ANALYSIS: TCLP Extraction Procedure

Method Ref: 1311

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

Analyte Name	Analytical Results	Reported Detection Limits
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

Analyte Name	Analytical Results	Reported Detection Limits
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

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

Analyte Name	Analytical Results	Reported Detection Limits
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: %

Analyte Name	Analytical Results	Reported Detection Limits
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: %

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

Toluene-d8	105	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

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: 3520B/8270B

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

Analyte Name	Analytical Results	Reported Detection Limits
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

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-1,2-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	100
Vinyl acetate	<RDL	2
Vinyl chloride	<RDL	5
Xylenes (Total)		

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: %

Analyte Name	Analytical Results	Reported Detection Limits

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: %

Analyte Name	Analytical Results	Reported Detection Limits
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

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

Analyte Name	Analytical Results	Reported Detection Limits
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

Analyte Name	Analytical Results	Reported Detection Limits
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

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: 2/2/98 Date Ext/Dig/Prep: 2/2/98 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: 1/30/98 Date Ext/Dig/Prep: 1/30/98 Result Units: %

Analyte Name	Analytical Results	Reported Detection Limits
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: %

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

Client Sample ID: METHOD BLANK AALSample ID #: AB36176 Accura Project #: 15489

Toluene-d8	109	0

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Environmental Analytical Services

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

CHAIN OF CUSTODY

Company Name: Omega Environmental Services Inc. Billing address:

Address: 4661 Hammermill Road Suite B Tucker GA 30084 Client P.O. #

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

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

Project Name: Hunter Army Airfield Fire Training Area

Project Number: Co# DACA21-97-C-0042

For Laboratory Use Only

Custody Seal: Y N Page 1 OF 1

QC Level: N 1 2 3 4 Init/Temp: MT 4°C

Sample Condition: Good AAL Lab Project # 15505

Samplers: (signature) David Price

Samplers: (printed) David Price

Sample ID #	Sample Date / Time	Comp	Grab	Matrix	Preserved	Sample Location:	No. of Containers	ANALYSIS: TPH-DRO	O&G	BTEX-8260	PAH-8270	VOC-8260				Remarks	Accura Sample ID No. AB
106-001-SWW-X	1-30-98		✓	W			2	✓	✓								36238
106-002-SWW-Z			✓	W			2	✓	✓								36239
106-003-SWW-Y			✓	W			2	✓	✓								36240
079-001-SWW-P			✓	W			3			✓	✓						36241
079-002-SWW-Q			✓	W			3			✓	✓						36242
106-SWW + 079-SWW TB			✓	W			2					✓					36243

Relinquished By:	Date / Time	Received By:	Date / Time	Special Requirements Or Remarks:
David Price	1/30/98	Fed-X (801466199446)	1/30/98	
Relinquished By:	Date / Time	Received By:	Date / Time	Turnaround Time Requested:
Fed-X	1-31-98 10:35	David Price	1-31-98 10:35	

Matrix Guide: (S = Soil) (W = Water) (L = Liquid) (C = Cartridge) (SL = Sludge) (A = Air Sample) (F = Foods) (M = Miscellaneous)

COC97-1.XLS

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

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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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

Linda Dodd

Accura Analytical Laboratory, Inc.

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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

Analyte Name	Analytical Results	Reported Detection Limits
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

Analyte Name	Analytical Results	Reported Detection Limits
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: %

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 (Waters) Method Ref: 8260A

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

Analyte Name	Analytical Results	Reported Detection Limits
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

Analyte Name	Analytical Results	Reported Detection Limits
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

Analyte Name	Analytical Results	Reported Detection Limits
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: %

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 (Waters) Method Ref: 8260A

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

Analyte Name	Analytical Results	Reported Detection Limits
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

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-1,2-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: %

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

Accura Analytical Laboratory, Inc.

ACCURA ANALYTICAL LABORATORY, INC.

6017 Financial Drive, Norcross, Georgia 30017, Phone (770)449-8800, FAX (770)449-5477

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

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

Analyte Name	Analytical Results	Reported Detection Limits
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

Analyte Name	Analytical Results	Reported Detection Limits
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

Analyte Name	Analytical Results	Reported Detection Limits
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

Analyte Name	Analytical Results	Reported Detection Limits
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

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-1,2-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: %

Analyte Name	Analytical Results	Reported Detection Limits
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: %

Analyte Name	Analytical Results	Reported Detection Limits
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: %

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

Accura Analytical Laboratory, Inc.

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	Date Sampled	Time Sampled
34757	106-QA-TB	98/01/28	00:00

Test Performed	Result	Units	Tested By	Test Date
VOLATILE ORGANICS GC/MS	*		SPA	98/02/04

*NOTE: See Attached

Sampled by District Personnel

Checked by: JWS

Signed by:

Blaise Willis

Blaise Willis
Chemist

Sheet 2 of 2

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: JWS

Signed by:

Blaise Willis

Blaise Willis
Chemist

Sheet 1 of 2

Hunter Army Airfield Georgia 6°C

(ER 1110-1-263)

Proj. No.	Project Name Hunter Fire Training Area Contract No. DACA21-97-C-0012					No. of Conts.	PAH-8270	BTEX-8260	VOCs 8260					TAT Remarks: SAD NO. MATRIX
Sampler: (Signature)	David Finn (912) 757-1606													
Date	Time	Pres.	Gr	Cm	Site Code/Sample Number									
1/28/98					106-001-WW-QA	3	✓	✓						
1/28/98					106-QA-TB	2	✓		✓					
							1/28/98 DP							

Sampler Relinquisher by: David Finn	Date/Time 1/28/98	Received by: (Sig.) Becky SC	Date/Time 1/29/98 04:20
Relinquished by: (Sig.)	Date/Time	Received by: (Sig.)	Date/Time
Relinquished by: (Sig.)	Date/Time	Received for Laboratory by: (Sig.)	Date/Time
Custody Seal No.		Lab Case No.	

Hazards Associated with Samples

Remarks at time of receipt.

ENG Form 5 -R, Oct 90

Propon CEMP-

Cooler Receipt Form

Job # 5428 No. of Coolers 1 Return Cooler:

Project: Hunter Army Airfield Date Received: 1/29/98

Date cooler opened: 1/29/98 by (print) B. Sebin
(sign) B. S.

1. Did cooler come with a shipping slip? (Yes) No
If yes, enter carrier & air bill number here: FE 8014b6199387

2. Were custody seals on outside of cooler: Yes (No)
How many & where: _____ seal date: _____ seal name: _____

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: (o) Type: _____ Yes No

Date logged-in: 1/29/98 by (print) B. Sebin
(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 1

11. Was project manager called & status discussed? (Yes) No
If yes, give details on the bottom of this form.

Who was called? Jessica By whom? Becky Date: 1/29/98

Add to run field list 8260 on trip blank even though bottle said BTEX-8260.

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: 34756 106-001-WW-QA
HUNTER ARMY AIRFIELD

Lab Number: 98-A009302

Date Collected: 1/28/98

Date Received: 1/30/98

Time Collected:

Time Received: 9:00

Sampler: BOBBI THORN

Sample type: Water

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ganics Reference Data

OA Blank	VB0204
[illegible]une, VOA	BFB0204
a[illegible]ration 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
Acenapthene	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
P[illegible]e	5.00	U	1	ug/l	2/ 1/98	1:24	M. Goodrich	8270
[illegible](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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Nashville, TN 37204-0566
Phone 1-615-726-0177

ANALYTICAL REPORT

Laboratory Number: 98-A009302
Sample ID: 34756 106-001-WW-QA

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
Acenapthylene	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
BNA's	990. ml	1.0 ml	1/31/98	Fitzwater	3510

Surrogate	% Recovery	Target Range
VOA Surrogate, 1,2-Dichloroethane, d4	90.7	70. - 131.
VOA Surrogate, Toluene d8	91.7	83. - 115.
VOA Surrogate, 4-Bromofluorobenzene	81.4	73. - 119.
VOA Surrogate, Dibromofluoromethane	113.	72. - 130.
BNA Surr., Nitrobenzene-d5	70.0	35. - 115.
BNA Surrogate, 2-Fluorobiphenyl	63.8	43. - 116.
BNA Surrogate, Terphenyl d14	39.6	20. - 130.

Report Approved By: Michael A. 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.

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: 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

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ganics Reference Data

OA Blank	VB0204
ank	20200WBB
Tune, VOA	BFB0204
C/MS Tune, BNA	DF0131
alibration Check, VOA	VS0204
alibration 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
Chloroethylvinylether	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

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-A009303
Sample ID: 34757 106-QA-TB

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
[illegible]ichloropropane	2.0	U	1	ug/l	2/ 4/98	19:36	J.Haley	8260B
[illegible]ichloropropane	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
-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

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-A009303
Sample ID: 34757 106-QA-TB

Surrogate	% Recovery	Target Range
VOA Surrogate, 1,2-Dichloroethane, d4	92.5	70. - 131.
VOA Surrogate, Toluene d8	96.0	83. - 115.
VOA Surrogate, 4-Bromofluorobenzene	77.2	73. - 119.
VOA 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 R. Hale, M.S., Laboratory Director

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

****

* Organics Spike/Duplicate Results **

ompound	%Recovery	Target Range	Precision RPD	Target Range
1-Dichloroethene	140.	61 - 145	2.0	0 - 14
richloroethene	115.	71 - 120	11.0	0 - 14
enzene	119.	76 - 127	10.0	0 - 11
- e	120.	76 - 125	10.0	0 - 13
. obenzene	105.	75 - 130	1.0	0 - 13
enol	74.	12 - 116	8.0	0 - 42
-Chlorophenol	74.	48 - 121	10.0	0 - 40
,4-Dichlorobenzene	72.	23 - 116	11.3	0 - 28
-Nitroso-di-n-propylamine	95.	38 - 148	5.1	0 - 38
,2,4-Trichlorobenzene	76.	27 - 121	9.2	0 - 28
-Chloro-3-methylphenol	85.	50 - 124	5.3	0 - 42
enaphthene	81.	49 - 119	6.2	0 - 31
-Nitrophenol	82.	24 - 127	6.6	0 - 50
,4-Dinitrotoluene	85.	46 - 147	2.0	0 - 38
entachlorophenol	74.	26 - 137	7.5	0 - 50
yrene	84.	32 - 132	5.9	0 - 31

* Volatile Organics Method Blank Results ***

ompound	Result	Flag	Units	Method
cetone	10.0	U	ug/l	8260B
enzene	2.0	U	ug/l	8260B
romobenzene	2.0	U	ug/l	8260B
romochloromethane	2.0	U	ug/l	8260B
romoform	2.0	U	ug/l	8260B
romomethane	2.0	U	ug/l	8260B
none	10.0	U	ug/l	8260B
-butylbenzene	2.0	U	ug/l	8260B
ec-Butylbenzene	2.0	U	ug/l	8260B
-Butylbenzene	2.0	U	ug/l	8260B
arbon disulfide	2.0	U	ug/l	8260B
arbon 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

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* Volatile Organics Method Blank Results ***

ompound	Result	Flag	Units	Method
hlorobenzene	2.0	U	ug/l	8260B
hloroethane	2.0	U	ug/l	8260B
-Chloroethylvinylether	2.0	U	ug/l	8260B
hloroform	2.0	U	ug/l	8260B
hloromethane	2.0	U	ug/l	8260B
rotoluene	2.0	U	ug/l	8260B
lorotoluene	2.0	U	ug/l	8260B
,2-Dibromo-3-chloropropane	10.0	U	ug/l	8260B
ibromochloromethane	2.0	U	ug/l	8260B
,2-Dibromoethane	2.0	U	ug/l	8260B
ibromomethane	2.0	U	ug/l	8260B
,2-Dichlorobenzene	2.0	U	ug/l	8260B
,3-Dichlorobenzene	2.0	U	ug/l	8260B
,4-Dichlorobenzene	2.0	U	ug/l	8260B
ichlorodifluoromethane	2.0	U	ug/l	8260B
,1-Dichloroethane	2.0	U	ug/l	8260B
,2-Dichloroethane	2.0	U	ug/l	8260B
,1-Dichloroethene	2.0	U	ug/l	8260B
is-1,2-Dichloroethene	2.0	U	ug/l	8260B
rans-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
is-1,3-Dichloropropene	2.0	U	ug/l	8260B
rans-1,3-Dichloropropene	2.0	U	ug/l	8260B
thylbenzene	2.0	U	ug/l	8260B
exachlorobutadiene	2.0	U	ug/l	8260B
-Hexanone	10.0	U	ug/l	8260B
propylbenzene	2.0	U	ug/l	8260B
ropyltoluene	2.0	U	ug/l	8260B
-Methyl-2-pentanone	10.0	U	ug/l	8260B
ethylene chloride	10.8		ug/l	8260B
aphthalene	2.0	U	ug/l	8260B
-Propylbenzene	2.0	U	ug/l	8260B
tyrene	2.0	U	ug/l	8260B

SPECIALIZED ASSAYS, INC.

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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

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* Volatile Organics Method Blank Results ***

ompound	Result	Flag	Units	Method
,1,1,2-Tetrachloroethane	2.0	U	ug/l	8260B
,1,2,2-Tetrachloroethane	2.0	U	ug/l	8260B
etrachloroethene	2.0	U	ug/l	8260B
oluene	2.0	U	ug/l	8260B
,2,3-Trichlorobenzene	2.0	U	ug/l	8260B
Trichlorobenzene	2.0	U	ug/l	8260B
,1-Trichloroethane	2.0	U	ug/l	8260B
,1,2-Trichloroethane	2.0	U	ug/l	8260B
richloroethene	2.0	U	ug/l	8260B
,2,3-Trichloropropane	2.0	U	ug/l	8260B
,2,4-Trimethylbenzene	2.0	U	ug/l	8260B
,3,5-Trimethylbenzene	2.0	U	ug/l	8260B
inyl chloride	2.0	U	ug/l	8260B
ylenes	2.0	U	ug/l	8260B
romodichloromethane	2.0	U	ug/l	8260B
richlorofluoromethane	2.0	U	ug/l	8260B

* Semi-Volatile Organics Method Blank Results ***

ompound	Result	Flag	Units	Method
aphthalene	5.0	U	ug/l	8270
cenapthene	5.0	U	ug/l	8270
nthracene	5.0	U	ug/l	8270
luoranthene	5.0	U	ug/l	8270
luorene	5.0	U	ug/l	8270
yrene	5.0	U	ug/l	8270
enzo(a)anthracene	5.0	U	ug/l	8270
enzo(a)pyrene	5.0	U	ug/l	8270
b)fluoranthene	5.0	U	ug/l	8270
k)fluoranthene	5.0	U	ug/l	8270
hrysene	5.0	U	ug/l	8270
ibenzo(a,h)anthracene	5.0	U	ug/l	8270
ndeno(1,2,3-cd)pyrene	5.0	U	ug/l	8270
cenapthylene	5.0	U	ug/l	8270
enzo(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-A009304

Sample I.D.: METHOD BLANK Lab Project: 90495

Project: Date Received: 1/30/98

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*** Semi-Volatile Organics Method Blank Results ***

Compound	Result	Flag	Units	Method
Phenanthrene	5.0	U	ug/l	8270
2-Methylnapthalene	5.0	U	ug/l	8270
1-Methylnapthalene	5.0	U	ug/l	8270

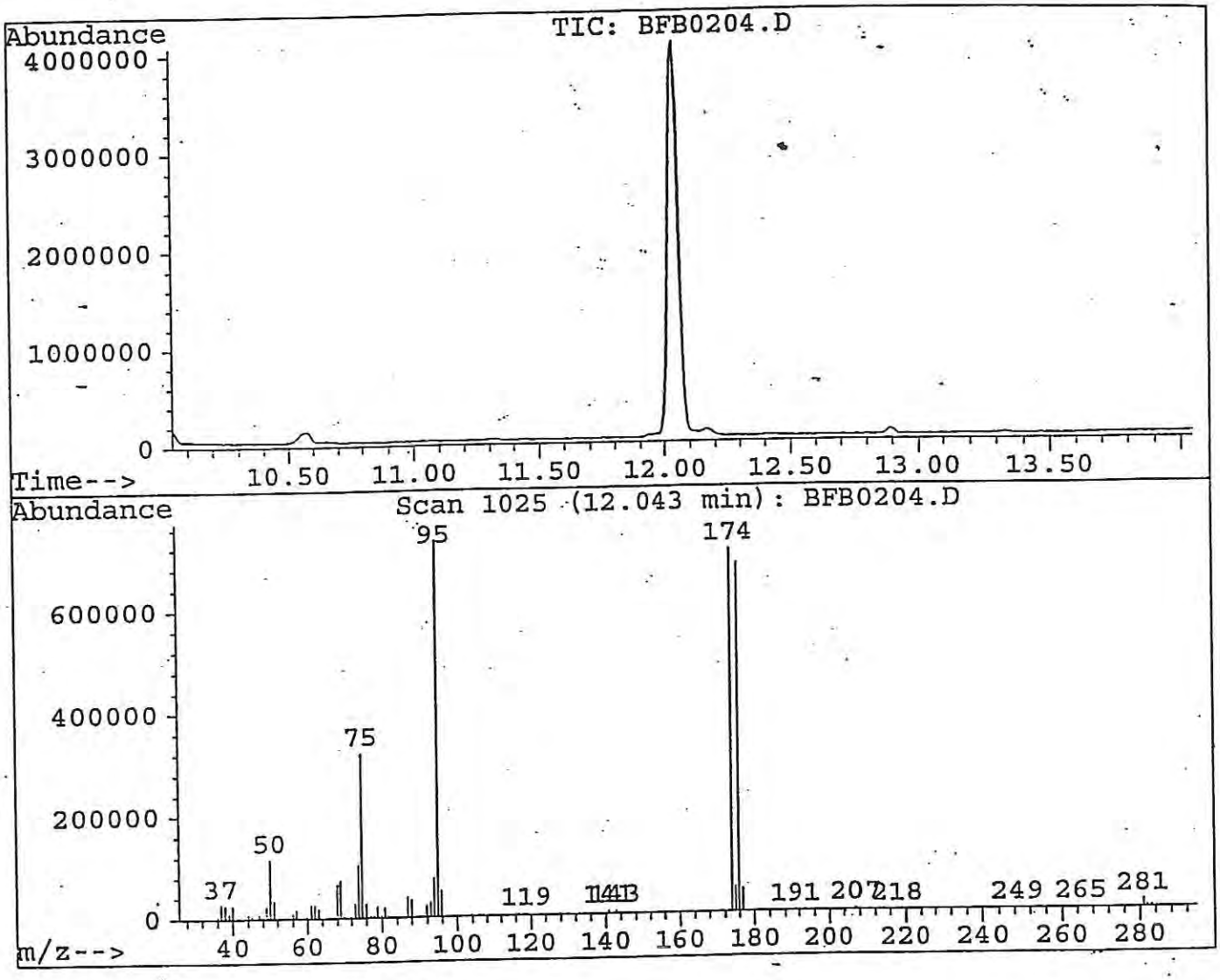
Michael A. Russell

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

Wed Feb 04 18:01:20 1998

Evaluate Continuing Calibration Report

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
4	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

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
	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

Evaluate Continuing Calibration Report

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%

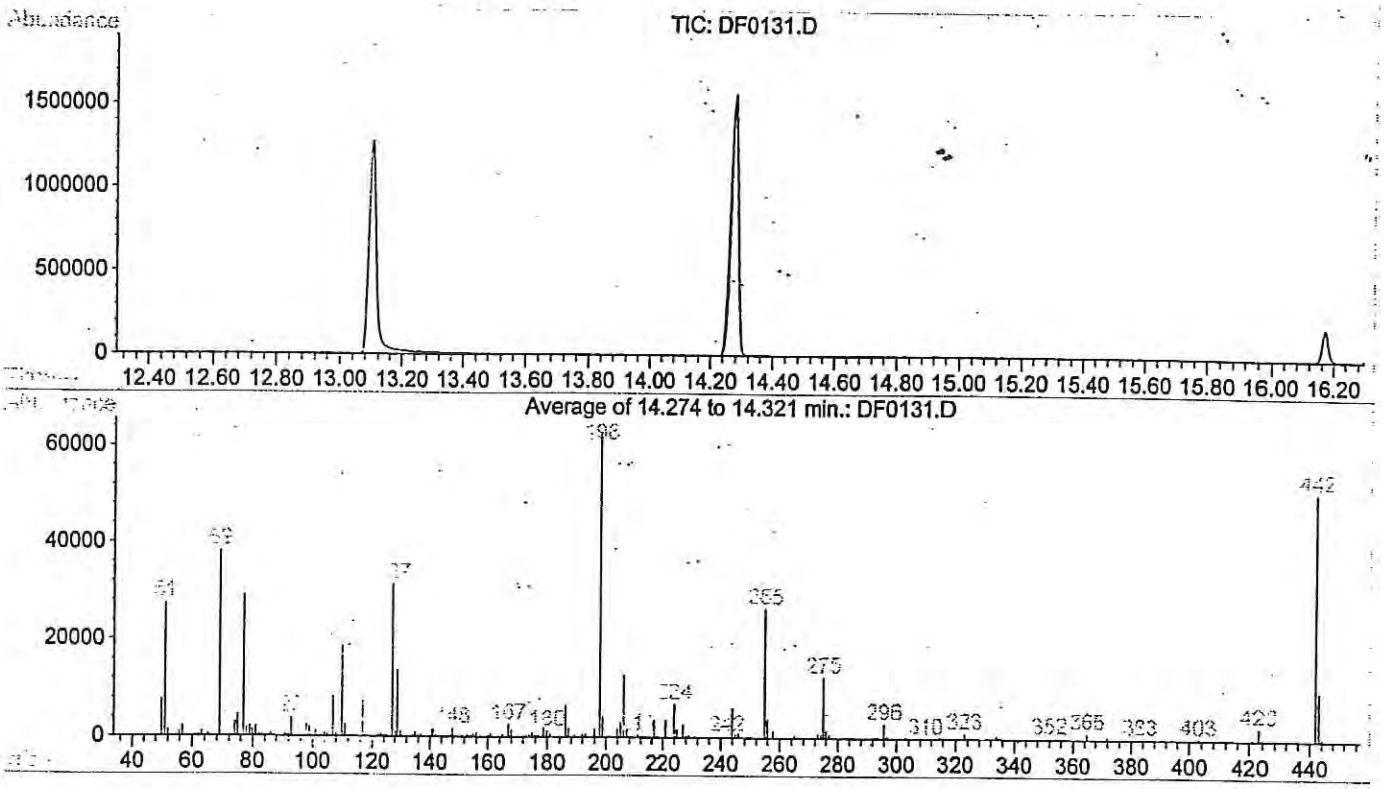
	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
81 T	1,2,4-Trichlorobenzene	0.264	0.263	0.6	340	0.03
82 T	Naphthalene	0.593	0.422	28.9#	232	0.03
83 T	Hexachlorobutadiene	0.192	0.197	-2.5	355	0.03
84 T	1,2,3-Trichlorobenzene	0.252	0.246	2.3	338	0.03

(#) = Out of Range SPCC's out = 0 CCC's out = 0

DFTPP

Data File : C:\HPCHEM\1\DATA\DF0131.D
Acq On : 31 Jan 1998 6:43 pm
Sample : tune
Misc :
MS Integration Params: rteint.p
Method : C:\HPCHEM\1\METHODS\8270.M (RTE Integrator)
Title : SW846 METHOD 8270

Vial: 2
Operator:
Inst : hp-9
Multiplr: 1.00



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
11		1,3-Dichlorobenzene	0.841	0.857	-1.9	48	-0.07
12	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

U.S. Army Corps of Engineers Work Unit #_____ Job #5126 Chain of Custody Rec

(ER 1110-1-263)

Proj. No.	Project Name: Hunter Army Airfield 90495					No. of Conts.	AAH (M8270)	BTEX (M8260)	VOC					TAT 14day
Sampler: (Signature)														Remarks:
Date	Time	Pres.	Gr	Cm	Site Code/Sample Number									SAD NO. / MATRIX
1/28/98	—				106-001-WW-QA	3	✓	✓		98-A009302				34756 water
↓	—				106-QA-TB	2			✓	98-A009303				34757 ↓

~~Sampler~~ Relinquisher by: Becky SL.	Date/Time 1/29/98	Received by: (Sig.)	Date/Time	Hazards Associated with Samples: 98-A009304
Relinquished by: (Sig.)	Date/Time	Received by: (Sig.)	Date/Time	
Relinquished by: (Sig.)	Date/Time	Received for Laboratory by: (Sig.)	Date/Time 1/30/98 0900	Remarks at time of receipt.
Custody Seal No.		Lab Case No.		

ENG Form 5021-R, Oct 90 Proponent: CEMP-

U.S. Army Corps of Engineers Work Or #_____ Job #J-128 Chain of Cu tody Rec

(E.. 1110-1-263)

Proj. No.	Project Name												TAT 14day
	Hunter Army Airfield 90495												Remarks:
Sampler: (Signature)													
Date	Time	Pres.	Gr	Cm	Site Code/Sample Number	No. of Conts.	AH (M8270)	BTEX (M8260)	VOC				SAD NO. / MATRIX
11/28/98	—				106-001-WW-QA	3	✓	✓		98-A009302			34756 water
↓	—				106-QA-TB	2			✓	98-A009303			34757 ↓

~~Sampler~~ Relinquisher by: Becky St.	Date/Time 11/29/98	Received by: (Sig.)	Date/Time	Hazards Associated with Samples
				98-A009304
Relinquished by: (Sig.)	Date/Time	Received by: (Sig.)	Date/Time	
Relinquished by: (Sig.)	Date/Time	Received for Laboratory by: (Sig.)	Date/Time 11/30/98 0900	Remarks at time of receipt.
Custody Seal No.		Lab Case No.		

ENG Form 5021-R Oct 90 Proponent: CEMP

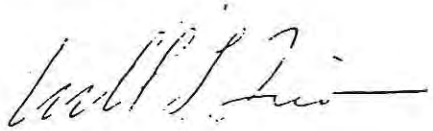
TRANSMITTAL OF SAD LABORATORY REPORT(S)

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
Date Received - 98/01/30
Date Reported - 98/02/19 09:53:07

HUNTER ARMY AIRFIELD, GA
Requisition - W33SJG70930225
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: JWJ

Signed by:

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

Lab #	Field ID	Date Sampled	Time Sampled
34779	HEAP#5-ES001-QA	98/01/29	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: JWS

Signed by:

Blaise Willis

Blaise Willis
Chemist

Sheet 3 of 3

U.S. Army Corps of Engineers Work Order #_____ Job #_____ Chain of Custody Rec

Hunter Army Airfield (ER 1110-1-263)

Proj. No.	Project Name: Hunter Army Fire Training Area Contract NO. DACA21-97-C-0042														TAT_____
Sampler: (Signature)	David Price 912-757-1606														Remarks:
Date	Time	Pres.	Gr	Cm	Site Code/Sample Number	No. of Conts.	BTEX - 8260	PAH - 8270	VOCs 8260	TCLP metals	TPH-418.1				SAD NO. MATRIX
1/29/98			✓		106T-002-SWW-QA	3	✓	✓							
1/29/98			✓		106TSWW-QA-TB	2			✓						
1/29/98					Heap #5-ES001-QA	2	✓	✓		✓	✓				

Sampler Relinquished by: David Price	Date/Time 1/29/98	Received by: (Sig.)	Date/Time 1/30/98 0936	Hazards Associated with Samples
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.		

ENG Form 5 -R, Oct 90 Pronon CEMP

Cooler Receipt Form

Job # 5433 No. of Coolers 1 Return Cooler _____

Project: Hunter Date Received: 1/30/98

Date cooler opened: 1/30/98 by (print) B. Serbin
(sign) B. S.

1. Did cooler come with a shipping slip? (Yes) No
If yes, enter carrier & air bill number here: FE 801466199398

2. Were custody seals on outside of cooler: Yes (No)
How many & where: _____ seal date: _____ seal name: _____

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: 4° Type: _____ Yes No

Date logged-in: 1/30/98 by (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

5. Were all bottle labels agree with custody papers? (Yes) No

6. Were correct containers used for the tests indicated? needed septa lid for soil BTEX 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 1

11. Was project manager called & status discussed? Yes (No)
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: 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

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ganics Reference Data

OA Blank	VB0205
M[illegible]ank	20346WBB
[illegible] Tune, VOA	BFB0205
C/MS Tune, BNA	DF0203
alibration Check, VOA	VS0205
alibration 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
Acenapthene	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
[illegible]anthene	5.00	U	1	ug/l	2/ 3/98	23:32	Cornelius	8270
Fluorene	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

SPECIALIZED ASSAYS, INC.

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Nashville, TN 37204-0566
Phone 1-615-726-0177

ANALYTICAL REPORT

Laboratory Number: 98-A010070
Sample ID: 34777 106T-002-SWW-QA

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
Acenapthylene	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
BNA's	990. ml	1.0 ml	2/ 3/98	A.BuFalino	3510

Surrogate	% Recovery	Target Range
VOA Surrogate, 1,2-Dichloroethane, d4	94.9	70. - 131.
VOA Surrogate, Toluene d8	103.	83. - 115.
VOA Surrogate, 4-Bromofluorobenzene	93.9	73. - 119.
VOA 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

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: 34778 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

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rganics Reference Data

VOA Blank	VB0211
[illegible] Tune, VOA	BFB0211
Calibration Check, VOA	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
[illegible]oromethane	2.0	U	1	ug/l	2/ 5/98	21:05	J. Haley	8260B
[illegible]hlorotoluene	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
[illegible]bromomethane	2.0	U	1	ug/l	2/ 5/98	21:05	J. Haley	8260B

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-A010071
Sample ID: 34778 106-SWW-QA-TB

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
1,3-Dichloropropene	2.0	U	1	ug/l	2/ 5/98	21:05	J. Haley	8260B
ans-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	10.0	U	1	ug/l	2/ 5/98	21:05	J. Haley	8260B
2-Hexanone	2.0	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	10.0	U	1	ug/l	2/ 5/98	21:05	J. Haley	8260B
4-Methyl-2-pentanone	2.0	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
yl chloride	2.0	U	1	ug/l	2/ 5/98	21:05	J. Haley	8260B
enes	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

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-A010071
Sample ID: 34778 106-SWW-QA-TB

Surrogate	% Recovery	Target Range
VOA Surrogate, 1,2-Dichloroethane, d4	99.2	70. - 131.
VOA Surrogate, Toluene d8	99.4	83. - 115.
VOA Surrogate, 4-Bromofluorobenzene	96.7	73. - 119.
VOA 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

SPECIALIZED ASSAYS, INC.

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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: 34779 HEAP#5-ES001-QA HUNTER ARMY AIRFIELD

Lab Number: 98-A010072

Sampler: BOBBI THORN

Date Collected: 1/29/98

Date Received: 1/31/98

Time Collected:

Time Received: 8:30

Sample type: Soil

---

ganics Reference Data

VOA Blank	VB0203
(Blank	203815BB
MS 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
Acenapthene	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
Fyrene	1830	U	10	ug/kg	2/ 5/98	18:51	M. Goodrich	8270

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Phone 1-615-726-0177

ANALYTICAL REPORT

Laboratory Number: 98-A010072
Sample ID: 34779 HEAP#5-ES001-QA

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
Acenapthylene	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
F ction, 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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Phone 1-615-726-0177

ANALYTICAL REPORT

Laboratory Number: 98-A010072
Sample ID: 34779 HEAP#5-ES001-QA

Sample Extraction Data

Parameter	Wt/Vol Extracted	Extract Vol	Date	Analyst	Method
BNA's	30.0 gm	1.0 ml	2/ 3/98	A.DuFalino	3550

Surrogate	% Recovery	Target Range
VOA Surrogate, 1,2-Dichloroethane, d4	101.	62. - 147.
VOA Surrogate, Toluene d8	104.	84. - 117.
VOA Surrogate, 4-Bromofluorobenzene	86.7	64. - 126.
VOA Surrogate, Dibromofluoromethane	92.8	77. - 118.

Report Approved By: Michael A. 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-A010073

Sample I.D.: METHOD BLANK Lab Project: 90627

Project: 303736 CALL#0672 Date Received: 1/31/98

****

* Organics Spike/Duplicate Results **

ompound	%Recovery	Target Range	Precision RPD	Target Range
,1-Dichloroethene	140.	61 - 145	2.0	0 - 14
richloroethene	115.	71 - 120	11.0	0 - 14
enzene	119.	76 - 127	10.0	0 - 11
e	120.	76 - 125	10.0	0 - 13
obenzene	105.	75 - 130	1.0	0 - 13
henol	77.	12 - 116	4.6	0 - 42
-Chlorophenol	84.	48 - 121	3.9	0 - 40
,4-Dichlorobenzene	79.	23 - 116	0.4	0 - 28
-Nitroso-di-n-propylamine	107.	38 - 148	4.8	0 - 38
,2,4-Trichlorobenzene	89.	27 - 121	7.0	0 - 28
-Chloro-3-methylphenol	83.	50 - 124	2.1	0 - 42
cenaphthene	85.	49 - 119	0.8	0 - 31
-Nitrophenol	76.	24 - 127	2.2	0 - 50
,4-Dinitrotoluene	72.	46 - 147	1.9	0 - 38
entachlorophenol	70.	26 - 137	2.6	0 - 50
yrene	86.	32 - 132	1.6	0 - 31

* Volatile Organics Method Blank Results ***

ompound	Result	Flag	Units	Method
cetone	10.0	U	ug/l	8260B
enzene	2.0	U	ug/l	8260B
romobenzene	2.0	U	ug/l	8260B
romochloromethane	2.0	U	ug/l	8260B
romoform	2.0	U	ug/l	8260B
rommethane	2.0	U	ug/l	8260B
none	10.0	U	ug/l	8260B
-Butylbenzene	2.0	U	ug/l	8260B
ec-Butylbenzene	2.0	U	ug/l	8260B
-Butylbenzene	2.0	U	ug/l	8260B
arbon disulfide	2.0	U	ug/l	8260B
arbon 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-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
p-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.

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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

****

* Volatile Organics Method Blank Results ***

ompound	Result	Flag	Units	Method
,1,1,2-Tetrachloroethane	2.0	U	ug/l	8260B
,1,2,2-Tetrachloroethane	2.0	U	ug/l	8260B
etrachloroethene	2.0	U	ug/l	8260B
oluene	2.0	U	ug/l	8260B
,2,3-Trichlorobenzene	2.0	U	ug/l	8260B
Trichlorobenzene	2.0	U	ug/l	8260B
,1-Trichloroethane	2.0	U	ug/l	8260B
,1,2-Trichloroethane	2.0	U	ug/l	8260B
richloroethene	2.0	U	ug/l	8260B
,2,3-Trichloropropane	2.0	U	ug/l	8260B
,2,4-Trimethylbenzene	2.0	U	ug/l	8260B
,3,5-Trimethylbenzene	2.0	U	ug/l	8260B
inyl chloride	2.0	U	ug/l	8260B
ylenes	2.0	U	ug/l	8260B
romodichloromethane	2.0	U	ug/l	8260B
richlorofluoromethane	2.0	U	ug/l	8260B

* Semi-Volatile Organics Method Blank Results ***

ompound	Result	Flag	Units	Method
laphthalene	5.0	U	ug/l	8270
cenapthene	5.0	U	ug/l	8270
nthracene	5.0	U	ug/l	8270
luoranthene	5.0	U	ug/l	8270
luorene	5.0	U	ug/l	8270
yrene	5.0	U	ug/l	8270
enzo(a)anthracene	5.0	U	ug/l	8270
enzo(a)pyrene	5.0	U	ug/l	8270
(b)fluoranthene	5.0	U	ug/l	8270
,k)fluoranthene	5.0	U	ug/l	8270
hrysene	5.0	U	ug/l	8270
ibenzo(a,h)anthracene	5.0	U	ug/l	8270
ndeno(1,2,3-cd)pyrene	5.0	U	ug/l	8270
cenapthylene	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

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*** Semi-Volatile Organics Method Blank Results ***

Compound	Result	Flag	Units	Method
Phenanthrene	5.0	U	ug/l	8270
2-Methylnapthalene	5.0	U	ug/l	8270
1-Methylnapthalene	5.0	U	ug/l	8270

Michael A. Burns

SPECIALIZED ASSAYS, INC.

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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

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* UST Spike/Duplicate Results **

Compound	%Recovery	Target Range	Precision RPD	Target Range
TRPH, 418.1	99.	75 - 125	0.0	0 - 25.0

** Organics Spike/Duplicate Results **

Compound	%Recovery	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
m,p-Xylene	2.0	U	ug/kg	8260B

SPECIALIZED ASSAYS, INC.

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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

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** Volatile Organics Method Blank Results ***

Compound	Result	Flag	Units	Method

** Semi-Volatile Organics Method Blank Results ***

Compound	Result	Flag	Units	Method
N alene	165.	U	ug/kg	8270
A apthene	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
Acenapthylene	165.	U	ug/kg	8270
Benzo(g,h,i)perylene	165.	U	ug/kg	8270
Phenanthrene	165.	U	ug/kg	8270
1-Methylnapthalene	165.	U	ug/kg	8270
2-Methylnapthalene	165.	U	ug/kg	8270

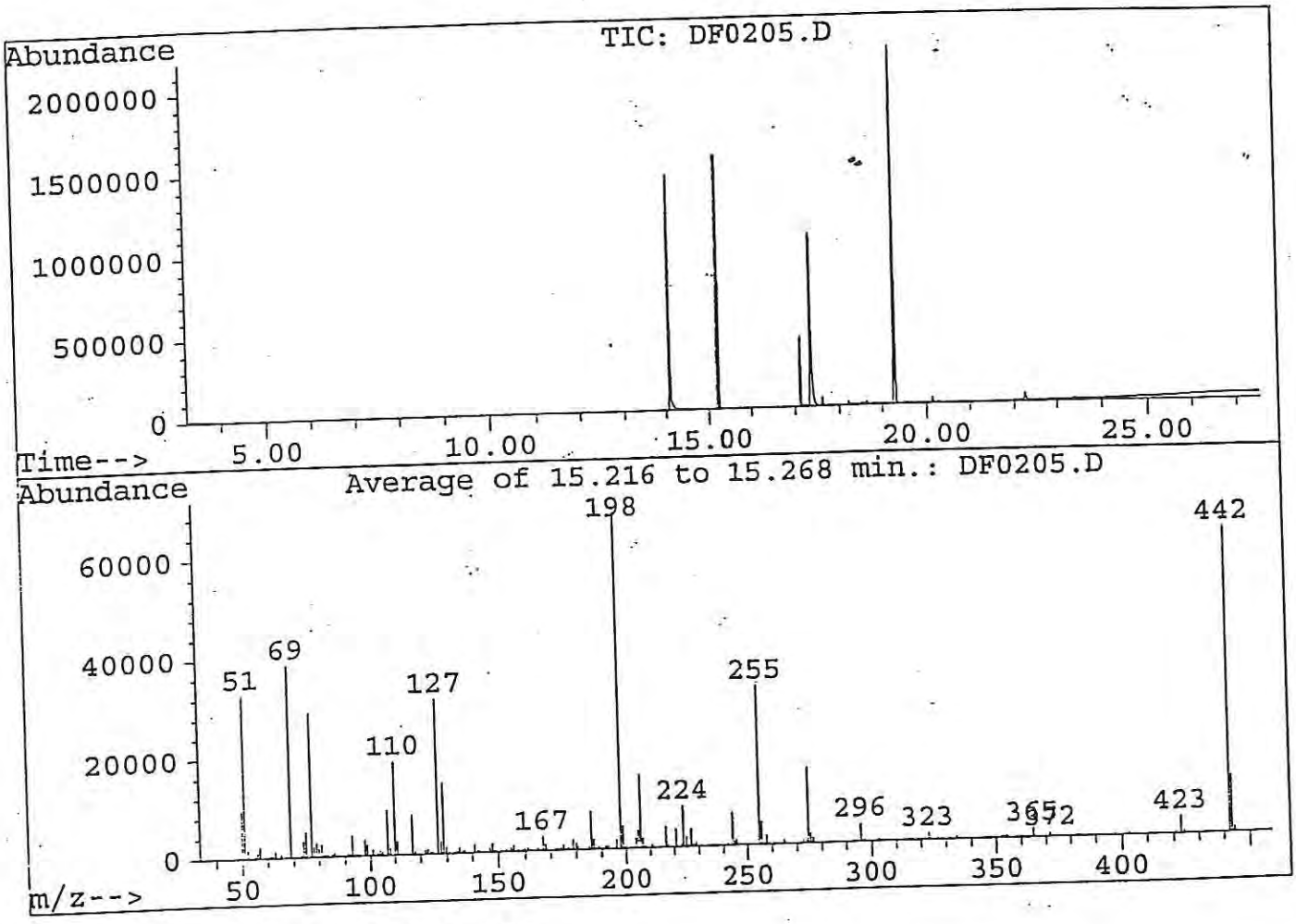
Michael A. Russell

DFTPP

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 - I
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
		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

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 SPCC's out = 0 CCC's out = 0

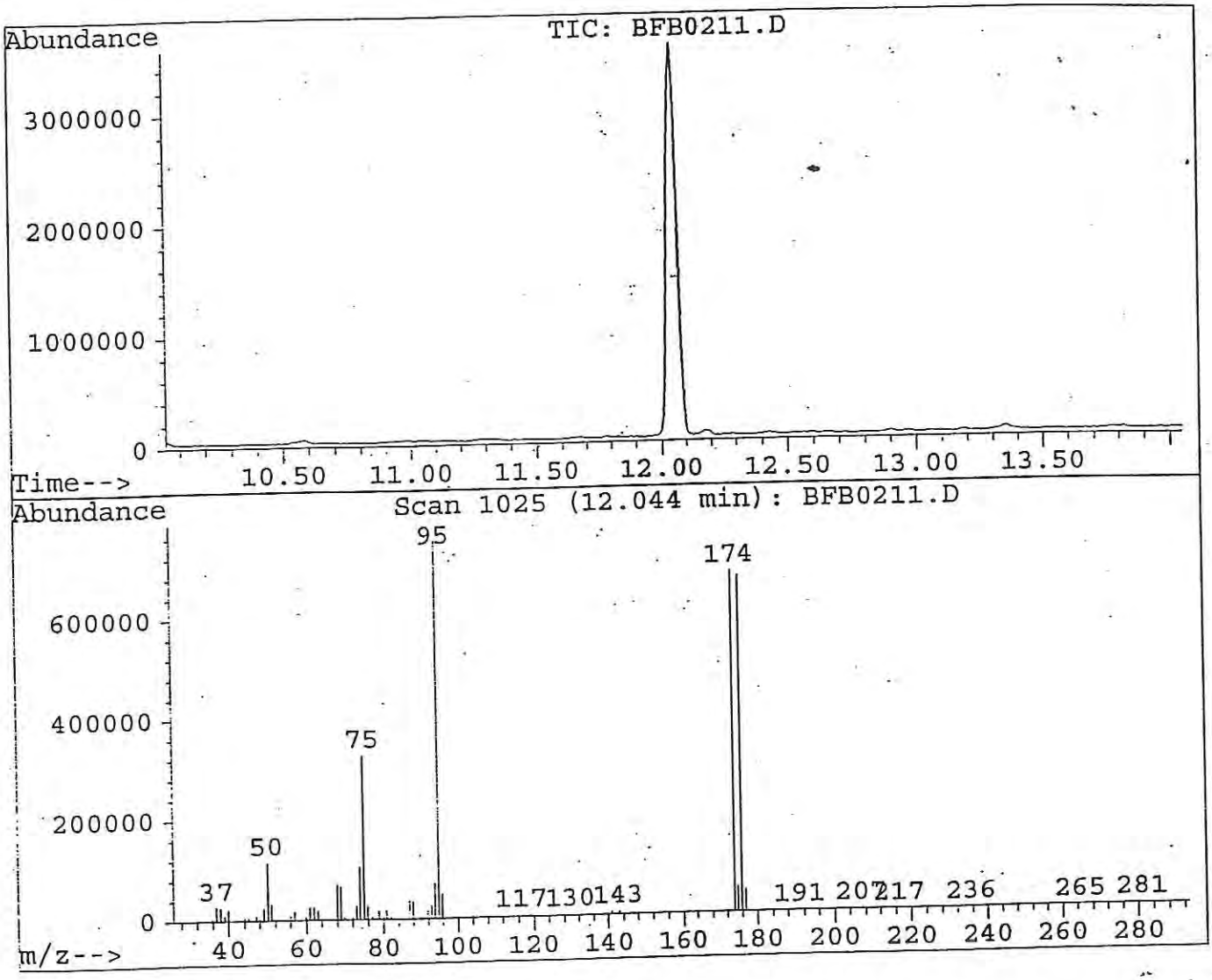
0500128.D 8270.M Fri Feb 06 09:11:36 1998

BFB

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							%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							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

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

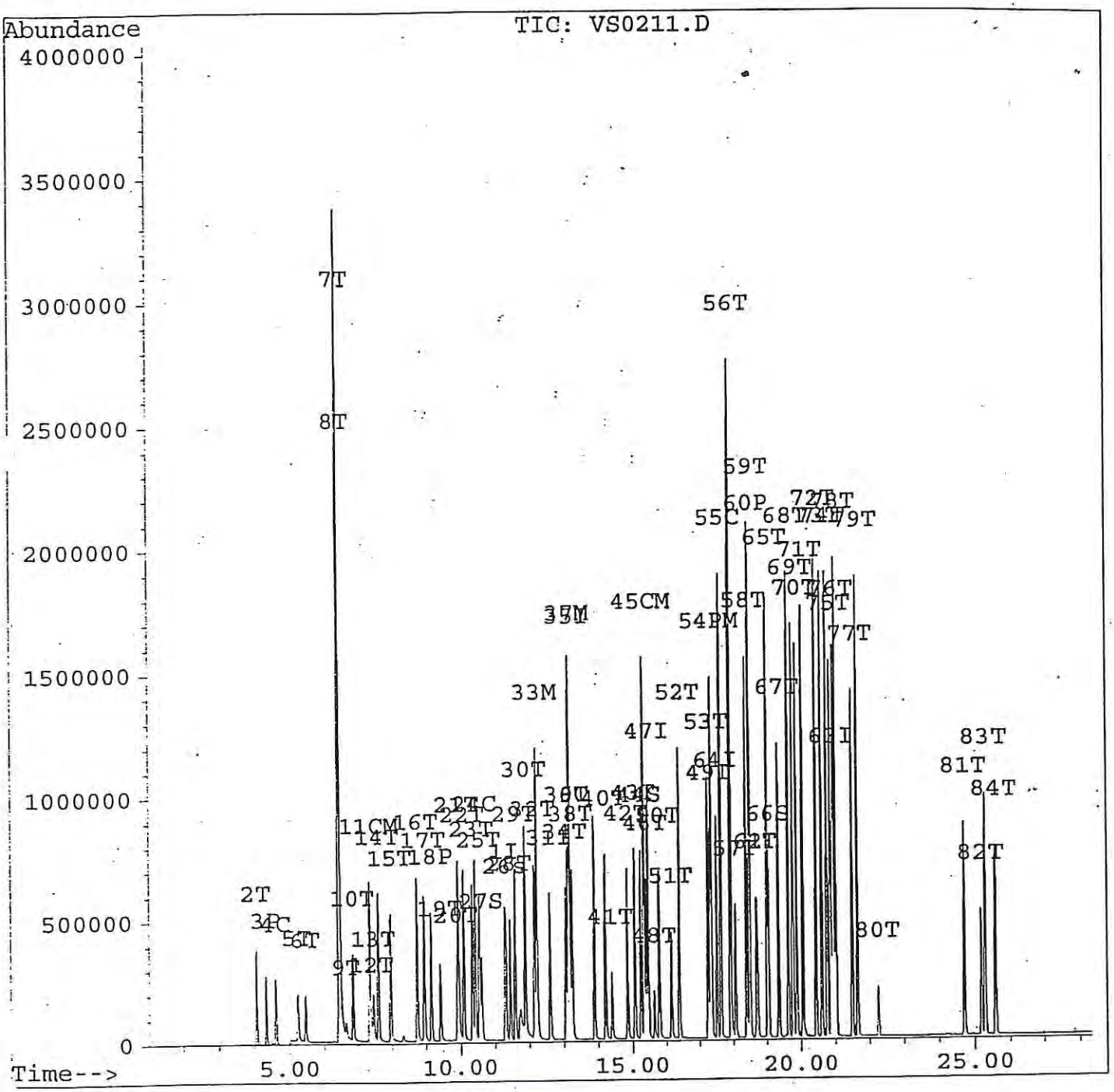
Compound	R.T.	QIon	Response	Conc Unit	Qvalue
36) 1,2-Dichloropropane	13.12	63	375607	58.35 ug/L #	84
37) Trichloroethene	13.18	130	494819	64.13 ug/L	91
38) Bromodichloromethane	13.24	83	560119	56.50 ug/L	100
39) 2-Chloroethyl vinyl ether	13.12	63	375607	583.51 ug/L #	57
40) cis-1,3-Dichloropropene	14.20	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

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



Data File : C:\HPCHEM\1\DATA\VS0211.D
Acq On : 11 Feb 98 9:37 am
Sample : con cal
Misc :

Vial: 25
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ethod : 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
	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

46	T	1,3-Dichloropropane	2.402	2.810	-17.0	127	0.02
47	I	Ethyl Methacrylate	2.811	3.467	-23.3	127	0.02
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
	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

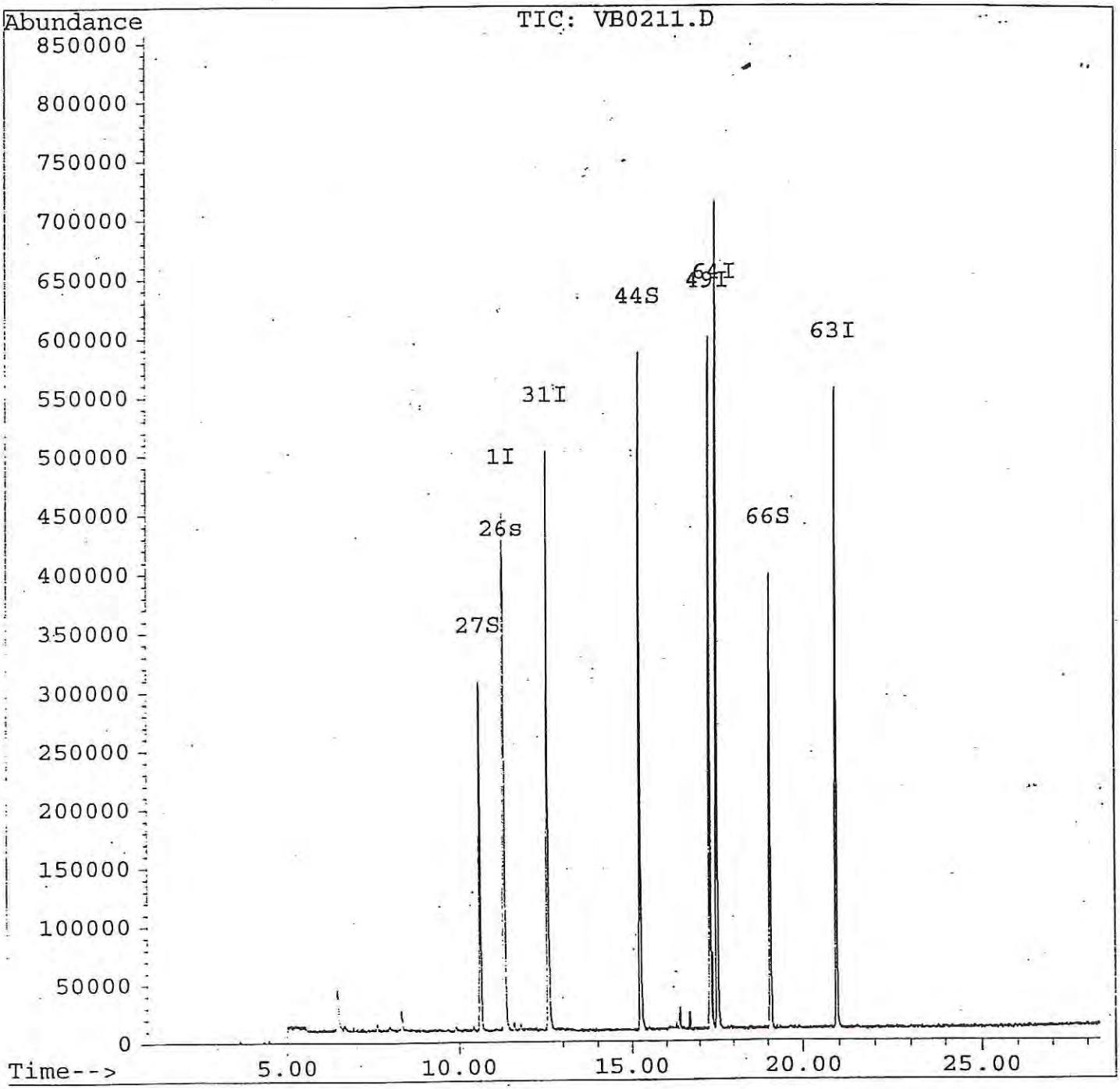
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	11.29	99	194073	30.00	ug/L	0.02
31) 1,4-Difluorobenzene	12.58	63	102821	30.00	ug/L	0.02
49) Chlorobenzene-d5	17.32	119	175288	30.00	ug/L	0.02
63) 1,4-Dichlorobenzene-d4	20.94	152	242195	30.00	ug/L	0.03
64) Ethylbenzene-d10	17.53	98	804507	30.00	ug/L	0.02
System Monitoring Compounds						%Recovery
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

(#) = qualifier out of range (m) = manual integration

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

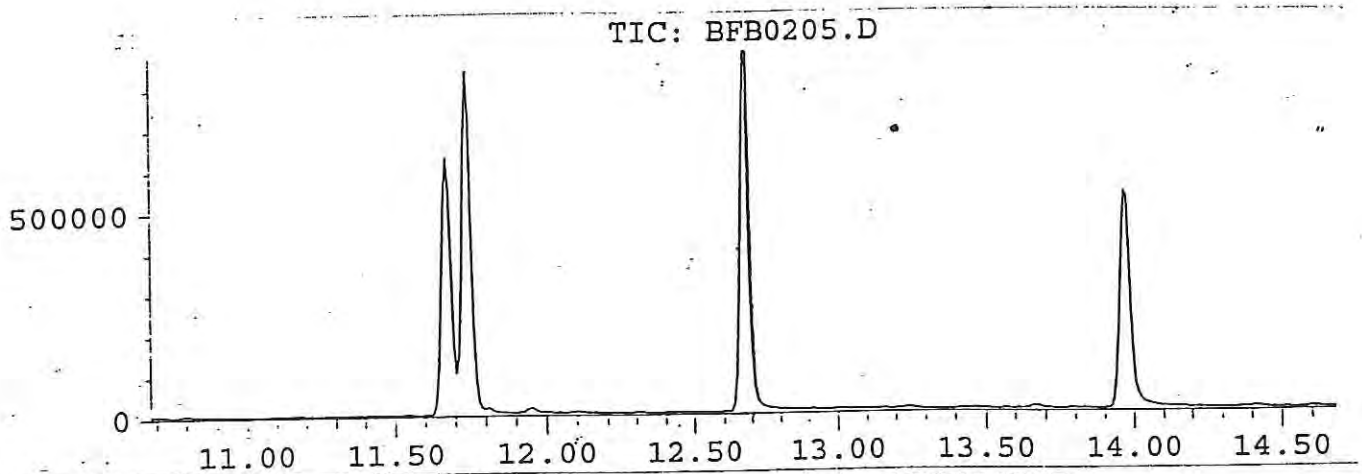


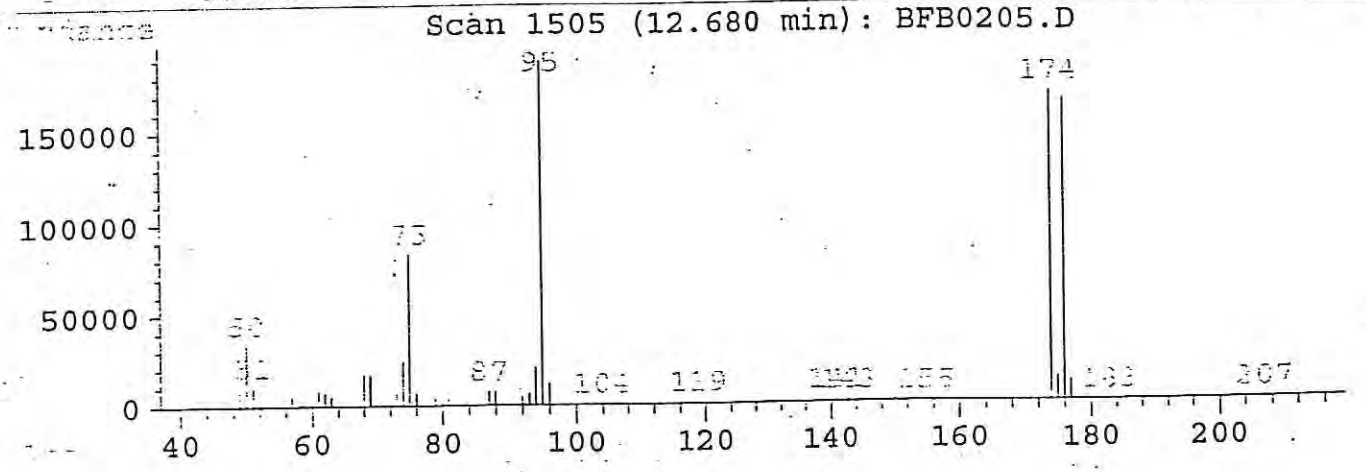
BFB

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 - I
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

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\VS0205.D
Acq On : 5 Feb 98 5:58 pm
Sample : CONCAL HP-8
isc :

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

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 SPCC's out = 0 CCC's out = 0

V0500204.D 8260.M Fri Feb 06 12:01:43 1998

Quantitation Report

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						%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						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

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

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
3) Hexachlorobutadiene	27.44	225	275730	49.40 ug/L #	1
84) 1,2,3-Trichlorobenzene	27.78	180	419067	46.02 ug/L	100

(#) = qualifier out of range (m) = manual integration

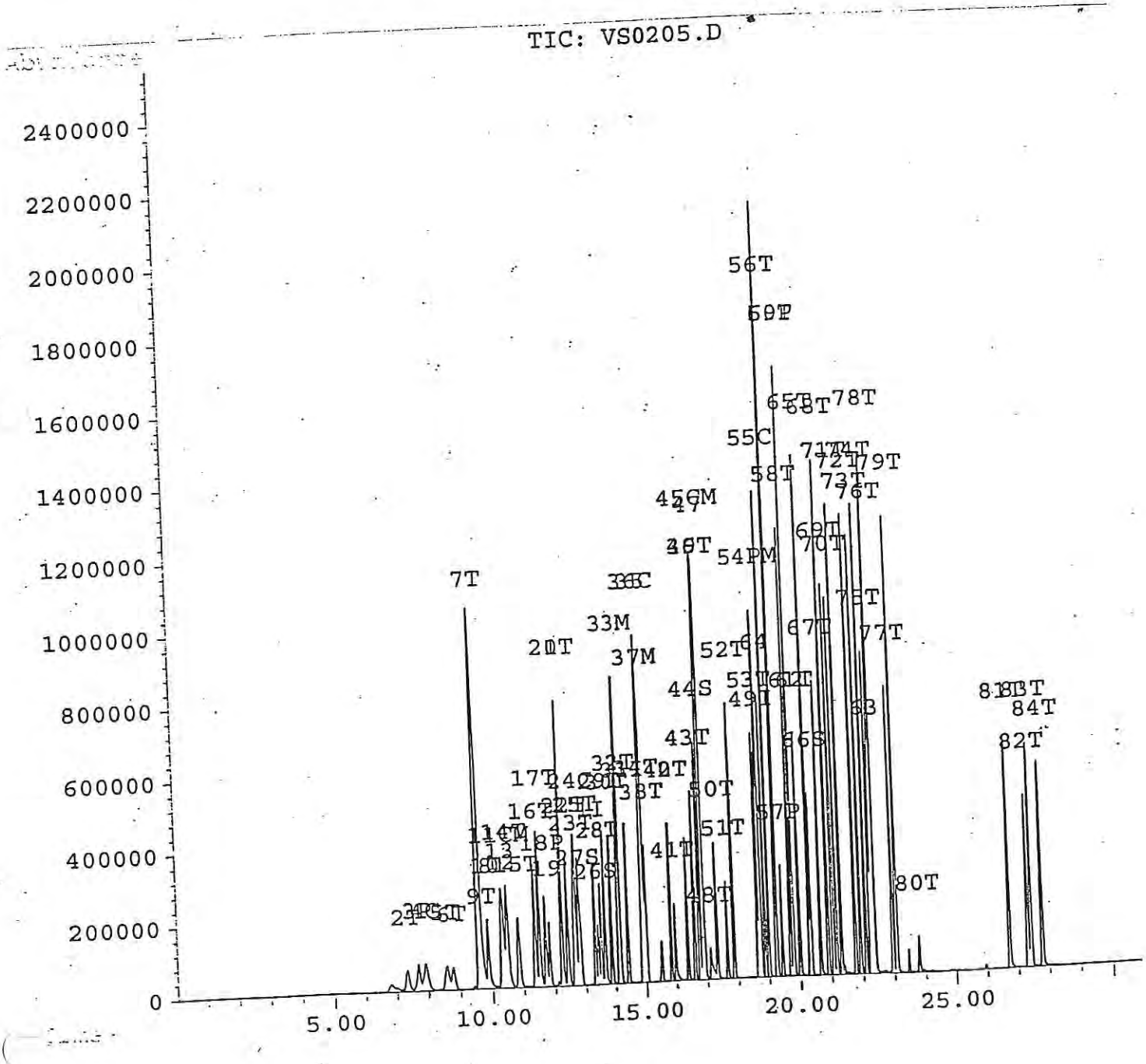
Quantitation Report

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

TIC: VS0205.D



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

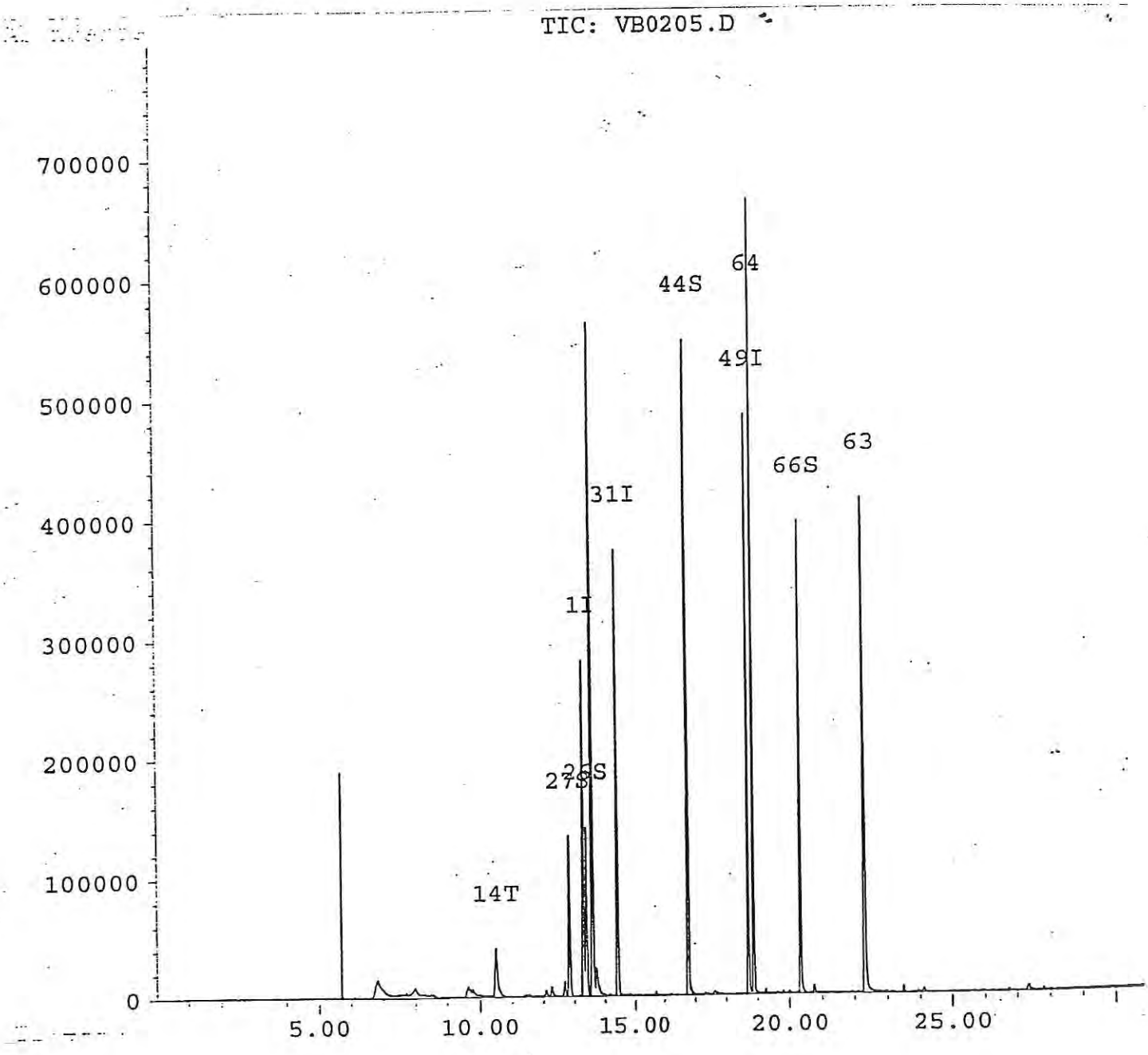
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	13.31	168	356436	30.00	ug/L	-0.02
31) 1,4-Difluorobenzene	14.43	114	486435	30.00	ug/L	-0.01
49) Chlorobenzene-d5	18.71	119	128548	30.00	ug/L	0.00
63) 1,4-Dichlorobenzene-d4	22.30	152	211831	30.00	ug/L	-0.01
64) Ethylbenzene-d10	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

(#) = qualifier out of range (m) = manual integration

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



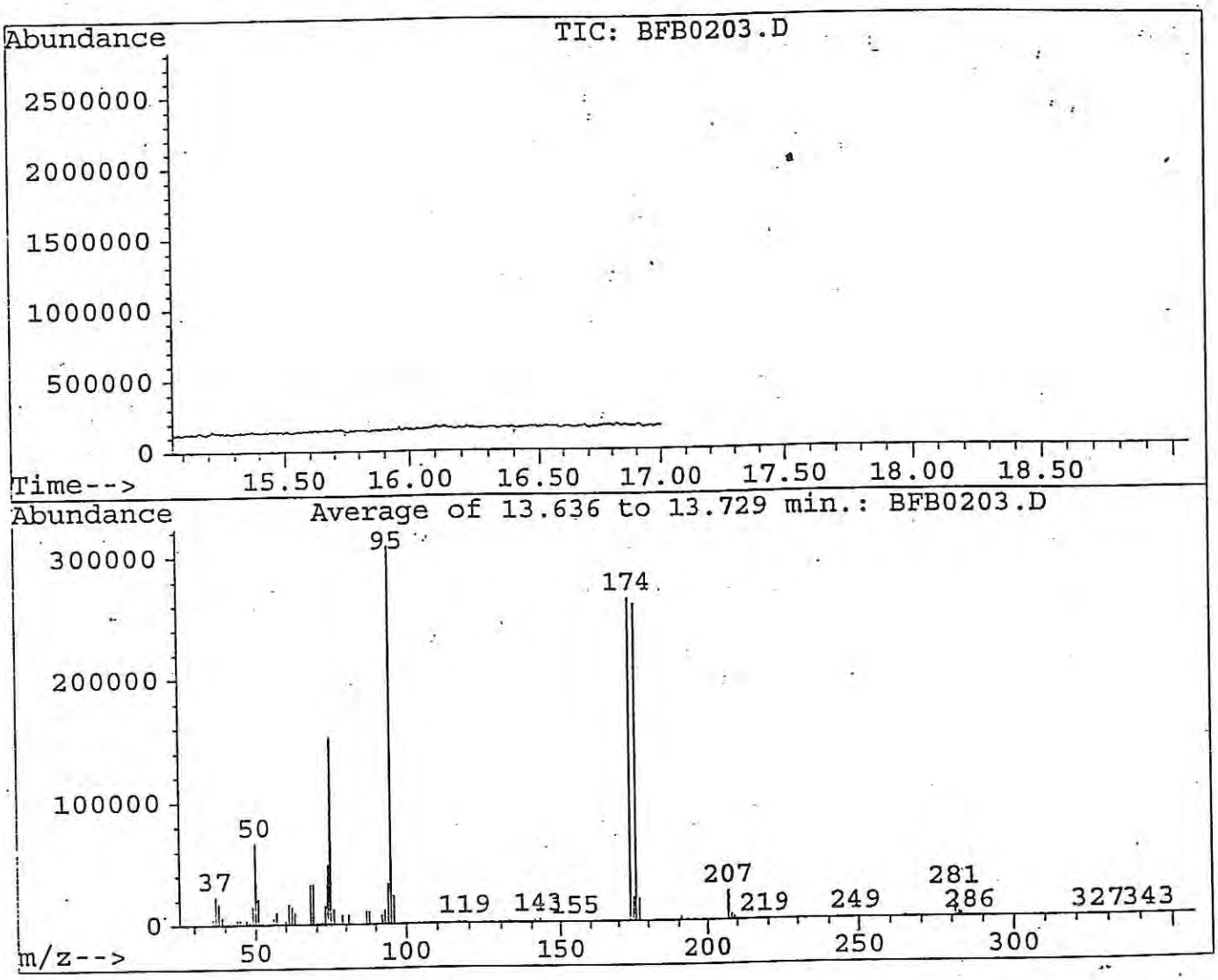
BFB

9201

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
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

Evaluate Continuing Calibration Report

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
			4.692		131	0.00

46	T	[illegible]loropropane	2.399	2.216	7.6	119	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
[illegible]	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
[illegible]	T	1,2,4-trimethylbenzene	1.103	0.973	11.8	115	0.00
[illegible]4	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 SPCC's out = 0 CCC's out = 0

S0500128.D 8260S.M Wed Feb 04 09:08:29 1998 HP-1

Quantitation Report

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					%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					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

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

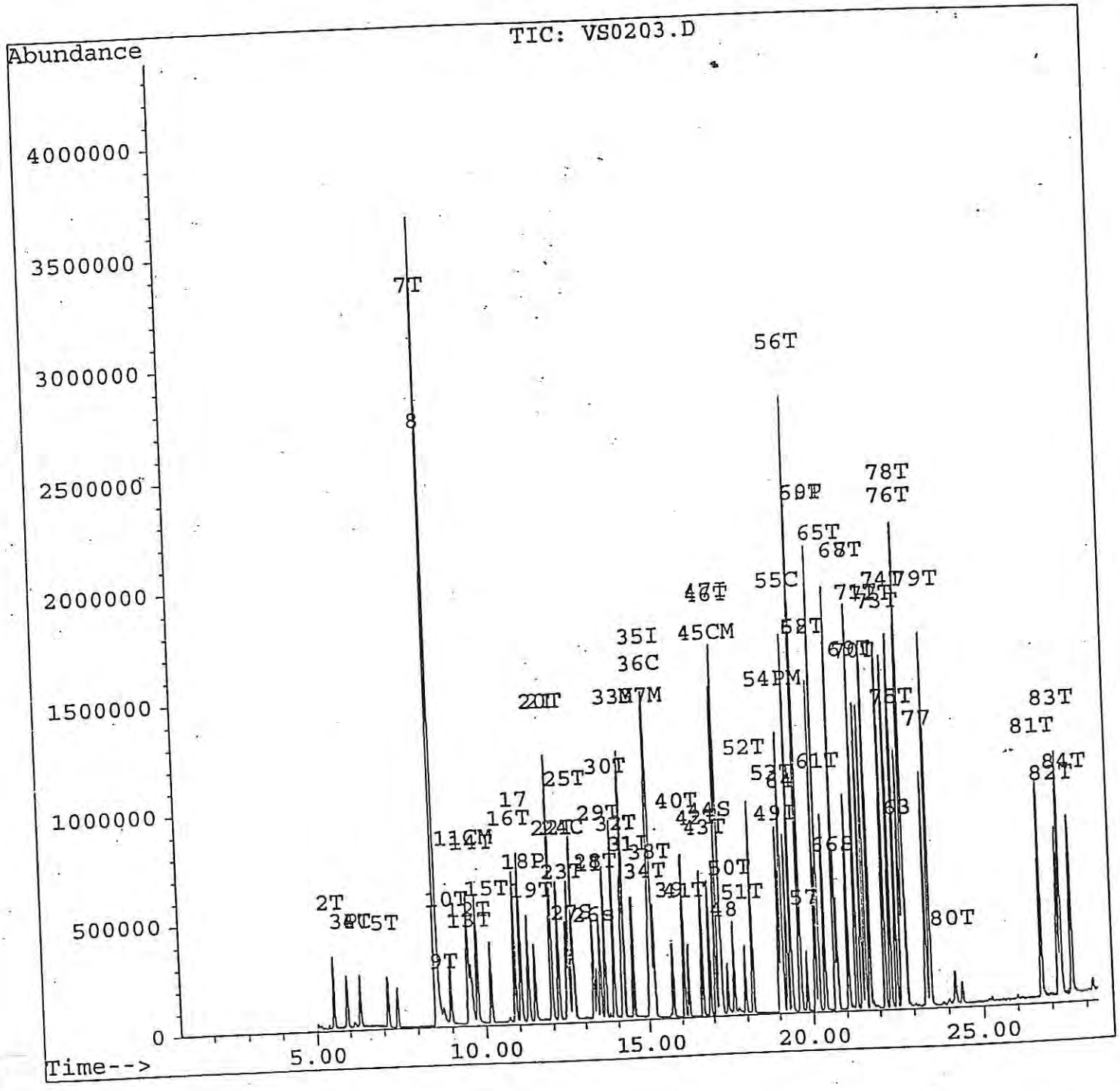
Compound	R.T.	QIon	Response	Conc Unit	Qvalue
36) 1,2-Dichloropropane	15.05	63	379501	53.07 ug/L #	87
37) Trichloroethene	15.11	130	460034	48.00 ug/L	93
38) Bromodichloromethane	15.18	83	463180	47.11 ug/L	100
39) 2-Chloroethyl vinyl ether	15.74	63	198480	446.59 ug/L #	52
40) cis-1,3-Dichloropropene	16.07	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

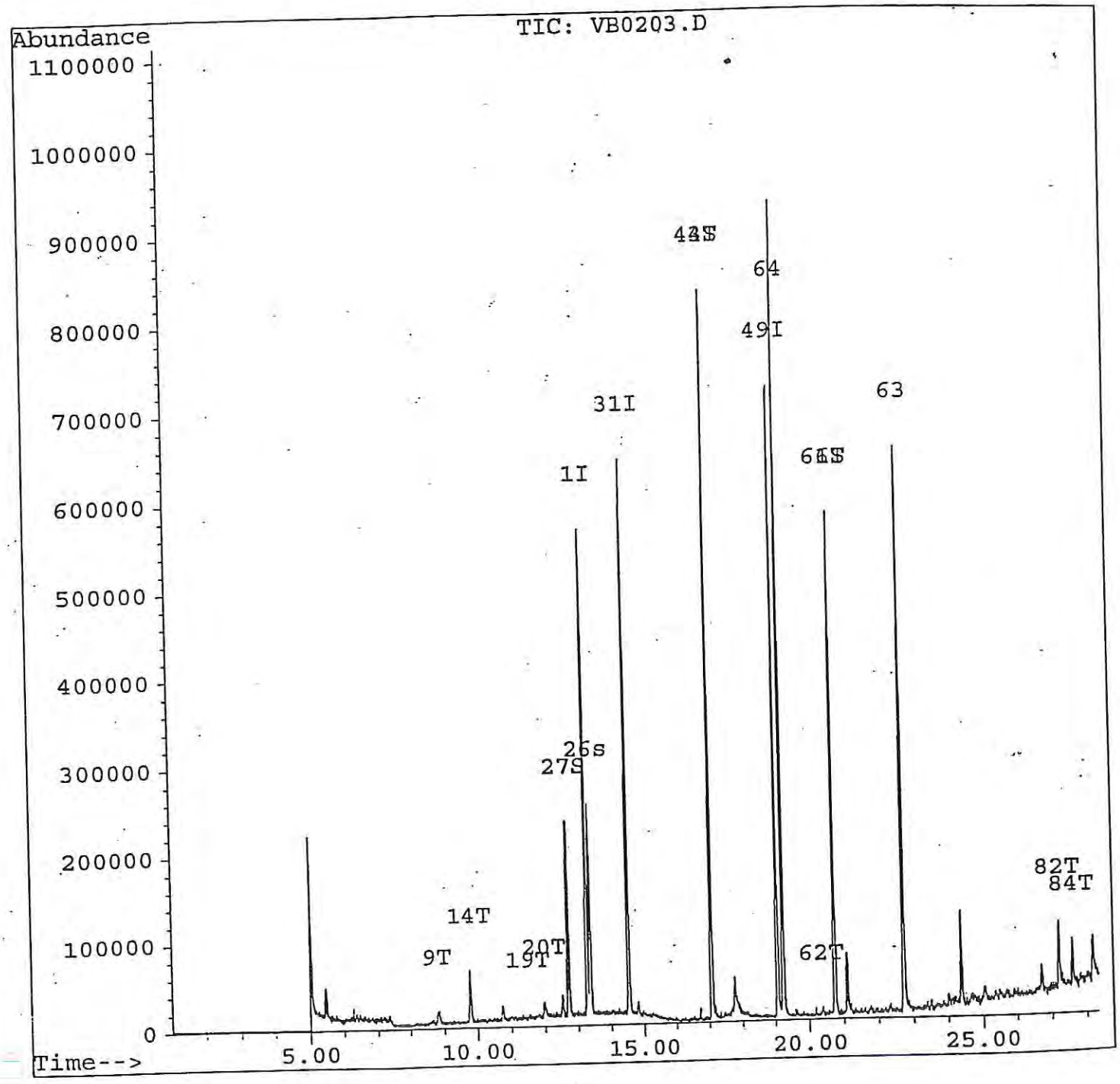
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	13.27	99	294119	30.00	ug/L	0.00
31) 1,4-Difluorobenzene	14.53	63	163338	30.00	ug/L	0.00
49) Chlorobenzene-d5	19.07	119	202380	30.00	ug/L	0.00
63) 1,4-Dichlorobenzene-d4	22.73	150	506356	30.00	ug/L	0.00
64) Ethylbenzene-d10	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

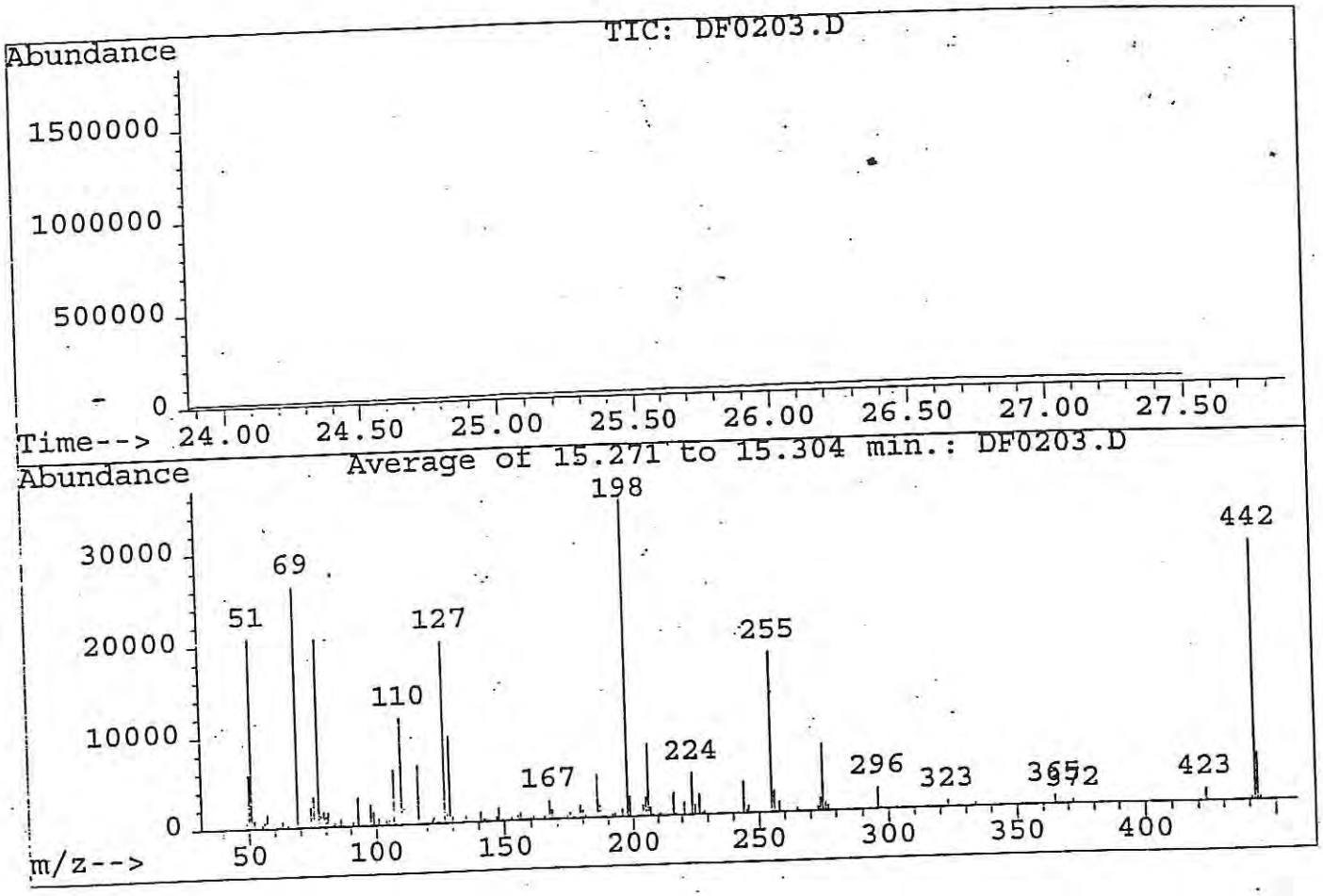


DFTPP

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 - Ir
Multiplr: 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

ethod : 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
	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
I	Acenaphthene-d10	1.000	1.000	0.0	73	0.00
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
		0.535	0.445	16.8	62	0.00

46		2,6-Dinitrotoluene	0.327	0.300	8.3	66	0.00
47		3-Nitroaniline	0.535	0.445	16.8	62	0.00
48	MC	Acenaphthene	1.113	0.922	17.2	60	0.00
49	P	2,4-dinitrophenol	0.155	0.171	-10.7	79	0.00
50		Dibenzofuran	1.514	1.433	5.4	70	0.00
1	M	2,4-Dinitrotoluene	0.423	0.368	13.1	64	0.00
2	MP	4-Nitrophenol	0.414	0.425	-2.7	72	0.00
53		Fluorene	1.199	1.076	10.2	66	0.00
54		4-Chlorophenyl phenylether	0.524	0.441	15.8	63	0.00
55		Diethylphthalate	1.516	1.334	12.0	65	0.00
56		4-Nitroaniline	0.412	0.353	14.4	62	0.00
57		1,2-Diphenylhydrazine	2.108	1.933	8.3	65	0.00
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		Benzidine	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
4		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 SPCC's out = 0 CCC's out = 0

0500105.D 8270.M Wed Feb 04 12:18:39 1998 HP-4

U.S. Army Corps of Engineers Work Or[illegible] # _____ Job # 5[illegible] Chain of Custody Rec

(EP 1110-1-263)

Proj. No.	Project Name: Hunter Army Airfield															TAT: 14day
	Sampler: (Signature) 90627															Remarks:
Date	Time	Pres.	Gr	Cm	Site Code/Sample Number	No. of Conts.	BTEX (M8260)	PAH (M8270)	M8260	TCLP Metals	TRPH				SAD NO.	MATRIX
11/29/98					106T-002-SWW-QA	3	✓	✓		98-A010070					34777	water
					106-SWW-QA-TB	2			✓	98-A010071					34778	↓
↓					HEAP#5-ES001-QA	2	✓	✓		✓	✓				34779	soil
														98-A010072		

Sampler Relinquisher by: Becky A.	Date/Time 11/30/98	Received by: (Sig.)	Date/Time	Samples 98-A010073
Relinquished by: (Sig.)	Date/Time	Received by: (Sig.)	Date/Time	98-A010074
Relinquished by: (Sig.)	Date/Time	Received for Laboratory by: (Sig.) SAS 1/31/98	Date/Time 8:30	Remarks at time of receipt.
Custody Seal No.		Lab Case No.		

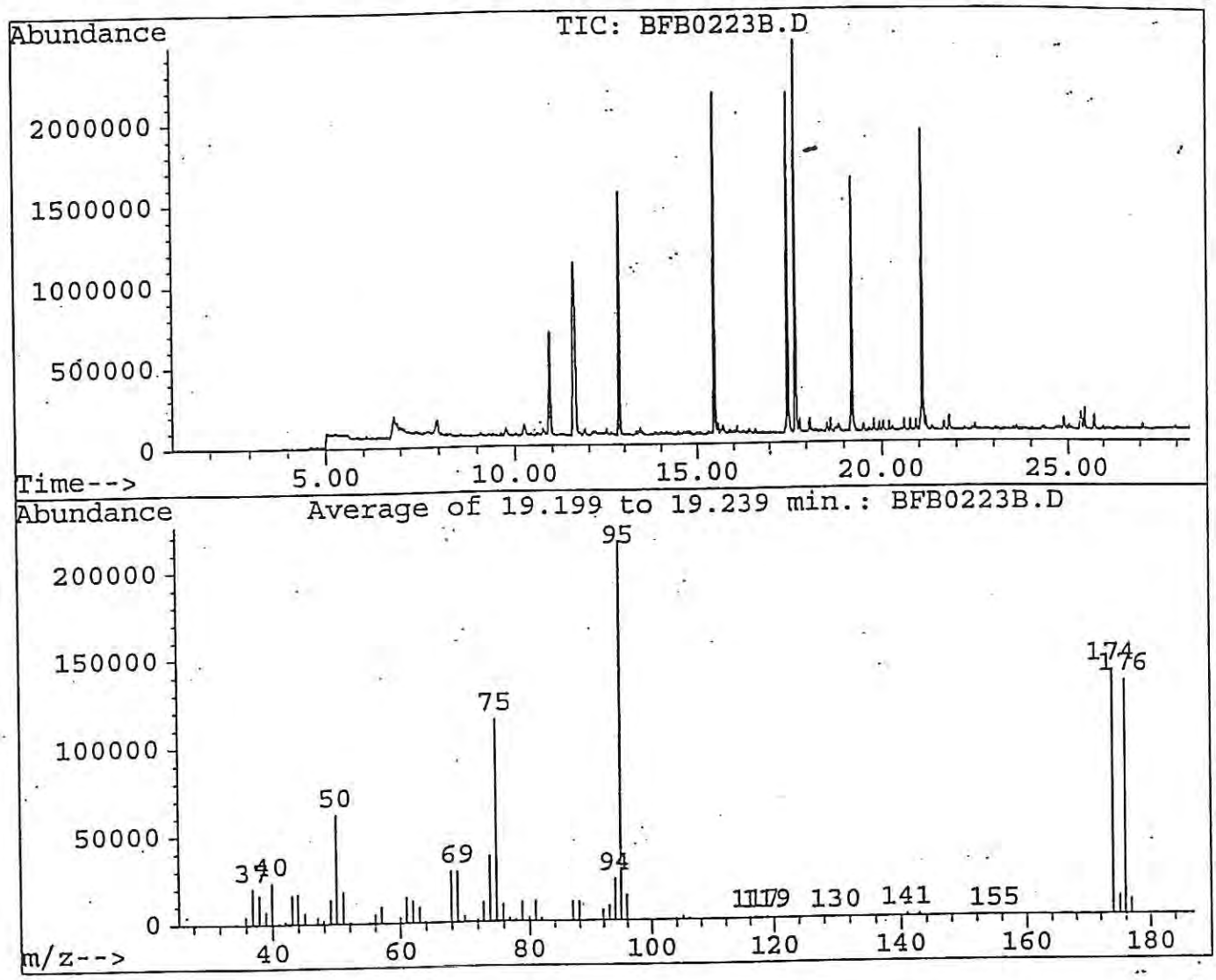
ENG Form 5021-R, Oct 90 Proponent: CEMP

BFB

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

Vial: 19
Operator: HP-10
Inst : 5972 - In
Multiplr: 1.00



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

BFB0223B.D 8260.M Tue Feb 24 10:37:25 1998

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

(#) = Out of Range

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

(#) = Out of Range

Evaluate Cons...

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%

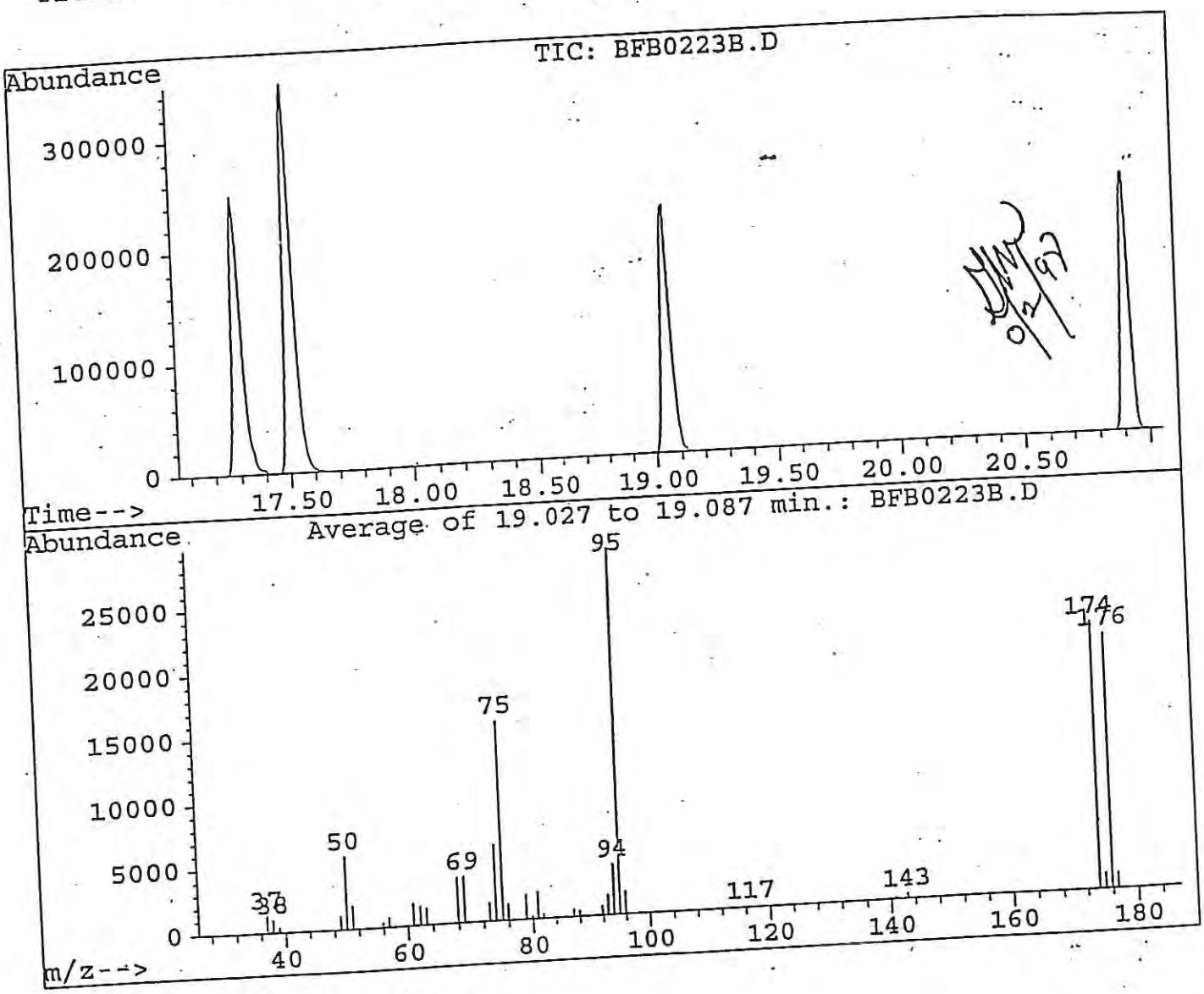
	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
81 T	1,2,4-Trichlorobenzene	0.357	0.344	3.8	90	0.00
82 T	Naphthalene	0.888	0.962	-8.3	92	0.00
83 T	Hexachlorobutadiene	0.168	0.155	7.9	81	0.00
84 T	1,2,3-Trichlorobenzene	0.346	0.337	2.7	95	0.00

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

Mar 02 12:17:59 1998

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	

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	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	0.361		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

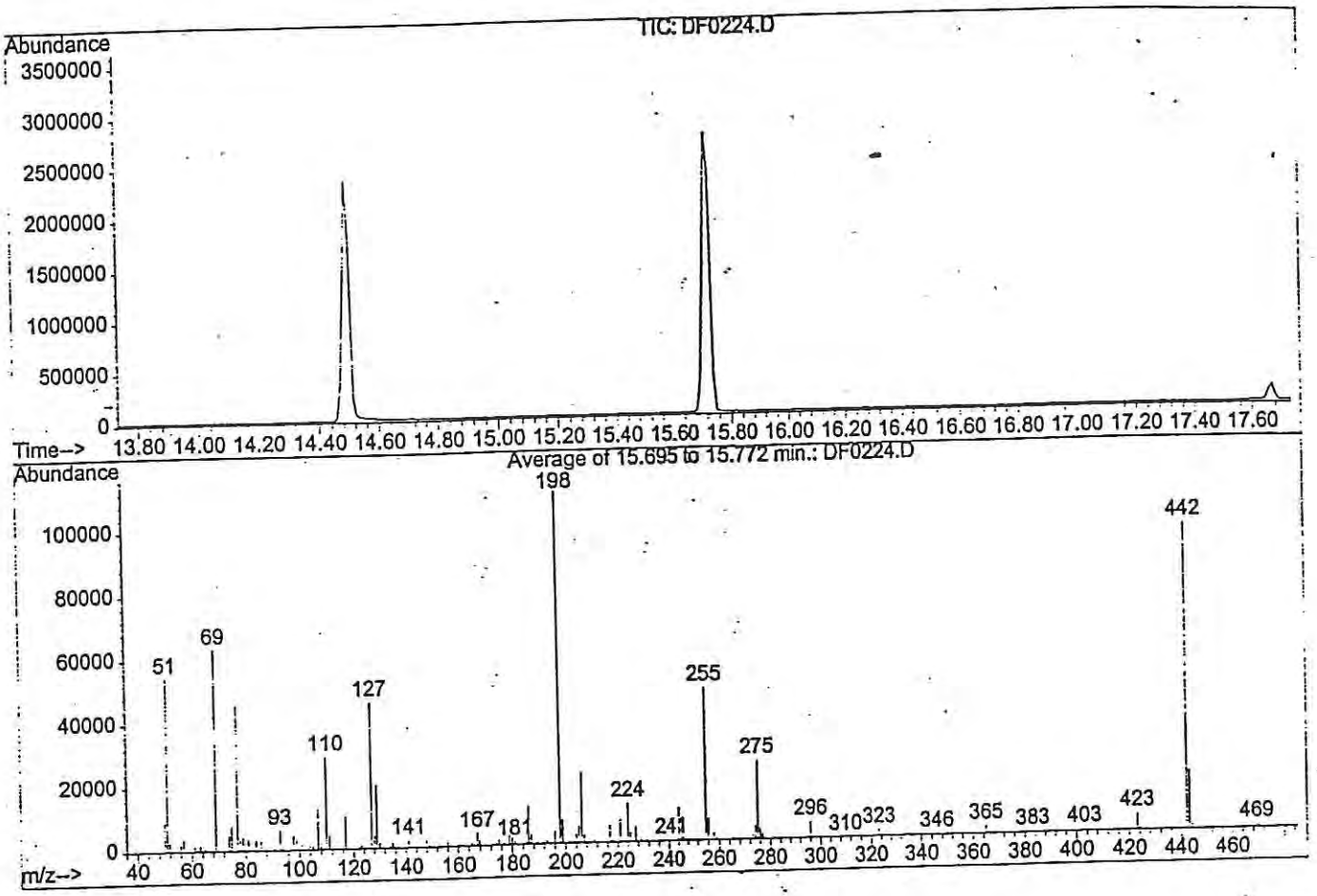
GC Column: DB-VRX ID: 0.25 (mm)

COMPOUND	RRF	RRF4	MIN RRF	% D	MAX % D
Toluene-d8	4.958	3.543		28.5	
Bromofluorobenzene	0.337	0.237		29.8	

All other compounds must meet a minimum RRF of 0.010.

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.

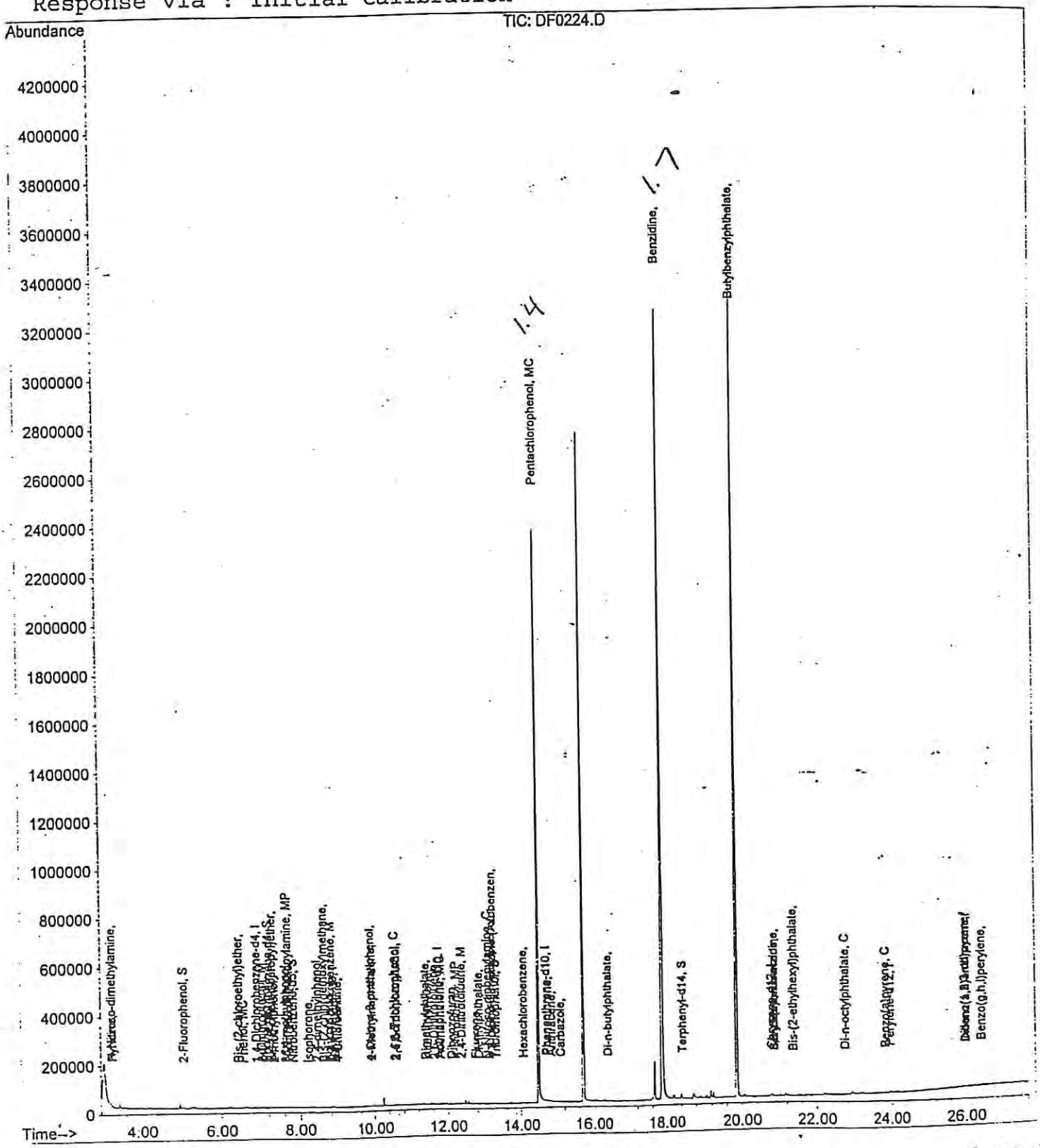
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	49.2	54506	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	57.2	63389	PASS
70	69	0.00	2	1.1	672	PASS
127	198	40	60	41.6	46062	PASS
197	198	0.00	1	0.4	398	PASS
198	198	100	100	100.0	110798	PASS
199	198	5	9	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



Data File : C:\HPCHEM\1\DATA\CC0224.D
Acq On : 24 Feb 98 4:38 pm
Sample : 50 ppm con cal
Misc :
Integration Params: rteint.p

Vial: 3
Operator: HP-13
Inst : hp-13
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8270.M (RTE Integrator)
Title : SEMIVOLATILES
Last Update : Thu Feb 19 11:10:16 1998
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	89	-0.06
2		Pyridine	0.783	0.714	8.8	69	-0.05
3		N-Nitroso-dimethylamine	0.560	0.556	0.7	89	-0.04
4	S	2-Fluorophenol	0.937	0.902	3.7	89	-0.04
5		Aniline	0.955	1.036	-8.5	105	-0.16
6		Bis-(2-chloroethyl)ether	0.905	0.855	5.5	87	-0.06
7	S	Phenol-d5	1.102	1.017	7.7	86	-0.04
8	MC	Phenol	1.236	1.199	3.0	97	-0.04
9	S	2-Chlorophenol-d4	0.798	0.765	4.1	89	-0.05
10	M	2-Chlorophenol	0.852	0.821	3.6	89	-0.06
11		1,3-Dichlorobenzene	0.867	0.787	9.2	85	-0.06
12	MC	1,4-Dichlorobenzene	0.929	0.890	4.2	89	-0.06
13	S	1,2-Dichlorobenzene-d4	0.946	0.868	8.2	89	-0.06
		1,2-Dichlorobenzene	0.818	0.890	-8.8	101	-0.35
15		Benzyl alcohol	0.719	0.592	17.7	78	-0.06
16		Bis-(2-chloroisopropyl)ethe	0.220	0.203	7.7	83	-0.06
17		2-methylphenol	0.830	0.797	4.0	89	-0.05
18		Hexachloroethane	0.361	0.324	10.2	87	-0.06
19	MP	N-Nitroso-di-n-propylamine	0.656	0.584	11.0	82	-0.08
20		3&4-methylphenol	1.034	0.899	13.1	83	-0.05
21	I	Naphthalene-d8	1.000	1.000	0.0	85	-0.06
22	S	Nitrobenzene-d5	0.428	0.424	0.9	85	-0.06
23		Nitrobenzene	0.417	0.404	3.1	81	-0.06
24		isophorone	0.825	0.782	5.2	80	-0.06
25	C	2-Nitrophenol	0.230	0.234	-1.7	87	-0.05
26		2,4-dimethylphenol	0.415	0.416	-0.2	86	-0.05
27		Bis-(2-chloroethoxy)methane	0.493	0.487	1.2	85	-0.06
28	C	2,4-Dichlorophenol	0.314	0.312	0.6	85	-0.05
29		Benzoic acid	0.265	0.200	24.5	56	-0.08
30	M	1,2,4-Trichlorobenzene	0.346	0.340	1.7	85	-0.06
31		Naphthalene	1.081	1.062	1.8	85	-0.06
32		4-Chloroaniline	0.475	0.488	-2.7	90	-0.06
33	C	hexachlorobutadiene	0.188	0.193	-2.7	88	-0.06
34		4-Chloro-3-methylphenol	0.340	0.334	1.8	83	-0.05
35		2-Methylnaphthalene	0.658	0.642	2.4	86	-0.06
36		1-Methylnaphthalene	0.667	0.657	1.5	88	-0.06
37	I	Acenaphthene-d10	1.000	1.000	0.0	84	-0.07
38	P	Hexachlorocyclopentadiene	0.224	0.258	-15.2	85	-0.06
39	C	2,4,6-Trichlorophenol	0.422	0.422	0.0	81	-0.05
40		2,4,5-Trichlorophenol	0.435	0.458	-5.3	86	-0.06
41	S	2-Fluorobiphenyl	1.279	1.300	-1.6	85	-0.06
		2-Chloronaphthalene	1.124	1.117	0.6	82	-0.06

45		Dimethylphthalate	1.338	1.349	-0.8	85	-0.07
46		2,6-Dinitrotoluene	0.341	0.339	0.6	78	-0.06
47		3-Nitroaniline	0.355	0.398	-12.1	87	-0.07
48	MC	Acenaphthene	1.094	1.100	-0.5	86	-0.07
49	P	2,4-Dinitrophenol	0.229	0.245	-7.0	81	-0.07
50		Dibenzofuran	1.614	1.610	0.2	83	-0.07
	M	2,4-Dinitrotoluene	0.459	0.455	0.9	78	-0.07
52	MP	4-Nitrophenol	0.307	0.300	2.3	79	-0.04
53		Fluorene	1.214	1.212	0.2	86	-0.08
54		4-Chlorophenylphenylether	0.622	0.638	-2.6	87	-0.07
55		Diethylphthalate	1.278	1.271	0.5	85	-0.07
56		4-Nitroaniline	0.394	0.398	-1.0	82	-0.07
57		1,2-Diphenylhydrazine (Azob	1.531	1.618	-5.7	86	-0.07
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 SPCC's out = 0 CCC's out = 0

0500214.D 8270.M Wed Feb 25 09:09:57 1998

SPECIALIZED ASSAYS, INC.

2960 Foster Creighton Dr.
P.O. Box 40566
Nashville, TN 37204-0566
Phone 1-615-726-0177

ANALYTICAL REPORT

IRECTOR U.S. ARMY CORPS ENG. 5394
ESAD LABORATORY
11 SOUTH COBB DRIVE
ARIETTA, GA 30060-3172

iample Location: 34919 HEAP #6-QA-TB
HUNTER army AIRFIELD

Lab Number: 98-A15002

)ate Collected: 2/12/98

Date Received: 2/14/98

'ime Collected:

Time Received: 9:00

Sampler: BOBBI THORN

Sample type: Water

anics Reference Data

A Blank	VB0216
/MS Tune, VOA	BFB0216
ation 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
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

2960 Foster Creighton Dr.
P.O. Box 40566
Nashville, TN 37204-0566
Phone 1-615-726-0177

ANALYTICAL REPORT

Laboratory Number: 98-A15002
Sample ID: 34919 HEAP #6-QA-TB

VOLATILE ORGANICS

nalyte	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
oluene	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
ylenes	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
VOA Surrogate, 1,2-Dichloroethane, d4	112.	70. - 131.
VOA Surrogate, Toluene d8	113.	83. - 115.
VOA Surrogate, 4-Bromofluorobenzene	106.	73. - 119.
VOA 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

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-A15003

Sample I.D.: METHOD BLANK Lab Project: 91824

Project: 444941 CALL#0708 Date Received: 2/14/98

****

** UST Spike/Duplicate Results **

mpound	%Recovery	Target Range	Precision RPD	Target Range
TRPH, 418.1	99.	75 - 125	1.1	0 - 25.0

** Organics Spike/Duplicate Results **

ound	%Recovery	Target Range	Precision RPD	Target Range
1-Dichloroethene	110.	59 - 172	8.0	0 - 22
richloroethene	100.	62 - 137	0.0	0 - 24
enzene	106.	66 - 142	6.0	0 - 21
oluene	108.	59 - 139	4.0	0 - 21
lorobenzene	94.	60 - 133	10.0	0 - 21
henol	75.	26 - 115	6.2	0 - 35
-Chlorophenol	76.	25 - 102	4.8	0 - 50
,4-Dichlorobenzene	72.	28 - 104	6.0	0 - 27
itroso-di-n-propylamine	95.	41 - 126	2.9	0 - 38
,2,4-Trichlorobenzene	80.	38 - 107	5.1	0 - 23
-Chloro-3-methylphenol	73.	26 - 103	0.8	0 - 33
cenaphthene	81.	31 - 137	6.9	0 - 19
-Nitrophenol	72.	11 - 125	6.9	0 - 50
,4-Dinitrotoluene	74.	28 - 100	11.0	0 - 47
entachlorophenol	74.	17 - 109	8.9	0 - 47
yrene	94.	35 - 142	9.0	0 - 36

** Volatile Organics Method Blank Results ***

nd	Result	Flag	Units	Method
enzene	2.0	U	ug/kg	8260B
thylbenzene	2.0	U	ug/kg	8260B
oluene	2.0	U	ug/kg	8260B
ylenes	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

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*** Volatile Organics Method Blank Results ***

Compound	Result	Flag	Units	Method

*** Semi-Volatile Organics Method Blank Results ***

Compound	Result	Flag	Units	Method
phthalene	165.	U	ug/kg	8270
F hene	165.	U	ug/kg	8270
cene	165.	U	ug/kg	8270
uoranthene	165.	U	ug/kg	8270
uorene	165.	U	ug/kg	8270
rene	165.	U	ug/kg	8270
nzo(a)anthracene	165.	U	ug/kg	8270
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
enapthylene	165.	U	ug/kg	8270
nzo(g,h,i)perylene	165.	U	ug/kg	8270
enanthrene	165.	U	ug/kg	8270
Methylnapthalene	165.	U	ug/kg	8270
Methylnapthalene	165.	U	ug/kg	8270

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PROJECT QUALITY CONTROL DATA

IRECTOR U.S. ARMY CORPS ENG. 5394 Report Number: 98-A15004

ample I.D.: METHOD BLANK Lab Project: 91824

roject: 444941 CALL#0708 Date Received: 2/14/98

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Organics Spike/Duplicate Results **

mpound	%Recovery	Target Range	Precision RPD	Target Range
1-Dichloroethene	105.	61 - 145	7.0	0 - 14
ichloroethene	109.	71 - 120	8.0	0 - 14
nzene	110.	76 - 127	3.0	0 - 11
luene	110.	76 - 125	4.0	0 - 13
enzene	110.	75 - 130	3.0	0 - 13

Volatile Organics Method Blank Results ***

mpound	Result	Flag	Units	Method
etone	10.0	U	ug/l	8260B
nzene	2.0	U	ug/l	8260B
omoform	2.0	U	ug/l	8260B
omomethane	2.0	U	ug/l	8260B
Butanone	10.0	U	ug/l	8260B
rbon disulfide	2.0	U	ug/l	8260B
rbon tetrachloride	2.0	U	ug/l	8260B
lorobenzene	2.0	U	ug/l	8260B
loroethane	2.0	U	ug/l	8260B
loroform	2.0	U	ug/l	8260B
loromethane	2.0	U	ug/l	8260B
bromochloromethane	2.0	U	ug/l	8260B
1-Dichloroethane	2.0	U	ug/l	8260B
2-Dichloroethane	2.0	U	ug/l	8260B
1-Dichloroethene	2.0	U	ug/l	8260B
s-1,2-Dichloroethene	2.0	U	ug/l	8260B
ans-1,2-Dichloroethene	2.0	U	ug/l	8260B
chloropropane	2.0	U	ug/l	8260B
3-Dichloropropene	2.0	U	ug/l	8260B
ans-1,3-Dichloropropene	2.0	U	ug/l	8260B
thylbenzene	2.0	U	ug/l	8260B
-Hexanone	10.0	U	ug/l	8260B
-Methyl-2-pentanone	10.0	U	ug/l	8260B

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PROJECT QUALITY CONTROL DATA

)IRECTOR U.S. ARMY CORPS ENG. 5394 Report Number: 98-A15004

;ample I.D.: METHOD BLANK Lab Project: 91824

'roject: 444941 CALL#0708 Date Received: 2/14/98

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Volatile Organics Method Blank Results ***

npound	Result	Flag	Units	Method
thylene chloride	2.0	U	ug/l	8260B
yrene	2.0	U	ug/l	8260B
1,2,2-Tetrachloroethane	2.0	U	ug/l	8260B
trachloroethene	2.0	U	ug/l	8260B
luene	2.0	U	ug/l	8260B
1,1-Trichloroethane	2.0	U	ug/l	8260B
' richloroethane	2.0	U	ug/l	8260B
i. .oroethene	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

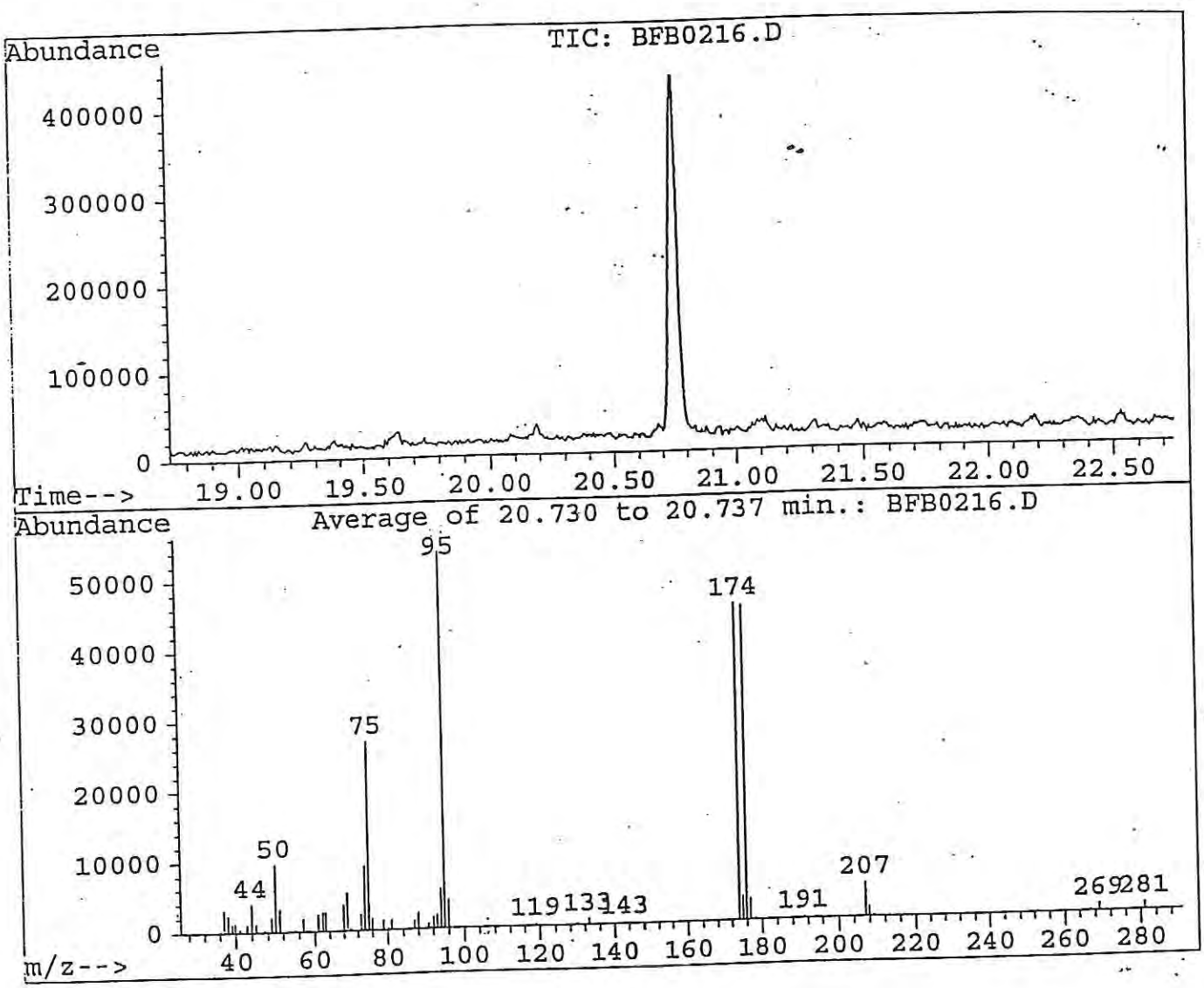
BFB

110 - 1

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

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

ethod : 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
[illegible]	T	Carbon Disulfide	2.125	2.372	-11.7	107	-0.07
[illegible]	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
9		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
45	CM	Toluene	7.280	7.397	-1.6	106	-0.03
[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	82	-0.04

47	I	Ethyl Methacrylate	0.589	0.370	37.1	64	-0.03
48		2-Hexanone					
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
	T	Tetrachloroethene	1.850	1.749	5.4	102	-0.02
	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
	T	sec-Butylbenzene	1.161	1.269	-9.3	117	-0.03
	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

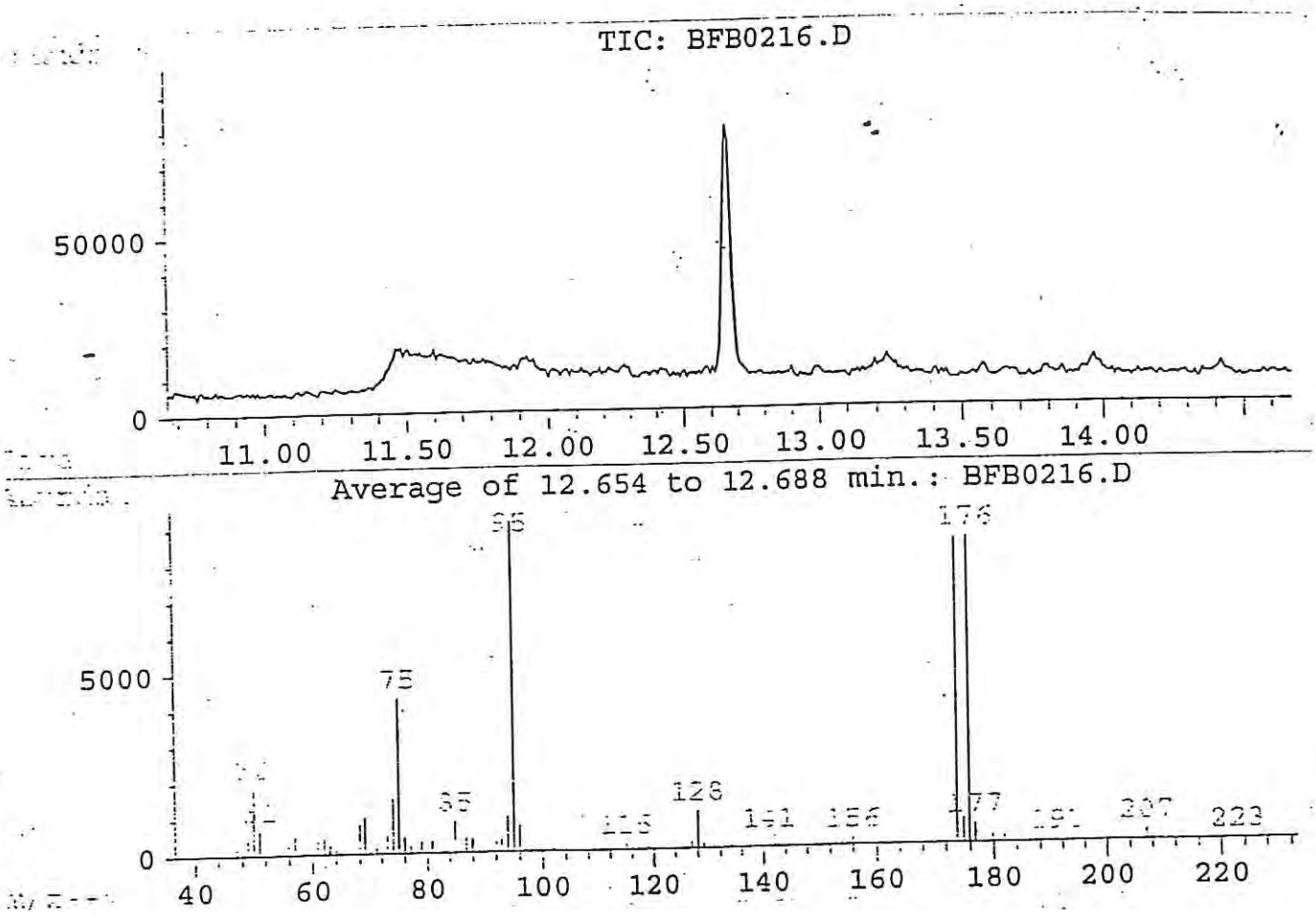
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S0500217.D 8260S.M Thu Feb 19 10:49:54 1998 HP-1

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



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
	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
38	T	Bromodichloromethane	0.397	0.447	-12.4	106	0.03
			0.005	0.006	-19.9	112	0.02

41	T	4-Methyl-2-pentanone	0.123	0.132	-7.5	96	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
[illegible]		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

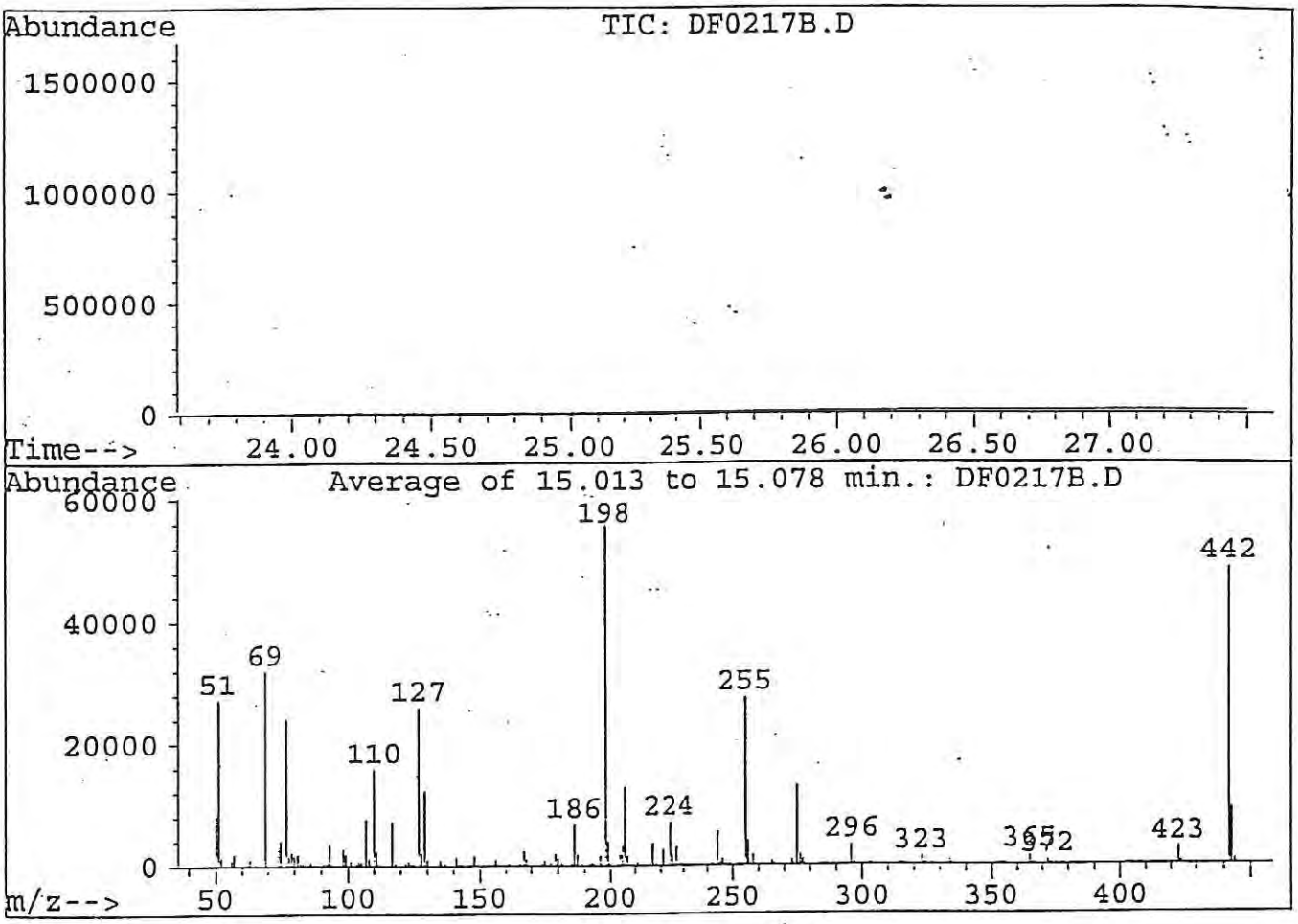
(#) = Out of Range SPCC's out = 0 CCC's out = 0

V0500204.D 8260.M 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
[illegible]	P	Hexachlorocyclopentadiene	0.108	0.112	-4.0	83	-0.01
	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
44		Acenaphthylene	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 SPCC's out = 0 CCC's out = 0

0500216.D 8270.M Wed Feb 18 11:34:38 1998

U.S. Army Corps of Engineers Work Order #_____ Job # 5114 Chain of Custody Record

(ER 1110-1-263)

). No.	Project Name: Hunter Army Airfield 91824					No. of Conts.	BTEX (M8260)	PAH (M8270)	TCLP Metals	TRPH (418.1)	TCL VOA (M8260) ADDED			TAT: 14 day Remarks: 98-A015001	MATRIX
mpler: (Signature)															
te	Time	Pres.	Gr	Cm	Site Code/Sample Number										
2/98	—				Heap #6-ES-001-QA	2	✓	✓	✓	✓				34918	soil
↓	—				Heap #6-QA-TB	2					✓			34919	water
					"									98-A015002	

Sampler Relinquisher by: Rick Sullivan	Date/Time 2/13/98	Received by: (Sig.)	Date/Time	mples 98-A015003
Relinquished by: (Sig.)	Date/Time	Received by: (Sig.)	Date/Time	98-A015004
Relinquished by: (Sig.)	Date/Time	Received for Laboratory by: (Sig.) SAS Pat Rafferty	Date/Time 2/14/98 9:00	Remarks at time of receipt.
Custody Seal No.		Lab Case No.		

NG Form 5C -R, Oct 90 Propone : CEMP-R

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

r trict - SAVANNAH
ce Received - 98/01/13
Date Reported - 98/02/11 10:37:54

HUNTER ARMY AIRFIELD, GA
Requisition - W33SJG73359741
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
LP EXTRACTION	*		SPA	98/01/14
TAL SOLIDS, % OF WET	92.00	%	SPA	98/01/18

*NOTE: See Attached

Sampled by District Personnel

Checked by: JWS

Signed by:

Blaise Willis
Chemist

et 1 of 2

Lab #	Field ID	Date Sampled	Time Sampled
34455	TRIP BLK	98/01/12	17:00

Test Performed	Result	Units	Tested By	Test Date
VOLATILE ORGANICS GC/MS	*		SPA	98/01/14

*NOTE: See Attached

Sampled by District Personnel

Checked by: JW's

Signed by:

Blaise Willis

Blaise Willis
Chemist

U.S. Army Corps of Engineers Work Order #_____ Job #_____ Chain of Custody Rec

(ER 1110-1-263

Proj. No.	Project Name	Sampler: (Signature)	No. of Conts.	BTEX / 8260	TPH-418.1	PAH 8270	TCLP metals	VOC / 8260			TAT / Remarks: / SAD NO. / MATRIX
DACA 21-97-C 0042	Hunter Army Airfield, Fire Training Area	David Price									
Date	Time	Pres.	Gr	Cm	Site Code/Sample Number						
1/12/98	4:45	Cool 4°C	✓		Heap #1-ES-003	1	✓	✓	✓		
1/12/98	4:45	Cool 4°C		✓	Heap #1-ES-003	1				✓	
1/12/98	5:00	HCL			Trip BLK					✓	

Sampler Relinquisher by: David Price	Date/Time 1/12/98 5:30 p.m.	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.)	Date/Time 1/13/98 0850	Remarks at time of receipt. Temp 6°C
Custody Seal No.		Lab Case No.		

NG Form 5021-R, Oct 90 Propane ... CEMP

Cooler Receipt Form

Job # 5363 No. of Coolers 1 Return Cooler Yes

Project: Hunter AAF Date Received: 1/13/98

Date cooler opened: 1/13/98 by (print) Bobbi Thorn
(sign) Bobbi Thorn

1. Did cooler come with a shipping slip? (Yes) No
If yes, enter carrier & air bill number here: FE #389013997 1

2. Were custody seals on outside of cooler: Yes (No)
How many & where: _____ seal date: _____ seal name: _____

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: 6°C Type: wet (Yes) No

Date logged-in: 1/13/98 by (print) Bobbi Thorn
(sign) Bobbi Thorn

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.) Trip didn't have date or time 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: headspace in both containers Yes (No)

10. 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. Thorn Date: 1/13/98

To 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

IRECTOR U.S. ARMY CORPS ENG. 5394
ESAD LABORATORY
11 SOUTH COBB DRIVE
ARIETTA, GA 30060-3172

ample Location: 34454 HEAP #980212 #1-ES-003 **Lab Number:** 98-A003571
HUNTER ARMY AIRFIELD-FIRE TRAINING

ampler: BOBBI THORN

ate Collected: 1/12/98 **Date Received:** 1/14/98

ime Collected: 16:45 **Time Received:** 9:00

ample type: Soil

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ics Reference Data

Blank	VB0118
Blank	161875BB
une, VOA	BFB0118
Tune, BNA	DF0115
ibration Check, VOA	VS0118
ibration Check, BNA	CC0115

rcent solids: 92.

VOLATILE ORGANICS

alyte	Result	Flag	DF	Units	Date	Time	Analyst	Method
etone	54.3	U	5	ug/kg	1/18/98	23:41	G. Norton	8260B
nzene	10.9	U	5	ug/kg	1/18/98	23:41	G. Norton	8260B
omobenzene	10.9	U	5	ug/kg	1/18/98	23:41	G. Norton	8260B
omochloromethane	10.9	U	5	ug/kg	1/18/98	23:41	G. Norton	8260B
omoform	10.9	U	5	ug/kg	1/18/98	23:41	G. Norton	8260B
omomethane	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
rbon Disulfide	10.9	U	5	ug/kg	1/18/98	23:41	G. Norton	8260B
tetrachloride	10.9	U	5	ug/kg	1/18/98	23:41	G. Norton	8260B
enzene	10.9	U	5	ug/kg	1/18/98	23:41	G. Norton	8260B
loroethane	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
loroform	10.9	U	5	ug/kg	1/18/98	23:41	G. Norton	8260B
loromethane	10.9	U	5	ug/kg	1/18/98	23:41	G. Norton	8260B

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-A003571
Sample ID: 34454 HEAP 71-ES-003
98042

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
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
-Trichloroethane	10.9	U	5	ug/kg	1/18/98	23:41	G. Norton	8260B
-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

SPECIALIZED ASSAYS, INC.
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ANALYTICAL REPORT

Laboratory Number: 98-A003571
Sample ID: 34454 HEAP 71-ES-003
003
93042

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/PCB's

Analyte	Result	Flag	DF	Units	Date	Time	Analyst	Method
Naphthalene	179.	U	1	ug/kg	1/16/98	1:39	M. Goodrich	8270
Acenapthene	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
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
Acenapthylene	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-Methylnapthalene	179.	U	1	ug/kg	1/16/98	1:39	M. Goodrich	8270
2-Methylnapthalene	179.	U	1	ug/kg	1/16/98	1:39	M. Goodrich	8270
Extraction, BNA,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 71-ES-003
#305
4802/2

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
Selenium	< 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

Parameter	Wt/Vol Extracted	Extract Vol	Date	Analyst	Method
BNA's	30.0 gm	1.0 ml	1/15/98	C.Gereaser	3550

Surrogate	% Recovery	Target Range
VOA Surrogate, 1,2-Dichloroethane, d4	91.0	62. - 147.
VOA Surrogate, Toluene d8	90.9	84. - 117.
VOA Surrogate, 4-Bromofluorobenzene	78.7	64. - 126.
VOA 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 D. 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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ANALYTICAL REPORT

DIRECTOR U.S. ARMY CORPS ENG. 5394
CESAD LABORATORY
611 SOUTH COBB DRIVE
MARIETTA, GA 30060-3172

Sample Location: 34455 TRIP BLK
HUNTER ARMY AIRFIELD-FIRE TRAINING

Lab Number: 98-A003572

Date Collected: 1/12/98

Date Received: 1/14/98

Time Collected: 17:00

Time Received: 9:00

Sampler: BOBBI THORN

Sample type: Water

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anics Reference Data

A Blank	VB0114B
/MS Tune, VOA	BFB0114B
tion Check, VOA	VS0114B

VOLATILE ORGANICS

nalyte	Result	Flag	DF	Units	Date	Time	Analyst	Method
cetone	10.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
enzene	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
romobenzene	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
romochloromethane	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
romoform	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
romomethane	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
arbon disulfide	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
arbon tetrachloride	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
hlorobenzene	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
hloroethane	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
hloroform	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
hloromethane	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
rotoluene	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
rotoluene	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

VOLATILE ORGANICS

nalyte	Result	Flag	DF	Units	Date	Time	Analyst	Method
,2-Dichlorobenzene	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
,3-Dichlorobenzene	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
,4-Dichlorobenzene	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
ichlorodifluoromethane	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
,1-Dichloroethane	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
,2-Dichloroethane	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
,1-Dichloroethene	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
is-1,2-Dichloroethene	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
rans-1,2-Dichloroethene	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
,2-Dichloropropane	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
,3-Dichloropropane	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
,2-Dichloropropane	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
,1-Dichloropropene	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
is-*,3-Dichloropropene	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
-1,3-Dichloropropene	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
thylbenzene	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
exachlorobutadiene	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
-Hexanone	10.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
sopropylbenzene	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
-Isopropyltoluene	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
-Methyl-2-pentanone	10.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
ethylene chloride	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
aphthalene	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
-Propylbenzene	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
tyrene	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
,1,1,2-Tetrachloroethane	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
,1,2,2-Tetrachloroethane	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
etrachloroethene	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
oluene	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
,2,3-Trichlorobenzene	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
,2,4-Trichlorobenzene	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
,1,1-Trichloroethane	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
,1,2-Trichloroethane	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
richloroethene	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
,2,3-Trichloropropane	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
,2,4-Trimethylbenzene	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
,3,5-Trimethylbenzene	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
inyl chloride	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
s	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
odichloromethane	2.0	U	1	ug/l	1/14/98	21:52	J. Haley	8260B
richlorofluoromethane	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

Surrogate	% Recovery	Target Range
VOA Surrogate, 1,2-Dichloroethane, d4	99.2	70. - 131.
VOA Surrogate, Toluene d8	101.	83. - 115.
VOA Surrogate, 4-Bromofluorobenzene	95.8	73. - 119.
VOA Surrogate, Dibromofluoromethane	108.	72. - 130.

Report Approved By: Michael B. 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

IRECTOR 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

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UST Spike/Duplicate Results **

pound	%Recovery	Target Range	Precision RPD	Target Range
PH, 418.1	102.	75 - 125	0.4	0 - 25.0

Organics Spike/Duplicate Results **

pound	%Recovery	Target Range	Precision RPD	Target Range
-Dichloroethene	90.	59 - 172	0.0	0 - 22
chloroethene	76.	62 - 137	0.0	0 - 24
zene	80.	66 - 142	2.0	0 - 21
uene	80.	59 - 139	0.0	0 - 21
orobenzene	84.	60 - 133	6.0	0 - 21
nol	90.	26 - 115	3.9	0 - 35
hlorophenol	99.	25 - 102	3.6	0 - 50
-Dichlorobenzene	86.	28 - 104	3.1	0 - 27
roso-di-n-propylamine	103.	41 - 126	1.7	0 - 38
2,4-Trichlorobenzene	89.	38 - 107	3.0	0 - 23
hloro-3-methylphenol	99.	26 - 103	1.5	0 - 33
naphthene	90.	31 - 137	1.6	0 - 19
itrophenol	97.	11 - 125	2.8	0 - 50
-Dinitrotoluene	94.	28 - 100	1.6	0 - 47
tachlorophenol	95.	17 - 109	1.3	0 - 47
ene	94.	35 - 142	1.6	0 - 36

Volatile Organics Method Blank Results ***

	Result	Flag	Units	Method
tone	10.0	U	ug/kg	8260B
zene	2.0	U	ug/kg	8260B
mobenzene	2.0	U	ug/kg	8260B
mochloromethane	2.0	U	ug/kg	8260B

SPECIALIZED ASSAYS, INC.

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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

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Volatile Organics Method Blank Results ***

mpound	Result	Flag	Units	Method
omoform	2.0	U	ug/kg	8260B
omomethane	2.0	U	ug/kg	8260B
Butanone	10.0	U	ug/kg	8260B
Butylbenzene	2.0	U	ug/kg	8260B
c-Butylbenzene	2.0	U	ug/kg	8260B
B[illegible]lbenzene	2.0	U	ug/kg	8260B
Disulfide	2.0	U	ug/kg	8260B
rbon tetrachloride	2.0	U	ug/kg	8260B
lorobenzene	2.0	U	ug/kg	8260B
loroethane	2.0	U	ug/kg	8260B
Chloroethylvinylether	2.0	U	ug/kg	8260B
loroform	2.0	U	ug/kg	8260B
loromethane	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
s-1,2-Dichloroethene	2.0	U	ug/kg	8260B
ans-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
[illegible]hloropropane	2.0	U	ug/kg	8260B
[illegible]chloropropene	2.0	U	ug/kg	8260B
s-1,3-Dichloropropene	2.0	U	ug/kg	8260B
ans-1,3-Dichloropropene	2.0	U	ug/kg	8260B
hylbenzene	2.0	U	ug/kg	8260B
xachlorobutadiene	2.0	U	ug/kg	8260B

SPECIALIZED ASSAYS, INC.

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Nashville, TN 37204-0566
Phone 1-615-726-0177

PROJECT QUALITY CONTROL DATA

)IRECTOR 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 ***

mpound	Result	Flag	Units	Method
Hexanone	10.0	U	ug/kg	8260B
opropylbenzene	2.0	U	ug/kg	8260B
Isopropyltoluene	2.0	U	ug/kg	8260B
Methyl-2-pentanone	10.0	U	ug/kg	8260B
thylene chloride	5.0		ug/kg	8260B
p[illegible]lene	2.0	U	ug/kg	8260B
[illegible]ylbenzene	2.0	U	ug/kg	8260B
yrene	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
trachloroethene	2.0	U	ug/kg	8260B
luene	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
ichloroethene	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
nyl chloride	2.0	U	ug/kg	8260B
lenes	2.0	U	ug/kg	8260B
omodichloromethane	2.0	U	ug/kg	8260B
ichlorofluoromethane	2.0	U	ug/kg	8260B

Semi-Volatile Organics Method Blank Results ***

mpound	Result	Flag	Units	Method
phthalene	165.	U	ug/kg	8270
[illegible]hene	165.	U	ug/kg	8270
[illegible]acene	165.	U	ug/kg	8270
uoranthene	165.	U	ug/kg	8270
uorene	165.	U	ug/kg	8270
rene	165.	U	ug/kg	8270
nzo(a)anthracene	165.	U	ug/kg	8270

SPECIALIZED ASSAYS, INC.

2960 Foster Creighton Dr.
P.O. Box 40566
Nashville, TN 37204-0566
Phone 1-615-726-0177

PROJECT QUALITY CONTROL DATA

)IRECTOR 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

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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
ieno(1,2,3-cd)pyrene	165.	U	ug/kg	8270
ena-thylene	165.	U	ug/kg	8270
,h,i)perylene	165.	U	ug/kg	8270
enanthrene	165.	U	ug/kg	8270
lethylnapthalene	165.	U	ug/kg	8270
lethylnapthalene	165.	U	ug/kg	8270

Michael A. Burns

SPECIALIZED ASSAYS, INC.

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Phone 1-615-726-0177

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

****

Organics Spike/Duplicate Results **

mpound	%Recovery	Target Range	Precision RPD	Target Range
l-Dichloroethene	96.	61 - 145	4.0	0 - 14
ichloroethene	102.	71 - 120	0.0	0 - 14
nzene	108.	76 - 127	8.0	0 - 11
luer	106.	76 - 125	2.0	0 - 13
l enzene	98.	75 - 130	2.0	0 - 13

Volatile Organics Method Blank Results ***

mpound	Result	Flag	Units	Method
etone	10.0	U	ug/l	8260B
nzene	2.0	U	ug/l	8260B
omobenzene	2.0	U	ug/l	8260B
omochloromethane	2.0	U	ug/l	8260B
omoform	2.0	U	ug/l	8260B
omomethane	2.0	U	ug/l	8260B
Butanone	10.0	U	ug/l	8260B
Butylbenzene	2.0	U	ug/l	8260B
-Butylbenzene	2.0	U	ug/l	8260B
Butylbenzene	2.0	U	ug/l	8260B
bon disulfide	2.0	U	ug/l	8260B
bon tetrachloride	2.0	U	ug/l	8260B
lorobenzene	2.0	U	ug/l	8260B
loroethane	2.0	U	ug/l	8260B
Chloroethylvinylether	2.0	U	ug/l	8260B
loroform	2.0	U	ug/l	8260B
loromethane	2.0	U	ug/l	8260B
toluene	2.0	U	ug/l	8260B
l. otoluene	2.0	U	ug/l	8260B
-Dibromo-3-chloropropane	10.0	U	ug/l	8260B
romochloromethane	2.0	U	ug/l	8260B
-Dibromoethane	2.0	U	ug/l	8260B
romomethane	2.0	U	ug/l	8260B

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Phone 1-615-726-0177

PROJECT QUALITY CONTROL DATA

IRECTOR U.S. ARMY CORPS ENG. 5394 Report Number: 98-A003574

ample I.D.: METHOD BLANK Lab Project: 89087

roject: 132251 CALL#0615 Date Received: 1/14/98

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Volatile Organics Method Blank Results ***

pound	Result	Flag	Units	Method
-Dichlorobenzene	2.0	U	ug/l	8260B
-Dichlorobenzene	2.0	U	ug/l	8260B
-Dichlorobenzene	2.0	U	ug/l	8260B
hlorodifluoromethane	2.0	U	ug/l	8260B
-Dichloroethane	2.0	U	ug/l	8260B
-Di-hloroethane	2.0	U	ug/l	8260B
loroethene	2.0	U	ug/l	8260B
-1,2-Dichloroethene	2.0	U	ug/l	8260B
ns-1,2-Dichloroethene	2.0	U	ug/l	8260B
-Dichloropropane	2.0	U	ug/l	8260B
-Dichloropropane	2.0	U	ug/l	8260B
-Dichloropropane	2.0	U	ug/l	8260B
-Dichloropropene	2.0	U	ug/l	8260B
-1,3-Dichloropropene	2.0	U	ug/l	8260B
ns-1,3-Dichloropropene	2.0	U	ug/l	8260B
ylbenzene	2.0	U	ug/l	8260B
achlorobutadiene	2.0	U	ug/l	8260B
exanone	10.0	U	ug/l	8260B
propylbenzene	2.0	U	ug/l	8260B
sopropyltoluene	2.0	U	ug/l	8260B
ethyl-2-pentanone	10.0	U	ug/l	8260B
hylene chloride	2.0	U	ug/l	8260B
hthalene	2.0	U	ug/l	8260B
ropylbenzene	2.0	U	ug/l	8260B
rene	2.0	U	ug/l	8260B
,1,2-Tetrachloroethane	2.0	U	ug/l	8260B
,2,2-Tetrachloroethane	2.0	U	ug/l	8260B
rachloroethene	2.0	U	ug/l	8260B
uene	2.0	U	ug/l	8260B
,3-Trichlorobenzene	2.0	U	ug/l	8260B
ichlorobenzene	2.0	U	ug/l	8260B
richloroethane	2.0	U	ug/l	8260B
,2-Trichloroethane	2.0	U	ug/l	8260B
chloroethene	2.0	U	ug/l	8260B
,3-Trichloropropane	2.0	U	ug/l	8260B
,4-Trimethylbenzene	2.0	U	ug/l	8260B

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PROJECT QUALITY CONTROL DATA

IRECTOR U.S. ARMY CORPS ENG. 5394 Report Number: 98-A003574

ample I.D.: METHOD BLANK Lab Project: 89087

roject: 132251 CALL#0615 Date Received: 1/14/98

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Volatile Organics Method Blank Results ***

pound	Result	Flag	Units	Method
,5-Trimethylbenzene	2.0	U	ug/l	8260B
yl chloride	2.0	U	ug/l	8260B
enes	2.0	U	ug/l	8260B
modichloromethane	2.0	U	ug/l	8260B
chlorofluoromethane	2.0	U	ug/l	8260B

Michael B. Burns

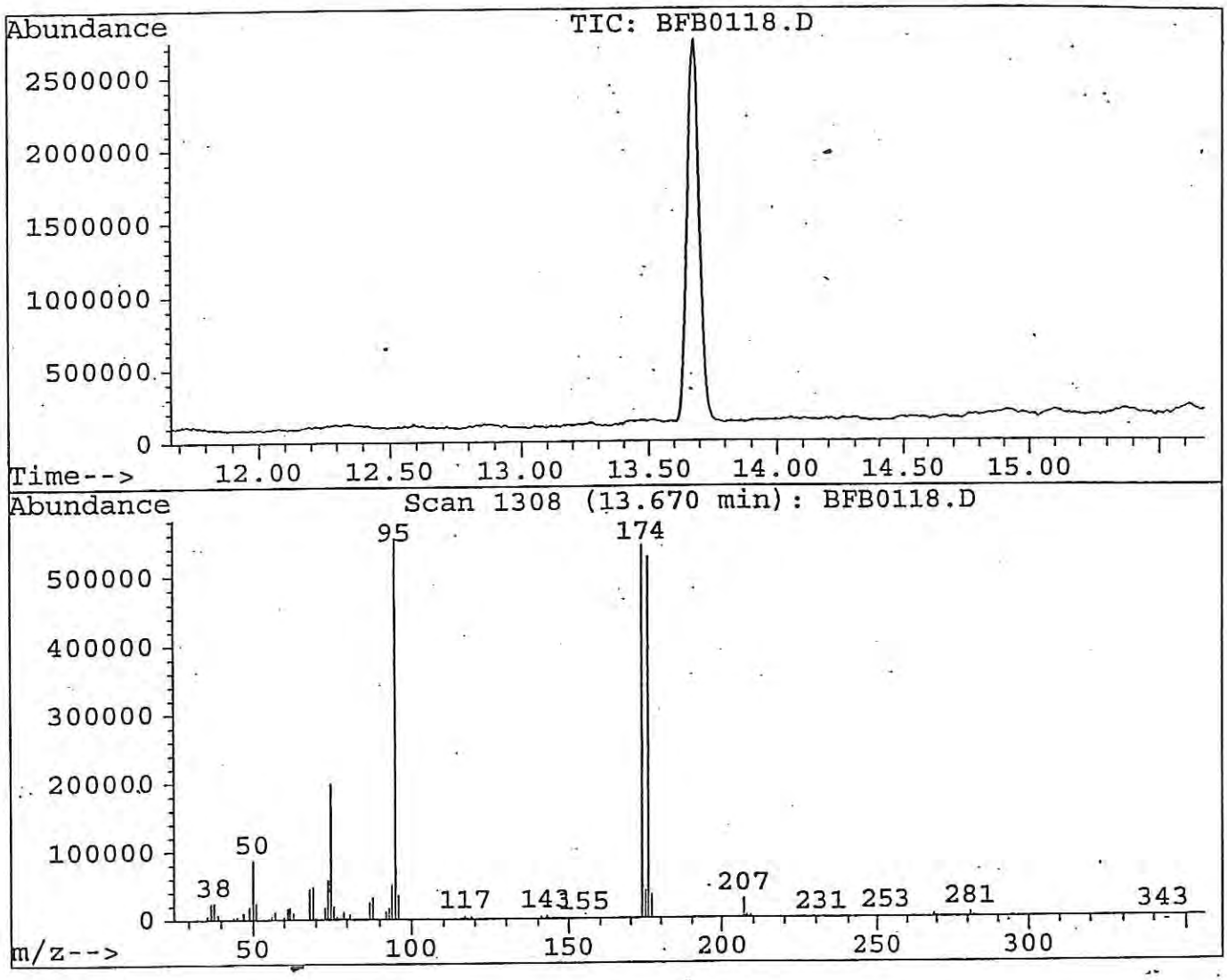
8760 1

BFB

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
)	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
)	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
46	T	1,3-Dichloropropane	2.310	2.780	15.7	60	0.00

47	I	Ethyl Methacrylate	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
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
	T	Tetrachloroethene	2.001	1.689	15.6	55	0.00
	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
	T	1,3-Dichlorobenzene	0.606	0.537	11.5	57	0.00
,6	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 SPCC's out = 0 CCC's out = 0

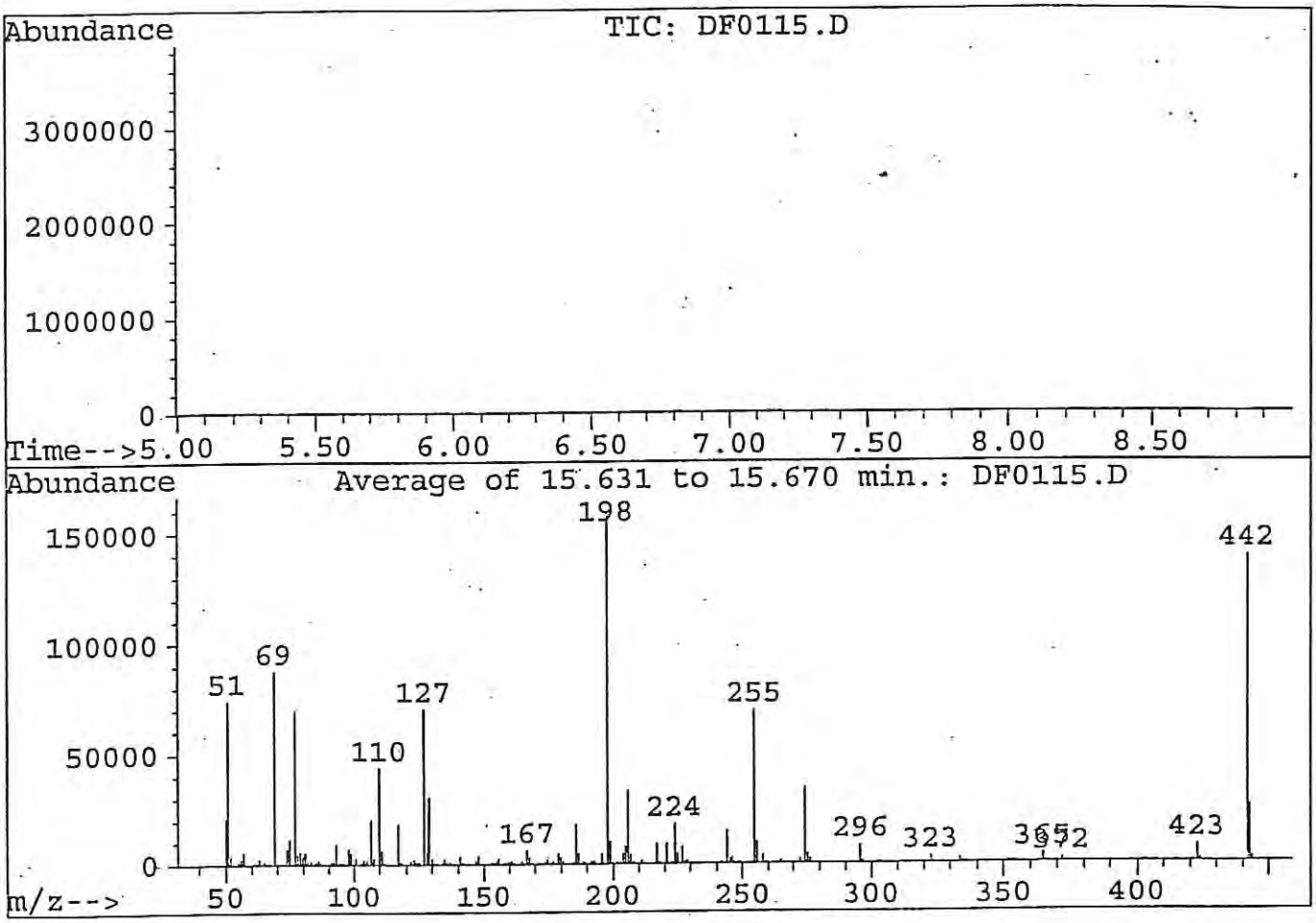
S0500114.D 8260S.M Mon Jan 19 11:26:58 1998 HP-1

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

DF0115.D 8270.M Fri Jan 16 10:26:38 1998

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

ethod : 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
		Benzyl Alcohol	0.712	0.663	7.0	91	-0.25
-6		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
	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
44		Acenaphthylene	1.749	1.510	13.7	97	-0.31

45		Dimethylphthalate	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
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
	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
		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 SPCC's out = 0 CCC's out = 0

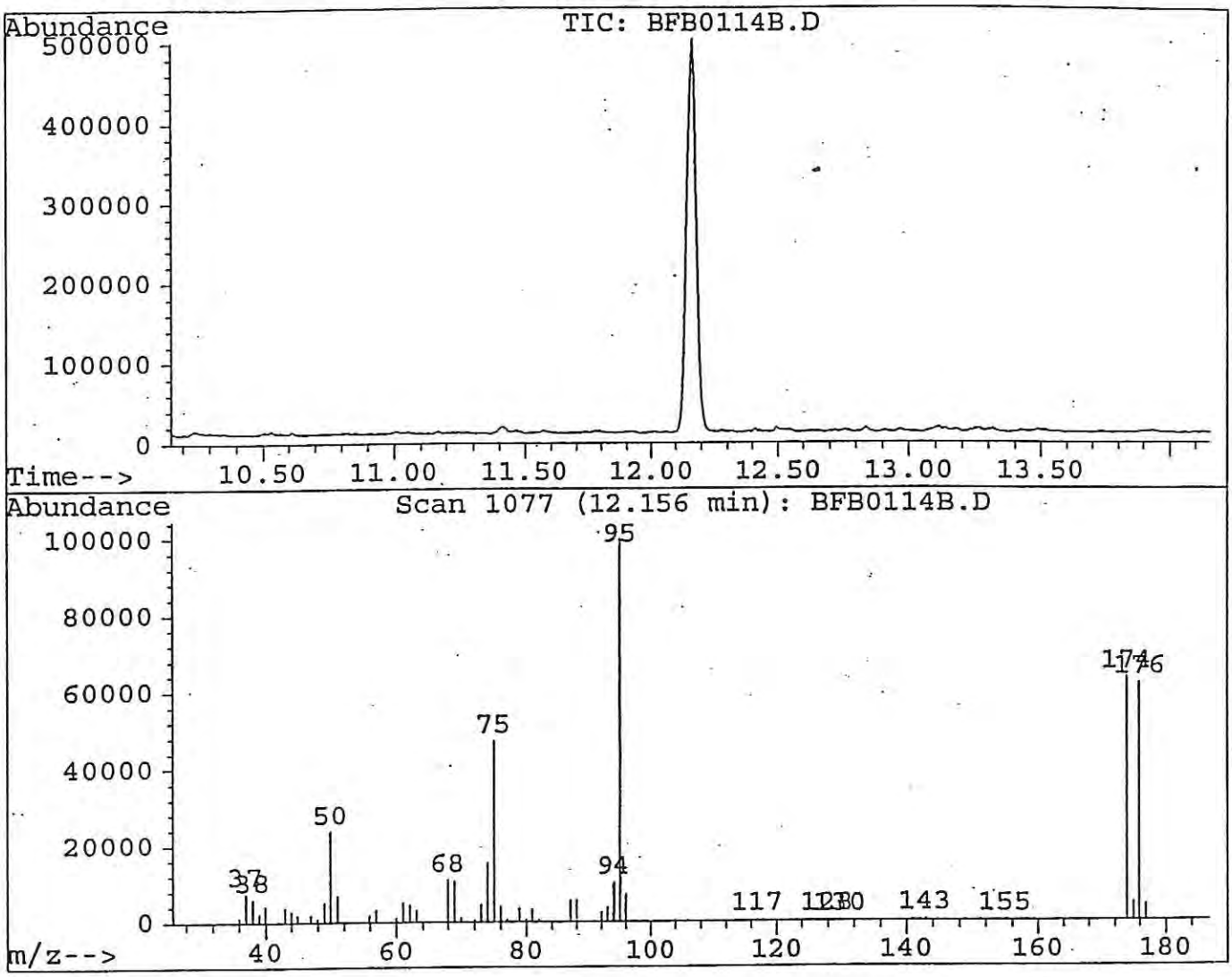
0500106.D 8270.M Fri Jan 16 10:41:09 1998

BFB

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 - 1
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						**%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						**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
39) 2-Chloroethyl vinyl ether	15.29	63	118892	530.46	ug/L	26

41)	4-Methyl-2-pentanone	14.62	58	241365	46.79 ug/L	97
42)	trans-1,3-Dichloropropene	15.07	75	915999	52.73 ug/L	99
43)	1,1,2-Trichloroethane	15.29	97	514004	52.39 ug/L	96
45)	Toluene	15.56	91	2091839	50.14 ug/L	98
46)	1,3-Dichloropropane	15.63	76	839097	53.11 ug/L	90
47)	Ethyl Methacrylate	15.68	69	1173408	53.13 ug/L	67
48)	2-Hexanone	15.68	58	46453	50.67 ug/L	43
50)	Dibromochloromethane	16.01	127	536884	52.70 ug/L	99
51)	1,2-Dibromoethane	16.35	107	661512	55.11 ug/L	98
52)	Tetrachloroethene	16.60	166	564802	57.47 ug/L	90
53)	1,1,1,2-Tetrachloroethane	17.44	131	543766	55.70 ug/L	98
54)	Chlorobenzene	17.55	112	1401876	50.60 ug/L	100
55)	Ethylbenzene	17.83	91	2478582	55.30 ug/L	98
56)	m,p-Xylene	18.10	91	3584429	107.68 ug/L	95
57)	Bromoform	18.25	173	420879	51.19 ug/L	1
58)	Styrene	18.56	104	1547632	57.00 ug/L	94
59)	o-Xylene	18.66	91	1864320	56.86 ug/L	95
60)	1,1,2,2-Tetrachloroethane	18.65	83	767635	58.78 ug/L	100
61)	1,2,3-Trichloropropane	18.56	75	67308	56.10 ug/L	50
62)	trans-1,4-Dichloro-2-buten	18.56	75	67308	53.18 ug/L	1
65)	Isopropylbenzene	19.17	105	2177473	50.87 ug/L	97
67)	Bromobenzene	19.52	77	1064207	53.45 ug/L	96
68)	Propylbenzene	19.79	91	2883790	52.70 ug/L	98
69)	2-Chlorotoluene	19.92	91	1645645	50.26 ug/L	96
70)	4-Chlorotoluene	19.92	91	1645645	50.26 ug/L	94
71)	1,3,5-Trimethylbenzene	20.20	105	1803538	51.57 ug/L	97
72)	t-Butylbenzene	20.60	119	1536996	53.39 ug/L	97
73)	1,2,4-trimethylbenzene	20.76	105	1784473	48.19 ug/L	98
74)	sec-Butylbenzene	20.92	105	2456786	50.36 ug/L	96
75)	1,3-Dichlorobenzene	21.02	146	1052442	51.21 ug/L	97
76)	1,4-Dichlorobenzene	21.02	146	1052442	51.21 ug/L	98
77)	1,2-Dichlorobenzene	21.66	146	1088008	51.61 ug/L	94
78)	p-Isopropyltoluene	21.18	119	2008522	56.42 ug/L	98
79)	Butylbenzene	21.81	91	2102069	50.09 ug/L	98
80)	1,2-Dibromo-3-chloropropan	22.43	157	133873	50.02 ug/L	100
81)	1,2,4-Trichlorobenzene	24.88	180	758936	53.38 ug/L	98
82)	Naphthalene	25.36	128	1927497	51.62 ug/L	100
83)	Hexachlorobutadiene	25.48	225	340098	51.51 ug/L	97
84)	1,2,3-Trichlorobenzene	25.74	180	701278	51.81 ug/L	96

(#) = qualifier out of range (m) = manual integration
VS0114B.D 8260.M Thu Jan 15 08:43:14 1998

U.S. Army Corps of Engineers

Work Order # _____ Job # 5363

Chain of Custody Rec

(ER 1110-1-263)

Proj. No.	Project Name														TAT 14 days
	Hunter Army Airfield - Fire Training Area														
Sampler: (Signature)	David Price 89087					No. of Conts.	8260	418.1	PAH / 8270	TCLP Metals					
Date	Time	Pres.	Gr	Cm	Site Code/Sample Number									SAD NO.	MATRIX
1/12/98	445	Cool			Heap #1-ES-003	1	✓	✓	✓	✓			98-A003571	34454	Soil
"	500	HCl			Trip Blk	2	✓						98-A003572	34455	Water

Sampler Relinquisher by: | Date/Time | Received by: (Sig.) | Date/Time | Hazards Associated with Samples

Relinquished by: (Sig.) Ashley Horn | Date/Time 1/13/98 1230 | Received by: (Sig.) FedEx | Date/Time | 98-A003573

Relinquished by: (Sig.) | Date/Time | Received for Laboratory by: (Sig.) Richard Rivera | Date/Time 1/14/98 | 98-A003574 | ne of receipt.

Custody Seal No. | Lab Case No.

1/13/98

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

District - SAVANNAH
Date Received - 98/02/19
Date Reported - 98/03/16 09:33:33

HUNTER ARMY AIRFIELD, GA
Requisition - W33SJG80283594
Work Order - 8379 Job Number - 5491

Lab #	Field ID	Date Sampled	Time Sampled
34964	HEAP #7-ES001-QA	98/02/18	00:00

Test Performed	Result	Units	Tested By	Test Date
VOLATILE ORGANICS GC/MS	*		SPA	98/02/24
SEMIVOLATILE ORGANICS GC/MS	*		SPA	98/02/25
TRPH	4300.0	MG/KG	SPA	98/02/25
TOTAL SOLIDS, % OF WET	92.00	%	SPA	98/02/24

*NOTE: See Attached

Sampled by District Personnel

Checked by: TF

Signed by:

Blaise Willis

Blaise Willis
Chemist

Sheet 1 of 2

Lab #	Field ID	Date Sampled	Time Sampled
34965	HEAP #7-QA-TB	98/02/18	00:00

Test Performed	Result	Units	Tested By	Test Date
VOLATILE ORGANICS GC/MS	*		SPA	98/02/24

*NOTE: See Attached

Sampled by District Personnel

Checked by: TT

Signed by:

Blaise Willis

Blaise Willis
Chemist

Army Corps of Engineers Work Order #_____ Job #_____ Chain of Custody Reco

(ER 1110-1-263)

Hunter Army Airfield

Project Name Hunter Fire Training Area

Contract No. DACA21-97-C0042

912 757-4402

Sampler: (Signature) 2/18/98

TAT_____

Remarks: 3°C

Date	Time	Pres.	Gr	Cm	Site Code/Sample Number	No. of Conts.	BTEX-8260	PAH-8270	TPH-418.1		VOC-8260			SAD NO. / MATRIX
2/18/98					1 trap #7-ES001-QA	2	✓	✓	✓					
2/18/98					1 trap #7-QA-TB	2					✓			

Sampler Relinquisher by:	Date/Time 2/18/98 4:30	Received by: (Sig.)	Date/Time 2/19/98 0910
Relinquished by: (Sig.)	Date/Time	Received by: (Sig.)	Date/Time
Relinquished by: (Sig.)	Date/Time	Received for Laboratory by: (Sig.)	Date/Time
Custody Seal #		Lab Case No.	

Hazards Associated with Samples

Remarks at time of receipt.

Propo[illegible]t: CEMP

Cooler Receipt Form

Job # 5491 No. of Coolers 1 Return Cooler

Project: Hunter Army Airfield Date Received: 2/19/98

Date cooler opened: 2/19/98 by (print) B. Sebin
(sign) B. S

1. Did cooler come with a shipping slip? (Yes) No
If yes, enter carrier & air bill number here: FT 803523822583

2. Were custody seals on outside of cooler? (Yes) No
How many & where: 2 seal date: _____ seal name: _____

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. Sebin
(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

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 1

11. Was project manager called & status discussed? Yes (No)
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: 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

---

nics Reference Data

QA Blank	VB0223B
MB Blank	21821SBB
BFB Tune, VOA	BFB0223B
GC/MS Tune, BNA	DF0224
Calibration Check, VOA	VS0223B
Calibration Check, BNA	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
Naphthalene	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
[illegible]	[illegible]		1	ug/kg	2/25/98	1:47	M. Goodrich	8270

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-A17514
Sample ID: 34964 HEAP #7-ES001-QA

SEMIVOLATILE ORGANICS and PESTICIDE/PCB's

nalyte	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	2/25/98	1:47	M. Goodrich	8270
cenapthylene	897.	U	5	ug/kg	2/26/98	12:17	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
xtraction, BNA,s	Completed			ug/kg	2/23/98	14:26	C. Gerenser	3550

UNDERGROUND STORAGE TANK RESULTS

nalyte	Result	Units	PQL	Dil Factor	Date	Time	Analyst	Method
etroleum 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, d4	120.	62. - 147.
r-Toluene d8	116.	84. - 117.
surr-4-Bromofluorobenzene	112.	64. - 126.
surr-Nitrobenzene-d5	93.	23. - 120.
surr-2-Fluorobiphenyl	53.	30. - 115.
surr-Terphenyl d14	62.	18. - 140.

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Phone 1-615-726-0177

ANALYTICAL REPORT

Laboratory Number: 98-A17514
Sample ID: 34964 HEAP #7-ES001-QA

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 B. Hale, M.S., Laboratory Director

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Phone 1-615-726-0177

ANALYTICAL REPORT

IRECTOR U.S. ARMY CORPS ENG. 5394
ESAD LABORATORY
11 SOUTH COBB DRIVE
ARIETTA, GA 30060-3172

ample Location: 34965 HEAP #7-QA-TB
HUNTER ARMY AIRFIELD

Lab Number: 98-A17515

ate Collected: 2/18/98

Date Received: 2/20/98

ime Collected:

Time Received: 9:00

ampler: BOBBI THORN

Sample type: Water

---

nics Reference Data

Blank VB0223B
MS Tune, VOA BFB0223B
tion Check, VOA VS0223B

VOLATILE ORGANICS

alyte	Result	Flag	DF	Units	Date	Time	Analyst	Method
etone	10.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
enzene	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
omobenzene	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
omochloromethane	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
omoform	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
omomethane	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
-Butanone	10.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
-Butylbenzene	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
ec-Butylbenzene	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
-Butylbenzene	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
arbon disulfide	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
arbon tetrachloride	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
lorobenzene	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
loroethane	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
-Chloroethylvinylether	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
loroform	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
loromethane	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
rotoluene	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
rotoluene	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
2-Dibromo-3-chloropropane	10.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
ibromochloromethane	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
-Dibromoethane	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
oromomethane	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B

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ANALYTICAL REPORT

Laboratory Number: 98-A17515
Sample ID: 34965 HEAP #7-QA-TB

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
ichlorodifluoromethane	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
,1-Dichloroethane	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
,2-Dichloroethane	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
,1-Dichloroethene	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
is-1,2-Dichloroethene	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
rans-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-Dichloropropane	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
,1-Dichloropropene	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
is-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
thylbenzene	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
Hexachlorobutadiene	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
2-Hexanone	10.0	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
4-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
Methylene chloride	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
Naphthalene	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
n-Propylbenzene	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
Styrene	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
,1,1,2-Tetrachloroethane	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
,1,2,2-Tetrachloroethane	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
Tetrachloroethene	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
Toluene	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
,2,3-Trichlorobenzene	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
,2,4-Trichlorobenzene	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
,1,1-Trichloroethane	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
,1,2-Trichloroethane	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
Trichloroethene	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
,2,3-Trichloropropane	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
,2,4-Trimethylbenzene	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
,3,5-Trimethylbenzene	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
Vinyl chloride	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
es	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
dichloromethane	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B
Trichlorofluoromethane	2.0	U	1	ug/l	2/24/98	6:49	S. Sturm	8260B

SPECIALIZED ASSAYS, INC.

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ANALYTICAL REPORT

Laboratory Number: 98-A17515
Sample ID: 34965 HEAP #7-QA-TB

Surrogate	% Recovery	Target Range
VOA Surrogate, 1,2-Dichloroethane, d4	107.	70. - 131.
VOA Surrogate, Toluene d8	92.	83. - 115.
VOA Surrogate, 4-Bromofluorobenzene	92.	73. - 119.
VOA Surrogate, Dibromofluoromethane	99.	72. - 130.

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 B. Hale, M.S., Laboratory Director

SPECIALIZED ASSAYS, INC.
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PROJECT QUALITY CONTROL DATA

IRECTOR U.S. ARMY CORPS ENG. 5394 Report Number: 98-A17516

ample I.D.: METHOD BLANK Lab Project: 92358

roject: Date Received: 2/20/98

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UST Spike/Duplicate Results **

mpound	%Recovery	Target Range	Precision RPD	Target Range
PH, 418.1	118.	75 - 125	0.0	0 - 25.0

Organics Spike/Duplicate Results **

mpound	%Recovery	Target Range	Precision RPD	Target Range
i-Dichloroethene	114.	59 - 172	16.0	0 - 22
ichloroethene	116.	62 - 137	10.0	0 - 24
nzene	120.	66 - 142	6.0	0 - 21
luene	108.	59 - 139	8.0	0 - 21
lorobenzene	116.	60 - 133	10.0	0 - 21
enol	63.	26 - 115	0.5	0 - 35
Chlorophenol	67.	25 - 102	4.1	0 - 50
4-Dichlorobenzene	61.	28 - 104	6.5	0 - 27
troso-di-n-propylamine	70.	41 - 126	1.7	0 - 38
2,4-Trichlorobenzene	65.	38 - 107	3.7	0 - 23
Chloro-3-methylphenol	62.	26 - 103	10.0	0 - 33
enaphthene	63.	31 - 137	5.6	0 - 19
Nitrophenol	58.	11 - 125	10.3	0 - 50
4-Dinitrotoluene	62.	28 - 100	10.2	0 - 47
ntachlorophenol	61.	17 - 109	8.5	0 - 47
rene	66.	35 - 142	9.5	0 - 36

Volatile Organics Method Blank Results ***

Id	Result	Flag	Units	Method
zene	2.0	U	ug/kg	8260B
lorobenzene	2.0	U	ug/kg	8260B
luene	2.0	U	ug/kg	8260B
[illegible]	2.0	U	ug/kg	8260B

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

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*** 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
Chrysene	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
Acenapthylene	165.	U	ug/kg	8270
Benzo(g,h,i)perylene	165.	U	ug/kg	8270
Phenanthrene	165.	U	ug/kg	8270
1-Methylnapthalene	165.	U	ug/kg	8270
2-Methylnapthalene	165.	U	ug/kg	8270

Michael A. Burns

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PROJECT QUALITY CONTROL DATA

IRECTOR U.S. ARMY CORPS ENG. 5394 Report Number: 98-A17517

ample I.D.: METHOD BLANK Lab Project: 92358

roject: Date Received: 2/20/98

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Organics Spike/Duplicate Results **

mpound	%Recovery	Target Range	Precision RPD	Target Range
1-Dichloroethene	98.	61 - 145	4.0	0 - 14
chloroethene	110.	71 - 120	8.0	0 - 14
nzene	104.	76 - 127	2.0	0 - 11
luene	110.	76 - 125	8.0	0 - 13
enzene	106.	75 - 130	6.0	0 - 13

Volatile Organics Method Blank Results ***

mpound	Result	Flag	Units	Method
etone	10.0	U	ug/l	8260B
nzene	2.0	U	ug/l	8260B
omobenzene	2.0	U	ug/l	8260B
omochloromethane	2.0	U	ug/l	8260B
omoform	2.0	U	ug/l	8260B
omomethane	2.0	U	ug/l	8260B
Butanone	10.0	U	ug/l	8260B
Butylbenzene	2.0	U	ug/l	8260B
c-Butylbenzene	2.0	U	ug/l	8260B
Butylbenzene	2.0	U	ug/l	8260B
rbon disulfide	2.0	U	ug/l	8260B
rbon tetrachloride	2.0	U	ug/l	8260B
lorobenzene	2.0	U	ug/l	8260B
loroethane	2.0	U	ug/l	8260B
Chloroethylvinylether	2.0	U	ug/l	8260B
loroform	2.0	U	ug/l	8260B
loromethane	2.0	U	ug/l	8260B
otoluene	2.0	U	ug/l	8260B
otoluene	2.0	U	ug/l	8260B
2-Dibromo-3-chloropropane	10.0	U	ug/l	8260B
romochloromethane	2.0	U	ug/l	8260B
2-Dibromoethane	2.0	U	ug/l	8260B
romomethane	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

Project: Date Received: 2/20/98

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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
chloroethane	2.0	U	ug/l	8260B
chloroethene	2.0	U	ug/l	8260B
s-1,2-Dichloroethene	2.0	U	ug/l	8260B
ans-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
s-1,3-Dichloropropene	2.0	U	ug/l	8260B
ans-1,3-Dichloropropene	2.0	U	ug/l	8260B
hylbenzene	2.0	U	ug/l	8260B
exachlorobutadiene	2.0	U	ug/l	8260B
-Hexanone	10.0	U	ug/l	8260B
opropylbenzene	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
aphthalene	2.0	U	ug/l	8260B
-Propylbenzene	2.0	U	ug/l	8260B
tyrene	2.0	U	ug/l	8260B
1,1,2-Tetrachloroethane	2.0	U	ug/l	8260B
1,2,2-Tetrachloroethane	2.0	U	ug/l	8260B
etrachloroethene	2.0	U	ug/l	8260B
oluene	2.0	U	ug/l	8260B
2,3-Trichlorobenzene	2.0	U	ug/l	8260B
Trichlorobenzene	2.0	U	ug/l	8260B
1,1-Trichloroethane	2.0	U	ug/l	8260B
1,2-Trichloroethane	2.0	U	ug/l	8260B
richloroethene	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

IRECTOR U.S. ARMY CORPS ENG. 5394 Report Number: 98-A17517

ample I.D.: METHOD BLANK Lab Project: 92358

roject: Date Received: 2/20/98

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Volatile Organics Method Blank Results ***

pound	Result	Flag	Units	Method
,5-Trimethylbenzene	2.0	U	ug/l	8260B
yl chloride	2.0	U	ug/l	8260B
enes	2.0	U	ug/l	8260B
modichloromethane	2.0	U	ug/l	8260B
chlorofluoromethane	2.0	U	ug/l	8260B

Michael A. Burns