

APPENDIX IV

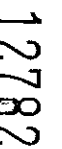
PRIMARY LABORATORY REPORTS AND QA LABORATORY REPORTS

- SLUDGES
- DEMOLISHED MATERIALS
- EXCAVATED SOIL
- WASTEWATER
- IDW's

BOOK 4 OF 9



DOCUMENT 8



6017 Financial Drive, Norcross, GA 30071
Phone # (770) 449-8800 Fax # (770) 449-5477

Billing address: SAME AS BELOW

Client P.O. #

For Laboratory Use Only

Custody Seal: Y N

Page 1 of 1

QC Level: N 1 2 3 4

InitTemp: 40°C

Sample Condition: *Good*
AAL Lab Project # *15006*

Samplers: (printed)

David Price

	No. of Containers	ANALYSTS BTEX-8260 PAHs-8270 TCM Metals
2		
2		

Special Requirements Or Remarks:

7

Date / Time

72 hours

00007.2 XI 9

ACCURA ANALYTICAL LABORATORY, INC.
6017 Financial Drive, Norcross, Georgia, 30071, Phone (770)449-8800

CASE NARRATIVE for Project Number: 15006
Client Project: Hunter Army Airfield, Fire Training Area / 97041

The following items were noted concerning this project:

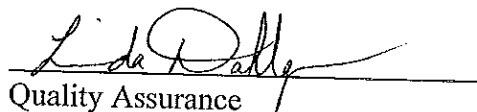
1. The following samples required dilution due to matrix interference, resulting in elevated detection limits:

BTEX - SW-846-8260A
001 002

PAH - SW-846-8270B
001 002

2. One surrogate was outside the method specified limit for the following sample due to matrix interference:

BTEX - SW-846-8260A
001 (4-Bromofluorobenzene)


Quality Assurance


Client Services Representative

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NC Certification # 483

SC Certification # 98015

USACE-MRD Approved

LABORATORY REPORT

Accura Sample ID #: AB31307

Accura Project #: 15006

Client: Omega Env. Services - Tucker

Date Sampled: 12/11/97

Client Contact: D. DRIVER

Date Received: 12/12/97

Client Project Number: 97041

Date Reported: 12/20/97

Client Project Name: HUNTER ARMY AIRFIELD, FIRE TRAINING AREA

Sample Matrix: SOIL

Client Sample ID: 001

ANALYSIS: BTEX

Method Ref: 5030A/8260A

Date Analyzed: 12/19/97

Date Ext/Dig/Prep: 12/19/97

Result Units: ug/Kg

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Benzene	<RDL	10
Ethyl benzene	<RDL	10
Toluene	<RDL	10
Xylenes	<RDL	10

ANALYSIS: PAH's

Method Ref: 3550A/8270B

Date Analyzed: 12/17/97

Date Ext/Dig/Prep: 12/16/97

Result Units: ug/Kg

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1-Methylnaphthalene	<RDL	1600
2-Methylnaphthalene	<RDL	1600
Acenaphthene	<RDL	1600
Acenaphthylene	<RDL	1600
Anthracene	<RDL	1600
Benzo(a)anthracene	<RDL	1600
Benzo(a)pyrene	<RDL	1600
Benzo(b)fluoranthene	<RDL	1600
Benzo(g,h,i)perylene	<RDL	1600
Benzo(k)fluoranthene	<RDL	1600
Chrysene	<RDL	1600
Dibenzo(a,h)anthracene	<RDL	1600
Fluoranthene	<RDL	1600
Fluorene	<RDL	1600
Indeno(1,2,3-cd)pyrene	<RDL	1600
Naphthalene	<RDL	1600
Phenanthrene	<RDL	1600
Pyrene	<RDL	1600

ANALYSIS: TCLP Extraction Procedure

Method Ref: 1311

Date Analyzed: 12/15/97 Date Ext/Dig/Prep: 12/15/97 Result Units:

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
TCLP Extraction	NA	0

ANALYSIS: TCLP Mercury

Method Ref: 7470A

Date Analyzed: 12/16/97 Date Ext/Dig/Prep: 12/16/97 Result Units: mg/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Mercury (Reg Limit = 0.2)	<RDL	0.01

ANALYSIS: TCLP Metals

Method Ref: 3010A/6010A

Date Analyzed: 12/16/97 Date Ext/Dig/Prep: 12/15/97 Result Units: mg/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Arsenic (Reg Limit = 5.0)	<RDL	1
Barium (Reg Limit = 100.0)	<RDL	1
Cadmium (Reg Limit = 1.0)	<RDL	1
Chromium (Reg Limit = 5.0)	<RDL	1
Lead (Reg Limit = 5.0)	<RDL	1
Selenium (Reg Limit = 1.0)	<RDL	1
Silver (Reg Limit = 5.0)	<RDL	1

ANALYSIS: X PAH/BN QC Surrogates (Soils)

Method Ref: 3550A/8270B

Date Analyzed: 12/17/97 Date Ext/Dig/Prep: 12/16/97 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
2-Fluorobiphenyl	65	0
Nitrobenzene-d5	59	0
p-Terphenyl-d14	77	0

ANALYSIS: X VOC QC Surrogates (Soils)

Method Ref: 8260A

Date Analyzed: 12/19/97 Date Ext/Dig/Prep: 12/19/97 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,2-Dichloroethane-d4	94	0
4-Bromofluorobenzene	122	0
Toluene-d8	95	0


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LABORATORY REPORT

Accura Sample ID #: AB31308

Accura Project #: 15006

Client: Omega Env. Services - Tucker

Date Sampled: 12/11/97

Client Contact: D. DRIVER

Date Received: 12/12/97

Client Project Number: 97041

Date Reported: 12/20/97

Client Project Name: HUNTER ARMY AIRFIELD, FIRE TRAINING AREA

Sample Matrix: SOLID

Client Sample ID: 002

ANALYSIS: BTEX

Method Ref: 5030A/8260A

Date Analyzed: 12/18/97

Date Ext/Dig/Prep: 12/18/97

Result Units: ug/Kg

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Benzene	<RDL	1000
Ethyl benzene	<RDL	1000
Toluene	<RDL	1000
Xylenes	<RDL	1000

ANALYSIS: PAH's

Method Ref: 3550A/8270B

Date Analyzed: 12/17/97

Date Ext/Dig/Prep: 12/16/97

Result Units: ug/Kg

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1-Methylnaphthalene	<RDL	5600
2-Methylnaphthalene	<RDL	5600
Acenaphthene	<RDL	5600
Acenaphthylene	<RDL	5600
Anthracene	<RDL	5600
Benzo(a)anthracene	<RDL	5600
Benzo(a)pyrene	<RDL	5600
Benzo(b)fluoranthene	<RDL	5600
Benzo(g,h,i)perylene	<RDL	5600
Benzo(k)fluoranthene	<RDL	5600
Chrysene	<RDL	5600
Dibenzo(a,h)anthracene	<RDL	5600
Fluoranthene	<RDL	5600
Fluorene	<RDL	5600
Indeno(1,2,3-cd)pyrene	<RDL	5600
Naphthalene	<RDL	5600
Phenanthrene	<RDL	5600
Pyrene	<RDL	5600

ANALYSIS: TCLP Extraction Procedure

Method Ref: 1311

Date Analyzed: 12/15/97 Date Ext/Dig/Prep: 12/15/97 Result Units:

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
TCLP Extraction	NA	0

ANALYSIS: TCLP Mercury

Method Ref: 7470A

Date Analyzed: 12/16/97 Date Ext/Dig/Prep: 12/16/97 Result Units: mg/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Mercury (Reg Limit = 0.2)	<RDL	0.01

ANALYSIS: TCLP Metals

Method Ref: 3010A/6010A

Date Analyzed: 12/16/97 Date Ext/Dig/Prep: 12/15/97 Result Units: mg/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Arsenic (Reg Limit = 5.0)	<RDL	1
Barium (Reg Limit = 100.0)	<RDL	1
Cadmium (Reg Limit = 1.0)	<RDL	1
Chromium (Reg Limit = 5.0)	<RDL	1
Lead (Reg Limit = 5.0)	<RDL	1
Selenium (Reg Limit = 1.0)	<RDL	1
Silver (Reg Limit = 5.0)	<RDL	1

ANALYSIS: X PAH/BN QC Surrogates (Soils)

Method Ref: 3550A/8270B

Date Analyzed: 12/17/97 Date Ext/Dig/Prep: 12/16/97 Result Units: %

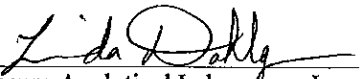
<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
2-Fluorobiphenyl	42	0
Nitrobenzene-d5	32	0
p-Terphenyl-d14	47	0

ANALYSIS: X VOC QC Surrogates (Soils)

Method Ref: 8260A

Date Analyzed: 12/18/97 Date Ext/Dig/Prep: 12/18/97 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,2-Dichloroethane-d4	100	0
4-Bromofluorobenzene	107	0
Toluene-d8	99	0


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LABORATORY REPORT

Accura Sample ID #: AB31309

Accura Project #: 15006

Client: Omega Env. Services - Tucker

Date Sampled: 12/11/97

Client Contact: D. DRIVER

Date Received: 12/12/97

Client Project Number: 97041

Date Reported: 12/20/97

Client Project Name: HUNTER ARMY AIRFIELD, FIRE TRAINING AREA

Sample Matrix: SOIL

Client Sample ID: METHOD BLANK

ANALYSIS: BTEX

Method Ref: 5030A/8260A

Date Analyzed: 12/18/97

Date Ext/Dig/Prep: 12/18/97

Result Units: ug/Kg

Analyte Name	Analytical Results	Reported Detection Limits
Benzene	<RDL	5
Ethyl benzene	<RDL	5
Toluene	<RDL	5
Xylenes	<RDL	5

ANALYSIS: PAH's

Method Ref: 3550A/8270B

Date Analyzed: 12/17/97

Date Ext/Dig/Prep: 12/16/97

Result Units: ug/Kg

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	<RDL	330
2-Methylnaphthalene	<RDL	330
Acenaphthene	<RDL	330
Acenaphthylene	<RDL	330
Anthracene	<RDL	330
Benzo(a)anthracene	<RDL	330
Benzo(a)pyrene	<RDL	330
Benzo(b)fluoranthene	<RDL	330
Benzo(g,h,i)perylene	<RDL	330
Benzo(k)fluoranthene	<RDL	330
Chrysene	<RDL	330
Dibenzo(a,h)anthracene	<RDL	330
Fluoranthene	<RDL	330
Fluorene	<RDL	330
Indeno(1,2,3-cd)pyrene	<RDL	330
Naphthalene	<RDL	330
Phenanthrene	<RDL	330
Pyrene	<RDL	330

ANALYSIS: TCLP Extraction Procedure

Method Ref: 1311

Date Analyzed: 12/15/97 Date Ext/Dig/Prep: 12/15/97 Result Units:

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
TCLP Extraction	NA	0

ANALYSIS: TCLP Mercury

Method Ref: 7470A

Date Analyzed: 12/16/97 Date Ext/Dig/Prep: 12/16/97 Result Units: mg/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Mercury (Reg Limit = 0.2)	<RDL	0.01

ANALYSIS: TCLP Metals

Method Ref: 3010A/6010A

Date Analyzed: 12/16/97 Date Ext/Dig/Prep: 12/15/97 Result Units: mg/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Arsenic (Reg Limit = 5.0)	<RDL	1
Barium (Reg Limit = 100.0)	<RDL	1
Cadmium (Reg Limit = 1.0)	<RDL	1
Chromium (Reg Limit = 5.0)	<RDL	1
Lead (Reg Limit = 5.0)	<RDL	1
Selenium (Reg Limit = 1.0)	<RDL	1
Silver (Reg Limit = 5.0)	<RDL	1

ANALYSIS: X PAH/BN QC Surrogates (Soils)

Method Ref: 3550A/8270B

Date Analyzed: 12/17/97 Date Ext/Dig/Prep: 12/16/97 Result Units: %

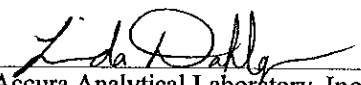
<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
2-Fluorobiphenyl	91	0
Nitrobenzene-d5	94	0
p-Terphenyl-d14	106	0

ANALYSIS: X VOC QC Surrogates (Soils)

Method Ref: 8260A

Date Analyzed: 12/18/97 Date Ext/Dig/Prep: 12/18/97 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,2-Dichloroethane-d4	98	0
4-Bromofluorobenzene	105	0
Toluene-d8	102	0


Accura Analytical Laboratory, Inc.

RECEIVED
DEC 14 2011
DEPT. OF JUSTICE



OMEGA ENVIRONMENTAL SERVICES, INC.

4661 Hammermill Rd. Suite B Tucker, GA 30084

Tel: (770) 621-9414 Fax: (770) 934-2451

DATE: 1/7/97

PAGES: _____

TO John Mount

FROM: David Price

FAX NUMBER _____

SENDERS FAX: _____

MESSAGE OR COMMENTS-

Analytical Results which includes
the Drum that is Hazard Sample I.D. for Drum
is ALM TRK - SD - 001

ACCURA ANALYTICAL LABORATORY, INC.
6017 Financial Drive, Norcross, Georgia, 30071, Phone (770)449-8800

CASE NARRATIVE for Project Number: 15096
Client Project: Hunter Fire Training Area / DACA21-97-C-0042

The following items were noted concerning this project:

1. The following samples required dilution due to high analyte concentration and matrix interference, resulting in elevated detection limits:

TPH - EPA 418.1

ConPad-ES-001

ConPad-DM-001

AlmTnk-SD-001

BTEX - SW-846-8260A

ConPad-DM-001

AlmTnk-SD-001

PAH - SW-846-8270B

AlmTnk-SD-001

2. One surrogate was outside the method specified limit for the following sample due to matrix interference:

BTEX - SW-846-8260A

1,2-Dichloroethane-d4 -

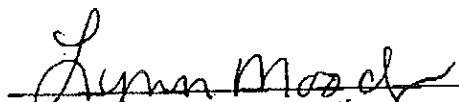
AlmTnk-SD-001

3. The surrogates were diluted out for the following sample analysis; therefore no recoveries could be reported:

PAH - SW-846-8270B

AlmTnk-SD-001


Quality Assurance


Client Services Representative

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USACE-MRD Approved

LABORATORY REPORT

Accura Sample ID #: AB32522

Accura Project #: 15096

Client: Omega Env. Services - Tucker

Date Sampled: 12/18/97

Client Contact: T. SHEPPARD

Date Received: 12/19/97

Client Project Number: DACA21-97-C-0042

Date Reported: 1/5/98

Client Project Name: HUNTER FIRE TRAINING AREA

Sample Matrix: SOIL

Client Sample ID: CONPAD-ES-001

ANALYSIS: BTEX

Method Ref: 5030A/8260A

Date Analyzed: 12/23/97

Date Ext/Dig/Prep: 12/23/97

Result Units: ug/Kg

Analyte Name	Analytical Results	Reported Detection Limits
Benzene	<RDL	5
Ethyl benzene	<RDL	5
Toluene	<RDL	5
Xylenes	<RDL	5

ANALYSIS: PAH's

Method Ref: 3550A/8270B

Date Analyzed: 1/2/98

Date Ext/Dig/Prep: 12/29/97

Result Units: ug/Kg

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	<RDL	330
2-Methylnaphthalene	<RDL	330
Acenaphthene	<RDL	330
Acenaphthylene	<RDL	330
Anthracene	<RDL	330
Benzo(a)anthracene	<RDL	330
Benzo(a)pyrene	<RDL	330
Benzo(b)fluoranthene	<RDL	330
Benzo(g,h,i)perylene	<RDL	330
Benzo(k)fluoranthene	<RDL	330
Chrysene	<RDL	330
Dibenzo(a,h)anthracene	<RDL	330
Fluoranthene	<RDL	330
Fluorene	<RDL	330
Indeno(1,2,3-cd)pyrene	<RDL	330
Naphthalene	<RDL	330
Phenanthrene	<RDL	330
Pyrene	<RDL	330

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<RDL = Less than Reported Detection Limit

Pg 1 of 12

Client Sample ID: CONPAD-ES-001

AAL Sample ID #: AB32522 Accura Project #: 15096

ANALYSIS: TCLP Extraction Procedure

Method Ref: 1311

Date Analyzed: 12/22/97 Date Ext/Dig/Prep: 12/22/97

Result Units:

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
TCLP Extraction	NA	0

ANALYSIS: TCLP Leachate Fluid pH

Method Ref: 1311

Date Analyzed: 12/23/97 Date Ext/Dig/Prep: 12/23/97

Result Units: pH Units

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
TCLP Leachate Fluid pH	5.1	0

ANALYSIS: TCLP Mercury

Method Ref: 7470A

Date Analyzed: 12/30/97 Date Ext/Dig/Prep: 12/30/97

Result Units: mg/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Mercury (Reg Limit = 0.2)	<RDL	0.01

ANALYSIS: TCLP Metals

Method Ref: 3010A/6010A

Date Analyzed: 12/30/97 Date Ext/Dig/Prep: 12/29/97

Result Units: mg/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Arsenic (Reg Limit = 5.0)	<RDL	1
Barium (Reg Limit = 100.0)	<RDL	1
Cadmium (Reg Limit = 1.0)	<RDL	1
Chromium (Reg Limit = 5.0)	<RDL	1
Lead (Reg Limit = 5.0)	1.2	1
Selenium (Reg Limit = 1.0)	<RDL	1
Silver (Reg Limit = 5.0)	<RDL	1

ANALYSIS: Total Petroleum Hydrocarbons

Method Ref: 418.1

Date Analyzed: 12/23/97 Date Ext/Dig/Prep: 12/23/97

Result Units: mg/Kg

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Total Petroleum Hydrocarbons	800	200

ANALYSIS: X PAH/BN QC Surrogates (Soils)

Method Ref: 3550A/8270B

Date Analyzed: 1/2/98 Date Ext/Dig/Prep: 12/29/97

Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
2-Fluorobiphenyl	81	0
Nitrobenzene-d5	69	0
p-Terphenyl-d14	98	0

ANALYSIS: X VOC OC Surrogates (Soils)

Method Ref: 8260A

Date Analyzed: 12/23/97

Date Ext/Dig/Prep: 12/23/97

Result Units: %

Analyte Name

Analytical Results

Reported Detection Limits

1,2-Dichloroethane-d4

102

0

4-Bromofluorobenzene

112

0

Toluene-d8

100

0


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LABORATORY REPORT

Accura Sample ID #: AB32523

Accura Project #: 15096

Client: Omega Env. Services - Tucker

Date Sampled: 12/18/97

Client Contact: T. SHEPPARD

Date Received: 12/19/97

Client Project Number: DACA21-97-C-0042

Date Reported: 1/5/98

Client Project Name: HUNTER FIRE TRAINING AREA

Sample Matrix: SOIL

Client Sample ID: CONPAD-DM-001

ANALYSIS: BTEX

Method Ref: 5030A/8260A

Date Analyzed: 12/22/97

Date Ext/Dig/Prep: 12/22/97

Result Units: ug/Kg

Analyte Name	Analytical Results	Reported Detection Limits
Benzene	<RDL	25
Ethyl benzene	130	25
Toluene	75	25
Xylenes	640	25

ANALYSIS: PAH's

Method Ref: 3550A/8270B

Date Analyzed: 12/31/97

Date Ext/Dig/Prep: 12/29/97

Result Units: ug/Kg

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	<RDL	330
2-Methylnaphthalene	<RDL	330
Acenaphthene	<RDL	330
Acenaphthylene	<RDL	330
Anthracene	<RDL	330
Benzo(a)anthracene	<RDL	330
Benzo(a)pyrene	<RDL	330
Benzo(b)fluoranthene	<RDL	330
Benzo(g,h,i)perylene	<RDL	330
Benzo(k)fluoranthene	<RDL	330
Chrysene	<RDL	330
Dibenzo(a,h)anthracene	<RDL	330
Fluoranthene	<RDL	330
Fluorene	<RDL	330
Indeno(1,2,3-cd)pyrene	<RDL	330
Naphthalene	<RDL	330
Phenanthrene	<RDL	330
Pyrene	<RDL	330

ANALYSIS: TCLP Extraction Procedure

Method Ref: 1311

Date Analyzed: 12/22/97

Date Ext/Dig/Prep: 12/22/97

Result Units:

Analyte Name**Analytical Results****Reported Detection Limits**

TCLP Extraction

NA

0

ANALYSIS: TCLP Leachate Fluid pH

Method Ref: 1311

Date Analyzed: 12/23/97

Date Ext/Dig/Prep: 12/23/97

Result Units: pH Units

Analyte Name**Analytical Results****Reported Detection Limits**

TCLP Leachate Fluid pH

11.7

0

ANALYSIS: TCLP Mercury

Method Ref: 7470A

Date Analyzed: 12/30/97

Date Ext/Dig/Prep: 12/30/97

Result Units: mg/L

Analyte Name**Analytical Results****Reported Detection Limits**

Mercury (Reg Limit = 0.2)

<RDL

0.01

ANALYSIS: TCLP Metals

Method Ref: 3010A/6010A

Date Analyzed: 12/30/97

Date Ext/Dig/Prep: 12/29/97

Result Units: mg/L

Analyte Name**Analytical Results****Reported Detection Limits**

Arsenic (Reg Limit = 5.0)

<RDL

1

Barium (Reg Limit = 100.0)

<RDL

1

Cadmium (Reg Limit = 1.0)

<RDL

1

Chromium (Reg Limit = 5.0)

<RDL

1

Lead (Reg Limit = 5.0)

<RDL

1

Selenium (Reg Limit = 1.0)

<RDL

1

Silver (Reg Limit = 5.0)

<RDL

1

ANALYSIS: Total Petroleum Hydrocarbons

Method Ref: 418.1

Date Analyzed: 12/23/97

Date Ext/Dig/Prep: 12/23/97

Result Units: mg/Kg

Analyte Name**Analytical Results****Reported Detection Limits**

Total Petroleum Hydrocarbons

410

100

ANALYSIS: X PAH/BN QC Surrogates (Soils)

Method Ref: 3550A/8270B

Date Analyzed: 12/31/97

Date Ext/Dig/Prep: 12/29/97

Result Units: %

Analyte Name**Analytical Results****Reported Detection Limits**

2-Fluorobiphenyl

57

0

Nitrobenzene-d5

44

0

p-Terphenyl-d14

113

0

ANALYSIS: X VOC QC Surrogates (Soils)

Method Ref: 8260A

Date Analyzed: 12/22/97

Date Ext/Dig/Prep: 12/22/97

Result Units: %

Analyte Name

Analytical Results

Reported Detection Limits

1,2-Dichloroethane-d4

115

0

4-Bromofluorobenzene

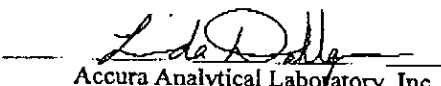
111

0

Toluene-d8

102

0


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NC Certification # 483

SC Certification # 98015

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LABORATORY REPORT**Accura Sample ID #: AB32524****Accura Project #: 15096**

Client: Omega Env. Services - Tucker

Date Sampled: 12/18/97

Client Contact: T. SHEPPARD

Date Received: 12/19/97

Client Project Number: DACA21-97-C-0042

Date Reported: 1/5/98

Client Project Name: HUNTER FIRE TRAINING AREA

Sample Matrix: SOIL

Client Sample ID: ALMTNK-SD-001

ANALYSIS: BTEX

Method Ref: 5030A/8260A

Date Analyzed: 12/22/97

Date Ext/Dig/Prep: 12/22/97

Result Units: ug/Kg

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Benzene	<RDL	10
Ethyl benzene	<RDL	10
Toluene	20	10
Xylenes	<RDL	10

ANALYSIS: PAH's

Method Ref: 3550A/8270B

Date Analyzed: 1/2/98

Date Ext/Dig/Prep: 12/29/97

Result Units: ug/Kg

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1-Methylnaphthalene	<RDL	16000
2-Methylnaphthalene	<RDL	16000
Acenaphthene	<RDL	16000
Acenaphthylene	<RDL	16000
Anthracene	<RDL	16000
Benzo(a)anthracene	<RDL	16000
Benzo(a)pyrene	<RDL	16000
Benzo(b)fluoranthene	<RDL	16000
Benzo(g,h,i)perylene	<RDL	16000
Benzo(k)fluoranthene	<RDL	16000
Chrysene	<RDL	16000
Dibenzo(a,h)anthracene	<RDL	16000
Fluoranthene	<RDL	16000
Fluorene	<RDL	16000
Indeno(1,2,3-cd)pyrene	<RDL	16000
Naphthalene	<RDL	16000
Phenanthrene	91,000	16000
Pyrene	18,000	16000

ANALYSIS: TCLP Extraction Procedure

Method Ref: 1311

Date Analyzed: 12/22/97 Date Ext/Dig/Prep: 12/22/97

Result Units:

Analyte Name**Analytical Results****Reported Detection Limits**

TCLP Extraction

NA

0

ANALYSIS: TCLP Leachate Fluid pH

Method Ref: 1311

Date Analyzed: 12/23/97 Date Ext/Dig/Prep: 12/23/97

Result Units: pH Units

Analyte Name**Analytical Results****Reported Detection Limits**

TCLP Leachate Fluid pH

5.0

0

ANALYSIS: TCLP Mercury

Method Ref: 7470A

Date Analyzed: 12/30/97 Date Ext/Dig/Prep: 12/30/97

Result Units: mg/L

Analyte Name**Analytical Results****Reported Detection Limits**

Mercury (Reg Limit = 0.2)

<RDL

0.01

ANALYSIS: TCLP Metals

Method Ref: 3010A/6010A

Date Analyzed: 12/30/97 Date Ext/Dig/Prep: 12/29/97

Result Units: mg/L

Analyte Name**Analytical Results****Reported Detection Limits**

Arsenic (Reg Limit = 5.0)

<RDL

1

Barium (Reg Limit = 100.0)

2.0

1

Cadmium (Reg Limit = 1.0)

2.0

1

Chromium (Reg Limit = 5.0)

<RDL

1

Lead (Reg Limit = 5.0)

46

1

Selenium (Reg Limit = 1.0)

<RDL

1

Silver (Reg Limit = 5.0)

<RDL

1

ANALYSIS: Total Petroleum Hydrocarbons

Method Ref: 418.1

Date Analyzed: 12/23/97 Date Ext/Dig/Prep: 12/23/97

Result Units: mg/Kg

Analyte Name**Analytical Results****Reported Detection Limits**

Total Petroleum Hydrocarbons

58,000

20000

ANALYSIS: X PAH/BN QC Surrogates (Soils)

Method Ref: 3550A/8270B

Date Analyzed: 1/2/98 Date Ext/Dig/Prep: 12/29/97

Result Units: %

Analyte Name**Analytical Results****Reported Detection Limits**

2-Fluorobiphenyl

See narrative

0

Nitrobenzene-d5

See narrative

0

p-Terphenyl-d14

See narrative

0

ANALYSIS: X VOC QC Surrogates (Soils)

Method Ref: 8260A

Date Analyzed: 12/22/97

Date Ext/Dig/Prep: 12/22/97

Result Units: %

Analyte Name

Analytical Results

Reported Detection Limits

1,2-Dichloroethane-d4

135

0

4-Bromofluorobenzene

94

0

Toluene-d8

97

0


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LABORATORY REPORT

Accura Sample ID #: AB32525

Accura Project #: 15096

Client: Omega Env. Services - Tucker

Date Sampled: 12/18/97

Client Contact: T. SHEPPARD

Date Received: 12/19/97

Client Project Number: DACA21-97-C-0042

Date Reported: 1/5/98

Client Project Name: HUNTER FIRE TRAINING AREA

Sample Matrix: SOIL

Client Sample ID: METHOD BLANK

ANALYSIS: BTEX

Method Ref: 5030A/8260A

Date Analyzed: 12/22/97

Date Ext/Dig/Prep: 12/22/97

Result Units: ug/Kg

Analyte Name	Analytical Results	Reported Detection Limits
Benzene	<RDL	5
Ethyl benzene	<RDL	5
Toluene	<RDL	5
Xylenes	<RDL	5

ANALYSIS: PAH's

Method Ref: 3550A/8270B

Date Analyzed: 12/30/97

Date Ext/Dig/Prep: 12/29/97

Result Units: ug/Kg

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	<RDL	330
2-Methylnaphthalene	<RDL	330
Acenaphthene	<RDL	330
Acenaphthylene	<RDL	330
Anthracene	<RDL	330
Benzo(a)anthracene	<RDL	330
Benzo(a)pyrene	<RDL	330
Benzo(b)fluoranthene	<RDL	330
Benzo(g,h,i)perylene	<RDL	330
Benzo(k)fluoranthene	<RDL	330
Chrysene	<RDL	330
Dibenzo(a,h)anthracene	<RDL	330
Fluoranthene	<RDL	330
Fluorene	<RDL	330
Indeno(1,2,3-cd)pyrene	<RDL	330
Naphthalene	<RDL	330
Phenanthrene	<RDL	330
Pyrene	<RDL	330

ANALYSIS: TCLP Extraction Procedure

Method Ref: 1311

Date Analyzed: 12/22/97 Date Ext/Dig/Prep: 12/22/97 Result Units:

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
TCLP Extraction	NA	0

ANALYSIS: TCLP Leachate Fluid pH

Method Ref: 1311

Date Analyzed: 12/23/97 Date Ext/Dig/Prep: 12/23/97 Result Units: pH Units

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
TCLP Leachate Fluid pH	5.1	0

ANALYSIS: TCLP Mercury

Method Ref: 7470A

Date Analyzed: 12/30/97 Date Ext/Dig/Prep: 12/30/97 Result Units: mg/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Mercury (Reg Limit = 0.2)	<RDL	0.01

ANALYSIS: TCLP Metals

Method Ref: 3010A/6010A

Date Analyzed: 12/30/97 Date Ext/Dig/Prep: 12/29/97 Result Units: mg/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Arsenic (Reg Limit = 5.0)	<RDL	1
Barium (Reg Limit = 100.0)	<RDL	1
Cadmium (Reg Limit = 1.0)	<RDL	1
Chromium (Reg Limit = 5.0)	<RDL	1
Lead (Reg Limit = 5.0)	<RDL	1
Selenium (Reg Limit = 1.0)	<RDL	1
Silver (Reg Limit = 5.0)	<RDL	1

ANALYSIS: Total Petroleum Hydrocarbons

Method Ref: 418.1

Date Analyzed: 12/23/97 Date Ext/Dig/Prep: 12/23/97 Result Units: mg/Kg

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Total Petroleum Hydrocarbons	<RDL	10

ANALYSIS: X PAH/BN QC Surrogates (Soils)

Method Ref: 3550A/8270B

Date Analyzed: 12/30/97 Date Ext/Dig/Prep: 12/29/97 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
2-Fluorobiphenyl	48	0
Nitrobenzene-d5	42	0
p-Terphenyl-d14	97	0

ANALYSIS: X VOC QC Surrogates (Soils)

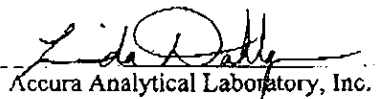
Method Ref: 8260A

Date Analyzed: 12/22/97

Date Ext/Dig/Prep: 12/22/97

Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,2-Dichloroethane-d4	98	0
4-Bromofluorobenzene	107	0
Toluene-d8	105	0


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CHAIN OF CUSTODY

Billing address:

Company Name: Omer Environmental SVCS

Client P.O. #

Address: 4461 Hammond Rd Ste B Tucker 3008

Report Sent to: (Client Contact): Travis Sheppard Geosciences Inc

Contact Phone # (912) 257-1606 Fax # (912) 257-1608

Project Name: Hunter Fire Training Area

Project Number: DACA21-97-C-0042

Samplers: (signature)	Samplers: (printed)
-----------------------	---------------------

IV. Samplers: (printed)

Sample ID #	Sample Date / Time	Comp	Grab	Matrix	Preserved	Sample Location:	No. of Containers
1							

Confad - ES-10	12-18-97	5	2
			2

Conrad-DM-001	12-18-97	5	2
---------------	----------	---	---

A/m	Tk-SD-001	12-18-97	5	2
-----	-----------	----------	---	---

[illegible]

[illegible][illegible][illegible]

Relinquished By:	Date / Time	Received By:
------------------	-------------	--------------

Requisitioned By: <i>[Signature]</i>	Date / Time 12-18-97	Received By: <i>M. Hall</i>
--------------------------------------	-------------------------	-----------------------------

[illegible]

Matrix Guld; (S = Soil) (W' = Water) (L = Liquid) (C = Cartridge) (SL = Sludge) (A = Air Sample) (T = Woods) (M = Miscellaneous)

COCP7-2.XLS



ACCURA ANALYTICAL LABORATORY, INC.
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CASE NARRATIVE for Project Number: 15314

Client Project: Hunter Army Airfield, Fire Training Area / 97-C-0042

The following items were noted concerning this project:

1. The following samples required dilution due to high analyte concentration, resulting in elevated detection limits:

TPH - EPA 418.1

Heap #1-ES-001

Heap #1-ES-002

BTEX - SW-846-8020A

Heap #1-ES-001

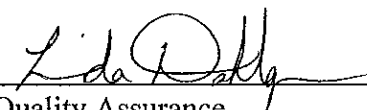
Heap #1-ES-002

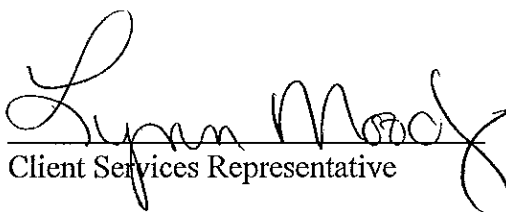
2. One surrogate was outside the method specified limit for the following sample:

PAH - SW-846-8270B

p-Terphenyl-d14 - Heap #1-ES-002

The remaining surrogates were within the acceptable limits; therefore the data satisfies the method requirements.


Quality Assurance


Client Services Representative

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LABORATORY REPORT

Accura Sample ID #: AB34160

Accura Project #: 15314

Client: Omega Env. Services - Tucker

Date Sampled: 1/12/98

Client Contact: JOHN MOUNT

Date Received: 1/13/98

Client Project Number: 97-C-0042

Date Reported: 1/16/98

Client Project Name: HUNTER ARMY AIRFIELD, FIRE TRAINING AREA

Sample Matrix: SOIL

Client Sample ID: HEAP # 1-ES-001

ANALYSIS: BTEX

Method Ref: 5030A/8020A

Date Analyzed: 1/13/98

Date Ext/Dig/Prep: 1/13/98

Result Units: ug/Kg

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Benzene	<RDL	100
Ethyl benzene	860	100
Toluene	200	100
Xylenes	6,500	100

ANALYSIS: PAH's

Method Ref: 3550A/8270B

Date Analyzed: 1/15/98

Date Ext/Dig/Prep: 1/14/98

Result Units: ug/Kg

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1-Methylnaphthalene	1,400	330
2-Methylnaphthalene	1,700	330
Acenaphthene	<RDL	330
Acenaphthylene	<RDL	330
Anthracene	<RDL	330
Benzo(a)anthracene	<RDL	330
Benzo(a)pyrene	<RDL	330
Benzo(b)fluoranthene	<RDL	330
Benzo(g,h,i)perylene	<RDL	330
Benzo(k)fluoranthene	<RDL	330
Chrysene	<RDL	330
Dibenzo(a,h)anthracene	<RDL	330
Fluoranthene	<RDL	330
Fluorene	<RDL	330
Indeno(1,2,3-cd)pyrene	<RDL	330
Naphthalene	1,200	330
Phenanthrene	540	330
Pyrene	<RDL	330

ANALYSIS: TCLP Extraction Procedure

Method Ref: 1311

Date Analyzed: 1/13/98 Date Ext/Dig/Prep: 1/13/98 Result Units:

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
TCLP Extraction	NA	0

ANALYSIS: TCLP Leachate Fluid pH

Method Ref: 1311

Date Analyzed: 1/14/98 Date Ext/Dig/Prep: 1/14/98 Result Units: pH Units

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
TCLP Leachate Fluid pH	5.1	0

ANALYSIS: TCLP Mercury

Method Ref: 7470A

Date Analyzed: 1/15/98 Date Ext/Dig/Prep: 1/15/98 Result Units: mg/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Mercury (Reg Limit = 0.2)	<RDL	0.01

ANALYSIS: TCLP Metals

Method Ref: 3010A/6010A

Date Analyzed: 1/15/98 Date Ext/Dig/Prep: 1/14/98 Result Units: mg/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Arsenic (Reg Limit = 5.0)	<RDL	1
Barium (Reg Limit = 100.0)	<RDL	1
Cadmium (Reg Limit = 1.0)	<RDL	1
Chromium (Reg Limit = 5.0)	<RDL	1
Lead (Reg Limit = 5.0)	<RDL	1
Selenium (Reg Limit = 1.0)	<RDL	1
Silver (Reg Limit = 5.0)	<RDL	1

ANALYSIS: Total Petroleum Hydrocarbons

Method Ref: 418.1

Date Analyzed: 1/15/98 Date Ext/Dig/Prep: 1/15/98 Result Units: mg/Kg

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Total Petroleum Hydrocarbons	2,800	500

ANALYSIS: X BTEX QC Surrogates (Soils)

Method Ref: 5030A/8020A

Date Analyzed: 1/13/98 Date Ext/Dig/Prep: 1/13/98 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,4-Difluorobenzene	76	0
4-Bromofluorobenzene	122	0

ANALYSIS: X PAH/BN QC Surrogates (Soils)

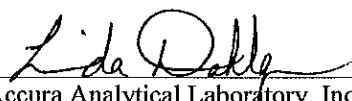
Method Ref: 3550A/8270B

Date Analyzed: 1/15/98

Date Ext/Dig/Prep: 1/14/98

Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
2-Fluorobiphenyl	71	0
Nitrobenzene-d5	82	0
p-Terphenyl-d14	21	0


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LABORATORY REPORT

Accura Sample ID #: AB34161

Accura Project #: 15314

Client: Omega Env. Services - Tucker

Date Sampled: 1/12/98

Client Contact: JOHN MOUNT

Date Received: 1/13/98

Client Project Number: 97-C-0042

Date Reported: 1/16/98

Client Project Name: HUNTER ARMY AIRFIELD, FIRE TRAINING AREA

Sample Matrix: SOIL

Client Sample ID: HEAP # 1-ES-002

ANALYSIS: BTEX

Method Ref: 5030A/8020A

Date Analyzed: 1/13/98

Date Ext/Dig/Prep: 1/13/98

Result Units: ug/Kg

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Benzene	<RDL	100
Ethyl benzene	1,000	100
Toluene	260	100
Xylenes	8,600	100

ANALYSIS: PAH's

Method Ref: 3550A/8270B

Date Analyzed: 1/15/98

Date Ext/Dig/Prep: 1/14/98

Result Units: ug/Kg

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1-Methylnaphthalene	1,200	330
2-Methylnaphthalene	1,700	330
Acenaphthene	<RDL	330
Acenaphthylene	<RDL	330
Anthracene	<RDL	330
Benzo(a)anthracene	<RDL	330
Benzo(a)pyrene	<RDL	330
Benzo(b)fluoranthene	<RDL	330
Benzo(g,h,i)perylene	<RDL	330
Benzo(k)fluoranthene	<RDL	330
Chrysene	<RDL	330
Dibenzo(a,h)anthracene	<RDL	330
Fluoranthene	<RDL	330
Fluorene	<RDL	330
Indeno(1,2,3-cd)pyrene	<RDL	330
Naphthalene	1,100	330
Phenanthrene	350	330
Pyrene	<RDL	330

ANALYSIS: TCLP Extraction Procedure

Method Ref: 1311

Date Analyzed: 1/13/98 Date Ext/Dig/Prep: 1/13/98 Result Units:

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
TCLP Extraction	NA	0

ANALYSIS: TCLP Leachate Fluid pH

Method Ref: 1311

Date Analyzed: 1/14/98 Date Ext/Dig/Prep: 1/14/98 Result Units: pH Units

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
TCLP Leachate Fluid pH	5.1	0

ANALYSIS: TCLP Mercury

Method Ref: 7470A

Date Analyzed: 1/15/98 Date Ext/Dig/Prep: 1/15/98 Result Units: mg/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Mercury (Reg Limit = 0.2)	<RDL	0.01

ANALYSIS: TCLP Metals

Method Ref: 3010A/6010A

Date Analyzed: 1/15/98 Date Ext/Dig/Prep: 1/14/98 Result Units: mg/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Arsenic (Reg Limit = 5.0)	<RDL	1
Barium (Reg Limit = 100.0)	<RDL	1
Cadmium (Reg Limit = 1.0)	<RDL	1
Chromium (Reg Limit = 5.0)	<RDL	1
Lead (Reg Limit = 5.0)	<RDL	1
Selenium (Reg Limit = 1.0)	<RDL	1
Silver (Reg Limit = 5.0)	<RDL	1

ANALYSIS: Total Petroleum Hydrocarbons

Method Ref: 418.1

Date Analyzed: 1/15/98 Date Ext/Dig/Prep: 1/15/98 Result Units: mg/Kg

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Total Petroleum Hydrocarbons	2,800	500

ANALYSIS: X BTEX QC Surrogates (Soils)

Method Ref: 5030A/8020A

Date Analyzed: 1/13/98 Date Ext/Dig/Prep: 1/13/98 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,4-Difluorobenzene	78	0
4-Bromofluorobenzene	128	0

ANALYSIS: X PAH/BN QC Surrogates (Soils)

Method Ref: 3550A/8270B

Date Analyzed: 1/15/98

Date Ext/Dig/Prep: 1/14/98

Result Units: %

Analyte Name

Analytical Results

Reported Detection Limits

2-Fluorobiphenyl

64

0

Nitrobenzene-d5

80

0

p-Terphenyl-d14

12

0


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LABORATORY REPORT

Accura Sample ID #: AB34162

Accura Project #: 15314

Client: Omega Env. Services - Tucker

Date Sampled: 1/12/98

Client Contact: JOHN MOUNT

Date Received: 1/13/98

Client Project Number: 97-C-0042

Date Reported: 1/16/98

Client Project Name: HUNTER ARMY AIRFIELD, FIRE TRAINING AREA

Sample Matrix: WATER

Client Sample ID: TRIP BLANK

ANALYSIS: VOC's

Method Ref: 5030A/8260A

Date Analyzed: 1/14/98

Date Ext/Dig/Prep: 1/14/98

Result Units: ug/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,1,1-Trichloroethane	<RDL	5
1,1,2,2-Tetrachloroethane	<RDL	5
1,1,2-Trichloroethane	<RDL	5
1,1-Dichloroethane	<RDL	5
1,1-Dichloroethene	<RDL	5
1,2-Dichlorobenzene	<RDL	5
1,2-Dichloroethane	<RDL	5
1,2-Dichloropropane	<RDL	5
1,3-Dichlorobenzene	<RDL	5
1,4-Dichlorobenzene	<RDL	5
2-Butanone (MEK)	<RDL	50
2-Chloroethylvinyl ether	<RDL	10
2-Hexanone	<RDL	50
4-Methyl-2-pentanone (MIBK)	<RDL	50
Acetone	<RDL	50
Benzene	<RDL	5
Bromodichloromethane	<RDL	5
Bromoform	<RDL	5
Bromomethane	<RDL	5
Carbon disulfide	<RDL	5
Carbon tetrachloride	<RDL	5
Chlorobenzene	<RDL	5
Chloroethane	<RDL	5
Chloroform	<RDL	5
Chloromethane	<RDL	5
cis-1,3-Dichloropropene	<RDL	5
Dibromochloromethane	<RDL	5
Ethylbenzene	<RDL	5
Methylene chloride	<RDL	5
Styrene	<RDL	5
Tetrachloroethene	<RDL	5
Toluene	<RDL	5

trans-1,2-Dichloroethene	<RDL	5
trans-1,3-Dichloropropene	<RDL	5
Trichloroethene	<RDL	5
Trichlorofluoromethane	<RDL	5
Vinyl acetate	<RDL	100
Vinyl chloride	<RDL	2
Xylenes (Total)	<RDL	5

ANALYSIS: X VOC QC Surrogates (Waters)

Method Ref: 8260A

Date Analyzed: 1/14/98 Date Ext/Dig/Prep: 1/14/98 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,2-Dichloroethane-d4	116	0
4-Bromofluorobenzene	102	0
Toluene-d8	104	0

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NC Certification # 483

SC Certification # 98015

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LABORATORY REPORT

Accura Sample ID #: AB34163

Accura Project #: 15314

Client: Omega Env. Services - Tucker

Date Sampled: 1/12/98

Client Contact: JOHN MOUNT

Date Received: 1/13/98

Client Project Number: 97-C-0042

Date Reported: 1/16/98

Client Project Name: HUNTER ARMY AIRFIELD, FIRE TRAINING AREA

Sample Matrix: SOIL

Client Sample ID: METHOD BLANK

ANALYSIS: BTEX

Method Ref: 5030A/8020A

Date Analyzed: 1/13/98

Date Ext/Dig/Prep: 1/13/98

Result Units: ug/Kg

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Benzene	<RDL	5
Ethyl benzene	<RDL	5
Toluene	<RDL	5
Xylenes	<RDL	5

ANALYSIS: PAH's

Method Ref: 3550A/8270B

Date Analyzed: 1/14/98

Date Ext/Dig/Prep: 1/14/98

Result Units: ug/Kg

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1-Methylnaphthalene	<RDL	330
2-Methylnaphthalene	<RDL	330
Acenaphthene	<RDL	330
Acenaphthylene	<RDL	330
Anthracene	<RDL	330
Benzo(a)anthracene	<RDL	330
Benzo(a)pyrene	<RDL	330
Benzo(b)fluoranthene	<RDL	330
Benzo(g,h,i)perylene	<RDL	330
Benzo(k)fluoranthene	<RDL	330
Chrysene	<RDL	330
Dibenzo(a,h)anthracene	<RDL	330
Fluoranthene	<RDL	330
Fluorene	<RDL	330
Indeno(1,2,3-cd)pyrene	<RDL	330
Naphthalene	<RDL	330
Phenanthrene	<RDL	330
Pyrene	<RDL	330

ANALYSIS: TCLP Extraction Procedure

Method Ref: 1311

Date Analyzed: 1/13/98 Date Ext/Dig/Prep: 1/13/98 Result Units:

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
TCLP Extraction	NA	0

ANALYSIS: TCLP Leachate Fluid pH

Method Ref: 1311

Date Analyzed: 1/14/98 Date Ext/Dig/Prep: 1/14/98 Result Units: pH Units

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
TCLP Leachate Fluid pH	5.0	0

ANALYSIS: TCLP Mercury

Method Ref: 7470A

Date Analyzed: 1/15/98 Date Ext/Dig/Prep: 1/15/98 Result Units: mg/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Mercury (Reg Limit = 0.2)	<RDL	0.01

ANALYSIS: TCLP Metals

Method Ref: 3010A/6010A

Date Analyzed: 1/15/98 Date Ext/Dig/Prep: 1/14/98 Result Units: mg/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Arsenic (Reg Limit = 5.0)	<RDL	1
Barium (Reg Limit = 100.0)	<RDL	1
Cadmium (Reg Limit = 1.0)	<RDL	1
Chromium (Reg Limit = 5.0)	<RDL	1
Lead (Reg Limit = 5.0)	<RDL	1
Selenium (Reg Limit = 1.0)	<RDL	1
Silver (Reg Limit = 5.0)	<RDL	1

ANALYSIS: Total Petroleum Hydrocarbons

Method Ref: 418.1

Date Analyzed: 1/15/98 Date Ext/Dig/Prep: 1/15/98 Result Units: mg/Kg

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Total Petroleum Hydrocarbons	<RDL	10

ANALYSIS: X BTEX QC Surrogates (Soils)

Method Ref: 5030A/8020A

Date Analyzed: 1/13/98 Date Ext/Dig/Prep: 1/13/98 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,4-Difluorobenzene	102	0
4-Bromofluorobenzene	96	0

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LABORATORY REPORT

Accura Sample ID #: AB34164

Accura Project #: 15314

Client: Omega Env. Services - Tucker

Date Sampled: 1/12/98

Client Contact: JOHN MOUNT

Date Received: 1/13/98

Client Project Number: 97-C-0042

Date Reported: 1/16/98

Client Project Name: HUNTER ARMY AIRFIELD, FIRE TRAINING AREA

Sample Matrix: WATER

Client Sample ID: METHOD BLANK

ANALYSIS: VOC's

Method Ref: 5030A/8260A

Date Analyzed: 1/14/98

Date Ext/Dig/Prep: 1/14/98

Result Units: ug/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,1,1-Trichloroethane	<RDL	5
1,1,2,2-Tetrachloroethane	<RDL	5
1,1,2-Trichloroethane	<RDL	5
1,1-Dichloroethane	<RDL	5
1,1-Dichloroethene	<RDL	5
1,2-Dichlorobenzene	<RDL	5
1,2-Dichloroethane	<RDL	5
1,2-Dichloropropane	<RDL	5
1,3-Dichlorobenzene	<RDL	5
1,4-Dichlorobenzene	<RDL	5
2-Butanone (MEK)	<RDL	50
2-Chloroethylvinyl ether	<RDL	10
2-Hexanone	<RDL	50
4-Methyl-2-pentanone (MIBK)	<RDL	50
Acetone	<RDL	50
Benzene	<RDL	5
Bromodichloromethane	<RDL	5
Bromoform	<RDL	5
Bromomethane	<RDL	5
Carbon disulfide	<RDL	5
Carbon tetrachloride	<RDL	5
Chlorobenzene	<RDL	5
Chloroethane	<RDL	5
Chloroform	<RDL	5
Chloromethane	<RDL	5
cis-1,3-Dichloropropene	<RDL	5
Dibromochloromethane	<RDL	5
Ethylbenzene	<RDL	5
Methylene chloride	<RDL	5
Styrene	<RDL	5
Tetrachloroethene	<RDL	5
Toluene	<RDL	5

trans-1,2-Dichloroethene	<RDL	5
trans-1,3-Dichloropropene	<RDL	5
Trichloroethene	<RDL	5
Trichlorofluoromethane	<RDL	5
Vinyl acetate	<RDL	100
Vinyl chloride	<RDL	2
Xylenes (Total)	<RDL	5

ANALYSIS: X VOC QC Surrogates (Waters)

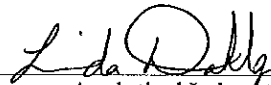
Method Ref: 8260A

Date Analyzed: 1/14/98

Date Ext/Dig/Prep: 1/14/98

Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,2-Dichloroethane-d4	102	0
4-Bromofluorobenzene	95	0
Toluene-d8	95	0


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CASE NARRATIVE for Project Number: 15408

Client Project: Hunter Fire Training Area / CO# DACA21-97-C-0042

The following item was noted concerning this project:

1. The following samples required dilution due to high analyte concentration and matrix interference, resulting in elevated detection limits:

PAH - SW-846-8270B

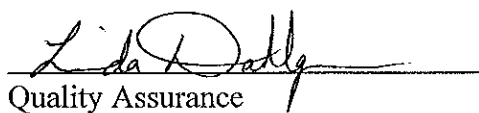
HP#2-ES-001-X

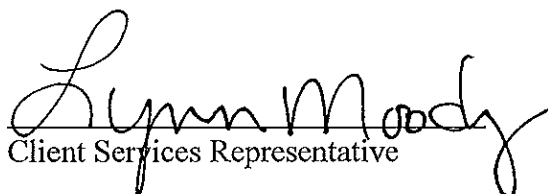
HP#2-ES-001-O

BTEX - SW-846-8020A

HP#2-ES-001-X

HP#2-ES-001-O


Quality Assurance


Client Services Representative

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LABORATORY REPORT

Accura Sample ID #: AB35577

Accura Project #: 15408

Client: Omega Env. Services - Tucker

Date Sampled: 1/20/98

Client Contact: T. SHEPPARD

Date Received: 1/22/98

Client Project Number: CO#DACA21-97-C-0042

Date Reported: 1/29/98

Client Project Name: HUNTER FIRE TRAINING AREA

Sample Matrix: SOIL

Client Sample ID: HP#2-ES-001-X

ANALYSIS: BTEX

Method Ref: 5030A/8260A

Date Analyzed: 1/26/98

Date Ext/Dig/Prep: 1/26/98

Result Units: ug/Kg

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Benzene	1,200	500
Ethyl benzene	3,000	500
Toluene	3,400	500
Xylenes	34,000	500

ANALYSIS: PAH's

Method Ref: 3550A/8270B

Date Analyzed: 1/26/98

Date Ext/Dig/Prep: 1/26/98

Result Units: ug/Kg

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1-Methylnaphthalene	3,600	1700
2-Methylnaphthalene	4,300	1700
Acenaphthene	<RDL	1700
Acenaphthylene	<RDL	1700
Anthracene	<RDL	1700
Benzo(a)anthracene	<RDL	1700
Benzo(a)pyrene	<RDL	1700
Benzo(b)fluoranthene	<RDL	1700
Benzo(g,h,i)perylene	<RDL	1700
Benzo(k)fluoranthene	<RDL	1700
Chrysene	<RDL	1700
Dibenzo(a,h)anthracene	<RDL	1700
Fluoranthene	<RDL	1700
Fluorene	<RDL	1700
Indeno(1,2,3-cd)pyrene	<RDL	1700
Naphthalene	<RDL	1700
Phenanthrene	<RDL	1700
Pyrene	<RDL	1700

ANALYSIS: TCLP Extraction Procedure

Method Ref: 1311

Date Analyzed: 1/26/98 Date Ext/Dig/Prep: 1/26/98 Result Units:

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
TCLP Extraction	NA	0

ANALYSIS: TCLP Mercury

Method Ref: 7470A

Date Analyzed: 1/29/98 Date Ext/Dig/Prep: 1/29/98 Result Units: mg/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Mercury (Reg Limit = 0.2)	<RDL	0.01

ANALYSIS: TCLP Metals

Method Ref: 3010A/6010A

Date Analyzed: 1/28/98 Date Ext/Dig/Prep: 1/27/98 Result Units: mg/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Arsenic (Reg Limit = 5.0)	<RDL	1
Barium (Reg Limit = 100.0)	<RDL	1
Cadmium (Reg Limit = 1.0)	<RDL	1
Chromium (Reg Limit = 5.0)	<RDL	1
Lead (Reg Limit = 5.0)	<RDL	1
Selenium (Reg Limit = 1.0)	<RDL	1
Silver (Reg Limit = 5.0)	<RDL	1

ANALYSIS: X PAH/BN QC Surrogates (Soils)

Method Ref: 3550A/8270B

Date Analyzed: 1/26/98 Date Ext/Dig/Prep: 1/26/98 Result Units: %

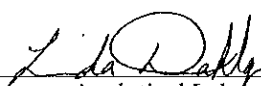
<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
2-Fluorobiphenyl	71	0
Nitrobenzene-d5	81	0
p-Terphenyl-d14	82	0

ANALYSIS: X VOC QC Surrogates (Soils)

Method Ref: 8260A

Date Analyzed: 1/26/98 Date Ext/Dig/Prep: 1/26/98 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,2-Dichloroethane-d4	115	0
4-Bromofluorobenzene	116	0
Toluene-d8	105	0


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LABORATORY REPORT

Accura Sample ID #: AB35578

Accura Project #: 15408

Client: Omega Env. Services - Tucker

Date Sampled: 1/20/98

Client Contact: T. SHEPPARD

Date Received: 1/22/98

Client Project Number: CO#DACA21-97-C-0042

Date Reported: 1/29/98

Client Project Name: HUNTER FIRE TRAINING AREA

Sample Matrix: SOIL

Client Sample ID: HP#2-ES-001-O

ANALYSIS: BTEX

Method Ref: 5030A/8260A

Date Analyzed: 1/26/98

Date Ext/Dig/Prep: 1/26/98

Result Units: ug/Kg

Analyte Name	Analytical Results	Reported Detection Limits
Benzene	650	500
Ethyl benzene	<RDL	500
Toluene	1,900	500
Xylenes	28,000	500

ANALYSIS: PAH's

Method Ref: 3550A/8270B

Date Analyzed: 1/26/98

Date Ext/Dig/Prep: 1/26/98

Result Units: ug/Kg

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	3,000	1700
2-Methylnaphthalene	3,600	1700
Acenaphthene	<RDL	1700
Acenaphthylene	<RDL	1700
Anthracene	<RDL	1700
Benzo(a)anthracene	<RDL	1700
Benzo(a)pyrene	<RDL	1700
Benzo(b)fluoranthene	<RDL	1700
Benzo(g,h,i)perylene	<RDL	1700
Benzo(k)fluoranthene	<RDL	1700
Chrysene	<RDL	1700
Dibenzo(a,h)anthracene	<RDL	1700
Fluoranthene	<RDL	1700
Fluorene	<RDL	1700
Indeno(1,2,3-cd)pyrene	<RDL	1700
Naphthalene	<RDL	1700
Phenanthrene	<RDL	1700
Pyrene	<RDL	1700

ANALYSIS: TCLP Extraction Procedure

Date Analyzed: 1/26/98

Date Ext/Dig/Prep: 1/26/98

Method Ref: 1311

Result Units:

Analyte NameAnalytical ResultsReported Detection Limits

TCLP Extraction

NA

0

ANALYSIS: TCLP Mercury

Date Analyzed: 1/29/98

Date Ext/Dig/Prep: 1/29/98

Method Ref: 7470A

Result Units: mg/L

Analyte NameAnalytical ResultsReported Detection Limits

Mercury (Reg Limit = 0.2)

<RDL

0.01

ANALYSIS: TCLP Metals

Date Analyzed: 1/28/98

Date Ext/Dig/Prep: 1/27/98

Method Ref: 3010A/6010A

Result Units: mg/L

Analyte NameAnalytical ResultsReported Detection Limits

Arsenic (Reg Limit = 5.0)
Barium (Reg Limit = 100.0)
Cadmium (Reg Limit = 1.0)
Chromium (Reg Limit = 5.0)
Lead (Reg Limit = 5.0)
Selenium (Reg Limit = 1.0)
Silver (Reg Limit = 5.0)

<RDL

1

<RDL

1

<RDL

1

<RDL

1

<RDL

1

<RDL

1

<RDL

1

Method Ref: 3550A/8270B

Result Units: %

ANALYSIS: X PAH/BN QC Surrogates (Soils)

Date Analyzed: 1/26/98

Date Ext/Dig/Prep: 1/26/98

Analyte NameAnalytical ResultsReported Detection Limits

2-Fluorobiphenyl
Nitrobenzene-d5
p-Terphenyl-d14

70

0

73

0

80

0

Method Ref: 8260A

Result Units: %

ANALYSIS: X VOC QC Surrogates (Soils)

Date Analyzed: 1/26/98

Date Ext/Dig/Prep: 1/26/98

Analyte NameAnalytical ResultsReported Detection Limits

1,2-Dichloroethane-d4
4-Bromofluorobenzene
Toluene-d8

95

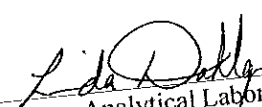
0

115

0

98

0


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Client Sample ID: HP#2-ES-001-O

<RDL = Less than Reported Detection Limit

AAL Sample ID #: AB35578 Accura Project #: 15408

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LABORATORY REPORT

Accura Project #: 15408

Accura Sample ID #: AB35579

Client: Omega Env. Services - Tucker

Client Contact: T. SHEPPARD

Client Project Number: CO#DACA21-97-C-0042

Client Project Name: HUNTER FIRE TRAINING AREA

Client Sample ID: HP#2-X-TB

Date Sampled: 1/20/98

Date Received: 1/22/98

Date Reported: 1/29/98

Sample Matrix: WATER

ANALYSIS: VOC's

Date Analyzed: 1/22/98 Date Ext/Dig/Prep: 1/22/98

Method Ref: 5030A/8260A

Result Units: ug/L

Analyte Name

Analytical Results

Reported Detection Limits

1,1,1-Trichloroethane	<RDL	5
1,1,2,2-Tetrachloroethane	<RDL	5
1,1,2-Trichloroethane	<RDL	5
1,1-Dichloroethane	<RDL	5
1,1-Dichloroethene	<RDL	5
1,2-Dichlorobenzene	<RDL	5
1,2-Dichloroethane	<RDL	5
1,2-Dichloropropane	<RDL	50
1,3-Dichlorobenzene	<RDL	10
1,4-Dichlorobenzene	<RDL	50
2-Butanone (MEK)	<RDL	50
2-Chloroethylvinyl ether	<RDL	50
2-Hexanone	<RDL	5
4-Methyl-2-pentanone (MIBK)	<RDL	5
Acetone	<RDL	5
Benzene	<RDL	5
Bromodichloromethane	<RDL	5
Bromoform	<RDL	5
Bromomethane	<RDL	5
Carbon disulfide	<RDL	5
Carbon tetrachloride	<RDL	5
Chlorobenzene	<RDL	5
Chloroethane	<RDL	5
Chloroform	<RDL	5
Chloromethane	<RDL	5
cis-1,3-Dichloropropene	<RDL	5
Dibromochloromethane	<RDL	5
Ethylbenzene	<RDL	5
Methylene chloride	<RDL	5
Styrene	<RDL	5
Tetrachloroethene	<RDL	5
Toluene	<RDL	5

<RDL = Less than Reported Detection Limit

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Client Sample ID: HP#2-X-TB

AALSample ID #: AB35579 Accura Project #: 15408

trans-1,2-Dichloroethene	<RDL	5
trans-1,3-Dichloropropene	<RDL	5
Trichloroethene	<RDL	5
Trichlorofluoromethane	<RDL	5
Vinyl acetate	<RDL	100
Vinyl chloride	<RDL	2
Xylenes (Total)	<RDL	5

ANALYSIS: X VOC QC Surrogates (Waters)

Method Ref: 8260A

Date Analyzed: 1/22/98

Date Ext/Dig/Prep: 1/22/98

Result Units: %

Analyte Name

Analytical Results

Reported Detection Limits

1,2-Dichloroethane-d4

93

0

4-Bromofluorobenzene

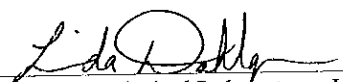
98

0

Toluene-d8

95

0


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LABORATORY REPORT

Accura Sample ID #: AB35580

Accura Project #: 15408

Client: Omega Env. Services - Tucker

Date Sampled: 1/20/98

Client Contact: T. SHEPPARD

Date Received: 1/22/98

Client Project Number: CO#DACA21-97-C-0042

Date Reported: 1/29/98

Client Project Name: HUNTER FIRE TRAINING AREA

Sample Matrix: SOIL

Client Sample ID: METHOD BLANK

ANALYSIS: BTEX

Method Ref: 5030A/8260A

Date Analyzed: 1/26/98

Date Ext/Dig/Prep: 1/26/98

Result Units: ug/Kg

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Benzene	<RDL	5
Ethyl benzene	<RDL	5
Toluene	<RDL	5
Xylenes	<RDL	5

ANALYSIS: PAH's

Method Ref: 3550A/8270B

Date Analyzed: 1/26/98

Date Ext/Dig/Prep: 1/26/98

Result Units: ug/Kg

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1-Methylnaphthalene	<RDL	330
2-Methylnaphthalene	<RDL	330
Acenaphthene	<RDL	330
Acenaphthylene	<RDL	330
Anthracene	<RDL	330
Benzo(a)anthracene	<RDL	330
Benzo(a)pyrene	<RDL	330
Benzo(b)fluoranthene	<RDL	330
Benzo(g,h,i)perylene	<RDL	330
Benzo(k)fluoranthene	<RDL	330
Chrysene	<RDL	330
Dibenzo(a,h)anthracene	<RDL	330
Fluoranthene	<RDL	330
Fluorene	<RDL	330
Indeno(1,2,3-cd)pyrene	<RDL	330
Naphthalene	<RDL	330
Phenanthrene	<RDL	330
Pyrene	<RDL	330

ANALYSIS: TCLP Extraction Procedure

Method Ref: 1311

Date Analyzed: 1/26/98 Date Ext/Dig/Prep: 1/26/98 Result Units:

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
TCLP Extraction	NA	0

ANALYSIS: TCLP Mercury

Method Ref: 7470A

Date Analyzed: 1/29/98 Date Ext/Dig/Prep: 1/29/98 Result Units: mg/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Mercury (Reg Limit = 0.2)	<RDL	0.01

ANALYSIS: TCLP Metals

Method Ref: 3010A/6010A

Date Analyzed: 1/28/98 Date Ext/Dig/Prep: 1/27/98 Result Units: mg/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Arsenic (Reg Limit = 5.0)	<RDL	1
Barium (Reg Limit = 100.0)	<RDL	1
Cadmium (Reg Limit = 1.0)	<RDL	1
Chromium (Reg Limit = 5.0)	<RDL	1
Lead (Reg Limit = 5.0)	<RDL	1
Selenium (Reg Limit = 1.0)	<RDL	1
Silver (Reg Limit = 5.0)	<RDL	1

ANALYSIS: X PAH/BN QC Surrogates (Soils)

Method Ref: 3550A/8270B

Date Analyzed: 1/26/98 Date Ext/Dig/Prep: 1/26/98 Result Units: %

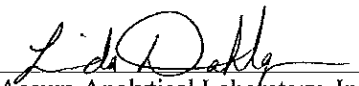
<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
2-Fluorobiphenyl	60	0
Nitrobenzene-d5	53	0
p-Terphenyl-d14	96	0

ANALYSIS: X VOC QC Surrogates (Soils)

Method Ref: 8260A

Date Analyzed: 1/26/98 Date Ext/Dig/Prep: 1/26/98 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,2-Dichloroethane-d4	94	0
4-Bromofluorobenzene	101	0
Toluene-d8	103	0


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LABORATORY REPORT

Accura Sample ID #: AB35581

Accura Project #: 15408

Client: Omega Env. Services - Tucker

Date Sampled: 1/20/98

Client Contact: T. SHEPPARD

Date Received: 1/22/98

Client Project Number: CO#DACA21-97-C-0042

Date Reported: 1/29/98

Client Project Name: HUNTER FIRE TRAINING AREA

Sample Matrix: WATER

Client Sample ID: METHOD BLANK

ANALYSIS: VOC's

Method Ref: 5030A/8260A

Date Analyzed: 1/22/98

Date Ext/Dig/Prep: 1/22/98

Result Units: ug/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,1,1-Trichloroethane	<RDL	5
1,1,2,2-Tetrachloroethane	<RDL	5
1,1,2-Trichloroethane	<RDL	5
1,1-Dichloroethane	<RDL	5
1,1-Dichloroethene	<RDL	5
1,2-Dichlorobenzene	<RDL	5
1,2-Dichloroethane	<RDL	5
1,2-Dichloropropane	<RDL	5
1,3-Dichlorobenzene	<RDL	5
1,4-Dichlorobenzene	<RDL	5
2-Butanone (MEK)	<RDL	50
2-Chloroethylvinyl ether	<RDL	10
2-Hexanone	<RDL	50
4-Methyl-2-pentanone (MIBK)	<RDL	50
Acetone	<RDL	50
Benzene	<RDL	5
Bromodichloromethane	<RDL	5
Bromoform	<RDL	5
Bromomethane	<RDL	5
Carbon disulfide	<RDL	5
Carbon tetrachloride	<RDL	5
Chlorobenzene	<RDL	5
Chloroethane	<RDL	5
Chloroform	<RDL	5
Chloromethane	<RDL	5
cis-1,3-Dichloropropene	<RDL	5
Dibromochloromethane	<RDL	5
Ethylbenzene	<RDL	5
Methylene chloride	<RDL	5
Styrene	<RDL	5
Tetrachloroethene	<RDL	5
Toluene	<RDL	5

trans-1,2-Dichloroethene	<RDL	5
trans-1,3-Dichloropropene	<RDL	5
Trichloroethene	<RDL	5
Trichlorofluoromethane	<RDL	5
Vinyl acetate	<RDL	100
Vinyl chloride	<RDL	2
Xylenes (Total)	<RDL	5

ANALYSIS: X VOC QC Surrogates (Waters)

Method Ref: 8260A

Date Analyzed: 1/22/98

Date Ext/Dig/Prep: 1/22/98

Result Units: %

Analyte Name

Analytical Results

Reported Detection Limits

1,2-Dichloroethane-d4

96

0

4-Bromofluorobenzene

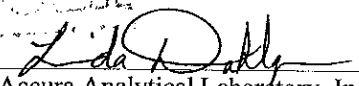
99

0

Toluene-d8

99

0


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CASE NARRATIVE for Project Number: 15404
Client Project: Hunter Fire Training Area / CO# DACA21-97-C-0042

The following item was noted concerning this project:

1. The following samples required dilution due to high analyte concentration and matrix interference, resulting in elevated detection limits:

PAH - SW-846-8270B

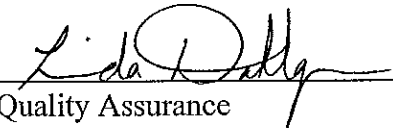
HP#3-ES-001-X

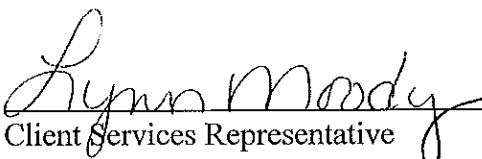
HP#3-ES-001-O

BTEX - SW-846-8020A

HP#3-ES-001-X

HP#3-ES-001-O


Quality Assurance


Client Services Representative

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LABORATORY REPORT

Accura Sample ID #: AB35563

Accura Project #: 15404

Client: Omega Env. Services - Tucker

Date Sampled: 1/21/98

Client Contact: T. SHEPPARD

Date Received: 1/22/98

Client Project Number: CO#DACA21-97-C-0042

Date Reported: 1/29/98

Client Project Name: HUNTER FIRE TRAINING AREA

Sample Matrix: SOIL

Client Sample ID: HP#3-ES-001-X

ANALYSIS: BTEX

Method Ref: 5030A/8260A

Date Analyzed: 1/23/98

Date Ext/Dig/Prep: 1/23/98

Result Units: ug/Kg

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Benzene	770	500
Ethyl benzene	900	500
Toluene	5,500	500
Xylenes	32,000	500

ANALYSIS: PAH's

Method Ref: 3550A/8270B

Date Analyzed: 1/26/98

Date Ext/Dig/Prep: 1/26/98

Result Units: ug/Kg

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1-Methylnaphthalene	3,800	1700
2-Methylnaphthalene	4,700	1700
Acenaphthene	<RDL	1700
Acenaphthylene	<RDL	1700
Anthracene	<RDL	1700
Benzo(a)anthracene	<RDL	1700
Benzo(a)pyrene	<RDL	1700
Benzo(b)fluoranthene	<RDL	1700
Benzo(g,h,i)perylene	<RDL	1700
Benzo(k)fluoranthene	<RDL	1700
Chrysene	<RDL	1700
Dibenzo(a,h)anthracene	<RDL	1700
Fluoranthene	<RDL	1700
Fluorene	<RDL	1700
Indeno(1,2,3-cd)pyrene	<RDL	1700
Naphthalene	1,800	1700
Phenanthrene	<RDL	1700
Pyrene	<RDL	1700

ANALYSIS: TCLP Extraction Procedure

Method Ref: 1311

Date Analyzed: 1/26/98 Date Ext/Dig/Prep: 1/26/98 Result Units:

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
TCLP Extraction	NA	0

ANALYSIS: TCLP Mercury

Method Ref: 7470A

Date Analyzed: 1/29/98 Date Ext/Dig/Prep: 1/29/98 Result Units: mg/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Mercury (Reg Limit = 0.2)	<RDL	0.01

ANALYSIS: TCLP Metals

Method Ref: 3010A/6010A

Date Analyzed: 1/28/98 Date Ext/Dig/Prep: 1/27/98 Result Units: mg/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Arsenic (Reg Limit = 5.0)	<RDL	1
Barium (Reg Limit = 100.0)	<RDL	1
Cadmium (Reg Limit = 1.0)	<RDL	1
Chromium (Reg Limit = 5.0)	<RDL	1
Lead (Reg Limit = 5.0)	<RDL	1
Selenium (Reg Limit = 1.0)	<RDL	1
Silver (Reg Limit = 5.0)	<RDL	1

ANALYSIS: X PAH/BN QC Surrogates (Soils)

Method Ref: 3550A/8270B

Date Analyzed: 1/26/98 Date Ext/Dig/Prep: 1/26/98 Result Units: %

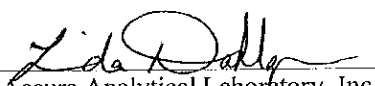
<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
2-Fluorobiphenyl	75	0
Nitrobenzene-d5	90	0
p-Terphenyl-d14	84	0

ANALYSIS: X VOC QC Surrogates (Soils)

Method Ref: 8260A

Date Analyzed: 1/23/98 Date Ext/Dig/Prep: 1/23/98 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,2-Dichloroethane-d4	120	0
4-Bromofluorobenzene	115	0
Toluene-d8	100	0


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LABORATORY REPORT

Accura Sample ID #: AB35564

Accura Project #: 15404

Client: Omega Env. Services - Tucker

Date Sampled: 1/21/98

Client Contact: T. SHEPPARD

Date Received: 1/22/98

Client Project Number: CO#DACA21-97-C-0042

Date Reported: 2/2/98

Client Project Name: HUNTER FIRE TRAINING AREA

Sample Matrix: SOIL

Client Sample ID: HP#3-ES-001-O

ANALYSIS: BTEX

Method Ref: 5030A/8260A

Date Analyzed: 1/23/98

Date Ext/Dig/Prep: 1/23/98

Result Units: ug/Kg

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Benzene	<RDL	1000
Ethyl benzene	1,100	1000
Toluene	3,000	1000
Xylenes	17,000	1000

ANALYSIS: PAH's

Method Ref: 3550A/8270B

Date Analyzed: 1/26/98

Date Ext/Dig/Prep: 1/26/98

Result Units: ug/Kg

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1-Methylnaphthalene	4,700	1700
2-Methylnaphthalene	5,800	1700
Acenaphthene	<RDL	1700
Acenaphthylene	<RDL	1700
Anthracene	<RDL	1700
Benzo(a)anthracene	<RDL	1700
Benzo(a)pyrene	<RDL	1700
Benzo(b)fluoranthene	<RDL	1700
Benzo(g,h,i)perylene	<RDL	1700
Benzo(k)fluoranthene	<RDL	1700
Chrysene	<RDL	1700
Dibenzo(a,h)anthracene	<RDL	1700
Fluoranthene	<RDL	1700
Fluorene	<RDL	1700
Indeno(1,2,3-cd)pyrene	<RDL	1700
Naphthalene	2,200	1700
Phenanthrene	<RDL	1700
Pyrene	<RDL	1700

ANALYSIS: TCLP Extraction Procedure

Method Ref: 1311

Date Analyzed: 1/26/98 Date Ext/Dig/Prep: 1/26/98

Result Units:

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
TCLP Extraction	NA	0

ANALYSIS: TCLP Mercury

Method Ref: 7470A

Date Analyzed: 1/29/98 Date Ext/Dig/Prep: 1/29/98 Result Units: mg/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Mercury (Reg Limit = 0.2)	<RDL	0.01

ANALYSIS: TCLP Metals

Method Ref: 3010A/6010A

Date Analyzed: 1/28/98 Date Ext/Dig/Prep: 1/27/98 Result Units: mg/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Arsenic (Reg Limit = 5.0)	<RDL	1
Barium (Reg Limit = 100.0)	<RDL	1
Cadmium (Reg Limit = 1.0)	<RDL	1
Chromium (Reg Limit = 5.0)	<RDL	1
Lead (Reg Limit = 5.0)	<RDL	1
Selenium (Reg Limit = 1.0)	<RDL	1
Silver (Reg Limit = 5.0)	<RDL	1

ANALYSIS: X PAH/BN QC Surrogates (Soils)

Method Ref: 3550A/8270B

Date Analyzed: 1/26/98 Date Ext/Dig/Prep: 1/26/98 Result Units: %

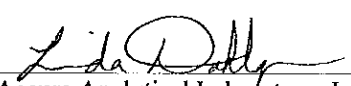
<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
2-Fluorobiphenyl	74	0
Nitrobenzene-d5	92	0
p-Terphenyl-d14	85	0

ANALYSIS: X VOC QC Surrogates (Soils)

Method Ref: 8260A

Date Analyzed: 1/23/98 Date Ext/Dig/Prep: 1/23/98 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,2-Dichloroethane-d4	91	0
4-Bromofluorobenzene	101	0
Toluene-d8	96	0


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LABORATORY REPORT

Accura Sample ID #: AB35565

Accura Project #: 15404

Client: Omega Env. Services - Tucker

Date Sampled: 1/21/98

Client Contact: T. SHEPPARD

Date Received: 1/22/98

Client Project Number: CO#DACA21-97-C-0042

Date Reported: 2/2/98

Client Project Name: HUNTER FIRE TRAINING AREA

Sample Matrix: WATER

Client Sample ID: HP#3-X-TB

ANALYSIS: VOC's

Method Ref: 5030A/8260A

Date Analyzed: 1/22/98

Date Ext/Dig/Prep: 1/22/98

Result Units: ug/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,1,1-Trichloroethane	<RDL	5
1,1,2,2-Tetrachloroethane	<RDL	5
1,1,2-Trichloroethane	<RDL	5
1,1-Dichloroethane	<RDL	5
1,1-Dichloroethene	<RDL	5
1,2-Dichlorobenzene	<RDL	5
1,2-Dichloroethane	<RDL	5
1,2-Dichloropropane	<RDL	5
1,3-Dichlorobenzene	<RDL	5
1,4-Dichlorobenzene	<RDL	5
2-Butanone (MEK)	<RDL	50
2-Chloroethylvinyl ether	<RDL	10
2-Hexanone	<RDL	50
4-Methyl-2-pentanone (MIBK)	<RDL	50
Acetone	<RDL	50
Benzene	<RDL	5
Bromodichloromethane	<RDL	5
Bromoform	<RDL	5
Bromomethane	<RDL	5
Carbon disulfide	<RDL	5
Carbon tetrachloride	<RDL	5
Chlorobenzene	<RDL	5
Chloroethane	<RDL	5
Chloroform	<RDL	5
Chloromethane	<RDL	5
cis-1,3-Dichloropropene	<RDL	5
Dibromochloromethane	<RDL	5
Ethylbenzene	<RDL	5
Methylene chloride	<RDL	5
Styrene	<RDL	5
Tetrachloroethene	<RDL	5
Toluene	<RDL	5

trans-1,2-Dichloroethene	<RDL	5
trans-1,3-Dichloropropene	<RDL	5
Trichloroethene	<RDL	5
Trichlorofluoromethane	<RDL	5
Vinyl acetate	<RDL	100
Vinyl chloride	<RDL	2
Xylenes (Total)	<RDL	5

ANALYSIS: X VOC QC Surrogates (Waters)

Method Ref: 8260A

Date Analyzed: 1/22/98

Date Ext/Dig/Prep: 1/22/98

Result Units: %

Analyte Name

Analytical Results

Reported Detection Limits

1,2-Dichloroethane-d4

106

0

4-Bromofluorobenzene

108

0

Toluene-d8

106

0


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LABORATORY REPORT

Accura Sample ID #: AB35566

Accura Project #: 15404

Client: Omega Env. Services - Tucker

Date Sampled: 1/21/98

Client Contact: T. SHEPPARD

Date Received: 1/22/98

Client Project Number: CO#DACA21-97-C-0042

Date Reported: 1/29/98

Client Project Name: HUNTER FIRE TRAINING AREA

Sample Matrix: SOIL

Client Sample ID: METHOD BLANK

ANALYSIS: BTEX

Method Ref: 5030A/8260A

Date Analyzed: 1/23/98

Date Ext/Dig/Prep: 1/23/98

Result Units: ug/Kg

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Benzene	<RDL	5
Ethyl benzene	<RDL	5
Toluene	<RDL	5
Xylenes	<RDL	5

ANALYSIS: PAH's

Method Ref: 3550A/8270B

Date Analyzed: 1/26/98

Date Ext/Dig/Prep: 1/26/98

Result Units: ug/Kg

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1-Methylnaphthalene	<RDL	330
2-Methylnaphthalene	<RDL	330
Acenaphthene	<RDL	330
Acenaphthylene	<RDL	330
Anthracene	<RDL	330
Benzo(a)anthracene	<RDL	330
Benzo(a)pyrene	<RDL	330
Benzo(b)fluoranthene	<RDL	330
Benzo(g,h,i)perylene	<RDL	330
Benzo(k)fluoranthene	<RDL	330
Chrysene	<RDL	330
Dibenzo(a,h)anthracene	<RDL	330
Fluoranthene	<RDL	330
Fluorene	<RDL	330
Indeno(1,2,3-cd)pyrene	<RDL	330
Naphthalene	<RDL	330
Phenanthrene	<RDL	330
Pyrene	<RDL	330

ANALYSIS: TCLP Extraction Procedure

Method Ref: 1311

Date Analyzed: 1/26/98 Date Ext/Dig/Prep: 1/26/98

Result Units:

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
TCLP Extraction	NA	0

ANALYSIS: TCLP Mercury

Method Ref: 7470A

Date Analyzed: 1/29/98 Date Ext/Dig/Prep: 1/29/98

Result Units: mg/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Mercury (Reg Limit = 0.2)	<RDL	0.01

ANALYSIS: TCLP Metals

Method Ref: 3010A/6010A

Date Analyzed: 1/28/98 Date Ext/Dig/Prep: 1/27/98

Result Units: mg/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Arsenic (Reg Limit = 5.0)	<RDL	1
Barium (Reg Limit = 100.0)	<RDL	1
Cadmium (Reg Limit = 1.0)	<RDL	1
Chromium (Reg Limit = 5.0)	<RDL	1
Lead (Reg Limit = 5.0)	<RDL	1
Selenium (Reg Limit = 1.0)	<RDL	1
Silver (Reg Limit = 5.0)	<RDL	1

ANALYSIS: X PAH/BN QC Surrogates (Soils)

Method Ref: 3550A/8270B

Date Analyzed: 1/26/98 Date Ext/Dig/Prep: 1/26/98

Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
2-Fluorobiphenyl	60	0
Nitrobenzene-d5	53	0
p-Terphenyl-d14	96	0

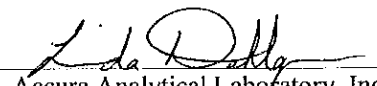
ANALYSIS: X VOC QC Surrogates (Soils)

Method Ref: 8260A

Date Analyzed: 1/23/98 Date Ext/Dig/Prep: 1/23/98

Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,2-Dichloroethane-d4	95	0
4-Bromofluorobenzene	104	0
Toluene-d8	101	0


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LABORATORY REPORT

Accura Sample ID #: AB35567

Accura Project #: 15404

Client: Omega Env. Services - Tucker

Date Sampled: 1/21/98

Client Contact: T. SHEPPARD

Date Received: 1/22/98

Client Project Number: CO#DACA21-97-C-0042

Date Reported: 1/29/98

Client Project Name: HUNTER FIRE TRAINING AREA

Sample Matrix: WATER

Client Sample ID: METHOD BLANK

ANALYSIS: VOC's

Method Ref: 5030A/8260A

Date Analyzed: 1/22/98

Date Ext/Dig/Prep: 1/22/98

Result Units: ug/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,1,1-Trichloroethane	<RDL	5
1,1,2,2-Tetrachloroethane	<RDL	5
1,1,2-Trichloroethane	<RDL	5
1,1-Dichloroethane	<RDL	5
1,1-Dichloroethene	<RDL	5
1,2-Dichlorobenzene	<RDL	5
1,2-Dichloroethane	<RDL	5
1,2-Dichloropropane	<RDL	5
1,3-Dichlorobenzene	<RDL	5
1,4-Dichlorobenzene	<RDL	5
2-Butanone (MEK)	<RDL	50
2-Chloroethylvinyl ether	<RDL	10
2-Hexanone	<RDL	50
4-Methyl-2-pentanone (MIBK)	<RDL	50
Acetone	<RDL	50
Benzene	<RDL	5
Bromodichloromethane	<RDL	5
Bromoform	<RDL	5
Bromomethane	<RDL	5
Carbon disulfide	<RDL	5
Carbon tetrachloride	<RDL	5
Chlorobenzene	<RDL	5
Chloroethane	<RDL	5
Chloroform	<RDL	5
Chloromethane	<RDL	5
cis-1,3-Dichloropropene	<RDL	5
Dibromochloromethane	<RDL	5
Ethylbenzene	<RDL	5
Methylene chloride	<RDL	5
Styrene	<RDL	5
Tetrachloroethene	<RDL	5
Toluene	<RDL	5

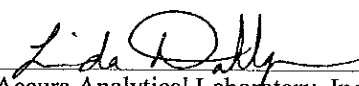
trans-1,2-Dichloroethene	<RDL	5
trans-1,3-Dichloropropene	<RDL	5
Trichloroethene	<RDL	5
Trichlorofluoromethane	<RDL	5
Vinyl acetate	<RDL	100
Vinyl chloride	<RDL	2
Xylenes (Total)	<RDL	5

ANALYSIS: X VOC QC Surrogates (Waters)

Method Ref: 8260A

Date Analyzed: 1/22/98 Date Ext/Dig/Prep: 1/22/98 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,2-Dichloroethane-d4	96	0
4-Bromofluorobenzene	99	0
Toluene-d8	99	0


Accura Analytical Laboratory, Inc.



ACCURA ANALYTICAL LABORATORY, INC.
6017 Financial Drive, Norcross, Georgia, 30071, Phone (770)449-8800

CASE NARRATIVE for Project Number: 15405

Client Project: Hunter Fire Training Area / CO# DACA21-97-C-0042

The following item was noted concerning this project:

1. The following samples required dilution due to high analyte concentration and matrix interference, resulting in elevated detection limits:

PAH - SW-846-8270B

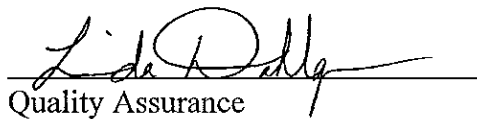
HP#4-ES-001-X

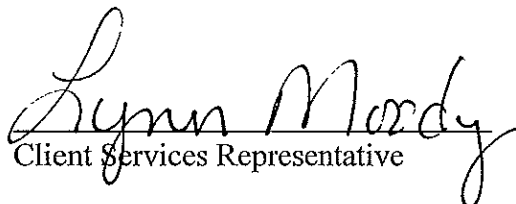
HP#4-ES-001-O

BTEX - SW-846-8020A

HP#4-ES-001-X

HP#4-ES-001-O


Quality Assurance


Client Services Representative

ACCURA ANALYTICAL LABORATORY, INC.

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FL Certification # E87429 NC Certification # 483 SC Certification # 98015 USACE-MRD Approved

LABORATORY REPORT

Accura Sample ID #: AB35568

Accura Project #: 15405

Client: Omega Env. Services - Tucker

Date Sampled: 1/21/98

Client Contact: T. SHEPPARD

Date Received: 1/22/98

Client Project Number: CO#DACA21-97-C-0042

Date Reported: 1/29/98

Client Project Name: HUNTER FIRE TRAINING AREA

Sample Matrix: SOIL

Client Sample ID: HP#4-ES-001-X

ANALYSIS: BTEX

Method Ref: 5030A/8260A

Date Analyzed: 1/23/98

Date Ext/Dig/Prep: 1/23/98

Result Units: ug/Kg

Analyte Name	Analytical Results	Reported Detection Limits
Benzene	1,000	1000
Ethyl benzene	4,300	1000
Toluene	2,900	1000
Xylenes	35,000	1000

ANALYSIS: PAH's

Method Ref: 3550A/8270B

Date Analyzed: 1/26/98

Date Ext/Dig/Prep: 1/26/98

Result Units: ug/Kg

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	4,600	1700
2-Methylnaphthalene	6,100	1700
Acenaphthene	<RDL	1700
Acenaphthylene	<RDL	1700
Anthracene	<RDL	1700
Benzo(a)anthracene	<RDL	1700
Benzo(a)pyrene	<RDL	1700
Benzo(b)fluoranthene	<RDL	1700
Benzo(g,h,i)perylene	<RDL	1700
Benzo(k)fluoranthene	<RDL	1700
Chrysene	<RDL	1700
Dibenzo(a,h)anthracene	<RDL	1700
Fluoranthene	<RDL	1700
Fluorene	<RDL	1700
Indeno(1,2,3-cd)pyrene	<RDL	1700
Naphthalene	2,500	1700
Phenanthrene	<RDL	1700
Pyrene	<RDL	1700

ANALYSIS: TCLP Extraction Procedure

Method Ref: 1311

Date Analyzed: 1/26/98 Date Ext/Dig/Prep: 1/26/98

Result Units:

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
TCLP Extraction	NA	0

ANALYSIS: TCLP Mercury

Method Ref: 7470A

Date Analyzed: 1/29/98 Date Ext/Dig/Prep: 1/29/98

Result Units: mg/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Mercury (Reg Limit = 0.2)	<RDL	0.01

ANALYSIS: TCLP Metals

Method Ref: 3010A/6010A

Date Analyzed: 1/28/98 Date Ext/Dig/Prep: 1/27/98

Result Units: mg/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Arsenic (Reg Limit = 5.0)	<RDL	1
Barium (Reg Limit = 100.0)	<RDL	1
Cadmium (Reg Limit = 1.0)	<RDL	1
Chromium (Reg Limit = 5.0)	<RDL	1
Lead (Reg Limit = 5.0)	<RDL	1
Selenium (Reg Limit = 1.0)	<RDL	1
Silver (Reg Limit = 5.0)	<RDL	1

ANALYSIS: X PAH/BN QC Surrogates (Soils)

Method Ref: 3550A/8270B

Date Analyzed: 1/26/98 Date Ext/Dig/Prep: 1/26/98

Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
2-Fluorobiphenyl	72	0
Nitrobenzene-d5	92	0
p-Terphenyl-d14	88	0

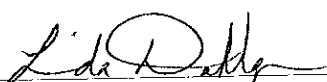
ANALYSIS: X VOC QC Surrogates (Soils)

Method Ref: 8260A

Date Analyzed: 1/23/98 Date Ext/Dig/Prep: 1/23/98

Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,2-Dichloroethane-d4	110	0
4-Bromofluorobenzene	101	0
Toluene-d8	101	0


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LABORATORY REPORT

Accura Sample ID #: AB35569

Accura Project #: 15405

Client: Omega Env. Services - Tucker

Client Contact: T. SHEPPARD

Client Project Number: CO#DACA21-97-C-0042

Client Project Name: HUNTER FIRE TRAINING AREA

Client Sample ID: HP#4-ES-001-O

Date Sampled: 1/21/98

Date Received: 1/22/98

Date Reported: 1/29/98

Sample Matrix: SOIL

ANALYSIS: BTEX

Method Ref: 5030A/8260A

Date Analyzed: 1/23/98 Date Ext/Dig/Prep: 1/23/98

Result Units: ug/Kg

Analyte Name	Analytical Results	Reported Detection Limits
Benzene	<RDL	1000
Ethyl benzene	<RDL	1000
Toluene	1,500	1000
Xylenes	24,000	1000

ANALYSIS: PAH's

Method Ref: 3550A/8270B

Date Analyzed: 1/26/98 Date Ext/Dig/Prep: 1/26/98

Result Units: ug/Kg

Analyte Name	Analytical Results	Reported Detection Limits
1-Methylnaphthalene	3,000	1700
2-Methylnaphthalene	3,300	1700
Acenaphthene	<RDL	1700
Acenaphthylene	<RDL	1700
Anthracene	<RDL	1700
Benzo(a)anthracene	<RDL	1700
Benzo(a)pyrene	<RDL	1700
Benzo(b)fluoranthene	<RDL	1700
Benzo(g,h,i)perylene	<RDL	1700
Benzo(k)fluoranthene	<RDL	1700
Chrysene	<RDL	1700
Dibenzo(a,h)anthracene	<RDL	1700
Fluoranthene	<RDL	1700
Fluorene	<RDL	1700
Indeno(1,2,3-cd)pyrene	<RDL	1700
Naphthalene	<RDL	1700
Phenanthrene	<RDL	1700
Pyrene	<RDL	1700

ANALYSIS: TCLP Extraction Procedure

Method Ref: 1311

Date Analyzed: 1/26/98 Date Ext/Dig/Prep: 1/26/98

Result Units:

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
TCLP Extraction	NA	0

ANALYSIS: TCLP Mercury

Method Ref: 7470A

Date Analyzed: 1/29/98 Date Ext/Dig/Prep: 1/29/98

Result Units: mg/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Mercury (Reg Limit = 0.2)	<RDL	0.01

ANALYSIS: TCLP Metals

Method Ref: 3010A/6010A

Date Analyzed: 1/28/98 Date Ext/Dig/Prep: 1/27/98

Result Units: mg/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Arsenic (Reg Limit = 5.0)	<RDL	1
Barium (Reg Limit = 100.0)	<RDL	1
Cadmium (Reg Limit = 1.0)	<RDL	1
Chromium (Reg Limit = 5.0)	<RDL	1
Lead (Reg Limit = 5.0)	<RDL	1
Selenium (Reg Limit = 1.0)	<RDL	1
Silver (Reg Limit = 5.0)	<RDL	1

ANALYSIS: X PAH/BN QC Surrogates (Soils)

Method Ref: 3550A/8270B

Date Analyzed: 1/26/98 Date Ext/Dig/Prep: 1/26/98

Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
2-Fluorobiphenyl	69	0
Nitrobenzene-d5	73	0
p-Terphenyl-d14	84	0

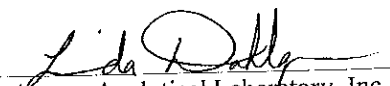
ANALYSIS: X VOC QC Surrogates (Soils)

Method Ref: 8260A

Date Analyzed: 1/23/98 Date Ext/Dig/Prep: 1/23/98

Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,2-Dichloroethane-d4	92	0
4-Bromofluorobenzene	104	0
Toluene-d8	98	0


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NC Certification # 483

SC Certification # 98015

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LABORATORY REPORT

Accura Sample ID #: AB35570

Accura Project #: 15405

Client: Omega Env. Services - Tucker

Date Sampled: 1/21/98

Client Contact: T. SHEPPARD

Date Received: 1/22/98

Client Project Number: CO#DACA21-97-C-0042

Date Reported: 2/2/98

Client Project Name: HUNTER FIRE TRAINING AREA

Sample Matrix: WATER

Client Sample ID: HP#4-X-TB

ANALYSIS: VOC's

Method Ref: 5030A/8260A

Date Analyzed: 1/22/98

Date Ext/Dig/Prep: 1/22/98

Result Units: ug/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,1,1-Trichloroethane	<RDL	5
1,1,2,2-Tetrachloroethane	<RDL	5
1,1,2-Trichloroethane	<RDL	5
1,1-Dichloroethane	<RDL	5
1,1-Dichloroethene	<RDL	5
1,2-Dichlorobenzene	<RDL	5
1,2-Dichloroethane	<RDL	5
1,2-Dichloropropane	<RDL	5
1,3-Dichlorobenzene	<RDL	5
1,4-Dichlorobenzene	<RDL	5
2-Butanone (MEK)	<RDL	50
2-Chloroethylvinyl ether	<RDL	10
2-Hexanone	<RDL	50
4-Methyl-2-pentanone (MIBK)	<RDL	50
Acetone	<RDL	50
Benzene	<RDL	5
Bromodichloromethane	<RDL	5
Bromoform	<RDL	5
Bromomethane	<RDL	5
Carbon disulfide	<RDL	5
Carbon tetrachloride	<RDL	5
Chlorobenzene	<RDL	5
Chloroethane	<RDL	5
Chloroform	<RDL	5
Chloromethane	<RDL	5
cis-1,3-Dichloropropene	<RDL	5
Dibromochloromethane	<RDL	5
Ethylbenzene	<RDL	5
Methylene chloride	<RDL	5
Styrene	<RDL	5
Tetrachloroethene	<RDL	5
Toluene	<RDL	5

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LABORATORY REPORT

Accura Sample ID #: AB35571

Accura Project #: 15405

Client: Omega Env. Services - Tucker

Date Sampled: 1/21/98

Client Contact: T. SHEPPARD

Date Received: 1/22/98

Client Project Number: CO#DACA21-97-C-0042

Date Reported: 1/29/98

Client Project Name: HUNTER FIRE TRAINING AREA

Sample Matrix: SOIL

Client Sample ID: METHOD BLANK

ANALYSIS: BTEX

Method Ref: 5030A/8260A

Date Analyzed: 1/23/98

Date Ext/Dig/Prep: 1/23/98

Result Units: ug/Kg

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Benzene	<RDL	5
Ethyl benzene	<RDL	5
Toluene	<RDL	5
Xylenes	<RDL	5

ANALYSIS: PAH's

Method Ref: 3550A/8270B

Date Analyzed: 1/26/98

Date Ext/Dig/Prep: 1/26/98

Result Units: ug/Kg

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1-Methylnaphthalene	<RDL	330
2-Methylnaphthalene	<RDL	330
Acenaphthene	<RDL	330
Acenaphthylene	<RDL	330
Anthracene	<RDL	330
Benzo(a)anthracene	<RDL	330
Benzo(a)pyrene	<RDL	330
Benzo(b)fluoranthene	<RDL	330
Benzo(g,h,i)perylene	<RDL	330
Benzo(k)fluoranthene	<RDL	330
Chrysene	<RDL	330
Dibenzo(a,h)anthracene	<RDL	330
Fluoranthene	<RDL	330
Fluorene	<RDL	330
Indeno(1,2,3-cd)pyrene	<RDL	330
Naphthalene	<RDL	330
Phenanthrene	<RDL	330
Pyrene	<RDL	330

ANALYSIS: TCLP Extraction Procedure

Method Ref: 1311

Date Analyzed: 1/26/98 Date Ext/Dig/Prep: 1/26/98 Result Units:

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
TCLP Extraction	NA	0

ANALYSIS: TCLP Mercury

Method Ref: 7470A

Date Analyzed: 1/29/98 Date Ext/Dig/Prep: 1/29/98 Result Units: mg/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Mercury (Reg Limit = 0.2)	<RDL	0.01

ANALYSIS: TCLP Metals

Method Ref: 3010A/6010A

Date Analyzed: 1/28/98 Date Ext/Dig/Prep: 1/27/98 Result Units: mg/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Arsenic (Reg Limit = 5.0)	<RDL	1
Barium (Reg Limit = 100.0)	<RDL	1
Cadmium (Reg Limit = 1.0)	<RDL	1
Chromium (Reg Limit = 5.0)	<RDL	1
Lead (Reg Limit = 5.0)	<RDL	1
Selenium (Reg Limit = 1.0)	<RDL	1
Silver (Reg Limit = 5.0)	<RDL	1

ANALYSIS: X PAH/BN QC Surrogates (Soils)

Method Ref: 3550A/8270B

Date Analyzed: 1/26/98 Date Ext/Dig/Prep: 1/26/98 Result Units: %

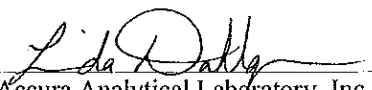
<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
2-Fluorobiphenyl	60	0
Nitrobenzene-d5	53	0
p-Terphenyl-d14	96	0

ANALYSIS: X VOC QC Surrogates (Soils)

Method Ref: 8260A

Date Analyzed: 1/23/98 Date Ext/Dig/Prep: 1/23/98 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,2-Dichloroethane-d4	95	0
4-Bromofluorobenzene	104	0
Toluene-d8	101	0


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LABORATORY REPORT

Accura Sample ID #: AB35572

Accura Project #: 15405

Client: Omega Env. Services - Tucker

Date Sampled: 1/21/98

Client Contact: T. SHEPPARD

Date Received: 1/22/98

Client Project Number: CO#DACA21-97-C-0042

Date Reported: 1/29/98

Client Project Name: HUNTER FIRE TRAINING AREA

Sample Matrix: WATER

Client Sample ID: METHOD BLANK

ANALYSIS: VOC's

Method Ref: 5030A/8260A

Date Analyzed: 1/22/98

Date Ext/Dig/Prep: 1/22/98

Result Units: ug/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,1,1-Trichloroethane	<RDL	5
1,1,2,2-Tetrachloroethane	<RDL	5
1,1,2-Trichloroethane	<RDL	5
1,1-Dichloroethane	<RDL	5
1,1-Dichloroethene	<RDL	5
1,2-Dichlorobenzene	<RDL	5
1,2-Dichloroethane	<RDL	5
1,2-Dichloropropane	<RDL	5
1,3-Dichlorobenzene	<RDL	5
1,4-Dichlorobenzene	<RDL	5
2-Butanone (MEK)	<RDL	50
2-Chloroethylvinyl ether	<RDL	10
2-Hexanone	<RDL	50
4-Methyl-2-pentanone (MIBK)	<RDL	50
Acetone	<RDL	50
Benzene	<RDL	5
Bromodichloromethane	<RDL	5
Bromoform	<RDL	5
Bromomethane	<RDL	5
Carbon disulfide	<RDL	5
Carbon tetrachloride	<RDL	5
Chlorobenzene	<RDL	5
Chloroethane	<RDL	5
Chloroform	<RDL	5
Chloromethane	<RDL	5
cis-1,3-Dichloropropene	<RDL	5
Dibromochloromethane	<RDL	5
Ethylbenzene	<RDL	5
Methylene chloride	<RDL	5
Styrene	<RDL	5
Tetrachloroethene	<RDL	5
Toluene	<RDL	5

trans-1,2-Dichloroethene	<RDL	5
trans-1,3-Dichloropropene	<RDL	5
Trichloroethene	<RDL	5
Trichlorofluoromethane	<RDL	5
Vinyl acetate	<RDL	100
Vinyl chloride	<RDL	2
Xylenes (Total)	<RDL	5

ANALYSIS: X VOC QC Surrogates (Waters)

Method Ref: 8260A

Date Analyzed: 1/22/98

Date Ext/Dig/Prep: 1/22/98

Result Units: %

Analyte Name

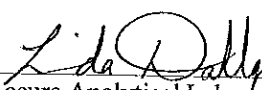
Analytical Results

Reported Detection Limits

1,2-Dichloroethane-d4
4-Bromofluorobenzene
Toluene-d8

96
99
99

0
0
0


Accura Analytical Laboratory, Inc.

ACCURA ANALYTICAL LABORATORY, INC.
Environmental Analytical Services

Environmental Analytical Services

CHAIN OF CUSTODY

Company Name: *Mega Environmental Services, Inc.* Billing address: *OES*

Address: 14661 University Blvd Suite B
Fremont CA 94534
Client P.O. #

Report Sent to: (Client Contact): *Spectacularly Fine Training Services*

Contact Phone # (912) 757-1606
Fax # (912) 757-1606
Custody Seal: Y N
Page 1 OF 1

Project Name:	QC Level:	Init Temp:
Hunter	1	60°C max
Fire	2	
Fire	3	
Training	4	

Project Number: **CO# DAC421-93-C-0042**

[illegible]

ACCURA ANALYTICAL LABORATORY, INC.
6017 Financial Drive, Norcross, Georgia, 30071, Phone (770)449-8800

CASE NARRATIVE for Project Number: 15408

Client Project: Hunter Fire Training Area / CO# DACA21-97-C-0042

The following item was noted concerning this project:

1. The following samples required dilution due to high analyte concentration and matrix interference, resulting in elevated detection limits:

PAH - SW-846-8270B

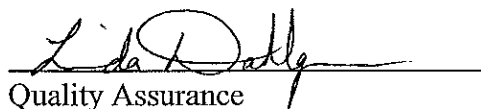
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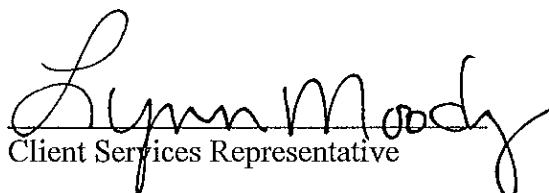
HP#2-ES-001-O

BTEX - SW-846-8020A

HP#2-ES-001-X

HP#2-ES-001-O


Quality Assurance


Client Services Representative

ACCURA ANALYTICAL LABORATORY, INC.

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FL Certification # E87429

NC Certification # 483

SC Certification # 98015

USACE-MRD Approved

LABORATORY REPORT

Accura Sample ID #: AB35577

Accura Project #: 15408

Client: Omega Env. Services - Tucker

Date Sampled: 1/20/98

Client Contact: T. SHEPPARD

Date Received: 1/22/98

Client Project Number: CO#DACA21-97-C-0042

Date Reported: 1/29/98

Client Project Name: HUNTER FIRE TRAINING AREA

Sample Matrix: SOIL

Client Sample ID: HP#2-ES-001-X

ANALYSIS: BTEX

Method Ref: 5030A/8260A

Date Analyzed: 1/26/98

Date Ext/Dig/Prep: 1/26/98

Result Units: ug/Kg

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Benzene	1,200	500
Ethyl benzene	3,000	500
Toluene	3,400	500
Xylenes	34,000	500

ANALYSIS: PAH's

Method Ref: 3550A/8270B

Date Analyzed: 1/26/98

Date Ext/Dig/Prep: 1/26/98

Result Units: ug/Kg

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1-Methylnaphthalene	3,600	1700
2-Methylnaphthalene	4,300	1700
Acenaphthene	<RDL	1700
Acenaphthylene	<RDL	1700
Anthracene	<RDL	1700
Benzo(a)anthracene	<RDL	1700
Benzo(a)pyrene	<RDL	1700
Benzo(b)fluoranthene	<RDL	1700
Benzo(g,h,i)perylene	<RDL	1700
Benzo(k)fluoranthene	<RDL	1700
Chrysene	<RDL	1700
Dibenzo(a,h)anthracene	<RDL	1700
Fluoranthene	<RDL	1700
Fluorene	<RDL	1700
Indeno(1,2,3-cd)pyrene	<RDL	1700
Naphthalene	<RDL	1700
Phenanthrene	<RDL	1700
Pyrene	<RDL	1700

ANALYSIS: TCLP Extraction Procedure

Method Ref: 1311

Date Analyzed: 1/26/98 Date Ext/Dig/Prep: 1/26/98 Result Units:

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
TCLP Extraction	NA	0

ANALYSIS: TCLP Mercury

Method Ref: 7470A

Date Analyzed: 1/29/98 Date Ext/Dig/Prep: 1/29/98 Result Units: mg/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Mercury (Reg Limit = 0.2)	<RDL	0.01

ANALYSIS: TCLP Metals

Method Ref: 3010A/6010A

Date Analyzed: 1/28/98 Date Ext/Dig/Prep: 1/27/98 Result Units: mg/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Arsenic (Reg Limit = 5.0)	<RDL	1
Barium (Reg Limit = 100.0)	<RDL	1
Cadmium (Reg Limit = 1.0)	<RDL	1
Chromium (Reg Limit = 5.0)	<RDL	1
Lead (Reg Limit = 5.0)	<RDL	1
Selenium (Reg Limit = 1.0)	<RDL	1
Silver (Reg Limit = 5.0)	<RDL	1

ANALYSIS: X PAH/BN QC Surrogates (Soils)

Method Ref: 3550A/8270B

Date Analyzed: 1/26/98 Date Ext/Dig/Prep: 1/26/98 Result Units: %

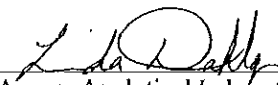
<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
2-Fluorobiphenyl	71	0
Nitrobenzene-d5	81	0
p-Terphenyl-d14	82	0

ANALYSIS: X VOC QC Surrogates (Soils)

Method Ref: 8260A

Date Analyzed: 1/26/98 Date Ext/Dig/Prep: 1/26/98 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,2-Dichloroethane-d4	115	0
4-Bromofluorobenzene	116	0
Toluene-d8	105	0


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NC Certification # 483

SC Certification # 98015

USACE-MRD Approved

LABORATORY REPORT

Accura Sample ID #: AB35578

Accura Project #: 15408

Client: Omega Env. Services - Tucker

Date Sampled: 1/20/98

Client Contact: T. SHEPPARD

Date Received: 1/22/98

Client Project Number: CO#DACA21-97-C-0042

Date Reported: 1/29/98

Client Project Name: HUNTER FIRE TRAINING AREA

Sample Matrix: SOIL

Client Sample ID: HP#2-ES-001-O

ANALYSIS: BTEX

Method Ref: 5030A/8260A

Date Analyzed: 1/26/98

Date Ext/Dig/Prep: 1/26/98

Result Units: ug/Kg

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Benzene	650	500
Ethyl benzene	<RDL	500
Toluene	1,900	500
Xylenes	28,000	500

ANALYSIS: PAH's

Method Ref: 3550A/8270B

Date Analyzed: 1/26/98

Date Ext/Dig/Prep: 1/26/98

Result Units: ug/Kg

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1-Methylnaphthalene	3,000	1700
2-Methylnaphthalene	3,600	1700
Acenaphthene	<RDL	1700
Acenaphthylene	<RDL	1700
Anthracene	<RDL	1700
Benzo(a)anthracene	<RDL	1700
Benzo(a)pyrene	<RDL	1700
Benzo(b)fluoranthene	<RDL	1700
Benzo(g,h,i)perylene	<RDL	1700
Benzo(k)fluoranthene	<RDL	1700
Chrysene	<RDL	1700
Dibenzo(a,h)anthracene	<RDL	1700
Fluoranthene	<RDL	1700
Fluorene	<RDL	1700
Indeno(1,2,3-cd)pyrene	<RDL	1700
Naphthalene	<RDL	1700
Phenanthrene	<RDL	1700
Pyrene	<RDL	1700

ANALYSIS: TCLP Extraction Procedure

Method Ref: 1311

Date Analyzed: 1/26/98 Date Ext/Dig/Prep: 1/26/98 Result Units:

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
TCLP Extraction	NA	0

ANALYSIS: TCLP Mercury

Method Ref: 7470A

Date Analyzed: 1/29/98 Date Ext/Dig/Prep: 1/29/98 Result Units: mg/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Mercury (Reg Limit = 0.2)	<RDL	0.01

ANALYSIS: TCLP Metals

Method Ref: 3010A/6010A

Date Analyzed: 1/28/98 Date Ext/Dig/Prep: 1/27/98 Result Units: mg/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Arsenic (Reg Limit = 5.0)	<RDL	1
Barium (Reg Limit = 100.0)	<RDL	1
Cadmium (Reg Limit = 1.0)	<RDL	1
Chromium (Reg Limit = 5.0)	<RDL	1
Lead (Reg Limit = 5.0)	<RDL	1
Selenium (Reg Limit = 1.0)	<RDL	1
Silver (Reg Limit = 5.0)	<RDL	1

ANALYSIS: X PAH/BN QC Surrogates (Soils)

Method Ref: 3550A/8270B

Date Analyzed: 1/26/98 Date Ext/Dig/Prep: 1/26/98 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
2-Fluorobiphenyl	70	0
Nitrobenzene-d5	73	0
p-Terphenyl-d14	80	0

ANALYSIS: X VOC QC Surrogates (Soils)

Method Ref: 8260A

Date Analyzed: 1/26/98 Date Ext/Dig/Prep: 1/26/98 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,2-Dichloroethane-d4	95	0
4-Bromofluorobenzene	115	0
Toluene-d8	98	0


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LABORATORY REPORT

Accura Sample ID #: AB35579

Accura Project #: 15408

Client: Omega Env. Services - Tucker

Date Sampled: 1/20/98

Client Contact: T. SHEPPARD

Date Received: 1/22/98

Client Project Number: CO#DACA21-97-C-0042

Date Reported: 1/29/98

Client Project Name: HUNTER FIRE TRAINING AREA

Sample Matrix: WATER

Client Sample ID: HP#2-X-TB

ANALYSIS: VOC's

Method Ref: 5030A/8260A

Date Analyzed: 1/22/98

Date Ext/Dig/Prep: 1/22/98

Result Units: ug/L

Analyte Name	Analytical Results	Reported Detection Limits
1,1,1-Trichloroethane	<RDL	5
1,1,2,2-Tetrachloroethane	<RDL	5
1,1,2-Trichloroethane	<RDL	5
1,1-Dichloroethane	<RDL	5
1,1-Dichloroethene	<RDL	5
1,2-Dichlorobenzene	<RDL	5
1,2-Dichloroethane	<RDL	5
1,2-Dichloropropane	<RDL	5
1,3-Dichlorobenzene	<RDL	5
1,4-Dichlorobenzene	<RDL	5
2-Butanone (MEK)	<RDL	50
2-Chloroethylvinyl ether	<RDL	10
2-Hexanone	<RDL	50
4-Methyl-2-pentanone (MIBK)	<RDL	50
Acetone	<RDL	50
Benzene	<RDL	5
Bromodichloromethane	<RDL	5
Bromoform	<RDL	5
Bromomethane	<RDL	5
Carbon disulfide	<RDL	5
Carbon tetrachloride	<RDL	5
Chlorobenzene	<RDL	5
Chloroethane	<RDL	5
Chloroform	<RDL	5
Chloromethane	<RDL	5
cis-1,3-Dichloropropene	<RDL	5
Dibromochloromethane	<RDL	5
Ethylbenzene	<RDL	5
Methylene chloride	<RDL	5
Styrene	<RDL	5
Tetrachloroethene	<RDL	5
Toluene	<RDL	5

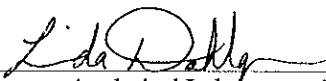
trans-1,2-Dichloroethene	<RDL	5
trans-1,3-Dichloropropene	<RDL	5
Trichloroethene	<RDL	5
Trichlorofluoromethane	<RDL	5
Vinyl acetate	<RDL	100
Vinyl chloride	<RDL	2
Xylenes (Total)	<RDL	5

ANALYSIS: X VOC QC Surrogates (Waters)

Method Ref: 8260A

Date Analyzed: 1/22/98 Date Ext/Dig/Prep: 1/22/98 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,2-Dichloroethane-d4	93	0
4-Bromofluorobenzene	98	0
Toluene-d8	95	0


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LABORATORY REPORT

Accura Sample ID #: AB35580

Accura Project #: 15408

Client: Omega Env. Services - Tucker

Date Sampled: 1/20/98

Client Contact: T. SHEPPARD

Date Received: 1/22/98

Client Project Number: CO#DACA21-97-C-0042

Date Reported: 1/29/98

Client Project Name: HUNTER FIRE TRAINING AREA

Sample Matrix: SOIL

Client Sample ID: METHOD BLANK

ANALYSIS: BTEX

Method Ref: 5030A/8260A

Date Analyzed: 1/26/98

Date Ext/Dig/Prep: 1/26/98

Result Units: ug/Kg

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Benzene	<RDL	5
Ethyl benzene	<RDL	5
Toluene	<RDL	5
Xylenes	<RDL	5

ANALYSIS: PAH's

Method Ref: 3550A/8270B

Date Analyzed: 1/26/98

Date Ext/Dig/Prep: 1/26/98

Result Units: ug/Kg

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1-Methylnaphthalene	<RDL	330
2-Methylnaphthalene	<RDL	330
Acenaphthene	<RDL	330
Acenaphthylene	<RDL	330
Anthracene	<RDL	330
Benzo(a)anthracene	<RDL	330
Benzo(a)pyrene	<RDL	330
Benzo(b)fluoranthene	<RDL	330
Benzo(g,h,i)perylene	<RDL	330
Benzo(k)fluoranthene	<RDL	330
Chrysene	<RDL	330
Dibenzo(a,h)anthracene	<RDL	330
Fluoranthene	<RDL	330
Fluorene	<RDL	330
Indeno(1,2,3-cd)pyrene	<RDL	330
Naphthalene	<RDL	330
Phenanthrene	<RDL	330
Pyrene	<RDL	330

ANALYSIS: TCLP Extraction Procedure

Method Ref: 1311

Date Analyzed: 1/26/98 Date Ext/Dig/Prep: 1/26/98 Result Units:

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
TCLP Extraction	NA	0

ANALYSIS: TCLP Mercury

Method Ref: 7470A

Date Analyzed: 1/29/98 Date Ext/Dig/Prep: 1/29/98 Result Units: mg/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Mercury (Reg Limit = 0.2)	<RDL	0.01

ANALYSIS: TCLP Metals

Method Ref: 3010A/6010A

Date Analyzed: 1/28/98 Date Ext/Dig/Prep: 1/27/98 Result Units: mg/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Arsenic (Reg Limit = 5.0)	<RDL	1
Barium (Reg Limit = 100.0)	<RDL	1
Cadmium (Reg Limit = 1.0)	<RDL	1
Chromium (Reg Limit = 5.0)	<RDL	1
Lead (Reg Limit = 5.0)	<RDL	1
Selenium (Reg Limit = 1.0)	<RDL	1
Silver (Reg Limit = 5.0)	<RDL	1

ANALYSIS: X PAH/BN QC Surrogates (Soils)

Method Ref: 3550A/8270B

Date Analyzed: 1/26/98 Date Ext/Dig/Prep: 1/26/98 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
2-Fluorobiphenyl	60	0
Nitrobenzene-d5	53	0
p-Terphenyl-d14	96	0

ANALYSIS: X VOC QC Surrogates (Soils)

Method Ref: 8260A

Date Analyzed: 1/26/98 Date Ext/Dig/Prep: 1/26/98 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,2-Dichloroethane-d4	94	0
4-Bromofluorobenzene	101	0
Toluene-d8	103	0


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LABORATORY REPORT

Accura Sample ID #: AB35581

Accura Project #: 15408

Client: Omega Env. Services - Tucker

Date Sampled: 1/20/98

Client Contact: T. SHEPPARD

Date Received: 1/22/98

Client Project Number: CO#DACA21-97-C-0042

Date Reported: 1/29/98

Client Project Name: HUNTER FIRE TRAINING AREA

Sample Matrix: WATER

Client Sample ID: METHOD BLANK

ANALYSIS: VOC's

Method Ref: 5030A/8260A

Date Analyzed: 1/22/98

Date Ext/Dig/Prep: 1/22/98

Result Units: ug/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,1,1-Trichloroethane	<RDL	5
1,1,2,2-Tetrachloroethane	<RDL	5
1,1,2-Trichloroethane	<RDL	5
1,1-Dichloroethane	<RDL	5
1,1-Dichloroethene	<RDL	5
1,2-Dichlorobenzene	<RDL	5
1,2-Dichloroethane	<RDL	5
1,2-Dichloropropane	<RDL	5
1,3-Dichlorobenzene	<RDL	5
1,4-Dichlorobenzene	<RDL	5
2-Butanone (MEK)	<RDL	50
2-Chloroethylvinyl ether	<RDL	10
2-Hexanone	<RDL	50
4-Methyl-2-pentanone (MIBK)	<RDL	50
Acetone	<RDL	50
Benzene	<RDL	5
Bromodichloromethane	<RDL	5
Bromoform	<RDL	5
Bromomethane	<RDL	5
Carbon disulfide	<RDL	5
Carbon tetrachloride	<RDL	5
Chlorobenzene	<RDL	5
Chloroethane	<RDL	5
Chloroform	<RDL	5
Chloromethane	<RDL	5
cis-1,3-Dichloropropene	<RDL	5
Dibromochloromethane	<RDL	5
Ethylbenzene	<RDL	5
Methylene chloride	<RDL	5
Styrene	<RDL	5
Tetrachloroethene	<RDL	5
Toluene	<RDL	5

trans-1,2-Dichloroethene	<RDL	5
trans-1,3-Dichloropropene	<RDL	5
Trichloroethene	<RDL	5
Trichlorofluoromethane	<RDL	5
Vinyl acetate	<RDL	100
Vinyl chloride	<RDL	2
Xylenes (Total)	<RDL	5

ANALYSIS: X VOC QC Surrogates (Waters)

Method Ref: 8260A

Date Analyzed: 1/22/98 Date Ext/Dig/Prep: 1/22/98 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,2-Dichloroethane-d4	96	0
4-Bromofluorobenzene	99	0
Toluene-d8	99	0


Accura Analytical Laboratory, Inc.

U.S. Army Corps of Engineers

Work Order

Job #

Chain of Custody, Records

Huber Army Airfield Georgia

AAZ # 15427

(ER 1110-1-263)

[illegible]

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6017 Financial Drive, Norcross, Georgia, 30071, Phone (770)449-8800

CASE NARRATIVE for Project Number: 15427

Client Project: Hunter Fire Training Area / CO# DACA21-97-C-0042

The following item was noted concerning this project:

1. The following samples required dilution due to high analyte concentration and/or matrix interference, resulting in elevated detection limits:

PAH - SW-846-8270B

HP#2-ES-001-QA

HP#3-ES-001-QA

HP#4-ES-001-QA

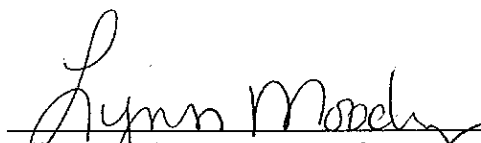
BTEX - SW-846-8260A

HP#2-ES-001-QA

HP#3-ES-001-QA

HP#4-ES-001-QA


Quality Assurance


Client Services Representative

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LABORATORY REPORT

Accura Sample ID #: AB35677

Accura Project #: 15427

Client: Omega Env. Services - Tucker

Date Sampled: 1/20/98

Client Contact: T. SHEPPARD

Date Received: 1/23/98

Client Project Number: CO#DACA21-97-C-0042

Date Reported: 2/3/98

Client Project Name: HUNTER FIRE TRAINING AREA

Sample Matrix: SOIL

Client Sample ID: HP#2-ES-001-QA

ANALYSIS: BTEX

Method Ref: 5030A/8260A

Date Analyzed: 1/26/98

Date Ext/Dig/Prep: 1/26/98

Result Units: ug/Kg

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Benzene	520	500
Ethyl benzene	3,200	500
Toluene	2,100	500
Xylenes	28,000	500

ANALYSIS: PAH's

Method Ref: 3550A/8270B

Date Analyzed: 1/29/98

Date Ext/Dig/Prep: 1/27/98

Result Units: ug/Kg

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1-Methylnaphthalene	<RDL	3300
2-Methylnaphthalene	4,200	3300
Acenaphthene	<RDL	3300
Acenaphthylene	<RDL	3300
Anthracene	<RDL	3300
Benzo(a)anthracene	<RDL	3300
Benzo(a)pyrene	<RDL	3300
Benzo(b)fluoranthene	<RDL	3300
Benzo(g,h,i)perylene	<RDL	3300
Benzo(k)fluoranthene	<RDL	3300
Chrysene	<RDL	3300
Dibenzo(a,h)anthracene	<RDL	3300
Fluoranthene	<RDL	3300
Fluorene	<RDL	3300
Indeno(1,2,3-cd)pyrene	<RDL	3300
Naphthalene	<RDL	3300
Phenanthrene	<RDL	3300
Pyrene	<RDL	3300

ANALYSIS: TCLP Extraction Procedure

Method Ref: 1311

Date Analyzed: 1/27/98 Date Ext/Dig/Prep: 1/27/98 Result Units:

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
TCLP Extraction	NA	0

ANALYSIS: TCLP Mercury

Method Ref: 7470A

Date Analyzed: 1/30/98 Date Ext/Dig/Prep: 1/30/98 Result Units: mg/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Mercury (Reg Limit = 0.2)	<RDL	0.01

ANALYSIS: TCLP Metals

Method Ref: 3010A/6010A

Date Analyzed: 1/30/98 Date Ext/Dig/Prep: 1/28/98 Result Units: mg/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Arsenic (Reg Limit = 5.0)	<RDL	1
Barium (Reg Limit = 100.0)	1.2	1
Cadmium (Reg Limit = 1.0)	<RDL	1
Chromium (Reg Limit = 5.0)	<RDL	1
Lead (Reg Limit = 5.0)	<RDL	1
Selenium (Reg Limit = 1.0)	<RDL	1
Silver (Reg Limit = 5.0)	<RDL	1

ANALYSIS: X PAH/BN QC Surrogates (Soils)

Method Ref: 3550A/8270B

Date Analyzed: 1/29/98 Date Ext/Dig/Prep: 1/27/98 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
2-Fluorobiphenyl	111	0
Nitrobenzene-d5	100	0
p-Terphenyl-d14	93	0

ANALYSIS: X VOC QC Surrogates (Soils)

Method Ref: 8260A

Date Analyzed: 1/26/98 Date Ext/Dig/Prep: 1/26/98 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,2-Dichloroethane-d4	93	0
4-Bromofluorobenzene	110	0
Toluene-d8	98	0


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LABORATORY REPORT

Accura Sample ID #: AB35678

Accura Project #: 15427

Client: Omega Env. Services - Tucker

Date Sampled: 1/21/98

Client Contact: T. SHEPPARD

Date Received: 1/23/98

Client Project Number: CO#DACA21-97-C-0042

Date Reported: 2/2/98

Client Project Name: HUNTER FIRE TRAINING AREA

Sample Matrix: SOIL

Client Sample ID: HP#3-ES-001-QA

ANALYSIS: BTEX

Method Ref: 5030A/8260A

Date Analyzed: 1/26/98

Date Ext/Dig/Prep: 1/26/98

Result Units: ug/Kg

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Benzene	<RDL	500
Ethyl benzene	<RDL	500
Toluene	<RDL	500
Xylenes	9,000	500

ANALYSIS: PAH's

Method Ref: 3550A/8270B

Date Analyzed: 1/29/98

Date Ext/Dig/Prep: 1/27/98

Result Units: ug/Kg

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1-Methylnaphthalene	<RDL	3300
2-Methylnaphthalene	3,600	3300
Acenaphthene	<RDL	3300
Acenaphthylene	<RDL	3300
Anthracene	<RDL	3300
Benzo(a)anthracene	<RDL	3300
Benzo(a)pyrene	<RDL	3300
Benzo(b)fluoranthene	<RDL	3300
Benzo(g,h,i)perylene	<RDL	3300
Benzo(k)fluoranthene	<RDL	3300
Chrysene	<RDL	3300
Dibenzo(a,h)anthracene	<RDL	3300
Fluoranthene	<RDL	3300
Fluorene	<RDL	3300
Indeno(1,2,3-cd)pyrene	<RDL	3300
Naphthalene	<RDL	3300
Phenanthrene	<RDL	3300
Pyrene	<RDL	3300

ANALYSIS: TCLP Extraction Procedure

Method Ref: 1311

Date Analyzed: 1/27/98 Date Ext/Dig/Prep: 1/27/98 Result Units:

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
TCLP Extraction	NA	0

ANALYSIS: TCLP Mercury

Method Ref: 7470A

Date Analyzed: 1/30/98 Date Ext/Dig/Prep: 1/30/98 Result Units: mg/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Mercury (Reg Limit = 0.2)	<RDL	0.01

ANALYSIS: TCLP Metals

Method Ref: 3010A/6010A

Date Analyzed: 1/30/98 Date Ext/Dig/Prep: 1/28/98 Result Units: mg/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Arsenic (Reg Limit = 5.0)	<RDL	1
Barium (Reg Limit = 100.0)	1.0	1
Cadmium (Reg Limit = 1.0)	<RDL	1
Chromium (Reg Limit = 5.0)	<RDL	1
Lead (Reg Limit = 5.0)	<RDL	1
Selenium (Reg Limit = 1.0)	<RDL	1
Silver (Reg Limit = 5.0)	<RDL	1

ANALYSIS: X PAH/BN QC Surrogates (Soils)

Method Ref: 3550A/8270B

Date Analyzed: 1/29/98 Date Ext/Dig/Prep: 1/27/98 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
2-Fluorobiphenyl	107	0
Nitrobenzene-d5	89	0
p-Terphenyl-d14	97	0

ANALYSIS: X VOC QC Surrogates (Soils)

Method Ref: 8260A

Date Analyzed: 1/26/98 Date Ext/Dig/Prep: 1/26/98 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,2-Dichloroethane-d4	93	0
4-Bromofluorobenzene	108	0
Toluene-d8	95	0


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LABORATORY REPORT

Accura Sample ID #: AB35679

Accura Project #: 15427

Client: Omega Env. Services - Tucker

Date Sampled: 1/21/98

Client Contact: T. SHEPPARD

Date Received: 1/23/98

Client Project Number: CO#DACA21-97-C-0042

Date Reported: 2/3/98

Client Project Name: HUNTER FIRE TRAINING AREA

Sample Matrix: SOIL

Client Sample ID: HP#4-ES-001-QA

ANALYSIS: BTEX

Method Ref: 5030A/8260A

Date Analyzed: 1/26/98

Date Ext/Dig/Prep: 1/26/98

Result Units: ug/Kg

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Benzene	<RDL	500
Ethyl benzene	1,400	500
Toluene	1,900	500
Xylenes	31,000	500

ANALYSIS: PAH's

Method Ref: 3550A/8270B

Date Analyzed: 1/29/98

Date Ext/Dig/Prep: 1/27/98

Result Units: ug/Kg

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1-Methylnaphthalene	3,700	3300
2-Methylnaphthalene	4,600	3300
Acenaphthene	<RDL	3300
Acenaphthylene	<RDL	3300
Anthracene	<RDL	3300
Benzo(a)anthracene	<RDL	3300
Benzo(a)pyrene	<RDL	3300
Benzo(b)fluoranthene	<RDL	3300
Benzo(g,h,i)perylene	<RDL	3300
Benzo(k)fluoranthene	<RDL	3300
Chrysene	<RDL	3300
Dibenzo(a,h)anthracene	<RDL	3300
Fluoranthene	<RDL	3300
Fluorene	<RDL	3300
Indeno(1,2,3-cd)pyrene	<RDL	3300
Naphthalene	<RDL	3300
Phenanthrene	<RDL	3300
Pyrene	<RDL	3300

ANALYSIS: TCLP Extraction Procedure

Method Ref: 1311

Date Analyzed: 1/27/98 Date Ext/Dig/Prep: 1/27/98 Result Units:

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
TCLP Extraction	NA	0

ANALYSIS: TCLP Mercury

Method Ref: 7470A

Date Analyzed: 1/30/98 Date Ext/Dig/Prep: 1/30/98 Result Units: mg/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Mercury (Reg Limit = 0.2)	<RDL	0.01

ANALYSIS: TCLP Metals

Method Ref: 3010A/6010A

Date Analyzed: 1/30/98 Date Ext/Dig/Prep: 1/28/98 Result Units: mg/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Arsenic (Reg Limit = 5.0)	<RDL	1
Barium (Reg Limit = 100.0)	1.1	1
Cadmium (Reg Limit = 1.0)	<RDL	1
Chromium (Reg Limit = 5.0)	<RDL	1
Lead (Reg Limit = 5.0)	<RDL	1
Selenium (Reg Limit = 1.0)	<RDL	1
Silver (Reg Limit = 5.0)	<RDL	1

ANALYSIS: X PAH/BN QC Surrogates (Soils)

Method Ref: 3550A/8270B

Date Analyzed: 1/29/98 Date Ext/Dig/Prep: 1/27/98 Result Units: %

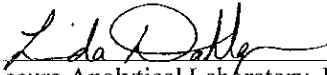
<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
2-Fluorobiphenyl	94	0
Nitrobenzene-d5	100	0
p-Terphenyl-d14	88	0

ANALYSIS: X VOC QC Surrogates (Soils)

Method Ref: 8260A

Date Analyzed: 1/26/98 Date Ext/Dig/Prep: 1/26/98 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,2-Dichloroethane-d4	96	0
4-Bromofluorobenzene	115	0
Toluene-d8	101	0


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LABORATORY REPORT

Accura Sample ID #: AB35680

Accura Project #: 15427

Client: Omega Env. Services - Tucker

Date Sampled: 1/21/98

Client Contact: T. SHEPPARD

Date Received: 1/23/98

Client Project Number: CO#DACA21-97-C-0042

Date Reported: 2/2/98

Client Project Name: HUNTER FIRE TRAINING AREA

Sample Matrix: WATER

Client Sample ID: HP#2,3,4-QA-TB

ANALYSIS: VOC's

Method Ref: 5030A/8260A

Date Analyzed: 1/27/98

Date Ext/Dig/Prep: 1/27/98

Result Units: ug/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,1,1-Trichloroethane	<RDL	5
1,1,2,2-Tetrachloroethane	<RDL	5
1,1,2-Trichloroethane	<RDL	5
1,1-Dichloroethane	<RDL	5
1,1-Dichloroethene	<RDL	5
1,2-Dichlorobenzene	<RDL	5
1,2-Dichloroethane	<RDL	5
1,2-Dichloropropane	<RDL	5
1,3-Dichlorobenzene	<RDL	5
1,4-Dichlorobenzene	<RDL	5
2-Butanone (MEK)	<RDL	50
2-Chloroethylvinyl ether	<RDL	10
2-Hexanone	<RDL	50
4-Methyl-2-pentanone (MIBK)	<RDL	50
Acetone	<RDL	50
Benzene	<RDL	5
Bromodichloromethane	<RDL	5
Bromoform	<RDL	5
Bromomethane	<RDL	5
Carbon disulfide	<RDL	5
Carbon tetrachloride	<RDL	5
Chlorobenzene	<RDL	5
Chloroethane	<RDL	5
Chloroform	<RDL	5
Chloromethane	<RDL	5
cis-1,3-Dichloropropene	<RDL	5
Dibromochloromethane	<RDL	5
Ethylbenzene	<RDL	5
Methylene chloride	<RDL	5
Styrene	<RDL	5
Tetrachloroethene	<RDL	5
Toluene	<RDL	5

trans-1,2-Dichloroethene	<RDL	5
trans-1,3-Dichloropropene	<RDL	5
Trichloroethene	<RDL	5
Trichlorofluoromethane	<RDL	5
Vinyl acetate	<RDL	100
Vinyl chloride	<RDL	2
Xylenes (Total)	<RDL	5

ANALYSIS: X VOC QC Surrogates (Waters)

Method Ref: 8260A

Date Analyzed: 1/27/98

Date Ext/Dig/Prep: 1/27/98

Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,2-Dichloroethane-d4	96	0
4-Bromofluorobenzene	99	0
Toluene-d8	98	0


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LABORATORY REPORT

Accura Sample ID #: AB35681

Accura Project #: 15427

Client: Omega Env. Services - Tucker

Date Sampled: 1/20/98

Client Contact: T. SHEPPARD

Date Received: 1/23/98

Client Project Number: CO#DACA21-97-C-0042

Date Reported: 2/2/98

Client Project Name: HUNTER FIRE TRAINING AREA

Sample Matrix: SOIL

Client Sample ID: METHOD BLANK

ANALYSIS: BTEX

Method Ref: 5030A/8260A

Date Analyzed: 1/26/98

Date Ext/Dig/Prep: 1/26/98

Result Units: ug/Kg

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Benzene	<RDL	5
Ethyl benzene	<RDL	5
Toluene	<RDL	5
Xylenes	<RDL	5

ANALYSIS: PAH's

Method Ref: 3550A/8270B

Date Analyzed: 1/27/98

Date Ext/Dig/Prep: 1/27/98

Result Units: ug/Kg

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1-Methylnaphthalene	<RDL	330
2-Methylnaphthalene	<RDL	330
Acenaphthene	<RDL	330
Acenaphthylene	<RDL	330
Anthracene	<RDL	330
Benzo(a)anthracene	<RDL	330
Benzo(a)pyrene	<RDL	330
Benzo(b)fluoranthene	<RDL	330
Benzo(g,h,i)perylene	<RDL	330
Benzo(k)fluoranthene	<RDL	330
Chrysene	<RDL	330
Dibenzo(a,h)anthracene	<RDL	330
Fluoranthene	<RDL	330
Fluorene	<RDL	330
Indeno(1,2,3-cd)pyrene	<RDL	330
Naphthalene	<RDL	330
Phenanthrene	<RDL	330
Pyrene	<RDL	330

ANALYSIS: TCLP Extraction Procedure

Method Ref: 1311

Date Analyzed: 1/27/98

Date Ext/Dig/Prep: 1/27/98

Result Units:

Analyte Name**Analytical Results****Reported Detection Limits**

TCLP Extraction

NA

0

ANALYSIS: TCLP Mercury

Method Ref: 7470A

Date Analyzed: 1/30/98

Date Ext/Dig/Prep: 1/30/98

Result Units: mg/L

Analyte Name**Analytical Results****Reported Detection Limits**

Mercury (Reg Limit = 0.2)

<RDL

0.01

ANALYSIS: TCLP Metals

Method Ref: 3010A/6010A

Date Analyzed: 1/30/98

Date Ext/Dig/Prep: 1/28/98

Result Units: mg/L

Analyte Name**Analytical Results****Reported Detection Limits**

Arsenic (Reg Limit = 5.0)

<RDL

1

Barium (Reg Limit = 100.0)

<RDL

1

Cadmium (Reg Limit = 1.0)

<RDL

1

Chromium (Reg Limit = 5.0)

<RDL

1

Lead (Reg Limit = 5.0)

<RDL

1

Selenium (Reg Limit = 1.0)

<RDL

1

Silver (Reg Limit = 5.0)

<RDL

1

ANALYSIS: X PAH/BN QC Surrogates (Soils)

Method Ref: 3550A/8270B

Date Analyzed: 1/27/98

Date Ext/Dig/Prep: 1/27/98

Result Units: %

Analyte Name**Analytical Results****Reported Detection Limits**

2-Fluorobiphenyl

90

0

Nitrobenzene-d5

70

0

p-Terphenyl-d14

92

0

ANALYSIS: X VOC QC Surrogates (Soils)

Method Ref: 8260A

Date Analyzed: 1/26/98

Date Ext/Dig/Prep: 1/26/98

Result Units: %

Analyte Name**Analytical Results****Reported Detection Limits**

1,2-Dichloroethane-d4

94

0

4-Bromofluorobenzene

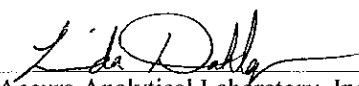
101

0

Toluene-d8

103

0


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LABORATORY REPORT

Accura Sample ID #: AB35682

Accura Project #: 15427

Client: Omega Env. Services - Tucker

Date Sampled: 1/21/98

Client Contact: T. SHEPPARD

Date Received: 1/23/98

Client Project Number: CO#DACA21-97-C-0042

Date Reported: 2/2/98

Client Project Name: HUNTER FIRE TRAINING AREA

Sample Matrix: WATER

Client Sample ID: METHOD BLANK

ANALYSIS: VOC's

Method Ref: 5030A/8260A

Date Analyzed: 1/27/98

Date Ext/Dig/Prep: 1/27/98

Result Units: ug/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,1,1-Trichloroethane	<RDL	5
1,1,2,2-Tetrachloroethane	<RDL	5
1,1,2-Trichloroethane	<RDL	5
1,1-Dichloroethane	<RDL	5
1,1-Dichloroethene	<RDL	5
1,2-Dichlorobenzene	<RDL	5
1,2-Dichloroethane	<RDL	5
1,2-Dichloropropane	<RDL	5
1,3-Dichlorobenzene	<RDL	5
1,4-Dichlorobenzene	<RDL	5
2-Butanone (MEK)	<RDL	50
2-Chloroethylvinyl ether	<RDL	10
2-Hexanone	<RDL	50
4-Methyl-2-pentanone (MIBK)	<RDL	50
Acetone	<RDL	50
Benzene	<RDL	5
Bromodichloromethane	<RDL	5
Bromoform	<RDL	5
Bromomethane	<RDL	5
Carbon disulfide	<RDL	5
Carbon tetrachloride	<RDL	5
Chlorobenzene	<RDL	5
Chloroethane	<RDL	5
Chloroform	<RDL	5
Chloromethane	<RDL	5
cis-1,3-Dichloropropene	<RDL	5
Dibromochloromethane	<RDL	5
Ethylbenzene	<RDL	5
Methylene chloride	<RDL	5
Styrene	<RDL	5
Tetrachloroethene	<RDL	5
Toluene	<RDL	5

trans-1,2-Dichloroethene	<RDL	5
trans-1,3-Dichloropropene	<RDL	5
Trichloroethene	<RDL	5
Trichlorofluoromethane	<RDL	5
Vinyl acetate	<RDL	100
Vinyl chloride	<RDL	2
Xylenes (Total)	<RDL	5

ANALYSIS: X VOC QC Surrogates (Waters)

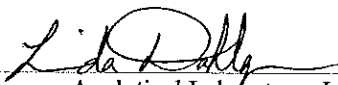
Method Ref: 8260A

Date Analyzed: 1/27/98

Date Ext/Dig/Prep: 1/27/98

Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,2-Dichloroethane-d4	92	0
4-Bromofluorobenzene	105	0
Toluene-d8	98	0


Accura Analytical Laboratory, Inc.

CHAIN OF CUSTODY

6017 Financial Drive, Norcross, GA 30071
Phone # (770) 449-8800 Fax # (770) 449-5477

Company Name: Meta Environmental Services Inc.

Billing address:

Address: 4166 1/2 Memorial Dr S.W. B. Trider GA 30084

Client P.O. #

Report Sent to: (Client Contact): *Consciences Inc / Kay's Shopland*

For Laboratory Use Only

Contact Phone # 912-757-1606 Fax # 912-757-1608

Custody Seal: Y N

Page 1 OF 1

Project Name: Hunter Fire Training Area

QCLevel: N 1 2 3 4

Init Temp: 60°C

Project Number: CO# 09CA21-97-C-0042

Sample Condition: *Good*

AAI Lab Project # 15480

[illegible]

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CASE NARRATIVE for Project Number: 15480

Client Project: Hunter Fire Training Area / CO#DACA21-97-C-0042

The following items were noted concerning this project:

1. The following samples required dilution due to high analyte concentration, resulting in elevated detection limits:

BTEX - SW-846-8260A

106-001-WW-X 106-001-WW-O

2. One surrogate recovery was outside the method specified limit for the following sample:

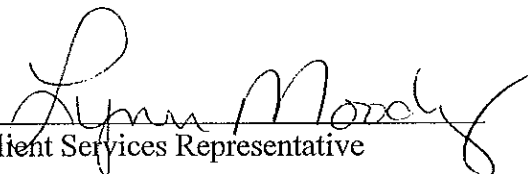
PAH - SW-846-8270B

p-Terphenyl-d14 - 106-001-WW-X

The remaining surrogates were within acceptable limits; therefore the data satisfies the method requirements.



Quality Assurance



Client Services Representative

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LABORATORY REPORT

Accura Sample ID #: AB36143

Accura Project #: 15480

Client: Omega Env. Services - Tucker

Date Sampled: 1/28/98

Client Contact: T. SHEPPARD

Date Received: 1/29/98

Client Project Number: CO#DACA21-97-C-0042

Date Reported: 2/17/98

Client Project Name: HUNTER FIRE TRAINING AREA

Sample Matrix: WATER

Client Sample ID: 106-001-WW-X

ANALYSIS: BTEX

Method Ref: 5030A/8260A

Date Analyzed: 1/29/98

Date Ext/Dig/Prep: 1/29/98

Result Units: ug/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Benzene	300	5
Ethyl benzene	96	5
Toluene	290	5
Xylenes	390	5

ANALYSIS: PAH's

Method Ref: 3520B/8270B

Date Analyzed: 2/3/98

Date Ext/Dig/Prep: 2/2/98

Result Units: ug/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1-Methylnaphthalene	<RDL	10
2-Methylnaphthalene	<RDL	10
Acenaphthene	<RDL	10
Acenaphthylene	<RDL	10
Anthracene	<RDL	10
Benzo(a)anthracene	<RDL	10
Benzo(a)pyrene	<RDL	10
Benzo(b)fluoranthene	<RDL	10
Benzo(g,h,i)perylene	<RDL	10
Benzo(k)fluoranthene	<RDL	10
Chrysene	<RDL	10
Dibenzo(a,h)anthracene	<RDL	10
Fluoranthene	<RDL	10
Fluorene	<RDL	10
Indeno(1,2,3-cd)pyrene	<RDL	10
Naphthalene	<RDL	10
Phenanthrene	<RDL	10
Pyrene	<RDL	10

ANALYSIS: X PAH/BN QC Surrogates (Waters)

Method Ref: 3520B/8270B

Date Analyzed: 2/3/98

Date Ext/Dig/Prep: 2/2/98

Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
2-Fluorobiphenyl	66	0
Nitrobenzene-d5	87	0
p-Terphenyl-d14	29	0

ANALYSIS: X VOC QC Surrogates (Waters)

Method Ref: 8260A

Date Analyzed: 1/29/98

Date Ext/Dig/Prep: 1/29/98

Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,2-Dichloroethane-d4	97	0
4-Bromofluorobenzene	103	0
Toluene-d8	103	0



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LABORATORY REPORT

Accura Sample ID #: AB36144

Accura Project #: 15480

Client: Omega Env. Services - Tucker

Date Sampled: 1/28/98

Client Contact: T. SHEPPARD

Date Received: 1/29/98

Client Project Number: CO#DACA21-97-C-0042

Date Reported: 2/17/98

Client Project Name: HUNTER FIRE TRAINING AREA

Sample Matrix: WATER

Client Sample ID: 106-001-WW-O

ANALYSIS: BTEX

Method Ref: 5030A/8260A

Date Analyzed: 1/29/98

Date Ext/Dig/Prep: 1/29/98

Result Units: ug/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Benzene	350	5
Ethyl benzene	100	5
Toluene	310	5
Xylenes	400	5

ANALYSIS: PAH's

Method Ref: 3520B/8270B

Date Analyzed: 2/3/98

Date Ext/Dig/Prep: 2/2/98

Result Units: ug/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1-Methylnaphthalene	<RDL	10
2-Methylnaphthalene	<RDL	10
Acenaphthene	<RDL	10
Acenaphthylene	<RDL	10
Anthracene	<RDL	10
Benzo(a)anthracene	<RDL	10
Benzo(a)pyrene	<RDL	10
Benzo(b)fluoranthene	<RDL	10
Benzo(g,h,i)perylene	<RDL	10
Benzo(k)fluoranthene	<RDL	10
Chrysene	<RDL	10
Dibenzo(a,h)anthracene	<RDL	10
Fluoranthene	<RDL	10
Fluorene	<RDL	10
Indeno(1,2,3-cd)pyrene	<RDL	10
Naphthalene	<RDL	10
Phenanthrene	<RDL	10
Pyrene	<RDL	10

ANALYSIS: X PAH/BN QC Surrogates (Waters)

Method Ref: 3520B/8270B

Date Analyzed: 2/3/98

Date Ext/Dig/Prep: 2/2/98

Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
2-Fluorobiphenyl	74	0
Nitrobenzene-d5	90	0
p-Terphenyl-d14	42	0

ANALYSIS: X VOC QC Surrogates (Waters)

Method Ref: 8260A

Date Analyzed: 1/29/98

Date Ext/Dig/Prep: 1/29/98

Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,2-Dichloroethane-d4	89	0
4-Bromofluorobenzene	99	0
Toluene-d8	100	0



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NC Certification # 483

SC Certification # 98015

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LABORATORY REPORT

Accura Sample ID #: AB36145

Accura Project #: 15480

Client: Omega Env. Services - Tucker

Date Sampled: 1/28/98

Client Contact: T. SHEPPARD

Date Received: 1/29/98

Client Project Number: CO#DACA21-97-C-0042

Date Reported: 2/17/98

Client Project Name: HUNTER FIRE TRAINING AREA

Sample Matrix: WATER

Client Sample ID: 106-X-TB

ANALYSIS: VOC's

Method Ref: 5030A/8260A

Date Analyzed: 1/29/98

Date Ext/Dig/Prep: 1/29/98

Result Units: ug/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,1,1-Trichloroethane	<RDL	5
1,1,2,2-Tetrachloroethane	<RDL	5
1,1,2-Trichloroethane	<RDL	5
1,1-Dichloroethane	<RDL	5
1,1-Dichloroethene	<RDL	5
1,2-Dichlorobenzene	<RDL	5
1,2-Dichloroethane	<RDL	5
1,2-Dichloropropane	<RDL	5
1,3-Dichlorobenzene	<RDL	5
1,4-Dichlorobenzene	<RDL	5
2-Butanone (MEK)	<RDL	50
2-Chloroethylvinyl ether	<RDL	10
2-Hexanone	<RDL	50
4-Methyl-2-pentanone (MIBK)	<RDL	50
Acetone	<RDL	50
Benzene	<RDL	5
Bromodichloromethane	<RDL	5
Bromoform	<RDL	5
Bromomethane	<RDL	5
Carbon disulfide	<RDL	5
Carbon tetrachloride	<RDL	5
Chlorobenzene	<RDL	5
Chloroethane	<RDL	5
Chloroform	<RDL	5
Chloromethane	<RDL	5
cis-1,2-Dichloroethene	<RDL	5
cis-1,3-Dichloropropene	<RDL	5
Dibromochloromethane	<RDL	5
Ethylbenzene	<RDL	5
Methylene chloride	<RDL	5
Styrene	<RDL	5
Tetrachloroethene	<RDL	5

Toluene	<RDL	5
trans-1,2-Dichloroethene	<RDL	5
trans-1,3-Dichloropropene	<RDL	5
Trichloroethene	<RDL	5
Trichlorofluoromethane	<RDL	5
Vinyl acetate	<RDL	100
Vinyl chloride	<RDL	2
Xylenes (Total)	<RDL	5

ANALYSIS: X VOC QC Surrogates (Waters)

Method Ref: 8260A

Date Analyzed: 1/29/98 Date Ext/Dig/Prep: 1/29/98 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,2-Dichloroethane-d4	95	0
4-Bromofluorobenzene	106	0
Toluene-d8	102	0



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SC Certification # 98015

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LABORATORY REPORT

Accura Sample ID #: AB36146

Accura Project #: 15480

Client: Omega Env. Services - Tucker

Date Sampled: 1/28/98

Client Contact: T. SHEPPARD

Date Received: 1/29/98

Client Project Number: CO#DACA21-97-C-0042

Date Reported: 2/17/98

Client Project Name: HUNTER FIRE TRAINING AREA

Sample Matrix: WATER

Client Sample ID: METHOD BLANK

ANALYSIS: PAH's

Method Ref: 3520B/8270B

Date Analyzed: 2/3/98

Date Ext/Dig/Prep: 2/2/98

Result Units: ug/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1-Methylnaphthalene	<RDL	10
2-Methylnaphthalene	<RDL	10
Acenaphthene	<RDL	10
Acenaphthylene	<RDL	10
Anthracene	<RDL	10
Benzo(a)anthracene	<RDL	10
Benzo(a)pyrene	<RDL	10
Benzo(b)fluoranthene	<RDL	10
Benzo(g,h,i)perylene	<RDL	10
Benzo(k)fluoranthene	<RDL	10
Chrysene	<RDL	10
Dibenzo(a,h)anthracene	<RDL	10
Fluoranthene	<RDL	10
Fluorene	<RDL	10
Indeno(1,2,3-cd)pyrene	<RDL	10
Naphthalene	<RDL	10
Phenanthrene	<RDL	10
Pyrene	<RDL	10

ANALYSIS: VOC's

Method Ref: 5030A/8260A

Date Analyzed: 1/29/98

Date Ext/Dig/Prep: 1/29/98

Result Units: ug/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,1,1-Trichloroethane	<RDL	5
1,1,2,2-Tetrachloroethane	<RDL	5
1,1,2-Trichloroethane	<RDL	5
1,1-Dichloroethane	<RDL	5
1,1-Dichloroethene	<RDL	5
1,2-Dichlorobenzene	<RDL	5
1,2-Dichloroethane	<RDL	5
1,2-Dichloropropane	<RDL	5

1,3-Dichlorobenzene	<RDL	5
1,4-Dichlorobenzene	<RDL	5
2-Butanone (MEK)	<RDL	50
2-Chloroethylvinyl ether	<RDL	10
2-Hexanone	<RDL	50
4-Methyl-2-pentanone (MIBK)	<RDL	50
Acetone	<RDL	50
Benzene	<RDL	5
Bromodichloromethane	<RDL	5
Bromoform	<RDL	5
Bromomethane	<RDL	5
Carbon disulfide	<RDL	5
Carbon tetrachloride	<RDL	5
Chlorobenzene	<RDL	5
Chloroethane	<RDL	5
Chloroform	<RDL	5
Chloromethane	<RDL	5
cis-1,2-Dichloroethene	<RDL	5
cis-1,3-Dichloropropene	<RDL	5
Dibromochloromethane	<RDL	5
Ethylbenzene	<RDL	5
Methylene chloride	<RDL	5
Styrene	<RDL	5
Tetrachloroethene	<RDL	5
Toluene	<RDL	5
trans-1,2-Dichloroethene	<RDL	5
trans-1,3-Dichloropropene	<RDL	5
Trichloroethene	<RDL	5
Trichlorofluoromethane	<RDL	5
Vinyl acetate	<RDL	100
Vinyl chloride	<RDL	2
Xylenes (Total)	<RDL	5

ANALYSIS: X PAH/BN QC Surrogates (Waters)

Method Ref: 3520B/8270B

Date Analyzed: 2/3/98 Date Ext/Dig/Prep: 2/2/98 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
2-Fluorobiphenyl	88	0
Nitrobenzene-d5	79	0
p-Terphenyl-d14	109	0

ANALYSIS: X VOC QC Surrogates (Waters)

Method Ref: 8260A

Date Analyzed: 1/29/98 Date Ext/Dig/Prep: 1/29/98 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,2-Dichloroethane-d4	96	0
4-Bromofluorobenzene	102	0
Toluene-d8	100	0

ASmith

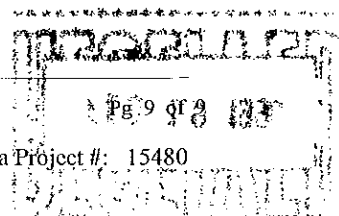
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<RDL = Less than Reported Detection Limit

Client Sample ID: METHOD BLANK

AALSample ID #: AB36146 Accura Project #: 15480



Company Name: Omnia Environmental Services Inc.

Billing address:

Address: 4661 Hammer Mill Road Suite B Tucker GA 30084

Client P.O. #

Report Sent to: (Client Contact): Greenseries Inc. Tread's Shepherd

Contact Phone # 912-757-1606 Fax # 912-757-1608

Project Name: Hunter Fire Training Area

Project Number: C0 # DACHA 21-57-C-0042

For Laboratory Use Only

Custody Seal: **X**

Page 1 of 1

QC Level: 1 2 3 4

Init Temp: 6°C

Sample Condition: 600A

AAL Lab Project # 15489

Sampers: (signature)

Samplers: (printed)
David Price

Sample ID #	Sample Date / Time	Comp	Grab	Matrix	Preserved	Sample Location:	No. of Containers	ANALYSIS				Remarks	Accura Sample ID No. AB
106M-001-SW-X	1/29/98		✓	W		Stored water in frac 106	3	✓	✓				36168
106T-002-SW-X	1/29/98		✓	W		"	3	✓	✓				36169
106T-002-SW-0	1/29/98		✓	W		"	3	✓	✓				36170
106B-003-SW-X	1/29/98		✓	W		"	3	✓	✓				36171
106-SW-TB	1/29/98		✓	W		"	2		✓				36172
HQ#5-ES001-X	1/29/98		✓	S			2	✓	✓		✓		36173
HQ#5-ES001-0	1/29/98		✓	S			2	✓	✓		✓		36174
Relinquished By: <i>[Signature]</i>	Date / Time 1/29/98	Received By: <i>[Signature]</i>		Date / Time 01/30/98 09:15	Special Requirements Or Remarks:								
Relinquished By:	Date / Time	Received By:		Date / Time	Turnaround Time Requested:								

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CASE NARRATIVE for Project Number: 15489

Client Project: Hunter Fire Training Area / CO# DACA21-97-C-0042

The following items were noted concerning this project:

1. The following samples required dilution due to matrix interference and/or high analyte concentration, resulting in elevated detection limits:

TPH - EPA 418.1

Heap #5-ES001-X

Heap #5-ES001-O

BTEX - SW-846-8260A

106M-001-SWW-X

106T-002-SWW-X

106T-002-SWW-O

106B-003-SWW-X

Heap #5-ES001-X

Heap #5-ES001-O

PAH - SW-846-8270B

Heap #5-ES001-X

Heap #5-ES001-O

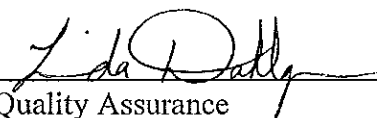
2. One surrogate was outside the method specified limit for the following samples, likely due to matrix interference:

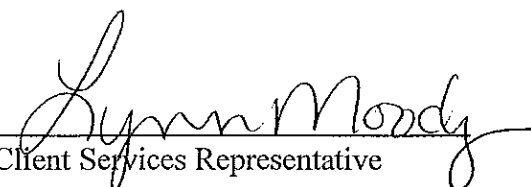
PAH - SW-846-8270B

Nitrobenzene-d5 - Heap #5-ES001-X

p-Terphenyl-d14 - 106M-001-SWW-X

The remaining surrogates were within the method specified limits.


Quality Assurance


Client Services Representative

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LABORATORY REPORT

Accura Sample ID #: AB36168

Accura Project #: 15489

Client: Omega Env. Services - Tucker

Date Sampled: 1/29/98

Client Contact: T. SHEPPARD

Date Received: 1/30/98

Client Project Number: CO#DACA21-97-C-0042

Date Reported: 2/3/98

Client Project Name: HUNTER FIRE TRAINING AREA

Sample Matrix: WATER

Client Sample ID: 106M-001-SWW-X

ANALYSIS: BTEX

Method Ref: 5030A/8260A

Date Analyzed: 2/2/98

Date Ext/Dig/Prep: 2/2/98

Result Units: ug/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Benzene	350	10
Ethyl benzene	20	10
Toluene	270	10
Xylenes	190	10

ANALYSIS: PAH's

Method Ref: 3520B/8270B

Date Analyzed: 2/2/98

Date Ext/Dig/Prep: 2/1/98

Result Units: ug/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1-Methylnaphthalene	<RDL	10
2-Methylnaphthalene	<RDL	10
Acenaphthene	<RDL	10
Acenaphthylene	<RDL	10
Anthracene	<RDL	10
Benzo(a)anthracene	<RDL	10
Benzo(a)pyrene	<RDL	10
Benzo(b)fluoranthene	<RDL	10
Benzo(g,h,i)perylene	<RDL	10
Benzo(k)fluoranthene	<RDL	10
Chrysene	<RDL	10
Dibenzo(a,h)anthracene	<RDL	10
Fluoranthene	<RDL	10
Fluorene	<RDL	10
Indeno(1,2,3-cd)pyrene	<RDL	10
Naphthalene	<RDL	10
Phenanthrene	<RDL	10
Pyrene	<RDL	10

ANALYSIS: X PAH/BN QC Surrogates (Waters)

Method Ref: 3520B/8270B

Date Analyzed: 2/2/98 Date Ext/Dig/Prep: 2/1/98

Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
2-Fluorobiphenyl	61	0
Nitrobenzene-d5	77	0
p-Terphenyl-d14	25	0

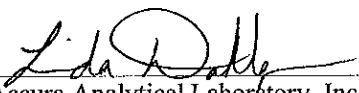
ANALYSIS: X VOC QC Surrogates (Waters)

Method Ref: 8260A

Date Analyzed: 2/2/98 Date Ext/Dig/Prep: 2/2/98

Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,2-Dichloroethane-d4	111	0
4-Bromofluorobenzene	108	0
Toluene-d8	101	0


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LABORATORY REPORT

Accura Sample ID #: AB36169

Accura Project #: 15489

Client: Omega Env. Services - Tucker

Date Sampled: 1/29/98

Client Contact: T. SHEPPARD

Date Received: 1/30/98

Client Project Number: CO#DACA21-97-C-0042

Date Reported: 2/3/98

Client Project Name: HUNTER FIRE TRAINING AREA

Sample Matrix: WATER

Client Sample ID: 106T-002-SWW-X

ANALYSIS: BTEX

Method Ref: 5030A/8260A

Date Analyzed: 2/2/98

Date Ext/Dig/Prep: 2/2/98

Result Units: ug/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Benzene	370	10
Ethyl benzene	21	10
Toluene	290	10
Xylenes	190	10

ANALYSIS: PAH's

Method Ref: 3520B/8270B

Date Analyzed: 2/2/98

Date Ext/Dig/Prep: 2/1/98

Result Units: ug/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1-Methylnaphthalene	<RDL	10
2-Methylnaphthalene	<RDL	10
Acenaphthene	<RDL	10
Acenaphthylene	<RDL	10
Anthracene	<RDL	10
Benzo(a)anthracene	<RDL	10
Benzo(a)pyrene	<RDL	10
Benzo(b)fluoranthene	<RDL	10
Benzo(g,h,i)perylene	<RDL	10
Benzo(k)fluoranthene	<RDL	10
Chrysene	<RDL	10
Dibenzo(a,h)anthracene	<RDL	10
Fluoranthene	<RDL	10
Fluorene	<RDL	10
Indeno(1,2,3-cd)pyrene	<RDL	10
Naphthalene	<RDL	10
Phenanthrene	<RDL	10
Pyrene	<RDL	10

ANALYSIS: X PAH/BN QC Surrogates (Waters)

Method Ref: 3520B/8270B

Date Analyzed: 2/2/98 Date Ext/Dig/Prep: 2/1/98

Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
2-Fluorobiphenyl	80	0
Nitrobenzene-d5	90	0
p-Terphenyl-d14	59	0

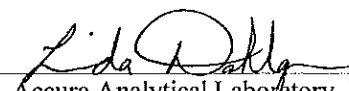
ANALYSIS: X VOC QC Surrogates (Waters)

Method Ref: 8260A

Date Analyzed: 2/2/98 Date Ext/Dig/Prep: 2/2/98

Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,2-Dichloroethane-d4	110	0
4-Bromofluorobenzene	113	0
Toluene-d8	105	0


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LABORATORY REPORT

Accura Sample ID #: AB36170

Accura Project #: 15489

Client: Omega Env. Services - Tucker

Date Sampled: 1/29/98

Client Contact: T. SHEPPARD

Date Received: 1/30/98

Client Project Number: CO#DACA21-97-C-0042

Date Reported: 2/3/98

Client Project Name: HUNTER FIRE TRAINING AREA

Sample Matrix: WATER

Client Sample ID: 106T-002-SWW-O

ANALYSIS: BTEX

Method Ref: 5030A/8260A

Date Analyzed: 2/2/98

Date Ext/Dig/Prep: 2/2/98

Result Units: ug/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Benzene	350	10
Ethyl benzene	22	10
Toluene	270	10
Xylenes	200	10

ANALYSIS: PAH's

Method Ref: 3520B/8270B

Date Analyzed: 2/2/98

Date Ext/Dig/Prep: 2/1/98

Result Units: ug/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1-Methylnaphthalene	<RDL	10
2-Methylnaphthalene	<RDL	10
Acenaphthene	<RDL	10
Acenaphthylene	<RDL	10
Anthracene	<RDL	10
Benzo(a)anthracene	<RDL	10
Benzo(a)pyrene	<RDL	10
Benzo(b)fluoranthene	<RDL	10
Benzo(g,h,i)perylene	<RDL	10
Benzo(k)fluoranthene	<RDL	10
Chrysene	<RDL	10
Dibenzo(a,h)anthracene	<RDL	10
Fluoranthene	<RDL	10
Fluorene	<RDL	10
Indeno(1,2,3-cd)pyrene	<RDL	10
Naphthalene	<RDL	10
Phenanthrene	<RDL	10
Pyrene	<RDL	10

ANALYSIS: X PAH/BN QC Surrogates (Waters)

Method Ref: 3520B/8270B

Date Analyzed: 2/2/98 Date Ext/Dig/Prep: 2/1/98 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
2-Fluorobiphenyl	76	0
Nitrobenzene-d5	88	0
p-Terphenyl-d14	51	0

ANALYSIS: X VOC QC Surrogates (Waters)

Method Ref: 8260A

Date Analyzed: 2/2/98 Date Ext/Dig/Prep: 2/2/98 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,2-Dichloroethane-d4	102	0
4-Bromofluorobenzene	108	0
Toluene-d8	103	0


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LABORATORY REPORT

Accura Sample ID #: AB36171

Accura Project #: 15489

Client: Omega Env. Services - Tucker

Date Sampled: 1/29/98

Client Contact: T. SHEPPARD

Date Received: 1/30/98

Client Project Number: CO#DACA21-97-C-0042

Date Reported: 2/4/98

Client Project Name: HUNTER FIRE TRAINING AREA

Sample Matrix: WATER

Client Sample ID: 106B-003-SWW-X

ANALYSIS: BTEX

Method Ref: 5030A/8260A

Date Analyzed: 1/30/98

Date Ext/Dig/Prep: 1/30/98

Result Units: ug/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Benzene	330	10
Ethyl benzene	20	5
Toluene	240	10
Xylenes	190	5

ANALYSIS: PAH's

Method Ref: 3520B/8270B

Date Analyzed: 2/2/98

Date Ext/Dig/Prep: 2/1/98

Result Units: ug/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1-Methylnaphthalene	<RDL	10
2-Methylnaphthalene	<RDL	10
Acenaphthene	<RDL	10
Acenaphthylene	<RDL	10
Anthracene	<RDL	10
Benzo(a)anthracene	<RDL	10
Benzo(a)pyrene	<RDL	10
Benzo(b)fluoranthene	<RDL	10
Benzo(g,h,i)perylene	<RDL	10
Benzo(k)fluoranthene	<RDL	10
Chrysene	<RDL	10
Dibenzo(a,h)anthracene	<RDL	10
Fluoranthene	<RDL	10
Fluorene	<RDL	10
Indeno(1,2,3-cd)pyrene	<RDL	10
Naphthalene	<RDL	10
Phenanthrene	<RDL	10
Pyrene	<RDL	10

ANALYSIS: X PAH/BN QC Surrogates (Waters)

Method Ref: 3520B/8270B

Date Analyzed: 2/2/98

Date Ext/Dig/Prep: 2/1/98

Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
2-Fluorobiphenyl	84	0
Nitrobenzene-d5	95	0
p-Terphenyl-d14	65	0

ANALYSIS: X VOC QC Surrogates (Waters)

Method Ref: 8260A

Date Analyzed: 1/30/98

Date Ext/Dig/Prep: 1/30/98

Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,2-Dichloroethane-d4	93	0
4-Bromofluorobenzene	98	0
Toluene-d8	100	0


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LABORATORY REPORT

Accura Sample ID #: AB36172

Accura Project #: 15489

Client: Omega Env. Services - Tucker

Date Sampled: 1/29/98

Client Contact: T. SHEPPARD

Date Received: 1/30/98

Client Project Number: CO#DACA21-97-C-0042

Date Reported: 2/3/98

Client Project Name: HUNTER FIRE TRAINING AREA

Sample Matrix: WATER

Client Sample ID: 106-SWW-TB

ANALYSIS: VOC's

Method Ref: 5030A/8260A

Date Analyzed: 1/30/98

Date Ext/Dig/Prep: 1/30/98

Result Units: ug/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,1,1-Trichloroethane	<RDL	5
1,1,2,2-Tetrachloroethane	<RDL	5
1,1,2-Trichloroethane	<RDL	5
1,1-Dichloroethane	<RDL	5
1,1-Dichloroethene	<RDL	5
1,2-Dichlorobenzene	<RDL	5
1,2-Dichloroethane	<RDL	5
1,2-Dichloropropane	<RDL	5
1,3-Dichlorobenzene	<RDL	5
1,4-Dichlorobenzene	<RDL	5
2-Butanone (MEK)	<RDL	50
2-Chloroethylvinyl ether	<RDL	10
2-Hexanone	<RDL	50
4-Methyl-2-pentanone (MIBK)	<RDL	50
Acetone	<RDL	50
Benzene	<RDL	5
Bromodichloromethane	<RDL	5
Bromoform	<RDL	5
Bromomethane	<RDL	5
Carbon disulfide	<RDL	5
Carbon tetrachloride	<RDL	5
Chlorobenzene	<RDL	5
Chloroethane	<RDL	5
Chloroform	<RDL	5
Chloromethane	<RDL	5
cis-1,2-Dichloroethene	<RDL	5
cis-1,3-Dichloropropene	<RDL	5
Dibromochloromethane	<RDL	5
Ethylbenzene	<RDL	5
Methylene chloride	<RDL	5
Styrene	<RDL	5
Tetrachloroethene	<RDL	5

Toluene	<RDL	5
trans-1,2-Dichloroethene	<RDL	5
trans-1,3-Dichloropropene	<RDL	5
Trichloroethene	<RDL	5
Trichlorofluoromethane	<RDL	5
Vinyl acetate	<RDL	100
Vinyl chloride	<RDL	2
Xylenes (Total)	<RDL	5

ANALYSIS: X VOC QC Surrogates (Waters)

Method Ref: 8260A

Date Analyzed: 1/30/98 Date Ext/Dig/Prep: 1/30/98

Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,2-Dichloroethane-d4	95	0
4-Bromofluorobenzene	107	0
Toluene-d8	99	0


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LABORATORY REPORT

Accura Sample ID #: AB36173

Accura Project #: 15489

Client: Omega Env. Services - Tucker

Date Sampled: 1/29/98

Client Contact: T. SHEPPARD

Date Received: 1/30/98

Client Project Number: CO#DACA21-97-C-0042

Date Reported: 2/4/98

Client Project Name: HUNTER FIRE TRAINING AREA

Sample Matrix: SOIL

Client Sample ID: HEAP # 5-ES001-X

ANALYSIS: BTEX

Method Ref: 5030A/8260A

Date Analyzed: 1/30/98

Date Ext/Dig/Prep: 1/30/98

Result Units: ug/Kg

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Benzene	<RDL	25
Ethyl benzene	200	25
Toluene	41	25
Xylenes	530	25

ANALYSIS: PAH's

Method Ref: 3550A/8270B

Date Analyzed: 1/30/98

Date Ext/Dig/Prep: 1/30/98

Result Units: ug/Kg

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1-Methylnaphthalene	23,000	3300
2-Methylnaphthalene	35,000	3300
Acenaphthene	<RDL	3300
Acenaphthylene	<RDL	3300
Anthracene	<RDL	3300
Benzo(a)anthracene	<RDL	3300
Benzo(a)pyrene	<RDL	3300
Benzo(b)fluoranthene	<RDL	3300
Benzo(g,h,i)perylene	<RDL	3300
Benzo(k)fluoranthene	<RDL	3300
Chrysene	<RDL	3300
Dibenzo(a,h)anthracene	<RDL	3300
Fluoranthene	<RDL	3300
Fluorene	<RDL	3300
Indeno(1,2,3-cd)pyrene	<RDL	3300
Naphthalene	20,000	3300
Phenanthrene	<RDL	3300
Pyrene	<RDL	3300

ANALYSIS: TCLP Extraction Procedure

Method Ref: 1311

Date Analyzed: 1/30/98 Date Ext/Dig/Prep: 1/30/98 Result Units:

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
TCLP Extraction	NA	0

ANALYSIS: TCLP Mercury

Method Ref: 7470A

Date Analyzed: 2/3/98 Date Ext/Dig/Prep: 2/3/98 Result Units: mg/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Mercury (Reg Limit = 0.2)	<RDL	0.01

ANALYSIS: TCLP Metals

Method Ref: 3010A/6010A

Date Analyzed: 2/3/98 Date Ext/Dig/Prep: 2/2/98 Result Units: mg/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Arsenic (Reg Limit = 5.0)	<RDL	1
Barium (Reg Limit = 100.0)	<RDL	1
Cadmium (Reg Limit = 1.0)	<RDL	1
Chromium (Reg Limit = 5.0)	<RDL	1
Lead (Reg Limit = 5.0)	<RDL	1
Selenium (Reg Limit = 1.0)	<RDL	1
Silver (Reg Limit = 5.0)	<RDL	1

ANALYSIS: Total Petroleum Hydrocarbons

Method Ref: 418.1

Date Analyzed: 2/2/98 Date Ext/Dig/Prep: 2/2/98 Result Units: mg/Kg

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Total Petroleum Hydrocarbons	18,000	2500

ANALYSIS: X PAH/BN QC Surrogates (Soils)

Method Ref: 3550A/8270B

Date Analyzed: 1/30/98 Date Ext/Dig/Prep: 1/30/98 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
2-Fluorobiphenyl	76	0
Nitrobenzene-d5	17	0
p-Terphenyl-d14	92	0

ANALYSIS: X VOC QC Surrogates (Soils)

Method Ref: 8260A

Date Analyzed: 1/30/98 Date Ext/Dig/Prep: 1/30/98 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,2-Dichloroethane-d4	100	0
4-Bromofluorobenzene	120	0


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LABORATORY REPORT

Accura Sample ID #: AB36174

Accura Project #: 15489

Client: Omega Env. Services - Tucker

Date Sampled: 1/29/98

Client Contact: T. SHEPPARD

Date Received: 1/30/98

Client Project Number: CO#DACA21-97-C-0042

Date Reported: 2/4/98

Client Project Name: HUNTER FIRE TRAINING AREA

Sample Matrix: SOIL

Client Sample ID: HEAP # 5-ES001-O

ANALYSIS: BTEX

Method Ref: 5030A/8260A

Date Analyzed: 1/30/98

Date Ext/Dig/Prep: 1/30/98

Result Units: ug/Kg

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Benzene	<RDL	10
Ethyl benzene	79	10
Toluene	20	10
Xylenes	270	10

ANALYSIS: PAH's

Method Ref: 3550A/8270B

Date Analyzed: 1/30/98

Date Ext/Dig/Prep: 1/30/98

Result Units: ug/Kg

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1-Methylnaphthalene	21,000	3300
2-Methylnaphthalene	33,000	3300
Acenaphthene	<RDL	3300
Acenaphthylene	<RDL	3300
Anthracene	<RDL	3300
Benzo(a)anthracene	<RDL	3300
Benzo(a)pyrene	<RDL	3300
Benzo(b)fluoranthene	<RDL	3300
Benzo(g,h,i)perylene	<RDL	3300
Benzo(k)fluoranthene	<RDL	3300
Chrysene	<RDL	3300
Dibenzo(a,h)anthracene	<RDL	3300
Fluoranthene	<RDL	3300
Fluorene	<RDL	3300
Indeno(1,2,3-cd)pyrene	<RDL	3300
Naphthalene	17,000	3300
Phenanthrene	<RDL	3300
Pyrene	<RDL	3300

ANALYSIS: TCLP Extraction Procedure

Method Ref: 1311

Date Analyzed: 1/30/98 Date Ext/Dig/Prep: 1/30/98

Result Units:

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
TCLP Extraction	NA	0

ANALYSIS: TCLP Mercury

Method Ref: 7470A

Date Analyzed: 2/3/98 Date Ext/Dig/Prep: 2/3/98

Result Units: mg/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Mercury (Reg Limit = 0.2)	<RDL	0.01

ANALYSIS: TCLP Metals

Method Ref: 3010A/6010A

Date Analyzed: 2/3/98 Date Ext/Dig/Prep: 2/2/98

Result Units: mg/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Arsenic (Reg Limit = 5.0)	<RDL	1
Barium (Reg Limit = 100.0)	<RDL	1
Cadmium (Reg Limit = 1.0)	<RDL	1
Chromium (Reg Limit = 5.0)	<RDL	1
Lead (Reg Limit = 5.0)	<RDL	1
Selenium (Reg Limit = 1.0)	<RDL	1
Silver (Reg Limit = 5.0)	<RDL	1

ANALYSIS: Total Petroleum Hydrocarbons

Method Ref: 418.1

Date Analyzed: 2/2/98 Date Ext/Dig/Prep: 2/2/98

Result Units: mg/Kg

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Total Petroleum Hydrocarbons	14,000	2500

ANALYSIS: X PAH/BN QC Surrogates (Soils)

Method Ref: 3550A/8270B

Date Analyzed: 1/30/98 Date Ext/Dig/Prep: 1/30/98

Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
2-Fluorobiphenyl	72	0
Nitrobenzene-d5	52	0
p-Terphenyl-d14	91	0

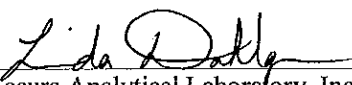
ANALYSIS: X VOC QC Surrogates (Soils)

Method Ref: 8260A

Date Analyzed: 1/30/98 Date Ext/Dig/Prep: 1/30/98

Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,2-Dichloroethane-d4	95	0
4-Bromofluorobenzene	120	0


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LABORATORY REPORT

Accura Sample ID #: AB36175

Accura Project #: 15489

Client: Omega Env. Services - Tucker

Date Sampled: 1/29/98

Client Contact: T. SHEPPARD

Date Received: 1/30/98

Client Project Number: CO#DACA21-97-C-0042

Date Reported: 2/3/98

Client Project Name: HUNTER FIRE TRAINING AREA

Sample Matrix: WATER

Client Sample ID: METHOD BLANK

ANALYSIS: BTEX

Method Ref: 5030A/8260A

Date Analyzed: 2/2/98

Date Ext/Dig/Prep: 2/2/98

Result Units: ug/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Benzene	<RDL	5
Ethyl benzene	<RDL	5
Toluene	<RDL	5
Xylenes	<RDL	5

ANALYSIS: PAH's

Method Ref: 3520B/8270B

Date Analyzed: 2/2/98

Date Ext/Dig/Prep: 2/1/98

Result Units: ug/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1-Methylnaphthalene	<RDL	10
2-Methylnaphthalene	<RDL	10
Acenaphthene	<RDL	10
Acenaphthylene	<RDL	10
Anthracene	<RDL	10
Benzo(a)anthracene	<RDL	10
Benzo(a)pyrene	<RDL	10
Benzo(b)fluoranthene	<RDL	10
Benzo(g,h,i)perylene	<RDL	10
Benzo(k)fluoranthene	<RDL	10
Chrysene	<RDL	10
Dibenzo(a,h)anthracene	<RDL	10
Fluoranthene	<RDL	10
Fluorene	<RDL	10
Indeno(1,2,3-cd)pyrene	<RDL	10
Naphthalene	<RDL	10
Phenanthrene	<RDL	10
Pyrene	<RDL	10

ANALYSIS: VOC's

Method Ref: 5030A/8260A

Date Analyzed: 1/30/98

Date Ext/Dig/Prep: 1/30/98

Result Units: ug/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,1,1-Trichloroethane	<RDL	5
1,1,2,2-Tetrachloroethane	<RDL	5
1,1,2-Trichloroethane	<RDL	5
1,1-Dichloroethane	<RDL	5
1,1-Dichloroethene	<RDL	5
1,2-Dichlorobenzene	<RDL	5
1,2-Dichloroethane	<RDL	5
1,2-Dichloropropane	<RDL	5
1,3-Dichlorobenzene	<RDL	5
1,4-Dichlorobenzene	<RDL	5
2-Butanone (MEK)	<RDL	50
2-Chloroethylvinyl ether	<RDL	10
2-Hexanone	<RDL	50
4-Methyl-2-pentanone (MIBK)	<RDL	50
Acetone	<RDL	50
Benzene	<RDL	5
Bromodichloromethane	<RDL	5
Bromoform	<RDL	5
Bromomethane	<RDL	5
Carbon disulfide	<RDL	5
Carbon tetrachloride	<RDL	5
Chlorobenzene	<RDL	5
Chloroethane	<RDL	5
Chloroform	<RDL	5
Chloromethane	<RDL	5
cis-1,2-Dichloroethene	<RDL	5
cis-1,3-Dichloropropene	<RDL	5
Dibromochloromethane	<RDL	5
Ethylbenzene	<RDL	5
Methylene chloride	<RDL	5
Styrene	<RDL	5
Tetrachloroethene	<RDL	5
Toluene	<RDL	5
trans-1,2-Dichloroethene	<RDL	5
trans-1,3-Dichloropropene	<RDL	5
Trichloroethene	<RDL	5
Trichlorofluoromethane	<RDL	5
Vinyl acetate	<RDL	100
Vinyl chloride	<RDL	2
Xylenes (Total)	<RDL	5

ANALYSIS: X PAH/BN QC Surrogates (Waters)

Method Ref: 3520B/8270B

Date Analyzed: 2/2/98

Date Ext/Dig/Prep: 2/1/98

Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
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2-Fluorobiphenyl	92	0
Nitrobenzene-d5	81	0
p-Terphenyl-d14	100	0

ANALYSIS: X VOC QC Surrogates (Waters)

Method Ref: 8260A

Date Analyzed: 2/2/98 Date Ext/Dig/Prep: 2/2/98 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,2-Dichloroethane-d4	109	0
4-Bromofluorobenzene	103	0
Toluene-d8	102	0


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LABORATORY REPORT

Accura Sample ID #: AB36176

Accura Project #: 15489

Client: Omega Env. Services - Tucker

Date Sampled: 1/29/98

Client Contact: T. SHEPPARD

Date Received: 1/30/98

Client Project Number: CO#DACA21-97-C-0042

Date Reported: 2/3/98

Client Project Name: HUNTER FIRE TRAINING AREA

Sample Matrix: SOIL

Client Sample ID: METHOD BLANK

ANALYSIS: BTEX

Method Ref: 5030A/8260A

Date Analyzed: 1/30/98

Date Ext/Dig/Prep: 1/30/98

Result Units: ug/Kg

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Benzene	<RDL	5
Ethyl benzene	<RDL	5
Toluene	<RDL	5
Xylenes	<RDL	5

ANALYSIS: PAH's

Method Ref: 3550A/8270B

Date Analyzed: 1/30/98

Date Ext/Dig/Prep: 1/30/98

Result Units: ug/Kg

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1-Methylnaphthalene	<RDL	330
2-Methylnaphthalene	<RDL	330
Acenaphthene	<RDL	330
Acenaphthylene	<RDL	330
Anthracene	<RDL	330
Benzo(a)anthracene	<RDL	330
Benzo(a)pyrene	<RDL	330
Benzo(b)fluoranthene	<RDL	330
Benzo(g,h,i)perylene	<RDL	330
Benzo(k)fluoranthene	<RDL	330
Chrysene	<RDL	330
Dibenzo(a,h)anthracene	<RDL	330
Fluoranthene	<RDL	330
Fluorene	<RDL	330
Indeno(1,2,3-cd)pyrene	<RDL	330
Naphthalene	<RDL	330
Phenanthrene	<RDL	330
Pyrene	<RDL	330

ANALYSIS: TCLP Extraction Procedure

Method Ref: 1311

Date Analyzed: 1/30/98 Date Ext/Dig/Prep: 1/30/98 Result Units:

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
TCLP Extraction	NA	0

ANALYSIS: TCLP Mercury

Method Ref: 7470A

Date Analyzed: 2/3/98 Date Ext/Dig/Prep: 2/3/98 Result Units: mg/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Mercury (Reg Limit = 0.2)	<RDL	0.01

ANALYSIS: TCLP Metals

Method Ref: 3010A/6010A

Date Analyzed: 2/3/98 Date Ext/Dig/Prep: 2/2/98 Result Units: mg/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Arsenic (Reg Limit = 5.0)	<RDL	1
Barium (Reg Limit = 100.0)	<RDL	1
Cadmium (Reg Limit = 1.0)	<RDL	1
Chromium (Reg Limit = 5.0)	<RDL	1
Lead (Reg Limit = 5.0)	<RDL	1
Selenium (Reg Limit = 1.0)	<RDL	1
Silver (Reg Limit = 5.0)	<RDL	1

ANALYSIS: Total Petroleum Hydrocarbons

Method Ref: 418.1

Date Analyzed: 2/2/98 Date Ext/Dig/Prep: 2/2/98 Result Units: mg/Kg

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Total Petroleum Hydrocarbons	<RDL	10

ANALYSIS: X PAH/BN QC Surrogates (Soils)

Method Ref: 3550A/8270B

Date Analyzed: 1/30/98 Date Ext/Dig/Prep: 1/30/98 Result Units: %

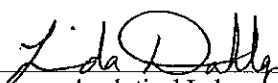
<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
2-Fluorobiphenyl	66	0
Nitrobenzene-d5	57	0
p-Terphenyl-d14	97	0

ANALYSIS: X VOC QC Surrogates (Soils)

Method Ref: 8260A

Date Analyzed: 1/30/98 Date Ext/Dig/Prep: 1/30/98 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,2-Dichloroethane-d4	97	0
4-Bromofluorobenzene	109	0


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CASE NARRATIVE for Project Number: 15505

Client Project: Hunter Army Airfield Fire Training Area / CO# DACA 21-97-C-0042

The following items were noted concerning this project:

1. The following samples required dilution due to high analyte concentration, resulting in elevated detection limits:

DRO - SW-846-8015

106-001-SWW-X 106-002-SWW-Z 106-003-SWW-Y

Oil & Grease - EPA 413.2

106-001-SWW-X 106-002-SWW-Z 106-003-SWW-Y

BTEX - SW-846-8020A

079-001-SWW-P

PAH - SW-846-8270B

079-001-SWW-P 079-002-SWW-Q

2. The surrogates were diluted out for the following samples; therefore no recoveries could be reported:

DRO - SW-846-8015

106-001-SWW-X 106-002-SWW-Z 106-003-SWW-Y

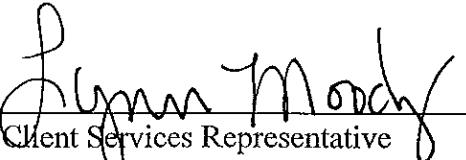
PAH - SW-846-8270B

079-001-SWW-P 079-002-SWW-Q

3. The DRO hits for the following samples appeared to be diesel fuel mixed with a heavier hydrocarbon, such as an oil product:

106-001-SWW-X 106-002-SWW-Z 106-003-SWW-Y


Quality Assurance


Client Services Representative

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LABORATORY REPORT

Accura Sample ID #: AB36238

Accura Project #: 15505

Client: Omega Env. Services - Tucker

Date Sampled: 1/30/98

Client Contact: T. SHEPPARD

Date Received: 1/31/98

Client Project Number: DACA 21-97-C-0042

Date Reported: 2/6/98

Client Project Name: HUNTER ARMY AIRFIELD FIRE TRAINING AREA

Sample Matrix: WATER

Client Sample ID: 106-001-SWW-X

ANALYSIS: Diesel Range Organics (DRO)

Method Ref: 3520B/8015

Date Analyzed: 2/5/98

Date Ext/Dig/Prep: 2/3/98

Result Units: mg/L

Analyte Name

Analytical Results

Reported Detection Limits

Diesel Range Organics (DRO)

230

10

ANALYSIS: Oil & Grease

Method Ref: 413.2

Date Analyzed: 2/5/98

Date Ext/Dig/Prep: 2/5/98

Result Units: mg/L

Analyte Name

Analytical Results

Reported Detection Limits

Oil & Grease (Infrared)

150

25

ANALYSIS: X DRO QC Surrogates (Waters)

Method Ref: 3520B/8015

Date Analyzed: 2/5/98

Date Ext/Dig/Prep: 2/3/98

Result Units: %

Analyte Name

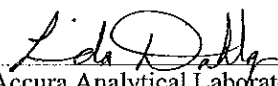
Analytical Results

Reported Detection Limits

o-Terphenyl

See narrative

0


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NC Certification # 483

SC Certification # 98015

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LABORATORY REPORT

Accura Sample ID #: AB36239

Accura Project #: 15505

Client: Omega Env. Services - Tucker

Date Sampled: 1/30/98

Client Contact: T. SHEPPARD

Date Received: 1/31/98

Client Project Number: DACA 21-97-C-0042

Date Reported: 2/6/98

Client Project Name: HUNTER ARMY AIRFIELD FIRE TRAINING AREA

Sample Matrix: WATER

Client Sample ID: 106-002-SWW-Z

ANALYSIS: Diesel Range Organics (DRO)

Method Ref: 3520B/8015

Date Analyzed: 2/5/98

Date Ext/Dig/Prep: 2/3/98

Result Units: mg/L

Analyte Name

Analytical Results

Reported Detection Limits

Diesel Range Organics (DRO)

47

10

ANALYSIS: Oil & Grease

Method Ref: 413.2

Date Analyzed: 2/5/98

Date Ext/Dig/Prep: 2/5/98

Result Units: mg/L

Analyte Name

Analytical Results

Reported Detection Limits

Oil & Grease (Infrared)

680

125

ANALYSIS: X DRO QC Surrogates (Waters)

Method Ref: 3520B/8015

Date Analyzed: 2/5/98

Date Ext/Dig/Prep: 2/3/98

Result Units: %

Analyte Name

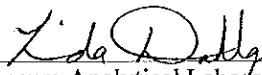
Analytical Results

Reported Detection Limits

o-Terphenyl

See narrative

0


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LABORATORY REPORT

Accura Sample ID #: AB36240

Accura Project #: 15505

Client: Omega Env. Services - Tucker

Date Sampled: 1/30/98

Client Contact: T. SHEPPARD

Date Received: 1/31/98

Client Project Number: DACA 21-97-C-0042

Date Reported: 2/6/98

Client Project Name: HUNTER ARMY AIRFIELD FIRE TRAINING AREA

Sample Matrix: WATER

Client Sample ID: 106-003-SWW-Y

ANALYSIS: Diesel Range Organics (DRO)

Method Ref: 3520B/8015

Date Analyzed: 2/5/98

Date Ext/Dig/Prep: 2/3/98

Result Units: mg/L

Analyte Name

Analytical Results

Reported Detection Limits

Diesel Range Organics (DRO)

63

10

ANALYSIS: Oil & Grease

Method Ref: 413.2

Date Analyzed: 2/5/98

Date Ext/Dig/Prep: 2/5/98

Result Units: mg/L

Analyte Name

Analytical Results

Reported Detection Limits

Oil & Grease (Infrared)

210

25

ANALYSIS: X DRO QC Surrogates (Waters)

Method Ref: 3520B/8015

Date Analyzed: 2/5/98

Date Ext/Dig/Prep: 2/3/98

Result Units: %

Analyte Name

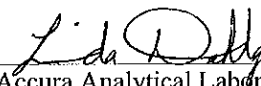
Analytical Results

Reported Detection Limits

o-Terphenyl

See narrative

0


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LABORATORY REPORT

Accura Sample ID #: AB36241

Accura Project #: 15505

Client: Omega Env. Services - Tucker

Date Sampled: 1/30/98

Client Contact: T. SHEPPARD

Date Received: 1/31/98

Client Project Number: DACA 21-97-C-0042

Date Reported: 2/6/98

Client Project Name: HUNTER ARMY AIRFIELD FIRE TRAINING AREA

Sample Matrix: WATER

Client Sample ID: 079-001-SWW-P

ANALYSIS: BTEX

Method Ref: 5030A/8260A

Date Analyzed: 2/2/98

Date Ext/Dig/Prep: 2/2/98

Result Units: ug/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Benzene	110	25
Ethyl benzene	78	25
Toluene	91	25
Xylenes	340	25

ANALYSIS: PAH's

Method Ref: 3520B/8270B

Date Analyzed: 2/4/98

Date Ext/Dig/Prep: 2/3/98

Result Units: ug/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1-Methylnaphthalene	4,800	500
2-Methylnaphthalene	6,600	500
Acenaphthene	<RDL	500
Acenaphthylene	<RDL	500
Anthracene	<RDL	500
Benzo(a)anthracene	<RDL	500
Benzo(a)pyrene	<RDL	500
Benzo(b)fluoranthene	<RDL	500
Benzo(g,h,i)perylene	<RDL	500
Benzo(k)fluoranthene	<RDL	500
Chrysene	<RDL	500
Dibenzo(a,h)anthracene	<RDL	500
Fluoranthene	<RDL	500
Fluorene	<RDL	500
Indeno(1,2,3-cd)pyrene	<RDL	500
Naphthalene	3,400	500
Phenanthrene	<RDL	500
Pyrene	<RDL	500

ANALYSIS: X PAH/BN QC Surrogates (Waters)

Method Ref: 3520B/8270B

Date Analyzed: 2/4/98 Date Ext/Dig/Prep: 2/3/98 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
2-Fluorobiphenyl	See narrative	0
Nitrobenzene-d5	See narrative	0
p-Terphenyl-d14	See narrative	0

ANALYSIS: X VOC QC Surrogates (Waters)

Method Ref: 8260A

Date Analyzed: 2/2/98 Date Ext/Dig/Prep: 2/2/98 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,2-Dichloroethane-d4	116	0
4-Bromofluorobenzene	105	0
Toluene-d8	89	0


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LABORATORY REPORT

Accura Sample ID #: AB36242

Accura Project #: 15505

Client: Omega Env. Services - Tucker

Date Sampled: 1/30/98

Client Contact: T. SHEPPARD

Date Received: 1/31/98

Client Project Number: DACA 21-97-C-0042

Date Reported: 2/9/98

Client Project Name: HUNTER ARMY AIRFIELD FIRE TRAINING AREA

Sample Matrix: WATER

Client Sample ID: 079-002-SWW-Q

ANALYSIS: BTEX

Method Ref: 5030A/8260A

Date Analyzed: 2/4/98

Date Ext/Dig/Prep: 2/4/98

Result Units: ug/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Benzene	71	5
Ethyl benzene	67	5
Toluene	82	5
Xylenes	310	5

ANALYSIS: PAH's

Method Ref: 3520B/8270B

Date Analyzed: 2/4/98

Date Ext/Dig/Prep: 2/3/98

Result Units: ug/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1-Methylnaphthalene	4,100	500
2-Methylnaphthalene	5,900	500
Acenaphthene	<RDL	500
Acenaphthylene	<RDL	500
Anthracene	<RDL	500
Benzo(a)anthracene	<RDL	500
Benzo(a)pyrene	<RDL	500
Benzo(b)fluoranthene	<RDL	500
Benzo(g,h,i)perylene	<RDL	500
Benzo(k)fluoranthene	<RDL	500
Chrysene	<RDL	500
Dibenzo(a,h)anthracene	<RDL	500
Fluoranthene	<RDL	500
Fluorene	<RDL	500
Indeno(1,2,3-cd)pyrene	<RDL	500
Naphthalene	2,400	500
Phenanthrene	<RDL	500
Pyrene	<RDL	500

ANALYSIS: X PAH/BN QC Surrogates (Waters)

Method Ref: 3520B/8270B

Date Analyzed: 2/4/98 Date Ext/Dig/Prep: 2/3/98

Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
2-Fluorobiphenyl	See narrative	0
Nitrobenzene-d5	See narrative	0
p-Terphenyl-d14	See narrative	0

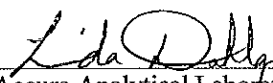
ANALYSIS: X VOC QC Surrogates (Waters)

Method Ref: 8260A

Date Analyzed: 2/4/98 Date Ext/Dig/Prep: 2/4/98

Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,2-Dichloroethane-d4	101	0
4-Bromofluorobenzene	91	0
Toluene-d8	93	0


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LABORATORY REPORT

Accura Sample ID #: AB36243

Accura Project #: 15505

Client: Omega Env. Services - Tucker

Date Sampled: 1/30/98

Client Contact: T. SHEPPARD

Date Received: 1/31/98

Client Project Number: DACA 21-97-C-0042

Date Reported: 2/6/98

Client Project Name: HUNTER ARMY AIRFIELD FIRE TRAINING AREA

Sample Matrix: WATER

Client Sample ID: 106-SWW + 079-SWW TB

ANALYSIS: VOC's

Method Ref: 5030A/8260A

Date Analyzed: 2/3/98

Date Ext/Dig/Prep: 2/3/98

Result Units: ug/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,1,1-Trichloroethane	<RDL	5
1,1,2,2-Tetrachloroethane	<RDL	5
1,1,2-Trichloroethane	<RDL	5
1,1-Dichloroethane	<RDL	5
1,1-Dichloroethene	<RDL	5
1,2-Dichlorobenzene	<RDL	5
1,2-Dichloroethane	<RDL	5
1,2-Dichloropropane	<RDL	5
1,3-Dichlorobenzene	<RDL	5
1,4-Dichlorobenzene	<RDL	5
2-Butanone (MEK)	<RDL	50
2-Chloroethylvinyl ether	<RDL	10
2-Hexanone	<RDL	50
4-Methyl-2-pentanone (MIBK)	<RDL	50
Acetone	<RDL	50
Benzene	<RDL	5
Bromodichloromethane	<RDL	5
Bromoform	<RDL	5
Bromomethane	<RDL	5
Carbon disulfide	<RDL	5
Carbon tetrachloride	<RDL	5
Chlorobenzene	<RDL	5
Chloroethane	<RDL	5
Chloroform	<RDL	5
Chloromethane	<RDL	5
cis-1,2-Dichloroethene	<RDL	5
cis-1,3-Dichloropropene	<RDL	5
Dibromochloromethane	<RDL	5
Ethylbenzene	<RDL	5
Methylene chloride	<RDL	5
Styrene	<RDL	5
Tetrachloroethene	<RDL	5

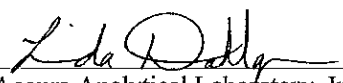
Toluene	<RDL	5
trans-1,2-Dichloroethene	<RDL	5
trans-1,3-Dichloropropene	<RDL	5
Trichloroethene	<RDL	5
Trichlorofluoromethane	<RDL	5
Vinyl acetate	<RDL	100
Vinyl chloride	<RDL	2
Xylenes (Total)	<RDL	5

ANALYSIS: X VOC QC Surrogates (Waters)

Method Ref: 8260A

Date Analyzed: 2/3/98 Date Ext/Dig/Prep: 2/3/98 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,2-Dichloroethane-d4	104	0
4-Bromofluorobenzene	101	0
Toluene-d8	93	0


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LABORATORY REPORT

Accura Sample ID #: AB36244

Accura Project #: 15505

Client: Omega Env. Services - Tucker

Date Sampled: 1/30/98

Client Contact: T. SHEPPARD

Date Received: 1/31/98

Client Project Number: DACA 21-97-C-0042

Date Reported: 2/6/98

Client Project Name: HUNTER ARMY AIRFIELD FIRE TRAINING AREA

Sample Matrix: WATER

Client Sample ID: METHOD BLANK

ANALYSIS: BTEX

Method Ref: 5030A/8260A

Date Analyzed: 2/2/98

Date Ext/Dig/Prep: 2/2/98

Result Units: ug/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Benzene	<RDL	5
Ethyl benzene	<RDL	5
Toluene	<RDL	5
Xylenes	<RDL	5

ANALYSIS: Diesel Range Organics (DRO)

Method Ref: 3520B/8015

Date Analyzed: 2/4/98

Date Ext/Dig/Prep: 2/3/98

Result Units: mg/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Diesel Range Organics (DRO)	<RDL	0.1

ANALYSIS: Oil & Grease

Method Ref: 413.2

Date Analyzed: 2/5/98

Date Ext/Dig/Prep: 2/5/98

Result Units: mg/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Oil & Grease (Infrared)	<RDL	0.5

ANALYSIS: PAH's

Method Ref: 3520B/8270B

Date Analyzed: 2/4/98

Date Ext/Dig/Prep: 2/3/98

Result Units: ug/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1-Methylnaphthalene	<RDL	10
2-Methylnaphthalene	<RDL	10
Acenaphthene	<RDL	10
Acenaphthylene	<RDL	10
Anthracene	<RDL	10
Benzo(a)anthracene	<RDL	10
Benzo(a)pyrene	<RDL	10
Benzo(b)fluoranthene	<RDL	10

Benzo(g,h,i)perylene	<RDL	10
Benzo(k)fluoranthene	<RDL	10
Chrysene	<RDL	10
Dibenzo(a,h)anthracene	<RDL	10
Fluoranthene	<RDL	10
Fluorene	<RDL	10
Indeno(1,2,3-cd)pyrene	<RDL	10
Naphthalene	<RDL	10
Phenanthrene	<RDL	10
Pyrene	<RDL	10

ANALYSIS: VOC's

Method Ref: 5030A/8260A

Date Analyzed: 2/3/98

Date Ext/Dig/Prep: 2/3/98

Result Units: ug/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,1,1-Trichloroethane	<RDL	5
1,1,2,2-Tetrachloroethane	<RDL	5
1,1,2-Trichloroethane	<RDL	5
1,1-Dichloroethane	<RDL	5
1,1-Dichloroethene	<RDL	5
1,2-Dichlorobenzene	<RDL	5
1,2-Dichloroethane	<RDL	5
1,2-Dichloropropane	<RDL	5
1,3-Dichlorobenzene	<RDL	5
1,4-Dichlorobenzene	<RDL	5
2-Butanone (MEK)	<RDL	50
2-Chloroethylvinyl ether	<RDL	10
2-Hexanone	<RDL	50
4-Methyl-2-pentanone (MIBK)	<RDL	50
Acetone	<RDL	50
Benzene	<RDL	5
Bromodichloromethane	<RDL	5
Bromoform	<RDL	5
Bromomethane	<RDL	5
Carbon disulfide	<RDL	5
Carbon tetrachloride	<RDL	5
Chlorobenzene	<RDL	5
Chloroethane	<RDL	5
Chloroform	<RDL	5
Chloromethane	<RDL	5
cis-1,2-Dichloroethene	<RDL	5
cis-1,3-Dichloropropene	<RDL	5
Dibromochloromethane	<RDL	5
Ethylbenzene	<RDL	5
Methylene chloride	<RDL	5
Styrene	<RDL	5
Tetrachloroethene	<RDL	5
Toluene	<RDL	5
trans-1,2-Dichloroethene	<RDL	5
trans-1,3-Dichloropropene	<RDL	5
Trichloroethene	<RDL	5

Trichlorofluoromethane	<RDL	5
Vinyl acetate	<RDL	100
Vinyl chloride	<RDL	2
Xylenes (Total)	<RDL	5

ANALYSIS: X DRO QC Surrogates (Waters)

Method Ref: 3520B/8015

Date Analyzed: 2/4/98 Date Ext/Dig/Prep: 2/3/98 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
o-Terphenyl	100	0

ANALYSIS: X PAH/BN QC Surrogates (Waters)

Method Ref: 3520B/8270B

Date Analyzed: 2/4/98 Date Ext/Dig/Prep: 2/3/98 Result Units: %

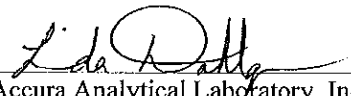
<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
2-Fluorobiphenyl	93	0
Nitrobenzene-d5	80	0
p-Terphenyl-d14	106	0

ANALYSIS: X VOC QC Surrogates (Waters)

Method Ref: 8260A

Date Analyzed: 2/2/98 Date Ext/Dig/Prep: 2/2/98 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,2-Dichloroethane-d4	109	0
4-Bromofluorobenzene	103	0
Toluene-d8	102	0


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CASE NARRATIVE for Project Number: 15635

Client Project: Hunter Fire Training Area

The following items were noted concerning this project:

1. The following surrogates were outside of the method specified limits due to matrix interference:

BTEX - SW-846-8260A

4-Bromofluorobenzene - Heap #6-ES-001-X, Heap #6-ES-001-O

Toluene - Heap #6-ES-001-O

2. The following samples were diluted due to matrix interference, resulting in elevated detection limits:

Total Petroleum Hydrocarbons

Heap #6-ES-001-X

Heap #6-ES-001-O

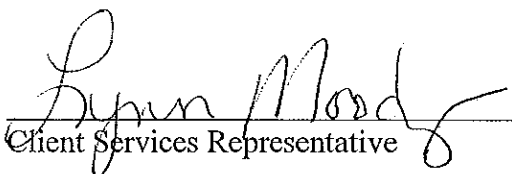
PAH's - SW-846-8270B

Heap #6-ES-001-X

Heap #6-ES-001-O



Quality Assurance



Client Services Representative

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NC Certification # 483

SC Certification # 98015

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LABORATORY REPORT

Accura Sample ID #: AB37402

Accura Project #: 15635

Client: Omega Env. Services - Tucker

Date Sampled: 2/12/98

Client Contact: T. SHEPPARD

Date Received: 2/12/98

Client Project Number: CO#PACA21-97-C-0042

Date Reported: 2/24/98

Client Project Name: HUNTER FIRE TRAINING AREA

Sample Matrix: SOIL

Client Sample ID: HEAP #6-ES-001-X

ANALYSIS: BTEX

Method Ref: 5030A/8260A

Date Analyzed: 2/17/98

Date Ext/Dig/Prep: 2/17/98

Result Units: ug/Kg

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Benzene	<RDL	5
Ethyl benzene	<RDL	5
Toluene	<RDL	5
Xylenes	<RDL	5

ANALYSIS: PAH's

Method Ref: 3550A/8270B

Date Analyzed: 2/19/98

Date Ext/Dig/Prep: 2/18/98

Result Units: ug/Kg

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1-Methylnaphthalene	<RDL	1600
2-Methylnaphthalene	<RDL	1600
Acenaphthene	<RDL	1600
Acenaphthylene	<RDL	1600
Anthracene	<RDL	1600
Benzo(a)anthracene	<RDL	1600
Benzo(a)pyrene	<RDL	1600
Benzo(b)fluoranthene	<RDL	1600
Benzo(g,h,i)perylene	<RDL	1600
Benzo(k)fluoranthene	<RDL	1600
Chrysene	<RDL	1600
Dibenzo(a,h)anthracene	<RDL	1600
Fluoranthene	<RDL	1600
Fluorene	<RDL	1600
Indeno(1,2,3-cd)pyrene	<RDL	1600
Naphthalene	<RDL	1600
Phenanthrene	<RDL	1600
Pyrene	<RDL	1600

ANALYSIS: TCLP Extraction Procedure

Method Ref: 1311

Date Analyzed: 2/16/98

Date Ext/Dig/Prep: 2/16/98

Result Units:

Analyte Name**Analytical Results****Reported Detection Limits**

TCLP Extraction

NA

0

ANALYSIS: TCLP Mercury

Method Ref: 7470A

Date Analyzed: 2/18/98

Date Ext/Dig/Prep: 2/18/98

Result Units: mg/L

Analyte Name**Analytical Results****Reported Detection Limits**

Mercury (Reg Limit = 0.2)

<RDL

0.01

ANALYSIS: TCLP Metals

Method Ref: 3010A/6010B

Date Analyzed: 2/18/98

Date Ext/Dig/Prep: 2/18/98

Result Units: mg/L

Analyte Name**Analytical Results****Reported Detection Limits**

Arsenic (Reg Limit = 5.0)

<RDL

1

Barium (Reg Limit = 100.0)

1.0

1

Cadmium (Reg Limit = 1.0)

<RDL

1

Chromium (Reg Limit = 5.0)

<RDL

1

Lead (Reg Limit = 5.0)

<RDL

1

Selenium (Reg Limit = 1.0)

<RDL

1

Silver (Reg Limit = 5.0)

<RDL

1

ANALYSIS: Total Petroleum Hydrocarbons

Method Ref: 418.1

Date Analyzed: 2/20/98

Date Ext/Dig/Prep: 2/20/98

Result Units: mg/Kg

Analyte Name**Analytical Results****Reported Detection Limits**

Total Petroleum Hydrocarbons

410

125

ANALYSIS: X PAH/BN QC Surrogates (Soils)

Method Ref: 3550A/8270B

Date Analyzed: 2/19/98

Date Ext/Dig/Prep: 2/18/98

Result Units: %

Analyte Name**Analytical Results****Reported Detection Limits**

2-Fluorobiphenyl

86

0

Nitrobenzene-d5

73

0

p-Terphenyl-d14

91

0

ANALYSIS: X VOC QC Surrogates (Soils)

Method Ref: 8260A

Date Analyzed: 2/17/98

Date Ext/Dig/Prep: 2/17/98

Result Units: %

Analyte Name**Analytical Results****Reported Detection Limits**

1,2-Dichloroethane-d4

109

0

4-Bromofluorobenzene

169

0



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FL Certification # E87429

NC Certification # 483

SC Certification # 98015

USACE-MRD Approved

LABORATORY REPORT

Accura Sample ID #: AB37403

Accura Project #: 15635

Client: Omega Env. Services - Tucker

Date Sampled: 2/12/98

Client Contact: T. SHEPPARD

Date Received: 2/12/98

Client Project Number: CO#PACA21-97-C-0042

Date Reported: 2/24/98

Client Project Name: HUNTER FIRE TRAINING AREA

Sample Matrix: SOIL

Client Sample ID: HEAP #6-ES-001-O

ANALYSIS: BTEX

Method Ref: 5030A/8260A

Date Analyzed: 2/17/98

Date Ext/Dig/Prep: 2/17/98

Result Units: ug/Kg

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Benzene	<RDL	5
Ethyl benzene	<RDL	5
Toluene	<RDL	5
Xylenes	<RDL	5

ANALYSIS: PAH's

Method Ref: 3550A/8270B

Date Analyzed: 2/19/98

Date Ext/Dig/Prep: 2/18/98

Result Units: ug/Kg

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1-Methylnaphthalene	<RDL	1600
2-Methylnaphthalene	<RDL	1600
Acenaphthene	<RDL	1600
Acenaphthylene	<RDL	1600
Anthracene	<RDL	1600
Benzo(a)anthracene	<RDL	1600
Benzo(a)pyrene	<RDL	1600
Benzo(b)fluoranthene	<RDL	1600
Benzo(g,h,i)perylene	<RDL	1600
Benzo(k)fluoranthene	<RDL	1600
Chrysene	<RDL	1600
Dibenzo(a,h)anthracene	<RDL	1600
Fluoranthene	<RDL	1600
Fluorene	<RDL	1600
Indeno(1,2,3-cd)pyrene	<RDL	1600
Naphthalene	<RDL	1600
Phenanthrene	<RDL	1600
Pyrene	<RDL	1600

ANALYSIS: TCLP Extraction Procedure

Method Ref: 1311

Date Analyzed: 2/16/98 Date Ext/Dig/Prep: 2/16/98 Result Units:

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
TCLP Extraction	NA	0

ANALYSIS: TCLP Mercury

Method Ref: 7470A

Date Analyzed: 2/18/98 Date Ext/Dig/Prep: 2/18/98 Result Units: mg/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Mercury (Reg Limit = 0.2)	<RDL	0.01

ANALYSIS: TCLP Metals

Method Ref: 3010A/6010B

Date Analyzed: 2/18/98 Date Ext/Dig/Prep: 2/18/98 Result Units: mg/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Arsenic (Reg Limit = 5.0)	<RDL	1
Barium (Reg Limit = 100.0)	1.2	1
Cadmium (Reg Limit = 1.0)	<RDL	1
Chromium (Reg Limit = 5.0)	<RDL	1
Lead (Reg Limit = 5.0)	<RDL	1
Selenium (Reg Limit = 1.0)	<RDL	1
Silver (Reg Limit = 5.0)	<RDL	1

ANALYSIS: Total Petroleum Hydrocarbons

Method Ref: 418.1

Date Analyzed: 2/20/98 Date Ext/Dig/Prep: 2/20/98 Result Units: mg/Kg

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Total Petroleum Hydrocarbons	280	83

ANALYSIS: X PAH/BN QC Surrogates (Soils)

Method Ref: 3550A/8270B

Date Analyzed: 2/19/98 Date Ext/Dig/Prep: 2/18/98 Result Units: %

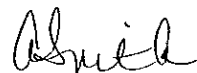
<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
2-Fluorobiphenyl	84	0
Nitrobenzene-d5	72	0
p-Terphenyl-d14	93	0

ANALYSIS: X VOC QC Surrogates (Soils)

Method Ref: 8260A

Date Analyzed: 2/17/98 Date Ext/Dig/Prep: 2/17/98 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,2-Dichloroethane-d4	98	0
4-Bromofluorobenzene	181	0



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LABORATORY REPORT

Accura Sample ID #: AB37404

Accura Project #: 15635

Client: Omega Env. Services - Tucker

Date Sampled: 2/12/98

Client Contact: T. SHEPPARD

Date Received: 2/12/98

Client Project Number: CO#PACA21-97-C-0042

Date Reported: 2/24/98

Client Project Name: HUNTER FIRE TRAINING AREA

Sample Matrix: WATER

Client Sample ID: HEAP #6-X-TB

ANALYSIS: VOC's

Method Ref: 5030A/8260A

Date Analyzed: 2/17/98

Date Ext/Dig/Prep: 2/17/98

Result Units: ug/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,1,1-Trichloroethane	<RDL	5
1,1,2,2-Tetrachloroethane	<RDL	5
1,1,2-Trichloroethane	<RDL	5
1,1-Dichloroethane	<RDL	5
1,1-Dichloroethene	<RDL	5
1,2-Dichlorobenzene	<RDL	5
1,2-Dichloroethane	<RDL	5
1,2-Dichloropropane	<RDL	5
1,3-Dichlorobenzene	<RDL	5
1,4-Dichlorobenzene	<RDL	5
2-Butanone (MEK)	<RDL	50
2-Chloroethylvinyl ether	<RDL	10
2-Hexanone	<RDL	50
4-Methyl-2-pentanone (MIBK)	<RDL	50
Acetone	<RDL	50
Benzene	<RDL	5
Bromodichloromethane	<RDL	5
Bromoform	<RDL	5
Bromomethane	<RDL	5
Carbon disulfide	<RDL	5
Carbon tetrachloride	<RDL	5
Chlorobenzene	<RDL	5
Chloroethane	<RDL	5
Chloroform	<RDL	5
Chloromethane	<RDL	5
cis-1,2-Dichloroethene	<RDL	5
cis-1,3-Dichloropropene	<RDL	5
Dibromochloromethane	<RDL	5
Ethylbenzene	<RDL	5
Methylene chloride	<RDL	5
Styrene	<RDL	5
Tetrachloroethene	<RDL	5

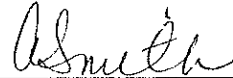
Toluene	<RDL	5
trans-1,2-Dichloroethene	<RDL	5
trans-1,3-Dichloropropene	<RDL	5
Trichloroethene	<RDL	5
Trichlorofluoromethane	<RDL	5
Vinyl acetate	<RDL	100
Vinyl chloride	<RDL	2
Xylenes (Total)	<RDL	5

ANALYSIS: X VOC QC Surrogates (Waters)

Method Ref: 8260A

Date Analyzed: 2/17/98 Date Ext/Dig/Prep: 2/17/98 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,2-Dichloroethane-d4	89	0
4-Bromofluorobenzene	98	0
Toluene-d8	101	0



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LABORATORY REPORT

Accura Sample ID #: AB37405

Accura Project #: 15635

Client: Omega Env. Services - Tucker

Date Sampled: 2/12/98

Client Contact: T. SHEPPARD

Date Received: 2/12/98

Client Project Number: CO#PACA21-97-C-0042

Date Reported: 2/24/98

Client Project Name: HUNTER FIRE TRAINING AREA

Sample Matrix: WATER

Client Sample ID: HEAP #6-X-RA

ANALYSIS: PAH's

Method Ref: 3520B/8270B

Date Analyzed: 2/18/98

Date Ext/Dig/Prep: 2/16/98

Result Units: ug/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1-Methylnaphthalene	<RDL	10
2-Methylnaphthalene	<RDL	10
Acenaphthene	<RDL	10
Acenaphthylene	<RDL	10
Anthracene	<RDL	10
Benzo(a)anthracene	<RDL	10
Benzo(a)pyrene	<RDL	10
Benzo(b)fluoranthene	<RDL	10
Benzo(g,h,i)perylene	<RDL	10
Benzo(k)fluoranthene	<RDL	10
Chrysene	<RDL	10
Dibenzo(a,h)anthracene	<RDL	10
Fluoranthene	<RDL	10
Fluorene	<RDL	10
Indeno(1,2,3-cd)pyrene	<RDL	10
Naphthalene	<RDL	10
Phenanthrene	<RDL	10
Pyrene	<RDL	10

ANALYSIS: TCLP Extraction Procedure

Method Ref: 1311

Date Analyzed: 2/17/98

Date Ext/Dig/Prep: 2/17/98

Result Units:

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
TCLP Extraction	NA	0

ANALYSIS: TCLP Mercury

Method Ref: 7470A

Date Analyzed: 2/18/98

Date Ext/Dig/Prep: 2/18/98

Result Units: mg/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Mercury (Reg Limit = 0.2)	<RDL	0.01

ANALYSIS: TCLP Metals

Method Ref: 3010A/6010B

Date Analyzed: 2/18/98

Date Ext/Dig/Prep: 2/18/98

Result Units: mg/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Arsenic (Reg Limit = 5.0)	<RDL	1
Barium (Reg Limit = 100.0)	<RDL	1
Cadmium (Reg Limit = 1.0)	<RDL	1
Chromium (Reg Limit = 5.0)	<RDL	1
Lead (Reg Limit = 5.0)	<RDL	1
Selenium (Reg Limit = 1.0)	<RDL	1
Silver (Reg Limit = 5.0)	<RDL	1

ANALYSIS: VOC's

Method Ref: 5030A/8260A

Date Analyzed: 2/17/98

Date Ext/Dig/Prep: 2/17/98

Result Units: ug/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,1,1-Trichloroethane	<RDL	5
1,1,2,2-Tetrachloroethane	<RDL	5
1,1,2-Trichloroethane	<RDL	5
1,1-Dichloroethane	<RDL	5
1,1-Dichloroethene	<RDL	5
1,2-Dichlorobenzene	<RDL	5
1,2-Dichloroethane	<RDL	5
1,2-Dichloropropane	<RDL	5
1,3-Dichlorobenzene	<RDL	5
1,4-Dichlorobenzene	<RDL	5
2-Butanone (MEK)	<RDL	50
2-Chloroethylvinyl ether	<RDL	10
2-Hexanone	<RDL	50
4-Methyl-2-pentanone (MIBK)	<RDL	50
Acetone	<RDL	50
Benzene	<RDL	5
Bromodichloromethane	<RDL	5
Bromoform	<RDL	5
Bromomethane	<RDL	5
Carbon disulfide	<RDL	5
Carbon tetrachloride	<RDL	5
Chlorobenzene	<RDL	5
Chloroethane	<RDL	5
Chloroform	<RDL	5
Chloromethane	<RDL	5
cis-1,2-Dichloroethene	<RDL	5
cis-1,3-Dichloropropene	<RDL	5
Dibromochloromethane	<RDL	5
Ethylbenzene	<RDL	5
Methylene chloride	<RDL	5
Styrene	<RDL	5
Tetrachloroethene	<RDL	5
Toluene	<RDL	5

trans-1,2-Dichloroethene	<RDL	5
trans-1,3-Dichloropropene	<RDL	5
Trichloroethene	<RDL	5
Trichlorofluoromethane	<RDL	5
Vinyl acetate	<RDL	100
Vinyl chloride	<RDL	2
Xylenes (Total)	<RDL	5

ANALYSIS: X PAH/BN QC Surrogates (Waters)

Method Ref: 3520B/8270B

Date Analyzed: 2/18/98 Date Ext/Dig/Prep: 2/16/98 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
2-Fluorobiphenyl	99	0
Nitrobenzene-d5	96	0
p-Terphenyl-d14	114	0

ANALYSIS: X VOC QC Surrogates (Soils)

Method Ref: 8260A

Date Analyzed: 2/17/98 Date Ext/Dig/Prep: 2/17/98 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,2-Dichloroethane-d4	95	0
4-Bromofluorobenzene	95	0
Toluene-d8	101	0

ANALYSIS: X VOC QC Surrogates (Waters)

Method Ref: 8260A

Date Analyzed: 2/17/98 Date Ext/Dig/Prep: 2/17/98 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,2-Dichloroethane-d4	95	0
4-Bromofluorobenzene	95	0
Toluene-d8	101	0

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LABORATORY REPORT

Accura Sample ID #: AB37406

Accura Project #: 15635

Client: Omega Env. Services - Tucker

Date Sampled: 2/12/98

Client Contact: T. SHEPPARD

Date Received: 2/12/98

Client Project Number: CO#PACA21-97-C-0042

Date Reported: 2/24/98

Client Project Name: HUNTER FIRE TRAINING AREA

Sample Matrix: SOIL

Client Sample ID: METHOD BLANK

ANALYSIS: BTEX

Method Ref: 5030A/8260A

Date Analyzed: 2/17/98

Date Ext/Dig/Prep: 2/17/98

Result Units: ug/Kg

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Benzene	<RDL	5
Ethyl benzene	<RDL	5
Toluene	<RDL	5
Xylenes	<RDL	5

ANALYSIS: PAH's

Method Ref: 3550A/8270B

Date Analyzed: 2/18/98

Date Ext/Dig/Prep: 2/18/98

Result Units: ug/Kg

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1-Methylnaphthalene	<RDL	330
2-Methylnaphthalene	<RDL	330
Acenaphthene	<RDL	330
Acenaphthylene	<RDL	330
Anthracene	<RDL	330
Benzo(a)anthracene	<RDL	330
Benzo(a)pyrene	<RDL	330
Benzo(b)fluoranthene	<RDL	330
Benzo(g,h,i)perylene	<RDL	330
Benzo(k)fluoranthene	<RDL	330
Chrysene	<RDL	330
Dibenzo(a,h)anthracene	<RDL	330
Fluoranthene	<RDL	330
Fluorene	<RDL	330
Indeno(1,2,3-cd)pyrene	<RDL	330
Naphthalene	<RDL	330
Phenanthrene	<RDL	330
Pyrene	<RDL	330

ANALYSIS: TCLP Extraction Procedure

Method Ref: 1311

Date Analyzed: 2/16/98

Date Ext/Dig/Prep: 2/16/98

Result Units:

Analyte Name**Analytical Results****Reported Detection Limits**

TCLP Extraction

NA

0

ANALYSIS: TCLP Mercury

Method Ref: 7470A

Date Analyzed: 2/18/98

Date Ext/Dig/Prep: 2/18/98

Result Units: mg/L

Analyte Name**Analytical Results****Reported Detection Limits**

Mercury (Reg Limit = 0.2)

<RDL

0.01

ANALYSIS: TCLP Metals

Method Ref: 3010A/6010B

Date Analyzed: 2/18/98

Date Ext/Dig/Prep: 2/18/98

Result Units: mg/L

Analyte Name**Analytical Results****Reported Detection Limits**

Arsenic (Reg Limit = 5.0)

<RDL

1

Barium (Reg Limit = 100.0)

<RDL

1

Cadmium (Reg Limit = 1.0)

<RDL

1

Chromium (Reg Limit = 5.0)

<RDL

1

Lead (Reg Limit = 5.0)

<RDL

1

Selenium (Reg Limit = 1.0)

<RDL

1

Silver (Reg Limit = 5.0)

<RDL

1

ANALYSIS: Total Petroleum Hydrocarbons

Method Ref: 418.1

Date Analyzed: 2/20/98

Date Ext/Dig/Prep: 2/20/98

Result Units: mg/Kg

Analyte Name**Analytical Results****Reported Detection Limits**

Total Petroleum Hydrocarbons

<RDL

10

ANALYSIS: X PAH/BN QC Surrogates (Soils)

Method Ref: 3550A/8270B

Date Analyzed: 2/18/98

Date Ext/Dig/Prep: 2/18/98

Result Units: %

Analyte Name**Analytical Results****Reported Detection Limits**

2-Fluorobiphenyl

75

0

Nitrobenzene-d5

71

0

p-Terphenyl-d14

93

0

ANALYSIS: X VOC QC Surrogates (Soils)

Method Ref: 8260A

Date Analyzed: 2/17/98

Date Ext/Dig/Prep: 2/17/98

Result Units: %

Analyte Name**Analytical Results****Reported Detection Limits**

1,2-Dichloroethane-d4

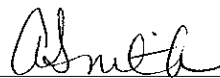
97

0

4-Bromofluorobenzene

107

0



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LABORATORY REPORT

Accura Sample ID #: AB37407

Accura Project #: 15635

Client: Omega Env. Services - Tucker

Date Sampled: 2/12/98

Client Contact: T. SHEPPARD

Date Received: 2/12/98

Client Project Number: CO#PACA21-97-C-0042

Date Reported: 2/24/98

Client Project Name: HUNTER FIRE TRAINING AREA

Sample Matrix: WATER

Client Sample ID: METHOD BLANK

ANALYSIS: PAH's

Method Ref: 3520B/8270B

Date Analyzed: 2/17/98

Date Ext/Dig/Prep: 2/16/98

Result Units: ug/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1-Methylnaphthalene	<RDL	10
2-Methylnaphthalene	<RDL	10
Acenaphthene	<RDL	10
Acenaphthylene	<RDL	10
Anthracene	<RDL	10
Benzo(a)anthracene	<RDL	10
Benzo(a)pyrene	<RDL	10
Benzo(b)fluoranthene	<RDL	10
Benzo(g,h,i)perylene	<RDL	10
Benzo(k)fluoranthene	<RDL	10
Chrysene	<RDL	10
Dibenzo(a,h)anthracene	<RDL	10
Fluoranthene	<RDL	10
Fluorene	<RDL	10
Indeno(1,2,3-cd)pyrene	<RDL	10
Naphthalene	<RDL	10
Phenanthrene	<RDL	10
Pyrene	<RDL	10

ANALYSIS: TCLP Extraction Procedure

Method Ref: 1311

Date Analyzed: 2/17/98

Date Ext/Dig/Prep: 2/17/98

Result Units:

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
TCLP Extraction	NA	0

ANALYSIS: TCLP Mercury

Method Ref: 7470A

Date Analyzed: 2/18/98

Date Ext/Dig/Prep: 2/18/98

Result Units: mg/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Mercury (Reg Limit = 0.2)	<RDL	0.01

ANALYSIS: TCLP Metals

Method Ref: 3010A/6010B

Date Analyzed: 2/18/98

Date Ext/Dig/Prep: 2/18/98

Result Units: mg/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Arsenic (Reg Limit = 5.0)	<RDL	1
Barium (Reg Limit = 100.0)	<RDL	1
Cadmium (Reg Limit = 1.0)	<RDL	1
Chromium (Reg Limit = 5.0)	<RDL	1
Lead (Reg Limit = 5.0)	<RDL	1
Selenium (Reg Limit = 1.0)	<RDL	1
Silver (Reg Limit = 5.0)	<RDL	1

ANALYSIS: VOC's

Method Ref: 5030A/8260A

Date Analyzed: 2/17/98

Date Ext/Dig/Prep: 2/17/98

Result Units: ug/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,1,1-Trichloroethane	<RDL	5
1,1,2,2-Tetrachloroethane	<RDL	5
1,1,2-Trichloroethane	<RDL	5
1,1-Dichloroethane	<RDL	5
1,1-Dichloroethene	<RDL	5
1,2-Dichlorobenzene	<RDL	5
1,2-Dichloroethane	<RDL	5
1,2-Dichloropropane	<RDL	5
1,3-Dichlorobenzene	<RDL	5
1,4-Dichlorobenzene	<RDL	5
2-Butanone (MEK)	<RDL	50
2-Chloroethylvinyl ether	<RDL	10
2-Hexanone	<RDL	50
4-Methyl-2-pentanone (MIBK)	<RDL	50
Acetone	<RDL	50
Benzene	<RDL	5
Bromodichloromethane	<RDL	5
Bromoform	<RDL	5
Bromomethane	<RDL	5
Carbon disulfide	<RDL	5
Carbon tetrachloride	<RDL	5
Chlorobenzene	<RDL	5
Chloroethane	<RDL	5
Chloroform	<RDL	5
Chloromethane	<RDL	5
cis-1,2-Dichloroethene	<RDL	5
cis-1,3-Dichloropropene	<RDL	5
Dibromochloromethane	<RDL	5
Ethylbenzene	<RDL	5
Methylene chloride	<RDL	5
Styrene	<RDL	5
Tetrachloroethene	<RDL	5
Toluene	<RDL	5

trans-1,2-Dichloroethene	<RDL	5
trans-1,3-Dichloropropene	<RDL	5
Trichloroethene	<RDL	5
Trichlorofluoromethane	<RDL	5
Vinyl acetate	<RDL	100
Vinyl chloride	<RDL	2
Xylenes (Total)	<RDL	5

ANALYSIS: X PAH/BN QC Surrogates (Waters)

Method Ref: 3520B/8270B

Date Analyzed: 2/17/98 Date Ext/Dig/Prep: 2/16/98 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
2-Fluorobiphenyl	98	0
Nitrobenzene-d5	102	0
p-Terphenyl-d14	117	0

ANALYSIS: X VOC QC Surrogates (Soils)

Method Ref: 8260A

Date Analyzed: 2/17/98 Date Ext/Dig/Prep: 2/17/98 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,2-Dichloroethane-d4	93	0
4-Bromofluorobenzene	98	0
Toluene-d8	109	0

ANALYSIS: X VOC QC Surrogates (Waters)

Method Ref: 8260A

Date Analyzed: 2/17/98 Date Ext/Dig/Prep: 2/17/98 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,2-Dichloroethane-d4	93	0
4-Bromofluorobenzene	98	0
Toluene-d8	109	0



Accura Analytical Laboratory, Inc.

ACCURA ANALYTICAL LABORATORY, INC.
6017 Financial Drive, Norcross, Georgia, 30071, Phone (770)449-8800

CASE NARRATIVE for Project Number: 15685

Client Project: Hunter Fire Training Area / CO# DACA 211-97-C-0042

The following items were noted concerning this project:

1. The following samples required dilution due to high analyte concentration and/or matrix interference, resulting in elevated detection limits:

BTEX - SW-846-8260A

Heap #7-ES001-X

Heap #7-ES001-O

PAH - SW-846-8270B

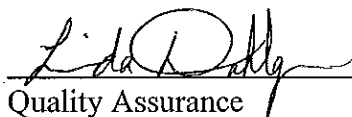
Heap #7-ES001-O

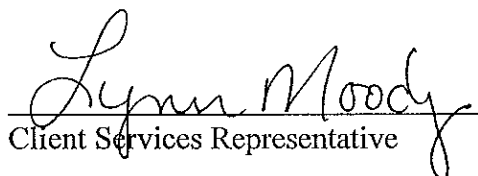
2. The following surrogate recovery was outside the method specified limit due to matrix interference:

BTEX - SW-846-8260A

4-Bromofluorobenzene -

Heap #7-ES001-O


Quality Assurance


Client Services Representative

ACCURA ANALYTICAL LABORATORY, INC.

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FL Certification # E87429

NC Certification # 483

SC Certification # 98015

USACE-MRD Approved

LABORATORY REPORT

Accura Sample ID #: AB37686

Accura Project #: 15685

Client: Omega Env. Services - Tucker

Date Sampled: 2/18/98

Client Contact: T. SHEPPARD

Date Received: 2/19/98

Client Project Number: CO#DACA 211-97-C-0042

Date Reported: 2/25/98

Client Project Name: HUNTER FIRE TRAINING AREA

Sample Matrix: SOIL

Client Sample ID: HEAP #7-ES001-X

ANALYSIS: BTEX

Method Ref: 5030A/8260A

Date Analyzed: 2/19/98

Date Ext/Dig/Prep: 2/19/98

Result Units: ug/Kg

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Benzene	35	25
Ethyl benzene	10,000	500
Toluene	<RDL	25
Xylenes	33,000	500

ANALYSIS: PAH's

Method Ref: 3550A/8270B

Date Analyzed: 2/24/98

Date Ext/Dig/Prep: 2/23/98

Result Units: ug/Kg

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1-Methylnaphthalene	1,700	330
2-Methylnaphthalene	2,000	330
Acenaphthene	<RDL	330
Acenaphthylene	<RDL	330
Anthracene	<RDL	330
Benzo(a)anthracene	<RDL	330
Benzo(a)pyrene	<RDL	330
Benzo(b)fluoranthene	<RDL	330
Benzo(g,h,i)perylene	<RDL	330
Benzo(k)fluoranthene	<RDL	330
Chrysene	<RDL	330
Dibenzo(a,h)anthracene	<RDL	330
Fluoranthene	<RDL	330
Fluorene	<RDL	330
Indeno(1,2,3-cd)pyrene	<RDL	330
Naphthalene	620	330
Phenanthrene	<RDL	330
Pyrene	<RDL	330

ANALYSIS: TCLP Extraction Procedure

Method Ref: 1311

Date Analyzed: 2/19/98 Date Ext/Dig/Prep: 2/19/98 Result Units:

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
TCLP Extraction	NA	0

ANALYSIS: TCLP Mercury

Method Ref: 7470A

Date Analyzed: 2/24/98 Date Ext/Dig/Prep: 2/24/98 Result Units: mg/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Mercury (Reg Limit = 0.2)	<RDL	0.01

ANALYSIS: TCLP Metals

Method Ref: 3010A/6010B

Date Analyzed: 2/23/98 Date Ext/Dig/Prep: 2/20/98 Result Units: mg/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Arsenic (Reg Limit = 5.0)	<RDL	1
Barium (Reg Limit = 100.0)	1.3	1
Cadmium (Reg Limit = 1.0)	<RDL	1
Chromium (Reg Limit = 5.0)	<RDL	1
Lead (Reg Limit = 5.0)	<RDL	1
Selenium (Reg Limit = 1.0)	<RDL	1
Silver (Reg Limit = 5.0)	<RDL	1

ANALYSIS: X PAH/BN QC Surrogates (Soils)

Method Ref: 3550A/8270B

Date Analyzed: 2/24/98 Date Ext/Dig/Prep: 2/23/98 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
2-Fluorobiphenyl	89	0
Nitrobenzene-d5	85	0
p-Terphenyl-d14	112	0

ANALYSIS: X VOC QC Surrogates (Soils)

Method Ref: 8260A

Date Analyzed: 2/19/98 Date Ext/Dig/Prep: 2/19/98 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,2-Dichloroethane-d4	100	0
4-Bromofluorobenzene	104	0
Toluene-d8	107	0


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NC Certification # 483

SC Certification # 98015

USACE-MRD Approved

LABORATORY REPORT

Accura Sample ID #: AB37687

Accura Project #: 15685

Client: Omega Env. Services - Tucker

Date Sampled: 2/18/98

Client Contact: T. SHEPPARD

Date Received: 2/19/98

Client Project Number: CO#DACA 211-97-C-0042

Date Reported: 2/25/98

Client Project Name: HUNTER FIRE TRAINING AREA

Sample Matrix: SOIL

Client Sample ID: HEAP #7-ES001-O

ANALYSIS: BTEX

Method Ref: 5030A/8260A

Date Analyzed: 2/19/98

Date Ext/Dig/Prep: 2/19/98

Result Units: ug/Kg

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Benzene	1100	500
Ethyl benzene	13,000	500
Toluene	530	500
Xylenes	40,000	500

ANALYSIS: PAH's

Method Ref: 3550A/8270B

Date Analyzed: 2/24/98

Date Ext/Dig/Prep: 2/23/98

Result Units: ug/Kg

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1-Methylnaphthalene	4,200	1600
2-Methylnaphthalene	6,100	1600
Acenaphthene	<RDL	330
Acenaphthylene	<RDL	330
Anthracene	<RDL	330
Benzo(a)anthracene	<RDL	330
Benzo(a)pyrene	<RDL	330
Benzo(b)fluoranthene	<RDL	330
Benzo(g,h,i)perylene	<RDL	330
Benzo(k)fluoranthene	<RDL	330
Chrysene	<RDL	330
Dibenzo(a,h)anthracene	<RDL	330
Fluoranthene	<RDL	330
Fluorene	<RDL	330
Indeno(1,2,3-cd)pyrene	<RDL	330
Naphthalene	3,400	330
Phenanthrene	<RDL	330
Pyrene	<RDL	330

ANALYSIS: TCLP Extraction Procedure

Method Ref: 1311

Date Analyzed: 2/19/98 Date Ext/Dig/Prep: 2/19/98 Result Units:

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
TCLP Extraction	NA	0

ANALYSIS: TCLP Mercury

Method Ref: 7470A

Date Analyzed: 2/24/98 Date Ext/Dig/Prep: 2/24/98 Result Units: mg/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Mercury (Reg Limit = 0.2)	<RDL	0.01

ANALYSIS: TCLP Metals

Method Ref: 3010A/6010B

Date Analyzed: 2/23/98 Date Ext/Dig/Prep: 2/20/98 Result Units: mg/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Arsenic (Reg Limit = 5.0)	<RDL	1
Barium (Reg Limit = 100.0)	1.2	1
Cadmium (Reg Limit = 1.0)	<RDL	1
Chromium (Reg Limit = 5.0)	<RDL	1
Lead (Reg Limit = 5.0)	<RDL	1
Selenium (Reg Limit = 1.0)	<RDL	1
Silver (Reg Limit = 5.0)	<RDL	1

ANALYSIS: X PAH/BN QC Surrogates (Soils)

Method Ref: 3550A/8270B

Date Analyzed: 2/24/98 Date Ext/Dig/Prep: 2/23/98 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
2-Fluorobiphenyl	78	0
Nitrobenzene-d5	79	0
p-Terphenyl-d14	104	0

ANALYSIS: X VOC QC Surrogates (Soils)

Method Ref: 8260A

Date Analyzed: 2/19/98 Date Ext/Dig/Prep: 2/19/98 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,2-Dichloroethane-d4	98	0
4-Bromofluorobenzene	136	0
Toluene-d8	98	0


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NC Certification # 483

SC Certification # 98015

USACE-MRD Approved

LABORATORY REPORT

Accura Sample ID #: AB37688

Accura Project #: 15685

Client: Omega Env. Services - Tucker

Date Sampled: 2/18/98

Client Contact: T. SHEPPARD

Date Received: 2/19/98

Client Project Number: CO#DACA 211-97-C-0042

Date Reported: 2/25/98

Client Project Name: HUNTER FIRE TRAINING AREA

Sample Matrix: WATER

Client Sample ID: HEAP #7-TB

ANALYSIS: VOC's

Method Ref: 5030A/8260A

Date Analyzed: 2/19/98

Date Ext/Dig/Prep: 2/19/98

Result Units: ug/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,1,1-Trichloroethane	<RDL	5
1,1,2,2-Tetrachloroethane	<RDL	5
1,1,2-Trichloroethane	<RDL	5
1,1-Dichloroethane	<RDL	5
1,1-Dichloroethene	<RDL	5
1,2-Dichlorobenzene	<RDL	5
1,2-Dichloroethane	<RDL	5
1,2-Dichloropropane	<RDL	5
1,3-Dichlorobenzene	<RDL	5
1,4-Dichlorobenzene	<RDL	5
2-Butanone (MEK)	<RDL	50
2-Chloroethylvinyl ether	<RDL	10
2-Hexanone	<RDL	50
4-Methyl-2-pentanone (MIBK)	<RDL	50
Acetone	<RDL	50
Benzene	<RDL	5
Bromodichloromethane	<RDL	5
Bromoform	<RDL	5
Bromomethane	<RDL	5
Carbon disulfide	<RDL	5
Carbon tetrachloride	<RDL	5
Chlorobenzene	<RDL	5
Chloroethane	<RDL	5
Chloroform	<RDL	5
Chloromethane	<RDL	5
cis-1,2-Dichloroethene	<RDL	5
cis-1,3-Dichloropropene	<RDL	5
Dibromochloromethane	<RDL	5
Ethylbenzene	<RDL	5
Methylene chloride	<RDL	5
Styrene	<RDL	5
Tetrachloroethene	<RDL	5

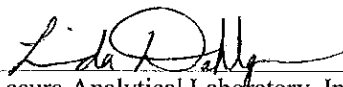
Toluene	<RDL	5
trans-1,2-Dichloroethene	<RDL	5
trans-1,3-Dichloropropene	<RDL	5
Trichloroethene	<RDL	5
Trichlorofluoromethane	<RDL	5
Vinyl acetate	<RDL	100
Vinyl chloride	<RDL	2
Xylenes (Total)	<RDL	5

ANALYSIS: X VOC QC Surrogates (Waters)

Method Ref: 8260A

Date Analyzed: 2/19/98 Date Ext/Dig/Prep: 2/19/98 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,2-Dichloroethane-d4	96	0
4-Bromofluorobenzene	93	0
Toluene-d8	92	0


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NC Certification # 483

SC Certification # 98015

USACE-MRD Approved

LABORATORY REPORT

Accura Sample ID #: AB37689

Accura Project #: 15685

Client: Omega Env. Services - Tucker

Date Sampled: 2/18/98

Client Contact: T. SHEPPARD

Date Received: 2/19/98

Client Project Number: CO#DACA 211-97-C-0042

Date Reported: 2/25/98

Client Project Name: HUNTER FIRE TRAINING AREA

Sample Matrix: SOIL

Client Sample ID: METHOD BLANK

ANALYSIS: BTEX

Method Ref: 5030A/8260A

Date Analyzed: 2/19/98

Date Ext/Dig/Prep: 2/19/98

Result Units: ug/Kg

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Benzene	<RDL	5
Ethyl benzene	<RDL	5
Toluene	<RDL	5
Xylenes	<RDL	5

ANALYSIS: PAH's

Method Ref: 3550A/8270B

Date Analyzed: 2/23/98

Date Ext/Dig/Prep: 2/23/98

Result Units: ug/Kg

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1-Methylnaphthalene	<RDL	330
2-Methylnaphthalene	<RDL	330
Acenaphthene	<RDL	330
Acenaphthylene	<RDL	330
Anthracene	<RDL	330
Benzo(a)anthracene	<RDL	330
Benzo(a)pyrene	<RDL	330
Benzo(b)fluoranthene	<RDL	330
Benzo(g,h,i)perylene	<RDL	330
Benzo(k)fluoranthene	<RDL	330
Chrysene	<RDL	330
Dibenzo(a,h)anthracene	<RDL	330
Fluoranthene	<RDL	330
Fluorene	<RDL	330
Indeno(1,2,3-cd)pyrene	<RDL	330
Naphthalene	<RDL	330
Phenanthrene	<RDL	330
Pyrene	<RDL	330

ANALYSIS: TCLP Extraction Procedure

Method Ref: 1311

Date Analyzed: 2/19/98 Date Ext/Dig/Prep: 2/19/98 Result Units:

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
TCLP Extraction	NA	0

ANALYSIS: TCLP Mercury

Method Ref: 7470A

Date Analyzed: 2/24/98 Date Ext/Dig/Prep: 2/24/98 Result Units: mg/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Mercury (Reg Limit = 0.2)	<RDL	0.01

ANALYSIS: TCLP Metals

Method Ref: 3010A/6010B

Date Analyzed: 2/23/98 Date Ext/Dig/Prep: 2/20/98 Result Units: mg/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
Arsenic (Reg Limit = 5.0)	<RDL	1
Barium (Reg Limit = 100.0)	<RDL	1
Cadmium (Reg Limit = 1.0)	<RDL	1
Chromium (Reg Limit = 5.0)	<RDL	1
Lead (Reg Limit = 5.0)	<RDL	1
Selenium (Reg Limit = 1.0)	<RDL	1
Silver (Reg Limit = 5.0)	<RDL	1

ANALYSIS: X PAH/BN QC Surrogates (Soils)

Method Ref: 3550A/8270B

Date Analyzed: 2/23/98 Date Ext/Dig/Prep: 2/23/98 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
2-Fluorobiphenyl	61	0
Nitrobenzene-d5	52	0
p-Terphenyl-d14	105	0

ANALYSIS: X VOC QC Surrogates (Soils)

Method Ref: 8260A

Date Analyzed: 2/19/98 Date Ext/Dig/Prep: 2/19/98 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,2-Dichloroethane-d4	86	0
4-Bromofluorobenzene	102	0
Toluene-d8	97	0


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SC Certification # 98015

USACE-MRD Approved

LABORATORY REPORT

Accura Sample ID #: AB37690

Accura Project #: 15685

Client: Omega Env. Services - Tucker

Date Sampled: 2/18/98

Client Contact: T. SHEPPARD

Date Received: 2/19/98

Client Project Number: CO#DACA 211-97-C-0042

Date Reported: 2/25/98

Client Project Name: HUNTER FIRE TRAINING AREA

Sample Matrix: WATER

Client Sample ID: METHOD BLANK

ANALYSIS: VOC's

Method Ref: 5030A/8260A

Date Analyzed: 2/19/98

Date Ext/Dig/Prep: 2/19/98

Result Units: ug/L

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,1,1-Trichloroethane	<RDL	5
1,1,2,2-Tetrachloroethane	<RDL	5
1,1,2-Trichloroethane	<RDL	5
1,1-Dichloroethane	<RDL	5
1,1-Dichloroethene	<RDL	5
1,2-Dichlorobenzene	<RDL	5
1,2-Dichloroethane	<RDL	5
1,2-Dichloropropane	<RDL	5
1,3-Dichlorobenzene	<RDL	5
1,4-Dichlorobenzene	<RDL	5
2-Butanone (MEK)	<RDL	50
2-Chloroethylvinyl ether	<RDL	10
2-Hexanone	<RDL	50
4-Methyl-2-pentanone (MIBK)	<RDL	50
Acetone	<RDL	50
Benzene	<RDL	5
Bromodichloromethane	<RDL	5
Bromoform	<RDL	5
Bromomethane	<RDL	5
Carbon disulfide	<RDL	5
Carbon tetrachloride	<RDL	5
Chlorobenzene	<RDL	5
Chloroethane	<RDL	5
Chloroform	<RDL	5
Chloromethane	<RDL	5
cis-1,2-Dichloroethene	<RDL	5
cis-1,3-Dichloropropene	<RDL	5
Dibromochloromethane	<RDL	5
Ethylbenzene	<RDL	5
Methylene chloride	<RDL	5
Styrene	<RDL	5
Tetrachloroethene	<RDL	5

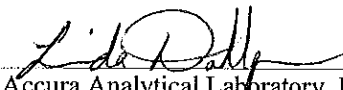
Toluene	<RDL	5
trans-1,2-Dichloroethene	<RDL	5
trans-1,3-Dichloropropene	<RDL	5
Trichloroethene	<RDL	5
Trichlorofluoromethane	<RDL	5
Vinyl acetate	<RDL	100
Vinyl chloride	<RDL	2
Xylenes (Total)	<RDL	5

ANALYSIS: X VOC QC Surrogates (Waters)

Method Ref: 8260A

Date Analyzed: 2/19/98 Date Ext/Dig/Prep: 2/19/98 Result Units: %

<u>Analyte Name</u>	<u>Analytical Results</u>	<u>Reported Detection Limits</u>
1,2-Dichloroethane-d4	93	0
4-Bromofluorobenzene	97	0
Toluene-d8	96	0


Accura Analytical Laboratory, Inc.

Klan

TRANSMITTAL OF SAD LABORATORY REPORT(S)

TO: Commander, Savannah District
US Army Corps of Engineers
ATTN: CESAS-PM-H
Mr. Brent Rose
P.O. Box 889
Savannah, GA 31402-0889

FROM: Director (CESAS-EN-L)
SAD Laboratory
USACE
611 South Cobb Drive
Marietta, GA 30060-3112

PROJECT: Hunter AAF -
Fire Training Area

REQN NO: W33SJG80283594
W.O. NO: 8379

SUBJECT: Analytical Testing Results

1. Enclosed is our report of analytical test results and chain of custody forms for samples collected on 12 January 1998 from Hunter AAF.

(). If you have any questions, please call Mr. Blaise Willis at 770-919-5295 or me at 770-919-3990.

SUBMITTED BY:

SIGNATURE:

DATE:

WILLIAM L. TISON, P. E.
Director, SAD Laboratory



18 Feb 1998

South Atlantic Division Laboratory
U. S. Army Corps of Engineers
611 South Cobb Drive
Marietta, Georgia 30060-3112

District - SAVANNAH

HUNTER ARMY AIRFIELD, GA

te Received - 98/01/13

Requisition - W33SJG73359741

Date Reported - 98/02/11 10:37:54

Work Order - 8355 Job Number - 5363

Lab # Field ID

Date Sampled

Time Sampled

34454 HEAP #1-ES-003

98/01/12

16:45

Test Performed

Result

Units

Tested
By

Test
Date

VOLATILE ORGANICS GC/MS

*

SPA

98/01/18

SEMIVOLATILE ORGANICS GC/MS

*

SPA

98/01/16

TRPH

3400.0

MG/KG

SPA

98/01/19

ARSENIC TCLP

< 0.100

PPM

SPA

98/01/16

BARIUM TCLP

< 1.000

PPM

SPA

98/01/16

CADMIUM TCLP

< 0.100

PPM

SPA

98/01/16

CHROMIUM TCLP

< 0.500

PPM

SPA

98/01/16

LEAD TCLP

< 0.500

PPM

SPA

98/01/16

MERCURY TCLP

< 0.0100

PPM

SPA

98/01/16

SELENIUM TCLP

< 0.100

PPM

SPA

98/01/16

SILVER TCLP

< 0.100

PPM

SPA

98/01/16

UP EXTRACTION

*

SPA

98/01/14

IAL SOLIDS, % OF WET

92.00

%

SPA

98/01/18

*NOTE: See Attached

Sampled by District Personnel

Signed by:

Checked by: JW3

Blaise Willis

Blaise Willis
Chemist

et 1 of 2

Lab # Field ID

34455 TRIP BLK

Date Sampled

98/01/12

Time Sampled

17:00

(
Test Performed

VOLATILE ORGANICS GC/MS

Result

Units

Tested
By

Test
Date

*

SPA

98/01/14

*NOTE: See Attached

Sampled by District Personnel

Checked by: JW

Signed by:

Blaise Willis

Blaise Willis
Chemist

set 2 of 2

Cooler Receipt Form

Job # 5363No. of Coolers 1Return Cooler YesProject: Hunter AAFDate Received: 1/13/98Date cooler opened: 1/13/98by (print) Bobbie Thurn
(sign) Bobbie Thurn

1. Did cooler come with a shipping slip?

If yes, enter carrier & air bill number here: FE #3890134971Yes ☒ No

2. Were custody seals on outside of cooler:

How many & where: _____ seal date: _____ seal name: _____

Yes ☒ No

3. Were custody seals unbroken upon receipt?

Yes ☐ No

4. Did you screen samples for radioactivity?

Yes ☒ No

5. Were custody papers sealed in a plastic bag & taped to inside lid?

Yes ☒ No

6. Were custody papers filled out properly (ink, signed, etc.)?

Yes ☒ No

7. Did you sign custody papers in the appropriate place?

Yes ☒ No

8. Was project identifiable from custody papers? If yes enter project name at the top of this form.

Yes ☒ No9. If required, was enough ice used: 6°C Type: wetYes ☒ NoDate logged-in: 1/13/98by (print) Bobbie Thurn
(sign) Bobbie Thurn1. Describe cooler packing: bubble wrap

2. Were all bottles sealed in separate plastic bags?

Yes ☒ No

3. Did all bottles arrive unbroken & labels in good condition?

Yes ☒ No4. Were all bottle labels complete (ID, date, time, signature, pres., etc.) Trip didn't have date
or timeYes ☒ No

5. Were all bottle labels agree with custody papers?

Yes ☒ No

6. Were correct containers used for the tests indicated?

Yes ☒ No

7. Were correct preservatives added to samples?

Yes ☒ No

8. Was a sufficient amount of sample sent for tests?

Yes ☒ No9. Were bubbles absent in Volatile samples? If no, list Field ID: headspace in both
containersYes ☒ No10. Number of days from sample date when received in the lab 1

11. Was project manager called & status discussed?

Yes ☒ No

If yes, give details on the bottom of this form.

Who was called? David Price By whom? B. Thurn Date: 1/13/98To clarify methods for analysis.

**SPECIALIZED ASSAYS, INC.**

2960 Foster Creighton Dr.
P.O. Box 40566
Nashville, TN 37204-0566
Phone 1-615-726-0177

ANALYTICAL REPORT

DIRECTOR U.S. ARMY CORPS ENG. 5394
CESAD LABORATORY
511 SOUTH COBB DRIVE
MARIETTA, GA 30060-3172

Sample Location: 34454 HEAP # ⁰⁰⁵98c212 1-ES-003 Lab Number: 98-A003571
HUNTER ARMY AIRFIELD-FIRE TRAINING

Sampler: BOBBI THORN

Date Collected: 1/12/98

Date Received: 1/14/98

Time Collected: 16:45

Time Received: 9:00

Sample type: Soil

Analysis Reference Data

A Blank	VB0118
A Blank	16187SBB
(Tune, VOA	BFR0118
/no Tune, BNA	DF0115
libration Check, VOA	VS0118
libration Check, BNA	CC0115

Percent solids: 92.

VOLATILE ORGANICS

anlyte	Result	Flag	DF	Units	Date	Time	Analyst	Method
acetone	54.3	U	5	ug/kg	1/18/98	23:41	G. Norton	8260B
benzene	10.9	U	5	ug/kg	1/18/98	23:41	G. Norton	8260B
monobenzene	10.9	U	5	ug/kg	1/18/98	23:41	G. Norton	8260B
monochloromethane	10.9	U	5	ug/kg	1/18/98	23:41	G. Norton	8260B
monoform	10.9	U	5	ug/kg	1/18/98	23:41	G. Norton	8260B
monomethane	10.9	U	5	ug/kg	1/18/98	23:41	G. Norton	8260B
-Butanone	54.3	U	5	ug/kg	1/18/98	23:41	G. Norton	8260B
-Butylbenzene	10.9	U	5	ug/kg	1/18/98	23:41	G. Norton	8260B
ec-Butylbenzene	10.9	U	5	ug/kg	1/18/98	23:41	G. Norton	8260B
-Butylbenzene	10.9	U	5	ug/kg	1/18/98	23:41	G. Norton	8260B
carbon Disulfide	10.9	U	5	ug/kg	1/18/98	23:41	G. Norton	8260B
carbon tetrachloride	10.9	U	5	ug/kg	1/18/98	23:41	G. Norton	8260B
monobenzene	10.9	U	5	ug/kg	1/18/98	23:41	G. Norton	8260B
chloroethane	10.9	U	5	ug/kg	1/18/98	23:41	G. Norton	8260B
-Chloroethylvinylether	10.9	U	5	ug/kg	1/18/98	23:41	G. Norton	8260B
chloroform	10.9	U	5	ug/kg	1/18/98	23:41	G. Norton	8260B
chloromethane	10.9	U	5	ug/kg	1/18/98	23:41	G. Norton	8260B

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ANALYTICAL REPORT

Laboratory Number: 98-A003571

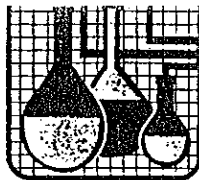
Sample ID: 34454 HEAP #1-ES-003

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VOLATILE ORGANICS

Analyte	Result	Flag	DF	Units	Date	Time	Analyst	Method
2-Chlorotoluene	10.9	U	5	ug/kg	1/18/98	23:41	G. Norton	8260B
4-Chlorotoluene	10.9	U	5	ug/kg	1/18/98	23:41	G. Norton	8260B
1,2-Dibromo-3-chloropropane	54.3	U	5	ug/kg	1/18/98	23:41	G. Norton	8260B
Dibromochloromethane	10.9	U	5	ug/kg	1/18/98	23:41	G. Norton	8260B
1,2-Dibromoethane	10.9	U	5	ug/kg	1/18/98	23:41	G. Norton	8260B
Dibromomethane	10.9	U	5	ug/kg	1/18/98	23:41	G. Norton	8260B
1,2-Dichlorobenzene	10.9	U	5	ug/kg	1/18/98	23:41	G. Norton	8260B
1,3-Dichlorobenzene	10.9	U	5	ug/kg	1/18/98	23:41	G. Norton	8260B
1,4-Dichlorobenzene	10.9	U	5	ug/kg	1/18/98	23:41	G. Norton	8260B
Dichlorodifluoromethane	10.9	U	5	ug/kg	1/18/98	23:41	G. Norton	8260B
1,1-Dichloroethane	10.9	U	5	ug/kg	1/18/98	23:41	G. Norton	8260B
1,2-Dichloroethane	10.9	U	5	ug/kg	1/18/98	23:41	G. Norton	8260B
1,1-Dichloroethene	10.9	U	5	ug/kg	1/18/98	23:41	G. Norton	8260B
1,2-Dichloroethene	10.9	U	5	ug/kg	1/18/98	23:41	G. Norton	8260B
trans-1,2-Dichloroethene	10.9	U	5	ug/kg	1/18/98	23:41	G. Norton	8260B
1,2-Dichloropropane	10.9	U	5	ug/kg	1/18/98	23:41	G. Norton	8260B
1,3-Dichloropropane	10.9	U	5	ug/kg	1/18/98	23:41	G. Norton	8260B
2,2-Dichloropropane	10.9	U	5	ug/kg	1/18/98	23:41	G. Norton	8260B
1,1-Dichloropropene	10.9	U	5	ug/kg	1/18/98	23:41	G. Norton	8260B
cis-1,3-Dichloropropene	10.9	U	5	ug/kg	1/18/98	23:41	G. Norton	8260B
trans-1,3-Dichloropropene	10.9	U	5	ug/kg	1/18/98	23:41	G. Norton	8260B
Ethylbenzene	1150		125	ug/kg	1/19/98	3:09	G. Norton	8260B
Hexachlorobutadiene	10.9	U	5	ug/kg	1/18/98	23:41	G. Norton	8260B
2-Hexanone	54.3	U	5	ug/kg	1/18/98	23:41	G. Norton	8260B
Isopropylbenzene	10.9	U	5	ug/kg	1/18/98	23:41	G. Norton	8260B
4-Isopropyltoluene	107.		5	ug/kg	1/18/98	23:41	G. Norton	8260B
4-Methyl-2-pentanone	54.3	U	5	ug/kg	1/18/98	23:41	G. Norton	8260B
Methylene chloride	10.9	U	5	ug/kg	1/18/98	23:41	G. Norton	8260B
Naphthalene	10.9	U	5	ug/kg	1/18/98	23:41	G. Norton	8260B
n-Propylbenzene	10.9	U	5	ug/kg	1/18/98	23:41	G. Norton	8260B
Styrene	10.9	U	5	ug/kg	1/18/98	23:41	G. Norton	8260B
1,1,1,2-Tetrachloroethane	10.9	U	5	ug/kg	1/18/98	23:41	G. Norton	8260B
1,1,2,2-Tetrachloroethane	10.9	U	5	ug/kg	1/18/98	23:41	G. Norton	8260B
Tetrachloroethene	10.9	U	5	ug/kg	1/18/98	23:41	G. Norton	8260B
Toluene	10.9	U	5	ug/kg	1/18/98	23:41	G. Norton	8260B
1,2,3-Trichlorobenzene	10.9	U	5	ug/kg	1/18/98	23:41	G. Norton	8260B
1,2,4-Trichlorobenzene	10.9	U	5	ug/kg	1/18/98	23:41	G. Norton	8260B
1,1,1-Trichloroethane	10.9	U	5	ug/kg	1/18/98	23:41	G. Norton	8260B
1,1,2-Trichloroethane	10.9	U	5	ug/kg	1/18/98	23:41	G. Norton	8260B
Trichloroethene	10.9	U	5	ug/kg	1/18/98	23:41	G. Norton	8260B
1,2,3-Trichloropropane	10.9	U	5	ug/kg	1/18/98	23:41	G. Norton	8260B
1,2,4-Trimethylbenzene	2430		125	ug/kg	1/19/98	3:09	G. Norton	8260B
1,3,5-Trimethylbenzene	1920		125	ug/kg	1/19/98	3:09	G. Norton	8260B

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ANALYTICAL REPORT

Laboratory Number: 98-A003571

Sample ID: 34454 HEAP 71-ES-003

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VOLATILE ORGANICS

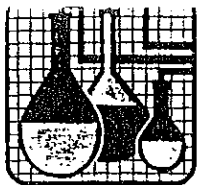
Analyte	Result	Flag	DF	Units	Date	Time	Analyst	Method
Vinyl chloride	10.9	U	5	ug/kg	1/18/98	23:41	G. Norton	8260B
Xylenes	2520		125	ug/kg	1/19/98	3:09	G. Norton	8260B
Bromodichloromethane	10.9	U	5	ug/kg	1/18/98	23:41	G. Norton	8260B
Trichlorofluoromethane	10.9	U	5	ug/kg	1/18/98	23:41	G. Norton	8260B

SEMIVOLATILE ORGANICS and PESTICIDE/PCR's

Analyte	Result	Flag	DF	Units	Date	Time	Analyst	Method
Naphthalene	179.	U	1	ug/kg	1/16/98	1:39	M. Goodrich	8270
Acenaphthene	179.	U	1	ug/kg	1/16/98	1:39	M. Goodrich	8270
Fluorene	179.	U	1	ug/kg	1/16/98	1:39	M. Goodrich	8270
Fluoranthene	179.	U	1	ug/kg	1/16/98	1:39	M. Goodrich	8270
Fluorene	179.	U	1	ug/kg	1/16/98	1:39	M. Goodrich	8270
Pyrene	179.	U	1	ug/kg	1/16/98	1:39	M. Goodrich	8270
Benzo(a)anthracene	179.	U	1	ug/kg	1/16/98	1:39	M. Goodrich	8270
Benzo(a)pyrene	179.	U	1	ug/kg	1/16/98	1:39	M. Goodrich	8270
Benzo(b)fluoranthene	179.	U	1	ug/kg	1/16/98	1:39	M. Goodrich	8270
Benzo(k)fluoranthene	179.	U	1	ug/kg	1/16/98	1:39	M. Goodrich	8270
Chrysene	179.	U	1	ug/kg	1/16/98	1:39	M. Goodrich	8270
Dibenzo(a,h)anthracene	179.	U	1	ug/kg	1/16/98	1:39	M. Goodrich	8270
Indeno(1,2,3-cd)pyrene	179.	U	1	ug/kg	1/16/98	1:39	M. Goodrich	8270
Acenaphthylene	179.	U	1	ug/kg	1/16/98	1:39	M. Goodrich	8270
Benzo(g,h,i)perylene	179.	U	1	ug/kg	1/16/98	1:39	M. Goodrich	8270
Phenanthrene	179.	U	1	ug/kg	1/16/98	1:39	M. Goodrich	8270
1-Methylnaphthalene	179.	U	1	ug/kg	1/16/98	1:39	M. Goodrich	8270
2-Methylnaphthalene	179.	U	1	ug/kg	1/16/98	1:39	M. Goodrich	8270
Extraction, RNA's	Completed			ug/kg	1/15/98	7:54	C. Gerenser	3550

UNDERGROUND STORAGE TANK RESULTS

Analyte	Result	Units	PQL	Dil Factor	Date	Time	Analyst	Method
Petroleum Hydrocarbons	3400	mg/kg	10.9	1	1/19/98	8:26	Fitzwater	418.1M

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ANALYTICAL REPORT

Laboratory Number: 98-A003571

Sample ID: 34454 HEAP #1-ES-003

#JLS

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CLP Results

analyte	Result	Units	Reg Limit	Matrix Spike Recovery (%)	Date	Method
arsenic	< 0.10	mg/l	5.0	106	1/16/98	6010B
barium	< 1.00	mg/l	100	94	1/16/98	6010B
cadmium	< 0.10	mg/l	1.0	102	1/16/98	6010B
chromium	< 0.50	mg/l	5.0	91	1/16/98	6010B
lead	< 0.50	mg/l	5.0	99	1/16/98	6010B
mercury	< 0.010	mg/l	0.20	114	1/16/98	7470A
melenium	< 0.10	mg/l	1.0	112	1/16/98	6010B
silver	< 0.10	mg/l	5.0	80	1/16/98	6010B
CLP Extraction	Completed				1/14/98	1311

Sample Extraction Data

analyzer	Wt/Vol Extracted	Extract Vol	Date	Analyst	Method
BNA's	30.0 gm	1.0 ml	1/15/98	C. Gersesser	3550

Surrogate	% Recovery	Target Range
VDA Surrogate, 1,2-Dichloroethane, d4	91.0	62. - 147.
VDA Surrogate, Toluene d8	90.9	84. - 117.
VDA Surrogate, 4-Bromofluorobenzene	78.7	64. - 126.
VDA Surrogate, Dibromofluoromethane	94.2	77. - 118.
BNA Surr., Nitrobenzene-d5	63.9	23. - 120.
BNA Surr., 2-Fluorobiphenyl	62.0	30. - 115.
BNA Surrogate, Terphenyl d14	78.6	18. - 140.

Report Approved By:

Michael H. Dunn

Report Date: 2/ 9/98

Theodore J. Duello, Ph.D., Q.A. Officer
Michael H. Dunn, M.S., Technical Director
Danny B. Hale, M.S., Laboratory Director

**SPECIALIZED ASSAYS, INC.**

2960 Foster Creighton Dr.
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Nashville, TN 37204-0566
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ANALYTICAL REPORT

DIRECTOR U.S. ARMY CORPS. ENG. 5394
CESAD LABORATORY
611 SOUTH COBB DRIVE
MARIETTA, GA 30060-3172

Sample Location: 34455 TRIP BLK Lab Number: 9B-A003572
HUNTER ARMY AIRFIELD-FIRE TRAINING

Date Collected: 1/12/98 Date Received: 1/14/98

Time Collected: 17:00 Time Received: 9:00

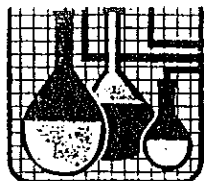
Sampler: BOBBI THORN Sample type: Water

Organics Reference Data

QA Blank VBO114B
GC/MS Tune, VOA BFB0114B
Injection Check, VOA VSO114B

VOLATILE ORGANICS

analyte	Result	Flag	DF	Units	Date	Time	Analyst	Method
acetone	10.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
benzene	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
bromobenzene	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
bromochloromethane	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
bromoform	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
bromomethane	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
-Butanone	10.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
-Butylbenzene	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
ec-Butylbenzene	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
-Butylbenzene	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
carbon disulfide	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
carbon tetrachloride	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
chlorobenzene	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
chloroethane	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
-Chloroethylvinylether	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
chloroform	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
chloromethane	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
-o-Crotoluene	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
-p-Crotoluene	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
,2-Dibromo-3-chloropropane	10.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
ibromochloromethane	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
,2-Dibromoethane	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
ibromomethane	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B

**SPECIALIZED ASSAYS, INC.**

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ANALYTICAL REPORT

Laboratory Number: 98-A003572

Sample ID: 34455 TRIP BLK

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VOLATILE ORGANICS

Analyte	Result	Flag	DF	Units	Date	Time	Analyst	Method
1,2-Dichlorobenzene	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
1,3-Dichlorobenzene	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
1,4-Dichlorobenzene	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
Dichlorodifluoromethane	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
1,1-Dichloroethane	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
1,2-Dichloroethane	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
1,1-Dichloroethene	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
cis-1,2-Dichloroethene	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
trans-1,2-Dichloroethene	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
1,2-Dichloropropane	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
1,3-Dichloropropane	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
2,2-Dichloropropane	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
1,1-Dichloropropene	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
cis-1,3-Dichloropropene	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
trans-1,3-Dichloropropene	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
Ethylbenzene	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
Hexachlorobutadiene	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
2-Hexanone	10.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
Isopropylbenzene	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
4-Isopropyltoluene	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
4-Methyl-2-pentanone	10.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
Methylene chloride	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
Naphthalene	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
n-Propylbenzene	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
Styrene	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
1,1,1,2-Tetrachloroethane	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
1,1,2,2-Tetrachloroethane	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
Tetrachloroethene	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
Toluene	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
1,2,3-Trichlorobenzene	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
1,2,4-Trichlorobenzene	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
1,1,1-Trichloroethane	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
1,1,2-Trichloroethane	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
Trichloroethene	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
1,2,3-Trichloropropane	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
1,2,4-Trimethylbenzene	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
1,3,5-Trimethylbenzene	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
Vinyl chloride	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
Xylenes	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
Bromodichloromethane	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
Trichlorofluoromethane	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B

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Phone 1-615-726-0177

ANALYTICAL REPORT

Laboratory Number: 98-A003572
Sample ID: 34455 TRIP BLK

Page 3

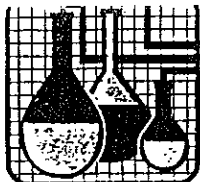
<u>Surrogate</u>	<u>% Recovery</u>	<u>Target Range</u>
VDA Surrogate, 1,2-Dichloroethane, d4	99.2	70. - 131.
VDA Surrogate, Toluene d8	101.	83. - 115.
VDA Surrogate, 4-Bromofluorobenzene	95.8	73. - 119.
VDA Surrogate, Dibromofluoromethane	108.	72. - 130.

Report Approved By:

Michael H. Dunn

Report Date: 2/ 9/98

Theodore J. Duello, Ph.D., Q.A. Officer
Michael H. Dunn, M.S., Technical Director
Danny B. Hale, M.S., Laboratory Director

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PROJECT QUALITY CONTROL DATA

DIRECTOR U.S. ARMY CORPS ENG. 5394

Report Number: 98-A003573

Sample I.D.: METHOD BLANK

Lab Project: 89087

Project: 132251 CALL#0615

Date Received: 1/14/98

UST Spike/Duplicate Results **

Compound	XRecovery	Target Range	Precision RPD	Target Range
RPH, 418.1	102.	75 - 125	0.4	0 - 25.0

Organics Spike/Duplicate Results **

Compound	XRecovery	Target Range	Precision RPD	Target Range
1-Dichloroethene	90.	59 - 172	0.0	0 - 22
1,1-Dichloroethene	76.	62 - 137	0.0	0 - 24
1,2-Dichloroethene	80.	66 - 142	2.0	0 - 21
1,3-Dichloroethene	80.	59 - 139	0.0	0 - 21
1,4-Dichlorobenzene	84.	60 - 133	6.0	0 - 21
1,2-Dichlorobenzene	90.	26 - 115	3.9	0 - 35
Chlorophenol	99.	25 - 102	3.6	0 - 50
4-Dichlorobenzene	86.	28 - 104	3.1	0 - 27
transo-di-n-propylamine	103.	41 - 126	1.7	0 - 38
2,4-Trichlorobenzene	89.	38 - 107	3.0	0 - 23
Chloro-3-methylphenol	99.	26 - 103	1.5	0 - 33
1-naphthene	90.	31 - 137	1.6	0 - 19
Nitrophenol	97.	11 - 125	2.8	0 - 50
4-Dinitrotoluene	94.	28 - 100	1.6	0 - 47
2,4-Dinitrophenol	95.	17 - 109	1.3	0 - 47
1,2-Dichlorobenzene	94.	35 - 142	1.6	0 - 36

Volatile Organics Method Blank Results ***

Compound	Result	Flag	Units	Method
Acetone	10.0	U	ug/kg	8260B
Benzene	2.0	U	ug/kg	8260B
Chlorobenzene	2.0	U	ug/kg	8260B
Chloromethane	2.0	U	ug/kg	8260B

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PROJECT QUALITY CONTROL DATA

DIRECTOR U. S. ARMY CORPS ENG. 5394

Report Number: 98-A003573

Sample I.D.: METHOD BLANK

Lab Project: 89087

Project: 132251 CALL#0615

Date Received: 1/14/98

Volatile Organics Method Blank Results ***

Compound	Result	Flag	Units	Method
Formaldehyde	2.0	U	ug/kg	8260B
Methanol	2.0	U	ug/kg	8260B
Butanone	10.0	U	ug/kg	8260B
Butylbenzene	2.0	U	ug/kg	8260B
n-Butylbenzene	2.0	U	ug/kg	8260B
Butylbenzene	2.0	U	ug/kg	8260B
Disulfide	2.0	U	ug/kg	8260B
Carbon tetrachloride	2.0	U	ug/kg	8260B
Toluene	2.0	U	ug/kg	8260B
Ethylbenzene	2.0	U	ug/kg	8260B
Chloroethylvinylether	2.0	U	ug/kg	8260B
Formaldehyde	2.0	U	ug/kg	8260B
Methanol	2.0	U	ug/kg	8260B
Chlorotoluene	2.0	U	ug/kg	8260B
Chlorotoluene	2.0	U	ug/kg	8260B
2-Dibromo-3-chloropropane	10.0	U	ug/kg	8260B
Bromochloromethane	2.0	U	ug/kg	8260B
2-Dibromoethane	2.0	U	ug/kg	8260B
Bromomethane	2.0	U	ug/kg	8260B
2-Dichlorobenzene	2.0	U	ug/kg	8260B
3-Dichlorobenzene	2.0	U	ug/kg	8260B
4-Dichlorobenzene	2.0	U	ug/kg	8260B
Chlorodifluoromethane	2.0	U	ug/kg	8260B
1-Dichloroethane	2.0	U	ug/kg	8260B
2-Dichloroethane	2.0	U	ug/kg	8260B
1-Dichloroethene	2.0	U	ug/kg	8260B
trans-1,2-Dichloroethene	2.0	U	ug/kg	8260B
cis-1,2-Dichloroethene	2.0	U	ug/kg	8260B
2-Dichloropropane	2.0	U	ug/kg	8260B
3-Dichloropropane	2.0	U	ug/kg	8260B
2-Chloropropane	2.0	U	ug/kg	8260B
1-Chloropropene	2.0	U	ug/kg	8260B
trans-1,3-Dichloropropene	2.0	U	ug/kg	8260B
cis-1,3-Dichloropropene	2.0	U	ug/kg	8260B
Toluene	2.0	U	ug/kg	8260B
1,3-Dichlorobutadiene	2.0	U	ug/kg	8260B

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PROJECT QUALITY CONTROL DATA

DIRECTOR U.S. ARMY CORPS ENG. 5394

Report Number: 98-A003573

Sample I.D.: METHOD BLANK

Lab Project: 89087

Project: 132251 CALL#0615

Date Received: 1/14/98

* Volatile Organics Method Blank Results ***

Compound	Result	Flag	Units	Method
Hexanone	10.0	U	ug/kg	8260B
Isopropylbenzene	2.0	U	ug/kg	8260B
Isopropyltoluene	2.0	U	ug/kg	8260B
Methyl-2-pentanone	10.0	U	ug/kg	8260B
Ethylene chloride	5.0		ug/kg	8260B
Phthalene	2.0	U	ug/kg	8260B
Tolylbenzene	2.0	U	ug/kg	8260B
Styrene	2.0	U	ug/kg	8260B
1,1,2-Tetrachloroethane	2.0	U	ug/kg	8260B
1,2,2-Tetrachloroethane	2.0	U	ug/kg	8260B
Tetrachloroethene	2.0	U	ug/kg	8260B
Toluene	2.0	U	ug/kg	8260B
2,3-Trichlorobenzene	2.0	U	ug/kg	8260B
2,4-Trichlorobenzene	2.0	U	ug/kg	8260B
1,1-Trichloroethane	2.0	U	ug/kg	8260B
1,2-Trichloroethane	2.0	U	ug/kg	8260B
Trichloroethene	2.0	U	ug/kg	8260B
2,3-Trichloropropane	2.0	U	ug/kg	8260B
2,4-Trimethylbenzene	2.0	U	ug/kg	8260B
3,5-Trimethylbenzene	2.0	U	ug/kg	8260B
Benzyl chloride	2.0	U	ug/kg	8260B
Alkenes	2.0	U	ug/kg	8260B
Monodichloromethane	2.0	U	ug/kg	8260B
Dichlorofluoromethane	2.0	U	ug/kg	8260B

* Semi-Volatile Organics Method Blank Results ***

Compound	Result	Flag	Units	Method
Phthalene	165.	U	ug/kg	8270
Anthracene	165.	U	ug/kg	8270
Fluoranthene	165.	U	ug/kg	8270
Fluorene	165.	U	ug/kg	8270
Styrene	165.	U	ug/kg	8270
Benz(a)anthracene	165.	U	ug/kg	8270



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PROJECT QUALITY CONTROL DATA

DIRECTOR U.S. ARMY CORPS ENG. 5394

Report Number: 98-A003573

Sample I.D.: METHOD BLANK

Lab Project: 89087

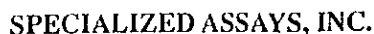
Project: 132251 CALL#0615

Date Received: 1/14/98

Semi-Volatile Organics Method Blank Results ***

mpound	Result	Flag	Units	Method
nzo(a)pyrene	165.	U	ug/kg	8270
nzo(b)fluoranthene	165.	U	ug/kg	8270
nzo(k)fluoranthene	165.	U	ug/kg	8270
rysene	165.	U	ug/kg	8270
benzo(a,h)anthracene	165.	U	ug/kg	8270
deno(1,2,3-cd)pyrene	165.	U	ug/kg	8270
enaethylene	165.	U	ug/kg	8270
n j,h,i)perylene	165.	U	ug/kg	8270
ananthrene	165.	U	ug/kg	8270
Methylnapthalene	165.	U	ug/kg	8270
Methylnapthalene	165.	U	ug/kg	8270

Michael A. Dunn



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DIRECTOR U. S. ARMY CORPS ENG. 5394

Report Number: 98-A003574

Sample I. D. : METHOD BLANK

Lab Project: 89087

Project: 132251 CALL#0615

Date Received: 1/14/98

Organics Spike/Duplicate Results **

Compound	% Recovery	Target Range	Precision RPD	Target Range
1-Dichloroethene	96.	61 - 145	4.0	0 - 14
1,1-Dichloroethene	102.	71 - 120	0.0	0 - 14
1,2-Dichloroethene	108.	76 - 127	8.0	0 - 11
1,1,1-Trichloroethene	106.	76 - 125	2.0	0 - 13
1,1,2-Trichloroethene	98.	75 - 130	2.0	0 - 13

Volatile Organics Method Blank Results ***

Compound	Result	Flag	Units	Method
acetone	10.0	U	ug/l	8260B
benzene	2.0	U	ug/l	8260B
monobenzene	2.0	U	ug/l	8260B
monochloromethane	2.0	U	ug/l	8260B
monoform	2.0	U	ug/l	8260B
monomethane	2.0	U	ug/l	8260B
Butanone	10.0	U	ug/l	8260B
Butylbenzene	2.0	U	ug/l	8260B
n-Butylbenzene	2.0	U	ug/l	8260B
Butylbenzene	2.0	U	ug/l	8260B
carbon disulfide	2.0	U	ug/l	8260B
carbon tetrachloride	2.0	U	ug/l	8260B
chlorobenzene	2.0	U	ug/l	8260B
chloroethane	2.0	U	ug/l	8260B
Chloroethylvinylether	2.0	U	ug/l	8260B
chloroform	2.0	U	ug/l	8260B
chloromethane	2.0	U	ug/l	8260B
Chlorotoluene	2.0	U	ug/l	8260B
Chlorotoluene	2.0	U	ug/l	8260B
2-Dibromo-3-chloropropane	10.0	U	ug/l	8260B
bromochloromethane	2.0	U	ug/l	8260B
2-Dibromoethane	2.0	U	ug/l	8260B
bromomethane	2.0	U	ug/l	8260B

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PROJECT QUALITY CONTROL DATA

DIRECTOR U.S. ARMY CORPS ENG. 5394

Report Number: 98-A003574

Sample I.D.: METHOD BLANK

Lab Project: 89087

Project: 132251 CALL#0615

Date Received: 1/14/98

Volatile Organics Method Blank Results ***

Compound	Result	Flag	Units	Method
2-Dichlorobenzene	2.0	U	ug/l	8260B
3-Dichlorobenzene	2.0	U	ug/l	8260B
4-Dichlorobenzene	2.0	U	ug/l	8260B
chlorodifluoromethane	2.0	U	ug/l	8260B
1-Dichloroethane	2.0	U	ug/l	8260B
2-Dichloroethane	2.0	U	ug/l	8260B
1-chloroethene	2.0	U	ug/l	8260B
trans-1,2-Dichloroethene	2.0	U	ug/l	8260B
cis-1,2-Dichloroethene	2.0	U	ug/l	8260B
2-Dichloropropane	2.0	U	ug/l	8260B
3-Dichloropropane	2.0	U	ug/l	8260B
2-Dichloropropane	2.0	U	ug/l	8260B
1-Dichloropropene	2.0	U	ug/l	8260B
cis-1,3-Dichloropropene	2.0	U	ug/l	8260B
trans-1,3-Dichloropropene	2.0	U	ug/l	8260B
Styrene	2.0	U	ug/l	8260B
1,2-Dichlorobutadiene	2.0	U	ug/l	8260B
Hexanone	10.0	U	ug/l	8260B
Propylbenzene	2.0	U	ug/l	8260B
Isopropyltoluene	2.0	U	ug/l	8260B
Methyl-2-pentanone	10.0	U	ug/l	8260B
Ethylene chloride	2.0	U	ug/l	8260B
Phthalene	2.0	U	ug/l	8260B
Propylbenzene	2.0	U	ug/l	8260B
Styrene	2.0	U	ug/l	8260B
1,1,2-Tetrachloroethane	2.0	U	ug/l	8260B
1,1,2,2-Tetrachloroethane	2.0	U	ug/l	8260B
1,1,2-Trichloroethane	2.0	U	ug/l	8260B
1,2,2-Trichloroethane	2.0	U	ug/l	8260B
1,1,2-Trichloroethane	2.0	U	ug/l	8260B
1,2-Trichloroethane	2.0	U	ug/l	8260B
1,3-Trichloropropane	2.0	U	ug/l	8260B
2,3-Trichloropropane	2.0	U	ug/l	8260B
2,4-Trimethylbenzene	2.0	U	ug/l	8260B



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PROJECT QUALITY CONTROL DATA

DIRECTOR U.S. ARMY CORPS ENG. 5394

Report Number: 98-A003574

Sample I.D.: METHOD BLANK

Lab Project: 89087

Project: 132251 CALL#0615

Date Received: 1/14/98

Volatile Organics Method Blank Results ***

Compound	Result	Flag	Units	Method
3,5-Trimethylbenzene	2.0	U	ug/l	8260B
nyl chloride	2.0	U	ug/l	8260B
lenes	2.0	U	ug/l	8260B
omodichloromethane	2.0	U	ug/l	8260B
ichlorofluoromethane	2.0	U	ug/l	8260B

Metel B. Rume

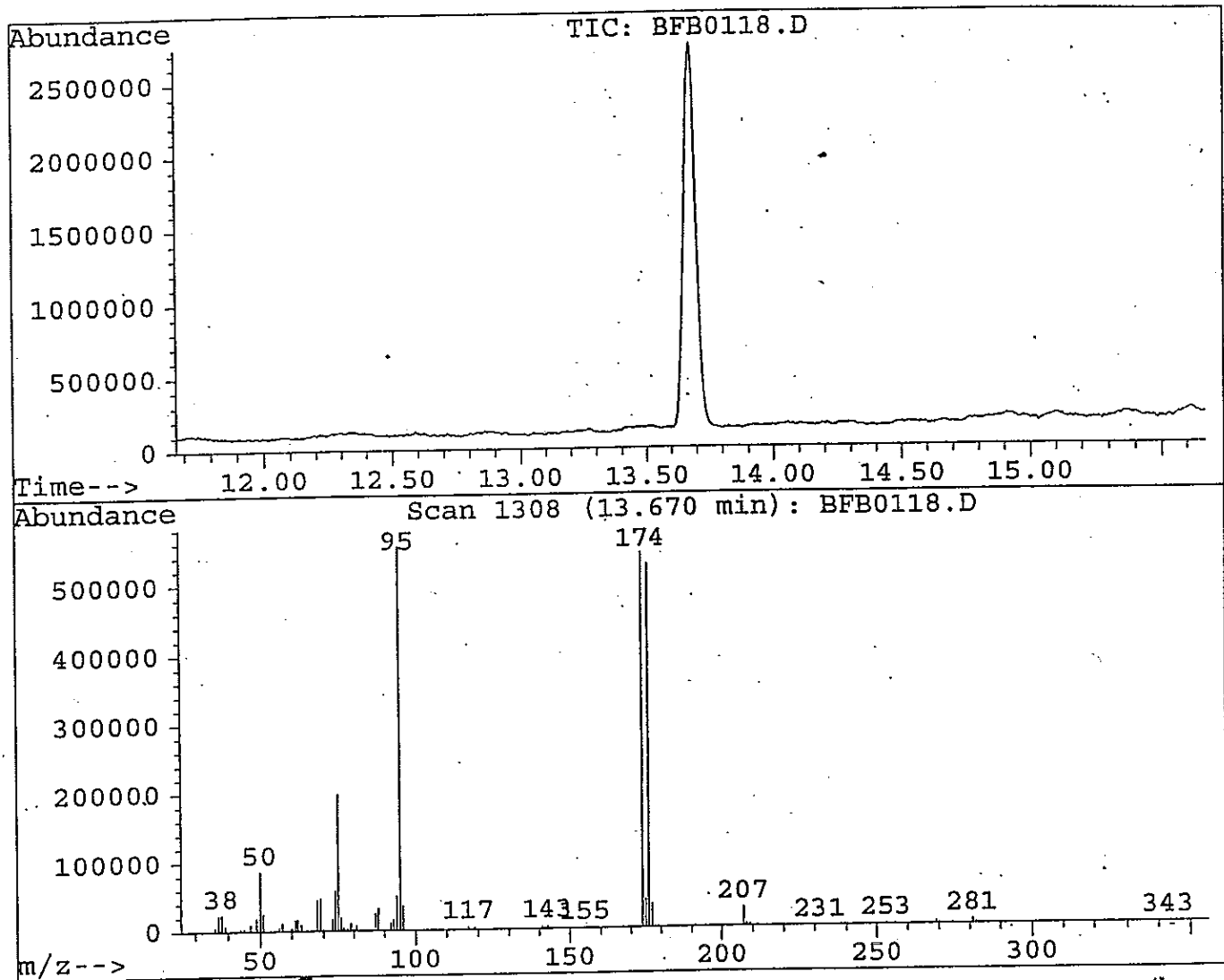
BFB

89001

Data File : C:\HPCHEM\1\DATA\BFB0118.D
 Acq On : 18 Jan 98 4:56 pm
 Sample : TUNE HP-1
 Misc :

Vial: 1
 Operator: HP-1
 Inst : 5971 - In
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8260S.M
 Title : 8260 volatile organics PLUS



Peak Apex is scan: 1308

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	15.5	86400	PASS
75	95	30	60	35.6	198080	PASS
95	95	100	100	100.0	556032	PASS
96	95	5	9	6.4	35544	PASS
173	174	0	2	0.0	0	PASS
174	95	50	100	97.6	542592	PASS
175	174	5	9	7.6	41392	PASS
176	174	95	101	97.1	526656	PASS
177	176	5	9	6.4	33848	PASS

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\VS0118.D
 Acq On : 18 Jan 98 5:19 pm
 Sample : CONCAL HP-1
 Misc :

Vial: 1
 Operator: HP-1
 Inst : 5971 - In
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8260S.M
 Title : 8260 volatile organics PLUS
 Last Update : Thu Jan 15 10:02:54 1998
 Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 20% Max. R.T. Dev 0.50min.
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1 I	Pentafluorobenzene	1.000	1.000	0.0	63	-0.02
2 T	Dichlorodifluoromethane	1.432	1.002	30.0	43	-0.05
3 P	Chloromethane	1.272	1.362	-7.1	69	-0.04
4 C	Vinyl Chloride	1.003	1.112	-10.9	72	-0.02
5 T	Bromomethane	0.986	0.944	4.3	62	-0.03
6 T	Chloroethane	0.317	0.339	-7.0	69	-0.02
7 T	Trichlorofluoromethane	1.769	1.832	-3.6	71	-0.04
9 T	Acetone	0.104	0.095	8.2	65	-0.08
10 T	Diethyl Ether	0.896	0.833	7.0	60	-0.03
11 CM	1,1-Dichloroethene	1.176	1.127	4.2	60	-0.03
12 T	Iodomethane	1.388	1.518	-9.3	64	-0.03
13 T	Acrylonitrile	0.282	0.319	-13.1	73	-0.04
14 T	Methylene Chloride	1.459	1.254	14.1	58	-0.03
15 T	Carbon Disulfide	3.081	3.124	-1.4	64	-0.03
6 T	trans-1,2-Dichloroethene	1.555	1.621	-4.3	65	-0.03
17	Methyl-t-butyl ether	2.590	2.282	11.9	56	-0.03
18 P	1,1-Dichloroethane	1.837	2.001	-8.9	67	-0.02
19 T	Vinyl Acetate	0.931	1.227	-31.8	91	-0.03
20 T	2-Butanone	0.144	0.103	28.8	51	-0.03
21	Diisopropyl ether	3.513	3.600	-2.5	65	-0.02
22 T	cis-1,2-Dichloroethene	1.267	1.467	-15.8	73	-0.03
23 T	Bromochloromethane	0.772	0.725	6.2	61	-0.01
24 C	Chloroform	1.855	1.687	9.0	58	-0.01
25 T	2,2-Dichloropropane	1.243	1.490	-19.9	85	-0.02
26 S	1,2-Dichloroethane-d4	0.738	0.740	-0.2	63	-0.02
27 S	Dibromofluoromethane	0.941	0.982	-4.3	65	-0.02
28 T	1,2-Dichloroethane	1.159	1.093	5.7	60	-0.02
29 T	1,1,1-Trichloroethane	1.525	1.401	8.2	58	-0.01
30 T	1,1-Dichloropropene	1.531	1.509	1.5	63	-0.01
31 I	1,4-Difluorobenzene	1.000	1.000	0.0	71	-0.02
32 T	Carbon Tetrachloride	2.501	2.669	-6.7	74	0.00
33 M	Benzene	9.395	8.506	9.5	66	-0.01
34 T	Dibromomethane	1.291	1.085	15.9	59	-0.02
35 I	2,3-Dichloro-1-Propene	2.425	2.330	3.9	67	-0.01
36 C	1,2-Dichloropropane	2.087	2.071	0.8	69	-0.01
37 M	Trichloroethene	2.932	2.473	15.6	60	-0.01
38 T	Bromodichloromethane	2.511	2.221	11.6	62	-0.02
39	2-Chloroethyl vinyl ether	1.170	1.016	13.2	60	0.00
40 T	cis-1,3-Dichloropropene	3.238	2.925	9.6	63	0.00
41 T	4-Methyl-2-pentanone	0.708	0.511	27.7	50	0.00
42 T	trans-1,3-Dichloropropene	2.583	2.401	7.1	67	-0.02
43 T	1,1,2-Trichloroethane	1.990	1.653	16.9	60	0.00
44 S	Toluene-d8	7.435	6.771	8.9	62	0.00
45 CM	Toluene	10.338	8.761	15.3	60	-0.02

47 I	Ethyl Methacrylate	4.151	3.321	19.8	57	0.00
48	2-Hexanone	0.668	0.631	5.6	65	-0.02
49 I	Chlorobenzene-d5	1.000	1.000	0.0	65	-0.01
50 T	Dibromochloromethane	0.914	0.891	2.6	64	-0.02
51 T	1,2-Dibromoethane	1.172	1.217	-3.8	68	-0.01
52 T	Tetrachloroethene	2.001	1.689	15.6	55	0.00
53 T	1,1,1,2-Tetrachloroethane	1.298	1.360	-4.8	67	-0.01
54 PM	Chlorobenzene	3.899	3.478	10.8	57	-0.01
55 C	Ethylbenzene	6.574	6.277	4.5	63	0.00
56 T	m,p-Xylene	4.791	4.575	4.5	61	0.00
57	Bromoform	0.941	0.727	22.8	50	0.00
58 T	Styrene	4.122	4.028	2.3	62	0.00
59 T	o-Xylene	5.025	4.691	6.6	60	0.00
60 P	1,1,2,2-Tetrachloroethane	1.334	1.169	12.4	57	0.00
61 T	1,2,3-Trichloropropane	1.494	1.893	-26.7	82	0.00
62 T	trans-1,4-Dichloro-2-butene	0.121	0.123	-1.9	62	-0.01
63	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	55	0.00
64	Ethylbenzene-d10	1.000	1.000	0.0	66	0.00
65 T	Isopropylbenzene	1.236	1.176	4.9	63	0.00
66 S	Bromofluorobenzene	0.289	0.273	5.8	61	0.00
67 T	Bromobenzene	0.047	0.042	10.8	59	0.00
68 T	Propylbenzene	1.464	1.391	5.0	61	0.00
69 T	2-Chlorotoluene	0.827	0.784	5.2	63	0.00
70 T	4-Chlorotoluene	0.794	0.769	3.2	63	0.00
71 T	1,3,5-Trimethylbenzene	0.966	0.907	6.1	61	-0.01
72 T	t-Butylbenzene	0.905	0.830	8.2	60	-0.01
73 T	1,2,4-trimethylbenzene	0.968	0.986	-1.8	67	0.00
74 T	sec-Butylbenzene	1.398	1.349	3.5	61	0.00
75 T	1,3-Dichlorobenzene	0.606	0.537	11.5	57	0.00
76 T	1,4-Dichlorobenzene	0.612	0.558	8.8	61	-0.01
77	1,2-Dichlorobenzene	0.599	0.494	17.5	55	0.00
78 T	p-Isopropyltoluene	1.082	1.081	0.1	64	0.00
79 T	Butylbenzene	0.984	0.995	-1.1	64	-0.01
80 T	1,2-Dibromo-3-chloropropane	0.062	0.040	35.4	40	0.00
81 T	1,2,4-Trichlorobenzene	0.363	0.422	-16.4	76	0.00
82 T	Naphthalene	0.786	0.729	7.3	62	0.00
83 T	Hexachlorobutadiene	0.287	0.251	12.5	56	0.00
84 T	1,2,3-Trichlorobenzene	0.365	0.354	2.8	62	-0.01

(#) = Out of Range
S0500114.D 8260S.M

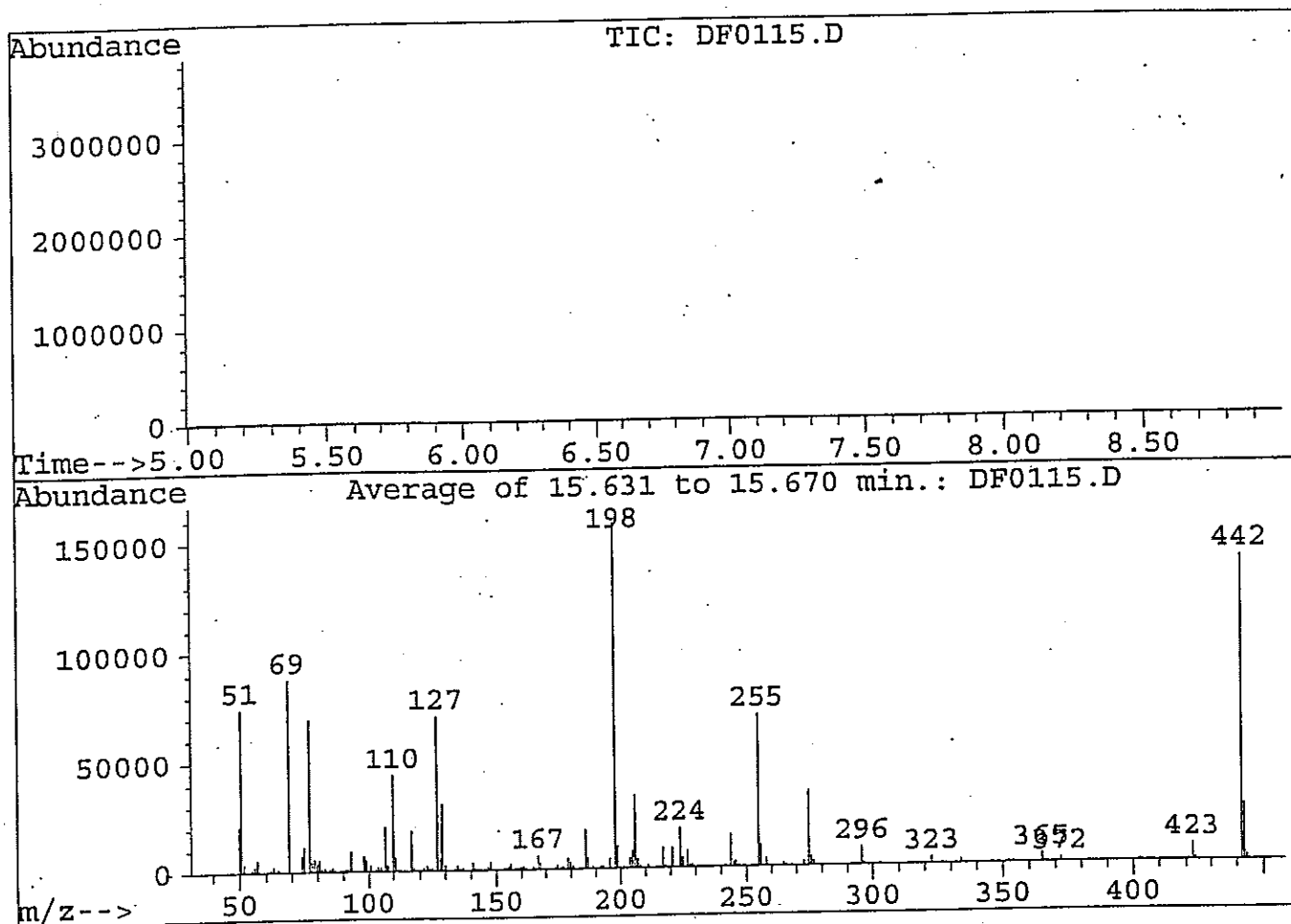
SPCC's out = 0 CCC's out = 0
Mon Jan 19 11:26:58 1998 HP-1

DFTPP

Data File : C:\HPCHEM\1\DATA\DF0115.D
Acq On : 15 Jan 98 4:00 pm
Sample : tune
Misc :

Vial: 2
Operator: HP-5
Inst : 5972 - In
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8270.M
Title : SW846 METHOD 8270



Peak Apex is scan: 580

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	46.9	74558	PASS
68	69	0	2	0.0	0	PASS
69	198	0	100	55.3	87884	PASS
70	69	0	2	0.2	140	PASS
127	198	30	60	44.4	70656	PASS
197	198	0	1	0.0	0	PASS
198	198	100	100	100.0	158981	PASS
199	198	5	9	6.6	10538	PASS
275	198	10	30	21.6	34367	PASS
365	198	1	100	2.5	3982	PASS
441	442	0	100	0.1	125	PASS
442	198	40	100	87.6	139223	PASS
443	442	17	23	18.6	25925	PASS

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\CC0115.D
 Acq On : 15 Jan 98 4:36 pm
 Sample : 50 ppm con cal
 Misc :

Vial: 3
 Operator: HP-5
 Inst : 5972 - In
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8270.M
 Title : SW846 METHOD 8270
 Last Update : Tue Jan 06 13:35:29 1998
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 10% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1 I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	97	0.02
2 T	Pyridine	0.657	0.671	-2.2	96	-0.23
3 T	N-Nitroso-dimethylamine	0.687	0.674	1.9	97	-0.23
4 S	2-Fluorophenol	0.862	0.808	6.2	92	-0.27
5	Aniline	1.362	1.305	4.1	93	-0.25
6	Bis-(2-Chloroethyl) ether	1.037	0.881	15.0	84	-0.25
7 S	Phenol-d5	1.168	0.957	18.1	80	-0.23
8 MC	Phenol	1.198	1.034	13.7	85	-0.25
9 S	2-Chlorophenol-d4	0.772	0.730	5.5	92	-0.25
10 M	2-Chlorophenol	0.841	0.796	5.3	93	-0.26
11	1,3-Dichlorobenzene	0.843	0.798	5.2	93	-0.26
12 MC	1,4-Dichlorobenzene	0.869	0.820	5.6	93	-0.25
13 S	1,2-Dichlorobenzene-d4	0.881	0.800	9.2	89	-0.25
14	1,2-Dichlorobenzene	0.780	0.708	9.2	89	-0.25
15	Benzyl Alcohol	0.712	0.663	7.0	91	-0.25
16	Bis-(2-chloroisopropyl) ethe	0.112	0.104	6.7	93	-0.08
17	2-Methylphenol	0.874	0.784	10.3	89	-0.25
18	Hexachloroethane	0.365	0.336	7.9	92	-0.26
19 MP	N-Nitroso-di-n-propylamine	0.626	0.580	7.4	92	-0.25
20	3,4-Methylphenol	1.103	0.993	10.0	87	-0.25
21 I	Naphthalene-d8	1.000	1.000	0.0	110	-0.27
22 S	Nitrobenzene-d5	0.435	0.378	13.1	96	-0.26
23	Nitrobenzene	0.437	0.385	12.0	97	-0.26
24	Isophorone	0.958	0.779	18.7	92	-0.26
25 C	2-Nitrophenol	0.218	0.194	11.0	96	-0.26
26	2,4-Dimethylphenol	0.433	0.367	15.3	93	-0.25
27	Bis-(2-chloroethoxy) methane	0.566	0.492	12.9	96	-0.25
28 C	2,4-Dichlorophenol	0.290	0.247	14.7	93	-0.27
29	Benzoic acid	0.149	0.202	-35.3	136	-0.25
30 M	1,2,4-Trichlorobenzene	0.311	0.268	13.7	96	-0.26
31	Naphthalene	1.037	0.879	15.3	94	-0.27
32	4-chloroaniline	0.456	0.387	15.1	93	-0.26
33 C	Hexachlorobutadiene	0.176	0.159	9.8	99	-0.26
34	4-Chloro-3-methylphenol	0.341	0.310	9.1	98	-0.26
35	2-Methylnaphthalene	0.807	0.752	6.8	97	-0.27
36	1-Methylnaphthalene	0.637	0.527	17.2	92	-0.28
37 I	Acenaphthene-d10	1.000	1.000	0.0	110	-0.31
38 P	Hexachlorocyclopentadiene	0.121	0.097	19.8	77	-0.27
39 C	2,4,6-Trichlorophenol	0.383	0.342	10.8	98	-0.28
40	2,4,5-Trichlorophenol	0.396	0.373	5.9	105	-0.29
41 S	2-fluorobiphenyl	1.259	1.031	18.1	92	-0.29
42	2-Chloronaphthalene	1.110	0.929	16.3	93	-0.29
43	2-Nitroaniline	0.477	0.411	13.8	96	-0.29

45		Dimethylphthalate	1.341	1.137	15.2	98	-0.29
46		2,6-Dinitrotoluene	0.335	0.293	12.6	95	-0.30
47		3-Nitroaniline	0.353	0.286	18.9	91	-0.30
48	MC	Acenaphthene	1.029	0.843	18.1	94	-0.31
49	P	2,4-dinitrophenol	0.112	0.133	-18.8	134	-0.29
50		Dibenzofuran	1.551	1.311	15.5	95	-0.32
51	M	2,4-Dinitrotoluene	0.434	0.398	8.2	100	-0.31
52	MP	4-Nitrophenol	0.333	0.264	20.7	113	0.12
53		Fluorene	1.151	0.967	16.0	94	-0.33
54		4-Chlorophenyl phenylether	0.605	0.524	13.4	94	-0.33
55		Diethylphthalate	1.373	1.182	13.9	94	-0.32
56		4-Nitroaniline	0.365	0.340	6.9	100	-0.32
57		1,2-Diphenylhydrazine	1.672	1.409	15.7	94	-0.33
58	I	Phenanthrene-d10	1.000	1.000	0.0	116	-0.35
59		4,6-Dinitro-2-methylphenol	0.130	0.130	-0.2	116	-0.32
60	C	N-Nitroso-diphenylamine	0.466	0.404	13.2	101	-0.34
61	S	Tribromophenol	0.108	0.098	9.3	104	-0.34
62		4-Bromophenyl phenyl ether	0.165	0.144	12.8	101	-0.34
63		Hexachlorobenzene	0.220	0.184	16.4	97	-0.34
64	MC	Pentachlorophenol	0.065	0.068	-4.0	108	-0.34
65		Phenanthrene	0.934	0.751	19.6	95	-0.35
66		Anthracene	0.954	0.785	17.7	97	-0.35
67		Carbazole	0.893	0.773	13.5	101	-0.35
68		Di-n-butyl phthalate	1.272	1.080	15.1	101	-0.35
69	C	Fluoranthene	1.028	0.877	14.8	100	0.12
70	I	Chrysene-d12	1.000	1.000	0.0	115	-0.39
71		Benzidine	0.449	0.423	5.7	112	-0.36
72	M	Pyrene	1.280	1.081	15.6	99	-0.38
73	S	Terphenyl-d14	0.868	0.724	16.6	97	-0.38
74		Butylbenzylphthalate	0.761	0.673	11.6	103	-0.37
75		3,3'-Dichlorobenzidine	0.418	0.352	15.8	94	-0.39
76		Benzo(a)anthracene	1.154	1.013	12.2	103	-0.39
77		Chrysene	0.857	0.866	-1.1	119	-0.39
78		Bis-(2-ethylhexyl)phthalate	1.041	0.842	19.2	95	-0.38
79	I	Perylene-d12	1.000	1.000	0.0	127	-0.40
80	C	Di-n-octylphthalate	2.335	2.598	-11.2	145	-0.38
81		Benzo(b)fluoranthene	1.591	1.125	29.3	94	-0.40
82		Benzo(k)fluoranthene	1.169	0.931	20.3	97	-0.40
83	C	Benzo(a)pyrene	1.274	1.075	15.6	108	-0.40
84		Indeno(1,2,3-cd)pyrene	1.541	1.178	23.6	98	-0.41
85		Dibenz(a,h)anthracene	1.078	0.952	11.8	114	-0.41
86		Benzo(g,h,i)perylene	1.329	1.178	11.3	113	-0.88

(#) = Out of Range
0500106.D 8270.M

SPCC's out = 0 CCC's out = 0
Fri Jan 16 10:41:09 1998

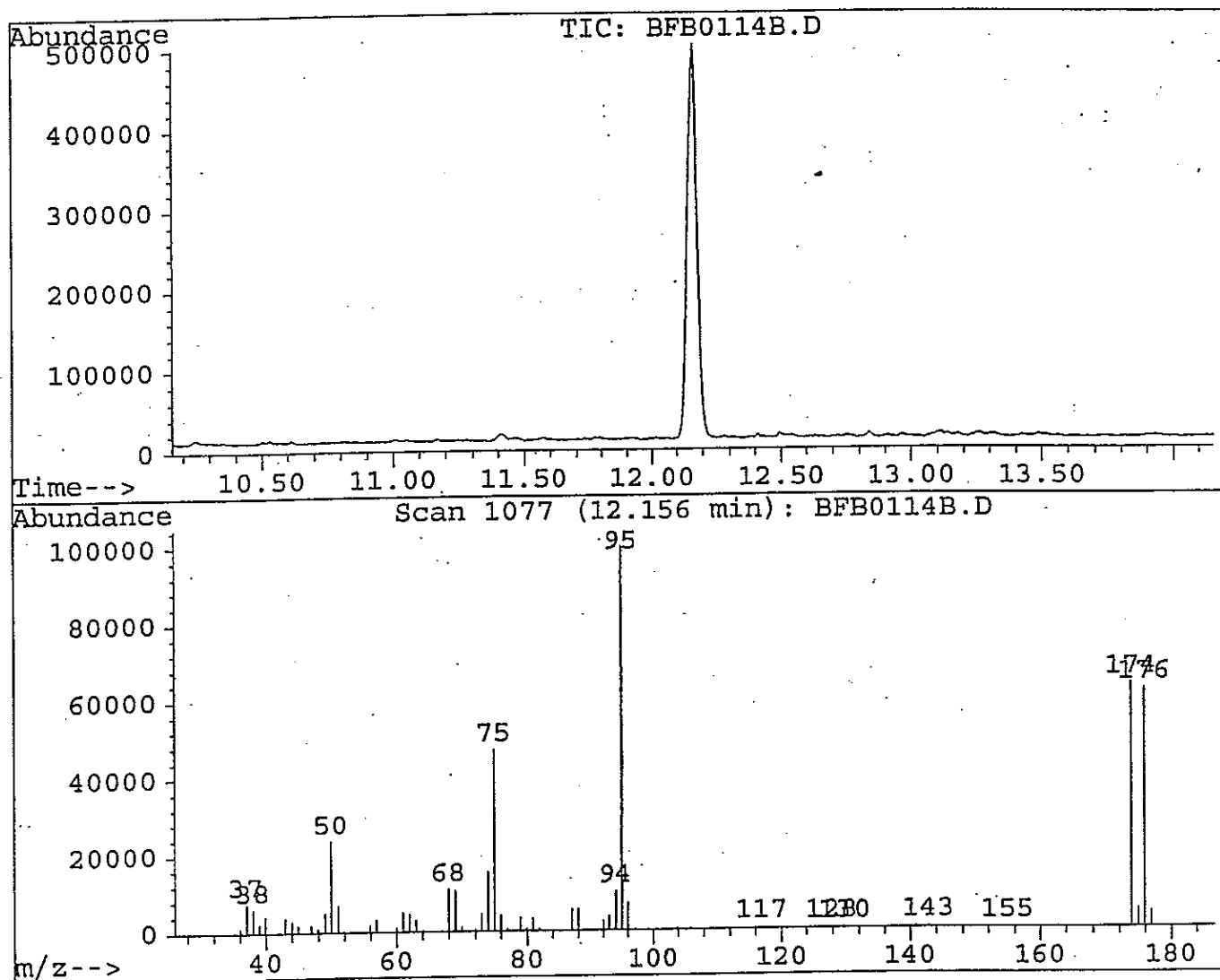
BFB

01-1

Data File : C:\HPCHEM\1\DATA\BFB0114B.D
 Acq On : 14 Jan 98 5:55 pm
 Sample : TUNE HP-10
 Misc :

Vial: 1
 Operator: hp-10
 Inst : 5972 - I
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8260.M
 Title : 8260 volatile organics PLUS



Peak Apex is scan: 1077

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	23.9	23816	PASS
75	95	30	60	47.5	47344	PASS
95	95	100	100	100.0	99768	PASS
96	95	5	9	7.0	6970	PASS
173	174	0	2	0.0	0	PASS
174	95	50	100	63.7	63520	PASS
175	174	5	9	7.6	4842	PASS
176	174	95	101	97.9	62200	PASS
177	176	5	9	6.7	4183	PASS

Data File : C:\HPCHEM\1\DATA\VS0114B.D
 Acq On : 14 Jan 98 6:19 pm
 Sample : 1
 Misc : con cal
 Quant Time: Jan 15 8:42 1998

Vial: 1
 Operator: hp-10
 Inst : 5972 - In
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8260.M
 Title : 8260 volatile organics PLUS
 Last Update : Wed Jan 14 14:10:34 1998
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Pentafluorobenzene	11.57	99	318351	30.00	ug/L	0.00
31) 1,4-Difluorobenzene	12.85	63	206460	30.00	ug/L	0.00
49) Chlorobenzene-d5	17.50	119	254004	30.00	ug/L	-0:01
63) 1,4-Dichlorobenzene-d4	21.08	150	754166	30.00	ug/L	0.00
64) Ethylbenzene-d10	17.71	98	1277229	30.00	ug/L	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recovery
26) 1,2-Dichloroethane-d4	11.62	65	415435	31.52	ug/L	105.07%
27) Dibromofluoromethane	10.92	111	392200	30.74	ug/L	102.45%
44) Toluene-d8	15.47	98	881760	29.95	ug/L	99.82%
66) Bromofluorobenzene	19.23	95	435155	31.68	ug/L	105.61%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	4.29	85	692255	40.47	ug/L	99
3) Chloromethane	4.60	50	645985	41.56	ug/L	71
4) Vinyl Chloride	4.83	62	293718	51.64	ug/L	97
5) Bromomethane	5.52	96	416067	43.61	ug/L	1
6) Chloroethane	5.76	64	286509	46.27	ug/L	84
7) Trichlorofluoromethane	6.75	101	761096	46.44	ug/L	64
8) Acrolein	6.75	56	41088	43.31	ug/L	26
9) Acetone	7.01	58	77035	58.12	ug/L	39
10) Diethyl Ether	7.21	59	524427	52.54	ug/L	87
11) 1,1-Dichloroethene	7.68	96	531745	47.80	ug/L	75
12) Iodomethane	7.74	142	893543	46.80	ug/L	99
13) Acrylonitrile	7.81	53	234911	47.79	ug/L	40
14) Methylene Chloride	7.96	84	724649	51.90	ug/L	99
15) Carbon Disulfide	8.29	76	2247542	50.07	ug/L	100
16) trans-1,2-Dichloroethene	9.07	61	1025199	46.93	ug/L	91
17) Methyl-t-butyl ether	9.29	73	1247426	51.12	ug/L	95
18) 1,1-Dichloroethane	9.48	63	1203959	50.13	ug/L	97
19) Vinyl Acetate	9.28	43	354362	48.99	ug/L	78
20) 2-Butanone	10.21	72	77912	53.59	ug/L	1
21) Diisopropyl ether	10.24	45	2372360	53.08	ug/L	86
22) cis-1,2-Dichloroethene	10.40	61	865083	49.34	ug/L	82
23) Bromochloromethane	10.65	130	423204	49.61	ug/L	98
24) Chloroform	10.73	83	1171211	52.53	ug/L	98
25) 2,2-Dichloropropane	10.84	77	744603	47.07	ug/L	100
28) 1,2-Dichloroethane	11.73	62	869305	51.04	ug/L	99
29) 1,1,1-Trichloroethane	11.87	97	789934	51.59	ug/L	90
30) 1,1-Dichloropropene	12.16	75	820154	52.72	ug/L	93
32) Carbon Tetrachloride	12.42	117	688250	50.89	ug/L	100
33) Benzene	12.48	78	2045027	50.22	ug/L	98
34) Dibromomethane	13.31	93	475653	50.50	ug/L	86
35) 2,3-Dichloro-1-Propene	13.41	39	863573	52.01	ug/L	49
36) 1,2-Dichloropropane	13.37	63	640995	51.71	ug/L	96
37) Trichloroethene	13.43	130	541417	52.18	ug/L	97
38) Bromodichloromethane	13.50	83	794766	47.88	ug/L	100

40)	cis-1,3-Dichloropropene	14.62	58	241365	46.79 ug/L	97
41)	4-Methyl-2-pentanone	15.07	75	915999	52.73 ug/L	99
42)	trans-1,3-Dichloropropene	15.29	97	514004	52.39 ug/L	96
43)	1,1,2-Trichloroethane	15.56	91	2091839	50.14 ug/L	98
44)	Toluene	15.63	76	839097	53.11 ug/L	90
45)	1,3-Dichloropropane	15.68	69	1173408	53.13 ug/L	67
46)	Ethyl Methacrylate	15.68	58	46453	50.67 ug/L	43
47)	2-Hexanone	16.01	127	536884	52.70 ug/L	99
48)	Dibromochloromethane	16.35	107	661512	55.11 ug/L	98
49)	1,2-Dibromoethane	16.60	166	564802	57.47 ug/L	90
50)	Tetrachloroethene	17.44	131	543766	55.70 ug/L	98
51)	1,1,1,2-Tetrachloroethane	17.55	112	1401876	50.60 ug/L	100
52)	Chlorobenzene	17.83	91	2478582	55.30 ug/L	98
53)	Ethylbenzene	18.10	91	3584429	107.68 ug/L	95
54)	m,p-Xylene	18.25	173	420879	51.19 ug/L	1
55)	Bromoform	18.56	104	1547632	57.00 ug/L	94
56)	Styrene	18.66	91	1864320	56.86 ug/L	95
57)	o-Xylene	18.65	83	767635	58.78 ug/L	100
58)	1,1,2,2-Tetrachloroethane	18.56	75	67308	56.10 ug/L	50
59)	1,2,3-Trichloropropane	18.56	75	67308	53.18 ug/L	1
60)	trans-1,4-Dichloro-2-buten	19.17	105	2177473	50.87 ug/L	97
61)	Isopropylbenzene	19.52	77	1064207	53.45 ug/L	96
62)	Bromobenzene	19.79	91	2883790	52.70 ug/L	98
63)	Propylbenzene	19.92	91	1645645	50.26 ug/L	96
64)	2-Chlorotoluene	19.92	91	1645645	50.26 ug/L	94
65)	4-Chlorotoluene	20.20	105	1803538	51.57 ug/L	97
66)	1,3,5-Trimethylbenzene	20.60	119	1536996	53.39 ug/L	97
67)	t-Butylbenzene	20.76	105	1784473	48.19 ug/L	98
68)	1,2,4-trimethylbenzene	20.92	105	2456786	50.36 ug/L	96
69)	sec-Butylbenzene	21.02	146	1052442	51.21 ug/L	97
70)	1,3-Dichlorobenzene	21.02	146	1052442	51.21 ug/L	98
71)	1,4-Dichlorobenzene	21.66	146	1088008	51.61 ug/L	94
72)	1,2-Dichlorobenzene	21.18	119	2008522	56.42 ug/L	98
73)	p-Isopropyltoluene	21.81	91	2102069	50.09 ug/L	98
74)	Butylbenzene	22.43	157	133873	50.02 ug/L	100
75)	1,2-Dibromo-3-chloropropan	24.88	180	758936	53.38 ug/L	98
76)	1,2,4-Trichlorobenzene	25.36	128	1927497	51.62 ug/L	100
77)	Naphthalene	25.48	225	340098	51.51 ug/L	97
78)	Hexachlorobutadiene	25.74	180	701278	51.81 ug/L	96
79)	1,2,3-Trichlorobenzene					

(#) = qualifier out of range (m) = manual integration

VS0114B.D 8260.M

Thu Jan 15 08:43:14 1998

Chain of Custody Rec

PropONENT: CEMP.

Blaise

TRANSMITTAL OF SAD LABORATORY REPORT(S)

TO: Commander, Savannah District
US Army Corps of Engineers
ATTN: CESAS-PM-H
Mr. Brent Rose
P.O. Box 889
Savannah, GA 31402-0889

FROM: Director (CESAS-EN-L)
SAD Laboratory
USACE
611 South Cobb Drive
Marietta, GA 30060-3112

PROJECT: Hunter AAF -
Fire Training Area

REQN NO: W33SJG80797577
W.O. NO: 8400

SUBJECT: Analytical Testing Results

1. Enclosed is our report of analytical test results and chain of custody forms for samples collected on 28 January 1998 from Hunter AAF.
2. If you have any questions, please call Mr. Blaise Willis at 770-919-5295 or me at 770-919-3990.

SUBMITTED BY:

SIGNATURE:

DATE:

WILLIAM L. TISON, P. E.
Director, SAD Laboratory



30 Mar 1998

Lab # Field ID

34757 106-QA-TB

Date Sampled Time Sampled

98/01/28 00:00

Test Performed

VOLATILE ORGANICS GC/MS

Result	Units	Tested By	Test Date
-----	-----	-----	-----
*		SPA	98/02/04

*NOTE: See Attached

Sampled by District Personnel

Checked by: JWS

Sheet 2 of 2

Signed by:

Blaise Willis

Blaise Willis
Chemist

South Atlantic Division Laboratory
U. S. Army Corps of Engineers
611 South Cobb Drive
Marietta, Georgia 30060-3112

District - SAVANNAH
Date Received - 98/01/29
Date Reported - 98/02/19 09:52:42

HUNTER ARMY AIRFIELD, GA
Requisition - W33SJG70930225
Work Order - 8211 Job Number - 5428

Lab #	Field ID	Date Sampled	Time Sampled
34756	106-001-WW-QA	98/01/28	00:00

Test Performed	Result	Units	Tested By	Test Date
VOLATILE ORGANICS GC/MS	*		SPA	98/02/04
SEMIVOLATILE ORGANICS GC/MS	*		SPA	98/02/01

*NOTE: See Attached

Sampled by District Personnel

Checked by: WWS

Signed by:

Blaise Willis

Blaise Willis
Chemist

Sheet 1 of 2

Hunter Army Airfield (EPC) 10

Prof. No.

Project Name Winter Fire Training Area

Sampler: (Signature)

David Price (612) 787-1606

Date	Time	Pres.	Gr	Cm	Site Code/Sample Number
------	------	-------	----	----	-------------------------

No.	of	Cons
-----	----	------

PAH-8270

BIFX-8260

VOL 5 8260

TAT

Remarks:

SAD NO.

MATRIX

1/28/98

106-001-1.34)-Q1A

در

7.

 $\angle$

28/98

106-224-TB

2

1/28/96
EP

7

Sampler
Refiniquisher by: *[Signature]*

Date/Time: /

Received by: (Sig.)

Date/Time

Hazards Associated with Samples

Relinquished by: (Sig.)

Date/Time

Received by: (Sig.)

Date/Time

Relinquished by: (Sig.)

Date/Time

Received for
Laboratory by: (Sig.)

Data/Time

Custody Seal No.

Lab Case No.

Remarks at time of receipt:

Cooler Receipt Form

Job # 542ENo. of Coolers 1

Return Cooler _____

Project: Hunter Army AirfieldDate Received: 1/29/98Date cooler opened: 1/29/98by (print) B. Serbin
(sign) B. S.1. Did cooler come with a shipping slip?
If yes, enter carrier & air bill number here: FE 801466199387Yes ☐ No ☒2. Were custody seals on outside of cooler:
How many & where: _____ seal date: _____ seal name: _____Yes ☐ No ☒

3. Were custody seals unbroken upon receipt?

Yes ☐ No ☐

4. Did you screen samples for radioactivity?

Yes ☐ No ☒

5. Were custody papers sealed in a plastic bag & taped to inside lid?

Yes ☐ No ☒

6. Were custody papers filled out properly (ink, signed, etc.)?

Yes ☐ No ☒

7. Did you sign custody papers in the appropriate place?

Yes ☐ No ☒8. Was project identifiable from custody papers? If yes enter project name
at the top of this form.Yes ☐ No ☒9. If required, was enough ice used: 60 Type: _____Yes ☐ No ☐Date logged-in: 1/29/98by (print) B. Serbin
(sign) B. S.1. Describe cooler packing: bubble wrap

2. Were all bottles sealed in separate plastic bags?

Yes ☐ No ☒

3. Did all bottles arrive unbroken & labels in good condition?

Yes ☐ No ☒

4. Were all bottle labels complete (ID, date, time, signature, pres., etc.)

Yes ☐ No ☒106-X-TB on bottle not 106-GA-TB.
5. Were all bottle labels agree with custody papers?Yes ☐ No ☒

6. Were correct containers used for the tests indicated?

Yes ☐ No ☒

7. Were correct preservatives added to samples?

Yes ☐ No ☒

8. Was a sufficient amount of sample sent for tests?

Yes ☐ No ☒

9. Were bubbles absent in Volatile samples? If no, list Field ID: _____

Yes ☐ No ☒10. Number of days from sample date when received in the lab 111. Was project manager called & status discussed?
If yes, give details on the bottom of this form.Yes ☐ No ☒Who was called? Geoscience By whom? Becky Date: 1/29/98

Added to run field list & cell on trip blank even though
bottle said BTER-8260.

**SPECIALIZED ASSAYS, INC.**

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ANALYTICAL REPORT

DIRECTOR U. S. ARMY CORPS ENG. 5394
CESAD LABORATORY
611 SOUTH COBB DRIVE
MARIETTA, GA 30060-3172

Sample Location: 34756 106-001-WW-QA
HUNTER ARMY AIRFIELD

Lab Number: 9B-A009302

Date Collected: 1/28/98

Date Received: 1/30/98

Time Collected:

Time Received: 9:00

Sampler: BOBBI THORN

Sample type: Water

Organics Reference Data

VOA Blank VB0204
S Tune, VOA BFB0204
Calibration Check, VOA VS0204

VOLATILE ORGANICS

Analyte	Result	Flag	DF	Units	Date	Time	Analyst	Method
Benzene	998.		100	ug/l	2/ 4/98	19:01	J. Haley	8260B
Ethylbenzene	245.		100	ug/l	2/ 4/98	19:01	J. Haley	8260B
Toluene	758.		100	ug/l	2/ 4/98	19:01	J. Haley	8260B
Xylenes	694.		100	ug/l	2/ 4/98	19:01	J. Haley	8260B

SEMIVOLATILE ORGANICS and PESTICIDE/PCB's

Analyte	Result	Flag	DF	Units	Date	Time	Analyst	Method
Naphthalene	5.00	U	1	ug/l	2/ 1/98	1:24	M. Goodrich	8270
Acenaphthene	5.00	U	1	ug/l	2/ 1/98	1:24	M. Goodrich	8270
Anthracene	5.00	U	1	ug/l	2/ 1/98	1:24	M. Goodrich	8270
Fluoranthene	5.00	U	1	ug/l	2/ 1/98	1:24	M. Goodrich	8270
Fluorene	5.00	U	1	ug/l	2/ 1/98	1:24	M. Goodrich	8270
Pyrene	5.00	U	1	ug/l	2/ 1/98	1:24	M. Goodrich	8270
Benz(a)anthracene	5.00	U	1	ug/l	2/ 1/98	1:24	M. Goodrich	8270
Benzo(a)pyrene	5.00	U	1	ug/l	2/ 1/98	1:24	M. Goodrich	8270
Benzo(b)fluoranthene	5.00	U	1	ug/l	2/ 1/98	1:24	M. Goodrich	8270
Benzo(k)fluoranthene	5.00	U	1	ug/l	2/ 1/98	1:24	M. Goodrich	8270
Chrysene	5.00	U	1	ug/l	2/ 1/98	1:24	M. Goodrich	8270
Dibenzo(a,h)anthracene	5.00	U	1	ug/l	2/ 1/98	1:24	M. Goodrich	8270



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ANALYTICAL REPORT

Laboratory Number: 98-A009302
Sample ID: 34756 106-001-WW-QA

Page 2

SEMIVOLATILE ORGANICS and PESTICIDE/PCB's

Analyte	Result	Flag	DF	Units	Date	Time	Analyst	Method
Indeno(1,2,3-cd)pyrene	5.00	U	1	ug/l	2/ 1/98	1:24	M. Goodrich	8270
Acenaphthylene	5.00	U	1	ug/l	2/ 1/98	1:24	M. Goodrich	8270
Benzo(g,h,i)perylene	5.00	U	1	ug/l	2/ 1/98	1:24	M. Goodrich	8270
Phenanthrene	5.00	U	1	ug/l	2/ 1/98	1:24	M. Goodrich	8270
1-Methylnapthalene	5.00	U	1	ug/l	2/ 1/98	1:24	M. Goodrich	8270
2-Methylnapthalene	5.00	U	1	ug/l	2/ 1/98	1:24	M. Goodrich	8270

Sample Extraction Data

Parameter	Wt/Vol Extracted	Extract Vol	Date	Analyst	Method
BHA's	990. ml	1.0 ml	1/31/98	Fitzwater	3510

Surrogate	% Recovery	Target Range
VDA Surrogate, 1,2-Dichloroethane, d4	90.7	70. - 131.
VDA Surrogate, Toluene d8	91.7	83. - 115.
VDA Surrogate, 4-Bromofluorobenzene	81.4	73. - 119.
VDA Surrogate, Dibromofluoromethane	113.	72. - 130.
BHA Surr., Nitrobenzene-d5	70.0	35. - 115.
BHA Surrogate, 2-Fluorobiphenyl	63.8	43. - 116.
BHA Surrogate, Terphenyl d14	39.6	20. - 130.

Report Approved By:

Michael H. Dunn

Report Date: 2/17/98

Theodore J. Duello, Ph.D., Q.A. Officer
Michael H. Dunn, M.S., Technical Director
Danny R. Hale, M.S., Laboratory Director



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ANALYTICAL REPORT

DIRECTOR U.S. ARMY CORPS ENG. 5394
CESAD LABORATORY
611 SOUTH COBB DRIVE
MARIETTA, GA 30060-3172

Sample Location: 34757 106-QA-TB
HUNTER ARMY AIRFIELD

Lab Number: 98-A009303

Date Collected: 1/28/98

Date Received: 1/30/98

Time Collected:

Time Received: 9:00

Sampler: BOBBI THORN

Sample type: Water

Organics Reference Data

VOA Blank	VB0204
3M Blank	20200WB
3C Tune, VOA	BFB0204
3C/MS Tune, BNA	DF0131
Calibration Check, VOA	VS0204
Calibration Check, BNA	CC0131

VOLATILE ORGANICS

Analyte	Result	Flag	DF	Units	Date	Time	Analyst	Method
Acetone	10.0	U	1	ug/l	2/ 4/98	19:36	J. Haley	8260B
Benzene	2.0	U	1	ug/l	2/ 4/98	19:36	J. Haley	8260B
Bromobenzene	2.0	U	1	ug/l	2/ 4/98	19:36	J. Haley	8260B
Bromochloromethane	2.0	U	1	ug/l	2/ 4/98	19:36	J. Haley	8260B
Bromoform	2.0	U	1	ug/l	2/ 4/98	19:36	J. Haley	8260B
Bromomethane	2.0	U	1	ug/l	2/ 4/98	19:36	J. Haley	8260B
2-Butanone	10.0	U	1	ug/l	2/ 4/98	19:36	J. Haley	8260B
n-Butylbenzene	2.0	U	1	ug/l	2/ 4/98	19:36	J. Haley	8260B
sec-Butylbenzene	2.0	U	1	ug/l	2/ 4/98	19:36	J. Haley	8260B
t-Butylbenzene	2.0	U	1	ug/l	2/ 4/98	19:36	J. Haley	8260B
Carbon disulfide	2.0	U	1	ug/l	2/ 4/98	19:36	J. Haley	8260B
Carbon tetrachloride	2.0	U	1	ug/l	2/ 4/98	19:36	J. Haley	8260B
Chlorobenzene	2.0	U	1	ug/l	2/ 4/98	19:36	J. Haley	8260B
Chloroethane	2.0	U	1	ug/l	2/ 4/98	19:36	J. Haley	8260B
1,1-Dichloroethylvinylether	2.0	U	1	ug/l	2/ 4/98	19:36	J. Haley	8260B
Chloroform	2.0	U	1	ug/l	2/ 4/98	19:36	J. Haley	8260B
Chloromethane	2.0	U	1	ug/l	2/ 4/98	19:36	J. Haley	8260B
2-Chlorotoluene	2.0	U	1	ug/l	2/ 4/98	19:36	J. Haley	8260B
4-Chlorotoluene	2.0	U	1	ug/l	2/ 4/98	19:36	J. Haley	8260B
1,2-Dibromo-3-chloropropane	10.0	U	1	ug/l	2/ 4/98	19:36	J. Haley	8260B



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ANALYTICAL REPORT

Laboratory Number: 98-A009303

Sample ID: 34757 106-QA-TB

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VOLATILE ORGANICS

Analyte	Result	Flag	DF	Units	Date	Time	Analyst	Method
Dibromochloromethane	2.0	U	1	ug/l	2/ 4/98	19:36	J. Haley	8260B
1,2-Dibromoethane	2.0	U	1	ug/l	2/ 4/98	19:36	J. Haley	8260B
Dibromomethane	2.0	U	1	ug/l	2/ 4/98	19:36	J. Haley	8260B
1,2-Dichlorobenzene	2.0	U	1	ug/l	2/ 4/98	19:36	J. Haley	8260B
1,3-Dichlorobenzene	2.0	U	1	ug/l	2/ 4/98	19:36	J. Haley	8260B
1,4-Dichlorobenzene	2.0	U	1	ug/l	2/ 4/98	19:36	J. Haley	8260B
Dichlorodifluoromethane	2.0	U	1	ug/l	2/ 4/98	19:36	J. Haley	8260B
1,1-Dichloroethane	2.0	U	1	ug/l	2/ 4/98	19:36	J. Haley	8260B
1,2-Dichloroethane	2.0	U	1	ug/l	2/ 4/98	19:36	J. Haley	8260B
1,1-Dichloroethene	2.0	U	1	ug/l	2/ 4/98	19:36	J. Haley	8260B
cis-1,2-Dichloroethene	2.0	U	1	ug/l	2/ 4/98	19:36	J. Haley	8260B
trans-1,2-Dichloroethene	2.0	U	1	ug/l	2/ 4/98	19:36	J. Haley	8260B
1,2-Dichloropropane	2.0	U	1	ug/l	2/ 4/98	19:36	J. Haley	8260B
1,3-Dichloropropane	2.0	U	1	ug/l	2/ 4/98	19:36	J. Haley	8260B
1,1-Dichloropropane	2.0	U	1	ug/l	2/ 4/98	19:36	J. Haley	8260B
1,1-Dichloropropene	2.0	U	1	ug/l	2/ 4/98	19:36	J. Haley	8260B
cis-1,3-Dichloropropene	2.0	U	1	ug/l	2/ 4/98	19:36	J. Haley	8260B
trans-1,3-Dichloropropene	2.0	U	1	ug/l	2/ 4/98	19:36	J. Haley	8260B
Ethylbenzene	2.0	U	1	ug/l	2/ 4/98	19:36	J. Haley	8260B
Hexachlorobutadiene	2.0	U	1	ug/l	2/ 4/98	19:36	J. Haley	8260B
2-Hexanone	10.0	U	1	ug/l	2/ 4/98	19:36	J. Haley	8260B
Isopropylbenzene	2.0	U	1	ug/l	2/ 4/98	19:36	J. Haley	8260B
4-Isopropyltoluene	2.0	U	1	ug/l	2/ 4/98	19:36	J. Haley	8260B
4-Methyl-2-pentanone	10.0	U	1	ug/l	2/ 4/98	19:36	J. Haley	8260B
Methylene chloride	2.0	U	1	ug/l	2/ 4/98	19:36	J. Haley	8260B
Naphthalene	2.0	U	1	ug/l	2/ 4/98	19:36	J. Haley	8260B
n-Propylbenzene	2.0	U	1	ug/l	2/ 4/98	19:36	J. Haley	8260B
Styrene	2.0	U	1	ug/l	2/ 4/98	19:36	J. Haley	8260B
1,1,1,2-Tetrachloroethane	2.0	U	1	ug/l	2/ 4/98	19:36	J. Haley	8260B
1,1,2,2-Tetrachloroethane	2.0	U	1	ug/l	2/ 4/98	19:36	J. Haley	8260B
Tetrachloroethene	2.0	U	1	ug/l	2/ 4/98	19:36	J. Haley	8260B
Toluene	2.0	U	1	ug/l	2/ 4/98	19:36	J. Haley	8260B
1,2,3-Trichlorobenzene	2.0	U	1	ug/l	2/ 4/98	19:36	J. Haley	8260B
1,2,4-Trichlorobenzene	2.0	U	1	ug/l	2/ 4/98	19:36	J. Haley	8260B
1,1,1-Trichloroethane	2.0	U	1	ug/l	2/ 4/98	19:36	J. Haley	8260B
1,1,2-Trichloroethane	2.0	U	1	ug/l	2/ 4/98	19:36	J. Haley	8260B
Trichloroethene	2.0	U	1	ug/l	2/ 4/98	19:36	J. Haley	8260B
1,2,3-Trichloropropane	2.0	U	1	ug/l	2/ 4/98	19:36	J. Haley	8260B
1,3,5-Trimethylbenzene	2.0	U	1	ug/l	2/ 4/98	19:36	J. Haley	8260B
1,3,5-Trimethylbenzene	2.0	U	1	ug/l	2/ 4/98	19:36	J. Haley	8260B
Vinyl chloride	2.0	U	1	ug/l	2/ 4/98	19:36	J. Haley	8260B
Xylenes	2.0	U	1	ug/l	2/ 4/98	19:36	J. Haley	8260B
Bromodichloromethane	2.0	U	1	ug/l	2/ 4/98	19:36	J. Haley	8260B
Trichlorofluoromethane	2.0	U	1	ug/l	2/ 4/98	19:36	J. Haley	8260B



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ANALYTICAL REPORT

Laboratory Number: 98-A009303

Sample ID: 34757 106-QA-TB

Page 3

Surrogate	% Recovery	Target Range
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VDA Surrogate, 1,2-Dichloroethane, d4	92.5	70. - 131.
VDA Surrogate, Toluene d8	96.0	83. - 115.
VDA Surrogate, 4-Bromofluorobenzene	77.2	73. - 119.
VDA Surrogate, Dibromofluoromethane	111.	72. - 130.

Report Approved By:

Michael H. Dunn

Report Date: 2/17/98

Theodore J. Duello, Ph.D., Q.A. Officer
Michael H. Dunn, M.S., Technical Director
Danny B. Hale, M.S., Laboratory Director



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PROJECT QUALITY CONTROL DATA

DIRECTOR U.S. ARMY CORPS ENG. 5394

Report Number: 98-A009304

Sample I.D.: METHOD BLANK

Lab Project: 90495

Project:

Date Received: 1/30/98

* Organics Spike/Duplicate Results **

Compound	%Recovery	Target Range	Precision RPD	Target Range
1,1-Dichloroethene	140.	61 - 145	2.0	0 - 14
Trichloroethene	115.	71 - 120	11.0	0 - 14
Benzene	119.	76 - 127	10.0	0 - 11
Toluene	120.	76 - 125	10.0	0 - 13
M-xylene	105.	75 - 130	1.0	0 - 13
Phenol	74.	12 - 116	8.0	0 - 42
p-Chlorophenol	74.	48 - 121	10.0	0 - 40
1,4-Dichlorobenzene	72.	23 - 116	11.3	0 - 28
N-Nitroso-di-n-propylamine	95.	38 - 148	5.1	0 - 38
1,2,4-Trichlorobenzene	76.	27 - 121	9.2	0 - 28
p-Chloro-3-methylphenol	85.	50 - 124	5.3	0 - 42
Acenaphthene	81.	49 - 119	6.2	0 - 31
p-Nitrophenol	82.	24 - 127	6.6	0 - 50
1,4-Dinitrotoluene	85.	46 - 147	2.0	0 - 38
Pentachlorophenol	74.	26 - 137	7.5	0 - 50
Pyrene	84.	32 - 132	5.9	0 - 31

* Volatile Organics Method Blank Results ***

Compound	Result	Flag	Units	Method
Acetone	10.0	U	ug/l	8260B
Benzene	2.0	U	ug/l	8260B
Bromobenzene	2.0	U	ug/l	8260B
Bromochloromethane	2.0	U	ug/l	8260B
Bromoform	2.0	U	ug/l	8260B
Bromomethane	2.0	U	ug/l	8260B
2-Butanone	10.0	U	ug/l	8260B
n-Butylbenzene	2.0	U	ug/l	8260B
sec-Butylbenzene	2.0	U	ug/l	8260B
t-Butylbenzene	2.0	U	ug/l	8260B
Carbon disulfide	2.0	U	ug/l	8260B
Carbon tetrachloride	2.0	U	ug/l	8260B



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PROJECT QUALITY CONTROL DATA

DIRECTOR U. S. ARMY CORPS ENG. 5394

Report Number: 98-A009304

Sample I.D.: METHOD BLANK

Lab Project: 90495

Project:

Date Received: 1/30/98

** Volatile Organics Method Blank Results ***

Compound	Result	Flag	Units	Method
Chlorobenzene	2.0	U	ug/l	8260B
Chloroethane	2.0	U	ug/l	8260B
2-Chloroethylvinylether	2.0	U	ug/l	8260B
Chloroform	2.0	U	ug/l	8260B
Chloromethane	2.0	U	ug/l	8260B
2-Chlorotoluene	2.0	U	ug/l	8260B
4-Chlorotoluene	2.0	U	ug/l	8260B
1,2-Dibromo-3-chloropropane	10.0	U	ug/l	8260B
Dibromochloromethane	2.0	U	ug/l	8260B
1,2-Dibromoethane	2.0	U	ug/l	8260B
Dibromomethane	2.0	U	ug/l	8260B
1,2-Dichlorobenzene	2.0	U	ug/l	8260B
1,3-Dichlorobenzene	2.0	U	ug/l	8260B
1,4-Dichlorobenzene	2.0	U	ug/l	8260B
Dichlorodifluoromethane	2.0	U	ug/l	8260B
1,1-Dichloroethane	2.0	U	ug/l	8260B
1,2-Dichloroethane	2.0	U	ug/l	8260B
1,1-Dichloroethene	2.0	U	ug/l	8260B
cis-1,2-Dichloroethene	2.0	U	ug/l	8260B
trans-1,2-Dichloroethene	2.0	U	ug/l	8260B
1,2-Dichloropropane	2.0	U	ug/l	8260B
1,3-Dichloropropane	2.0	U	ug/l	8260B
2,2-Dichloropropane	2.0	U	ug/l	8260B
1,1-Dichloropropene	2.0	U	ug/l	8260B
cis-1,3-Dichloropropene	2.0	U	ug/l	8260B
trans-1,3-Dichloropropene	2.0	U	ug/l	8260B
Ethylbenzene	2.0	U	ug/l	8260B
Hexachlorobutadiene	2.0	U	ug/l	8260B
2-Hexanone	10.0	U	ug/l	8260B
Isopropylbenzene	2.0	U	ug/l	8260B
4-Propyltoluene	2.0	U	ug/l	8260B
4-Methyl-2-pentanone	10.0	U	ug/l	8260B
Methylene chloride	10.8		ug/l	8260B
Naphthalene	2.0	U	ug/l	8260B
n-Propylbenzene	2.0	U	ug/l	8260B
Styrene	2.0	U	ug/l	8260B

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Phone 1-615-726-0177

PROJECT QUALITY CONTROL DATA

DIRECTOR U.S. ARMY CORPS ENG. 5394

Report Number: 98-A009304

Sample I.D.: METHOD BLANK

Lab Project: 90495

Project:

Date Received: 1/30/98

**** Volatile Organics Method Blank Results *****

Compound	Result	Flag	Units	Method
1,1,1,2-Tetrachloroethane	2.0	U	ug/l	8260B
1,1,2,2-Tetrachloroethane	2.0	U	ug/l	8260B
Tetrachloroethene	2.0	U	ug/l	8260B
Toluene	2.0	U	ug/l	8260B
1,2,3-Trichlorobenzene	2.0	U	ug/l	8260B
1,2,4-Trichlorobenzene	2.0	U	ug/l	8260B
1,1,1-Trichloroethane	2.0	U	ug/l	8260B
1,1,2-Trichloroethane	2.0	U	ug/l	8260B
Trichloroethene	2.0	U	ug/l	8260B
1,2,3-Trichloropropane	2.0	U	ug/l	8260B
1,2,4-Trimethylbenzene	2.0	U	ug/l	8260B
1,3,5-Trimethylbenzene	2.0	U	ug/l	8260B
Vinyl chloride	2.0	U	ug/l	8260B
Xylenes	2.0	U	ug/l	8260B
Bromodichloromethane	2.0	U	ug/l	8260B
Trichlorofluoromethane	2.0	U	ug/l	8260B

**** Semi-Volatile Organics Method Blank Results *****

Compound	Result	Flag	Units	Method
Naphthalene	5.0	U	ug/l	8270
Acenaphthene	5.0	U	ug/l	8270
Anthracene	5.0	U	ug/l	8270
Fluoranthene	5.0	U	ug/l	8270
Fluorene	5.0	U	ug/l	8270
Pyrene	5.0	U	ug/l	8270
Benzo(a)anthracene	5.0	U	ug/l	8270
Benzo(a)pyrene	5.0	U	ug/l	8270
Benzo(b)fluoranthene	5.0	U	ug/l	8270
Benzo(k)fluoranthene	5.0	U	ug/l	8270
Chrysene	5.0	U	ug/l	8270
Dibenzo(a,h)anthracene	5.0	U	ug/l	8270
Indeno(1,2,3-cd)pyrene	5.0	U	ug/l	8270
Acenaphthylene	5.0	U	ug/l	8270
Benzo(g,h,i)perylene	5.0	U	ug/l	8270



SPECIALIZED ASSAYS, INC.

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Nashville, TN 37204-0566
Phone 1-615-726-0177

PROJECT QUALITY CONTROL DATA

DIRECTOR U.S. ARMY CORPS ENG. 5394

Report Number: 98-A009304

Sample I.D.: METHOD BLANK

Lab Project: 90495

Project:

Date Received: 1/30/98

* Semi-Volatile Organics Method Blank Results ***

Compound	Result	Flag	Units	Method
benanthrene	5.0	U	ug/l	8270
-Methylnapthalene	5.0	U	ug/l	8270
-Methylnapthalene	5.0	U	ug/l	8270

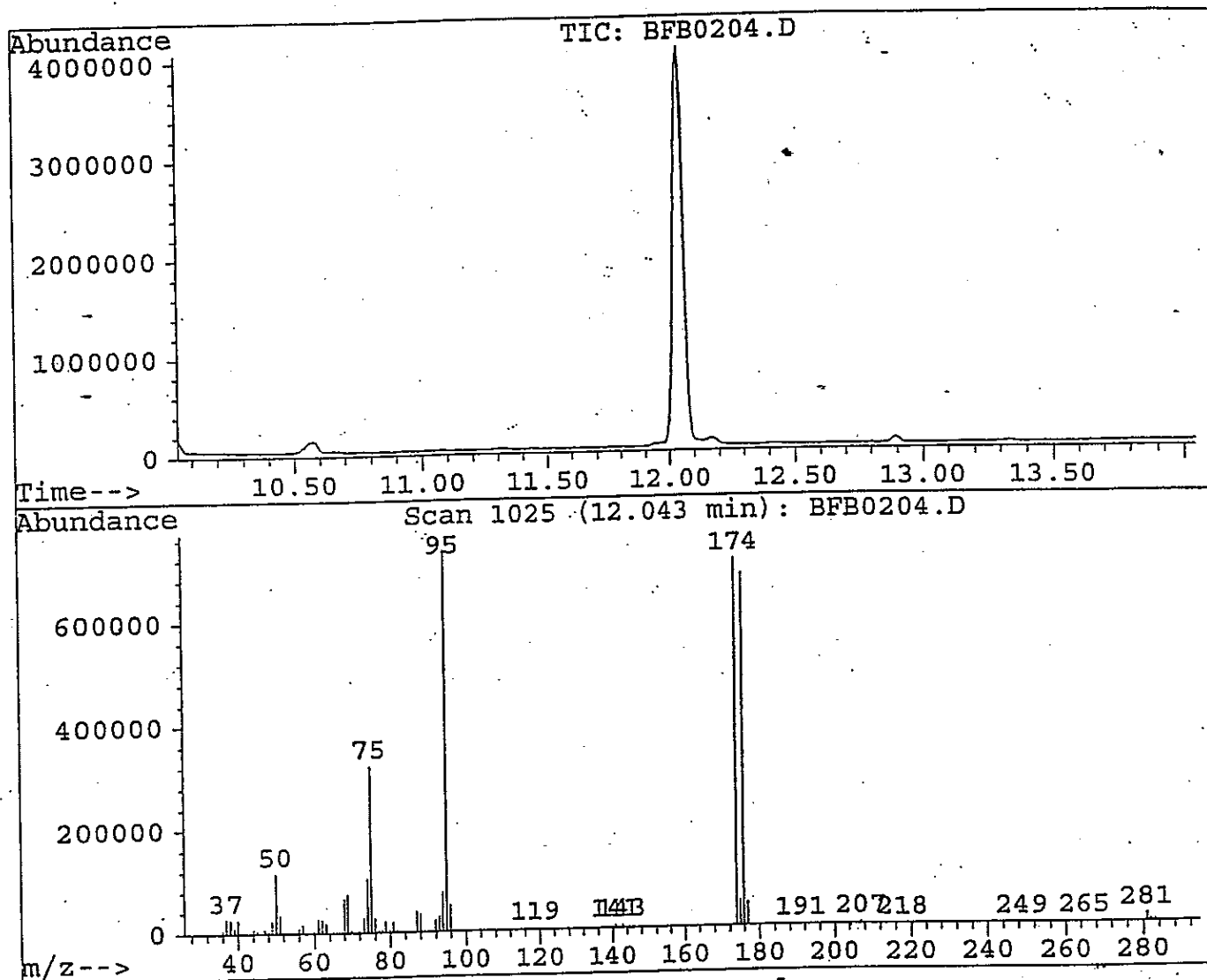
Paul A. Smith

BFB

Data File : C:\HPCHEM\1\DATA\BFB0204.D
 Acq On : 4 Feb 98 4:44 pm
 Sample : TUNE HP-2
 Misc :

Vial: 1
 Operator: hp-2
 Inst : 5972
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8260.M
 Title : 8260 volatile organics PLUS



Peak Apex is scan: 1025

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	15.8	116584	PASS
75	95	30	60	43.8	322432	PASS
95	95	100	100	100.0	736384	PASS
96	95	5	9	6.8	50184	PASS
173	174	0	2	0.0	0	PASS
174	95	50	100	96.4	710208	PASS
175	174	5	9	6.9	49080	PASS
176	174	95	101	96.0	681536	PASS
177	176	5	9	6.6	45072	PASS

Data File : C:\HPCHEM\1\DATA\VS0204.D
 Acq On : 4 Feb 98 5:13 pm
 Sample : CON CAL HP-2
 Misc :

Vial: 1
 Operator: hp-2
 Inst : 5972 - In
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8260.M
 Title : 8260.volatile organics PLUS
 Last Update : Wed Feb 04 18:05:35 1998
 Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 20% Max. R.T. Dev : 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 400%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev (min)
1 I	Pentafluorobenzene	1.000	1.000	0.0	269	0.03
2 T	Dichlorodifluoromethane	1.230	0.994	19.2	251	0.02
3 P	Chloromethane	0.632	0.909	-43.7#	451#	0.02
4 C	Vinyl Chloride	0.887	0.834	6.0	286	0.00
5 T	Bromomethane	0.536	0.509	5.1	302	0.03
6 T	Chloroethane	0.431	0.522	-21.1#	388	0.02
7 T	Trichlorofluoromethane	2.027	1.423	29.8#	219	0.03
8 T	Acrolein	0.072	0.055	23.6#	244	0.01
9 T	Acetone	0.071	0.064	9.4	278	0.02
10 T	Diethyl Ether	0.540	0.529	2.0	311	0.03
11 CM	1,1-Dichloroethene	0.800	0.792	1.0	313	0.03
12 T	Iodomethane	0.632	0.640	-1.3	297	0.03
13 T	Acrylonitrile	0.502	0.428	14.9	270	0.03
14 T	Methylene Chloride	0.889	1.004	-12.9	336	0.04
15 T	Carbon Disulfide	2.023	2.340	-15.7	368	0.03
16 T	trans-1,2-Dichloroethene	1.235	1.163	5.8	291	0.03
17 T	Methyl-t-butyl ether	2.195	1.832	16.6	260	0.03
18 P	1,1-Dichloroethane	1.375	1.376	-0.1	328	0.03
19 T	Vinyl Acetate	1.467	1.450	1.2	315	0.03
20 T	2-Butanone	0.087	0.099	-13.3	312	0.03
21 T	Diisopropyl ether	1.823	2.483	-36.2#	431#	0.03
22 T	cis-1,2-Dichloroethene	1.101	1.237	-12.4	334	0.03
23 T	Bromochloromethane	0.732	0.780	-6.6	337	0.03
24 C	Chloroform	1.903	1.887	0.9	312	0.03
25 T	2,2-Dichloropropane	1.447	1.311	9.4	276	0.03
26 S	1,2-Dichloroethane-d4	1.312	1.133	13.7	231	0.03
27 S	Dibromofluoromethane	1.103	1.126	-2.1	276	0.03
28 T	1,2-Dichloroethane	1.724	1.224	29.0#	223	0.03
29 T	1,1,1-Trichloroethane	1.858	1.465	21.1#	248	0.04
30 T	1,1-Dichloropropene	1.098	1.246	-13.5	352	0.03
31 I	1,4-Difluorobenzene	1.000	1.000	0.0	357	0.03
32 T	Carbon Tetrachloride	4.470	2.687	39.9#	240	0.04
33 M	Benzene	5.890	6.311	-7.2	444#	0.03
34 T	Dibromomethane	1.926	1.303	32.4#	267	0.03
35 I	2,3-Dichloro-1-Propene	2.437	2.149	11.8	364	0.03
36 C	1,2-Dichloropropane	1.497	1.664	-11.2	425#	0.03
37 M	Trichloroethene	2.646	2.209	16.5	326	0.03
38 T	Bromodichloromethane	3.706	2.613	29.5#	284	0.03
39 T	2-Chloroethyl vinyl ether	0.150	0.166	-11.2	425#	0.03
40 T	cis-1,3-Dichloropropene	2.648	2.609	1.5	379	0.03
41 T	4-Methyl-2-pentanone	0.600	0.432	28.0#	273	0.03

(#) = Out of Range

VS0204.D 8260.M

Wed Feb 04 18:14:14 1998

Page 1

Data File : C:\HPCHEM\1\DATA\VS0204.D
 Acq On : 4 Feb 98 5:13 pm
 Sample : CON CAL HP-2
 Misc :

Vial: 1
 Operator: hp-2
 Inst : 5972 - In
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8260.M
 Title : 8260 volatile organics PLUS
 Last Update : Wed Feb 04 18:05:35 1998
 Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 20% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 400%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev (min)
42 T	trans-1,3-Dichloropropene	2.810	2.134	24.1#	294	0.03
43 T	1,1,2-Trichloroethane	1.939	1.543	20.4#	307	0.03
44 S	Toluene-d8	5.337	5.256	1.5	332	0.03
45 CM	Toluene	7.638	6.706	12.2	353	0.03
46 T	1,3-Dichloropropane	2.703	2.557	5.4	373	0.03
47 I	Ethyl Methacrylate	3.647	3.197	12.4	352	0.03
48 T	2-Hexanone	0.613	0.426	30.6#	292	0.03
49 I	Chlorobenzene-d5	1.000	1.000	0.0	328	0.03
50 T	Dibromochloromethane	1.543	1.107	28.3#	276	0.03
51 T	1,2-Dibromoethane	1.647	1.109	32.7#	266	0.02
52 T	Tetrachloroethene	1.350	1.293	4.2	364	0.03
53 T	1,1,1,2-Tetrachloroethane	1.503	1.213	19.2	324	0.03
54 PM	Chlorobenzene	3.399	2.836	16.6	325	0.02
55 C	Ethylbenzene	5.516	4.603	16.5	311	0.03
56 T	m,p-Xylene	4.498	3.738	16.9	311	0.03
57 T	Bromoform	1.414	0.994	29.7#	268	0.03
58 T	Styrene	3.181	2.716	14.6	322	0.02
59 T	o-Xylene	4.686	3.844	18.0	316	0.03
60 P	1,1,2,2-Tetrachloroethane	1.553	1.315	15.3	332	0.03
61 T	1,2,3-Trichloropropane	1.747	1.313	24.8#	285	0.03
62 T	trans-1,4-Dichloro-2-butene	1.747	1.313	24.8#	285	0.03
63 I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	367	0.03
64 I	Ethylbenzene-d10	1.000	1.000	0.0	319	0.03
65 T	Isopropylbenzene	1.142	0.992	13.1	305	0.03
66 S	Bromofluorobenzene	0.339	0.312	7.8	291	0.03
67 T	Bromobenzene	0.428	0.427	0.1	360	0.02
68 T	Propylbenzene	1.369	1.283	6.2	334	0.02
69 T	2-Chlorotoluene	0.866	0.779	10.0	321	0.13
70 T	4-Chlorotoluene	0.872	0.779	10.7	328	0.03
71 T	1,3,5-Trimethylbenzene	0.981	0.847	13.6	304	0.03
72 T	t-Butylbenzene	0.828	0.721	12.9	302	0.03
73 T	1,2,4-trimethylbenzene	1.005	0.831	17.3	288	0.03
74 T	sec-Butylbenzene	1.241	1.151	7.3	339	0.02
75 T	1,3-Dichlorobenzene	0.607	0.587	3.3	349	0.02
76 T	1,4-Dichlorobenzene	0.621	0.591	4.9	350	0.03
77 T	1,2-Dichlorobenzene	0.565	0.544	3.6	351	0.03
78 T	p-Isopropyltoluene	1.026	0.938	8.5	317	0.03
79 T	Butylbenzene	0.961	0.884	8.1	324	0.02
80 T	1,2-Dibromo-3-chloropropane	0.092	0.054	41.2#	211	0.03

(#) = Out of Range

Data File : C:\HPCHEM\1\DATA\VS0204.D
Acq On : 4 Feb 98 5:13 pm
Sample : CON CAL HP-2
Misc :

Vial: 1
Operator: hp-2
Inst : 5972 - In
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8260.M
Title : 8260 volatile organics PLUS
Last Update : Wed Feb 04 18:05:35 1998
Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 20% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 400%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
81 T	1,2,4-Trichlorobenzene	0.264	0.263	0.6	340	0.03
82 T	Naphthalene	0.593	0.422	28.9#	232	0.03
83 T	Hexachlorobutadiene	0.192	0.197	-2.5	355	0.03
84 T	1,2,3-Trichlorobenzene	0.252	0.246	2.3	338	0.03

Data File : C:\HPCHEM\1\DATA\DF0131.D

Vial: 2

Acq On : 31 Jan 1998 6:43 pm

Operator:

Sample : tune

Inst : hp-9

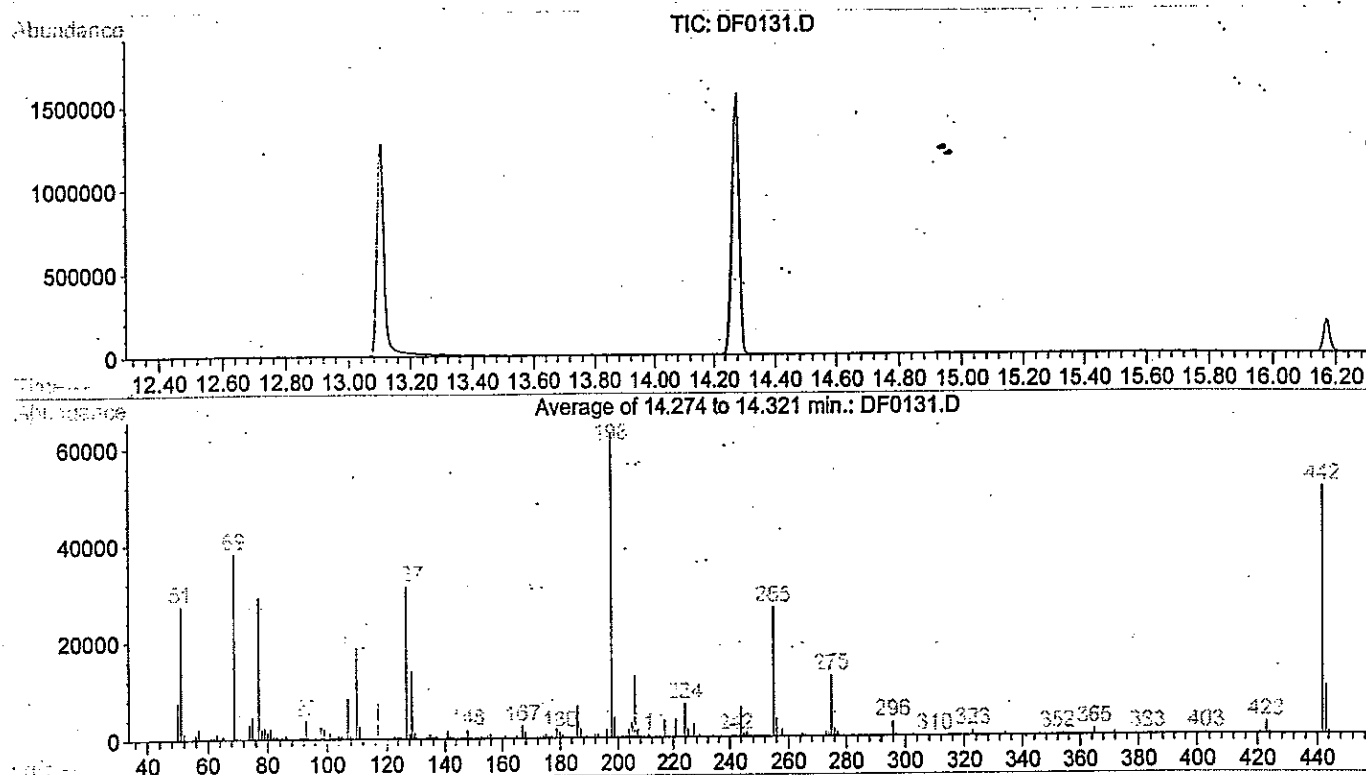
Misc :

Multiplr: 1.00

MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\8270.M (RTE Integrator)

Title : SW846 METHOD 8270



Spectrum Information: Average of 14.274 to 14.321 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	43.9	27406	PASS
68	69	0.00	2	0.1	25	PASS
69	198	0.00	100	61.1	38172	PASS
70	69	0.00	2	0.2	94	PASS
127	198	30	60	50.2	31375	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	62457	PASS
199	198	5	9	6.7	4159	PASS
275	198	10	30	20.1	12540	PASS
365	198	1	100	2.1	1322	PASS
441	442	0.01	100	0.1	59	PASS
442	198	40	100	82.1	51249	PASS
443	442	15	23	19.6	10046	PASS

Data File : C:\HPCHEM\1\DATA\CC0131.D
 Acq On : 31 Jan 1998 7:19 pm
 Sample : 50ppm con cal
 Misc :
 MS Integration Params: rteint.p

Vial: 3
 Operator:
 Inst : hp-9
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8270.M (RTE Integrator)
 Title : SW846 METHOD 8270
 Last Update : Tue Jan 27 14:48:24 1998
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 10% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1 I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	47	-0.07
2 T	Pyridine	0.646	0.548	15.2	43	-0.10
3 T	N-Nitroso-dimethylamine	0.623	0.401	35.6	30	-0.10
4 S	2-Fluorophenol	0.804	0.735	8.6	43	-0.07
5	Aniline	1.199	1.108	7.6	44	-0.06
6	Bis-(2-Chloroethyl)ether	0.840	0.801	4.6	47	-0.06
7 S	Phenol-d5	0.937	0.967	-3.2	50	-0.05
8 MC	Phenol	0.991	0.898	9.4	45	-0.05
9 s	2-Chlorophenol-d4	0.781	0.767	1.8	47	-0.06
10 M	2-Chlorophenol	0.819	0.797	2.7	46	-0.06
	1,3-Dichlorobenzene	0.841	0.857	-1.9	48	-0.07
MC	1,4-Dichlorobenzene	0.909	0.924	-1.7	49	-0.07
13 s	1,2-Dichlorobenzene-d4	0.888	0.905	-1.9	49	-0.07
14	1,2-Dichlorobenzene	0.809	0.864	-6.8	53	-0.06
15	Benzyl Alcohol	0.651	0.742	-14.0	55	-0.05
16	Bis-(2-chloroisopropyl)ethe	0.244	0.243	0.4	48	-0.06
17	2-Methylphenol	0.727	0.846	-16.4	56	-0.05
18	Hexachloroethane	0.316	0.241	23.7	37	-0.06
19 MP	N-Nitroso-di-n-propylamine	0.584	0.683	-17.0	55	-0.05
20	3,4-Methylphenol	0.877	1.048	-19.5	56	-0.04
21 I	Naphthalene-d8	1.000	1.000	0.0	56	-0.05
22 S	Nitrobenzene-d5	0.395	0.395	0.0	57	-0.05
23	Nitrobenzene	0.396	0.412	-4.0	61	-0.05
24	Isophorone	0.841	0.805	4.3	57	-0.05
25 C	2-Nitrophenol	0.221	0.235	-6.3	60	-0.05
26	2,4-Dimethylphenol	0.387	0.394	-1.8	60	-0.04
27	Bis-(2-chloroethoxy)methane	0.476	0.471	1.1	59	-0.04
28 C	2,4-Dichlorophenol	0.285	0.283	0.7	57	-0.04
29	Benzoic acid	0.155	0.182	-17.4	66	-0.02
30 M	1,2,4-Trichlorobenzene	0.290	0.296	-2.1	59	-0.05
31	Naphthalene	0.986	0.998	-1.2	60	-0.05
	4-chloroaniline	0.462	0.475	-2.8	60	-0.04
33 C	Hexachlorobutadiene	0.168	0.177	-5.4	60	-0.05
34	4-Chloro-3-methylphenol	0.298	0.333	-11.7	62	-0.02
35	2-Methylnaphthalene	0.603	0.640	-6.1	57	-0.04
36	1-Methylnaphthalene	0.664	0.670	-0.9	59	-0.04

TRANSMITTAL OF SAD LABORATORY REPORT(S)

TO: Commander, Savannah District
US Army Corps of Engineers
ATTN: CESAS-PM-H
Mr. Brent Rose
P.O. Box 889
Savannah, GA 31402-0889

FROM: Director (CESAS-EN-L)
SAD Laboratory
USACE
611 South Cobb Drive
Marietta, GA 30060-3112

PROJECT: Hunter AAF -
Fire Training Area

REQN NO: W33SJG80797577
W.O. NO: 8400

SUBJECT: Analytical Testing Results

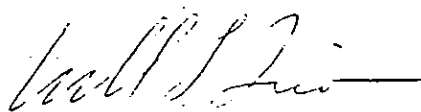
1. Enclosed is our report of analytical test results and chain of custody forms for samples collected on 29 January 1998 from Hunter AAF.
2. If you have any questions, please call Mr. Blaise Willis at 770-919-5295 or me at 770-919-3990.

SUBMITTED BY:

SIGNATURE:

DATE:

WILLIAM L. TISON, P. E.
Director, SAD Laboratory



30 Mar 1998

South Atlantic Division Laboratory
U. S. Army Corps of Engineers
611 South Cobb Drive
Marietta, Georgia 30060-3112

District - SAVANNAH

HUNTER ARMY AIRFIELD, GA

Date Received - 98/01/30

Requisition - W33SJG70930225

Date Reported - 98/02/19 09:53:07

Work Order - 8211 Job Number - 5433

Lab # Field ID

Date Sampled

Time Sampled

34777 106T-002-SWW-QA

98/01/29

00:00

Test Performed

Result

Units

Tested
By

Test
Date

VOLATILE ORGANICS GC/MS

*

SPA

98/02/05

SEMIVOLATILE ORGANICS GC/MS

*

SPA

98/02/03

*NOTE: See Attached

Sampled by District Personnel

Checked by: JW

Signed by:

Blaise Willis

Blaise Willis
Chemist

Sheet 1 of 3

Lab # Field ID

Date Sampled

Time Sampled

34778 106-SWW-QA-TB

98/01/29

00:00

Test Performed

Result

Units

Tested

By

Test

Date

VOLATILE ORGANICS GC/MS

*

SPA

98/02/05

*NOTE: See Attached

Sampled by District Personnel

Checked by: JW

Signed by:

Blaise Willis

Blaise Willis
Chemist

Sheet 2 of 3

Lab # Field ID

34779 HEAP#5-ES001-QA

Date Sampled

98/01/29

Time Sampled

00:00

Test Performed	Result	Units	Tested By	Test Date
VOLATILE ORGANICS GC/MS	*		SPA	98/02/03
SEMIVOLATILE ORGANICS GC/MS	*		SPA	98/02/05
TRPH	20200.0	MG/KG	SPA	98/02/04
TOTAL SOLIDS, % OF WET	90.00	%	SPA	98/02/05
ARSENIC TCLP	< 0.100	PPM	SPA	98/02/06
BARIUM TCLP	< 1.000	PPM	SPA	98/02/06
CADMIUM TCLP	< 0.100	PPM	SPA	98/02/06
CHROMIUM TCLP	< 0.500	PPM	SPA	98/02/06
LEAD TCLP	< 0.500	PPM	SPA	98/02/06
MERCURY TCLP	< 0.0100	PPM	SPA	98/02/04
SELENIUM TCLP	< 0.100	PPM	SPA	98/02/06
SILVER TCLP	< 0.100	PPM	SPA	98/02/06
TCLP EXTRACTION	*		SPA	98/02/02

*NOTE: See Attached

Sampled by District Personnel

Checked by: WWS

Signed by:

Blaise Willis

Blaise Willis
Chemist

Sheet 3 of 3

Proj. No.

Project Name: Hunter Army Fire Training Area
Contract NO. DAHA21-87-C-0042

Hunter Army Airfield

Sampler: (Signature)

Michael Ricci 912-757-1606

Date Time Pres. Gr. Cm. Site Code/Sample Number

No. of Conts.

BTEX-8260

PAH-8270

VOCs-8260

TCLP metals

TPH-4/8.1

TAT _____

Remarks:

SAD NO.

MATRIX

1/25/88 ✓ 106T-002-SW-W-QA

3

✓

✓

✓

✓

✓

1/25/88 ✓ 106T-SW-W-QA-TB

2

✓

✓

✓

✓

✓

1/24/89 114g #5-E5001-QA

2

✓

✓

✓

✓

✓

Sampler Relinquished by: (Sig.) Date/Time Received by: (Sig.) Date/Time Hazards Associated with Samples

Michael Ricci

1/29/88

Michael Ricci

1/30/88
0936

Relinquished by: (Sig.)

Date/Time

Received by: (Sig.)

Date/Time

Relinquished by: (Sig.)

Date/Time

Received for Laboratory by: (Sig.)

Date/Time

Remarks at time of receipt.

Custody Seal No.

Lab Case No.

Cooler Receipt Form

Job # 5433No. of Coolers 1Return Cooler Project: HunterDate Received: 11/30/98Date cooler opened: 11/30/98 by (print) B. Seibin
(sign) B. Se1. Did cooler come with a shipping slip?
If yes, enter carrier & air bill number here: FE 801466199398Yes ☒ No2. Were custody seals on outside of cooler:
How many & where: seal date: seal name: Yes ☒ No

3. Were custody seals unbroken upon receipt?

Yes ☒ No

4. Did you screen samples for radioactivity?

Yes ☒ No

5. Were custody papers sealed in a plastic bag & taped to inside lid?

Yes ☒ No

6. Were custody papers filled out properly (ink, signed, etc.)?

Yes ☒ No

7. Did you sign custody papers in the appropriate place?

Yes ☒ No8. Was project identifiable from custody papers? If yes enter project name
at the top of this form.Yes ☒ No9. If required, was enough ice used: 4⁰ Type: Yes ☒ NoDate logged-in: 11/30/98 by (print) B. Seibin
(sign) B. Se1. Describe cooler packing: bubble wrapYes ☒ No

2. Were all bottles sealed in separate plastic bags?

Yes ☒ No

3. Did all bottles arrive unbroken & labels in good condition?

Yes ☒ No

4. Were all bottle labels complete (ID, date, time, signature, pres., etc.)

Yes ☒ No

5. Were all bottle labels agree with custody papers?

Yes ☒ No6. Were correct containers used for the tests indicated? needed septa lid for soil
BTEXYes ☒ No

7. Were correct preservatives added to samples?

Yes ☒ No

8. Was a sufficient amount of sample sent for tests?

Yes ☒ No9. Were bubbles absent in Volatile samples? If no, list Field ID: 10. Number of days from sample date when received in the lab 111. Was project manager called & status discussed?
If yes, give details on the bottom of this form.Yes ☒ NoWho was called? By whom? Date:

**SPECIALIZED ASSAYS, INC.**

2960 Foster Creighton Dr.
P.O. Box 40566
Nashville, TN 37204-0566
Phone 1-615-726-0177

ANALYTICAL REPORT

DIRECTOR U. S. ARMY CORPS ENG. 5394
CESAD LABORATORY
611 SOUTH COBB DRIVE
MARIETTA, GA 30060-3172

Sample Location: 34777 106T-002-SWW-QA
HUNTER ARMY AIRFIELD

Lab Number: 98-A010070

Date Collected: 1/29/98

Date Received: 1/31/98

Time Collected:

Time Received: 8:30

Sampler: BOBBI THORN

Sample type: Water

Organics Reference Data

VOA Blank	VB0205
3M Blank	20346WBB
3M Tune, VOA	BFB0205
GC/MS Tune, BNA	DF0203
Calibration Check, VOA	VS0205
Calibration Check, BNA	CC0203

VOLATILE ORGANICS

Analyte	Result	Flag	DF	Units	Date	Time	Analyst	Method
Benzene	384.		10	ug/l	2/11/98	10:47	J. Haley	8260B
Ethylbenzene	19.0		1	ug/l	2/ 5/98	20:28	J. Haley	8260B
Toluene	323.		10	ug/l	2/11/98	10:47	J. Haley	8260B
Xylenes	201.		1	ug/l	2/ 5/98	20:28	J. Haley	8260B

SEMIVOLATILE ORGANICS and PESTICIDE/PCB's

Analyte	Result	Flag	DF	Units	Date	Time	Analyst	Method
Naphthalene	5.00	U	1	ug/l	2/ 3/98	23:32	Cornelius	8270
Acenaphthene	5.00	U	1	ug/l	2/ 3/98	23:32	Cornelius	8270
Anthracene	5.00	U	1	ug/l	2/ 3/98	23:32	Cornelius	8270
Fluoranthene	5.00	U	1	ug/l	2/ 3/98	23:32	Cornelius	8270
Pyrene	5.00	U	1	ug/l	2/ 3/98	23:32	Cornelius	8270
Benzo(a)anthracene	5.00	U	1	ug/l	2/ 3/98	23:32	Cornelius	8270
Benzo(a)pyrene	5.00	U	1	ug/l	2/ 3/98	23:32	Cornelius	8270
Benzo(b)fluoranthene	5.00	U	1	ug/l	2/ 3/98	23:32	Cornelius	8270

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ANALYTICAL REPORT

Laboratory Number: 98-A010070
Sample ID: 34777 106T-002-SWW-QA

Page 2

SEMIVOLATILE ORGANICS and PESTICIDE/PCB's

Analyte	Result	Flag	DF	Units	Date	Time	Analyst	Method
Benzo(k)fluoranthene	5.00	U	1	ug/l	2/ 3/98	23:32	Cornelius	8270
Chrysene	5.00	U	1	ug/l	2/ 3/98	23:32	Cornelius	8270
Dibenzo(a,h)anthracene	5.00	U	1	ug/l	2/ 3/98	23:32	Cornelius	8270
Indeno(1,2,3-cd)pyrene	5.00	U	1	ug/l	2/ 3/98	23:32	Cornelius	8270
Acenaphthylene	5.00	U	1	ug/l	2/ 3/98	23:32	Cornelius	8270
Benzo(g,h,i)perylene	5.00	U	1	ug/l	2/ 3/98	23:32	Cornelius	8270
Phenanthrene	5.00	U	1	ug/l	2/ 3/98	23:32	Cornelius	8270
1-Methylnapthalene	5.00	U	1	ug/l	2/ 3/98	23:32	Cornelius	8270
2-Methylnapthalene	5.00	U	1	ug/l	2/ 3/98	23:32	Cornelius	8270

Sample Extraction Data

Parameter	Wt/Vol Extracted	Extract Vol	Date	Analyst	Method
BHA's	990. ml	1.0 ml	2/ 3/98	A. Dufalino	3510

Surrogate	% Recovery	Target Range
VDA Surrogate, 1,2-Dichloroethane, d4	94.9	70. - 131.
VDA Surrogate, Toluene d8	103.	83. - 115.
VDA Surrogate, 4-Bromofluorobenzene	93.9	73. - 119.
VDA Surrogate, Dibromofluoromethane	95.2	72. - 130.
BNA Surr., Nitrobenzene-d5	62.4	35. - 115.
BNA Surrogate, 2-Fluorobiphenyl	49.3	43. - 116.
BNA Surrogate, Terphenyl d14	21.4	20. - 130.

Report Approved By: Michael H. Dunn Report Date: 2/17/98

Theodore J. Duello, Ph.D., Q.A. Officer
Michael H. Dunn, M.S., Technical Director
Danny B. Hale, M.S., Laboratory Director

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ANALYTICAL REPORT

DIRECTOR U. S. ARMY CORPS ENG. 5394
CESAD LABORATORY
611 SOUTH COBB DRIVE
MARIETTA, GA 30060-3172

Sample Location: 3477B 106-SWW-QA-TB
HUNTER ARMY AIRFIELD

Lab Number: 98-A010071

Date Collected: 1/29/98

Date Received: 1/31/98

Time Collected:

Time Received: 8:30

Sampler: BOBBI THORN

Sample type: Water

Organics Reference Data

VOA Blank
CIS Tune, VOA
Calibration Check, VOA

VB0211
BFB0211
VS0211

VOLATILE ORGANICS

Analyte	Result	Flag	DF	Units	Date	Time	Analyst	Method
Acetone	10.0	U	1	ug/l	2/ 5/98	21:05	J. Haley	8260B
Benzene	2.0	U	1	ug/l	2/ 5/98	21:05	J. Haley	8260B
Bromobenzene	2.0	U	1	ug/l	2/ 5/98	21:05	J. Haley	8260B
Bromochloromethane	2.0	U	1	ug/l	2/ 5/98	21:05	J. Haley	8260B
Bromoform	2.0	U	1	ug/l	2/ 5/98	21:05	J. Haley	8260B
Bromomethane	2.0	U	1	ug/l	2/ 5/98	21:05	J. Haley	8260B
2-Butanone	10.0	U	1	ug/l	2/ 5/98	21:05	J. Haley	8260B
n-Butylbenzene	2.0	U	1	ug/l	2/ 5/98	21:05	J. Haley	8260B
sec-Butylbenzene	2.0	U	1	ug/l	2/ 5/98	21:05	J. Haley	8260B
t-Butylbenzene	2.0	U	1	ug/l	2/ 5/98	21:05	J. Haley	8260B
Carbon disulfide	2.0	U	1	ug/l	2/ 5/98	21:05	J. Haley	8260B
Carbon tetrachloride	2.0	U	1	ug/l	2/ 5/98	21:05	J. Haley	8260B
Chlorobenzene	2.0	U	1	ug/l	2/ 5/98	21:05	J. Haley	8260B
Chloroethane	2.0	U	1	ug/l	2/ 5/98	21:05	J. Haley	8260B
2-Chloroethylvinylether	2.0	U	1	ug/l	2/ 5/98	21:05	J. Haley	8260B
Chloroform	2.0	U	1	ug/l	2/ 5/98	21:05	J. Haley	8260B
Chloromethane	2.0	U	1	ug/l	2/ 5/98	21:05	J. Haley	8260B
Chlorotoluene	2.0	U	1	ug/l	2/ 5/98	21:05	J. Haley	8260B
4-Chlorotoluene	2.0	U	1	ug/l	2/ 5/98	21:05	J. Haley	8260B
1,2-Dibromo-3-chloropropane	10.0	U	1	ug/l	2/ 5/98	21:05	J. Haley	8260B
Dibromochloromethane	2.0	U	1	ug/l	2/ 5/98	21:05	J. Haley	8260B
1,2-Dibromoethane	2.0	U	1	ug/l	2/ 5/98	21:05	J. Haley	8260B
Dibromomethane	2.0	U	1	ug/l	2/ 5/98	21:05	J. Haley	8260B

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ANALYTICAL REPORT

Laboratory Number: 98-A010071
Sample ID: 34778 106-SWW-QA-TB

Page 2

VOLATILE ORGANICS

Analyte	Result	Flag	DF	Units	Date	Time	Analyst	Method
1,2-Dichlorobenzene	2.0	U	1	ug/l	2/ 5/98	21:05	J. Haley	8260B
1,3-Dichlorobenzene	2.0	U	1	ug/l	2/ 5/98	21:05	J. Haley	8260B
1,4-Dichlorobenzene	2.0	U	1	ug/l	2/ 5/98	21:05	J. Haley	8260B
Dichlorodifluoromethane	2.0	U	1	ug/l	2/ 5/98	21:05	J. Haley	8260B
1,1-Dichloroethane	2.0	U	1	ug/l	2/ 5/98	21:05	J. Haley	8260B
1,2-Dichloroethane	2.0	U	1	ug/l	2/ 5/98	21:05	J. Haley	8260B
1,1-Dichloroethene	2.0	U	1	ug/l	2/ 5/98	21:05	J. Haley	8260B
cis-1,2-Dichloroethene	2.0	U	1	ug/l	2/ 5/98	21:05	J. Haley	8260B
trans-1,2-Dichloroethene	2.0	U	1	ug/l	2/ 5/98	21:05	J. Haley	8260B
1,2-Dichloropropane	2.0	U	1	ug/l	2/ 5/98	21:05	J. Haley	8260B
1,3-Dichloropropane	2.0	U	1	ug/l	2/ 5/98	21:05	J. Haley	8260B
2,2-Dichloropropane	2.0	U	1	ug/l	2/ 5/98	21:05	J. Haley	8260B
1,1-Dichloropropene	2.0	U	1	ug/l	2/ 5/98	21:05	J. Haley	8260B
trans-1,3-Dichloropropene	2.0	U	1	ug/l	2/ 5/98	21:05	J. Haley	8260B
cis-1,3-Dichloropropene	2.0	U	1	ug/l	2/ 5/98	21:05	J. Haley	8260B
Ethylbenzene	2.0	U	1	ug/l	2/ 5/98	21:05	J. Haley	8260B
Hexachlorobutadiene	2.0	U	1	ug/l	2/ 5/98	21:05	J. Haley	8260B
2-Hexanone	10.0	U	1	ug/l	2/ 5/98	21:05	J. Haley	8260B
Isopropylbenzene	2.0	U	1	ug/l	2/ 5/98	21:05	J. Haley	8260B
4-Isopropyltoluene	2.0	U	1	ug/l	2/ 5/98	21:05	J. Haley	8260B
4-Methyl-2-pentanone	10.0	U	1	ug/l	2/ 5/98	21:05	J. Haley	8260B
Methylene chloride	2.0	U	1	ug/l	2/ 5/98	21:05	J. Haley	8260B
Naphthalene	2.0	U	1	ug/l	2/ 5/98	21:05	J. Haley	8260B
n-Propylbenzene	2.0	U	1	ug/l	2/ 5/98	21:05	J. Haley	8260B
Styrene	2.0	U	1	ug/l	2/ 5/98	21:05	J. Haley	8260B
1,1,1,2-Tetrachloroethane	2.0	U	1	ug/l	2/ 5/98	21:05	J. Haley	8260B
1,1,2,2-Tetrachloroethane	2.0	U	1	ug/l	2/ 5/98	21:05	J. Haley	8260B
Tetrachloroethene	2.0	U	1	ug/l	2/ 5/98	21:05	J. Haley	8260B
Toluene	2.0	U	1	ug/l	2/ 5/98	21:05	J. Haley	8260B
1,2,3-Trichlorobenzene	2.0	U	1	ug/l	2/ 5/98	21:05	J. Haley	8260B
1,2,4-Trichlorobenzene	2.0	U	1	ug/l	2/ 5/98	21:05	J. Haley	8260B
1,1,1-Trichloroethane	2.0	U	1	ug/l	2/ 5/98	21:05	J. Haley	8260B
1,1,2-Trichloroethane	2.0	U	1	ug/l	2/ 5/98	21:05	J. Haley	8260B
Trichloroethene	2.0	U	1	ug/l	2/ 5/98	21:05	J. Haley	8260B
1,2,3-Trichloropropane	2.0	U	1	ug/l	2/ 5/98	21:05	J. Haley	8260B
1,2,4-Trimethylbenzene	2.0	U	1	ug/l	2/ 5/98	21:05	J. Haley	8260B
1,3,5-Trimethylbenzene	2.0	U	1	ug/l	2/ 5/98	21:05	J. Haley	8260B
vinyl chloride	2.0	U	1	ug/l	2/ 5/98	21:05	J. Haley	8260B
Alkenes	2.0	U	1	ug/l	2/ 5/98	21:05	J. Haley	8260B
Bromodichloromethane	2.0	U	1	ug/l	2/ 5/98	21:05	J. Haley	8260B
Trichlorofluoromethane	2.0	U	1	ug/l	2/ 5/98	21:05	J. Haley	8260B

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ANALYTICAL REPORT

Laboratory Number: 98-A010071
Sample ID: 34778 106-SWW-QA-TB

Page 3

Surrogate	% Recovery	Target Range
UOA Surrogate, 1,2-Dichloroethane, d4	99.2	70. - 131.
UOA Surrogate, Toluene d8	99.4	83. - 115.
UOA Surrogate, 4-Bromofluorobenzene	96.7	73. - 119.
UOA Surrogate, Dibromofluoromethane	98.2	72. - 130.

Report Approved By: Michael H. Dunn Report Date: 2/17/98

Theodore J. Duello, Ph.D., Q.A. Officer
Michael H. Dunn, M.S., Technical Director
Danny B. Hale, M.S., Laboratory Director

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ANALYTICAL REPORT

DIRECTOR U.S. ARMY CORPS ENG. 5394
CESAD LABORATORY
611 SOUTH COBB DRIVE
MARIETTA, GA 30060-3172

Sample Location: 34779 HEAP#5-ES001-QA Lab Number: 98-A010072
HUNTER ARMY AIRFIELD

Sampler: BOBBI THORN

Date Collected: 1/29/98

Date Received: 1/31/98

Time Collected:

Time Received: B:30

Sample type: Soil

Organics Reference Data

VOA Blank	VR0203
B ⁺ Blank	203B15RB
G. S. Tune, VOA	BFB0203
GC/MS Tune, BNA	DF0205
Calibration Check, VOA	VS0203
Calibration Check, BNA	CC0205

Percent solids: 90.

VOLATILE ORGANICS

Analyte	Result	Flag	DF	Units	Date	Time	Analyst	Method
Benzene	278.	U	125	ug/kg	2/ 3/98	20:02	G. Norton	8260B
Ethylbenzene	278.	U	125	ug/kg	2/ 3/98	20:02	G. Norton	8260B
Toluene	278.	U	125	ug/kg	2/ 3/98	20:02	G. Norton	8260B
Xylenes	278.	U	125	ug/kg	2/ 3/98	20:02	G. Norton	8260B

SEMIVOLATILE ORGANICS and PESTICIDE/PCB's

Analyte	Result	Flag	DF	Units	Date	Time	Analyst	Method
Phthalene	1830	U	10	ug/kg	2/ 5/98	18:51	M. Goodrich	8270
Acenaphthene	1830	U	10	ug/kg	2/ 5/98	18:51	M. Goodrich	8270
Anthracene	1830	U	10	ug/kg	2/ 5/98	18:51	M. Goodrich	8270
Fluoranthene	1830	U	10	ug/kg	2/ 5/98	18:51	M. Goodrich	8270
Fluorene	1830	U	10	ug/kg	2/ 5/98	18:51	M. Goodrich	8270
Pyrene	1830	U	10	ug/kg	2/ 5/98	18:51	M. Goodrich	8270

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ANALYTICAL REPORT

Laboratory Number: 98-A010072
Sample ID: 34779 HEAP#5-ES001-QA

Page 2

SEMIVOLATILE ORGANICS and PESTICIDE/PCB's

Analyte	Result	Flag	DF	Units	Date	Time	Analyst	Method
Benzo(a)anthracene	1830	U	10	ug/kg	2/ 5/98	18:51	M. Goodrich	8270
Benzo(a)pyrene	1830	U	10	ug/kg	2/ 5/98	18:51	M. Goodrich	8270
Benzo(b)fluoranthene	1830	U	10	ug/kg	2/ 5/98	18:51	M. Goodrich	8270
Benzo(k)fluoranthene	1830	U	10	ug/kg	2/ 5/98	18:51	M. Goodrich	8270
Chrysene	1830	U	10	ug/kg	2/ 5/98	18:51	M. Goodrich	8270
Dibenzo(a,h)anthracene	1830	U	10	ug/kg	2/ 5/98	18:51	M. Goodrich	8270
Indeno(1,2,3-cd)pyrene	1830	U	10	ug/kg	2/ 5/98	18:51	M. Goodrich	8270
Acenaphthylene	1830	U	10	ug/kg	2/ 5/98	18:51	M. Goodrich	8270
Benzo(g,h,i)perylene	1830	U	10	ug/kg	2/ 5/98	18:51	M. Goodrich	8270
Phenanthrene	1830	U	10	ug/kg	2/ 5/98	18:51	M. Goodrich	8270
1-Methylnapthalene	1830	U	10	ug/kg	2/ 5/98	18:51	M. Goodrich	8270
2-Methylnapthalene	1830	U	10	ug/kg	2/ 5/98	18:51	M. Goodrich	8270
E fraction, BNA's	Completed			ug/kg	2/ 3/98	14:21	A. Bufalino	3550

UNDERGROUND STORAGE TANK RESULTS

Analyte	Result	Units	PQL	Dil Factor	Date	Time	Analyst	Method
Petroleum Hydrocarbons	20200	mg/kg	11.1	1	2/ 4/98	14:53	Ciesielski	418.1M

TCLP Results

Analyte	Result	Units	Reg Limit	Matrix Spike Recovery (%)	Date	Method
Arsenic	< 0.10	mg/l	5.0	111	2/ 6/98	6010B
Barium	< 1.00	mg/l	100	98	2/ 6/98	6010B
Cadmium	< 0.10	mg/l	1.0	107	2/ 6/98	6010B
Chromium	< 0.50	mg/l	5.0	101	2/ 6/98	6010B
Lead	< 0.50	mg/l	5.0	105	2/ 6/98	6010B
Mercury	< 0.010	mg/l	0.20	112	2/ 4/98	7470A
Selenium	< 0.10	mg/l	1.0	117	2/ 6/98	6010B
Silver	< 0.10	mg/l	5.0	94	2/ 6/98	6010B
TCLP Extraction	Completed				2/ 2/98	1311

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ANALYTICAL REPORT

Laboratory Number: 98-A010072
Sample ID: 34779 HEAP#5-ES001-QA

Page 3

Sample Extraction Data

Parameter	Wt/Vol Extracted	Extract Vol	Date	Analyst	Method
BHA's	30.0 gm	1.0 mL	2/ 3/98	A. DuFalino	3550

Surrogate	% Recovery	Target Range
UDA Surrogate, 1,2-Dichloroethane, d4	101.	62. - 147.
UDA Surrogate, Toluene d8	104.	84. - 117.
UDA Surrogate, 4-Bromofluorobenzene	86.7	64. - 126.
UDA Surrogate, Dibromofluoromethane	92.8	77. - 118.

Report Approved By: Michael H. Dunn Report Date: 2/17/98

Theodore J. Duello, Ph.D., Q.A. Officer
Michael H. Dunn, M.S., Technical Director
Danny B. Hale, M.S., Laboratory Director

**SPECIALIZED ASSAYS, INC.**

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PROJECT QUALITY CONTROL DATA

DIRECTOR U.S. ARMY CORPS ENG. 5394

Report Number: 98-A010073

Sample I.D.: METHOD BLANK

Lab Project: 90627

Project: 303736 CALL#0672

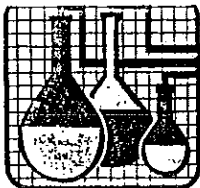
Date Received: 1/31/98

**** Organics Spike/Duplicate Results ****

Compound	%Recovery	Target Range	Precision RPD	Target Range
1,1-Dichloroethene	140.	61 - 145	2.0	0 - 14
Trichloroethene	115.	71 - 120	11.0	0 - 14
Benzene	119.	76 - 127	10.0	0 - 11
Toluene	120.	76 - 125	10.0	0 - 13
C. xylene	105.	75 - 130	1.0	0 - 13
Phenol	77.	12 - 116	4.6	0 - 42
2-Chlorophenol	84.	48 - 121	3.9	0 - 40
1,4-Dichlorobenzene	79.	23 - 116	0.4	0 - 28
N-Nitroso-di-n-propylamine	107.	38 - 148	4.8	0 - 38
1,2,4-Trichlorobenzene	89.	27 - 121	7.0	0 - 28
4-Chloro-3-methylphenol	83.	50 - 124	2.1	0 - 42
Acenaphthene	85.	49 - 119	0.8	0 - 31
4-Nitrophenol	76.	24 - 127	2.2	0 - 50
2,4-Dinitrotoluene	72.	46 - 147	1.9	0 - 38
Pentachlorophenol	70.	26 - 137	2.6	0 - 50
Pyrene	86.	32 - 132	1.6	0 - 31

**** Volatile Organics Method Blank Results *****

Compound	Result	Flag	Units	Method
Acetone	10.0	U	ug/l	8260B
Benzene	2.0	U	ug/l	8260B
Bromobenzene	2.0	U	ug/l	8260B
Bromochloromethane	2.0	U	ug/l	8260B
Bromoform	2.0	U	ug/l	8260B
Bromomethane	2.0	U	ug/l	8260B
2-butanone	10.0	U	ug/l	8260B
n-butylbenzene	2.0	U	ug/l	8260B
sec-butylbenzene	2.0	U	ug/l	8260B
t-butylbenzene	2.0	U	ug/l	8260B
Carbon disulfide	2.0	U	ug/l	8260B
Carbon tetrachloride	2.0	U	ug/l	8260B

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Nashville, TN 37204-0566
Phone 1-615-726-0177

PROJECT QUALITY CONTROL DATA

DIRECTOR U. S. ARMY CORPS ENG. 5394

Report Number: 98-A010073

Sample I. D.: METHOD BLANK

Lab Project: 90627

Project: 303736 CALL#0672

Date Received: 1/31/98

**** Volatile Organics Method Blank Results *****

Compound	Result	Flag	Units	Method
Chlorobenzene	2.0	U	ug/l	8260B
Chloroethane	2.0	U	ug/l	8260B
2-Chloroethylvinylether	2.0	U	ug/l	8260B
Chloroform	2.0	U	ug/l	8260B
Chloromethane	2.0	U	ug/l	8260B
2-Chlorotoluene	2.0	U	ug/l	8260B
4-Chlorotoluene	2.0	U	ug/l	8260B
1,2-Dibromo-3-chloropropane	10.0	U	ug/l	8260B
Dibromochloromethane	2.0	U	ug/l	8260B
1,2-Dibromoethane	2.0	U	ug/l	8260B
Dibromomethane	2.0	U	ug/l	8260B
1,2-Dichlorobenzene	2.0	U	ug/l	8260B
1,3-Dichlorobenzene	2.0	U	ug/l	8260B
1,4-Dichlorobenzene	2.0	U	ug/l	8260B
Dichlorodifluoromethane	2.0	U	ug/l	8260B
1,1-Dichloroethane	2.0	U	ug/l	8260B
1,2-Dichloroethane	2.0	U	ug/l	8260B
1,1-Dichloroethene	2.0	U	ug/l	8260B
cis-1,2-Dichloroethene	2.0	U	ug/l	8260B
trans-1,2-Dichloroethene	2.0	U	ug/l	8260B
1,2-Dichloropropane	2.0	U	ug/l	8260B
1,3-Dichloropropane	2.0	U	ug/l	8260B
2,2-Dichloropropane	2.0	U	ug/l	8260B
1,1-Dichloropropene	2.0	U	ug/l	8260B
cis-1,3-Dichloropropene	2.0	U	ug/l	8260B
trans-1,3-Dichloropropene	2.0	U	ug/l	8260B
Ethylbenzene	2.0	U	ug/l	8260B
Hexachlorobutadiene	2.0	U	ug/l	8260B
2-Hexanone	10.0	U	ug/l	8260B
Isopropylbenzene	2.0	U	ug/l	8260B
Isopropyltoluene	2.0	U	ug/l	8260B
4-Methyl-2-pentanone	10.0	U	ug/l	8260B
Methylene chloride	2.0	U	ug/l	8260B
Naphthalene	2.0	U	ug/l	8260B
n-Propylbenzene	2.0	U	ug/l	8260B
Styrene	2.0	U	ug/l	8260B

**SPECIALIZED ASSAYS, INC.**

2960 Foster Creighton Dr.
P.O. Box 40566
Nashville, TN 37204-0566
Phone 1-615-726-0177

PROJECT QUALITY CONTROL DATA

DIRECTOR U.S. ARMY CORPS ENG. 5394

Report Number: 98-A010073

Sample I.D.: METHOD BLANK

Lab Project: 90627

Project: 303736 CALL#0672

Date Received: 1/31/98

**** Volatile Organics Method Blank Results *****

Compound	Result	Flag	Units	Method
1,1,1,2-Tetrachloroethane	2.0	U	ug/l	8260B
1,1,2,2-Tetrachloroethane	2.0	U	ug/l	8260B
Tetrachloroethene	2.0	U	ug/l	8260B
Toluene	2.0	U	ug/l	8260B
1,2,3-Trichlorobenzene	2.0	U	ug/l	8260B
1,4-Trichlorobenzene	2.0	U	ug/l	8260B
1,1-Trichloroethane	2.0	U	ug/l	8260B
1,1,2-Trichloroethane	2.0	U	ug/l	8260B
Trichloroethene	2.0	U	ug/l	8260B
1,2,3-Trichloropropane	2.0	U	ug/l	8260B
1,2,4-Trimethylbenzene	2.0	U	ug/l	8260B
1,3,5-Trimethylbenzene	2.0	U	ug/l	8260B
Vinyl chloride	2.0	U	ug/l	8260B
Xylenes	2.0	U	ug/l	8260B
Bromodichloromethane	2.0	U	ug/l	8260B
Trichlorofluoromethane	2.0	U	ug/l	8260B

**** Semi-Volatile Organics Method Blank Results *****

Compound	Result	Flag	Units	Method
Naphthalene	5.0	U	ug/l	8270
Acenaphthene	5.0	U	ug/l	8270
Anthracene	5.0	U	ug/l	8270
Fluoranthene	5.0	U	ug/l	8270
Fluorene	5.0	U	ug/l	8270
Pyrene	5.0	U	ug/l	8270
Benzo(a)anthracene	5.0	U	ug/l	8270
Benzo(a)pyrene	5.0	U	ug/l	8270
Benzo(b)fluoranthene	5.0	U	ug/l	8270
Benzo(k)fluoranthene	5.0	U	ug/l	8270
Chrysene	5.0	U	ug/l	8270
Dibenzo(a,h)anthracene	5.0	U	ug/l	8270
Indeno(1,2,3-cd)pyrene	5.0	U	ug/l	8270
Acenaphthylene	5.0	U	ug/l	8270
Benzo(g,h,i)perylene	5.0	U	ug/l	8270



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PROJECT QUALITY CONTROL DATA

DIRECTOR U.S. ARMY CORPS ENG. 5394

Report Number: 98-A010073

Sample I.D.: METHOD BLANK

Lab Project: 90627

Project: 303736 CALL#0672

Date Received: 1/31/98

* Semi-Volatile Organics Method Blank Results ***

Compound	Result	Flag	Units	Method
benanthrene	5.0	U	ug/l	8270
-Methylnapthalene	5.0	U	ug/l	8270
-Methylnapthalene	5.0	U	ug/l	8270

Met A. Ruvv

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Nashville, TN 37204-0566
Phone 1-615-726-0177

PROJECT QUALITY CONTROL DATA

DIRECTOR U. S. ARMY CORPS ENG. 5394

Report Number: 98-A010074

Sample I.D.: METHOD BLANK

Lab Project: 90627

Project: 303736 CALL#0672

Date Received: 1/31/98

**** UST Spike/Duplicate Results ****

Compound	ZRecovery	Target Range	Precision RPD	Target Range
TRPH, 418.1	99.	75 - 125	0.0	0 - 25.0

**** Organics Spike/Duplicate Results ****

Compound	ZRecovery	Target Range	Precision RPD	Target Range
1,1-Dichloroethene	93.	59 - 172	5.0	0 - 22
Trichloroethene	120.	62 - 137	6.0	0 - 24
Benzene	121.	66 - 142	7.0	0 - 21
Toluene	112.	59 - 139	4.0	0 - 21
Chlorobenzene	99.	60 - 133	2.0	0 - 21
Phenol	60.	26 - 115	7.3	0 - 35
2-Chlorophenol	63.	25 - 102	9.0	0 - 50
1,4-Dichlorobenzene	53.	28 - 104	11.4	0 - 27
Nitroso-di-n-propylamine	61.	41 - 126	7.2	0 - 38
1,2,4-Trichlorobenzene	49.	38 - 107	12.4	0 - 23
4-Chloro-3-methylphenol	56.	26 - 103	4.4	0 - 33
Acenaphthene	62.	31 - 137	6.5	0 - 19
4-Nitrophenol	46.	11 - 125	11.8	0 - 50
2,4-Dinitrotoluene	54.	28 - 100	1.7	0 - 47
Pentachlorophenol	37.	17 - 109	10.1	0 - 47
Pyrene	69.	35 - 142	1.8	0 - 36

**** Volatile Organics Method Blank Results *****

Compound	Result	Flag	Units	Method
Benzene	2.0	U	ug/kg	8260B
Ethylbenzene	2.0	U	ug/kg	8260B
Toluene	2.0	U	ug/kg	8260B
Xylenes	2.0	U	ug/kg	8260B



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Phone 1-615-726-0177

PROJECT QUALITY CONTROL DATA

DIRECTOR U. S. ARMY CORPS ENG. 5394

Report Number: 98-A010074

Sample I.D.: METHOD BLANK

Lab Project: 90627

Project: 303736 CALL#0672

Date Received: 1/31/98

* Volatile Organics Method Blank Results ***

Compound	Result	Flag	Units	Method
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* Semi-Volatile Organics Method Blank Results ***

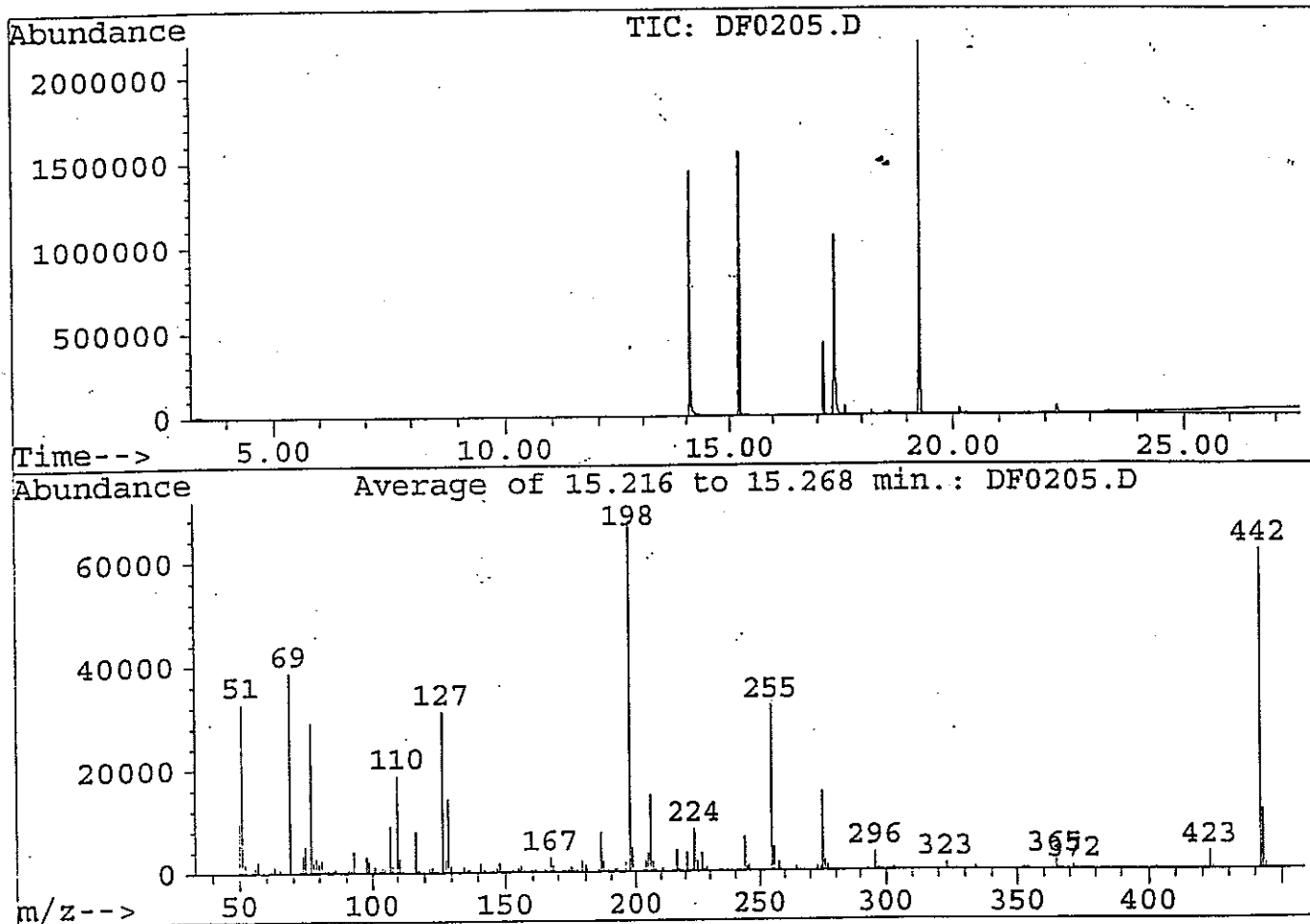
Compound	Result	Flag	Units	Method
Naphthalene	165.	U	ug/kg	8270
Anthracene	165.	U	ug/kg	8270
Fluoranthene	165.	U	ug/kg	8270
Fluorene	165.	U	ug/kg	8270
Pyrene	165.	U	ug/kg	8270
Benzo(a)anthracene	165.	U	ug/kg	8270
Benzo(a)pyrene	165.	U	ug/kg	8270
Benzo(b)fluoranthene	165.	U	ug/kg	8270
Benzo(k)fluoranthene	165.	U	ug/kg	8270
Chrysene	165.	U	ug/kg	8270
Dibenzo(a,h)anthracene	165.	U	ug/kg	8270
Indeno(1,2,3-cd)pyrene	165.	U	ug/kg	8270
Acenaphthylene	165.	U	ug/kg	8270
Benzo(g,h,i)perylene	165.	U	ug/kg	8270
Phenanthrene	165.	U	ug/kg	8270
1-Methylnaphthalene	165.	U	ug/kg	8270
2-Methylnaphthalene	165.	U	ug/kg	8270

Michael A. Rame

Data File : C:\HPCHEM\1\DATA\DF0205.D
 Acq On : 5 Feb 98 5:02 pm
 Sample : tune
 Misc :

Vial: 2
 Operator: HP-5
 Inst : 5972 - Ir
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8270.M
 Title : SW846 METHOD 8270



Peak Apex is scan: AVERAGE

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	47.9	32742	PASS
68	69	0	2	0.0	0	PASS
69	198	0	100	56.6	38627	PASS
70	69	0	2	0.0	13	PASS
127	198	30	60	45.6	31151	PASS
197	198	0	1	0.0	0	PASS
198	198	100	100	100.0	68284	PASS
199	198	5	9	6.7	4606	PASS
275	198	10	30	22.3	15257	PASS
365	198	1	100	2.6	1789	PASS
441	442	0	100	0.0	20	PASS
442	198	40	100	90.3	61647	PASS
443	442	17	23	19.0	11738	PASS

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\CC0205.D
 Acq On : 5 Feb 98 5:38 pm
 Sample : 50 ppm con cal
 Misc :

Vial: 3
 Operator: HP-5
 Inst : 5972 - In
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8270.M
 Title : SW846 METHOD 8270
 Last Update : Thu Feb 05 08:24:52 1998
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 10% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1 I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	91	-0.13
2 T	Pyridine	0.422	0.441	-4.5	88	-0.14
3 T	N-Nitroso-dimethylamine	0.248	0.259	-4.3	100	-0.13
4 S	2-Fluorophenol	0.582	0.606	-4.1	95	-0.11
5	Aniline	1.130	1.127	0.3	93	-0.13
6	Bis-(2-Chloroethyl) ether	0.921	0.912	1.0	95	-0.14
7 S	Phenol-d5	0.997	1.053	-5.6	101	-0.12
8 MC	Phenol	1.094	1.063	2.8	94	-0.13
9 S	2-Chlorophenol-d4	0.752	0.810	-7.6	105	-0.13
10 M	2-Chlorophenol	0.810	0.872	-7.6	105	-0.13
11	1,3-Dichlorobenzene	0.866	0.872	-0.6	97	-0.13
12 MC	1,4-Dichlorobenzene	0.896	0.899	-0.4	95	-0.13
13 S	1,2-Dichlorobenzene-d4	0.990	0.865	12.6	86	-0.13
14	1,2-Dichlorobenzene	0.877	0.810	7.7	91	-0.13
15	Benzyl Alcohol	0.720	0.755	-4.8	94	-0.14
16	Bis-(2-chloroisopropyl) ethe	0.127	0.122	3.7	96	0.07
17	2-Methylphenol	0.847	0.824	2.7	94	-0.12
18	Hexachloroethane	0.450	0.395	12.3	86	-0.13
19 MP	N-Nitroso-di-n-propylamine	0.687	0.645	6.1	91	-0.14
20	3,4-Methylphenol	1.115	1.086	2.6	92	-0.13
21 I	Naphthalene-d8	1.000	1.000	0.0	81	-0.13
22 S	Nitrobenzene-d5	0.462	0.427	7.5	77	-0.13
23	Nitrobenzene	0.454	0.453	0.3	84	-0.14
24	Isophorone	0.883	0.876	0.8	85	-0.15
25 C	2-Nitrophenol	0.213	0.238	-11.6	92	-0.13
26	2,4-Dimethylphenol	0.437	0.477	-9.1	91	-0.13
27	Bis-(2-chloroethoxy) methane	0.529	0.484	8.5	78	-0.13
28 C	2,4-Dichlorophenol	0.300	0.306	-1.9	84	-0.13
29	Benzoic acid	0.162	0.183	-12.6	71	-0.13
30 M	1,2,4-Trichlorobenzene	0.355	0.337	5.1	80	-0.13
31	Naphthalene	1.080	1.093	-1.2	90	-0.14
32	4-chloroaniline	0.435	0.326	25.0	61	-0.31
33 C	Hexachlorobutadiene	0.211	0.231	-9.3	92	-0.13
34	4-Chloro-3-methylphenol	0.358	0.379	-5.6	86	-0.13
35	2-Methylnaphthalene	0.661	0.704	-6.5	92	-0.13
36	1-Methylnaphthalene	0.676	0.672	0.7	87	-0.13
37 I	Acenaphthene-d10	1.000	1.000	0.0	79	-0.15
38 P	Hexachlorocyclopentadiene	0.118	0.115	2.6	70	-0.13
39 C	2,4,6-Trichlorophenol	0.415	0.435	-4.9	86	-0.13
40	2,4,5-Trichlorophenol	0.417	0.447	-7.3	85	-0.13
41 S	2-fluorobiphenyl	1.348	1.266	6.1	79	-0.14
42	2-Chloronaphthalene	1.164	1.148	1.4	82	-0.15
43	2-Nitroaniline	0.444	0.477	-7.6	84	-0.15

45		Dimethylphthalate	1.355	1.388	-2.5	86	-0.15
46		2,6-Dinitrotoluene	0.347	0.353	-1.8	82	-0.15
47		3-Nitroaniline	0.340	0.291	14.4	68	-0.17
48	MC	Acenaphthene	1.082	1.096	-1.4	86	-0.15
49	P	2,4-dinitrophenol	0.171	0.231	-35.4	88	-0.15
50		Dibenzofuran	1.600	1.584	1.0	84	-0.16
51	M	2,4-Dinitrotoluene	0.449	0.472	-5.1	85	-0.17
52	MP	4-Nitrophenol	0.238	0.266	-11.8	88	-0.15
53		Fluorene	1.255	1.229	2.1	81	-0.17
54		4-Chlorophenyl phenylether	0.676	0.700	-3.6	84	-0.16
55		Diethylphthalate	1.412	1.470	-4.1	86	-0.17
56		4-Nitroaniline	0.337	0.383	-13.6	84	-0.19
57		1,2-Diphenylhydrazine	1.724	1.645	4.5	77	-0.16
58	I	Phenanthrene-d10	1.000	1.000	0.0	75	-0.18
59		4,6-Dinitro-2-methylphenol	0.147	0.174	-18.3	84	-0.17
60	C	N-Nitroso-diphenylamine	0.449	0.454	-1.1	82	-0.17
61	S	Tribromophenol	0.114	0.123	-7.4	83	-0.17
62		4-Bromophenyl phenyl ether	0.163	0.190	-16.0	92	-0.17
63		Hexachlorobenzene	0.225	0.248	-10.0	88	-0.17
64	MC	Pentachlorophenol	0.094	0.108	-15.0	84	-0.17
65		Phenanthrene	0.925	0.922	0.3	79	-0.08
66		Anthracene	0.934	0.918	1.7	77	-0.18
67		Carbazole	0.816	0.823	-0.9	81	-0.18
68		Di-n-butyl phthalate	1.136	1.217	-7.1	86	-0.17
69	C	Fluoranthene	1.022	1.095	-7.2	86	-0.19
70	I	Chrysene-d12	1.000	1.000	0.0	81	-0.18
71		Benzidine	0.267	0.272	-1.6	73	-0.17
72	M	Pyrene	1.299	1.263	2.8	83	-0.19
73	S	Terphenyl-d14	0.845	0.882	-4.4	89	-0.18
74		Butylbenzylphthalate	0.625	0.655	-4.8	84	-0.18
75		3,3'-Dichlorobenzidine	0.361	0.363	-0.7	74	-0.19
76		Benzo(a)anthracene	1.100	1.204	-9.4	90	-0.19
77		Chrysene	0.927	0.988	-6.6	97	-0.19
78		Bis-(2-ethylhexyl)phthalate	0.881	0.876	0.5	81	-0.17
79	I	Perylene-d12	1.000	1.000	0.0	91	-0.17
80	C	Di-n-octylphthalate	1.871	1.733	7.4	82	-0.17
81		Benzo(b)fluoranthene	1.504	1.315	12.6	87	-0.22
82		Benzo(k)fluoranthene	1.172	1.131	3.5	79	-0.20
83	C	Benzo(a)pyrene	1.243	1.127	9.4	85	-0.19
84		Indeno(1,2,3-cd)pyrene	1.457	1.316	9.7	81	-0.20
85		Dibenz(a,h)anthracene	1.068	1.074	-0.5	93	-0.20
86		Benzo(g,h,i)perylene	1.295	1.131	12.7	80	-0.19

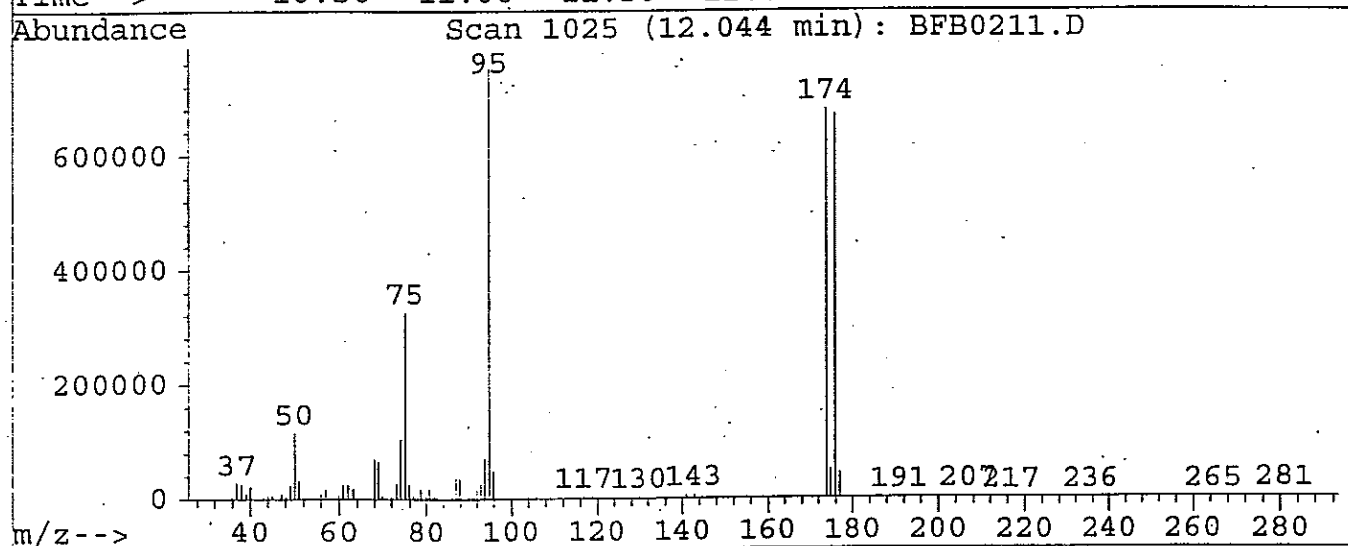
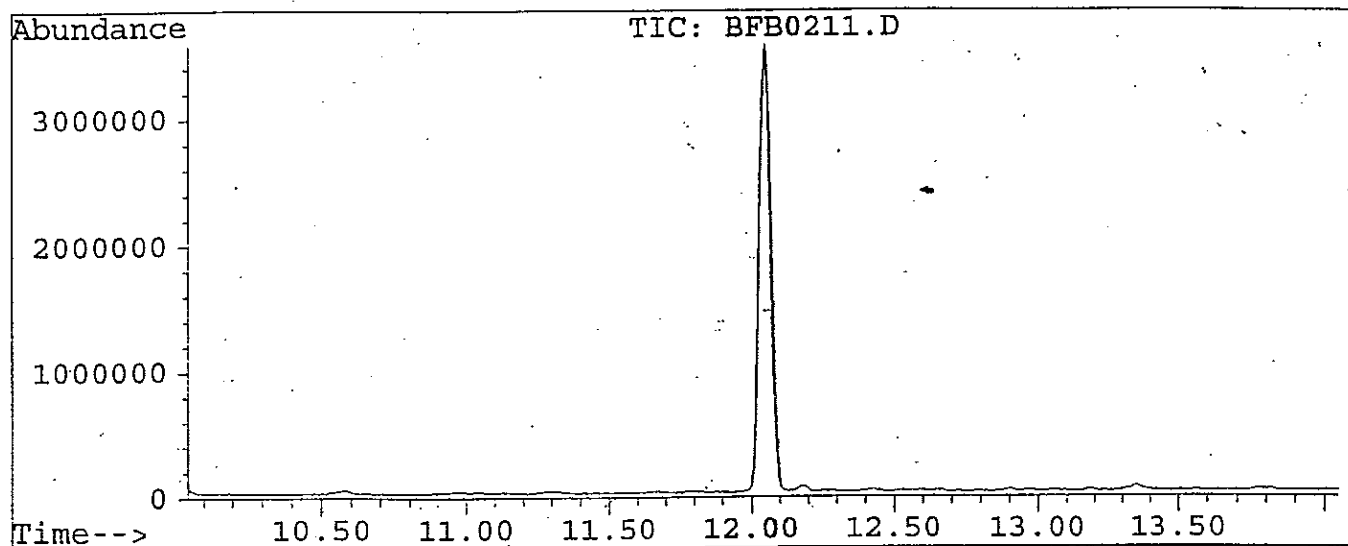
(#) = Out of Range
0500128.D 8270.M

SPCC's out = 0 CCC's out = 0
Fri Feb 06 09:11:36 1998

Data File : C:\HPCHEM\1\DATA\BFB0211.D
 Acq On : 11 Feb 98 9:13 am
 Sample : tune hp-2
 Misc :

Vial: 1
 Operator: hp-2
 Inst : 5972 - In
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8260.M
 Title : 8260 volatile organics PLUS



Peak Apex is scan: 1025

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	15.4	115720	PASS
75	95	30	60	43.3	326208	PASS
95	95	100	100	100.0	752704	PASS
96	95	5	9	6.6	49824	PASS
173	174	0	2	0.0	0	PASS
174	95	50	100	90.4	680320	PASS
175	174	5	9	7.4	50216	PASS
176	174	95	101	98.6	670592	PASS
177	176	5	9	6.5	43376	PASS

Data File : C:\HPCHEM\1\DATA\VS0211.D

Acq On : 11 Feb 98 9:37 am

Sample : con cal

Misc :

Quant Time: Feb 11 10:11 1998

Vial: 25

Operator: hp-2

Inst : 5972 - In

Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8260.M

Title : 8260 volatile organics PLUS

Last Update : Fri Feb 06 10:55:54 1998

Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	11.30	99	237540	30.00	ug/L	0.03
31) 1,4-Difluorobenzene	12.59	63	117566	30.00	ug/L	0.03
49) Chlorobenzene-d5	17.32	119	208658	30.00	ug/L	0.02
63) 1,4-Dichlorobenzene-d4	20.93	152	379919	30.00	ug/L	0.02
64) Ethylbenzene-d10	17.53	98	891032	30.00	ug/L	0.02

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recovery
26) 1,2-Dichloroethane-d4	11.32	65	256520	25.09	ug/L	83.64%
27) Dibromofluoromethane	10.61	111	263690	25.00	ug/L	83.32%
44) Toluene-d8	15.25	98	647278	32.28	ug/L	107.60%
66) Bromofluorobenzene	19.06	95	289939	31.60	ug/L	105.32%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	4.07	85	424971	56.61	ug/L	100
3) Chloromethane	4.34	50	368760	51.82	ug/L	99
4) Vinyl Chloride	4.62	62	369075	62.60	ug/L	99
5) Bromomethane	5.23	96	175260	35.89	ug/L	96
6) Chloroethane	5.46	64	208716	54.38	ug/L	98
7) Trichlorofluoromethane	6.43	101	599062	49.55	ug/L	98
8) Acrolein	6.42	56	22764	52.03	ug/L #	97
9) Acetone	6.65	58	25077	56.79	ug/L #	58
10) Diethyl Ether	6.86	59	281619	59.57	ug/L	94
11) 1,1-Dichloroethene	7.35	96	382947	54.71	ug/L	97
12) Iodomethane	7.41	142	154777	27.32	ug/L m	93
13) Acrylonitrile	7.47	53	203204	54.02	ug/L	97
14) Methylene Chloride	7.61	84	415682	50.05	ug/L	99
15) Carbon Disulfide	7.97	76	1085726	49.40	ug/L	100
16) trans-1,2-Dichloroethene	8.75	61	496514	47.79	ug/L	94
17) Methyl-t-butyl ether	8.95	73	859084	55.10	ug/L #	89
18) 1,1-Dichloroethane	9.16	63	647602	49.12	ug/L	98
19) Vinyl Acetate	9.41	43	614690	65.51	ug/L	96
20) 2-Butanone	9.89	72	34581	49.91	ug/L #	1
21) Diisopropyl ether	9.92	45	1002237	47.52	ug/L	99
22) cis-1,2-Dichloroethene	10.09	61	491353	48.56	ug/L	97
23) Bromochloromethane	10.34	130	340652	54.37	ug/L	99
24) Chloroform	10.42	83	773564	51.38	ug/L	97
25) 2,2-Dichloropropane	10.54	77	560216	53.87	ug/L	98
28) 1,2-Dichloroethane	11.44	62	517649	50.07	ug/L	99
29) 1,1,1-Trichloroethane	11.59	97	622421	51.04	ug/L	98
30) 1,1-Dichloropropene	11.88	75	546293	53.88	ug/L	97
32) Carbon Tetrachloride	12.15	117	588998	57.88	ug/L	99
33) Benzene	12.21	78	1451426	61.36	ug/L #	87
34) Dibromomethane	13.06	93	288519	57.06	ug/L	92
35) 2,3-Dichloro-1-Propene	13.16	39	462345	76.96	ug/L #	77

(#) = qualifier out of range (m) = manual integration

VS0211.D 8260.M

Wed Feb 11 10:11:49 1998

Page 1

Data File : C:\HPCHEM\1\DATA\VS0211.D

Acq On : 11 Feb 98 9:37 am

Sample : con cal

Misc :

Quant Time: Feb 11 10:11 1998

Vial: 25

Operator: hp-2

Inst : 5972 - In

Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8260.M

Title : 8260 volatile organics PLUS

Last Update : Fri Feb 06 10:55:54 1998

Response via : Multiple Level Calibration

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
36) 1,2-Dichloropropane	13.12	63	375607	58.35	ug/L #	84
37) Trichloroethene	13.18	130	494819	64.13	ug/L	91
38) Bromodichloromethane	13.24	83	560119	56.50	ug/L	100
39) 2-Chloroethyl vinyl ether	13.12	63	375607	583.51	ug/L #	57
40) cis-1,3-Dichloropropene	14.20	75	575718	58.41	ug/L	95
41) 4-Methyl-2-pentanone	14.39	58	96331	57.08	ug/L #	75
42) trans-1,3-Dichloropropene	14.84	75	502634	58.54	ug/L	97
43) 1,1,2-Trichloroethane	15.07	97	333580	59.33	ug/L	99
45) Toluene	15.35	91	1482780	61.84	ug/L	98
46) 1,3-Dichloropropane	15.41	76	518382	56.51	ug/L #	72
47) Ethyl Methacrylate	15.48	69	679242	58.62	ug/L #	90
48) 2-Hexanone	15.66	58	89269	53.57	ug/L #	77
50) Dibromochloromethane	15.79	127	402872	55.60	ug/L	99
51) 1,2-Dibromoethane	16.15	107	396392	55.19	ug/L	99
52) Tetrachloroethene	16.40	166	476699	58.99	ug/L	95
53) 1,1,1,2-Tetrachloroethane	17.25	131	432520	56.68	ug/L	95
54) Chlorobenzene	17.37	112	1080249	56.00	ug/L	93
55) Ethylbenzene	17.65	91	1749216	57.68	ug/L	99
56) m,p-Xylene	17.93	91	2654765	117.01	ug/L	97
57) Bromoform	18.07	173	366189	57.16	ug/L #	1
58) Styrene	18.39	104	1005251	55.09	ug/L	100
59) o-Xylene	18.49	91	1339603	55.37	ug/L	99
60) 1,1,2,2-Tetrachloroethane	18.47	83	456377	57.76	ug/L #	98
61) 1,2,3-Trichloropropane	18.68	75	468838	53.30	ug/L	92
62) trans-1,4-Dichloro-2-buten	18.68	75	468513	52.49	ug/L #	49
65) Isopropylbenzene	19.01	105	1640800	55.24	ug/L	99
67) Bromobenzene	19.35	77	667147	55.25	ug/L #	72
68) Propylbenzene	19.63	91	2020837	56.03	ug/L	93
69) 2-Chlorotoluene	19.77	91	1244881	57.32	ug/L #	88
70) 4-Chlorotoluene	19.88	91	1186696	53.39	ug/L #	86
71) 1,3,5-Trimethylbenzene	20.05	105	1298176	54.17	ug/L	98
72) t-Butylbenzene	20.45	119	1224098	57.74	ug/L	93
73) 1,2,4-trimethylbenzene	20.60	105	1406688	56.45	ug/L	97
74) sec-Butylbenzene	20.76	105	1821286	57.87	ug/L	97
75) 1,3-Dichlorobenzene	20.87	146	977979	60.84	ug/L	98
76) 1,4-Dichlorobenzene	20.97	146	998468	62.88	ug/L	95
77) 1,2-Dichlorobenzene	21.50	146	895374	59.45	ug/L #	88
78) p-Isopropyltoluene	21.03	119	1540816	59.09	ug/L	97
79) Butylbenzene	21.65	91	1438750	58.66	ug/L #	96
80) 1,2-Dibromo-3-chloropropan	22.25	157	93946	56.93	ug/L #	88
81) 1,2,4-Trichlorobenzene	24.71	180	432654	58.76	ug/L	98
82) Naphthalene	25.18	128	647204	52.86	ug/L	100
83) Hexachlorobutadiene	25.30	225	339976	69.15	ug/L	97
84) 1,2,3-Trichlorobenzene	25.57	180	397327	62.55	ug/L	96

(#) = qualifier out of range (m) = manual integration

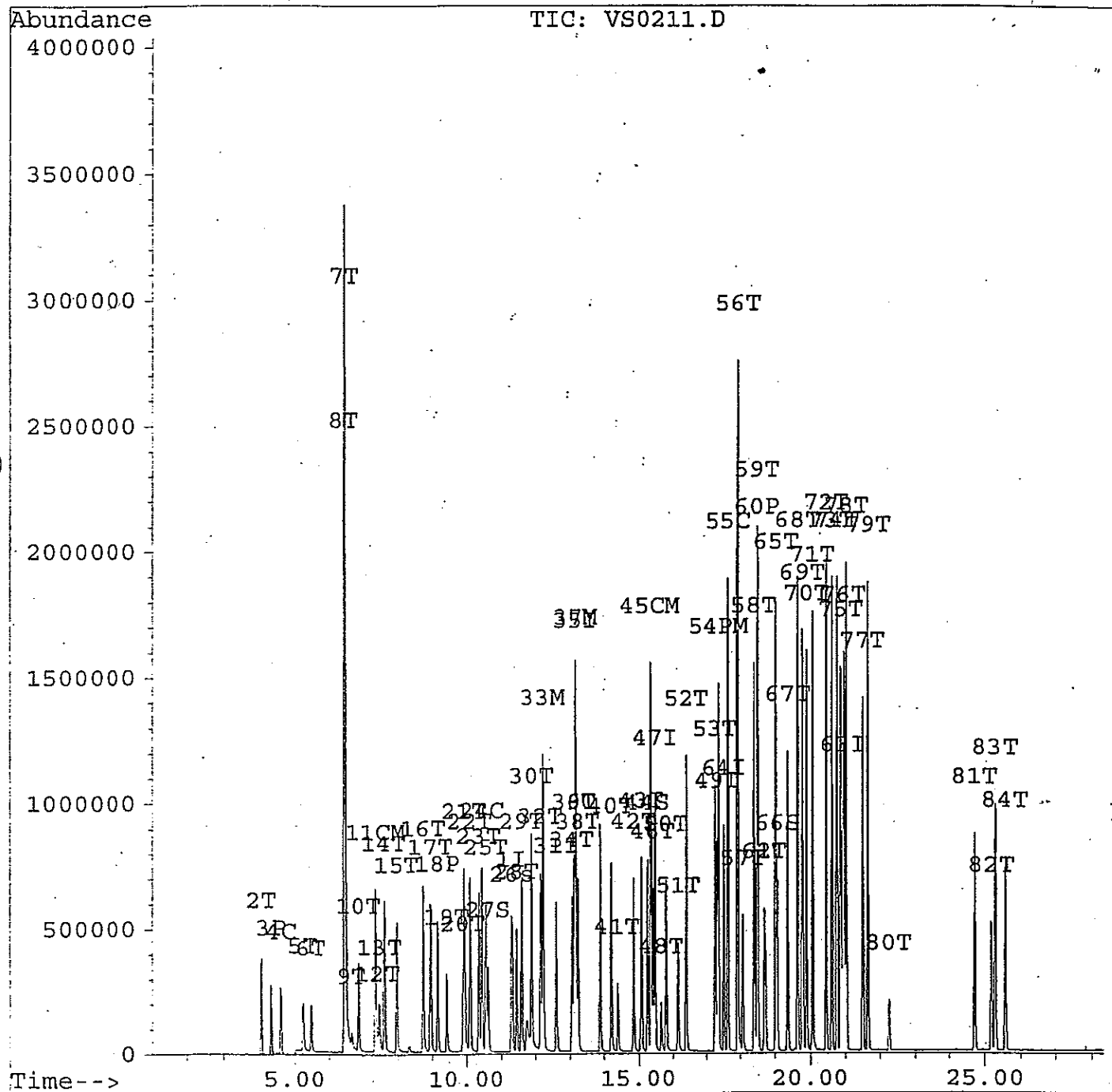
VS0211.D 8260.M

Wed Feb 11 10:11:55 1998

Page 2

Vial: 25
Operator: hp-2
Inst : 5972 - In
Multiplr: 1.00

Vial: 25
Operator: hp-2
Inst : 5972 - In
Multiplr: 1.00



Data File : C:\HPCHEM\1\DATA\VS0211.D
 Acq On : 11 Feb 98 9:37 am
 Sample : con cal
 Misc :

Vial: 25
 Operator: hp-2
 Inst: 5972 - In
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8260.M
 Title : 8260 volatile organics PLUS
 Last Update : Fri Feb 06 10:55:54 1998
 Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 20% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 400%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1 I	Pentafluorobenzene	1.000	1.000	0.0	125	0.03
2 T	Dichlorodifluoromethane	0.980	1.073	-9.5	135	0.02
3 P	Chloromethane	1.090	0.931	14.5	122	0.02
4 C	Vinyl Chloride	0.880	0.932	-5.9	128	0.05
5 T	Bromomethane	0.690	0.443	35.9	100	0.03
6 T	Chloroethane	0.568	0.527	7.3	122	0.03
7 T	Trichlorofluoromethane	1.617	1.513	6.4	120	0.03
8 T	Acrolein	0.052	0.057	-9.6	133	0.02
9 T	Acetone	0.073	0.063	13.3	109	0.01
10 T	Diethyl Ether	0.601	0.711	-18.4	162	0.03
11 CM	1,1-Dichloroethene	0.885	0.967	-9.3	150	0.03
12 T	Iodomethane	0.627	0.391	37.7	73	0.03
13 T	Acrylonitrile	0.453	0.513	-13.3	150	0.02
14 T	Methylene Chloride	1.294	1.050	18.9	118	0.03
15 T	Carbon Disulfide	3.051	2.742	10.1	123	0.03
16 T	trans-1,2-Dichloroethene	1.382	1.254	9.3	117	0.03
17 T	Methyl-t-butyl ether	1.863	2.170	-16.5	147	0.03
18 P	1,1-Dichloroethane	1.775	1.636	7.9	121	0.03
19 T	Vinyl Acetate	1.087	1.553	-42.8	171	0.02
20 T	2-Butanone	0.101	0.087	13.4	126	0.01
21 T	Diisopropyl ether	2.437	2.532	-3.9	124	0.02
22 T	cis-1,2-Dichloroethene	1.319	1.241	5.9	121	0.03
23 T	Bromochloromethane	0.808	0.860	-6.5	138	0.03
24 C	Chloroform	2.166	1.954	9.8	123	0.03
25 T	2,2-Dichloropropane	1.336	1.415	-5.9	134	0.03
26 S	1,2-Dichloroethane-d4	1.291	1.080	16.4	107	0.03
27 S	Dibromofluoromethane	1.332	1.110	16.7	103	0.02
28 T	1,2-Dichloroethane	1.406	1.308	7.0	119	0.02
29 T	1,1,1-Trichloroethane	1.578	1.572	0.4	130	0.03
30 T	1,1-Dichloropropene	1.256	1.380	-9.9	132	0.03
31 I	1,4-Difluorobenzene	1.000	1.000	0.0	113	0.03
32 T	Carbon Tetrachloride	2.725	3.006	-10.3	123	0.03
33 M	Benzene	6.268	7.407	-18.2	128	0.02
34 T	Dibromomethane	1.341	1.472	-9.8	125	0.03
35 I	2,3-Dichloro-1-Propene	1.743	2.360	-35.3	120	0.03
36 C	1,2-Dichloropropane	1.650	1.917	-16.1	126	0.02
37 M	Trichloroethene	2.360	2.525	-7.0	130	0.03
38 T	Bromodichloromethane	2.651	2.859	-7.8	121	0.02
39 T	2-Chloroethyl vinyl ether	0.165	0.192	-16.1	126	0.02
40 T	cis-1,3-Dichloropropene	2.289	2.938	-28.3	133	0.02
41 T	4-Methyl-2-pentanone	0.424	0.492	-16.0	136	0.01
42 T	trans-1,3-Dichloropropene	1.928	2.565	-33.0	143	0.02
43 T	1,1,2-Trichloroethane	1.451	1.702	-17.3	128	0.03
44 S	Toluene-d8	5.117	5.506	-7.6	115	0.03
45 CM	Toluene	6.607	7.567	-14.5	128	0.02

46	T	1,3-Dichloropropane	2.482	2.048	-0.0	127	0.02
47	I	Ethyl Methacrylate	2.811	3.467	-23.3	127	0.01
48	T	2-Hexanone	0.407	0.456	-12.0	135	0.01
49	I	Chlorobenzene-d5	1.000	1.000	0.0	123	0.02
50	T	Dibromochloromethane	1.106	1.158	-4.7	123	0.02
51	T	1,2-Dibromoethane	1.070	1.140	-6.6	132	0.03
52	T	Tetrachloroethene	1.214	1.371	-12.9	136	0.03
53	T	1,1,1,2-Tetrachloroethane	1.199	1.244	-3.7	129	0.03
54	PM	Chlorobenzene	2.985	3.106	-4.1	130	0.02
55	C	Ethylbenzene	4.682	5.030	-7.4	132	0.02
56	T	m,p-Xylene	3.439	3.817	-11.0	128	0.02
57	T	Bromoform	0.972	1.053	-8.3	132	0.02
58	T	Styrene	2.364	2.891	-22.3	136	0.01
59	T	o-Xylene	3.599	3.852	-7.0	123	0.01
60	P	1,1,2,2-Tetrachloroethane	1.304	1.312	-0.7	126	0.01
61	T	1,2,3-Trichloropropane	1.244	1.348	-8.4	130	0.01
62	T	trans-1,4-Dichloro-2-butene	1.244	1.347	-8.3	130	0.01
63	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	124	0.02
64	I	Ethylbenzene-d10	1.000	1.000	0.0	112	0.02
65	T	Isopropylbenzene	0.913	1.105	-21.0	126	0.02
66	S	Bromofluorobenzene	0.309	0.325	-5.3	112	0.02
67	T	Bromobenzene	0.400	0.449	-12.3	123	0.01
68	T	Propylbenzene	1.128	1.361	-20.6	128	0.02
69	T	2-Chlorotoluene	0.705	0.838	-18.9	123	0.01
70	T	4-Chlorotoluene	0.695	0.799	-14.9	121	0.02
71	T	1,3,5-Trimethylbenzene	0.745	0.874	-17.3	120	0.02
72	T	t-Butylbenzene	0.654	0.824	-26.0	129	0.02
73	T	1,2,4-trimethylbenzene	0.758	0.947	-24.9	129	0.01
74	T	sec-Butylbenzene	1.003	1.226	-22.3	129	0.01
75	T	1,3-Dichlorobenzene	0.534	0.659	-23.3	133	0.02
76	T	1,4-Dichlorobenzene	0.532	0.672	-26.3	140	0.02
77	T	1,2-Dichlorobenzene	0.487	0.603	-23.9	139	0.01
78	T	p-Isopropyltoluene	0.835	1.038	-24.2	132	0.01
79	T	Butylbenzene	0.723	0.969	-34.0	139	0.02
80	T	1,2-Dibromo-3-chloropropane	0.047	0.063	-35.2	135	0.01
81	T	1,2,4-Trichlorobenzene	0.191	0.291	-52.7	178	0.02
82	T	Naphthalene	0.320	0.436	-36.1	167	0.01
83	T	Hexachlorobutadiene	0.168	0.229	-36.4	148	0.02
84	T	1,2,3-Trichlorobenzene	0.174	0.268	-54.1	161	0.02

(#) = Out of Range
V0500205.D 8260.M

SPCC's out = 0 CCC's out = 0
Wed Feb 11 10:12:58 1998

Data File : C:\HPCHEM\1\DATA\VB0211.D
Acq. On : 11 Feb 98 10:12 am
Sample : 1
Misc : method blank
Quant Time: Feb 11 14:54 1998

Vial: 26
Operator: hp-2
Inst : 5972 - In
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8260.M
Title : 8260 volatile organics PLUS
Last Update : Wed Feb 11 14:41:24 1998
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Pentafluorobenzene	11.29	99	194073	30.00	ug/L	0.02
31) 1,4-Difluorobenzene	12.58	63	102821	30.00	ug/L	0.02
49) Chlorobenzene-d5	17.32	119	175288	30.00	ug/L	0.02
63) 1,4-Dichlorobenzene-d4	20.94	152	242195	30.00	ug/L	0.03
64) Ethylbenzene-d10	17.53	98	804507	30.00	ug/L	0.02
						%Recovery
System Monitoring Compounds						
26) 1,2-Dichloroethane-d4	11.32	65	224463	26.87	ug/L	89.58%
27) Dibromofluoromethane	10.61	111	247920	28.76	ug/L	95.88%
44) Toluene-d8	15.25	98	541003	30.85	ug/L	102.83%
66) Bromofluorobenzene	19.07	95	208210	25.13	ug/L	83.76%

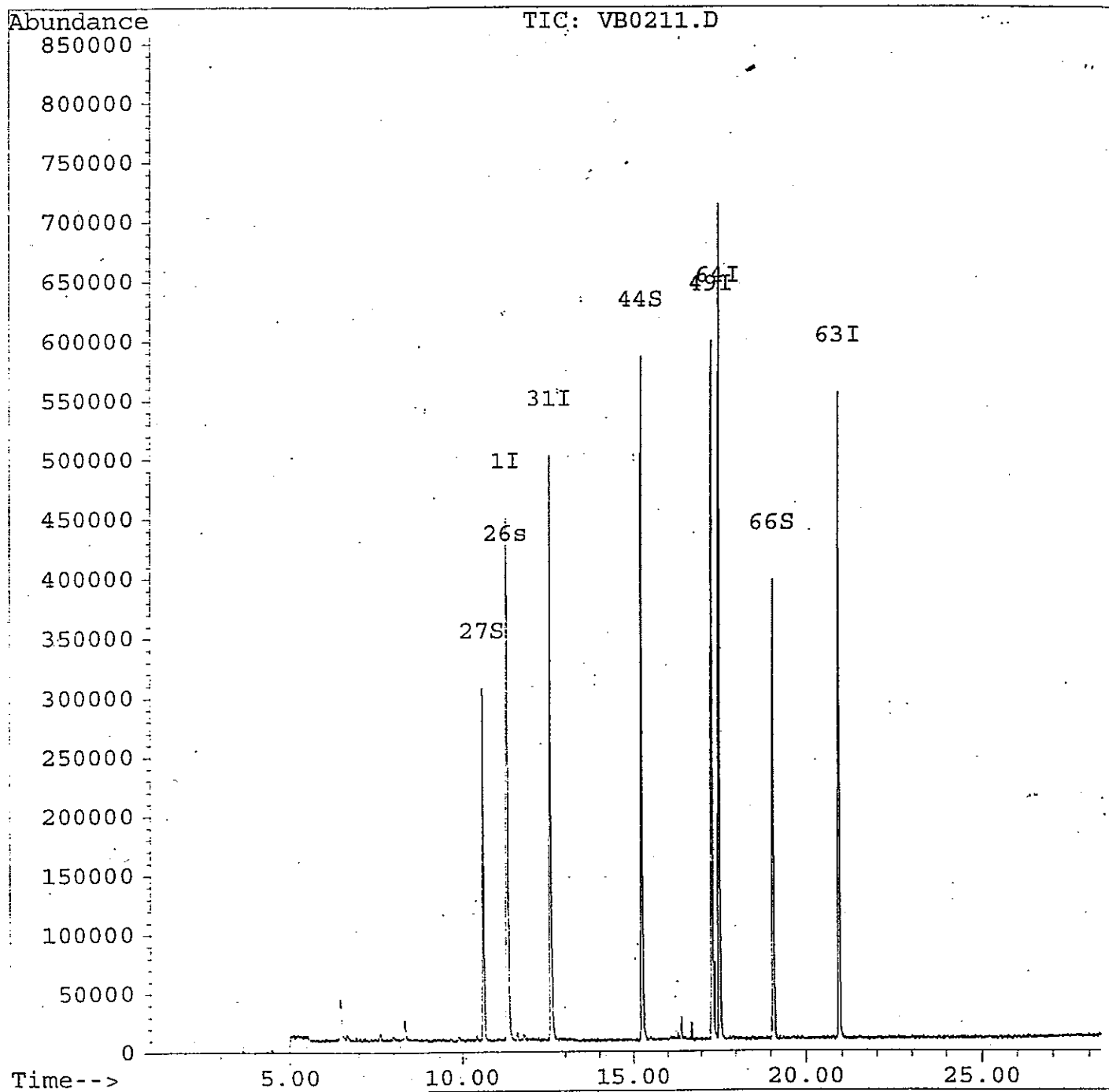
Target Compounds

Qvalue

Data File : C:\HPCHEM\1\DATA\VB0211.D
Acq On : 11 Feb 98 10:12 am
Sample : 1
Misc : method blank
Quant Time: Feb 11 14:54 1998

Vial: 26
Operator: hp-2
Inst : 5972 In
Multiplr: 1.00

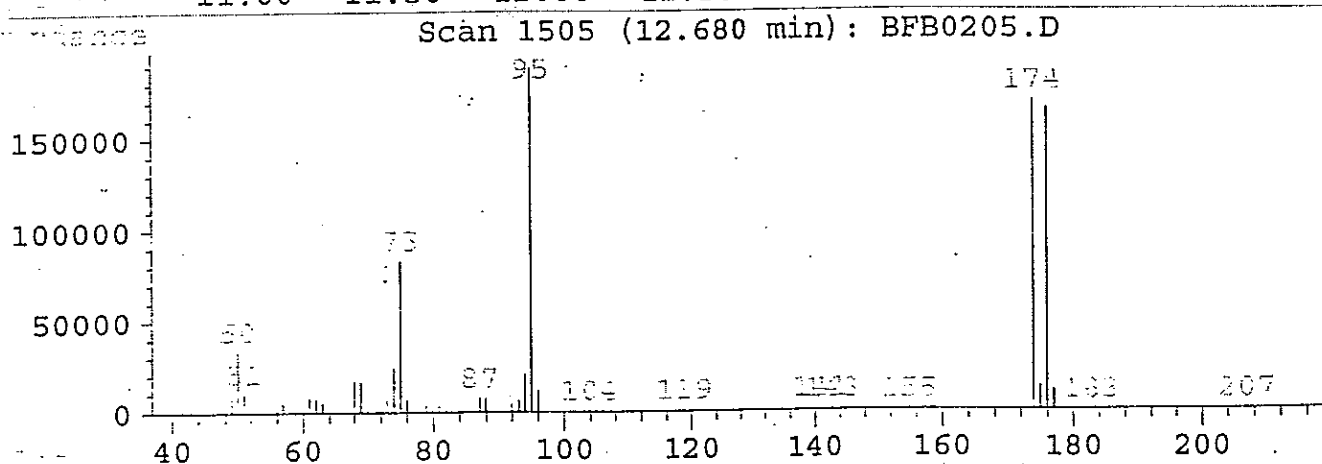
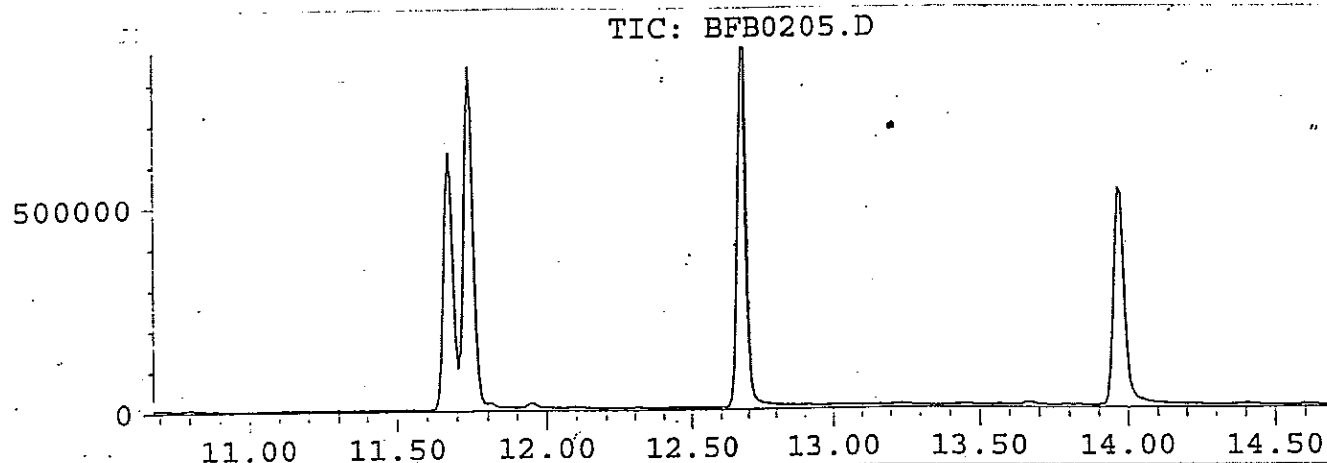
Method : C:\HPCHEM\1\METHODS\8260.M
Title : 8260 volatile organics PLUS
Last Update : Wed Feb 11 14:41:24 1998
Response via : Multiple Level Calibration



Data File : C:\HPCHEM\1\DATA\BFB0205.D
Acq On : 5 Feb 98 5:21 pm
Sample : TUNE HP-8
Misc :

Vial: 1
Operator: HP-8
Inst- : 5971 - Ir
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8260.M
Title : 8260 volatile organics



Peak Apex is scan: 1505

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	18.0	33912	PASS
75	95	30	60	44.2	83472	PASS
95	95	100	100	100.0	188672	PASS
96	95	5	9	6.3	11839	PASS
173	174	0	2	0.0	0	PASS
174	95	50	100	90.0	169856	PASS
175	174	5	9	7.7	13068	PASS
176	174	95	101	97.5	165632	PASS
177	176	5	9	6.5	10845	PASS

Data File : C:\HPCHEM\1\DATA\VS0205.D

Acq On : 5 Feb 98 5:58 pm

Sample : CONCAL HP-8

Misc :

Vial: 2

Operator: HP-8

Inst : 5971 - In

Multiplr:-1.00

Method : C:\HPCHEM\1\METHODS\8260.M

Title : 8260 volatile organics

Last Update : Thu Feb 05 12:49:32 1998

Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 10% Max. R.T. Dev 0.50min

Max. RRF Dev : 20% Max. Rel. Area : 250%

	Compound	AvgRF	CCRF*	%Dev	Area%	Dev (min)
1 I	Pentafluorobenzene	1.000	1.000	0.0	113	-0.02
2 T	Dichlorodifluoromethane	0.334	0.355	-6.2	114	-0.03
3 P	Chloromethane	0.462	0.422	8.6	99	-0.03
4 C	Vinyl Chloride	0.418	0.450	-7.8	111	-0.04
5 T	Bromomethane	0.285	0.281	1.5	109	-0.04
6 T	Chloroethane	0.308	0.318	-3.1	115	-0.05
7 T	Trichlorofluoromethane	0.536	0.553	-3.1	111	-0.02
8	Acrolein	0.352	0.362	-3.1	116	-0.03
9 T	Acetone	0.158	0.136	13.8	103	-0.03
10	Diethyl Ether	0.353	0.362	-2.8	116	-0.03
11 CM	1,1-Dichloroethene	0.375	0.378	-0.8	109	-0.02
12	Iodomethane	0.307	0.308	-0.5	97	-0.04
13	Acrylonitrile	0.279	0.283	-1.5	119	-0.02
14 T	Methylene Chloride	0.539	0.497	7.8	116	-0.03
15 T	Carbon Disulfide	1.068	1.119	-4.9	112	-0.03
16 T	trans-1,2-Dichloroethene	0.633	0.642	-1.5	110	-0.02
17 T	Methyl-t-butyl ether	1.098	1.144	-4.2	117	-0.01
18 P	1,1-Dichloroethane	0.768	0.783	-2.0	111	-0.02
19	Vinyl Acetate	0.709	0.740	-4.3	106	-0.02
20 T	2-Butanone	0.969	0.950	2.0	109	-0.02
21 T	Diisopropyl ether	1.683	1.721	-2.3	112	-0.03
22 T	cis-1,2-Dichloroethene	0.580	0.592	-2.1	111	-0.02
23 T	Bromochloromethane	0.258	0.259	-0.3	113	-0.02
24 C	Chloroform	0.762	0.760	0.2	112	-0.02
25 T	2,2-Dichloropropane	0.592	0.619	-4.6	108	-0.02
26 S	1,2-Dichloroethane-d4	0.456	0.473	-3.7	119	-0.03
27 S	Dibromofluoromethane	0.413	0.427	-3.4	117	-0.01
28 T	1,2-Dichloroethane	0.545	0.556	-2.0	113	-0.01
29 T	1,1,1-Trichloroethane	0.593	0.614	-3.7	109	-0.02
30 T	1,1-Dichloropropene	0.590	0.599	-1.6	107	-0.02
31 I	1,4-Difluorobenzene	1.000	1.000	0.0	113	-0.01
32 T	Carbon Tetrachloride	0.363	0.379	-4.4	111	-0.01
33 M	Benzene	1.257	1.270	-1.0	110	-0.01
34 T	Dibromomethane	0.187	0.189	-0.8	111	-0.01
35	2,3-Dichloro-1-propene	0.156	0.158	-1.6	109	-0.01
36 C	1,2-Dichloropropane	0.338	0.339	-0.2	106	-0.01
37 M	Trichloroethene	0.327	0.326	0.5	105	-0.01
		0.307	0.410	-3.2	110	-0.02

39	T	2-Chloroethyl vinyl ether	0.497	0.517	-4.0	110	0.00
40	T	cis-1,3-Dichloropropene	0.123	0.102	17.0	70	-0.01
41	T	4-Methyl-2-pentanone	0.497	0.517	-4.0	110	0.00
42	T	trans-1,3-Dichloropropene	0.259	0.259	0.1	107	0.00
43	T	1,1,2-Trichloroethane	1.020	1.039	-1.9	114	-0.01
44	S	Toluene-d8	1.337	1.325	0.8	105	-0.01
	CM	Toluene	0.482	0.489	-1.4	110	0.00
46	T	1,3-Dichloropropane	0.666	0.685	-2.9	112	0.00
47		Ethyl Methacrylate	0.090	0.067	25.7	70	-0.02
48	T	2-Hexanone					
49	I	Chlorobenzene-d5	1.000	1.000	0.0	115	0.00
50	T	Dibromochloromethane	0.853	0.881	-3.4	108	0.00
51	T	1,2-Dibromoethane	1.044	1.069	-2.4	111	0.00
52	T	Tetrachloroethene	1.400	1.397	0.2	107	-0.01
53	T	1,1,1,2-Tetrachloroethane	1.108	1.101	0.6	104	0.00
54	PM	Chlorobenzene	3.154	3.128	0.8	106	-0.01
55	C	Ethylbenzene	5.709	5.671	0.7	104	0.00
56	T	m,p-Xylene	4.440	4.343	2.2	102	0.00
57	P	Bromoform	0.811	0.832	-2.5	106	0.00
58	T	Styrene	3.420	3.416	0.1	106	0.00
59	T	o-Xylene	4.525	4.443	1.8	103	0.00
60	P	1,1,2,2-Tetrachloroethane	1.237	1.256	-1.5	110	0.00
61	T	1,2,3-Trichloropropane	1.559	1.565	-0.4	106	-0.01
62		Trans-1,4-dichloro-2-butene	1.559	1.565	-0.4	106	-0.01
63		1,4-Dichlorobenzene-d4	1.000	1.000	0.0	119	-0.01
64		Ethylbenzene-d10	1.000	1.000	0.0	115	0.00
65	T	Isopropylbenzene	1.018	0.999	1.9	106	0.00
66	S	Bromofluorobenzene	0.299	0.302	-0.9	117	0.00
67	T	Bromobenzene	0.400	0.394	1.5	106	0.00
68	T	Propylbenzene	1.249	1.213	2.9	106	-0.01
69	T	2-Chlorotoluene	0.733	0.707	3.6	105	0.00
70	T	4-Chlorotoluene	0.739	0.719	2.6	106	-0.01
71	T	1,3,5-Trimethylbenzene	0.838	0.806	3.9	105	0.00
72	T	t-Butylbenzene	0.712	0.687	3.5	106	0.00
73	T	1,2,4-trimethylbenzene	0.849	0.804	5.3	104	-0.01
74	T	sec-Butylbenzene	1.108	1.075	3.0	108	-0.01
75	T	1,3-Dichlorobenzene	0.469	0.453	3.4	105	-0.00
76	T	1,4-Dichlorobenzene	0.469	0.451	4.0	104	0.00
77	T	1,2-Dichlorobenzene	0.448	0.433	3.4	106	0.00
78	T	p-Isopropyltoluene	0.905	0.872	3.6	107	0.00
79	T	Butylbenzene	0.904	0.872	3.6	107	0.00
80	T	1,2-Dibromo-3-chloropropane	0.047	0.048	-1.6	108	0.00
81	T	1,2,4-Trichlorobenzene	0.348	0.328	5.8	107	0.00
82	T	Naphthalene	0.676	0.627	7.3	107	0.00
83	T	Hexachlorobutadiene	0.206	0.199	3.3	109	0.00
84	T	1,2,3-Trichlorobenzene	0.317	0.303	4.5	114	0.00

(#) = Out of Range
V0500204.D 8260.M

SPCC's out = 0 CCC's out = 0
Fri Feb 06 12:01:43 1998

Data File : C:\HPCHEM\1\DATA\VS0205.D

Acq On : 5 Feb 98 5:58 pm

Sample : CONCAL HP-8

Misc :

Quant Time: Feb 6 11:58 1998

Vial: 2

Operator: HP-8

Inst : 5971 - In

Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8260.M

Title : 8260 volatile organics

Last Update : Thu Feb 05 12:49:32 1998

Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Pentafluorobenzene	13.31	168	421428	30.00	ug/L	-0.02
31) 1,4-Difluorobenzene	14.43	114	564660	30.00	ug/L	-0.01
49) Chlorobenzene-d5	18.71	119	150419	30.00	ug/L	0.00
63) 1,4-Dichlorobenzene-d4	22.30	152	267221	30.00	ug/L	-0.01
64) Ethylbenzene-d10	18.88	98	830644	30.00	ug/L	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recovery
26) 1,2-Dichloroethane-d4	13.41	65	199308	31.10	ug/L	103.67%
27) Dibromofluoromethane	12.85	111	179836	31.02	ug/L	103.41%
44) Toluene-d8	16.78	98	586752	30.56	ug/L	101.87%
66) Bromofluorobenzene	20.36	95	250847	30.27	ug/L	100.90%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	7.33	85	249118	52.44	ug/L m	97
3) Chloromethane	7.70	50	296325	49.47	ug/L #	60
4) Vinyl Chloride	7.94	62	316173	53.25	ug/L m	77
5) Bromomethane	8.58	96	197485	43.99	ug/L m	89
6) Chloroethane	8.77	64	223215	52.47	ug/L m	50
7) Trichlorofluoromethane	9.60	101	388154	51.60	ug/L	98
8) Acrolein	9.89	59	254548	52.01	ug/L #	68
9) Acetone	9.72	43	95627	52.46	ug/L #	69
10) Diethyl Ether	9.89	59	254548	51.94	ug/L #	67
11) 1,1-Dichloroethene	10.32	96	265362	50.32	ug/L	90
12) Iodomethane	10.39	142	216513	46.61	ug/L m	1
13) Acrylonitrile	10.37	53	198879	51.60	ug/L #	1
14) Methylene Chloride	10.50	84	348861	57.79	ug/L	99
15) Carbon Disulfide	10.85	76	786313	49.97	ug/L	99
16) trans-1,2-Dichloroethene	11.38	61	451267	50.36	ug/L	90
17) Methyl-t-butyl ether	11.52	73	803271	51.29	ug/L #	90
18) 1,1-Dichloroethane	11.70	63	550174	50.48	ug/L	100
19) Vinyl Acetate	11.83	43	519543	51.79	ug/L #	1
20) 2-Butanone	12.24	43	666981	51.40	ug/L #	93
21) Diisopropyl ether	12.24	45	1208935	50.47	ug/L #	84
22) cis-1,2-Dichloroethene	12.43	61	415857	50.05	ug/L	96
23) Bromochloromethane	12.64	130	181957	50.30	ug/L	98
24) Chloroform	12.69	83	533606	52.85	ug/L	99
25) 2,2-Dichloropropane	12.79	77	435107	50.95	ug/L	89

(#) = qualifier out of range (m) = manual integration

VS0205.D 8260.M Fri Feb 06 11:59:24 1998

Data File : C:\HPCHEM\1\DATA\VS0205.D

Acq On : 5 Feb 98 5:58 pm

Sample : CONCAL HP-8

Misc :

Quant Time: Feb 6 11:58 1998

Vial: 2

Operator: HP-8

Inst : 5971 - In

Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8260.M

Title : 8260 volatile organics

Last Update : Thu Feb 05 12:49:32 1998

Response via : Multiple Level Calibration

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
28) 1,2-Dichloroethane	13.52	62	390395	50.51 ug/L	97
29) 1,1,1-Trichloroethane	13.65	97	431568	51.62 ug/L #	91
30) 1,1-Dichloropropene	13.88	75	420826	50.88 ug/L	96
32) Carbon Tetrachloride	14.12	117	356213	50.52 ug/L	98
33) Benzene	14.17	78	1194986	50.43 ug/L #	91
34) Dibromomethane	14.88	93	177784	49.06 ug/L	85
35) 2,3-Dichloro-1-propene	14.93	49	148742	50.69 ug/L	100
36) 1,2-Dichloropropane	14.92	63	318714	50.62 ug/L #	82
37) Trichloroethene	14.97	130	306564	49.43 ug/L #	91
38) Bromodichloromethane	15.03	83	385782	49.51 ug/L	100
39) 2-Chloroethyl vinyl ether	16.93	63	39939	397.20 ug/L	59
40) cis-1,3-Dichloropropene	15.84	75	486868	49.68 ug/L	95
41) 4-Methyl-2-pentanone	15.98	58	95984	42.92 ug/L #	70
42) trans-1,3-Dichloropropene	15.84	75	486868	49.68 ug/L	96
43) 1,1,2-Trichloroethane	16.62	97	243618	48.95 ug/L	94
45) Toluene	16.87	91	1247250	49.94 ug/L	97
46) 1,3-Dichloropropane	16.93	76	459759	49.84 ug/L #	1
47) Ethyl Methacrylate	16.91	69	644703	52.16 ug/L #	41
48) 2-Hexanone	17.11	58	62790	36.79 ug/L #	79
50) Dibromochloromethane	17.31	127	220970	48.04 ug/L	98
51) 1,2-Dibromoethane	17.64	107	267889	48.10 ug/L	98
52) Tetrachloroethene	17.85	166	350198	49.42 ug/L	98
53) 1,1,1,2-Tetrachloroethane	18.65	131	275984	47.96 ug/L #	92
54) Chlorobenzene	18.75	112	784278	48.90 ug/L #	89
55) Ethylbenzene	19.00	91	1421726	49.26 ug/L #	86
56) m,p-Xylene	19.25	91	2177810	98.63 ug/L #	65
57) Bromoform	19.45	173	208582	45.54 ug/L #	1
58) Styrene	19.70	104	856471	48.62 ug/L	93
59) o-Xylene	19.80	91	1113841	49.36 ug/L	98
60) 1,1,2,2-Tetrachloroethane	19.80	83	314917	49.56 ug/L #	96
61) 1,2,3-Trichloropropane	19.99	75	392337	47.24 ug/L #	66
62) Trans-1,4-dichloro-2-buten	19.99	75	392337	49.85 ug/L #	92
65) Isopropylbenzene	20.30	105	1382800	48.87 ug/L #	89
67) Bromobenzene	20.67	77	545731	48.87 ug/L	83
68) Propylbenzene	20.91	91	1678939	48.30 ug/L #	80
69) 2-Chlorotoluene	21.06	91	978598	48.12 ug/L	97
70) 4-Chlorotoluene	21.17	91	996063	48.04 ug/L	95

(#) = qualifier out of range (m) = manual integration

VS0205.D 8260.M

Fri Feb 06 11:59:26 1998

Data File : C:\HPCHEM\1\DATA\VS0205.D
Acq On : 5 Feb 98 5:58 pm
Sample : CONCAL HP-8
Misc :
Quant Time: Feb 6 11:58 1998

Vial: 2
Operator: HP-8
Inst : 5971 - In
Multiplr: 1.00

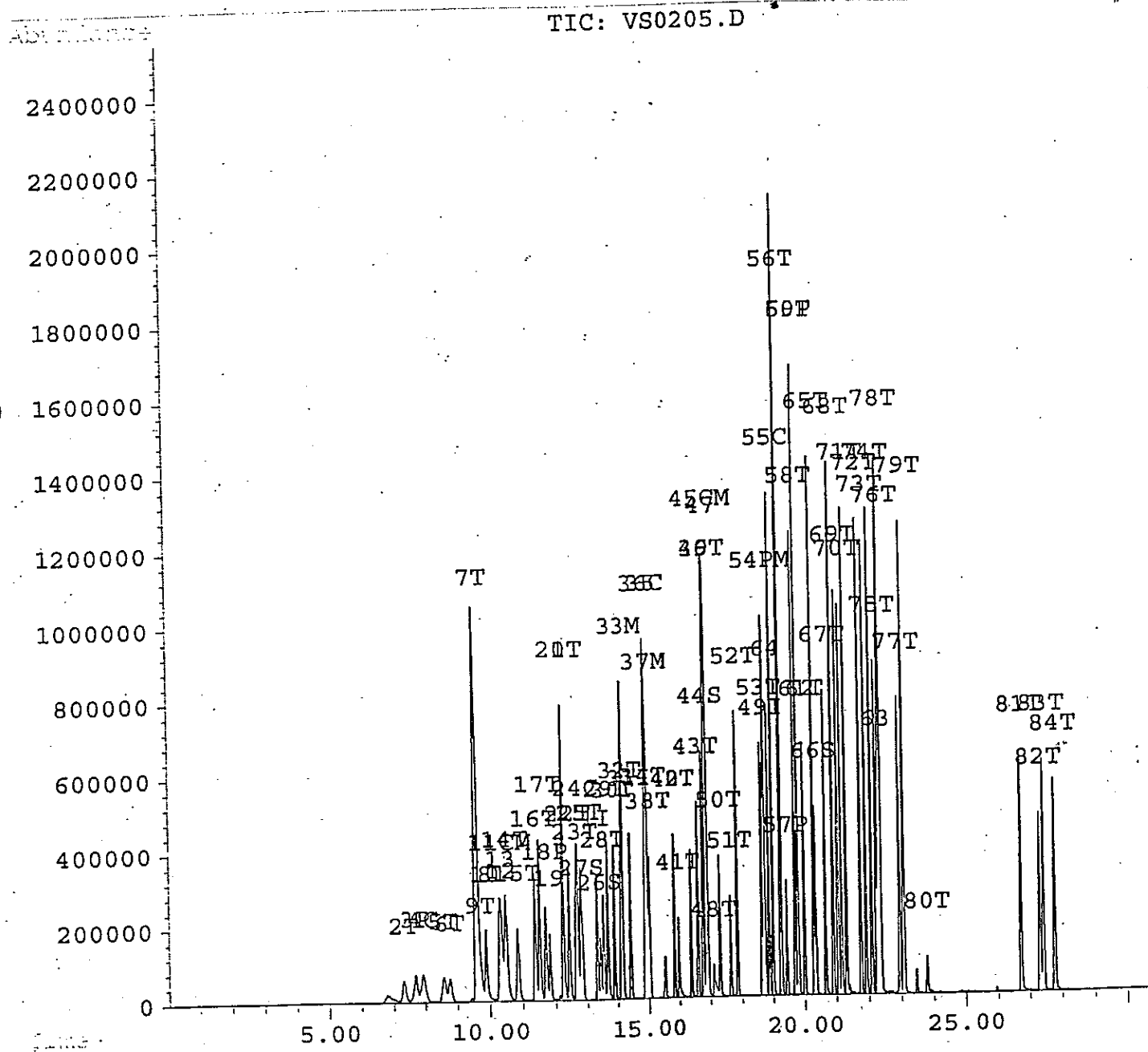
Method : C:\HPCHEM\1\METHODS\8260.M
Title : 8260 volatile organics
Last Update : Thu Feb 05 12:49:32 1998
Response via : Multiple Level Calibration

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
71) 1,3,5-Trimethylbenzene	21.31	105	1115926	47.86	ug/L	93
72) t-Butylbenzene	21.76	119	951465	48.10	ug/L	97
73) 1,2,4-trimethylbenzene	21.92	105	1113262	47.05	ug/L	95
74) sec-Butylbenzene	22.10	105	1488446	48.40	ug/L #	89
75) 1,3-Dichlorobenzene	22.24	146	626874	47.35	ug/L	95
76) 1,4-Dichlorobenzene	22.35	146	623693	47.11	ug/L	94
77) 1,2-Dichlorobenzene	22.95	146	599235	47.88	ug/L #	94
78) p-Isopropyltoluene	22.38	119	1207106	47.95	ug/L	94
79) Butylbenzene	23.08	91	1207033	47.56	ug/L	97
80) 1,2-Dibromo-3-chloropropan	23.80	157	66640	45.33	ug/L	92
81) 1,2,4-Trichlorobenzene	26.73	180	454582	45.56	ug/L	98
82) Naphthalene	27.31	128	868285	42.98	ug/L	100
83) Hexachlorobutadiene	27.44	225	275730	49.40	ug/L #	1
84) 1,2,3-Trichlorobenzene	27.78	180	419067	46.02	ug/L	100

Data File : C:\HPCHEM\1\DATA\VS0205.D
Acq On : 5 Feb 98 5:58 pm
Sample : CONCAL HP-8
Misc :
Quant Time: Feb 6 11:58 1998

Vial: 2
Operator: HP-8
Inst : 5971 - In
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8260.M
Title : 8260 volatile organics
Last Update : Thu Feb 05 12:49:32 1998
Response via : Multiple Level Calibration



Data File : C:\HPCHEM\1\DATA\VB0205.D
Acq On : 5 Feb 98 6:35 pm
Sample : 1
Misc : METHOD BLANK HP-8
Quant Time: Feb 6 12:05 1998

Vial: 3
Operator: HP-8
Inst : 5971 - In
Multiplr: 1.00

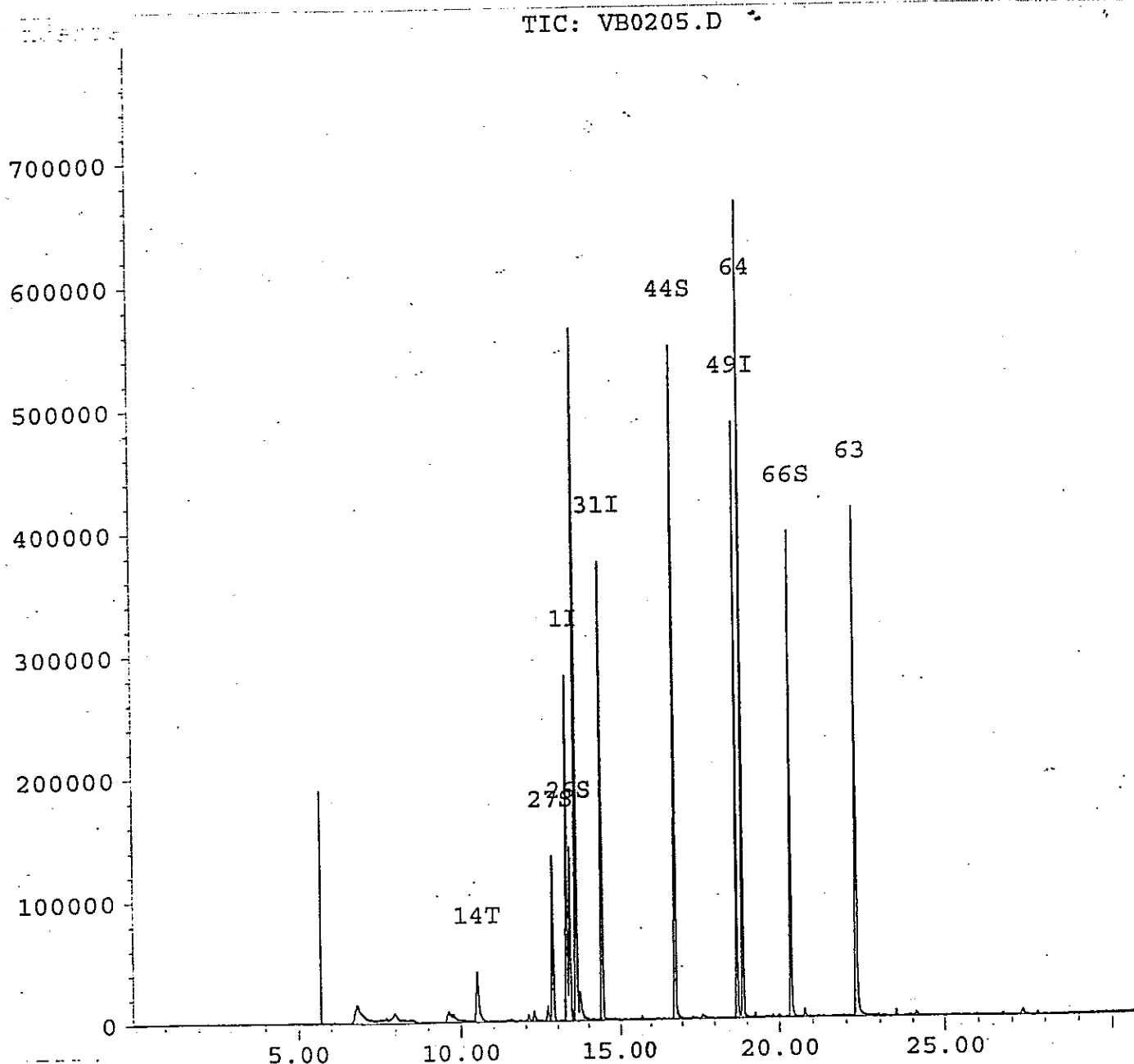
Method : C:\HPCHEM\1\METHODS\8260.M
Title : 8260 volatile organics
Last Update : Thu Feb 05 12:49:32 1998
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Pentafluorobenzene	13.31	168	356436	30.00	ug/L	-0.02
31) 1,4-Difluorobenzene	14.43	114	486435	30.00	ug/L	-0.01
49) Chlorobenzene-d5	18.71	119	128548	30.00	ug/L	0.00
63) 1,4-Dichlorobenzene-d4	22.30	152	211831	30.00	ug/L	-0.01
64) Ethylbenzene-d10	18.88	98	691093	30.00	ug/L	0.00
System Monitoring Compounds						%Recovery
26) 1,2-Dichloroethane-d4	13.42	65	173487	32.01	ug/L	106.70%
27) Dibromofluoromethane	12.84	111	155068	31.63	ug/L	105.43%
44) Toluene-d8	16.78	98	495178	29.94	ug/L	99.79%
66) Bromofluorobenzene	20.36	95	208183	30.19	ug/L	100.64%
Target Compounds						Qvalue
14) Methylene Chloride	10.50	84	48383	9.48	ug/L #	75

Data File : C:\HPCHEM\1\DATA\VB0205.D
Acq On : 5 Feb 98 6:35 pm
Sample : 1
Misc : METHOD BLANK HP-8
Quant Time: Feb 6 12:05 1998

Vial: 3
Operator: HP-8
Inst : 5971 - In
Multiplr: 1.00

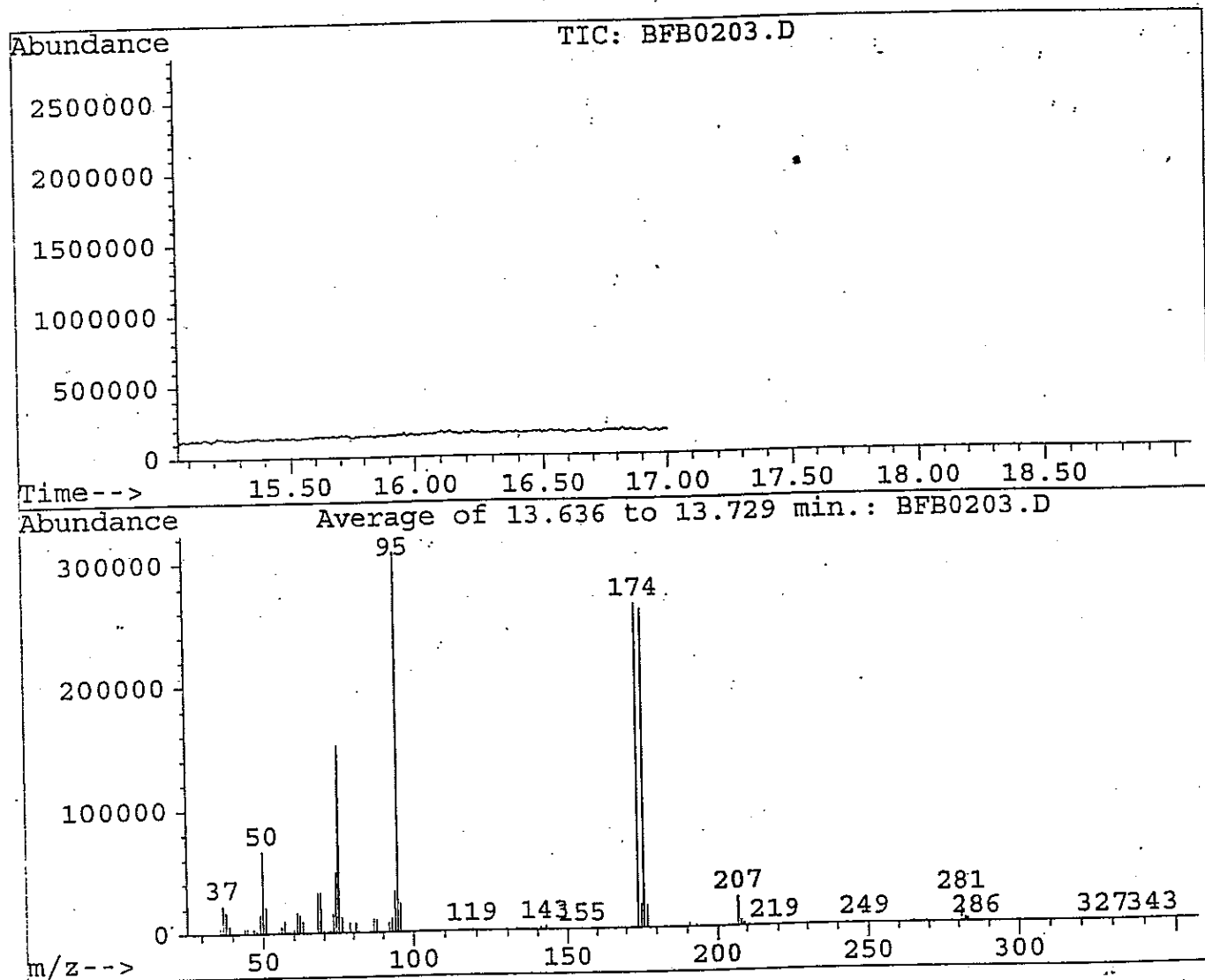
Method : C:\HPCHEM\1\METHODS\8260.M
Title : 8260 volatile organics
Last Update : Thu Feb 05 12:49:32 1998
Response via : Multiple Level Calibration



Data File : C:\HPCHEM\1\DATA\BFB0203.D
 Acq On : 3 Feb 98 4:08 pm
 Sample : TUNE HP-1
 Misc :

Vial: 1
 Operator: HP-1
 Inst : 5971 - J
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8260S.M
 Title : 8260 volatile organics PLUS



Peak Apex is scan: 95

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	21.5	66479	PASS
75	95	30	60	49.5	152698	PASS
95	95	100	100	100.0	308663	PASS
96	95	5	9	7.5	23097	PASS
173	174	0	2	0.0	0	PASS
174	95	50	100	85.4	263705	PASS
175	174	5	9	7.5	19804	PASS
176	174	95	101	98.2	259054	PASS
177	176	5	9	7.0	18244	PASS

Data File : C:\HPCHEM\1\DATA\VS0203.D
 Acq On : 3 Feb 98 4:32 pm
 Sample : CON CAL
 Misc :

Vial: 1
 Operator: HP-1
 Inst : 5971 - In
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8260S.M
 Title : 8260 volatile organics PLUS
 Last Update : Thu Jan 29 10:50:49 1998
 Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 20% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1 I	Pentafluorobenzene	1.000	1.000	0.0	156	0.00
2 T	Dichlorodifluoromethane	0.924	0.808	12.6	120	-0.03
3 P	Chloromethane	0.719	0.837	-16.5	164	-0.02
4 C	Vinyl Chloride	0.875	0.829	5.3	183	0.08
5 T	Bromomethane	0.550	0.496	9.7	134	0.00
6 T	Chloroethane	0.286	0.263	8.3	171	0.08
7 T	Trichlorofluoromethane	1.559	1.280	17.9	120	-0.02
8	Acrolein	0.068	0.077	-12.5	165	-0.03
9 T	Acetone	0.065	0.059	9.0	141	-0.04
10 T	Diethyl Ether	0.613	0.614	-0.1	149	-0.01
11 CM	1,1-Dichloroethene	0.623	0.709	-13.8	253	0.00
12 T	Iodomethane	0.422	0.354	16.1	156	0.00
13 T	Acrylonitrile	0.342	0.422	-23.2	276	-0.01
14 T	Methylene Chloride	0.952	0.807	15.2	142	0.00
15 T	Carbon Disulfide	1.699	1.720	-1.3	143	0.00
16 T	trans-1,2-Dichloroethene	1.447	1.279	11.7	135	0.00
17	Methyl-t-butyl ether	2.597	2.050	21.1	118	0.00
18 P	1,1-Dichloroethane	1.542	1.504	2.4	140	0.00
19 T	Vinyl Acetate	1.381	1.588	-15.0	204	-0.02
20 T	2-Butanone	0.119	0.079	33.7	107	-0.02
21	Diisopropyl ether	3.042	2.716	10.7	135	0.00
22 T	cis-1,2-Dichloroethene	1.227	1.175	4.3	132	0.00
23 T	Bromochloromethane	0.595	0.505	15.2	130	0.00
24 C	Chloroform	1.839	1.691	8.1	141	0.00
25 T	2,2-Dichloropropane	1.357	1.422	-4.8	173	-0.01
26 S	1,2-Dichloroethane-d4	1.028	0.806	21.6	117	0.00
27 S	Dibromofluoromethane	0.826	0.652	21.0	127	0.00
28 T	1,2-Dichloroethane	1.625	1.223	24.7	111	-0.01
29 T	1,1,1-Trichloroethane	1.579	1.237	21.7	117	0.00
30 T	1,1-Dichloropropene	1.346	1.165	13.5	132	0.00
31 I	1,4-Difluorobenzene	1.000	1.000	0.0	134	0.00
32 T	Carbon Tetrachloride	2.220	2.366	-6.5	153	0.00
33 M	Benzene	5.907	6.212	-5.2	138	0.00
34 T	Dibromomethane	0.886	0.942	-6.3	137	-0.01
35 I	2,3-Dichloro-1-Propene	3.831	3.406	11.1	113	0.00
36 C	1,2-Dichloropropane	1.551	1.668	-7.5	139	-0.01
37 M	Trichloroethene	2.117	2.022	4.5	125	0.00
38 T	Bromodichloromethane	2.099	2.035	3.0	128	0.00
39	2-Chloroethyl vinyl ether	0.085	0.087	-2.4	136	0.00
40 T	cis-1,3-Dichloropropene	2.399	2.493	-3.9	136	0.00
41 T	4-Methyl-2-pentanone	0.537	0.527	1.9	121	0.00
42 T	trans-1,3-Dichloropropene	2.245	2.213	1.4	131	0.00
43 T	1,1,2-Trichloroethane	1.296	1.226	5.4	122	0.00
44 S	Toluene-d8	4.853	4.692	3.3	131	0.00
45		4.751	4.492	3.8	125	0.00

47	I	Ethyl Methacrylate	3.478	3.230	7.1	118	0.00
48		2-Hexanone	0.545	0.520	4.5	123	-0.01
49	I	Chlorobenzene-d5	1.000	1.000	0.0	138	0.00
50	T	Dibromochloromethane	0.970	0.866	10.7	107	0.00
51	T	1,2-Dibromoethane	1.206	1.133	6.1	113	0.00
52	T	Tetrachloroethene	1.756	1.691	3.7	118	0.00
53	T	1,1,1,2-Tetrachloroethane	1.380	1.294	6.2	111	0.00
54	PM	Chlorobenzene	3.708	3.795	-2.3	127	0.00
55	C	Ethylbenzene	6.416	6.359	0.9	124	0.00
56	T	m,p-Xylene	5.137	5.218	-1.6	127	0.00
57		Bromoform	0.832	0.701	15.7	100	0.00
58	T	Styrene	3.889	3.970	-2.1	125	0.00
59	T	o-Xylene	5.246	5.188	1.1	120	0.00
60	P	1,1,2,2-Tetrachloroethane	1.226	1.196	2.5	116	0.00
61	T	1,2,3-Trichloropropane	1.684	1.608	4.5	114	0.00
62	T	trans-1,4-Dichloro-2-butene	0.164	0.176	-7.5	120	0.00
63		1,4-Dichlorobenzene-d4	1.000	1.000	0.0	118	0.00
64		Ethylbenzene-d10	1.000	1.000	0.0	136	0.00
65	T	Isopropylbenzene	1.330	1.241	6.7	118	0.00
66	S	Bromofluorobenzene	0.313	0.277	11.5	117	0.00
67	T	Bromobenzene	0.062	0.062	-0.3	118	0.00
68	T	Propylbenzene	1.492	1.497	-0.4	125	0.00
69	T	2-Chlorotoluene	0.883	0.857	3.0	123	0.00
70	T	4-Chlorotoluene	0.906	0.885	2.3	126	0.00
71	T	1,3,5-Trimethylbenzene	1.110	0.960	13.5	111	0.00
72	T	t-Butylbenzene	0.998	0.916	8.2	117	0.00
73	T	1,2,4-trimethylbenzene	1.103	0.973	11.8	115	0.00
74	T	sec-Butylbenzene	1.422	1.357	4.6	123	0.00
75	T	1,3-Dichlorobenzene	0.639	0.601	6.0	123	0.00
76	T	1,4-Dichlorobenzene	0.650	0.592	9.0	119	0.00
77		1,2-Dichlorobenzene	0.608	0.543	10.7	114	0.00
78	T	p-Isopropyltoluene	1.261	1.121	11.1	116	0.00
79	T	Butylbenzene	1.084	1.042	3.9	122	0.00
80	T	1,2-Dibromo-3-chloropropane	0.052	0.043	16.7	106	0.00
81	T	1,2,4-Trichlorobenzene	0.462	0.427	7.8	120	0.00
82	T	Naphthalene	0.936	0.823	12.1	112	0.00
83	T	Hexachlorobutadiene	0.343	0.305	11.1	113	0.00
84	T	1,2,3-Trichlorobenzene	0.420	0.351	16.6	111	0.00

(#) = Out of Range
S0500128.D 8260S.M

SPCC's out = 0 CCC's out = 0
Wed Feb 04 09:08:29 1998 HP-1

Data File : C:\HPCHEM\1\DATA\VS0203.D

Acq On : 3 Feb 98 4:32 pm

Sample : CON CAL

Misc :

Quant Time: Feb 3 17:00 1998

Vial: 1

Operator: HP-1

Inst : 5971 - In

Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8260S.M

Title : 8260 volatile organics PLUS

Last Update : Thu Jan 29 10:50:49 1998

Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Pentafluorobenzene	13.26	99	308320	30.00	ug/L	0.00
31) 1,4-Difluorobenzene	14.52	63	136533	30.00	ug/L	0.00
49) Chlorobenzene-d5	19.07	119	165936	30.00	ug/L	0.00
63) 1,4-Dichlorobenzene-d4	22.73	150	532364	30.00	ug/L	0.00
64) Ethylbenzene-d10	19.24	98	894848	30.00	ug/L	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recovery
26) 1,2-Dichloroethane-d4	13.35	65	248584	23.53	ug/L	78.44%
27) Dibromofluoromethane	12.67	111	201066	23.70	ug/L	79.00%
44) Toluene-d8	17.06	98	640568	29.00	ug/L	96.67%
66) Bromofluorobenzene	20.74	95	247733	26.54	ug/L	88.46%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	5.52	85	415014	41.53	ug/L	100
3) Chloromethane	5.91	50	430289	50.30	ug/L	95
4) Vinyl Chloride	6.31	62	425993	37.22	ug/L	97
5) Bromomethane	7.14	96	255121	43.10	ug/L	97
6) Chloroethane	6.30	64	134916	36.65	ug/L	43
7) Trichlorofluoromethane	8.54	101	657895	39.84	ug/L	97
8) Acrolein	8.51	56	39513	52.34	ug/L	92
9) Acetone	8.76	58	30331	56.75	ug/L	1
10) Diethyl Ether	8.96	59	315483	48.25	ug/L	92
11) 1,1-Dichloroethene	9.51	96	364246	48.94	ug/L	72
12) Iodomethane	9.57	142	181930	47.54	ug/L	91
13) Acrylonitrile	9.61	53	216789	57.10	ug/L	95
14) Methylene Chloride	9.75	84	414682	49.26	ug/L	98
15) Carbon Disulfide	10.16	76	884012	45.76	ug/L	89
16) trans-1,2-Dichloroethene	10.88	61	657105	43.83	ug/L	95
17) Methyl-t-butyl ether	11.05	73	1053393	39.31	ug/L	92
18) 1,1-Dichloroethane	11.27	63	773095	46.06	ug/L	97
19) Vinyl Acetate	11.48	43	816099	56.06	ug/L	98
20) 2-Butanone	11.95	72	40556	39.55	ug/L	1
21) Diisopropyl ether	11.96	45	1395803	44.55	ug/L	94
22) cis-1,2-Dichloroethene	12.17	61	603877	43.69	ug/L	84
23) Bromochloromethane	12.43	130	259333	41.27	ug/L	97
24) Chloroform	12.49	83	868971	48.24	ug/L	99
25) 2,2-Dichloropropane	12.61	77	730871	47.70	ug/L	91
28) 1,2-Dichloroethane	13.46	62	628436	39.24	ug/L	98
29) 1,1,1-Trichloroethane	13.62	97	635692	37.56	ug/L	92
30) 1,1-Dichloropropene	13.88	75	598414	43.18	ug/L	96
32) Carbon Tetrachloride	14.15	117	538338	57.47	ug/L	98
33) Benzene	14.20	78	1413551	52.29	ug/L	99
34) Dibromomethane	15.00	93	214362	57.91	ug/L #	85
35) 2,3-Dichloro-1-Propene	15.08	39	775159	44.56	ug/L #	37

(#) = qualifier out of range (m) = manual integration

VS0203.D 8260S.M

Tue Feb 03 17:00:46 1998

HP-1

Page 1

Acq On : 3 Feb 98 4:32 pm

Sample : CON CAL

Misc :

Quant Time: Feb 3 17:00 1998

Vial: 1
Operator: HP-1
Inst : 5971 - In
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8260S.M

Title : 8260 volatile organics PLUS

Last Update : Thu Jan 29 10:50:49 1998

Response via : Multiple Level Calibration

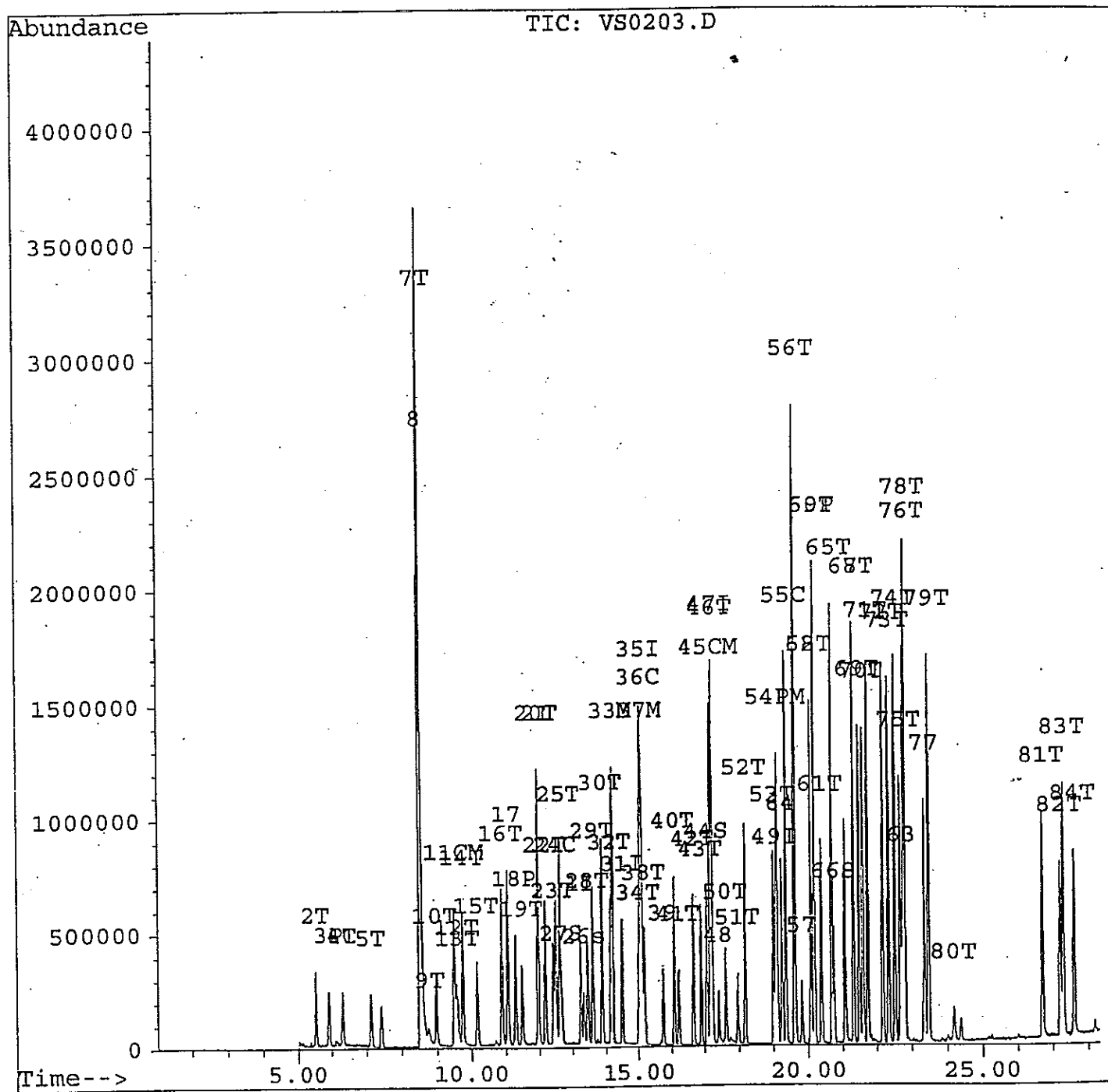
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
36) 1,2-Dichloropropane	15.05	63	379501	53.07	ug/L #	87
37) Trichloroethene	15.11	130	460034	48.00	ug/L	93
38) Bromodichloromethane	15.18	83	463180	47.11	ug/L	100
39) 2-Chloroethyl vinyl ether	15.74	63	198480	446.59	ug/L #	52
40) cis-1,3-Dichloropropene	16.07	75	567333	49.54	ug/L	97
41) 4-Methyl-2-pentanone	16.22	58	119966	45.60	ug/L	90
42) trans-1,3-Dichloropropene	16.67	75	503584	43.72	ug/L	97
43) 1,1,2-Trichloroethane	16.89	97	278883	45.65	ug/L	93
45) Toluene	17.16	91	1477228	48.73	ug/L	99
46) 1,3-Dichloropropane	17.23	76	504362	45.60	ug/L #	5
47) Ethyl Methacrylate	17.22	69	734928	44.61	ug/L #	5
48) 2-Hexanone	17.41	58	118437	46.59	ug/L #	88
50) Dibromochloromethane	17.62	127	239393	37.05	ug/L	97
51) 1,2-Dibromoethane	17.97	107	313430	43.47	ug/L	97
52) Tetrachloroethene	18.18	166	467690	45.51	ug/L	98
53) 1,1,1,2-Tetrachloroethane	19.00	131	357883	42.75	ug/L	94
54) Chlorobenzene	19.11	112	1049426	49.18	ug/L	94
55) Ethylbenzene	19.36	91	1758600	46.92	ug/L	97
56) m,p-Xylene	19.62	91	2886346	98.41	ug/L	100
57) Bromoform	19.83	173	193853	32.66	ug/L #	81
58) Styrene	20.08	104	1097950	47.88	ug/L	98
59) o-Xylene	20.18	91	1434810	47.95	ug/L	100
60) 1,1,2,2-Tetrachloroethane	20.17	83	330642	44.15	ug/L #	97
61) 1,2,3-Trichloropropane	20.37	75	444843	42.08	ug/L	95
62) trans-1,4-Dichloro-2-buten	20.07	75	48686	48.18	ug/L #	4
65) Isopropylbenzene	20.67	105	1851086	46.71	ug/L	98
67) Bromobenzene	21.30	77	92220	47.99	ug/L #	24
68) Propylbenzene	21.30	91	2233122	50.25	ug/L	92
69) 2-Chlorotoluene	21.46	91	1277531	48.37	ug/L	91
70) 4-Chlorotoluene	21.57	91	1320632	48.40	ug/L	91
71) 1,3,5-Trimethylbenzene	21.71	105	1431616	43.31	ug/L	97
72) t-Butylbenzene	22.17	119	1366746	45.40	ug/L	92
73) 1,2,4-trimethylbenzene	22.33	105	1450800	43.86	ug/L	97
74) sec-Butylbenzene	22.52	105	2023466	47.84	ug/L	97
75) 1,3-Dichlorobenzene	22.67	146	896376	46.15	ug/L	97
76) 1,4-Dichlorobenzene	22.78	146	882853	45.34	ug/L	95
77) 1,2-Dichlorobenzene	23.38	146	809830	43.90	ug/L #	91
78) p-Isopropyltoluene	22.80	119	1671701	43.74	ug/L	97
79) Butylbenzene	23.49	91	1553982	48.00	ug/L #	96
80) 1,2-Dibromo-3-chloropropan	24.18	157	64369	32.62	ug/L	95
81) 1,2,4-Trichlorobenzene	26.71	180	636176	45.28	ug/L	98
82) Naphthalene	27.20	128	1227169	42.92	ug/L	100
83) Hexachlorobutadiene	27.29	225	454881	43.27	ug/L #	90
84) 1,2,3-Trichlorobenzene	27.59	180	522823	40.50	ug/L	93

(#)=qualifier out of range (m)=manual integration

Data File : C:\HPCHEM\1\DATA\VS0203.D
Acq On : 3 Feb 98 4:32 pm
Sample : CON CAL
Misc :
Quant Time: Feb 3 17:00 1998

Vial: 1
Operator: HP-1
Inst : 5971 - In
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8260S.M
Title : 8260 volatile organics PLUS
Last Update : Thu Jan 29 10:50:49 1998
Response via : Multiple Level Calibration



Data File : C:\HPCHEM\1\DATA\VB0203.D
 Acq On : 3 Feb 98 5:07 pm
 Sample : 1
 Misc : METHOD BLANK
 Quant Time: Feb 3 17:35 1998

Vial: 2
 Operator: HP-1
 Inst : 5971 - In
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8260S.M
 Title : 8260 volatile organics PLUS
 Last Update : Thu Jan 29 10:50:49 1998
 Response via : Multiple Level Calibration

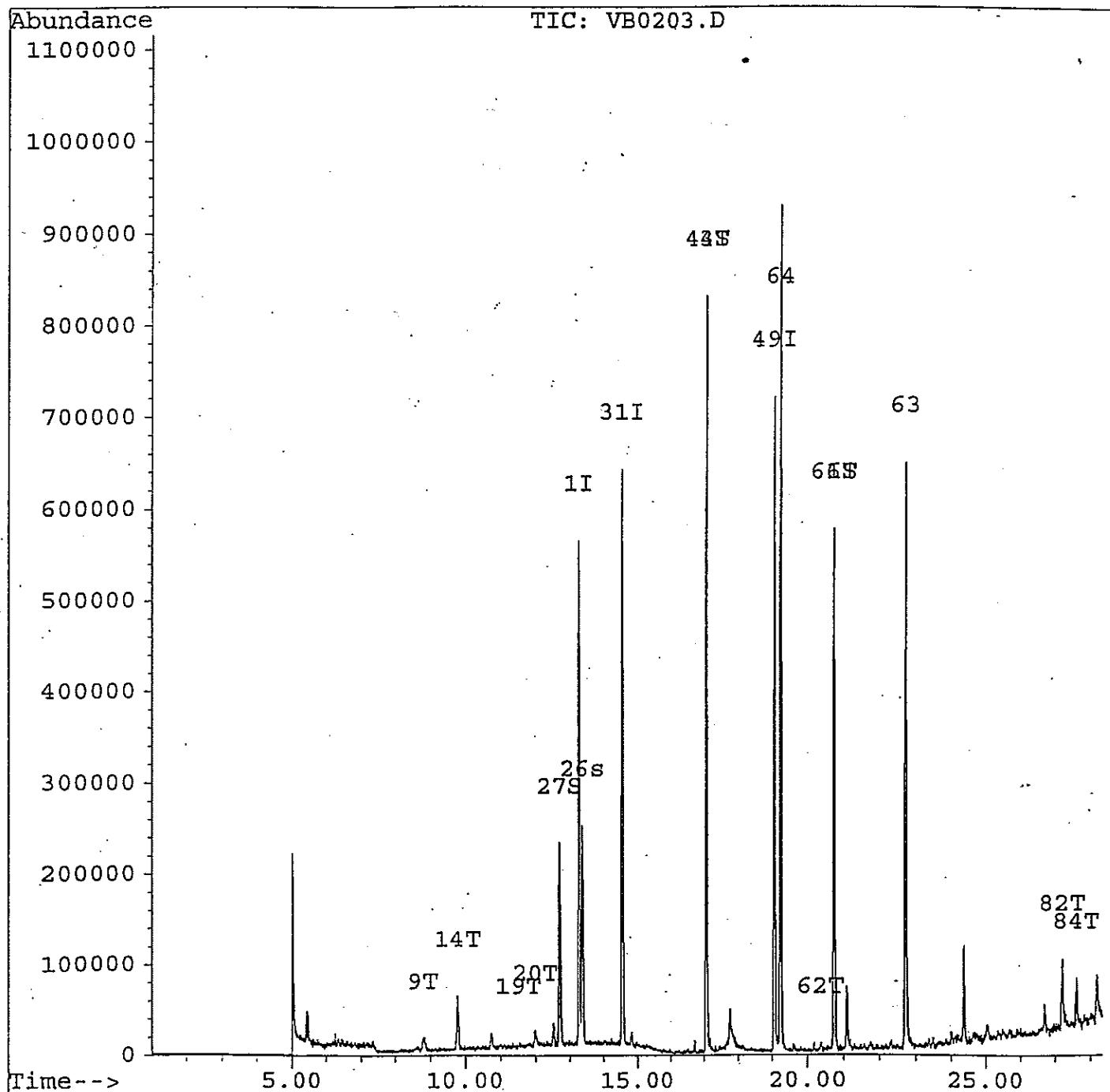
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	13.27	99	294119	30.00	ug/L	0.00
31) 1,4-Difluorobenzene	14.53	63	163338	30.00	ug/L	0.00
49) Chlorobenzene-d5	19.07	119	202380	30.00	ug/L	0.00
63) 1,4-Dichlorobenzene-d4	22.73	150	506356	30.00	ug/L	0.00
64) Ethylbenzene-d10	19.25	98	1008670	30.00	ug/L	0.00
System Monitoring Compounds						%Recovery
26) 1,2-Dichloroethane-d4	13.37	65	292132	28.99	ug/L	96.63%
27) Dibromofluoromethane	12.69	111	222602	27.50	ug/L	91.68%
44) Toluene-d8	17.06	98	761012	28.80	ug/L	96.00%
66) Bromofluorobenzene	20.75	95	296712	28.20	ug/L	94.00%
Target Compounds						Qvalue
9) Acetone	8.80	58	2544	4.99	ug/L #	8
14) Methylene Chloride	9.79	84	42406	5.28	ug/L	95
19) Vinyl Acetate	11.51	43	1280	8.67	ug/L #	78
20) 2-Butanone	11.98	72	3837	3.92	ug/L	87
43) 1,1,2-Trichloroethane	17.07	97	18116	2.48	ug/L #	1
61) 1,2,3-Trichloropropane	20.75	75	153922	11.94	ug/L #	50
62) trans-1,4-Dichloro-2-buten	20.38	75	2533	6.63	ug/L #	50
82) Naphthalene	27.20	128	127144	3.94	ug/L	100
84) 1,2,3-Trichlorobenzene	27.59	180	35443	2.44	ug/L #	88

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\VB0203.D
Acq On : 3 Feb 98 5:07 pm
Sample : 1
Misc : METHOD BLANK
Quant Time: Feb 3 17:35 1998

Vial: 2
Operator: HP-1
Inst : 5971 - In
Multiplr: 1.00

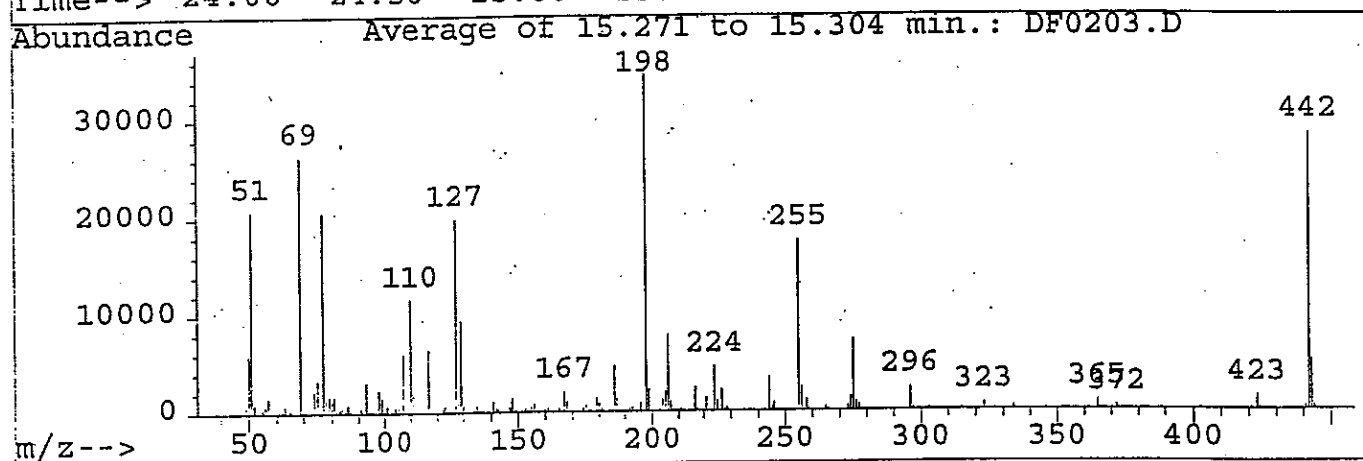
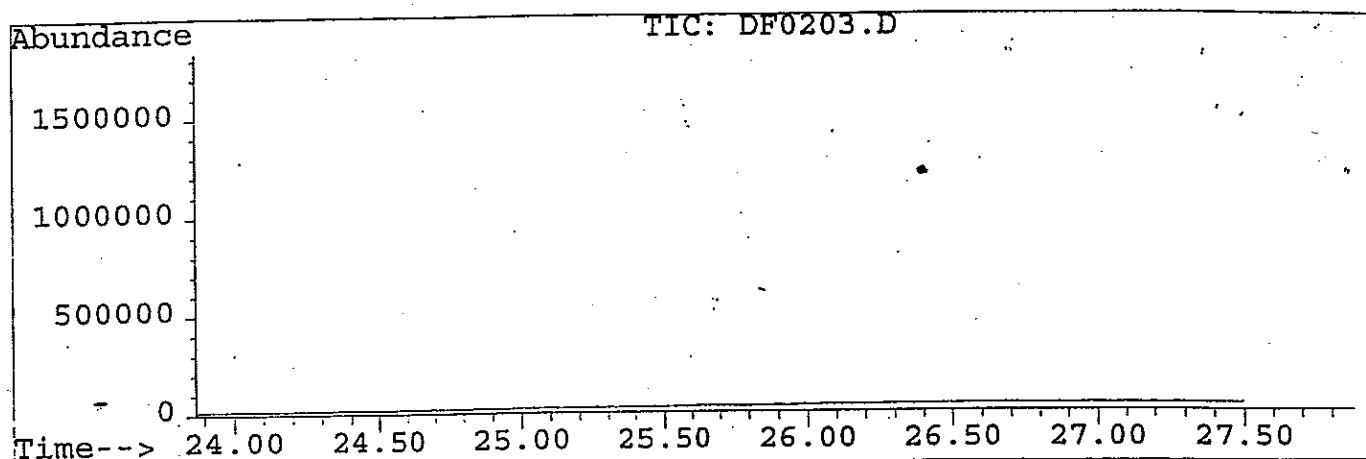
Method : C:\HPCHEM\1\METHODS\8260S.M
Title : 8260 volatile organics PLUS
Last Update : Thu Jan 29 10:50:49 1998
Response via : Multiple Level Calibration



Data File : C:\HPCHEM\1\DATA\DF0203.D
 Acq On : 3 Feb 98 4:49 pm
 Sample : tune
 Misc :

Vial: 2
 Operator: hp-4
 Inst : 5972 - ID
 Multipir: 1.00

Method : C:\HPCHEM\1\METHODS\8270.M
 Title : SW846 METHOD 8270



Peak Apex is scan: 3539

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	58.9	20795	PASS
68	69	0	2	0.0	0	PASS
69	198	0	100	74.9	26450	PASS
70	69	0	2	0.7	186	PASS
127	198	30	60	56.4	19922	PASS
197	198	0	1	0.0	0	PASS
198	198	100	100	100.0	35302	PASS
199	198	5	9	6.5	2307	PASS
275	198	10	30	20.9	7365	PASS
365	198	1	100	2.8	977	PASS
441	442	0	100	1.5	430	PASS
442	198	40	100	80.8	28537	PASS
443	442	17	23	18.3	5219	PASS

Data File : C:\HPCHEM\1\DATA\CC0203.D

Acq On : 3 Feb 98 5:26 pm

Sample : 50 ppm con cal

Misc :

Vial: 3

Operator: hp-4

Inst : 5972 - In

Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8270.M

Title : SW846 METHOD 8270

Last Update : Wed Feb 04 09:35:24 1998

Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 10% Max. R.T. Dev 0.50min

Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1 I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	60	0.28
2 T	Pyridine	1.151	1.093	5.1	63	0.00
3 T	N-Nitroso-dimethylamine	0.737	0.590	20.0	52	0.00
4 S	2-Fluorophenol	0.796	0.893	-12.1	72	0.00
5	Aniline	1.290	1.199	7.1	59	0.00
6	Bis-(2-Chloroethyl) ether	0.937	0.856	8.7	58	0.00
7 S	Phenol-d5	0.967	0.997	-3.2	66	0.00
8 MC	Phenol	1.181	1.020	13.7	55	0.00
9 s	2-Chlorophenol-d4	0.781	0.758	3.0	62	0.00
10 M	2-Chlorophenol	0.818	0.795	2.8	62	0.00
11	1,3-Dichlorobenzene	0.813	0.789	2.9	64	0.00
12 MC	1,4-Dichlorobenzene	0.841	0.741	11.9	56	0.27
13 s	1,2-Dichlorobenzene-d4	0.817	0.800	2.1	64	0.00
14	1,2-Dichlorobenzene	0.736	0.713	3.2	62	0.00
15	Benzyl Alcohol	0.720	0.812	-12.8	73	0.00
16	Bis-(2-chloroisopropyl) ethe	0.227	0.210	7.6	60	0.00
17	2-Methylphenol	0.734	0.712	3.0	61	0.00
18	Hexachloroethane	0.361	0.377	-4.7	67	0.00
19 MP	N-Nitroso-di-n-propylamine	0.624	0.617	1.1	64	0.00
20	3,4-Methylphenol	0.798	0.935	-17.1	74	0.23
21 I	Naphthalene-d8	1.000	1.000	0.0	71	0.00
22 S	Nitrobenzene-d5	0.471	0.441	6.4	66	0.00
23	Nitrobenzene	0.467	0.441	5.7	65	0.00
24	Isophorone	0.944	0.840	11.0	62	0.00
25 C	2-Nitrophenol	0.213	0.199	6.6	66	0.00
26	2,4-Dimethylphenol	0.412	0.391	5.0	67	0.00
27	Bis-(2-chloroethoxy) methane	0.532	0.427	19.8	57	0.00
28 C	2,4-Dichlorophenol	0.267	0.240	10.2	62	0.00
29	Benzoic acid	0.245	0.215	12.4	60	0.00
30 M	1,2,4-Trichlorobenzene	0.255	0.231	9.2	64	0.00
31	Naphthalene	0.987	0.845	14.4	62	0.00
32	4-chloroaniline	0.462	0.372	19.4	55	0.00
33 C	Hexachlorobutadiene	0.145	0.140	3.6	68	0.00
34	4-Chloro-3-methylphenol	0.335	0.318	5.0	67	0.00
35	2-Methylnaphthalene	0.581	0.518	10.8	65	0.00
36	1-Methylnaphthalene	0.603	0.524	13.2	62	0.00
37 I	Acenaphthene-d10	1.000	1.000	0.0	73	0.00
38 P	Hexachlorocyclopentadiene	0.289	0.249	13.8	61	0.00
39 C	2,4,6-Trichlorophenol	0.357	0.320	10.4	64	0.00
40	2,4,5-Trichlorophenol	0.388	0.350	9.8	65	0.00
41 S	2-fluorobiphenyl	1.221	1.053	13.7	64	0.00
42	2-Chloronaphthalene	1.138	1.001	12.1	65	0.00
43	2-Nitroaniline	0.535	0.445	16.8	62	0.00
44	Acenaphthylene	1.901	1.527	19.7	58	0.00

46		2,6-Dinitrotoluene	0.527	0.508	16.8	62	0.00
47		3-Nitroaniline	0.535	0.445	17.2	60	0.00
48	MC	Acenaphthene	1.113	0.922	-10.7	79	0.00
49	P	2,4-dinitrophenol	0.155	0.171	5.4	70	0.00
50		Dibenzofuran	1.514	1.433	13.1	64	0.00
51	M	2,4-Dinitrotoluene	0.423	0.368	-2.7	72	0.00
52	MP	4-Nitrophenol	0.414	0.425	10.2	66	0.00
53		Fluorene	1.199	1.076	15.8	63	0.00
54		4-Chlorophenyl phenylether	0.524	0.441	12.0	65	0.00
55		Diethylphthalate	1.516	1.334	14.4	62	0.00
56		4-Nitroaniline	0.412	0.353	8.3	65	0.00
57		1,2-Diphenylhydrazine	2.108	1.933			
58	I	Phenanthrene-d10	1.000	1.000	0.0	74	0.00
59		4,6-Dinitro-2-methylphenol	0.130	0.137	-5.1	78	0.00
60	C	N-Nitroso-diphenylamine	0.510	0.438	14.1	64	0.00
61	S	Tribromophenol	0.099	0.091	7.4	68	0.00
62		4-Bromophenyl phenyl ether	0.165	0.141	14.7	63	0.00
63		Hexachlorobenzene	0.206	0.173	15.9	64	0.00
64	MC	Pentachlorophenol	0.140	0.129	7.6	70	0.00
65		Phenanthrene	0.987	0.801	18.9	60	0.00
66		Anthracene	1.022	0.897	12.2	64	0.00
67		Carbazole	0.913	0.821	10.0	70	0.00
68		Di-n-butyl phthalate	1.596	1.330	16.6	64	0.00
69	C	Fluoranthene	1.010	0.873	13.6	64	0.49
70	I	Chrysene-d12	1.000	1.000	0.0	72	0.00
71		Benzydine	0.478	0.422	11.7	63	0.00
72	M	Pyrene	1.287	1.135	11.8	61	0.00
73	S	Terphenyl-d14	0.872	0.734	15.9	58	0.00
74		Butylbenzylphthalate	0.960	0.991	-3.2	73	0.00
75		3,3'-Dichlorobenzidine	0.385	0.373	3.0	74	0.00
76		Benzo(a)anthracene	1.133	0.953	15.8	59	0.00
77		Chrysene	0.862	0.880	-2.0	72	0.00
78		Bis-(2-ethylhexyl)phthalate	1.324	1.126	15.0	60	0.00
79	I	Perylene-d12	1.000	1.000	0.0	72	0.00
80	C	Di-n-octylphthalate	3.081	2.824	8.3	68	0.00
81		Benzo(b)fluoranthene	1.696	1.322	22.1	57	0.00
82		Benzo(k)fluoranthene	1.205	1.037	14.0	59	0.00
83	C	Benzo(a)pyrene	1.333	1.142	14.4	62	0.00
84		Indeno(1,2,3-cd)pyrene	1.540	1.235	19.8	57	0.00
85		Dibenz(a,h)anthracene	1.127	1.069	5.2	68	0.00
86		Benzo(g,h,i)perylene	1.317	1.043	20.8	57	0.00

(#) = Out of Range
0500105.D 8270.M

SPCC's out = 0 CCC's out = 0
Wed Feb 04 12:18:39 1998 HP-4

TRANSMITTAL OF SAD LABORATORY REPORT(S)

TO: Commander, Savannah District
US Army Corps of Engineers
ATTN: CESAS-PM-H
Mr. Brent Rose
P.O. Box 889
Savannah, GA 31402-0889

FROM: Director (CESAS-EN-L)
SAD Laboratory
USACE
611 South Cobb Drive
Marietta, GA 30060-3112

PROJECT: Hunter AAF -
Fire Training Area

REQN NO: W33SJG80797577
W.O. NO: 8400

SUBJECT: Analytical Testing Results

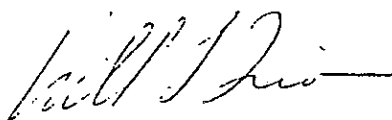
1. Enclosed is our report of analytical test results and chain of custody forms for samples collected on 12 February 1998 from Hunter AAF.
2. If you have any questions, please call Mr. Blaise Willis at 770-919-5295 or me at 770-919-3990.

SUBMITTED BY:

SIGNATURE:

DATE:

WILLIAM L. TISON, P. E.
Director, SAD Laboratory



30 Mar 1998

South Atlantic Division Laboratory
U. S. Army Corps of Engineers
611 South Cobb Drive
Marietta, Georgia 30060-3112

District - SAVANNAH
Date Received - 98/02/13
Date Reported - 98/03/09 13:28:30

HUNTER ARMY AIRFIELD, GA
Requisition - W33SJK80283594
Work Order - 8379 Job Number - 5474

Lab #	Field ID	Date Sampled	Time Sampled
34918	HEAP #6-ES-001-QA	98/02/12	00:00

Test Performed	Result	Units	Tested By	Test Date
VOLATILE ORGANICS GC/MS	*		SPA	98/02/16
SEMIVOLATILE ORGANICS GC/MS	*		SPA	98/02/18
TRPH	1280.0	MG/KG	SPA	98/02/15
ARSENIC TCLP	< 0.100	PPM	SPA	98/02/18
BARIUM TCLP	< 1.000	PPM	SPA	98/02/18
CADMIUM TCLP	< 0.100	PPM	SPA	98/02/18
CHROMIUM TCLP	< 0.500	PPM	SPA	98/02/18
LEAD TCLP	< 0.500	PPM	SPA	98/02/18
MERCURY TCLP	< 0.0100	PPM	SPA	98/02/17
SELENIUM TCLP	< 0.100	PPM	SPA	98/02/18
SILVER TCLP	< 0.100	PPM	SPA	98/02/18
TCLP EXTRACTION	*		SPA	98/02/14
TOTAL SOLIDS, % OF WET	86.00	%	SPA	98/02/16

*NOTE: See Attached

Sampled by District Personnel

Checked by: JWS

Signed by:

Blaise Willis

Blaise Willis
Chemist

Sheet 1 of 2

Lab # Field ID

34919 HEAP #6-QA-TB

Date Sampled Time Sampled

98/02/12 00:00

()
Test Performed

Result	Units	Tested By	Test Date
-----	-----	-----	-----
*		SPA	98/02/16

VOLATILE ORGANICS GC/MS

*NOTE: See Attached

Sampled by District Personnel

Checked by: JWS

Signed by:

Blaise Willis

Blaise Willis
Chemist

Sheet 2 of 2

Cooler Receipt Form

Job # 5474No. of Coolers 1Return Cooler Project: Hunter Army AirfieldDate Received: 2/13/98Date cooler opened: 2/13/98 by (print) B. Serbin
(sign) B. SZ1. Did cooler come with a shipping slip?
If yes, enter carrier & air bill number here: FE 801466199413Yes ☒ No2. Were custody seals on outside of cooler:
How many & where: seal date: seal name: Yes ☒ No

3. Were custody seals unbroken upon receipt?

Yes No

4. Did you screen samples for radioactivity?

Yes ☒ No

5. Were custody papers sealed in a plastic bag & taped to inside lid?

Yes ☒ No

6. Were custody papers filled out properly (ink, signed, etc.)?

Yes ☒ No

7. Did you sign custody papers in the appropriate place?

Yes ☒ No8. Was project identifiable from custody papers? If yes enter project name
at the top of this form.Yes ☒ No9. If required, was enough ice used. 8.0 Type:

Yes No

Date logged-in: 2/13/98 by (print) B. Serbin
(sign) B. SZ1. Describe cooler packing: bubble wrapYes ☒ No

2. Were all bottles sealed in separate plastic bags?

Yes ☒ No

3. Did all bottles arrive unbroken & labels in good condition?

Yes ☒ No

4. Were all bottle labels complete (ID, date, time, signature, pres., etc.)

Yes ☒ No

5. Were all bottle labels agree with custody papers?

Yes ☒ No

6. Were correct containers used for the tests indicated?

Yes ☒ No

7. Were correct preservatives added to samples?

Yes ☒ No

8. Was a sufficient amount of sample sent for tests?

Yes ☒ No9. Were bubbles absent in Volatile samples? If no, list Field ID: 10. Number of days from sample date when received in the lab 1Yes ☒ No11. Was project manager called & status discussed?
If yes, give details on the bottom of this form.Who was called? By whom? Date:



SPECIALIZED ASSAYS, INC.

2960 Foster Creighton Dr.
P.O. Box 40566
Nashville, TN 37204-0566
Phone 1-615-726-0177

ANALYTICAL REPORT

DIRECTOR, U.S. ARMY CORPS ENG. 5394
CESAD LABORATORY
611 SOUTH COBB DRIVE
MARIETTA, GA 30060-3172

Sample Location: 34918 HEAP #6-ES-001-QA Lab Number: 98-A15001
HUNTER ARMY AIRFIELD

Sampler: BOBBI THORN

Date Collected: 2/12/98

Date Received: 2/14/98

Time Collected:

Time Received: 9:00

Sample type: Soil

Mechanics Reference Data

VOA Blank	UB0216
Blank	21200SBB
GC Tune, VOA	3FB0216
GC/MS Tune, BNA	DF0217B
Calibration Check, VOA	VS0216
Calibration Check, BNA	CC0217B

Percent solids: 86.

VOLATILE ORGANICS

Analyte	Result	Flag	DF	Units	Date	Time	Analyst	Method
Benzene	2.33	U	1	ug/kg	2/16/98	17:47	G. Norton	8260B
Ethylbenzene	11.3		1	ug/kg	2/16/98	17:47	G. Norton	8260B
Toluene	2.33	U	1	ug/kg	2/16/98	17:47	G. Norton	8260B
Xylenes	2.33	U	1	ug/kg	2/16/98	17:47	G. Norton	8260B

SEMIVOLATILE ORGANICS and PESTICIDE/PCB's

Analyte	Result	Flag	DF	Units	Date	Time	Analyst	Method
Anthracene	192.		1	ug/kg	2/18/98	7:42	Cornelius	8270
Acenaphthene	192.	U	1	ug/kg	2/18/98	7:42	Cornelius	8270
Anthracene	192.	U	1	ug/kg	2/18/98	7:42	Cornelius	8270
Fluoranthene	192.		1	ug/kg	2/18/98	7:42	Cornelius	8270
Fluorene	192.		1	ug/kg	2/18/98	7:42	Cornelius	8270
Pyrene	192.		1	ug/kg	2/18/98	7:42	Cornelius	8270

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ANALYTICAL REPORT

Laboratory Number: 98-A15001

Sample ID: 34918 HEAP #6-ES-001-QA

Page 2

SEMIVOLATILE ORGANICS and PESTICIDE/PCB's

Analyte	Result	Flag	DF	Units	Date	Time	Analyst	Method
Benzo(a)anthracene	192.	U	1	ug/kg	2/18/98	7:42	Cornelius	8270
Benzo(a)pyrene	192.	U	1	ug/kg	2/18/98	7:42	Cornelius	8270
Benzo(b)fluoranthene	192.	U	1	ug/kg	2/18/98	7:42	Cornelius	8270
Benzo(k)fluoranthene	192.	U	1	ug/kg	2/18/98	7:42	Cornelius	8270
Chrysene	192.	U	1	ug/kg	2/18/98	7:42	Cornelius	8270
Dibenzo(a,h)anthracene	192.	U	1	ug/kg	2/18/98	7:42	Cornelius	8270
Indeno(1,2,3-cd)pyrene	192.	U	1	ug/kg	2/18/98	7:42	Cornelius	8270
Acenaphthylene	192.	U	1	ug/kg	2/18/98	7:42	Cornelius	8270
Benzo(g,h,i)perylene	192.	U	1	ug/kg	2/18/98	7:42	Cornelius	8270
Phenanthrene	192.	U	1	ug/kg	2/18/98	7:42	Cornelius	8270
1-Methylnapthalene	491.		1	ug/kg	2/18/98	7:42	Cornelius	8270
2-Methylnapthalene	492.		1	ug/kg	2/18/98	7:42	Cornelius	8270
Extraction, BNA's	Completed			ug/kg	2/14/98	15:46	A. Bufalino	3550

UNDERGROUND STORAGE TANK RESULTS

Analyte	Result	Units	PQL	Dil Factor	Date	Time	Analyst	Method
Petroleum Hydrocarbons	1280	mg/kg	11.6	1	2/15/98	14:28	Fitzwater	418.1

TCLP Results

Analyte	Result	Units	Reg Limit	Matrix Spike Recovery (%)	Date	Method
Arsenic	< 0.10	mg/l	5.0	102	2/18/98	6010B
Barium	< 1.00	mg/l	100	93	2/18/98	6010B
Cadmium	< 0.10	mg/l	1.0	97	2/18/98	6010B
Chromium	< 0.50	mg/l	5.0	92	2/18/98	6010B
Lead	< 0.50	mg/l	5.0	97	2/18/98	6010B
Mercury	< 0.010	mg/l	0.20	96	2/17/98	7470A
Selenium	< 0.10	mg/l	1.0	108	2/18/98	6010B
Silver	< 0.10	mg/l	5.0	98	2/18/98	6010B
TCLP Extraction	Completed				2/14/98	1311



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ANALYTICAL REPORT

Laboratory Number: 98-A15001

Sample ID: 34918 HEAP #6-ES-001-QA

Page 3

Sample Extraction Data

Parameter	Nt/Vol Extracted	Extract Vol	Date	Analyst	Method
ONA's	30.0 gm	1.0 ml	2/14/98	A. Bufalino	3550

Surrogate	% Recovery	Target Range
VDA Surrogate, 1,2-Dichloroethane, 44	93.6	62. - 147.
VDA Surrogate, Toluene 48	91.0	84. - 117.
VDA Surrogate, 4-Bromofluorobenzene	111.	64. - 126.
VDA Surrogate, Dibromofluoromethane	105.	77. - 118.
ONA Surr., Nitrobenzene-45	73.8	23. - 120.
ONA Surr., 2-Fluorobiphenyl	67.4	30. - 115.
IA Surrogate, Terphenyl 414	83.4	18. - 140.

Report Approved By: Michael H. Dunn Report Date: 3/ 3/98

Theodore J. Duello, Ph.D., Q.A. Officer
Michael H. Dunn, M.S., Technical Director
Danny B. Hale, M.S., Laboratory Director



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ANALYTICAL REPORT

DIRECTOR U.S. ARMY CORPS ENG. 5394
CESAD LABORATORY
611 SOUTH COBB DRIVE
MARIETTA, GA 30060-3172

Sample Location: 34919 HEAP #6-QA-TB
HUNTER ARMY AIRFIELD

Date Collected: 2/12/98

Time Collected:

Sampler: BOBBI THORN

Lab Number: 98-A15002

Date Received: 2/14/98

Time Received: 9:00

Sample type: Water

Organics Reference Data

QA Blank VB0216
C/MS Tune, VOA BFB0216
a ration Check, VOA VS0216

VOLATILE ORGANICS

Analyte	Result	Flag	DF	Units	Date	Time	Analyst	Method
Acetone	10.0	U	1	ug/l	2/16/98	19:01	S. Sturm	8260B
Benzene	2.0	U	1	ug/l	2/16/98	19:01	S. Sturm	8260B
Bromoform	2.0	U	1	ug/l	2/16/98	19:01	S. Sturm	8260B
Bromomethane	2.0	U	1	ug/l	2/16/98	19:01	S. Sturm	8260B
2-Butanone	10.0	U	1	ug/l	2/16/98	19:01	S. Sturm	8260B
Carbon disulfide	2.0	U	1	ug/l	2/16/98	19:01	S. Sturm	8260B
Carbon tetrachloride	2.0	U	1	ug/l	2/16/98	19:01	S. Sturm	8260B
Chlorobenzene	2.0	U	1	ug/l	2/16/98	19:01	S. Sturm	8260B
Chloroethane	2.0	U	1	ug/l	2/16/98	19:01	S. Sturm	8260B
Chloroform	2.0	U	1	ug/l	2/16/98	19:01	S. Sturm	8260B
Chloromethane	2.0	U	1	ug/l	2/16/98	19:01	S. Sturm	8260B
Dibromochloromethane	2.0	U	1	ug/l	2/16/98	19:01	S. Sturm	8260B
1,1-Dichloroethane	2.0	U	1	ug/l	2/16/98	19:01	S. Sturm	8260B
1,2-Dichloroethane	2.0	U	1	ug/l	2/16/98	19:01	S. Sturm	8260B
1,1-Dichloroethene	2.0	U	1	ug/l	2/16/98	19:01	S. Sturm	8260B
cis-1,2-Dichloroethene	2.0	U	1	ug/l	2/16/98	19:01	S. Sturm	8260B
trans-1,2-Dichloroethene	2.0	U	1	ug/l	2/16/98	19:01	S. Sturm	8260B
1,1-Dichloropropane	2.0	U	1	ug/l	2/16/98	19:01	S. Sturm	8260B
cis-1,3-Dichloropropene	2.0	U	1	ug/l	2/16/98	19:01	S. Sturm	8260B
trans-1,3-Dichloropropene	2.0	U	1	ug/l	2/16/98	19:01	S. Sturm	8260B
Ethylbenzene	2.0	U	1	ug/l	2/16/98	19:01	S. Sturm	8260B
2-Hexanone	10.0	U	1	ug/l	2/16/98	19:01	S. Sturm	8260B
4-methyl-2-pentanone	10.0	U	1	ug/l	2/16/98	19:01	S. Sturm	8260B



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ANALYTICAL REPORT

Laboratory Number: 98-A15002
Sample ID: 34919 HEAP #6-QA-TB

Page 2

VOLATILE ORGANICS

anlyte	Result	Flag	DF	Units	Date	Time	Analyst	Method
ethylene chloride	2.0	U	1	ug/l	2/16/98	19:01	S. Sturm	8260B
tyrene	2.0	U	1	ug/l	2/16/98	19:01	S. Sturm	8260B
,1,2,2-Tetrachloroethane	2.0	U	1	ug/l	2/16/98	19:01	S. Sturm	8260B
etrachloroethene	2.0	U	1	ug/l	2/16/98	19:01	S. Sturm	8260B
luene	2.0	U	1	ug/l	2/16/98	19:01	S. Sturm	8260B
,1,1-Trichloroethane	2.0	U	1	ug/l	2/16/98	19:01	S. Sturm	8260B
,1,2-Trichloroethane	2.0	U	1	ug/l	2/16/98	19:01	S. Sturm	8260B
richloroethene	2.0	U	1	ug/l	2/16/98	19:01	S. Sturm	8260B
inyl chloride	2.0	U	1	ug/l	2/16/98	19:01	S. Sturm	8260B
ylene	2.0	U	1	ug/l	2/16/98	19:01	S. Sturm	8260B
romodichloromethane	2.0	U	1	ug/l	2/16/98	19:01	S. Sturm	8260B

Surrogate	% Recovery	Target Range
UDA Surrogate, 1,2-Dichloroethane, d4	112.	70. - 131.
UDA Surrogate, Toluene d8	113.	83. - 115.
UDA Surrogate, 4-Bromofluorobenzene	106.	73. - 119.
UDA Surrogate, Dibromofluoromethane	118.	72. - 130.

Report Approved By:

Report Date: 3/ 3/98

Theodore J. Duello, Ph.D., Q.A. Officer
Michael H. Dunn, M.S., Technical Director
Danny B. Hale, M.S., Laboratory Director



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PROJECT QUALITY CONTROL DATA

DIRECTOR U.S. ARMY CORPS ENG. 5394

Report Number: 98-A15003

Sample I.D.: METHOD BLANK

Lab Project: 91824

Project: 444941 CALL#0708

Date Received: 2/14/98

* UST Spike/Duplicate Results **

Compound	%Recovery	Target Range	Precision RPD	Target Range
TRPH, 418.1	99.	75 - 125	1.1	0 - 25.0

* Organics Spike/Duplicate Results **

Compound	%Recovery	Target Range	Precision RPD	Target Range
1-Dichloroethene	110.	59 - 172	8.0	0 - 22
Trichloroethene	100.	62 - 137	0.0	0 - 24
Benzene	106.	66 - 142	6.0	0 - 21
Toluene	108.	59 - 139	4.0	0 - 21
Chlorobenzene	94.	60 - 133	10.0	0 - 21
Phenol	75.	26 - 115	6.2	0 - 35
2-Chlorophenol	76.	25 - 102	4.8	0 - 50
1,4-Dichlorobenzene	72.	28 - 104	6.0	0 - 27
Nitroso-di-n-propylamine	95.	41 - 126	2.9	0 - 38
2,4-Trichlorobenzene	80.	38 - 107	5.1	0 - 23
2-Chloro-3-methylphenol	73.	26 - 103	0.8	0 - 33
Acenaphthene	81.	31 - 137	6.9	0 - 19
2-Nitrophenol	72.	11 - 125	6.9	0 - 50
1,4-Dinitrotoluene	74.	28 - 100	11.0	0 - 47
2,4,6-Trichlorophenol	74.	17 - 109	8.9	0 - 47
Biphenyl	94.	35 - 142	9.0	0 - 36

* Volatile Organics Method Blank Results ***

Compound	Result	Flag	Units	Method
Benzene	2.0	U	ug/kg	8260B
Ethylbenzene	2.0	U	ug/kg	8260B
Toluene	2.0	U	ug/kg	8260B
Xylenes	2.0	U	ug/kg	8260B



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PROJECT QUALITY CONTROL DATA

DIRECTOR U.S. ARMY CORPS ENG. 5394

Report Number: 98-A15003

Sample I.D.: METHOD BLANK

Lab Project: 91824

Project: 444941 CALL#0708

Date Received: 2/14/98

Volatile Organics Method Blank Results ***

Compound	Result	Flag	Units	Method
----------	--------	------	-------	--------

Semi-Volatile Organics Method Blank Results ***

Compound	Result	Flag	Units	Method
naphthalene	165.	U	ug/kg	8270
anthracene	165.	U	ug/kg	8270
fluorene	165.	U	ug/kg	8270
fluoranthene	165.	U	ug/kg	8270
pyrene	165.	U	ug/kg	8270
benzo(a)anthracene	165.	U	ug/kg	8270
benzo(a)pyrene	165.	U	ug/kg	8270
benzo(b)fluoranthene	165.	U	ug/kg	8270
benzo(k)fluoranthene	165.	U	ug/kg	8270
perylene	165.	U	ug/kg	8270
benzo(a,h)anthracene	165.	U	ug/kg	8270
indeno(1,2,3-cd)pyrene	165.	U	ug/kg	8270
benzophenanthrene	165.	U	ug/kg	8270
1-methylnaphthalene	165.	U	ug/kg	8270
2-methylnaphthalene	165.	U	ug/kg	8270



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PROJECT QUALITY CONTROL DATA

DIRECTOR U.S. ARMY CORPS ENG. 5394

Report Number: 98-A15004

Sample I.D.: METHOD BLANK

Lab Project: 91824

Project: 444941 CALL#0708

Date Received: 2/14/98

Organics Spike/Duplicate Results **

Compound	%Recovery	Target Range	Precision RPD	Target Range
1-Dichloroethene	105.	61 - 145	7.0	0 - 14
Dichloroethene	109.	71 - 120	8.0	0 - 14
Benzene	110.	76 - 127	3.0	0 - 11
o-Xylene	110.	76 - 125	4.0	0 - 13
m-Xylene	110.	75 - 130	3.0	0 - 13

* Volatile Organics Method Blank Results ***

Compound	Result	Flag	Units	Method
Acetone	10.0	U	ug/l	8260B
Benzene	2.0	U	ug/l	8260B
Formaldehyde	2.0	U	ug/l	8260B
Formic acid	2.0	U	ug/l	8260B
Acetone	10.0	U	ug/l	8260B
Carbon disulfide	2.0	U	ug/l	8260B
Carbon tetrachloride	2.0	U	ug/l	8260B
Chlorobenzene	2.0	U	ug/l	8260B
Chloroethane	2.0	U	ug/l	8260B
Chloroform	2.0	U	ug/l	8260B
Chloromethane	2.0	U	ug/l	8260B
Bromochloromethane	2.0	U	ug/l	8260B
1,1-Dichloroethane	2.0	U	ug/l	8260B
1,2-Dichloroethane	2.0	U	ug/l	8260B
1,1-Dichloroethene	2.0	U	ug/l	8260B
trans-1,2-Dichloroethene	2.0	U	ug/l	8260B
trans-1,2-Dichloroethane	2.0	U	ug/l	8260B
1,1-Dichloropropane	2.0	U	ug/l	8260B
trans-1,3-Dichloropropene	2.0	U	ug/l	8260B
trans-1,3-Dichloropropene	2.0	U	ug/l	8260B
Ethylbenzene	2.0	U	ug/l	8260B
2-Hexanone	10.0	U	ug/l	8260B
2-Methyl-2-pentanone	10.0	U	ug/l	8260B



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PROJECT QUALITY CONTROL DATA

DIRECTOR U. S. ARMY CORPS ENG. 5394

Report Number: 98-A15004

Sample I. D.: METHOD BLANK

Lab Project: 91824

Project: 444941 CALL#0708

Date Received: 2/14/98

* Volatile Organics Method Blank Results ***

Compound	Result	Flag	Units	Method
ethylene chloride	2.0	U	ug/l	8260B
styrene	2.0	U	ug/l	8260B
1,1,2,2-Tetrachloroethane	2.0	U	ug/l	8260B
tetrachloroethene	2.0	U	ug/l	8260B
toluene	2.0	U	ug/l	8260B
1,1,1-Trichloroethane	2.0	U	ug/l	8260B
1,1,2-Trichloroethane	2.0	U	ug/l	8260B
trichloroethene	2.0	U	ug/l	8260B
vinyl chloride	2.0	U	ug/l	8260B
xylenes	2.0	U	ug/l	8260B
monodichloromethane	2.0	U	ug/l	8260B

Handwritten signature

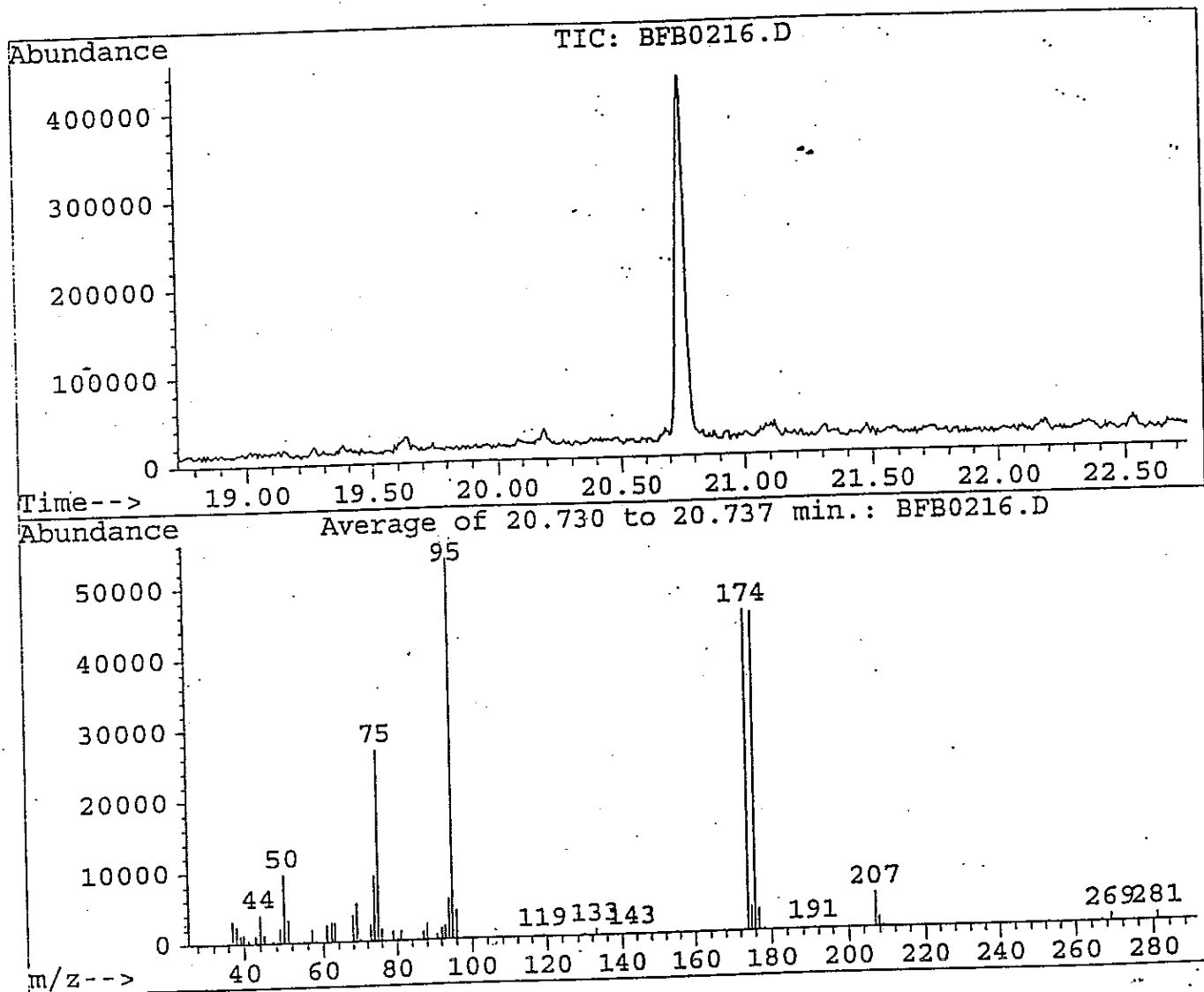
BFB

71847

Data File : C:\HPCHEM\1\DATA\BFB0216.D
 Acq On : 16 Feb 98 10:59 am
 Sample : 1
 Misc : TUNE HP-1

Vial: 1
 Operator: HP-1
 Inst: 5971 - In
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8260S.M
 Title : 8260 volatile organics PLUS



Peak Apex is scan: 2983

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	18.0	9658	PASS
75	95	30	60	50.2	26924	PASS
95	95	100	100	100.0	53660	PASS
96	95	5	9	7.5	4006	PASS
173	174	0	2	0.0	0	PASS
174	95	50	100	84.3	45256	PASS
175	174	5	9	7.7	3469	PASS
176	174	95	101	99.4	44988	PASS
177	176	5	9	6.7	3036	PASS

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\VS0216.D
 Acq On : 16 Feb 98 11:34 am
 Sample : 1
 Misc : CON CAL

Vial: 1
 Operator: HP-1
 Inst : 5971 - In
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8260S.M
 Title : 8260 volatile organics PLUS
 Last Update : Wed Feb 18 16:09:48 1998
 Response via : Single Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 20% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

Compound		AvgRF	CCRF	%Dev Area%		Dev(min)
1 I	Pentafluorobenzene	1.000	1.000	0.0	100	-0.04
2 T	Dichlorodifluoromethane	0.780	0.778	0.3	97	-0.08
3 P	Chloromethane	0.787	0.965	-22.6	119	-0.10
4 C	Vinyl Chloride	0.772	0.845	-9.4	103	-0.09
5 T	Bromomethane	0.568	0.624	-10.0	112	-0.07
6 T	Chloroethane	0.485	0.275	43.3	54	-1.20
7 T	Trichlorofluoromethane	1.355	1.592	-17.5	116	-0.08
8	Acrolein	0.060	0.063	-4.6	108	-0.08
9 T	Acetone	0.063	0.052	17.6	81	-0.05
10 T	Diethyl Ether	0.704	0.691	1.9	95	-0.08
11 CM	1,1-Dichloroethene	0.798	0.913	-14.4	111	-0.08
13 T	Acrylonitrile	0.420	0.309	26.4	70	-0.07
14 T	Methylene Chloride	0.955	0.946	0.9	102	-0.07
15 T	Carbon Disulfide	2.125	2.372	-11.7	107	-0.07
16 T	trans-1,2-Dichloroethene	1.202	1.387	-15.4	111	-0.06
17	Methyl-t-butyl ether	2.331	1.977	15.2	84	-0.06
18 P	1,1-Dichloroethane	1.435	1.629	-13.5	111	-0.07
19 T	Vinyl Acetate	1.641	1.302	20.7	81	-0.52
20 T	2-Butanone	0.122	0.099	18.4	92	-0.05
21	Diisopropyl ether	2.698	2.612	3.2	97	-0.05
22 T	cis-1,2-Dichloroethene	1.126	1.207	-7.2	104	-0.05
23 T	Bromochloromethane	0.524	0.543	-3.7	97	-0.07
24 C	Chloroform	1.693	1.797	-6.2	108	-0.06
25 T	2,2-Dichloropropane	1.510	1.695	-12.3	111	-1.62
26 S	1,2-Dichloroethane-d4	0.932	0.857	8.0	90	-0.05
27 S	Dibromofluoromethane	0.780	0.741	5.0	94	-0.05
28 T	1,2-Dichloroethane	1.189	1.096	7.9	90	-0.04
29 T	1,1,1-Trichloroethane	1.428	1.666	-16.6	110	-0.06
30 T	1,1-Dichloropropene	1.224	1.376	-12.4	110	-0.03
31 I	1,4-Difluorobenzene	1.000	1.000	0.0	102	-0.03
32 T	Carbon Tetrachloride	2.237	2.563	-14.6	111	-0.05
33 M	Benzene	6.725	6.782	-0.8	106	-0.04
34 T	Dibromomethane	0.994	0.847	14.8	87	-0.05
35 I	2,3-Dichloro-1-Propene	2.833	2.795	1.3	98	-0.04
36 C	1,2-Dichloropropane	1.541	1.570	-1.8	99	-0.02
37 M	Trichloroethene	2.007	2.120	-5.6	106	-0.03
38 T	Bromodichloromethane	2.145	2.116	1.3	96	-0.04
39	2-Chloroethyl vinyl ether	0.140	0.704	-404.3	443	0.66
40 T	cis-1,3-Dichloropropene	2.515	2.553	-1.5	98	-0.03
41 T	4-Methyl-2-pentanone	0.546	0.362	33.6	64	-0.03
42 T	trans-1,3-Dichloropropene	2.262	2.173	3.9	95	-0.04
43 T	1,1,2-Trichloroethane	1.366	1.105	19.1	83	-0.03
44 S	Toluene-d8	5.617	5.618	-0.0	106	-0.03
	Toluene	7.280	7.397	-1.6	106	-0.03

47 I	Ethyl Methacrylate	3.250	2.270	37.1	64	-0.03
48	2-Hexanone	0.589	0.370			
49 I	Chlorobenzene-d5	1.000	1.000	0.0	112	-0.02
50 T	Dibromochloromethane	0.852	0.737	13.6	88	-0.03
51 T	1,2-Dibromoethane	1.075	0.862	19.8	84	-0.02
52 T	Tetrachloroethene	1.850	1.749	5.4	102	-0.02
53 T	1,1,1,2-Tetrachloroethane	1.313	1.193	9.1	95	-0.02
54 PM	Chlorobenzene	3.528	4.208	-19.3	130	-0.03
55 C	Ethylbenzene	6.742	8.074	-19.8	129	-0.03
56 T	m,p-Xylene	5.306	6.177	-16.4	127	-0.03
57	Bromoform	0.840	0.682	18.8	85	-0.03
58 T	Styrene	3.817	4.500	-17.9	122	-0.02
59 T	o-Xylene	5.345	6.376	-19.3	125	-0.02
60 P	1,1,2,2-Tetrachloroethane	1.166	1.636	-40.3	151	-0.01
61 T	1,2,3-Trichloropropane	1.642	2.439	-48.6	154	-0.03
62 T	trans-1,4-Dichloro-2-butene	1.647	0.229	86.1	15	-0.32
63	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	104	-0.02
64	Ethylbenzene-d10	1.000	1.000	0.0	108	-0.03
65 T	Isopropylbenzene	1.085	1.175	-8.3	117	-0.02
66 S	Bromofluorobenzene	0.316	0.316	0.0	101	-0.02
67 T	Bromobenzene	0.440	0.614	-39.4	147	-0.03
68 T	Propylbenzene	1.355	1.441	-6.3	113	-0.03
69 T	2-Chlorotoluene	0.830	0.865	-4.3	112	-0.02
70 T	4-Chlorotoluene	0.834	0.865	-3.8	107	-0.14
71 T	1,3,5-Trimethylbenzene	0.899	0.957	-6.3	109	-0.03
72 T	t-Butylbenzene	0.786	0.838	-6.7	114	-0.02
73 T	1,2,4-trimethylbenzene	0.931	0.974	-4.5	113	-0.02
74 T	sec-Butylbenzene	1.161	1.269	-9.3	117	-0.03
75 T	1,3-Dichlorobenzene	0.573	0.586	-2.3	109	-0.03
76 T	1,4-Dichlorobenzene	0.573	0.586	-2.2	105	-0.03
77	1,2-Dichlorobenzene	0.534	0.514	3.7	100	-0.03
78 T	p-Isopropyltoluene	0.984	1.051	-6.8	112	-0.02
79 T	Butylbenzene	0.983	1.057	-7.6	116	-0.03
80 T	1,2-Dibromo-3-chloropropane	0.051	0.069	-36.5	133	-0.02
81 T	1,2,4-Trichlorobenzene	0.382	0.400	-4.8	117	-0.03
82 T	Naphthalene	0.645	0.607	5.8	93	-0.03
83 T	Hexachlorobutadiene	0.282	0.296	-4.9	112	-0.02
84 T	1,2,3-Trichlorobenzene	0.349	0.328	6.0	103	-0.03

(#) = Out of Range
S0500217.D 8260S.M

SPCC's out = 0 CCC's out = 0
Thu Feb 19 10:49:54 1998 HP-1

BFB

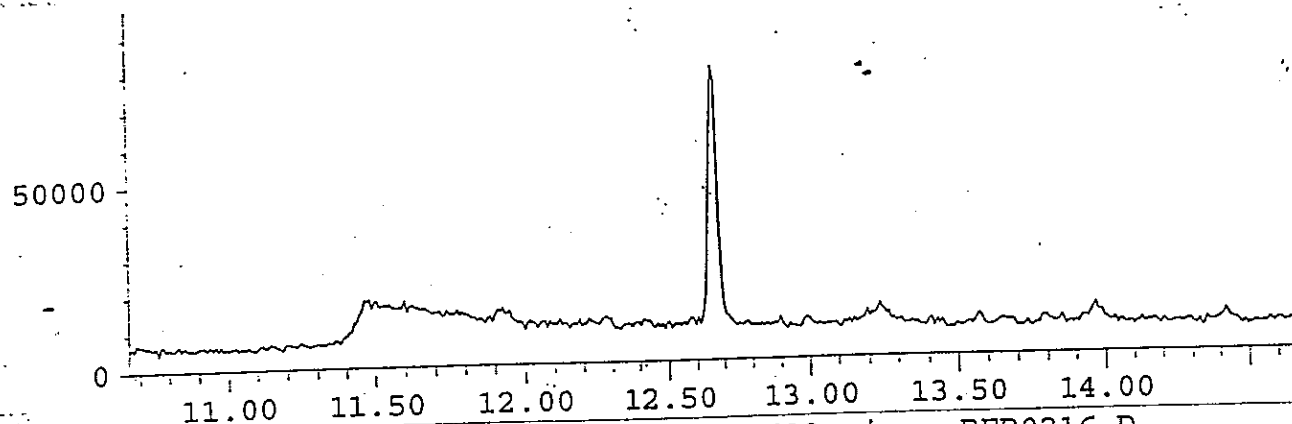
91041

Data File : C:\HPCHEM\1\DATA\BFB0216.D
 Acq On : 16 Feb 98 9:42 am
 Sample : TUNE HP-8
 Misc :

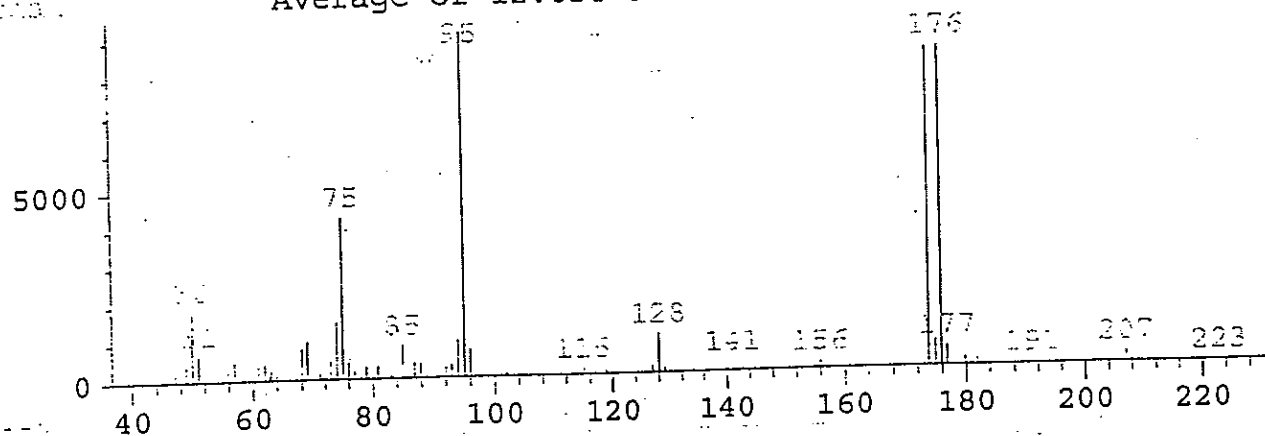
Vial: 1
 Operator: HP-8
 Inst : 5971 - In
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8260.M
 Title : 8260 volatile organics

TIC: BFB0216.D



Average of 12.654 to 12.688 min.: BFB0216.D



Peak Apex is scan: 1503

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	20.7	1884	PASS
75	95	30	60	47.0	4291	PASS
95	95	100	100	100.0	9122	PASS
96	95	5	9	7.9	722	PASS
173	174	0	2	0.0	0	PASS
174	95	50	100	92.5	8439	PASS
175	174	5	9	8.2	694	PASS
176	174	95	101	100.6	8491	PASS
177	176	5	9	6.3	533	PASS

Data File : C:\HPCHEM\1\DATA\VS0216.D
 Acq On : 16 Feb 98 10:11 am
 Sample : CONCAL HP-8
 Misc :

Vial: 1
 Operator: HP-8
 Inst : 5971 - In
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8260.M
 Title : 8260 volatile organics
 Last Update : Thu Feb 12 08:42:06 1998
 Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 10% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 250%

Compound		AvgRF	CCRF	%Dev Area%		Dev (min)
1 I	Pentafluorobenzene	1.000	1.000	0.0	103	0.02
2 T	Dichlorodifluoromethane	0.334	0.347	-3.9	101	0.05
3 P	Chloromethane	0.462	0.470	-1.8	100	0.00
4 C	Vinyl Chloride	0.418	0.353	15.4	79	-0.03
5 T	Bromomethane	0.285	0.267	6.6	94	0.08
6 T	Chloroethane	0.308	0.341	-10.5	112	0.00
7 T	Trichlorofluoromethane	0.536	0.606	-13.1	110	0.00
8	Acrolein	0.352	0.486	-38.4	141	0.03
9 T	Acetone	0.158	0.120	23.9	82	0.00
10	Diethyl Ether	0.353	0.488	-38.5	141	0.03
CM	1,1-Dichloroethene	0.375	0.425	-13.3	111	0.01
	Acrylonitrile	0.279	0.349	-25.0	133	0.01
14 T	Methylene Chloride	0.539	0.486	9.7	103	0.00
15 T	Carbon Disulfide	1.068	1.164	-9.0	106	0.02
16 T	trans-1,2-Dichloroethene	0.633	0.715	-13.0	111	0.02
17 T	Methyl-t-butyl ether	1.098	1.267	-15.4	118	0.00
18 P	1,1-Dichloroethane	0.768	0.869	-13.1	112	0.03
19	Vinyl Acetate	0.709	0.964	-35.9	126	0.02
20 T	2-Butanone	0.969	1.121	-15.7	117	0.01
21 T	Diisopropyl ether	1.683	1.851	-10.0	110	0.01
22 T	cis-1,2-Dichloroethene	0.580	0.664	-14.4	113	0.01
23 T	Bromochloromethane	0.258	0.306	-18.4	121	0.02
24 C	Chloroform	0.762	0.815	-7.1	109	0.03
25 T	2,2-Dichloropropane	0.592	0.719	-21.4	113	0.02
26 S	1,2-Dichloroethane-d4	0.456	0.493	-8.2	113	0.03
27 S	Dibromofluoromethane	0.413	0.486	-17.8	121	0.03
28 T	1,2-Dichloroethane	0.545	0.623	-14.3	115	0.02
29 T	1,1,1-Trichloroethane	0.593	0.666	-12.3	107	0.03
30 T	1,1-Dichloropropene	0.590	0.653	-10.8	106	0.03
31 I	1,4-Difluorobenzene	1.000	1.000	0.0	100	0.02
32 T	Carbon Tetrachloride	0.363	0.412	-13.6	107	0.02
3 M	Benzene	1.257	1.438	-14.4	110	0.02
34 T	Dibromomethane	0.187	0.260	-38.5	134	0.03
35	2,3-Dichloro-1-propene	0.156	0.179	-14.8	109	0.03
36 C	1,2-Dichloropropane	0.338	0.375	-11.0	103	0.03
37 M	Trichloroethene	0.327	0.371	-13.4	106	0.02
	Bromodichloromethane	0.397	0.447	-12.4	106	0.03

41 T	4-Methyl-2-pentanone	0.123	0.132	-7.3	80	0.02
42 T	trans-1,3-Dichloropropene	0.497	0.578	-16.2	109	0.03
43 T	1,1,2-Trichloroethane	0.259	0.286	-10.6	104	0.03
44 S	Toluene-d8	1.020	1.309	-28.3	127	0.02
45 CM	Toluene	1.337	1.484	-11.0	104	0.02
T	1,3-Dichloropropane	0.482	0.546	-13.4	109	0.02
	Ethyl Methacrylate	0.666	0.769	-15.5	111	0.02
48 T	2-Hexanone	0.090	0.120	-33.6	111	0.00
49 I	Chlorobenzene-d5	1.000	1.000	0.0	99	0.02
50 T	Dibromochloromethane	0.853	0.884	-3.7	94	0.02
51 T	1,2-Dibromoethane	1.044	1.240	-18.8	112	0.03
52 T	Tetrachloroethene	1.400	1.634	-16.7	108	0.03
53 T	1,1,1,2-Tetrachloroethane	1.108	1.242	-12.1	102	0.02
54 PM	Chlorobenzene	3.154	3.609	-14.4	106	0.02
55 C	Ethylbenzene	5.709	6.545	-14.6	104	0.02
56 T	m,p-Xylene	4.440	4.991	-12.4	102	0.01
57 P	Bromoform	0.811	0.517	36.3	57	0.03
58 T	Styrene	3.420	3.863	-13.0	103	0.02
59 T	o-Xylene	4.525	5.076	-12.2	102	0.03
60 P	1,1,2,2-Tetrachloroethane	1.237	1.413	-14.2	107	0.03
61 T	1,2,3-Trichloropropane	1.559	1.764	-13.2	103	0.02
62	Trans-1,4-dichloro-2-butene	1.559	1.764	-13.2	103	0.02
63	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	98	0.03
64	Ethylbenzene-d10	1.000	1.000	0.0	110	0.03
T	Isopropylbenzene	1.018	1.034	-1.6	104	0.03
66 S	Bromofluorobenzene	0.299	0.326	-9.0	120	0.03
67 T	Bromobenzene	0.400	0.416	-3.9	106	0.02
68 T	Propylbenzene	1.249	1.261	-0.9	105	0.03
69 T	2-Chlorotoluene	0.733	0.740	-0.9	104	0.03
70 T	4-Chlorotoluene	0.739	0.744	-0.7	104	0.03
71 T	1,3,5-Trimethylbenzene	0.838	0.831	0.9	103	0.03
72 T	t-Butylbenzene	0.712	0.716	-0.5	105	0.03
73 T	1,2,4-trimethylbenzene	0.849	0.838	1.3	103	0.03
74 T	sec-Butylbenzene	1.108	1.103	0.5	105	0.03
75 T	1,3-Dichlorobenzene	0.469	0.463	1.3	102	0.03
76 T	1,4-Dichlorobenzene	0.469	0.469	0.1	103	0.03
77 T	1,2-Dichlorobenzene	0.448	0.436	2.6	102	0.03
78 T	p-Isopropyltoluene	0.905	0.898	0.7	105	0.03
79 T	Butylbenzene	0.904	0.894	1.1	104	0.03
80 T	1,2-Dibromo-3-chloropropane	0.047	0.044	7.0	94	0.03
81 T	1,2,4-Trichlorobenzene	0.348	0.351	-0.7	108	0.03
82 T	Naphthalene	0.676	0.728	-7.6	118	0.04
83 T	Hexachlorobutadiene	0.206	0.210	-1.9	109	0.04
84 T	1,2,3-Trichlorobenzene	0.317	0.339	-6.8	121	0.03

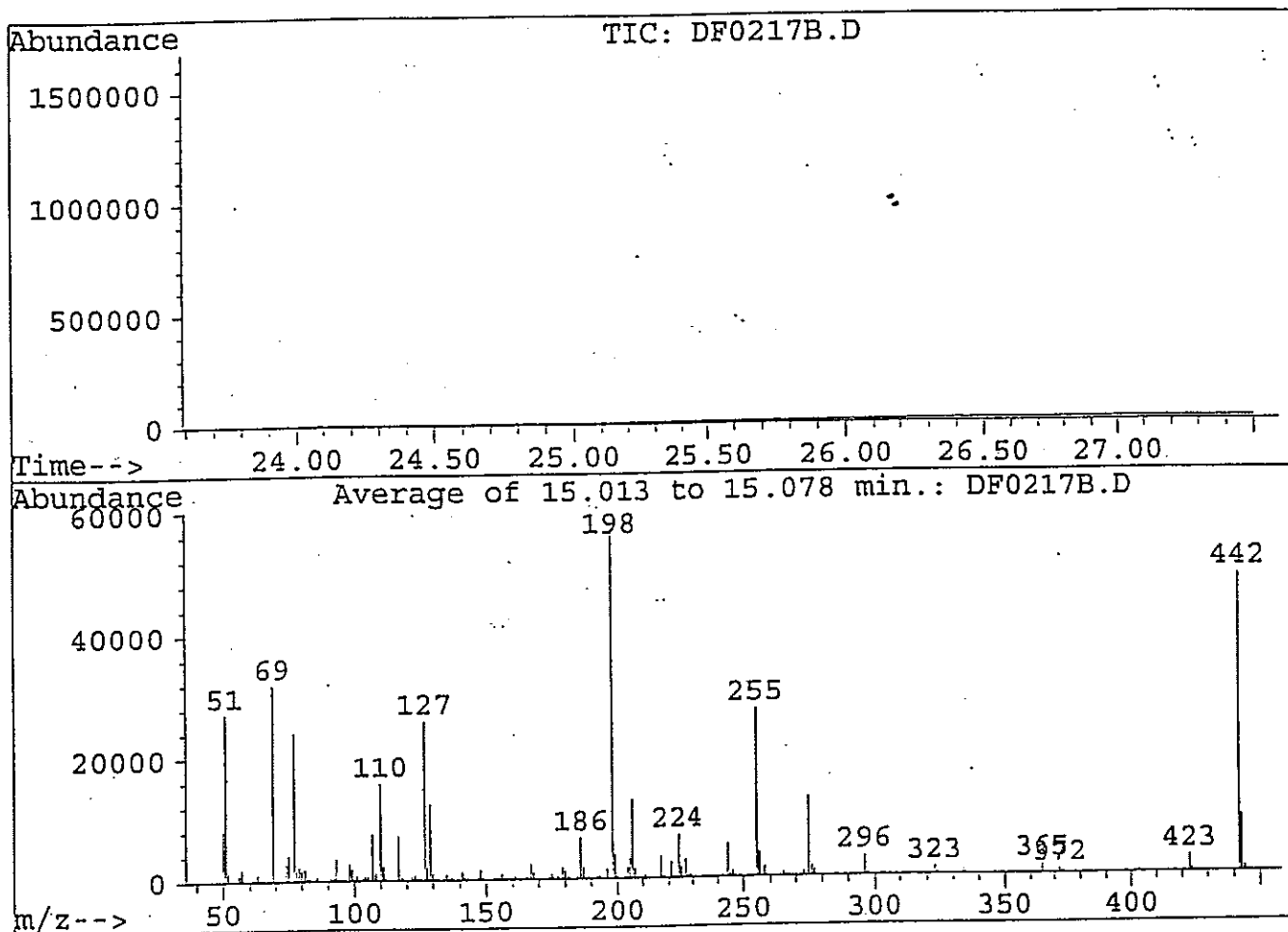
(#) = Out of Range
V0500204.D 8260.M

SPCC's out = 0 CCC's out = 0
Mon Feb 16 16:18:00 1998

Data File : C:\HPCHEM\1\DATA\DF0217B.D
 Acq On : 17 Feb 98 9:26 pm
 Sample : tune
 Misc :

Vial: 2
 Operator: HP-5
 Inst : 5972 - In
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8270.M
 Title : SW846 METHOD 8270



Peak Apex is scan: 3500

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	47.3	27216	PASS
68	69	0	2	0.0	0	PASS
69	198	0	100	55.5	31936	PASS
70	69	0	2	0.0	0	PASS
127	198	30	60	45.0	25884	PASS
197	198	0	1	0.0	0	PASS
198	198	100	100	100.0	57501	PASS
199	198	5	9	6.8	3926	PASS
275	198	10	30	22.5	12963	PASS
365	198	1	100	2.7	1559	PASS
441	442	0	100	0.1	54	PASS
442	198	40	100	84.8	48785	PASS
443	442	17	23	18.9	9197	PASS

Data File : C:\HPCHEM\1\DATA\CC0217B.D
 Acq On : 17 Feb 98 10:03 pm
 Sample : 50ppm con cal
 Misc :

Vial: 3
 Operator: HP-5
 Inst: 5972 - In
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8270.M
 Title : SW846 METHOD 8270
 Last Update : Tue Feb 17 10:30:43 1998
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 10% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1 I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	83	-0.01
2 T	Pyridine	0.864	0.756	12.5	76	0.06
3 T	N-Nitroso-dimethylamine	0.425	0.472	-11.0	84	-0.01
4 S	2-Fluorophenol	0.802	0.888	-10.8	83	0.00
5	Aniline	1.148	1.151	-0.3	84	-0.01
6	Bis-(2-Chloroethyl)ether	0.872	0.864	0.9	87	-0.01
7 S	Phenol-d5	0.971	1.015	-4.5	87	-0.03
8 MC	Phenol	1.043	1.066	-2.2	87	-0.03
9 S	2-Chlorophenol-d4	0.790	0.780	1.2	85	-0.01
10 M	2-Chlorophenol	0.853	0.849	0.4	85	-0.02
11	1,3-Dichlorobenzene	0.832	0.830	0.3	84	-0.01
12 MC	1,4-Dichlorobenzene	0.869	0.895	-2.9	85	0.00
13 s	1,2-Dichlorobenzene-d4	0.926	0.918	0.8	86	-0.01
14	1,2-Dichlorobenzene	0.829	0.817	1.5	85	-0.01
15	Benzyl Alcohol	0.751	0.787	-4.9	88	-0.03
	Bis-(2-chloroisopropyl)ethe	0.146	0.130	10.8	80	0.01
	2-Methylphenol	0.779	0.789	-1.4	86	-0.02
18	Hexachloroethane	0.409	0.403	1.5	84	0.00
19 MP	N-Nitroso-di-n-propylamine	0.650	0.659	-1.3	87	-0.03
20	3,4-Methylphenol	1.032	1.048	-1.6	86	-0.03
21 I	Naphthalene-d8	1.000	1.000	0.0	83	-0.01
22 S	Nitrobenzene-d5	0.431	0.450	-4.4	87	-0.02
23	Nitrobenzene	0.428	0.451	-5.3	88	-0.02
24	Isophorone	0.813	0.848	-4.3	89	-0.03
25 C	2-Nitrophenol	0.214	0.224	-4.9	86	-0.01
26	2,4-Dimethylphenol	0.462	0.486	-5.1	88	-0.03
27	Bis-(2-chloroethoxy)methane	0.459	0.472	-2.9	86	-0.02
28 C	2,4-Dichlorophenol	0.282	0.302	-7.2	87	-0.01
29	Benzoic acid	0.210	0.242	-15.6	87	-0.06
30 M	1,2,4-Trichlorobenzene	0.327	0.334	-2.1	85	0.00
31	Naphthalene	1.137	1.121	1.5	87	-0.01
32	4-chloroaniline	0.431	0.433	-0.6	86	-0.01
33 C	Hexachlorobutadiene	0.230	0.236	-2.3	86	-0.01
34	4-Chloro-3-methylphenol	0.362	0.395	-9.2	89	-0.03
35	2-Methylnaphthalene	0.666	0.668	-0.3	87	-0.01
36	1-Methylnaphthalene	0.639	0.668	-4.6	87	-0.01
37 I	Acenaphthene-d10	1.000	1.000	0.0	84	-0.02
38 P	Hexachlorocyclopentadiene	0.108	0.112	-4.0	83	-0.01
39 C	2,4,6-Trichlorophenol	0.406	0.432	-6.3	87	-0.03
40	2,4,5-Trichlorophenol	0.402	0.440	-9.5	87	-0.02
41 S	2-fluorobiphenyl	1.291	1.363	-5.6	89	-0.01
42	2-Chloronaphthalene	1.089	1.133	-4.1	88	-0.02
43	2-Nitroaniline	0.435	0.462	-6.1	88	-0.03
		1.779	1.854	-4.2	88	-0.02

47		3-Nitroaniline	0.350	0.369	-5.5	89	-0.03
48	MC	Acenaphthene	1.111	1.154	-3.9	88	-0.02
49	P	2,4-dinitrophenol	0.196	0.198	-0.8	81	-0.02
50		Dibenzofuran	1.538	1.590	-3.4	88	-0.02
51	M	2,4-Dinitrotoluene	0.445	0.478	-7.4	90	-0.03
52	MP	4-Nitrophenol	0.240	0.273	-13.7	87	-0.04
		Fluorene	1.268	1.347	-6.2	89	-0.02
		4-Chlorophenyl phenylether	0.698	0.729	-4.4	89	-0.02
55		Diethylphthalate	1.484	1.591	-7.2	91	-0.03
56		4-Nitroaniline	0.348	0.376	-8.2	89	-0.04
57		1,2-Diphenylhydrazine	1.636	1.761	-7.7	92	-0.03
58	I	Phenanthrene-d10	1.000	1.000	0.0	86	-0.03
59		4,6-Dinitro-2-methylphenol	0.153	0.158	-3.3	81	-0.03
60	C	N-Nitroso-diphenylamine	0.416	0.426	-2.3	89	-0.03
61	S	Tribromophenol	0.130	0.140	-8.0	90	-0.03
62		4-Bromophenyl phenyl ether	0.181	0.185	-2.1	87	-0.02
63		Hexachlorobenzene	0.237	0.248	-4.7	90	-0.03
64	MC	Pentachlorophenol	0.099	0.113	-14.6	93	-0.03
65		Phenanthrene	0.922	0.961	-4.2	91	-0.03
66		Anthracene	0.917	0.952	-3.8	88	-0.03
67		Carbazole	0.774	0.816	-5.5	91	-0.03
68		Di-n-butyl phthalate	1.171	1.252	-6.9	92	-0.03
69	C	Fluoranthene	1.107	1.164	-5.2	91	-0.03
70	I	Chrysene-d12	1.000	1.000	0.0	86	-0.03
71		Benzidine	0.347	0.335	3.5	85	-0.03
72	M	Pyrene	1.219	1.280	-5.0	91	-0.03
73	S	Terphenyl-d14	0.861	0.912	-5.9	91	-0.03
74		Butylbenzylphthalate	0.599	0.658	-9.7	94	-0.03
		3,3'-Dichlorobenzidine	0.427	0.454	-6.2	91	-0.04
		Benzo(a)anthracene	1.164	1.221	-4.9	91	-0.03
77		Chrysene	1.109	1.172	-5.7	92	-0.04
78		Bis-(2-ethylhexyl)phthalate	0.821	0.904	-10.1	95	-0.03
79	I	Perylene-d12	1.000	1.000	0.0	72	-0.04
80	C	Di-n-octylphthalate	1.858	1.989	-7.0	76	-0.03
81		Benzo(b)fluoranthene	1.422	1.600	-12.5	82	0.00
82		Benzo(k)fluoranthene	1.289	1.286	0.2	72	-0.04
83	C	Benzo(a)pyrene	1.249	1.390	-11.3	79	-0.04
84		Indeno(1,2,3-cd)pyrene	1.440	1.601	-11.2	77	-0.07
85		Dibenz(a,h)anthracene	1.257	1.380	-9.8	78	-0.06
86		Benzo(g,h,i)perylene	1.231	1.239	-0.6	71	-0.06

(#) = Out of Range
0500216.D 8270.M

SPCC's out = 0 CCC's out = 0
Wed Feb 18 11:34:38 1998

TRANSMITTAL OF SAD LABORATORY REPORT(S)

TO: Commander, Savannah District
US Army Corps of Engineers
ATTN: CESAS-PM-H
Mr. Brent Rose
P.O. Box 889
Savannah, GA 31402-0889

FROM: Director (CESAS-EN-L)
SAD Laboratory
USACE
611 South Cobb Drive
Marietta, GA 30060-3112

PROJECT: Hunter AAF -
Fire Training Area

REQN NO: W33SJG80797577
W.O. NO: 8400

SUBJECT: Analytical Testing Results

1. Enclosed is our report of analytical test results and chain of custody forms for samples collected on 18 February 1998 from Hunter AAF.

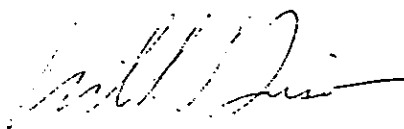
2. If you have any questions, please call Mr. Blaise Willis at 770-919-5295 or me at 770-919-3990.

SUBMITTED BY:

SIGNATURE:

DATE:

WILLIAM L. TISON, P. E.
Director, SAD Laboratory



30 Mar 1998

South Atlantic Division Laboratory
U. S. Army Corps of Engineers.
611 South Cobb Drive
Marietta, Georgia 30060-3112

HUNTER ARMY AIRFIELD, GA

Requisition - W33SJG80283594

Work Order - 8379 Job Number - 5491

District - SAVANNAH

Date Received - 98/02/19

Date Reported - 98/03/16 09:33:33

Lab # Field ID

34964 HEAP #7-ES001-QA

Date Sampled

98/02/18

Time Sampled

00:00

Test Performed

VOLATILE ORGANICS GC/MS
SEMIVOLATILE ORGANICS GC/MS
TRPH
TOTAL SOLIDS, % OF WET

Result

Units

Tested
By

Test
Date

*

*

4300.0

92.00

MG/KG

%

SPA

SPA

SPA

SPA

98/02/24

98/02/25

98/02/25

98/02/24

*NOTE: See Attached

Sampled by District Personnel

Checked by: TH

Signed by:

Blaise Willis

Blaise Willis
Chemist

Lab # Field ID

34965 HEAP #7-QA-TB

Date Sampled Time Sampled

98/02/18 00:00

Test Performed

VOLATILE ORGANICS GC/MS

Result	Units	Tested By	Test Date
-----	-----	-----	-----
*		SPA	98/02/24

*NOTE: See Attached

Sampled by District Personnel

Checked by: JA

Sheet 2 of 2

Signed by:

Blaise Willis

Blaise Willis
Chemist

Army Corps of Engineers

Work Order #

Job #

Chain of Custody Receipt

(ER 1110-1-263)

Hunter Army Airfield

Project Name *Hunter Fire Training Area*

Contract No. *DACA 21-57-C0012*

912 757-1402

Site: (Signature)

2/18/58

No. of Conts.

BTEX-8260

PAH-8270

TPH-418.1

VOC-8260

Remarks:

QC

SAD NO.

MATRIX

Date

Time

Pres.

Gr

Cm

Site Code/Sample Number

2/18/58

1 kg #7-ES 001-Q14

2

✓

✓

✓

2/18/58

1 kg #7-QA-1B

2

Hazards Associated with Samples

Remarks at time of receipt.

Sampler Requisitioner by:

[Signature]

Date/Time

2/18/58 0630

Received by: (Sig.)

[Signature]

Date/Time

2/19/58 0610

Requisitioned by: (Sig.)

Date/Time

Received for Laboratory by: (Sig.)

Lab Case No.

Requisitioned by: (Sig.)

Custody Seal No.

Proposed by: C

Cooler Receipt Form

Job # 5491No. of Coolers 1

Return Cooler _____

Project: Hunter Army AirfieldDate Received: 2/19/98Date cooler opened: 2/19/98 by (print) B. Serbin
(sign) B. Serbin

1. Did cooler come with a shipping slip?

If yes, enter carrier & air bill number here: FT 803523822583

Yes No

2. Were custody seals on outside of cooler:

How many & where: 2 seal date: _____ seal name: _____

Yes No

3. Were custody seals unbroken upon receipt?

Yes No

4. Did you screen samples for radioactivity?

Yes No

5. Were custody papers sealed in a plastic bag & taped to inside lid? on bottom of cooler

Yes No

6. Were custody papers filled out properly (ink, signed, etc.)?

Yes No

7. Did you sign custody papers in the appropriate place?

Yes No

8. Was project identifiable from custody papers? If yes enter project name at the top of this form.

Yes No

9. If required, was enough ice used? EO Type: _____

Yes No

Date logged in: 2/19/98 by (print) B. Serbin
(sign) B. Serbin1. Describe cooler packing: bubble wrap

Yes No

2. Were all bottles sealed in separate plastic bags?

Yes No

3. Did all bottles arrive unbroken & labels in good condition?

Yes No

4. Were all bottle labels complete (ID, date, time, signature, pres., etc.)?

Yes No

5. Were all bottle labels agree with custody papers?

Yes No

6. Were correct containers used for the tests indicated?

Yes No

7. Were correct preservatives added to samples?

Yes No

8. Was a sufficient amount of sample sent for tests?

Yes No

9. Were bubbles absent in Volatile samples? If no, list Field ID: _____

10. Number of days from sample date when received in the lab 1

Yes No

11. Was project manager called & status discussed?
If yes, give details on the bottom of this form.

Who was called? _____ By whom? _____ Date: _____

**SPECIALIZED ASSAYS, INC.**

2960 Foster Creighton Dr.
P.O. Box 40566
Nashville, TN 37204-0566
Phone 1-615-726-0177

ANALYTICAL REPORT

DIRECTOR U.S. ARMY CORPS ENG. 5394
CESAD LABORATORY
511 SOUTH COBB DRIVE
MARIETTA, GA 30060-3172

Sample Location: 34964 HEAP #7-ES001-QA Lab Number: 98-A17514
HUNTER ARMY AIRFIELD

Sampler: BOBBI THORN

Date Collected: 2/18/98

Date Received: 2/20/98

Time Collected:

Time Received: 9:00

Sample type: Soil

Calibration Reference Data

QA Blank	VR0223R
QA Blank	21821SBR
Cal Tune, VOA	BFR0223R
Cal MS Tune, RNA	DF0224
Calibration Check, VOA	VS0223R
Calibration Check, RNA	CC0224

Percent solids: 92.

VOLATILE ORGANICS

Analyte	Result	Flag	DF	Units	Date	Time	Analyst	Method
Benzene	217.	U	100	ug/kg	2/24/98	5:07	S. Wani	8260B
Ethylbenzene	217.	U	100	ug/kg	2/24/98	5:07	S. Wani	8260B
Toluene	217.	U	100	ug/kg	2/24/98	5:07	S. Wani	8260B
Xylenes	217.	U	100	ug/kg	2/24/98	5:07	S. Wani	8260B

SEMIVOLATILE ORGANICS and PESTICIDE/PCB's

Analyte	Result	Flag	DF	Units	Date	Time	Analyst	Method
Chthalene	4640		5	ug/kg	2/26/98	12:17	M. Goodrich	8270
Acenaphthene	179.	U	1	ug/kg	2/25/98	1:47	M. Goodrich	8270
Anthracene	182.		1	ug/kg	2/25/98	1:47	M. Goodrich	8270
Fluoranthene	1400		1	ug/kg	2/25/98	1:47	M. Goodrich	8270
Fluorene	517		1	ug/kg	2/25/98	1:47	M. Goodrich	8270



SPECIALIZED ASSAYS, INC.

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ANALYTICAL REPORT

Laboratory Number: 98-A17514
Sample ID: 34964 HEAP #7-ES001-QA

Page 2

SEMIVOLATILE ORGANICS and PESTICIDE/PCB's

anlyte	Result	Flag	DF	Units	Date	Time	Analyst	Method
enzo(a)anthracene	684.		1	ug/kg	2/25/98	1:47	M. Goodrich	8270
enzo(a)pyrene	625.		1	ug/kg	2/25/98	1:47	M. Goodrich	8270
enzo(b)fluoranthene	564.		1	ug/kg	2/25/98	1:47	M. Goodrich	8270
enzo(k)fluoranthene	679.		1	ug/kg	2/25/98	1:47	M. Goodrich	8270
hrysene	678.		1	ug/kg	2/25/98	1:47	M. Goodrich	8270
ibenzo(a,h)anthracene	179.		1	ug/kg	2/25/98	1:47	M. Goodrich	8270
ndeno(1,2,3-cd)pyrene	239.		1	ug/kg	2/26/98	12:17	M. Goodrich	8270
cenapthylene	897.	U	5	ug/kg	2/25/98	1:47	M. Goodrich	8270
enzo(g,h,i)perylene	200.		1	ug/kg	2/25/98	1:47	M. Goodrich	8270
henanthrene	657.		1	ug/kg	2/25/98	1:47	M. Goodrich	8270
-Methylnapthalene	6300		1	ug/kg	2/25/98	1:47	M. Goodrich	8270
-Methylnapthalene	9420		1	ug/kg	2/25/98	1:47	M. Goodrich	8270
Extraction, BNA's	Completed				2/23/98	14:26	C. Gerenser	3550

UNDERGROUND STORAGE TANK RESULTS

anlyte	Result	Units	PQL	Dil Factor	Date	Time	Analyst	Method
Petroleum Hydrocarbons	4300	mg/kg	10.9	1	2/25/98	12:21	Ciesielski	418.1

Sample Extraction Data

Parameter	Wt/Vol Extracted	Extract Vol	Date	Analyst	Method
BNA's	30.0 gm	1.0 mL	2/23/98	C. Gerenser	3550

Surrogate	% Recovery	Target Range
surr-1,2-Dichloroethane, d2	120.	62. - 147.
surr-Toluene d8	116.	64. - 117.
surr-4-Bromofluorobenzene	112.	64. - 126.
surr-Nitrobenzene-d5	93.	23. - 120.
surr-2-Fluorobiphenyl	53.	30. - 115.
surr-Terphenyl d10	62.	13. - 140.



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ANALYTICAL REPORT

Laboratory Number: 98-A17514
Sample ID: 34964 HEAP #7-ES001-QA

Page 3

Surrogate

% Recovery

Target Range

Report Approved By:

Michael H. Dunn

Report Date: 3/13/98

Theodore J. Duello, Ph.D., Q.A. Officer
Michael H. Dunn, M.S., Technical Director
Danny R. Hale, M.S., Laboratory Director

**SPECIALIZED ASSAYS, INC.**

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Nashville, TN 37204-0566
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ANALYTICAL REPORT

DIRECTOR U.S. ARMY CORPS ENG. 5394
CESAD LABORATORY
511 SOUTH COBB DRIVE
MARIETTA, GA 30060-3172

Sample Location: 34965 HEAP #7-QA-TB
HUNTER ARMY AIRFIELD

Lab Number: 98-A17515

Date Collected: 2/18/98

Date Received: 2/20/98

Time Collected:

Time Received: 9:00

Sampler: BOBBI THORN

Sample type: Water

anics Reference Data

A Blank VB0223B
/MS Tune, VOA BFB0223B
ation Check, VOA VS0223B

VOLATILE ORGANICS

anlyte	Result	Flag	DF	Units	Date	Time	Analyst	Method
acetone	10.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
benzene	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
bromobenzene	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
bromochloromethane	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
bromoform	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
bromomethane	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
2-Butanone	10.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
n-Butylbenzene	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
sec-Butylbenzene	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
n-Butylbenzene	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
Carbon disulfide	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
Carbon tetrachloride	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
Chlorobenzene	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
Chloroethane	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
1-Chloroethylvinylether	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
Chloroform	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
Chloromethane	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
o-Chlorotoluene	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
p-Chlorotoluene	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
1,2-Dibromo-3-chloropropane	10.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
1-bromochloromethane	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
1,2-Dibromoethane	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B



ANALYTICAL REPORT

Laboratory Number: 98-A17515
Sample ID: 34965 HEAP #7-QA-TB

Page 2

VOLATILE ORGANICS

Analyte	Result	Flag	DF	Units	Date	Time	Analyst	Method
2-Dichlorobenzene	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
3-Dichlorobenzene	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
4-Dichlorobenzene	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
1,1-Dichloroethane	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
1,2-Dichloroethane	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
1,1-Dichloroethene	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
trans-1,2-Dichloroethene	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
2-Dichloropropane	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
3-Dichloropropane	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
2-Dichloropropene	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
1,1-Dichloropropene	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
trans-1,3-Dichloropropene	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
1,3-Dichloropropene	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
1,4-Dichlorobenzene	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
Hexachlorobutadiene	10.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
2-Hexanone	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
Isopropylbenzene	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
1-Isopropyltoluene	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
4-Methyl-2-pentanone	10.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
1,1,2,2-Tetrachloroethane	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
1,1,1,2-Tetrachloroethane	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
1,1,2,2-Tetrachloroethene	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
1,1,1,2-Tetrachloroethene	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
1,1,2,2-Tetrachloroethene	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
1,1,2,3-Tetrachloroethene	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
1,1,2,4-Tetrachloroethene	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
1,1,3,3-Tetrachloroethene	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
1,1,3,4-Tetrachloroethene	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
1,2,3,4-Tetrachloroethene	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
1,2,3,5-Tetrachloroethene	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
1,2,4,5-Tetrachloroethene	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
1,2,3,6-Tetrachloroethene	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
1,2,4,6-Tetrachloroethene	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
1,3,4,5-Tetrachloroethene	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
1,3,5,6-Tetrachloroethene	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
1,3,4,6-Tetrachloroethene	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
1,3,5,6-Tetrachloroethene	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
1,3,4,6-Tetrachloroethene	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
1,3,5,6-Tetrachloroethene	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
1,3,4,6-Tetrachloroethene	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
1,3,5,6-Tetrachloroethene	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
1,3,4,6-Tetrachloroethene	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
1,3,5,6-Tetrachloroethene	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
1,3,4,6-Tetrachloroethene	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
1,3,5,6-Tetrachloroethene	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
1,3,4,6-Tetrachloroethene	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	826



SPECIALIZED ASSAYS, INC.

2960 Foster Creighton Dr.
P.O. Box 40566
Nashville, TN 37204-0566
Phone 1-615-726-0177

ANALYTICAL REPORT

Laboratory Number: 98-A17515
Sample ID: 34965 HEAP #7-QA-TB

Page 3

Surrogate	% Recovery	Target Range
VBA Surrogate, 1,2-Dichloroethane, d4	107.	70. - 131.
VBA Surrogate, Toluene d8	92.	83. - 115.
VBA Surrogate, 4-Bromofluorobenzene	92.	73. - 119.
VBA Surrogate, Dibromofluoromethane	99.	72. - 130.

Report Approved By: Michael H. Dunn Report Date: 3/13/98

Theodore J. Duell, Ph.D., Q.A. Officer
Michael H. Dunn, M.S., Technical Director
Danny B. Hale, M.S., Laboratory Director



SPECIALIZED ASSAYS, INC.

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PROJECT QUALITY CONTROL DATA

DIRECTOR U.S. ARMY CORPS ENG. 5394

Report Number: 98-A17516

Sample I.D.: METHOD BLANK

Lab Project: 92358

Project:

Date Received: 2/20/98

UST Spike/Duplicate Results **

Compound	%Recovery	Target Range	Precision RPD	Target Range
RPD, 418.1	118.	75 - 125	0.0	0 - 25.0

Organics Spike/Duplicate Results **

Compound	%Recovery	Target Range	Precision RPD	Target Range
1-Dichloroethene	114.	59 - 172	16.0	0 - 22
Dichloroethene	116.	62 - 137	10.0	0 - 24
Benzene	120.	66 - 142	6.0	0 - 21
Toluene	108.	59 - 139	8.0	0 - 21
Chlorobenzene	116.	60 - 133	10.0	0 - 21
Phenol	63.	26 - 115	0.5	0 - 35
2-Chlorophenol	67.	25 - 102	4.1	0 - 50
1,4-Dichlorobenzene	61.	28 - 104	6.5	0 - 27
Nitroso-di-n-propylamine	70.	41 - 126	1.7	0 - 38
1,2,4-Trichlorobenzene	65.	38 - 107	3.7	0 - 23
2-Chloro-3-methylphenol	62.	26 - 103	10.0	0 - 33
Acenaphthene	63.	31 - 137	5.6	0 - 19
2-Nitrophenol	58.	11 - 125	10.3	0 - 50
1,4-Dinitrotoluene	62.	28 - 100	10.2	0 - 47
2,4-Dichlorophenol	61.	17 - 109	8.5	0 - 47
1,2-Dichlorobenzene	66.	35 - 142	9.5	0 - 36

Volatile Organics Method Blank Results ***

Compound	Result	Flag	Units	Method
Benzene	2.0	U	ug/kg	8260B
Toluene	2.0	U	ug/kg	8260B
Xylenes	2.0	U	ug/kg	8260B



2960 Foster Creighton Dr.
P.O. Box 40566
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Phone 1-615-726-0177

PROJECT QUALITY CONTROL DATA

DIRECTOR U.S. ARMY CORPS ENG. 5394

Report Number: 98-A17516

Sample I.D.: METHOD BLANK

Lab Project: 92358

Project:

Date Received: 2/20/98

[illegible]

Volatile Organics Method Blank Results ***

Compound	Result	Flag	Units	Method
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Semi-Volatile Organics Method Blank Results ***

Compound	Result	Flag	Units	Method
naphthalene	165.	U	ug/kg	8270
anthracene	165.	U	ug/kg	8270
fluoranthene	165.	U	ug/kg	8270
fluorene	165.	U	ug/kg	8270
pyrene	165.	U	ug/kg	8270
benzo(a)anthracene	165.	U	ug/kg	8270
benzo(a)pyrene	165.	U	ug/kg	8270
benzo(b)fluoranthene	165.	U	ug/kg	8270
benzo(k)fluoranthene	165.	U	ug/kg	8270
chrysene	165.	U	ug/kg	8270
benzo(a,h)anthracene	165.	U	ug/kg	8270
benzo(1,2,3-cd)pyrene	165.	U	ug/kg	8270
benzophenanthrene	165.	U	ug/kg	8270
benzo(g,h,i)perylene	165.	U	ug/kg	8270
phenanthrene	165.	U	ug/kg	8270
1-methylnaphthalene	165.	U	ug/kg	8270
2-methylnaphthalene	165.	U	ug/kg	8270

Mital S. Kumar



SPECIALIZED ASSAYS, INC.

2960 Foster Creighton Dr.
P.O. Box 40566
Nashville, TN 37204-0566
Phone 1-615-726-0177

PROJECT QUALITY CONTROL DATA

DIRECTOR U.S. ARMY CORPS ENG. 5394

Report Number: 98-A17517

Sample I.D.: METHOD BLANK

Lab Project: 92358

Project:

Date Received: 2/20/98

Organics Spike/Duplicate Results **

Compound	%Recovery	Target Range	Precision RPD	Target Range
1-Dichloroethene	98.	61 - 145	4.0	0 - 14
2-chloroethene	110.	71 - 120	8.0	0 - 14
m-xylene	104.	76 - 127	2.0	0 - 11
p-xylene	110.	76 - 125	8.0	0 - 13
toluene	106.	75 - 130	6.0	0 - 13

Volatile Organics Method Blank Results ***

Compound	Result	Flag	Units	Method
acetone	10.0	U	ug/l	8260B
benzene	2.0	U	ug/l	8260B
o-xylene	2.0	U	ug/l	8260B
monobenzene	2.0	U	ug/l	8260B
monochloromethane	2.0	U	ug/l	8260B
monoform	2.0	U	ug/l	8260B
monomethane	2.0	U	ug/l	8260B
butanone	10.0	U	ug/l	8260B
butylbenzene	2.0	U	ug/l	8260B
sec-butylbenzene	2.0	U	ug/l	8260B
tert-butylbenzene	2.0	U	ug/l	8260B
carbon disulfide	2.0	U	ug/l	8260B
carbon tetrachloride	2.0	U	ug/l	8260B
chlorobenzene	2.0	U	ug/l	8260B
chloroethane	2.0	U	ug/l	8260B
chloroethylvinylether	2.0	U	ug/l	8260B
chloroform	2.0	U	ug/l	8260B
chloromethane	2.0	U	ug/l	8260B
o-cresol	2.0	U	ug/l	8260B
p-cresol	2.0	U	ug/l	8260B
1,1-Dibromo-3-chloropropane	10.0	U	ug/l	8260B
monochloromethane	2.0	U	ug/l	8260B
1,1-Dibromoethane	2.0	U	ug/l	8260B



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PROJECT QUALITY CONTROL DATA

DIRECTOR U.S. ARMY CORPS ENG. 5394

Report Number: 98-A17517

Sample I.D.: METHOD BLANK

Lab Project: 92358

Date Received: 2/20/98

Project:

Volatile Organics Method Blank Results ***

Compound	Result	Flag	Units	Method
3,5-Trimethylbenzene	2.0	U	ug/l	8260B
vinyl chloride	2.0	U	ug/l	8260B
olefins	2.0	U	ug/l	8260B
monochloromethane	2.0	U	ug/l	8260B
trichlorofluoromethane	2.0	U	ug/l	8260B

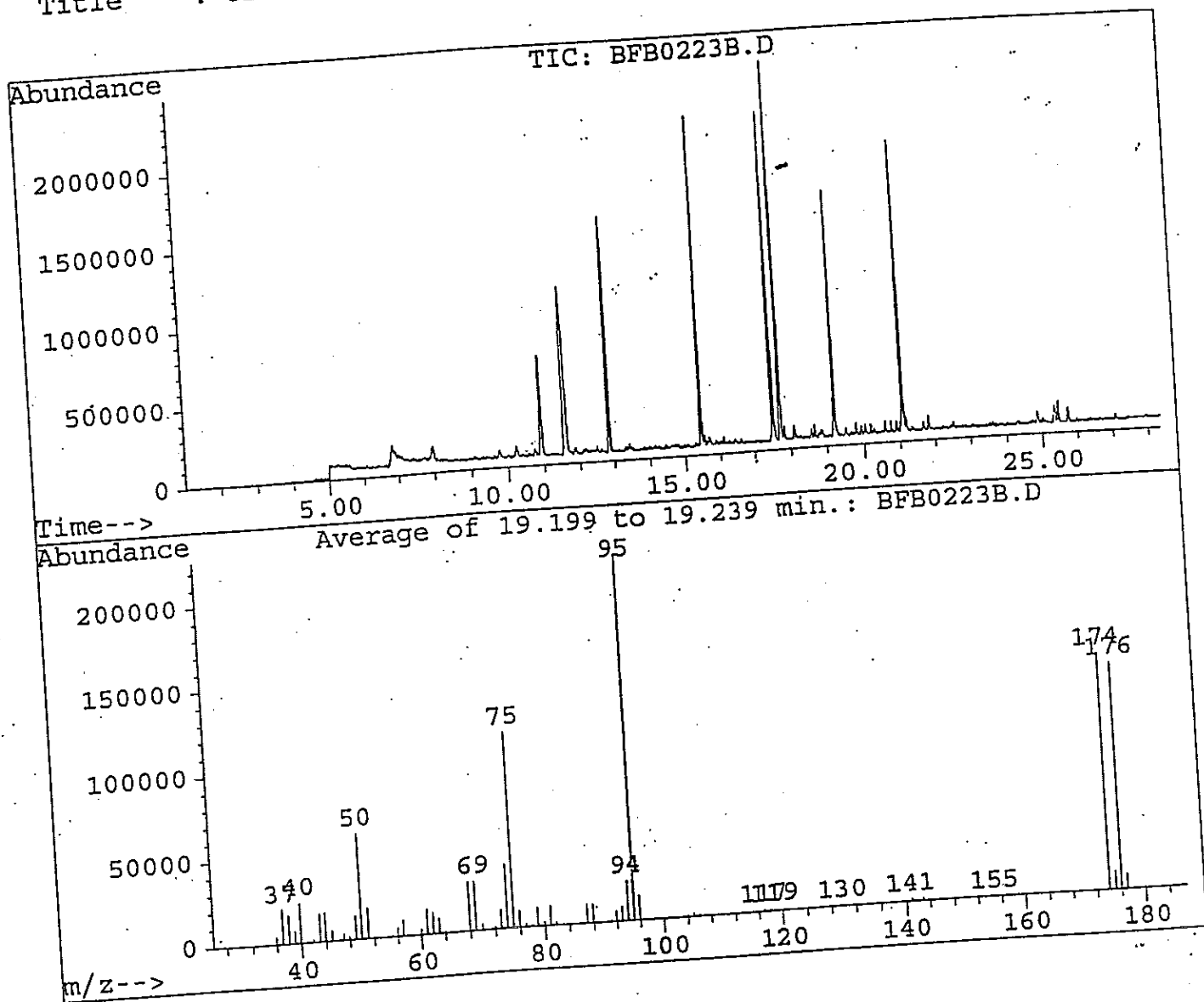
Michael H. Rumm

BFB

Vial: 19
Operator: HP-10
Inst: 5972 - In
Multiplr: 1.00

Data File : C:\HPCHEM\1\DATA\BFB0223B.D
Acq On : 23 Feb 98 10:35 pm
Sample : TUNE HP-10
Misc :

Method : C:\HPCHEM\1\METHODS\8260.M
Title : 8260 volatile organics PLUS



Peak Apex is scan: 179.9

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	28.8	62091	PASS
75	95	30	60	53.3	115195	PASS
95	95	100	100	100.0	215926	PASS
96	95	5	9	6.6	14296	PASS
173	174	0	2	0.0	0	PASS
174	95	50	100	64.6	139505	PASS
175	174	5	9	7.8	10853	PASS
176	174	95	101	95.6	133301	PASS
177	176	5	9	6.7	8894	PASS

Data File : C:\HPCHEM\1\DATA\VS0223B.D
 Acq On : 23 Feb 98 11:11 pm
 Sample : CON CAL HP-10
 Misc :

Vial: 20
 Operator: HP-10
 Inst : 5972 - In
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8260.M
 Title : 8260 volatile organics PLUS
 Last Update : Tue Feb 24 10:34:06 1998
 Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 20% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

Compound		AvgRF	CCRF	%Dev Area		Dev(min)
1 I	Pentafluorobenzene	1.000	1.000	0.0	82	0.02
2 T	Dichlorodifluoromethane	0.906	0.919	-1.4	93	0.03
3 P	Chloromethane	1.113	1.224	-10.0	100	0.03
4 C	Vinyl Chloride	0.528	0.523	1.0	71	0.06
5 T	Bromomethane	0.652	0.741	-13.8	111	0.07
6 T	Chloroethane	0.476	0.548	-15.1	98	0.05
7 T	Trichlorofluoromethane	1.299	1.484	-14.2	103	0.05
8	Acrolein	0.085	0.095	-12.2	85	0.02
9 T	Acetone	0.105	0.136	-29.5#	140	0.00
10 T	Diethyl Ether	1.081	1.139	-5.3	87	0.03
11 CM	1,1-Dichloroethene	1.000	1.017	-1.8	85	0.06
12 T	Iodomethane	1.313	1.766	-34.5#	102	0.03
13 T	Acrylonitrile	1.099	1.079	1.8	91	0.02
14 T	Methylene Chloride	1.258	1.437	-14.3	93	0.03
15 T	Carbon Disulfide	3.765	3.995	-6.1	94	0.04
16 T	trans-1,2-Dichloroethene	2.159	2.126	1.5	90	0.03
17	Methyl-t-butyl ether	2.630	2.589	1.6	83	0.00
18 P	1,1-Dichloroethane	2.309	2.532	-9.7	92	0.03
19 T	Vinyl Acetate	1.016	0.980	3.6	104	0.00
20 T	2-Butanone	0.158	0.137	13.6	82	0.00
21	Diisopropyl ether	4.534	5.074	-11.9	96	0.01
22 T	cis-1,2-Dichloroethene	1.943	2.076	-6.9	94	0.03
23 T	Bromochloromethane	0.723	0.794	-9.8	94	0.03
24 C	Chloroform	2.321	2.614	-12.6	103	0.02
25 T	2,2-Dichloropropane	1.635	1.586	3.0	76	0.02
26 S	1,2-Dichloroethane-d4	1.369	0.975	28.8#	96	0.02
27 S	Dibromofluoromethane	1.097	0.757	31.0#	88	0.02
28 T	1,2-Dichloroethane	1.890	2.261	-19.6	102	0.02
29 T	1,1,1-Trichloroethane	1.606	1.809	-12.6	96	0.01
30 T	1,1-Dichloropropene	1.604	1.754	-9.3	90	0.02
31 I	1,4-Difluorobenzene	1.000	1.000	0.0	91	0.02
32 T	Carbon Tetrachloride	2.010	1.997	0.7	94	0.02
33 M	Benzene	5.961	5.943	0.3	93	0.03
34 T	Dibromomethane	1.346	1.335	0.8	92	0.00
35 I	2,3-Dichloro-1-Propene	3.079	3.388	-10.0	106	0.01
36 C	1,2-Dichloropropane	1.888	1.871	0.9	89	0.02
37 M	Trichloroethene	1.492	1.362	8.7	86	0.01
38 T	Bromodichloromethane	2.425	2.714	-11.9	107	0.00
39	2-Chloroethyl vinyl ether	0.037	0.039	-6.6	108	0.00
40 T	cis-1,3-Dichloropropene	2.774	2.694	2.9	84	0.00
41 T	4-Methyl-2-pentanone	0.706	0.648	8.2	87	0.00

Data File : C:\HPCHEM\1\DATA\VS0223B.D
 Acq On : 23 Feb 98 11:11 pm
 Sample : CON CAL HP-10
 Misc :

Vial: 20
 Operator: HP-10
 Inst : 5972 - In
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8260.M
 Title : 8260 volatile organics PLUS
 Last Update : Tue Feb 24 10:34:06 1998
 Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 20% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

Compound		AvgRF	CCRF	%Dev Area		Dev (min)
42 T	trans-1,3-Dichloropropene	2.478	2.579	-4.1	96	0.00
43 T	1,1,2-Trichloroethane	1.453	1.405	3.3	93	0.00
44 S	Toluene-d8	4.063	2.549	37.3#	90	0.00
45 CM	Toluene	5.815	5.466	6.0	85	0.00
46 T	1,3-Dichloropropane	2.537	2.565	-1.1	101	0.01
47 I	Ethyl Methacrylate	3.425	3.507	-2.4	99	0.00
48	2-Hexanone	0.156	0.162	-3.7	104	0.00
49 I	Chlorobenzene-d5	1.000	1.000	0.0	88	0.00
50 T	Dibromochloromethane	1.205	1.356	-12.5	102	0.00
51 T	1,2-Dibromoethane	1.565	1.615	-3.2	89	0.00
52 T	Tetrachloroethene	1.220	1.250	-2.4	90	0.00
53 T	1,1,1,2-Tetrachloroethane	1.244	1.375	-10.5	96	0.00
54 PM	Chlorobenzene	3.464	3.642	-5.2	96	0.00
55 C	Ethylbenzene	5.977	6.492	-8.6	99	0.00
56 T	m,p-Xylene	4.719	5.075	-7.5	93	0.00
57	Bromoform	1.008	1.142	-13.3	99	0.00
58 T	Styrene	3.530	3.976	-12.6	93	0.00
59 T	o-Xylene	4.831	5.204	-7.7	94	0.00
60 P	1,1,2,2-Tetrachloroethane	2.095	2.196	-4.8	95	0.00
61 T	1,2,3-Trichloropropane	2.701	2.630	2.6	91	0.00
62 T	trans-1,4-Dichloro-2-butene	0.163	0.198	-21.2#	102	0.00
63	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	93	0.00
64	Ethylbenzene-d10	1.000	1.000	0.0	85	0.00
65 T	Isopropylbenzene	1.030	1.177	-14.3	103	0.00
66 S	Bromofluorobenzene	0.316	0.236	25.4#	105	-0.00
67 T	Bromobenzene	0.548	0.573	-4.5	98	0.00
68 T	Propylbenzene	1.366	1.507	-10.3	91	-0.13
69 T	2-Chlorotoluene	0.887	0.929	-4.8	93	0.00
70 T	4-Chlorotoluene	0.901	1.054	-17.0	105	0.00
71 T	1,3,5-Trimethylbenzene	0.889	1.004	-13.0	97	0.00
72 T	t-Butylbenzene	0.705	0.787	-11.7	97	0.00
73 T	1,2,4-trimethylbenzene	0.921	1.068	-15.9	99	0.00
74 T	sec-Butylbenzene	1.190	1.357	-14.1	101	0.00
75 T	1,3-Dichlorobenzene	0.535	0.582	-8.8	96	0.00
76 T	1,4-Dichlorobenzene	0.550	0.620	-12.7	102	0.00
77	1,2-Dichlorobenzene	0.510	0.593	-16.3	107	0.00
78 T	p-Isopropyltoluene	0.913	0.993	-8.8	89	0.00
79 T	Butylbenzene	1.107	1.334	-20.5#	110	0.00
80 T	1,2-Dibromo-3-chloropropane	0.070	0.072	-3.1	98	0.00

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\VS0223B.D
 Acq On : 23 Feb 98 11:11 pm
 Sample : CON CAL HP-10
 Misc :

Vial: 20
 Operator: HP-10
 Inst : 5972 - In
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8260.M
 Title : 8260 volatile organics PLUS
 Last Update : Tue Feb 24 10:34:06 1998
 Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 20% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

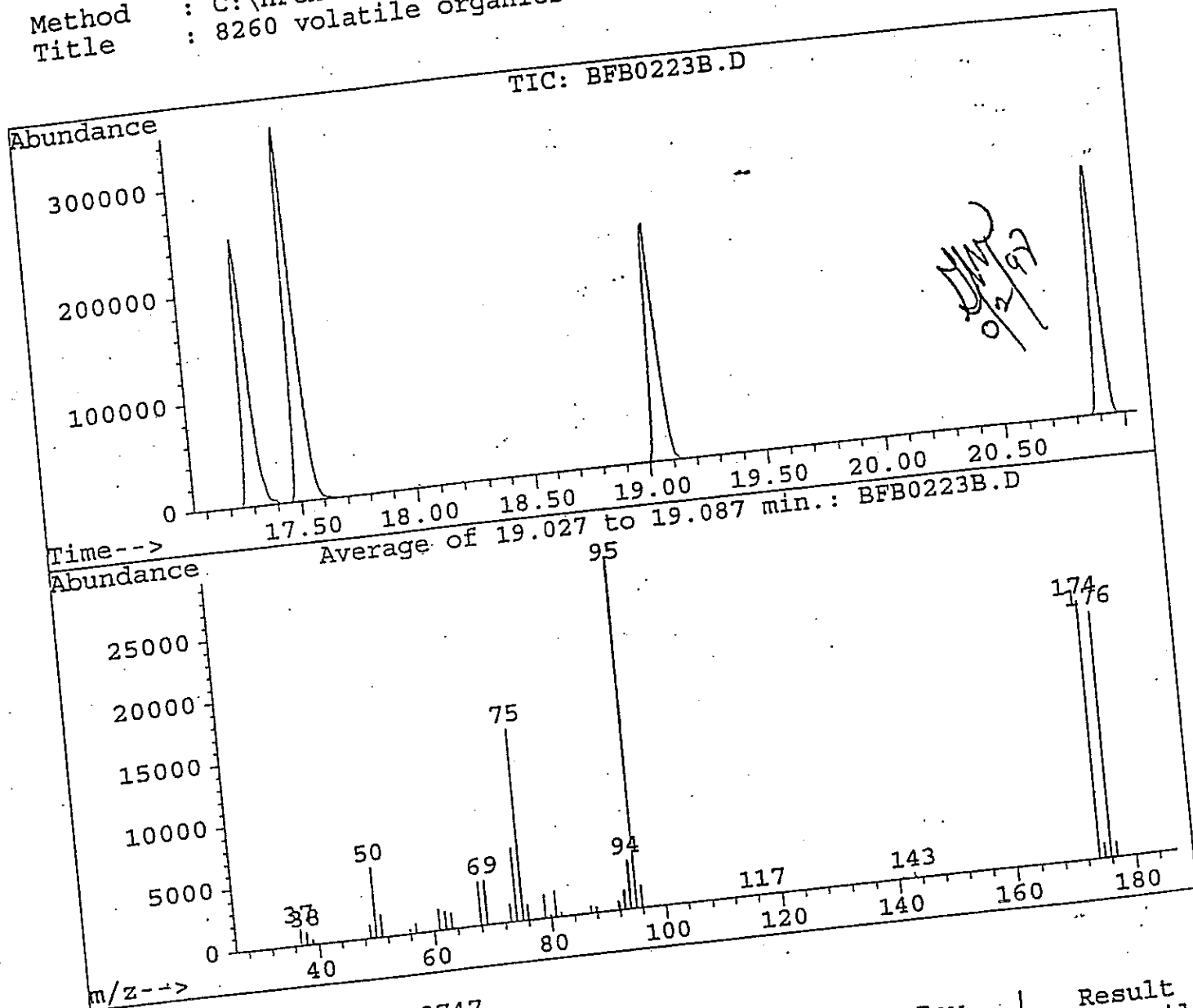
Compound		AvgRF	CCRF	%Dev Area % Dev(min)		
81 T	1,2,4-Trichlorobenzene	0.357	0.344	3.8	90	0.00
82 T	Naphthalene	0.888	0.962	-8.3	92	0.00
83 T	Hexachlorobutadiene	0.168	0.155	7.9	81	0.00
84 T	1,2,3-Trichlorobenzene	0.346	0.337	2.7	95	0.00

BFB

Data File : C:\HPCHEM\1\DATA\BFB0223B.D
 Acq On : 24 Feb 98 12:28 am
 Sample : 1
 Misc : TUNE

Vial: 15
 Operator: hp-2
 Inst : 5972 - I
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8260BB.M
 Title : 8260 volatile organics PLUS



Peak Apex is scan: 2747

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	20.0	5655	PASS
75	95	30	60	54.6	15445	PASS
95	95	100	100	100.0	28303	PASS
96	95	5	9	6.3	1779	PASS
173	174	0	2	0.0	0	PASS
174	95	50	100	73.3	20736	PASS
175	174	5	9	5.8	1203	PASS
176	174	95	101	95.4	19783	PASS
177	176	5	9	6.0	1181	PASS

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: SPECIALIZED ASSAYS, Inc. Contract: Parsons Eng Scie
 Lab Code: SASSAYS Case No.: Fitzsimon SAS No.: _____ SDG No.: 92406
 Instrument ID: HP-2 Calibration Date: 02/24/98 Time: 01:03
 Lab File ID: VS0223B.D Init. Calib. Date(s): 02/23/98 02/23/98
 Heated Purge: (Y/N) N Init. Calib. Times: 16:17 18:02
 GC Column: DB-VRX ID: 0.25 (mm)

COMPOUND	RRF	RRF4	MIN RRF	% D	MAX % D
Dichlorodifluoromethane	1.283	1.380		-7.6	
Chloromethane	0.701	0.721	0.300	-2.9	0.0
Vinyl Chloride	0.898	0.831	0.100	7.5	20.0
Bromomethane	0.706	0.677		4.2	
Chloroethane	0.384	0.424		-10.4	
Trichlorofluoromethane	1.985	2.242		-12.9	
Acrolein	0.033	0.048		-47.1	
Acetone	0.074	0.048		35.3	
Diethyl Ether	0.469	0.518		-10.4	
1,1-Dichloroethene	0.696	0.709	0.100	-1.9	20.0
Iodomethane	1.311	1.636		-24.8	
Acrylonitrile	0.297	0.295		0.7	
Methylene Chloride	0.900	0.819		9.0	
Carbon Disulfide	1.817	2.184		-20.2	
trans-1,2-Dichloroethene	1.028	1.104		-7.3	
Methyl-t-butyl ether	1.727	2.010		-16.4	
1,1-Dichloroethane	1.238	1.325	0.300	-7.0	0.0
Vinyl Acetate	1.152	0.898		22.0	
2-Butanone	0.099	0.071		28.7	
Diisopropyl ether	1.288	1.414		-9.8	
cis-1,2-Dichloroethene	0.996	1.093		-9.7	
Bromochloromethane	0.562	0.644		-14.6	
Chloroform	1.930	2.015	0.100	-4.4	20.0
2,2-Dichloropropane	1.517	1.572		-3.6	
1,2-Dichloroethane	1.499	1.718		-14.6	
1,1,1-Trichloroethane	1.711	1.967		-14.9	
1,1-Dichloropropene	1.113	1.259		-13.1	
Carbon Tetrachloride	3.968	4.531		-14.2	
Benzene	5.716	5.817		-1.8	
Dibromomethane	1.602	1.742		-8.8	
2,3-Dichloro-1-Propene	1.964	3.053		-55.5	
1,2-Dichloropropane	1.453	1.499	0.100	-3.1	20.0
Trichloroethene	1.972	2.393		-21.3	
Bromodichloromethane	3.135	3.748		-19.6	
2-Chloroethyl vinyl ether	0.722	0.150		79.3	
cis-1,3-Dichloropropene	2.455	2.827		-15.2	
4-Methyl-2-pentanone	0.440	0.403		8.5	
trans-1,3-Dichloropropene	2.356	2.831		-20.1	
1,1,2-Trichloroethane	1.390	1.601		-15.2	

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: SPECIALIZED ASSAYS, Inc. Contract: Parsons Eng Scie
 Lab Code: SASSAYS Case No.: Fitzsimon SAS No.: SDG No.: 92406
 Instrument ID: HP-2 Calibration Date: 02/24/98 Time: 01:03
 Lab File ID: VS0223B.D Init. Calib. Date(s): 02/23/98 02/23/98
 Heated Purge: (Y/N) N Init. Calib. Times: 16:17 18:02
 GC Column: DB-VRX ID: 0.25 (mm)

COMPOUND	RRF	RRF4	MIN RRF	% D	MAX % D
Toluene	7.157	7.103	0.100	0.8	20.0
1,3-Dichloropropane	2.573	2.878		-11.9	
Ethyl Methacrylate	2.810	3.369		-19.9	
2-Hexanone	0.435	0.381		17.1	
Dibromochloromethane	1.283	1.394		-8.7	
1,2-Dibromoethane	1.293	1.297		-0.3	
Tetrachloroethene	1.180	1.305		-10.6	
1,1,1,2-Tetrachloroethane	1.371	1.457		-6.2	
1-Chlorohexane	1.577	1.789		-13.4	
Chlorobenzene	2.966	2.984	0.300	-0.6	0.0
Ethylbenzene	5.245	5.475	0.100	-4.4	20.0
m,p-Xylene	5.967	4.508		24.5	
Bromoform	1.072	1.109		-3.5	
Styrene	2.554	2.920		-14.3	
o-Xylene	4.510	4.923		-9.2	
1,1,2,2-Tetrachloroethane	1.427	1.353	0.300	5.2	0.0
1,2,3-Trichloropropane	1.516	1.608		-6.1	
trans-1,4-Dichloro-2-butene	1.516	1.608		-6.1	
Isopropylbenzene	0.954	1.132		-18.6	
Bromobenzene	0.424	0.479		-13.0	
Propylbenzene	1.236	1.318		-6.7	
2-Chlorotoluene	0.782	0.866		-10.8	
4-Chlorotoluene	0.806	0.866		-7.4	
1,3,5-Trimethylbenzene	0.854	0.954		-11.7	
t-Butylbenzene	0.740	0.866		-16.9	
1,2,4-trimethylbenzene	0.881	0.972		-10.3	
sec-Butylbenzene	1.000	1.246		-24.6	
1,3-Dichlorobenzene	0.521	0.575		-10.2	
1,4-Dichlorobenzene	0.552	0.585		-5.8	
1,2-Dichlorobenzene	0.504	0.534		-6.0	
p-Isopropyltoluene	1.117	1.100		1.5	
Butylbenzene	0.865	0.958		-10.7	
1,2-Dibromo-3-chloropropane	0.065	0.059		9.0	
1,2,4-Trichlorobenzene	0.245	0.223		8.9	
Naphthalene	0.137	0.138		-1.0	
Hexachlorobutadiene	0.168	0.206		-22.8	
1,2,3-Trichlorobenzene	0.232	0.207		11.0	
1,2-Dichloroethane-d4	1.318	0.844		35.9	
Dibromofluoromethane	1.054	0.764		27.5	

All other compounds must meet a minimum RRF of 0.010.

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: SPECIALIZED ASSAYS, Inc. Contract: Parsons Eng Scie
 Lab Code: SASSAYS Case No.: Fitzsimon SAS No.: SDG No.: 92406
 Instrument ID: HP-2 Calibration Date: 02/24/98 Time: 01:03
 Lab File ID: VS0223B.D Init. Calib. Date(s): 02/23/98 02/23/98
 Heated Purge: (Y/N) N Init. Calib. Times: 16:17 18:02
 GC Column: DB-VRX ID: 0.25 (mm)

COMPOUND	RRF	RRF4	MIN RRF	% D	MAX % D
Toluene-d8	4.958	3.543		28.5	
Bromofluorobenzene	0.337	0.237		29.8	

DFTPP

Data File : C:\HPCHEM\1\DATA\DF0224.D

Acq On : 24 Feb 98 4:00 pm

Sample : tune

Misc :

MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\8270.M (RTE Integrator).

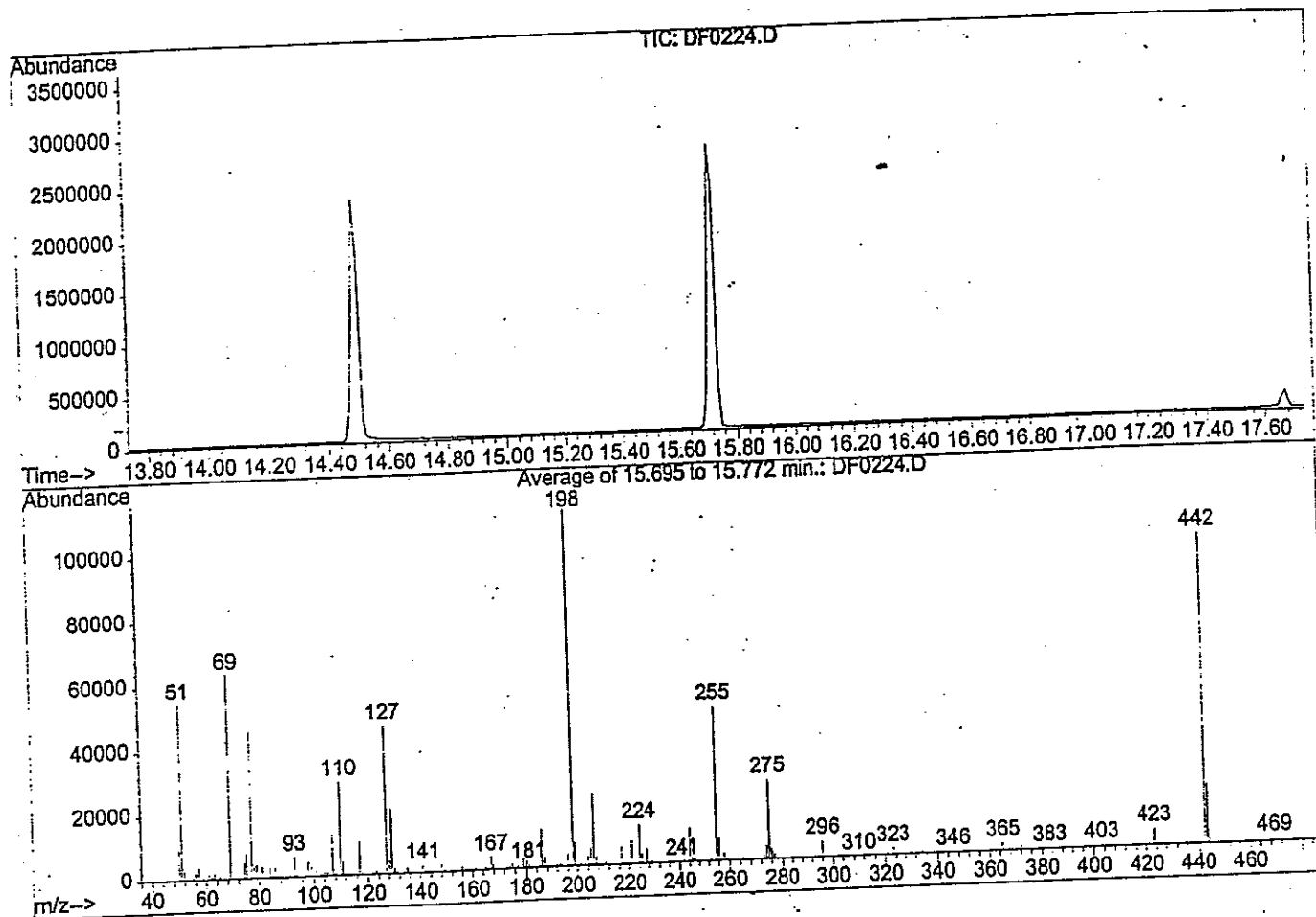
Title : SEMIVOLATILES

Vial: 2

Operator: HP-13

Inst : hp-13

Multipir: 1.00



Spectrum Information: Average of 15.695 to 15.772 min.

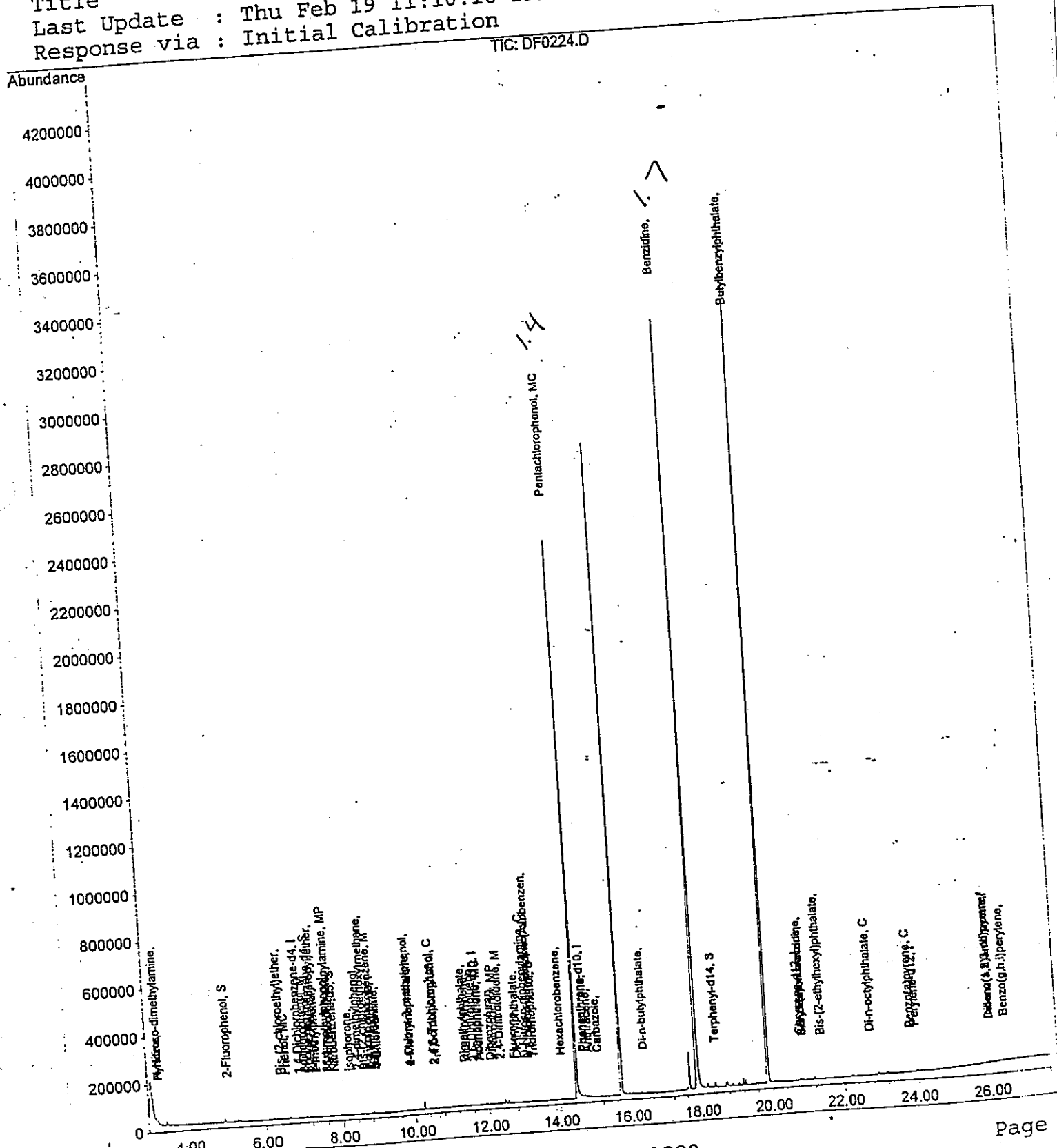
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	49.2	54506	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	57.2	63389	PASS
70	69	0.00	2	1.1	672	PASS
127	198	40	60	41.6	46062	PASS
197	198	0.00	1	0.4	398	PASS
198	198	100	100	100.0	110798	PASS
199	198	5	9	6.8	7563	PASS
275	198	10	30	22.5	24929	PASS
365	198	1	100	2.2	2417	PASS
441	443	0.01	100	0.1	22	PASS
442	198	40	100	86.9	96268	PASS
443	442	17	23	19.4	18637	PASS

Data File : C:\HPCHEM\1\DATA\DF0224.D
 Acq On : 24 Feb 98 4:00 pm
 Sample : tune
 Misc :
 MS Integration Params: rteint.p
 Quant Time: Feb 24 16:29 1998

Vial: 2
 Operator: HP-13
 Inst : hp-13
 Multiplr: 1.00

Quant Results File: 8270.RES

Method : C:\HPCHEM\1\METHODS\8270.M (RTE Integrator)
 Title : SEMIVOLATILES
 Last Update : Thu Feb 19 11:10:16 1998
 Response via : Initial Calibration



44	Acenaphthylene	1.338	1.349	-0.8	85	-0.07
45	Dimethylphthalate	0.341	0.339	0.6	78	-0.06
46	2,6-Dinitrotoluene	0.355	0.398	-12.1	87	-0.07
47	3-Nitroaniline	1.094	1.100	-0.5	86	-0.07
48 MC	Acenaphthene	0.229	0.245	-7.0	81	-0.07
49 P	2,4-Dinitrophenol	1.614	1.610	0.2	83	-0.07
50	Dibenzofuran	0.459	0.455	0.9	78	-0.07
(M	2,4-Dinitrotoluene	0.307	0.300	2.3	79	-0.04
52 MP	4-Nitrophenol	1.214	1.212	0.2	86	-0.08
53	Fluorene	0.622	0.638	-2.6	87	-0.07
54	4-Chlorophenylphenylether	1.278	1.271	0.5	85	-0.07
55	Diethylphthalate	0.394	0.398	-1.0	82	-0.07
56	4-Nitroaniline	1.531	1.618	-5.7	86	-0.07
57	1,2-Diphenylhydrazine (Azob					
58 I	Phenanthrene-d10	1.000	1.000	0.0	84	-0.07
59	4,6-dinitro-2-methylphenol	0.153	0.164	-7.2	80	-0.07
60 C	N-Nitroso-diphenylamine	0.426	0.436	-2.3	88	-0.07
61 S	Tribromophenol	0.124	0.126	-1.6	85	-0.07
62	4-Bromophenylphenylether	0.171	0.172	-0.6	87	-0.07
63	Hexachlorobenzene	0.227	0.226	0.4	86	-0.07
64 MC	Pentachlorophenol	0.165	0.154	6.7	74	-0.07
65	Phenanthrene	0.932	0.908	2.6	84	-0.07
66	Anthracene	0.955	0.998	-4.5	88	-0.07
67	Carbazole	0.858	0.871	-1.5	88	-0.07
68	Di-n-butylphthalate	1.160	1.125	3.0	84	-0.07
69 C	Fluoranthene	1.060	1.001	5.6	82	0.42
70 I	Chrysene-d12	1.000	1.000	0.0	81	-0.08
71	Benzidine	0.255	0.211	17.3	74	-0.06
72 M	Pyrene	1.320	1.298	1.7	81	-0.08
(S	Terphenyl-d14	0.900	0.889	1.2	83	-0.07
74	Butylbenzylphthalate	0.668	0.675	-1.0	81	-0.08
75	3,3'-Dichlorobenzidine	0.419	0.455	-8.6	85	-0.10
76	Benzo(a)anthracene	1.210	1.115	7.9	77	0.04
77	Chrysene	1.134	1.115	1.7	79	-0.08
78	Bis-(2-ethylhexyl)phthalate	0.922	0.937	-1.6	82	-0.08
79 I	Perylene-d12	1.000	1.000	0.0	72	-0.10
80 C	Di-n-octylphthalate	1.703	1.992	-17.0	81	-0.11
81	Benzo(b)fluoranthene	1.387	1.161	16.3	61	-0.04
82	Benzo(k)fluoranthene	1.130	1.161	-2.7	70	-0.11
83 C	Benzo(a)pyrene	1.177	1.353	-15.0	83	-0.11
84	Indeno(1,2,3-cd)pyrene	1.439	1.634	-13.6	79	-0.08
85	Dibenz(a,h)anthracene	1.170	1.216	-3.9	73	-0.11
86	Benzo(g,h,i)perylene	1.241	1.437	-15.8	81	-0.12

(#) = Out of Range
0500214.D 8270.M

SPCC's out = 0 CCC's out = 0
Wed Feb 25 09:09:57 1998