971686

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

COOLER #: 1T

REGION 5
230 South Dearborn Street
Chicago, Illinois 60604

CHAIN OF CUSTODY RECORD

PROJ. NO.: FWI0149
PROJECT NAME: F05-8905-015 / 12004
SAMPLERS: (Signature) Karen M Spangler

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	8oz EXTRACTABLE	120ml VOA					REMARKS: Tag No.'s	Low Conc. Matrix
EFKZ1	5/23/89	1245		✓	S1	3	1	2					5-133351, 133353, 133354	Soil
EFKZ2	5/23/89	1255		✓	S2	3	1	2					5-133356, 133357, 133358	Soil
EFKZ3	5/23/89	1310		✓	S3	3	1	2					5-133359, 133361, 133362	Soil
EFKZ4	5/23/89	1320		✓	S4	3	1	2					5-133363, 133365, 133366	Soil
EFKZ5	5/23/89	1350		✓	S5	3	1	2					5-133367, 133369, 133370	Soil
EFKZ6	5/23/89	MCS		✓	S6	3	1	2					5-133371, 133373, 133374	Soil
EFKZ7	5/23/89	1215		✓	S7	3	1	2					5-133375, 133377, 133378	Soil

Lot #: 8oz: F8221174 S1-S6
F8222044 S7

120ml: G8128094 All

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Karen M Spangler	5/23/89 1600				
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: EMSI Airbill #: 9071157572 Custody Seal #'s: 19863, 19864	

Distribution: White — Accompanies Shipment; Pink — Coordinator Field Files; Yellow — Laboratory File

05- 02368

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

Cooler #: V-78

REGION 5
230 South Dearborn Street
Chicago, Illinois 60604

CHAIN OF CUSTODY RECORD

PROJ. NO.: FWI0149
PROJECT NAME: F05-8905-015 / 12004
SAMPLERS: (Signature) Karen McSpangler

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	8 oz. Met + CN⁻						REMARKS TAG #	Low Conc Matrix
MEEB65	5/23/89	1245		X	S1	1	1						5-133352	Soil
MEEB66	5/23/89	1255		X	S2	1	1						5-133356	Soil
MEEB67	5/23/89	1310		X	S3	1	1						5-133360	Soil
MEEB68	5/23/89	1320		X	S4	1	1						5-133364	Soil
MEEB69	5/23/89	1350		X	S5	1	1						5-133368	Soil
MEEB70	5/23/89	1405		X	S6	1	1						5-133372	Soil
~~MEEB71~~	~~5/ /89~~				~~75~~ KMS S7	~~1~~	~~1~~						~~5-133376~~	~~Soil~~ KMS
MEEB71	5/23/89	1215		X	~~75~~ KMS S7	1	1						5-133376	Soil
													LOT #: F8221174	S1-S6
													F8222044	S7

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Karen McSpangler	5/23/89 1600				
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: ALLIED
Airbill #: 9071157561
Custody Seal #'s: 19841, 19842

Distribution: White — Accompanies Shipment; Pink — Coordinator Field Files; Yellow — Laboratory File

05-02369

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

COOLER# : 145

REGION 5
.230 South Dearborn
Chicago, Illinois 60

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME
FWIC149	FOS-8905-015/12004/4523E

SAMPLERS: (Signature) Karen M Spangler

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	Metals 1 Liter plastic	CN⁻ 1 Liter plastic					REMARKS TAG #:	Low Conc Matrix
MEEB72	5/24/89	1015		X	Blank	2	1	1					5-133382, 5-133384	Dkng Water
MEEB73	5/24/89	1010		X	RW1	2	1	1					5-133390, 5-133391	Dkng H_2O
MEEB74	5/24/89	1045		X	RW2	2	1	1					5-133399, 5-133400	Dkng H_2O
MEEB75	5/24/89	1010		X	DUP	2	1	1					5-133417, 5-133418	Dkng H_2O
MEEB76	5/24/89	1000		X	RW3	2	1	1					5-133425, 5-133426	Dkng H_2O
MEEB77	5/24/89	1120		X	RW4	2	1	1					5-133433, 5-133434	Dkng H_2O
MEEB78	5/24/89	1120		X	RW5	2	1	1					5-133441, 5-133442	Dkng H_2O

LOT #: C9061024
C9061034
C9065024

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Karen M Spangler	5/24/89 1300				
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: JTC
Airbill #: 9071157454
Custody Seal #'s: 19843, 19844

05- 0237

Distribution: White — Accompanies Shipment; Pink — Coordinator Field Files; Yellow — Laboratory File

PROJ. NO. FWI0149
SAMPLERS: (Signature) Karen M Spangler

N AGENCY

Cooler #: 207

REGION 5
230 South Dearborn Street
Chicago, Illinois 60604

CHAIN OF CUSTODY RECORD

ME
05-015/12004/4476E

Spangler

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	ABN/Pest/PCB 1L amber	VOA 40ml					REMARKS Tag #'s Low Conc Matrix
RW1	5/24/89	1010		✓	RW1	6	3	3					5-133387, 133386, 133389 133392, 93, 94 Drkg H_2O
RW2	5/24/89	1045		✓	RW2 + MSD	16	8	8					5-133414-16; 5-133419-21 Drkg H_2O
													Lot #'s: 1L: H7271472
													H7271482
													40ml: B8133264

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Karen M Spangler	5/24/89 1300				
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: HAZLET Airbill #: 9071157465 Custody Seals: 19847, 19848	

Distribution: White — Accompanies Shipment; Pink — Coordinator Field Files; Yellow — Laboratory File

05- 02372

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

Cooler # E&E V-70

REGION 5
230 South Dearborn Street
Chicago, Illinois 60604

CHAIN OF CUSTODY RECORD

PROJ. NO.: FWI0149
PROJECT NAME: F05-8905-015/12004/4476E
SAMPLERS: (Signature) Karen M Spangler

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	ABN/Pest/PCB 1L amber	VOA 40 ml					REMARKS Tag #'s	Low Conc Matrix
DUP	5/24/89	1010		✓	DUPLICATE	6	3	3					5-133414,15,16; 5-133419-21	Drkg H_2O
BLK	5/24/89	1015		✓	Blank	6	3	3					5-133379-81; 5-133383,85,86	Drkg H_2O
RW5	5/24/89	1120		✓	RW5	6	3	3					5-133438-40; 5-133443-45	Drkg H_2O

Lot #'s: 1L: H7029172
H7271472

40ml: B8133264

OTR in Cooler #: 209

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Karen M Spangler	5/24/89 1500				
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: HAZLET
Airbill #: 9071157465
Custody Seal #'s: 19845, 19846

Distribution: White — Accompanies Shipment; Pink — Coordinator Field Files; Yellow — Laboratory File

05-02371

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

Cooler # : 185

REGION 5
230 South Dearborn Street
Chicago, Illinois 60604

CHAIN OF CUSTODY RECORD

PROJ. NO.: FWI0149
PROJECT NAME: F05-8905-015/12004/4476E
SAMPLERS: (Signature) Karen M Spangler

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	A/B/N/Pest/Pet-amber	VOA 40ml					REMARKS Tag #'s	Low Conc Matrxix
RW3	5/24/89	1000		✓	RW3	6	3	3					5-133422-24; 5-133427-29	Drkg H_2O
RW4	5/24/89	1120		✓	RW4	6	3	3					5-133430-32; 5-133435-37	Drkg H_2O

Lot #'s: 1L: H7271482
H7271472

40ml: B8133264

OTR in Cooler # 209

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Karen M Spangler	5/24/89 1300				
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: HAZLET Airbill #: 9071157465 Custody Seals #: 19879, 19850	

Distribution: White — Accompanies Shipment; Pink — Coordinator Field Files; Yellow — Laboratory File

05-02373

SAMPLE DESCRIPTION

SITE NAME/TDD# HALLIE TOWN LANDFILL / F05-8905-015

CASE NUMBER 12004

SAMPLE #/STATION LOCATION Residential Well Blank

SAMPLING DATE 5/24/89 SAMPLING TIME 1015

ORGANIC TRAFFIC NUMBER EFK28

INORGANIC TRAFFIC NUMBER MEEB72

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
3- 1L amber	Extractable	5-133379, 80, 81	H7029172/H7271472
1 L plastic	Metals	5-133382	C9065024
1L plastic	Cyanide	5-133384	"
3- 40ml Vial	VOA	5-133383, 85, 86	B8133264

YSICAL DESCRIPTION AT TIME OF COLLECTION: Clear

AL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT:

als + HNO_3 CN^- + NaOH

Bags of ice over samples

T READINGS

A

Y NA

NA

SAMPLE DESCRIPTION

SITE NAME/TDD# HALLIE TOWN LANDFILL / F05-8905-015

CASE NUMBER 12004

SAMPLE #/STATION LOCATION Residential Well RW1

SAMPLING DATE 5/24/89 SAMPLING TIME 1010

ORGANIC TRAFFIC NUMBER EFK29

INORGANIC TRAFFIC NUMBER MEEB73

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
3- 1L amber	Extractable	5-133387,88,89	H7271472
1 L plastic	Metals	5-133390	C9061024
1L plastic	Cyanide	5-133391	"
3- 40ml vial	VOA	5-133392,93,94	B8133264

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: Clear

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT:

Metals + HNO_3 CN^- + NaOH

Bags of ice over samples

INSTRUMENT READINGS

pH 7.16

CONDUCTIVITY 160 ppm

TEMPERATURE 16°C

SAMPLE DESCRIPTION

SITE NAME/TDD# HALLIE TOWN LANDFILL / F05-8905-015

CASE NUMBER 12004

SAMPLE #/STATION LOCATION Residential Well DUPLICATE (RW1)

SAMPLING DATE 5/24/89 SAMPLING TIME 1010

ORGANIC TRAFFIC NUMBER EFK3

INORGANIC TRAFFIC NUMBER ME EB 75

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
3 - 1L amber	Extractable	5-133414, 15, 16	H7271472
1 L plastic	Metals	5-133417	C9061024
1 L plastic	Cyanide	5-133418	"
3 - 40 ml Vial	VOA	5-133419, 20, 21	B8133264

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: Clear

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT:

Metals + HNO_3 CN^- + NaOH

Bags of ice over samples

INSTRUMENT READINGS

pH 7.16

CONDUCTIVITY 60 ppm

TEMPERATURE 16°C

SAMPLE DESCRIPTION

SITE NAME/TDD# HALLIE TOWN LANDFILL / F05-8905-015

CASE NUMBER 12004

SAMPLE #/STATION LOCATION RESIDENTIAL WELL RW2 + MSD

SAMPLING DATE 5/24/89 SAMPLING TIME 1045

ORGANIC TRAFFIC NUMBER EFK30

INORGANIC TRAFFIC NUMBER MEEB74

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
3-1L amber	Extractable	5-133395,96,97	H7271472
1L plastic	Metals	5-133399	C9061024
1L plastic	Cyanide	5-133400	"
3 40ml vial	VOA	5-133401,02,03	B8133264
MSD 5-1L amber	Extractable	5-133404,05,06,07,08	H7271482
MSD 5-40ml vial	VOA	5-133409,10,11,12,13	B8133264

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: Clear

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT:

Metals + HNO_3 CN^- + NaOH

Bags of ice over samples

INSTRUMENT READINGS

pH 8.18

CONDUCTIVITY 50ppm

TEMPERATURE 17°C

SAMPLE DESCRIPTION

SITE NAME/TDD# HALLIE TOWN LANDFILL / F05-8905-015

CASE NUMBER 12004

SAMPLE #/STATION LOCATION Residential Well RW3

SAMPLING DATE 5/24/89 SAMPLING TIME 1000

ORGANIC TRAFFIC NUMBER EFK32

INORGANIC TRAFFIC NUMBER MEEB76

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
3- 1L amber	Extractable	5-133422, 23, 24	H727 1482
1 L plastic	Metals	5-133425	C906 1024
1L plastic	Cyanide	5-133426	"
3- 40 ml Vial	VOA	5-133427, 28, 29	B8133264

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: Clear

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT:

Metals + HNO_3 CN^- + NaOH

Bags of ice over samples

INSTRUMENT READINGS

pH 6.85

CONDUCTIVITY 140 ppm

TEMPERATURE 18°C

SAMPLE DESCRIPTION

SITE NAME/TOD# HALLIE TOWN LANDFILL / F05-8905-015

CASE NUMBER 12004

SAMPLE #/STATION LOCATION Residential Well RW4

SAMPLING DATE 5/24/89 SAMPLING TIME 1120

ORGANIC TRAFFIC NUMBER EFK33

INORGANIC TRAFFIC NUMBER ME EB77

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
3- 1L amber	Extractable	5-133430, 31, 32	H7271472/ H7271482
1 L plastic	Metals	5-133433	C9061024
1L plastic	Cyanide	5-133434	"
3- 40ml Vial	VOA	5-133435, 36, 37	B8133264

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: Clear

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT:

Metals + HNO_3 CN^- + NaOH

Bags of ice over samples

INSTRUMENT READINGS

pH 8.36

CONDUCTIVITY 45 ppm

TEMPERATURE 16°C

SAMPLE DESCRIPTION

SITE NAME/TDD# HALLIE TOWN LANDFILL / F05-8905-015

CASE NUMBER 12064

SAMPLE #/STATION LOCATION Residential Well RW5

SAMPLING DATE 5/24/89 SAMPLING TIME 1120

ORGANIC TRAFFIC NUMBER EF1K34

INORGANIC TRAFFIC NUMBER MEEB78

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
3- 1L amber	Extractable	5-133438, 39, 40	H7271482
1 L plastic	Metals	5-133441	C9061034
1L plastic	Cyanide	5-133442	"
3- 40ml Vial	VOA	5-133443, 44, 45	B8133269

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: Clear

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT:

Metals + HNO_3 CN^- + NaOH

Bags of ice over samples

INSTRUMENT READINGS

pH 7.57

CONDUCTIVITY 50ppm

TEMPERATURE 18 °C

SAMPLE DESCRIPTION

SITE NAME/TDD# HALLIE TOWN LANDFILL / F05-8905-015

CASE NUMBER 12004

SAMPLE #/STATION LOCATION Soil S1

SAMPLING DATE 5/23/89 SAMPLING TIME 1245

ORGANIC TRAFFIC NUMBER EFK21

INORGANIC TRAFFIC NUMBER ME EB 65

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
8 oz	Extractable	5-133351	F8221174
8 oz	Metals/CN⁻	52	"
2-120 ml	VOA	53, 54	G8188094

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: light brown sand

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: NONE

INSTRUMENT READINGS

pH NA

CONDUCTIVITY NA

TEMPERATURE NA

SAMPLE DESCRIPTION

SITE NAME/TDD# HALLIE TOWN LANDFILL / F05-8905-015

CASE NUMBER 12004

SAMPLE #/STATION LOCATION Soil S2

SAMPLING DATE 5/23/89 SAMPLING TIME 1255

ORGANIC TRAFFIC NUMBER EFK22

INORGANIC TRAFFIC NUMBER ME&B66

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
8 oz	Extractable	5-133355	F8221174
8 oz	Metals/CN⁻	56	"
2-120 ml	VOA	57,58	68188094

PHYSICAL DESCRIPTION AT TIME OF COLLECTION:

light brown sand,

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: NONE

INSTRUMENT READINGS

pH NA

CONDUCTIVITY NA

TEMPERATURE NA

SAMPLE DESCRIPTION

SITE NAME/TDD# HALLIE TOWN LANDFILL / F05-8905-015

CASE NUMBER 12004

SAMPLE #/STATION LOCATION Soil S3

SAMPLING DATE 5/23/89 SAMPLING TIME 1310

ORGANIC TRAFFIC NUMBER EFK23

INORGANIC TRAFFIC NUMBER ME EB67

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
8 oz	Extractable	5-133359	F8221174
8 oz	Metals/CN⁻	60	"
2-120 ml	VOA	61, 62	G8188094

PHYSICAL DESCRIPTION AT TIME OF COLLECTION:

light brown sand

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: NONE

INSTRUMENT READINGS

pH NA

CONDUCTIVITY NA

TEMPERATURE NA

SAMPLE DESCRIPTION

SITE NAME/TDD# HALLIE TOWN LANDFILL / F05-8905-015

CASE NUMBER 12004

SAMPLE #/STATION LOCATION Soil 54

SAMPLING DATE 5/23/89 SAMPLING TIME 1320

ORGANIC TRAFFIC NUMBER EFK24

INORGANIC TRAFFIC NUMBER ME EB368

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
8 oz	Extractable	5-133363	F8221174
8 oz	Metals/CN⁻	64	"
2-120 ml	VOA	65, 66	68188094

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: dark brown sandy loam

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: NONE

INSTRUMENT READINGS

pH NA

CONDUCTIVITY NA

TEMPERATURE NA

SAMPLE DESCRIPTION

SITE NAME/TDD# HALLIE TOWN LANDFILL / F05-8905-015

CASE NUMBER 12004

SAMPLE #/STATION LOCATION Soil 55

SAMPLING DATE 5/23/89 SAMPLING TIME 1350

ORGANIC TRAFFIC NUMBER EFK25

INORGANIC TRAFFIC NUMBER ME EB69

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
8 oz	Extractable	5-133367	F8221171
8 oz	Metals/CN⁻	68	"
2-120 ml	VOA	69, 70	G8188091

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: medium brown sand

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: NONE

INSTRUMENT READINGS

pH NA

CONDUCTIVITY NA

TEMPERATURE NA

SAMPLE DESCRIPTION

SITE NAME/TDD# HALLIE TOWN LANDFILL / F05-8905-015
CASE NUMBER 12004

SAMPLE #/STATION LOCATION Soil S6

SAMPLING DATE 5/23/89 SAMPLING TIME 1405

ORGANIC TRAFFIC NUMBER EFK26
INORGANIC TRAFFIC NUMBER ME&B70

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
8 oz	Extractable	5-133371	F8221174
8 oz	Metals/CN⁻	72	"
2-120 ml	VOA	73,74	G8188094

PHYSICAL DESCRIPTION AT TIME OF COLLECTION:
dark brown sand

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: NONE

INSTRUMENT READINGS
pH NA
CONDUCTIVITY NA
TEMPERATURE NA

SAMPLE DESCRIPTION

SITE NAME/TDD# HALLIE TOWN LANDFILL / F05-8905-015

CASE NUMBER 12004

SAMPLE #/STATION LOCATION Soil 57

SAMPLING DATE 5/23/89 SAMPLING TIME 1215

ORGANIC TRAFFIC NUMBER E FK 27

INORGANIC TRAFFIC NUMBER ME EB 71

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
8 oz	Extractable	5-133375	F8222094
8 oz	Metals/CN⁻	76	"
2-120 ml	VOA	77, 78	68188094

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: dark brown loam

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: NONE

INSTRUMENT READINGS

pH NA

CONDUCTIVITY NA

TEMPERATURE NA

SAMPLE PROPOSAL
FIT REGION V

1. Date Form Completed May 11, 1989

2. Account # FWI 0149 TDD # F05-8706-067 (Work Plan)

EPA I.D. # WID981095920

3. Site Name, City, State Hallie Town Landfill, Eau Claire, Wisconsin

4. Team Leader Ted Nehrkorn Sampler Karen Spangler

5. Number and Type of Samples:

Soil/Sediment 7 Surface Water _____ Ground Water _____

Residential/Municipal Wells 5 Other _____

Number of Blanks 1 Number of Duplicates 1

6. RAS Parameters Requested:

A/B/N X Pest/PCB X Volatiles X Metals X Cyanide X

SAS Parameters Requested: Drinking Waters

7. Expected Sampling Date(s): May 23 and 24, 1989

Expected Shipping Date(s): May 23 and 24, 1989

8. Lab Used For Analysis: Organic EMSI (Soils) / HAZLET (RW)

Inorganic ALLIED (Soils) / JTC (RW)

SAS _____

9. Case Number 12004 SAS Number 4476E / 4523E

10. Airbill Numbers:

Organic Lab 9071157572 # Coolers 1 # Samples 7 Soils } 5/23 Called

Inorganic Lab 9071157561 # Coolers 1 # Samples 7 Soils }

CRL/SAS Lab 9071157465 # Coolers 3 # Samples 5 RW } 5/24 Called

9071157454 1 5 RW

Complete

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

MEMORANDUM

DATE: June 5, 1989
TO: File
FROM: Karen M. Spangler KMS
SUBJECT: Hallie Town Landfill/FWI0149SA/F05-8905-015
Wisconsin/Case #12004

This memorandum addresses an error in sampling paperwork for residential well samples collected on May 24, 1989. On the 3 organic chain-of-custody forms, the station location was entered in the station numnber column instead of the OTR numbers.

3230:3

recycled paper

SITE NAME: HALLIE TOWN LANDFILL PAN: FWI 0149SA

NAME	ADDRESS	CITY

Non-responsive

6.

7.

8.

9.

10.

11.

12.

13.

14.

15.

16.

QA013(5/5/89)

RWI

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5
230 SOUTH DEARBORN ST.
CHICAGO, ILLINOIS 60604

REPLY TO THE ATTENTION OF:

Sample Collection Date: MAY 24, 1989

Recipient Information: Non-responsive [redacted]

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 sample analysis of samples collected from your property will be forwarded by the U.S. EPA within 6 months. If a copy of the sample analysis is not received within 6 months of the sample collection 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 WID981095920

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.: F05-8905-015 ; PAN: FNI01495A
Yellow: Recipient
Pink: U.S. EPA

RW2

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

REPLY TO THE ATTENTION OF:

Sample Collection Date: MAY 24, 1989

Recipient Information: Non-responsive [redacted]

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 sample analysis of samples collected from your property will be forwarded by the U.S. EPA within 6 months. If a copy of the sample analysis is not received within 6 months of the sample collection 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 WID981095920

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.: F05-8905-015 ; PAN: FWI0149SA
Yellow: Recipient
Pink: U.S. EPA

RW3

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

REPLY TO THE ATTENTION OF:

Sample Collection Date: MAY 24, 1989

Recipient Information: Non-responsive [redacted]

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 sample analysis of samples collected from your property will be forwarded by the U.S. EPA within 6 months. If a copy of the sample analysis is not received within 6 months of the sample collection 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 WID981095920

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.: F05-8905-015; PAN: FWI0149SA
Yellow: Recipient
Pink: U.S. EPA

RW4

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

REPLY TO THE ATTENTION OF:

Sample Collection Date: MAY 24, 1989

Recipient Information: Non-responsive [redacted]

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 sample analysis of samples collected from your property will be forwarded by the U.S. EPA within 6 months. If a copy of the sample analysis is not received within 6 months of the sample collection 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 WID981095920

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.: F05-8905-015 ; PAN: FWI0149SA
Yellow: Recipient
Pink: U.S. EPA

RWS

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

REPLY TO THE ATTENTION OF:

Sample Collection Date: May 24, 1989

Recipient Information: Non-responsive [redacted]

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 sample analysis of samples collected from your property will be forwarded by the U.S. EPA within 6 months. If a copy of the sample analysis is not received within 6 months of the sample collection 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 WID981095920

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.: F05-8905-015; PAN: FWI0149SA
Yellow: Recipient
Pink: U.S. EPA

WID981095920

REGION: 05

U. S. ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF EMERGENCY AND REMEDIAL RESPONSE
DATA BASE UPDATED 83/01/07
T.1 - ERRIS TURNAROUND DOCUMENT

PAGE: 296
RUN DATE: 83/01/07
RUN TIME: 12:23:51

SITE DATA

EPA ID NO.: _____ SHEET

(ACTION : A - FOR DATA ENTRY USE ONLY)

AK ID: SITE NAME: Hallie Town Ldfl SOURCE: T

STREET: SW1/4 NW1/4 SEC33 T28N R9W CONG. DIST.: 07

SITE PRIORITY: CITY: Eau Claire ST: WI ZIP: ~~54703~~ 54730

HRS: COUNTY NAME: Eau Claire COUNTY CODE: 035

S DATE (YY/MM): LATITUDE: / / LONGITUDE: / /

ENFORCEMENT TERMINATION (CHECK ONE IF APPLICABLE): PENDING NO FURTHER ACTION

ENFORCEMENT DISPOSITION (CHECK ANY THAT APPLY): NO VIABLE RESPONSIBLE PARTY VOLUNTARY RESPONSE

ENFORCED RESPONSE COST RECOVERY

ENVIRO ACTIONS

	(ACTION - FOR DATA ENTRY USE ONLY)	EVENT TYPE	DATE (YY/MM) STARTED	DATE (YY/MM) COMPLETED	CONDUCTED BY EPA	STATE	RESP/PARTY	OTHER	COMMS
LEVELS	A	SITE DISCOVERY (SD)		83/08/30					
	A	PRELIMINARY ASSESSMENT (PA)		83/09/30					
		SITE INVESTIGATION (SI)	/	/					
		REMEDIAL ACTION (RD)	/	/					
		REMOVAL ACTION (RV)	/	/					
DISCRETE SITE		ENFORCEMENT INVESTIGATION (EI)	/	/					
		ADMINISTRATIVE ORDER (AO)	/	/					
		JUDICIAL ACTION (JA)	/	/					

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5
230 SOUTH DEARBORN ST.
CHICAGO, ILLINOIS 60604

REPLY TO THE ATTENTION OF:

FIT Inspection Date: 5/23/89

CERCLIS Site Name: HALLIE TOWN LANDFILL

Site Address: SW 1/4, NW 1/4, SEC. 23, T. 28 N., R. 9 W.

Recipient Information: MR. DAVID F. MEIER
Name

HALLIE TOWNSHIP CHAIRMAN
Title

957 HAGEN RD
Street Address

CHIPPEWA FALLS WI 54729
City State Zip Code

(715) 723-2911
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 WID981095920

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.: F05-8905-015; PAN: FWI0149SA
Yellow: Recipient
Pink: U.S. EPA

RECEIPT FOR SAMPLES

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

U. S. EPA ID NO WID981095920

PROJ. ACCT. NO. FWI0149SA

TDD F05-8905-015

SPLIT SAMPLES ACCEPTED( ) DECLINED(✓)

FACILITY/OCCUPANT NAME: Hallie Town Landfill

FACILITY/OCCUPANT ADDRESS:

SAMPLE NUMBER	DATE	TIME	SPLIT SAMPLES (✓)	OTR#	ITR#	DESCRIPTION OF SAMPLE LOCATIONS	SEMIVOLATILES	PESTICIDES/PCBS	VOLATILES	METALS	CYANIDE			MATRIX
S1	5/23/89	1245		EFKZ1	MEEB65		✓	✓	✓	✓	✓			SOIL
S2	5/23/89	1255		EFKZ2	MEEB66		✓	✓	✓	✓	✓			SOIL
S3	5/23/89	1310		EFKZ3	MEEB67		✓	✓	✓	✓	✓			SOIL
S4	5/23/89	1320		EFKZ4	MEEB68		✓	✓	✓	✓	✓			SOIL
S5	5/23/89	1350		EFKZ5	MEEB69		✓	✓	✓	✓	✓			SOIL
S6	5/23/89	1405		EFKZ6	MEEB70		✓	✓	✓	✓	✓			SOIL
~~S7~~	~~5/ /89~~	~~KMS~~		~~EFKZ7~~	~~MEEB71~~	~~KMS~~	~~✓~~	~~✓~~	~~✓~~	~~✓~~	~~✓~~			~~SOIL~~ KMS

TRANSFERRED BY

Ted W. Nelson (Signature) 5/23/89 (Date) 14:30 (Time)

RECEIVED BY:

Dennis Johnson (Signature) 5/23/89 (Date) 2:35 PM (Time)

TITLE: Ayres Associates

TELEPHONE: 715-834-3161

DISTRIBUTION

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

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5
230 SOUTH DEARBORN ST.
CHICAGO, ILLINOIS 60604

REPLY TO THE ATTENTION OF:

FIT Inspection Date: 5/23/89

CERCLIS Site Name: HALLIE TOWN LANDFILL

Site Address: SW1/4, NW1/4, SEC. 23, T. 28 N., R. 9 W.

Recipient Information: MR. DAVID F. MEIER
Name

HALLIE TOWNSHIP CHAIRMAN
Title

957 HAGEN RD
Street Address

CHIPPEWA FALLS WI 54729
City State Zip Code

(715) 723-2911
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 WID981095920

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.: F05-8905-015; PAN: FWI01495A
Yellow: Recipient
Pink: U.S. EPA

SAMPLE PROPOSAL
FIT REGION V

1. Date Form Completed May 11, 1989

2. Account # FWI 0149 TDD # F05-8706-067 (Work Plan)

EPA I.D. # WID981095920

3. Site Name, City, State Hallie Town Landfill, Eau Claire, Wisconsin

4. Team Leader Ted Nehrkorn Sampler Karen Spangler

5. Number and Type of Samples:

Soil/Sediment 7 Surface Water _____ Ground Water _____

Residential/Municipal Wells 5 Other _____

Number of Blanks 1 Number of Duplicates 1

6. RAS Parameters Requested:

A/B/N X Pest/PCB X Volatiles X Metals X Cyanide X

SAS Parameters Requested: Drinking Waters

7. Expected Sampling Date(s): May 23 and 24, 1989

Expected Shipping Date(s): May 23 and 24, 1989

8. Lab Used For Analysis: Organic EMSI (Soils) / HAZLET (RW)

Inorganic ALLIED (Soils) / JTC (RW)

SAS _____

9. Case Number 12004 SAS Number 4476E / 4523E

10. Airbill Numbers:

						AIRBILLS
Organic Lab	EMSI	# Coolers	1	# Samples	7	9071157572
Inorganic Lab	Allied	# Coolers	1	# Samples	7	9071157561
CRL/SAS Lab	O- HAZLET	# Coolers	3	# Samples	7	9071157465
	I- JTC		1		7	9071157454

EPA

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: 12004

SAS No. (if applicable):

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

2. Region Number: V

Sampling Co.: FIT

Sampler (Name): KAREN M. SPANGLER

4. Date Shipped: 5/23/89

Airbill Number: 9071157572

Carrier: F

Non-Superfund Program

Site Name: Hallie Town LandFill

City, State: Hallie, Wisconsin

Site Spill ID

3. Ship To: Env. Monitoring & Services
4765 Calle Quetzal
Camarillo CA 93010
Attn: Sue Ozdemir

Triple 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 VOA	BNA	Pest/PCB	(D) Special Handling	(E) Station Location	(F) Date/Time of Sample Collection	(G) Corresponding CLP Inorganic Sample Number
EFK21	5	L	X	X	X				MEEB65
EFK22	5	L	X	X	X				MEEB66
EFK23	5	L	X	X	X				MEEB67
EFK24	5	L	X	X	X				MEEB68
EFK25	5	L	X	X	X				MEEB69
EFK26	5	L	X	X	X				MEEB70
EFK27	5	L	X	X	X				MEEB71

Shipment 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

COOLER #: 17

CHAIN OF CUSTODY RECORD

REGION 5
230 South Dearborn Street
Chicago, Illinois 60604

PROJ. NO.: FWI0149
PROJECT NAME: F05-8905-015 / 12004
SAMPLERS: (Signature) Karen M Spangler

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	8oz EXTRACTABLE	120ml VOA					REMARKS: Tag No.'s	Low Conc. Matrix
EFKZ1	5/23/89	1245		✓	51	3	1	2					5-133351, 133353, 133354	Soil
EFKZ2	5/23/89	1255		✓	52	3	1	2					5-133356, 133357, 133358	Soil
EFKZ3	5/23/89	1310		✓	53	3	1	2					5-133359, 133361, 133362	Soil
EFKZ4	5/23/89	1320		✓	54	3	1	2					5-133363, 133365, 133366	Soil
EFKZ5	5/23/89	1350		✓	55	3	1	2					5-133367, 133369, 133370	Soil
EFKZ6	5/23/89	1405		✓	56	3	1	2					5-133371, 133373, 133374	Soil
EFKZ7	5/23/89	1215		✓	57	3	1	2					5-133375, 133377, 133378	Soil
													Lot #: 8oz: F8221174	51-56
													F8227044	57
													120ml: 68188094	All

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Karen M Spangler	5/23/89 1600				
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: EMSI Airbill #: 9071157572 Custody Seal #'s: 19863, 19864	

Distribution: White — Accompanies Shipment; Pink — Coordinator Field Files; Yellow — Laboratory File

05- 02368

United States Environmental Protection Agency
Contract Laboratory Program Sample Management Office
PO Box 818 Alexandria, VA 22313
703-557-2490 FTS 557-2490

EPA

Inorganic Traffic Report
(For CLP Use Only)

Case Number: 12004
SAS No. (If applicable):

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

2. Region Number: V
Sampling Co.: FIT
Sampler (Name): KAREN M. SPANGLER

4. Date Shipped: 5/23/89
Airbill Number: 9071157561
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

Site Name: Hallie Town LandFill
City, State: Hallie, Wisconsin
Site Spill ID:

3. Ship To:
Allied Analytical Research
1518 Valwood Parkway
Suite 118
Carrollton, TX 75006
Attn: Debbie Bass

Double 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: Total Metals	(C) RAS Analysis: Cyanide	(D) Special Handling	(E) Station Location	(F) Date/Time of Sample Collection	(G) Corresponding Organic Sample Number
MEEB65	5	L	X	X				EFK21
MEEB66	5	L	X	X				EFK22
MEEB67	5	L	X	X				EFK23
MEEB68	5	L	X	X				EFK24
MEEB69	5	L	X	X				EFK25
MEEB70	5	L	X	X				EFK26
MEEB71	5	L	X	X				EFK27
	Shipment		Complete					

EPA Form 9110-1 (8-88) Replaces EPA Form 2075-6, 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

Cooler #: V-78

REGION 5
230 South Dearborn Street
Chicago, Illinois 60604

CHAIN OF CUSTODY RECORD

PROJ. NO.: FWI0149
PROJECT NAME: F05-8905-015 / 12004
SAMPLERS: (Signature) Karen McSpangler

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	8oz. Met + CN-						REMARKS TAG #	Low Conc. Matrix
MEEB65	5/23/89	1245		X	51	1	1						5-133352	Soil
MEEB66	5/23/89	1255		X	52	1	1						5-133356	Soil
MEEB67	5/23/89	1310		X	53	1	1						5-133360	Soil
MEEB68	5/23/89	1320		X	54	1	1						5-133364	Soil
MEEB69	5/23/89	1350		X	55	1	1						5-133368	Soil
MEEB70	5/23/89	1405		X	56	1	1						5-133372	Soil
~~MEEB71~~	~~5/ 89~~				~~75 KMS~~ 57	1	1						~~5-133376~~	~~Soil~~ KMS
MEEB71	5/23/89	1215		X	~~KMS~~ 57	1	1						5-133376	Soil

LOT #: F8221174 51-56
F8222044 57

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Karen McSpangler	5/23/89 1600				
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	

Remarks: Shipped FED. EX. to: ALLIED
Airbill #: 9071157561
Custody Seal #'s: 19841, 19842

Distribution: White — Accompanies Shipment; Pink — Coordinator Field Files; Yellow — Laboratory File

05-02369

SAMPLE DESCRIPTION

SITE NAME/TDD# HALLIE TOWN LANDFILL / F05-8905-015

CASE NUMBER 12004

SAMPLE #/STATION LOCATION Soil S1

SAMPLING DATE 5/23/89 SAMPLING TIME 1245

ORGANIC TRAFFIC NUMBER EFKZ1

INORGANIC TRAFFIC NUMBER MEEB 65

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
8 oz	Extractable	5-133351	F8221174
8 oz	Metals/CN⁻	52	"
2-120 ml	VOA	53, 54	G8188094

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: light brown sand

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: NONE

INSTRUMENT READINGS

pH NA

CONDUCTIVITY NA

TEMPERATURE NA

SAMPLE DESCRIPTION

SITE NAME/TDD# HALLIE TOWN LANDFILL / F05-8905-015

CASE NUMBER 12004

SAMPLE #/STATION LOCATION Soil S2

SAMPLING DATE 5/23/89 SAMPLING TIME 1255

ORGANIC TRAFFIC NUMBER EFK22

INORGANIC TRAFFIC NUMBER ME2B66

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
8 oz	Extractable	5-133355	F8221174
8 oz	Metals/CN⁻	56	"
2-120 ml	VOA	57,58	68188094

PHYSICAL DESCRIPTION AT TIME OF COLLECTION:

light brown sand

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: NONE

INSTRUMENT READINGS

pH NA

CONDUCTIVITY NA

TEMPERATURE NA

SAMPLE DESCRIPTION

SITE NAME/TDD# HALLIE TOWN LANDFILL / F05-8905-015

CASE NUMBER 12004

SAMPLE #/STATION LOCATION Soil S3

SAMPLING DATE 5/23/89 SAMPLING TIME 1310

ORGANIC TRAFFIC NUMBER EFK23

INORGANIC TRAFFIC NUMBER ME EB67

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
8 oz	Extractable	5-133359	F8221174
8 oz	Metals/CN⁻	60	"
2-120 ml	VOA	61, 62	68188094

PHYSICAL DESCRIPTION AT TIME OF COLLECTION:

light brown sand

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: NONE

INSTRUMENT READINGS

pH NA

CONDUCTIVITY NA

TEMPERATURE NA

SAMPLE DESCRIPTION

SITE NAME/TDD# HALLIE TOWN LANDFILL / F05-8905-015

CASE NUMBER 12004

SAMPLE #/STATION LOCATION Soil 54

SAMPLING DATE 5/23/89 SAMPLING TIME 1320

ORGANIC TRAFFIC NUMBER EFK24

INORGANIC TRAFFIC NUMBER ME EB368

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
8 oz	Extractable	5-133363	F8221174
8 oz	Metals/CN⁻	64	"
2-120 ml	VOA	65, 66	68188094

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: dark brown sandy loam

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: NONE

INSTRUMENT READINGS

pH NA

CONDUCTIVITY NA

TEMPERATURE NA

SAMPLE DESCRIPTION

SITE NAME/TDD# HALLIE TOWN LANDFILL / F05-8905-015

CASE NUMBER 12004

SAMPLE #/STATION LOCATION Soil S5

SAMPLING DATE 5/23/89 SAMPLING TIME 1350

ORGANIC TRAFFIC NUMBER EFK25

INORGANIC TRAFFIC NUMBER ME EB69

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
8 oz	Extractable	5-133367	F8221174
8 oz	Metals/CN⁻	68	"
2-120 ml	VOA	69, 70	G8188094

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: medium brown sand

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: NONE

INSTRUMENT READINGS

pH NA

CONDUCTIVITY NA

TEMPERATURE NA

SAMPLE DESCRIPTION

SITE NAME/TDD# HALLIE TOWN LANDFILL / F05-8905-015

CASE NUMBER 12004

SAMPLE #/STATION LOCATION Soil S6

SAMPLING DATE 5/23/89 SAMPLING TIME 1405

ORGANIC TRAFFIC NUMBER EFK26

INORGANIC TRAFFIC NUMBER ME&B70

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
8 oz	Extractable	5-133371	F8221174
8 oz	Metals/CN⁻	72	"
2-120 ml	VOA	73,74	68188094

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: dark brown sand

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: NONE

INSTRUMENT READINGS

pH NA

CONDUCTIVITY NA

TEMPERATURE NA

SAMPLE DESCRIPTION

SITE NAME/TDD# HALLIE TOWN LANDFILL / F05-8905-015

CASE NUMBER 12004

SAMPLE #/STATION LOCATION Soil 57

SAMPLING DATE 5/23/89 SAMPLING TIME 1215

ORGANIC TRAFFIC NUMBER EFK27

INORGANIC TRAFFIC NUMBER MEEB71

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
8 oz	Extractable	5-133375	F8222094
8 oz	Metals/CN⁻	76	"
2-120 ml	VOA	77, 78	G8188094

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: dark brown loam

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: NONE

INSTRUMENT READINGS

pH NA

CONDUCTIVITY NA

TEMPERATURE NA

EPA

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: 12004
SAS No. (if applicable): 4476E

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

Non-Superfund Program

Site Name: Hallie Town LandFill

City, State: Hallie Wisconsin

Site Spill ID

2. Region Number: V
Sampling Co.: FIT

Sampler (Name): Karen M. Spangler

3. Ship To:
HAZLETON LABS, INC.
515 SCIENCE DRIVE
MADISON, WI 53711
Attn: Steven Crupi

4. Date Shipped: 5/24/89
Airbill Number: 9071157465

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. 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 VOA	BNA	Pest/PCB	(D) Special Handling	(E) Station Location	(F) Date/Time of Sample Collection	(G) Corresponding CLP Inorganic Sample Number
EFK28	3	L	X	X	X	Blank			MEEB72
EFK29	2	L	X	X	X				MEEB73
EFK30	2	L	X	X	X				MEEB74
EFK31	2	L	X	X	X				MEEB75
EFK32	2	L	X	X	X				MEEB76
EFK33	2	L	X	X	X				MEEB77
EFK34	2	L	X	X	X				MEEB78

Shipment 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

Cooler #: 209

REGION 5
230 South Dearborn Street
Chicago, Illinois 60604

CHAIN OF CUSTODY RECORD

PROJ. NO.: FNI0149
PROJECT NAME: F05-8905-015/12004/4476E
SAMPLERS: (Signature) Karen M Spangler

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	ABN/Pest/PCB 4L amber	VOA 40ml					REMARKS Tag #'s / Low Conc Matrix
RW1	5/24/89	1010		✓	RW1	6	3	3					5-133387, 133388, 133389 Drkg H_2O
RW2	5/24/89	1045		✓	RW2 + MSD	16	8	8					5-133414-16; 5-133419-21 Drkg H_2O
													Lot #'s: 1L: H7271472
													H7271482
													40ml: 88133264

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Karen M Spangler	5/24/89 1300				
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: HAZLET Airbill #: 9071157465 Custody Seals: 19847, 19848	

Distribution: White — Accompanies Shipment; Pink — Coordinator Field Files; Yellow — Laboratory File

05- 02372

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

Cooler # : 185

REGION 5
230 South Dearborn Street
Chicago, Illinois 60604

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME
FWI0149	F05-8905-015/12004/4476E

SAMPLERS: *(Signature)* Karen M Spangler

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	A/B/N/Pest/KCF amber 40ml	VOA					REMARKS Tag #'s	Low Conc Matrix
RW3	5/24/89	1000		✓	RW3	6	3	3					5-133422-24; 5-133427-29	Drkg H_2O
RW4	5/24/89	1120		✓	RW4	6	3	3					5-133430-32; 5-133435-37	Drkg H_2O
													Lot #'s: 1L: H7271482	
													H7271472	
													40ml: B8133264	
													OTR in Cooler # 209	

Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*
Karen M Spangler	5/24/89 1300				
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: HAZLET Airbill #: 907 115 7465 Custody Seals #: 19849, 19850	

Distribution: White — Accompanies Shipment; Pink — Coordinator Field Files; Yellow — Laboratory File

05-02373

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

Cooler # E&E V-70

REGION 5
230 South Dearborn Street
Chicago, Illinois 60604

CHAIN OF CUSTODY RECORD

PROJ. NO.: FNI0149
PROJECT NAME: F05-8905-015/12004/4476E
SAMPLERS: (Signature) Karen M Spangler

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	ABN/Pest/PCB 1L amber	VOA 40 ml					REMARKS Tag #'s	Low Conc Matrix
DUP	5/24/89	1010		✓	DUPLICATE	6	3	3					5-133414, 15, 16; 5-133419-21	Drkg H_2O
BLK	5/24/89	1015		✓	Blank	6	3	3					5-133379-81; 5-133383, 85, 86	Drkg H_2O
RW5	5/24/89	1120		✓	RW5	6	3	3					5-133438-40; 5-133443-45	Drkg H_2O
													Lot #'s: 1L: H7029172	
													H7271472	
													40ml: B8133264	
					OTR in Cooler #: 209									

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Karen M Spangler	5/24/89 1300				
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: HAZLET Airbill #: 9071157465 Custody Seal #'s: 19845, 19846

Distribution: White — Accompanies Shipment; Pink — Coordinator Field Files; Yellow — Laboratory File

05-02371

EPA

United States Environmental Protection Agency
Contract Laboratory Program Sample Management Office
PO Box 818 Alexandria, VA 22313
703-557-2490 FTS 557-2490

Inorganic Traffic Report
(For CLP Use Only)

Case Number: 12004
SAS No. (if applicable): 4523E

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

2. Region Number: V
Sampling Co.: FIT
Sampler (Name): KAREN M. SPANGLER

4. Date Shipped: 5/24/89
Airbill Number: 9071157454
Carrier: F

Non-Superfund Program

Site Name: Hallie Town Landfill
City, State: Hallie, Wisconsin
Site Spill ID

3. Ship To:
JTC Environmental Consultants
Four Research Place Suite L-10
Rockville MD 20850
Attn: Mike Drury

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
MEEB72	3	L	X	X	Blank			EFK28
MEEB73	2	L	X	X				EFK29
MEEB74	2	L	X	X				EFK30
MEEB75	2	L	X	X				EFK31
MEEB76	2	L	X	X				EFK32
MEEB77	2	L	X	X				EFK33
MEEB78	2	L	X	X				EFK34
	Shipment			Complete				

EPA Form 9110-1 (8-88) Replaces EPA Form 2075-6, 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

Cooler # : 193

REGION 5
230 South Dearborn Street
Chicago, Illinois 60604

CHAIN OF CUSTODY RECORD

PROJ. NO.: FWI0149
PROJECT NAME: F05-8905-015/12004/4523E
SAMPLERS: (Signature) Karen M Spangler

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	Metals 1 Liter plastic	CN- 1 Liter plastic					REMARKS: TAG #:	Sample Matrix
MEEB72	5/24/89	1015		X	Blank	2	1	1					5-133382, 5-133384	Dkng Water
MEEB73	5/24/89	1010		X	RW1	2	1	1					5-133390, 5-133391	Dkng, H_2O
MEEB74	5/24/89	1015		X	RW2	2	1	1					5-133399, 5-133400	Dkng, H_2O
MEEB75	5/24/89	1010		X	DUP	2	1	1					5-133417, 5-133418	Dkng, H_2O
MEEB76	5/24/89	1000		X	RW3	2	1	1					5-133425, 5-133426	Dkng, H_2O
MEEB77	5/24/89	1120		X	RW4	2	1	1					5-133433, 5-133434	Dkng, H_2O
MEEB78	5/24/89	1120		X	RW5	2	1	1					5-133441, 5-133442	Dkng, H_2O

LOT #: C9061024
C9061034
C9065024

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Karen M Spangler	5/24/89 1500				
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: JTC Airbill #: 9071157454 Custody Seal #'s: 19843, 19844	

Distribution: White — Accompanies Shipment; Pink — Coordinator Field Files; Yellow — Laboratory File

05-02370

SAMPLE DESCRIPTION

SITE NAME/TDD# HALLIE TOWN LANDFILL / F05-8905-015

CASE NUMBER 12004

SAMPLE #/STATION LOCATION Residential Well Blank

SAMPLING DATE 5/24/89 SAMPLING TIME 1015

ORGANIC TRAFFIC NUMBER EFK28

INORGANIC TRAFFIC NUMBER MEEB72

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
3- 1L amber	Extractable	5-133379, 80, 81	H7029172/H727147
1 L plastic	Metals	5-133382	C9065024
1L plastic	Cyanide	5-133384	"
3- 40 ml Vial	VOA	5-133383, 85, 86	B8133264

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: Clear

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT:

Metals + HNO_3 CN^- + NaOH

Bags of ice over samples

INSTRUMENT READINGS

pH NA

CONDUCTIVITY NA

TEMPERATURE NA

SAMPLE DESCRIPTION

SITE NAME/TDD# HALLIE TOWN LANDFILL / F05-8905-015

CASE NUMBER 12004

SAMPLE #/STATION LOCATION Residential Well RW1

SAMPLING DATE 5/24/89 SAMPLING TIME 1010

ORGANIC TRAFFIC NUMBER EFK29

INORGANIC TRAFFIC NUMBER MEEB73

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
3 - 1L amber	Extractable	5-133387, 88, 89	H7271472
1 L plastic	Metals	5-133390	C9061021
1 L plastic	Cyanide	5-133391	"
3 - 40 ml vial	VOA	5-133392, 93, 94	B8133264

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: Clear

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT:

Metals + HNO_3 CN^- + NaOH

Bags of ice over samples

INSTRUMENT READINGS

pH 7.16

CONDUCTIVITY 60 ppm

TEMPERATURE 16°C

SAMPLE DESCRIPTION

SITE NAME/TDD# HALLIE TOWN LANDFILL / F05-8905-015

CASE NUMBER 12004

SAMPLE #/STATION LOCATION Residential Well DUPLICATE (RW1)

SAMPLING DATE 5/24/89 SAMPLING TIME 1010

ORGANIC TRAFFIC NUMBER EFK31

INORGANIC TRAFFIC NUMBER ME EB 75

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
3- 1L amber	Extractable	5-133414, 15, 16	H7271472
1 L plastic	Metals	5-133417	C9061024
1L plastic	Cyanide	5-133418	"
3- 40ml Vial	VOA	5-133419, 20, 21	B8133264

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: Clear

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT:

Metals + HNO_3 CN^- + NaOH

Bags of ice over samples

INSTRUMENT READINGS

pH 7.16

CONDUCTIVITY 60ppm

TEMPERATURE 16°C

SAMPLE DESCRIPTION

SITE NAME/TDD# HALLIE TOWN LANDFILL / F05-8905-015

CASE NUMBER 12004

SAMPLE #/STATION LOCATION RESIDENTIAL WELL RW2 + MSD

SAMPLING DATE 5/24/89 SAMPLING TIME 1045

ORGANIC TRAFFIC NUMBER EFK30

INORGANIC TRAFFIC NUMBER MEEB74

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
3-1L amber	Extractable	5-133395,96,97	H7271472
1L plastic	Metals	5-133399	C9061024
1L plastic	Cyanide	5-133400	"
3 40ml vial	VOA	5-133401,02,03	B8133264
MSD 5-1L amber	Extractable	5-133404,05,06,07,08	H7271482
MSD 5-40ml vial	VOA	5-133409,10,11,12,13	B8133264

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: Clear

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT:

Metals + HNO_3 CN^- + NaOH

Bags of ice over samples

INSTRUMENT READINGS

pH 8.18

CONDUCTIVITY 50ppm

TEMPERATURE 17°C

SAMPLE DESCRIPTION

SITE NAME/TDD# HALLIE TOWN LANDFILL / F05-8905-015

CASE NUMBER 12004

SAMPLE #/STATION LOCATION Residential Well RW3

SAMPLING DATE 5/24/89 SAMPLING TIME 1000

ORGANIC TRAFFIC NUMBER EFK32

INORGANIC TRAFFIC NUMBER MEEB76

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
3 - 1L amber	Extractable	5-133422, 23, 24	H727 1482
1 L plastic	Metals	5-133425	C906 1024
1L plastic	Cyanide	5-133426	"
3 - 40 ml Vial	VOA	5-133427, 28, 29	B8133264

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: Clear

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT:

Metals + HNO_3 CN^- + NaOH

Bags of ice over samples

INSTRUMENT READINGS

pH 6.85

CONDUCTIVITY 140 ppm

TEMPERATURE 18°C

SAMPLE DESCRIPTION

SITE NAME/TDD# HALLIE TOWN LANDFILL / F05-8905-015

CASE NUMBER 12004

SAMPLE #/STATION LOCATION Residential Well RW4

SAMPLING DATE 5/24/89 SAMPLING TIME 1120

ORGANIC TRAFFIC NUMBER EFK33

INORGANIC TRAFFIC NUMBER ME EB77

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
3 - 1L amber	Extractable	5-133430, 31, 32	H7271472/ H7274486
1 L plastic	Metals	5-133433	C9061024
1 L plastic	Cyanide	5-133434	"
3 - 40 ml Vial	VOA	5-133435, 36, 37	B8133269

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: Clear

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT:

Metals + HNO_3 CN^- + NaOH

Bags of ice over samples

INSTRUMENT READINGS

pH 8.36

CONDUCTIVITY 45 ppm

TEMPERATURE 16°C

SAMPLE DESCRIPTION

SITE NAME/TDD# HALLIE TOWN LANDFILL / F05-8905-015

CASE NUMBER 12064

SAMPLE #/STATION LOCATION Residential Well RW5

SAMPLING DATE 5/24/89 SAMPLING TIME 1120

ORGANIC TRAFFIC NUMBER EF1634

INORGANIC TRAFFIC NUMBER MEEB78

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
3- 1L amber	Extractable	5-133438, 39, 40	H7271482
1 L plastic	Metals	5-133441	C9061034
1L plastic	Cyanide	5-133442	"
3- 40ml Vial	VOA	5-133443, 44, 45	B8133269

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: Clear

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT:

Metals + HNO_3 CN^- + NaOH

Bags of ice over samples

INSTRUMENT READINGS

pH 7.57

CONDUCTIVITY 50ppm

TEMPERATURE 18 °C

ecology and environment, inc.

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

International Specialists in the Environment

M E M O R A N D U M

DATE: June 5, 1989

TO: File

FROM: Karen M. Spangler KMS

SUBJECT: Hallie Town Landfill/FWI0149SA/F05-8905-015
Wisconsin/Case #12004

This memorandum addresses an error in sampling paperwork for residential well samples collected on May 24, 1989. On the 3 organic chain-of-custody forms, the station location was entered in the station numnber column instead of the OTR numbers.

3230:3

recycled paper

RWI

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5
230 SOUTH DEARBORN ST.
CHICAGO, ILLINOIS 60604

REPLY TO THE ATTENTION OF:

Sample Collection Date: MAY 24, 1989

Recipient Information: Non-responsive [redacted]

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 sample analysis of samples collected from your property will be forwarded by the U.S. EPA within 6 months. If a copy of the sample analysis is not received within 6 months of the sample collection 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 WID981095920

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.: F05-8905-015 ; PAN: FWI01495A
Yellow: Recipient
Pink: U.S. EPA

RW2

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5
230 SOUTH DEARBORN ST.
CHICAGO, ILLINOIS 60604

REPLY TO THE ATTENTION OF:

Sample Collection Date: MAY 24, 1989

Recipient Information: Non-responsive [redacted]

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 sample analysis of samples collected from your property will be forwarded by the U.S. EPA within 6 months. If a copy of the sample analysis is not received within 6 months of the sample collection 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 WID981095920

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.: F05-8905-015 ; PAN: FWI0149SA
Yellow: Recipient
Pink: U.S. EPA

RW3

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5
230 SOUTH DEARBORN ST.
CHICAGO, ILLINOIS 60604

REPLY TO THE ATTENTION OF:

Sample Collection Date: MAY 24, 1989

Recipient Information: Non-responsive [redacted]

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 sample analysis of samples collected from your property will be forwarded by the U.S. EPA within 6 months. If a copy of the sample analysis is not received within 6 months of the sample collection 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 WID981095920

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.: F05-8905-015; PAN: FWI0149SA
Yellow: Recipient
Pink: U.S. EPA

RW4

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5
230 SOUTH DEARBORN ST.
CHICAGO, ILLINOIS 60604

REPLY TO THE ATTENTION OF:

Sample Collection Date: MAY 24, 1989

Recipient Information: Non-responsive [redacted]

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 sample analysis of samples collected from your property will be forwarded by the U.S. EPA within 6 months. If a copy of the sample analysis is not received within 6 months of the sample collection 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 WID981095920

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.: F05-8905-015 ; PAN: FWI0149SA
Yellow: Recipient
Pink: U.S. EPA

RWS

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5
230 SOUTH DEARBORN ST.
CHICAGO, ILLINOIS 60604

REPLY TO THE ATTENTION OF:

Sample Collection Date: MAY 24, 1989

Recipient Information: Non-responsive

[redacted]

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 sample analysis of samples collected from your property will be forwarded by the U.S. EPA within 6 months. If a copy of the sample analysis is not received within 6 months of the sample collection 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 WID981095920

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.: F05-8905-015; PAN: FWI0149SA
Yellow: Recipient
Pink: U.S. EPA

RECEIPT FOR SAMPLES

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

U. S. EPA ID NO WID981095920

PROJ. ACCT. NO. FWI0149SA

TDD F05-8905-015

SPLIT SAMPLES N/A ACCEPTED( ) DECLINED( )

FACILITY/OCCUPANT NAME: KAY RADLE

FACILITY/OCCUPANT ADDRESS: RR 7 2518 Shaffer Rd Chippewa Falls, WI

SAMPLE NUMBER	DATE	TIME	SPLIT SAMPLES (✓)	OTR#	ITR#	DESCRIPTION OF SAMPLE LOCATIONS	SEMIVOLATILES	PESTICIDES/PCBS	VOLATILES	METALS	CYANIDE			MATRIX
RW1	5/24/89	10:10	N/A	EFK 29	MEEB 73	RW1 /Duplicate	✓	✓	✓	✓	✓			water

TRANSFERRED BY: Regina Bayer 5/24/89 10:40
(Signature) (Date) (Time)

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 WID981095920

PROJ. ACCT. NO. FWI0149SA

TDD F05-8905-015

SPLIT SAMPLES N/A ACCEPTED( ) DECLINED( )

FACILITY/OCCUPANT NAME Roger Clouse

FACILITY/OCCUPANT ADDRESS R.1 Box 405 Chippewa Falls, WI

SAMPLE NUMBER	DATE	TIME	SPLIT SAMPLES (✓)	OTR#	ITR#	DESCRIPTION OF SAMPLE LOCATIONS	SEMIVOLATILES	PESTICIDES/PCBS	VOLATILES	METALS	CYANIDE			MATRIX
RW5	5/24/89	11:15	—	EFK34	MEEB78	RW5	✓	✓	✓	✓	✓			water

TRANSFERRED BY Regina Bayer 5/24/89 11:05
(Signature) (Date) (Time)

RECEIVED BY: Myrna Clouse 5-24-89
(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

...ANT NAME: Dedrickson

...ACCT. NO. WID985

TDD FALS N/A ACCEPTED( ) DECLINED( )

FACILITY/OCCUPANT ADDRESS: RT. 7 BOX 358 B CHIPPEWA FALLS WI 54729

SAMPLE NUMBER	DATE	TIME	SPLIT SAMPLES (✓)	OTR#	ITR#	DESCRIPTION OF SAMPLE LOCATIONS	SEMIVOLATILES	PESTICIDES/PCB	VOLATILES	METALS	CYANIDE			MATRIX
RW4	5/24/89		—	EFK33	MEEB77	RW4	✓	✓	✓	✓	✓			water

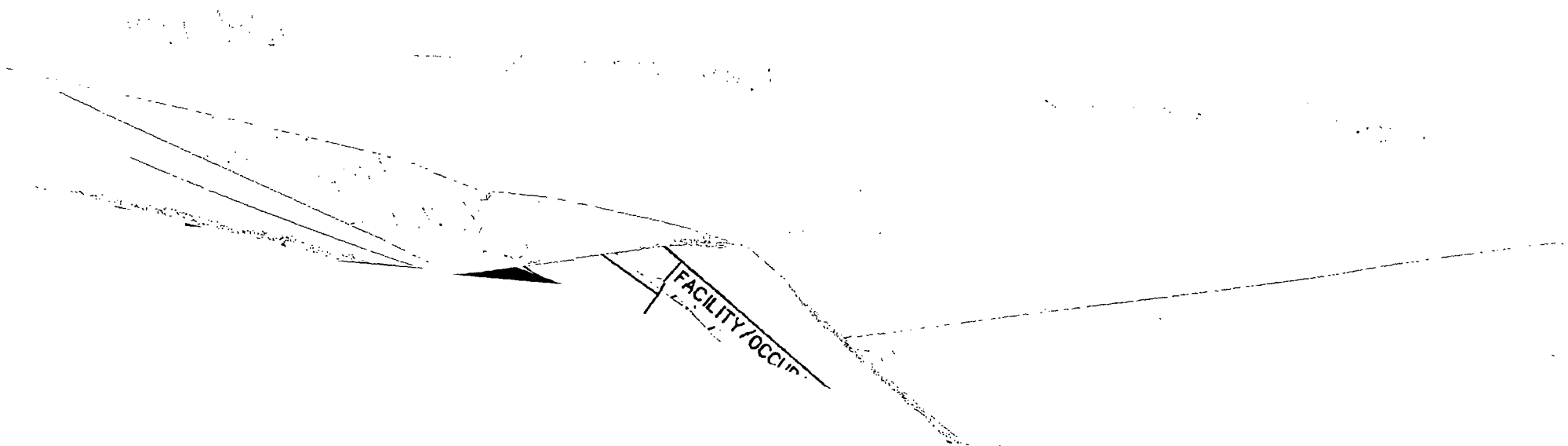
TRANSFERRED BY: Ted Nehrkorn 5/24/89
(Signature) (Date) (Time)

RECEIVED BY: Linda Dedrickson 5/24/89
(Signature) (Date) 1120 (Time)

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

TITLE

TELEPHONE


FACILITY/OCCUP

ecology and environment, inc.

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

International Specialists in the Environment

CRL Receipt Date 7/6 FIT Receipt Date 8/1 Review Completed 8/2

TO: Nehr/Kozy

FROM: Mary Gzyra

SUBJECT: Hollie Town LF

PAN: WI0149SA **(1 hour charged for review)** Case # 12004/4523

Sample Description

Organics (VOA, ABN, Pest/PCB)		Inorganics (Metals, Cyanide)	
# _____	Low Soil	# _____	Low Soil
_____	Low Water	_____	Low Water
_____	Drinking Water	7	Drinking Water
_____	Other	_____	Other

Project Data Status _____ Completed!!

✓ Incomplete, awaiting soil org + inorg.

FIT Data Review Findings:

See previous comment on pg 2 - data is preliminary.

Check Data Sheets for Transcription Errors

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

Book No. 9 Page No. _____ Date Sampled 5/24

0759:2

recycled paper

3/ 8/2/89

Table 4-> Cont.

2070-13 Physical State*	Waste Characteristics**	Category***	SI Memo	Sample Collection Information and Parameters	1 RW1	2 Dup	3 RW2	4 RW3	5 RW4	6 RW5	7 BLK	>_8	>_9	>_10	>_11	>_12
				Analyte Detected (values in > mg/kg or µg/L)	MEEB 73	75	74	76	77	78	72					
Solid	A,D	MES	CSC	aluminum		143				71.5 B	91.5 B					
Solid	A,D	MES	HM	antimony		5.7	5.4	5.1 N	9.4 N							
Solid	A,D	MES	HM	arsenic												
Solid	A,D	MES	CSC	barium			20.4 B	35.7 B	19.4 B	21 B						
Solid	A,D	MES	M	beryllium			2.7 JB		3.1 JB		2.5 JB					
Solid	A,D	MES	HM	cadmium							0.31 JB					
Solid	D	MES	CSC	calcium	13400	12500	13800	38300	15900	13600						
Solid	A,D	MES	HM	chromium												
Solid	A,D	MES	HM	cobalt				7.6 JNB								
Solid	A,D	MES	HM	copper	35.8 J	34.1 J				12.4 J						
Solid	A,D	MES	HM,CSC	iron	97.5 JB	91.5 JB	499 J	429 J	636 J	65.6 JB						
Solid	A,B	MES	HM	lead	1.2 JB	5.7 JN	0.87 JB	0.97 JB	0.53 JB	1.0 JB	0.84 JB					
Solid	A,D	MES	CSC	magnesium	6410 J	6160 J	8000 J	16400 J	5580 J	6230 J						
Solid	A,D	MES	HM	manganese	11.3 J	8.1 JB	809 J		650 J							
Liquid	A,D	MES	HM	mercury												
Solid	A,D	MES	HM	nickel												
Solid	D	MES	CSC	potassium	850 B		960 B	1150 B	1070 B	886 B						
Solid	A,D	MES	M	selenium		3.8 N		2.2 N								
Solid	A,D	MES	HM	silver			3.3 JNB	4.4 JNB								
Solid	D	MES	CSC	sodium	2970	2820	2640	7360	2320	3770						
Solid	A,D	MES	HM	thallium												
Solid	A,D	MES	HM	vanadium												
Solid	A,D	MES	CSC,HM	zinc	262 J	235 J	20.5 J			19.2 JB						
Solid	A	IOC	IOC	cyanide												

— Not detected.

6/21

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 7,25-89

8/1/89

SUBJECT: Review of Region V CLP Data Received for Review on 6 July 1989

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

TO: Data User: FIT

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

SITE NAME: Hallie Town L.F. SMO Case No. 12004/SAS4523E

EPA Data Set No. SF6211 No. of Samples: 7 D.U./Activity Numbers TFA/TFA102

CRL No. 89FN11R01, 89FN20S57-61, 89FN20D57

SMO Traffic No. MEEB 72-78

CLP Laboratory: JTC Hrs. Required for Review: 14 +1/2 DX 7/24/89

Following are our findings:

SEE NEXT PAGE

( ) Data are acceptable for use.
( ) Data are acceptable for use with qualifications referenced above. See Data Qualifier sheets and Calibration Outlier forms for flags and additional comments.
(X) Data are preliminary - pending verification by Contractor Laboratory. See Case Summary above. Q. Dila 7-24-89
( ) Data are unacceptable.

cc: Carla Dempsey, CLP Quality Assurance Officer, Analytical Operations Branch
James Petty, Chief Quality Assurance Research, EMSL, Las Vegas

DATA QUALIFIERS

Contract Lab: JTC Case No.: 12004 SAS4523E

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

This Case was on hold awaiting further information from the laboratory.

The data user is CAUTIONed that this review is a preliminary one and is subject to change later, pending feedback from the contract laboratory. The likelihood that the review findings will change after receipt and rereview of the resubmitted data is very high.

This review covers the laboratory's portion of Case 12004 SAS4523E for the analysis of seven drinking water samples for metals and cyanide.

ICAP Analysis:

Some continuing blank values (Be (2.6 ug/L), Fe (52.5 ug/L), Ag (5.3 ug/L), and Co (8.1 ug/L)) exceeded IDL levels. Contamination is indicated. The following are qualified as noted: Be sample results for MEEB72, 74, and 77, the Co result for MEEB76, and the Ag results for MEEB74 and 76 are estimated (J); the Fe results for MEEB73, 75, and 78 are so affected but these are qualified below.

The matrix spike, the lab duplicate, and the serial dilution analyses were run using a field blank sample. Because of this no useful control information is available concerning possible bias, the quality of analysis precision, or possible matrix interference. The lab has been directed to provide these QC audits using valid samples.

GFAA Analysis: The reviewer corrected qualifier Form 1 flags for the following: "S" flags were changed to "+" flags for As for MEEB72 and 76, Pb for MEEB75, and Tl for MEEB72.

Some continuing blank values (Pb (1.1 ug/L) and Cd (0.3 ug/L)) exceeded IDL levels. Contamination is indicated. All Pb sample results except for MEEB75, and the Cd result for MEEB72 are estimated (J). Pb for MEEB75 is qualified below.

As sample results for MEEB72 and 76, the Pb result for MEEB75, and the Tl result for MEEB72 are flagged "+" and indicate interference since even with two MSA analysis attempts the correlation coefficient was less than 0.995. These As and Pb results are estimated (UJ) and (J), respectively; the Tl result is estimated (UJ).

As with the ICAP analysis, so too with the GFAA analysis no useful control information is available from matrix spike, lab duplicate, or serial dilution analyses since a field blank was used. Update of these audits is expected from the laboratory.

R. Dilg
7-24-89

DATA QUALIFIERS

Contract Lab : JTC Case No. : 12004 SAS4523E

Hg and cyanide results cannot be fully evaluated again due to the lack of valid control audits for the matrix spike and laboratory duplicate analyses.

Field QC: Sample MEEB72 is designated a field blank. All results are below contract specified levels.

Samples MEEB73 / 74 are designated field duplicates. RPD values for Cu (200%), Fe (135%), Mg (22.1%), Mn (195%), and Zn (171%) are all greater than 20 percent RPD. All Cu, Fe, Mg, Mn, and Zn sample results are estimated (J) due to poor precision.

R. Dily
7-24-89

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MEEB73

Name: JTC ENVIRONMENTAL CNSLTS. Contract: 68-W8-0023

Lab Code: JTC Case No.: 12004 SAS No.: 4523E SDG No.: MEEB72

Matrix (soil/water): WATER Lab Sample ID: 741984

Level (low/med): LOW Date received: 05/25/89

% Solids: .0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	70.0	U		P
7440-36-0	Antimony	5.0	U	S	F
7440-38-2	Arsenic	2.2	U	S	F
7440-39-3	Barium	14.0	U		P
7440-41-7	Beryllium	2.5	U		P
7440-43-9	Cadmium	.27	U	S	F
7440-70-2	Calcium	13400.0			P
7440-47-3	Chromium	8.6	U		P
7440-48-4	Cobalt	6.8	U	*	P
7440-50-8	Copper	35.8			P
7439-89-6	Iron	97.5	B		P
7439-92-1	Lead	1.2	B	S	F
7439-95-4	Magnesium	6410.0			P
7439-96-5	Manganese	11.3			P
7439-97-6	Mercury	.20	U		CV
7440-02-0	Nickel	12.0	U	*	P
7440-09-7	Potassium	850.0	B		A
7782-49-2	Selenium	2.0	U	* S	F
7440-22-4	Silver	3.3	U	N*	P
7440-23-5	Sodium	2970.0			A
7440-28-0	Thallium	2.0	U	* S	F
7440-62-2	Vanadium	6.3	U		P
7440-66-6	Zinc	262.0			P
	Cyanide	10.0	U		AS

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MEEB75

Name: JTC ENVIRONMENTAL CNSLTS. Contract: 68-W8-0023

Lab Code: JTC Case No.: 12004 SAS No.: 4523E SDG No.: MEEB72

Matrix (soil/water): WATER Lab Sample ID: 741986

Level (low/med): LOW Date received: 05/25/89

% Solids: .0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	143.0			P
7440-36-0	Antimony	5.7		S	F
7440-38-2	Arsenic	2.2	U	S	F
7440-39-3	Barium	14.0	U		P
7440-41-7	Beryllium	2.5	U		P
7440-43-9	Cadmium	.27	U	S	F
7440-70-2	Calcium	12500.0			P
7440-47-3	Chromium	8.6	U		P
7440-48-4	Cobalt	6.8	U	*	P
7440-50-8	Copper	34.1			P
7439-89-6	Iron	91.5	B		P
7439-92-1	Lead	5.7		+	F
7439-95-4	Magnesium	6160.0			P
7439-96-5	Manganese	8.1	B		P
7439-97-6	Mercury	.20	U		CV
7440-02-0	Nickel	12.0	U	*	P
7440-09-7	Potassium	814.0	U		A
7782-49-2	Selenium	3.8		* S	F
7440-22-4	Silver	3.3	U	N*	P
7440-23-5	Sodium	2820.0			A
7440-28-0	Thallium	2.0	U	* S	F
7440-62-2	Vanadium	6.3	U		P
7440-66-6	Zinc	235.0			P
	Cyanide	10.0	U		AS

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MEEB74

Name: JTC ENVIRONMENTAL CNSLTS. Contract: 68-W8-0023

Lab Code: JTC Case No.: 12004 SAS No.: 4523E SDG No.: MEEB72

Matrix (soil/water): WATER Lab Sample ID: 741985

Level (low/med): LOW Date received: 05/25/89

% Solids: .0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	70.0	U		P
7440-36-0	Antimony	5.4		S	F
7440-38-2	Arsenic	2.2	U	S	F
7440-39-3	Barium	20.4	B		P
7440-41-7	Beryllium	2.7	B		P
7440-43-9	Cadmium	.27	U	S	F
7440-70-2	Calcium	13800.0			P
7440-47-3	Chromium	8.6	U		P
7440-48-4	Cobalt	6.8	U	*	P
7440-50-8	Copper	8.4	U		P
7439-89-6	Iron	499.0			P
7439-92-1	Lead	.87	B	S	F
7439-95-4	Magnesium	8000.0			P
7439-96-5	Manganese	809.0			P
7439-97-6	Mercury	.20	U		CV
7440-02-0	Nickel	12.0	U	*	P
7440-09-7	Potassium	960.0	B		A
7782-49-2	Selenium	2.0	U	* S	F
7440-22-4	Silver	3.3	B	N*	P
7440-23-5	Sodium	2640.0			A
7440-28-0	Thallium	2.0	U	* S	F
7440-62-2	Vanadium	6.3	U		P
7440-66-6	Zinc	20.5			P
	Cyanide	10.0	U		AS

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MEEB76

Name: JTC ENVIRONMENTAL CNSLTS. Contract: 68-W8-0023

Lab Code: JTC Case No.: 12004 SAS No.: 4523E SDG No.: MEEB72

Matrix (soil/water): WATER Lab Sample ID: 741987

Level (low/med): LOW Date received: 05/25/89

% Solids: .0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	70.0	U		P
7440-36-0	Antimony	5.1		N S	F
7440-38-2	Arsenic	2.2	U	+	F
7440-39-3	Barium	35.7	B		P
7440-41-7	Beryllium	2.5	U		P
7440-43-9	Cadmium	.27	U	S	F
7440-70-2	Calcium	38300.0			P
7440-47-3	Chromium	8.6	U		P
7440-48-4	Cobalt	7.6	B	*	P
7440-50-8	Copper	8.4	U		P
7439-89-6	Iron	429.0			P
7439-92-1	Lead	.97	B	S	F
7439-95-4	Magnesium	16400.0			P
7439-96-5	Manganese	5.0	U		P
7439-97-6	Mercury	.20	U		CV
7440-02-0	Nickel	12.0	U	*	P
7440-09-7	Potassium	1150.0	B		A
7782-49-2	Selenium	2.2		* S	F
7440-22-4	Silver	4.4	B	N*	P
7440-23-5	Sodium	7360.0			A
7440-28-0	Thallium	2.0	U	* S	F
7440-62-2	Vanadium	6.3	U		P
7440-66-6	Zinc	18.0	U		P
	Cyanide	10.0	U		AS

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MEEB77 Rev 4

Name: JTC ENVIRONMENTAL CNSLTS. Contract: 68-W8-0023

Lab Code: JTC Case No.: 12004 SAS No.: 4523E SDG No.: MEEB72

Matrix (soil/water): WATER Lab Sample ID: 741988

Level (low/med): LOW Date received: 05/25/89

% Solids: .0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	70.0	U		P
7440-36-0	Antimony	9.4		N S	F
7440-38-2	Arsenic	2.2	U	S	F
7440-39-3	Barium	19.4	B		P
7440-41-7	Beryllium	3.1	B		P
7440-43-9	Cadmium	.27	U	S	F
7440-70-2	Calcium	15900.0			P
7440-47-3	Chromium	8.6	U		P
7440-48-4	Cobalt	6.8	U	*	P
7440-50-8	Copper	8.4	U		P
7439-89-6	Iron	636.0			P
7439-92-1	Lead	.53	B	S	F
7439-95-4	Magnesium	5580.0			P
7439-96-5	Manganese	650.0			P
7439-97-6	Mercury	.20	U		CV
7440-02-0	Nickel	12.0	U	*	P
7440-09-7	Potassium	1070.0	B		A
7782-49-2	Selenium	2.0	U	* S	F
7440-22-4	Silver	3.3	U	N*	P
7440-23-5	Sodium	2320.0			A
7440-28-0	Thallium	2.0	U	* S	F
7440-62-2	Vanadium	6.3	U		P
7440-66-6	Zinc	18.0	U		P
	Cyanide	10.0	U		AS

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

FORM I - IN 7/87

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MEEB78

Name: JTC ENVIRONMENTAL CNSLTS. Contract: 68-W8-0023

Lab Code: JTC Case No.: 12004 SAS No.: 4523E SDG No.: MEEB72

Matrix (soil/water): WATER Lab Sample ID: 741989

Level (low/med): LOW Date received: 05/25/89

% Solids: .0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	71.5	B		P
7440-36-0	Antimony	5.0	U	N S	F
7440-38-2	Arsenic	2.2	U	S	F
7440-39-3	Barium	21.0	B		P
7440-41-7	Beryllium	2.5	U		P
7440-43-9	Cadmium	22	U	S	F
7440-70-2	Calcium	13600.0			P
7440-47-3	Chromium	8.6	U		P
7440-48-4	Cobalt	6.8	U	*	P
7440-50-8	Copper	12.4			P
7439-89-6	Iron	65.6	B		P
7439-92-1	Lead	1.0	B	S	F
7439-95-4	Magnesium	6230.0			P
7439-96-5	Manganese	5.0	U		P
7439-97-6	Mercury	.20	U		CV
7440-02-0	Nickel	12.0	U	*	P
7440-09-7	Potassium	886.0	B		A
7782-49-2	Selenium	2.0	U	* S	F
7440-22-4	Silver	3.3	U	N*	P
7440-23-5	Sodium	3770.0			A
7440-28-0	Thallium	2.0	U	* S	F
7440-62-2	Vanadium	6.3	U		P
7440-66-6	Zinc	19.2	B		P
	Cyanide	10.0	U		AS

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MEEB72 Blk

Name: JTC ENVIRONMENTAL CNSLTS. Contract: 68-W8-0023

Lab Code: JTC Case No.: 12004 SAS No.: 4523E SDG No.: MEEB72

Matrix (soil/water): WATER Lab Sample ID: 741983

Level (low/med): LOW Date received: 05/25/89

% Solids: .0

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

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	91.5	B		P	
7440-36-0	Antimony	5.0	U	N S	F	
7440-38-2	Arsenic	2.2	U	+ ~~E~~	F	RD
7440-39-3	Barium	14.0	U		P	
7440-41-7	Beryllium	2.5	B		P	
7440-43-9	Cadmium	.31	B	S	F	
7440-70-2	Calcium	813.0	U		P	
7440-47-3	Chromium	8.6	U		P	
7440-48-4	Cobalt	6.8	U	*	P	
7440-50-8	Copper	8.4	U		P	
7439-89-6	Iron	22.0	U		P	
7439-92-1	Lead	.84	B	S	F	
7439-95-4	Magnesium	421.0	U		P	
7439-96-5	Manganese	5.0	U		P	
7439-97-6	Mercury	.20	U		CV	
7440-02-0	Nickel	12.0	U	*	P	
7440-09-7	Potassium	814.0	U		A	
7782-49-2	Selenium	2.0	U	* S	F	
7440-22-4	Silver	3.3	U	N*	P	
7440-23-5	Sodium	230.0	U		A	
7440-28-0	Thallium	2.0	U	* + ~~E~~	F	RD
7440-62-2	Vanadium	6.3	U		P	
7440-66-6	Zinc	18.0	U		P	
	Cyanide	10.0	U		AS	

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SPECIAL ANALYTICAL SERVICES
REVIEW DOCUMENT

A. Client FIT

B. Laboratory(s) JTC

C. SAS Number 4523E

Site Name HALLIE TOWN L.F.

			Task Code(s)
D. Specific Request:	Organics		
	Inorganics	ICAP METALS	
	Other		

			Protocol Code(s)
E. Analytical Methodologies:	Organics		
	Inorganics	SAS SPECIFIED	
	Other		

F. Methods Source EPA SAS

G. Reviewer Name WESTON

H. Reviewer Function or Title ESAT

The purpose of this inquiry is to gain information and recommendations from the SAS Program Principals directly, in order to improve the methodology(ies), QA/QC requirements, or reporting formats for future similar Special Analytical Services. Therefore, please respond in a timely fashion to all questions and requests.

SPECIAL ANALYTICAL SERVICES
CLIENT REVIEW INQUIRY

Please return this inquiry document to SMO after review of the data package for this Special Analytical Service.

A. General Methodologies

1. Did the referenced methodology(ies) or protocol provide technically useful information for this specific SAS request? If not, please explain.

   Yes

2. Describe any changes in methodology or other technical improvements that you recommend in order to more adequately perform this specific SAS task.

B. QC Requirements

1. Were the QC procedures adequate for determining the quality of the data for this specific SAS request? If not, describe any problems encountered with the QC information.

YES

2. Describe any changes in the QC requirements that you recommend in order to more adequately perform this specific SAS task.

C. Data Sheets and Report Format

1. Were the reporting deliverables clear and understandable? If not, please explain.

2. What changes in report or deliverable format do you recommend?

ON FORM 8, OR SIMILAR FORMAT, HAVE A COLUMN FOR THE MSA SLOPE VALUES TO BE ENTERED, SINCE QC CRITERIA IN THE SAS SPECIFICALLY STATE TO COMPARE SAMPLE SLOPE VALUES WITH THE INITIAL CALIBRATION BLANK SLOPE.

D. Other Comments

Enter here any comments or recommendations for items not covered above.

THE LABORATORY USED A FIELD BLANK FOR THE DUPLICATE, SPIKE, AND SERIAL DILUTION.

THE LAB WAS SOMEWHAT SLOPPY IN WHAT RAW DATA WAS PRESENTED. SEE "SUMMARY OF QUESTIONS / ISSUES DISCUSSED" ON THE TELEPHONE RECORD LOG.

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: JTC ENVIRONMENTAL CNSLTS. Contract: 68-W8-0023

Lab Code: JTC Case No.: 12004 SAS No.: 4523E SDG No.: MEEB72

SOW No.: 7/87

EPA Sample No.	Lab Sample ID.
MEEB72	741983
MEEB72D	741983D
MEEB72S	741983S
MEEB73	741984
MEEB74	741985
MEEB75	741986
MEEB76	741987
MEEB77	741988
MEEB78	741989

Were ICP interelement corrections applied? Yes/No NO

Were ICP background corrections applied? Yes/No YES

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

Comments:

Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by Laboratory Manager or the Manager's designee, as varified by the following signature.

Lab Manager: Gregory Dickinson

Date: 07/05/89

U.S. EPA - CLP

3
BLANKS

Lab Name: JTC ENVIRONMENTAL CNSLTS. Contract: 68-W8-0023

Lab Code: JTC Case No.: 12004 SAS No.: 4523E SDG No.: MEEB72

Preparation Blank Matrix (soil/water): WATER

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

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum	70.0	U	70.0	U	70.0	U	-76.7	B	70.000	U	P
Antimony	5.0	U	5.0	U	5.0	U	5.0	U	5.000	U	F
Arsenic	2.2	U	2.4	B	2.2	U	2.2	U			F
Barium	14.0	U	14.0	U	14.0	U	14.0	U	14.000	U	P
Beryllium	2.6	B	2.5	U	2.5	U	2.5	U	2.500	U	P
Cadmium	.3	U	.3	U	.3	U	.3	U			F
Calcium	813.0	U	813.0	U	813.0	U	813.0	U	813.000	U	P
Chromium	8.6	U	8.6	U	8.6	U	8.6	U	8.600	U	P
Cobalt	6.8	U	6.8	U	8.1	B	6.8	U	6.830	B	P
Copper	8.4	U	-9.5	B	8.4	U	8.4	U	8.400	U	P
Iron	35.1	B	52.5	B	22.0	U	37.2	B	24.113	B	P
Lead	1.1	B	.7	B	.5	U	.5	U			F
Magnesium	421.0	U	421.0	U	421.0	U	421.0	U	421.000	U	P
Manganese	5.0	U	5.0	U	5.0	U	5.0	U	5.000	U	P
Mercury	.2	U	.2	U	.2	U			.200	U	CV
Nickel	12.0	U	12.0	U	12.0	U	12.0	U	12.000	U	P
Potassium	814.0	U	814.0	U	814.0	U			814.000	U	A
Selenium	2.0	U	2.0	U	2.0	U	2.0	U			F
Silver	3.3	U	5.3		4.1	B	3.3	U	4.484	B	P
Sodium	230.0	U	230.0	U	230.0	U	230.0	U			A
Thallium	2.0	U	2.0	U	2.0	U	2.0	U			F
Vanadium	6.3	U	6.3	U	-8.6	B	6.3	U	6.300	U	P
Zinc	18.0	U	18.0	U	18.0	U	18.0	U	18.000	U	P
Cyanide	10.0	U	10.0	U	10.0	U			10.000	U	AS

U.S. EPA - CLP

3
BLANKS

Name: JTC ENVIRONMENTAL CNSLTS. Contract: 68-W8-0023

Lab Code: JTC Case No.: 12004 SAS No.: 4523E SDG No.: MEEB72

Preparation Blank Matrix (soil/water):

Preparation Blank Concentration Units (ug/L or 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											P
Antimony			5.0	U	5.0	U	5.0	U			F
Arsenic			2.2	U	2.2	U	2.2	U			F
Barium											P
Beryllium											P
Cadmium			.3	U	.3	B	.3	U			F
Calcium											P
Chromium											P
Cobalt											P
Copper											P
Iron											P
Lead			.5	U	1.0	B	.8	B			F
Magnesium											P
Manganese											P
Mercury											CV
Nickel											P
Potassium											A
Selenium			2.0	U							F
Silver											P
Sodium											A
Thallium			2.0	U	2.0	U					F
Vanadium											P
Zinc											P
Cyanide											AS

U.S. EPA - CLP

5A
SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

MEEB72S

1 Name: JTC ENVIRONMENTAL CNSLTS. Contract: 68-W8-002

Lab Code: JTC Case No.: 12004 SAS No.: 4523E SDG No.: MEEB72

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

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

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum	85-115	1906.1600		91.5130	B	2000.0	90.7		P
Antimony	85-115	15.7140		5.0000	U	20.0	78.6		F
Arsenic		2.2000	U	2.2000	U				NR
Barium	85-115	2111.5100		14.0000	U	2000.0	105.6		P
Beryllium	85-115	51.5400		2.5190	B	50.0	98.0		P
Cadmium		.2700	U	.3110	B				NR
Calcium	85-115	52983.4000		813.0000	U	50000.0	106.0		P
Chromium	85-115	220.3130		8.6000	U	200.0	110.2		P
Cobalt	85-115	484.7950		6.8000	U	500.0	97.0		P
Copper	85-115	241.6190		8.4000	U	250.0	96.6		P
Iron	85-115	1016.7000		22.0000	U	1000.0	101.7		P
ad		.5000	U	.8370	B				NR
gnesium	85-115	26916.3000		421.0000	U	25000.0	107.7		P
Manganese	85-115	200.1350		5.0000	U	200.0	100.1		P
Mercury	80-120	.8690		.2000	U	1.0	86.9		CV
Nickel	85-115	407.1410		12.0000	U	400.0	101.8		P
Potassium	85-115	20850.0000		814.0000	U	20000.0	104.3		A
Selenium		2.0000	U	2.0000	U				NR
Silver	85-115	26.6000		3.3000	U	50.0	53.2	N	P
Sodium	85-115	49800.0000		230.0000	U	50000.0	99.6		A
Thallium		2.0000	U	2.0000	U				NR
Vanadium	85-115	505.7950		6.3000	U	500.0	101.2		P
Zinc	85-115	212.7170		18.0000	U	200.0	106.4		P
Cyanide	80-120	96.1000		10.0000	U	100.0	96.1		AS

Comments:

U.S. EPA - CLP

6
DUPLICATES

EPA SAMPLE NO.

MEEB72D

Name: JTC ENVIRONMENTAL CNSLTS. Contract: 68-W8-002

Lab Code: JTC Case No.: 12004 SAS No.: 4523E SDG No.: MEEB72

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

% Solids for Sample: .0 % Solids for Duplicate: .0

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

Analite	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum	100.0	91.5130	B	70.0000	U	200.0		P
Antimony		5.0000	U	5.0000	U			P
Arsenic	5.0	2.2000	U	4.9800	B	200.0		P
Barium		14.0000	U	14.0000	U			P
Beryllium	5.0	2.5190	B	2.5000	U	200.0		P
Cadmium	.5	.3110	B	.2700	U	200.0		P
Calcium		813.0000	U	813.0000	U			P
Chromium		8.6000	U	8.6000	U			P
Cobalt	10.0	6.8000	U	10.5800		200.0	*	P
Copper		8.4000	U	8.4000	U			P
Iron		22.0000	U	22.0000	U			P
Lead	2.0	.8370	B	1.0580	B	23.3		P
Magnesium		421.0000	U	421.0000	U			P
Manganese		5.0000	U	5.0000	U			P
Mercury		.2000	U	.2000	U			CV
Nickel	20.0	12.0000	U	767.3240		200.0	*	P
Potassium		814.0000	U	814.0000	U			A
Selenium	2.0	2.0000	U	2.2410		200.0	*	F
Silver	5.0	3.3000	U	5.3000		200.0	*	P
Sodium		230.0000	U	230.0000	U			A
Thallium	2.0	2.0000	U	2.6080		200.0	*	F
Vanadium		6.3000	U	6.3000	U			P
Zinc		18.0000	U	18.0000	U			P
Cyanide		10.0000	U	10.0000	U			AS

U.S. EPA - CLP

11

INSTRUMENT DETECTION LIMITS (QUARTERLY)

Lab Name: JTC ENVIRONMENTAL CNSLTS. Contract: 68-WB-0023

Lab Code: JTC Case No.: 12004 SAS No.: 4523E SDG No.: MEEB72

ICP ID Number: 6000 Date: 04/11/89

Flame AA ID Number: 460

Furnace AA ID Number:

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum	308.22		100	70.0	P
Antimony					P
Arsenic					P
Barium	233.53		50	14.0	P
Beryllium	313.04		5	2.5	P
Cadmium	214.00				P
Calcium	317.93		1000	813.0	P
Chromium	267.72		10	8.6	P
Cobalt	228.62		10	6.8	P
Copper	324.75		10	8.4	P
Iron	259.94		100	22.0	P
Lead					P
Magnesium	279.08		1000	421.0	P
Manganese	257.61		10	5.0	P
Mercury	254.00		0.2	0.1	CV
Nickel	231.60		20	12.0	P
Potassium	766.00		2000	814.0	A
Selenium	196.00				P
Silver	328.07		5	3.3	P
Sodium	330.24		1000	230.0	~~P~~ A
Thallium					F
Vanadium	292.40		10	6.3	P
Zinc	213.86		20	18.0	P

Comments:

U.S. EPA - CLP

11
INSTRUMENT DETECTION LIMITS (QUARTERLY)

Lab Name: JTC ENVIRONMENTAL CNSLTS. Contract: 68-W8-0023

Lab Code: JTC Case No.: 12004 SAS No.: 4523E SDG No.: MEEB72

ICP ID Number: Date: 04/11/89

Flame AA ID Number:

Furnace AA ID Number: 3050

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum					P
Antimony					P
Arsenic					F
Barium					P
Beryllium					P
Cadmium	228.80	BZ	0.5	0.27	F
Calcium					P
Chromium					P
Cobalt					P
Copper					P
Iron					P
Lead	283.00	BZ	2.0	0.8	F
Magnesium					P
Manganese					P
Mercury					CV
Nickel					P
Potassium					A
Selenium					F
Silver					P
Sodium					P
Thallium					F
Vanadium					P
Zinc					P

Comments:

U.S. EPA - CLP

11
INSTRUMENT DETECTION LIMITS (QUARTERLY)

Lab Name: JTC ENVIRONMENTAL CNSLTS. Contract: 68-W8-0023

Lab Code: JTC Case No.: 12004 SAS No.: 4523E SDG No.: MEEB72

ICP ID Number: Date: 04/11/89

Flame AA ID Number:

Furnace AA ID Number: 3051

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum					P
Antimony	217.60	BZ	5.0	5.0	P
Arsenic	193.70	BZ	5.0	2.2	F
Barium					P
Beryllium					P
Cadmium					P
Calcium					P
Chromium					P
Cobalt					P
Copper					P
Iron					P
Lead					F
Magnesium					P
Manganese					P
Mercury					CV
Nickel					P
Potassium					A
Selenium	196.00	BZ	2.0	2.0	F
Silver					P
Sodium					P
Thallium	277.00	BZ	2.0	2.0	F
Vanadium					P
Zinc					P

Comments:

DRINKING WATER MEMO

1. The drinking water memo has been checked.

2. A copy has been sent to Bill Messenger.

3. Please document control and file the drinking water memo under the correct TDD.

4. File the analytical data with the rest of the analytical data under the correct TDD.

Tom Clyne

SITE NAME: HALLIE TOWN LANDFILL PAN: FWI0149SA

NAME	ADDRESS	CITY
Non-responsive		

7.

8.

9.

10.

11.

12.

13.

14.

15.

16.

QA013(5/5/89)

RWI

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5
230 SOUTH DEARBORN ST.
CHICAGO, ILLINOIS 60604

REPLY TO THE ATTENTION OF:

Sample Collection Date: MAY 24, 1989

Recipient Information: Non-responsive [redacted]

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 sample analysis of samples collected from your property will be forwarded by the U.S. EPA within 6 months. If a copy of the sample analysis is not received within 6 months of the sample collection 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 WID981095920

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.: F05-8905-015 ; PAN: FWI0149SA
Yellow: Recipient
Pink: U.S. EPA

DRINKING WATER MEMORANDUM

DATE: OCTOBER 3, 1989

TO: 1. William Messenger, U.S. EPA 2. _____

FROM: TED NEHRKORN, FIT

SUBJECT: Drinking Water Sample Results

Sample RW1, EFK 28, MEFB 73

Action Level

☐ No Contamination _____
No hits above any health-related standards.

☐ Low Level Contamination _____
Hits just above health-related standards.

☐ Significant Contamination _____
Hits are above health-related standards.

☐ Please check the following. They are less than health-related standards but above detection limits.

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

☐ Please check secondary maximum contamination limits for:

Aluminum	_____	Manganese	_____
Copper	_____	Silver	_____
Iron	_____	Zinc	_____

Tom Clyne

Tom Clyne

Sample: RW1

ANALYTICAL DATA AND RELATED HEALTH ADVISORY TABLE

REVISION #1, EFFECTIVE 3 APRIL 1989

Sample Collection Information and Parameters	Detection Limits (ug/L)	Sample Result (ug/L)	Lab Blank (ug/L)	Comments	Standards: Status Reg. A	Standards: MRDLG (ug/L)	Standards: MCLG (ug/L)	Standards: MCL (ug/L)	Status HA A	Health Advisories: 10-kg Child: One-Day (ug/L)	10-kg Child: Ten-Day (ug/L)	10-kg Child: Longer-Term (ug/L)	70-kg Adult: Longer-Term (ug/L)	70-kg Adult: RfD (ug/kg/day)	70-kg Adult: DWEL (ug/L)	70-kg Adult: Lifetime (ug/L)	ug/L at 10-4 Cancer Risk	Cancer Group
Compound Detected																		
Volatile Organics																		
CHLOROMETHANE	1.5				L	-	-	-	D	-	-	-	-	-	-	-	-	-
BROMOMETHANE	1.5				-	-	-	-	D	-	-	-	-	-	-	-	-	-
VINYL CHLORIDE	1.5				F	-	ZERO	2	F	3000	3000	10	50	-	-	-	1.5	A
CHLOROETHANE	1.5				L	-	-	-	D	-	-	-	50-	-	-	-	-	-
METHYLENE CHLORIDE	1				L	-	-	-	F	10000	2000	-	-	60	2000	-	300	B2
ACETONE	5		4.0															
CARBON DISULFIDE	3																	
1,1-DICHLOROETHENE	1.5				F	-	7	7	F	2000	1000	1000	4000	9	400	7	-	C
1,1-DICHLOROETHANE	1.5				L	-	-	-	D	-	-	-	-	-	-	-	-	-
1,2-DICHLOROETHENE (TOTAL)	1.5				P	-	70	70	F	4000	1000	1000	1000	10	400	70	-	D
CHLOROFORM	1.5				L	100	-	-	D	-	-	-	-	10	-	-	600	B2
1,2-DICHLOROETHANE	1.5				F	-	ZERO	5	F	700	700	700	2600	-	-	-	40	B2
2-BUTANONE (MEK)	5				-	-	-	-	F	80000	8000	3000	9000	50	900	200	-	D
1,1,1-TRICHLOROETHANE	1.5				F	-	200	200	F	100000	40000	40000	100000	90	1000	200	-	D
CARBON TETRACHLORIDE	1.5				F	-	ZERO	5	F	4000	200	70	300	0.7	30	-	30	B2
VINYL ACETATE	5																	
BROMODICHLOROMETHANE	1.5				L	100	-	-	D	-	-	-	-	2	-	-	-	-
1,2-DICHLOROPROPANE	1.5				P	-	ZERO	5	F	-	90	-	-	-	-	-	60	B2
CIS-1,3-DICHLOROPROPENE	2				L	-	-	-	F	30	30	30	100	0.3	10	-	20	B2
TRICHLOROETHENE	1.5				F	-	ZERO	5	F	-	-	-	-	7	300	-	300	B2
DIBROMOCHLOROMETHANE	1.5				L	100	-	-	D	-	-	-	-	2	-	-	-	-
1,1,2-TRICHLOROETHANE	1.5				-	-	-	-	D	-	-	-	-	30	-	-	-	-
BENZENE	1.5				F	-	ZERO	5	F	200	200	-	-	-	-	-	100	A

BLANK SPACES INDICATE THAT NO ANALYTICAL RESULTS ABOVE DETECTION LIMITS WERE REPORTED IN THE SAMPLE RESULT COLUMN.

IN THE HEALTH RELATED COLUMNS, A BLANK SPACE INDICATES THAT NO STANDARD IS REPORTED.

ANALYTICAL DATA AND RELATED HEALTH ADVISORY TABLE

REVISION 01, EFFECTIVE 3 APRIL 1989

Sample:

Sample Collection Information and Parameters	Detection Limits (ug/L)	Sample Result (ug/L)	Lab Blank (ug/L)	Comments	Standards: Status Reg. A	Standards: MRDWR (ug/L)	Standards: MCLG (ug/L)	Standards: MCL (ug/L)	Health Advisories: Status HA A	10-kg Child: One-Day (ug/L)	10-kg Child: Ten-Day (ug/L)	10-kg Child: Longer-Term (ug/L)	70-kg Adult: Longer-Term (ug/L)	70-kg Adult: RfD (ug/kg/day)	70-kg Adult: DWEL (ug/L)	70-kg Adult: Lifetime (ug/L)	ug/L at 10-4 Cancer Risk	Cancer Group
Compound Detected																		
Volatile Organics (cont)																		
TRANS-1,3-DICHLOROPROPENE	1				L	-	-	-	F	30	30	30	100	0.3	10	-	20	B2
BROMOFORM	1.5				L	100	-	-	D	-	-	-	-	20	-	-	-	-
4-METHYL-2-PENTANONE	1.5																	
2-HEXANONE	5																	
TETRACHLOROETHENE	1.5				P	-	ZERO	5	F	2000	2000	1000	5000	10	500	-	70	B2
TOLUENE	1.5	0.6		40 ϕ	P	-	2000	2000	F	20000	3000	3000	10000	300	10000	2000	-	-
1,1,2,2-TETRACHLOROETHANE	1.5				L	-	-	-	D	-	-	-	-	-	-	-	-	-
CHLOROBENZENE	1.5			100 ϕ	P	-	100	100	F	2000	2000	2000	7000	20	700	100	-	D
ETHYLBENZENE	1.5	5.0		30 ϕ	P	-	700	700	F	30000	3000	1000	3000	100	3000	700	-	D
STYRENE	1			10 ϕ	P	-	ZERO	5	F	20000	2000	2000	7000	200	7000	-	1	B2
XYLENES (TOTAL)	1.5	19.0		20 ϕ	P	-	10000	10000	F	40000	40000	40000	10000	2000	60000	10000	-	D
2-CHLOROETHYL VINYL ETHER	1.5																	
ACROLEIN	25																	
ACRYLONITRILE	25				L	-	-	-	-	-	-	-	-	-	-	-	-	-

Sample:

ANALYTICAL DATA AND RELATED HEALTH ADVISORY TABLE

REVISION 01, EFFECTIVE 3 APRIL 1989

Sample Collection Information and Parameters	Detection Limits (ug/L)	Sample Result (ug/L)	Lab Blank (ug/L)	Comments	Standards: Status Reg. A	Standards: MRDLG (ug/L)	Standards: MCLG (ug/L)	Standards: MCL (ug/L)	Health Advisories: Status HA A	10-kg Child: One-Day (ug/L)	10-kg Child: Ten-Day (ug/L)	10-kg Child: Longer-Term (ug/L)	70-kg Adult: Longer-Term (ug/L)	70-kg Adult: RfD (ug/kg/day)	70-kg Adult: DWEL (ug/L)	70-kg Adult: Lifetime (ug/L)	ug/L at 10-4 Cancer Risk	Cancer Group
Compund Detected																		
Semivolatile Organics																		
PHENOL	2				-	-	-	-	D	-	-	-	-	40	-	-	-	-
BIS(2-CHLOROETHYL)ETHER	1.5																	
2-CHLOROPHENOL	2				L	-	-	-	D	-	-	-	-	5	200	-	-	-
1,3-DICHLOROBENZENE	2				P	-	600	600	F	9000	9000	9000	30000	89	3000	600	-	D
1,4-DICHLOROBENZENE	2				F	-	75	75	F	10000	10000	10000	40000	100	4000	75	-	C
BENZYL ALCOHOL	2																	
1,2-DICHLOROBENZENE	2.5				P	-	600	600	F	9000	9000	9000	30000	89	3000	600	-	D
2-METHYLPHENOL	1																	
N-NITROSO-DI-N-DIPROPYLAMINE	1.5																	
HEXACHLOROETHANE	2																	
NITROBENZENE	2.5																	
ISOPHORONE	2.5				L	-	-	-	D	-	-	-	-	150	-	-	-	-
2-NITROPHENOL	2																	
2,4-DIMETHYLPHENOL	2																	
BENZOIC ACID	20																	
BIS(2-CHLOROETHOXYL)METHANE	2.5																	
2,4-DICHLOROPHENOL	2				L	-	-	-	D	-	-	-	-	3	100	-	-	-
1,2,4-TRICHLOROBENZENE	2				-	-	-	-	D	-	-	-	-	20	-	-	-	-
NAPHTHALENE	2				-	-	-	-	D	-	-	-	-	410	-	-	-	-
4-CHLOROANILINE	2																	
HEXACHLOROBUTADIENE	2.5				-	-	-	-	D	-	-	-	-	2	-	-	5	C
4-CHLORO-3-METHYLPHENOL	1.5																	
2-METHYLNAPHTHALENE	2																	

ANALYTICAL DATA AND RELATED HEALTH ADVISORY TABLE REVISION 01, EFFECTIVE 3 APRIL 1989

Sample:

Sample Collection Information and Parameters	Detection Limits (ug/L)	Sample Result (ug/L)	Lab Blank (ug/L)	Comments	Standards: Status Reg. A	Standards: NIPDWR (ug/L)	Standards: MCLG (ug/L)	Standards: MCL (ug/L)	Status HA A	Health Advisories: 10-kg Child One-Day (ug/L)	Health Advisories: 10-kg Child Ten-Day (ug/L)	Health Advisories: 10-kg Child Longer-Term (ug/L)	Health Advisories: Longer-Term (ug/L)	Health Advisories: 70-kg Adult RfD (ug/kg/day)	Health Advisories: 70-kg Adult DWEL (ug/L)	Health Advisories: Lifetime (ug/L)	Health Advisories: ug/L at 10-4 Cancer Risk	Cancer Group
Compound Detected																		
Semivolatile Organics (cont)																		
HEXACHLOROCYLOPENTADIENE	2				L	-	-	-	-	-	-	-	-	7	-	-	-	-
2,4,6-TRICHLOROPHENOL	1.5																	
2,4,5-TRICHLOROPHENOL	1.5																	
2-CHLORONAPHTHALENE	1.5																	
2-NITROANILINE	1																	
DIMETHYLPHTHALATE	1.5				L	-	-	-	-	-	-	-	-	-	-	-	-	D
ACENAPHTHYLENE	1.5				-	-	-	-	D	-	-	-	-	-	-	-	-	-
2,6-DINITROTOLUENE	1																	
3-NITROANILINE	2.5																	
ACENAPHTHENE	1.5																	
2,4-DINITROPHENOL	(15)																	
4-NITROPHENOL	1.5																	
DIBENZOFURAN	1																	
2,4-DINITROTOLUENE	1				L	-	-	-	D	-	-	-	-	-	-	-	-	-
DIETHYLPHTHALATE	1				-	-	-	-	D	-	-	-	-	800	-	-	-	D
4-CHLOROPHENYL-PHENYLETHER	1																	
FLUORENE	1								L	-	-	-	-	-	-	-	-	D
4-NITROANILINE	3																	
4,6-DINITRO-2-METHYLPHENOL	(15)																	
N-NITROSODIPHENYLAMINE A																		
DIPHENYLAMINE A	1.5																	
4-BROMOPHENYL-PHENYLETHER	1.5																	
HEXACHLOROBENZENE	1.5				-	-	-	-	F	50	50	50	200	0.8	30	-	2	B2

ANALYTICAL DATA AND RELATED HEALTH ADVISORY TABLE

REVISION 01, EFFECTIVE 3 APRIL 1989

Sample:

Sample Collection Information and Parameters	Detection Limits (ug/L)	Sample Result (ug/L)	Lab Blank (ug/L)	Comments	Standards: Status Reg. *	Standards: RIPDWR (ug/L)	Standards: RCLG (ug/L)	Standards: RCL (ug/L)	Health Advisories: Status HA *	10-kg Child: One-Day (ug/L)	10-kg Child: Ten-Day (ug/L)	10-kg Child: Longer-Term (ug/L)	70-kg Adult: Longer-Term (ug/L)	70-kg Adult: RfD (ug/kg/day)	70-kg Adult: DWEL (ug/L)	70-kg Adult: Lifetime (ug/L)	ug/L at 10-4 Cancer Risk	Cancer Group
Compound Detected																		
Semivolatile Organics (cont)																		
PENTACHLOROPHENOL	2			30 θ	P	-	200	200	E	1000	300	300	1000	30	1000	200	-	D
PHENANTHRENE	1				L	-	-	-	-	-	-	-	-	-	-	-	-	-
ANTHRACENE	2.5				L	-	-	-	-	-	-	-	-	-	-	-	-	D
DI-N-BUTYLPHTHALATE	2				L	-	-	-	-	-	-	-	-	100	-	-	-	D
FLUORANTHENE	1.5																	
PYRENE	1.5				L	-	-	-	-	-	-	-	-	-	-	-	-	D
BUTYLBENZYLPHTHALATE	3.5				L	-	-	-	-	-	-	-	-	200	-	-	-	C
BENZO[A]ANTHRACENE AA					L	-	-	-	-	-	-	-	-	-	-	-	-	B2
CHRYSENE AA	1.5				L	-	-	-	-	-	-	-	-	-	-	-	-	B2
BIS(2-ETHYLHEXYL)PHTHALATE	1				-	-	-	-	D	-	-	-	-	20	-	-	-	B2
DI-N-OCTYLPHTHALATE	1.5																	
BENZO[B]FLUORANTHENE AAA					L	-	-	-	-	-	-	-	-	-	-	-	-	B2
BENZO[K]FLUORANTHENE AAA	1.5				L	-	-	-	-	-	-	-	-	-	-	-	-	B2
BENZO[A]PYRENE	2				L	-	-	-	-	-	-	-	-	-	-	-	-	B2
INDENO[1,2,3-C,D]PYRENE	3.5				L	-	-	-	-	-	-	-	-	-	-	-	-	B2
DIBENZO[A,H]ANTHRCENE	2.5				L	-	-	-	-	-	-	-	-	-	-	-	-	B2
BENZO[G,H,I]PERYLENE	4				L	-	-	-	-	-	-	-	-	-	-	-	-	D
4-METHYLPHENOL	1																	
BIS(2-CHLOROISOPROPYL)ETHER	2.5				-	-	-	-	D	-	-	-	-	-	-	-	-	-
ANILINE	1.5																	
1,2-DIPHENYLHYDRAZINE	1																	

ANALYTICAL DATA AND RELATED HEALTH ADVISORY TABLE

REVISION # 1, EFFECTIVE DATE 3 APL 1989

Sample:

Sample Collection Information and Parameters	Detection Limits (ug/L)	Sample Result (ug/L)	Lab Blank (ug/L)	Comments	Standards Status Reg. A	Standards NIPDWR (ug/L)	Standards MCLG (ug/L)	Standards MCL (ug/L)	Status HA A	Health Advisories 10-kg Child One-Day (ug/L)	10-kg Child Ten-Day (ug/L)	10-kg Child Longer-Term (ug/L)	70-kg Adult Longer-Term (ug/L)	70-kg Adult RfD (ug/kg/day)	70-kg Adult DWEL (ug/L)	70-kg Adult Lifetime (ug/L)	ug/l at 10-4 Cancer Risk	Cancer Group
Compound Detected																		
Pesticide/PCBs																		
ALPHA BHC	(0.010																	
BETA BHC	(0.005																	
DELTA BHC	(0.005																	
GAMMA BHC (LINDANE)	0.005				P	4	0.2	0.2	F	1000	1000	30	100	0.3	10	0.2	3	C
HEPTACHLOR	0.030				P	-	ZERO	0.4	F	10	10	5	5	0.5	20	-	0.8	B2
ALDRIN	0.005																	
HEPTACHLOR EPOXIDE	0.005				P	-	ZERO	0.2	F	10	-	0.1	0.1	0.013	0.4	-	0.4	B2
ENDOSULFAN I	0.010																	
DIELDRIN	0.010				L	-	-	-	F	0.5	0.5	0.5	2	0.05	2	-	0.2	B2
4,4'-DDE	(0.005																	
ENDRIN	0.010				L	0.2	-	-	F	20	5	5	20	0.015	2	0.3	-	E
ENDOSULFAN II	0.010																	
4,4'-DDD	(0.020																	
ENDOSULFAN SULFATE	(0.10)																	
4,4'-DDT	0.020																	
METHOXYCHLOR (MARIATE)	0.020				P	100	400	400	F	6000	2000	500	2000	50	2000	400	-	D
ENDRINE ALDEHYDE	(0.030																	
ENDRIN KETONE	(0.030																	
CHLORDANE	(0.020				P	-	ZERO	2	F	60	60	0.5	0.5	0.045	2	-	3	B2
ALPHA CHLORDANE	0.020																	
GAMMA CHLORDANE	0.020																	
TOXAPHENE	(0.25)				P	5	ZERO	5	F	500	40	-	-	100	-	-	3	B2
AROCLOR 1016	0.10				P	-	ZERO	0.5	P	-	-	1	4	-	-	-	0.5	B2
AROCLOR 1221	0.10				P	-	ZERO	0.5	P	-	-	1	4	-	-	-	0.5	B2
AROCLOR 1232	0.10				P	-	ZERO	0.5	P	-	-	1	4	-	-	-	0.5	B2
AROCLOR 1242	(0.10)				P	-	ZERO	0.5	P	-	-	1	4	-	-	-	0.5	B2
AROCLOR 1248	(0.10)				P	-	ZERO	0.5	P	-	-	1	4	-	-	-	0.5	B2
AROCLOR 1254	(0.10)				P	-	ZERO	0.5	P	-	-	1	4	-	-	-	0.5	B2
AROCLOR 1260	(0.10)				P	-	ZERO	0.5	P	-	-	1	4	-	-	-	0.5	B2

Sample:

AMALYTICAL DATA AND RELATED HEALTH ADVISORY TABLE

REVISION 01, EFFECTIVE 3 APRIL 1989

Sample Collection Information and Parameters	Detection Limits (ug/L)	Sample Result (ug/L)	Lab Blank (ug/L)	Comments	Standards: Status Reg. A	Standards: MRDLG (ug/L)	Standards: MCLG (ug/L)	Standards: MCL (ug/L)	Health Advisories: Status HA A	10-kg Child: One-Day (ug/L)	10-kg Child: Ten-Day (ug/L)	10-kg Child: Longer-Term (ug/L)	70-kg Adult: Longer-Term (ug/L)	70-kg Adult: RfD (ug/kg/day)	70-kg Adult: DWEL (ug/L)	70-kg Adult: Lifetime (ug/L)	ug/L at 10-4 Cancer Risk	Cancer Group
Compound Detected																		
Analyte Detected																		
ALUMINUM	100			50 θ	L	-	-	-	D	-	-	-	-	-	-	-	-	-
ANTIMONY	5				L	-	-	-	D	-	-	-	-	0.4	-	-	-	-
ARSENIC	5				P	50	ZERO	50	D	-	-	-	-	1	-	50	3	A
BARIUM	50				P	1000	5000	5000	F	5000	5000	5000	5000	-	-	5000	-	D
BERYLLIUM	5				L	-	-	-	D	-	-	-	-	5	-	-	-	B2
CADMIUM	0.5		0.3 B		P	10	5	5	F	40	40	5	20	0.5	20	5	-	B
CALCIUM	1000	13,400																
CHROMIUM	10				P	50	100	100	F	1000	1000	200	800	5	200	100	-	D
COBALT	10																	
COPPER	10	35.8 J		1000 θ														
IRON	100	97.5 JB		300 θ														
LEAD (at source)	2				P	-	ZERO	5	-	-	-	-	-	-	-	-	-	-
LEAD (at tap)	2	1.2 JB	1.0 B		P	50	ZERO	TT	-	-	-	-	-	-	-	-	-	-
MAGNESIUM	1000	6410 J																
MANGANESE	10	11.3 J		50 θ	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MERCURY	0.2				P	2	2	2	F	-	-	-	-	0.3	10	2	-	D
NICKEL	20				L	-	-	-	F	1000	1000	2000	600	20	600	200	-	D
POTASSIUM	2000	850 B																
SELENIUM	2				P	10	50	50	-	-	-	-	-	-	-	-	-	-
SILVER	5			50 θ	L	50	-	-	D	-	-	-	-	3	-	-	-	-
SODIUM	1000	2970			L	-	-	-	D	-	-	-	-	-	20000	-	-	-
THALLIUM	2				L	-	-	-	D	-	-	-	-	0.07	-	-	-	-
TIN	40																	

ANALYTICAL DATA AND RELATED HEALTH ADVISORY TABLE REVISION 01, EFFECTIVE 3 APRIL 1989

Sample:

Sample Collection Information and Parameters	Detection Limits (ug/L)	Sample Result (ug/L)	Lab Blank (ug/L)	Comments	Standards: Status Reg. A	Standards: NIPDWR (ug/L)	Standards: MCLG (ug/L)	Standards: MCL (ug/L)	Status HA A	Health Advisories: 10-kg Child: One-Day (ug/L)	10-kg Child: Ten-Day (ug/L)	10-kg Child: Longer-Term (ug/L)	70-kg Adult: Longer-Term (ug/L)	70-kg Adult: RfD (ug/kg/day)	70-kg Adult: DWEL (ug/L)	70-kg Adult: Lifetime (ug/L)	ug/L at 10-4 Cancer Risk	Cancer Group
Compound Detected																		
Analyte Detected (cont)																		
VANADIUM	10				L	-	-	-	D	-	-	-	-	20	-	-	-	-
ZINC	20	262 J		5000 @	L	-	-	-	D	-	-	-	-	-	-	-	-	-
CYANIDE	10				L	-	-	-	F	200	200	200	800	22	800	200	-	D
BORON	80				L	-	-	-	D	-	-	-	-	-	-	-	-	-
LITHIUM	10																	
MOLYBDENUM	15				L	-	-	-	D	20000	200	6	20	0.6	20	4	-	D
TITANIUM	25																	
STRONTIUM	10				L	-	-	-	D	-	-	-	-	-	-	-	-	D
YTTRIUM	5																	

Detection Limits:
A These Two Parameters Are Reported As A Total
AA These Two Parameters Are Reported As A Total
AAA These Two Parameters Are Reported As A Total
@ Secondary Maximum Containment Levels (ug/L).
Values In Parentheses Are Estimates. Actual Values Are Being Determined At This Time.

NT - Not Tested For

DESCRIPTION AND QUALIFIERS

The following are descriptions of the 19 columns listed on the table and the qualifiers to clarify the analytical and health related values.

Column	Description
1. Sample Collection Information and Parameters.	The compounds and analytes analyzed for on this water sample.
2. Detection Limits	The detection limits that a laboratory must meet as part of the analytical service contact.
3. Sample Results	The value determined by this analysis.
4. Lab Blank	Laboratory contamination that may be found in the laboratory blank. A quality control check.
5. Comments	The water reviewer's comments on the usability of the value in the Sample Results column.
6. Status Reg	F-final D-draft L-listed for regulation P-proposed (Phase II draft proposal, based on levels proposed in 1985).
7. NIPDWR-	National Interim Primary Drinking Water Regulations: refers to the interim regulatory requirements under the Safe Drinking Water Act (SDWA) of 1974. The NIPDWR specified maximum allowable levels for 22 different contaminants at the consumer's drinking water tap. These interim standards, known as Maximum Contaminant Levels (MCL), were promulgated for 22 contaminants in March 1975, with the intention of revising and promulgating the final National Primary Drinking Water Regulations (NPDWR) a few years later. The values listed in this column are the original MCLs assigned under the interim regulations. The NPDWRs were effected under the SDWA Amendments of June 19, 1986. These revised regulations specify MCLs or treatment techniques for additional contaminants. At this time, 8 additional contaminants (synthetic volatile organic chemicals) have also been assigned MCLs. (Code of Federal Regulations, Chapter 40, part 141, et seq.)
8. MCLG-	Maximum Contaminant Level Goal: Under the National Primary Drinking Water Regulations, the term MCLG now replaces the previous term RMCL or recommended Maximum Contaminant Levels. Under the 1986 SDWA Amendments, any NPDWR which establishes an MCL must also simultaneously publish an MCLG at the time of proposed rulemaking and promulgation. The MCLG is the maximum level of a contaminant at which no known or anticipated adverse human health effects would occur, and which include an adequate margin of safety. MCLGs are nonenforceable health goals.

9. MCL-	Maximum Contaminant Level: Derived from the MCLG, the MCL is the maximum permissible level of a contaminant in drinking water which is delivered to the consumers' tap and used by the general public for drinking. MCLs are legally enforceable. The standards reflect the best achievable levels considering the occurrence, relative source contribution factors, monitoring capability, cost of treatment, available technology and health effects. The standards listed in this column for each contaminant under the NIPDWR are either newly promulgated or revised from the NIPDWR. In a few cases, the enforceable standard has changed; however, in most cases (when comparing columns headed NIPDWR and MCL) the existing interim standard has been revised or has been newly developed.
10. Status HA	F-final D-draft L-listed for regulation P-proposed (Phase II draft proposal, based on levels proposed in 1985).

Health Advisories

The Health Advisory (HA) program is sponsored by the Office of Drinking Water (ODW), and provides information on the health effects, analytical methods and treatment technology useful for dealing with drinking water contamination. Health advisories describe nonregulatory concentrations of drinking water contaminants at which adverse health effects would not be anticipated to occur over specific exposure durations. Health advisories contain a margin of safety, to protect sensitive members of the population. The Health Advisories are developed for one-day, ten-day, longer term and lifetime exposures based on data describing non carcinogenic endpoints of toxicity. The advisories are intended to serve as informal technical guidance to assist Federal, State, and local officials when emergency spills or contaminant situations occur. THEY ARE NOT CONSTRUED AS LEGALLY ENFORCEABLE FEDERAL STANDARDS AND ARE SUBJECT TO CHANGE AS NEW INFORMATION BECOMES AVAILABLE.

Health Advisory values for the adult are derived in the same way as for the 10-kg child. Again, certain assumptions are made: The adult is assumed to weigh 70-kg and consume 2 liters of water per day.

10-KG Child

11. 1 day 12. 10 day 13. Longer term	The child is assumed to be a more sensitive population entity. Included in this assumption, is that the body weight of a child is 10 kg and that one liter of water per day is ingested. Under these and other assumption specific to the available toxicological data bases, Health Advisory values have been derived and listed in the respective columns for one-day, ten-day, and longer term exposures. Longer term is defined as approximately 7 years, or 10 percent of an individual's lifetime.

70-KG Adult

14. Longer term	As with the 10-kg child, longer term exposure is approximately 7 years or 10 percent of an individual's lifetime.

15. RfD	Reference Dose: formerly known as the Acceptable Daily Intake (ADI), the RfD is an estimate of a daily exposure to the human population (including sensitive subpopulations) that is likely to be without appreciable risk or deleterious effects over a lifetime. The RfD is expressed in units of daily dose.
16. DWEL	Drinking Water Equivalent Lifetime: The medium-specific (i.e., drinking water) lifetime exposure level, assuming 100 percent exposure from that medium, at which adverse noncarcinogenic health effects would not be expected to occur. The DWEL is derived from multiplying the RfD by the adult body weight (70kg) and divided by the adult daily water consumption (2 liters/day)
17. Lifetime	Lifetime Health Advisory: This value is determined by factoring in other sources of exposure to the particular contaminant. The relative source contribution from drinking water is based on actual exposure data. If data are unavailable, a value of 20 percent is assumed for synthetic organic chemical contaminants and a value of 10 percent assumed for inorganic chemical contaminants. The lifetime Health Advisory is determined by multiplying the DWEL by the relative source contribution from drinking water.
18. $\mu g/L$ as 10^{-4} Cancer Risk	This column contains values indicating the concentration of the particular contaminant in drinking water that would produce as 10^{-4} excess lifetime cancer risk. Simply stated, if a group of 10,000 persons was exposed to the contaminant at its respective concentration listed in this column, then one individual in the group might be expected to develop cancer (above background incidence) solely from exposure to that contaminant in drinking water.
19. Cancer Group	The Office of Health and Environmental Assessment (OHEA) within EPA's Office of Research and Development (ORD) has developed guidelines for carcinogen risk assessment. These guidelines discuss weighing the evidence that a substance is a carcinogen, and classifying the chemical into one of five groups, based on the weight of evidence: Group A - Human carcinogen Group B - Probable human carcinogen Group B consists of two sub-classifications: B_1 - limited human evidence but sufficient animal evidence B_2 - Sufficient animal evidence, but inadequate or no human evidence Group C - Possible human carcinogen Group D - Not classified as to human carcinogenicity Group E - Evidence of noncarcinogenicity for humans

Qualifiers Used For The Health Related Table

NA - not applicable
PS - performance standard 0.5 NTU - 1.0 NTU
TT - treatment technique
** - no more than 5% of the samples may be positive. For systems collecting fewer than 40 samples/month, no more than 1% may be positive.
*** - guidance

+ - large discrepancies between Lifetime and Longer term HA values may occur because of the Agency's conservative policies, especially with regard to carcinogenicity, relative source contribution, and less than lifetime exposures in chronic toxicity testing. These factors can result in a cumulative UF (uncertainty factor) of 10 to 1,000 when calculating a Lifetime HA.

2306:6

I. ONLY DETECTABLE CONCENTRATIONS ARE REPORTED.

II. The following are the qualifiers used to define the organic and inorganic analytical data.

A. Organics

FOOTNOTE	DEFINITION	INTERPRETATION
U	Indicates compound was analyzed for but not detected.	Compound was not detected.
J	Indicates an estimated value.	Compound value may be semi-quantitative.
UJ	Quantitation limit is estimated due to a Quality Control (QC) protocol.	Compound was not detected.
C	This flag applies to pesticide results where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/ul in the final extract shall be confirmed by GC/MS.	Compound was confirmed by mass spectroscopy
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.	Compound value may be semi-quantitative if it is <5x the blank concentration (<10x the blank concentrations for common lab 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 semi-quantitative.
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.
A	This flag indicates that a TIC is a suspected aldol-condensation product.	Alerts data user of a lab artifact.
R	Results are unusable due to a major violation of QC protocol.	Compound value is not usable.

B. Inorganics

FOOTNOTE OLD	FOOTNOTE NEW	DEFINITION	INTERPRETATION
E	E	Estimated or not reported due to inteference. See laboratory narrative.	Compound or element was not detected or value may be semi-quantitative.
s	s	Analysis by Method of Standard Additions.	Value may be 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 semi-quantitative.
+	+	Correlation coefficient for standard additions in 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 semi-quantitative.
U	U	Compound was analyzed for but not detected.	Compound was not detected.
	M	Duplicate injection precision not met.	Value may be semi-quantitative.
	W	Post digestion spike for furnance AA analysis is out of control limits (35-115%), while sample absorbance is <50% of spike absorbance.	Value may be semi-quantitative.

C. Analytical Procedure Qualifiers for Inorganic Analysis

"P" for ICP
"A" for Flame AA
"F" for Furnance AA
"CV" for Manual Cold Vapor AA
"AV" for Automated Cold Vapor AA
"AS" for Semi-automated Spectrophotometric
"C" for Manual Spectrophotometric
"T" for Titrimetric
"NR" if the analyte is not required to be analyzed.

RW2

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

REPLY TO THE ATTENTION OF:

Sample Collection Date: MAY 24, 1989

Recipient Information: Non-responsive [redacted]

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 sample analysis of samples collected from your property will be forwarded by the U.S. EPA within 6 months. If a copy of the sample analysis is not received within 6 months of the sample collection 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 WID981095920

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.: F05-8905-015 ; PAN: FWI0149SA
Yellow: Recipient
Pink: U.S. EPA

DRINKING WATER MEMORANDUM

DATE: OCTOBER 3, 1989

TO: 1. William Messenger, U.S. EPA 2. _____

FROM: TED NEHRKORN, FIT

SUBJECT: Drinking Water Sample Results

Sample RW2, EFK30, MEFB74

Action Level

☐ No Contamination
No hits above any health-related standards.

☐ Low Level Contamination
Hits just above health-related standards.

☐ Significant Contamination
Hits are above health-related standards.

☐ Please check the following. They are less than health-related standards but above detection limits.

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

☐ Please check secondary maximum contamination limits for:

Aluminum	_____	Manganese	_____
Copper	_____	Silver	_____
Iron	_____	Zinc	_____

Tom Clyne

Tom Clyne

Sample: RW2

ANALYTICAL DATA AND RELATED HEALTH ADVISORY TABLE

REVISION #1, EFFECTIVE 3 APRIL 1989

Sample Collection Information and Parameters	Detection Limits (ug/L)	Sample Result (ug/L)	Lab Blank (ug/L)	Comments	Standards: Status Reg. *	Standards: MRDLGR (ug/L)	Standards: MCLG (ug/L)	Standards: MCL (ug/L)	Health Advisories: Status HA *	10-kg Child: One-Day (ug/L)	10-kg Child: Ten-Day (ug/L)	10-kg Child: Longer-Term (ug/L)	70-kg Adult: Longer-Term (ug/L)	70-kg Adult: RfD (ug/kg/day)	70-kg Adult: DWEL (ug/L)	70-kg Adult: Lifetime (ug/L)	ug/L at 10-4 Cancer Risk	Cancer Group
Compound Detected																		
Volatile Organics																		
CHLOROMETHANE	1.5				L	-	-	-	D	-	-	-	-	-	-	-	-	-
BROMOMETHANE	1.5				-	-	-	-	D	-	-	-	-	-	-	-	-	-
VINYL CHLORIDE	1.5				F	-	ZERO	2	F	3000	3000	10	50	-	-	-	1.5	A
CHLOROETHANE	1.5				L	-	-	-	D	-	-	-	50-	-	-	-	-	-
METHYLENE CHLORIDE	1				L	-	-	-	F	10000	2000	-	-	60	2000	-	300	B2
ACETONE	5		4.0															
CARBON DISULFIDE	3																	
1,1-DICHLOROETHENE	1.5				F	-	7	7	F	2000	1000	1000	4000	9	400	7	-	C
1,1-DICHLOROETHANE	1.5				L	-	-	-	D	-	-	-	-	-	-	-	-	-
1,2-DICHLOROETHENE (TOTAL)	1.5				P	-	70	70	F	4000	1000	1000	1000	10	400	70	-	D
CHLOROFORM	1.5				L	100	-	-	D	-	-	-	-	10	-	-	600	B2
1,2-DICHLOROETHANE	1.5				F	-	ZERO	5	F	700	700	700	2600	-	-	-	40	B2
2-BUTANONE (MEK)	5				-	-	-	-	F	80000	8000	3000	9000	50	900	200	-	D
1,1,1-TRICHLOROETHANE	1.5				F	-	200	200	F	100000	40000	40000	100000	90	1000	200	-	D
CARBON TETRACHLORIDE	1.5				F	-	ZERO	5	F	4000	200	70	300	0.7	30	-	30	B2
VINYL ACETATE	5																	
BROMODICHLOROMETHANE	1.5				L	100	-	-	D	-	-	-	-	2	-	-	-	-
1,2-DICHLOROPROPANE	1.5				P	-	ZERO	5	F	-	90	-	-	-	-	-	60	B2
CIS-1,3-DICHLOROPROPENE	2				L	-	-	-	F	30	30	30	100	0.3	10	-	20	B2
TRICHLOROETHENE	1.5				F	-	ZERO	5	F	-	-	-	-	7	300	-	300	B2
DIBROMOCHLOROMETHANE	1.5				L	100	-	-	D	-	-	-	-	2	-	-	-	-
1,1,2-TRICHLOROETHANE	1.5				-	-	-	-	D	-	-	-	-	30	-	-	-	-
BENZENE	1.5				F	-	ZERO	5	F	200	200	-	-	-	-	-	100	A

BLANK SPACES INDICATE THAT NO ANALYTICAL RESULTS ABOVE DETECTION LIMITS WERE REPORTED IN THE SAMPLE RESULT COLUMN.

IN THE HEALTH RELATED COLUMNS, A BLANK SPACE INDICATES THAT NO STANDARD IS REPORTED.

ANALYTICAL DATA AND RELATED HEALTH ADVISORY TABLE

REVISION 01, EFFECTIVE 3 APRIL 1989

Sample:

Sample Collection Information and Parameters	Detection Limits (ug/L)	Sample Result (ug/L)	Lab Blank (ug/L)	Comments	Standards: Status Reg. A	Standards: MRDWR (ug/L)	Standards: MCLG (ug/L)	Standards: MCL (ug/L)	Status HA A	Health Advisories: 10-kg Child: One-Day (ug/L)	10-kg Child: Ten-Day (ug/L)	10-kg Child: Longer-Term (ug/L)	70-kg Adult: Longer-Term (ug/L)	70-kg Adult: RfD (ug/kg/day)	70-kg Adult: DWEL (ug/L)	70-kg Adult: Lifetime (ug/L)	ug/L at 10-4 Cancer Risk	Cancer Group
Compound Detected																		
Volatile Organics (cont)																		
TRANS-1,3-DICHLOROPROPENE	1				L	-	-	-	F	30	30	30	100	0.3	10	-	20	B2
BROMOFORM	1.5				L	100	-	-	D	-	-	-	-	20	-	-	-	-
4-METHYL-2-PENTANONE	1.5																	
2-HEXANONE	5																	
TETRACHLOROETHENE	1.5				P	-	ZERO	5	F	2000	2000	1000	5000	10	500	-	70	B2
TOLUENE	1.5	0.3		40 ϕ	P	-	2000	2000	F	20000	3000	3000	10000	300	10000	2000	-	-
1,1,2,2-TETRACHLOROETHANE	1.5				L	-	-	-	D	-	-	-	-	-	-	-	-	-
CHLOROBENZENE	1.5			100 ϕ	P	-	100	100	F	2000	2000	2000	7000	20	700	100	-	D
ETHYLBENZENE	1.5			30 ϕ	P	-	700	700	F	30000	3000	1000	3000	100	3000	700	-	D
STYRENE	1			10 ϕ	P	-	ZERO	5	F	20000	2000	2000	7000	200	7000	-	1	B2
XYLENES (TOTAL)	1.5			20 ϕ	P	-	10000	10000	F	40000	40000	40000	10000	2000	60000	10000	-	D
2-CHLOROETHYL VINYL ETHER	1.5																	
ACROLEIN	25																	
ACRYLONITRILE	25				L	-	-	-	-	-	-	-	-	-	-	-	-	-

Sample:

ANALYTICAL DATA AND RELATED HEALTH ADVISORY TABLE

REVISION 01, EFFECTIVE 3 APRIL 1989

Sample Collection Information and Parameters	Detection Limits (ug/L)	Sample Result (ug/L)	Lab Blank (ug/L)	Comments	Standards: Status Reg. A	Standards: MTPDWR (ug/L)	Standards: MCLG (ug/L)	Standards: MCL (ug/L)	Status HA A	Health Advisories: 10-kg Child: One-Day (ug/L)	Health Advisories: 10-kg Child: Ten-Day (ug/L)	Health Advisories: 10-kg Child: Longer-Term (ug/L)	Health Advisories: 70-kg Adult: Longer-Term (ug/L)	Health Advisories: 70-kg Adult: RfD (ug/kg/day)	Health Advisories: 70-kg Adult: DWEL (ug/L)	Health Advisories: 70-kg Adult: Lifetime (ug/L)	Health Advisories: ug/L at 10-4 Cancer Risk	Cancer Group
Compound Detected																		
Semivolatile Organics																		
PHENOL	2				-	-	-	-	D	-	-	-	-	40	-	-	-	-
BIS(2-CHLOROETHYL)ETHER	1.5																	
2-CHLOROPHENOL	2				L	-	-	-	D	-	-	-	-	5	200	-	-	-
1,3-DICHLOROBENZENE	2				P	-	600	600	F	9000	9000	9000	30000	89	3000	600	-	D
1,4-DICHLOROBENZENE	2				F	-	75	75	F	10000	10000	10000	40000	100	4000	75	-	C
BENZYL ALCOHOL	2																	
1,2-DICHLOROBENZENE	2.5				P	-	600	600	F	9000	9000	9000	30000	89	3000	600	-	D
2-METHYLPHENOL	1																	
N-NITROSO-DI-N-DIPROPYLAMINE	1.5																	
HEXACHLOROETHANE	2																	
NITROBENZENE	2.5																	
ISOPHORONE	2.5				L	-	-	-	D	-	-	-	-	150	-	-	-	-
2-NITROPHENOL	2																	
2,4-DIMETHYLPHENOL	2																	
BENZOIC ACID	20																	
BIS(2-CHLOROETHOXYL)METHANE	2.5																	
2,4-DICHLOROPHENOL	2				L	-	-	-	D	-	-	-	-	3	100	-	-	-
1,2,4-TRICHLOROBENZENE	2				-	-	-	-	D	-	-	-	-	20	-	-	-	-
NAPHTHALENE	2				-	-	-	-	D	-	-	-	-	410	-	-	-	-
4-CHLOROANILINE	2																	
HEXACHLOROBUTADIENE	2.5				-	-	-	-	D	-	-	-	-	2	-	-	5	C
4-CHLORO-3-METHYLPHENOL	1.5																	
2-METHYLNAPHTHALENE	2																	

ANALYTICAL DATA AND RELATED HEALTH ADVISORY TABLE REVISION 01, EFFECTIVE 3 APRIL 1989

Sample:

Sample Collection Information and Parameters	Detection Limits (ug/L)	Sample Result (ug/L)	Lab Blank (ug/L)	Comments	Standards: Status Reg. A	Standards: MTDWR (ug/L)	Standards: MCLG (ug/L)	Standards: MCL (ug/L)	Status MA A	Health Advisories: 10-kg Child: One-Day (ug/L)	Health Advisories: 10-kg Child: Ten-Day (ug/L)	Health Advisories: 10-kg Child: Longer-Term (ug/L)	Health Advisories: Longer-Term (ug/L)	Health Advisories: 70-kg Adult: RfD (ug/kg/day)	Health Advisories: 70-kg Adult: DWEL (ug/L)	Health Advisories: Lifetime (ug/L)	Health Advisories: ug/L at 10-4 Cancer Risk	Cancer Group
Compound Detected																		
Semivolatile Organics (cont)																		
HEXACHLOROCYLOPENTADIENE	2				L	-	-	-	-	-	-	-	-	7	-	-	-	-
2,4,6-TRICHLOROPHENOL	1.5																	
2,4,5-TRICHLOROPHENOL	1.5																	
2-CHLORONAPHTHALENE	1.5																	
2-NITROANILINE	1																	
DIMETHYLPHTHALATE	1.5				L	-	-	-	-	-	-	-	-	-	-	-	-	D
ACENAPHTHYLENE	1.5				-	-	-	-	D	-	-	-	-	-	-	-	-	-
2,6-DINITROTOLUENE	1																	
3-NITROANILINE	2.5																	
ACENAPHTHENE	1.5																	
2,4-DINITROPHENOL	(15)																	
4-NITROPHENOL	1.5																	
DIBENZOFURAN	1																	
2,4-DINITROTOLUENE	1				L	-	-	-	D	-	-	-	-	-	-	-	-	-
DIETHYLPHTHALATE	1				-	-	-	-	D	-	-	-	-	800	-	-	-	D
4-CHLOROPHENYL-PHENYLETHER	1																	
FLUORENE	1								L	-	-	-	-	-	-	-	-	D
4-NITROANILINE	3																	
4,6-DINITRO-2-METHYLPHENOL	(15)																	
N-NITROSODIPHENYLAMINE A																		
DIPHENYLAMINE A	1.5																	
4-BROMOPHENYL-PHENYLETHER	1.5																	
HEXACHLOROBENZENE	1.5				-	-	-	-	F	50	50	50	200	0.8	30	-	2	B2

ANALYTICAL DATA AND RELATED HEALTH ADVISORY TABLE

REVISION 01, EFFECTIVE 3 APRIL 1989

Sample:

Sample Collection Information and Parameters	Detection Limits (ug/L)	Sample Result (ug/L)	Lab Blank (ug/L)	Comments	Standards: Status Reg. A	Standards: MRDGR (ug/L)	Standards: MCLG (ug/L)	Standards: MCL (ug/L)	Status HA A	Health Advisories: 10-kg Child: One-Day (ug/L)	Health Advisories: 10-kg Child: Ten-Day (ug/L)	Health Advisories: 10-kg Child: Longer-Term (ug/L)	Health Advisories: Longer-Term (ug/L)	Health Advisories: 70-kg Adult: RfD (ug/kg/day)	Health Advisories: 70-kg Adult: DWEL (ug/L)	Health Advisories: Lifetime (ug/L)	Health Advisories: ug/L at 10-4 Cancer Risk	Cancer Group
Compound Detected																		
Semivolatile Organics (cont)																		
PENTACHLOROPHENOL	2			30 0	P	-	200	200	F	1000	300	300	1000	30	1000	200	-	D
PHENANTHRENE	1				L	-	-	-	-	-	-	-	-	-	-	-	-	-
ANTHRACENE	2.5				L	-	-	-	-	-	-	-	-	-	-	-	-	D
DI-N-BUTYLPHTHALATE	2				L	-	-	-	-	-	-	-	-	100	-	-	-	D
FLUORANTHENE	1.5																	
PYRENE	1.5				L	-	-	-	-	-	-	-	-	-	-	-	-	D
BUTYLBENZYLPHTHALATE	3.5				L	-	-	-	-	-	-	-	-	200	-	-	-	C
BENZO[A]ANTHRACENE AA					L	-	-	-	-	-	-	-	-	-	-	-	-	B2
CHRYSENE AA	1.5				L	-	-	-	-	-	-	-	-	-	-	-	-	B2
BIS(2-ETHYLHEXYL)PHTHALATE	1				-	-	-	-	D	-	-	-	-	20	-	-	-	B2
DI-N-OCTYLPHTHALATE	1.5																	
BENZO[B]FLUORANTHENE AAA					L	-	-	-	-	-	-	-	-	-	-	-	-	B2
BENZO[K]FLUORANTHENE AAA	1.5				L	-	-	-	-	-	-	-	-	-	-	-	-	B2
BENZO[A]PYRENE	2				L	-	-	-	-	-	-	-	-	-	-	-	-	B2
INDENO[1,2,3-C,D]PYRENE	3.5				L	-	-	-	-	-	-	-	-	-	-	-	-	B2
DIBENZO[A,H]ANTHRCENE	2.5				L	-	-	-	-	-	-	-	-	-	-	-	-	B2
BENZO[G,H,I]PERYLENE	4				L	-	-	-	-	-	-	-	-	-	-	-	-	D
4-METHYLPHENOL	1																	
BIS(2-CHLOROISOPROPYL)ETHER	2.5				-	-	-	-	D	-	-	-	-	-	-	-	-	-
ANILINE	1.5																	
1,2-DIPHENYLHYDRAZINE	1																	

ANALYTICAL DATA AND RELATED HEALTH ADVISORY TABLE

REVISION # 1, EFFECTIVE DATE 3 APL 1989

Sample:

Sample Collection Information and Parameters	Detection Limits (ug/L)	Sample Result (ug/L)	Lab Blank (ug/L)	Comments	Standards Status Reg. A	NIPDWR (ug/L)	MCLG (ug/L)	MCL (ug/L)	Status HA A	Health Advisories 10-kg Child One-Day (ug/L)	10-kg Child Ten-Day (ug/L)	10-kg Child Longer-Term (ug/L)	70-kg Adult Longer-Term (ug/L)	70-kg Adult RfD (ug/kg/day)	70-kg Adult DWEL (ug/L)	70-kg Adult Lifetime (ug/L)	ug/l at 10-4 Cancer Risk	Cancer Group
Compound Detected																		
Pesticide/PCBs																		
ALPHA BHC	(0.010																	
BETA BHC	(0.005																	
DELTA BHC	(0.005																	
GAMMA BHC (LINDANE)	0.005				P	4	0.2	0.2	F	1000	1000	30	100	0.3	10	0.2	3	C
HEPTACHLOR	0.030				P	-	ZERO	0.4	F	10	10	5	5	0.5	20	-	0.8	B2
ALDRIN	0.005																	
HEPTACHLOR EPOXIDE	0.005				P	-	ZERO	0.2	F	10	-	0.1	0.1	0.013	0.4	-	0.4	B2
ENDOSULFAN I	0.010																	
DIELDRIN	0.010				L	-	-	-	F	0.5	0.5	0.5	2	0.05	2	-	0.2	B2
4,4'-DDE	(0.005																	
ENDRIN	0.010				L	0.2	-	-	F	20	5	5	20	0.015	2	0.3	-	E
ENDOSULFAN II	0.010																	
4,4'-DDD	(0.020																	
ENDOSULFAN SULFATE	(0.10)																	
4,4'-DDT	0.020																	
METHOXYCHLOR (MARIATE)	0.020				P	100	400	400	F	6000	2000	500	2000	50	2000	400	-	D
ENDRINE ALDEHYDE	(0.030																	
ENDRIN KETONE	(0.030																	
CHLORDANE	(0.020				P	-	ZERO	2	F	60	60	0.5	0.5	0.045	2	-	3	B2
ALPHA CHLORDANE	0.020																	
GAMMA CHLORDANE	0.020																	
TOXAPHENE	(0.25)				P	5	ZERO	5	F	500	40	-	-	100	-	-	3	B2
AROCLOR 1016	0.10				P	-	ZERO	0.5	P	-	-	1	4	-	-	-	0.5	B2
AROCLOR 1221	0.10				P	-	ZERO	0.5	P	-	-	1	4	-	-	-	0.5	B2
AROCLOR 1232	0.10				P	-	ZERO	0.5	P	-	-	1	4	-	-	-	0.5	B2
AROCLOR 1242	(0.10)				P	-	ZERO	0.5	P	-	-	1	4	-	-	-	0.5	B2
AROCLOR 1248	(0.10)				P	-	ZERO	0.5	P	-	-	1	4	-	-	-	0.5	B2
AROCLOR 1254	(0.10)				P	-	ZERO	0.5	P	-	-	1	4	-	-	-	0.5	B2
AROCLOR 1260	(0.10)				P	-	ZERO	0.5	P	-	-	1	4	-	-	-	0.5	B2

ANALYTICAL DATA AND RELATED HEALTH ADVISORY TABLE

REVISION #1, EFFECTIVE 3 APRIL 1989

Sample:

Sample Collection Information and Parameters	Detection Limits (ug/L)	Sample Result (ug/L)	Lab Blank (ug/L)	Comments	Standards: Status Reg. A	Standards: MRDLG (ug/L)	Standards: MCLG (ug/L)	Standards: MCL (ug/L)	Health Advisories: Status HA A	10-Kg Child: One-Day (ug/L)	10-Kg Child: Ten-Day (ug/L)	10-Kg Child: Longer-Term (ug/L)	70-Kg Adult: Longer-Term (ug/L)	70-Kg Adult: RfD (ug/kg/day)	70-Kg Adult: DWEL (ug/L)	70-Kg Adult: Lifetime (ug/L)	ug/L at 10-4 Cancer Risk	Cancer Group
Compound Detected																		
Analyte Detected																		
ALUMINUM	100			50 θ	L	-	-	-	D	-	-	-	-	-	-	-	-	-
ANTIMONY	5	5.4			L	-	-	-	D	-	-	-	-	0.4	-	-	-	-
ARSENIC	5				P	50	ZERO	50	D	-	-	-	-	1	-	50	3	A
BARIUM	50	20.4 B			P	1000	5000	5000	F	5000	5000	5000	5000	-	-	5000	-	D
BERYLLIUM	5	2.7 JB			L	-	-	-	D	-	-	-	-	5	-	-	-	B2
CADMIUM	0.5		0.3B		P	10	5	5	F	40	40	5	20	0.5	20	5	-	B
CALCIUM	1000	13,800																
CHROMIUM	10				P	50	100	100	F	1000	1000	200	800	5	200	100	-	D
COBALT	10																	
COPPER	10			1000 θ														
IRON	100	499 J		300 θ														
LEAD (at source)	2				P	-	ZERO	5	-	-	-	-	-	-	-	-	-	-
LEAD (at tap)	2	0.87 JB	1.0B		P	50	ZERO	TT	-	-	-	-	-	-	-	-	-	-
MAGNESIUM	1000	8,000 J																
MANGANESE	10	809 J		50 θ	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MERCURY	0.2				P	2	2	2	F	-	-	-	-	0.3	10	2	-	D
NICKEL	20				L	-	-	-	F	1000	1000	2000	600	20	600	200	-	D
POTASSIUM	2000	960 B																
SELENIUM	2				P	10	50	50	-	-	-	-	-	-	-	-	-	-
SILVER	5	3.3 J*NB		50 θ	L	50	-	-	D	-	-	-	-	3	-	-	-	-
SODIUM	1000	2640			L	-	-	-	D	-	-	-	-	-	20000	-	-	-
THALLIUM	2				L	-	-	-	D	-	-	-	-	0.07	-	-	-	-
TIN	40																	

ANALYTICAL DATA AND RELATED HEALTH ADVISORY TABLE

REVISION 01, EFFECTIVE 3 APRIL 1989

Sample:

Sample Collection Information and Parameters	Detection Limits (ug/L)	Sample Result (ug/L)	Lab Blank (ug/L)	Comments	Standards: Status Reg. A	Standards: MIPDWR (ug/L)	Standards: MCLG (ug/L)	Standards: MCL (ug/L)	Status HA A	Health Advisories: 10-kg Child: One-Day (ug/L)	10-kg Child: Ten-Day (ug/L)	10-kg Child: Longer-Term (ug/L)	70-kg Adult: Longer-Term (ug/L)	70-kg Adult: RfD (ug/kg/day)	70-kg Adult: DWEL (ug/L)	70-kg Adult: Lifetime (ug/L)	ug/L at 10-4 Cancer Risk	Cancer Group
Compound Detected																		
Analyte Detected (cont)																		
VANADIUM	10				L	-	-	-	D	-	-	-	-	20	-	-	-	-
ZINC	20	20.5 J		5000 ◊	L	-	-	-	D	-	-	-	-	-	-	-	-	-
CYANIDE	10				L	-	-	-	F	200	200	200	800	22	800	200	-	D
BORON	80				L	-	-	-	D	-	-	-	-	-	-	-	-	-
LITHIUM	10																	
MOLYBDENUM	15				L	-	-	-	D	20000	200	6	20	0.6	20	4	-	D
TITANIUM	25																	
STRONTIUM	10				L	-	-	-	D	-	-	-	-	-	-	-	-	D
YTTRIUM	5																	

Detection Limits:
A These Two Parameters Are Reported As A Total
AA These Two Parameters Are Reported As A Total
AAA These Two Parameters Are Reported As A Total
◊ Secondary Maximum Containment Levels (ug/L).
Values In Parentheses Are Estimates. Actual Values Are Being Determined At This Time.

NT - Not Tested For

DESCRIPTION AND QUALIFIERS

The following are descriptions of the 19 columns listed on the table and the qualifiers to clarify the analytical and health related values.

Column	Description
1. Sample Collection Information and Parameters.	The compounds and analytes analyzed for on this water sample.
2. Detection Limits	The detection limits that a laboratory must meet as part of the analytical service contact.
3. Sample Results	The value determined by this analysis.
4. Lab Blank	Laboratory contamination that may be found in the laboratory blank. A quality control check.
5. Comments	The water reviewer's comments on the usability of the value in the Sample Results column.
6. Status Reg	F-final D-draft L-listed for regulation P-proposed (Phase II draft proposal, based on levels proposed in 1985).
7. NIPDWR-	National Interim Primary Drinking Water Regulations: refers to the <u>interim</u> regulatory requirements under the Safe Drinking Water Act (SDWA) of 1974. The NIPDWR specified maximum allowable levels for 22 different contaminants at the consumer's drinking water tap. These interim standards, known as Maximum Contaminant Levels (MCL), were promulgated for 22 contaminants in March 1975, with the intention of revising and promulgating the final National Primary Drinking Water Regulations (NPDWR) a few years later. The values listed in this column are the original MCLs assigned under the <u>interim</u> regulations. The NPDWRs were effected under the SDWA Amendments of June 19, 1986. These revised regulations specify MCLs or treatment techniques for additional contaminants. At this time, 8 additional contaminants (synthetic volatile organic chemicals) have also been assigned MCLs. (Code of Federal Regulations, Chapter 40, part 141, <u>et seq</u>.)
8. MCLG-	Maximum Contaminant Level Goal: Under the National Primary Drinking Water Regulations, the term MCLG now replaces the previous term RMCL or recommended Maximum Contaminant Levels. Under the 1986 SDWA Amendments, any NPDWR which establishes an MCL must also simultaneously publish an MCLG at the time of proposed rulemaking and promulgation. The MCLG is the maximum level of a contaminant at which no known or anticipated adverse human health effects would occur, and which include an adequate margin of safety. MCLGs are nonenforceable health goals.

9. MCL-	Maximum Contaminant Level: Derived from the MCLG, the MCL is the maximum permissible level of a contaminant in drinking water which is delivered to the consumers' tap and used by the general public for drinking. MCLs are legally enforceable. The standards reflect the best achievable levels considering the occurrence, relative source contribution factors, monitoring capability, cost of treatment, available technology and health effects. The standards listed in this column for each contaminant under the NIPDWR are either newly promulgated or revised from the NIPDWR. In a few cases, the enforceable standard has changed; however, in most cases (when comparing columns headed NIPDWR and MCL) the existing interim standard has been revised or has been newly developed.
10. Status HA	F-final D-draft L-listed for regulation P-proposed (Phase II draft proposal, based on levels proposed in 1985).

Health Advisories

The Health Advisory (HA) program is sponsored by the Office of Drinking Water (ODW), and provides information on the health effects, analytical methods and treatment technology useful for dealing with drinking water contamination. Health advisories describe nonregulatory concentrations of drinking water contaminants at which adverse health effects would not be anticipated to occur over specific exposure durations. Health advisories contain a margin of safety, to protect sensitive members of the population. The Health Advisories are developed for one-day, ten-day, longer term and lifetime exposures based on data describing non carcinogenic endpoints of toxicity. The advisories are intended to serve as informal technical guidance to assist Federal, State, and local officials when emergency spills or contaminant situations occur. THEY ARE NOT CONSTRUED AS LEGALLY ENFORCEABLE FEDERAL STANDARDS AND ARE SUBJECT TO CHANGE AS NEW INFORMATION BECOMES AVAILABLE.

Health Advisory values for the adult are derived in the same way as for the 10-kg child. Again, certain assumptions are made: The adult is assumed to weigh 70-kg and consume 2 liters of water per day.

10-KG Child

11. 1 day 12. 10 day 13. Longer term	The child is assumed to be a more sensitive population entity. Included in this assumption, is that the body weight of a child is 10 kg and that one liter of water per day is ingested. Under these and other assumption specific to the available toxicological data bases, Health Advisory values have been derived and listed in the respective columns for one-day, ten-day, and longer term exposures. Longer term is defined as approximately 7 years, or 10 percent of an individual's lifetime.

70-KG Adult

14. Longer term	As with the 10-kg child, longer term exposure is approximately 7 years or 10 percent of an individual's lifetime.

15. RfD	Reference Dose: formerly known as the Acceptable Daily Intake (ADI), the RfD is an estimate of a daily exposure to the human population (including sensitive subpopulations) that is likely to be without appreciable risk or deleterious effects over a lifetime. The RfD is expressed in units of daily dose.
16. DWEL	Drinking Water Equivalent Lifetime: The medium-specific (i.e., drinking water) lifetime exposure level, assuming 100 percent exposure from that medium, at which adverse noncarcinogenic health effects would not be expected to occur. The DWEL is derived from multiplying the RfD by the adult body weight (70kg) and divided by the adult daily water consumption (2 liters/day)
17. Lifetime	Lifetime Health Advisory: This value is determined by factoring in other sources of exposure to the particular contaminant. The relative source contribution from drinking water is based on actual exposure data. If data are unavailable, a value of 20 percent is assumed for synthetic organic chemical contaminants and a value of 10 percent assumed for inorganic chemical contaminants. The lifetime Health Advisory is determined by multiplying the DWEL by the relative source contribution from drinking water.
18. $\mu g/L$ as 10^{-4} Cancer Risk	This column contains values indicating the concentration of the particular contaminant in drinking water that would produce as 10^{-4} excess lifetime cancer risk. Simply stated, if a group of 10,000 persons was exposed to the contaminant at its respective concentration listed in this column, then one individual in the group might be expected to develop cancer (above background incidence) solely from exposure to that contaminant in drinking water.
19. Cancer Group	The Office of Health and Environmental Assessment (OHEA) within EPA's Office of Research and Development (ORD) has developed guidelines for carcinogen risk assessment. These guidelines discuss weighing the evidence that a substance is a carcinogen, and classifying the chemical into one of five groups, based on the weight of evidence: Group A - Human carcinogen Group B - Probable human carcinogen Group B consists of two sub-classifications: B_1 - limited human evidence but sufficient animal evidence B_2 - Sufficient animal evidence, but inadequate or no human evidence Group C - Possible human carcinogen Group D - Not classified as to human carcinogenicity Group E - Evidence of noncarcinogenicity for humans

Qualifiers Used For The Health Related Table

NA - not applicable
PS - performance standard 0.5 NTU - 1.0 NTU
TT - treatment technique
** - no more than 5% of the samples may be positive. For systems collecting fewer than 40 samples/month, no more than 1% may be positive.
*** - guidance

+ - large discrepancies between Lifetime and Longer term HA values may occur because of the Agency's conservative policies, especially with regard to carcinogenicity, relative source contribution, and less than lifetime exposures in chronic toxicity testing. These factors can result in a cumulative UF (uncertainty factor) of 10 to 1,000 when calculating a Lifetime HA.

2306:6

I. ONLY DETECTABLE CONCENTRATIONS ARE REPORTED.

II. The following are the qualifiers used to define the organic and inorganic analytical data.

A. Organics

FOOTNOTE	DEFINITION	INTERPRETATION
U	Indicates compound was analyzed for but not detected.	Compound was not detected.
J	Indicates an estimated value.	Compound value may be semi-quantitative.
UJ	Quantitation limit is estimated due to a Quality Control (QC) protocol.	Compound was not detected.
C	This flag applies to pesticide results where the identification has been confirmed by GC/MS. Single component pesticides >10 ng/ul in the final extract shall be confirmed by GC/MS.	Compound was confirmed by mass spectroscopy
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.	Compound value may be semi-quantitative if it is <5x the blank concentration (<10x the blank concentrations for common lab 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 semi-quantitative.
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.
A	This flag indicates that a TIC is a suspected aldol-condensation product.	Alerts data user of a lab artifact.
R	Results are unusable due to a major violation of QC protocol.	Compound value is not usable.

B. Inorganics

FOOTNOTE OLD	FOOTNOTE NEW	DEFINITION	INTERPRETATION
E	E	Estimated or not reported due to inteference. See laboratory narrative.	Compound or element was not detected or value may be semi-quantitative.
s	s	Analysis by Method of Standard Additions.	Value may be 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 semi-quantitative.
+	+	Correlation coefficient for standard additions in 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 semi-quantitative.
U	U	Compound was analyzed for but not detected.	Compound was not detected.
	M	Duplicate injection precision not met.	Value may be semi-quantitative.
	W	Post digestion spike for furnance AA analysis is out of control limits (35-115%), while sample absorbance is <50% of spike absorbance.	Value may be semi-quantitative.

C. Analytical Procedure Qualifiers for Inorganic Analysis

"P" for ICP
"A" for Flame AA
"F" for Furnance AA
"CV" for Manual Cold Vapor AA
"AV" for Automated Cold Vapor AA
"AS" for Semi-automated Spectrophotometric
"C" for Manual Spectrophotometric
"T" for Titrimetric
"NR" if the analyte is not required to be analyzed.

RW3

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

REPLY TO THE ATTENTION OF:

Sample Collection Date: MAY 24, 1989

Recipient Informati

Non-responsive

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 sample analysis of samples collected from your property will be forwarded by the U.S. EPA within 6 months. If a copy of the sample analysis is not received within 6 months of the sample collection 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 WID981095920

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.: F05-8905-015; PAN: FWI0149SA
Yellow: Recipient
Pink: U.S. EPA

DRINKING WATER MEMORANDUM

DATE: OCTOBER 3, 1989

TO: 1. William Messenger, U.S. EPA 2. _____

FROM: TED NEHEKOREN, FIT

SUBJECT: Drinking Water Sample Results

Sample RW3, EFK31, MEFB76

Action Level

☐ No Contamination
No hits above any health-related standards.

☐ Low Level Contamination
Hits just above health-related standards.

☐ Significant Contamination
Hits are above health-related standards.

☐ Please check the following. They are less than health-related standards but above detection limits.

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

☐ Please check secondary maximum contamination limits for:

Aluminum	_____	Manganese	_____
Copper	_____	Silver	_____
Iron	_____	Zinc	_____

Tom Clyne

Tom Clyne

ANALYTICAL DATA AND RELATED HEALTH ADVISORY TABLE

REVISION #1, EFFECTIVE 3 APRIL 1989

Sample:

Sample Collection Information and Parameters	Detection Limits (ug/L)	Sample Result (ug/L)	Lab Blank (ug/L)	Comments	Standards: Status Reg. A	Standards: NIPDWR (ug/L)	Standards: MCLG (ug/L)	Standards: MCL (ug/L)	Health Advisories: Status HA A	10-kg Child: One-Day (ug/L)	10-kg Child: Ten-Day (ug/L)	10-kg Child: Longer-Term (ug/L)	70-kg Adult: Longer-Term (ug/L)	70-kg Adult: RfD (ug/kg/day)	70-kg Adult: DWEL (ug/L)	70-kg Adult: Lifetime (ug/L)	ug/L at 10-4 Cancer Risk	Cancer Group
Compound Detected																		
Volatile Organics																		
CHLOROMETHANE	1.5				L	-	-	-	D	-	-	-	-	-	-	-	-	-
BROMOMETHANE	1.5				-	-	-	-	D	-	-	-	-	-	-	-	-	-
VINYL CHLORIDE	1.5				F	-	ZERO	2	F	3000	3000	10	50	-	-	-	1.5	A
CHLOROETHANE	1.5				L	-	-	-	D	-	-	-	50-	-	-	-	-	-
METHYLENE CHLORIDE	1				L	-	-	-	F	10000	2000	-	-	60	2000	-	300	B2
ACETONE	5		4.0															
CARBON DISULFIDE	3																	
1,1-DICHLOROETHENE	1.5				F	-	7	7	F	2000	1000	1000	4000	9	400	7	-	C
1,1-DICHLOROETHANE	1.5				L	-	-	-	D	-	-	-	-	-	-	-	-	-
1,2-DICHLOROETHENE (TOTAL)	1.5				P	-	70	70	F	4000	1000	1000	1000	10	400	70	-	D
CHLOROFORM	1.5				L	100	-	-	D	-	-	-	-	10	-	-	600	B2
1,2-DICHLOROETHANE	1.5				F	-	ZERO	5	F	700	700	700	2600	-	-	-	40	B2
2-BUTANONE (MEK)	5				-	-	-	-	F	80000	8000	3000	9000	50	900	200	-	D
1,1,1-TRICHLOROETHANE	1.5				F	-	200	200	F	100000	40000	40000	100000	90	1000	200	-	D
CARBON TETRACHLORIDE	1.5				F	-	ZERO	5	F	4000	200	70	300	0.7	30	-	30	B2
VINYL ACETATE	5																	
BROMODICHLOROMETHANE	1.5				L	100	-	-	D	-	-	-	-	2	-	-	-	-
1,2-DICHLOROPROPANE	1.5				P	-	ZERO	5	F	-	90	-	-	-	-	-	60	B2
CIS-1,3-DICHLOROPROPENE	2				L	-	-	-	F	30	30	30	100	0.3	10	-	20	B2
TRICHLOROETHENE	1.5				F	-	ZERO	5	F	-	-	-	-	7	300	-	300	B2
DIBROMOCHLOROMETHANE	1.5				L	100	-	-	D	-	-	-	-	2	-	-	-	-
1,1,2-TRICHLOROETHANE	1.5				-	-	-	-	D	-	-	-	-	30	-	-	-	-
BENZENE	1.5				F	-	ZERO	5	F	200	200	-	-	-	-	-	100	A

BLANK SPACES INDICATE THAT NO ANALYTICAL RESULTS ABOVE DETECTION LIMITS WERE REPORTED IN THE SAMPLE RESULT COLUMN.

IN THE HEALTH RELATED COLUMNS, A BLANK SPACE INDICATES THAT NO STANDARD IS REPORTED.

ANALYTICAL DATA AND RELATED HEALTH ADVISORY TABLE

REVISION 01, EFFECTIVE 3 APRIL 1989

Sample:

Sample Collection Information and Parameters	Detection Limits (ug/L)	Sample Result (ug/L)	Lab Blank (ug/L)	Comments	Standards: Status Reg. A	Standards: NIPDWR (ug/L)	Standards: MCLG (ug/L)	Standards: MCL (ug/L)	Health Advisories: Status HA A	10-kg Child: One-Day (ug/L)	10-kg Child: Ten-Day (ug/L)	10-kg Child: Longer-Term (ug/L)	70-kg Adult: Longer-Term (ug/L)	70-kg Adult: RfD (ug/kg/day)	70-kg Adult: DWEL (ug/L)	70-kg Adult: Lifetime (ug/L)	ug/L at 10-4 Cancer Risk	Cancer Group
Compound Detected																		
Volatile Organics (cont)																		
TRANS-1,3-DICHLOROPROPENE	1				L	-	-	-	F	30	30	30	100	0.3	10	-	20	B2
BROMOFORM	1.5				L	100	-	-	D	-	-	-	-	20	-	-	-	-
4-METHYL-2-PENTANONE	1.5																	
2-HEXANONE	5																	
TETRACHLOROETHENE	1.5				P	-	ZERO	5	F	2000	2000	1000	5000	10	500	-	70	B2
TOLUENE	1.5			40 0	P	-	2000	2000	F	20000	3000	3000	10000	300	10000	2000	-	-
1,1,2,2-TETRACHLOROETHANE	1.5				L	-	-	-	D	-	-	-	-	-	-	-	-	-
CHLOROBENZENE	1.5			100 0	P	-	100	100	F	2000	2000	2000	7000	20	700	100	-	D
ETHYLBENZENE	1.5			30 0	P	-	700	700	F	30000	3000	1000	3000	100	3000	700	-	D
STYRENE	1			10 0	P	-	ZERO	5	F	20000	2000	2000	7000	200	7000	-	1	B2
XYLENES (TOTAL)	1.5			20 0	P	-	10000	10000	F	40000	40000	40000	10000	2000	60000	10000	-	D
2-CHLOROETHYL VINYL ETHER	1.5																	
ACROLEIN	25																	
ACRYLONITRILE	25				L	-	-	-	-	-	-	-	-	-	-	-	-	-

ANALYTICAL DATA AND RELATED HEALTH ADVISORY TABLE REVISION 01, EFFECTIVE 3 APRIL 1989

Sample:

Sample Collection Information and Parameters	Detection Limits (ug/L)	Sample Result (ug/L)	Lab Blank (ug/L)	Comments	Standards: Status Reg. *	Standards: MRDLR (ug/L)	Standards: MCLG (ug/L)	Standards: MCL (ug/L)	Status HA *	Health Advisories: 10-kg Child: One-Day (ug/L)	10-kg Child: Ten-Day (ug/L)	10-kg Child: Longer-Term (ug/L)	Health Advisories: 70-kg Adult: Longer-Term (ug/L)	70-kg Adult: RfD (ug/kg/day)	70-kg Adult: DWEL (ug/L)	Lifetime (ug/L)	ug/L at 10-4 Cancer Risk	Cancer Group
Compound Detected																		
Semivolatile Organics																		
PHENOL	2				-	-	-	-	D	-	-	-	-	40	-	-	-	-
BIS(2-CHLOROETHYL)ETHER	1.5																	
2-CHLOROPHENOL	2				L	-	-	-	D	-	-	-	-	5	200	-	-	-
1,3-DICHLOROBENZENE	2				P	-	600	600	F	9000	9000	9000	30000	89	3000	600	-	D
1,4-DICHLOROBENZENE	2				F	-	75	75	F	10000	10000	10000	40000	100	4000	75	-	C
BENZYL ALCOHOL	2																	
1,2-DICHLOROBENZENE	2.5				P	-	600	600	F	9000	9000	9000	30000	89	3000	600	-	D
2-METHYLPHENOL	1																	
N-NITROSO-DI-N-DIPROPYLAMINE	1.5																	
HEXACHLOROETHANE	2																	
NITROBENZENE	2.5																	
ISOPHORONE	2.5				L	-	-	-	D	-	-	-	-	150	-	-	-	-
2-NITROPHENOL	2																	
2,4-DIMETHYLPHENOL	2																	
BENZOIC ACID	20																	
BIS(2-CHLOROETHOXYL)METHANE	2.5																	
2,4-DICHLOROPHENOL	2				L	-	-	-	D	-	-	-	-	3	100	-	-	-
1,2,4-TRICHLOROBENZENE	2				-	-	-	-	D	-	-	-	-	20	-	-	-	-
NAPHTHALENE	2				-	-	-	-	D	-	-	-	-	410	-	-	-	-
4-CHLOROANILINE	2																	
HEXACHLOROBUTADIENE	2.5				-	-	-	-	D	-	-	-	-	2	-	-	5	C
4-CHLORO-3-METHYLPHENOL	1.5																	
2-METHYLNAPHTHALENE	2																	

ANALYTICAL DATA AND RELATED HEALTH ADVISORY TABLE REVISION #1, EFFECTIVE 3 APRIL 1989

Sample:

Sample Collection Information and Parameters	Detection Limits (ug/L)	Sample Result (ug/L)	Lab Blank (ug/L)	Comments	Standards: Status Reg. A	Standards: NIPDWR (ug/L)	Standards: MCLG (ug/L)	Standards: MCL (ug/L)	Status HA A	Health Advisories: 10-kg Child: One-Day (ug/L)	10-kg Child: Ten-Day (ug/L)	10-kg Child: Longer-Term (ug/L)	Health Advisories: Longer-Term (ug/L)	70-kg Adult: RfD (ug/kg/day)	70-kg Adult: DWEL (ug/L)	Lifetime (ug/L)	ug/L at 10-4 Cancer Risk	Cancer Group
Compound Detected																		
Semivolatile Organics (cont)																		
HEXACHLOROCYLOPENTADIENE	2				L	-	-	-	-	-	-	-	-	7	-	-	-	-
2,4,6-TRICHLOROPHENOL	1.5																	
2,4,5-TRICHLOROPHENOL	1.5																	
2-CHLORONAPHTHALENE	1.5																	
2-NITROANILINE	1																	
DIMETHYLPHTHALATE	1.5				L	-	-	-	-	-	-	-	-	-	-	-	-	D
ACENAPHTHYLENE	1.5				-	-	-	-	D	-	-	-	-	-	-	-	-	-
2,6-DINITROTOLUENE	1																	
3-NITROANILINE	2.5																	
ACENAPHTHENE	1.5																	
2,4-DINITROPHENOL	(15)																	
4-NITROPHENOL	1.5																	
DIBENZOFURAN	1																	
2,4-DINITROTOLUENE	1				L	-	-	-	D	-	-	-	-	-	-	-	-	-
DIETHYLPHTHALATE	1				-	-	-	-	D	-	-	-	-	800	-	-	-	D
4-CHLOROPHENYL-PHENYLETHER	1																	
FLUORENE	1								L	-	-	-	-	-	-	-	-	D
4-NITROANILINE	3																	
4,6-DINITRO-2-METHYLPHENOL	(15)																	
N-NITROSODIPHENYLAMINE A																		
DIPHENYLAMINE A	1.5																	
4-BROMOPHENYL-PHENYLETHER	1.5																	
HEXACHLOROBENZENE	1.5				-	-	-	-	F	50	50	50	200	0.8	30	-	2	B2

ANALYTICAL DATA AND RELATED HEALTH ADVISORY TABLE

REVISION 01, EFFECTIVE 3 APRIL 1989

Sample:

Sample Collection Information and Parameters	Detection Limits (ug/L)	Sample Result (ug/L)	Lab Blank (ug/L)	Comments	Standards: Status Reg. *	Standards: MIPDWR (ug/L)	Standards: MCLG (ug/L)	Standards: MCL (ug/L)	Health Advisories: Status HA *	10-kg Child: One-Day (ug/L)	10-kg Child: Ten-Day (ug/L)	10-kg Child: Longer-Term (ug/L)	70-kg Adult: Longer-Term (ug/L)	70-kg Adult: RfD (ug/kg/day)	70-kg Adult: DWEL (ug/L)	70-kg Adult: Lifetime (ug/L)	ug/L at 10-4 Cancer Risk	Cancer Group
Compound Detected																		
Semivolatile Organics (cont)																		
PENTACHLOROPHENOL	2			30 @	P	-	200	200	F	1000	300	300	1000	30	1000	200	-	D
PHENANTHRENE	1				L	-	-	-	-	-	-	-	-	-	-	-	-	-
ANTHRACENE	2.5				L	-	-	-	-	-	-	-	-	-	-	-	-	D
DI-N-BUTYLPHTHALATE	2				L	-	-	-	-	-	-	-	-	100	-	-	-	D
FLUORANTHENE	1.5																	
PYRENE	1.5				L	-	-	-	-	-	-	-	-	-	-	-	-	D
BUTYLBENZYLPHTHALATE	3.5				L	-	-	-	-	-	-	-	-	200	-	-	-	C
BENZO(A)ANTHRACENE AA					L	-	-	-	-	-	-	-	-	-	-	-	-	B2
CHRYSENE AA	1.5				L	-	-	-	-	-	-	-	-	-	-	-	-	B2
BIS(2-ETHYLHEXYL)PHTHALATE	1				-	-	-	-	D	-	-	-	-	20	-	-	-	B2
DI-N-OCTYLPHTHALATE	1.5																	
BENZO(B)FLUORANTHENE AAA					L	-	-	-	-	-	-	-	-	-	-	-	-	B2
BENZO(K)FLUORANTHENE AAA	1.5				L	-	-	-	-	-	-	-	-	-	-	-	-	B2
BENZO(A)PYRENE	2				L	-	-	-	-	-	-	-	-	-	-	-	-	B2
INDENO(1,2,3-C,D)PYRENE	3.5				L	-	-	-	-	-	-	-	-	-	-	-	-	B2
DIBENZO(A,H)ANTHRCENE	2.5				L	-	-	-	-	-	-	-	-	-	-	-	-	B2
BENZO(G,H,I)PERYLENE	4				L	-	-	-	-	-	-	-	-	-	-	-	-	D
4-METHYLPHENOL	1																	
BIS(2-CHLOROISOPROPYL)ETHER	2.5				-	-	-	-	D	-	-	-	-	-	-	-	-	-
ANILINE	1.5																	
1,2-DIPHENYLHYDRAZINE	1																	

ANALYTICAL DATA AND RELATED HEALTH ADVISORY TABLE

REVISION # 1, EFFECTIVE DATE 3 APL 1989

Sample:

Sample Collection Information and Parameters	Detection Limits	Sample Result	Lab Blank	Comments	Standards					Health Advisories									
					Status Reg. A	NIPDWR	MCLG	MCL	Status HA A	10-kg Child			70-kg Adult					ug/l at 10-4 Cancer Risk	Cancer Group
										One-Day	Ten-Day	Longer-Term	Longer-Term	RfD	DWEL	Lifetime			
Compound Detected	(ug/L)	(ug/L)	(ug/L)			(ug/L)	(ug/L)	(ug/L)		(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/kg/day)	(ug/L)	(ug/L)			
Pesticide/PCBs																			
ALPHA BHC	(0.010																		
BETA BHC	(0.005																		
DELTA BHC	(0.005																		
GAMMA BHC (LINDANE)	0.005				P	4	0.2	0.2	F	1000	1000	30	100	0.3	10	0.2	3	C
HEPTACHLOR	0.030				P	-	ZERO	0.4	F	10	10	5	5	0.5	20	-	0.8	B2
ALDRIN	0.005																		
HEPTACHLOR EPOXIDE	0.005				P	-	ZERO	0.2	F	10	-	0.1	0.1	0.013	0.4	-	0.4	B2
ENDOSULFAN I	0.010																		
DIELDRIN	0.010				L	-	-	-	F	0.5	0.5	0.5	2	0.05	2	-	0.2	B2
4,4'-DDE	(0.005																		
ENDRIN	0.010				L	0.2	-	-	F	20	5	5	20	0.015	2	0.3	-	E
ENDOSULFAN II	0.010																		
4,4'-DDD	(0.020																		
ENDOSULFAN SULFATE	(0.10)																		
4,4'-DDT	0.020																		
METHOXYCHLOR (MARIATE)	0.020				P	100	400	400	F	6000	2000	500	2000	50	2000	400	-	D	
ENDRINE ALDEHYDE	(0.030																		
ENDRIN KETONE	(0.030																		
CHLORDANE	(0.020				P	-	ZERO	2	F	60	60	0.5	0.5	0.045	2	-	3	B2	
ALPHA CHLORDANE	0.020																		
GAMMA CHLORDANE	0.020																		
TOXAPHENE	(0.25)				P	5	ZERO	5	F	500	40	-	-	100	-	-	3	B2	
AROCLOR 1016	0.10				P	-	ZERO	0.5	P	-	-	1	4	-	-	-	0.5	B2	
AROCLOR 1221	0.10				P	-	ZERO	0.5	P	-	-	1	4	-	-	-	0.5	B2	
AROCLOR 1232	0.10				P	-	ZERO	0.5	P	-	-	1	4	-	-	-	0.5	B2	
AROCLOR 1242	(0.10)				P	-	ZERO	0.5	P	-	-	1	4	-	-	-	0.5	B2	
AROCLOR 1248	(0.10)				P	-	ZERO	0.5	P	-	-	1	4	-	-	-	0.5	B2	
AROCLOR 1254	(0.10)				P	-	ZERO	0.5	P	-	-	1	4	-	-	-	0.5	B2	
AROCLOR 1260	(0.10)				P	-	ZERO	0.5	P	-	-	1	4	-	-	-	0.5	B2	

ANALYTICAL DATA AND RELATED HEALTH ADVISORY TABLE

REVISION 01, EFFECTIVE 3 APRIL 1989

Sample:

Sample Collection Information and Parameters	Detection Limits (ug/L)	Sample Result (ug/L)	Lab Blank (ug/L)	Comments	Standards: Status Reg. A	Standards: MIPDWR (ug/L)	Standards: MCLG (ug/L)	Standards: MCL (ug/L)	Health Advisories: Status HA A	10-kg Child: One-Day (ug/L)	10-kg Child: Ten-Day (ug/L)	10-kg Child: Longer-Term (ug/L)	70-kg Adult: Longer-Term (ug/L)	70-kg Adult: RfD (ug/kg/day)	70-kg Adult: DWEL (ug/L)	70-kg Adult: Lifetime (ug/L)	ug/L at 10-4 Cancer Risk	Cancer Group
Compound Detected																		
Analyte Detected																		
ALUMINUM	100			50 ϕ	L	-	-	-	D	-	-	-	-	-	-	-	-	-
ANTIMONY	5	5.1 N			L	-	-	-	D	-	-	-	-	0.4	-	-	-	-
ARSENIC	5				P	50	ZERO	30	D	-	-	-	-	1	-	50	3	A
BARIUM	50	35.7 B			P	1000	5000	5000	F	5000	5000	5000	5000	-	-	5000	-	D
BERYLLIUM	5				L	-	-	-	D	-	-	-	-	5	-	-	-	B2
CADMIUM	0.5		0.3 B		P	10	5	5	F	40	40	5	20	0.5	20	5	-	D
CALCIUM	1000	38,300																
CHROMIUM	10				P	50	100	100	F	1000	1000	200	800	5	200	100	-	D
COBALT	10	7.6 J*B																
COPPER	10			1000 ϕ														
IRON	100	429 J		300 ϕ														
LEAD (at source)	2				P	-	ZERO	5	-	-	-	-	-	-	-	-	-	-
LEAD (at tap)	2	0.97 JB	1.0 B		P	50	ZERO	TT	-	-	-	-	-	-	-	-	-	-
MAGNESIUM	1000	16,400 J																
MANGANESE	10			50 ϕ	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MERCURY	0.2				P	2	2	2	F	-	-	-	-	0.3	10	2	-	D
NICKEL	20				L	-	-	-	F	1000	1000	2000	600	20	600	200	-	D
POTASSIUM	2000	1150 B																
SELENIUM	2	2.2 *			P	10	50	50	-	-	-	-	-	-	-	-	-	-
SILVER	5	4.4 J*NB		50 ϕ	L	50	-	-	D	-	-	-	-	3	-	-	-	-
SODIUM	1000	7360			L	-	-	-	D	-	-	-	-	-	20000	-	-	-
THALLIUM	2				L	-	-	-	D	-	-	-	-	0.07	-	-	-	-
TIN	40																	

ANALYTICAL DATA AND RELATED HEALTH ADVISORY TABLE

REVISION 01, EFFECTIVE 3 APRIL 1989

Sample:

Sample Collection Information and Parameters	Detection Limits (ug/L)	Sample Result (ug/L)	Lab Blank (ug/L)	Comments	Standards: Status Reg. A	Standards: NIPDWR (ug/L)	Standards: MCLG (ug/L)	Standards: MCL (ug/L)	Status HA A	Health Advisories: 10-kg Child: One-Day (ug/L)	10-kg Child: Ten-Day (ug/L)	10-kg Child: Longer-Term (ug/L)	70-kg Adult: Longer-Term (ug/L)	70-kg Adult: RfD (ug/kg/day)	70-kg Adult: DWEL (ug/L)	70-kg Adult: Lifetime (ug/L)	ug/L at 10-4 Cancer Risk	Cancer Group
Compund Detected																		
Analyte Detected (cont)																		
VANADIUM	10				L	-	-	-	D	-	-	-	-	20	-	-	-	-
ZINC	20			5000 @	L	-	-	-	D	-	-	-	-	-	-	-	-	-
CYANIDE	10				L	-	-	-	F	200	200	200	800	22	800	200	-	D
BORON	80				L	-	-	-	D	-	-	-	-	-	-	-	-	-
LITHIUM	10																	
MOLYBDENUM	15				L	-	-	-	D	20000	200	6	20	0.6	20	4	-	D
TITANIUM	25																	
STRONTIUM	10				L	-	-	-	D	-	-	-	-	-	-	-	-	D
YTTRIUM	5																	

Detection Limits:

A These Two Parameters Are Reported As A Total

AA These Two Parameters Are Reported As A Total

AAA These Two Parameters Are Reported As A Total

@ Secondary Maximum Containment Levels (ug/L).

Values In Parentheses Are Estimates. Actual Values Are Being Determined At This Time.

NT - Not Tested For

DESCRIPTION AND QUALIFIERS

The following are descriptions of the 19 columns listed on the table and the qualifiers to clarify the analytical and health related values.

Column	Description
1. Sample Collection Information and Parameters.	The compounds and analytes analyzed for on this water sample.
2. Detection Limits	The detection limits that a laboratory must meet as part of the analytical service contact.
3. Sample Results	The value determined by this analysis.
4. Lab Blank	Laboratory contamination that may be found in the laboratory blank. A quality control check.
5. Comments	The water reviewer's comments on the usability of the value in the Sample Results column.
6. Status Reg	F-final D-draft L-listed for regulation P-proposed (Phase II draft proposal, based on levels proposed in 1985).
7. NIPDWR-	National Interim Primary Drinking Water Regulations: refers to the <u>interim</u> regulatory requirements under the Safe Drinking Water Act (SDWA) of 1974. The NIPDWR specified maximum allowable levels for 22 different contaminants at the consumer's drinking water tap. These interim standards, known as Maximum Contaminant Levels (MCL), were promulgated for 22 contaminants in March 1975, with the intention of revising and promulgating the final National Primary Drinking Water Regulations (NPDWR) a few years later. The values listed in this column are the original MCLs assigned under the <u>interim</u> regulations. The NPDWRs were effected under the SDWA Amendments of June 19, 1986. These revised regulations specify MCLs or treatment techniques for additional contaminants. At this time, 8 additional contaminants (synthetic volatile organic chemicals) have also been assigned MCLs. (Code of Federal Regulations, Chapter 40, part 141, <u>et seq</u>.)
8. MCLG-	Maximum Contaminant Level Goal: Under the National Primary Drinking Water Regulations, the term MCLG now replaces the previous term RMCL or recommended Maximum Contaminant Levels. Under the 1986 SDWA Amendments, any NPDWR which establishes an MCL must also simultaneously publish an MCLG at the time of proposed rulemaking and promulgation. The MCLG is the maximum level of a contaminant at which no known or anticipated adverse human health effects would occur, and which include an adequate margin of safety. MCLGs are nonenforceable health goals.

9. MCL	Maximum Contaminant Level: Derived from the MCLG, the MCL is the maximum permissible level of a contaminant in drinking water which is delivered to the consumers' tap and used by the general public for drinking. MCLs are legally enforceable. The standards reflect the best achievable levels considering the occurrence, relative source contribution factors, monitoring capability, cost of treatment, available technology and health effects. The standards listed in this column for each contaminant under the NIPDWR are either newly promulgated or revised from the NIPDWR. In a few cases, the enforceable standard has changed; however, in most cases (when comparing columns headed NIPDWR and MCL) the existing interim standard has been revised or has been newly developed.
10. Status HA	F-final D-draft L-listed for regulation P-proposed (Phase II draft proposal, based on levels proposed in 1985).

Health Advisories

The Health Advisory (HA) program is sponsored by the Office of Drinking Water (ODW), and provides information on the health effects, analytical methods and treatment technology useful for dealing with drinking water contamination. Health advisories describe nonregulatory concentrations of drinking water contaminants at which adverse health effects would not be anticipated to occur over specific exposure durations. Health advisories contain a margin of safety, to protect sensitive members of the population. The Health Advisories are developed for one-day, ten-day, longer term and lifetime exposures based on data describing non carcinogenic endpoints of toxicity. The advisories are intended to serve as informal technical guidance to assist Federal, State, and local officials when emergency spills or contaminant situations occur. THEY ARE NOT CONSTRUED AS LEGALLY ENFORCEABLE FEDERAL STANDARDS AND ARE SUBJECT TO CHANGE AS NEW INFORMATION BECOMES AVAILABLE.

Health Advisory values for the adult are derived in the same way as for the 10-kg child. Again, certain assumptions are made: The adult is assumed to weigh 70-kg and consume 2 liters of water per day.

10-KG Child

11. 1 day 12. 10 day 13. Longer term	The child is assumed to be a more sensitive population entity. Included in this assumption, is that the body weight of a child is 10 kg and that one liter of water per day is ingested. Under these and other assumption specific to the available toxicological data bases, Health Advisory values have been derived and listed in the respective columns for one-day, ten-day, and longer term exposures. Longer term is defined as approximately 7 years, or 10 percent of an individual's lifetime.

70-KG Adult

14. Longer term	As with the 10-kg child, longer term exposure is approximately 7 years or 10 percent of an individual's lifetime.

15. RfD	Reference Dose: formerly known as the Acceptable Daily Intake (ADI), the RfD is an estimate of a daily exposure to the human population (including sensitive subpopulations) that is likely to be without appreciable risk or deleterious effects over a lifetime. The RfD is expressed in units of daily dose.
16. DWEL	Drinking Water Equivalent Lifetime: The medium-specific (i.e., drinking water) lifetime exposure level, assuming 100 percent exposure from that medium, at which adverse noncarcinogenic health effects would not be expected to occur. The DWEL is derived from multiplying the RfD by the adult body weight (70kg) and divided by the adult daily water consumption (2 liters/day)
17. Lifetime	Lifetime Health Advisory: This value is determined by factoring in other sources of exposure to the particular contaminant. The relative source contribution from drinking water is based on actual exposure data. If data are unavailable, a value of 20 percent is assumed for synthetic organic chemical contaminants and a value of 10 percent assumed for inorganic chemical contaminants. The lifetime Health Advisory is determined by multiplying the DWEL by the relative source contribution from drinking water.
18. $\mu g/L$ as 10^{-4} Cancer Risk	This column contains values indicating the concentration of the particular contaminant in drinking water that would produce as 10^{-4} excess lifetime cancer risk. Simply stated, if a group of 10,000 persons was exposed to the contaminant at its respective concentration listed in this column, then one individual in the group might be expected to develop cancer (above background incidence) solely from exposure to that contaminant in drinking water.
19. Cancer Group	The Office of Health and Environmental Assessment (OHEA) within EPA's Office of Research and Development (ORD) has developed guidelines for carcinogen risk assessment. These guidelines discuss weighing the evidence that a substance is a carcinogen, and classifying the chemical into one of five groups, based on the weight of evidence: Group A - Human carcinogen Group B - Probable human carcinogen Group B consists of two sub-classifications: B_1 - limited human evidence but sufficient animal evidence B_2 - Sufficient animal evidence, but inadequate or no human evidence Group C - Possible human carcinogen Group D - Not classified as to human carcinogenicity Group E - Evidence of noncarcinogenicity for humans

Qualifiers Used For The Health Related Table

NA - not applicable
PS - performance standard 0.5 NTU - 1.0 NTU
TT - treatment technique
** - no more than 5% of the samples may be positive. For systems collecting fewer than 40 samples/month, no more than 1% may be positive.
*** - guidance

+ - large discrepancies between Lifetime and Longer term HA values may occur because of the Agency's conservative policies, especially with regard to carcinogenicity, relative source contribution, and less than lifetime exposures in chronic toxicity testing. These factors can result in a cumulative UF (uncertainty factor) of 10 to 1,000 when calculating a Lifetime HA.

2306:6

I. ONLY DETECTABLE CONCENTRATIONS ARE REPORTED.

II. The following are the qualifiers used to define the organic and inorganic analytical data.

A. Organics

FOOTNOTE	DEFINITION	INTERPRETATION
U	Indicates compound was analyzed for but not detected.	Compound was not detected.
J	Indicates an estimated value.	Compound value may be semi-quantitative.
UJ	Quantitation limit is estimated due to a Quality Control (QC) protocol.	Compound was not detected.
C	This flag applies to pesticide results where the identification has been confirmed by GC/MS. Single component pesticides >10 ng/ul in the final extract shall be confirmed by GC/MS.	Compound was confirmed by mass spectroscopy
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.	Compound value may be semi-quantitative if it is <5x the blank concentration (<10x the blank concentrations for common lab 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 semi-quantitative.
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.
A	This flag indicates that a TIC is a suspected aldol-condensation product.	Alerts data user of a lab artifact.
R	Results are unusable due to a major violation of QC protocol.	Compound value is not usable.

B. Inorganics

FOOTNOTE OLD	FOOTNOTE NEW	DEFINITION	INTERPRETATION
E	E	Estimated or not reported due to inteference. See laboratory narrative.	Compound or element was not detected or value may be semi-quantitative.
S	S	Analysis by Method of Standard Additions.	Value may be 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 semi-quantitative.
+	+	Correlation coefficient for standard additions in 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 semi-quantitative.
U	U	Compound was analyzed for but not detected.	Compound was not detected.
	M	Duplicate injection precision not met.	Value may be semi-quantitative.
	W	Post digestion spike for furnance AA analysis is out of control limits (35-115%), while sample absorbance is <50% of spike absorbance.	Value may be semi-quantitative.

C. Analytical Procedure Qualifiers for Inorganic Analysis

"P" for ICP
"A" for Flame AA
"F" for Furnance AA
"CV" for Manual Cold Vapor AA
"AV" for Automated Cold Vapor AA
"AS" for Semi-automated Spectrophotometric
"C" for Manual Spectrophotometric
"T" for Titrimetric
"NR" if the analyte is not required to be analyzed.

RW4

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

REPLY TO THE ATTENTION OF:

Sample Collection Date: MAY 24, 1989

Recipient Information: Non-responsive [redacted]

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 sample analysis of samples collected from your property will be forwarded by the U.S. EPA within 6 months. If a copy of the sample analysis is not received within 6 months of the sample collection 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 WID981095920

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.: F05-8905-015 ; PAN: FWI0149SA
Yellow: Recipient
Pink: U.S. EPA

DRINKING WATER MEMORANDUM

DATE: OCTOBER 3, 1989

TO: 1. William Messenger, U.S. EPA 2. _____

FROM: TED NEHRKORN, FIT

SUBJECT: Drinking Water Sample Results

Sample RW4, EFK32, MEF877

Action Level

☐ No Contamination _____
No hits above any health-related standards.

☐ Low Level Contamination _____
Hits just above health-related standards.

☐ Significant Contamination _____
Hits are above health-related standards.

☐ Please check the following. They are less than health-related standards but above detection limits.

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

☐ Please check secondary maximum contamination limits for:

Aluminum	_____	Manganese	_____
Copper	_____	Silver	_____
Iron	_____	Zinc	_____

Tom Clyne

Tom Clyne

ANALYTICAL DATA AND RELATED HEALTH ADVISORY TABLE

REVISION #1, EFFECTIVE 3 APRIL 1989

Sample:

Sample Collection Information and Parameters	Detection Limits (ug/L)	Sample Result (ug/L)	Lab Blank (ug/L)	Comments	Standards: Status Reg. A	Standards: NIPDWR (ug/L)	Standards: MCLG (ug/L)	Standards: MCL (ug/L)	Health Advisories: Status HA A	10-kg Child: One-Day (ug/L)	10-kg Child: Ten-Day (ug/L)	10-kg Child: Longer-Term (ug/L)	70-kg Adult: Longer-Term (ug/L)	70-kg Adult: RfD (ug/kg/day)	70-kg Adult: DWEL (ug/L)	70-kg Adult: Lifetime (ug/L)	ug/L at 10-4 Cancer Risk	Cancer Group
Compound Detected																		
Volatile Organics																		
CHLOROMETHANE	1.5				L	-	-	-	D	-	-	-	-	-	-	-	-	-
BROMOMETHANE	1.5				-	-	-	-	D	-	-	-	-	-	-	-	-	-
VINYL CHLORIDE	1.5				F	-	ZERO	2	F	3000	3000	10	50	-	-	-	1.5	A
CHLOROETHANE	1.5				L	-	-	-	D	-	-	-	50-	-	-	-	-	-
METHYLENE CHLORIDE	1				L	-	-	-	F	10000	2000	-	-	60	2000	-	300	B2
ACETONE	5		4.0															
CARBON DISULFIDE	3																	
1,1-DICHLOROETHENE	1.5				F	-	7	7	F	2000	1000	1000	4000	9	400	7	-	C
1,1-DICHLOROETHANE	1.5				L	-	-	-	D	-	-	-	-	-	-	-	-	-
1,2-DICHLOROETHENE (TOTAL)	1.5	0.9			P	-	70	70	F	4000	1000	1000	1000	10	400	70	-	D
CHLOROFORM	1.5				L	100	-	-	D	-	-	-	-	10	-	-	600	B2
1,2-DICHLOROETHANE	1.5				F	-	ZERO	5	F	700	700	700	2600	-	-	-	40	B2
2-BUTANONE (MEK)	5				-	-	-	-	F	80000	8000	3000	9000	50	900	200	-	D
1,1,1-TRICHLOROETHANE	1.5				F	-	200	200	F	100000	40000	40000	100000	90	1000	200	-	D
CARBON TETRACHLORIDE	1.5				F	-	ZERO	5	F	4000	200	70	300	0.7	30	-	30	B2
VINYL ACETATE	5																	
BROMODICHLOROMETHANE	1.5				L	100	-	-	D	-	-	-	-	2	-	-	-	-
1,2-DICHLOROPROPANE	1.5				P	-	ZERO	5	F	-	90	-	-	-	-	-	60	B2
CIS-1,3-DICHLOROPROPENE	2				L	-	-	-	F	30	30	30	100	0.3	10	-	20	B2
TRICHLOROETHENE	1.5				F	-	ZERO	5	F	-	-	-	-	7	300	-	300	B2
DIBROMOCHLOROMETHANE	1.5				L	100	-	-	D	-	-	-	-	2	-	-	-	-
1,1,2-TRICHLOROETHANE	1.5				-	-	-	-	D	-	-	-	-	30	-	-	-	-
BENZENE	1.5				F	-	ZERO	5	F	200	200	-	-	-	-	-	100	A

BLANK SPACES INDICATE THAT NO ANALYTICAL RESULTS ABOVE DETECTION LIMITS WERE REPORTED IN THE SAMPLE RESULT COLUMN.

IN THE HEALTH RELATED COLUMNS, A BLANK SPACE INDICATES THAT NO STANDARD IS REPORTED.

ANALYTICAL DATA AND RELATED HEALTH ADVISORY TABLE

REVISION 01, EFFECTIVE 3 APRIL 1989

Sample:

Sample Collection Information and Parameters	Detection Limits (ug/L)	Sample Result (ug/L)	Lab Blank (ug/L)	Comments	Standards: Status Reg. A	Standards: NIPDWR (ug/L)	Standards: MCLG (ug/L)	Standards: MCL (ug/L)	Status HA A	Health Advisories: 10-Kg Child: One-Day (ug/L)	10-Kg Child: Ten-Day (ug/L)	10-Kg Child: Longer-Term (ug/L)	70-Kg Adult: Longer-Term (ug/L)	70-Kg Adult: RfD (ug/kg/day)	70-Kg Adult: DWEL (ug/L)	70-Kg Adult: Lifetime (ug/L)	ug/L at 10-4 Cancer Risk	Cancer Group
Compound Detected																		
Volatile Organics (cont)																		
TRANS-1,3-DICHLOROPROPENE	1				L	-	-	-	F	30	30	30	100	0.3	10	-	20	B2
BROMOFORM	1.5				L	100	-	-	D	-	-	-	-	20	-	-	-	-
4-METHYL-2-PENTANONE	1.5																	
2-HEXANONE	5																	
TETRACHLOROETHENE	1.5	0.8			P	-	ZERO	5	F	2000	2000	1000	5000	10	500	-	70	B2
TOLUENE	1.5	0.3		40 ϕ	P	-	2000	2000	F	20000	3000	3000	10000	300	10000	2000	-	-
1,1,2,2-TETRACHLOROETHANE	1.5				L	-	-	-	D	-	-	-	-	-	-	-	-	-
CHLOROBENZENE	1.5			100 ϕ	P	-	100	100	F	2000	2000	2000	7000	20	700	100	-	D
ETHYLBENZENE	1.5			30 ϕ	P	-	700	700	F	30000	3000	1000	3000	100	3000	700	-	D
STYRENE	1			10 ϕ	P	-	ZERO	5	F	20000	2000	2000	7000	200	7000	-	1	B2
XYLENES (TOTAL)	1.5			20 ϕ	P	-	10000	10000	F	40000	40000	40000	10000	2000	60000	10000	-	D
2-CHLOROETHYL VINYL ETHER	1.5																	
ACROLEIN	25																	
ACRYLONITRILE	25				L	-	-	-	-	-	-	-	-	-	-	-	-	-

ANALYTICAL DATA AND RELATED HEALTH ADVISORY TABLE REVISION 01, EFFECTIVE 3 APRIL 1989

Sample:

Sample Collection Information and Parameters	Detection Limits (ug/L)	Sample Result (ug/L)	Lab Blank (ug/L)	Comments	Standards: Status Reg. A	Standards: MRDWR (ug/L)	Standards: MCLG (ug/L)	Standards: MCL (ug/L)	Health Advisories: Status HA A	10-kg Child: One-Day (ug/L)	10-kg Child: Ten-Day (ug/L)	10-kg Child: Longer-Term (ug/L)	70-kg Adult: Longer-Term (ug/L)	70-kg Adult: RfD (ug/kg/day)	70-kg Adult: DWEL (ug/L)	70-kg Adult: Lifetime (ug/L)	ug/L at 10-4 Cancer Risk	Cancer Group
Compound Detected																		
Semivolatile Organics																		
PHENOL	2				-	-	-	-	D	-	-	-	-	40	-	-	-	-
BIS(2-CHLOROETHYL)ETHER	1.5																	
2-CHLOROPHENOL	2				L	-	-	-	D	-	-	-	-	5	200	-	-	-
1,3-DICHLOROBENZENE	2				P	-	600	600	F	9000	9000	9000	30000	89	3000	600	-	D
1,4-DICHLOROBENZENE	2				F	-	75	75	F	10000	10000	10000	40000	100	4000	75	-	C
BENZYL ALCOHOL	2																	
1,2-DICHLOROBENZENE	2.5				P	-	600	600	F	9000	9000	9000	30000	89	3000	600	-	D
2-METHYLPHENOL	1																	
N-NITROSO-DI-N-DIPROPYLAMINE	1.5																	
HEXACHLOROETHANE	2																	
NITROBENZENE	2.5																	
ISOPHORONE	2.5				L	-	-	-	D	-	-	-	-	150	-	-	-	-
2-NITROPHENOL	2																	
2,4-DIMETHYLPHENOL	2																	
BENZOIC ACID	20																	
BIS(2-CHLOROETHOXYL)METHANE	2.5																	
2,4-DICHLOROPHENOL	2				L	-	-	-	D	-	-	-	-	3	100	-	-	-
1,2,4-TRICHLOROBENZENE	2				-	-	-	-	D	-	-	-	-	20	-	-	-	-
NAPHTHALENE	2				-	-	-	-	D	-	-	-	-	410	-	-	-	-
4-CHLOROANILINE	2																	
HEXACHLOROBUTADIENE	2.5				-	-	-	-	D	-	-	-	-	2	-	-	5	C
4-CHLORO-3-METHYLPHENOL	1.5																	
2-METHYLNAPHTHALENE	2																	

ANALYTICAL DATA AND RELATED HEALTH ADVISORY TABLE REVISION 01, EFFECTIVE 3 APRIL 1989

Sample:

Sample Collection Information and Parameters	Detection Limits (ug/L)	Sample Result (ug/L)	Lab Blank (ug/L)	Comments	Standards: Status Reg. A	Standards: NIPDWR (ug/L)	Standards: MCLG (ug/L)	Standards: MCL (ug/L)	Status HA A	Health Advisories: 10-kg Child: One-Day (ug/L)	Health Advisories: 10-kg Child: Ten-Day (ug/L)	Health Advisories: 10-kg Child: Longer-Term (ug/L)	Health Advisories: Longer-Term (ug/L)	Health Advisories: 70-kg Adult: RfD (ug/kg/day)	Health Advisories: 70-kg Adult: DWEL (ug/L)	Health Advisories: LIFETIME (ug/L)	Health Advisories: ug/L at 10-4 Cancer Risk	Cancer Group
Compound Detected																		
Semivolatile Organics (cont)																		
HEXACHLOROCYLOPENTADIENE	2				L	-	-	-	-	-	-	-	-	7	-	-	-	-
2,4,6-TRICHLOROPHENOL	1.5																	
2,4,5-TRICHLOROPHENOL	1.5																	
2-CHLORONAPHTHALENE	1.5																	
2-NITROANILINE	1																	
DIMETHYLPHTHALATE	1.5				L	-	-	-	-	-	-	-	-	-	-	-	-	D
ACENAPHTHYLENE	1.5				-	-	-	-	D	-	-	-	-	-	-	-	-	-
2,6-DINITROTOLUENE	1																	
3-NITROANILINE	2.5																	
ACENAPHTHENE	1.5																	
2,4-DINITROPHENOL	(15)																	
4-NITROPHENOL	1.5																	
DIBENZOFURAN	1																	
2,4-DINITROTOLUENE	1				L	-	-	-	D	-	-	-	-	-	-	-	-	-
DIETHYLPHTHALATE	1				-	-	-	-	D	-	-	-	-	800	-	-	-	D
4-CHLOROPHENYL-PHENYLETHER	1																	
FLUORENE	1								L	-	-	-	-	-	-	-	-	D
4-NITROANILINE	3																	
4,6-DINITRO-2-METHYLPHENOL	(15)																	
N-NITROSODIPHENYLAMINE A																		
DIPHENYLAMINE A	1.5																	
4-BROMOPHENYL-PHENYLETHER	1.5																	
HEXACHLOROBENZENE	1.5				-	-	-	-	F	50	50	50	200	0.8	30	-	2	B2

ANALYTICAL DATA AND RELATED HEALTH ADVISORY TABLE

REVISION 01, EFFECTIVE 3 APRIL 1989

Sample:

Sample Collection Information and Parameters	Detection Limits (ug/L)	Sample Result (ug/L)	Lab Blank (ug/L)	Comments	Standards: Status Reg. A	Standards: MIPDWR (ug/L)	Standards: MCLG (ug/L)	Standards: MCL (ug/L)	Health Advisories: Status HA A	10-kg Child: One-Day (ug/L)	10-kg Child: Ten-Day (ug/L)	10-kg Child: Longer-Term (ug/L)	70-kg Adult: Longer-Term (ug/L)	70-kg Adult: RfD (ug/kg/day)	70-kg Adult: DWEL (ug/L)	70-kg Adult: Lifetime (ug/L)	ug/L at 10-4 Cancer Risk	Cancer Group
Compound Detected																		
Semivolatile Organics (cont)																		
PENTACHLOROPHENOL	2			30 0	P	-	200	200	F	1000	300	300	1000	30	1000	200	-	D
PHENANTHRENE	1				L	-	-	-	-	-	-	-	-	-	-	-	-	-
ANTHRACENE	2.5				L	-	-	-	-	-	-	-	-	-	-	-	-	D
DI-N-BUTYLPHTHALATE	2				L	-	-	-	-	-	-	-	-	100	-	-	-	D
FLUORANTHENE	1.5																	
PYRENE	1.5				L	-	-	-	-	-	-	-	-	-	-	-	-	D
BUTYLBENZYLPHTHALATE	3.5				L	-	-	-	-	-	-	-	-	200	-	-	-	C
BENZO(A)ANTHRACENE AA					L	-	-	-	-	-	-	-	-	-	-	-	-	B2
CHRYSENE AA	1.5				L	-	-	-	-	-	-	-	-	-	-	-	-	B2
BIS(2-ETHYLHEXYL)PHTHALATE	1				-	-	-	-	D	-	-	-	-	20	-	-	-	B2
DI-N-OCTYLPHTHALATE	1.5																	
BENZO(B)FLUORANTHENE AAA					L	-	-	-	-	-	-	-	-	-	-	-	-	B2
BENZO(K)FLUORANTHENE AAA	1.5				L	-	-	-	-	-	-	-	-	-	-	-	-	B2
BENZO(A)PYRENE	2				L	-	-	-	-	-	-	-	-	-	-	-	-	B2
INDENO(1,2,3-C,D)PYRENE	3.5				L	-	-	-	-	-	-	-	-	-	-	-	-	B2
DIBENZO(A,H)ANTHRCENE	2.5				L	-	-	-	-	-	-	-	-	-	-	-	-	B2
BENZO(G,H,I)PERYLENE	4				L	-	-	-	-	-	-	-	-	-	-	-	-	D
4-METHYLPHENOL	1																	
BIS(2-CHLOROISOPROPYL)ETHER	2.5				-	-	-	-	D	-	-	-	-	-	-	-	-	-
ANILINE	1.5																	
1,2-DIPHENYLHYDRAZINE	1																	

ANALYTICAL DATA AND RELATED HEALTH ADVISORY TABLE

REVISION # 1, EFFECTIVE DATE 3 APL 1989

Sample:

Sample Collection Information and Parameters	Detection Limits (ug/L)	Sample Result (ug/L)	Lab Blank (ug/L)	Comments	Standards: Status Reg. A	Standards: NIPDWR (ug/L)	Standards: MCLG (ug/L)	Standards: MCL (ug/L)	Status HA A	Health Advisories: 10-kg Child: One-Day (ug/L)	10-kg Child: Ten-Day (ug/L)	10-kg Child: Longer-Term (ug/L)	70-kg Adult: Longer-Term (ug/L)	70-kg Adult: RfD (ug/kg/day)	70-kg Adult: DWEL (ug/L)	70-kg Adult: Lifetime (ug/L)	ug/l at 10-4 Cancer Risk	Cancer Group
Compound Detected																		
Pesticide/PCBs																		
ALPHA BHC	(0.010																	
BETA BHC	(0.005																	
DELTA BHC	(0.005																	
GAMMA BHC (LINDANE)	0.005				P	4	0.2	0.2	F	1000	1000	30	100	0.3	10	0.2	3	C
HEPTACHLOR	0.030				P	-	ZERO	0.4	F	10	10	5	5	0.5	20	-	0.8	B2
ALDRIN	0.005																	
HEPTACHLOR EPOXIDE	0.005				P	-	ZERO	0.2	F	10	-	0.1	0.1	0.013	0.4	-	0.4	B2
ENDOSULFAN I	0.010																	
DIELDRIN	0.010				L	-	-	-	F	0.5	0.5	0.5	2	0.05	2	-	0.2	B2
4,4'-DDE	(0.005																	
ENDRIN	0.010				L	0.2	-	-	F	20	5	5	20	0.015	2	0.3	-	E
ENDOSULFAN II	0.010																	
4,4'-DDD	(0.020																	
ENDOSULFAN SULFATE	(0.10)																	
4,4'-DDT	0.020																	
METHOXYCHLOR (MARIATE)	0.020				P	100	400	400	F	6000	2000	500	2000	50	2000	400	-	D
ENDRINE ALDEHYDE	(0.030																	
ENDRIN KETONE	(0.030																	
CHLORDANE	(0.020				P	-	ZERO	2	F	60	60	0.5	0.5	0.045	2	-	3	B2
ALPHA CHLORDANE	0.020																	
GAMMA CHLORDANE	0.020																	
TOXAPHENE	(0.25)				P	5	ZERO	5	F	500	40	-	-	100	-	-	3	B2
AROCLOR 1016	0.10				P	-	ZERO	0.5	P	-	-	1	4	-	-	-	0.5	B2
AROCLOR 1221	0.10				P	-	ZERO	0.5	P	-	-	1	4	-	-	-	0.5	B2
AROCLOR 1232	0.10				P	-	ZERO	0.5	P	-	-	1	4	-	-	-	0.5	B2
AROCLOR 1242	(0.10)				P	-	ZERO	0.5	P	-	-	1	4	-	-	-	0.5	B2
AROCLOR 1248	(0.10)				P	-	ZERO	0.5	P	-	-	1	4	-	-	-	0.5	B2
AROCLOR 1254	(0.10)				P	-	ZERO	0.5	P	-	-	1	4	-	-	-	0.5	B2
AROCLOR 1260	(0.10)				P	-	ZERO	0.5	P	-	-	1	4	-	-	-	0.5	B2

ANALYTICAL DATA AND RELATED HEALTH ADVISORY TABLE

REVISION 01, EFFECTIVE 3 APRIL 1989

Sample:

Sample Collection Information and Parameters	Detection Limits (ug/L)	Sample Result (ug/L)	Lab Blank (ug/L)	Comments	Standards: Status Reg. A	Standards: NIPDWR (ug/L)	Standards: MCLG (ug/L)	Standards: MCL (ug/L)	Health Advisories: Status HA A	10-kg Child: One-Day (ug/L)	10-kg Child: Ten-Day (ug/L)	10-kg Child: Longer-Term (ug/L)	70-kg Adult: Longer-Term (ug/L)	70-kg Adult: RfD (ug/kg/day)	70-kg Adult: DWEL (ug/L)	70-kg Adult: Lifetime (ug/L)	ug/L at 10-4 Cancer Risk	Cancer Group
Compound Detected																		
Analyte Detected																		
ALUMINUM	100			50 θ	L	-	-	-	D	-	-	-	-	-	-	-	-	-
ANTIMONY	5	9.4 N			L	-	-	-	D	-	-	-	-	0.4	-	-	-	-
ARSENIC	5				P	50	ZERO	30	D	-	-	-	-	1	-	50	3	A
BARIUM	50	19.4 B			P	1000	5000	5000	F	5000	5000	5000	5000	-	-	5000	-	D
BERYLLIUM	5	3.1 JB			L	-	-	-	D	-	-	-	-	5	-	-	-	B2
CADMIUM	0.5		0.3 B		P	10	5	5	F	40	40	5	20	0.5	20	5	-	D
CALCIUM	1000	15,900																
CHROMIUM	10				P	50	100	100	F	1000	1000	200	800	5	200	100	-	D
COBALT	10																	
COPPER	10			1000 θ														
IRON	100	636 J		300 θ														
LEAD (at source)	2				P	-	ZERO	5	-	-	-	-	-	-	-	-	-	-
LEAD (at tap)	2	0.53 JB	1.0 B		P	50	ZERO	TT	-	-	-	-	-	-	-	-	-	-
MAGNESIUM	1000	5580 J																
MANGANESE	10	650 J		50 θ	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MERCURY	0.2				P	2	2	2	F	-	-	-	-	0.3	10	2	-	D
NICKEL	20				L	-	-	-	F	1000	1000	2000	600	20	600	200	-	D
POTASSIUM	2000	1070 B																
SELENIUM	2				P	10	50	50	-	-	-	-	-	-	-	-	-	-
SILVER	5			50 θ	L	50	-	-	D	-	-	-	-	3	-	-	-	-
SODIUM	1000	2320			L	-	-	-	D	-	-	-	-	-	20000	-	-	-
THALLIUM	2				L	-	-	-	D	-	-	-	-	0.07	-	-	-	-
TIN	40																	

ANALYTICAL DATA AND RELATED HEALTH ADVISORY TABLE

REVISION 01, EFFECTIVE 3 APRIL 1989

Sample:

Sample Collection Information and Parameters	Detection Limits (ug/L)	Sample Result (ug/L)	Lab Blank (ug/L)	Comments	Standards: Status Reg. A	Standards: NIPDWR (ug/L)	Standards: MCLG (ug/L)	Standards: MCL (ug/L)	Status HA A	Health Advisories: 10-kg Child: One-Day (ug/L)	10-kg Child: Ten-Day (ug/L)	10-kg Child: Longer-Term (ug/L)	70-kg Adult: Longer-Term (ug/L)	70-kg Adult: RfD (ug/kg/day)	70-kg Adult: DWEL (ug/L)	70-kg Adult: Lifetime (ug/L)	ug/L at 10-4 Cancer Risk	Cancer Group
Compound Detected																		
Analyte Detected (cont)																		
VANADIUM	10				L	-	-	-	D	-	-	-	-	20	-	-	-	-
ZINC	20			5000 θ	L	-	-	-	D	-	-	-	-	-	-	-	-	-
CYANIDE	10				L	-	-	-	F	200	200	200	800	22	800	200	-	D
BORON	80				L	-	-	-	D	-	-	-	-	-	-	-	-	-
LITHIUM	10																	
MOLYBDENUM	15				L	-	-	-	D	20000	200	6	20	0.6	20	4	-	D
TITANIUM	25																	
STRONTIUM	10				L	-	-	-	D	-	-	-	-	-	-	-	-	D
YTTRIUM	5																	

Detection Limits:

A These Two Parameters Are Reported As A Total

AA These Two Parameters Are Reported As A Total

AAA These Two Parameters Are Reported As A Total

θ Secondary Maximum Containment Levels (ug/L).

Values In Parentheses Are Estimates. Actual Values Are Being Determined At This Time.

NT - Not Tested For

DESCRIPTION AND QUALIFIERS

The following are descriptions of the 19 columns listed on the table and the qualifiers to clarify the analytical and health related values.

Column	Description
1. Sample Collection Information and Parameters.	The compounds and analytes analyzed for on this water sample.
2. Detection Limits	The detection limits that a laboratory must meet as part of the analytical service contact.
3. Sample Results	The value determined by this analysis.
4. Lab Blank	Laboratory contamination that may be found in the laboratory blank. A quality control check.
5. Comments	The water reviewer's comments on the usability of the value in the Sample Results column.
6. Status Reg	F-final D-draft L-listed for regulation P-proposed (Phase II draft proposal, based on levels proposed in 1985).
7. NIPDWR-	National Interim Primary Drinking Water Regulations: refers to the <u>interim</u> regulatory requirements under the Safe Drinking Water Act (SDWA) of 1974. The NIPDWR specified maximum allowable levels for 22 different contaminants at the consumer's drinking water tap. These interim standards, known as Maximum Contaminant Levels (MCL), were promulgated for 22 contaminants in March 1975, with the intention of revising and promulgating the final National Primary Drinking Water Regulations (NPDWR) a few years later. The values listed in this column are the original MCLs assigned under the <u>interim</u> regulations. The NPDWRs were effected under the SDWA Amendments of June 19, 1986. These revised regulations specify MCLs or treatment techniques for additional contaminants. At this time, 8 additional contaminants (synthetic volatile organic chemicals) have also been assigned MCLs. (Code of Federal Regulations, Chapter 40, part 141, <u>et seq</u>.)
8. MCLG-	Maximum Contaminant Level Goal: Under the National Primary Drinking Water Regulations, the term MCLG now replaces the previous term RMCL or recommended Maximum Contaminant Levels. Under the 1986 SDWA Amendments, any NPDWR which establishes an MCL must also simultaneously publish an MCLG at the time of proposed rulemaking and promulgation. The MCLG is the maximum level of a contaminant at which no known or anticipated adverse human health effects would occur, and which include an adequate margin of safety. MCLGs are nonenforceable health goals.

9. MCL-	Maximum Contaminant Level: Derived from the MCLG, the MCL is the maximum permissible level of a contaminant in drinking water which is delivered to the consumers' tap and used by the general public for drinking. MCLs are legally enforceable. The standards reflect the best achievable levels considering the occurrence, relative source contribution factors, monitoring capability, cost of treatment, available technology and health effects. The standards listed in this column for each contaminant under the NIPDWR are either newly promulgated or revised from the NIPDWR. In a few cases, the enforceable standard has changed; however, in most cases (when comparing columns headed NIPDWR and MCL) the existing interim standard has been revised or has been newly developed.
10. Status HA	F-final D-draft L-listed for regulation P-proposed (Phase II draft proposal, based on levels proposed in 1985).

Health Advisories

The Health Advisory (HA) program is sponsored by the Office of Drinking Water (ODW), and provides information on the health effects, analytical methods and treatment technology useful for dealing with drinking water contamination. Health advisories describe nonregulatory concentrations of drinking water contaminants at which adverse health effects would not be anticipated to occur over specific exposure durations. Health advisories contain a margin of safety, to protect sensitive members of the population. The Health Advisories are developed for one-day, ten-day, longer term and lifetime exposures based on data describing non carcinogenic endpoints of toxicity. The advisories are intended to serve as informal technical guidance to assist Federal, State, and local officials when emergency spills or contaminant situations occur. THEY ARE NOT CONSTRUED AS LEGALLY ENFORCEABLE FEDERAL STANDARDS AND ARE SUBJECT TO CHANGE AS NEW INFORMATION BECOMES AVAILABLE.

Health Advisory values for the adult are derived in the same way as for the 10-kg child. Again, certain assumptions are made: The adult is assumed to weigh 70-kg and consume 2 liters of water per day.

10-KG Child

11. 1 day 12. 10 day 13. Longer term	The child is assumed to be a more sensitive population entity. Included in this assumption, is that the body weight of a child is 10 kg and that one liter of water per day is ingested. Under these and other assumption specific to the available toxicological data bases, Health Advisory values have been derived and listed in the respective columns for one-day, ten-day, and longer term exposures. Longer term is defined as approximately 7 years, or 10 percent of an individual's lifetime.

70-KG Adult

14. Longer term	As with the 10-kg child, longer term exposure is approximately 7 years or 10 percent of an individual's lifetime.

15. RfD	Reference Dose: formerly known as the Acceptable Daily Intake (ADI), the RfD is an estimate of a daily exposure to the human population (including sensitive subpopulations) that is likely to be without appreciable risk or deleterious effects over a lifetime. The RfD is expressed in units of daily dose.
16. DWEL	Drinking Water Equivalent Lifetime: The medium-specific (i.e., drinking water) lifetime exposure level, assuming 100 percent exposure from that medium, at which adverse noncarcinogenic health effects would not be expected to occur. The DWEL is derived from multiplying the RfD by the adult body weight (70kg) and divided by the adult daily water consumption (2 liters/day)
17. Lifetime	Lifetime Health Advisory: This value is determined by factoring in other sources of exposure to the particular contaminant. The relative source contribution from drinking water is based on actual exposure data. If data are unavailable, a value of 20 percent is assumed for synthetic organic chemical contaminants and a value of 10 percent assumed for inorganic chemical contaminants. The lifetime Health Advisory is determined by multiplying the DWEL by the relative source contribution from drinking water.
18. $\mu g/L$ as 10^{-4} Cancer Risk	This column contains values indicating the concentration of the particular contaminant in drinking water that would produce as 10^{-4} excess lifetime cancer risk. Simply stated, if a group of 10,000 persons was exposed to the contaminant at its respective concentration listed in this column, then one individual in the group might be expected to develop cancer (above background incidence) solely from exposure to that contaminant in drinking water.
19. Cancer Group	The Office of Health and Environmental Assessment (OHEA) within EPA's Office of Research and Development (ORD) has developed guidelines for carcinogen risk assessment. These guidelines discuss weighing the evidence that a substance is a carcinogen, and classifying the chemical into one of five groups, based on the weight of evidence: Group A - Human carcinogen Group B - Probable human carcinogen Group B consists of two sub-classifications: B_1 - limited human evidence but sufficient animal evidence B_2 - Sufficient animal evidence, but inadequate or no human evidence Group C - Possible human carcinogen Group D - Not classified as to human carcinogenicity Group E - Evidence of noncarcinogenicity for humans

Qualifiers Used For The Health Related Table

NA - not applicable
PS - performance standard 0.5 NTU - 1.0 NTU
TT - treatment technique
** - no more than 5% of the samples may be positive. For systems collecting fewer than 40 samples/month, no more than 1% may be positive.
*** - guidance

+ - large discrepancies between Lifetime and Longer term HA values may occur because of the Agency's conservative policies, especially with regard to carcinogenicity, relative source contribution, and less than lifetime exposures in chronic toxicity testing. These factors can result in a cumulative UF (uncertainty factor) of 10 to 1,000 when calculating a Lifetime HA.

2306:6

I. ONLY DETECTABLE CONCENTRATIONS ARE REPORTED.

II. The following are the qualifiers used to define the organic and inorganic analytical data.

A. Organics

FOOTNOTE	DEFINITION	INTERPRETATION
U	Indicates compound was analyzed for but not detected.	Compound was not detected.
J	Indicates an estimated value.	Compound value may be semi-quantitative.
UJ	Quantitation limit is estimated due to a Quality Control (QC) protocol.	Compound was not detected.
C	This flag applies to pesticide results where the identification has been confirmed by GC/MS. Single component pesticides >10 ng/ul in the final extract shall be confirmed by GC/MS.	Compound was confirmed by mass spectroscopy
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.	Compound value may be semi-quantitative if it is <5x the blank concentration (<10x the blank concentrations for common lab 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 semi-quantitative.
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.
A	This flag indicates that a TIC is a suspected aldol-condensation product.	Alerts data user of a lab artifact.
R	Results are unusable due to a major violation of QC protocol.	Compound value is not usable.

B. Inorganics

FOOTNOTE OLD	FOOTNOTE NEW	DEFINITION	INTERPRETATION
E	E	Estimated or not reported due to inteference. See laboratory narrative.	Compound or element was not detected or value may be semi-quantitative.
S	S	Analysis by Method of Standard Additions.	Value may be 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 semi-quantitative.
+	+	Correlation coefficient for standard additions in 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 semi-quantitative.
U	U	Compound was analyzed for but not detected.	Compound was not detected.
	M	Duplicate injection precision not met.	Value may be semi-quantitative.
	W	Post digestion spike for furnance AA analysis is out of control limits (35-115%), while sample absorbance is <50% of spike absorbance.	Value may be semi-quantitative.

C. Analytical Procedure Qualifiers for Inorganic Analysis

"P" for ICP
"A" for Flame AA
"F" for Furnance AA
"CV" for Manual Cold Vapor AA
"AV" for Automated Cold Vapor AA
"AS" for Semi-automated Spectrophotometric
"C" for Manual Spectrophotometric
"T" for Titrimetric
"NR" if the analyte is not required to be analyzed.

RWS

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5
230 SOUTH DEARBORN ST.
CHICAGO, ILLINOIS 60604

REPLY TO THE ATTENTION OF:

Sample Collection Date: May 24, 1989

Recipient Information: Non-responsive [redacted]

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 sample analysis of samples collected from your property will be forwarded by the U.S. EPA within 6 months. If a copy of the sample analysis is not received within 6 months of the sample collection 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 WID981095920

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.: F05-8905-015; PAN: FWI0149SA
Yellow: Recipient
Pink: U.S. EPA

DRINKING WATER MEMORANDUM

DATE: OCTOBER 3, 1989

TO: 1. William Messenger, U.S. EPA 2. _____

FROM: TED NEHRKORN, FIT

SUBJECT: Drinking Water Sample Results

Sample RW5, EFK33, MEFB78

Action Level

☐ No Contamination _____
No hits above any health-related standards.

☐ Low Level Contamination _____
Hits just above health-related standards.

☐ Significant Contamination _____
Hits are above health-related standards.

☐ Please check the following. They are less than health-related standards but above detection limits.

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

☐ Please check secondary maximum contamination limits for:

Aluminum	_____	Manganese	_____
Copper	_____	Silver	_____
Iron	_____	Zinc	_____

Tom Clyne

Tom Clyne

ANALYTICAL DATA AND RELATED HEALTH ADVISORY TABLE REVISION #1, EFFECTIVE 3 APRIL 1989

Sample:

Sample Collection Information and Parameters	Detection Limits (ug/L)	Sample Result (ug/L)	Lab Blank (ug/L)	Comments	Standards: Status Reg. A	Standards: NIPDWR (ug/L)	Standards: MCLG (ug/L)	Standards: MCL (ug/L)	Health Advisories: Status HA A	10-kg Child: One-Day (ug/L)	10-kg Child: Ten-Day (ug/L)	10-kg Child: Longer-Term (ug/L)	70-kg Adult: Longer-Term (ug/L)	70-kg Adult: RfD (ug/kg/day)	70-kg Adult: DWEL (ug/L)	70-kg Adult: Lifetime (ug/L)	ug/L at 10-4 Cancer Risk	Cancer Group
Compound Detected																		
Volatile Organics																		
CHLOROMETHANE	1.5				L	-	-	-	D	-	-	-	-	-	-	-	-	-
BROMOMETHANE	1.5				-	-	-	-	D	-	-	-	-	-	-	-	-	-
VINYL CHLORIDE	1.5				F	-	ZERO	2	F	3000	3000	10	50	-	-	-	1.5	A
CHLOROETHANE	1.5				L	-	-	-	D	-	-	-	50-	-	-	-	-	-
METHYLENE CHLORIDE	1				L	-	-	-	F	10000	2000	-	-	60	2000	-	300	B2
ACETONE	5		4.0															
CARBON DISULFIDE	3																	
1,1-DICHLOROETHENE	1.5				F	-	7	7	F	2000	1000	1000	4000	9	400	7	-	C
1,1-DICHLOROETHANE	1.5				L	-	-	-	D	-	-	-	-	-	-	-	-	-
1,2-DICHLOROETHENE (TOTAL)	1.5				P	-	70	70	F	4000	1000	1000	1000	10	400	70	-	D
CHLOROFORM	1.5				L	100	-	-	D	-	-	-	-	10	-	-	600	B2
1,2-DICHLOROETHANE	1.5				F	-	ZERO	5	F	700	700	700	2600	-	-	-	40	B2
2-BUTANONE (MEK)	5				-	-	-	-	F	80000	8000	3000	9000	50	900	200	-	D
1,1,1-TRICHLOROETHANE	1.5				F	-	200	200	F	100000	40000	40000	100000	90	1000	200	-	D
CARBON TETRACHLORIDE	1.5				F	-	ZERO	5	F	4000	200	70	300	0.7	30	-	30	B2
VINYL ACETATE	5																	
BROMODICHLOROMETHANE	1.5				L	100	-	-	D	-	-	-	-	2	-	-	-	-
1,2-DICHLOROPROPANE	1.5				P	-	ZERO	5	F	-	90	-	-	-	-	-	60	B2
CIS-1,3-DICHLOROPROPENE	2				L	-	-	-	F	30	30	30	100	0.3	10	-	20	B2
TRICHLOROETHENE	1.5				F	-	ZERO	5	F	-	-	-	-	7	300	-	300	B2
DIBROMOCHLOROMETHANE	1.5				L	100	-	-	D	-	-	-	-	2	-	-	-	-
1,1,2-TRICHLOROETHANE	1.5				-	-	-	-	D	-	-	-	-	30	-	-	-	-
BENZENE	1.5				F	-	ZERO	5	F	200	200	-	-	-	-	-	100	A

BLANK SPACES INDICATE THAT NO ANALYTICAL RESULTS ABOVE DETECTION LIMITS WERE REPORTED IN THE SAMPLE RESULT COLUMN.

IN THE HEALTH RELATED COLUMNS, A BLANK SPACE INDICATES THAT NO STANDARD IS REPORTED.

ANALYTICAL DATA AND RELATED HEALTH ADVISORY TABLE REVISION 01, EFFECTIVE 3 APRIL 1989

Sample:

Sample Collection Information and Parameters	Detection Limits (ug/L)	Sample Result (ug/L)	Lab Blank (ug/L)	Comments	Standards: Status Reg. *	Standards: NIPDWR (ug/L)	Standards: MCLG (ug/L)	Standards: MCL (ug/L)	Status HA *	Health Advisories: 10-kg Child: One-Day (ug/L)	Health Advisories: 10-kg Child: Ten-Day (ug/L)	Health Advisories: 10-kg Child: Longer-Term (ug/L)	Health Advisories: 70-kg Adult: Longer-Term (ug/L)	Health Advisories: 70-kg Adult: RfD (ug/kg/day)	Health Advisories: 70-kg Adult: DWEL (ug/L)	Health Advisories: 70-kg Adult: Lifetime (ug/L)	Health Advisories: ug/L at 10-4 Cancer Risk	Cancer Group
Compound Detected																		
Volatile Organics (cont)																		
TRANS-1,3-DICHLOROPROPENE	1				L	-	-	-	F	30	30	30	100	0.3	10	-	20	B2
BROMOFORM	1.5				L	100	-	-	D	-	-	-	-	20	-	-	-	-
4-METHYL-2-PENTANONE	1.5																	
2-HEXANONE	5																	
TETRACHLOROETHENE	1.5				P	-	ZERO	5	F	2000	2000	1000	5000	10	500	-	70	B2
TOLUENE	1.5			40 ♦	P	-	2000	2000	F	20000	3000	3000	10000	300	10000	2000	-	-
1,1,2,2-TETRACHLOROETHANE	1.5				L	-	-	-	D	-	-	-	-	-	-	-	-	-
CHLOROBENZENE	1.5			100 ♦	P	-	100	100	F	2000	2000	2000	7000	20	700	100	-	D
ETHYLBENZENE	1.5			30 ♦	P	-	700	700	F	30000	3000	1000	3000	100	3000	700	-	D
STYRENE	1			10 ♦	P	-	ZERO	5	F	20000	2000	2000	7000	200	7000	-	1	B2
XYLENES (TOTAL)	1.5			20 ♦	P	-	10000	10000	F	40000	40000	40000	10000	2000	60000	10000	-	D
2-CHLOROETHYL VINYL ETHER	1.5																	
ACROLEIN	25																	
ACRYLONITRILE	25				L	-	-	-	-	-	-	-	-	-	-	-	-	-

ANALYTICAL DATA AND RELATED HEALTH ADVISORY TABLE REVISION 01, EFFECTIVE 3 APRIL 1989

Sample:

Sample Collection Information and Parameters	Detection Limits (ug/L)	Sample Result (ug/L)	Lab Blank (ug/L)	Comments	Standards: Status Reg. *	Standards: MIPDWR (ug/L)	Standards: MCLG (ug/L)	Standards: MCL (ug/L)	Health Advisories: Status HA *	10-kg Child: One-Day (ug/L)	10-kg Child: Ten-Day (ug/L)	10-kg Child: Longer-Term (ug/L)	70-kg Adult: Longer-Term (ug/L)	70-kg Adult: RfD (ug/kg/day)	70-kg Adult: DWEL (ug/L)	70-kg Adult: Lifetime (ug/L)	ug/L at 10-4 Cancer Risk	Cancer Group
Compound Detected																		
Semivolatile Organics																		
PHENOL	2				-	-	-	-	D	-	-	-	-	40	-	-	-	-
BIS(2-CHLOROETHYL)ETHER	1.5																	
2-CHLOROPHENOL	2				L	-	-	-	D	-	-	-	-	5	200	-	-	-
1,3-DICHLOROBENZENE	2				P	-	600	600	F	9000	9000	9000	30000	89	3000	600	-	D
1,4-DICHLOROBENZENE	2				F	-	75	75	F	10000	10000	10000	40000	100	4000	75	-	C
BENZYL ALCOHOL	2																	
1,2-DICHLOROBENZENE	2.5				P	-	600	600	F	9000	9000	9000	30000	89	3000	600	-	D
2-METHYLPHENOL	1																	
N-NITROSO-DI-N-DIPROPYLAMINE	1.5																	
HEXACHLOROETHANE	2																	
NITROBENZENE	2.5																	
ISOPHORONE	2.5				L	-	-	-	D	-	-	-	-	150	-	-	-	-
2-NITROPHENOL	2																	
2,4-DIMETHYLPHENOL	2																	
BENZOIC ACID	20																	
BIS(2-CHLOROETHOXYL)METHANE	2.5																	
2,4-DICHLOROPHENOL	2				L	-	-	-	D	-	-	-	-	3	100	-	-	-
1,2,4-TRICHLOROBENZENE	2				-	-	-	-	D	-	-	-	-	20	-	-	-	-
NAPHTHALENE	2				-	-	-	-	D	-	-	-	-	410	-	-	-	-
4-CHLOROANILINE	2																	
HEXACHLOROBUTADIENE	2.5				-	-	-	-	D	-	-	-	-	2	-	-	5	C
4-CHLORO-3-METHYLPHENOL	1.5																	
2-METHYLNAPHTHALENE	2																	

ANALYTICAL DATA AND RELATED HEALTH ADVISORY TABLE REVISION #1, EFFECTIVE 3 APRIL 1989

Sample:

Sample Collection Information and Parameters	Detection Limits (ug/L)	Sample Result (ug/L)	Lab Blank (ug/L)	Comments	Standards: Status Reg. A	Standards: NIPDWR (ug/L)	Standards: MCLG (ug/L)	Standards: MCL (ug/L)	Health Advisories: Status HA A	10-kg Child: One-Day (ug/L)	10-kg Child: Ten-Day (ug/L)	10-kg Child: Longer-Term (ug/L)	70-kg Adult: Longer-Term (ug/L)	70-kg Adult: RfD (ug/kg/day)	70-kg Adult: DWEL (ug/L)	70-kg Adult: LIFetime (ug/L)	ug/L at 10-4 Cancer Risk	Cancer Group
Compound Detected																		
Semivolatile Organics (cont)																		
HEXACHLOROCYLOPENTADIENE	2				L	-	-	-	-	-	-	-	-	7	-	-	-	-
2,4,6-TRICHLOROPHENOL	1.5																	
2,4,5-TRICHLOROPHENOL	1.5																	
2-CHLORONAPHTHALENE	1.5																	
2-NITROANILINE	1																	
DIMETHYLPHTHALATE	1.5				L	-	-	-	-	-	-	-	-	-	-	-	-	D
ACENAPHTHYLENE	1.5				-	-	-	-	D	-	-	-	-	-	-	-	-	-
2,6-DINITROTOLUENE	1																	
3-NITROANILINE	2.5																	
ACENAPHTHENE	1.5																	
2,4-DINITROPHENOL	(15)																	
4-NITROPHENOL	1.5																	
DIBENZOFURAN	1																	
2,4-DINITROTOLUENE	1				L	-	-	-	D	-	-	-	-	-	-	-	-	-
DIETHYLPHTHALATE	1				-	-	-	-	D	-	-	-	-	800	-	-	-	D
4-CHLOROPHENYL-PHENYLETHER	1																	
FLUORENE	1								L	-	-	-	-	-	-	-	-	D
4-NITROANILINE	3																	
4,6-DINITRO-2-METHYLPHENOL	(15)																	
N-NITROSODIPHENYLAMINE A																		
DIPHENYLAMINE A	1.5																	
4-BROMOPHENYL-PHENYLETHER	1.5																	
HEXACHLOROBENZENE	1.5				-	-	-	-	F	50	50	50	200	0.8	30	-	2	B2

ANALYTICAL DATA AND RELATED HEALTH ADVISORY TABLE REVISION #1, EFFECTIVE 3 APRIL 1989

Sample:

Sample Collection Information and Parameters	Detection Limits (ug/L)	Sample Result (ug/L)	Lab Blank (ug/L)	Comments	Standards: Status Reg. *	Standards: NIPDWR (ug/L)	Standards: ACLG (ug/L)	Standards: ACL (ug/L)	Health Advisories: Status HA *	Health Advisories: 10-kg Child: One-Day (ug/L)	Health Advisories: 10-kg Child: Ten-Day (ug/L)	Health Advisories: 10-kg Child: Longer-Term (ug/L)	Health Advisories: 70-kg Adult: Longer-Term (ug/L)	Health Advisories: 70-kg Adult: RfD (ug/kg/day)	Health Advisories: 70-kg Adult: DWEL (ug/L)	Health Advisories: 70-kg Adult: Lifetime (ug/L)	Health Advisories: ug/L at 10-4 Cancer Risk	Cancer Group
Compound Detected																		
Semivolatile Organics (cont)																		
PENTACHLOROPHENOL	2			30 ♦	P	-	200	200	F	1000	300	300	1000	30	1000	200	-	D
PHENANTHRENE	1				L	-	-	-	-	-	-	-	-	-	-	-	-	-
ANTHRACENE	2.5				L	-	-	-	-	-	-	-	-	-	-	-	-	D
DI-N-BUTYLPHTHALATE	2				L	-	-	-	-	-	-	-	-	100	-	-	-	D
FLUORANTHENE	1.5																	
PYRENE	1.5				L	-	-	-	-	-	-	-	-	-	-	-	-	D
BUTYLBENZYLPHTHALATE	3.5				L	-	-	-	-	-	-	-	-	200	-	-	-	C
BENZO[A]ANTHRACENE **					L	-	-	-	-	-	-	-	-	-	-	-	-	B2
CHRYSENE **	1.5				L	-	-	-	-	-	-	-	-	-	-	-	-	B2
BIS(2-ETHYLHEXYL)PHTHALATE	1				-	-	-	-	D	-	-	-	-	20	-	-	-	B2
DI-N-OCTYLPHTHALATE	1.5																	
BENZO[B]FLUORANTHENE ***					L	-	-	-	-	-	-	-	-	-	-	-	-	B2
BENZO[K]FLUORANTHENE ***	1.5				L	-	-	-	-	-	-	-	-	-	-	-	-	B2
BENZO[A]PYRENE	2				L	-	-	-	-	-	-	-	-	-	-	-	-	B2
INDENO[1,2,3-C,D]PYRENE	3.5				L	-	-	-	-	-	-	-	-	-	-	-	-	B2
DIBENZO[A,H]ANTHRCENE	2.5				L	-	-	-	-	-	-	-	-	-	-	-	-	B2
BENZO[G,H,I]PERYLENE	4				L	-	-	-	-	-	-	-	-	-	-	-	-	D
4-METHYLPHENOL	1																	
BIS(2-CHLOROISOPROPYL)ETHER	2.5				-	-	-	-	D	-	-	-	-	-	-	-	-	-
ANILINE	1.5																	
1,2-DIPHENYLHYDRAZINE	1																	

ANALYTICAL DATA AND RELATED HEALTH ADVISORY TABLE

REVISION # 1, EFFECTIVE DATE 3 APL 1989

Sample:

Sample Collection Information and Parameters	Detection Limits	Sample Result	Lab Blank	Comments	Standards					Health Advisories								
					Status Reg. A	MIPDWR	MCLG	MCL	Status HA A	10-kg Child			70-kg Adult				ug/l at 10-4 Cancer Risk	Cancer Group
										One-Day	Ten-Day	Longer-Term	Longer-Term	RfD	DWEL	Lifetime		
Compound Detected	(ug/L)	(ug/L)	(ug/L)			(ug/L)	(ug/L)	(ug/L)		(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/kg/day)	(ug/L)	(ug/L)		
Pesticide/PCBs																		
ALPHA BHC	(0.010																	
BETA BHC	(0.005																	
DELTA BHC	(0.005																	
GAMMA BHC (LINDANE)	0.005				P	4	0.2	0.2	F	1000	1000	30	100	0.3	10	0.2	3	C
HEPTACHLOR	0.030				P	-	ZERO	0.4	F	10	10	5	5	0.5	20	-	0.8	B2
ALDRIN	0.005																	
HEPTACHLOR EPOXIDE	0.005				P	-	ZERO	0.2	F	10	-	0.1	0.1	0.013	0.4	-	0.4	B2
ENDOSULFAN I	0.010																	
DIELDRIN	0.010				L	-	-	-	F	0.5	0.5	0.5	2	0.05	2	-	0.2	B2
4,4'-DDE	(0.005																	
ENDRIN	0.010				L	0.2	-	-	F	20	5	5	20	0.015	2	0.3	-	E
ENDOSULFAN II	0.010																	
4,4'-DDD	(0.020																	
ENDOSULFAN SULFATE	(0.10)																	
4,4'-DDT	0.020																	
METHOXYCHLOR (MARIATE)	0.020				P	100	400	400	F	6000	2000	500	2000	50	2000	400	-	D
ENDRINE ALDEHYDE	(0.030																	
ENDRIN KETONE	(0.030																	
CHLORDANE	(0.020				P	-	ZERO	2	F	60	60	0.5	0.5	0.045	2	-	3	B2
ALPHA CHLORDANE	0.020																	
GAMMA CHLORDANE	0.020																	
TOXAPHENE	(0.25)				P	5	ZERO	5	F	500	40	-	-	100	-	-	3	B2
AROCLOR 1016	0.10				P	-	ZERO	0.5	P	-	-	1	4	-	-	-	0.5	B2
AROCLOR 1221	0.10				P	-	ZERO	0.5	P	-	-	1	4	-	-	-	0.5	B2
AROCLOR 1232	0.10				P	-	ZERO	0.5	P	-	-	1	4	-	-	-	0.5	B2
AROCLOR 1242	(0.10)				P	-	ZERO	0.5	P	-	-	1	4	-	-	-	0.5	B2
AROCLOR 1248	(0.10)				P	-	ZERO	0.5	P	-	-	1	4	-	-	-	0.5	B2
AROCLOR 1254	(0.10)				P	-	ZERO	0.5	P	-	-	1	4	-	-	-	0.5	B2
AROCLOR 1260	(0.10)				P	-	ZERO	0.5	P	-	-	1	4	-	-	-	0.5	B2

ANALYTICAL DATA AND RELATED HEALTH ADVISORY TABLE REVISION 01, EFFECTIVE 3 APRIL 1989

Sample:

Sample Collection Information and Parameters	Detection Limits (ug/L)	Sample Result (ug/L)	Lab Blank (ug/L)	Comments	Standards: Status Reg. *	Standards: NIPDWR (ug/L)	Standards: MCLG (ug/L)	Standards: MCL (ug/L)	Health Advisories: Status HA *	10-kg Child: One-Day (ug/L)	10-kg Child: Ten-Day (ug/L)	10-kg Child: Longer-Term (ug/L)	70-kg Adult: Longer-Term (ug/L)	70-kg Adult: RfD (ug/kg/day)	70-kg Adult: DWEL (ug/L)	70-kg Adult: Lifetime (ug/L)	ug/L at 10-4 Cancer Risk	Cancer Group
Compund Detected																		
Analyte Detected																		
ALUMINUM	100	71.5 B		50 #	L	-	-	-	D	-	-	-	-	-	-	-	-	-
ANTIMONY	5				L	-	-	-	D	-	-	-	-	0.4	-	-	-	-
ARSENIC	5				P	50	ZERO	30	D	-	-	-	-	1	-	50	3	A
BARIUM	50	21.5 B			P	1000	5000	5000	F	5000	5000	5000	5000	-	-	5000	-	D
BERYLLIUM	5				L	-	-	-	D	-	-	-	-	5	-	-	-	B2
CADMIUM	0.5		0.3B		P	10	5	5	F	40	40	5	20	0.5	20	5	-	D
CALCIUM	1000	13,600																
CHROMIUM	10				P	50	100	100	F	1000	1000	200	800	5	200	100	-	D
COBALT	10																	
COPPER	10	12.4 J		1000 #														
IRON	100	65.6 JB		300 #														
LEAD (at source)	2				P	-	ZERO	5	-	-	-	-	-	-	-	-	-	-
LEAD (at tap)	2	1.0 JB	1.0B		P	50	ZERO	TT	-	-	-	-	-	-	-	-	-	-
MAGNESIUM	1000	6230 J																
MANGANESE	10			50 #	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MERCURY	0.2				P	2	2	2	F	-	-	-	-	0.3	10	2	-	D
NICKEL	20				L	-	-	-	F	1000	1000	2000	600	20	600	200	-	D
POTASSIUM	2000	886 B																
SELENIUM	2				P	10	50	50	-	-	-	-	-	-	-	-	-	-
SILVER	5			50 #	L	50	-	-	D	-	-	-	-	3	-	-	-	-
SODIUM	1000	3770			L	-	-	-	D	-	-	-	-	-	20000	-	-	-
THALLIUM	2				L	-	-	-	D	-	-	-	-	0.07	-	-	-	-
TIN	40																	

ANALYTICAL DATA AND RELATED HEALTH ADVISORY TABLE REVISION #1, EFFECTIVE 3 APRIL 1989

Sample:

Sample Collection Information and Parameters	Detection Limits (ug/L)	Sample Result (ug/L)	Lab Blank (ug/L)	Comments	Standards: Status Reg. *	Standards: NIPDWR (ug/L)	Standards: MCLG (ug/L)	Standards: MCL (ug/L)	Health Advisories: Status HA *	10-kg Child: One-Day (ug/L)	10-kg Child: Ten-Day (ug/L)	10-kg Child: Longer-Term (ug/L)	70-kg Adult: Longer-Term (ug/L)	70-kg Adult: RfD (ug/kg/day)	70-kg Adult: DWEL (ug/L)	70-kg Adult: Lifetime (ug/L)	ug/L at 10-4 Cancer Risk	Cancer Group
Compound Detected																		
Analyte Detected (cont)																		
VANADIUM	10				L	-	-	-	D	-	-	-	-	20	-	-	-	-
ZINC	20	19.2 JB		5000 ♦	L	-	-	-	D	-	-	-	-	-	-	-	-	-
CYANIDE	10				L	-	-	-	F	200	200	200	800	22	800	200	-	D
BORON	80				L	-	-	-	D	-	-	-	-	-	-	-	-	-
LITHIUM	10																	
MOLYBDENUM	15				L	-	-	-	D	20000	200	6	20	0.6	20	4	-	D
TITANIUM	25																	
STRONTIUM	10				L	-	-	-	D	-	-	-	-	-	-	-	-	D
YTTRIUM	5																	

Detection Limits:
* These Two Parameters Are Reported As A Total
** These Two Parameters Are Reported As A Total
*** These Two Parameters Are Reported As A Total
♦ Secondary Maximum Containment Levels (ug/L).
Values In Parentheses Are Estimates. Actual Values Are Being Determined At This Time.

NT - Not Tested For

DESCRIPTION AND QUALIFIERS

The following are descriptions of the 19 columns listed on the table and the qualifiers to clarify the analytical and health related values.

Column	Description
1. Sample Collection Information and Parameters.	The compounds and analytes analyzed for on this water sample.
2. Detection Limits	The detection limits that a laboratory must meet as part of the analytical service contact.
3. Sample Results	The value determined by this analysis.
4. Lab Blank	Laboratory contamination that may be found in the laboratory blank. A quality control check.
5. Comments	The water reviewer's comments on the usability of the value in the Sample Results column.
6. Status Reg	F-final D-draft L-listed for regulation P-proposed (Phase II draft proposal, based on levels proposed in 1985).
7. NIPDWR-	National Interim Primary Drinking Water Regulations: refers to the <u>interim</u> regulatory requirements under the Safe Drinking Water Act (SDWA) of 1974. The NIPDWR specified maximum allowable levels for 22 different contaminants at the consumer's drinking water tap. These interim standards, known as Maximum Contaminant Levels (MCL), were promulgated for 22 contaminants in March 1975, with the intention of revising and promulgating the final National Primary Drinking Water Regulations (NPDWR) a few years later. The values listed in this column are the original MCLs assigned under the <u>interim</u> regulations. The NPDWRs were effected under the SDWA Amendments of June 19, 1986. These revised regulations specify MCLs or treatment techniques for additional contaminants. At this time, 8 additional contaminants (synthetic volatile organic chemicals) have also been assigned MCLs. (Code of Federal Regulations, Chapter 40, part 141, <u>et seq</u>.)
8. MCLG-	Maximum Contaminant Level Goal: Under the National Primary Drinking Water Regulations, the term MCLG now replaces the previous term RMCL or recommended Maximum Contaminant Levels. Under the 1986 SDWA Amendments, any NPDWR which establishes an MCL must also simultaneously publish an MCLG at the time of proposed rulemaking and promulgation. The MCLG is the maximum level of a contaminant at which no known or anticipated adverse human health effects would occur, and which include an adequate margin of safety. MCLGs are nonenforceable health goals.

9. MCL-	Maximum Contaminant Level: Derived from the MCLG, the MCL is the maximum permissible level of a contaminant in drinking water which is delivered to the consumers' tap and used by the general public for drinking. MCLs are legally enforceable. The standards reflect the best achievable levels considering the occurrence, relative source contribution factors, monitoring capability, cost of treatment, available technology and health effects. The standards listed in this column for each contaminant under the NIPDWR are either newly promulgated or revised from the NIPDWR. In a few cases, the enforceable standard has changed; however, in most cases (when comparing columns headed NIPDWR and MCL) the existing interim standard has been revised or has been newly developed.
10. Status HA	F-final D-draft L-listed for regulation P-proposed (Phase II draft proposal, based on levels proposed in 1985).

Health Advisories

The Health Advisory (HA) program is sponsored by the Office of Drinking Water (ODW), and provides information on the health effects, analytical methods and treatment technology useful for dealing with drinking water contamination. Health advisories describe nonregulatory concentrations of drinking water contaminants at which adverse health effects would not be anticipated to occur over specific exposure durations. Health advisories contain a margin of safety, to protect sensitive members of the population. The Health Advisories are developed for one-day, ten-day, longer term and lifetime exposures based on data describing non carcinogenic endpoints of toxicity. The advisories are intended to serve as informal technical guidance to assist Federal, State, and local officials when emergency spills or contaminant situations occur. THEY ARE NOT CONSTRUED AS LEGALLY ENFORCEABLE FEDERAL STANDARDS AND ARE SUBJECT TO CHANGE AS NEW INFORMATION BECOMES AVAILABLE.

Health Advisory values for the adult are derived in the same way as for the 10-kg child. Again, certain assumptions are made: The adult is assumed to weigh 70-kg and consume 2 liters of water per day.

10-KG Child

11. 1 day 12. 10 day 13. Longer term	The child is assumed to be a more sensitive population entity. Included in this assumption, is that the body weight of a child is 10 kg and that one liter of water per day is ingested. Under these and other assumption specific to the available toxicological data bases, Health Advisory values have been derived and listed in the respective columns for one-day, ten-day, and longer term exposures. Longer term is defined as approximately 7 years, or 10 percent of an individual's lifetime.

70-KG Adult

14. Longer term	As with the 10-kg child, longer term exposure is approximately 7 years or 10 percent of an individual's lifetime.

15. RfD	Reference Dose: formerly known as the Acceptable Daily Intake (ADI), the RfD is an estimate of a daily exposure to the human population (including sensitive subpopulations) that is likely to be without appreciable risk or deleterious effects over a lifetime. The RfD is expressed in units of daily dose.
16. DWEL	Drinking Water Equivalent Lifetime: The medium-specific (i.e., drinking water) lifetime exposure level, assuming 100 percent exposure from that medium, at which adverse noncarcinogenic health effects would not be expected to occur. The DWEL is derived from multiplying the RfD by the adult body weight (70kg) and divided by the adult daily water consumption (2 liters/day)
17. Lifetime	Lifetime Health Advisory: This value is determined by factoring in other sources of exposure to the particular contaminant. The relative source contribution from drinking water is based on actual exposure data. If data are unavailable, a value of 20 percent is assumed for synthetic organic chemical contaminants and a value of 10 percent assumed for inorganic chemical contaminants. The lifetime Health Advisory is determined by multiplying the DWEL by the relative source contribution from drinking water.
18. $\mu g/L$ as 10^{-4} Cancer Risk	This column contains values indicating the concentration of the particular contaminant in drinking water that would produce as 10^{-4} excess lifetime cancer risk. Simply stated, if a group of 10,000 persons was exposed to the contaminant at its respective concentration listed in this column, then one individual in the group might be expected to develop cancer (above background incidence) solely from exposure to that contaminant in drinking water.
19. Cancer Group	The Office of Health and Environmental Assessment (OHEA) within EPA's Office of Research and Development (ORD) has developed guidelines for carcinogen risk assessment. These guidelines discuss weighing the evidence that a substance is a carcinogen, and classifying the chemical into one of five groups, based on the weight of evidence: Group A - Human carcinogen Group B - Probable human carcinogen Group B consists of two sub-classifications: B_1 - limited human evidence but sufficient animal evidence B_2 - Sufficient animal evidence, but inadequate or no human evidence Group C - Possible human carcinogen Group D - Not classified as to human carcinogenicity Group E - Evidence of noncarcinogenicity for humans

Qualifiers Used For The Health Related Table

NA - not applicable
PS - performance standard 0.5 NTU - 1.0 NTU
TT - treatment technique
** - no more than 5% of the samples may be positive. For systems collecting fewer than 40 samples/month, no more than 1% may be positive.
*** - guidance

+ - large discrepancies between Lifetime and Longer term HA values may occur because of the Agency's conservative policies, especially with regard to carcinogenicity, relative source contribution, and less than lifetime exposures in chronic toxicity testing. These factors can result in a cumulative UF (uncertainty factor) of 10 to 1,000 when calculating a Lifetime HA.

2306:6

I. ONLY DETECTABLE CONCENTRATIONS ARE REPORTED.

II. The following are the qualifiers used to define the organic and inorganic analytical data.

A. Organics

FOOTNOTE	DEFINITION	INTERPRETATION
U	Indicates compound was analyzed for but not detected.	Compound was not detected.
J	Indicates an estimated value.	Compound value may be semi-quantitative.
UJ	Quantitation limit is estimated due to a Quality Control (QC) protocol.	Compound was not detected.
C	This flag applies to pesticide results where the identification has been confirmed by GC/MS. Single component pesticides >10 ng/ul in the final extract shall be confirmed by GC/MS.	Compound was confirmed by mass spectroscopy
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.	Compound value may be semi-quantitative if it is <5x the blank concentration (<10x the blank concentrations for common lab 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 semi-quantitative.
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.
A	This flag indicates that a TIC is a suspected aldol-condensation product.	Alerts data user of a lab artifact.
R	Results are unusable due to a major violation of QC protocol.	Compound value is not usable.

B. Inorganics

FOOTNOTE OLD	FOOTNOTE NEW	DEFINITION	INTERPRETATION
E	E	Estimated or not reported due to inteference. See laboratory narrative.	Compound or element was not detected or value may be semi-quantitative.
s	s	Analysis by Method of Standard Additions.	Value may be 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 semi-quantitative.
+	+	Correlation coefficient for standard additions in 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 semi-quantitative.
U	U	Compound was analyzed for but not detected.	Compound was not detected.
	M	Duplicate injection precision not met.	Value may be semi-quantitative.
	W	Post digestion spike for furnance AA analysis is out of control limits (35-115%), while sample absorbance is <50% of spike absorbance.	Value may be semi-quantitative.

C. Analytical Procedure Qualifiers for Inorganic Analysis

"P" for ICP
"A" for Flame AA
"F" for Furnance AA
"CV" for Manual Cold Vapor AA
"AV" for Automated Cold Vapor AA
"AS" for Semi-automated Spectrophotometric
"C" for Manual Spectrophotometric
"T" for Titrimetric
"NR" if the analyte is not required to be analyzed.

ecology and environment, inc.

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

CRL Receipt Date 6/16 FIT Receipt Date 7/7 Review Completed 8/3

TO: Nehrkorn
FROM: Mary Gzyra
SUBJECT: Hallie Tocon LF
PAN: WI0149SA (1 hour charged for review) Case # 12004

Sample Description

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

Project Data Status _____ Completed!!

✓ Incomplete, awaiting Soil Vol.

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 5/23

0759:2

recycled paper

Zy 8/3/89

Table 4-_>_
RESULTS OF CHEMICAL ANALYSIS OF
FIT-COLLECTED >_____ SAMPLES

2070-13				Sample Collection Information and Parameters	Sample Number											
Physical State*	Waste Characteristics**	Category***	SI Memo		>S1	>S2	>S3	>S4	>S5	>S6	>S7	>_8	>_9	>_10	>_11	>_12
				Date												
				Time												
				Organic Traffic Report Number	EFK21	EFK22	EFK23	EFK24	EFK25	EFK26						
				Inorganic Traffic Report Number												
				Temperature (°C)												
				Specific Conductivity (µmhos)												
				pH												
				Compound Detected (values in > µg/L or µg/kg)												
				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												
Liquid	E,H,I,A	SOL	K,CLA	acetone												
Liquid	A,H,I	SOL	SH	carbon disulfide												
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												
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												
Liquid	A,G,E	SOL	A,CLA	toluene				6 J		1 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.

2070-13				Sample Collection Information and Parameters	Sample Number											
Physical State*	Waste CHARACTERISTICS	CATEGORY**	SI Memo		≥ 1	≥ 2	≥ 3	≥ 4	≥ 5	≥ 6	≥ 7	≥ 8	≥ 9	≥ 10	≥ 11	≥ 12
				Semivolatile Organics												
S, thick liquid	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												
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												
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												
Solid	A,D	OCC	NA	2,4-dinitrotoluene												
Liquid	A,D	OCC	PH	diethylphthalate												
	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												

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												
Liquid	A,D	OCC	PH,CLA	di-n-butylphthalate												
Solid	A,D	OCC	PAH	fluoranthene												
Solid	A,D	OCC	PAH	pyrene												
Liquid	A,D	OCC	PH,CLA	butylbenzylphthalate												
	A,D	OCC	HA	3,3'-dichlorobenzidine												
Solid	A,D	OCC	PAH	benzo[a]anthracene												
Solid	A,D	OCC	PAH	chrysene												
Liquid	A,D	OCC	PH,CLA	bis(2-ethylhexyl)phthalate				140 J								
Liquid	A,D	OCC	PH,CLA	di-n-octylphthalate												
Solid	A,D	OCC	PAH	benzo[b]fluoranthene												
Solid	A,D	OCC	PAH	benzo[k]fluoranthene												
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[g,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												

8/1

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: July 5, 1989

7/7/89

SUBJECT: Review of Region V CLP Data Received for Review on 6-16-89

FROM: Curtis Ross, Director (5SCRL) Central Regional Laboratory Dorothy M. May

TO: Data User: Jit

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

SITE NAME: Hallie Town LF SMO Case No. 12004

EPA Data Set No. SF 6211 No. of Samples: 7 D.U./Activity Numbers TFA/TFA102

CRL No. 89FN20550-56

SMO Traffic No. EF1K21-27

CLP Laboratory: EMSI Hrs. Required for Review: 16hrs 1.5 17.5

Following are our findings:

This Review covers the results of 7 low level soil samples for RAS organic analysis.

Qualifiers and calibration outliers are noted on the following pages of this review narrative.

John Vasinho 6/30/89
Roy F. Weston/ESAT

( ) Data are acceptable for use.
(✓) Data are acceptable for use with qualifications referenced above. See Data Qualifier sheets and Calibration Outlier forms for flags and additional comments.
) Data are preliminary - pending verification by Contractor Laboratory. See Case Summary above.
) Data are unacceptable.

Carla Dempsey, CLP Quality Assurance Officer, Analytical Operations Branch
James Petty, Chief Quality Assurance Research, EMSI, LO Vegas

DATA QUALIFIERS

Contractor: EMSI

Case 12004

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

(1) Holding times

All sample holding times have been met.

(2) GC/MS Tuning

All (BFB) and (DFTPP) tuning criteria have been achieved.

(3) Calibration

Volatile and Semi-Volatile outliers for the initial and continuing calibration are noted on the calibration outlier forms which follow. No outliers were noted for the pesticide fraction.

(4) Blanks

A) Volatile

The volatile blank (VB1K01) reports detectable amounts of Methylene chloride and Acetone. All samples associated with blank: (EFK22, 26, 24, 27, 21) report detectable amounts of Methylene chloride at concentrations that are less than 10 times the amount found in the blank. Also, All samples associated with this blank with the exception of (EFK22) report detectable amounts of Acetone at concentrations less than 10 times the amount found in the blank. The sample (EFK22) reports no detectable amount of Acetone. Therefore, the compounds Methylene chloride and Acetone have been flagged (U) as undetected in the samples (EFK22, 26, 24, 27, 21) with the exception of Acetone in sample (EFK22) which was left unflagged.

Reviewed by: John Vasinko

Phone: (312) 353-8309

Date: 6/30/89

DATA QUALIFIERS

Contractor: EMI

Case 12004

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

④ Blanks (Cont.)

The Volatile blank (VBIK02) reports detectable amounts of Methylene chloride and Acetone. The samples associated with this blank i(EFK 24 RE, 25) both report detectable amount of Methylene chloride and Acetone at concentration less than 10 times the amount found in the blank. Therefore, the compounds Methylene chloride and Acetone have been flagged (U), as undetected, in the samples listed above.

The Volatile blank (VBIK03) reports detectable amounts of Methylene chloride and Acetone. The sample associated with this blank (EFK23) reports detectable amounts of Methylene chloride and Acetone at concentration that are less than 10 times the amount found in the blank. Therefore, Methylene chloride and Acetone have been flagged (U) as undetected in sample (EFK 23)

B) Semi-Volatile

The Semi-volatile blank (SBIK01) reports no detectable amount of contamination.

c) Pesticide

The pesticide blank (PBIK01) reports no detectable amount of contamination.

⑤ Surrogate recoveries

A) Volatile

The volatile sample (EFK 24 RE) reports high (135%) recovery for the surrogate Toluene-d8. Therefore, positive results of this sample should be flagged (J) as estimated

Reviewed by: John Vasinko

Phone: (312) 353-8309

Date: 6/30/89

DATA QUALIFIERS

Contractor: EMI

Case 12004

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

(5) Surrogate recovery (cont.)
And the quantitation limits flagged (UJ).
B) Semi-Volatile
All Semi-Volatile samples report surrogate recoveries well within Q.C. limits
C) Pesticide
All pesticide samples report surrogate recoveries well within Q.C. limits.

(6) Matrix Spike / Matrix Spike duplicate
All Fractions report MS/MSD recoveries and RPD values that are well within Q.C. limits

(7) Field Duplicates
No Field duplicates or Field blanks were supplied with this data set.

(8) Internal Standard Performance
A) Volatile
The Internal Standard chlorobenzene in sample (EFK 24 and EFK 24 RE) are low and outside the Q.C. limit. Therefore, compounds quantitated with this internal standard (see attached list of internal standards and corresponding analytes) should be flagged (J) as estimated for positive results and the quantitation limits flagged (UJ).
B) Semi-Volatile
All Semi-Volatile samples report Internal Standard

Reviewed by: John Vasinko
Phone: (312) 353-8309
Date: 6/30/89

DATA QUALIFIERS

Contractor: EMI

Case 12004

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.)
Areas and retention times that are 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 CRQLs have been adjusted to reflect the dilution and percent moisture of the sample.

(10) Additional Case Specific Problems
The Analytical results for this case should be considered acceptable with the above mentioned qualifiers.

Reviewed by: John Vasinko
Phone: (312) 353-8309
Date: 6/30/89

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

CASE/SAS # 12004 CONTRACTOR EMSI

Instrument # I50B	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	5/4/89 8:15			5/29/89 6:12			5/30/89 9:29			6/2/89 6:28					
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
Chloromethane															
Bromomethane															
Vinyl Chloride															
Chloroethane															
Methylene Chloride															
Acetone	.304	33.1	J	.429	41.1	J									
Carbon Disulfide															
1,1-Dichloroethane															
1,1-Dichloroethene															
Trans-1,2-Dichloroethene															
Chloroform															
2-Butanone	.024	31.3	J	.031	29.2	J	.022	8.3	J	.017	29.2	J			
1,2-Dichloroethane															
1,1,1-Trichloroethane															
Carbon Tetrachloride															
Vinyl Acetate	.701									.414	40.9	J			
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	.198									.138	30.3	J			
Tetrachloroethene															
1,1,2,2-Tetrachloroethane															
Toluene															
Chlorobenzene															
Ethylbenzene															
Styrene															
m-Xylene															
o/p-Xylene															

AFFECTED SAMPLES:

VBIK01	VBIK02	VBIK03
EFK22	EFK24 RE	EFK23
EFK26	EFK25	
EFK24		
EFK27		
EFK21		
EFK23MS		
EFK23MSD		

Reviewer's Initials/Date: J.V. 6/30/89

* 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 # 12004 CONTRACTOR EMSI

Instrument # 4500B	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	5/6/89 00:20			5/31/89 9:09			6/2/89 1950								
	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	.177			.110	37.9	J	.102	42.4	J						
Benzoic Acid	.111			.068	38.7	J									
bis(2-Chloroethoxy)Methane															
2,4-Dichlorophenol															
1,2,4-Trichlorobenzene															
Naphthalene															
4-Chloroaniline	.175			.100	42.9	J									
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	.184			.122	33.7	J									
4-Nitrophenol															
Dibenzofuran															

AFFECTED SAMPLES:

EKF 25	EKF 27		
S81K01			
EKF 23			
EKF 23 MS			
EKF 23 MSD			
EKF 21			
EKF 22			
EKF 26			
EKF 24			

Reviewer Initials/Date: J.V. 6/30/89

* 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 # 12004 CONTRACTOR EMSI

Instrument # 4500 B	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	5/6/89 00:20			5/31/89 9:09			6/2/89 1950								
	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	.123			.084	31.7	J									
N-Nitrosodiphenylamine															
4-Bromophenyl-phenylether															
Hexachlorobenzene															
Pentachlorophenol															
Phenanthrene															
Anthracene															
Di-n-Butylphthalate															
Fluoranthene															
Pyrene															
Butylbenzylphthalate	.128			.449	38.3	J									
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	.769			1.03	30.4	J									
Benzo(g,h,i) Perylene	.745			1.006	35.0	J									

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 6/30/89

8/87

*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}	Perylene-d_{12}
Phenol	Nitrobenzene	Hexachlorocyclopentadiene	4,6-Dinitro-2-methylphenol	Pyrene	Di-n-octyl Phthalate
bis(2-Chloroethyl) ether	Isophorone	2,4,6-Trichlorophenol	N-nitrosodiphenylamine	Butylbenzyl Phthalate	Benzo(b)fluoranthene
2-Chlorophenol	2-Nitrophenol	2,4,5-Trichlorophenol	1,2-Diphenylhydrazine	3,3'-Dichlorobenzidine	Benzo(k)fluoranthene
1,3-Dichlorobenzene	2,4-Dimethylphenol	2-Chloronaphthalene	4-Bromophenyl Phenyl Ether	Benzo(a)anthracene	Benzo(a)pyrene
1,4-Dichlorobenzene	Benzoic acid	2-Nitroaniline	Hexachlorobenzene	bis(2-ethylhexyl Phthalate	Indeno(1,2,3-cd) pyrene
Benzyl Alcohol	bis(2-Chloroethoxy)methane	Dimethyl Phthalate	Pentachlorophenol	Chrysene	Dibenz(a,h) anthracene
1,2-Dichlorobenzene	2,4-Dichlorophenol	Acenaphthylene	Phenanthrene	Terphenyl-d_{14} (surr)	Benzo(g,h,i)
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)			

For reporting results to the USEPA, the following contract specific qualifiers are to be used. The seven qualifiers defined below are not subject to modification by the laboratory. Up to five qualifiers may be reported on Form I for each compound.

The seven EPA-defined qualifiers to be used are as follows:

U - Indicates compound was analyzed for 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:

$$\frac{(330\ U)}{D} \times df \qquad \text{where } D = \frac{100 - \%\ moisture}{100}$$

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 samples 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 of 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 in Exhibit D. 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. NOTE: For total xylenes, where three isomers are quantified as two peaks, the calibration range of each peak should be considered separately, e.g., a diluted analysis is not required for total xylenes unless the concentration of either peak separately exceeds 200 ug/L.

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 a TIC is a suspected aldol-condensation product.

X - Other specific flags 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. Begin by using "X". If more than one flag 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.

The combination of flags "BU" or"UB" is expressly prohibited. Blank contaminants are flagged "B" only when they are also detected in the sample.

If analyses at two different dilution factors are required (see Exhibit D), follow the data reporting instructions given in Exhibit D and with the "D" and "E" flags above.

JUN 05 1989

SUPERFUND 6211

CENTRAL REGIONAL LABORATORY SAMPLE DATA REPORT
ORGANICS/INORGANICS
THIS FORM IS TO BE USED FOR SAMPLES SENT TO CONTRACT ONLY

low soils
SAMPLE DATES: 5/23-24/89
LOG IN DATE: 6/15/89
DUE DATE: 8/1/89

CASE NUMBER/SAS No. 12004 SITE NAME Hallie Town LF LABORATORY EMSI + / ALLIED DATE SHIPPED 5/23/89

SUPERFUND DU NUMBER TFA102 EPA RPM or OSC (S.M.S.)/(CES) — CERCLIS NUMBER WID981095920 PAGE 1 OF 2

ACTIVITY NUMBER ZZ

	CRL LOG NUMBER	ORGANIC TRAFFIC REPORT NUMBER or SAS Packing List No.	INORGANIC TRAFFIC REPORT NUMBER	WATER OR LIQUIDS: ACID-BASE NEUTRAL CPDS ORGANIC SCAN UG/L TOX17574	VOLATILE ORGANIC ANALYSIS ORGANIC SCAN UG/L TOX17564	WATER POLYCHLORINATED BIPHENYLS UG/L PES 17144	WATER CHLORINATED PESTICIDES UG/L PES17134	TOTAL METALS IN WATER UG/L MET111	WATER CYANIDE UG/L MIN74919	NITRATE/NITRITE MG/L MIN7284	AMMONIA MG/L MIN7294	RESIDUE, FILTERABLE TDS MG/L MIN7362	RESIDUE, NON-FILT TSS MG/L MIN7372			SEDIMENTS or SOILS: ACID-BASE NEUTRAL CPDS ORGANIC SCAN MG/KG TOX215722	VOLATILE ORGANIC ANALYSIS ORGANIC SCAN MG/KG TOX215622	SEDIMENTS POLYCHLORINATED BIPHENYLS MG/KG PES211422	SEDIMENT CHLORINATED PESTICIDES MG/KG 211322	TOTAL METALS MG/KG MET413	CYANIDE MG/KG MIN44930	EP TOXICITY METALS MG/KG	AMMONIA MG/KG MIN42925				
1	[illegible]20S50	EFK21 +	MEEB65													✓	✓	✓	✓	✓	✓						
2	S51	22	66																								
3	S52	23	67																								
4	S53	24	68																								
5	S54	25	69																								
6	S55	26	70																								
7	S56	27	71													✓	✓	✓	✓	✓	✓						

EPA

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: 12004
SAS No. (if applicable):

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)

2. Region Number: V
Sampling Co.: FIT
Sampler (Name): KARIN M. SPANGLER
3. Ship To: Envi Monitoring & Services 4765 Calle Quetzal Camarillo CA 93010 Attn: Sue Ozdemir

4. Date Shipped: 5/23/89
Airbill Number: 9071157572
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: 5-24-1989 1000AM
Received by: David M. Lind
Laboratory Contract Number: 68-01-7396
Unit Price: $ 871.00
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.
EFK21	5	L	X	X	X				MEEB65				
EFK22	5	L	X	X	X				MEEB66				
EFK23	5	L	X	X	X				MEEB67				
EFK24	5	L	X	X	X				MEEB68				
EFK25	5	L	X	X	X				MEEB69				
EFK26	5	L	X	X	X				MEEB70				
EFK27	5	L	X	X	X				MEEB71				
Shipment		Complete											

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

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFK21

Lab Name: EMSI Contract: 68-01-7396

Lab Code: EMSI Case No.: 12004 SAS No.: _____ SDG No.: EFK21

Matrix: (soil/water) SOIL Lab Sample ID: _____

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 052989V19

Level: (low/med) LOW Date Received: 05/24/89

% Moisture: not dec. 7 Date Analyzed: 05/29/89

Column: (pack/cap) PACK Dilution Factor: 1.0

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	2	~~BJ~~ u
67-64-1	Acetone	10	~~BJ~~ u
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	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	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total Xylenes	5	U

S.U. 6/30/89

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EFK21

Lab Name: EMSI Contract: 68-01-7396

Lab Code: EMSI Case No.: 12004 SAS No.: _____ SDG No.: EFK21

Matrix: (soil/water) SOIL Lab Sample ID: _____

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 052989V19

Level: (low/med) LOW Date Received: 05/24/89

% Moisture: not dec. 7 Date Analyzed: 05/29/89

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFK22

Lab Name: EMSI Contract: 68-01-7396

Lab Code: EMSI Case No.: 12004 SAS No.: _____ SDG No.: EFK21

Matrix: (soil/water) SOIL Lab Sample ID: _____

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 052989V08

Level: (low/med) LOW Date Received: 05/24/89

% Moisture: not dec. 3 Date Analyzed: 05/29/89

Column: (pack/cap) PACK Dilution Factor: 1.0

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

I.J. 6/30/89

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EFK22

Lab Name: EMSI Contract: 68-01-7396

Lab Code: EMSI Case No.: 12004 SAS No.: _____ SDG No.: EFK21

Matrix: (soil/water) SOIL Lab Sample ID: _____

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 052989V08

Level: (low/med) LOW Date Received: 05/24/89

% Moisture: not dec. 3 Date Analyzed: 05/29/89

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFK23

Lab Name: EMSI Contract: 68-01-7396

Lab Code: EMSI Case No.: 12004 SAS No.: _____ SDG No.: EFK21

Matrix: (soil/water) SOIL Lab Sample ID: _____

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 060289V04

Level: (low/med) LOW Date Received: 05/24/89

% Moisture: not dec. 3 Date Analyzed: 06/02/89

Column: (pack/cap) PACK Dilution Factor: 1.0

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

S.V. 6/30/89

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EFK23

Lab Name: EMSI Contract: 68-01-7396

Lab Code: EMSI Case No.: 12004 SAS No.: _____ SDG No.: EFK21

Matrix: (soil/water) SOIL Lab Sample ID: _____

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 060289V04

Level: (low/med) LOW Date Received: 05/24/89

% Moisture: not dec. 3 Date Analyzed: 06/02/89

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFK24

Lab Name: EMSI Contract: 68-01-7396

Lab Code: EMSI Case No.: 12004 SAS No.: _____ SDG No.: EFK21

Matrix: (soil/water) SOIL Lab Sample ID: _____

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 052989V11

Level: (low/med) LOW Date Received: 05/24/89

% Moisture: not dec. 10 Date Analyzed: 05/29/89

Column: (pack/cap) PACK Dilution Factor: 1.0

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	2	~~B~~ u
67-64-1	Acetone	5	~~B~~ u
75-15-0	Carbon Disulfide	6	U
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	11	U
71-55-6	1,1,1-Trichloroethane	6	U
56-23-5	Carbon Tetrachloride	6	U
108-05-4	Vinyl Acetate	11	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	11	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	6	U
79-34-5	1,1,2,2-Tetrachloroethane	6	U
108-88-3	Toluene	6	
108-90-7	Chlorobenzene	6	U
100-41-4	Ethylbenzene	6	U
100-42-5	Styrene	6	U
1330-20-7	Total Xylenes	6	U

SW. 6/30/89

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EFK24

Lab Name: EMSI Contract: 68-01-7396

Lab Code: EMSI Case No.: 12004 SAS No.: _____ SDG No.: EFK21

Matrix: (soil/water) SOIL Lab Sample ID: _____

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 052989V11

Level: (low/med) LOW Date Received: 05/24/89

% Moisture: not dec. 10 Date Analyzed: 05/29/89

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFK25

Lab Name: EMSI Contract: 68-01-7396

Lab Code: EMSI Case No.: 12004 SAS No.: _____ SDG No.: EFK21

Matrix: (soil/water) SOIL Lab Sample ID: _____

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 053089V07

Level: (low/med) LOW Date Received: 05/24/89

% Moisture: not dec. 3 Date Analyzed: 05/30/89

Column: (pack/cap) PACK Dilution Factor: 1.0

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

I.V. 6/30/89

FORM I VOA 1/87 Rev.

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EFK25

Lab Name: EMSI Contract: 68-01-7396

Lab Code: EMSI Case No.: 12004 SAS No.: _____ SDG No.: EFK21

Matrix: (soil/water) SOIL Lab Sample ID: _____

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 053089V07

Level: (low/med) LOW Date Received: 05/24/89

% Moisture: not dec. 3 Date Analyzed: 05/30/89

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFK26

Lab Name: EMSI Contract: 68-01-7396

Lab Code: EMSI Case No.: 12004 SAS No.: _____ SDG No.: EFK21

Matrix: (soil/water) SOIL Lab Sample ID: _____

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 052989V10

Level: (low/med) LOW Date Received: 05/24/89

% Moisture: not dec. 3 Date Analyzed: 05/29/89

Column: (pack/cap) PACK Dilution Factor: 1.0

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

S.V. 6/30/89

FORM I VOA 1/87 Rev.

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EFK26

Lab Name: EMSI Contract: 68-01-7396

Lab Code: EMSI Case No.: 12004 SAS No.: _____ SDG No.: EFK21

Matrix: (soil/water) SOIL Lab Sample ID: _____

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 052989V10

Level: (low/med) LOW Date Received: 05/24/89

% Moisture: not dec. 3 Date Analyzed: 05/29/89

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFK27

Lab Name: EMSI Contract: 68-01-7396

Lab Code: EMSI Case No.: 12004 SAS No.: _____ SDG No.: EFK21

Matrix: (soil/water) SOIL Lab Sample ID: _____

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 052989V12

Level: (low/med) LOW Date Received: 05/24/89

% Moisture: not dec. 14 Date Analyzed: 05/29/89

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	12	U
74-83-9	Bromomethane	12	U
75-01-4	Vinyl Chloride	12	U
75-00-3	Chloroethane	12	U
75-09-2	Methylene Chloride	3	~~B~~ u
67-64-1	Acetone	6	~~B~~ u
75-15-0	Carbon Disulfide	6	U
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	12	U
71-55-6	1,1,1-Trichloroethane	6	U
56-23-5	Carbon Tetrachloride	6	U
108-05-4	Vinyl Acetate	12	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	12	U
591-78-6	2-Hexanone	12	U
127-18-4	Tetrachloroethene	6	U
79-34-5	1,1,2,2-Tetrachloroethane	6	U
108-88-3	Toluene	6	U
108-90-7	Chlorobenzene	6	U
100-41-4	Ethylbenzene	6	U
100-42-5	Styrene	6	U
1330-20-7	Total Xylenes	6	U

S.V. 6/30/89

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EFK27

Lab Name: EMSI Contract: 68-01-7396

Lab Code: EMSI Case No.: 12004 SAS No.: _____ SDG No.: EFK21

Matrix: (soil/water) SOIL Lab Sample ID: _____

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 052989V12

Level: (low/med) LOW Date Received: 05/24/89

% Moisture: not dec. 14 Date Analyzed: 05/29/89

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EKF21

Lab Name: EMSI Contract: 68-01-7396

Lab Code: EMSI Case No.: 12004 SAS No.: _____ SDG No.: EFK21

Matrix: (soil/water) SOIL Lab Sample ID: _____

Sample wt/vol: 30.9 (g/mL) G Lab File ID: 053189S09

Level: (low/med) LOW Date Received: 05/24/89

% Moisture: not dec. 7 dec. 7 Date Extracted: 05/25/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/31/89

GPC Cleanup: (Y/N) N pH: 6.0 Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	690	U
111-44-4	bis(2-Chloroethyl)Ether	690	U
95-57-8	2-Chlorophenol	690	U
541-73-1	1,3-Dichlorobenzene	690	U
106-46-7	1,4-Dichlorobenzene	690	U
100-51-6	Benzyl Alcohol	690	U
95-50-1	1,2-Dichlorobenzene	690	U
95-48-7	2-Methylphenol	690	U
108-60-1	bis(2-Chloroisopropyl)Ether	690	U
106-44-5	4-Methylphenol	690	U
621-64-7	N-Nitroso-Di-n-Propylamine	690	U
67-72-1	Hexachloroethane	690	U
98-95-3	Nitrobenzene	690	U
78-59-1	Isophorone	690	U
88-75-5	2-Nitrophenol	690	U
105-67-9	2,4-Dimethylphenol	690	U
65-85-0	Benzoic Acid	3300	U
111-91-1	bis(2-Chloroethoxy)Methane	690	U
120-83-2	2,4-Dichlorophenol	690	U
120-82-1	1,2,4-Trichlorobenzene	690	U
91-20-3	Naphthalene	690	U
106-47-8	4-Chloroaniline	690	U
87-68-3	Hexachlorobutadiene	690	U
59-50-7	4-Chloro-3-Methylphenol	690	U
91-57-6	2-Methylnaphthalene	690	U
77-47-4	Hexachlorocyclopentadiene	690	U
88-06-2	2,4,6-Trichlorophenol	690	U
95-95-4	2,4,5-Trichlorophenol	3300	U
91-58-7	2-Chloronaphthalene	690	U
88-74-4	2-Nitroaniline	3300	U
131-11-3	Dimethyl Phthalate	690	U
208-96-8	Acenaphthylene	690	U
606-20-2	2,6-Dinitrotoluene	690	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EKF21

Lab Name: EMSI Contract: 68-01-7396

Lab Code: EMSI Case No.: 12004 SAS No.: _____ SDG No.: EFK21

Matrix: (soil/water) SOIL Lab Sample ID: _____

Sample wt/vol: 30.9 (g/mL) G Lab File ID: 053189S09

Level: (low/med) LOW Date Received: 05/24/89

% Moisture: not dec. 7 dec. 7 Date Extracted: 05/25/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/31/89

GPC Cleanup: (Y/N) N pH: 6.0 Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	3300	U
83-32-9	Acenaphthene	690	U
51-28-5	2,4-Dinitrophenol	3300	U
100-02-7	4-Nitrophenol	3300	U
132-64-9	Dibenzofuran	690	U
121-14-2	2,4-Dinitrotoluene	690	U
84-66-2	Diethylphthalate	690	U
7005-72-3	4-Chlorophenyl-phenylether	690	U
86-73-7	Fluorene	690	U
100-01-6	4-Nitroaniline	3300	U
534-52-1	4,6-Dinitro-2-Methylphenol	3300	U
86-30-6	N-Nitrosodiphenylamine (1)	690	U
101-55-3	4-Bromophenyl-phenylether	690	U
118-74-1	Hexachlorobenzene	690	U
87-86-5	Pentachlorophenol	3300	U
85-01-8	Phenanthrene	690	U
120-12-7	Anthracene	690	U
84-74-2	Di-n-Butylphthalate	690	U
206-44-0	Fluoranthene	690	U
129-00-0	Pyrene	690	U
85-68-7	Butylbenzylphthalate	690	U
91-94-1	3,3'-Dichlorobenzidine	1400	U
56-55-3	Benzo(a)Anthracene	690	U
218-01-9	Chrysene	690	U
117-81-7	bis(2-Ethylhexyl)Phthalate	690	U
117-84-0	Di-n-Octyl Phthalate	690	U
205-99-2	Benzo(b)Fluoranthene	690	U
207-08-9	Benzo(k)Fluoranthene	690	U
50-32-8	Benzo(a)Pyrene	690	U
193-39-5	Indeno(1,2,3-cd)Pyrene	690	U
53-70-3	Dibenz(a,h)Anthracene	690	U
191-24-2	Benzo(g,h,i)Perylene	690	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EKF21

Lab Name: EMSI Contract: 68-01-7396

Lab Code: EMSI Case No.: 12004 SAS No.: _____ SDG No.: EFK21

Matrix: (soil/water) SOIL Lab Sample ID: _____

Sample wt/vol: 30.9 (g/mL) G Lab File ID: 053189S09

Level: (low/med) LOW Date Received: 05/24/89

% Moisture: not dec. 7 dec. 7 Date Extracted: 05/25/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/31/89

GPC Cleanup: (Y/N) N pH: 6.0 Dilution Factor: 2.0

Number TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 000-00-0	SATURATED ALIPHATIC HYDROCAR	31.71	420	J

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EKF22

Lab Name: EMSI Contract: 68-01-7396

Lab Code: EMSI Case No.: 12004 SAS No.: _____ SDG No.: EFK21

Matrix: (soil/water) SOIL Lab Sample ID: _____

Sample wt/vol: 30.2 (g/mL) G Lab File ID: 053189S10

Level: (low/med) LOW Date Received: 05/24/89

% Moisture: not dec. 3 dec. 3 Date Extracted: 05/25/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/31/89

GPC Cleanup: (Y/N) N pH: 6.8 Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	670	U
111-44-4	bis(2-Chloroethyl)Ether	670	U
95-57-8	2-Chlorophenol	670	U
541-73-1	1,3-Dichlorobenzene	670	U
106-46-7	1,4-Dichlorobenzene	670	U
100-51-6	Benzyl Alcohol	670	U
95-50-1	1,2-Dichlorobenzene	670	U
95-48-7	2-Methylphenol	670	U
108-60-1	bis(2-Chloroisopropyl)Ether	670	U
106-44-5	4-Methylphenol	670	U
621-64-7	N-Nitroso-Di-n-Propylamine	670	U
67-72-1	Hexachloroethane	670	U
98-95-3	Nitrobenzene	670	U
78-59-1	Isophorone	670	U
88-75-5	2-Nitrophenol	670	U
105-67-9	2,4-Dimethylphenol	670	U
65-85-0	Benzoic Acid	3300	U
111-91-1	bis(2-Chloroethoxy)Methane	670	U
120-83-2	2,4-Dichlorophenol	670	U
120-82-1	1,2,4-Trichlorobenzene	670	U
91-20-3	Naphthalene	670	U
106-47-8	4-Chloroaniline	670	U
87-68-3	Hexachlorobutadiene	670	U
59-50-7	4-Chloro-3-Methylphenol	670	U
91-57-6	2-Methylnaphthalene	670	U
77-47-4	Hexachlorocyclopentadiene	670	U
88-06-2	2,4,6-Trichlorophenol	670	U
95-95-4	2,4,5-Trichlorophenol	3300	U
91-58-7	2-Chloronaphthalene	670	U
88-74-4	2-Nitroaniline	3300	U
131-11-3	Dimethyl Phthalate	670	U
208-96-8	Acenaphthylene	670	U
606-20-2	2,6-Dinitrotoluene	670	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EKF22

Lab Name: EMSI Contract: 68-01-7396

Lab Code: EMSI Case No.: 12004 SAS No.: _____ SDG No.: EFK21

Matrix: (soil/water) SOIL Lab Sample ID: _____

Sample wt/vol: 30.2 (g/mL) G Lab File ID: 053189S10

Level: (low/med) LOW Date Received: 05/24/89

% Moisture: not dec. 3 dec. 3 Date Extracted: 05/25/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/31/89

GPC Cleanup: (Y/N) N pH: 6.8 Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	3300	U
83-32-9	Acenaphthene	670	U
51-28-5	2,4-Dinitrophenol	3300	U
100-02-7	4-Nitrophenol	3300	U
132-64-9	Dibenzofuran	670	U
121-14-2	2,4-Dinitrotoluene	670	U
84-66-2	Diethylphthalate	670	U
7005-72-3	4-Chlorophenyl-phenylether	670	U
86-73-7	Fluorene	670	U
100-01-6	4-Nitroaniline	3300	U
534-52-1	4,6-Dinitro-2-Methylphenol	3300	U
86-30-6	N-Nitrosodiphenylamine (1)	670	U
101-55-3	4-Bromophenyl-phenylether	670	U
118-74-1	Hexachlorobenzene	670	U
87-86-5	Pentachlorophenol	3300	U
85-01-8	Phenanthrene	670	U
120-12-7	Anthracene	670	U
84-74-2	Di-n-Butylphthalate	670	U
206-44-0	Fluoranthene	670	U
129-00-0	Pyrene	670	U
85-68-7	Butylbenzylphthalate	670	U
91-94-1	3,3'-Dichlorobenzidine	1300	U
56-55-3	Benzo(a)Anthracene	670	U
218-01-9	Chrysene	670	U
117-81-7	bis(2-Ethylhexyl)Phthalate	670	U
117-84-0	Di-n-Octyl Phthalate	670	U
205-99-2	Benzo(b)Fluoranthene	670	U
207-08-9	Benzo(k)Fluoranthene	670	U
50-32-8	Benzo(a)Pyrene	670	U
193-39-5	Indeno(1,2,3-cd)Pyrene	670	U
53-70-3	Dibenz(a,h)Anthracene	670	U
191-24-2	Benzo(g,h,i)Perylene	670	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EKF22

Lab Name: EMSI Contract: 68-01-7396

Lab Code: EMSI Case No.: 12004 SAS No.: _____ SDG No.: EFK21

Matrix: (soil/water) SOIL Lab Sample ID: _____

Sample wt/vol: 30.2 (g/mL) G Lab File ID: 053189S10

Level: (low/med) LOW Date Received: 05/24/89

% Moisture: not dec. 3 dec. 3 Date Extracted: 05/25/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/31/89

GPC Cleanup: (Y/N) N pH: 6.8 Dilution Factor: 2.0

Number TICs found: 3

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 000-00-0	UNKNOWN	8.55	410	J
2. 000-00-0	SATURATED ALIPHATIC HYDROCAR	31.71	680	J
3. 000-00-0	UNKNOWN	35.49	410	J

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EKF23

Lab Name: EMSI Contract: 68-01-7396

Lab Code: EMSI Case No.: 12004 SAS No.: _____ SDG No.: EFK21

Matrix: (soil/water) SOIL Lab Sample ID: _____

Sample wt/vol: 30.4 (g/mL) G Lab File ID: 053189S06

Level: (low/med) LOW Date Received: 05/24/89

% Moisture: not dec. 3 dec. 3 Date Extracted: 05/25/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/31/89

GPC Cleanup: (Y/N) N pH: 6.2 Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	670	U
111-44-4	bis(2-Chloroethyl)Ether	670	U
95-57-8	2-Chlorophenol	670	U
541-73-1	1,3-Dichlorobenzene	670	U
106-46-7	1,4-Dichlorobenzene	670	U
100-51-6	Benzyl Alcohol	670	U
95-50-1	1,2-Dichlorobenzene	670	U
95-48-7	2-Methylphenol	670	U
108-60-1	bis(2-Chloroisopropyl)Ether	670	U
106-44-5	4-Methylphenol	670	U
621-64-7	N-Nitroso-Di-n-Propylamine	670	U
67-72-1	Hexachloroethane	670	U
98-95-3	Nitrobenzene	670	U
78-59-1	Isophorone	670	U
88-75-5	2-Nitrophenol	670	U
105-67-9	2,4-Dimethylphenol	670	U
65-85-0	Benzoic Acid	3200	U
111-91-1	bis(2-Chloroethoxy)Methane	670	U
120-83-2	2,4-Dichlorophenol	670	U
120-82-1	1,2,4-Trichlorobenzene	670	U
91-20-3	Naphthalene	670	U
106-47-8	4-Chloroaniline	670	U
87-68-3	Hexachlorobutadiene	670	U
59-50-7	4-Chloro-3-Methylphenol	670	U
91-57-6	2-Methylnaphthalene	670	U
77-47-4	Hexachlorocyclopentadiene	670	U
88-06-2	2,4,6-Trichlorophenol	670	U
95-95-4	2,4,5-Trichlorophenol	3200	U
91-58-7	2-Chloronaphthalene	670	U
88-74-4	2-Nitroaniline	3200	U
131-11-3	Dimethyl Phthalate	670	U
208-96-8	Acenaphthylene	670	U
606-20-2	2,6-Dinitrotoluene	670	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EKF23

Lab Name: EMSI Contract: 68-01-7396

Lab Code: EMSI Case No.: 12004 SAS No.: _____ SDG No.: EFK21

Matrix: (soil/water) SOIL Lab Sample ID: _____

Sample wt/vol: 30.4 (g/mL) G Lab File ID: 053189S06

Level: (low/med) LOW Date Received: 05/24/89

% Moisture: not dec. 3 dec. 3 Date Extracted: 05/25/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/31/89

GPC Cleanup: (Y/N) N pH: 6.2 Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	3200	U
83-32-9	Acenaphthene	670	U
51-28-5	2,4-Dinitrophenol	3200	U
100-02-7	4-Nitrophenol	3200	U
132-64-9	Dibenzofuran	670	U
121-14-2	2,4-Dinitrotoluene	670	U
84-66-2	Diethylphthalate	670	U
7005-72-3	4-Chlorophenyl-phenylether	670	U
86-73-7	Fluorene	670	U
100-01-6	4-Nitroaniline	3200	U
534-52-1	4,6-Dinitro-2-Methylphenol	3200	U
86-30-6	N-Nitrosodiphenylamine (1)	670	U
101-55-3	4-Bromophenyl-phenylether	670	U
118-74-1	Hexachlorobenzene	670	U
87-86-5	Pentachlorophenol	3200	U
85-01-8	Phenanthrene	670	U
120-12-7	Anthracene	670	U
84-74-2	Di-n-Butylphthalate	670	U
206-44-0	Fluoranthene	670	U
129-00-0	Pyrene	670	U
85-68-7	Butylbenzylphthalate	670	U
91-94-1	3,3'-Dichlorobenzidine	1300	U
56-55-3	Benzo(a)Anthracene	670	U
218-01-9	Chrysene	670	U
117-81-7	bis(2-Ethylhexyl)Phthalate	670	U
117-84-0	Di-n-Octyl Phthalate	670	U
205-99-2	Benzo(b)Fluoranthene	670	U
207-08-9	Benzo(k)Fluoranthene	670	U
50-32-8	Benzo(a)Pyrene	670	U
193-39-5	Indeno(1,2,3-cd)Pyrene	670	U
53-70-3	Dibenz(a,h)Anthracene	670	U
191-24-2	Benzo(g,h,i)Perylene	670	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EKF23

Lab Name: EMSI Contract: 68-01-7396

Lab Code: EMSI Case No.: 12004 SAS No.: _____ SDG No.: EFK21

Matrix: (soil/water) SOIL Lab Sample ID: _____

Sample wt/vol: 30.4 (g/mL) G Lab File ID: 053189S06

Level: (low/med) LOW Date Received: 05/24/89

% Moisture: not dec. 3 dec. 3 Date Extracted: 05/25/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/31/89

GPC Cleanup: (Y/N) N pH: 6.2 Dilution Factor: 2.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q.

FORM I SV-TIC 1/87 Rev.

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EKF24

Lab Name: EMSI Contract: 68-01-7396

Lab Code: EMSI Case No.: 12004 SAS No.: _____ SDG No.: EFK21

Matrix: (soil/water) SOIL Lab Sample ID: _____

Sample wt/vol: 30.8 (g/mL) G Lab File ID: 053189S12

Level: (low/med) LOW Date Received: 05/24/89

% Moisture: not dec. 10 dec. 10 Date Extracted: 05/25/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/31/89

GPC Cleanup: (Y/N) N pH: 5.7 Dilution Factor: 2.0

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	720	U
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	720	U
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	Dimethyl Phthalate	720	U
208-96-8	Acenaphthylene	720	U
606-20-2	2,6-Dinitrotoluene	720	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EKF24

Lab Name: EMSI Contract: 68-01-7396

Lab Code: EMSI Case No.: 12004 SAS No.: _____ SDG No.: EFK21

Matrix: (soil/water) SOIL Lab Sample ID: _____

Sample wt/vol: 30.8 (g/mL) G Lab File ID: 053189S12

Level: (low/med) LOW Date Received: 05/24/89

% Moisture: not dec. 10 dec. 10 Date Extracted: 05/25/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/31/89

GPC Cleanup: (Y/N) N pH: 5.7 Dilution Factor: 2.0

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	720	U
120-12-7	Anthracene	720	U
84-74-2	Di-n-Butylphthalate	720	U
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	140	J
117-84-0	Di-n-Octyl Phthalate	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

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EKF24

Lab Name: EMSI Contract: 68-01-7396

Lab Code: EMSI Case No.: 12004 SAS No.: _____ SDG No.: EFK21

Matrix: (soil/water) SOIL Lab Sample ID: _____

Sample wt/vol: 30.8 (g/mL) G Lab File ID: 053189S12

Level: (low/med) LOW Date Received: 05/24/89

% Moisture: not dec. 10 dec. 10 Date Extracted: 05/25/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/31/89

GPC Cleanup: (Y/N) N pH: 5.7 Dilution Factor: 2.0

Number TICs found: 13

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 000-00-0	UNKNOWN ALIPHATIC KETONE	7.77	500	J
2. 000-00-0	UNKNOWN	26.49	650	J
3. 000-00-0	SATURATED ALIPHATIC HYDROCAR	27.19	360	J
4. 000-00-0	SATURATED ALIPHATIC HYDROCAR	27.41	500	J
5. 000-00-0	UNKNOWN	28.46	360	J
6. 000-00-0	SATURATED ALIPHATIC HYDROCAR	29.11	870	J
7. 000-00-0	UNKNOWN ALIPHATIC OXYGENATED	29.44	500	J
8. 000-00-0	UNKNOWN	30.87	1200	J
9. 000-00-0	SATURATED ALIPHATIC HYDROCAR	31.74	5600	J
10. 000-00-0	UNKNOWN	34.31	1200	J
11. 000-00-0	SATURATED ALIPHATIC HYDROCAR	35.49	1200	J
12. 000-00-0	UNKNOWN	39.42	580	J
13. 000-00-0	UNKNOWN	40.84	1400	J

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EKF25

Lab Name: EMSI Contract: 68-01-7396

Lab Code: EMSI Case No.: 12004 SAS No.: _____ SDG No.: EFK21

Matrix: (soil/water) SOIL Lab Sample ID: _____

Sample wt/vol: 30.1 (g/mL) G Lab File ID: 053189S03

Level: (low/med) LOW Date Received: 05/24/89

% Moisture: not dec. 3 dec. 3 Date Extracted: 05/25/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/31/89

GPC Cleanup: (Y/N) N pH: 6.5 Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	680	U
111-44-4	bis(2-Chloroethyl)Ether	680	U
95-57-8	2-Chlorophenol	680	U
541-73-1	1,3-Dichlorobenzene	680	U
106-46-7	1,4-Dichlorobenzene	680	U
100-51-6	Benzyl Alcohol	680	U
95-50-1	1,2-Dichlorobenzene	680	U
95-48-7	2-Methylphenol	680	U
108-60-1	bis(2-Chloroisopropyl)Ether	680	U
106-44-5	4-Methylphenol	680	U
621-64-7	N-Nitroso-Di-n-Propylamine	680	U
67-72-1	Hexachloroethane	680	U
98-95-3	Nitrobenzene	680	U
78-59-1	Isophorone	680	U
88-75-5	2-Nitrophenol	680	U
105-67-9	2,4-Dimethylphenol	680	U
65-85-0	Benzoic Acid	3300	U
111-91-1	bis(2-Chloroethoxy)Methane	680	U
120-83-2	2,4-Dichlorophenol	680	U
120-82-1	1,2,4-Trichlorobenzene	680	U
91-20-3	Naphthalene	680	U
106-47-8	4-Chloroaniline	680	U
87-68-3	Hexachlorobutadiene	680	U
59-50-7	4-Chloro-3-Methylphenol	680	U
91-57-6	2-Methylnaphthalene	680	U
77-47-4	Hexachlorocyclopentadiene	680	U
88-06-2	2,4,6-Trichlorophenol	680	U
95-95-4	2,4,5-Trichlorophenol	3300	U
91-58-7	2-Chloronaphthalene	680	U
88-74-4	2-Nitroaniline	3300	U
131-11-3	Dimethyl Phthalate	680	U
208-96-8	Acenaphthylene	680	U
606-20-2	2,6-Dinitrotoluene	680	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EKF25

Lab Name: EMSI Contract: 68-01-7396

Lab Code: EMSI Case No.: 12004 SAS No.: _____ SDG No.: EFK21

Matrix: (soil/water) SOIL Lab Sample ID: _____

Sample wt/vol: 30.1 (g/mL) G Lab File ID: 053189S03

Level: (low/med) LOW Date Received: 05/24/89

% Moisture: not dec. 3 dec. 3 Date Extracted: 05/25/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/31/89

GPC Cleanup: (Y/N) N pH: 6.5 Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	3300	U
83-32-9	Acenaphthene	680	U
51-28-5	2,4-Dinitrophenol	3300	U
100-02-7	4-Nitrophenol	3300	U
132-64-9	Dibenzofuran	680	U
121-14-2	2,4-Dinitrotoluene	680	U
84-66-2	Diethylphthalate	680	U
7005-72-3	4-Chlorophenyl-phenylether	680	U
86-73-7	Fluorene	680	U
100-01-6	4-Nitroaniline	3300	U
534-52-1	4,6-Dinitro-2-Methylphenol	3300	U
86-30-6	N-Nitrosodiphenylamine (1)	680	U
101-55-3	4-Bromophenyl-phenylether	680	U
118-74-1	Hexachlorobenzene	680	U
87-86-5	Pentachlorophenol	3300	U
85-01-8	Phenanthrene	680	U
120-12-7	Anthracene	680	U
84-74-2	Di-n-Butylphthalate	680	U
206-44-0	Fluoranthene	680	U
129-00-0	Pyrene	680	U
85-68-7	Butylbenzylphthalate	680	U
91-94-1	3,3'-Dichlorobenzidine	1400	U
56-55-3	Benzo(a)Anthracene	680	U
218-01-9	Chrysene	680	U
117-81-7	bis(2-Ethylhexyl)Phthalate	680	U
117-84-0	Di-n-Octyl Phthalate	680	U
205-99-2	Benzo(b)Fluoranthene	680	U
207-08-9	Benzo(k)Fluoranthene	680	U
50-32-8	Benzo(a)Pyrene	680	U
193-39-5	Indeno(1,2,3-cd)Pyrene	680	U
53-70-3	Dibenz(a,h)Anthracene	680	U
191-24-2	Benzo(g,h,i)Perylene	680	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EKF25

Lab Name: EMSI Contract: 68-01-7396

Lab Code: EMSI Case No.: 12004 SAS No.: _____ SDG No.: EFK21

Matrix: (soil/water) SOIL Lab Sample ID: _____

Sample wt/vol: 30.1 (g/mL) G Lab File ID: 053189S03

Level: (low/med) LOW Date Received: 05/24/89

% Moisture: not dec. 3 dec. 3 Date Extracted: 05/25/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/31/89

GPC Cleanup: (Y/N) N pH: 6.5 Dilution Factor: 2.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

FORM I SV-TIC 1/87 Rev.

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EKF26

Lab Name: EMSI Contract: 68-01-7396

Lab Code: EMSI Case No.: 12004 SAS No.: _____ SDG No.: EFK21

Matrix: (soil/water) SOIL Lab Sample ID: _____

Sample wt/vol: 30.2 (g/mL) G Lab File ID: 053189S11

Level: (low/med) LOW Date Received: 05/24/89

% Moisture: not dec. 3 dec. 3 Date Extracted: 05/25/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/31/89

GPC Cleanup: (Y/N) N pH: 6.1 Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	680	U
111-44-4	bis(2-Chloroethyl)Ether	680	U
95-57-8	2-Chlorophenol	680	U
541-73-1	1,3-Dichlorobenzene	680	U
106-46-7	1,4-Dichlorobenzene	680	U
100-51-6	Benzyl Alcohol	680	U
95-50-1	1,2-Dichlorobenzene	680	U
95-48-7	2-Methylphenol	680	U
108-60-1	bis(2-Chloroisopropyl)Ether	680	U
106-44-5	4-Methylphenol	680	U
621-64-7	N-Nitroso-Di-n-Propylamine	680	U
67-72-1	Hexachloroethane	680	U
98-95-3	Nitrobenzene	680	U
78-59-1	Isophorone	680	U
88-75-5	2-Nitrophenol	680	U
105-67-9	2,4-Dimethylphenol	680	U
65-85-0	Benzoic Acid	3300	U
111-91-1	bis(2-Chloroethoxy)Methane	680	U
120-83-2	2,4-Dichlorophenol	680	U
120-82-1	1,2,4-Trichlorobenzene	680	U
91-20-3	Naphthalene	680	U
106-47-8	4-Chloroaniline	680	U
87-68-3	Hexachlorobutadiene	680	U
59-50-7	4-Chloro-3-Methylphenol	680	U
91-57-6	2-Methylnaphthalene	680	U
77-47-4	Hexachlorocyclopentadiene	680	U
88-06-2	2,4,6-Trichlorophenol	680	U
95-95-4	2,4,5-Trichlorophenol	3300	U
91-58-7	2-Chloronaphthalene	680	U
88-74-4	2-Nitroaniline	3300	U
131-11-3	Dimethyl Phthalate	680	U
208-96-8	Acenaphthylene	680	U
606-20-2	2,6-Dinitrotoluene	680	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EKF26

Lab Name: EMSI Contract: 68-01-7396

Lab Code: EMSI Case No.: 12004 SAS No.: _____ SDG No.: EFK21

Matrix: (soil/water) SOIL Lab Sample ID: _____

Sample wt/vol: 30.2 (g/mL) G Lab File ID: 053189S11

Level: (low/med) LOW Date Received: 05/24/89

% Moisture: not dec. 3 dec. 3 Date Extracted: 05/25/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/31/89

GPC Cleanup: (Y/N) N pH: 6.1 Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	3300	U
83-32-9	Acenaphthene	680	U
51-28-5	2,4-Dinitrophenol	3300	U
100-02-7	4-Nitrophenol	3300	U
132-64-9	Dibenzofuran	680	U
121-14-2	2,4-Dinitrotoluene	680	U
84-66-2	Diethylphthalate	680	U
7005-72-3	4-Chlorophenyl-phenylether	680	U
86-73-7	Fluorene	680	U
100-01-6	4-Nitroaniline	3300	U
534-52-1	4,6-Dinitro-2-Methylphenol	3300	U
86-30-6	N-Nitrosodiphenylamine (1)	680	U
101-55-3	4-Bromophenyl-phenylether	680	U
118-74-1	Hexachlorobenzene	680	U
87-86-5	Pentachlorophenol	3300	U
85-01-8	Phenanthrene	680	U
120-12-7	Anthracene	680	U
84-74-2	Di-n-Butylphthalate	680	U
206-44-0	Fluoranthene	680	U
129-00-0	Pyrene	680	U
85-68-7	Butylbenzylphthalate	680	U
91-94-1	3,3'-Dichlorobenzidine	1400	U
56-55-3	Benzo(a)Anthracene	680	U
218-01-9	Chrysene	680	U
117-81-7	bis(2-Ethylhexyl)Phthalate	680	U
117-84-0	Di-n-Octyl Phthalate	680	U
205-99-2	Benzo(b)Fluoranthene	680	U
207-08-9	Benzo(k)Fluoranthene	680	U
50-32-8	Benzo(a)Pyrene	680	U
193-39-5	Indeno(1,2,3-cd)Pyrene	680	U
53-70-3	Dibenz(a,h)Anthracene	680	U
191-24-2	Benzo(g,h,i)Perylene	680	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EKF26

Lab Name: EMSI Contract: 68-01-7396

Lab Code: EMSI Case No.: 12004 SAS No.: _____ SDG No.: EFK21

Matrix: (soil/water) SOIL Lab Sample ID: _____

Sample wt/vol: 30.2 (g/mL) G Lab File ID: 053189S11

Level: (low/med) LOW Date Received: 05/24/89

% Moisture: not dec. 3 dec. 3 Date Extracted: 05/25/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/31/89

GPC Cleanup: (Y/N) N pH: 6.1 Dilution Factor: 2.0

Number TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 000-00-0	SATURATED ALIPHATIC HYDROCAR	31.71	410	J

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EKF27

Lab Name: EMSI Contract: 68-01-7396

Lab Code: EMSI Case No.: 12004 SAS No.: _____ SDG No.: EFK21

Matrix: (soil/water) SOIL Lab Sample ID: _____

Sample wt/vol: 30.5 (g/mL) G Lab File ID: 060289S14

Level: (low/med) LOW Date Received: 05/24/89

% Moisture: not dec. 14 dec. 14 Date Extracted: 05/25/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/03/89

GPC Cleanup: (Y/N) N pH: 5.8 Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	760	U
111-44-4	bis(2-Chloroethyl)Ether	760	U
95-57-8	2-Chlorophenol	760	U
541-73-1	1,3-Dichlorobenzene	760	U
106-46-7	1,4-Dichlorobenzene	760	U
100-51-6	Benzyl Alcohol	760	U
95-50-1	1,2-Dichlorobenzene	760	U
95-48-7	2-Methylphenol	760	U
108-60-1	bis(2-Chloroisopropyl)Ether	760	U
106-44-5	4-Methylphenol	760	U
621-64-7	N-Nitroso-Di-n-Propylamine	760	U
67-72-1	Hexachloroethane	760	U
98-95-3	Nitrobenzene	760	U
78-59-1	Isophorone	760	U
88-75-5	2-Nitrophenol	760	U
105-67-9	2,4-Dimethylphenol	760	U
65-85-0	Benzoic Acid	3700	U
111-91-1	bis(2-Chloroethoxy)Methane	760	U
120-83-2	2,4-Dichlorophenol	760	U
120-82-1	1,2,4-Trichlorobenzene	760	U
91-20-3	Naphthalene	760	U
106-47-8	4-Chloroaniline	760	U
87-68-3	Hexachlorobutadiene	760	U
59-50-7	4-Chloro-3-Methylphenol	760	U
91-57-6	2-Methylnaphthalene	760	U
77-47-4	Hexachlorocyclopentadiene	760	U
88-06-2	2,4,6-Trichlorophenol	760	U
95-95-4	2,4,5-Trichlorophenol	3700	U
91-58-7	2-Chloronaphthalene	760	U
88-74-4	2-Nitroaniline	3700	U
131-11-3	Dimethyl Phthalate	760	U
208-96-8	Acenaphthylene	760	U
606-20-2	2,6-Dinitrotoluene	760	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EKF27

Lab Name: EMSI Contract: 68-01-7396

Lab Code: EMSI Case No.: 12004 SAS No.: _____ SDG No.: EFK21

Matrix: (soil/water) SOIL Lab Sample ID: _____

Sample wt/vol: 30.5 (g/mL) G Lab File ID: 060289S14

Level: (low/med) LOW Date Received: 05/24/89

% Moisture: not dec. 14 dec. 14 Date Extracted: 05/25/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/03/89

GPC Cleanup: (Y/N) N pH: 5.8 Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	3700	U
83-32-9	Acenaphthene	760	U
51-28-5	2,4-Dinitrophenol	3700	U
100-02-7	4-Nitrophenol	3700	U
132-64-9	Dibenzofuran	760	U
121-14-2	2,4-Dinitrotoluene	760	U
84-66-2	Diethylphthalate	760	U
7005-72-3	4-Chlorophenyl-phenylether	760	U
86-73-7	Fluorene	760	U
100-01-6	4-Nitroaniline	3700	U
534-52-1	4,6-Dinitro-2-Methylphenol	3700	U
86-30-6	N-Nitrosodiphenylamine (1)	760	U
101-55-3	4-Bromophenyl-phenylether	760	U
118-74-1	Hexachlorobenzene	760	U
87-86-5	Pentachlorophenol	3700	U
85-01-8	Phenanthrene	760	U
120-12-7	Anthracene	760	U
84-74-2	Di-n-Butylphthalate	760	U
206-44-0	Fluoranthene	760	U
129-00-0	Pyrene	760	U
85-68-7	Butylbenzylphthalate	760	U
91-94-1	3,3'-Dichlorobenzidine	1500	U
56-55-3	Benzo(a)Anthracene	760	U
218-01-9	Chrysene	760	U
117-81-7	bis(2-Ethylhexyl)Phthalate	760	U
117-84-0	Di-n-Octyl Phthalate	760	U
205-99-2	Benzo(b)Fluoranthene	760	U
207-08-9	Benzo(k)Fluoranthene	760	U
50-32-8	Benzo(a)Pyrene	760	U
193-39-5	Indeno(1,2,3-cd)Pyrene	760	U
53-70-3	Dibenz(a,h)Anthracene	760	U
191-24-2	Benzo(g,h,i)Perylene	760	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EKF27

Lab Name: EMSI Contract: 68-01-7396

Lab Code: EMSI Case No.: 12004 SAS No.: _____ SDG No.: EFK21

Matrix: (soil/water) SOIL Lab Sample ID: _____

Sample wt/vol: 30.5 (g/mL) G Lab File ID: 060289S14

Level: (low/med) LOW Date Received: 05/24/89

% Moisture: not dec. 14 dec. 14 Date Extracted: 05/25/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/03/89

GPC Cleanup: (Y/N) N pH: 5.8 Dilution Factor: 2.0

Number TICs found: 19

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 000-00-0	UNKNOWN ALIPHATIC KETONE	7.75	990	J
2. 000-00-0	UNKNOWN AROMATIC ACID	13.17	530	J
3. 000-00-0	UNKNOWN	14.27	530	J
4. 000-00-0	UNKNOWN	15.95	380	J
5. 000-00-0	UNKNOWN	19.42	310	J
6. 000-00-0	UNKNOWN AROMATIC	23.79	2100	J
7. 000-00-0	UNKNOWN	25.22	1100	J
8. 000-00-0	UNKNOWN OXYGENATED	25.44	610	J
9. 000-00-0	UNKNOWN	25.74	380	J
10. 000-00-0	UNKNOWN	25.91	380	J
11. 000-00-0	UNKNOWN OXYGENATED	26.64	990	J
12. 000-00-0	SATURATED ALIPHATIC HYDROCAR	27.22	1600	J
13. 000-00-0	UNKNOWN	28.01	690	J
14. 000-00-0	UNKNOWN OXYGENATED	29.17	990	J
15. 000-00-0	UNKNOWN	30.87	920	J
16. 000-00-0	UNKNOWN	32.82	1800	J
17. 000-00-0	SATURATED ALIPHATIC HYDROCAR	35.51	920	J
18. 000-00-0	UNKNOWN	36.14	380	J
19. 000-00-0	UNKNOWN	40.82	380	J

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFK21

Lab Name: Environmental Monitoring Contract: 68-01-7396

Lab Code: EMSI Case: 12004 SAS No.: SDG No.: EFK21

Matrix: (soil/water) SOIL Lab sample ID: RAS-003691

Sample wt/vol: 30.60 (g/ml) G Lab File ID:

Level: (low/med) LOW Date Received: 05/24/89

% Moisture: not dec. 7 dec. 7 Date Extracted: 05/25/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/31/89

GPC Cleanup: (Y/N) N pH: 6.0 Dilution factor: 2

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 (Lindane)	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	34.	U
72-55-9	4,4'-DDE	34.	U
72-20-8	Endrin	34.	U
33213-65-9	Endosulfan II	34.	U
72-54-8	4,4'-DDD	34.	U
1031-07-8	Endosulfan sulfate	34.	U
50-29-3	4,4'-DDT	34.	U
72-43-5	Methoxychlor	170.	U
53494-70-5	Endrin ketone	34.	U
5103-71-9	alpha-Chlordane	170.	U
5103-74-2	gamma-Chlordane	170.	U
8001-35-2	Toxaphene	340.	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	340.	U
11096-82-5	Aroclor-1260	340.	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFK22

Lab Name: Environmental Monitoring Contract: 68-01-7396

Lab Code: EMSI Case: 12004 SAS No.: SDG No.: EFK21

Matrix: (soil/water) SOIL Lab sample ID: RAS-003692

Sample wt/vol: 30.20 (g/ml) G Lab File ID:

Level: (low/med) LOW Date Received: 05/24/89

% Moisture: not dec. 3 dec. 3 Date Extracted: 05/25/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/31/89

GPC Cleanup: (Y/N) N pH: 6.8 Dilution factor: 2

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 (Lindane)	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	33.	U
72-55-9	4,4'-DDE	33.	U
72-20-8	Endrin	33.	U
33213-65-9	Endosulfan II	33.	U
72-54-8	4,4'-DDD	33.	U
1031-07-8	Endosulfan sulfate	33.	U
50-29-3	4,4'-DDT	33.	U
72-43-5	Methoxychlor	160.	U
53494-70-5	Endrin ketone	33.	U
5103-71-9	alpha-Chlordane	160.	U
5103-74-2	gamma-Chlordane	160.	U
8001-35-2	Toxaphene	330.	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	330.	U
11096-82-5	Aroclor-1260	330.	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFK23

Lab Name: Environmental Monitoring Contract: 68-01-7396

Lab Code: EMSI Case: 12004 SAS No.: SDG No.: EFK21

Matrix: (soil/water) SOIL Lab sample ID: RAS-003693

Sample wt/vol: 30.20 (g/ml) G Lab File ID:

Level: (low/med) LOW Date Received: 05/24/89

% Moisture: not dec. 3 dec. 3 Date Extracted: 05/25/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/31/89

GPC Cleanup: (Y/N) N pH: 6.2 Dilution factor: 2

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 (Lindane)	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	33.	U
72-55-9	4,4'-DDE	33.	U
72-20-8	Endrin	33.	U
33213-65-9	Endosulfan II	33.	U
72-54-8	4,4'-DDD	33.	U
1031-07-8	Endosulfan sulfate	33.	U
50-29-3	4,4'-DDT	33.	U
72-43-5	Methoxychlor	160.	U
53494-70-5	Endrin ketone	33.	U
5103-71-9	alpha-Chlordane	160.	U
5103-74-2	gamma-Chlordane	160.	U
8001-35-2	Toxaphene	330.	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	330.	U
11096-82-5	Aroclor-1260	330.	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFK24

Lab Name: Environmental Monitoring Contract: 68-01-7396

Lab Code: EMSI Case: 12004 SAS No.: SDG No.: EFK21

Matrix: (soil/water) SOIL Lab sample ID: RAS-003694

Sample wt/vol: 30.60 (g/ml) G Lab File ID:

Level: (low/med) LOW Date Received: 05/24/89

% Moisture: not dec. 10 dec. 10 Date Extracted: 05/25/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/31/89

GPC Cleanup: (Y/N) N pH: 5.7 Dilution factor: 2

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 (Lindane)	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

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFK25

Lab Name: Environmental Monitoring Contract: 68-01-7396

Lab Code: EMSI Case: 12004 SAS No.: SDG No.: EFK21

Matrix: (soil/water) SOIL Lab sample ID: RAS-003695

Sample wt/vol: 30.50 (g/ml) G Lab File ID:

Level: (low/med) LOW Date Received: 05/24/89

% Moisture: not dec. 3 dec. 3 Date Extracted: 05/25/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/31/89

GPC Cleanup: (Y/N) N pH: 6.5 Dilution factor: 2

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 (Lindane)	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

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFK26

Lab Name: Environmental Monitoring Contract: 68-01-7396

Lab Code: EMSI Case: 12004 SAS No.: SDG No.: EFK21

Matrix: (soil/water) SOIL Lab sample ID: RAS-003696

Sample wt/vol: 30.70 (g/ml) G Lab File ID:

Level: (low/med) LOW Date Received: 05/24/89

% Moisture: not dec. 3 dec. 3 Date Extracted: 05/25/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/31/89

GPC Cleanup: (Y/N) N pH: 6.1 Dilution factor: 2

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 (Lindane)	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

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFK27

Lab Name: Environmental Monitoring Contract: 68-01-7396

Lab Code: EMSI Case: 12004 SAS No.: SDG No.: EFK21

Matrix: (soil/water) SOIL Lab sample ID: RAS-003697

Sample wt/vol: 30.20 (g/ml) G Lab File ID:

Level: (low/med) LOW Date Received: 05/24/89

% Moisture: not dec. 14 dec. 14 Date Extracted: 05/25/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/31/89

GPC Cleanup: (Y/N) N pH: 5.8 Dilution factor: 2

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	18.	U
319-85-7	beta-BHC	18.	U
319-86-8	delta-BHC	18.	U
58-89-9	gamma-BHC (Lindane)	18.	U
76-44-8	Heptachlor	18.	U
309-00-2	Aldrin	18.	U
1024-57-3	Heptachlor epoxide	18.	U
959-98-8	Endosulfan I	18.	U
60-57-1	Dieldrin	37.	U
72-55-9	4,4'-DDE	37.	U
72-20-8	Endrin	37.	U
33213-65-9	Endosulfan II	37.	U
72-54-8	4,4'-DDD	37.	U
1031-07-8	Endosulfan sulfate	37.	U
50-29-3	4,4'-DDT	37.	U
72-43-5	Methoxychlor	180.	U
53494-70-5	Endrin ketone	37.	U
5103-71-9	alpha-Chlordane	180.	U
5103-74-2	gamma-Chlordane	180.	U
8001-35-2	Toxaphene	370.	U
12674-11-2	Aroclor-1016	180.	U
11104-28-2	Aroclor-1221	180.	U
11141-16-5	Aroclor-1232	180.	U
53469-21-9	Aroclor-1242	180.	U
12672-29-6	Aroclor-1248	180.	U
11097-69-1	Aroclor-1254	370.	U
11096-82-5	Aroclor-1260	370.	U

1.0 NARRATIVE

EPA Contract No. 68-01-7396
EPA Case Number 12004
SDG Number EFK21

Introduction

The results of analysis of seven (7) soil samples (EFK21-EFK27) from EPA Case No. 12004 are discussed in this narrative. These samples were received on May 24, 1989.

Sample Extraction and Analysis

The semivolatile samples were extracted on May 25, 1989. The pesticide samples were extracted on May 25, 1989. All extractions were performed within holding time deadlines.

The samples were analyzed for volatile organics on May 29, 30 and June 2, 1989. The samples were analyzed for semivolatiles on May 31 and June 3, 1989. The samples were analyzed for pesticides on May 31, 1989. All analyses were performed within holding time deadlines.

The volatile internal stardard Chlorobenzene was outside QC limits for sample number EFK24 and EFK24RE.

Surrogate Recoveries

Soil volatile surrogate recovery QC limit was exceeded on sample number EFK24RE for Toluene-d8.

All other surrogate recoveries were within QC limits.

Matrix Spike/Matrix Spike Duplicate

All MS and MSD percent recoveries were within QC limits.

Data Package Submittal

The data package for EPA Case No. 12004 was shipped via Federal Express on June 15, 1989 for next day delivery to Ms. Leslie Braun (SMO, Alexandria, VA), Data Audit Staff (USEPA/EMSL, Las Vegas, NV) and Mr. Curtis Ross (USEPA Region V, Chicago, IL).

Conclusion

The reported data appears good and meets all contractual requirements, except where noted. However, should there be questions or other matters which require clarification, please contact Sue Ozdemir directly.

Sue Ozdemir, Manager
Analytical Chemistry Operations

6/14/89
Date

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.

Sue Ozdemir, Manager
Analytical Chemistry Operations

6/14/89
Date

John McVoy
QC Coordinator

6/14/89
Date

2B
SOIL VOLATILE SURROGATE RECOVERY

Lab Name: EMSI Contract: 68-01-7396

Lab Code: EMSI Case No.: 12004 SAS No.: _____ SDG No.: EFK21

Level:(low/med) LOW

	EPA SAMPLE NO.	S1 (TOL) #	S2 (BFB) #	S3 (DCE) #	OTHER	TOT OUT
01	EFK21	96	74	95		0
02	EFK22	103	81	96		0
03	EFK23	102	85	100		0
04	EFK24	117	76	94		0
05	EFK24RE	135 *	87	94		1
06	EFK25	108	114	95		0
07	EFK26	110	76	95		0
08	EFK27	98	94	97		0
09	EFK23MS	99	84	96		0
10	EFK23MSD	99	82	95		0
11	VBLK01	100	97	97		0
12	VBLK02	116	120	102		0
13	VBLK03	99	94	98		0

		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

2D
SOIL SEMIVOLATILE SURROGATE RECOVERY

Lab Name: EMSI Contract: 68-01-7396

Lab Code: EMSI Case No.: 12004 SAS No.: _____ SDG No.: EFK21

Level:(low/med) LOW

	EPA SAMPLE NO.	S1 (NBZ) #	S2 (FBP) #	S3 (TPH) #	S4 (PHL) #	S5 (2FP) #	S6 (TBP) #	OTHER	TOT OUT
01	EKF21	55	56	70	60	60	69		0
02	EKF22	42	50	76	56	49	65		0
03	EKF23	38	44	67	47	43	57		0
04	EKF24	51	57	80	58	51	72		0
05	EKF25	62	72	92	76	76	75		0
06	EKF26	51	56	74	60	55	67		0
07	EKF27	54	62	77	62	56	94		0
08	EKF23MS	59	60	80	68	63	82		0
09	EKF23MSD	57	60	73	68	61	77		0
10	SBLK01	53	58	74	58	56	55		0

	QC LIMITS
S1 (NBZ) = Nitrobenzene-d5	(23-120)
S2 (FBP) = 2-Fluorobiphenyl	(30-115)
S3 (TPH) = Terphenyl	(18-137)
S4 (PHL) = Phenol-d5	(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

2F
SOIL PESTICIDE SURROGATE RECOVERY

Lab Name: Environmental Monitoring Contract: 68-01-7396

Lab Code: EMSI Case: 12004 SAS No.: SDG No.: EFK21

Level:(low/med) LOW

	EPA SAMPLE NO.	S1 (DBC) #	OTHER
01	EFK21	68	0
02	EFK22	77	0
03	EFK23	74	0
04	EFK24	60	0
05	EFK25	42	0
06	EFK25MS	85	0
07	EFK25MSD	75	0
08	EFK26	67	0
09	EFK27	57	0
10	PBLK01	94	0
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			

ADVISORY QC LIMITS (20-150)

S1 (DBC) = Dibutylchlorendate

Column used to flag recovery values

* Values outside of QC limits

D Surrogates diluted out

FORM II PEST-2 1/87 Rev.

3B

SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: EMSI Contract: 68-01-7396

Lab Code: EMSI Case No.: 12004 SAS No.: _____ SDG No.: EFK21

Matrix Spike - EPA Sample No.: EFK23 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	51.5	0	42.4	82	59-172
Trichloroethene	51.5	0	45.4	88	62-137
Benzene	51.5	0	41.6	81	66-142
Toluene	51.5	0	44.2	86	59-139
Chlorobenzene	51.5	0	46.2	90	60-133

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	51.5	37.3	72	13	22	59-172
Trichloroethene	51.5	40.1	78	12	24	62-137
Benzene	51.5	36.8	71	13	21	66-142
Toluene	51.5	39.5	77	11	21	59-139
Chlorobenzene	51.5	41.2	80	12	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: CASE 12004 EFK23 5.0G
60C TO 220C @ 10C/MIN ON INCOS 50 B

3D

SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: EMSI Contract: 68-01-7396

Lab Code: EMSI Case No.: 12004 SAS No.: _____ SDG No.: EFK21

Matrix Spike - EPA Sample No.: EKF23 Level:(low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC LIMITS REC.
Phenol	13500	0	8900	66	26- 90
2-Chlorophenol	13500	0	8020	59	25-102
1,4-Dichlorobenzene	6740	0	3450	51	28 104
N-Nitroso-di-n-prop.(1)	6740	0	4120	61	41 126
1,2,4-Trichlorobenzene	6740	0	3990	59	38 107
4-Chloro-3-methylphenol	13500	0	9370	69	26 103
Acenaphthene	6740	0	4090	61	31-137
4-Nitrophenol	13500	0	9780	72	11-114
2,4-Dinitrotoluene	6740	0	4750	70	28- 89
Pentachlorophenol	13500	0	8500	63	17-109
Pyrene	6740	0	5720	85	35-142

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Phenol	13300	9200	69	-4	35	26- 90
2-Chlorophenol	13300	8670	65	-10	50	25-102
1,4-Dichlorobenzene	6670	3540	53	-4	27	28 104
N-Nitroso-di-n-prop.(1)	6670	4340	65	-6	38	41 126
1,2,4-Trichlorobenzene	6670	4260	64	-8	23	38 107
4-Chloro-3-methylphenol	13300	9670	73	-6	33	26 103
Acenaphthene	6670	4210	63	-3	19	31-137
4-Nitrophenol	13300	8670	65	10	50	11-114
2,4-Dinitrotoluene	6670	4620	69	1	47	28- 89
Pentachlorophenol	13300	8000	60	5	47	17-109
Pyrene	6670	5600	84	1	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: 0 out of 22 outside limits

COMMENTS: 51277-12004 EKF23 5/25/89 SOIL
1.5 MIN @ 35C, THEN 10C/MIN TO 300C (FINN 4500B)

3F

SOIL PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Environmental Monitoring Contract: 68-01-7396

Lab Code: EMSI Case No.: 12004 SAS No.: SDG No.: EFK21

Matrix Spike - EPA Sample No.: EFK25 Level:(low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC LIMITS REC.
gamma-BHC (Lindane)	53.3	0.	44.5	84	46-127
Heptachlor	53.3	0.	47.2	88	35-130
Aldrin	53.3	0.	45.6	85	34-132
Dieldrin	133.3	0.	114.1	86	31-134
Endrin	133.3	0.	127.5	95	42-139
4,4'-DDT	133.3	0.	112.8	84	23-134

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
gamma-BHC (Lindane)	54.2	40.4	75	11	50	46-127
Heptachlor	54.2	43.9	81	9	31	35-130
Aldrin	54.2	41.2	76	11	43	34-132
Dieldrin	135.5	104.3	77	11	38	31-134
Endrin	135.5	115.5	85	11	45	42-139
4,4'-DDT	135.5	102.7	76	11	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: 0 out of 12 outside limits

COMMENTS:

4A
VOLATILE METHOD BLANK SUMMARY

Lab Name: EMSI Contract: 68-01-7396

Lab Code: EMSI Case No.: 12004 SAS No.: _____ SDG No.: EFK21

Lab File ID: 052989V05 Lab Sample ID: _____

Date Analyzed: 05/29/89 Time Analyzed: 0939

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

Instrument ID: I50B

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	EFK21		052989V19	1811
02	EFK22		052989V08	1123
03	EFK24		052989V11	1306
04	EFK26		052989V10	1231
05	EFK27		052989V12	1340
06	EFK23MS		052989V20	1845
07	EFK23MSD		052989V21	1919

COMMENTS: VBLK01 S05108902
60C FOR 2MIN TO 220C @ 10C/MIN (INCOS 50B)

4A
VOLATILE METHOD BLANK SUMMARY

Lab Name: EMSI Contract: 68-01-7396

Lab Code: EMSI Case No.: 12004 SAS No.: _____ SDG No.: EFK21

Lab File ID: 053089V05 Lab Sample ID: _____

Date Analyzed: 05/30/89 Time Analyzed: 1117

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

Instrument ID: I50B

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	EFK24RE		053089V06	1201
02	EFK25		053089V07	1243

COMMENTS: VBLK02 S05108902
60C FOR 2MIN TO 220C @ 10C/MIN (INCOS 50B)

4A
VOLATILE METHOD BLANK SUMMARY

Lab Name: EMSI Contract: 68-01-7396

Lab Code: EMSI Case No.: 12004 SAS No.: _____ SDG No.: EFK21

Lab File ID: 060289V03 Lab Sample ID: _____

Date Analyzed: 06/02/89 Time Analyzed: 0724

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

Instrument ID: I50B

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	EFK23		060289V04	0804

COMMENTS: VBLK03
60C TO 220C @ 10C/MIN ON INCOS 50 B

4B
SEMIVOLATILE METHOD BLANK SUMMARY

Lab Name: EMSI Contract: 68-01-7396

Lab Code: EMSI Case No.: 12004 SAS No.: _____ SDG No.: EFK21

Lab File ID: 053189S05 Lab Sample ID: _____

Date Extracted: 05/25/89 Extraction:(SepF/Cont/Sonc) SONC

Date Analyzed: 05/31/89 Time Analyzed: 1158

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

Instrument ID: 4500B

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	EKF21		053189S09	05/31/89
02	EKF22		053189S10	05/31/89
03	EKF23		053189S06	05/31/89
04	EKF24		053189S12	05/31/89
05	EKF25		053189S03	05/31/89
06	EKF26		053189S11	05/31/89
07	EKF27		060289S14	06/03/89
08	EKF23MS		053189S07	05/31/89
09	EKF23MSD		053189S08	05/31/89

COMMENTS: SBLK01 51277-12004 METHOD BLANK 5/25/89 SOIL
1.5 MIN @ 35C, THEN 10C/MIN TO 300C (FINN 4500B)

4C

PESTICIDE METHOD BLANK SUMMARY

Lab Name: Environmental Monitoring Contract: 68-01-7396

Lab Code: EMSI Case: 12004 SAS No.: SDG No.: EFK21

Lab sample ID: RAS-100299 Lab File ID:

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

Date Extracted: 05/25/89 Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed (1): 05/31/89 Date Analyzed (2): 05/31/89

Time Analyzed (1): 13:21 Time Analyzed (2): 13:21

Instrument ID (1): 001364 Instrument ID (2): 001364

GC Column ID (1): DB171125 GC Column ID (2): DB51332

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

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	EFK21	RAS-003691	05/31/89	
02	EFK22	RAS-003692	05/31/89	
03	EFK23	RAS-003693	05/31/89	
04	EFK24	RAS-003694	05/31/89	
05	EFK25	RAS-003695	05/31/89	
06	EFK25MS	RAS-400362	05/31/89	
07	EFK25MSD	RAS-400363	05/31/89	
08	EFK26	RAS-003696	05/31/89	
09	EFK27	RAS-003697	05/31/89	05/31/89
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				

COMMENTS:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK01

Lab Name: EMSI Contract: 68-01-7396

Lab Code: EMSI Case No.: 12004 SAS No.: _____ SDG No.: EFK21

Matrix: (soil/water) SOIL Lab Sample ID: _____

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 052989V05

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

% Moisture: not dec. ____ Date Analyzed: 05/29/89

Column: (pack/cap) PACK Dilution Factor: 1.0

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	2	J
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	Total Xylenes	5	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK01

Lab Name: EMSI Contract: 68-01-7396

Lab Code: EMSI Case No.: 12004 SAS No.: _____ SDG No.: EFK21

Matrix: (soil/water) SOIL Lab Sample ID: _____

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 052989V05

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

% Moisture: not dec. ____ Date Analyzed: 05/29/89

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK02

Lab Name: EMSI Contract: 68-01-7396

Lab Code: EMSI Case No.: 12004 SAS No.: _____ SDG No.: EFK21

Matrix: (soil/water) SOIL Lab Sample ID: _____

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 053089V05

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

% Moisture: not dec. _____ Date Analyzed: 05/30/89

Column: (pack/cap) PACK Dilution Factor: 1.0

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	1	J
67-64-1	Acetone	2	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	Total Xylenes	5	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK02

Lab Name: EMSI Contract: 68-01-7396

Lab Code: EMSI Case No.: 12004 SAS No.: _____ SDG No.: EFK21

Matrix: (soil/water) SOIL Lab Sample ID: _____

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 053089V05

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

% Moisture: not dec. ____ Date Analyzed: 05/30/89

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK03

Lab Name: EMSI Contract: 68-01-7396

Lab Code: EMSI Case No.: 12004 SAS No.: _____ SDG No.: EFK21

Matrix: (soil/water) SOIL Lab Sample ID: _____

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 060289V03

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

% Moisture: not dec. ____ Date Analyzed: 06/02/89

Column: (pack/cap) PACK Dilution Factor: 1.0

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	2	J
67-64-1	Acetone	2	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	Total Xylenes	5	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK03

Lab Name: EMSI Contract: 68-01-7396

Lab Code: EMSI Case No.: 12004 SAS No.: _____ SDG No.: EFK21

Matrix: (soil/water) SOIL Lab Sample ID: _____

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 060289V03

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

% Moisture: not dec. ____ Date Analyzed: 06/02/89

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLK01

Lab Name: EMSI Contract: 68-01-7396

Lab Code: EMSI Case No.: 12004 SAS No.: _____ SDG No.: EFK21

Matrix: (soil/water) SOIL Lab Sample ID: _____

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 053189S05

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

% Moisture: not dec. ____ dec. ____ Date Extracted: 05/25/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/31/89

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 2.0

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	Dimethyl Phthalate	660	U
208-96-8	Acenaphthylene	660	U
606-20-2	2,6-Dinitrotoluene	660	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLK01

Lab Name: EMSI Contract: 68-01-7396

Lab Code: EMSI Case No.: 12004 SAS No.: _____ SDG No.: EFK21

Matrix: (soil/water) SOIL Lab Sample ID: _____

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 053189S05

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

% Moisture: not dec. ____ dec. ____ Date Extracted: 05/25/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/31/89

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 2.0

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-Octyl Phthalate	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
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SBLK01

Lab Name: EMSI Contract: 68-01-7396

Lab Code: EMSI Case No.: 12004 SAS No.: _____ SDG No.: EFK21

Matrix: (soil/water) SOIL Lab Sample ID: _____

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 053189S05

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

% Moisture: not dec. ____ dec. ____ Date Extracted: 05/25/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/31/89

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 2.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PBLK01

Lab Name: Environmental Monitoring Contract: 68-01-7396

Lab Code: EMSI Case: 12004 SAS No.: SDG No.: EFK21

Matrix: (soil/water) SOIL Lab sample ID: RAS-100299

Sample wt/vol: 30.00 (g/ml) G Lab File ID:

Level: (low/med) LOW Date Received:

% Moisture: not dec. dec. Date Extracted: 05/25/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/31/89

GPC Cleanup: (Y/N) N pH: Dilution factor: 2

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 (Lindane)	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.

EFK24RE

Lab Name: EMSI Contract: 68-01-7396

Lab Code: EMSI Case No.: 12004 SAS No.: _____ SDG No.: EFK21

Matrix: (soil/water) SOIL Lab Sample ID: _____

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 053089V06

Level: (low/med) LOW Date Received: 05/24/89

% Moisture: not dec. 10 Date Analyzed: 05/30/89

Column: (pack/cap) PACK Dilution Factor: 1.0

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	4	~~BJ~~ U
67-64-1	Acetone	9	~~BJ~~ U
75-15-0	Carbon Disulfide	6	U
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	11	U
71-55-6	1,1,1-Trichloroethane	6	U
56-23-5	Carbon Tetrachloride	6	U
108-05-4	Vinyl Acetate	11	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	11	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	6	U
79-34-5	1,1,2,2-Tetrachloroethane	6	U
108-88-3	Toluene	2	J
108-90-7	Chlorobenzene	6	U
100-41-4	Ethylbenzene	6	U
100-42-5	Styrene	6	U
1330-20-7	Total Xylenes	6	U

S.V. 6/30/89

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EFK24RE

Lab Name: EMSI Contract: 68-01-7396

Lab Code: EMSI Case No.: 12004 SAS No.: _____ SDG No.: EFK21

Matrix: (soil/water) SOIL Lab Sample ID: _____

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 053089V06

Level: (low/med) LOW Date Received: 05/24/89

% Moisture: not dec. 10 Date Analyzed: 05/30/89

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

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

CRL Receipt Date 6/28 FIT Receipt Date 10/24 Review Completed 10/24/89

TO: Nehkong
FROM: Mary Gzyra
SUBJECT: Hallie Prairie LF
PAN: WI0149SA (1 hour charged for review) Case # 12004

Sample Description

Organics (VOA, ABN, Pest/PCB)		Inorganics (Metals, Cyanide)	
#	Low Soil	# 7	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 5/23

0759:2

recycled paper

Table 4-> Cont.

2070-13 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
				Analyte Detected (values in > mg/kg or µg/L)	MEEB65	66	67	68	69	70	71					
Solid	A,D	MES	CSC	aluminum	5910	5490	4340	5640	3660	6500	5950					
Solid	A,D	MES	HM	antimony		5.5 JB		3.6 JB	3.4 JB	6.2 JB	5.0 JB					
Solid	A,D	MES	HM	arsenic	1.3 JNWB		0.98 JNWB			1.8 JNB	1.5 JNB					
Solid	A,D	MES	CSC	barium	63.7	38.8 B	23.6 B	68.9	16.7 B	93.6	85.6					
Solid	A,D	MES	M	beryllium												
Solid	A,D	MES	HM	cadmium				0.34 JB		0.46 JB						
Solid	D	MES	CSC	calcium	1060	1650	2480	2050	1250	1790	1720					
Solid	A,D	MES	HM	chromium	9.9	13	8.8	10.3	7.1	14.4	7.6					
Solid	A,D	MES	HM	cobalt	5.1 B	5.8 B	6.6 B	5.5 B	4.5 B	9.6 B	3.8 B					
Solid	A,D	MES	HM	copper	5.0	15.4	16.1	18	9.0	23.4	5.8					
Solid	A,D	MES	HM,CSC	iron	8730	9900	9560	9800	5880	12500	6140					
Solid	A,D	MES	HM	lead	5.3	34	5.8	32	1.3	138	11.5					
Solid	A,D	MES	CSC	magnesium	1500	2220	2520	2190	2050	2190	1450					
Solid	A,D	MES	HM	manganese	333 JN	184 JN	174 JN	318 JN	135 JN	699 JN	368 JN					
Liquid	A,D	MES	HM	mercury												
Solid	A,D	MES	HM	nickel	11.1	12.1	12.4	14.3	12.2	17.2	8.9					
Solid	D	MES	CSC	potassium	397 B	340 B	298 B	325 B	159 B	386 B	376 B					
Solid	A,D	MES	M	selenium												
Solid	A,D	MES	HM	silver												
Solid	D	MES	CSC	sodium			102 B			91 B						
Solid	A,D	MES	HM	thallium												
Solid	A,D	MES	HM	vanadium	25.9	24	26.7	89.8	14.8	28.4	14.6					
Solid	A,D	MES	CSC,HM	zinc	23.6	47.5	25	77.5	15.6	895	29					
Solid	A	IOC	IOC	cyanide												

— Not detected.

8/1

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

ATE: 7·31·89

10/24/89

:CT: Review of Region V CLP Data
Received for Review on 6/28/89

OM: Curtis Ross, Director (5SCRL)
Central Regional Laboratory Jay Tyler

TO: Data User: Dit

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

SITE NAME: Hallie Town LF. SMO Case No. 12004

EPA Data Set No. SF6211 No. of Samples: 7 D.U./Activity Numbers TFA/TFA02

ERL No. 89FN20550 - 56

SMO Traffic No. MCB65-71

CLP Laboratory: Allied Hrs. Required for Review: 6.5

+1/2 DX 7/20/89

Following are our findings:

SEE NEXT PAGE

) Data are acceptable for use.
X) Data are acceptable for use with qualifications referenced above.
See Data Qualifier sheets and Calibration Outlier forms for flags and additional comments.
) Data are preliminary - pending verification by Contractor Laboratory.
See Case Summary above.
) Data are unacceptable.

R. Dilg 7-20-89

c: Carla Dempsey, CLP Quality Assurance Officer, Analytical Operations Branch
James Petty, Chief Quality Assurance Research, EMSL, Las Vegas

DATA QUALIFIERS

Contract Lab: Allied (NET) Case No.: 12004

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

This review covers the laboratory's portion of Case 12004 for the analysis of seven low soils for metals and cyanide.

ICAP Analysis: The reviewer corrected K and Na data on Form 7 and the Sb duplicate data on Form 6.

The initial calibration blank for Sb (45.8 ug/L) and the continuing calibration blank for Cd (1.1 ug/L) exceeded IDL values. The following are estimated (J) due to contamination: the Sb results for MEEB66, 68, 69, 70, and 71 and the Cd results for MEEB68 and 70.

Matrix spike recovery for Mn (129.9%R) indicates high bias. All Mn results are estimated (J).

The laboratory flagged Al (20.2 %RPD) and Fe (23.5 %RPD) duplicate results with an "*"; however, these do not exceed the control criterion of 35 percent RPD for soils. All Al and Fe results are acceptable.

GFAA Analysis: The reviewer corrected the %R value for As on Form 5A.

Matrix spike recovery for As (127.5%R) indicates high bias while that for Se (70%R) indicates low bias. As results for MEEB65, 67, 70, and 71 are estimated (J); the As result for MEEB66 is acceptable and the As results for MEEB68 and 69 are qualified below. All Se results are estimated (UJ) with detection limits possibly elevated.

Some results were flagged "W" by the laboratory indicating possible interference. The Se results for MEEB65, 66, and 71 and the As results for MEEB65 and 67 are so affected but these are already qualified. The As results for MEEB68 and 69 are estimated (UJ).

The reviewer entered the cyanide prep blank result on Form 3 since this was not done by the laboratory.

Hg and cyanide results are acceptable.

R. Dilg
7-20-89

QC EXCEPTION SUMMARY REPORT

CASE # 12004
DATA SET # SF6211
LAB Q.C.#
DATE: 7-20-89

SITE HALLIE TOWN LF
LAB ALLIED (NET)
REVIEWED BY WESTON

MATRIX: SOILS
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	Sol Dup RPD	Sol 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	Spk Sample RPD	
Aluminum										(20.2)														
Antimony		45.8																						
Arsenic											127.5						W							
Barium																								
Beryllium																								
Cadmium		1.1																						
Calcium																								
Chromium		(-2.6)																						
Cobalt																								
Copper																								
Iron					8.5					(23.5)														
Lead																								
Magnesium																								
Manganese											129.9													
Mercury																								
Nickel																								
Potassium																								
Selenium											70						W							
Silver																								
Sodium																								
Thallium																								
Tin																								
Vanadium																								
Zinc																								
Cyanide																								

DPO: [ ] ACTION [ ] FYI Region_____

INORGANIC REGIONAL DATA ASSESSMENT SUMMARY

CASE NO. 12004 LABORATORY ALLIED (NET)

SDG NO. MEEB66 DATA USER FIT

SOW 7/87 REVIEW COMPLETION DATE 7-20-89

NO. OF SAMPLES _____ WATER 7 SOIL _____ OTHER

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

	ICP	AA	Hg	CYANIDE
1. HOLDING TIMES	O	O	O	O
2. INITIAL CALIBRATIONS	X	O	O	O
3. CONTINUING CALIBRATIONS	X	O	O	O
4. FIELD BLANKS ('F' = not applicable)	F	F	F	F
5. LABORATORY BLANKS	O	O	O	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	O			
12. SAMPLE VERIFICATION	O	O	O	O
13. REGIONAL QC ('F' = not applicable)	F	F	F	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: _____

AREAS OF CONCERN: _____

U.S. EPA - CLP

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: ALLIED ANALYTICAL Contract: 68-W8-0059

Lab Code: ALLIED Case No.: 12004 SAS No.: _____ SDG No.: MEEB65

SOW No.: 7/87

EPA Sample No.	Lab Sample ID.
MEEB65	112272
MEEB65D	112272D
MEEB66	112273
MEEB66S	112273S
MEEB67	112274
MEEB68	112275
MEEB69	112276
MEEB70	112277
MEEB71	112278

Were ICP interelement corrections applied? Yes/No YES

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

Comments:
REGION V SENT SEVEN (7) LOW SOILS
VTSR=05-24-89

Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Lab Manager: Cynthia Placko-Moore

Date: 6-27-89

760001

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MEEB65

Lab Name: ALLIED ANALYTICAL Contract: 68-W8-0059

Lab Code: ALLIED Case No.: 12004 SAS No.: _____ SDG No.: MEEB65

Matrix (soil/water): SOIL Lab Sample ID: 112272

Level (low/med): LOW Date Received: 05/24/89

% Solids: 96.6

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5910.00		*	P
7440-36-0	Antimony	3.30	U		P
7440-38-2	Arsenic	1.30	B	WN	F
7440-39-3	Barium	63.70			P
7440-41-7	Beryllium	0.14	U		P
7440-43-9	Cadmium	0.22	U		P
7440-70-2	Calcium	1060.00			P
7440-47-3	Chromium	9.90			P
7440-48-4	Cobalt	5.10	B		P
7440-50-8	Copper	5.00			P
7439-89-6	Iron	8730.00		*	P
7439-92-1	Lead	5.30			F
7439-95-4	Magnesium	1500.00			P
7439-96-5	Manganese	333.00		N	P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	11.10			P
7440-09-7	Potassium	397.00	B		P
7482-49-2	Selenium	0.74	U	WN	F
7440-22-4	Silver	1.30	U		P
7440-23-5	Sodium	84.20	U		P
7440-28-0	Thallium	0.52	U		F
7440-62-2	Vanadium	25.90			P
7440-66-6	Zinc	23.60			P
	Cyanide	5.00	U		C

Color Before: BROWN Clarity Before: _____ Texture: MEDIUM

Color After: COLORLESS Clarity After: _____ Artifacts: YES

Comments:
ROOTS, ROCKS

760002

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MEEB66

Lab Name: ALLIED ANALYTICAL Contract: 68-W8-0059

Lab Code: ALLIED Case No.: 12004 SAS No.: _____ SDG No.: MEEB65

Matrix (soil/water): SOIL Lab Sample ID: 112273

Level (low/med): LOW Date Received: 05/24/89

% Solids: 96.6

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5490.00		*	P
7440-36-0	Antimony	5.50	B		P
7440-38-2	Arsenic	9.40	U	N	F
7440-39-3	Barium	38.80	B		P
7440-41-7	Beryllium	0.14	U		P
7440-43-9	Cadmium	0.22	U		P
7440-70-2	Calcium	1650.00			P
7440-47-3	Chromium	13.00			P
7440-48-4	Cobalt	5.80	B		P
7440-50-8	Copper	15.40			P
7439-89-6	Iron	9900.00		*	P
7439-92-1	Lead	34.00			F
7439-95-4	Magnesium	2220.00			P
7439-96-5	Manganese	184.00		N	P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	12.10			P
7440-09-7	Potassium	340.00	B		P
7482-49-2	Selenium	0.74	U	WN	F
7440-22-4	Silver	1.30	U		P
7440-23-5	Sodium	84.20	U		P
7440-28-0	Thallium	0.52	U		F
7440-62-2	Vanadium	24.00			P
7440-66-6	Zinc	47.50			P
	Cyanide	5.00	U		C

Color Before: BROWN Clarity Before: _____ Texture: MEDIUM

Color After: COLORLESS Clarity After: _____ Artifacts: YES

Comments:
ROCKS

760003

U.S. EPA - CLP

1
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MEEB67

Lab Name: ALLIED ANALYTICAL Contract: 68-W8-0059

Lab Code: ALLIED Case No.: 12004 SAS No.: _____ SDG No.: MEEB65

Matrix (soil/water): SOIL Lab Sample ID: 112274

Level (low/med): LOW Date Received: 05/24/89

% Solids: 98.2

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	4340.00		*	P
7440-36-0	Antimony	3.30	U		P
7440-38-2	Arsenic	0.98	B	WN	F
7440-39-3	Barium	23.60	B		P
7440-41-7	Beryllium	0.14	U		P
7440-43-9	Cadmium	0.22	U		P
7440-70-2	Calcium	2480.00			P
7440-47-3	Chromium	8.80			P
7440-48-4	Cobalt	6.60	B		P
7440-50-8	Copper	16.10			P
7439-89-6	Iron	9560.00		*	P
7439-92-1	Lead	5.80			F
7439-95-4	Magnesium	2520.00			P
7439-96-5	Manganese	174.00		N	P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	12.40			P
7440-09-7	Potassium	298.00	B		P
7482-49-2	Selenium	0.74	U	N	F
7440-22-4	Silver	1.30	U		P
7440-23-5	Sodium	102.00	B		P
7440-28-0	Thallium	0.52	U		F
7440-62-2	Vanadium	25.70			P
7440-66-6	Zinc	25.00			P
	Cyanide	5.00	U		C

Color Before: BROWN Clarity Before: _____ Texture: MEDIUM

Color After: COLORLESS Clarity After: _____ Artifacts: YES

Comments:
ROCKS

760004

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MEEB68

Lab Name: ALLIED ANALYTICAL Contract: 68-W8-0059

Lab Code: ALLIED Case No.: 12004 SAS No.: _____ SDG No.: MEEB65

Matrix (soil/water): SOIL Lab Sample ID: 112275

Level (low/med): LOW Date Received: 05/24/89

% Solids: 89.2

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5640.00		*	P
7440-36-0	Antimony	3.60	B		P
7440-38-2	Arsenic	0.94	U	WN	F
7440-39-3	Barium	68.90			P
7440-41-7	Beryllium	0.14	U		P
7440-43-9	Cadmium	0.34	B		P
7440-70-2	Calcium	2050.00			P
7440-47-3	Chromium	10.30			P
7440-48-4	Cobalt	5.50	B		P
7440-50-8	Copper	18.00			P
7439-89-6	Iron	9800.00		*	P
7439-92-1	Lead	32.00			F
7439-95-4	Magnesium	2190.00			P
7439-96-5	Manganese	318.00		N	P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	14.30			P
7440-09-7	Potassium	325.00	B		P
7482-49-2	Selenium	0.74	U	N	F
7440-22-4	Silver	1.30	U		P
7440-23-5	Sodium	84.20	U		P
7440-28-0	Thallium	0.52	U		F
7440-62-2	Vanadium	89.80			P
7440-66-6	Zinc	77.50			P
	Cyanide	5.00	U		C

Color Before: BROWN Clarity Before: _____ Texture: MEDIUM

Color After: COLORLESS Clarity After: _____ Artifacts: _____

Comments:

760005

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MEEB69

Lab Name: ALLIED ANALYTICAL Contract: 68-W8-0059

Lab Code: ALLIED Case No.: 12004 SAS No.: _____ SDG No.: MEEB65

Matrix (soil/water): SOIL Lab Sample ID: 112276

Level (low/med): LOW Date Received: 05/24/89

% Solids: 97.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	3660.00		*	P
7440-36-0	Antimony	3.40	B		P
7440-38-2	Arsenic	0.94	U	WN	F
7440-39-3	Barium	16.70	B		P
7440-41-7	Beryllium	0.14	U		P
7440-43-9	Cadmium	0.22	U		P
7440-70-2	Calcium	1250.00			P
7440-47-3	Chromium	7.10			P
7440-48-4	Cobalt	4.50	B		P
7440-50-8	Copper	9.00			P
7439-89-6	Iron	5880.00		*	P
7439-92-1	Lead	1.30			F
7439-95-4	Magnesium	2050.00			P
7439-96-5	Manganese	135.00		N	P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	12.20			P
7440-09-7	Potassium	159.00	B		P
7482-49-2	Selenium	0.74	U	N	F
7440-22-4	Silver	1.30	U		P
7440-23-5	Sodium	84.20	U		P
7440-28-0	Thallium	0.52	U		F
7440-62-2	Vanadium	14.80			P
7440-66-6	Zinc	15.60			P
	Cyanide	5.00	U		C

Color Before: BROWN Clarity Before: _____ Texture: MEDIUM

Color After: COLORLESS Clarity After: _____ Artifacts: YES

Comments:
ROCKS

760006

U.S. EPA - CLP

1
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MEEB70

Lab Name: ALLIED ANALYTICAL Contract: 68-W8-0059

Lab Code: ALLIED Case No.: 12004 SAS No.: _____ SDG No.: MEEB65

Matrix (soil/water): SOIL Lab Sample ID: 112277

Level (low/med): LOW Date Received: 05/24/89

% Solids: 96.2

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6500.00		*	P
7440-36-0	Antimony	6.20	B		P
7440-38-2	Arsenic	1.80	B	N	F
7440-39-3	Barium	93.60			P
7440-41-7	Beryllium	0.14	U		P
7440-43-9	Cadmium	0.46	B		P
7440-70-2	Calcium	1790.00			P
7440-47-3	Chromium	14.40			P
7440-48-4	Cobalt	9.60	B		P
7440-50-8	Copper	23.40			P
7439-89-6	Iron	12500.00		*	P
7439-92-1	Lead	138.00			F
7439-95-4	Magnesium	2190.00			P
7439-96-5	Manganese	699.00		N	P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	17.20			P
7440-09-7	Potassium	386.00	B		P
7482-49-2	Selenium	0.74	U	N	F
7440-22-4	Silver	1.30	U		P
7440-23-5	Sodium	91.00	B		P
7440-28-0	Thallium	0.52	U		F
7440-62-2	Vanadium	28.40			P
7440-66-6	Zinc	295.00			P
	Cyanide	5.00	U		C

Color Before: BROWN Clarity Before: _____ Texture: FINE

Color After: COLORLESS Clarity After: _____ Artifacts: YES

Comments:
GRASS, ROCKS

760007

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MEEB71

Lab Name: ALLIED ANALYTICAL Contract: 68-W8-0059

Lab Code: ALLIED Case No.: 12004 SAS No.: _____ SDG No.: MEEB65

Matrix (soil/water): SOIL Lab Sample ID: 112278

Level (low/med): LOW Date Received: 05/24/89

% Solids: 85.8

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5550.00		*	P
7440-36-0	Antimony	5.00	B		P
7440-38-2	Arsenic	1.50	B	N	F
7440-39-3	Barium	85.60			P
7440-41-7	Beryllium	0.14	U		P
7440-43-9	Cadmium	0.22	U		P
7440-70-2	Calcium	1720.00			P
7440-47-3	Chromium	7.60			P
7440-48-4	Cobalt	3.80	B		P
7440-50-8	Copper	5.80			P
7439-89-6	Iron	6140.00		*	P
7439-92-1	Lead	11.50			F
7439-95-4	Magnesium	1450.00			P
7439-96-5	Manganese	368.00		N	P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	8.90			P
7440-09-7	Potassium	376.00	B		P
7482-49-2	Selenium	0.74	U	WN	F
7440-22-4	Silver	1.30	U		P
7440-23-5	Sodium	84.20	U		P
7440-28-0	Thallium	0.52	U		F
7440-62-2	Vanadium	14.60			P
7440-66-6	Zinc	29.00			P
	Cyanide	5.00	U		C

Color Before: BROWN Clarity Before: _____ Texture: MEDIUM

Color After: COLORLESS Clarity After: _____ Artifacts: YES

Comments:
ROOTS

760008

U.S. EPA - CLP

3
BLANKS

Lab Name: ALLIED ANALYTICAL Contract: 68-W8-0059

Lab Code: ALLIED Case No.: 12004 SAS No.: _____ SDG No.: MEEB65

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	89.5	U	89.5	U	89.5	U			17.900	U	P
Antimony	45.8	B	40.0	B	44.7	B			3.300	U	P
Arsenic	4.7	U	4.7	U	4.7	U	4.7	U	0.940	U	F
Barium	13.1	U	13.1	U	13.1	U			2.620	U	P
Beryllium	0.7	U	0.7	U	0.7	U			0.140	U	P
Cadmium	1.1	U	1.1	U	1.1	B			0.220	U	P
Calcium	327.0	U	327.0	U	327.0	U			65.400	U	P
Chromium	-2.3	B	-2.6	B	1.8	U			0.360	U	P
Cobalt	3.3	U	3.3	U	3.3	U			0.660	U	P
Copper	2.9	U	2.9	U	2.9	U			0.580	U	P
Iron	30.5	U	30.5	U	30.5	U			8.500	B	P
Lead	1.7	U	1.7	U	1.7	U	1.7	U	0.340	U	F
Magnesium	422.0	U	422.0	U	422.0	U			84.400	U	P
Manganese	1.9	U	1.9	U	1.9	U			0.380	U	P
Mercury	0.2	U	0.2	U	0.2	U			0.100	U	CV
Nickel	16.6	U	16.6	U	16.6	U			3.320	U	P
Potassium	421.0	U	421.0	U	421.0	U			84.200	U	P
Selenium	3.7	U	3.7	U	3.7	U	3.7	U	0.740	U	F
Silver	6.7	U	6.7	U	6.7	U			1.340	U	P
Sodium	421.0	U	421.0	U	421.0	U			84.200	U	P
Thallium	2.6	U	2.6	U	2.6	U	2.6	U	0.520	U	F
Vanadium	3.5	U	3.5	U	3.5	U			0.700	U	P
Zinc	2.6	U	2.6	U	2.6	U			0.520	U	P
Cyanide	10.0	U	10.0	U	10.0	U	10.0	U	5.0	U	C

U.S. EPA - CLP

5A
SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

MEEB66S

Lab Name: ALLIED ANALYTICAL Contract: 68-W8-0059

Lab Code: ALLIED Case No.: 12004 SAS No.: _____ SDG No.: MEEB65

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

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	90.0600		5.4650	B	100.0	84.6		P
Arsenic	75-125	10.2000		9.4000	U	8.0	127.5 ~~10.0~~	N	F
Barium	75-125	414.1000		38.8500	B	400.0	93.8		P
Beryllium	75-125	9.3620		0.1400	U	10.0	93.6		P
Cadmium	75-125	9.4410		0.2200	U	10.0	94.4		P
Calcium									NR
Chromium	75-125	51.4500		13.0400		40.0	96.0		P
Cobalt	75-125	106.0000		5.7810	B	100.0	100.2		P
Copper	75-125	66.1500		15.4000		50.0	101.5		P
Iron									NR
Lead		38.5000		34.0000		4.0	112.5		F
Magnesium									NR
Manganese	75-125	313.8000		183.9000		100.0	129.9	N	P
Mercury	75-125	0.5500		0.0400	U	0.5	110.0		CV
Nickel	75-125	106.0000		12.1300		100.0	93.9		P
Potassium									NR
Selenium	75-125	1.4000		0.7400	U	2.0	70.0	N	F
Silver	75-125	7.6560		1.3400	U	10.0	76.6		P
Sodium									NR
Thallium	75-125	8.8200		0.5200	U	10.0	88.2		F
Vanadium	75-125	124.4000		24.0000		100.0	100.4		P
Zinc	75-125	144.1000		47.4900		100.0	96.6		P
Cyanide	75-125	22.7000		2.0000	U	25.0	90.8		C

Comments:

U.S. EPA - CLP

5B
POST DIGEST SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

MEEB66

Lab Name: ALLIED ANALYTICAL Contract: 68-W8-0059

Lab Code: ALLIED Case No.: 12004 SAS No.: _____ SDG No.: MEEB65

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									NR
Arsenic									NR
Barium									NR
Beryllium									NR
Cadmium									NR
Calcium									NR
Chromium									NR
Cobalt									NR
Copper									NR
Iron									NR
Lead									NR
Magnesium									NR
Manganese		2705.00		919.70		1840.0	97.0		P
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.

MEEB65D

Lab Name: ALLIED ANALYTICAL Contract: 68-W8-0059

Lab Code: ALLIED Case No.: 12004 SAS No.: _____ SDG No.: MEEB65

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

% Solids for Sample: 96.6 % Solids for Duplicate: 97.0

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

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum		5910.0000		4827.0000		20.2	*	P
Antimony	12.0	3.3001	U	3.7 ~~3.3001~~	~~U~~ B			P
Arsenic	2.0	1.2800	B	0.9400	U			F
Barium	40.0	63.7200		54.1100		16.3		P
Beryllium	1.0	0.1400	U	0.1400	U			P
Cadmium	1.0	0.2200	U	0.2200	U			P
Calcium	1000.0	1057.0000		966.4000	B	9.0		P
Chromium	2.0	9.9000		8.9070		10.6		P
Cobalt	10.0	5.1330	B	4.2360	B	19.1		P
Copper	5.0	4.9600	B	4.4000	B	12.0		P
Iron		8732.0000		6899.0000		23.5	*	P
Lead	1.0	5.3000		4.8800		8.3		F
Magnesium	1000.0	1496.0000		1236.0000		19.0		P
Manganese		332.9000		303.5000		9.2		P
Mercury	0.0	0.0400	U	0.0400	U			CV
Nickel	8.0	11.0900		8.2910		28.9		P
Potassium	1000.0	396.9000	B	305.8000	B	25.9		P
Selenium	1.0	0.7400	U	0.7400	U			F
Silver	2.0	1.3400	U	1.3400	U			P
Sodium	1000.0	84.2023	U	84.2023	U			P
Thallium	2.0	0.5200	U	0.5200	U			F
Vanadium	10.0	25.9000		20.2600		24.4		P
Zinc		23.6500		21.8000		8.1		P
Cyanide		5.0000	U	5.0000	U			C

760016

U.S. EPA - CLP

11
INSTRUMENT DETECTION LIMITS (QUARTERLY)

Lab Name: ALLIED ANALYTICAL Contract: 68-W8-0059

Lab Code: ALLIED Case No.: 12004 SAS No.: _____ SDG No.: MEEB65

ICP ID Number: JA 61 Date: 04/06/89

Flame AA ID Number: _____

Furnace AA ID Number: ZEE 3030

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum	308.22		200	89.5	P
Antimony	206.83		60	16.5	P
Arsenic	193.70	BZ	10	4.7	F
Barium	493.71		200	13.1	P
Beryllium	313.11		5	0.7	P
Cadmium	228.80		5	1.1	P
Calcium	396.85		5000	327.0	P
Chromium	267.72		10	1.8	P
Cobalt	228.62		50	3.3	P
Copper	324.75		25	2.9	P
Iron	259.94		100	30.5	P
Lead	220.36	BZ	5	1.7	F
Magnesium	279.08		5000	422.0	P
Manganese	257.61		15	1.9	P
Mercury	253.70		0.2	0.2	CV
Nickel	231.60		40	16.6	P
Potassium	766.49		5000	421.0	P
Selenium	196.03	BZ	5	3.7	F
Silver	328.07		10	6.7	P
Sodium	589.59		5000	421.0	P
Thallium	190.86	BZ	10	2.6	F
Vanadium	292.40		50	3.5	P
Zinc	213.86		20	2.6	P

U.S. EPA - CLP

11
INSTRUMENT DETECTION LIMITS (QUARTERLY)

Lab Name: ALLIED ANALYTICAL Contract: 68-W8-0059

Lab Code: ALLIED Case No.: 12004 SAS No.: _____ SDG No.: MEEB65

ICP ID Number: JA 61 Date: 04/06/89

Flame AA ID Number: AA 5000

Furnace AA ID Number: _____

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum			200		
Antimony			60		
Arsenic	193.60		10	16.3	P
Barium			200		
Beryllium			5		
Cadmium			5		
Calcium			5000		
Chromium			10		
Cobalt			50		
Copper			25		
Iron			100		
Lead	220.30		5	8.6	P
Magnesium			5000		
Manganese			15		
Mercury			0.2		
Nickel			40		
Potassium			5000		
Selenium	196.00		5	17.3	P
Silver			10		
Sodium			5000		
Thallium			10		
Vanadium			50		
Zinc			20		

U.S. EPA - CLP

11
INSTRUMENT DETECTION LIMITS (QUARTERLY)

Lab Name: ALLIED ANALYTICAL Contract: 68-W8-0059

Lab Code: ALLIED Case No.: 12004 SAS No.: _____ SDG No.: MEEB65

ICP ID Number: _____ Date: 04/06/89

Flame AA ID Number: _____

Furnace AA ID Number: PE 500

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum			200		
Antimony			60		
Arsenic	193.60	BD	10	3.0	F
Barium			200		
Beryllium			5		
Cadmium			5		
Calcium			5000		
Chromium			10		
Cobalt			50		
Copper			25		
Iron			100		
Lead	220.36	BD	5	2.0	F
Magnesium			5000		
Manganese			15		
Mercury			0.2		
Nickel			40		
Potassium			5000		
Selenium	196.03	BD	5	3.0	F
Silver			10		
Sodium			5000		
Thallium			10		
Vanadium			50		
Zinc			20		

ecology and environment, inc.

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

International Specialists in the Environment

CRL Receipt Date 6/9 FIT Receipt Date 6/19 Review Completed 6/20/89

TO: Nehrkorn

FROM: Mary Gzyra

SUBJECT: Hallie Poron LF

PAN: WI0149SA (1 hour charged for review) Case # 12004/4476

Sample Description

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

Project Data Status _____ Completed!!

✓ Incomplete, awaiting Soil org & cyanide

DW cyanide

FIT Data Review Findings:

No SV or Pest/PCB detected

Check Data Sheets for Transcription Errors

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

Book No. 9 Page No. _____ Date Sampled 5/24

0759:2

recycled paper

Table 4-_>_
RESULTS OF CHEMICAL ANALYSIS OF
FIT-COLLECTED >_____ SAMPLES

2070-13				Sample Collection Information and Parameters	Sample Number											
Physical State*	Waste Characteristics**	Category***	SI Memo		>_1	>_2	>_3	>_4	>_5	>_6	>_7	>_8	>_9	>_10	>_11	>_12
				Date												
				Time												
				Organic Traffic Report Number	EFK28	EFK29	EFK30	EFK31	EFK32	EFK33	EFK34					
				Inorganic Traffic Report Number												
				Temperature (°C)												
				Specific Conductivity (µmhos)												
				pH												
				Compound Detected (values in > µg/L or µg/kg)												
				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												
Liquid	E,H,I,A	SOL	K,CLA	acetone												
Liquid	A,H,I	SOL	SH	carbon disulfide												
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)					0.9							
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												
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					0.8							
Liquid	A,G,E	SOL	A,CLA	toluene	0.6		0.3		0.3							
Liquid	A,D,E	SOL	HH	1,1,2,2-tetrachloroethane												
Liquid	A,D,G	SOL	HA	chlorobenzene												
Liquid	A,G	SOL	A	ethylbenzene	5						-					
Liquid	A,D,G	OCC	A	styrene												
Liquid	A,G	SOL	A	xylenes (total)	19											

421

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: June 19, 1989

SUBJECT: Review of Region V CLP Data
Received for Review on 6-9-89

6/19/89

FROM: Curtis Ross, Director (5SCRL)
Central Regional Laboratory
Dorothy M. May

TO: Data User: dit

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

SITE NAME: Hallie Town LF SMO Case No. 12004SAS4476E

EPA Data Set No. SF6211 No. of Samples: 7 D.U./Activity Numbers

CRL No.

SMO Traffic No. EFK28 - 34

CLP Laboratory: Hazleton Hrs. Required for Review: 8 h. 1.5 9.5

Following are our findings:

Seven (7) residential well samples were received at the laboratory on 5.24.89. All water samples were in good condition and were analyzed for VOA, SVOA, Pesticides under SAS for low detection limits. EFK 28 is a field blank of SDG # EFK 28. The reviewer's narrative and data qualifiers are noted in the following pages.

6.15.89
L. Finkelberg
Weston / ESAT.

( ) Data are acceptable for use.
(X) Data are acceptable for use with qualifications referenced above. See Data Qualifier sheets and Calibration Outlier forms for flags and additional comments.
( ) Data are preliminary - pending verification by Contractor Laboratory. See Case Summary above.
( ) Data are unacceptable.

cc: Carla Dempsey, CLP Quality Assurance Officer, Analytical Operations Branch
James Petty, Chief Quality Assurance Research, EMSL, Las Vegas

DATA QUALIFIERS

Contractor: HAZLET.

Case 12004/4476-E

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

1. Holding time.
Laboratory received the residential well water samples on 5.24.89. All water samples for VOA, SVOa and Pesticides met holding time criteria of seven (7) days from the date of samples were received by the laboratory to analysis of VOlatiles and extraction of SVO and Pesticides except EFK30MS. This sample was extracted two days later then holding time criteria of seven days, therefore all positive results of unspiked sample EFK30MS will be estimated (J) and sample quantitation limits as estimated (UJ).

2. GC/MS tuning and GC performance.
GC/MS tuning complied with the mass list and ion abundance criteria for BFB and DFTPP.
DDT Retention time is >12 min on wide-bore capillary column.
The % D for evaluation of RT's shift for DBC was >1.5% for wide-bore capillary column DB-5 for the standard AR 1221. Lab. narrative states, that a new standard will be prepared, but evaluation of RT shift for DBC with a new standard were not included in data package, therefore any positive result in associated samples is flagged ~~unusable (R)~~ estimated "J" and negative results unusable "R" WSW 6/16/89

3. Calibration
Initial and continuing calibration of VOA and SVOa were calculated for the TCL and outliers were recorded in the outliers form, included as part of these narrative.

Reviewed by: Z. Finkelberg

Phone: 353-2964

DATA QUALIFIERS

Contractor: HAZLET.

Case 12004/4476-E

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

Calibration (CONTIN.)

According to the SAS request for CLP, Initial Calibration for SVOa of drinking water with low detection limits should should be run at 5, 10, 20, 50 and 100 ng, except for Benzoic Acid; 2,4-dinitrophenol; 2,4,5-trichlorophenol, 4-nitrophenol; 4,6-dinitro-2-methylphenol and pentachlorophenol which should be analyzed at 20, 50, 80, 100 and 200 total ng. Initial calibration of SVO in SDG#EFK28 were run at 20, 50, 80, 120 and 160 ng. Linearity check of pesticides based on calibration Factor (CF) of evaluation mix A, B, C were within 10% RSD for quantitation column DB-5.

The % D between calibration factors is <15% for compounds being quantitated and <20% for the compounds being confirmed.

4. Method blank.

VBLK08 and VBLK09 contained Methylene Chloride and Acetone. The presence of those compounds (common lab. contaminants) in any associated samples was flagged as non-detected (U) when sample result was <10x the blank result. Volatile BLANK SUMMARY (Form IV-VOA) lists the associated samples. SBLK16 and SBLK 21 showed presence of Di-n-butylphthalate, butylbenzylphthalate and bis(2-Ethylhexyl)phthalate. and TICs (one TIC in SBLK 16 and 3 TICs in SBLK 21). The presence of Phthalates (common lab. contaminants) in a corresponding associated samples at <10x the blank concentration raises

Reviewed by: Z. Finkelberg

Phone: 353-2964

DATA QUALIFIERS

Contractor: HAZLET

Case/12004/4476-E.

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

Method blank (CONTIN.)
the limit of detection, therefore any positive result under this value is qualified as a non-detected and flagged (u). SVOa BLANK Summary (Form IV-SD lists the associated samples.
Pesticide blank PBLK01 was clean.

5. Surrogate recovery.
VOA SVOa and Pesticide surrogate recovery in SDG# EFK 28 met QC criteria.
SVOa surrogate recovery of 2-Fluorophenol in EFK 30MSD fell below the lower QC limit of 21%, but no qualification with respect to surrogate recovery is pleased on data, because only one surrogate is out of specification in the acid fraction.

6. Matrix Spike and Matrix Spike Duplicate.
Water sample EFK30 was used as water spike for VOA, SVOa and Pesticides.
VOA and Pesticides MS/MSD recovery and % RPD's met QC limits.
SV fraction: The MSD persent recovery of Pentachlorophenol for sample EFK30 is 0%. The % RPD for Pentachlorophenol (200%) is above the upper QC limit of 50%.
The MSD persent recovery of 4-Nitrophenol for sample EFK30 is 1% and % RPD is 175% (above the upper QC limit of 50%), therefore any positive result of Pentachlorophenol and 4-Nitrophenol in unspiked sample EFK30 is flagged as estimated (J)

Reviewed by: Z. Finkelberg 6.15.89

Phone: 353-2964

DATA QUALIFIERS

Contractor: HAZLET

Case 12004/4476-E

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

Matrix Spike /Matrix Spike Duplicate (contin.)
and any non-detected result of those two compounds in unspiked sample EFK30 is flagged as estimated (UJ) with the quantitation limit. All other SVOa MS/MSD recovery and % RPDs met QC criteria.

7. Field Blank and Field Duplicate.
EFK28 is a field blank for SDG # EFK28.
Field Blank containes Toluene, Ethylbenzene, Total Xylene.
No field duplicate in SDG # EFK28.

8. Internal standard.
VOA and SVOa internal standard area count and RT's met QC criteria.

9. Compound Quantitation and Reporting Detection limits.
TCL quantitation of SVOa, VOA and Pesticides were properly reported.

10. Additional Case Specific Problems.
The data in this case are acceptable with respect to the above qualifications.
The lab. narrative states, that "the concentration of cis- and trans-1,3 dichloropropenes in the calibration runs are different than those specified by the SAS". The actual concentration were used to calculate the RF for cis- and trans-1,3 dichloropropene.

Reviewed by: Z. Finkelberg
Phone: 353-2964
Date: 6.15.89

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

CASE/SAS # 12004/4476-E CONTRACTOR HAZLET

Instrument #INC 50A	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	4.19.89			5.26.89 11:23			5.30.89 11:55								
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
Chloromethane															
Bromomethane															
Vinyl Chloride															
Chloroethane															
Methylene Chloride															
Acetone	.124	39.4	J												
Carbon Disulfide															
1,1-Dichloroethane															
1,1-Dichloroethene															
Trans-1,2-Dichloroethene															
Chloroform															
2-Butanone	0.003	29.8	R	0.003	33.3	R	0.003	33.3	R						
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	.190	13.3	R	.190	3.7	R	.193	3.2	R						
4-Methyl-2-Pentanone															
2-Hexanone	.064			.064	31.3	J	.064	37.5	J						
Tetrachloroethene															
1,1,2,2-Tetrachloroethane	.252	4.5	R	.252	0	R	.252	3.6	R						
Toluene															
Chlorobenzene															
Ethylbenzene															
Styrene															
m-Xylene															
o/p-Xylene															

AFFECTED SAMPLES:

VBLK 08	VBLK 09	
EFK 28	EFK 34	
EFK 29	777	
EFK 30		
EFK 31		
EFK 32		
EFK 33		
EFK 30MS		
EFK 30MSD		

Reviewer's Initials/Date: Z. Finkelberg 6.15.89

* 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 # 12006/4476-E CONTRACTOR HAZLET

Instrument # INC 50B	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	5.30.89			5.31.89 18:30			6.2.89 21:20								
	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															
Dibenzofuran															

AFFECTED SAMPLES:

SBLK16	EFK 30MS	
EFK 28	SBLK 21	
EFK 29		
EFK 30		
EFK30MSD		
EFK 31		
EFK 32		
EFK 33		
EFK 34		

Reviewer Initials/Date: Z. Finkelberg 6.15.89

* 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 # 12004/4476E CONTRACTOR HAZLET

Instrument #	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	5.30.89			5.31.89 8:36			6.2.89 21:20								
	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: L. Finkelberg 6.15.89

8/87

EXPLAINATION OF DATA QUALIFIERS

For reporting results to the USEPA, the following contract specific qualifiers are to be used. The seven qualifiers defined below are not subject to modification by the laboratory. Up to five qualifiers may be reported on Form I for each compound.

The seven EPA-defined qualifiers to be used are as follows:

U - Indicates compound was analyzed for 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

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 samples 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 of 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 ≥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 in Exhibit D. 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. NOTE: For total xylenes, where three isomers are quantified as two peaks, the calibration range of each peak should be considered separately, e.g., a diluted analysis is not required for total xylenes unless the concentration of either peak separately exceeds 200 ug/L.

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 a TIC is a suspected aldol-condensation product.

X - Other specific flags 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. Begin by using "X". If more than one flag 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 samples.

The combination of flags "BU" or "UB" is expressly prohibited. Blank contaminants are flagged "B" only when they are also detected in the sample.

If analyses at two different dilution factors are required (see Exhibit D), follow the data reporting instructions given in Exhibit D and with the "D" and "E" flags above.

SAMPLE DELIVERY GROUP (SDG)
TRAFFIC REPORT (TR) COVER SHEET

Lab Name: Hazleton Laboratories Contract No.: 68-01-7418

Lab Code: HAZLET ~~Case~~ Set No.: 12004 SAS No.: 4476-E

Full Sample Analysis Price in Contract: $ 978.00

SDG No./First Sample in SDG: EFK 28 Sample Receipt Date: 5/25/89 (MM/DD/YY)
(Lowest EPA Sample Number in first shipment of samples received under SDG)

Last Sample in SDG: EFK 34 Sample Receipt Date: 5/25/89 (MM/DD/YY)
(Highest EPA Sample Number in last shipment of samples received under SDG)

full TCL

EPA Sample Numbers in the SDG (listed in alphanumeric order):

1	EFK 28	11	
2	EFK 29	12	
3	EFK 30	13	
4	EFK 31	14	
5	EFK 32	15	
6	EFK 33	16	
7	EFK 34	17	
8		18	
9		19	
10		20	

Note: There are a maximum of 20 field samples in an SDG.

Attach Traffic Reports to this form in alphanumeric order (i.e., the order listed on this form).

Amy Austin 5/25/89

Sample Custodian Date

Set

EPA

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: 12004
SAS No. (if applicable): 4476E

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)

2. Region Number: V
Sampling Co.: FIT
Sampler (Name): KAREN M. Spangler
3. Ship To: HAZLETON LABS, INC. 515 SCIENCE DRIVE MADISON, WI 53711 Attn: Steven Crupi

4. Date Shipped: 5/24/89
Airbill Number: 9071157465
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: 5/25/89
Received by: Amy Austin
Laboratory Contract Number: 68-01-7418
Unit Price: $978.00
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) Soil	Water—MIS Liq.	Non Water—MIS Liq.
EFK28	3	L	X	X	X	Blank			MEEB72	Samples rec'd			
EFK29	2	L	X	X	X				MEEB73	cool; intact;			
EFK30	2	L	X	X	X				MEEB74	under custody			
EFK31	2	L	X	X	X				MEEB75	and in good			
EFK32	2	L	X	X	X				MEEB76	condition			
EFK33	2	L	X	X	X				MEEB77				
EFK34	2	L	X	X	X				MEEB78	SDG # is EFK 28			
										last sample SDG # is EFK 34			
	Shipment			Complete									

EPA Form 9110-2 (8-89) 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

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFK28

Lab Name: HAZLET Contract: 68-01-7418

Lab Code: HAZLET Set No.: 12004 SAS No.: 4476-E SDG No.: EFK28

Matrix: (soil/water) WATER Lab Sample ID: 90505456

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: 905CA127

Level: (low/med) 25ML Date Received: 05/25/89

% Moisture: not dec. ____ Date Analyzed: 05/26/89

Column: (pack/cap) PACK Dilution Factor: 1.0

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

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	0.4	U
74-83-9	Bromomethane	0.3	U
75-01-4	Vinyl Chloride	0.3	U
75-00-3	Chloroethane	0.2	U
75-09-2	Methylene Chloride	1.7	~~B~~ LL 6.15.89
67-64-1	Acetone	8	~~B~~ LL L.F.
75-15-0	Carbon Disulfide	0.2	U
75-35-4	1,1-Dichloroethene	0.2	U
75-34-3	1,1-Dichloroethane	0.2	U
540-59-0	1,2-Dichloroethene (total)	0.2	U
67-66-3	Chloroform	0.2	U
107-06-2	1,2-Dichloroethane	0.6	U
78-93-3	2-Butanone	5	U
71-55-6	1,1,1-Trichloroethane	0.2	U
56-23-5	Carbon Tetrachloride	0.2	U
108-05-4	Vinyl Acetate	0.3	U
75-27-4	Bromodichloromethane	0.2	U
78-87-5	1,2-Dichloropropane	0.2	U
10061-01-5	cis-1,3-Dichloropropene	0.4	U
79-01-6	Trichloroethene	0.2	U
124-48-1	Dibromochloromethane	0.2	U
79-00-5	1,1,2-Trichloroethane	0.2	U
71-43-2	Benzene	0.2	U
10061-02-6	Trans-1,3-Dichloropropene	0.3	U
75-25-2	Bromoform	0.7	U
108-10-1	4-Methyl-2-Pentanone	1	U
591-78-6	2-Hexanone	1	U
127-18-4	Tetrachloroethene	0.2	U
79-34-5	1,1,2,2-Tetrachloroethane	0.2	U
108-88-3	Toluene	0.6	
108-90-7	Chlorobenzene	0.2	U
100-41-4	Ethylbenzene	5	
100-42-5	Styrene	0.3	U
1330-20-7	Xylenes (total)	19	
107-02-8	Acrolein	4	U
107-13-1	Acrylonitrile	5	U

FORM I VOA 1/87 Rev.

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EFK28

Lab Name: HAZLET Contract: 68-01-7418

Lab Code: HAZLET Set No.: 12004 SAS No.: 4476-E SDG No.: EFK28

Matrix: (soil/water) WATER Lab Sample ID: 90505456

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: 905CA127

Level: (low/med) 25ML Date Received: 05/25/89

% Moisture: not dec. ____ Date Analyzed: 05/26/89

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

FORM I VOA-TIC 1/87 Rev.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFK29

Lab Name: HAZLET Contract: 68-01-7418

Lab Code: HAZLET Set No.: 12004 SAS No.: 4476-E SDG No.: EFK28

Matrix: (soil/water) WATER Lab Sample ID: 90505457

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: 905CA128

Level: (low/med) 25ML Date Received: 05/25/89

% Moisture: not dec. ____ Date Analyzed: 05/26/89

Column: (pack/cap) PACK Dilution Factor: 1.0

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

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	0.4	U
74-83-9	Bromomethane	0.3	U
75-01-4	Vinyl Chloride	0.3	U
75-00-3	Chloroethane	0.2	U
75-09-2	Methylene Chloride	1.7 ~~0.8~~	~~BJ~~ U 6.15.89 L.F.
67-64-1	Acetone	3	~~B~~ U
75-15-0	Carbon Disulfide	0.2	U
75-35-4	1,1-Dichloroethene	0.2	U
75-34-3	1,1-Dichloroethane	0.2	U
540-59-0	1,2-Dichloroethene (total)	0.2	U
67-66-3	Chloroform	0.2	U
107-06-2	1,2-Dichloroethane	0.6	U
78-93-3	2-Butanone	5	U
71-55-6	1,1,1-Trichloroethane	0.2	U
56-23-5	Carbon Tetrachloride	0.2	U
108-05-4	Vinyl Acetate	0.3	U
75-27-4	Bromodichloromethane	0.2	U
78-87-5	1,2-Dichloropropane	0.2	U
10061-01-5	cis-1,3-Dichloropropene	0.4	U
79-01-6	Trichloroethene	0.2	U
124-48-1	Dibromochloromethane	0.2	U
79-00-5	1,1,2-Trichloroethane	0.2	U
71-43-2	Benzene	0.2	U
10061-02-6	Trans-1,3-Dichloropropene	0.3	U
75-25-2	Bromoform	0.7	U
108-10-1	4-Methyl-2-Pentanone	1	U
591-78-6	2-Hexanone	1	U
127-18-4	Tetrachloroethene	0.2	U
79-34-5	1,1,2,2-Tetrachloroethane	0.2	U
108-88-3	Toluene	0.3	U
108-90-7	Chlorobenzene	0.2	U
100-41-4	Ethylbenzene	0.2	U
100-42-5	Styrene	0.3	U
1330-20-7	Xylenes (total)	0.3	U
107-02-8	Acrolein	4	U
107-13-1	Acrylonitrile	5	U

FORM I VOA 1/87 Rev.

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EFK29

Lab Name: HAZLET Contract: 68-01-7418

Lab Code: HAZLET Set No.: 12004 SAS No.: 4476-E SDG No.: EFK28

Matrix: (soil/water) WATER Lab Sample ID: 90505457

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: 905CA128

Level: (low/med) 25ML Date Received: 05/25/89

% Moisture: not dec. ____ Date Analyzed: 05/26/89

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	G

FORM I VOA-TIC 1/87 Rev.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFK30

Lab Name: HAZLET Contract: 68-01-7418

Lab Code: HAZLET Set No.: 12004 SAS No.: 4476-E SDG No.: EFK28

Matrix: (soil/water) WATER Lab Sample ID: 90505458

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: 905CA129

Level: (low/med) 25ML Date Received: 05/25/89

% Moisture: not dec. ____ Date Analyzed: 05/26/89

Column: (pack/cap) PACK Dilution Factor: 1.0

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

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	0.4	U
74-83-9	Bromomethane	0.3	U
75-01-4	Vinyl Chloride	0.3	U
75-00-3	Chloroethane	0.2	U
75-09-2	Methylene Chloride	1.7 ~~1~~	~~B~~ BL
67-64-1	Acetone	7	~~B~~ BL
75-15-0	Carbon Disulfide	0.2	U
75-35-4	1,1-Dichloroethene	0.2	U
75-34-3	1,1-Dichloroethane	0.2	U
540-59-0	1,2-Dichloroethene (total)	0.2	U
67-66-3	Chloroform	0.2	U
107-06-2	1,2-Dichloroethane	0.6	U
78-93-3	2-Butanone	5	U
71-55-6	1,1,1-Trichloroethane	0.2	U
56-23-5	Carbon Tetrachloride	0.2	U
108-05-4	Vinyl Acetate	0.3	U
75-27-4	Bromodichloromethane	0.2	U
78-87-5	1,2-Dichloropropane	0.2	U
10061-01-5	cis-1,3-Dichloropropene	0.4	U
79-01-6	Trichloroethene	0.2	U
124-48-1	Dibromochloromethane	0.2	U
79-00-5	1,1,2-Trichloroethane	0.2	U
71-43-2	Benzene	0.2	U
10061-02-6	Trans-1,3-Dichloropropene	0.3	U
75-25-2	Bromoform	0.7	U
108-10-1	4-Methyl-2-Pentanone	1	U
591-78-6	2-Hexanone	1	U
127-18-4	Tetrachloroethene	0.2	U
79-34-5	1,1,2,2-Tetrachloroethane	0.2	U
108-88-3	Toluene	0.3	
108-90-7	Chlorobenzene	0.2	U
100-41-4	Ethylbenzene	0.2	U
100-42-5	Styrene	0.3	U
1330-20-7	Xylenes (total)	0.3	U
107-02-8	Acrolein	4	U
107-13-1	Acrylonitrile	5	U

6.15.89 L.F.

FORM I VOA 1/87 Rev.

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EFK30

Lab Name: HAZLET Contract: 68-01-7418

Lab Code: HAZLET Set No.: 12004 SAS No.: 4476-E SDG No.: EFK28

Matrix: (soil/water) WATER Lab Sample ID: 90505458

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: 905CA129

Level: (low/med) 25ML Date Received: 05/25/89

% Moisture: not dec. ____ Date Analyzed: 05/26/89

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

FORM I VOA-TIC 1/87 Rev.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFK31

Lab Name: HAZLET Contract: 68-01-7418

Lab Code: HAZLET Set No.: 12004 SAS No.: 4476-E SDG No.: EFK28

Matrix: (soil/water) WATER Lab Sample ID: 90505461

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: 905CA130

Level: (low/med) 25ML Date Received: 05/25/89

% Moisture: not dec. ____ Date Analyzed: 05/26/89

Column: (pack/cap) PACK Dilution Factor: 1.0

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

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	0.4	U
74-83-9	Bromomethane	0.3	U
75-01-4	Vinyl Chloride	0.3	U
75-00-3	Chloroethane	0.2	U
75-09-2	Methylene Chloride	1.7 ~~0.6~~	~~B~~ U 6.1589
67-64-1	Acetone	3	~~B~~ U L.F.
75-15-0	Carbon Disulfide	0.2	U
75-35-4	1,1-Dichloroethene	0.2	U
75-34-3	1,1-Dichloroethane	0.2	U
540-59-0	1,2-Dichloroethene (total)	0.2	U
67-66-3	Chloroform	0.2	U
107-06-2	1,2-Dichloroethane	0.6	U
78-93-3	2-Butanone	5	U
71-55-6	1,1,1-Trichloroethane	0.2	U
56-23-5	Carbon Tetrachloride	0.2	U
108-05-4	Vinyl Acetate	0.3	U
75-27-4	Bromodichloromethane	0.2	U
78-87-5	1,2-Dichloropropane	0.2	U
10061-01-5	cis-1,3-Dichloropropene	0.4	U
79-01-6	Trichloroethene	0.2	U
124-48-1	Dibromochloromethane	0.2	U
79-00-5	1,1,2-Trichloroethane	0.2	U
71-43-2	Benzene	0.2	U
10061-02-6	Trans-1,3-Dichloropropene	0.3	U
75-25-2	Bromoform	0.7	U
108-10-1	4-Methyl-2-Pentanone	1	U
591-78-6	2-Hexanone	1	U
127-18-4	Tetrachloroethene	0.2	U
79-34-5	1,1,2,2-Tetrachloroethane	0.2	U
108-88-3	Toluene	0.3	U
108-90-7	Chlorobenzene	0.2	U
100-41-4	Ethylbenzene	0.2	U
100-42-5	Styrene	0.3	U
1330-20-7	Xylenes (total)	0.3	U
107-02-8	Acrolein	4	U
107-13-1	Acrylonitrile	5	U

FORM I VOA 1/87 Rev.

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EFK31

Lab Name: HAZLET Contract: 68-01-7418

Lab Code: HAZLET Set No.: 12004 SAS No.: 4476-E SDG No.: EFK28

Matrix: (soil/water) WATER Lab Sample ID: 90505461

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: 905CA130

Level: (low/med) 25ML Date Received: 05/25/89

% Moisture: not dec. ____ Date Analyzed: 05/26/89

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

FORM I VOA-TIC 1/87 Rev.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFK32

Lab Name: HAZLET Contract: 68-01-7418

Lab Code: HAZLET Set No.: 12004 SAS No.: 4476-E SDG No.: EFK28

Matrix: (soil/water) WATER Lab Sample ID: 90505462

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: 905CA131

Level: (low/med) 25ML Date Received: 05/25/89

% Moisture: not dec. ____ Date Analyzed: 05/26/89

Column: (pack/cap) PACK Dilution Factor: 1.0

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

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	0.4	U
74-83-9	Bromomethane	0.3	U
75-01-4	Vinyl Chloride	0.3	U
75-00-3	Chloroethane	0.2	U
75-09-2	Methylene Chloride	1.7 ~~1~~	~~B~~ JU 6.15.89
67-64-1	Acetone	6	~~B~~ JU L.F.
75-15-0	Carbon Disulfide	0.2	U
75-35-4	1,1-Dichloroethene	0.2	U
75-34-3	1,1-Dichloroethane	0.2	U
540-59-0	1,2-Dichloroethene (total)	0.9	
67-66-3	Chloroform	0.2	U
107-06-2	1,2-Dichloroethane	0.6	U
78-93-3	2-Butanone	5	U
71-55-6	1,1,1-Trichloroethane	0.2	U
56-23-5	Carbon Tetrachloride	0.2	U
108-05-4	Vinyl Acetate	0.3	U
75-27-4	Bromodichloromethane	0.2	U
78-87-5	1,2-Dichloropropane	0.2	U
10061-01-5	cis-1,3-Dichloropropene	0.4	U
79-01-6	Trichloroethene	0.2	U
124-48-1	Dibromochloromethane	0.2	U
79-00-5	1,1,2-Trichloroethane	0.2	U
71-43-2	Benzene	0.2	U
10061-02-6	Trans-1,3-Dichloropropene	0.3	U
75-25-2	Bromoform	0.7	U
108-10-1	4-Methyl-2-Pentanone	1	U
591-78-6	2-Hexanone	1	U
127-18-4	Tetrachloroethene	0.8	
79-34-5	1,1,2,2-Tetrachloroethane	0.2	U
108-88-3	Toluene	0.3	
108-90-7	Chlorobenzene	0.2	U
100-41-4	Ethylbenzene	0.2	U
100-42-5	Styrene	0.3	U
1330-20-7	Xylenes (total)	0.3	U
107-02-8	Acrolein	4	U
107-13-1	Acrylonitrile	5	U

FORM I VOA 1/87 Rev.

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EFK32

Lab Name: HAZLET Contract: 68-01-7418

Lab Code: HAZLET Set No.: 12004 SAS No.: 4476-E SDG No.: EFK28

Matrix: (soil/water) WATER Lab Sample ID: 90505462

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: 905CA131

Level: (low/med) 25ML Date Received: 05/25/89

% Moisture: not dec. ____ Date Analyzed: 05/26/89

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

FORM I VOA-TIC 1/87 Rev.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFK33

Lab Name: HAZLET Contract: 68-01-7418

Lab Code: HAZLET Set No.: 12004 SAS No.: 4476-E SDG No.: EFK28

Matrix: (soil/water) WATER Lab Sample ID: 90505463

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: 905CA132

Level: (low/med) 25ML Date Received: 05/25/89

% Moisture: not dec. ____ Date Analyzed: 05/26/89

Column: (pack/cap) PACK Dilution Factor: 1.0

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

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	0.4	U
74-83-9	Bromomethane	0.3	U
75-01-4	Vinyl Chloride	0.3	U
75-00-3	Chloroethane	0.2	U
75-09-2	Methylene Chloride	1.7 ~~0.8~~	~~B~~ BU 6.15.89
67-64-1	Acetone	3	~~B~~ BU L.F.
75-15-0	Carbon Disulfide	0.2	U
75-35-4	1,1-Dichloroethene	0.2	U
75-34-3	1,1-Dichloroethane	0.2	U
540-59-0	1,2-Dichloroethene (total)	0.2	U
67-66-3	Chloroform	0.2	U
107-06-2	1,2-Dichloroethane	0.6	U
78-93-3	2-Butanone	5	U
71-55-6	1,1,1-Trichloroethane	0.2	U
56-23-5	Carbon Tetrachloride	0.2	U
108-05-4	Vinyl Acetate	0.3	U
75-27-4	Bromodichloromethane	0.2	U
78-87-5	1,2-Dichloropropane	0.2	U
10061-01-5	cis-1,3-Dichloropropene	0.4	U
79-01-6	Trichloroethene	0.2	U
124-48-1	Dibromochloromethane	0.2	U
79-00-5	1,1,2-Trichloroethane	0.2	U
71-43-2	Benzene	0.2	U
10061-02-6	Trans-1,3-Dichloropropene	0.3	U
75-25-2	Bromoform	0.7	U
108-10-1	4-Methyl-2-Pentanone	1	U
591-78-6	2-Hexanone	1	U
127-18-4	Tetrachloroethene	0.2	U
79-34-5	1,1,2,2-Tetrachloroethane	0.2	U
108-88-3	Toluene	0.3	U
108-90-7	Chlorobenzene	0.2	U
100-41-4	Ethylbenzene	0.2	U
100-42-5	Styrene	0.3	U
1330-20-7	Xylenes (total)	0.3	U
107-02-8	Acrolein	4	U
107-13-1	Acrylonitrile	5	U

FORM I VOA 1/87 Rev.

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EFK33

Lab Name: HAZLET Contract: 68-01-7418

Lab Code: HAZLET Set No.: 12004 SAS No.: 4476-E SDG No.: EFK28

Matrix: (soil/water) WATER Lab Sample ID: 90505463

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: 905CA132

Level: (low/med) 25ML Date Received: 05/25/89

% Moisture: not dec. ____ Date Analyzed: 05/26/89

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

FORM I VOA-TIC 1/87 Rev.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFK34

Lab Name: HAZLET Contract: 68-01-7418

Lab Code: HAZLET Set No.: 12004 SAS No.: 4476-E SDG No.: EFK28

Matrix: (soil/water) WATER Lab Sample ID: 90505464

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: 905CA138

Level: (low/med) 25ML Date Received: 05/25/89

% Moisture: not dec. ____ Date Analyzed: 05/30/89

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	0.4	U
74-83-9	Bromomethane	0.3	U
75-01-4	Vinyl Chloride	0.3	U
75-00-3	Chloroethane	0.2	U
75-09-2	Methylene Chloride	1.7 ~~1~~	~~B~~ JL 6.15.89
67-64-1	Acetone	25	~~B~~ LL L.F.
75-15-0	Carbon Disulfide	0.2	U
75-35-4	1,1-Dichloroethene	0.2	U
75-34-3	1,1-Dichloroethane	0.2	U
540-59-0	1,2-Dichloroethene (total)	0.2	U
67-66-3	Chloroform	0.2	U
107-06-2	1,2-Dichloroethane	0.6	U
78-93-3	2-Butanone	5	U
71-55-6	1,1,1-Trichloroethane	0.2	U
56-23-5	Carbon Tetrachloride	0.2	U
108-05-4	Vinyl Acetate	0.3	U
75-27-4	Bromodichloromethane	0.2	U
78-87-5	1,2-Dichloropropane	0.2	U
10061-01-5	cis-1,3-Dichloropropene	0.4	U
79-01-6	Trichloroethene	0.2	U
124-48-1	Dibromochloromethane	0.2	U
79-00-5	1,1,2-Trichloroethane	0.2	U
71-43-2	Benzene	0.2	U
10061-02-6	Trans-1,3-Dichloropropene	0.3	U
75-25-2	Bromoform	0.7	U
108-10-1	4-Methyl-2-Pentanone	1	U
591-78-6	2-Hexanone	1	U
127-18-4	Tetrachloroethene	0.2	U
79-34-5	1,1,2,2-Tetrachloroethane	0.2	U
108-88-3	Toluene	0.3	U
108-90-7	Chlorobenzene	0.2	U
100-41-4	Ethylbenzene	0.2	U
100-42-5	Styrene	0.3	U
1330-20-7	Xylenes (total)	0.3	U
107-02-8	Acrolein	4	U
107-13-1	Acrylonitrile	5	U

FORM I VOA 1/87 Rev.

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EFK34

Lab Name: HAZLET Contract: 68-01-7418

Lab Code: HAZLET Set No.: 12004 SAS No.: 4476-E SDG No.: EFK28

Matrix: (soil/water) WATER Lab Sample ID: 90505464

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: 905CA138

Level: (low/med) 25ML Date Received: 05/25/89

% Moisture: not dec. ____ Date Analyzed: 05/30/89

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

FORM I VOA-TIC 1/87 Rev.

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFK28

Lab Name: HAZLET Contract: 68-01-7418

Lab Code: HAZLET ~~Case~~ SCT 06/7/89 No.: 12004 SAS No.: 4476-E SDG No.: EFK28

Matrix: (soil/water) WATER Lab Sample ID: 90505456

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 905CB205

Level: (low/med) LOW Date Received: 05/25/89

% Moisture: not dec. ____ dec. ____ Date Extracted: 05/26/89

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 05/31/89

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	1	U
111-44-4	bis(2-Chloroethyl)Ether	0.8	U
95-57-8	2-Chlorophenol	2	U
541-73-1	1,3-Dichlorobenzene	0.6	U
106-46-7	1,4-Dichlorobenzene	0.7	U
100-51-6	Benzyl Alcohol	2	U
95-50-1	1,2-Dichlorobenzene	0.7	U
95-48-7	2-Methylphenol	1	U
39638-32-9	bis(2-Chloroisopropyl)Ether	3	U
106-44-5	4-Methylphenol	1	U
621-64-7	N-Nitroso-Di-n-Propylamine	2	U
67-72-1	Hexachloroethane	2	U
98-95-3	Nitrobenzene	5	U
78-59-1	Isophorone	2	U
88-75-5	2-Nitrophenol	3	U
105-67-9	2,4-Dimethylphenol	2	U
65-85-0	Benzoic Acid	50	U
111-91-1	bis(2-Chloroethoxy)Methane	0.7	U
120-83-2	2,4-Dichlorophenol	2	U
120-82-1	1,2,4-Trichlorobenzene	0.9	U
91-20-3	Naphthalene	0.4	U
106-47-8	4-Chloroaniline	2	U
87-68-3	Hexachlorobutadiene	1	U
59-50-7	4-Chloro-3-methylphenol	2	U
91-57-6	2-Methylnaphthalene	0.5	U
77-47-4	Hexachlorocyclopentadiene	1	U
88-06-2	2,4,6-Trichlorophenol	2	U
95-95-4	2,4,5-Trichlorophenol	3	U
91-58-7	2-Chloronaphthalene	0.9	U
88-74-4	2-Nitroaniline	2	U
131-11-3	Dimethyl Phthalate	0.9	U
208-96-8	Acenaphthylene	0.5	U
606-20-2	2,6-Dinitrotoluene	0.9	U

FORM I SV-1 1/87 Rev.

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFK28

Lab Name: HAZLET SCT 6/7/89 Contract: 68-01-7418

Lab Code: HAZLET ~~Case~~ No.: 12004 SAS No.: 4476-E SDG No.: EFK28

Matrix: (soil/water) WATER Lab Sample ID: 90505456

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 905CB205

Level: (low/med) LOW Date Received: 05/25/89

% Moisture: not dec. ____ dec. ____ Date Extracted: 05/26/89

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 05/31/89

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q	
99-09-2	3-Nitroaniline	1	U	
83-32-9	Acenaphthene	0.5	U	
51-28-5	2,4-Dinitrophenol	35	U	
100-02-7	4-Nitrophenol	10	U	
132-64-9	Dibenzofuran	0.5	U	
121-14-2	2,4-Dinitrotoluene	0.9	U	
84-66-2	Diethylphthalate	0.9	U	
7005-72-3	4-Chlorophenyl-phenylether	1	U	
86-73-7	Fluorene	0.5	U	
100-10-6	4-Nitroaniline	2	U	
534-52-1	4,6-Dinitro-2-methylphenol	8	U	
86-30-6	N-Nitrosodiphenylamine (1)	0.7	U	
101-55-3	4-Bromophenyl-phenylether	0.9	U	
118-74-1	Hexachlorobenzene	1	U	
87-86-5	Pentachlorophenol	6	U	
85-01-8	Phenanthrene	0.3	U	
120-12-7	Anthracene	0.4	U	
84-74-2	Di-n-Butylphthalate	2	~~B~~ U	6.15.89
206-44-0	Fluoranthene	1	U	
129-00-0	Pyrene	1	U	
85-68-7	Butylbenzylphthalate	3.0 ~~0.6~~	~~B~~ U	L.F.
91-94-1	3,3'-Dichlorobenzidine	3	U	
56-55-3	Benzo(a)anthracene	0.3	U	
218-01-9	Chrysene	0.4	U	
117-81-7	bis(2-Ethylhexyl)phthalate	2.0 ~~0.9~~	~~B~~ U	6.15.89
117-84-0	Di-n-octylphthalate	2	U	L.F.
205-99-2	Benzo(b)fluoranthene	1	U	
207-08-9	Benzo(k)fluoranthene	2	U	
50-32-8	Benzo(a)pyrene	0.4	U	
193-39-5	Indeno(1,2,3-cd)Pyrene	2	U	
53-70-3	Dibenz(a,h)Anthracene	1	U	
191-24-2	Benzo(g,h,i)perylene	1	U	

(1) - Cannot be separated from Diphenylamine

SAS 4476E SET 12004 SEMIVOLATILES

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EFK28

Lab Name: HAZLET Contract: 68-01-7418

Lab Code: HAZLET ~~Case~~ SCT No.: 12004 SAS No.: 4476-E SDG No.: EFK28

Matrix: (soil/water) WATER Lab Sample ID: 90505456

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 905CB205

Level: (low/med) LOW Date Received: 05/25/89

% Moisture: not dec. ____ dec. ____ Date Extracted: 05/26/89

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 05/31/89

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

Number TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 128-37-0	PHENOL, 2,6-BIS(1,1-DIMETHYL	17.15	2.9	J

FORM I SV-TIC 1/87 Rev.

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFK29

Lab Name: HAZLET SCT 6/7/89 Contract: 68-01-7418

Lab Code: HAZLET ~~Case~~ No.: 12004 SAS No.: 4476-E SDG No.: EFK28

Matrix: (soil/water) WATER Lab Sample ID: 90505457

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 905CB206

Level: (low/med) LOW Date Received: 05/25/89

% Moisture: not dec. ____ dec. ____ Date Extracted: 05/26/89

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 05/31/89

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	1	U
111-44-4	bis(2-Chloroethyl)Ether	0.8	U
95-57-8	2-Chlorophenol	2	U
541-73-1	1,3-Dichlorobenzene	0.6	U
106-46-7	1,4-Dichlorobenzene	0.7	U
100-51-6	Benzyl Alcohol	2	U
95-50-1	1,2-Dichlorobenzene	0.7	U
95-48-7	2-Methylphenol	1	U
39638-32-9	bis(2-Chloroisopropyl)Ether	3	U
106-44-5	4-Methylphenol	1	U
621-64-7	N-Nitroso-Di-n-Propylamine	2	U
67-72-1	Hexachloroethane	2	U
98-95-3	Nitrobenzene	5	U
78-59-1	Isophorone	2	U
88-75-5	2-Nitrophenol	3	U
105-67-9	2,4-Dimethylphenol	2	U
65-85-0	Benzoic Acid	50	U
111-91-1	bis(2-Chloroethoxy)Methane	0.7	U
120-83-2	2,4-Dichlorophenol	2	U
120-82-1	1,2,4-Trichlorobenzene	0.9	U
91-20-3	Naphthalene	0.4	U
106-47-8	4-Chloroaniline	2	U
87-68-3	Hexachlorobutadiene	1	U
59-50-7	4-Chloro-3-methylphenol	2	U
91-57-6	2-Methylnaphthalene	0.5	U
77-47-4	Hexachlorocyclopentadiene	1	U
88-06-2	2,4,6-Trichlorophenol	2	U
95-95-4	2,4,5-Trichlorophenol	3	U
91-58-7	2-Chloronaphthalene	0.9	U
88-74-4	2-Nitroaniline	2	U
131-11-3	Dimethyl Phthalate	0.9	U
208-96-8	Acenaphthylene	0.5	U
606-20-2	2,6-Dinitrotoluene	0.9	U

FORM I SV-1 1/87 Rev.

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFK29

Lab Name: HAZLET Contract: 68-01-7418

Lab Code: HAZLET ~~Case~~ SET No.: 12004 SAS No.: 4476-E SDG No.: EFK28

Matrix: (soil/water) WATER Lab Sample ID: 90505457

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 905CB206

Level: (low/med) LOW Date Received: 05/25/89

% Moisture: not dec. ____ dec. ____ Date Extracted: 05/26/89

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 05/31/89

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q	
99-09-2	3-Nitroaniline	1	U	
83-32-9	Acenaphthene	0.5	U	
51-28-5	2,4-Dinitrophenol	35	U	
100-02-7	4-Nitrophenol	10	U	
132-64-9	Dibenzofuran	0.5	U	
121-14-2	2,4-Dinitrotoluene	0.9	U	
84-66-2	Diethylphthalate	0.9	U	
7005-72-3	4-Chlorophenyl-phenylether	1	U	
86-73-7	Fluorene	0.5	U	
100-10-6	4-Nitroaniline	2	U	
534-52-1	4,6-Dinitro-2-methylphenol	8	U	
86-30-6	N-Nitrosodiphenylamine (1)	0.7	U	
101-55-3	4-Bromophenyl-phenylether	0.9	U	
118-74-1	Hexachlorobenzene	1	U	
87-86-5	Pentachlorophenol	6	U	
85-01-8	Phenanthrene	0.3	U	
120-12-7	Anthracene	0.4	U	
84-74-2	Di-n-Butylphthalate	2	~~B~~ U	6.15.89 L.F.
206-44-0	Fluoranthene	1	U	
129-00-0	Pyrene	1	U	
85-68-7	Butylbenzylphthalate	3.0	~~0.6~~ ~~B~~ U	6.15.89 L.F.
91-94-1	3,3'-Dichlorobenzidine	3	U	
56-55-3	Benzo(a)anthracene	0.3	U	
218-01-9	Chrysene	0.4	U	
117-81-7	bis(2-Ethylhexyl)phthalate	2	U	
117-84-0	Di-n-octylphthalate	2	U	
205-99-2	Benzo(b)fluoranthene	1	U	
207-08-9	Benzo(k)fluoranthene	2	U	
50-32-8	Benzo(a)pyrene	0.4	U	
193-39-5	Indeno(1,2,3-cd)Pyrene	2	U	
53-70-3	Dibenz(a,h)Anthracene	1	U	
191-24-2	Benzo(g,h,i)perylene	1	U	

(1) - Cannot be separated from Diphenylamine

FORM I SV-2 1/87 Rev.

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EFK29

Lab Name: HAZLET 06/12/89 Contract: 68-01-7418

Lab Code: HAZLET ~~Case~~ SCT No.: 12004 SAS No.: 4476-E SDG No.: EFK28

Matrix: (soil/water) WATER Lab Sample ID: 90505457

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 905CB206

Level: (low/med) LOW Date Received: 05/25/89

% Moisture: not dec. ____ dec. ____ Date Extracted: 05/26/89

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 05/31/89

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

FORM I SV-TIC 1/87 Rev.

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFK30

Lab Name: HAZLET Contract: 68-01-7418

Lab Code: HAZLET ~~Case~~ SCT No.: 12004 SAS No.: 4476-E SDG No.: EFK28

Matrix: (soil/water) WATER Lab Sample ID: 90505458

Sample wt/vol: 950 (g/mL) ML Lab File ID: 905CB207

Level: (low/med) LOW Date Received: 05/25/89

% Moisture: not dec. ____ dec. ____ Date Extracted: 05/26/89

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 05/31/89

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	1	U
111-44-4	bis(2-Chloroethyl)Ether	0.9	U
95-57-8	2-Chlorophenol	2	U
541-73-1	1,3-Dichlorobenzene	0.6	U
106-46-7	1,4-Dichlorobenzene	0.7	U
100-51-6	Benzyl Alcohol	2	U
95-50-1	1,2-Dichlorobenzene	0.8	U
95-48-7	2-Methylphenol	1	U
39638-32-9	bis(2-Chloroisopropyl)Ether	3	U
106-44-5	4-Methylphenol	1	U
621-64-7	N-Nitroso-Di-n-Propylamine	2	U
67-72-1	Hexachloroethane	2	U
98-95-3	Nitrobenzene	6	U
78-59-1	Isophorone	2	U
88-75-5	2-Nitrophenol	3	U
105-67-9	2,4-Dimethylphenol	2	U
65-85-0	Benzoic Acid	53	U
111-91-1	bis(2-Chloroethoxy)Methane	0.7	U
120-83-2	2,4-Dichlorophenol	2	U
120-82-1	1,2,4-Trichlorobenzene	0.9	U
91-20-3	Naphthalene	0.4	U
106-47-8	4-Chloroaniline	2	U
87-68-3	Hexachlorobutadiene	1	U
59-50-7	4-Chloro-3-methylphenol	2	U
91-57-6	2-Methylnaphthalene	0.6	U
77-47-4	Hexachlorocyclopentadiene	1	U
88-06-2	2,4,6-Trichlorophenol	2	U
95-95-4	2,4,5-Trichlorophenol	3	U
91-58-7	2-Chloronaphthalene	0.9	U
88-74-4	2-Nitroaniline	2	U
131-11-3	Dimethyl Phthalate	0.9	U
208-96-8	Acenaphthylene	0.5	U
606-20-2	2,6-Dinitrotoluene	0.9	U

FORM I SV-1 1/87 Rev.

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFK30

Lab Name: HAZLET Contract: 68-01-7418

Lab Code: HAZLET ~~Case~~ SCT No.: 12004 SAS No.: 4476-E SDG No.: EFK28

Matrix: (soil/water) WATER Lab Sample ID: 90505458

Sample wt/vol: 950 (g/mL) ML Lab File ID: 905CB207

Level: (low/med) LOW Date Received: 05/25/89

% Moisture: not dec. ____ dec. ____ Date Extracted: 05/26/89

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 05/31/89

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q	
99-09-2	3-Nitroaniline	1	U	
83-32-9	Acenaphthene	0.6	U	
51-28-5	2,4-Dinitrophenol	37	U	
100-02-7	4-Nitrophenol	11	U	
132-64-9	Dibenzofuran	0.5	U	
121-14-2	2,4-Dinitrotoluene	0.9	U	
84-66-2	Diethylphthalate	0.9	U	
7005-72-3	4-Chlorophenyl-phenylether	1	U	
86-73-7	Fluorene	0.5	U	
100-10-6	4-Nitroaniline	2	U	
534-02-1	4,6-Dinitro-2-methylphenol	8	U	
86-30-6	N-Nitrosodiphenylamine (1)	0.8	U	
101-55-3	4-Bromophenyl-phenylether	0.9	U	
118-74-1	Hexachlorobenzene	1	U	
87-86-5	Pentachlorophenol	6	U	
85-01-8	Phenanthrene	0.3	U	
120-12-7	Anthracene	0.4	U	
84-74-2	Di-n-Butylphthalate	2	~~B~~ U	6.15.89
206-44-0	Fluoranthene	1	U	
129-00-0	Pyrene	1	U	
85-68-7	Butylbenzylphthalate	3.0 ~~0.7~~	~~B~~ U	L.F.
91-94-1	3,3'-Dichlorobenzidine	3	U	
56-55-3	Benzo(a)anthracene	0.3	U	
218-01-9	Chrysene	0.5	U	
117-81-7	bis(2-Ethylhexyl)phthalate	2.0 ~~0.7~~	~~B~~ U	6.15.89
117-84-0	Di-n-octylphthalate	2	U	
205-99-2	Benzo(b)fluoranthene	1	U	
207-08-9	Benzo(k)fluoranthene	2	U	
50-32-8	Benzo(a)pyrene	0.4	U	
193-39-5	Indeno(1,2,3-cd)Pyrene	2	U	
53-70-3	Dibenz(a,h)Anthracene	1	U	
191-24-2	Benzo(g,h,i)perylene	2	U	

(1) - Cannot be separated from Diphenylamine

FORM I SV-2 1/87 Rev.

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EFK30

Lab Name: HAZLET Contract: 68-01-7418

Lab Code: HAZLET ~~Case~~ SCT No.: 12004 SAS No.: 4476-E SDG No.: EFK28

Matrix: (soil/water) WATER Lab Sample ID: 90505458

Sample wt/vol: 950 (g/mL) ML Lab File ID: 905CB207

Level: (low/med) LOW Date Received: 05/25/89

% Moisture: not dec. ____ dec. ____ Date Extracted: 05/26/89

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 05/31/89

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

FORM I SV-TIC 1/87 Rev.

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFK31

Lab Name: HAZLET Contract: 68-01-7418

Lab Code: HAZLET ~~Case~~ Set No.: 12004 SAS No.: 4476-E SDG No.: EFK28

Matrix: (soil/water) WATER Lab Sample ID: 90505461

Sample wt/vol: 920 (g/mL) ML Lab File ID: 905CB210

Level: (low/med) LOW Date Received: 05/25/89

% Moisture: not dec. ____ dec. ____ Date Extracted: 05/26/89

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 06/01/89

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	1	U
111-44-4	bis(2-Chloroethyl)Ether	0.9	U
95-57-8	2-Chlorophenol	2	U
541-73-1	1,3-Dichlorobenzene	0.6	U
106-46-7	1,4-Dichlorobenzene	0.8	U
100-51-6	Benzyl Alcohol	2	U
95-50-1	1,2-Dichlorobenzene	0.8	U
95-48-7	2-Methylphenol	1	U
39638-32-9	bis(2-Chloroisopropyl)Ether	3	U
106-44-5	4-Methylphenol	1	U
621-64-7	N-Nitroso-Di-n-Propylamine	2	U
67-72-1	Hexachloroethane	2	U
98-95-3	Nitrobenzene	6	U
78-59-1	Isophorone	2	U
88-75-5	2-Nitrophenol	3	U
105-67-9	2,4-Dimethylphenol	2	U
65-85-0	Benzoic Acid	55	U
111-91-1	bis(2-Chloroethoxy)Methane	0.8	U
120-83-2	2,4-Dichlorophenol	2	U
120-82-1	1,2,4-Trichlorobenzene	1	U
91-20-3	Naphthalene	0.5	U
106-47-8	4-Chloroaniline	2	U
87-68-3	Hexachlorobutadiene	2	U
59-50-7	4-Chloro-3-methylphenol	2	U
91-57-6	2-Methylnaphthalene	0.6	U
77-47-4	Hexachlorocyclopentadiene	1	U
88-06-2	2,4,6-Trichlorophenol	2	U
95-95-4	2,4,5-Trichlorophenol	3	U
91-58-7	2-Chloronaphthalene	1	U
88-74-4	2-Nitroaniline	2	U
131-11-3	Dimethyl Phthalate	0.9	U
208-96-8	Acenaphthylene	0.5	U
606-20-2	2,6-Dinitrotoluene	0.9	U

FORM I SV-1 1/87 Rev.

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFK31

Lab Name: HAZLET 06/21/89 Contract: 68-01-7418

Lab Code: HAZLET Set ~~Case~~ No.: 12004 SAS No.: 4476-E SDG No.: EFK28

Matrix: (soil/water) WATER Lab Sample ID: 90505461

Sample wt/vol: 920 (g/mL) ML Lab File ID: 905CB210

Level: (low/med) LOW Date Received: 05/25/89

% Moisture: not dec. ____ dec. ____ Date Extracted: 05/26/89

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 06/01/89

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

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

CAS NO.	COMPOUND		Q	
99-09-2	3-Nitroaniline	2	U	
83-32-9	Acenaphthene	0.6	U	
51-28-5	2,4-Dinitrophenol	39	U	
100-02-7	4-Nitrophenol	11	U	
132-64-9	Dibenzofuran	0.5	U	
121-14-2	2,4-Dinitrotoluene	0.9	U	
84-66-2	Diethylphthalate	1	U	
7005-72-3	4-Chlorophenyl-phenylether	1	U	
86-73-7	Fluorene	0.5	U	
100-10-6	4-Nitroaniline	2	U	
534-52-1	4,6-Dinitro-2-methylphenol	9	U	
86-30-6	N-Nitrosodiphenylamine (1)	0.8	U	
101-55-3	4-Bromophenyl-phenylether	1	U	
118-74-1	Hexachlorobenzene	1	U	
87-86-5	Pentachlorophenol	7	U	
85-01-8	Phenanthrene	0.4	U	
120-12-7	Anthracene	0.4	U	
84-74-2	Di-n-Butylphthalate	2	B~~U~~	6.15.89 L.F.
206-44-0	Fluoranthene	1	U	
129-00-0	Pyrene	1	U	
85-68-7	Butylbenzylphthalate	3	U	
91-94-1	3,3'-Dichlorobenzidine	3	U	
56-55-3	Benzo(a)anthracene	0.3	U	
218-01-9	Chrysene	0.5	U	
117-81-7	bis(2-Ethylhexyl)phthalate	2	U	
117-84-0	Di-n-octylphthalate	2	U	
205-99-2	Benzo(b)fluoranthene	1	U	
207-08-9	Benzo(k)fluoranthene	2	U	
50-32-8	Benzo(a)pyrene	0.5	U	
193-39-5	Indeno(1,2,3-cd)Pyrene	2	U	
53-70-3	Dibenz(a,h)Anthracene	1	U	
191-24-2	Benzo(g,h,i)perylene	2	U	

(1) - Cannot be separated from Diphenylamine

FORM I SV-2 1/87 Rev.

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EFK31

Lab Name: HAZLET Contract: 68-01-7418

Lab Code: HAZLET ~~Case~~ SCT No.: 12004 SAS No.: 4476-E SDG No.: EFK28

Matrix: (soil/water) WATER Lab Sample ID: 90505461

Sample wt/vol: 920 (g/mL) ML Lab File ID: 905CB210

Level: (low/med) LOW Date Received: 05/25/89

% Moisture: not dec. ____ dec. ____ Date Extracted: 05/26/89

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 06/01/89

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

FORM I SV-TIC 1/87 Rev.

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFK32

Lab Name: HAZLET Contract: 68-01-7418

Lab Code: HAZLET Case No.: 12004 SAS No.: 4476-E SDG No.: EFK28

Matrix: (soil/water) WATER Lab Sample ID: 90505462

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 905CB211

Level: (low/med) LOW Date Received: 05/25/89

% Moisture: not dec. ____ dec. ____ Date Extracted: 05/26/89

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 06/01/89

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	1	U
111-44-4	bis(2-Chloroethyl)Ether	0.8	U
95-57-8	2-Chlorophenol	2	U
541-73-1	1,3-Dichlorobenzene	0.6	U
106-46-7	1,4-Dichlorobenzene	0.7	U
100-51-6	Benzyl Alcohol	2	U
95-50-1	1,2-Dichlorobenzene	0.7	U
95-48-7	2-Methylphenol	1	U
39638-32-9	bis(2-Chloroisopropyl)Ether	3	U
106-44-5	4-Methylphenol	1	U
621-64-7	N-Nitroso-Di-n-Propylamine	2	U
67-72-1	Hexachloroethane	2	U
98-95-3	Nitrobenzene	5	U
78-59-1	Isophorone	2	U
88-75-5	2-Nitrophenol	3	U
105-67-9	2,4-Dimethylphenol	2	U
65-85-0	Benzoic Acid	50	U
111-91-1	bis(2-Chloroethoxy)Methane	0.7	U
120-83-2	2,4-Dichlorophenol	2	U
120-82-1	1,2,4-Trichlorobenzene	0.9	U
91-20-3	Naphthalene	0.4	U
106-47-8	4-Chloroaniline	2	U
87-68-3	Hexachlorobutadiene	1	U
59-50-7	4-Chloro-3-methylphenol	2	U
91-57-6	2-Methylnaphthalene	0.5	U
77-47-4	Hexachlorocyclopentadiene	1	U
88-06-2	2,4,6-Trichlorophenol	2	U
95-95-4	2,4,5-Trichlorophenol	3	U
91-58-7	2-Chloronaphthalene	0.9	U
88-74-4	2-Nitroaniline	2	U
131-11-3	Dimethyl Phthalate	0.9	U
208-96-8	Acenaphthylene	0.5	U
606-20-2	2,6-Dinitrotoluene	0.9	U

FORM I SV-1 1/87 Rev.

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFK32

Lab Name: HAZLET SCT 6/7/89 Contract: 68-01-7418

Lab Code: HAZLET Case No.: 12004 SAS No.: 4476-E SDG No.: EFK28

Matrix: (soil/water) WATER Lab Sample ID: 90505462

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 905CB211

Level: (low/med) LOW Date Received: 05/25/89

% Moisture: not dec. ____ dec. ____ Date Extracted: 05/26/89

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 06/01/89

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q	
99-09-2	3-Nitroaniline	1	U	
83-32-9	Acenaphthene	0.5	U	
51-28-5	2,4-Dinitrophenol	35	U	
100-02-7	4-Nitrophenol	10	U	
132-64-9	Dibenzofuran	0.5	U	
121-14-2	2,4-Dinitrotoluene	0.9	U	
84-66-2	Diethylphthalate	0.9	U	
7005-72-3	4-Chlorophenyl-phenylether	1	U	
86-73-7	Fluorene	0.5	U	
100-10-6	4-Nitroaniline	2	U	
534-52-1	4,6-Dinitro-2-methylphenol	8	U	
86-30-6	N-Nitrosodiphenylamine (1)	0.7	U	
101-55-3	4-Bromophenyl-phenylether	0.9	U	
118-74-1	Hexachlorobenzene	1	U	
87-86-5	Pentachlorophenol	6	U	
85-01-8	Phenanthrene	0.3	U	
120-12-7	Anthracene	0.4	U	
84-74-2	Di-n-Butylphthalate	2	~~B~~ U	6.15.89
206-44-0	Fluoranthene	1	U	
129-00-0	Pyrene	1	U	L.F.
85-68-7	Butylbenzylphthalate	3.0 0.6	~~B~~ U	
91-94-1	3,3'-Dichlorobenzidine	3	U	
56-55-3	Benzo(a)anthracene	0.3	U	
218-01-9	Chrysene	0.4	U	
117-81-7	bis(2-Ethylhexyl)phthalate	2	U	
117-84-0	Di-n-octylphthalate	2	U	
205-99-2	Benzo(b)fluoranthene	1	U	
207-08-9	Benzo(k)fluoranthene	2	U	
50-32-8	Benzo(a)pyrene	0.4	U	
193-39-5	Indeno(1,2,3-cd)Pyrene	2	U	
53-70-3	Dibenz(a,h)Anthracene	1	U	
191-24-2	Benzo(g,h,i)perylene	1	U	

(1) - Cannot be separated from Diphenylamine

FORM I SV-2 1/87 Rev.

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EFK32

Lab Name: HAZLET Contract: 68-01-7418

Lab Code: HAZLET ~~Case~~ SCT No.: 12004 SAS No.: 4476-E SDG No.: EFK28

Matrix: (soil/water) WATER Lab Sample ID: 90505462

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 905CB211

Level: (low/med) LOW Date Received: 05/25/89

% Moisture: not dec. ____ dec. ____ Date Extracted: 05/26/89

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 06/01/89

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

FORM I SV-TIC 1/87 Rev.

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFK33

Lab Name: HAZLET Contract: 68-01-7418

Lab Code: HAZLET ~~Case~~ SCT No.: 12004 SAS No.: 4476-E SDG No.: EFK28

Matrix: (soil/water) WATER Lab Sample ID: 90505463

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 905CB212

Level: (low/med) LOW Date Received: 05/25/89

% Moisture: not dec. ____ dec. ____ Date Extracted: 05/26/89

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 06/01/89

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	1	U
111-44-4	bis(2-Chloroethyl)Ether	0.8	U
95-57-8	2-Chlorophenol	2	U
541-73-1	1,3-Dichlorobenzene	0.6	U
106-46-7	1,4-Dichlorobenzene	0.7	U
100-51-6	Benzyl Alcohol	2	U
95-50-1	1,2-Dichlorobenzene	0.7	U
95-48-7	2-Methylphenol	1	U
39638-32-9	bis(2-Chloroisopropyl)Ether	3	U
106-44-5	4-Methylphenol	1	U
621-64-7	N-Nitroso-Di-n-Propylamine	2	U
67-72-1	Hexachloroethane	2	U
98-95-3	Nitrobenzene	5	U
78-59-1	Isophorone	2	U
88-75-5	2-Nitrophenol	3	U
105-67-9	2,4-Dimethylphenol	2	U
65-85-0	Benzoic Acid	50	U
111-91-1	bis(2-Chloroethoxy)Methane	0.7	U
120-83-2	2,4-Dichlorophenol	2	U
120-82-1	1,2,4-Trichlorobenzene	0.9	U
91-20-3	Naphthalene	0.4	U
106-47-8	4-Chloroaniline	2	U
87-68-3	Hexachlorobutadiene	1	U
59-50-7	4-Chloro-3-methylphenol	2	U
91-57-6	2-Methylnaphthalene	0.5	U
77-47-4	Hexachlorocyclopentadiene	1	U
88-06-2	2,4,6-Trichlorophenol	2	U
95-95-4	2,4,5-Trichlorophenol	3	U
91-58-7	2-Chloronaphthalene	0.9	U
88-74-4	2-Nitroaniline	2	U
131-11-3	Dimethyl Phthalate	0.9	U
208-96-8	Acenaphthylene	0.5	U
606-20-2	2,6-Dinitrotoluene	0.9	U

FORM I SV-1 1/87 Rev.

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFK33

Lab Name: HAZLET SCT #617449 Contract: 68-01-7418

Lab Code: HAZLET ~~Case~~ No.: 12004 SAS No.: 4476-E SDG No.: EFK28

Matrix: (soil/water) WATER Lab Sample ID: 90505463

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 905CB212

Level: (low/med) LOW Date Received: 05/25/89

% Moisture: not dec. ____ dec. ____ Date Extracted: 05/26/89

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 06/01/89

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q	
99-09-2	3-Nitroaniline	1	U	
83-32-9	Acenaphthene	0.5	U	
51-28-5	2,4-Dinitrophenol	35	U	
100-02-7	4-Nitrophenol	10	U	
132-64-9	Dibenzofuran	0.5	U	
121-14-2	2,4-Dinitrotoluene	0.9	U	
84-66-2	Diethylphthalate	0.9	U	
7005-72-3	4-Chlorophenyl-phenylether	1	U	
86-73-7	Fluorene	0.5	U	
100-10-6	4-Nitroaniline	2	U	
534-52-1	4,6-Dinitro-2-methylphenol	8	U	
86-30-6	N-Nitrosodiphenylamine (1)	0.7	U	
101-55-3	4-Bromophenyl-phenylether	0.9	U	
118-74-1	Hexachlorobenzene	1	U	
87-86-5	Pentachlorophenol	6	U	
85-01-8	Phenanthrene	0.3	U	
120-12-7	Anthracene	0.4	U	
84-74-2	Di-n-Butylphthalate	2	~~B~~JL	6.15.89
206-44-0	Fluoranthene	1	U	
129-00-0	Pyrene	1	U	
85-68-7	Butylbenzylphthalate	3.0	~~0.7~~ ~~B~~JL	L.F.
91-94-1	3,3'-Dichlorobenzidine	3	U	
56-55-3	Benzo(a)anthracene	0.3	U	
218-01-9	Chrysene	0.4	U	
117-81-7	bis(2-Ethylhexyl)phthalate	2	U	
117-84-0	Di-n-octylphthalate	2	U	
205-99-2	Benzo(b)fluoranthene	1	U	
207-08-9	Benzo(k)fluoranthene	2	U	
50-32-8	Benzo(a)pyrene	0.4	U	
193-39-5	Indeno(1,2,3-cd)Pyrene	2	U	
53-70-3	Dibenz(a,h)Anthracene	1	U	
191-24-2	Benzo(g,h,i)perylene	1	U	

(1) - Cannot be separated from Diphenylamine

FORM I SV-2 1/87 Rev.

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EFK33

Lab Name: HAZLET Contract: 68-01-7418

Lab Code: HAZLET ~~Case~~ SOT No.: 12004 SAS No.: 4476-E SDG No.: EFK28

Matrix: (soil/water) WATER Lab Sample ID: 90505463

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 905CB212

Level: (low/med) LOW Date Received: 05/25/89

% Moisture: not dec. ____ dec. ____ Date Extracted: 05/26/89

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 06/01/89

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

Number TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	6.57	3.2	J

FORM I SV-TIC 1/87 Rev.

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFK34

Lab Name: HAZLET SCT 06/7/89 Contract: 68-01-7418

Lab Code: HAZLET ~~Case~~ No.: 12004 SAS No.: 4476-E SDG No.: EFK28

Matrix: (soil/water) WATER Lab Sample ID: 90505464

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 905CB213

Level: (low/med) LOW Date Received: 05/25/89

% Moisture: not dec. ____ dec. ____ Date Extracted: 05/26/89

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 06/01/89

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	1	U
111-44-4	bis(2-Chloroethyl)Ether	0.8	U
95-57-8	2-Chlorophenol	2	U
541-73-1	1,3-Dichlorobenzene	0.6	U
106-46-7	1,4-Dichlorobenzene	0.7	U
100-51-6	Benzyl Alcohol	2	U
95-50-1	1,2-Dichlorobenzene	0.7	U
95-48-7	2-Methylphenol	1	U
39638-32-9	bis(2-Chloroisopropyl)Ether	3	U
106-44-5	4-Methylphenol	1	U
621-64-7	N-Nitroso-Di-n-Propylamine	2	U
67-72-1	Hexachloroethane	2	U
98-95-3	Nitrobenzene	5	U
78-59-1	Isophorone	2	U
88-75-5	2-Nitrophenol	3	U
105-67-9	2,4-Dimethylphenol	2	U
65-85-0	Benzoic Acid	50	U
111-91-1	bis(2-Chloroethoxy)Methane	0.7	U
120-83-2	2,4-Dichlorophenol	2	U
120-82-1	1,2,4-Trichlorobenzene	0.9	U
91-20-3	Naphthalene	0.4	U
106-47-8	4-Chloroaniline	2	U
87-68-3	Hexachlorobutadiene	1	U
59-50-7	4-Chloro-3-methylphenol	2	U
91-57-6	2-Methylnaphthalene	0.5	U
77-47-4	Hexachlorocyclopentadiene	1	U
88-06-2	2,4,6-Trichlorophenol	2	U
95-95-4	2,4,5-Trichlorophenol	3	U
91-58-7	2-Chloronaphthalene	0.9	U
88-74-4	2-Nitroaniline	2	U
131-11-3	Dimethyl Phthalate	0.9	U
208-96-8	Acenaphthylene	0.5	U
606-20-2	2,6-Dinitrotoluene	0.9	U

FORM I SV-1 1/87 Rev.

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFK34

Lab Name: HAZLET Contract: 68-01-7418

Lab Code: HAZLET ~~Case~~ SCT No.: 12004 SAS No.: 4476-E SDG No.: EFK28

Matrix: (soil/water) WATER Lab Sample ID: 90505464

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 905CB213

Level: (low/med) LOW Date Received: 05/25/89

% Moisture: not dec. ____ dec. ____ Date Extracted: 05/26/89

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 06/01/89

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q	
99-09-2	3-Nitroaniline	1	U	
83-32-9	Acenaphthene	0.5	U	
51-28-5	2,4-Dinitrophenol	35	U	
100-02-7	4-Nitrophenol	10	U	
132-64-9	Dibenzofuran	0.5	U	
121-14-2	2,4-Dinitrotoluene	0.9	U	
84-66-2	Diethylphthalate	0.9	U	
7005-72-3	4-Chlorophenyl-phenylether	1	U	
86-73-7	Fluorene	0.5	U	
100-10-6	4-Nitroaniline	2	U	
534-52-1	4,6-Dinitro-2-methylphenol	8	U	
86-30-6	N-Nitrosodiphenylamine (1)	0.7	U	
101-55-3	4-Bromophenyl-phenylether	0.9	U	
118-74-1	Hexachlorobenzene	1	U	
87-86-5	Pentachlorophenol	6	U	
85-01-8	Phenanthrene	0.3	U	
120-12-7	Anthracene	0.4	U	
84-74-2	Di-n-Butylphthalate	2.0 ~~0.7~~	~~B~~ JL	6.15.89
206-44-0	Fluoranthene	1	U	
129-00-0	Pyrene	1	U	L.F.
85-68-7	Butylbenzylphthalate	3.0 0.6	~~B~~ JL	
91-94-1	3,3'-Dichlorobenzidine	3	U	
56-55-3	Benzo(a)anthracene	0.3	U	
218-01-9	Chrysene	0.4	U	
117-81-7	bis(2-Ethylhexyl)phthalate	2	U	
117-84-0	Di-n-octylphthalate	2	U	
205-99-2	Benzo(b)fluoranthene	1	U	
207-08-9	Benzo(k)fluoranthene	2	U	
50-32-8	Benzo(a)pyrene	0.4	U	
193-39-5	Indeno(1,2,3-cd)Pyrene	2	U	
53-70-3	Dibenz(a,h)Anthracene	1	U	
191-24-2	Benzo(g,h,i)perylene	1	U	

(1) - Cannot be separated from Diphenylamine

FORM I SV-2 1/87 Rev.

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EFK34

Lab Name: HAZLET SCT 06/7/89 Contract: 68-01-7418

Lab Code: HAZLET ~~Case~~ No.: 12004 SAS No.: 4476-E SDG No.: EFK28

Matrix: (soil/water) WATER Lab Sample ID: 90505464

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 905CB213

Level: (low/med) LOW Date Received: 05/25/89

% Moisture: not dec. ____ dec. ____ Date Extracted: 05/26/89

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 06/01/89

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

FORM I SV-TIC 1/87 Rev.

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EFK28

Lab Name: HAZLET Contract: 68-01-7418

Lab Code: HAZLET ~~Case~~ Set No.: 12004 SAS No.: 4476-E SDG No.: EFK28

Matrix: (soil/water) WATER Lab Sample ID: 90505456

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

Level: (low/med) LOW Date Received: 05/25/89

% Moisture: not dec. ____ dec. ____ Date Extracted: 05/25/89

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 06/03/89

GPC Cleanup: (Y/N) N pH: 5.0 Dilution Factor: 0.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.0020	U
319-85-7	beta-BHC	0.0020	U
319-86-8	delta-BHC	0.0010	U
58-89-9	gamma-BHC (Lindane)	0.0020	U
76-44-8	Heptachlor	0.0010	U
309-00-2	Aldrin	0.0020	U
1024-57-3	Heptachlor epoxide	0.0030	U
959-98-8	Endosulfan I	0.0030	U
60-57-1	Dieldrin	0.0060	U
72-55-9	4,4'-DDE	0.013	U
72-20-8	Endrin	0.0070	U
33213-65-9	Endosulfan II	0.0040	U
72-54-8	4,4'-DDD	0.0030	U
1031-07-8	Endosulfan sulfate	0.016	U
50-29-3	4,4'-DDT	0.0030	U
72-43-5	Methoxychlor	0.030	U
53494-70-5	Endrin ketone	0.010	U
5103-71-9	alpha-Chlordane	0.0040	U
5103-74-2	gamma-Chlordane	0.0030	U
8001-35-2	Toxaphene	0.010	U
12674-11-2	Aroclor-1016	0.010	U
11104-28-2	Aroclor-1221	0.090	U
11141-16-5	Aroclor-1232	0.020	U
53469-21-9	Aroclor-1242	0.020	U
12672-29-6	Aroclor-1248	0.010	U
11097-69-1	Aroclor-1254	0.030	U
11096-82-5	Aroclor-1260	0.010	U

FORM I PEST 1/87 Rev.

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EFK29

Lab Name: HAZLET Contract: 68-01-7418

Lab Code: HAZLET ~~Case~~ Set No.: 12004 SAS No.: 4476-E SDG No.: EFK28

Matrix: (soil/water) WATER Lab Sample ID: 90505457

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

Level: (low/med) LOW Date Received: 05/25/89

% Moisture: not dec. ____ dec. ____ Date Extracted: 05/25/89

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 06/03/89

GPC Cleanup: (Y/N) N pH: 6.0 Dilution Factor: 0.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.0020	U
319-85-7	beta-BHC	0.0020	U
319-86-8	delta-BHC	0.0010	U
58-89-9	gamma-BHC (Lindane)	0.0020	U
76-44-8	Heptachlor	0.0010	U
309-00-2	Aldrin	0.0020	U
1024-57-3	Heptachlor epoxide	0.0030	U
959-98-8	Endosulfan I	0.0030	U
60-57-1	Dieldrin	0.0060	U
72-55-9	4,4'-DDE	0.013	U
72-20-8	Endrin	0.0070	U
33213-65-9	Endosulfan II	0.0040	U
72-54-8	4,4'-DDD	0.0030	U
1031-07-8	Endosulfan sulfate	0.016	U
50-29-3	4,4'-DDT	0.0030	U
72-43-5	Methoxychlor	0.030	U
53494-70-5	Endrin ketone	0.010	U
5103-71-9	alpha-Chlordane	0.0040	U
5103-74-2	gamma-Chlordane	0.0030	U
8001-35-2	Toxaphene	0.010	U
12674-11-2	Aroclor-1016	0.010	U
11104-28-2	Aroclor-1221	0.090	U
11141-16-5	Aroclor-1232	0.020	U
53469-21-9	Aroclor-1242	0.020	U
12672-29-6	Aroclor-1248	0.010	U
11097-69-1	Aroclor-1254	0.030	U
11096-82-5	Aroclor-1260	0.010	U

FORM I PEST 1/87 Rev.

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EFK30

Lab Name: HAZLET Contract: 68-01-7418

Lab Code: HAZLET ~~Case~~ Set No.: 12004 SAS No.: 4476-E SDG No.: EFK28

Matrix: (soil/water) WATER Lab Sample ID: 90505458

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

Level: (low/med) LOW Date Received: 05/25/89

% Moisture: not dec. ____ dec. ____ Date Extracted: 05/25/89

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 06/03/89

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 0.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.0020	U
319-85-7	beta-BHC	0.0020	U
319-86-8	delta-BHC	0.0010	U
58-89-9	gamma-BHC (Lindane)	0.0020	U
76-44-8	Heptachlor	0.0010	U
309-00-2	Aldrin	0.0020	U
1024-57-3	Heptachlor epoxide	0.0030	U
959-98-8	Endosulfan I	0.0030	U
60-57-1	Dieldrin	0.0060	U
72-55-9	4,4'-DDE	0.013	U
72-20-8	Endrin	0.0070	U
33213-65-9	Endosulfan II	0.0040	U
72-54-8	4,4'-DDD	0.0030	U
1031-07-8	Endosulfan sulfate	0.016	U
50-29-3	4,4'-DDT	0.0030	U
72-43-5	Methoxychlor	0.030	U
53494-70-5	Endrin ketone	0.010	U
5103-71-9	alpha-Chlordane	0.0040	U
5103-74-2	gamma-Chlordane	0.0030	U
8001-35-2	Toxaphene	0.010	U
12674-11-2	Aroclor-1016	0.010	U
11104-28-2	Aroclor-1221	0.090	U
11141-16-5	Aroclor-1232	0.020	U
53469-21-9	Aroclor-1242	0.020	U
12672-29-6	Aroclor-1248	0.010	U
11097-69-1	Aroclor-1254	0.030	U
11096-82-5	Aroclor-1260	0.010	U

FORM I PEST 1/87 Rev.

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EFK31

Lab Name: HAZLET Contract: 68-01-7418

Lab Code: HAZLET ~~Case~~ Set No.: 12004 SAS No.: 4476-E SDG No.: EFK28

Matrix: (soil/water) WATER Lab Sample ID: 90505461

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

Level: (low/med) LOW Date Received: 05/25/89

% Moisture: not dec. ____ dec. ____ Date Extracted: 05/25/89

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 06/03/89

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 0.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.0020	U
319-85-7	beta-BHC	0.0020	U
319-86-8	delta-BHC	0.0010	U
58-89-9	gamma-BHC (Lindane)	0.0020	U
76-44-8	Heptachlor	0.0010	U
309-00-2	Aldrin	0.0020	U
1024-57-3	Heptachlor epoxide	0.0030	U
959-98-8	Endosulfan I	0.0030	U
60-57-1	Dieldrin	0.0060	U
72-55-9	4,4'-DDE	0.013	U
72-20-8	Endrin	0.0070	U
33213-65-9	Endosulfan II	0.0040	U
72-54-8	4,4'-DDD	0.0030	U
1031-07-8	Endosulfan sulfate	0.016	U
50-29-3	4,4'-DDT	0.0030	U
72-43-5	Methoxychlor	0.030	U
53494-70-5	Endrin ketone	0.010	U
5103-71-9	alpha-Chlordane	0.0040	U
5103-74-2	gamma-Chlordane	0.0030	U
8001-35-2	Toxaphene	0.010	U
12674-11-2	Aroclor-1016	0.010	U
11104-28-2	Aroclor-1221	0.090	U
11141-16-5	Aroclor-1232	0.020	U
53469-21-9	Aroclor-1242	0.020	U
12672-29-6	Aroclor-1248	0.010	U
11097-69-1	Aroclor-1254	0.030	U
11096-82-5	Aroclor-1260	0.010	U

FORM I PEST 1/87 Rev.

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EFK32

Lab Name: HAZLET Contract: 68-01-7418

Lab Code: HAZLET ~~Case~~ Set No.: 12004 SAS No.: 4476-E SDG No.: EFK28

Matrix: (soil/water) WATER Lab Sample ID: 90505462

Sample wt/vol: 950 (g/mL) ML Lab File ID: _____

Level: (low/med) LOW Date Received: 05/25/89

% Moisture: not dec. ____ dec. ____ Date Extracted: 05/25/89

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 06/03/89

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 0.100

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.0021	U
319-85-7	beta-BHC	0.0021	U
319-86-8	delta-BHC	0.0011	U
58-89-9	gamma-BHC (Lindane)	0.0021	U
76-44-8	Heptachlor	0.0011	U
309-00-2	Aldrin	0.0021	U
1024-57-3	Heptachlor epoxide	0.0032	U
959-98-8	Endosulfan I	0.0032	U
60-57-1	Dieldrin	0.0063	U
72-55-9	4,4'-DDE	0.014	U
72-20-8	Endrin	0.0074	U
33213-65-9	Endosulfan II	0.0042	U
72-54-8	4,4'-DDD	0.0032	U
1031-07-8	Endosulfan sulfate	0.017	U
50-29-3	4,4'-DDT	0.0032	U
72-43-5	Methoxychlor	0.032	U
53494-70-5	Endrin ketone	0.011	U
5103-71-9	alpha-Chlordane	0.0042	U
5103-74-2	gamma-Chlordane	0.0032	U
8001-35-2	Toxaphene	0.011	U
12674-11-2	Aroclor-1016	0.011	U
11104-28-2	Aroclor-1221	0.095	U
11141-16-5	Aroclor-1232	0.021	U
53469-21-9	Aroclor-1242	0.021	U
12672-29-6	Aroclor-1248	0.011	U
11097-69-1	Aroclor-1254	0.032	U
11096-82-5	Aroclor-1260	0.011	U

FORM I PEST 1/87 Rev.

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EFK33

Lab Name: HAZLET Contract: 68-01-7418

Lab Code: HAZLET ~~Case~~ Set No.: 12004 SAS No.: 4476-E SDG No.: EFK28

Matrix: (soil/water) WATER Lab Sample ID: 90505463

Sample wt/vol: 960 (g/mL) ML Lab File ID:

Level: (low/med) LOW Date Received: 05/25/89

% Moisture: not dec. ____ dec. ____ Date Extracted: 05/25/89

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 06/03/89

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 0.100

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.0021	U
319-85-7	beta-BHC	0.0021	U
319-86-8	delta-BHC	0.0010	U
58-89-9	gamma-BHC (Lindane)	0.0021	U
76-44-8	Heptachlor	0.0010	U
309-00-2	Aldrin	0.0021	U
1024-57-3	Heptachlor epoxide	0.0031	U
959-98-8	Endosulfan I	0.0031	U
60-57-1	Dieldrin	0.0062	U
72-55-9	4,4'-DDE	0.014	U
72-20-8	Endrin	0.0073	U
33213-65-9	Endosulfan II	0.0042	U
72-54-8	4,4'-DDD	0.0031	U
1031-07-8	Endosulfan sulfate	0.017	U
50-29-3	4,4'-DDT	0.0031	U
72-43-5	Methoxychlor	0.031	U
53494-70-5	Endrin ketone	0.010	U
5103-71-9	alpha-Chlordane	0.0042	U
5103-74-2	gamma-Chlordane	0.0031	U
8001-35-2	Toxaphene	0.010	U
12674-11-2	Aroclor-1016	0.010	U
11104-28-2	Aroclor-1221	0.094	U
11141-16-5	Aroclor-1232	0.021	U
53469-21-9	Aroclor-1242	0.021	U
12672-29-6	Aroclor-1248	0.010	U
11097-69-1	Aroclor-1254	0.031	U
11096-82-5	Aroclor-1260	0.010	U

FORM I PEST 1/87 Rev.

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EFK34

Lab Name: HAZLET Contract: 68-01-7418

Lab Code: HAZLET ~~Case~~ Set No.: 12004 SAS No.: 4476-E SDG No.: EFK28

Matrix: (soil/water) WATER Lab Sample ID: 90505464

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

Level: (low/med) LOW Date Received: 05/25/89

% Moisture: not dec. ____ dec. ____ Date Extracted: 05/25/89

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 06/03/89

GPC Cleanup: (Y/N) N pH: 6.0 Dilution Factor: 0.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.0020	U
319-85-7	beta-BHC	0.0020	U
319-86-8	delta-BHC	0.0010	U
58-89-9	gamma-BHC (Lindane)	0.0020	U
76-44-8	Heptachlor	0.0010	U
309-00-2	Aldrin	0.0020	U
1024-57-3	Heptachlor epoxide	0.0030	U
959-98-8	Endosulfan I	0.0030	U
60-57-1	Dieldrin	0.0060	U
72-55-9	4,4'-DDE	0.013	U
72-20-8	Endrin	0.0070	U
33213-65-9	Endosulfan II	0.0040	U
72-54-8	4,4'-DDD	0.0030	U
1031-07-8	Endosulfan sulfate	0.016	U
50-29-3	4,4'-DDT	0.0030	U
72-43-5	Methoxychlor	0.030	U
53494-70-5	Endrin ketone	0.010	U
5103-71-9	alpha-Chlordane	0.0040	U
5103-74-2	gamma-Chlordane	0.0030	U
8001-35-2	Toxaphene	0.010	U
12674-11-2	Aroclor-1016	0.010	U
11104-28-2	Aroclor-1221	0.090	U
11141-16-5	Aroclor-1232	0.020	U
53469-21-9	Aroclor-1242	0.020	U
12672-29-6	Aroclor-1248	0.010	U
11097-69-1	Aroclor-1254	0.030	U
11096-82-5	Aroclor-1260	0.010	U

FORM I PEST 1/87 Rev.

HAZLETON LABORATORIES AMERICA, INC.

3301 KINSMAN BLVD. • P.O. BOX 7545 • MADISON, WI 53707 • (608) 241-4471 • TLX 703956 HAZRAL MDS UD

RECEIVED
JUN 08 1989
US EPA CENTRAL REGIONAL LAB.
536 S. CLARK ST.
CHICAGO, ILLINOIS 60605

June 7,1989

Sample Management Office
Viar and Company
209 Madison Street
Suite 200
Alexandria, VA 22314

CASE NARRATIVE for SAS Case number 4476-E, Set number 12004, SDG number EFK28.

Enclosed is the data package for SAS Case number 4476-E, Set number 12004, SDG number EFK28. Seven water samples under this case, set, and SDG number were received for full organic analysis on May 25, 1989 from Region V. All samples were analyzed and reported according to the protocols provided by SAS4476-E. The following list itemizes the SMO numbers associated with this case, set, and SDG:

SAS Case No. 4476-E, Set No. 12004 (SDG EFK28)
Sample listing

EFK28	EFK29	EFK30	EFK31
EFK32	EFK33	EFK34	

Please note the following summary comments relating to the analytical results and contractual quality control in this case:

- Holding Times. All holding times were within the QC limits with the following exception:

  Semivolatile fraction: Sample EFK30MS was extracted three days outside of the holding time.

- GC/MS Tuning. All tuning requirements for BFB and DFTPP for all samples analyzed in this case were within contract criteria.

- Instrumental Calibrations. All instrumental calibrations were within contract criteria with the following exceptions:

  Volatile fraction: The SAS request specified that

all SPCC criteria (.300 minimum) be met and that all response factors (RF) be greater than 0.05. In the initial calibration and continual calibration, bromoform and 1,1,2,2-tetrachloroethane did not meet the SPCC criteria. 2-butanone did not meet the minimun RF criteria of 0.05. It should be noted that these compounds have historically shown a diminished response when the purge volume is increased to 25 ml.

The SAS request also specifies that the %RSD of all RF's be less than 35% in the initial calibration. The %RSD for acetone was greater than 35% in the initial calibration. Since acetone is a common lab solvent, any background level of acetone becomes significant in the low concentration standards. The relative response factor (RRF) in the 5 ppb standard was much higher than expected which raised the %RSD result.

The %D's in the continuing calibrations are required to be below 25%. This criteria was not met by 2-hexanone and 2-butanone. Because the average response for these analytes are so low using the 25ml purge method, almost any difference in the RF will result in the percent difference (%D) exceeding the 25% criteria.

Please note the additional comment concerning the instrumental calibrations performed for this case.

Volatile fraction: The concentrations of cis- and trans-1,3-dicloropropenes in the calibration runs are different than those specified by the SAS. The difference is due to the ampule mixes supplied by Supelco, our supplier for the purgeable standards mix.

The actual concentrations of cis- and trans-1,3-dichloropropene in the standards are as follows:

Standard	Actual cis-	Actual trans-
5 ppb	6 ppb	4 ppb
10	12	8
20	24	16
40	48	32
60	72	48

The actual concentrations are used to calculate the response factors for cis- and trans-1,3-dichloropropene.

- Method Blanks. The method blank extracted and analyzed with the samples met contract criteria. Target analytes detected in the volatile method blank were quantitated at a level less than five times the lowered detection limits.

- Surrogate Recoveries. All calculated surrogate recoveries were found to be within the QC limits with the following exceptions:

  Semivolatile fraction: The recovery of 2-Fluorophenol for sample EFK30MS (14%) fell below the lower QC limit of 21%.

- Matrix Spike/ Matrix Spike Duplicates. All matrix spike (MS) and matrix spike duplicate (MSD) recoveries were found to be within the QC limits with the following exceptions:

  Semivolatile fraction: The MSD percent recovery of pentachlorophenol for sample EFK30 (0%) fell below the QC limit of 9%. The relative percent difference (%RPD) for Pentachlorophenol (200%) was above the upper QC limit of 50%.

  The MSD percent recovery of 4-nitrophenol for sample EFK30 (1%) fell below the QC limit of 10%. The relative percent difference (%RPD) for 4-nitrophenol (175%) was above the upper QC limit of 50%.

- DBC Retention Time Shift The percent difference (%D) for the standard AR1221 (2.4%) was above the QC limit of 1.5%. Since all other retention times were below the QC limit, the standard solution is suspect and a new standard will be prepared.

If you have any questions regarding this case or need any clarifications, please feel free to call.

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 aobve. 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 his designee, as verified by the following signature.

Amy L Austin

Amy L. Austin
Documentation/QA Officer
Environmental Analysis

6/7/89
Date

cc: Region V
EMSL-LV
Central File
Case File

2A
WATER VOLATILE SURROGATE RECOVERY

Lab Name: HAZLET Contract: 68-01-7418

Lab Code: HAZLET Set No.: 12004 SAS No.: 4476-E SDG No.: EFK28

	EPA SAMPLE NO.	S1 (TOL)#	S2 (BFB)#	S3 (DCE)#	OTHER	TOT OUT
01	EFK28	101	94	101		0
02	EFK29	99	91	96		0
03	EFK30	98	92	100		0
04	EFK31	102	92	104		0
05	EFK32	109	89	106		0
06	EFK33	101	93	99		0
07	EFK34	103	93	95		0
08	ZZZZZ	107	92	98		0
09	EFK30MS	102	98	98		0
10	EFK30MSD	102	99	97		0
11	VBLK08	102	88	105		0
12	VBLK09	100	97	96		0

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

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

FORM II VOA-1 1/87 Rev.

2C

WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: HAZLET Contract: 68-01-7418

SCT 6/7/89

Lab Code: HAZLET ~~Case~~ No.: 12004 SAS No.: 4476-E SDG No.: EFK28

	EPA SAMPLE NO.	S1 (NBZ)#	S2 (FBP)#	S3 (TPH)#	S4 (PHL)#	S5 (2FP)#	S6 (TBP)#	OTHER	TOT OUT
01	EFK28	69	72	105	29	35	54		0
02	EFK29	66	72	103	35	45	69		0
03	EFK30	73	78	103	21	25	42		0
04	EFK31	71	79	107	35	43	56		0
05	EFK32	54	62	89	35	41	57		0
06	EFK33	70	74	103	23	33	61		0
07	EFK34	66	70	104	31	35	60		0
08	EFK30MS	80	83	112	28	34	69		0
09	EFK30MSD	49	51	94	23	14 *	29		1
10	SBLK16	68	70	117	32	40	67		0
11	SBLK21	75	76	102	31	37	25		0

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

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

WATER PESTICIDE SURROGATE RECOVERY

Lab Name: HAZLET Contract: 68-01-7418

Lab Code: HAZLET ~~Case~~ Set No.: 12004 SAS No.: 4476-E SDG No.: EFK28

	EPA SAMPLE NO.	S1 (DBC)#	OTHER
01	EFK28	79	0
02	EFK29	88	0
03	EFK30	85	0
04	EFK31	80	0
05	EFK32	76	0
06	EFK33	75	0
07	EFK34	83	0
08	EFK30MS	63	0
09	EFK30MSD	77	0
10	PBLK01	73	0

ADVISORY QC LIMITS

S1 (DBC) = Dibutlychlorendate (24-154)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

FORM II PEST-1 1/87 Rev.

3A

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: HAZLET Contract: 68-01-7418

Lab Code: HAZLET Set No.: 12004 SAS No.: 4476-E SDG No.: EFK28

Matrix Spike - EPA Sample No.: EFK30

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	20.0	0	14.9	75	61-145
Trichloroethene	20.0	0	20.1	101	71-120
Benzene	20.0	0	19.9	100	76-127
Toluene	20.0	0.293	20.9	103	76-125
Chlorobenzene	20.0	0	20.8	104	75-130

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	20.0	15.3	77	-3	14	61-145
Trichloroethene	20.0	20.1	101	0	14	71-120
Benzene	20.0	19.6	98	2	11	76-127
Toluene	20.0	20.8	103	0	13	76-125
Chlorobenzene	20.0	21.0	105	-1	13	75-130

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

* Values outside of QC limits

RPD: 0 out of 5 outside limits
Spike Recovery: 0 out of 10 outside limits

COMMENTS: 25.0ML 90505458,EFK30 +500NG IS,SS +131UL MEOH
INC50A, SET 12004, SAS NO. 4476-E, SDG# EFK28

FORM III VOA-1 1/87 Rev.

WATER SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: HAZLET Contract: 68-01-7418

Lab Code: HAZLET ~~Case~~ SCT 6/7/89 No.: 12004 SAS No.: 4476-E SDG No.: EFK28

Matrix Spike - EPA Sample No.: EFK30

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC.
Phenol	50.0	0	11.1	22	12- 86
2-Chlorophenol	50.0	0	24.7	49	27-123
1,4-Dichlorobenzene	25.0	0	18.1	72	36 97
N-Nitroso-di-n-prop.(1)	25.0	0	18.4	74	41 116
1,2,4-Trichlorobenzene	25.0	0	18.1	72	39 98
4-Chloro-3-methylphenol	50.0	0	23.3	47	23 97
Acenaphthene	25.0	0	20.6	82	46-118
4-Nitrophenol	50.0	0	7.60	15	10- 80
2,4-Dinitrotoluene	25.0	0	17.1	68	24- 96
Pentachlorophenol	50.0	0	15.6	31	9-103
Pyrene	25.0	0	26.3	105	26-127

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Phenol	50.0	10.1	20	10	42	12- 86
2-Chlorophenol	50.0	17.7	35	33	40	27-123
1,4-Dichlorobenzene	25.0	14.8	59	20	28	36 97
N-Nitroso-di-n-prop.(1)	25.0	18.9	76	-3	38	41 116
1,2,4-Trichlorobenzene	25.0	15.3	61	17	28	39 98
4-Chloro-3-methylphenol	50.0	20.2	40	16	42	23 97
Acenaphthene	25.0	20.1	80	2	31	46-118
4-Nitrophenol	50.0	0.640	1 *	175 *	50	10- 80
2,4-Dinitrotoluene	25.0	16.6	66	3	38	24- 96
Pentachlorophenol	50.0	0	0 *	200 *	50	9-103
Pyrene	25.0	27.7	111	-6	31	26-127

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

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

RPD: 2 out of 11 outside limits
Spike Recovery: 2 out of 22 outside limits

COMMENTS: 1UL EFK30(90505458)
INC50B-SAS-4476-E

FORM III SV-1 1/87 Rev.

WATER PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: HAZLET Contract: 68-01-7418

Lab Code: HAZLET ~~Case~~ Set No.: 12004 SAS No.: 4476-E SDG No.: EFK28

Matrix Spike - EPA Sample No.: EFK30

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC.
gamma-BHC (Lindane)	0.0200	0	0.0132	66	56-123
Heptachlor	0.0200	0	0.0127	64	40-131
Aldrin	0.0200	0	0.0129	65	40-120
Dieldrin	0.0500	0	0.0410	82	52-126
Endrin	0.0500	0	0.0417	83	56-121
4,4'-DDT	0.0500	0	0.0390	78	38-127

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
gamma-BHC (Lindane)	0.0200	0.0149	75	-12	15	56-123
Heptachlor	0.0200	0.0148	74	-15	20	40-131
Aldrin	0.0200	0.0142	71	-10	22	40-120
Dieldrin	0.0500	0.0477	95	-15	18	52-126
Endrin	0.0500	0.0500	100	-18	21	56-121
4,4'-DDT	0.0500	0.0450	90	-14	27	38-127

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

* Values outside of QC limits

RPD: 0 out of 6 outside limits
Spike Recovery: 0 out of 12 outside limits

COMMENTS:

FORM III PEST-1 8/87 Rev.

4A

VOLATILE METHOD BLANK SUMMARY

Lab Name: HAZLET Contract: 68-01-7418

Lab Code: HAZLET Set No.: 12004 SAS No.: 4476-E SDG No.: EFK28

Lab File ID: 905CA121 Lab Sample ID: VBLK08

Date Analyzed: 05/26/89 Time Analyzed: 1219

Matrix: (soil/water) WATER Level: (low/med) 25ML

Instrument ID: INC50A

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	EFK28	90505456	905CA127	1636
02	EFK29	90505457	905CA128	1723
03	EFK30	90505458	905CA129	1810
04	EFK31	90505461	905CA130	1857
05	EFK32	90505462	905CA131	1943
06	EFK33	90505463	905CA132	2030
07	EFK30MS	90505459	905CA133	2117
08	EFK30MSD	90505460	905CA134	2204

COMMENTS: VBLK08 +131UL MEOH
INC50A, PACKED COLUMN, SAS NO. 4476-E

4A
VOLATILE METHOD BLANK SUMMARY

Lab Name: HAZLET Contract: 68-01-7418

Lab Code: HAZLET Set No.: 12004 SAS No.: 4476-E SDG No.: EFK28

Lab File ID: 905CA137 Lab Sample ID: VBLK09

Date Analyzed: 05/30/89 Time Analyzed: 1303

Matrix: (soil/water) WATER Level: (low/med) 25ML

Instrument ID: INC50A

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	EFK34	90505464	905CA138	1413
02	ZZZZZ	HOLD_BLK	905CA139	1453

COMMENTS: VBLK09 +131UL MEOH
INC50A, SET 12004, SAS 4476-E, SDG EFK28

FORM IV VOA 1/87 Rev.

4B
SEMIVOLATILE METHOD BLANK SUMMARY

Lab Name: HAZLET Contract: 68-01-7418

Lab Code: HAZLET Case No.: 12004 SAS No.: 4476-E SDG No.: EFK28

Lab File ID: 905CB204 Lab Sample ID: SBLK16

Date Extracted: 05/26/89 Extraction: (SepF/Cont/Sonc) SEPF

Date Analyzed: 05/31/89 Time Analyzed: 2028

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

Instrument ID: INC50B

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	EFK28	90505456	905CB205	05/31/89
02	EFK29	90505457	905CB206	05/31/89
03	EFK30	90505458	905CB207	05/31/89
04	EFK31	90505461	905CB210	06/01/89
05	EFK32	90505462	905CB211	06/01/89
06	EFK33	90505463	905CB212	06/01/89
07	EFK34	90505464	905CB213	06/01/89
08	EFK30MSD	90505460	905CB209	06/01/89

COMMENTS: 1UL SBLK16(05/26/89)
INC50B-SAS-4476-E

FORM IV SV 1/87 Rev.

4B

SEMIVOLATILE METHOD BLANK SUMMARY

Lab Name: HAZLET Contract: 68-01-7418

Lab Code: HAZLET Set No.: 12004 SAS No.: 4476-E SDG No.: EFK28

Lab File ID: 906CB021 Lab Sample ID: SBLK21

Date Extracted: 06/02/89 Extraction: (SepF/Cont/Sonc) SEPF

Date Analyzed: 06/03/89 Time Analyzed: 0110

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

Instrument ID: INC50B

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	EFK30MS	90505459	906CB020	06/03/89

COMMENTS: 1UL SBLK21(06/02/89)
INC50B-SAS-4476-E

FORM IV SV 1/87 Rev.

PESTICIDE METHOD BLANK SUMMARY

Lab Name: HAZLET Contract: 68-01-7418

Lab Code: HAZLET ~~Case~~ Set No.: 12004 SAS No.: 4476-E SDG No.: EFK28

Lab Sample ID: BLANK01 Lab File ID: _____

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

Date Extracted: 05/25/89 Extraction:(SepF/Cont/Sonc) SEPF

Date Analyzed (1): 06/02/89 Date Analyzed (2): 06/02/89

Time Analyzed (1): 2142 Time Analyzed (2): 2215

Instrument ID (1): HP007A Instrument ID (2): HP007B

GC Column ID (1): DB 5 GC Column ID (2): DB-608

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

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	EFK28	90505456	06/03/89	
02	EFK29	90505457	06/03/89	
03	EFK30	90505458	06/03/89	
04	EFK31	90505461	06/03/89	
05	EFK32	90505462	06/03/89	
06	EFK33	90505463	06/03/89	
07	EFK34	90505464	06/03/89	
08	EFK30MS	90505459	06/03/89	
09	EFK30MSD	90505460	06/03/89	

COMMENTS:

PESTICIDE ORGANICS ANALYSIS DATA SHEET

PBLK01

Lab Name: HAZLET Contract: 68-01-7418

Lab Code: HAZLET ~~Case~~ Set No.: 12004 SAS No.: 4476-E SDG No.: EFK28

Matrix: (soil/water) WATER Lab Sample ID: BLANK01

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

Level: (low/med) LOW Date Received:

% Moisture: not dec. ____ dec. ____ Date Extracted: 05/25/89

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 06/02/89

GPC Cleanup: (Y/N) N pH: 5.0 Dilution Factor: 0.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.0020	U
319-85-7	beta-BHC	0.0020	U
319-86-8	delta-BHC	0.0010	U
58-89-9	gamma-BHC (Lindane)	0.0020	U
76-44-8	Heptachlor	0.0010	U
309-00-2	Aldrin	0.0020	U
1024-57-3	Heptachlor epoxide	0.0030	U
959-98-8	Endosulfan I	0.0030	U
60-57-1	Dieldrin	0.0060	U
72-55-9	4,4'-DDE	0.013	U
72-20-8	Endrin	0.0070	U
33213-65-9	Endosulfan II	0.0040	U
72-54-8	4,4'-DDD	0.0030	U
1031-07-8	Endosulfan sulfate	0.016	U
50-29-3	4,4'-DDT	0.0030	U
72-43-5	Methoxychlor	0.030	U
53494-70-5	Endrin ketone	0.010	U
5103-71-9	alpha-Chlordane	0.0040	U
5103-74-2	gamma-Chlordane	0.0030	U
8001-35-2	Toxaphene	0.010	U
12674-11-2	Aroclor-1016	0.010	U
11104-28-2	Aroclor-1221	0.090	U
11141-16-5	Aroclor-1232	0.020	U
53469-21-9	Aroclor-1242	0.020	U
12672-29-6	Aroclor-1248	0.010	U
11097-69-1	Aroclor-1254	0.030	U
11096-82-5	Aroclor-1260	0.010	U

FORM I PEST 1/87 Rev.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK08

Lab Name: HAZLET Contract: 68-01-7418

Lab Code: HAZLET Set No.: 12004 SAS No.: 4476-E SDG No.: EFK28

Matrix: (soil/water) WATER Lab Sample ID: VBLK08

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: 905CA121

Level: (low/med) 25ML Date Received: _____

% Moisture: not dec. ____ Date Analyzed: 05/26/89

Column: (pack/cap) PACK Dilution Factor: 1.0

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

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	0.4	U
74-83-9	Bromomethane	0.3	U
75-01-4	Vinyl Chloride	0.3	U
75-00-3	Chloroethane	0.2	U
75-09-2	Methylene Chloride	0.8	J
67-64-1	Acetone	4	
75-15-0	Carbon Disulfide	0.2	U
75-35-4	1,1-Dichloroethene	0.2	U
75-34-3	1,1-Dichloroethane	0.2	U
540-59-0	1,2-Dichloroethene (total)	0.2	U
67-66-3	Chloroform	0.2	U
107-06-2	1,2-Dichloroethane	0.6	U
78-93-3	2-Butanone	5	U
71-55-6	1,1,1-Trichloroethane	0.2	U
56-23-5	Carbon Tetrachloride	0.2	U
108-05-4	Vinyl Acetate	0.3	U
75-27-4	Bromodichloromethane	0.2	U
78-87-5	1,2-Dichloropropane	0.2	U
10061-01-5	cis-1,3-Dichloropropene	0.4	U
79-01-6	Trichloroethene	0.2	U
124-48-1	Dibromochloromethane	0.2	U
79-00-5	1,1,2-Trichloroethane	0.2	U
71-43-2	Benzene	0.2	U
10061-02-6	Trans-1,3-Dichloropropene	0.3	U
75-25-2	Bromoform	0.7	U
108-10-1	4-Methyl-2-Pentanone	1	U
591-78-6	2-Hexanone	1	U
127-18-4	Tetrachloroethene	0.2	U
79-34-5	1,1,2,2-Tetrachloroethane	0.2	U
108-88-3	Toluene	0.3	U
108-90-7	Chlorobenzene	0.2	U
100-41-4	Ethylbenzene	0.2	U
100-42-5	Styrene	0.3	U
1330-20-7	Xylenes (total)	0.3	U
107-02-8	Acrolein	4	U
107-13-1	Acrylonitrile	5	U

FORM I VOA 1/87 Rev.

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK08

Lab Name: HAZLET Contract: 68-01-7418

Lab Code: HAZLET Set No.: 12004 SAS No.: 4476-E SDG No.: EFK28

Matrix: (soil/water) WATER Lab Sample ID: VBLK08

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: 905CA121

Level: (low/med) 25ML Date Received: _____

% Moisture: not dec. ____ Date Analyzed: 05/26/89

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

FORM I VOA-TIC 1/87 Rev.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK09

Lab Name: HAZLET Contract: 68-01-7418

Lab Code: HAZLET Set No.: 12004 SAS No.: 4476-E SDG No.: EFK28

Matrix: (soil/water) WATER Lab Sample ID: VBLK09

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: 905CA137

Level: (low/med) 25ML Date Received: _____

% Moisture: not dec. ____ Date Analyzed: 05/30/89

Column: (pack/cap) PACK Dilution Factor: 1.0

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

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	0.4	U
74-83-9	Bromomethane	0.3	U
75-01-4	Vinyl Chloride	0.3	U
75-00-3	Chloroethane	0.2	U
75-09-2	Methylene Chloride	0.2	J
67-64-1	Acetone	3	
75-15-0	Carbon Disulfide	0.2	U
75-35-4	1,1-Dichloroethene	0.2	U
75-34-3	1,1-Dichloroethane	0.2	U
540-59-0	1,2-Dichloroethene (total)	0.2	U
67-66-3	Chloroform	0.2	U
107-06-2	1,2-Dichloroethane	0.6	U
78-93-3	2-Butanone	5	U
71-55-6	1,1,1-Trichloroethane	0.2	U
56-23-5	Carbon Tetrachloride	0.2	U
108-05-4	Vinyl Acetate	0.3	U
75-27-4	Bromodichloromethane	0.2	U
78-87-5	1,2-Dichloropropane	0.2	U
10061-01-5	cis-1,3-Dichloropropene	0.4	U
79-01-6	Trichloroethene	0.2	U
124-48-1	Dibromochloromethane	0.2	U
79-00-5	1,1,2-Trichloroethane	0.2	U
71-43-2	Benzene	0.2	U
10061-02-6	Trans-1,3-Dichloropropene	0.3	U
75-25-2	Bromoform	0.7	U
108-10-1	4-Methyl-2-Pentanone	1	U
591-78-6	2-Hexanone	1	U
127-18-4	Tetrachloroethene	0.2	U
79-34-5	1,1,2,2-Tetrachloroethane	0.2	U
108-88-3	Toluene	0.3	U
108-90-7	Chlorobenzene	0.2	U
100-41-4	Ethylbenzene	0.2	U
100-42-5	Styrene	0.3	U
1330-20-7	Xylenes (total)	0.3	U
107-02-8	Acrolein	4	U
107-13-1	Acrylonitrile	5	U

FORM I VOA 1/87 Rev.

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK09

Lab Name: HAZLET Contract: 68-01-7418

Lab Code: HAZLET Set No.: 12004 SAS No.: 4476-E SDG No.: EFK28

Matrix: (soil/water) WATER Lab Sample ID: VBLK09

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: 905CA137

Level: (low/med) 25ML Date Received: _____

% Moisture: not dec. ____ Date Analyzed: 05/30/89

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

FORM I VOA-TIC 1/87 Rev.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ZZZZZ

Lab Name: HAZLET Contract: 68-01-7418

Lab Code: HAZLET Set No.: 12004 SAS No.: 4476-E SDG No.: EFK28

Matrix: (soil/water) WATER Lab Sample ID: HOLD BLK

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: 905CA139

Level: (low/med) 25ML Date Received: _____

% Moisture: not dec. ____ Date Analyzed: 05/30/89

Column: (pack/cap) PACK Dilution Factor: 1.0

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

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	0.4	U
74-83-9	Bromomethane	0.3	U
75-01-4	Vinyl Chloride	0.3	U
75-00-3	Chloroethane	0.2	U
75-09-2	Methylene Chloride	1.7 ~~1~~	~~B~~ U 6.15.89
67-64-1	Acetone	5	~~B~~ U L.F.
75-15-0	Carbon Disulfide	0.2	U
75-35-4	1,1-Dichloroethene	0.2	U
75-34-3	1,1-Dichloroethane	0.2	U
540-59-0	1,2-Dichloroethene (total)	0.2	U
67-66-3	Chloroform	0.2	U
107-06-2	1,2-Dichloroethane	0.6	U
78-93-3	2-Butanone	5	U
71-55-6	1,1,1-Trichloroethane	0.2	U
56-23-5	Carbon Tetrachloride	0.2	U
108-05-4	Vinyl Acetate	0.3	U
75-27-4	Bromodichloromethane	0.2	U
78-87-5	1,2-Dichloropropane	0.2	U
10061-01-5	cis-1,3-Dichloropropene	0.4	U
79-01-6	Trichloroethene	0.2	U
124-48-1	Dibromochloromethane	0.2	U
79-00-5	1,1,2-Trichloroethane	0.2	U
71-43-2	Benzene	0.2	U
10061-02-6	Trans-1,3-Dichloropropene	0.3	U
75-25-2	Bromoform	0.7	U
108-10-1	4-Methyl-2-Pentanone	1	U
591-78-6	2-Hexanone	1	U
127-18-4	Tetrachloroethene	0.2	U
79-34-5	1,1,2,2-Tetrachloroethane	0.2	U
108-88-3	Toluene	0.3	U
108-90-7	Chlorobenzene	0.2	U
100-41-4	Ethylbenzene	0.2	U
100-42-5	Styrene	0.3	U
1330-20-7	Xylenes (total)	0.3	U
107-02-8	Acrolein	4	U
107-13-1	Acrylonitrile	5	U

FORM I VOA 1/87 Rev.

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

ZZZZZ

Lab Name: HAZLET Contract: 68-01-7418

Lab Code: HAZLET Set No.: 12004 SAS No.: 4476-E SDG No.: EFK28

Matrix: (soil/water) WATER Lab Sample ID: HOLD BLK

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: 905CA139

Level: (low/med) 25ML Date Received: _____

% Moisture: not dec. ____ Date Analyzed: 05/30/89

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

FORM I VOA-TIC 1/87 Rev.

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLK16

Lab Name: HAZLET Contract: 68-01-7418

Lab Code: HAZLET Case No.: 12004 SAS No.: 4476-E SDG No.: EFK28

Matrix: (soil/water) WATER Lab Sample ID: SBLK16

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 905CB204

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

% Moisture: not dec. ____ dec. ____ Date Extracted: 05/26/89

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 05/31/89

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	1	U
111-44-4	bis(2-Chloroethyl)Ether	0.8	U
95-57-8	2-Chlorophenol	2	U
541-73-1	1,3-Dichlorobenzene	0.6	U
106-46-7	1,4-Dichlorobenzene	0.7	U
100-51-6	Benzyl Alcohol	2	U
95-50-1	1,2-Dichlorobenzene	0.7	U
95-48-7	2-Methylphenol	1	U
39638-32-9	bis(2-Chloroisopropyl)Ether	3	U
106-44-5	4-Methylphenol	1	U
621-64-7	N-Nitroso-Di-n-Propylamine	2	U
67-72-1	Hexachloroethane	2	U
98-95-3	Nitrobenzene	5	U
78-59-1	Isophorone	2	U
88-75-5	2-Nitrophenol	3	U
105-67-9	2,4-Dimethylphenol	2	U
65-85-0	Benzoic Acid	50	U
111-91-1	bis(2-Chloroethoxy)Methane	0.7	U
120-83-2	2,4-Dichlorophenol	2	U
120-82-1	1,2,4-Trichlorobenzene	0.9	U
91-20-3	Naphthalene	0.4	U
106-47-8	4-Chloroaniline	2	U
87-68-3	Hexachlorobutadiene	1	U
59-50-7	4-Chloro-3-methylphenol	2	U
91-57-6	2-Methylnaphthalene	0.5	U
77-47-4	Hexachlorocyclopentadiene	1	U
88-06-2	2,4,6-Trichlorophenol	2	U
95-95-4	2,4,5-Trichlorophenol	3	U
91-58-7	2-Chloronaphthalene	0.9	U
88-74-4	2-Nitroaniline	2	U
131-11-3	Dimethyl Phthalate	0.9	U
208-96-8	Acenaphthylene	0.5	U
606-20-2	2,6-Dinitrotoluene	0.9	U

FORM I SV-1 1/87 Rev.

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLK16

Lab Name: HAZLET Contract: 68-01-7418

Lab Code: HAZLET ~~Case~~ SET No.: 12004 SAS No.: 4476-E SDG No.: EFK28

Matrix: (soil/water) WATER Lab Sample ID: SBLK16

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 905CB204

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

% Moisture: not dec. ____ dec. ____ Date Extracted: 05/26/89

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 05/31/89

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	3-Nitroaniline	1	U
83-32-9	Acenaphthene	0.5	U
51-28-5	2,4-Dinitrophenol	35	U
100-02-7	4-Nitrophenol	10	U
132-64-9	Dibenzofuran	0.5	U
121-14-2	2,4-Dinitrotoluene	0.9	U
84-66-2	Diethylphthalate	0.9	U
7005-72-3	4-Chlorophenyl-phenylether	1	U
86-73-7	Fluorene	0.5	U
100-10-6	4-Nitroaniline	2	U
534-52-1	4,6-Dinitro-2-methylphenol	8	U
86-30-6	N-Nitrosodiphenylamine (1)	0.7	U
101-55-3	4-Bromophenyl-phenylether	0.9	U
118-74-1	Hexachlorobenzene	1	U
87-86-5	Pentachlorophenol	6	U
85-01-8	Phenanthrene	0.3	U
120-12-7	Anthracene	0.4	U
84-74-2	Di-n-Butylphthalate	0.8	J
206-44-0	Fluoranthene	1	U
129-00-0	Pyrene	1	U
85-68-7	Butylbenzylphthalate	0.7	J
91-94-1	3,3'-Dichlorobenzidine	3	U
56-55-3	Benzo(a)anthracene	0.3	U
218-01-9	Chrysene	0.4	U
117-81-7	bis(2-Ethylhexyl)phthalate	0.7	J
117-84-0	Di-n-octylphthalate	2	U
205-99-2	Benzo(b)fluoranthene	1	U
207-08-9	Benzo(k)fluoranthene	2	U
50-32-8	Benzo(a)pyrene	0.4	U
193-39-5	Indeno(1,2,3-cd)Pyrene	2	U
53-70-3	Dibenz(a,h)Anthracene	1	U
191-24-2	Benzo(g,h,i)perylene	1	U

(1) - Cannot be separated from Diphenylamine

FORM I SV-2 1/87 Rev.

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SBLK16

Lab Name: HAZLET 06/7/89 Contract: 68-01-7418

Lab Code: HAZLET ~~Case~~ SCT No.: 12004 SAS No.: 4476-E SDG No.: EFK28

Matrix: (soil/water) WATER Lab Sample ID: SBLK16

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 905CB204

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

% Moisture: not dec. ____ dec. ____ Date Extracted: 05/26/89

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 05/31/89

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

Number TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 872-50-4	2-PYRROLIDINONE, 1-METHYL-	9.22	3.0	J

FORM I SV-TIC 1/87 Rev.

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLK21

Lab Name: HAZLET Contract: 68-01-7418

Lab Code: HAZLET ~~Case~~ Set No.: 12004 SAS No.: 4476-E SDG No.: EFK28

Matrix: (soil/water) WATER Lab Sample ID: SBLK21

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 906CB021

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

% Moisture: not dec. ____ dec. ____ Date Extracted: 06/02/89

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 06/03/89

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	1	U
111-44-4	bis(2-Chloroethyl)Ether	0.8	U
95-57-8	2-Chlorophenol	2	U
541-73-1	1,3-Dichlorobenzene	0.6	U
106-46-7	1,4-Dichlorobenzene	0.7	U
100-51-6	Benzyl Alcohol	2	U
95-50-1	1,2-Dichlorobenzene	0.7	U
95-48-7	2-Methylphenol	1	U
39638-32-9	bis(2-Chloroisopropyl)Ether	3	U
106-44-5	4-Methylphenol	1	U
621-64-7	N-Nitroso-Di-n-Propylamine	2	U
67-72-1	Hexachloroethane	2	U
98-95-3	Nitrobenzene	5	U
78-59-1	Isophorone	2	U
88-75-5	2-Nitrophenol	3	U
105-67-9	2,4-Dimethylphenol	2	U
65-85-0	Benzoic Acid	50	U
111-91-1	bis(2-Chloroethoxy)Methane	0.7	U
120-83-2	2,4-Dichlorophenol	2	U
120-82-1	1,2,4-Trichlorobenzene	0.9	U
91-20-3	Naphthalene	0.4	U
106-47-8	4-Chloroaniline	2	U
87-68-3	Hexachlorobutadiene	1	U
59-50-7	4-Chloro-3-methylphenol	2	U
91-57-6	2-Methylnaphthalene	0.5	U
77-47-4	Hexachlorocyclopentadiene	1	U
88-06-2	2,4,6-Trichlorophenol	2	U
95-95-4	2,4,5-Trichlorophenol	3	U
91-58-7	2-Chloronaphthalene	0.9	U
88-74-4	2-Nitroaniline	2	U
131-11-3	Dimethyl Phthalate	0.9	U
208-96-8	Acenaphthylene	0.5	U
606-20-2	2,6-Dinitrotoluene	0.9	U

FORM I SV-1 1/87 Rev.

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLK21

Lab Name: HAZLET 06/12/89 Contract: 68-01-7418

Lab Code: HAZLET ~~Case~~ SET No.: 12004 SAS No.: 4476-E SDG No.: EFK28

Matrix: (soil/water) WATER Lab Sample ID: SBLK21

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 906CB021

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

% Moisture: not dec. ____ dec. ____ Date Extracted: 06/02/89

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 06/03/89

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	3-Nitroaniline	1	U
83-32-9	Acenaphthene	0.5	U
51-28-5	2,4-Dinitrophenol	35	U
100-02-7	4-Nitrophenol	10	U
132-64-9	Dibenzofuran	0.5	U
121-14-2	2,4-Dinitrotoluene	0.9	U
84-66-2	Diethylphthalate	0.9	U
7005-72-3	4-Chlorophenyl-phenylether	1	U
86-73-7	Fluorene	0.5	U
100-10-6	4-Nitroaniline	2	U
534-52-1	4,6-Dinitro-2-methylphenol	8	U
86-30-6	N-Nitrosodiphenylamine (1)	0.7	U
101-55-3	4-Bromophenyl-phenylether	0.9	U
118-74-1	Hexachlorobenzene	1	U
87-86-5	Pentachlorophenol	6	U
85-01-8	Phenanthrene	0.3	U
120-12-7	Anthracene	0.4	U
84-74-2	Di-n-Butylphthalate	3	
206-44-0	Fluoranthene	1	U
129-00-0	Pyrene	1	U
85-68-7	Butylbenzylphthalate	0.7	J
91-94-1	3,3'-Dichlorobenzidine	3	U
56-55-3	Benzo(a)anthracene	0.3	U
218-01-9	Chrysene	0.4	U
117-81-7	bis(2-Ethylhexyl)phthalate	1	J
117-84-0	Di-n-octylphthalate	2	U
205-99-2	Benzo(b)fluoranthene	1	U
207-08-9	Benzo(k)fluoranthene	2	U
50-32-8	Benzo(a)pyrene	0.4	U
193-39-5	Indeno(1,2,3-cd)Pyrene	2	U
53-70-3	Dibenz(a,h)Anthracene	1	U
191-24-2	Benzo(g,h,i)perylene	1	U

(1) - Cannot be separated from Diphenylamine

FORM I SV-2 1/87 Rev.

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SBLK21

Lab Name: HAZLET Contract: 68-01-7418

Lab Code: HAZLET ~~Case~~ SCT No.: 12004 SAS No.: 4476-E SDG No.: EFK28

Matrix: (soil/water) WATER Lab Sample ID: SBLK21

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 906CB021

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

% Moisture: not dec. ____ dec. ____ Date Extracted: 06/02/89

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 06/03/89

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

Number TICs found: 3

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 872-50-4	2-PYRROLIDINONE, 1-METHYL-	9.24	2.8	J
2. 10340-49-5	BENZENE, (1-METHYL-3-BUTENYL	15.50	4.4	J
3. 4919-12-4	1,2,4-TRIAZOLO[4,3-A]PYRIDIN	18.59	5.7	J

FORM I SV-TIC 1/87 Rev.

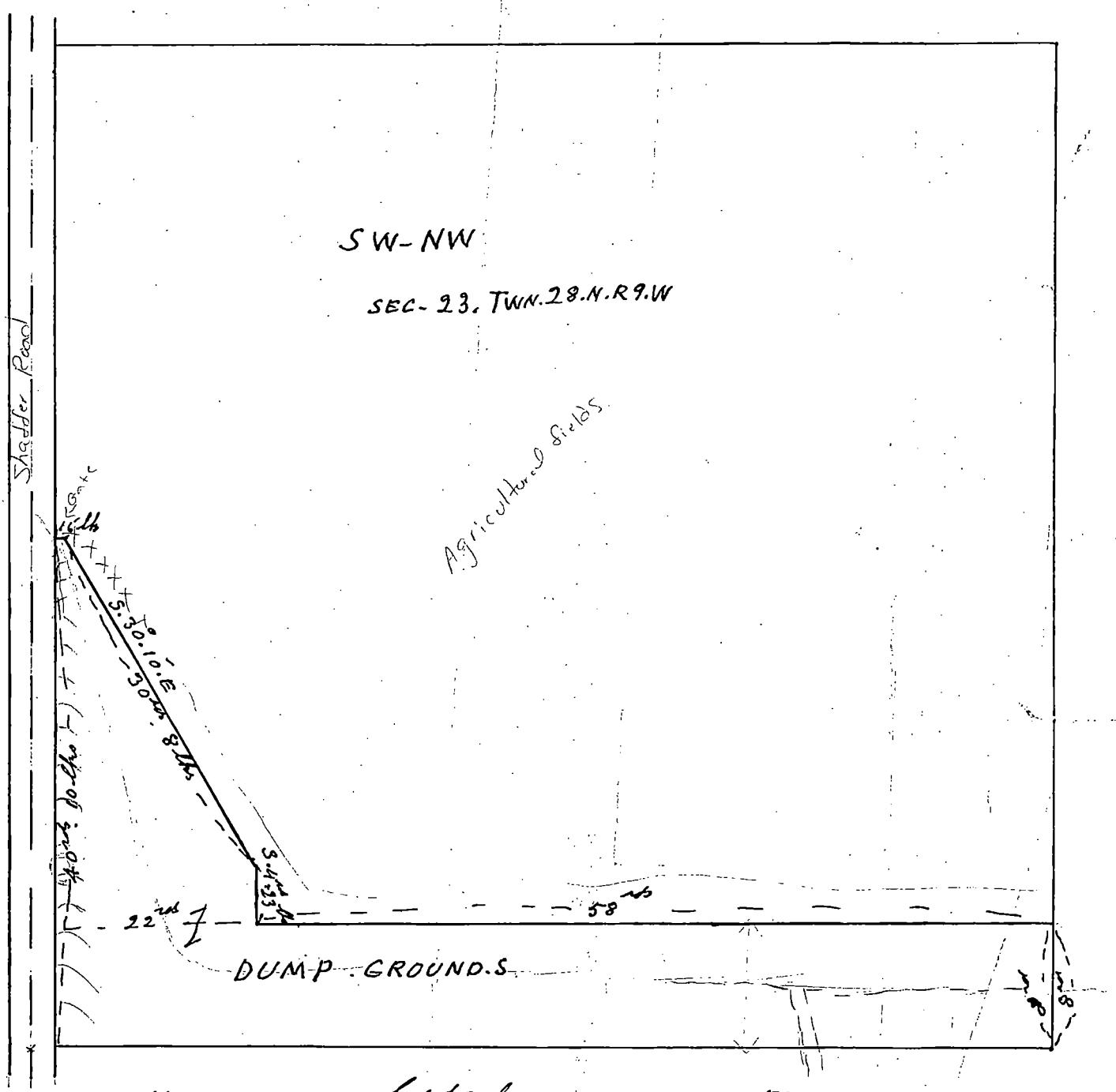
Certificate of Survey

CHIPPEWA COUNTY, WISCONSIN

This is to certify that on the 14 day of September, 1953,

I, Alfred Filburz, Topg. Eng County Surveyor, did at the

request of Town of Hallie, Chippewa County make the following survey:



Dated this 14 day of September, 1953.

Signed: Alfred Filburz
County Surveyor

Hallie. TIF

Grey ?

✓ Show bitmaps

✓ Select for Tracing

Import? Tiff

Pencil tool

X

Arrow tool

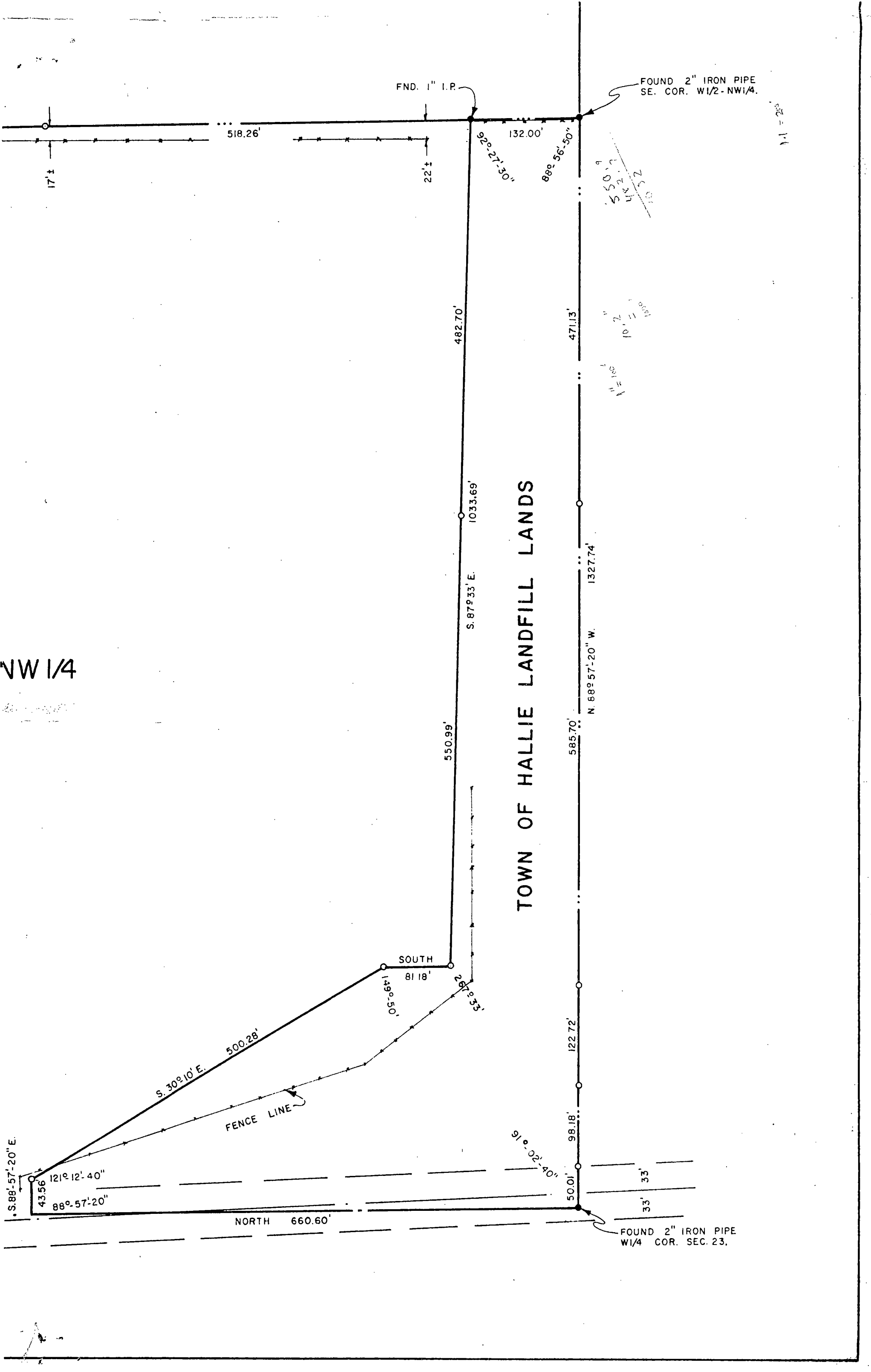
control Key

Traveling

11th

Link

WI0149A.CDR


FND. 1" I.P.
FOUND 2" IRON PIPE
SE. COR. W1/2-NW1/4.
518.26'
17.1'
22'±
92°-27'-30"
132.00'
88° 56'-50"
482.70'
471.13'
1033.69'
S. 87°33' E.
1327.74'
N. 88° 57'-20" W.
550.99'
585.70'
TOWN OF HALLIE LANDFILL LANDS
SOUTH
81.18'
149°-50'
267°33'
500.28'
S. 30°10' E.
FENCE LINE
122.72'
98.18'
91°-02'-40"
50.01'
33'
33'
S.88°-57'-20" E.
121°12'-40"
43.56'
88°-57'-20"
NORTH 660.60'
FOUND 2" IRON PIPE
W1/4 COR. SEC. 23.

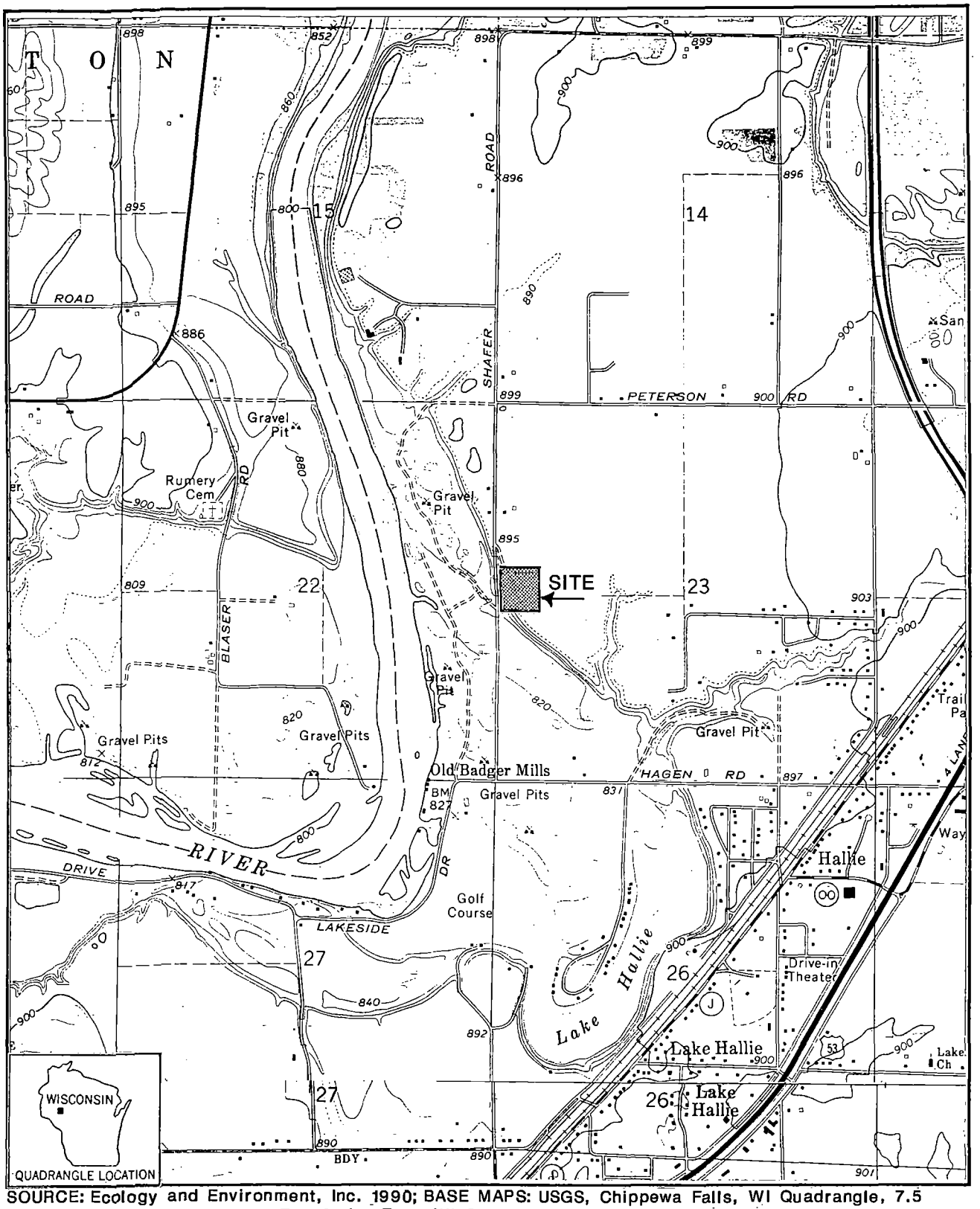
NW 1/4

I, JEROME F. HIESS, REGESTERED LAND SURVEYOR HEREBY CERTIFY THAT THIS SURVEY IS CORRECT AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

Jerome F. Hiess
JEROME F. HIESS

DATED THIS 14th DAY OF July, 1977

WISCONSIN
JEROME F.
HIESS
S-1131
CHIPPEWA FALLS
WISCONSIN
LAND SURVEYOR

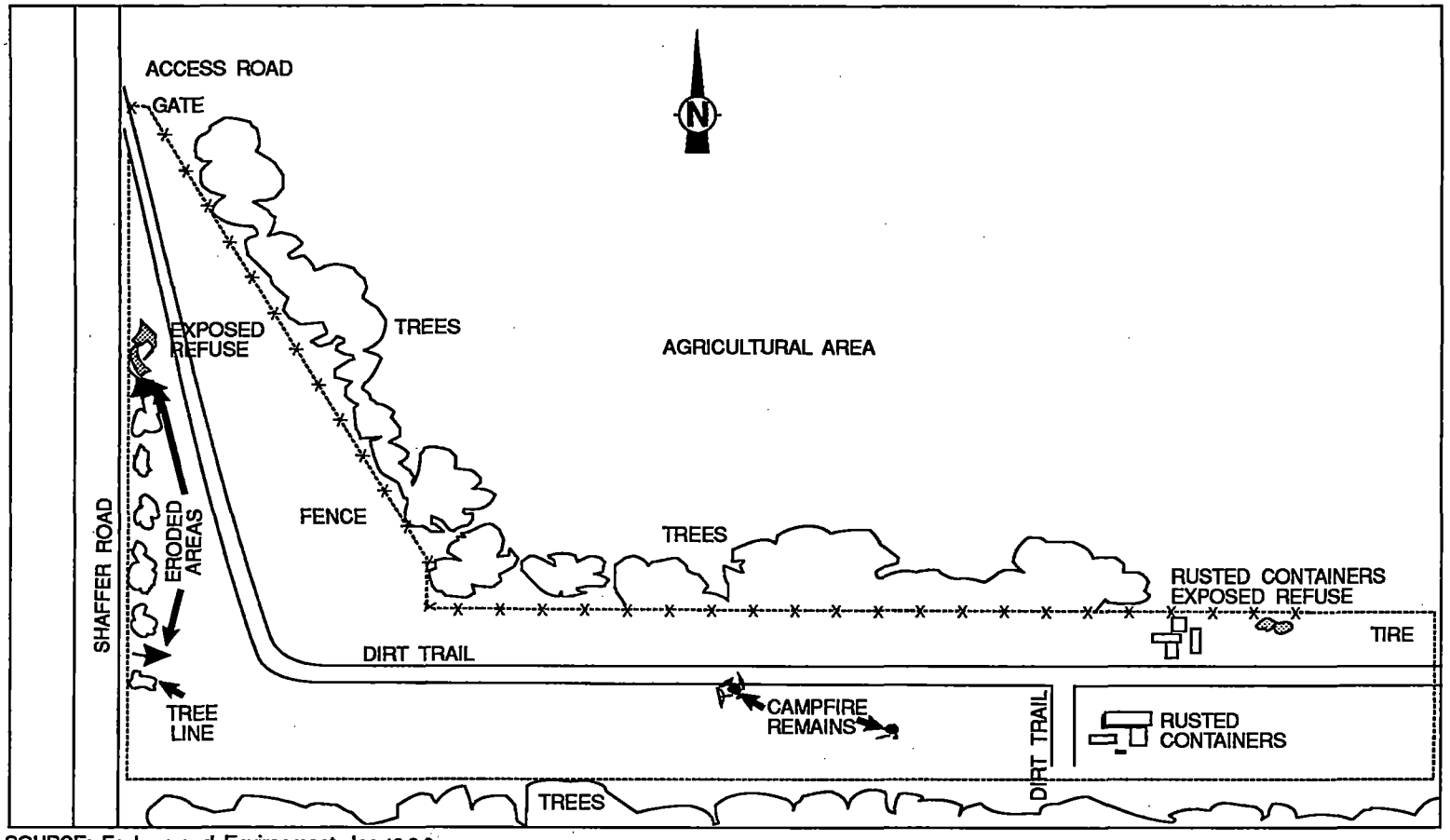


SOURCE: Ecology and Environment, Inc. 1990; BASE MAPS: USGS, Chippewa Falls, WI Quadrangle, 7.5 Minute Series, 1972; Eau Claire East, WI Quadrangle, 7.5 Minute Series, 1972.

SCALE

0 ½ 1 MILE

FIGURE 2-1 SITE LOCATION

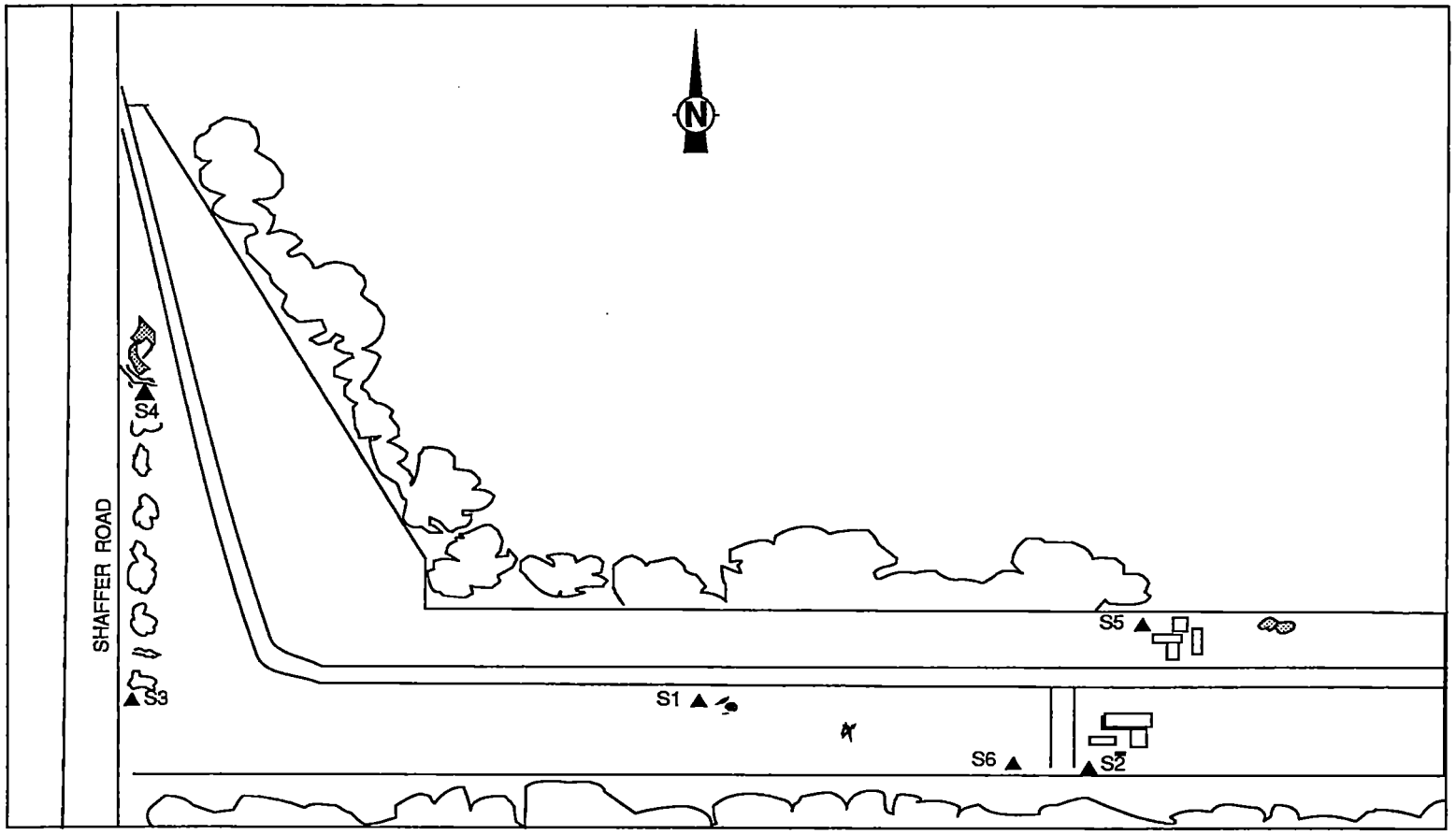


SOURCE: Ecology and Environment, Inc.1990.

SCALE

0 125 250 375 500 FEET

FIGURE 3-1 SITE FEATURES

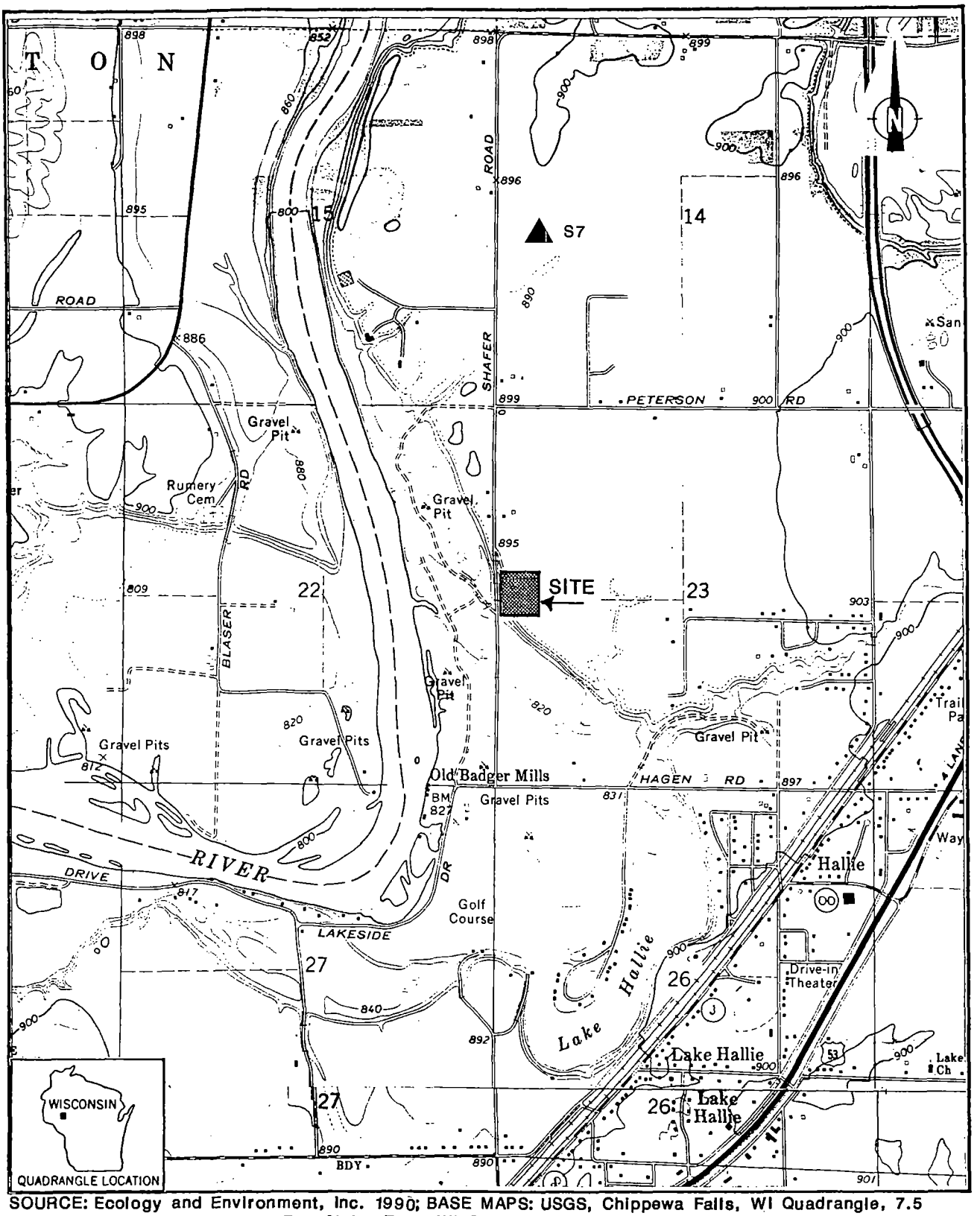


SOURCE: Ecology and Environment, Inc.1990.

SCALE

0 125 250 375 500 FEET

FIGURE 3-2 ON-SITE SOIL SAMPLING LOCATIONS

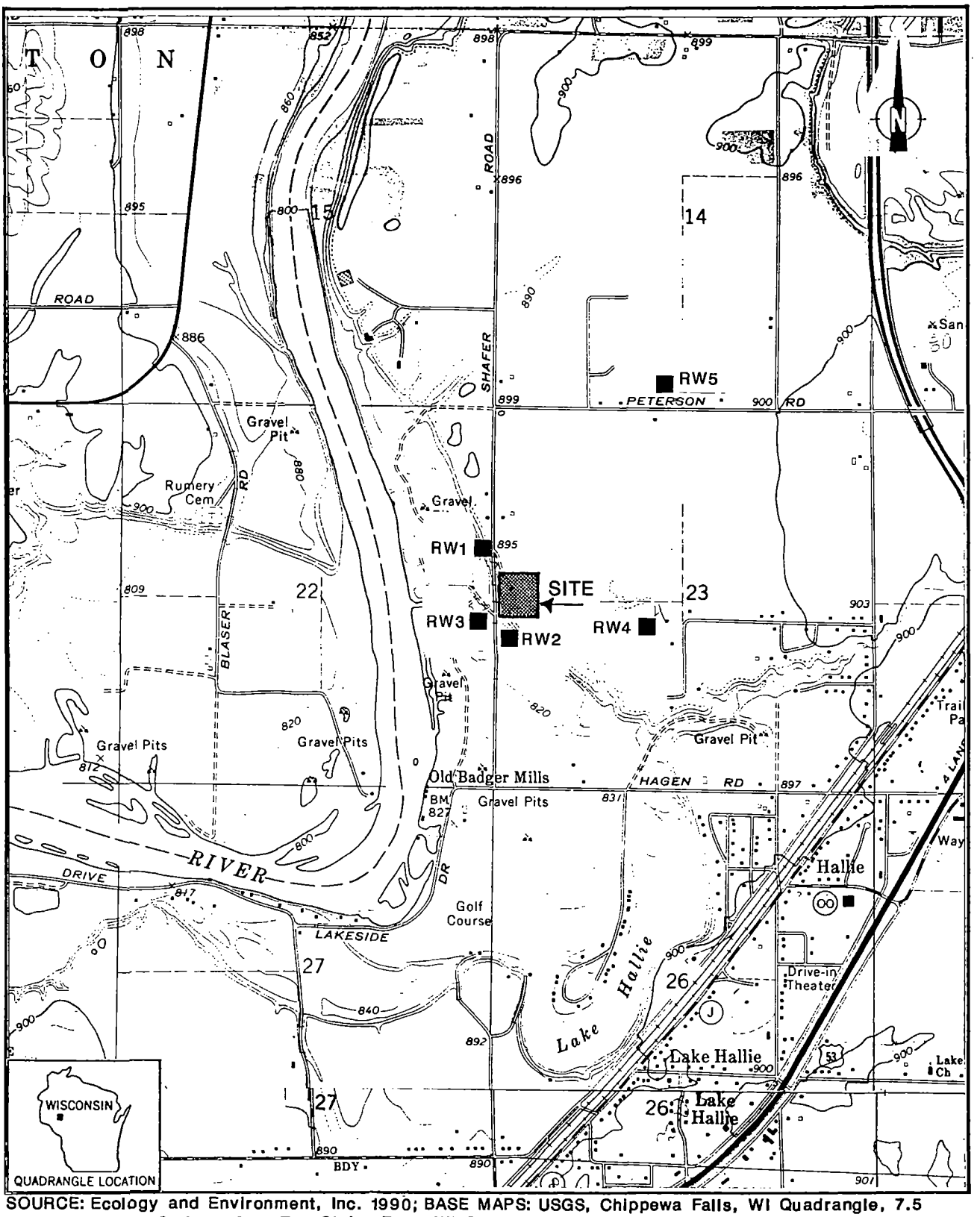


SOURCE: Ecology and Environment, Inc. 1990; BASE MAPS: USGS, Chippewa Falls, WI Quadrangle, 7.5 Minute Series, 1972; Eau Claire East, WI Quadrangle, 7.5 Minute Series, 1972.

SCALE

0 ½ 1 MILE

FIGURE 3-3 OFF-SITE SOIL SAMPLING LOCATION



SOURCE: Ecology and Environment, Inc. 1990; BASE MAPS: USGS, Chippewa Falls, WI Quadrangle, 7.5 Minute Series, 1972; Eau Claire East, WI Quadrangle, 7.5 Minute Series, 1972.

SCALE

0 ½ 1 MILE

FIGURE 3-4 RESIDENTIAL WELL SAMPLING LOCATIONS

State of Wisconsin
Department of Natural Resources
Private Water Supply
Box 7921
Madison, Wisconsin 53707

NOTE:
White Copy – Division's Copy
Green Copy – Driller's Copy
Yellow Copy – Owner's Copy

WELL CONSTRUCTOR'S REPORT
Form 3300-15 Rev. 2-79

MAR 5 1985

1. COUNTY Chippewa

CHECK (✓) ONE: ☑ Town ☐ Village ☐ City

Name Hallie

Non-responsive

4. Distance in feet from well to nearest: (Record answer in appropriate block)

Building	Sanitary Bldg. Drain C.I.	Sanitary Bldg. Drain Other	Sanitary Bldg. Sewer C.I.	Sanitary Bldg. Sewer Other	Floor Drain Connected To: C.I. Sewer	Floor Drain Connected To: Other Sewer	Storm Bldg. Drain C.I.	Storm Bldg. Drain Other	Storm Bldg. Sewer C.I.	Storm Bldg. Sewer Other
10										

Street Sewer San.	Street Sewer Storm	Other Sewers C.I.	Other Sewers Other	Foundation Drain Connected to: Sewer / Clearwater Dr.	Sewage Sump / Clearwater Sump	Sewage Sump C.I.	Sewage Sump Other	Clearwater Sump	Septic Tank	Holding Tank	Sewage Absorption Unit: Seepage Pit / Seepage Bed / Seepage Trench	Manure Hopper or Retention or Pnuematic Tank
									80		112	

Privy	Pet Waste Pit	Pit: Nonconforming Existing: Well / Pump / Tank	Subsurface Pumproom Nonconforming Existing	Barn Gutter	Animal Barn Pen	Animal Yard	Silo With Pit	Glass Lined Storage Facility	Silo w/o Pit	Earthen Silage Storage Trench Or Pit	Earthen Manure Basin
		12	12								

Temporary Manure Stack or Platform	Watertight Liquid Manure Tank or Basin	Manure Pressure Pipe	Subsurface Gasoline or Oil Tank	Waste Pond or Land Disposal Unit (Specify Type)	Manure Storage Basin / Concrete Floor Only / Concrete Floor and Partial Concrete Walls	Other (Describe)

5. Well is intended to supply water for:

6. DRILLHOLE

Dia. (in.)	From (ft.)	To (ft.)	Dia. (in.)	From (ft.)	To (ft.)
6	Surface	94			

7. CASING, LINER, CURBING AND SCREEN

Dia. (in.)	Material, Weight, Specification Mfg. & Method of Assembly	From (ft.)	To (ft.)
6	T&C Newsteel .280 well	Surface	90
	19.45 lb USA		
	5 9/16 Stainless steel super S		
	5x6 Kpacker	48" overall 73"	
		90	94

8. GROUT OR OTHER SEALING MATERIAL

Kind	From (ft.)	To (ft.)
	Surface	

9. FORMATIONS

Kind	From (ft.)	To (ft.)
Sand & gravel	Surface	94

10. TYPE OF DRILLING MACHINE USED

☐ Cable Tool ☐ Rotary-air w/drilling mud ☐ Rotary-w/drilling mud ☐ Rotary-hammer w/drilling mud & air ☑ Rotary-hammer & air ☐ Reverse Rotary ☐ Jetting with ☐ Air ☐ Water

Well construction completed on June 12 1980

Well is terminated 13 inches ☑ above ☐ below final grade

Well disinfected upon completion ☑ Yes ☐ No

Well sealed watertight upon completion ☑ Yes ☐ No

11. MISCELLANEOUS DATA

Yield Test: 1 Hrs. at 20 GPM

Depth from surface to normal water level 71 Ft.

Depth of water level when pumping 73 Ft. Stabilized ☑ Yes ☐ No

Water sample sent to Eau Claire #1308 laboratory on 6-25 1980

Your opinion concerning other pollution hazards, information concerning difficulties encountered, and data relating to nearby wells, screens, seals, method of finishing the well, amount of cement used in grouting, blasting, etc., should be given on reverse side.

Signature [illegible] #146

Business Name and Complete Mailing Address Olson Bros. Well Drilling Co. 4625 Olson D[illegible]

State of Wisconsin
Department of Natural Resources
Private Water Supply
Box 7921
Madison, Wisconsin 53707

NOTE:
White Copy – Division's Copy
Green Copy – Driller's Copy
Yellow Copy – Owner's Copy

WELL CONSTRUCTOR'S REPORT
Form 3300-15 Rev. 2-79

JAN 24 1986

COUNTY: Chippewa

CHECK (✓) ONE: ☒ Town ☐ Village ☐ City

Name: Hallie

Non-responsive

1. Distance in feet from well to nearest: (Record answer in appropriate block)

Building	Sanitary Bldg. Drain C.I.	Sanitary Bldg. Drain Other	Sanitary Bldg. Sewer C.I.	Sanitary Bldg. Sewer Other	Floor Drain Connected To: C.I. Sewer	Floor Drain Connected To: Other Sewer	Storm Bldg. Drain C.I.	Storm Bldg. Drain Other	Storm Bldg. Sewer C.I.	Storm Bldg. Sewer Other
5										

Street Sewer San.	Street Sewer Storm	Other Sewers C.I.	Other Sewers Other	Foundation Drain Connected to: Sewer	Sewage Sump	Clearwater Dr.	Clearwater Sump	Sewage Sump C.I.	Sewage Sump Other	Clearwater Sump	Septic Tank	Holding Tank	Sewage Absorption Unit: Seepage Pit	Seepage Bed	Seepage Trench	Manure Hopper or Retention or Pnuematic Tank
											40				60	

Privy	Pet Waste Pit	Pit: Nonconforming Existing	Subsurface Pumproom	Barn Gutter	Animal Barn Pen	Animal Yard	Silo With Pit	Glass Lined Storage Facility	Silo w/o Pit	Earthen Silage Storage Trench Or Pit	Earthen Manure Basin
		Well / Pump / Tank	Nonconforming Existing								

Temporary Manure Stack or Platform	Watertight Liquid Manure Tank or Basin	Manure Pressure Pipe	Subsurface Gasoline or Oil Tank	Waste Pond or Land Disposal Unit (Specify Type)	Manure Storage Basin / Concrete Floor Only / Concrete Floor and Partial Concrete Walls	Other (Describe)

5. Well is intended to supply water for: Human

6. DRILLHOLE

Dia. (in.)	From (ft.)	To (ft.)	Dia. (in.)	From (ft.)	To (ft.)
5	Surface	93½			

7. CASING, LINER, CURBING AND SCREEN
Material, Weight, Specification

Dia. (in.)	Mfg. & Method of Assembly	From (ft.)	To (ft.)
5	New steel threaded	Surface	91
	& cuppled 15 lbs per ft		
	ASTM A-120 1200 PSI		
	Valley STeel Pipe		
	5" by 3 ft Johnson screen	90½	93½

8. GROUT OR OTHER SEALING MATERIAL

Kind	From (ft.)	To (ft.)
none	Surface	

9. FORMATIONS

Kind	From (ft.)	To (ft.)
Sand & gravel	Surface	93½

10. TYPE OF DRILLING MACHINE USED

☒ Cable Tool ☐ Rotary-air w/drilling mud ☐ Rotary-w/drilling mud ☐ Rotary-hammer w/drilling mud & air ☐ Rotary-hammer & air ☐ Reverse Rotary ☐ Jetting with ☐ Air ☐ Water

Well construction completed on 12-10 19 85

11. MISCELLANEOUS DATA

Yield Test: 3 Hrs. at 12 GPM

Depth from surface to normal water level 74 Ft.

Depth of water level when pumping 74 Ft. Stabilized ☒ Yes ☐ No

Well is terminated 12 inches ☒ above ☐ below final grade

Well disinfected upon completion ☒ Yes ☐ No

Well sealed watertight upon completion ☒ Yes ☐ No

Water sample sent to Madison laboratory on 12-11 19 85

Your opinion concerning other pollution hazards, information concerning difficulties encountered, and data relating to nearby wells, screens, seals, method of finishing the well, amount of cement used in grouting, blasting, etc., should be given on reverse side.

Signature: [illegible] Registered Well Driller

Business Name and Complete Mailing Address: Route 2 Eau Claire, WI

State of Wisconsin
Department of Natural Resources
Private Water Supply
Box 7921
Madison, Wisconsin 53707

NOTE:
White Copy – Division's Copy
Green Copy – Driller's Copy
Yellow Copy – Owner's Copy

WELL CONSTRUCTOR'S REPORT
Form 3300-15 Rev. 2-79

1. COUNTY: CHIPPEWA

CHECK (✓) ONE: ☑ Town ☐ Village ☐ City Name: HALLE

Section or Gov't. Lot | Section | Township | Range

3. NAME ☑ OWNER ☐ AGENT AT TIME OF DRILLING CHECK (✓) ONE

Non-responsive

4. Distance in feet from well to nearest: (Record answer in appropriate block)

Building	Sanitary Bldg. Drain C.I.	Sanitary Bldg. Drain Other	Sanitary Bldg. Sewer C.I.	Sanitary Bldg. Sewer Other	Floor Drain Connected To: C.I. Sewer	Floor Drain Connected To: Other Sewer	Storm Bldg. Drain C.I.	Storm Bldg. Drain Other	Storm Bldg. Sewer C.I.	Storm Bldg. Sewer Other
4	17									

Street Sewer San.	Street Sewer Storm	Other Sewers C.I.	Other Sewers Other	Foundation Drain Connected to: Sewer / Clearwater Dr.	Sewage Sump / Clearwater Sump	Sewage Sump C.I.	Sewage Sump Other	Clearwater Sump	Septic Tank	Holding Tank	Sewage Absorption Unit: Seepage Pit / Seepage Bed / Seepage Trench	Manure Hopper or Retention or Pnuematic Tank
									54		65	

Privy	Pet Waste Pit	Pit: Nonconforming Existing: Well / Pump / Tank	Subsurface Pumproom Nonconforming Existing	Barn Gutter	Animal Barn Pen	Animal Yard	Silo With Pit	Glass Lined Storage Facility	Silo w/o Pit	Earthen Silage Storage Trench Or Pit	Earthen Manure Basin

Temporary Manure Stack or Platform	Watertight Liquid Manure Tank or Basin	Manure Pressure Pipe	Subsurface Gasoline or Oil Tank	Waste Pond or Land Disposal Unit (Specify Type)	Manure Storage Basin / Concrete Floor Only / Concrete Floor and Partial Concrete Walls	Other (Describe)

5. Well is intended to supply water for: HOME

6. DRILLHOLE

Dia. (in.)	From (ft.)	To (ft.)	Dia. (in.)	From (ft.)	To (ft.)
6	Surface	95			

7. CASING, LINER, CURBING AND SCREEN
Material, Weight, Specification

Dia. (in.)	Mfg. & Method of Assembly	From (ft.)	To (ft.)
6	STEEL 18.97 A53 WELDED	Surface	42

8. GROUT OR OTHER SEALING MATERIAL

Kind	From (ft.)	To (ft.)
	Surface	

9. FORMATIONS

Kind	From (ft.)	To (ft.)
SAND	Surface	42
SAND ROCK	42	95

10. TYPE OF DRILLING MACHINE USED

☑ Cable Tool ☐ Rotary-hammer w/drilling mud & air ☐ Jetting with ☐ Air ☐ Water
☐ Rotary-air w/drilling mud ☐ Rotary-hammer & air
☐ Rotary-w/drilling mud ☐ Reverse Rotary

Well construction completed on 6 JUNE 1980

11. MISCELLANEOUS DATA

Yield Test: 3 Hrs. at 15 GPM

Depth from surface to normal water level 76 Ft.

Depth of water level when pumping 81 Ft. Stabilized ☑ Yes ☐ No

Well is terminated 13 inches ☑ above ☐ below final grade

Well disinfected upon completion ☑ Yes ☐ No

Well sealed watertight upon completion ☑ Yes ☐ No

Water sample sent to EAU CLAIRE laboratory on 17 JUNE 1980

Your opinion concerning other pollution hazards, information concerning difficulties encountered, and data relating to nearby wells, screens, seals, method of finishing the well, amount of cement used in grouting, blasting, etc., should be given on reverse side.

Signature [illegible] Business Name and Complete Mailing Address

plot

State of Wisconsin
Department of Natural Resources
Private Water Supply
Box 7921
Madison, Wisconsin 53707

NOTE:
White Copy – Division's Copy
Green Copy – Driller's Copy
Yellow Copy – Owner's Copy

WELL CONSTRUCTOR'S REPORT
Form 3300–15 Rev. 2-79

DEC 30 1983

1. COUNTY: Chippewa

CHECK (✓) ONE: ☑ Town ☐ Village ☐ City

Name: Wheaton

Non-responsive

4. Distance in feet from well to nearest: (Record answer in appropriate block)

Building	Sanitary Bldg. Drain		Sanitary Bldg. Sewer		Floor Drain Connected To:		Storm Bldg. Drain		Storm Bldg. Sewer	
	C.I.	Other	C.I.	Other	C.I. Sewer	Other Sewer	C.I.	Other	C.I.	Other
6										

Street Sewer		Other Sewers		Foundation Drain Connected to:				Sewage Sump		Clearwater Sump	Septic Tank	Holding Tank	Sewage Absorption Unit	Manure Hopper or Retention or Pnuematic Tank
San.	Storm	C.I.	Other	Sewer		Sewage Sump		C.I.	Other		NONE		Seepage Pit / Seepage Bed / Seepage Trench NONE	
				Clearwater Dr.		Clearwater Sump								

Privy	Pet Waste Pit	Pit: Nonconforming Existing	Subsurface Pumproom	Barn Gutter	Animal Barn Pen	Animal Yard	Silo With Pit	Glass Lined Storage Facility	Silo w/o Pit	Earthen Silage Storage Trench Or Pit	Earthen Manure Basin
		Well / Pump / Tank	Nonconforming Existing								

Temporary Manure Stack or Platform	Watertight Liquid Manure Tank or Basin	Manure Pressure Pipe	Subsurface Gasoline or Oil Tank	Waste Pond or Land Disposal Unit (Specify Type)	Manure Storage Basin / Concrete Floor Only / Concrete Floor and Partial Concrete Walls	Other (Describe)

5. Well is intended to supply water for: Human

6. DRILLHOLE

Dia. (in.)	From (ft.)	To (ft.)	Dia. (in.)	From (ft.)	To (ft.)
6	Surface	43½			

7. CASING, LINER, CURBING AND SCREEN
Material, Weight, Specification

Dia. (in.)	Mfg. & Method of Assembly	From (ft.)	To (ft.)
6	New Steel Threaded & Cuppled 20 lbs per ft. ASTM A-120 1200 PSI Valley Steel Pipe	Surface	41
	5" by 3 ft. Johnson Screen	40½	43½

8. GROUT OR OTHER SEALING MATERIAL

Kind	From (ft.)	To (ft.)
NONE	Surface	

9. FORMATIONS

Kind	From (ft.)	To (ft.)
SAND	Surface	43½

10. TYPE OF DRILLING MACHINE USED

☑ Cable Tool
☐ Rotary-air w/drilling mud
☐ Rotary-w/drilling mud
☐ Rotary-hammer w/drilling mud & air
☐ Rotary-hammer & air
☐ Reverse Rotary
☐ Jetting with ☐ Air ☐ Water

Well construction completed on 11-4 19 83

11. MISCELLANEOUS DATA

Yield Test: 3 Hrs. at 10 GPM

Depth from surface to normal water level 22 Ft.

Depth of water level when pumping 22 Ft. Stabilized ☑ Yes ☐ No

Well is terminated 12 inches ☑ above ☐ below final grade

Well disinfected upon completion ☑ Yes ☐ No

Well sealed watertight upon completion ☑ Yes ☐ No

Water sample sent to Madison laboratory on 11-7 19 83

Your opinion concerning other pollution hazards, information concerning difficulties encountered, and data relating to nearby wells, screens, seals, method of finishing the well, amount of cement used in grouting, blasting, etc., should be given on reverse side.

Signature: [illegible]

Business Name and Complete Mailing Address: [illegible]

State of Wisconsin
Department of Natural Resources
Private Water Supply
Box 7921
Madison, Wisconsin 53707

NOTE:
White Copy – Division's Copy
Green Copy – Driller's Copy
Yellow Copy – Owner's Copy

WELL CONSTRUCTOR'S REPORT
Form 3300–15 Rev. 2-79

1. COUNTY: Chippewa

CHECK (✓) ONE: ☒ Town ☐ Village ☐ City — Name: Hallie

¼ Section or Gov't. Lot | Section | Township | Range | 2. NAME ☒ OWNER ☐ AGENT AT TIME OF DRILLING CHECK (✓) ONE

Non-responsive

4. Distance in feet from well to nearest: (Record answer in appropriate block)

Building	Sanitary Bldg. Drain C.I.	Sanitary Bldg. Drain Other	Sanitary Bldg. Sewer C.I.	Sanitary Bldg. Sewer Other	Connected To: C.I. Sewer	Connected To: Other Sewer	Storm Bldg. Drain C.I.	Storm Bldg. Drain Other	Storm Bldg. Sewer C.I.	Storm Bldg. Sewer Other
8		12		22						

Street Sewer San.	Street Sewer Storm	Other Sewers C.I.	Other Sewers Other	Foundation Drain Connected to: Sewer / Clearwater Dr.	Sewage Sump / Clearwater Sump	Sewage Sump C.I.	Sewage Sump Other	Clearwater Sump	Septic Tank	Holding Tank	Sewage Absorption Unit: Seepage Pit / Seepage Bed / Seepage Trench	Manure Hopper or Retention or Pnuematic Tank
									32		64	

Privy	Pet Waste Pit	Pit: Nonconforming Existing: Well / Pump / Tank	Subsurface Pumproom Nonconforming Existing	Barn Gutter	Animal Barn Pen	Animal Yard	Silo With Pit	Glass Lined Storage Facility	Silo w/o Pit	Earthen Silage Storage Trench Or Pit	Earthen Manure Basin

Temporary Manure Stack or Platform	Watertight Liquid Manure Tank or Basin	Manure Pressure Pipe	Subsurface Gasoline or Oil Tank	Waste Pond or Land Disposal Unit (Specify Type)	Manure Storage Basin / Concrete Floor Only / Concrete Floor and Partial Concrete Walls	Other (Describe)

5. Well is intended to supply water for: Mobile Home

6. DRILLHOLE

Dia. (in.)	From (ft.)	To (ft.)	Dia. (in.)	From (ft.)	To (ft.)
5	Surface	39			

7. CASING, LINER, CURBING AND SCREEN

Dia. (in.)	Material, Weight, Specification Mfg. & Method of Assembly	From (ft.)	To (ft.)
5	Steel T&C New Blk	Surface	36 D.T.
	15.00# perft 258 WALL		
	ASTM A-120 Union		
	Steel		
5" By	3' JOHNSON SCREEN	36	39

8. GROUT OR OTHER SEALING MATERIAL

Kind	From (ft.)	To (ft.)
NONE	Surface	

9. FORMATIONS

Kind	From (ft.)	To (ft.)
TOP SOIL	Surface	1
sand & gravel	1	4
sand & clay	4	7
sand & gravel	7	39

10. TYPE OF DRILLING MACHINE USED

☒ Cable Tool ☐ Rotary-air w/drilling mud ☐ Rotary-w/drilling mud ☐ Rotary-hammer w/drilling mud & air ☐ Rotary-hammer & air ☐ Reverse Rotary ☐ Jetting with ☐ Air ☐ Water

Well construction completed on May 2 1983

11. MISCELLANEOUS DATA

Yield Test: 3 Hrs. at 15 GPM

Depth from surface to normal water level 12 Ft.

Depth of water level when pumping 14 Ft. Stabilized ☒ Yes ☐ No

Well is terminated 12 inches ☒ above ☐ below final grade

Well disinfected upon completion ☒ Yes ☐ No

Well sealed watertight upon completion ☒ Yes ☐ No

Water sample sent to Eau Claire laboratory on May 11 1983

Your opinion concerning other pollution hazards, information concerning difficulties encountered, and data relating to nearby wells, screens, seals, method of finishing the well, amount of cement used in grouting, blasting, etc., should be given on reverse side.

Signature: [illegible]

Business Name and Complete Mailing Address: Ken Olson Well Drilling

plot CH-530

State of Wisconsin
Department of Natural Resources
Private Water Supply
Box 7921
Madison, Wisconsin 53707

NOTE:
White Copy – Division's Copy
Green Copy – Driller's Copy
Yellow Copy – Owner's Copy

WELL CONSTRUCTOR'S REPORT

Form 3300–15 Rev. 2-79

RECEIVED JUL 20 1981

JUN 18

1. COUNTY: Chippewa

CHECK (✓) ONE: ☒ Town ☐ Village ☐ City

Name: Hallie

Non-responsive

4. Distance in feet from well to nearest: (Record answer in appropriate block)

Building	Sanitary Bldg. Drain C.I.	Sanitary Bldg. Drain Other	Sanitary Bldg. Sewer C.I.	Sanitary Bldg. Sewer Other	Floor Drain Connected To: C.I. Sewer	Floor Drain Connected To: Other Sewer	Storm Bldg. Drain C.I.	Storm Bldg. Drain Other	Storm Bldg. Sewer C.I.	Storm Bldg. Sewer Other
Nothing in at this date										

Street Sewer San.	Street Sewer Storm	Other Sewers C.I.	Other Sewers Other	Foundation Drain Connected to: Sewer	Sewage Sump	Clearwater Dr.	Clearwater Sump	Sewage Sump C.I.	Sewage Sump Other	Clearwater Sump	Septic Tank	Holding Tank	Sewage Absorption Unit: Seepage Pit / Seepage Bed / Seepage Trench	Manure Hopper or Retention or Pnuematic Tank

Privy	Pet Waste Pit	Pit: Nonconforming Existing	Subsurface Pumproom Nonconforming Existing	Barn Gutter	Animal Barn Pen	Animal Yard	Silo With Pit	Glass Lined Storage Facility	Silo w/o Pit	Earthen Silage Storage Trench Or Pit	Earthen Manure Basin
		Well / Pump / Tank									

Temporary Manure Stack or Platform	Watertight Liquid Manure Tank or Basin	Manure Pressure Pipe	Subsurface Gasoline or Oil Tank	Waste Pond or Land Disposal Unit (Specify Type)	Manure Storage Basin / Concrete Floor Only / Concrete Floor and Partial Concrete Walls	Other (Describe)

5. Well is intended to supply water for: Duplex

6. DRILLHOLE

Dia. (in.)	From (ft.)	To (ft.)	Dia. (in.)	From (ft.)	To (ft.)
6	Surface	107			

7. CASING, LINER, CURBING AND SCREEN
Material, Weight, Specification

Dia. (in.)	Mfg. & Method of Assembly	From (ft.)	To (ft.)
6	Steel T&C new black	Surface	87
	19.45# per ft. 280 wall		
	ASTM A53		
	Sumitomo Metal Ind		

8. GROUT OR OTHER SEALING MATERIAL

Kind	From (ft.)	To (ft.)
None	Surface	

9. FORMATIONS

Kind	From (ft.)	To (ft.)
Topsoil	Surface	1
Sand	1	6
Sand & gravel	6	32
Sand	32	41
Sand & gravel	41	64
Soft sand rock	64	69
Firm sand rock	69	107

10. TYPE OF DRILLING MACHINE USED

☒ Cable Tool ☐ Rotary-air w/drilling mud ☐ Rotary-w/drilling mud ☐ Rotary-hammer w/drilling mud & air ☐ Rotary-hammer & air ☐ Reverse Rotary ☐ Jetting with ☐ Air ☐ Water

Well construction completed on 6-15 19 81

11. MISCELLANEOUS DATA

Yield Test: 2 Hrs. at 25 GPM

Depth from surface to normal water level 72 Ft.

Depth of water level when pumping 86 Ft. Stabilized ☒ Yes ☐ No

Well is terminated 12 inches ☒ above ☐ below final grade

Well disinfected upon completion ☒ Yes ☐ No

Well sealed watertight upon completion ☒ Yes ☐ No

Water sample sent to Eau Claire laboratory on 6-16 19 81

Your opinion concerning other pollution hazards, information concerning difficulties encountered, and data relating to nearby wells, screens, seals, method of finishing the well, amount of cement used in grouting, blasting, etc., should be given on reverse side.

Signature: [illegible]

Business Name and Complete Mailing Address: K. Olson Well Drilling

plot

State of Wisconsin
Department of Natural Resources
Private Water Supply
Box 7921
Madison, Wisconsin 53707

NOTE:
White Copy – Division's Copy
Green Copy – Driller's Copy
Yellow Copy – Owner's Copy

WELL CONSTRUCTOR'S REPORT
Form 3300-15 Rev. 2-79

JUL 14 198

1. COUNTY Chippewa

CHECK (✓) ONE: ☒ Town ☐ Village ☐ City

Name Hallie

Non-responsive

4. Distance in feet from well to nearest: (Record answer in appropriate block)

Building	Sanitary Bldg. Drain		Sanitary Bldg. Sewer		Drain Connected To:		Storm Bldg. Drain		Storm Bldg. Sewer	
	C.I.	Other	C.I.	Other	C.I. Sewer	Other Sewer	C.I.	Other	C.I.	Other
None										

Street Sewer		Other Sewers		Foundation Drain Connected to:		Sewage Sump		Clearwater Sump	Septic Tank	Holding Tank	Sewage Absorption Unit	Manure Hopper or Retention or Pnuematic Tank
San.	Storm	C.I.	Other	Sewer	Sewage Sump	C.I.	Other		60		Seepage Pit	
				Clearwater Dr.	Clearwater Sump						Seepage Bed	
											Seepage Trench 100	

Privy	Pet Waste Pit	Pit: Nonconforming Existing	Subsurface Pumproom	Barn Gutter	Animal Barn Pen	Animal Yard	Silo With Pit	Glass Lined Storage Facility	Silo w/o Pit	Earthen Silage Storage Trench Or Pit	Earthen Manure Basin
		Well	Nonconforming Existing								
		Pump									
		Tank									

Temporary Manure Stack or Platform	Watertight Liquid Manure Tank or Basin	Manure Pressure Pipe	Subsurface Gasoline or Oil Tank	Waste Pond or Land Disposal Unit (Specify Type)	Manure Storage Basin	Other (Describe)
					Concrete Floor Only	
					Concrete Floor and Partial Concrete Walls	

5. Well is intended to supply water for: Human

6. DRILLHOLE

Dia. (in.)	From (ft.)	To (ft.)	Dia. (in.)	From (ft.)	To (ft.)
5	Surface	97½			

7. CASING, LINER, CURBING AND SCREEN

Dia. (in.)	Material, Weight, Specification Mfg. & Method of Assembly	From (ft.)	To (ft.)
5	New steel Pipe Threaded & Coupled 5.2 lbs per ft Astm A-53 Valley Steel Pipe	Surface	95
3 ft by 5" Johnson screen		94½	97½

8. GROUT OR OTHER SEALING MATERIAL

Kind	From (ft.)	To (ft.)
None	Surface	

9. FORMATIONS

Kind	From (ft.)	To (ft.)
Sand & Gravel	Surface	97½

RECEIVED
JUN 29 1981
DNR - WCD

10. TYPE OF DRILLING MACHINE USED

☒ Cable Tool
☐ Rotary-air w/drilling mud
☐ Rotary-w/drilling mud
☐ Rotary-hammer w/drilling mud & air
☐ Rotary-hammer & air
☐ Reverse Rotary
☐ Jetting with ☐ Air ☐ Water

Well construction completed on 6-11 1981

Well is terminated 10 inches ☒ above ☐ below final grade

Well disinfected upon completion ☒ Yes ☐ No

Well sealed watertight upon completion ☒ Yes ☐ No

11. MISCELLANEOUS DATA

Yield Test: 1 Hrs. at 12 GPM

Depth from surface to normal water level 72 Ft.

Depth of water level when pumping 72 Ft. Stabilized ☒ Yes ☐ No

Water sample sent to Madison laboratory on 6-17 1981

Your opinion concerning other pollution hazards, information concerning difficulties encountered, and data relating to nearby wells, screens, seals, method of finishing the well, amount of cement used in grouting, blasting, etc., should be given on reverse side.

Signature R. D. [illegible]

Business Name and Complete Mailing Address R-1 B [illegible]

State of Wisconsin
Department of Natural Resources
Box 7921
Madison, Wisconsin 53707

NOTE:
White Copy – Division's Copy
Green Copy – Driller's Copy
Yellow Copy – Owner's Copy

WELL CONSTRUCTOR'S REPORT

Form 3300–15 Rev. 12-76

NOV 28 1980

NOV 26 1980

1. COUNTY Chippewa

CHECK (✓) ONE: ☒ Town ☐ Village ☐ City

Name Hallie

Non-responsive

4. Distance in feet from well to nearest: (Record answer in appropriate block)

Building	Sanitary Bldg. Drain		Sanitary Bldg. Sewer		Floor Drain Connected To:		Storm Bldg. Drain		Storm Bldg. Sewer	
	C.I.	Other	C.I.	Other	C.I. Sewer	Other Sewer	C.I.	Other	C.I.	Other
6										

Street Sewer		Other Sewers		Foundation Drain Connected to:				Sewage Sump		Clearwater Sump	Septic Tank	Holding Tank	Sewage Absorption Unit	
San.	Storm	C.I.	Other	Sewer		Sewage Sump		C.I.	Other		None		Seepage Pit	
				Clearwater Dr.		Clearwater Sump							Seepage Bed	
													Seepage Trench	None

Privy	Pet Waste Pit	Pit: Nonconforming Existing		Subsurface Pumproom Nonconforming Existing	Barn Gutter	Animal Barn Pen	Animal Yard	Silo With Pit	Glass Lined Storage Facility	Silo w/o Pit	Earthen Silage Storage Trench Or Pit
		Well									
		Pump									
		Tank									

Temporary Manure Stack	Watertight Liquid Manure Tank	Solid Manure Storage Structure	Subsurface Gasoline or Oil Tank	Waste Pond or Land Disposal Unit (Specify Type)	Other (Give Description)

5. Well is intended to supply water for: Human

6. DRILLHOLE

Dia. (in.)	From (ft.)	To (ft.)	Dia. (in.)	From (ft.)	To (ft.)
5	Surface	96			

7. CASING, LINER, CURBING AND SCREEN

Dia. (in.)	Material, Weight, Specification & Method of Assembly	From (ft.)	To (ft.)
5	New Steel Threaded Coupled 15 lbs per ft Astra A-53 Valley Steel Pipe	Surface	93
5" by 3 ft Johnson Screen		93	96

8. GROUT OR OTHER SEALING MATERIAL

Kind	From (ft.)	To (ft.)
None	Surface	

9. FORMATIONS

Kind	From (ft.)	To (ft.)
Sand & Gravel	Surface	96

10. TYPE OF DRILLING MACHINE USED

☒ Cable Tool ☐ Rotary-air w/drilling mud ☐ Rotary-w/drilling mud ☐ Rotary-hammer w/drilling mud & air ☐ Rotary-hammer & air ☐ Reverse Rotary ☐ Jetting with ☐ Air ☐ Water

Well construction completed on 9-16 1980

11. MISCELLANEOUS DATA

Yield Test: 3 Hrs. at 10 GPM

Depth from surface to normal water level 74 Ft.

Depth of water level when pumping 74 Ft. Stabilized ☒ Yes ☐ No

Well is terminated 10 inches ☒ above ☐ below final grade

Well disinfected upon completion ☒ Yes ☐ No

Well sealed watertight upon completion ☒ Yes ☐ No

Water sample sent to Madison laboratory on 9-16 1980

Your opinion concerning other pollution hazards, information concerning difficulties encountered, and data relating to nearby wells, screens, seals, method of finishing the well, amount of cement used in grouting, blasting, etc., should be given on reverse side.

Signature Robert Nettestad Registered Well Driller

Complete Mail Address R-2 Eau Claire Wi.

State of Wisconsin
Department of Natural Resources
Private Water Supply
Box 7921
Madison, Wisconsin 53707

NOTE:
White Copy – Division's Copy
Green Copy – Driller's Copy
Yellow Copy – Owner's Copy

WELL CONSTRUCTOR'S REPORT
Form 3300-15 Rev. 2-79

JUN 10 1985

1. COUNTY: Chippewa

CHECK (✓) ONE: ☒ Town ☐ Village ☐ City Name: Hallie

Non-responsive

4. Distance in feet from well to nearest: (Record answer in appropriate block)

Building	Sanitary Bldg. Drain C.I.	Sanitary Bldg. Drain Other	Sanitary Bldg. Sewer C.I.	Sanitary Bldg. Sewer Other	Floor Drain Connected To: C.I. Sewer	Floor Drain Connected To: Other Sewer	Storm Bldg. Drain C.I.	Storm Bldg. Drain Other	Storm Bldg. Sewer C.I.	Storm Bldg. Sewer Other
6	19		36		32					

Street Sewer San.	Street Sewer Storm	Other Sewers C.I.	Other Sewers Other	Foundation Drain Connected to: Sewer	Sewage Sump	Clearwater Dr.	Clearwater Sump	Sewage Sump C.I.	Sewage Sump Other	Clearwater Sump	Septic Tank	Holding Tank	Sewage Absorption Unit: Seepage Pit	Seepage Bed	Seepage Trench	Manure Hopper or Retention or Pnuematic Tank
											40		61			

Privy	Pet Waste Pit	Pit: Nonconforming Existing		Subsurface Pumproom Nonconforming Existing	Barn Gutter	Animal Barn Pen	Animal Yard	Silo With Pit	Glass Lined Storage Facility	Silo w/o Pit	Earthen Silage Storage Trench Or Pit	Earthen Manure Basin
		Well	14	16								
		Pump										
		Tank										

Temporary Manure Stack or Platform	Watertight Liquid Manure Tank or Basin	Manure Pressure Pipe	Subsurface Gasoline or Oil Tank	Waste Pond or Land Disposal Unit (Specify Type)	Manure Storage Basin / Concrete Floor Only / Concrete Floor and Partial Concrete Walls	Other (Describe)

5. Well is intended to supply water for: Home

6. DRILLHOLE

Dia. (in.)	From (ft.)	To (ft.)	Dia. (in.)	From (ft.)	To (ft.)
5	Surface	94			

7. CASING, LINER, CURBING AND SCREEN
Material, Weight, Specification

Dia. (in.)	Mfg. & Method of Assembly	From (ft.)	To (ft.)
5"	Steel T&C New BLK	Surface	91
	15.00# per ft 258 all		
	ASTM A53 NKK Steel		
	made in Japan		
5" By	3' Johnson screen	91	94

8. GROUT OR OTHER SEALING MATERIAL

Kind	From (ft.)	To (ft.)
NONE	Surface	

9. FORMATIONS

Kind	From (ft.)	To (ft.)
TOP SOIL	Surface	1
sand	1	10
sand & gravel	10	94

10. TYPE OF DRILLING MACHINE USED

☒ Cable Tool ☐ Rotary-hammer w/drilling mud & air ☐ Jetting with ☐ Air ☐ Water
☐ Rotary-air w/drilling mud ☐ Rotary-hammer & air
☐ Rotary-w/drilling mud ☐ Reverse Rotary

Well construction completed on May 29 1985

11. MISCELLANEOUS DATA

Yield Test: 3 Hrs. at 12 GPM

Depth from surface to normal water level 68 Ft.

Depth of water level when pumping 72 Ft. Stabilized ☒ Yes ☐ No

Well is terminated 10 inches ☒ above ☐ below final grade

Well disinfected upon completion ☒ Yes ☐ No

Well sealed watertight upon completion ☒ Yes ☐ No

Water sample sent to Eau Claire laboratory on May 30 1985

Your opinion concerning other pollution hazards, information concerning difficulties encountered, and data relating to nearby wells, screens, seals, method of finishing the well, amount of cement used in grouting, blasting, etc., should be given on reverse side.

Signature

Business Name and Complete Mailing Address: Ken Olson Well Drilling 3319 Melby Rd

State of Wisconsin
Department of Natural Resources
Private Water Supply
Box 7921
Madison, Wisconsin 53707

NOTE:
White Copy – Division's Copy
Green Copy – Driller's Copy
Yellow Copy – Owner's Copy

WELL CONSTRUCTOR'S REPORT
Form 3300–15 Rev. 2-79

MAY 17 1983

1. COUNTY: Chippewa

CHECK (✓) ONE: ☒ Town ☐ Village ☐ City Name: Hallie

Non-responsive

4. Distance in feet from well to nearest: (Record answer in appropriate block)

Building	Sanitary Bldg. Drain C.I.	Sanitary Bldg. Drain Other	Sanitary Bldg. Sewer C.I.	Sanitary Bldg. Sewer Other	Floor Drain Connected To: C.I. Sewer	Floor Drain Connected To: Other Sewer	Storm Bldg. Drain C.I.	Storm Bldg. Drain Other	Storm Bldg. Sewer C.I.	Storm Bldg. Sewer Other
9		29		32						

Street Sewer San.	Street Sewer Storm	Other Sewers C.I.	Other Sewers Other	Foundation Drain Connected to: Sewer	Sewage Sump	Clearwater Dr.	Clearwater Sump	Sewage Sump C.I.	Sewage Sump Other	Clearwater Sump	Septic Tank	Holding Tank	Sewage Absorption Unit: Seepage Pit / Seepage Bed / Seepage Trench	Manure Hopper or Retention or Pnuematic Tank
											96		120	

Privy	Pet Waste Pit	Pit: Nonconforming Existing	Subsurface Pumproom Nonconforming Existing	Barn Gutter	Animal Barn Pen	Animal Yard	Silo With Pit	Glass Lined Storage Facility	Silo w/o Pit	Earthen Silage Storage Trench Or Pit	Earthen Manure Basin
		Well / Pump / Tank									

Temporary Manure Stack or Platform	Watertight Liquid Manure Tank or Basin	Manure Pressure Pipe	Subsurface Gasoline or Oil Tank	Waste Pond or Land Disposal Unit (Specify Type)	Manure Storage Basin / Concrete Floor Only / Concrete Floor and Partial Concrete Walls	Other (Describe)

5. Well is intended to supply water for: Mobile Home

6. DRILLHOLE

Dia. (in.)	From (ft.)	To (ft.)	Dia. (in.)	From (ft.)	To (ft.)
6	Surface	95			

7. CASING, LINER, CURBING AND SCREEN

Dia. (in.)	Material, Weight, Specification Mfg. & Method of Assembly	From (ft.)	To (ft.)
6	Steel T&C New BLK	Surface	92
	19.45 per ft 280		
	wall ASTM A-120		
	Union Steel		
5" By	1 Johnson screen	92	95

8. GROUT OR OTHER SEALING MATERIAL

Kind	From (ft.)	To (ft.)
NONE	Surface	

9. FORMATIONS

Kind	From (ft.)	To (ft.)
Top Soil	Surface	1
sand	1	4
sand & gravel	4	95

10. TYPE OF DRILLING MACHINE USED

☒ Cable Tool ☐ Rotary-air w/drilling mud ☐ Rotary-w/drilling mud ☐ Rotary-hammer w/drilling mud & air ☐ Rotary-hammer & air ☐ Reverse Rotary ☐ Jetting with ☐ Air ☐ Water

Well construction completed on May 4 19 83

11. MISCELLANEOUS DATA

Yield Test: 3 Hrs. at 10 GPM

Depth from surface to normal water level 74 Ft.

Depth of water level when pumping 76 Ft. Stabilized ☒ Yes ☐ No

Well is terminated 14 inches ☒ above ☐ below final grade

Well disinfected upon completion ☒ Yes ☐ No

Well sealed watertight upon completion ☒ Yes ☐ No

Water sample sent to Eau Claire laboratory on May 5 19 83

Your opinion concerning other pollution hazards, information concerning difficulties encountered, and data relating to nearby wells, screens, seals, method of finishing the well, amount of cement used in grouting, blasting, etc., should be given on reverse side.

Signature

Business Name and Complete Mailing Address: Kenneth B. Olson Well Drilling

State of Wisconsin
Department of Natural Resources
Private Water Supply
Box 7921
Madison, Wisconsin 53707

NOTE:
White Copy – Division's Copy
Green Copy – Driller's Copy
Yellow Copy – Owner's Copy

WELL CONSTRUCTOR'S REPORT
Form 3300–15 Rev. 5-85

DEC 30 1985

1. COUNTY Chippewa

CHECK (✓) ONE: ☒ Town ☐ Village ☐ City Name Hallie

Non-responsive

4. Distance in feet from well to nearest: (Record answer in appropriate block)

Building	Sanitary Bldg. Drain C.I.	Sanitary Bldg. Drain Other	Sanitary Bldg. Sewer C.I.	Sanitary Bldg. Sewer Other	Floor Drain Connected To: C.I. Sewer	Floor Drain Connected To: Other Sewer	Storm Bldg. Drain C.I.	Storm Bldg. Drain Other	Storm Bldg. Sewer C.I.	Storm Bldg. Sewer Other
11		17	39		29		—			

Street Sewer San.	Street Sewer Storm	Other Sewers C.I.	Other Sewers Other	Foundation Drain Connected to: Sewer / Clearwater Dr.	Sewage Sump / Clearwater Sump	Sewage Sump C.I.	Sewage Sump Other	Clearwater Sump	Septic Tank	Holding Tank	Sewage Absorption Unit: Seepage Pit / Seepage Bed / Seepage Trench	Manure Hopper or Retention or Pnuematic Tank
—								—	48	—	70	—

Privy	Pet Waste Pit	Pit: Nonconforming Existing	Subsurface Pumproom	Barn Gutter	Animal Barn Pen	Animal Yard	Silo With Pit	Glass Lined Storage Facility	Silo w/o Pit	Earthen Silage Storage Trench Or Pit	Earthen Manure Basin
		Well / Pump / Tank	Nonconforming Existing								

Temporary Manure Stack or Platform	Watertight Liquid Manure Tank or Basin	Manure Pressure Pipe	Subsurface Gasoline or Oil Tank	Waste Pond or Land Disposal Unit (Specify Type)	Manure Storage Basin / Concrete Floor Only / Concrete Floor and Partial Concrete Walls	Other (Describe)

5. Well is intended to supply water for: Home

6. DRILLHOLE

Dia. (in.)	From (ft.)	To (ft.)	Dia. (in.)	From (ft.)	To (ft.)
6	Surface	98			

7. CASING, LINER, CURBING AND SCREEN
Material, Weight, Specification

Dia. (in.)	Mfg. & Method of Assembly	From (ft.)	To (ft.)
6	Steel PIE new BIK	Surface	95
	18.97# per ft 280		
	WALL ASTM A120		
	NKK Steel		
5" By 3'	Johnson screen	95	98

8. GROUT OR OTHER SEALING MATERIAL

Kind	From (ft.)	To (ft.)
NONE	Surface	

9. FORMATIONS

Kind	From (ft.)	To (ft.)
TOP SOIL	Surface	1
sand & gravel	1	98

10. TYPE OF DRILLING MACHINE USED

☒ Cable Tool ☐ Rotary-air w/drilling mud ☐ Rotary-w/drilling mud ☐ Rotary-hammer w/drilling mud & air ☐ Rotary-hammer & air ☐ Reverse Rotary ☐ Jetting with ☐ Air ☐ Water

Well construction completed on Dec 8 19 85

11. MISCELLANEOUS DATA

Yield Test: 3 Hrs. at 12 GPM

Depth from surface to normal water level 80 Ft.

Depth of water level when pumping 83 Ft. Stabilized ☒ Yes ☐ No

Well is terminated 12 inches ☒ above ☐ below final grade

Well disinfected upon completion ☒ Yes ☐ No

Well sealed watertight upon completion ☒ Yes ☐ No

Water sample sent to Eau Claire laboratory on Dec 10 19 85

Your opinion concerning other pollution hazards, information concerning difficulties encountered, and data relating to nearby wells, screens, seals, method of finishing the well, amount of cement used in grouting, blasting, etc., should be given on reverse side.

Signature Darrell Olson Registered Well Driller

Business Name and Complete Mailing Address Ken Olson Well Drilling 3219 Mt Rd Bloomer WI 54703