level: (low/med) LOW  Date Received: 2/21/90

% Moisture: not dec. 8.  Date Analyzed: 3/ 3/90

Column: (pack/cap) CAP  Dilution Factor: 1.00

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 11. | U |
| 74-83-9 | Bromomethane | 11. | U |
| 75-01-4 | Vinyl Chloride | 11. | U |
| 75-00-3 | Chloroethane | 11. | U |
| 75-09-2 | Methylene Chloride | 110 | |
| 67-64-1 | Acetone | 118 | ~~B~~ u |
| 75-15-0 | Carbon Disulfide | 2. | J |
| 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 | 118 | ~~B~~ u |
| 71-55-6 | 1,1,1-Trichloroethane | 5. | U |
| 56-23-5 | Carbon Tetrachloride | 5. | U |
| 108-05-4 | Vinyl Acetate | 11. | 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 | 11. | U |
| 591-78-6 | 2-Hexanone | 11. | U |
| 127-18-4 | Tetrachloroethene | 5. | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 5. | U |
| 108-88-3 | Toluene | 79. | |
| 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 |

J.V

J.V.

4/3/91

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EJJ64

Lab Name: PEI Contract: 68-D9-0037

Lab Code: PEI Case No.: 13622 SAS No.: SDG No.: EJJ62

Matrix: (soil/water) SOIL Lab Sample ID: XO-02-168-03B

Sample wt/vol: 5.000 (g/mL) G Lab File ID: EJJ64

Level: (low/med) LOW Date Received: 2/21/90

% Moisture: not dec. 8. Date Analyzed: 3/ 3/90

Column: (pack/cap) CAP Dilution Factor: 1.00

Number TICs found: 4

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

| | CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|---|
| 1. | - - | UNKNOWN HYDROCARBON | 8.05 | 8. | J |
| 2. | - - | UNKNOWN HYDROCARBON | 8.97 | 10. | J |
| 3. | - - | UNKNOWN HYDROCARBON | 9.55 | 8. | J |
| 4. | - - | UNKNOWN AROMATIC | 16.12 | 7. | J |
| 5. | | | | | |
| 6. | | | | | |
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
000075
EJJ64 RE

Lab Name: PEI Contract: 68-D9-0037

Lab Code: PEI Case No.: 13622 SAS No.: SDG No.: EJJ62

Matrix: (soil/water) SOIL Lab Sample ID: XO-02-168-03B

Sample wt/vol: 5.000 (g/mL) G Lab File ID: EJJ64RE

Level: (low/med) LOW Date Received: 2/21/90

% Moisture: not dec. 8. Date Analyzed: 3/ 5/90

Column: (pack/cap) CAP Dilution Factor: 1.00

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 74-87-3 | CHLOROMETHANE | 11. | U |
| 74-83-9 | BROMOMETHANE | 11. | U |
| 75-01-4 | VINYL CHLORIDE | 11. | U |
| 75-00-3 | CHLOROETHANE | 11. | U |
| 75-09-2 | METHYLENE CHLORIDE | 48. | |
| 67-64-1 | ACETONE | 11. | U |
| 75-15-0 | CARBON DISULFIDE | 3. | J |
| 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 | 11. | U |
| 71-55-6 | 1,1,1-TRICHLOROETHANE | 5. | U |
| 56-23-5 | CARBON TETRACHLORIDE | 5. | U |
| 108-05-4 | VINYL ACETATE | 11. | 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 | 11. | U |
| 591-78-6 | 2-HEXANONE | 11. | U |
| 127-18-4 | TETRACHLOROETHENE | 5. | U |
| 79-34-5 | 1,1,2,2-TETRACHLOROETHANE | 5. | U |
| 108-88-3 | TOLUENE | 52. | |
| 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 |

1E

EPA SAMPLE NO.

00076

EJJ64 RE

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: PEI Contract: 68-D9-0037

Lab Code: PEI Case No.: 13622 SAS No.: SDG No.: EJJ62

Matrix: (soil/water) SOIL Lab Sample ID: XO-02-168-03B

Sample wt/vol: 5.000 (g/mL) G Lab File ID: EJJ64RE

Level: (low/med) LOW Date Received: 2/21/90

% Moisture: not dec. 8. Date Analyzed: 3/ 5/90

Column: (pack/cap) CAP Dilution Factor: 1.00

Number TICs found: 1

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

| | CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|---|
| 1. | - - | UNKNOWN | 10.85 | 10. | J |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
000084

EJJ65

Lab Name: PEI Contract: 68-D9-0037

Lab Code: PEI Case No.: 13622 SAS No.: SDG No.: EJJ62

Matrix: (soil/water) SOIL Lab Sample ID: X0-02-168-04B

Sample wt/vol: 5.000 (g/mL) G Lab File ID: EJJ65RE

Level: (low/med) LOW Date Received: 2/21/90

% Moisture: not dec. 22. Date Analyzed: 3/ 5/90

Column: (pack/cap) CAP Dilution Factor: 1.00

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 74-87-3 | CHLOROMETHANE | 13. | U |
| 74-83-9 | BROMOMETHANE | 13. | U |
| 75-01-4 | VINYL CHLORIDE | 13. | U |
| 75-00-3 | CHLOROETHANE | 13. | U |
| 75-09-2 | METHYLENE CHLORIDE | 41. | |
| 67-64-1 | ACETONE | 13 ~~4.~~ | ~~B~~ U |
| 75-15-0 | CARBON DISULFIDE | 3. | J |
| 75-35-4 | 1,1-DICHLOROETHENE | 6. | U |
| 75-34-3 | 1,1-DICHLOROETHANE | 6. | U |
| 540-59-0 | 1,2-DICHLOROETHENE (TOTAL) | 6. | U |
| 67-66-3 | CHLOROFORM | 6. | U |
| 107-06-2 | 1,2-DICHLOROETHANE | 6. | U |
| 78-93-3 | 2-BUTANONE | 13. | U |
| 71-55-6 | 1,1,1-TRICHLOROETHANE | 6. | U |
| 56-23-5 | CARBON TETRACHLORIDE | 6. | U |
| 108-05-4 | VINYL ACETATE | 13. | U |
| 75-27-4 | BROMODICHLOROMETHANE | 6. | U |
| 78-87-5 | 1,2-DICHLOROPROPANE | 6. | U |
| 10061-01-5 | CIS-1,3-DICHLOROPROPENE | 6. | U |
| 79-01-6 | TRICHLOROETHENE | 6. | U |
| 124-48-1 | DIBROMOCHLOROMETHANE | 6. | U |
| 79-00-5 | 1,1,2-TRICHLOROETHANE | 6. | U |
| 71-43-2 | BENZENE | 6. | U |
| 10061-02-6 | TRANS-1,3-DICHLOROPROPENE | 6. | U |
| 75-25-2 | BROMOFORM | 6. | U |
| 108-10-1 | 4-METHYL-2-PENTANONE | 13. | U |
| 591-78-6 | 2-HEXANONE | 13. | U |
| 127-18-4 | TETRACHLOROETHENE | 6. | U |
| 79-34-5 | 1,1,2,2-TETRACHLOROETHANE | 6. | U |
| 108-88-3 | TOLUENE | 23. | |
| 108-90-7 | CHLOROBENZENE | 6. | U |
| 100-41-4 | ETHYLBENZENE | 6. | U |
| 100-42-5 | STYRENE | 6. | U |
| 1330-20-7 | XYLENE (TOTAL) | 6. | U |

J.V. 4/3/90

1E

EPA SAMPLE NO.

000085

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EJJ65

Lab Name: PEI Contract: 68-D9-0037

Lab Code: PEI Case No.: 13622 SAS No.: SDG No.: EJJ62

Matrix: (soil/water) SOIL Lab Sample ID: XO-02-168-04B

Sample wt/vol: 5.000 (g/mL) G Lab File ID: EJJ65RE

Level: (low/med) LOW Date Received: 2/21/90

% Moisture: not dec. 22. Date Analyzed: 3/ 5/90

Column: (pack/cap) CAP Dilution Factor: 1.00

Number TICs found: 1

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

| | CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|---|
| 1. | - - | UNKNOWN | 10.87 | 8. | J |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
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1A

# VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EJJ66

Lab Name: PEI  Contract: 68-D9-0037

Lab Code: PEI  Case No.: 13622  SAS No.:  SDG No.: EJJ62

Matrix: (soil/water) SOIL  Lab Sample ID: X0-02-168-05B

Sample wt/vol: 5.000 (g/mL) G  Lab File ID: EJJ66

Level: (low/med) LOW  Date Received: 2/21/90

% Moisture: not dec. 24.  Date Analyzed: 3/ 3/90

Column: (pack/cap) CAP  Dilution Factor: 1.00

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 74-87-3 | Chloromethane | 13. | U |
| 74-83-9 | Bromomethane | 13. | U |
| 75-01-4 | Vinyl Chloride | 13. | U |
| 75-00-3 | Chloroethane | 13. | U |
| 75-09-2 | Methylene Chloride | 170. | |
| 67-64-1 | Acetone | 13 ~~12~~ | ~~BJ~~ |
| 75-15-0 | Carbon Disulfide | 3. | J |
| 75-35-4 | 1,1-Dichloroethene | 7. | U |
| 75-34-3 | 1,1-Dichloroethane | 7. | U |
| 540-59-0 | 1,2-Dichloroethene (total) | 7. | U |
| 67-66-3 | Chloroform | 7. | U |
| 107-06-2 | 1,2-Dichloroethane | 7. | U |
| 78-93-3 | 2-Butanone | 13 ~~2~~ | ~~BJ~~ |
| 71-55-6 | 1,1,1-Trichloroethane | 7. | U |
| 56-23-5 | Carbon Tetrachloride | 7. | U |
| 108-05-4 | Vinyl Acetate | 13. | U |
| 75-27-4 | Bromodichloromethane | 7. | U |
| 78-87-5 | 1,2-Dichloropropane | 7. | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 7 | U |
| 79-01-6 | Trichloroethene | 4. | J |
| 124-48-1 | Dibromochloromethane | 7. | U |
| 79-00-5 | 1,1,2-Trichloroethane | 7. | U |
| 71-43-2 | Benzene | 7. | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 7. | U |
| 75-25-2 | Bromoform | 7. | U |
| 108-10-1 | 4-Methyl-2-Pentanone | 13. | U |
| 591-78-6 | 2-Hexanone | 13. | U |
| 127-18-4 | Tetrachloroethene | 14. | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 7. | U |
| 108-88-3 | Toluene | 140. | |
| 108-90-7 | Chlorobenzene | 7. | U |
| 100-41-4 | Ethylbenzene | 7. | U |
| 100-42-5 | Styrene | 7. | U |
| 1330-20-7 | Xylene (total) | 7. | U |

J.J. 4/3/90

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

000095

EJJ66

Lab Name: PEI Contract: 68-D9-0037

Lab Code: PEI Case No.: 13622 SAS No.: SDG No.: EJJ62

Matrix: (soil/water) SOIL Lab Sample ID: XO-02-168-05B

Sample wt/vol: 5.000 (g/mL) G Lab File ID: EJJ66

Level: (low/med) LOW Date Received: 2/21/90

% Moisture: not dec. 24. Date Analyzed: 3/ 3/90

Column: (pack/cap) CAP Dilution Factor: 1.00

Number TICs found: 1

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

| | CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|---|
| 1. | - - | UNKNOWN HYDROCARBON | 9.57 | 7. | J |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

~~000110~~

EJJ66 RE

Lab Name: PEI Contract: 68-D9-0037

Lab Code: PEI Case No.: 13622 SAS No.: SDG No.: EJJ62

Matrix: (soil/water) SOIL Lab Sample ID: X0-02-168-05B

Sample wt/vol: 5.000 (g/mL) G Lab File ID: EJJ66RE

Level: (low/med) LOW Date Received: 2/21/90

% Moisture: not dec. 24. Date Analyzed: 3/ 5/90

Column: (pack/cap) CAP Dilution Factor: 1.00

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 74-87-3 | CHLOROMETHANE | 13. | U |
| 74-83-9 | BROMOMETHANE | 13. | U |
| 75-01-4 | VINYL CHLORIDE | 13. | U |
| 75-00-3 | CHLOROETHANE | 13. | U |
| 75-09-2 | METHYLENE CHLORIDE | 64. | |
| 67-64-1 | ACETONE | 13 ~~5.~~ | ~~BDL~~ U |
| 75-15-0 | CARBON DISULFIDE | 4. | J |
| 75-35-4 | 1,1-DICHLOROETHENE | 7. | U |
| 75-34-3 | 1,1-DICHLOROETHANE | 7. | U |
| 540-59-0 | 1,2-DICHLOROETHENE (TOTAL) | 7. | U |
| 67-66-3 | CHLOROFORM | 7. | U |
| 107-06-2 | 1,2-DICHLOROETHANE | 7. | U |
| 78-93-3 | 2-BUTANONE | 13. | U |
| 71-55-6 | 1,1,1-TRICHLOROETHANE | 7. | U |
| 56-23-5 | CARBON TETRACHLORIDE | 7. | U |
| 108-05-4 | VINYL ACETATE | 13. | U |
| 75-27-4 | BROMODICHLOROMETHANE | 7. | U |
| 78-87-5 | 1,2-DICHLOROPROPANE | 7. | U |
| 10061-01-5 | CIS-1,3-DICHLOROPROPENE | 7. | U |
| 79-01-6 | TRICHLOROETHENE | 7. | U |
| 124-48-1 | DIBROMOCHLOROMETHANE | 7. | U |
| 79-00-5 | 1,1,2-TRICHLOROETHANE | 7. | U |
| 71-43-2 | BENZENE | 7. | U |
| 10061-02-6 | TRANS-1,3-DICHLOROPROPENE | 7. | U |
| 75-25-2 | BROMOFORM | 7. | U |
| 108-10-1 | 4-METHYL-2-PENTANONE | 13. | U |
| 591-78-6 | 2-HEXANONE | 13. | U |
| 127-18-4 | TETRACHLOROETHENE | 7. | U |
| 79-34-5 | 1,1,2,2-TETRACHLOROETHANE | 7. | U |
| 108-88-3 | TOLUENE | 200. | |
| 108-90-7 | CHLOROBENZENE | 7. | U |
| 100-41-4 | ETHYLBENZENE | 7. | U |
| 100-42-5 | STYRENE | 7. | U |
| 1330-20-7 | XYLENE (TOTAL) | 7. | U |

J.U. 4/3/90

1E

EPA SAMPLE NO.

000111

EJJ66 RE

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: PEI Contract: 68-D9-0037

Lab Code: PEI Case No.: 13622 SAS No.: SDG No.: EJJ62

Matrix: (soil/water) SOIL Lab Sample ID: X0-02-168-05B

Sample wt/vol: 5.000 (g/mL) G Lab File ID: EJJ66RE

Level: (low/med) LOW Date Received: 2/21/90

% Moisture: not dec. 24. Date Analyzed: 3/ 5/90

Column: (pack/cap) CAP Dilution Factor: 1.00

Number TICs found: 2

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

| | CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|---|
| 1. | - - | UNKNOWN | 10.87 | 50. | J |
| 2. | - - | UNKNOWN | 11.48 | 40. | J |
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1A

# VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

000121

EJJ67

Lab Name: PEI  Contract: 68-D9-0037

Lab Code: PEI  Case No.: 13622  SAS No.:  SDG No.: EJJ62

Matrix: (soil/water) SOIL  Lab Sample ID: XO-02-168-06B

Sample wt/vol: 5.000 (g/mL) G  Lab File ID: EJJ67

Level: (low/med) LOW  Date Received: 2/21/90

% Moisture: not dec. 36.  Date Analyzed: 3/ 5/90

Column: (pack/cap) CAP  Dilution Factor: 1.00

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 74-87-3 | CHLOROMETHANE | 16. | U |
| 74-83-9 | BROMOMETHANE | 16. | U |
| 75-01-4 | VINYL CHLORIDE | 16. | U |
| 75-00-3 | CHLORDETHANE | 16. | U |
| 75-09-2 | METHYLENE CHLORIDE | 19 | |
| 67-64-1 | ACETONE | ~~16.~~ | ~~BDL~~ U |
| 75-15-0 | CARBON DISULFIDE | 3. | J |
| 75-35-4 | 1,1-DICHLOROETHENE | 8. | U |
| 75-34-3 | 1,1-DICHLOROETHANE | 8. | U |
| 540-59-0 | 1,2-DICHLOROETHENE (TOTAL) | 8. | U |
| 67-66-3 | CHLOROFORM | 8. | U |
| 107-06-2 | 1,2-DICHLOROETHANE | 8. | U |
| 78-93-3 | 2-BUTANONE | 16. | U |
| 71-55-6 | 1,1,1-TRICHLOROETHANE | 8. | U |
| 56-23-5 | CARBON TETRACHLORIDE | 8. | U |
| 108-05-4 | VINYL ACETATE | 16. | U |
| 75-27-4 | BROMODICHLOROMETHANE | 8. | U |
| 78-87-5 | 1,2-DICHLOROPROPANE | 8. | U |
| 10061-01-5 | CIS-1,3-DICHLOROPROPENE | 8. | U |
| 79-01-6 | TRICHLOROETHENE | 8. | U |
| 124-48-1 | DIBROMOCHLOROMETHANE | 8. | U |
| 79-00-5 | 1,1,2-TRICHLOROETHANE | 8. | U |
| 71-43-2 | BENZENE | 8. | U |
| 10061-02-6 | TRANS-1,3-DICHLOROPROPENE | 8. | U |
| 75-25-2 | BROMOFORM | 8. | U |
| 108-10-1 | 4-METHYL-2-PENTANONE | 16. | U |
| 591-78-6 | 2-HEXANONE | 16. | U |
| 127-18-4 | TETRACHLOROETHENE | 8. | U |
| 79-34-5 | 1,1,2,2-TETRACHLOROETHANE | 8. | U |
| 108-88-3 | TOLUENE | 8. | U |
| 108-90-7 | CHLOROBENZENE | 8. | U |
| 100-41-4 | ETHYLBENZENE | 8. | U |
| 100-42-5 | STYRENE | 8. | U |
| 1330-20-7 | XYLENE (TOTAL) | 8. | U |

J.V. 4/3/90

1E

EPA SAMPLE NO.

000122

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EJJ67

Lab Name: PEI Contract: 68-D9-0037

Lab Code: PEI Case No.: 13622 SAS No.: SDG No.: EJJ62

Matrix: (soil/water) SOIL Lab Sample ID: X0-02-168-06B

Sample wt/vol: 5.000 (g/mL) G Lab File ID: EJJ67

Level: (low/med) LOW Date Received: 2/21/90

% Moisture: not dec. 36. Date Analyzed: 3/ 5/90

Column: (pack/cap) CAP Dilution Factor: 1.00

Number TICs found: 0

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

| | CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|---|
| 1. | | | | | |
| 2. | | | | | |
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
000129

EJJ68

Lab Name: PEI Contract: 68-D9-0037

Lab Code: PEI Case No.: 13622 SAS No.: SDG No.: EJJ62

Matrix: (soil/water) SOIL Lab Sample ID: XO-02-168-07B

Sample wt/vol: 5.000 (g/mL) G Lab File ID: EJJ68

Level: (low/med) LOW Date Received: 2/21/90

% Moisture: not dec. 32. Date Analyzed: 3/ 5/90

Column: (pack/cap) CAP Dilution Factor: 1.00

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 74-87-3 | CHLOROMETHANE | 15. | U |
| 74-83-9 | BROMOMETHANE | 15. | U |
| 75-01-4 | VINYL CHLORIDE | 15. | U |
| 75-00-3 | CHLOROETHANE | 15. | U |
| 75-09-2 | METHYLENE CHLORIDE | 23. | |
| 67-64-1 | ACETONE | 153. | BJU |
| 75-15-0 | CARBON DISULFIDE | 7. | U |
| 75-35-4 | 1,1-DICHLOROETHENE | 7. | U |
| 75-34-3 | 1,1-DICHLOROETHANE | 7. | U |
| 540-59-0 | 1,2-DICHLOROETHENE (TOTAL) | 7. | U |
| 67-66-3 | CHLOROFORM | 7. | U |
| 107-06-2 | 1,2-DICHLOROETHANE | 7. | U |
| 78-93-3 | 2-BUTANONE | 15. | U |
| 71-55-6 | 1,1,1-TRICHLOROETHANE | 7. | U |
| 56-23-5 | CARBON TETRACHLORIDE | 7. | U |
| 108-05-4 | VINYL ACETATE | 15. | U |
| 75-27-4 | BROMODICHLOROMETHANE | 7. | U |
| 78-87-5 | 1,2-DICHLOROPROPANE | 7. | U |
| 10061-01-5 | CIS-1,3-DICHLOROPROPENE | 7. | U |
| 79-01-6 | TRICHLOROETHENE | 7. | U |
| 124-48-1 | DIBROMOCHLOROMETHANE | 7. | U |
| 79-00-5 | 1,1,2-TRICHLOROETHANE | 7. | U |
| 71-43-2 | BENZENE | 7. | U |
| 10061-02-6 | TRANS-1,3-DICHLOROPROPENE | 7. | U |
| 75-25-2 | BROMOFORM | 7. | U |
| 108-10-1 | 4-METHYL-2-PENTANONE | 15. | U |
| 591-78-6 | 2-HEXANONE | 15. | U |
| 127-18-4 | TETRACHLOROETHENE | 7. | U |
| 79-34-5 | 1,1,2,2-TETRACHLOROETHANE | 7. | U |
| 108-88-3 | TOLUENE | 5. | J |
| 108-90-7 | CHLOROBENZENE | 7. | U |
| 100-41-4 | ETHYLBENZENE | 7. | U |
| 100-42-5 | STYRENE | 7. | U |
| 1330-20-7 | XYLENE (TOTAL) | 7. | U |

J.V. 4/3/90

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

000130
EJJ68

Lab Name: PEI Contract: 68-D9-0037

Lab Code: PEI Case No.: 13622 SAS No.: SDG No.: EJJ62

Matrix: (soil/water) SOIL Lab Sample ID: XO-02-168-07B

Sample wt/vol: 5.000 (g/mL) G Lab File ID: EJJ68

Level: (low/med) LOW Date Received: 2/21/90

% Moisture: not dec. 32. Date Analyzed: 3/ 5/90

Column: (pack/cap) CAP Dilution Factor: 1.00

Number TICs found: 3

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

| | CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|---|
| 1. | - - | UNKNOWN | 10.87 | 20. | J |
| 2. | - - | UNKNOWN | 11.63 | 7. | J |
| 3. | - - | UNKNOWN | 14.85 | 6. | J |
| 4. | | | | | |
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EJJ69

Lab Name: PEI Contract: 68-D9-0037

Lab Code: PEI Case No.: 13622 SAS No.: SDG No.: EJJ62

Matrix: (soil/water) SOIL Lab Sample ID: XO-02-168-08B

Sample wt/vol: 5.000 (g/mL) G Lab File ID: EJJ69

Level: (low/med) LOW Date Received: 2/21/90

% Moisture: not dec. 28. Date Analyzed: 3/ 5/90

Column: (pack/cap) CAP Dilution Factor: 1.00

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 74-87-3 | CHLOROMETHANE | 14. | U |
| 74-83-9 | BROMOMETHANE | 14. | U |
| 75-01-4 | VINYL CHLORIDE | 14. | U |
| 75-00-3 | CHLOROETHANE | 14 | U |
| 75-09-2 | METHYLENE CHLORIDE | 22. | |
| 67-64-1 | ACETONE | ~~14.~~ | ~~B~~ |
| 75-15-0 | CARBON DISULFIDE | 7. | U |
| 75-35-4 | 1,1-DICHLOROETHENE | 7. | U |
| 75-34-3 | 1,1-DICHLOROETHANE | 7. | U |
| 540-59-0 | 1,2-DICHLOROETHENE (TOTAL) | 7. | U |
| 67-66-3 | CHLOROFORM | 7. | U |
| 107-06-2 | 1,2-DICHLOROETHANE | 7. | U |
| 78-93-3 | 2-BUTANONE | 14. | U |
| 71-55-6 | 1,1,1-TRICHLOROETHANE | 7. | U |
| 56-23-5 | CARBON TETRACHLORIDE | 7. | U |
| 108-05-4 | VINYL ACETATE | 14. | U |
| 75-27-4 | BROMODICHLOROMETHANE | 7. | U |
| 78-87-5 | 1,2-DICHLOROPROPANE | 7. | U |
| 10061-01-5 | CIS-1,3-DICHLOROPROPENE | 7. | U |
| 79-01-6 | TRICHLOROETHENE | 7. | U |
| 124-48-1 | DIBROMOCHLOROMETHANE | 7. | U |
| 79-00-5 | 1,1,2-TRICHLOROETHANE | 7. | U |
| 71-43-2 | BENZENE | 7. | U |
| 10061-02-6 | TRANS-1,3-DICHLOROPROPENE | 7. | U |
| 75-25-2 | BROMOFORM | 7. | U |
| 108-10-1 | 4-METHYL-2-PENTANONE | 14. | U |
| 591-78-6 | 2-HEXANONE | 14. | U |
| 127-18-4 | TETRACHLOROETHENE | 7. | U |
| 79-34-5 | 1,1,2,2-TETRACHLOROETHANE | 7. | U |
| 108-88-3 | TOLUENE | 2. | J |
| 108-90-7 | CHLOROBENZENE | 7. | U |
| 100-41-4 | ETHYLBENZENE | 7. | U |
| 100-42-5 | STYRENE | 7. | U |
| 1330-20-7 | XYLENE (TOTAL) | 7. | U |

J.V. 4/3/90

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EJJ69

Lab Name: PEI Contract: 68-D9-0037

Lab Code: PEI Case No.: 13622 SAS No.: SDG No.: EJJ62

Matrix: (soil/water) SOIL Lab Sample ID: XO-02-168-08B

Sample wt/vol: 5.000 (g/mL) G Lab File ID: EJJ69

Level: (low/med) LOW Date Received: 2/21/90

% Moisture: not dec. 28. Date Analyzed: 3/ 5/90

Column: (pack/cap) CAP Dilution Factor: 1.00

Number TICs found: 0

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

| CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|
| 1. | | | | |
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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EJJ62

Lab Name: PEI Contract: 68-D9-0037

Lab Code: PEI Case No.: 13622 SAS No.: SDG No.: EJJ62

Matrix: (soil/water) SOIL Lab Sample ID: X0-02-168-01A

Sample wt/vol: 30.1 (g/mL) G Lab File ID: EJJ62

Level: (low/med) LOW Date Received: 2/21/90

% Moisture: not dec. 9. dec. _____ Date Extracted: 2/26/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 3/ 9/90

GPC Cleanup: (Y/N) Y pH: 5.5 Dilution Factor: 1.00

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 108-95-2 | Phenol | 720. | U |
| 111-44-4 | bis(2-Chloroethyl)ether | 720. | U |
| 95-57-8 | 2-Chlorophenol | 720. | U |
| 541-73-1 | 1,3-Dichlorobenzene | 720. | U |
| 106-46-7 | 1,4-Dichlorobenzene | 720. | U |
| 100-51-6 | Benzyl alcohol | 720. | U |
| 95-50-1 | 1,2-Dichlorobenzene | 720. | U |
| 95-48-7 | 2-Methylphenol | 720. | U |
| 108-60-1 | bis(2-Chloroisopropyl)ether | 720. | U |
| 106-44-5 | 4-Methylphenol | 720. | U |
| 621-64-7 | N-Nitroso-di-n-propylamine | 720. | U |
| 67-72-1 | Hexachloroethane | 720. | U |
| 98-95-3 | Nitrobenzene | 720. | U |
| 78-59-1 | Isophorone | 720. | U |
| 88-75-5 | 2-Nitrophenol | 720. | U |
| 105-67-9 | 2,4-Dimethylphenol | 720. | U |
| 65-85-0 | Benzoic acid | 3500. | U |
| 111-91-1 | bis(2-Chloroethoxy)methane | 720. | U |
| 120-83-2 | 2,4-Dichlorophenol | 720. | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 720. | U |
| 91-20-3 | Naphthalene | 130. | J |
| 106-47-8 | 4-Chloroaniline | 720. | U |
| 87-68-3 | Hexachlorobutadiene | 720. | U |
| 59-50-7 | 4-Chloro-3-methylphenol | 720. | U |
| 91-57-6 | 2-Methylnaphthalene | 220 | J |
| 77-47-4 | Hexachlorocyclopentadiene | 720. | U |
| 88-06-2 | 2,4,6-Trichlorophenol | 720. | U |
| 95-95-4 | 2,4,5-Trichlorophenol | 3500. | U |
| 91-58-7 | 2-Chloronaphthalene | 720. | U |
| 88-74-4 | 2-Nitroaniline | 3500. | U |
| 131-11-3 | Dimethylphthalate | 720. | U |
| 208-96-8 | Acenaphthylene | 720. | U |
| 606-20-2 | 2,6-Dinitrotoluene | 720. | U |

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

000244

EJJ62

Lab Name: PEI Contract: 68-D9-0037

Lab Code: PEI Case No.: 13622 SAS No.: SDG No.: EJJ62

Matrix: (soil/water) SOIL Lab Sample ID: X0-02-168-01A

Sample wt/vol: 30.1 (g/mL) G Lab File ID: EJJ62

Level: (low/med) LOW Date Received: 2/21/90

% Moisture: not dec. 9. dec. _____ Date Extracted: 2/26/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 3/ 9/90

GPC Cleanup: (Y/N) Y pH: 5.5 Dilution Factor: 1.00

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 99-09-2 | 3-Nitroaniline | 3500. | U |
| 83-32-9 | Acenaphthene | 720. | U |
| 51-28-5 | 2,4-Dinitrophenol | 3500. | U |
| 100-02-7 | 4-Nitrophenol | 3500. | U |
| 132-64-9 | Dibenzofuran | 720. | U |
| 121-14-2 | 2,4-Dinitrotoluene | 720. | U |
| 84-66-2 | Diethylphthalate | 720. | U |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 720. | U |
| 86-73-7 | Fluorene | 720. | U |
| 100-01-6 | 4-Nitroaniline | 3500. | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 3500. | U |
| 86-30-6 | N-Nitrosodiphenylamine (1) | 720. | U |
| 101-55-3 | 4-Bromophenyl-phenylether | 720. | U |
| 118-74-1 | Hexachlorobenzene | 720. | U |
| 87-86-5 | Pentachlorophenol | 3500. | U |
| 85-01-8 | Phenanthrene | 130. | J |
| 120-12-7 | Anthracene | 720. | U |
| 84-74-2 | Di-n-butylphthalate | 97. | J |
| 206-44-0 | Fluoranthene | 720. | U |
| 129-00-0 | Pyrene | 720. | U |
| 85-68-7 | Butylbenzylphthalate | 720. | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | 1400. | U |
| 56-55-3 | Benzo(a)anthracene | 720. | U |
| 218-01-9 | Chrysene | 720. | U |
| 117-81-7 | bis(2-Ethylhexyl)phthalate | 120. | J |
| 117-84-0 | Di-n-octylphthalate | 720. | U |
| 205-99-2 | Benzo(b)fluoranthene | 720. | U |
| 207-08-9 | Benzo(k)fluoranthene | 720. | U |
| 50-32-8 | Benzo(a)pyrene | 720. | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 720. | U |
| 53-70-3 | Dibenz(a,h)anthracene | 720. | U |
| 191-24-2 | Benzo(g,h,i)perylene | 720. | U |

(1) - Cannot be separated from diphenylamine

1F

EPA SAMPLE NO.
000245

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EJJ62

Lab Name: PEI Contract: 68-D9-0037

Lab Code: PEI Case No.: 13622 SAS No.: SDG No.: EJJ62

Matrix: (soil/water) SOIL Lab Sample ID: X0-02-168-01A

Sample wt/vol: 30.1 (g/mL) G Lab File ID: EJJ62

Level: (low/med) LOW Date Received: 2/21/90

% Moisture: not dec. 9. dec. _____ Date Extracted: 2/26/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 3/ 9/90

GPC Cleanup: (Y/N) Y pH: 5.5 Dilution Factor: 1.00

Number TICs found: 9

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

| | CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|---|
| 1. | - - | UNKNOWN | 8.20 | 1000. | J A |
| 2. | - - | UNKNOWN | 8.33 | 500. | J A |
| 3. | - - | UNKNOWN | 8.58 | 700. | BJ A |
| 4. | - - | UNKNOWN | 9.50 | 900. | J A |
| 5. | - - | UNKNOWN | 10.62 | 2000. | J A |
| 6. | - - | UNKNOWN HYDROCARBON | 18.73 | 300. | J |
| 7. | - - | UNKNOWN HYDROCARBON | 20.02 | 400. | J |
| 8. | - - | UNKNOWN | 24.10 | 700. | J |
| 9. | - - | UNKNOWN | 26.95 | 1000. | J |
| 10. | | | | | |
| 11. | | | | | |
| 12. | | | | | |
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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EJJ63

Lab Name: PEI Contract: 68-D9-0037

Lab Code: PEI Case No.: 13622 SAS No.: SDG No.: EJJ62

Matrix: (soil/water) SOIL Lab Sample ID: X0-02-168-02A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EJJ63RE2

Level: (low/med) LOW Date Received: 2/21/90

% Moisture: not dec. 30. dec. _____ Date Extracted: 2/26/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 3/14/90

GPC Cleanup: (Y/N) Y pH: 5.5 Dilution Factor: 1.00

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 108-95-2 | Phenol | 940. | U |
| 111-44-4 | bis(2-Chloroethyl)ether | 940. | U |
| 95-57-8 | 2-Chlorophenol | 940. | U |
| 541-73-1 | 1,3-Dichlorobenzene | 940. | U |
| 106-46-7 | 1,4-Dichlorobenzene | 940. | U |
| 100-51-6 | Benzyl alcohol | 940. | U |
| 95-50-1 | 1,2-Dichlorobenzene | 940. | U |
| 95-48-7 | 2-Methylphenol | 940. | U |
| 108-60-1 | bis(2-Chloroisopropyl)ether | 940. | U |
| 106-44-5 | 4-Methylphenol | 940. | U |
| 621-64-7 | N-Nitroso-di-n-propylamine | 940. | U |
| 67-72-1 | Hexachloroethane | 940. | U |
| 98-95-3 | Nitrobenzene | 940. | U |
| 78-59-1 | Isophorone | 940. | U |
| 88-75-5 | 2-Nitrophenol | 940. | U |
| 105-67-9 | 2,4-Dimethylphenol | 940. | U |
| 65-85-0 | Benzoic acid | 4600. | U |
| 111-91-1 | bis(2-Chloroethoxy)methane | 940. | U |
| 120-83-2 | 2,4-Dichlorophenol | 940. | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 940. | U |
| 91-20-3 | Naphthalene | 1300. | |
| 106-47-8 | 4-Chloroaniline | 940. | U |
| 87-68-3 | Hexachlorobutadiene | 940. | U |
| 59-50-7 | 4-Chloro-3-methylphenol | 940. | U |
| 91-57-6 | 2-Methylnaphthalene | 1900. | |
| 77-47-4 | Hexachlorocyclopentadiene | 940. | U |
| 88-06-2 | 2,4,6-Trichlorophenol | 940. | U |
| 95-95-4 | 2,4,5-Trichlorophenol | 4600. | U |
| 91-58-7 | 2-Chloronaphthalene | 940. | U |
| 88-74-4 | 2-Nitroaniline | 4600. | U |
| 131-11-3 | Dimethylphthalate | 940. | U |
| 208-96-8 | Acenaphthylene | 940. | U |
| 606-20-2 | 2,6-Dinitrotoluene | 940. | U |

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EJJ63

Lab Name: PEI Contract: 68-D9-0037

Lab Code: PEI Case No.: 13622 SAS No.: SDG No.: EJJ62

Matrix: (soil/water) SOIL Lab Sample ID: X0-02-168-02A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EJJ63RE2

Level: (low/med) LOW Date Received: 2/21/90

% Moisture: not dec. 30. dec. _____ Date Extracted: 2/26/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 3/14/90

GPC Cleanup: (Y/N) Y pH: 5.5 Dilution Factor: 1.00

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 99-09-2 | 3-Nitroaniline | 4600. | U |
| 83-32-9 | Acenaphthene | 940. | U |
| 51-28-5 | 2,4-Dinitrophenol | 4600. | U |
| 100-02-7 | 4-Nitrophenol | 4600. | U |
| 132-64-9 | Dibenzofuran | 410. | J |
| 121-14-2 | 2,4-Dinitrotoluene | 940. | U |
| 84-66-2 | Diethylphthalate | 940. | U |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 940. | U |
| 86-73-7 | Fluorene | 940. | U |
| 100-01-6 | 4-Nitroaniline | 4600. | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 4600. | U |
| 86-30-6 | N-Nitrosodiphenylamine (1) | 940. | U |
| 101-55-3 | 4-Bromophenyl-phenylether | 940. | U |
| 118-74-1 | Hexachlorobenzene | 940. | U |
| 87-86-5 | Pentachlorophenol | 4600. | U |
| 85-01-8 | Phenanthrene | 980. | |
| 120-12-7 | Anthracene | 130. | J |
| 84-74-2 | Di-n-butylphthalate | 170. | J |
| 206-44-0 | Fluoranthene | 610. | J |
| 129-00-0 | Pyrene | 650. | J |
| 85-68-7 | Butylbenzylphthalate | 940. | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | 1900. | U |
| 56-55-3 | Benzo(a)anthracene | 460. | J |
| 218-01-9 | Chrysene | 530. | J |
| 117-81-7 | bis(2-Ethylhexyl)phthalate | 270. | J |
| 117-84-0 | Di-n-octylphthalate | 940. | U |
| 205-99-2 | Benzo(b)fluoranthene | 400. | J |
| 207-08-9 | Benzo(k)fluoranthene | 280. | J |
| 50-32-8 | Benzo(a)pyrene | 940. | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 940. | U |
| 53-70-3 | Dibenz(a,h)anthracene | 940. | U |
| 191-24-2 | Benzo(g,h,i)perylene | 940. | U |

(1) - Cannot be separated from diphenylamine

1F

EPA SAMPLE NO.
000269

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EJJ63

Lab Name: PEI Contract: 68-D9-0037

Lab Code: PEI Case No.: 13622 SAS No.: SDG No.: EJJ62

Matrix: (soil/water) SOIL Lab Sample ID: XO-02-168-02A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EJJ63RE2

Level: (low/med) LOW Date Received: 2/21/90

% Moisture: not dec. 30. dec. _____ Date Extracted: 2/26/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 3/14/90

GPC Cleanup: (Y/N) Y pH: 5.5 Dilution Factor: 1.00

Number TICs found: 17

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

| CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|
| 1. - - | UNKNOWN | 8.35 | 3000. | J A |
| 2. - - | UNKNOWN | 9.27 | 3000. | J A |
| 3. - - | UNKNOWN | 10.35 | 5000. | J A |
| 4. - - | UNKNOWN AROMATIC | 14.75 | 1000. | J |
| 5. - - | UNKNOWN AROMATIC | 16.32 | 2000. | J |
| 6. - - | UNKNOWN AROMATIC | 16.58 | 2000. | J |
| 7. - - | UNKNOWN | 18.55 | 2000. | J |
| 8. - - | UNKNOWN | 18.97 | 4000. | J |
| 9. - - | UNKNOWN HYDROCARBON | 19.77 | 3000. | J |
| 10. - - | UNKNOWN | 23.67 | 4000. | J |
| 11. - - | UNKNOWN | 23.80 | 2000. | J |
| 12. - - | UNKNOWN | 24.55 | 900. | J |
| 13. - - | UNKNOWN | 24.72 | 2000. | J |
| 14. - - | UNKNOWN | 24.90 | 2000. | J |
| 15. - - | UNKNOWN | 26.15 | 1000. | J |
| 16. - - | UNKNOWN | 26.55 | 5000. | J |
| 17. - - | UNKNOWN | 25.98 | 2000. | J |
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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EJJ64

Lab Name: PEI Contract: 68-D9-0037

Lab Code: PEI Case No.: 13622 SAS No.: SDG No.: EJJ62

Matrix: (soil/water) SOIL Lab Sample ID: X0-02-168-03A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EJJ64

Level: (low/med) LOW Date Received: 2/21/90

% Moisture: not dec. 8. dec. _____ Date Extracted: 2/26/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 3/ 9/90

GPC Cleanup: (Y/N) Y pH: 5.5 Dilution Factor: 1.00

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 108-95-2 | Phenol | 710. | U |
| 111-44-4 | bis(2-Chloroethyl)ether | 710. | U |
| 95-57-8 | 2-Chlorophenol | 710. | U |
| 541-73-1 | 1,3-Dichlorobenzene | 710. | U |
| 106-46-7 | 1,4-Dichlorobenzene | 710. | U |
| 100-51-6 | Benzyl alcohol | 710. | U |
| 95-50-1 | 1,2-Dichlorobenzene | 710. | U |
| 95-48-7 | 2-Methylphenol | 710. | U |
| 108-60-1 | bis(2-Chloroisopropyl)ether | 710. | U |
| 106-44-5 | 4-Methylphenol | 710. | U |
| 621-64-7 | N-Nitroso-di-n-propylamine | 710. | U |
| 67-72-1 | Hexachloroethane | 710. | U |
| 98-95-3 | Nitrobenzene | 710. | U |
| 78-59-1 | Isophorone | 710. | U |
| 88-75-5 | 2-Nitrophenol | 710. | U |
| 105-67-9 | 2,4-Dimethylphenol | 710. | U |
| 65-85-0 | Benzoic acid | 3500. | U |
| 111-91-1 | bis(2-Chloroethoxy)methane | 710. | U |
| 120-83-2 | 2,4-Dichlorophenol | 710. | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 710. | U |
| 91-20-3 | Naphthalene | 130. | J |
| 106-47-8 | 4-Chloroaniline | 710. | U |
| 87-68-3 | Hexachlorobutadiene | 710. | U |
| 59-50-7 | 4-Chloro-3-methylphenol | 710. | U |
| 91-57-6 | 2-Methylnaphthalene | 150. | J |
| 77-47-4 | Hexachlorocyclopentadiene | 710. | U |
| 88-06-2 | 2,4,6-Trichlorophenol | 710. | U |
| 95-95-4 | 2,4,5-Trichlorophenol | 3500. | U |
| 91-58-7 | 2-Chloronaphthalene | 710. | U |
| 88-74-4 | 2-Nitroaniline | 3500. | U |
| 131-11-3 | Dimethylphthalate | 710. | U |
| 208-96-8 | Acenaphthylene | 710. | U |
| 606-20-2 | 2,6-Dinitrotoluene | 710. | U |

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EJJ64

Lab Name: PEI Contract: 68-D9-0037

Lab Code: PEI Case No.: 13622 SAS No.: SDG No.: EJJ62

Matrix: (soil/water) SOIL Lab Sample ID: XO-02-168-03A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EJJ64

Level: (low/med) LOW Date Received: 2/21/90

% Moisture: not dec. 8. dec. _____ Date Extracted: 2/26/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 3/ 9/90

GPC Cleanup: (Y/N) Y pH: 5.5 Dilution Factor: 1.00

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 99-09-2 | 3-Nitroaniline | 3500. | U |
| 83-32-9 | Acenaphthene | 710. | U |
| 51-28-5 | 2,4-Dinitrophenol | 3500. | U |
| 100-02-7 | 4-Nitrophenol | 3500. | U |
| 132-64-9 | Dibenzofuran | 710. | U |
| 121-14-2 | 2,4-Dinitrotoluene | 710. | U |
| 84-66-2 | Diethylphthalate | 710. | U |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 710. | U |
| 86-73-7 | Fluorene | 710. | U |
| 100-01-6 | 4-Nitroaniline | 3500. | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 3500. | U |
| 86-30-6 | N-Nitrosodiphenylamine (1) | 710. | U |
| 101-55-3 | 4-Bromophenyl-phenylether | 710. | U |
| 118-74-1 | Hexachlorobenzene | 710. | U |
| 87-86-5 | Pentachlorophenol | 3500. | U |
| 85-01-8 | Phenanthrene | 110. | J |
| 120-12-7 | Anthracene | 710. | U |
| 84-74-2 | Di-n-butylphthalate | 710. | U |
| 206-44-0 | Fluoranthene | 710. | U |
| 129-00-0 | Pyrene | 710. | U |
| 85-68-7 | Butylbenzylphthalate | 710. | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | 1400. | U |
| 56-55-3 | Benzo(a)anthracene | 710. | U |
| 218-01-9 | Chrysene | 710. | U |
| 117-81-7 | bis(2-Ethylhexyl)phthalate | 95. | J |
| 117-84-0 | Di-n-octylphthalate | 710. | U |
| 205-99-2 | Benzo(b)fluoranthene | 710. | U |
| 207-08-9 | Benzo(k)fluoranthene | 710. | U |
| 50-32-8 | Benzo(a)pyrene | 710. | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 710. | U |
| 53-70-3 | Dibenz(a,h)anthracene | 710. | U |
| 191-24-2 | Benzo(g,h,i)perylene | 710. | U |

(1) - Cannot be separated from diphenylamine

1F

EPA SAMPLE NO.

EJJ64

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: PEI Contract: 68-D9-0037

Lab Code: PEI Case No.: 13622 SAS No.: SDG No.: EJJ62

Matrix: (soil/water) SOIL Lab Sample ID: X0-02-168-03A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EJJ64

Level: (low/med) LOW Date Received: 2/21/90

% Moisture: not dec. 8. dec. _____ Date Extracted: 2/26/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 3/ 9/90

GPC Cleanup: (Y/N) Y pH: 5.5 Dilution Factor: 1.00

Number TICs found: 6

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

| | CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|---|
| 1. | - - | UNKNOWN | 8.20 | 1000. | J A |
| 2. | - - | UNKNOWN | 8.58 | 600. | J A |
| 3. | - - | UNKNOWN | 9.50 | 2000. | J A |
| 4. | - - | UNKNOWN | 10.58 | 2000. | J A |
| 5. | - - | UNKNOWN | 18.78 | 300. | J |
| 6. | - - | UNKNOWN | 24.08 | 900. | J |
| 7. | | | | | |
| 8. | | | | | |
| 9. | | | | | |
| 10. | | | | | |
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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EJJ65

Lab Name: PEI Contract: 68-D9-0037

Lab Code: PEI Case No.: 13622 SAS No.: SDG No.: EJJ62

Matrix: (soil/water) SOIL Lab Sample ID: X0-02-168-04A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EJJ65

Level: (low/med) LOW Date Received: 2/21/90

% Moisture: not dec. 22. dec. _____ Date Extracted: 2/26/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 3/12/90

GPC Cleanup: (Y/N) Y pH: 5.5 Dilution Factor: 1.00

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 108-95-2 | Phenol | 850. | U |
| 111-44-4 | bis(2-Chloroethyl)ether | 850. | U |
| 95-57-8 | 2-Chlorophenol | 850. | U |
| 541-73-1 | 1,3-Dichlorobenzene | 850. | U |
| 106-46-7 | 1,4-Dichlorobenzene | 850. | U |
| 100-51-6 | Benzyl alcohol | 850. | U |
| 95-50-1 | 1,2-Dichlorobenzene | 850. | U |
| 95-48-7 | 2-Methylphenol | 850. | U |
| 108-60-1 | bis(2-Chloroisopropyl)ether | 850. | U |
| 106-44-5 | 4-Methylphenol | 850. | U |
| 621-64-7 | N-Nitroso-di-n-propylamine | 850. | U |
| 67-72-1 | Hexachloroethane | 850. | U |
| 98-95-3 | Nitrobenzene | 850. | U |
| 78-59-1 | Isophorone | 850. | U |
| 88-75-5 | 2-Nitrophenol | 850. | U |
| 105-67-9 | 2,4-Dimethylphenol | 850. | U |
| 65-85-0 | Benzoic acid | 4100. | U |
| 111-91-1 | bis(2-Chloroethoxy)methane | 850. | U |
| 120-83-2 | 2,4-Dichlorophenol | 850. | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 850. | U |
| 91-20-3 | Naphthalene | 850. | U |
| 106-47-8 | 4-Chloroaniline | 850. | U |
| 87-68-3 | Hexachlorobutadiene | 850. | U |
| 59-50-7 | 4-Chloro-3-methylphenol | 850. | U |
| 91-57-6 | 2-Methylnaphthalene | 850. | U |
| 77-47-4 | Hexachlorocyclopentadiene | 850. | U |
| 88-06-2 | 2,4,6-Trichlorophenol | 850. | U |
| 95-95-4 | 2,4,5-Trichlorophenol | 4100. | U |
| 91-58-7 | 2-Chloronaphthalene | 850. | U |
| 88-74-4 | 2-Nitroaniline | 4100. | U |
| 131-11-3 | Dimethylphthalate | 850. | U |
| 208-96-8 | Acenaphthylene | 850. | U |
| 606-20-2 | 2,6-Dinitrotoluene | 850. | U |

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EJJ65

Lab Name: PEI Contract: 68-D9-0037

Lab Code: PEI Case No.: 13622 SAS No.: SDG No.: EJJ62

Matrix: (soil/water) SOIL Lab Sample ID: XO-02-168-04A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EJJ65

Level: (low/med) LOW Date Received: 2/21/90

% Moisture: not dec. 22. dec. _____ Date Extracted: 2/26/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 3/12/90

GPC Cleanup: (Y/N) Y pH: 5.5 Dilution Factor: 1.00

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 99-09-2 | 3-Nitroaniline | 4100. | U |
| 83-32-9 | Acenaphthene | 850. | U |
| 51-28-5 | 2,4-Dinitrophenol | 4100. | U |
| 100-02-7 | 4-Nitrophenol | 4100. | U |
| 132-64-9 | Dibenzofuran | 850. | U |
| 121-14-2 | 2,4-Dinitrotoluene | 850. | U |
| 84-66-2 | Diethylphthalate | 850. | U |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 850. | U |
| 86-73-7 | Fluorene | 850. | U |
| 100-01-6 | 4-Nitroaniline | 4100. | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 4100. | U |
| 86-30-6 | N-Nitrosodiphenylamine (1) | 850. | U |
| 101-55-3 | 4-Bromophenyl-phenylether | 850. | U |
| 118-74-1 | Hexachlorobenzene | 850. | U |
| 87-86-5 | Pentachlorophenol | 4100. | U |
| 85-01-8 | Phenanthrene | 850. | U |
| 120-12-7 | Anthracene | 850. | U |
| 84-74-2 | Di-n-butylphthalate | 100. | J |
| 206-44-0 | Fluoranthene | 850. | U |
| 129-00-0 | Pyrene | 850. | U |
| 85-68-7 | Butylbenzylphthalate | 850. | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | 1700. | U |
| 56-55-3 | Benzo(a)anthracene | 850. | U |
| 218-01-9 | Chrysene | 850. | U |
| 117-81-7 | bis(2-Ethylhexyl)phthalate | 850. | U |
| 117-84-0 | Di-n-octylphthalate | 850. | U |
| 205-99-2 | Benzo(b)fluoranthene | 850. | U |
| 207-08-9 | Benzo(k)fluoranthene | 850. | U |
| 50-32-8 | Benzo(a)pyrene | 850. | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 850. | U |
| 53-70-3 | Dibenz(a,h)anthracene | 850. | U |
| 191-24-2 | Benzo(g,h,i)perylene | 850. | U |

(1) - Cannot be separated from diphenylamine

1F

EPA SAMPLE NO.
000329

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EJJ65

Lab Name: PEI Contract: 68-D9-0037

Lab Code: PEI Case No.: 13622 SAS No.: SDG No.: EJJ62

Matrix: (soil/water) SOIL Lab Sample ID: X0-02-168-04A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EJJ65

Level: (low/med) LOW Date Received: 2/21/90

% Moisture: not dec. 22. dec. _____ Date Extracted: 2/26/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 3/12/90

GPC Cleanup: (Y/N) Y pH: 5.5 Dilution Factor: 1.00

Number TICs found: 7

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

| | CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|---|
| 1. | - - | UNKNOWN HYDROCARBON | 6.50 | 500. | J |
| 2. | - - | UNKNOWN HYDROCARBON | 6.70 | 500. | J |
| 3. | - - | UNKNOWN | 8.18 | 1000. | J A |
| 4. | - - | UNKNOWN | 8.57 | 2000. | BJ A |
| 5. | - - | UNKNOWN | 9.48 | 2000. | BJ A |
| 6. | - - | UNKNOWN | 10.60 | 3000. | J A |
| 7. | - - | UNKNOWN | 12.20 | 400. | J |
| 8. | | | | | |
| 9. | | | | | |
| 10. | | | | | |
| 11. | | | | | |
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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EJJ66

Lab Name: PEI Contract: 68-D9-0037

Lab Code: PEI Case No.: 13622 SAS No.: SDG No.: EJJ62

Matrix: (soil/water) SOIL Lab Sample ID: X0-02-168-05A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EJJ66

Level: (low/med) LOW Date Received: 2/21/90

% Moisture: not dec. 24. dec. _____ Date Extracted: 2/26/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 3/ 9/90

GPC Cleanup: (Y/N) Y pH: 6.0 Dilution Factor: 1.00

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 108-95-2 | Phenol | 860. | U |
| 111-44-4 | bis(2-Chloroethyl)ether | 860. | U |
| 95-57-8 | 2-Chlorophenol | 860. | U |
| 541-73-1 | 1,3-Dichlorobenzene | 860. | U |
| 106-46-7 | 1,4-Dichlorobenzene | 860. | U |
| 100-51-6 | Benzyl alcohol | 860. | U |
| 95-50-1 | 1,2-Dichlorobenzene | 860. | U |
| 95-48-7 | 2-Methylphenol | 860. | U |
| 108-60-1 | bis(2-Chloroisopropyl)ether | 860. | U |
| 106-44-5 | 4-Methylphenol | 860. | U |
| 621-64-7 | N-Nitroso-di-n-propylamine | 860. | U |
| 67-72-1 | Hexachloroethane | 860. | U |
| 98-95-3 | Nitrobenzene | 860. | U |
| 78-59-1 | Isophorone | 860. | U |
| 88-75-5 | 2-Nitrophenol | 860. | U |
| 105-67-9 | 2,4-Dimethylphenol | 860. | U |
| 65-85-0 | Benzoic acid | 4200. | U |
| 111-91-1 | bis(2-Chloroethoxy)methane | 860. | U |
| 120-83-2 | 2,4-Dichlorophenol | 860. | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 860. | U |
| 91-20-3 | Naphthalene | 860. | U |
| 106-47-8 | 4-Chloroaniline | 860. | U |
| 87-68-3 | Hexachlorobutadiene | 860. | U |
| 59-50-7 | 4-Chloro-3-methylphenol | 860. | U |
| 91-57-6 | 2-Methylnaphthalene | 860. | U |
| 77-47-4 | Hexachlorocyclopentadiene | 860. | U |
| 88-06-2 | 2,4,6-Trichlorophenol | 860. | U |
| 95-95-4 | 2,4,5-Trichlorophenol | 4200. | U |
| 91-58-7 | 2-Chloronaphthalene | 860. | U |
| 88-74-4 | 2-Nitroaniline | 4200. | U |
| 131-11-3 | Dimethylphthalate | 860. | U |
| 208-96-8 | Acenaphthylene | 860. | U |
| 606-20-2 | 2,6-Dinitrotoluene | 860. | U |

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

000346

EJJ66

Lab Name: PEI Contract: 68-D9-0037

Lab Code: PEI Case No.: 13622 SAS No.: SDG No.: EJJ62

Matrix: (soil/water) SOIL Lab Sample ID: X0-02-168-05A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EJJ66

Level: (low/med) LOW Date Received: 2/21/90

% Moisture: not dec. 24. dec. _____ Date Extracted: 2/26/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 3/ 9/90

GPC Cleanup: (Y/N) Y pH: 6.0 Dilution Factor: 1.00

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 99-09-2 | 3-Nitroaniline | 4200. | U |
| 83-32-9 | Acenaphthene | 860. | U |
| 51-28-5 | 2,4-Dinitrophenol | 4200. | U |
| 100-02-7 | 4-Nitrophenol | 4200. | U |
| 132-64-9 | Dibenzofuran | 860. | U |
| 121-14-2 | 2,4-Dinitrotoluene | 860. | U |
| 84-66-2 | Diethylphthalate | 860. | U |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 860. | U |
| 86-73-7 | Fluorene | 860. | U |
| 100-01-6 | 4-Nitroaniline | 4200. | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 4200. | U |
| 86-30-6 | N-Nitrosodiphenylamine (1) | 860. | U |
| 101-55-3 | 4-Bromophenyl-phenylether | 860. | U |
| 118-74-1 | Hexachlorobenzene | 860. | U |
| 87-86-5 | Pentachlorophenol | 4200. | U |
| 85-01-8 | Phenanthrene | 860. | U |
| 120-12-7 | Anthracene | 860. | U |
| 84-74-2 | Di-n-butylphthalate | 860. | U |
| 206-44-0 | Fluoranthene | 860. | U |
| 129-00-0 | Pyrene | 860. | U |
| 85-68-7 | Butylbenzylphthalate | 860. | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | 1700. | U |
| 56-55-3 | Benzo(a)anthracene | 860. | U |
| 218-01-9 | Chrysene | 860. | U |
| 117-81-7 | bis(2-Ethylhexyl)phthalate | 860. | U |
| 117-84-0 | Di-n-octylphthalate | 860. | U |
| 205-99-2 | Benzo(b)fluoranthene | 860. | U |
| 207-08-9 | Benzo(k)fluoranthene | 860. | U |
| 50-32-8 | Benzo(a)pyrene | 860. | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 860. | U |
| 53-70-3 | Dibenz(a,h)anthracene | 860. | U |
| 191-24-2 | Benzo(g,h,i)perylene | 860. | U |

(1) - Cannot be separated from diphenylamine

1F

EPA SAMPLE NO.
000347

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EJJ66

Lab Name: PEI Contract: 68-D9-0037

Lab Code: PEI Case No.: 13622 SAS No.: SDG No.: EJJ62

Matrix: (soil/water) SOIL Lab Sample ID: X0-02-168-05A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EJJ66

Level: (low/med) LOW Date Received: 2/21/90

% Moisture: not dec. 24. dec. _____ Date Extracted: 2/26/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 3/ 9/90

GPC Cleanup: (Y/N) Y pH: 6.0 Dilution Factor: 1.00

Number TICs found: 6

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

| CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|
| 1. - - | UNKNOWN | 8.20 | 3000. | J A |
| 2. - - | UNKNOWN | 8.57 | 1000. | J A |
| 3. - - | UNKNOWN | 9.48 | 2000. | J A |
| 4. - - | UNKNOWN | 10.58 | 2000. | J A |
| 5. - - | UNKNOWN | 26.95 | 700. | J |
| 6. - - | UNKNOWN | 27.07 | 500. | J |
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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EJJ67

Lab Name: PEI Contract: 68-D9-0037

Lab Code: PEI Case No.: 13622 SAS No.: SDG No.: EJJ62

Matrix: (soil/water) SOIL Lab Sample ID: XO-02-168-06A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EJJ67RE

Level: (low/med) LOW Date Received: 2/21/90

% Moisture: not dec. 36. dec. _____ Date Extracted: 2/26/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 3/13/90

GPC Cleanup: (Y/N) Y pH: 6.0 Dilution Factor: 1.00

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 108-95-2 | Phenol | 1000. | U |
| 111-44-4 | bis(2-Chloroethyl)ether | 1000. | U |
| 95-57-8 | 2-Chlorophenol | 1000. | U |
| 541-73-1 | 1,3-Dichlorobenzene | 1000. | U |
| 106-46-7 | 1,4-Dichlorobenzene | 1000. | U |
| 100-51-6 | Benzyl alcohol | 1000. | U |
| 95-50-1 | 1,2-Dichlorobenzene | 1000. | U |
| 95-48-7 | 2-Methylphenol | 1000. | U |
| 108-60-1 | bis(2-Chloroisopropyl)ether | 1000. | U |
| 106-44-5 | 4-Methylphenol | 1000. | U |
| 621-64-7 | N-Nitroso-di-n-propylamine | 1000. | U |
| 67-72-1 | Hexachloroethane | 1000. | U |
| 98-95-3 | Nitrobenzene | 1000. | U |
| 78-59-1 | Isophorone | 1000. | U |
| 88-75-5 | 2-Nitrophenol | 1000. | U |
| 105-67-9 | 2,4-Dimethylphenol | 1000. | U |
| 65-85-0 | Benzoic acid | 5000. | U |
| 111-91-1 | bis(2-Chloroethoxy)methane | 1000. | U |
| 120-83-2 | 2,4-Dichlorophenol | 1000. | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 1000. | U |
| 91-20-3 | Naphthalene | 1000. | U |
| 106-47-8 | 4-Chloroaniline | 1000. | U |
| 87-68-3 | Hexachlorobutadiene | 1000. | U |
| 59-50-7 | 4-Chloro-3-methylphenol | 1000. | U |
| 91-57-6 | 2-Methylnaphthalene | 1000. | U |
| 77-47-4 | Hexachlorocyclopentadiene | 1000. | U |
| 88-06-2 | 2,4,6-Trichlorophenol | 1000. | U |
| 95-95-4 | 2,4,5-Trichlorophenol | 5000. | U |
| 91-58-7 | 2-Chloronaphthalene | 1000. | U |
| 88-74-4 | 2-Nitroaniline | 5000. | U |
| 131-11-3 | Dimethylphthalate | 1000. | U |
| 208-96-8 | Acenaphthylene | 1000. | U |
| 606-20-2 | 2,6-Dinitrotoluene | 1000. | U |

1C

EPA SAMPLE NO. 000362

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EJJ67

Lab Name: PEI Contract: 68-D9-0037

Lab Code: PEI Case No.: 13622 SAS No.: SDG No.: EJJ62

Matrix: (soil/water) SOIL Lab Sample ID: X0-02-168-06A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EJJ67RE

Level: (low/med) LOW Date Received: 2/21/90

% Moisture: not dec. 36. dec. _____ Date Extracted: 2/26/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 3/13/90

GPC Cleanup: (Y/N) Y pH: 6.0 Dilution Factor: 1.00

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 99-09-2 | 3-Nitroaniline | 5000. | U |
| 83-32-9 | Acenaphthene | 1000. | U |
| 51-28-5 | 2,4-Dinitrophenol | 5000. | U |
| 100-02-7 | 4-Nitrophenol | 5000. | U |
| 132-64-9 | Dibenzofuran | 1000. | U |
| 121-14-2 | 2,4-Dinitrotoluene | 1000. | U |
| 84-66-2 | Diethylphthalate | 230. | J |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 1000. | U |
| 86-73-7 | Fluorene | 1000. | U |
| 100-01-6 | 4-Nitroaniline | 5000. | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 5000. | U |
| 86-30-6 | N-Nitrosodiphenylamine (1) | 1000. | U |
| 101-55-3 | 4-Bromophenyl-phenylether | 1000. | U |
| 118-74-1 | Hexachlorobenzene | 1000. | U |
| 87-86-5 | Pentachlorophenol | 5000. | U |
| 85-01-8 | Phenanthrene | 1000. | U |
| 120-12-7 | Anthracene | 1000. | U |
| 84-74-2 | Di-n-butylphthalate | 150. | J |
| 206-44-0 | Fluoranthene | 1000. | U |
| 129-00-0 | Pyrene | 1000. | U |
| 85-68-7 | Butylbenzylphthalate | 1000. | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | 2100. | U |
| 56-55-3 | Benzo(a)anthracene | 1000. | U |
| 218-01-9 | Chrysene | 1000. | U |
| 117-81-7 | bis(2-Ethylhexyl)phthalate | 290. | J |
| 117-84-0 | Di-n-octylphthalate | 1000. | U |
| 205-99-2 | Benzo(b)fluoranthene | 1000. | U |
| 207-08-9 | Benzo(k)fluoranthene | 1000. | U |
| 50-32-8 | Benzo(a)pyrene | 1000. | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 1000. | U |
| 53-70-3 | Dibenz(a,h)anthracene | 1000. | U |
| 191-24-2 | Benzo(g,h,i)perylene | 1000. | U |

(1) - Cannot be separated from diphenylamine

1F

EPA SAMPLE NO.
000363

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EJJ67

Lab Name: PEI Contract: 68-D9-0037

Lab Code: PEI Case No.: 13622 SAS No.: SDG No.: EJJ62

Matrix: (soil/water) SOIL Lab Sample ID: X0-02-168-06A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EJJ67RE

Level: (low/med) LOW Date Received: 2/21/90

% Moisture: not dec. 36. dec. _____ Date Extracted: 2/26/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 3/13/90

GPC Cleanup: (Y/N) Y pH: 6.0 Dilution Factor: 1.00

Number TICs found: 12

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

| | CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|---|
| 1. | - - | UNKNOWN | 8.45 | 1000. | J A |
| 2. | - - | UNKNOWN | 9.37 | 2000. | J A |
| 3. | - - | UNKNOWN | 9.75 | 700. | J A |
| 4. | - - | UNKNOWN | 10.47 | 3000. | J |
| 5. | - - | UNKNOWN | 12.08 | 400. | J |
| 6. | - - | UNKNOWN | 30.17 | 900. | J |
| 7. | - - | UNKNOWN | 32.30 | 2000. | J |
| 8. | - - | UNKNOWN | 32.53 | 8000. | J |
| 9. | - - | UNKNOWN | 33.75 | 6000. | J |
| 10. | - - | UNKNOWN | 35.75 | 6000. | J |
| 11. | - - | UNKNOWN | 38.60 | 4000. | J |
| 12. | - - | UNKNOWN | 40.03 | 2000. | J |
| 13. | | | | | |
| 14. | | | | | |
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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EJJ68

Lab Name: PEI Contract: 68-D9-0037

Lab Code: PEI Case No.: 13622 SAS No.: SDG No.: EJJ62

Matrix: (soil/water) SOIL Lab Sample ID: X0-02-168-07A

Sample wt/vol: 30.1 (g/mL) G Lab File ID: EJJ68

Level: (low/med) LOW Date Received: 2/21/90

% Moisture: not dec. 32. dec. _____ Date Extracted: 2/26/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 3/12/90

GPC Cleanup: (Y/N) Y pH: 6.0 Dilution Factor: 1.00

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 108-95-2 | Phenol | 970. | U |
| 111-44-4 | bis(2-Chloroethyl)ether | 970. | U |
| 95-57-8 | 2-Chlorophenol | 970. | U |
| 541-73-1 | 1,3-Dichlorobenzene | 970. | U |
| 106-46-7 | 1,4-Dichlorobenzene | 970. | U |
| 100-51-6 | Benzyl alcohol | 970. | U |
| 95-50-1 | 1,2-Dichlorobenzene | 970. | U |
| 95-48-7 | 2-Methylphenol | 970. | U |
| 108-60-1 | bis(2-Chloroisopropyl)ether | 970. | U |
| 106-44-5 | 4-Methylphenol | 970. | U |
| 621-64-7 | N-Nitroso-di-n-propylamine | 970. | U |
| 67-72-1 | Hexachloroethane | 970. | U |
| 98-95-3 | Nitrobenzene | 970. | U |
| 78-59-1 | Isophorone | 970. | U |
| 88-75-5 | 2-Nitrophenol | 970. | U |
| 105-67-9 | 2,4-Dimethylphenol | 970. | U |
| 65-85-0 | Benzoic acid | 4700. | U |
| 111-91-1 | bis(2-Chloroethoxy)methane | 970. | U |
| 120-83-2 | 2,4-Dichlorophenol | 970. | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 970. | U |
| 91-20-3 | Naphthalene | 970. | U |
| 106-47-8 | 4-Chloroaniline | 970. | U |
| 87-68-3 | Hexachlorobutadiene | 970. | U |
| 59-50-7 | 4-Chloro-3-methylphenol | 970. | U |
| 91-57-6 | 2-Methylnaphthalene | 970. | U |
| 77-47-4 | Hexachlorocyclopentadiene | 970. | U |
| 88-06-2 | 2,4,6-Trichlorophenol | 970. | U |
| 95-95-4 | 2,4,5-Trichlorophenol | 4700. | U |
| 91-58-7 | 2-Chloronaphthalene | 970. | U |
| 88-74-4 | 2-Nitroaniline | 4700. | U |
| 131-11-3 | Dimethylphthalate | 970. | U |
| 208-96-8 | Acenaphthylene | 970. | U |
| 606-20-2 | 2,6-Dinitrotoluene | 970. | U |

1C

EPA SAMPLE NO.
000387

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EJJ68

Lab Name: PEI Contract: 68-D9-0037

Lab Code: PEI Case No.: 13622 SAS No.: SDG No.: EJJ62

Matrix: (soil/water) SOIL Lab Sample ID: X0-02-168-07A

Sample wt/vol: 30.1 (g/mL) G Lab File ID: EJJ68

Level: (low/med) LOW Date Received: 2/21/90

% Moisture: not dec. 32. dec. _____ Date Extracted: 2/26/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 3/12/90

GPC Cleanup: (Y/N) Y pH: 6.0 Dilution Factor: 1.00

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 99-09-2 | 3-Nitroaniline | 4700. | U |
| 83-32-9 | Acenaphthene | 970. | U |
| 51-28-5 | 2,4-Dinitrophenol | 4700. | U |
| 100-02-7 | 4-Nitrophenol | 4700. | U |
| 132-64-9 | Dibenzofuran | 970. | U |
| 121-14-2 | 2,4-Dinitrotoluene | 970. | U |
| 84-66-2 | Diethylphthalate | 970. | U |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 970. | U |
| 86-73-7 | Fluorene | 970. | U |
| 100-01-6 | 4-Nitroaniline | 4700. | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 4700. | U |
| 86-30-6 | N-Nitrosodiphenylamine (1) | 970. | U |
| 101-55-3 | 4-Bromophenyl-phenylether | 970. | U |
| 118-74-1 | Hexachlorobenzene | 970. | U |
| 87-86-5 | Pentachlorophenol | 4700. | U |
| 85-01-8 | Phenanthrene | 100. | J |
| 120-12-7 | Anthracene | 970. | U |
| 84-74-2 | Di-n-butylphthalate | 130. | J |
| 206-44-0 | Fluoranthene | 970. | U |
| 129-00-0 | Pyrene | 120. | J |
| 85-68-7 | Butylbenzylphthalate | 970. | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | 1900. | U |
| 56-55-3 | Benzo(a)anthracene | 970. | U |
| 218-01-9 | Chrysene | 970. | U |
| 117-81-7 | bis(2-Ethylhexyl)phthalate | 150. | J |
| 117-84-0 | Di-n-octylphthalate | 970. | U |
| 205-99-2 | Benzo(b)fluoranthene | 970. | U |
| 207-08-9 | Benzo(k)fluoranthene | 970. | U |
| 50-32-8 | Benzo(a)pyrene | 970. | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 970. | U |
| 53-70-3 | Dibenz(a,h)anthracene | 970. | U |
| 191-24-2 | Benzo(g,h,i)perylene | 970. | U |

(1) - Cannot be separated from diphenylamine

1F

EPA SAMPLE NO.

000388

EJJ68

# SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
## TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: PEI Contract: 68-D9-0037

Lab Code: PEI Case No.: 13622 SAS No.: SDG No.: EJJ62

Matrix: (soil/water) SOIL Lab Sample ID: X0-02-168-07A

Sample wt/vol: 30.1 (g/mL) G Lab File ID: EJJ68

Level: (low/med) LOW Date Received: 2/21/90

% Moisture: not dec. 32. dec. _____ Date Extracted: 2/26/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 3/12/90

GPC Cleanup: (Y/N) Y pH: 6.0 Dilution Factor: 1.00

Number TICs found: 4

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

| CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|
| 1. - - | UNKNOWN | 8.20 | 5000. | J A |
| 2. - - | UNKNOWN | 8.55 | 800. | BJ A |
| 3. - - | UNKNOWN | 9.50 | 3000. | J A |
| 4. - - | UNKNOWN | 10.58 | 4000. | J A |
| 5. | | | | |
| 6. | | | | |
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| 30. | | | | |

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EJJ69

Lab Name: PEI Contract: 68-D9-0037

Lab Code: PEI Case No.: 13622 SAS No.: SDG No.: EJJ62

Matrix: (soil/water) SOIL Lab Sample ID: X0-02-168-08A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EJJ69

Level: (low/med) LOW Date Received: 2/21/90

% Moisture: not dec. 28. dec. _____ Date Extracted: 2/26/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 3/12/90

GPC Cleanup: (Y/N) Y pH: 5.5 Dilution Factor: 1.00

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 108-95-2 | Phenol | 920. | U |
| 111-44-4 | bis(2-Chloroethyl)ether | 920. | U |
| 95-57-8 | 2-Chlorophenol | 920. | U |
| 541-73-1 | 1,3-Dichlorobenzene | 920. | U |
| 106-46-7 | 1,4-Dichlorobenzene | 920. | U |
| 100-51-6 | Benzyl alcohol | 920. | U |
| 95-50-1 | 1,2-Dichlorobenzene | 920. | U |
| 95-48-7 | 2-Methylphenol | 920. | U |
| 108-60-1 | bis(2-Chloroisopropyl)ether | 920. | U |
| 106-44-5 | 4-Methylphenol | 920. | U |
| 621-64-7 | N-Nitroso-di-n-propylamine | 920. | U |
| 67-72-1 | Hexachloroethane | 920. | U |
| 98-95-3 | Nitrobenzene | 920. | U |
| 78-59-1 | Isophorone | 920. | U |
| 88-75-5 | 2-Nitrophenol | 920. | U |
| 105-67-9 | 2,4-Dimethylphenol | 920. | U |
| 65-85-0 | Benzoic acid | 4400. | U |
| 111-91-1 | bis(2-Chloroethoxy)methane | 920. | U |
| 120-83-2 | 2,4-Dichlorophenol | 920. | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 920. | U |
| 91-20-3 | Naphthalene | 920. | U |
| 106-47-8 | 4-Chloroaniline | 920. | U |
| 87-68-3 | Hexachlorobutadiene | 920. | U |
| 59-50-7 | 4-Chloro-3-methylphenol | 920. | U |
| 91-57-6 | 2-Methylnaphthalene | 920. | U |
| 77-47-4 | Hexachlorocyclopentadiene | 920. | U |
| 88-06-2 | 2,4,6-Trichlorophenol | 920. | U |
| 95-95-4 | 2,4,5-Trichlorophenol | 4400. | U |
| 91-58-7 | 2-Chloronaphthalene | 920. | U |
| 88-74-4 | 2-Nitroaniline | 4400. | U |
| 131-11-3 | Dimethylphthalate | 920. | U |
| 208-96-8 | Acenaphthylene | 920. | U |
| 606-20-2 | 2,6-Dinitrotoluene | 920. | U |

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

000405

EJJ69

Lab Name: PEI Contract: 68-D9-0037

Lab Code: PEI Case No.: 13622 SAS No.: SDG No.: EJJ62

Matrix: (soil/water) SOIL Lab Sample ID: X0-02-168-08A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EJJ69

Level: (low/med) LOW Date Received: 2/21/90

% Moisture: not dec. 28. dec. _____ Date Extracted: 2/26/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 3/12/90

GPC Cleanup: (Y/N) Y pH: 5.5 Dilution Factor: 1.00

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 99-09-2 | 3-Nitroaniline | 4400. | U |
| 83-32-9 | Acenaphthene | 920. | U |
| 51-28-5 | 2,4-Dinitrophenol | 4400. | U |
| 100-02-7 | 4-Nitrophenol | 4400. | U |
| 132-64-9 | Dibenzofuran | 920. | U |
| 121-14-2 | 2,4-Dinitrotoluene | 920. | U |
| 84-66-2 | Diethylphthalate | 920. | U |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 920. | U |
| 86-73-7 | Fluorene | 920. | U |
| 100-01-6 | 4-Nitroaniline | 4400. | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 4400. | U |
| 86-30-6 | N-Nitrosodiphenylamine (1) | 920. | U |
| 101-55-3 | 4-Bromophenyl-phenylether | 920. | U |
| 118-74-1 | Hexachlorobenzene | 920. | U |
| 87-86-5 | Pentachlorophenol | 4400. | U |
| 85-01-8 | Phenanthrene | 920. | U |
| 120-12-7 | Anthracene | 920. | U |
| 84-74-2 | Di-n-butylphthalate | 130. | J |
| 206-44-0 | Fluoranthene | 920. | U |
| 129-00-0 | Pyrene | 920. | U |
| 85-68-7 | Butylbenzylphthalate | 920. | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | 1800. | U |
| 56-55-3 | Benzo(a)anthracene | 920. | U |
| 218-01-9 | Chrysene | 920. | U |
| 117-81-7 | bis(2-Ethylhexyl)phthalate | 920. | U |
| 117-84-0 | Di-n-octylphthalate | 920. | U |
| 205-99-2 | Benzo(b)fluoranthene | 920. | U |
| 207-08-9 | Benzo(k)fluoranthene | 920. | U |
| 50-32-8 | Benzo(a)pyrene | 920. | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 920. | U |
| 53-70-3 | Dibenz(a,h)anthracene | 920. | U |
| 191-24-2 | Benzo(g,h,i)perylene | 920. | U |

(1) - Cannot be separated from diphenylamine

1F

EPA SAMPLE NO.

000406

EJJ69

# SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
## TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: PEI Contract: 68-D9-0037

Lab Code: PEI Case No.: 13622 SAS No.: SDG No.: EJJ62

Matrix: (soil/water) SOIL Lab Sample ID: X0-02-168-08A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EJJ69

Level: (low/med) LOW Date Received: 2/21/90

% Moisture: not dec. 28. dec. _____ Date Extracted: 2/26/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 3/12/90

GPC Cleanup: (Y/N) Y pH: 5.5 Dilution Factor: 1.00

Number TICs found: 5

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

| | CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|---|
| 1. | - - | UNKNOWN | 8.20 | 3000. | J A |
| 2. | - - | UNKNOWN | 8.32 | 700. | J A |
| 3. | - - | UNKNOWN | 8.57 | 1000. | BJ A |
| 4. | - - | UNKNOWN | 9.50 | 3000. | J A |
| 5. | - - | UNKNOWN | 10.58 | 4000. | J |
| 6. | | | | | |
| 7. | | | | | |
| 8. | | | | | |
| 9. | | | | | |
| 10. | | | | | |
| 11. | | | | | |
| 12. | | | | | |
| 13. | | | | | |
| 14. | | | | | |
| 15. | | | | | |
| 16. | | | | | |
| 17. | | | | | |
| 18. | | | | | |
| 19. | | | | | |
| 20. | | | | | |
| 21. | | | | | |
| 22. | | | | | |
| 23. | | | | | |
| 24. | | | | | |
| 25. | | | | | |
| 26. | | | | | |
| 27. | | | | | |
| 28. | | | | | |
| 29. | | | | | |
| 30. | | | | | |

1D

# PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

000533
EJJ62

Lab Name: PEI  Contract: 68-D9-0037

Lab Code: PEI  Case No.: 13622  SAS No.:  SDG No.: EJJ62

Matrix: (soil/water) SOIL  Lab Sample ID: X0-02-168-01A

Sample wt/vol: 30.1 (g/mL) G  Lab File ID: JJP062

Level: (low/med) LOW  Date Received: 2/21/90

% Moisture: not dec. 9. dec._____  Date Extracted: 2/26/90

Extraction: (SepF/Cont/Sonc) SONC  Date Analyzed: 3/ 4/90

GPC Cleanup: (Y/N) Y  pH: 5.5  Dilution Factor: 1.00

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 319-84-6 | alpha-BHC | 17. | U |
| 319-85-7 | beta-BHC | 17. | U |
| 319-86-8 | delta-BHC | 17. | U |
| 58-89-9 | gamma-BHC | 17. | U |
| 76-44-8 | Heptachlor | 17. | U |
| 309-00-2 | Aldrin | 17. | U |
| 1024-57-3 | Heptachlor epoxide | 17. | U |
| 959-98-8 | Endosulfan I | 17. | U |
| 60-57-1 | Dieldrin | 35. | U |
| 72-55-9 | 4,4'-DDE | 35. | U |
| 72-20-8 | Endrin | 35. | U |
| 33213-65-9 | Endosulfan II | 35. | U |
| 72-54-8 | 4,4'-DDD | 35. | U |
| 1031-07-8 | Endosulfan sulfate | 35. | U |
| 50-29-3 | 4,4'-DDT | 35. | U |
| 72-43-5 | Methoxychlor | 170. | U |
| 53494-70-5 | Endrin ketone | 35. | U |
| 5103-71-9 | alpha-Chlordane | 170. | U |
| 5103-74-2 | gamma-Chlordane | 170. | U |
| 8001-35-2 | Toxaphene | 350. | U |
| 12674-11-2 | Aroclor-1016 | 170. | U |
| 11104-28-2 | Aroclor-1221 | 170. | U |
| 11141-16-5 | Aroclor-1232 | 170. | U |
| 53469-21-9 | Aroclor-1242 | 170. | U |
| 12672-29-6 | Aroclor-1248 | 170. | U |
| 11097-69-1 | Aroclor-1254 | 350. | U |
| 11096-82-5 | Aroclor-1260 | 350. | U |

000542

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EJJ63

Lab Name: PEI Contract: 68-D9-0037

Lab Code: PEI Case No.: 13622 SAS No.: SDG No.: EJJ62

Matrix: (soil/water) SOIL Lab Sample ID: X0-02-168-02A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: JJP063

Level: (low/med) LOW Date Received: 2/21/90

% Moisture: not dec. 30. dec._____ Date Extracted: 2/26/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 3/ 4/90

GPC Cleanup: (Y/N) Y pH: 5.5 Dilution Factor: 1.00

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 319-84-6 | alpha-BHC | 23. | U |
| 319-85-7 | beta-BHC | 23. | U |
| 319-86-8 | delta-BHC | 23. | U |
| 58-89-9 | gamma-BHC | 23. | U |
| 76-44-8 | Heptachlor | 23. | U |
| 309-00-2 | Aldrin | 23. | U |
| 1024-57-3 | Heptachlor epoxide | 23. | U |
| 959-98-8 | Endosulfan I | 23. | U |
| 60-57-1 | Dieldrin | 46. | U |
| 72-55-9 | 4,4'-DDE | 46. | U |
| 72-20-8 | Endrin | 46. | U |
| 33213-65-9 | Endosulfan II | 46. | U |
| 72-54-8 | 4,4'-DDD | 46. | U |
| 1031-07-8 | Endosulfan sulfate | 46. | U |
| 50-29-3 | 4,4'-DDT | 46. | U |
| 72-43-5 | Methoxychlor | 230. | U |
| 53494-70-5 | Endrin ketone | 46. | U |
| 5103-71-9 | alpha-Chlordane | 230. | U |
| 5103-74-2 | gamma-Chlordane | 230. | U |
| 8001-35-2 | Toxaphene | 460. | U |
| 12674-11-2 | Aroclor-1016 | 230. | U |
| 11104-28-2 | Aroclor-1221 | 230. | U |
| 11141-16-5 | Aroclor-1232 | 230. | U |
| 53469-21-9 | Aroclor-1242 | 230. | U |
| 12672-29-6 | Aroclor-1248 | 230. | U |
| 11097-69-1 | Aroclor-1254 | 460. | U |
| 11096-82-5 | Aroclor-1260 | 460. | U |

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

000551

EJJ64

Lab Name: PEI Contract: 68-D9-0037

Lab Code: PEI Case No.: 13622 SAS No.: SDG No.: EJJ62

Matrix: (soil/water) SOIL Lab Sample ID: X0-02-168-03A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: JJP064

Level: (low/med) LOW Date Received: 2/21/90

% Moisture: not dec. 8. dec._____ Date Extracted: 2/26/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 3/ 4/90

GPC Cleanup: (Y/N) Y pH: 5.5 Dilution Factor: 1.00

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 319-84-6 | alpha-BHC | 17. | U |
| 319-85-7 | beta-BHC | 17. | U |
| 319-86-8 | delta-BHC | 17. | U |
| 58-89-9 | gamma-BHC | 17. | U |
| 76-44-8 | Heptachlor | 17. | U |
| 309-00-2 | Aldrin | 17. | U |
| 1024-57-3 | Heptachlor epoxide | 17. | U |
| 959-98-8 | Endosulfan I | 17. | U |
| 60-57-1 | Dieldrin | 35. | U |
| 72-55-9 | 4,4'-DDE | 35. | U |
| 72-20-8 | Endrin | 35. | U |
| 33213-65-9 | Endosulfan II | 35. | U |
| 72-54-8 | 4,4'-DDD | 35. | U |
| 1031-07-8 | Endosulfan sulfate | 35. | U |
| 50-29-3 | 4,4'-DDT | 35. | U |
| 72-43-5 | Methoxychlor | 170. | U |
| 53494-70-5 | Endrin ketone | 35. | U |
| 5103-71-9 | alpha-Chlordane | 170. | U |
| 5103-74-2 | gamma-Chlordane | 170. | U |
| 8001-35-2 | Toxaphene | 350. | U |
| 12674-11-2 | Aroclor-1016 | 170. | U |
| 11104-28-2 | Aroclor-1221 | 170. | U |
| 11141-16-5 | Aroclor-1232 | 170. | U |
| 53469-21-9 | Aroclor-1242 | 170. | U |
| 12672-29-6 | Aroclor-1248 | 170. | U |
| 11097-69-1 | Aroclor-1254 | 350. | U |
| 11096-82-5 | Aroclor-1260 | 350. | U |

000556

1D

EPA SAMPLE NO.

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EJJ65

Lab Name: PEI Contract: 68-D9-0037

Lab Code: PEI Case No.: 13622 SAS No.: SDG No.: EJJ62

Matrix: (soil/water) SOIL Lab Sample ID: X0-02-168-04A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: JJP065

Level: (low/med) LOW Date Received: 2/21/90

% Moisture: not dec. 22. dec._____ Date Extracted: 2/26/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 3/ 4/90

GPC Cleanup: (Y/N) Y pH: 5.5 Dilution Factor: 1.00

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 319-84-6 | alpha-BHC | 21. | U |
| 319-85-7 | beta-BHC | 21. | U |
| 319-86-8 | delta-BHC | 21. | U |
| 58-89-9 | gamma-BHC | 21. | U |
| 76-44-8 | Heptachlor | 21. | U |
| 309-00-2 | Aldrin | 21. | U |
| 1024-57-3 | Heptachlor epoxide | 21. | U |
| 959-98-8 | Endosulfan I | 21. | U |
| 60-57-1 | Dieldrin | 41. | U |
| 72-55-9 | 4,4'-DDE | 41. | U |
| 72-20-8 | Endrin | 41. | U |
| 33213-65-9 | Endosulfan II | 41. | U |
| 72-54-8 | 4,4'-DDD | 41. | U |
| 1031-07-8 | Endosulfan sulfate | 41. | U |
| 50-29-3 | 4,4'-DDT | 41. | U |
| 72-43-5 | Methoxychlor | 210. | U |
| 53494-70-5 | Endrin ketone | 41. | U |
| 5103-71-9 | alpha-Chlordane | 210. | U |
| 5103-74-2 | gamma-Chlordane | 210. | U |
| 8001-35-2 | Toxaphene | 410. | U |
| 12674-11-2 | Aroclor-1016 | 210. | U |
| 11104-28-2 | Aroclor-1221 | 210. | U |
| 11141-16-5 | Aroclor-1232 | 210. | U |
| 53469-21-9 | Aroclor-1242 | 210. | U |
| 12672-29-6 | Aroclor-1248 | 210. | U |
| 11097-69-1 | Aroclor-1254 | 410. | U |
| 11096-82-5 | Aroclor-1260 | 410. | U |

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EJJ66

Lab Name: PEI Contract: 68-D9-0037

Lab Code: PEI Case No.: 13622 SAS No.: SDG No.: EJJ62

Matrix: (soil/water) SOIL Lab Sample ID: X0-02-168-05A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: JJP066

Level: (low/med) LOW Date Received: 2/21/90

% Moisture: not dec. 24. dec._____ Date Extracted: 2/26/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 3/ 4/90

GPC Cleanup: (Y/N) Y pH: 6.0 Dilution Factor: 1.00

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 319-84-6 | alpha-BHC | 21. | U |
| 319-85-7 | beta-BHC | 21. | U |
| 319-86-8 | delta-BHC | 21. | U |
| 58-89-9 | gamma-BHC | 21. | U |
| 76-44-8 | Heptachlor | 21. | U |
| 309-00-2 | Aldrin | 21. | U |
| 1024-57-3 | Heptachlor epoxide | 21. | U |
| 959-98-8 | Endosulfan I | 21. | U |
| 60-57-1 | Dieldrin | 42. | U |
| 72-55-9 | 4,4'-DDE | 42. | U |
| 72-20-8 | Endrin | 42. | U |
| 33213-65-9 | Endosulfan II | 42. | U |
| 72-54-8 | 4,4'-DDD | 42. | U |
| 1031-07-8 | Endosulfan sulfate | 42. | U |
| 50-29-3 | 4,4'-DDT | 42. | U |
| 72-43-5 | Methoxychlor | 210. | U |
| 53494-70-5 | Endrin ketone | 42. | U |
| 5103-71-9 | alpha-Chlordane | 210. | U |
| 5103-74-2 | gamma-Chlordane | 210. | U |
| 8001-35-2 | Toxaphene | 420. | U |
| 12674-11-2 | Aroclor-1016 | 210. | U |
| 11104-28-2 | Aroclor-1221 | 210. | U |
| 11141-16-5 | Aroclor-1232 | 210. | U |
| 53469-21-9 | Aroclor-1242 | 210. | U |
| 12672-29-6 | Aroclor-1248 | 210. | U |
| 11097-69-1 | Aroclor-1254 | 420. | U |
| 11096-82-5 | Aroclor-1260 | 420. | U |

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EJJ67

Lab Name: PEI Contract: 68-D9-0037

Lab Code: PEI Case No.: 13622 SAS No.: SDG No.: EJJ62

Matrix: (soil/water) SOIL Lab Sample ID: X0-02-168-06A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: JJP067

Level: (low/med) LOW Date Received: 2/21/90

% Moisture: not dec. 36. dec._____ Date Extracted: 2/26/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 3/ 4/90

GPC Cleanup: (Y/N) Y pH: 6.0 Dilution Factor: 1.00

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 319-84-6 | alpha-BHC | 25. | U |
| 319-85-7 | beta-BHC | 25. | U |
| 319-86-8 | delta-BHC | 25. | U |
| 58-89-9 | gamma-BHC | 25. | U |
| 76-44-8 | Heptachlor | 25. | U |
| 309-00-2 | Aldrin | 25. | U |
| 1024-57-3 | Heptachlor epoxide | 25. | U |
| 959-98-8 | Endosulfan I | 25. | U |
| 60-57-1 | Dieldrin | 50. | U |
| 72-55-9 | 4,4'-DDE | 50. | U |
| 72-20-8 | Endrin | 50. | U |
| 33213-65-9 | Endosulfan II | 50. | U |
| 72-54-8 | 4,4'-DDD | 50. | U |
| 1031-07-8 | Endosulfan sulfate | 50. | U |
| 50-29-3 | 4,4'-DDT | 50. | U |
| 72-43-5 | Methoxychlor | 250. | U |
| 53494-70-5 | Endrin ketone | 50. | U |
| 5103-71-9 | alpha-Chlordane | 250. | U |
| 5103-74-2 | gamma-Chlordane | 250. | U |
| 8001-35-2 | Toxaphene | 500. | U |
| 12674-11-2 | Aroclor-1016 | 250. | U |
| 11104-28-2 | Aroclor-1221 | 250. | U |
| 11141-16-5 | Aroclor-1232 | 250. | U |
| 53469-21-9 | Aroclor-1242 | 250. | U |
| 12672-29-6 | Aroclor-1248 | 250. | U |
| 11097-69-1 | Aroclor-1254 | 500. | U |
| 11096-82-5 | Aroclor-1260 | 500. | U |

000571

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EJJ68

Lab Name: PEI Contract: 68-D9-0037

Lab Code: PEI Case No.: 13622 SAS No.: SDG No.: EJJ62

Matrix: (soil/water) SOIL Lab Sample ID: X0-02-168-07A

Sample wt/vol: 30.1 (g/mL) G Lab File ID: JJP068

Level: (low/med) LOW Date Received: 2/21/90

% Moisture: not dec. 32. dec._____ Date Extracted: 2/26/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 3/ 4/90

GPC Cleanup: (Y/N) Y pH: 6.0 Dilution Factor: 1.00

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 319-84-6 | alpha-BHC | 24. | U |
| 319-85-7 | beta-BHC | 24. | U |
| 319-86-8 | delta-BHC | 24. | U |
| 58-89-9 | gamma-BHC | 24. | U |
| 76-44-8 | Heptachlor | 24. | U |
| 309-00-2 | Aldrin | 24. | U |
| 1024-57-3 | Heptachlor epoxide | 24. | U |
| 959-98-8 | Endosulfan I | 24. | U |
| 60-57-1 | Dieldrin | 47. | U |
| 72-55-9 | 4,4'-DDE | 47. | U |
| 72-20-8 | Endrin | 47. | U |
| 33213-65-9 | Endosulfan II | 47. | U |
| 72-54-8 | 4,4'-DDD | 47. | U |
| 1031-07-8 | Endosulfan sulfate | 47. | U |
| 50-29-3 | 4,4'-DDT | 47. | U |
| 72-43-5 | Methoxychlor | 240. | U |
| 53494-70-5 | Endrin ketone | 47. | U |
| 5103-71-9 | alpha-Chlordane | 240. | U |
| 5103-74-2 | gamma-Chlordane | 240. | U |
| 8001-35-2 | Toxaphene | 470. | U |
| 12674-11-2 | Aroclor-1016 | 240. | U |
| 11104-28-2 | Aroclor-1221 | 240. | U |
| 11141-16-5 | Aroclor-1232 | 240. | U |
| 53469-21-9 | Aroclor-1242 | 240. | U |
| 12672-29-6 | Aroclor-1248 | 240. | U |
| 11097-69-1 | Aroclor-1254 | 470. | U |
| 11096-82-5 | Aroclor-1260 | 470. | U |

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EJJ69

Lab Name: PEI Contract: 68-D9-0037

Lab Code: PEI Case No.: 13622 SAS No.: SDG No.: EJJ62

Matrix: (soil/water) SOIL Lab Sample ID: X0-02-168-0RA

Sample wt/vol: 30.0 (g/mL) G Lab File ID: JJP069

Level: (low/med) LOW Date Received: 2/21/90

% Moisture: not dec. 28. dec._____ Date Extracted: 2/26/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 3/ 5/90

GPC Cleanup: (Y/N) Y pH: 5.5 Dilution Factor: 1.00

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 319-84-6 | alpha-BHC | 22. | U |
| 319-85-7 | beta-BHC | 22. | U |
| 319-86-8 | delta-BHC | 22. | U |
| 58-89-9 | gamma-BHC | 22. | U |
| 76-44-8 | Heptachlor | 22. | U |
| 309-00-2 | Aldrin | 22. | U |
| 1024-57-3 | Heptachlor epoxide | 22. | U |
| 959-98-8 | Endosulfan I | 22. | U |
| 60-57-1 | Dieldrin | 44. | U |
| 72-55-9 | 4,4'-DDE | 44. | U |
| 72-20-8 | Endrin | 44. | U |
| 33213-65-9 | Endosulfan II | 44. | U |
| 72-54-8 | 4,4'-DDD | 44. | U |
| 1031-07-8 | Endosulfan sulfate | 44. | U |
| 50-29-3 | 4,4'-DDT | 44. | U |
| 72-43-5 | Methoxychlor | 220. | U |
| 53494-70-5 | Endrin ketone | 44. | U |
| 5103-71-9 | alpha-Chlordane | 220. | U |
| 5103-74-2 | gamma-Chlordane | 220. | U |
| 8001-35-2 | Toxaphene | 440. | U |
| 12674-11-2 | Aroclor-1016 | 220. | U |
| 11104-28-2 | Aroclor-1221 | 220. | U |
| 11141-16-5 | Aroclor-1232 | 220. | U |
| 53469-21-9 | Aroclor-1242 | 220. | U |
| 12672-29-6 | Aroclor-1248 | 220. | U |
| 11097-69-1 | Aroclor-1254 | 440. | U |
| 11096-82-5 | Aroclor-1260 | 440. | U |

F I T  S A M P L E  P R O P O S A L  F O R M  R E G I O N  V

DATE FORM COMPLETED 1/11/90 PAN# F0H082858 TDD# F05-8805-020 EPA I.D.# OHD980423347

SITE NAME (PRINT) Philo Plant - Ohio Power CITY Philo STATE OH

TEAM LEADER Tracy Gray SAMPLER Henry Adamiak DATE SENT TO RSCC

**********

CASE # 13622 DRINKING WATER SAS # ORGANIC INORGANIC

**********

ROUTINE ANALYTICAL SERVICES (RAS)

LOW WATERS **MONITORING WELLS**

| FRACTION | NUMBER OF FIELD SAMPLES+ BLANKS+ DUPLICATE= TOTAL | EXPECTED DATE TO SAMPLE | LABORATORY NAME | NUMBER OF COOLERS SHIPPED | NUMBER OF SAMPLES SHIPPED | AIR BILL NUMBERS | DATE SHIPPED TO LAB |
|---|---|---|---|---|---|---|---|
| VOA | | | | | | | |
| ABNs | | | | | | | |
| PEST/PCB | | | | | | | |
| METALS | | | | | | | |
| CN | | | | | | | |

**********

LOW WATERS **SURFACE WATERS**

| FRACTION | NUMBER OF FIELD SAMPLES+ BLANKS+ DUPLICATE= TOTAL | EXPECTED DATE TO SAMPLE | LABORATORY NAME | NUMBER OF COOLERS SHIPPED | NUMBER OF SAMPLES SHIPPED | AIR BILL NUMBERS | DATE SHIPPED TO LAB |
|---|---|---|---|---|---|---|---|
| VOA | | | | | | | |
| ABNs | | | | | | | |
| PEST/PCB | | | | | | | |
| METALS | | | | | | | |
| CN | | | | | | | |

**********

LOW SOILS/SEDIMENTS/SLUDGES

| FRACTION | NUMBER OF FIELD SAMPLES+ BLANKS+ DUPLICATE= TOTAL | EXPECTED DATE TO SAMPLE | LABORATORY NAME | NUMBER OF COOLERS SHIPPED | NUMBER OF SAMPLES SHIPPED | AIR BILL NUMBERS | DATE SHIPPED TO LAB |
|---|---|---|---|---|---|---|---|
| VOA | | | | | | | |
| ABNs | | w/o | PEI | 1 | 8 | 6454148400 | 2/28 |
| PEST/PCB | 10 | | | | | | |
| METALS | | 2/14/90 | Vegas | 1 | 8 | 6454148422 | 2/20 |
| CN | | | | | | | |

**********

RESIDENTIAL/ MUNICIPAL WELL WATERS (**DRINKING WATER SAMPLES**)

LOW DETECTION LIMITS/FAST TURN AROUND

| FRACTION | NUMBER OF FIELD SAMPLES+ BLANKS+ DUPLICATE= TOTAL | EXPECTED DATE TO SAMPLE | LABORATORY NAME | NUMBER OF COOLERS SHIPPED | NUMBER OF SAMPLES SHIPPED | AIR BILL NUMBERS | DATE SHIPPED TO LAB |
|---|---|---|---|---|---|---|---|
| VOA | | | | | | | |
| ABNs | | | | | | | |
| PEST/PCB | | | | | | | |
| METALS | | | | | | | |
| CN | | | | | | | |

**********

SEE NEXT PAGE FOR SPECIAL ANALYTICAL SERVICE REQUEST FOR THIS SITE

SAS #

Complete Paperwork

SITE _____ PAGE 2

**********

SPECIAL ANALYTICAL SERVICES

WATERS

CASE # _____ SAS # _____

| FRACTION | NUMBER OF FIELD SAMPLES+ BLANKS+ DUPLICATE= TOTAL | EXPECTED DATE TO SAMPLE | LABORATORY NAME | NUMBER OF COOLERS SHIPPED | NUMBER OF SAMPLES SHIPPED | AIR BILL NUMBERS | DATE SHIPPED TO LAB |
|---|---|---|---|---|---|---|---|
| VOA | | | | | | | |
| ABNs | | | | | | | |
| PEST/PCB | | | | | | | |
| METALS | | | | | | | |
| CN | | | | | | | |

**********

SOILS/SEDIMENTS/SLUDGES

CASE # _____ SAS # _____

| FRACTION | NUMBER OF FIELD SAMPLES+ BLANKS+ DUPLICATE= TOTAL | EXPECTED DATE TO SAMPLE | LABORATORY NAME | NUMBER OF COOLERS SHIPPED | NUMBER OF SAMPLES SHIPPED | AIR BILL NUMBERS | DATE SHIPPED TO LAB |
|---|---|---|---|---|---|---|---|
| VOA | | | | | | | |
| ABNs | | | | | | | |
| PEST/PCB | | | | | | | |
| METALS | | | | | | | |
| CN | | | | | | | |

**********

(OTHERS) _____

CASE # _____ SAS # _____

| FRACTION | NUMBER OF FIELD SAMPLES+ BLANKS+ DUPLICATE= TOTAL | EXPECTED DATE TO SAMPLE | LABORATORY NAME | NUMBER OF COOLERS SHIPPED | NUMBER OF SAMPLES SHIPPED | AIR BILL NUMBERS | DATE SHIPPED TO LAB |
|---|---|---|---|---|---|---|---|
| VOA | | | | | | | |
| ABNs | | | | | | | |
| PEST/PCB | | | | | | | |
| METALS | | | | | | | |
| CN | | | | | | | |

# COLUMBUS SOUTHERN OHIO POWER COMPANIES

FILED

ENVIRONMENTAL AFFAIRS DEPARTMENT
215 North Front Street
Columbus, Ohio 43215
Fax: (614) 464-7377

FAX TRANSMISSION COVER SHEET

Date: 3/10/95

To: Jeff Leto

Fax: 303-295-2818

Subject: ~~[illegible]~~ Philo Plant

Sender: Steve Stroup

YOU SHOULD RECEIVE [ 10 ] PAGE(S), INCLUDING THIS COVER SHEET. IF YOU DO NOT RECEIVE ALL THE PAGES, PLEASE CALL (614) 464-7418.

COMMENTS:

Jeff-

The following are 8 PCB samples (wipe samples) taken from the oil processing building that was formerly within the Philo substation. The building was decontaminated. The last page is from 4 transformer oil tanks near the building. Call me when you get this to discuss.

- Steve

ZANDE ENVIRONMENTAL SERVICE, INC.
1233 DUBLIN RD.
COLUMBUS, OH 43215
(614)486-4383



OHIO EPA APPROVAL #1030
SAMPLE ANALYSIS REPORT

Date: 07/11/90

.EP, OHIO POWER COMPANY
14 WEST 5TH STREET
.AST LIVERPOOL, OH 43920

CUSTOMER # : AEPOP1
SAMPLE ID : 06363
SAMPLE DATE: 06/14/90
SAMPLE TIME: 14:11
DATE RECEIVED: 06/15/90

.TTN: MR. E. W. FITZGERALD
ROJECT #:
AMPLED BY: EARL FITZGERALD

SITE LOCATION: PHILO OIL HOUSE TEARDOWN
SITE ID: 2
SAMPLE TYPE: WIPE

OTE: GROUND FLOOR OIL HOUSE

| EST | EPA METHOD # | RESULT | UNITS |
|---|---|---|---|
| CB'S FROM WIPE SAMPLE | 8080 | 3.7 | UG/100CM |

NOTE: PCB PATTERN MOST CLOSELY RESEMBLES ARACHLOR 1248, ARACHLOR 1260 MIX.

REVIEWED BY: _____ CHEMIST _____ DATE

ZANDE ENVIRONMENTAL SERVICE, INC.
1233 DUBLIN RD.
COLUMBUS, OH 43215
(614)486-4383

Page: 1

OHIO EPA APPROVAL #1030
SAMPLE ANALYSIS REPORT

Date: 07/11/90

:P, OHIO POWER COMPANY
:4 WEST 5TH STREET
AST LIVERPOOL, OH 43920

CUSTOMER # : AEPOP1
SAMPLE ID : 06362
SAMPLE DATE: 06/14/90
SAMPLE TIME: 14:08
DATE RECEIVED: 06/15/90

:TN: MR. E. W. FITZGERALD
ROJECT #:
AMPLED BY: EARL FITZGERALD

SITE LOCATION: PHILO OIL HOUSE TEARDOWN
SITE ID: 1
SAMPLE TYPE: WIPE

OTE: TOP FLOOR OIL HOUSE

| EST | EPA METHOD # | RESULT | UNITS |
|---|---|---|---|
| :B'S FROM WIPE SAMPLE | 8080 | 22.3 | UG/100CM |

NOTE: UNITS ARE MICROGRAMS PER 100 SQUARE CENTIMETERS.
PCB PATTERN MOST CLOSELY RESEMBLES ARACHLOR 1260.

REVIEWED BY: _____ _____
CHEMIST DATE

ZANDE ENVIRONMENTAL SERVICE, INC.
1233 DUBLIN RD.
COLUMBUS, OH 43215
(614)486-4383



OHIO EPA APPROVAL #1030
SAMPLE ANALYSIS REPORT

Date: 07/11/90

:P, OHIO POWER COMPANY
.4 WEST 5TH STREET
:ST LIVERPOOL, OH 43920

CUSTOMER # : AEPOP1
SAMPLE ID : 06364
SAMPLE DATE: 06/14/90
SAMPLE TIME: 14:15
DATE RECEIVED: 06/15/90

'TN: MR. E. W. FITZGERALD
:OJECT #:
:MPLED BY: EARL FITZGERALD

SITE LOCATION: PHILO OIL HOUSE TEARDOWN
SITE ID: 3
SAMPLE TYPE: WIPE

:TE: GROUND FLOOR OIL HOUSE

| :ST | EPA METHOD # | RESULT | UNITS |
|---|---|---|---|
| :B'S FROM WIPE SAMPLE | 8080 | 11.6 | UG/100CM |

:NOTE: PCB PATTERN MOST CLOSELY RESEMBLES ARACHLOR 1260

REVIEWED BY: _____ _____
CHEMIST DATE

ZANDE ENVIRONMENTAL SERVICE, INC.
1233 DUBLIN RD.
COLUMBUS, OH 43215
(614)486-4383



OHIO EPA APPROVAL #1030
SAMPLE ANALYSIS REPORT

Date: 07/11/90

.EP, OHIO POWER COMPANY
.4 WEST 5TH STREET
AST LIVERPOOL, OH 43920

CUSTOMER # : AEPOP1
SAMPLE ID : 06365
SAMPLE DATE: 06/14/90
SAMPLE TIME: 13:55
DATE RECEIVED: 06/15/90

.TTN: MR. E. W. FITZGERALD
ROJECT #:
AMPLED BY: EARL FITZGERALD

SITE LOCATION: PHILO OIL HOUSE TEARDOWN
SITE ID: 4
SAMPLE TYPE: WIPE

OTE: BASEMENT FLOOR OIL HOUSE

| EST | EPA METHOD # | RESULT | UNITS |
|---|---|---|---|
| CB'S FROM WIPE SAMPLE | 8080 | <1.0 | UG/100CM |

REVIEWED BY: _____ CHEMIST _____ DATE

ZANDE ENVIRONMENTAL SERVICE, INC.
1233 DUBLIN RD.
COLUMBUS, OH 43215
(614)486-4383



OHIO EPA APPROVAL #1030
SAMPLE ANALYSIS REPORT

Date: 07/11/90

EP, OHIO POWER COMPANY
14 WEST 5TH STREET
AST LIVERPOOL, OH 43920

CUSTOMER # : AEPOP1
SAMPLE ID : 06366
SAMPLE DATE: 06/14/90
SAMPLE TIME: 13:54
DATE RECEIVED: 06/15/90

TTN: MR. E. W. FITZGERALD
ROJECT #:
AMPLED BY: EARL FITZGERALD

SITE LOCATION: PHILO OIL HOUSE TEARDOWN
SITE ID: 5
SAMPLE TYPE: WIPE

OTE: BASEMENT FLOOR OIL HOUSE

| EST | EPA METHOD # | RESULT | UNITS |
|---|---|---|---|
| CB'S FROM WIPE SAMPLE | 8080 | 5.0 | UG/100CM |

NOTE: PCB PATTERN MOST CLOSELY RESEMBLES ARACHLOR 1248.

REVIEWED BY: _____ CHEMIST _____ DATE

ZANDE ENVIRONMENTAL SERVICE, INC.
1233 DUBLIN RD.
COLUMBUS, OH 43215
(614)486-4383



OHIO EPA APPROVAL #1030
SAMPLE ANALYSIS REPORT

Date: 07/11/90

EP, OHIO POWER COMPANY
14 WEST 5TH STREET
AST LIVERPOOL, OH 43920

CUSTOMER # : AEPOP1
SAMPLE ID : 06367
SAMPLE DATE: 06/14/90
SAMPLE TIME: 14:05
DATE RECEIVED: 06/15/90

TTN: MR. E. W. FITZGERALD
ROJECT #:
AMPLED BY: EARL FITZGERALD

SITE LOCATION: PHILO OIL HOUSE TEARDOWN
SITE ID: 6
SAMPLE TYPE: WIPE

OTE: BASEMENT FLOOR OIL HOUSE

| EST | EPA METHOD # | RESULT | UNITS |
|---|---|---|---|
| CB'S FROM WIPE SAMPLE | 8080 | <1.0 | UG/100CM |

REVIEWED BY: _____ _____
CHEMIST DATE

1233 DUBLIN RD.
COLUMBUS, OH 43215
(614)486-4383



OHIO EPA APPROVAL #1030
SAMPLE ANALYSIS REPORT

Date: 07/16/90

P, OHIO POWER COMPANY
4 WEST 5TH STREET
ST LIVERPOOL, OH 43920

CUSTOMER # : AEPOP1
SAMPLE ID : 06602
SAMPLE DATE: 07/10/90
SAMPLE TIME: 14:57
DATE RECEIVED: 07/11/90

TN: MR. E. W. FITZGERALD
OJECT #:
MPLED BY: EARL FITZGERALD

SITE LOCATION: PHILO OIL HOUSE TEARDOWN
SITE ID: 1-A
SAMPLE TYPE: WIPE

TE: TOP FLOOR OF OIL HOUSE

| ST | EPA METHOD # | RESULT | UNITS |
|---|---|---|---|
| B'S FROM WIPE SAMPLE | 8080 | <1.0 | UG/100CM |

NOTE: UNITS ARE MICROGRAMS PER 100 SQUARE CENTIMETERS.

REVIEWED BY: Daniel P. Smith
CHEMIST

JUL 16 1990
DATE

ZANDE ENVIRONMENTAL SERVICE, INC.
1233 DUBLIN RD.
COLUMBUS, OH 43215
(614)486-4383



OHIO EPA APPROVAL #1030
SAMPLE ANALYSIS REPORT

Date: 07/16/90

P, OHIO POWER COMPANY
4 WEST 5TH STREET
ST LIVERPOOL, OH 43920

CUSTOMER # : AEPOP1
SAMPLE ID : 06603
SAMPLE DATE: 07/10/90
SAMPLE TIME: 14:50
DATE RECEIVED: 07/11/90

TN: MR. E. W. FITZGERALD
OJECT #:
MPLED BY: EARL FITZGERALD

SITE LOCATION: PHILO OIL HOUSE TEARDOWN
SITE ID: 3-A
SAMPLE TYPE: WIPE

TE: GROUND FLOOR OF OIL HOUSE

| ST | EPA METHOD # | RESULT | UNITS |
|---|---|---|---|
| B'S FROM WIPE SAMPLE | 8080 | <1.0 | UG/100CM |

NOTE: UNITS ARE MICROGRAMS PER 100 SQUARE CENTIMETERS.

REVIEWED BY: Daniel P. Smith
CHEMIST

JUL. 16 1990
DATE

ENSR

Formerly Sunohio

ENSR Operations
1501 Raff Rd. S.W.
Canton, Ohio 44710
216-477-3474

OHIO POWER CO.
RECEIVED
MAY 15 1989
ENVIRONMENTAL AFFAIRS

May 11, 1989

Mr. Jim Ludwig
Ohio Power Company
301 Cleveland Ave. S.W.
Canton, OH 44701

Dear Mr. Ludwig:

The ENSR Operations Laboratory performed analyses for the PCB contamination level of 4 surface wipe samples received on May 8, 1989. These wipe samples, taken from tanks at the Philo Station, had the following results.

| Lab Ref.# | Location | ID# | ug/100 $cm^2$ |
|---|---|---|---|
| 19720 | Philo Station Tank #1 | 004065601 | <1 |
| 19721 | Philo Station Tank #2 | 004065602 | <1 |
| 19722 | " Tank #3 | 004065603 | <1 |
| 19723 | " Tank #4 | 004065604 | <1 |

Thank you for allowing ENSR Operations the opportunity to perform this service. If you have any questions, please do not hesitate to call.

Sincerely,

ENSR OPERATIONS

Tim McBride

Tim McBride
Laboratory Manager

TM/ad