SITE INSPECTION REPORT
ORBIS PRODUCTS CORPORATION
55 VIRGINIA STREET
NEWARK, ESSEX COUNTY, NEW JERSEY

CERCLIS ID No.: NJD010910099

VOLUME V OF VIII

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Prepared for:
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Prepared by:
Region II Site Assessment Team
Weston Solutions, Inc.
Edison, New Jersey 08837

253172

REFERENCE 14 (continued)

Remedial Investigation Report & Remedial Action Workplan

Orbis Products Corporation
55 Virginia Street R-F14
Block 3773, Lots 15, 41, 43 and 53
Newark, Essex County, New Jersey
Case # 86-11-17-0100

Attachment 9 – 4 of 4

(856) 354-1337

VAL ASSOCIATES LABORATORY INC.

Water,Air & Soil Analysis

FAX: (856)354-1586

PHILIP V. DATZ, JR.
Chemist

N.J. Cert. # 04174

Seven Deer Tree
Professional Center
600 Deer Road
Cherry Hill, NJ 08034

Envirotactics

Project: Newark, NJ

Project#:
Date: March 14, 2002
Samples: 0202018-001A through 0202018-004a

Philip V. Datz, Jr.
Laboratory Director

37-88

(856) 354-1337

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LABORATORY DELIVERABLES

THIS FORM MUST BE COMPLETED BY THE LABORATORY OR ENVIRONMENTAL CONSULTANT AND ACCOMPANY ALL DATA SUBMISSIONS

The following laboratory deliverables shall be included in the data submission. All deviations from the accepted methodology and procedures, or performance values outside acceptable ranges shall be summarized in the Non-Conformance Summary. The proposed "Technical Requirements for Site Remediation" rules, which appeared in the May 4,1992 New Jersey Register, provides further details. The document shall be bound and paginated, contain a table of contents, and all pages shall be legible. Incomplete packages may be returned or held without reveiw until the data package is complete.

1. Cover Page, Title Page listing Lab Certification #, facility name & Address & date of report	X
2. Table of Contents	X
3. Summary Sheets Listing Analytical Results for all targeted and non-targeted compounds	X
4. Summary Table cross-referencing field ID vs. Lab ID	X
5. Document bound, paginated and legible	X
6. Chain of Custody	X
7. Methodology Summary	X
8. Laboratory Chronicle and Holding Time Check	X
9. Results submitted on a dry weight basis (where applicable)	X
10. Method Detection Limits	X
11. Lab certified by NJDEP for parameters or appropriate category of parameters or a member of the USEPA CLP	X
12. Non-Conformance Summary	X

Philip V. Datz Jr.
Laboratory Manager or Environmental Consultant's Signature

March 14, 2002
Date

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VAL Associates Laboratory, Inc.

Date: *14-Mar-02*

CLIENT: Envirotactics
Project: Newark
Lab Order: 0202018

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
0202018-001A	MW-5		2/5/02	2/5/02
0202018-002A	MW-3		2/5/02	2/5/02
0202018-003A	MW-16		2/5/02	2/5/02
0202018-004A	MW-7		2/5/02	2/5/02

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VAL Associates Laboratory, Inc.

Date: *14-Mar-02*

CLIENT:	Envirotactics	**Client Sample ID:**	MW-5
Lab Order:	0202018	**Tag Number:**	
Project:	Newark	**Collection Date:**	2/5/02
Lab ID:	0202018-001A	**Matrix:**	AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ICP METALS		**E200.7**				**Analyst: TPA**
Beryllium	ND	0.00063		mg/L	1	2/7/02
Chromium	0.03020	0.00314		mg/L	1	2/7/02
Copper	0.05160	0.00314		mg/L	1	2/7/02
Nickel	0.12960	0.00785		mg/L	1	2/7/02
Silver	0.00680	0.00345		mg/L	1	2/7/02
Zinc	0.72000	0.00157		mg/L	1	2/7/02
METALS BY GFAA		**E200.9**				**Analyst: TPA**
Antimony	ND	0.005		mg/L	1	2/11/02
Arsenic	0.028	0.002		mg/L	1	2/6/02
Cadmium	0.002	0.001		mg/L	1	2/7/02
Lead	0.076	0.050	*	mg/L	10	2/15/02
Selenium	ND	0.005		mg/L	1	2/7/02
Thallium	ND	0.002		mg/L	1	2/6/02
MERCURY, TOTAL		**SW7470**				**Analyst: TPA**
Mercury	ND	0.0002		mg/L	1	2/11/02
SEMIVOLATILE ORGANICS EPA METHOD 625 -B		**E625**				**Analyst: DBD**
1,2,4-Trichlorobenzene	R ~~ND~~	~~3.000~~ R		µg/L	1	2/8/02
1,2-Dichlorobenzene	ND	10.00 UJ		µg/L	1	2/8/02
1,3-Dichlorobenzene	ND	10.00		µg/L	1	2/8/02
1,4-Dichlorobenzene	ND	10.00		µg/L	1	2/8/02
2,4-Dinitrotoluene	ND	3.000		µg/L	1	2/8/02
2,6-Dinitrotoluene	ND	3.000		µg/L	1	2/8/02
2-Chloronaphthalene	ND	10.00		µg/L	1	2/8/02
3,3'-Dichlorobenzidine	ND	10.00		µg/L	1	2/8/02
4-Bromophenyl phenyl ether	ND	10.00		µg/L	1	2/8/02
4-Chlorophenyl phenyl ether	ND	10.00 UJ		µg/L	1	2/8/02
Acenaphthene	ND	10.00		µg/L	1	2/8/02
Acenaphthylene	ND	10.00		µg/L	1	2/8/02
Anthracene	ND	10.00		µg/L	1	2/8/02
Benz(a)anthracene	ND	3.000		µg/L	1	2/8/02
Benzidine	R ~~ND~~	~~10.00~~		µg/L	1	2/8/02
Benzo(a)pyrene	ND	10.00		µg/L	1	2/8/02
Benzo(b)fluoranthene	ND	3.000		µg/L	1	2/8/02
Benzo(g,h,i)perylene	ND	10.00		µg/L	1	2/8/02
Benzo(k)fluoranthene	ND	10.00 UJ		µg/L	1	2/8/02
Bis(2-chloroethoxy)methane	R ~~ND~~	~~10.00~~		µg/L	1	2/8/02
Bis(2-chloroethyl)ether	ND	3.000 UJ		µg/L	1	2/8/02
Bis(2-chloroisopropyl)ether	ND	10.00		µg/L	1	2/8/02
Bis(2-ethylhexyl)phthalate	ND	10.00	*	µg/L	1	2/8/02

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

VAL Associates Laboratory, Inc.

Date: *14-Mar-02*

CLIENT:	Envirotactics	**Client Sample ID:**	MW-5
Lab Order:	0202018	**Tag Number:**	
Project:	Newark	**Collection Date:**	2/5/02
Lab ID:	0202018-001A	**Matrix:**	AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANICS EPA METHOD 625 -B		**E625**				Analyst: DBD
Butyl benzyl phthalate	ND	10.00		µg/L	1	2/8/02
Chrysene	ND	10.00		µg/L	1	2/8/02
Di-n-butyl phthalate	ND	10.00		µg/L	1	2/8/02
Di-n-octyl phthalate	ND	10.00		µg/L	1	2/8/02
Dibenz(a,h)anthracene	ND	10.00		µg/L	1	2/8/02
Diethyl phthalate	ND	10.00		µg/L	1	2/8/02
Dimethyl phthalate	ND	10.00		µg/L	1	2/8/02
Fluoranthene	ND	10.00		µg/L	1	2/8/02
Fluorene	ND	10.00	UJ	µg/L	1	2/8/02
Hexachlorobenzene	ND	3.000		µg/L	1	2/8/02
Hexachlorobutadiene	~~ND~~	~~10.00~~	R	µg/L	1	2/8/02
Hexachlorocyclopentadiene	~~ND~~	~~10.00~~	R	µg/L	1	2/8/02
Hexachloroethane	ND	10.00	UJ	µg/L	1	2/8/02
Indeno(1,2,3-cd)pyrene	ND	10.00		µg/L	1	2/8/02
Isophorone	~~ND~~	~~10.00~~	R	µg/L	1	2/8/02
N-Nitrosodi-n-propylamine	ND	10.00	UJ	µg/L	1	2/8/02
N-Nitrosodimethylamine	ND	10.00	UJ	µg/L	1	2/8/02
N-Nitrosodiphenylamine	ND	10.00		µg/L	1	2/8/02
Naphthalene	~~ND~~	~~10.00~~	R	µg/L	1	2/8/02
Nitrobenzene	~~ND~~	~~10.00~~	R	µg/L	1	2/8/02
Phenanthrene	ND	10.00		µg/L	1	2/8/02
Pyrene	ND	10.00		µg/L	1	2/8/02
PHENOLICS, TOTAL RECOVERABLE		**E420.1**				Analyst: BVS
Phenolics, Total Recoverable	172	2.00		mg/L	100	2/6/02

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

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VAL Associates Laboratory, Inc.

Date: *14-Mar-02*

CLIENT:	Envirotactics	**Client Sample ID:**	MW-5
Lab Order:	0202018	**Tag Number:**	
Project:	Newark	**Collection Date:**	2/5/02
Lab ID:	0202018-001A	**Matrix:**	AQUEOUS

RN TENTATIVELY IDENTIFIED COMPOUNDS

	CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q
1	108-88-3	Toluene	3.689870	6089	JN
2		Silanediamine, 1,1-dimethyl-N	8.88	4518	J
3		Silanediamine, 1,1-dimethyl	8.99	182.6	J
4		Cyclohexanol, 3,3,5-trimethyl	10.66	3899	J
5		Cyclohexanol, 3,3,5-trimethyl	10.74	3464	J
6		Bicyclo[2.2.1]heptan-2-one, 1	11.82	225.9	J
7		Bicyclo [2.2.1] heptan-2-one,	11.96	4244	J
8		L-(-) - Menthol	12.52	3225	J
9	621-27-2	Phenol, 3-propyl-	13.78227	6528	JN
10		Phenol, 3-propyl-(2)	13.96	3614	J
11		Unknown(4)	14.61	3503	J
12		Unknown(5)	14.63	3040	J
13		Thymol	14.91	3807	J
14	1470-94-6	1H-Inden-5-ol, 2,3-dihydro-	15.45750	5738	JN
15		Unknown(6)	18.61	242.9	J

VAL Associates Laboratory, Inc.

Date: *14-Mar-02*

CLIENT:	Envirotactics	**Client Sample ID:**	MW-3
Lab Order:	0202018	**Tag Number:**	
Project:	Newark	**Collection Date:**	2/5/02
Lab ID:	0202018-002A	**Matrix:**	AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANICS EPA METHOD 625 -B E625						Analyst: DBD
1,2,4-Trichlorobenzene	R ~~ND~~	~~3.000~~		µg/L	1	2/8/02
1,2-Dichlorobenzene	ND	10.00		µg/L	1	2/8/02
1,3-Dichlorobenzene	ND	10.00		µg/L	1	2/8/02
1,4-Dichlorobenzene	ND	10.00		µg/L	1	2/8/02
2,4-Dinitrotoluene	ND	3.000		µg/L	1	2/8/02
2,6-Dinitrotoluene	ND	3.000		µg/L	1	2/8/02
2-Chloronaphthalene	ND	10.00		µg/L	1	2/8/02
3,3'-Dichlorobenzidine	ND	10.00		µg/L	1	2/8/02
4-Bromophenyl phenyl ether	ND	10.00		µg/L	1	2/8/02
4-Chlorophenyl phenyl ether	ND	10.00	UJ	µg/L	1	2/8/02
Acenaphthene	ND	10.00		µg/L	1	2/8/02
Acenaphthylene	ND	10.00		µg/L	1	2/8/02
Anthracene	ND	10.00		µg/L	1	2/8/02
Benz(a)anthracene	ND	3.000		µg/L	1	2/8/02
Benzidine	R ~~ND~~	~~10.00~~		µg/L	1	2/8/02
Benzo(a)pyrene	ND	10.00		µg/L	1	2/8/02
Benzo(b)fluoranthene	ND	3.000		µg/L	1	2/8/02
Benzo(g,h,i)perylene	ND	10.00		µg/L	1	2/8/02
Benzo(k)fluoranthene	ND	10.00	UJ	µg/L	1	2/8/02
Bis(2-chloroethoxy)methane	R ~~ND~~	~~10.00~~		µg/L	1	2/8/02
Bis(2-chloroethyl)ether	ND	3.000		µg/L	1	2/8/02
Bis(2-chloroisopropyl)ether	ND	10.00		µg/L	1	2/8/02
Bis(2-ethylhexyl)phthalate	ND	10.00		µg/L	1	2/8/02
Butyl benzyl phthalate	ND	10.00		µg/L	1	2/8/02
Chrysene	ND	10.00		µg/L	1	2/8/02
Di-n-butyl phthalate	ND	10.00		µg/L	1	2/8/02
Di-n-octyl phthalate	ND	10.00		µg/L	1	2/8/02
Dibenz(a,h)anthracene	ND	10.00		µg/L	1	2/8/02
Diethyl phthalate	ND	10.00		µg/L	1	2/8/02
Dimethyl phthalate	ND	10.00		µg/L	1	2/8/02
Fluoranthene	ND	10.00		µg/L	1	2/8/02
Fluorene	ND	10.00	UJ	µg/L	1	2/8/02
Hexachlorobenzene	ND	3.000		µg/L	1	2/8/02
Hexachlorobutadiene	R ~~ND~~	~~10.00~~		µg/L	1	2/8/02
Hexachlorocyclopentadiene	R ~~ND~~	~~10.00~~		µg/L	1	2/8/02
Hexachloroethane	ND	10.00		µg/L	1	2/8/02
Indeno(1,2,3-cd)pyrene	ND	10.00		µg/L	1	2/8/02
Isophorone	R ~~ND~~	~~10.00~~		µg/L	1	2/8/02
N-Nitrosodi-n-propylamine	ND	10.00		µg/L	1	2/8/02
N-Nitrosodimethylamine	ND	10.00		µg/L	1	2/8/02

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

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VAL Associates Laboratory, Inc.

Date: *14-Mar-02*

CLIENT:	Envirotactics	**Client Sample ID:**	MW-3
Lab Order:	0202018	**Tag Number:**	
Project:	Newark	**Collection Date:**	2/5/02
Lab ID:	0202018-002A	**Matrix:**	AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANICS EPA METHOD 625 -B E625						Analyst: DBD
N-Nitrosodiphenylamine	ND	10.00		µg/L	1	2/8/02
Naphthalene	~~ND~~ R	~~10.00~~		µg/L	1	2/8/02
Nitrobenzene	~~ND~~ ↓	~~10.00~~		µg/L	1	2/8/02
Phenanthrene	ND	10.00		µg/L	1	2/8/02
Pyrene	ND	10.00		µg/L	1	2/8/02

Qualifiers:		
	ND - Not Detected at the Reporting Limit	S - Spike Recovery outside accepted recovery limits
	J - Analyte detected below quantitation limits	R - RPD outside accepted recovery limits
	B - Analyte detected in the associated Method Blank	E - Value above quantitation range
	* - Value exceeds Maximum Contaminant Level	

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VAL Associates Laboratory, Inc. Date: *14-Mar-02*

CLIENT:	Envirotactics	**Client Sample ID:**	MW-3
Lab Order:	0202018	**Tag Number:**	
Project:	Newark	**Collection Date:**	2/5/02
Lab ID:	0202018-002A	**Matrix:**	AQUEOUS

RN TENTATIVELY IDENTIFIED COMPOUNDS

	CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q
1	106-42-3	p-Xylene	5.966578	6.381	JN
2	98-82-8	Benzene, (1-methylethyl)-	7.177464	32.27	JN
3	95-49-8	Benzene, 1-chloro-2-methyl-	7.816776	30.02	JN
4	106-43-4	Benzene, 1-chloro-4-methyl-	8.012697	5.65	JN
5		Trifluoroacetyl-.alpha.-terpi	9.480743	8.362	J
6	116-02-9	Cyclohexanol, 3,3,5-trimethyl	10.0244	36.83	JN
7		l-1,2,3-trimethylbicyclo[2.2.	10.61162	5.66	J
8	1196-31-2	Cyclohexanone, 5-methyl-2-(1-	11.83297	9.285	JN
9	10482-56-1	3-Cyclohexene-1-methanol, .al	12.48287	11.27	JN
10	57576-09-7	Cyclohexanol, 5-methyl-2-(1-m	12.57909	22.41	JN
11	499-75-2	Phenol, 2-methyl-5-(1-methyle	14.00963	35.05	JN
12	499-75-2	Phenol, 2-methyl-5-(1-methyle	14.16993	649.2	JN
13	1745-81-9	Phenol, 2-(2-propenyl)-	14.90176	6.989	JN
14		Unknown(13)	15.40249	5.712	J

VAL Associates Laboratory, Inc.

Date: *15-Mar-02*

CLIENT:	Envirotactics	**Client Sample ID:**	MW-16
Lab Order:	0202018	**Tag Number:**	
Project:	Newark	**Collection Date:**	2/5/02
Lab ID:	0202018-003A	**Matrix:**	AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ORGANOCHLORINE PEST		**E608**				Analyst: BVS
4,4'-DDD	ND	0.010		µg/L	1	3/1/02
4,4'-DDE	ND	0.014		µg/L	1	3/1/02
4,4'-DDT	ND	0.014		µg/L	1	3/1/02
Aldrin	ND	0.013		µg/L	1	3/1/02
alpha-BHC	ND	0.008		µg/L	1	3/1/02
Alpha-Chlordane	ND	0.005		µg/L	1	3/1/02
beta-BHC	ND	0.006		µg/L	1	3/1/02
delta-BHC	ND	0.013		µg/L	1	3/1/02
Dieldrin	ND	0.012		µg/L	1	3/1/02
Endosulfan I	ND	0.012		µg/L	1	3/1/02
Endosulfan II	ND	0.004		µg/L	1	3/1/02
Endosulfan sulfate	ND	0.013		µg/L	1	3/1/02
Endrin	ND	0.008		µg/L	1	3/1/02
Endrin aldehyde	ND	0.014		µg/L	1	3/1/02
Endrin Ketone	ND	0.008		µg/L	1	3/1/02
gamma-BHC	ND	0.001		µg/L	1	3/1/02
Gamma-Chlordane	ND	0.005		µg/L	1	3/1/02
Heptachlor	ND	0.003		µg/L	1	3/1/02
Heptachlor epoxide	ND	0.008		µg/L	1	3/1/02
Methoxychlor	ND	0.012		µg/L	1	3/1/02
Toxaphene	ND	0.100		µg/L	1	3/1/02
SEMIVOLATILE ORGANICS EPA METHOD 625 -B		**E625**				Analyst: DBD
1,2,4-Trichlorobenzene	~~ND~~ R	~~3.000~~		µg/L	1	2/8/02
1,2-Dichlorobenzene	ND	10.00		µg/L	1	2/8/02
1,3-Dichlorobenzene	ND	10.00		µg/L	1	2/8/02
1,4-Dichlorobenzene	ND	10.00		µg/L	1	2/8/02
2,4-Dinitrotoluene	ND	3.000		µg/L	1	2/8/02
2,6-Dinitrotoluene	ND	3.000		µg/L	1	2/8/02
2-Chloronaphthalene	ND	10.00		µg/L	1	2/8/02
3,3'-Dichlorobenzidine	ND	10.00		µg/L	1	2/8/02
4-Bromophenyl phenyl ether	ND	10.00		µg/L	1	2/8/02
4-Chlorophenyl phenyl ether	ND	10.00 UJ		µg/L	1	2/8/02
Acenaphthene	ND	10.00		µg/L	1	2/8/02
Acenaphthylene	ND	10.00		µg/L	1	2/8/02
Anthracene	ND	10.00		µg/L	1	2/8/02
Benz(a)anthracene	ND	3.000		µg/L	1	2/8/02
Benzidine	~~ND~~ R	~~10.00~~		µg/L	1	2/8/02
Benzo(a)pyrene	ND	10.00		µg/L	1	2/8/02
Benzo(b)fluoranthene	ND	3.000		µg/L	1	2/8/02
Benzo(g,h,i)perylene	ND	10.00		µg/L	1	2/8/02

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

VAL Associates Laboratory, Inc.

Date: *14-Mar-02*

CLIENT:	Envirotactics	**Client Sample ID:**	MW-16
Lab Order:	0202018	**Tag Number:**	
Project:	Newark	**Collection Date:**	2/5/02
Lab ID:	0202018-003A	**Matrix:**	AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANICS EPA METHOD 625 -B		**E625**				Analyst: DBD
Benzo(k)fluoranthene	ND	10.00	UJ	µg/L	1	2/8/02
Bis(2-chloroethoxy)methane	R ~~ND~~	~~10.00~~		µg/L	1	2/8/02
Bis(2-chloroethyl)ether	ND	3.000		µg/L	1	2/8/02
Bis(2-chloroisopropyl)ether	ND	10.00		µg/L	1	2/8/02
Bis(2-ethylhexyl)phthalate	ND	10.00		µg/L	1	2/8/02
Butyl benzyl phthalate	ND	10.00		µg/L	1	2/8/02
Chrysene	ND	10.00		µg/L	1	2/8/02
Di-n-butyl phthalate	ND	10.00		µg/L	1	2/8/02
Di-n-octyl phthalate	ND	10.00		µg/L	1	2/8/02
Dibenz(a,h)anthracene	ND	10.00		µg/L	1	2/8/02
Diethyl phthalate	ND	10.00		µg/L	1	2/8/02
Dimethyl phthalate	ND	10.00		µg/L	1	2/8/02
Fluoranthene	ND	10.00		µg/L	1	2/8/02
Fluorene	ND	10.00	UJ	µg/L	1	2/8/02
Hexachlorobenzene	ND	3.000		µg/L	1	2/8/02
Hexachlorobutadiene	R ~~ND~~	~~10.00~~		µg/L	1	2/8/02
Hexachlorocyclopentadiene	R ~~ND~~	~~10.00~~		µg/L	1	2/8/02
Hexachloroethane	ND	10.00		µg/L	1	2/8/02
Indeno(1,2,3-cd)pyrene	ND	10.00		µg/L	1	2/8/02
Isophorone	R ~~ND~~	~~10.00~~		µg/L	1	2/8/02
N-Nitrosodi-n-propylamine	ND	10.00		µg/L	1	2/8/02
N-Nitrosodimethylamine	ND	10.00		µg/L	1	2/8/02
N-Nitrosodiphenylamine	ND	10.00		µg/L	1	2/8/02
Naphthalene	R ~~ND~~	~~10.00~~		µg/L	1	2/8/02
Nitrobenzene	R ~~ND~~	~~10.00~~		µg/L	1	2/8/02
Phenanthrene	ND	10.00		µg/L	1	2/8/02
Pyrene	ND	10.00		µg/L	1	2/8/02
PHENOLICS, TOTAL RECOVERABLE		**E420.1**				Analyst: BVS
Phenolics, Total Recoverable	12.4	2.00		mg/L	100	2/6/02

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

3799

VAL Associates Laboratory, Inc.

Date: *14-Mar-02*

CLIENT:	Envirotactics	**Client Sample ID:**	MW-16
Lab Order:	0202018	**Tag Number:**	
Project:	Newark	**Collection Date:**	2/5/02
Lab ID:	0202018-003A	**Matrix:**	AQUEOUS

BN TENTATIVELY IDENTIFIED COMPOUNDS

	CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q
1	100-46-9	Benzylamine	9.446180	113.5	JN
2	33156-92-2	1,4-Cycloheptadiene, 6-(1-but	14.10319	66.74	JN
3	3020-06-2	3,4-Dimethylbenzyl cyanide	15.00409	67.35	JN
4	101-53-1	Phenol, 4-(phenylmethyl)-	19.37265	68.72	JN
5	102-97-6	Benzenemethanamine, N-(1-meth	22.94096	173.7	JN
6	2175-91-9	1,3-Cyclopentadiene, 5-(1-met	23.33554	121.4	JN

VAL Associates Laboratory, Inc.

Date: *14-Mar-02*

CLIENT:	Envirotactics	**Client Sample ID:**	MW-7
Lab Order:	0202018	**Tag Number:**	
Project:	Newark	**Collection Date:**	2/5/02
Lab ID:	0202018-004A	**Matrix:**	AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ICP METALS		**E200.7**				Analyst: TPA
Beryllium	ND	0.00063		mg/L	1	2/7/02
Chromium	ND	0.00314		mg/L	1	2/7/02
Copper	0.04750	0.00314		mg/L	1	2/7/02
Nickel	ND	0.00785		mg/L	1	2/7/02
Silver	ND	0.00345		mg/L	1	2/7/02
Zinc	0.01200	0.00157		mg/L	1	2/7/02
METALS BY GFAA		**E200.9**				Analyst: TPA
Antimony	ND	0.005		mg/L	1	2/11/02
Arsenic	0.016	0.010		mg/L	1	2/6/02
Cadmium	ND	0.001		mg/L	1	2/7/02
Lead	0.044	0.020	*	mg/L	4	2/15/02
Selenium	ND	0.005		mg/L	1	2/7/02
Thallium	ND	0.002		mg/L	1	2/6/02
MERCURY, TOTAL		**SW7470**				Analyst: TPA
Mercury	ND	0.0002		mg/L	1	2/11/02
SEMIVOLATILE ORGANICS EPA METHOD 625 -B		**E625**				Analyst: DBD
1,2,4-Trichlorobenzene	ND	3.000		µg/L	1	2/8/02
1,2-Dichlorobenzene	ND	10.00		µg/L	1	2/8/02
1,3-Dichlorobenzene	ND	10.00		µg/L	1	2/8/02
1,4-Dichlorobenzene	ND	10.00		µg/L	1	2/8/02
2,4-Dinitrotoluene	ND	3.000		µg/L	1	2/8/02
2,6-Dinitrotoluene	ND	3.000		µg/L	1	2/8/02
2-Chloronaphthalene	ND	10.00		µg/L	1	2/8/02
3,3'-Dichlorobenzidine	ND	10.00		µg/L	1	2/8/02
4-Bromophenyl phenyl ether	ND	10.00		µg/L	1	2/8/02
4-Chlorophenyl phenyl ether	ND	10.00	UJ	µg/L	1	2/8/02
Acenaphthene	ND	10.00		µg/L	1	2/8/02
Acenaphthylene	ND	10.00		µg/L	1	2/8/02
Anthracene	ND	10.00		µg/L	1	2/8/02
Benz(a)anthracene	ND	3.000		µg/L	1	2/8/02
Benzidine	R ~~ND~~	~~10.00~~		µg/L	1	2/8/02
Benzo(a)pyrene	ND	10.00		µg/L	1	2/8/02
Benzo(b)fluoranthene	ND	3.000		µg/L	1	2/8/02
Benzo(g,h,i)perylene	ND	10.00		µg/L	1	2/8/02
Benzo(k)fluoranthene	ND	10.00	UJ	µg/L	1	2/8/02
Bis(2-chloroethoxy)methane	ND	10.00		µg/L	1	2/8/02
Bis(2-chloroethyl)ether	ND	3.000		µg/L	1	2/8/02
Bis(2-chloroisopropyl)ether	ND	10.00		µg/L	1	2/8/02
Bis(2-ethylhexyl)phthalate	ND	10.00		µg/L	1	2/8/02

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

000013

3801

VAL Associates Laboratory, Inc.

Date: *14-Mar-02*

CLIENT:	Envirotactics	**Client Sample ID:**	MW-7
Lab Order:	0202018	**Tag Number:**	
Project:	Newark	**Collection Date:**	2/5/02
Lab ID:	0202018-004A	**Matrix:**	AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANICS EPA METHOD 625 -B E625						Analyst: DBD
Butyl benzyl phthalate	ND	10.00		µg/L	1	2/8/02
Chrysene	ND	10.00		µg/L	1	2/8/02
Di-n-butyl phthalate	ND	10.00		µg/L	1	2/8/02
Di-n-octyl phthalate	ND	10.00		µg/L	1	2/8/02
Dibenz(a,h)anthracene	ND	10.00		µg/L	1	2/8/02
Diethyl phthalate	ND	10.00		µg/L	1	2/8/02
Dimethyl phthalate	ND	10.00		µg/L	1	2/8/02
Fluoranthene	ND	10.00		µg/L	1	2/8/02
Fluorene	ND	10.00	UJ	µg/L	1	2/8/02
Hexachlorobenzene	ND	3.000		µg/L	1	2/8/02
Hexachlorobutadiene	ND	10.00		µg/L	1	2/8/02
Hexachlorocyclopentadiene	R ~~ND~~	~~10.00~~		µg/L	1	2/8/02
Hexachloroethane	ND	10.00		µg/L	1	2/8/02
Indeno(1,2,3-cd)pyrene	ND	10.00		µg/L	1	2/8/02
Isophorone	ND	10.00		µg/L	1	2/8/02
N-Nitrosodi-n-propylamine	ND	10.00		µg/L	1	2/8/02
N-Nitrosodimethylamine	ND	10.00		µg/L	1	2/8/02
N-Nitrosodiphenylamine	ND	10.00		µg/L	1	2/8/02
Naphthalene	ND	10.00		µg/L	1	2/8/02
Nitrobenzene	ND	10.00		µg/L	1	2/8/02
Phenanthrene	ND	10.00		µg/L	1	2/8/02
Pyrene	ND	10.00		µg/L	1	2/8/02

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

000014

3802

VAL Associates Laboratory, Inc.

Date: *14-Mar-02*

CLIENT:	Envirotactics	**Client Sample ID:**	MW-7
Lab Order:	0202018	**Tag Number:**	
Project:	Newark	**Collection Date:**	2/5/02
Lab ID:	0202018-004A	**Matrix:**	AQUEOUS

BN TENTATIVELY IDENTIFIED COMPOUNDS

	CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q
1		Unknown (14)	3.53328	582.5	J
2	590-50-1	2-Pentanone, 4,4-dimethyl-	3.9257	794.6	JN
3	95-49-8	Benzene, 1-chloro-2-methyl-	7.802350	1181	JN
4	498-81-7	Cyclohexanemethanol, .alpha.,	11.66215	4199	JN
5	33156-92-2	1,4-Cycloheptadiene, 6-(1-but	13.91314	340	JN
6	89-83-8	Thymol	14.19216	34.24	JN
7	4514-87-8	3-Bornanone, oxime	14.47808	30.04	JN
8		Acetamide, N-methyl-N-[4-[4-m	14.92201	16.23	J
9	7712-46-1	8-Hydroxycarvotanacetone	16.17833	28.49	JN
10	74779-76-3	Cyclopropanecarboxylic acid,	16.28563	71.87	JN
11		Unknown (12)	17.07269	7.966	J
12		Unknown (10)	17.24674	8.756	J
13		2,6-Diaminopyridine	18.03396	10.74	J
14	62337-96-6	Cyclohexane, 1,1,2-trimethyl-	18.40126	31.8	JN

Figure 2. Ground Water Sampling Log

Project _____ Site _____ Well No. 15 Date _____

Well Depth _____ Screen Length _____ Well Diameter _____ Casing Type _____

Sampling Device _____ Tubing type _____ Water Level _____

Measuring Point _____ Other Infor _____

Sampling Personnel _____

Time	pH	Temp	Cond.	Dis.O_2	Turb.	[ ]Conc			Notes
10:38	3.96	~~6.03~~ 6.57	1793	23.03	Clear				6.6
10:44	5.68	6.37	921	14.53	Clear				131.3
10:50	5.67	6.31	922	14.79	Clear				130.2
10:55	5.67	6.33	924	14.74	Clear				131.4

Type of Samples Collected _____

Information: 2 in = 617 ml/ft, 4 in = 2470 ml/ft: $Vol_{cyl} = \pi r^2 h$, $Vol_{sphere} = 4/3\pi r^3$

3804

WELL SAMPLING DATA FORM

DATE: 2/5/02
CLIENT: Environtactics
PROJECT NO.:
LOCATION: Newark
WEATHER: Sunny
SAMPLED BY: B

WELL NUMBER: 15
NJDEP PERMIT NO.:
TYPE OF WELL: 4"

CEMENT SEAL INTACT: Y
WATER IN MANHOLE: N
MANHOLECOVER INTACT: Y
PVC CASING INTACT: Y
CAP SEALED: Y
LOCK INTACT: Y
MEASURED POINT MARKED: N
PID MEASUREMENT: _____ PPM

DEPTH TO BOTTOM OF WELL: _____ FT.
DEPTH TO WATER: 8.15 FT.
WATER COLUMN: 0.00 FT.
VOLUME OF WATER IN WELL: _____ GAL
VOLUME OF WATER TO REMOVE: _____ GAL
VOLUME REMOVED: _____ GAL
TIME OF START: _____
TIME OF FINISH: _____
RATE OF PURGE: _____ GPM

METHOD OF PURGE: Pump
METHOD OF SAMPLE COLLECTION:
PHYSICAL APPEARANCE/COMMENTS:

FIELD MEASUREMENTS:

BEFORE PURGE:		AFTER PURGE:		AFTER SAMPLING:	
pH:	Units	pH:	Units	pH:	Units
COND:	µs	COND:	µs	COND:	µs
TEMP:	°C	TEMP:	°C	TEMP:	°C
ORP:	mV	ORP:	mV	ORP:	mV
DO:	ppm	DO:	ppm	DO:	ppm

TIME OF SAMPLE COLLECTION: 10:54

TYPES OF SAMPLES COLLECTED:

LABORATORY NAME AND LOCATION:
Val Associates Laboratory
600 Deer Tree Road
Unit #7
Cherry Hill, NJ 08034
Phone: 856-354-1337
Fax: 856-354-1586

000017

3805

Figure 2. Ground Water Sampling Log

Project _____ Site _____ Well No. 5 _____ Date _____

Well Depth _____ Screen Length _____ Well Diameter _____ Casing Type _____

Sampling Device _____ Tubing type _____ Water Level _____

Measuring Point _____ Other Infor _____

Sampling Personnel _____

Time	pH	Temp	Cond.	Dis.O_2	Turb.	[ ]Conc			Notes
11:07	3.68	7.91	2609	17.98	Clear				122.6
11:12	3.501	15.02	2918	3.36	Black				-90.2
11:17	11.51	15.24	2909	3.71	Black				-143.2
11:23	11.52	15.29	2910	3.70	Black				-147.2
11:26	11.52	15.31	2911	3.70	Black				-148.4

Type of Samples Collected _____

Information: 2 in = 617 ml/ft, 4 in = 2470 ml/ft: $Vol_{cyl} = \pi r^2 h$, $Vol_{sphere} = 4/3\pi r^3$

3806

WELL SAMPLING DATA FORM

DATE: 2/6/07 2/5/07
CLIENT: Envirotechs
PROJECT NO.:
LOCATION: Newark
WEATHER: Sunny 38
SAMPLED BY:

WELL NUMBER: 5
NJDEP PERMIT NO.:
TYPE OF WELL: 4"

CEMENT SEAL INTACT: Y
WATER IN MANHOLE: N
MANHOLECOVER INTACT: Y
PVC CASING INTACT: Y
CAP SEALED: Y
LOCK INTACT: Y
MEASURED POINT MARKED: Y
PID MEASUREMENT: _____ PPM

DEPTH TO BOTTOM OF WELL: _____ FT.
DEPTH TO WATER: 9.07 FT.
WATER COLUMN: 0.00 FT.
VOLUME OF WATER IN WELL: _____ GAL
VOLUME OF WATER TO REMOVE: _____ GAL
VOLUME REMOVED: _____ GAL
TIME OF START: _____
TIME OF FINISH: _____
RATE OF PURGE: _____ GPM

METHOD OF PURGE: Pump
METHOD OF SAMPLE COLLECTION: Pump
PHYSICAL APPEARANCE/COMMENTS:

IELD MEASUREMENTS:

BEFORE PURGE:		AFTER PURGE:		AFTER SAMPLING:	
pH:	Units	pH:	Units	pH:	Units
COND:	µs	COND:	µs	COND:	µs
TEMP:	°C	TEMP:	°C	TEMP:	°C
ORP:	mV	ORP:	mV	ORP:	mV
DO:	ppm	DO:	ppm	DO:	ppm

TIME OF SAMPLE COLLECTION: 11:28

TYPES OF SAMPLES COLLECTED:
BN, Metals

LABORATORY NAME AND LOCATION:
Val Associates Laboratory
600 Deer Tree Road
Unit #7
Cherry Hill, NJ 08034
Phone: 856-354-1337
Fax: 856-354-1586

Strange Odor

000019

3807

Figure 2. Ground Water Sampling Log

Project _____ Site _____ Well No. 3 _____ Date _____

Well Depth _____ Screen Length _____ Well Diameter _____ Casing Type _____

Sampling Device _____ Tubing type _____ Water Level _____

Measuring Point _____ Other Infor _____

Sampling Personnel _____

Time	pH	Temp	Cond.	Dis.O_2	Turb.	[ ]Conc			Notes
11:38	10.97	13.34	1857	14.91	Clay				-97.7
11:41	10.63	16.15	1981	8.48	Clay				-101.7
11:45	10.64	16.24	1985	8.49	Clay				-108.4
11:49	10.65	16.50	2001	8.46	Clay				-110.4

Type of Samples Collected _____

Information: 2 in = 617 ml/ft, 4 in = 2470 ml/ft; $Vol_{cyl} = m^3h$, $Vol_{sphere} = 4/3\pi r^3$

3808

WELL SAMPLING DATA FORM

DATE: 2/5/02
CLIENT: Envirotactics
PROJECT NO.:
LOCATION: Newark
WEATHER: Sunny
SAMPLED BY: JS

WELL NUMBER: 3
NJDEP PERMIT NO.:
TYPE OF WELL: 411

CEMENT SEAL INTACT: Y
WATER IN MANHOLE: N
MANHOLECOVER INTACT: Y
PVC CASING INTACT: Y
CAP SEALED: Y
LOCK INTACT: Y
MEASURED POINT MARKED: N
PID MEASUREMENT: _____ PPM

DEPTH TO BOTTOM OF WELL: _____ FT.
DEPTH TO WATER: 17.67 FT.
WATER COLUMN: 0.00 FT.
VOLUME OF WATER IN WELL: _____ GAL
VOLUME OF WATER TO REMOVE: _____ GAL
VOLUME REMOVED: _____ GAL
TIME OF START: _____
TIME OF FINISH: _____
RATE OF PURGE: _____ GPM

METHOD OF PURGE: Pump
METHOD OF SAMPLE COLLECTION: Pump
PHYSICAL APPEARANCE/COMMENTS:

FIELD MEASUREMENTS:

BEFORE PURGE:		AFTER PURGE:		AFTER SAMPLING:	
pH:	Units	pH:	Units	pH:	Units
COND:	µs	COND:	µs	COND:	µs
TEMP:	°C	TEMP:	°C	TEMP:	°C
ORP:	mV	ORP:	mV	ORP:	mV
DO:	ppm	DO:	ppm	DO:	ppm

TIME OF SAMPLE COLLECTION: 11:51

TYPES OF SAMPLES COLLECTED:

BN

LABORATORY NAME AND LOCATION:
Val Associates Laboratory
600 Deer Tree Road
Unit #7
Cherry Hill, NJ 08034
Phone: 856-354-1337
Fax: 856-354-1586

000021

3809

Figure 2. Ground Water Sampling Log

Project _____ Site _____ Well No. 2 Date _____

Well Depth _____ Screen Length _____ Well Diameter _____ Casing Type _____

Sampling Device _____ Tubing type _____ Water Level _____

Measuring Point _____ Other Infor _____

Sampling Personnel _____

Time	pH	Temp	Cond.	Dis.O_2	Turb.	[ ]Conc			Notes
12:10	3.49	12.33	539	11.44	Clear				4.85
12:14	4.53	14.55	502	4.21	Clearly				-3.9
12:17	6.19	14.38	504	4.20	Clearly				-2.1
12:20	6.20	14.41	505	4.21	Clearly				-3.4
12:23	6.21	14.44	507	4.22	Clearly				-4.1

Type of Samples Collected _____

Information: 2 in = 617 ml/ft, 4 in = 2470 ml/ft: $Vol_{cyl} = \pi r^2 h$, $Vol_{sphere} = 4/3\pi r^3$

3810

WELL SAMPLING DATA FORM

DATE: 2/5/02
CLIENT: Environmental
PROJECT NO.:
LOCATION: Newark
WEATHER: Sunny
SAMPLED BY: G

WELL NUMBER: 2
NJDEP PERMIT NO.:
TYPE OF WELL: 4"

CEMENT SEAL INTACT: Y
WATER IN MANHOLE: N
MANHOLECOVER INTACT: Y
PVC CASING INTACT: Y
CAP SEALED: Y
LOCK INTACT: Y
MEASURED POINT MARKED: N
PID MEASUREMENT: _____ PPM

DEPTH TO BOTTOM OF WELL: _____ FT.
DEPTH TO WATER: 12.99 FT.
WATER COLUMN: 0.00 FT.
VOLUME OF WATER IN WELL: _____ GAL
VOLUME OF WATER TO REMOVE: _____ GAL
VOLUME REMOVED: _____ GAL
TIME OF START: _____
TIME OF FINISH: _____
RATE OF PURGE: _____ GPM

METHOD OF PURGE: Pump
METHOD OF SAMPLE COLLECTION:
PHYSICAL APPEARANCE/COMMENTS:

FIELD MEASUREMENTS:

BEFORE PURGE:		AFTER PURGE:		AFTER SAMPLING:	
pH:	Units	pH:	Units	pH:	Units
COND:	µs	COND:	µs	COND:	µs
TEMP:	°C	TEMP:	°C	TEMP:	°C
ORP:	mV	ORP:	mV	ORP:	mV
DO:	ppm	DO:	ppm	DO:	ppm

TIME OF SAMPLE COLLECTION: 12.24

TYPES OF SAMPLES COLLECTED:

LABORATORY NAME AND LOCATION:
Val Associates Laboratory
600 Deer Tree Road
Unit #7
Cherry Hill, NJ 08034
Phone: 856-354-1337
Fax: 856-354-1586

000023

3-011

Figure 2. Ground Water Sampling Log

Project _____ Site 16 Well No. 16 Date _____

Well Depth _____ Screen Length _____ Well Diameter _____ Casing Type _____

Sampling Device _____ Tubing type _____ Water Level _____

Measuring Point _____ Other infor _____

Sampling Personnal _____

Time	pH	Temp	Cond.	Dis.O_2	Turb.	[ ]Conc			Notes

Type of Samples Collected _____

Information: 2 in = 617 ml/ft, 4 in = 2470 ml/ft: Vol_{wl} = m³h, Vol_{screen} = 4/3π r³

000024

3612

WELL SAMPLING DATA FORM

DATE: 2/5/02
CLIENT: Envirotech
PROJECT NO.:
LOCATION: Newark
WEATHER: Sunny
SAMPLED BY: B

WELL NUMBER: 16
NJDEP PERMIT NO.:
TYPE OF WELL: 411

CEMENT SEAL INTACT: Y
WATER IN MANHOLE: N
MANHOLECOVER INTACT: Y
PVC CASING INTACT: Y
CAP SEALED: Y
LOCK INTACT: Y
MEASURED POINT MARKED: NJ
PID MEASUREMENT: _____ PPM

DEPTH TO BOTTOM OF WELL: _____ FT.
DEPTH TO WATER: 16.25 FT.
WATER COLUMN: 0.00 FT.
VOLUME OF WATER IN WELL: _____ GAL
VOLUME OF WATER TO REMOVE: _____ GAL
VOLUME REMOVED: _____ GAL
TIME OF START: _____
TIME OF FINISH: _____
RATE OF PURGE: _____ GPM

METHOD OF PURGE: pump
METHOD OF SAMPLE COLLECTION:
PHYSICAL APPEARANCE/COMMENTS:

FIELD MEASUREMENTS:

BEFORE PURGE:		AFTER PURGE:		AFTER SAMPLING:	
pH:	Units	pH:	Units	pH:	Units
COND:	µs	COND:	µs	COND:	µs
TEMP:	°C	TEMP:	°C	TEMP:	°C
ORP:	mV	ORP:	mV	ORP:	mV
DO:	ppm	DO:	ppm	DO:	ppm

TIME OF SAMPLE COLLECTION: _____

TYPES OF SAMPLES COLLECTED:
BN, Pest Acid

Not Enough water to do Lo-Flow

LABORATORY NAME AND LOCATION:
Val Associates Laboratory
600 Deer Tree Road
Unit #7
Cherry Hill, NJ 08034
Phone: 856-354-1337
Fax: 856-354-1586

000025

3-013

Figure 2. Ground Water Sampling Log

Project _____ Site _____ Well No. 7 Date _____

Well Depth _____ Screen Length _____ Well Diameter _____ Casing Type _____

Sampling Device _____ Tubing type _____ Water Level _____

Measuring Point _____ Other Infor _____

Sampling Personnel _____

Time	pH	Temp	Cond.	Dis.O_2	Turb.	[ ]Conc			Notes
12:54	4.81	8.53	4308	19.44	Clear				41.2
12:57	8.06	10.67	4757	9.81	Cloudy				-52.4
1:02	8.07	10.68	4761	9.83	Cloudy				-50.6
1:06	9.11	14.38	4961	12.19	Cloudy				-80.6
1:09	9.12	14.41	4960	12.16	Cloudy				-81.4

Type of Samples Collected _____

Information: 2 in = 617 ml/ft, 4 in = 2470 ml/ft: $Vol_{cyl} = \pi r^2 h$; $Vol_{sphere} = 4/3\pi r^3$

3-614

WELL SAMPLING DATA FORM

DATE: 2/5/02
CLIENT: ENVIROTACTICS
PROJECT NO.:
LOCATION: Newark
WEATHER: Sunny
SAMPLED BY: B

WELL NUMBER: 7
NJDEP PERMIT NO.:
TYPE OF WELL: 4"

CEMENT SEAL INTACT: Y
WATER IN MANHOLE: no
MANHOLECOVER INTACT: Y
PVC CASING INTACT: Y
CAP SEALED: Y
LOCK INTACT: Y
MEASURED POINT MARKED: N
PID MEASUREMENT: _____ PPM

DEPTH TO BOTTOM OF WELL: _____ FT.
DEPTH TO WATER: 13.25 FT.
WATER COLUMN: 0.00 FT.
VOLUME OF WATER IN WELL: _____ GAL
VOLUME OF WATER TO REMOVE: _____ GAL
VOLUME REMOVED: _____ GAL
TIME OF START: _____
TIME OF FINISH: _____
RATE OF PURGE: _____ GPM

METHOD OF PURGE: Pump
METHOD OF SAMPLE COLLECTION: Pump
PHYSICAL APPEARANCE/COMMENTS:

FIELD MEASUREMENTS:

BEFORE PURGE:		AFTER PURGE:		AFTER SAMPLING:	
pH:	Units	pH:	Units	pH:	Units
COND:	µs	COND:	µs	COND:	µs
TEMP:	°C	TEMP:	°C	TEMP:	°C
ORP:	mV	ORP:	mV	ORP:	mV
DO:	ppm	DO:	ppm	DO:	ppm

TIME OF SAMPLE COLLECTION: 1:10

TYPES OF SAMPLES COLLECTED:

LABORATORY NAME AND LOCATION:
Val Associates Laboratory
600 Deer Tree Road
Unit #7
Cherry Hill, NJ 08034
Phone: 856-354-1337
Fax: 856-354-1586

000027

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VAL Associates Laboratory, Inc.

Date: *14-Mar-02*

CLIENT: Envirotactics
Work Order: 0202018
Project: Newark

ANALYTICAL QC SUMMARY REPORT

TestNo: E625

Sample ID: MB-3063	SampType: MBLK	TestCode: 625_W_BNA	Units: µg/L	Prep Date: 2/6/02	Run ID: BNAPB_020208A
Client ID: ZZZZZ	Batch ID: 3063	TestNo: E625		Analysis Date: 2/8/02	SeqNo: 144473

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	0	3.000	0	0	0	0	0	0	0		
1,2-Dichlorobenzene	0	4.139	0	0	0	0	0	0	0		
1,3-Dichlorobenzene	0	3.347	0	0	0	0	0	0	0		
1,4-Dichlorobenzene	0	4.108	0	0	0	0	0	0	0		
2,4,5-Trichlorophenol	0	3.584	0	0	0	0	0	0	0		
2,4,6-Trichlorophenol	0	4.080	0	0	0	0	0	0	0		
2,4-Dichlorophenol	0	4.931	0	0	0	0	0	0	0		
2,4-Dimethylphenol	0	4.337	0	0	0	0	0	0	0		
2,4-Dinitrophenol	0	5.164	0	0	0	0	0	0	0		
2,4-Dinitrotoluene	0	3.000	0	0	0	0	0	0	0		
2,6-Dinitrotoluene	0	3.000	0	0	0	0	0	0	0		
2-Chloronaphthalene	0	4.427	0	0	0	0	0	0	0		
2-Chlorophenol	0	4.970	0	0	0	0	0	0	0		
2-Methylphenol	0	4.403	0	0	0	0	0	0	0		
2-Nitrophenol	0	4.357	0	0	0	0	0	0	0		
3,3'-Dichlorobenzidine	0	7.054	0	0	0	0	0	0	0		
3-Methylphenol	0	1.485	0	0	0	0	0	0	0		
4,6-Dinitro-2-methylphenol	0	3.548	0	0	0	0	0	0	0		
4-Bromophenyl phenyl ether	0	2.948	0	0	0	0	0	0	0		
4-Chloro-3-methylphenol	0	3.978	0	0	0	0	0	0	0		
4-Chlorophenyl phenyl ether	0	4.722	0	0	0	0	0	0	0		
4-Methylphenol	0	1.958	0	0	0	0	0	0	0		
4-Nitrophenol	0	5.141	0	0	0	0	0	0	0		
Acenaphthene	0	4.537	0	0	0	0	0	0	0		
Acenaphthylene	0	5.659	0	0	0	0	0	0	0		
Aniline	0	4.749	0	0	0	0	0	0	0		
Anthracene	0	3.238	0	0	0	0	0	0	0		
Azobenzene	0	2.386	0	0	0	0	0	0	0		
Benz(a)anthracene	0	3.000	0	0	0	0	0	0	0		
Benzidine	0	5.945	0	0	0	0	0	0	0		

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000028

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

CLIENT: Envirotactics
Work Order: 0202018
Project: Newark

ANALYTICAL QC SUMMARY REPORT

TestNo: E625

Sample ID: MB-3063	SampType: MBLK	TestCode: 625_W_BNA	Units: µg/L	Prep Date: 2/6/02	Run ID: BNAPB_020208A
Client ID: ZZZZZ	Batch ID: 3063	TestNo: E625		Analysis Date: 2/8/02	SeqNo: 144473

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzo(a)pyrene	0	3.836	0	0	0	0	0	0	0		
Benzo(b)fluoranthene	0	2.934	0	0	0	0	0	0	0		
Benzo(g,h,i)perylene	0	3.379	0	0	0	0	0	0	0		
Benzo(k)fluoranthene	0	4.733	0	0	0	0	0	0	0		
Benzoic acid	0	3.918	0	0	0	0	0	0	0		
Bis(2-chloroethoxy)methane	0	6.671	0	0	0	0	0	0	0		
Bis(2-chloroethyl)ether	0	1.659	0	0	0	0	0	0	0		
Bis(2-chloroisopropyl)ether	0	5.063	0	0	0	0	0	0	0		
Bis(2-ethylhexyl)phthalate	0	5.206	0	0	0	0	0	0	0		
Butyl benzyl phthalate	0	3.525	0	0	0	0	0	0	0		
Carbazole	0	4.351	0	0	0	0	0	0	0		
Chrysene	0	3.331	0	0	0	0	0	0	0		
Di-n-butyl phthalate	0	4.880	0	0	0	0	0	0	0		
Di-n-octyl phthalate	0	6.344	0	0	0	0	0	0	0		
Dibenz(a,h)anthracene	0	3.972	0	0	0	0	0	0	0		
Diethyl phthalate	0	6.927	0	0	0	0	0	0	0		
Dimethyl phthalate	0	2.028	0	0	0	0	0	0	0		
Fluoranthene	0	4.918	0	0	0	0	0	0	0		
Fluorene	0	2.801	0	0	0	0	0	0	0		
Hexachlorobenzene	0	3.000	0	0	0	0	0	0	0		
Hexachlorobutadiene	0	5.939	0	0	0	0	0	0	0		
Hexachlorocyclopentadiene	0	3.379	0	0	0	0	0	0	0		
Hexachloroethane	0	3.000	0	0	0	0	0	0	0		
Indeno(1,2,3-cd)pyrene	0	3.893	0	0	0	0	0	0	0		
Isophorone	0	4.709	0	0	0	0	0	0	0		
N-Nitrosodi-n-propylamine	0	10.00	0	0	0	0	0	0	0		
N-Nitrosodimethylamine	0	4.100	0	0	0	0	0	0	0		
N-Nitrosodiphenylamine	0	2.959	0	0	0	0	0	0	0		
Naphthalene	0	5.505	0	0	0	0	0	0	0		
Nitrobenzene	0	3.000	0	0	0	0	0	0	0		
Pentachlorophenol	0	1.000	0	0	0	0	0	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

000029

CLIENT: Envirotactics
Work Order: 0202018
Project: Newark

ANALYTICAL QC SUMMARY REPORT

TestNo: E625

Sample ID: MB-3063	SampType: MBLK	TestCode: 625_W_BNA	Units: µg/L	Prep Date: 2/6/02	Run ID: BNAPB_020208A
Client ID: ZZZZZ	Batch ID: 3063	TestNo: E625		Analysis Date: 2/8/02	SeqNo: 144473

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenanthrene	0	4.254	0	0	0	0	0	0	0		
Phenol	0	5.039	0	0	0	0	0	0	0		
Pyrene	0	4.565	0	0	0	0	0	0	0		
Pyridine	0	3.944	0	0	0	0	0	0	0		

Sample ID: MB-3063#2	SampType: MBLK	TestCode: 625_W_BNA	Units: µg/L	Prep Date: 2/13/02	Run ID: BNAPB_020221A
Client ID: ZZZZZ	Batch ID: 3063	TestNo: E625		Analysis Date: 2/21/02	SeqNo: 144886

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	0	3.000									
1,2-Dichlorobenzene	0	10.00									
1,3-Dichlorobenzene	0	10.00									
1,4-Dichlorobenzene	0	10.00									
2,4,5-Trichlorophenol	0	10.00									
2,4,6-Trichlorophenol	0	10.00									
2,4-Dichlorophenol	0	10.00									
2,4-Dimethylphenol	0	10.00									
2,4-Dinitrophenol	0	10.00									
2,4-Dinitrotoluene	0	3.000									
2,6-Dinitrotoluene	0	3.000									
2-Chloronaphthalene	0	10.00									
2-Chlorophenol	0	10.00									
2-Methylphenol	0	10.00									
2-Nitrophenol	0	10.00									
3,3'-Dichlorobenzidine	0	10.00									
3-Methylphenol	0	10.00									
4,6-Dinitro-2-methylphenol	0	10.00									
4-Bromophenyl phenyl ether	0	10.00									
4-Chloro-3-methylphenol	0	10.00									
4-Chlorophenyl phenyl ether	0	10.00									
4-Methylphenol	0	10.00									

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

(856) 354-1337

VAL ASSOCIATES LABORATORY INC.

FAX: (856)354-1586

Water,Air & Soil Analysis

PHILIP V. DATZ, JR.
Chemist

N.J. Cert. # 04174

Seven Deer Tree
Professional Center
600 Deer Road
Cherry Hill, NJ 08034

Organics Analysis Data Sheet
Tentatively Identified Compounds
Semivolatile Compounds

Client:
Sample ID: MB-3063 (BNAPB 572)
Date Received: N/A
Date Extracted: N/A
Analysis Date: 02/08/02
Column: Capillary
Sample Matrix: Aqueous
Reporting Units: ug/L
Method: EPA Method 625

Client ID: Method Blank

Project #:
Dilution Factor: 1.00
Percent Solids: 0.00
Sample Wt./Vol.: 1000.00 ml

C.A.S. Number	Compound	Retention Time		Result	DQ
	Unknown	8.83		2.79	J

Data Reporting Qualifiers
DQ - Data qualifiers
J - Estimated value
B - Compound found in method blank
MDL - Method detection limit

4B

SEMIVOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

MB-3043#4

Lab Name: VAL ASSO LAB Contract: _____

Lab Code: F2 Case No.: _____ SAS No.: _____ SDG No.: BB438

Lab File ID: BNAPB570.Q Lab Sample ID:

Instrument ID: GC/MS Date Extracted:

Matrix: (soil/water) WATER Date Analyzed: 02/08/82

Level: (low/med) Low Time Analyzed: 08:39

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	MB-3043#4	MB-3043#4	BNAPB570.MSS	08:39
02	100PPBSTD	100PPBSTD	BNAPB571.MSS	09:29
03	~~MB-3043#2~~ 3063	~~MB-3043#2~~ 3063	BNAPB572.MSS	10:23
04	0202009-002A	0202009-002A	BNAPB573.MSS	11:17
05	0202009-003A	0202009-003A	BNAPB574.MSS	12:11
06	0202014-001A	0202014-001A	BNAPB575.MSS	13:11
07	0202014-003A	0202014-003A	BNAPB576.MSS	13:57
08	0202014-004A	0202014-004A	BNAPB577.MSS	14:51
09	0202014-005A	0202014-005A	BNAPB578.MSS	15:44
10	0202014-006A	0202014-006A	BNAPB579.MSS	16:38
11	0202014-007A	0202014-007A	BNAPB580.MSS	17:31
12	0202014-009A	0202014-009A	BNAPB581.MSS	18:25
13	0202018-001A	0202018-001A	BNAPB582.MSS	19:18
14	0202018-002A	0202018-002A	BNAPB583.MSS	20:10
15	0202018-003A	0202018-003A	BNAPB584.MSS	21:04
16	0202018-004A	0202018-004A	BNAPB585.MSS	21:58
17	100PPBSTD	100PPBSTD	BNAPB586.MSS	22:51
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

AGN 2/8/82

COMMENTS: _____

000032

3620

VAL Associates Laboratory, Inc.

Date: *15-Mar-02*

CLIENT: Envirotactics
Work Order: 0202018
Project: Newark

ANALYTICAL QC SUMMARY REPORT

TestCode: 608_w_pest

Sample ID: MB-3021	SampType: MBLK	TestCode: 608_w_pest	Units: µg/L	Prep Date: 1/21/02	Run ID: PEST2_020122A
Client ID: ZZZZZ	Batch ID: 3021	TestNo: E608		Analysis Date: 1/22/02	SeqNo: 141969

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4,4'-DDD	ND	0.0100									
4,4'-DDE	ND	0.0139									
4,4'-DDT	ND	0.0143									
Aldrin	ND	0.0126									
alpha-BHC	ND	0.00770									
Alpha-Chlordane	ND	0.00500									
beta-BHC	ND	0.00599									
delta-BHC	ND	0.0126									
Dieldrin	ND	0.0116									
Endosulfan I	ND	0.0120									
Endosulfan II	ND	0.00399									
Endosulfan sulfate	ND	0.0126									
Endrin	ND	0.00769									
Endrin aldehyde	ND	0.0139									
Endrin Ketone	ND	0.00817									
gamma-BHC	ND	0.00120									
Gamma-Chlordane	ND	0.00500									
Heptachlor	ND	0.00308									
Heptachlor epoxide	ND	0.00848									
Methoxychlor	ND	0.0117									
Toxaphene	ND	0.100									

Sample ID: MB-3021	SampType: MBLK	TestCode: 608_w_pest	Units: µg/L	Prep Date: 1/21/02	Run ID: PEST2_020301A
Client ID: ZZZZZ	Batch ID: 3021	TestNo: E608		Analysis Date: 3/1/02	SeqNo: 146620

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4,4'-DDD	ND	0.0100	0	0	0	0	0	0	0		
4,4'-DDE	ND	0.0139	0	0	0	0	0	0	0		
4,4'-DDT	ND	0.0143	0	0	0	0	0	0	0		
Aldrin	ND	0.0126	0	0	0	0	0	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

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000033

CLIENT: Envirotactics
Work Order: 0202018
Project: Newark

ANALYTICAL QC SUMMARY REPORT

TestCode: 608_w_pest

Sample ID: MB-3021	SampType: MBLK	TestCode: 608_w_pest	Units: µg/L	Prep Date: 1/21/02	Run ID: PEST2_020301A
Client ID: ZZZZZ	Batch ID: 3021	TestNo: E608		Analysis Date: 3/1/02	SeqNo: 146620

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
alpha-BHC	ND	0.00770	0	0	0	0	0	0	0		
Alpha-Chlordane	ND	0.00500	0	0	0	0	0	0	0		
beta-BHC	ND	0.00599	0	0	0	0	0	0	0		
delta-BHC	ND	0.0126	0	0	0	0	0	0	0		
Dieldrin	ND	0.0116	0	0	0	0	0	0	0		
Endosulfan I	ND	0.0120	0	0	0	0	0	0	0		
Endosulfan II	ND	0.00399	0	0	0	0	0	0	0		
Endosulfan sulfate	ND	0.0126	0	0	0	0	0	0	0		
Endrin	ND	0.00769	0	0	0	0	0	0	0		
Endrin aldehyde	ND	0.0139	0	0	0	0	0	0	0		
Endrin Ketone	ND	0.00817	0	0	0	0	0	0	0		
gamma-BHC	ND	0.00120	0	0	0	0	0	0	0		
Gamma-Chlordane	ND	0.00500	0	0	0	0	0	0	0		
Heptachlor	ND	0.00308	0	0	0	0	0	0	0		
Heptachlor epoxide	ND	0.00848	0	0	0	0	0	0	0		
Methoxychlor	ND	0.0117	0	0	0	0	0	0	0		
Toxaphene	ND	0.100	0	0	0	0	0	0	0		

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0000034

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

VAL Associates Laboratory, Inc.

Date: *14-Mar-02*

CLIENT: Envirotactics
Work Order: 0202018
Project: Newark

ANALYTICAL QC SUMMARY REPORT

TestNo: E200.7

Sample ID: mblk	SampType: mblk	TestCode: 200.7dw	Units: mg/L	Prep Date:	Run ID: SPECTRO ICP_020207
Client ID: ZZZZZ	Batch ID: 3071	TestNo: E200.7		Analysis Date: 2/7/02	SeqNo: 143424

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Beryllium	0	0.000628									
Chromium	0	0.00314									
Copper	0	0.00314									
Nickel	0	0.00785									
Silver	0	0.00345									
Zinc	0	0.00157									

Sample ID: ccb	SampType: ccb	TestCode: 200.7dw	Units: mg/L	Prep Date:	Run ID: SPECTRO ICP_020207
Client ID: ZZZZZ	Batch ID: 3071	TestNo: E200.7		Analysis Date: 2/7/02	SeqNo: 143423

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Beryllium	0	0.000628	0	0	0	0	0	0	0		
Chromium	0	0.00314	0	0	0	0	0	0	0		
Copper	0	0.00314	0	0	0	0	0	0	0		
Nickel	0	0.00785	0	0	0	0	0	0	0		
Silver	0	0.00345	0	0	0	0	0	0	0		
Zinc	0	0.00157	0	0	0	0	0	0	0		

Sample ID: ccb	SampType: ccb	TestCode: 200.7dw	Units: mg/L	Prep Date:	Run ID: SPECTRO ICP_020207
Client ID: ZZZZZ	Batch ID: 3071	TestNo: E200.7		Analysis Date: 2/7/02	SeqNo: 143425

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Beryllium	0	0.000628	0	0	0	0	0	0	0		
Chromium	0	0.00314	0	0	0	0	0	0	0		
Copper	0	0.00314	0	0	0	0	0	0	0		
Nickel	0	0.00785	0	0	0	0	0	0	0		
Silver	0	0.00345	0	0	0	0	0	0	0		
Zinc	0	0.00157	0	0	0	0	0	0	0		

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0000035

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

CLIENT: Envirotactics
Work Order: 0202018
Project: Newark

ANALYTICAL QC SUMMARY REPORT

TestNo: E200.7

Sample ID: ccb	SampType: ccb	TestCode: 200.7dw	Units: mg/L	Prep Date:	Run ID: SPECTRO ICP_020207
Client ID: ZZZZZ	Batch ID: 3071	TestNo: E200.7		Analysis Date: 2/7/02	SeqNo: 143426

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Beryllium	0	0.000628	0	0	0	0	0	0	0		
Chromium	0	0.00314	0	0	0	0	0	0	0		
Copper	0	0.00314	0	0	0	0	0	0	0		
Nickel	0	0.00785	0	0	0	0	0	0	0		
Silver	0	0.00345	0	0	0	0	0	0	0		
Zinc	0	0.00157	0	0	0	0	0	0	0		

Sample ID: icb	SampType: icb	TestCode: 200.7dw	Units: mg/L	Prep Date:	Run ID: SPECTRO ICP_020207
Client ID: ZZZZZ	Batch ID: 3071	TestNo: E200.7		Analysis Date: 2/7/02	SeqNo: 143421

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Beryllium	0	0.000628	0	0	0	0	0	0	0		
Chromium	0	0.00314	0	0	0	0	0	0	0		
Copper	0	0.00314	0	0	0	0	0	0	0		
Nickel	0	0.00785	0	0	0	0	0	0	0		
Silver	0	0.00345	0	0	0	0	0	0	0		
Zinc	0	0.00157	0	0	0	0	0	0	0		

Sample ID: mblk	SampType: mblk	TestCode: 200.7w	Units: mg/L	Prep Date:	Run ID: SPECTRO ICP_020212
Client ID: ZZZZZ	Batch ID: 3071	TestNo: E200.7		Analysis Date: 2/12/02	SeqNo: 143853

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	ND	0.0031400									
Manganese	ND	0.0012560									
Zinc	ND	0.0015700									

Sample ID: mblk	SampType: mblk	TestCode: 200.7w	Units: mg/L	Prep Date:	Run ID: SPECTRO ICP_020219
Client ID: ZZZZZ	Batch ID: 3071	TestNo: E200.7		Analysis Date: 2/19/02	SeqNo: 144950

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	ND	0.010676	0	0	0	0	0	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

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000036

CLIENT: Envirotactics
Work Order: 0202018
Project: Newark

ANALYTICAL QC SUMMARY REPORT

TestNo: E200.7

Sample ID: mblk	SampType: mblk	TestCode: 200.7w	Units: mg/L	Prep Date:	Run ID: SPECTRO ICP_020220
Client ID: ZZZZZ	Batch ID: 3071	TestNo: E200.7		Analysis Date: 2/20/02	SeqNo: 145032

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	ND	0.010676									

Sample ID: ccb	SampType: ccb	TestCode: 200.7w	Units: mg/L	Prep Date:	Run ID: SPECTRO ICP_020212
Client ID: ZZZZZ	Batch ID: 3071	TestNo: E200.7		Analysis Date: 2/12/02	SeqNo: 143837

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	ND	0.0031400	0	0	0	0	0	0	0		
Manganese	ND	0.0012560	0	0	0	0	0	0	0		
Zinc	ND	0.0015700	0	0	0	0	0	0	0		

Sample ID: ccb	SampType: ccb	TestCode: 200.7w	Units: mg/L	Prep Date:	Run ID: SPECTRO ICP_020212
Client ID: ZZZZZ	Batch ID: 3071	TestNo: E200.7		Analysis Date: 2/12/02	SeqNo: 143846

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	ND	0.0031400	0	0	0	0	0	0	0		
Manganese	ND	0.0012560	0	0	0	0	0	0	0		
Zinc	ND	0.0015700	0	0	0	0	0	0	0		

Sample ID: ccb	SampType: ccb	TestCode: 200.7w	Units: mg/L	Prep Date:	Run ID: SPECTRO ICP_020212
Client ID: ZZZZZ	Batch ID: 3071	TestNo: E200.7		Analysis Date: 2/12/02	SeqNo: 143850

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	ND	0.0031400	0	0	0	0	0	0	0		
Manganese	ND	0.0012560	0	0	0	0	0	0	0		
Zinc	ND	0.0015700	0	0	0	0	0	0	0		

Sample ID: ccb	SampType: ccb	TestCode: 200.7w	Units: mg/L	Prep Date:	Run ID: SPECTRO ICP_020219
Client ID: ZZZZZ	Batch ID: 3071	TestNo: E200.7		Analysis Date: 2/19/02	SeqNo: 144947

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

3625

0000037

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

CLIENT: Envirotactics
Work Order: 0202018
Project: Newark

ANALYTICAL QC SUMMARY REPORT

TestNo: E200.7

Sample ID: ccb	SampType: ccb	TestCode: 200.7w	Units: mg/L	Prep Date:	Run ID: SPECTRO ICP_020219
Client ID: ZZZZZ	Batch ID: 3071	TestNo: E200.7		Analysis Date: 2/19/02	SeqNo: 144947

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	ND	0.010676	0	0	0	0	0	0	0		

Sample ID: ccb	SampType: ccb	TestCode: 200.7w	Units: mg/L	Prep Date:	Run ID: SPECTRO ICP_020220
Client ID: ZZZZZ	Batch ID: 3071	TestNo: E200.7		Analysis Date: 2/20/02	SeqNo: 145029

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	ND	0.010676	0	0	0	0	0	0	0		

Sample ID: icb	SampType: icb	TestCode: 200.7w	Units: mg/L	Prep Date:	Run ID: SPECTRO ICP_020212
Client ID: ZZZZZ	Batch ID: 3071	TestNo: E200.7		Analysis Date: 2/12/02	SeqNo: 143848

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	ND	0.0031400	0	0	0	0	0	0	0		
Manganese	ND	0.0012560	0	0	0	0	0	0	0		
Zinc	ND	0.0015700	0	0	0	0	0	0	0		

Sample ID: icb	SampType: icb	TestCode: 200.7w	Units: mg/L	Prep Date:	Run ID: SPECTRO ICP_020219
Client ID: ZZZZZ	Batch ID: 3071	TestNo: E200.7		Analysis Date: 2/19/02	SeqNo: 144945

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	ND	0.010676	0	0	0	0	0	0	0		

Sample ID: icb	SampType: icb	TestCode: 200.7w	Units: mg/L	Prep Date:	Run ID: SPECTRO ICP_020220
Client ID: ZZZZZ	Batch ID: 3071	TestNo: E200.7		Analysis Date: 2/20/02	SeqNo: 145027

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	ND	0.010676	0	0	0	0	0	0	0		

3826

000038

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

CLIENT: Envirotactics
Work Order: 0202018
Project: Newark

ANALYTICAL QC SUMMARY REPORT

TestNo: E200.9

Sample ID: mblk	SampType: mblk	TestCode: 200.9w	Units: mg/L	Prep Date:	Run ID: METALS_020206A
Client ID: ZZZZZ	Batch ID: 3069	TestNo: E200.9		Analysis Date: 2/6/02	SeqNo: 143305

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.00200									

Sample ID: mblk	SampType: mblk	TestCode: 200.9w	Units: mg/L	Prep Date:	Run ID: METALS_020206B
Client ID: ZZZZZ	Batch ID: 3069	TestNo: E200.9		Analysis Date: 2/6/02	SeqNo: 143517

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Thallium	ND	0.00200									

Sample ID: mblk	SampType: mblk	TestCode: 200.9w	Units: mg/L	Prep Date:	Run ID: METALS_020215C
Client ID: ZZZZZ	Batch ID: 3069	TestNo: E200.9		Analysis Date: 2/15/02	SeqNo: 144259

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.00500									

Sample ID: mblk	SampType: mblk	TestCode: 200.9w	Units: mg/L	Prep Date:	Run ID: METALS_020207A
Client ID: ZZZZZ	Batch ID: 3069	TestNo: E200.9		Analysis Date: 2/7/02	SeqNo: 144719

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cadmium	ND	0.00100									

Sample ID: mblk	SampType: mblk	TestCode: 200.9w	Units: mg/L	Prep Date:	Run ID: METALS_020219A
Client ID: ZZZZZ	Batch ID: 3069	TestNo: E200.9		Analysis Date: 2/19/02	SeqNo: 144874

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.00500									

Sample ID: mblk	SampType: mblk	TestCode: 200.9w	Units: mg/L	Prep Date:	Run ID: METALS_020214A
Client ID: ZZZZZ	Batch ID: 3069	TestNo: E200.9		Analysis Date: 2/14/02	SeqNo: 145055

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

2427

000039

CLIENT: Envirotactics
Work Order: 0202018
Project: Newark

ANALYTICAL QC SUMMARY REPORT

TestNo: E200.9

Sample ID: mblk	SampType: mblk	TestCode: 200.9w	Units: mg/L	Prep Date:	Run ID: METALS_020214A
Client ID: ZZZZZ	Batch ID: 3069	TestNo: E200.9		Analysis Date: 2/14/02	SeqNo: 145055

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.00200									

Sample ID: mblk	SampType: mblk	TestCode: 200.9w	Units: mg/L	Prep Date:	Run ID: METALS_020207B
Client ID: ZZZZZ	Batch ID: 3069	TestNo: E200.9		Analysis Date: 2/7/02	SeqNo: 145362

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	ND	0.00500									

Sample ID: mblk	SampType: mblk	TestCode: 200.9w	Units: mg/L	Prep Date:	Run ID: METALS_020211A
Client ID: ZZZZZ	Batch ID: 3069	TestNo: E200.9		Analysis Date: 2/11/02	SeqNo: 147483

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	ND	0.00500									

Sample ID: ccb	SampType: ccb	TestCode: 200.9w	Units: mg/L	Prep Date:	Run ID: METALS_020206A
Client ID: ZZZZZ	Batch ID: 3069	TestNo: E200.9		Analysis Date: 2/6/02	SeqNo: 143287

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.00200	0	0	0	0	0	0	0		

Sample ID: ccb	SampType: ccb	TestCode: 200.9w	Units: mg/L	Prep Date:	Run ID: METALS_020206B
Client ID: ZZZZZ	Batch ID: 3069	TestNo: E200.9		Analysis Date: 2/6/02	SeqNo: 143511

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Thallium	ND	0.00200	0	0	0	0	0	0	0		

Sample ID: ccb	SampType: ccb	TestCode: 200.9w	Units: mg/L	Prep Date:	Run ID: METALS_020215C
Client ID: ZZZZZ	Batch ID: 3069	TestNo: E200.9		Analysis Date: 2/15/02	SeqNo: 144247

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

3826

000040

CLIENT: Envirotactics
Work Order: 0202018
Project: Newark

ANALYTICAL QC SUMMARY REPORT

TestNo: E200.9

Sample ID: ccb	SampType: ccb	TestCode: 200.9w	Units: mg/L	Prep Date:	Run ID: METALS_020215C
Client ID: ZZZZZ	Batch ID: 3069	TestNo: E200.9		Analysis Date: 2/15/02	SeqNo: 144247

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.00500	0	0	0	0	0	0	0		

Sample ID: ccb	SampType: ccb	TestCode: 200.9w	Units: mg/L	Prep Date:	Run ID: METALS_020207A
Client ID: ZZZZZ	Batch ID: 3069	TestNo: E200.9		Analysis Date: 2/7/02	SeqNo: 144707

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cadmium	ND	0.00100	0	0	0	0	0	0	0		

Sample ID: ccb	SampType: ccb	TestCode: 200.9w	Units: mg/L	Prep Date:	Run ID: METALS_020219A
Client ID: ZZZZZ	Batch ID: 3069	TestNo: E200.9		Analysis Date: 2/19/02	SeqNo: 144862

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.00500	0	0	0	0	0	0	0		

Sample ID: ccb	SampType: ccb	TestCode: 200.9w	Units: mg/L	Prep Date:	Run ID: METALS_020214A
Client ID: ZZZZZ	Batch ID: 3069	TestNo: E200.9		Analysis Date: 2/14/02	SeqNo: 145049

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.00200	0	0	0	0	0	0	0		

Sample ID: ccb	SampType: ccb	TestCode: 200.9w	Units: mg/L	Prep Date:	Run ID: METALS_020207B
Client ID: ZZZZZ	Batch ID: 3069	TestNo: E200.9		Analysis Date: 2/7/02	SeqNo: 145350

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	ND	0.00500	0	0	0	0	0	0	0		

Sample ID: ccb	SampType: ccb	TestCode: 200.9w	Units: mg/L	Prep Date:	Run ID: METALS_020211A
Client ID: ZZZZZ	Batch ID: 3069	TestNo: E200.9		Analysis Date: 2/11/02	SeqNo: 147465

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

3625

00041

CLIENT: Envirotactics
Work Order: 0202018
Project: Newark

ANALYTICAL QC SUMMARY REPORT

TestNo: E200.9

Sample ID: ccb	SampType: ccb	TestCode: 200.9w	Units: mg/L	Prep Date:	Run ID: METALS_020211A
Client ID: ZZZZZ	Batch ID: 3069	TestNo: E200.9		Analysis Date: 2/11/02	SeqNo: 147465

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	ND	0.00500	0	0	0	0	0	0	0		

Sample ID: icb	SampType: icb	TestCode: 200.9w	Units: mg/L	Prep Date:	Run ID: METALS_020206A
Client ID: ZZZZZ	Batch ID: 3069	TestNo: E200.9		Analysis Date: 2/6/02	SeqNo: 143293

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.00200	0	0	0	0	0	0	0		

Sample ID: icb	SampType: icb	TestCode: 200.9w	Units: mg/L	Prep Date:	Run ID: METALS_020206B
Client ID: ZZZZZ	Batch ID: 3069	TestNo: E200.9		Analysis Date: 2/6/02	SeqNo: 143513

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Thallium	ND	0.00200	0	0	0	0	0	0	0		

Sample ID: icb	SampType: icb	TestCode: 200.9w	Units: mg/L	Prep Date:	Run ID: METALS_020215C
Client ID: ZZZZZ	Batch ID: 3069	TestNo: E200.9		Analysis Date: 2/15/02	SeqNo: 144251

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.0004543	0.00500	0	0	0	0	0	0	0		

Sample ID: icb	SampType: icb	TestCode: 200.9w	Units: mg/L	Prep Date:	Run ID: METALS_020207A
Client ID: ZZZZZ	Batch ID: 3069	TestNo: E200.9		Analysis Date: 2/7/02	SeqNo: 144711

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cadmium	ND	0.00100	0	0	0	0	0	0	0		

Sample ID: icb	SampType: icb	TestCode: 200.9w	Units: mg/L	Prep Date:	Run ID: METALS_020219A
Client ID: ZZZZZ	Batch ID: 3069	TestNo: E200.9		Analysis Date: 2/19/02	SeqNo: 144866

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

3630
000042

CLIENT: Envirotactics
Work Order: 0202018
Project: Newark

ANALYTICAL QC SUMMARY REPORT

TestNo: E200.9

Sample ID: Icb	SampType: Icb	TestCode: 200.9w	Units: mg/L	Prep Date:	Run ID: METALS_020219A
Client ID: ZZZZZ	Batch ID: 3069	TestNo: E200.9		Analysis Date: 2/19/02	SeqNo: 144866

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.00500	0	0	0	0	0	0	0		

Sample ID: Icb	SampType: Icb	TestCode: 200.9w	Units: mg/L	Prep Date:	Run ID: METALS_020214A
Client ID: ZZZZZ	Batch ID: 3069	TestNo: E200.9		Analysis Date: 2/14/02	SeqNo: 145051

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.00200	0	0	0	0	0	0	0		

Sample ID: Icb	SampType: Icb	TestCode: 200.9w	Units: mg/L	Prep Date:	Run ID: METALS_020207B
Client ID: ZZZZZ	Batch ID: 3069	TestNo: E200.9		Analysis Date: 2/7/02	SeqNo: 145354

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	ND	0.00500	0	0	0	0	0	0	0		

Sample ID: Icb	SampType: Icb	TestCode: 200.9w	Units: mg/L	Prep Date:	Run ID: METALS_020211A
Client ID: ZZZZZ	Batch ID: 3069	TestNo: E200.9		Analysis Date: 2/11/02	SeqNo: 147471

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	ND	0.00500	0	0	0	0	0	0	0		

3631

000043

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

CLIENT: Envirotactics
Work Order: 0202018
Project: Newark

ANALYTICAL QC SUMMARY REPORT

TestNo: E420.1

Sample ID: MB-R11820	SampType: MBLK	TestCode: PHENOLS_T	Units: mg/L	Prep Date:	Run ID: WC_020206I
Client ID: ZZZZZZ	Batch ID: R11820	TestNo: E420.1		Analysis Date: 2/6/02	SeqNo: 147675

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenolics, Total Recoverable	ND	0.0200	0	0	0	0	0	0	0		

34432

000044

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

CLIENT: Envirotactics
Work Order: 0202018
Project: Newark

ANALYTICAL QC SUMMARY REPORT

TestNo: SW7470

Sample ID: mblk	SampType: mblk	TestCode: hg_ctw	Units: mg/L	Prep Date:	Run ID: HG_020211A
Client ID: ZZZZZ	Batch ID: R11825	TestNo: SW7470		Analysis Date: 2/11/02	SeqNo: 144612

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.000200									

Sample ID: ccb	SampType: ccb	TestCode: hg_ctw	Units: mg/L	Prep Date:	Run ID: HG_020211A
Client ID: ZZZZZ	Batch ID: R11825	TestNo: SW7470		Analysis Date: 2/11/02	SeqNo: 144594

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.000200	0	0	0	0	0	0	0		

Sample ID: icb	SampType: icb	TestCode: hg_ctw	Units: mg/L	Prep Date:	Run ID: HG_020211A
Client ID: ZZZZZ	Batch ID: R11825	TestNo: SW7470		Analysis Date: 2/11/02	SeqNo: 144600

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.000200	0	0	0	0	0	0	0		

3933

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

0000045

2C
WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: Val Asso lab Contract:

Lab Code: F2 Case No.: SAS No.: SDG No.: bb438

	EPA SAMPLE No.	S1 (FBP) #	S2 (PHL) #	S3 (NBZ) #	S4 (FBP) #	S5 (TBP) #	S6 (TPH) #	TOT OUT
01	MB-3043#4	52	49	89	88	67	93	0
02	100PPBSTD	81	78	81	71	69	54	0
03	~~MB-3043#2~~ 3063	85	57	88	60	83	76	0
04	0202009-002A	.0*	.0*	58	64	.0*	63	3
05	0202009-003A	.0*	.0*	69	50	.0*	61	3
06	0202014-001A	.0*	.0*	61	50	.0*	72	3
07	0202014-003A	.0*	.0*	36	48	.0*	52	3
08	0202014-004A	.0*	.0*	45	61	.0*	62	3
09	0202014-005A	.0*	.0*	53	52	.0*	55	3
10	0202014-006A	.0*	.0*	66	62	.0*	88	3
11	0202014-007A	.0*	.0*	51	48	.0*	73	3
12	0202014-009A	.0*	.0*	47	50	.0*	57	3
13	0202018-001A	.0*	.0*	75	89	.0*	123	3
14	0202018-002A	.0*	.0*	42	51	.0*	90	3
15	0202018-003A	.0*	.0*	41	62	.0*	102	3
16	0202018-004A	.0*	.0*	85	54	.0*	123	3
17	100PPBSTD	77	74	86	60	50	50	0

HLN 2/8/02

		QC LIMITS
S1(FBP)	= 2-Fluorophenol	(21-100)
S2(PHL)	= Phenol-D6	(10-94)
S3(NBZ)	= Nitrobenzene-D5	(35-114)
S4(FBP)	= 2-Fluorobiphenyl	(43-116)
S5(TBP)	= 2,4,6-Tribromophenol	(10-123)
S6(TPH)	= Terphenyl-D14	(33-141)

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

VAL Associates Laboratory, Inc.

Date: 15-Mar-02

CLIENT: Envirotactics
Work Order: 0202018
Project: Newark
Test No: E608 **Matrix:** W

QC SUMMARY REPORT
SURROGATE RECOVERIES

Sample ID	CL10BZ2	XYL2456CLM						
0202018-003A	96.1	78.0 *						
LCS-3021	112	96.1						
MB-3021	157 *	106						
MB-3021#2	88.8	88.5						

Acronym		Surrogate	QC Limits
CL10BZ2	=	Decachlorobiphenyl	85-115
XYL2456CLM	=	Tetrachloro-m-xylene	85-115

*** Surrogate recovery outside acceptance limits**

000047

3635

CLIENT: Envirotactics
Work Order: 0202018
Project: Newark

ANALYTICAL QC SUMMARY REPORT

TestNo: E200.7

Sample ID: 0202018-004ams	SampType: ms	TestCode: 200.7w	Units: mg/L	Prep Date:	Run ID: SPECTRO ICP_020207
Client ID: MW-7	Batch ID: 3071	TestNo: E200.7		Analysis Date: 2/7/02	SeqNo: 143406

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Beryllium	4.565	0.00062800	5	0	91.3	70	130	0	0		
Chromium	4.392	0.0031400	5	0	87.8	70	130	0	0		
Copper	4.571	0.0031400	5	0.0475	90.5	70	130	0	0		
Nickel	4.705	0.0078500	5	0	94.1	70	130	0	0		
Silver	0.3902	0.0034500	0.5	0	78	70	130	0	0		
Zinc	4.601	0.0015700	5	0.012	91.8	70	130	0	0		

Sample ID: 0202037-003ams	SampType: ms	TestCode: 200.7w	Units: mg/L	Prep Date: 2/12/02	Run ID: SPECTRO ICP_020212
Client ID: ZZZZZ	Batch ID: 3071	TestNo: E200.7		Analysis Date: 2/12/02	SeqNo: 143834

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	1.16	0.0031400	1	0.0512	111	70	130	0	0		
Manganese	1.134	0.0012560	1	0.0436	109	70	130	0	0		
Zinc	1.169	0.0015700	1	0.0566	111	70	130	0	0		

Sample ID: 0202037-003ams	SampType: ms	TestCode: 200.7w	Units: mg/L	Prep Date: 2/12/02	Run ID: SPECTRO ICP_020219
Client ID: ZZZZZ	Batch ID: 3071	TestNo: E200.7		Analysis Date: 2/19/02	SeqNo: 144902

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	168.1	0.042704	12.5	36.6	1050	70	130	0	0		S

Sample ID: 0202037-003ams	SampType: ms	TestCode: 200.7w	Units: mg/L	Prep Date: 2/12/02	Run ID: SPECTRO ICP_020220
Client ID: ZZZZZ	Batch ID: 3071	TestNo: E200.7		Analysis Date: 2/20/02	SeqNo: 145034

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	194.4	0.042704	25	36.6	631	70	130	0	0		S

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0000048

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

CLIENT: Envirotactics
Work Order: 0202018
Project: Newark

ANALYTICAL QC SUMMARY REPORT

TestNo: E200.7

Sample ID: 0202018-004amsd | SampType: msd | TestCode: 200.7w | Units: mg/L | Prep Date: | Run ID: SPECTRO ICP_020207
Client ID: MW-7 | Batch ID: 3071 | TestNo: E200.7 | Analysis Date: 2/7/02 | SeqNo: 143407

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Beryllium	4.554	0.00062800	5	0	91.1	70	130	4.565	0.228	0	
Chromium	4.414	0.0031400	5	0	88.3	70	130	4.392	0.500	0	
Copper	4.564	0.0031400	5	0.0475	90.3	70	130	4.571	0.153	0	
Nickel	4.697	0.0078500	5	0	93.9	70	130	4.705	0.170	0	
Silver	0.3867	0.0034500	0.5	0	77.3	70	130	0.3902	0.901	0	
Zinc	4.609	0.0015700	5	0.012	91.9	70	130	4.601	0.174	0	

Sample ID: 0202037-003amsd | SampType: msd | TestCode: 200.7w | Units: mg/L | Prep Date: 2/12/02 | Run ID: SPECTRO ICP_020212
Client ID: ZZZZZ | Batch ID: 3071 | TestNo: E200.7 | Analysis Date: 2/12/02 | SeqNo: 143835

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	1.065	0.0031400	1	0.0512	101	70	130	1.16	8.54	0	
Manganese	1.026	0.0012560	1	0.0436	98.2	70	130	1.134	10.0	0	
Zinc	1.069	0.0015700	1	0.0566	101	70	130	1.169	8.94	0	

Sample ID: 0202037-003amsd | SampType: msd | TestCode: 200.7w | Units: mg/L | Prep Date: 2/12/02 | Run ID: SPECTRO ICP_020219
Client ID: ZZZZZ | Batch ID: 3071 | TestNo: E200.7 | Analysis Date: 2/19/02 | SeqNo: 144903

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	185.6	0.042704	12.5	36.6	1190	70	130	168.1	9.91	0	S

Sample ID: 0202037-003amsd | SampType: msd | TestCode: 200.7w | Units: mg/L | Prep Date: 2/12/02 | Run ID: SPECTRO ICP_020220
Client ID: ZZZZZ | Batch ID: 3071 | TestNo: E200.7 | Analysis Date: 2/20/02 | SeqNo: 145035

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	193.5	0.042704	25	36.6	628	70	130	194.4	0.454	0	S

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

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CLIENT: Envirotactics
Work Order: 0202018
Project: Newark

ANALYTICAL QC SUMMARY REPORT

TestNo: E200.9

Sample ID: 0202014-001ams	SampType: ms	TestCode: 200.9w	Units: mg/L	Prep Date: 2/5/02	Run ID: METALS_020206A
Client ID: ZZZZZ	Batch ID: 3069	TestNo: E200.9		Analysis Date: 2/6/02	SeqNo: 143276

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.05441	0.00200	0.05	0	109	75	125	0	0		

Sample ID: 0202014-001ams	SampType: ms	TestCode: 200.9w	Units: mg/L	Prep Date: 2/5/02	Run ID: METALS_020206B
Client ID: ZZZZZ	Batch ID: 3069	TestNo: E200.9		Analysis Date: 2/6/02	SeqNo: 143503

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Thallium	0.02632	0.00200	0.025	0	105	75	125	0	0		*

Sample ID: 0202018-004ams	SampType: ms	TestCode: 200.9w	Units: mg/L	Prep Date:	Run ID: METALS_020215C
Client ID: MW-7	Batch ID: 3069	TestNo: E200.9		Analysis Date: 2/15/02	SeqNo: 144262

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.06252	0.0200	0.015	0.04444	121	75	125	0	0		*

Sample ID: 0202014-001ams	SampType: ms	TestCode: 200.9w	Units: mg/L	Prep Date: 2/5/02	Run ID: METALS_020207A
Client ID: ZZZZZ	Batch ID: 3069	TestNo: E200.9		Analysis Date: 2/7/02	SeqNo: 144695

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cadmium	0.002862	0.00100	0.003	0	95.4	75	125	0	0		

Sample ID: 0202098-004ams	SampType: ms	TestCode: 200.9w	Units: mg/L	Prep Date:	Run ID: METALS_020219A
Client ID: ZZZZZ	Batch ID: 3069	TestNo: E200.9		Analysis Date: 2/19/02	SeqNo: 144858

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.01924	0.00500	0.01	0.008591	106	75	125	0	0		*

Sample ID: 0202037-003ams	SampType: ms	TestCode: 200.9w	Units: mg/L	Prep Date: 2/12/02	Run ID: METALS_020214A
Client ID: ZZZZZ	Batch ID: 3069	TestNo: E200.9		Analysis Date: 2/14/02	SeqNo: 145039

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

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000050

CLIENT: Envirotactics
Work Order: 0202018
Project: Newark

ANALYTICAL QC SUMMARY REPORT

TestNo: E200.9

Sample ID: 0202037-003ams	SampType: ms	TestCode: 200.9w	Units: mg/L	Prep Date: 2/12/02	Run ID: METALS_020214A
Client ID: ZZZZZ	Batch ID: 3069	TestNo: E200.9		Analysis Date: 2/14/02	SeqNo: 145039

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.03193	0.00200	0.02	0.01652	77	75	125	0	0		

Sample ID: 0202014-001ams	SampType: ms	TestCode: 200.9w	Units: mg/L	Prep Date: 2/5/02	Run ID: METALS_020207B
Client ID: ZZZZZ	Batch ID: 3069	TestNo: E200.9		Analysis Date: 2/7/02	SeqNo: 145338

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	0.02695	0.00500	0.025	0	108	75	125	0	0		

Sample ID: 0202018-004ams	SampType: ms	TestCode: 200.9w	Units: mg/L	Prep Date:	Run ID: METALS_020211A
Client ID: MW-7	Batch ID: 3069	TestNo: E200.9		Analysis Date: 2/11/02	SeqNo: 147456

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.02092	0.00500	0.025	0	83.7	75	125	0	0		*

Sample ID: 0202014-001amsd	SampType: msd	TestCode: 200.9w	Units: mg/L	Prep Date: 2/5/02	Run ID: METALS_020206A
Client ID: ZZZZZ	Batch ID: 3069	TestNo: E200.9		Analysis Date: 2/6/02	SeqNo: 143277

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.04709	0.00200	0.05	0	94.2	75	125	0.05441	14.4	20	

Sample ID: 0202014-001amsd	SampType: msd	TestCode: 200.9w	Units: mg/L	Prep Date: 2/5/02	Run ID: METALS_020206B
Client ID: ZZZZZ	Batch ID: 3069	TestNo: E200.9		Analysis Date: 2/6/02	SeqNo: 143504

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Thallium	0.02772	0.00200	0.025	0	111	75	125	0.02632	5.20	20	*

Sample ID: 0202018-004amsd	SampType: msd	TestCode: 200.9w	Units: mg/L	Prep Date:	Run ID: METALS_020215C
Client ID: MW-7	Batch ID: 3069	TestNo: E200.9		Analysis Date: 2/15/02	SeqNo: 144263

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

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0000051

CLIENT: Envirotactics
Work Order: 0202018
Project: Newark

ANALYTICAL QC SUMMARY REPORT

TestNo: E200.9

Sample ID: 0202018-004amsd	SampType: msd	TestCode: 200.9w	Units: mg/L	Prep Date:			Run ID: METALS_020215C			
Client ID: MW-7	Batch ID: 3069	TestNo: E200.9		Analysis Date: 2/15/02			SeqNo: 144263			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.05563	0.0200	0.015	0.04444	74.6	75	125	0.06252	11.7	20	*

Sample ID: 0202014-001amsd	SampType: msd	TestCode: 200.9w	Units: mg/L	Prep Date: 2/5/02			Run ID: METALS_020207A			
Client ID: ZZZZZ	Batch ID: 3069	TestNo: E200.9		Analysis Date: 2/7/02			SeqNo: 144696			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cadmium	0.003024	0.00100	0.003	0	101	75	125	0.002862	5.50	20	

Sample ID: 0202098-004amsd	SampType: msd	TestCode: 200.9w	Units: mg/L	Prep Date:			Run ID: METALS_020219A			
Client ID: ZZZZZ	Batch ID: 3069	TestNo: E200.9		Analysis Date: 2/19/02			SeqNo: 144859			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.01947	0.00500	0.01	0.008591	109	75	125	0.01924	1.21	20	*

Sample ID: 0202037-003amsd	SampType: msd	TestCode: 200.9w	Units: mg/L	Prep Date: 2/12/02			Run ID: METALS_020214A			
Client ID: ZZZZZ	Batch ID: 3069	TestNo: E200.9		Analysis Date: 2/14/02			SeqNo: 145040			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.03933	0.00200	0.02	0.01652	114	75	125	0.03193	20.8	20	R

Sample ID: 0202014-001amsd	SampType: msd	TestCode: 200.9w	Units: mg/L	Prep Date: 2/5/02			Run ID: METALS_020207B			
Client ID: ZZZZZ	Batch ID: 3069	TestNo: E200.9		Analysis Date: 2/7/02			SeqNo: 145339			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	0.02691	0.00500	0.025	0	108	75	125	0.02695	0.169	20	

Sample ID: 0202018-004amsd	SampType: msd	TestCode: 200.9w	Units: mg/L	Prep Date:			Run ID: METALS_020211A			
Client ID: MW-7	Batch ID: 3069	TestNo: E200.9		Analysis Date: 2/11/02			SeqNo: 147457			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

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CLIENT: Envirotactics
Work Order: 0202018
Project: Newark

ANALYTICAL QC SUMMARY REPORT

TestNo: E200.9

Sample ID: 0202018-004amsd	SampType: msd	TestCode: 200.9w	Units: mg/L	Prep Date:				Run ID: METALS_020211A			
Client ID: MW-7	Batch ID: 3069	TestNo: E200.9		Analysis Date: 2/11/02				SeqNo: 147457			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.02617	0.00500	0.025	0	105	75	125	0.02092	22.3	20	*

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Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

CLIENT: Envirotactics
Work Order: 0202018
Project: Newark

ANALYTICAL QC SUMMARY REPORT

TestNo: SW7470

Sample ID: 0202014-001ms	SampType: ms	TestCode: hg_ctw	Units: mg/L	Prep Date:	Run ID: HG_020211A
Client ID: ZZZZZ	Batch ID: R11825	TestNo: SW7470		Analysis Date: 2/11/02	SeqNo: 144578

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.002225	0.000200	0.0025	0	89	80	120	0	0		*

Sample ID: 0202014-001msd	SampType: msd	TestCode: hg_ctw	Units: mg/L	Prep Date:	Run ID: HG_020211A
Client ID: ZZZZZ	Batch ID: R11825	TestNo: SW7470		Analysis Date: 2/11/02	SeqNo: 144579

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.003157	0.000200	0.0025	0	126	80	120	0.002225	34.6	20	SR*

3642

0000054

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

WATER SEMIVOLATILE MATRIX/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Val Asso lab Contract:

Lab Code: F2 Case No.: SAS No.: SDG No.: bb438

Matrix Spike - EPA Sample No.: MB-3043#4

COMPOUND	SPIKE ADDED (UG/L)	SAMPLE CONCENTRATION (UG/L)	MS CONCENTRATION (UG/L)	MS % REC #	QC LIMITS REC.
N-Nitrosodimethylamine	100.00	0.0	17.0	17.0	12-158
bis(2-Chloroethyl) ether	100.00	0.0	58.0	58.0	12-158
Phenol	100.00	0.0	52.3	52.3	5-112
2-Chlorophenol	100.00	0.0	62.3	62.3	23-134
1,3-Dichlorobenzene	100.00	0.0	60.2	60.2	1-172
1,4-Dichlorobenzene	100.00	0.0	58.4	58.4	20-124
1,2-Dichlorobenzene	100.00	0.0	56.3	56.3	32-129
Bis(2-Chloroisopropyl) ether	100.00	0.0	82.0	82.0	36-166
N-Nitrosodi-n-propylamine	100.00	0.0	71.3	71.3	1-230
Hexachloroethane	100.00	0.0	82.9	82.9	21-113
Nitrobenzene	100.00	0.0	43.7	43.7	35-180
Isophorone	100.00	0.0	62.5	62.5	21-196
2-Nitrophenol	100.00	0.0	44.9	44.9	29-182
2,4-Dimethylphenol	100.00	0.0	40.0	40.0	32-119
bis(2-Chloroethoxy)methane	100.00	0.0	86.7	86.7	33-184
1,2,4-Trichlorobenzene	100.00	0.0	48.1	48.1	44-142
2,4-Dichlorophenol	100.00	0.0	71.9	71.9	39-135
[illegible]phthalene	100.00	0.0	59.6	59.6	21-133
Hexachlorobutadiene	100.00	0.0	42.0	42.0	24-116
4-chloro-3-methylphenol	100.00	0.0	24.8	24.8	22-147
Hexachlorocyclopentadiene	100.00	0.0	52.4	52.4	10-144
2,4,6-Trichlorophenol	100.00	0.0	80.9	80.9	37-144
2-Chloronaphthalene	100.00	0.0	62.5	62.5	60-118
Dimethyl phthalate	100.00	0.0	69.3	69.3	1-112
Acenaphthylene	100.00	0.0	37.7	37.7	33-145
2,6-Dinitrotoluene	100.00	0.0	51.5	51.5	50-158
Acenaphthene	100.00	0.0	54.6	54.6	47-145
2,4-Dinitrotoluene	100.00	0.0	43.8	43.8	39-139
4-Nitrophenol	100.00	0.0	47.3	47.3	1-132
Diethyl phthalate	100.00	0.0	57.7	57.7	1-114
Fluorene	100.00	0.0	59.6	59.6	52-121
4-Chlorophenyl phenyl ether	100.00	0.0	53.6	53.6	25-158
4,6-Dinitro-2-methylphenol	100.00	0.0	9.4	9.4	1-181
N-Nitrosodiphenylamine	100.00	0.0	49.7	49.7	39-139
4-Bromophenyl phenyl ether	100.00	0.0	75.6	75.6	35-127
Hexachlorobenzene	100.00	0.0	72.1	72.1	1-152
Pentachlorophenol	100.00	0.0	74.1	74.1	5-176
Phenanthrene	100.00	0.0	56.3	56.3	54-120
Anthracene	100.00	0.0	60.9	60.9	27-133
Di-n-butyl phthalate	100.00	0.0	76.3	76.3	1-118
Fluoranthene	100.00	0.0	48.2	48.2	26-137
Pyrene	100.00	0.0	52.7	52.7	52-115
Benzidine	100.00	0.0	82.7	82.7	27-133
[illegible]tyl benzyl phthalate	100.00	0.0	137.5	137.5	1-152
Benzo(a)anthracene	100.00	0.0	59.3	59.3	33-143
Chrysene	100.00	0.0	39.8	39.8	17-168
3,3'-Dichlorobenzidine	100.00	0.0	55.7	55.7	1-262

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3043

bis(2-Ethylhexyl)phthalate	100.00	0.0	71.0		71.0	8-158
Di-n-octyl phthalate	100.00	0.0	121.6		121.6	4-146
Benzo(b)fluoranthene	100.00	0.0	75.4		75.4	24-159
Benzo(k)fluoranthene	100.00	0.0	49.2		49.2	11-162
Benzo(a)pyrene	100.00	0.0	77.0		77.0	17-163
Indeno(1,2,3-c,d)pyrene	100.00	0.0	52.4		52.4	1-171
Dibenz(a,h)anthracene	100.00	0.0	50.4		50.4	1-227
Benzo(ghi)perylene	100.00	0.0	45.3		45.3	1-219

COMPOUND	SPIKE ADDED (UG/L)	MSD CONCENTRATION (UG/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
N-Nitrosodimethylamine	100.00	17.0	17.0	0.0	100	12-158
bis(2-Chloroethyl) ether	100.00	58.0	58.0	0.0	100	12-158
Phenol	100.00	52.3	52.3	0.0	100	5-112
2-Chlorophenol	100.00	62.3	62.3	0.0	100	23-134
1,3-Dichlorobenzene	100.00	60.2	60.2	0.0	100	1-172
1,4-Dichlorobenzene	100.00	58.4	58.4	0.0	100	20-124
1,2-Dichlorobenzene	100.00	56.3	56.3	0.0	100	32-129
Bis(2-Chloroisopropyl) ether	100.00	82.0	82.0	0.0	100	36-166
N-Nitrosodi-n-propylamine	100.00	71.3	71.3	0.0	100	1-230
Hexachloroethane	100.00	82.9	82.9	0.0	100	21-113
Nitrobenzene	100.00	43.7	43.7	0.0	100	35-180
Isophorone	100.00	62.5	62.5	0.0	100	21-196
2-Nitrophenol	100.00	44.9	44.9	0.0	100	29-182
2,4-Dimethylphenol	100.00	40.0	40.0	0.0	100	32-119
bis(2-Chloroethoxy)methane	100.00	86.7	86.7	0.0	100	33-184
1,2,4-Trichlorobenzene	100.00	48.1	48.1	0.0	100	44-142
2,4-Dichlorophenol	100.00	71.9	71.9	0.0	100	39-135
Naphthalene	100.00	59.6	59.6	0.0	100	21-133
Hexachlorobutadiene	100.00	42.0	42.0	0.0	100	24-11
4-chloro-3-methylphenol	100.00	24.8	24.8	0.0	100	22-147
Hexachlorocyclopentadiene	100.00	52.4	52.4	0.0	100	10-144
2,4,6-Trichlorophenol	100.00	80.9	80.9	0.0	100	37-144
2-Chloronaphthalene	100.00	62.5	62.5	0.0	100	60-118
Dimethyl phthalate	100.00	69.3	69.3	0.0	100	1-112
Acenaphthylene	100.00	37.7	37.7	0.0	100	33-145
2,6-Dinitrotoluene	100.00	51.5	51.5	0.0	100	50-158
Acenaphthene	100.00	54.6	54.6	0.0	100	47-145
2,4-Dinitrotoluene	100.00	43.8	43.8	0.0	100	39-139
4-Nitrophenol	100.00	47.3	47.3	0.0	100	1-132
Diethyl phthalate	100.00	57.7	57.7	0.0	100	1-114
Fluorene	100.00	59.6	59.6	0.0	100	52-121
4-Chlorophenyl phenyl ether	100.00	53.6	53.6	0.0	100	25-158
4,6-Dinitro-2-methylphenol	100.00	9.4	9.4	0.0	100	1-181
N-Nitrosodiphenylamine	100.00	49.7	49.7	0.0	100	39-139
4-Bromophenyl phenyl ether	100.00	75.6	75.6	0.0	100	35-127
Hexachlorobenzene	100.00	72.1	72.1	0.0	100	1-152
Pentachlorophenol	100.00	74.1	74.1	0.0	100	5-176
Phenanthrene	100.00	56.3	56.3	0.0	100	54-120
Anthracene	100.00	60.9	60.9	0.0	100	27-133
Di-n-butyl phthalate	100.00	76.3	76.3	0.0	100	1-118
Fluoranthene	100.00	48.2	48.2	0.0	100	26-137
Pyrene	100.00	52.7	52.7	0.0	100	52-115
Benzidine	100.00	82.7	82.7	0.0	100	27-133
Butyl benzyl phthalate	100.00	137.5	137.5	0.0	100	1-152
Benzo(a)anthracene	100.00	59.3	59.3	0.0	100	33-14
Chrysene	100.00	39.8	39.8	0.0	100	17-16
3,3'-Dichlorobenzidine	100.00	55.7	55.7	0.0	100	1-262
bis(2-Ethylhexyl)phthalate	100.00	71.0	71.0	0.0	100	8-158

Di-n-octyl phthalate	100.00	121.6	121.6	0.0	100	4-146
Benzo(b)fluoranthene	100.00	75.4	75.4	0.0	100	24-159
Benzo(k)fluoranthene	100.00	49.2	49.2	0.0	100	11-162
Benzo(a)pyrene	100.00	77.0	77.0	0.0	100	17-163
Indeno(1,2,3-c,d)pyrene	100.00	52.4	52.4	0.0	100	1-171
Dibenz(a,h)anthracene	100.00	50.4	50.4	0.0	100	1-227
Benzo(ghi)perylene	100.00	45.3	45.3	0.0	100	1-219

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

RPD: 0 out of 55 outside limits
Spike Recovery: out of 110 outside limits

COMMENTS: _____

VAL Associates Laboratory, Inc.

Date: *15-Mar-02*

CLIENT: Envirotactics
Work Order: 0202018
Project: Newark

ANALYTICAL QC SUMMARY REPORT

TestCode: 608_w_pest

Sample ID: LCS-3021	SampType: LCS	TestCode: 608_w_pest	Units: µg/L	Prep Date: 1/21/02		Run ID: PEST2_020122A	
Client ID: ZZZZZ	Batch ID: 3021	TestNo: E608		Analysis Date: 1/22/02		SeqNo: 141968	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4,4'-DDD	0.2378	0.0100	0.25	0	95.1	85	115	0	0		
4,4'-DDE	0.2767	0.0139	0.25	0	111	85	115	0	0		
4,4'-DDT	0.2522	0.0143	0.25	0	101	85	115	0	0		
Aldrin	0.2696	0.0126	0.25	0	108	85	115	0	0		
alpha-BHC	0.2579	0.00770	0.25	0	103	85	115	0	0		
Alpha-Chlordane	0.2678	0.00500	0.25	0	107	85	115	0	0		
beta-BHC	0.2664	0.00599	0.25	0	107	85	115	0	0		
delta-BHC	0.2509	0.0126	0.25	0	100	85	115	0	0		
Dieldrin	0.2393	0.0116	0.25	0	95.7	85	115	0	0		
Endosulfan I	0.2678	0.0120	0.25	0	107	85	115	0	0		
Endosulfan II	0.2629	0.00399	0.25	0	105	85	115	0	0		
Endosulfan sulfate	0.2526	0.0126	0.25	0	101	85	115	0	0		
Endrin	0.2506	0.00769	0.25	0	100	85	115	0	0		
Endrin aldehyde	0.247	0.0139	0.25	0	98.8	85	115	0	0		
Endrin Ketone	0.2324	0.00817	0.25	0	93	85	115	0	0		
gamma-BHC	0.2489	0.00120	0.25	0	99.6	85	115	0	0		
Gamma-Chlordane	0.2752	0.00500	0.25	0	110	85	115	0	0		
Heptachlor	0.2509	0.00308	0.25	0	100	85	115	0	0		
Heptachlor epoxide	0.2791	0.00848	0.25	0	112	85	115	0	0		
Methoxychlor	0.2475	0.0117	0.25	0	99	85	115	0	0		

3946

000058

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

VAL Associates Laboratory, Inc.

Date: *14-Mar-02*

CLIENT: Envirotactics
Work Order: 0202018
Project: Newark

ANALYTICAL QC SUMMARY REPORT

TestNo: E200.7

Sample ID: lcs	SampType: lcs	TestCode: 200.7dw	Units: mg/L	Prep Date:	Run ID: SPECTRO ICP_020207
Client ID: ZZZZZ	Batch ID: 3071	TestNo: E200.7		Analysis Date: 2/7/02	SeqNo: 143398

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Beryllium	5.049	0.000628	5	0	101	85	115	0	0		E*
Chromium	4.931	0.00314	5	0	98.6	85	115	0	0		*
Copper	5.18	0.00314	5	0	104	85	115	0	0		*
Nickel	5.37	0.00785	5	0	107	85	115	0	0		
Silver	0.4579	0.00345	0.5	0	91.6	85	115	0	0		*
Zinc	5.17	0.00157	5	0	103	85	115	0	0		

Sample ID: lcs	SampType: lcs	TestCode: 200.7w	Units: mg/L	Prep Date:	Run ID: SPECTRO ICP_020212
Client ID: ZZZZZ	Batch ID: 3071	TestNo: E200.7		Analysis Date: 2/12/02	SeqNo: 143851

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	1.098	0.0031400	1	0	110	85	115	0	0		
Manganese	1.09	0.0012560	1	0	109	85	115	0	0		
Zinc	1.061	0.0015700	1	0	106	85	115	0	0		

Sample ID: lcs	SampType: lcs	TestCode: 200.7w	Units: mg/L	Prep Date:	Run ID: SPECTRO ICP_020219
Client ID: ZZZZZ	Batch ID: 3071	TestNo: E200.7		Analysis Date: 2/19/02	SeqNo: 144948

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	11.95	0.010676	12.5	0	95.6	85	115	0	0		

Sample ID: lcs	SampType: lcs	TestCode: 200.7w	Units: mg/L	Prep Date:	Run ID: SPECTRO ICP_020220
Client ID: ZZZZZ	Batch ID: 3071	TestNo: E200.7		Analysis Date: 2/20/02	SeqNo: 145030

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	11.72	0.010676	12.5	0	93.8	85	115	0	0		

3947

000051

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

CLIENT: Envirotactics
Work Order: 0202018
Project: Newark

ANALYTICAL QC SUMMARY REPORT

TestNo: E200.9

Sample ID: lcs	SampType: lcs	TestCode: 200.9w	Units: mg/L	Prep Date:			Run ID: METALS_020206A
Client ID: ZZZZZ	Batch ID: 3069	TestNo: E200.9		Analysis Date: 2/6/02			SeqNo: 143299

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.04594	0.00200	0.05	0	91.9	85	115	0	0		

Sample ID: lcs	SampType: lcs	TestCode: 200.9w	Units: mg/L	Prep Date:			Run ID: METALS_020206B
Client ID: ZZZZZ	Batch ID: 3069	TestNo: E200.9		Analysis Date: 2/6/02			SeqNo: 143515

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Thallium	0.02557	0.00200	0.025	0	102	85	115	0	0		*

Sample ID: lcs	SampType: lcs	TestCode: 200.9w	Units: mg/L	Prep Date:			Run ID: METALS_020215C
Client ID: ZZZZZ	Batch ID: 3069	TestNo: E200.9		Analysis Date: 2/15/02			SeqNo: 144255

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.01426	0.00500	0.015	0	95.1	85	115	0	0		

Sample ID: lcs	SampType: lcs	TestCode: 200.9w	Units: mg/L	Prep Date:			Run ID: METALS_020207A
Client ID: ZZZZZ	Batch ID: 3069	TestNo: E200.9		Analysis Date: 2/7/02			SeqNo: 144715

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cadmium	0.003006	0.00100	0.003	0	100	85	115	0	0		

Sample ID: lcs	SampType: lcs	TestCode: 200.9w	Units: mg/L	Prep Date:			Run ID: METALS_020219A
Client ID: ZZZZZ	Batch ID: 3069	TestNo: E200.9		Analysis Date: 2/19/02			SeqNo: 144870

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.01398	0.00500	0.015	0	93.2	85	115	0	0		

Sample ID: lcs	SampType: lcs	TestCode: 200.9w	Units: mg/L	Prep Date:			Run ID: METALS_020214A
Client ID: ZZZZZ	Batch ID: 3069	TestNo: E200.9		Analysis Date: 2/14/02			SeqNo: 145053

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

3848

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CLIENT: Envirotactics
Work Order: 0202018
Project: Newark

ANALYTICAL QC SUMMARY REPORT

TestNo: E200.9

Sample ID: lcs	SampType: lcs	TestCode: 200.9w	Units: mg/L	Prep Date:	Run ID: METALS_020214A
Client ID: ZZZZZ	Batch ID: 3069	TestNo: E200.9		Analysis Date: 2/14/02	SeqNo: 145053

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.04647	0.00200	0.05	0	92.9	85	115	0	0		

Sample ID: lcs	SampType: lcs	TestCode: 200.9w	Units: mg/L	Prep Date:	Run ID: METALS_020207B
Client ID: ZZZZZ	Batch ID: 3069	TestNo: E200.9		Analysis Date: 2/7/02	SeqNo: 145358

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	0.02587	0.00500	0.025	0	103	85	115	0	0		

Sample ID: lcs	SampType: lcs	TestCode: 200.9w	Units: mg/L	Prep Date:	Run ID: METALS_020211A
Client ID: ZZZZZ	Batch ID: 3069	TestNo: E200.9		Analysis Date: 2/11/02	SeqNo: 147477

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.02406	0.00500	0.025	0	96.2	85	115	0	0		

3849

000061

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

CLIENT: Envirotactics
Work Order: 0202018
Project: Newark

ANALYTICAL QC SUMMARY REPORT

TestNo: SW7470

Sample ID: lcs	SampType: lcs	TestCode: hg_ctw	Units: mg/L	Prep Date:			Run ID: HG_020211A				
Client ID: ZZZZZ	Batch ID: R11825	TestNo: SW7470		Analysis Date: 2/11/02			SeqNo: 144606				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.002321	0.000200	0.0025	0	92.8	85	115	0	0		*

3850

0000062

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Lab Order: 0202018
Client: Envirotactics
Project: Newark

DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
0202018-001A	MW-5	2/5/02	Aqueous	BASE/NEUTRALS		2/6/02	2/8/02
				ICP METALS		2/12/02	2/12/02
				ICP METALS		2/12/02	2/7/02
				MERCURY, Total			2/11/02
				METALS by GFAA		2/12/02	2/6/02
				METALS by GFAA		2/12/02	2/7/02
				METALS by GFAA		2/12/02	2/6/02
				METALS by GFAA		2/12/02	2/15/02
				METALS by GFAA		2/12/02	2/11/02
				METALS by GFAA		2/12/02	2/7/02
				PHENOLICS, TOTAL RECOVERABLE			2/6/02
0202018-002A	MW-3			BASE/NEUTRALS		2/6/02	2/8/02
0202018-003A	MW-16			BASE/NEUTRALS		2/6/02	2/8/02
				ORGANOCHLORINE PEST		2/6/02	3/1/02
				PHENOLICS, TOTAL RECOVERABLE			2/6/02
0202018-004A	MW-7			BASE/NEUTRALS		2/6/02	2/8/02
				ICP METALS		2/12/02	2/7/02
				ICP METALS		2/12/02	2/12/02
				MERCURY, Total			2/11/02
				METALS by GFAA		2/12/02	2/7/02
				METALS by GFAA		2/12/02	2/15/02
				METALS by GFAA		2/12/02	2/6/02
				METALS by GFAA		2/12/02	2/7/02
				METALS by GFAA		2/12/02	2/6/02
				METALS by GFAA		2/12/02	2/11/02

3451

000063

(856) 354-1337

VAL ASSOCIATES LABORATORY INC.

FAX: (856)354-1586

Water,Air & Soil Analysis

PHILIP V. DATZ, JR.
Chemist

N.J. Cert. # 04174

Seven Deer Tree
Professional Center
600 Deer Road
Cherry Hill, NJ 08034

Methodology

Metals

Analysis - Furnace atomic absorption spectroscopy.
- Antimony - Method 200.9
- Arsenic - Method 200.9
- Selenium - Method 200.9
- Thallium - Method 200.9
- Lead - Method 200.9
- Cadmium - Method 200.9

- Cold vapor atomic absorption spectroscopy.
  - Mercury - Method 245.1
- Method 200.7: Determination of Metals and Trace Elements by Inductively Coupled Plasma-Atomic Emission Spectrometry

Semivolatiles

Preparations - Method 3510: Separatory Funnel Liquid to Liquid Extraction

Analysis - Method 625.1, Base/Neutrals and Acid (Capillary Column), Federal Register, Vol. 49, No. 209, October 26,1984.

Organochlorine Pesticides

Preparations - Method 3510: Separatory Funnel Liquid to Liquid Extraction

Analysis - Method 608, Organochlorine Pesticides Federal Register, Vol. 49, No. 209, October 26,1984.

Phenols

Analysis - Method 420.1: Phenolics (Spectrophotometric, Manual 4-AAP with Distillation)

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3652

CLIENT: Envirotactics
Project: Newark
Lab Order: 0202018

CASE NARRATIVE

The software used to quantitate both volatile and semivolatile data, due to a year 2000 error, cannot recognize the year 2000. Until this problem can be resolved, the year 2001 will be replaced with the year 1981 on all volatile and semivolatile data (i.e. 01/01/01 will be displayed as 01/01/81).

All samples were extracted and/or analyzed within prescribed hold time. See laboratory chronicle for further details.

All volatile surrogate spikes were within QA/QC limits. See volatile surrogate recovery sheets for further details. All semivolatile surrogate spikes were within QA/QC limits. See semivolatile surrogate recovery sheet for further details. All pesticide surrogate spikes were within QA/QC limits. See pesticide surrogate recovery sheet for further details.

All semivolatile laboratory control spike recoveries were within QA/QC limits. See semivolatile laboratory control spike recovery sheets for further details. All metal matrix spike/matrix spike duplicate recoveries were within QA/QC limits. See metal matrix spike/matrix spike duplicate recovery sheets for further details.

All laboratory control spike recoveries met QA/QC criteria. Please see laboratory control spike recovery sheets for further details.

All initial and continuing calibration data met QA/QC standards. Please see initial and continuing calibration summaries for further details. All instrument tune data met QA/QC criteria. Please see instrument tune summary for further details.

No other problems were encountered during extraction and/or analysis.

3653

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0202-2-1A

0202018-4A

Val Associates Laboratory, Inc.
Seven Deer Tree Professional Center
600 Deer Road
Cherry Hill, NJ 08034
Phone: (856) 354-1337
Fax: (856) 354-1586
NJDEP Cert. #: 04174

Client: ENVIROTACTICS
Address:
City, State: Newark, NJ
Contact: Basil
Phone:
Fax:

Project:
Location: NEWARK
Project #:
PO #:

Turnaround Time (confirm):
24HR. 48HR. 72HR.
1-Week Standard
Other:

QA/QC Package
Standard Reduced

Electronic Deliverables Y or N

Please note any special handling requirements or methodologies to be used here:

Analysis and Preservative

Sample ID	Date	Time	Matrix	Type C	Type G	Sample Location/Description	VO Soil Kit #	No. of Cont.	PH Enol	H2SO4	HCL	HNO3	NaOH	ZnAC	Na2S2O3	Ascorbic	Barium	UN	BN	Pest								
MW15	2/5/02	10:54	AQ		-		SK	0																				
MW5	/ /	11:28			-		SK	~~2~~ 3	X		X					X												
MW3	/ /	11:51			-		SK	1								X												
MW2	/ /	12:24			-		SK	0																				
MW16	/ /	12:40			-		SK	~~3~~ 3	X							X	X											
MW7	/ /	1:10			-		SK	2	0		X					X												
	/ /	:					SK																					
	/ /	:					SK																					
	/ /	:					SK																					
	/ /	:					SK																					
	/ /	:					SK																					
	/ /	:					SK																					
	/ /	:					SK																					
	/ /	:					SK																					

Shipped Via: VAL

Relinquished by:	Date	Time	Agent of:	Received by:	Date	Time	Agent of:
Joey Scott	2/5/02	3:15	VAL		/ /	:	
Relinquished by:	/ /	:		Received by:	/ /	:	
Received for Lab by: [signature]	2/5/02	15:15					

Printed Name: Hope Nungesser

Sample Temperature
Were samples iced for transport: Y N
Cooler temp. at receipt: 4 degrees C

Sampled by: [signature] Printed Name: JOEY Scott

Comments/Remarks:
MW 15, MW2, get no analysis
MW 16, NOT Enough water to do bottom

3654

000066

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Val Asso lab Contract:

Lab Code: F2 Case No.: SAS No.: SDG No.: b001

Instrument ID: GC/MS Calibration Date(s): 01/14/82 01/14/82

Calibration Times: 12:49 16:04

LAB FILE ID: RRF20=BNAPB462.Q RRF50=BNAPB463.Q
RRF100=BNAPB464.Q RRF120=BNAPB465.Q RRF160=BNAPB466.Q

COMPOUND	RRF20	RRF50	RRF100	RRF120	RRF160	$\overline{RRF}$	% RSD
N-Nitrosodimethylamine	1.67427	1.62017	2.07159	2.11492	1.77864	1.85192	12.32
bis(2-Chloroethyl) ether	1.67585	1.96716	2.43540	2.21570	2.23897	2.10662	13.89
Phenol	1.26357	1.95902	2.04477	1.61608	1.62498	1.70168	18.33
2-Chlorophenol	2.13218	1.97913	1.99213	1.76114	2.80258	2.13343	18.60
1,3-Dichlorobenzene	1.82219	1.74556	2.14031	1.79509	2.38434	1.97750	13.92
1,4-Dichlorobenzene	1.12038	1.16060	1.23013	1.25920	1.42671	1.23940	9.54
1,2-Dichlorobenzene	1.64752	1.36284	1.50181	1.98236	1.98355	1.69562	16.57
Bis(2-Chloroisopropyl) ether	0.38080	0.34471	0.34036	0.38625	0.42170	0.37477	8.91
N-Nitrosodi-n-propylamine	0.35090	0.38312	0.38571	0.30059	0.30810	0.34568	11.64
Hexachloroethane	0.63415	0.50998	0.67752	0.75236	0.76787	0.66838	15.57
Nitrobenzene	0.24915	0.26760	0.27022	0.26718	0.28155	0.26714	4.35
Isophorone	0.44357	0.40974	0.51173	0.51203	0.38966	0.45335	12.53
2-Nitrophenol	0.15092	0.15972	0.21284	0.23575	0.25450	0.20275	22.61
2,4-Dimethylphenol	0.26903	0.28000	0.33001	0.25076	0.37469	0.30090	16.83
bis(2-Chloroethoxy)methane	0.24130	0.19941	0.22022	0.24357	0.24953	0.23081	8.99
1,2,4-Trichlorobenzene	0.30129	0.25709	0.32381	0.39878	0.42686	0.34157	20.50
2,4-Dichlorophenol	0.25864	0.20728	0.18516	0.24524	0.25585	0.23043	14.14
Naphthalene	0.93674	0.97033	1.16206	1.38235	1.33387	1.15707	17.58
Hexachlorobutadiene	0.25369	0.15373	0.19960	0.24058	0.21832	0.21318	18.37
4-chloro-3-methylphenol	0.16687	0.14559	0.12216	0.21518	0.20520	0.17100	22.97
Hexachlorocyclopentadiene	0.00000	0.00000	0.02565	0.01866	0.02468	0.02298	16.44
2,4,6-Trichlorophenol	0.25488	0.16817	0.23325	0.24291	0.23160	0.22616	14.91
2-Chloronaphthalene	1.00530	1.34395	1.35960	1.48729	1.42844	1.32492	14.16
Dimethyl phthalate	1.07746	1.17262	1.02826	1.67245	1.54913	1.29998	22.44
Acenaphthylene	1.33159	2.34653	2.36169	2.39894	1.99180	2.08611	21.70
2,6-Dinitrotoluene	0.14819	0.23058	0.20729	0.17078	0.16836	0.18504	17.94
Acenaphthene	1.15959	1.34640	1.60331	1.50158	1.29499	1.38117	12.62
2,4-Dinitrophenol	0.00000	0.08131	0.12053	0.10658	0.10229	0.10268	15.81
2,4-Dinitrotoluene	0.43834	0.35379	0.41277	0.43979	0.53244	0.43543	14.80
4-Nitrophenol	0.87667	0.98420	0.98084	0.93354	0.94877	0.94480	4.62
Diethyl phthalate	1.31140	1.17589	1.57915	1.75074	1.65739	1.49491	16.19
Fluorene	1.46744	1.60716	2.28398	1.90161	1.61765	1.77557	18.31
4-Chlorophenyl phenyl ether	0.46077	0.62431	0.55581	0.70999	0.58556	0.58729	15.57
4,6-Dinitro-2-methylphenol	0.00000	0.14770	0.16620	0.21870	0.22871	0.19033	20.75
N-Nitrosodiphenylamine	0.70865	0.72217	0.90221	1.01107	0.94401	0.85762	15.81
4-Bromophenyl phenyl ether	0.10475	0.08733	0.12995	0.14682	0.14503	0.12277	21.18
Hexachlorobenzene	0.20301	0.21685	0.22638	0.23050	0.28017	0.23138	12.64
Pentachlorophenol	0.00000	0.01497	0.01867	0.01615	0.02392	0.01843	21.57
Phenanthrene	1.19396	1.22821	1.62994	1.48447	1.54345	1.41601	13.73
Anthracene	1.15135	1.04471	1.48205	1.37689	1.48567	1.30813	15.31
Di-n-butyl phthalate	1.51170	1.36069	2.22787	2.01982	2.18238	1.86049	21.42
Fluoranthene	1.35055	1.07672	1.40395	1.72276	1.32928	1.37665	16.78
Pyrene	1.12721	1.11678	1.36468	1.66241	1.32765	1.31974	16.85
Benzidine	0.00000	0.00537	0.00563	0.00730	0.00754	0.00646	17.27
Butyl benzyl phthalate	0.61798	0.60999	0.90621	0.89582	0.94381	0.79476	20.89
Benzo(a)anthracene	1.83571	1.60507	1.50071	1.58294	1.56969	1.61883	7.87
Chrysene	1.61669	1.50854	1.32120	1.65038	1.60624	1.54061	8.67
3,3'-Dichlorobenzidine	0.11231	0.08172	0.12445	0.15917	0.11930	0.11939	23.23
bis(2-Ethylhexyl)phthalate	2.05915	2.68942	2.90413	2.97022	3.33014	2.79061	16.82

* Compounds with required mininum RRF and maximum %RSD values.
All other compounds must meet a minimum RRF of 0.010.

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Val Asso lab Contract:

Lab Code: F2 Case No.: SAS No.: SDG No.: b001

Instrument ID: GC/MS Calibration Date(s): 01/14/82 01/14/82

Calibration Times: 12:49 16:04

LAB FILE ID: RRF20=BNAPB462.Q RRF50=BNAPB463.Q
RRF100=BNAPB464.Q RRF120=BNAPB465.Q RRF160=BNAPB466.Q

COMPOUND	RRF20	RRF50	RRF100	RRF120	RRF160	$\overline{RRF}$	% RSD
Di-n-octyl phthalate	9.94907	9.90849	11.5175	11.7207	11.9004	10.9992	8.97
Benzo(b)fluoranthene	2.23717	2.64167	2.33933	2.20089	2.08494	2.30080	9.18
Benzo(k)fluoranthene	2.34279	2.87152	2.45897	3.32853	2.84567	2.76950	14.07
Benzo(a)pyrene	1.83345	2.34064	2.24345	2.92816	2.73419	2.41598	17.78
Indeno(1,2,3-c,d)pyrene	3.32880	4.30227	4.19733	4.60650	4.00697	4.08837	11.66
Dibenz(a,h)anthracene	3.25021	4.13549	3.94903	4.33677	3.76614	3.88753	10.67
Benzo(ghi)perylene	2.86649	3.21904	3.16367	3.84728	3.32116	3.28353	10.89
2-FLUOROPHENOL	1.67018	1.27067	1.38550	1.09840	1.77743	1.44044	19.49
PHENOL-D6	1.13706	1.75291	1.44292	1.30272	1.48642	1.42441	16.07
NITROBENZENE-D5	0.12745	0.12633	0.11602	0.15655	0.13624	0.13252	11.49
2-FLUOROBIPHENYL	1.54125	1.65726	1.90880	1.52602	1.16431	1.55953	17.24
2,4,6-TRIBROMOPHENOL	0.33347	0.26291	0.35714	0.26460	0.25829	0.29528	15.74
TERPHENYL-D14	0.49439	0.44244	0.00000	0.54155	0.57137	0.51244	11.01

* Compounds with required mininum RRF and maximum %RSD values.
All other compounds must meet a minimum RRF of 0.010.

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

DD

Lab Name: VAL ASSO LAB Contract: _____

Lab Code: F2 Case No.: _____ SAS No.: _____ SDG No.: BB438

Instrument ID: GC/MS Calibration Date(s): 02/08/82 Time: 09:29

Lab File ID: BNAPB571.Q Init Calib. Date(s): 1/14/82 1/14/82

Init. Calib. Times: 12:49 16:04

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
N-Nitrosodimethylamine	1.8519	1.5016		18.9	35.0
bis(2-Chloroethyl) ether	2.1066	1.7070		19.0	35.0
Phenol	1.7016	1.4327		15.8	35.0
2-Chlorophenol	2.1334	1.8142		15.0	35.0
1,3-Dichlorobenzene	1.9775	1.6622		15.9	35.0
1,4-Dichlorobenzene	1.2394	1.0520		15.1	35.0
1,2-Dichlorobenzene	1.6956	1.4567		14.1	35.0
Bis(2-Chloroisopropyl) ether	0.3747	0.3411		9.0	
N-Nitrosodi-n-propylamine	0.3456	0.2934		15.1	35.0
Hexachloroethane	0.6683	0.7522		12.5	35.0
Nitrobenzene	0.2671	0.2313		13.4	35.0
Isophorone	0.4533	0.4201		7.3	35.0
2-Nitrophenol	0.2027	0.2504		23.5	35.0
2,4-Dimethylphenol	0.3009	0.3191		6.1	35.0
bis(2-Chloroethoxy)methane	0.2308	0.2630		14.0	35.0
1,2,4-Trichlorobenzene	0.3415	0.2749		19.5	35.0
2,4-Dichlorophenol	0.2304	0.1964		14.7	35.0
Naphthalene	1.1570	1.2254		5.9	35.0
Hexachlorobutadiene	0.2131	0.1808		15.2	35.0
4-chloro-3-methylphenol	0.1710	0.1680		1.7	35.0
Hexachlorocyclopentadiene	0.0229	0.0282		23.1	35.0
2,4,6-Trichlorophenol	0.2261	0.2121		6.2	35.0
2-Chloronaphthalene	1.3249	1.1728		11.5	35.0
Dimethyl phthalate	1.2999	1.3718		5.5	35.0
Acenaphthylene	2.0861	1.9246		7.7	35.0
2,6-Dinitrotoluene	0.1850	0.1775		4.1	35.0
Acenaphthene	1.3811	1.1424		17.3	35.0
2,4-Dinitrophenol	0.1026	0.0860		16.2	35.0
2,4-Dinitrotoluene	0.4354	0.4295		1.3	35.0
4-Nitrophenol	0.9448	1.1142		17.9	35.0
Diethyl phthalate	1.4949	1.4317		4.2	35.0
Fluorene	1.7755	1.3323		25.0	35.0
4-Chlorophenyl phenyl ether	0.5872	0.4364		25.7	35.0
4,6-Dinitro-2-methylphenol	0.1903	0.2152		13.1	35.0

All other compounds must meet a minimum RF of 0.010.

000069

3037

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: VAL ASSO LAB Contract: _____

Lab Code: F2 Case No.: _____ SAS No.: _____ SDG No.: BB438

Instrument ID: GC/MS Calibration Date(s): ~~01/14~~ 02 08 /82 Time: ~~16:04~~ 9:29

Lab File ID: BNAPB571.Q Init Calib. Date(s): 1/14/02 1/14/02

Init. Calib. Times: 12:49 16:04

COMPOUND	$\overline{RRF}$	RRF50	MIN RRF	%D	MAX %D
N-Nitrosodiphenylamine	0.8576	1.0210		19.1	35.0
4-Bromophenyl phenyl ether	0.1227	0.1306		6.4	35.0
Hexachlorobenzene	0.2313	0.2184		5.6	35.0
Pentachlorophenol	0.0184	0.0190		3.1	35.0
Phenanthrene	1.4160	1.2927		8.7	35.0
Anthracene	1.3081	1.2374		5.4	35.0
Di-n-butyl phthalate	1.8604	2.1799		17.2	35.0
Fluoranthene	1.3766	1.1329		17.7	35.0
Pyrene	1.3197	1.1693		11.4	35.0
Benzidine	0.0064	***0.0075***		16.8	35.0
Butyl benzyl phthalate	0.7947	0.7579		4.6	35.0
Benzo(a)anthracene	1.6188	1.3755		15.0	35.0
Chrysene	1.5406	1.2859		16.5	35.0
3,3'-Dichlorobenzidine	0.1193	0.1129		5.4	35.0
bis(2-Ethylhexyl)phthalate	2.7906	2.7743		0.6	35.0
Di-n-octyl phthalate	10.999	12.065		9.7	35.0
Benzo(b)fluoranthene	2.3008	2.4936		8.4	35.0
Benzo(k)fluoranthene	2.7695	3.3561		21.2	35.0
Benzo(a)pyrene	2.4159	2.8363		17.4	35.0
Indeno(1,2,3-c,d)pyrene	4.0883	4.1950		2.6	35.0
Dibenz(a,h)anthracene	3.8875	3.7789		2.8	35.0
Benzo(ghi)perylene	3.2835	3.0603		6.8	35.0
2-Fluorophenol	1.4404	1.1651	0.600	19.1	.0
Phenol-D6	1.4244	1.1127	0.800	21.9	.0
Nitrobenzene-D5	0.1325	0.1067	0.200	19.4	.0

All other compounds must meet a minimum RF of 0.010.

QUANT REPORT
Quant Rev: 10

Operator Id:
Dilution Factor:<None>
Output File: C:\BNAP\BNAPB571.Q
Data File: c:\bnap\bnapb571.mss
Name: LPC 625 W BNA (2) 1
Misc: 100PPBSTD,BB438,L,1000.0,1.00,1.0,0,
ID File: c:\bnap\hsl\625b.i
Title: SW-846 Method 8270 Semi-Volatile Quant ID File
t Calib: 01/17/82 10:29

Quant Time : 82/21/19 54:20
Injected at : 02/08/82 09:29

Last Qcal Date: None

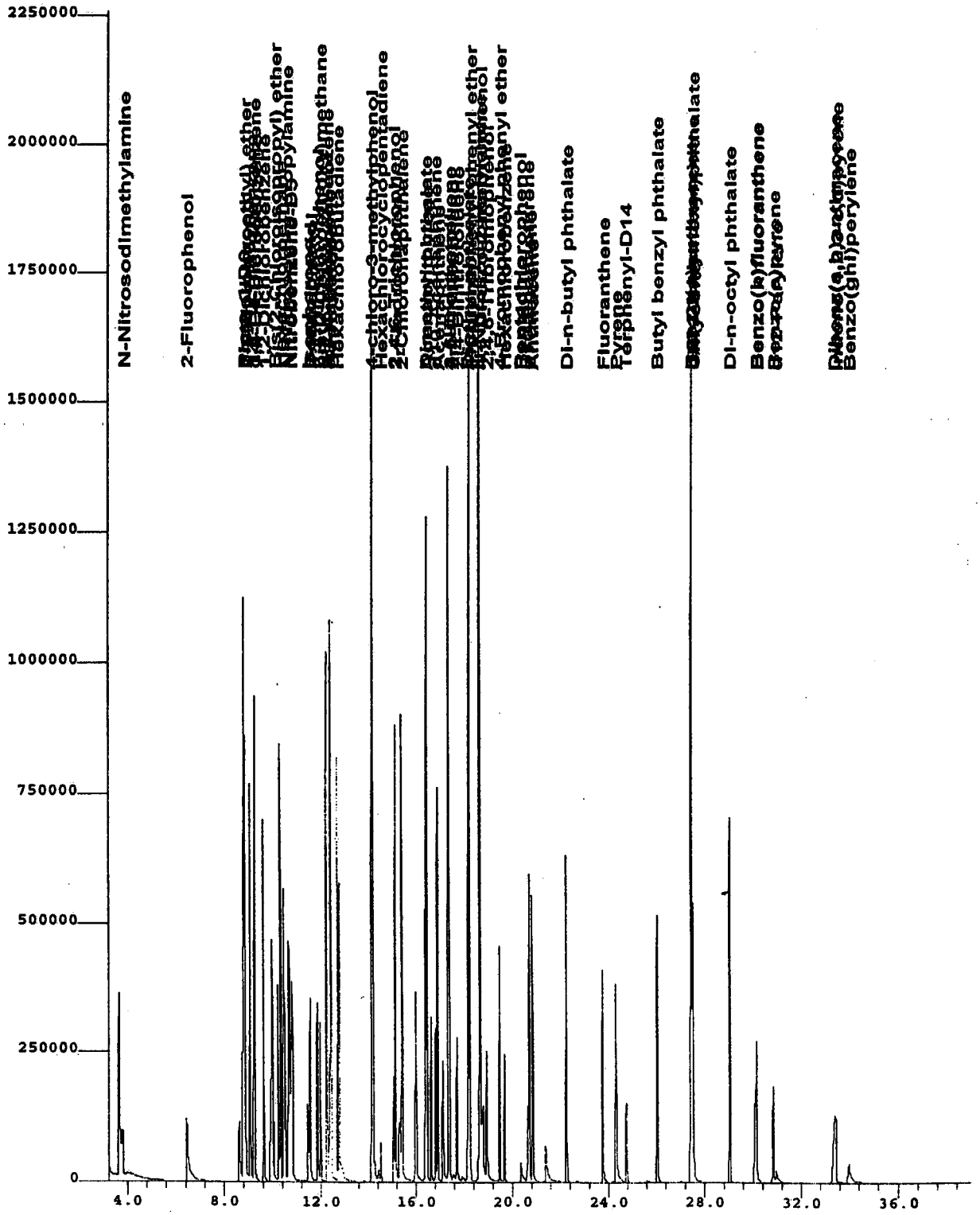
	Compound	R.T.	Q Ion	Area	Conc	Units	Q
1)	*d4-1,4-Dichlorobenzene	9.21	152	165056	40.00	ug/l	94
2)	N-Nitrosodimethylamine	3.80	74	619652	81.09	ug/l	0
3)	2-Fluorophenol	6.44	112	480789	80.89	ug/l	0
4)	bis(2-Chloroethyl) ether	8.82	93	704405	81.03	ug/l	0
5)	Phenol-D6	8.77	99	459153	78.12	ug/l	0
6)	Phenol	8.81	94	591187	84.19	ug/l	100
7)	2-Chlorophenol	8.87	128	748618	85.04	ug/l	93
8)	1,3-Dichlorobenzene	9.08	146	685922	84.06	ug/l	92
9)	1,4-Dichlorobenzene	9.26	148	434112	84.88	ug/l	100
10)	1,2-Dichlorobenzene	9.63	146	601129	85.92	ug/l	85
11)	Bis(2-Chloroisopropyl) ether	10.06	121	140790	91.04	ug/l	0
12)	N-Nitrosodi-n-propylamine	10.54	70	121074	84.88	ug/l	0
13)	Hexachloroethane	10.33	117	310396	112.54	ug/l	0
14)	*d8-Naphthalene	12.38	136	579522	40.00	ug/l	100
15)	Nitrobenzene-D5	10.78	54	154666	80.56	ug/l	100
16)	Nitrobenzene	10.67	77	335160	86.60	ug/l	0
17)	Isophorone	11.46	82	608752	92.68	ug/l	0
18)	2-Nitrophenol	11.57	139	362813	123.52	ug/l	100
19)	2,4-Dimethylphenol	11.87	107	462433	106.08	ug/l	100
20)	bis(2-Chloroethoxy)methane	11.99	93	381157	113.98	ug/l	100
21)	1,2,4-Trichlorobenzene	12.25	180	398313	80.49	ug/l	90
22)	2,4-Dichlorophenol	12.26	162	284634	85.26	ug/l	94
23)	Benzoic acid	11.54	105	14565	5.49	ug/l	100
24)	Naphthalene	12.44	128	1775443	105.91	ug/l	88
25)M	Hexachlorobutadiene	12.71	225	261958	84.81	ug/l	0
26)M	4-chloro-3-methylphenol	14.15	107	243531	98.30	ug/l	0
27)	*d10-Acenaphthene	16.82	162	303671	40.00	ug/l	98
28)	Hexachlorocyclopentadiene	14.54	237	21470	123.05	ug/l	100
29)M	2,4,6-Trichlorophenol	15.07	198	161074	93.81	ug/l	0
30)	2-Fluorobiphenyl	15.16	172	837353	70.72	ug/l	98
31)	2-Chloronaphthalene	15.43	162	890393	88.52	ug/l	83
32)	Dimethyl phthalate	16.42	163	1041452	105.53	ug/l	99
33)	Acenaphthylene	16.47	152	1461152	92.26	ug/l	96
34)M	2,6-Dinitrotoluene	17.38	63	134784	95.95	ug/l	0
35)	Acenaphthene	16.93	153	867321	82.72	ug/l	96
36)M	2,4-Dinitrophenol	17.55	184	65288	83.76	ug/l	0
37)	2,4-Dinitrotoluene	17.71	165	326135	98.66	ug/l	100
38)M	4-Nitrophenol	17.40	139	845935	117.94	ug/l	0
39)	Diethyl phthalate	18.20	149	1086929	95.77	ug/l	83
40)	Fluorene	18.26	166	1011518	75.04	ug/l	95
41)	4-Chlorophenyl phenyl ether	18.27	204	331349	74.32	ug/l	100
42)	2,4,6-Tribromophenol	18.95	332	155277	69.27	ug/l	93
43)	*d10-Phenanthrene	20.63	188	280846	40.00	ug/l	98
44)	4,6-Dinitro-2-methylphenol	18.72	198	151150	113.11	ug/l	100
45)	N-Nitrosodiphenylamine	18.68	169	716919	119.06	ug/l	0
46)	4-Bromophenyl phenyl ether	19.49	248	91735	106.42	ug/l	0
47)	Hexachlorobenzene	19.69	284	76671	47.20	ug/l	100
48)	Pentachlorophenol	20.33	266	13340	103.10	ug/l	0
49)	Phenanthrene	20.72	178	907662	91.30	ug/l	94
50)	Anthracene	20.85	178	868799	94.59	ug/l	0
51)	Di-n-butyl phthalate	22.27	149	1530588	117.17	ug/l	0
52)	Fluoranthene	23.77	202	795467	82.30	ug/l	96
53)M	Pyrene	24.33	202	821018	88.60	ug/l	0
54)	*d12-Chrysene	27.48	240	152680	40.00	ug/l	100
55)	Benzidine	20.41	184	2880	116.82	ug/l	100
56)	Terphenyl-D14	24.74	244	105087	53.73	ug/l	94
57)M	Butyl benzyl phthalate	26.05	149	289324	95.37	ug/l	0
58)	Benzo(a)anthracene	27.44	228	525038	84.97	ug/l	100
59)	Chrysene	27.56	228	490854	83.47	ug/l	100
60)	3,3'-Dichlorobenzidine	27.48	252	43128	94.64	ug/l	0
61)	bis(2-Ethylhexyl)phthalate	27.51	149	1058951	99.42	ug/l	0
62)	*d12-Perylene	30.96	264	24915	40.00	ug/l	0
63)	Di-n-octyl phthalate	29.05	149	751498	109.69	ug/l	0
64)	Benzo(b)fluoranthene	30.10	252	155323	108.38	ug/l	0
65)	Benzo(k)fluoranthene	30.18	252	209045	121.18	ug/l	0
66)	Benzo(a)pyrene	30.84	252	176669	117.40	ug/l	0
67)	Indeno(1,2,3-c,d)pyrene	33.44	276	261299	102.61	ug/l	100
68)	Dibenz(a,h)anthracene	33.35	278	235382	97.21	ug/l	100
69)M	Benzo(ghi)perylene	34.00	276	190623	93.20	ug/l	0

* Compound is Internal Standard

000071

3659

Data File: C:\BNAP\BNAPB571.MSS
Quant Output File: C:\BNAP\BNAPB571.Q
Injection Time: 02/08/82 09:29
Misc: 100PPBSTD,BB438,L,1000.0,1.00,1.0,0,



000072

3660

File Name	Sample Name	TCX Ret. Time	TCX Area (µV·s)	TCX Area/ Amount	TCX Adjusted Amount	a-BHC Ret. Time	a-BHC Area (µV·s)	a-BHC Area/ Amount	a-BHC Adjusted Amount
psta297.	5PPBSTD PEST20	8.26	903670.12	8860.8386	101.9847	9.68	18831.98	3462.7044	5.4385
psta298.	10PPBSTD PEST20	8.28	907849.96	9781.5339	92.8126	9.69	40064.04	4591.8137	8.7251
psta299.	25PPBSTD PEST20	8.27	942218.32	9618.3925	97.9601	9.68	111239.07	5250.0560	21.1882
psta300.	40PPBSTD PEST20	8.26	945453.93	8668.9678	109.0619	9.67	212357.90	4985.5351	42.5948
psta301.	50PPBSTD PEST20	8.26	928510.81	9457.1620	98.1807	9.68	262170.02	5239.0834	50.0412
Averages		8.27	925540.63	9277.3790	100.0000	9.68	128932.60	4705.8385	25.5976
%RSD		0.10	2.07	5.2432	6.0247	0.07	82.31	5.8208	78.0569

File Name	Sample Name	y-BHC(Lindane) Ret. Time	y-BHC(Lindane) Area (µV·s)	y-BHC(Lindane) Area/ Amount	y-BHC(Lindane) Adjusted Amount	b-BHC Ret. Time	b-BHC Area (µV·s)	b-BHC Area/ Amount	b-BHC Adjusted Amount
psta297.	5PPBSTD PEST20	10.44	22647.76	4232.1940	5.3513	10.68	22973.93	872.7866	26.3225
psta298.	10PPBSTD PEST20	10.46	44687.75	5073.9913	8.8072	10.69	9045.39	3313.1474	2.7301
psta299.	25PPBSTD PEST20	10.44	121224.07	5578.3941	21.7310	10.68	20403.30	937.6825	21.7593
psta300.	40PPBSTD PEST20	10.44	230269.70	5468.4273	42.1089	10.67	33476.61	789.4375	42.4057
psta301.	50PPBSTD PEST20	10.44	280759.44	5598.3074	50.1508	10.67	37304.28	761.0393	49.0176
Averages		10.44	139917.74	5190.2628	25.6298	10.68	24640.70	1334.8187	28.4470
%RSD		0.07	80.84	11.0928	77.6002	0.07	45.48	3.0158	64.0661

File Name	Sample Name	g-BHC Ret. Time	g-BHC Area (µV·s)	g-BHC Area/ Amount	g-BHC Adjusted Amount	HEPTCHLOR Ret. Time	HEPTCHLOR Area (µV·s)	HEPTCHLOR Area/ Amount	HEPTCHLOR Adjusted Amount
psta297.	5PPBSTD PEST20	11.07	23517.00	3851.4991	6.1059	11.53	39939.57	7722.9994	5.1715
psta298.	10PPBSTD PEST20	11.08	34286.47	3810.4839	8.9979	11.54	81734.11	8902.3304	9.1812
psta299.	25PPBSTD PEST20	11.07	68315.17	3126.6461	21.8493	11.53	215214.09	9346.7634	23.0255
psta300.	40PPBSTD PEST20	11.06	138414.65	3209.1685	43.1310	11.52	392288.48	9298.9220	42.1864
psta301.	50PPBSTD PEST20	11.06	149610.77	3043.3220	49.1603	11.53	472272.90	9563.1440	49.3847
Averages		11.07	82828.81	3408.2239	25.8489	11.53	240289.83	8966.8318	25.7899
%RSD		0.06	70.49	11.4614	75.7065	0.06	78.64	8.1980	75.9377

File Name	Sample Name	ALDRIN Ret. Time	ALDRIN Area (µV·s)	ALDRIN Area/ Amount	ALDRIN Adjusted Amount	HEPTACHLOR EPOXIDE Ret. Time	HEPTACHLOR EPOXIDE Area (µV·s)	HEPTACHLOR EPOXIDE Area/ Amount	HEPTACHLOR EPOXIDE Adjusted Amount
psta297.	5PPBSTD PEST20	12.18	29837.19	5695.6459	5.2386	13.49	36390.14	7058.6288	5.1554
psta298.	10PPBSTD PEST20	12.19	62320.18	7007.8847	8.8929	13.50	79574.39	8359.4817	9.5191
psta299.	25PPBSTD PEST20	12.18	166992.93	7466.5834	22.3654	13.49	201769.50	8639.6257	23.3540
psta300.	40PPBSTD PEST20	12.17	305516.02	7268.7594	42.0314	13.48	347465.69	8408.1562	41.3248
psta301.	50PPBSTD PEST20	12.18	384110.76	7699.1884	49.8898	13.48	421584.46	8458.1132	49.8438
Averages		12.18	189755.42	7027.6124	25.6836	13.49	217356.84	8184.8011	25.8394
%RSD		0.06	80.57	11.1962	76.9928	0.05	76.51	7.7999	75.3511

File Name	Sample Name	y-CHLORDANE Ret. Time	y-CHLORDANE Area (µV·s)	y-CHLORDANE Area/ Amount	y-CHLORDANE Adjusted Amount	a-CHLORDANE Ret. Time	a-CHLORDANE Area (µV·s)	a-CHLORDANE Area/ Amount	a-CHLORDANE Adjusted Amount
psta297.	5PPBSTD PEST20	13.75	38009.53	7469.0603	5.0889	14.02	44687.38	7532.1317	5.9329
psta298.	10PPBSTD PEST20	13.76	75447.13	7898.8460	9.5517	14.03	71103.70	7652.2394	9.2919
psta299.	25PPBSTD PEST20	13.75	196830.82	8194.0600	24.0212	14.02	182691.07	7780.4332	23.4808
psta300.	40PPBSTD PEST20	13.74	339686.05	8274.9020	41.0502	14.01	321876.89	7816.5138	41.1791
psta301.	50PPBSTD PEST20	13.74	412501.24	8294.8058	49.7301	14.02	390183.49	7824.8518	49.8646
Averages		13.75	212494.95	8026.3348	25.8884	14.02	202108.50	7721.2340	25.9499
%RSD		0.05	76.48	4.3553	74.8339	0.05	75.05	1.6362	74.3280

File Name	Sample Name	4,4' DDE Ret. Time	4,4' DDE Area (µV·s)	4,4' DDE Area/ Amount	4,4' DDE Adjusted Amount	ENDOSULFAN 1 Ret. Time	ENDOSULFAN 1 Area (µV·s)	ENDOSULFAN 1 Area/ Amount	ENDOSULFAN 1 Adjusted Amount
psta297.	5PPBSTD PEST20	14.23	40001.97	7014.9430	5.7024	14.29	58827.33	10941.2964	5.3766
psta298.	10PPBSTD PEST20	14.24	65387.77	6946.0090	9.4137	14.30	100300.66	10635.5261	9.4307
psta299.	25PPBSTD PEST20	14.23	146652.61	6382.3136	22.9780	14.29	232707.81	10109.7892	23.0181
psta300.	40PPBSTD PEST20	14.22	259173.52	6268.1151	41.3479	14.28	414343.03	9998.5830	41.4402
psta301.	50PPBSTD PEST20	14.22	327724.88	6557.1603	49.9797	14.28	493499.09	9886.7856	49.9150
Averages		14.23	167788.15	6633.7082	25.8843	14.29	259935.58	10314.3961	25.8361
%RSD		0.05	73.72	5.0313	74.9813	0.05	73.26	4.3912	75.4248

File Name	Sample Name	DIELDRIN Ret. Time	DIELDRIN Area (µV·s)	DIELDRIN Area/ Amount	DIELDRIN Adjusted Amount	ENDRIN Ret. Time	ENDRIN Area (µV·s)	ENDRIN Area/ Amount	ENDRIN Adjusted Amount

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psta300.	40PPBSTD PEST20	14.77	282937.23	6851.5705	41.2952	15.23	267799.42	6341.0132	42.2329
psta301.	50PPBSTD PEST20	14.78	344556.39	6855.8156	50.2575	15.23	314057.30	6359.3898	49.3848
Averages		14.78	180606.76	7523.3379	25.7367	15.24	165386.79	6599.4983	25.7964
%RSD		0.05	71.95	6.2540	76.3933	0.05	74.19	8.0419	75.8992

File Name	Sample Name	4,4'-DDD Ret. Time	4,4'-DDD Area [µV·s]	4,4'-DDD Area/ Amount	4,4'-DDD Adjusted Amount	ENDOSULFAN II Ret. Time	ENDOSULFAN II Area [µV·s]	ENDOSULFAN II Area/ Amount	ENDOSULFAN II Adjusted Amount
297.	5PPBSTD PEST20	15.42	19676.96	3612.6410	5.4467	15.69	43586.90	8412.7345	5.1811
psta298.	10PPBSTD PEST20	15.43	34855.37	3772.5356	9.2392	15.70	69168.04	7303.1086	9.4710
psta299.	25PPBSTD PEST20	15.42	86397.53	3784.0265	22.8322	15.69	163630.45	6861.2028	23.8487
psta300.	40PPBSTD PEST20	15.41	153165.56	3706.5172	41.3233	15.68	286072.37	6844.5934	41.7954
psta301.	50PPBSTD PEST20	15.42	180289.99	3596.2518	50.1327	15.68	329560.00	6694.6924	49.2271
Averages		15.42	94877.08	3694.3944	25.7948	15.69	178403.55	7223.2663	25.9046
%RSD		0.05	74.57	2.3676	75.8293	0.05	71.33	9.7281	74.7598

File Name	Sample Name	4,4'-DDT Ret. Time	4,4'-DDT Area [µV·s]	4,4'-DDT Area/ Amount	4,4'-DDT Adjusted Amount	ENDRIN ALDEHYDE Ret. Time	ENDRIN ALDEHYDE Area [µV·s]	ENDRIN ALDEHYDE Area/ Amount	ENDRIN ALDEHYDE Adjusted Amount
psta297.	5PPBSTD PEST20	15.97	17536.32	3019.9875	5.8068	16.53	28484.81	5956.2677	4.7823
psta298.	10PPBSTD PEST20	15.98	23474.35	2792.1253	8.4073	16.53	57551.87	5836.4737	9.8607
psta299.	25PPBSTD PEST20	15.97	65987.24	3008.5273	21.9334	16.52	144892.70	5515.0722	26.2721
psta300.	40PPBSTD PEST20	15.96	130914.65	2984.8545	43.8596	16.51	229174.23	5401.8773	42.4249
psta301.	50PPBSTD PEST20	15.97	145494.31	2988.5790	48.6834	16.52	264181.01	5564.7962	47.4736
Averages		15.97	76681.37	2958.8147	25.7381	16.52	144856.92	5654.8974	26.1627
%RSD		0.05	77.48	3.1868	76.8995	0.05	71.17	4.1044	72.5595

File Name	Sample Name	METHOXYCHLOR Ret. Time	METHOXYCHLOR Area [µV·s]	METHOXYCHLOR Area/ Amount	METHOXYCHLOR Adjusted Amount	ENDOSULFAN SULFATE Ret. Time	ENDOSULFAN SULFATE Area [µV·s]	ENDOSULFAN SULFATE Area/ Amount	ENDOSULFAN SULFATE Adjusted Amount
psta297.	5PPBSTD PEST20	16.96	7022.29	1301.1875	5.3968	17.38	17930.62	3426.7191	5.2326
psta298.	10PPBSTD PEST20	16.96	13076.54	1563.0405	8.3661	17.38	30960.89	3590.8599	8.6221
psta299.	25PPBSTD PEST20	16.95	38923.51	1738.9985	22.3827	17.38	88693.56	3663.4576	24.2103
psta300.	40PPBSTD PEST20	16.94	80456.68	1899.6018	42.3545	17.37	164024.08	3805.0740	43.1067
psta301.	50PPBSTD PEST20	16.95	92717.32	1865.0840	49.7121	17.37	185574.80	3853.1530	48.1618
Averages		16.95	46439.27	1673.5824	25.6425	17.37	97436.79	3667.8527	25.8667
%RSD		0.04	83.55	4.7254	77.4484	0.04	77.86	4.6680	75.3660

File Name	Sample Name	ENDRIN KETONE Ret. Time	ENDRIN KETONE Area [µV·s]	ENDRIN KETONE Area/ Amount	ENDRIN KETONE Adjusted Amount	DCB Ret. Time	DCB Area [µV·s]	DCB Area/ Amount	DCB Adjusted Amount
psta297.	5PPBSTD PEST20	17.92	41776.21	6525.0946	6.4024	19.90	578633.46	6096.4790	94.9127
psta298.	10PPBSTD PEST20	17.93	51200.48	5968.9715	8.5778	19.91	633769.12	7371.3619	85.9772
psta299.	25PPBSTD PEST20	17.92	106212.07	5886.2417	18.0441	19.90	730647.31	7246.6133	100.8260
psta300.	40PPBSTD PEST20	17.91	329466.77	5567.5477	59.1763	19.89	785314.82	7003.5029	112.1317
psta301.	50PPBSTD PEST20	17.91	221071.49	5774.9485	38.2811	19.90	788564.25	7428.6117	106.1523
Averages		17.92	149945.40	5944.5608	26.0963	19.90	703385.79	7029.3137	100.0000
%RSD		0.04	82.12	6.0180	85.7353	0.03	13.32	7.7741	10.1024

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File Name	Sample Name	Tetrachloro-m-xylene Ret. Time	Area [µV·s]	Area/ Amount	Adjusted Amount	a-BHC Ret. Time	Area [µV·s]	Area/ Amount	Adjusted Amount
pstb297.	5PPBSTD PEST20	8.32	1245543.92	13023.9606	95.6348	9.90	31689.87	6430.7111	4.9279
pstb298.	10PPBSTD PEST20	8.33	1306413.25	13023.9606	100.3084	9.91	69084.46	7411.1374	9.3217
pstb299.	25PPBSTD PEST20	8.32	1258454.81	13023.9606	96.6261	9.90	187277.80	8069.0971	23.2093
pstb300.	40PPBSTD PEST20	8.31	1368894.17	13023.9606	105.1058	9.89	342882.41	8263.7019	41.4926
pstb301.	50PPBSTD PEST20	8.32	1332674.17	13023.9606	102.3248	9.90	413960.45	8305.0937	49.8442
Averages		8.32	1302396.06	13023.9606	100.0000	9.90	208979.00	7695.9482	25.7591
%RSD		0.10	3.94	0.0000	3.9372	0.07	79.86	10.3025	76.1297

File Name	Sample Name	y-BHC(Lindane) Ret. Time	Area [µV·s]	Area/ Amount	Adjusted Amount	b-BHC Ret. Time	Area [µV·s]	Area/ Amount	Adjusted Amount
pstb297.	5PPBSTD PEST20	10.75	32200.39	6128.7809	5.2540	10.97	64502.95	1735.5884	37.1649
pstb298.	10PPBSTD PEST20	10.76	66104.48	7062.5016	9.3599	10.98	32911.62	4439.6604	7.4131
pstb299.	25PPBSTD PEST20	10.75	172558.62	7754.7214	22.2521	10.97	44237.16	2446.8601	18.0792
pstb300.	40PPBSTD PEST20	10.74	331623.38	7987.9148	41.5156	10.96	68382.29	1675.2835	40.8183
pstb301.	50PPBSTD PEST20	10.74	403861.70	8034.7985	50.2641	10.97	78244.88	1561.5671	50.1066
Averages		10.75	201269.71	7393.7435	25.7291	10.97	57655.78	2371.7919	30.7164
%RSD		0.06	80.77	10.9129	76.5198	0.06	32.19	50.8927	56.9113

File Name	Sample Name	g-BHC Ret. Time	Area [µV·s]	Area/ Amount	Adjusted Amount	HEPTCHLOR Ret. Time	Area [µV·s]	Area/ Amount	Adjusted Amount
pstb297.	5PPBSTD PEST20	11.62	28160.00	4617.9150	6.0980	11.72	40058.66	8106.9854	4.9413
pstb298.	10PPBSTD PEST20	11.63	40265.75	4611.0313	8.7325	11.73	80934.81	8553.0367	9.4627
pstb299.	25PPBSTD PEST20	11.62	111055.59	4600.8621	24.1380	11.72	217811.24	8853.0161	24.6031
pstb300.	40PPBSTD PEST20	11.61	195134.50	4598.3766	42.4355	11.71	364734.97	8927.5969	40.8548
pstb301.	50PPBSTD PEST20	11.62	223581.70	4597.9591	48.6263	11.72	444049.21	8947.5563	49.6280
Averages		11.62	119639.51	4605.2288	26.0061	11.72	229517.78	8677.6383	25.8980
%RSD		0.05	73.87	0.1922	73.9600	0.06	76.22	4.1038	74.7190

File Name	Sample Name	ALDRIN Ret. Time	Area [µV·s]	Area/ Amount	Adjusted Amount	HEPTACHLOR EPOXIDE Ret. Time	Area [µV·s]	Area/ Amount	Adjusted Amount
pstb297.	5PPBSTD PEST20	12.41	38759.58	7905.8344	4.9027	13.65	78057.83	11231.1475	6.9501
pstb298.	10PPBSTD PEST20	12.42	88268.90	9221.5211	9.5721	13.66	109751.04	10311.4437	10.6436
pstb299.	25PPBSTD PEST20	12.42	228994.21	10024.1045	22.8444	13.65	228354.81	9333.7177	24.4656
pstb300.	40PPBSTD PEST20	12.41	424714.60	10282.7905	41.3034	13.64	367825.47	9033.1862	40.7193
pstb301.	50PPBSTD PEST20	12.41	518306.23	10339.1610	50.1304	13.65	442037.93	8953.9372	49.3680
Averages		12.41	259808.70	9554.6823	25.7506	13.65	245205.42	9772.6865	26.4293
%RSD		0.05	80.10	10.7189	76.2250	0.05	64.59	10.0092	69.8411

File Name	Sample Name	y-CHLORDANE Ret. Time	Area [µV·s]	Area/ Amount	Adjusted Amount	a-CHLORDANE Ret. Time	Area [µV·s]	Area/ Amount	Adjusted Amount
pstb297.	5PPBSTD PEST20	14.04	51537.98	11025.9077	4.6743	14.34	47169.93	9341.6113	5.0494
pstb298.	10PPBSTD PEST20	14.05	117538.02	10655.0248	11.0312	14.35	96208.07	9157.7236	10.5057
pstb299.	25PPBSTD PEST20	14.04	252921.70	10507.2921	24.0711	14.34	214342.72	9063.1414	23.6499
pstb300.	40PPBSTD PEST20	14.03	429846.25	10455.4893	41.1120	14.33	380384.43	9029.9873	42.1246
pstb301.	50PPBSTD PEST20	14.03	515906.99	10443.2113	49.4012	14.34	441002.79	9024.1297	48.8693
Averages		14.04	273550.19	10617.3850	26.0580	14.34	235821.59	9123.3186	26.0398
%RSD		0.05	72.47	2.2925	73.2807	0.04	73.00	1.4604	73.5571

File Name	Sample Name	ENDOSULFAN 1 Ret. Time	Area [µV·s]	Area/ Amount	Adjusted Amount	4,4' DDE Ret. Time	Area [µV·s]	Area/ Amount	Adjusted Amount
pstb297.	5PPBSTD PEST20	14.44	40866.83	9048.7197	4.5163	14.74	49096.71	9569.1022	5.1308
pstb298.	10PPBSTD PEST20	14.45	95146.75	9830.8632	9.6784	14.74	97898.75	9118.5852	10.7362
pstb299.	25PPBSTD PEST20	14.44	253616.14	10247.5599	24.7489	14.74	212944.11	8891.0693	23.9503
pstb300.	40PPBSTD PEST20	14.43	423884.37	10353.3990	40.9416	14.72	366898.70	8812.5564	41.6336
pstb301.	50PPBSTD PEST20	14.43	513719.74	10381.3272	49.4850	14.73	431533.57	8796.4640	49.0576
Averages		14.44	265446.77	9972.3738	25.8740	14.73	231674.37	9037.5554	26.1017
%RSD		0.04	76.82	5.6310	74.9484	0.05	71.52	3.5825	72.9111

File Name	Sample Name	DIELDRIN Ret. Time	Area [µV·s]	Area/ Amount	Adjusted Amount	ENDRIN Ret. Time	Area [µV·s]	Area/ Amount	Adjusted Amount

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pstb298.	10PPBSTD PEST20	15.01	77854.01	8127.8992	9.5786	15.61	65276.82	6394.8178	10.2078
pstb299.	25PPBSTD PEST20	15.00	192747.85	8362.5236	23.0490	15.60	161446.37	6415.2045	25.1662
pstb300.	40PPBSTD PEST20	14.99	358660.18	8438.8824	42.5009	15.59	263125.40	6420.5734	40.9816
pstb301.	50PPBSTD PEST20	14.99	414254.23	8450.9133	49.0189	15.60	315612.84	6421.9926	49.1456
Averages		15.00	217148.86	8239.5380	25.9098	15.60	166736.89	6400.5855	25.9891
%RSD		0.05	76.18	3.2687	74.8583	0.04	74.04	0.4706	73.8857

File Name	Sample Name	4,4'-DDD Ret. Time	4,4'-DDD Area [µV·s]	4,4'-DDD Area/ Amount	4,4'-DDD Adjusted Amount	ENDOSULFAN II Ret. Time	ENDOSULFAN II Area [µV·s]	ENDOSULFAN II Area/ Amount	ENDOSULFAN II Adjusted Amount
pstb297.	5PPBSTD PEST20	15.89	27577.74	4908.6906	5.6181	16.03	42537.29	7511.9693	5.6626
pstb298.	10PPBSTD PEST20	15.90	47567.89	4566.9752	10.4156	16.04	67634.34	7366.3209	9.1816
pstb299.	25PPBSTD PEST20	15.89	107599.88	4334.7158	24.8228	16.03	185733.09	7215.5477	25.7407
pstb300.	40PPBSTD PEST20	15.88	175008.10	4268.4633	41.0003	16.02	287066.01	7185.8146	39.9490
pstb301.	50PPBSTD PEST20	15.88	208939.16	4251.6183	49.1434	16.03	357093.98	7175.1870	49.7679
Averages		15.89	113338.55	4466.0926	26.2001	16.03	188012.94	7290.9679	26.0603
%RSD		0.04	69.27	6.2171	71.9164	0.04	72.37	1.9955	73.2102

File Name	Sample Name	4,4'-DDT Ret. Time	4,4'-DDT Area [µV·s]	4,4'-DDT Area/ Amount	4,4'-DDT Adjusted Amount	ENDRIN ALDEHYDE Ret. Time	ENDRIN ALDEHYDE Area [µV·s]	ENDRIN ALDEHYDE Area/ Amount	ENDRIN ALDEHYDE Adjusted Amount
pstb297.	5PPBSTD PEST20	16.50	18469.94	3072.5503	6.0113	16.71	28599.73	5920.2123	4.8309
pstb298.	10PPBSTD PEST20	16.51	28483.55	3086.9106	9.2272	16.72	54457.90	5155.7490	10.5626
pstb299.	25PPBSTD PEST20	16.50	70595.23	3102.8668	22.7516	16.71	128539.62	4763.6485	26.9834
pstb300.	40PPBSTD PEST20	16.49	136021.70	3108.0936	43.7637	16.70	192202.64	4677.0413	41.0949
pstb301.	50PPBSTD PEST20	16.49	149731.41	3108.6110	48.1667	16.70	223520.22	4653.1092	48.0367
Averages		16.50	80660.36	3095.8065	25.9841	16.71	125464.02	5033.9521	26.3017
%RSD		0.04	74.71	0.5068	74.4847	0.04	67.28	10.6319	71.1406

File Name	Sample Name	ENDOSULFAN SULFATE Ret. Time	ENDOSULFAN SULFATE Area [µV·s]	ENDOSULFAN SULFATE Area/ Amount	ENDOSULFAN SULFATE Adjusted Amount	METHOXYCHLOR Ret. Time	METHOXYCHLOR Area [µV·s]	METHOXYCHLOR Area/ Amount	METHOXYCHLOR Adjusted Amount
pstb297.	5PPBSTD PEST20	17.25	21390.31	3887.2845	5.5026	17.88	15872.09	2308.4078	6.8758
pstb298.	10PPBSTD PEST20	17.26	36068.62	3878.7241	9.2991	17.89	21503.91	2179.9411	9.8644
pstb299.	25PPBSTD PEST20	17.25	93279.32	3871.1048	24.0963	17.88	48276.41	2005.5031	24.0720
pstb300.	40PPBSTD PEST20	17.24	166174.48	3869.0029	42.9502	17.87	82355.88	1953.5458	42.1571
pstb301.	50PPBSTD PEST20	17.24	186400.69	3868.7112	48.1816	17.88	94455.01	1944.4051	48.5778
[illegible]rages		17.25	100662.69	3874.9655	26.0060	17.88	52492.66	2078.3606	26.3094
		0.04	73.93	0.2062	74.0157	0.03	67.16	7.6860	71.1123

File Name	Sample Name	ENDRIN KETONE Ret. Time	ENDRIN KETONE Area [µV·s]	ENDRIN KETONE Area/ Amount	ENDRIN KETONE Adjusted Amount	Decachlorobiphenyl Ret. Time	Decachlorobiphenyl Area [µV·s]	Decachlorobiphenyl Area/ Amount	Decachlorobiphenyl Adjusted Amount
pstb297.	5PPBSTD PEST20	18.28	43760.38	6668.0856	6.5627	20.72	537742.21	4890.2861	109.9613
pstb298.	10PPBSTD PEST20	18.29	60998.02	6270.0778	9.7284	20.73	408280.49	4890.2861	83.4881
pstb299.	25PPBSTD PEST20	18.28	112186.18	5864.6042	19.1294	20.72	458801.34	4890.2861	93.8189
pstb300.	40PPBSTD PEST20	18.27	313499.89	5588.0792	56.1015	20.71	517128.17	4890.2861	105.7460
pstb301.	50PPBSTD PEST20	18.28	225566.20	5645.9124	39.9521	20.71	523190.86	4890.2861	106.9857
Averages		18.28	151202.13	6007.3518	26.2948	20.72	489028.61	4890.2861	100.0000
%RSD		0.03	76.18	7.5937	80.4525	0.03	11.09	0.0000	11.0893

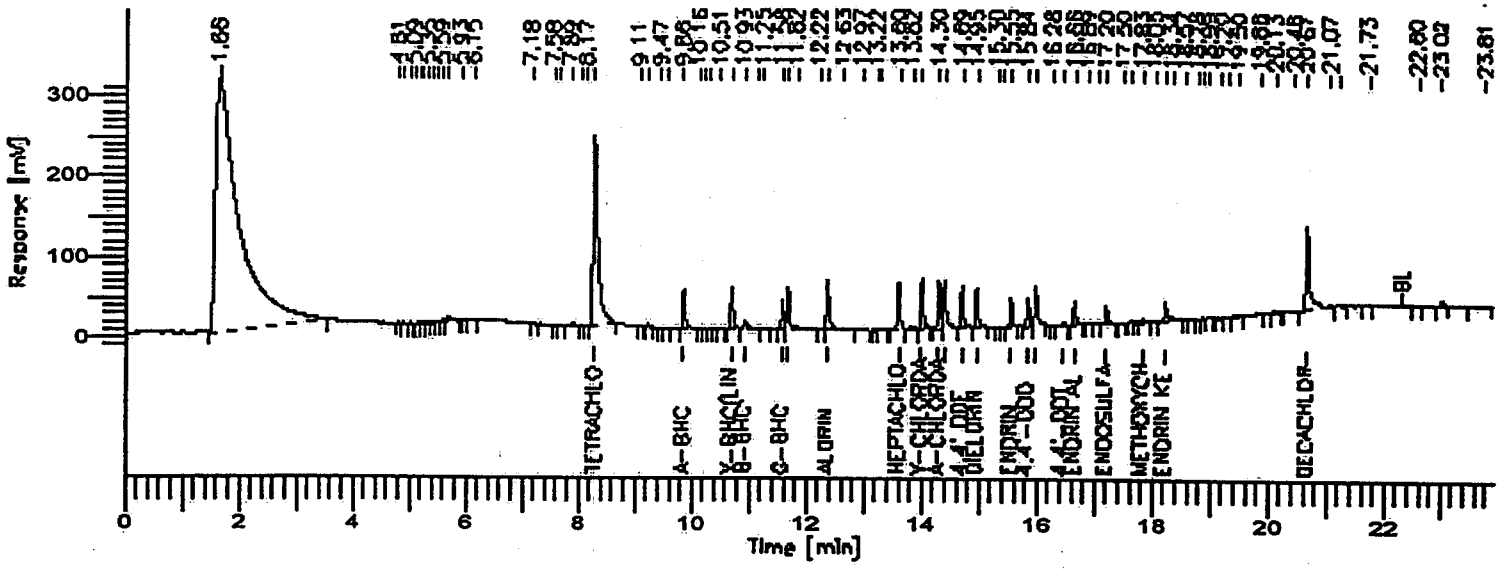
ASCII File Created Successfully - Stored in: C:\TC4\GRO\pcb_007X.csv

Env. Tig / C9 1: 2/12/02
Pesticides Channel B

00007

3064

Software Version: 4.1<2F12>
Date: 3/14/02 01:02 PM
Sample Name : 20PPBSTD PEST20
Data File : C:\TC4\PEST\PSTB423.RAW Date: 3/2/02 01:06 PM
Sequence File: C:\TC4\PEST\PEST.SEQ Cycle: 423 Channel : B
Instrument : AUTOSYS_PEST Rack/Vial: 0/40 Operator:
Sample Amount : 1.0000 Dilution Factor : 1.00



VAL ASSOCIATES LABORATORY

PESTICIDES ANALYSIS

Peak #	Time [min]	Component Name	Area [µV·s]	BL	Response Factor	CONC PPB
21	8.297	Tetrachloro-m-xylene	1360051.86	BB	13023.9606	104.4269
26	9.864	a-BHC	186294.57	BV	8817.4268	21.1280
31	10.710	y-BHC(Lindane)	171658.57	BV	7752.2475	22.1431
32	10.932	b-BHC	43864.37	VE	2314.8295	18.9493
35	11.584	g-BHC	106530.92	BV	5293.8885	20.1234
36	11.681	HEPTCHLOR	158313.33	VE	7934.8502	19.9516
39	12.373	ALDRIN	211463.94	BE	9978.9439	21.1910
44	13.604	HEPTACHLOR EPOXIDE	204569.35	BB	9429.9203	21.6936
46	13.994	y-CHLORDANE	195196.17	BB	10544.8301	18.5111
47	14.297	a-CHLORDANE	172765.84	BV	9081.5241	19.0239
48	14.393	ENDOSULFAN 1	207072.20	VB	10189.2743	20.3226
49	14.690	4,4' DDE	165681.97	BB	8945.2473	18.5218
50	14.951	DIELDRIN	150184.51	BB	8316.4209	18.0588
53	15.552	ENDRIN	102271.53	BB	5078.5820	20.1378
54	15.841	4,4'-DDD	101930.54	BV	4919.5885	20.7193

000077

Peak #	Time [min]	Component Name	Area [µV·s]	BL	Response Factor	CONC PPB
55	15.982	ENDOSULFAN II	155871.63	VB	7231.7877	21.5537
57	16.447	4,4'-DDT	10967.08	BB	554.8160	19.7671
58	16.658	ENDRIN ALDEHYDE	92154.50	BB	4430.6574	20.7993
61	17.197	ENDOSULFAN SULFATE	64582.46	BB	3206.0262	20.1441
64	17.828	METHOXYCHLOR	14139.15	BB	689.7103	20.5001
66	18.232	ENDRIN KETONE	67876.49	BE	3136.4693	21.6410
78	20.669	Decachlorobiphenyl	477750.69	VE	4890.2861	97.6938
			4421191.65		1.4576e+05	607.0013

000078

3666

(856) 354-1337

VAL ASSOCIATES LABORATORY INC.

FAX: (856)354-1586

Water,Air & Soil Analysis

PHILIP V. DATZ, JR.
Chemist

N.J. Cert. # 04174

Seven Deer Tree
Professional Center
600 Deer Road
Cherry Hill, NJ 08034

Quality Assurance/Quality Control Data
Initial and Continuing Calibration Verification
Furnace Atomic Absorption

Analysis Date: 02/06/02
Reporting Units: ppm
Method: GFAA

Element: Arsenic (As)

Initial Calibration

Standards	. True . Concentration	Cor. Peak Area	Amount Read	Percent Recovery
Blank	0.00	0.000	0.000	N/A
Standard 1	0.002	0.015	0.002	102.62
Standard 2	0.025	0.192	0.026	103.15
Standard 3	0.050	0.378	0.051	101.70
Standard 4	0.100	0.739	0.099	99.47

Continuing Calibration

Standards	. True . Concentration		Amount Read	Percent Recovery
Intial Calibration Verification	0.100		0.099	99.36
Initial Calibration Blank	0.000		0.001	N/A
Continuing Calibration Verification	0.050		0.053	106.50
Continuing Calibration Blank	0.000		0.000	N/A

N/A - Not applicable

000079

3867

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Quality Assurance/Quality Control Data
Initial and Continuing Calibration Verification
Furnace Atomic Absorption

Analysis Date: 02/06/02
Reporting Units: ppm
Method: GFAA

Element: Thallium (Tl)

Initial Calibration

Standards	. True . Concentration	Cor. Peak Area	Amount Read	Percent Recovery
Blank	0.00	0.003	0.00	N/A
Standard 1	0.002	0.005	0.001	64.79
Standard 2	0.010	0.036	0.010	99.13
Standard 3	0.025	0.096	0.026	104.64
Standard 4	0.050	0.182	0.050	99.18

Continuing Calibration				
Standards	. True . Concentration		Amount Read	Percent Recovery
Intial Calibration Verification	0.050		0.049	97.80
Initial Calibration Blank	0.00		0.00	N/A
Continuing Calibration Verification	0.025		0.026	105.26
Continuing Calibration Blank	0.00		0.00	N/A

N/A - Not applicable

000060

34656

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Quality Assurance/Quality Control Data
Initial and Continuing Calibration Verification
Furnace Atomic Absorption

Analysis Date: 02/07/02
Reporting Units: ppm
Method: GFAA

Element: Cadmium (Cd)

Initial Calibration

Standards	. True . Concentration	Cor. Peak Area	Amount Read	Percent Recovery
Blank	0.00	0.001	0.00	N/A
Standard 1	0.0010	0.1699	0.0011	109.56
Standard 2	0.0020	0.3246	0.0021	104.66
Standard 3	0.0030	0.4718	0.0030	101.41
Standard 4	0.0040	0.6033	0.0039	97.25

Continuing Calibration

Standards	. True . Concentration		Amount Read	Percent Recovery
Intial Calibration Verification	0.0040		0.0039	97.25
Initial Calibration Blank	0.0000		0.0000	N/A
Continuing Calibration Verification	0.0030		0.0030	99.08
Continuing Calibration Blank	0.0000		0.0001	N/A

N/A - Not applicable

000081

3669

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Quality Assurance/Quality Control Data
Initial and Continuing Calibration Verification
Furnace Atomic Absorption

Analysis Date: 02/07/02
Reporting Units: ppm
Method: GFAA

Element: Selenium (Se)

Initial Calibration

Standards	. True . Concentration	Cor. Peak Area	Amount Read	Percent Recovery
Blank	0.00	-0.003	0.000	N/A
Standard 1	0.005	0.014	0.005	95.35
Standard 2	0.010	0.028	0.010	97.56
Standard 3	0.025	0.076	0.026	104.00
Standard 4	0.050	0.144	0.050	99.30

Continuing Calibration

Standards	. True . Concentration		Amount Read	Percent Recovery
Intial Calibration Verification	0.050		0.049	98.29
Initial Calibration Blank	0.000		0.000	N/A
Continuing Calibration Verification	0.025		0.027	106.70
Continuing Calibration Blank	0.000		0.000	N/A

N/A - Not applicable

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Quality Assurance/Quality Control Data
Initial and Continuing Calibration Verification
Cold Vapor Atomic Absorption

Analysis Date: 2/11/02
Reporting Units: ppm
Method: CVAA

Element: Mercury (Hg)

Initial Calibration				
Standards	. True . Concentration	Cor. Peak Area	Amount Read	Percent Recovery
Blank	0.00000	0.0023	0.0000	N/A
Standard 1	0.00020	0.0065	0.0002	122.51
Standard 2	0.00050	0.0155	0.0006	116.69
Standard 3	0.00100	0.0293	0.0011	110.27
Standard 4	0.00500	0.1326	0.0050	99.71

Continuing Calibration				
Standards	. True . Concentration		Amount Read	Percent Recovery
Intial Calibration Verification	0.0050		0.0048	96.83
Initial Calibration Blank	0.0000		0.0000	N/A
Continuing Calibration Verification	0.0010		0.0010	100.42
Continuing Calibration Blank	0.0000		-0.0001	N/A

N/A - Not applicable

000083

3671

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VAL ASSOCIATES LABORATORY INC.

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Water,Air & Soil Analysis

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Quality Assurance/Quality Control Data
Initial and Continuing Calibration Verification
Furnace Atomic Absorption

Analysis Date: 02/11/02
Reporting Units: ppm
Method: GFAA

Element: Antimony (Sb)

Initial Calibration

Standards	. True . Concentration	Cor. Peak Area	Amount Read	Percent Recovery
Blank	0.000	0.005	0.000	N/A
Standard 1	0.005	0.010	0.006	127.52
Standard 2	0.010	0.017	0.011	106.27
Standard 3	0.025	0.038	0.024	97.56
Standard 4	0.050	0.079	0.050	100.28

Continuing Calibration				
Standards	. True . Concentration		Amount Read	Percent Recovery
Intial Calibration Verification	0.050		0.067	134.58
Initial Calibration Blank	0.000		0.001	N/A
Continuing Calibration Verification	0.025		0.023	92.57
Continuing Calibration Blank	0.000		-0.002	N/A

N/A - Not applicable

000084

3672

VAL Associates Laboratory, Inc.

Date: *14-Mar-02*

CLIENT: Envirotactics
Work Order: 0202018
Project: Newark

ANALYTICAL QC SUMMARY REPORT

TestNo: E200.7

Sample ID: ccv	SampType: ccv	TestCode: 200.7dw	Units: mg/L	Prep Date:	Run ID: SPECTRO ICP_020207
Client ID: ZZZZZ	Batch ID: 3071	TestNo: E200.7		Analysis Date: 2/7/02	SeqNo: 143397

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Beryllium	5.129	0.000628	5	0	103	85	115	0	0		E*
Chromium	4.97	0.00314	5	0	99.4	85	115	0	0		*
Copper	5.22	0.00314	5	0	104	85	115	0	0		*
Nickel	5.37	0.00785	5	0	107	85	115	0	0		
Silver	0.4627	0.00345	0.5	0	92.5	85	115	0	0		*
Zinc	5.2	0.00157	5	0	104	85	115	0	0		

Sample ID: ccv	SampType: ccv	TestCode: 200.7dw	Units: mg/L	Prep Date:	Run ID: SPECTRO ICP_020207
Client ID: ZZZZZ	Batch ID: 3071	TestNo: E200.7		Analysis Date: 2/7/02	SeqNo: 143409

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Beryllium	5.085	0.000628	5	0	102	85	115	0	0		E*
Chromium	4.899	0.00314	5	0	98	85	115	0	0		*
Copper	5.26	0.00314	5	0	105	85	115	0	0		*
Nickel	5.3	0.00785	5	0	106	85	115	0	0		
Silver	0.496	0.00345	0.5	0	99.2	85	115	0	0		*
Zinc	5.13	0.00157	5	0	103	85	115	0	0		

Sample ID: ccv	SampType: ccv	TestCode: 200.7dw	Units: mg/L	Prep Date:	Run ID: SPECTRO ICP_020207
Client ID: ZZZZZ	Batch ID: 3071	TestNo: E200.7		Analysis Date: 2/7/02	SeqNo: 143427

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Beryllium	5.229	0.000628	5	0	105	85	115	0	0		E*
Chromium	5.24	0.00314	5	0	105	85	115	0	0		*
Copper	5.15	0.00314	5	0	103	85	115	0	0		*
Nickel	5.2	0.00785	5	0	104	85	115	0	0		
Silver	0.47	0.00345	0.5	0	94	85	115	0	0		*
Zinc	5.2	0.00157	5	0	104	85	115	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

3673

080085

CLIENT: Envirotactics
Work Order: 0202018
Project: Newark

ANALYTICAL QC SUMMARY REPORT

TestNo: E200.7

Sample ID: icv	SampType: icv	TestCode: 200.7dw	Units: mg/L	Prep Date:	Run ID: SPECTRO ICP_020207
Client ID: ZZZZZ	Batch ID: 3071	TestNo: E200.7		Analysis Date: 2/7/02	SeqNo: 143396

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Beryllium	9.944	0.000628	10	0	99.4	90	110	0	0		E*
Chromium	9.71	0.00314	10	0	97.1	90	110	0	0		*
Copper	10.15	0.00314	10	0	102	90	110	0	0		E*
Nickel	10.32	0.00785	10	0	103	90	110	0	0		E
Silver	1.008	0.00345	1	0	101	90	110	0	0		E*
Zinc	10.04	0.00157	10	0	100	90	110	0	0		

Sample ID: ccv	SampType: ccv	TestCode: 200.7w	Units: mg/L	Prep Date:	Run ID: SPECTRO ICP_020212
Client ID: ZZZZZ	Batch ID: 3071	TestNo: E200.7		Analysis Date: 2/12/02	SeqNo: 143824

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	5.46	0.0031400	5	0	109	90	110	0	0		
Manganese	5.23	0.0012560	5	0	105	90	110	0	0		
Zinc	5.41	0.0015700	5	0	108	90	110	0	0		

Sample ID: ccv	SampType: ccv	TestCode: 200.7w	Units: mg/L	Prep Date:	Run ID: SPECTRO ICP_020212
Client ID: ZZZZZ	Batch ID: 3071	TestNo: E200.7		Analysis Date: 2/12/02	SeqNo: 143845

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	5.45	0.0031400	5	0	109	90	110	0	0		
Manganese	5.22	0.0012560	5	0	104	90	110	0	0		
Zinc	5.44	0.0015700	5	0	109	90	110	0	0		

Sample ID: ccv	SampType: ccv	TestCode: 200.7w	Units: mg/L	Prep Date:	Run ID: SPECTRO ICP_020212
Client ID: ZZZZZ	Batch ID: 3071	TestNo: E200.7		Analysis Date: 2/12/02	SeqNo: 143849

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	5.3	0.0031400	5	0	106	90	110	0	0		
Manganese	5.15	0.0012560	5	0	103	90	110	0	0		
Zinc	5.31	0.0015700	5	0	106	90	110	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

2674

990000

CLIENT: Envirotactics
Work Order: 0202018
Project: Newark

ANALYTICAL QC SUMMARY REPORT

TestNo: E200.7

Sample ID: ccv	SampType: ccv	TestCode: 200.7w	Units: mg/L	Prep Date:			Run ID: SPECTRO ICP_020219			
Client ID: ZZZZZ	Batch ID: 3071	TestNo: E200.7		Analysis Date: 2/19/02			SeqNo: 144946			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	11.85	0.010676	12.5	0	94.8	90	110	0	0		

Sample ID: ccv	SampType: ccv	TestCode: 200.7w	Units: mg/L	Prep Date:			Run ID: SPECTRO ICP_020220			
Client ID: ZZZZZ	Batch ID: 3071	TestNo: E200.7		Analysis Date: 2/20/02			SeqNo: 145028			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	11.9	0.010676	12.5	0	95.2	90	110	0	0		

Sample ID: icv	SampType: icv	TestCode: 200.7w	Units: mg/L	Prep Date:			Run ID: SPECTRO ICP_020212			
Client ID: ZZZZZ	Batch ID: 3071	TestNo: E200.7		Analysis Date: 2/12/02			SeqNo: 143847			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	10.38	0.0031400	10	0	104	95	105	0	0		E
Manganese	10.07	0.0012560	10	0	101	95	105	0	0		E
Zinc	10.29	0.0015700	10	0	103	95	105	0	0		E

Sample ID: icv	SampType: icv	TestCode: 200.7w	Units: mg/L	Prep Date:			Run ID: SPECTRO ICP_020219			
Client ID: ZZZZZ	Batch ID: 3071	TestNo: E200.7		Analysis Date: 2/19/02			SeqNo: 144944			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	25.07	0.010676	25	0	100	95	105	0	0		

Sample ID: icv	SampType: icv	TestCode: 200.7w	Units: mg/L	Prep Date:			Run ID: SPECTRO ICP_020220			
Client ID: ZZZZZ	Batch ID: 3071	TestNo: E200.7		Analysis Date: 2/20/02			SeqNo: 145026			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	24.79	0.010676	25	0	99.2	95	105	0	0		

3675

180007

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Val Asso lab Contract:

Lab Code: F2 Case No.: SAS No.: SDG No.: bb438
Lab File ID: DFTPB468.MSS DFTPP Injection Date: 2/ 8/82
Instrument ID: GC/MS DFTPP Injection Time: 8:00

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	43.6
68	Less than 2.0% of mass 69	0.2(0.9)1
69	Mass 69 relative abundance	17.9
70	Less Than 2.0% of mass 69	0.1(0.5)1
127	25.0 - 75.0% of mass 198	36.4
197	less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	5.7
275	10.0 - 30.0% of mass 198	10.5
365	Greater than 0.75% of mass 198	3.0
441	Present, but less than mass 443	8.9
442	40.0 - 110.0% mass 198	51.1
443	15.0 to 24.0% of mass 442	9.9(19.4)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	MB-3043#4	MB-3043#4	BNAPB570.O	02/08/82	08:39
02	100PPBSTD	100PPBSTD	BNAPB571.O	02/08/82	09:29
03	~~MB-3043#2~~ 3063	~~MB-3043#2~~ 3063	BNAPB572.O	02/08/82	10:23 HLN 2/8/82
04	0202009-002A	0202009-002A	BNAPB573.O	02/08/82	11:17
05	0202009-003A	0202009-003A	BNAPB574.O	02/08/82	12:11
06	0202014-001A	0202014-001A	BNAPB575.O	02/08/82	13:11
07	0202014-003A	0202014-003A	BNAPB576.O	02/08/82	13:57
08	0202014-004A	0202014-004A	BNAPB577.O	02/08/82	14:51
09	0202014-005A	0202014-005A	BNAPB578.O	02/08/82	15:44
10	0202014-006A	0202014-006A	BNAPB579.O	02/08/82	16:38
11	0202014-007A	0202014-007A	BNAPB580.O	02/08/82	17:31
12	0202014-009A	0202014-009A	BNAPB581.O	02/08/82	18:25
13	0202018-001A	0202018-001A	BNAPB582.O	02/08/82	19:18
14	0202018-002A	0202018-002A	BNAPB583.O	02/08/82	20:10
15	0202018-003A	0202018-003A	BNAPB584.O	02/08/82	21:04
16	0202018-004A	0202018-004A	BNAPB585.O	02/08/82	21:58
17	100PPBSTD	100PPBSTD	BNAPB586.O	02/08/82	22:51
18					
19					
20					
21					
22					

8B

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: Val Asso lab Contract:

Lab Code: F2 Case No.: SAS No. SDG No. bb438

Lab File ID (Standard): BNAPB571.Q Date Analyzed: 02/08/82

Instrument ID: GC/MS Time Analyzed: 09:29

	EPA SAMPLE NO.	IS1( ) # AREA	RT#	IS2( ) # AREA	RT#	IS3( ) # AREA	RT#
	12 HOUR STD	165056	9.21	579522	12.38	303671	16.82
	UPPER LIMIT	330111	9.71	1159044	12.88	607342	17.32
	LOWER LIMIT	82528	8.71	289761	11.88	151836	16.32
01	MB-3043#4	127072	9.15	262891*	12.34	152678	16.81
02	100PPBSTD	165056	9.21	579522	12.38	303671	16.82
03	MB-3043#2	109504	9.15	241372*	12.36	125202*	16.84
04	0202009-002A	83692	9.19	231659*	12.37	108728*	16.83
05	0202009-003A	81387*	9.18	157693*	12.38	108368*	16.84
06	0202014-001A	59840*	9.19	133769*	12.38	91518*	16.83
07	0202014-003A	85194	9.17	194137*	12.36	86173*	16.82
08	0202014-004A	79261*	9.19	183649*	12.39	72798*	16.82
09	0202014-005A	77644*	9.20	131376*	12.39	62658*	16.83
10	0202014-006A	58916*	9.18	123865*	12.36	93858*	16.81
11	0202014-007A	62063*	9.19	106511*	12.39	59554*	16.83
12	0202014-009A	69690*	9.19	128544*	12.37	71473*	16.83
13	0202018-001A	81068*	9.30	144061* R	12.70	281275	17.01
14	0202018-002A	234503	9.16	77503*	13.55*	333653	16.81
15	0202018-003A	99382	9.15	91889*	13.54*	293739	16.81
16	0202018-004A	126935	9.15	834605	12.32	387391	16.79
17	100PPBSTD	188107	9.15	644404	12.34	289130	16.80
18							
19							
20							
21							
22							

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

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

Column used to flag internal standard area values with an asterisk
Values outside of QC limits

8C

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: Val Asso lab Contract:

Lab Code: F2 Case No.: SAS No. SDG No. bb438

Lab File ID (Standard): BNAPB571.Q Date Analyzed: 02/08/82

Instrument ID: GC/MS Time Analyzed: 09:29

		IS4( ) # AREA	RT#	IS5( ) # AREA	RT#	IS6( ) # AREA	RT#
	12 HOUR STD	280846	20.63	152680	27.48	24915	30.96
	UPPER LIMIT	561692	21.13	305360	27.98	49830	31.46
	LOWER LIMIT	140423	20.13	76340	26.98	12458	30.46
	EPA SAMPLE NO.						
01	MB-3043#4	114725*	20.65	50291*	27.51	16588	31.03
02	100PPBSTD	280846	20.63	152680	27.48	24915	30.96
03	MB-3043#2	126525*	20.69	50726*	27.54	17648	31.08
04	0202009-002A	109687*	20.74	46243*	27.57	16876	31.07
05	0202009-003A	111597*	20.69	48595*	27.55	18448	31.05
06	0202014-001A	91670*	20.75	39783*	27.57	13596	31.09
07	0202014-003A	106271*	20.72	43634*	27.55	15551	31.08
08	0202014-004A	106805*	20.68	44462*	27.55	15064	31.07
09	0202014-005A	78534*	20.73	34502*	27.58	12818	31.08
10	0202014-006A	87651*	20.66	42200*	27.53	13500	31.10
11	0202014-007A	76644*	20.74	34567*	27.57	12359*	31.09
12	0202014-009A	91196*	20.72	38539*	27.56	13916	31.08
13	0202018-001A	615707*	20.67	133955	27.48	28943	31.03
14	0202018-002A	299433	20.64	170928	27.50	30293	31.03
15	0202018-003A	276695	20.62	96118	27.48	17111	30.99
16	0202018-004A	267288	20.60	95583	27.45	25923	30.97
17	100PPBSTD	243617	20.61	140697	27.44	29008	30.99
18							
19							
20							
21							
22							

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

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

Column used to flag internal standard area values with an asterisk
Values outside of QC limits

VAL Associates Laboratory, Inc.

Date: *14-Mar-02*

CLIENT: Envirotactics
Work Order: 0202018
Project: Newark

ANALYTICAL QC SUMMARY REPORT

TestNo: E200.7

Sample ID: interfer	SampType: lcs1	TestCode: 200.7W	Units: mg/L	Prep Date:		Run ID: SPECTRO ICP_020121
Client ID: ZZZZZ	Batch ID: 3071	TestNo: E200.7		Analysis Date: 1/21/02		SeqNo: 141176

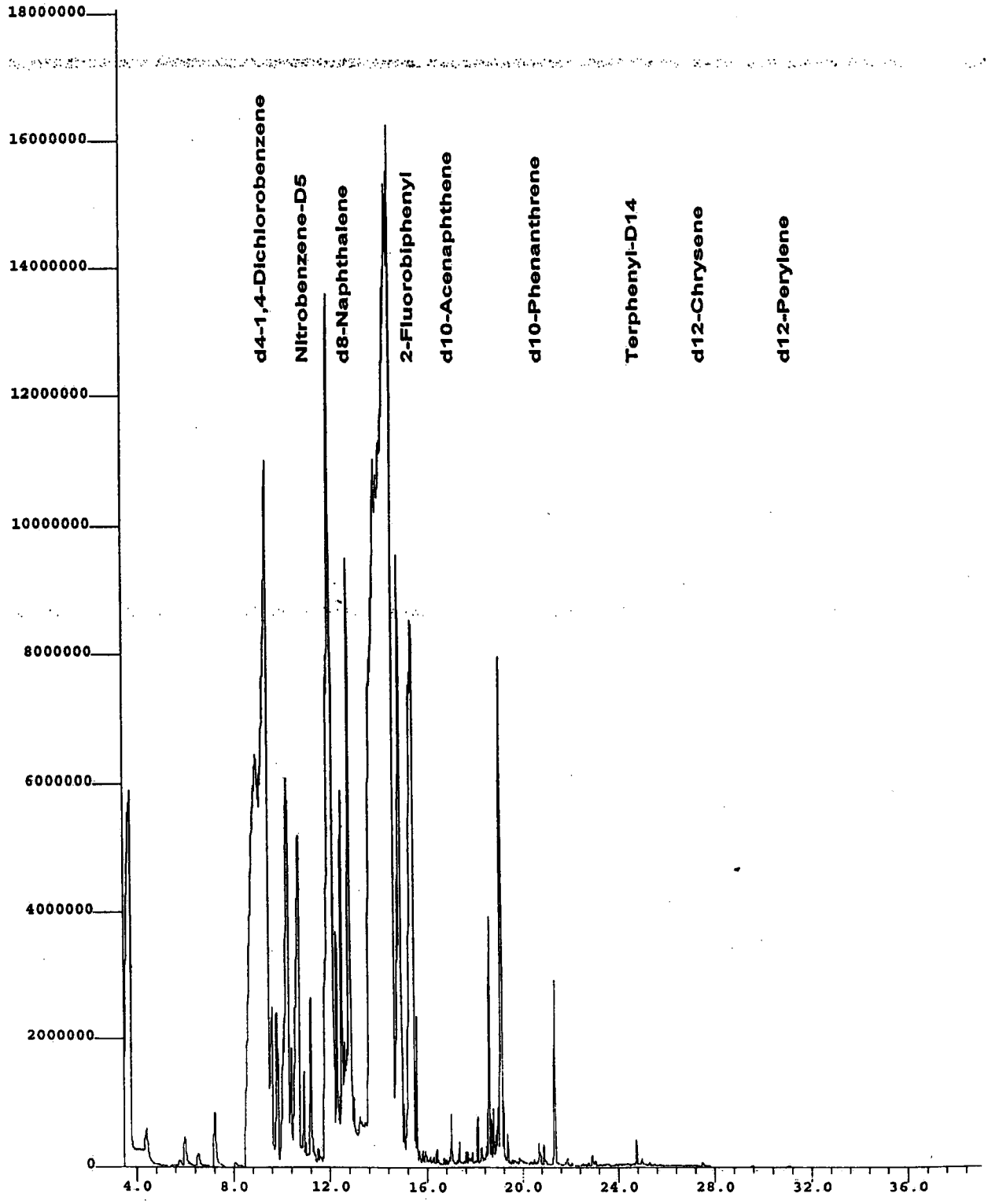
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	30.13	0.020700	30	0	100	85	115	0	0		
Chromium	49.04	0.0031400	50	0	98.1	85	115	0	0		E
Cobalt	19.89	0.0021980	20	0	99.4	85	115	0	0		E
Copper	39.94	0.0031400	40	0	99.8	85	115	0	0		E
Iron	92.3	0.0025100	90	0	103	85	115	0	0		E
Manganese	19.82	0.0012560	20	0	99.1	85	115	0	0		E
Nickel	20.13	0.0078500	20	0	101	85	115	0	0		E
Vanadium	20.09	0.0034500	20	0	100	85	115	0	0		
Zinc	19.67	0.0015700	20	0	98.4	85	115	0	0		E

3679

000091

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

Data File: C:\BNAP\BNAPB582.MSS
Quant Output File: C:\BNAP\BNAPB582.Q
Injection Time: 02/08/82 19:18
Misc: 0202018-001A,BB438,L,1000.0,1.00,1.0,0,



000092

3660

QUANT REPORT
Quant Rev: 10

Operator Id:
Dilution Factor:<None>
Output File: C:\BNAP\BNAPB582.Q
Data File: c:\bnap\bnapb582.mss
Name: SAMP_625_W_BN_(13) 7
Misc: 0202018-001A,BB438,L,1000.0,1.00,1.0,0,
ID File: c:\bnap\hsl\625b.i
Title: SW-846 Method 8270 Semi-Volatile Quant ID File
st Calib: 01/17/82 10:29

Quant Time : 82/21/19 52:20
Injected at : 02/08/82 19:18

Last Qcal Date: None

Num	Compound	R.T.	Q Ion	Area	Conc	Units	Q
1)	M*d4-1,4-Dichlorobenzene	9.30	152	81068	40.00	ug/l	0
14)	*d8-Naphthalene	12.70	136	144061	40.00	ug/l	0
15)	Nitrobenzene-D5	11.03	54	35772	74.95	ug/l	0
27)	*d10-Acenaphthene	17.01	162	281275	40.00	ug/l	0
30)	2-Fluorobiphenyl	15.37	172	980871	89.44	ug/l	98
43)	*d10-Phenanthrene	20.67	188	615707	40.00	ug/l	98
54)	*d12-Chrysene	27.48	240	133955	40.00	ug/l	100
56)	M Terphenyl-D14	24.74	244	210595	122.72	ug/l	0
62)	*d12-Perylene	31.03	264	28943	40.00	ug/l	100

* Compound is Internal Standard

000093

34681

Int report for Plus Analysis ..... Plus version 5.0

Quant Output File: c:\bnap\bnapb582.q
Data File Name: C:\BNAP\BNAPB582.MSS
Name: SAMP_625_W_BN_(13) 7
Misc Data: 0202018-001A,BB438,L,1000.0,1.00,1.0,0,
Plus Method File: C:\AQUARIUS\FILES\BNA.NIS
Parameters Minimum % Istd Area to Report: 10.00
Absolute maximum Number of Peaks: 15
Which Istd from Output file(1st,2nd)..: 2
Maximum Hits for graphics: 3

Rank Order
Date: 02-15-1982
Time: 10:30:36
Delta Rt: 0.06

#	R.T. (min.)	Start Time	End Time	Width	Type	Area	Rank	
23)	9.47	9.19	9.50	0.309	VB	1.85e+08	CMPD	Phenol
45)	12.06	11.98	12.10	0.126	VV	1.19e+08	CMPD	bis(2-Chloroethoxy)meth
76)	15.37	15.15	15.39	0.241	VV	1.02e+08	CMPD	2-Fluorobiphenyl
60)	13.78	13.54	13.79	0.250	BV	8.01e+07	1	
1)	3.69	3.49	3.70	0.210	BV	7.47e+07	2	
78)	15.46	15.42	15.54	0.117	VB	7.04e+07	3	
119)	19.12	19.00	19.15	0.156	VV	5.97e+07	CMPD	4-Chlorophenyl phenyl e
17)	8.88	8.45	8.89	0.435	BV	5.54e+07	4	
44)	11.96	11.86	11.98	0.119	VV	5.21e+07	5	
33)	10.66	10.45	10.67	0.220	BV	4.79e+07	6	
73)	14.91	14.85	14.97	0.115	BB	4.67e+07	7	
54)	12.83	12.74	12.86	0.121	BB	4.55e+07	CMPD	Benzoic acid
62)	13.96	13.83	13.98	0.147	VV	4.44e+07	8	
70)	14.61	14.55	14.62	0.066	BV	4.30e+07	9	
34)	10.74	10.67	10.80	0.126	VV	4.25e+07	10	
49)	12.52	12.44	12.55	0.113	BV	3.96e+07	11	
2)	3.75	3.70	3.76	0.061	VV	3.94e+07	CMPD	N-Nitrosodimethylamine
71)	14.63	14.62	14.66	0.041	VB	3.73e+07	12	
46)	12.13	12.10	12.17	0.071	VB	3.61e+07	CMPD	2-Nitrophenol
77)	15.41	15.39	15.42	0.034	VV	2.88e+07	CMPD	2-Fluorobiphenyl
113)	18.61	18.49	18.65	0.156	VV	2.35e+07	13	
39)	11.23	11.12	11.33	0.213	VV	2.34e+07	CMPD	2,4-Dimethylphenol
43)	11.82	11.71	11.86	0.143	BV	2.19e+07	14	
18)	8.99	8.89	9.01	0.117	VV	1.77e+07	15	
143)	21.36	21.26	21.48	0.221	VV	1.72e+07	16	
47)	12.29	12.23	12.36	0.127	BV	1.66e+07	17	
3)	3.78	3.76	3.80	0.045	VB	1.59e+07	CMPD	N-Nitrosodimethylamine
61)	13.83	13.79	13.83	0.040	VV	1.37e+07	18	
27)	9.80	9.71	9.82	0.117	BV	1.30e+07	CMPD	Phenol-D6
72)	14.84	14.68	14.85	0.178	BB	1.15e+07	19	
30)	10.25	10.17	10.26	0.094	BV	1.11e+07	20	
14)	7.21	7.13	7.35	0.224	BB	1.05e+07	21	
25)	9.63	9.60	9.67	0.070	VV	9558877	CMPD	1,2-Dichlorobenzene
24)	9.58	9.50	9.60	0.094	BV	9233442	CMPD	1,2-Dichlorobenzene
79)	15.59	15.54	15.61	0.066	BB	8853001	CMPD	2-Chloronaphthalene
67)	14.41	14.31	14.44	0.130	BV	8616376	22	
32)	10.42	10.33	10.44	0.109	BB	8577829	23	
28)	9.84	9.82	9.93	0.110	VB	8211426	CMPD	Phenol-D6

Int report for Plus Analysis ..... Plus version 5.0

Quant Output File: c:\bnap\bnapb582.q
Data File Name: C:\BNAP\BNAPB582.MSS
Name: SAMP_625_W_BN_(13) 7
Misc Data: 0202018-001A,BB438,L,1000.0,1.00,1.0,0,
Plus Method File: C:\AQUARIUS\FILES\BNA.NIS
Parameters Minimum % Istd Area to Report: 10.00
Absolute maximum Number of Peaks: 15
Which Istd from Output file(1st,2nd)..: 2
Maximum Hits for graphics: 3

Rank Order
Date: 02-15-1982
Time: 10:30:36
Delta Rt: 0.06

#	R.T. (min.)	Start Time	End Time	Width	Type	Area	Rank	
64)	14.06	14.01	14.09	0.081	VB	7616189	24	
68)	14.47	14.44	14.49	0.049	VV	7415516	25	
63)	13.99	13.98	14.01	0.032	VV	7371963	26	
36)	10.93	10.83	10.95	0.119	VV	7100464	27	
9)	4.40	4.24	4.59	0.349	VB	6826320	28	
12)	5.97	5.89	6.14	0.245	BB	6420316	29	
29)	10.08	9.97	10.11	0.141	BB	6207627	30	
22)	9.18	9.16	9.19	0.032	VV	5538218	CMPD	1,3-Dichlorobenzene
118)	18.96	18.89	19.00	0.112	VV	4796215	CMPD	Fluorene
95)	17.01	16.95	17.06	0.113	VV	3873542	ISTD	d10-Acenaphthene
74)	15.02	14.99	15.05	0.058	BB	3728782	31	
21)	9.15	9.13	9.16	0.031	VV	3702897	CMPD	1,3-Dichlorobenzene
19)	9.02	9.01	9.06	0.055	VB	3295955	32	
13)	6.52	6.44	6.77	0.331	BB	3060233	33	
51)	12.63	12.58	12.65	0.072	VV	2718848	34	
107)	18.11	18.05	18.16	0.114	VB	2718507	35	
114)	18.69	18.65	18.73	0.079	VB	2655993	CMPD	Diethyl phthalate
115)	18.77	18.73	18.79	0.060	BV	2610602	CMPD	N-Nitrosodiphenylamine
31)	10.27	10.26	10.30	0.038	VB	2564002	CMPD	N-Nitrosodi-n-propylami
66)	14.22	14.19	14.24	0.056	BB	2439488	CMPD	4-chloro-3-methylphenol
20)	9.10	9.08	9.13	0.047	BV	2278496	36	
69)	14.50	14.49	14.51	0.025	VB	2258796	37	
120)	19.18	19.15	19.21	0.052	VB	2034659	38	
48)	12.41	12.36	12.43	0.071	VB	2000696	39	
175)	24.74	24.66	24.85	0.192	VV	1877635	CMPD	Terphenyl-D14
121)	19.36	19.32	19.42	0.104	BV	1834207	40	
139)	20.89	20.81	20.94	0.133	VV	1698815	41	
137)	20.67	20.63	20.71	0.079	VV	1670312	ISTD	d10-Phenanthrene
50)	12.57	12.55	12.58	0.032	VV	1391792	42	
57)	13.24	13.17	13.29	0.120	BB	1288610	43	
99)	17.33	17.29	17.45	0.156	VB	1274513	CMPD	4-Nitrophenol
11)	5.76	5.68	5.89	0.215	BB	1273084	44	
117)	18.86	18.83	18.89	0.052	VV	1236435	45	
55)	12.98	12.96	13.05	0.088	BB	1197118	CMPD	Naphthalene
41)	11.51	11.44	11.55	0.111	BB	1106669	46	

Int report for Plus Analysis ..... Plus version 5.0

Quant Output File: c:\bnap\bnapb582.q
Data File Name: C:\BNAP\BNAPB582.MSS
Name: SAMP_625_W_BN_(13) 7
Misc Data: 0202018-001A,BB438,L,1000.0,1.00,1.0,0,
Plus Method File: C:\AQUARIUS\FILES\BNA.NIS
Parameters Minimum % Istd Area to Report: 10.00
Absolute maximum Number of Peaks: 15
Which Istd from Output file(1st,2nd)..: 2
Maximum Hits for graphics: 3

Rank Order
Date: 02-15-1982
Time: 10:30:36
Delta Rt: 0.06

#	R.T. (min.)	Start Time	End Time	Width	Type	Area	Rank	
112)	18.46	18.40	18.49	0.096	VV	1076301	47	
75)	15.13	15.10	15.15	0.049	BV	1045211	48	
138)	20.73	20.71	20.81	0.097	VV	944658	49	
160)	22.91	22.87	22.99	0.126	VV	926118	50	
109)	18.24	18.20	18.27	0.069	VV	886732	51	
101)	17.62	17.58	17.67	0.095	VV	883452	CMPD	2,6-Dinitrotoluene
65)	14.17	14.15	14.19	0.041	BB	814272	52	
104)	17.87	17.82	17.93	0.105	VV	784405	53	
102)	17.70	17.67	17.75	0.079	VV	776276	CMPD	Acenaphthene
37)	10.97	10.95	11.05	0.095	VB	762583	54	
80)	15.68	15.64	15.73	0.092	BB	738339	55	
53)	12.72	12.68	12.74	0.056	VB	732045	ISTD	d8-Naphthalene
87)	16.40	16.35	16.44	0.085	BV	698351	56	
110)	18.29	18.27	18.32	0.052	VB	692317	57	
116)	18.81	18.79	18.83	0.044	VV	690396	CMPD	N-Nitrosodiphenylamine
40)	11.35	11.33	11.42	0.087	VB	660136	58	
177)	24.96	24.92	25.08	0.164	VB	646824	59	
94)	16.91	16.86	16.95	0.086	BV	585254	60	
149)	21.88	21.85	22.00	0.151	VV	534403	61	
126)	19.85	19.81	19.89	0.089	BV	502000	62	
52)	12.67	12.65	12.68	0.032	VV	490905	ISTD	d8-Naphthalene
82)	15.92	15.89	15.94	0.059	BB	479511	CMPD	Dimethyl phthalate
86)	16.27	16.22	16.34	0.118	VB	471439	63	
134)	20.47	20.39	20.53	0.134	BV	464236	64	
103)	17.79	17.75	17.82	0.070	VV	458349	65	
59)	13.47	13.42	13.53	0.112	VB	454379	66	
140)	20.97	20.94	21.08	0.142	VB	438604	67	
92)	16.69	16.66	16.76	0.102	VV	430839	68	
127)	19.93	19.89	19.99	0.098	VV	390695	69	
161)	23.04	22.99	23.14	0.144	VB	381334	70	
42)	11.58	11.55	11.63	0.087	BB	361660	71	
96)	17.07	17.06	17.15	0.095	VV	337842	72	
38)	11.09	11.05	11.12	0.071	BV	314415	73	
84)	16.12	16.09	16.16	0.076	VV	306486	74	
148)	21.83	21.78	21.85	0.063	VV	300133	75	

3884

Quant Output File: c:\bnap\bnapb582.q
Data File Name: C:\BNAP\BNAPB582.MSS
Name: SAMP_625_W_BN_(13) 7
Misc Data: 0202018-001A,BB438,L,1000.0,1.00,1.0,0,
Plus Method File: C:\AQUARIUS\FILES\BNA.NIS
Parameters Minimum % Istd Area to Report: 10.00
Absolute maximum Number of Peaks: 15
Which Istd from Output file(1st,2nd)..: 2
Maximum Hits for graphics: 3

Rank Order
Date: 02-15-1982
Time: 10:30:37
Delta Rt: 0.06

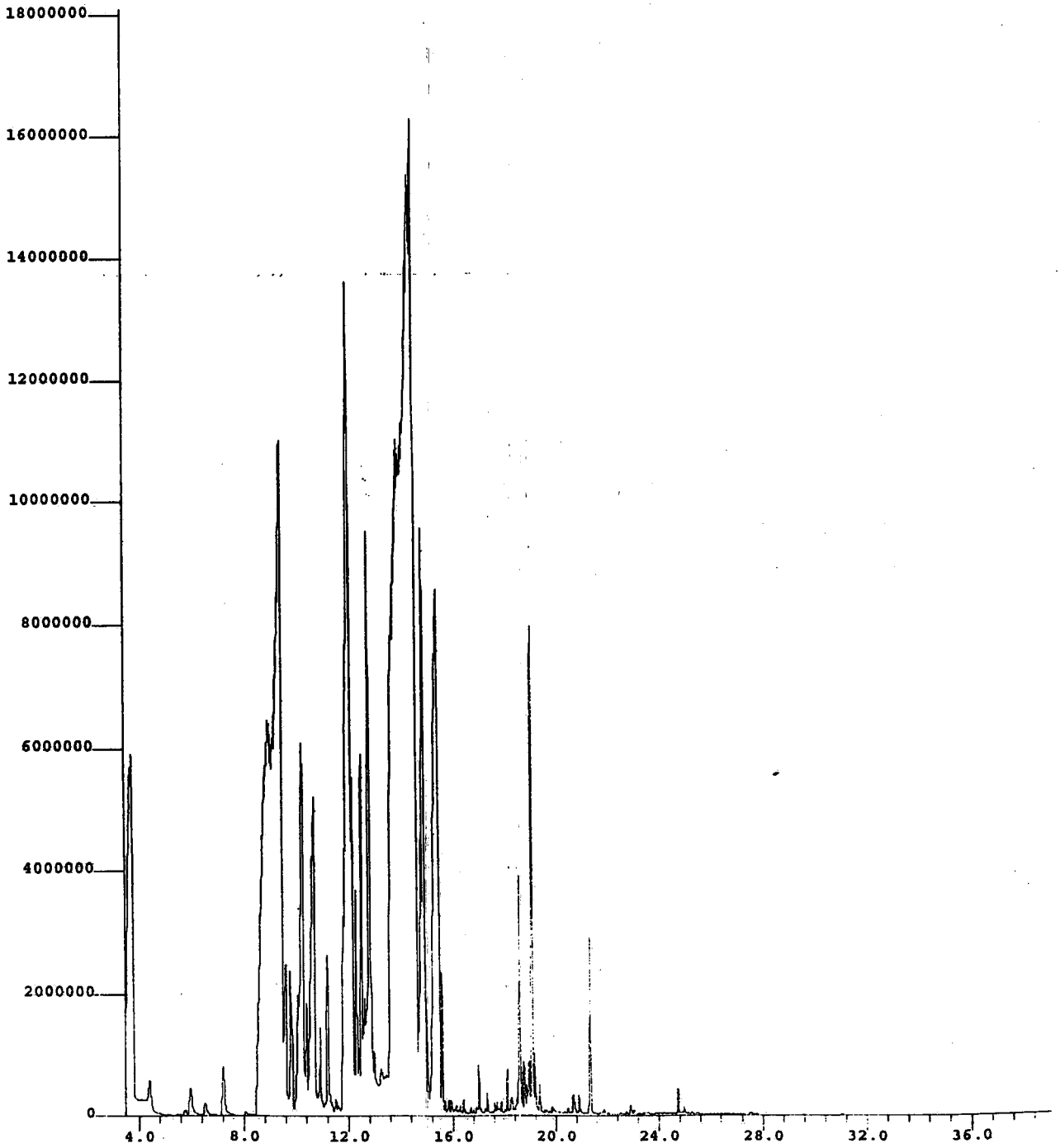
#	R.T. (min.)	Start Time	End Time	Width	Type	Area	Rank	
98)	17.26	17.21	17.29	0.087	VV	293541	CMPD	2,4-Dinitrophenol
93)	16.79	16.76	16.86	0.102	VB	260274	76	
26)	9.71	9.67	9.71	0.039	VB	257792	77	
35)	10.81	10.80	10.83	0.039	VV	254347	78	
165)	23.59	23.53	23.67	0.144	VV	252202	79	
158)	22.75	22.71	22.80	0.099	VV	251077	80	
88)	16.46	16.44	16.50	0.060	VV	232227	81	
58)	13.39	13.34	13.42	0.081	BV	222347	82	
144)	21.50	21.48	21.61	0.134	VV	221763	83	
123)	19.56	19.50	19.60	0.098	BB	213653	84	
167)	23.91	23.81	23.97	0.162	BV	210867	85	
178)	25.29	25.20	25.34	0.137	BV	210851	86	
128)	20.05	19.99	20.10	0.107	VV	202423	87	
100)	17.53	17.49	17.58	0.087	BV	201285	88	
150)	22.06	22.00	22.12	0.124	VB	190130	89	
191)	27.48	27.45	27.53	0.082	BB	188062	ISTD	bis(2-Ethylhexyl)phthal
81)	15.80	15.77	15.82	0.043	BB	186379	CMPD	Acenaphthylene
16)	8.05	8.02	8.07	0.053	BB	185778	90	
111)	18.37	18.32	18.40	0.079	BV	184125	91	
83)	16.04	16.00	16.09	0.085	BV	180655	92	
164)	23.48	23.45	23.53	0.081	VV	179935	93	
106)	18.01	17.96	18.05	0.087	BV	174765	94	
168)	24.03	23.97	24.13	0.164	VV	172275	95	
194)	31.03	30.98	31.13	0.146	BB	171825	ISTD	d12-Perylene
155)	22.52	22.48	22.57	0.091	VV	171782	96	
162)	23.25	23.14	23.34	0.206	BV	155854	97	
85)	16.19	16.16	16.22	0.060	VV	152335	98	
124)	19.64	19.60	19.66	0.061	BB	130752	99	
133)	20.35	20.33	20.39	0.061	VB	128688	100	
163)	23.40	23.34	23.45	0.108	VV	125950	101	
136)	20.61	20.58	20.63	0.053	VV	125767	102	
122)	19.45	19.42	19.50	0.079	VB	124982	103	
125)	19.77	19.72	19.81	0.090	BB	115141	104	
171)	24.30	24.24	24.37	0.127	BB	110977	105	
10)	5.48	5.41	5.52	0.116	BB	108184	CMPD	2-Fluorophenol

Quant Output File: c:\bnap\bnapb582.q
Data File Name: C:\BNAP\BNAPB582.MSS
Name: SAMP_625_W_BN_(13) 7
Misc Data: 0202018-001A,BB438,L,1000.0,1.00,1.0,0,
Plus Method File: C:\AQUARIUS\FILES\BNA.NIS
Parameters Minimum % Istd Area to Report: 10.00
Absolute maximum Number of Peaks: 15
Which Istd from Output file(1st,2nd)..: 2
Maximum Hits for graphics: 3

Rank Order
Date: 02-15-1982
Time: 10:30:37
Delta Rt: 0.06

#	R.T. (min.)	Start Time	End Time	Width	Type	Area	Rank	
132)	20.31	20.29	20.33	0.045	VV	105363	106	
6)	4.10	4.05	4.12	0.072	BB	97665	107	
180)	25.47	25.43	25.53	0.100	VB	93785	108	
108)	18.19	18.16	18.20	0.036	BV	87042	109	
147)	21.76	21.73	21.78	0.053	VV	84499	110	
141)	21.13	21.08	21.19	0.106	BV	84199	111	
135)	20.55	20.53	20.58	0.053	VV	78839	112	
15)	7.96	7.84	8.01	0.170	BB	77310	113	
142)	21.22	21.19	21.26	0.071	VV	73491	CMPD	Di-n-butyl phthalate
89)	16.51	16.50	16.54	0.042	VV	71386	114	
192)	29.54	29.49	29.56	0.077	BV	68850	115	
189)	26.97	26.90	27.10	0.209	VB	67617	116	
182)	25.72	25.67	25.86	0.190	VB	67430	117	
193)	29.58	29.56	29.63	0.063	VB	67149	118	
185)	26.15	26.09	26.19	0.100	BV	65533	119	
156)	22.60	22.57	22.67	0.100	VV	62822	120	
146)	21.71	21.66	21.73	0.072	VV	62389	121	
172)	24.40	24.37	24.43	0.055	BB	60031	122	
5)	4.03	3.99	4.05	0.058	BB	59416	123	
173)	24.56	24.51	24.62	0.110	BV	59144	124	
8)	4.23	4.22	4.24	0.029	BV	55768	125	
129)	20.12	20.10	20.15	0.054	VB	51334	126	
91)	16.64	16.60	16.66	0.059	BV	50647	127	
4)	3.92	3.89	3.93	0.043	BB	50531	128	

Data File: C:\BNAP\BNAPB582.MSS
Quant Output File: c:\bnap\bnapb582.q
Injection Time: 02/08/82 19:18
Misc: 0202018-001A,BB438,L,1000.0,1.00,1.0,0,

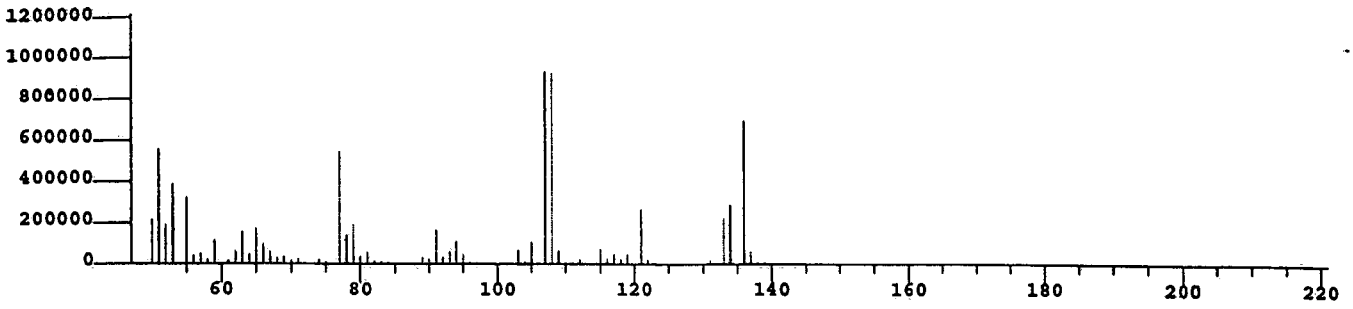


000099

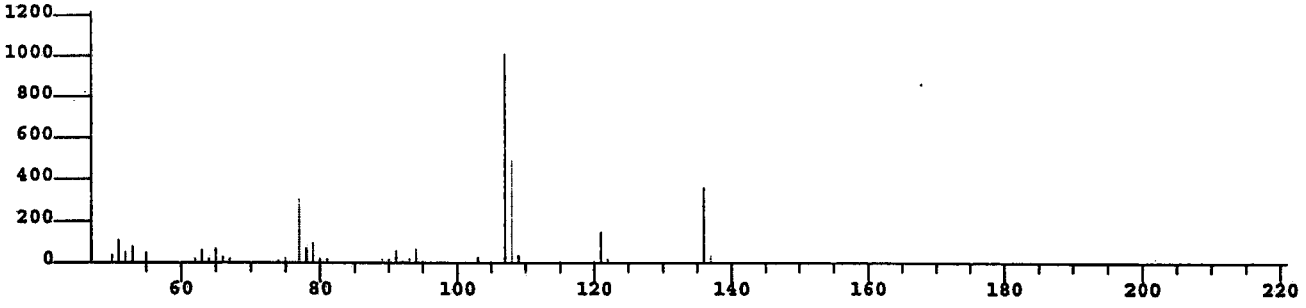
3887

(ND)

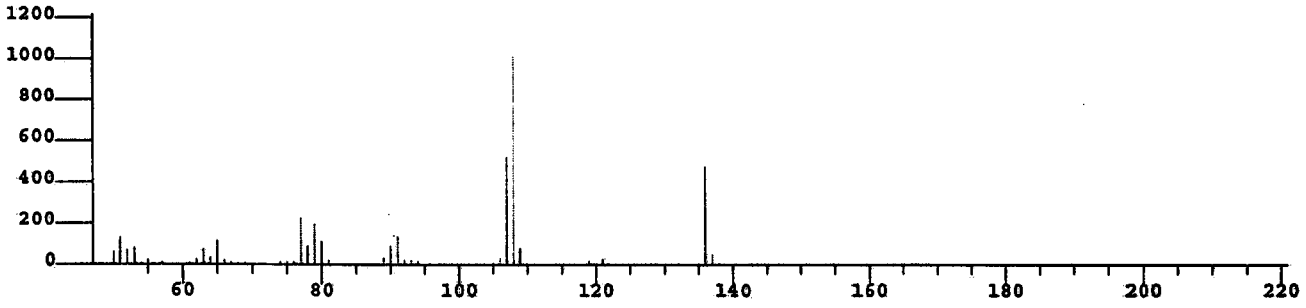
Scan: 1350 RT (min): 13.78



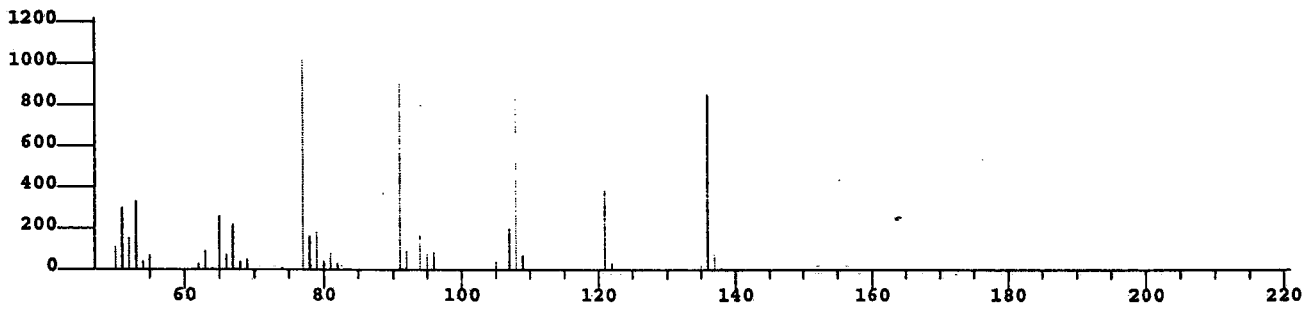
Phenol, 3-propyl-



Benzene, 1-ethoxy-3-methyl-



2,5-Cyclohexadien-1-one, 3,4,4-trimethyl-



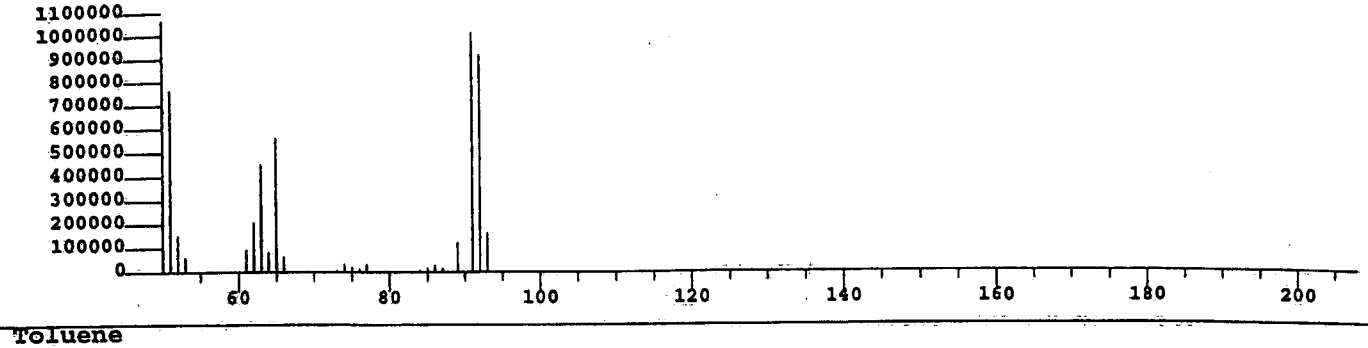
Data File: C:\BNAP\BNAPB582.MSS
Name: SAMP_625_W_BN_(13) 7
Misc Data: 0202018-001A,BB438,L,1000.0,1.00,1.0,0,
RT (min): 13.78 Scan: 1350
Area: 8.01e+07 Rank: 1
Semi-quantitative Conc(uncorrected): 6528.37 ug/l
Calculated Using Istd: d8-Naphthalene@ 12.70

Name	Cas No	SI	MW	Formula
1) Phenol, 3-propyl-	621-27-2	79.5	136	C9H12O
2) Benzene, 1-ethoxy-3-methyl-	621-32-9	74.8	136	C9H12O
3) 2,5-Cyclohexadien-1-one, 3,4,4-trimethyl-	17429-31-1	73.7	136	C9H12O
4) Phenol, 4-propyl-	645-56-7	73.7	136	C9H12O
5) Benzene, 1-ethoxy-4-methyl-	622-60-6	73.4	136	C9H12O
6) Benzene, 1-ethoxy-2-methyl-	614-71-1	70.8	136	C9H12O
7) Phenol, 2-propyl-	644-35-9	70.7	136	C9H12O

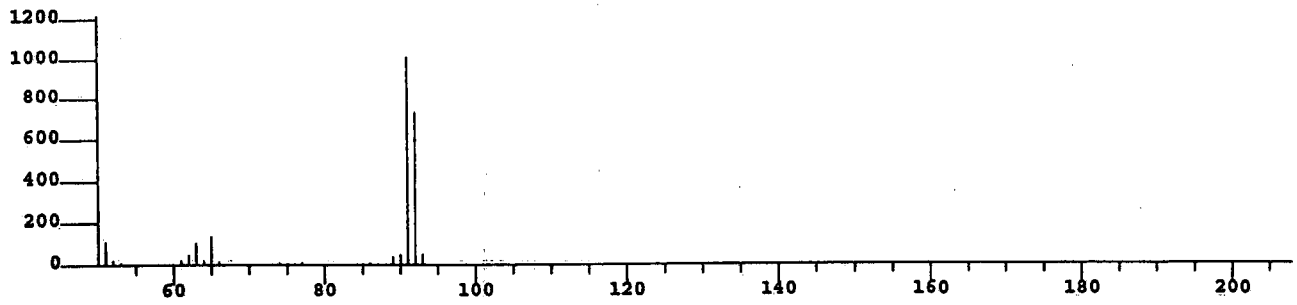
000100

3886

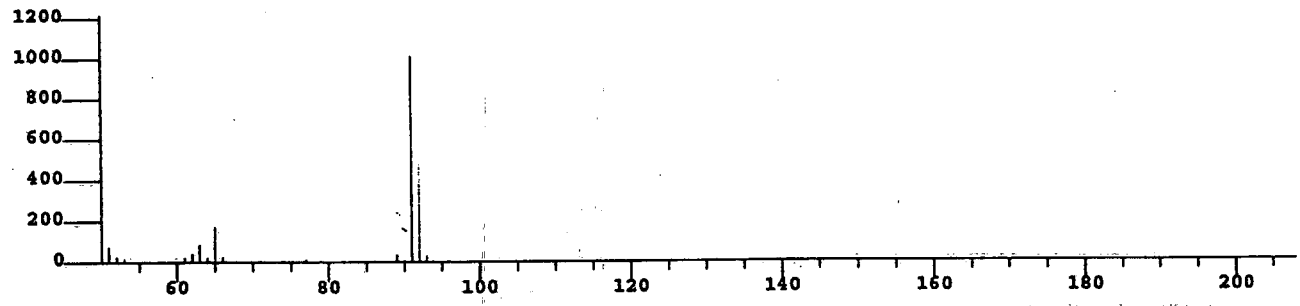
Scan: 29 RT (min): 3.69



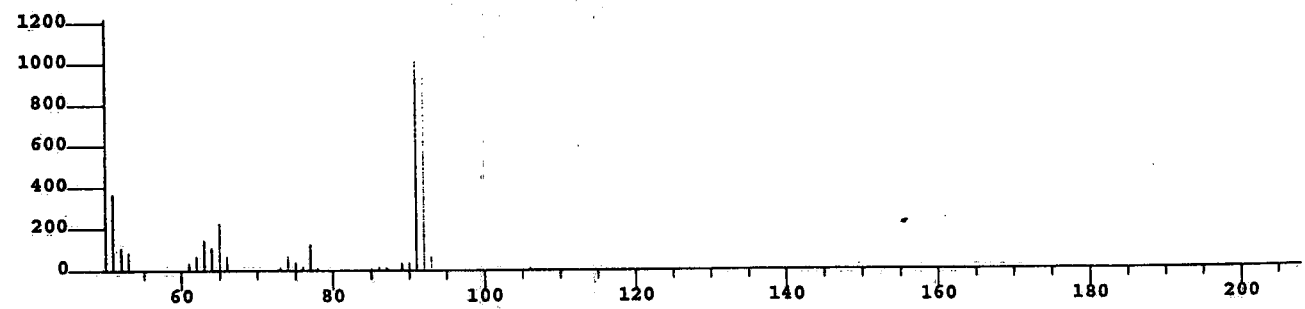
Toluene



1,3,5-Cycloheptatriene



1,5-Heptadien-3-yne

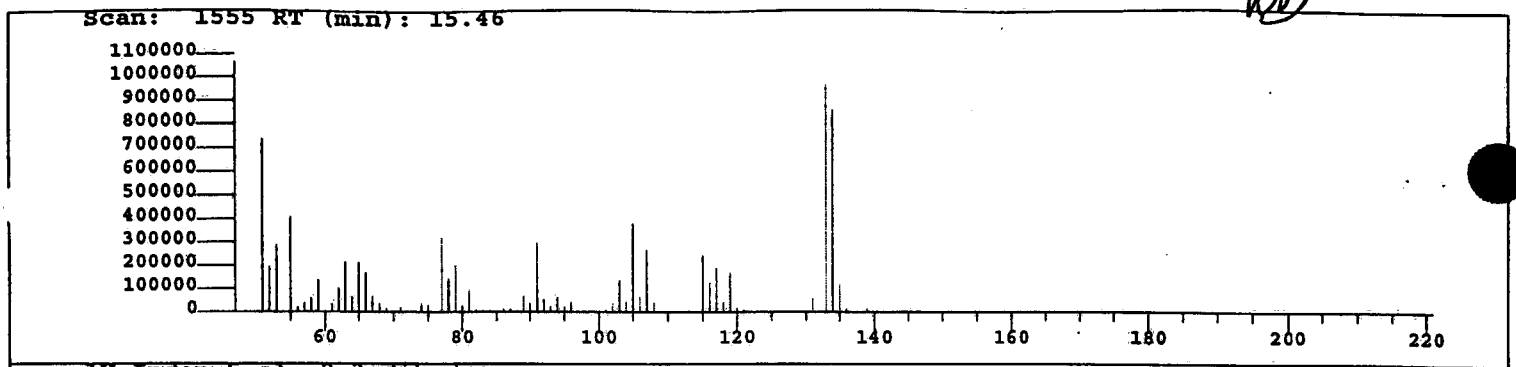


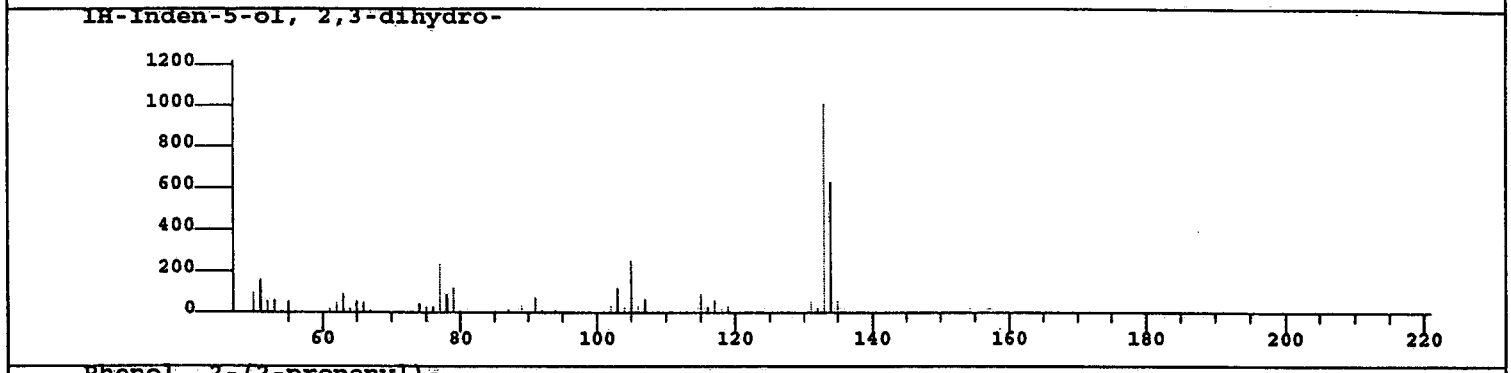
Data File: C:\BNAP\BNAPB582.MSS
Name: SAMP_625_W_BN (13) 7
Misc Data: 0202018-001A,BB438,L,1000.0,1.00,1.0,0,
RT (min): 3.69 Scan: 29
Area: 7.47e+07 Rank: 2
Semi-quantitative Conc(uncorrected): 6089.29 ug/l
Calculated Using Istd: d4-1,4-Dichlorobenzene@ 9.30

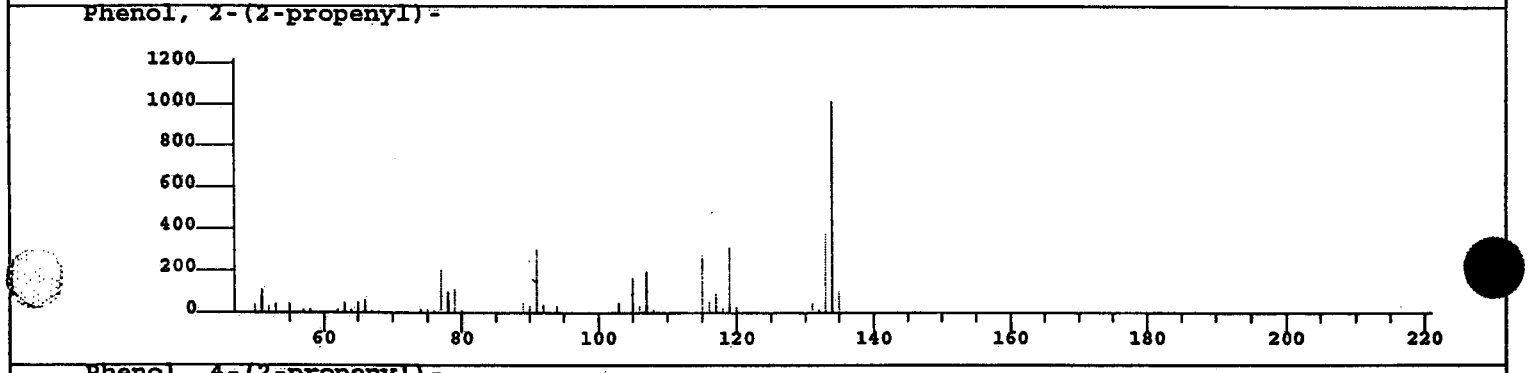
	Name	Cas No	SI	MW	Formula
1)	Toluene	108-88-3	88.1	92	C7H8
2)	1,3,5-Cycloheptatriene	544-25-2	83.0	92	C7H8
3)	1,5-Heptadien-3-yne	3511-27-1	82.5	92	C7H8
4)	Tricyclo[3.2.2.02,4]non-8-ene-6,6,7,7-tetracarbonitrile	62249-53-0	76.7	220	C13H8N4
5)	Cyclobutene, 2-propenylidene-	52097-85-5	76.2	92	C7H8
6)	2,5-Norbornadiene	121-46-0	76.1	92	C7H8
7)	Benzeneacetaldehyde	122-78-1	76.0	120	C8H8O
	Benzyl methyl ketone	103-79-7	75.1	134	C9H10O
	Zirconium, bis(methylbenzene)-		74.4	274	C14H16Zr
	Spiro[3.3]hepta-1,5-diene	22635-78-5	74.0	92	C7H8

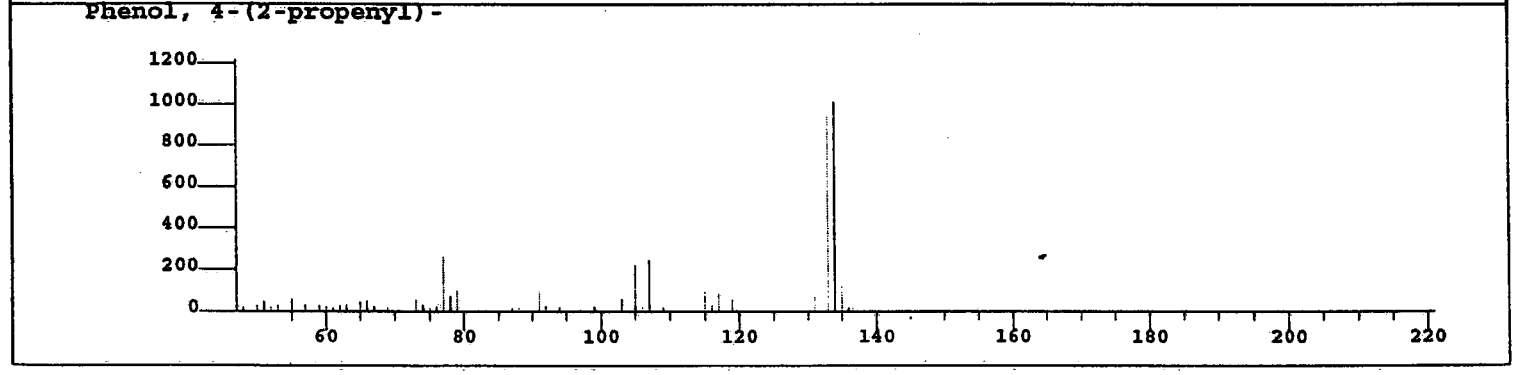
000101

3069





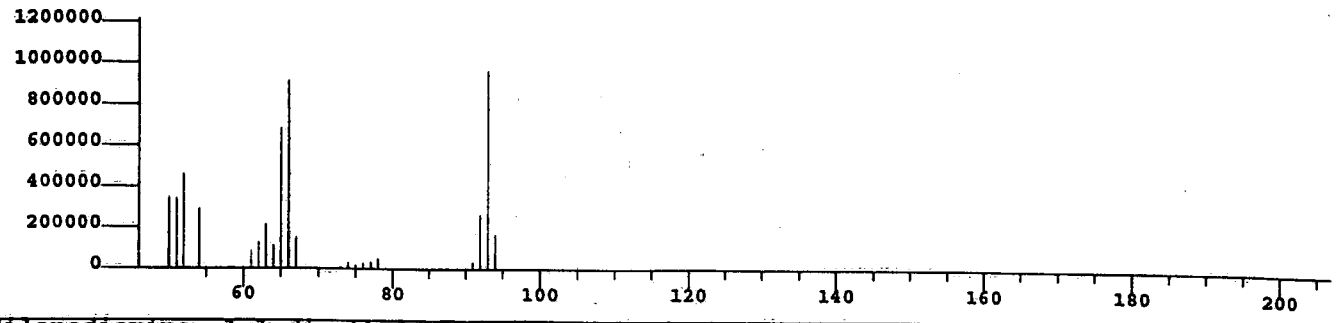




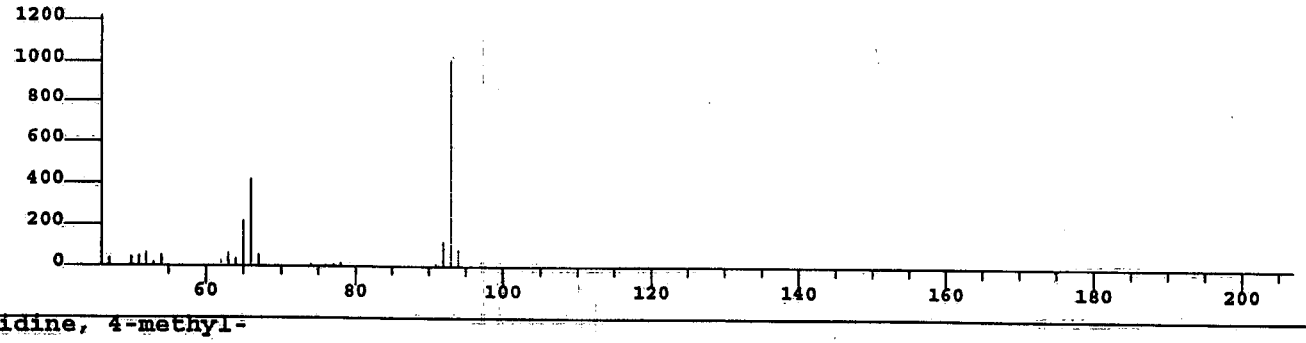
Data File: C:\BNAP\BNAPB582.MSS
Name: SAMP_625_W_BN_(13) 7
Misc Data: 020218-001A,BB438,L,1000.0,1.00,1.0,0,
RT (min): 15.46 Scan: 1555
Area: 7.04e+07 Rank: 3
Semi-quantitative Conc(uncorrected): 5738.44 ug/l
Calculated Using Istd: d8-Naphthalene@ 12.70

	Name	Cas No	SI	MW	Formula
1)	1H-Inden-5-ol, 2,3-dihydro-	1470-94-6	83.4	134	C9H10O
2)	Phenol, 2-(2-propenyl)-	1745-81-9	82.4	134	C9H10O
3)	Phenol, 4-(2-propenyl)-	501-92-8	82.4	134	C9H10O
4)	4-Allylphenyl acetate		81.2	176	C11H12O2
5)	1H-Indenol, 2,3-dihydro-	36643-74-0	80.0	134	C9H10O
6)	Benzenemethanol, ar-ethenyl-	30584-69-1	79.9	134	C9H10O
7)	2-(1-Cyclopentenyl)furan		79.4	134	C9H10O
8)	Benzofuran, 2,3-dihydro-2-methyl-	1746-11-8	78.3	134	C9H10O
9)	2H-1-Benzopyran, 3,4-dihydro-	493-08-3	78.2	134	C9H10O
10)	1H-Inden-1-ol, 2,3-dihydro-	6351-10-6	77.1	134	C9H10O

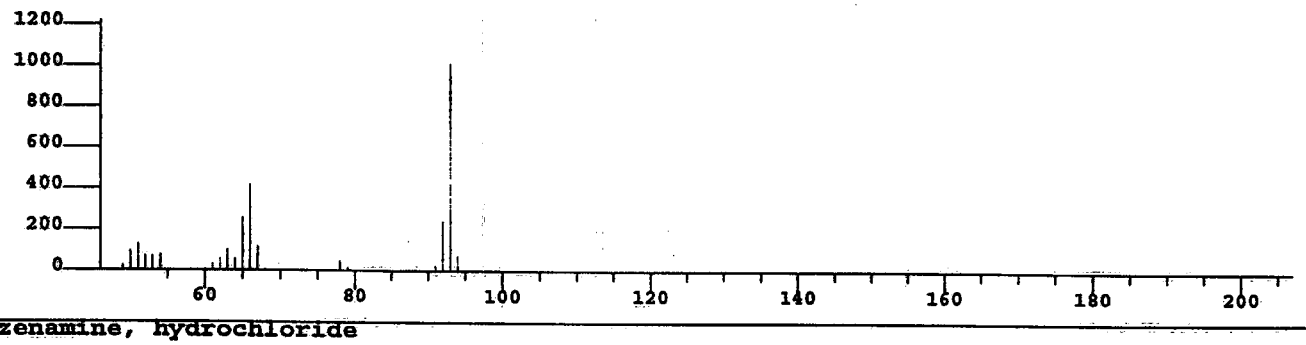
Scan: 731 RT (min): 8.88



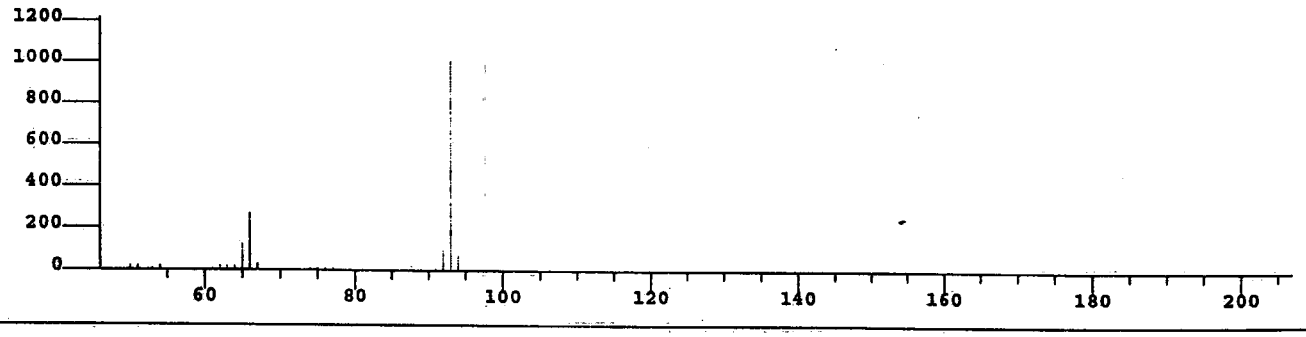
Silanediamine, 1,1-dimethyl-N,N'-diphenyl-



Pyridine, 4-methyl-



Benzenamine, hydrochloride



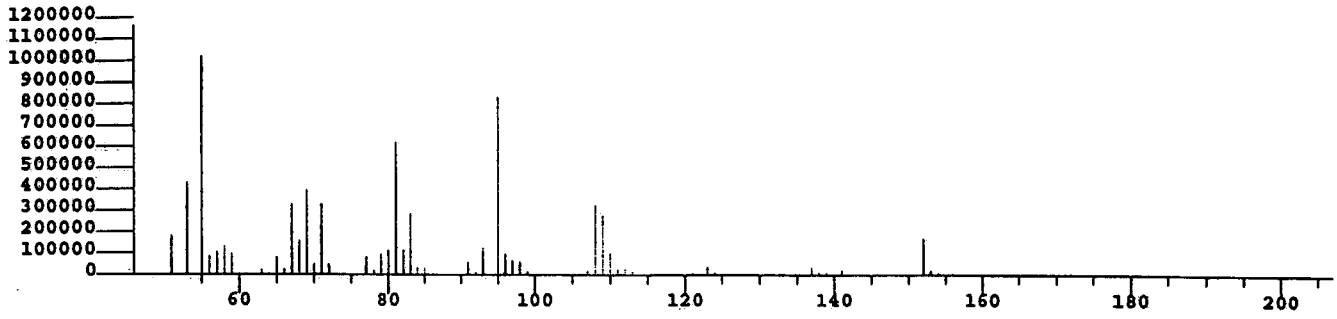
Data File: C:\BNAP\BNAPB582.MSS
Name: SAMP_625_W_BN_(13) 7
Misc Data: 0202018-001A,BB438,L,1000.0,1.00,1.0,0,
RT (min): 8.88 Scan: 731
Area: 5.54e+07 Rank: 4
Semi-quantitative Conc(uncorrected): 4518.05 ug/l
Calculated Using Istd: d4-1,4-Dichlorobenzene@ 9.30

	Name	Cas No	SI	MW	Formula
1)	Silanediamine, 1,1-dimethyl-N,N'-diphenyl-	13435-09-1	88.1	242	C14H18N2Si
2)	Pyridine, 4-methyl-	108-89-4	79.7	93	C6H7N
3)	Benzenamine, hydrochloride	142-04-1	78.3	129	C6H8ClN
4)	Aniline	62-53-3	75.7	93	C6H7N
5)	2-Pyridinecarboxylic acid, 6-methyl-	934-60-1	75.3	137	C7H7NO2
6)	Pyridine, 3-methyl-	108-99-6	75.1	93	C6H7N
7)	Pyridine, 2-methyl-	109-06-8	73.5	93	C6H7N
8)	4-Pentenenitrile, 2y-, 1-oxide	28769-50-8	72.9	93	C6H7N

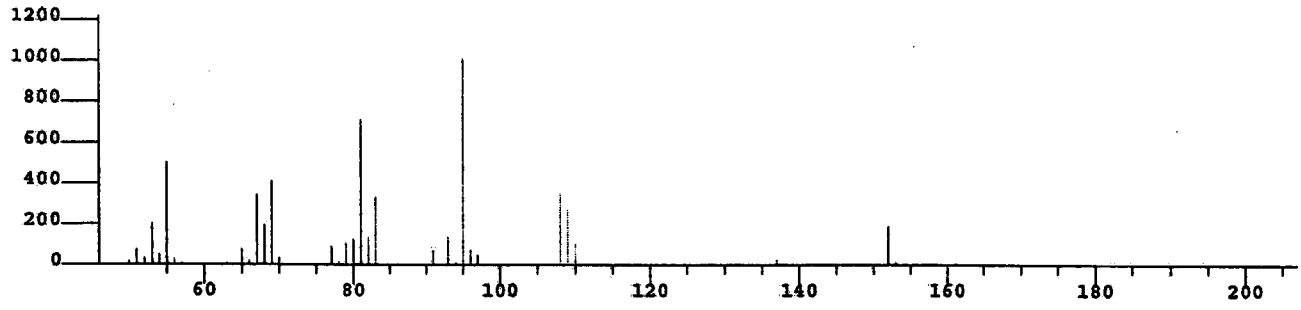
000103

3-8-91

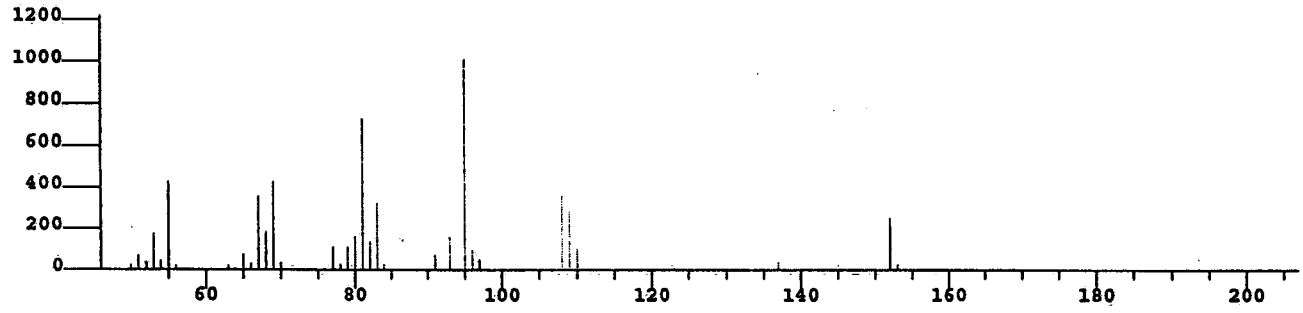
Scan: 1122 RT (min): 11.96



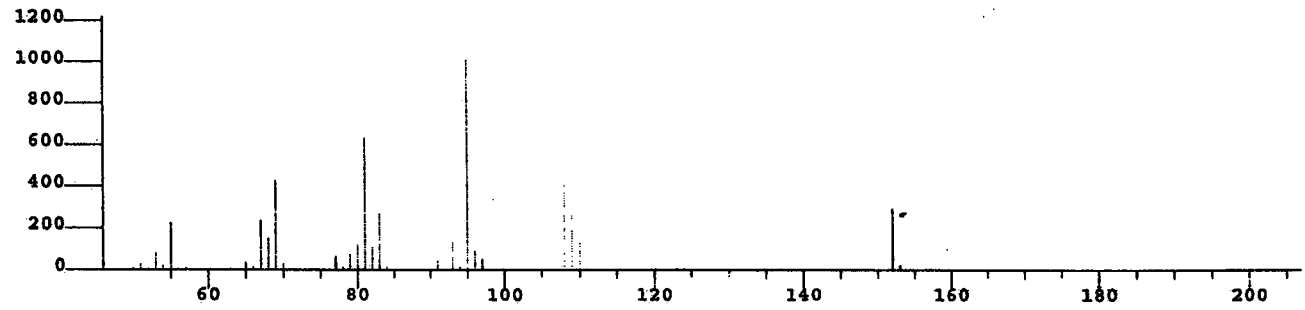
Bicyclo[2.2.1]heptan-2-one, 1,7,7-trimethyl-, (.+/-.)-



Bicyclo[2.2.1]heptan-2-one, 1,7,7-trimethyl-, (1S)-



Bicyclo[2.2.1]heptan-2-one, 1,7,7-trimethyl-, (1R)-



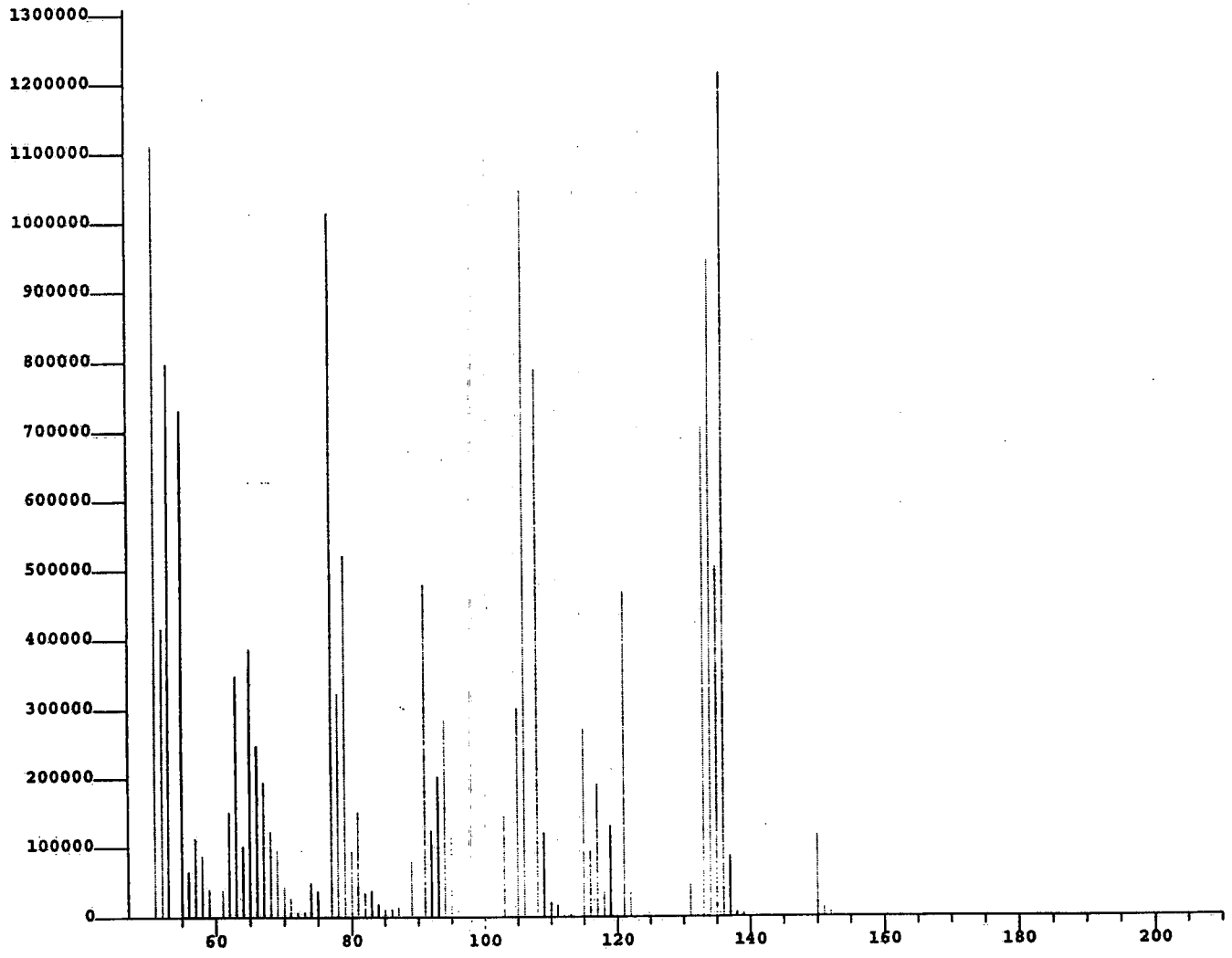
Data File: C:\BNAP\BNAPB582.MSS
Name: SAMP 625 W BN (13) 7
Misc Data: 0202018-001A,BB438,L,1000.0,1.00,1.0,0,
RT (min): 11.96 Scan: 1122
Area: 5.21e+07 Rank: 5
Semi-quantitative Conc(uncorrected): 4244.50 ug/l
Calculated Using Istd: d4-1,4-Dichlorobenzene@ 9.30

	Name	Cas No	SI	MW	Formula
1)	Bicyclo[2.2.1]heptan-2-one, 1,7,7-trimethyl-, (.+/-.)-	21368-68-3	87.5	152	C10H16O
2)	Bicyclo[2.2.1]heptan-2-one, 1,7,7-trimethyl-, (1S)-	464-48-2	86.6	152	C10H16O
3)	Bicyclo[2.2.1]heptan-2-one, 1,7,7-trimethyl-, (1R)-	464-49-3	81.6	152	C10H16O
4)	Cyclohexanone, 2-methyl-5-(1-methylethenyl)-	7764-50-3	77.0	152	C10H16O
5)	Bicyclo[2.2.1]heptan-2-one, 5,5,6-trimethyl-, endo-	3767-44-0	76.5	152	C10H16O
6)	Camphor	76-22-2	75.0	152	C10H16O
7)	Bicyclo[2.2.1]heptan-2-one, 5,5,6-trimethyl-, exo-	3649-86-3	74.5	152	C10H16O
8)	Bicyclo[3.1.0]hexan-2-one, 4-methyl-1-(1-methylethyl)-, (1.alpha	2506-61-8	73.1	152	C10H16O
9)	Bicyclo[2.2.1]heptan-2-one, 4,7,7-trimethyl-, (1R)-	13854-85-8	71.2	152	C10H16O
10)	Bicyclo[3.1.1]heptan-2-one, 3,6,6-trimethyl-	16022-08-5	70.9	152	C10H16O

000104

3892

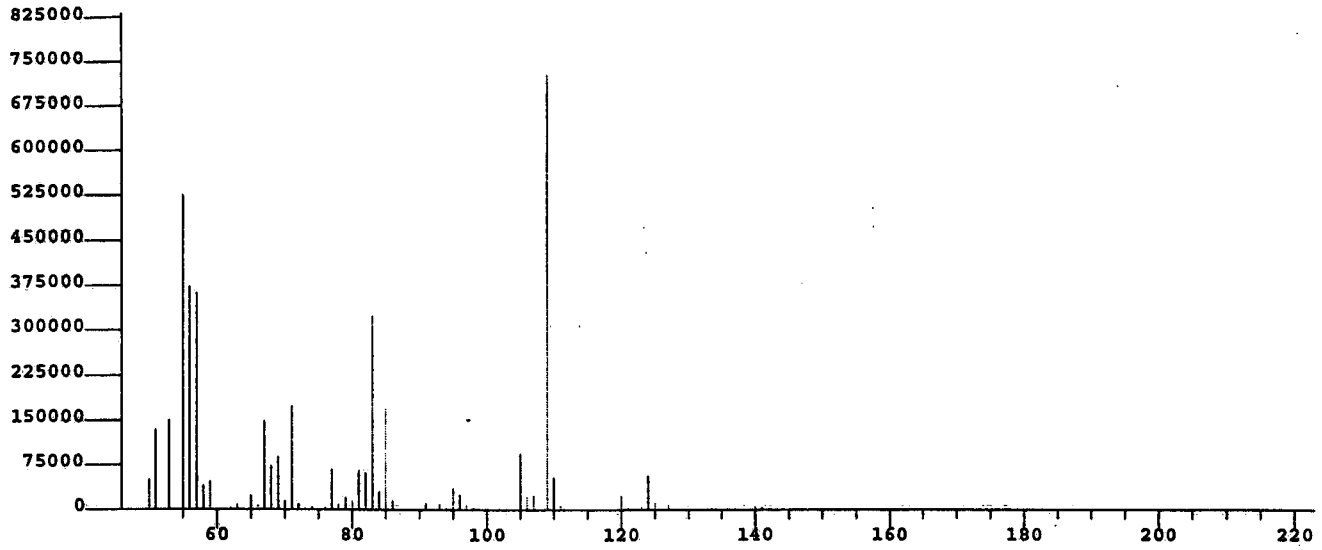
Scan: 1451 RT (min): 14.61



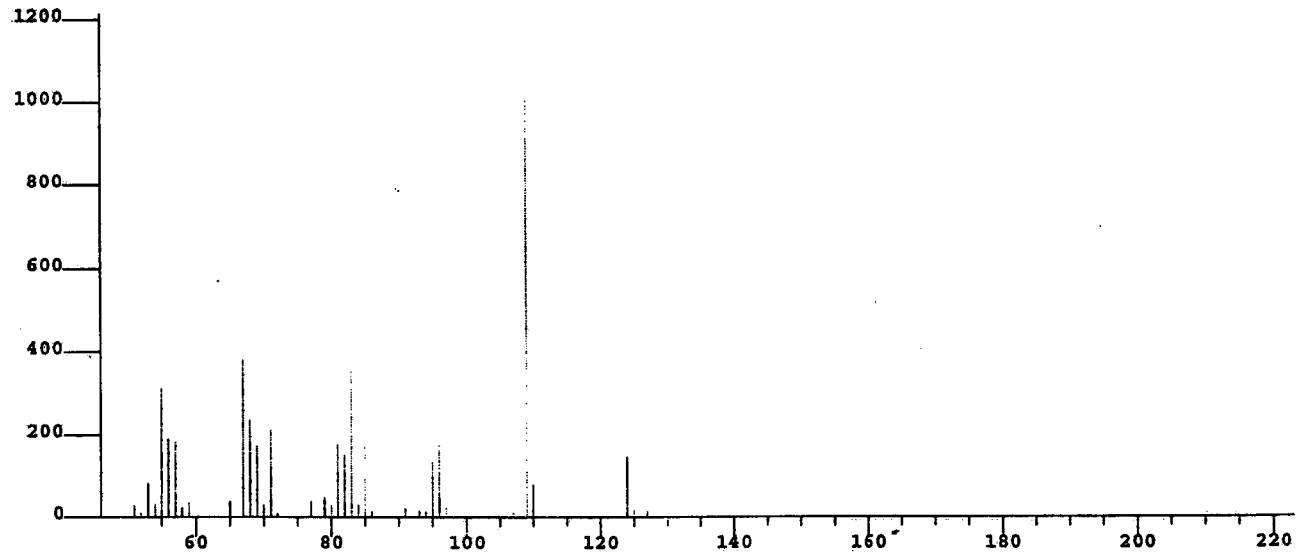
Data File: C:\BNAP\BNAPB582.MSS
Name: SAMP_625_W_BN_(13) 7
Misc Data: 0202018-001A,BB438,L,1000.0,1.00,1.0,0,
RT (min): 14.61 Scan: 1451
Area: 4.30e+07 Rank: 9
Semi-quantitative Conc(uncorrected): 3502.69 ug/l
Calculated Using Istd: d8-Naphthalenew 12.70
No library Matches Found

3693

Scan: 958 RT (min): 10.66



Cyclohexanol, 3,3,5-trimethyl-



Data File: C:\BNAP\BNAPB582.MSS
Name: SAMP_625_W_BN_(13) 7
Misc Data: 0202018-001A,BB438,L,1000.0,1.00,1.0,0,
RT (min): 10.66 Scan: 958
Area: 4.79e+07 Rank: 6
Semi-quantitative Conc(uncorrected): 3899.02 ug/l
Calculated Using Istd: d4-1,4-Dichlorobenzene-d4 9.30

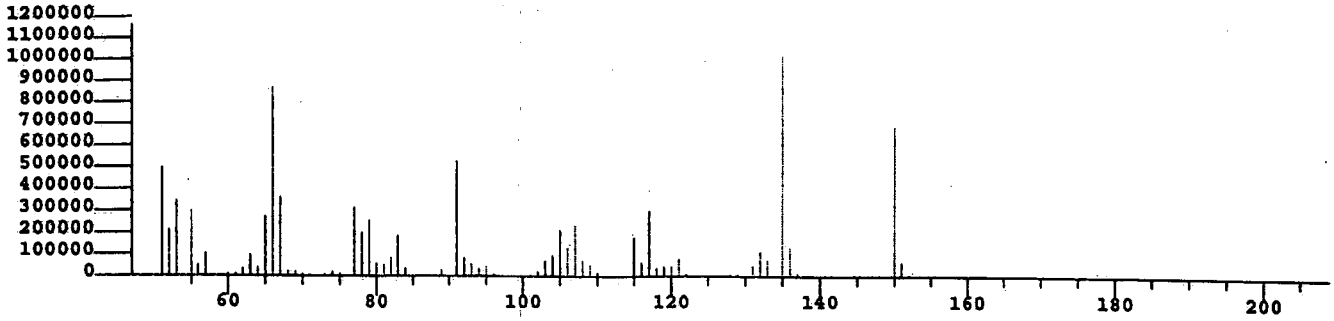
	Name	Cas No	SI	MW	Formula
1)	Cyclohexanol, 3,3,5-trimethyl-	116-02-9	82.8	142	C9H18O

000106

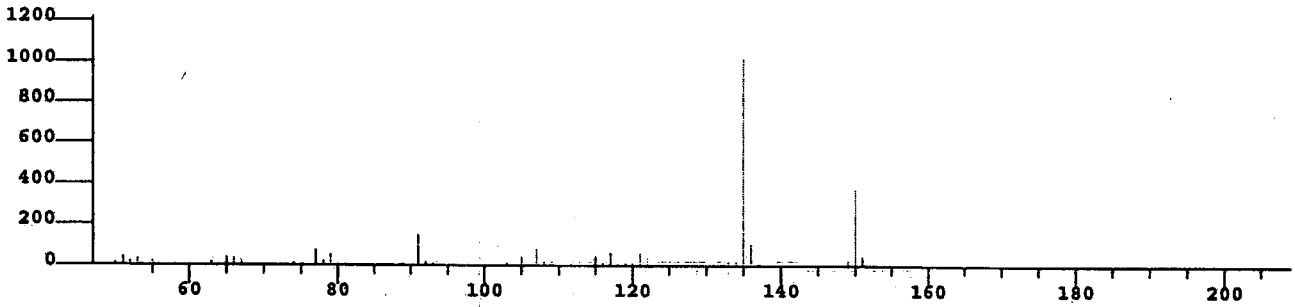
3-094

1(4)

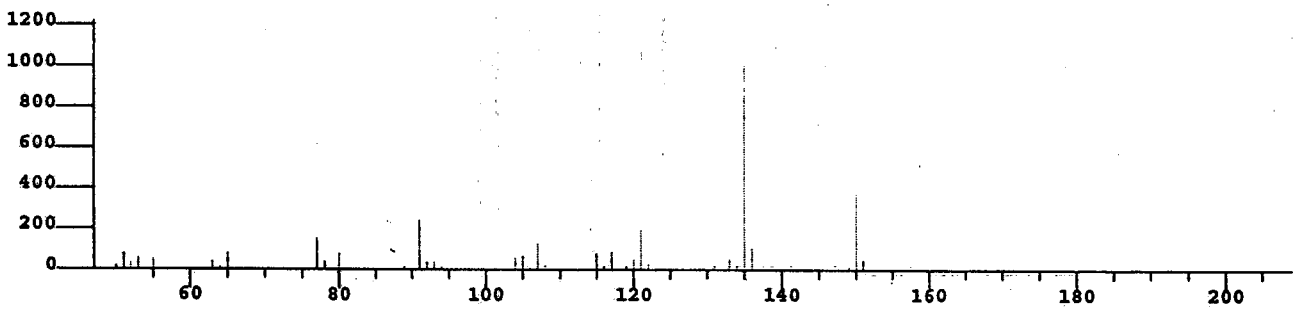
Scan: 1489 RT (min): 14.91



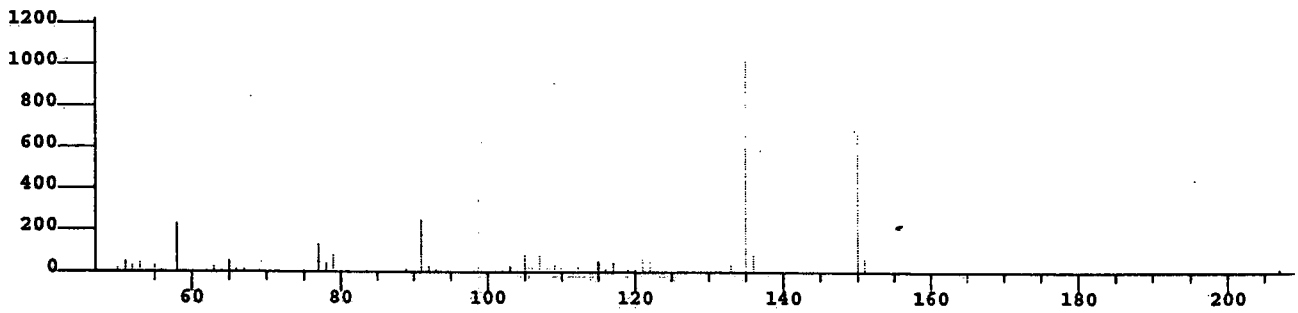
Thymol



3,4-Diethylphenol



Phenol, 3-methyl-5-(1-methylethyl)-, methylcarbamate



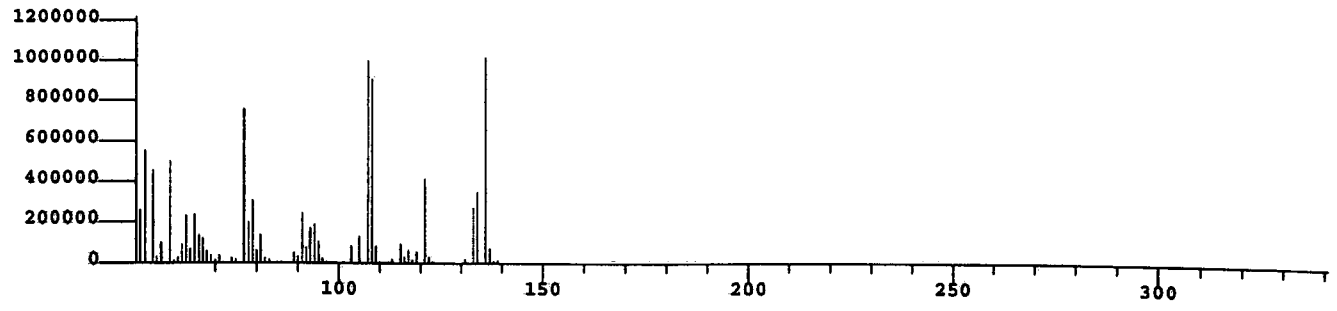
Data File: C:\BNAP\BNAPB582.MSS
Name: SAMP_625_W_BN_(13) 7
Misc Data: 0202018-001A,BB438,L,1000.0,1.00,1.0,0,
RT (min): 14.91 Scan: 1489
Area: 4.67e+07 Rank: 7
Semi-quantitative Conc(uncorrected): 3806.95 ug/l
Calculated Using Istd: d8-Naphthalene@ 12.70

Name	Cas No	SI	MW	Formula
1) Thymol	89-83-8	76.4	150	C10H14O
2) 3,4-Diethylphenol	875-85-4	74.2	150	C10H14O
3) Phenol, 3-methyl-5-(1-methylethyl)-, methylcarbamate	2631-37-0	73.8	207	C12H17NO2
4) Phenol, 2-ethyl-4,5-dimethyl-	2219-78-5	73.6	150	C10H14O
5) Phenol, 2,3,5,6-tetramethyl-	527-35-5	73.6	150	C10H14O
6) Phenol, 2-methyl-5-(1-methylethyl)-	499-75-2	73.6	150	C10H14O
7) 1-(2,4-Dimethylphenyl)ethanol	99500-87-5	72.0	150	C10H14O
8) D-Verbenone	18309-32-5	71.8	150	C10H14O
3-Cyclohexen-1-ol, 5-methylene-6-(1-methylethenyl)-	54274-41-8	70.5	150	C10H14O
2,3,4,6-Tetramethylphenol		70.4	150	C10H14O

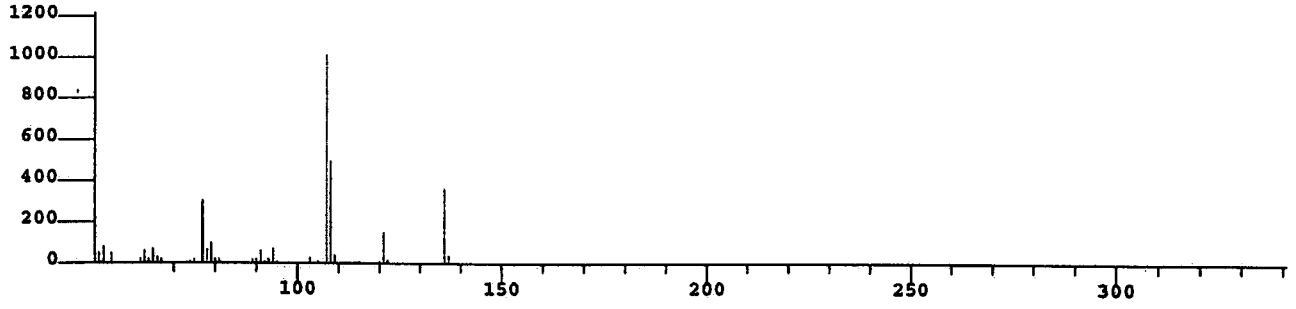
000107

3855

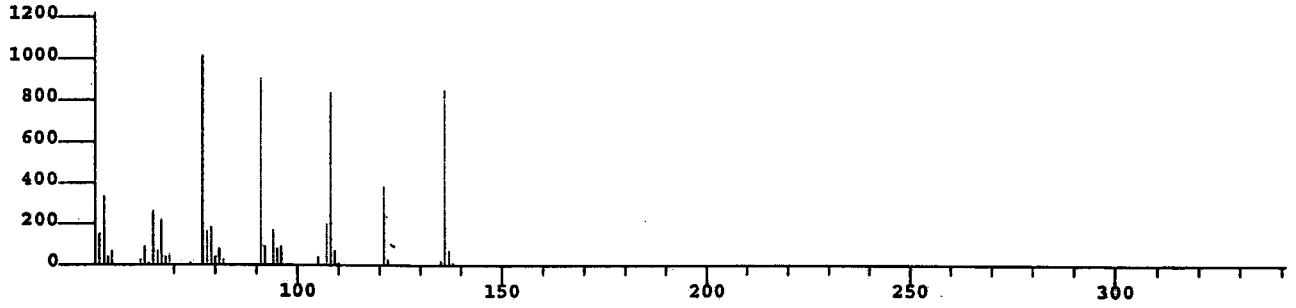
Scan: 1372 RT (min): 13.96



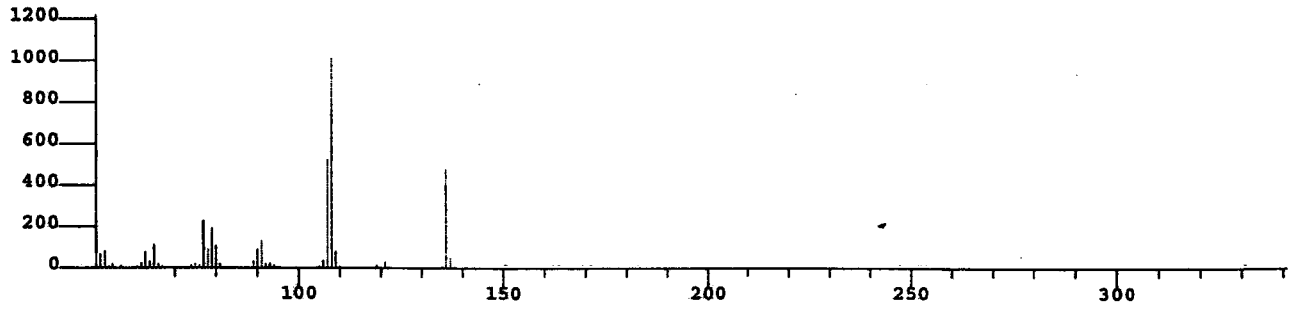
Phenol, 3-propyl-



2,5-Cyclohexadien-1-one, 3,4,4-trimethyl-



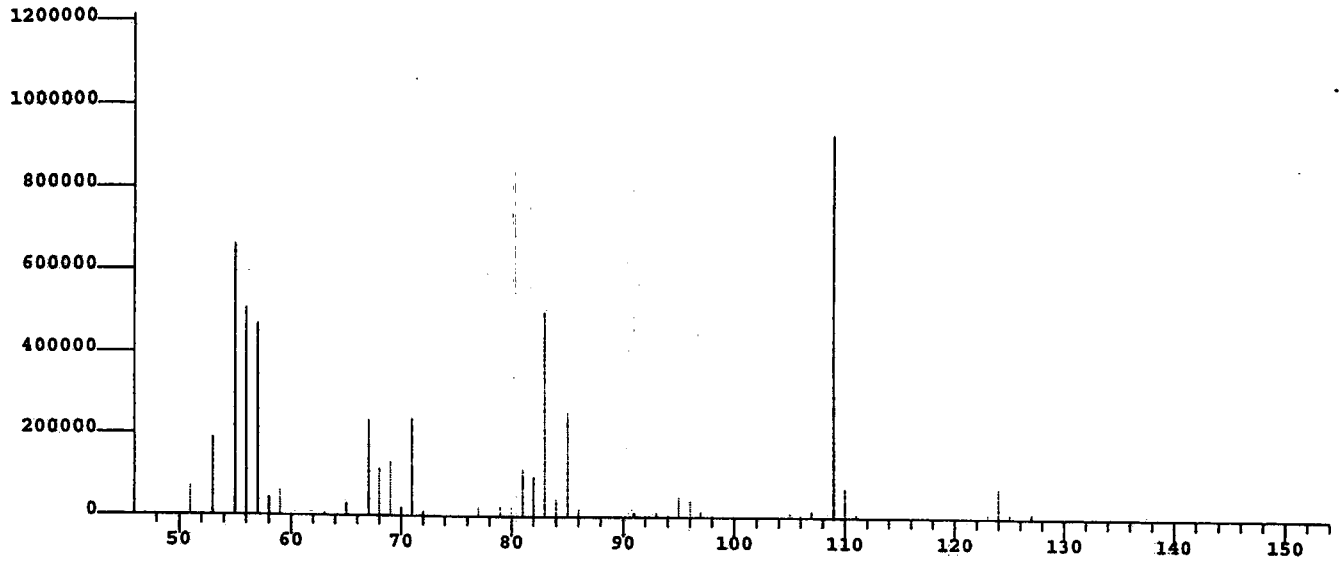
Benzene, 1-ethoxy-3-methyl-



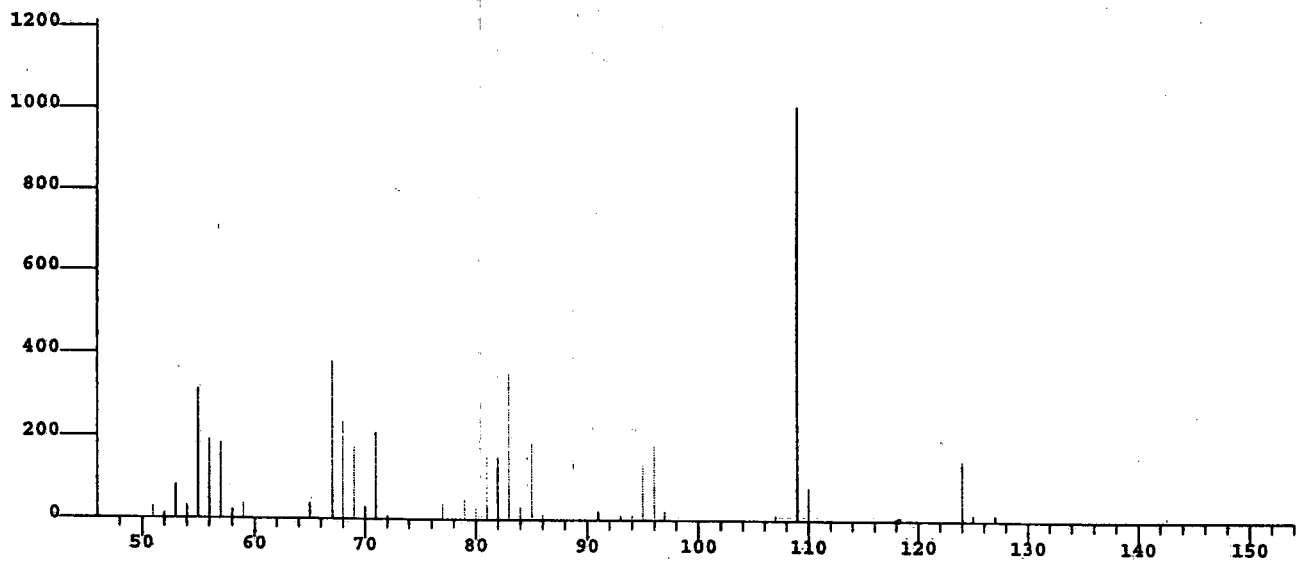
Data File: C:\BNAP\BNAPB582.MSS
Name: SAMP_625_W_BN_(13) 7
Misc Data: 0202018-001A,BB438,L,1000.0,1.00,1.0,0,
RT (min): 13.96 Scan: 1372
Area: 4.44e+07 Rank: 8
Semi-quantitative Conc(uncorrected): 3614.00 ug/l
Calculated Using Istd: d8-Naphthalene@ 12.70

	Name	Cas No	SI	MW	Formula
1)	Phenol, 3-propyl-	621-27-2	75.5	136	C9H12O
2)	2,5-Cyclohexadien-1-one, 3,4,4-trimethyl-	17429-31-1	73.2	136	C9H12O
3)	Benzene, 1-ethoxy-3-methyl-	621-32-9	71.8	136	C9H12O
4)	Phenol, 2-ethyl-4-methyl-	3855-26-3	70.8	136	C9H12O
5)	Benzene, 1-ethoxy-4-methyl-	622-60-6	70.1	136	C9H12O
6)	Cyclohexene, 5-methyl-3-(1-methylethenyl)-, trans-(-)-	56816-08-1	70.0	136	C10H16

Scan: 968 RT (min): 10.74



Cyclohexanol, 3,3,5-trimethyl-



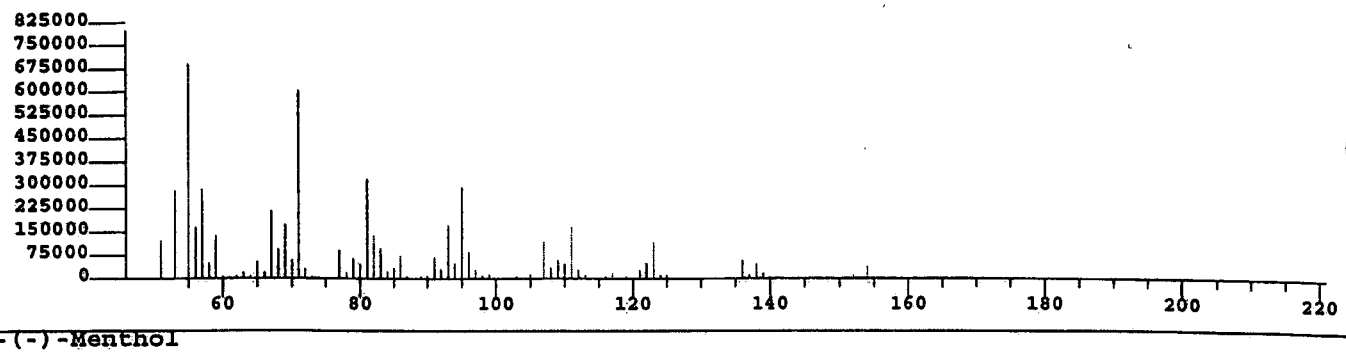
Data File: C:\BNAP\BNAPB582.MSS
Name: SAMP_625_W_BN (13) 7
Misc Data: 0202018-001A,BB438,L,1000.0,1.00,1.0,0,
RT (min): 10.74 Scan: 968
Area: 4.25e+07 Rank: 10
Semi-quantitative Conc(uncorrected): 3464.44 ug/l
Calculated Using Istd: d4-1,4-Dichlorobenzene 9.30

Name	Cas No	SI	MW	Formula
1) Cyclohexanol, 3,3,5-trimethyl-	116-02-9	87.3	142	C9H18O

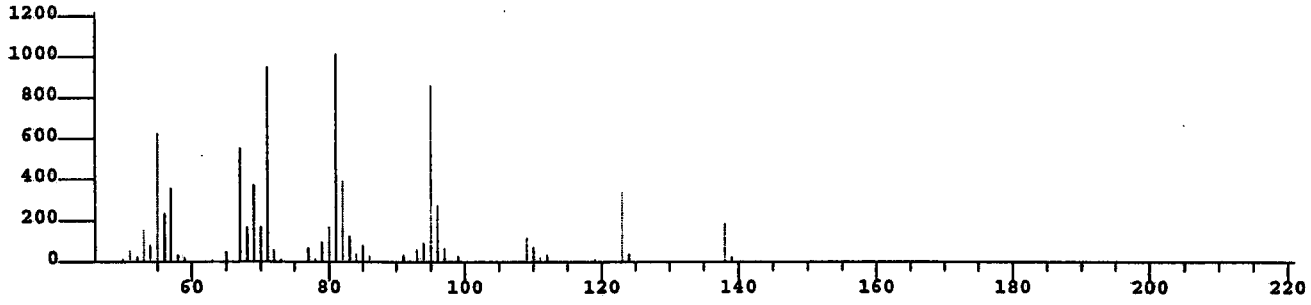
000109

3097

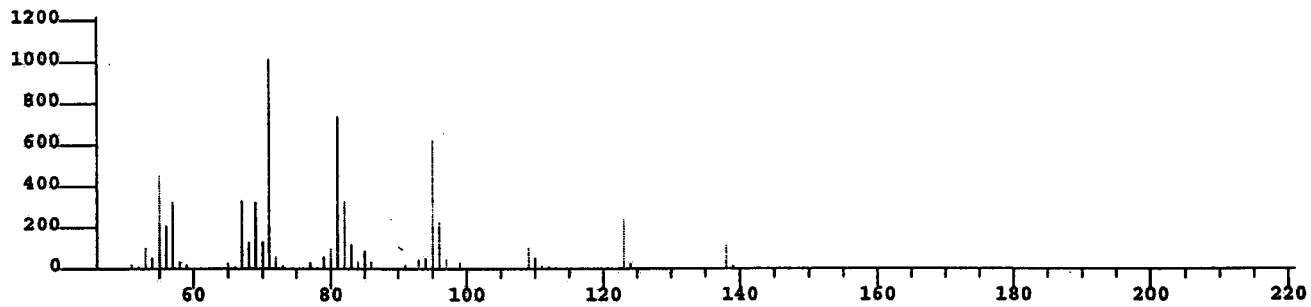
Scan: 1193 RT (min): 12.52



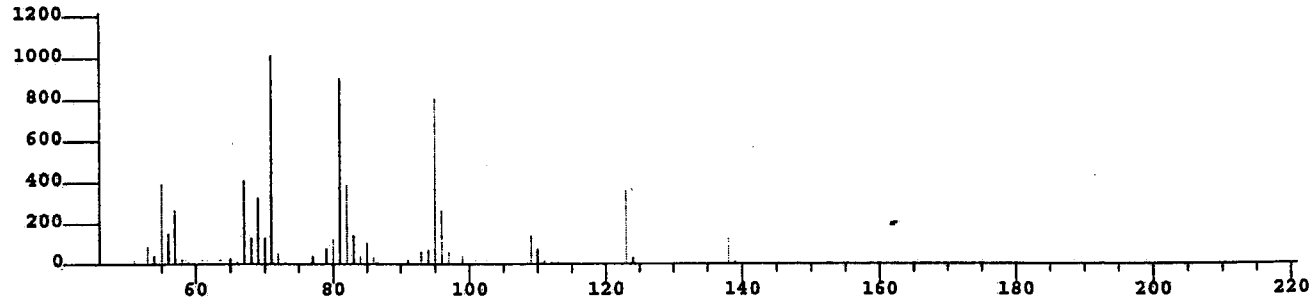
L-(-)-Menthol



Cyclohexanol, 1-methyl-4-(1-methylethyl)-



Cyclohexanol, 5-methyl-2-(1-methylethyl)-, (1.alpha.,2.beta.,5.a



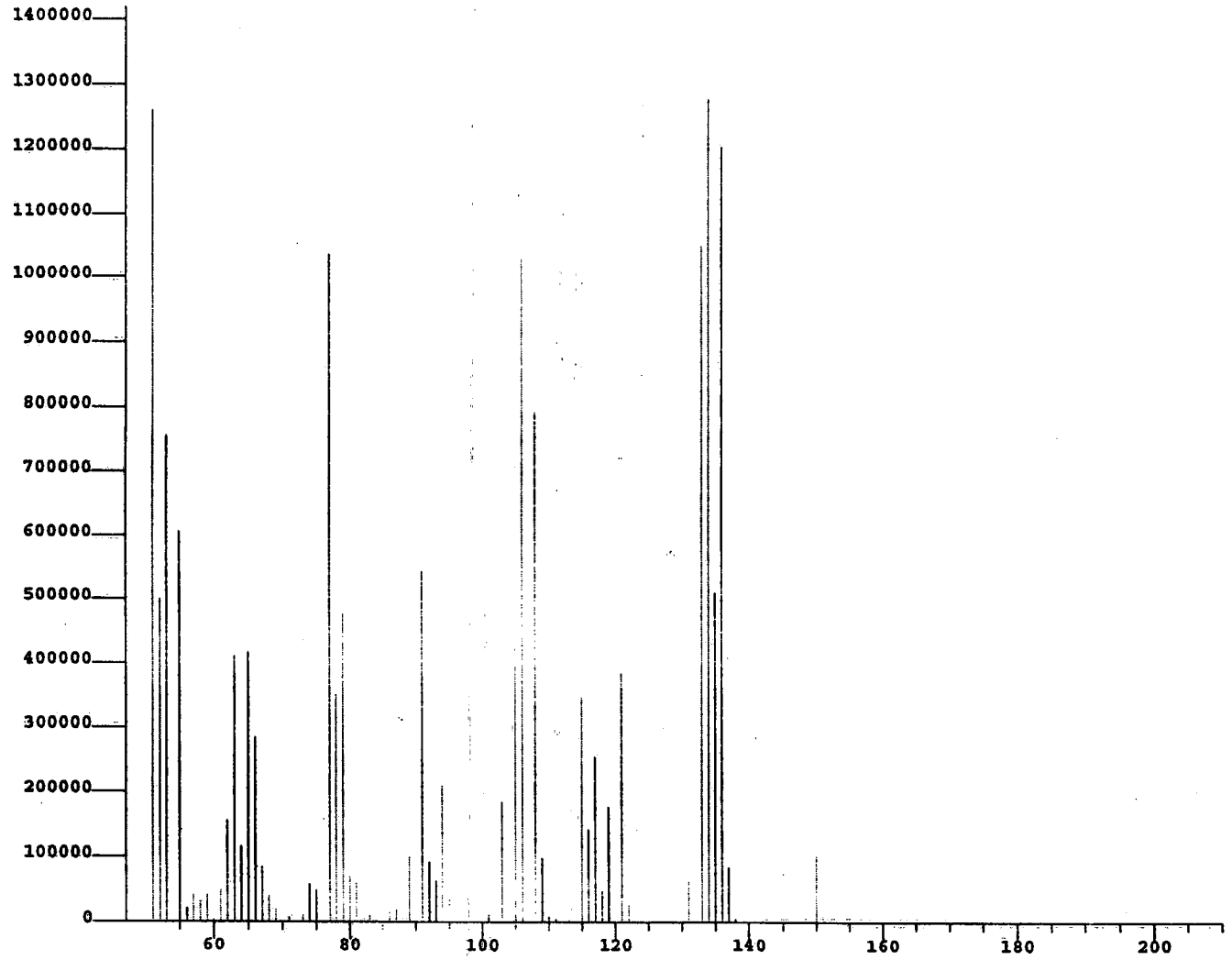
Data File: C:\BNAP\BNAPB582.MSS
Name: SAMP_625_W_BN_(13) 7
Misc Data: 0202018-001A,BB438,L,1000.0,1.00,1.0,0,
RT (min): 12.52 Scan: 1193
Area: 3.96e+07 Rank: 11
Semi-quantitative Conc(uncorrected): 3224.98 ug/l
Calculated Using Istd: d4-1,4-Dichlorobenzene@ 9.30

	Name	Cas No	SI	MW	Formula
1)	L-(-)-Menthol	2216-51-5	76.5	156	C10H20O
2)	Cyclohexanol, 1-methyl-4-(1-methylethyl)-	21129-27-1	74.9	156	C10H20O
3)	Cyclohexanol, 5-methyl-2-(1-methylethyl)-, (1.alpha.,2.beta.,5.a	15356-70-4	74.6	156	C10H20O
4)	Cyclohexanol, 5-methyl-2-(1-methylethyl)-, [1S-(1.alpha.,2.alpha	2216-52-6	73.8	156	C10H20O
5)	Cyclohexanol, 5-methyl-2-(1-methylethyl)-, (1.alpha.,2.beta.,5.b	490-99-3	73.8	156	C10H20O
6)	Cyclohexanol, 5-methyl-2-(1-methylethenyl)-, [1R-(1.alpha.,2.bet	89-79-2	72.9	154	C10H18O
7)	2-Pentadecyn-1-ol	2834-00-6	72.9	224	C15H28O
8)	Cyclohexanol, 5-methyl-2-(1-methylethyl)-, (1.alpha.,2.alpha.,5.	491-02-1	72.8	156	C10H20O
9)	Cyclohexanol, 5-methyl-2-(1-methylethyl)-, [1S-(1.alpha.,2.beta.	23283-97-8	72.8	156	C10H20O
10)	Cyclohexanol, 5-methyl-2-(1-methylethenyl)-	7786-67-6	72.4	154	C10H18O

000110

3898

Scan: 1455 RT (min): 14.63

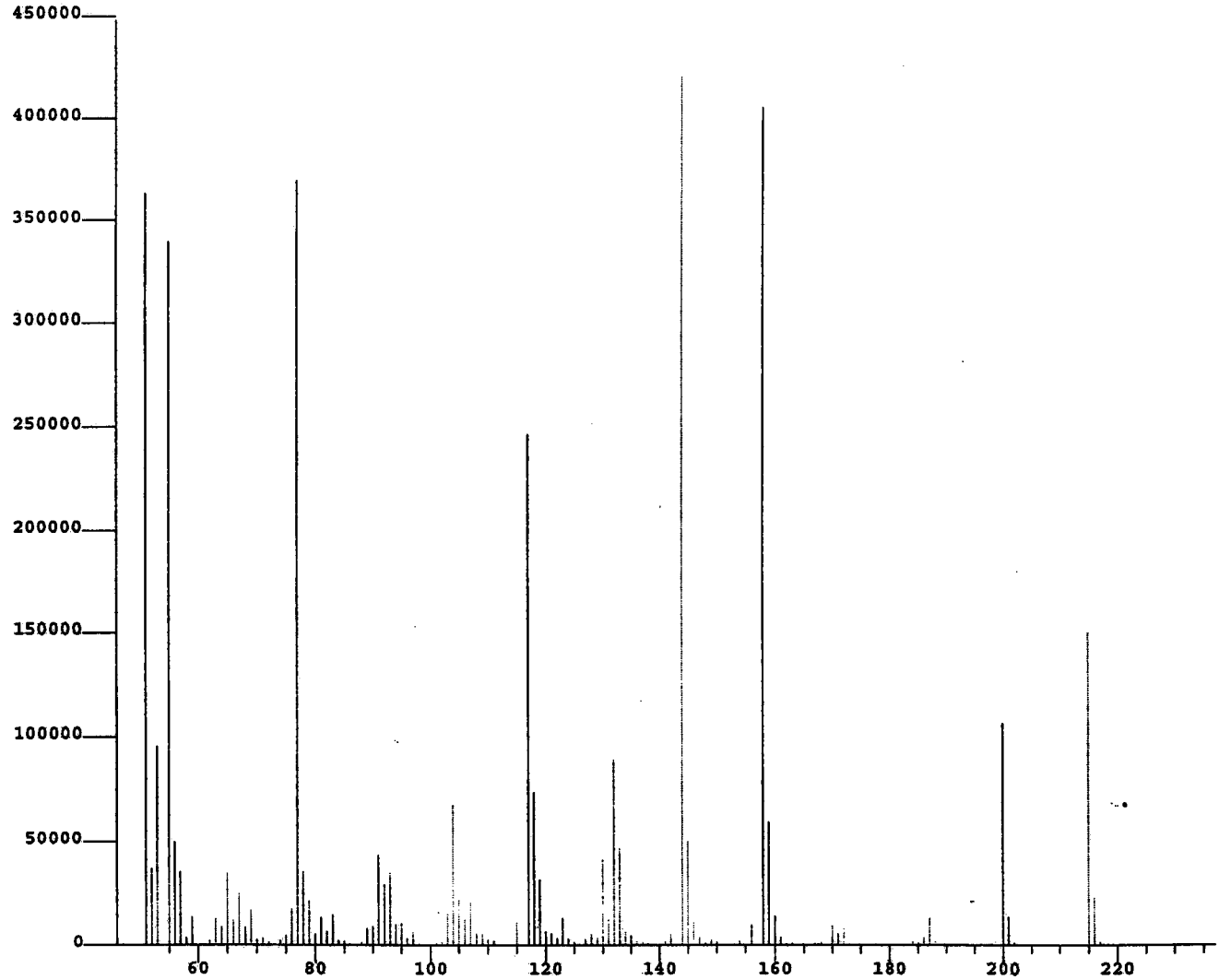


Data File: C:\BNAP\BNAPB582.MSS
Name: SAMP_625_W_BN_(13) 7
Misc Data: 0202018-001A,BB438,L,1000.0,1.00,1.0,0,
RT (min): 14.63 Scan: 1455
Area: 3.73e+07 Rank: 12
Semi-quantitative Conc(uncorrected): 3040.18 ug/l
Calculated Using Istd: d8-Naphthalene@ 12.70
No library Matches Found

000111

3899

Scan: 1922 RT (min): 18.61

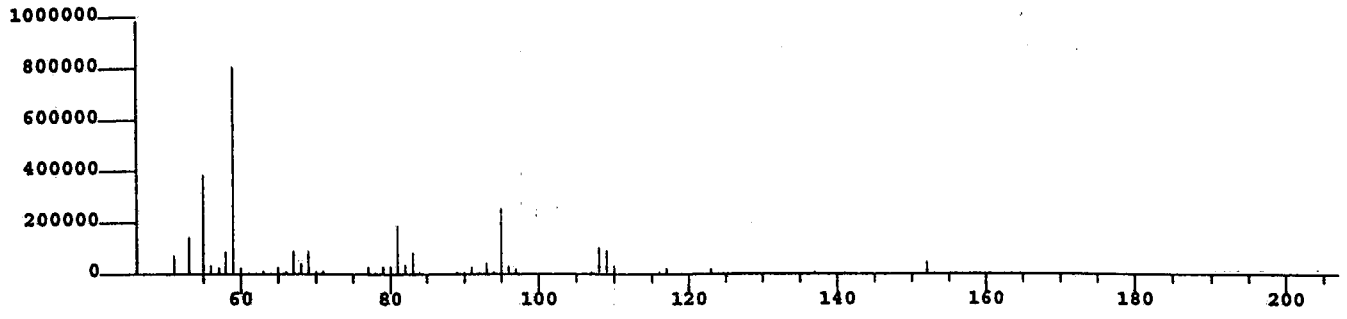


Data File: C:\BNAP\BNAPB582.MSS
Name: SAMP_625_W_BN_(13) 7
Misc Data: 0202018-001A,BB438,L,1000.0,1.00,1.0,0,
RT (min): 18.61 Scan: 1922
Area: 2.35e+07 Rank: 13
Semi-quantitative Conc(uncorrected): 242.94 ug/l
Calculated Using Istd: d10-Acenaphthene@ 17.01
No library Matches Found

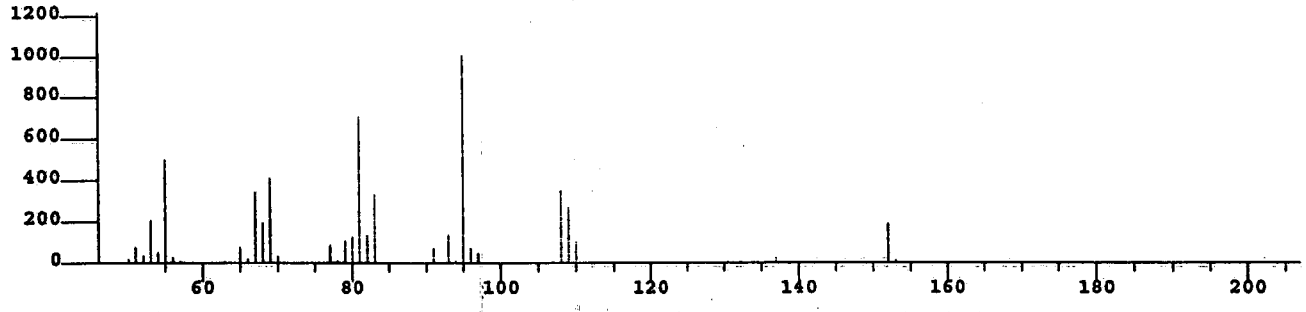
000112

3900

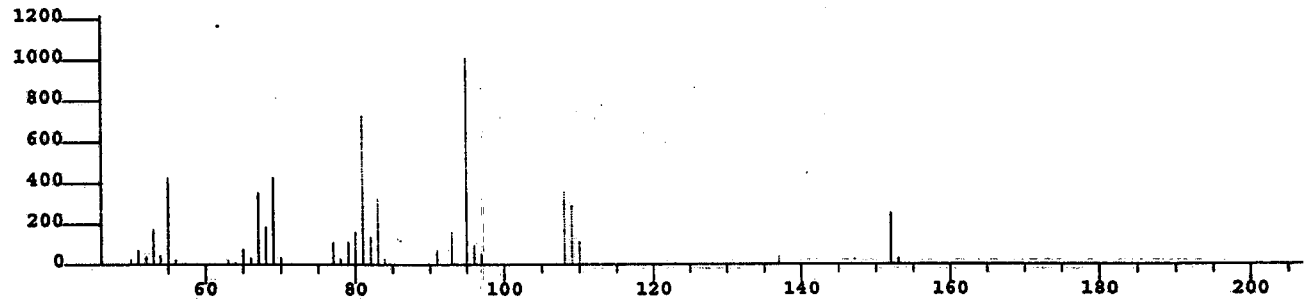
Scan: 1104 RT (min): 11.82



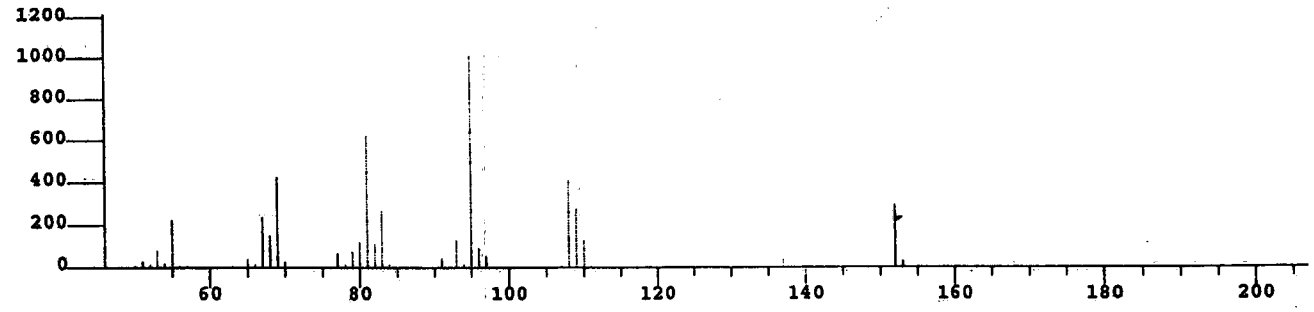
Bicyclo[2.2.1]heptan-2-one, 1,7,7-trimethyl-, (.+/-.)-



Bicyclo[2.2.1]heptan-2-one, 1,7,7-trimethyl-, (1S)-



Bicyclo[2.2.1]heptan-2-one, 1,7,7-trimethyl-, (1R)-



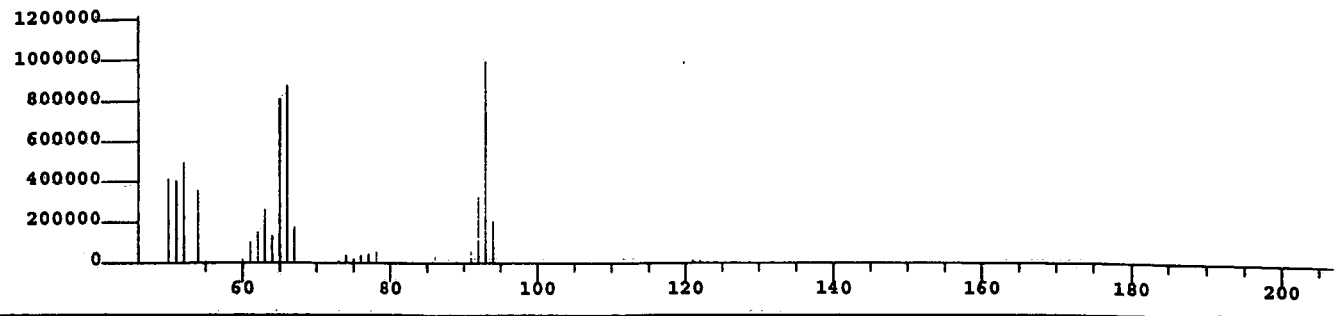
Data File: C:\BNAP\BNAPB582.MSS
Name: SAMP_625_W_BN_(13) 7
Misc Data: 0202018-001A,BB438,L,1000.0,1.00,1.0,0,
RT (min): 11.82 Scan: 1104
Area: 2.19e+07 Rank: 14
Semi-quantitative Conc(uncorrected): 225.94 ug/l
Calculated Using Istd: d4-1,4-Dichlorobenzene@ 9.30

	Name	Cas No	SI	MW	Formula
1)	Bicyclo[2.2.1]heptan-2-one, 1,7,7-trimethyl-, (.+/-.)-	21368-68-3	77.3	152	C10H16O
2)	Bicyclo[2.2.1]heptan-2-one, 1,7,7-trimethyl-, (1S)-	464-48-2	76.5	152	C10H16O
3)	Bicyclo[2.2.1]heptan-2-one, 1,7,7-trimethyl-, (1R)-	464-49-3	74.0	152	C10H16O

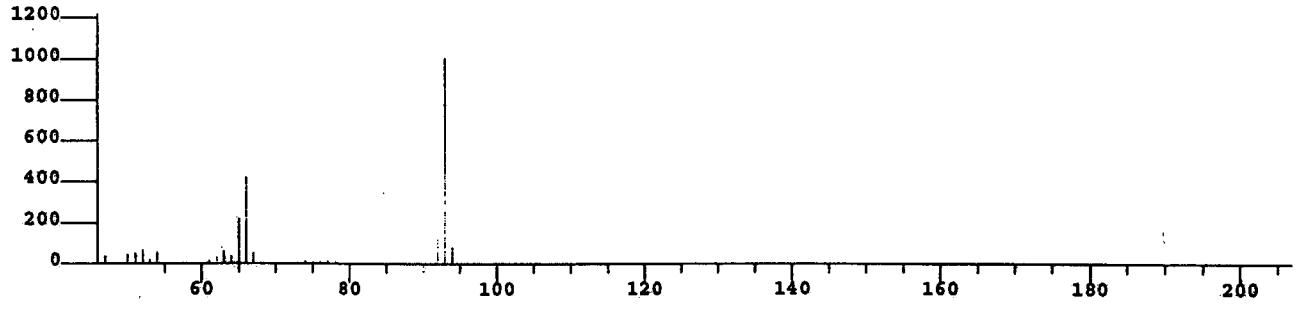
000113

3901

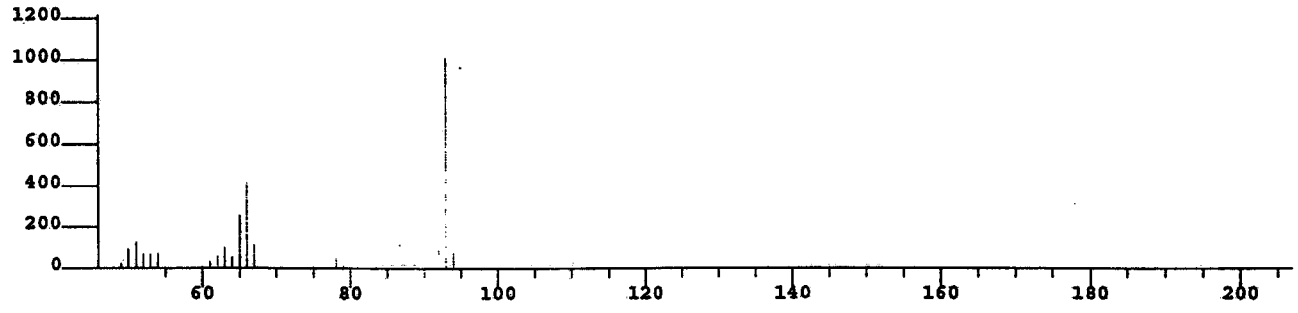
Scan: 745 RT (min): 8.99



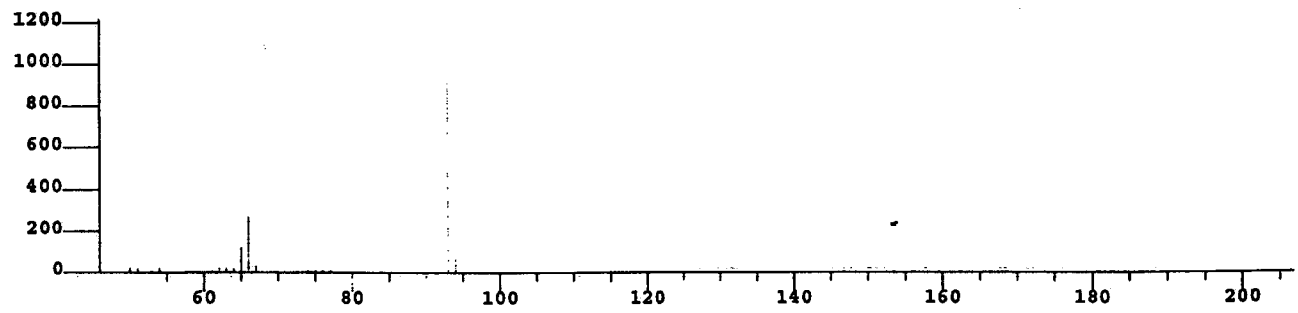
Silanediamine, 1,1-dimethyl-N,N'-diphenyl-



Pyridine, 4-methyl-



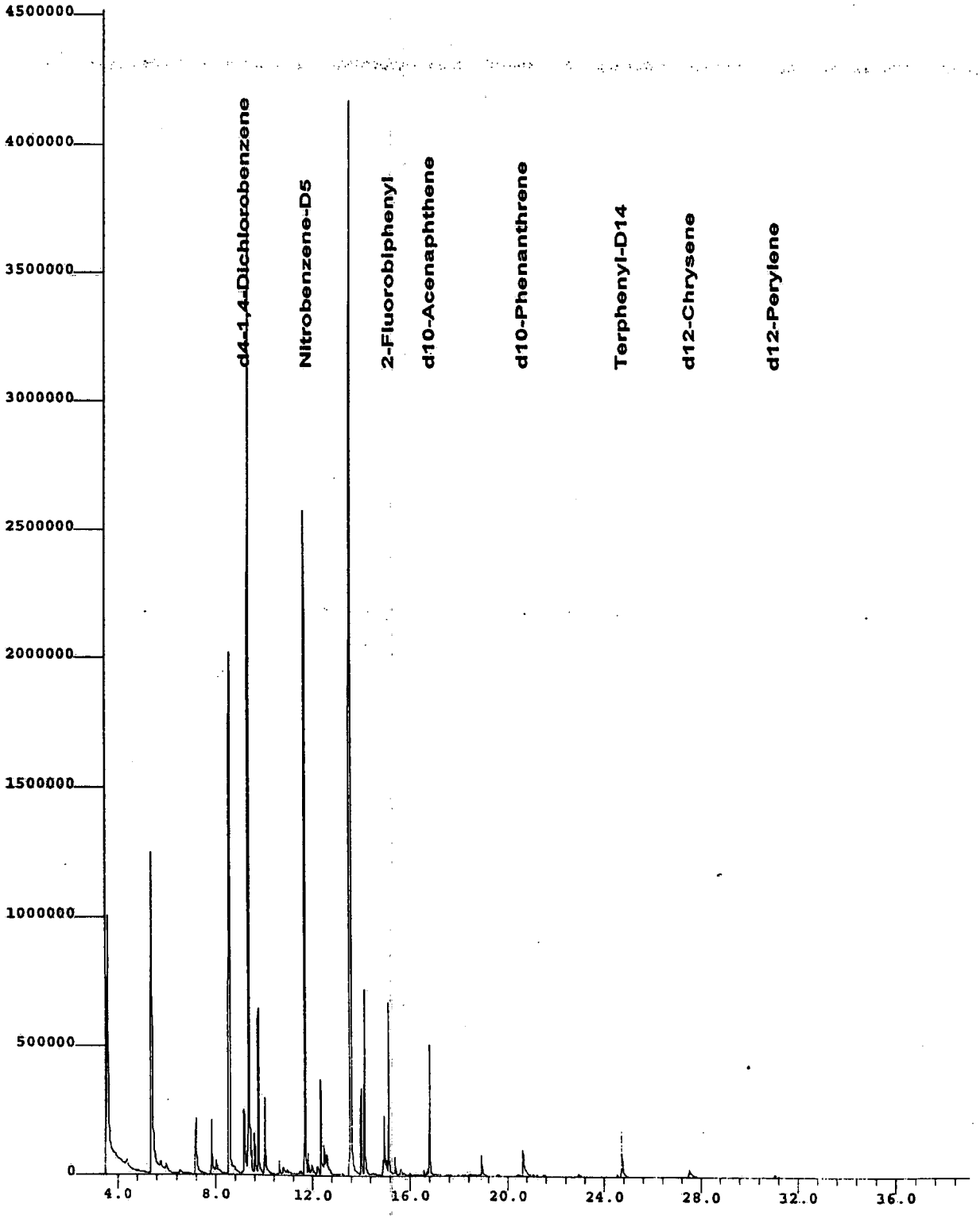
Benzenamine, hydrochloride



Data File: C:\BNAP\BNAPB582.MSS
Name: SAMP_625_W_BN_(13) 7
Misc Data: 0202018-001A,BB438,L,1000.0,1.00,1.0,0,
RT (min): 8.99 Scan: 745
Area: 1.77e+07 Rank: 15
Semi-quantitative Conc(uncorrected): 182.61 ug/l
Calculated Using Istd: d4-1,4-Dichlorobenzene@ 9.30

	Name	Cas No	SI	MW	Formula
1)	Silanediamine, 1,1-dimethyl-N,N'-diphenyl-	13435-09-1	85.3	242	C14H18N2Si
2)	Pyridine, 4-methyl-	108-89-4	77.8	93	C6H7N
3)	Benzenamine, hydrochloride	142-04-1	76.8	129	C6H8ClN
4)	2-Pyridinecarboxylic acid, 6-methyl-	934-60-1	74.6	137	C7H7NO2
5)	Aniline	62-53-3	74.4	93	C6H7N
6)	Pyridine, 3-methyl-	108-99-6	73.6	93	C6H7N
7)	Pyridine, 2-methyl-	109-06-8	71.7	93	C6H7N
	4-Pentenenitrile, 2y-, 1-oxide	28769-50-8	71.1	93	C6H7N

Data File: C:\BNAP\BNAPB583.MSS
Quant Output File: C:\BNAP\BNAPB583.Q
Injection Time: 02/08/82 20:10
Misc: 0202018-002A,BB438,L,1000.0,1.00,1.0,0,



000115

3903

QUANT REPORT
Quant Rev: 10

Operator Id:
Dilution Factor:<None>
Output File: C:\BNAP\BNAPB583.Q
Data File: c:\bnap\bnapb583.mss
Name: SAMP_625_W_BN_(14) 8
Misc: 0202018-002A,BB438,L,1000.0,1.00,1.0,0,
ID File: c:\bnap\hsl\625b.i
Title: SW-846 Method 8270 Semi-Volatile Quant ID File
Last Calib: 01/17/82 10:29
Quant Time : 82/21/19 52:50
Injected at : 02/08/82 20:10
Last Qcal Date: None

	Compound	R.T.	Q Ion	Area	Conc	Units	Q
1)	*d4-1,4-Dichlorobenzene	9.16	152	234503	40.00	ug/l	94
15)	Nitrobenzene-D5	11.73	54	10791	42.03	ug/l	0
27)	*d10-Acenaphthene	16.81	162	333653	40.00	ug/l	0
30)	2-Fluorobiphenyl	15.14	172	660571	50.78	ug/l	98
43)	*d10-Phenanthrene	20.64	188	299433	40.00	ug/l	98
54)M	*d12-Chrysene	27.50	240	170928	40.00	ug/l	0
56)	Terphenyl-D14	24.73	244	196545	89.76	ug/l	90
62)	*d12-Perylene	31.03	264	30293	40.00	ug/l	100

* Compound is Internal Standard

000116

3904

Int report for Plus Analysis ..... Plus version 5.0

Quant Output File: c:\bnap\bnapb583.q
Data File Name: C:\BNAP\BNAPB583.MSS
Name: SAMP_625_W_BN_(14) 8
Misc Data: 0202018-002A,BB438,L,1000.0,1.00,1.0,0,
Plus Method File: C:\AQUARIUS\FILES\BNA.NIS
Parameters Minimum % Istd Area to Report: 10.00
Absolute maximum Number of Peaks: 15
Which Istd from Output file(1st,2nd)..: 3
Maximum Hits for graphics: 3

Rank Order
Date: 03-14-1982
Time: 13:26:46
Delta Rt: 0.06

#	R.T. (min.)	Start Time	End Time	Width	Type	Area	Rank	
42)	13.64	13.50	13.95	0.453	BB	3.85e+07	CMPD	Benzoic acid
18)	9.39	9.30	9.47	0.164	VV	2.34e+07	CMPD	Bis(2-Chloroisopropyl)
13)	8.60	8.49	8.69	0.206	BV	1.72e+07	CMPD	Phenol
29)	11.70	11.63	11.80	0.168	BV	1.52e+07	CMPD	Nitrobenzene
5)	5.38	5.34	5.61	0.269	BB	1.03e+07	CMPD	2-Fluorophenol
1)	3.58	3.49	3.71	0.218	BB	8952813	CMPD	N-Nitrosodimethylamine
44)	14.17	14.13	14.30	0.175	BB	2898629	1	
21)	9.75	9.71	9.95	0.242	VB	2596824	CMPD	N-Nitrosodi-n-propylami
50)	15.14	15.10	15.28	0.180	BB	2204089	CMPD	2-Fluorobiphenyl
60)	16.81	16.77	16.97	0.201	VB	2056766	ISTD	d10-Acenaphthene
35)	12.34	12.31	12.42	0.108	VV	1788476	2	
16)	9.16	9.10	9.24	0.145	BV	1692786	ISTD	bis(2-Chloroethyl) ethe
22)	10.02	9.99	10.22	0.233	BB	1558727	3	
43)	14.01	13.96	14.08	0.122	BB	1483257	4	
9)	7.18	7.14	7.35	0.203	BB	1365584	5	
10)	7.82	7.79	7.95	0.154	BV	1270393	6	
38)	12.58	12.51	12.67	0.162	VV	948298	7	
78)	24.73	24.68	24.89	0.208	BB	910352	CMPD	Terphenyl-D14
20)	9.60	9.57	9.71	0.136	VV	879505	CMPD	1,2-Dichlorobenzene
72)	20.64	20.60	20.77	0.166	BB	743908	ISTD	d10-Phenanthrene
48)	14.97	14.93	14.99	0.063	VB	645823	CMPD	4-chloro-3-methylphenol
37)	12.48	12.46	12.51	0.054	VV	476985	8	
30)	11.83	11.80	11.91	0.107	VV	392932	9	
68)	18.92	18.88	19.01	0.132	BV	380304	CMPD	4-Chlorophenyl phenyl e
19)	9.48	9.47	9.57	0.107	VV	353879	10	
47)	14.90	14.88	14.93	0.053	BV	295779	11	
17)	9.26	9.24	9.30	0.062	VV	289666	CMPD	1,4-Dichlorobenzene
7)	5.97	5.91	6.12	0.204	BB	270036	12	
51)	15.40	15.34	15.46	0.123	BB	241750	13	
24)	10.61	10.57	10.70	0.133	BB	239534	14	
12)	8.01	7.99	8.08	0.088	BB	239119	15	

Data File: C:\BNAP\BNAPB583.MSS
Quant Output File: c:\bnap\bnapb583.q
Injection Time: 02/08/82 20:10
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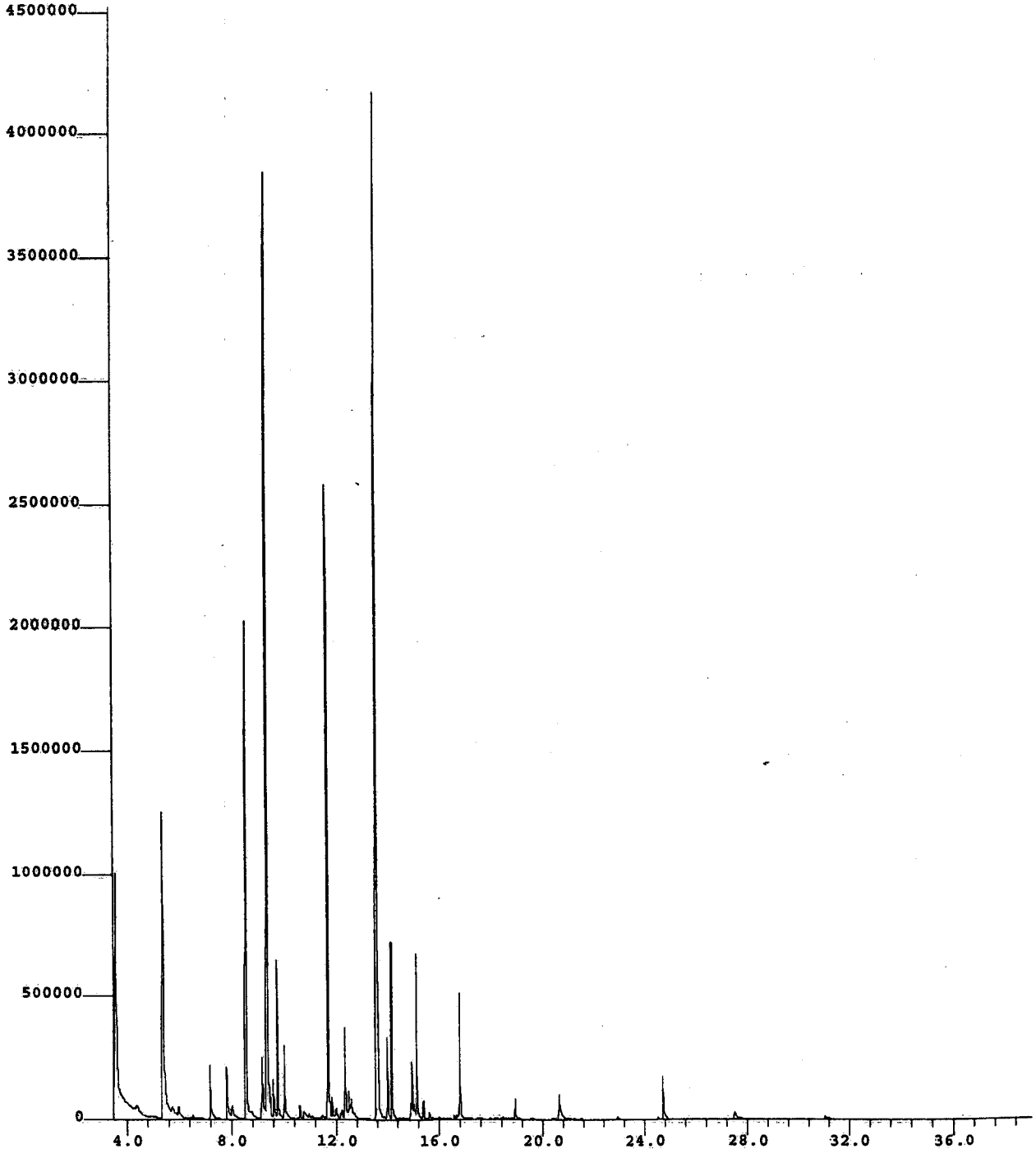
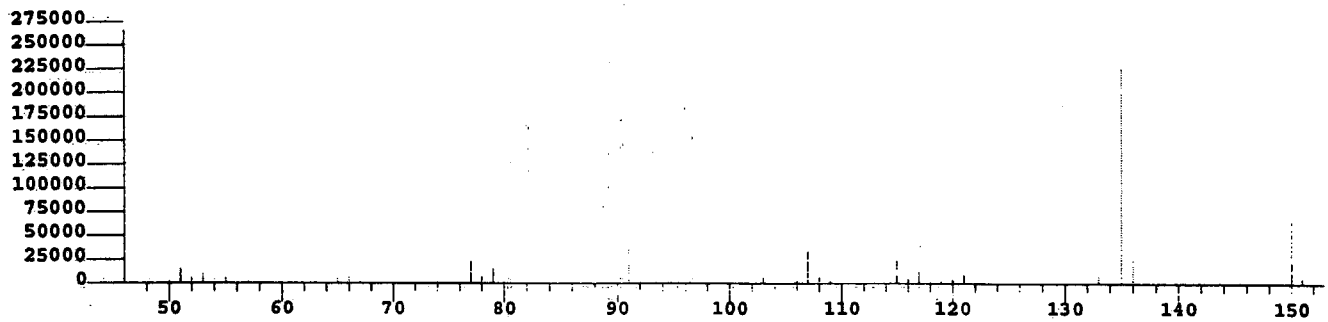


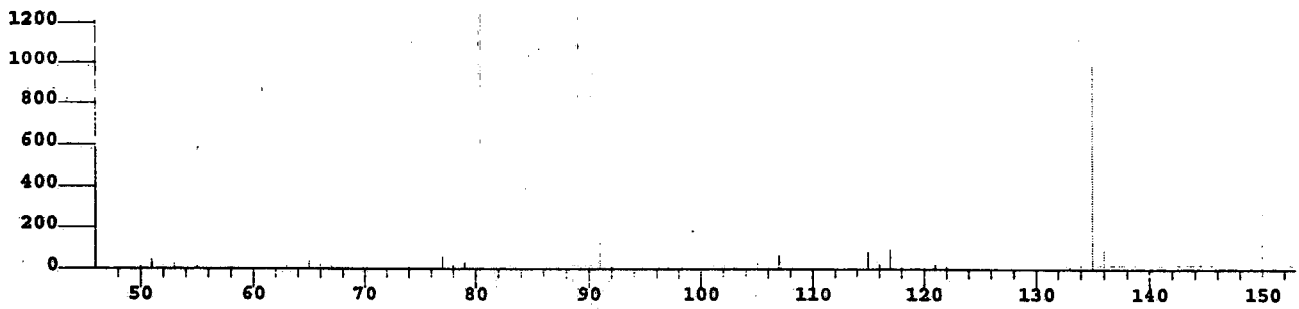
000118

3506

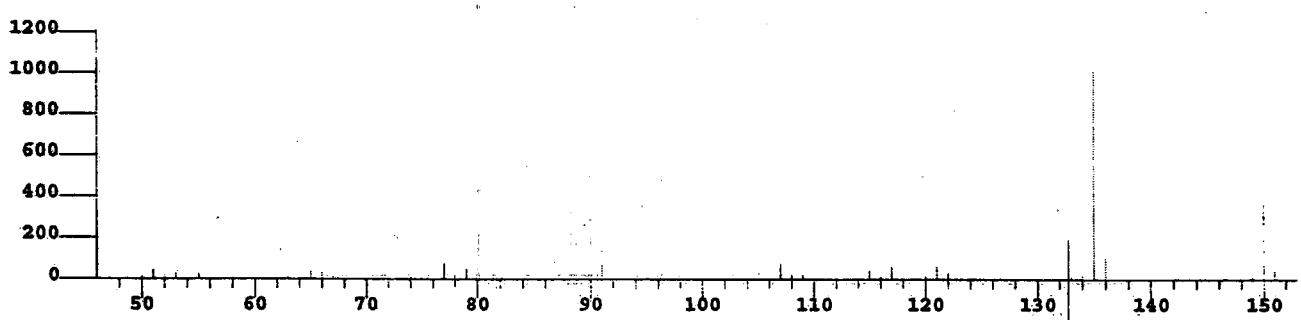
Scan: 1456 RT (min): 14.17



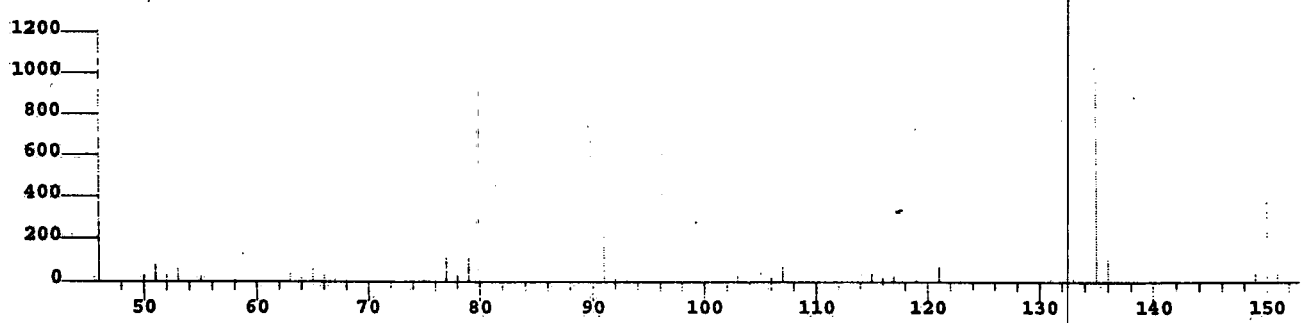
Phenol, 2-methyl-5-(1-methylethyl)-



Thymol



Phenol, 2-ethyl-4,5-dimethyl-

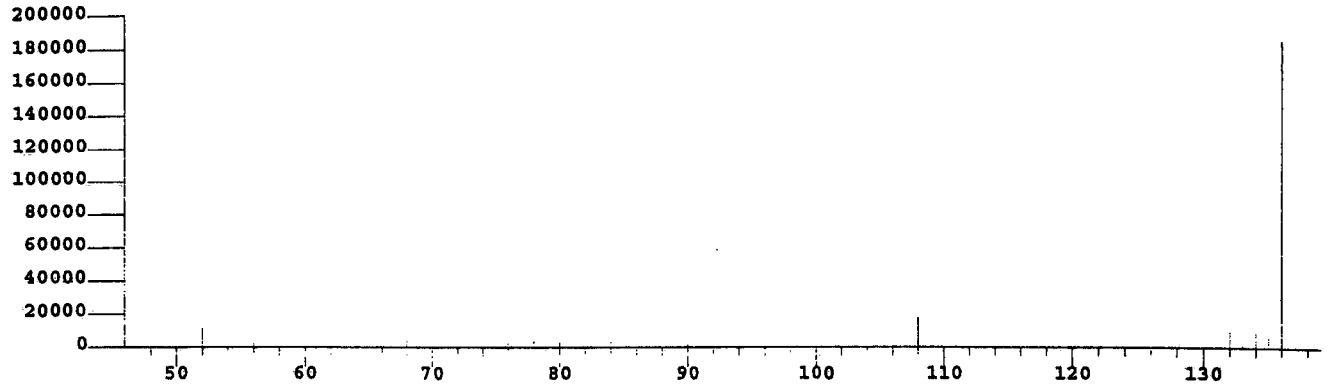


Data File: C:\BNAP\BNAPB583.MSS
Name: SAMP_625_W_BN_(14) 8
Misc Data: 0202018-002A,BB438,L,1000.0,1.00,1.0,0,
RT (min): 14.17 Scan: 1456
Area: 2898629 Rank: 1
Semi-quantitative Conc(uncorrected): 649.22 ug/l
Calculated Using Istd: d8-Naphthalene@ 13.55

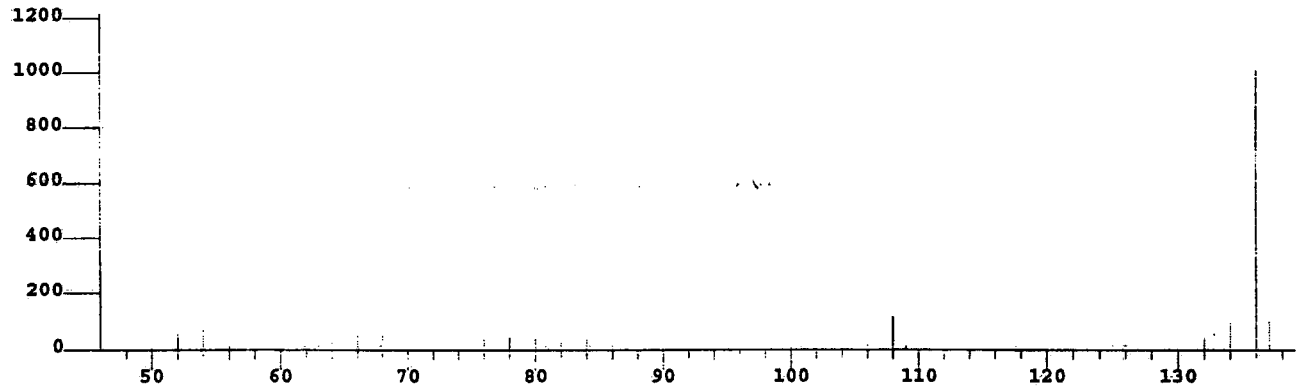
Name	Cas No	SI	MW	Formula
1) Phenol, 2-methyl-5-(1-methylethyl)-	499-75-2	91.8	150	C10H14O
2) Thymol	89-83-8	88.6	150	C10H14O
3) Phenol, 2-ethyl-4,5-dimethyl-	2219-78-5	87.3	150	C10H14O
4) Phenol, 5-methyl-2-(1-methylethyl)-, acetate		85.8	192	C12H16O2
5) Phenol, 2,3,5,6-tetramethyl-	527-35-5	85.5	150	C10H14O
6) 3,4-Diethylphenol	875-85-4	85.1	150	C10H14O
Phenol, 5-methyl-2-(1-methylethyl)-, acetate	528-79-0	84.5	192	C12H16O2
2,5-Diethylphenol	876-20-0	84.1	150	C10H14O
Phenol, diethyl-	26967-65-7	82.8	150	C10H14O
0) Benzene, 1-methoxy-4-(1-methylethyl)-	4132-48-3	82.1	150	C10H14O

3507

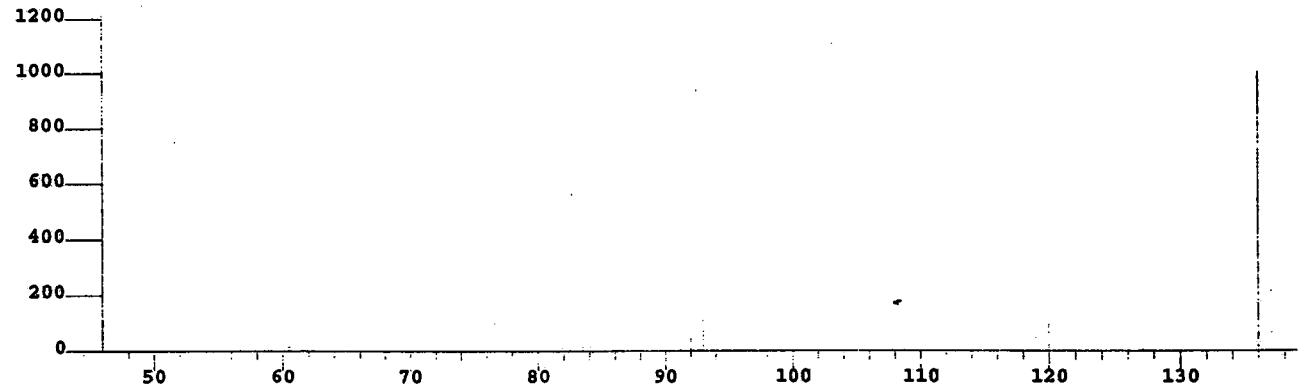
Scan: 1212 RT (min): 12.34



Naphthalene-d8-



Benzaldehyde, 4-amino-, oxime



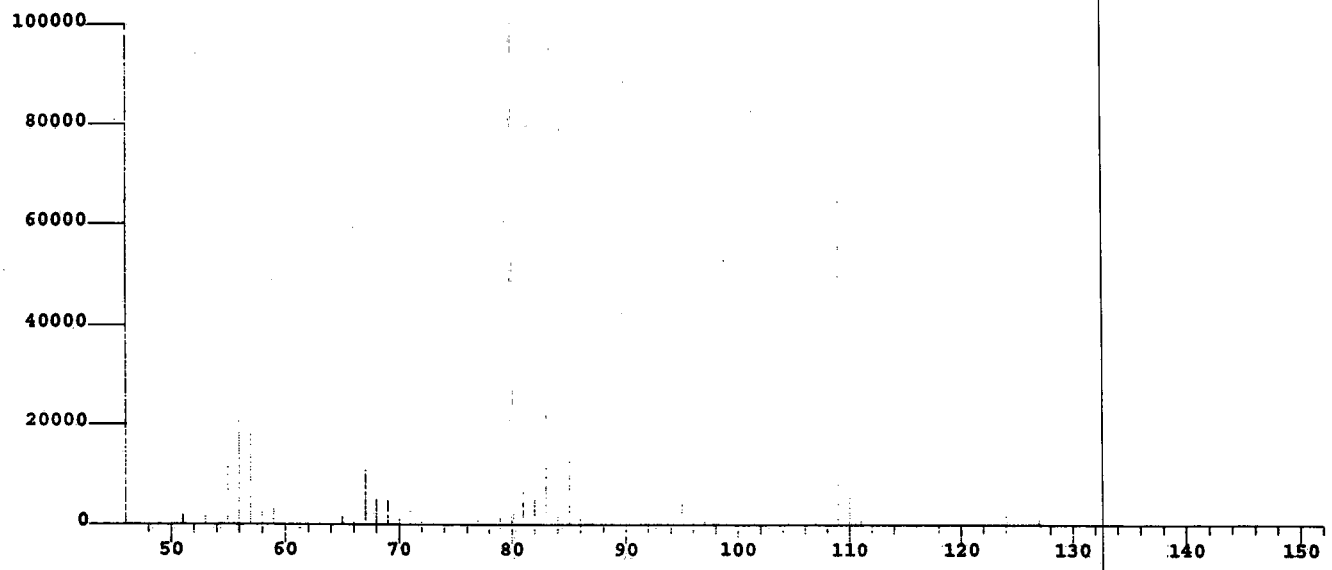
Data File: C:\BNAP\BNAPB583.MSS
Name: SAMP_625_W_BN_(14) 8
Misc Data: 0202018-002A,BB438,L,1000.0,1.00,1.0,0,
RT (min): 12.34 Scan: 1212
Area: 1788476 Rank: 2
Semi-quantitative Conc(uncorrected): 42.26 ug/l
Calculated Using Istd: d4-1,4-Dichlorobenzene@ 9.16

	Name	Cas No	SI	MW	Formula
1)	Naphthalene-d8-	1146-65-2	93.7	136	C10D8
2)	Benzaldehyde, 4-amino-, oxime	3419-18-9	72.7	136	C7H8N2O

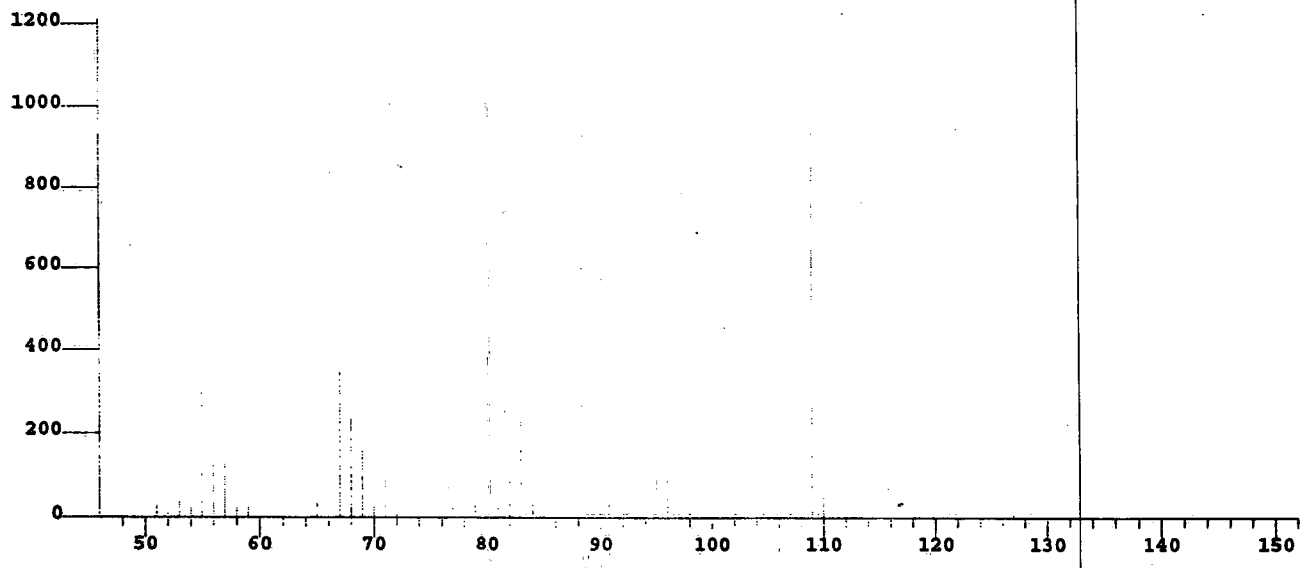
000120

3908

Scan: 900 RT (min): 10.02



Cyclohexanol, 3,3,5-trimethyl-



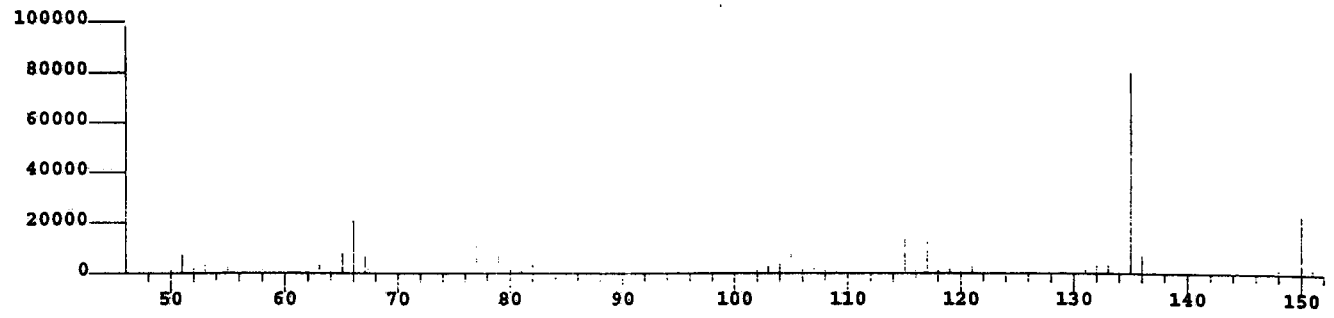
Data File: C:\BNAP\BNAPB583.MSS
Name: SAMP_625_W_BN_(14) 8
Misc Data: 0202018-002A,BB438,L,1000.0,1.00,1.0,0,
RT (min): 10.02 Scan: 900
Area: 1558727 Rank: 3
Semi-quantitative Conc(uncorrected): 36.83 ug/l
Calculated Using Istd: d4-1,4-Dichlorobenzene@ 9.16

Name	Cas No	SI	MW	Formula
1) Cyclohexanol, 3,3,5-trimethyl-	116-02-9	87.9	142	C9H18O

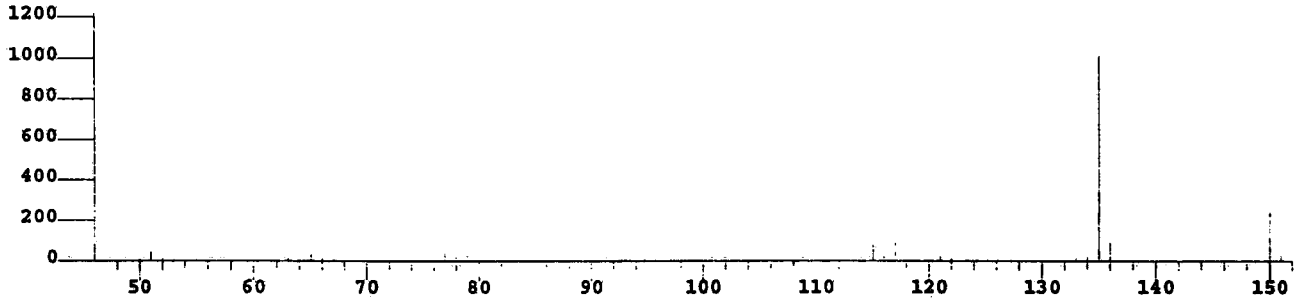
000121

3909

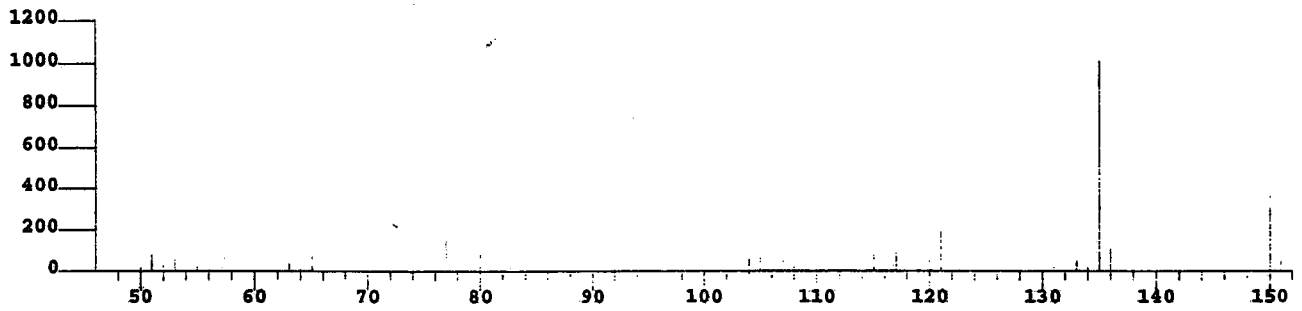
Scan: 1435 RT (min): 14.01



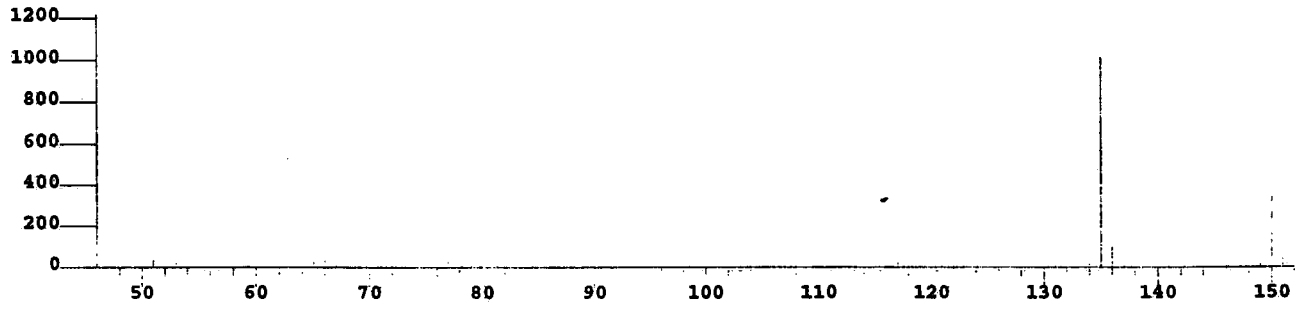
Phenol, 2-methyl-5-(1-methylethyl)-



3,4-Diethylphenol



Thymol

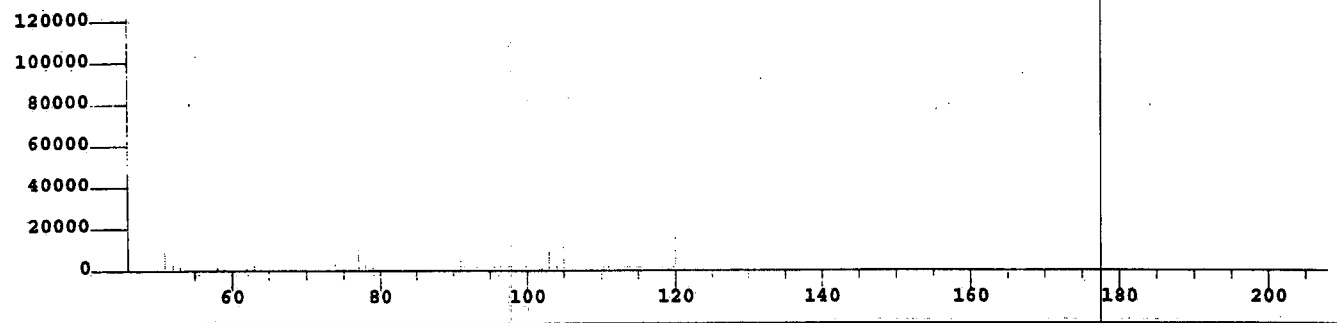


Data File: C:\BNAP\BNAPB583.MSS
Name: SAMP_625_W_BN_(14) 8
Misc Data: 0202018-002A,BB438,L,1000.0,1.00,1.0,0,
RT (min): 14.01 Scan: 1435
Area: 1483257 Rank: 4
Semi-quantitative Conc(uncorrected): 35.05 ug/l
Calculated Using Istd: d8-Naphthalene@ 13.55

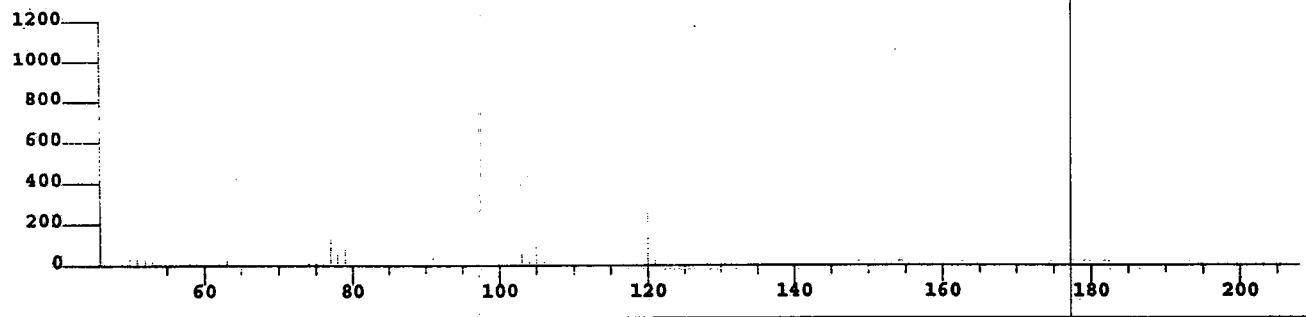
	Name	Cas No	SI	MW	Formula
1)	Phenol, 2-methyl-5-(1-methylethyl)-	499-75-2	84.0	150	C10H14O
2)	3,4-Diethylphenol	875-85-4	81.2	150	C10H14O
3)	Thymol	89-83-8	80.1	150	C10H14O
4)	Phenol, 2-ethyl-4,5-dimethyl-	2219-78-5	79.6	150	C10H14O
5)	Phenol, 5-methyl-2-(1-methylethyl)-, acetate		78.4	192	C12H16O2
6)	2,5-Diethylphenol	876-20-0	77.0	150	C10H14O
7)	Benzenemethanol, .alpha.,.alpha.,4-trimethyl-	1197-01-9	76.7	150	C10H14O
8)	Phenol, 2,3,5,6-tetramethyl-	527-35-5	75.3	150	C10H14O
9)	2,3,4,6-Tetramethylphenol		74.9	150	C10H14O
10)	Phenol, 3-methyl-5-(1-methylethyl)-, methylcarbamate	2631-37-0	74.8	207	C12H17NO2

000122

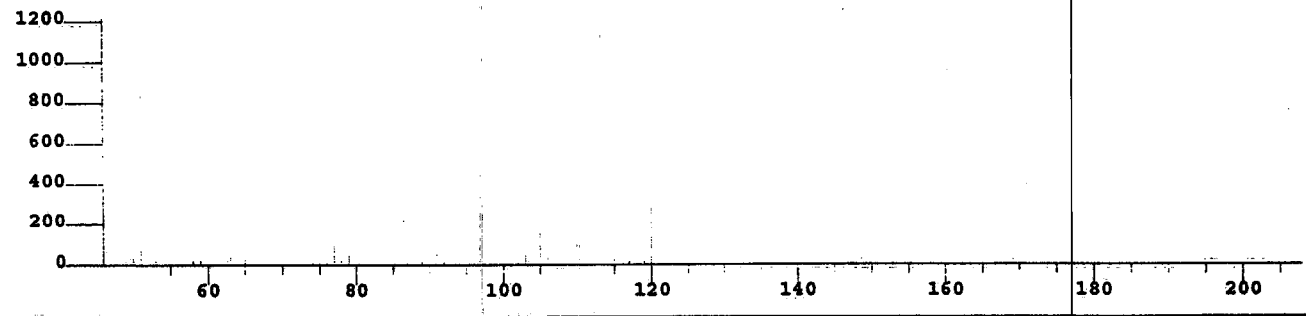
Scan: 514 RT (min): 7.18



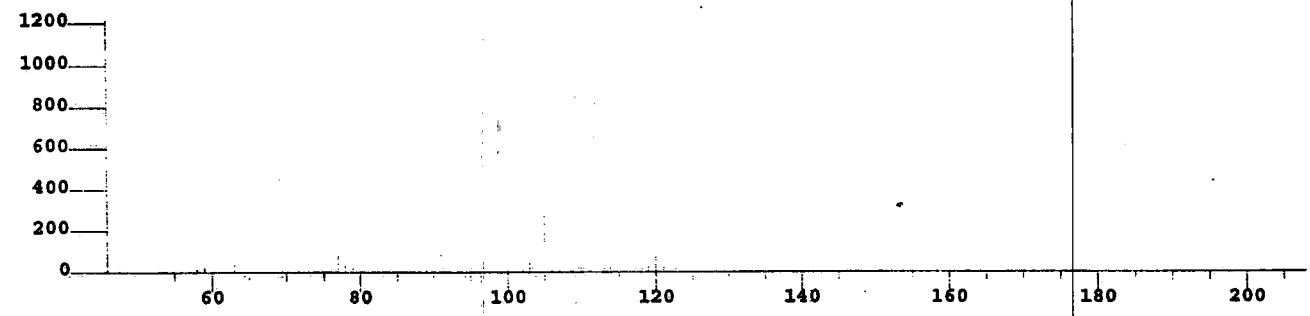
Benzene, (1-methylethyl)-



Benzene, 1-ethyl-2-methyl-



Benzene, 1-ethyl-4-methyl-

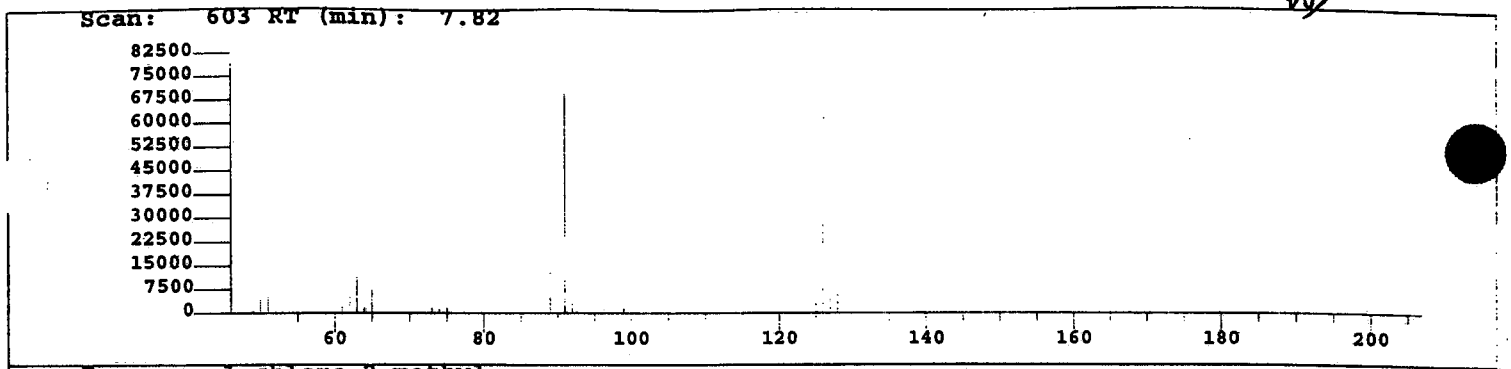


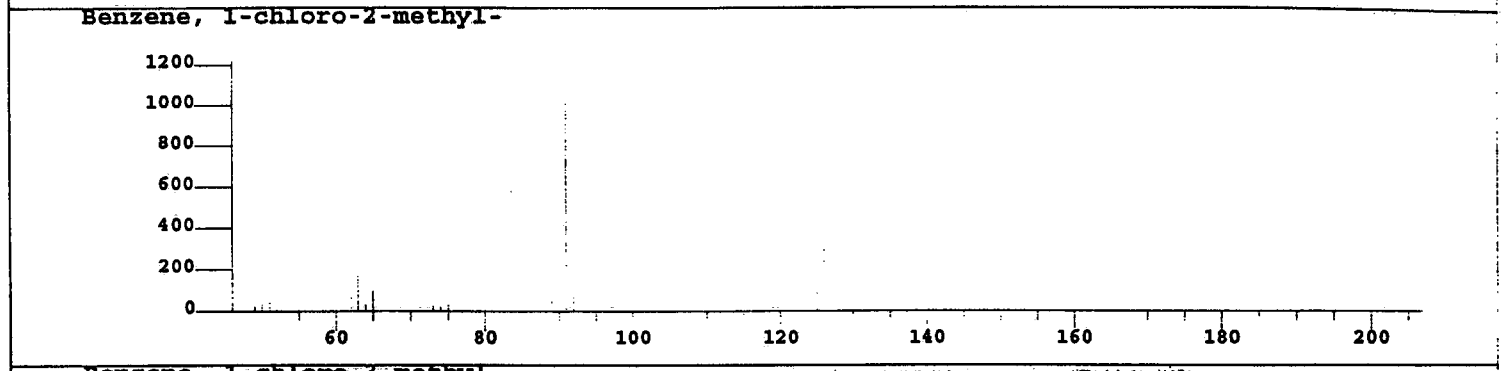
Data File: C:\BNAP\BNAPB583.MSS
Name: SAMP_625_W_BN_(14) 8
Misc Data: 0202018-002A,BB438,L,1000.0,1.00,1.0,0,
RT (min): 7.18 Scan: 514
Area: 1365584 Rank: 5
Semi-quantitative Conc(uncorrected): 32.27 ug/l
Calculated Using Istd: d4-1,4-Dichlorobenzene@ 9.16

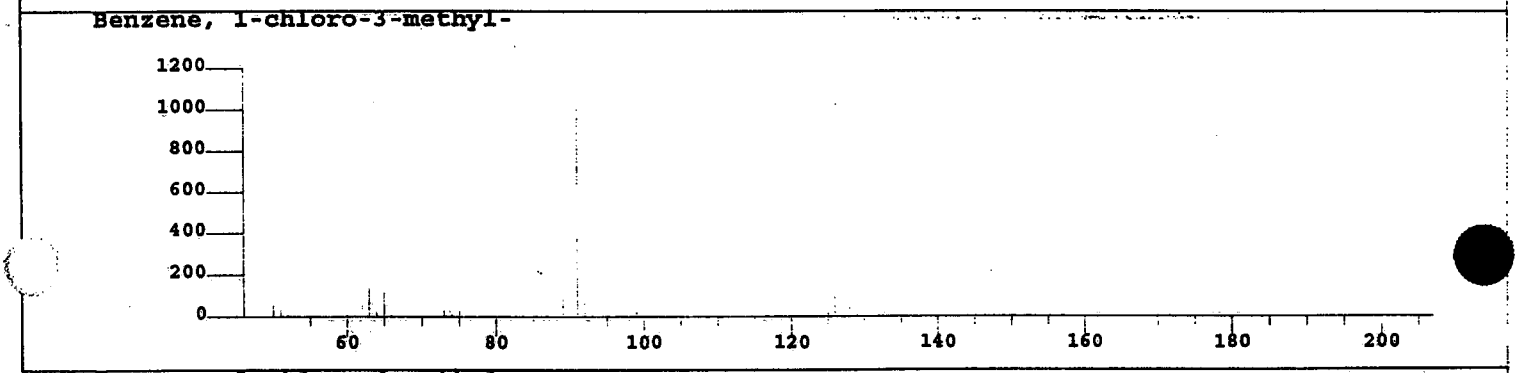
	Name	Cas No	SI	MW	Formula
1)	Benzene, (1-methylethyl)-	98-82-8	95.0	120	C9H12
2)	Benzene, 1-ethyl-2-methyl-	611-14-3	87.3	120	C9H12
3)	Benzene, 1-ethyl-4-methyl-	622-96-8	84.6	120	C9H12
4)	Benzene, 1,2,3-trimethyl-	526-73-8	83.7	120	C9H12
5)	1,2,4-Trimethylbenzene	95-36-3	83.1	120	C9H12
6)	Benzene, 1-ethyl-3-methyl-	620-14-4	82.3	120	C9H12
7)	Benzene, (1-methyl-3-butenyl)-	10340-49-5	81.4	146	C11H14
8)	Benzene, 1,2,4-trimethyl-	95-63-6	79.9	120	C9H12
9)	2,3-Heptadien-5-yne, 2,4-dimethyl-	41898-89-9	79.1	120	C9H12
10)	Benzene, 1,3,5-trimethyl-	108-67-8	79.1	120	C9H12

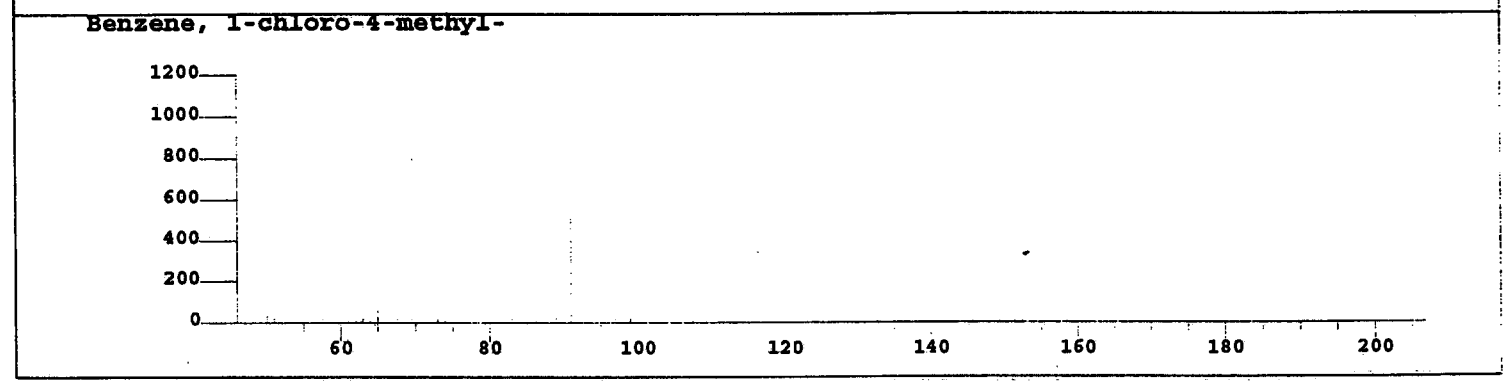
000123

3511



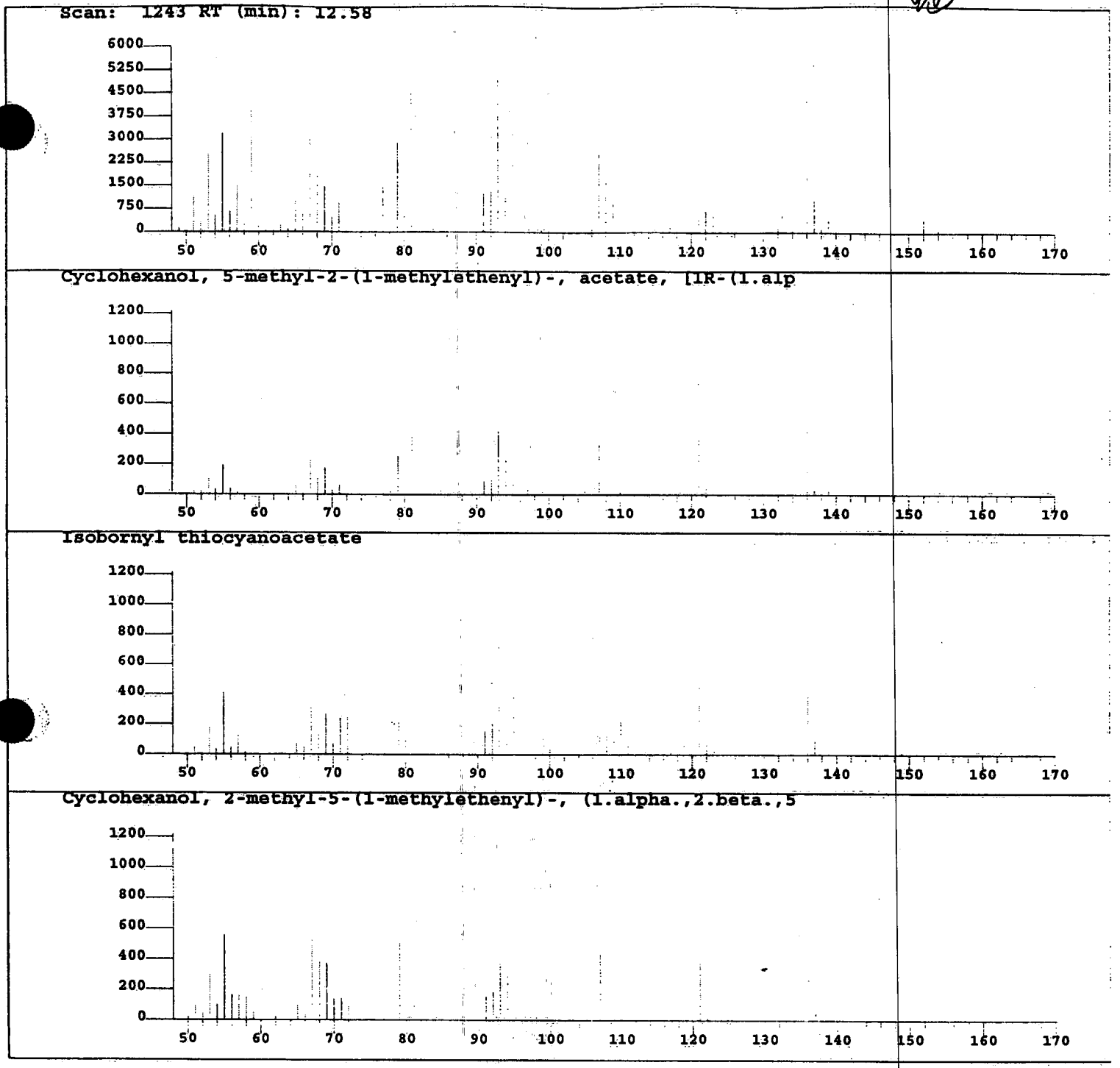






Data File: C:\BNAP\BNAPB583.MSS
Name: SAMP_625_W_BN_(14) 8
Misc Data: 0202018-002A,BB438,L,1000.0,1.00,1.0,0,
RT (min): 7.82 Scan: 603
Area: 1270393 Rank: 6
Semi-quantitative Conc(uncorrected): 30.02 ug/l
Calculated Using Istd: d4-1,4-Dichlorobenzene@ 9.16

	Name	Cas No	SI	MW	Formula
1)	Benzene, 1-chloro-2-methyl-	95-49-8	95.5	126	C7H7Cl
2)	Benzene, 1-chloro-3-methyl-	108-41-8	93.0	126	C7H7Cl
3)	Benzene, 1-chloro-4-methyl-	106-43-4	90.7	126	C7H7Cl
4)	Benzyl chloride	100-44-7	85.4	126	C7H7Cl
5)	Hydrazinecarboxylic acid, phenylmethyl ester	5331-43-1	80.5	166	C8H10N2O2
6)	1,3,5-Cycloheptatriene, 2-chloro-	34896-79-2	78.9	126	C7H7Cl
	1,3,5-Cycloheptatriene, 3-chloro-	55619-05-1	78.7	126	C7H7Cl
	1,3,5-Cycloheptatriene, 1-chloro-	32743-66-1	73.3	126	C7H7Cl
7)	2-(p-Chlorophenyl)-ethylamine	156-41-2	71.0	155	C8H10ClN

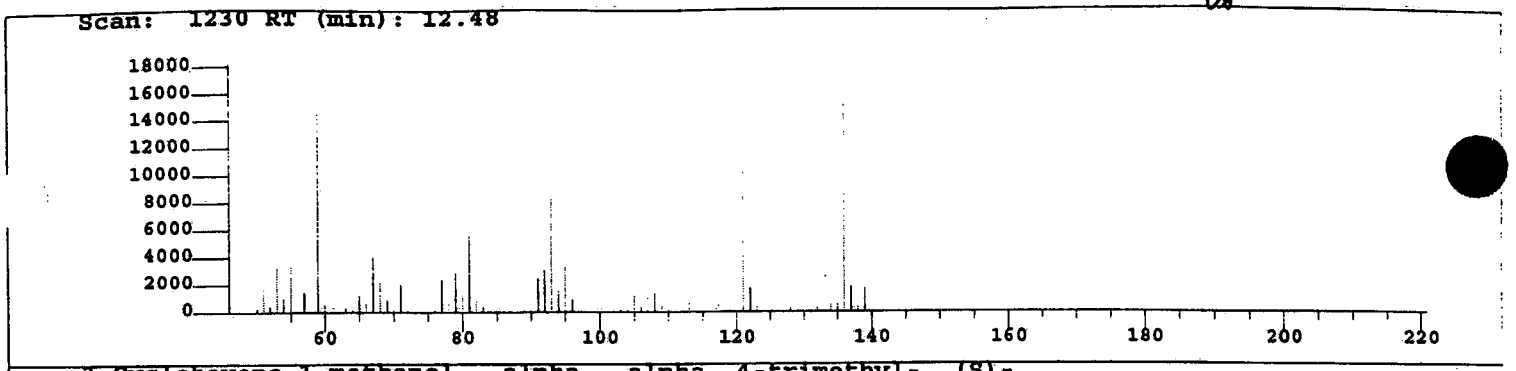


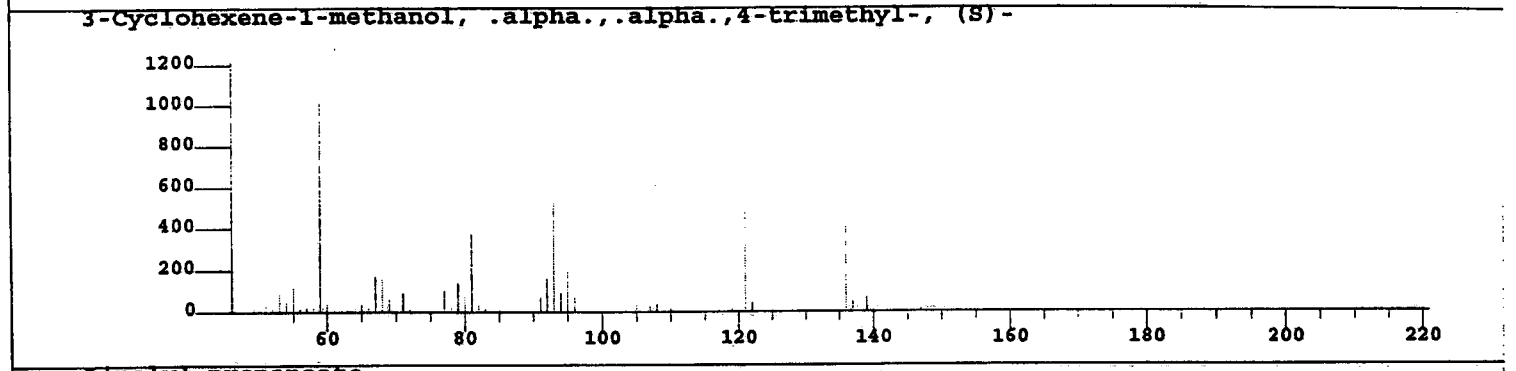
Data File: C:\BNAP\BNAPB583.MSS
Name: SAMP_625_W_BN_(14) 8
Misc Data: 0202018-002A,BB438,L,1000.0,1.00,1.0,0,
RT (min): 12.58 Scan: 1243
Area: 948298 Rank: 7
Semi-quantitative Conc(uncorrected): 22.41 ug/l
Calculated Using Istd: d4-1,4-Dichlorobenzene@ 9.16

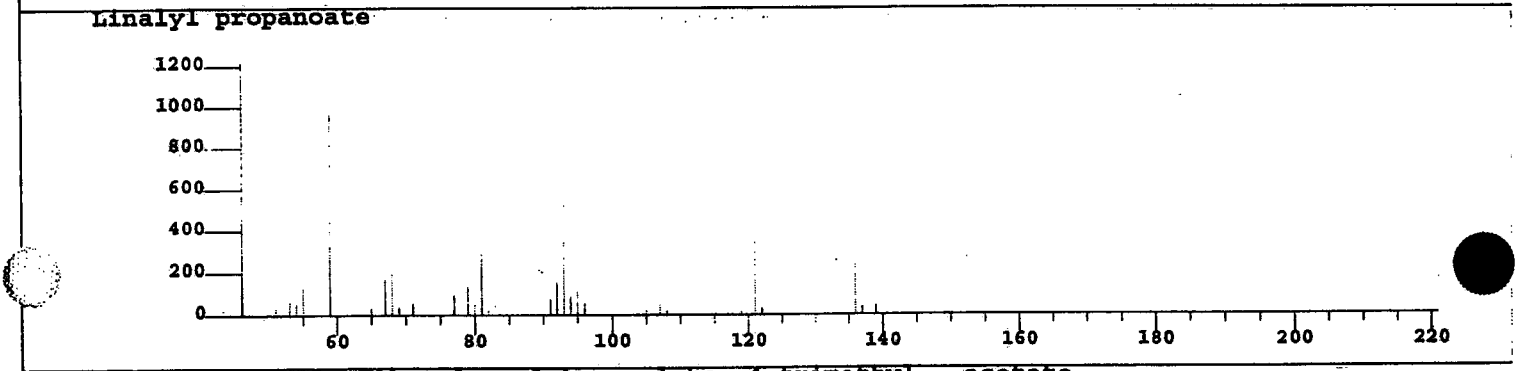
	Name	Cas No	SI	MW	Formula
1)	Cyclohexanol, 5-methyl-2-(1-methylethenyl)-, acetate, [1R-(1.alp	57576-09-7	83.1	196	C12H20O2
2)	Isobornyl thiocyanoacetate	115-31-1	81.9	253	C13H19NO2S
3)	Cyclohexanol, 2-methyl-5-(1-methylethenyl)-, (1.alpha.,2.beta.,5	38049-26-2	81.7	154	C10H18O
4)	3-Cyclohexene-1-methanol, .alpha.,.alpha.,4-trimethyl-, (S)-	10482-56-1	80.3	154	C10H18O
5)	Bicyclo[4.1.0]heptan-3-ol, 4,7,7-trimethyl-, [1R-(1.alpha.,3.bet	4089-03-6	80.2	154	C10H18O
6)	Cyclohexanol, 2-methyl-5-(1-methylethenyl)-	619-01-2	79.9	154	C10H18O
	5-Caranol, (1S,3R,5S,6R)-(-)-	6909-21-3	79.5	154	C10H18O
	Bicyclo[4.1.0]heptan-3-ol, 4,7,7-trimethyl-, [1R-(1.alpha.,3.bet	4017-93-0	79.3	154	C10H18O
	Cyclohexanol, 2-methylene-3-(1-methylethyl)-, acetate, cis-	54845-30-6	78.8	196	C12H20O2
	Cyclohexanol, 2-methyl-5-(1-methylethenyl)-, acetate, (1.alpha.,	20777-49-5	78.6	196	C12H20O2

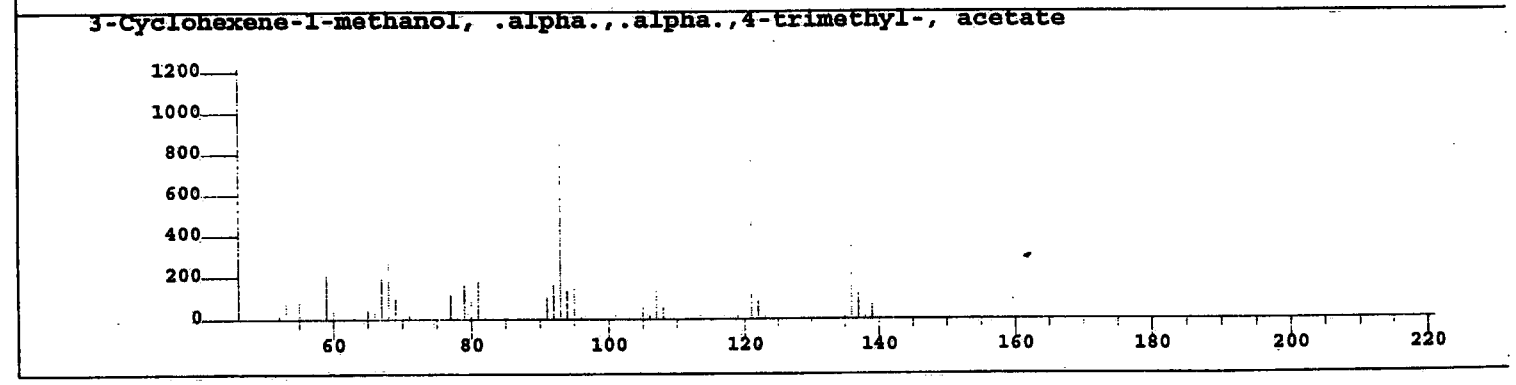
000125

3913







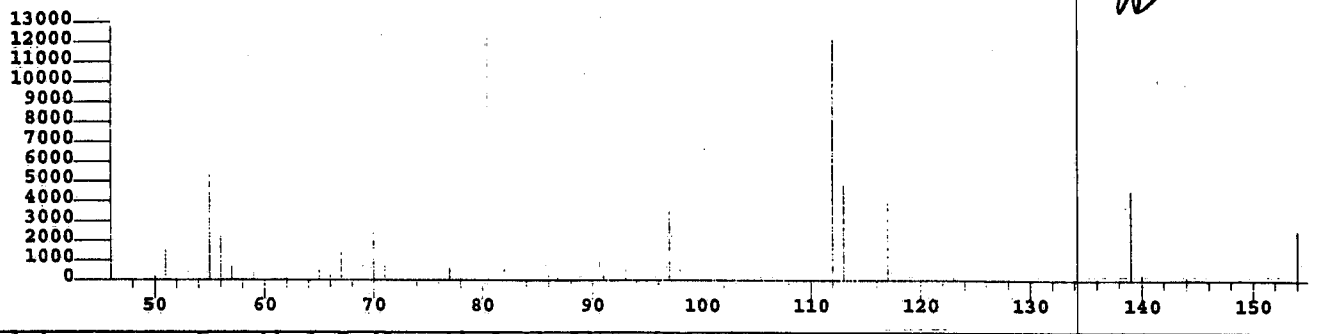


Data File: C:\BNAP\BNAPB583.MSS
Name: SAMP_625_W_BN_(14) 8
Misc Data: 0202018-002A,BB438,L,1000.0,1.00,1.0,0,
RT (min): 12.48 Scan: 1230
Area: 476985 Rank: 8
Semi-quantitative Conc(uncorrected): 11.27 ug/l
Calculated Using Istd: d4-1,4-Dichlorobenzene® 9.16

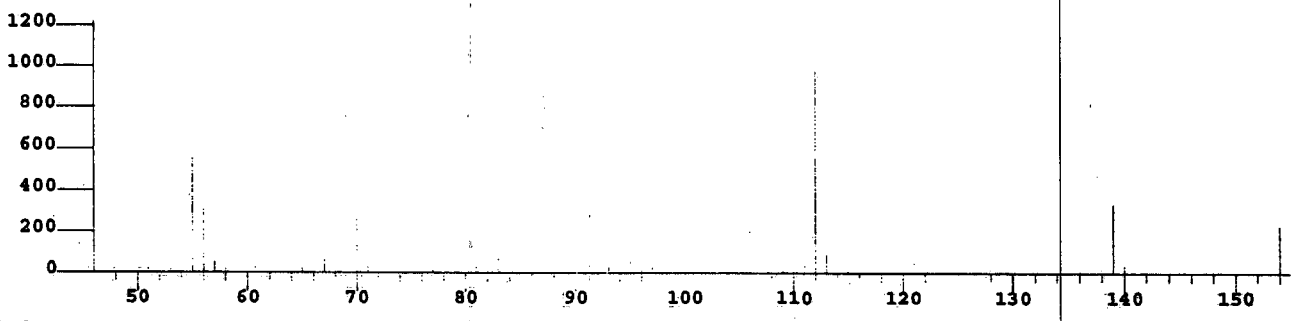
	Name	Cas No	SI	MW	Formula
1)	3-Cyclohexene-1-methanol, .alpha.,.alpha.,4-trimethyl-, (S)-	10482-56-1	88.5	154	C10H18O
2)	Linalyl propanoate		86.9	210	C13H22O2
3)	3-Cyclohexene-1-methanol, .alpha.,.alpha.,4-trimethyl-, acetate	80-26-2	83.9	196	C12H20O2
4)	3-Cyclohexene-1-methanol, .alpha.,.alpha.4-trimethyl-	98-55-5	82.0	154	C10H18O
5)	.gamma.-Terpineol	586-81-2	77.7	154	C10H18O
6)	Cyclohexene, 1-methyl-3-(1-methylethenyl)-, (.+/-.)-	499-03-6	77.6	136	C10H16
7)	Bicyclo[4.1.0]heptan-3-ol, 4,7,7-trimethyl-, [1R-(1.alpha.,3.bet	4017-93-0	77.2	154	C10H18O
8)	Cyclohexanol, 5-methyl-2-(1-methylethenyl)-, acetate, [1R-(1.alp	57576-09-7	77.0	196	C12H20O2
9)	Bicyclo[2.2.1]heptane, 2-chloro-2,3,3-trimethyl-	465-30-5	76.8	172	C10H17Cl
10)	Bicyclo[2.2.1]heptane, 2-chloro-1,7,7-trimethyl-, exo-	559-45-5	76.4	172	C10H17Cl

000126

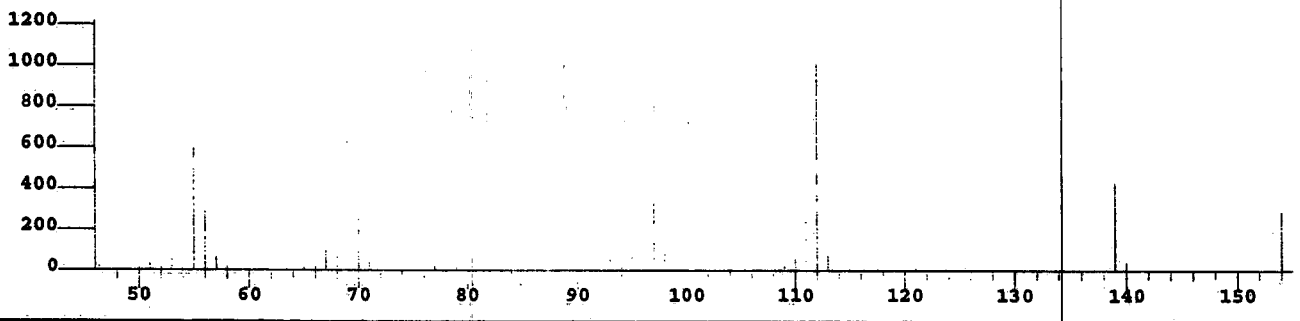
Scan: 1145 RT (min): 11.83



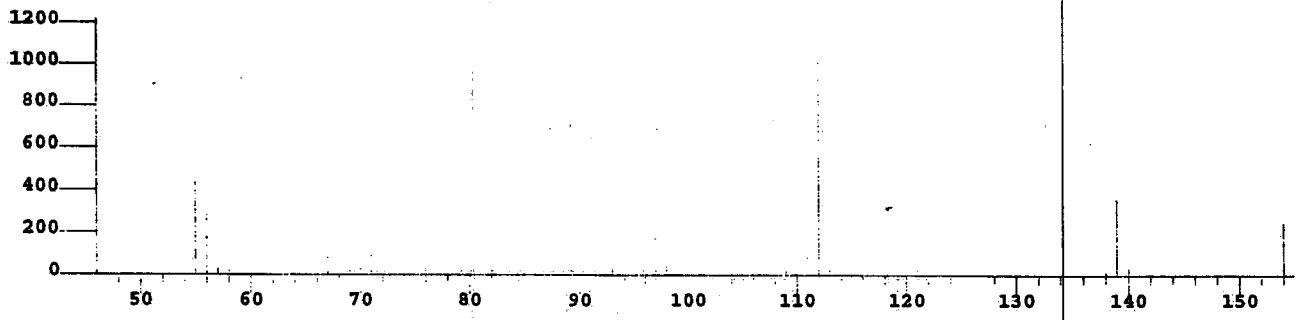
Cyclohexanone, 5-methyl-2-(1-methylethyl)-, (2R-cis)-



Cyclohexanone, 5-methyl-2-(1-methylethyl)-



Cyclohexanone, 5-methyl-2-(1-methylethyl)-, trans-



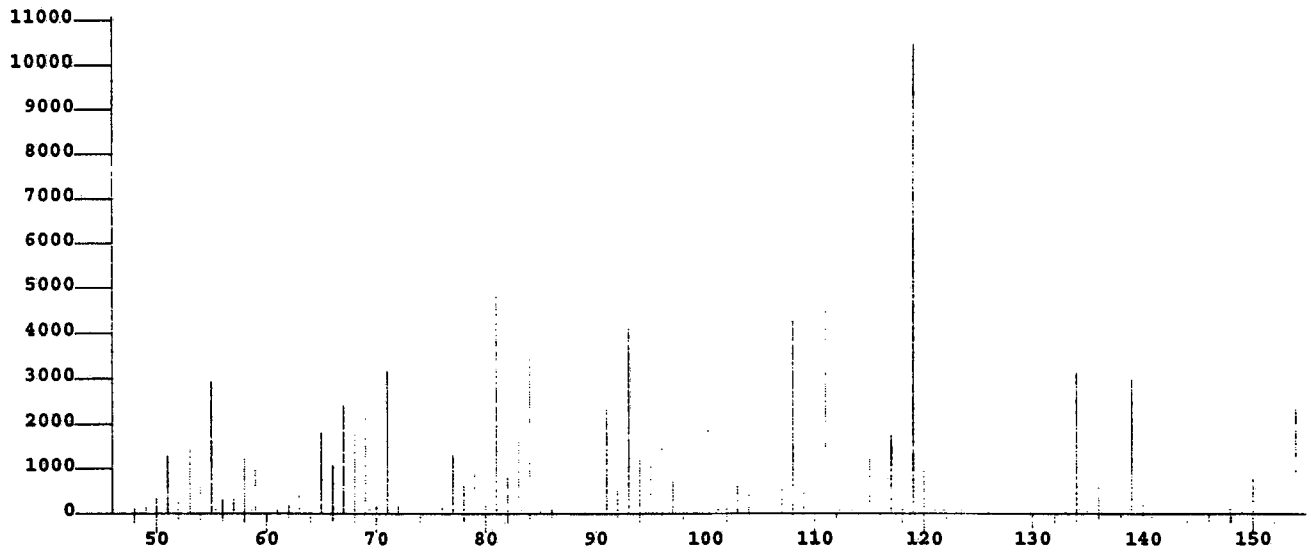
Data File: C:\BNAP\BNAPB583.MSS
Name: SAMP_625_W_BN_(14) 8
Misc Data: 0202018-002A,BB438,L,1000.0,1.00,1.0,0,
RT (min): 11.83 Scan: 1145
Area: 392932 Rank: 9
Semi-quantitative Conc(uncorrected): 9.28 ug/l
Calculated Using Istd: d4-1,4-Dichlorobenzene@ 9.16

Name	Cas No	SI	MW	Formula
1) Cyclohexanone, 5-methyl-2-(1-methylethyl)-, (2R-cis)-	1196-31-2	81.1	154	C10H18O
2) Cyclohexanone, 5-methyl-2-(1-methylethyl)-	10458-14-7	81.0	154	C10H18O
3) Cyclohexanone, 5-methyl-2-(1-methylethyl)-, trans-	89-80-5	78.4	154	C10H18O
4) Cyclohexanone, 5-methyl-2-(1-methylethyl)-, cis-	491-07-6	76.7	154	C10H18O
5) Cyclohexanone, 5-methyl-2-(1-methylethyl)-, (2S-cis)-	18309-28-9	74.1	154	C10H18O

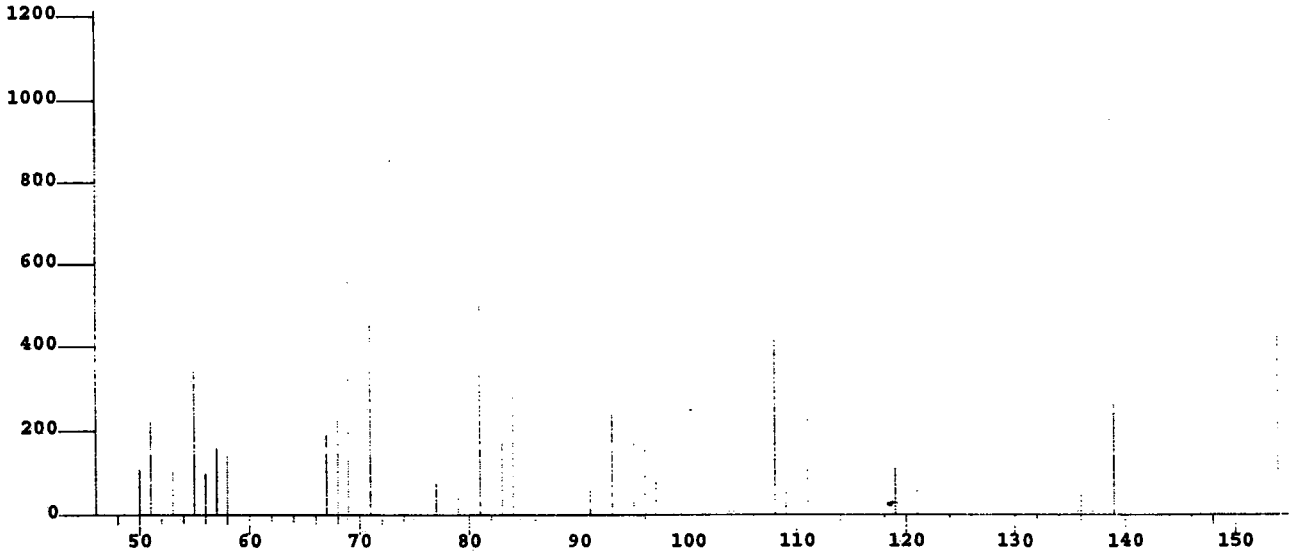
000127

3915

Scan: 829 RT (min): 9.48



Trifluoroacetyl-.alpha.-terpineol

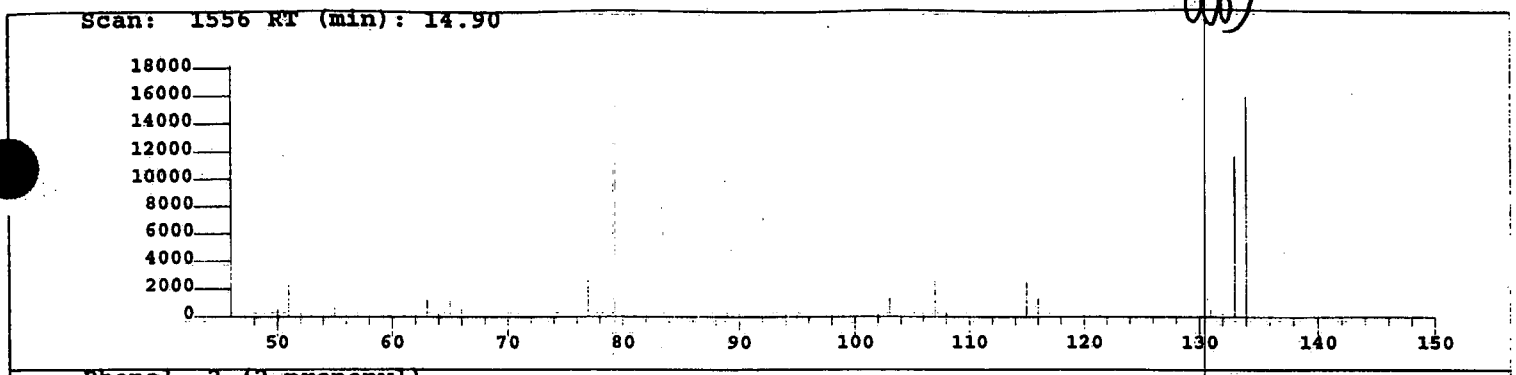


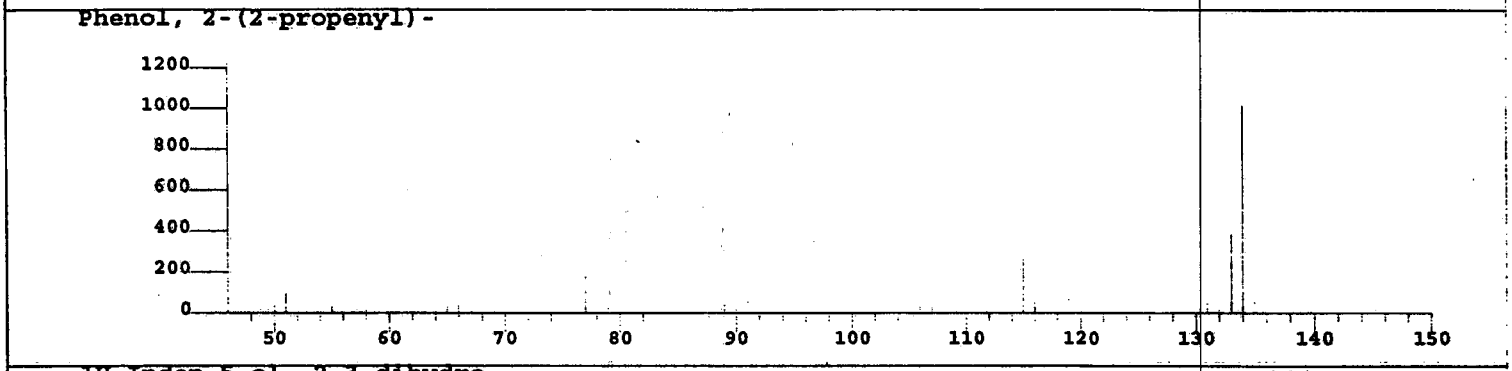
Data File: C:\BNAP\BNAPB583.MSS
Name: SAMP_625_W_BN_(14) 8
Misc Data: 0202018-002A,BB438,L,1000.0,1.00,1.0,0,
RT (min): 9.48 Scan: 829
Area: 353879 Rank: 10
Semi-quantitative Conc(uncorrected): 8.36 ug/l
Calculated Using Istd: d4-1,4-Dichlorobenzene@ 9.16

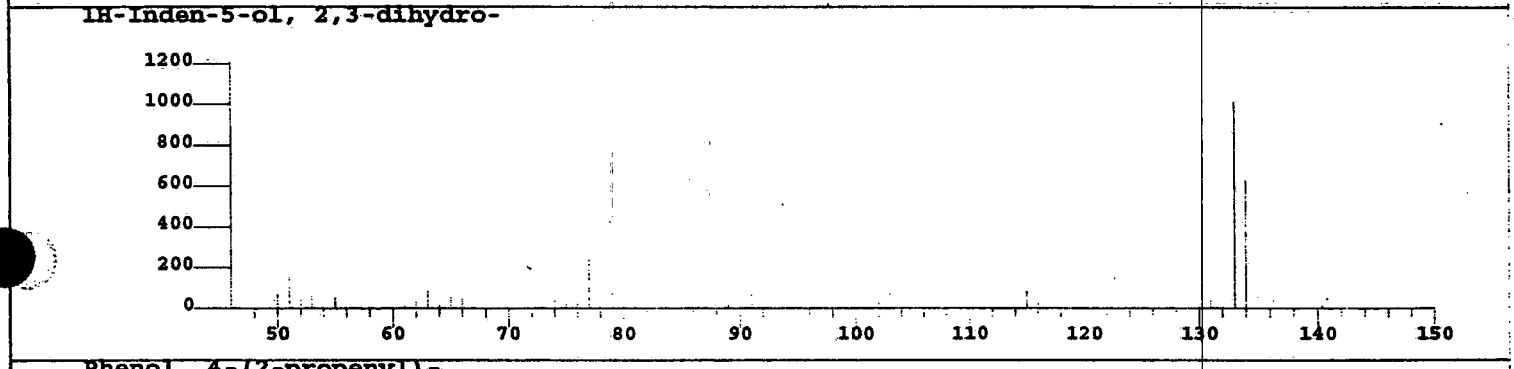
Name	Cas No	SI	MW	Formula
1) Trifluoroacetyl-.alpha.-terpineol		70.1	250	C12H17F3O2

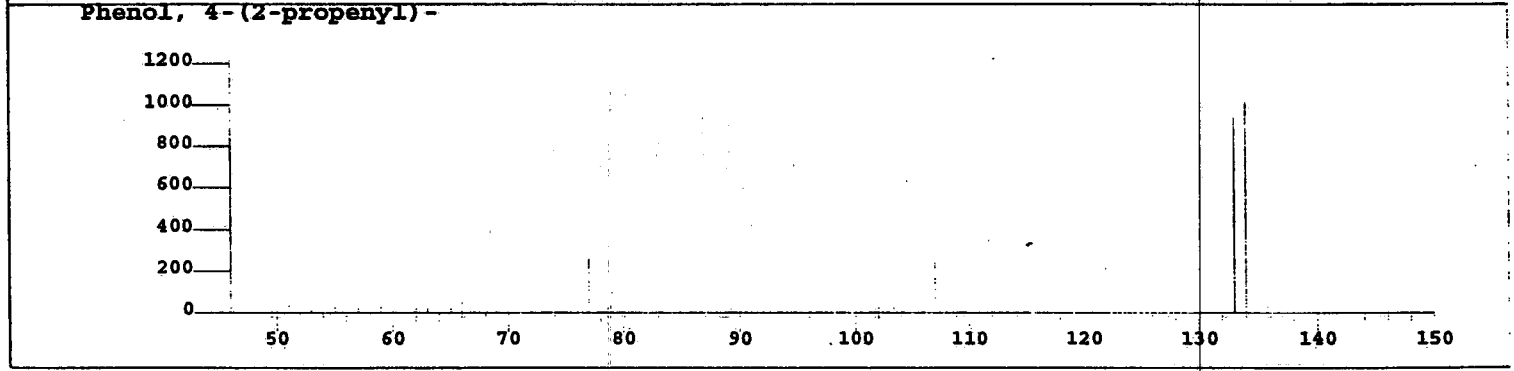
000128

3916









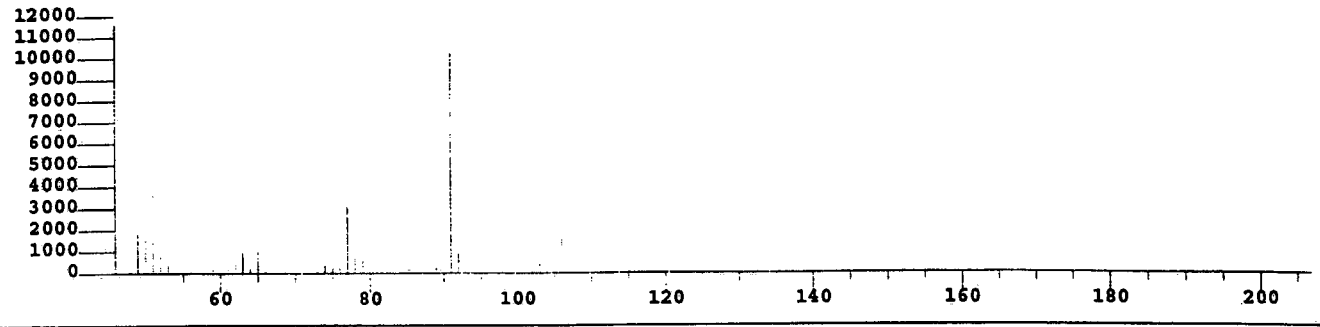
Data File: C:\BNAP\BNAPB583.MSS
Name: SAMP_625_W_BN_(14) 8
Misc Data: 0202018-002A,BB438,L,1000.0,1.00,1.0,0,
RT (min): 14.90 Scan: 1556
Area: 295779 Rank: 11
Semi-quantitative Conc(uncorrected): 6.99 ug/l
Calculated Using Istd: d8-Naphthalene@ 13.55

	Name	Cas No	SI	MW	Formula
1)	Phenol, 2-(2-propenyl)-	1745-81-9	88.3	134	C9H10O
2)	1H-Inden-5-ol, 2,3-dihydro-	1470-94-6	87.3	134	C9H10O
3)	Phenol, 4-(2-propenyl)-	501-92-8	86.6	134	C9H10O
4)	4-Allylphenyl acetate		85.7	176	C11H12O2
5)	Benzenemethanol, ar-ethenyl-	30584-69-1	84.8	134	C9H10O
6)	Benzofuran, 2,3-dihydro-2-methyl-	1746-11-8	82.9	134	C9H10O
	2-(1-Cyclopentenyl)furan		81.4	134	C9H10O
	Phenol, 2-(2-propenyl)-, acetate	4125-54-6	80.8	176	C11H12O2
	2H-1-Benzopyran, 3,4-dihydro-	493-08-3	80.8	134	C9H10O
0)	1H-Inden-1-ol, 2,3-dihydro-	6351-10-6	80.4	134	C9H10O

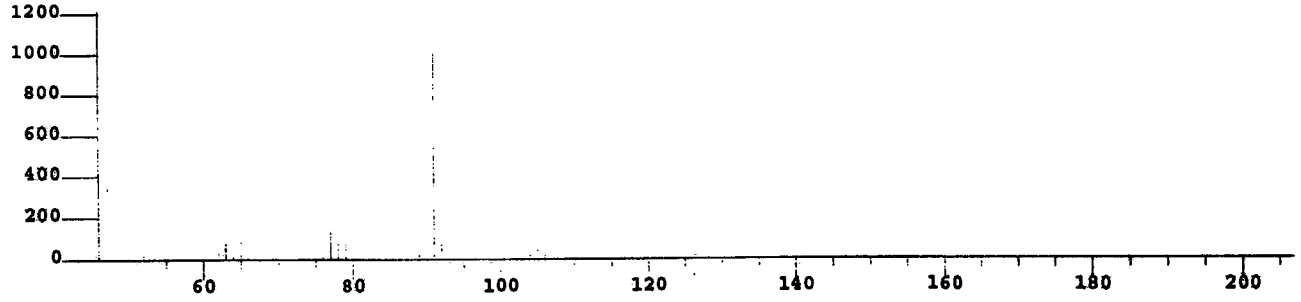
000129

3917

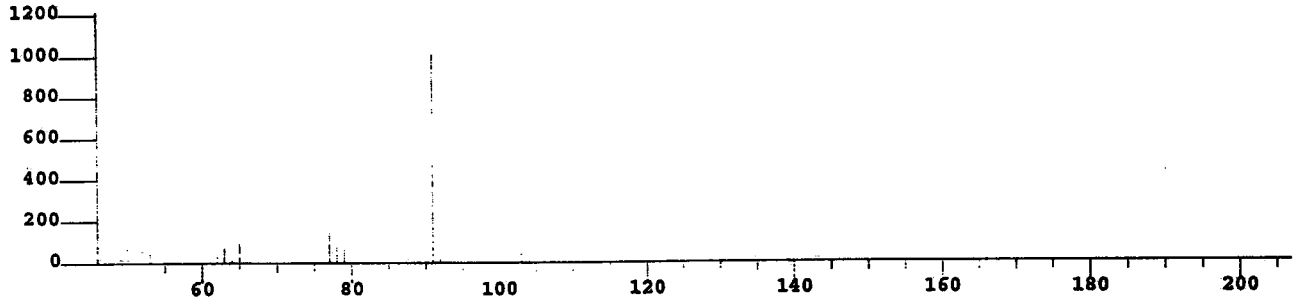
Scan: 344 RT (min): 5.97



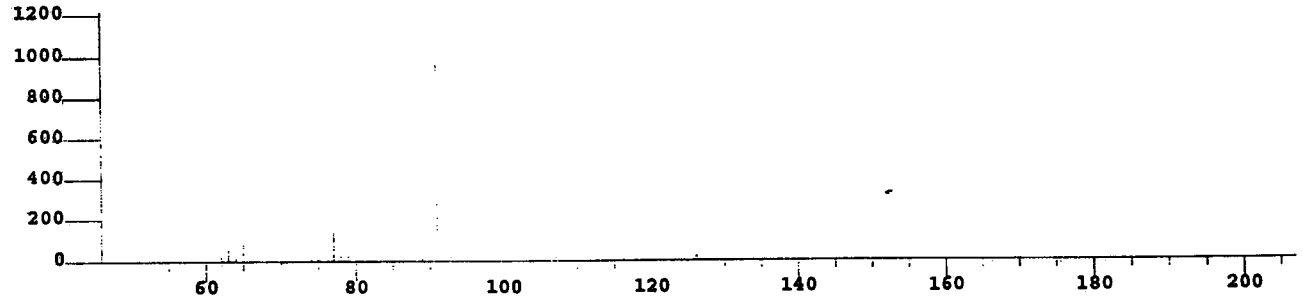
p-Xylene



Benzene, 1,2-dimethyl-



Benzene, 1,3-dimethyl-



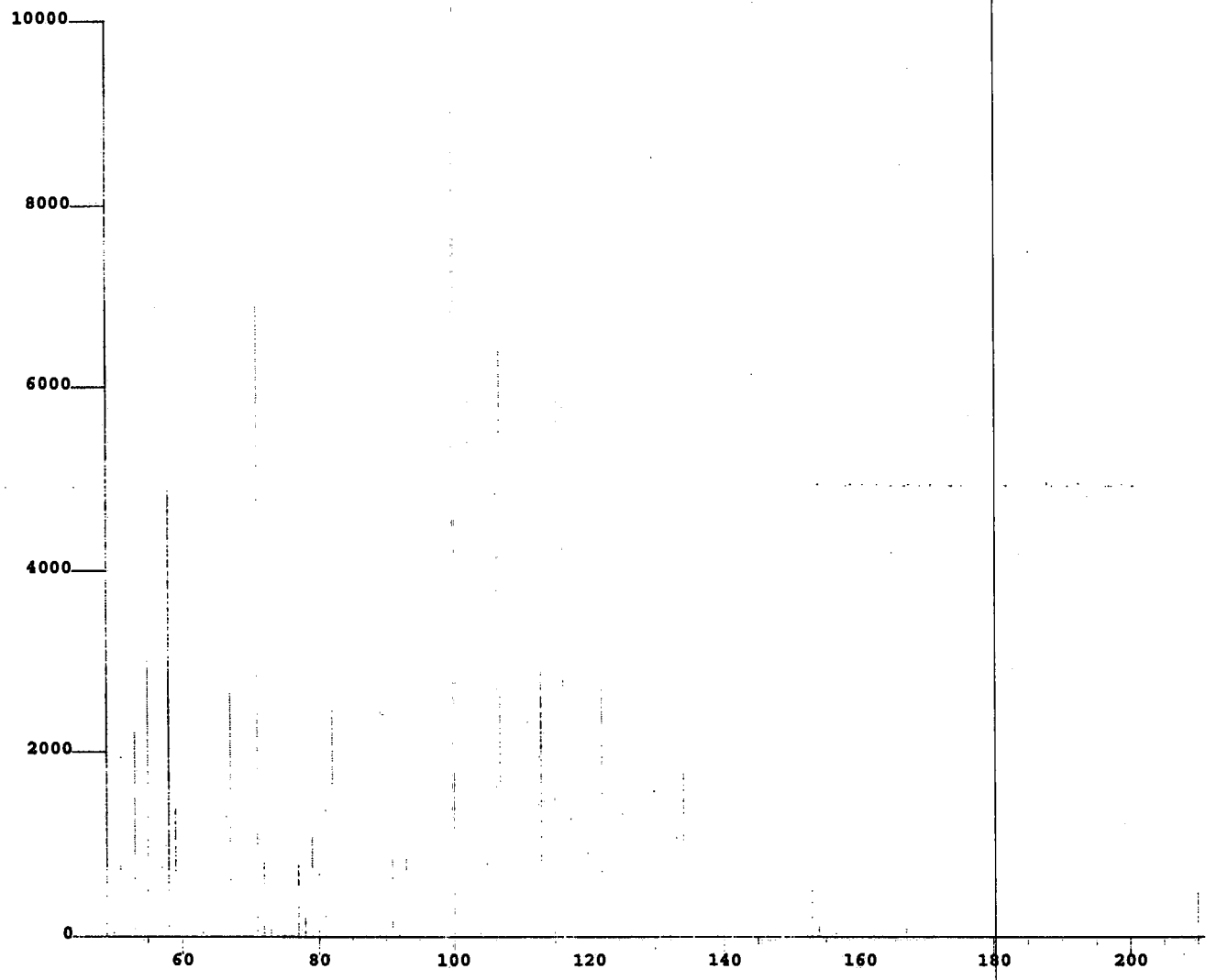
Data File: C:\BNAP\BNAPB583.MSS
Name: SAMP_625_W_BN_(14) 8
Misc Data: 0202018-002A,BB438,L,1000.0,1.00,1.0,0,
RT (min): 5.97 Scan: 344
Area: 270036 Rank: 12
Semi-quantitative Conc(uncorrected): 6.38 ug/l
Calculated Using Istd: d4-1,4-Dichlorobenzene@ 9.16

	Name	Cas No	SI	MW	Formula
1)	p-Xylene	106-42-3	79.4	106	C8H10
2)	Benzene, 1,2-dimethyl-	95-47-6	77.5	106	C8H10
3)	Benzene, 1,3-dimethyl-	108-38-3	77.2	106	C8H10
4)	Cyclopentene, 1-ethenyl-3-methylene-	61142-07-2	74.2	106	C8H10
5)	1,3-Cyclopentadiene, 5-(1-methylethylidene)-	2175-91-9	72.6	106	C8H10
6)	Ethylbenzene	100-41-4	71.6	106	C8H10

000130

3918

Scan: 1621 RT (min): 15.40

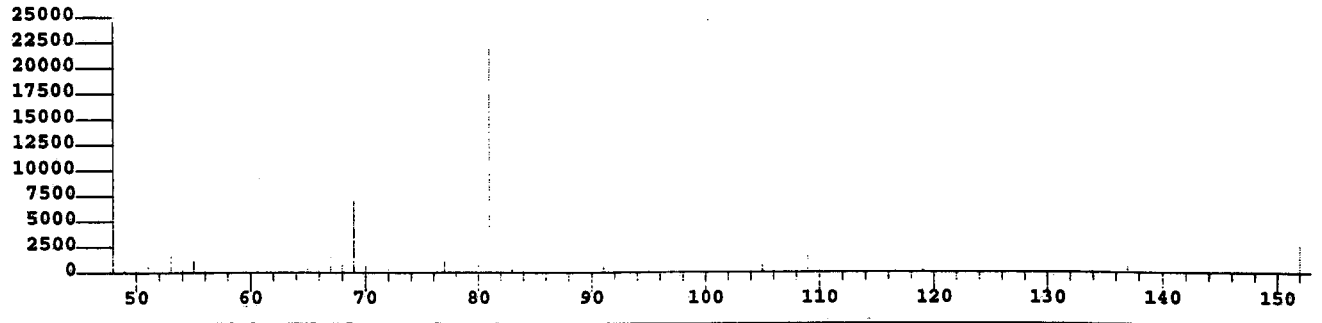


Data File: C:\BNAP\BNAPB583.MSS
Name: SAMP_625_W_BN_(14) 8
Misc Data: 0202018-002A,BB438,L,1000.0,1.00,1.0,0,
RT (min): 15.40 Scan: 1621
Area: 241750 Rank: 13
Semi-quantitative Conc(uncorrected): 5.71 ug/l
Calculated Using Istd: d8-Naphthalene@ 13.55
No library Matches Found

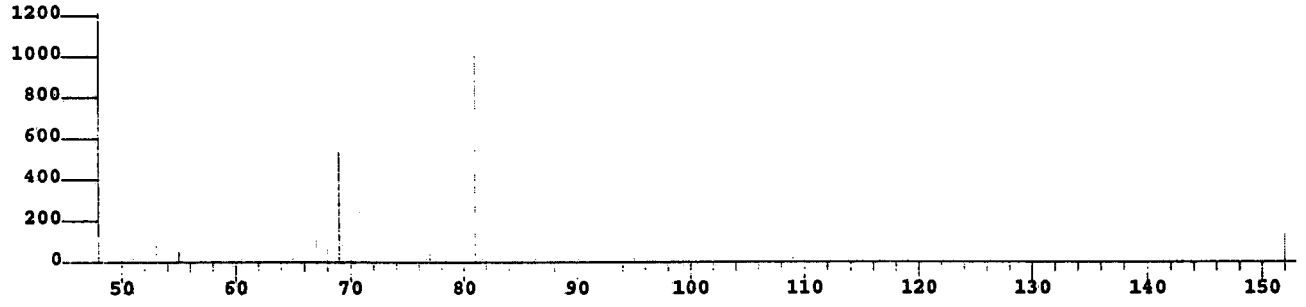
000131

3919

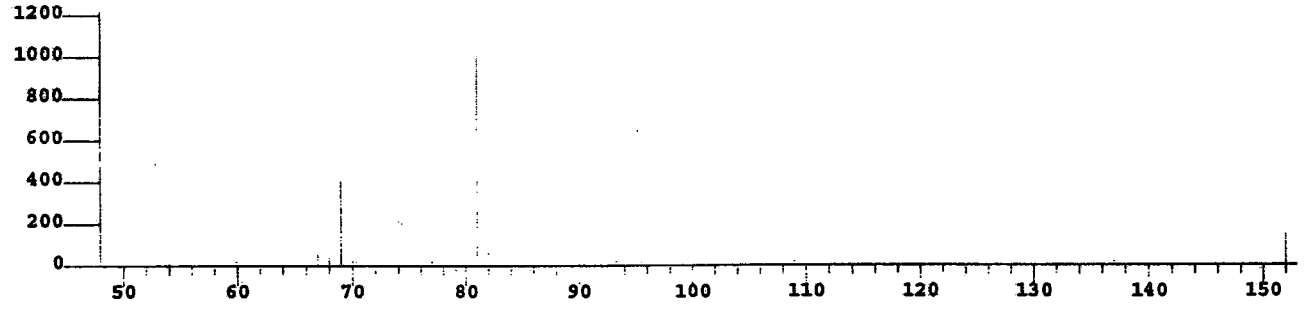
Scan: 980 RT (min): 10.61



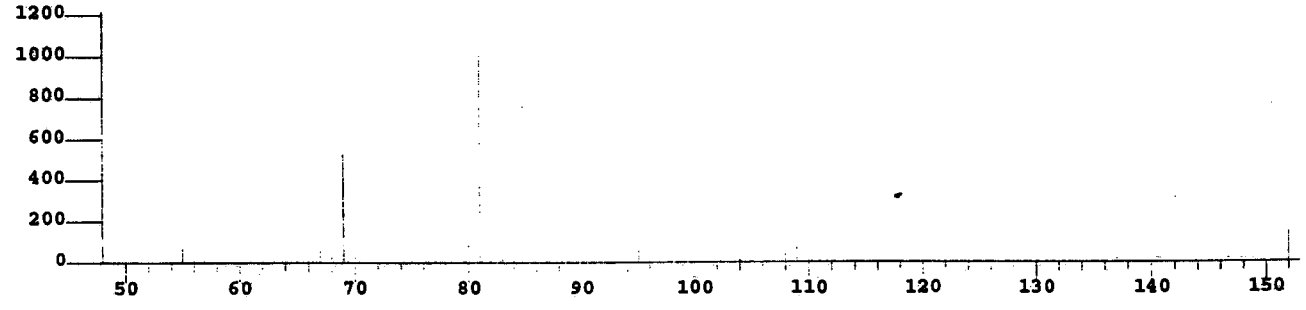
1-1,2,3-trimethylbicyclo[2.2.1]-2-heptanol



Bicyclo[2.2.1]heptan-2-one, 1,3,3-trimethyl-



Bicyclo[2.2.1]heptan-2-one, 1,3,3-trimethyl-

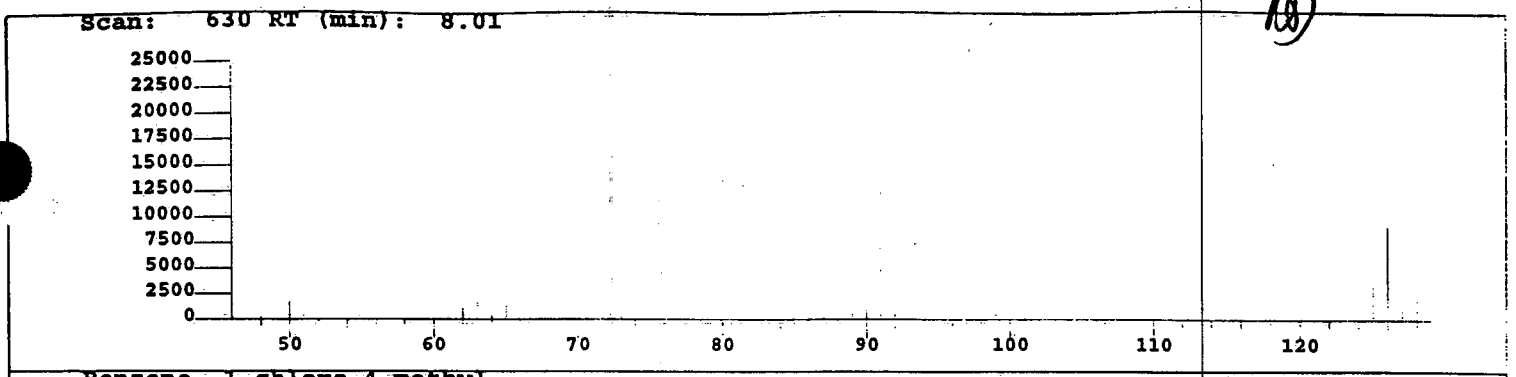


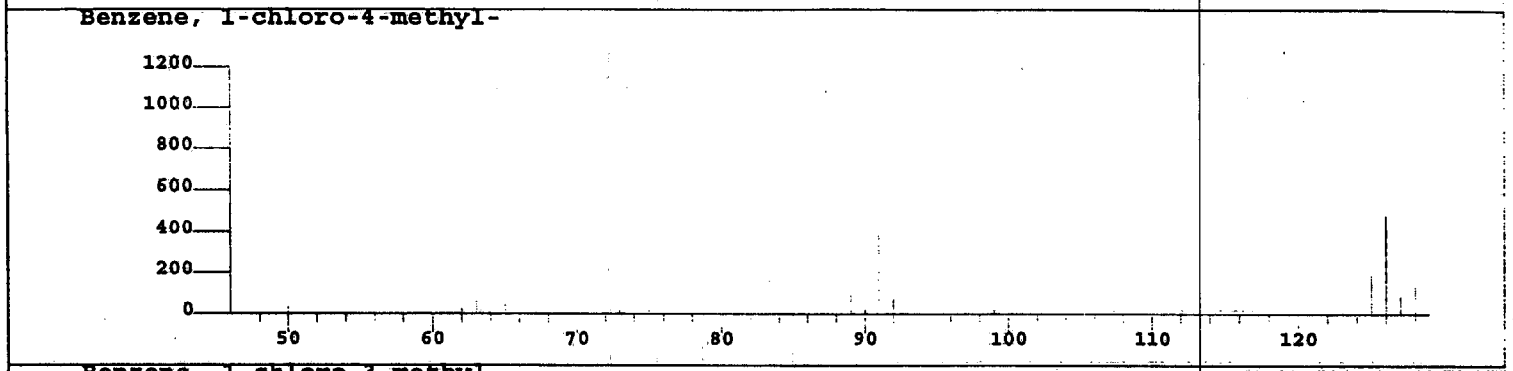
Data File: C:\BNAP\BNAPB583.MSS
Name: SAMP_625_W_BN_(14) 8
Misc Data: 0202018-002A,BB438,L,1000.0,1.00,1.0,0,
RT (min): 10.61 Scan: 980
Area: 239534 Rank: 14
Semi-quantitative Conc(uncorrected): 5.66 ug/l
Calculated Using Istd: d4-1,4-Dichlorobenzene@ 9.16

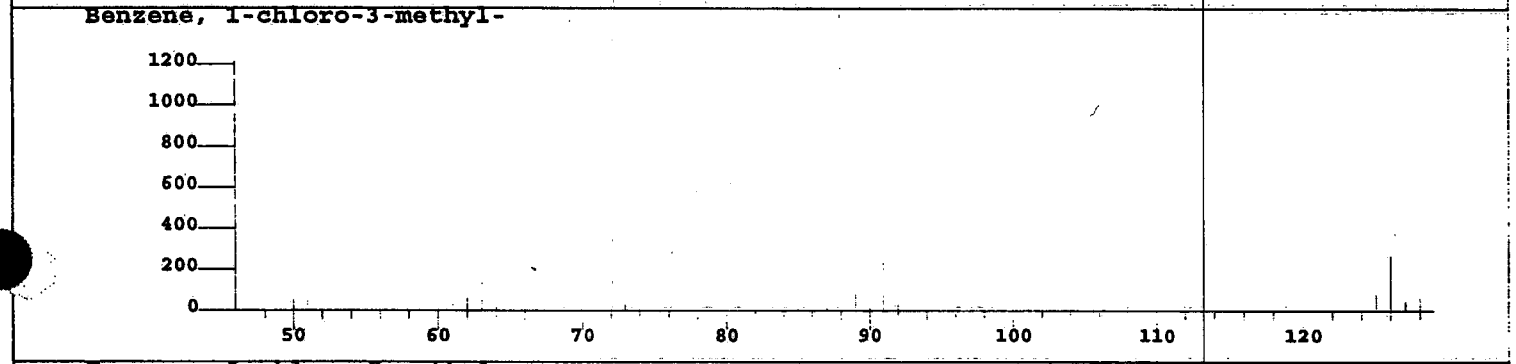
	Name	Cas No	SI	MW	Formula
1)	1-1,2,3-trimethylbicyclo[2.2.1]-2-heptanol		92.1	154	C10H18O
2)	Bicyclo[2.2.1]heptan-2-one, 1,3,3-trimethyl-	4695-62-9	90.4	152	C10H16O
3)	Bicyclo[2.2.1]heptan-2-one, 1,3,3-trimethyl-	1195-79-5	81.2	152	C10H16O
4)	Bicyclo[2.2.1]heptan-2-one, 4,7,7-trimethyl-, (1R)-	13854-85-8	78.6	152	C10H16O
5)	Cyclohexanone, 5-methyl-2-(1-methylethylidene)-	15932-80-6	78.4	152	C10H16O
6)	Pulegone	89-82-7	78.2	152	C10H16O
	Bicyclo[2.2.1]heptan-2-one, 4,7,7-trimethyl-, (1S)-	10292-98-5	78.0	152	C10H16O
	Cyclohexanone, 5-methyl-2-(1-methylethenyl)-, trans-	29606-79-9	72.2	152	C10H16O
	1,4-Undecadiene, (Z)-	55976-14-2	72.0	152	C11H20
10)	2,4-Decadienal	2363-88-4	71.7	152	C10H16O

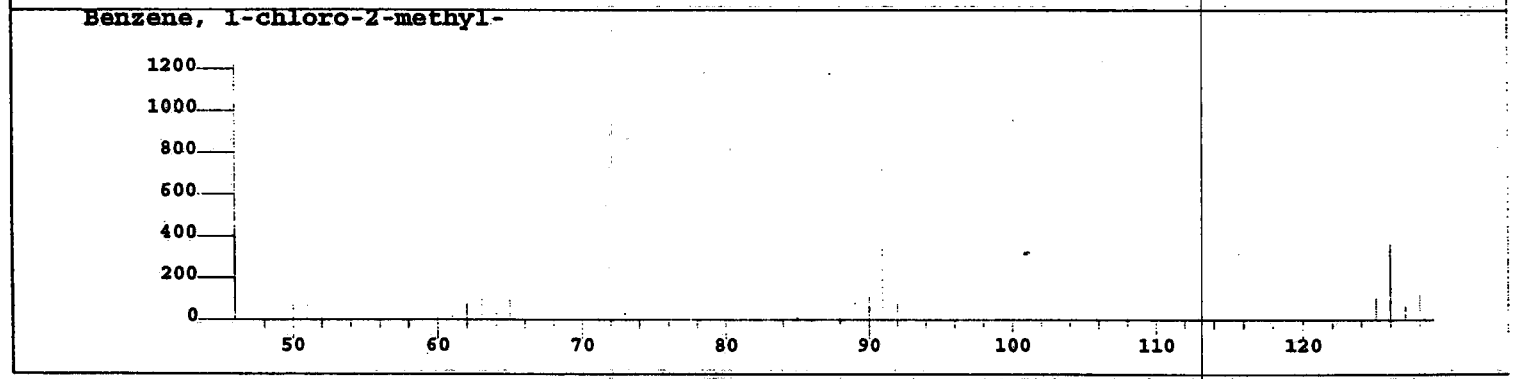
000132

3920





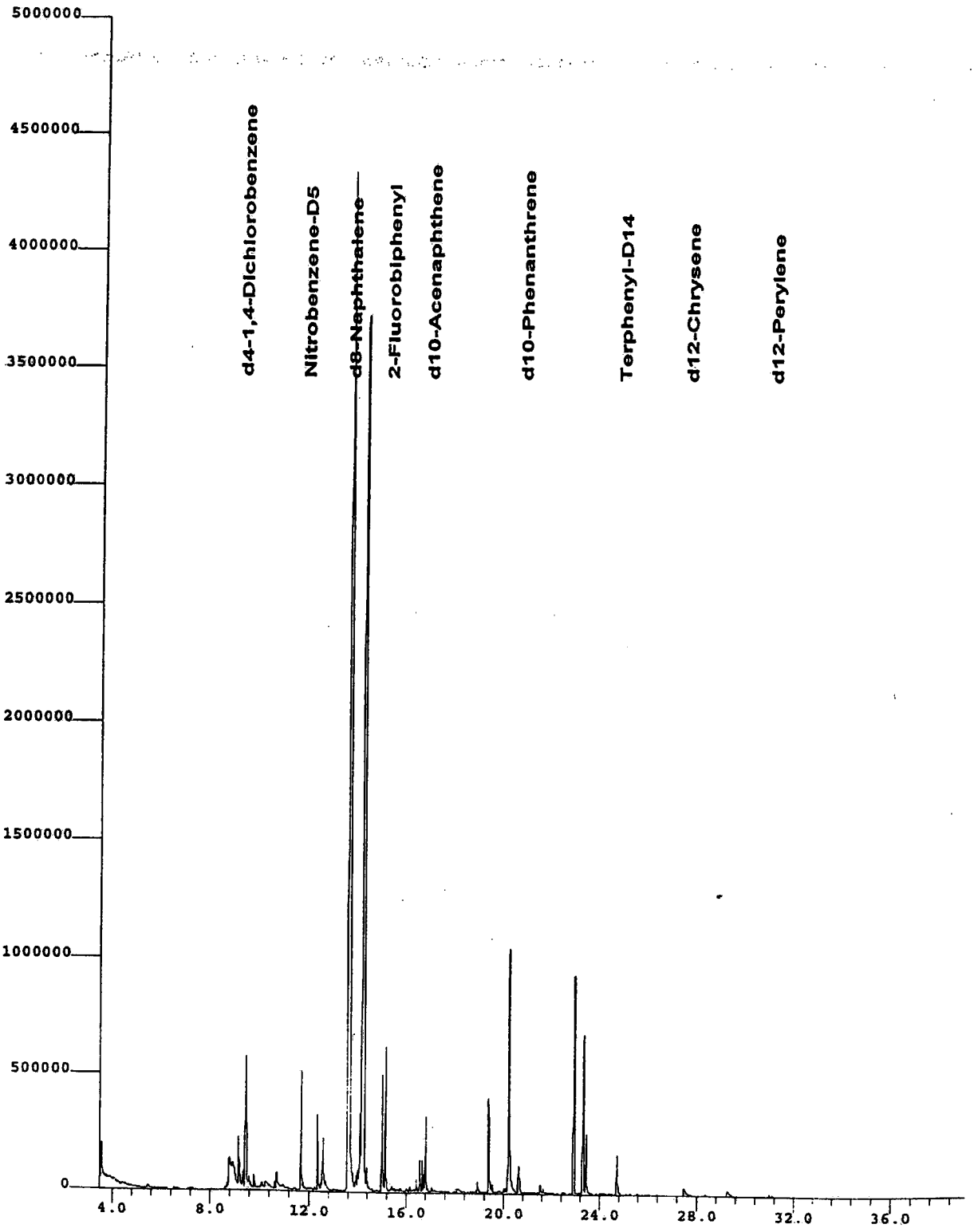




Data File: C:\BNAP\BNAPB583.MSS
Name: SAMP_625_W_BN_(14) 8
Misc Data: 0202018-002A,BB438,L,1000.0,1.00,1.0,0,
RT (min): 8.01 Scan: 630
Area: 239119 Rank: 15
Semi-quantitative Conc(uncorrected): 5.65 ug/l
Calculated Using Istd: d4-1,4-Dichlorobenzene@ 9.16

	Name	Cas No	SI	MW	Formula
1)	Benzene, 1-chloro-4-methyl-	106-43-4	96.3	126	C7H7Cl
2)	Benzene, 1-chloro-3-methyl-	108-41-8	94.5	126	C7H7Cl
3)	Benzene, 1-chloro-2-methyl-	95-49-8	93.3	126	C7H7Cl
4)	Benzyl chloride	100-44-7	83.6	126	C7H7Cl
5)	1,3,5-Cycloheptatriene, 3-chloro-	55619-05-1	81.9	126	C7H7Cl
6)	1,3,5-Cycloheptatriene, 2-chloro-	34896-79-2	81.8	126	C7H7Cl
7)	Hydrazinecarboxylic acid, phenylmethyl ester	5331-43-1	80.6	166	C8H10N2O2
8)	1,3,5-Cycloheptatriene, 1-chloro-	32743-66-1	78.3	126	C7H7Cl
9)	2-(p-Chlorophenyl)-ethylamine	156-41-2	70.9	155	C8H10ClN

Data File: C:\BNAP\BNAPB584.MSS
Quant Output File: C:\BNAP\BNAPB584.Q
Injection Time: 02/08/82 21:04
Misc: 0202018-003A,BB438,L,1000.0,1.00,1.0,0,



000134

3922

QUANT REPORT
Quant Rev: 10

Operator Id:
Dilution Factor:<None>
Output File: C:\BNAP\BNAPB584.Q
Data File: c:\bnap\bnapb584.mss
Name: SAMP_625_W_BN_(15) 9
Misc: 0202018-003A,BB438,L,1000.0,1.00,1.0,0,
ID File: c:\bnap\hsl\625b.i
Title: SW-846 Method 8270 Semi-Volatile Quant ID File
t Calib: 01/17/82 10:29

Quant Time : 82/21/19 52:80
Injected at : 02/08/82 21:04
Last Qcal Date: None

Num	Compound	R.T.	Q Ion	Area	Conc	Units	Q
1)	*d4-1,4-Dichlorobenzene	9.15	152	99382	40.00	ug/l	95
14)	M*d8-Naphthalene	13.54	136	91889	40.00	ug/l	0
15)	Nitrobenzene-D5	11.69	54	12406	40.75	ug/l	0
27)	*d10-Acenaphthene	16.81	162	293739	40.00	ug/l	94
30)	2-Fluorobiphenyl	15.14	172	711883	62.16	ug/l	98
43)	*d10-Phenanthrene	20.62	188	276695	40.00	ug/l	98
54)	*d12-Chrysene	27.48	240	96118	40.00	ug/l	100
56)	Terphenyl-D14	24.72	244	125355	101.80	ug/l	95
62)	*d12-Perylene	30.99	264	17111	40.00	ug/l	100

* Compound is Internal Standard

000135

3923

Int report for Plus Analysis ..... Plus version 5.0

Quant Output File: c:\bnap\bnapb584.q
Data File Name: C:\BNAP\BNAPB584.MSS
Name: SAMP_625_W_BN_(15) 9
Misc Data: 0202018-003A,BB438,L,1000.0,1.00,1.0,0,
Plus Method File: C:\AQUARIUS\FILES\BNA.NIS
Parameters Minimum % Istd Area to Report: 10.00 Rank Order
Absolute maximum Number of Peaks: 15 Date: 03-14-1982
Which Istd from Output file(1st,2nd)..: 3 Time: 13:28:39
Maximum Hits for graphics: 3 Delta Rt: 0.06

#	R.T. (min.)	Start Time	End Time	Width	Type	Area	Rank	
51)	13.66	13.51	13.79	0.286	BB	4.79e+07	CMPD	Benzoic acid
55)	14.25	14.12	14.33	0.203	VV	4.45e+07	CMPD	Naphthalene
91)	20.22	20.14	20.37	0.230	BB	6412391	CMPD	Benzidine
101)	22.94	22.83	23.01	0.174	BB	5500711	1	
102)	23.34	23.22	23.39	0.165	BV	3843078	2	
25)	9.45	9.39	9.56	0.174	BV	3751751	3	
64)	15.14	15.10	15.30	0.198	VB	2499669	CMPD	2-Fluorobiphenyl
63)	15.00	14.93	15.10	0.172	VV	2227149	4	
54)	14.10	14.03	14.12	0.092	VV	2206875	5	
86)	19.37	19.31	19.50	0.186	BV	2176344	6	
37)	11.68	11.63	11.74	0.106	BV	1995320	CMPD	Nitrobenzene
44)	12.32	12.29	12.42	0.130	BV	1611928	7	
47)	12.55	12.51	12.64	0.131	VV	1364958	CMPD	Isophorone
22)	9.15	9.12	9.25	0.130	BV	1322756	ISTD	d4-1,4-Dichlorobenzene
78)	16.81	16.77	16.88	0.113	VB	1266733	ISTD	d10-Acenaphthene
103)	23.46	23.39	23.54	0.152	VB	1261969	8	
1)	3.56	3.52	3.68	0.159	BB	1137421	CMPD	N-Nitrosodimethylamine
92)	20.61	20.53	20.76	0.226	BB	785688	ISTD	d10-Phenanthrene
106)	24.72	24.67	24.85	0.173	BB	730188	CMPD	Terphenyl-D14
75)	16.57	16.51	16.63	0.119	BB	542022	9	
76)	16.67	16.63	16.71	0.080	BB	438831	CMPD	2,4-Dinitrophenol
26)	9.59	9.56	9.73	0.166	VV	349212	CMPD	1,2-Dichlorobenzene
48)	12.66	12.64	12.85	0.205	VB	346625	10	
27)	9.78	9.73	9.93	0.207	VB	338013	11	
108)	27.48	27.41	27.67	0.266	BB	337391	ISTD	d12-Chrysene
52)	13.93	13.86	13.98	0.114	BV	324872	12	
53)	14.01	13.98	14.03	0.055	VV	320919	13	
20)	8.78	8.75	8.81	0.059	BB	319568	14	
32)	10.69	10.67	10.75	0.082	BB	307576	CMPD	N-Nitrosodi-n-propylami
24)	9.33	9.30	9.38	0.076	VB	288929	15	
56)	14.35	14.33	14.37	0.039	VV	268234	16	
77)	16.74	16.71	16.77	0.064	BV	240875	17	
74)	16.42	16.39	16.51	0.119	BB	237840	18	
95)	21.53	21.44	21.60	0.158	BV	228601	19	
85)	18.92	18.88	19.00	0.125	BB	226572	CMPD	4-Chlorophenyl phenyl e
28)	10.09	9.93	10.17	0.236	BB	198688	20	
57)	14.38	14.37	14.41	0.038	VV	197670	21	
38)	11.77	11.74	11.82	0.076	VV	195392	22	

Int report for Plus Analysis ..... Plus version 5.0

Quant Output File: c:\bnap\bnapb584.q
Data File Name: C:\BNAP\BNAPB584.MSS
Name: SAMP_625_W_BN_(15) 9
Misc Data: 0202018-003A,BB438,L,1000.0,1.00,1.0,0,
Plus Method File: C:\AQUARIUS\FILES\BNA.NIS

Parameters
Minimum % Istd Area to Report: 10.00
Absolute maximum Number of Peaks: 15
Which Istd from Output file(1st,2nd)..: 3
Maximum Hits for graphics: 3

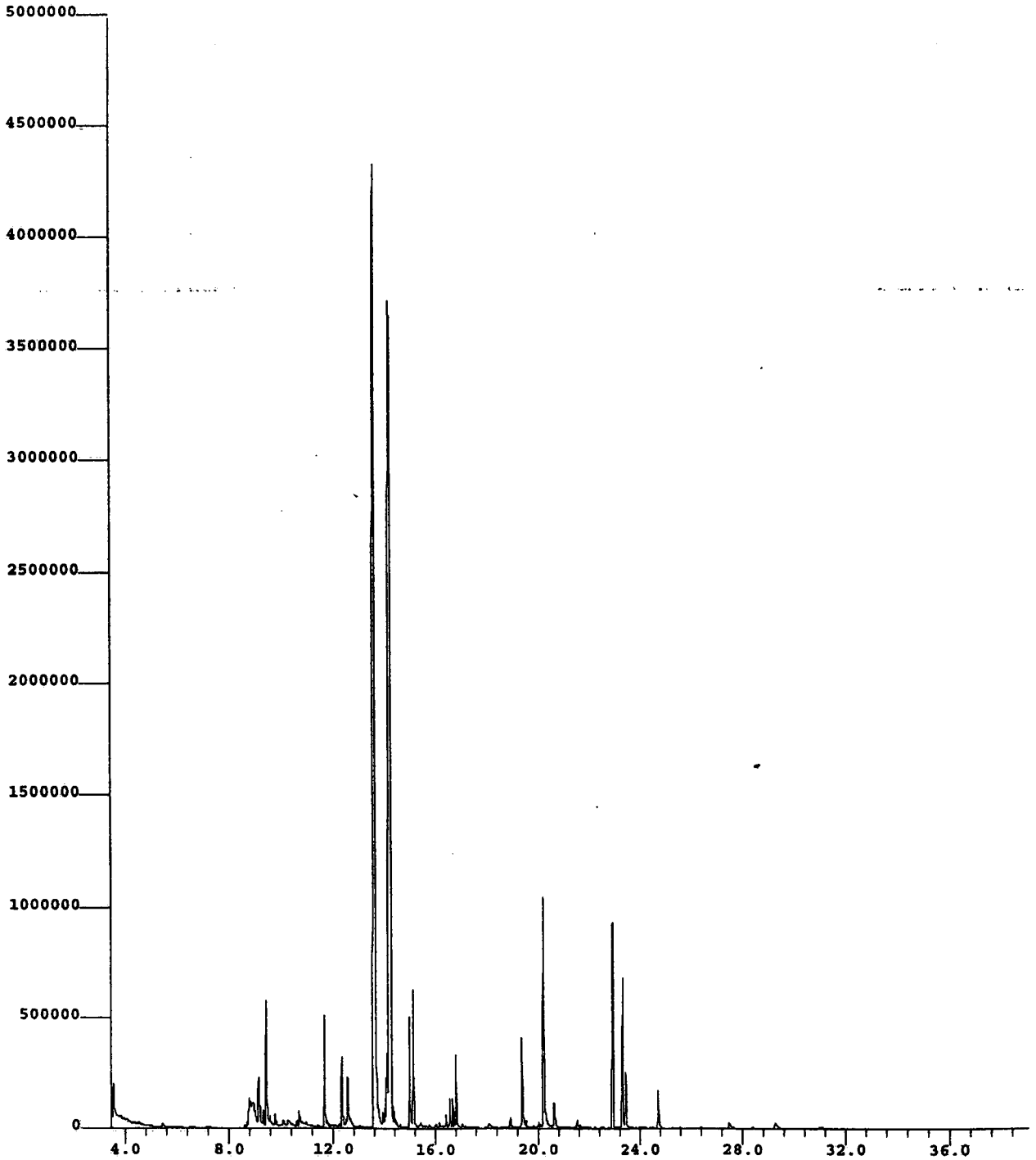
Rank Order
Date: 03-14-1982
Time: 13:28:39
Delta Rt: 0.06

#	R.T. (min.)	Start Time	End Time	Width	Type	Area	Rank
46)	12.48	12.46	12.51	0.053	VV	183967	23
87)	19.53	19.50	19.65	0.156	VB	156325	24
110)	29.27	29.22	29.33	0.110	BB	154589	25

000137

3925

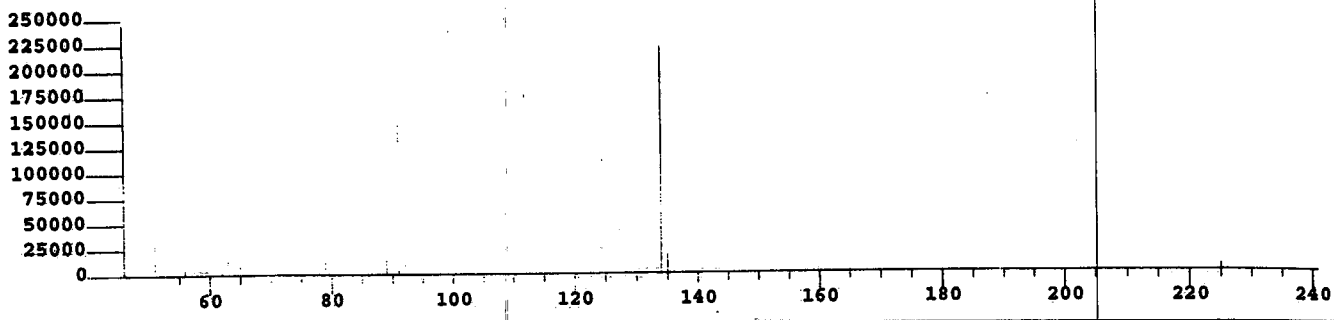
Data File: C:\BNAP\BNAPB584.MSS
Quant Output File: c:\bnap\bnapb584.q
Injection Time: 02/08/82 21:04
Misc: 0202018-003A,BB438,L,1000.0,1.00,1.0,0,



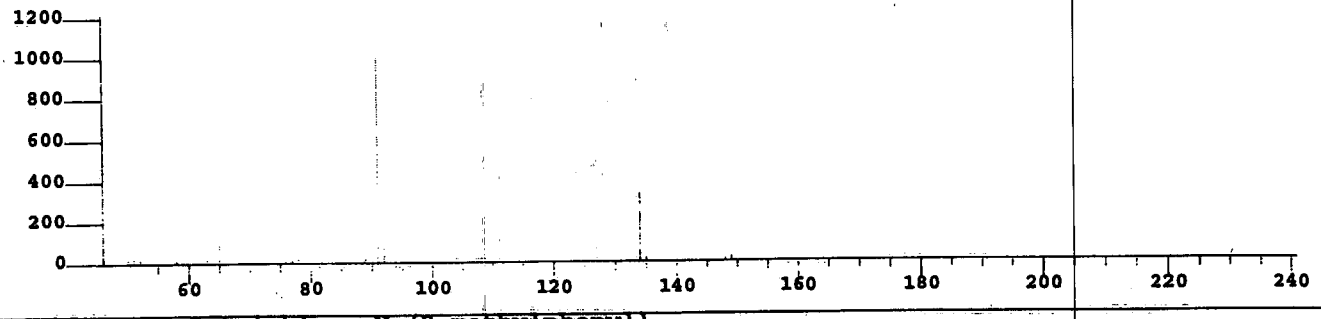
000138

3926

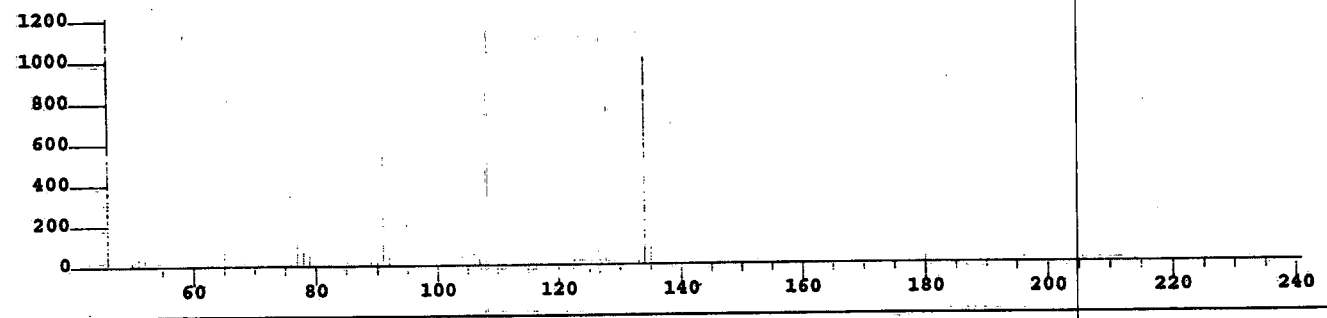
Scan: 2606 RT (min): 22.94



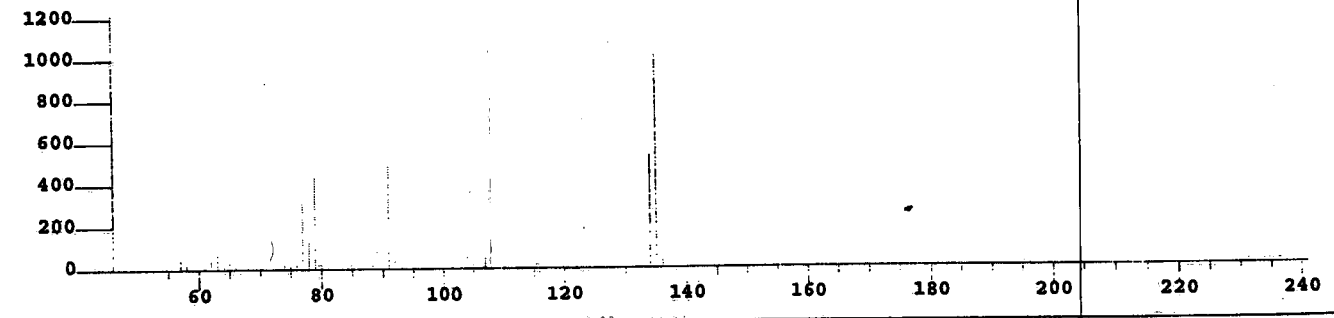
Benzenemethanamine, N-(1-methylethyl)-



Acetamide, 2,2,2-trichloro-N-(2-methylphenyl)-



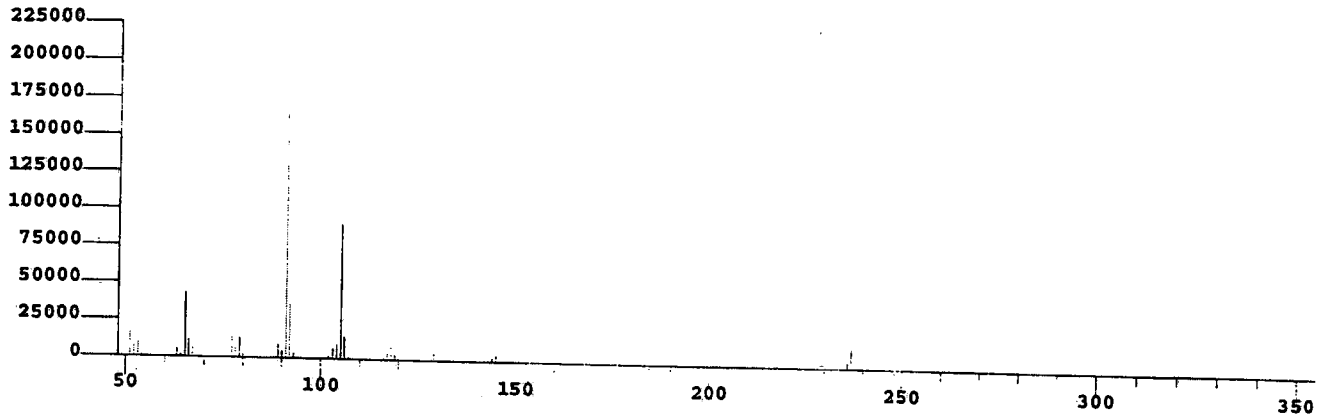
N-Benzylformamide



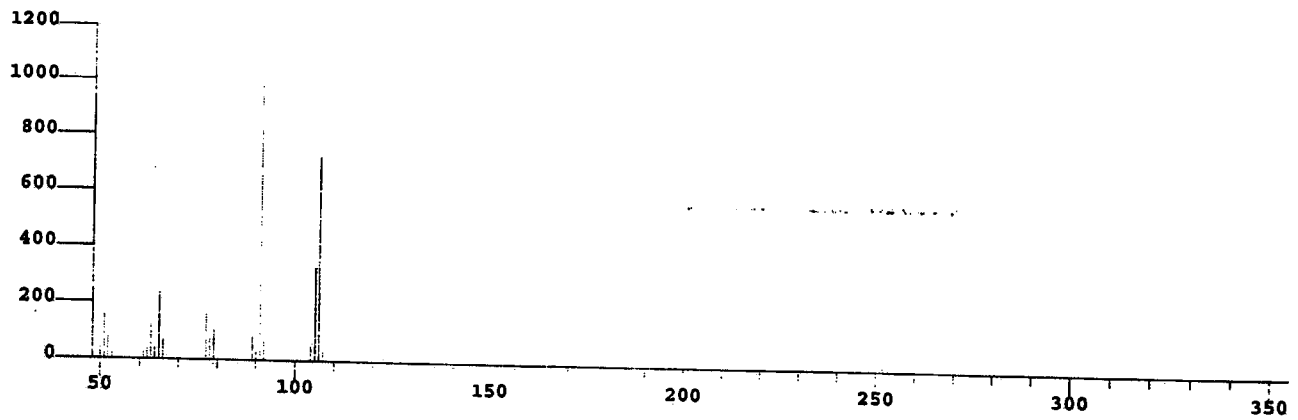
Data File: C:\BNAP\BNAPB584.MSS
Name: SAMP_625_W_BN_(15) 9
Misc Data: 0202018-003A,BB438,L,1000.0,1.00,1.0,0,
RT (min): 22.94 Scan: 2606
Area: 5500711 Rank: 1
Semi-quantitative Conc(uncorrected): 173.70 ug/l
Calculated Using Istd: d10-Acenaphthene@ 16.81

Name	Cas No	SI	MW	Formula
1) Benzenemethanamine, N-(1-methylethyl)-	102-97-6	76.8	149	C10H15N
2) Acetamide, 2,2,2-trichloro-N-(2-methylphenyl)-	4257-87-8	72.6	251	C9H8Cl3NO
3) N-Benzylformamide	6343-54-0	70.8	135	C8H9NO
4) Acetamide, 2,2,2-trichloro-N-(4-methylphenyl)-	2564-09-2	70.7	251	C9H8Cl3NO
5) Acetamide, 2,2,2-trichloro-N-(3-methylphenyl)-	2563-96-4	70.0	251	C9H8Cl3NO

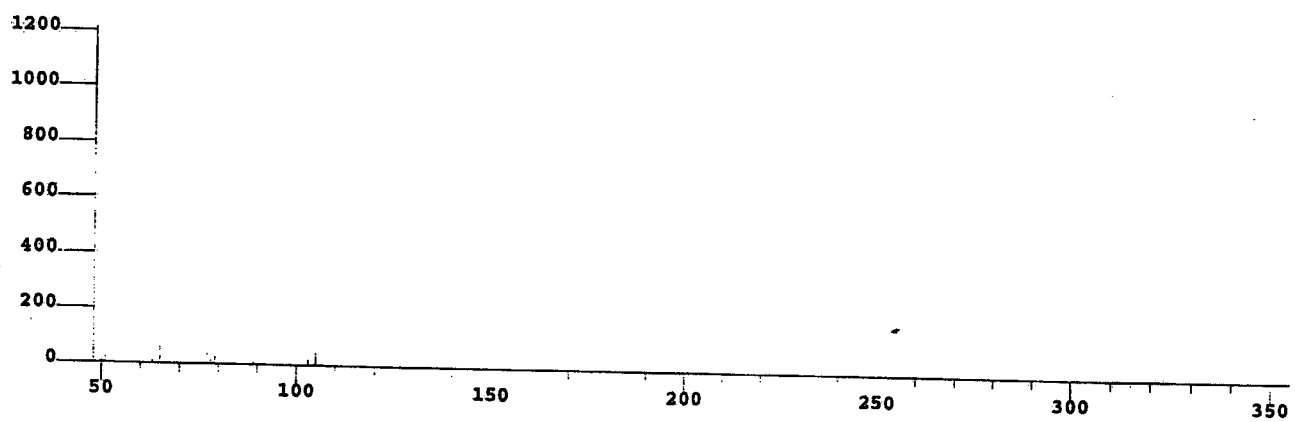
Scan: 2657 RT (min): 23.34



1,3-Cyclopentadiene, 5-(1-methylethylidene)-



Hydrazine, (2-phenylethyl)-



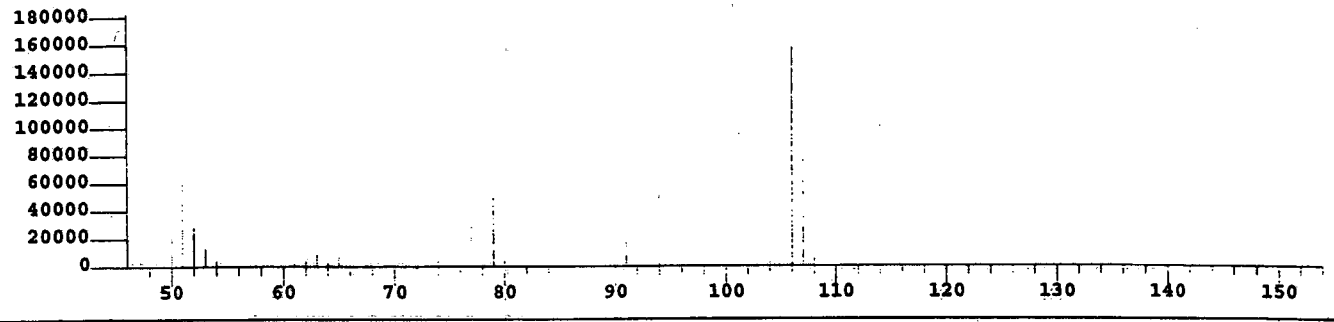
Data File: C:\BNAP\BNAPB584.MSS
Name: SAMP_625_W_BN_(15) 9
Misc Data: 0202018-003A,BB438,L,1000.0,1.00,1.0,0,
RT (min): 23.34 Scan: 2657
Area: 3843078 Rank: 2
Semi-quantitative Conc(uncorrected): 121.35 ug/l
Calculated Using Istd: d10-Acenaphthene@ 16.81

Name	Cas No	SI	MW	Formula
1) 1,3-Cyclopentadiene, 5-(1-methylethylidene)-	2175-91-9	71.5	106	C8H10
2) Hydrazine, (2-phenylethyl)-	51-71-8	71.0	136	C8H12N2

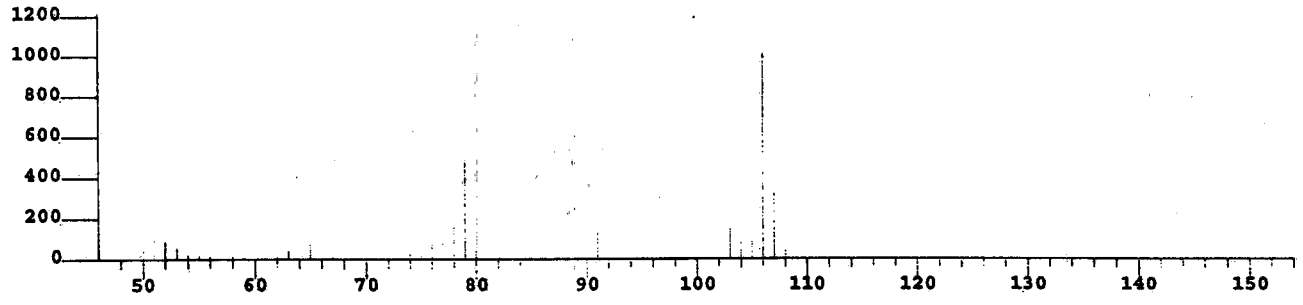
000140

3928

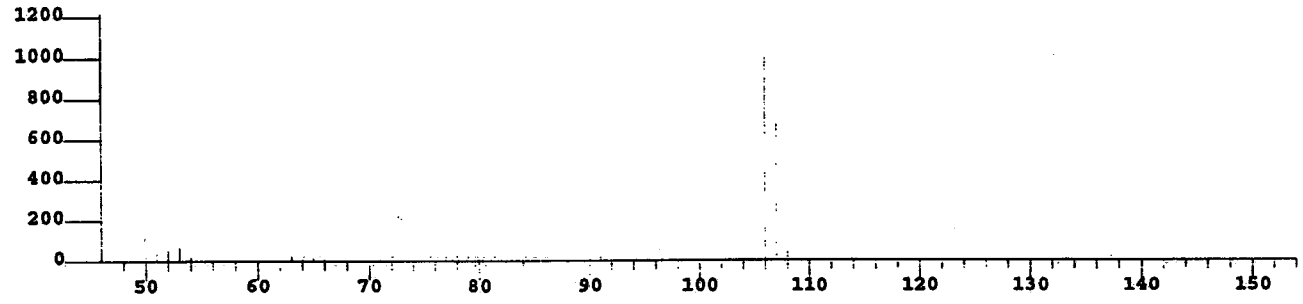
Scan: 833 RT (min): 9.45



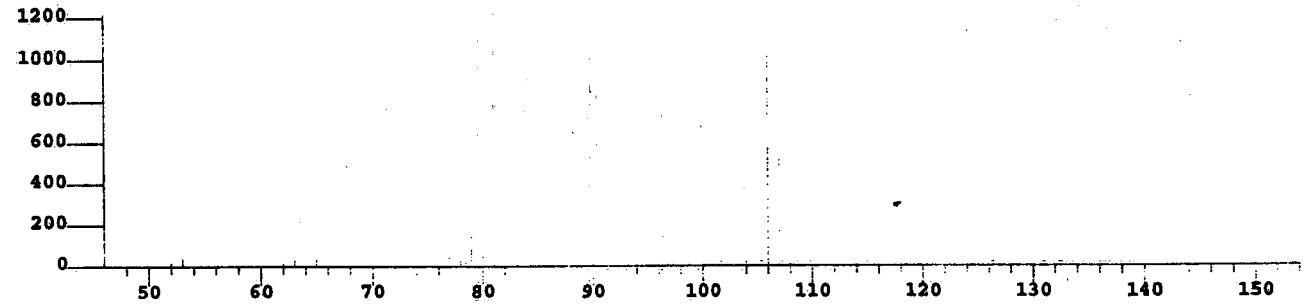
Benzylamine



p-Aminotoluene



Benzenamine, 3-methyl-



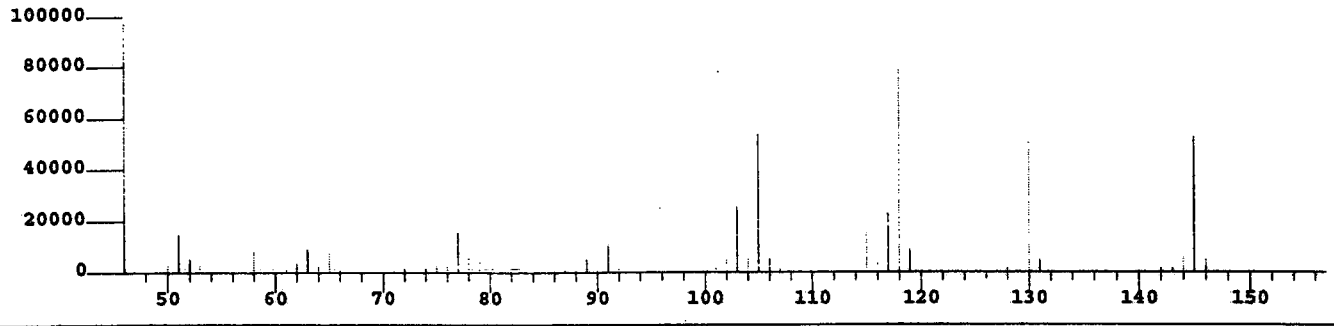
Data File: C:\BNAP\BNAPB584.MSS
Name: SAMP_625_W_BN_(15) 9
Misc Data: 0202018-003A,BB438,L,1000.0,1.00,1.0,0,
RT (min): 9.45 Scan: 833
Area: 3751751 Rank: 3
Semi-quantitative Conc(uncorrected): 113.45 ug/l
Calculated Using Istd: d4-1,4-Dichlorobenzene@ 9.15

	Name	Cas No	SI	MW	Formula
1)	Benzylamine	100-46-9	83.4	107	C7H9N
2)	p-Aminotoluene	106-49-0	83.3	107	C7H9N
3)	Benzenamine, 3-methyl-	108-44-1	83.2	107	C7H9N
4)	1,2-Diphenylethylamine	25611-78-3	82.5	197	C14H15N
5)	Boranamine, N-methyl-1-(1-methylethyl)-N,1-diphenyl-	39967-39-0	82.4	237	C16H20BN
6)	Benzenamine, 2-methyl-	95-53-4	82.3	107	C7H9N
7)	Aniline, N-methyl-	100-61-8	81.5	107	C7H9N
8)	Pyridine, 2-ethyl-	100-71-0	79.9	107	C7H9N
9)	Urea, (3-methylphenyl)-	63-99-0	79.5	150	C8H10N2O
10)	p-Tolylhydroxylamine	623-10-9	74.8	123	C7H9NO

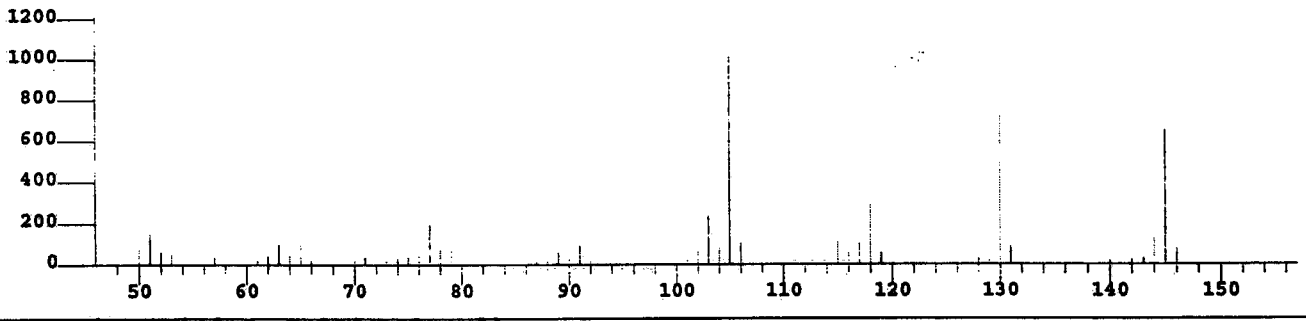
000141

3929

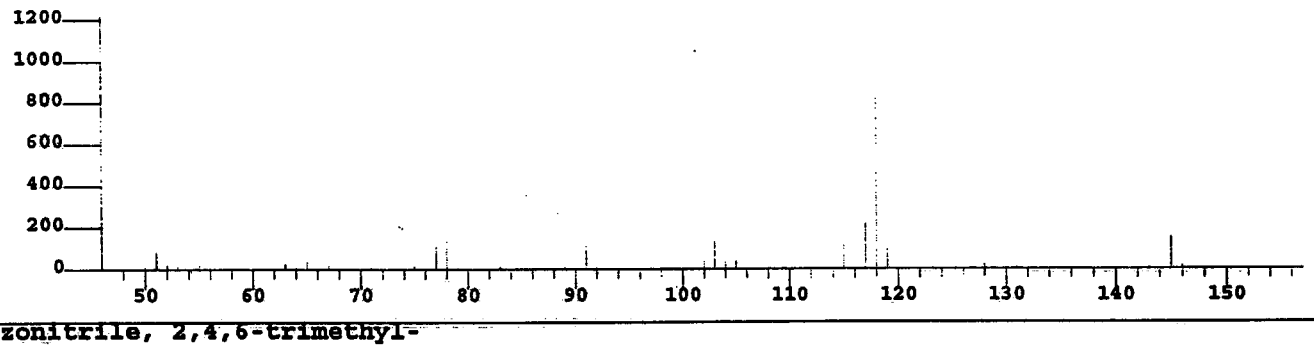
Scan: 1571 RT (min): 15.00



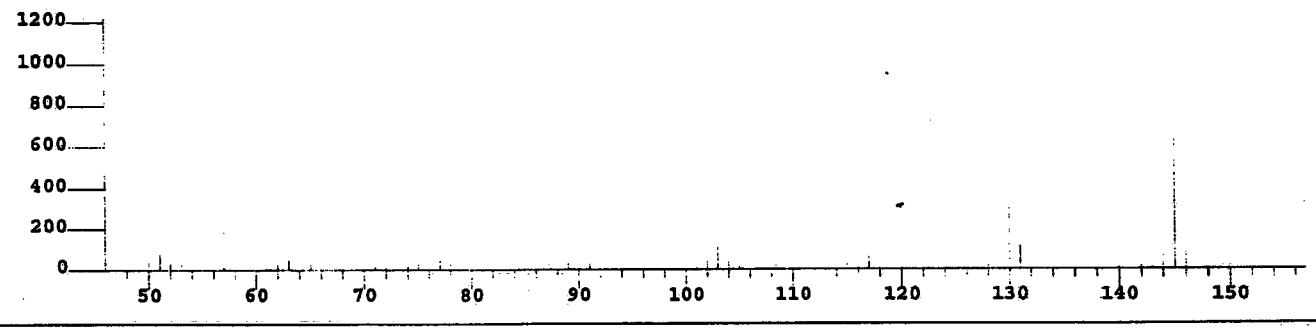
3,4-Dimethylbenzyl cyanide



Benzene, (3-methyl-1-methylenebutyl)-



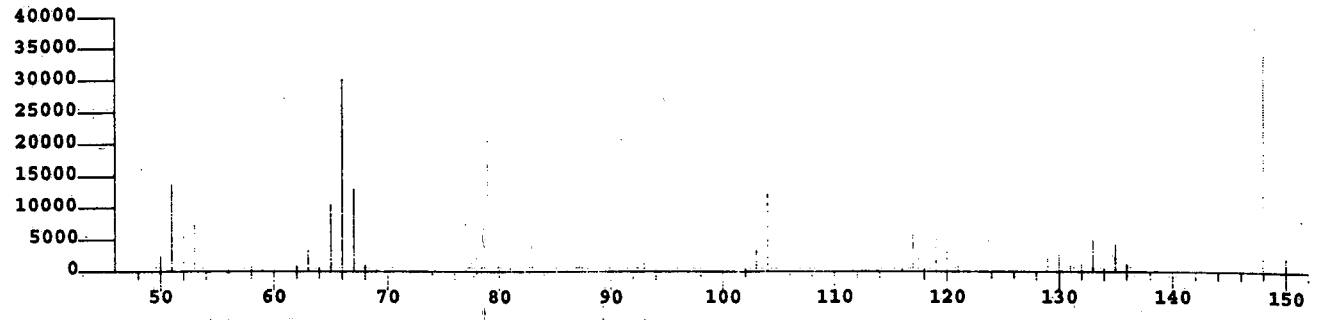
Benzonitrile, 2,4,6-trimethyl-



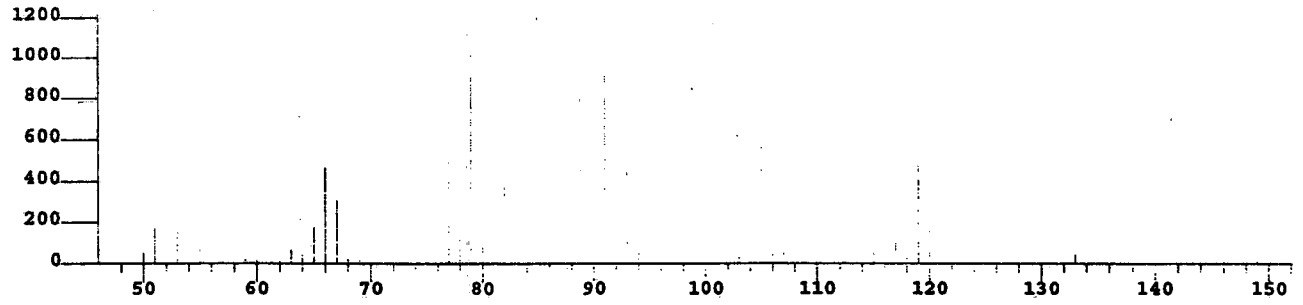
Data File: C:\BNAP\BNAPB584.MSS
Name: SAMP_625_W_BN_(15) 9
Misc Data: 0202018-003A,BB438,L,1000.0,1.00,1.0,0,
RT (min): 15.00 Scan: 1571
Area: 2227149 Rank: 4
Semi-quantitative Conc(uncorrected): 67.35 ug/l
Calculated Using Istd: d8-Naphthalene@ 13.54

Name	Cas No	SI	MW	Formula
1) 3,4-Dimethylbenzyl cyanide	3020-06-2	86.4	145	C10H11N
2) Benzene, (3-methyl-1-methylenebutyl)-	38212-14-5	72.0	160	C12H16
3) Benzonitrile, 2,4,6-trimethyl-	2571-52-0	71.1	145	C10H11N

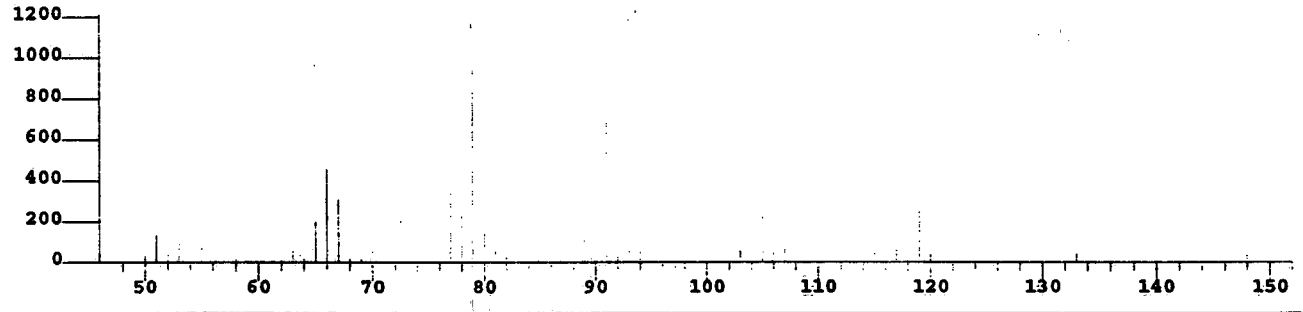
Scan: 1453 RT (min): 14.10



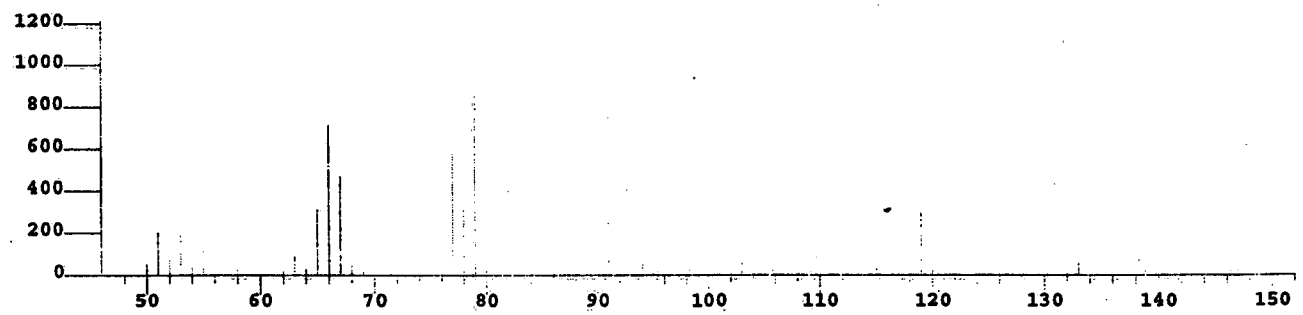
1,4-Cycloheptadiene, 6-(1-butenyl)-, [S-(Z)]-



6-[(Z)-1-Butenyl]-1,4-cycloheptadiene



3-[(Z)-1-Butenyl]-4-vinylcyclopentene



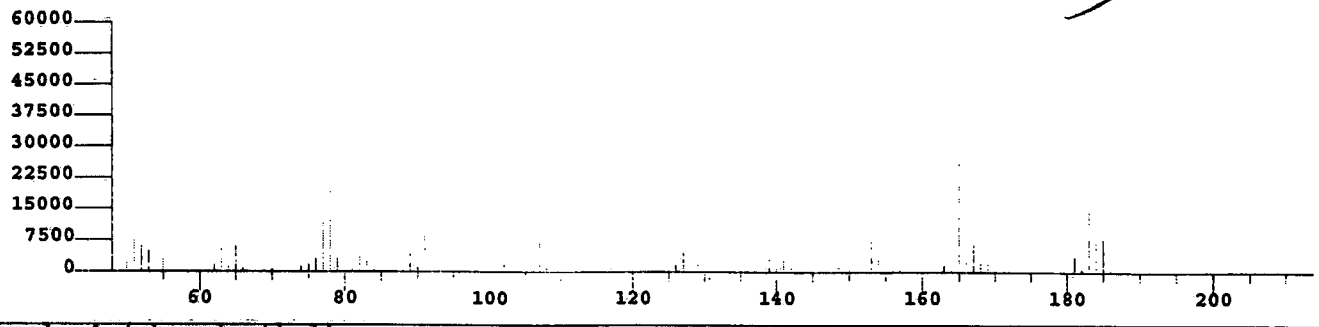
Data File: C:\BNAP\BNAPB584.MSS
Name: SAMP_625_W_BN_(15) 9
Misc Data: 0202018-003A,BB438,L,1000.0,1.00,1.0,0,
RT (min): 14.10 Scan: 1453
Area: 2206875 Rank: 5
Semi-quantitative Conc(uncorrected): 66.74 ug/l
Calculated Using Istd: d8-Naphthalene@ 13.54

	Name	Cas No	SI	MW	Formula
1)	1,4-Cycloheptadiene, 6-(1-butenyl)-, [S-(Z)]-	33156-92-2	73.6	148	C11H16
2)	6-[(Z)-1-Butenyl]-1,4-cycloheptadiene	33156-93-3	72.7	148	C11H16
3)	3-[(Z)-1-Butenyl]-4-vinylcyclopentene	52886-04-1	71.9	148	C11H16

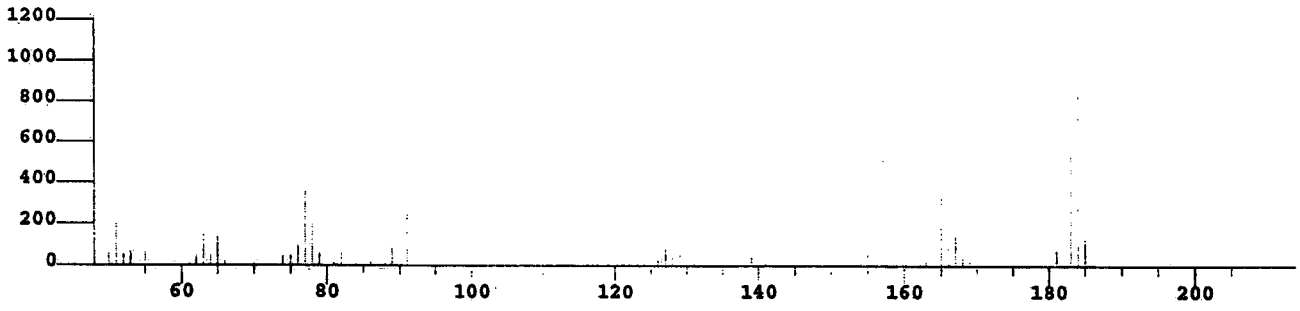
000143

39931

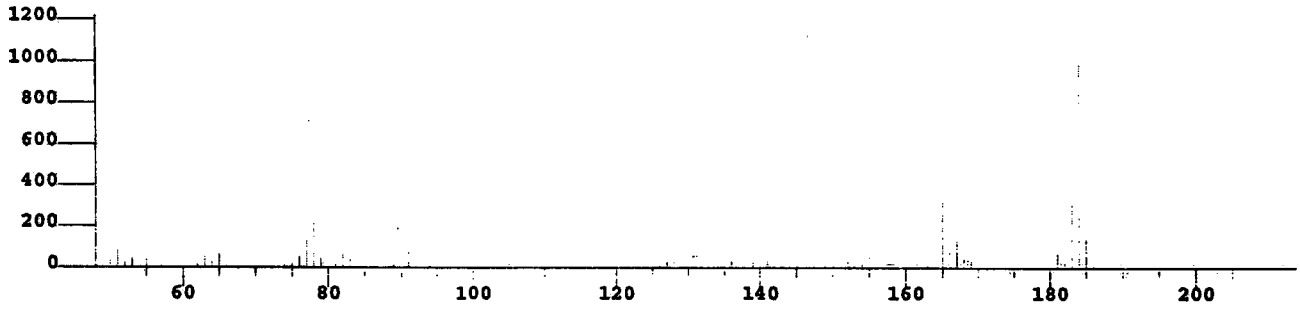
Scan: 2142 RT (min): 19.37



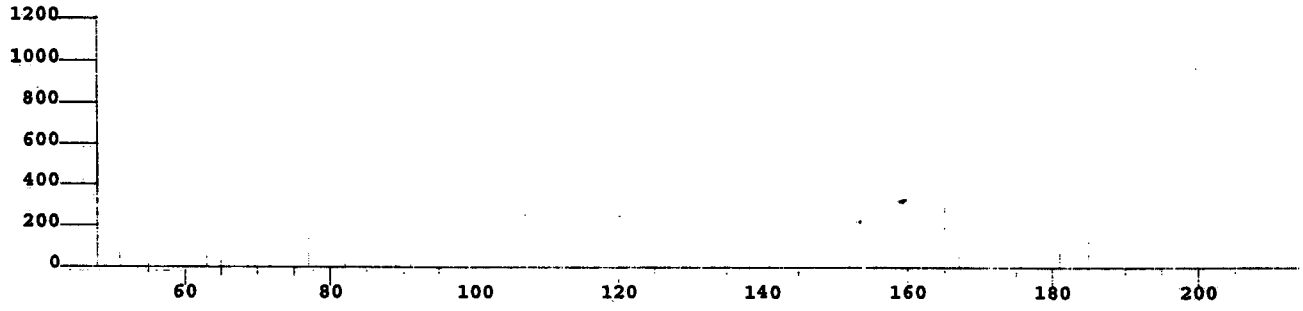
Phenol, 4-(phenylmethyl)-



Phenol, 2-(phenylmethyl)-



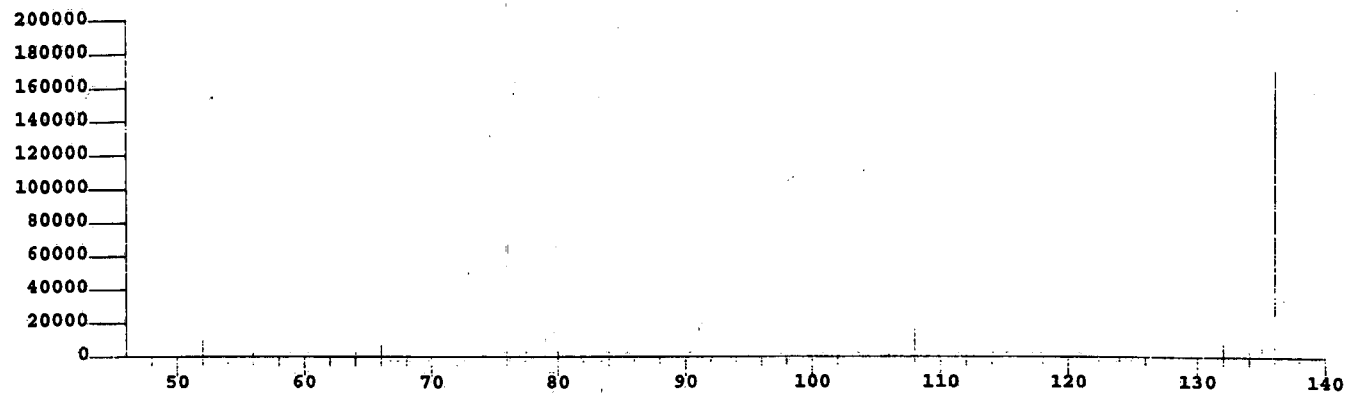
Diphenan



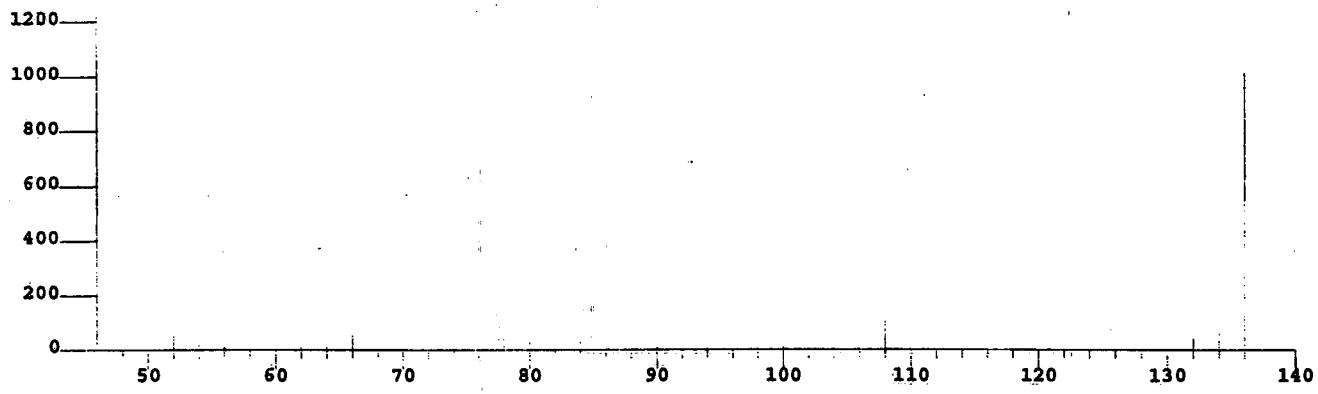
Data File: C:\BNAP\BNAPB584.MSS
Name: SAMP_625_W_BN_(15) 9
Misc Data: 0202018-003A,BB438,L,1000.0,1.00,1.0,0,
RT (min): 19.37 Scan: 2142
Area: 2176344 Rank: 6
Semi-quantitative Conc(uncorrected): 68.72 ug/l
Calculated Using Istd: d10-Acenaphthene@ 16.81

	Name	Cas No	SI	MW	Formula
1)	Phenol, 4-(phenylmethyl)-	101-53-1	90.8	184	C13H12O
2)	Phenol, 2-(phenylmethyl)-	28994-41-4	89.7	184	C13H12O
3)	Diphenan	101-71-3	83.5	227	C14H13NO2
4)	Benzene, 1-methyl-2-phenoxy-	3991-61-5	80.3	184	C13H12O
5)	[1,1'-Biphenyl]-4-methanol	3597-91-9	77.4	184	C13H12O
6)	[1,1'-Biphenyl]-2-methanol	2928-43-0	75.6	184	C13H12O

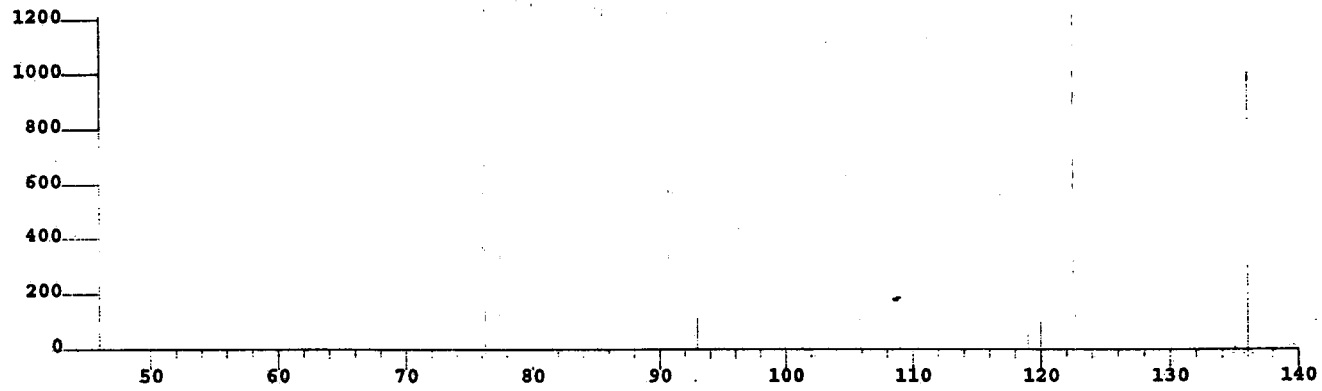
Scan: 1218 RT (min): 12.32



Naphthalene-d8-



Benzaldehyde, 4-amino-, oxime



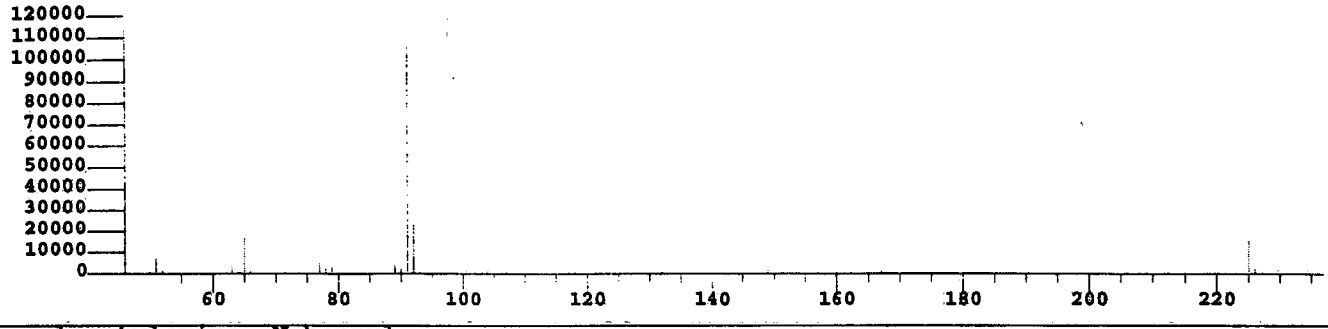
Data File: C:\BNAP\BNAPB584.MSS
Name: SAMP_625_W_BN_(15) 9
Misc Data: 0202018-003A,BB438,L,1000.0,1.00,1.0,0,
RT (min): 12.32 Scan: 1218
Area: 1611928 Rank: 7
Semi-quantitative Conc(uncorrected): 48.74 ug/l
Calculated Using Istd: d4-1,4-Dichlorobenzene@ 9.15

	Name	Cas No	SI	MW	Formula
1)	~~Naphthalene-d8-~~	1146-65-2	93.8	136	C10D8
2)	Benzaldehyde, 4-amino-, oxime	3419-18-9	72.4	136	C7H8N2O

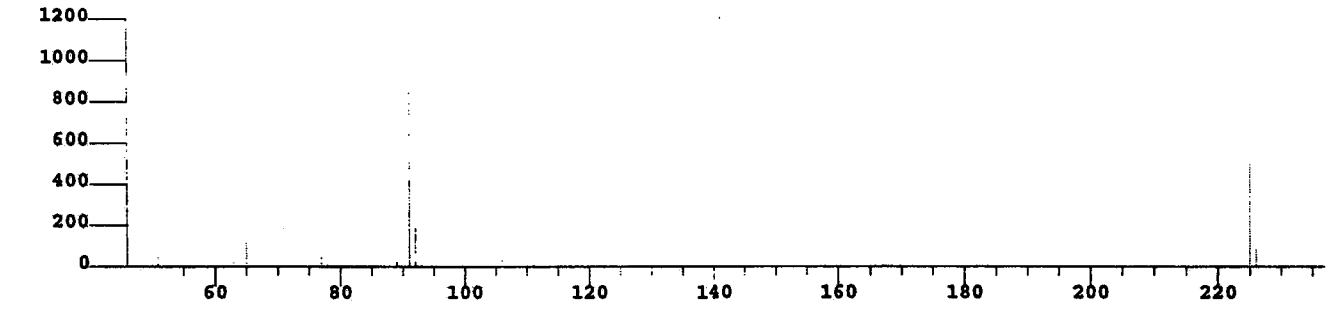
000145

3933

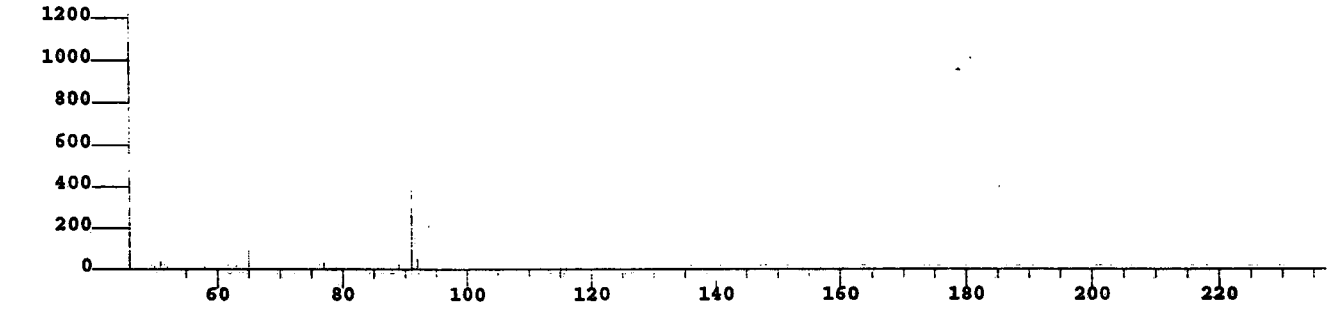
Scan: 2672 RT (min): 23.46



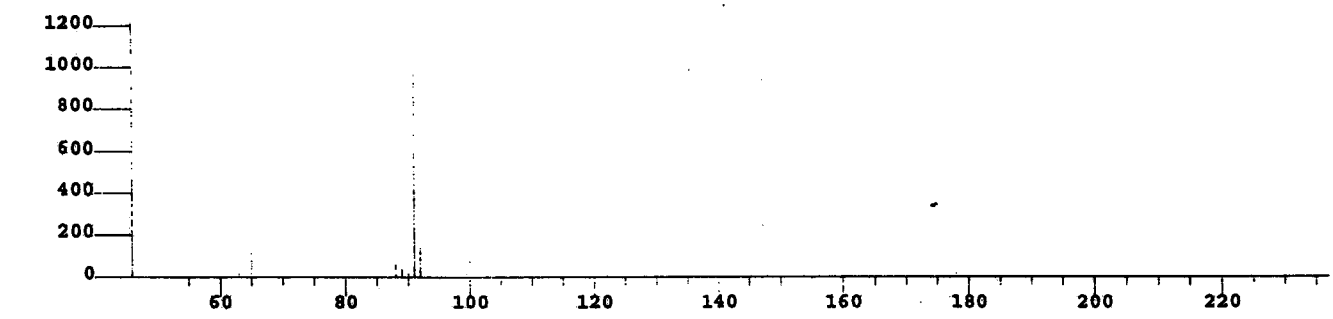
Phenylacetylamino, N-benzyl-



2-Benzyloxyethylamine



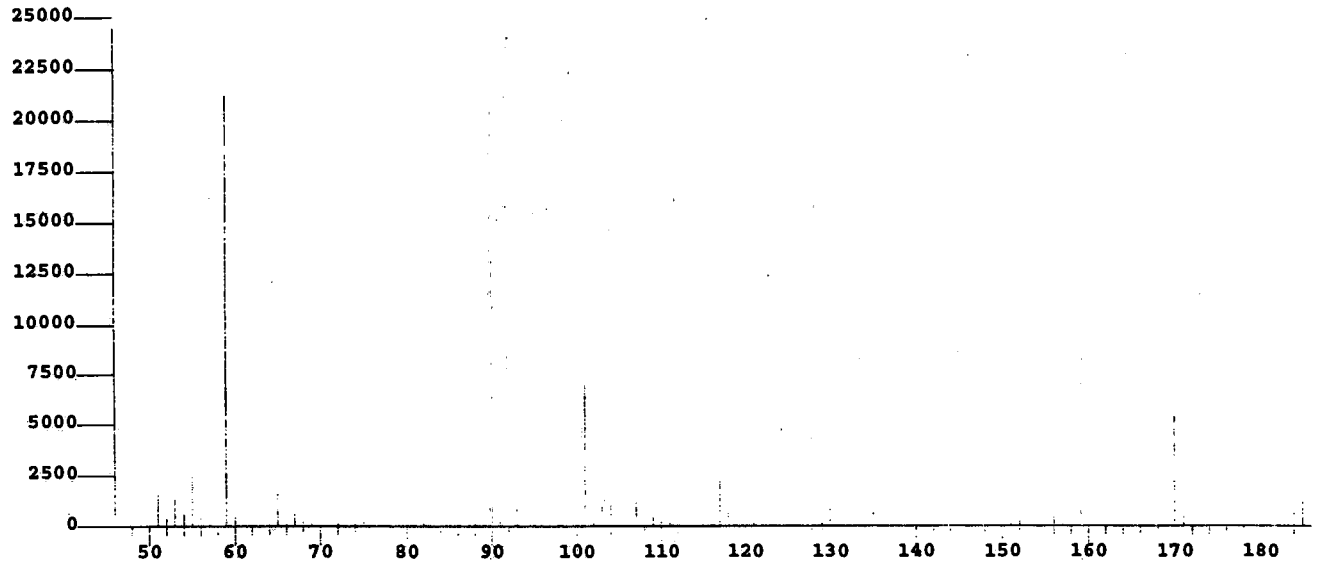
5-(Benzylsulphonyl)dihydro-1,3,5-dioxazine



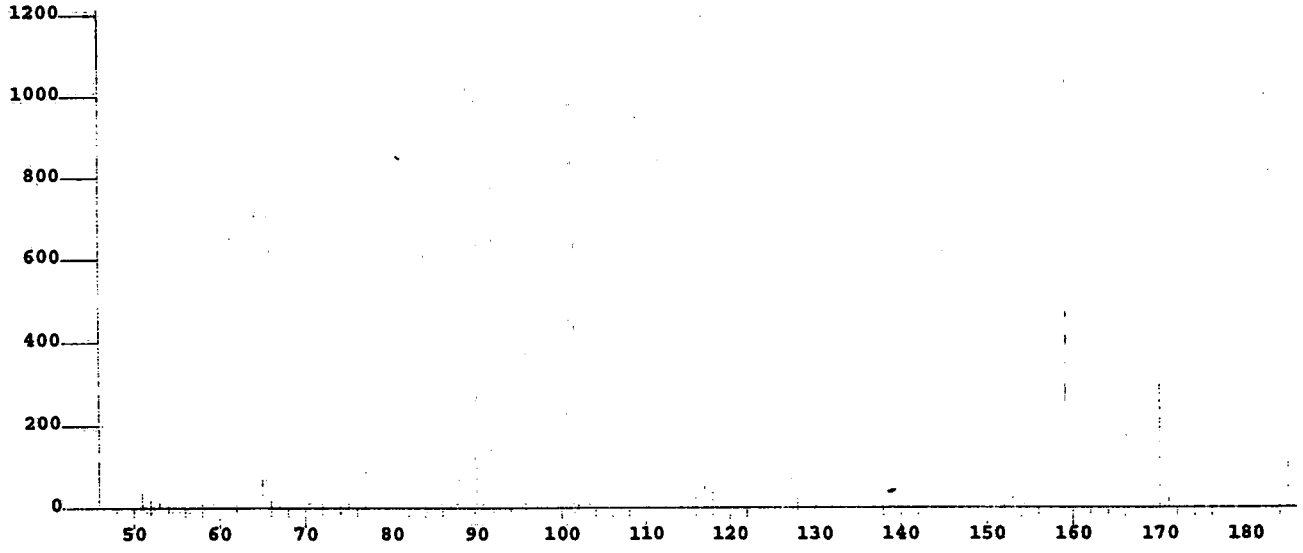
Data File: C:\BNAP\BNAPB584.MSS
Name: SAMP_625_W_BN_(15) 9
Misc Data: 0202018-003A,BB438,L,1000.0,1.00,1.0,0,
RT (min): 23.46 Scan: 2672
Area: 1261969 Rank: 8
Semi-quantitative Conc(uncorrected): 39.85 ug/l
Calculated Using Istd: d10-Acenaphthene@ 16.81

	Name	Cas No	SI	MW	Formula
1)	Phenylacetylamino, N-benzyl-		86.5	225	C15H15NO
2)	2-Benzyloxyethylamine	38336-04-8	79.7	151	C9H13NO
3)	5-(Benzylsulphonyl)dihydro-1,3,5-dioxazine	81763-18-0	76.9	243	C10H13NO4S
4)	Benzeneethanamine, .alpha.-methyl-	60-15-1	74.7	135	C9H13N
5)	Benzeneacetic acid, phenylmethyl ester	102-16-9	74.3	226	C15H14O2
6)	Bibenzyl	103-29-7	72.1	182	C14H14
7)	Benzene, (2,2,2-triethoxyethyl)-	16754-56-6	72.0	238	C14H22O3
8)	Cyclobutene, 2-propenylidene-	52097-85-5	71.6	92	C7H8
9)	1-Propanone, 1-phenyl-3-[2-(phenylmethoxy)phenyl]-	56052-51-8	71.6	316	C22H20O2
10)	Amphetamine	300-62-9	71.3	135	C9H13N

Scan: 1773 RT (min): 16.57



3-Chloro-2,6-diethylaniline



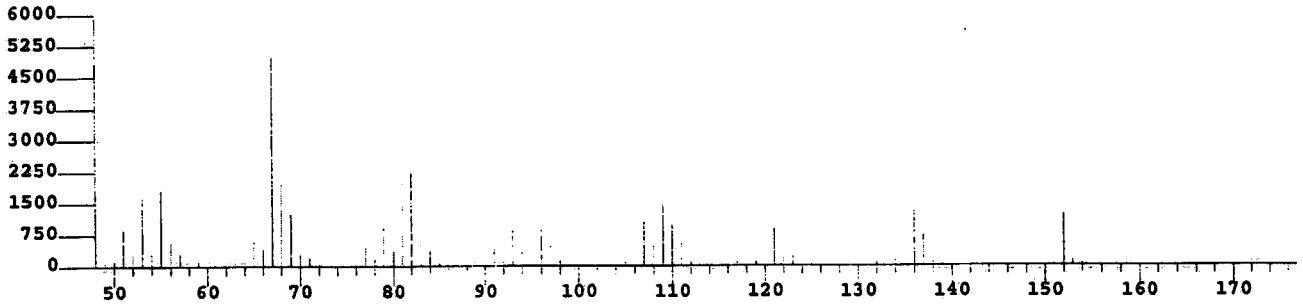
Data File: C:\BNAP\BNAPB584.MSS
Name: SAMP_625_W_BN_(15) 9
Misc Data: 0202018-003A,BB438,L,1000.0,1.00,1.0,0,
RT (min): 16.57 Scan: 1773
Area: 542022 Rank: 9
Semi-quantitative Conc(uncorrected): 17.12 ug/l
Calculated Using Istd: d8-Naphthalene@ 13.54

Name	Cas No	SI	MW	Formula
1) 3-Chloro-2,6-diethylaniline	67330-62-5	75.2	183	C10H14ClN

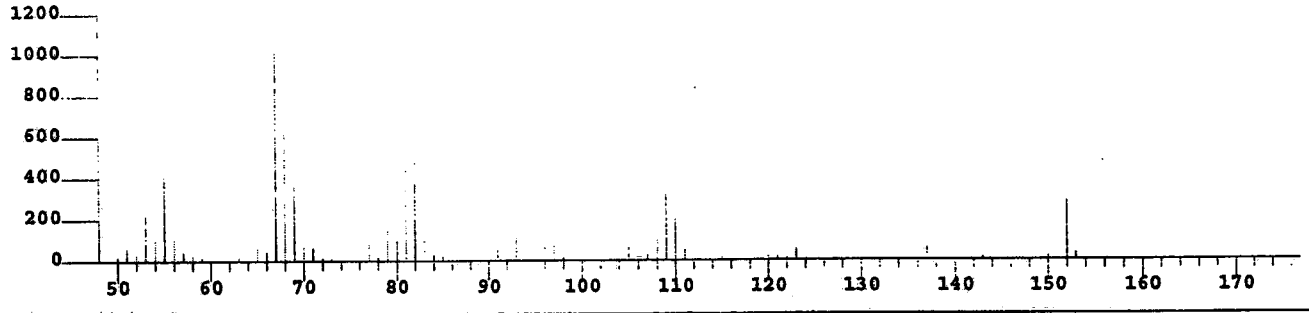
000146

39735

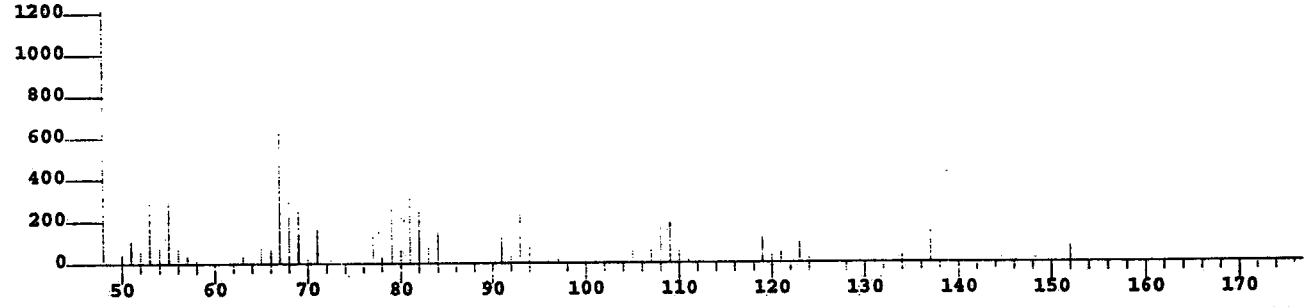
Scan: 1262 RT (min): 12.66



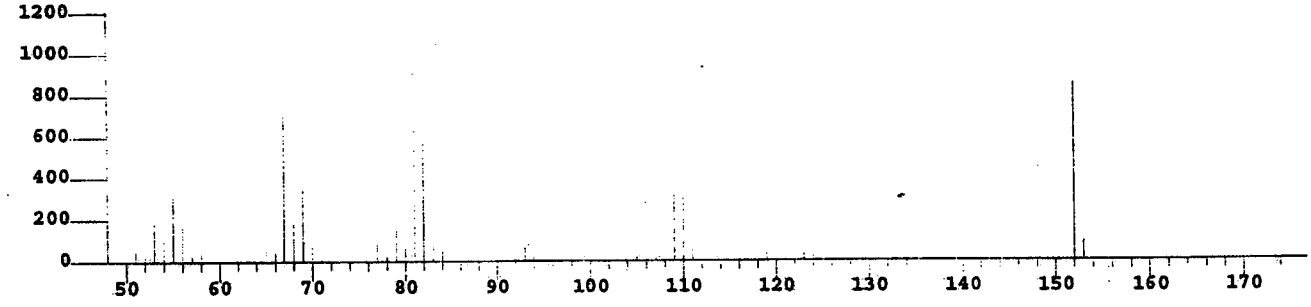
Cyclohexanone, 2-methyl-5-(1-methylethenyl)-



7-Oxabicyclo[4.1.0]heptane, 1-methyl-4-(1-methylethenyl)-



Bicyclo[4.1.0]heptan-3-one, 4,7,7-trimethyl-, [1R-(1.alpha.,4.al



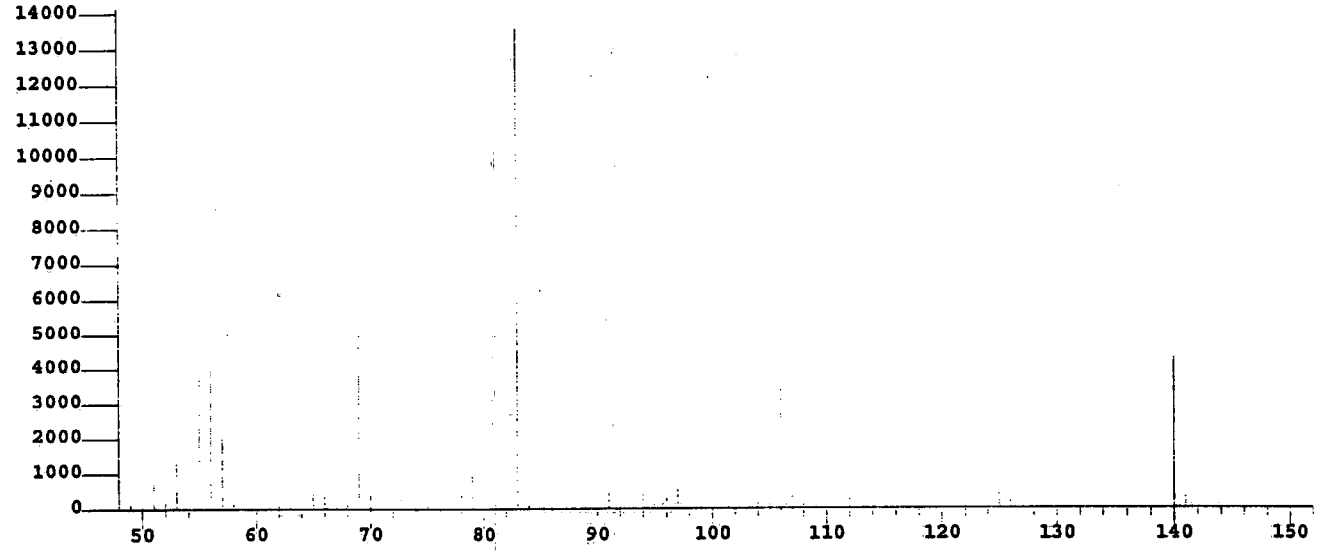
Data File: C:\BNAP\BNAPB584.MSS
Name: SAMP_625_W_BN_(15) 9
Misc Data: 0202018-003A,BB438,L,1000.0,1.00,1.0,0,
RT (min): 12.66 Scan: 1262
Area: 346625 Rank: 10
Semi-quantitative Conc(uncorrected): 10.48 ug/l
Calculated Using Istd: d4-1,4-Dichlorobenzene@ 9.15

	Name	Cas No	SI	MW	Formula
1)	Cyclohexanone, 2-methyl-5-(1-methylethenyl)-	7764-50-3	83.5	152	C10H16O
2)	7-Oxabicyclo[4.1.0]heptane, 1-methyl-4-(1-methylethenyl)-	1195-92-2	76.4	152	C10H16O
3)	Bicyclo[4.1.0]heptan-3-one, 4,7,7-trimethyl-, [1R-(1.alpha.,4.al	4176-04-9	75.0	152	C10H16O
4)	2(1H)-Benzocyclooctenone, decahydro-10a-methyl-, trans-	55103-68-9	75.0	194	C13H22O
5)	(R)-(-)-14-Methyl-8-hexadecyn-1-ol	64566-18-3	74.9	252	C17H32O
6)	2H-Inden-2-one, octahydro-3a-methyl-, trans-	20379-99-1	74.6	152	C10H16O
7)	Bicyclo[3.1.0]hexan-2-one, 4-methyl-1-(1-methylethyl)-, (1.alpha	2506-61-8	74.5	152	C10H16O
8)	Spiro[4.5]decan-6-one	13388-94-8	74.5	152	C10H16O
9)	9,17-Octadecadienal, (Z)-	56554-35-9	74.5	264	C18H32O
10)	1-Decalone (cis-trans)	4832-16-0	74.2	152	C10H16O

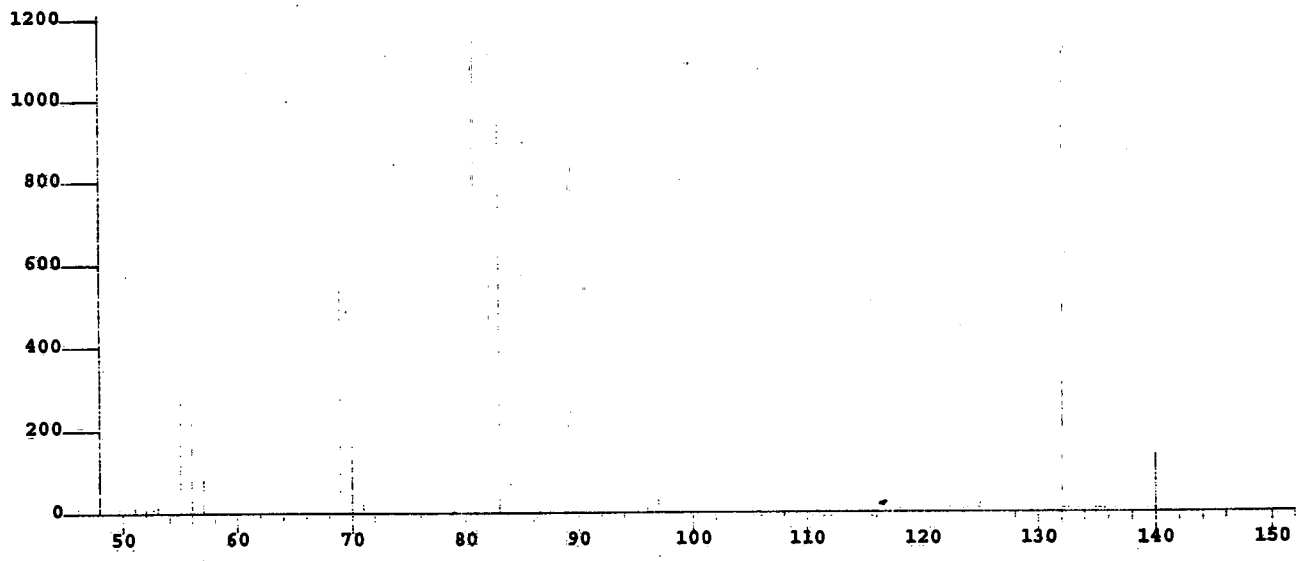
000147

3936

Scan: 877 RT (min): 9.78



Cyclohexanone, 3,3,5-trimethyl-



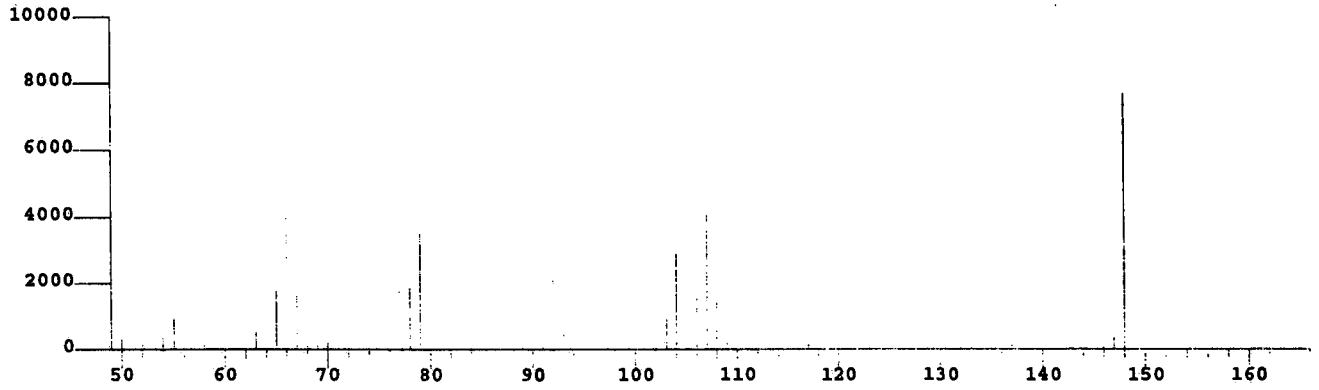
Data File: C:\BNAP\BNAPB584.MSS
Name: SAMP_625_W_BN_(15) 9
Misc Data: 0202018-003A,BB438,L,1000.0,1.00,1.0,0,
RT (min): 9.78 Scan: 877
Area: 338013 Rank: 11
Semi-quantitative Conc(uncorrected): 10.22 ug/l
Calculated Using Istd: d4-1,4-Dichlorobenzene@ 9.15

Name	Cas No	SI	MW	Formula
1) Cyclohexanone, 3,3,5-trimethyl-	873-94-9	75.6	140	C9H16O

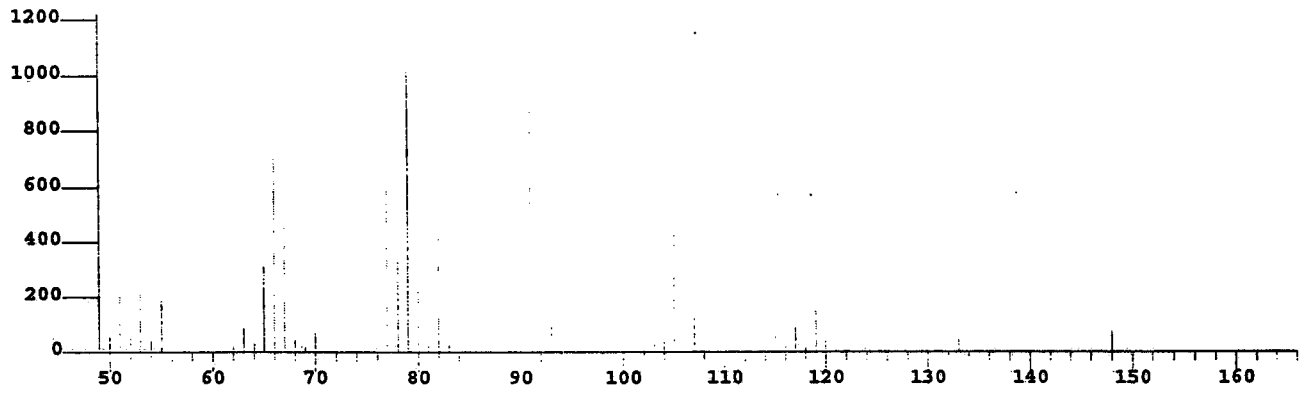
000148

3937

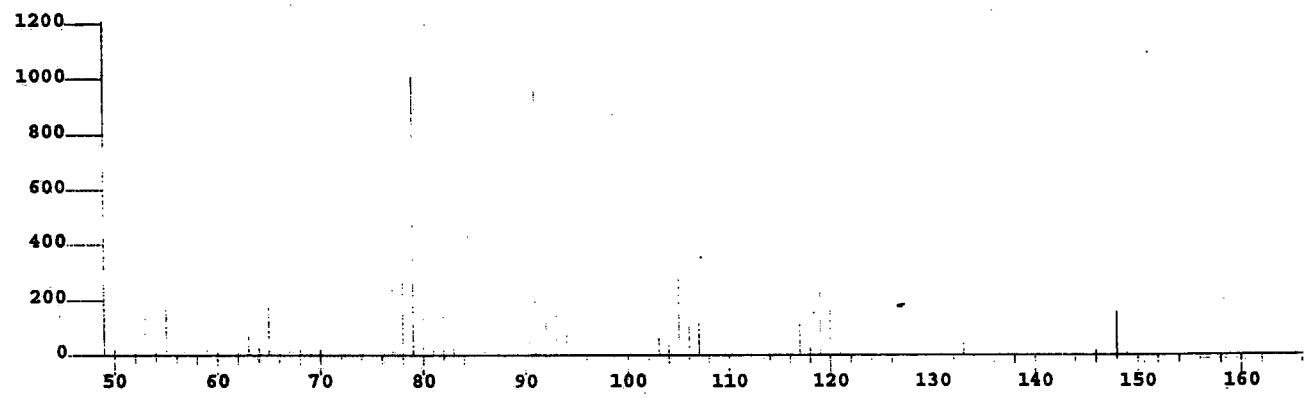
Scan: 1431 RT (min): 13.93



3-[(Z)-1-Butenyl]-4-vinylcyclopentene



1,4-Cycloheptadiene, 6-(1-butenyl)-, [S-(Z)]-



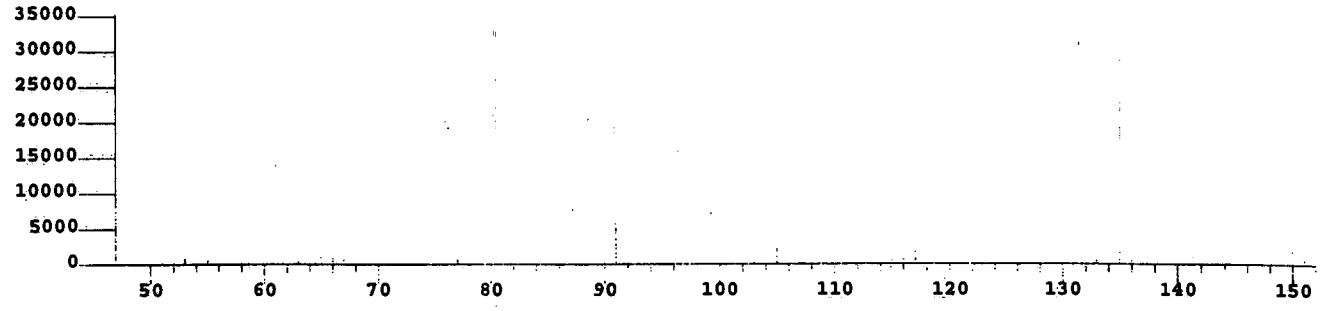
Data File: C:\BNAP\BNAPB584.MSS
Name: SAMP_625_W_BN_(15) 9
Misc Data: 0202018-003A,BB438,L,1000.0,1.00,1.0,0,
RT (min): 13.93 Scan: 1431
Area: 324872 Rank: 12
Semi-quantitative Conc(uncorrected): 9.82 ug/l
Calculated Using Istd: d8-Naphthalene@ 13.54

	Name	Cas No	SI	MW	Formula
1)	3-[(Z)-1-Butenyl]-4-vinylcyclopentene	52886-04-1	71.2	148	C11H16
2)	1,4-Cycloheptadiene, 6-(1-butenyl)-, [S-(Z)]-	33156-92-2	70.9	148	C11H16

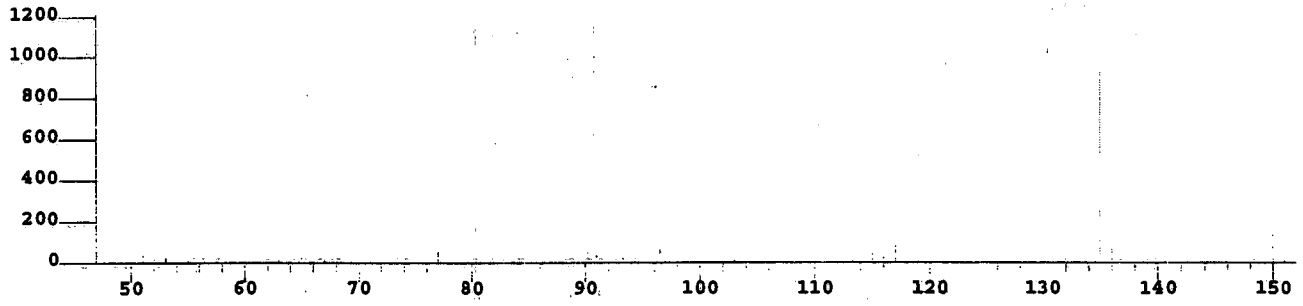
000149

3938

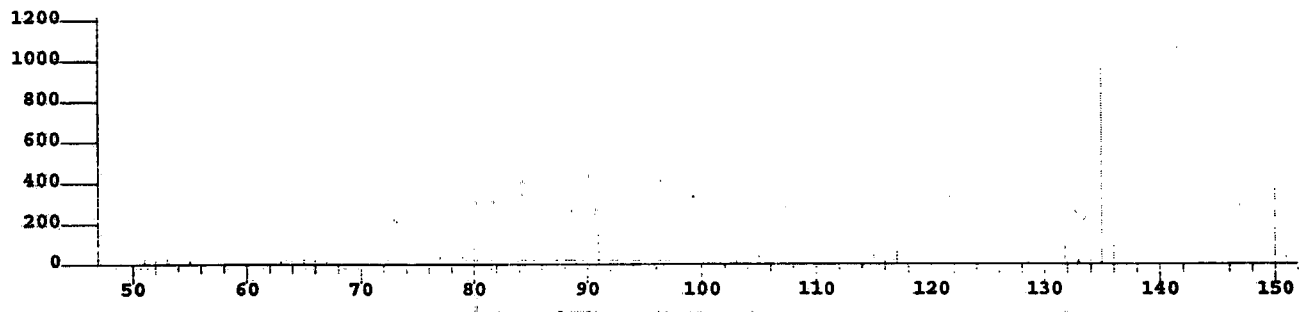
Scan: 1441 RT (min): 14.01



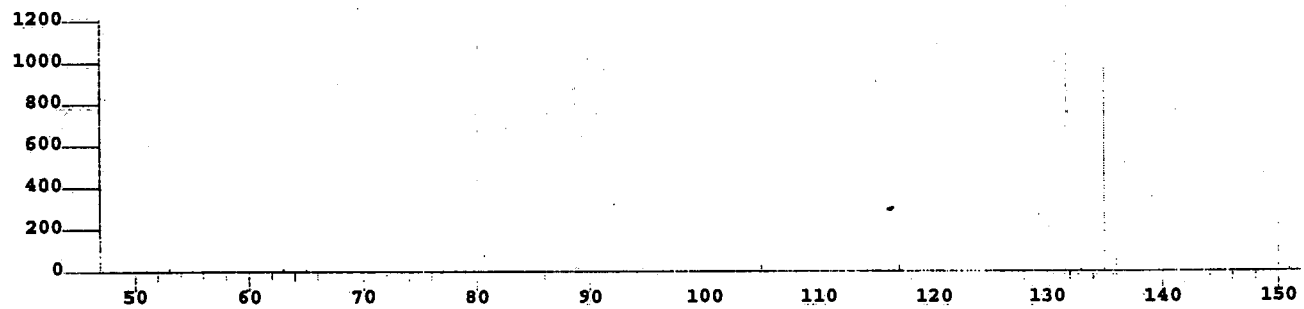
Phenol, 2-methyl-5-(1-methylethyl)-



Thymol



Phenol, 5-methyl-2-(1-methylethyl)-, acetate



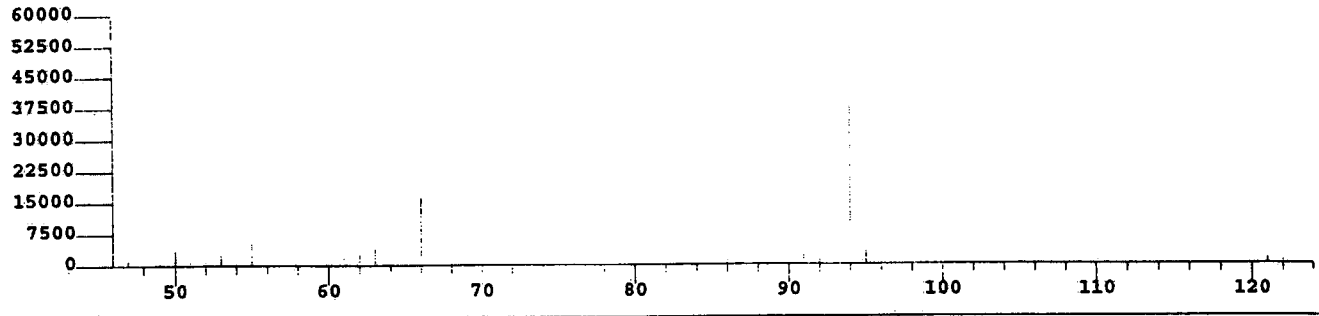
Data File: C:\BNAP\BNAPB584.MSS
Name: SAMP_625_W_BN_(15) 9
Misc Data: 0202018-003A,BB438,L,1000.0,1.00,1.0,0,
RT (min): 14.01 Scan: 1441
Area: 320919 Rank: 13
Semi-quantitative Conc(uncorrected): 9.70 ug/l
Calculated Using Istd: d8-Naphthalene@ 13.54

	Name	Cas No	SI	MW	Formula
1)	Phenol, 2-methyl-5-(1-methylethyl)-	499-75-2	87.2	150	C10H14O
2)	Thymol	89-83-8	87.1	150	C10H14O
3)	Phenol, 5-methyl-2-(1-methylethyl)-, acetate		84.3	192	C12H16O2
4)	3,4-Diethylphenol	875-85-4	83.5	150	C10H14O
5)	Phenol, 2-ethyl-4,5-dimethyl-	2219-78-5	83.0	150	C10H14O
6)	Phenol, 2,3,5,6-tetramethyl-	527-35-5	82.6	150	C10H14O
7)	2,5-Diethylphenol	876-20-0	81.5	150	C10H14O
8)	Phenol, 5-methyl-2-(1-methylethyl)-, acetate	528-79-0	81.4	192	C12H16O2
9)	Phenol, 2-(1,1-dimethylethyl)-	88-18-6	79.7	150	C10H14O
10)	Benzene, 1-methoxy-4-(1-methylethyl)-	4132-48-3	79.3	150	C10H14O

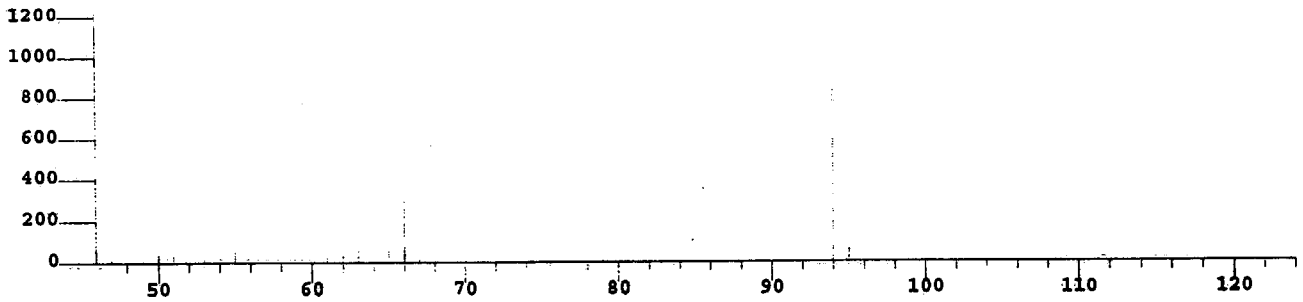
000150

3939

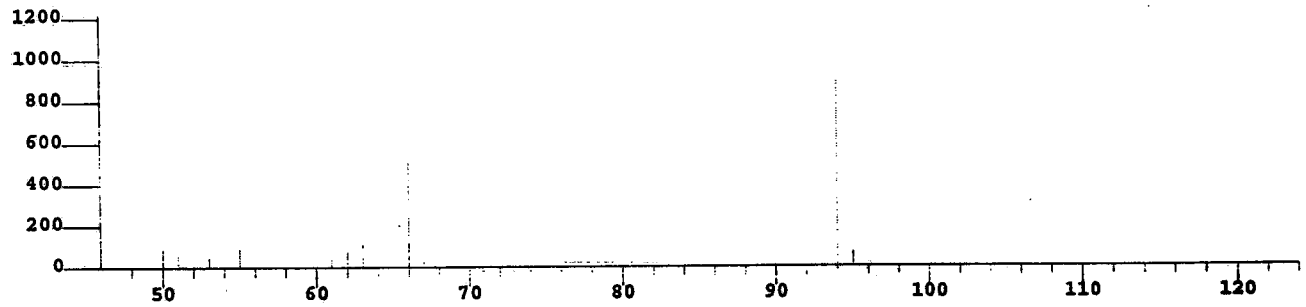
Scan: 744 RT (min): 8.78



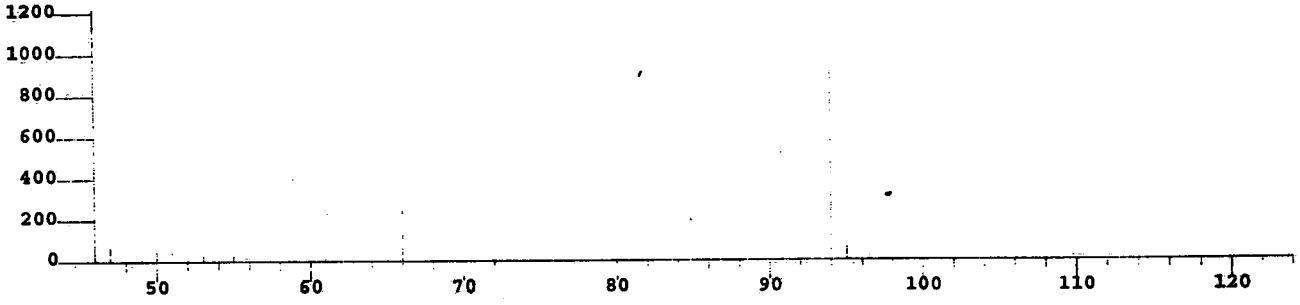
Phosphonic acid, (p-hydroxyphenyl)-



Benzenesulfonic acid, 4-hydroxy-



Phenol



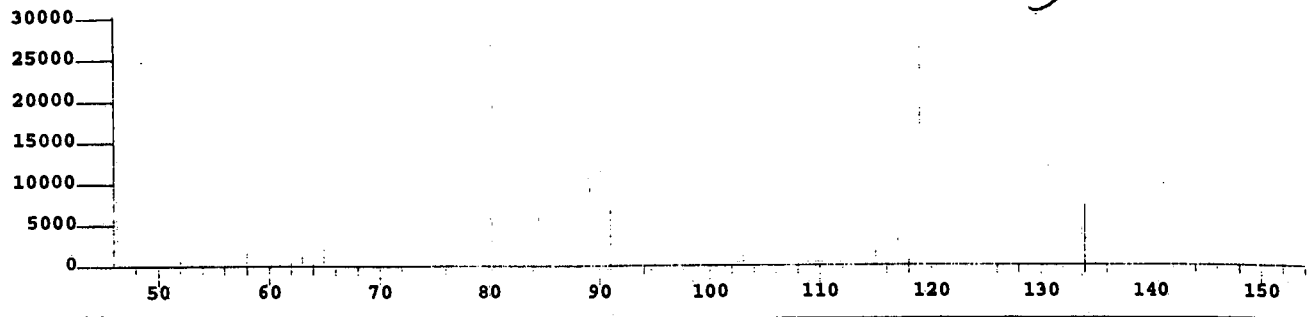
Data File: C:\BNAP\BNAPB584.MSS
Name: SAMP_625_W_BN_(15) 9
Misc Data: 0202018-003A,BB438,L,1000.0,1.00,1.0,0,
RT (min): 8.78 Scan: 744
Area: 319568 Rank: 14
Semi-quantitative Conc(uncorrected): 9.66 ug/l
Calculated Using Istd: d4-1,4-Dichlorobenzene@ 9.15

	Name	Cas No	SI	MW	Formula
1)	Phosphonic acid, (p-hydroxyphenyl)-	33795-18-5	89.2	174	C6H7O4P
2)	Benzenesulfonic acid, 4-hydroxy-	98-67-9	86.8	174	C6H6O4S
3)	Phenol	108-95-2	84.9	94	C6H6O
4)	Carbamic acid, phenyl ester	622-46-8	82.6	137	C7H7NO2
5)	Acetic acid, phenyl ester	122-79-2	82.5	136	C8H8O2
6)	Carbamic acid, butylmethyl-, phenyl ester	54644-61-0	71.5	207	C12H17NO2
	Pyrimidine, 5-methyl-	2036-41-1	70.3	94	C5H6N2

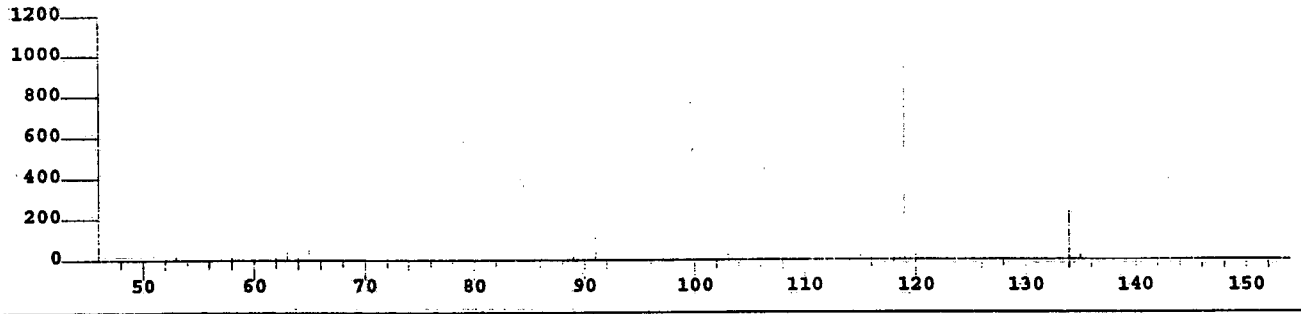
000151

3940

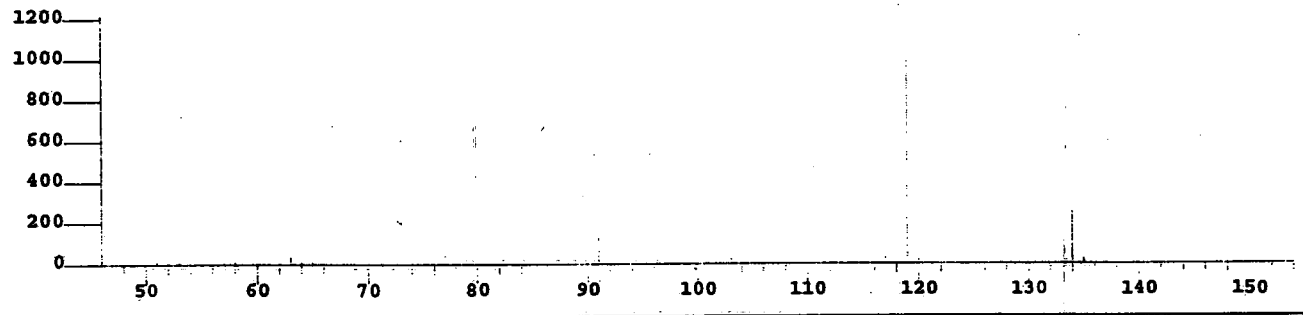
Scan: 817 RT (min): 9.33



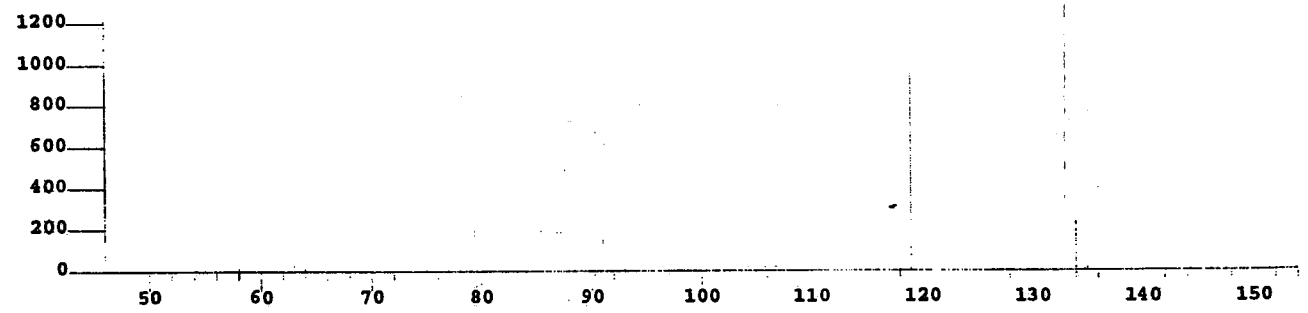
Benzene, 1-methyl-2-(1-methylethyl)-



Benzene, 1-methyl-3-(1-methylethyl)-



Benzene, 1-methyl-4-(1-methylethyl)-



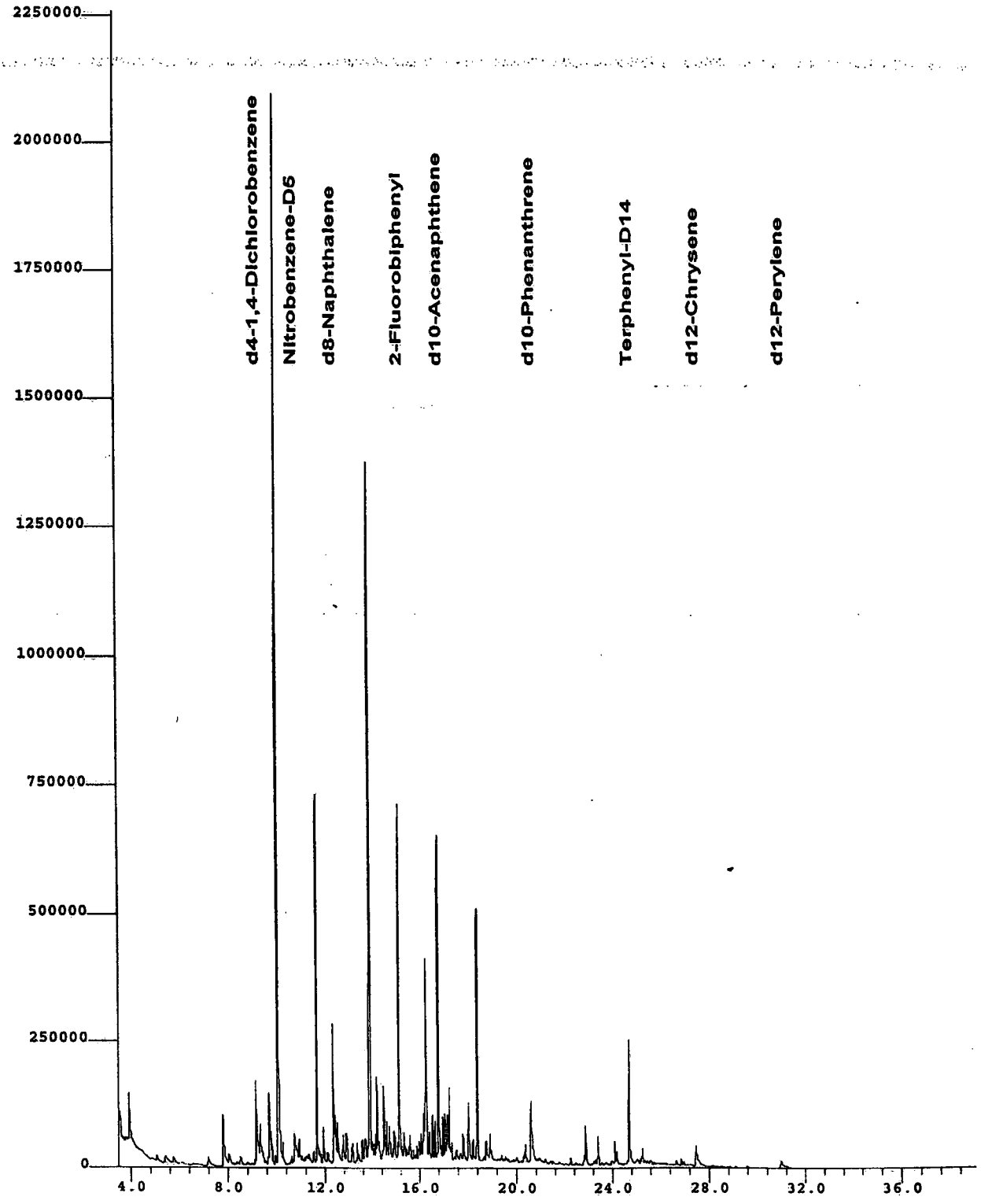
Data File: C:\BNAP\BNAPB584.MSS
Name: SAMP_625_W_BN_(15) 9
Misc Data: 0202018-003A,BB438,L,1000.0,1.00,1.0,0,
RT (min): 9.33 Scan: 817
Area: 288929 Rank: 15
Semi-quantitative Conc(uncorrected): 8.74 ug/l
Calculated Using Istd: d4-1,4-Dichlorobenzene@ 9.15

	Name	Cas No	SI	MW	Formula
1)	Benzene, 1-methyl-2-(1-methylethyl)-	527-84-4	86.3	134	C10H14
2)	Benzene, 1-methyl-3-(1-methylethyl)-	535-77-3	85.8	134	C10H14
3)	Benzene, 1-methyl-4-(1-methylethyl)-	99-87-6	85.6	134	C10H14
4)	Bicyclo[4.1.0]hept-4-en-3-ol, 3,7,7-trimethyl-, [1S-(1.alpha.,3.	4017-81-6	83.6	152	C10H16O
5)	Benzene, methyl(1-methylethyl)-	25155-15-1	82.6	134	C10H14
6)	Benzene, 1-ethyl-2,4-dimethyl-	874-41-9	81.7	134	C10H14
7)	Benzene, 2-ethyl-1,3-dimethyl-	2870-04-4	80.6	134	C10H14
8)	Benzene, 4-ethyl-1,2-dimethyl-	934-80-5	79.1	134	C10H14
9)	Benzene, 1,2,3,5-tetramethyl-	527-53-7	78.9	134	C10H14
10)	Benzene, tert-butyl-	98-06-6	78.8	134	C10H14

000152

3941

Data File: C:\BNAP\BNAPB585.MSS
Quant Output File: C:\BNAP\BNAPB585.Q
Injection Time: 02/08/82 21:58
Misc: 0202018-004A,BB438,L,1000.0,1.00,1.0,0,



000153

3942

QUANT REPORT
Quant Rev: 10

Operator Id:
Dilution Factor:<None>
Output File: C:\BNAP\BNAPB585.Q
Data File: c:\bnap\bnapb585.mss
Name: SAMP_625_W_BN_(16) 1
Misc: 0202018-004A,BB438,L,1000.0,1.00,1.0,0,
ID File: c:\bnap\hsl\625b.i
Title: SW-846 Method 8270 Semi-Volatile Quant ID File
Last Calib: 01/17/82 10:29
Quant Time : 82/21/19 52:90
Injected at : 02/08/82 21:58
Last Qcal Date: None

Num	Compound	R.T.	Q Ion	Area	Conc	Units	Q
1)	*d4-1,4-Dichlorobenzene	9.15	152	126935	40.00	ug/l	98
14)	*d8-Naphthalene	12.32	136	834605	40.00	ug/l	100
15)	Nitrobenzene-D5	10.71	54	233973	84.62	ug/l	0
27)	*d10-Acenaphthene	16.79	162	387391	40.00	ug/l	90
30)	2-Fluorobiphenyl	15.13	172	817692	54.14	ug/l	95
43)	*d10-Phenanthrene	20.60	188	267288	40.00	ug/l	99
54)	*d12-Chrysene	27.45	240	95583	40.00	ug/l	100
56)	Terphenyl-D14	24.71	244	150613	123.00	ug/l	95
62)	*d12-Perylene	30.97	264	25923	40.00	ug/l	100

* Compound is Internal Standard

000154

3943

Int report for Plus Analysis ..... Plus version 5.0

Quant Output File: c:\bnap\bnapb585.q
Data File Name: C:\BNAP\BNAPB585.MSS
Name: SAMP_625_W_BN_(16) 1
Misc Data: 0202018-004A,BB438,L,1000.0,1.00,1.0,0,
Plus Method File: C:\AQUARIUS\FILES\BNA.NIS
Parameters Minimum % Istd Area to Report: 10.00 Rank Order
Absolute maximum Number of Peaks: 15 Date: 02-15-1982
Which Istd from Output file(1st,2nd)..: 2 Time: 10:33:15
Maximum Hits for graphics: 3 Delta Rt: 0.06

#	R.T. (min.)	Start Time	End Time	Width	Type	Area	Rank	
30)	10.07	10.01	10.23	0.213	VV	1.09e+07	CMPD	Nitrobenzene
64)	13.91	13.77	13.96	0.191	BV	9297684	1	
78)	15.13	15.09	15.27	0.179	VV	3119608	CMPD	2-Fluorobiphenyl
44)	11.66	11.59	11.73	0.139	VV	3026578	2	
95)	16.79	16.74	16.86	0.125	VV	2640167	ISTD	d10-Acenaphthene
110)	18.40	18.30	18.57	0.266	VB	2098840	3	
90)	16.29	16.23	16.35	0.123	VV	1965438	4	
148)	24.71	24.67	24.87	0.201	VV	1122923	CMPD	Terphenyl-D14
50)	12.32	12.29	12.37	0.087	BB	1093854	ISTD	d8-Naphthalene
68)	14.19	14.16	14.25	0.096	VV	936403	5	
21)	9.15	9.12	9.22	0.100	BB	868957	ISTD	d4-1,4-Dichlorobenzene
14)	7.80	7.78	8.01	0.228	BV	851563	6	
71)	14.48	14.40	14.57	0.161	VB	821361	7	
89)	16.18	16.11	16.23	0.122	VV	779151	8	
99)	17.16	17.11	17.21	0.100	VV	709865	CMPD	4-Nitrophenol
108)	18.03	17.97	18.13	0.164	BB	709004	9	
126)	20.60	20.57	20.67	0.093	BB	592909	ISTD	d10-Phenanthrene
100)	17.25	17.21	17.28	0.067	VV	577902	10	
6)	3.93	3.89	4.01	0.118	BB	572735	11	
98)	17.07	17.02	17.11	0.091	VV	525808	12	
26)	9.70	9.67	9.72	0.047	VV	469597	CMPD	N-Nitrosodi-n-propylami
27)	9.73	9.72	9.77	0.054	VV	467117	CMPD	N-Nitrosodi-n-propylami
75)	14.92	14.84	15.01	0.177	VB	443708	13	
1)	3.53	3.48	3.61	0.133	BB	419877	14	
92)	16.55	16.48	16.60	0.115	VV	410934	15	
79)	15.36	15.27	15.42	0.146	VV	395597	16	
97)	16.98	16.94	17.02	0.082	VV	375540	CMPD	Acenaphthene
137)	22.88	22.85	22.98	0.138	VB	370446	17	
93)	16.65	16.60	16.70	0.099	VV	357346	18	
48)	11.93	11.90	12.02	0.123	VB	350255	19	
73)	14.71	14.67	14.77	0.097	BV	343942	20	
53)	12.75	12.69	12.83	0.134	BV	328353	21	
91)	16.41	16.35	16.48	0.130	VV	324259	22	
106)	17.80	17.77	17.90	0.139	BV	320188	23	
22)	9.33	9.30	9.38	0.086	BV	316430	CMPD	Phenol
28)	9.79	9.77	9.89	0.120	VB	307661	24	
140)	23.41	23.33	23.49	0.156	VB	274862	25	
54)	12.88	12.83	12.90	0.070	VV	265536	26	

000155

3944

Int Report for Plus Analysis ..... Plus Version 5.0

Quant Output File: c:\bnap\bnapb585.q
Data File Name: C:\BNAP\BNAPB585.MSS
Name: SAMP_625_W_BN_(16) 1
Misc Data: 0202018-004A,BB438,L,1000.0,1.00,1.0,0,
Plus Method File: C:\AQUARIUS\FILES\BNA.NIS
Parameters Minimum % Istd Area to Report: 10.00 Rank Order
Absolute maximum Number of Peaks: 15 Date: 02-15-1982
Which Istd from Output file(1st,2nd)..: 2 Time: 10:33:15
Maximum Hits for graphics: 3 Delta Rt: 0.06

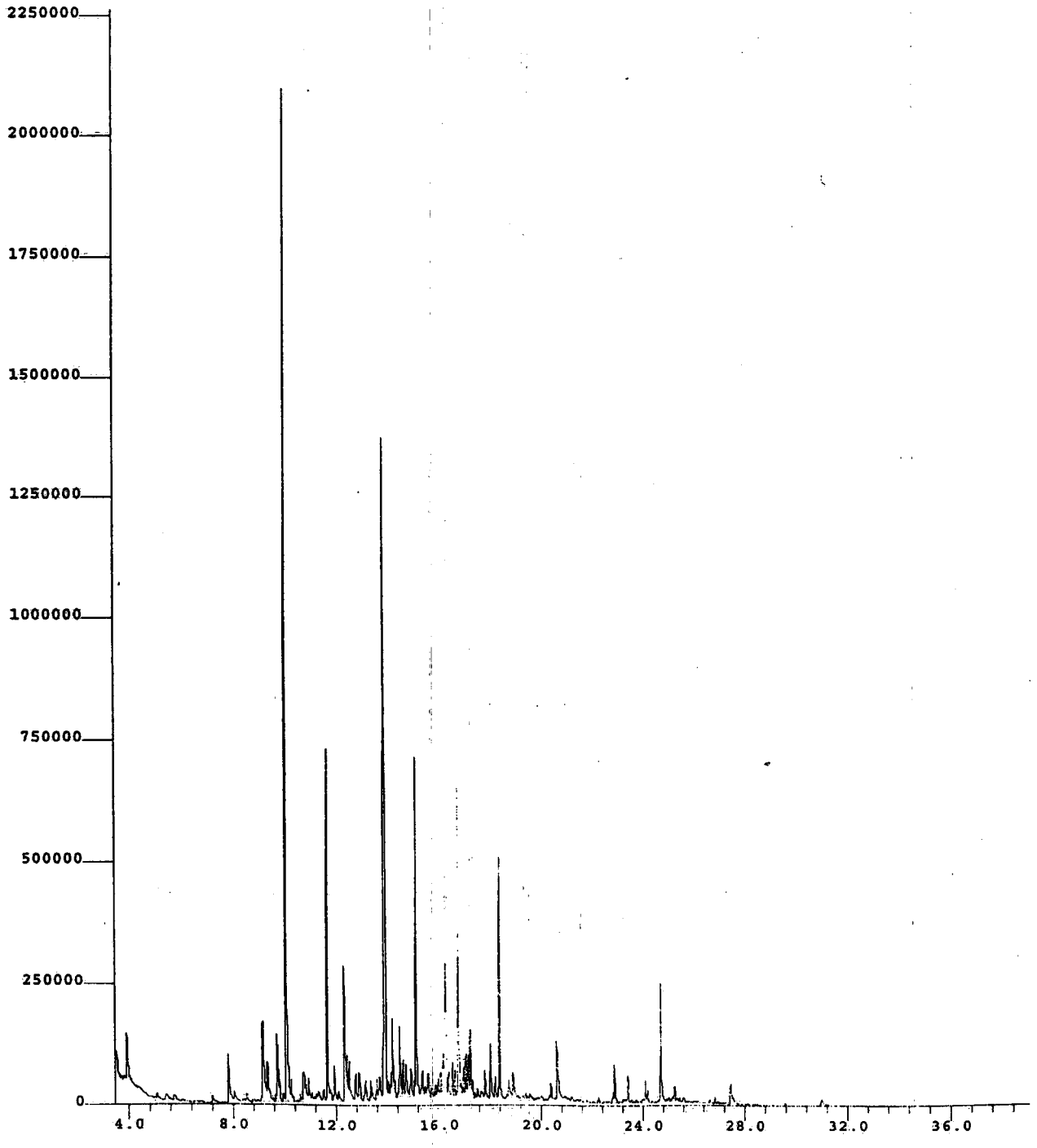
#	R.T. (min.)	Start Time	End Time	Width	Type	Area	Rank	
82)	15.59	15.57	15.69	0.122	VB	261213	27	
52)	12.52	12.49	12.62	0.132	BB	241127	28	
88)	16.07	16.03	16.11	0.073	VV	234265	29	
58)	13.16	13.13	13.25	0.125	VB	232311	30	
164)	27.45	27.41	27.53	0.118	BB	227672	ISTD	bis(2-Ethylhexyl)phthal
72)	14.60	14.57	14.64	0.065	BB	223674	31	
109)	18.21	18.17	18.30	0.130	BV	218555	32	
67)	14.14	14.10	14.16	0.056	VV	215529	33	
60)	13.35	13.31	13.40	0.086	VV	210379	34	
55)	12.92	12.90	12.97	0.070	VV	206775	35	
69)	14.27	14.25	14.36	0.111	VB	202353	36	
51)	12.43	12.41	12.47	0.063	BB	198396	CMPD	Naphthalene
124)	20.37	20.33	20.49	0.157	VB	194823	37	
65)	13.99	13.96	14.03	0.071	VV	190831	38	
62)	13.57	13.53	13.62	0.085	BB	184950	39	
112)	18.74	18.70	18.81	0.107	BB	183964	40	
113)	18.90	18.87	18.94	0.067	BB	182198	41	
15)	8.03	8.01	8.15	0.140	VB	181631	42	
87)	15.98	15.96	16.03	0.072	VV	178240	43	
34)	10.73	10.69	10.75	0.054	BB	177693	CMPD	Nitrobenzene-D5
145)	24.10	24.06	24.13	0.076	VV	177187	44	
153)	25.26	25.21	25.31	0.101	VV	175580	45	
66)	14.05	14.03	14.10	0.072	VV	170162	46	
41)	11.30	11.26	11.36	0.101	VV	161158	47	
96)	16.88	16.86	16.94	0.074	VV	160620	48	
31)	10.26	10.23	10.30	0.076	VB	158868	49	
43)	11.52	11.45	11.59	0.146	BV	158667	CMPD	2-Nitrophenol
81)	15.56	15.51	15.57	0.065	VV	147488	50	
80)	15.45	15.42	15.51	0.089	VV	144997	51	
13)	7.18	7.16	7.31	0.146	BB	139127	52	
17)	8.52	8.47	8.65	0.178	BB	137590	CMPD	Phenol-D6
102)	17.34	17.32	17.38	0.066	VB	134590	53	
37)	10.93	10.90	10.97	0.069	BB	133970	54	
57)	13.10	13.05	13.13	0.079	BV	132028	55	
45)	11.76	11.73	11.79	0.055	VV	127840	56	

Quant Output File: c:\bnap\bnapb585.q
Data File Name: C:\BNAP\BNAPB585.MSS
Name: SAMP_625_W_BN_(16) 1
Misc Data: 0202018-004A,BB438,L,1000.0,1.00,1.0,0,
Plus Method File: C:\AQUARIUS\FILES\BNA.NIS
Parameters Minimum % Istd Area to Report: 10.00
Absolute maximum Number of Peaks: 15
Which Istd from Output file(1st,2nd)..: 2
Maximum Hits for graphics: 3

Rank Order
Date: 02-15-1982
Time: 10:33:16
Delta Rt: 0.06

#	R.T. (min.)	Start Time	End Time	Width	Type	Area	Rank
101)	17.30	17.28	17.32	0.041	VV	115310	57
76)	15.05	15.01	15.06	0.048	BV	115095	58
146)	24.19	24.13	24.24	0.109	VB	113067	59
136)	22.82	22.73	22.85	0.113	BV	112971	60
77)	15.08	15.06	15.09	0.032	VV	110265	61
10)	5.74	5.71	5.84	0.137	BB	110027	62

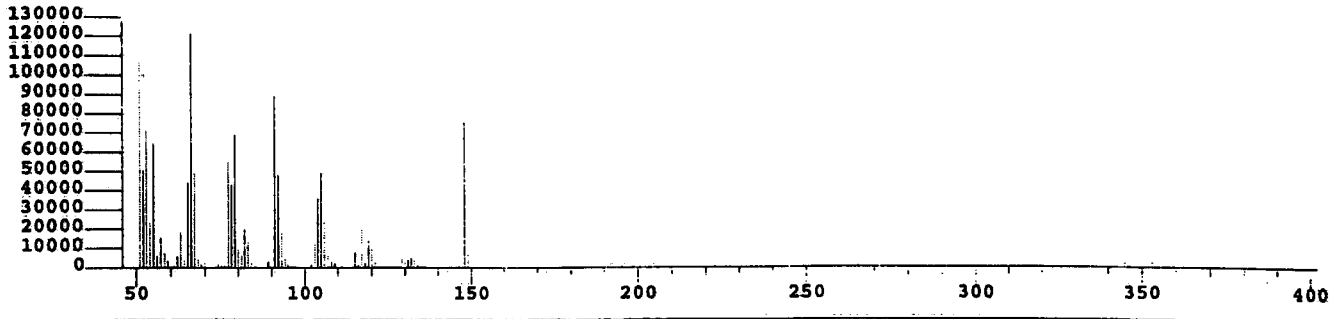
Data File: C:\BNAP\BNAPB585.MSS
Quant Output File: c:\bnap\bnapb585.q
Injection Time: 02/08/82 21:58
Misc: 0202018-004A,BB438,L,1000.0,1.00,1.0,0,



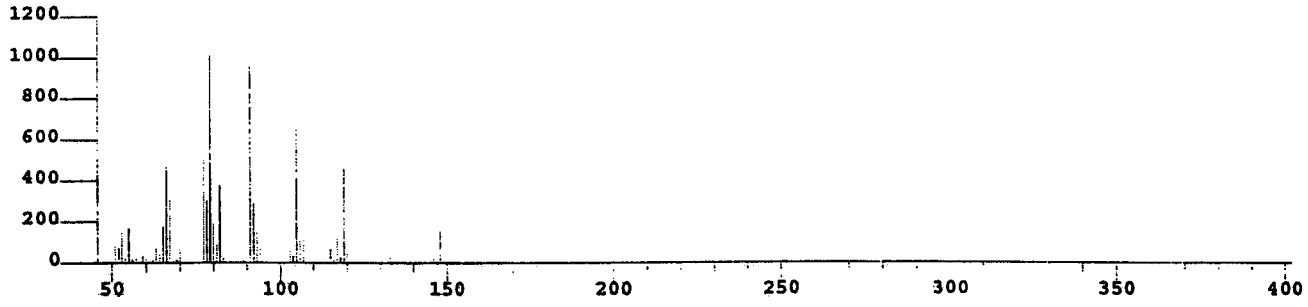
000158

3947

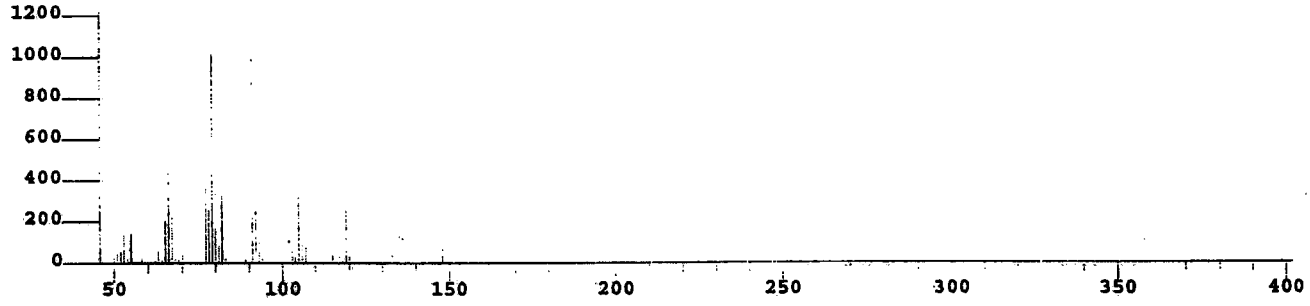
Scan: 1402 RT (min): 13.91



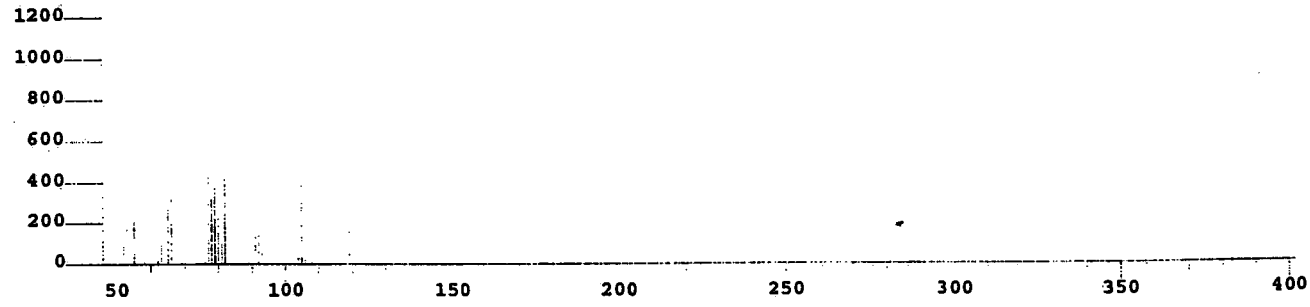
1,4-Cycloheptadiene, 6-(1-butenyl)-, [S-(Z)]-



6-[(Z)-1-Butenyl]-1,4-cycloheptadiene



3-[(Z)-1-Butenyl]-4-vinylcyclopentene



Data File: C:\BNAP\BNAPB585.MSS
Name: SAMP_625_W_BN_(16) 1
Misc Data: 0202018-004A,BB438,L,1000.0,1.00,1.0,0,
RT (min): 13.91 Scan: 1402
Area: 9297684 Rank: 1
Semi-quantitative Conc(uncorrected): 340.00 ug/l
Calculated Using Istd: d8-Naphthalene@ 12.32

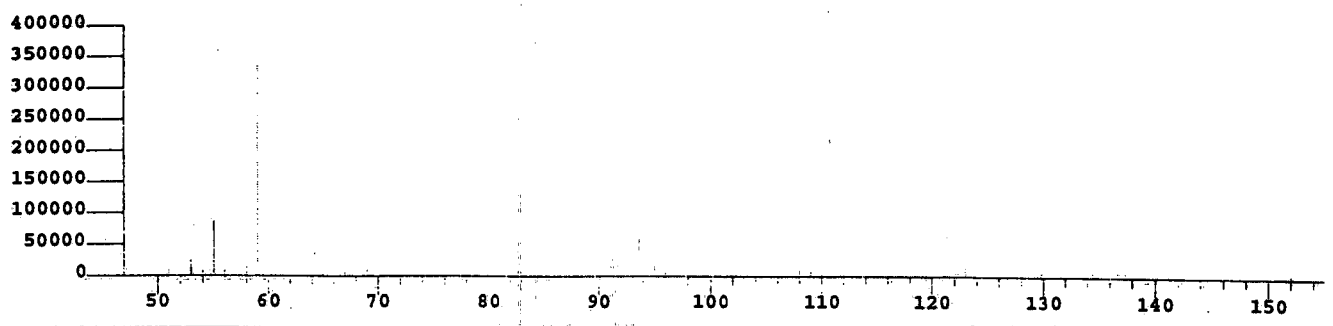
	Name	Cas No	SI	MW	Formula
1)	1,4-Cycloheptadiene, 6-(1-butenyl)-, [S-(Z)]-	33156-92-2	74.0	148	C11H16
2)	6-[(Z)-1-Butenyl]-1,4-cycloheptadiene	33156-93-3	73.1	148	C11H16
3)	3-[(Z)-1-Butenyl]-4-vinylcyclopentene	52886-04-1	72.4	148	C11H16

000159

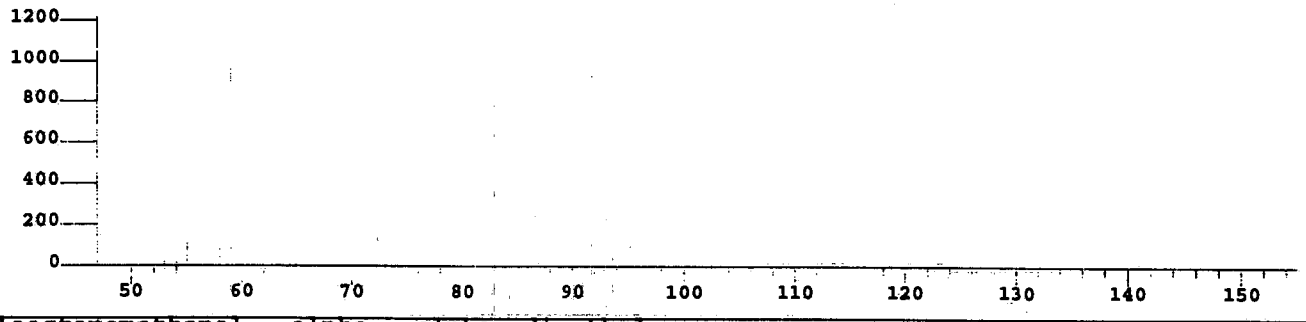
39458

(11)

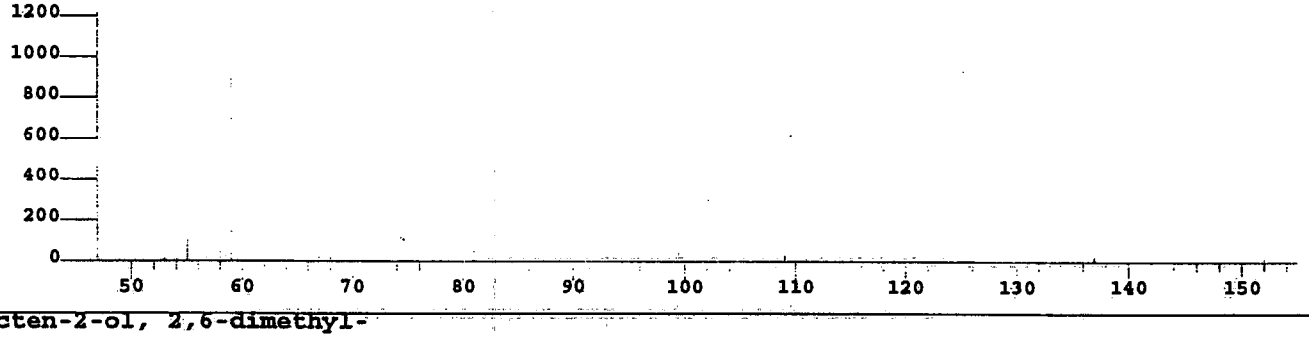
Scan: 1114 RT (min): 11.66



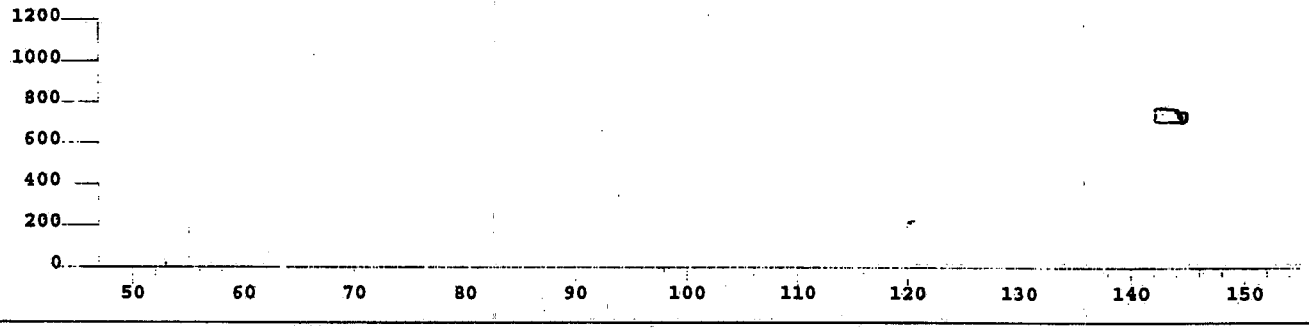
Cyclohexanemethanol, .alpha.,.alpha.,4-trimethyl-



Cyclooctanemethanol, .alpha.,.alpha.-dimethyl-



7-Octen-2-ol, 2,6-dimethyl-

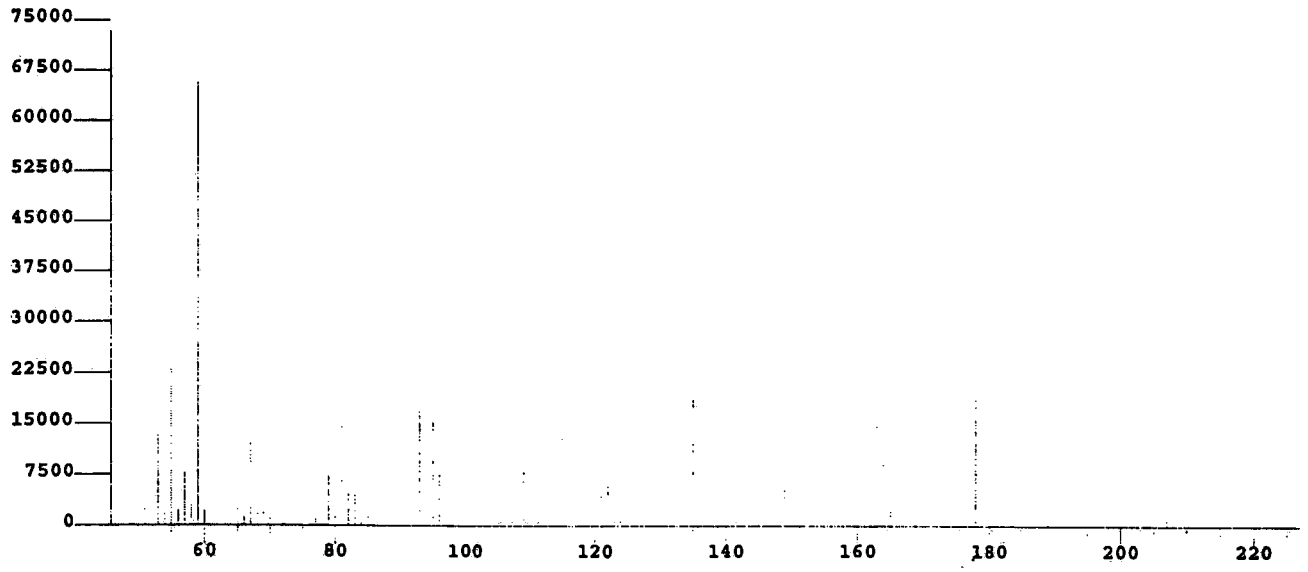


Data File: C:\BNAP\BNAPB585.MSS
Name: SAMP_625_W_BN_(16) 1
Misc Data: 0202018-004A,BB438,L,1000.0,1.00,1.0,0,
RT (min): 11.66 Scan: 1114
Area: 3026578 Rank: 2
Semi-quantitative Conc(uncorrected): 4198.77 ug/l
Calculated Using Istd: d4-1,4-Dichlorobenzene 9.15

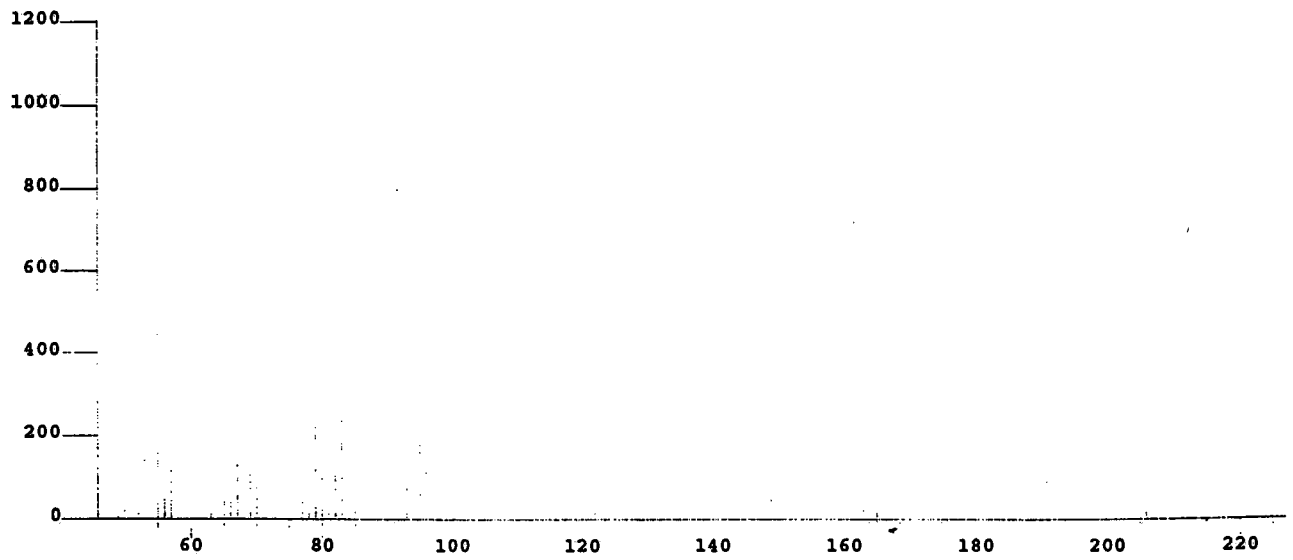
	Name	Cas No	SI	MW	Formula
1)	Cyclohexanemethanol, .alpha.,.alpha.,4-trimethyl-	498-81-7	83.2	156	C10H20O
2)	Cyclooctanemethanol, .alpha.,.alpha.-dimethyl-	16624-06-9	76.1	170	C11H22O
3)	7-Octen-2-ol, 2,6-dimethyl-	18479-58-8	75.6	156	C10H20O
4)	1,8-Nonanediol, 8-methyl-	54725-73-4	72.2	174	C10H22O2
5)	2,3-Dimethyl-4-penten-2-ol	19781-52-3	71.5	114	C7H14O
6)	3-Pentanol	584-02-1	70.9	88	C5H12O
7)	1,7-Octanediol, 3,7-dimethyl-	107-74-4	70.7	174	C10H22O2
	Methyl 16-methoxyheptadecanoate		70.4	314	C19H38O3

000160

Scan: 1955 RT (min): 18.40



Cyclohexane, 1,1,2-trimethyl-3,5-bis(1-methylethenyl)-, (2.alpha



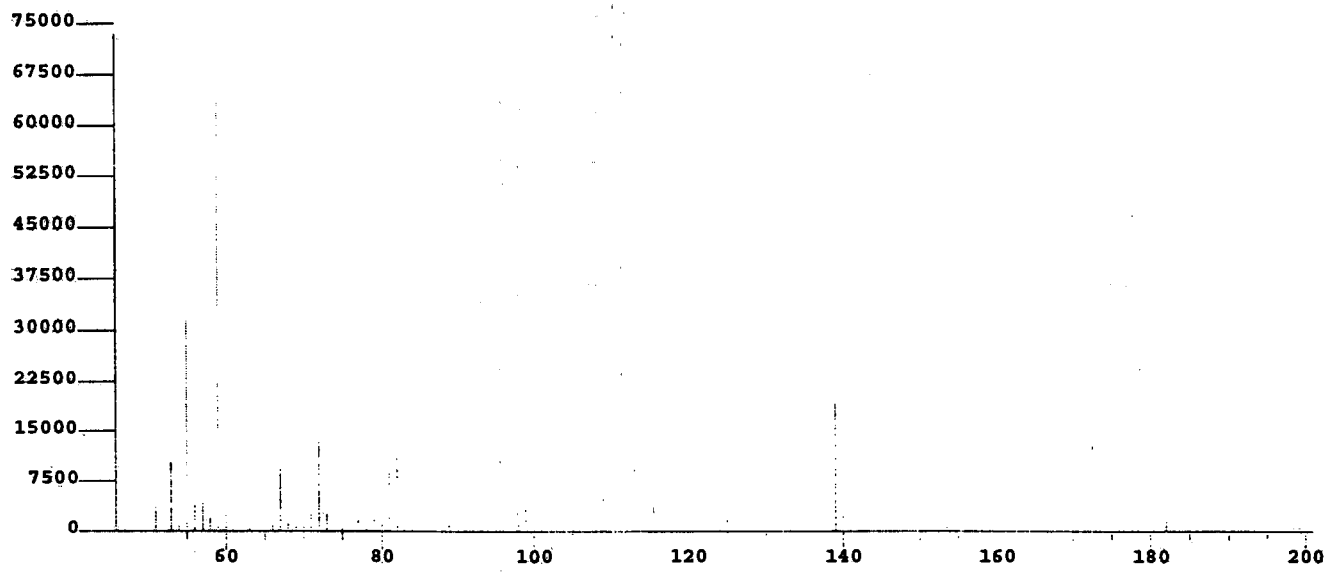
Data File: C:\BNAP\BNAPB585.MSS
Name: SAMP 625 W BN (16) 1
Misc Data: 0202018-004A,BB438,L,1000.0,1.00,1.0,0,
RT (min): 18.40 Scan: 1955
Area: 2098840 Rank: 3
Semi-quantitative Conc(uncorrected): 31.80 ug/l
Calculated Using Istd: d10-Acenaphthene@ 16.79

Name	Cas No	SI	MW	Formula
1) Cyclohexane, 1,1,2-trimethyl-3,5-bis(1-methylethenyl)-, (2.alpha	62337-96-6	70.3	206	C15H26

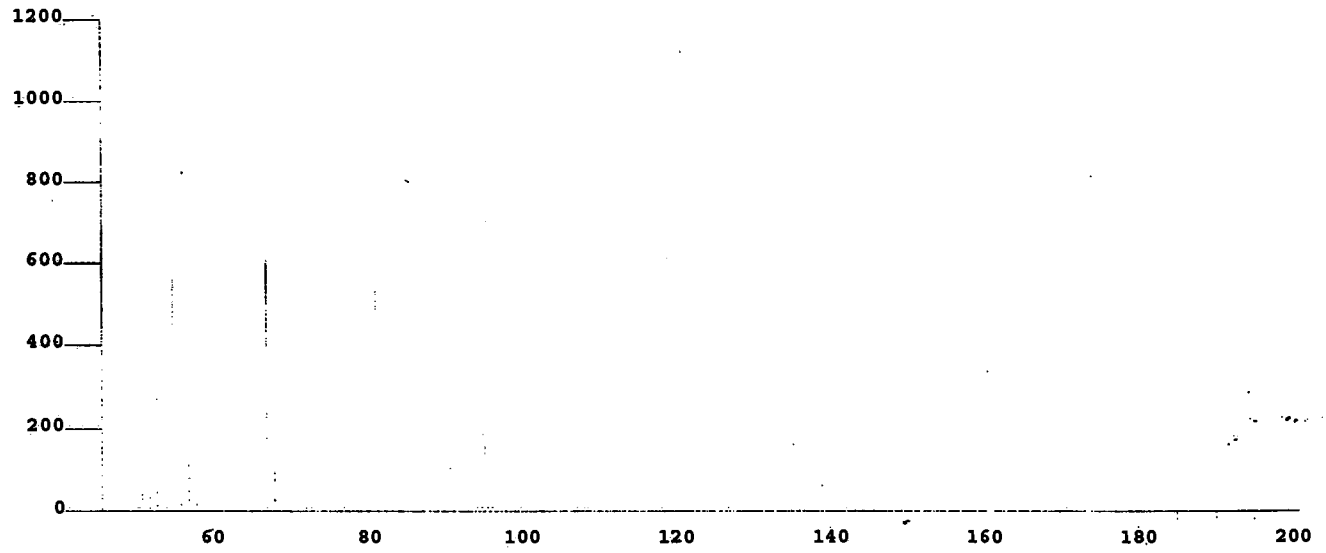
000161

3950

Scan: 1697 RT (min): 16.29



Cyclopropanecarboxylic acid, 3-(3-butenyl)-2,2-dimethyl-

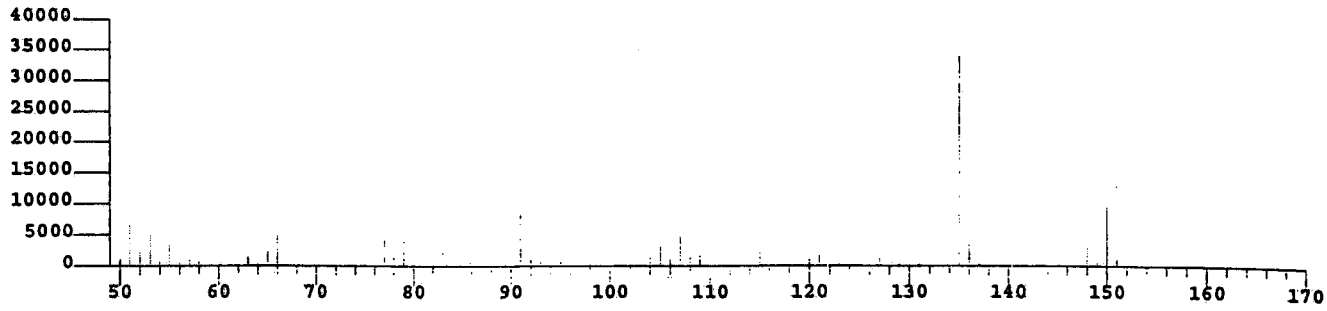


Data File: C:\BNAP\BNAPB585.MSS
Name: SAMP_625_W_BN_(16) 1
Misc Data: 0202018-004A,BB438,L,1000.0,1.00,1.0,0,
RT (min): 16.29 Scan: 1697
Area: 1965438 Rank: 4
Semi-quantitative Conc(uncorrected): 71.87 ug/l
Calculated Using Istd: d8-Naphthalene@ 12.32

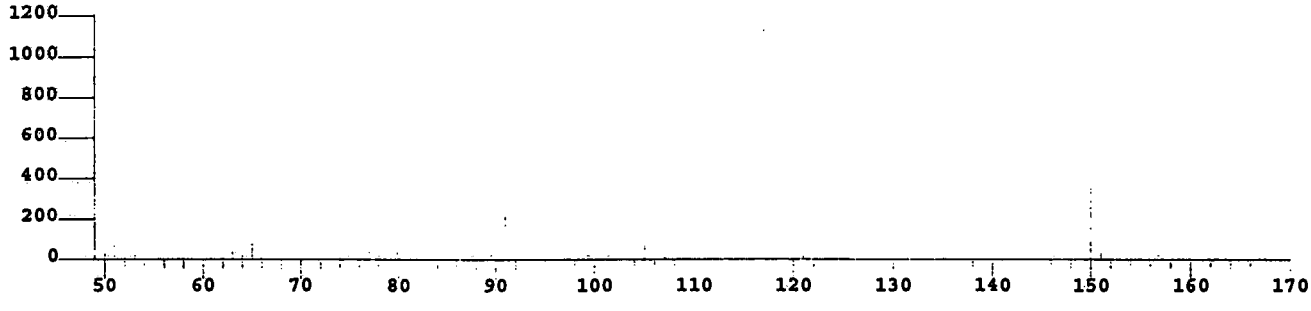
Name	Cas No	SI	MW	Formula
1) Cyclopropanecarboxylic acid, 3-(3-butenyl)-2,2-dimethyl-	74779-76-3	70.3	168	C10H16O2

000162

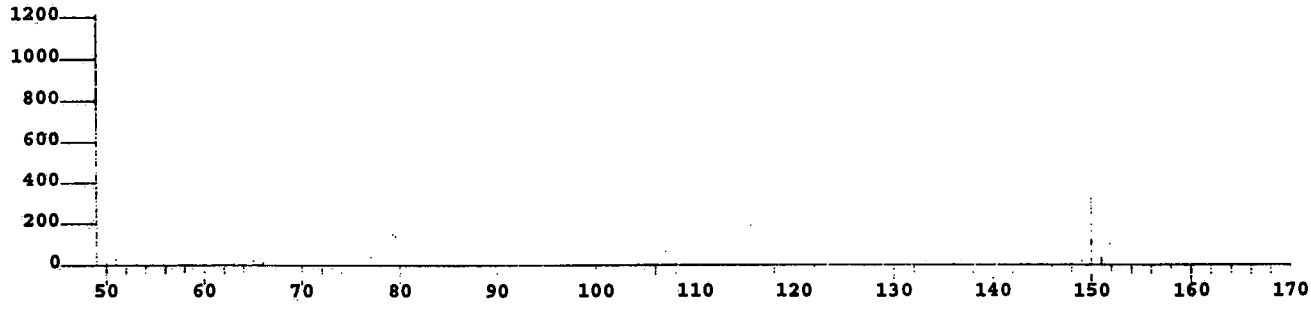
Scan: 1437 RT (min): 14.19



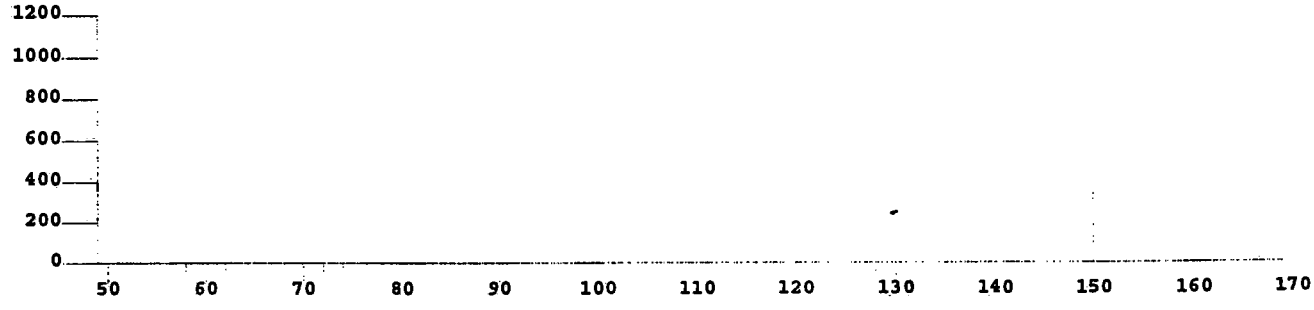
Phenol, 2-ethyl-4,5-dimethyl-



Thymol



2,5-Diethylphenol



Data File: C:\BNAP\BNAPB585.MSS
Name: SAMP_625_W_BN_(16) 1
Misc Data: 0202018-004A,BB438,L,1000.0,1.00,1.0,0,
RT (min): 14.19 Scan: 1437
Area: 936403 Rank: 5
Semi-quantitative Conc(uncorrected): 34.24 ug/l
Calculated Using Istd: d8-Naphthalene@ 12.32

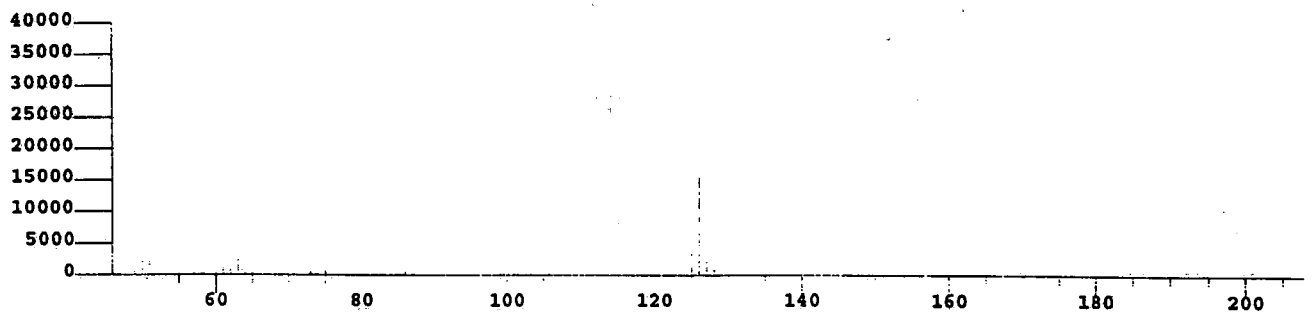
	Name	Cas No	SI	MW	Formula
1)	Phenol, 2-ethyl-4,5-dimethyl-	2219-78-5	80.2	150	C10H14O
2)	Thymol	89-83-8	80.1	150	C10H14O
3)	2,5-Diethylphenol	876-20-0	77.1	150	C10H14O
4)	Phenol, 2-methyl-5-(1-methylethyl)-	499-75-2	76.9	150	C10H14O
5)	3,4-Diethylphenol	875-85-4	76.5	150	C10H14O
6)	Phenol, 5-methyl-2-(1-methylethyl)-, acetate		75.6	192	C12H16O2
7)	D-Verbenone	18309-32-5	73.5	150	C10H14O
8)	Benzene, 1-methoxy-4-(1-methylethyl)-	4132-48-3	71.9	150	C10H14O
9)	Phenol, 3-methyl-5-(1-methylethyl)-, methylcarbamate	2631-37-0	71.8	207	C12H17NO2
10)	3,9-Epoxy-p-mentha-1,8(10)-diene		71.3	150	C10H14O

000163

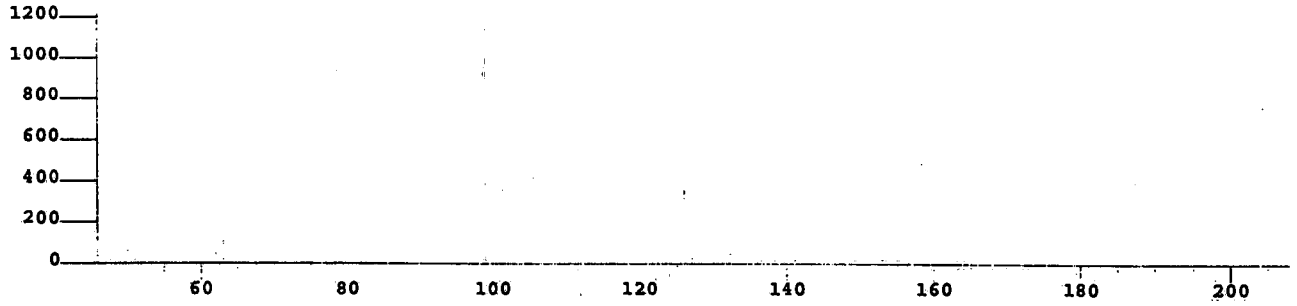
3952

(DD)

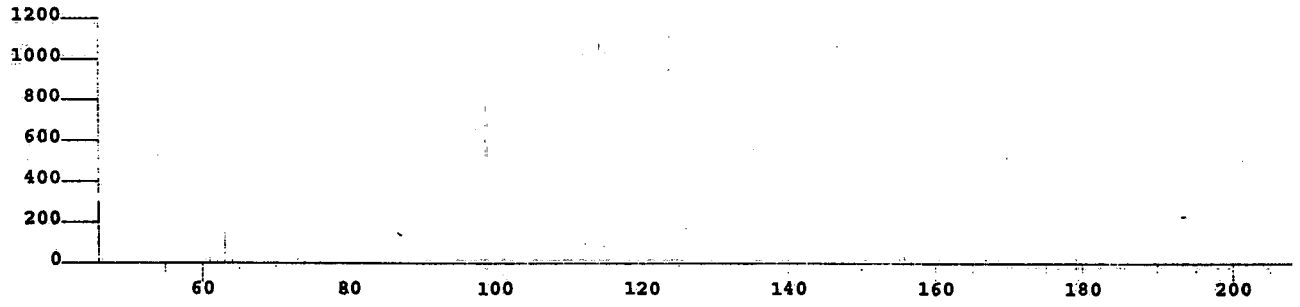
Scan: 601 RT (min): 7.80



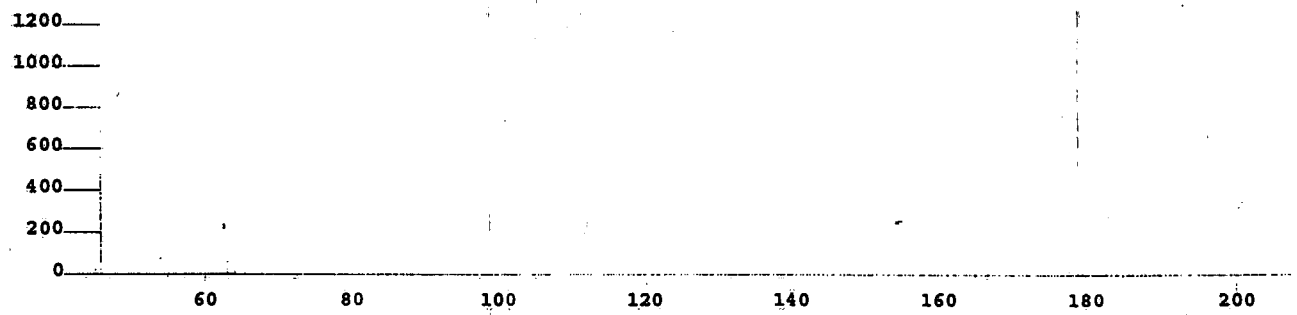
Benzene, 1-chloro-2-methyl-



Benzene, 1-chloro-3-methyl-



Benzene, 1-chloro-4-methyl-



Data File: C:\BNAP\BNAPB585.MSS
Name: SAMP_625_W_BN_(16) 1
Misc Data: 0202018-004A,BB438,L,1000.0,1.00,1.0,0,
RT (min): 7.80 Scan: 601
Area: 851563 Rank: 6
Semi-quantitative Conc(uncorrected): 1181.37 ug/l
Calculated Using Istd: d4-1,4-Dichlorobenzene* 9.15

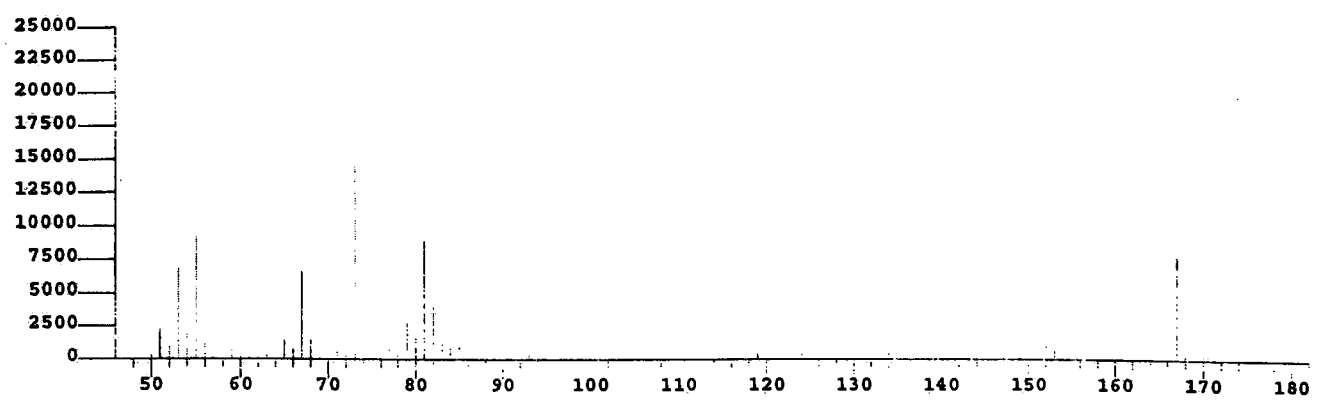
	Name	Cas No	SI	MW	Formula
1)	Benzene, 1-chloro-2-methyl-	95-49-8	95.1	126	C7H7Cl
2)	Benzene, 1-chloro-3-methyl-	108-41-8	92.7	126	C7H7Cl
3)	Benzene, 1-chloro-4-methyl-	106-43-4	90.7	126	C7H7Cl
4)	Benzyl chloride	100-44-7	85.3	126	C7H7Cl
5)	Hydrazinecarboxylic acid, phenylmethyl ester	5331-43-1	81.0	166	C8H10N2O2
6)	1,3,5-Cycloheptatriene, 2-chloro-	34896-79-2	78.9	126	C7H7Cl
7)	1,3,5-Cycloheptatriene, 3-chloro-	55619-05-1	78.8	126	C7H7Cl
	1,3,5-Cycloheptatriene, 1-chloro-	32743-66-1	72.9	126	C7H7Cl
	2-(p-Chlorophenyl)-ethylamine	156-41-2	71.1	155	C8H10ClN

000164

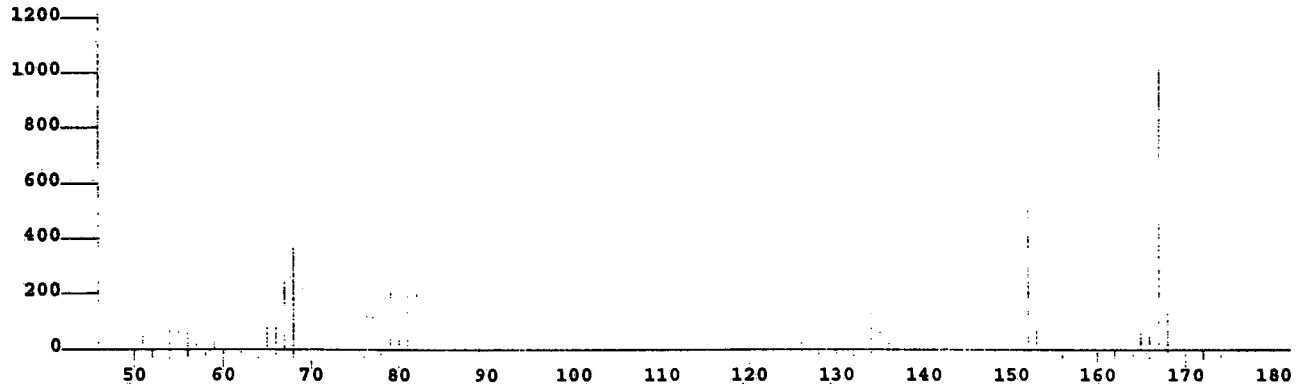
3953

(W)

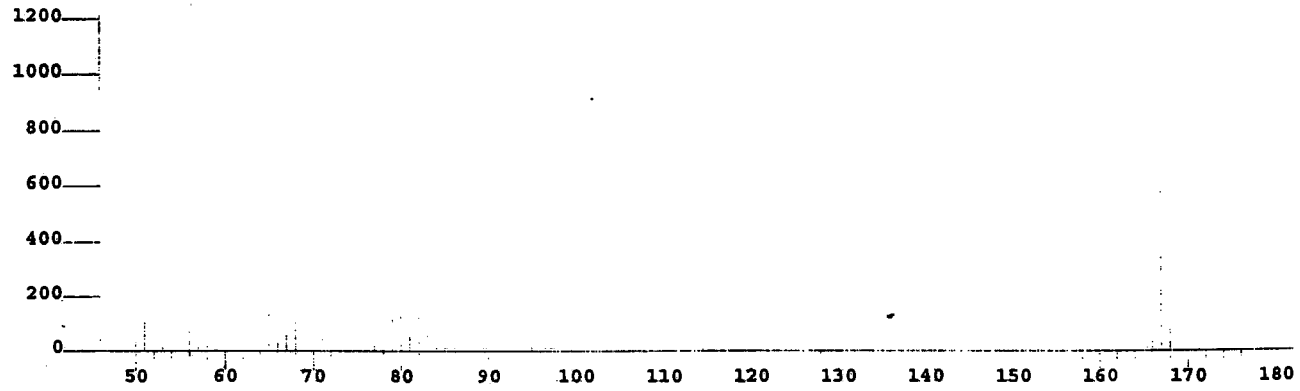
Scan: 1473 RT (min): 14.48



3-Bornanone, oxime



2-Bornanone oxime



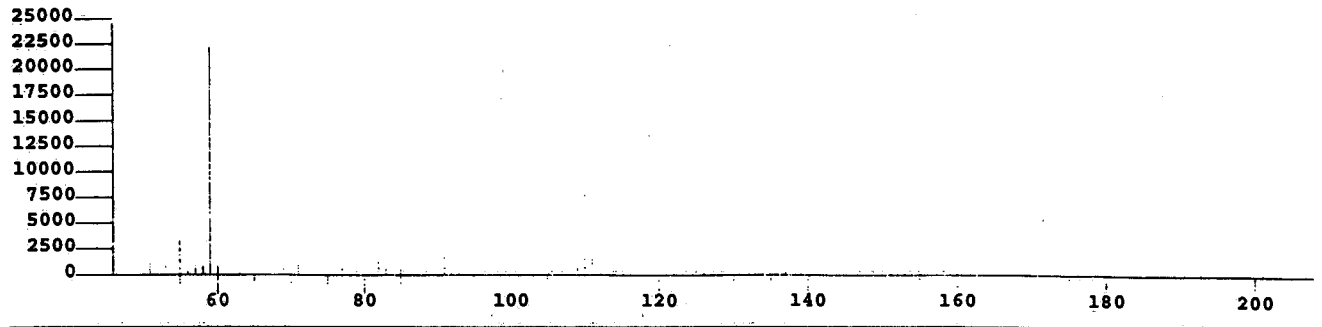
Data File: C:\BNAP\BNAPB585.MSS
Name: SAMP_625_W_BN_(16) 1
Misc Data: 0202018-004A,BB438,L,1000.0,1.00,1.0,0,
RT (min): 14.48 Scan: 1473
Area: 821361 Rank: 7
Semi-quantitative Conc(uncorrected): 30.04 ug/l
Calculated Using Istd: d8-Naphthalene@ 12.32

	Name	Cas No	SI	MW	Formula
1)	3-Bornanone, oxime	4514-87-8	70.8	167	C10H17NO
2)	2-Bornanone oxime	13559-66-5	70.1	167	C10H17NO

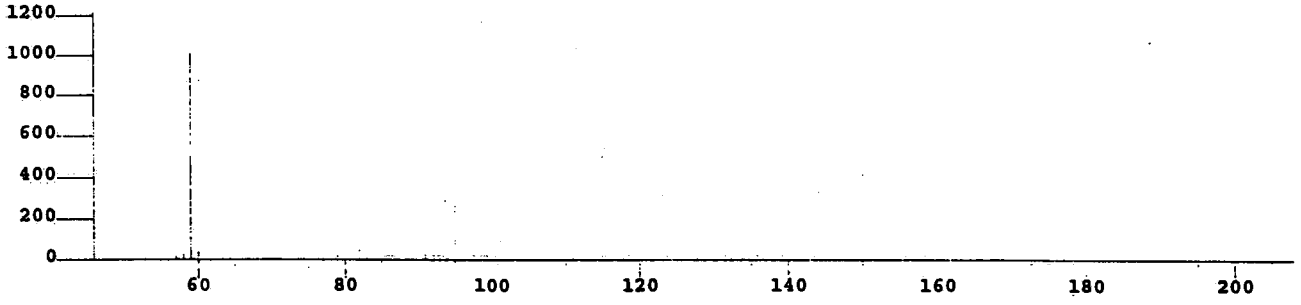
000165

3954

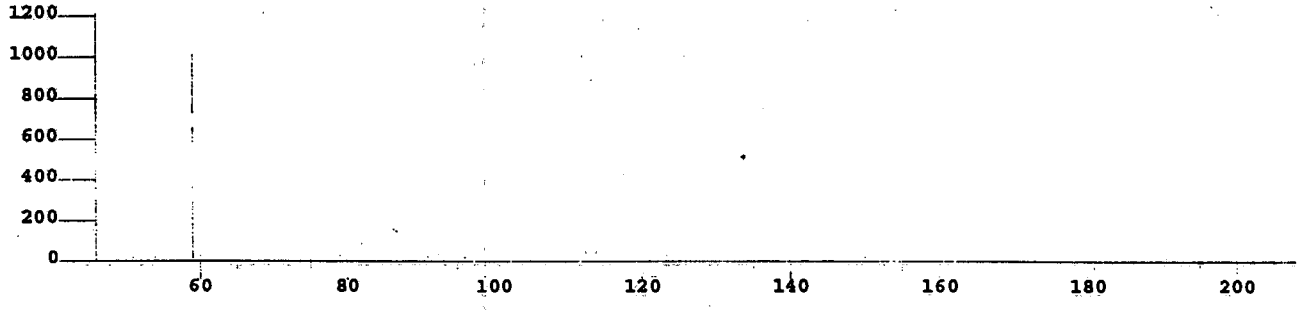
Scan: 1684 RT (min): 16.18



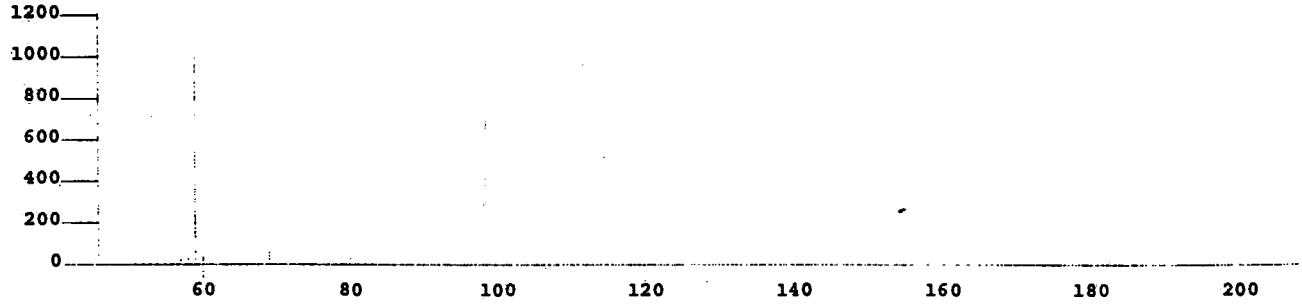
8-Hydroxycarvotanacetone



s-(+)-5-(1-Hydroxy-1-methylethyl)-2-methyl-2-cyclohexen-1-one

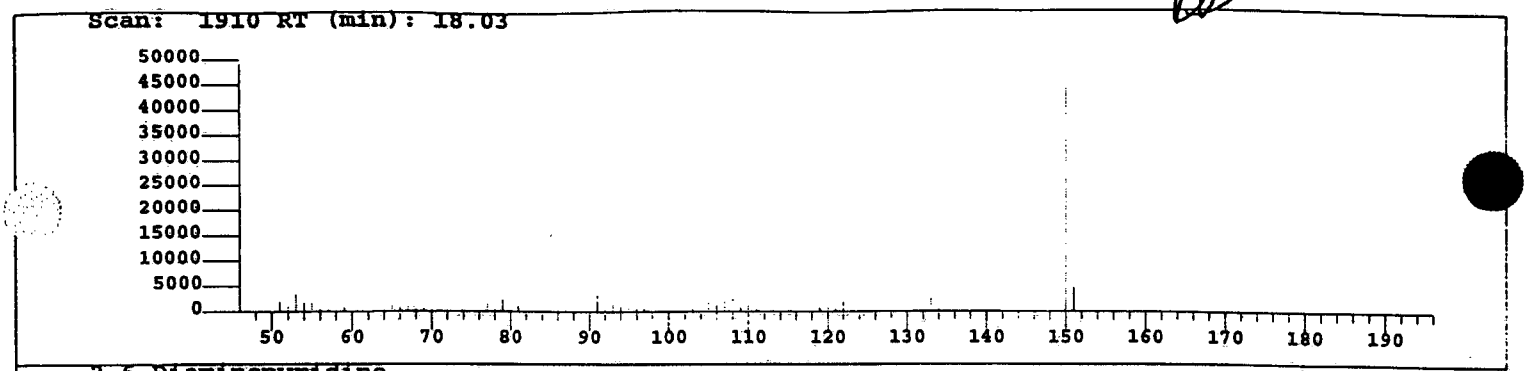


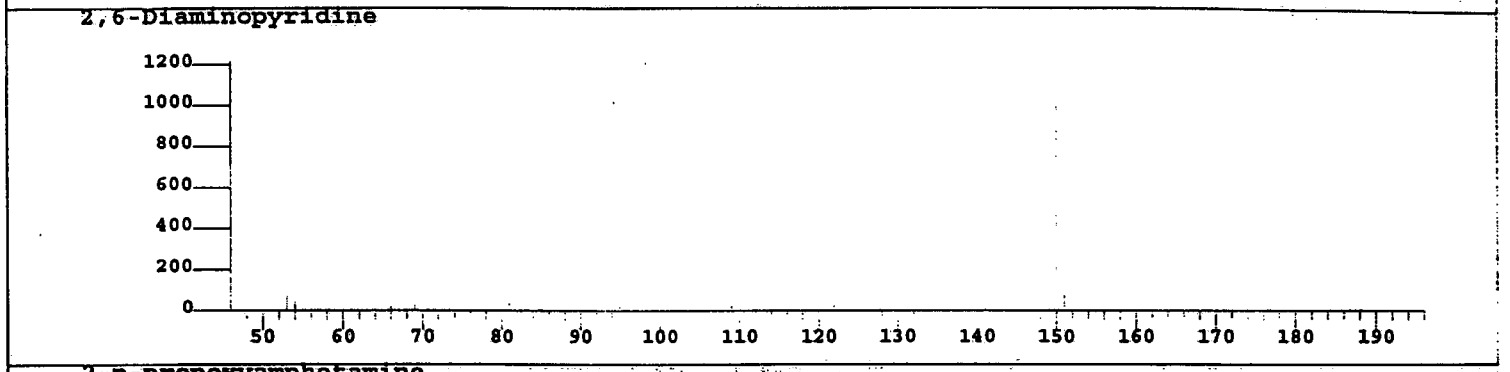
5-Hydroxy-4-hydroxymethyl-1-(1-hydroxy-1-isopropyl)cyclohex-3-en

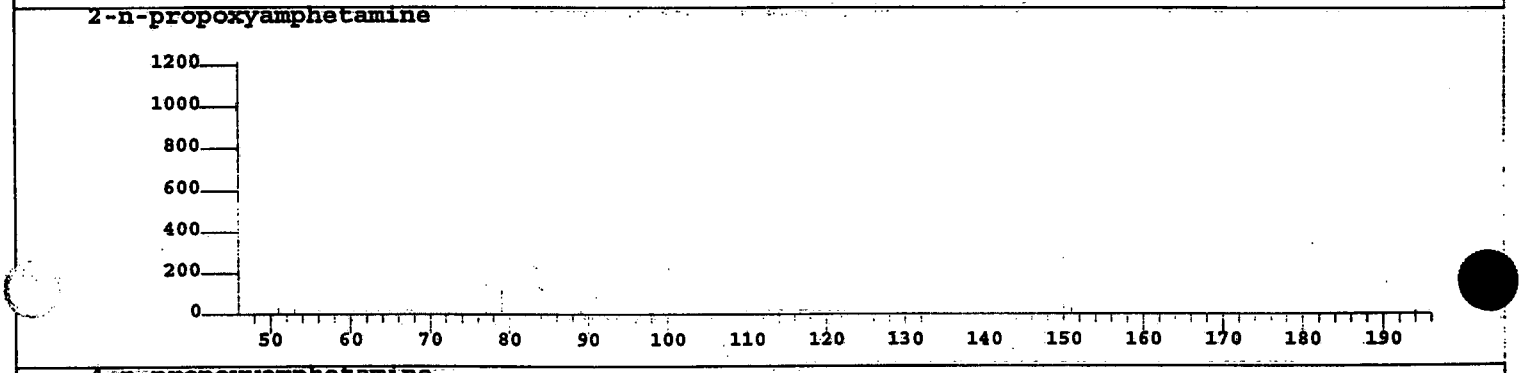


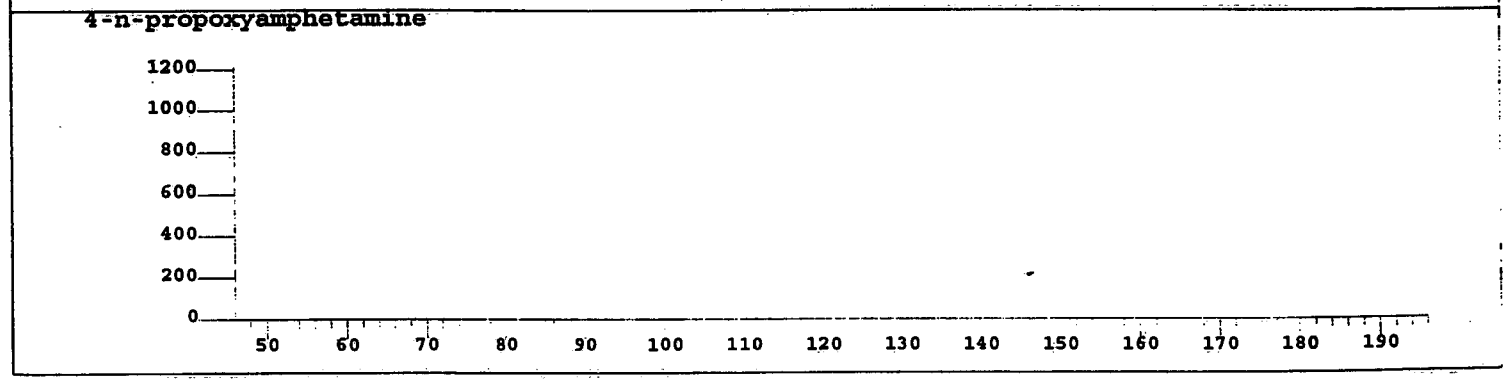
Data File: C:\BNAP\BNAPB585.MSS
Name: SAMP_625_W_BN_(16) 1
Misc Data: 0202018-004A,BB438,L,1000.0,1.00,1.0,0,
RT (min): 16.18 Scan: 1684
Area: 779151 Rank: 8
Semi-quantitative Conc(uncorrected): 28.49 ug/l
Calculated Using Istd: d8-Naphthalene@ 12.32

	Name	Cas No	SI	MW	Formula
1)	8-Hydroxycarvotanacetone	7712-46-1	83.9	168	C10H16O2
2)	s-(+)-5-(1-Hydroxy-1-methylethyl)-2-methyl-2-cyclohexen-1-one	60593-11-5	81.5	168	C10H16O2
3)	5-Hydroxy-4-hydroxymethyl-1-(1-hydroxy-1-isopropyl)cyclohex-3-en	87096-72-8	77.0	186	C10H18O3
4)	1,2-cis-1,5-Trans-2,5-dihydroxy-4-methyl-1-(1-hydroxy-1-isopropy	87096-70-6	75.7	186	C10H18O3
5)	1,2-trans-1,5-Trans-2,5-dihydroxy-4-methyl-1-(1-hydroxy-1-isopro	87096-71-7	72.7	186	C10H18O3









Data File: C:\BNAP\BNAPB585.MSS
Name: SAMP_625_W_BN_(16) 1
Misc Data: 0202018-004A,BB438,L,1000.0,1.00,1.0,0,
RT (min): 18.03 Scan: 1910
Area: 709004 Rank: 9
Semi-quantitative Conc(uncorrected): 10.74 ug/l
Calculated Using Istd: d10-Acenaphthene@ 16.79

	Name	Cas No	SI	MW	Formula
1)	2,6-Diaminopyridine		76.3	150	C5H6N6
2)	2-n-propoxyamphetamine		75.9	193	C12H19NO
3)	4-n-propoxyamphetamine		72.6	193	C12H19NO
4)	2,4-Cycloheptadien-1-one, 2,6,6-trimethyl-	503-93-5	71.7	150	C10H14O
5)	3,7-Epoxy-2-methylene-6-methyloct-6-en-1-al		70.7	166	C10H14O2
6)	4,7-Diaminobenzofurazan		70.0	150	C6H6N4O

000167

3956

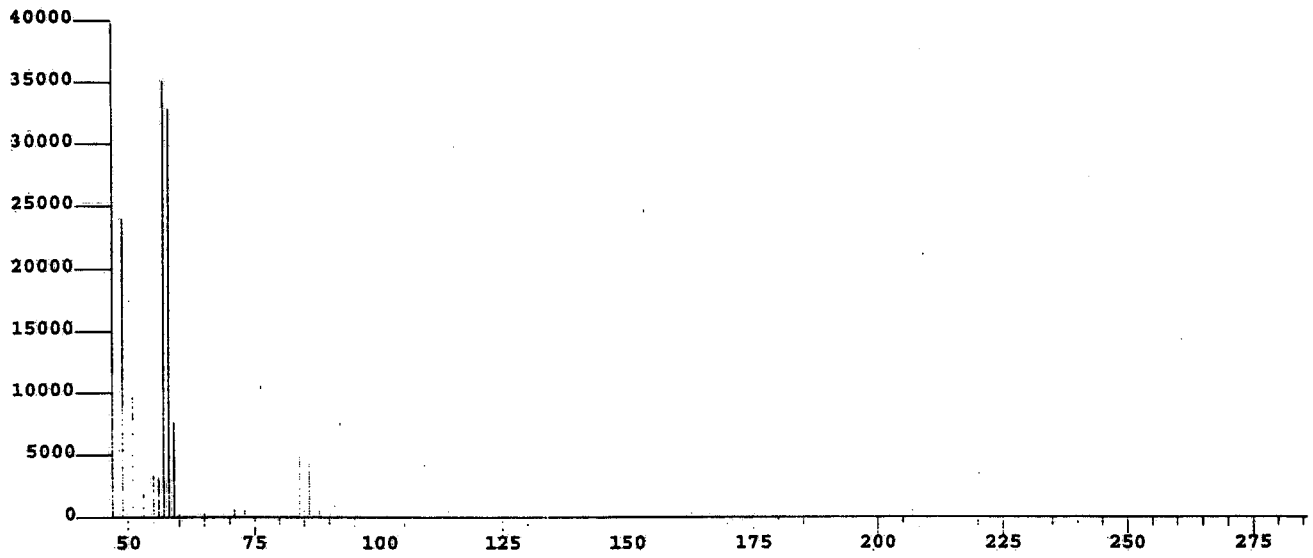
Scan: 1814 RT (min): 17.25

Data File: C:\BNAP\BNAPB585.MSS
Name: SAMP_625_W_BN_(16) 1
Misc Data: 0202018-004A,BB438,L,1000.0,1.00,1.0,0,
RT (min): 17.25 Scan: 1814
Area: 577902 Rank: 10
Semi-quantitative Conc(uncorrected): 8.76 ug/l
Calculated Using Istd: d10-Acenaphthene@ 16.79
No library Matches Found

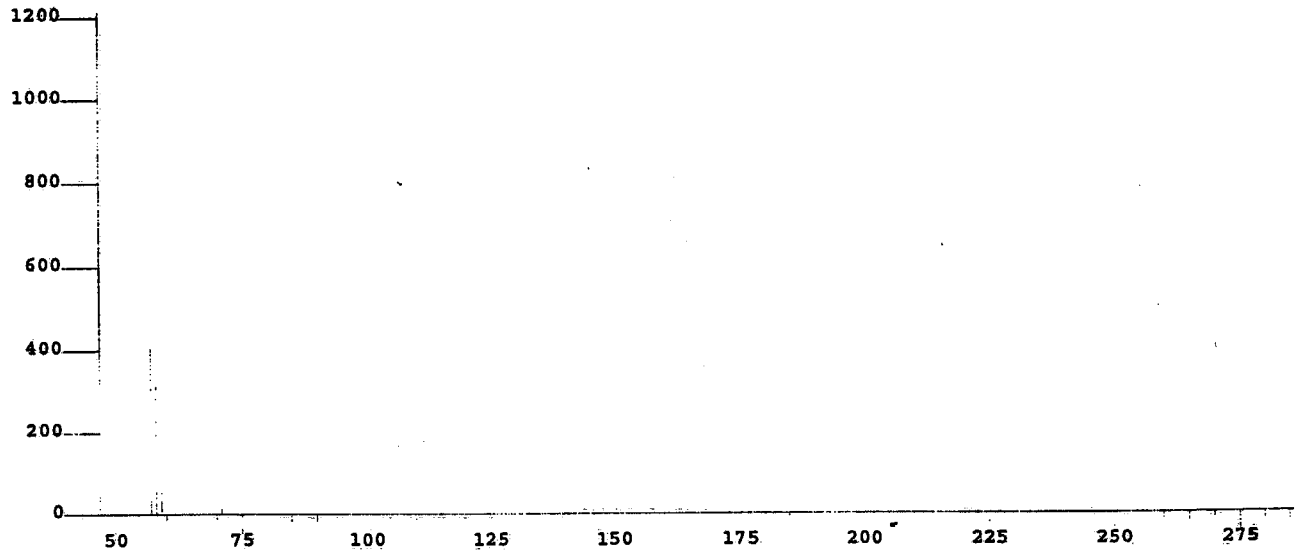
000168

3957

Scan: 62 RT (min): 3.93



2-Pentanone, 4,4-dimethyl-



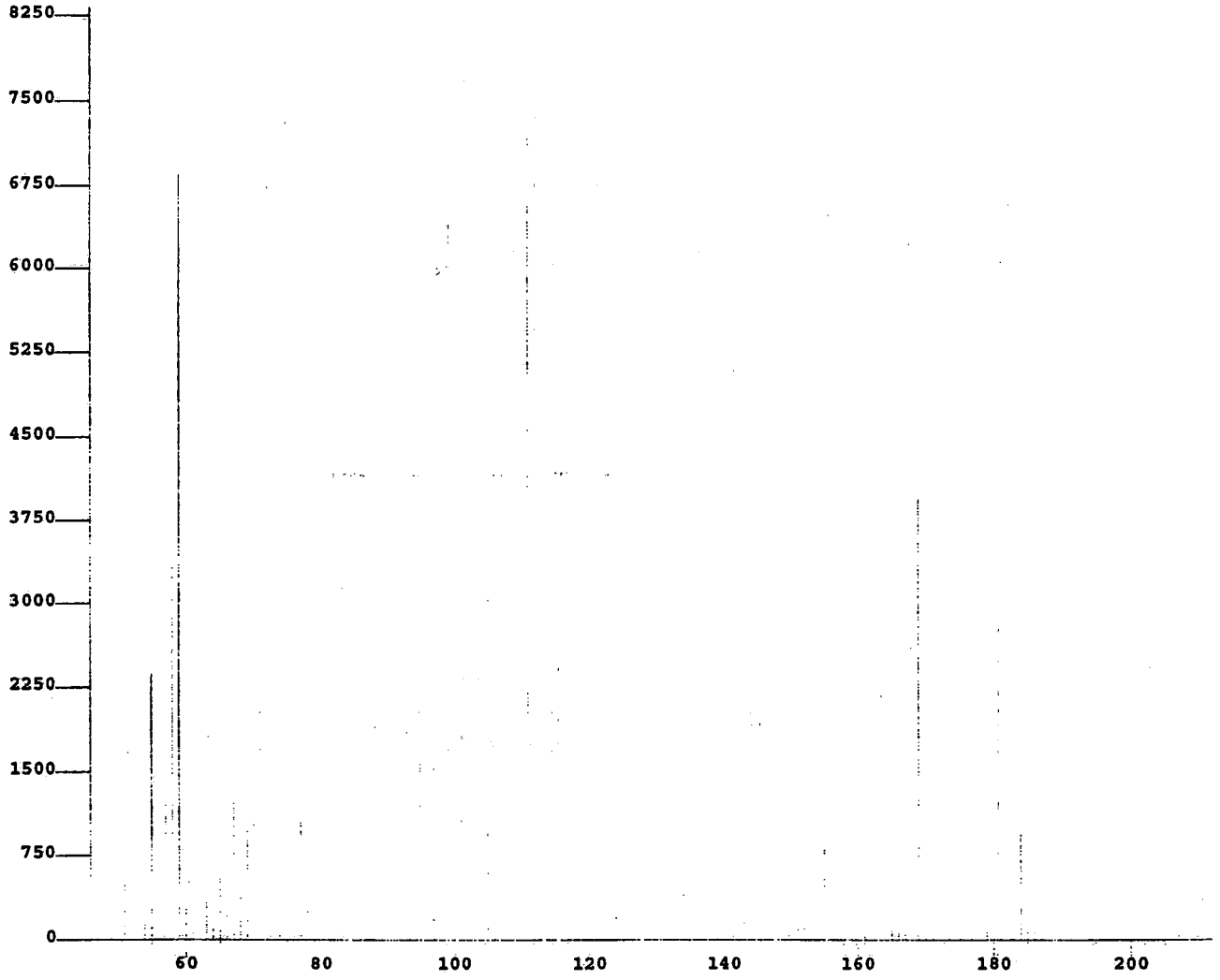
Data File: C:\BNAP\BNAPB585.MSS
Name: SAMP_625_W_BN_(16) 1
Misc Data: 0202018-004A,BB438,L,1000.0,1.00,1.0,0,
RT (min): 3.93 Scan: 62
Area: 572735 Rank: 11
Semi-quantitative Conc(uncorrected): 794.55 ug/l
Calculated Using Istd: d4-1,4-Dichlorobenzene@ 9.15

Name	Cas No	SI	MW	Formula
1) 2-Pentanone, 4,4-dimethyl-	590-50-1	73.9	114	C7H14O

000169

3958

Scan: 1793 RT (min): 17.07

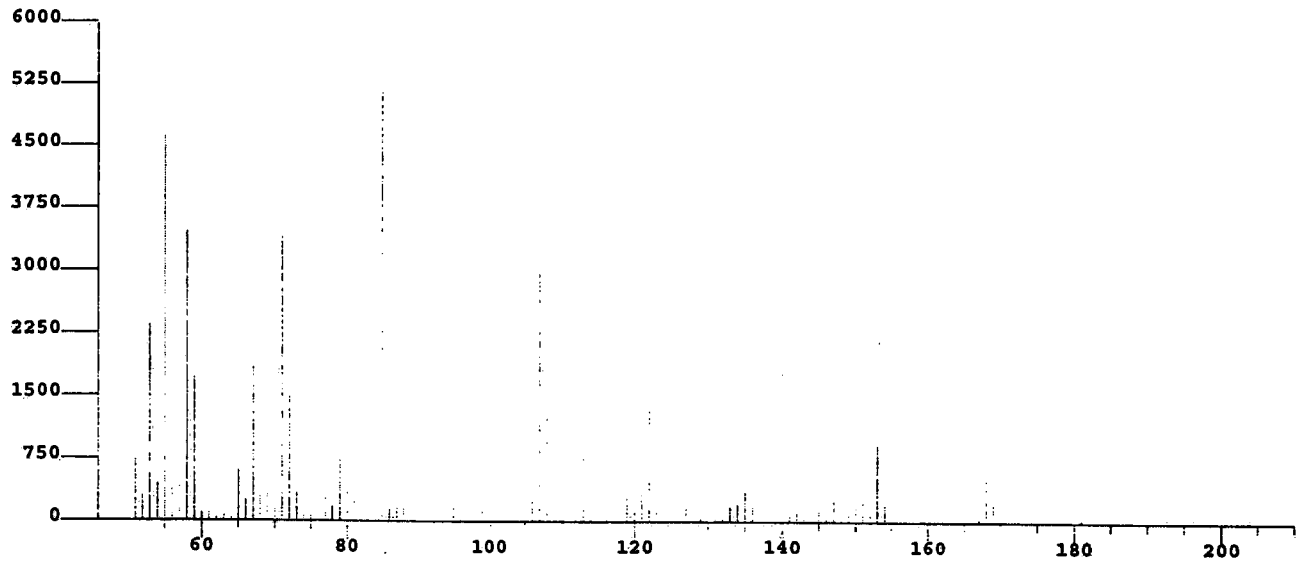


Data File: C:\BNAP\BNAPB585.MSS
Name: SAMP_625_W_BN_(16) 1
Misc Data: 0202018-004A,BB438,L,1000.0,1.00,1.0,0,
RT (min): 17.07 Scan: 1793
Area: 525808 Rank: 12
Semi-quantitative Conc(uncorrected): 7.97 ug/l
Calculated Using Istd: d10-Acenaphthene@ 16.79
No library Matches Found

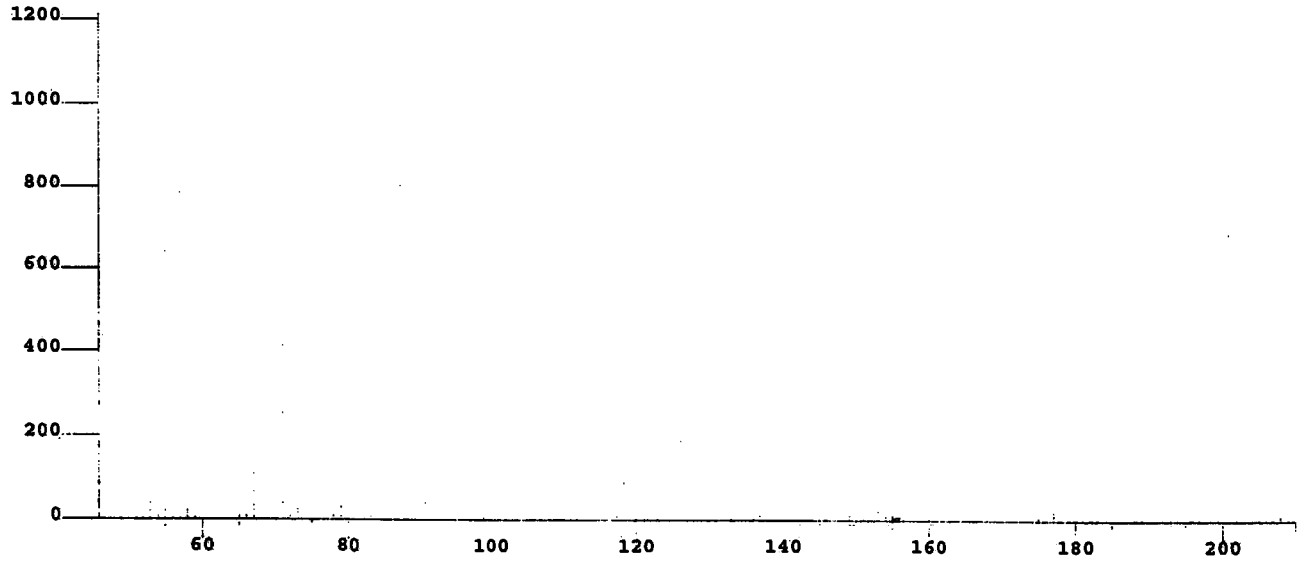
000170

3959

Scan: 1528 RT (min): 14.92



Acetamide, N-methyl-N-[4-[4-methoxy-1-hexahydropyridyl]-2-butyny



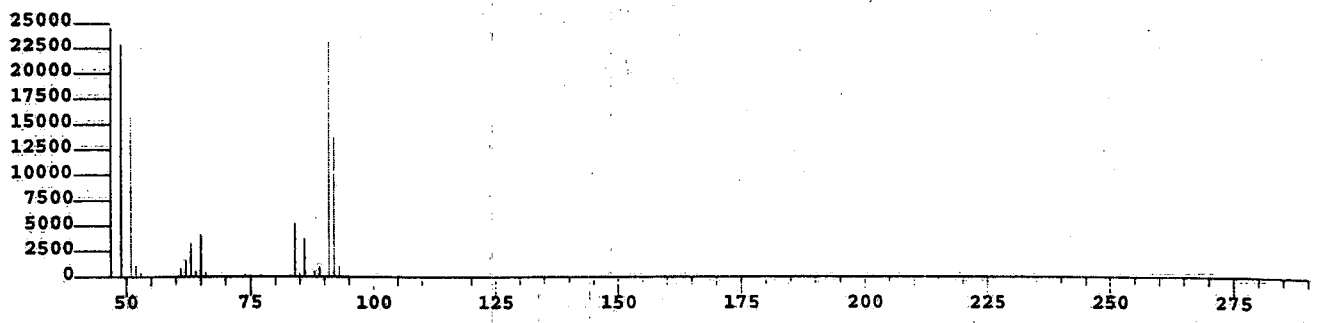
Data File: C:\BNAP\BNAPB585.MSS
Name: SAMP_625_W_BN_(16) 1
Misc Data: 0202018-004A,BB438,L,1000.0,1.00,1.0,0,
RT (min): 14.92 Scan: 1528
Area: 443708 Rank: 13
Semi-quantitative Conc(uncorrected): 16.23 ug/l
Calculated Using Istd: d8-Naphthalene@ 12.32

Name	Cas No	SI	MW	Formula
1) Acetamide, N-methyl-N-[4-[4-methoxy-1-hexahydropyridyl]-2-butyny		71.7	238	C13H22N2O2

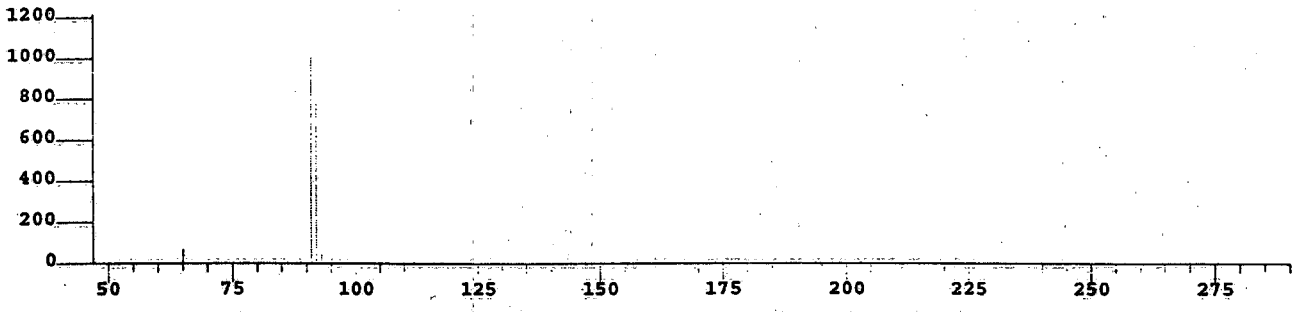
000171

3960

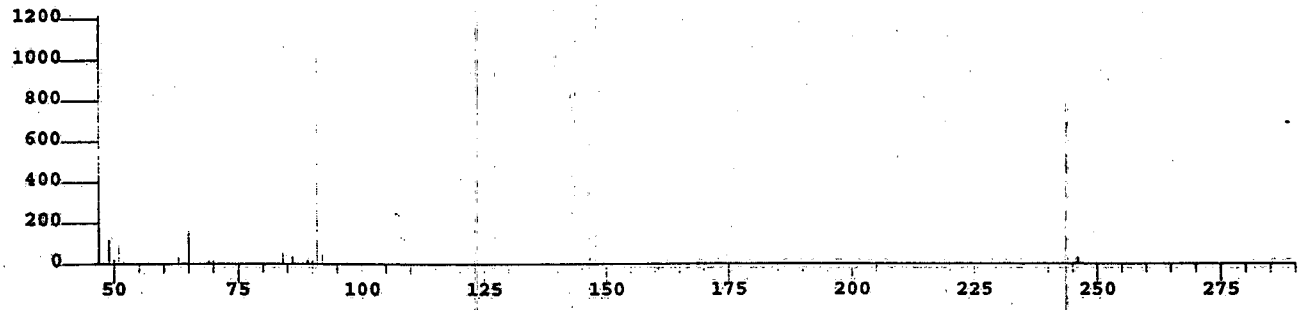
Scan: 8 RT (min): 3.53



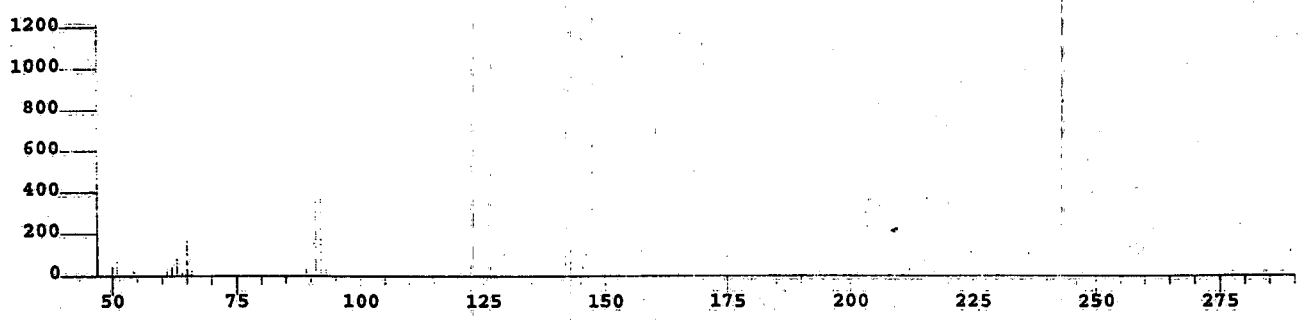
Formanilide, 2'-(4,6-diamino-s-triazin-2-yl)-



Benzaldehyde, 4-benzyloxy-2-fluoro-5-hydroxy-



1,3,5-Cycloheptatriene



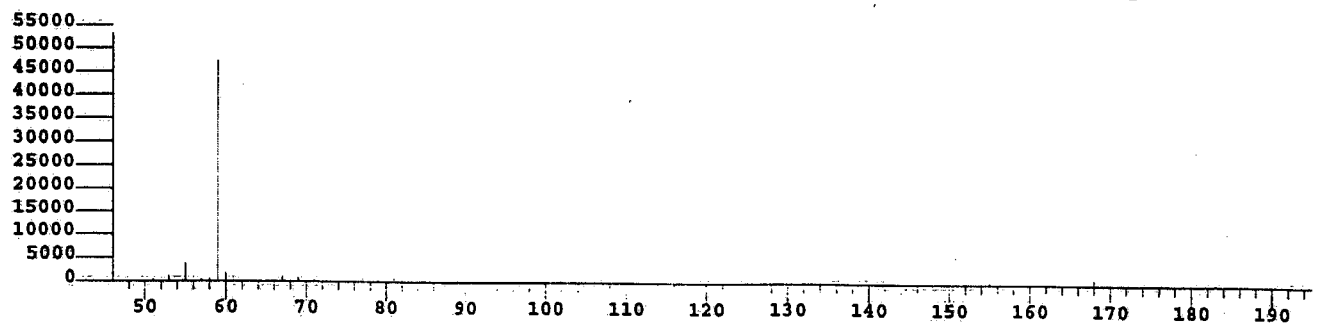
Data File: C:\BNAP\BNAPB585.MSS
Name: SAMP_625_W_BN_(16) 1
Misc Data: 0202018-004A,BB438,L,1000.0,1.00,1.0,0,
RT (min): 3.53 Scan: 8
Area: 419877 Rank: 14
Semi-quantitative Conc(uncorrected): 582.50 ug/l
Calculated Using Istd: d4-1,4-Dichlorobenzene@ 9.15

	Name	Cas No	SI	MW	Formula
1)	Formanilide, 2'-(4,6-diamino-s-triazin-2-yl)-	29366-79-8	74.6	230	C10H10N6O
2)	Benzaldehyde, 4-benzyloxy-2-fluoro-5-hydroxy-		71.2	246	C14H11FO3
3)	1,3,5-Cycloheptatriene	544-25-2	70.7	92	C7H8

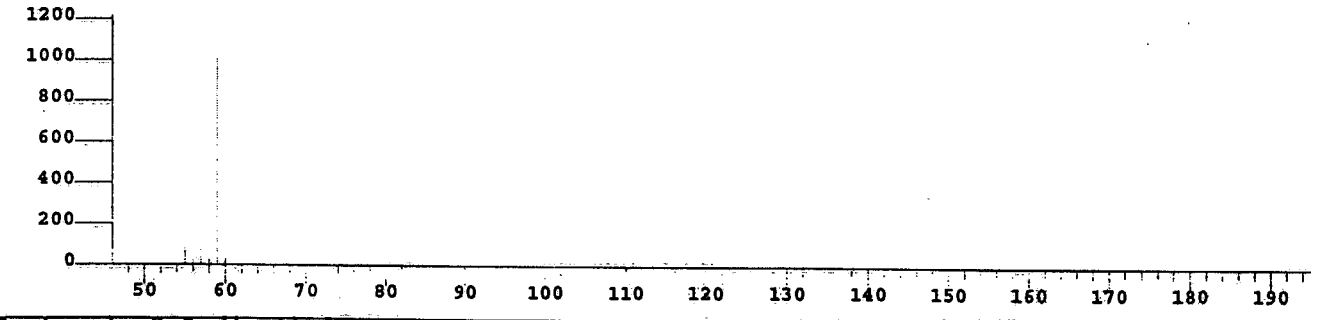
000172

3961

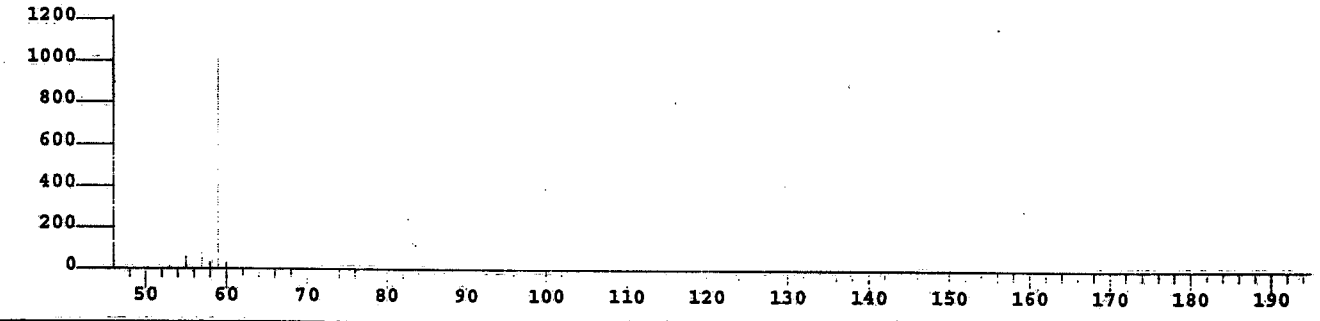
Scan: 1730 RT (min): 16.55



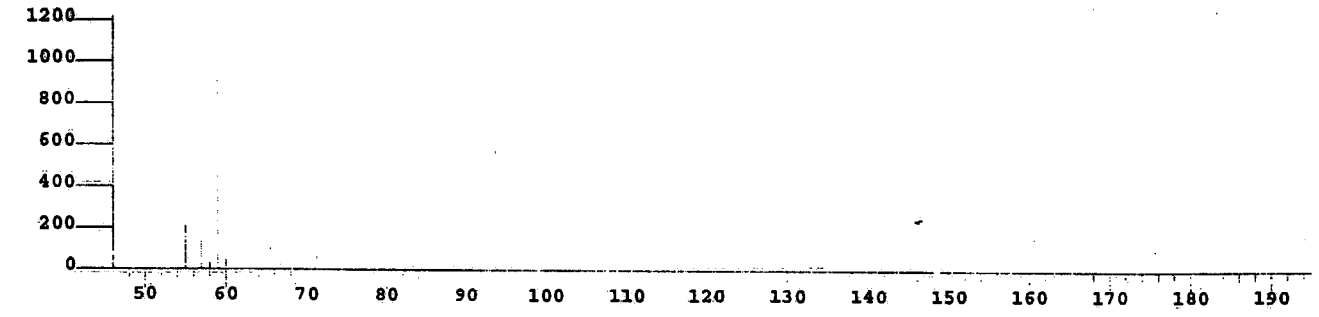
2-Hexanol, 2-methyl-



2-Pentanol, 2,3-dimethyl-



2-Heptanone, 3-hydroxy-3-methyl-



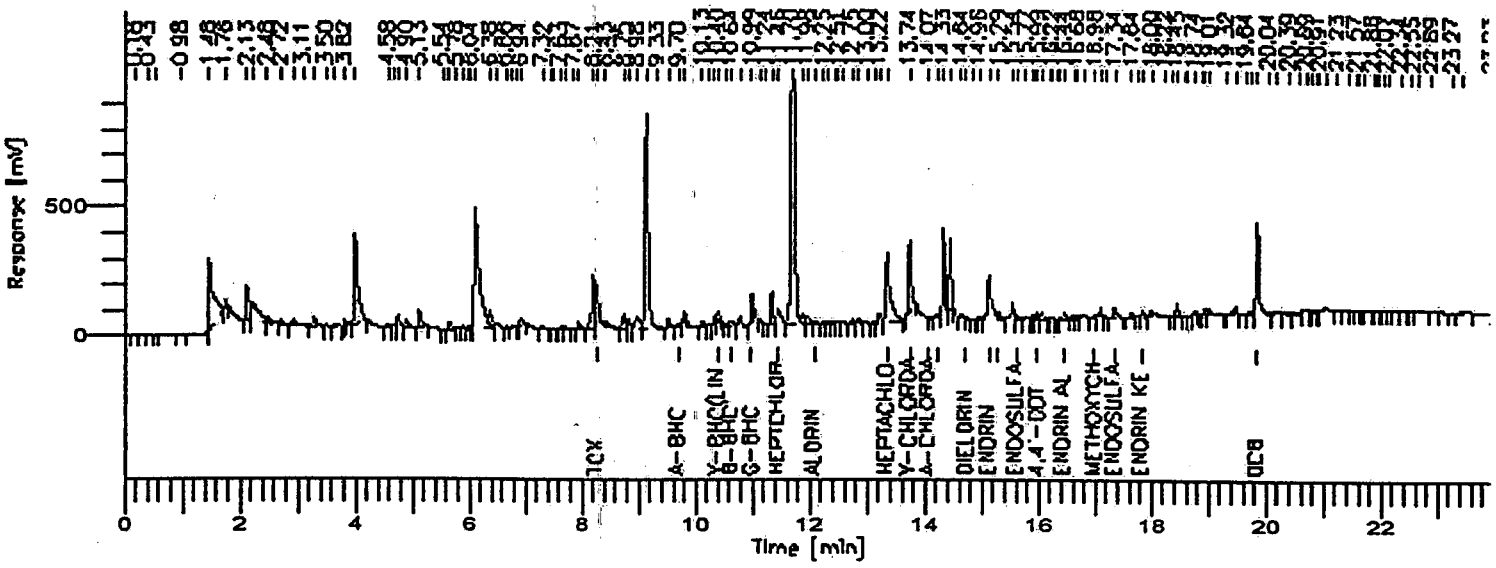
Data File: C:\BNAP\BNAPB585.MSS
Name: SAMP 625 W BN (16) 1
Misc Data: 0202018-004A,BB438,L,1000.0,1.00,1.0,0,
RT (min): 16.55 Scan: 1730
Area: 410934 Rank: 15
Semi-quantitative Conc(uncorrected): 15.03 ug/l
Calculated Using Istd: d8-Naphthalene@ 12.32

	Name	Cas No	SI	MW	Formula
1)	2-Hexanol, 2-methyl-	625-23-0	79.6	116	C7H16O
2)	2-Pentanol, 2,3-dimethyl-	4911-70-0	77.8	116	C7H16O
3)	2-Heptanone, 3-hydroxy-3-methyl-	13757-91-0	74.1	144	C8H16O2
4)	Cyclooctanemethanol, .alpha.,.alpha.-dimethyl-	16624-06-9	72.9	170	C11H22O
5)	2,3,3-Trimethyl-2-pentanol	23171-85-9	72.6	130	C8H18O
6)	2-Pentanol, 2,4-dimethyl-	625-06-9	72.5	116	C7H16O

000173

3962

Software Version: 4.1<2F12>
Date: 3/4/02 11:31 AM
Sample Name : 0202018-003A
Data File : C:\TC4\PEST\PSTA425.RAW Date: 3/2/02 02:06 PM
Sequence File: C:\TC4\PEST\PEST.SEQ Cycle: 425 Channel : A
Instrument : AUTOSYS_PEST Rack/Vial: 0/42 Operator:
Sample Amount : 1.0000 Dilution Factor : 1.00



VAL ASSOCIATES LABORATORY

PESTICIDES ANALYSIS

peaks do not match on confirming channel MMG

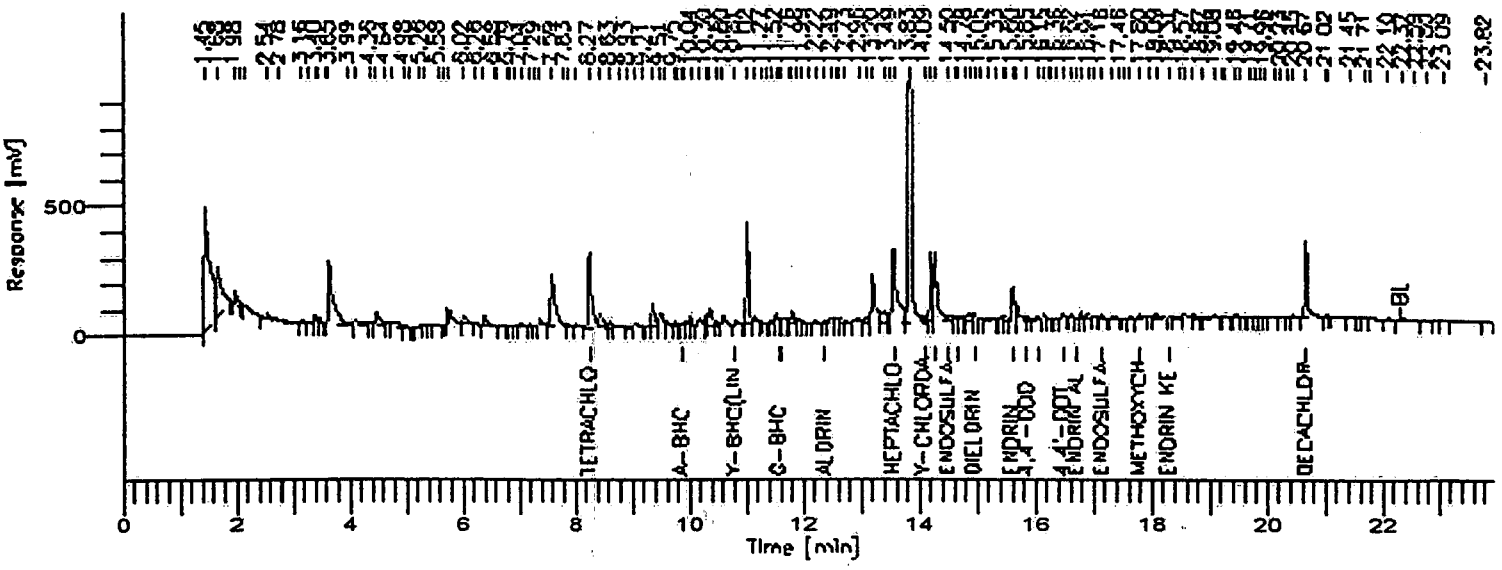
Peak #	Time [min]	Component Name	Area [µV·s]	BL	Response Factor	CONC PPB
44	8.277	TCX	604610.03	VE	6221.0509	97.1878
52	9.703	a-BHC	27653.91	BB	3764.0417	7.3469
57	10.397	y-BHC(Lindane)	91105.19	BB	4474.3142	20.3618
59	10.640	b-BHC	98689.84	VV	1173.4190	84.1045
61	10.992	g-BHC	216371.49	BB	2658.3316	81.3937
65	11.463	HEPTCHLOR	389043.64	VV	18417.5625	21.1235
69	12.102	ALDRIN	73854.17	VV	9190.6732	8.0358
80	13.348	HEPTACHLOR EPOXIDE	1435753.68	VB	14190.9429	101.1739
81	13.737	y-CHLORDANE	914764.07	BB	8346.2271	109.6021
82	14.068	a-CHLORDANE	10085.59	BB	6578.6035	1.5331
83	14.225	ENDOSULFAN 1	52005.87	BV	10711.5788	4.8551
87	14.728	DIELDRIN	7519.49	VB	2759.6021	2.7248
0	15.126	ENDRIN	871948.24	VE	11063.6726	78.8118
91	15.294	4,4'-DDD	109586.15	EV	5405.0273	20.2749
93	15.626	ENDOSULFAN II	75338.70	VV	8293.2234	9.0844

000174

3963

Peak #	Time [min]	Component Name	Area [µV·s]	BL	Response Factor	CONC PPB
97	15.989	4,4'-DDT	76972.50	VV	3062.7034	25.1322
[illegible]3	16.441	ENDRIN ALDEHYDE	95303.50	VB	5671.5422	16.8038
107	16.983	METHOXYCHLOR	47858.63	VV	2654.9411	18.0262
110	17.344	ENDOSULFAN SULFATE	170147.14	BB	6222.3716	27.3444
113	17.840	ENDRIN KETONE	70321.65	VV	6448.9766	10.9043
128	19.847	DCB	1191234.39	VE	4860.8323	245.0680
			6630167.84		1.4217e+05	990.8931

Software Version: 4.1<2F12>
Date: 3/5/02 09:56 AM
Sample Name : 0202018-003A
Data File : C:\TC4\PEST\PSTB425.RAW Date: 3/2/02 02:06 PM
Sequence File: C:\TC4\PEST\PEST.SEQ Cycle: 425 Channel : B
Instrument : AUTOSYS_PEST Rack/Vial: 0/42 Operator:
Sample Amount : 1.0000 Dilution Factor : 1.00



VAL ASSOCIATES LABORATORY

PESTICIDES ANALYSIS

Peaks do not match on primary channel MK

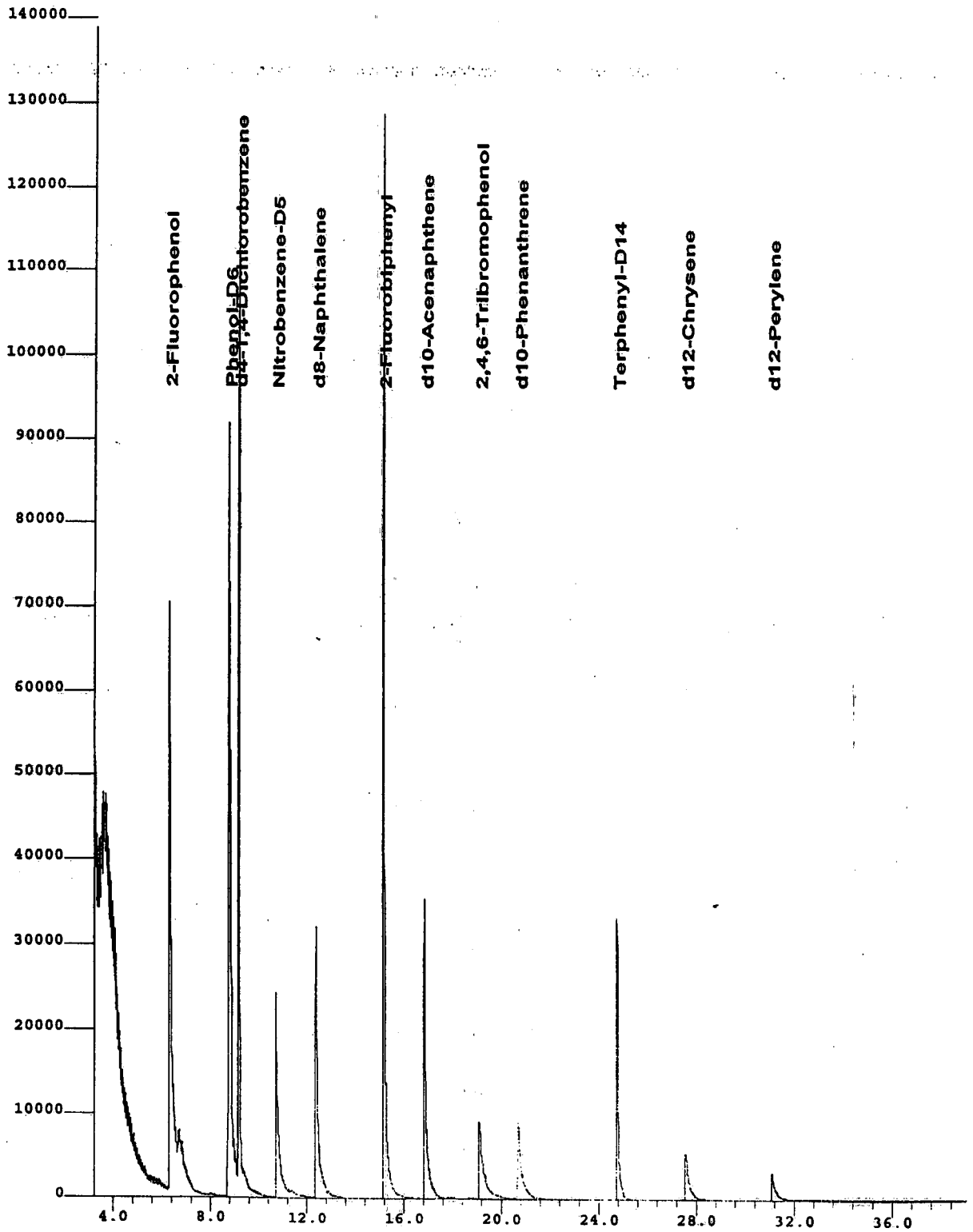
Peak #	Time [min]	Component Name	Area [µV·s]	BL	Response Factor	CONC PPB
43	8.266	Tetrachloro-m-xylene	1214603.95	VE	15563.9606	78.0395
55	9.879	a-BHC	38549.31	VV	6723.0879	5.7339
63	10.811	y-BHC(Lindane)	46586.96	BB	6658.8457	6.9963
70	11.583	g-BHC	34578.30	VV	5660.8570	6.1083
71	11.644	HEPTCHLOR	102095.99	VV	10024.4140	10.1847
78	12.387	ALDRIN	26387.11	BV	7063.3777	3.7358
88	13.563	HEPTACHLOR EPOXIDE	1536055.69	VV	8684.9675	176.8637
90	14.089	y-CHLORDANE	148113.18	EV	10597.5621	13.9762
92	14.278	a-CHLORDANE	1062238.97	VE	9002.6980	117.9912
93	14.502	ENDOSULFAN 1	158037.45	EV	10092.2265	15.6593
95	14.686	4,4' DDE	103249.51	VV	9096.2575	11.3508
98	14.950	DIELDRIN	129275.14	VV	8282.9741	15.6073
4	15.604	ENDRIN	447349.05	VV	6424.0888	69.6362
106	15.854	4,4'-DDD	78408.62	VB	5281.6817	14.8454
107	16.049	ENDOSULFAN II	75319.02	BV	7341.7050	10.2591

000176

3965

Peak #	Time [min]	Component Name	Area [µV·s]	BL	Response Factor	CONC PPB
112	16.475	4,4'-DDT	75021.12	BB	3103.5069	24.1730
1	16.715	ENDRIN ALDEHYDE	1861.17	BB	-1698.1753	-1.0960
..8	17.156	ENDOSULFAN SULFATE	28426.70	BB	4479.6637	6.3457
123	17.803	METHOXYCHLOR	79714.66	BV	1767.6859	45.0955
126	18.310	ENDRIN KETONE	16778.14	VV	6918.2057	2.4252
144	20.668	Decachlorobiphenyl	988746.56	BB	10290.2861	96.0854
			6391396.61		1.5136e+05	730.0165

Data File: C:\BNAP\BNAPB572.MSS
Quant Output File: C:\BNAP\BNAPB572.Q
Injection Time: 02/08/82 10:23
Misc: MB-3043#2,BB438,L,1000.0,1.00,1.0,0,
3063 HLN 2/8/02



000178

QUANT REPORT
Quant Rev: 10

Operator Id:
Dilution Factor:<None>
Output File: C:\BNAP\BNAPB572.Q
Data File: c:\bnap\bnapb572.mss
Name: MBLK 625 W BNA (3) 2
Misc: ~~MB-3043#2~~, BB438,L,1000.0,1.00,1.0,0,
ID File: c:\bnap\hsl\625b.i
Title: SW-846 Method 8270 Semi-Volatile Quant ID File
t Calib: 01/17/82 10:29

Quant Time : 82/21/19 43:40
Injected at : 02/08/82 10:23

MB-3063 HLN 2/8/02

Last Qcal Date: None

	Compound	R.T.	Q Ion	Area	Conc	Units	Q
1)	M*d4-1,4-Dichlorobenzene	9.15	152	109504	40.00	ug/l	0
3)	2-Fluorophenol	6.29	112	333590	84.60	ug/l	0
5)	Phenol-D6	8.74	99	223342	57.28	ug/l	0
14)	*d8-Naphthalene	12.36	136	241372	40.00	ug/l	100
15)	Nitrobenzene-D5	10.71	54	70363	87.99	ug/l	0
27)	*d10-Acenaphthene	16.84	162	125202	40.00	ug/l	0
30)	2-Fluorobiphenyl	15.15	172	292107	59.84	ug/l	98
42)	2,4,6-Tribromophenol	19.08	332	76617	82.90	ug/l	0
43)	*d10-Phenanthrene	20.69	188	126525	40.00	ug/l	0
54)	*d12-Chrysene	27.54	240	50726	40.00	ug/l	0
56)	Terphenyl-D14	24.75	244	49077	75.52	ug/l	90
62)	M*d12-Perylene	31.08	264	17648	40.00	ug/l	0

* Compound is Internal Standard

000179

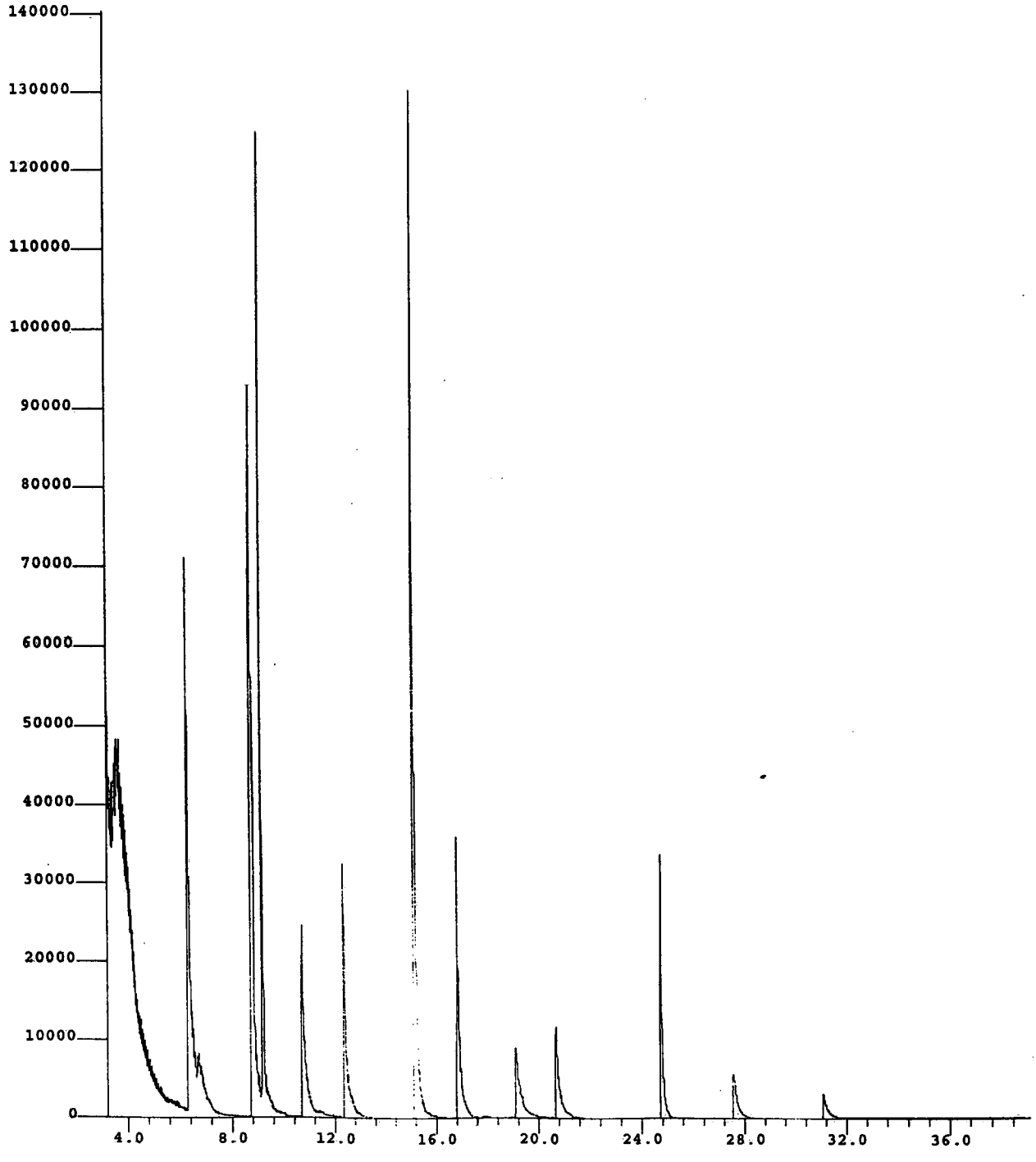
3968

Quant Output File: c:\bnap\bnapb572.q
Data File Name: C:\BNAP\BNAPB572.MSS MB-3063 HLN 2/8/02
Name: MBLK_625_W_BNA_(3) 2
Misc Data: ~~MB-3043#2~~,BB438,L,1000.0,1.00,1.0,0,
Plus Method File: C:\AQUARIUS\FILES\BNA.NIS
Parameters Minimum % Istd Area to Report: 10.00 Rank Order
Absolute maximum Number of Peaks: 15 Date: 02-15-1982
Which Istd from Output file(1st,2nd)..: 2 Time: 10:19:26
Maximum Hits for graphics: 3 Delta Rt: 0.06

#	R.T. (min.)	Start Time	End Time	Width	Type	Area	Rank	
11)	15.15	15.11	15.32	0.201	BB	827450	CMPD	2-Fluorobiphenyl
8)	9.15	9.12	9.27	0.155	BB	583399	ISTD	d4-1,4-Dichlorobenzene
5)	6.29	6.26	6.36	0.094	BB	444950	CMPD	2-Fluorophenol
15)	24.75	24.71	24.86	0.150	BB	209303	CMPD	Terphenyl-D14
12)	16.84	16.80	16.89	0.087	BB	181374	ISTD	d10-Acenaphthene
10)	12.36	12.33	12.41	0.079	BB	155309	ISTD	d8-Naphthalene
6)	8.75	8.73	8.76	0.030	BB	142275	CMPD	Phenol-D6
14)	20.68	20.65	20.80	0.150	BB	107225	ISTD	d10-Phenanthrene
9)	10.71	10.68	10.76	0.071	BB	95558	CMPD	Nitrobenzene-D5
13)	19.09	19.05	19.15	0.101	BB	54141	CMPD	2,4,6-Tribromophenol
7)	8.83	8.82	8.87	0.052	BB	40662	1	
16)	27.56	27.52	27.61	0.086	BB	30578	ISTD	d12-Chrysene
17)	31.08	31.05	31.14	0.085	BB	16357	ISTD	d12-Perylene

Data File: C:\BNAP\BNAPB572.MSS
Quant Output File: c:\bnap\bnapb572.q
Injection Time: 02/08/82 10:23
Misc: MB-~~3043#2~~,BB438,L,1000.0,1.00,1.0,0,

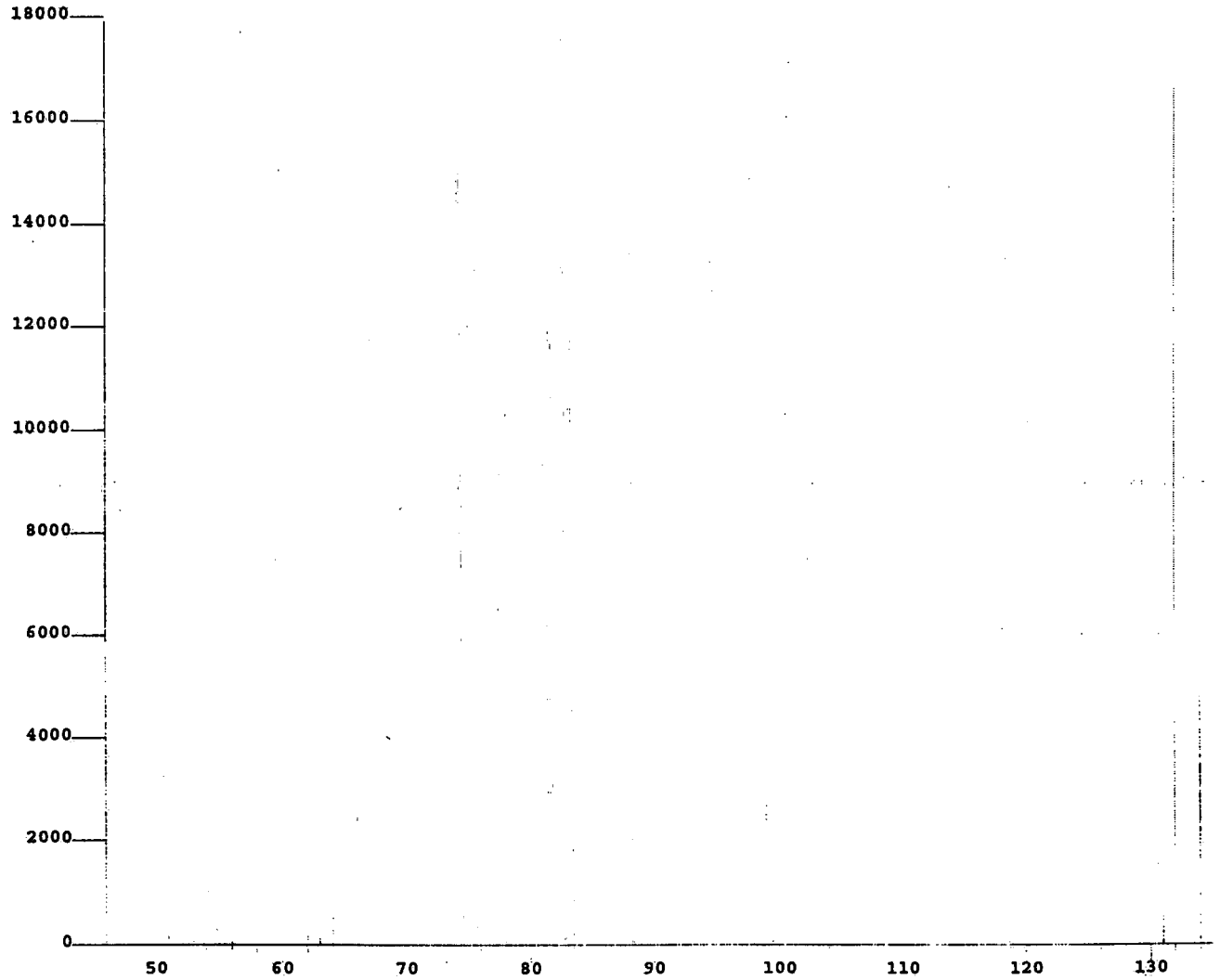
3063 HLN 2/8/82



000181

3970

Scan: 794 RT (min): 8.83

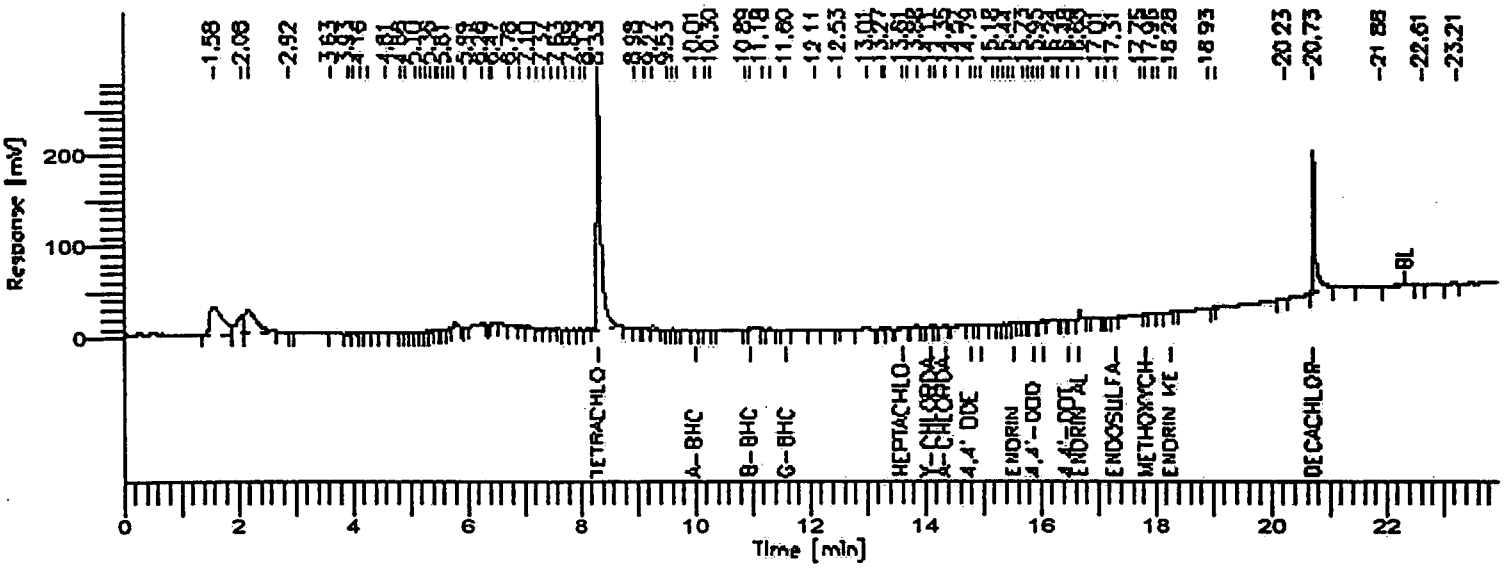


Data File: C:\BNAP\BNAPB572.MSS MB-3063 HLN 2/8/02
Name: MBLK 625 W BNA (3) 2
Misc Data: ~~MB-3043#2~~,BB438,L,1000.0,1.00,1.0,0,
RT (min): 8.83 Scan: 794
Area: 40662 Rank: 1
Semi-quantitative Conc(uncorrected): 2.79 ug/l
Calculated Using Istd: d4-1,4-Dichlorobenzene@ 9.15
No library Matches Found

000182

3971

Software Version: 4.1<2F12>
Date: 1/25/02 03:13 PM
Sample Name : MB-3021
Data File : C:\TC4\PEST\PSTB258.RAW Date: 1/22/02 01:45 PM
Sequence File: C:\TC4\PEST\PEST.SEQ Cycle: 258 Channel : B
Instrument : AUTOSYS_PEST Rack/Vial: 0/6 Operator:
Sample Amount : 1.0000 Dilution Factor : 1.00



VAL ASSOCIATES LABORATORY

PESTICIDES ANALYSIS

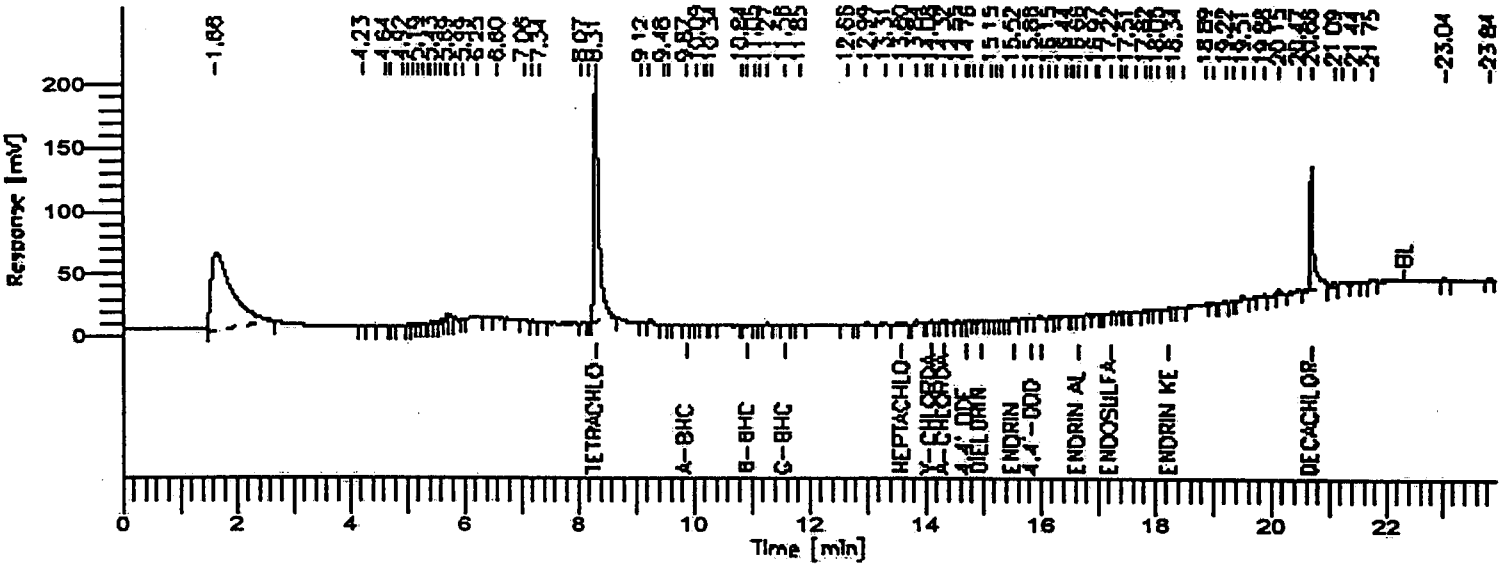
Peak #	Time [min]	Component Name	Area [µV·s]	BL	Response Factor	CONC PPB
37	8.333	Tetrachloro-m-xylene	1379695.77	BB	12985.1428	106.2519
44	10.008	a-BHC	2547.49	BB	1591.7375	1.6004
48	10.976	b-BHC	30008.55	VV	13010.3193	2.3065
51	11.595	g-BHC	5624.15	BB	2837.3525	1.9822
57	13.611	HEPTACHLOR EPOXIDE	17141.04	BV	7294.9668	2.3497
60	14.109	y-CHLORDANE	11011.85	BV	6645.4453	1.6571
62	14.347	a-CHLORDANE	7897.87	BB	4237.2051	1.8639
64	14.787	4,4' DDE	9160.16	VV	5462.9671	1.6768
66	14.992	DIELDRIN	4970.55	BB	2922.0068	1.7011
71	15.548	ENDRIN	2807.95	BB	1733.2182	1.6201
74	15.894	4,4'-DDD	3266.12	VV	18296.8872	0.1785
76	16.037	ENDOSULFAN II	4925.63	VV	5906.9359	0.8339
79	16.478	4,4'-DDT	1777.23	BB	1416.2006	1.2549
80	16.684	ENDRIN ALDEHYDE	34146.75	BB	4416.8920	7.7309
83	17.306	ENDOSULFAN SULFATE	2353.79	BB	-1597.6227	-1.4733

000183

3972

Peak #	Time [min]	Component Name	Area [µV·s]	BL	Response Factor	CONC PPB
85	17.858	METHOXYCHLOR	7457.19	VV	-2423.2148	-3.0774
88	18.282	ENDRIN KETONE	3193.67	VV	-474.0277	-6.7373
93	20.725	Decachlorobiphenyl	596235.54	BB	3791.9417	157.2375
			2124221.29		88054.3537	278.9574

Software Version: 4.1<2F12>
Date: 3/14/02 01:07 PM
Sample Name : MB-3021#2
Data File : C:\TC4\PEST\PSTB424.RAW Date: 3/2/02 01:36 PM
Sequence File: C:\TC4\PEST\PEST.SEQ Cycle: 424 Channel : B
Instrument : AUTOSYS_PEST Rack/Vial: 0/41 Operator:
Sample Amount : 1.0000 Dilution Factor : 1.00



VAL ASSOCIATES LABORATORY

PESTICIDES ANALYSIS

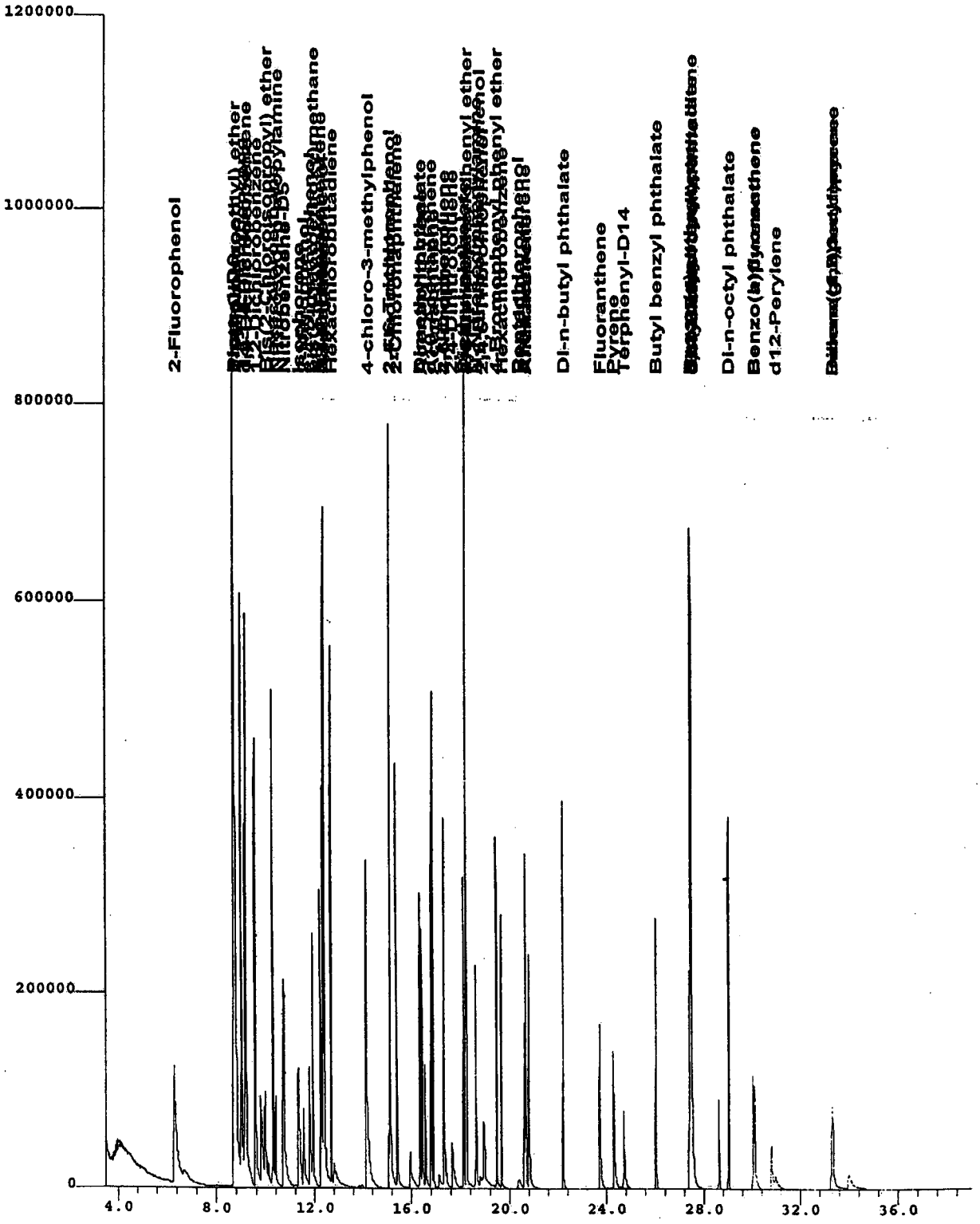
Peak #	Time [min]	Component Name	Area [µV·s]	BL	Response Factor	CONC PPB
25	8.314	Tetrachloro-m-xylene	1152216.39	BB	13023.9606	88.4690
30	9.874	a-BHC	2262.47	BB	1559.5017	1.4508
36	10.942	b-BHC	9580.61	VV	1.5853e+05	0.0604
40	11.563	g-BHC	2892.38	BB	5748.5537	0.5031
45	13.598	HEPTACHLOR EPOXIDE	24637.06	VB	34004.7788	0.7245
48	14.082	y-CHLORDANE	5128.28	VB	25115.2893	0.2042
49	14.315	a-CHLORDANE	9173.10	BB	11163.2617	0.8217
51	14.697	4,4' DDE	8098.26	VV	19205.9128	0.4217
54	14.960	DIELDRIN	5182.97	BB	4896.4712	1.0585
58	15.521	ENDRIN	8858.26	BV	4892.3046	1.8107
60	15.856	4,4'-DDD	7876.53	VV	11193.8468	0.7036
61	15.997	ENDOSULFAN II	16037.61	VV	8237.2074	1.9470
67	16.664	ENDRIN ALDEHYDE	4421.74	VV	-9955.5177	-0.4441
71	17.216	ENDOSULFAN SULFATE	3077.18	BB	3367.2245	0.9139
78	18.251	ENDRIN KETONE	6800.36	VV	7907.9286	0.8599

000185

3974

Peak #	Time [min]	Component Name	Area [µV·s]	BL	Response Factor	CONC PPB
90	20.684	Decachlorobiphenyl	434333.14	VV	4890.2861	88.8155
			1700576.33		3.0378e+05	188.3203

Data File: C:\BNAP\BNAPB586.MSS
Quant Output File: C:\BNAP\BNAPB586.Q
Injection Time: 02/08/82 22:51
Misc: 100PPBSTD,BB438,L,1000.0,1.00,1.0,0,



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3976

QUANT REPORT
Quant Rev: 10

Operator Id:
Dilution Factor:<None>
Output File: C:\BNAP\BNAPB586.Q
Data File: c:\bnap\bnapb586.mss
Name: LCS 625 W BNA (17)
Misc: 100PPBSTD,BB438,L,1000.0,1.00,1.0,0,
ID File: c:\bnap\hsl\625b.i
Title: SW-846 Method 8270 Semi-Volatile Quant ID File
st Calib: 01/17/82 10:29

Quant Time : 82/21/19 55:50
Injected at : 02/08/82 22:51

Last Qcal Date: None

Num	Compound	R.T.	Q	Ion	Area	Conc	Units	Q
1)	M*d4-1,4-Dichlorobenzene	9.15		152	188107	40.00	ug/l	0
2)	N-Nitrosodimethylamine	3.48		74	148311	17.03	ug/l	0
3)	2-Fluorophenol	6.30		112	524903	77.49	ug/l	100
4)	bis(2-Chloroethyl) ether	8.71		93	574847	58.03	ug/l	68
5)	Phenol-D6	8.68		99	495721	74.00	ug/l	100
6)	Phenol	8.71		94	418167	52.25	ug/l	100
7)	2-Chlorophenol	8.77		128	624676	62.26	ug/l	91
8)	1,3-Dichlorobenzene	9.00		146	559340	60.15	ug/l	92
9)	1,4-Dichlorobenzene	9.19		148	340351	58.39	ug/l	100
10)	1,2-Dichlorobenzene	9.56		146	448654	56.27	ug/l	87
11)	Bis(2-Chloroisopropyl) ether	9.95		121	144453	81.96	ug/l	100
12)	N-Nitrosodi-n-propylamine	10.39		70	115822	71.25	ug/l	100
13)	Hexachloroethane	10.28		117	260645	82.92	ug/l	100
14)	*d8-Naphthalene	12.34		136	644404	40.00	ug/l	0
15)	Nitrobenzene-D5	10.69		54	183527	85.96	ug/l	100
16)	Nitrobenzene	10.74		77	188223	43.74	ug/l	100
17)	Isophorone	11.32		82	456634	62.52	ug/l	91
18)	2-Nitrophenol	11.53		139	146492	44.85	ug/l	100
19)	2,4-Dimethylphenol	11.79		107	193979	40.02	ug/l	100
20)	bis(2-Chloroethoxy)methane	11.93		93	322233	86.66	ug/l	100
21)	1,2,4-Trichlorobenzene	12.23		180	264680	48.10	ug/l	94
22)	M 2,4-Dichlorophenol	12.30		162	266975	71.92	ug/l	0
24)	Naphthalene	12.39		128	1110487	59.57	ug/l	88
25)	Hexachlorobutadiene	12.69		225	144079	41.95	ug/l	94
26)	4-chloro-3-methylphenol	14.22		107	68299	24.79	ug/l	100
27)	*d10-Acenaphthene	16.80		162	289130	40.00	ug/l	98
28)	Hexachlorocyclopentadiene	14.54		237	8698	52.36	ug/l	0
29)	2,4,6-Trichlorophenol	15.08		198	132292	80.93	ug/l	0
30)	2-Fluorobiphenyl	15.14		172	671414	59.56	ug/l	98
31)	M 2-Chloronaphthalene	15.40		162	598131	62.46	ug/l	0
32)	Dimethyl phthalate	16.36		163	651314	69.31	ug/l	99
33)	Acenaphthylene	16.44		152	568962	37.73	ug/l	99
34)	2,6-Dinitrotoluene	17.34		63	68823	51.46	ug/l	0
35)	Acenaphthene	16.90		153	545069	54.60	ug/l	95
36)	2,4-Dinitrophenol	18.24		184	17587	23.70	ug/l	0
37)	2,4-Dinitrotoluene	17.66		165	137700	43.75	ug/l	0
38)	4-Nitrophenol	17.34		139	322791	47.27	ug/l	100
39)	Diethyl phthalate	18.12		149	623859	57.73	ug/l	85
40)	M Fluorene	18.23		166	765363	59.63	ug/l	0
41)	4-Chlorophenyl phenyl ether	18.24		204	227499	53.59	ug/l	100
42)	2,4,6-Tribromophenol	18.93		332	106170	49.74	ug/l	92
43)	*d10-Phenanthrene	20.61		188	243617	40.00	ug/l	95
44)	4,6-Dinitro-2-methylphenol	18.78		198	10924	9.42	ug/l	100
45)	N-Nitrosodiphenylamine	18.62		169	259727	49.72	ug/l	86
46)	4-Bromophenyl phenyl ether	19.47		248	56537	75.61	ug/l	96
47)	Hexachlorobenzene	19.67		284	101550	72.06	ug/l	100
48)	M Pentachlorophenol	20.37		266	8311	74.05	ug/l	0
49)	Phenanthrene	20.68		178	485474	56.29	ug/l	97
50)	Anthracene	20.68		178	485474	60.93	ug/l	96
51)	Di-n-butyl phthalate	22.23		149	864209	76.27	ug/l	96
52)	Fluoranthene	23.73		202	404188	48.21	ug/l	92
53)	Pyrene	24.29		202	423903	52.74	ug/l	94
54)	*d12-Chrysene	27.44		240	140697	40.00	ug/l	100
55)	Benzidine	20.42		184	1879	82.72	ug/l	0
56)	Terphenyl-D14	24.72		244	90555	50.24	ug/l	0
57)	Butyl benzyl phthalate	26.04		149	384436	137.52	ug/l	63
58)	Benzo(a)anthracene	27.40		228	337907	59.34	ug/l	100
59)	Chrysene	27.50		228	215769	39.82	ug/l	100
60)	3,3'-Dichlorobenzidine	27.49		252	23372	55.65	ug/l	93
61)	bis(2-Ethylhexyl)phthalate	27.48		149	696845	70.99	ug/l	91
62)	*d12-Perylene	30.99		264	29008	40.00	ug/l	100
63)	Di-n-octyl phthalate	29.04		149	969973	121.60	ug/l	97
64)	Benzo(b)fluoranthene	30.06		252	125845	75.42	ug/l	100
65)	Benzo(k)fluoranthene	30.11		252	98769	49.18	ug/l	100
66)	Benzo(a)pyrene	30.11		252	134976	77.04	ug/l	90
67)	Indeno(1,2,3-c,d)pyrene	33.33		276	155359	52.40	ug/l	100
68)	Dibenz(a,h)anthracene	33.30		278	142198	50.44	ug/l	100
69)	Benzo(ghi)perylene	33.33		276	107802	45.27	ug/l	100

* Compound is Internal Standard

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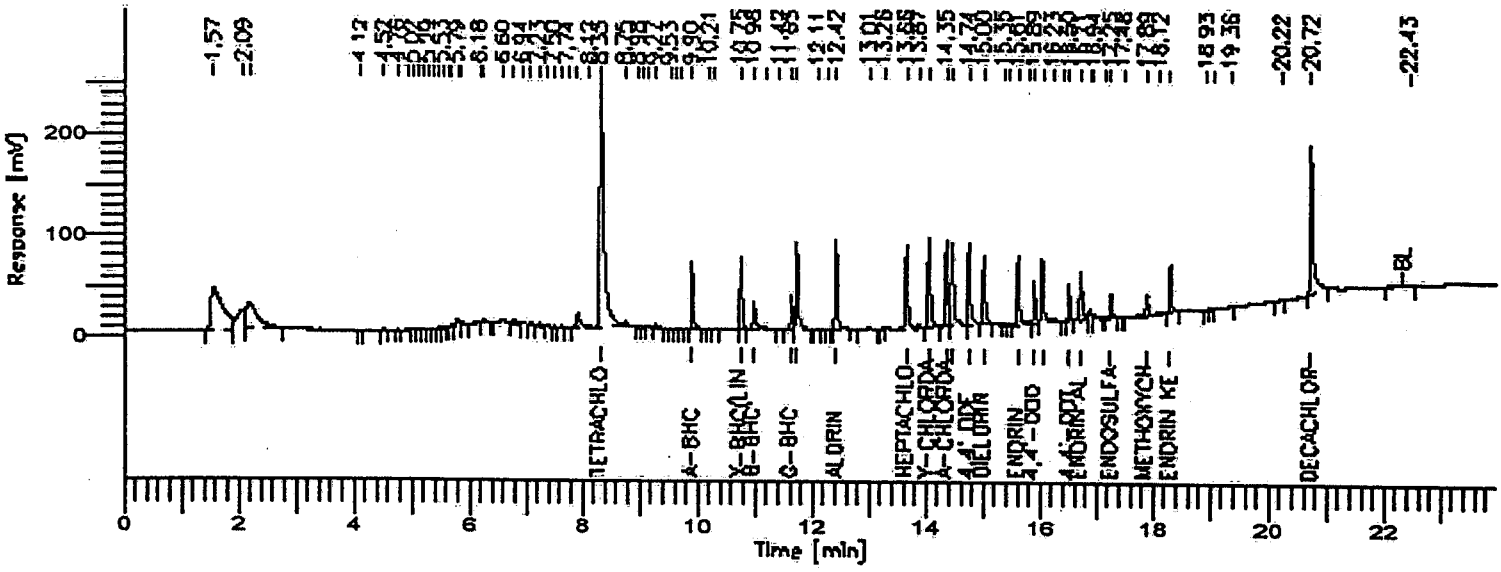
Software Version: 4.1<2F12>
Date: 3/14/02 09:28 AM
Sample Name : LCS-3021
Data File : C:\TC4\PEST\PSTB259.RAW Date: 1/22/02 02:14 PM
Sequence File: C:\TC4\PEST\PEST.SEQ Cycle: 259 Channel : B
Instrument : AUTOSYS_PEST Rack/Vial: 0/7 Operator:
Sample Amount : 1.0000 Dilution Factor : 1.00



VAL ASSOCIATES LABORATORY

PESTICIDES ANALYSIS

Peak #	Time [min]	Component Name	Area [µV·s]	BL	Response Factor	CONC PPB
32	8.327	Tetrachloro-m-xylene	1251437.29	BE	13023.9606	96.0873
41	9.904	a-BHC	209262.97	BB	8113.3293	25.7925
44	10.753	y-BHC(Lindane)	194361.89	BB	7808.0311	24.8926
45	10.977	b-BHC	94033.29	BE	3529.5398	26.6418
48	11.629	g-BHC	88653.87	BV	3533.1391	25.0921
49	11.730	HEPTCHLOR	271480.80	VB	10790.9309	25.1582
52	12.423	ALDRIN	272685.61	BB	10112.5586	26.9650
55	13.656	HEPTACHLOR EPOXIDE	257885.65	BE	9240.8703	27.9071
57	14.045	y-CHLORDANE	288690.22	BV	10491.6446	27.5162
58	14.349	a-CHLORDANE	238718.46	VV	9055.3640	26.3621
59	14.446	ENDOSULFAN 1	274956.39	VV	10267.8410	26.7784
60	14.742	4,4' DDE	245342.76	VV	8866.2103	27.6717
61	15.003	DIELDRIN	200230.93	VB	8368.6412	23.9263
64	15.605	ENDRIN	187666.75	BE	7490.1981	25.0550
66	15.893	4,4'-DDD	103238.31	VV	4342.1080	23.7761

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Peak #	Time [min]	Component Name	Area [µV·s]	BL	Response Factor	CONC PPB
67	16.035	ENDOSULFAN II	189672.89	VE	7213.7913	26.2931
0	16.504	4,4'-DDT	89805.36	VV	3560.9883	25.2192
71	16.712	ENDRIN ALDEHYDE	161721.88	VV	6546.5896	24.7032
75	17.252	ENDOSULFAN SULFATE	62557.97	BB	2476.6456	25.2592
77	17.887	METHOXYCHLOR	60411.09	BE	2440.9973	24.7485
79	18.289	ENDRIN KETONE	134588.31	BB	5790.3328	23.2436
84	20.723	Decachlorobiphenyl	548338.87	BB	4890.2861	112.1282
			5425741.59		1.5795e+05	721.2174

(856) 354-1337

VAL ASSOCIATES LABORATORY INC.

FAX: (856)354-1586

Water,Air & Soil Analysis

PHILIP V. DATZ, JR.
Chemist

N.J. Cert. # 04174

Seven Deer Tree
Professional Center
600 Deer Road
Cherry Hill, NJ 08034

Non-Conformance Summary
Metals Analysis

	YES	NO
1. Calibration Summary Meets Criteria	X	
2. ICP Interference Check Sample Results Summary Submitted (if applicable) / Meet Criteria	X	
3. Serial Dilution Summary Submitted (if applicable) / Meet Criteria		
4. Laboratory Control Sample Summary Submitted (if applicable) / Meet Criteria	X	
5. Blank Contamination If yes list compounds and concentrations		X
6. Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria If not met, list those compounds and their recoveries	X	
7. Extraction Holding Times Met If not met, list samples and number of days exceeded	X	
8. Analysis Holding Time Met If not met, list samples and number of days exceeded	X	

6. 0 out of 26 outside QC limits; see pages

9. Additional Comments:

Laboratory Manager: Philip V. Datz Jr. Date March 14, 2002

000189

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(856) 354-1337

VAL ASSOCIATES LABORATORY INC.

FAX: (856)354-1586

Water,Air & Soil Analysis

PHILIP V. DATZ, JR.
Chemist

N.J. Cert. # 04174

Seven Deer Tree
Professional Center
600 Deer Road
Cherry Hill, NJ 08034

Non-Conformance Summary
GC/MS Analysis

	YES	NO
1. Chromatographs Labeled/Compounds Identified (Field Samples and Method Blanks)	X	
2. GC/MS Tune Specifications		
b. DFTPP meets criteria		
3. GC/MS Tuning Frequency - Performed every 24 hrs. for 600 series and 12 hrs. for 8000 series	X	
4. GC/MS Calibration - Initial Calibration performed within 30 days before sample analysis and continuing calibration performed within 24 hrs. of sample analysis for 600 series and 12 hrs. for 8000 series.	X	
5. GC/MS Calibration Requirements		
a. Calibration Check Compounds	X	
b. System Performance Check Compounds	X	
6. Blank Contamination - If yes, list compounds and concentrations		
b. B/N Fraction: See pages for details		
c. Acid Fraction: See pages for details		
7. Surrogate Recoveries meet Criteria		
b. B/N Fraction: 0 out of 12 outside limits; see pages		
c. Acid Fraction: out of outside limits; see pages		
8. Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria		
b. B/N Fraction: 0 out of 90 outside limits; see pages	X	
c. Acid Fraction: 0 out of 20 outside limits; see pages	X	
9. Laboratory Control Spike Recoveries Meet Criteria		
b. B/N Fraction: 0 out of 45 outside limits; see pages	X	
c. Acid Fraction: 0 out of 10 outside limits; see pages	X	
10. Internal Standard Area/Retention Time Meets Criteria	X	
11. Extraction Holding Times Met		
If not met, list samples and number of days exceeded		
12. Analysis Holding Time Met		
If not met, list samples and number of days exceeded	X	

Laboratory Manager: Philip V. Datz Jr. Date: 3/14/02

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39481

02/22/2002

Envirotactics, Inc.
25-17 Rt 35
Bldg D, Suite 202
Manasquan, NJ 08736

Attention: Mr. Basil Ellmers

SEVERN TRENT SERVICES

STL Edison
777 New Durham Road
Edison, NJ 08817

Tel: 732-549-3900
Fax: 732-549-3679
www.stl-inc.com

Laboratory Results
Job No. T413 - 444-Orbis Newark

Dear Mr. Ellmers:

Enclosed are the results you requested for the following sample(s) received at our laboratory on February 7, 2002.

Lab No.	Client ID	Analysis Required
331185	MW-1	3810-Methane,Ethane,Ethene
		Fe
		Sulfide
		Chloride
		Ammonia
		Tot. Phosphorus
		Sulfate
331186	MW-3	3810-Methane,Ethane,Ethene
		Fe
		Sulfide
		Chloride
		Ammonia
		Tot. Phosphorus
		Sulfate
331187	MW-5	3810-Methane,Ethane,Ethene
		Fe
		Sulfide
		Chloride
		Ammonia
		Tot. Phosphorus
		Sulfate
331188	MW-6	3810-Methane,Ethane,Ethene

SEVERN TRENT SERVICES

STL Edison
777 New Durham Road
Edison, NJ 08817

Tel: 732-549-3900
Fax: 732-549-3679
www.stl-inc.com

Laboratory Results
Job No. T413 - 444-Orbis Newark (cont'd)

Lab No.	Client ID	Analysis Required
		Fe
		Sulfide
		Chloride
		Ammonia
		Tot. Phosphorus
		Sulfate
331189	MW-7	3810-Methane,Ethane,Ethene
		Fe
		Sulfide
		Chloride
		Ammonia
		Tot. Phosphorus
		Sulfate
331190	MW-17	3810-Methane,Ethane,Ethene
		Fe
		Sulfide
		Chloride
		Ammonia
		Tot. Phosphorus
		Sulfate
331191	MW-1-Dis	Fe

SEVERN TRENT SERVICES

STL Edison
777 New Durham Road
Edison, NJ 08817

Tel: 732-549-3900
Fax: 732-549-3679
www.stl-inc.com

Laboratory Results
Job No. T413 - 444-Orbis Newark (cont'd)

Lab No.	Client ID	Analysis Required
331192	MW-3-Dis	Fe
331193	MW-5-Dis	Fe
331194	MW-6-Dis	Fe
331195	MW-7-Dis	Fe
331196	MW-17-Dis	Fe

An invoice for our services is also enclosed. If you have any questions please contact your Project Manager, Joy Kelly, at (732) 549-3900.

Very Truly Yours,

Michael J. Urban
Laboratory Director

SEVERN TRENT SERVICES

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SEVERN TRENT SERVICES

Analytical Results Summary

SEVERN TRENT SERVICES

Client ID: MW-1
Site: 444-Orbis Newark

Lab Sample No: 331185
Lab Job No: T413

Date Sampled: 02/04/02
Date Received: 02/07/02
Date Analyzed: 02/12/02
GC Column: GS-Q
Instrument ID: VSCREEN3.i
Lab File ID: scrc9831.d

Matrix: WATER
Level: MED
Purge Volume: 10.0 ml
Final Volume: 0.0 mL
Dilution Factor: 1.0

METHANE, ETHANE, ETHENE
METHOD 3810

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methane	20	5.0
Ethene	ND	5.0
Ethane	ND	5.0

SEVERN TRENT SERVICES

Client ID: MW-3
Site: 444-Orbis Newark

Lab Sample No: 331186
Lab Job No: T413

Date Sampled: 02/05/02
Date Received: 02/07/02
Date Analyzed: 02/12/02
GC Column: GS-Q
Instrument ID: VSCREEN3.i
Lab File ID: scrc9832.d

Matrix: WATER
Level: MED
Purge Volume: 10.0 ml
Final Volume: 0.0 mL
Dilution Factor: 50.0

METHANE, ETHANE, ETHENE
METHOD 3810

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methane	4000	250
Ethene	ND	250
Ethane	ND	250

SEVERN TRENT SERVICES

Client ID: MW-5
Site: 444-Orbis Newark

Lab Sample No: 331187
Lab Job No: T413

Date Sampled: 02/05/02
Date Received: 02/07/02
Date Analyzed: 02/12/02
GC Column: GS-Q
Instrument ID: VSCREEN3.i
Lab File ID: scrc9837.d

Matrix: WATER
Level: MED
Purge Volume: 10.0 ml
Final Volume: 0.0 mL
Dilution Factor: 50.0

METHANE, ETHANE, ETHENE
METHOD 3810

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methane	3000	250
Ethene	ND	250
Ethane	ND	250

SEVERN TRENT SERVICES

Client ID: MW-6
Site: 444-Orbis Newark

Lab Sample No: 331188
Lab Job No: T413

Date Sampled: 02/04/02
Date Received: 02/07/02
Date Analyzed: 02/12/02
GC Column: GS-Q
Instrument ID: VSCREEN3.i
Lab File ID: scrc9834.d

Matrix: WATER
Level: MED
Purge Volume: 10.0 ml
Final Volume: 0.0 mL
Dilution Factor: 5.0

METHANE, ETHANE, ETHENE
METHOD 3810

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methane	390	25
Ethene	ND	25
Ethane	ND	25

3990

SEVERN TRENT SERVICES

Client ID: MW-7
Site: 444-Orbis Newark

Lab Sample No: 331189
Lab Job No: T413

Date Sampled: 02/05/02
Date Received: 02/07/02
Date Analyzed: 02/12/02
GC Column: GS-Q
Instrument ID: VSCREEN3.i
Lab File ID: scrc9835.d

Matrix: WATER
Level: MED
Purge Volume: 10.0 ml
Final Volume: 0.0 mL
Dilution Factor: 10.0

METHANE, ETHANE, ETHENE
METHOD 3810

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methane	810	50
Ethene	ND	50
Ethane	ND	50

SEVERN TRENT SERVICES

Client ID: MW-17
Site: 444-Orbis Newark

Lab Sample No: 331190
Lab Job No: T413

Date Sampled: 02/04/02
Date Received: 02/07/02
Date Analyzed: 02/12/02
GC Column: GS-Q
Instrument ID: VSCREEN3.i
Lab File ID: scrc9836.d

Matrix: WATER
Level: MED
Purge Volume: 10.0 ml
Final Volume: 0.0 mL
Dilution Factor: 1.0

METHANE, ETHANE, ETHENE
METHOD 3810

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methane	7.8	5.0
Ethene	8.5	5.0
Ethane	ND	5.0

SEVERN TRENT SERVICES

Client ID: MW-1
Site: 444-Orbis Newark

Lab Sample No: 331185
Lab Job No: T413

Date Sampled: 02/04/02
Date Received: 02/07/02

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	M
Iron	3630	39.7	P

M Column - Method Code (See Section 2 of Report)

SEVERN TRENT SERVICES

Client ID: MW-3
Site: 444-Orbis Newark

Lab Sample No: 331186
Lab Job No: T413

Date Sampled: 02/05/02
Date Received: 02/07/02

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	M
Iron	5210	39.7	P

M Column - Method Code (See Section 2 of Report)

SEVERN TRENT SERVICES

Client ID: **MW-5**
Site: **444-Orbis Newark**

Lab Sample No: 331187
Lab Job No: T413

Date Sampled: 02/05/02
Date Received: 02/07/02

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	M
Iron	11500	79.4	P

M Column - Method Code (See Section 2 of Report)

SEVERN TRENT SERVICES

Client ID: MW-6
Site: 444-Orbis Newark

Lab Sample No: 331188
Lab Job No: T413

Date Sampled: 02/04/02
Date Received: 02/07/02

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	M
Iron	9790	39.7	P

M Column - Method Code (See Section 2 of Report)

SEVERN TRENT SERVICES

Client ID: **MW-7**
Site: **444-Orbis Newark**

Lab Sample No: 331189
Lab Job No: T413

Date Sampled: 02/05/02
Date Received: 02/07/02

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	M
Iron	7180	39.7	P

M Column - Method Code (See Section 2 of Report)

SEVERN TRENT SERVICES

Client ID: MW-17
Site: 444-Orbis Newark

Lab Sample No: 331190
Lab Job No: T413

Date Sampled: 02/04/02
Date Received: 02/07/02

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	M
Iron	268	39.7	P

M Column - Method Code (See Section 2 of Report)

39998

SEVERN TRENT SERVICES

Client ID: **MW-1-Dis**
Site: **444-Orbis Newark**

Lab Sample No: 331191
Lab Job No: T413

Date Sampled: 02/04/02
Date Received: 02/07/02

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	M
Iron	3990	39.7	P

M Column - Method Code (See Section 2 of Report)

3999

SEVERN TRENT SERVICES

Client ID: MW-3-Dis
Site: 444-Orbis Newark

Lab Sample No: 331192
Lab Job No: T413

Date Sampled: 02/05/02
Date Received: 02/07/02

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	M
Iron	4370	39.7	P

M Column - Method Code (See Section 2 of Report)

4000

SEVERN TRENT SERVICES

Client ID: **MW-5-Dis**
Site: **444-Orbis Newark**

Lab Sample No: 331193
Lab Job No: T413

Date Sampled: 02/05/02
Date Received: 02/07/02

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	M
Iron	11500	79.4	P

M Column - Method Code (See Section 2 of Report)

SEVERN TRENT SERVICES

Client ID: MW-6-Dis
Site: 444-Orbis Newark

Lab Sample No: 331194
Lab Job No: T413

Date Sampled: 02/04/02
Date Received: 02/07/02

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	M
Iron	8860	39.7	P

M Column - Method Code (See Section 2 of Report)

SEVERN TRENT SERVICES

Client ID: **MW-7-Dis**
Site: **444-Orbis Newark**

Lab Sample No: 331195
Lab Job No: T413

Date Sampled: 02/05/02
Date Received: 02/07/02

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	M
Iron	7890	39.7	P

M Column - Method Code (See Section 2 of Report)

SEVERN TRENT SERVICES

Client ID: MW-17-Dis
Site: 444-Orbis Newark

Lab Sample No: 331196
Lab Job No: T413

Date Sampled: 02/04/02
Date Received: 02/07/02

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	M
Iron	244	39.7	P

M Column - Method Code (See Section 2 of Report)

SEVERN TRENT SERVICES

Site: 444-Orbis Newark

Lab Job No: T413

Date Received: 02/07/2002
Matrix: WATER

Date Extracted: 02/08/2002
Date Analyzed: 02/13/2002
QA Batch: 0356

Ammonia

STL Edison Sample #	Client ID	Sample Date	Dilution Factor	Analytical Result Units: mg/l
331185	MW-1	02/04/2002	1.0	0.3
331186	MW-3	02/05/2002	1.0	1.1
331187	MW-5	02/05/2002	10.0	22.1
331188	MW-6	02/04/2002	1.0	3.2
331189	MW-7	02/05/2002	1.0	0.38
331190	MW-17	02/04/2002	1.0	1.2

Quantitation Limit for Ammonia is 0.1 mg/l.

SEVERN TRENT SERVICES

Site: 444-Orbis Newark

Lab Job No: T413

Date Received: 02/07/2002
Matrix: WATER

Date Analyzed: 02/14/2002
QA Batch: 1700

Chloride

STL Edison Sample #	Client ID	Sample Date	Dilution Factor	Analytical Result Units: mg/l
331185	MW-1	02/04/2002	1.0	34.0
331186	MW-3	02/05/2002	1.0	29.0
331187	MW-5	02/05/2002	4.0	ND
331188	MW-6	02/04/2002	10.0	190
331189	MW-7	02/05/2002	5.0	217
331190	MW-17	02/04/2002	2.0	65.0

Quantitation Limit for Chloride is 5.0 mg/l.

SEVERN TRENT SERVICES

Site: 444-Orbis Newark

Lab Job No: T413

Date Received: 02/07/2002
Matrix: WATER

Date Analyzed: 02/12/2002
QA Batch: 1648

Sulfate

STL Edison Sample #	Client ID	Sample Date	Dilution Factor	Analytical Result Units: mg/l
331185	MW-1	02/04/2002	5.0	168
331186	MW-3	02/05/2002	1.0	29.6
331187	MW-5	02/05/2002	1.0	ND
331188	MW-6	02/04/2002	1.0	16.9
331189	MW-7	02/05/2002	2.0	60.1
331190	MW-17	02/04/2002	2.0	59.3

Quantitation Limit for Sulfate is 5.0 mg/l.

SEVERN TRENT SERVICES

Site: 444-Orbis Newark

Lab Job No: T413

Date Received: 02/07/2002
Matrix: WATER

Date Analyzed: 02/09/2002
QA Batch: 1389

Sulfide

STL Edison Sample #	Client ID	Sample Date	Dilution Factor	Analytical Result Units: mg/l
331185	MW-1	02/04/2002	1.0	ND
331186	MW-3	02/05/2002	1.0	ND
331187	MW-5	02/05/2002	1.0	ND
331188	MW-6	02/04/2002	1.0	ND
331189	MW-7	02/05/2002	1.0	ND
331190	MW-17	02/04/2002	1.0	ND

Quantitation Limit for Sulfide is 1.0 mg/l.

SEVERN TRENT SERVICES

Site: 444-Orbis Newark

Lab Job No: T413

Date Received: 02/07/2002
Matrix: WATER

Date Analyzed: 02/08/2002
QA Batch: 1322

Total Phosphorus

STL Edison Sample #	Client ID	Sample Date	Dilution Factor	Analytical Result Units: mg/l
331185	MW-1	02/04/2002	1.0	0.43
331186	MW-3	02/05/2002	2.0	0.51
331187	MW-5	02/05/2002	10.0	4.6
331188	MW-6	02/04/2002	4.0	1.1
331189	MW-7	02/05/2002	5.0	2.0
331190	MW-17	02/04/2002	1.0	0.07

Quantitation Limit for Total Phosphorus is 0.03 mg/l.

General Information

Chain of Custody

T413

STL EDISON
777 New Durham Road
Edison, New Jersey 08817
Phone: (732) 549-3900 Fax: (732) 549-3679

CHAIN OF CUSTODY / ANALYSIS REQUEST

PAGE 1 OF 1

Name (for report and invoice): Basil Ellmers	Samplers Name (Printed): Basil Ellmers	Site/Project Identification: 444 - ORBIS Newark
Company: ENVIROTACTICS Inc	P.O. #:	State (Location of site): NJ: ☒ NY: ☐ Other:
		Regulatory Program:
Address: 2517 Highway 35 Bld D Ste 202	Analysis Turnaround Time: Standard ☒	LAB USE ONLY Project No:
City: Manasquan State: NJ 08736	Rush Charges Authorized For: 2 Week ☐ 1 Week ☐ Other ☐	Job No: T413
Phone: 732 292 0100 Fax: 732 292 2208		

ANALYSIS REQUESTED (ENTER "X" BELOW TO INDICATE REQUEST)

Sample Identification	Date	Time	Matrix	No. of Cont.	Methane Ethane Ethene	Sulfate	Total Sulfide	Chloride Nitrate Nitrite	Diss Iron	Iron	Phosphorus	Nitrogen-Ammonia				Sample Numbers	Diss
MW-1	2/4/02	1130	A	9	✓	✓	✓	✓	✓	✓	✓	✓				331185	33119
MW-3	2/5/02	1150	A	9	✓	✓	✓	✓	✓	✓	✓	✓				331186	33119
MW-5	2/5/02	1120	A	9	✓	✓	✓	✓	✓	✓	✓	✓				331187	33119
MW-6	2/4/02	2:00	A	9	✓	✓	✓	✓	✓	✓	✓	✓				331188	33119
MW-7	2/5/02	110	A	9	✓	✓	✓	✓	✓	✓	✓	✓				331189	33119
MW-17	2/4/02	250	A	9	✓	✓	✓	✓	✓	✓	✓	✓				331190	33119

Preservation Used: 1 = ICE, 2 = HCl, 3 = H_2SO_4, 4 = HNO_3, 5 = NaOH
6 = Other _____, 7 = Other _____

Soil:
Water:

Special Instructions (*) NO_3 & NO_2 cancelled per Basil E.: out of hold

Water Metals Filtered (Yes/No)?

Relinquished by	Company	Date / Time	Received by	Company
1) Basil Ellmers	Envirotactics	2/5/02 4:00	1) [signature] 02.07.02 08:28	STL Edison Jason Paluch
2) [signature]	STL Edison Jason Paluch	02.07.02 12:15	2) Ventriarelle	STL
3)			3)	
4)			4)	

Laboratory Certifications: New Jersey (12028), New York (11452), Pennsylvania (68-522), Connecticut (PH-0200), Rhode Island (132).

H011

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INTERNAL CUSTODY RECORD
AND
LABORATORY CHRONICLE
STL Edison

777 New Durham Road, Edison, New Jersey
08817

Job No: T413 **Site:** 444-Orbis Newark

Client: Envirotactics, Inc.

VOAGC

3810

Lab Sample ID	Date Sampled	Date Received	Preparation Date	Technician's Name	Analysis Date	Analyst's Name	QA Batch
WATER							
331185	2/4/2002	2/07/2002			2/12/2002	Yip, Ming	0488
331186	2/5/2002	2/07/2002			2/12/2002	Yip, Ming	0488
331187	2/5/2002	2/07/2002			2/12/2002	Yip, Ming	0488
331188	2/4/2002	2/07/2002			2/12/2002	Yip, Ming	0488
331189	2/5/2002	2/07/2002			2/12/2002	Yip, Ming	0488
331190	2/4/2002	2/07/2002			2/12/2002	Yip, Ming	0488

INTERNAL CUSTODY RECORD
AND
LABORATORY CHRONICLE
STL Edison

777 New Durham Road, Edison, New Jersey
08817

Job No:	T413	**Site:**	444-Orbis Newark
Client:	Envirotactics, Inc.	**Date Sampled:**	2/4/2002
Sample No.:	331185	**Date Received:**	2/7/2002
		Matrix:	WATER

METALS

Analytic Parameter	Preparation Date	Technician's Name	Analysis Date	Analyst's Name	QA Batch
IRON	2/11/2002	Yang, Qin	2/11/2002	Evans, Donald	12324

INTERNAL CUSTODY RECORD
AND
LABORATORY CHRONICLE
STL Edison

777 New Durham Road, Edison, New Jersey
08817

Job No:	T413	**Site:**	444-Orbis Newark
Client:	Envirotactics, Inc.	**Date Sampled:**	2/5/2002
Sample No.:	331186	**Date Received:**	2/7/2002
		Matrix:	WATER

METALS

Analytic Parameter	Preparation Date	Technician's Name	Analysis Date	Analyst's Name	QA Batch
IRON	2/11/2002	Yang, Qin	2/11/2002	Evans, Donald	12324

INTERNAL CUSTODY RECORD
AND
LABORATORY CHRONICLE
STL Edison

777 New Durham Road, Edison, New Jersey
08817

Job No:	T413	**Site:**	444-Orbis Newark
Client:	Envirotactics, Inc.	**Date Sampled:**	2/5/2002
Sample No.:	331187	**Date Received:**	2/7/2002
		Matrix:	WATER

METALS

Analytic Parameter	Preparation Date	Technician's Name	Analysis Date	Analyst's Name	QA Batch
IRON	2/11/2002	Yang, Qin	2/11/2002	Evans, Donald	12324

INTERNAL CUSTODY RECORD
AND
LABORATORY CHRONICLE
STL Edison

777 New Durham Road, Edison, New Jersey
08817

Job No:	T413	**Site:**	444-Orbis Newark
Client:	Envirotactics, Inc.	**Date Sampled:**	2/4/2002
Sample No.:	331188	**Date Received:**	2/7/2002
		Matrix:	WATER

METALS

Analytic Parameter	Preparation Date	Technician's Name	Analysis Date	Analyst's Name	QA Batch
IRON	2/11/2002	Yang, Qin	2/11/2002	Evans, Donald	12324

INTERNAL CUSTODY RECORD
AND
LABORATORY CHRONICLE
STL Edison

777 New Durham Road, Edison, New Jersey
08817

Job No:	T413	**Site:**	444-Orbis Newark
Client:	Envirotactics, Inc.	**Date Sampled:**	2/5/2002
Sample No.:	331189	**Date Received:**	2/7/2002
		Matrix:	WATER

METALS

Analytic Parameter	Preparation Date	Technician's Name	Analysis Date	Analyst's Name	QA Batch
IRON	2/11/2002	Yang, Qin	2/11/2002	Evans, Donald	12324

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INTERNAL CUSTODY RECORD
AND
LABORATORY CHRONICLE
STL Edison

777 New Durham Road, Edison, New Jersey
08817

Job No:	T413	**Site:**	444-Orbis Newark
Client:	Envirotactics, Inc.	**Date Sampled:**	2/4/2002
Sample No.:	331190	**Date Received:**	2/7/2002
		Matrix:	WATER

METALS

Analytic Parameter	Preparation Date	Technician's Name	Analysis Date	Analyst's Name	QA Batch
IRON	2/11/2002	Yang, Qin	2/11/2002	Evans, Donald	12324

INTERNAL CUSTODY RECORD
AND
LABORATORY CHRONICLE
STL Edison

777 New Durham Road, Edison, New Jersey
08817

Job No: T413
Client: Envirotactics, Inc.
Sample No.: 331191

Site: 444-Orbis Newark
Date Sampled: 2/4/2002
Date Received: 2/7/2002
Matrix: WATER

METALS

Analytic Parameter	Preparation Date	Technician's Name	Analysis Date	Analyst's Name	QA Batch
IRON	2/11/2002	Yang, Qin	2/11/2002	Evans, Donald	12324

INTERNAL CUSTODY RECORD
AND
LABORATORY CHRONICLE
STL Edison

777 New Durham Road, Edison, New Jersey
08817

Job No:	T413	**Site:**	444-Orbis Newark
Client:	Envirotactics, Inc.	**Date Sampled:**	2/5/2002
Sample No.:	331192	**Date Received:**	2/7/2002
		Matrix:	WATER

METALS

Analytic Parameter	Preparation Date	Technician's Name	Analysis Date	Analyst's Name	QA Batch
IRON	2/11/2002	Yang, Qin	2/11/2002	Evans, Donald	12324

INTERNAL CUSTODY RECORD
AND
LABORATORY CHRONICLE
STL Edison

777 New Durham Road, Edison, New Jersey
08817

Job No:	T413	**Site:**	444-Orbis Newark
Client:	Envirotactics, Inc.	**Date Sampled:**	2/5/2002
Sample No.:	331193	**Date Received:**	2/7/2002
		Matrix:	WATER

METALS

Analytic Parameter	Preparation Date	Technician's Name	Analysis Date	Analyst's Name	QA Batch
IRON	2/11/2002	Yang, Qin	2/11/2002	Evans, Donald	12324

INTERNAL CUSTODY RECORD
AND
LABORATORY CHRONICLE
STL Edison

777 New Durham Road, Edison, New Jersey
08817

Job No:	T413	**Site:**	444-Orbis Newark
Client:	Envirotactics, Inc.	**Date Sampled:**	2/4/2002
Sample No.:	331194	**Date Received:**	2/7/2002
		Matrix:	WATER

METALS

Analytic Parameter	Preparation Date	Technician's Name	Analysis Date	Analyst's Name	QA Batch
IRON	2/11/2002	Yang, Qin	2/11/2002	Evans, Donald	12324

INTERNAL CUSTODY RECORD
AND
LABORATORY CHRONICLE
STL Edison

777 New Durham Road, Edison, New Jersey
08817

Job No:	T413	**Site:**	444-Orbis Newark
Client:	Envirotactics, Inc.	**Date Sampled:**	2/5/2002
Sample No.:	331195	**Date Received:**	2/7/2002
		Matrix:	WATER

METALS

Analytic Parameter	Preparation Date	Technician's Name	Analysis Date	Analyst's Name	QA Batch
IRON	2/11/2002	Yang, Qin	2/11/2002	Evans, Donald	12324

INTERNAL CUSTODY RECORD
AND
LABORATORY CHRONICLE
STL Edison

777 New Durham Road, Edison, New Jersey
08817

Job No:	T413	**Site:**	444-Orbis Newark
Client:	Envirotactics, Inc.	**Date Sampled:**	2/4/2002
Sample No.:	331196	**Date Received:**	2/7/2002
		Matrix:	WATER

METALS

Analytic Parameter	Preparation Date	Technician's Name	Analysis Date	Analyst's Name	QA Batch
IRON	2/11/2002	Yang, Qin	2/11/2002	Evans, Donald	12324

INTERNAL CUSTODY RECORD
AND
LABORATORY CHRONICLE
STL Edison

777 New Durham Road, Edison, New Jersey
08817

Job No: T413 Site: 444-Orbis Newark

Client: Envirotactics, Inc.

WET CHEM

CHLORIDE

Lab Sample ID	Date Sampled	Date Received	Preparation Date	Technician's Name	Analysis Date	Analyst's Name	QA Batch
WATER							
331185	2/4/2002	2/07/2002			2/14/2002	Ohlson, Donna	1700
331186	2/5/2002	2/07/2002			2/14/2002	Ohlson, Donna	1700
331187	2/5/2002	2/07/2002			2/14/2002	Ohlson, Donna	1700
331188	2/4/2002	2/07/2002			2/14/2002	Ohlson, Donna	1700
331189	2/5/2002	2/07/2002			2/14/2002	Ohlson, Donna	1700
331190	2/4/2002	2/07/2002			2/14/2002	Ohlson, Donna	1700

NITROGEN-AMMONIA

Lab Sample ID	Date Sampled	Date Received	Preparation Date	Technician's Name	Analysis Date	Analyst's Name	QA Batch
WATER							
331185	2/4/2002	2/07/2002			2/13/2002	Raisa, Kamenetskaya	0356
331186	2/5/2002	2/07/2002			2/13/2002	Raisa, Kamenetskaya	0356
331187	2/5/2002	2/07/2002			2/13/2002	Raisa, Kamenetskaya	0356
331188	2/4/2002	2/07/2002			2/13/2002	Raisa, Kamenetskaya	0356
331189	2/5/2002	2/07/2002			2/13/2002	Raisa, Kamenetskaya	0356
331190	2/4/2002	2/07/2002			2/13/2002	Raisa, Kamenetskaya	0356

INTERNAL CUSTODY RECORD
AND
LABORATORY CHRONICLE
STL Edison

777 New Durham Road, Edison, New Jersey
08817

Job No: T413 **Site:** 444-Orbis Newark

Client: Envirotactics, Inc.

WET CHEM

PHOSPHORUS - TOTAL

Lab Sample ID	Date Sampled	Date Received	Preparation Date	Technician's Name	Analysis Date	Analyst's Name	QA Batch
WATER							
331185	2/4/2002	2/07/2002			2/8/2002	Ohlson, Donna	1322
331186	2/5/2002	2/07/2002			2/8/2002	Ohlson, Donna	1322
331187	2/5/2002	2/07/2002			2/8/2002	Ohlson, Donna	1322
331188	2/4/2002	2/07/2002			2/8/2002	Ohlson, Donna	1322
331189	2/5/2002	2/07/2002			2/8/2002	Ohlson, Donna	1322
331190	2/4/2002	2/07/2002			2/8/2002	Ohlson, Donna	1322

SULFATE

Lab Sample ID	Date Sampled	Date Received	Preparation Date	Technician's Name	Analysis Date	Analyst's Name	QA Batch
WATER							
331185	2/4/2002	2/07/2002			2/12/2002	Ohlson, Donna	1648
331186	2/5/2002	2/07/2002			2/12/2002	Ohlson, Donna	1648
331187	2/5/2002	2/07/2002			2/12/2002	Ohlson, Donna	1648
331188	2/4/2002	2/07/2002			2/12/2002	Ohlson, Donna	1648
331189	2/5/2002	2/07/2002			2/12/2002	Ohlson, Donna	1648
331190	2/4/2002	2/07/2002			2/12/2002	Ohlson, Donna	1648

INTERNAL CUSTODY RECORD
AND
LABORATORY CHRONICLE
STL Edison

777 New Durham Road, Edison, New Jersey
08817

Job No: T413 Site: 444-Orbis Newark

Client: Envirotactics, Inc.

WET CHEM

TOTAL SULFIDE

Lab Sample ID	Date Sampled	Date Received	Preparation Date	Technician's Name	Analysis Date	Analyst's Name	QA Batch
WATER							
331185	2/4/2002	2/07/2002			2/9/2002	Hizon, Ken	1389
331186	2/5/2002	2/07/2002			2/9/2002	Hizon, Ken	1389
331187	2/5/2002	2/07/2002			2/9/2002	Hizon, Ken	1389
331188	2/4/2002	2/07/2002			2/9/2002	Hizon, Ken	1389
331189	2/5/2002	2/07/2002			2/9/2002	Hizon, Ken	1389
331190	2/4/2002	2/07/2002			2/9/2002	Hizon, Ken	1389

Methodology Review

Analytical Methodology Summary

Volatile Organics:

Unless otherwise specified, water samples are analyzed for volatile organics by purge and trap GC/MS as specified in EPA Method 624. Drinking water samples are analyzed by EPA Method 524.2. Solid samples are analyzed for volatile organics as specified in the EPA publication "Test Methods for Evaluating Solid Waste" (SW-846, 3rd Edition) Method 8260B. Water samples are analyzed for volatile organics by purge and trap GC/PID and GC/ELCD as specified in EPA Methods 601 and 602. Solid samples are analyzed by GC/PID and GC/ELCD in accordance with SW-846, 3rd Edition Method 8021B.

Acid and Base/Neutral Extractable Organics:

Unless otherwise specified, water samples are analyzed for acid and/or base/neutral extractable organics by GC/MS in accordance with EPA Method 625. Solids are analyzed for acid and/or base/neutral extractable organics as specified in the EPA publication "Test Methods for Evaluating Solid Waste" (SW-846, 3rd Edition) Method 8270C.

GC/MS Nontarget Compound Analysis:

Analysis for nontarget compounds is conducted, upon request, in conjunction with GC/MS analyses by EPA Methods 624, 625, 8260B and 8270C. Nontarget compound analysis is conducted using a forward library search of the EPA/NIH/NBS mass spectral library of compounds at the greatest apparent concentration (10% or greater of the nearest internal standard) in each organic fraction (15 for volatile, 15 for base/neutrals and 10 for acid extractables).

Organochlorine Pesticides and PCBs:

Unless otherwise specified, water samples are analyzed for organochlorine pesticides and PCBs by dual column gas chromatography with electron capture detectors as specified in EPA Method 608. Solid samples are analyzed as specified in the EPA publication "Test Methods for Evaluating Solid Waste" (SW-846, 3rd Edition) Method 8081A for organochlorine pesticides and Method 8082 for PCBs.

Total Petroleum Hydrocarbons:

Water samples are analyzed for petroleum hydrocarbons by I.R. using EPA Method 418.1. Solid samples are prepared for analysis by soxhlet extraction consistent with the March 1990 N.J. DEP "Remedial Investigation Guide" Appendix A, page 52, and analyzed by U.S. EPA Method 418.1

Metals Analysis:

Metals analyses are performed by any of four techniques specified by a Method Code provided on each data report page, as follows:

P - Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP)

A - Flame Atomic Absorption

F - Furnace Atomic Absorption

CV - Manual Cold Vapor (Mercury)

Water samples are digested and analyzed using EPA methods provided in "Methods for Chemical Analysis of Water and Wastewater" (EPA 600/4-79-020). Solid samples are analyzed as specified in the EPA publication "Test Methods for Evaluating Solid Waste" (SW-846, 3rd Edition); samples are digested according to Method 3050B "Acid Digestion of Soil, Sediments and Sludges."

Specific method references for ICP analyses are water Method 200.7 and solid Method 6010B. Mercury analyses are conducted by the manual cold vapor technique specified by water Method 245.1 and solid Method 7471A. Other specific Atomic Absorption method references are as follows:

	Water Test Method		Solid Test Method	
Element	Flame	Furnace	Flame	Furnace
Aluminum	202.1	202.2	7020	--
Antimony	204.1	204.2	7040	7041
Arsenic	--	206.2	--	7060
Barium	208.1	--	7080	--
Beryllium	210.1	210.2	7090	7091
Cadmium	213.1	213.2	7130	7131
Calcium	215.1	--	7140	--
Chromium, Total	218.1	218.2	7190	7191
Chromium, (+6)	218.4	218.5	7197	7195
Cobalt	219.1	219.2	7200	7201
Copper	220.1	220.2	7210	--
Iron	236.1	236.2	7380	--
Lead	239.1	239.2	7420	7421
Magnesium	242.1	--	7450	--
Manganese	243.1	243.2	7460	--
Nickel	249.1	249.2	7520	--
Potassium	258.1	--	7610	--
Selenium	--	270.2	--	7740
Silver	272.1	272.2	7760	--
Sodium	273.1	--	7770	--
Tin	283.1	283.2	7870	--
Thallium	279.1	279.2	7840	7841
Vanadium	286.1	286.2	7910	7911
Zinc	289.1	289.2	7950	--

Cyanide:

Water samples are analyzed for cyanide using EPA Method 335.3. Cyanide is determined in solid samples as specified in the EPA Contract Laboratory Program IFB dated July 1988, revised February 1989.

Phenols:

Water samples are analyzed for total phenols using EPA Method 420.2. Total phenols are determined in solid samples by preparing the sample as outlined in the EPA Contract Laboratory Program IFB for cyanide, followed by a phenols determination using EPA Method 420.1.

Cleanup of Semivolatile Extracts:

Upon request Method 3611B Alumina Column Cleanup and/or Method 3650B Acid-Base Partition Cleanup are performed to improve detection limits by the removal of saturated hydrocarbon interferences.

Hazardous Waste Characteristics:

Samples for hazardous waste characteristics are analyzed as specified in the U.S. EPA publication "Test Methods for Evaluating Solid Waste" (SW-846, 3rd Edition). Specific method references are as follows:

Ignitability	- Method 1020A
Corrosivity	- Water pH Method 9040B Soil pH Method 9045C
Reactivity	- Chapter 7, Section 7.3.3 and 7.3.4 respectively for hydrogen cyanide and hydrogen sulfide release
Toxicity	- TCLP Method 1311

Miscellaneous Parameters:

Additional analyses performed on both aqueous and solid samples are in accordance with methods published in the following references:

- Test Methods for Evaluating Solid Wastes, SW-846 3rd Edition, November 1986.
- Standard Methods for the Examination of Water and Wastewater, 17th Edition.
- Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, 1979.

Data Reporting Qualifiers

ORGANIC DATA REPORTING QUALIFIERS

ND - The compound was not detected at the indicated concentration.

J - Mass spectral data indicates the presence of a compound that meets the identification criteria. The result is less than the specified quantitation limit but greater than zero. The concentration given is an approximate value.

B - The analyte was found in the laboratory blank as well as the sample. This indicates possible laboratory contamination of the environmental sample.

P - For dual column analysis, the percent difference between the quantitated concentrations on the two columns is greater than 40%.

* - For dual column analysis, the lowest quantitated concentration is being reported due to coeluting interference.

INORGANIC DATA REPORTING QUALIFIERS (SW-846 METHODS ONLY)

ND - The compound was not detected at the indicated concentration.

B - Reported value is less than the Method Detection Limit but greater than or equal to the Instrument Detection Limit.

E - The reported value is estimated because of the presence of interference. See explanatory note in the Nonconformance Summary if the problem applies to all of the samples or on the individual Inorganic Analysis Data Sheet if the problem is isolated.

M - Duplicate injection precision not met on the Furnace Atomic Absorption analysis.

N - The spiked sample recovery is not within control limits.

S - The reported value was determined by the Method of Standard Additions (MSA).

* - Duplicate Analysis is not within control limits.

W - Post digestion spike for Furnace Atomic Absorption analysis is out of control.

\+ - Correlation coefficient for MSA is less than 0.995.

M Column - Method Qualifiers

P - Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP).

A - Flame Atomic Absorption Spectroscopy (FAA).

F - Graphite Furnace Atomic Absorption Spectroscopy (GFAA).

CV - Cold Vapor Atomic Absorption Spectroscopy.

Non-Conformance Summary

NON-CONFORMANCE SUMMARY

STL Edison Job Number: T413

Volatile Organics Analysis:

All data conforms with method requirements ✓; or
Analysis was not requested _____; or
Non-conformance for the specific samples listed is as follows:

_____

_____

_____

_____

See continuation page if checked ( )

Base/Neutral and/or Acid Extractable Organics:

All data conforms with method requirements _____; or
Analysis was not requested ✓; or
Non-conformance for the specific samples listed is as follows:

_____

_____

_____

_____

See continuation page if checked ( )

PCBs and/or Organochlorine Pesticides:

All data conforms with method requirements _____; or
Analysis was not requested ✓; or
Non-conformance for the specific samples listed is as follows:

_____

_____

_____

_____

See continuation page if checked ( )

Page 1 of 2

Non-conformance Summary, Page 2 of 2
STL Edison Job Number: T413

Metals Analysis:

All data conforms with method requirements ✓; or
Analysis was not requested _____; or
Non-conformance for the specific samples listed is as follows:

_____

_____

_____

_____

_____

See continuation page if checked ( )

Total Petroleum Hydrocarbons:

All data conforms with method requirements ✓; or
Analysis was not requested _____; or
Non-conformance for the specific samples listed is as follows:

_____

_____

_____

See continuation page if checked ( )

General Chemistry/Disposal Parameters:

All data conforms with method requirements ✓; or
Analysis was not requested _____; or
Non-conformance for the specific samples listed is as follows:

_____

_____

_____

See continuation page if checked ( )

Signature of Laboratory Manager: _____ Date: 2-22-96

GC/FID Forms and Data

Results Summary and Chromatograms

Client ID: MW-1
Site: 444-Orbis Newark

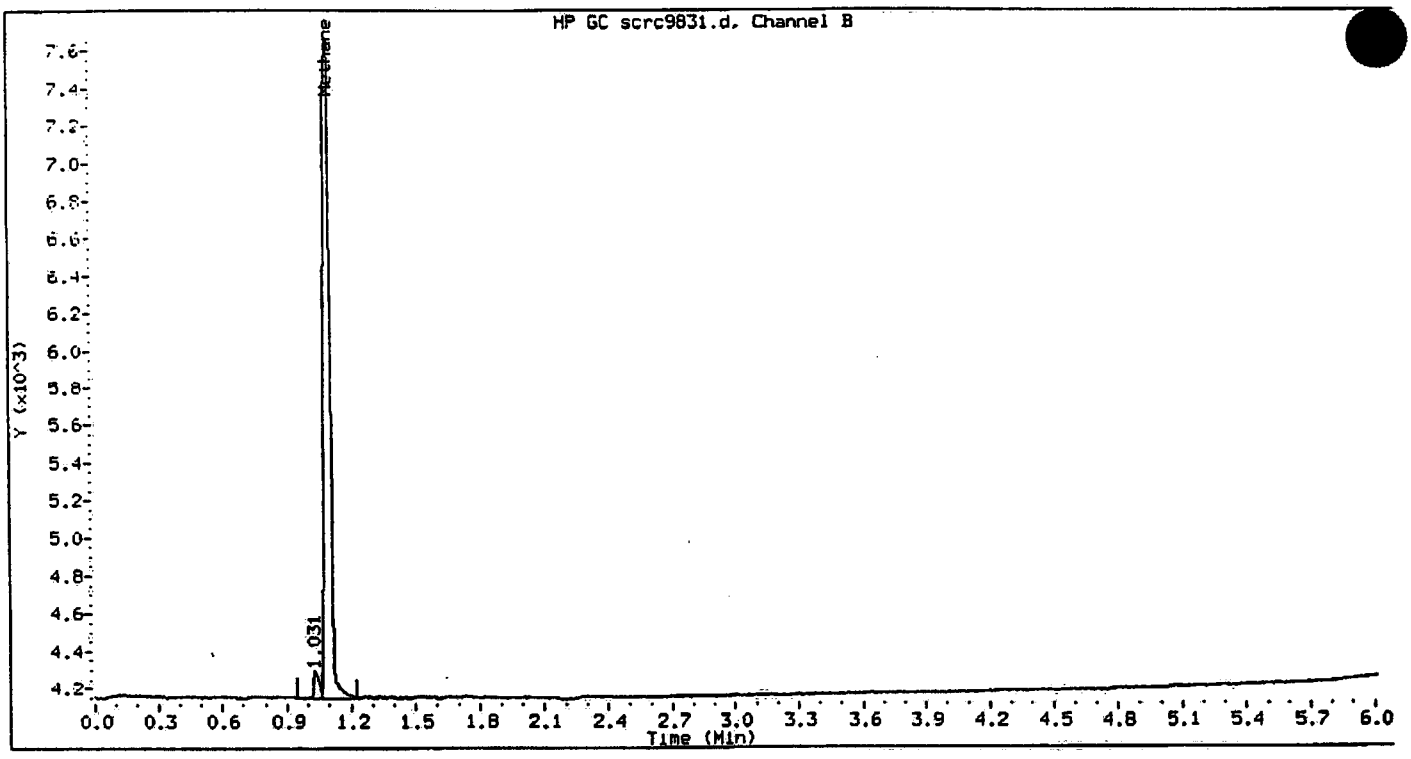
Lab Sample No: 331185
Lab Job No: T413

Date Sampled: 02/04/02
Date Received: 02/07/02
Date Analyzed: 02/12/02
GC Column: GS-Q
Instrument ID: VSCREEN3.i
Lab File ID: scrc9831.d

Matrix: WATER
Level: MED
Purge Volume: 10.0 ml
Final Volume: 0.0 mL
Dilution Factor: 1.0

METHANE, ETHANE, ETHENE
METHOD 3810

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methane	20	5.0
Ethene	ND	5.0
Ethane	ND	5.0



Method : /chem/VSCREEN3.i/3810/02-07-02/12Feb02.b/3810_01.m
Sample Info : 331185
Lab ID : 331185
Inj Date : 12-FEB-2002 07:56
Operator : vscreen3
Cpnd Sublist: MEE

Inst ID : VSCREEN3.i
Dil Factor : 1
Sample Matrix : WATER
Sample Type: SAMPLE

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ml)	FINAL (ug/L)
Methane	1.097	1.096	0.001	37470	20.533	20.533

H040

Client ID: MW-3
Site: 444-Orbis Newark

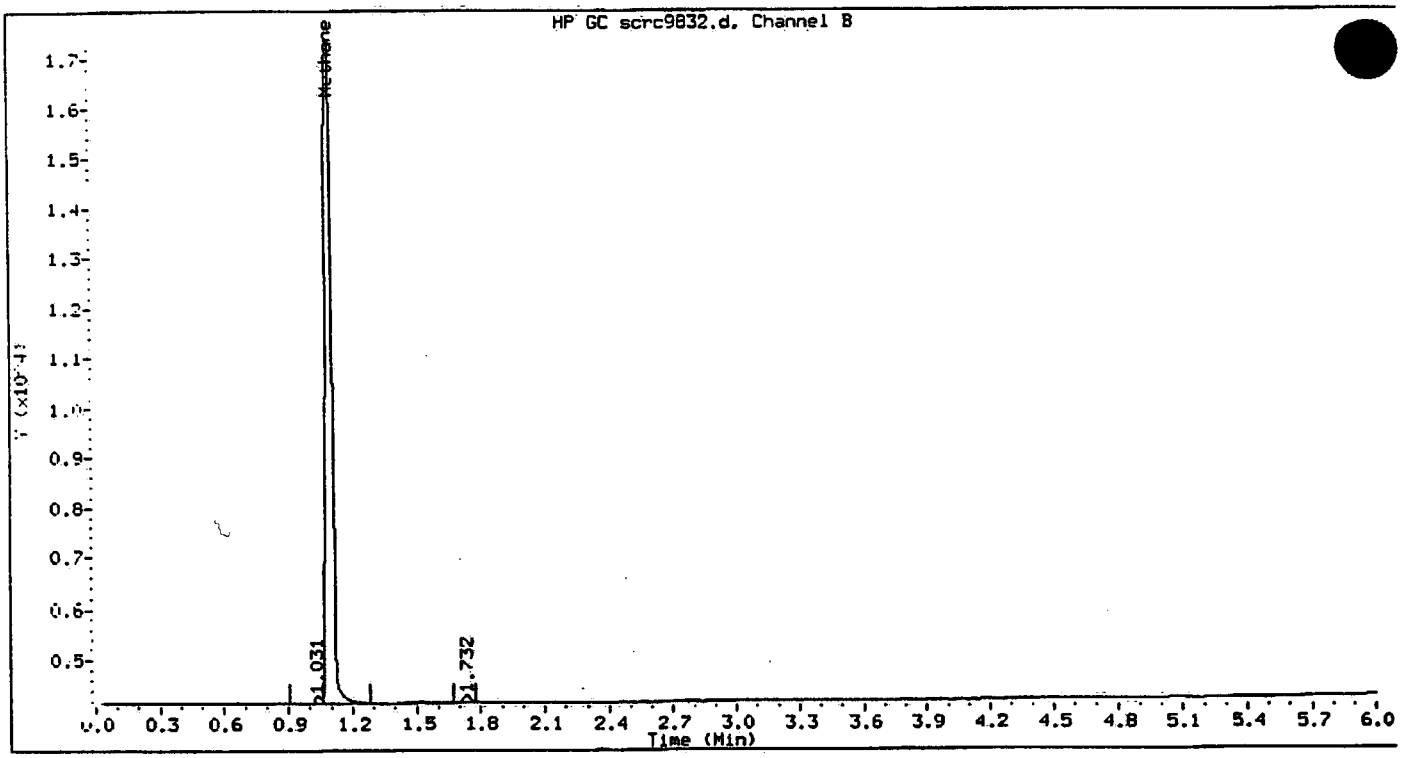
Lab Sample No: 331186
Lab Job No: T413

Date Sampled: 02/05/02
Date Received: 02/07/02
Date Analyzed: 02/12/02
GC Column: GS-Q
Instrument ID: VSCREEN3.i
Lab File ID: scrc9832.d

Matrix: WATER
Level: MED
Purge Volume: 10.0 ml
Final Volume: 0.0 mL
Dilution Factor: 50.0

METHANE, ETHANE, ETHENE
METHOD 3810

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methane	4000	250
Ethene	ND	250
Ethane	ND	250



Method : /chem/VSCREEN3.i/3810/02-07-02/12Feb02.b/3810_01.m
Sample Info : 331186;;50
Lab ID : 331186
Inj Date : 12-FEB-2002 08:06
Operator : vscreen3
Cpnd Sublist: MEE

Inst ID : VSCREEN3.i
Dil Factor : 50
Sample Matrix : WATER
Sample Type: SAMPLE

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ml)	CONCENTRATIONS FINAL (ug/L)
Methane	1.097	1.096	0.001	146587	80.329	4016.471

H0247

Client ID: **MW-5**
Site: 444-Orbis Newark

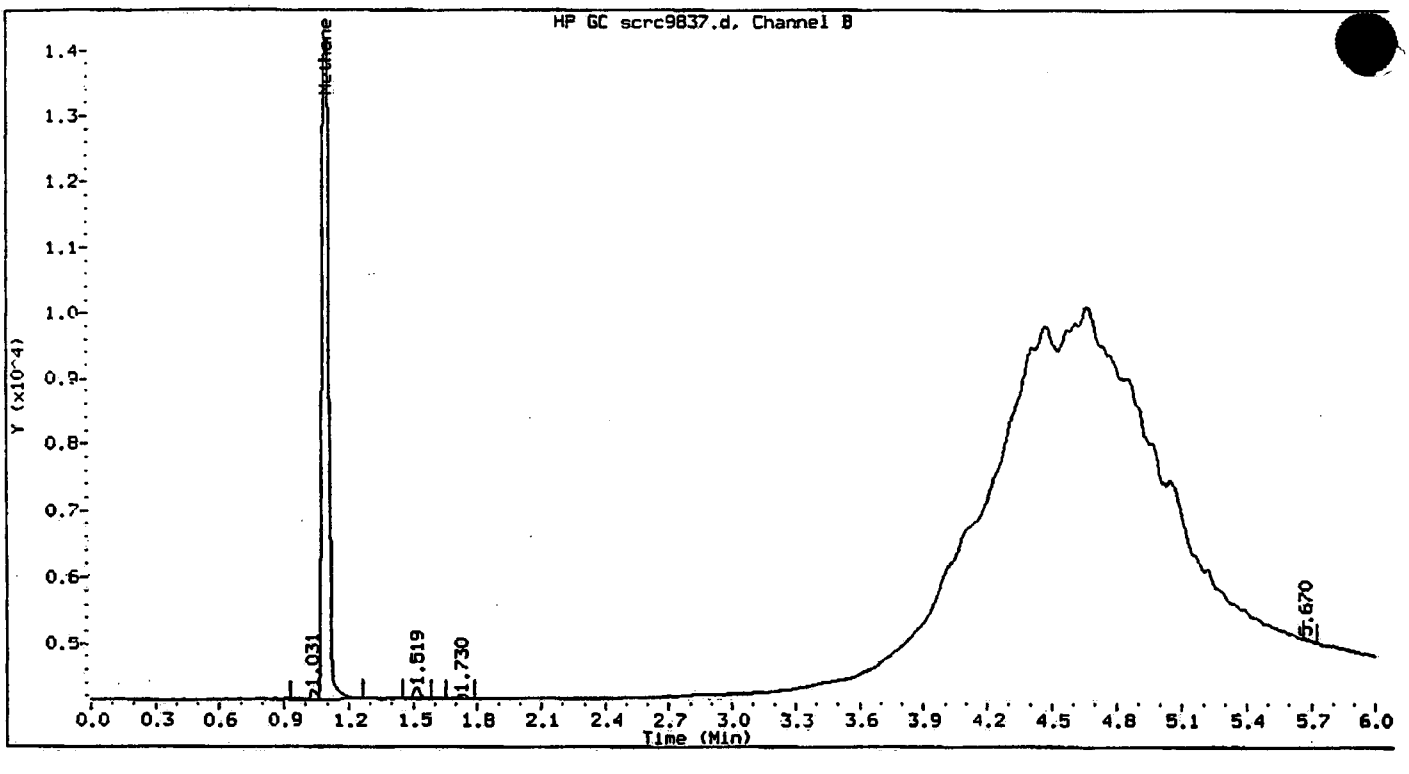
Lab Sample No: **331187**
Lab Job No: T413

Date Sampled: 02/05/02
Date Received: 02/07/02
Date Analyzed: 02/12/02
GC Column: GS-Q
Instrument ID: VSCREEN3.i
Lab File ID: scrc9837.d

Matrix: WATER
Level: MED
Purge Volume: 10.0 ml
Final Volume: 0.0 mL
Dilution Factor: 50.0

METHANE, ETHANE, ETHENE
METHOD 3810

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methane	3000	250
Ethene	ND	250
Ethane	ND	250



Method : /chem/VSCREEN3.i/3810/02-07-02/12Feb02.b/3810_01.m
Sample Info : 331187;;50
Lab ID : 331187 Inst ID : VSCREEN3.i
Inj Date : 12-FEB-2002 08:57 Dil Factor : 50
Operator : vscreen3 Sample Matrix : WATER
Cpnd Sublist: MEE Sample Type: SAMPLE

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ml)	FINAL (ug/L)
Methane	1.097	1.096	0.001	110079	60.323	3016.155

4044

Client ID: **MW-6**
Site: 444-Orbis Newark

Lab Sample No: **331188**
Lab Job No: T413

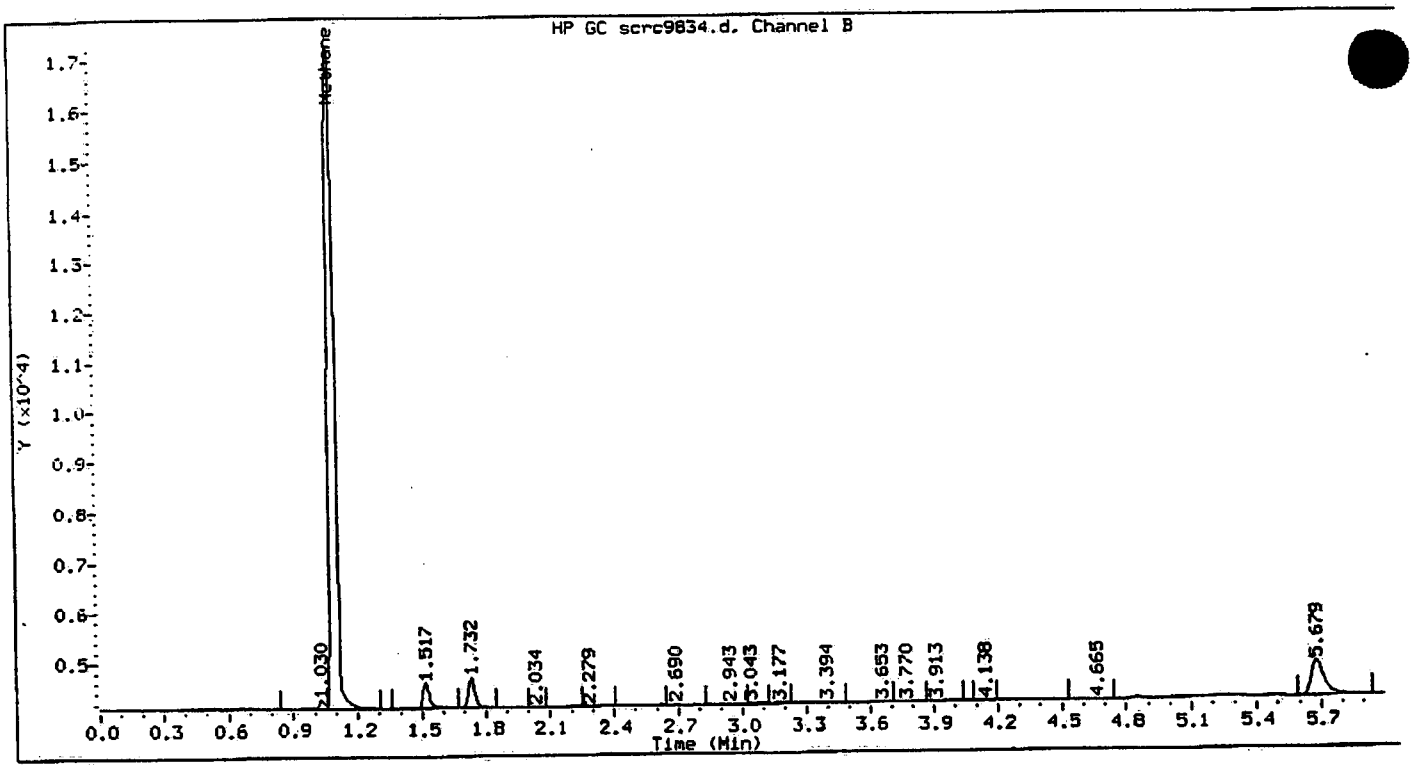
Date Sampled: 02/04/02
Date Received: 02/07/02
Date Analyzed: 02/12/02
GC Column: GS-Q
Instrument ID: VSCREEN3.i
Lab File ID: scrc9834.d

Matrix: WATER
Level: MED
Purge Volume: 10.0 ml
Final Volume: 0.0 mL
Dilution Factor: 5.0

METHANE, ETHANE, ETHENE
METHOD 3810

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methane	390	25
Ethene	ND	25
Ethane	ND	25

4045



Method : /chem/VSCREEN3.i/3810/02-07-02/12Feb02.b/3810_01.m
Sample Info : 331188;;5
Lab ID : 331188
Inj Date : 12-FEB-2002 08:27
Operator : vscreen3
Cpnd Sublist: MEE

Inst ID : VSCREEN3.i
Dil Factor : 5
Sample Matrix : WATER
Sample Type: SAMPLE

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ml)	FINAL (ug/L)
Methane	1.094	1.096	0.003	141353	77.461	387.306

H046

Client ID: MW-7
Site: 444-Orbis Newark

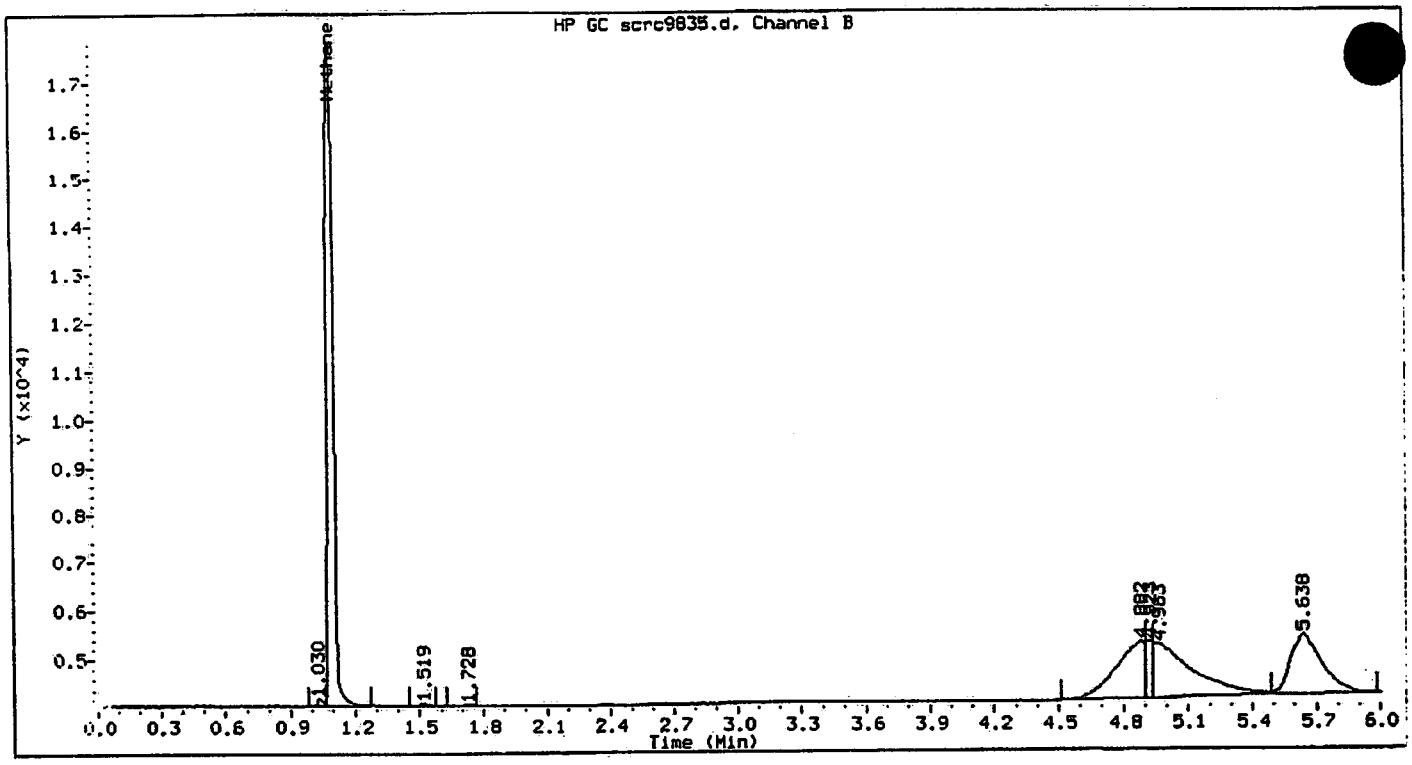
Lab Sample No: 331189
Lab Job No: T413

Date Sampled: 02/05/02
Date Received: 02/07/02
Date Analyzed: 02/12/02
GC Column: GS-Q
Instrument ID: VSCREEN3.i
Lab File ID: scrc9835.d

Matrix: WATER
Level: MED
Purge Volume: 10.0 ml
Final Volume: 0.0 mL
Dilution Factor: 10.0

METHANE, ETHANE, ETHENE
METHOD 3810

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methane	810	50
Ethene	ND	50
Ethane	ND	50



Method : /chem/VSCREEN3.i/3810/02-07-02/12Feb02.b/3810_01.m
Sample Info : 331189;;10
Lab ID : 331189
Inj Date : 12-FEB-2002 08:37
Operator : vscreen3
Cpnd Sublist: MEE

Inst ID : VSCREEN3.i
Dil Factor : 10
Sample Matrix : WATER
Sample Type: SAMPLE

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ml)	FINAL (ug/L)
Methane	1.096	1.096	0.000	148582	81.423	814.227

40446

Client ID: MW-17
Site: 444-Orbis Newark

Lab Sample No: 331190
Lab Job No: T413

Date Sampled: 02/04/02
Date Received: 02/07/02
Date Analyzed: 02/12/02
GC Column: GS-Q
Instrument ID: VSCREEN3.i
Lab File ID: scrc9836.d

Matrix: WATER
Level: MED
Purge Volume: 10.0 ml
Final Volume: 0.0 mL
Dilution Factor: 1.0

METHANE, ETHANE, ETHENE
METHOD 3810

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methane	7.8	5.0
Ethene	8.5	5.0
Ethane	ND	5.0

Method Blank Results Summary

LAB SAMPLE NO.

CG043

VOLATILE METHOD BLANK SUMMARY

Date Analyzed: 02/12/02

Instrument ID: VSCREEN3

Time Analyzed: 0729

Lab File ID: SCRC9830

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

	CLIENT ID.	LAB SAMPLE NO	LAB FILE ID	TIME ANALYZED
01	MW-1	331185	SCRC9831	0756
02	MW-3	331186	SCRC9832	0806
03	MW-6	331188	SCRC9834	0827
04	MW-7	331189	SCRC9835	0837
05	MW-17	331190	SCRC9836	0847
06	MW-5	331187	SCRC9837	0857
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

COMMENTS:

Client ID: CG043
Site:

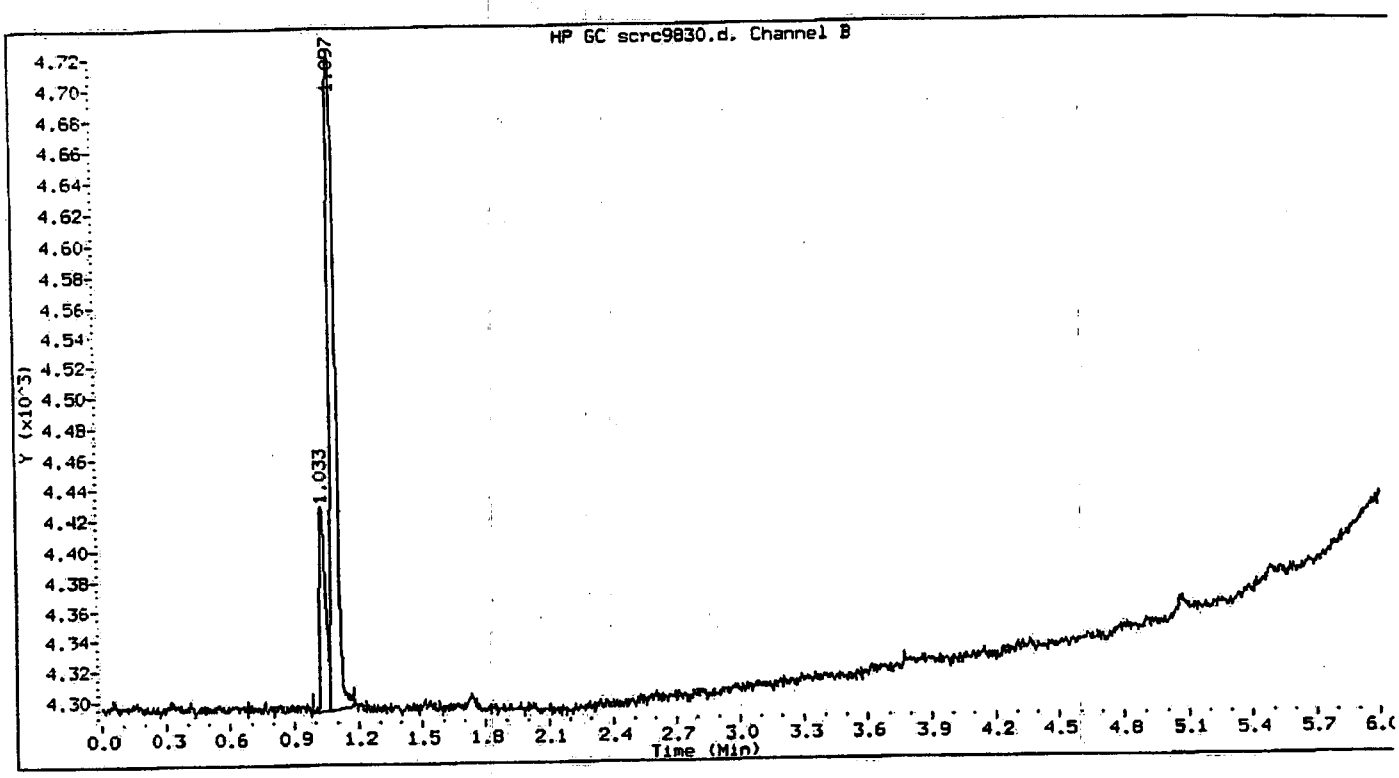
Lab Sample No: CG043
Lab Job No: T413

Date Sampled: _____
Date Received: _____
Date Analyzed: 02/12/02
GC Column: GS-Q
Instrument ID: VSCREEN3.i
Lab File ID: scrc9830.d

Matrix: WATER
Level: MED
Purge Volume: 10.0 ml
Final Volume: 0.0 mL
Dilution Factor: 1.0

METHANE, ETHANE, ETHENE
METHOD 3810

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methane	ND	5.0
Ethene	ND	5.0
Ethane	ND	5.0
Propane	ND	5.0



Method : /chem/VSCREEN3.i/3810/02-07-02/12Feb02.b/3810_01.m
Sample Info : CG043
Lab ID : CG043
Inj Date : 12-FEB-2002 07:29
Operator : vscreen3
Cpnd Sublist: all

Inst ID : VSCREEN3.i
Dil Factor : 1
Sample Matrix : WATER
Sample Type: BLANK

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ml)	CONCENTRATIONS FINAL (ug/L)

4054

Calibration Summary

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Instrument ID: VSCREEN3

Calibration Date(s): 02/07/02 02/07/02

Calibration Time(s): 0733 0832

LAB FILE ID: RRF5: SCRC9774 RRF25: SCRC9770 RRF50: SCRC9771
RRF100: SCRC9772 RRF200: SCRC9773

COMPOUND	RRF5	RRF25	RRF50	RRF100	RRF200
Methane	2046	1866	1792	1720	1699
Ethene	1486	1655	1756	1756	1760
Ethane	1380	1639	1704	1702	1707
Propane	1445	1694	1743	1751	1770

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Instrument ID: VSCREEN3

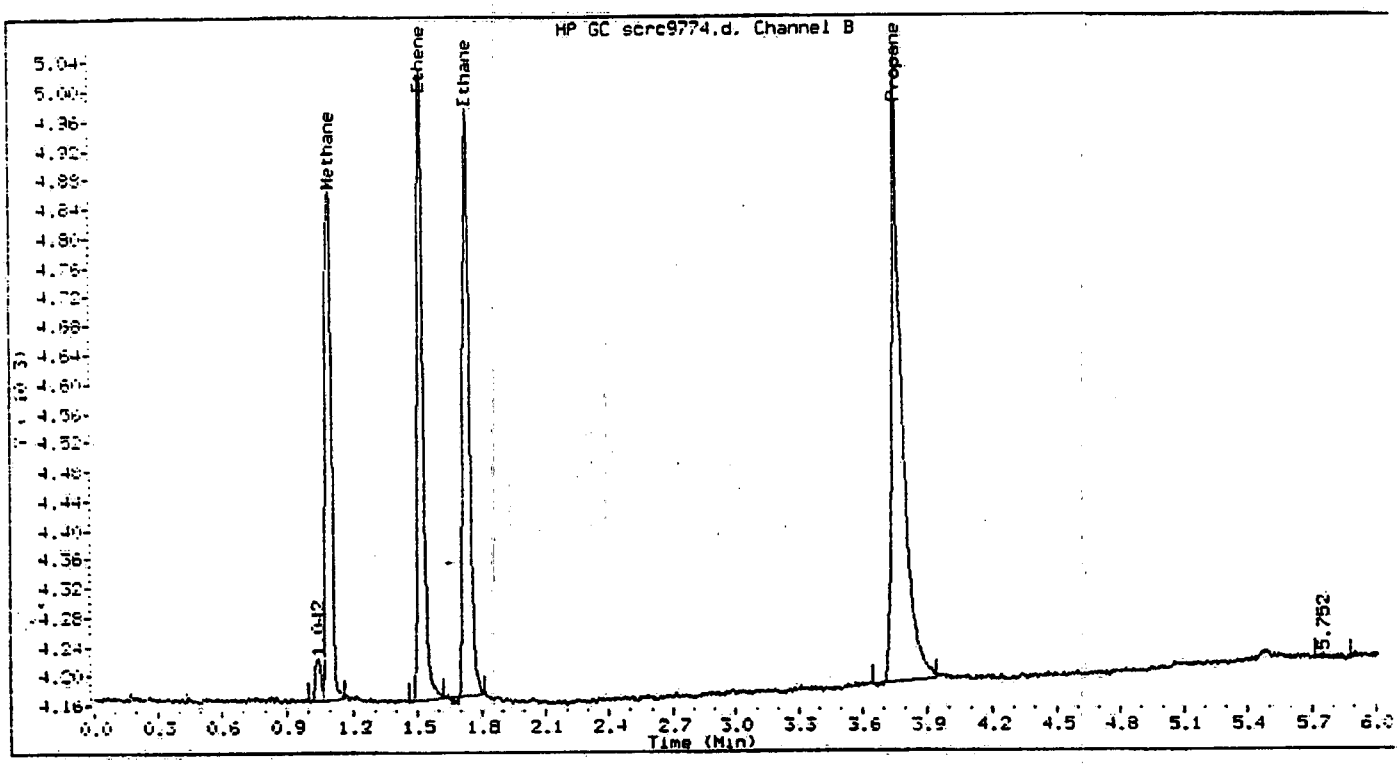
Calibration Date(s): 02/07/02 02/07/02

Calibration Time(s): 0733 0832

COMPOUND	CURVE	COEFFICENT A1	%RSD OR R^2
Methane	AVRG	1825	7.7*
Ethene	AVRG	1682	7.0*
Ethane	AVRG	1627	8.6*
Propane	AVRG	1681	8.0*

* Compounds with required maximum %RSD values.

Data File: /chem/VSCREEN3.i/3810/02-07-02/07Feb02.b/scrc9774.d Page 1
Report Date 02/08/2002 10:13



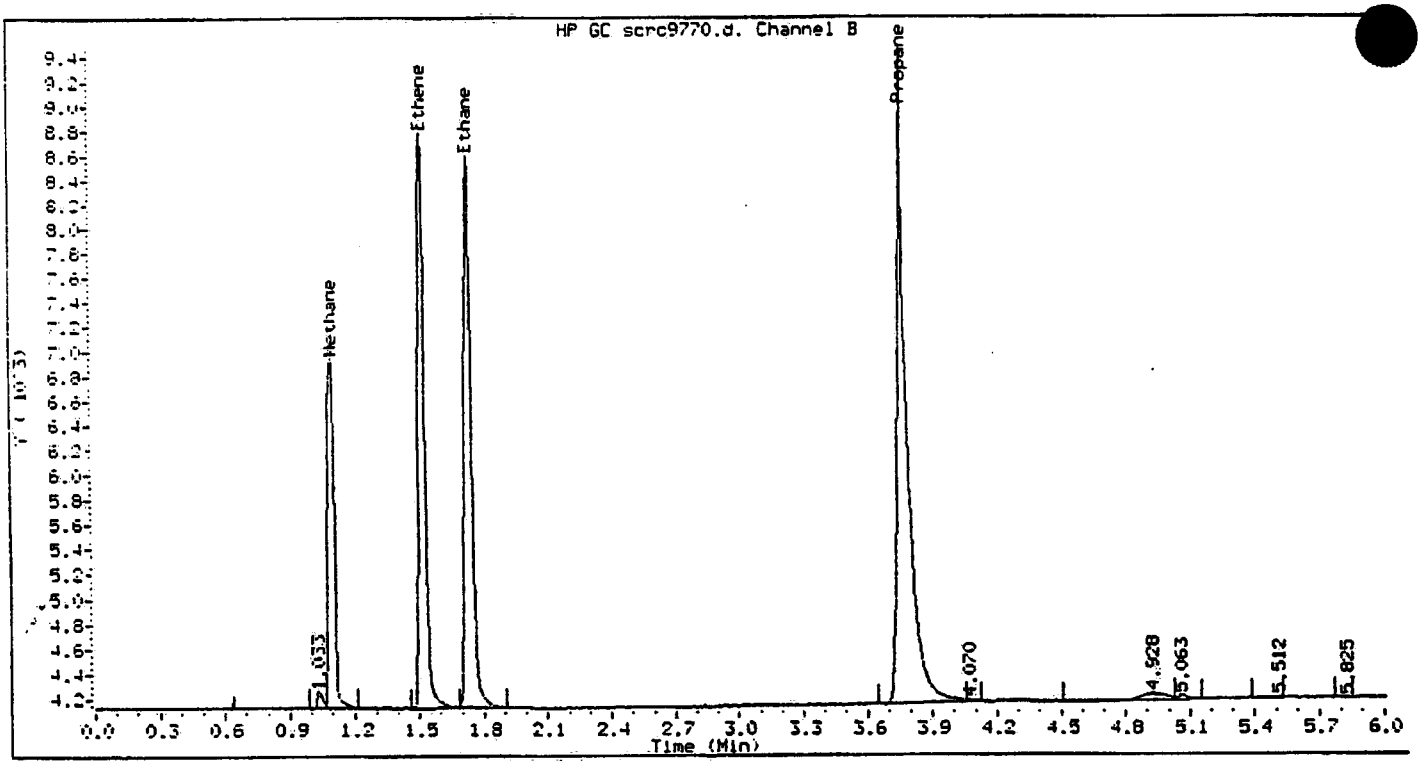
Method : /chem/VSCREEN3.i/3810/02-07-02/07Feb02.b/3810_01.m
Sample Info : scrc005
Lab ID : scrc005
Inj Date : 07-FEB-2002 08:32
Operator : vscreen3
Cpnd Sublist: all

Inst ID : VSCREEN3.i
Dil Factor : 1
Sample Matrix : WATER
Sample Type: CALIB_1

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ml)	CONCENTRATIONS FINAL (ug/L)
Methane	1.098	1.099	0.001	6692	3.667	3.667
Ethene	1.517	1.515	0.002	8469	5.034	5.034
Ethane	1.733	1.733	0.000	8490	5.219	5.219
Propane	3.753	3.764	0.011	12935	7.696	7.696

T413

4058

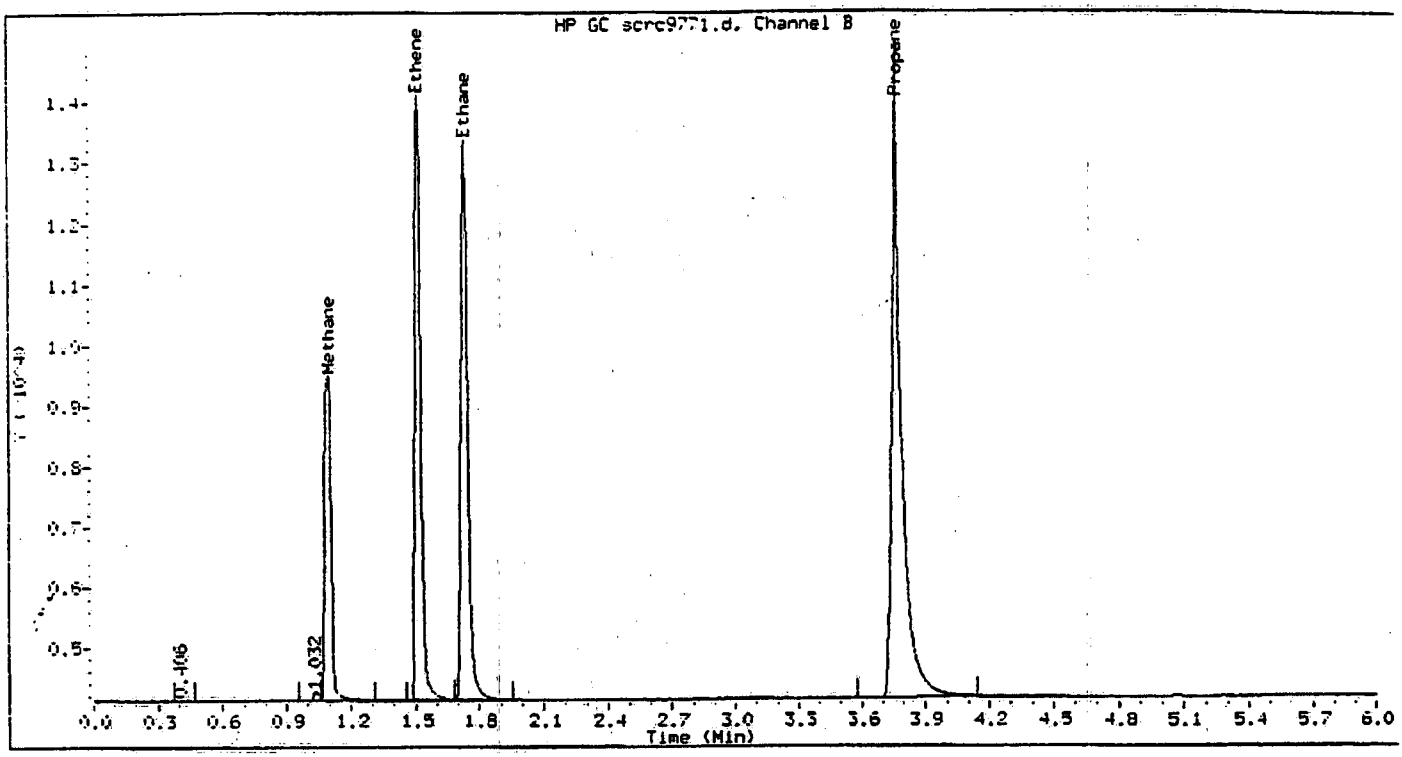


Method : /chem/VSCREEN3.i/3810/02-07-02/07Feb02.b/3810_01.m
Sample Info : scrc025
Lab ID : scrc025
Inj Date : 07-FEB-2002 07:33
Operator : vscreen3
Cpnd Sublist: all

Inst ID : VSCREEN3.i
Dil Factor : 1
Sample Matrix : WATER
Sample Type: CALIB_2

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ml)	CONCENTRATIONS FINAL (ug/L)
Methane	1.099	1.099	0.000	30503	16.716	16.716
Ethene	1.515	1.515	0.000	47161	28.031	28.031
Ethane	1.733	1.733	0.000	50412	30.992	30.992
Propane	3.757	3.764	0.008	75812	45.105	45.105

4059

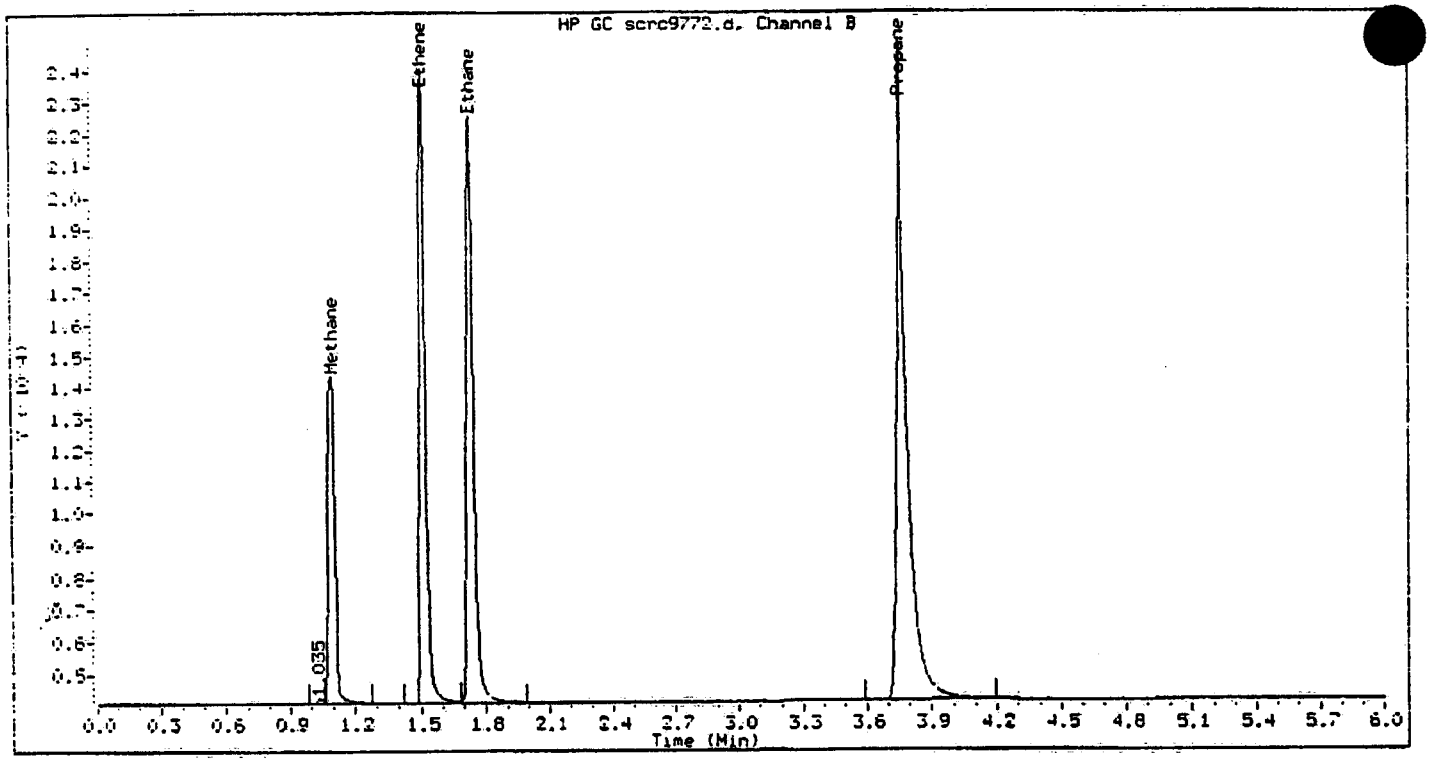


Method : /chem/VSCREEN3.i/3810/02-07-02/07Feb02.b/3810_01.m
Sample Info : scrc050
Lab ID : scrc050
Inj Date : 07-FEB-2002 07:43
Operator : vscreen3
Cpnd Sublist: all

Inst ID : VSCREEN3.i
Dil Factor : 1
Sample Matrix : WATER
Sample Type: CALIB_3

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ml)	FINAL (ug/L)
Methane	1.099	1.099	0.000	58603	32.114	32.114
Ethene	1.515	1.515	0.000	100069	59.478	59.478
Ethane	1.733	1.733	0.000	104770	64.409	64.409
Propane	1.764	1.764	0.000	155992	92.810	92.810

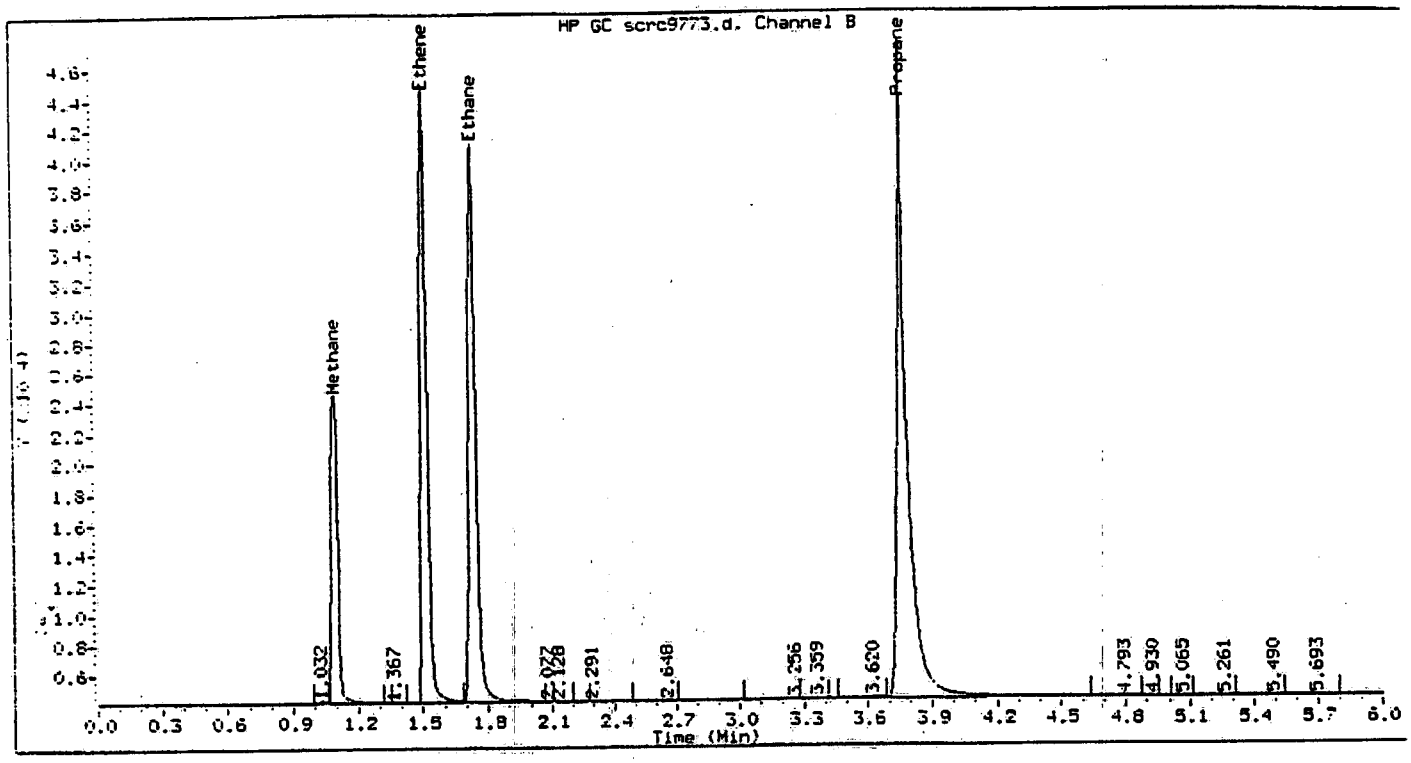
H060



Method : /chem/VSCREEN3.i/3810/02-07-02/07Feb02.b/3810_01.m
Sample Info : scrc100
Lab ID : scrc100
Inj Date : 07-FEB-2002 07:53
Operator : vscreen3
Cpnd Sublist: all

Inst ID : VSCREEN3.i
Dil Factor : 1
Sample Matrix : WATER
Sample Type: CALIB_4

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ml)	FINAL (ug/L)
Methane	1.099	1.099	0.000	112518	61.660	61.660
Ethene	1.514	1.515	0.001	200235	119.014	119.014
Ethane	1.733	1.733	0.000	209412	128.739	128.739
Propane	3.761	3.764	0.003	313511	186.526	186.526



Method : /chem/VSCREEN3.i/3810/02-07-02/07Feb02.b/3810_01.m
Sample Info : scrc200
Lab ID : scrc200
Inj Date : 07-FEB-2002 08:03
Operator : vscreen3
Cpnd Sublist: all

Inst ID : VSCREEN3.i
Dil Factor : 1
Sample Matrix : WATER
Sample Type: CALIB_5

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ml)	CONCENTRATIONS FINAL (ug/L)
Methane	1.098	1.099	0.001	220923	121.065	121.065
Ethene	1.513	1.515	0.002	401191	238.457	238.457
Ethane	1.733	1.733	0.000	419961	258.178	258.178
Propane	3.763	3.764	0.001	633716	377.036	377.036

4067

VOLATILE ORGANICS CONTINUING CALIBRATION CHECK

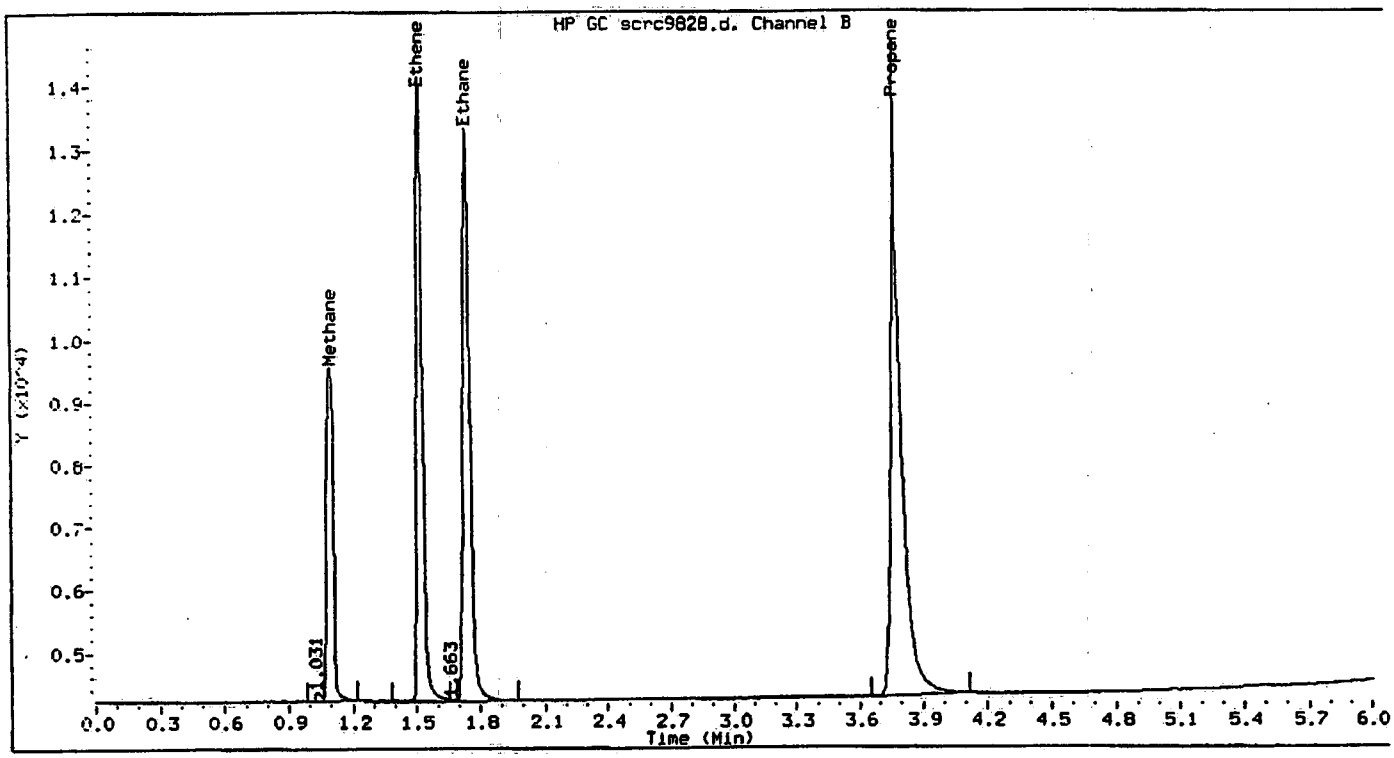
Instrument ID: VSCREEN3 Calibration Date: 02/12/02 Time: 0704

Lab File ID: SCRC9828 Init. Calib. Date(s): 02/07/02 02/07/02

Heated Purge: (Y/N) N Init. Calib. Times: 0733 0832

COMPOUND	$\overline{RRF}$	RRF50	MIN RRF	%D	MAX %D
Methane	1824.82	1731.83		5.1	15.0
Ethene	1682.44	1715.79		-2.0	15.0
Ethane	1626.64	1670.18		-2.7	15.0
Propane	1680.79	1704.22		-1.4	15.0

H063



Method : /chem/VSCREEN3.i/3810/02-07-02/12Feb02.b/3810_01.m
Sample Info : scrc043
Lab ID : scrc043
Inj Date : 12-FEB-2002 07:04
Operator : vscreen3
Cpnd Sublist: all

Inst ID : VSCREEN3.i
Dil Factor : 1
Sample Matrix : WATER
Sample Type: CCALIB_3

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ml)	CONCENTRATIONS FINAL (ug/L)
Methane	1.096	1.096	0.000	56631	31.034	31.034
Ethene	1.517	1.517	0.000	97800	58.130	58.130
Ethane	1.737	1.737	0.000	102716	63.146	63.146
Propane	3.763	3.763	0.000	152528	90.748	90.748

4064

Spike Recovery Summary

VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY
METHOD 3810

Matrix: WATER

Level: MED

Matrix Spike - Lab Sample No.: 329998

MS Sample from Lab Job No: T195

QA Batch: 0488

Compound	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
Methane	33	0.00	34	103	67-130
Ethene	57	0.00	60	105	71-134
Ethane	62	0.00	66	106	73-136
Propane	90	0.00	96	107	71-136

Compound	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Methane	33	34	103	0	40	67-130
Ethene	57	60	105	0	40	71-134
Ethane	62	67	108	2	40	73-136
Propane	90	97	108	1	40	71-136

Column to be used to flag recovery and RPD values with an asterik
* Values outside of QC limits
RPD: 0 out of 4 outside limits
Spike Recovery: 0 out of 8 outside limits

COMMENTS: _____

4066

Metals Forms and Data

Analytical Results Summary

Client ID: **MW-1**
Site: **444-Orbis Newark**

Lab Sample No: 331185
Lab Job No: T413

Date Sampled: 02/04/02
Date Received: 02/07/02

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	M
Iron	3630	39.7	P

M Column - Method Code (See Section 2 of Report)

4066

Client ID: **MW-3**
Site: **444-Orbis Newark**

Lab Sample No: 331186
Lab Job No: T413

Date Sampled: 02/05/02
Date Received: 02/07/02

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	M
Iron	5210	39.7	P

M Column - Method Code (See Section 2 of Report)

4069

Client ID: **MW-5**
Site: **444-Orbis Newark**

Lab Sample No: 331187
Lab Job No: T413

Date Sampled: 02/05/02
Date Received: 02/07/02

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	M
Iron	11500	79.4	P

M Column - Method Code (See Section 2 of Report)

Client ID: **MW-6**
Site: **444-Orbis Newark**

Lab Sample No: 331188
Lab Job No: T413

Date Sampled: 02/04/02
Date Received: 02/07/02

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	M
Iron	9790	39.7	P

M Column - Method Code (See Section 2 of Report)

Client ID: MW-7
Site: 444-Orbis Newark

Lab Sample No: 331189
Lab Job No: T413

Date Sampled: 02/05/02
Date Received: 02/07/02

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	M
Iron	7180	39.7	P

M Column - Method Code (See Section 2 of Report)

H072

Client ID: **MW-17**
Site: **444-Orbis Newark**

Lab Sample No: 331190
Lab Job No: T413

Date Sampled: 02/04/02
Date Received: 02/07/02

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	M
Iron	268	39.7	P

M Column - Method Code (See Section 2 of Report)

Client ID: **MW-1-Dis**
Site: **444-Orbis Newark**

Lab Sample No: 331191
Lab Job No: T413

Date Sampled: 02/04/02
Date Received: 02/07/02

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	M
Iron	3990	39.7	P

M Column - Method Code (See Section 2 of Report)

Client ID: **MW-3-Dis**
Site: **444-Orbis Newark**

Lab Sample No: 331192
Lab Job No: T413

Date Sampled: 02/05/02
Date Received: 02/07/02

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	M
Iron	4370	39.7	P

M Column - Method Code (See Section 2 of Report)

Client ID: **MW-5-Dis**
Site: **444-Orbis Newark**

Lab Sample No: 331193
Lab Job No: T413

Date Sampled: 02/05/02
Date Received: 02/07/02

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	M
Iron	11500	79.4	P

M Column - Method Code (See Section 2 of Report)

Client ID: **MW-6-Dis**
Site: **444-Orbis Newark**

Lab Sample No: 331194
Lab Job No: T413

Date Sampled: 02/04/02
Date Received: 02/07/02

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	M
Iron	8860	39.7	P

M Column - Method Code (See Section 2 of Report)

Client ID: **MW-7-Dis**
Site: **444-Orbis Newark**

Lab Sample No: 331195
Lab Job No: T413

Date Sampled: 02/05/02
Date Received: 02/07/02

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	M
Iron	7890	39.7	P

M Column - Method Code (See Section 2 of Report)

Client ID: **MW-17-Dis**
Site: **444-Orbis Newark**

Lab Sample No: 331196
Lab Job No: T413

Date Sampled: 02/04/02
Date Received: 02/07/02

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	M
Iron	244	39.7	P

M Column - Method Code (See Section 2 of Report)

4079

Blank Results Summary

BLANKS

Lab Name: STL_EDISON_____

Lab Code: 12543_ Lab Job No.: _T413 _____ Batch No.: 12324_

Preparation Blank Matrix (soil/water): WATER

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

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum											NR
Antimony											NR
Arsenic											NR
Barium											NR
Beryllium											NR
Cadmium	0.4	U	0.4	U	0.4	U	0.4	U	0.400	U	P
Calcium											NR
Chromium											NR
Cobalt											NR
Copper	2.4	B	2.1	U	2.1	U	2.1	U	2.100	U	P
Iron	39.7	U	39.7	U	39.7	U	39.7	U	39.700	U	P
Lead											NR
Magnesium											NR
Manganese											NR
Mercury											NR
Nickel											NR
Potassium											NR
Selenium											NR
Silver											NR
Sodium											NR
Thallium											NR
Vanadium											NR
Zinc											NR
Molybdenu											NR

BLANKS

Lab Name: STL_EDISON_____ _____

Lab Code: 12543_ Lab Job No.: _T413 _____ Batch No.: 12324_

Preparation Blank Matrix (soil/water): _____

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

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum											NR
Antimony											NR
Arsenic											NR
Barium											NR
Beryllium											NR
Cadmium			0.4	U							P
Calcium											NR
Chromium											NR
Cobalt											NR
Copper			2.1	U							P
Iron			39.7	U							P
Lead											NR
Magnesium											NR
Manganese											NR
Mercury											NR
Nickel											NR
Potassium											NR
Selenium											NR
Silver											NR
Sodium											NR
Thallium											NR
Vanadium											NR
Zinc											NR
Molybdenu											NR

Calibration Summary

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: STL_EDISON_____ _____

Lab Code: 12543_ Lab Job No.: T413 _____ Batch No.: 12324_

Initial Calibration Source: INORG VENT__

Continuing Calibration Source: INORG VENT__

Concentration Units: ug/L

Analyte	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(1)	Found	%R(1)	M
Aluminum									NR
Antimony									NR
Arsenic									NR
Barium									NR
Beryllium									NR
Cadmium	2500.0	2474.33	99.0	2500.0	2503.27	100.1	2512.46	100.5	P
Calcium									NR
Chromium									NR
Cobalt									NR
Copper	12500.0	12274.01	98.2	12500.0	12462.87	99.7	12496.24	100.0	P
Iron	100000.0	98852.47	98.9	100000.0	99824.50	99.8	100064.4	100.1	P
Lead									NR
Magnesium									NR
Manganese									NR
Mercury									NR
Nickel									NR
Potassium									NR
Selenium									NR
Silver									NR
Sodium									NR
Thallium									NR
Vanadium									NR
Zinc									NR
Molybdenu									NR

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: STL_EDISON_____ _____

Lab Code: 12543_ Lab Job No.: T413 _____ Batch No.: 12324_

Initial Calibration Source: INORG VENT__

Continuing Calibration Source: INORG VENT__

Concentration Units: ug/L

Analyte	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(1)	Found	%R(1)	M
Aluminum_									NR
Antimony_									NR
Arsenic__									NR
Barium___									NR
Beryllium									NR
Cadmium__				2500.0	2494.60	99.8	2528.35	101.1	P_
Calcium__									NR
Chromium_									NR
Cobalt___									NR
Copper___				12500.0	12546.13	100.4	12601.26	100.8	P_
Iron_____				100000.0	99612.44	99.6	100720.6	100.7	P_
Lead_____									NR
Magnesium									NR
Manganese									NR
Mercury__									NR
Nickel___									NR
Potassium									NR
Selenium_									NR
Silver___									NR
Sodium___									NR
Thallium_									NR
Vanadium_									NR
Zinc_____									NR
Molybdenu									NR
_____									__

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

ICP Interference Check Results Summary

ICP INTERFERENCE CHECK SAMPLE

Lab Name: STL_EDISON

Lab Code: 12543 Lab Job No.: T413 Batch No.: 12324

ICP ID Number: TRACE2 TJA61 ICS Source: INORG VENT

Concentration Units: ug/L

Analyte	True Sol. A	True Sol. AB	Initial Found Sol. A	Initial Found Sol. AB	Initial Found %R	Final Found Sol. A	Final Found Sol. AB	Final Found %R
Aluminum	500000	500000	501727	497953.3	99.6	512552	514174.0	102.8
Antimony		100		104.5	104.5		102.6	102.6
Arsenic		100		105.2	105.2		100.1	100.1
Barium		100		105.0	105.0		107.3	107.3
Beryllium		100		99.9	99.9		102.2	102.2
Cadmium		100		97.4	97.4		99.3	99.3
Calcium	500000	500000	479915	475896.6	95.2	487416	487807.6	97.6
Chromium		100		94.0	94.0		96.2	96.2
Cobalt		100		96.4	96.4		98.4	98.4
Copper		100		104.9	104.9		108.1	108.1
Iron	200000	200000	201066	198794.0	99.4	203645	203209.7	101.6
Lead		100		95.3	95.3		99.3	99.3
Magnesium	500000	500000	520880	523312.9	104.7	532057	540385.2	108.1
Manganese		100		98.8	98.8		101.2	101.2
Mercury								
Nickel		100		96.9	96.9		98.5	98.5
Potassium		10000		9856.7	98.6		10264.8	102.6
Selenium		100		94.8	94.8		95.8	95.8
Silver		100		103.7	103.7		106.2	106.2
Sodium		10000		9110.1	91.1		9329.1	93.3
Thallium		100		93.8	93.8		98.7	98.7
Vanadium		100		104.5	104.5		107.7	107.7
Zinc		100		100.5	100.5		101.9	101.9

Spike Sample Recovery Summary

SPIKE SAMPLE RECOVERY

LAB SAMPLE NO.

BSW021102

Lab Name: STL_EDISON

Lab Code: 12543 Lab Job No.: T413 Batch No.: 12324

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

% Solids for Sample: 0.0

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

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum									NR
Antimony									NR
Arsenic									NR
Barium									NR
Beryllium									NR
Cadmium	80-120	51.5710		0.4000	U	50.00	103.1		P
Calcium									NR
Chromium									NR
Cobalt									NR
Copper	80-120	253.5700		2.1000	U	250.00	101.4		P
Iron	80-120	1033.2370		39.7000	U	1000.00	103.3		P
Lead									NR
Magnesium									NR
Manganese									NR
Mercury									NR
Nickel									NR
Potassium									NR
Selenium									NR
Silver									NR
Sodium									NR
Thallium									NR
Vanadium									NR
Zinc									NR
Molybdenu									NR

Comments:

SPIKE SAMPLE RECOVERY

LAB SAMPLE NO.

331198MS

Lab Name: STL_EDISON

Lab Code: 12543 Lab Job No.: T413 Batch No.: 12324

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

% Solids for Sample: 0.0

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

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum									NR
Antimony									NR
Arsenic									NR
Barium									NR
Beryllium									NR
Cadmium	80-120	51.7810		0.4000	U	50.00	103.6		P
Calcium									NR
Chromium									NR
Cobalt									NR
Copper	80-120	258.8390		2.5750	B	250.00	102.5		P
Iron	80-120	1047.8340		39.7000	U	1000.00	104.8		P
Lead									NR
Magnesium									NR
Manganese									NR
Mercury									NR
Nickel									NR
Potassium									NR
Selenium									NR
Silver									NR
Sodium									NR
Thallium									NR
Vanadium									NR
Zinc									NR
Molybdenu									NR

Comments:

SPIKE SAMPLE RECOVERY

LAB SAMPLE NO.

331198MSD

Lab Name: STL_EDISON

Lab Code: 12543 Lab Job No.: T413 Batch No.: 12324

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

% Solids for Sample: 0.0

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

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum									NR
Antimony									NR
Arsenic									NR
Barium									NR
Beryllium									NR
Cadmium	80-120	50.1730		0.4000	U	50.00	100.3		P
Calcium									NR
Chromium									NR
Cobalt									NR
Copper	80-120	257.2980		2.5750	B	250.00	101.9		P
Iron	80-120	1031.1380		39.7000	U	1000.00	103.1		P
Lead									NR
Magnesium									NR
Manganese									NR
Mercury									NR
Nickel									NR
Potassium									NR
Selenium									NR
Silver									NR
Sodium									NR
Thallium									NR
Vanadium									NR
Zinc									NR
Molybdenu									NR

Comments:

Sample and MS Duplicate Results Summary

DUPLICATES

LAB SAMPLE NO.

331198D

Lab Name: STL_EDISON

Lab Code: 12543_ Lab Job No.: T413 Batch No.: 12324_

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

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

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

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum								NR
Antimony								NR
Arsenic								NR
Barium								NR
Beryllium								NR
Cadmium		0.4000	U	0.4000	U			P
Calcium								NR
Chromium								NR
Cobalt								NR
Copper		2.5750	B	2.4640	B	4.4		P
Iron		39.7000	U	39.7000	U			P
Lead								NR
Magnesium								NR
Manganese								NR
Mercury								NR
Nickel								NR
Potassium								NR
Selenium								NR
Silver								NR
Sodium								NR
Thallium								NR
Vanadium								NR
Zinc								NR
Molybdenu								NR

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DUPLICATES

LAB SAMPLE NO.

331198MS/MS

Lab Name: STL_EDISON

Lab Code: 12543 Lab Job No.: T413 Batch No.: 12324

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

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

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

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum								NR
Antimony								NR
Arsenic								NR
Barium								NR
Beryllium								NR
Cadmium		51.7810		50.1730		3.2		P
Calcium								NR
Chromium								NR
Cobalt								NR
Copper		258.8390		257.2980		0.6		P
Iron		1047.8340		1031.1380		1.6		P
Lead								NR
Magnesium								NR
Manganese								NR
Mercury								NR
Nickel								NR
Potassium								NR
Selenium								NR
Silver								NR
Sodium								NR
Thallium								NR
Vanadium								NR
Zinc								NR
Molybdenu								NR

Laboratory Control Samples Results Summary

LABORATORY CONTROL SAMPLE

Lab Name: STL_EDISON_____ _____

Lab Code: 12543_ Lab Job No.: __T413 _____ Batch No.: 12324_

Solid LCS Source: _____

Aqueous LCS Source: INORG VENT__

Analyte	Aqueous (ug/L) True	Found	%R	Solid (mg/kg) True	Found	C	Limits		%R
Aluminum_									
Antimony_									
Arsenic__									
Barium___									
Beryllium									
Cadmium__	1000.0	1007.22	100.7						
Calcium__									
Chromium_									
Cobalt___									
Copper___	1000.0	992.42	99.2						
Iron_____	1000.0	1005.11	100.5						
Lead_____									
Magnesium									
Manganese									
Mercury__									
Nickel___									
Potassium									
Selenium_									
Silver___									
Sodium___									
Thallium_									
Vanadium_									
Zinc_____									
Molybdenu									

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Serial Dilution Summary

ICP SERIAL DILUTION

LAB SAMPLE NO.

331198L ___

ab Name: STL_EDISON_____ _____

Lab Code: 12543_ Lab Job No.: _T413 _____ Batch No.: 12324_

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

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Aluminum							NR
Antimony							NR
Arsenic							NR
Barium							NR
Beryllium							NR
Cadmium	0.40	U	2.00	U			P
Calcium							NR
Chromium							NR
Cobalt							NR
Copper	2.58	B	10.50	U	100.0		P
Iron	39.70	U	198.50	U			P
Lead							NR
Magnesium							NR
Manganese							NR
Mercury							NR
Nickel							NR
Potassium							NR
Selenium							NR
Silver							NR
Sodium							NR
Thallium							NR
Vanadium							NR
Zinc							NR

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Analysis Run Log

ANALYSIS RUN LOG

Lab Name: STL_EDISON_____ Contract: _____

Lab Code: 12543_ Case No.: _____ SAS No.: _____ SDG No.:12324_

Instrument ID Number: TRACE2 TJA61_ Method: P_

Start Date: 02/11/02 End Date: 02/12/02

EPA Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	MO
2CAL-BLK	1.00	2119		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	X
T2CAL1	1.00	2124		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	_	X	X	_	X	X	X	X
T2CAL2	1.00	2130		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	_	X	X	_	X	X	X	X
T2CAL3	1.00	2135		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	X
ZZZZZZ	1.00	2140		_	_	_	_	_	X	_	_	_	X	X	_	_	_	_	_	_	_	_	_	_	_	_	_
ICV/CCV	1.00	2145		_	_	_	_	_	X	_	_	_	X	X	_	_	_	_	_	_	_	_	_	_	_	_	_
ICB/CCB	1.00	2151		_	_	_	_	_	X	_	_	_	X	X	_	_	_	_	_	_	_	_	_	_	_	_	_
ICSA	1.00	2156		_	_	_	_	_	X	_	_	_	X	X	_	_	_	_	_	_	_	_	_	_	_	_	_
ICSAB	1.00	2201		_	_	_	_	_	X	_	_	_	X	X	_	_	_	_	_	_	_	_	_	_	_	_	_
ZZZZZZ	1.00	2207		_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
ZZZZZZ	1.00	2212		_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
SW021102	1.00	2217		_	_	_	_	_	X	_	_	_	X	X	_	_	_	_	_	_	_	_	_	_	_	_	_
BW021102	1.00	2222		_	_	_	_	_	X	_	_	_	X	X	_	_	_	_	_	_	_	_	_	_	_	_	_
LCSW	1.00	2228		_	_	_	_	_	X	_	_	_	X	X	_	_	_	_	_	_	_	_	_	_	_	_	_
331198D	1.00	2233		_	_	_	_	_	X	_	_	_	X	X	_	_	_	_	_	_	_	_	_	_	_	_	_
331198	1.00	2238		_	_	_	_	_	X	_	_	_	X	_	_	_	_	_	_	_	_	_	_	_	_	_	_
331198L	1.00	2244		_	_	_	_	_	X	_	_	_	X	X	_	_	_	_	_	_	_	_	_	_	_	_	_
CCV	1.00	2249		_	_	_	_	_	X	_	_	_	X	X	_	_	_	_	_	_	_	_	_	_	_	_	_
CCB	1.00	2254		_	_	_	_	_	X	_	_	_	X	X	_	_	_	_	_	_	_	_	_	_	_	_	_
331198MS	1.00	2259		_	_	_	_	_	X	_	_	_	X	X	_	_	_	_	_	_	_	_	_	_	_	_	_
31198MSD	1.00	2305		_	_	_	_	_	X	_	_	_	X	X	_	_	_	_	_	_	_	_	_	_	_	_	_
ZZZZZZ	1.00	2310		_	_	_	_	_	_	_	_	_	_	X	_	_	_	_	_	_	_	_	_	_	_	_	_
331185	1.00	2315		_	_	_	_	_	_	_	_	_	_	X	_	_	_	_	_	_	_	_	_	_	_	_	_
331186	1.00	2321		_	_	_	_	_	_	_	_	_	_	X	_	_	_	_	_	_	_	_	_	_	_	_	_
331187	2.00	2326		_	_	_	_	_	_	_	_	_	_	X	_	_	_	_	_	_	_	_	_	_	_	_	_
331188	1.00	2331		_	_	_	_	_	_	_	_	_	_	X	_	_	_	_	_	_	_	_	_	_	_	_	_
331189	1.00	2336		_	_	_	_	_	_	_	_	_	_	X	_	_	_	_	_	_	_	_	_	_	_	_	_
331190	1.00	2342		_	_	_	_	_	_	_	_	_	_	X	_	_	_	_	_	_	_	_	_	_	_	_	_
331191	1.00	2347		_	_	_	_	_	_	_	_	_	_	X	_	_	_	_	_	_	_	_	_	_	_	_	_
CCV	1.00	2352		_	_	_	_	_	X	_	_	_	X	X	_	_	_	_	_	_	_	_	_	_	_	_	_
CCB	1.00	2358		_	_	_	_	_	X	_	_	_	X	X	_	_	_	_	_	_	_	_	_	_	_	_	_
331192	1.00	0003		_	_	_	_	_	_	_	_	_	_	X	_	_	_	_	_	_	_	_	_	_	_	_	_
				_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

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ANALYSIS RUN LOG

Lab Name: STL_EDISON_____ Contract: _____

Lab Code: 12543_ Case No.: _____ SAS No.: _____ SDG No.:12324_

Instrument ID Number: TRACE2 TJA61_ Method: P_

Start Date: 02/11/02 End Date: 02/12/02

EPA Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	MO
331193	2.00	0008												X													
331194	1.00	0014												X													
331195	1.00	0019												X													
331196	1.00	0024												X													
331215	1.00	0029												X													
331217	1.00	0035												X													
331197	1.00	0040							X				X														
331199	1.00	0045							X				X														
331200	1.00	0051							X				X														
CCV	1.00	0056							X				X	X													
CCB	1.00	0101							X				X	X													
ICSA	1.00	0106							X				X	X													
ICSAB	1.00	0112							X				X	X													
CCV	1.00	0117							X				X	X													
CCB	1.00	0122							X				X	X													

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General Chemistry Forms

Analytical Results Summary

Site: 444-Orbis Newark

Lab Job No: T413

Date Received: 02/07/2002
Matrix: WATER

Date Extracted: 02/08/2002
Date Analyzed: 02/13/2002
QA Batch: 0356

Ammonia

STL Edison Sample #	Client ID	Sample Date	Dilution Factor	Analytical Result Units: mg/l
331185	MW-1	02/04/2002	1.0	0.3
331186	MW-3	02/05/2002	1.0	1.1
331187	MW-5	02/05/2002	10.0	22.1
331188	MW-6	02/04/2002	1.0	3.2
331189	MW-7	02/05/2002	1.0	0.38
331190	MW-17	02/04/2002	1.0	1.2

Quantitation Limit for Ammonia is 0.1 mg/l.

Site: 444-Orbis Newark

Lab Job No: T413

Date Received: 02/07/2002
Matrix: WATER

Date Analyzed: 02/14/2002
QA Batch: 1700

Chloride

STL Edison Sample #	Client ID	Sample Date	Dilution Factor	Analytical Result Units: mg/l
331185	MW-1	02/04/2002	1.0	34.0
331186	MW-3	02/05/2002	1.0	29.0
331187	MW-5	02/05/2002	4.0	ND
331188	MW-6	02/04/2002	10.0	190
331189	MW-7	02/05/2002	5.0	217
331190	MW-17	02/04/2002	2.0	65.0

Quantitation Limit for Chloride is 5.0 mg/l.

Site: 444-Orbis Newark

Lab Job No: T413

Date Received: 02/07/2002
Matrix: WATER

Date Analyzed: 02/12/2002
QA Batch: 1648

Sulfate

STL Edison Sample #	Client ID	Sample Date	Dilution Factor	Analytical Result Units: mg/l
331185	MW-1	02/04/2002	5.0	168
331186	MW-3	02/05/2002	1.0	29.6
331187	MW-5	02/05/2002	1.0	ND
331188	MW-6	02/04/2002	1.0	16.9
331189	MW-7	02/05/2002	2.0	60.1
331190	MW-17	02/04/2002	2.0	59.3

Quantitation Limit for Sulfate is 5.0 mg/l.

Site: 444-Orbis Newark

Lab Job No: T413

Date Received: 02/07/2002
Matrix: WATER

Date Analyzed: 02/09/2002
QA Batch: 1389

Sulfide

STL Edison Sample #	Client ID	Sample Date	Dilution Factor	Analytical Result Units: mg/l
331185	MW-1	02/04/2002	1.0	ND
331186	MW-3	02/05/2002	1.0	ND
331187	MW-5	02/05/2002	1.0	ND
331188	MW-6	02/04/2002	1.0	ND
331189	MW-7	02/05/2002	1.0	ND
331190	MW-17	02/04/2002	1.0	ND

Quantitation Limit for Sulfide is 1.0 mg/l.

Site: 444-Orbis Newark

Lab Job No: T413

Date Received: 02/07/2002

Date Analyzed: 02/08/2002

Matrix: WATER

QA Batch: 1322

Total Phosphorus

STL Edison Sample #	Client ID	Sample Date	Dilution Factor	Analytical Result Units: mg/l
331185	MW-1	02/04/2002	1.0	0.43
331186	MW-3	02/05/2002	2.0	0.51
331187	MW-5	02/05/2002	10.0	4.6
331188	MW-6	02/04/2002	4.0	1.1
331189	MW-7	02/05/2002	5.0	2.0
331190	MW-17	02/04/2002	1.0	0.07

Quantitation Limit for Total Phosphorus is 0.03 mg/l.

QA Summary

CHLORIDE

Matrix: WATER

Lab Sample No.: 331185

QA Batch No.: 1700

Lab Job No.: T413

Laboratory Blank	
Blank Conc Units: mg/l	Quant Limit Units: mg/l
ND	5.0

Matrix Spike				
Spike Added Units: mg/l	Sample Conc Units: mg/l	MS Conc Units: mg/l	MS % Rec	QC Limits Rec
100	34.0	136.0	102	81-124

Matrix Spike Duplicate					
Spike Added Units: mg/l	MSD Conc Units: mg/l	MSD % Rec	% RPD	QC LIMITS RPD	REC
100	134.0	100	1.5	7.0	81-124

Laboratory Control Sample				
Vendor	Lot #	True Value Units: mg/l	Acceptable Range: mg/l	Measured Value: mg/l
ERA	73022	45.9	40.6-51.2	44.0

NITROGEN-AMMONIA

Matrix: WATER

Lab Sample No.: 330365

QA Batch No.: 0356

Lab Job No.: T251

Laboratory Blank	
Blank Conc (mg/l as N)	Quant Limit (mg/l as N)
ND	0.10

Matrix Spike				
Spike Added (mg/l as N)	Sample Conc (mg/l as N)	MS Conc (mg/l as N)	MS % Rec	QC Limits Rec
1.0	ND	0.899	89.9	43-152

Matrix Spike Duplicate					
Spike Added (mg/l as N)	MSD Conc (mg/l as N)	MSD % Rec	% RPD	QC LIMITS RPD	REC
1.0	0.870	87.0	3.3	16.5	43-152

Blank Spike			
Spike Added (mg/l as N)	BS Conc. (mg/l as N)	% Recovery	QC LIMIT BS %REC
1.0	0.924	92.4	90-110

TOTAL PHOSPHATE / PHOSPHORUS AS P

Matrix: WATER

Lab Sample No.: 331185

QA Batch No.: 1322

Lab Job No.: T413

Laboratory Blank	
Blank Conc Units: mg/l	Quant Limit Units: mg/l
ND	0.030

Matrix Spike				
Spike Added Units: mg/l	Sample Conc Units: mg/l	MS Conc Units: mg/l	MS % Rec	QC Limits Rec
0.20	0.43	0.63	96.5	84-115

Matrix Spike Duplicate					
Spike Added Units: mg/l	MSD Conc Units: mg/l	MSD % Rec	% RPD	QC LIMITS RPD	REC
0.20	0.62	92.5	1.3	9.3	84-115

Laboratory Control Sample				
Vendor	Lot #	True Value Units: mg/l	Acceptable Range: mg/l	Measured Value: mg/l
ERA	9986	8.15	7.01-9.29	7.36

SULFATE

Matrix: WATER **Lab Sample No.: 330368**

QA Batch No.: 1648 **Lab Job No.: T251**

Laboratory Blank	
Blank Conc Units: mg/l	Quant Limit Units: mg/l
ND	5.0

Matrix Spike				
Spike Added Units: mg/l	Sample Conc Units: mg/l	MS Conc Units: mg/l	MS % Rec	QC Limits Rec
1000	609	1623	101	82-115

Matrix Spike Duplicate					
Spike Added Units: mgl	MSD Conc Units: mg/l	MSD % Rec	% RPD	QC LIMITS RPD	 REC
1000	1603	99.4	1.2	8.7	82-115

SPIKE ADDED CONCENTRATION is adjusted for Sample Volume

Blank Spike			
True Value Units: mg/l	Measured Value Units: mg/l	BS % Rec	Limits
500	481	96.2	90-110

SULFIDE

Matrix: WATER

Lab Sample No.: 330346

QA Batch No.: 1389

Lab Job No.: T247

Laboratory Blank	
Blank Conc Units: mg/l	Quant Limit Units: mg/l
ND	1.0

Matrix Spike				
Spike Added Units: mg/l	Sample Conc Units: mg/l	MS Conc Units: mg/l	MS % Rec	QC Limits Rec
5.3	ND	4.6	86.8	80-112

Matrix Spike Duplicate					
Spike Added Units: mg/l	MSD Conc Units: mg/l	MSD % Rec	% RPD	QC LIMITS RPD	REC
5.3	4.6	86.8	0.0	8.3	80-112

Laboratory Control Sample				
Vendor	Lot #	True Value Units: mg/l	Acceptable Range: mg/l	Measured Value: mg/l
ERA	20100	7.25	5.15-9.35	6.45

This is the Last Page of the Document

02/19/2002

SEVERN TRENT SERVICES

STL Edison
777 New Durham Road
Edison, NJ 08817

Tel: 732-549-3900
Fax: 732-549-3679
www.stl-inc.com

Envirotactics, Inc.
25-17 Rt 35
Bldg D, Suite 202
Manasquan, NJ 08736

Attention: Mr. Basil Ellmers

Laboratory Results
Job No. T444 - ORBIS-Newark

Dear Mr. Ellmers:

Enclosed are the results you requested for the following sample(s) received at our laboratory on February 8, 2002.

Lab No.	Client ID	Analysis Required
331369	MW-1	Nitrate
		Nitrite
331370	MW-3	Nitrate
		Nitrite
331371	MW-5	Nitrate
		Nitrite
331372	MW-6	Nitrate
		Nitrite
331373	MW-7	Nitrate
		Nitrite
331374	MW-17	Nitrate

SEVERN TRENT SERVICES

STL Edison
777 New Durham Road
Edison, NJ 08817

Tel: 732-549-3900
Fax: 732-549-3679
www.stl-inc.com

Laboratory Results
Job No. T444 - ORBIS-Newark (cont'd)

Lab No.	Client ID	Analysis Required
		Nitrite

An invoice for our services is also enclosed. If you have any questions please contact your Project Manager, Joy Kelly, at (732) 549-3900.

Very Truly Yours,

Michael J. Urban
Laboratory Director

SEVERN TRENT SERVICES

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SEVERN TRENT SERVICES

Analytical Results Summary

SEVERN TRENT SERVICES

Site: ORBIS-Newark

Lab Job No: T444

Date Received: 02/08/2002
Matrix: WATER

Date Analyzed: 02/08/2002
QA Batch: 0617

Nitrate

STL Edison Sample #	Client ID	Sample Date	Dilution Factor	Analytical Result Units: mg/l
331369	MW-1	02/08/2002	1.0	ND
331370	MW-3	02/08/2002	1.0	ND
331371	MW-5	02/08/2002	1.0	ND
331372	MW-6	02/08/2002	1.0	ND
331373	MW-7	02/08/2002	1.0	ND
331374	MW-17	02/08/2002	1.0	1.3

Quantitation Limit for Nitrate is 0.1 mg/l.

SEVERN TRENT SERVICES

Site: ORBIS-Newark

Lab Job No: T444

Date Received: 02/08/2002
Matrix: WATER

Date Analyzed: 02/08/2002
QA Batch: 0230

Nitrite

STL Edison Sample #	Client ID	Sample Date	Dilution Factor	Analytical Result Units: mg/l
331369	MW-1	02/08/2002	1.0	ND
331370	MW-3	02/08/2002	1.0	ND
331371	MW-5	02/08/2002	1.0	ND
331372	MW-6	02/08/2002	1.0	ND
331373	MW-7	02/08/2002	1.0	ND
331374	MW-17	02/08/2002	1.0	0.27

Quantitation Limit for Nitrite is 0.1 mg/l.

General Information

Chain of Custody

777 New Durham Road
Edison, New Jersey 08817
Phone: (732) 549-3900 Fax: (732) 549-3679

CHAIN OF CUSTODY / ANALYSIS REQUEST

PAGE 1 OF 1

Name (for report and invoice) Basil Ellmers	Samplers Name (Printed) Basil Ellmers	Site/Project Identification ORBIS - NewARK
Company Envirotactics Inc	P.O. # JOB 444	State (Location of site): NJ: ☒ NY: ☐ Other:
		Regulatory Program:
Address 2517 Hwy 35 Bld D Ste 202	Analysis Turnaround Time: Standard ☒	LAB USE ONLY Project No:
City Manasquan State NJ 08736	Rush Charges Authorized For: 2 Week ☐ 1 Week ☐ Other ☐	Job No: T444
Phone 732 292-0100 Fax 732 292-2808		

ANALYSIS REQUESTED (ENTER "X" BELOW TO INDICATE REQUEST)

Sample Identification	Date	Time	Matrix	No. of. Cont.	Nitrite	Nitrate									Sample Numbers
MW-1	2/8/02	9:30	A	1	✓	✓									331369
MW-3		10:20	A	1	✓	✓									331370
MW-5		9:50	A	1	✓	✓									331371
MW-6		10:00	A	1	✓	✓									331372
MW-7		10:10	A	1	✓	✓									331373
MW-17		9:40	A	1	✓	✓									331374

Preservation Used: 1 = ICE, 2 = HCl, 3 = H_2SO_4, 4 = HNO_3, 5 = NaOH
6 = Other _____, 7 = Other _____

Soil:
Water:

Special Instructions ☆48 hr short hold

Water Metals Filtered (Yes/No)?

Relinquished by	Company	Date / Time	Received by	Company
1) B Ellmers	Envirotactics	2/8/02 10:30	1) [signature]	STL Edison Wayne Clark
2) [signature]	STL Edison Wayne Clark	2/8/02 1120	2) D Ventuarello	STL
3)			3)	
4)			4)	

Laboratory Certifications: New Jersey (12028) New York (11452) Pennsylvania (68-522) Connecticut (PH 3000) [illegible]

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Laboratory Chronicles

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INTERNAL CUSTODY RECORD
AND
LABORATORY CHRONICLE
STL Edison

777 New Durham Road, Edison, New Jersey
08817

Job No: T444 Site: ORBIS-Newark

Client: Envirotactics, Inc.

WET CHEM

NITROGEN-NITRATE

Lab Sample ID	Date Sampled	Date Received	Preparation Date	Technician's Name	Analysis Date	Analyst's Name	QA Batch
WATER							
331369	2/8/2002	2/08/2002			2/8/2002	Kaur, Kuldeep	0617
331370	2/8/2002	2/08/2002			2/8/2002	Kaur, Kuldeep	0617
331371	2/8/2002	2/08/2002			2/8/2002	Kaur, Kuldeep	0617
331372	2/8/2002	2/08/2002			2/8/2002	Kaur, Kuldeep	0617
331373	2/8/2002	2/08/2002			2/8/2002	Kaur, Kuldeep	0617
331374	2/8/2002	2/08/2002			2/8/2002	Kaur, Kuldeep	0617

NITROGEN-NITRITE

Lab Sample ID	Date Sampled	Date Received	Preparation Date	Technician's Name	Analysis Date	Analyst's Name	QA Batch
WATER							
331369	2/8/2002	2/08/2002			2/8/2002	Kaur, Kuldeep	0230
331370	2/8/2002	2/08/2002			2/8/2002	Kaur, Kuldeep	0230
331371	2/8/2002	2/08/2002			2/8/2002	Kaur, Kuldeep	0230
331372	2/8/2002	2/08/2002			2/8/2002	Kaur, Kuldeep	0230
331373	2/8/2002	2/08/2002			2/8/2002	Kaur, Kuldeep	0230
331374	2/8/2002	2/08/2002			2/8/2002	Kaur, Kuldeep	0230

Methodology Review

Analytical Methodology Summary

Volatile Organics:

Unless otherwise specified, water samples are analyzed for volatile organics by purge and trap GC/MS as specified in EPA Method 624. Drinking water samples are analyzed by EPA Method 524.2. Solid samples are analyzed for volatile organics as specified in the EPA publication "Test Methods for Evaluating Solid Waste" (SW-846, 3rd Edition) Method 8260B. Water samples are analyzed for volatile organics by purge and trap GC/PID and GC/ELCD as specified in EPA Methods 601 and 602. Solid samples are analyzed by GC/PID and GC/ELCD in accordance with SW-846, 3rd Edition Method 8021B.

Acid and Base/Neutral Extractable Organics:

Unless otherwise specified, water samples are analyzed for acid and/or base/neutral extractable organics by GC/MS in accordance with EPA Method 625. Solids are analyzed for acid and/or base/neutral extractable organics as specified in the EPA publication "Test Methods for Evaluating Solid Waste" (SW-846, 3rd Edition) Method 8270C.

GC/MS Nontarget Compound Analysis:

Analysis for nontarget compounds is conducted, upon request, in conjunction with GC/MS analyses by EPA Methods 624, 625, 8260B and 8270C. Nontarget compound analysis is conducted using a forward library search of the EPA/NIH/NBS mass spectral library of compounds at the greatest apparent concentration (10% or greater of the nearest internal standard) in each organic fraction (15 for volatile, 15 for base/neutrals and 10 for acid extractables).

Organochlorine Pesticides and PCBs:

Unless otherwise specified, water samples are analyzed for organochlorine pesticides and PCBs by dual column gas chromatography with electron capture detectors as specified in EPA Method 608. Solid samples are analyzed as specified in the EPA publication "Test Methods for Evaluating Solid Waste" (SW-846, 3rd Edition) Method 8081A for organochlorine pesticides and Method 8082 for PCBs.

Total Petroleum Hydrocarbons:

Water samples are analyzed for petroleum hydrocarbons by I.R. using EPA Method 418.1. Solid samples are prepared for analysis by soxhlet extraction consistent with the March 1990 N.J. DEP "Remedial Investigation Guide" Appendix A, page 52, and analyzed by U.S. EPA Method 418.1

Metals Analysis:

Metals analyses are performed by any of four techniques specified by a Method Code provided on each data report page, as follows:

P - Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP)

A - Flame Atomic Absorption

F - Furnace Atomic Absorption

CV - Manual Cold Vapor (Mercury)

Water samples are digested and analyzed using EPA methods provided in "Methods for Chemical Analysis of Water and Wastewater" (EPA 600/4-79-020). Solid samples are analyzed as specified in the EPA publication "Test Methods for Evaluating Solid Waste" (SW-846, 3rd Edition); samples are digested according to Method 3050B "Acid Digestion of Soil, Sediments and Sludges."

Specific method references for ICP analyses are water Method 200.7 and solid Method 6010B. Mercury analyses are conducted by the manual cold vapor technique specified by water Method 245.1 and solid Method 7471A. Other specific Atomic Absorption method references are as follows:

	Water Test Method		Solid Test Method	
Element	Flame	Furnace	Flame	Furnace
Aluminum	202.1	202.2	7020	--
Antimony	204.1	204.2	7040	7041
Arsenic	--	206.2	--	7060
Barium	208.1	--	7080	--
Beryllium	210.1	210.2	7090	7091
Cadmium	213.1	213.2	7130	7131
Calcium	215.1	--	7140	--
Chromium, Total	218.1	218.2	7190	7191
Chromium, (+6)	218.4	218.5	7197	7195
Cobalt	219.1	219.2	7200	7201
Copper	220.1	220.2	7210	--
Iron	236.1	236.2	7380	--
Lead	239.1	239.2	7420	7421
Magnesium	242.1	--	7450	--
Manganese	243.1	243.2	7460	--
Nickel	249.1	249.2	7520	--
Potassium	258.1	--	7610	--
Selenium	--	270.2	--	7740
Silver	272.1	272.2	7760	--
Sodium	273.1	--	7770	--
Tin	283.1	283.2	7870	--
Thallium	279.1	279.2	7840	7841
Vanadium	286.1	286.2	7910	7911
Zinc	289.1	289.2	7950	--

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41127

Cyanide:

Water samples are analyzed for cyanide using EPA Method 335.3. Cyanide is determined in solid samples as specified in the EPA Contract Laboratory Program IFB dated July 1988, revised February 1989.

Phenols:

Water samples are analyzed for total phenols using EPA Method 420.2. Total phenols are determined in solid samples by preparing the sample as outlined in the EPA Contract Laboratory Program IFB for cyanide, followed by a phenols determination using EPA Method 420.1.

Cleanup of Semivolatile Extracts:

Upon request Method 3611B Alumina Column Cleanup and/or Method 3650B Acid-Base Partition Cleanup are performed to improve detection limits by the removal of saturated hydrocarbon interferences.

Hazardous Waste Characteristics:

Samples for hazardous waste characteristics are analyzed as specified in the U.S. EPA publication "Test Methods for Evaluating Solid Waste" (SW-846, 3rd Edition). Specific method references are as follows:

Ignitability - Method 1020A

Corrosivity - Water pH Method 9040B
Soil pH Method 9045C

Reactivity - Chapter 7, Section 7.3.3 and 7.3.4 respectively for hydrogen cyanide and hydrogen sulfide release

Toxicity - TCLP Method 1311

Miscellaneous Parameters:

Additional analyses performed on both aqueous and solid samples are in accordance with methods published in the following references:

- Test Methods for Evaluating Solid Wastes, SW-846 3rd Edition, November 1986.
- Standard Methods for the Examination of Water and Wastewater, 17th Edition.
- Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, 1979.

T444

4178

Data Reporting Qualifiers

T444

4129

DATA REPORTING QUALIFIERS

ND - The compound was not detected at the indicated concentration.

B - The analyte was found in the laboratory blank as well as the sample. This indicates possible laboratory contamination of the environmental sample.

P - For dual column analysis, the percent difference between the quantitated concentrations on the two columns is greater than 40%.

* - For dual column analysis, the lowest quantitated concentration is being reported due to coeluting interference.

Non-Conformance Summary

T444

4131

NON-CONFORMANCE SUMMARY

STL Edison Job Number: T444

Volatile Organics Analysis:

All data conforms with method requirements ____; or
Analysis was not requested ✓; or
Non-conformance for the specific samples listed is as follows:

See continuation page if checked ( )

Base/Neutral and/or Acid Extractable Organics:

All data conforms with method requirements ____; or
Analysis was not requested ✓; or
Non-conformance for the specific samples listed is as follows:

See continuation page if checked ( )

PCBs and/or Organochlorine Pesticides:

All data conforms with method requirements ____; or
Analysis was not requested ✓; or
Non-conformance for the specific samples listed is as follows:

See continuation page if checked ( )

T444

4132

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Non-conformance Summary, Page 2 of 2
STL Edison Job Number: T444

Metals Analysis:

All data conforms with method requirements ____; or
Analysis was not requested ✓; or
Non-conformance for the specific samples listed is as follows:

See continuation page if checked ( )

Total Petroleum Hydrocarbons:

All data conforms with method requirements ____; or
Analysis was not requested ✓; or
Non-conformance for the specific samples listed is as follows:

See continuation page if checked ( )

General Chemistry/Disposal Parameters:

All data conforms with method requirements ____; or
Analysis was not requested ____; or
Non-conformance for the specific samples listed is as follows:
Nitrate: QA BATCH 0230 Recovery of MS/MSD outside QC limits. The LCS meets QC limits.

See continuation page if checked ( )

Signature of Laboratory Manager: [signature] Date: 2-19-02

T444

4133

16

General Chemistry Forms

Analytical Results Summary

T444

4134

Site: ORBIS-Newark

Lab Job No: T444

Date Received: 02/08/2002
Matrix: WATER

Date Analyzed: 02/08/2002
QA Batch: 0617

Nitrate

STL Edison Sample #	Client ID	Sample Date	Dilution Factor	Analytical Result Units: mg/l
331369	MW-1	02/08/2002	1.0	ND
331370	MW-3	02/08/2002	1.0	ND
331371	MW-5	02/08/2002	1.0	ND
331372	MW-6	02/08/2002	1.0	ND
331373	MW-7	02/08/2002	1.0	ND
331374	MW-17	02/08/2002	1.0	1.3

Quantitation Limit for Nitrate is 0.1 mg/l.

Site: ORBIS-Newark

Lab Job No: T444

Date Received: 02/08/2002
Matrix: WATER

Date Analyzed: 02/08/2002
QA Batch: 0230

Nitrite

STL Edison Sample #	Client ID	Sample Date	Dilution Factor	Analytical Result Units: mg/l
331369	MW-1	02/08/2002	1.0	ND
331370	MW-3	02/08/2002	1.0	ND
331371	MW-5	02/08/2002	1.0	ND
331372	MW-6	02/08/2002	1.0	ND
331373	MW-7	02/08/2002	1.0	ND
331374	MW-17	02/08/2002	1.0	0.27

Quantitation Limit for Nitrite is 0.1 mg/l.

QA Summary

NITROGEN-NITRATE

Matrix: WATER

Lab Sample No.: 331370

QA Batch No.: 0617

Lab Job No.: T444

Laboratory Blank	
Blank Conc (mg/l as N)	Quant Limit (mg/l as N)
ND	0.10

Matrix Spike				
Spike Added (mg/l as N)	Sample Conc (mg/l as N)	MS Conc (mg/l as N)	MS % Rec	QC Limits Rec
1.0	ND	0.934	93.4	45-156

Matrix Spike Duplicate					
Spike Added (mg/l as N)	MSD Conc (mg/l as N)	MSD % Rec	% RPD	QC LIMITS RPD	QC LIMITS REC
1.0	0.941	94.1	0.75	14.6	45-156

Laboratory Control Sample				
Vendor	Lot #	True Value (mg/l as N)	Acceptable Range: mg/l	Measured Value: mg/l
ERA	8059	6.3	5.6-7.1	6.1

NITROGEN-NITRITE

Matrix: WATER

Lab Sample No.: 331370

QA Batch No.: 0230

Lab Job No.: T444

Laboratory Blank	
Blank Conc Units: mg/l	Quant Limit Units: mg/l
ND	0.10

Matrix Spike				
Spike Added Units: mg/l	Sample Conc Units: mg/l	MS Conc Units: mg/l	MS % Rec	QC Limits Rec
0.50	ND	0.366	73.2	86.2-120

Matrix Spike Duplicate					
Spike Added Units: mg/l	MSD Conc Units: mg/l	MSD % Rec	% RPD	QC LIMITS RPD	QC LIMITS REC
0.50	0.371	74.2	1.4	6.4	86.2-120

Laboratory Control Sample				
Vendor	Lot #	True Value Units: mg/l	Acceptable Range: mg/l	Measured Value: mg/l
ERA	3417	5.08	4.32-5.84	4.8

This is the Last Page of the Document

T444

4140

REFERENCE 15

envirotactics

• 2517 Highway 35
• Building D, Suite 202
• Manasquan, NJ 08736
• Phone 732.292.0100
• Fax 732.292.2808

February 5, 2002

Rodger Fedak
NJDEP
Northern Field Office
2 Babcock Place
West Orange, NJ 07052

Re: Preliminary Assessment/Site Investigation/ Remedial Investigation Workplan Report Former Orbis Products Corporation 55 Virginia Street, Newark, New Jersey

Dear Mr. Fedak:

Attached please find three copies of the report detailing the Preliminary Assessment/Site Investigation/Remedial Investigation Workplan for the former Orbis Products facility. One copy of the laboratory reports has been submitted.

Envirotactics has completed the PA/SI phase of the work and has also completed the Remedial Investigation Phase of the work at the request of the City of Newark. Nine additional monitoring wells including one deep well were installed at the site. The second round of groundwater sampling has recently been completed along with the proposed soil delineation sampling. It is anticipated that a Remedial Investigation/Remedial Action Workplan will be submitted in approximately two months.

If you have any questions or would like to visit the site, please call me.

Sincerely,
For Envirotactics, Inc.

Christopher Neuffer
President

Cell 732-759-6272

envirotactics

• 2517 Highway 35
• Building D, Suite 202
• Manasquan, NJ 08736
• Phone 732.292.0100
• Fax 732.292.2808

PRELIMINARY ASSESSMENT REPORT (PAR)
SITE INVESTIGATION REPORT (SIR)
And
REMEDIAL INVESTIGATION WORKPLAN (RIW)

Orbis Products Corporation
55 Virginia Street
Block 3773, Lots 15, 41, 43 and 53
Newark, Essex County, New Jersey
Case #86-11-17-0100

Prepared For:

City of Newark
920 Broad Street
Newark, New Jersey 07102

Prepared By:

Envirotactics, Inc.
2517 Highway 35
Building D, Suite 202
Manasquan, New Jersey 08736

January 2001

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1.0 Introduction

Envirotactics, Inc. was retained by the City of Newark to perform a Preliminary Assessment (PA), Site Investigation (SI), Remedial Investigation (RI) and develop a Remedial Action Workplan (RAW) at the property identified as the former Orbis Products Corporation located at 55 Virginia Street, Block 3773, Lots 15, 41, 43 and 53 in Newark, New Jersey. Figure 1, Attachment 2, shows the general site location. The assessment and investigation of the property is being conducted for the City of Newark as part of the NJDEP Hazardous Discharge Site Remediation Fund (HDSRF). This site is an integral part of the City of Newark's redevelopment plan and the expansion of the Newark Airport.

1.1 Purpose

The purpose of the investigation is to obtain sufficient information regarding the site soil and groundwater conditions to select remedial options to be implemented at the site, thereby allowing for redevelopment of the property.

The investigation includes a Preliminary Site Assessment, Site Investigation activities, a Remedial Investigation and preparation of a Remedial Action Workplan.

Envirotactics' scope of services in connection with the Preliminary Assessment phase of work included the following components:

- A review of available federal, state, and local records through electronic database searches and document requests;
- A site walk-through to visually identify potential environmental concerns relating to present and past site operations;
- Interviews with knowledgeable representatives;
- Review of historical environmental reports.

The Preliminary Assessment was followed by a Site Investigation that included investigation of both soil and groundwater at areas of concern identified during the Preliminary Assessment. Based on the results of the Site Investigation, a Remedial Investigation Workplan (RIW) was developed to delineate the contaminants detected at the site. Once the Remedial Investigation activities have been completed, a Remedial Action Workplan will be developed.

This report details the results of the Preliminary Assessment and Site Investigation. The report also provides a Remedial Investigation Workplan to complete investigation of identified areas of concern. All work was conducted in accordance with N.J.A.C. 7:26E, "Technical Requirements for Site Remediation".

2.0 Site Description

A description of the subject property including current and historical uses is provided below. Also provided is a description of the surrounding properties and their usage.

2.1 Location and Legal Description

The subject property consists of four lots identified as Block 3773, Lots 15, 41, 43 and 53 located in the City of Newark (40° 41' 17.7" North, 74° 12' 5.3" West). The property is identified as 55 Virginia Street and consists of approximately 6.1 acres. A tax map is supplied as Figure 3, Attachment 2.

The City of Newark is the current owner of the property that was formerly operated by Orbis Products Corporation. The property was acquired through a foreclosure due to failure to pay taxes.

2.2 Site Vicinity and Characteristics

The property is located in a mixed industrial and commercial area. The property is bordered by McClellan Street to the north and commercial properties on the north side of McClellan Street. Railroad property and rail lines are located to the east. Further to the east are residential properties. Virginia Street and the Magruder Color Company property are located to the south. Various industrial properties are present to the west. The industrial properties to the west consist of a dry ice manufacturer, a scrap metal yard, and another portion of the Magruder Color Company.

A USGS Topographic Map is provided as Figure 2, Attachment 2.

2.3 Existing Structures/Improvements

As described above, the property consists of four lots. The property is currently vacant with no operations conducted. The property is generally flat in elevation with a slight decrease in elevation from the central portion of the property to the south and north. No standing water bodies are present on or in the immediate vicinity of the property.

A description of the improvements for each lot is provided below. Figure 4, Attachment 2 shows the buildings currently present at the site. Figure 5, Attachment 2 provides a historical map of the property and Figure 6, Attachment 2 provides a GIS map of the property that includes the footprint of historic buildings at the site.

Lot 15

Lot 15 is currently occupied by five buildings. Building #1 is a two-story cinderblock structure located at the entrance to the property from Virginia Street. Building #1 appears to have been utilized for the production of chemicals, office space, locker rooms, and a lunch room.

Building #2 is located to the north of Building #1. This building is a four-story concrete structure that was utilized as the main production facility. This building also houses three large boilers that were utilized to heat this building and the adjacent structures.

Immediately surrounding the main production building are several smaller buildings consisting of offices, laboratories, and various operations. Building #3 is a one-story L-shaped building located immediately to the west of Building #2. Building #3 was formerly utilized for office space and a laboratory. Adjacent to the north side of Building #3 is an open metal Quonset hut structure, Building #4. It appears that Building #4 housed parts storage, electrical circuits and a former water production well. Building #5 is located to the north of Building #2 and adjacent to the Building #4. Building #5 is divided into several sections and appears to have been utilized for parts storage, a locker room and laboratory space. The Sanborn maps identify the eastern most portion of the building as insect spray manufacturing. In addition, three electrical transformers are located on a concrete pad adjacent to the west side of Building #5.

Based on the Sanborn Maps, other structures were present to the east of Building #5. However, only concrete foundations and portions of walls are currently present at this location. A former railroad spur is also present on the property. The spur runs parallel to the south side of Building #2 and extends to the west where the spur ends. The railroad spur is no longer in operation.

Lot 41

No structures are currently present on lot 41. The concrete foundations and brick building debris of two former buildings are present. The two buildings were identified on historical aerial photographs, historic site maps, and Sanborn maps. One underground storage tank estimated to be approximately 15,000 gallons in capacity is present below a concrete pad located on this lot. Two additional underground storage tanks estimated to be 1,000 gallons and 5,000 gallons were detected on this lot. In addition, a former water treatment plant was located on this parcel of the property. The plant consisted of a rectangular concrete walled and lined basin where onsite water was treated prior to discharging to the local public treatment works. The concrete basin has been graded over and no evidence of it is visible on the soil surface.

A former railroad line spur ran east to west across this parcel and extended onto the property of the dry ice manufacturer located to the west. The railroad spur is no longer in operation.

Lot 43

Building #6, a five-story concrete building, is present on this lot. The lot is located in the northeast corner of the property and borders McClellan Street. It appears that this building was formerly utilized for production and warehousing.

Lot 53

Two small sheds are currently located on this parcel that comprises the southeast corner of the property. One shed formerly housed the sprinkler and water pump system for fire suppression is located near the entrance to the property along Virginia Street. The second shed is a former pump house for a 20,000 gallon heating oil underground storage tank located immediately adjacent to the shed. Two additional underground storage tanks are known to be located on Lot 15. One tank is an estimated 10,000 gallon heating oil tank located east of Building #2. The other tank is an estimated 1,000 gallon tank located adjacent to a former building present on this lot. A concrete foundation is the only portion of the former building that was present on this parcel.

In addition, a former railroad line spur ran through this lot and continued through Lot 15 as described above. Several storage trailers are present on this lot. The trailers contain metal and various other debris. Several large steel vessels and a boiler are also stored on the asphalt on this lot.

2.4 Current Uses of the Property

The subject property is currently vacant with no operations conducted. The structures described above are present however there are no occupants.

2.5 Historical Uses of the Property

The historical use of the property is provided below. The historical use was determined through review of historical reports, Sanborn Maps, and aerial photographs.

Orbis Products Corporation was established in 1922 and the main production building (Building #2) at the facility was constructed in 1923. Original operations at the site included manufacturing of gums and powdered plant derivatives. In the late 1940's, Orbis Products became a subsidiary of Norda, Inc. Manufacturing at the site then consisted mainly of manufacturing aromatic chemicals, pharmaceuticals, organic intermediates, fragrances and flavors. The final products were produced through custom blending, distillation and fractionation of batch sized quantities of raw materials and intermediates.

Operations at the site became very limited sometime during 1983. In 1984, a report stated that four employees were present at the facility. A 1995 Community Right to Know Survey indicated that two employees were present at the facility. Reports indicate that operations at this point consisted of the decommissioning of the site and small batch

operations. All operations at the facility completely ceased sometime after 1995. It is also known that Enroserv, an environmental company, leased office space in Building #1 in the late 1980's.

Building #6, located at the northeast portion of the property along McClellan Street, was originally operated by companies other than Orbis. In the 1930's this portion of the property was operated by the Reo Chemical Company for warehousing. Reo Chemical Company operated until the 1950's. The exact operations of Reo Chemical is unknown. R. Conte Casket Manufacturing also operated at this portion of the property from the 1940's through the 1960's.

2.6 Current and Historical Uses of Adjoining Properties

Through review of the historical aerial photographs and Sanborn Maps it was determined that the surrounding properties had historically been utilized for commercial/industrial purposes. A further description of the Sanborn Maps is provided in Section 3.2 and a description of the historic aerial photographs is provided in Section 3.3.

2.7 Topography

The topography of the subject property is relatively flat. The central portion of the property from the east to west has the highest elevation at the property. The topography gently slopes downward to the south and north from the central portion of the property. The property decreases sharply along the northern property line, between the northern fence line and McClellan Street.

2.8 Local Geology and Soils

The Brunswick Formation underlies the Newark and Elizabeth area. The Brunswick Formation, which forms the bedrock, may exceed 6,000 feet in thickness and is composed of shale and sandstone with local occurrences of sandy and pebbly consolidated beds. The Brunswick Formation is overlain by Pleistocene glacial deposits. The depth of the deposits varies and is largely controlled by the underlying bedrock topography. In the southern part of Newark the is a layer of lacustine clay and sandy clay which is overlain by 50 to 100 feet of other stratified and unstratified glacial drift. The thickness of the Pleistocene glacial deposits in the vicinity of the site ranges from approximately 40 feet to 160 feet.

The depth to bedrock at the site ranges from approximately 35 to 45 feet below grade. Groundwater was encountered at depths ranging from 5 to 12 feet below grade. The soils at the site consisted of fill material, sands, silts, and clay mixtures to a depth of approximately 15 to 20 feet below grade. Below the silts and clays is a layer of coarse sands. Soil logs of the monitoring well installations are supplied in Attachment 6.

3.0 Records Review

A review of the available local, state and federal records was performed and is summarized below. The state and federal database regulatory review report is provided in Attachment 7.

3.1 Local Regulatory Review

The following information was obtained through contact with the City of Newark Municipal Offices. The offices contacted include the Tax Assessor, the Fire Prevention Bureau, the Building/Engineering Department, and Health Department.

No information of environmental concern was available from the Building/Engineering Department, Fire and the Health Department.

According to the Tax Assessors office the property is owned by the City of Newark and was acquired through tax foreclosure. A tax map was obtained and is provided as Figure 3, Attachment 1.

Envirotactics also reviewed deed information regarding the ownership of the property (Block 3773, Lot 15, Lot 41, Lot 43 and Lot 53). A description of the information reviewed is provided below.

Lot 15
Orbis Products purchased Lot 15 from Mary A. S. Jones et al. on March 7, 1922. Orbis Products purchased another portion of the current lot 15 from Auto Strop Safety Razor Company on May 1, 1922. On July 15, 1943 Orbis Products purchased an additional portion of the current Lot 15 from Gilette Safety Razor, Co. The City of Newark acquired the property from Orbis Products as identified in a Certificate of Sale for unpaid Municipal Liens dated September 24, 1998.

Lot 41
Orbis Products purchased Lot 41 from the Air Reduction Sales Company dated March 7, 1946. The City of Newark acquired the property from Orbis Products as identified in a Certificate of Sale for unpaid Municipal Liens dated September 24, 1998. Lot 41 was combined with Lot 15 for the Municipal Lien.

Lot 43
Orbis Products purchased Lot 43 from the City of Newark on August 15, 1978. The City of Newark acquired the property from Orbis Products as identified in a Certificate of Sale for unpaid Municipal Liens dated December 19, 1996.

Lot 53

Orbis Products purchased Lot 53 from the The United New Jersey RR & Canal Co on October 3, 1946. The City of Newark acquired the property from Orbis Products as identified in a Certificate of Sale for unpaid Municipal Liens dated December 19, 1996.

3.2 Sanborn Maps

Sanborn Fire Insurance Maps were reviewed for this property for the years 1931, 1950, 1973, 1988, and 1994. A summary of the pertinent features highlighted by the Sanborn Maps is outlined below. Copies of the Sanborn Fire Insurance Maps are included in Attachment 3.

1931 In 1931, the subject property is occupied by three main buildings and approximately eleven smaller structures. The northeast corner of the property (Lot 43) along McClellan Street is occupied by two large structures and one smaller structure. The map indicates that the property is operated by Harrison Holding Co. Lofts. The smallest structure is identified as a lumber storage shed. The two main buildings are located adjacent to each other and are separated by a railroad line spur that runs between the buildings. The building to the west is identified as vacant. No indication of the use of the second building is provided.

The southern half of the property (Lot 15 and Lot 53) is identified as being operated by Orbis Products Trading Co. manufacturing chemicals and essential oils. One large building (Current Building #2) is also present. The building is identified as containing stills and having an iron chimney. Three small unidentified structures are located to the north. One storage building, a tool shed, a small unidentified structure and dwelling are located to the east. Immediately to the south of the main building are a railroad line spur, a machine shop and two storage sheds.

Pure Carbonic Inc. and Gillette Safety Razor Co. are located to the west of the subject property. Gillette Safety Razor Co., Auto Division, occupies that western portion of the current Lot 15, in the area where the railroad spur currently terminates.

Virginia Street is located to the south beyond Schweitzer Inc., a manufacturer of paper. Railroad lines are located to the east of the property.

1950 The subject property is in similar condition as identified in the 1931 map with the following additions. The northeast portion of the property is now identified as being operated by R. Conte and the Reo Chemical Company. The five-story portion of Building #6 is utilized by R. Conte for Casket Manufacturing. The one-story portion of Building #6 is utilized by the Reo Chemical Company for warehousing. The two main buildings in this area have now been connected by an

addition. The lumber storage shed area is no longer present and a small automobile garage is present at that location.

The southern portion of the property is identified as the Orbis Products Corporation and Derris Inc., manufacturers of chemicals and essential oils. The main manufacturing building (Building #2) is shown as containing stills and is identified as being built in 1923. The buildings to the east are no longer present with the exception of a small tool shed located in the southeast corner of the property. The three buildings located near the northeast corner of Building #2 are identified as manufacturing. Two buildings (i.e., current Building #3 and Building #4) have been constructed to the west and are identified as warehousing. Another building is present to the northeast and is identified as the extraction building. This building is not located on the subject property. Several small structures that are interconnected (i.e., current Building #5) are present to the north of the main building. These structures are identified as being utilized for grinding, warehousing, and insect spray manufacturing.

The operations of the adjacent properties are identified as being the same as in 1931 with the exception of the property to the west. This property is identified as used auto and truck sales and an auto salvage yard.

1973 The 1973 map is similar to the 1950 map with the following additions. An addition identified as a laboratory has been added to the warehouse building (i.e., current Building #3) located west of the main Orbis building. Two large buildings have been constructed to the east of the main Orbis building. The buildings are identified as being utilized for chemical manufacturing. Two caustic tanks are identified adjacent to the southern building.

In addition, a large building (i.e., current Building #1) has been constructed to the south of the main Orbis building along Virginia Street.

The property located to the southwest along Virginia Street is identified as being operated by Nuodex Products, Inc.

1988 The 1988 map is similar to the 1973 map. The property on the south side of Virginia Street is now identified as the Magruder Color Co. In addition, an acid tank is present between the two buildings located to the east of Building #2.

1994 The 1994 map is similar to the 1988 map. The only addition to the subject property is four caustic tanks to the east of the main Orbis building (i.e., current Building #2) and two tanks located to the north of Building #2. Also, the property to the southeast formerly identified as Nuodex Products is now operated by Magruder Color Co.

3.3 Aerial Photographs

Aerial Photographs of the site were reviewed for the years 1943, 1954, 1966, 1976, 1984 and 1995. A description of the photographs reviewed is provided below.

1943 The 1943 aerial shows several of the buildings that are currently present at the site. Building #2, the main Orbis building, can be observed. Several small buildings including Building #5 are present to the north of the main building. Building #6 located in the northeast corner of the property is present. Two railroad line spurs can be seen on the property. One spur is present directly south of Building #2 and the second spur is present south of Building #6. A small building is present at the current location of Building #1. The remainder of the property appears undeveloped and soil covered.

1954 The 1954 aerial is similar to 1943 with the addition of Buildings #3 and #4 that are present to the west of Building #2. On the western boundary of the property there appears to be an area of disturbed soil or possible detention basin.

1966 The 1966 aerial shows the addition of two large square shaped buildings to the east of the main Orbis building (Building #2). In addition, numerous vehicles are present throughout the site.

1976 The 1976 aerial is a poor quality photograph. However it appears that Building #1 has been constructed near the entrance to the facility adjacent to Virginia Street.

1984 The 1984 aerial is also a poor quality photograph. No additional structures or changes can be observed since the 1976 photograph.

1995 The 1995 aerial shows that the two large square buildings formerly located to the east of Building #2 are no longer present.

3.4 City Directories

City Directory searches were performed and reviewed by Envirotactics. City Directories lists the name of the resident or business operated from the address provided. Since the property extends from Virginia Street to McClellan Street, searches were performed for 55 Virginia Street and 41-63 McClellan Street. A description of the findings is provided below.

55 Virginia Street
The 1939 city directory identified the property as Derris Inc. Insect Powder and Orbis Products Corp. Gum. The 1943, 1957, and 1964 directories identify the occupant as Orbis Products Corp. Gum. The 1971, 1976, 1981, 1986, 1990, 1995 and 2000 directories identify the occupant as Orbis Products Corp. The 1986 directory also identifies Enroserv Inc. as an occupant.

41-63 McClellan Street
The 1936 city directory identified 47 McClellan Street as occupied by REO Chem Corp, Supreme Art Co & Kiddie's Gym Corp. The 1940, 1943, 1951, 1955, 1957, and 1965 identified 47 McClellan Street as occupied by Conte Caskets. The 1940 through 1965 city directories identified 41 McClellan Street as occupied by Air Reduction Chem Mfrs Co.

3.5 Database Records Search

Envirotactics utilized the services of Environmental Data Resources, Inc. (EDR) to conduct an electronic search of available federal and state databases (see Attachment 6). Each database was searched for a specific radius from the site in accordance with ASTM Standards.

The subject property was identified under numerous databases. Nu-Soils Inc. located at 55 Virginia Street was identified on the Solid Waste Facility Directory. Nu-Soils was identified as having facility identification number 0714001356 as a recycling center. The facility was identified as not operating. Based on the information reviewed by Envirotactics it appears that Nu-Soils never operated at the site.

Orbis Products Corporation was identified under the following databases.

Database	Description
(CERCLIS) Comprehensive Environmental Response, Compensation, and Liability Information System	The discovery and preliminary assessment of the site were completed in 1989. The investigation was deferred to RCRA.
(RCRIS - SQG and TSD) Resource Conservation and Recovery Information System - Small Quantity Generator and Treatment, Storage and Disposal Facility	Identified as a small quantity generator and TSDF. Three violations regarding TSDF activities were noted.
(FINDS) Facility Index System/Facility Identification Initiative Program Summary Report	FINDS identified that the site was listed as in the Aerometric Information Retrieval System.
(TSCA) Toxic Substance Control Act	No additional information provided.
(CORRACTS) Corrective Action Report	A RCRA facility assessment was completed. The facility was given a medium priority.
(UST) Underground Storage Tank Data	Five USTs identified including 10,000 gallon No. 6 oil and 20,000 gallon No. 6 oil. Also one 3,000 gallon, 8,000 gallon and 10,000 gallon other hazardous substance.
(SHWS) Known Contaminated Sites in New Jersey	The facility identification number is NJD010910099 and the case identification number is 930105. As of the 1993 the case was still pending.
(NJ Release) Hazardous Material Incident Database	Case number 92-1-2-1411-39 was assigned in 1992. Samples collected from a pipeline at the plant detected toluene at 180 ppb and phenol at 140 ppb. This sampling was conducted as part of the pipe line testing. No materials were released as the materials discharge to a treatment plant.

In addition, several of the adjacent property owners were identified in the database search.

- Dry Ice Corporation located at 39 McClellan Street was identified in the UST and Leaking Underground Storage Tanks (LUST) database. The site was reportedly issued a no further action letter for the LUST.
- Magruder Color Company located at 1 Virginia Street was identified in the TSCA and LUST databases. The site was reportedly issued a no further action letter for the LUST.
- Magruder Color Company located at 1029 Newark Avenue (i.e., south side of Virginia Street across from Orbis property) was identified in the Major Facilities, RCRIS Small Quantity Generator, Toxic Chemical Release Inventory System (TRIS), UST, LUST, NJ Release, NJ Spills, and TSCA. The release reported at the site was for #4 heating oil. The site was reportedly issued a no further action letter for the LUST.

3.6 Previous Environmental Investigations

Envirotactics submitted Freedom of Information Act Requests to the NJDEP and to the EPA. Envirotactics reviewed all file information available from both agencies. A description of the pertinent information reviewed is supplied below.

3.6.1 NJDEP File Review

Envirotactics performed a review at the NJDEP offices in Trenton, New Jersey of all available NJDEP files. Information was maintained on file at the Division of Hazardous Waste and the Division of Responsible Party Site Remediation - Northern Field Office. A synopsis of pertinent information reviewed is provided below.

Letter from NJDEP to Orbis Products dated June 11, 1986

The NJDEP letter is in regard to the onsite water treatment system that discharges to the Passaic Valley Sewer Control (PVSC). The identification number for the site is NJD010910099. The letter states that Orbis is subject to Industrial Waste Management Facility (IWMF) requirements and requires that sludges generated from the unit cannot accumulate onsite for more than 90 days.

An attached worksheet outlines the layout of the water treatment system as described below.

- Unit #1 First steel tank: Feed Collection
- Unit #2 Second steel tank: Phase separation or organic mixtures
- Unit #3 First concrete tank: neutralization
- Unit #4 Second concrete tank: neutralization

Letter from NJDEP to Orbis Products dated May 27, 1987

The NJDEP states that Orbis is not required to obtain a NJPDES permit since the treatment system discharges to a POTW.

Hazardous Wastes Abatement Plans dated December 2, 1987

A hazardous waste abatement plan was prepared for Adron Incorporated (Orbis Plant) by the Forum for Scientific Excellence, Inc. The plan identified that two people, a production supervisor and a chemical operator, work at the facility. The plan identified the buildings on site in 1987 and their respective uses. The building use and locations are provided below. The building number identification has been modified to reflect the building numbers identified by Envirotactics previously in this report.

Building I.D.	Description
Building #1	Is divided into three sections consisting of office space, production, and lockers/lunchroom. This building was identified as being utilized for the storage of hazardous wastes and raw materials and products. It also stated that the first floor was rented to Enroserv for office space.
Building #2	This building was identified as being three sections consisting of tower, oil room, and boiler room. Raw materials and products were identified as being stored in this building.
Building #3	This building was identified as the production office and research lab and small distillation.
Building #4	This building was identified as maintenance storage being rented to Enroserv.
Building #5	This building was divided into several sections and was identified as the metal machine shop, brick machine shop, and autoclave.
Building #6	This building was identified as an equipment warehouse. Raw products consisting of lime in bags was identified as being stored in this building.
Two buildings east of Building #2	Two former buildings were present to the east of Building #2. The northern building was identified as Phenyl Ethyl Alcohol and lime repackaging. The southern building was identified as Hydroxyl and anisic aldehyde.
Water Treatment	The water treatment area to the west of Building #5 was identified.
Water Sprinkler System	The shed located near the entrance to the facility from Virginia Street was identified as the water sprinklers system, power and controls.
Diked Tank Areas	Two diked tank areas were identified. One area is located to the south of Building #6. The second area is located immediately south of the first diked tank area.
Cooling Tower	Located at the northeast corner of Building #2.

Small quantities of four types of hazardous wastes were reportedly generated from blending and redistillation operations. The complexity of the mixtures makes it difficult to give a specific characterization of these hazardous wastes without specific analysis. The waste were classified into four categories consisting of the following.

- Combustible process solids
- Combustible liquids
- Flammable liquids
- Corrosive liquids

Resource Conservation and Recovery Act Site Closure Plan January 1988
Killam Associates prepared a Site Closure Plan for Orbis Products. The plan describes the closure of one 10,000 gallon AGST (Tank OT-100). The tank was used in the 1970's to store non-commercial grade fuel that was burned on site. In the 1980's Orbis stopped burning the fuel and shipped it off site as a regulated hazardous waste. The tank was also used to store waste solvents that were disposed. The tank was reportedly empty since 1985.

Letter to NJDEP from Hannoch Weisman dated April 19, 1989
The letter states that Tank OT-100 was dismantled and disposed of as a hazardous waste at a RCRA facility.

Soil Remediation Report dated April 5, 1990 prepared by Hannoch Weisman
Removal of 1,124 tons of soil was conducted in the area of six former underground storage tanks. Post-excavation sampling was conducted with all results reportedly below the NJDEP Cleanup Criteria. The report stated no groundwater was encountered.

Proposed Sampling for AGST dated December 18, 1990 from Killam Associates
Killam proposed remediation and sampling in area of the hazardous waste aboveground storage tank (OT-100). Original sampling in this area detected elevated levels of volatile organics, base neutrals, PCBs, Metals, and total petroleum hydrocarbons.

Letter from NJDEP dated June 28, 1991
The NJDEP Division of Hazardous Waste Management accepted closure certification of the hazardous waste tank. However, complete delisting of Orbis Products from treatment storage and disposal status to generator status can only take place after all soil and groundwater remediation around the RCRA tank has been completed.

Notice of Violation from the NJDEP dated August 7, 1991
A Notice of Violation was issued by the NJDEP for discharge of a hazardous substance and improper storage of hazardous substances cited during a NJDEP May 1991 site visit.

Letter to Orbis from NJDEP dated December 12, 1991
The letter states that pre-existing drum storage problems have been adequately addressed. Orbis must address soil contamination generated from the removal of the hazardous waste aboveground storage tank. It is also required to remove two remaining heating oil USTs and perform a groundwater investigation consisting of the installation and sampling of 6 monitoring wells. The wells must be analyzed for volatile organics, base neutrals, PP metals, TPH, and additional parameters.

Letter to the City of Newark from NJDEP dated August 14, 2000
The NJDEP Bureau of Water Allocation submitted a letter to the City of Newark requesting the City to seal two wells identified at the site. One well is identified as well permit #26-1728 located on Lot 15. The well was installed in 1958 to a total depth of 350 feet. This well has been identified as being located in Building #4 at the site.

The second well was reported to be located on Lot 53 and was completed in approximately 1937. The depth of this well was not reported. The location of this well is unknown.

Internal NJDEP Memorandums
Several internal NJDEP Memorandums were reviewed. The subject of the memorandums ranged from analytical laboratory report review to recommendations for further action. One memorandum dated October 10, 1990 recommended delineation sampling of soil with analysis for volatiles, base neutrals, PCBs, Metals and TPH.

Miscellaneous Information
The site has five underground storage tanks registered with the NJDEP Bureau of Underground Storage Tanks. The tanks are identified as the following:

10,000 gallon - #6 heating oil
20,000 gallon - #6 heating oil
3,000 gallon – other hazardous substance
8,000 gallon – other hazardous substance
10,000 gallon – other hazardous substance

3.6.2 EPA File Review

Envirotactics obtained copies of the files maintained by the EPA. The majority of the information reviewed involved RCRA issues. Information from both the NJDEP and the EPA were maintained in the file.

Letter from Orbis to EPA dated June 16, 1981
Orbis (EPA ID Number NJD010910099) states that they filed a "Part A" RCRA permit application on November 18, 1980 which identified Orbis as a Hazardous Waste Treater and Storer. This application was filed because Orbis operates a wastewater neutralization tank which discharges into a POTW and Orbis considered it a future possibility that they might store hazardous waste in drums for more than 90 days. Upon review of RCRS regulations Orbis determined that the wastewater treatment activities were exempt. Orbis requested that the "Part A" application be canceled as of November 18, 1980.

Letter from EPA to Orbis Products date January 31, 1983
Letter states that Orbis is required to maintain financial assurances as interim status standards for a hazardous waste treatment, storage, and disposal facility.

NJDEP Memo of RCRA Inspection dated August 28, 1984

NJDEP personnel from the Division of Hazardous Waste conducted a RCRA site inspection on August 20, 1984. At the time of the inspection the facility was staffed by 4 people. It was reported that full operations had ceased in 1983 due to foreign competition. Activities were reported to be selling of existing inventory, limited blending of inventory items, and cleaning up of the site.

It was reported that when the plant was operating, the oils separated during the wastewater treatment were stored and fed as supplemental fuel to the plants three boilers. At the time of the inspection, the general housekeeping was considered as average with evidence that some of the process areas were being dismantled. There were three tanks, approximately 10,000 gallons each, cited as being involved in the storage of waste fuels. These tanks were concrete diked to about four feet in height.

Two main areas of concern were noted during the inspection. The wastewater treatment unit consisted of a ground level concrete structure about 8 feet deep with two sections. The first section was used as a skimmer and the second having central agitation. This unit fed to a sewer line outfall. It was reported by Orbis that the unit consisted of a pH control operation and that very small quantities of sludge were generated. The system was not in operation and was filled with approximately 6 feet of a brown colored sludge. A notice of violation was given to classify and dispose of the sludge.

The second area of concern consisted of the warehouse where approximately 1,200 drums of still bottom residues were stored. Several areas of leaking drums were observed. Notices of violations were issued.

In addition, the laboratory was stripped of equipment and appeared to be 95% closed with lab chemicals being packed in drums.

Letter from NJDEP to Orbis Products dated November 30, 1987

The NJDEP Division of Hazardous Waste sent a letter to Orbis acknowledging that Orbis has requested to be delisted from TSD status to generator status. In order to be delisted, the facility must implement closure of the container storage area and one aboveground steel tank. Orbis had requested that they be delisted as a TSD in 1981 and 1983 since Orbis believed that they were placed on the EPA list by mistake. However, they had been given no response.

Final Draft Preliminary Assessment dated June 30, 1989

A Draft Preliminary Assessment was completed for the USEPA in 1989 by the NUS Corporation. The report provided the results of the assessment and labeled the site as a medium priority. A summary of the information provided in the Draft PA is provided below.

Two hazardous waste units were present at the facility. One unit is a wastewater treatment system. During an inspection in June 1984 it was estimated that approximately 37,000 gallons of sludge was present in the 40,000 gallon tank. The second waste unit was a drum storage area located adjacent to the southeast side of the wastewater treatment system. A 10,000 gallon aboveground storage tank (AGST) used to store hazardous waste was also present at the facility. The tank was identified as both No. OT-100 and No. 19A.

Approximately 1,200 55-gallon drums were observed in the warehouse in poor condition during one inspection of the site. The warehouse was used to store still bottom residues consisting of p-chlorobenzoyl, sodium hypochloride, allyl asothiocyanate, anisic aldehyde, and sludge removed from the wastewater treatment system. It was reported that leaking drums were present but that the majority of drums had been removed at the time of the assessment. Also identified was a drum storage area located on the southeast side of the wastewater treatment unit. The area measured approximately 25 feet by 65 feet and had no containment.

Between 1983 and 1986, six underground storage tanks (USTs) were removed. Holes were present in three of the six tanks. Analysis of soil samples detected volatile compounds. In addition, two 25,000 gallon aboveground storage tanks were removed. There were three 10,000 gallon aboveground waste oil tanks located at the site. It was also noted that two 10,000 gallon fuel oil underground storage tanks were present at the facility.

An inspection conducted in 1984 indicated two areas of obvious soil contamination. One area was located along the back fence apparently due to oil-contaminated rainwater entering the site from an adjacent junkyard. A second area consisted of soil contamination located in the area of the 10,000 gallon aboveground storage tank. Another area of concern consisted of several piles of soil and material identified as kiln dust located along one side of the warehouse. It was also identified that the site had a NJPDES permit number NJ0021016. The report recommended soil and groundwater sampling be conducted in areas of concern and that the integrity of all tanks be verified.

Miscellaneous

An attachment contained in the EPA file identified 21 permit numbers listed under the NJDEP Air Pollution Control Program. It was also stated that 12 additional applications had been submitted but had not yet been issued certificate numbers or permits.

A historical site map was included in the EPA file information. This map appears to show the property during full operations. Numerous aboveground storage tanks and former building locations are shown. No date was provided with this map. The map contents were overlain onto the current site map and is provided as Figure 5, Attachment 2.

Envirotactics reviewed a Notification of Regulated Waste Activity for Nu-Soils (Recycling Center) in 1995. Envirotactics believes that Nu-Soils intended to but never operated at the site.

4.0 Areas of Concern and Site Investigation

A visual reconnaissance of the property was performed by Mr. Christopher Neuffer of Envirotactics as part of the Preliminary Assessment phase of the investigation. The results of the site walk-through along with the historical information obtained through file reviews identified potential areas of concern (AOC) at the site. The areas of concern identified during the site walk-through and through the file reviews are provided below. The historic site map presented as Figure 5, Attachment 2 also provided significant information in determining potential areas of concern. The areas of concern are identified on Figure 4, Attachment 2. The initial site investigation and soil sampling conducted at each area of concern is also provided below.

The site investigation activities described below were conducted between October 10, 2000 and April 16, 2001. The soil investigation was conducted through test pits and soil borings. All soils were field screened with an Organic Vapor Meter (OVM) with samples collected from the soils exhibiting the highest field screen readings. Summary tables of the soil analytical results of sampling are provided in Attachment 3. All soil sample locations and results are provided on Figure 7, Attachment 2. A Health and Safety Plan is provided as Attachment 9.

4.1 AOC-1: Building #6

Building #6 is located in the northwest corner of the property. The building was reportedly historically utilized for casket manufacturing, warehousing for a chemical company, and warehousing of materials utilized by Orbis Products. The building has concrete floors with no apparent areas of concern located within the interior of the building. No underground storage tanks were observed to be associated with this building.

The main potential environmental concern associated with this building is any discharges to the exterior of the building from materials utilized or stored within the building. No evidence of discharges was observed in the vicinity of the building.

In order to assess if any discharges occurred at the perimeter of the building, test pits were conducted on the north, west, and south side of the building. No test pits were conducted on the east side of the building since the building is located immediately adjacent to the railroad property and a six-foot fence.

Two test pits were conducted on the north side of the building to a depth of 5 feet. Test pits were conducted at the location of two loading areas. All test pits were visibly assessed and field screened with an organic vapor meter (OVM). No evidence of discharges were observed, therefore, no sampling was conducted.

Two test pits were conducted on the west side of the building. One test pit was conducted along the portion of the building that has no walls at the ground level and allows direct access into the building. The test pit was conducted to a depth of approximately 9 feet with no evidence of a discharge detected. A layer of fill material containing cinders and ash was present to a depth of 1 foot below grade. One soil sample, S-1, was collected from the fill material with analysis for PP+40. Sample S-1 detected four base neutral compounds above the NJDEP Most Stringent Soil Cleanup Criteria (MSSCC). Benzo(a)anthracene was detected at a level of 0.98 ppm, benzo(b)flouranthene was detected at 1.1 ppm, benzo(k)flouranthene at 1.0 ppm, and benzo(a)pyrene at 0.74 ppm. No other PP+40 compounds were detected above the MSSCC.

The second test pit was conducted at the southwest corner of the building. The test pit was conducted directly below an overhead silo that is connected to the roof of the building. The former purpose of the silo is unknown. The test pit was conducted to a depth of 6 feet below grade with no evidence of a discharge detected. A layer of fill material containing cinders and ash was present at a depth of 1 to 4 feet below grade. Sample S-18 was collected from the fill material at a depth of 2.5 feet below grade with analysis performed for PP+40. Six base neutral compounds were detected above the MSSCC. Benzo(a)anthracene was detected at a level of 5.1 ppm, benzo(b)flouranthene was detected at 3.6 ppm, benzo(k)flouranthene at 3.11 ppm, benzo(a)pyrene at 4.53 ppm, indeno(1,2,3-cd)pyrene at 2.92 ppm, and dibenzo(a,h)anthracene at 0.979 ppm. In addition, total polychlorinated biphenyls (PCBs) were detected at 2.72 ppm. No other PP+40 compounds were detected above the MSSCC.

One test pit was conducted on the south side of the building where a former aboveground storage tank was identified on a historical map. No evidence of a discharge was detected at this location. However, a former railroad spur was identified at approximately 3 feet below grade that historically entered the building at this location. No sampling was conducted.

4.2 AOC-2: Former Wastewater Treatment System

A former wastewater treatment system was operated at the site by Orbis Products. A concrete neutralization basin was located in the northwest corner of the property. The basin was reportedly constructed of concrete and was divided into two sections to allow for proper neutralization prior to discharging the water to the POTW. A former NJDEP site inspection identified that the basin contained a large quantity of sludge.

Envirotactics initially performed one test pit in the center of the former basin. The basin appears to have been bulldozed in and covered with soil. The test pit encountered concrete debris and sludge up to a depth of approximately 6 feet below grade at which point a concrete base was encountered. One sample, S-2, was collected from the sludge

with analysis for PP+40. Sample S-2 collected at a depth of 3 feet below grade detected eight base neutral compounds above the MSSCC. Benzo(a)anthracene was detected at a level of 18.0 ppm, chrysene at 17.0 ppm, bis(2-ethylhexyl)phthalate at 140.0 ppm, benzo(b)flouranthene at 20.0 ppm, benzo(k)flouranthene at 11.0 ppm, benzo(a)pyrene at 15.0 ppm, indeno(1,2,3-cd)pyrene at 3.8 ppm, and dibenzo(a,h)anthracene at 2.1 ppm. Total petroleum hydrocarbons (TPH) were also detected at a level of 832 ppm and lead at 587 ppm. No other PP+40 compounds were detected above the MSSCC.

Another sample was initially collected on the southeast side of the basin. A test pit was conducted to a depth of 10 feet below grade with no evidence of a discharge observed. One sample S-3 was collected at a depth of 5 feet below grade with analysis for PP+40. No compounds were detected above the MSSCC.

Based on the results of soil sample S-2, horizontal delineation sampling was performed around the perimeter of the former neutralization basin. Six soil samples, S-40 through S-45, were collected around the perimeter of the detention basin at depths of 6 feet below grade. All samples were analyzed for TPH, BN+15, and lead based on the results of sample S-2 collected from the sludge. All test pits were field screened with no elevated OVM readings detected with the exception of sample location S-45. Since S-45 detected elevated OVM readings, this sample was also analyzed for VO+10.

TPH levels detected ranged from non-detect to 33 ppm. No base neutral compounds were detected above the MSSCC. Sample S-43 was the only sample to detect lead above the MSSCC at a level of 420 ppm. Sample S-45 was also analyzed for VO+10 and detected two volatile compounds above the MSSCC. Benzene was detected at a level of 23 ppm and chlorobenzene at 4 ppm. No other compounds were detected above the MSSCC.

No vertical delineation was conducted at the location of S-2 due to the presence of a concrete base detected in the area of the settling basin and since groundwater sampling conducted downgradient of the area did not detect the contaminants detected in sample S-2.

4.3 AOC-3: Suspected Oil Discharge Area

An inspection conducted in 1984 by the NJDEP and reported in the Final Draft Preliminary Assessment dated June 30, 1989, identified that an area of surface staining was present adjacent to the metal scrap yard. The metal scrap yard is located on the west side of the property and is separated by a 10 foot high chain-link fence. No evidence of surface staining was observed in this area. However, one test pit was conducted to a depth of approximately 8 feet below grade. Evidence of soil staining was observed in the test pit at a depth of 7 feet. Sample S-8 was collected at a depth of 7 feet with analysis for PP+40. Sample S-8 detected TPH at a level of 868 ppm and one volatile above the MSSCC, 1,2-dichloroethane at a level of 3.5 ppm. In addition, one base neutral

compound was detected above the MSSCC, n-nitroso-di-n-propylamine at a level of 2.4 ppm. No other compounds were detected above the MSSCC.

Three test pits were conducted to provide horizontal delineation of the contaminants detected in sample S-8. Samples S-37 through S-39 were collected. No sample was collected to the south of S-8 due to the presence of a thick concrete surface. All samples were analyzed for TPH and VO+10 based on the results of S-8. Sample S-37 collected to the east of S-8, detected methylene chloride at 1.17 ppm and benzene at 1.74 ppm. Sample S-38 collected to the west of S-8, immediately adjacent to the scrap metal yard fence detected TPH at a level of 3,030 ppm and three volatile compounds above the MSSCC, 1,2-dichloroethane at 6.97 ppm, benzene at 1.25 ppm and trichloroethene at 1.03 ppm. Sample S-39 collected to the north of S-8 detected methylene chloride at a level of 1.27 ppm. No other compounds were detected above the MSSCC.

Based on the results of sampling and visual observations, it appears that contaminants detected in this area are migrating onto the property from the adjacent scrap metal yard.

4.4 AOC-4: Aboveground Storage Tank Area - South of WWT

The historic site map provided as Figure 5 in Attachment 2 identified several aboveground storage tanks (ASTs) located to the south of the wastewater treatment area adjacent to the property boundary. According to the map it appears that approximately 8 former aboveground storage tanks were located at this area. Currently no tanks are present and the area has a concrete surface.

Envirotactics collected one sample, S-19, at a depth of 1.5 feet below grade with analysis for PP+40. Standing water was present in the test pit at a depth of approximately 5 feet below grade. Sample S-19 detected TPH at a level of 30,500 ppm. Two volatile compounds were detected above the MSSCC. Benzene was detected at a level of 5.09 ppm and chlorobenzene at 21.2 ppm. No other compounds were detected above the MSSCC.

4.5 AOC-5: Diked Tank Area

The historic site map provided as Figure 5 in Attachment 2 identified four aboveground storage tanks located to the south of Building #6. According to the map the tanks were located within a diked block wall area. Currently no tanks are present and the area has a concrete surface base.

Envirotactics conducted three test pits around the perimeter of the concrete base of the former tanks. The test pits were conducted on the west, north, and east side of the concrete base. No test pit was conducted on the south side due to the presence of an underground storage tank (AOC-6) that was investigated through soil borings.

All test pits were field screened and samples collected from the depth corresponding to the highest field screen reading. Samples were analyzed for PP+40. Sample S-14 was collected on the north side of the concrete base at a depth of 2 feet below grade from a layer of fill material consisting of ceramic material, black cinders, silt and sands. Standing water was present at a depth of 3.5 feet below grade. Sample S-14 detected TPH at a level of 3,670 ppm, arsenic at 38.7 ppm and lead at 701 ppm. In addition, two volatile organic compounds were detected above the MSSCC. Benzene was detected at a level of 9.33 ppm and 1,2-Dichlorobenzene was detected at 416 ppm.

Sample S-15 was collected from the west side of the concrete base at a depth of 4 feet below grade. This sample was collected from clayey silt soil located immediately below a layer of fill debris. Sample S-15 detected benzene at a level of 3.54 ppm. No other compounds were detected above the MSSCC.

No elevated OVM readings were observed on the eastern side of the concrete base, therefore no sample was collected.

4.6 AOC-6: 15,000 Gallon UST

One underground storage tank estimated to be approximately 15,000 gallons in size is located directly adjacent to and south of AOC-5. The tank is 7 to 8 feet in diameter with the base of the tank located at a depth of 10.5 feet below grade. All piping for the tank appears to extend directly above the tank through a concrete pad.

Envirotactics collected a total of five soil samples, S-58 through S-62, around the perimeter of the tank. The samples were collected through soil borings at a depth of 11.5 feet below grade. The soil borings were field screened to a depth of 12 feet below grade with no elevated OVM readings detected and no groundwater encountered. Each sample was analyzed for PP+40. One sample, S-60, detected benzene at a level of 1.19 ppm. No other compounds were detected above the MSSCC in any of the samples.

4.7 AOC-7: 1,000 Gallon and 5,000 Gallon USTs

Two previously unidentified underground storage tanks were detected while performing exploratory test pits. The two tanks are estimated to 1,000 gallon and 5,000 gallons in capacity. The former use of the tanks is unknown and the tanks are filled with water. The base of the 1,000 gallon tank was present at approximately 8 feet below grade and the base of the 5,000 gallon tank was present at approximately 12 feet below grade.

Four soil samples, S-46 through S-49, were collected in the vicinity of the tanks through test pits to determine if elevated levels of contaminants were present in this area. Since the former use of the tanks is unknown, all samples were analyzed for PP+40. Sample S-46 and S-47 were collected adjacent to the 1,000 gallon tank at a depth of 9 feet below

grade. Sample S-46 detected benzene at a level of 581 ppm and S-47 detected benzene at 19 ppm.

Sample S-48 was collected at a depth of 9 feet between the 1,000 gallon tank and the 5,000 gallon tank. Sample S-48 detected benzene at 506 ppm. In addition, S-48 detected six metals above the MSSCC. Arsenic was detected at a level of 200 ppm, beryllium at 81.2 ppm, copper at 1,660 ppm, lead at 936 ppm, nickel at 2,220 ppm, thallium at 15.5 ppm, and zinc at 5,520 ppm. Sample S-49 was collected immediately adjacent to the base of the 5,000 gallon tank at a depth of 12 feet below grade. Sample S-49 detected benzene at a level of 58.5 ppm. No other compounds were detected above the MSSCC.

Immediately to the north of the USTs, a pipe was observed to be protruding from the soil surface. The pipe was investigated and determined to run to the south towards the two USTs. One sample, S-17, was collected from the soil below the piping in an area that detected elevated OVM readings at a depth of 2.5 feet below grade. Sample S-17 was analyzed for PP+40. The only compound detected above the MSSCC was benzene at a level of 14.2 ppm.

4.8 AOC-8: Aboveground Storage Tank Farms and Transformer Pad

The historic site map provided as Figure 5 in Attachment 2 identified two aboveground storage tank farm areas located on the west and north side of a former building. The building was formerly located on the eastern central portion of the property. No building or tanks are currently present. The tank farm on the north side of the building appeared to have been diked with a concrete base and to have contained approximately 9 aboveground storage tanks. The contents of the former tanks are unknown. The north side of this tank farm area was investigated as part of AOC-6 and the east side of this area was investigated as part of AOC-7. Envirotactics collected one soil sample, S-4, adjacent to the concrete to the northwest of this former tank area at a depth of 5.5 feet below grade. Sample S-4 was analyzed for PP+40 with no contaminants detected above the MSSCC.

The second tank farm area was located on the west side of the former building and contained approximately 13 aboveground storage tanks. No tanks are currently present and the contents of the former tanks are unknown. Initially, two samples S-5 and S-16 were collected in this area from test pits. Both samples were analyzed for PP+40. Sample S-5 was collected at a depth of 2.5 feet below grade and detected benzene at a level of 51 ppm. Sample S-16 was collected at a depth of 4 feet below grade and detected benzene at a level of 6.72 ppm and 1,2-dichlorobenzene at 84.3 ppm. No other contaminants were detected above the MSSCC.

In an attempt to delineate the elevated volatile compounds detected, five soil samples, S-30 through S-34, were collected and analyzed for VO+10. Sample S-31 was collected at a depth of 7 feet below grade at the same location as S-5 to provide vertical

delineation. Sample S-31 detected benzene at a level of 7.88 ppm and methylene chloride at 1.14 ppm. Sample S-32 was collected to the south of S-5 at a depth of 3.5 feet below grade. Sample S-32 detected methylene chloride at a level of 1.15 ppm. Sample S-33 was collected to the east of S-5 at a depth of 6 feet below grade. Sample S-33 detected benzene at a level of 1.69 ppm and methylene chloride at 1.07 ppm. Sample S-34 was collected to the north of sample S-5 at a depth of 5 feet below grade. Sample S-34 detected benzene at a level of 82.8 ppm. No other volatile compounds were detected above the MSSCC.

Sample S-30 was collected to the west of S-5 from within the footings of a former diked aboveground storage tank area. This area had perched water present at a depth of approximately 2 feet below grade that was trapped by the concrete footings of the former dike walls and a clayey silt layer. One sample, S-30, was collected below this water level at a depth of 3 feet below grade and analyzed for PP+40. Benzene was detected at a level of 13.1 ppm and toluene was detected at a level of 1,450 ppm. No other contaminants were detected above the MSSCC.

Sample S-50 was then collected between S-5 and S-30 at a depth of 7 feet below grade. Sample S-50 was analyzed for TPH and VO+10. No compounds were detected above the MSSCC.

The historic site map provided as Figure 5 in Attachment 2 also identified a former transformer area at this location. Two surface samples, T-5 and T-6, were collected adjacent to the concrete pad that the transformers were historically located and were analyzed for PCBs only. Sample T-5 detected PCBs above the MSSCC at a level of 2.06 ppm and sample T-6 at 1.37 ppm.

4.9 AOC-9: 10,000 Gallon #6 Heating Oil UST

One 10,000 gallon heating oil underground storage tank is located east of Building #2. The tank was registered as a #6 heating oil tank. Upon investigation of the tank it was determined to be full of water and contain heating coils in the bottom of the tank. The presence of heating coils confirms that the tank contained either #4 or #6 heating oil.

During the initial investigation of the site, one soil sample, S-10, was collected east of the tank with analysis for TPH and VO+10. Sample S-10 was collected at a depth of 13 feet below grade due to an elevated OVM reading. S-10 detected toluene at a level of 540 ppm. No evidence of petroleum was observed in the soil boring and no other contaminants were detected above the MSSCC.

In order to fully assess the tank, five test pits were conducted immediately adjacent to the tank with soil samples collected at a depth corresponding to the base of the tank. Samples S-52, S-53, S-56, S-57, and S-67 were collected at depths of 12 to 13 feet below grade and analyzed for the TPH. Levels of TPH detected ranged from 28.2 to 207 ppm.

One sample S-54 was collected from the north end of the tank at a depth of 6 feet from soils that exhibited a slight petroleum odor. Sample S-54 detected TPH at a level of 248 ppm. Since sample S-54 detected the highest TPH level, this sample was also analyzed for polynuclear aromatic hydrocarbons (PAH). No PAH compounds were detected above the MSSCC.

On the west side of the tank approximately 5 feet from the side of the tank, a layer of dark colored soil was detected at a depth of approximately 6 feet below grade. Sample S-55 was collected from this depth with analysis for PP+40. No compounds were detected above the MSSCC.

4.10 AOC-10: Former Aboveground Hazardous Waste Tank

Historical reports and NJDEP correspondences reviewed identified the presence of a former 10,000 gallon hazardous waste aboveground storage tank. The tank reportedly contained waste oil and solvents. A NJDEP letter required that soil sampling be performed around the perimeter of the tank.

The tank is no longer present but was formerly located on a concrete platform at the southeast corner of Building #2. Three samples were collected from the perimeter of the former tank concrete platform. Samples S-35 and S-36 were collected from the north and west side of the platform with analysis performed for TPH. Sample S-35 detected TPH at a level of 424 ppm and sample S-36 was non-detect for TPH. No sample was collected from the west side of the concrete platform due to the presence of a concrete surface and Building #2. Sample S-51 was collected from the south side of the platform at a depth of 1 foot below grade. Evidence of oil staining was observed in the soil. Sample S-51 detected TPH at a level of 5,750 ppm. Since this sample detected the highest TPH level and the tank formerly contained waste oil, the sample was also analyzed for VO+10, BN+15, PP Metals and PCBs. Sample S-51 detected benzene at a level of 61.1 ppm and toluene at 10,800 ppm. Five base neutral compounds, benzo(a)anthracene at 8.18 ppm, bis(2-ethylhexyl)phthalate at 77.2 ppm, benzo(b)fluoranthene at 3.8 ppm, benzo(k)fluoranthene at 5.25 ppm and benzo(a)pyrene at 3.11 ppm were also detected above the MSSCC. In addition, arsenic was detected at 21.5 ppm, beryllium at 2.12 ppm, and PCBs at 0.543 ppm above the MSSCC. No other compounds were detected above the MSSCC.

4.11 AOC-11: Unidentified Pipe

An unidentified 8 inch diameter pipe was observed protruding from the concrete surface east of Building #2. A test pit was conducted adjacent to the pipe to determine if the pipe was associated with an underground storage tank. Upon further investigation it appeared that the pipe was a former water pipe. While conducting excavation at this location, soils were observed that exhibited elevated readings with the OVM. One soil sample, S- 13, was collected at a depth of 2 feet below grade with analysis for PP+40. Sample S-13

detected chloroform at a level of 15 ppm, benzene at 69.2 ppm, and 1,2-Dichlorobenzene at 262 ppm which exceeds their respective MSSCC. No other contaminants were detected above the MSSCC.

4.12 AOC-12: 1,000 Gallon UST

A 1,000 gallon underground storage tank was detected near the southeast corner of the property. The tank appeared to be a 1,000 gallon tank and was filled with water. Upon excavation of the area immediately adjacent to the tank, it appeared that the tank was located within the foundation of a former basement that was filled with construction debris. The former foundation was filled with water with the water level present above the top of the tank.

Envirotactics conducted one test pit on the east side of the tank on the exterior of the foundation wall. The sample was located within 3 feet of the tank location. One sample, S-29, was collected at a depth of 7 feet below grade with analysis for PP+40. The only contaminant detected above the MSSCC was benzene at a level of 17.2 ppm.

4.13 AOC-13: Aboveground Storage Tanks at Southeast Property Corner

The historic site map provided as Figure 5 in Attachment 2 identified six aboveground storage tanks located at the southeast corner of the property. No tanks are currently present and the contents of the former tanks are unknown.

One test pit was conducted beneath a former diked area. Two samples, S-12 and S-12A, were collected from the test pit. Both samples were analyzed for PP+40. Sample S-12 was collected at a depth of 3 feet below grade. Benzene at a level of 21.9 ppm was the only compound detected above the MSSCC. Sample S-12A was collected at a depth of 7.5 feet below grade. Benzene at a level of 16.1 ppm was the only compound detected above the MSSCC.

Two additional samples were collected from the western area of the tank storage area at two depths from a single soil boring. Sample S-68A was collected at a depth of 6.5 feet below grade with analysis for PP+40. Sample S-68A detected benzene at a level of 10.5 ppm with no other compounds detected above the MSSCC. Sample S-68B was collected at a depth of 12 feet below grade with analysis for VO+10. Benzene detected at a level of 32.1 ppm was the only compound detected above the MSSCC.

4.14 AOC-14: 20,000 Gallon #6 Heating Oil UST

One 20,000 gallon heating oil underground storage tank is located to the southeast of Building #1. The tank was registered as a #6 heating oil tank. Upon investigation of the tank it was determined to be full of water and contain heating coils. The presence of heating coils confirms that the tank contained either #4 or #6 heating oil.

Five soil samples were collected around the perimeter of the tank at a depth corresponding to the base of the tank. A sixth sample could not be collected due to the presence of a small pump shed located adjacent to the tank. Samples S-9 and S-63 through S-66 were collected and analyzed for TPH. TPH levels detected ranged from 54 ppm to 986 ppm. Since sample S-65 detected the highest level of TPH, this sample was also analyzed for PAH compounds. No PAH compounds were detected.

4.15 AOC-15: Former Building #2 Aboveground Storage Tank

Concrete cradles for a former aboveground storage tank are located on the west side of Building #2. The tank is no longer present and the former use of the tank is unknown. A pipe extends from the building at the north end of the former tank location. Envirotactics performed a test pit below this pipe and adjacent to the former tank. The test pit was extended to a depth of 4 feet below grade with no elevated field screen readings detected. One sample, S-23, was collected at a depth of 1 foot below grade from a layer of fill material containing cinders and ash. The sample was analyzed for PP+40. Sample S-23 detected two volatile organic compounds above the MSSCC, 1,2-Dichloroethane was detected at 1.14 ppm and trichloroethene was detected at 3.12 ppm. Low levels of three base neutral compounds were also detected above the MSSCC, benzo(b)fluoranthene was detected at 1.06 ppm, benzo(a)pyrene at 1.15 ppm and indeno(1,2,3-cd)pyrene at 0.959 ppm. In addition, one pesticide 4,4'-DDD was detected above the MSSCC at a level of 4.45 ppm and PCBs were detected at 23.6 ppm.

4.16 AOC-16: Building #2 Catch Basins

Three catch basins were identified on the north side of Building #2 immediately adjacent to the building exterior. Numerous pipes located on the exterior of the building discharged into each basin. The former use of the pipes is unknown. Basin #1 consisted of a circular terracotta catch basin with a concrete bottom that historically received the discharges from several pipes. At the base of the basin was a 10 inch diameter terracotta pipe that discharged to the north towards the drainage system for this portion of the property. The basin was excavated and one soil sample collected below the base of the basin at a depth of 3.5 feet below grade. Sample S-20 was analyzed for PP+40. Sample S-20 detected benzene at a level of 4.22 ppm, zinc at a level of 1,680 ppm, and PCBs at 1.44 ppm. No other contaminants were detected above the MSSCC.

Basin #2 was located further to the west along the north side of Building #2. Basin #2 consisted of a rectangular concrete sump that received the discharges from several pipes. No pipes discharged from this basin. The basin was excavated and one soil sample collected below the base of the basin at a depth of 6 feet below grade. Sample S-21 was analyzed for PP+40 with no compounds detected above the MSSCC. TPH was detected at a level of 1,150 ppm.

Basin #3 was located at the northwest corner of Building #2. Basin #3 consisted of a rectangular catch basin that received the discharge from one pipe. The basin was constructed of brick with no underground piping associated with the basin. The basin was excavated and one soil sample collected below the base of the basin at a depth of 6 feet below grade. Sample S-22 was analyzed for PP+40. Sample S-22 detected three volatile compounds above the MSSCC, trichloroethene was detected at 1.09 ppm, tetrachloroethene at 1.44 ppm and chlorobenzene at 1.83 ppm. TPH was detected at 9,390 ppm and PCBs at 0.983 ppm. No other contaminants were detected above the MSSCC.

4.17 AOC-17: Aboveground Storage Tank Area North of Building #2

The historic site map provided as Figure 5 in Attachment 2 identified aboveground storage tanks located to the north of Building #2 and east of Building #5. No tanks are currently present. The area appeared to have historically contained approximately 9 aboveground storage tanks. The contents of the former tanks are unknown and currently the area is completely covered by a concrete surface.

One soil sample was collected at this location during the installation of monitoring well MW-5. Sample S-MW5A was collected at a depth of 1.5 feet below grade and analyzed for PP+40. Sample S-MW5A detected two volatile organic compounds above the MSSCC, 1,2-dichloroethane at 18 ppm and benzene at 1.9 ppm. Five base neutral compounds were detected above their respective MSSCC, 1,2-Dichlorobenzene was detected at a level of 71 ppm, benzo(a)anthracene at 3.5 ppm, benzo(b)fluoranthene at 3.3 ppm, benzo(k)fluoranthene at 1.9 ppm, and benzo(a)pyrene at 3.1 ppm. In addition, nickel was detected at a level of 1,200 ppm and the pesticide 4,4'-DDD was detected at 13.2 ppm. No other contaminants were detected above the MSSCC.

4.18 AOC-18: Area South of Building #3

Building #3 was historically utilized as a laboratory. Two test pits were conducted on the south side of the building. One test pit was conducted immediately adjacent to the southwest corner of the building. No elevated field screen readings were detected and no visual evidence of a discharge was observed, therefore no samples were collected.

A second test pit was conducted approximately 20 feet south of the building adjacent to a paved area. Evidence of construction debris consisting mainly of concrete was observed in this test pit. One sample, S-25, was collected at a depth of 7 feet below grade that corresponds to the soil interval immediately above the depth of groundwater in this area. Sample S-25 was analyzed for PP+40 with no contaminants detected above the MSSCC.

A third test pit was conducted further to the south adjacent to the end of the railroad spur. No elevated field screen readings were detected and no visual evidence of a discharge was observed, therefore no samples were collected.

4.19 AOC-19: Site Storm Water Drainage System

Envirotactics investigated the storm water drainage system for the presence of contaminants. It appears that there are two separate storm water collection systems present at the site, one system collecting storm water on the north side of the facility and one in the central and south side of the facility. The estimated configuration of the storm water systems is provided on Figure 6, Attachment 2.

Several storm water catch basins are located on the north side of Building #2. The basins appear to all be interconnected through a pipeline that runs parallel to the north side of Building #2. It appears that this drainage system formerly discharged to the on site water treatment system.

The catch basins contain sediment and the system does not appear to drain properly. One catch basin is located on the west side of Building #4. A shallow storm water catch basin is located in this area that formerly received discharges from an adjacent catch basin in which aboveground piping discharged. One sediment sample, S-24, was collected from the base of the catch basin with analysis for PP+40. Sample S-24 detected lead at 464 ppm, mercury at 34.7 ppm, nickel at 385 ppm and zinc at 2,090 ppm. In addition, PCBs were detected at 1.2 ppm.

Envirotactics performed a test pit adjacent to another catch basin located in the courtyard on the north side of Building #2. Sample S-7 was collected at a depth of 8 feet, immediately above the depth to groundwater encountered in this area. Sample S-7 was analyzed for PP+40 with no contaminants detected above the MSSCC.

A second storm water system drains the eastern and south side of Building #2. Several catch basins are located on the east side of Building #2. The basins are interconnected and flow to the south where they then connect to additional basins that are located on the south side of Building #2. The discharge from these basins flows to the west where they discharge into an active combined sanitary/storm water system. This active sanitary/storm water system currently receives discharges from the adjacent Magruder facility. The liquids in the system flow to the north to McClellan Street.

Three catch basins were investigated for the presence of discharges. One catch basin is located directly east of the southeast corner of Building #2. This basin was rectangular in shape and had concrete construction with sediment present in the base. A test pit was conducted through the base of the catch basin with one soil sample, S-11, collected from below the catch basin base at depth of 5 feet below grade. The sample was analyzed for PP+40. The only compound detected above the MSSCC was the pesticide 4,4'-DDT at a level of 17.1 ppm.

The catch basin located at sample location S-11 connected to a circular catch basin located to the south of the southeast corner of Building #2. The basin was full of sediment. Envirotactics collected one sample, S-28, from the sediment within the catch basin. Sample S-28 was analyzed for PP+40. Sample S-28 detected TPH at a level of 10,200 ppm, benzo(a)anthracene at 1.79 ppm, nickel at 275 ppm, and PCBs at 1.86 ppm.

Another catch basin was investigated that was located to the east of Building #1. The catch basin was circular with brick construction. The basin had a discharge pipe that flowed to the north and connected to the system running parallel to the south of Building #2. A test pit was conducted adjacent to the catch basin and sample S-27 was collected below the base of the basin at a depth of 3 feet below grade. Sample S-27 was analyzed for PP+40 with no contaminants detected above the MSSCC.

4.20 AOC-20 Former Transformers

Three electrical transformers are present on a concrete pad adjacent to the western side of Building #5. All lines connected to the transformers have been removed and oil staining is present on the concrete pad below the transformers. Four surface soil samples (T1 through T4) were collected on October 27, 2000. One sample was collected from each side of the concrete pad. Analysis was performed for PCBs. The results of sampling detected PCB levels above the MSSCC ranging from 2.31 ppm to 41 ppm.

These transformers were determined to be the property of PSE&G. PSE&G has begun cleanup of the transformer area. The transformers have been removed and cleanup of the soils is scheduled to begin in the near future. This cleanup is being performed under NJDEP Case Number 01-04-10-1409-37.

4.21 Building Interiors

Numerous drums, process tanks, and miscellaneous containers are present in the interior of the buildings. The majority of the drums and process tanks are not labeled and the contents, if any, are unknown. Some drums are in poor condition. A general description of the materials present is provided below. All materials remaining at the site must be properly identified and disposed.

- Building #1 contains numerous 55 gallon drums and 5 gallon containers that are stored in the former process area of this building. In addition, several process vessels or tanks are present.

- Building #2 contains a large number of process tanks and vessels. The former use of the vessels and if any product is present is unknown. Several small miscellaneous containers of unidentified materials are also present.

- Building #3 contains several small containers of unidentified materials.

- Building #5 contains several drums and small containers of unidentified materials.
- Building #6 contains one drum that appears to be waste oil.

In addition, several unidentified gas cylinders are located in the courtyard area between Building #2 and Building #5.

4.22 Soil Data Reliability

All soil samples were collected, maintained, and transported in accordance with standard quality assurance/quality control (QA/QC) protocol. All samples were analyzed by an NJDEP certified laboratories, Accredited Laboratories, LLC (Cert. #12007) located in Carteret, New Jersey and Integrated Analytical Laboratories, LLC (Cert. #14751) located in Randolph, New Jersey. All holding times and method detection limits were within the required criteria. The laboratory analytical report is provided in Attachment 10.

The Electronic Data Submission (EDS) is also provided in Attachment 10 as required by the NJDEP. This data is provided on the attached floppy disks that detail the sample parameters and laboratory analysis results.

5.0 Groundwater Investigation

A groundwater investigation was conducted to characterize the current conditions of the groundwater at the site. Two phases of groundwater investigation have been conducted. A preliminary investigation consisting of sampling temporary well points was initially conducted. This phase was followed by the installation of eight monitoring wells and two rounds of groundwater sampling.

5.1 Preliminary Groundwater Investigation

Due to the importance of this project and requested expedience of the investigation, Envirotactics performed a preliminary groundwater investigation in October 2000. Previous NJDEP documents directed to Orbis Products requested that a groundwater investigation be conducted, however, no actions were taken. The groundwater investigation was conducted utilizing a Geoprobe direct push unit to install temporary well points. Envirotactics installed seven temporary well points throughout the site with several wells biased towards known areas of concern. The wells were sampled for volatile organics with a forward library search (VO+10) and base neutral compounds with a forward library search (BN+15). Three of the seven temporary wells were sampled for priority pollutants plus forty (PP+40) due to the historical use of the property. The well points sampled for PP+40 were located throughout the site to be representative of the entire site. Temporary well locations are provided on Figure 8, Attachment 2.

Temporary wells GW-1, GW-2 and GW-3 were analyzed for PP+40. The analytical results of sampling are provided in Table 1, below.

Table 1
PP+40 Groundwater Results

Sample I.D.	GW-1	GW-2	GW-3	GWQS
Volatile Organics (ppb)				
Chloroform	ND	ND	ND	6
1,2-Dichloroethane	ND	ND	0.587	2
Vinyl Chloride	ND	2.61	ND	5
Benzene	**8.4**	**90.8**	**7.43**	1
Toluene	2.95	0.939	0.607	1,000
Tetrachloroethene	ND	ND	ND	1
Chlorobenzene	1.61	15.5	16.6	50
Ethylbenzene	1.54	1.16	ND	700
Total Xylenes	5.69	ND	ND	1,000
1,4-Dichlorobenzene	0.413	ND	ND	75
1,3-Dichlorobenzene	ND	ND	ND	600
1,2-Dichlorobenzene	6.73	0.406	0.573	600
TICs	127.8	3.5	4.3	100/500

Table 1 (Continued)
PP+40 Groundwater Results

Sample I.D.	GW-1	GW-2	GW-3	GWQS
Base Neutrals (ppb)				
Phenol	ND	ND	ND	4000
1,3-Dichlorobenzene	ND	ND	ND	600
1,4-Dichlorobenzene	ND	ND	ND	75
Benzyl Alcohol	ND	ND	ND	2,000
1,2-Dichlorobenzene	2.34	ND	ND	75
2-Methylphenol	ND	ND	ND	---
4-Methylphenol	ND	ND	ND	---
2,4-Dichlorophenol	ND	ND	ND	20
Naphthalene	ND	ND	ND	300
2-Methylnaphthalene	ND	ND	ND	---
2,4,5-Trichlorophenol	ND	ND	ND	50
Diethylphthalate	ND	3.75	2.94	5,000
Di-n-butylphthalate	ND	ND	ND	900
Fluorene	4.05	ND	ND	300
TICs	100.1	95	66.9	100/500
PP Metals (ppb)				
Arsenic	**10.1**	**12.7**	**12.8**	8
Beryllium	ND	5.32	ND	20
Cadmium	ND	**5.18**	ND	4
Chromium	20.9	40.4	ND	100
Copper	93.1	240.	ND	1,000
Lead	**12.1**	**42.2**	ND	10
Nickel	**365.0**	62.8	ND	100
Zinc	151.0	173.0	36.4	5,000
Pesticides (ppb)				
4,4'-DDE	ND	0.0128	ND	0.1
4,4'-DDD	ND	0.0313	ND	0.1
PCBs (ppb)	ND	0.253	ND	0.5
Cyanide (ppb)	ND	ND	30.5	200
Phenol (ppb)	ND	ND	ND	4,000

All results in parts per billion (ppb).
ND – Not detected.
D – Result is based on dilution.

Temporary wells GW-4, GW-5 and GW-7 were analyzed for VO+10 and BN+15 only. The analytical results of sampling are provided in Table 2, below.

Table 2
VO+10 and BN+15 Groundwater Results

Sample I.D.	GW-4	GW-5	GW-7	GWQS
Volatile Organics (ppb)				
Benzene	**9,990**	**4,210**	**310**	1
Toluene	ND	44.9	**130,000**	1,000
Tetrachloroethene	ND	ND	ND	1
Chlorobenzene	863	ND	ND	50
Ethylbenzene	ND	ND	760	700
Methylene Chloride	ND	ND	**780**	3
Total Xylenes	ND	ND	**1,400**	1,000
TICs	ND	ND	**131,300**	100/500
Base Neutrals (ppb)				
1,3-Dichlorobenzene	1.62	ND	ND	600
1,4-Dichlorobenzene	10.8	ND	4J	75
1,2-Dichlorobenzene	4.51	ND	42	75
Acenaphthene	21.5	ND	ND	400
Diethylphthalate	3.23	ND	9J	5,000
TICs	**1523.7**	8.4	**5230**	100/500

All results are in parts per billion (ppb).
ND – Not detected.
J – Compound was detected below the MDL.

The results of sampling detected levels of volatile organic compounds in all samples collected above the NJDEP Groundwater Quality Standards (GWQS). No targeted base neutral compounds were detected above the GWQS, however, base neutral total tentatively identified compounds (TICs) were detected above 500 ppb in samples GW-4 and GW-7. In addition, samples GW-1, GW-2 and GW-3 detected levels of metals above the GWQS. The levels of metals detected may be attributed to the turbid samples that are inherent during sampling with a Geoprobe.

5.2 Monitoring Well Installation

In March 2001, Envirotactics oversaw the installation of eight monitoring wells (MW-1 through MW-8) at the site. The wells were installed by Wilson Drilling Company, Inc. located in Phillipsburg, New Jersey. The monitoring well permits, Form B's and logs are provided in Attachment 6. The depth to groundwater encountered at the site varied from approximately 5 feet to 12 feet below grade.

The wells, with the exception of MW-4, were installed to a depth of 18 to 20 feet and were equipped with 15 feet of screen. MW-4 was installed to a depth of 11 feet below grade with water encountered at a depth of 2 feet below grade. It was later determined that the water present at two feet below grade was not groundwater but was actually perched water trapped within the foundation of a former aboveground storage tank dike area. All soils encountered during installation of the wells consisted mainly of clayey silts. After installation, the wells were developed to remove fines (i.e., silt and/or clay particles) from the sand pack and assure free flow of water from the formation into the well. The development facilitates the collection of a representative sample. The well locations are provided in Figure 8, Attachment 2.

5.3 First Round of Monitoring Well Sampling

In accordance with standard NJDEP practices, the wells were sampled approximately two weeks after development on April 3, 2001. Before sampling the wells, Envirotactics determined the depth to groundwater from the top of the well casing and determined that there was no free product in the wells with the exception of MW-8. The product present in MW-8 was several inches thick, was black and viscous in nature, and did not appear to be oil. Envirotactics also collected the required geochemistry parameters including dissolved oxygen, specific conductance, temperature, and pH. Prior to sampling, three well volumes were purged from each well. Collection of the groundwater samples was performed using a disposable bailer. This method is utilized to ensure that the collected sample will be turbid free and representative of a typical groundwater sample from the subject site. Since product was present in MW-8, the well was not purged. However, a groundwater sample was collected from below the product to document the contaminants present. The well locations and results of sampling are shown on Figure 8, Attachment 2.

All samples were analyzed for PP+40. The results of sampling are provided in Table 3 and 4, below. The groundwater analytical laboratory report is provided in Attachment 11.

Table 3
Groundwater Results 4/3/01

Sample I.D.	MW-1	MW-2	MW-3	MW-4	GWQS
Volatile Organics					
Chloroform	0.999	0.483	ND	ND	6
Benzene	**10.3**	0.357	**125,000**	**312**	1
Toluene	ND	ND	**3,350**	**2,800**	1,000
Chlorobenzene	**76.4**	ND	**1180**	ND	50
1,2-Dichlorobenzene	0.537	ND	ND	ND	600
TICs	ND	ND	ND	ND	500
Base Neutral Compounds					
Phenol	ND	ND	3.28	ND	4,000
Aniline	ND	ND	2.18	ND	--
1,4-Dichlorobenzene	ND	ND	1.09	ND	75
1,2-Dichlorobenzene	ND	ND	3.64	0.721	600
2-Methylphenol	ND	ND	ND	11.7	--
4-Methylphenol	ND	2.68	ND	9.74	--
2,4-Dimethylphenol	ND	ND	ND	1.81	100
Naphthalene	ND	ND	ND	1.06	300
Acenaphthene	ND	ND	ND	0.808	400
Fluorene	ND	ND	ND	0.719	300
TICs	86.4	146.4	**3,334.9**	**979.6**	500
Metals					
Arsenic	4.15	ND	ND	**9.63**	8
Cadmium	ND	0.812	ND	ND	4
Chromium	ND	ND	ND	ND	100
Copper	ND	ND	ND	ND	1000
Lead	ND	ND	ND	ND	10
Nickel	ND	ND	ND	ND	100
Selenium	ND	ND	ND	ND	50
Zinc	ND	529	23.7	25.2	5000
Pesticides	ND	ND	ND	ND	---
PCBs	ND	ND	ND	ND	0.5
Cyanide	ND	ND	ND	ND	200
Phenol	ND	ND	90	157	4000

All results are in parts per billion (ppb).
ND - Not detected.

Table 4
Groundwater Results 4/3/01

Sample I.D.	MW-5	MW-6	MW-7	MW-8	GWQS
Volatile Organics					
Chloroform	**416**	**62.4**	**669**	ND	6
Carbon Tetrachloride	ND	**5.83**	ND	ND	2
1,2-Dichloroethane (EDC)	ND	ND	ND	**7300**	2
Benzene	**7,070**	ND	**55.2**	**340,000**	1
Trichloroethene	ND	**96.8**	ND	ND	1
Toluene	**35,600**	44.6	16	**254,000**	1,000
1,1,2-Trichloroethane	ND	ND	**14.8**	ND	3
Tetrachloroethene	**2420**	**4.34**	**8.75**	ND	1
Chlorobenzene	ND	ND	2.37	ND	50
Ethylbenzene	132	532	2.13	ND	700
Total Xylenes	675	855	1.06	ND	1,000
1,2-Dichlorobenzene	223	ND	0.996	ND	600
TICs	**9,950**	**7,794**	378.2	ND	500
Base Neutral Compounds					
Phenol	102	ND	ND	1,640D	4,000
Aniline	8,580D	ND	ND	ND	--
1,2-Dichlorobenzene	83.6	ND	ND	71.4	600
4-Methylphenol	86.8	1.32	2.61	12,000D	--
Naphthalene	ND	42.7	ND	ND	300
2-Methylnaphthalene	ND	21.4	ND	ND	--
TICs	**19,941**	772.7	**1,041.1**	**4,207**	500
Metals					
Arsenic	**30.5**	ND	ND	**8.79**	8
Cadmium	ND	ND	1.77	ND	4
Chromium	ND	ND	ND	38.9	100
Copper	ND	ND	41.1	ND	1,000
Lead	9.06	ND	6.38	ND	10
Nickel	**166**	ND	ND	ND	100
Selenium	ND	ND	ND	ND	50
Zinc	351	ND	56.8	ND	5,000
Pesticides					
4,4'-DDE	ND	ND	ND	**0.342**	0.1
4,4'-DDD	ND	ND	ND	**0.821**	0.1
PCBs	ND	ND	ND	ND	0.5
Cyanide	ND	ND	ND	ND	200
Phenol	25.5	56.3	ND	**34,300**	4,000

All results are in parts per billion (ppb).
ND - Not detected.
D - Sample was diluted.

The groundwater analysis detected levels of volatiles above the GWQS in all wells with the exception of MW-2. No targeted base neutral compounds were identified above the GWQS, however, MW-3, MW-4, MW-5, MW-7 and MW-8 detected total base neutral TICs above the GWQS. MW-4, MW-5 and MW-8 detected metal compounds above the GWQS. In addition, MW-8 detected pesticides and phenol above the GWQS.

5.4 Second Round of Monitoring Well Sampling

A second confirmatory round of groundwater sampling was conducted on May 2, 2001. Prior to sampling, three well volumes were purged from each well. Collection of the groundwater samples was performed using a disposable bailer. This method is utilized to ensure that the collected sample will be turbid free and representative of a typical groundwater sample from the subject site. Since product was present in MW-8, the well was not purged. However, a groundwater sample was collected from below the product to document the contaminants present. In addition, MW-4 was not sampled since it was determined that this well did not represent groundwater conditions and was monitoring perched water trapped within the foundation of a former aboveground storage tank dike area.

Since MW-4 was not sampled, a temporary well point was installed to provide groundwater data in this area. TW-1 was installed approximately 20 feet to the north of MW-4 on April 4, 2001. TW-1 was installed utilizing a hollow stem auger to drill to approximately 20 feet below grade. A total of 15 feet of 2 inch diameter screen was installed. The temporary well was purged and sampled with a disposable bailer. After sampling the temporary well, the well was removed and the boring backfilled. The well sampling reports are included in Attachment 6. The well locations and sample results are shown on Figure 9, Attachment 2.

All samples were analyzed for PP+40. The results of sampling are provided in Table 5 and 6, below. The groundwater analytical laboratory report is provided in Attachment 11.

Table 5

Groundwater Results 5/2/01

Sample I.D.	MW-1	MW-2	MW-3	MW-5	GWQS
Volatile Organics					
Vinyl Chloride	ND	**558**	ND	ND	5
Chloroform	ND	ND	ND	**649**	6
Benzene	**23.1**	**17,300**	**57,500**	**7,590**	1
Toluene	1.57	355	**1,540**	**32,400**	1,000
Tetrachloroethene	ND	ND	ND	**2,110**	1
Chlorobenzene	**119 D**	ND	ND	ND	50
Ethylbenzene	0.362	ND	ND	ND	700
Total Xylenes	ND	ND	ND	**614**	1,000
1,4-Dichlorobenzene	0.468	ND	ND	ND	75
1,2-Dichlorobenzene	1.14	ND	ND	198	600
TICs	10.4	ND	ND	ND	500
Base Neutral Compounds					
Phenol	ND	ND	3.2	119	4,000
Aniline	7.4	12.9	7.33	16,000 D	--
1,4-Dichlorobenzene	ND	1.34	0.95	3.89	75
1,2-Dichlorobenzene	ND	11.4	3.58	81.7	600
4-Methylphenol	ND	1.39	ND	356	600
2,4-Dimethylphenol	ND	4.84	ND	ND	5000
Naphthalene	ND	1.03	ND	ND	400
2-Methylnapthalene	ND	ND	ND	9.48	300
TICs	232.8	425.7	**1,002.7**	**8,402**	500
Metals					
Arsenic	5.83	6.24	ND	**28.2**	8
Beryllium	ND	ND	ND	ND	20
Cadmium	ND	1.48	ND	ND	4
Chromium	ND	ND	ND	26.9	100
Copper	ND	ND	ND	ND	1,000
Lead	ND	ND	ND	**13.8**	10
Nickel	ND	56.1	ND	**144**	100
Selenium	ND	ND	ND	ND	50
Zinc	ND	366	34.1	143	5,000
Pesticides	ND	ND	ND	ND	---
PCBs	ND	ND	ND	ND	0.5
Cyanide	24	ND	ND	ND	200
Phenol	ND	ND	54.5	**46,600**	4,000

All results are in parts per billion (ppb).

ND - Not detected.

Table 6
Groundwater Results 5/2/01

Sample I.D.	MW-6	MW-7	MW-8	TW-1	GWQS
Volatile Organics					
Vinyl Chloride	**12.1**	ND	ND	ND	5
Chloroform	**36.9**	**228**	ND	ND	6
Benzene	**3.92**	**195**	**249,000**	**466**	1
Trichloroethene	**70.9**	ND	ND	ND	1
Toluene	41.9	110	**250,000**	ND	1000
1,1,2-Trichloroethane	ND	**7.51**	ND	ND	3
Tetrachloroethene	ND	**6.19**	ND	ND	1
Ethylbenzene	266	8.62	ND	ND	700
Total Xylenes	423	ND	ND	ND	1000
1,2-Dichlorobenzene	ND	2.98	ND	ND	600
TICs	**2,808**	494	ND	ND	500
Base Neutral Compounds					
Phenol	ND	ND	**5,450 D**	ND	4,000
Aniline	ND	ND	109	ND	--
1,2-Dichlorobenzene	ND	ND	185	ND	600
2-Methylphenol	ND	ND	508	ND	--
4-Methylphenol	ND	1.58	**28,300 D**	ND	600
2,4-Dimethylphenol	ND	ND	ND	0.665	5000
4-Chloro-3-methylphenol	ND	ND	ND	3.84	--
TICs	36.1	**1,172.4**	**10,294**	335.61	500
Metals					
Arsenic	4.49	6.97	**10.1**	6.99	8
Beryllium	ND	ND	ND	ND	20
Cadmium	ND	0.817	0.766	ND	4
Chromium	ND	ND	48.5	ND	100
Copper	ND	47.7	ND	ND	1000
Lead	ND	ND	ND	ND	10
Nickel	ND	ND	24.8	ND	100
Selenium	ND	ND	ND	8.23	50
Zinc	ND	48.9	65.8	23.3	5000
Pesticides					
4,4'-DDE	ND	ND	**1.78**	ND	0.1
Endosulfan II	ND	ND	**0.967**	ND	0.4
4,4'-DDD	ND	ND	**4.15**	ND	0.1
PCBs	ND	ND	ND	ND	0.5
Cyanide	ND	ND	ND	ND	200
Phenol	74.7	124	**26,500**	175	4000

All results are in parts per billion (ppb).
ND - Not detected.

5.5 Groundwater Data Reliability

All groundwater samples were collected, maintained, and transported in accordance with standard quality assurance/quality control (QA/QC) protocol. All samples were analyzed by an NJDEP certified laboratory, Accredited Laboratories, LLC (Cert. #12007) located in Carteret, New Jersey and Integrated Analytical Laboratories, LLC (Cert. #14751) located in Randolph, New Jersey.. All holding times and method detection limits were within the required criteria. The laboratory analytical report is provided in Attachment 11.

The Electronic Data Submission (EDS) is also provided in Attachment 11 as required by the NJDEP. This data is provided on the attached floppy disks that detail the sample parameters and laboratory analysis results.

5.6 Groundwater Flow

In accordance with N.J.A.C. 7:26E the monitoring wells were surveyed by a licensed surveyor to assist in determining groundwater elevations. The monitoring well Form Bs are provided in Attachment 9. Depths to groundwater measurements were collected prior to sampling on April 3, 2001 and on May 2, 2001. The groundwater elevations are summarized in Tables 7 and 8, below.

Table 7
April 3, 2001 Water Elevations

Well I.D.	Well Elevations (top of PVC)	Depth to Water	Static Water Level
MW-1	20.06	8.87	11.19
MW-2	23.19	10.49	12.70
MW-3	27.77	15.86	11.91
MW-4	28.08	NI	NI
MW-5	25.47	6.04	19.34
MW-6	27.88	10.70	17.18
MW-7	26.27	8.26	18.01
MW-8	27.48	13.96	13.52

All measurements in feet.
NI - Not included in GW flow survey.

Table 8
May 2, 2001 Water Elevations

Well I.D.	Well Elevations (top of PVC)	Depth to Water	Static Water Level
MW-1	20.06	9.30	10.76
MW-2	23.19	12.36	10.83
MW-3	27.77	16.38	11.39
MW-4	28.08	NI	NI
MW-5	25.47	7.30	18.17
MW-6	27.88	11.55	16.33
MW-7	26.27	9.20	17.07
MW-8	27.48	14.68	12.80

All measurements in feet.
NI - Not included in GW flow survey.

Groundwater elevations were shown to fluctuate approximately 1 foot from the April 3, 2001 sampling event to the May 2, 2001 event. It should be noted that no correction was made for the product present in MW-8. Groundwater was shown to flow in an easterly and northeasterly direction with an apparent mounding effect near the central portion of the property. As described above, MW-4 is not representative of groundwater conditions in this area. Therefore MW-4 was not included in the groundwater flow calculations. Since MW-4 was not utilized in determining groundwater flow direction, Envirotactics estimates that once an additional monitoring well is installed in the area of MW-4, groundwater flow in the southern portion of the property will be in a more southeasterly direction. Groundwater flow direction is shown on Figures 10 and 11, Attachment 2.

5.7 Receptor Evaluation

Envirotactics conducted a receptor evaluation in accordance with N.J.A.C. 7:26E-4.4. This evaluation addressed any nearby groundwater usage, surface water bodies, and subsurface utilities including basements, or other structures that may be impacted from a vapor hazard. The results of the receptor evaluation are plotted on a figure provided in Attachment 7. Information for each site described on the figures is cross referenced in Attachment 7.

5.7.1 1/2 Mile Paper Search

A one-half mile radius paper search was performed and a total of 20 wells were identified. It is noted that some of the well locations could not be found due to incomplete addresses. The well sites were plotted on a map with a scale of one inch equals 0.50 miles and are cross referenced with the map reference identification number. Refer to Table 9, for a summary of these well records.

Table 9
Summary of 1/2 Mile Paper Search

Map Reference ID #	Name/Owner	Location	# of Wells & Usage	Maximum Well Depth (ft.)
1	Orbis Products Corp. (subject property)	55 Virginia Street	1 Cooling	350
2	Ranco, Inc.	1001 Newark Avenue	10 Monitoring	35
3	Bon-Art International	99 Evergreen Avenue	2 Monitoring	15
4	N.J. Economic Development Authority	815 Frelinghuysen Avenue	1 Monitoring	14
5	Economy Color Card, Inc.	1000 South Elmora Avenue	5 Monitoring	34.5
6	Newark Board of Education	226 Dayton Street	1 Monitoring	15
7	Banner Pharmacaps	1111 Jefferson Avenue	16 Monitoring 1 Industrial	248
8	MPDV, Inc.	850 Frelinghuysen Avenue	3 Monitoring	12.5
9	The Dial Corp.	1000 Jefferson Avenue	5 Piezometers	19
10	Sun Oil Corp.	663 Newark Avenue	3 Monitoring	20
11	NJ Transit	25-31 West Grand Street	1 Monitoring	25
12	Summit Bank	857 Anna Street	1 Monitoring	14
13	Pennick Corp.	158 Mount Olivet Avenue	31 Monitoring 2 Industrial	584
14	Hayward Industries, Inc.	900 Fairmount Avenue	12 Monitoring	92
15	Magruder Color Company	1029 Newark Avenue	1 Monitoring	25
16	U.S. Screening	780 Frelinghuysen Avenue	1 Industrial	910
17	Merit Oil of N.J.	623 Spring Street	1 Monitoring	22
18	Crown Central Petroleum	450 South Front Street	5 Monitoring	12
19	Bristol Myers Products	1350 Hillside Avenue	2 Piezometers	60
20	NJD Associates C/O Markso	6 Evans Terminal Road	1 Monitoring	14

The locations of the wells identified in the receptor evaluation are depicted on the Figure provided in Attachment 7. The well sites are shown on the enclosed map using the map reference identification number. No domestic wells were observed within a ½ mile radius of the site. All wells identified were either monitoring wells or industrial wells.

One cooling well was identified on the subject property that was installed in 1958. The well is identified as 350 feet deep with 151 feet of casing. This well is no longer in service and is located within the Quonset Hut Building #4. In addition, a second well permit for the site was identified by the Bureau of Water Allocation. This well is identified as approximately 120 feet in depth installed in 1937. The location of this well is unknown.

5.7.2 One Mile Computer Search

A one mile radius computer search was conducted to determine the locations of water withdrawal points and contaminated sites around the subject area. As outlined below, one 100,000 gallon per day well site was detected within 1 mile from the site. Twenty-one contaminated sites were detected within 1 mile from the site. These sites are summarized below and the locations of these wells are plotted on the map provided in Attachment 7.

Table 10
100,000 GPD Wells

Map Reference ID #	NAME	LATITUDE LONGITUDE	TYPE OF SITE	DISTANCE FROM SITE (MILES)
4067PS	Essex County Parks & Recreation	N40 41 2 W74 12 28	100,000 GPM	0.9

Table 11
Contaminated Sites

Map Reference ID #	NAME	LOCATION	TYPE OF SITE	DISTANCE FROM SITE (MILES)
216	Bessemer Processing Company Inc.	135 Haynes Avenue	BEECRA	1.0
13	Pennick Corporation	158 Mount Olivet Avenue	BEECRA	1.0
720	Container Ring Company Incorporated	855 Woodruff Lane	BEECRA	1.0
2	Economy Color Card Company	1001 Newark Avenue	BEECRA	0.5
723	Metal Powder and Chemical Works, Inc.	701 Spring Street	BEECRA	0.7
7	Pharmacaps Inc.	1111 Jefferson Avenue	BEECRA	0.2
1470	Elizabeth Moving and Storage Company	1000 Sherman Avenue	BFCM-6	0.1
2247	Amtrack Rail Yard	1140-1146 North Avenue	BFO-N	0.4
21	Anheuser Busch Incorporated	200 Rte 1	BUST	0.7
4484	G & S Investors	768 Frelinghuysen Avenue	BUST	0.7
4489	Leggett & Platt Incorporated	750 Frehlinghuysen Avenue	BUST	0.7
6049	Allied Aviation Service Company of N.J.	North Avenue & Division Street	BUST	1.0
6057	Exxon Service Station Elizabeth City	845 Spring Street	BUST	0.7
6066	New England Motor Freight	1 to 71 North Avenue	BUST	0.8
6068	Papetti Hygrade Egg Products, Incorporated	847 North Avenue	BUST	0.9
6070	Sears Roebuck & Company	1000 Jefferson Avenue	BUST	0.2
6071	Service Station Elizabeth City	720 Spring Street	BUST	0.8
6073	Shell Service Station Elizabeth City	590 Spring Street	BUST	0.9
6076	Value Service Station Elizabeth City	623 Spring Street	BUST	0.9
6077	Wakefern Food Corporation	610 to 620 Spring Street	BUST	0.9
6086	Community Food Bank of New Jersey	31 Evans Terminal Road	BUST	0.9

It should be noted that three monitoring wells were observed on the adjacent Magruder Color property located to the southwest. Magruder reported that the wells were installed to monitor a former underground storage tank location. The wells were not identified in the above receptor evaluation.

5.7.3 Other Receptors

The closest water body to the site is Weequahic Lake located approximately ¾ mile to the northwest. No impact to this water body is anticipated due to the distance of the lake from the site and since groundwater flows in a generally eastern direction in this area.

In addition, only one building at the site has a basement. Building #6 located in the northeast corner of the property has a basement. No odors or OVM readings were detected in this basement. No other structures are present at the site that would be subject to a vapor hazard associated with the groundwater.

6.0 Remedial Investigation Workplan

Based on the soil and groundwater sampling conducted to date, additional investigation and remediation will be required to complete delineation of the identified areas of concern. The main contaminant of concern at the site in both the soil and groundwater is volatile organics. Low levels of base neutral compounds, metals, and PCBs were detected at several locations throughout the site, however, these compounds are not significantly impacting the groundwater at the site. In addition, many areas where these compounds were detected consisted of fill material and it is anticipated that the source of these contaminants may be the fill material.

This portion of the report provides the Remedial Investigation Workplan (RIW) to complete the delineation of the soil and groundwater at the site. After completing the RIW, a Remedial Action Workplan will be submitted to the NJDEP. This RIW was prepared with a focus on the anticipated remediation of the site. The anticipated final remediation of the site will include removal of "Hotspot" areas of contamination, capping of the site and establishing a Deed Notice. In addition establishment of a Classification Exception Area (CEA) for the groundwater with continued monitoring will be required.

Each area of concern (AOC) identified during the site investigation will be further investigated as described below.

6.1 AOC-1: Building #6

Two soil samples were collected on the west side of Building #6 from two separate areas. One sample, S-1, was collected from the center of the west side of the building from fill material present in the top one foot of soil. Sample S-1 was analyzed for PP+40 and detected low levels of base neutral compounds with the highest level detected being benzo(b)flouranthene at 1.1 ppm. No other PP+40 compounds were detected above the NJDEP Most Stringent Soil Cleanup Criteria (MSSCC). No further investigation of this area is proposed. The soils below the fill material consisted of clayey silts with no evidence of a discharge observed. In addition, the contaminants detected in sample S-1 are typically associated with historic fill material. The low levels of base neutral compounds will be addressed through capping of the site and establishment of the Deed Notice.

The second sample, S-18, was collected at the southwest corner of Building #6. This sample was also collected from fill material and was analyzed for PP+40. Six base neutral compounds were detected above the MSSCC with the highest level detected being benzo(a)anthracene at 5.1 ppm. In addition, PCBs were detected at 2.72 ppm. Due to the presence of PCBs, Envirotactics proposes to delineate this area with analysis for BN+15 and PCBs. No remediation of this area is anticipated since the area will be capped as part of the Deed Notice.

6.2 AOC-2: Former Wastewater Treatment System

Seven soil samples were collected within and adjacent to the former concrete neutralization basin for the former onsite wastewater treatment system. One sample collected from the sludge within the basin was analyzed for PP+40 and identified the presence of base neutral compounds and lead above the MSSCC. Six additional samples were collected around the perimeter of the former structure with no elevated base neutral compounds detected. One sample, S-43, detected lead at a level of 420 ppm which is below the NJDEP Non-Residential Direct Contact Soil Cleanup Criteria (NRDCSCC) of 600 ppm. In addition, sample S-45 collected from the southern end of the basin was analyzed for VO+10 due to elevated field screen readings. Sample S-45 detected benzene at 23 ppm and chlorobenzene at 4 ppm above the MSSCC. Envirotactics proposes to delineate the area of sample S-45 with analysis performed for VO+10.

No remediation of the former neutralization basin area is anticipated since only low levels of base neutrals and lead were detected in the former sludge. All delineation samples were below the MSSCC as described above except for lead in sample S-43. Therefore, the former concrete basin area has been completely delineated except for the volatile compounds in the area of S-45. Any potential remediation in the area of S-45 will be determined based on the proposed sampling.

6.3 AOC-3: Suspected Oil Discharge Area

A test pit was conducted adjacent to the fence of the neighboring metal scrap yard located to the west. One sample S-8 was collected from the soil interval that exhibited evidence of contamination with analysis for PP+40. The sample detected TPH at 868 ppm, 1,2-dichloroethene at 3.5 ppm and n-nitroso-di-n-propylamine at 2.4 ppm.

Three test pits were conducted around the perimeter of sample S-8. Samples were collected with analysis for TPH and VO+10. Sample S-37 collected to the east detected methylene chloride at 1.17 ppm and 1.74 ppm. Sample S-39 collected to the north detected methylene chloride at 1.27 ppm. Based on the results of sampling, the contaminants present detected in sample S-8 have been delineated to the east and north. Sample S-38 was collected to the west immediately adjacent to the scrap metal yard. Sample S-38 detected TPH at a level of 3,030 ppm, 1,2-dichloroethane at 6.97 ppm, benzene at 1.25 ppm and trichloroethene at 1.03 ppm. Based on visual observations and the results of sampling, it appears that contaminants are migrating onto the property from the adjacent metal scrap yard. No sampling was conducted to the south due to a thick concrete surface.

No further investigation is proposed for this area. While several compounds were detected above the MSSCC, all levels detected are all below or only slightly above the

NJDEP Residential Direct Contact Soil Cleanup Criteria. In addition, it appears that these contaminants are migrating onto the subject property.

6.4 AOC-4: Aboveground Storage Tank Area - South of WWT

One sample was collected in the area of several former aboveground storage tanks with analysis performed for PP+40. Sample S-19 detected TPH at a level of 30,500 ppm, benzene at 5.09 ppm and chlorobenzene at 21.2 ppm.

Envirotactics proposes to delineate the area of sample S-19 with analysis performed for TPH and VO+10.

6.5 AOC-5: Diked Tank Area

Three test pits were performed around the concrete base of a former diked aboveground storage tank area. Only two samples were collected and analyzed for PP+40 based on field screening. Sample S-14 collected on the north side of the concrete base detected TPH at a level of 3,670 ppm, arsenic at 38.7 ppm and lead at 701 ppm. In addition, benzene was detected at a level of 9.33 ppm and 1,2-Dichlorobenzene at 416 ppm. Sample S-15 collected from the west side of the concrete base detected benzene at a level of 3.54 ppm. Envirotactics proposes to delineate the area of samples S-14 and S-15 with analysis performed for TPH, lead, and VO+10.

No remediation of this area is anticipated since the volatile organic compounds were detected below the NRDCSCC and the area will be capped as part of the Deed Notice.

6.6 AOC-6: 15,000 Gallon UST

One 15,000 gallon UST was investigated through five soil borings conducted around the perimeter of the tank. No evidence of a discharge was detected and five soil samples were analyzed for PP+40. Only one sample detected any compounds above the MSSCC. Sample S-60 detected benzene at a level of 1.19 ppm.

No further investigation of this tank area is proposed. Upon approval from the NJDEP, Envirotactics proposes to remove and properly dispose of the tank.

6.7 AOC-7: 1,000 Gallon and 5,000 gallon USTs

Four soil samples were collected adjacent to two USTs. The samples were analyzed for PP+40. Benzene was detected in all four samples ranging from 19 ppm to 581 ppm. In addition, six metals were detected above the MSSCC. A fifth sample, S-17, was collected from this area below piping. The sample S-17 detected benzene at a level of 14.2 ppm.

Envirotactics proposes to delineate this area with sample analysis performed for VO+10 and PP Metals. Upon approval from the NJDEP, Envirotactics proposes to remove and properly dispose of the tanks. In addition, MW-3 located in this area detected elevated levels of benzene in the groundwater. Envirotactics anticipates that soil removal will be performed in this area to remove the source soils contributing to the elevated levels of benzene detected in the well.

6.8 AOC-8: Aboveground Storage Tank Farms and Transformer Pad

Two former aboveground storage tank farms were identified on the north side and east side of the former production building located in the eastern central portion of the site. One sample, S-4, was collected on the northwest side of the former tank farm and analyzed for PP+40 with no contaminants detected above the MSSCC. The north side of this area was investigated as part of AOC-6 and the east side as part of AOC-7. No investigation was performed on the south side due to the presence of the concrete base of the former building. Envirotactics proposes no further investigation of this area other than that described in AOC-6 and AOC-7.

The second former tank farm area was located on the west side of the former building. Two samples were initially collected and analyzed for PP+40. Sample S-5 was collected from the area and detected benzene at a level of 51 ppm. Sample S-16 also in this area detected benzene at a level of 6.72 ppm and 1,2,-dichlorobenzene at 84.3 ppm. No other contaminants were detected above the MSSCC.

Sample S-31 was collected at a depth of 7 feet at the same location as S-5 to provide vertical delineation. Sample S-31 detected benzene at a level 7.88 ppm and methylene chloride at 1.14 ppm. Sample S-32 collected to the south of sample S-5 detected methylene chloride at a level of 1.15 ppm. Sample S-33 collected to the east of S-5 detected benzene at a level of 1.69 ppm and methylene chloride at 1.07 ppm. No further vertical delineation and no further delineation to the south and east are proposed.

Several other samples were collected in this area to provide delineation of sample S-5 and S-16 to the west and north. Levels of benzene and toluene were detected above the MSSCC. Envirotactics proposes to perform additional delineation to the north and east of this area with analysis for VO+10.

In addition, two surface samples were collected adjacent to a former transformer pad location. Sample T-5 and T-6 detected PCB levels above the MSSCC at 2.06 ppm and 1.37 ppm, respectively. Envirotactics will perform additional delineation sampling of this area with analysis for PCBs.

6.9 AOC-9: 10,000 Gallon #6 Heating Oil UST

One soil boring was conducted during the preliminary investigation of the tank area. Sample S-10 detected no TPH levels. This sample was also analyzed for VO+10 due to an elevated field screen reading. S-10 detected toluene at 540 ppm, which is only slightly above the MSSCC of 500 ppm. Five test pits were conducted immediately adjacent to a 10,000 gallon #6 heating oil UST. Five samples collected at the base of the tank detected TPH ranging from 28.2 ppm to 207 ppm. A sixth sample, S-54, was collected from a depth of 6 feet below grade from soils that exhibited a slight petroleum odor. Sample S-54 detected TPH at a level of 248 ppm. This sample was also analyzed for PAH compounds with no contaminants detected above the MSSCC.

No further investigation of this tank area is proposed. Upon approval from the NJDEP, Envirotactics proposes to remove and properly dispose of the tank.

6.10 AOC-10: Former Aboveground Hazardous Waste Tank

Three soil samples were collected around the concrete base of a former 10,000 gallon hazardous waste aboveground storage tank. The samples collected on the northern and eastern side of the concrete base detected low levels of TPH and no visual evidence of contamination was observed. Sample S-51 was collected from the south side of the concrete base from a soil interval that exhibited visual evidence of soil contamination. Sample S-51 detected TPH at a level of 5,750 ppm. The sample also detected volatiles, base neutrals, metals, and PCBs above the MSSCC.

Envirotactics proposes to vertically and horizontally delineate this area with sample analysis performed for TPH, VO+10, BN+15, PP Metals and PCBs.

6.11 AOC-11: Unidentified Pipe

A test pit was conducted adjacent to an unidentified pipe that was protruding from the concrete surface east of Building #2. Upon further investigation it appeared that the pipe was a former water pipe. One soil sample was collected and analyzed for PP+40 from this area at a location that exhibited an elevated field screen reading. Sample S-13 detected chloroform at a level of 15 ppm, benzene at 69.2 ppm and 1,2-dichlorobenzene at 262 ppm. No other contaminants were detected above the MSSCC.

Envirotactics proposes to delineate the area of sample S-13 with analysis performed for VO+10.

6.12 AOC-12: 1,000 Gallon UST

A 1,000 gallon UST was detected near the southeast corner of the property. Sample S-29 was collected adjacent to the area of the tank with analysis for PP+40. Benzene was detected at a level of 16.1 ppm. No other contaminants were detected above the MSSCC.

Envirotactics proposes to delineate the area of sample S-29 with analysis performed for VO+10. Upon approval from the NJDEP, Envirotactics proposes to remove and properly dispose of the tank.

6.13 AOC-13: Aboveground Storage Tanks at Southeast Property Corner

Two locations were sampled at the location of several former aboveground storage tanks. Two samples were collected at each sample location with analysis for PP+40. Benzene was detected in all four samples at levels ranging from 10.5 ppm to 32.1 ppm. No other contaminants were detected above the MSSCC.

In addition, a monitoring well (MW-8) installed in this area has detected floating free product present on the water within the well. This well was sampled and detected levels of volatiles, pesticides, and phenol above the GWQS.

Envirotactics proposes to perform additional soil sampling in this area with analysis for TPH, VO+10, pesticides and phenol to determine the source of free product present in MW-8. In addition, soil borings will be extended below the depth of groundwater to determine the extent of floating free product present on the water table. It is anticipated that soil excavation and disposal will be required in this area to remove the source of groundwater contamination detected in MW-8.

6.14 AOC-14: 20,000 Gallon #6 Heating Oil UST

Five soil samples were collected around the perimeter of a 20,000 gallon #6 heating oil tank. TPH levels detected ranged from 54 ppm to 986 ppm. Sample S-64 detected the highest level of TPH and was also analyzed for PAH compounds. No PAH compounds were detected.

No further investigation of this tank area is proposed. Upon approval from the NJDEP, Envirotactics proposes to remove and properly dispose of the tank.

6.15 AOC-15: Former Building #2 Aboveground Storage Tank

One soil sample was collected adjacent to a former aboveground storage tank with analysis performed for PP+40. Sample S-23 was collected from a layer of fill material. Levels of volatile compounds, base neutral compounds, pesticides and PCBs were detected above the MSSCC.

Envirotactics proposes to perform vertical and horizontal delineation in the area of sample S-23 with analysis performed for VO+10, BN+15, pesticides and PCBs. No remediation of this area is anticipated since the contaminants were detected below the

NRDCSCC or Impact to Groundwater Soil Cleanup Criteria (IGWSCC) for each contaminant and the area will be capped as part of the Deed Notice.

6.16 AOC-16: Building #2 Catch Basins

Three catch basins were located on the north side of Building #2 that received discharges from pipes extending from the building. Soil samples were collected below the base of each basin with analysis performed for PP+40. Sample S-20 collected below Basin #1 detected benzene at a level of 4.22 ppm, zinc at a level of 1,680 ppm, and PCBs at 1.44 ppm. Sample S-21 collected below Basin #2 detected no compounds above the MSSCC. Sample S-22 collected below Basin #3 detected trichloroethene at a level of 1.09 ppm, tetrachloroethene at 1.44 ppm, and chlorobenzene at 1.83 ppm.

No further investigation of these areas is proposed. The samples were collected immediately below the source of any contamination (i.e., base of basin) and the levels of contaminants detected are only slightly above the MSSCC. In addition, all levels of contaminants detected are below the NRDCSCC with the exception of zinc. No remediation of this area is anticipated since the area will be capped as part of the Deed Notice.

6.17 AOC-17: Aboveground Storage Tank Area North of Building #2

One soil sample was collected from the area of former aboveground storage tanks with analysis performed for PP+40. Sample S-MW5A detected 1,2-dichloroethane at a level of 18 ppm and benzene at 1.9 ppm. Five base neutral compounds were detected above the MSSCC. 1,2-Dichlorobenzene was detected at a level of 71 ppm, benzo(a)anthracene at 3.5 ppm, benzo(b)fluoranthene at 3.3 ppm, benzo(k)fluoranthene at 1.9 ppm, and benzo(a)pyrene at 3.1 ppm. In addition, nickel was detected at a level of 1,200 ppm and the pesticide 4,4'-DDD was detected at 13.2 ppm. No other contaminants were detected above the MSSCC.

Envirotactics proposes to perform additional delineation of this area with analysis for VO+10, BN+15, PP Metals, and Pesticides.

6.18 AOC-18: Area South of Building #3

Building #3 was historically utilized as a laboratory. Two test pits were conducted on the south side of the building. One test pit was conducted immediately adjacent to the southwest corner of the building. No elevated field screen readings were detected and no visual evidence of a discharge was observed, therefore no samples were collected. A second test pit was conducted approximately 20 feet south of the building adjacent to a paved area. Evidence of construction debris consisting mainly of concrete was observed in this test pit. One sample, S-25, was collected at a depth of 7 feet below grade that corresponds to the soil interval immediately above the depth of groundwater in this area.

Sample S-25 was analyzed for PP+40 with no contaminants detected above the MSSCC. A third test pit was conducted further to the south adjacent to the end of the railroad spur. No elevated field screen readings were detected and no visual evidence of a discharge was observed, therefore no samples were collected.

No further investigation of this area is proposed since no contaminants were detected above the MSSCC.

6.19 AOC-19: Site Storm Water Drainage System

Envirotactics investigated the storm water drainage system for the presence of contaminants.

One catch basin is located on the west side of Building #4. A shallow storm water catch basin is located in this area that formerly received discharges from an adjacent catch basin in which the aboveground piping discharged. One sediment sample, S-24, was collected from the base of the catch basin with analysis for PP+40. Sample S-24 detected lead at 464 ppm, mercury at 34.7 ppm, nickel at 385 ppm and zinc at 2,090 ppm. In addition, PCBs were detected at 1.2 ppm. No further investigation of this catch basin is proposed. The contaminants were detected in sediments located within the base of the catch basin and the integrity of the catch basin was determined to be solid.

Envirotactics performed a test pit adjacent to another catch basin located in the courtyard on the north side of Building #2. Sample S-7 was collected at a depth of 8 feet immediately above the depth to groundwater encountered in this area. Sample S-7 was analyzed for PP+40 with no contaminants detected above the MSSCC. No further investigation of this area is proposed since no contaminants were detected above the MSSCC.

One catch basin is located directly east of the southeast corner of Building #2. A test pit was conducted through the base of the catch basin with one soil sample, S-11, collected from below the catch basin base at depth of 5 feet below grade. The sample was analyzed for PP+40. The only compound detected above the MSSCC was the pesticide 4,4'-DDT at a level of 17.1 ppm. Envirotactics proposes to delineate the area of S-11 with analysis performed for pesticides.

The catch basin located at sample location S-11 connected to a circular catch basin located to the south of the southeast corner of Building #2. The basin was full of sediment. Envirotactics collected one sample, S-28, from the sediment within the catch basin. Sample S-28 was analyzed for PP+40. Sample S-28 detected TPH at a level of 10,200 ppm, benzo(a)anthracene at 1.79 ppm, nickel at 275 ppm, and PCBs at 1.86 ppm. Envirotactics proposes to collect one soil sample adjacent to the base of the catch basin with analysis for TPH, VO+10, BN+15, PP Metals and PCBs.

Another catch basin was investigated that was located to the east of Building #1. The catch basin was circular with brick construction. The basin had a discharge pipe that flowed to the north and connected to the system running parallel to the south of Building #2. A test pit was conducted adjacent to the catch basin and sample S-27 was collected below the base of the basin at a depth of 3 feet below grade. Sample S-27 was analyzed for PP+40 with no contaminants detected above the MSSCC. No further investigation of this area is proposed since no contaminants were detected above the MSSCC.

6.20 AOC-20 Former Transformers

Three electrical transformers are present on a concrete pad adjacent to the western side of Building #5. All lines connected to the transformers have been removed and oil staining is present on the concrete pad below the transformers. One sample was collected from each side of the concrete pad. The results of sampling detected PCB levels above the MSSCC ranging from 2.31 ppm to 41 ppm.

These transformers were determined to be the property of PSE&G. PSE&G has begun cleanup of the transformer area. The transformers have been removed and cleanup of the soils is scheduled to begin in the near future. This cleanup is being performed under NJDEP Case Number 01-04-10-1409-37.

No further investigation or remediation of this area is proposed since PSE&G is performing the required remediation.

6.21 Building Interiors

Numerous drums, process tanks, and miscellaneous containers are present in the interior of the buildings. The majority of the drums and process tanks are not labeled and the contents, if any, are unknown. Some drums are in poor condition. A general description of the materials present is provided below. All materials remaining at the site must be properly identified and disposed.

- Building #1 contains numerous 55 gallon drums and 5 gallon containers that are stored in the former process area of this building. In addition, several process vessels or tanks are present.

- Building #2 contains a large number of process tanks and vessels. The former use of the vessels and if any product is present is unknown. Several small miscellaneous containers of unidentified materials are also present.

- Building #3 contains several small containers of unidentified materials.

- Building #5 contains several drums and small containers of unidentified materials.

- Building #6 contains one drum that appears to be waste oil.

In addition, several unidentified gas cylinders are located in the courtyard area between Building #2 and Building #5.

Envirotactics proposes to properly classify and dispose of all materials. No soil investigation is proposed in association with the above described materials since these materials are located within the building interiors and did not discharge to the environment.

6.22 Groundwater

A preliminary groundwater investigation was conducted through the installation of temporary well points to determine if groundwater had been impacted at the site. Based on the results of this preliminary investigation, eight groundwater monitoring wells were installed throughout the site.

Two rounds of groundwater samples were collected from the wells with analysis for PP+40. The results of sampling indicate that volatile organic compounds consisting of benzene, toluene, chlorobenzene, chloroform, 1,2-dichloroethane, trichloroethene, tetrachlorethene, vinyl chloride and 1,1,2-trichloroethane are the main contaminants of concern at the site. No targeted base neutral compounds were detected above the GWQS. However, total base neutral TICs were detected above the GWQS in several of the wells.

Monitoring wells MW-4, MW-5 and MW-8 were the only wells to detect metals above the GWQS. MW-4 detected arsenic at a level of 9.63 ppb. MW-5 detected arsenic at a level of 30.5 ppb, lead at 13.8 ppb, and nickel at 166 ppb. MW-8 detected arsenic at a level of 10.1 ppb.

No levels of cyanide or PCBs were detected in any of the wells above the GWQS. MW-5 and MW-8 detected phenols above the GWQS. In addition, MW-8 detected pesticides above the GWQS.

Since elevated levels of contaminants were detected in the wells, additional delineation of groundwater is required. Due to the importance of this project to the City of Newark and the need to complete the investigation of the groundwater expediently, additional monitoring wells were installed at the site in July 2001. Eight additional shallow groundwater monitoring wells (MW-9 through MW-16) and one deep groundwater well (MW-17) were installed. MW-9 was installed in the central portion of the site as a replacement well for MW-4. All other shallow monitoring wells were installed around the perimeter of the property. The deep monitoring well (MW-17) was installed in the area of MW-5 since MW-5 detected the highest levels of contaminants. The approximate locations (i.e., surveying of the wells has not been completed) of the wells are provided on Figure 12, Attachment 2. A detailed description of the well installations and all

required documentation will be provided in the Remedial Investigation Report to be submitted following completion of the RIW.

Envirotactics proposes to sample all wells with the exception of MW-4 and MW-8 for VO+10, BN+15, PP Metals, Pesticides and Phenols. The wells will be sampled using low-flow sampling techniques. Low flow sampling is being conducted to determine if the levels of metals detected in the wells can be attributed to suspended solids (i.e., turbidity) in the samples. Monitoring well MW-4 will not be sampled since this well is monitoring water trapped within the foundation of a former tank dike. Envirotactics will properly abandon MW-4. In addition, MW-8 will not be sampled due to the presence of floating free product. It is anticipated the MW-8 will be abandoned during remediation of this area.

The goal of the groundwater investigation is to delineate the extent of groundwater contamination and document that natural attenuation is occurring. The anticipated remediation for the groundwater is removal of source soils, removal of floating product, and monitored natural attenuation. Once decreasing trends in contamination are documented, a Classification Exception Area (CEA) with a Natural Remediation Compliance Plan (NRCP) can be established for the contamination. The CEA/NRCP will likely include conducting annual sampling at plume monitoring points to ensure that the contamination is not impacting any receptors.

Detailed groundwater characterization is an important aspect of monitored natural attenuation. With this in mind, the following parameters provide important data regarding natural attenuation of chlorinated compounds. Therefore samples will be collected and analysis of geochemistry parameters conducted including iron total and dissolved, nitrate-nitrite, nitrogen ammonia, sulfite, sulfate, sulfide, methane, ethane, ethane, chloride, and total phosphorous. These analytical parameters are recommended in the EPA document "Technical Protocol for Evaluating Natural Attenuation of Chlorinated Solvents in Ground Water" dated September 1998.

Envirotactics also proposes to perform several slug tests at the site to assist in determining aquifer characteristics. This information will be utilizing in establishing the Classification Exception Area (CEA) for the site.

6.23 Reporting

Upon completion of the Remedial Investigation, a Remedial Investigation Report (RIR) and Remedial Action Workplan (RAW) will be submitted to the NJDEP. The reports will detail all soil and groundwater activities conducted and will provide proposed remedial actions for each area of concern.

CERTIFICATIONS
N.J.A.C. 7:26 -1.2 et. seq.

Any person making a submission to the Department required by this chapter and pursuant to N.J.A.C. 7:26 E, shall include the following signature and notarized certification, for each technical submittal. Additionally, the certification shall indicate the case name and address, case number, type of documents submitted, e.g. Remedial Action Report, for each technical submittal.

TYPE OF DOCUMENT Preliminary Assessment/Site Investigation/Remedial Investigation Workplan

CASE NAME Orbis Products Corporation

CASE ADDRESS 55 Virginia Street, Newark, New Jersey

CASE NUMBER 86-11-17-0100

The following certification shall be signed by:

1. For a corporation, by a principal executive officer of at least the level of vice president.
2. For a partnership or sole proprietorship, by a general partner of the proprietor, respectively, or:
3. For a municipality, State, Federal or other public agency, by either a principal executive officer or ranking elected official.
4. For the persons other than 1 through 3 above, by the person with legal responsibility for the site.

"I certify under penalty of law that I have personally examined and am familiar with the information submitted herein and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, to the best of my knowledge. I believe that the submitted information is true, accurate and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement that I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute, I am personally liable for the penalties."

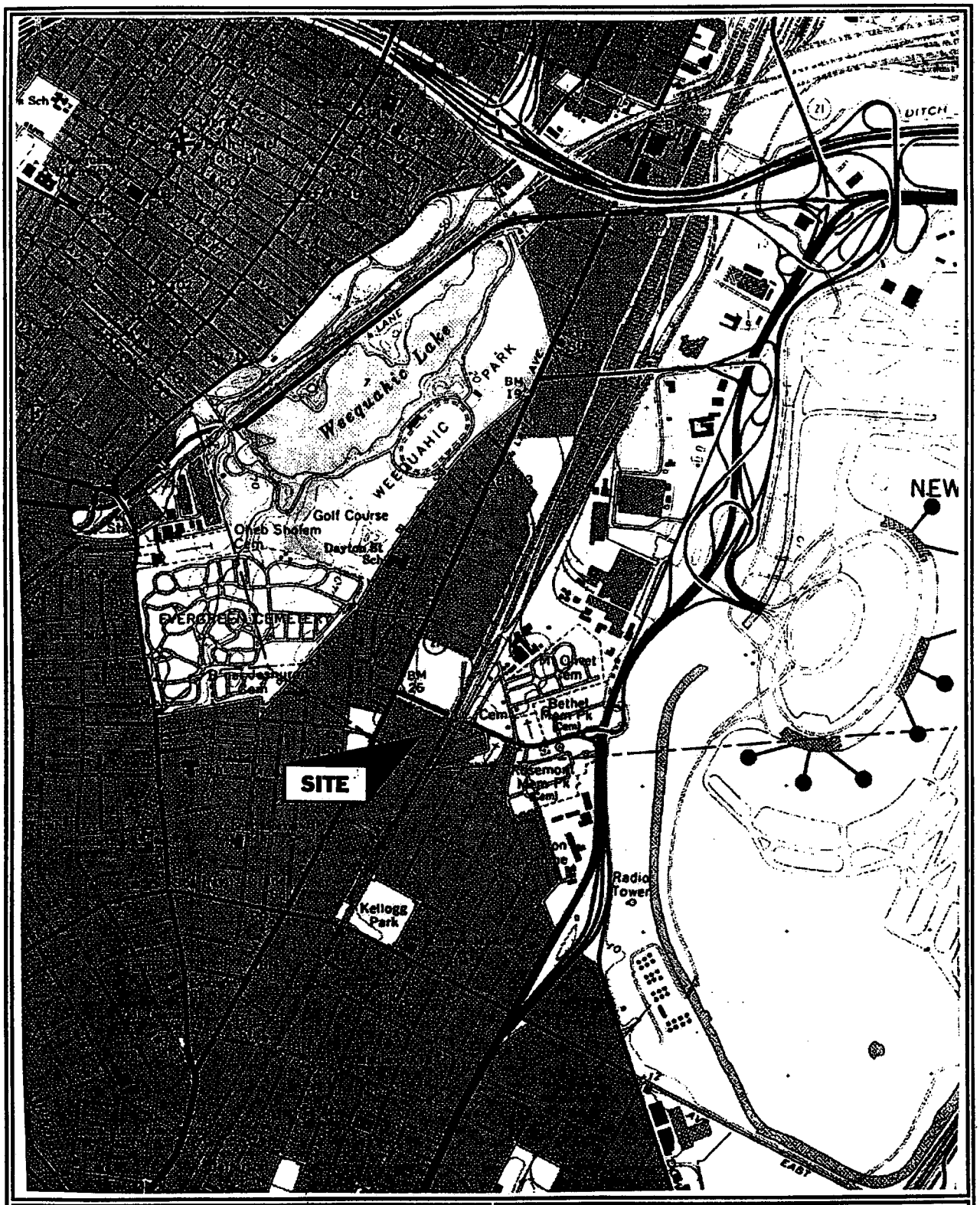
PRINTED NAME ALFRED L. FAIELLA TITLE DIRECTOR OF DEVELOPMENT

SIGNATURE [signature] DATE 2/4/02

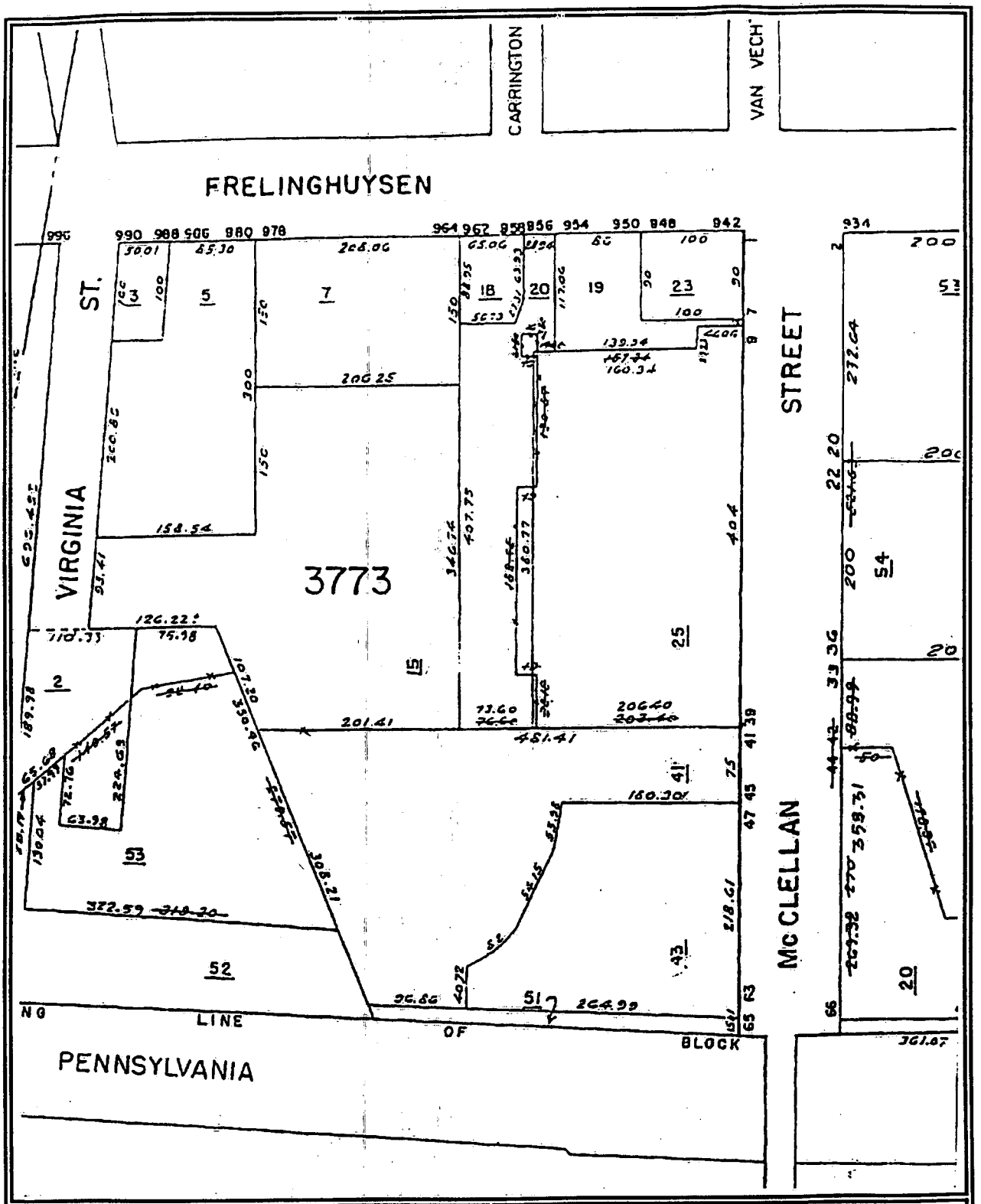
NOTARY SIGNATURE [signature] DATE 2/4/02

Notary Public
State of New Jersey
Regina Bayley
My Commission Expires 03/03/2003

Envirotactics, Inc. **2517 Highway 35** **Building D, Suite 202** **Manasquan, NJ 08736**	**FIGURE 1 Site Location Map** **Orbis Products Corporation** **55 Virginia Street, Newark** **Block 3773, Lots 15, 41, 43 and 53** **Source: DeLorme Street Atlas**



Envirotactics, Inc. **2517 Highway 35** **Building D, Suite 202** **Manasquan, NJ 08736**	**FIGURE 2 USGS Map** **Orbis Products Corporation** **55 Virginia Street, Newark** **Block 3773, Lots 15, 41, 43 and 53** **Source: Elizabeth Quadrangle**



Envirotactics, Inc. **2517 Highway 35** **Building D, Suite 202** **Manasquan, NJ 08736**	**FIGURE 3 Tax Map** **Orbis Products Corporation** **55 Virginia Street, Newark** **Block 3773, Lots 15, 41, 43 and 53**

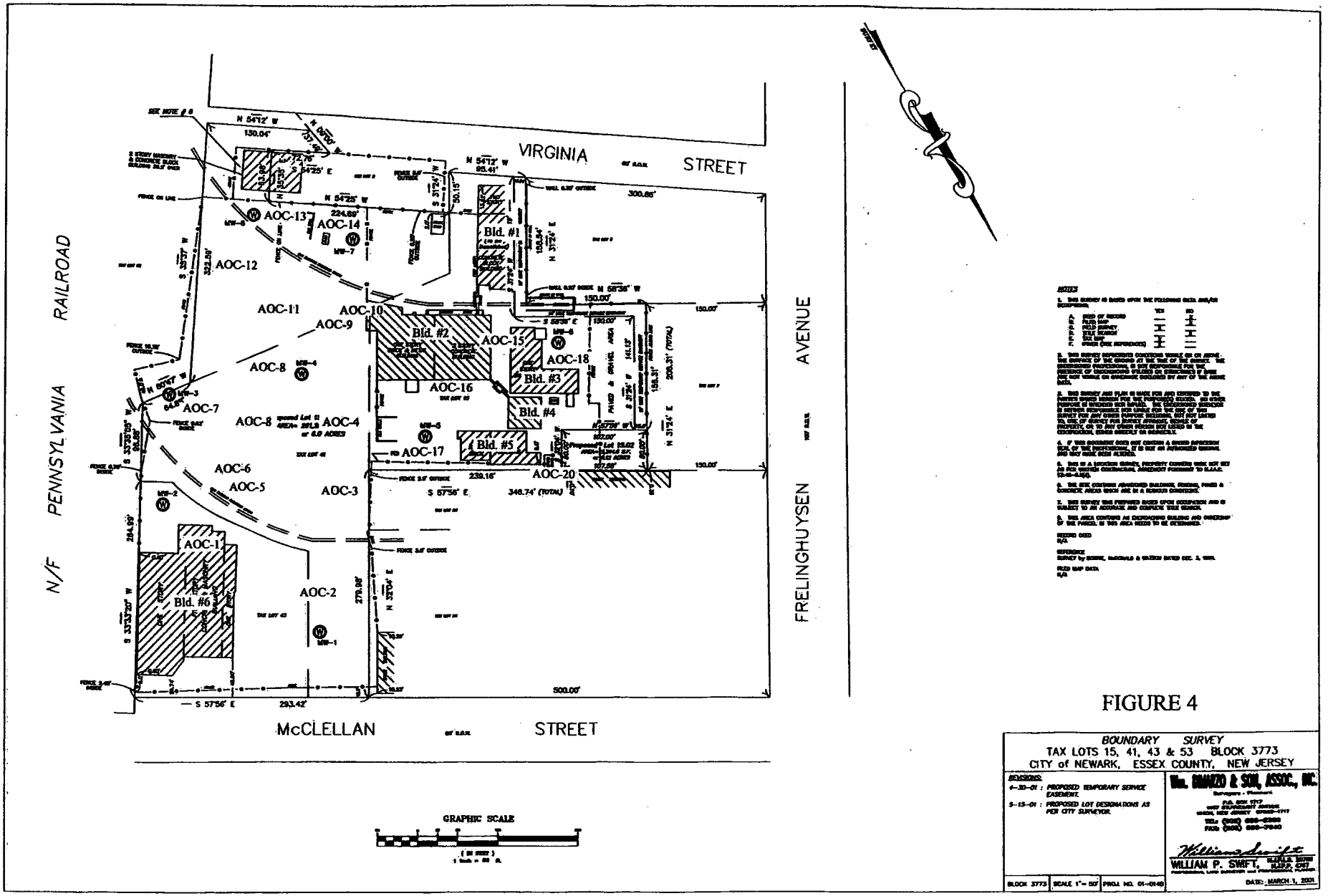
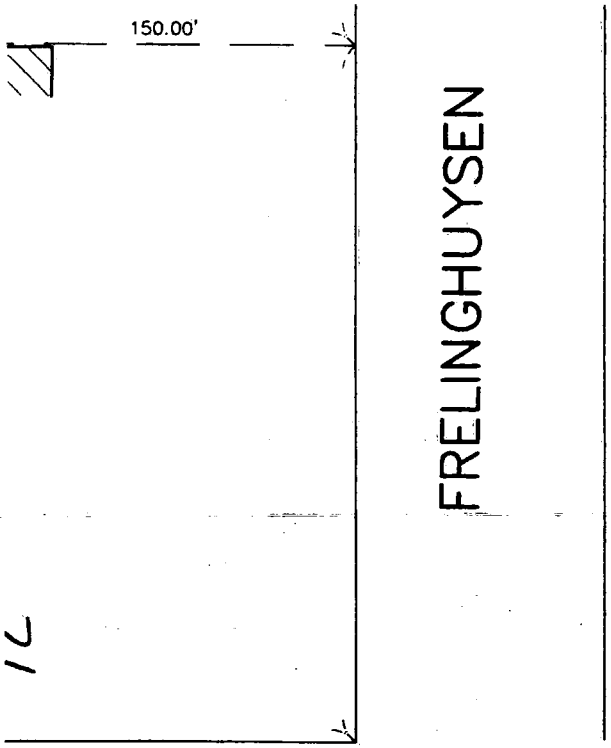

VIRGINIA STREET
McCLELLAN STREET
N/F PENNSYLVANIA RAILROAD
FRELINGHUYSEN AVENUE
AOC-1
AOC-2
AOC-3
AOC-4
AOC-5
AOC-6
AOC-7
AOC-8
AOC-9
AOC-10
AOC-11
AOC-12
AOC-13
AOC-14
AOC-15
AOC-16
AOC-17
AOC-18
AOC-20
Bld. #1
Bld. #2
Bld. #3
Bld. #4
Bld. #5
Bld. #6
GRAPHIC SCALE
BOUNDARY SURVEY
TAX LOTS 15, 41, 43 & 53 BLOCK 3773
CITY of NEWARK, ESSEX COUNTY, NEW JERSEY
REVISIONS:
4-30-01 : PROPOSED TEMPORARY SERVICE EASEMENT.
5-15-01 : PROPOSED LOT DESIGNATIONS AS PER CITY SURVEYOR.
Wm. DIMARZO & SON, ASSOC., INC.
WILLIAM P. SWIFT,
BLOCK 3773
SCALE 1"= 50'
PROJ. NO. 01-0148
DATE: MARCH 1, 2001

FIGURE 4



GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)

1 inch = 50 ft.

FIGURE 7

SOIL SAMPLE LOCATION MAP

TAX LOTS 15, 41, 43 & 53 BLOCK 3773

CITY of NEWARK, ESSEX COUNTY, NEW JERSEY

REVISIONS:

BLOCK 3773	SCALE 1"= 50'	PROJ. NO. 01-030B

Wm. DiMARZO & SON, ASSOC., INC.

Surveyors • Planners

P.O. BOX 544
639 CHANCELLOR AVENUE
IRVINGTON, NEW JERSEY 07111-0544

TEL: (973) 372-1400
FAX: (973) 372-1543

William Swift

WILLIAM P. SWIFT, N.J.P.L.S. 20788 N.J.P.P. 4787
PROFESSIONAL LAND SURVEYOR and PROFESSIONAL PLANNER

DATE: JUNE 22, 2001

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

FIGURE 7

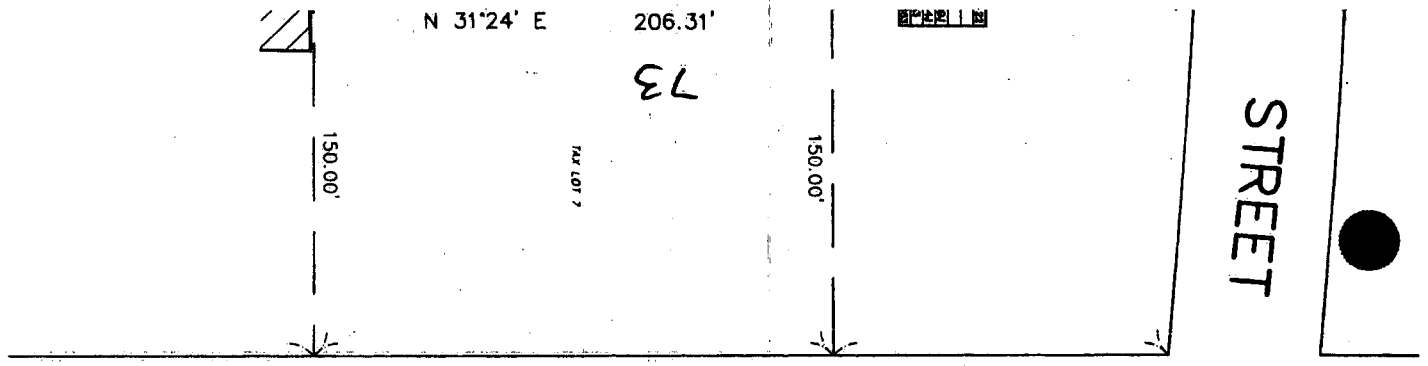
SOIL SAMPLE LOCATION MAP

TAX LOTS 15, 41, 43 & 53 BLOCK 3773

CITY of NEWARK, ESSEX COUNTY, NEW JERSEY

REVISIONS:

Wm DiMARZO & SON ASSOC INC



NGHUYSEN 100' R.O.W. AVENUE

N 31°24' E 206.31'

74

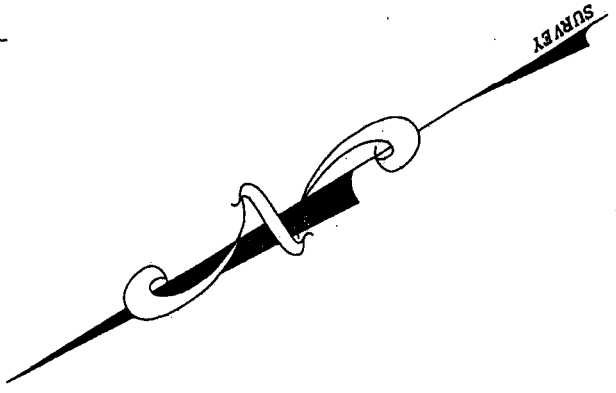
150.00'

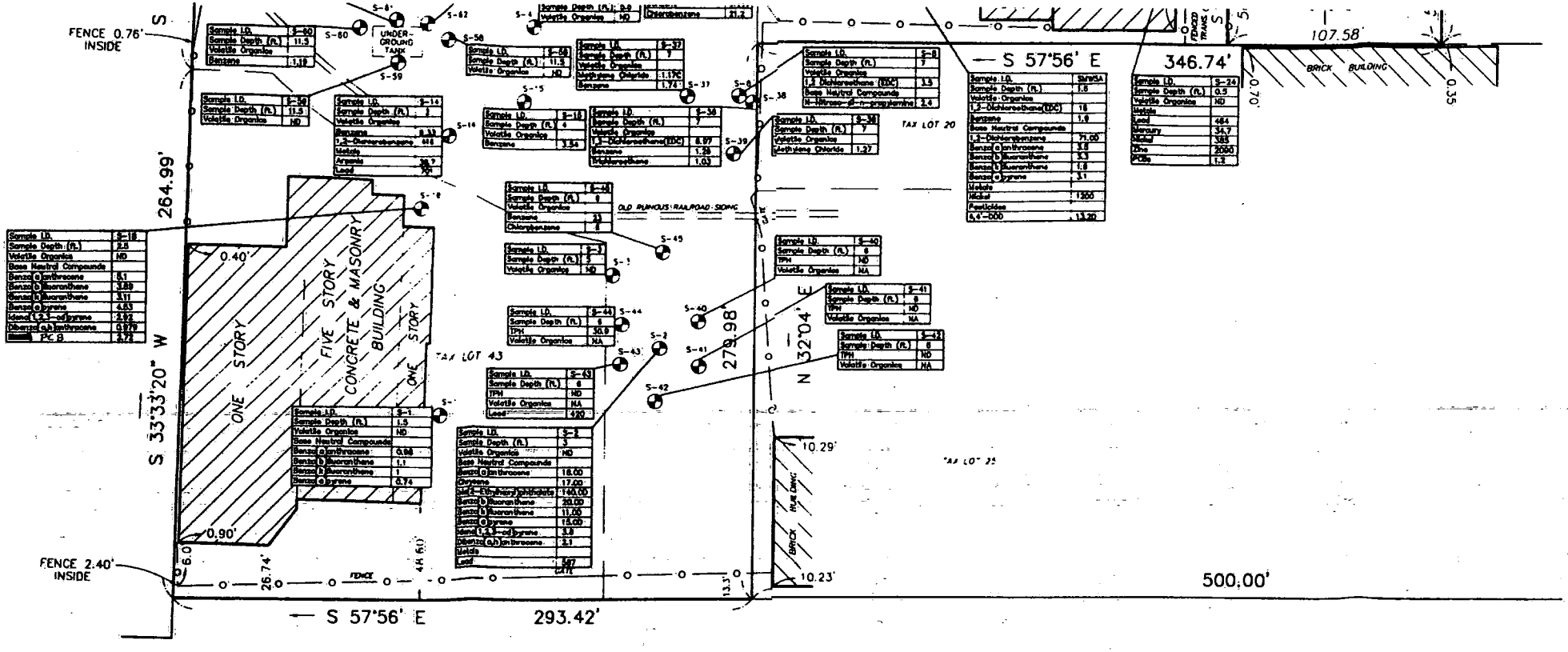
TAX LOT 7

STREET

0' R.O.W.

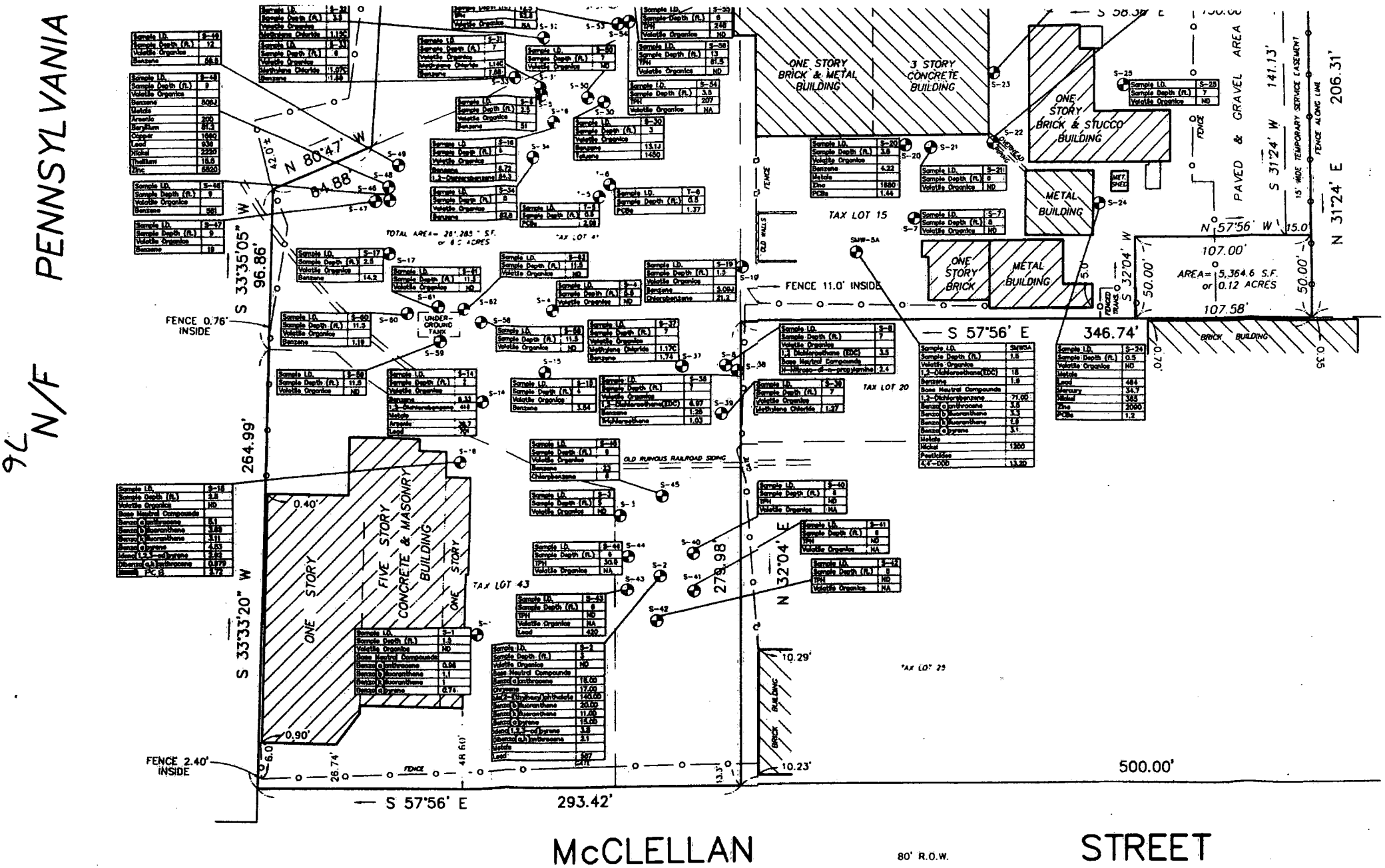
AVENUE





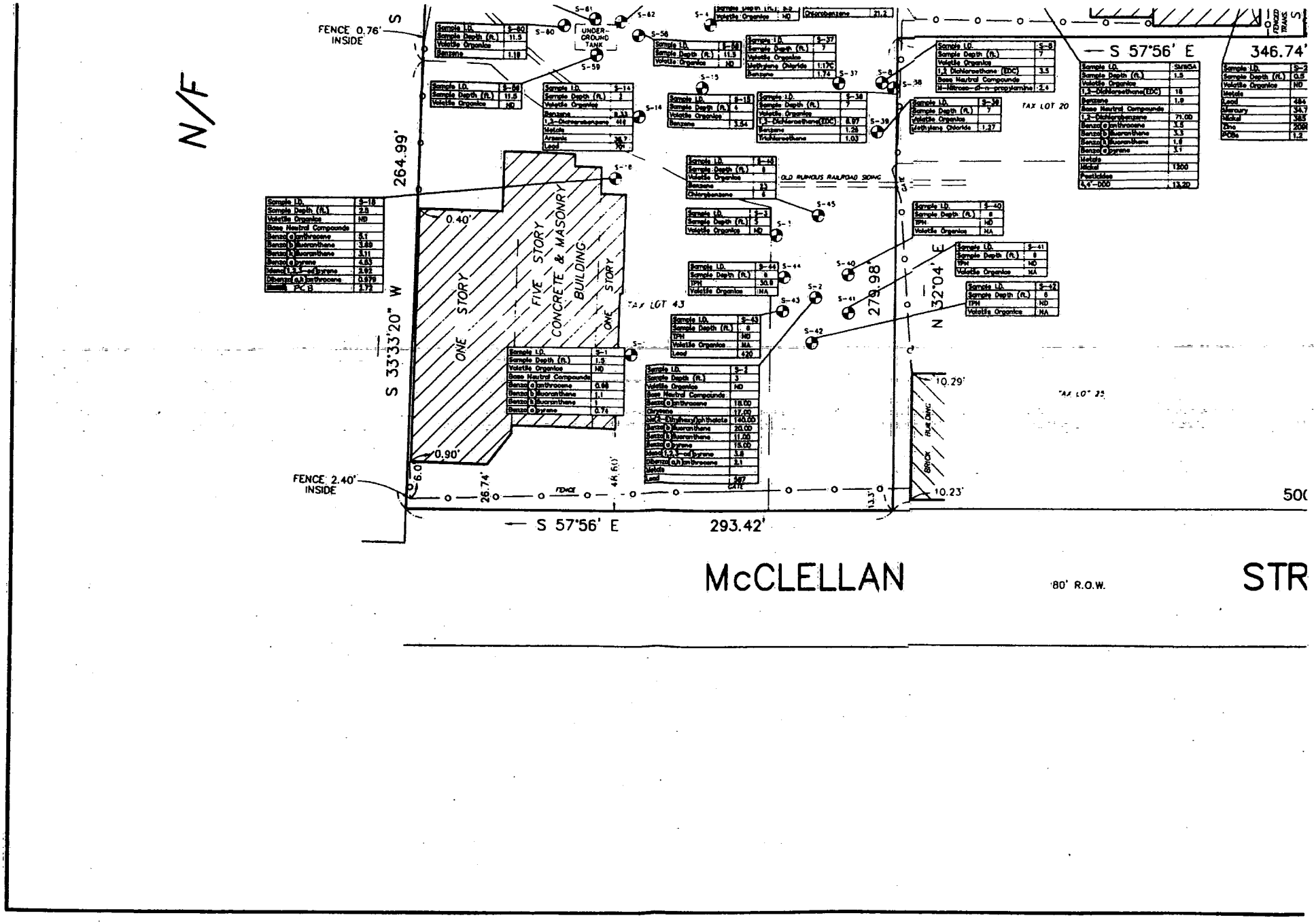
N/F
FENCE 0.76' INSIDE
FENCE 2.40' INSIDE
S 33°33'20" W
264.99'
0.40'
0.90'
ONE STORY
FIVE STORY CONCRETE & MASONRY BUILDING
ONE STORY
TAX LOT 43
TAX LOT 20
TAX LOT 25
OLD RUINOUS RAILROAD SIDING
BRICK BUILDING
BRICK BUILDING
S 57°56' E
293.42'
279.98'
N 32°04' E
346.74'
107.58'
0.70'
0.35
10.29'
10.23'
500.00'
26.74'
48.60'
6.0
13.3'
FENCE
GATE
McCLELLAN
80' R.O.W.
STREET

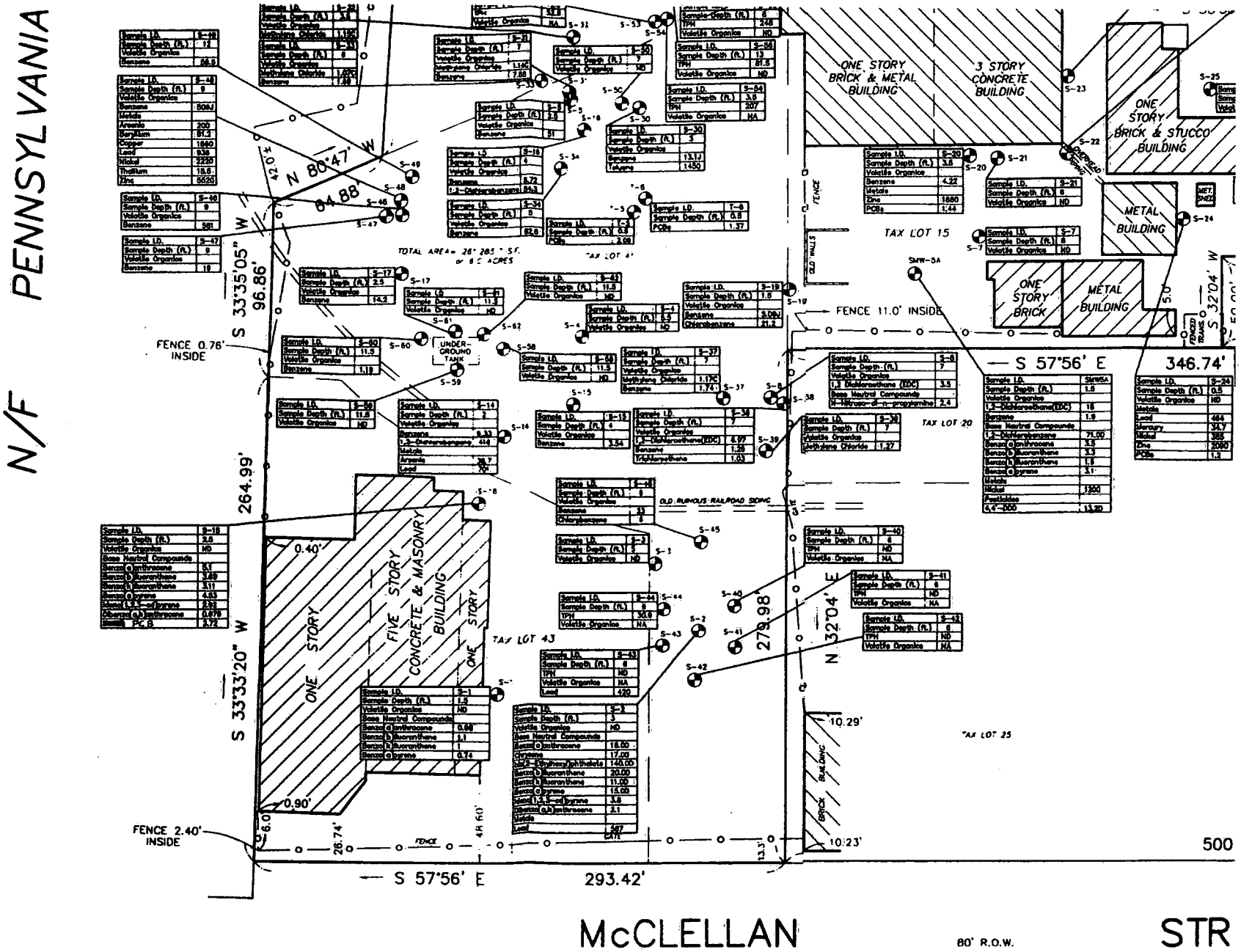
75


PENNSYLVANIA
N/F
N 80°47' W
84.88'
S 33°35'05" W
96.86'
264.99'
S 33°33'20" W
FENCE 0.76' INSIDE
FENCE 2.40' INSIDE
ONE STORY BRICK & METAL BUILDING
3 STORY CONCRETE BUILDING
ONE STORY BRICK & STUCCO BUILDING
METAL BUILDING
ONE STORY BRICK
METAL BUILDING
TAX LOT 15
TAX LOT 20
TAX LOT 43
TAX LOT 25
FENCE 11.0' INSIDE
UNDER-GROUND TANK
OLD RUINOUS RAILROAD SIDING
ONE STORY
FIVE STORY CONCRETE & MASONRY BUILDING
ONE STORY
PAVED & GRAVEL AREA
15' WIDE TEMPORARY SERVICE EASEMENT
FENCE ALONG LINE
S 31°24' W
141.13'
N 31°24' E
206.31'
N 57°56' W
107.00'
AREA= 5,364.6 S.F. or 0.12 ACRES
107.58'
S 32°04' W
50.00'
S 57°56' E
346.74'
N 32°04' E
279.98'
S 57°56' E
293.42'
500.00'
McCLELLAN
80' R.O.W.
STREET

RGINIA
60' R.O.W.
STREET
WALL 0.30' OUTSIDE
300.86'
N 31°24' E
158.54'
Sample I.D. S-23
Sample Depth (ft.) 1
Volatile Organics
1,2-Dichloroethane(EDC) 1.14
Trichloroethene 3.12
Base Neutral Compounds
Benzo(b)fluoranthene 1.06
Benzo(a)pyrene 1.15
Indeno(1,2,3-cd)pyrene 2.82
Pesticides
4,4'-DDD 4,450
ARSENIC 2.21
PCB 27.6
TAX LOT 5
Sample I.D. S-22
Sample Depth (ft.) 6
Volatile Organics
Trichloroethene 1.09J
Tetrachloroethene 1.44J
Chlorobenzene 1.63
PCBs 0.863
WALL 0.10' INSIDE
N 58°36' W
150.00'
FENCE IN WALL
150.00'
15' WIDE TEMPORARY SERVICE EASEMENT
S 58°36' E
150.00'
S-25
Sample I.D. S-25
Sample Depth (ft.) 7
Volatile Organics ND
& STUCCO
UILDING
FENCE
PAVED & GRAVEL AREA
S 31°24' W
141.13'
15' WIDE TEMPORARY SERVICE EASEMENT
FENCE ALONG LINE
206.31'
N 31°24' E
TAX LOT 7
MET. SHED
S-24
N 57°56' W
15.0
107.00'
S 32°04' W
50.00'
AREA= 5,364.6 S.F
or 0.12 ACRES
50.00'
107.58
FENCED TRANS
150.00'
346.74'
BRICK BUILDING
0.70
0.35
Sample I.D. S-24
Sample Depth (ft.) 0.5
Volatile Organics ND
484
34.7
385
2090
1.2
AVENUE
100' R.O.W.
NGHUYSEN

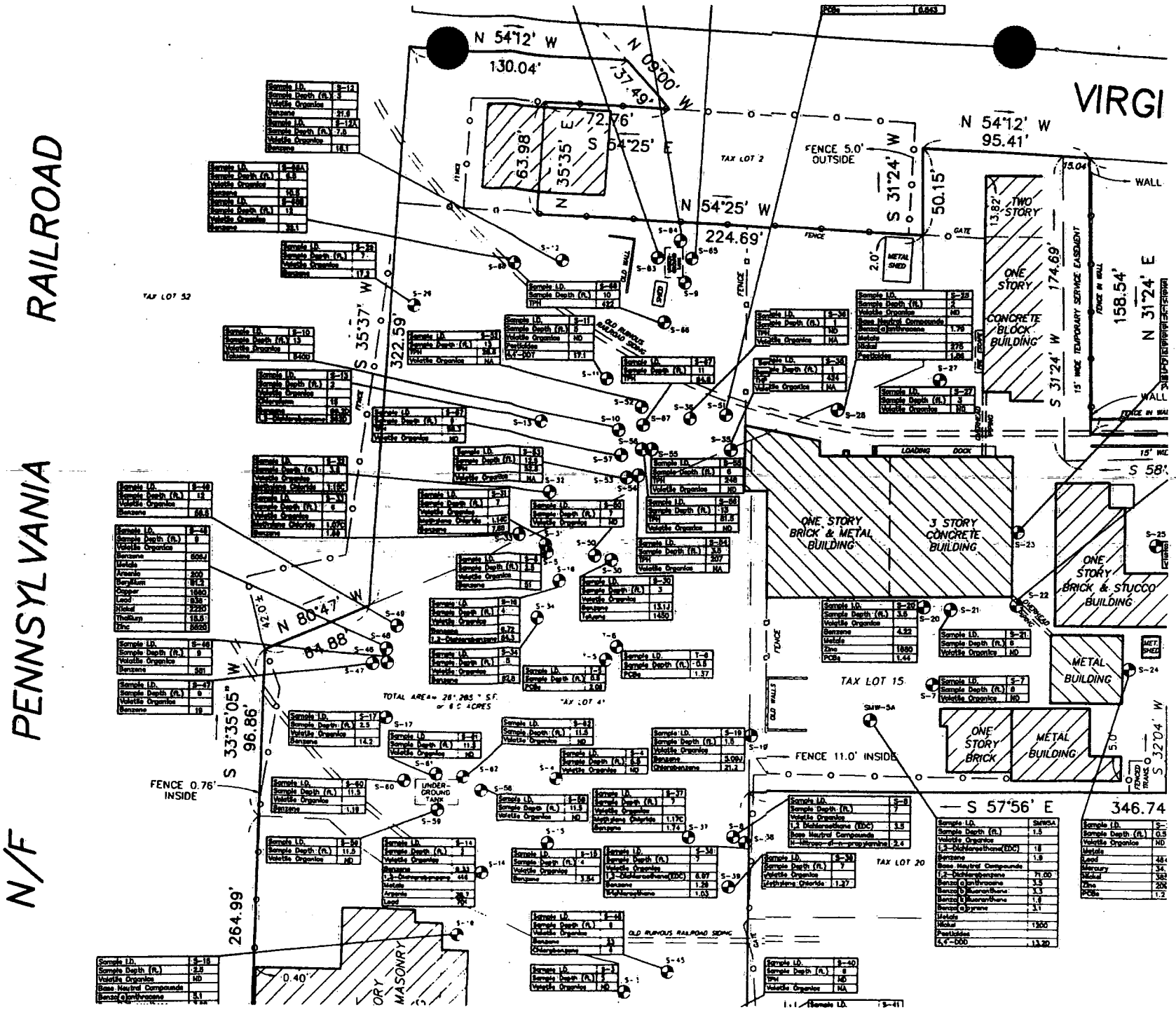
SURVEY
GINIA
60' R.O.W.
STREET
WALL 0.30' OUTSIDE
300.86'
N 31°24' E
TAX LOT 5
Sample I.D. S-23
Sample Depth (ft.) 1
Volatile Organics
1,2-Dichloroethene(TDC) 1.14
Trichloroethene 3.13
Base-Neutral Compounds
Benzo(b)fluoranthene 1.06
Benzo(k)fluorene 1.15
Pesticides
4,4'-DDD 4.400
ARSENIC 3.24
PCB 27.6
Sample I.D. S-22
Sample Depth (ft.) 6
Volatile Organics
Trichloroethene 1.09J
Tetrachloroethene 1.44J
Chlorobenzene 1.83
PCBs 0.983
WALL 0.10' INSIDE
N 58°36' W
150.00'
150.00'
15' WIDE TEMPORARY SERVICE EASEMENT
S 58°36' E
150.00'
S-25
Sample I.D. S-25
Sample Depth (ft.) 7
Volatile Organics ND
PAVED & GRAVEL AREA
141.13'
S 31°24' W
FENCE
FENCE ALONG LINE
15' WIDE TEMPORARY SERVICE EASEMENT
206.31'
N 31°24' E
TAX LOT 7
S-24
N 57°56' W
15.0
AVENUE
100' R.O.W.


N/F
FENCE 0.76' INSIDE
FENCE 2.40' INSIDE
S 33°33'20" W
264.99'
S 57°56' E
293.42'
279.98'
N 32°04' E
346.74'
ONE STORY
FIVE STORY CONCRETE & MASONRY BUILDING
ONE STORY
TAX LOT 43
TAX LOT 20
TAX LOT 25
OLD RUINOUS RAILROAD SIDING
UNDER-GROUND TANK
BRICK BUILDING
FENCE
GATE
McCLELLAN
80' R.O.W.
STR



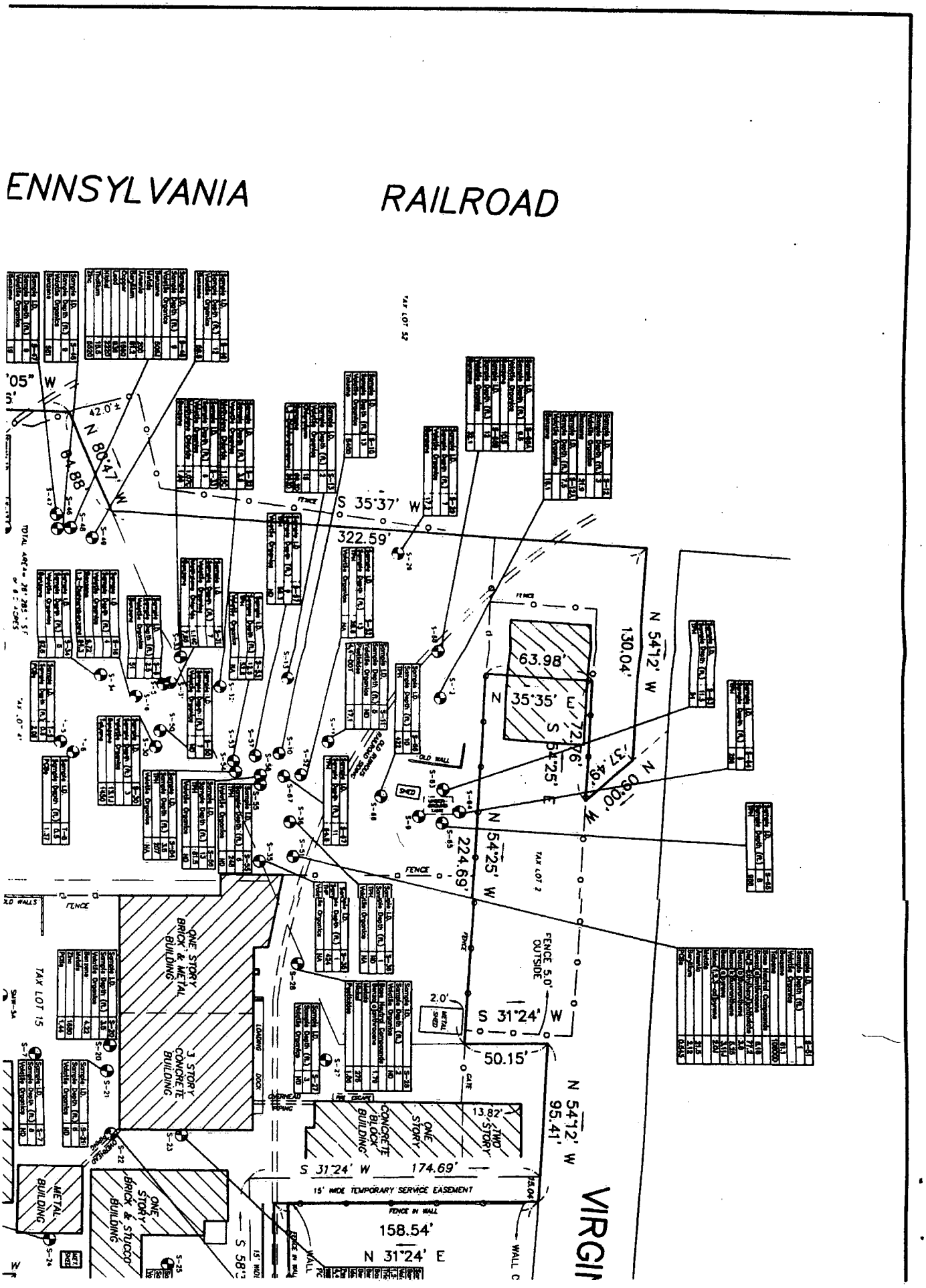
PENNSYLVANIA
N/F
N 80°47' W
84.88'
42.0'±
S 33°35'05" W
96.86'
FENCE 0.76' INSIDE
264.99'
S 33°33'20" W
0.40'
0.90'
FENCE 2.40' INSIDE
6.0
26.74'
48.60'
S 57°56' E
293.42'
ONE STORY
FIVE STORY CONCRETE & MASONRY BUILDING
ONE STORY
TAX LOT 43
TOTAL AREA = 26' 285 ' S.F. or 6 C ACRES
UNDER-GROUND TANK
ONE STORY BRICK & METAL BUILDING
3 STORY CONCRETE BUILDING
ONE STORY BRICK & STUCCO BUILDING
METAL BUILDING
ONE STORY BRICK
METAL BUILDING
TAX LOT 15
FENCE 11.0' INSIDE
OLD WALLS
FENCE
OLD RUINOUS RAILROAD SIDING
TAX LOT 20
TAX LOT 25
BRICK BUILDING
279.98'
N 32°04' E
10.29'
10.23'
S 57°56' E
346.74'
S 32°04' W
500
McCLELLAN
80' R.O.W.
STR

80



N/F PENNSYLVANIA RAILROAD
VIRGI
N 54°12' W
130.04'
N 09°00' W
37.49'
72.76'
S 54°25' E
63.98'
N 35°35' E
N 54°25' W
224.69'
N 54°12' W
95.41'
S 31°24' W
50.15'
FENCE 5.0' OUTSIDE
TAX LOT 2
TAX LOT 52
S 35°37' W
322.59'
N 80°47' W
84.88'
S 33°35'05" W
96.86'
264.99'
FENCE 0.76' INSIDE
UNDER-GROUND TANK
TOTAL AREA= 28,285 S.F. or 6.0 ACRES
TAX LOT 4
TAX LOT 15
TAX LOT 20
FENCE 11.0' INSIDE
ONE STORY BRICK & METAL BUILDING
3 STORY CONCRETE BUILDING
ONE STORY BRICK & STUCCO BUILDING
METAL BUILDING
ONE STORY BRICK
METAL BUILDING
ONE STORY CONCRETE BLOCK BUILDING
TWO STORY
LOADING DOCK
WALL
15' WIDE TEMPORARY SERVICE EASEMENT
FENCE IN WALL
OLD RUINOUS RAILROAD SIDING
OLD WALLS
S 57°56' E
346.74
S 32°04' W
158.54'
N 31°24' E
174.69'
S 31°24' W

18


ENNSYLVANIA RAILROAD
TAX LOT 52
N 80°47' W
84.88'
42.0'
S 35°37' W
322.59'
N 54°12' W
130.04'
63.98'
S 35°35' E
72.76'
S 54°25' E
37.49'
N 09°00' W
N 54°25' W
224.69'
TAX LOT 2
FENCE
FENCE 5.0' OUTSIDE
S 31°24' W
50.15'
2.0'
METAL SHED
N 54°12' W
95.41'
13.82'
ONE STORY
TWO STORY
CONCRETE BLOCK BUILDING
ONE STORY BRICK & METAL BUILDING
3 STORY CONCRETE BUILDING
LOADING DOCK
TAX LOT 15
S 31°24' W
174.69'
15' WIDE TEMPORARY SERVICE EASEMENT
FENCE IN WALL
158.54'
N 31°24' E
METAL BUILDING
ONE STORY BRICK & STUCCO BUILDING
VIRGI

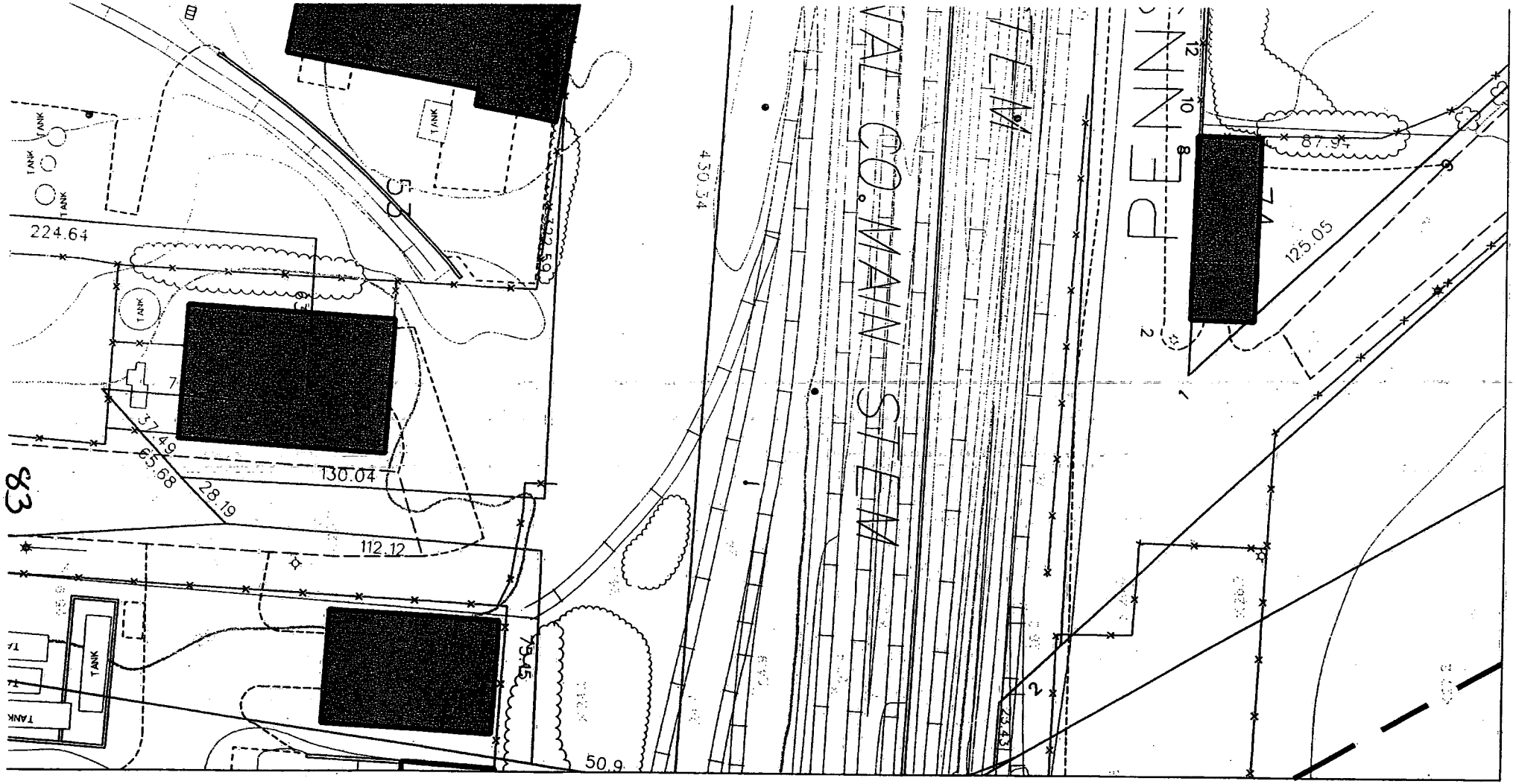


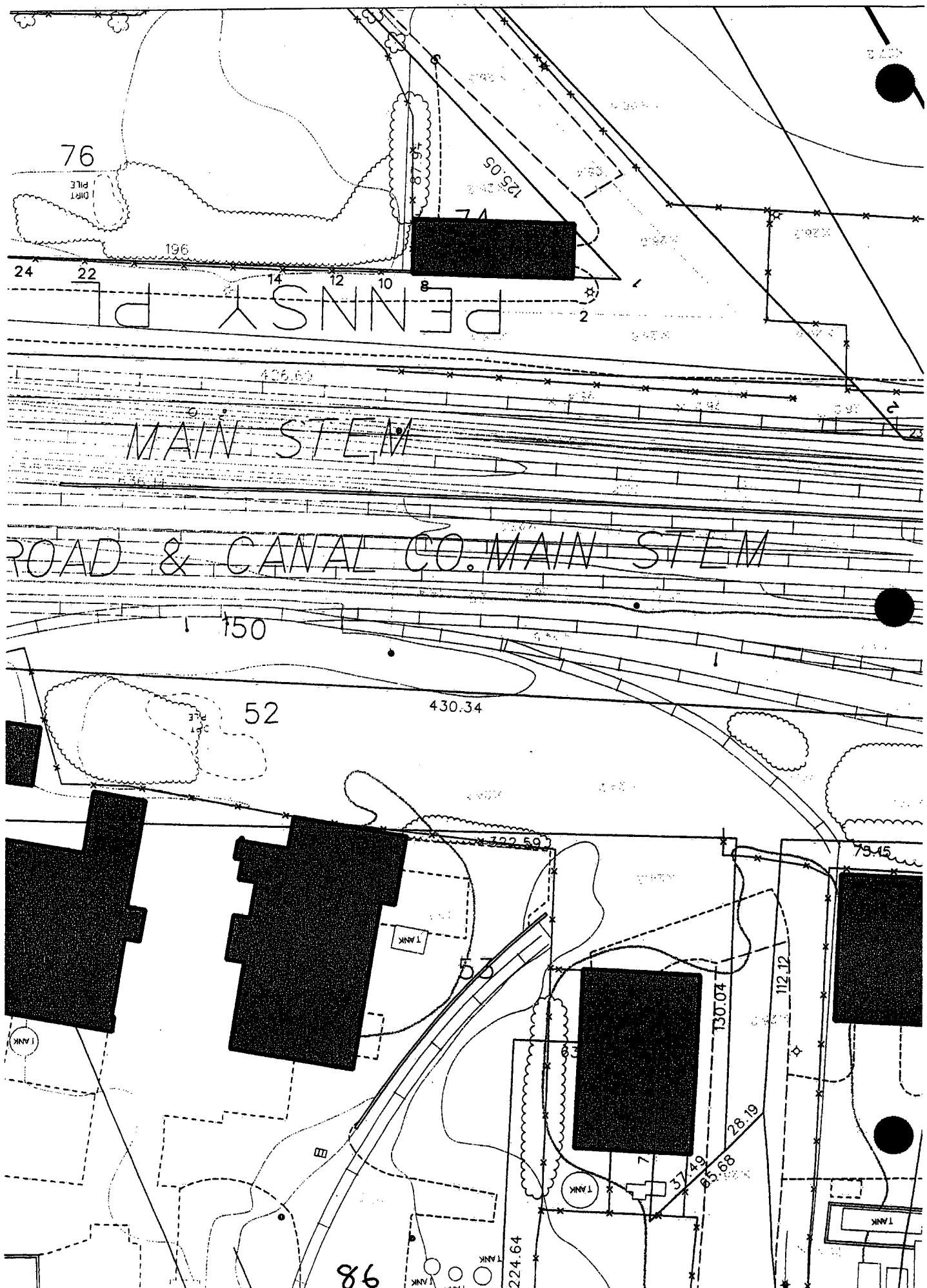
FIGURE 6

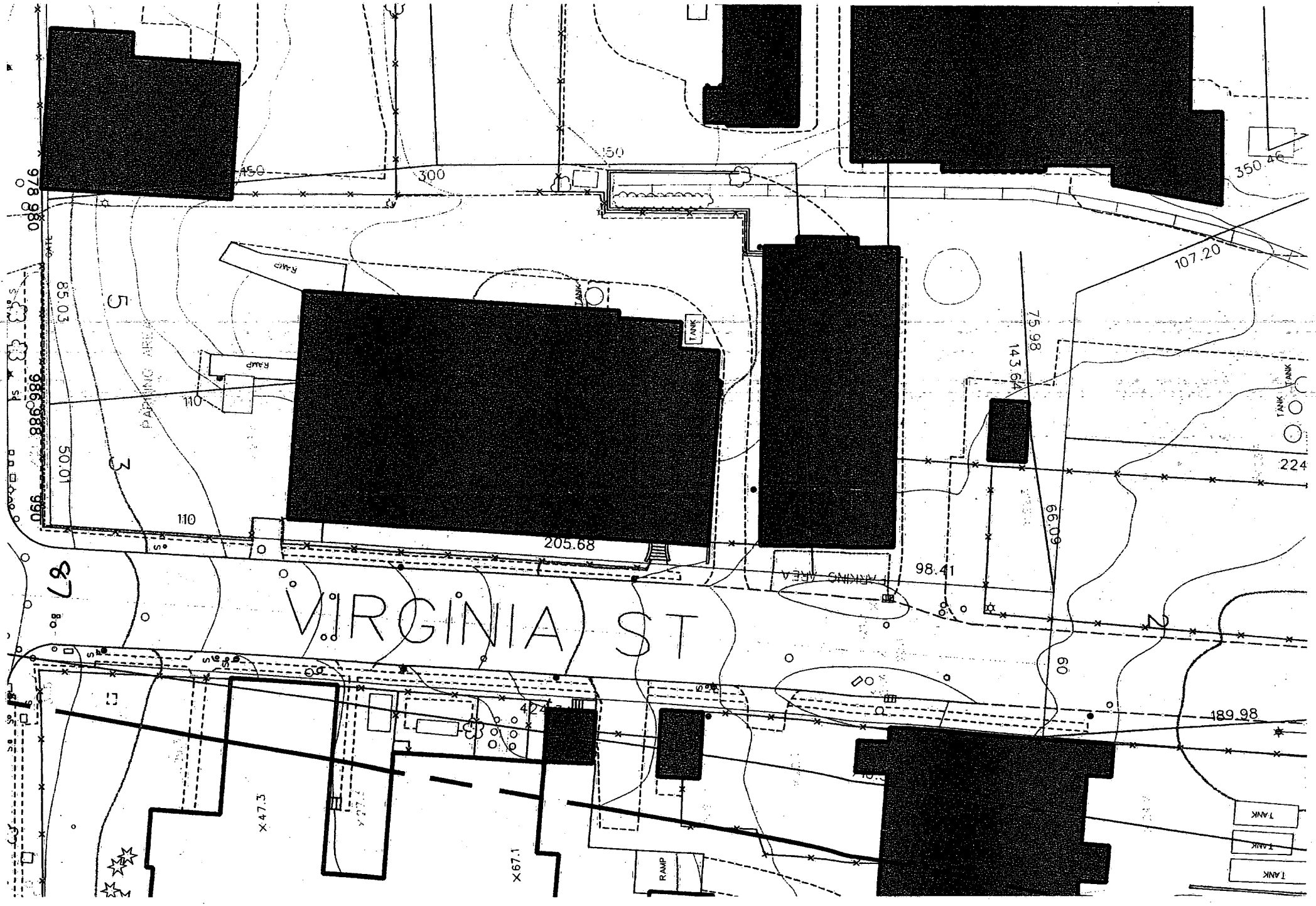
GIS MAP

Former Orbis Products
Newark, Essex County

VIRGINIA ST
TANK
RAMP
224.64
189.98
66.09
60
75.98
143.64
98.41
205.68
110
84

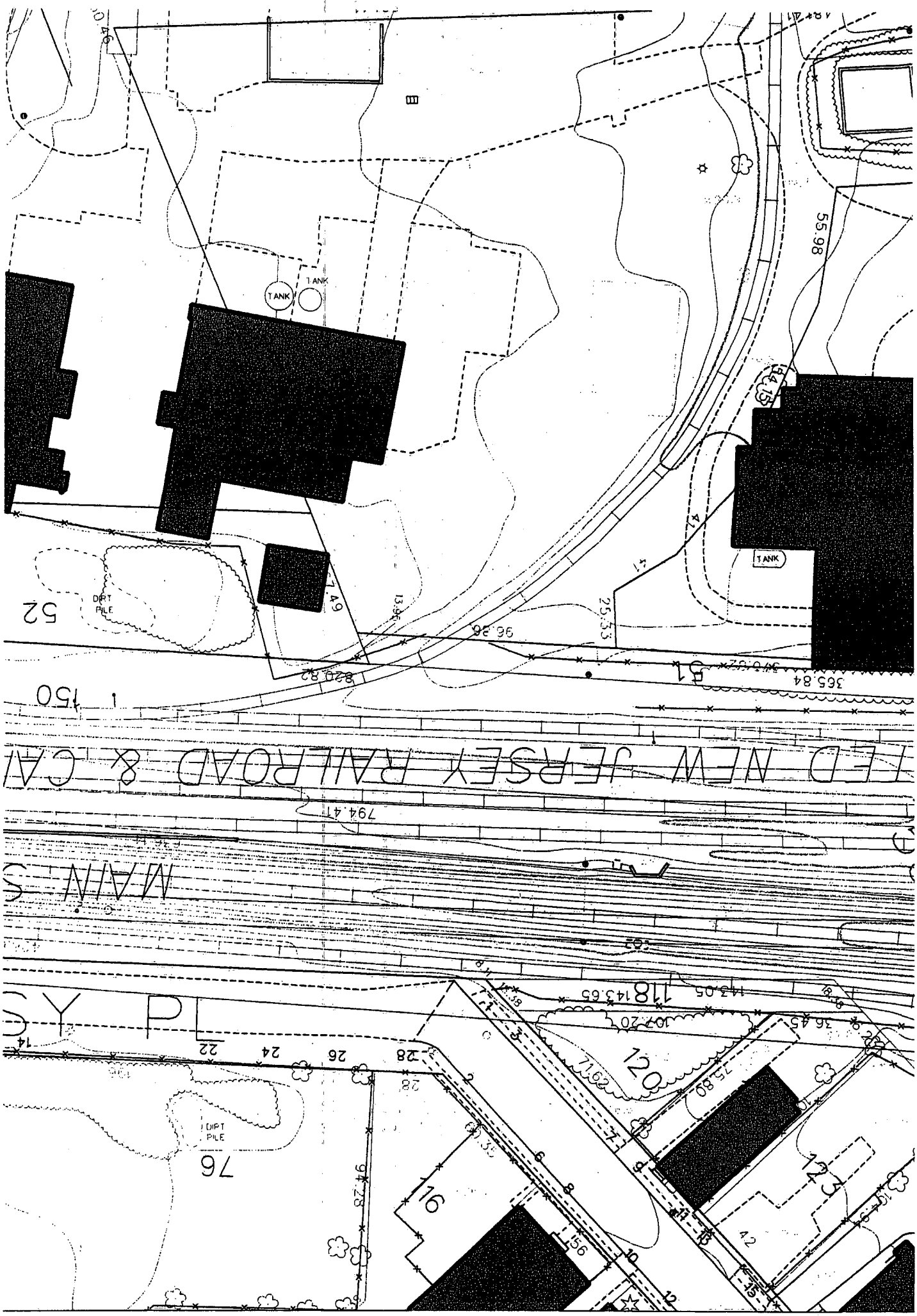
VIRGIN
FRELI
RAMP
110
110
5
3
85.03
50.01
986.988
990
BENCHES
OBSCUR


76
DIRT PILE
196
24
22
14
12
10
8
2
87.94
125.05
PENNSY PL
426.69
MAIN STEM
ROAD & CANAL CO. MAIN STEM
150
52
430.34
322.59
79.15
TANK
53
130.04
112.12
28.19
37.49
65.68
224.64
86

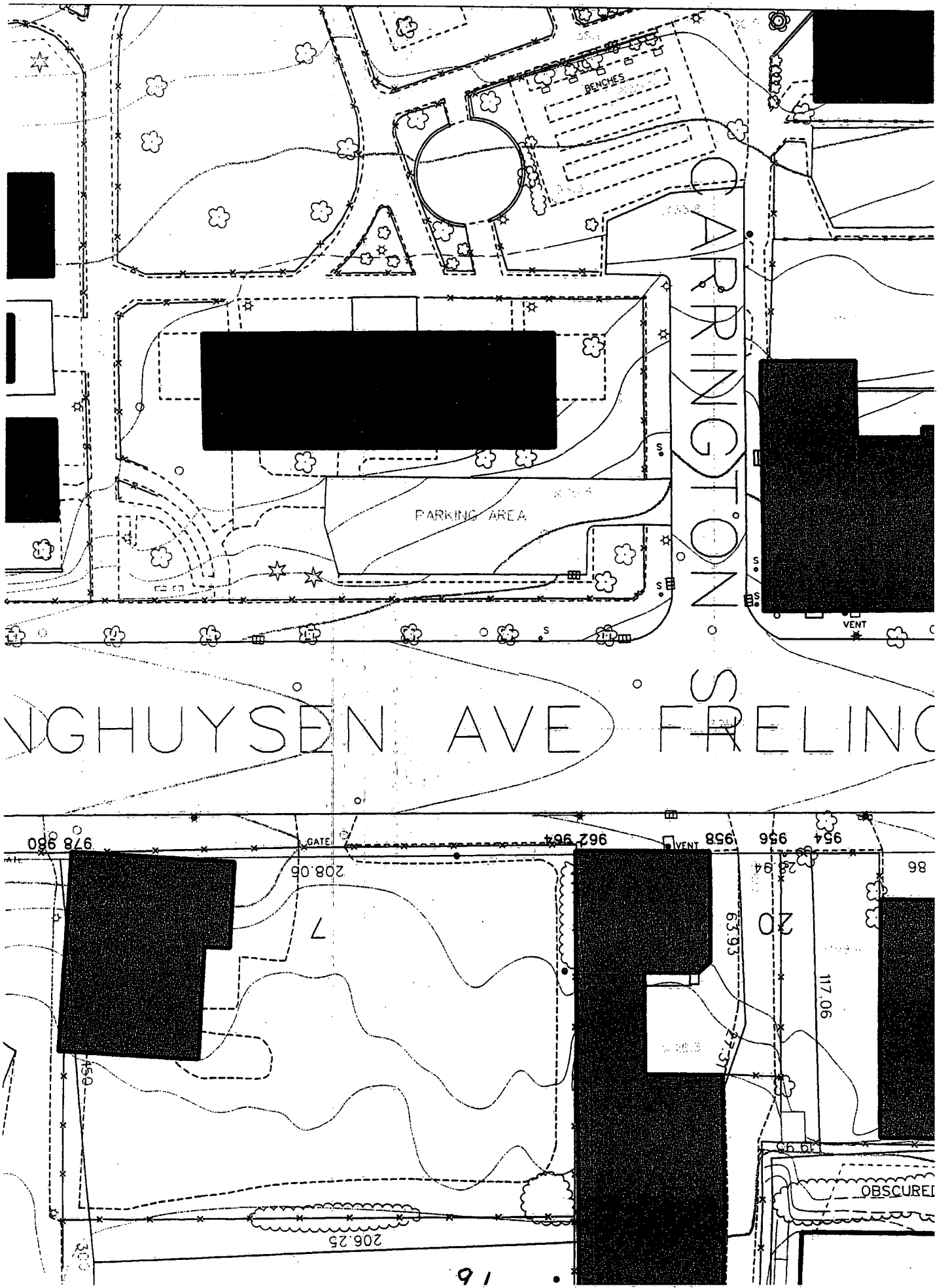


VIRGINIA ST
PARKING AREA
RAMP
TANK
150
300
350.46
107.20
75.98
143.64
224
66.09
98.41
205.68
189.98
85.03
50.01
110
5
3
2
87

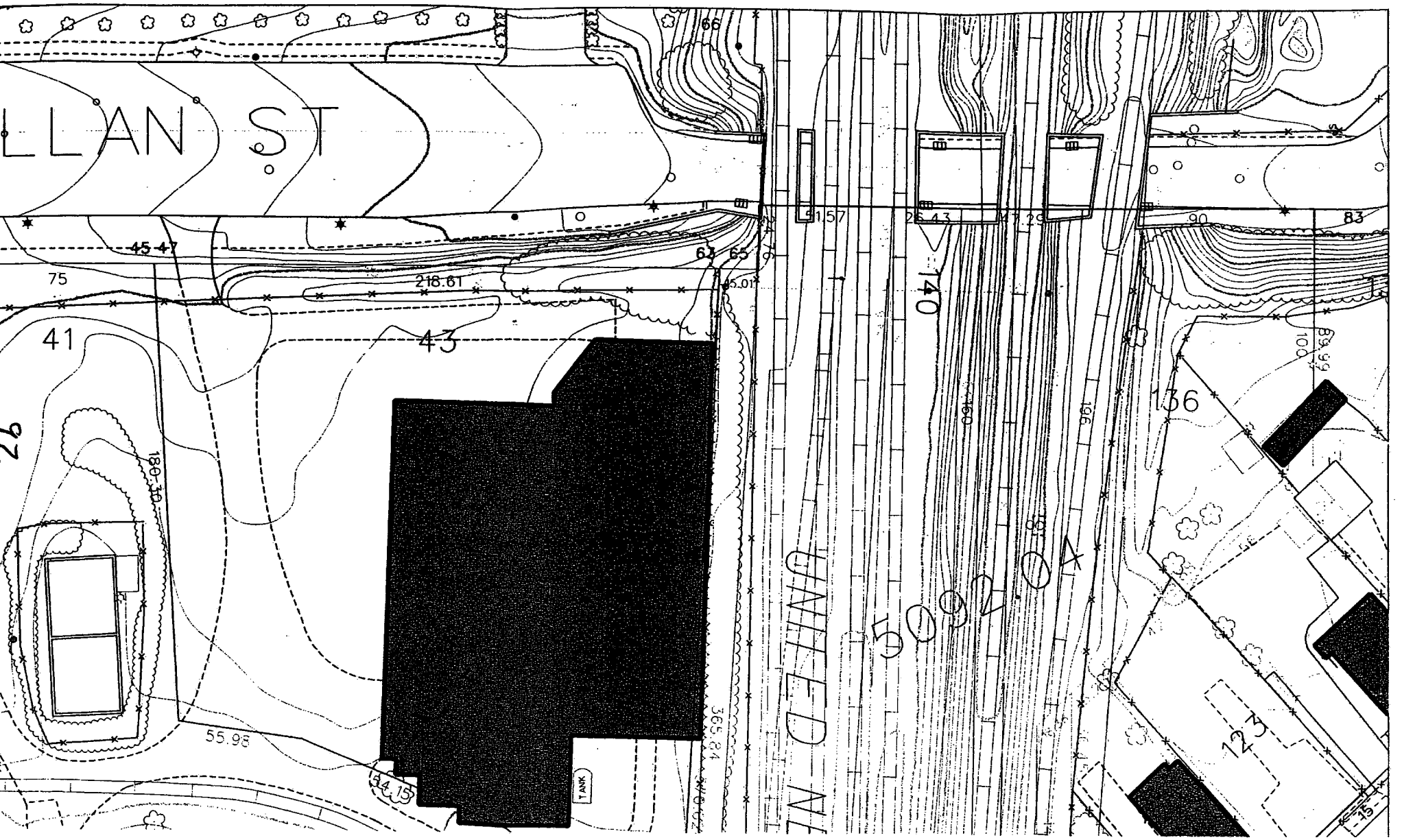
RAMP
RAMP
PARKING AREA
5
3
85.03
50.01
978 980
986 988 990
FRELINGHUYS
OBSCURED
BENCHES

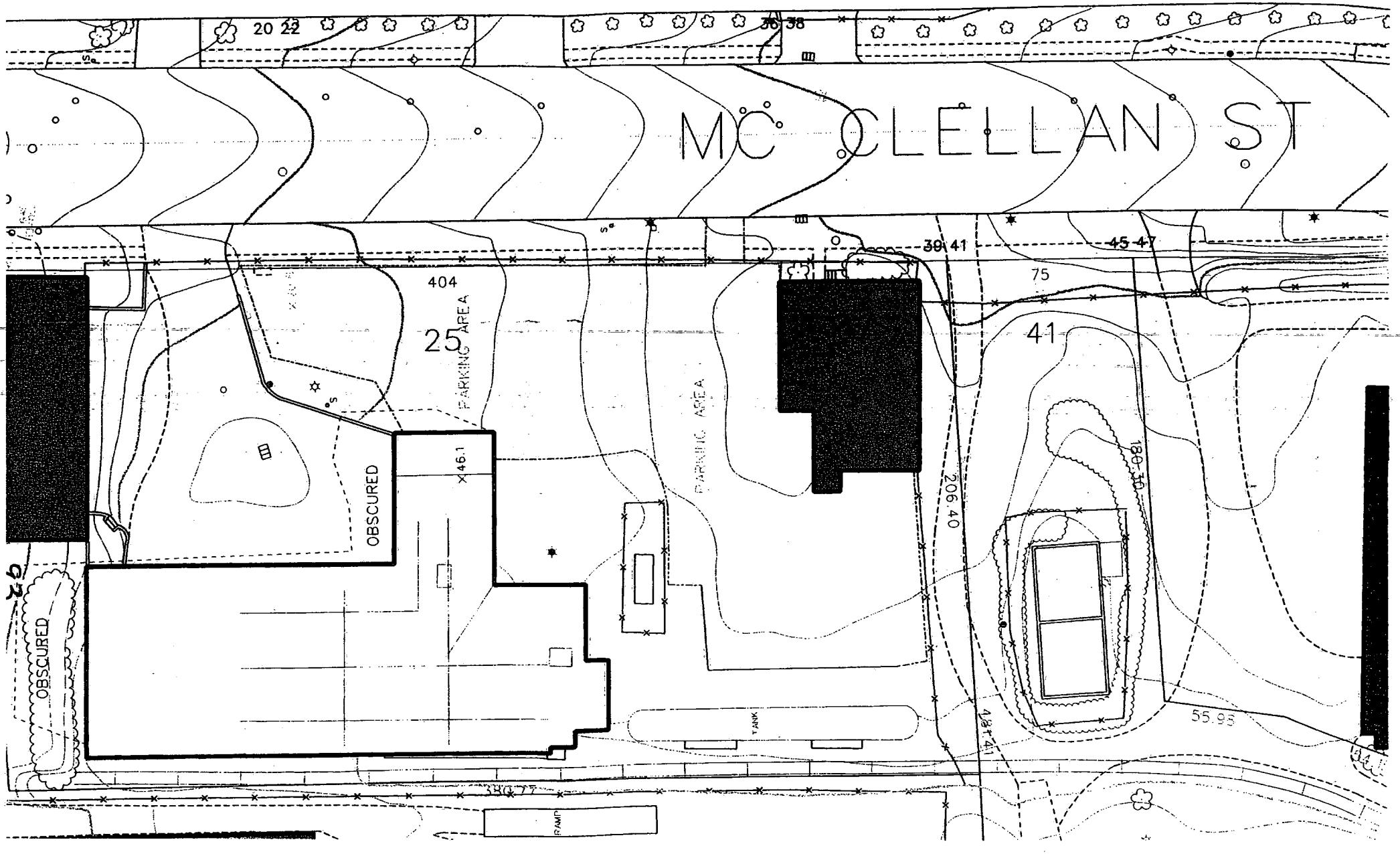

TANK
TANK
TANK
DIRT PILE
DIRT PILE
52
150
51
118
120
123
116
76
55.98
365.84
820.82
794.41
143.65
143.05
107.20
71.62
75.80
36.45
94.28
96.36
25.33
13.96
7.49

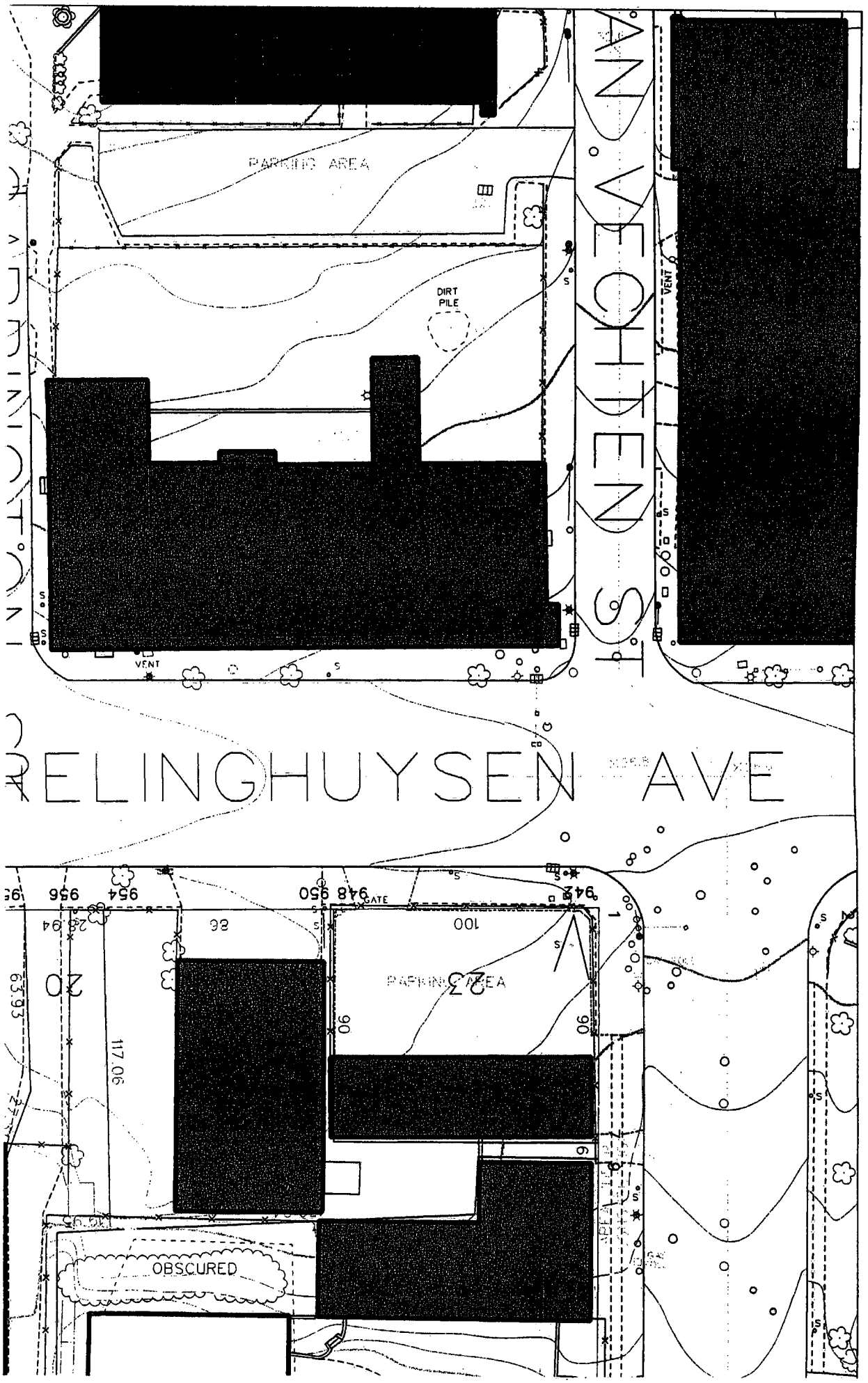
208.06
7
63.93
2
117.06
OBSCURE
206.25
TANKS
×44.2
RAMP
TANK
15
201.41
73.60

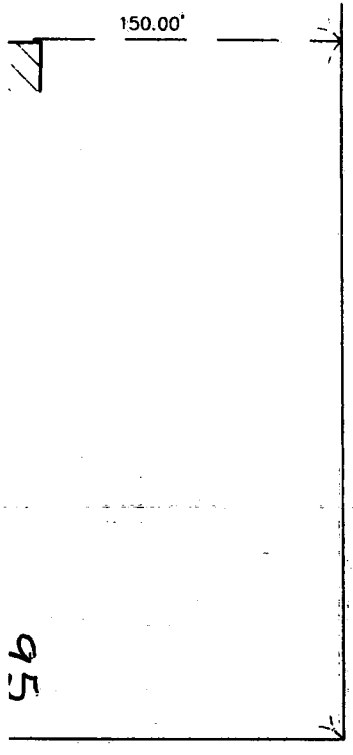


BENCHES
CARRINGTON ST
PARKING AREA
VENT
NGHUYSEN AVE
FRELING
978 980
GATE
962 964
VENT
958
956
954
208.06
28.94
63.93
117.06
OBSCURED
206.25


LLAN ST
66
45 47
75
218.61
63 65
45.01
51.57
26.43
47.29
90
83
41
43
140
136
180.30
55.98
54.15
365.84
TANK
123
5092.04


MC CLELLAN ST
20 22
36 38
39 41
45 47
404
25
PARKING AREA
PARKING AREA
OBSCURED
OBSCURED
46.1
75
41
206.40
180.30
55.98
TANK
RAMP


PARKING AREA
DIRT PILE
VENT
VENT
RELINGHUYSEN AVE
GATE
100
90
90
117.06
63.93
OBSCURED



FRELINGHUYSEN

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

FIGURE 7

SOIL SAMPLE LOCATION MAP

TAX LOTS 15, 41, 43 & 53 BLOCK 3773
CITY of NEWARK, ESSEX COUNTY, NEW JERSEY

REVISIONS:

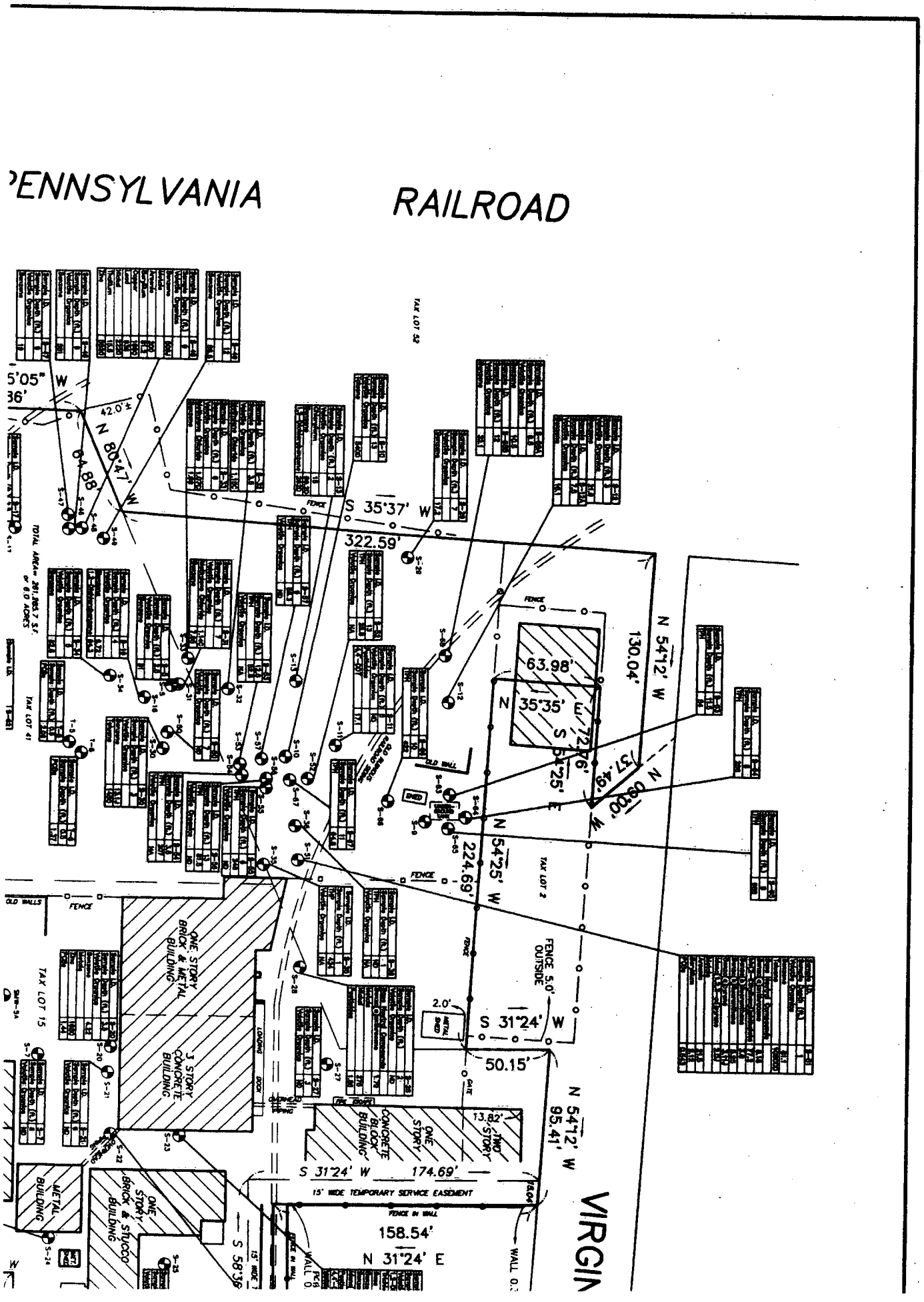
BLOCK 3773	SCALE 1"= 50'	PROJ. NO. 01-030B

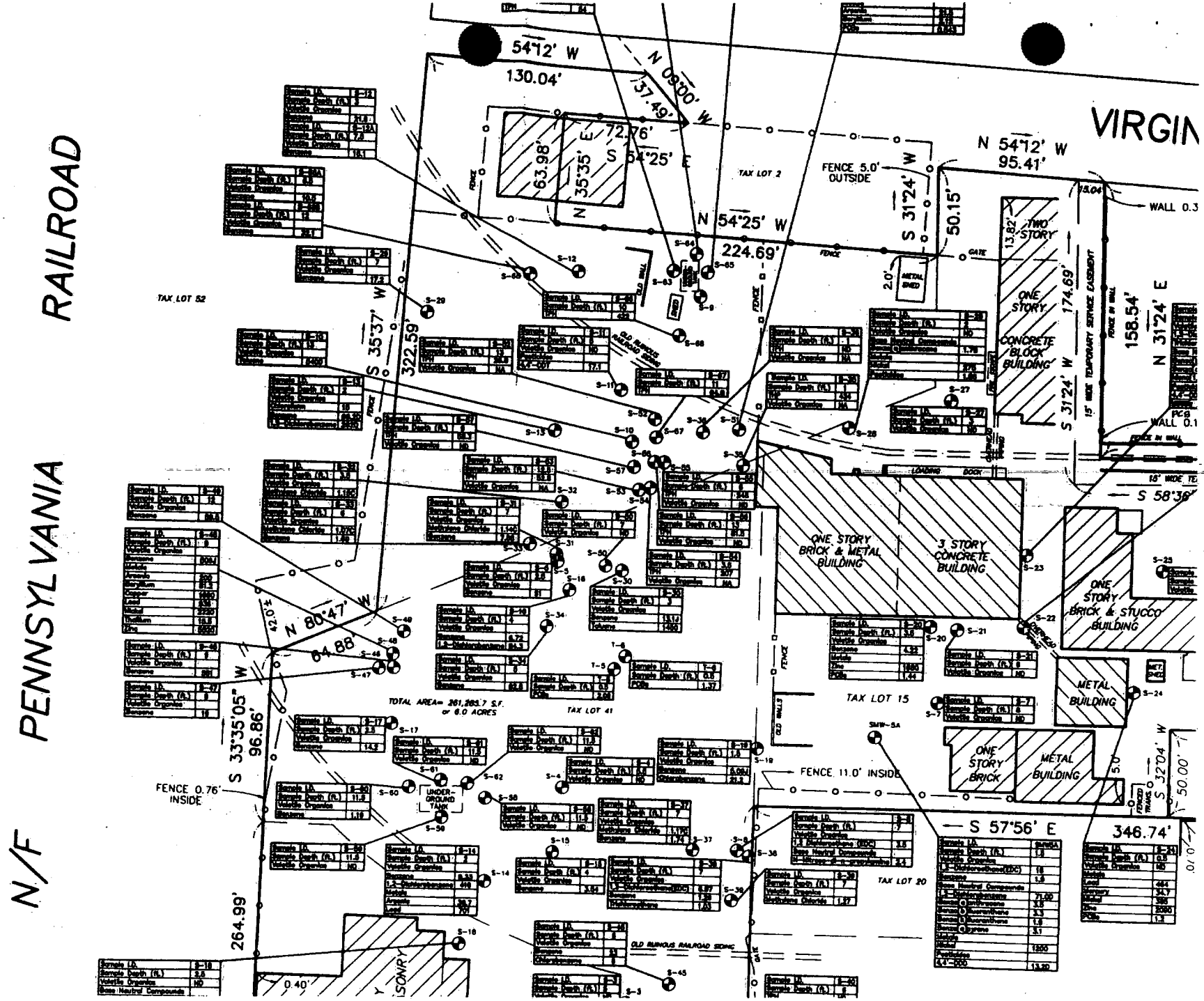
Wm. DiMARZO & SON, ASSOC., INC.
Surveyors • Planners
P.O. BOX 544
639 CHANCELLOR AVENUE
IRVINGTON, NEW JERSEY 07111-0544
TEL: (973) 372-1400
FAX: (973) 372-1543

William Swift

WILLIAM P. SWIFT, N.J.P.L.S. 20788, N.J.P.P. 4767
PROFESSIONAL LAND SURVEYOR and PROFESSIONAL PLANNER

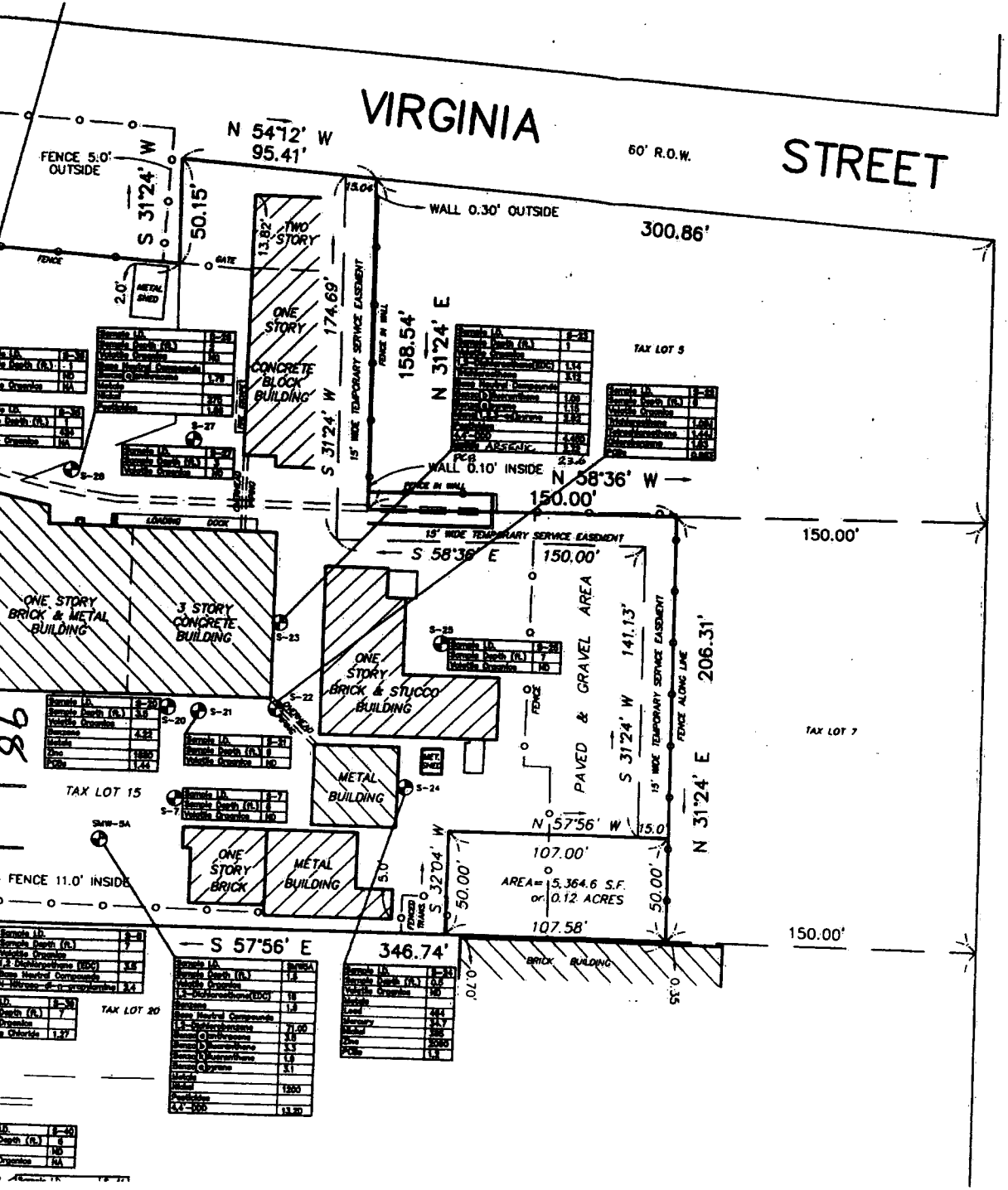
DATE: JUNE 22, 2001

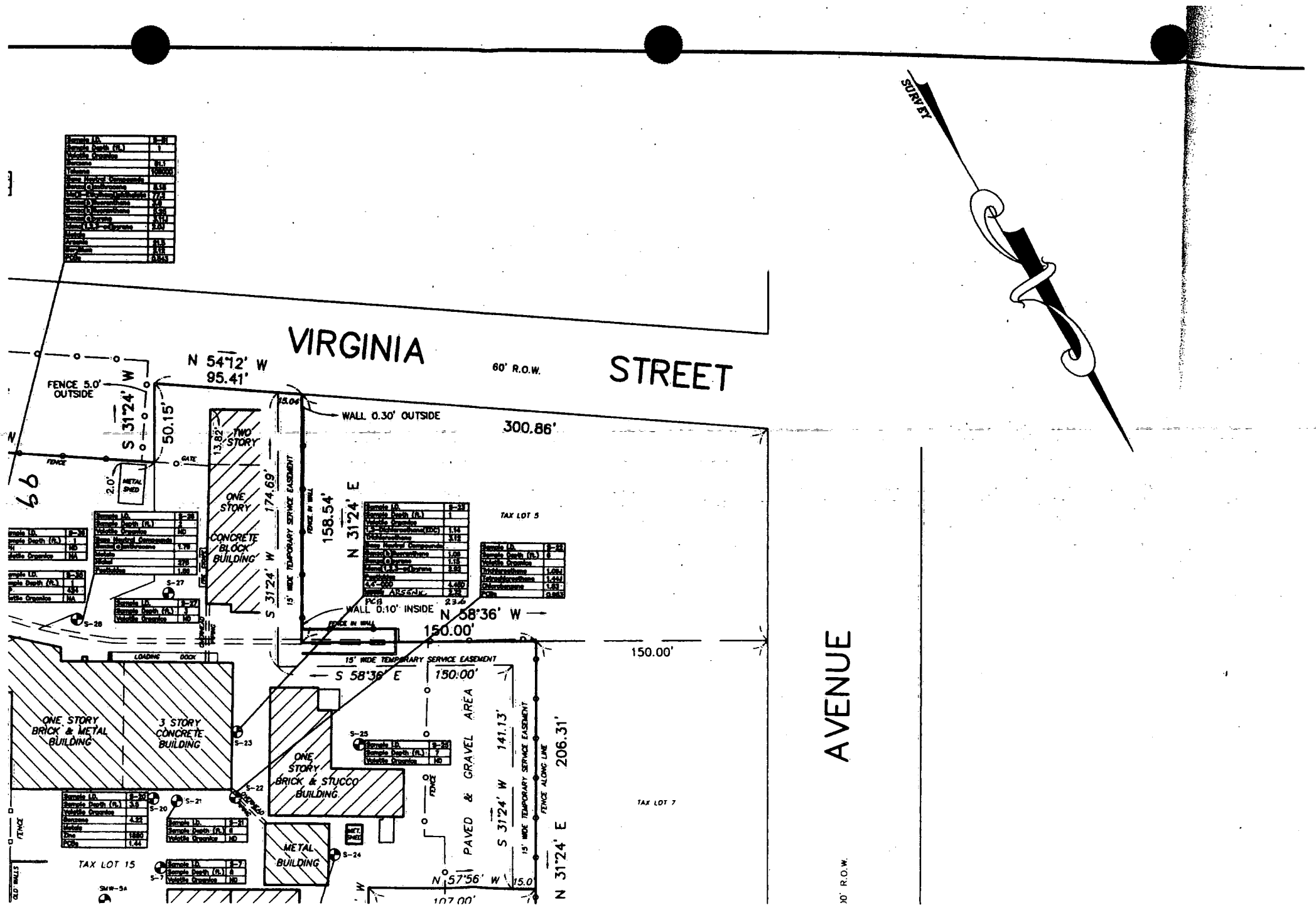

PENNSYLVANIA RAILROAD
TAX LOT 52
TAX LOT 41
TAX LOT 15
TAX LOT 2
S 35°37' W
322.59'
N 80°47' W
64.88'
42.0'±
N 54°12' W
130.04'
63.98'
N 35°35' E
72.76'
S 54°25' E
137.49'
N 09°00' W
N 54°25' W
224.69'
FENCE 5.0' OUTSIDE
S 31°24' W
50.15'
N 54°12' W
95.41'
S 31°24' W 174.69'
15' WIDE TEMPORARY SERVICE EASEMENT
158.54'
N 31°24' E
ONE STORY BRICK & METAL BUILDING
3 STORY CONCRETE BUILDING
CONCRETE BLOCK BUILDING
ONE STORY
TWO STORY
METAL BUILDING
ONE STORY BRICK & STUCCO BUILDING
OLD WALLS
FENCE
OLD WALL
SHED
GATE
LOADING DOCK
OVERHEAD PIPING
FENCE IN WALL
VIRGIN

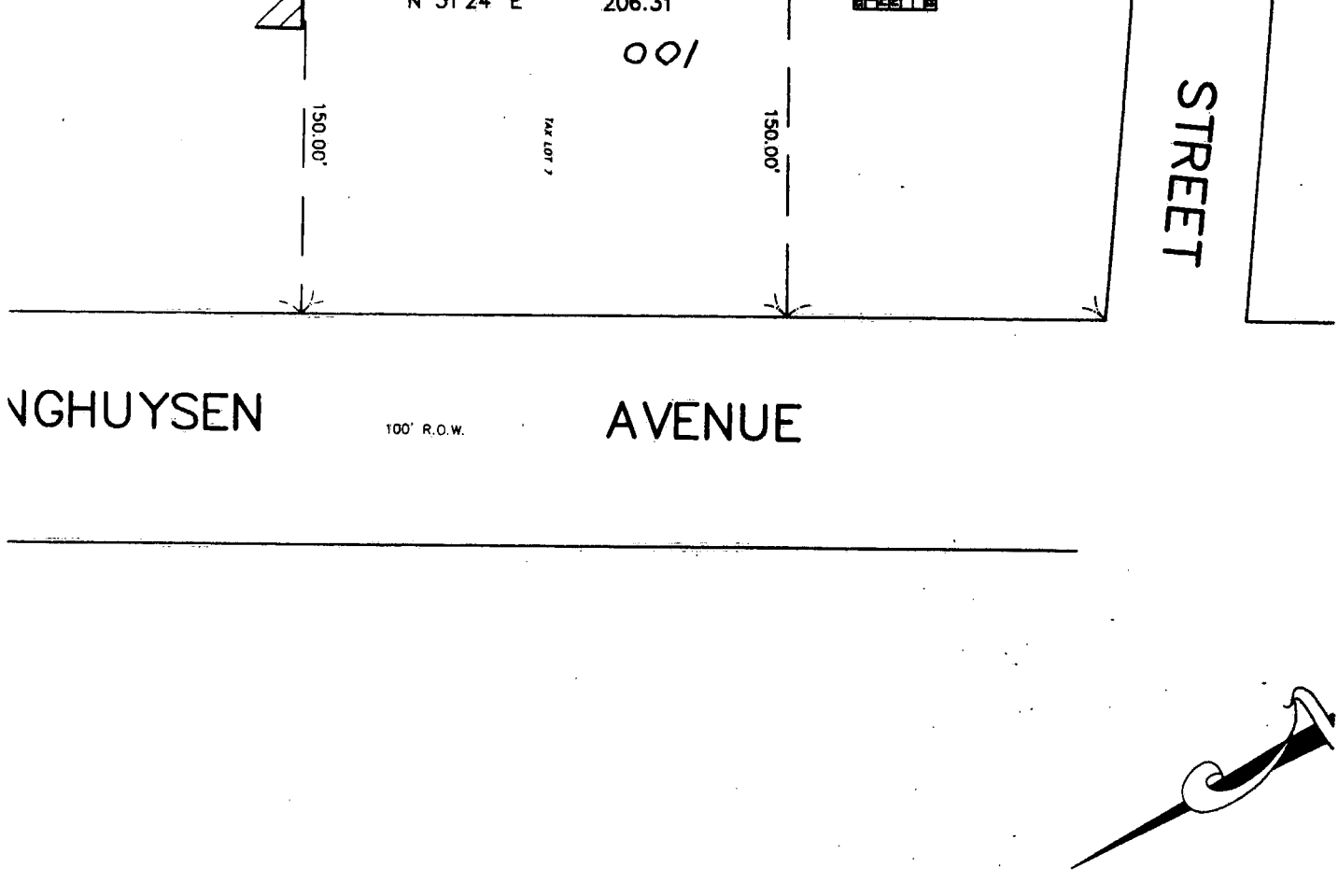


N/F PENNSYLVANIA RAILROAD
VIRGIN
TAX LOT 52
TAX LOT 2
TAX LOT 41
TAX LOT 15
TAX LOT 20
54°12' W
130.04'
N 09°00' W
37.49'
72.76'
S 54°25' E
63.98'
N 35°35' E
N 54°25' W
224.69'
FENCE 5.0' OUTSIDE
S 31°24' W
50.15'
N 54°12' W
95.41'
WALL 0.3
TWO STORY
ONE STORY CONCRETE BLOCK BUILDING
174.69'
158.54'
N 31°24' E
S 31°24' W
15' WIDE TEMPORARY SERVICE EASEMENT
FENCE IN WALL
WALL 0.1
S 58°36'
S 35°37' W
322.59'
N 80°47' W
64.88'
42.0'±
S 33°35'05" W
96.86'
264.99'
0.40'
TOTAL AREA= 261,263.7 S.F. or 6.0 ACRES
FENCE 0.76' INSIDE
UNDER-GROUND TANK
ONE STORY BRICK & METAL BUILDING
3 STORY CONCRETE BUILDING
ONE STORY BRICK & STUCCO BUILDING
METAL BUILDING
ONE STORY BRICK
METAL BUILDING
FENCE 11.0' INSIDE
S 57°56' E
346.74'
S 32°04' W
50.00'
OLD RUINOUS RAILROAD SIDING

97


VIRGINIA STREET
60' R.O.W.
N 54°12' W
95.41'
FENCE 5.0' OUTSIDE
S 31°24' W
50.15'
WALL 0.30' OUTSIDE
300.86'
TWO STORY
13.82'
ONE STORY CONCRETE BLOCK BUILDING
174.69'
15' WIDE TEMPORARY SERVICE EASEMENT
FENCE IN WALL
158.54'
N 31°24' E
TAX LOT 5
WALL 0.10' INSIDE
N 58°36' W
150.00'
LOADING DOCK
15' WIDE TEMPORARY SERVICE EASEMENT
S 58°36' E
150.00'
150.00'
ONE STORY BRICK & METAL BUILDING
3 STORY CONCRETE BUILDING
ONE STORY BRICK & STUCCO BUILDING
PAVED & GRAVEL AREA
S 31°24' W
141.13'
15' WIDE TEMPORARY SERVICE EASEMENT
FENCE ALONG LINE
N 31°24' E
206.31'
TAX LOT 7
METAL BUILDING
TAX LOT 15
N 57°56' W
15.0'
107.00'
AREA = 5,364.6 S.F. or 0.12 ACRES
S 32°04' W
50.00'
50.00'
FENCE 11.0' INSIDE
S 57°56' E
346.74'
107.58'
150.00'
BRICK BUILDING
TAX LOT 20
GHUYSEN AVENUE
100' R.O.W.


VIRGINIA
STREET
60' R.O.W.
N 54°12' W
95.41'
FENCE 5.0' OUTSIDE
S 31°24' W
50.15'
WALL 0.30' OUTSIDE
300.86'
TWO STORY
ONE STORY
CONCRETE BLOCK BUILDING
174.69'
15' WIDE TEMPORARY SERVICE EASEMENT
158.54'
N 31°24' E
TAX LOT 5
WALL 0.10' INSIDE
N 58°36' W
150.00'
150.00'
LOADING DOCK
S 58°36' E
150.00'
ONE STORY BRICK & METAL BUILDING
3 STORY CONCRETE BUILDING
ONE STORY BRICK & STUCCO BUILDING
PAVED & GRAVEL AREA
S 31°24' W
141.13'
15' WIDE TEMPORARY SERVICE EASEMENT
FENCE ALONG LINE
N 31°24' E
206.31'
METAL BUILDING
TAX LOT 15
TAX LOT 7
N 57°56' W
15.0
107.00'
AVENUE
60' R.O.W.
SURVEY


N 31 24 E
206.31
001
150.00'
TAX LOT 7
150.00'
STREET
NGHUYSEN
100' R.O.W.
AVENUE

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

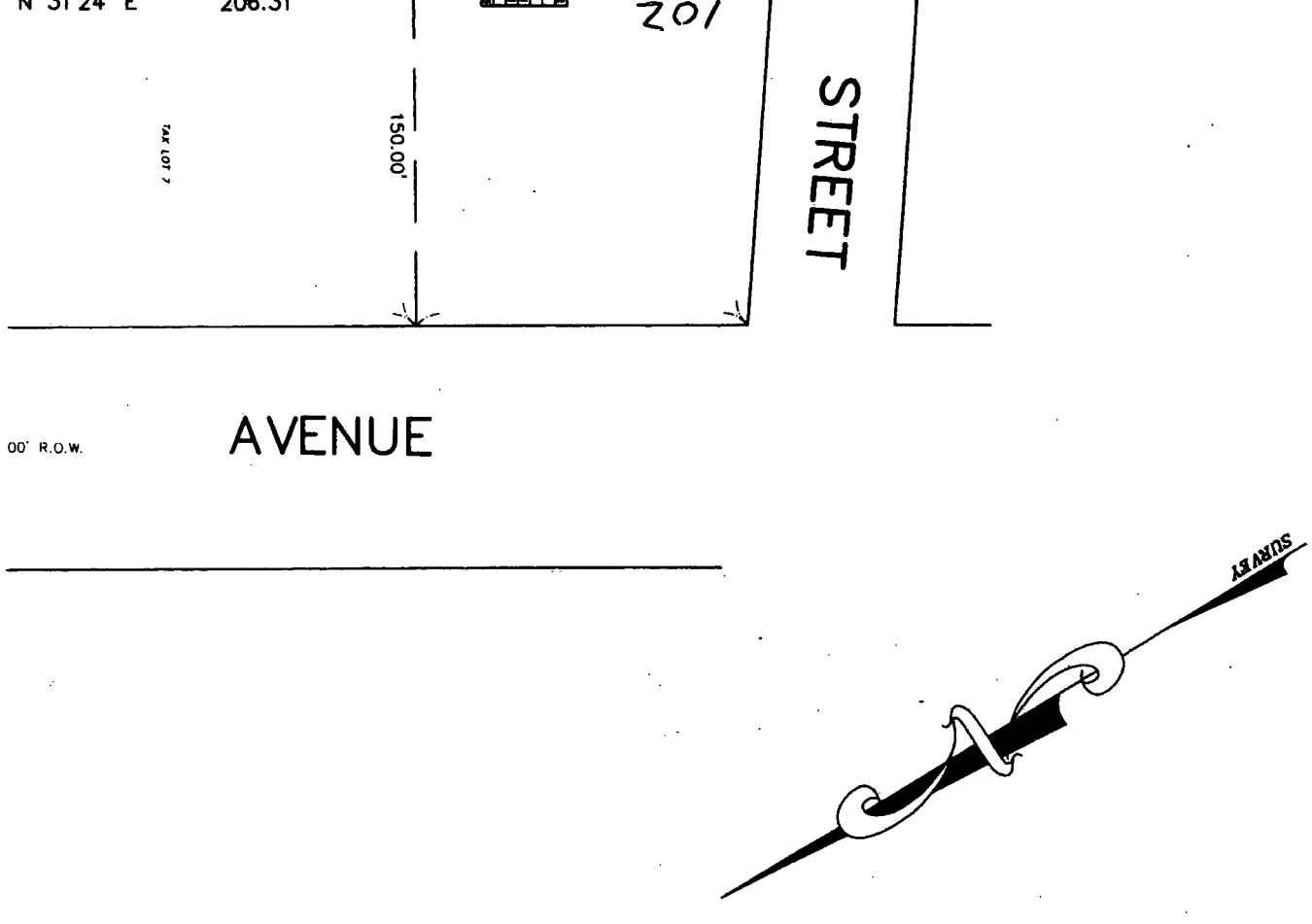
FIGURE 7

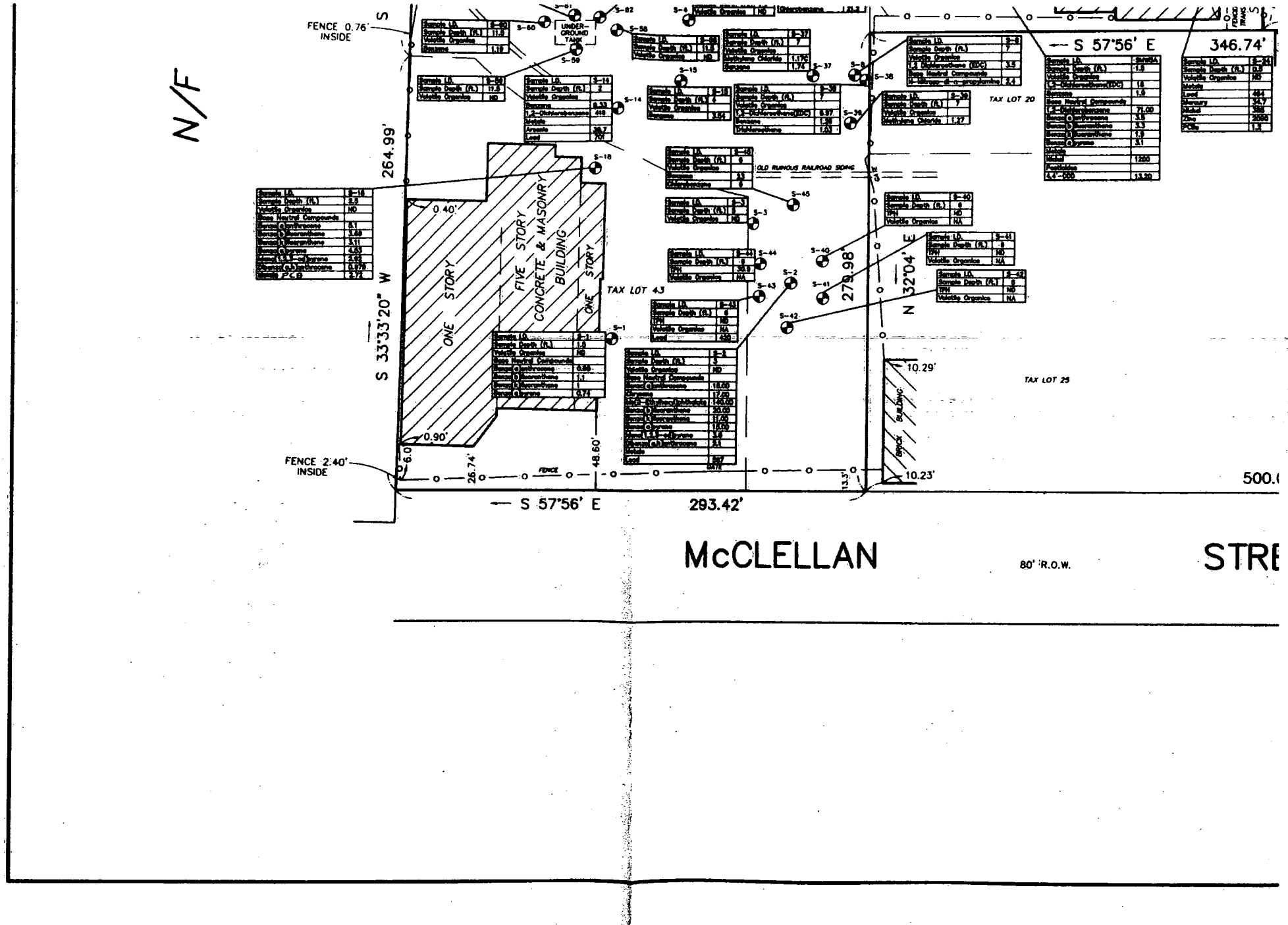
SOIL SAMPLE LOCATION MAP

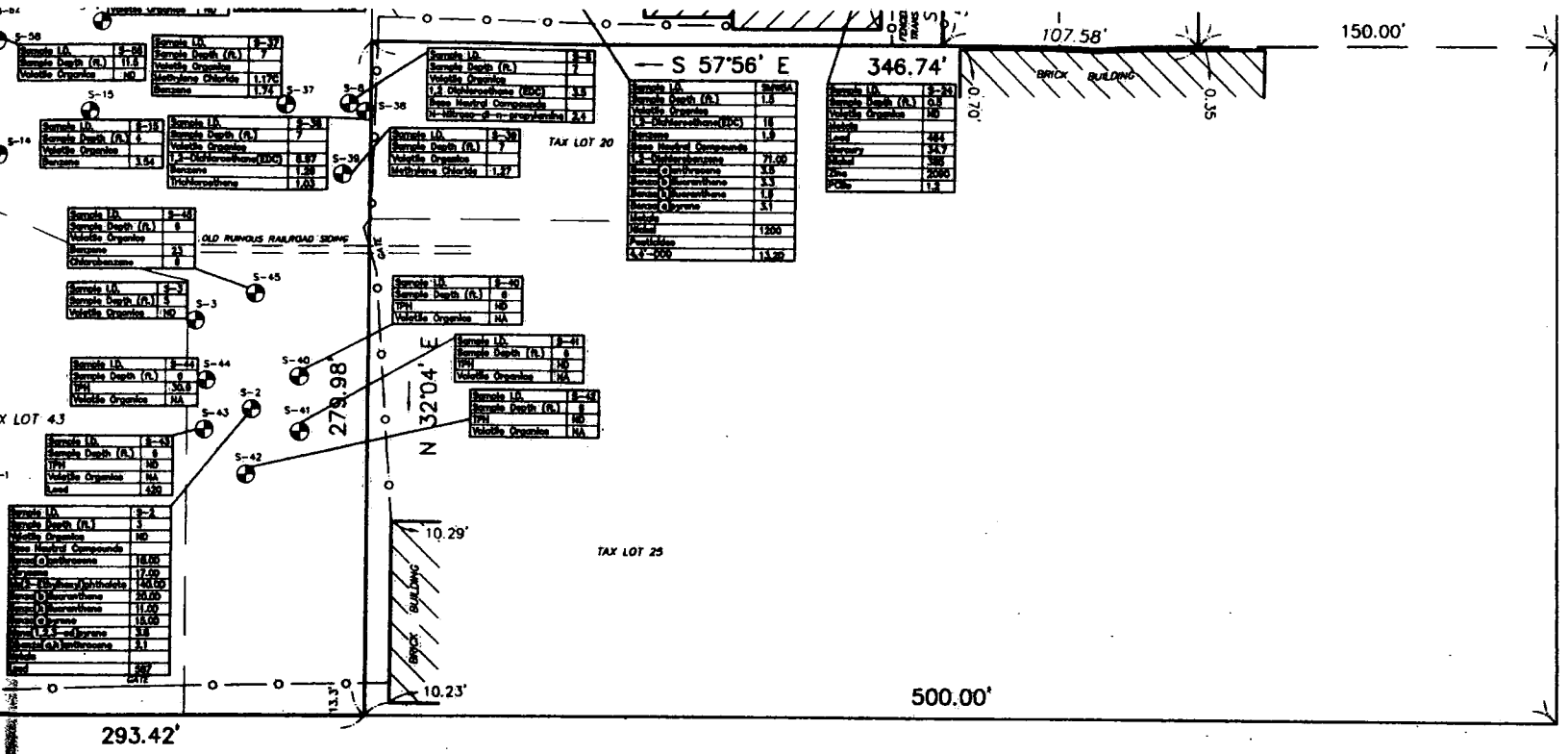
TAX LOTS 15, 41, 43 & 53 BLOCK 3773
CITY of NEWARK, ESSEX COUNTY, NEW JERSEY

REVISIONS:

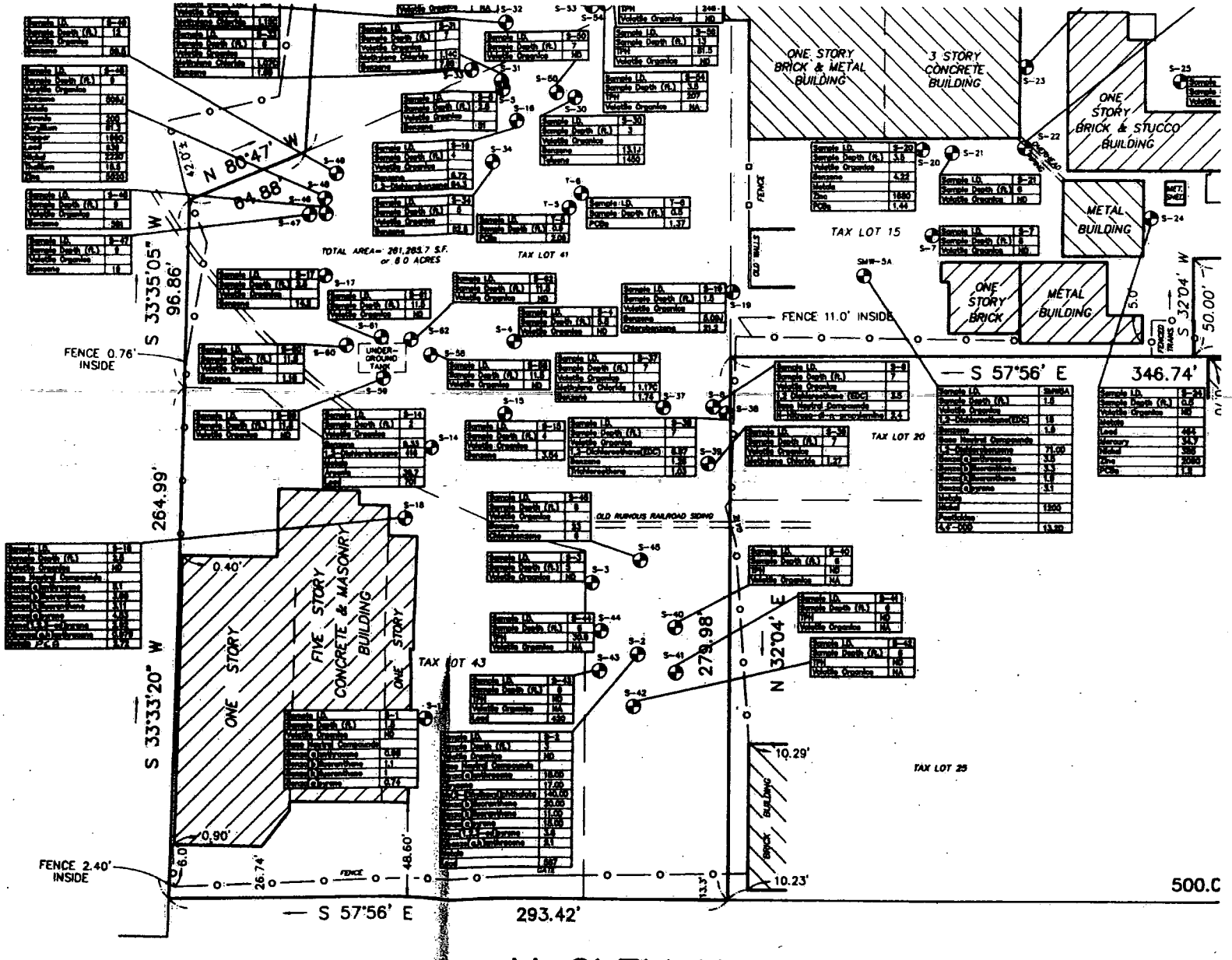
Wm. DiMARZO & SON, ASSOC. INC.

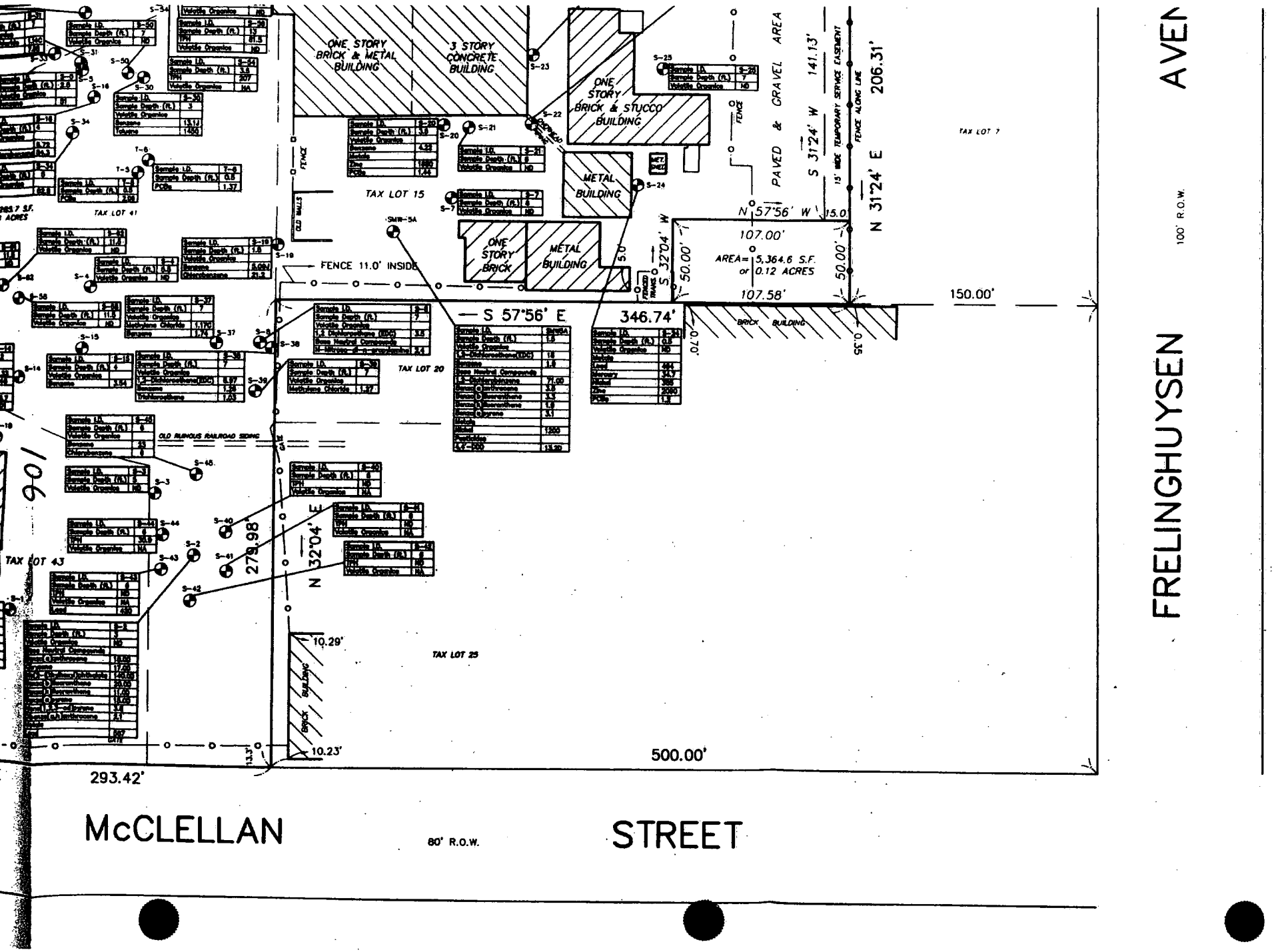

N 31 24 E
206.31
201
150.00'
TAX LOT 7
STREET
00' R.O.W.
AVENUE
SURVEY


N/F
FENCE 0.76' INSIDE
UNDER-GROUND TANK
S 57°56' E
346.74'
TAX LOT 20
OLD ILLINOIS RAILROAD SIDING
264.99'
S 33°33'20" W
0.40'
ONE STORY
FIVE STORY CONCRETE & MASONRY BUILDING
ONE STORY
TAX LOT 43
279.98'
N 32°04'
10.29'
TAX LOT 25
BRICK BUILDING
0.90'
FENCE 2.40' INSIDE
6.0'
26.74'
FENCE
48.60'
13.3'
10.23'
S 57°56' E
293.42'
McCLELLAN
80' R.O.W.
STRE

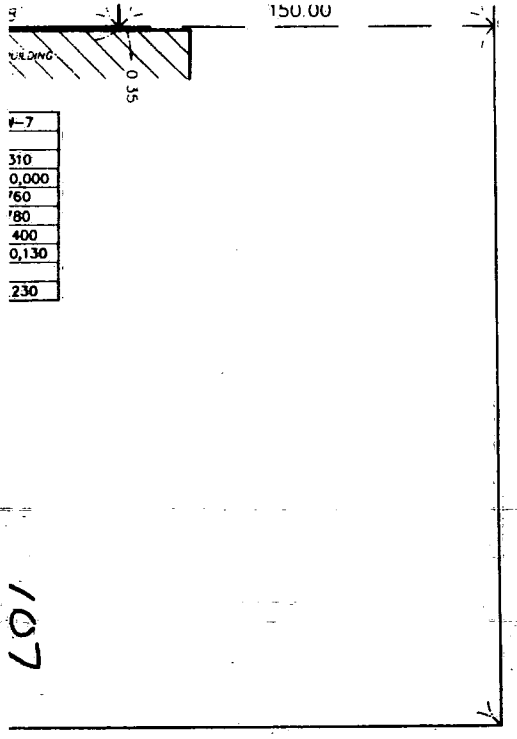


101 McCLELLAN STREET 80' R.O.W.


PENNSYLVANIA
N/F
SUI
ONE STORY BRICK & METAL BUILDING
3 STORY CONCRETE BUILDING
ONE STORY BRICK & STUCCO BUILDING
METAL BUILDING
ONE STORY BRICK
METAL BUILDING
TAX LOT 15
TAX LOT 41
TAX LOT 20
TAX LOT 43
TAX LOT 25
TOTAL AREA= 261,265.7 S.F. or 6.0 ACRES
N 80°47' W
84.88'
42.0'±
S 33°35'05" W
96.86'
264.99'
S 33°33'20" W
FENCE 0.76' INSIDE
FENCE 11.0' INSIDE
FENCE 2.40' INSIDE
UNDER-GROUND TANK
OLD RUSVOIS RAILROAD SIDING
ONE STORY FIVE STORY CONCRETE & MASONRY BUILDING ONE STORY
0.40'
0.90'
6.0'
26.74'
48.60'
13.3'
10.29'
10.23'
BRICK BUILDING
— S 57°56' E
293.42'
— S 57°56' E
346.74'
N 32°04' E
279.98'
S 32°04' W
50.00'
5.0'
McCLELLAN
80' R.O.W.
STRE
500.0



ONE STORY BRICK & METAL BUILDING
3 STORY CONCRETE BUILDING
ONE STORY BRICK & STUCCO BUILDING
METAL BUILDING
ONE STORY BRICK
METAL BUILDING
PAVED & GRAVEL AREA
S 31°24' W 141.13'
15' WIDE TEMPORARY SERVICE EASEMENT
FENCE ALONG LINE
N 31°24' E 206.31'
TAX LOT 7
TAX LOT 15
TAX LOT 41
TAX LOT 20
TAX LOT 43
TAX LOT 25
FENCE 11.0' INSIDE
OLD RUINOUS RAILROAD SIDING
N 57°56' W 15.0'
107.00'
AREA= 5,364.6 S.F. or 0.12 ACRES
107.58'
50.00'
50.00'
S 32°04' W
150.00'
S 57°56' E 346.74'
BRICK BUILDING
279.98'
N 32°04' E
10.29'
10.23'
500.00'
293.42'
McCLELLAN STREET
80' R.O.W.
FRELINGHUYSEN AVEN
100' R.O.W.



MW-4	28.08
MW-5	25.47
MW-6	27.88
MW-7	26.27
MW-8	27.48

FIGURE 8

GROUNDWATER SAMPLE LOCATION MAP – 4/3/01

TAX LOTS 15, 41, 43 & 53 BLOCK 3773

CITY of NEWARK, ESSEX COUNTY, NEW JERSEY

REVISIONS:

BLOCK 3773 | SCALE 1"= 50' | PROJ. NO. 01-030B

Wm. DiMARZO & SON, ASSOC., INC.
Surveyors • Planners
P.O. BOX 544
639 CHANCELLOR AVENUE
IRVINGTON, NEW JERSEY 07111-0544
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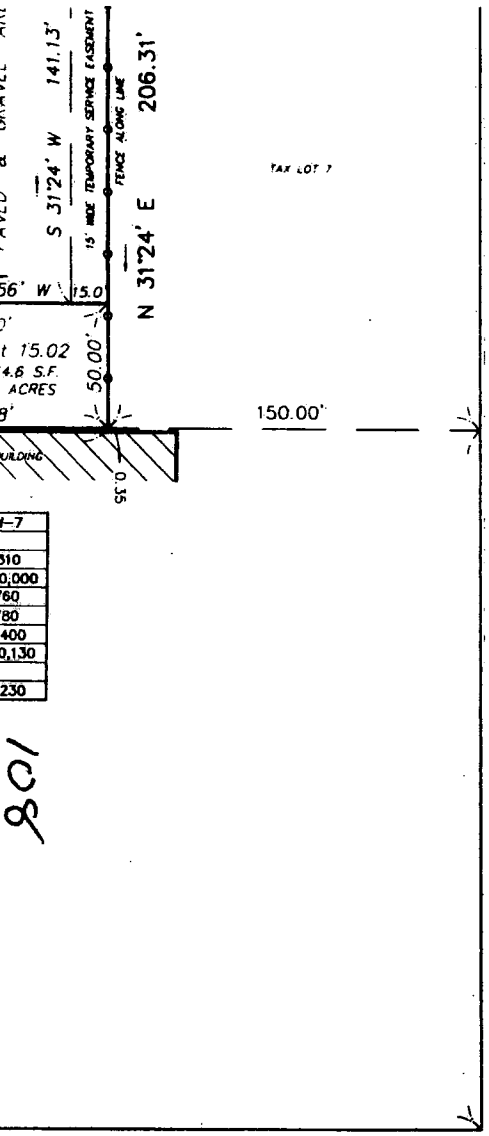
William Swift

WILLIAM P. SWIFT, N.J.P.L.S. 20788 N.J.P.P. 4767
PROFESSIONAL LAND SURVEYOR and PROFESSIONAL PLANNER

DATE: JUNE 22, 2001



FRELINGHUYSEN AVE

100' R.O.W

WELL EVELATIONS (TOP of PVC)

MW–1	20.06
MW–2	23.19
MW–3	27.77
MW–4	28.08
MW–5	25.47
MW–6	27.88
MW–7	26.27
MW–8	27.48

FIGURE 8

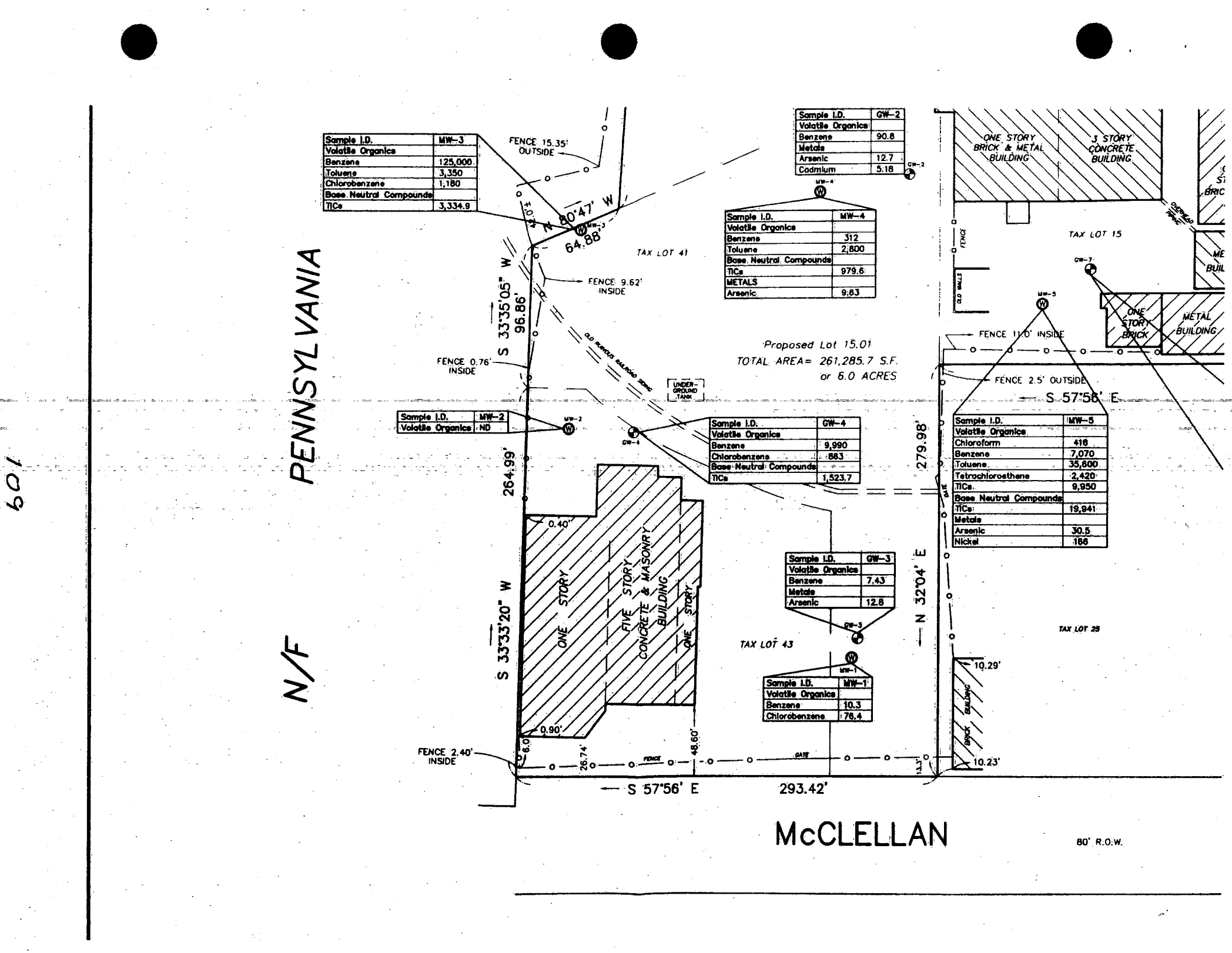
GROUNDWATER SAMPLE LOCATION MAP – 4/3/01

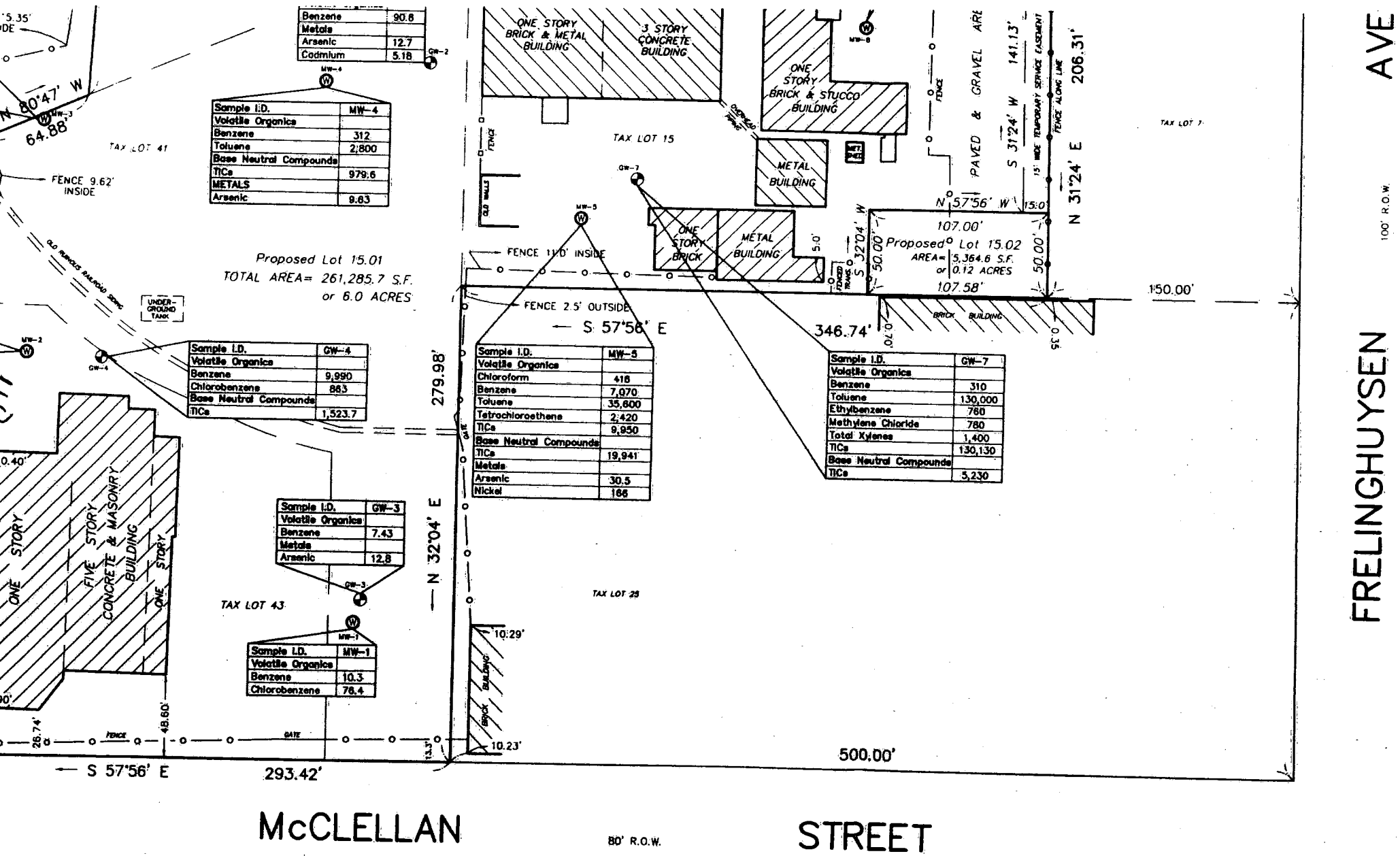
TAX LOTS 15, 41, 43 & 53 BLOCK 3773

CITY of NEWARK, ESSEX COUNTY, NEW JERSEY

REVISIONS:

Wm. DiMARZO & SON, ASSOC., INC.


Sample I.D. | MW-3
Volatile Organics |
Benzene | 125,000
Toluene | 3,350
Chlorobenzene | 1,180
Base Neutral Compounds |
TICs | 3,334.9
FENCE 15.35' OUTSIDE
N 80°47' W
64.88'
TAX LOT 41
FENCE 9.62' INSIDE
S 33°35'05" W
96.86'
OLD PENNSYLVANIA RAILROAD SPUR
UNDER-GROUND TANK
FENCE 0.76' INSIDE
Sample I.D. | MW-2
Volatile Organics | ND
Sample I.D. | GW-2
Volatile Organics |
Benzene | 90.8
Metals |
Arsenic | 12.7
Cadmium | 5.18
Sample I.D. | MW-4
Volatile Organics |
Benzene | 312
Toluene | 2,800
Base Neutral Compounds |
TICs | 979.6
METALS |
Arsenic | 9.63
Proposed Lot 15.01
TOTAL AREA= 261,285.7 S.F.
or 6.0 ACRES
Sample I.D. | GW-4
Volatile Organics |
Benzene | 9,990
Chlorobenzene | 883
Base Neutral Compounds |
TICs | 1,523.7
264.99'
0.40'
ONE STORY
FIVE STORY CONCRETE & MASONRY BUILDING
ONE STORY
0.90'
S 33°33'20" W
Sample I.D. | GW-3
Volatile Organics |
Benzene | 7.43
Metals |
Arsenic | 12.8
TAX LOT 43
Sample I.D. | MW-1
Volatile Organics |
Benzene | 10.3
Chlorobenzene | 78.4
FENCE 2.40' INSIDE
6.0'
26.74'
FENCE
48.60'
GATE
13.3'
S 57°56' E
293.42'
N 32°04' E
279.98'
ONE STORY BRICK & METAL BUILDING
3 STORY CONCRETE BUILDING
OVERHEAD WIRES
FENCE
TAX LOT 15
OLD WALLS
FENCE 11.0' INSIDE
FENCE 2.5' OUTSIDE
S 57°56' E
ONE STORY BRICK
METAL BUILDING
Sample I.D. | MW-5
Volatile Organics |
Chloroform | 416
Benzene | 7,070
Toluene | 35,600
Tetrachloroethene | 2,420
TICs | 9,950
Base Neutral Compounds |
TICs | 19,941
Metals |
Arsenic | 30.5
Nickel | 186
GATE
TAX LOT 25
10.29'
BRICK BUILDING
10.23'
N/F PENNSYLVANIA
McCLELLAN
80' R.O.W.
601



Sample I.D.	MW-4
Volatile Organics	
Benzene	312
Toluene	2,800
Base Neutral Compounds	
TICs	979.6
METALS	
Arsenic	9.63

Benzene	90.6
Metals	
Arsenic	12.7
Cadmium	5.18

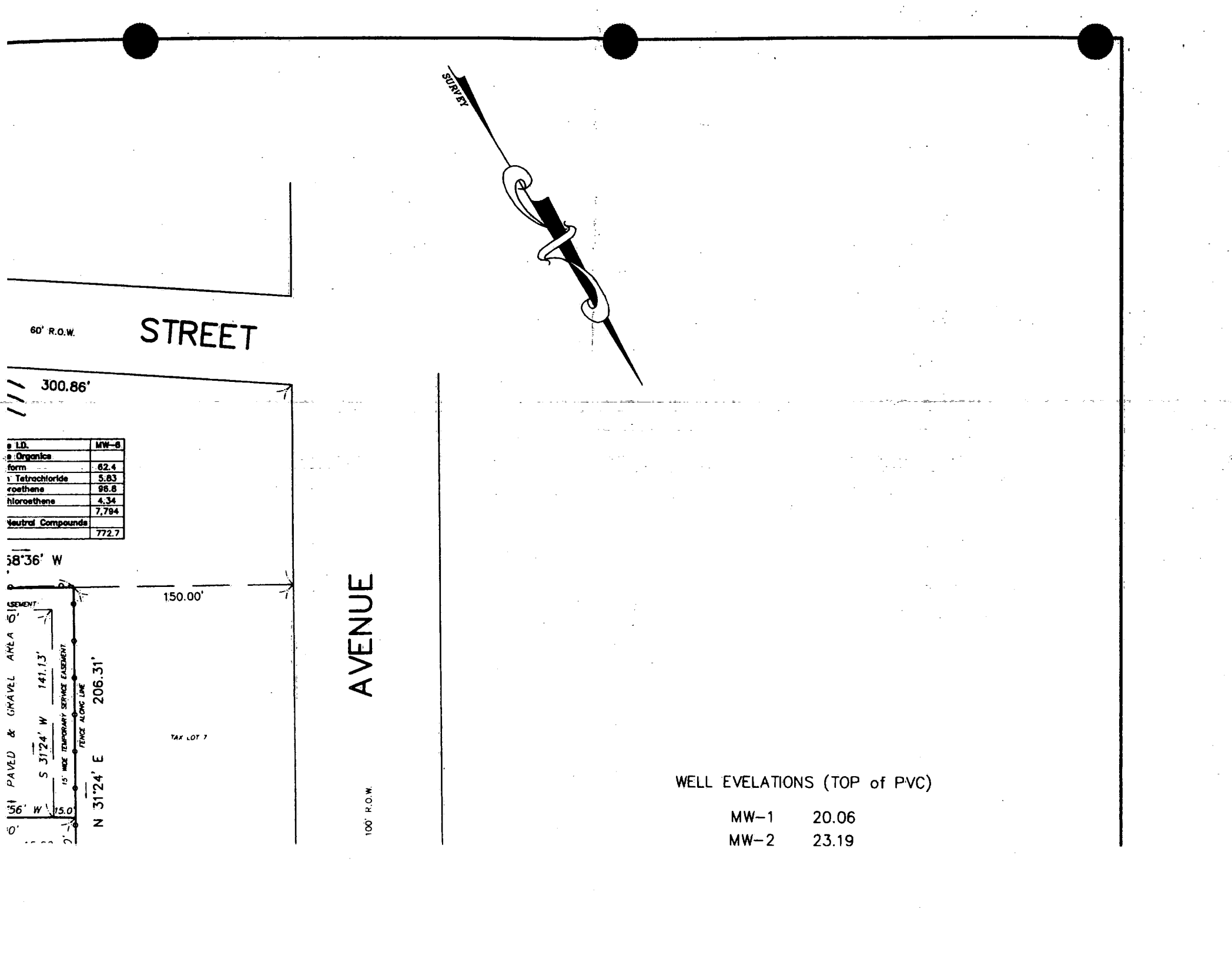
Sample I.D.	GW-4
Volatile Organics	
Benzene	9,990
Chlorobenzene	863
Base Neutral Compounds	
TICs	1,523.7

Sample I.D.	MW-5
Volatile Organics	
Chloroform	416
Benzene	7,070
Toluene	35,600
Tetrachloroethene	2,420
TICs	9,950
Base Neutral Compounds	
TICs	19,941
Metals	
Arsenic	30.5
Nickel	166

Sample I.D.	GW-7
Volatile Organics	
Benzene	310
Toluene	130,000
Ethylbenzene	760
Methylene Chloride	780
Total Xylenes	1,400
TICs	130,130
Base Neutral Compounds	
TICs	5,230

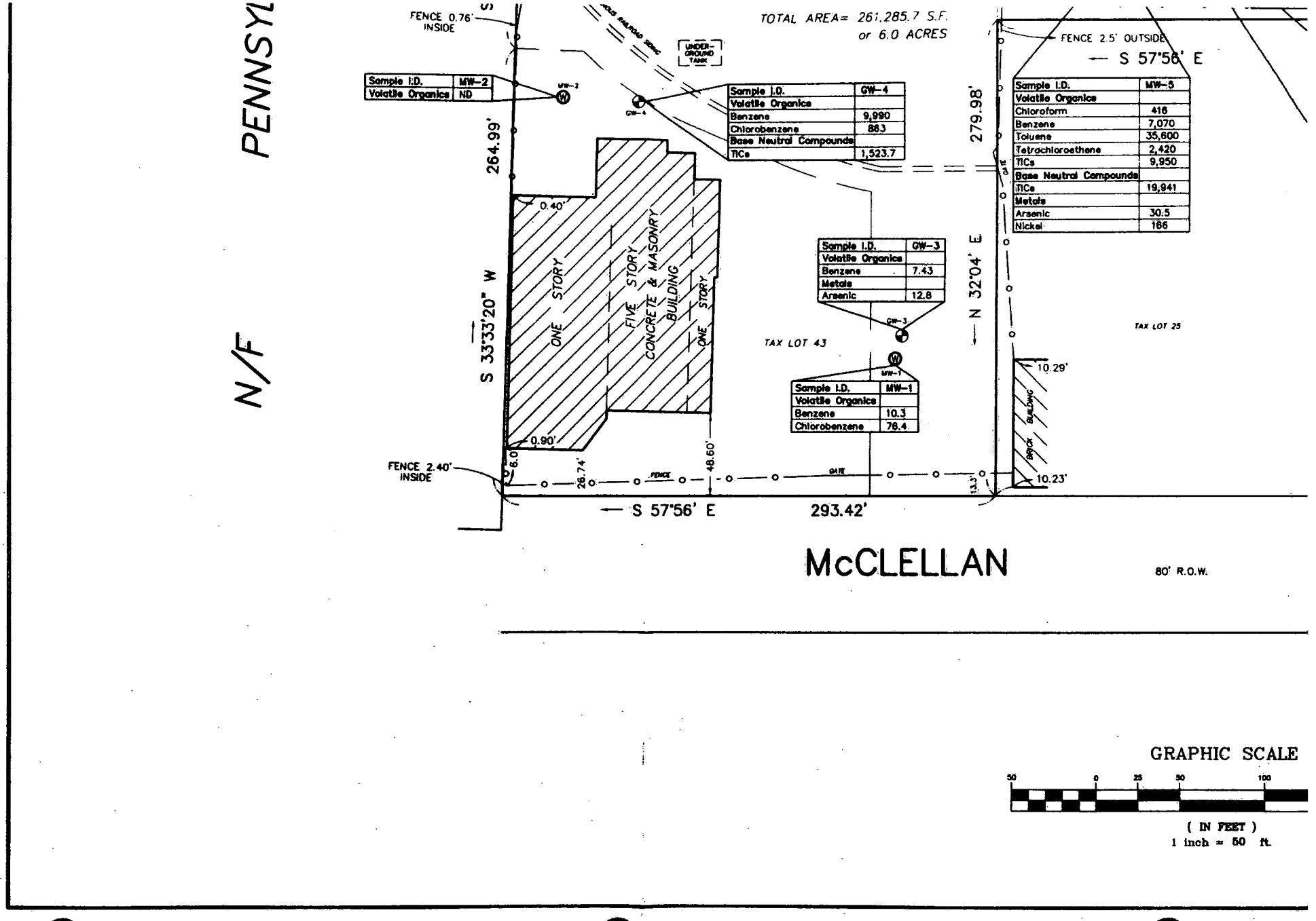
Sample I.D.	GW-3
Volatile Organics	
Benzene	7.43
Metals	
Arsenic	12.8

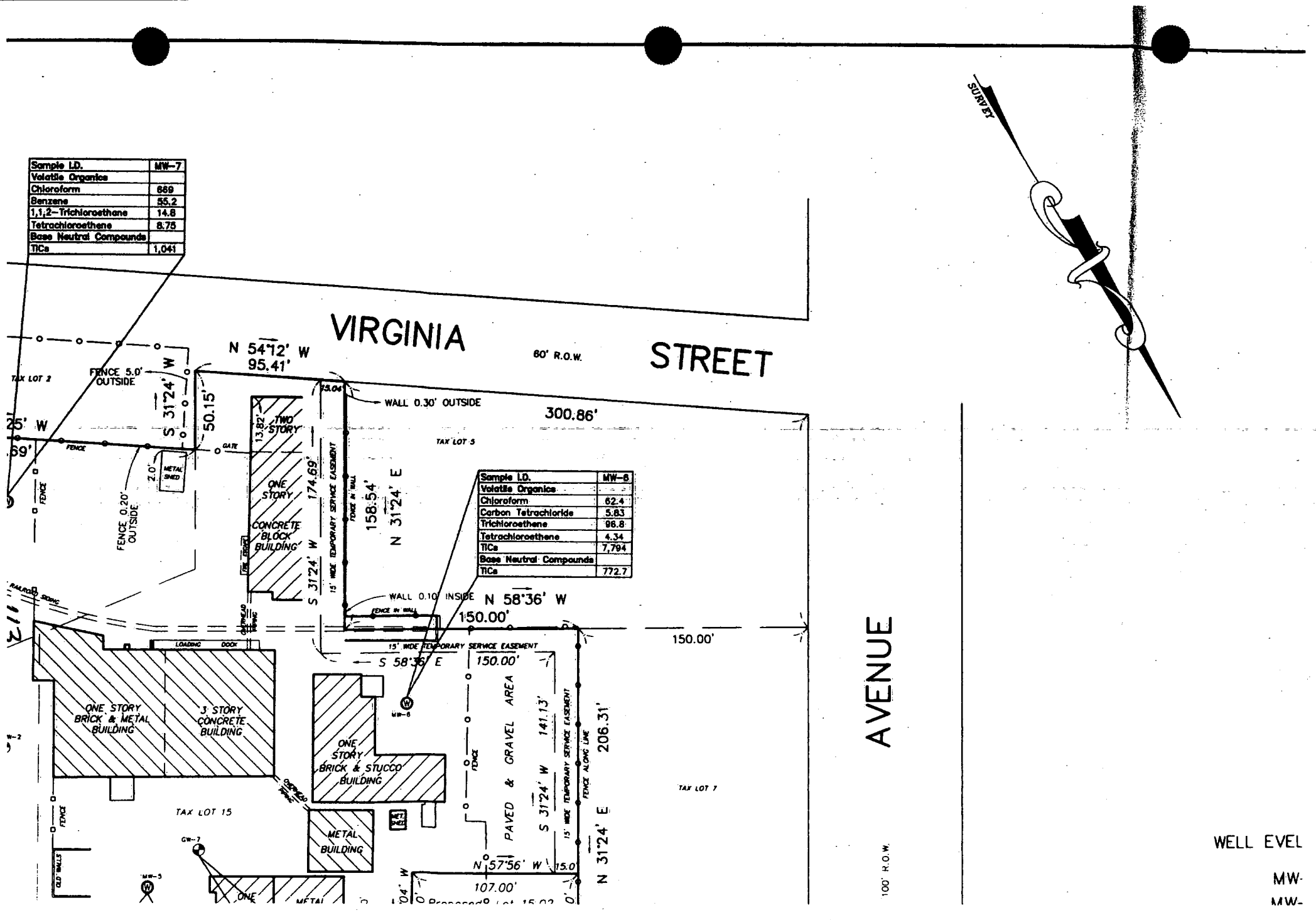
Sample I.D.	MW-1
Volatile Organics	
Benzene	10.3
Chlorobenzene	76.4

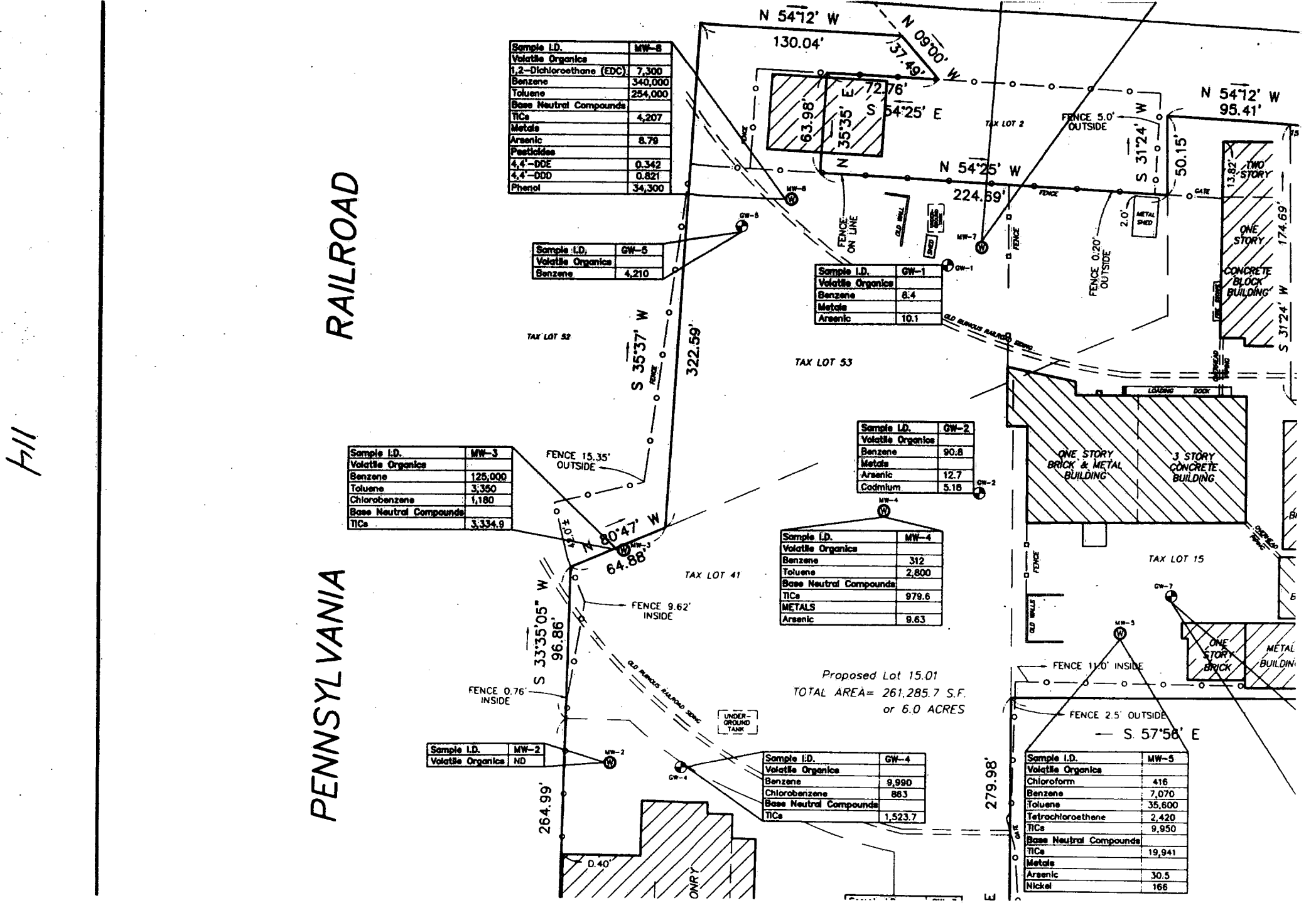


WELL EVELATIONS (TOP of PVC)

MW-1	20.06
MW-2	23.19


PENNSYL
N/F
TOTAL AREA= 261,285.7 S.F.
or 6.0 ACRES
FENCE 0.76' INSIDE
UNDER-GROUND TANK
Sample I.D. | MW-2
Volatile Organics | ND
Sample I.D. | GW-4
Volatile Organics |
Benzene | 9,990
Chlorobenzene | 883
Base Neutral Compounds |
TICs | 1,523.7
FENCE 2.5' OUTSIDE
S 57°56' E
Sample I.D. | MW-5
Volatile Organics |
Chloroform | 416
Benzene | 7,070
Toluene | 35,600
Tetrachloroethene | 2,420
TICs | 9,950
Base Neutral Compounds |
TICs | 19,941
Metals |
Arsenic | 30.5
Nickel | 166
264.99'
S 33°33'20" W
0.40'
ONE STORY
FIVE STORY CONCRETE & MASONRY BUILDING
ONE STORY
Sample I.D. | GW-3
Volatile Organics |
Benzene | 7.43
Metals |
Arsenic | 12.8
TAX LOT 43
279.98'
N 32°04' E
TAX LOT 25
10.29'
BRICK BUILDING
Sample I.D. | MW-1
Volatile Organics |
Benzene | 10.3
Chlorobenzene | 76.4
0.90'
6.0'
FENCE 2.40' INSIDE
26.74'
FENCE
48.60'
GATE
13.3'
10.23'
S 57°56' E
293.42'
McCLELLAN
80' R.O.W.
GRAPHIC SCALE
50 0 25 50 100
(IN FEET)
1 inch = 50 ft.


Sample I.D. | MW-7
Volatile Organics |
Chloroform | 669
Benzene | 55.2
1,1,2-Trichloroethane | 14.8
Tetrachloroethene | 8.75
Base Neutral Compounds |
TICs | 1,041
VIRGINIA STREET
60' R.O.W.
N 54°12' W
95.41'
FENCE 5.0' OUTSIDE
S 31°24' W
50.15'
TAX LOT 2
WALL 0.30' OUTSIDE
300.86'
TAX LOT 5
TWO STORY
13.82'
ONE STORY CONCRETE BLOCK BUILDING
174.69'
15' WIDE TEMPORARY SERVICE EASEMENT
158.54'
N 31°24' E
METAL SHED
2.0'
FENCE 0.20' OUTSIDE
GATE
FENCE
Sample I.D. | MW-6
Volatile Organics |
Chloroform | 62.4
Carbon Tetrachloride | 5.83
Trichloroethene | 98.8
Tetrachloroethene | 4.34
TICs | 7,794
Base Neutral Compounds |
TICs | 772.7
WALL 0.10' INSIDE
N 58°36' W
150.00'
150.00'
15' WIDE TEMPORARY SERVICE EASEMENT
S 58°36' E
150.00'
LOADING DOCK
ONE STORY BRICK & METAL BUILDING
3 STORY CONCRETE BUILDING
ONE STORY BRICK & STUCCO BUILDING
MW-6
PAVED & GRAVEL AREA
141.13'
S 31°24' W
15' WIDE TEMPORARY SERVICE EASEMENT
FENCE ALONG LINE
N 31°24' E
206.31'
TAX LOT 7
AVENUE
100' R.O.W.
TAX LOT 15
METAL BUILDING
GW-7
MW-5
N 57°56' W
15.0
107.00'
WELL EVEL
MW-
MW-



Sample I.D.	MW-6
Volatile Organics	
1,2-Dichloroethane (EDC)	7,300
Benzene	340,000
Toluene	254,000
Base Neutral Compounds	
TICs	4,207
Metals	
Arsenic	8.79
Pesticides	
4,4'-DDE	0.342
4,4'-DDD	0.821
Phenol	34,300

Sample I.D.	GW-5
Volatile Organics	
Benzene	4,210

Sample I.D.	GW-1
Volatile Organics	
Benzene	8.4
Metals	
Arsenic	10.1

Sample I.D.	GW-2
Volatile Organics	
Benzene	90.8
Metals	
Arsenic	12.7
Cadmium	5.18

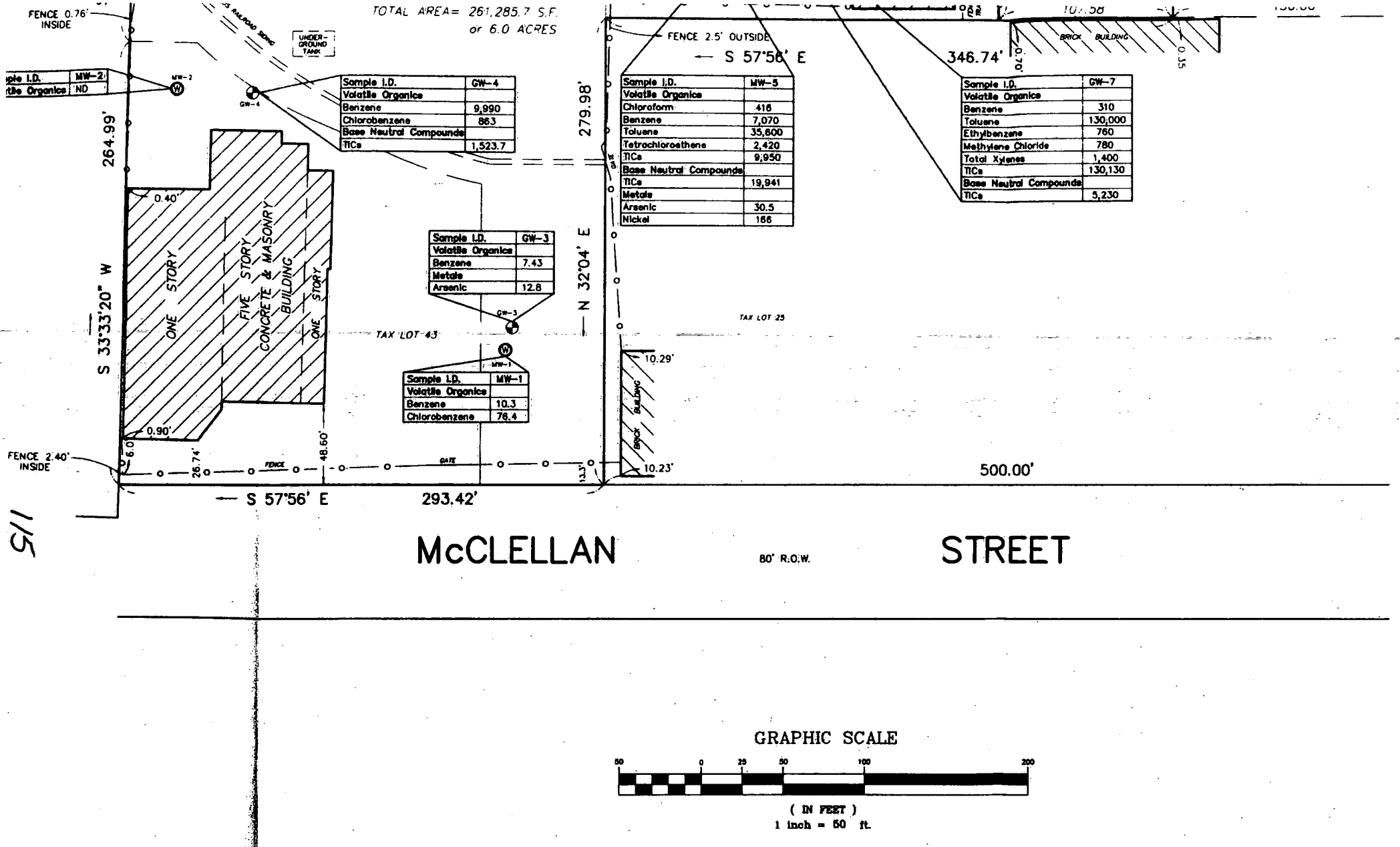
Sample I.D.	MW-3
Volatile Organics	
Benzene	125,000
Toluene	3,350
Chlorobenzene	1,180
Base Neutral Compounds	
TICs	3,334.9

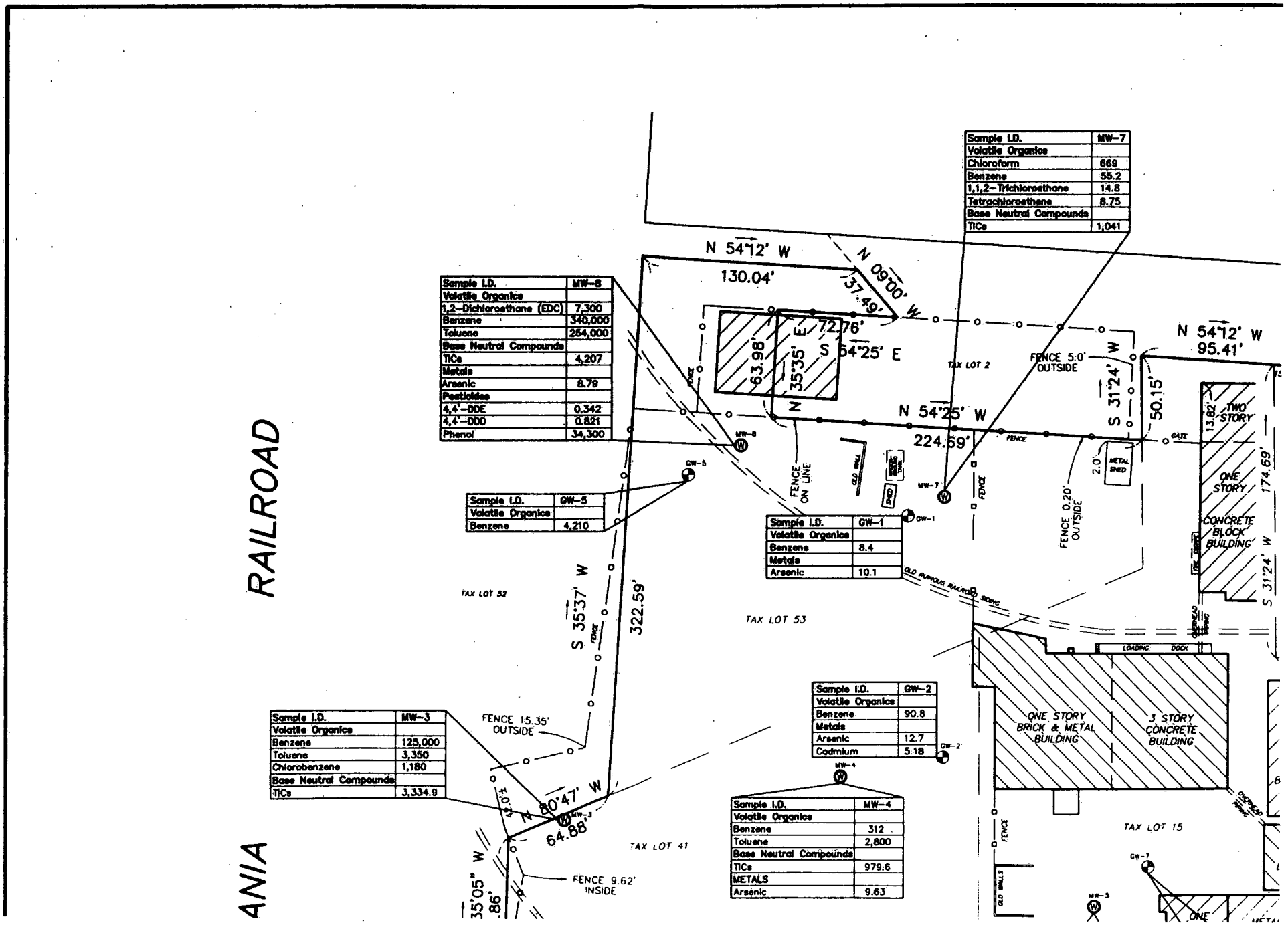
Sample I.D.	MW-4
Volatile Organics	
Benzene	312
Toluene	2,800
Base Neutral Compounds	
TICs	979.6
METALS	
Arsenic	9.63

Sample I.D.	MW-2
Volatile Organics	ND

Sample I.D.	GW-4
Volatile Organics	
Benzene	9,990
Chlorobenzene	883
Base Neutral Compounds	
TICs	1,523.7

Sample I.D.	MW-5
Volatile Organics	
Chloroform	416
Benzene	7,070
Toluene	35,600
Tetrachloroethene	2,420
TICs	9,950
Base Neutral Compounds	
TICs	19,941
Metals	
Arsenic	30.5
Nickel	166


TOTAL AREA= 261,285.7 S.F.
or 6.0 ACRES
FENCE 0.76' INSIDE
UNDER-GROUND TANK
FENCE 2.5' OUTSIDE
S 57°58' E
346.74'
BRICK BUILDING
0.70'
0.55'
Sample I.D. | MW-2
Volatile Organics | ND
Sample I.D. | GW-4
Volatile Organics |
Benzene | 9,990
Chlorobenzene | 863
Base Neutral Compounds |
TICs | 1,523.7
Sample I.D. | MW-5
Volatile Organics |
Chloroform | 416
Benzene | 7,070
Toluene | 35,600
Tetrachloroethene | 2,420
TICs | 9,950
Base Neutral Compounds |
TICs | 19,941
Metals |
Arsenic | 30.5
Nickel | 166
Sample I.D. | GW-7
Volatile Organics |
Benzene | 310
Toluene | 130,000
Ethylbenzene | 760
Methylene Chloride | 780
Total Xylenes | 1,400
TICs | 130,130
Base Neutral Compounds |
TICs | 5,230
264.99'
S 33°33'20" W
279.98'
N 32°04' E
0.40'
ONE STORY
FIVE STORY CONCRETE & MASONRY BUILDING
ONE STORY
Sample I.D. | GW-3
Volatile Organics |
Benzene | 7.43
Metals |
Arsenic | 12.8
TAX LOT 43
TAX LOT 25
Sample I.D. | MW-1
Volatile Organics |
Benzene | 10.3
Chlorobenzene | 76.4
10.29'
BRICK BUILDING
0.90'
6.0'
FENCE 2.40' INSIDE
26.74'
FENCE
48.60'
GATE
13.3'
10.23'
500.00'
S 57°56' E
293.42'
McCLELLAN
80' R.O.W.
STREET
GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft.



Sample I.D.	MW-7
Volatile Organics	
Chloroform	669
Benzene	55.2
1,1,2-Trichloroethane	14.8
Tetrachloroethene	8.75
Base Neutral Compounds	
TICs	1,041

Sample I.D.	MW-8
Volatile Organics	
1,2-Dichloroethane (EDC)	7,300
Benzene	340,000
Toluene	254,000
Base Neutral Compounds	
TICs	4,207
Metals	
Arsenic	8.79
Pesticides	
4,4'-DDE	0.342
4,4'-DDD	0.821
Phenol	34,300

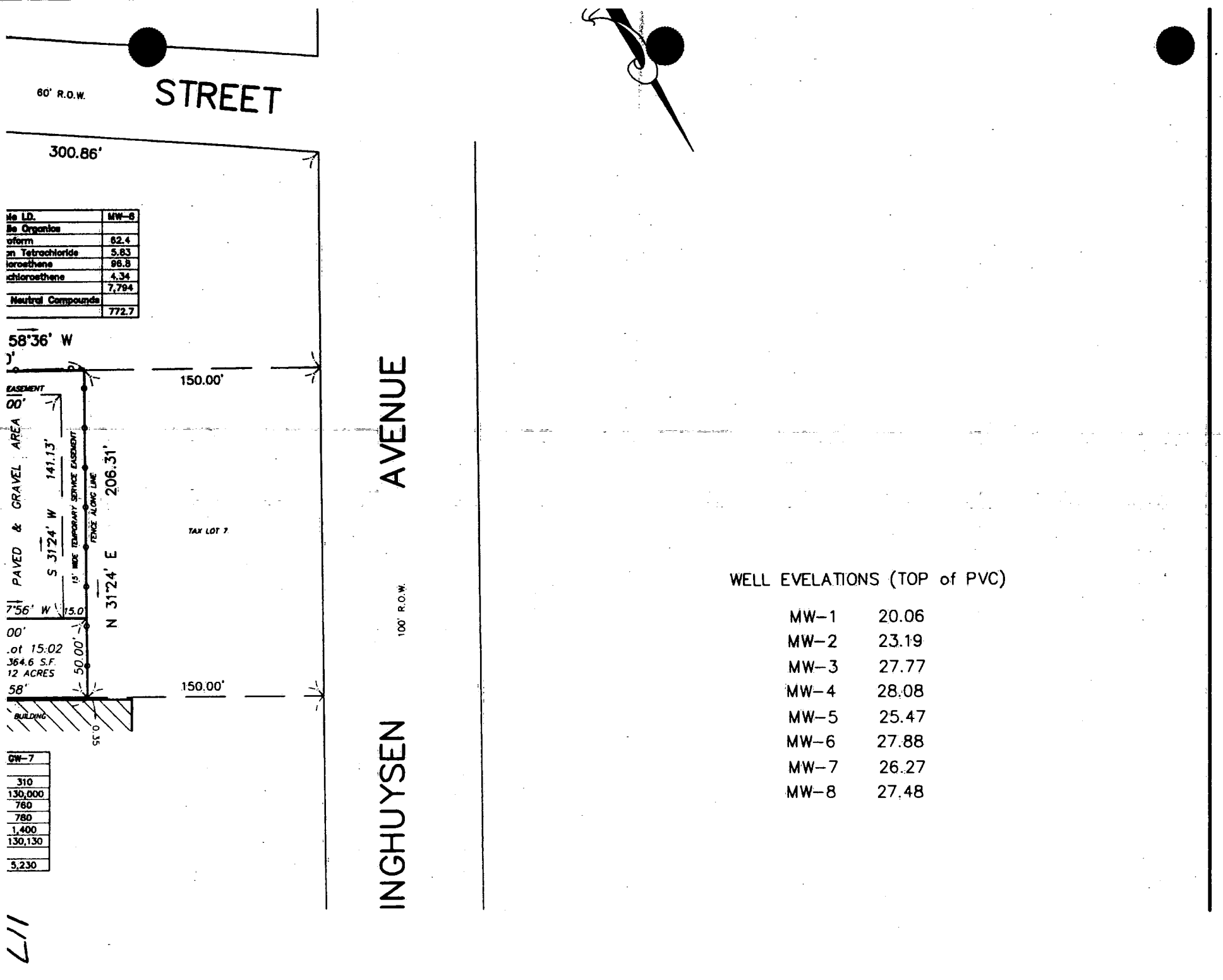
Sample I.D.	GW-5
Volatile Organics	
Benzene	4,210

Sample I.D.	GW-1
Volatile Organics	
Benzene	8.4
Metals	
Arsenic	10.1

Sample I.D.	GW-2
Volatile Organics	
Benzene	90.8
Metals	
Arsenic	12.7
Cadmium	5.18

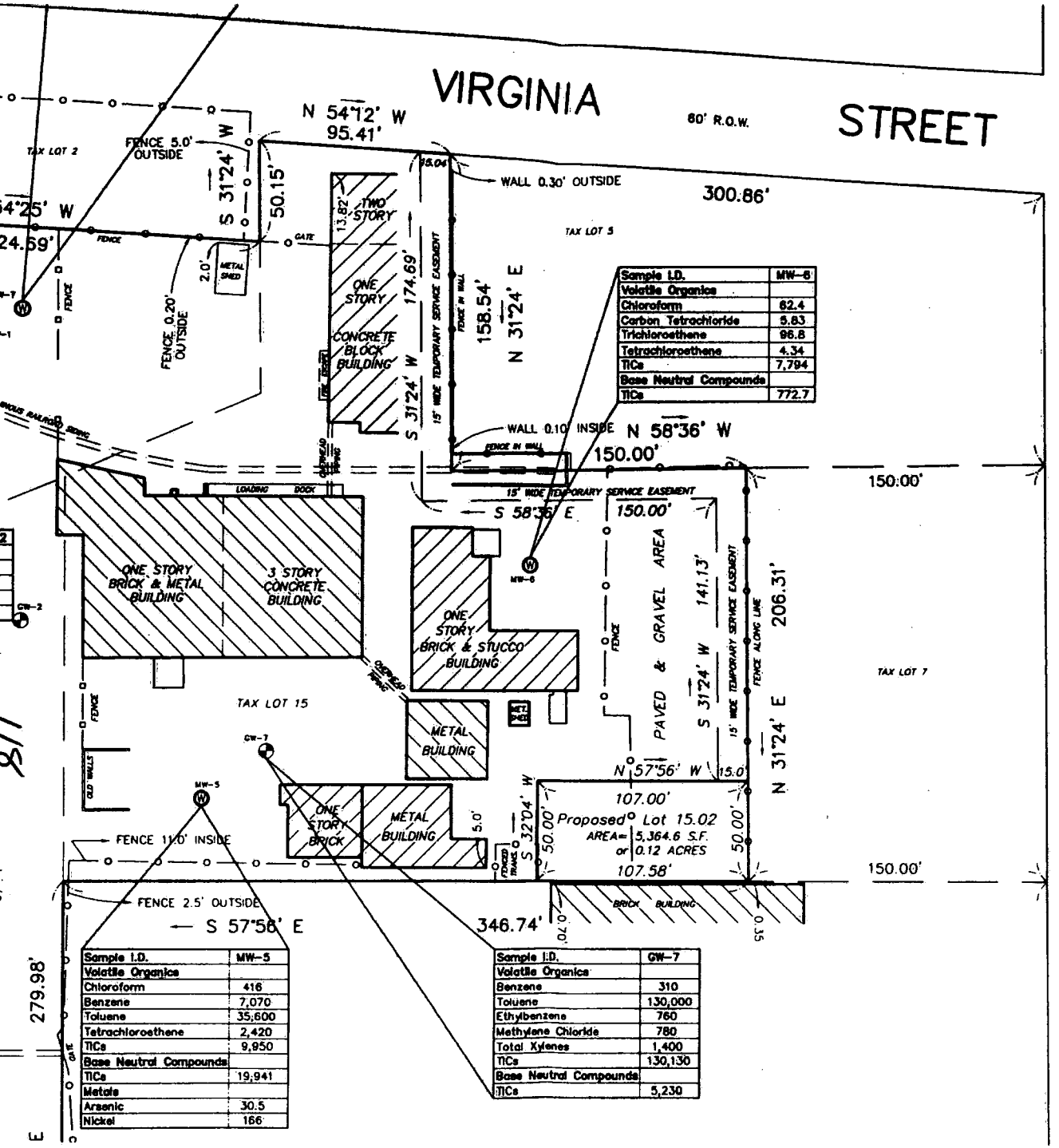
Sample I.D.	MW-3
Volatile Organics	
Benzene	125,000
Toluene	3,350
Chlorobenzene	1,180
Base Neutral Compounds	
TICs	3,334.9

Sample I.D.	MW-4
Volatile Organics	
Benzene	312
Toluene	2,800
Base Neutral Compounds	
TICs	979.6
METALS	
Arsenic	9.63



WELL EVELATIONS (TOP of PVC)

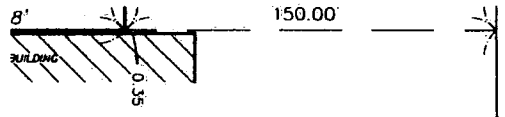
MW-1	20.06
MW-2	23.19
MW-3	27.77
MW-4	28.08
MW-5	25.47
MW-6	27.88
MW-7	26.27
MW-8	27.48



Sample I.D.	MW-6
Volatile Organics	
Chloroform	82.4
Carbon Tetrachloride	5.83
Trichloroethene	96.8
Tetrachloroethene	4.34
TICs	7,794
Base Neutral Compounds	
TICs	772.7

Sample I.D.	MW-5
Volatile Organics	
Chloroform	416
Benzene	7,070
Toluene	35,600
Tetrachloroethene	2,420
TICs	9,950
Base Neutral Compounds	
TICs	19,941
Metals	
Arsenic	30.5
Nickel	166

Sample I.D.	GW-7
Volatile Organics	
Benzene	310
Toluene	130,000
Ethylbenzene	760
Methylene Chloride	780
Total Xylenes	1,400
TICs	130,130
Base Neutral Compounds	
TICs	5,230



FRELINGHUYSEN

6/1

MW–4	28.08
MW–5	25.47
MW–6	27.88
MW–7	26.27
MW–8	27.48

FIGURE 9

GROUNDWATER SAMPLE LOCATION MAP – 5/2/01

TAX LOTS 15, 41, 43 & 53 BLOCK 3773

CITY of NEWARK, ESSEX COUNTY, NEW JERSEY

REVISIONS:

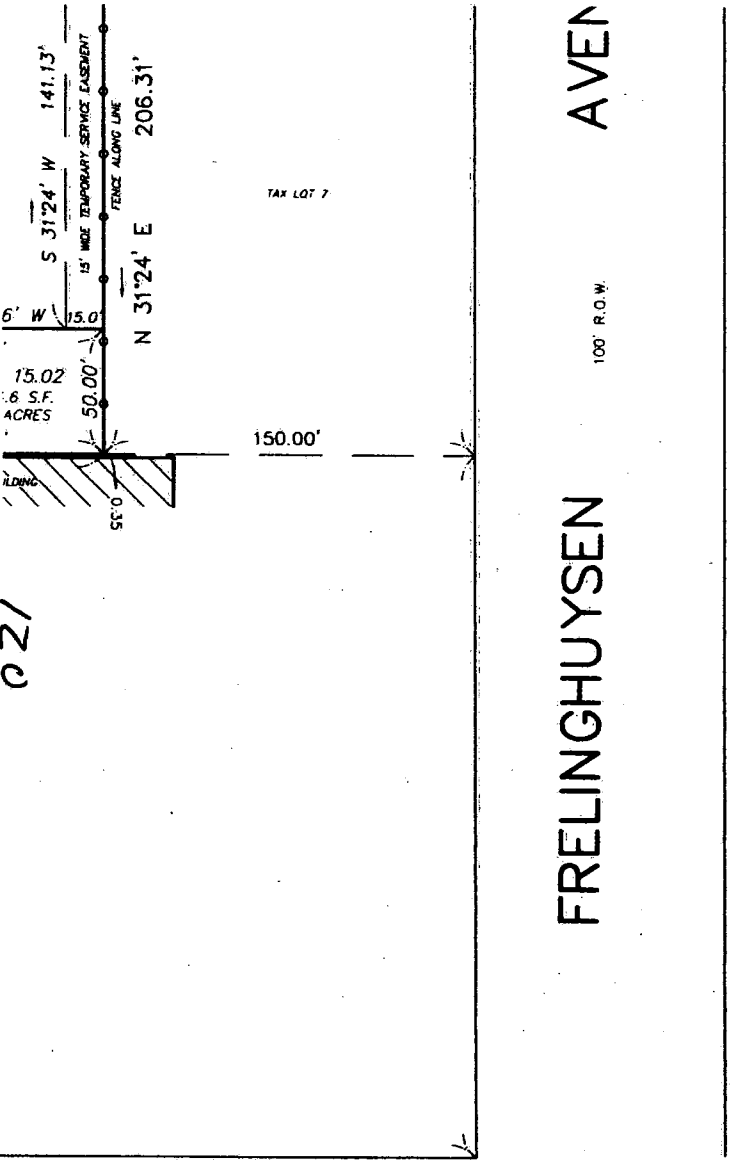
Wm. DiMARZO & SON, ASSOC., INC.
Surveyors • Planners
P.O. BOX 544
639 CHANCELLOR AVENUE
IRVINGTON, NEW JERSEY 07111–0544
TEL: (973) 372–1400
FAX: (973) 372–1543

William Swift

WILLIAM P. SWIFT, N.J.P.L.S. 20788 N.J.P.P. 4767
PROFESSIONAL LAND SURVEYOR and PROFESSIONAL PLANNER

BLOCK 3773 | SCALE 1"= 50' | PROJ. NO. 01–030B

DATE: JUNE 22, 2001



WELL EVELATIONS (TOP of PVC)

MW-1	20.06
MW-2	23.19
MW-3	27.77
MW-4	28.08
MW-5	25.47
MW-6	27.88
MW-7	26.27
MW-8	27.48

FIGURE 9

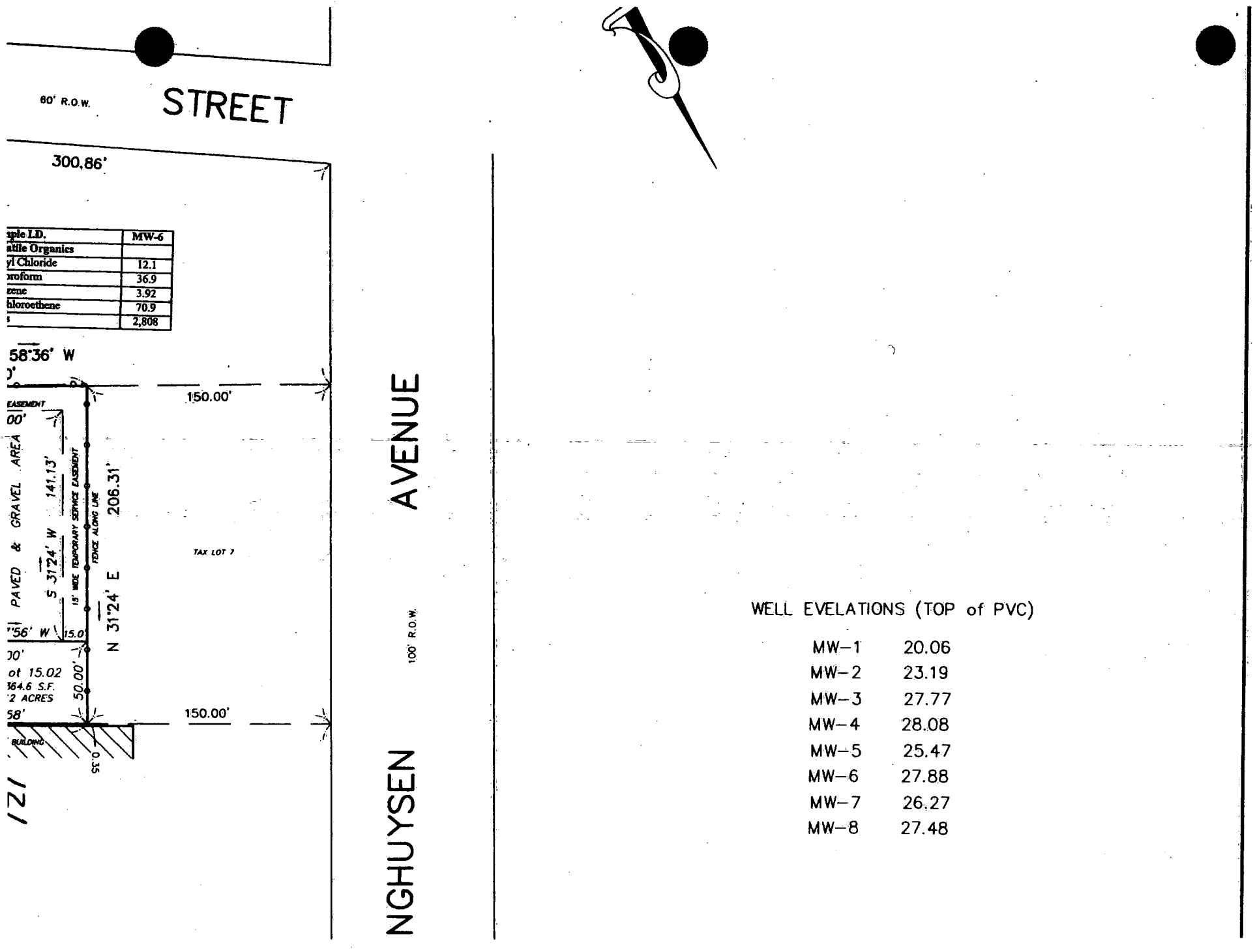
GROUNDWATER SAMPLE LOCATION MAP – 5/2/01

TAX LOTS 15, 41, 43 & 53 BLOCK 3773

CITY OF NEWARK, ESSEX COUNTY, NEW JERSEY

REVISIONS:

Wm. DiMARZO & SON ASSOC. INC.

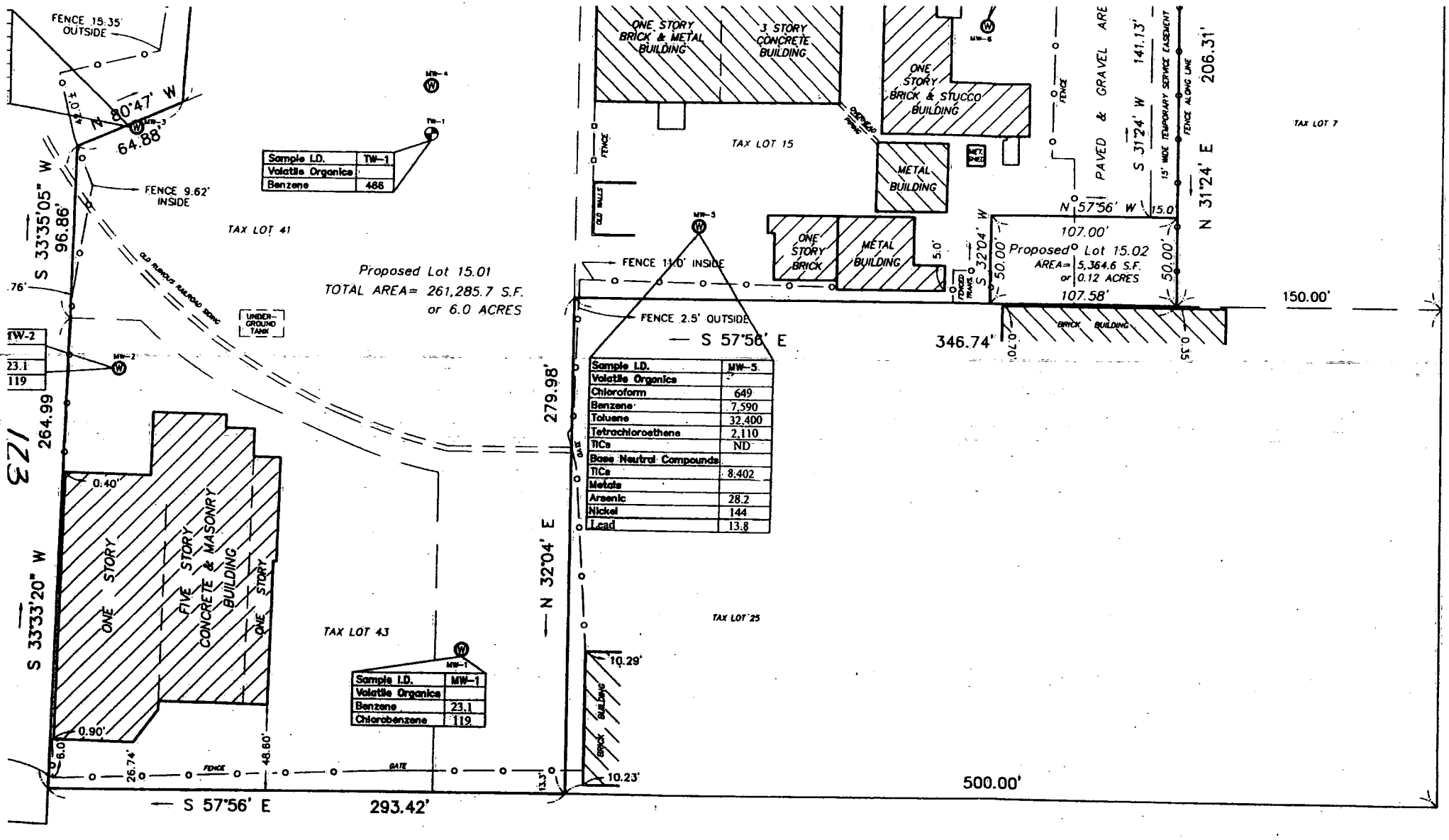


WELL EVELATIONS (TOP of PVC)

MW-1	20.06
MW-2	23.19
MW-3	27.77
MW-4	28.08
MW-5	25.47
MW-6	27.88
MW-7	26.27
MW-8	27.48

WELL EVELATIONS (TOP of PVC)

MW-1	20.06
MW-2	23.19



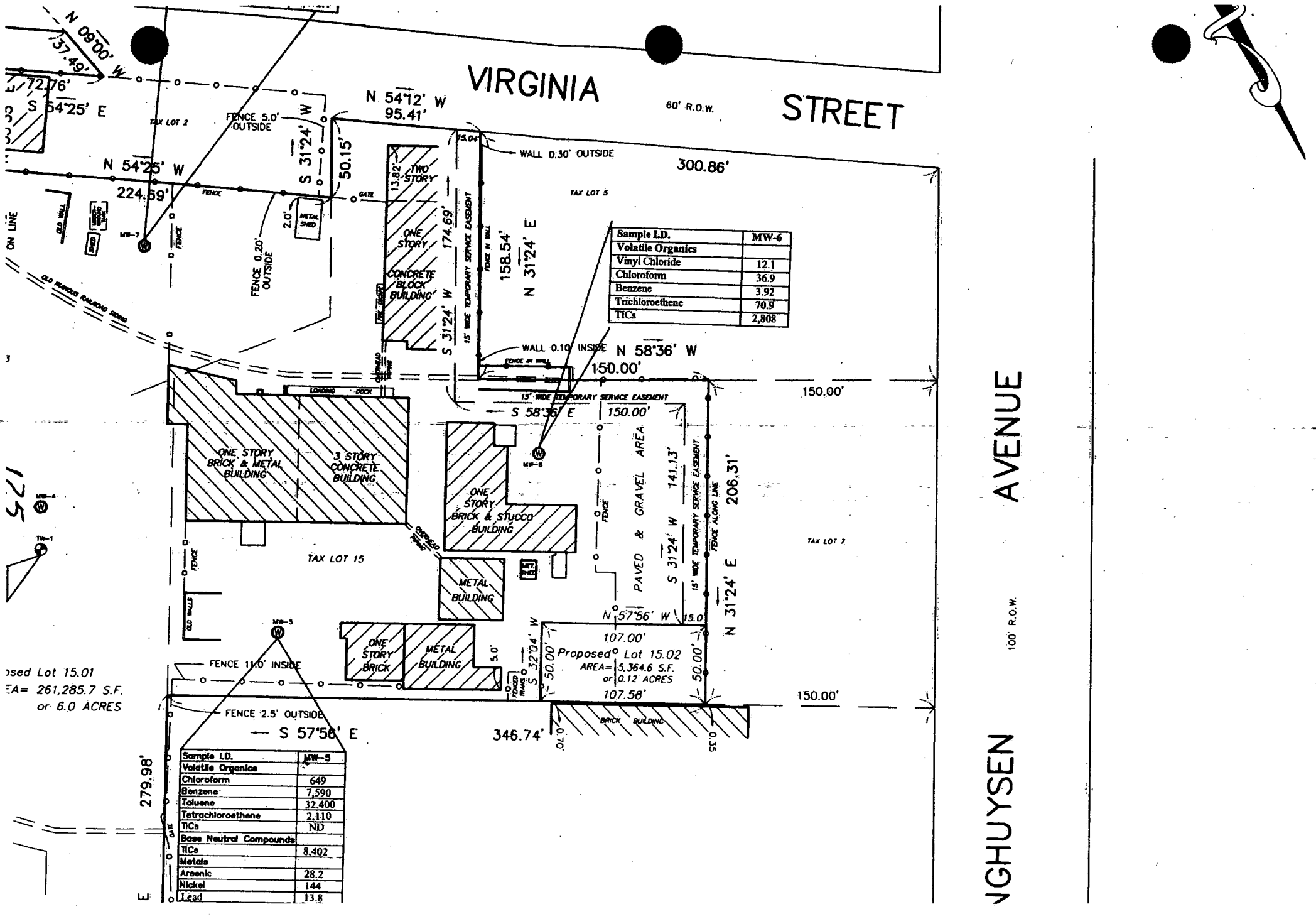
Sample I.D.	TW-1
Volatile Organics	
Benzene	466

Sample I.D.	MW-5
Volatile Organics	
Chloroform	649
Benzene	7,590
Toluene	32,400
Tetrachloroethene	2,110
TICs	ND
Base Neutral Compounds	
TICs	8,402
Metals	
Arsenic	28.2
Nickel	144
Lead	13.8

Sample I.D.	MW-1
Volatile Organics	
Benzene	23.1
Chlorobenzene	119

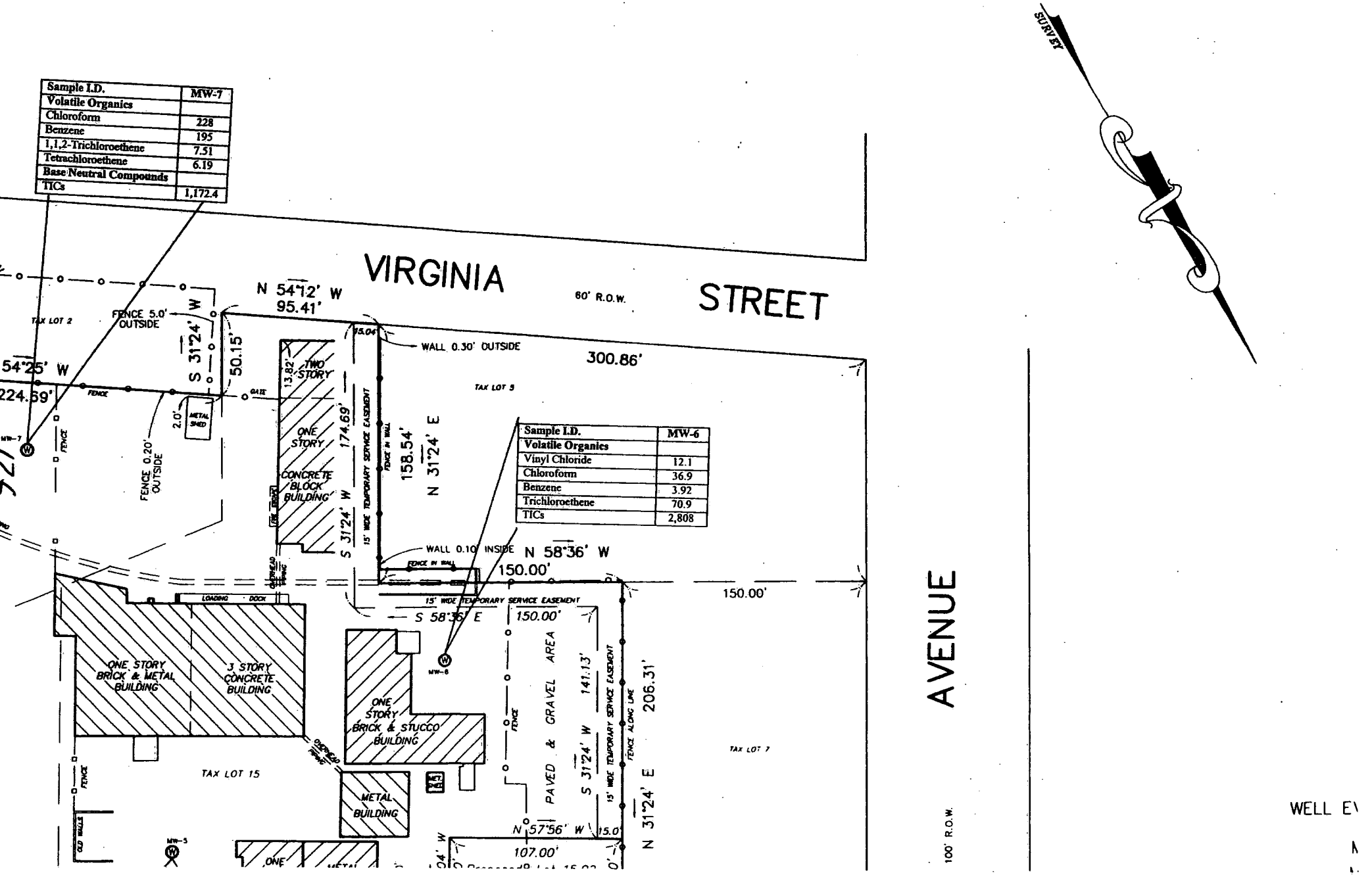
123

PENNSYL
N/F
FENCE 0.76' INSIDE
TOTAL AREA= 261,285.7 S.F.
or 6.0 ACRES
UNDER-GROUND TANK
FENCE 2.5' OUTSIDE
S 57°56' E
346.74'
Sample I.D. MW-2
Volatile Organics
Vinyl Chloride 23.1
Chlorobenzene 119
MW-2
264.99
S 33°33'20" W
0.40'
ONE STORY
FIVE STORY CONCRETE & MASONRY BUILDING
ONE STORY
0.90'
6.0'
FENCE 2.40' INSIDE
26.74'
FENCE
48.60'
GATE
13.3'
S 57°56' E
293.42'
279.98'
N 32°04' E
Sample I.D. MW-5
Volatile Organics
Chloroform 649
Benzene 7,590
Toluene 32,400
Tetrachloroethene 2,110
TICs ND
Base Neutral Compounds
TICs 8,402
Metals
Arsenic 28.2
Nickel 144
Lead 13.8
TAX LOT 43
TAX LOT 25
MW-1
Sample I.D. MW-1
Volatile Organics
Benzene 23.1
Chlorobenzene 119
10.29'
BUILDING
BRICK
10.23'
500.0
McCLELLAN
80' R.O.W.
STRE
GRAPHIC SCALE
50 0 25 50 100
(IN FEET)
1 inch = 50 ft.



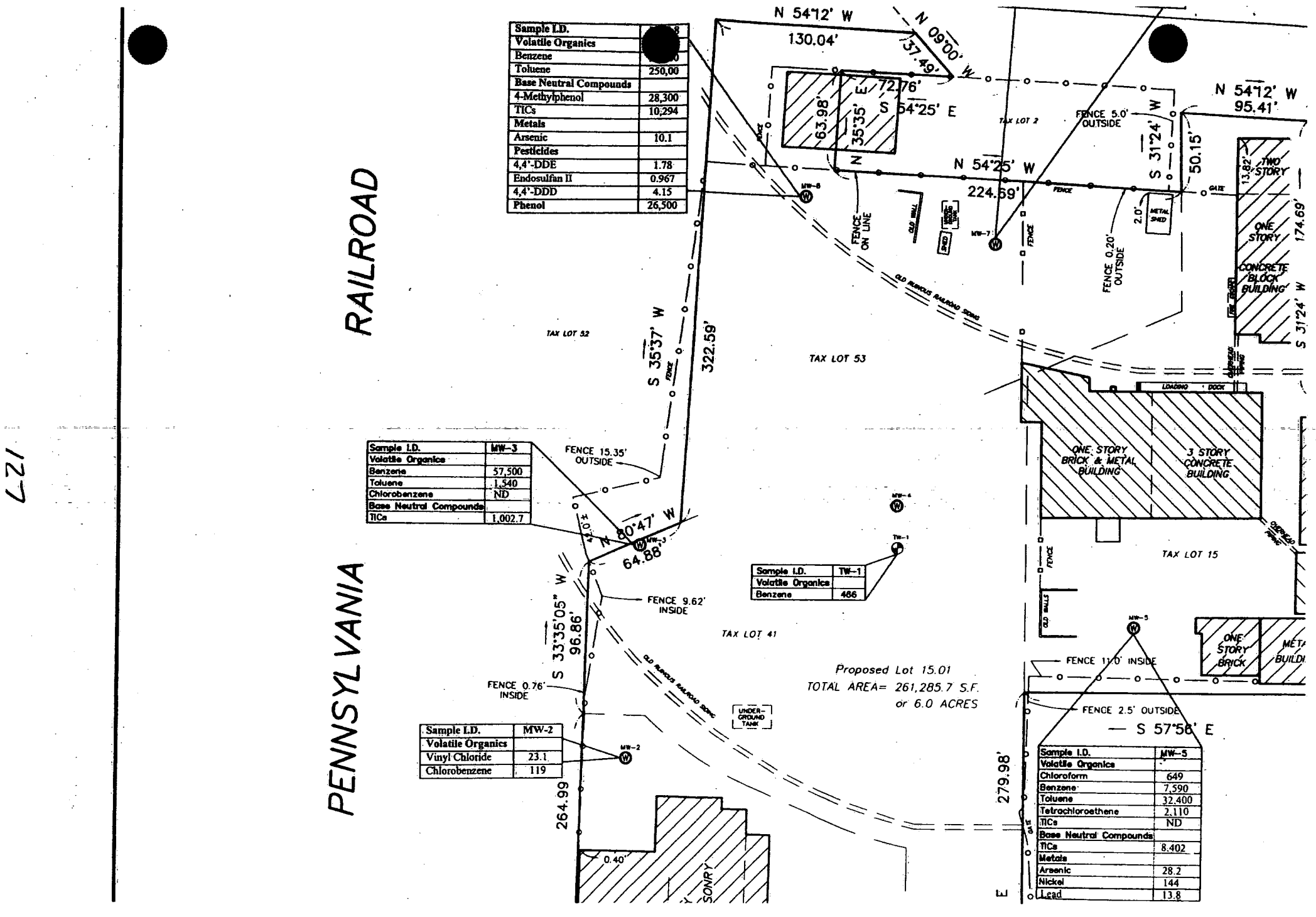
Sample I.D.	MW-6
Volatile Organics	
Vinyl Chloride	12.1
Chloroform	36.9
Benzene	3.92
Trichloroethene	70.9
TICs	2,808

Sample I.D.	MW-5
Volatile Organics	
Chloroform	649
Benzene	7,590
Toluene	32,400
Tetrachloroethene	2,110
TICs	ND
Base Neutral Compounds	
TICs	8,402
Metals	
Arsenic	28.2
Nickel	144
Lead	13.8



Sample I.D.	MW-7
Volatile Organics	
Chloroform	228
Benzene	195
1,1,2-Trichloroethene	7.51
Tetrachloroethene	6.19
Base Neutral Compounds	
TICs	1,172.4

Sample I.D.	MW-6
Volatile Organics	
Vinyl Chloride	12.1
Chloroform	36.9
Benzene	3.92
Trichloroethene	70.9
TICs	2,808



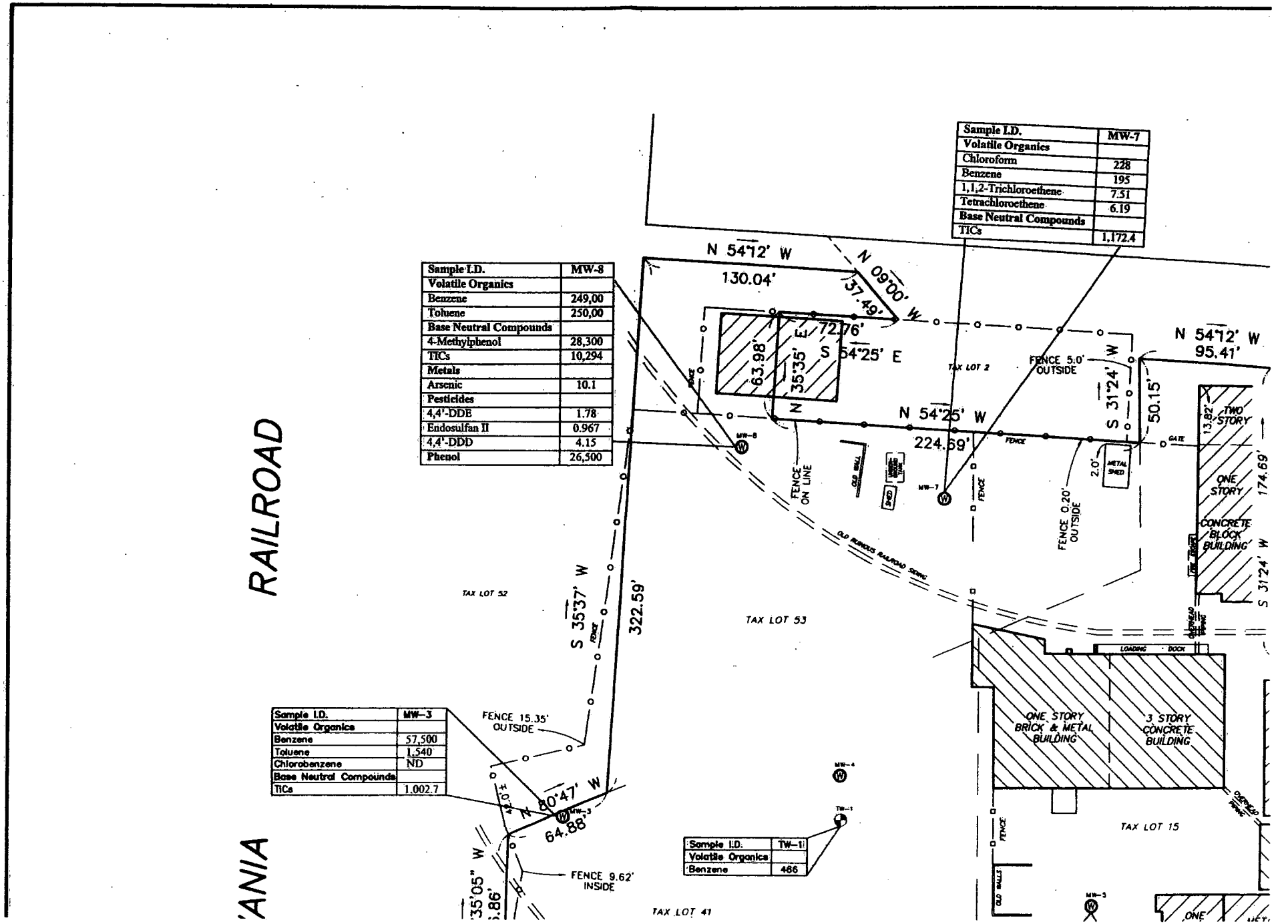
Sample I.D.	[illegible]
Volatile Organics	
Benzene	[illegible]
Toluene	250,00
Base Neutral Compounds	
4-Methylphenol	28,300
TICs	10,294
Metals	
Arsenic	10.1
Pesticides	
4,4'-DDE	1.78
Endosulfan II	0.967
4,4'-DDD	4.15
Phenol	26,500

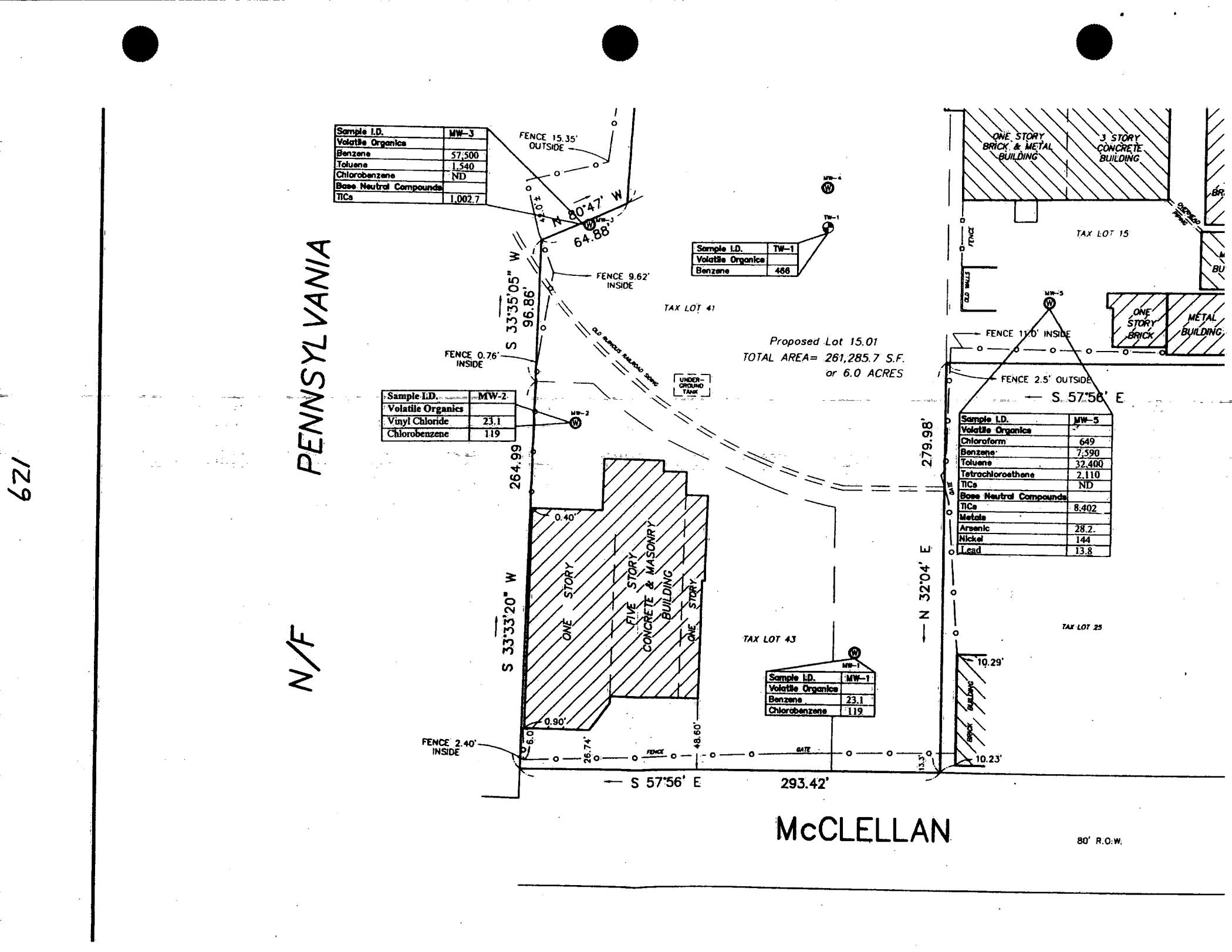
Sample I.D.	MW-3
Volatile Organics	
Benzene	57,500
Toluene	1,540
Chlorobenzene	ND
Base Neutral Compounds	
TICs	1,002.7

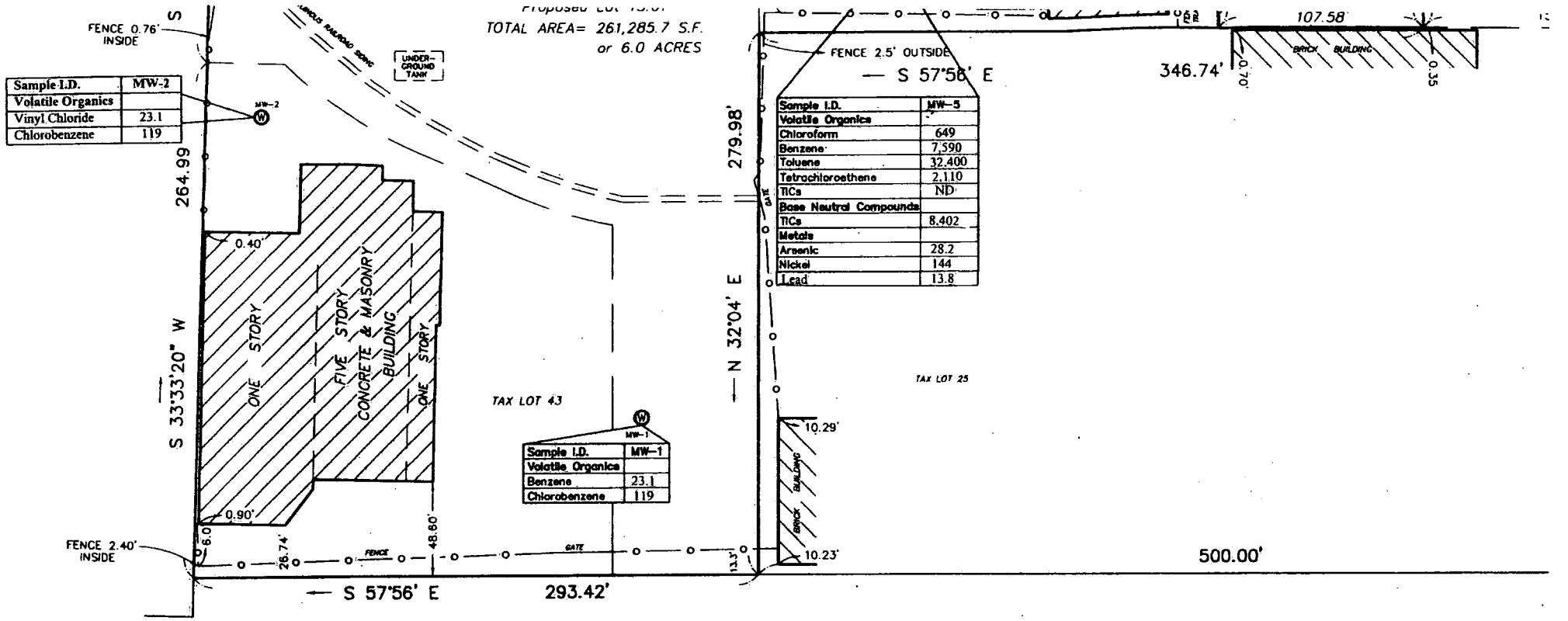
Sample I.D.	TW-1
Volatile Organics	
Benzene	466

Sample I.D.	MW-2
Volatile Organics	
Vinyl Chloride	23.1
Chlorobenzene	119

Sample I.D.	MW-5
Volatile Organics	
Chloroform	649
Benzene	7,590
Toluene	32,400
Tetrachloroethene	2,110
TICs	ND
Base Neutral Compounds	
TICs	8,402
Metals	
Arsenic	28.2
Nickel	144
Lead	13.8


RAILROAD
'ANIA
821
Sample I.D. | MW-7
Volatile Organics |
Chloroform | 228
Benzene | 195
1,1,2-Trichloroethene | 7.51
Tetrachloroethene | 6.19
Base Neutral Compounds |
TICs | 1,172.4
Sample I.D. | MW-8
Volatile Organics |
Benzene | 249,00
Toluene | 250,00
Base Neutral Compounds |
4-Methylphenol | 28,300
TICs | 10,294
Metals |
Arsenic | 10.1
Pesticides |
4,4'-DDE | 1.78
Endosulfan II | 0.967
4,4'-DDD | 4.15
Phenol | 26,500
Sample I.D. | MW-3
Volatile Organics |
Benzene | 57,500
Toluene | 1,540
Chlorobenzene | ND
Base Neutral Compounds |
TICs | 1,002.7
Sample I.D. | TW-1
Volatile Organics |
Benzene | 486
N 54°12' W
130.04'
N 09°00' W
37.49'
72.76'
S 54°25' E
63.98'
N 35°35' E
N 54°12' W
95.41'
S 31°24' W
50.15'
N 54°25' W
224.69'
FENCE 5.0' OUTSIDE
FENCE ON LINE
FENCE 0.20' OUTSIDE
TAX LOT 2
TAX LOT 52
TAX LOT 53
TAX LOT 15
TAX LOT 41
S 35°37' W
322.59'
FENCE 15.35' OUTSIDE
N 80°47' W
64.88'
FENCE 9.62' INSIDE
S 35°05" W
13.82'
TWO STORY
ONE STORY
CONCRETE BLOCK BUILDING
174.69'
S 31°24' W
LOADING DOCK
ONE STORY BRICK & METAL BUILDING
3 STORY CONCRETE BUILDING
METAL SHED
OLD RAILS
OLD ILLINOIS RAILROAD SPUR
MW-8
MW-7
MW-4
MW-3
TW-1


621
PENNSYLVANIA
N/F
Sample I.D. | MW-3
Volatile Organics |
Benzene | 57,500
Toluene | 1,540
Chlorobenzene | ND
Base Neutral Compounds |
TICs | 1,002.7
FENCE 15.35' OUTSIDE
N 80°47' W
64.88'
S 33°35'05" W
96.86'
FENCE 9.62' INSIDE
Sample I.D. | TW-1
Volatile Organics |
Benzene | 466
TAX LOT 41
OLD ILLINOIS RAILROAD SIGNAL
UNDER-GROUND TANK
FENCE 0.76' INSIDE
Sample I.D. | MW-2
Volatile Organics |
Vinyl Chloride | 23.1
Chlorobenzene | 119
264.99
S 33°33'20" W
ONE STORY
FIVE STORY CONCRETE & MASONRY BUILDING
ONE STORY
0.40'
0.90'
6.0'
FENCE 2.40' INSIDE
26.74'
FENCE
48.60'
GATE
13.3'
S 57°56' E
293.42'
TAX LOT 43
Sample I.D. | MW-1
Volatile Organics |
Benzene | 23.1
Chlorobenzene | 119
Proposed Lot 15.01
TOTAL AREA= 261,285.7 S.F.
or 6.0 ACRES
ONE STORY BRICK & METAL BUILDING
3 STORY CONCRETE BUILDING
TAX LOT 15
FENCE
OLD WALLS
FENCE 1.10' INSIDE
ONE STORY BRICK
METAL BUILDING
FENCE 2.5' OUTSIDE
S 57°56' E
279.98'
GATE
N 32°04' E
Sample I.D. | MW-5
Volatile Organics |
Chloroform | 649
Benzene | 7,590
Toluene | 32,400
Tetrachloroethene | 2,110
TICs | ND
Base Neutral Compounds |
TICs | 8,402
Metals |
Arsenic | 28.2
Nickel | 144
Lead | 13.8
TAX LOT 25
10.29'
BUILDING
BRICK
10.23'
McCLELLAN
80' R.O.W.



GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)

1 inch = 50 ft.

130

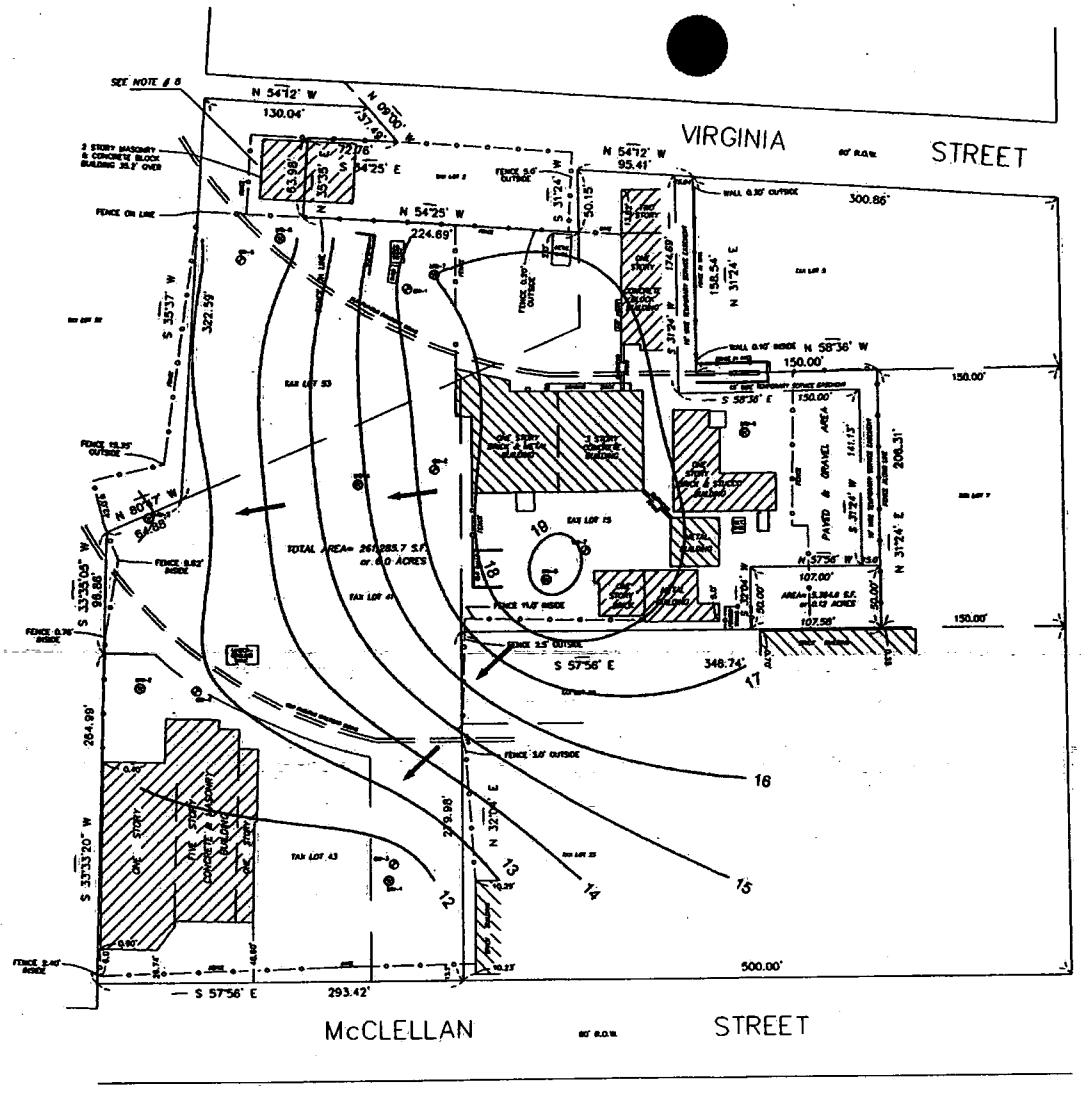


FIGURE 10

NOTES

THIS DRAWING WAS PREPARED USING INFORMATION TAKEN FROM:
DRAWING ENTITLED:
GROUNDWATER SAMPLE LOCATION MAP
TAX LOTS 15, 41, 43 & 53 BLOCK 3773
CITY of NEWARK, ESSEX COUNTY, NEW JERSEY

LEGEND

MW ◔ MONITORING WELL LOCATION

APPARENT GROUNDWATER ELEVATION CONTOUR AND FLOW DIRECTION
(ELEVATIONS EXPRESSED IN FEET MEAN SEA LEVEL)

GROUNDWATER CONTOUR MAP
APRIL 3, 2001

TAX LOTS 15, 41, 43 & 53 BLOCK 3773
CITY of NEWARK
ESSEX COUNTY, NEW JERSEY

PROJECT MANAGER: R.G. PROJECT NO.

2517 Highway 35, Bldg. D, Ste. 202
Manasquan, New Jersey 08736
732.292.0100 - fax 732.292.2806
Air, Soil & Groundwater Specialties

DRAWN BY/DATE: RLL / 6-24-01
APPROVED/DATE:
DRAWING NUMBER: BL3773-101

Xref: BL3773-000.dwg

131

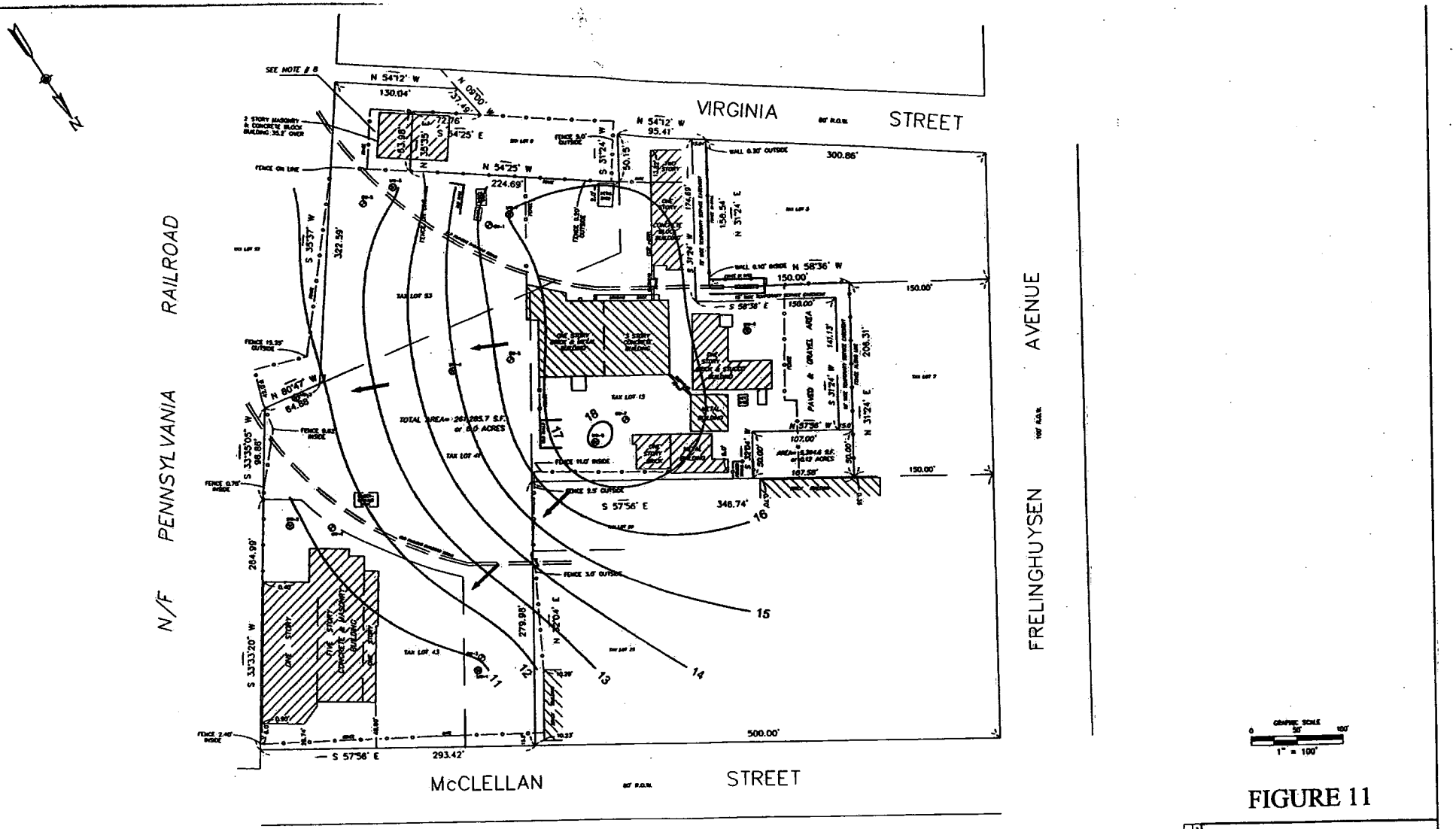


FIGURE 11

NOTES

THIS DRAWING WAS PREPARED USING INFORMATION TAKEN FROM:
DRAWING ENTITLED:
GROUNDWATER SAMPLE LOCATION MAP
TAX LOTS 15, 41, 43 & 53 BLOCK 3773
CITY of NEWARK, ESSEX COUNTY, NEW JERSEY

LEGEND

MW — MONITORING WELL LOCATION

APPARENT GROUNDWATER ELEVATION CONTOUR AND FLOW DIRECTION
(ELEVATIONS EXPRESSED IN FEET MEAN SEA LEVEL)

GROUNDWATER CONTOUR MAP
MAY 2, 2001

TAX LOTS 15, 41, 43 & 53 BLOCK 3773
CITY of NEWARK
ESSEX COUNTY, NEW JERSEY

PROJECT MANAGER: R.G. PROJECT NO.:

CTEC TECS
2517 Highway 35, Bldg. D, Ste. 202
Manasquan, New Jersey 08736
732.292.0100 - fax 732.292.2808

DRAWN BY/DATE: RLL / 6-23-01
APPROVED/DATE:
DRAWING NUMBER: BL3773-102

Xref: BL3773-000.dwg

132

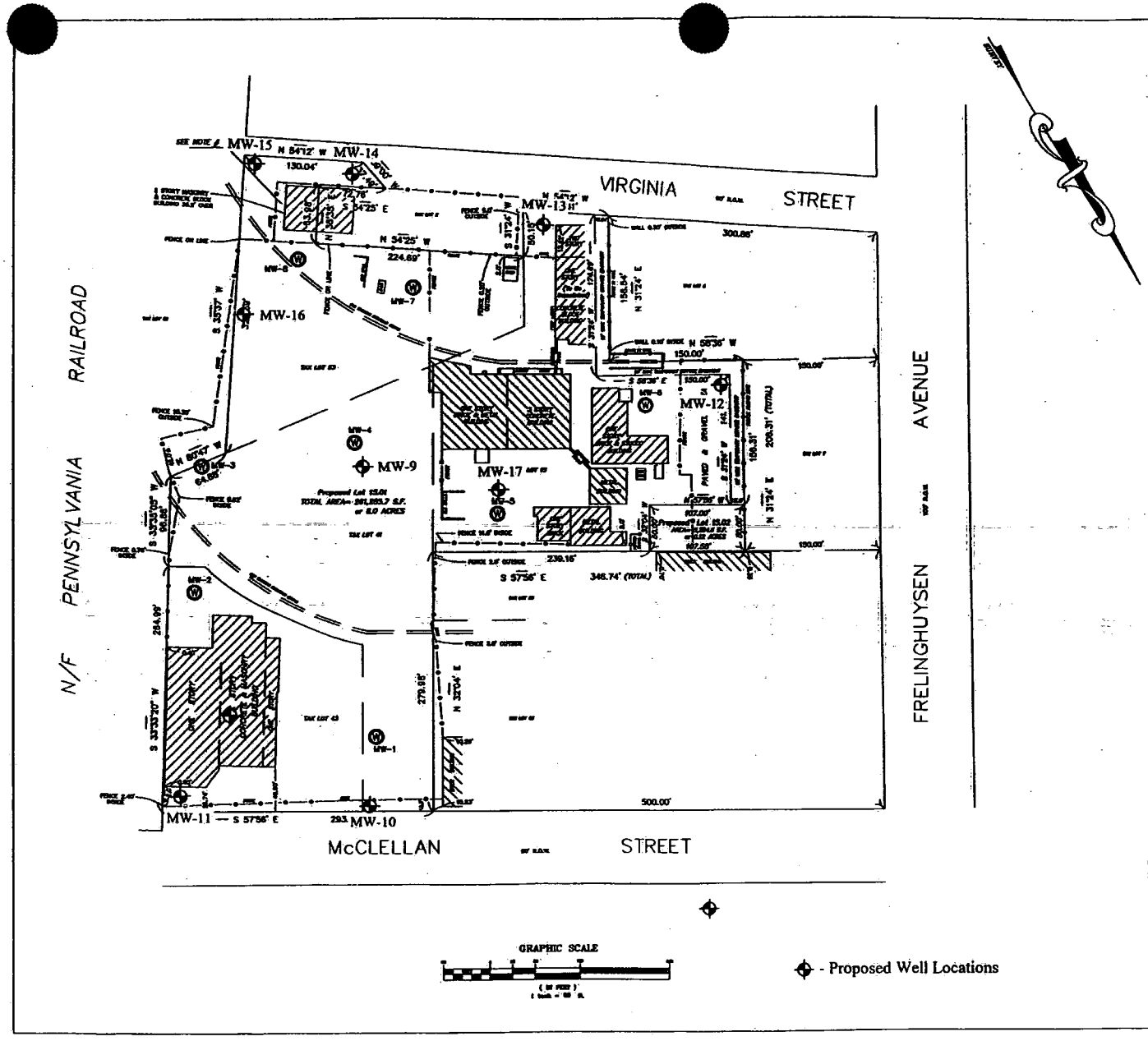


FIGURE 12

BOUNDARY SURVEY
TAX LOTS 15, 41, 43 & 53 BLOCK 3773
CITY of NEWARK, ESSEX COUNTY, NEW JERSEY

REVISIONS:
4-30-01 : PROPOSED TEMPORARY SERVICE EASEMENT.
5-15-01 : PROPOSED LOT DESIGNATIONS AS PER CITY SURVEYOR.

Wm. DIMARZO & SON, ASSOC., INC.

WILLIAM P. SWIFT, N.J.P.L.S. 20098 N.J.P.P. 4787

BLOCK 3773 | SCALE 1"= 50' | PROJ. NO. 01-0148 | DATE: MARCH 1, 2001

133

Environmental Data Resources, Inc.

an edr company

"Linking Technology with Tradition"

Sanborn® Map Report

Ship to: Chris Neuffer
Envirotactics Inc.
2517 Route 35
Manasquan, NJ 08736

1012284DAS 732-528-3701

Order Date: 10/3/2000 **Completion Date:** 10/03/2000
Inquiry #: 547945.7S
P.O. #: na
Site Name: Orbis Products Corp.
Address: 55 Virginia Street
City/State: Newark, NJ 07112
Cross Streets: Frelinghuysen Ave

Based on client-supplied information, fire insurance maps for the following years were identified

1931 - 1 - map
1950 - 1 - map
1973 - 1 - map
1988 - 1 - map
1994 - 1 - map

Total Maps: 5

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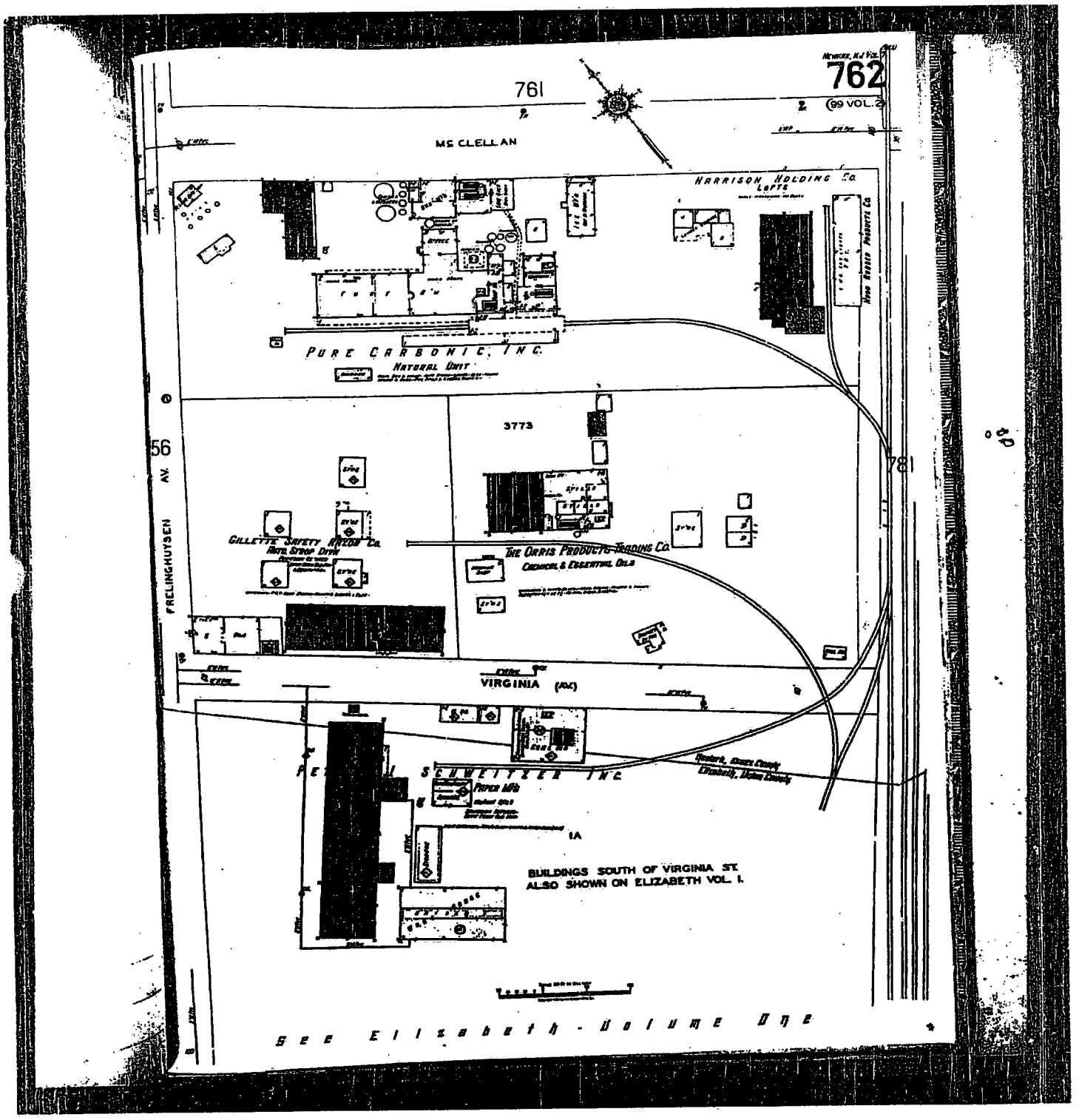

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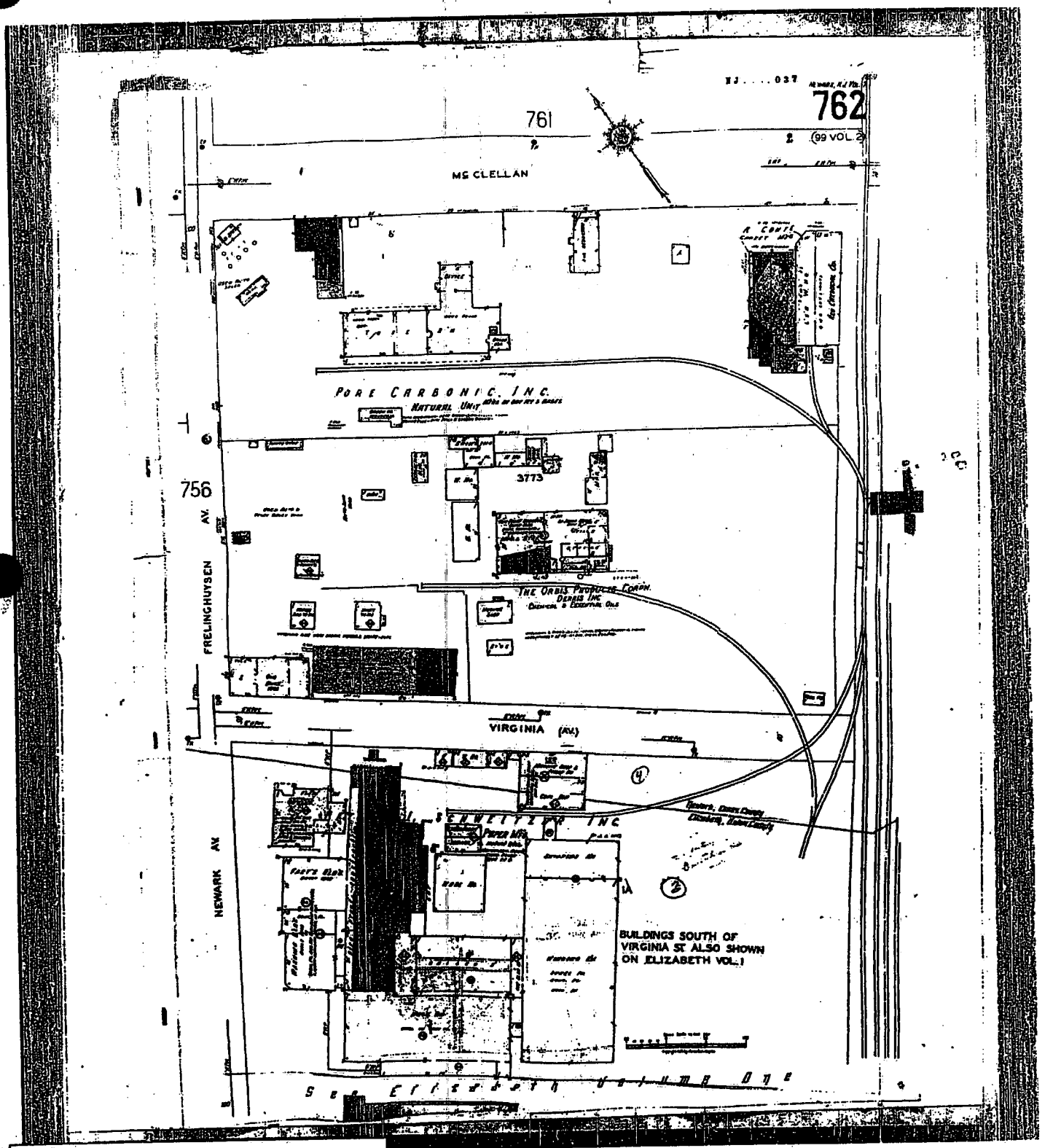

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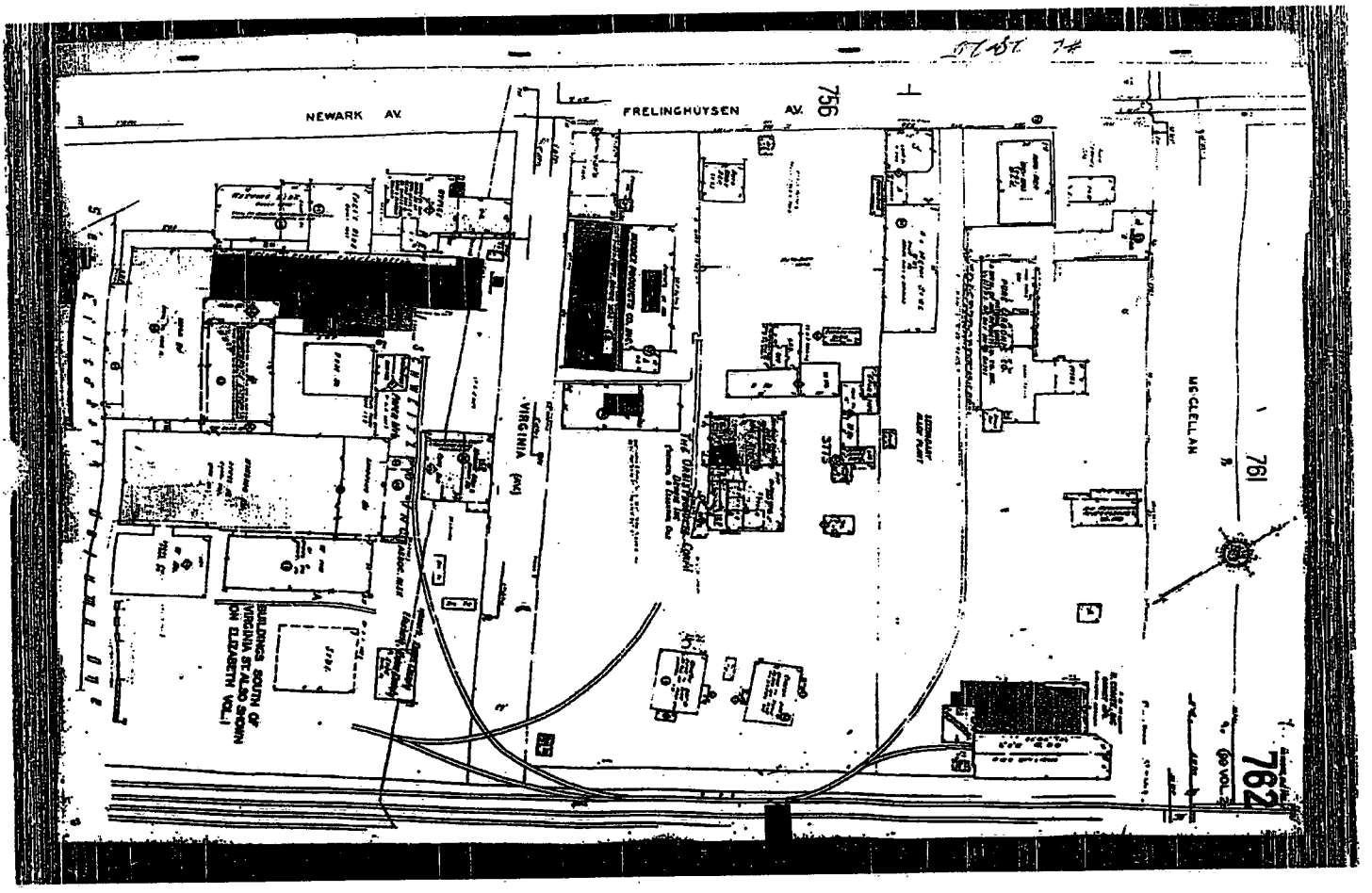

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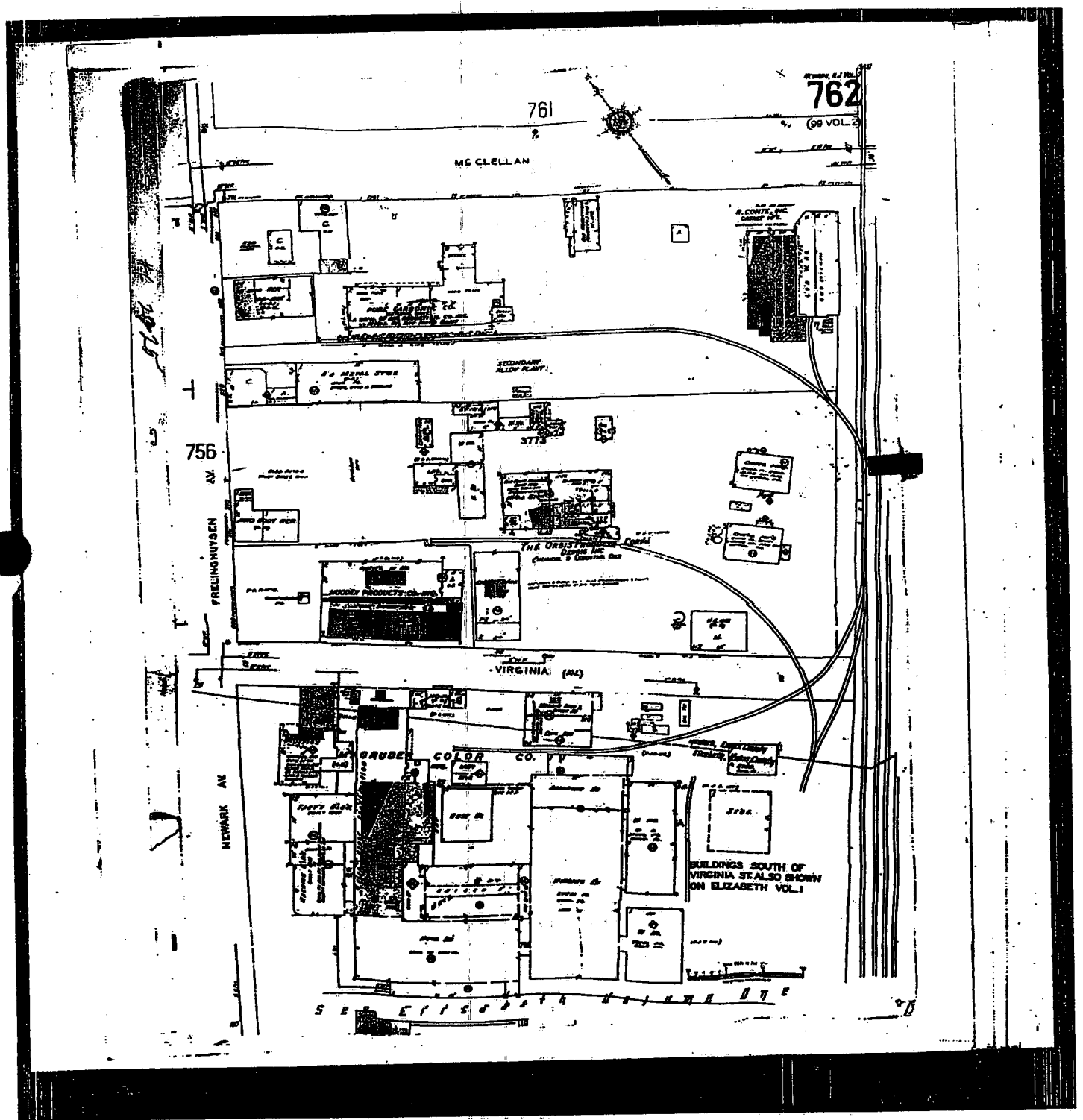

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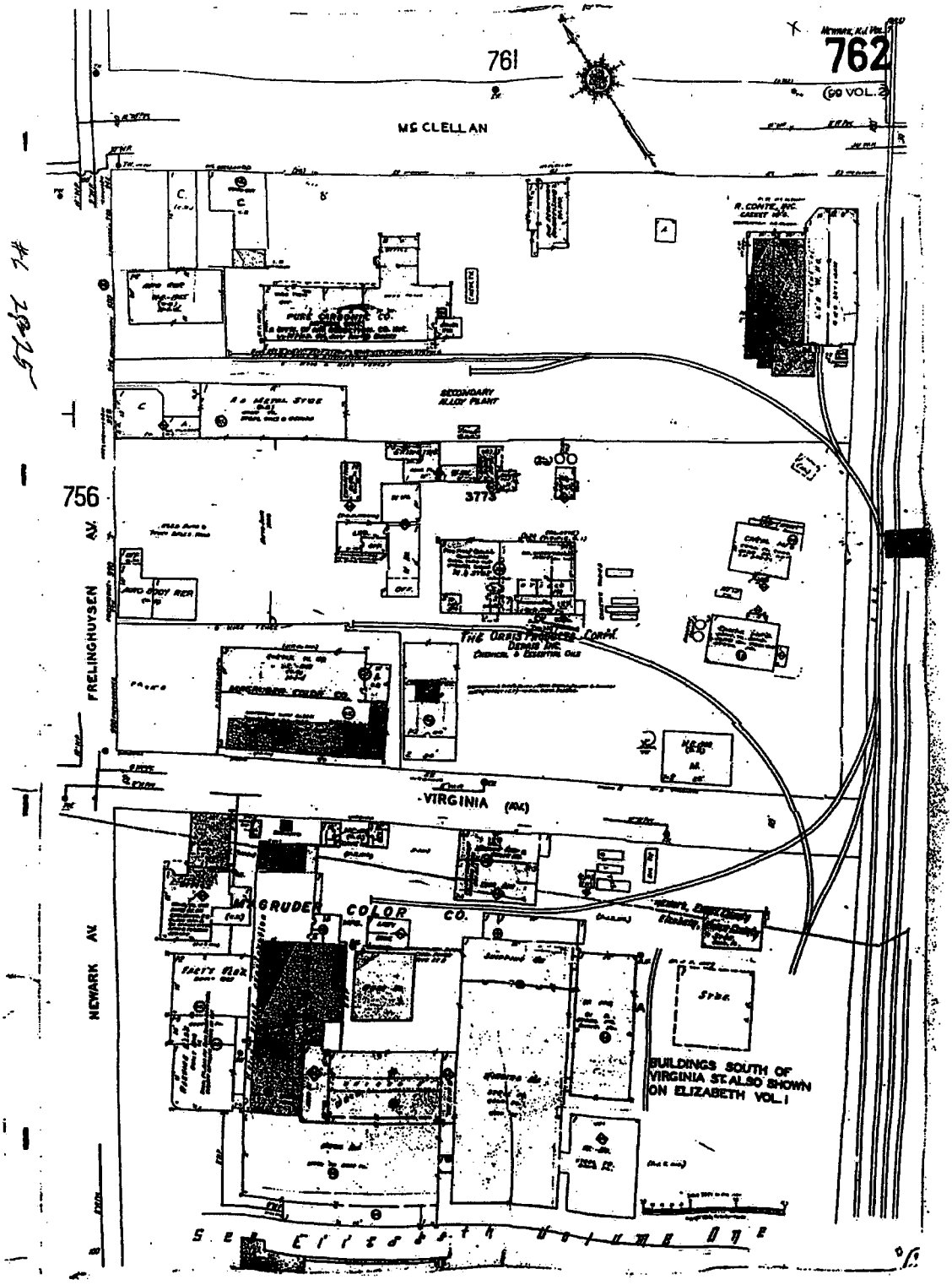

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Sample I.D.	S-1	S-2	S-3	S-4	S-5	S-7	S-8	S-10	RDCSCC	NRDCSCC	IGWSCC
Sample Depth (ft.)	1.5	3	5	5.5	2.5	8	7	13			
TPH	82	834	ND	51	ND	110	868	ND	xxxx	xxxx	xxxx
Volatile Organics											
Methylene Chloride	ND	ND	ND	1.0B	ND	ND	ND	ND	49	210	1
1,2-Dichloroethane (EDC)	ND	ND	ND	ND	ND	ND	**3.5**	ND	6	24	1
Benzene	ND	ND	ND	0.43J	[redacted]	0.31J	0.97	0.2J	3	13	1
Toluene	ND	1	ND	0.37J	19	280	7.7	**540D**	1000	1000	500
Tetrachlorethene	ND	ND	ND	ND	ND	0.43J	ND	ND	4	6	1
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	37	680	1
Ethylbenzene	ND	ND	ND	ND	ND	3.4	0.4J	ND	1000	1000	100
1,2,4-Trimethylbenzene	ND	ND	ND	ND	ND	ND	ND	0.39J	xxxx	xxxx	xxxx
sec-Butylbenzene	ND	ND	ND	ND	ND	ND	ND	0.32J	xxxx	xxxx	xxxx
p-Isopropylbenzene	ND	ND	ND	ND	ND	ND	ND	660D	xxxx	xxxx	xxxx
Naphthalene	ND	ND	ND	ND	ND	ND	ND	0.32J	230	4200	100
TICs	ND	2.12	6.59	13.22	295.9	44.95	79.8	35.8	xxxx	xxxx	xxxx

Sample S-9 was collected at 12' below grade with analysis for TPH. TPH was non-detect.

All results are in parts per million (ppm).
ND - Not detected.
J - Concentration detected below the MDL.
Bold - Compound above the most stringent soil cleanup criteria.
Shaded - Compound above the Non-Residential Soil Cleanup Criteria.

Sample I.D.	S-1	S-2	S-3	S-4	S-5	S-7	S-8	S-10	RDCSCC	NRDCSCC	IGWSCC
Sample Depth (ft.)	1.5	3	5	5.5	2.5	8	7	13			
Base Neutral Compounds											
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	0.085	ND	NA	5100	10000	100
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	0.21	ND	NA	570	10000	100
Benzyl alcohol	0.091J	ND	ND	ND	ND	1.6	ND	NA	10000	10000	50
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	1.1	0.23J	NA	5100	10000	50
2-Methylphenol	ND	ND	ND	ND	ND	0.6	ND	NA	2800	10000	2800
4-Methylphenol	0.084J	0.095J	ND	ND	0.11J	0.69	ND	NA	2800	10000	2800
N-Nitroso-di-n-propylamine	ND	ND	ND	ND	ND	ND	2.4	NA	0.66	0.66	10
Isophorone	ND	ND	ND	ND	ND	0.73	ND	NA	1100	10000	50
Benzoic acid	0.39J	ND	ND	ND	1.2J	ND	ND	NA	xxxx	xxxx	xxxx
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	0.077J	ND	NA	68	1200	100
Naphthalene	0.056J	1.9	ND	ND	0.12J	0.11J	ND	NA	230	4200	100
4-Chlorophenyl-phenylether	ND	ND	ND	ND	ND	ND	1.4	NA	xxxx	xxxx	xxxx
2-Methylnaphthalene	ND	1.1	ND	ND	ND	ND	ND	NA	xxxx	xxxx	xxxx
2-Chloronaphthalene	ND	ND	ND	ND	ND	0.096J	ND	NA	xxxx	xxxx	xxxx
Dimethylphthalate	ND	0.08J	ND	ND	ND	0.11J	ND	NA	10000	10000	50
Acenaphthylene	0.094J	0.5	ND	ND	ND	ND	ND	NA	xxxx	xxxx	xxxx
Acenaphthene	0.11J	4.7	ND	ND	0.1J	ND	ND	NA	3400	10000	100
4-Nitrophenol	ND	ND	ND	ND	ND	1.3	ND	NA	xxxx	xxxx	xxxx
Dibenzofuran	0.066J	3.6	ND	ND	0.074J	ND	0.43J	NA	xxxx	xxxx	xxxx
Fluorene	0.12J	6.2	ND	ND	0.099J	ND	0.67	NA	2300	10000	100
Phenanthrene	1.4	45.0D	0.21J	0.18J	0.67	0.71	ND	NA	xxxx	xxxx	xxxx
Anthracene	0.34J	15.0D	0.048J	0.068J	0.1J	ND	ND	NA	10000	10000	100
Di-n-butylphthalate	0.10J	1.1	ND	ND	ND	ND	4.7	NA	5700	10000	100
Fluoranthene	2	47.0D	0.3J	0.19J	0.5	0.17J	0.41J	NA	2300	10000	100
Benzidine	0.82	ND	ND	ND	ND	2.2	ND	NA	xxxx	xxxx	xxxx
Pyrene	1.8	36.0D	0.23J	0.13J	0.38J	011J	0.63	NA	1700	10000	100
Butylbenzylphthalate	ND	1.6	ND	ND	ND	ND	2.7	NA	1100	10000	100
Benzo[a]anthracene	0.98	19.0D	0.13J	0.058J	0.16J	ND	ND	NA	0.9	4	500
Chrysene	1.1	17.0D	0.16J	0.077J	0.18J	ND	ND	NA	9	40	500

All results are in parts per million (ppm).
ND - Not detected.
J - Concentration detected below the MDL.
Bold - Compound above the most stringent soil cleanup criteria.
Shaded - Compound above the Non-Residential Soil Cleanup Criteria.

Sample I.D.	S-1	S-2	S-3	S-4	S-5	S-7	S-8	S-10	RDCSCC	NRDCSCC	IGWSCC
Sample Depth (ft.)	1.5	3	5	5.5	2.5	8	7	13			
Base Neutral Compounds (Continued)											
bis(2-Ethylhexyl)phthalate	1.1	**140.0D**	ND	ND	ND	1.8	0.59	NA	49	210	100
Di-n-octylphthalate	ND	50.0D	ND	ND	ND	2.6	0.93	NA	1100	10000	100
Benzo[b]fluoranthene	**1.1**	[illegible]	0.099J	0.062J	0.15J	ND	ND	NA	0.9	4	50
Benzo[k]fluoranthene	**1**	[illegible]	0.13J	0.081J	0.088J	ND	ND	NA	0.9	4	500
Benzo[a]pyrene	[illegible]	[illegible]	0.11J	0.058J	0.13J	ND	ND	NA	0.66	0.66	100
Ideno[1,2,3-cd]pyrene	0.33J	**3.8**	0.063J	0.041J	0.065J	ND	ND	NA	0.9	4	500
Dibenzo[a,h]anthracene	0.18J	[illegible]	ND	ND	ND	ND	ND	NA	0.66	0.66	100
Benzo[g,h,i]perylene	0.27J	3.1	0.06J	ND	0.062J	ND	ND	NA	xxxx	xxxx	xxxx
TICs	86.52	194.8	93.88	105.32	185.37	289.5	107.06	NA	xxxx	xxxx	xxxx

All results are in parts per million (ppm).
ND - Not detected.
J - Concentration detected below the MDL.
Bold - Compound above the most stringent soil cleanup criteria.
Shaded - Compound above the Non-Residential Soil Cleanup Criteria.

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Sample I.D.	S-1	S-2	S-3	S-4	S-5	S-7	S-8	S-10	RDCSCC	NRDCSCC	IGWSCC
Sample Depth (ft.)	1.5	3	5	5.5	2.5	8	7	13			
Metals											
Antimony	ND	ND	ND	ND	ND	ND	ND	NA	14	340	xxxx
Arsenic	7.24	10.9	16.2	5.08	2.95	ND	11.1	NA	20	20	xxxx
Beryllium	1.42	1.55	1.36	1.32	1.19	1	1.48	NA	2	2	xxxx
Cadmium	4.64	3.58	2.43	2.97	1.97	1.9	2.55	NA	39	100	xxxx
Chromium	25.4	24.2	18.6	21.5	20.6	15.9	37.6	NA	120000	xxxx	xxxx
Copper	80.6	75.2	95.8	87.9	12.2	14.9	41.4	NA	600	600	xxxx
Lead	120	587	54.2	56.7	ND	ND	80	NA	400	600	xxxx
Mercury	0.345	0.553	0.424	ND	ND	ND	ND	NA	14	270	xxxx
Nickel	52.5	20.3	16.1	35.3	18.2	93.8	20.1	NA	250	2400	xxxx
Selenium	ND	ND	ND	ND	ND	ND	ND	NA	63	3100	xxxx
Silver	ND	ND	ND	ND	ND	ND	ND	NA	110	4100	xxxx
Thallium	ND	ND	ND	ND	ND	ND	ND	NA	2	2	xxxx
Zinc	181	374	227	219	54.1	64.6	384	NA	1500	1500	xxxx
Pesticides											
A-Chlordane	ND	0.016	ND	ND	ND	ND	ND	NA	xxxx	xxxx	xxxx
G-Chlordane	ND	0.0602	ND	ND	ND	ND	ND	NA	xxxx	xxxx	xxxx
Dieldrin	ND	0.011	ND	ND	ND	ND	ND	NA	0.042	0.18	50
4,4'-DDE	0.198D	0.0466	ND	0.0191	ND	0.114	ND	NA	2	9	50
4,4'-DDD	0.106D	0.0676	ND	0.0749	ND	0.497	ND	NA	3	12	50
4,4'-DDT	0.12D	0.0645	ND	0.00577	ND	ND	ND	NA	2	9	500
PCBs	ND	ND	ND	ND	ND	ND	ND	NA	0.49	2	50
Cyanide	2.22	ND	ND	ND	ND	1.1	ND	NA	1100	21000	xxxx
Phenol	ND	ND	ND	ND	ND	21	ND	NA	10000	10000	50

All results are in parts per million (ppm).
ND - Not detected.
J - Concentration detected below the MDL.
Bold - Compound above the most stringent soil cleanup criteria.
Shaded - Compound above the Non-Residential Soil Cleanup Criteria.

Sample I.D.	S-11	S-12	S-12A	S-13	S-14	S-15	S-16	RDCSCC	NRDCSCC	IGWSCC
Sample Depth (ft.)	5	3	7.5	2	2	4	4			
TPH	41.1	ND	NA	165	3,670	123	254	xxxx	xxxx	xxxx
Volatile Organics										
Chloroform	ND	ND	ND	**15**	ND	ND	ND	19	28	1
Benzene	0.222J	[redacted]	[redacted]	[redacted]	**9.33**	**3.54**	**6.72**	3	13	1
Toluene	ND	1.73	4.18	315D	71.4	28.7	1.02J	1000	1000	500
Chlorobenzene	ND	ND	ND	0.54	ND	ND	ND	37	680	1
Ethylbenzene	ND	ND	ND	0.84	5.28J	ND	ND	1000	1000	100
Total Xylenes	ND	ND	ND	1.93	105	ND	ND	410	1000	67
1,3-Dichlorobenzene	ND	ND	ND	2.32	10.2J	ND	ND	5100	10000	100
1,4-Dichlorobenzene	ND	ND	ND	21.9	8.78J	ND	2.75J	570	10000	100
1,2-Dichlorobenzene	2.97	ND	ND	**262D**	**416**	1.75J	**84.3**	5100	10000	50
TICs	22.95	39.097	3.76	1346.2	1430.8	603.52	ND	xxxx	xxxx	xxxx
Base Neutral Compounds										
Phenol	ND	0.314	0.0994	0.25J	ND	ND	ND	10000	10000	50
1,3-Dichlorobenzene	ND	ND	ND	ND	3.2	ND	0.259	5100	10000	100
1,4-Dichlorobenzene	ND	ND	ND	1.35	16.8	ND	0.836	570	10000	100
1,2-Dichlorobenzene	0.639	ND	ND	23.4	170	0.0652	28.4	5100	10000	50
4-Methylphenol	0.163	8.66	8.19	ND	ND	ND	ND	2800	10000	xxxx
2,4-Dimethylphenol	ND	0.591	ND	ND	ND	ND	ND	1100	10000	10
1,2,4-Trichlorobenzene	ND	ND	ND	ND	1.32J	ND	ND	68	1200	100
2-Methylnaphthalene	ND	ND	ND	ND	8.5	ND	ND	xxxx	xxxx	xxxx
Phenanthrene	ND	ND	ND	0.251	ND	ND	ND	xxxx	xxxx	xxxx
Anthracene	0.102J	ND	ND	ND	ND	ND	ND	10000	10000	100
Carbazole	17.9	ND	0.0991	4.38	1.11J	ND	ND	xxxx	xxxx	xxxx
Fluoranthene	ND	ND	ND	0.17J	ND	ND	ND	2300	10000	100
Pyrene	ND	ND	ND	0.165J	ND	ND	ND	1700	10000	100
bis(2-Ethylhexyl)phthalate	ND	ND	ND	0.3	ND	ND	ND	49	210	100
TICs	27.717	0.332	1.03	315.08	1348.7	78.833	34.848	xxxx	xxxx	xxxx

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ND - Not detected.
J - Concentration detected below the MDL.
Bold - Compound above the most stringent soil cleanup criteria.
Shaded - Compound above the Non-Residential Soil Cleanup Criteria.

Sample I.D.	S-11	S-12	S-12A	S-13	S-14	S-15	S-16	RDCSCC	NRDCSCC	IGWSCC
Sample Depth (ft.)	5	3	7.5	2	2	4	4			
Metals										
Antimony	ND	ND	ND	ND	ND	ND	ND	14	340	xxxx
Arsenic	12.4	1.98	2.09	6.13	38.7	1.85	2.72	20	20	xxxx
Beryllium	0.481	0.936	0.743	ND	0.421	0.552	0.539	2	2	xxxx
Cadmium	ND	ND	ND	ND	0.422	ND	0.48	39	100	xxxx
Chromium	356	24	19.4	261	64.5	20.3	29.4	120000	xxxx	xxxx
Copper	22.1	21.7	22.4	20.9	143	18.2	148	600	600	xxxx
Lead	19.5	18.4	10.2	99.1	701	32.3	113	400	600	xxxx
Mercury	0.0513	ND	ND	0.181	0.267	0.0556	0.146	14	270	xxxx
Nickel	20.3	27.1	23.5	5.46	64.5	18.8	25	250	2400	xxxx
Selenium	ND	ND	ND	ND	5.28	ND	ND	63	3100	xxxx
Silver	ND	ND	ND	ND	1.27	ND	ND	110	4100	xxxx
Thallium	0.27	0.158	0.25	ND	ND	0.129	0.105	2	2	xxxx
Zinc	54	76.1	61.8	36.8	581	75.5	173	1500	1500	xxxx
Pesticides										
4,4'-DDE	ND	ND	NA	0.089	0.112	0.272	ND	2	9	50
4,4'-DDD	0.0322	ND	NA	0.322	0.403	ND	0.0119	3	12	50
4,4'-DDT	[illegible]	ND	NA	ND	ND	ND	ND	2	9	500
PCBs	ND	ND	NA	ND	ND	ND	ND	0.49	2	50
Cyanide	ND	ND	NA	ND	1.25	ND	ND	1100	21000	xxxx
Phenol	ND	ND	NA	8.69	33.6	ND	ND	10000	10000	50

All results are in parts per million (ppm).
ND - Not detected.
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Shaded - Compound above the Non-Residential Soil Cleanup Criteria.

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Sample I.D.	S-17	S-18	S-19	S-20	S-21	S-22	S-23	SMW5A	RDCSCC	NRDCSCC	IGWSCC
Sample Depth (ft.)	2.5	2.5	1.5	3.5	6	6	1	1.5			
TPH	239	170	30500	137	1150	9390	307	46	xxxx	xxxx	xxxx
Volatile Organics											
Methylene Chloride	ND	ND	ND	ND	ND	ND	ND	0.79B	49	210	1
1,2-Dichloroethane (EDC)	ND	ND	ND	ND	ND	ND	**1.14**	**18**	6	24	1
Benzene	**1.19**	ND	**5.09J**	**4.22**	0.709	ND	0.571J	**1.9**	3	13	1
Trichloroethene	ND	ND	ND	ND	ND	**1.09J**	**3.12**	ND	23	54	1
Toluene	ND	0.205J	1400	16:8	4.76	1.91	2.54	49D	1000	1000	500
Tetrachloroethene	ND	ND	ND	0.295J	ND	**1.44J**	ND	ND	4	6	1
Chlorobenzene	ND	ND	**21.2**	0.236J	ND	**1.83**	ND	ND	37	680	1
Ethylbenzene	ND	ND	4.12J	ND	ND	1.34J	ND	0.91	1000	1000	100
Total Xylenes	ND	ND	11.8	0.637J	ND	2.69	ND	ND	410	1000	67
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	0.449J	ND	ND	5100	10000	100
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	2.01	ND	ND	570	10000	100
1,2-Dichlorobenzene	ND	ND	5.06J	ND	0.266J	13.5	ND	0.22J	5100	10000	50
TICs	ND	1.28	6737	33.538	47.916	559.91	ND	254.8	xxxx	xxxx	xxxx

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ND - Not detected.
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Shaded - Compound above the Non-Residential Soil Cleanup Criteria.

Sample I.D.	S-17	S-18	S-19	S-20	[illegible]	S-22	S-23	SMW5A	RDCSCC	NRDCSCC	IG[illegible]C
Sample Depth (ft.)	2.5	2.5	1.5	3.5	6	6	1	1.5			
Base Neutral Compounds											
Aniline	ND	ND	20.1	ND	ND	ND	ND	ND	xxxx	xxxx	xxxx
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	0.78	5100	10000	100
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	0.323J	ND	4.9	570	10000	100
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	2.08	ND	**71.0D**	5100	10000	50
1,2,4-Trichlorobenzene	ND	ND	ND	0.242	ND	0.534	ND	1	68	1200	100
4-Methylphenol	ND	ND	ND	ND	ND	ND	ND	0.11J	2800	10000	xxxx
Isophorone	ND	ND	ND	ND	ND	ND	ND	0.22J	1100	10000	50
Naphthalene	ND	0.234J	2.22	ND	ND	ND	ND	0.29J	230	4200	100
4-Chloroanilne	ND	ND	ND	ND	ND	ND	ND	1.1	230	4200	xxxx
2-Methylnaphthalene	ND	ND	0.372	ND	ND	ND	ND	ND	xxxx	xxxx	xxxx
Acenaphthylene	ND	0.208J	ND	ND	ND	ND	0.283	0.64	xxxx	xxxx	xxxx
Acenaphthene	ND	0.758	ND	ND	ND	ND	ND	0.72	3400	10000	100
Dibenzofuran	ND	0.417	ND	ND	ND	ND	ND	0.47	xxxx	xxxx	xxxx
Fluorene	ND	0.822	ND	ND	ND	ND	ND	2.6	2300	10000	100
Phenanthrene	ND	8.18	1.31	0.618	ND	0.554	0.67	4.7	xxxx	xxxx	xxxx
Anthracene	ND	1.78	1.41	ND	ND	ND	0.186J	1.6	10000	10000	100
Carbazole	ND	0.778	0.727	0.633	ND	0.601	ND	ND	xxxx	xxxx	xxxx
Di-n-butylphthalate	ND	8.46	ND	ND	ND	ND	ND	ND	5700	10000	100
Fluoranthene	ND	10.5	ND	ND	ND	0.317J	1.05	3.8	2300	10000	100
4-Nitrophenol	ND	ND	ND	ND	ND	ND	ND	12.0JD	xxxx	xxxx	xxxx
N-Nitosodiphenylamine	ND	ND	ND	ND	ND	ND	ND	1.7	140	600	100
Benzidine	ND	ND	ND	ND	ND	ND	ND	4.9	xxxx	xxxx	xxxx
Pyrene	ND	10.5	ND	ND	ND	ND	1.39	5.6	1700	10000	100
Benzo[a]anthracene	ND	[illegible]	ND	ND	ND	ND	0.781	**3.5**	0.9	4	500
Chrysene	ND	4.62	ND	ND	ND	0.304J	1.02	3	9	40	500
bis(2-Ethylhexyl)phthalate	ND	5.32	0.913	3	ND	ND	0.372	2.1B	49	210	100
Benzo[b]fluoranthene	ND	**3.69**	ND	ND	ND	ND	**1.06**	**3.3**	0.9	4	50
Benzo[k]fluoranthene	ND	**3.11**	ND	ND	ND	ND	0.824	**1.9**	0.9	4	500
Benzo[a]pyrene	ND	[illegible]	ND	ND	ND	ND	[illegible]	[illegible]	0.66	0.66	100
Indeno[1,2,3-cd]pyrene	ND	**2.92**	ND	ND	ND	ND	**0.959**	0.64	0.9	4	500
Dibenz[a,h]anthracene	ND	[illegible]	ND	ND	ND	ND	0.346	0.41	0.66	0.66	100
Benzo[g,h,i]perylene	ND	3.21	ND	ND	ND	ND	1.2	0.49	xxxx	xxxx	xxxx
TICs	9.863	9.42	641.22	322.46	156.56	199.16	72.33	146.8	xxxx	xxxx	xxxx

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ND - Not detected.
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Bold - Compound above the moste stringent soil cleanup criteria.
Shaded - Compound above the Non-Residential Soil Cleanup Criteria.

Sample I.D.	S-17	S-18	S-19	S-20	S-21	S-22	S-23	SMW5A	RDCSCC	NRDCSCC	IGWSCC
Sample Depth (ft.)	2.5	2.5	1.5	3.5	6	6	1	1.5			
Metals											
Antimony	ND	ND	ND	ND	ND	ND	ND	ND	14	340	xxxx
Arsenic	1.4	11.6	2.48	1.96	0.972	2.02	27.1	6.99	20	20	xxxx
Beryllium	ND	0.594	0.609	0.355	0.511	ND	0.617	1.11	2	2	xxxx
Cadmium	0.573	1.67	1.06	4.39	ND	ND	2.68	9.65	39	100	xxxx
Chromium	13.4	26.7	23	23.5	27.8	19.8	51.6	16	120000	xxxx	xxxx
Copper	63.3	224	29.6	45.2	23.9	7.56	76.8	33.8	600	600	xxxx
Lead	87.1	330	205	93.6	17	83.9	238	88.1	400	600	xxxx
Mercury	0.125	0.315	0.0834	0.481	0.0354	0.0408	0.819	ND	14	270	xxxx
Nickel	3.95	31.7	14.1	771	73.3	78.7	31	1200	250	2400	xxxx
Selenium	ND	ND	ND	ND	ND	ND	ND	ND	63	3100	xxxx
Silver	ND	ND	ND	ND	ND	ND	ND	ND	110	4100	xxxx
Thallium	ND	0.148	0.214	0.0953	0.108	ND	0.127	ND	2	2	xxxx
Zinc	129	391	225	680	80.3	111	531	995	1500	1500	xxxx
Pesticides											
alpha-BHC	ND	ND	ND	ND	ND	ND	ND	0.00772	xxxx	xxxx	xxxx
Endosulfan I	ND	ND	ND	ND	ND	ND	ND	0.0667D	340	6200	50
A-Chlordane	ND	ND	ND	ND	ND	ND	ND	0.0179	xxxx	xxxx	xxxx
G-Chlordane	ND	ND	ND	ND	ND	ND	ND	0.00826	xxxx	xxxx	xxxx
4,4'-DDE	ND	ND	ND	0.089	0.0369	0.0354	1.15	3.74D	2	9	50
Endosulfan II	ND	ND	ND	ND	ND	ND	ND	0.103D	340	6200	50
4,4'-DDD	ND	ND	ND	0.0611	0.0584	0.0628	4.45D	1.52D	3	12	50
PCBs	ND	2.72	ND	1.44	0.245	0.983	2.16	ND	0.49	2	50
Cyanide	ND	ND	3.31	5.94	ND	ND	126	ND	1100	21000	xxxx
Phenol	ND	ND	19.4	3.14	ND	3.26	ND	ND	10000	10000	50

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Shaded - Compound above the Non-Residential Soil Cleanup Criteria.

Sample I.D.	S-24	S-25	S-27	S-28	S-29	S-30	RDCSCC	NRDCSCC	IGWSCC
Sample Depth (ft.)	0.5	7	3	2	7	3			
TPH	1150	195	129	10200	30.3	600	xxxx	xxxx	xxxx
Volatile Organics									
Benzene	ND	ND	ND	ND	[illegible]	[illegible]	3	13	1
Toluene	0.399J	2.17J	0.301J	1.08J	0.630J	[illegible]	1000	1000	500
Ethylbenzene	ND	29.9	ND	0.861J	ND	ND	1000	1000	100
Total Xylenes	ND	20.7	ND	0.732J	ND	ND	410	1000	67
1,2-Dichlorobenzene	ND	ND	0.412J	0.6J	ND	ND	5100	10000	50
TICs	ND	1450.1	24.321	379.26	ND	7036.9	xxxx	xxxx	xxxx
Base Neutral Compounds									
Naphthalene	ND	3.47	ND	ND	ND	ND	230	4200	100
2-Methylnaphthalene	ND	2.11	ND	ND	ND	ND	xxxx	xxxx	xxxx
Acenaphthylene	ND	ND	ND	6.36	ND	ND	xxxx	xxxx	xxxx
Fluorene	ND	ND	ND	1.58	ND	ND	2300	10000	100
Phenanthrene	ND	0.26	ND	8.75	ND	0.322	xxxx	xxxx	xxxx
Anthracene	ND	ND	ND	3.33	ND	ND	10000	10000	100
Carbazole	0.514	ND	ND	3.07	ND	ND	xxxx	xxxx	xxxx
Di-n-butylphthalate	ND	ND	ND	ND	ND	0.17J	5700	10000	100
Fluoranthene	ND	0.487	ND	1.19J	ND	0.254J	2300	10000	100
Pyrene	ND	0.466	ND	1.45	ND	ND	1700	10000	100
Benzo[a]anthracene	ND	0.336	ND	1.79	ND	ND	0.9	4	500
Chrysene	ND	0.277	ND	ND	ND	ND	9	40	500
bis(2-Ethylhexyl)phthalate	4.21	ND	0.3	28.1	ND	ND	49	210	100
Benzo[b]fluoranthene	ND	0.325	ND	ND	ND	ND	0.9	4	50
Benzo[k]fluoranthene	ND	0.153J	ND	ND	ND	ND	0.9	4	500
Benzo[a]pyrene	ND	0.299	ND	ND	ND	ND	0.66	0.66	100
Indeno[1,2,3-cd]pyrene	ND	0.226	ND	ND	ND	ND	0.9	4	500
Benzo[g,h,i]perylene	ND	0.241	ND	ND	ND	ND	xxxx	xxxx	xxxx
TICs	114.15	42.39	ND	362.85	22.74	384.95	xxxx	xxxx	xxxx

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Shaded - Compound above the Non-Residential Soil Cleanup Criteria.

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Sample I.D.	S-24	S-25	S-27	S-28	S-29	S-30	RDCSCC	NRDCSCC	IGWSCC
Sample Depth (ft.)	0.5	7	3	2	7	3			
Metals									
Antimony	ND	ND	ND	ND	ND	ND	14	340	xxxx
Arsenic	15	2.01	1.21	5.31	3.98	2.65	20	20	xxxx
Beryllium	0.289	0.477	0.406	0.658	1.03	0.734	2	2	xxxx
Cadmium	10.4	0.322	0.676	3.14	0.611	0.524	39	100	xxxx
Chromium	251	23.7	42.1	71	58	41.6	120000	xxxx	xxxx
Copper	435	32.9	60.8	181	105	20.3	600	600	xxxx
Lead	**464**	39.6	81.5	284	61.7	16.6	400	600	xxxx
Mercury	**34.7**	0.309	0.139	0.905	0.5	0.0476	14	270	xxxx
Nickel	**385**	15.4	28	**275**	33	25.1	250	2400	xxxx
Selenium	2.95	ND	ND	ND	ND	ND	63	3100	xxxx
Silver	2.06	ND	ND	ND	ND	ND	110	4100	xxxx
Thallium	ND	ND	0.105	0.182	0.189	0.142	2	2	xxxx
Zinc	[redacted]	142	152	558	145	295	1500	1500	xxxx
Pesticides									
4,4'-DDE	0.322	ND	ND	0.079	ND	ND	2	9	50
4,4'-DDD	0.18	ND	ND	ND	ND	ND	3	12	50
4,4'-DDT	0.0554	ND	ND	ND	ND	ND	2	9	500
PCBs	1.2	ND	0.161	**1.86**	ND	ND	0.49	2	50
Cyanide	0.00245	ND	ND	2	ND	ND	1100	21000	xxxx
Phenol	ND	9.84	ND	ND	ND	39.4	10000	10000	50

All results are in parts per million (ppm).
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Sample I.D.	S-31	S-32	S-33	S-34	S-35	S-36	S-37	RDCSCC	NRDCSCC	IGWSCC
Sample Depth (ft.)	7	3.5	6	5	1	1	7			
TPH	NA	73.4	NA	NA	424	ND	ND	xxxx	xxxx	xxxx
Volatile Organics										
Methylene Chloride	**1.14C**	**1.15C**	**1.07C**	ND	NA	NA	**1.17C**	49	210	1
Benzene	**7.88**	**0.54J**	**1.69**	**42.8**	NA	NA	**1.74**	3	13	1
Trichloroethene	ND	ND	ND	ND	NA	NA	ND	23	54	1
Toluene	**0.211J**	**0.65J**	**3.12**	**42.5**	NA	NA	**13.9**	1000	1000	500
Tetrachloroethene	ND	ND	ND	ND	NA	NA	ND	4	6	1
Chlorobenzene	ND	ND	**0.813**	ND	NA	NA	ND	37	680	1
Ethylbenzene	ND	ND	ND	ND	NA	NA	ND	1000	1000	100
Total Xylenes	ND	ND	ND	ND	NA	NA	ND	410	1000	67
1,3-Dichlorobenzene	ND	ND	ND	ND	NA	NA	ND	5100	10000	100
1,4-Dichlorobenzene	ND	ND	ND	**0.97J**	NA	NA	ND	570	10000	100
1,2-Dichlorobenzene	ND	ND	ND	**17.8**	NA	NA	ND	5100	10000	50
TICs	ND	**2.46**	**83.2**	**655**	NA	NA	**9.29**	xxxx	xxxx	xxxx

All results are in parts per million (ppm).
ND - Not detected.
J - Concentration detected below the MDL.
Bold - Compound above the most stringent soil cleanup criteria.
Shaded - Compound above the Non-Residential Soil Cleanup Criteria.

Sample I.D.	S-38	S-39	S-40	S-41	S-42	S-43	S-44	RDCSCC	NRDCSCC	IGWSCC
Sample Depth (ft.)	7	7	6	6	6	6	6			
TPH	3030	ND	ND	ND	ND	ND	30.9	xxxx	xxxx	xxxx
Volatile Organics										
Chloroethane	0.518J	ND	NA	NA	NA	NA	NA	xxxx	xxxx	xxxx
Methylene Chloride	ND	**1.27**	NA	NA	NA	NA	NA	49	210	1
1,2-Dichloroethane (EDC)	**6.97**	ND	NA	NA	NA	NA	NA	6	24	1
Benzene	**1.26**	0.55J	NA	NA	NA	NA	NA	3	13	1
Trichloroethene	**1.03**	ND	NA	NA	NA	NA	NA	23	54	1
Toluene	9.88	0.689J	NA	NA	NA	NA	NA	1000	1000	500
Ethylbenzene	0.784J	ND	NA	NA	NA	NA	NA	1000	1000	100
Total Xylenes	3.87	ND	NA	NA	NA	NA	NA	410	1000	67
1,3-Dichlorobenzene	0.244J	ND	NA	NA	NA	NA	NA	5100	10000	100
1,4-Dichlorobenzene	0.856J	ND	NA	NA	NA	NA	NA	570	10000	100
1,2-Dichlorobenzene	1.35	ND	NA	NA	NA	NA	NA	5100	10000	50
TICs	2.535	ND	NA	NA	NA	NA	NA	xxxx	xxxx	xxxx
Base Neutral Compounds										
Acenaphthene	NA	NA	0.116J	ND	ND	ND	ND	3400	10000	100
Phenanthrene	NA	NA	ND	ND	0.0741J	0.0759J	0.126	xxxx	xxxx	xxxx
Fluoranthene	NA	NA	ND	ND	0.0823J	ND	ND	2300	10000	100
Pyrene	NA	NA	ND	ND	0.074J	ND	ND	1700	10000	100
Butylbenzylphthalate	NA	NA	ND	ND	ND	ND	0.224	1100	10000	100
bis(2-Ethylhexyl)phthalate	NA	NA	ND	ND	0.355	0.13	1.56	49	210	100
Di-n-octylphthalate	NA	NA	ND	ND	0.198	ND	ND	1100	10000	100
Indeno[1,2,3-cd]pyrene	NA	NA	ND	ND	0.0734J	ND	ND	0.9	4	500
TICs	NA	NA	ND	ND	5.583	4.143	5.51	xxxx	xxxx	xxxx
Lead	NA	NA	12.4	11.7	30.7	**420**	91.1	400	600	xxxx

All results are in parts per million (ppm).
ND - Not detected.
J - Concentration detected below the MDL.
Bold - Compound above the most stringent soil cleanup criteria.
Shaded - Compound above the Non-Residential Soil Cleanup Criteria.

Sample I.D.	S-45	S-46	S-47	S-48	S-49	S-50	S-51	RDCSCC	NRDCSCC	IGWSCC
Sample Depth (ft.)	6	9	9	9	12	7	1			
TPH	33	36.9	ND	ND	ND	ND	5750	xxxx	xxxx	xxxx
Volatile Organics										
Benzene	25	58	19	506J	58.5	0.472J	61.1	3	13	1
Toluene	1.98	ND	ND	ND	1.59	6.07	10800D	1000	1000	500
Chlorobenzene	4	ND	ND	ND	0.655J	ND	ND	37	680	1
Ethylbenzene	0.274J	ND	ND	ND	ND	ND	10.9J	1000	1000	100
Total Xylenes	0.269J	ND	ND	ND	ND	ND	58	410	1000	67
TICs	ND	ND	ND	ND	ND	ND	1572.8	xxxx	xxxx	xxxx
Base Neutral Compounds										
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	NA	3.71	5100	10000	50
Naphthalene	ND	ND	ND	ND	ND	NA	5.03	230	4200	100
2-Methylnaphthalene	ND	ND	ND	ND	ND	NA	6.86	xxxx	xxxx	xxxx
Fluorene	ND	ND	ND	ND	ND	NA	3.28	2300	10000 (c)	100
Phenanthrene	0.155	ND	ND	ND	ND	NA	19.6	xxxx	xxxx	xxxx
Anthracene	ND	ND	ND	ND	ND	NA	5.88	10000	10000	100
Carbazole	ND	ND	ND	ND	ND	NA	16	xxxx	xxxx	xxxx
Fluoranthene	0.339	ND	ND	ND	ND	NA	23	2300	10000	100
Benzidine	ND	ND	ND	ND	ND	NA	270	xxxx	xxxx	xxxx
Pyrene	0.494	ND	ND	ND	ND	NA	12.8	1700	10000	100
Benzo[a]anthracene	0.238	ND	ND	ND	ND	NA	3.18	0.9	4	500
Chrysene	0.274	ND	ND	ND	ND	NA	7.62	9	40	500
bis(2-Ethylhexyl)phthalate	0.0496J	ND	ND	ND	ND	NA	**77.2**	49	210	100
Benzo[b]fluoranthene	0.159	ND	ND	ND	ND	NA	**3.8**	0.9	4	50
Benzo[k]fluoranthene	0.115	ND	ND	ND	ND	NA	3.25	0.9	4	500
Benzo[a]pyrene	0.214	ND	ND	ND	ND	NA	2.10	0.66	0.66	100
Indeno[1,2,3-cd]pyrene	0.13	ND	ND	ND	ND	NA	**2.0J**	0.9	4	500
Dibenz[a,h]anthracene	0.0556J	ND	ND	ND	ND	NA	ND	0.66	0.66	100
Benzo[g,h,i]perylene	0.164	ND	ND	ND	ND	NA	ND	xxxx	xxxx	xxxx
TICs	2.763	5.003	ND	0.477	1.423	NA	4783.5	xxxx	xxxx	xxxx

All results are in parts per million (ppm).

ND - Not detected.

J - Concentration detected below the MDL.

Bold - Compound above the most stringent soil cleanup criteria.

Shaded - Compound above the Non-Residential Soil Cleanup Criteria.

Sample I.D.	S-45	S-46	S-47	S-48	S-49	S-50	S-51	RDCSCC	NRDCSCC	IGWSCC
Sample Depth (ft.)	6	9	9	9	12	7	1			
Metals										
Antimony	NA	ND	ND	ND	ND	NA	ND	14	340	xxxx
Arsenic	NA	1.61	1.65	20.6	1.68	NA	21.5	20	20	xxxx
Beryllium	NA	0.747	0.665	5.12	0.77	NA	2.12	2	2	xxxx
Cadmium	NA	ND	0.266	5.63	ND	NA	1.03	39	100	xxxx
Chromium	NA	20.8	18.3	2000	21.1	NA	66.7	120000	xxxx	xxxx
Copper	NA	22.1	16.7	1360	19.8	NA	192	600	600	xxxx
Lead	58.4	14.5	8.64	2030	13.8	NA	190	400	600	xxxx
Mercury	NA	0.02	ND	ND	ND	NA	0.138	14	270	xxxx
Nickel	NA	22.5	22.4	2220	24	NA	92.7	250	2400	xxxx
Selenium	NA	ND	ND	ND	ND	NA	ND	63	3100	xxxx
Silver	NA	ND	ND	ND	ND	NA	ND	110	4100	xxxx
Thallium	NA	0.144	0.134	15.2	0.168	NA	0.949	2	2	xxxx
Zinc	NA	71.7	52.6	5620	85.3	NA	478	1500	1500	xxxx
Pesticides										
4,4'-DDE	NA	0.0154	ND	ND	ND	NA	NA	2	9	50
4,4'-DDD	NA	0.133	ND	0.0378	ND	NA	NA	3	12	50
4,4'-DDT	NA	0.436	0.0295	ND	ND	NA	NA	2	9	500
PCBs	NA	ND	ND	ND	ND	NA	**0.543**	0.49	2	50
Cyanide	NA	ND	ND	ND	ND	NA	NA	1100	21000	xxxx
Phenol	NA	ND	ND	17.1	4.72	NA	NA	10000	10000	50

All results are in parts per million (ppm).
ND - Not detected.
J - Concentration detected below the MDL.
Bold - Compound above the most stringent soil cleanup criteria.
Shaded - Compound above the Non-Residential Soil Cleanup Criteria.

Sample I.D.	S-52	S-53	S-54	S-55	S-56	S-57	RDCSCC	NRDCSCC	IGWSCC
Sample Depth (ft.)	13	12.5	3.5	6	13	9			
TPH	28.2	52.8	207	248	81.5	58.3	xxxx	xxxx	xxxx
Volatile Organics									
Toluene	NA	NA	NA	333	NA	NA	1000	1000	500
TICs	NA	NA	NA	104	NA	NA	xxxx	xxxx	xxxx
Base Neutral Compounds									
Phenanthrene	NA	NA	0.283	ND	NA	NA	xxxx	xxxx	xxxx
Anthracene	NA	NA	0.139J	ND	NA	NA	10000	10000	100
Fluoranthene	NA	NA	0.213	ND	NA	NA	2300	10000	100
Pyrene	NA	NA	0.185J	ND	NA	NA	1700	10000	100
Butylbenzylphthalate	NA	NA	ND	7.73	NA	NA	1100	10000	100
TICs	NA	NA	NA	512.77	NA	NA	xxxx	xxxx	xxxx

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All results are in parts per million (ppm).
ND - Not detected.
J - Concentration detected below the MDL.
Bold - Compound above the most stringent soil cleanup criteria.
Shaded - Comopund above the Non-Residential Soil Cleanup Criteria.

Sample I.D.	S-52	S-53	S-54	S-55	S-56	S-57	RDCSCC	NRDCSCC	IGWSCC
Sample Depth (ft.)	13	12.5	3.5	6	13	9			
Metals									
Antimony	NA	NA	NA	ND	NA	NA	14	340	xxxx
Arsenic	NA	NA	NA	3.02	NA	NA	20	20	xxxx
Beryllium	NA	NA	NA	0.513	NA	NA	2	2	xxxx
Cadmium	NA	NA	NA	ND	NA	NA	39	100	xxxx
Chromium	NA	NA	NA	22.8	NA	NA	120000	xxxx	xxxx
Copper	NA	NA	NA	15.5	NA	NA	600	600	xxxx
Lead	NA	NA	NA	14.6	NA	NA	400	600	xxxx
Mercury	NA	NA	NA	0.15	NA	NA	14	270	xxxx
Nickel	NA	NA	NA	20.8	NA	NA	250	2400	xxxx
Selenium	NA	NA	NA	ND	NA	NA	63	3100	xxxx
Silver	NA	NA	NA	ND	NA	NA	110	4100	xxxx
Thallium	NA	NA	NA	0.152	NA	NA	2	2	xxxx
Zinc	NA	NA	NA	63.4	NA	NA	1500	1500	xxxx
Pesticides	NA	NA	NA	ND	NA	NA	xxxx	xxxx	xxxx
PCBs	NA	NA	NA	ND	NA	NA	0.49	2	50
Cyanide	NA	NA	NA	ND	NA	NA	1100	21000	xxxx
Phenol	NA	NA	NA	6.84	NA	NA	10000	10000	50

All results are in parts per million (ppm).
ND - Not detected.
J - Concentration detected below the MDL.
Bold - Compound above the most stringent soil cleanup criteria.
Shaded - Comopund above the Non-Residential Soil Cleanup Criteria.

Sample I.D.	S-58	S-59	S-60	S-61	S-62	S-68A	S-68B	RDCSCC	NRDCSCC	IGWSCC
Sample Depth (ft.)	11.5	11.5	11.5	11.5	11.5	6.5	12			
TPH	34.3	ND	229	34.9	57.9	26.8	NA	xxxx	xxxx	xxxx
Volatile Organics										
Benzene	0.317J	ND	**1.19**	0.787	0.418J	**10.5**	321	3	13	1
Toluene	ND	ND	0.325J	ND	ND	50.2	85	1000	1000	500
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	1000	1000	100
Total Xylenes	ND	ND	0.2J	ND	ND	ND	ND	410	1000	67
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	0.426J	ND	5100	10000	50
TICs	ND	ND	2.308	ND	ND	3.59	ND	xxxx	xxxx	xxxx
Base Neutral Compounds										
Phenol	ND	ND	ND	ND	ND	0.322	NA	10000	10000	50
2-Methylphenol	ND	ND	ND	ND	ND	0.293	NA	2800	10000	xxxx
4-Methylphenol	ND	ND	ND	ND	ND	0.965	NA	2800	10000	xxxx
bis(2-Ethylhexyl)phthalate	0.117	ND	ND	ND	ND	ND	NA	49	210	100
TICs	13.628	ND	34.895	ND	ND	ND	NA	xxxx	xxxx	xxxx

All results are in parts per million (ppm).
ND - Not detected.
J - Concentration detected below the MDL.
Bold - Compound above the most stringent soil cleanup criteria.
Shaded - Compound above the Non-Residential Soil Cleanup Criteria.

Sample I.D.	S-58	S-59	S-60	S-61	S-62	S-68A	S-68B	RDCSCC	NRDCSCC	IGWSCC
Sample Depth (ft.)	11.5	11.5	11.5	11.5	11.5	6.5	12			
Metals										
Antimony	ND	ND	ND	ND	ND	ND	NA	14	340	xxxx
Arsenic	1.87	1.75	1.84	1.55	1.63	1.01	NA	20	20	xxxx
Beryllium	0.824	0.96	0.911	0.901	0.863	0.728	NA	2	2	xxxx
Cadmium	ND	0.257	0.33	0.303	0.403	0.268	NA	39	100	xxxx
Chromium	21.3	24.3	22.5	24	22.8	19.5	NA	120000	xxxx	xxxx
Copper	19.4	19.1	20.7	20.9	18.8	16.6	NA	600	600	xxxx
Lead	10.7	9.62	9.08	10.1	9.08	7.98	NA	400	600	xxxx
Mercury	ND	ND	ND	ND	ND	ND	NA	14	270	xxxx
Nickel	19.1	22.1	23	22.4	21.8	18.1	NA	250	2400	xxxx
Selenium	ND	ND	ND	ND	ND	ND	NA	63	3100	xxxx
Silver	ND	ND	ND	ND	ND	ND	NA	110	4100	xxxx
Thallium	0.128	0.161	0.113	0.15	0.145	0.0943	NA	2	2	xxxx
Zinc	70.8	67.3	115	54.7	60.9	49.1	NA	1500	1500	xxxx
Pesticides										
Heptachlor epoxide	ND	0.0131	ND	ND	ND	ND	NA	xxxx	xxxx	xxxx
Endosulfan	ND	0.0154	ND	ND	ND	ND	NA	340	6200	50
4,4'-DDE	ND	0.0115	ND	ND	ND	ND	NA	2	9	50
Dieldrin	ND	0.0121	ND	ND	ND	ND	NA	0.042	0.18	50
PCBs	ND	ND	ND	ND	ND	ND	NA	0.49	2	50
Cyanide	ND	ND	ND	ND	ND	ND	NA	1100	21000	xxxx
Phenol	ND	ND	7.23	ND	ND	ND	NA	10000	10000	50

All results are in parts per million (ppm).
ND - Not detected.
J - Concentration detected below the MDL.
Bold - Compound above the most stringent soil cleanup criteria.
Shaded - Compound above the Non-Residential Soil Cleanup Criteria.

Sample I.D.	S-63	S-64	S-65	S-66	S-67	RDCSCC	NRDCSCC	IGWSCC
Sample Depth (ft.)	11.5	8	8	10	11			
TPH	54	286	986	422	64.8	xxxx	xxxx	xxxx
PAH Compounds	NA	NA	ND	NA	NA	xxxx	xxxx	xxxx

All results are in parts per million (ppm).
ND - Not detected.
J - Concentration detected below the MDL.
Bold - Compound above the most stringent soil cleanup criteria.
Shaded - Compound above the Non-Residential Soil Cleanup Criteria.

ORBIS SOIL SAMPLE RESULTS
Transformer Area

	T1	T2	T3	T4	T5	T6	RDCSCC	NRDCSCC	IGWSCC
Depth (ft.)	0.5	0.5	0.5	0.5	0.5	0.5			
PCBs	**41.0D**	**35.0D**	**2.31**	**13.0**	**2.06**	**1.37**	0.49	2	50

All results in parts per million (ppm).
D – Result is based on dilution.
RDCSCC – NJDEP Residential Direct Contact Soil Cleanup Criteria
NRDCSCC – NJDEP Non-Residential Direct Contact Soil Cleanup Criteria
IGWSCC - NJDEP Impact to Groundwater Soil Cleanup Criteria

Samples T1 through T4 were collected adjacent to the transformers that will be remediated by PSE&G.

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Temporary Well Point Results

Sample I.D.	GW-1	GW-2	GW-3	GW-4	GW-5	GW-7	GWQS
Volatile Organics							
1,2-Dichloroethane (EDC)	ND	ND	0.587	ND	ND	ND	2
Vinyl Chloride	ND	2.61	ND	ND	ND	ND	5
Benzene	**8.4**	**90.8**	**7.43**	**9990**	**4210**	**310**	1
Toluene	2.95	0.939	0.607	ND	44.9	**130,000**	1000
Chlorobenzene	1.61	15.5	16.6	**863**	ND	ND	50
Ethylbenzene	1.54	1.16	ND	ND	ND	**760**	700
Methylene Chloride	ND	ND	ND	ND	ND	**780**	3
Total Xylenes	5.69	ND	ND	ND	ND	**1,400**	1000
1,4-Dichlorobenzene	0.413	ND	ND	ND	ND	ND	75
1,2-Dichlorobenzene	6.73	0.406	0.573	ND	ND	ND	600
TICs	127.8	3.5	4.3	ND	ND	**130130**	500
Base Neutral Compounds							
1,3-Dichlorobenzene	ND	ND	ND	1.62	ND	ND	600
1,4-Dichlorobenzene	ND	ND	ND	10.8	ND	4J	75
1,2-Dichlorobenzene	2.34	ND	ND	4.51	ND	42	600
Diethylphthalate	ND	3.75	2.94	3.23	ND	9J	5000
Acenaphthene	ND	ND	ND	21.5	ND	ND	400
Fluorene	4.05	ND	ND	ND	ND	ND	300
TICs	100.1	95	66.9	**1523.7**	8.4	**5230**	500

All results are in parts per billion (ppb).
ND - Not detected.
D - Compound reported from the Diluted analysis.
Bold - Compound detected above the Groundwater Quality Standards (GWQS).

Sample #	GW-1	GW-2	GW-3	GW-4	GW-5	GW-7	GWQS
Metals							
Arsenic	**10.1**	**12.7**	**12.8**	NA	NA	NA	8
Beryllium	ND	**5.32**	ND	NA	NA	NA	20
Cadmium	ND	**5.18**	ND	NA	NA	NA	4
Chromium	**20.9**	**40.4**	ND	NA	NA	NA	100
Copper	**93.1**	**240**	ND	NA	NA	NA	1000
Lead	**12.1**	**42.2**	ND	NA	NA	NA	10
Nickel	**365**	**62.8**	ND	NA	NA	NA	100
Zinc	**151**	**173**	**36.4**	NA	NA	NA	5000
Pesticides							
4,4'-DDE	ND	**0.0128**	ND	NA	NA	NA	0.1
4,4'-DDD	ND	**0.0313**	ND	NA	NA	NA	0.1
PCBs	ND	**0.253**	ND	NA	NA	NA	0.5
Cyanide	ND	ND	**30.5**	NA	NA	NA	200
Phenol	ND	ND	ND	**157**	**25.5**	**56.3**	4000

All results are in parts per billion (ppb).
ND - Not detected.
D - Compound reported from the Diluted analysis.
Bold - Compound detected above the Groundwater Quality Standards (GWQS).

Orbis - 4/03/01 Groundwater Results

Sample I.D.	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-8	GWQS
Volatile Organics									
Chloroform	0.999	0.483	ND	ND	**416**	**62.4**	**669**	ND	6
Carbon Tetrachloride	ND	ND	ND	ND	ND	**5.83**	ND	ND	2
1,2-Dichloroethane (EDC)	ND	ND	ND	ND	ND	ND	ND	**7300**	2
Benzene	**10.3**	0.357	**125000**	**312**	**7070**	ND	**55.2**	**340000**	1
Trichloroethene	ND	ND	ND	ND	ND	**96.8**	ND	ND	1
Toluene	ND	ND	**3350**	**2800**	**35600**	44.6	16	**254000**	1000
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	**14.8**	ND	3
Tetrachloroethene	ND	ND	ND	ND	**2420**	**4.34**	**8.75**	ND	1
Chlorobenzene	**76.4**	ND	**1180**	ND	ND	ND	2.37	ND	50
Ethylbenzene	ND	ND	ND	ND	132	532	2.13	ND	700
Total Xylenes	ND	ND	ND	ND	675	855	1.06	ND	1000
1,2-Dichlorobenzene	0.537	ND	ND	ND	223	ND	0.996	ND	600
TICs	ND	ND	ND	ND	**9950**	**7794**	**378.2**	ND	500
Base Neutral Compounds									
Phenol	ND	ND	3.28	ND	102	ND	ND	1640D	4000
Aniline	ND	ND	2.18	ND	8580D	ND	ND	ND	--
1,4-Dichlorobenzene	ND	ND	1.09	ND	ND	ND	ND	ND	75
1,2-Dichlorobenzene	ND	ND	3.64	0.721	83.6	ND	ND	71.4	600
2-Methylphenol	ND	ND	ND	11.7	ND	ND	ND	ND	--
4-Methylphenol	ND	2.68	ND	9.74	86.8	1.32	2.61	12000D	--
2,4-Dimethylphenol	ND	ND	ND	1.81	ND	ND	ND	ND	100
Naphthalene	ND	ND	ND	1.06	ND	42.7	ND	ND	300
4-Chloro-3-methylphenol	ND	ND	ND	ND	ND	ND	ND	ND	20
2-Methylnaphthalene	ND	ND	ND	ND	ND	21.4	ND	ND	--
Acenaphthene	ND	ND	ND	0.808	ND	ND	ND	ND	400
Fluorene	ND	ND	ND	0.719	ND	ND	ND	ND	300
TICs	86.4	146.4	**3334.9**	**979.6**	**19941**	**772.7**	**1041.1**	**4207**	500

All results are in parts per billion (ppb).
ND - Not detected.
D - Compound reported from the Diluted analysis.
Bold - Compound above the Groundwater Quality Standards (GWQS).

Orbis - 5/02/01 Groundwater Results

Sample I.D.	MW-1	MW-2	MW-3	MW-5	MW-6	MW-7	MW-8	TW-1	GWQS
Volatile Organics									
Vinyl Chloride	ND	**558**	ND	ND	**12.1**	ND	ND	ND	5
Chloroform	ND	ND	ND	**649**	**36.9**	**228**	ND	ND	6
Benzene	**23.1**	**17,300**	**57,500**	**7,590**	**3.92**	**195**	**249,000**	**466**	1
Trichloroethene	ND	ND	ND	ND	**70.9**	ND	ND	ND	1
Toluene	1.57	355	**1,540**	**32,400**	41.9	110	**250,000**	ND	1000
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	**7.51**	ND	ND	3
Tetrachloroethene	ND	ND	ND	**2,110**	ND	**6.19**	ND	ND	1
Chlorobenzene	**119 D**	ND	ND	ND	ND	ND	ND	ND	50
Ethylbenzene	0.362	ND	ND	ND	266	8.62	ND	ND	700
Total Xylenes	ND	ND	ND	614	423	ND	ND	ND	1000
1,4-Dichlorobenzene	0.468	ND	ND	ND	ND	ND	ND	ND	75
1,2-Dichlorobenzene	1.14	ND	ND	198	ND	2.98	ND	ND	600
TICs	10.4	ND	ND	ND	**2,808**	494	ND	ND	500
Base Neutral Compounds									
Phenol	ND	ND	3.2	119	ND	ND	**5,450 D**	ND	4,000
Aniline	7.4	12.9	7.33	16,000 D	ND	ND	109	ND	NA
1,4-Dichlorobenzene	ND	1.34	0.95	3.89	ND	ND	ND	ND	75
1,2-Dichlorobenzene	ND	11.4	3.58	81.7	ND	ND	185	ND	600
2-Methylphenol	ND	ND	ND	ND	ND	ND	508	ND	NA
4-Methylphenol	ND	1.39	ND	356	ND	1.58	**28,300 D**	ND	600
2,4-Dimethylphenol	ND	4.84	ND	ND	ND	ND	ND	0.665	5000
Naphthalene	ND	1.03	ND	ND	ND	ND	ND	ND	400
4-Chloro-3-methylphenol	ND	ND	ND	ND	ND	ND	ND	3.84	NA
2-Methylnapthalene	ND	ND	ND	9.48	ND	ND	ND	ND	300
TICs	232.8	425.7	**1,002.7**	**8,402**	36.1	**1,172.4**	**10,294**	335.61	500

All results are in parts per billion (ppb).
ND - Not detected.
D - Compound reported from the Diluted analysis.
Bold - Compound detected above the Groundwater Quality Standards (GWQS).

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Sample I.D.	MW-1	MW-2	MW-3	MW-5	MW-6	MW-7	MW-8	TW-1	GWQS
Metals									
Arsenic	5.83	6.24	ND	**28.2**	4.49	6.97	**10.1**	6.99	8
Beryllium	ND	ND	ND	ND	ND	ND	ND	ND	20
Cadmium	ND	1.48	ND	ND	ND	0.817	0.766	ND	4
Chromium	ND	ND	ND	26.9	ND	ND	48.5	ND	100
Copper	ND	ND	ND	ND	ND	47.7	ND	ND	1000
Lead	ND	ND	ND	**13.8**	ND	ND	ND	ND	10
Nickel	ND	56.1	ND	**144**	ND	ND	24.8	ND	100
Selenium	ND	ND	ND	ND	ND	ND	ND	8.23	50
Zinc	ND	366	34.1	143	ND	48.9	65.8	23.3	5000
Pesticides									
4,4'-DDE	ND	ND	ND	ND	ND	ND	**1.78**	ND	0.1
Endosulfan II	ND	ND	ND	ND	ND	ND	**0.967**	ND	0.4
4,4'-DDD	ND	ND	ND	ND	ND	ND	**4.15**	ND	0.1
PCBs	ND	ND	ND	ND	ND	ND	ND	ND	0.5
Cyanide	24	ND	ND	ND	ND	ND	ND	ND	200
Phenol	ND	ND	54.5	**46,600**	74.7	124	**26,500**	175	4000

Note: A thin layer of floating product was observed in MW-8. MW-4 was not sampled.

All results are in parts per billion (ppb).
ND - Not detected.
D - Compound reported from the Diluted analysis.
Bold - Compound detected above the Groundwater Quality Standards (GWQS).

PAR/SIR/RIW

Orbis Products Corporation
55 Virginia Street
Newark, Essex County, NJ
Case #86-11-17-0100
Attachment 10
Soil Laboratory Reports
(1 of 6)

Ref 15

ACCREDITED LABORATORIES, INC.

Implementing Tomorrow's Technology, Today™....

Analytical Data Report

for

Envirotactics
2517 Rt. 35, Bldg. D Suite 202
Manasquan, NJ 08736

Project: Ordis

Accredited Laboratories Case No.: 9748
Date Received: 10/13/00

RECEIVED FEB 2002

Field ID	Laboratory Sample #
S-1	200012803
S-2	200012804
S-3	200012805
S-4	200012806
S-5	200012807
S-6	200012808
S-7	200012809
S-8	200012810
TB	200012811

Accredited Laboratories, Inc. New Jersey Certification Number 12007. This data has been reviewed and accepted by:

Theodore C. Gaydos
Technical Director

(732) 541-2025 *CORPORATE OFFICES* FAX (732) 541-1383
20 Pershing Avenue
Carteret, New Jersey 07008

Printed on RECYCLED paper made with 20% post consumer waste

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MS/MSD Summary	
Method Blank	
Metals:	214
Standard Calibrations	
Blanks	
ICP Interference Check Sample	
Spike Sample Recovery	
Sample Duplicate	
Laboratory Control Sample	
ICP Serial Dilution	
General Chemistry:	229
Sample Duplicate	
MS Summary	
Total Petroleum Hydrocarbons:	231
Sample Duplicate/MS Summary	
Raw Data	
Volatile Organics	232
Base Neutral/Acid Extractable Organics	266
Pesticides/PCBs	290

ACCREDITED LABORATORIES, INC.
20 PERSHING AVENUE
CARTERET, NEW JERSEY 07008
PHONE (732) 541-2025 FAX (732) 541-1383

CHAIN OF CUSTODY FORM

STATE AGENCY NJ NY PA CT DE OTHER ____

CLIENT	ENVIROTACTICS INC	PROJECT	ORBIS
ADDRESS	2517 HWY 35 BLDG 222	CONTACT	CHRIS NEUFFER
CITY	MANASQUAN	PHONE	732-292-0100
STATE	NJ ZIP 08736	FAX	732-292-2808

ALI SAMPLE #	FIELD ID	*C	**M	DATE / TIME SAMPLED	SAMPLE DESCRIPTION	ANALYSIS
0012803	S-1	2	S	10/13/00 8:15		TPH, ~~[illegible]~~, PP+40 meoH
0012804	S-2	2	S	10/13 9:00		"
0012805	S-3	2	S	10/13 9:30		"
0012806	S-4	2	S	10/13 10:55		"
0012807	S-5	2	S	10/13 11:20		"
0012808	S-6	2	S	10/13 1:50		"
0012809	S-7	2	S	10/13 2:30		"
0012810	S-8	2	S	10/13 4:00		"
0012811	TB	1	X	10/13 /00		VOH6

NO CONTAINER TURNAROUND: STANDARD — FAX (If Blank, Std. 3 weeks)

DELIVERABLES (circle one): STD REDUCED FULL OTHER ____

RELINQUISHED BY PRINT	RELINQUISHED BY SIGN	RECEIVED BY PRINT	RECEIVED BY SIGN	ORGANIZATION	DATE	TIME	REASON
CHRIS NEUFFER	[signature]	Jason Miller	[signature]	ALI	10/13/00	17:30	Analysis

PERSON(S) ASSUMING RESPONSIBILITY FOR SAMPLING: PRINT: CHRIS NEUFFER SIGN: [signature]

COMMENTS	Sample Temp Ambient	ALI QUOTE	
		ALI CASE	9748
		P.O.	

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Accredited Laboratories, Inc.

INTERNAL CHAIN OF CUSTODY

Laboratory Person Breaking Field Seal on Sample Shuttle & Accepting Responsibility for Sample	Laboratory: Accredited Laboratories, Inc. Location: Carteret, N.J. Name: JASON MILLER Title: Sci
Field Sample Seal No. Non	Date Broken: __/__/__ Military Time Seal Broken _____
Case No. 9748	✓ Check if No Seal on Sample Shuttle.

Field #	Laboratory #	Test Name	Date Sampled	Date Received
S-1	200012803	MEVO15	10/13/00	10/13/00
S-2	200012804	MEVO15	10/13/00	10/13/00
S-3	200012805	MEVO15	10/13/00	10/13/00
S-4	200012806	MEVO15	10/13/00	10/13/00
S-5	200012807	MEVO15	10/13/00	10/13/00
S-6	200012808	MEVO15	10/13/00	10/13/00
S-7	200012809	MEVO15	10/13/00	10/13/00
S-8	200012810	MEVO15	10/13/00	10/13/00
TB	200012811	MEVO15	10/13/00	10/13/00

DATE	TIME	RELINQUISHED BY	RECEIVED BY	PURPOSE OF CHANGE OF CUSTODY
10/25/00		Printed Name JASON MILLER	Printed Name W. LLORENTE	analysis
		Signature	Signature	
		Printed Name	Printed Name	
		Signature	Signature	
		Printed Name	Printed Name	
		Signature	Signature	
		Printed Name	Printed Name	
		Signature	Signature	
		Printed Name	Printed Name	
		Signature	Signature	
		Printed Name	Printed Name	
		Signature	Signature	
		Printed Name	Printed Name	
		Signature	Signature	

FORM: 291COC

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Accredited Laboratories, Inc.

INTERNAL CHAIN OF CUSTODY

Laboratory Person Breaking Field Seal on Sample Shuttle & Accepting Responsibility for Sample — Laboratory: Accredited Laboratories, Inc. Location: Carteret, N.J.
Name: JASON MILLER Title: Sr.

Field Sample Seal No. None Date Broken: __/__/__ Military Time Seal Broken _____

Case No. 9748 ✓ Check if No Seal on Sample Shuttle.

Field #	Laboratory #	Test Name	Date Sampled	Date Received
S-1	200012803	BNA25	10/13/00	10/13/00
S-2	200012804	BNA25	10/13/00	10/13/00
S-3	200012805	BNA25	10/13/00	10/13/00
S-4	200012806	BNA25	10/13/00	10/13/00
S-5	200012807	BNA25	10/13/00	10/13/00
S-6	200012808	BNA25	10/13/00	10/13/00
S-7	200012809	BNA25	10/13/00	10/13/00
S-8	200012810	BNA25	10/13/00	10/13/00

DATE	TIME	RELINQUISHED BY	RECEIVED BY	PURPOSE OF CHANGE OF CUSTODY
10/17/00	8:30 AM	Printed Name JASON MILLER Signature	Printed Name John Bustin Signature John Bustin	EXTRACTION
10/17/00	3:00 PM	Printed Name John Bustin Signature John Bustin	Printed Name JASON MILLER Signature	Cold STORAGE
		Printed Name Signature	Printed Name Signature	
		Printed Name Signature	Printed Name Signature	
		Printed Name Signature	Printed Name Signature	
		Printed Name Signature	Printed Name Signature	
		Printed Name Signature	Printed Name Signature	

FORM: 291COC

Accredited Laboratories, Inc.

INTERNAL CHAIN OF CUSTODY

Laboratory Person Breaking Field Seal on Sample Shuttle & Accepting Responsibility for Sample

Laboratory: Accredited Laboratories, Inc. Location: Carteret, N.J.

Name: JASON MILLER Title: Sko

Field Sample Seal No. None Date Broken: __/__/__ Military Time Seal Broken _____

Case No. 9748 ~~Check~~ if No Seal on Sample Shuttle.

Field #	Laboratory #	Test Name	Date Sampled	Date Received
S-1	200012803	PEST/PCB	10/13/00	10/13/00
S-2	200012804	PEST/PCB	10/13/00	10/13/00
S-3	200012805	PEST/PCB	10/13/00	10/13/00
S-4	200012806	PEST/PCB	10/13/00	10/13/00
S-5	200012807	PEST/PCB	10/13/00	10/13/00
S-6	200012808	PEST/PCB	10/13/00	10/13/00
S-7	200012809	PEST/PCB	10/13/00	10/13/00
S-8	200012810	PEST/PCB	10/13/00	10/13/00

DATE	TIME	RELINQUISHED BY	RECEIVED BY	PURPOSE OF CHANGE OF CUSTODY
10/20/00	8:30	Printed Name JASON MILLER Signature	Printed Name J Bustin Signature J Bustin	Extraction
10/20/00	3:00	Printed Name J Bustin Signature J Bustin	Printed Name JASON MILLER Signature	Cold Storage
		Printed Name Signature	Printed Name Signature	
		Printed Name Signature	Printed Name Signature	
		Printed Name Signature	Printed Name Signature	
		Printed Name Signature	Printed Name Signature	
		Printed Name Signature	Printed Name Signature	

FORM: 291C00

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Accredited Laboratories, Inc.

INTERNAL CHAIN OF CUSTODY

Laboratory Person Breaking Field Seal on Sample Shuttle & Accepting Responsibility for Sample	Laboratory: Accredited Laboratories, Inc. Name: JASON MILLER	Location: Carteret, N.J. Title: SRO
Field Sample Seal No. none	Date Broken: __/__/__	Military Time Seal Broken _____
Case No. 9748	__ Check if No Seal on Sample Shuttle.	

Field #	Laboratory #	Test Name	Date Sampled	Date Received
S-1	200012803	PPMET	10/13/00	10/13/00
S-2	200012804	PPMET	10/13/00	10/13/00
S-3	200012805	PPMET	10/13/00	10/13/00
S-4	200012806	PPMET	10/13/00	10/13/00
S-5	200012807	PPMET	10/13/00	10/13/00
S-6	200012808	PPMET	10/13/00	10/13/00
S-7	200012809	PPMET	10/13/00	10/13/00
S-8	200012810	PPMET	10/13/00	10/13/00

DATE	TIME	RELINQUISHED BY	RECEIVED BY	PURPOSE OF CHANGE OF CUSTODY
		Printed Name JASON MILLER	Printed Name L. RIVERA	prep
		Signature [signature]	Signature L-R	
10-7		Printed Name L. RIVERA	Printed Name JASON MILLER	Storage
		Signature L-R	Signature [signature]	
		Printed Name	Printed Name	
		Signature	Signature	
		Printed Name	Printed Name	
		Signature	Signature	
		Printed Name	Printed Name	
		Signature	Signature	
		Printed Name	Printed Name	
		Signature	Signature	
		Printed Name	Printed Name	
		Signature	Signature	

FORM: 291COC

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Accredited Laboratories, Inc.

INTERNAL CHAIN OF CUSTODY

Laboratory Person Breaking Field Seal on Sample Shuttle & Accepting Responsibility for Sample	Laboratory: Accredited Laboratories, Inc. Location: Carteret, N.J. Name: JASON MILLER Title: CSO
Field Sample Seal No. None	Date Broken: __/__/__ Military Time Seal Broken _____
Case No. 9748	__ Check if No Seal on Sample Shuttle.

Field #	Laboratory #	Test Name	Date Sampled	Date Received
S-1	200012803	% SOLIDS	10/13/00	10/13/00
S-2	200012804	% SOLIDS	10/13/00	10/13/00
S-3	200012805	% SOLIDS	10/13/00	10/13/00
S-4	200012806	% SOLIDS	10/13/00	10/13/00
S-5	200012807	% SOLIDS	10/13/00	10/13/00
S-6	200012808	% SOLIDS	10/13/00	10/13/00
S-7	200012809	% SOLIDS	10/13/00	10/13/00
S-8	200012810	% SOLIDS	10/13/00	10/13/00

DATE	TIME	RELINQUISHED BY	RECEIVED BY	PURPOSE OF CHANGE OF CUSTODY
10/16		Printed Name JASON MILLER Signature	Printed Name Lina Miguel Signature	Analysis
10/16		Printed Name Lina Miguel Signature	Printed Name JASON MILLER Signature	Cold Storage
		Printed Name Signature	Printed Name Signature	
		Printed Name Signature	Printed Name Signature	
		Printed Name Signature	Printed Name Signature	
		Printed Name Signature	Printed Name Signature	
		Printed Name Signature	Printed Name Signature	

FORM: 291COC

Accredited Laboratories, Inc.

INTERNAL CHAIN OF CUSTODY

Laboratory Person Breaking Field Seal on Sample Shuttle & Accepting Responsibility for Sample	Laboratory: Accredited Laboratories, Inc. Name: JASON MILLER	Location: Carteret, N.J. Title: Sup
Field Sample Seal No. n/a	Date Broken: __/__/__	Military Time Seal Broken ____
Case No. 9748	~~Check~~ if No Seal on Sample Shuttle.	

Field #	Laboratory #	Test Name	Date Sampled	Date Received
S-1	200012803	CN	10/13/00	10/13/00
S-2	200012804	CN	10/13/00	10/13/00
S-3	200012805	CN	10/13/00	10/13/00
S-4	200012806	CN	10/13/00	10/13/00
S-5	200012807	CN	10/13/00	10/13/00
S-6	200012808	CN	10/13/00	10/13/00
S-7	200012809	CN	10/13/00	10/13/00
S-8	200012810	CN	10/13/00	10/13/00

DATE	TIME	RELINQUISHED BY	RECEIVED BY	PURPOSE OF CHANGE OF CUSTODY
10/17/00		Printed Name JASON MILLER	Printed Name S. Parekh	
		Signature	Signature S. Parekh	analysis
10/17/00		Printed Name S. Parekh	Printed Name JASON MILLER	
		Signature S. Parekh	Signature	Cold storage
		Printed Name	Printed Name	
		Signature	Signature	
		Printed Name	Printed Name	
		Signature	Signature	
		Printed Name	Printed Name	
		Signature	Signature	
		Printed Name	Printed Name	
		Signature	Signature	
		Printed Name	Printed Name	
		Signature	Signature	

FORM: 291COC

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Accredited Laboratories, Inc.

INTERNAL CHAIN OF CUSTODY

Laboratory Person Breaking Field Seal on Sample Shuttle & Accepting Responsibility for Sample	Laboratory: Accredited Laboratories, Inc. Location: Carteret, N.J. Name: JASON MILLER Title: SA
Field Sample Seal No. Non	Date Broken: __/__/__ Military Time Seal Broken _____
Case No. 9748	Check if No Seal on Sample Shuttle.

Field #	Laboratory #	Test Name	Date Sampled	Date Received
S-1	200012803	TPHC	10/13/00	10/13/00
S-2	200012804	TPHC	10/13/00	10/13/00
S-3	200012805	TPHC	10/13/00	10/13/00
S-4	200012806	TPHC	10/13/00	10/13/00
S-5	200012807	TPHC	10/13/00	10/13/00
S-6	200012808	TPHC	10/13/00	10/13/00
S-7	200012809	TPHC	10/13/00	10/13/00
S-8	200012810	TPHC	10/13/00	10/13/00

DATE	TIME	RELINQUISHED BY	RECEIVED BY	PURPOSE OF CHANGE OF CUSTODY
10/19/00	15:00	Printed Name JASON MILLER Signature	Printed Name RBAUTISTA Signature RB	EXTRACTION
10/19/00	1600	Printed Name RBAUTISTA Signature RB	Printed Name JASON MILLER Signature	COLD STORAGE
		Printed Name Signature	Printed Name Signature	
		Printed Name Signature	Printed Name Signature	
		Printed Name Signature	Printed Name Signature	
		Printed Name Signature	Printed Name Signature	
		Printed Name Signature	Printed Name Signature	

FORM: 291COC

METHODOLOGY SUMMARY

Volatile Organics - EPA 8260 (soil)

An inert gas is purged through a 5 g sample at elevated temperature. Alternatively the soil is extracted with methanol. A portion of extract is spiked into a purging vessel and purged by an inert gas. The vapor is swept through a sorbent column where the purgeables are trapped. After purging is completed, the sorbent column is heated and back-flushed with the inert gas to desorb the purgeables onto a GC column. The GC is temperature programmed to separate the purgeables which are then detected with a mass spectrometer.

Base-Neutral/Acid Extractables - EPA 8270 (soil)

A 30 gram portion of soil is mixed with anhydrous sodium sulfate and is extracted with 1:1 methylene chloride and acetone. The methylene chloride extract is dried and concentrated and a measured amount is injected onto a GC and the analytes are detected with a mass spectrometer.

Pesticides/PCB's - EPA 3550/8080 (soil/solid)

A 30 gram portion of solid is mixed with anhydrous sodium sulfate and is extracted with 1:1 methylene chloride and acetone using sonication technique. The extract is separated from the sample by either centrifugation or filtration. The extract is then solvent-exchanged to hexane in a K-D concentrator to a final volume of 10 ml. The extract is injected into a gas chromatograph and the compounds in the GC effluent are detected by an electron capture detector.

Metals (soil)

A 1-5 gram portion of soil is digested with nitric acid and hydrogen peroxide. The digestate is then refluxed with either nitric acid or hydrochloric acid. Diluted hydrochloric acid is used as the final reflux acid for the flame AA or ICAP of Ag, Al, Ba, Be, Cd, Cr, Co, Cu, Fe, Pb, Ni, Sb, Sn, Tl and Zn. Diluted nitric acid is employed as the final dilution acid for the furnace AA analysis of As, Pb and Se. For the graphite furnace analysis, an aliquot of the digestate is spiked with nickel nitrate solution and is placed into the graphite furnace. The aliquot is then slowly evaporated to dryness, charred and atomized. The absorption of the EDL radiation during atomization is proportional to the element concentration. For the flame AA, the digestate is aspirated and atomized in a flame. The absorption of the HCL radiation during atomization is proportional to the element concentration. The basis of ICAP method is the measurement of

atomic emission by an optical spectroscope technique. The emission spectra are dispersed by a grating spectrometer and the intensities of the line are measured and processed by a computer system. For mercury analysis, a 0.5-1.0 gram portion of sample is digested with potassium permanganate and persulfate at acidic condition in a water bath at 95°C. The mercury in the sample is reduced to the elemental state and detected by the cold vapor technique in a closed system. The analytical procedures are derived from "EPA Methods for Evaluating Solid Waste, 3rd Edition, 1986" The AA technique is specified in Method 7000 series. The ICAP technique is specified in Method 6010.

Total Cyanide - SW 846, 9010 (solid)

A representative portion of sample is weighed and placed into a cyanide distillation apparatus. The cyanide as hydrocyanic acid is released from cyanide complexes by means of a reflux-distillation operation and absorbed in a scrubber containing sodium hydroxide solution. The cyanide ion in the absorbing solution is then determined colorimetrically according to EPA "Test Methods for Evaluating Solid Wastes", SW 846.

Petroleum Hydrocarbons - Modified EPA 418.1 (soil)

A 30 gram portion of soil is extracted with fluorocarbon 113. Interferences are removed with silica gel adsorbent. Infrared analysis of the extract is performed by direct comparison with standards.

Date: 10/16/00 ACCREDITED LABORATORIES, INC. Time: 8:30:22

ORGANIC ANALYSIS LABORATORY CHRONICLE

PP LIST

Client: Envirotactics Test Date Due: 10/27/00
Fax Data Due: **10/25/00** Hard Copy Due: **10/25/00**
Client Project Name: Ordis

Date Sampled:10/13/00 Date Received:10/13/00 Report Package: Reduced

Test: MEVO15 QC#: _____
Test Description:Methanol Preserved Volatiles+15 (MEVO15)

By Method: _____

SAMPLE IDENTIFICATION			Mtx	EXTRACTION			ANALYSIS			TIC FLAG
Field#	Case#	Sample#		Date	Time	Init	Date	Time	Init	
S-1	9748	200012803	S				10/26/00	14:21	RH	
S-2	9748	200012804	S					15:01		
S-3	9748	200012805	S				10/25/00	17:36		
S-4	9748	200012806	S					18:16		
S-5	9748	200012807	S					18:56		
S-6	9748	200012808	S					19:36		
S-7	9748	200012809	S					20:16		
S-8	9748	200012810	S					20:55		
TB	9748	200012811	S					13:11		

Reviewed by: _____ Date: 10/27/00

Abreviations:Sample Matrix:
Mtx:A=Aqueous:S=Soil:O=Oil:K=Solid:F=Filters:P=Potable Water:G=Sludge
X=Other

RPT:Report01

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Date: 10/16/00 ACCREDITED LABORATORIES, INC. Time: 8:30:22

ORGANIC ANALYSIS LABORATORY CHRONICLE

PP LIST

Client: Envirotactics Fax Data Due: **10/25/00** Test Date Due: 10/27/00 Hard Copy Due: **10/25/00**

Client Project Name: Ordis

Date Sampled:10/13/00 Date Received:10/13/00 Report Package: Reduced

QC#: _____

Test: BNA25
Test Description:Base Neutral Acid Compounds + 25 (BNA25)

By Method: _____

SAMPLE IDENTIFICATION			Mtx	EXTRACTION			ANALYSIS			TIC FLAG
Field#	Case#	Sample#		Date	Time	Init	Date	Time	Init	
S-1	9748	200012803	S	10/17/2000		JRB	10/23/00	16:11	DDL	
S-2	9748	200012804	S					16:54		
S-3	9748	200012805	S					13:16		
S-4	9748	200012806	S					14:00		
S-5	9748	200012807	S					14:44		
S-6	9748	200012808	S					17:38		
S-7	9748	200012809	S					19:13		
S-8	9748	200012810	S					19:05		

Reviewed by: DDL Date: 10/25/00

Abreviations:Sample Matrix:
Mtx:A=Aqueous:S=Soil:O=Oil:K=Solid:F=Filters:P=Potable Water:G=Sludge
X=Other

RPT:Report01

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Date: 10/16/00 ACCREDITED LABORATORIES, INC. Time: 8:30:23

ORGANIC ANALYSIS LABORATORY CHRONICLE

PP LIST

Client: Envirotactics Fax Data Due: **10/25/00** Test Date Due: 10/20/00 Hard Copy Due: **10/25/00**

Client Project Name: Ordis

Date Sampled:10/13/00 Date Received:10/13/00 Report Package: Reduced

QC#: _____

Test: PEST/PCB
Test Description:Pesticides/PCBs (Pest/PCB)

By Method: _____

SAMPLE IDENTIFICATION			Mtx	EXTRACTION			ANALYSIS			TIC FLAG
Field#	Case#	Sample#		Date	Time	Init	Date	Time	Init	
S-1	9748	200012803	S	10/20/2000		JRB	10/21/00	04:40	JH	
S-2	9748	200012804	S					05:17		
S-3	9748	200012805	S					05:54		
S-4	9748	200012806	S					06:32		
S-5	9748	200012807	S					07:09		
S-6	9748	200012808	S					07:46		
S-7	9748	200012809	S					08:23		
S-8	9748	200012810	S					09:00		

Reviewed by: _____ Date: 10/26/00

Abreviations:Sample Matrix:
Mtx:A=Aqueous:S=Soil:O=Oil:K=Solid:F=Filters:P=Potable Water:G=Sludge
X=Other

RPT:Report01

Date: 10/16/00 ACCREDITED LABORATORIES, INC. Time: 8:29:37
INORGANIC ANALYSIS LABORATORY CHRONICLE

PP LIST

Client: Envirotactics
Fax Data Due: **10/25/00**
Test Date Due: 10/27/00
Hard Copy Due: **10/25/00**
Field#: S-1
Case#: 9748
Sample#: 200012803
Client Sample Description:
Date Sampled: 10/13/00 Date Received: 10/13/00 Report Package: Reduced

QC#: 00047 = ICP
00044 = GFA
00043 - CV ✓

Test: PPMET
Test Description: Priority Pollutant Metals (PPMET)
Project Name: Ordis
Mtx:A=Aqueous:S=Soil:O=Oil:K=Solid:F=Filters:P=Potable Water:G=Sludge:X=Oth
Sample Comments:

By Method: _____

MTX	ELEMENT	SYM	RESULT	MDL	UNITS	LABORATORY CHRONICLE PREPARATION DATE	PREPARATION INIT	ANALYSIS DATE	ANALYSIS INIT	REF
S	Antimony	Sb				10-17	LR	10-18	N	123-19
S	Arsenic	As						10-17	LT	112-44
S	Beryllium	Be						10-18	N	X
S	Cadmium	Cd								X
S	Chromium-T	Cr								X
S	Copper	Cu								X
S	Lead	Pb								X
S	Mercury	Hg				10-17	SR	10-17	SR	125-9
S	Nickel	Ni				10-17	LR	10-18	N	X
S	Selenium	Se						10-17	LT	994-47
S	Silver	Ag						10-18	N	X
S	Thallium	Tl						10-17	LT	994-48
S	Zinc	Zn						10-18	N	X

X = 123-19

Quality control Report Number(s): 001017 B

Reviewed by: LT Date: 10/25

RPT:Report02
14

Date: 10/16/00 ACCREDITED LABORATORIES, INC. Time: 8:29:38
INORGANIC ANALYSIS LABORATORY CHRONICLE

PP LIST

Client: Envirotactics Fax Data Due: **10/25/00** Test Date Due: 10/27/00
Hard Copy Due: **10/25/00**
Field#: S-2 Case#: 9748 Sample#: 200012804
Client Sample Description:
Date Sampled: 10/13/00 Date Received: 10/13/00 Report Package: Reduced

Test: PPMET QC#: 00043-CV
Test Description: Priority Pollutant Metals (PPMET)
Project Name: Ordis
Mtx:A=Aqueous:S=Soil:O=Oil:K=Solid:F=Filters:P=Potable Water:G=Sludge:X=Oth
Sample Comments:

By Method: _____ LABORATORY CHRONICLE

MTX	ELEMENT	SYM	RESULT	MDL	UNITS	PREPARATION DATE	PREPARATION INIT	ANALYSIS DATE	ANALYSIS INIT	REF
S	Antimony	Sb				10-17	LK	10-18	L	123-19
S	Arsenic	As						10-17	LT	112-44
S	Beryllium	Be						10-18	W	X
S	Cadmium	Cd								X
S	Chromium-T	Cr								X
S	Copper	Cu								X
S	Lead	Pb								X
S	Mercury	Hg				10-17	SK	10-17	SK	125-9
S	Nickel	Ni				10-17	LK	10-18	L	X
S	Selenium	Se						10-17	LT	994-47
S	Silver	Ag						10-18	W	X
S	Thallium	Tl						10-17	LT	994-48
S	Zinc	Zn						10-18	W	X

L = 123-19

Quality control Report Number(s): 001017 B

Reviewed by: LT Date: 10/25

RPT:Report02

15

Date: 10/16/00 ACCREDITED LABORATORIES, INC. Time: 8:29:39
INORGANIC ANALYSIS LABORATORY CHRONICLE

PP LIST

Client: Envirotactics
Fax Data Due: 10/25/00
Test Date Due: 10/27/00
Hard Copy Due: 10/25/00
Field#: S-3
Case#: 9748
Sample#: 200012805
Client Sample Description:
Date Sampled: 10/13/00 Date Received: 10/13/00 Report Package: Reduced

Test: PPMET
QC#: 00043-CV
Test Description: Priority Pollutant Metals (PPMET)
Project Name: Ordis
Mtx:A=Aqueous:S=Soil:O=Oil:K=Solid:F=Filters:P=Potable Water:G=Sludge:X=Oth
Sample Comments:

By Method: _____

						LABORATORY CHRONICLE PREPARATION		ANALYSIS		
MTX	ELEMENT	SYM	RESULT	MDL	UNITS	DATE	INIT	DATE	INIT	REF
S	Antimony	Sb				10-17	L.K	10-18	N	123-19
S	Arsenic	As						10-18	LT	112-44
S	Beryllium	Be						N		X
S	Cadmium	Cd								X
S	Chromium-T	Cr								X
S	Copper	Cu								X
S	Lead	Pb								X
S	Mercury	Hg				10-17	SR	10-17	SR	125-9
S	Nickel	Ni				10-17	L.K	10-18	N	X
S	Selenium	Se						10-17	LT	994-47
S	Silver	Ag						10-18	N	X
S	Thallium	Tl						10-17	LT	994-48
S	Zinc	Zn						10-18	N	X

X = 123-19

Quality control Report Number(s): 001017 B

Reviewed by: LT Date: 10/25

RPT:Report02
16

Date: 10/16/00 ACCREDITED LABORATORIES, INC. Time: 8:29:40
INORGANIC ANALYSIS LABORATORY CHRONICLE

PP LIST

Client: Envirotactics Test Date Due: 10/27/00
Fax Data Due: **10/25/00** Hard Copy Due: **10/25/00**
Field#: S-4 Case#: 9748 Sample#: 200012806
Client Sample Description:
Date Sampled: 10/13/00 Date Received: 10/13/00 Report Package: Reduced

Test: PPMET QC#: 00043-CV
Test Description: Priority Pollutant Metals (PPMET)
Project Name: Ordis
Mtx:A=Aqueous:S=Soil:O=Oil:K=Solid:F=Filters:P=Potable Water:G=Sludge:X=Oth
Sample Comments:

By Method: _____

						LABORATORY CHRONICLE PREPARATION		LABORATORY CHRONICLE ANALYSIS		
MTX	ELEMENT	SYM	RESULT	MDL	UNITS	DATE	INIT	DATE	INIT	REF
S	Antimony	Sb				10-17	LR	10-18	A	123-19
S	Arsenic	As						10-17	LT	112-94
S	Beryllium	Be						10-18	A	X
S	Cadmium	Cd								X
S	Chromium-T	Cr								X
S	Copper	Cu								X
S	Lead	Pb								X
S	Mercury	Hg				10-17	SR	10-17	SR	125-9
S	Nickel	Ni				10-17	LR	10-18	A	X
S	Selenium	Se						10-17	LT	994-4
S	Silver	Ag						10-18	A	X
S	Thallium	Tl						10-17	LT	994-49
S	Zinc	Zn						10-18	A	X

X = 123-19

Quality control Report Number(s): 001017 B

Reviewed by: LT Date: 10/25

RPT:Report02

17

Date: 10/16/00 ACCREDITED LABORATORIES, INC. Time: 8:29:42
INORGANIC ANALYSIS LABORATORY CHRONICLE

PP LIST

Client: Envirotactics
Test Date Due: 10/27/00
Fax Data Due: **10/25/00**
Hard Copy Due: **10/25/00**
Field#: S-5 Case#: 9748 Sample#: 200012807
Client Sample Description:
Date Sampled: 10/13/00 Date Received: 10/13/00 Report Package: Reduced

Test: PPMET QC#: 00043-CV
Test Description: Priority Pollutant Metals (PPMET)
Project Name: Ordis
Mtx:A=Aqueous:S=Soil:O=Oil:K=Solid:F=Filters:P=Potable Water:G=Sludge:X=Oth
Sample Comments:

By Method: _____

						LABORATORY CHRONICLE PREPARATION		LABORATORY CHRONICLE ANALYSIS		
MTX	ELEMENT	SYM	RESULT	MDL	UNITS	DATE	INIT	DATE	INIT	REF
S	Antimony	Sb				10-17	L.P	10-18	N	132-M
S	Arsenic	As						10-17	LT	112-44
S	Beryllium	Be						10-18	N	X
S	Cadmium	Cd								X
S	Chromium-T	Cr								X
S	Copper	Cu								X
S	Lead	Pb								X
S	Mercury	Hg				10-17	SK	10-17	SK	125-9
S	Nickel	Ni				10-17	LK	10-18	N	X
S	Selenium	Se						10-17	LT	994-47
S	Silver	Ag						10-18	N	X
S	Thallium	Tl						10-17	LT	994-48
S	Zinc	Zn						10-18	N	X

Quality control Report Number(s): 001017 B

Reviewed by: LT Date: 10/25 RPT:Report02

18

Date: 10/16/00 ACCREDITED LABORATORIES, ~~INC.~~ Time: 8:29:43
INORGANIC ANALYSIS LABORATORY CHRONICLE

PP LIST

Client: Envirotactics Fax Data Due: **10/25/00** Test Date Due: 10/27/00
Hard Copy Due: **10/25/00**
Field#: S-6 Case#: 9748 Sample#: 200012808
Client Sample Description:
Date Sampled: 10/13/00 Date Received: 10/13/00 Report Package: Reduced

Test: PPMET QC#: 00043-CV
Test Description: Priority Pollutant Metals (PPMET)
Project Name: Ordis
Mtx:A=Aqueous:S=Soil:O=Oil:K=Solid:F=Filters:P=Potable Water:G=Sludge:X=Oth
Sample Comments:

By Method: _____

						LABORATORY CHRONICLE PREPARATION		LABORATORY CHRONICLE ANALYSIS		
MTX	ELEMENT	SYM	RESULT	MDL	UNITS	DATE	INIT	DATE	INIT	REF
S	Antimony	Sb				10-17	LR	10-18	W	123-A
S	Arsenic	As						10-18	LT	112-44
S	Beryllium	Be							W	X
S	Cadmium	Cd								X
S	Chromium-T	Cr								X
S	Copper	Cu								X
S	Lead	Pb								X
S	Mercury	Hg				10-17	SR	10-17	SR	125-10
S	Nickel	Ni				10-17	LR	10-18	W	X
S	Selenium	Se						10-17	LT	994-47
S	Silver	Ag						10-18	W	X
S	Thallium	Tl						10-17	LT	994-48
S	Zinc	Zn						10-18	W	X

Quality control Report Number(s): 001017 B

Reviewed by: LT Date: 10/25 RPT:Report02

19

Date: 10/16/00 ACCREDITED LABORATORIES, INC. Time: 8:29:52
INORGANIC ANALYSIS LABORATORY CHRONICLE

PP LIST

Client: Envirotactics
Fax Data Due: **10/25/00**
Test Date Due: 10/27/00
Hard Copy Due: **10/25/00**
Field#: S-7
Case#: 9748
Sample#: 200012809
Client Sample Description:
Date Sampled: 10/13/00 Date Received: 10/13/00 Report Package: Reduced

Test: PPMET
QC#: 00043-CV
Test Description: Priority Pollutant Metals (PPMET)
Project Name: Ordis
Mtx:A=Aqueous:S=Soil:O=Oil:K=Solid:F=Filters:P=Potable Water:G=Sludge:X=Oth
Sample Comments:

By Method: _____

						LABORATORY CHRONICLE PREPARATION		ANALYSIS		
MTX	ELEMENT	SYM	RESULT	MDL	UNITS	DATE	INIT	DATE	INIT	REF
S	Antimony	Sb				10-17	L.R	10-18	~	133.15
S	Arsenic	As						10-18	LT	112-44
S	Beryllium	Be							~	X
S	Cadmium	Cd								X
S	Chromium-T	Cr								X
S	Copper	Cu								X
S	Lead	Pb								X
S	Mercury	Hg				10-17	SK	10-17	SK	125-10
S	Nickel	Ni				10-17	LR	10-17	~	X
S	Selenium	Se						10-17	LT	994-47
S	Silver	Ag						10-17	~	X
S	Thallium	Tl						10-17	LT	994-48
S	Zinc	Zn						10-17	~	X

X = 133.15

Quality control Report Number(s): 001017 B

Reviewed by: LT Date: 10/25 RPT:Report02

20

Date: 10/16/00 ACCREDITED LABORATORIES, INC. Time: 8:30:00
INORGANIC ANALYSIS LABORATORY CHRONICLE

PP LIST

Client: Envirotactics
Test Date Due: 10/27/00
Fax Data Due: **10/25/00** Hard Copy Due: **10/25/00**
Field#: S-8 Case#: 9748 Sample#: 200012810
Client Sample Description:
Date Sampled: 10/13/00 Date Received: 10/13/00 Report Package: Reduced

Test: PPMET QC#: 00043-CV
Test Description: Priority Pollutant Metals (PPMET)
Project Name: Ordis
Mtx:A=Aqueous:S=Soil:O=Oil:K=Solid:F=Filters:P=Potable Water:G=Sludge:X=Oth
Sample Comments:

By Method: _____

						LABORATORY CHRONICLE PREPARATION		LABORATORY CHRONICLE ANALYSIS		
MTX	ELEMENT	SYM	RESULT	MDL	UNITS	DATE	INIT	DATE	INIT	REF
S	Antimony	Sb				10-17	L.R	10-18	W	123-19
S	Arsenic	As						10-18	LT	112-44
S	Beryllium	Be							W	X
S	Cadmium	Cd								X
S	Chromium-T	Cr								X
S	Copper	Cu								X
S	Lead	Pb								X
S	Mercury	Hg				10-17	SR	10-17	SR	125-10
S	Nickel	Ni				10-17	L.R	10-18	W	X
S	Selenium	Se						10-17	LT	999-47
S	Silver	Ag						10-18	W	X
S	Thallium	Tl						10-17	LT	999-48
S	Zinc	Zn						10-18	W	X

X = 123-19

Quality control Report Number(s): 001017 B

Reviewed by: JT Date: 10/25 RPT:Report02

Date: 10/16/00

Accredited Laboratories, Inc.
General Chemistry Laboratory Chronicle

Time: 8:30:37
Page: 1

PP LIST

Client Name: Envirotactics
Client Field Number: S-1
Client Sample Description:
Date Sampled: 10/13/00
Client Project Name: Ordis
Phases:

Case#: 9748
Date Received: 10/13/00

Sample#: 200012803
Fax Data Due: **10/25/00**
Hard Copy Due: **10/25/00**
Report Package: Reduced

Mtx	Analytes	Test Due Date	ANALYTICAL DATA RESULTS	MDL	UNITS	SAMPLE PREP DATE	INIT	SAMPLE ANALYSIS DATE	INIT	REF
S	% SOLIDS	10/27/00	85.7	0.10	%	10-16-00	dol	10-16-00	dol	5944
S	CN	10/27/00	2.22	1.08	mg/kg	10/17/00	S.P.	10/18/00	S.P.	126-17

Reviewed By: _____ Date: _____

Matrix:A=Aqueous: S=Soil: O=Oil: K=Solid: F=Filters: P=Potable Water: G=Sludge: X=Other: RPT:Report06

Date: 10/16/00

Accredited Laboratories, Inc.
General Chemistry Laboratory Chronicle

Time: 8:30:44
Page: 2

PP LIST

Client Name: Envirotactics
Client Field Number: S-2
Client Sample Description:
Date Sampled: 10/13/00
Client Project Name: Ordis
Phases:

Case#: 9748

Date Received: 10/13/00

Sample#: 200012804
Fax Data Due: **10/25/00**
Hard Copy Due: **10/25/00**
Report Package: Reduced

Mtx	Analytes	Test Due Date	ANALYTICAL DATA RESULTS	MDL	UNITS	SAMPLE PREP DATE	INIT	SAMPLE ANALYSIS DATE	INIT	REF
S	% SOLIDS	10/27/00	72.5	0.10	%	10-16-00	dd	10-16-00	dd	5945
S	CN	10/27/00	ND	1.17	mg/kg	10/17/00	S.P.	10/18/00	S.P.	126-17

G61

Reviewed By: _____ Date: _____

Matrix:A=Aqueous: S=Soil: O=Oil: K=Solid: F=Filters: P=Potable Water: G=Sludge: X=Other: RPT:Report06

23

Date: 10/16/00

Accredited Laboratories, Inc.
General Chemistry Laboratory Chronicle

Time: 8:30:49
Page: 3

PP LIST

Client Name: Envirotactics
Client Field Number: S-3
Client Sample Description:
Date Sampled: 10/13/00
Client Project Name: Ordis
Phases:

Case#: 9748
Date Received: 10/13/00

Sample#: 200012805
Fax Data Due: **10/25/00**
Hard Copy Due: **10/25/00**
Report Package: Reduced

			ANALYTICAL DATA			SAMPLE PREP		SAMPLE ANALYSIS		
Mtx	Analytes	Test Due Date	RESULTS	MDL	UNITS	DATE	INIT	DATE	INIT	REF
S	% SOLIDS	10/27/00	78.6	0.10	%	10-16-00	dal	10-16-00	dal	5944
S	CN	10/27/00	ND	1.18	mg/kg	10/17/00	S.P.	10/18/00	S.P.	126-17

961

Reviewed By: _____ Date: _____

Matrix:A=Aqueous: S=Soil: O=Oil: K=Solid: F=Filters: P=Potable Water: G=Sludge: X=Other: RPT:Report06

72

Date: 10/16/00

Accredited Laboratories, Inc.
General Chemistry Laboratory Chronicle

Time: 8:30:59
Page: 4

PP LIST

Client Name: Envirotactics
Client Field Number: S-4
Client Sample Description:
Date Sampled: 10/13/00
Client Project Name: Ordis
Phases:

Case#: 9748

Date Received: 10/13/00

Sample#: 200012806
Fax Data Due: **10/25/00**
Hard Copy Due: **10/25/00**
Report Package: Reduced

Mtx	Analytes	Test Due Date	ANALYTICAL DATA RESULTS	MDL	UNITS	SAMPLE PREP DATE	INIT	SAMPLE ANALYSIS DATE	INIT	REF
S	% SOLIDS	10/27/00	85.3	0.10	%	10-16-00	dm	10-16-00	dm	5944
S	CN	10/27/00	NR	1.13	mg/kg	10/17/00	SP	10/18/00	SP	126.17

19-1

Reviewed By: _____ Date: _____

Matrix:A=Aqueous: S=Soil: O=Oil: K=Solid: F=Filters: P=Potable Water: G=Sludge: X=Other: RPT:Report06

25

Date: 10/16/00

Accredited Laboratories, Inc.
General Chemistry Laboratory Chronicle

PP LIST

Client Name: Envirotactics
Client Field Number: S-5
Client Sample Description:
Date Sampled: 10/13/00
Client Project Name: Ordis
Phases:

Case#: 9748

Date Received: 10/13/00

Sample#: 200012807
Fax Data Due: **10/25/00**
Hard Copy Due: **10/25/00**
Report Package: Reduced

Mtx	Analytes	Test Due Date	ANALYTICAL DATA RESULTS	MDL	UNITS	SAMPLE PREP DATE	INIT	SAMPLE ANALYSIS DATE	INIT	REF
S	% SOLIDS	10/27/00	85.9	0.10	%	10-16-00	dm	10-16-00	dm	5944
S	CN	10/27/00	ND	1.09	mg/kg	10/17/00	S.P.	10/18/00	S.P.	126-17

1984

Reviewed By: _____ Date: _____

Matrix: A=Aqueous: S=Soil: O=Oil: K=Solid: F=Filters: P=Potable Water: G=Sludge: X=Other: RPT:Report06

26

Date: 10/16/00

Accredited Laboratories, Inc.
General Chemistry Laboratory Chronicle

Time: 8:31:13
Page: 6

PP LIST

Client Name: Envirotactics
Client Field Number: S-6
Client Sample Description:
Date Sampled: 10/13/00
Client Project Name: Ordis
Phases:

Case#: 9748

Date Received: 10/13/00

Sample#: 200012808
Fax Data Due: **10/25/00**
Hard Copy Due: **10/25/00**
Report Package: Reduced

Mtx	Analytes	Test Due Date	ANALYTICAL DATA RESULTS	MDL	UNITS	SAMPLE PREP DATE	INIT	SAMPLE ANALYSIS DATE	INIT	REF
S	% SOLIDS	10/27/00	84.6	0.10	%	10-16-00	dal	10-16-00	dal	5944
S	CN	10/27/00	ND	1.03	mg/kg	10/17/00	S.P.	10/18/00	S.P.	126-17

Reviewed By: _____ Date: _____

Matrix:A=Aqueous: S=Soil: O=Oil: K=Solid: F=Filters: P=Potable Water: G=Sludge: X=Other: RPT:Report06

Date: 10/16/00

Accredited Laboratories, Inc.
General Chemistry Laboratory Chronicle

PP LIST

Client Name: Envirotactics
Client Field Number: S-7
Client Sample Description:
Date Sampled: 10/13/00
Client Project Name: Ordis
Phases:

Case#: 9748
Date Received: 10/13/00

Sample#: 200012809
Fax Data Due: 10/25/00
Hard Copy Due: 10/25/00
Report Package: Reduced

Mtx	Analytes	Test Due Date	ANALYTICAL DATA RESULTS	MDL	UNITS	SAMPLE PREP DATE	INIT	SAMPLE ANALYSIS DATE	INIT	REF
S	% SOLIDS	10/27/00	87.2	0.10	%	10-16-00	dm	10-16-00	dm	5944
S	CN	10/27/00	1.10	1.09	mg/kg	10/17/00	S.P.	10/18/00	S.P.	126-17

200

Reviewed By: _____ Date: _____

Matrix:A=Aqueous: S=Soil: O=Oil: K=Solid: F=Filters: P=Potable Water: G=Sludge: X=Other: RPT:Report06

28

Date: 10/16/00

Accredited Laboratories, Inc.
General Chemistry Laboratory Chronicle

Time: 8:31:29
Page: 8

PP LIST

Client Name: Envirotactics
Client Field Number: S-8
Client Sample Description:
Date Sampled: 10/13/00
Client Project Name: Ordis
Phases:

Case#: 9748
Date Received: 10/13/00

Sample#: 200012810
Fax Data Due: **10/25/00**
Hard Copy Due: **10/25/00**
Report Package: Reduced

			ANALYTICAL DATA			SAMPLE PREP		SAMPLE ANALYSIS		
Mtx	Analytes	Test Due Date	RESULTS	MDL	UNITS	DATE	INIT	DATE	INIT	REF
S	% SOLIDS	10/27/00	76.0	0.10	%	10-16-00	dm	10-16-00	dm	5944
S	CN	10/27/00	ND	0.99	mg/kg	10/17/00	S.P.	10/18/00	S.P	126-17

201

Reviewed By: _____ Date: _____

Matrix: A=Aqueous: S=Soil: O=Oil: K=Solid: F=Filters: P=Potable Water: G=Sludge: X=Other: RPT:Report06

29

Date: 10/16/00 ACCREDITED LABORATORIES, INC. Time: 8:30:30

ORGANIC ANALYSIS LABORATORY CHRONICLE

PP LIST

Client: Envirotactics
Fax Data Due: **10/25/00**
Test Date Due: 10/20/00
Hard Copy Due: **10/25/00**
Client Project Name: Ordis
Case #: 9748

Date Sampled:10/13/00 Date Received:10/13/00 Report Pkg: Reduced

Test: TPHC Sample Matrix: S
Test Description:Total Petroleum Hydrocarbons (TPHC)

Mtx:A=Aqueous:S=Soil:O=Oil:K=Solid By Method: _____
:F=Filters:P=Potable Water:G=Sludge:X=Other

SAMPLE IDENTIFICATION		ANALYTICAL DATA			LABORATORY CHRONICLE EXTRACTION		ANALYSIS		
Field#	Sample#	RESULT	MDL	UNITS	DATE	TIME	DATE	TIME	INIT
S-1	200012803	82	46	MG/KG	10-19-00		10-19-00		RB
S-2	200012804	834	51						
S-3	200012805	ND	48						
S-4	200012806	51	46						
S-5	200012807	ND	45						
S-6	200012808	900	47						
S-7	200012809	110	45						
S-8	200012810	868	52						

QUALITY CONTROL:
Method Blank : _____
Mean Percent Spike Recovery : _____
Relative Percent Difference of Duplicate Spikes : _____

Reviewed by: _____ Date: 10-25-00 RPT:Report03

30

CONFORMANCE/NON-CONFORMANCE SUMMARY

Accredited Labs received 8 soil samples and 1 trip blank sample (Project: Ordis; ALI Case #9748) from Envirotactics, Inc. on 10/13/00 for the analyses of Priority Pollutants +40 and Total Petroleum Hydrocarbons.

All analyses were performed within the required holding time.

All analyses were reported on a dry weight basis.

In the Volatile Organic analysis, one surrogate (Toluene-d8) for ALI Sample #0012804 and 0012807, and one surrogate (Bromo-fluorobenzene) for ALI Sample #0012808 were out of criteria. ALI Sample #0012804 was used for the MS/MSD analyses, and in the MS analyses the surrogate (Toluene-d8) was again recovered out of the required criteria. ALI Sample #0012807 and 0012808 were diluted and analyzed and the surrogates were again recovered out of the required criteria.

The MDL levels were elevated in the Volatile Organic analysis due to the methanol preservation technique used at the time of sampling.

In the BNA analysis, four surrogates (Terphenyl-d14, Phenol-d5, 2-Fluorophenol and 2,4,6-Tribromophenol) for ALI Sample #0012804, and three surrogates (2-Fluorobiphenyl, Terphenyl-d14 and 2,4,6-Tribromophenol) for ALI Sample #0012810 were out of criteria. The both samples were diluted and analyzed and the surrogates for

ALI Sample #0012810 were recovered within the required criteria. Three surrogates (Phenol-d5, 2-Fluorophenol and 2,4,6-Tribromophenol) for ALI Sample #0012804 were again recovered out of the required criteria.

"The laboratory has reviewed the quality assurance and quality control measurements for the sample analysis stated above."

Theodore C. Gaydos
Technical Director

State of New Jersey
Department of Environmental Protection

Certifies That

ACCREDITED LABORATORIES INCORPORATED

LABORATORY CERTIFICATION DATE 2007

[illegible] the requirements [illegible]

Regulations Governing The Certification Of

Laboratories And Environmental Measurements N.J.A.C. 7:18 et. seq.

[illegible]

State Certified Environmental Laboratory

To perform the analyses as indicated on the [illegible] Certified Parameter List

which must accompany this certificate to be valid

Expiration Date June 30, 2001

Joseph F. Aiello, Chief
Office of Quality Assurance

THIS CERTIFICATE IS TO BE CONSPICUOUSLY DISPLAYED AT THE LABORATORY WITH THE ANNUAL CERTIFIED PARAMETER LIST IN A LOCATION ON THE PREMISES VISIBLE TO THE PUBLIC.

[illegible] LABOR [illegible], INC
VOLATILE ORGANIC ANALYSIS DATA

CASE NUMBER	2745	MATRIX	[illegible]
SAMPLE NUMBER	0012803	DILUTION FACTOR	[illegible]
DATA FILE	[illegible]	DATE EXTRACTED	
CLIENT NAME	ENVIROTACTICS	DATE ANALYZED	10/26/00
FIELD ID	S-1	ANALYZED BY	ROBERT

CAS #	COMPOUND	UG/KG	MDL	CAS #	COMPOUND	UG/KG	MDL
107028	Acrolein	U	3200	71432	Benzene	U	650
107131	Acrylonitrile	U	3200	79016	Trichloroethene	U	650
74873	Chloromethane	U	650	78875	1,2-Dichloropropane	U	650
75014	Vinyl Chloride	U	650	75274	Bromodichloromethane	U	650
74839	Bromomethane	U	650	10061015	cis-1,3-dichloropropene	U	650
75003	Chloroethane	U	650	108883	Toluene	U	650
75694	Trichlorofluoromethane	U	650	10061026	trans-1,3-Dichloropropene	U	650
75354	1,1-Dichloroethene	U	650	79005	1,1,2-Trichloroethane	U	650
75092	Methylene Chloride	U	650	127184	Tetrachloroethene	U	650
156605	trans-1,2-Dichloroethene	U	650	124481	Dibromochloromethane	U	650
75343	1,1-Dichloroethane	U	650	100414	Ethylbenzene	U	650
67663	Chloroform	U	650	108907	Chlorobenzene	U	650
71556	1,1,1-Trichloroethane	U	650	75252	Bromoform	U	650
56235	Carbon Tetrachloride	U	650	79345	1,1,2,2-Tetrachloroethane	U	650
107062	1,2-Dichloroethane	U	650	110758	2-Chloroethylvinylether	U	650

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	77 %	70-121	OK
Toluene-d8	81 %	81-117	OK
Bromofluorobenzene	81 %	74-121	OK

Percent solid of 85.7 is used for all target compounds.

J - Indicates compound concentration found below MDL.
U - Indicates compound analyzed for but not detected,
D - Indicates result is based on a dilution.
I - Result exceeds industrial surface soil standards.*

B - Indicates compound found in associated blank.
E - Indicates result exceeds highest calibration standard
R - Result exceeds residential surface soil standards.*

* Flags are based on New Jersey Soil Cleanup Criteria from Site Remediation News Volume 06 Number 1.

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Name: Accredited Labs, Inc. Lab Sample ID: 0012803

Client Name: ENVIROTACTICS Field ID: S-1

Case No.: 9748 Date Extracted:

Lab File ID: >A8788 Date Analyzed: 10/26/00

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

* Unknowns are defined as: Compounds that are less than 80% probability or have no database entries from the library.

FORM I SV-TIC

LAB NUMBER	[illegible]	MATRIX	[illegible]
CASE # NUMBER	[illegible]	DILUTION FACTOR	[illegible]
DATA FILE	[illegible]	DATE EXTRACTED	[illegible]
CLIENT NAME	[illegible]	DATE ANALYZED	[illegible]
FIELD ID	[illegible]	ANALYZED BY	[illegible]

CAS #	COMPOUND	UG/KG	MDL	CAS #	COMPOUND	UG/KG	MDL
107028	Acrolein	U	4000	71432	Benzene	U	800
107131	Acrylonitrile	U	4000	79016	Trichloroethene	U	800
74873	Chloromethane	U	800	78875	1,2-Dichloropropane	U	800
75014	Vinyl Chloride	U	800	75274	Bromodichloromethane	U	800
74839	Bromomethane	U	800	10061015	cis-1,3-Dichloropropene	U	800
75003	Chloroethane	U	800	108883	Toluene	1000	800
75694	Trichlorofluoromethane	U	800	10061026	trans-1,3-Dichloropropene	U	800
75354	1,1-Dichloroethene	U	800	79005	1,1,2-Trichloroethane	U	800
75092	Methylene Chloride	U	800	127184	Tetrachloroethene	U	800
156605	trans-1,2-Dichloroethene	U	800	124481	Dibromochloromethane	U	800
75343	1,1-Dichloroethane	U	800	100414	Ethylbenzene	U	800
67663	Chloroform	U	800	108907	Chlorobenzene	U	800
71556	1,1,1-Trichloroethane	U	800	75252	Bromoform	U	800
56235	Carbon Tetrachloride	U	800	79345	1,1,2,2-Tetrachloroethane	U	800
107062	1,2-Dichloroethane	U	800	110758	2-Chloroethylvinylether	U	800

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	70 %	70-121	OK
Toluene-d8	76 %	81-117	OUT
Bromofluorobenzene	76 %	74-121	OK

Percent solid of 72.5 is used for all target compounds.

J - Indicates compound concentration found below MDL.
U - Indicates compound analyzed for but not detected.
D - Indicates result is based on a dilution.
I - Result exceeds industrial surface soil standards.*

B - Indicates compound found in associated blank.
E - Indicates result exceeds highest calibration standard
R - Result exceeds residential surface soil standards.*

* Flags are based on New Jersey Soil Cleanup Criteria from Site Remediation News Volume 06 Number 1.

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Name: Accredited Labs, Inc. Lab Sample ID: 0012804

Client Name: ENVIROTACTICS Field ID: S-2

Case No.: 9748 Date Extracted:

Lab File ID: >A8789 Date Analyzed: 10/26/00

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	26.16	720	
2.	96	Naphthalene	33.20	1400	

* Unknowns are defined as: Compounds that are less than 80% probability or have no database entries from the library.

FORM I SV-TIC

[illegible] LABORATORIES, INC.
VOLATILE ORGANIC ANALYSIS DATA

CASE NUMBER	[illegible]	MATRIX	Soil
SAMPLE NUMBER	SS12B02	DILUTION FACTOR	1.0
DATA FILE	[illegible]	DATE EXTRACTED	
CLIENT NAME	ENVIRONTECTICS	DATE ANALYZED	10/25/90
FIELD ID	S-2	ANALYZED BY	ROBERT

CAS #	COMPOUND	UG/KG	MDL
107028	Acrolein	U	3800
107131	Acrylonitrile	U	3800
74873	Chloromethane	U	760
75014	Vinyl Chloride	U	760
74839	Bromomethane	U	760
75003	Chloroethane	U	760
75694	Trichlorofluoromethane	U	760
75354	1,1-Dichloroethene	U	760
75092	Methylene Chloride	U	760
156605	trans-1,2-Dichloroethene	U	760
75343	1,1-Dichloroethane	U	760
67663	Chloroform	U	760
71556	1,1,1-Trichloroethane	U	760
56235	Carbon Tetrachloride	U	760
107062	1,2-Dichloroethane	U	760

CAS #	COMPOUND	UG/KG	MDL
71432	Benzene	U	760
79016	Trichloroethene	U	760
78875	1,2-Dichloropropane	U	760
75274	Bromodichloromethane	U	760
10061015	cis-1,3-dichloropropene	U	760
108883	Toluene	U	760
10061026	trans-1,3-Dichloropropene	U	760
79005	1,1,2-Trichloroethane	U	760
127184	Tetrachloroethene	U	760
124481	Dibromochloromethane	U	760
100414	Ethylbenzene	U	760
108907	Chlorobenzene	U	760
75252	Bromoform	U	760
79345	1,1,2,2-Tetrachloroethane	U	760
110758	2-Chloroethylvinylether	U	760

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	77 %	70-121	OK
Toluene-d8	83 %	81-117	OK
Bromofluorobenzene	82 %	74-121	OK

Percent solid of 78.6 is used for all target compounds.

J - Indicates compound concentration found below MDL.
U - Indicates compound analyzed for but not detected.
D - Indicates result is based on a dilution.
I - Result exceeds industrial surface soil standards.*

B - Indicates compound found in associated blank.
E - Indicates result exceeds highest calibration standard
R - Result exceeds residential surface soil standards.*

* Flags are based on New Jersey Soil Cleanup Criteria from Site Remediation News Volume 06 Number 1.

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Name: Accredited Labs, Inc. Lab Sample ID: 0012805

Client Name: ENVIROTACTICS Field ID: S-3

Case No.: 9748 Date Extracted:

Lab File ID: >A8770 Date Analyzed: 10/25/00

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown hydrocarbon	5.73	5700	B
2.		Unknown	33.62	890	

* Unknowns are defined as: Compounds that are less than 80% probability or have no database entries from the library.

FORM I SV-TIC

[illegible]
VOLATILE ORGANIC ANALYSIS DATA

CASE NUMBER	9748	MATRIX	Soil
SAMPLE NUMBER	0012806	SOLUTION FACTOR	154
DATA FILE	[illegible]	DATE EXTRACTED	
CLIENT NAME	ENVIROTACTICS	DATE ANALYZED	10/25/01
FIELD ID	S-4	ANALYZED BY	ROBERT

CAS #	COMPOUND	UG/KG	MDL	CAS #	COMPOUND	UG/KG	MDL
107028	Acrolein	U	4500	71432	Benzene	430 J	900
10713.	Acrylonitrile	U	4500	79016	Trichloroethene	U	900
74873	Chloromethane	U	900	78875	1,2-Dichloropropane	U	900
75014	Vinyl Chloride	U	900	75274	Bromodichloromethane	U	900
74839	Bromomethane	U	900	10061015	cis-1,3-dichloropropene	U	900
75003	Chloroethane	U	900	108883	Toluene	370 J	900
75694	Trichlorofluoromethane	U	900	10061026	trans-1,3-Dichloropropene	U	900
75354	1,1-Dichloroethene	U	900	79005	1,1,2-Trichloroethane	U	900
75092	Methylene Chloride	1000 B	900	127184	Tetrachloroethene	U	900
156605	trans-1,2-Dichloroethene	U	900	124481	Dibromochloromethane	U	900
75343	1,1-Dichloroethane	U	900	100414	Ethylbenzene	U	900
67663	Chloroform	U	900	108907	Chlorobenzene	U	900
71556	1,1,1-Trichloroethane	U	900	75252	Bromoform	U	900
56235	Carbon Tetrachloride	U	900	79345	1,1,2,2-Tetrachloroethane	U	900
107062	1,2-Dichloroethane	U	900	110758	2-Chloroethylvinylether	U	900

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	78 %	70-121	OK
Toluene-d8	84 %	81-117	OK
Bromofluorobenzene	85 %	74-121	OK

Percent solid of 85.3 is used for all target compounds.

J - Indicates compound concentration found below MDL.
U - Indicates compound analyzed for but not detected,
D - Indicates result is based on a dilution.
I - Result exceeds industrial surface soil standards.*

B - Indicates compound found in associated blank.
E - Indicates result exceeds highest calibration standard
R - Result exceeds residential surface soil standards.*

* Flags are based on New Jersey Soil Cleanup Criteria from Site Remediation News Volume 06 Number 1.

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Name: Accredited Labs, Inc. Lab Sample ID: 0012806

Client Name: ENVIROTACTICS Field ID: S-4

Case No.: 9748 Date Extracted:

Lab File ID: >A8771 Date Analyzed: 10/25/00

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown hydrocarbon	5.76	7300	B
2.		Unknown	25.24	2500	
3.		Unknown	25.79	690	
4.		Unknown	29.79	2100	
5.		Unknown	33.42	630	

* Unknowns are defined as: Compounds that are less than 80% probability or have no database entries from the library.

FORM I SV-TIC

[illegible] LABORATORIES, INC.
VOLATILE ORGANIC ANALYSIS DATA

CASE NUMBER	9243	MATRIX	Soil
SAMPLE NUMBER	0012807	DILUTION FACTOR	120
DATA FILE	[illegible]	DATE EXTRACTED	
CLIENT NAME	ENVIROTACTILE	DATE ANALYZED	10/25/00
FIELD ID	S-5	ANALYZED BY	ROBERT

CAS #	COMPOUND	UG/KG	MDL	CAS #	COMPOUND	UG/KG	MDL
107028	Acrolein	U	3500	71432	Benzene	60000 E I	700
107131	Acrylonitrile	U	3500	79016	Trichloroethene	U	700
74873	Chloromethane	U	700	78875	1,2-Dichloropropane	U	700
75014	Vinyl Chloride	U	700	75274	Bromodichloromethane	U	700
74839	Bromomethane	U	700	10061015	cis-1,3-dichloropropene	U	700
75003	Chloroethane	U	700	108883	Toluene	19000	700
75694	Trichlorofluoromethane	U	700	10061026	trans-1,3-Dichloropropene	U	700
75354	1,1-Dichloroethene	U	700	79005	1,1,2-Trichloroethane	U	700
75092	Methylene Chloride	U	700	127184	Tetrachloroethene	U	700
156605	trans-1,2-Dichloroethene	U	700	124481	Dibromochloromethane	U	700
75343	1,1-Dichloroethane	U	700	100414	Ethylbenzene	U	700
67663	Chloroform	U	700	108907	Chlorobenzene	U	700
71556	1,1,1-Trichloroethane	U	700	75252	Bromoform	U	700
56235	Carbon Tetrachloride	U	700	79345	1,1,2,2-Tetrachloroethane	U	700
107062	1,2-Dichloroethane	U	700	110758	2-Chloroethylvinylether	U	700

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	75 %	70-121	OK
Toluene-d8	80 %	81-117	OUT
Bromofluorobenzene	80 %	74-121	OK

Percent solid of 85.9 is used for all target compounds.

J - Indicates compound concentration found below MDL.
U - Indicates compound analyzed for but not detected,
D - Indicates result is based on a dilution.
I - Result exceeds industrial surface soil standards.*

B - Indicates compound found in associated blank.
E - Indicates result exceeds highest calibration standard
R - Result exceeds residential surface soil standards.*

* Flags are based on New Jersey Soil Cleanup Criteria from Site Remediation News Volume 06 Number 1.

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Name: Accredited Labs, Inc. Lab Sample ID: 0012807

Client Name: ENVIROTACTICS Field ID: S-5

Case No.: 9748 Date Extracted:

Lab File ID: >A8772 Date Analyzed: 10/25/00

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown hydrocarbon	5.79	5600	B
2.		Unknown	26.00	2300	
3.		Unknown	27.00	2900	
4.		Unknown	27.41	250000	
5.		Unknown	28.78	4500	
6.		Unknown	29.10	2600	
7.		Unknown	30.23	2100	
8.		Unknown	30.46	2100	
9.		Unknown	31.51	7300	
10.		Unknown	31.87	2100	
11.		Unknown	32.42	2300	
12.		Unknown	33.42	5000	
13.		Unknown	34.05	4400	
14.		Unknown	34.19	2700	

* Unknowns are defined as: Compounds that are less than 80% probability or have no database entries from the library.

FORM I SV-TIC

[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	DATE ANALYZED	12/21/89
[illegible]	[illegible]	ANALYZED BY	ROBERT

CAS #	COMPOUND	UG/KG		MDL
107028	Acrolein	U		17000
107131	Acrylonitrile	U		17000
74873	Chloromethane	U		3500
75014	Vinyl Chloride	U		3500
74839	Bromomethane	U		3500
75003	Chloroethane	U		3500
75694	Trichlorofluoromethane	U		3500
75354	1,1-Dichloroethene	U		3500
75092	Methylene Chloride	U		3500
156605	trans-1,2-Dichloroethene	U		3500
75343	1,1-Dichloroethane	U		3500
67663	Chloroform	U		3500
71556	1,1,1-Trichloroethane	U		3500
56235	Carbon Tetrachloride	U		3500
107062	1,2-Dichloroethane	U		3500

CAS #	COMPOUND	UG/KG		MDL
71432	Benzene	21000	DJ	3500
79016	Trichloroethene	U		3500
78875	1,2-Dichloropropane	U		3500
75274	Bromodichloromethane	U		3500
10061015	cis-1,3-dichloropropene	U		3500
108883	Toluene	16000	D	3500
10061026	trans-1,3-Dichloropropene	U		3500
79005	1,1,2-Trichloroethane	U		3500
127184	Tetrachloroethene	U		3500
124481	Dibromochloromethane	U		3500
100414	Ethylbenzene	U		3500
108907	Chlorobenzene	U		3500
75252	Bromoform	U		3500
79345	1,1,2,2-Tetrachloroethane	U		3500
110758	2-Chloroethylvinylether	U		3500

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	57 %	70-121	OUT
Toluene-d8	66 %	81-117	OUT
Bromofluorobenzene	67 %	74-121	OUT

Percent solid of 85.9 is used for all target compounds.

J - Indicates compound concentration found below MDL.
U - Indicates compound analyzed for but not detected.
D - Indicates result is based on a dilution.
I - Result exceeds industrial surface soil standards.*

B - Indicates compound found in associated blank.
E - Indicates result exceeds highest calibration standard
R - Result exceeds residential surface soil standards.*

* Flags are based on New Jersey Soil Cleanup Criteria from Site Remediation News Volume 06 Number 1.

[illegible] LABORATORIES, INC.
VOLATILE ORGANIC ANALYSIS DATA

CASE NUMBER	[illegible]	MATRIX	[illegible]
SAMPLE NUMBER	[illegible]	DILUTION FACTOR	121
DATA FILE	[illegible]	DATE EXTRACTED	
CLIENT NAME	ENVIROTECTICS	DATE ANALYZED	10/25/0[illegible]
FIELD ID	[illegible]	ANALYZED BY	ROBERT

CAS #	COMPOUND	UG/KG	MDL
107028	Acrolein	U	3600
107131	Acrylonitrile	U	3600
74873	Chloromethane	U	720
75014	Vinyl Chloride	U	720
74839	Bromomethane	U	720
75003	Chloroethane	U	720
75694	Trichlorofluoromethane	U	720
75354	1,1-Dichloroethene	U	720
75092	Methylene Chloride	U	720
156605	trans-1,2-Dichloroethene	U	720
75343	1,1-Dichloroethane	U	720
67663	Chloroform	U	720
71556	1,1,1-Trichloroethane	U	720
56235	Carbon Tetrachloride	U	720
107062	1,2-Dichloroethane	U	720

CAS #	COMPOUND	UG/KG	MDL
71432	Benzene	39000 E I	720
79016	Trichloroethene	1700	720
78875	1,2-Dichloropropane	U	720
75274	Bromodichloromethane	U	720
10061015	cis-1,3-dichloropropene	U	720
108883	Toluene	120000 E	720
10061026	trans-1,3-Dichloropropene	U	720
79005	1,1,2-Trichloroethane	U	720
127184	Tetrachloroethene	2000	720
124481	Dibromochloromethane	U	720
100414	Ethylbenzene	1700	720
108907	Chlorobenzene	5200	720
75252	Bromoform	U	720
79345	1,1,2,2-Tetrachloroethane	U	720
110758	2-Chloroethylvinylether	U	720

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	79 %	70-121	OK
Toluene-d8	91 %	81-117	OK
Bromofluorobenzene	133 %	74-121	OUT

Percent solid of 84.6 is used for all target compounds.

J - Indicates compound concentration found below MDL.
U - Indicates compound analyzed for but not detected,
D - Indicates result is based on a dilution.
I - Result exceeds industrial surface soil standards.*

B - Indicates compound found in associated blank.
E - Indicates result exceeds highest calibration standard
R - Result exceeds residential surface soil standards.*

* Flags are based on New Jersey Soil Cleanup Criteria from Site Remediation News Volume 06 Number 1.

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Accredited Labs, Inc. Lab Sample ID: 0012808

Client Name: ENVIROTACTICS Field ID: S-6

Case No.: 9748 Date Extracted:

Lab File ID: >A8773 Date Analyzed: 10/25/00

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown hydrocarbon	5.75	5500	B
2.		Unknown	24.18	94000	
3.		Unknown	24.36	9600	
4.		Unknown	25.59	3600	
5.		Unknown	25.86	70000	
6.		Unknown	26.72	5700	
7.		Unknown	27.18	1900	
8.		Unknown	27.41	47000	
9.	149	Benzene, 1,2-dichloro-	28.63	41000	
10.		Unknown	30.91	4500	
11.		Unknown	32.14	23000	
12.	218	Benzene, 1,2,4-trichloro-	32.64	2000	
13.		Unknown	33.64	4200	
14.		Unknown	34.37	2100	

* Unknowns are defined as: Compounds that are less than 80% probability or have no database entries from the library.

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CAS #	COMPOUND	UG/KG	MDL
107028	Acrolein	U	36000
107131	Acrylonitrile	U	36000
74873	Chloromethane	U	7200
75014	Vinyl Chloride	U	7200
74839	Bromomethane	U	7200
75003	Chloroethane	U	7200
75694	Trichlorofluoromethane	U	7200
75354	1,1-Dichloroethene	U	7200
75092	Methylene Chloride	U	7200
156605	trans-1,2-Dichloroethene	U	7200
75343	1,1-Dichloroethane	U	7200
67663	Chloroform	U	7200
71556	1,1,1-Trichloroethane	U	7200
56235	Carbon Tetrachloride	U	7200
107062	1,2-Dichloroethane	U	7200

CAS #	COMPOUND	UG/KG	MDL
71432	Benzene	40100 DJ	7200
79016	Trichloroethene	U	7200
78875	1,2-Dichloropropane	U	7200
75274	Bromodichloromethane	U	7200
10061015	cis-1,3-dichloropropene	U	7200
108883	Toluene	510000 E D	7200
10061026	trans-1,3-Dichloropropene	U	7200
79005	1,1,2-Trichloroethane	U	7200
127184	Tetrachloroethene	2100 J D	7200
124481	Dibromochloromethane	U	7200
100414	Ethylbenzene	2400 J D	7200
108907	Chlorobenzene	6100 J D	7200
75252	Bromoform	U	7200
79345	1,1,2,2-Tetrachloroethane	U	7200
110758	2-Chloroethylvinylether	U	7200

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	73 %	70-121	OK
Toluene-d8	84 %	81-117	OK
Bromofluorobenzene	165 %	74-121	OUT

Percent solid of 84.6 is used for all target compounds.

J - Indicates compound concentration found below MDL.
U - Indicates compound analyzed for but not detected,
D - Indicates result is based on a dilution.
I - Result exceeds industrial surface soil standards.*

B - Indicates compound found in associated blank.
E - Indicates result exceeds highest calibration standard
R - Result exceeds residential surface soil standards.*

* Flags are based on New Jersey Soil Cleanup Criteria from Site Remediation News Volume 06 Number 1.

CAS #	COMPOUND	UG/KG		MDL
107028	Acrolein	U		360000
107131	Acrylonitrile	U		360000
74873	Chloromethane	U		72000
75014	Vinyl Chloride	U		72000
74839	Bromomethane	U		72000
75003	Chloroethane	U		72000
75694	Trichlorofluoromethane	U		72000
75354	1,1-Dichloroethene	U		72000
75092	Methylene Chloride	U		72000
156605	trans-1,2-Dichloroethene	U		72000
75343	1,1-Dichloroethane	U		72000
67663	Chloroform	U		72000
71556	1,1,1-Trichloroethane	U		72000
56235	Carbon Tetrachloride	U		72000
107062	1,2-Dichloroethane	U		72000
71432	Benzene	J		72000
79016	Trichloroethene	U		72000
78875	1,2-Dichloropropane	U		72000
75274	Bromodichloromethane	U		72000
10061015	cis-1,3-dichloropropene	U		72000
108883	Toluene	550000	D	72000
10061026	trans-1,3-Dichloropropene	U		72000
79005	1,1,2-Trichloroethane	U		72000
127184	Tetrachloroethene	U		72000
124481	Dibromochloromethane	U		72000
100414	Ethylbenzene	U		72000
108907	Chlorobenzene	U		72000
75252	Bromoform	U		72000
79345	1,1,2,2-Tetrachloroethane	U		72000
110758	2-Chloroethylvinylether	U		72000

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	**********	NOT DETECTED	**********
Toluene-d8	**********	NOT DETECTED	**********
Bromofluorobenzene	**********	NOT DETECTED	**********

Percent solid of 84.6 is used for all target compounds.

J - Indicates compound concentration found below MDL.
U - Indicates compound analyzed for but not detected.
D - Indicates result is based on a dilution.
I - Result exceeds industrial surface soil standards.*

B - Indicates compound found in associated blank.
E - Indicates result exceeds highest calibration standard
R - Result exceeds residential surface soil standards.*

* Flags are based on New Jersey Soil Cleanup Criteria from Site Remediation News Volume 06 Number 1.

CAS #	COMPOUND	UG/KG	MDL
[illegible]	Acrolein	U	3500
[illegible]	Acrylonitrile	U	3500
74873	Chloromethane	U	710
75014	Vinyl Chloride	U	710
74839	Bromomethane	U	710
75003	Chloroethane	U	710
75694	Trichlorofluoromethane	U	710
75354	1,1-Dichloroethene	U	710
75092	Methylene Chloride	U	710
156605	trans-1,2-Dichloroethene	U	710
75343	1,1-Dichloroethane	U	710
67663	Chloroform	U	710
71556	1,1,1-Trichloroethane	U	710
56235	Carbon Tetrachloride	U	710
107062	1,2-Dichloroethane	U	710

CAS #	COMPOUND	UG/KG	MDL
71432	Benzene	510 J	710
79016	Trichloroethene	U	710
78875	1,2-Dichloropropane	U	710
75274	Bromodichloromethane	U	710
10061015	cis-1,3-Dichloropropene	U	710
108883	Toluene	170000 E	710
10061026	trans-1,3-Dichloropropene	U	710
79005	1,1,2-Trichloroethane	U	710
127184	Tetrachloroethene	430 J	710
124481	Dibromochloromethane	U	710
100414	Ethylbenzene	3400	710
108907	Chlorobenzene	U	710
75252	Bromoform	U	710
79345	1,1,2,2-Tetrachloroethane	U	710
110758	2-Chloroethylvinylether	U	710

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	82 %	70-121	OK
Toluene-d8	83 %	81-117	OK
Bromofluorobenzene	93 %	74-121	OK

Percent solid of 87.2 is used for all target compounds.

J - Indicates compound concentration found below MDL.
U - Indicates compound analyzed for but not detected,
D - Indicates result is based on a dilution.
I - Result exceeds industrial surface soil standards.*

B - Indicates compound found in associated blank.
E - Indicates result exceeds highest calibration standard
R - Result exceeds residential surface soil standards.*

* Flags are based on New Jersey Soil Cleanup Criteria from Site Remediation News Volume 06 Number 1.

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Name: Accredited Labs, Inc. | Lab Sample ID: 0012809

Client Name: ENVIROTACTICS | Field ID: S-7

Case No.: 9748 | Date Extracted:

Lab File ID: >A8774 | Date Analyzed: 10/25/00

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	8.19	930	
2.		Unknown	12.14	3200	
3.		Unknown	14.09	8400	
4.		Unknown	21.59	3300	
5.		Unknown	24.18	4600	
6.		Unknown	24.37	18000	
7.		Unknown	25.50	810	
8.		Unknown	25.82	2300	
9.		Unknown	26.00	1200	
10.		Unknown	27.05	890	
11.		Unknown	27.23	650	
12.		Unknown	29.14	670	

* Unknowns are defined as: Compounds that are less than 80% probability or have no database entries from the library.

FORM I SV-TIC

CAS #	COMPOUND	UG/KG		MDL
107028	Acrolein	U		16000
107131	Acrylonitrile	U		16000
74873	Chloromethane	U		3500
75014	Vinyl Chloride	U		3500
74839	Bromomethane	U		3500
75003	Chloroethane	U		3500
75694	Trichlorofluoromethane	U		3500
75354	1,1-Dichloroethene	U		3500
75092	Methylene Chloride	U		3500
156605	trans-1,2-Dichloroethene	U		3500
75343	1,1-Dichloroethane	U		3500
67663	Chloroform	U		3500
71556	1,1,1-Trichloroethane	U		3500
56235	Carbon Tetrachloride	U		3500
107062	1,2-Dichloroethane	U		3500

CAS #	COMPOUND	UG/KG		MDL
71432	Benzene	U		3500
79016	Trichloroethene	U		3500
78875	1,2-Dichloropropane	U		3500
75274	Bromodichloromethane	U		3500
10061015	cis-1,3-Dichloropropene	U		3500
108883	Toluene	200000	E D	3500
10061026	trans-1,3-Dichloropropene	U		3500
79005	1,1,2-Trichloroethane	U		3500
127184	Tetrachloroethene	U		3500
124481	Dibromochloromethane	U		3500
100414	Ethylbenzene	2900	J D	3500
108907	Chlorobenzene	U		3500
75252	Bromoform	U		3500
79345	1,1,2,2-Tetrachloroethane	U		3500
110758	2-Chloroethylvinylether	U		3500

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	60 %	70-121	OUT
Toluene-d8	62 %	81-117	OUT
Bromofluorobenzene	75 %	74-121	OK

Percent solid of 87.2 is used for all target compounds.

J - Indicates compound concentration found below MDL.
U - Indicates compound analyzed for but not detected,
D - Indicates result is based on a dilution.
I - Result exceeds industrial surface soil standards.*

B - Indicates compound found in associated blank.
E - Indicates result exceeds highest calibration standard
R - Result exceeds residential surface soil standards.*

* Flags are based on New Jersey Soil Cleanup Criteria from Site Remediation News Volume 06 Number 1.

74873	Chloromethane	U	14000	78875	1,2-Dichloropropane	U	14000
75014	Vinyl Chloride	U	14000	75274	Bromodichloromethane	U	14000
74839	Bromomethane	U	14000	10061015	cis-1,3-dichloropropene	U	14000
75003	Chloroethane	U	14000	108883	Toluene	230000 B	14000
75694	Trichlorofluoromethane	U	14000	10061026	trans-1,3-Dichloropropene	U	14000
75354	1,1-Dichloroethene	U	14000	79005	1,1,2-Trichloroethane	U	14000
75092	Methylene Chloride	U	14000	127184	Tetrachloroethene	U	14000
156605	trans-1,2-Dichloroethene	U	14000	124481	Dibromochloromethane	U	14000
75343	1,1-Dichloroethane	U	14000	100414	Ethylbenzene	U	14000
67663	Chloroform	U	14000	108907	Chlorobenzene	U	14000
71556	1,1,1-Trichloroethane	U	14000	75252	Bromoform	U	14000
56235	Carbon Tetrachloride	U	14000	79345	1,1,2,2-Tetrachloroethane	U	14000
107062	1,2-Dichloroethane	U	14000	110758	2-Chloroethylvinylether	U	14000

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	**********	NOT DETECTED	**********
Toluene-d8	**********	NOT DETECTED	**********
Bromofluorobenzene	**********	NOT DETECTED	**********

Percent solid of 87.2 is used for all target compounds.

J - Indicates compound concentration found below MDL.
U - Indicates compound analyzed for but not detected,
D - Indicates result is based on a dilution.
I - Result exceeds industrial surface soil standards.*

B - Indicates compound found in associated blank.
E - Indicates result exceeds highest calibration standard
R - Result exceeds residential surface soil standards.*

* Flags are based on New Jersey Soil Cleanup Criteria from Site Remediation News Volume 06 Number 1.

LAB ID	[illegible]
LAB FILE ID	[illegible]
DATE FILE	[illegible]
CLIENT NAME	[illegible]
FIELD ID	[illegible]

MATRIX	[illegible]
DILUTION FACTOR	[illegible]
DATE EXTRACTED	[illegible]
DATE ANALYZED	[illegible]
ANALYZED BY	[illegible]

CAS #	COMPOUND	UG/KG	MDL
107028	Acrolein	U	4200
107131	Acrylonitrile	U	4200
74873	Chloromethane	U	850
75014	Vinyl Chloride	U	850
74839	Bromomethane	U	850
75003	Chloroethane	U	850
75694	Trichlorofluoromethane	U	850
75354	1,1-Dichloroethene	U	850
75092	Methylene Chloride	U	850
156605	trans-1,2-Dichloroethene	U	850
75343	1,1-Dichloroethane	U	850
67663	Chloroform	U	850
71556	1,1,1-Trichloroethane	U	850
56235	Carbon Tetrachloride	U	850
107062	1,2-Dichloroethane	3500	850

CAS #	COMPOUND	UG/KG	MDL
71432	Benzene	970	850
79016	Trichloroethene	U	850
78875	1,2-D chloropropane	U	850
75274	Bromodichloromethane	U	850
10061015	cis-1,3-dichloropropene	U	850
108883	Toluene	7700	850
10061026	trans-1,3-Dichloropropene	U	850
79005	1,1,2-Trichloroethane	U	850
127184	Tetrachloroethene	U	850
124481	Dibromochloromethane	U	850
100414	Ethylbenzene	400 J	850
108907	Chlorobenzene	U	850
75252	Bromoform	U	850
79345	1,1,2,2-Tetrachloroethane	U	850
110758	2-Chloroethylvinylether	U	850

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	79 %	70-121	OK
Toluene-d8	83 %	81-117	OK
Bromofluorobenzene	94 %	74-121	OK

Percent solid of 76.0 is used for all target compounds.

J - Indicates compound concentration found below MDL.
U - Indicates compound analyzed for but not detected,
D - Indicates result is based on a dilution.
I - Result exceeds industrial surface soil standards.*

B - Indicates compound found in associated blank.
E - Indicates result exceeds highest calibration standard
R - Result exceeds residential surface soil standards.*

* Flags are based on New Jersey Soil Cleanup Criteria from Site Remediation News Volume 06 Number 1.

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Accredited Labs, Inc. Lab Sample ID: 0012810

Client Name: ENVIROTACTICS Field ID: S-8

Case No.: 9748 Date Extracted:

Lab File ID: >A8775 Date Analyzed: 10/25/00

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown hydrocarbon	5.72	5800	B
2.		Unknown	24.16	4800	
3.		Unknown	25.48	5600	
4.		Unknown	25.75	2700	
5.		Unknown	27.07	3500	
6.		Unknown	27.48	5900	
7.		Unknown	29.91	1800	
8.		Unknown	30.09	3300	
9.		Unknown	31.96	5900	
10.		Unknown	32.32	9700	
11.		Unknown	32.73	6700	
12.		Unknown	33.09	6500	
13.		Unknown	33.46	16000	
14.		Unknown	33.73	1600	

* Unknowns are defined as: Compounds that are less than 80% probability or have no database entries from the library.

FORM I SV-TIC

[illegible]

[illegible]	[illegible]	MATRIX	[illegible]
[illegible]	[illegible]	DILUTION FACTOR	125
[illegible]	[illegible]	DATE EXTRACTED	
CLIENT NAME	[illegible]	DATE ANALYZED	[illegible]
FIELD ID	[illegible]	ANALYZED BY	ROBERT

CAS #	COMPOUND	UG/KG	MDL	CAS #	COMPOUND	UG/KG	MDL
107028	Acrolein	U	3100	71432	Benzene	U	630
107131	Acrylonitrile	U	3100	79016	Trichloroethene	U	630
74873	Chloromethane	U	630	78875	1,2-Dichloropropane	U	630
75014	Vinyl Chloride	U	630	75274	Bromodichloromethane	U	630
74839	Bromomethane	U	630	10061015	cis-1,3-dichloropropene	U	630
75003	Chloroethane	U	630	108883	Toluene	U	630
75694	Trichlorofluoromethane	U	630	10061026	trans-1,3-Dichloropropene	U	630
75354	1,1-Dichloroethene	U	630	79005	1,1,2-Trichloroethane	U	630
75092	Methylene Chloride	U	630	127184	Tetrachloroethene	U	630
156605	trans-1,2-Dichloroethene	U	630	124481	Dibromochloromethane	U	630
75343	1,1-Dichloroethane	U	630	100414	Ethylbenzene	U	630
67663	Chloroform	U	630	108907	Chlorobenzene	U	630
71556	1,1,1-Trichloroethane	U	630	75252	Bromoform	U	630
56235	Carbon Tetrachloride	U	630	79345	1,1,2,2-Tetrachloroethane	U	630
107062	1,2-Dichloroethane	U	630	110758	2-Chloroethylvinylether	U	630

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	79 %	70-121	OK
Toluene-d8	86 %	81-117	OK
Bromofluorobenzene	85 %	74-121	OK

Percent solid of 100 is used for all target compounds.

J - Indicates compound concentration found below MDL.
U - Indicates compound analyzed for but not detected,
D - Indicates result is based on a dilution.
I - Result exceeds industrial surface soil standards.*

B - Indicates compound found in associated blank.
E - Indicates result exceeds highest calibration standard
R - Result exceeds residential surface soil standards.*

* Flags are based on New Jersey Soil Cleanup Criteria from Site Remediation News Volume 06 Number 1.

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Name: Accredited Labs, Inc. Lab Sample ID: 0012811

Client Name: ENVIROTACTICS Field ID: TB

Case No.: 9748 Date Extracted:

Lab File ID: >A8763 Date Analyzed: 10/25/00

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown hydrocarbon	5.72	4700	B

* Unknowns are defined as: Compounds that are less than 80% probability or have no database entries from the library.

FORM I SV-TIC

ACCREDITED LABORATORIES, INC.
BNA ORGANIC ANALYSIS DATA

CASE NUMBER	9748	MATRIX	Soil
SAMPLE NUMBER	0012803	DILUTION FACTOR	1.0
DATA FILE	>F2266	DATE EXTRACTED	10/17/00
CLIENT NAME	ENVIROTACTICS	DATE ANALYZED	10/23/00
FIELD ID	S-1	ANALYZED BY	DANIEL

CAS #	COMPOUND	UG/KG		MDL
83329	Acenaphthene	110	J	390
208968	Acenaphthylene	94	J	390
120127	Anthracene	340	J	390
56553	Benzo(a)Anthracene	980	R	390
50328	Benzo(a)Pyrene	740	I	390
205992	Benzo(b)fluoranthene	1100	R	390
191242	Benzo(g,h,i)Perylene	270	J	390
207089	Benzo(k)Fluoranthene	1000	R	390
65850	Benzoic Acid	390	J	1900
100516	Benzyl Alcohol	91	J	390
111444	bis(-2-Chloroethyl)Ether	U		390
108601	bis(2-Chloroisopropyl)ether	U		390
117817	Bis(2-Ethylhexyl)Phthalate	1100		390
111911	bis(-2-Chloroethoxy)Methane	U		390
101553	4-Bromophenyl-phenylether	U		390
85687	Butylbenzylphthalate	U		390
106478	4-Chloroaniline	U		390
91587	2-Chloronaphthalene	U		390
59507	4-Chloro-3-methylphenol	U		390
95578	2-Chlorophenol	U		390
7005723	4-Chlorophenyl-phenylether	U		390
218019	Chrysene	1100		390
53703	Dibenzo(a,h)Anthracene	180	J	390
132649	Dibenzofuran	66	J	390
95501	1,2-Dichlorobenzene	U		390
541731	1,3-Dichlorobenzene	U		390
106467	1,4-Dichlorobenzene	U		390
91941	3,3'-Dichlorobenzidine	U		390
120832	2,4-Dichlorophenol	U		390
84662	Diethylphthalate	U		390
105679	2,4-Dimethylphenol	U		390
131113	Dimethyl Phthalate	U		390
84742	Di-n-Butylphthalate	100	J	390
534521	4,6-Dinitro-2-methylphenol	U		390
51285	2,4-Dinitrophenol	U		390
121142	2,4-Dinitrotoluene	U		390
606202	2,6-Dinitrotoluene	U		390
117840	Di-n-octyl phthalate	U		390
206440	Fluoranthene	2000		390
86737	Fluorene	120	J	390
118741	Hexachlorobenzene	U		390
87683	Hexachlorobutadiene	U		390
77474	Hexachlorocyclopentadiene	U		390
67721	Hexachloroethane	U		390
193395	Indeno(1,2,3-cd)Pyrene	330	J	390
78591	Isophorone	U		390
91576	2-Methylnaphthalene	U		390
95487	2-Methylphenol	U		390
108394	3&4-Methylphenol	84	J	390
91203	Naphthalene	56	J	390
88744	2-Nitroaniline	U		390
99092	3-Nitroaniline	U		390
100016	4-Nitroaniline	U		390
98953	Nitrobenzene	U		390
88755	2-Nitrophenol	U		390
100027	4-Nitrophenol	U		390
62759	N-Nitrosodimethylamine	U		390
86306	N-Nitrosodiphenylamine	U		390
621647	N-Nitroso-Di-n-propylamine	U		390
87865	Pentachlorophenol	U		390
85018	Phenanthrene	1400		390
108952	Phenol	U		390
129000	Pyrene	1800		390
120821	1,2,4-Trichlorobenzene	U		390
95954	2,4,5-Trichlorophenol	U		390
88062	2,4,6-Trichlorophenol	U		390
92875	Benzidine	820		390
122667	1,2-Diphenylhydrazine	U		390

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
Nitrobenzene-d5	66 %	23-120	OK
2-Fluorobiphenyl	76 %	30-115	OK
Terphenyl-d14	73 %	18-137	OK
Phenol-d5	84 %	24-113	OK
2-Fluorophenol	73 %	25-121	OK
2,4,6-Tribromophenol	77 %	19-122	OK

Percent solid of 85.7 is used for all target compounds.

J - Indicates compound concentration found below MDL.
U - Indicates compound analyzed for but not detected.
D - Indicates result is based on a dilution.
I - Results exceed industrial surface soil standards.*
B - Indicates compound found in associated blank.
E - Concentration exceeds highest calibration standard.
R - Result exceeds residential surface soil standards.*

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* Flags are based on New Jersey Soil Cleanup Criteria from Site Remediation News Volume 06 Number 1.
** 3-Methylphenol and 4-Methylphenol can not be separated by the method applied

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Accredited Labs, Inc. Lab Sample ID: 0012803

Client Name: ENVIROTACTICS Field ID: S-1

Case No.: 9748 Date Extracted: 10/17/00

Lab File ID: >F2266 Date Analyzed: 10/23/00

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Aldol Condensate	5.70	60000	B
2.		Unknown aromatic	16.29	600	
3.		Unknown aromatic	19.77	470	
4.	5162038	*** See below	20.87	760	
5.		Unknown aromatic	21.28	440	
6.		Unknown	21.90	980	
7.		Unknown aromatic	22.17	310	
8.		Unknown aromatic	22.23	710	
9.		Unknown aromatic	22.70	1100	
10.		Unknown aromatic	23.48	300	
11.	238846	11H-Benzo[a]fluorene	25.13	240	
12.		Unknown aromatic	25.37	310	
13.		Unknown aromatic	25.70	220	
14.		Unknown aromatic	25.95	740	
15.		Unknown aromatic	26.18	220	
16.		Unknown aromatic	26.77	220	
17.		Unknown aromatic	27.00	500	
18.		Unknown aromatic	28.15	260	
19.		Unknown	28.51	270	
20.		Unknown aromatic	28.84	1300	
21.		Unknown	30.38	1900	
22.		Unknown	30.59	1500	
23.		Unknown	31.06	670	
24.		Unknown aromatic	31.25	6900	
25.		Unknown aromatic	31.87	5600	

***

4. Methanone, (2-chlorophenyl)phenyl-

* Unknowns are defined as: Compounds that are less than 80% probability or have no database entries from the library.

FORM I SV-TIC

ACCREDITED LABORATORIES, INC.
BNA ORGANIC ANALYSIS DATA

CASE NUMBER	9748	MATRIX	Soil
SAMPLE NUMBER	0012804	DILUTION FACTOR	1.0
DATA FILE	>F2267	DATE EXTRACTED	10/17/00
CLIENT NAME	ENVIROTACTICS	DATE ANALYZED	10/23/00
FIELD ID	S-2	ANALYZED BY	DANIEL

CAS #	COMPOUND	UG/KG			MDL
83329	Acenaphthene	4700			460
208968	Acenaphthylene	500			460
120127	Anthracene	9300	E		460
56553	Benzo(a)Anthracene	20000	E	I	460
50328	Benzo(a)Pyrene	12000	E	I	460
205992	Benzo(b)fluoranthene	14000	E	I	460
191242	Benzo(g,h,i)Perylene	3100			460
207089	Benzo(k)Fluoranthene	14000	E	I	460
65850	Benzoic Acid	U			2300
100516	Benzyl Alcohol	U			460
111444	bis(-2-Chloroethyl)Ether	U			460
108601	bis(2-Chloroisopropyl)ether	U			460
117817	Bis(2-Ethylhexyl)Phthalate	53000	E	R	460
111911	bis(-2-Chloroethoxy)Methane	U			460
101553	4-Bromophenyl-phenylether	U			460
85687	Butylbenzylphthalate	1600			460
106478	4-Chloroaniline	U			460
91587	2-Chloronaphthalene	U			460
59507	4-Chloro-3-methylphenol	U			460
95578	2-Chlorophenol	U			460
7005723	4-Chlorophenyl-phenylether	U			460
218019	Chrysene	13000	E	R	460
53703	Dibenzo(a,h)Anthracene	2100		I	460
132649	Dibenzofuran	3600			460
95501	1,2-Dichlorobenzene	U			460
541731	1,3-Dichlorobenzene	U			460
106467	1,4-Dichlorobenzene	U			460
91941	3,3'-Dichlorobenzidine	U			460
120832	2,4-Dichlorophenol	U			460
84662	Diethylphthalate	U			460
105679	2,4-Dimethylphenol	U			460
131113	Dimethyl Phthalate	80	J		460
84742	Di-n-Butylphthalate	1100			460
534521	4,6-Dinitro-2-methylphenol	U			460
51285	2,4-Dinitrophenol	U			460
121142	2,4-Dinitrotoluene	U			460
606202	2,6-Dinitrotoluene	U			460
117840	Di-n-octyl phthalate	53000	E		460
206440	Fluoranthene	24000	E		460
86737	Fluorene	6200			460
118741	Hexachlorobenzene	U			460
87683	Hexachlorobutadiene	U			460
77474	Hexachlorocyclopentadiene	U			460
67721	Hexachloroethane	U			460
193395	Indeno(1,2,3-cd)Pyrene	3800		R	460
78591	Isophorone	U			460
91576	2-Methylnaphthalene	1100			460
95487	2-Methylphenol	U			460
108394	3&4-Methylphenol	95	J		460
91203	Naphthalene	1900			460
88744	2-Nitroaniline	U			460
99092	3-Nitroaniline	U			460
100016	4-Nitroaniline	U			460
98953	Nitrobenzene	U			460
88755	2-Nitrophenol	U			460
100027	4-Nitrophenol	U			460
62759	N-Nitrosodimethylamine	U			460
86306	N-Nitrosodiphenylamine	U			460
621647	N-Nitroso-Di-n-propylamine	U			460
87865	Pentachlorophenol	U			460
85018	Phenanthrene	26000	E		460
108952	Phenol	U			460
129000	Pyrene	34000	E		460
120821	1,2,4-Trichlorobenzene	U			460
95954	2,4,5-Trichlorophenol	U			460
88062	2,4,6-Trichlorophenol	U			460
92875	Benzidine	U			460
122667	1,2-Diphenylhydrazine	U			460

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
Nitrobenzene-d5	70 %	23-120	OK
2-Fluorobiphenyl	76 %	30-115	OK
Terphenyl-d14	162 %	18-137	OUT
Phenol-d5	149 %	24-113	OUT
2-Fluorophenol	123 %	25-121	OUT
2,4,6-Tribromophenol	135 %	19-122	OUT

Percent solid of 72.5 is used for all target compounds.

J - Indicates compound concentration found below MDL.
U - Indicates compound analyzed for but not detected.
D - Indicates result is based on a dilution.
I - Results exceed industrial surface soil standards.*
B - Indicates compound found in associated blank.
E - Concentration exceeds highest calibration standard.
R - Result exceeds residential surface soil standards.*

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* Flags are based on New Jersey Soil Cleanup Criteria from Site Remediation News Volume 06 Number 1.
** 3-Methylphenol and 4-Methylphenol can not be separated by the method applied

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Accredited Labs, Inc. Lab Sample ID: 0012804

Client Name: ENVIROTACTICS Field ID: S-7

Case No.: 9748 Date Extracted: 10/17/00

Lab File ID: >F2267 Date Analyzed: 10/23/00

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Aldol Condensate	5.70	65000	B
2.	132650	Dibenzothiophene	20.36	12000	
3.	85029	Benzo[f]quinoline	21.25	5800	
4.	86748	9H-Carbazole	21.39	17000	
5.	5394865	*** See below	21.50	5300	
6.	832644	Phenanthrene, 4-methyl-	21.97	10000	
7.	613127	Anthracene, 2-methyl-	22.05	7300	
8.		Unknown aromatic	22.30	16000	
9.		Unknown aromatic	22.75	5800	
10.		Unknown aromatic	23.43	5700	
11.		Unknown aromatic	24.09	1900	
12.		Unknown aromatic	24.73	1900	
13.	243174	11H-Benzo[b]fluorene	25.31	3400	
14.		Unknown aromatic	25.47	2900	
15.		Unknown aromatic	25.55	1400	
16.		Unknown aromatic	25.80	2600	
17.		Unknown aromatic	26.81	1400	
18.		Unknown aromatic	26.90	1500	
19.		Unknown aromatic	28.20	1500	
20.		Unknown	28.49	1300	
21.		Unknown aromatic	28.61	1300	
22.		Unknown	30.64	5500	
23.		Unknown aromatic	31.93	8500	
24.		Unknown	32.63	4800	
25.		Unknown aromatic	33.15	5000	

***
5. 1H-Indene, 1-(phenylmethylene)-

* Unknowns are defined as: Compounds that are less than 80% probability or have no database entries from the library.

FORM I SV-TIC

ACCREDITED LABORATORIES, INC.
BNA ORGANIC ANALYSIS DATA

CASE NUMBER	9748	MATRIX	Soil
SAMPLE NUMBER	0012804DL	DILUTION FACTOR	20
DATA FILE	>F2288	DATE EXTRACTED	10/17/00
CLIENT NAME	ENVIROTACTICS	DATE ANALYZED	10/24/00
FIELD ID	S-2	ANALYZED BY	DANIEL

CAS #	COMPOUND	UG/KG		MDL
83329	Acenaphthene	5400	J D	9200
208968	Acenaphthylene	U		9200
120127	Anthracene	15000	D	9200
56553	Benzo(a)Anthracene	18000	DI	9200
50328	Benzo(a)Pyrene	15000	DI	9200
205992	Benzo(b)fluoranthene	20000	DI	9200
191242	Benzo(g,h,i)Perylene	4500	J D	9200
207089	Benzo(k)Fluoranthene	11000	DI	9200
65850	Benzoic Acid	U		46000
100516	Benzyl Alcohol	U		9200
111444	bis(-2-Chloroethyl)Ether	U		9200
108601	bis(2-Chloroisopropyl)ether	U		9200
117817	Bis(2-Ethylhexyl)Phthalate	140000	DR	9200
111911	bis(-2-Chloroethoxy)Methane	U		9200
101553	4-Bromophenyl-phenylether	U		9200
85687	Butylbenzylphthalate	U		9200
106478	4-Chloroaniline	U		9200
91587	2-Chloronaphthalene	U		9200
59507	4-Chloro-3-methylphenol	U		9200
95578	2-Chlorophenol	U		9200
7005723	4-Chlorophenyl-phenylether	U		9200
218019	Chrysene	17000	DR	9200
53703	Dibenzo(a,h)Anthracene	3400	J DI	9200
132649	Dibenzofuran	4000	J D	9200
95501	1,2-Dichlorobenzene	U		9200
541731	1,3-Dichlorobenzene	U		9200
106467	1,4-Dichlorobenzene	U		9200
91941	3,3'-Dichlorobenzidine	U		9200
120832	2,4-Dichlorophenol	U		9200
84662	Diethylphthalate	U		9200
105679	2,4-Dimethylphenol	U		9200
131113	Dimethyl Phthalate	U		9200
84742	Di-n-Butylphthalate	U		9200
534521	4,6-Dinitro-2-methylphenol	U		9200

CAS #	COMPOUND	UG/KG		MDL
51285	2,4-Dinitrophenol	U		9200
121142	2,4-Dinitrotoluene	U		9200
606202	2,6-Dinitrotoluene	U		9200
117840	Di-n-octyl phthalate	50000	D	9200
206440	Fluoranthene	47000	D	9200
86737	Fluorene	8200	J D	9200
118741	Hexachlorobenzene	U		9200
87683	Hexachlorobutadiene	U		9200
77474	Hexachlorocyclopentadiene	U		9200
67721	Hexachloroethane	U		9200
193395	Indeno(1,2,3-cd)Pyrene	5300	J DI	9200
78591	Isophorone	U		9200
91576	2-Methylnaphthalene	980	J D	9200
95487	2-Methylphenol	U		9200
108394	3&4-Methylphenol	U		9200
91203	Naphthalene	1900	J D	9200
88744	2-Nitroaniline	U		9200
99092	3-Nitroaniline	U		9200
100016	4-Nitroaniline	U		9200
98953	Nitrobenzene	U		9200
88755	2-Nitrophenol	U		9200
100027	4-Nitrophenol	U		9200
62759	N-Nitrosodimethylamine	U		9200
86306	N-Nitrosodiphenylamine	U		9200
621647	N-Nitroso-Di-n-propylamine	U		9200
87865	Pentachlorophenol	U		9200
85018	Phenanthrene	45000	D	9200
108952	Phenol	U		9200
129000	Pyrene	36000	D	9200
120821	1,2,4-Trichlorobenzene	U		9200
95954	2,4,5-Trichlorophenol	U		9200
88062	2,4,6-Trichlorophenol	U		9200
92875	Benzidine	U		9200
122667	1,2-Diphenylhydrazine	U		9200

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
Nitrobenzene-d5	56 %	23-120	OK
2-Fluorobiphenyl	84 %	30-115	OK
Terphenyl-d14	84 %	18-137	OK
Phenol-d5	174 %	24-113	OUT
2-Fluorophenol	141 %	25-121	OUT
2,4,6-Tribromophenol	141 %	19-122	OUT

Percent solid of 72.5 is used for all target compounds.

J - Indicates compound concentration found below MDL.
U - Indicates compound analyzed for but not detected.
D - Indicates result is based on a dilution.
I - Results exceed industrial surface soil standards.*
B - Indicates compound found in associated blank.
E - Concentration exceeds highest calibration standard.
R - Result exceeds residential surface soil standards.*

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* Flags are based on New Jersey Soil Cleanup Criteria from Site Remediation News Volume 06 Number 1.
** 3-Methylphenol and 4-Methylphenol can not be separated by the method applied

ACCREDITED LABORATORIES, INC.
BNA ORGANIC ANALYSIS DATA

SE NUMBER	9748	MATRIX	Soil
SAMPLE NUMBER	0012805	DILUTION FACTOR	1.0
DATA FILE	>F2262	DATE EXTRACTED	10/17/00
CLIENT NAME	ENVIROTACTICS	DATE ANALYZED	10/23/00
FIELD ID	S-3	ANALYZED BY	DANIEL

CAS #	COMPOUND	UG/KG	MDL
83329	Acenaphthene	U	420
208968	Acenaphthylene	U	420
120127	Anthracene	48 J	420
56553	Benzo(a)Anthracene	130 J	420
50328	Benzo(a)Pyrene	110 J	420
205992	Benzo(b)fluoranthene	99 J	420
191242	Benzo(g,h,i)Perylene	60 J	420
207089	Benzo(k)Fluoranthene	130 J	420
65850	Benzoic Acid	U	2100
100516	Benzyl Alcohol	U	420
111444	bis(-2-Chloroethyl)Ether	U	420
108601	bis(2-Chloroisopropyl)ether	U	420
117817	Bis(2-Ethylhexyl)Phthalate	U	420
111911	bis(-2-Chloroethoxy)Methane	U	420
101553	4-Bromophenyl-phenylether	U	420
85687	Butylbenzylphthalate	U	420
106478	4-Chloroaniline	U	420
91587	2-Chloronaphthalene	U	420
59507	4-Chloro-3-methylphenol	U	420
95578	2-Chlorophenol	U	420
7005723	4-Chlorophenyl-phenylether	U	420
218019	Chrysene	160 J	420
53703	Dibenzo(a,h)Anthracene	U	420
132649	Dibenzofuran	U	420
95501	1,2-Dichlorobenzene	U	420
541731	1,3-Dichlorobenzene	U	420
106467	1,4-Dichlorobenzene	U	420
91941	3,3'-Dichlorobenzidine	U	420
120832	2,4-Dichlorophenol	U	420
84662	Diethylphthalate	U	420
105679	2,4-Dimethylphenol	U	420
131113	Dimethyl Phthalate	U	420
84742	Di-n-Butylphthalate	U	420
534521	4,6-Dinitro-2-methylphenol	U	420
51285	2,4-Dinitrophenol	U	420
121142	2,4-Dinitrotoluene	U	420
606202	2,6-Dinitrotoluene	U	420
117840	Di-n-octyl phthalate	U	420
206440	Fluoranthene	300 J	420
86737	Fluorene	U	420
118741	Hexachlorobenzene	U	420
87683	Hexachlorobutadiene	U	420
77474	Hexachlorocyclopentadiene	U	420
67721	Hexachloroethane	U	420
193395	Indeno(1,2,3-cd)Pyrene	63 J	420
78591	Isophorone	U	420
91576	2-Methylnaphthalene	U	420
95487	2-Methylphenol	U	420
108394	3&4-Methylphenol	U	420
91203	Naphthalene	U	420
88744	2-Nitroaniline	U	420
99092	3-Nitroaniline	U	420
100016	4-Nitroaniline	U	420
98953	Nitrobenzene	U	420
88755	2-Nitrophenol	U	420
100027	4-Nitrophenol	U	420
62759	N-Nitrosodimethylamine	U	420
86306	N-Nitrosodiphenylamine	U	420
621647	N-Nitroso-Di-n-propylamine	U	420
87865	Pentachlorophenol	U	420
85018	Phenanthrene	210 J	420
108952	Phenol	U	420
129000	Pyrene	230 J	420
120821	1,2,4-Trichlorobenzene	U	420
95954	2,4,5-Trichlorophenol	U	420
88062	2,4,6-Trichlorophenol	U	420
92875	Benzidine	U	420
122667	1,2-Diphenylhydrazine	U	420

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
Nitrobenzene-d5	64 %	23-120	OK
2-Fluorobiphenyl	80 %	30-115	OK
Terphenyl-d14	71 %	18-137	OK
Phenol-d5	88 %	24-113	OK
2-Fluorophenol	77 %	25-121	OK
2,4,6-Tribromophenol	86 %	19-122	OK

Percent solid of 78.6 is used for all target compounds.

J - Indicates compound concentration found below MDL.
U - Indicates compound analyzed for but not detected.
D - Indicates result is based on a dilution.
I - Results exceed industrial surface soil standards.*
B - Indicates compound found in associated blank.
E - Concentration exceeds highest calibration standard.
R - Result exceeds residential surface soil standards.*

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* Flags are based on New Jersey Soil Cleanup Criteria from Site Remediation News Volume 06 Number 1.
** 3-Methylphenol and 4-Methylphenol can not be separated by the method applied

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Accredited Labs, Inc. Lab Sample ID: 0012805

Client Name: ENVIROTACTICS Field ID: S-3

Case No.: 9748 Date Extracted: 10/17/00

Lab File ID: >F2262 Date Analyzed: 10/23/00

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	4.91	690	
2.		Aldol Condensate	5.64	73000	B
3.	21368683	*** See below	11.80	210	
4.		Unknown aromatic	13.98	340	
5.		Unknown aromatic	16.19	2400	
6.		Unknown hydrocarbon	16.72	510	
7.	119619	Benzophenone (8CI)	18.82	6000	
8.	5162038	*** See below	20.84	330	
9.		Unknown	21.27	230	
10.		Unknown	22.21	1200	
11.		Unknown aromatic	22.31	300	
12.		Unknown aromatic	22.68	2800	
13.		Unknown	22.78	200	
14.		Unknown aromatic	25.36	230	
15.	6624799	1-Dotriacontanol	27.10	290	
16.		Unknown aromatic	28.69	340	
17.		Unknown	31.15	3600	
18.		Unknown aromatic	31.31	630	
19.	630079	Pentatriacontane	31.47	290	
20.		Unknown aromatic	33.11	290	

***

3. Bicyclo[2.2.1]heptan-2-one, 1,7,7-trimethyl-, (.+-

8. Methanone, (2-chlorophenyl)phenyl-

* Unknowns are defined as: Compounds that are less than 80% probability or have no database entries from the library.

FORM I SV-TIC

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ACCREDITED LABORATORIES, INC.
BNA ORGANIC ANALYSIS DATA

CASE NUMBER	9748	MATRIX	Soil
SAMPLE NUMBER	0012806	DILUTION FACTOR	1.0
DATA FILE	>F2263	DATE EXTRACTED	10/17/00
CLIENT NAME	ENVIROTACTICS	DATE ANALYZED	10/23/00
FIELD ID	S-4	ANALYZED BY	DANIEL

CAS #	COMPOUND	UG/KG	MDL
83329	Acenaphthene	U	390
208968	Acenaphthylene	U	390
120127	Anthracene	68 J	390
56553	Benzo(a)Anthracene	58 J	390
50328	Benzo(a)Pyrene	58 J	390
205992	Benzo(b)fluoranthene	62 J	390
191242	Benzo(g,h,i)Perylene	U	390
207089	Benzo(k)Fluoranthene	81 J	390
65850	Benzoic Acid	U	2000
100516	Benzyl Alcohol	U	390
111444	bis(-2-Chloroethyl)Ether	U	390
108601	bis(2-Chloroisopropyl)ether	U	390
117817	Bis(2-Ethylhexyl)Phthalate	U	390
111911	bis(-2-Chloroethoxy)Methane	U	390
101553	4-Bromophenyl-phenylether	U	390
85687	Butylbenzylphthalate	U	390
106478	4-Chloroaniline	U	390
91587	2-Chloronaphthalene	U	390
59507	4-Chloro-3-methylphenol	U	390
95578	2-Chlorophenol	U	390
7005723	4-Chlorophenyl-phenylether	U	390
218019	Chrysene	77 J	390
53703	Dibenzo(a,h)Anthracene	U	390
132649	Dibenzofuran	U	390
95501	1,2-Dichlorobenzene	U	390
541731	1,3-Dichlorobenzene	U	390
106467	1,4-Dichlorobenzene	U	390
91941	3,3'-Dichlorobenzidine	U	390
120832	2,4-Dichlorophenol	U	390
84662	Diethylphthalate	U	390
105679	2,4-Dimethylphenol	U	390
131113	Dimethyl Phthalate	U	390
84742	Di-n-Butylphthalate	U	390
534521	4,6-Dinitro-2-methylphenol	U	390
51285	2,4-Dinitrophenol	U	390
121142	2,4-Dinitrotoluene	U	390
606202	2,6-Dinitrotoluene	U	390
117840	Di-n-octyl phthalate	U	390
206440	Fluoranthene	190 J	390
86737	Fluorene	U	390
118741	Hexachlorobenzene	U	390
87683	Hexachlorobutadiene	U	390
77474	Hexachlorocyclopentadiene	U	390
67721	Hexachloroethane	U	390
193395	Indeno(1,2,3-cd)Pyrene	41 J	390
78591	Isophorone	U	390
91576	2-Methylnaphthalene	U	390
95487	2-Methylphenol	U	390
108394	3&4-Methylphenol	U	390
91203	Naphthalene	U	390
88744	2-Nitroaniline	U	390
99092	3-Nitroaniline	U	390
100016	4-Nitroaniline	U	390
98953	Nitrobenzene	U	390
88755	2-Nitrophenol	U	390
100027	4-Nitrophenol	U	390
62759	N-Nitrosodimethylamine	U	390
86306	N-Nitrosodiphenylamine	U	390
621647	N-Nitroso-Di-n-propylamine	U	390
87865	Pentachlorophenol	U	390
85018	Phenanthrene	180 J	390
108952	Phenol	U	390
129000	Pyrene	130 J	390
120821	1,2,4-Trichlorobenzene	U	390
95954	2,4,5-Trichlorophenol	U	390
88062	2,4,6-Trichlorophenol	U	390
92875	Benzidine	U	390
122667	1,2-Diphenylhydrazine	U	390

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
Nitrobenzene-d5	62 %	23-120	OK
2-Fluorobiphenyl	77 %	30-115	OK
Terphenyl-d14	74 %	18-137	OK
Phenol-d5	93 %	24-113	OK
2-Fluorophenol	70 %	25-121	OK
2,4,6-Tribromophenol	83 %	19-122	OK

Percent solid of 85.3 is used for all target compounds.

J - Indicates compound concentration found below MDL.
U - Indicates compound analyzed for but not detected.
D - Indicates result is based on a dilution.
I - Results exceed industrial surface soil standards.*
B - Indicates compound found in associated blank.
E - Concentration exceeds highest calibration standard.
R - Result exceeds residential surface soil standards.*

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* Flags are based on New Jersey Soil Cleanup Criteria from Site Remediation News Volume 06 Number 1.
** 3-Methylphenol and 4-Methylphenol can not be separated by the method applied

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Accredited Labs, Inc.

Client Name: ENVIROTACTICS

Case No.: 9748

Lab File ID: >F2263

Lab Sample ID: 001806

Field ID: S-4

Date Extracted: 10/17/00

Date Analyzed: 10/23/00

CONCENTRATION UNITS: (ug/l or ug/Kg): ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Aldol Condensate	5.64	68000	B
2.	498817	*** See below	11.80	2100	
3.		Unknown aromatic	16.21	2000	
4.		Unknown hydrocarbon	18.78	290	
5.		Unknown aromatic	20.46	250	
6.		Unknown aromatic	20.97	350	
7.		Unknown aromatic	21.07	250	
8.		Unknown aromatic	21.21	450	
9.		Unknown aromatic	21.30	380	
10.		Unknown aromatic	21.50	280	
11.		Unknown aromatic	21.60	530	
12.		Unknown aromatic	21.69	260	
13.		Unknown aromatic	21.83	1500	
14.		Unknown aromatic	21.95	1400	
15.		Unknown aromatic	22.08	770	
16.		Unknown	22.18	910	
17.		Unknown aromatic	22.26	2000	
18.		Unknown aromatic	22.32	1400	
19.		Unknown	22.53	3200	
20.		Unknown aromatic	22.77	4800	
21.		Unknown aromatic	22.98	4900	
22.		Unknown aromatic	23.02	8300	
23.		Unknown aromatic	23.92	210	
24.		Unknown	24.52	400	
25.		Unknown aromatic	28.73	390	

***
2. Cyclohexanemethanol, .alpha.,.alpha.,4-trimethyl-

* Unknowns are defined as: Compounds that are less than 80% probability or have no database entries from the library.

FORM I SV-TIC

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ACCREDITED LABORATORIES, INC.
BNA ORGANIC ANALYSIS DATA

CASE NUMBER	9748	MATRIX	Soil
SAMPLE NUMBER	0012807	DILUTION FACTOR	1.0
DATA FILE	>F2264	DATE EXTRACTED	10/17/00
CLIENT NAME	ENVIROTACTICS	DATE ANALYZED	10/23/00
FIELD ID	S-5	ANALYZED BY	DANIEL

CAS #	COMPOUND	UG/KG	MDL
83329	Acenaphthene	100 J	390
208968	Acenaphthylene	U	390
120127	Anthracene	100 J	390
56553	Benzo(a)Anthracene	160 J	390
50328	Benzo(a)Pyrene	130 J	390
205992	Benzo(b)fluoranthene	150 J	390
191242	Benzo(g,h,i)Perylene	62 J	390
207089	Benzo(k)Fluoranthene	88 J	390
65850	Benzoic Acid	1200 J	1900
100516	Benzyl Alcohol	U	390
111444	bis(-2-Chloroethyl)Ether	U	390
108601	bis(2-Chloroisopropyl)ether	U	390
117817	Bis(2-Ethylhexyl)Phthalate	U	390
111911	bis(-2-Chloroethoxy)Methane	U	390
101553	4-Bromophenyl-phenylether	U	390
85687	Butylbenzylphthalate	U	390
106478	4-Chloroaniline	U	390
91587	2-Chloronaphthalene	U	390
59507	4-Chloro-3-methylphenol	U	390
95578	2-Chlorophenol	U	390
7005723	4-Chlorophenyl-phenylether	U	390
218019	Chrysene	180 J	390
53703	Dibenzo(a,h)Anthracene	U	390
132649	Dibenzofuran	74 J	390
95501	1,2-Dichlorobenzene	U	390
541731	1,3-Dichlorobenzene	U	390
106467	1,4-Dichlorobenzene	U	390
91941	3,3'-Dichlorobenzidine	U	390
120832	2,4-Dichlorophenol	U	390
84662	Diethylphthalate	U	390
105679	2,4-Dimethylphenol	U	390
131113	Dimethyl Phthalate	U	390
84742	Di-n-Butylphthalate	U	390
534521	4,6-Dinitro-2-methylphenol	U	390
51285	2,4-Dinitrophenol	U	390
121142	2,4-Dinitrotoluene	U	390
606202	2,6-Dinitrotoluene	U	390
117840	Di-n-octyl phthalate	U	390
206440	Fluoranthene	500	390
86737	Fluorene	99 J	390
118741	Hexachlorobenzene	U	390
87683	Hexachlorobutadiene	U	390
77474	Hexachlorocyclopentadiene	U	390
67721	Hexachloroethane	U	390
193395	Indeno(1,2,3-cd)Pyrene	65 J	390
78591	Isophorone	U	390
91576	2-Methylnaphthalene	U	390
95487	2-Methylphenol	U	390
108394	3&4-Methylphenol	110 J	390
91203	Naphthalene	120 J	390
88744	2-Nitroaniline	U	390
99092	3-Nitroaniline	U	390
100016	4-Nitroaniline	U	390
98953	Nitrobenzene	U	390
88755	2-Nitrophenol	U	390
100027	4-Nitrophenol	U	390
62759	N-Nitrosodimethylamine	U	390
86306	N-Nitrosodiphenylamine	U	390
621647	N-Nitroso-Di-n-propylamine	U	390
87865	Pentachlorophenol	U	390
85018	Phenanthrene	670	390
108952	Phenol	U	390
129000	Pyrene	380 J	390
120821	1,2,4-Trichlorobenzene	U	390
95954	2,4,5-Trichlorophenol	U	390
88062	2,4,6-Trichlorophenol	U	390
92875	Benzidine	U	390
122667	1,2-Diphenylhydrazine	U	390

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
Nitrobenzene-d5	75 %	23-120	OK
2-Fluorobiphenyl	86 %	30-115	OK
Terphenyl-d14	75 %	18-137	OK
Phenol-d5	103 %	24-113	OK
2-Fluorophenol	80 %	25-121	OK
2,4,6-Tribromophenol	94 %	19-122	OK

Percent solid of 85.9 is used for all target compounds.

J - Indicates compound concentration found below MDL.
U - Indicates compound analyzed for but not detected.
D - Indicates result is based on a dilution.
I - Results exceed industrial surface soil standards.*
B - Indicates compound found in associated blank.
E - Concentration exceeds highest calibration standard.
R - Result exceeds residential surface soil standards.*

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* Flags are based on New Jersey Soil Cleanup Criteria from Site Remediation News Volume 06 Number 1.
** 3-Methylphenol and 4-Methylphenol can not be separated by the method applied

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Accredited Labs, Inc. Lab Sample ID: 0012807

Client Name: ENVIROTACTICS Field ID: S-5

Case No.: 9748 Date Extracted: 10/17/00

Lab File ID: >F2264 Date Analyzed: 10/23/00

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Aldol Condensate	5.65	61000	B
2.		Unknown hydrocarbon	5.71	11000	
3.	464175	*** See below	9.69	35000	
4.		Unknown aromatic	11.34	3700	
5.	464482	*** See below	11.81	4700	
6.		Unknown aromatic	12.65	10000	
7.		Unknown aromatic	14.08	1700	
8.		Unknown aromatic	14.14	1200	
9.		Unknown aromatic	14.61	32000	
10.		Unknown aromatic	14.86	4300	
11.		Unknown aromatic	14.92	5100	
12.		Unknown hydrocarbon	15.49	2200	
13.		Unknown aromatic	15.61	860	
14.		Unknown aromatic	16.21	810	
15.		Unknown aromatic	16.49	1000	
16.	10219757	*** See below	17.05	1200	
17.	639996	*** See below	17.74	1100	
18.		Unknown aromatic	18.62	1200	
19.		Unknown aromatic	18.79	870	
20.		Unknown aromatic	18.85	1200	
21.	5162038	*** See below	20.87	710	
22.		Unknown aromatic	21.90	2000	
23.		Unknown aromatic	22.47	600	
24.		Unknown aromatic	22.82	1400	
25.		Unknown aromatic	24.30	520	

***

3. Bicyclo[2.2.1]hept-2-ene, 1,7,7-trimethyl-
5. Bicyclo[2.2.1]heptan-2-one, 1,7,7-trimethyl-, (1S)
16. Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-1,8a-dimet
17. Cyclohexanemethanol, 4-ethenyl-.alpha.,.alpha.,4-t
21. Methanone, (2-chlorophenyl)phenyl-

* Unknowns are defined as: Compounds that are less than 80% probability or have no database entries from the library.

ACCREDITED LABORATORIES, INC.
BNA ORGANIC ANALYSIS DATA

CASE NUMBER	9748	MATRIX	Soil
SAMPLE NUMBER	0012808	DILUTION FACTOR	1.0
DATA FILE	>F2268	DATE EXTRACTED	10/17/00
CLIENT NAME	ENVIROTACTICS	DATE ANALYZED	10/23/00
FIELD ID	S-6	ANALYZED BY	DANIEL

CAS #	COMPOUND	UG/KG	MDL
83329	Acenaphthene	U	390
208968	Acenaphthylene	510	390
120127	Anthracene	220 J	390
56553	Benzo(a)Anthracene	U	390
50328	Benzo(a)Pyrene	U	390
205992	Benzo(b)fluoranthene	U	390
191242	Benzo(g,h,i)Perylene	U	390
207089	Benzo(k)Fluoranthene	U	390
65850	Benzoic Acid	U	2000
100516	Benzyl Alcohol	1100	390
111444	bis(-2-Chloroethyl)Ether	U	390
108601	bis(2-Chloroisopropyl)ether	U	390
117817	Bis(2-Ethylhexyl)Phthalate	1900	390
111911	bis(-2-Chloroethoxy)Methane	U	390
101553	4-Bromophenyl-phenylether	U	390
85687	Butylbenzylphthalate	U	390
106478	4-Chloroaniline	U	390
91587	2-Chloronaphthalene	U	390
59507	4-Chloro-3-methylphenol	11000 E	390
95578	2-Chlorophenol	U	390
7005723	4-Chlorophenyl-phenylether	670	390
218019	Chrysene	U	390
53703	Dibenzo(a,h)Anthracene	U	390
132649	Dibenzofuran	U	390
95501	1,2-Dichlorobenzene	33000 E	390
541731	1,3-Dichlorobenzene	2200	390
106467	1,4-Dichlorobenzene	9900 E	390
91941	3,3'-Dichlorobenzidine	U	390
120832	2,4-Dichlorophenol	U	390
84662	Diethylphthalate	540	390
105679	2,4-Dimethylphenol	U	390
131113	Dimethyl Phthalate	2400	390
84742	Di-n-Butylphthalate	15000 E	390
534521	4,6-Dinitro-2-methylphenol	U	390
51285	2,4-Dinitrophenol	U	390
121142	2,4-Dinitrotoluene	U	390
606202	2,6-Dinitrotoluene	U	390
117840	Di-n-octyl phthalate	U	390
206440	Fluoranthene	67 J	390
86737	Fluorene	U	390
118741	Hexachlorobenzene	U	390
87683	Hexachlorobutadiene	U	390
77474	Hexachlorocyclopentadiene	U	390
67721	Hexachloroethane	U	390
193395	Indeno(1,2,3-cd)Pyrene	U	390
78591	Isophorone	U	390
91576	2-Methylnaphthalene	U	390
95487	2-Methylphenol	U	390
108394	3&4-Methylphenol	U	390
91203	Naphthalene	5900	390
88744	2-Nitroaniline	U	390
99092	3-Nitroaniline	U	390
100016	4-Nitroaniline	U	390
98953	Nitrobenzene	U	390
88755	2-Nitrophenol	U	390
100027	4-Nitrophenol	3200	390
62759	N-Nitrosodimethylamine	U	390
86306	N-Nitrosodiphenylamine	U	390
621647	N-Nitroso-Di-n-propylamine	U	390
87865	Pentachlorophenol	U	390
85018	Phenanthrene	230 J	390
108952	Phenol	U	390
129000	Pyrene	U	390
120821	1,2,4-Trichlorobenzene	1800	390
95954	2,4,5-Trichlorophenol	U	390
88062	2,4,6-Trichlorophenol	U	390
92875	Benzidine	U	390
122667	1,2-Diphenylhydrazine	U	390

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
Nitrobenzene-d5	91 %	23-120	OK
2-Fluorobiphenyl	18 %	30-115	OUT
Terphenyl-d14	86 %	18-137	OK
Phenol-d5	116 %	24-113	OUT
2-Fluorophenol	102 %	25-121	OK
2,4,6-Tribromophenol	40 %	19-122	OK

Percent solid of 84.6 is used for all target compounds.

J - Indicates compound concentration found below MDL.
U - Indicates compound analyzed for but not detected.
D - Indicates result is based on a dilution.
I - Results exceed industrial surface soil standards.*
B - Indicates compound found in associated blank.
E - Concentration exceeds highest calibration standard.
R - Result exceeds residential surface soil standards.*

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* Flags are based on New Jersey Soil Cleanup Criteria from Site Remediation News Volume 06 Number 1.
** 3-Methylphenol and 4-Methylphenol can not be separated by the method applied

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Accredited Labs, Inc.

Lab Sample ID: 0012808

Client Name: ENVIROTACTICS

Field ID: S-6

Case No.: 9748

Date Extracted: 10/17/00

Lab File ID: >F2268

Date Analyzed: 10/23/00

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	108883	Benzene, methyl-	3.40	3100	
2.		Aldol Condensate	5.68	10000	B
3.		Unknown aromatic	7.62	3500	
4.	79925	Camphene (DOT)(8CI)	7.91	1800	
5.	18172673	*** See below	8.60	5200	
6.		Unknown aromatic	8.89	1700	
7.		Unknown aromatic	9.69	3600	
8.		Unknown aromatic	10.73	1600	
9.		Unknown aromatic	11.04	5000	
10.	32768540	*** See below	11.39	3200	
11.		Unknown hydrocarbon	11.96	3300	
12.		Unknown hydrocarbon	12.84	23000	
13.		Unknown aromatic	13.37	3900	
14.		Unknown	13.52	6900	
15.		Unknown aromatic	14.17	14000	
16.		Unknown aromatic	14.95	5000	
17.		Unknown hydrocarbon	15.28	11000	
18.		Unknown hydrocarbon	15.59	5600	
19.		Unknown aromatic	15.75	6500	
20.		Unknown aromatic	17.23	4400	
21.		Unknown aromatic	19.12	2300	
22.		Unknown	21.55	5300	
23.		Unknown aromatic	28.70	2100	
24.		Unknown aromatic	29.03	610	
25.		Unknown hydrocarbon	30.50	630	

***

5. Bicyclo[3.1.1]heptane, 6,6-dimethyl-2-methylene-,
10. Benzene, 1,2-dichloro-3-methyl-

* Unknowns are defined as: Compounds that are less than 80% probability or have no database entries from the library.

FORM I SV-TIC

ACCREDITED LABORATORIES, INC.
BNA ORGANIC ANALYSIS DATA

CASE NUMBER	9748	MATRIX	Soil
SAMPLE NUMBER	0012808DL	DILUTION FACTOR	20
DATA FILE	>F2289	DATE EXTRACTED	10/17/00
CLIENT NAME	ENVIROTACTICS	DATE ANALYZED	10/24/00
FIELD ID	S-6	ANALYZED BY	DANIEL

CAS #	COMPOUND	UG/KG	MDL
83329	Acenaphthene	U	7900
208968	Acenaphthylene	U	7900
120127	Anthracene	U	7900
56553	Benzo(a)Anthracene	U	7900
50328	Benzo(a)Pyrene	U	7900
205992	Benzo(b)fluoranthene	U	7900
191242	Benzo(g,h,i)Perylene	U	7900
207089	Benzo(k)Fluoranthene	U	7900
65850	Benzoic Acid	U	39000
100516	Benzyl Alcohol	U	7900
111444	bis(-2-Chloroethyl)Ether	U	7900
108601	bis(2-Chloroisopropyl)ether	U	7900
117817	Bis(2-Ethylhexyl)Phthalate	1800 J D	7900
111911	bis(-2-Chloroethoxy)Methane	U	7900
101553	4-Bromophenyl-phenylether	U	7900
85687	Butylbenzylphthalate	U	7900
106478	4-Chloroaniline	U	7900
91587	2-Chloronaphthalene	U	7900
59507	4-Chloro-3-methylphenol	12000 D	7900
95578	2-Chlorophenol	U	7900
7005723	4-Chlorophenyl-phenylether	U	7900
218019	Chrysene	U	7900
53703	Dibenzo(a,h)Anthracene	U	7900
132649	Dibenzofuran	U	7900
95501	1,2-Dichlorobenzene	100000 D	7900
541731	1,3-Dichlorobenzene	1700 J D	7900
106467	1,4-Dichlorobenzene	9200 D	7900
91941	3,3'-Dichlorobenzidine	U	7900
120832	2,4-Dichlorophenol	U	7900
84662	Diethylphthalate	1200 J D	7900
105679	2,4-Dimethylphenol	U	7900
131113	Dimethyl Phthalate	U	7900
84742	Di-n-Butylphthalate	120000 D	7900
534521	4,6-Dinitro-2-methylphenol	U	7900
51285	2,4-Dinitrophenol	U	7900
121142	2,4-Dinitrotoluene	U	7900
606202	2,6-Dinitrotoluene	U	7900
117840	Di-n-octyl phthalate	U	7900
206440	Fluoranthene	U	7900
86737	Fluorene	U	7900
118741	Hexachlorobenzene	U	7900
87683	Hexachlorobutadiene	U	7900
77474	Hexachlorocyclopentadiene	U	7900
67721	Hexachloroethane	U	7900
193395	Indeno(1,2,3-cd)Pyrene	U	7900
78591	Isophorone	U	7900
91576	2-Methylnaphthalene	U	7900
95487	2-Methylphenol	U	7900
108394	3&4-Methylphenol	U	7900
91203	Naphthalene	16000 D	7900
88744	2-Nitroaniline	U	7900
99092	3-Nitroaniline	U	7900
100016	4-Nitroaniline	U	7900
98953	Nitrobenzene	U	7900
88755	2-Nitrophenol	U	7900
100027	4-Nitrophenol	5400 J D	7900
62759	N-Nitrosodimethylamine	U	7900
86306	N-Nitrosodiphenylamine	U	7900
621647	N-Nitroso-Di-n-propylamine	U	7900
87865	Pentachlorophenol	U	7900
85018	Phenanthrene	U	7900
108952	Phenol	U	7900
129000	Pyrene	U	7900
120821	1,2,4-Trichlorobenzene	2600 J D	7900
95954	2,4,5-Trichlorophenol	U	7900
88062	2,4,6-Trichlorophenol	U	7900
92875	Benzidine	U	7900
122667	1,2-Diphenylhydrazine	U	7900

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
Nitrobenzene-d5	72 %	23-120	OK
2-Fluorobiphenyl	101 %	30-115	OK
Terphenyl-d14	97 %	18-137	OK
Phenol-d5	96 %	24-113	OK
2-Fluorophenol	67 %	25-121	OK
2,4,6-Tribromophenol	92 %	19-122	OK

Percent solid of 84.6 is used for all target compounds.

J - Indicates compound concentration found below MDL.
U - Indicates compound analyzed for but not detected.
D - Indicates result is based on a dilution.
I - Results exceed industrial surface soil standards.*
B - Indicates compound found in associated blank.
E - Concentration exceeds highest calibration standard.
R - Result exceeds residential surface soil standards.*

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* Flags are based on New Jersey Soil Cleanup Criteria from Site Remediation News Volume 06 Number 1.
** 3-Methylphenol and 4-Methylphenol can not be separated by the method applied

ACCREDITED LABORATORIES, INC.
BNA ORGANIC ANALYSIS DATA

CASE NUMBER	9748	MATRIX	Soil
SAMPLE NUMBER	0012809	DILUTION FACTOR	1.0
DATA FILE	>F2269	DATE EXTRACTED	10/17/00
CLIENT NAME	ENVIROTACTICS	DATE ANALYZED	10/23/00
FIELD ID	S-7	ANALYZED BY	DANIEL

CAS #	COMPOUND	UG/KG	MDL
83329	Acenaphthene	U	380
208968	Acenaphthylene	U	380
120127	Anthracene	U	380
56553	Benzo(a)Anthracene	U	380
50328	Benzo(a)Pyrene	U	380
205992	Benzo(b)fluoranthene	U	380
191242	Benzo(g,h,i)Perylene	U	380
207089	Benzo(k)Fluoranthene	U	380
65850	Benzoic Acid	U	1900
100516	Benzyl Alcohol	1600	380
111444	bis(-2-Chloroethyl)Ether	U	380
108601	bis(2-Chloroisopropyl)ether	U	380
117817	Bis(2-Ethylhexyl)Phthalate	1800	380
111911	bis(-2-Chloroethoxy)Methane	U	380
101553	4-Bromophenyl-phenylether	U	380
85687	Butylbenzylphthalate	U	380
106478	4-Chloroaniline	U	380
91587	2-Chloronaphthalene	96 J	380
59507	4-Chloro-3-methylphenol	U	380
95578	2-Chlorophenol	U	380
7005723	4-Chlorophenyl-phenylether	U	380
218019	Chrysene	U	380
53703	Dibenzo(a,h)Anthracene	U	380
132649	Dibenzofuran	U	380
95501	1,2-Dichlorobenzene	1100	380
541731	1,3-Dichlorobenzene	85 J	380
106467	1,4-Dichlorobenzene	210 J	380
91941	3,3'-Dichlorobenzidine	U	380
120832	2,4-Dichlorophenol	U	380
84662	Diethylphthalate	U	380
105679	2,4-Dimethylphenol	U	380
131113	Dimethyl Phthalate	110 J	380
84742	Di-n-Butylphthalate	U	380
534521	4,6-Dinitro-2-methylphenol	U	380
51285	2,4-Dinitrophenol	U	380
121142	2,4-Dinitrotoluene	U	380
606202	2,6-Dinitrotoluene	U	380
117840	Di-n-octyl phthalate	2600	380
206440	Fluoranthene	170 J	380
86737	Fluorene	U	380
118741	Hexachlorobenzene	U	380
87683	Hexachlorobutadiene	U	380
77474	Hexachlorocyclopentadiene	U	380
67721	Hexachloroethane	U	380
193395	Indeno(1,2,3-cd)Pyrene	U	380
78591	Isophorone	730	380
91576	2-Methylnaphthalene	U	380
95487	2-Methylphenol	600	380
108394	3&4-Methylphenol	690	380
91203	Naphthalene	110 J	380
88744	2-Nitroaniline	U	380
99092	3-Nitroaniline	U	380
100016	4-Nitroaniline	U	380
98953	Nitrobenzene	U	380
88755	2-Nitrophenol	U	380
100027	4-Nitrophenol	1300	380
62759	N-Nitrosodimethylamine	U	380
86306	N-Nitrosodiphenylamine	U	380
621647	N-Nitroso-Di-n-propylamine	U	380
87865	Pentachlorophenol	U	380
85018	Phenanthrene	710	380
108952	Phenol	U	380
129000	Pyrene	110 J	380
120821	1,2,4-Trichlorobenzene	77 J	380
95954	2,4,5-Trichlorophenol	U	380
88062	2,4,6-Trichlorophenol	U	380
92875	Benzidine	2200	380
122667	1,2-Diphenylhydrazine	U	380

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
Nitrobenzene-d5	69 %	23-120	OK
2-Fluorobiphenyl	91 %	30-115	OK
Terphenyl-d14	101 %	18-137	OK
Phenol-d5	92 %	24-113	OK
2-Fluorophenol	71 %	25-121	OK
2,4,6-Tribromophenol	34 %	19-122	OK

Percent solid of 87.2 is used for all target compounds.

J - Indicates compound concentration found below MDL.
U - Indicates compound analyzed for but not detected.
D - Indicates result is based on a dilution.
I - Results exceed industrial surface soil standards.*
B - Indicates compound found in associated blank.
E - Concentration exceeds highest calibration standard.
R - Result exceeds residential surface soil standards.*

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* Flags are based on New Jersey Soil Cleanup Criteria from Site Remediation News Volume 06 Number 1.
** 3-Methylphenol and 4-Methylphenol can not be separated by the method applied

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Accredited Labs, Inc. Lab Sample ID: 0012809

Client Name: ENVIROTACTICS Field ID: S-7

Case No.: 9748 Date Extracted: 10/17/00

Lab File ID: >F2269 Date Analyzed: 10/23/00

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown aromatic	5.81	130000	
2.	527844	*** See below	9.65	84000	
3.		Unknown aromatic	14.00	7500	
4.		Unknown aromatic	14.74	1500	
5.		Unknown	16.28	1500	
6.		Unknown aromatic	17.24	1600	
7.		Unknown aromatic	17.45	1300	
8.		Unknown aromatic	17.63	2600	
9.		Unknown aromatic	17.98	2200	
10.	2050080	*** See below	18.17	2200	
11.		Unknown aromatic	18.49	1900	
12.		Unknown aromatic	18.99	2300	
13.		Unknown aromatic	19.46	700	
14.	103491	*** See below	20.14	970	
15.		Unknown aromatic	20.36	1800	
16.	51.62038	*** See below	21.06	1500	
17.		Unknown aromatic	21.63	950	
18.		Unknown aromatic	21.94	1800	
19.	2510954	*** See below	22.64	880	
20.		Unknown	25.20	5100	
21.	620406	*** See below	25.83	7000	
22.		Unknown aromatic	28.91	2800	
23.		Unknown	31.13	5500	
24.		Unknown aromatic	31.30	6900	
25.		Unknown aromatic	31.91	15000	

***

2. Benzene, 1-methyl-2-(1-methylethyl)-
10. Benzoic acid, 2-hydroxy-, pentyl ester
14. Benzenemethanamine, N-(phenylmethyl)-
16. Methanone, (2-chlorophenyl)phenyl-
19. Benzeneacetonitrile, .alpha.-(phenylmethylene)-
21. Benzenemethanamine, N,N-bis(phenylmethyl)-

* Unknowns are defined as: Compounds that are less than 80% probability or have no database entries from the library.

ACCREDITED LABORATORIES, INC.
BNA ORGANIC ANALYSIS DATA

CASE NUMBER	9748	MATRIX	Soil
SAMPLE NUMBER	0012810	DILUTION FACTOR	1.0
DATA FILE	>F2270	DATE EXTRACTED	10/17/00
CLIENT NAME	ENVIROTACTICS	DATE ANALYZED	10/23/00
FIELD ID	S-8	ANALYZED BY	DANIEL

CAS #	COMPOUND	UG/KG	MDL	CAS #	COMPOUND	UG/KG	MDL
83329	Acenaphthene	U	440	51285	2,4-Dinitrophenol	U	440
208968	Acenaphthylene	U	440	121142	2,4-Dinitrotoluene	U	440
120127	Anthracene	U	440	606202	2,6-Dinitrotoluene	U	440
56553	Benzo(a)Anthracene	U	440	117840	Di-n-octyl phthalate	930	440
50328	Benzo(a)Pyrene	U	440	206440	Fluoranthene	410 J	440
205992	Benzo(b)fluoranthene	U	440	86737	Fluorene	670	440
191242	Benzo(g,h,i)Perylene	U	440	118741	Hexachlorobenzene	U	440
207089	Benzo(k)Fluoranthene	U	440	87683	Hexachlorobutadiene	U	440
65850	Benzoic Acid	U	2200	77474	Hexachlorocyclopentadiene	U	440
100516	Benzyl Alcohol	U	440	67721	Hexachloroethane	U	440
111444	bis(-2-Chloroethyl)Ether	U	440	193395	Indeno(1,2,3-cd)Pyrene	U	440
108601	bis(2-Chloroisopropyl)ether	U	440	78591	Isophorone	U	440
117817	Bis(2-Ethylhexyl)Phthalate	590	440	91576	2-Methylnaphthalene	U	440
111911	bis(-2-Chloroethoxy)Methane	U	440	95487	2-Methylphenol	U	440
101553	4-Bromophenyl-phenylether	U	440	108394	3&4-Methylphenol	U	440
85687	Butylbenzylphthalate	2700	440	91203	Naphthalene	U	440
106478	4-Chloroaniline	U	440	88744	2-Nitroaniline	U	440
91587	2-Chloronaphthalene	U	440	99092	3-Nitroaniline	U	440
59507	4-Chloro-3-methylphenol	U	440	100016	4-Nitroaniline	U	440
95578	2-Chlorophenol	U	440	98953	Nitrobenzene	U	440
7005723	4-Chlorophenyl-phenylether	1400	440	88755	2-Nitrophenol	U	440
218019	Chrysene	U	440	100027	4-Nitrophenol	U	440
53703	Dibenzo(a,h)Anthracene	U	440	62759	N-Nitrosodimethylamine	U	440
132649	Dibenzofuran	430 J	440	86306	N-Nitrosodiphenylamine	2400	440
95501	1,2-Dichlorobenzene	230 J	440	621647	N-Nitroso-Di-n-propylamine	U	440
541731	1,3-Dichlorobenzene	U	440	87865	Pentachlorophenol	U	440
106467	1,4-Dichlorobenzene	U	440	85018	Phenanthrene	U	440
91941	3,3'-Dichlorobenzidine	U	440	108952	Phenol	2100	440
120832	2,4-Dichlorophenol	U	440	129000	Pyrene	630	440
84662	Diethylphthalate	U	440	120821	1,2,4-Trichlorobenzene	U	440
105679	2,4-Dimethylphenol	U	440	95954	2,4,5-Trichlorophenol	U	440
131113	Dimethyl Phthalate	U	440	88062	2,4,6-Trichlorophenol	U	440
84742	Di-n-Butylphthalate	4700	440	92875	Benzidine	U	440
534521	4,6-Dinitro-2-methylphenol	U	440	122667	1,2-Diphenylhydrazine	U	440

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
Nitrobenzene-d5	27 %	23-120	OK
2-Fluorobiphenyl	189 %	30-115	OUT
Terphenyl-d14	179 %	18-137	OUT
Phenol-d5	73 %	24-113	OK
2-Fluorophenol	33 %	25-121	OK
2,4,6-Tribromophenol	289 %	19-122	OUT

Percent solid of 76.0 is used for all target compounds.

J - Indicates compound concentration found below MDL.
U - Indicates compound analyzed for but not detected.
D - Indicates result is based on a dilution.
I - Results exceed industrial surface soil standards.*
B - Indicates compound found in associated blank.
E - Concentration exceeds highest calibration standard.
R - Result exceeds residential surface soil standards.*

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* Flags are based on New Jersey Soil Cleanup Criteria from Site Remediation News Volume 06 Number 1.
** 3-Methylphenol and 4-Methylphenol can not be separated by the method applied

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Accredited Labs, Inc. Lab Sample ID: 0012810

Client Name: ENVIROTACTICS Field ID: S-8

Case No.: 9748 Date Extracted: 10/17/00

Lab File ID: >F2270 Date Analyzed: 10/23/00

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown hyddrocarbon	4.24	1600	
2.		Aldol Condensate	5.79	10000	B
3.	13435091	*** See below	8.81	4700	
4.		Unknown aromatic	9.10	5600	
5.		Unknown aromatic	10.94	2000	
6.		Unknown aromatic	11.18	850	
7.		Unknown	11.29	2700	
8.	21368683	*** See below	12.00	2500	
9.	10458147	*** See below	12.17	1800	
10.	1196312	*** See below	12.31	1600	
11.		Unknown	12.39	1100	
12.		Unknown aromatic	12.84	1500	
13.		Unknown aromatic	12.96	1600	
14.		Unknown aromatic	13.09	2300	
15.		Unknown aromatic	13.46	2100	
16.		Unknown aromatic	13.82	1600	
17.		Unknown aromatic	14.83	910	
18.		Unknown aromatic	15.81	3000	
19.		Unknown aromatic	15.96	2500	
20.		Unknown aromatic	16.74	2500	
21.		Unknown	18.07	3500	
22.		Unknown aromatic	19.65	4400	
23.		Unknown aromatic	21.63	5700	
24.		Unknown aromatic	24.29	21000	
25.		Unknown aromatic	24.60	20000	

***

3. Silanediamine, 1,1-dimethyl-N,N'-diphenyl-
8. Bicyclo[2.2.1]heptan-2-one, 1,7,7-trimethyl-, (.+-
9. Cyclohexanone, 5-methyl-2-(1-methylethyl)-
10. Cyclohexanone, 5-methyl-2-(1-methylethyl)-, (2R-ci

* Unknowns are defined as: Compounds that are less than 80% probability or have no database entries from the library.

ACCREDITED LABORATORIES, INC.
BNA ORGANIC ANALYSIS DATA

CASE NUMBER	9748	MATRIX	Soil
SAMPLE NUMBER	0012810DL	DILUTION FACTOR	10
DATA FILE	>F2291	DATE EXTRACTED	10/17/00
CLIENT NAME	ENVIROTACTICS	DATE ANALYZED	10/24/00
FIELD ID	S-8	ANALYZED BY	DANIEL

CAS #	COMPOUND	UG/KG	MDL
83329	Acenaphthene	U	4400
208968	Acenaphthylene	U	4400
120127	Anthracene	U	4400
56553	Benzo(a)Anthracene	U	4400
50328	Benzo(a)Pyrene	U	4400
205992	Benzo(b)fluoranthene	U	4400
191242	Benzo(g,h,i)Perylene	U	4400
207089	Benzo(k)fluoranthene	U	4400
65850	Benzoic Acid	U	22000
100516	Benzyl Alcohol	U	4400
111444	bis(-2-Chloroethyl)Ether	U	4400
108601	bis(2-Chloroisopropyl)ether	U	4400
117817	Bis(2-Ethylhexyl)Phthalate	630 J D	4400
111911	bis(-2-Chloroethoxy)Methane	U	4400
101553	4-Bromophenyl-phenylether	U	4400
85687	Butylbenzylphthalate	2600 J D	4400
106478	4-Chloroaniline	U	4400
91587	2-Chloronaphthalene	U	4400
59507	4-Chloro-3-methylphenol	U	4400
95578	2-Chlorophenol	U	4400
7005723	4-Chlorophenyl-phenylether	U	4400
218019	Chrysene	U	4400
53703	Dibenzo(a,h)Anthracene	U	4400
132649	Dibenzofuran	U	4400
95501	1,2-Dichlorobenzene	U	4400
541731	1,3-Dichlorobenzene	U	4400
106467	1,4-Dichlorobenzene	U	4400
91941	3,3'-Dichlorobenzidine	U	4400
120832	2,4-Dichlorophenol	U	4400
84662	Diethylphthalate	U	4400
105679	2,4-Dimethylphenol	U	4400
131113	Dimethyl Phthalate	U	4400
84742	Di-n-Butylphthalate	7300 D	4400
534521	4,6-Dinitro-2-methylphenol	U	4400
51285	2,4-Dinitrophenol	U	4400
121142	2,4-Dinitrotoluene	U	4400
606202	2,6-Dinitrotoluene	U	4400
117840	Di-n-octyl phthalate	520 J D	4400
206440	Fluoranthene	U	4400
86737	Fluorene	U	4400
118741	Hexachlorobenzene	U	4400
87683	Hexachlorobutadiene	U	4400
77474	Hexachlorocyclopentadiene	U	4400
67721	Hexachloroethane	U	4400
193395	Indeno(1,2,3-cd)Pyrene	U	4400
78591	Isophorone	U	4400
91576	2-Methylnaphthalene	U	4400
95487	2-Methylphenol	U	4400
108394	3&4-Methylphenol	U	4400
91203	Naphthalene	U	4400
88744	2-Nitroaniline	U	4400
99092	3-Nitroaniline	U	4400
100016	4-Nitroaniline	U	4400
98953	Nitrobenzene	U	4400
88755	2-Nitrophenol	U	4400
100027	4-Nitrophenol	U	4400
62759	N-Nitrosodimethylamine	U	4400
86306	N-Nitrosodiphenylamine	U	4400
621647	N-Nitroso-Di-n-propylamine	U	4400
87865	Pentachlorophenol	U	4400
85018	Phenanthrene	U	4400
108952	Phenol	3200 J D	4400
129000	Pyrene	U	4400
120821	1,2,4-Trichlorobenzene	U	4400
95954	2,4,5-Trichlorophenol	U	4400
88062	2,4,6-Trichlorophenol	U	4400
92875	Benzidine	U	4400
122667	1,2-Diphenylhydrazine	U	4400

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
Nitrobenzene-d5	88 %	23-120	OK
2-Fluorobiphenyl	111 %	30-115	OK
Terphenyl-d14	94 %	18-137	OK
Phenol-d5	102 %	24-113	OK
2-Fluorophenol	79 %	25-121	OK
2,4,6-Tribromophenol	114 %	19-122	OK

Percent solid of 76.0 is used for all target compounds.

J - Indicates compound concentration found below MDL.
U - Indicates compound analyzed for but not detected.
D - Indicates result is based on a dilution.
I - Results exceed industrial surface soil standards.*
B - Indicates compound found in associated blank.
E - Concentration exceeds highest calibration standard.
R - Result exceeds residential surface soil standards.*

* Flags are based on New Jersey Soil Cleanup Criteria from Site Remediation News Volume 06 Number 1.
** 3-Methylphenol and 4-Methylphenol can not be separated by the method applied

ACCREDITED LABORATORIES, INC
PESTICIDE/PCB ORGANIC ANALYSIS DATA

CASE NUMBER	9748	MATRIX	Soil
SAMPLE NUMBER	0012803	DILUTION FACTOR	1
DATA FILE	>G7622	DATE EXTRACTED	10/20/00
CLIENT NAME	ENVIROTACTICS	DATE ANALYZED	10/21/00
FIELD ID	S-1	ANALYZED BY	JEFF

CAS#	COMPOUND	UG/KG	MDL
319846	A-BHC	U	.778
319857	B-BHC	U	.778
58899	G-BHC (Lindane)	U	.778
319868	D-BHC	U	.778
76448	Heptachlor	U	.778
309002	Aldrin	U	.778
1024573	Heptachlor Epoxide	U	.778
959988	Endosulfan I	U	.778
5103719	A-Chlordane	U	.778
5103742	G-Chlordane	U	.778
60571	Dieldrin	U	1.56
72559	4,4'-DDE	198 E	1.56
72208	Endrin	U	1.56
33213659	Endosulfan II	U	1.56
72548	4,4'-DDD	265 E	1.56
7421934	Endrin Aldehyde	U	1.56
1031078	Endosulfan Sulfate	U	1.56
50293	4,4'-DDT	170 E	1.56
53494705	Endrin Ketone	U	1.56
72435	Methoxychlor	U	7.78
8001352	Toxaphene	U	38.9
12674112	Aroclor-1016	U	19.4
11104282	Aroclor-1221	U	19.4
11141165	Aroclor-1232	U	19.4
53469219	Aroclor-1242	U	19.4
12672296	Aroclor-1248	U	19.4
11097691	Aroclor-1254	U	19.4
11096825	Aroclor-1260	U	19.4

Percent Solid of 85.7 is used for all target compounds.

B - Indicates compound found in associated blank.
J - Indicates compound concentration found below MDL.
U - Indicates compound analyzed for but not detected.
E - Indicates result exceeds highest calibration standard.
D - Indicates result is based on a dilution.
R - Result exceeds residential surface soil standards.*
I - Result exceeds industrial surface soil standards.*

* Flags are based on New Jersey Soil Cleanup from Site Remediation News Volume 06 Number 1.

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ACCREDITED LABORATORIES, INC
PESTICIDE/PCB ORGANIC ANALYSIS DATA

CASE NUMBER	9748	MATRIX	Soil
SAMPLE NUMBER	0012803DL 10	DILUTION FACTOR	10
DATA FILE	>G7651	DATE EXTRACTED	10/20/00
CLIENT NAME	ENVIROTACTICS	DATE ANALYZED	10/23/00
FIELD ID	S-1	ANALYZED BY	JEFF

CAS#	COMPOUND	UG/KG		MDL
319846	A-BHC	U		7.78
319857	B-BHC	U		7.78
58899	G-BHC (Lindane)	U		7.78
319868	D-BHC	U		7.78
76448	Heptachlor	U		7.78
309002	Aldrin	U		7.78
1024573	Heptachlor Epoxide	U		7.78
959988	Endosulfan I	U		7.78
5103719	A-Chlordane	U		7.78
5103742	G-Chlordane	U		7.78
60571	Dieldrin	U		15.6
72559	4,4'-DDE	198	D	15.6
72208	Endrin	U		15.6
33213659	Endosulfan II	U		15.6
72548	4,4'-DDD	106	D	15.6
7421934	Endrin Aldehyde	U		15.6
1031078	Endosulfan Sulfate	U		15.6
50293	4,4'-DDT	120	D	15.6
53494705	Endrin Ketone	U		15.6
72435	Methoxychlor	U		77.8
8001352	Toxaphene	U		389
12674112	Aroclor-1016	U		194
11104282	Aroclor-1221	U		194
11141165	Aroclor-1232	U		194
53469219	Aroclor-1242	U		194
12672296	Aroclor-1248	U		194
11097691	Aroclor-1254	U		194
11096825	Aroclor-1260	U		194

Percent Solid of 85.7 is used for all target compounds.

B - Indicates compound found in associated blank.
J - Indicates compound concentration found below MDL.
U - Indicates compound analyzed for but not detected.
E - Indicates result exceeds highest calibration standard.
D - Indicates result is based on a dilution.
R - Result exceeds residential surface soil standards.*
I - Result exceeds industrial surface soil standards.*

* Flags are based on New Jersey Soil Cleanup from Site Remediation News Volume 06 Number 1.

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ACCREDITED LABORATORIES, INC
PESTICIDE/PCB ORGANIC ANALYSIS DATA

CASE NUMBER	9748	MATRIX	Soil
SAMPLE NUMBER	0012804	DILUTION FACTOR	1
DATA FILE	>G7623	DATE EXTRACTED	10/20/00
CLIENT NAME	ENVIROTACTICS	DATE ANALYZED	10/21/00
FIELD ID	S-2	ANALYZED BY	JEFF

CAS#	COMPOUND	UG/KG	MDL
319846	A-BHC	U	.920
319857	B-BHC	U	.920
58899	G-BHC (Lindane)	U	.920
319868	D-BHC	U	.920
76448	Heptachlor	U	.920
309002	Aldrin	U	.920
1024573	Heptachlor Epoxide	U	.920
959988	Endosulfan I	U	.920
5103719	A-Chlordane	16.0	.920
5103742	G-Chlordane	60.2	.920
60571	Dieldrin	11.0	1.84
72559	4,4'-DDE	46.6	1.84
72208	Endrin	U	1.84
33213659	Endosulfan II	U	1.84
72548	4,4'-DDD	67.6	1.84
7421934	Endrin Aldehyde	U	1.84
1031078	Endosulfan Sulfate	U	1.84
50293	4,4'-DDT	64.5	1.84
53494705	Endrin Ketone	U	1.84
72435	Methoxychlor	U	9.20
8001352	Toxaphene	U	46.0
12674112	Aroclor-1016	U	23.0
11104282	Aroclor-1221	U	23.0
11141165	Aroclor-1232	U	23.0
53469219	Aroclor-1242	U	23.0
12672296	Aroclor-1248	U	23.0
11097691	Aroclor-1254	U	23.0
11096825	Aroclor-1260	U	23.0

Percent Solid of 72.5 is used for all target compounds.

B - Indicates compound found in associated blank.
J - Indicates compound concentration found below MDL.
U - Indicates compound analyzed for but not detected.
E - Indicates result exceeds highest calibration standard.
D - Indicates result is based on a dilution.
R - Result exceeds residential surface soil standards.*
I - Result exceeds industrial surface soil standards.*

* Flags are based on New Jersey Soil Cleanup from Site Remediation News Volume 06 Number 1.

ACCREDITED LABORATORIES, INC
PESTICIDE/PCB ORGANIC ANALYSIS DATA

CASE NUMBER	9748	MATRIX	Soil
SAMPLE NUMBER	0012805	DILUTION FACTOR	1
DATA FILE	>G7624	DATE EXTRACTED	10/20/00
CLIENT NAME	ENVIROTACTICS	DATE ANALYZED	10/21/00
FIELD ID	S-3	ANALYZED BY	JEFF

CAS#	COMPOUND	UG/KG	MDL
319846	A-BHC	U	.848
319857	B-BHC	U	.848
58899	G-BHC (Lindane)	U	.848
319868	D-BHC	U	.848
76448	Heptachlor	U	.848
309002	Aldrin	U	.848
1024573	Heptachlor Epoxide	U	.848
959988	Endosulfan I	U	.848
5103719	A-Chlordane	U	.848
5103742	G-Chlordane	U	.848
60571	Dieldrin	U	1.70
72559	4,4'-DDE	U	1.70
72208	Endrin	U	1.70
33213659	Endosulfan II	U	1.70
72548	4,4'-DDD	U	1.70
7421934	Endrin Aldehyde	U	1.70
1031078	Endosulfan Sulfate	U	1.70
50293	4,4'-DDT	U	1.70
53494705	Endrin Ketone	U	1.70
72435	Methoxychlor	U	8.48
8001352	Toxaphene	U	42.4
12674112	Aroclor-1016	U	21.2
11104282	Aroclor-1221	U	21.2
11141165	Aroclor-1232	U	21.2
53469219	Aroclor-1242	U	21.2
12672296	Aroclor-1248	U	21.2
11097691	Aroclor-1254	U	21.2
11096825	Aroclor-1260	U	21.2

Percent Solid of 78.6 is used for all target compounds.

B - Indicates compound found in associated blank.
J - Indicates compound concentration found below MDL.
U - Indicates compound analyzed for but not detected.
E - Indicates result exceeds highest calibration standard.
D - Indicates result is based on a dilution.
R - Result exceeds residential surface soil standards.*
I - Result exceeds industrial surface soil standards.*

* Flags are based on New Jersey Soil Cleanup from Site Remediation News Volume 06 Number 1.

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ACCREDITED LABORATORIES, INC
PESTICIDE/PCB ORGANIC ANALYSIS DATA

CASE NUMBER	9748	MATRIX	Soil
SAMPLE NUMBER	0012806	DILUTION FACTOR	1
DATA FILE	>G7625	DATE EXTRACTED	10/20/00
CLIENT NAME	ENVIROTACTICS	DATE ANALYZED	10/21/00
FIELD ID	S-4	ANALYZED BY	JEFF

CAS#	COMPOUND	UG/KG	MDL
319846	A-BHC	U	.782
319857	B-BHC	U	.782
58899	G-BHC (Lindane)	U	.782
319868	D-BHC	U	.782
76448	Heptachlor	U	.782
309002	Aldrin	U	.782
1024573	Heptachlor Epoxide	U	.782
959988	Endosulfan I	U	.782
5103719	A-Chlordane	U	.782
5103742	G-Chlordane	U	.782
60571	Dieldrin	U	1.56
72559	4,4'-DDE	19.1	1.56
72208	Endrin	U	1.56
33213659	Endosulfan II	U	1.56
72548	4,4'-DDD	74.9	1.56
7421934	Endrin Aldehyde	U	1.56
1031078	Endosulfan Sulfate	U	1.56
50293	4,4'-DDT	5.77	1.56
53494705	Endrin Ketone	U	1.56
72435	Methoxychlor	U	7.82
8001352	Toxaphene	U	39.1
12674112	Aroclor-1016	U	19.5
11104282	Aroclor-1221	U	19.5
11141165	Aroclor-1232	U	19.5
53469219	Aroclor-1242	U	19.5
12672296	Aroclor-1248	U	19.5
11097691	Aroclor-1254	U	19.5
11096825	Aroclor-1260	U	19.5

Percent Solid of 85.3 is used for all target compounds.

B - Indicates compound found in associated blank.
J - Indicates compound concentration found below MDL.
U - Indicates compound analyzed for but not detected.
E - Indicates result exceeds highest calibration standard.
D - Indicates result is based on a dilution.
R - Result exceeds residential surface soil standards.*
I - Result exceeds industrial surface soil standards.*

* Flags are based on New Jersey Soil Cleanup from Site Remediation News Volume 06 Number 1.

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ACCREDITED LABORATORIES, INC
PESTICIDE/PCB ORGANIC ANALYSIS DATA

CASE NUMBER	9748	MATRIX	Soil
SAMPLE NUMBER	0012807	DILUTION FACTOR	1
DATA FILE	>G7626	DATE EXTRACTED	10/20/00
CLIENT NAME	ENVIROTACTICS	DATE ANALYZED	10/21/00
FIELD ID	S-5	ANALYZED BY	JEFF

CAS#	COMPOUND	UG/KG	MDL
319846	A-BHC	U	.776
319857	B-BHC	U	.776
58899	G-BHC (Lindane)	U	.776
319868	D-BHC	U	.776
76448	Heptachlor	U	.776
309002	Aldrin	U	.776
1024573	Heptachlor Epoxide	U	.776
959988	Endosulfan I	U	.776
5103719	A-Chlordane	U	.776
5103742	G-Chlordane	U	.776
60571	Dieldrin	U	1.55
72559	4,4'-DDE	U	1.55
72208	Endrin	U	1.55
33213659	Endosulfan II	U	1.55
72548	4,4'-DDD	U	1.55
7421934	Endrin Aldehyde	U	1.55
1031078	Endosulfan Sulfate	U	1.55
50293	4,4'-DDT	U	1.55
53494705	Endrin Ketone	U	1.55
72435	Methoxychlor	U	7.76
8001352	Toxaphene	U	38.8
12674112	Aroclor-1016	U	19.4
11104282	Aroclor-1221	U	19.4
11141165	Aroclor-1232	U	19.4
53469219	Aroclor-1242	U	19.4
12672296	Aroclor-1248	U	19.4
11097691	Aroclor-1254	U	19.4
11096825	Aroclor-1260	U	19.4

Percent Solid of 85.9 is used for all target compounds.

B - Indicates compound found in associated blank.
J - Indicates compound concentration found below MDL.
U - Indicates compound analyzed for but not detected.
E - Indicates result exceeds highest calibration standard.
D - Indicates result is based on a dilution.
R - Result exceeds residential surface soil standards.*
I - Result exceeds industrial surface soil standards.*

* Flags are based on New Jersey Soil Cleanup from Site Remediation News Volume 06 Number 1.

ACCREDITED LABORATORIES, INC
PESTICIDE/PCB ORGANIC ANALYSIS DATA

CASE NUMBER	9748	MATRIX	Soil
SAMPLE NUMBER	0012808	DILUTION FACTOR	1
DATA FILE	>G7627	DATE EXTRACTED	10/20/00
CLIENT NAME	ENVIROTACTICS	DATE ANALYZED	10/21/00
FIELD ID	S-6	ANALYZED BY	JEFF

CAS#	COMPOUND	UG/KG	MDL
319846	A-BHC	U	.788
319857	B-BHC	U	.788
58899	G-BHC (Lindane)	U	.788
319868	D-BHC	U	.788
76448	Heptachlor	U	.788
309002	Aldrin	U	.788
1024573	Heptachlor Epoxide	U	.788
959988	Endosulfan I	U	.788
5103719	A-Chlordane	21.4	.788
5103742	G-Chlordane	222 E	.788
60571	Dieldrin	U	1.58
72559	4,4'-DDE	1190 E	1.58
72208	Endrin	U	1.58
33213659	Endosulfan II	U	1.58
72548	4,4'-DDD	6930 E R	1.58
7421934	Endrin Aldehyde	U	1.58
1031078	Endosulfan Sulfate	U	1.58
50293	4,4'-DDT	600 E	1.58
53494705	Endrin Ketone	U	1.58
72435	Methoxychlor	U	7.88
8001352	Toxaphene	U	39.4
12674112	Aroclor-1016	U	19.7
11104282	Aroclor-1221	U	19.7
11141165	Aroclor-1232	U	19.7
53469219	Aroclor-1242	U	19.7
12672296	Aroclor-1248	U	19.7
11097691	Aroclor-1254	U	19.7
11096825	Aroclor-1260	U	19.7

Percent Solid of 84.6 is used for all target compounds.

B - Indicates compound found in associated blank.
J - Indicates compound concentration found below MDL.
U - Indicates compound analyzed for but not detected.
E - Indicates result exceeds highest calibration standard.
D - Indicates result is based on a dilution.
R - Result exceeds residential surface soil standards.*
I - Result exceeds industrial surface soil standards.*

* Flags are based on New Jersey Soil Cleanup from Site Remediation News Volume 06 Number 1.

ACCREDITED LABORATORIES, INC
PESTICIDE/PCB ORGANIC ANALYSIS DATA

CASE NUMBER	9748	MATRIX	Soil
SAMPLE NUMBER	0012808DL 10	DILUTION FACTOR	10
DATA FILE	>G7652	DATE EXTRACTED	10/20/00
CLIENT NAME	ENVIROTACTICS	DATE ANALYZED	10/23/00
FIELD ID	S-6	ANALYZED BY	JEFF

CAS#	COMPOUND	UG/KG		MDL
319846	A-BHC	U		7.88
319857	B-BHC	U		7.88
58899	G-BHC (Lindane)	U		7.88
319868	D-BHC	U		7.88
76448	Heptachlor	U		7.88
309002	Aldrin	U		7.88
1024573	Heptachlor Epoxide	U		7.88
959988	Endosulfan I	U		7.88
5103719	A-Chlordane	13.8	D	7.88
5103742	G-Chlordane	295	D	7.88
60571	Dieldrin	U		15.8
72559	4,4'-DDE	702	D	15.8
72208	Endrin	U		15.8
33213659	Endosulfan II	U		15.8
72548	4,4'-DDD	16300	E DI	15.8
7421934	Endrin Aldehyde	U		15.8
1031078	Endosulfan Sulfate	U		15.8
50293	4,4'-DDT	1080	D	15.8
53494705	Endrin Ketone	U		15.8
72435	Methoxychlor	U		78.8
8001352	Toxaphene	U		394
12674112	Aroclor-1016	U		197
11104282	Aroclor-1221	U		197
11141165	Aroclor-1232	U		197
53469219	Aroclor-1242	U		197
12672296	Aroclor-1248	U		197
11097691	Aroclor-1254	U		197
11096825	Aroclor-1260	U		197

Percent Solid of 84.6 is used for all target compounds.

B - Indicates compound found in associated blank.
J - Indicates compound concentration found below MDL.
U - Indicates compound analyzed for but not detected.
E - Indicates result exceeds highest calibration standard.
D - Indicates result is based on a dilution.
R - Result exceeds residential surface soil standards.*
I - Result exceeds industrial surface soil standards.*

* Flags are based on New Jersey Soil Cleanup from Site Remediation News Volume 06 Number 1.

ACCREDITED LABORATORIES, INC
PESTICIDE/PCB ORGANIC ANALYSIS DATA

CASE NUMBER	9748	MATRIX	Soil
SAMPLE NUMBER	0012808DL 100	DILUTION FACTOR	100
DATA FILE	>G7653	DATE EXTRACTED	10/20/00
CLIENT NAME	ENVIROTACTICS	DATE ANALYZED	10/23/00
FIELD ID	S-6	ANALYZED BY	JEFF

CAS#	COMPOUND	UG/KG		MDL
319846	A-BHC	U		78.8
319857	B-BHC	U		78.8
58899	G-BHC (Lindane)	U		78.8
319868	D-BHC	U		78.8
76448	Heptachlor	U		78.8
309002	Aldrin	U		78.8
1024573	Heptachlor Epoxide	U		78.8
959988	Endosulfan I	U		78.8
5103719	A-Chlordane	U		78.8
5103742	G-Chlordane	220	D	78.8
60571	Dieldrin	U		158
72559	4,4'-DDE	301	D	158
72208	Endrin	U		158
33213659	Endosulfan II	U		158
72548	4,4'-DDD	17500	DI	158
7421934	Endrin Aldehyde	U		158
1031078	Endosulfan Sulfate	U		158
50293	4,4'-DDT	628	D	158
53494705	Endrin Ketone	U		158
72435	Methoxychlor	U		788
8001352	Toxaphene	U		3940
12674112	Aroclor-1016	U		1970
11104282	Aroclor-1221	U		1970
11141165	Aroclor-1232	U		1970
53469219	Aroclor-1242	U		1970
12672296	Aroclor-1248	U		1970
11097691	Aroclor-1254	U		1970
11096825	Aroclor-1260	U		1970

Percent Solid of 84.6 is used for all target compounds.

B - Indicates compound found in associated blank.
J - Indicates compound concentration found below MDL.
U - Indicates compound analyzed for but not detected.
E - Indicates result exceeds highest calibration standard.
D - Indicates result is based on a dilution.
R - Result exceeds residential surface soil standards.*
I - Result exceeds industrial surface soil standards.*

* Flags are based on New Jersey Soil Cleanup from Site Remediation News Volume 06 Number 1.

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ACCREDITED LABORATORIES, INC
PESTICIDE/PCB ORGANIC ANALYSIS DATA

CASE NUMBER	9748	MATRIX	Soil
SAMPLE NUMBER	0012809	DILUTION FACTOR	1
DATA FILE	>G7628	DATE EXTRACTED	10/20/00
CLIENT NAME	ENVIROTACTICS	DATE ANALYZED	10/21/00
FIELD ID	S-7	ANALYZED BY	JEFF

CAS#	COMPOUND	UG/KG	MDL
319846	A-BHC	U	.765
319857	B-BHC	U	.765
58899	G-BHC (Lindane)	U	.765
319868	D-BHC	U	.765
76448	Heptachlor	U	.765
309002	Aldrin	U	.765
1024573	Heptachlor Epoxide	U	.765
959988	Endosulfan I	U	.765
5103719	A-Chlordane	U	.765
5103742	G-Chlordane	U	.765
60571	Dieldrin	U	1.53
72559	4,4'-DDE	114	1.53
72208	Endrin	U	1.53
33213659	Endosulfan II	U	1.53
72548	4,4'-DDD	541 E	1.53
7421934	Endrin Aldehyde	U	1.53
1031078	Endosulfan Sulfate	U	1.53
50293	4,4'-DDT	U	1.53
53494705	Endrin Ketone	U	1.53
72435	Methoxychlor	U	7.65
8001352	Toxaphene	U	38.2
12674112	Aroclor-1016	U	19.1
11104282	Aroclor-1221	U	19.1
11141165	Aroclor-1232	U	19.1
53469219	Aroclor-1242	U	19.1
12672296	Aroclor-1248	U	19.1
11097691	Aroclor-1254	U	19.1
11096825	Aroclor-1260	U	19.1

Percent Solid of 87.2 is used for all target compounds.

B - Indicates compound found in associated blank.
J - Indicates compound concentration found below MDL.
U - Indicates compound analyzed for but not detected.
E - Indicates result exceeds highest calibration standard.
D - Indicates result is based on a dilution.
R - Result exceeds residential surface soil standards.*
I - Result exceeds industrial surface soil standards.*

* Flags are based on New Jersey Soil Cleanup from Site Remediation News Volume 06 Number 1.

ACCREDITED LABORATORIES, INC
PESTICIDE/PCB ORGANIC ANALYSIS DATA

CASE NUMBER	9748	MATRIX	Soil
SAMPLE NUMBER	0012809DL 10	DILUTION FACTOR	10
DATA FILE	>G7654	DATE EXTRACTED	10/20/00
CLIENT NAME	ENVIROTACTICS	DATE ANALYZED	10/23/00
FIELD ID	S-7	ANALYZED BY	JEFF

CAS#	COMPOUND	UG/KG		MDL
319846	A-BHC	U		7.65
319857	B-BHC	U		7.65
58899	G-BHC (Lindane)	U		7.65
319868	D-BHC	U		7.65
76448	Heptachlor	U		7.65
309002	Aldrin	U		7.65
1024573	Heptachlor Epoxide	U		7.65
959988	Endosulfan I	U		7.65
5103719	A-Chlordane	U		7.65
5103742	G-Chlordane	U		7.65
60571	Dieldrin	U		15.3
72559	4,4'-DDE	60.1	D	15.3
72208	Endrin	U		15.3
33213659	Endosulfan II	U		15.3
72548	4,4'-DDD	497	D	15.3
7421934	Endrin Aldehyde	U		15.3
1031078	Endosulfan Sulfate	U		15.3
50293	4,4'-DDT	U		15.3
53494705	Endrin Ketone	U		15.3
72435	Methoxychlor	U		76.5
8001352	Toxaphene	U		382
12674112	Aroclor-1016	U		191
11104282	Aroclor-1221	U		191
11141165	Aroclor-1232	U		191
53469219	Aroclor-1242	U		191
12672296	Aroclor-1248	U		191
11097691	Aroclor-1254	U		191
11096825	Aroclor-1260	U		191

Percent Solid of 87.2 is used for all target compounds.

B - Indicates compound found in associated blank.
J - Indicates compound concentration found below MDL.
U - Indicates compound analyzed for but not detected.
E - Indicates result exceeds highest calibration standard.
D - Indicates result is based on a dilution.
R - Result exceeds residential surface soil standards.*
I - Result exceeds industrial surface soil standards.*

* Flags are based on New Jersey Soil Cleanup from Site Remediation News Volume 06 Number 1.

ACCREDITED LABORATORIES, INC
PESTICIDE/PCB ORGANIC ANALYSIS DATA

CASE NUMBER	9748	MATRIX	Soil
SAMPLE NUMBER	0012810	DILUTION FACTOR	1
DATA FILE	>G7629	DATE EXTRACTED	10/20/00
CLIENT NAME	ENVIROTACTICS	DATE ANALYZED	10/21/00
FIELD ID	S-8	ANALYZED BY	JEFF

CAS#	COMPOUND	UG/KG	MDL
319846	A-BHC	U	.877
319857	B-BHC	U	.877
58899	G-BHC (Lindane)	U	.877
319868	D-BHC	U	.877
76448	Heptachlor	U	.877
309002	Aldrin	U	.877
1024573	Heptachlor Epoxide	U	.877
959988	Endosulfan I	U	.877
5103719	A-Chlordane	U	.877
5103742	G-Chlordane	U	.877
60571	Dieldrin	U	1.75
72559	4,4'-DDE	U	1.75
72208	Endrin	U	1.75
33213659	Endosulfan II	U	1.75
72548	4,4'-DDD	U	1.75
7421934	Endrin Aldehyde	U	1.75
1031078	Endosulfan Sulfate	U	1.75
50293	4,4'-DDT	U	1.75
53494705	Endrin Ketone	U	1.75
72435	Methoxychlor	U	8.77
8001352	Toxaphene	U	43.9
12674112	Aroclor-1016	U	21.9
11104282	Aroclor-1221	U	21.9
11141165	Aroclor-1232	U	21.9
53469219	Aroclor-1242	U	21.9
12672296	Aroclor-1248	U	21.9
11097691	Aroclor-1254	U	21.9
11096825	Aroclor-1260	U	21.9

Percent Solid of 76.0 is used for all target compounds.

B - Indicates compound found in associated blank.
J - Indicates compound concentration found below MDL.
U - Indicates compound analyzed for but not detected.
E - Indicates result exceeds highest calibration standard.
D - Indicates result is based on a dilution.
R - Result exceeds residential surface soil standards.*
I - Result exceeds industrial surface soil standards.*

* Flags are based on New Jersey Soil Cleanup from Site Remediation News Volume 06 Number 1.

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ACCREDITED LABORATORIES, INC.
INORGANIC ANALYSIS DATA SHEET

Case #: 9748
Sample #: 0012803
Field ID: S-1
Client Name: ENVIROTACTIC

Matrix: Soil
Date Received: 10/13/00

CAS No.	Element	Result MG/KG	MDL MG/KG	Dilution Factor	Method	Date Analyzed
7440-36-0	Antimony	ND	7.53	1	P	10/18/00
7440-38-2	Arsenic	7.24	1.50	4	F	10/17/00
7440-41-7	Beryllium	1.42	.753	1	P	10/18/00
7440-43-9	Cadmium	4.64	.753	1	P	10/18/00
7440-47-3	Chromium	25.4	2.26	1	P	10/18/00
7440-50-8	Copper	80.6	2.26	1	P	10/18/00
7439-92-1	Lead	120	15.1	1	P	10/18/00
7439-97-6	Mercury	.345	.233	1	CV	10/17/00
7440-02-0	Nickel	52.5	3.76	1	P	10/18/00
7782-49-2	Selenium	ND	3.74	10	F	10/17/00
7440-22-4	Silver	ND	1.13	1	P	10/18/00
7440-28-0	Thallium	ND	3.74	10	F	10/17/00
7440-66-6	Zinc	181	7.53	1	P	10/18/00

Percent Solid of 89.7 is used for all target elements

ND - Element analyzed for but not detected.
P - Analyzed by ICP
F - Analyzed by GFA
CV - Analyzed by Cold Vapor
A - Analyzed by flame AA

ACCREDITED LABORATORIES, INC.
INORGANIC ANALYSIS DATA SHEET

Case #: 9748
Sample #: 0012804
Field ID: S-2
Client Name: ENVIROTACTIC

Matrix: Soil
Date Received: 10/13/00

CAS No.	Element	Result MG/KG	MDL MG/KG	Dilution Factor	Method	Date Analyzed
7440-36-0	Antimony	ND	8.84	1	P	10/18/00
7440-38-2	Arsenic	10.9	1.77	4	F	10/17/00
7440-41-7	Beryllium	1.55	.884	1	P	10/18/00
7440-43-9	Cadmium	3.58	.884	1	P	10/18/00
7440-47-3	Chromium	24.2	2.65	1	P	10/18/00
7440-50-8	Copper	75.2	2.65	1	P	10/18/00
7439-92-1	Lead	587	17.7	1	P	10/18/00
7439-97-6	Mercury	.553	.276	1	CV	10/17/00
7440-02-0	Nickel	20.3	4.42	1	P	10/18/00
7782-49-2	Selenium	ND	4.42	10	F	10/17/00
7440-22-4	Silver	ND	1.33	1	P	10/18/00
7440-28-0	Thallium	ND	4.42	10	F	10/17/00
7440-66-6	Zinc	374	8.84	1	P	10/18/00

Percent Solid of 72.5 is used for all target elements

ND - Element analyzed for but not detected.
P - Analyzed by ICP
F - Analyzed by GFA
CV - Analyzed by Cold Vapor
A - Analyzed by flame AA

ACCREDITED LABORATORIES, INC.
INORGANIC ANALYSIS DATA SHEET

Case #: 9748
Sample #: 0012805
Field ID: S-3
Client Name: ENVIROTACTIC

Matrix: Soil
Date Received: 10/13/00

CAS No.	Element	Result MG/KG	MDL MG/KG	Dilution Factor	Method	Date Analyzed
7440-36-0	Antimony	ND	8.05	1	P	10/18/00
7440-38-2	Arsenic	16.2	4.08	10	F	10/18/00
7440-41-7	Beryllium	1.36	.805	1	P	10/18/00
7440-43-9	Cadmium	2.43	.805	1	P	10/18/00
7440-47-3	Chromium	18.6	2.42	1	P	10/18/00
7440-50-8	Copper	95.8	2.42	1	P	10/18/00
7439-92-1	Lead	54.2	16.1	1	P	10/18/00
7439-97-6	Mercury	.424	.254	1	CV	10/17/00
7440-02-0	Nickel	16.1	4.03	1	P	10/18/00
7782-49-2	Selenium	ND	4.08	10	F	10/17/00
7440-22-4	Silver	ND	1.21	1	P	10/18/00
7440-28-0	Thallium	ND	4.08	10	F	10/17/00
7440-66-6	Zinc	227	8.05	1	P	10/18/00

Percent Solid of 78.6 is used for all target elements

ND - Element analyzed for but not detected.
P - Analyzed by ICP
F - Analyzed by GFA
CV - Analyzed by Cold Vapor
A - Analyzed by flame AA

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ACCREDITED LABORATORIES, INC.
INORGANIC ANALYSIS DATA SHEET

Case #: 9748
Sample #: 0012806
Field ID: S-4
Client Name: ENVIROTACTIC

Matrix: Soil
Date Received: 10/13/00

CAS No.	Element	Result MG/KG	MDL MG/KG	Dilution Factor	Method	Date Analyzed
7440-36-0	Antimony	ND	7.51	1	P	10/18/00
7440-38-2	Arsenic	5.08	1.51	4	F	10/17/00
7440-41-7	Beryllium	1.32	.751	1	P	10/18/00
7440-43-9	Cadmium	2.97	.751	1	P	10/18/00
7440-47-3	Chromium	21.5	2.25	1	P	10/18/00
7440-50-8	Copper	87.9	2.25	1	P	10/18/00
7439-92-1	Lead	56.7	15.0	1	P	10/18/00
7439-97-6	Mercury	ND	.234	1	CV	10/17/00
7440-02-0	Nickel	35.3	3.76	1	P	10/18/00
7782-49-2	Selenium	ND	3.78	10	F	10/17/00
7440-22-4	Silver	ND	1.13	1	P	10/18/00
7440-28-0	Thallium	ND	3.78	10	F	10/17/00
7440-66-6	Zinc	219	7.51	1	P	10/18/00

Percent Solid of 85.3 is used for all target elements

ND - Element analyzed for but not detected.
P - Analyzed by ICP
F - Analyzed by GFA
CV - Analyzed by Cold Vapor
A - Analyzed by flame AA

ACCREDITED LABORATORIES, INC.
INORGANIC ANALYSIS DATA SHEET

Case #: 9748
Sample #: 0012807
Field ID: S-5
Client Name: ENVIROTACTIC

Matrix: Soil
Date Received: 10/13/00

CAS No.	Element	Result MG/KG	MDL MG/KG	Dilution Factor	Method	Date Analyzed
7440-36-0	Antimony	ND	7.32	1	P	10/18/00
7440-38-2	Arsenic	2.95	1.47	4	F	10/17/00
7440-41-7	Beryllium	1.19	.732	1	P	10/18/00
7440-43-9	Cadmium	1.97	.732	1	P	10/18/00
7440-47-3	Chromium	20.6	2.20	1	P	10/18/00
7440-50-8	Copper	12.2	2.20	1	P	10/18/00
7439-92-1	Lead	ND	14.6	1	P	10/18/00
7439-97-6	Mercury	ND	.233	1	CV	10/17/00
7440-02-0	Nickel	18.2	3.66	1	P	10/18/00
7782-49-2	Selenium	ND	3.68	10	F	10/17/00
7440-22-4	Silver	ND	1.10	1	P	10/18/00
7440-28-0	Thallium	ND	3.68	10	F	10/17/00
7440-66-6	Zinc	54.1	7.32	1	P	10/18/00

Percent Solid of 85.9 is used for all target elements

ND - Element analyzed for but not detected.
P - Analyzed by ICP
F - Analyzed by GFA
CV - Analyzed by Cold Vapor
A - Analyzed by flame AA

ACCREDITED LABORATORIES, INC.
INORGANIC ANALYSIS DATA SHEET

Case #: 9748
Sample #: 0012808
Field ID: S-6
Client Name: ENVIROTACTIC

Matrix: Soil
Date Received: 10/13/00

CAS No.	Element	Result MG/KG	MDL MG/KG	Dilution Factor	Method	Date Analyzed
7440-36-0	Antimony	ND	7.58	1	P	10/18/00
7440-38-2	Arsenic	ND	1.53	4	F	10/18/00
7440-41-7	Beryllium	.917	.758	1	P	10/18/00
7440-43-9	Cadmium	1.40	.758	1	P	10/18/00
7440-47-3	Chromium	14.2	2.27	1	P	10/18/00
7440-50-8	Copper	14.9	2.27	1	P	10/18/00
7439-92-1	Lead	16.9	15.2	1	P	10/18/00
7439-97-6	Mercury	ND	.236	1	CV	10/17/00
7440-02-0	Nickel	12.6	3.79	1	P	10/18/00
7782-49-2	Selenium	ND	3.81	10	F	10/17/00
7440-22-4	Silver	ND	1.14	1	P	10/18/00
7440-28-0	Thallium	ND	3.81	10	F	10/17/00
7440-66-6	Zinc	90.9	7.58	1	P	10/18/00

Percent Solid of 84.6 is used for all target elements

ND - Element analyzed for but not detected.
P - Analyzed by ICP
F - Analyzed by GFA
CV - Analyzed by Cold Vapor
A - Analyzed by flame AA

ACCREDITED LABORATORIES, INC.
INORGANIC ANALYSIS DATA SHEET

Case #: 9748
Sample #: 0012809
Field ID: S-7
Client Name: ENVIROTACTIC

Matrix: Soil
Date Received: 10/13/00

CAS No.	Element	Result MG/KG	MDL MG/KG	Dilution Factor	Method	Date Analyzed
7440-36-0	Antimony	ND	7.21	1	P	10/18/00
7440-38-2	Arsenic	ND	1.45	4	F	10/18/00
7440-41-7	Beryllium	1.00	.721	1	P	10/18/00
7440-43-9	Cadmium	1.90	.721	1	P	10/18/00
7440-47-3	Chromium	15.9	2.16	1	P	10/18/00
7440-50-8	Copper	14.9	2.16	1	P	10/18/00
7439-92-1	Lead	ND	14.4	1	P	10/18/00
7439-97-6	Mercury	ND	.229	1	CV	10/17/00
7440-02-0	Nickel	93.8	3.61	1	P	10/18/00
7782-49-2	Selenium	ND	3.63	10	F	10/17/00
7440-22-4	Silver	ND	1.08	1	P	10/18/00
7440-28-0	Thallium	ND	3.63	10	F	10/17/00
7440-66-6	Zinc	64.6	7.21	1	P	10/18/00

Percent Solid of 87.2 is used for all target elements

ND - Element analyzed for but not detected.
P - Analyzed by ICP
F - Analyzed by GFA
CV - Analyzed by Cold Vapor
A - Analyzed by flame AA

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ACCREDITED LABORATORIES, INC.
INORGANIC ANALYSIS DATA SHEET

Case #: 9748
Sample #: 0012810
Field ID: S-8
Client Name: ENVIROTACTIC

Matrix: Soil
Date Received: 10/13/00

CAS No.	Element	Result MG/KG	MDL MG/KG	Dilution Factor	Method	Date Analyzed
7440-36-0	Antimony	ND	8.33	1	P	10/18/00
7440-38-2	Arsenic	11.1	1.69	4	F	10/18/00
7440-41-7	Beryllium	1.48	.833	1	P	10/18/00
7440-43-9	Cadmium	2.55	.833	1	P	10/18/00
7440-47-3	Chromium	37.6	2.50	1	P	10/18/00
7440-50-8	Copper	41.4	2.50	1	P	10/18/00
7439-92-1	Lead	80.0	16.7	1	P	10/18/00
7439-97-6	Mercury	ND	.263	1	CV	10/17/00
7440-02-0	Nickel	20.1	4.16	1	P	10/18/00
7782-49-2	Selenium	ND	4.22	10	F	10/17/00
7440-22-4	Silver	ND	1.25	1	P	10/18/00
7440-28-0	Thallium	ND	4.22	10	F	10/17/00
7440-66-6	Zinc	384	8.33	1	P	10/18/00

Percent Solid of 76.0 is used for all target elements

ND - Element analyzed for but not detected.
P - Analyzed by ICP
F - Analyzed by GFA
CV - Analyzed by Cold Vapor
A - Analyzed by flame AA

95

ACCREDITED LABORATORIES, INC.
GENERAL CHEMISTRY ANALYSIS DATA

Case #: 9748
Sample #: 0012803
Client Name: ENVIROTACT
Field Number: S-1

Matrix: Soil
Date Received: 10/13/00
% Moisture: 14.3

ANALYTES	RESULTS	MDL	UNITS	DILUTION FACTOR	METHOD BLANK RESULTS	METHOD BLANK MDL	ANALYSIS DATE
Solids, Percent	85.7	0.10	%	1.			10/16/00
Cyanide, Total	2.22	1.08	mg/Kg	1.	ND	0.01	10/18/00

96

ACCREDITED LABORATORIES, INC.
GENERAL CHEMISTRY ANALYSIS DATA

Case #: 9748
Sample #: 0012804
Client Name: ENVIROTACT
Field Number: S-2

Matrix: Soil
Date Received: 10/13/00
% Moisture: 27.5

ANALYTES	RESULTS	MDL	UNITS	DILUTION FACTOR	METHOD BLANK RESULTS	METHOD BLANK MDL	ANALYSIS DATE
Solids, Percent	72.5	0.10	%	1.			10/16/00
Cyanide, Total	ND	1.17	mg/Kg	1.	ND	0.01	10/18/00

97

ACCREDITED LABORATORIES, INC.
GENERAL CHEMISTRY ANALYSIS DATA

Case #: 9748
Sample #: 0012805
Client Name: ENVIROTACT
Field Number: S-3

Matrix: Soil
Date Received: 10/13/00
% Moisture: 21.4

ANALYTES	RESULTS	MDL	UNITS	DILUTION FACTOR	METHOD BLANK RESULTS	METHOD BLANK MDL	ANALYSIS DATE
Solids, Percent	78.6	0.10	%	1.			10/16/00
Cyanide, Total	ND	1.18	mg/Kg	1.	ND	0.01	10/18/00

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ACCREDITED LABORATORIES, INC.
GENERAL CHEMISTRY ANALYSIS DATA

Case #: 9748
Sample #: 0012806
Client Name: ENVIROTACT
Field Number: S-4

Matrix: Soil
Date Received: 10/13/00
% Moisture: 14.7

ANALYTES	RESULTS	MDL	UNITS	DILUTION FACTOR	METHOD BLANK RESULTS	METHOD BLANK MDL	ANALYSIS DATE
Solids, Percent	85.3	0.10	%	1.			10/16/00
Cyanide, Total	ND	1.13	mg/Kg	1.	ND	0.01	10/18/00

ACCREDITED LABORATORIES, INC.
GENERAL CHEMISTRY ANALYSIS DATA

Case #:	9748	Matrix:	Soil
Sample #:	0012807	Date Received:	10/13/00
Client Name:	ENVIROTACT	% Moisture:	14.1
Field Number:	S-5		

ANALYTES	RESULTS	MDL	UNITS	DILUTION FACTOR	METHOD BLANK RESULTS	METHOD BLANK MDL	ANALYSIS DATE
Solids, Percent	85.9	0.10	%	1.			10/16/00
Cyanide, Total	ND	1.09	mg/Kg	1.	ND	0.01	10/18/00

100

ACCREDITED LABORATORIES, INC.
GENERAL CHEMISTRY ANALYSIS DATA

Case #: 9748
Sample #: 0012808
Client Name: ENVIROTACT
Field Number: S-6

Matrix: Soil
Date Received: 10/13/00
% Moisture: 15.4

ANALYTES	RESULTS	MDL	UNITS	DILUTION FACTOR	METHOD BLANK RESULTS	METHOD BLANK MDL	ANALYSIS DATE
Solids, Percent	84.6	0.10	%	1.			10/16/00
Cyanide, Total	ND	1.03	mg/Kg	1.	ND	0.01	10/18/00

ACCREDITED LABORATORIES, INC.
GENERAL CHEMISTRY ANALYSIS DATA

Case #: 9748
Sample #: 0012809
Client Name: ENVIROTACT
Field Number: S-7

Matrix: Soil
Date Received: 10/13/00
% Moisture: 12.8

ANALYTES	RESULTS	MDL	UNITS	DILUTION FACTOR	METHOD BLANK RESULTS	METHOD BLANK MDL	ANALYSIS DATE
Solids, Percent	87.2	0.10	%	1.			10/16/00
Cyanide, Total	1.10	1.09	mg/Kg	1.	ND	0.01	10/18/00

ACCREDITED LABORATORIES, INC.
GENERAL CHEMISTRY ANALYSIS DATA

Case #: 9748
Sample #: 0012810
Client Name: ENVIROTACT
Field Number: S-8

Matrix: Soil
Date Received: 10/13/00
% Moisture: 24.0

ANALYTES	RESULTS	MDL	UNITS	DILUTION FACTOR	METHOD BLANK RESULTS	METHOD BLANK MDL	ANALYSIS DATE
Solids, Percent	76.0	0.10	%	1.			10/16/00
Cyanide, Total	ND	0.99	mg/Kg	1.	ND	0.01	10/18/00

Accredited Laboratories, Inc.
Total Petroleum Hydrocarbon Analysis

Client: ENVIROTACT
Case #: 9748
Analyst: RB

Matrix: Soil
Date Received: 10/13/00
Date Analyzed: 10/19/00

Field #	Sample #	Amount Used (g)	% S	DF	ABS	Result mg/Kg	MDL mg/Kg
S-1	0012803	15.20	85.7	1	8	82	46
S-2	0012804	16.38	72.5	1	74	834	51
S-3	0012805	15.89	78.6	1	0	ND	48
S-4	0012806	15.34	85.3	1	5	51	46
S-5	0012807	15.37	85.9	1	3	ND	45
S-6	0012808	15.12	84.6	1	86	900	47
S-7	0012809	15.33	87.2	1	11	110	45
S-8	0012810	15.22	76.0	1	75	868	52

Response Factor = .13383944

% S = Percent Solids
DF = Dilution Factor
ABS = Absorbance

Method Blank: < 20 mg/Kg

104

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION
BROMOFLUOROBENZENE (BFB)

Name: ACCREDITED LABORATORIES, INC. Contract: _____

Lab File ID: >A8432 BFB Injection Date: 10/06/00

Instrument ID: HP5970BA BFB Injection Time: 08:57

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	23.6
75	30.0 - 60.0% of mass 95	57.9
95	Base peak, 100% relative abundance	100.
96	5.0 - 9.0% of mass 95	7.7
173	Less than 2.0% of mass 174	0.0(0.0)1
174	Greater than 50.0% of mass 95	68.8
175	5.0 - 9.0% of mass 174	4.8(7.0)1
176	95.0 - 101.0% of mass 174	65.7(95.6)1
177	5.0 - 9.0% of mass 176	5.2(7.9)2

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		VSTD050	>A8433	10/06/00	09:15
02		VSTD020	>A8434	10/06/00	10:23
03		VSTD010	>A8435	10/06/00	11:03
04		VSTD100	>A8436	10/06/00	11:43
05		VSTD200	>A8437	10/06/00	12:22
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

105

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION
BROMOFLUOROBENZENE (BFB)

Name: ACCREDITED LABORATORIES, INC. Contract: _____

Lab File ID: >A8759 BFB Injection Date: 10/25/00

Instrument ID: HP5970BA BFB Injection Time: 10:07

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	18.9
75	30.0 - 60.0% of mass 95	50.6
95	Base peak, 100% relative abundance	100.
96	5.0 - 9.0% of mass 95	7.4
173	Less than 2.0% of mass 174	0.0(0.0)1
174	Greater than 50.0% of mass 95	73.1
175	5.0 - 9.0% of mass 174	6.1(8.3)1
176	95.0 - 101.0% of mass 174	72.3(98.9)1
177	5.0 - 9.0% of mass 176	5.1(7.0)2

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		VSTD050	>A8760	10/25/00	10:26
02		VBLKA85	>A8762	10/25/00	12:20
03		0012811	>A8763	10/25/00	13:11
04		0012771	>A8764	10/25/00	13:51
05		0013014	>A8765	10/25/00	14:31
06		0013013	>A8766	10/25/00	15:04
07		0012756DL	>A8767	10/25/00	15:36
08		0012803	>A8768	10/25/00	16:16
09		0012804	>A8769	10/25/00	16:56
10		0012805	>A8770	10/25/00	17:36
11		0012806	>A8771	10/25/00	18:16
12		0012807	>A8772	10/25/00	18:56
13		0012808	>A8773	10/25/00	19:36
14		0012809	>A8774	10/25/00	20:16
15		0012810	>A8775	10/25/00	20:55
16		0012012	>A8776	10/25/00	21:35
17					
18					
19					
20					
21					
22					

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5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION
BROMOFLUOROBENZENE (BFB)

Name: ACCREDITED LABORATORIES, INC. Contract: _____

Lab File ID: >A8781 BFB Injection Date: 10/26/00

Instrument ID: HP5970BA BFB Injection Time: 09:06

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	22.3
75	30.0 - 60.0% of mass 95	55.0
95	Base peak, 100% relative abundance	100.
96	5.0 - 9.0% of mass 95	8.3
173	Less than 2.0% of mass 174	0.0(0.0)1
174	Greater than 50.0% of mass 95	66.7
175	5.0 - 9.0% of mass 174	4.7(7.0)1
176	95.0 - 101.0% of mass 174	65.1(97.5)1
177	5.0 - 9.0% of mass 176	5.4(8.3)2

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		VSTD050	>A8782	10/26/00	09:25
02		VBLKA86	>A8785	10/26/00	12:04
03		0013093	>A8786	10/26/00	13:01
04		0013092	>A8787	10/26/00	13:41
05		0012803	>A8788	10/26/00	14:21
06		0012804	>A8789	10/26/00	15:01
07		0012807DL	>A8790	10/26/00	15:40
08		0012808DL	>A8791	10/26/00	16:20
09		0012809DL	>A8792	10/26/00	17:00
10		0012810DL	>A8793	10/26/00	17:40
11		0012804MS	>A8794	10/26/00	18:20
12		0012804MSD	>A8795	10/26/00	19:00
13		0013088	>A8796	10/26/00	19:40
14		0013089	>A8797	10/26/00	20:20
15		0013090	>A8798	10/26/00	21:00
16					
17					
18					
19					
20					
21					
22					

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION
BROMOFLUOROBENZENE (BFB)

Name: ACCREDITED LABORATORIES, INC. Contract: _____

Lab File ID: >A8804 BFB Injection Date: 10/27/00

Instrument ID: HP5970BA BFB Injection Time: 09:43

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	18.5
75	30.0 - 60.0% of mass 95	52.9
95	Base peak, 100% relative abundance	100.
96	5.0 - 9.0% of mass 95	8.8
173	Less than 2.0% of mass 174	0.0(0.0)1
174	Greater than 50.0% of mass 95	93.7
175	5.0 - 9.0% of mass 174	6.6(7.0)1
176	95.0 - 101.0% of mass 174	90.8(96.9)1
177	5.0 - 9.0% of mass 176	6.4(7.1)2

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

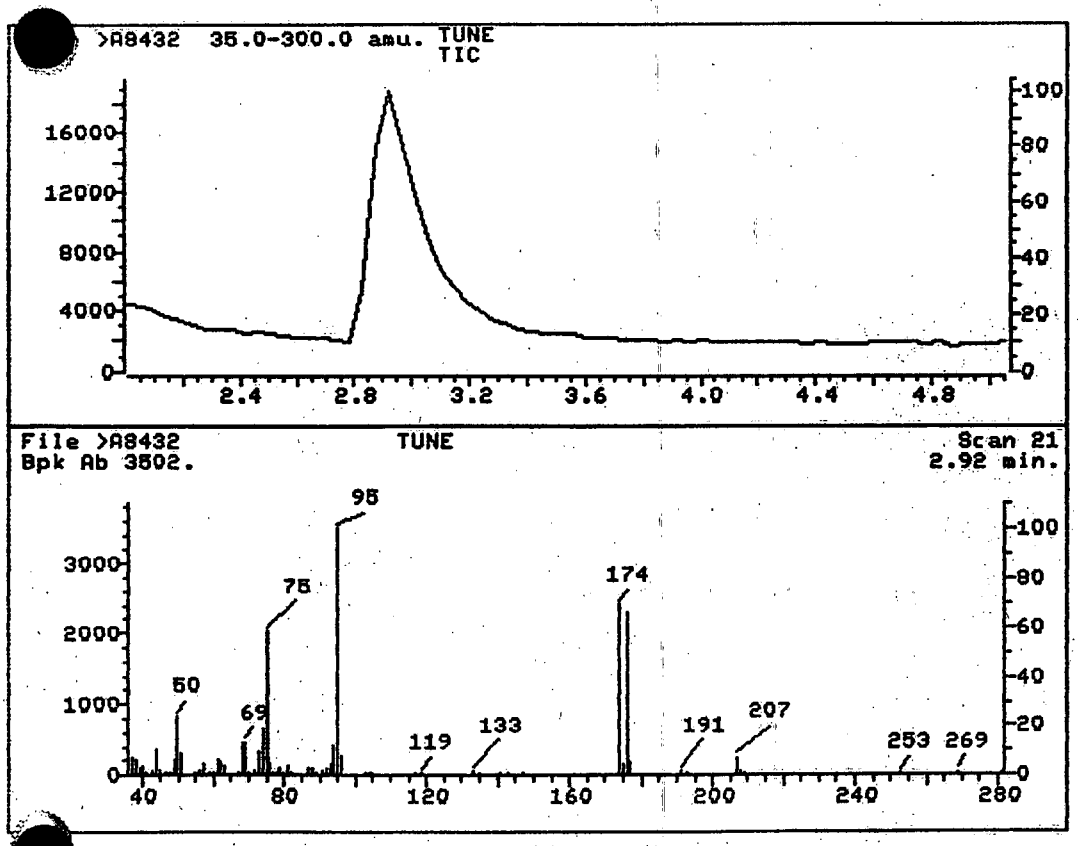
	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		VSTD050	>A8805	10/27/00	10:04
02		VBLKA87	>A8806	10/27/00	11:00
03		0013093	>A8807	10/27/00	11:54
04		0013088	>A8808	10/27/00	12:34
05		0013091	>A8809	10/27/00	13:14
06		0012808DL	>A8810	10/27/00	13:54
07		0012809DL	>A8811	10/27/00	14:26
08		BLANK	>A8812	10/27/00	14:59
09		0012975	>A8813	10/27/00	15:39
10		0013189	>A8814	10/27/00	16:19
11		0013188	>A8815	10/27/00	16:59
12		0012969	>A8816	10/27/00	17:38
13		0012970	>A8817	10/27/00	18:18
14		0012971	>A8818	10/27/00	18:58
15		0012972	>A8819	10/27/00	19:38
16		0012973	>A8820	10/27/00	20:19
17		0012974	>A8821	10/27/00	20:59
18					
19					
20					
21					
22					

GC/MS PERFORMANCE STANDARD

Bromofluorobenzene (BFB)

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
50	15-40% of mass 95	23.56	23.56	OK
75	30-60% of mass 95	57.94	57.94	OK
95	Base peak, 100% relative abundance	100.00	100.00	OK
96	5-9% of mass 95	7.65	7.65	OK
173	Less than 2% of mass 174	0.00	0.00	OK
174	Greater than 50% of mass 95	68.79	68.79	OK
175	5-9% of mass 174	4.83	7.02	OK
176	95-101% of mass 174	65.73	95.56	OK
177	5-9% of mass 176	5.20	7.91	OK

Injection Date: 10/06/00
Injection Time: 08:57
Data File: >A8432
Scan: 21



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>A8432 TUNE
21

s: >A8432 Scan #: 21 Retn. time: 2.92

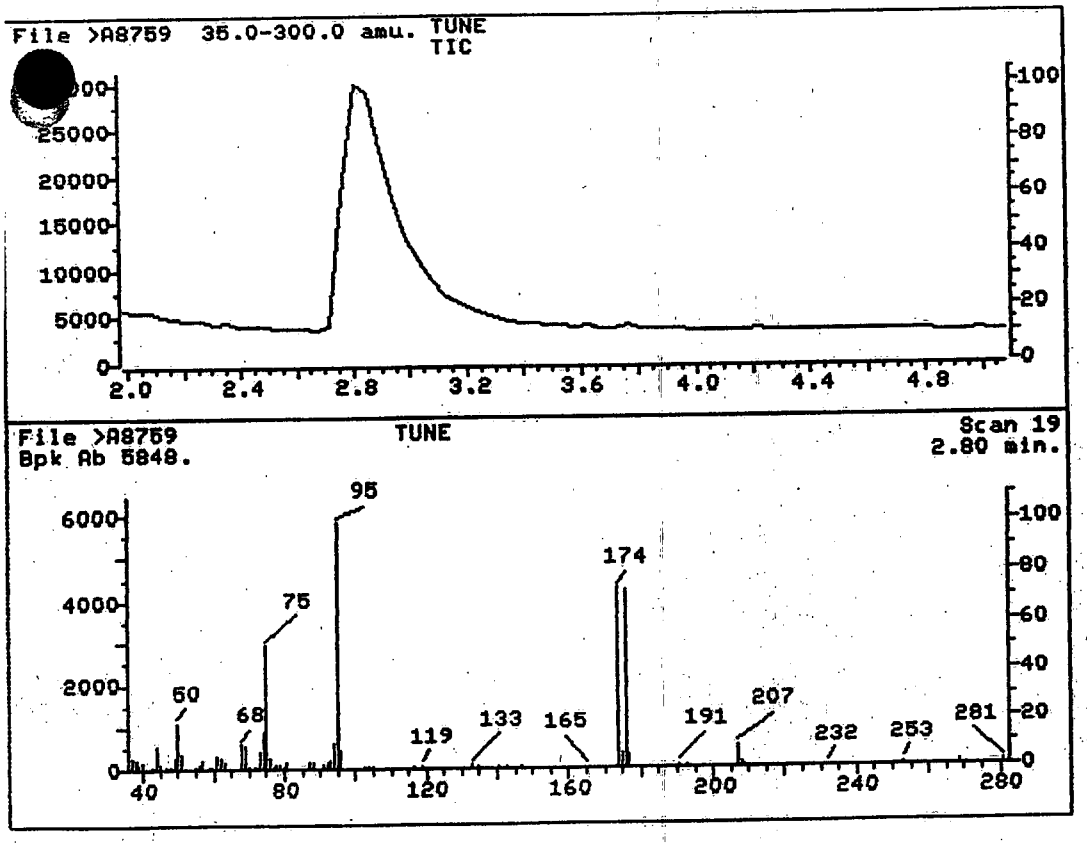
m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
35.90	33.00	56.95	140.00	76.95	37.00	102.95	36.00	174.90	169.00
37.00	233.00	58.85	28.00	78.05	28.00	103.95	43.00	175.90	2302.00
38.00	208.00	60.00	48.00	78.85	96.00	105.05	31.00	176.90	182.00
39.00	90.00	61.00	220.00	79.95	34.00	105.85	19.00	177.90	15.00
39.90	111.00	62.00	173.00	80.95	111.00	114.90	20.00	190.95	54.00
41.00	48.00	63.00	121.00	81.95	28.00	116.90	26.00	193.00	33.00
43.00	75.00	66.90	31.00	87.00	85.00	118.90	35.00	206.95	249.00
43.90	371.00	68.00	448.00	88.00	90.00	127.05	12.00	208.05	55.00
45.00	69.00	68.90	452.00	88.90	29.00	127.95	17.00	209.05	38.00
46.95	45.00	70.00	33.00	90.90	54.00	132.95	56.00	252.90	36.00
48.05	30.00	72.00	62.00	91.90	109.00	134.85	24.00	260.05	17.00
48.95	202.00	73.05	316.00	92.90	167.00	140.90	25.00	268.95	49.00
49.95	825.00	73.95	662.00	93.90	419.00	142.90	26.00	269.85	13.00
50.95	289.00	74.95	2029.00	95.00	3502.00	146.90	24.00	281.00	47.00
54.95	45.00	76.05	160.00	96.00	268.00	173.90	2409.00	281.90	13.00
55.95	71.00								

GC/MS PERFORMANCE STANDARD

Bromofluorobenzene (BFB)

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
50	15-40% of mass 95	18.93	18.93	OK
75	30-60% of mass 95	50.58	50.58	OK
95	Base peak, 100% relative abundance	100.00	100.00	OK
96	5-9% of mass 95	7.39	7.39	OK
173	Less than 2% of mass 174	0.00	0.00	OK
174	Greater than 50% of mass 95	73.12	73.12	OK
175	5-9% of mass 174	6.07	8.30	OK
176	95-101% of mass 174	72.33	98.92	OK
177	5-9% of mass 176	5.10	7.05	OK

Injection Date: 10/25/00
Injection Time: 10:07
Data File: >A8759
Scan: 19



>A8759 TUNE
19

File: >A8759 Scan #: 19 Retn. time: 2.80

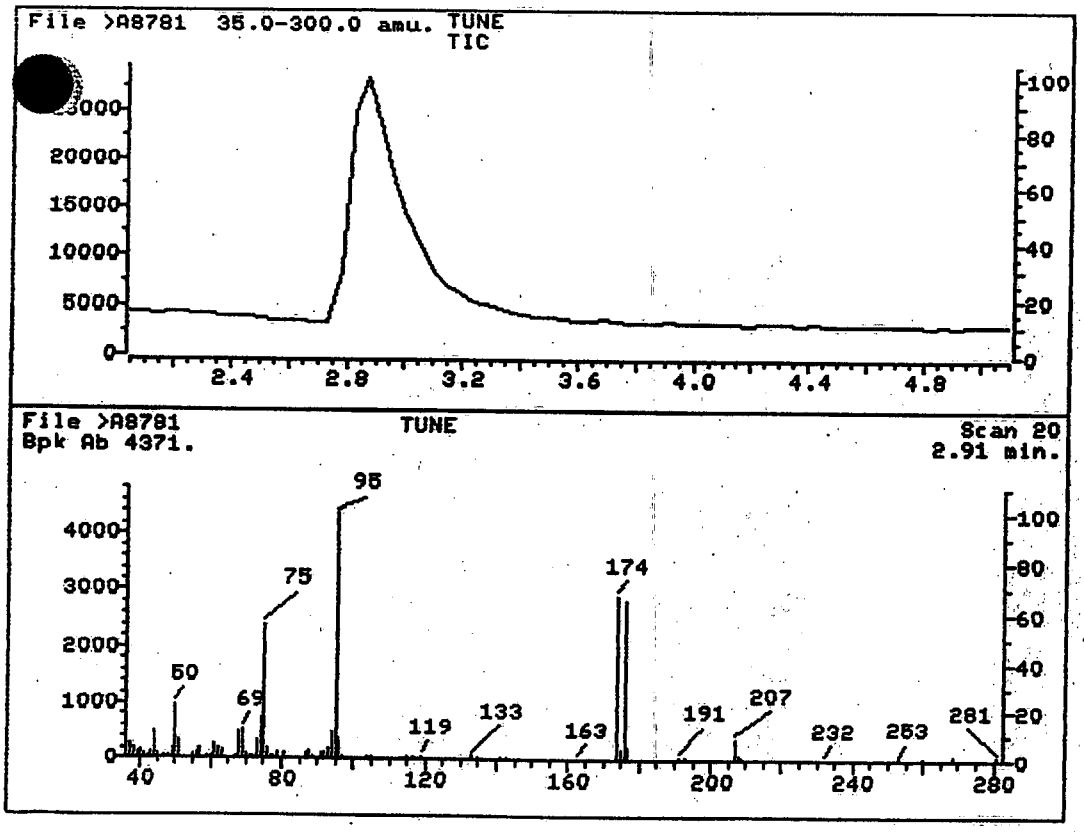
m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
35.90	48.00	59.90	68.00	86.90	176.00	127.85	27.00	190.85	71.00
37.00	275.00	61.00	291.00	87.90	147.00	129.75	21.00	191.95	16.00
38.00	229.00	62.00	267.00	88.80	28.00	132.95	109.00	192.90	55.00
38.90	110.00	63.00	174.00	91.00	123.00	134.95	54.00	206.95	512.00
39.90	148.00	63.80	15.00	92.00	147.00	140.80	43.00	207.95	105.00
41.00	33.00	67.90	582.00	92.90	223.00	142.80	41.00	208.85	77.00
42.90	53.00	68.90	564.00	93.90	593.00	145.10	17.00	222.90	23.00
43.90	532.00	69.90	53.00	94.90	5848.00	146.90	40.00	231.90	21.00
44.90	105.00	71.90	75.00	95.90	432.00	147.80	20.00	252.90	80.00
46.95	58.00	72.90	413.00	96.90	23.00	148.90	22.00	259.85	34.00
47.95	38.00	73.95	886.00	102.85	39.00	154.85	17.00	260.95	11.00
48.95	235.00	74.95	2958.00	103.95	46.00	160.85	16.00	266.85	21.00
49.95	1107.00	75.95	262.00	104.95	44.00	164.85	19.00	268.85	100.00
50.95	339.00	76.95	68.00	105.75	25.00	173.80	4276.00	269.85	26.00
51.95	32.00	77.95	96.00	116.90	46.00	174.80	355.00	270.95	23.00
54.95	39.00	78.85	121.00	117.80	26.00	175.80	4230.00	280.90	111.00
55.85	95.00	79.85	39.00	118.90	73.00	176.80	298.00	282.00	30.00
56.95	190.00	80.85	149.00	126.95	32.00	178.90	12.00	282.80	18.00
58.95	40.00	81.85	35.00						

GC/MS PERFORMANCE STANDARD

Bromofluorobenzene (BFB)

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
50	15-40% of mass 95	22.31	22.31	OK
75	30-60% of mass 95	55.02	55.02	OK
95	Base peak, 100% relative abundance	100.00	100.00	OK
96	5-9% of mass 95	8.31	8.31	OK
173	Less than 2% of mass 174	0.00	0.00	OK
174	Greater than 50% of mass 95	66.74	66.74	OK
175	5-9% of mass 174	4.67	6.99	OK
176	95-101% of mass 174	65.07	97.50	OK
177	5-9% of mass 176	5.42	8.33	OK

Injection Date: 10/26/00
Injection Time: 09:06
Data File: >A8781
Scan: 20



>A8781 TUNE
20

e: >A8781 Scan #: 20 Retn. time: 2.91

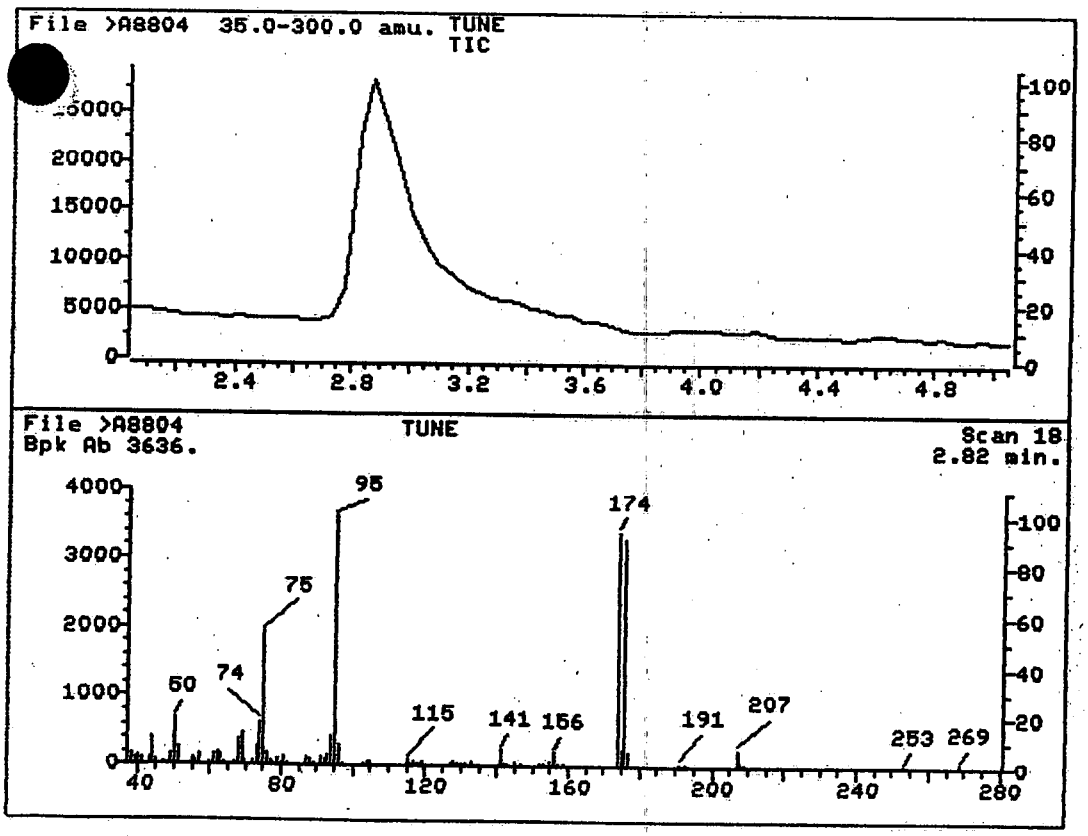
m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
35.90	42.00	58.95	30.00	80.85	116.00	116.90	30.00	177.90	15.00
37.00	251.00	60.00	49.00	82.95	25.00	117.90	15.00	190.95	55.00
38.00	203.00	61.00	250.00	86.90	129.00	118.90	56.00	191.85	16.00
39.00	108.00	62.00	207.00	87.80	138.00	127.85	21.00	192.90	44.00
39.90	171.00	63.00	151.00	88.90	31.00	129.65	14.00	206.95	378.00
40.90	82.00	67.00	30.00	90.90	105.00	130.85	15.00	207.95	72.00
41.90	28.00	67.90	485.00	91.90	125.00	132.95	75.00	208.95	44.00
43.00	102.00	68.90	539.00	93.00	189.00	133.95	21.00	218.85	12.00
43.90	473.00	69.90	65.00	93.90	489.00	134.95	34.00	231.90	21.00
44.90	95.00	71.00	36.00	94.90	4371.00	140.90	32.00	248.90	15.00
47.05	44.00	72.00	62.00	95.90	363.00	142.90	43.00	252.90	45.00
47.95	34.00	72.90	347.00	96.90	29.00	148.80	14.00	253.80	13.00
48.95	204.00	73.95	755.00	102.95	24.00	160.85	17.00	259.95	30.00
49.95	975.00	74.95	2405.00	103.95	36.00	162.85	23.00	268.85	74.00
50.95	328.00	75.95	194.00	104.95	50.00	173.80	2917.00	280.90	82.00
54.95	72.00	76.95	55.00	108.65	11.00	174.80	204.00	281.80	26.00
55.95	101.00	77.95	31.00	110.85	17.00	175.80	2844.00	282.80	19.00
56.95	203.00	78.85	102.00	115.00	28.00	176.80	237.00		

GC/MS PERFORMANCE STANDARD

Bromofluorobenzene (BFB)

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
50	15-40% of mass 95	18.45	18.45	OK
75	30-60% of mass 95	52.86	52.86	OK
95	Base peak, 100% relative abundance	100.00	100.00	OK
96	5-9% of mass 95	8.77	8.77	OK
173	Less than 2% of mass 174	0.00	0.00	OK
174	Greater than 50% of mass 95	93.67	93.67	OK
175	5-9% of mass 174	6.60	7.05	OK
176	95-101% of mass 174	90.76	96.89	OK
177	5-9% of mass 176	6.41	7.06	OK

Injection Date: 10/27/00
Injection Time: 09:43
Data File: >A8804
Scan: 18



115

>A8804 TUNE
18

File: >A8804 Scan #: 18 Retn. time: 2.82

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
37.00	183.00	61.00	175.00	87.90	97.00	120.00	17.00	155.95	209.00
38.00	173.00	62.00	179.00	89.00	36.00	121.00	15.00	157.05	44.00
39.00	106.00	63.00	149.00	91.00	119.00	125.90	15.00	158.95	48.00
39.90	144.00	64.00	28.00	91.90	89.00	127.05	41.00	159.95	14.00
41.00	91.00	66.90	47.00	92.90	155.00	127.95	69.00	162.85	21.00
43.00	89.00	68.00	379.00	94.00	434.00	128.95	44.00	164.95	18.00
43.90	415.00	68.90	458.00	94.90	3636.00	129.95	25.00	173.80	3406.00
44.90	69.00	69.90	54.00	95.90	319.00	130.95	37.00	174.90	240.00
46.95	40.00	72.00	55.00	97.00	39.00	132.95	56.00	175.80	3300.00
47.95	23.00	72.90	281.00	101.85	12.00	133.85	15.00	176.80	233.00
48.95	156.00	73.95	631.00	102.85	35.00	138.95	21.00	190.95	41.00
49.95	671.00	74.95	1922.00	103.95	65.00	141.00	252.00	191.85	12.00
51.05	241.00	75.95	195.00	104.95	67.00	142.00	45.00	192.90	27.00
51.95	23.00	76.95	82.00	106.95	23.00	142.80	48.00	206.95	259.00
52.95	23.00	77.95	50.00	110.95	16.00	145.00	64.00	207.95	57.00
55.05	91.00	78.85	112.00	115.00	87.00	145.80	15.00	208.95	30.00
55.95	67.00	79.95	30.00	115.90	28.00	146.90	35.00	253.00	30.00
56.95	151.00	80.85	115.00	116.90	57.00	151.90	38.00	268.95	56.00
57.85	14.00	81.95	39.00	117.90	36.00	152.95	39.00	269.95	13.00
60.00	39.00	86.90	116.00	119.00	54.00	154.95	80.00	281.00	55.00

Initial Calibration Data
HSL Compounds

Case No: _____ Instrument ID: HP5970BA

Contractor: Accredited Labs Calibration Date: 10/06/00

Contract No: CAAS09

Minimum $\overline{RF}$ for SPCC is 0.1 Maximum % RSD for CCC is 20%

Laboratory ID:	>A8435	>A8434	>A8433	>A8436	>A8437					
Compound	RF 10.00	RF 20.00	RF 50.00	RF 100.00	RF 200.00	$\overline{RRT}$	$\overline{RF}$	% RSD	CCC	SPCC
Acrolein	.00285	.01341	.01416	.01612	.01715	.452	.01274	44.962		
Acrylonitrile	.04263	.04630	.04756	.05593	.05540	.629	.04957	11.819		
Acetone	.05951	.07312	.06128	.06311	.06245	.481	.06389	8.352		
Dichlorodifluoromethane	.49579	.53496	.53218	.52842	.45533	.265	.50933	6.689		
Chloromethane	.15221	.25466	.30136	.27958	.27196	.287	.25195	23.110		**
Vinyl Chloride	.17412	.19813	.20329	.23382	.21785	.299	.20544	10.879	*	
Bromomethane	.25290	.26556	.27419	.27800	.25178	.338	.26449	4.527		
Chloroethane	.11203	.12942	.12706	.13758	.12906	.345	.12703	7.324		
Trichlorofluoromethane	.93062	1.00017	.92679	1.01300	.93125	.379	.96037	4.422		
1,1-Dichloroethene	.57954	.60693	.59032	.66418	.65493	.456	.61918	6.180	*	
Carbon disulfide	.53332	.59194	.62452	.69042	.70349	.493	.62874	11.210		
Methylene Chloride	.82104	.65010	.42970	.53479	.51557	.557	.59024	25.593		
trans-1,2-Dichloroethene	.54056	.55321	.55069	.63324	.58250	.601	.57204	6.574		
1,1-Dichloroethane	.66821	.68100	.68000	.78828	.74507	.714	.71251	7.297		**
Vinyl acetate	.63439	.67908	.55693	.67582	.66249	.736	.64174	7.881		
2,2-Dichloropropane	.52803	.57575	.54008	.62409	.59188	.854	.57197	6.814		
2-Butanone	.08734	.11429	.12276	.15858	.12836	.883	.12227	21.009		
cis-1,2-dichloroethene	.64352	.66475	.64094	.74639	.74398	.864	.68792	7.718		
Chloroform	.85769	.89172	.84902	.98528	.98740	.943	.91422	7.410	*	
Bromochloromethane	.30573	.31766	.33833	.36425	.36840	.919	.33888	8.168		
1,1,1-Trichloroethane	.85064	.89246	.84720	.95069	.95148	.964	.89849	5.699		
T-butyl alcohol	.02068	.02410	.02517	.02934	.03004	.600	.02587	14.967		
1,2-Dichloroethane-d4	.57960	.55170	.50164	.57175	.54669	.919	.55028	5.528		
1,1-Dichloropropene	.98575	.82815	.61577	.62756	.57018	.873	.72548	24.272		
Carbon Tetrachloride	1.23568	1.12497	.87159	.85381	.79770	.864	.97675	19.643		
1,2-Dichloroethane	.60087	.65383	.58900	.63332	.62110	.933	.61962	4.153		
Benzene	.83963	.92145	.80839	.86515	.83059	.910	.85304	5.077		
Trichloroethene	.48548	.52462	.48684	.48251	.47516	1.034	.49092	3.946		
1,2-Dichloropropane	.35772	.37933	.34716	.39026	.36744	1.084	.36838	4.629	*	
Bromodichloromethane	.79037	.86194	.81287	.92121	.91846	1.136	.86097	6.928		

(Conc=50.0,100.0,250.0,50
(Conc=50.0,100.0,250.0,50
(Conc=100.0,200.0,500.0,1

RF - Response Factor (Subscript is amount in ug/l)

$\overline{RRT}$ - Average Relative Retention Time (RT Std/RT Istd)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Initial Calibration Data
HSL Compounds

Case No: Instrument ID: HP5970BA

Contractor: Accredited Labs Calibration Date: 10/06/00

Contract No: CAAS09

Minimum $\overline{RF}$ for SPCC is 0.1 Maximum % RSD for CCC is 20%

Laboratory ID:	>A8435	>A8434	>A8433	>A8436	>A8437					
Compound	RF 10.00	RF 20.00	RF 50.00	RF 100.00	RF 200.00	$\overline{RRT}$	$\overline{RF}$	% RSD	CCC	SPCC
Dibromomethane	.35867	.41274	.40323	.42119	.38910	1.103	.39698	6.174		
2-Chloroethylvinylether	.14505	.15687	.15390	.19159	.19403	1.196	.16829	13.560		
cis-1,3-dichloropropene	.56190	.61600	.57436	.65327	.65250	1.214	.61161	6.978		(Conc=9.45,18.9,47.3,94.5
Toluene-d8	1.21708	1.06953	.95473	1.04145	.98951	1.248	1.05446	9.602		
Toluene	1.05183	1.10706	.98061	1.06468	1.03187	1.259	1.04721	4.423	*	
trans-1,3-Dichloropropene	.43381	.50349	.47428	.56851	.55249	1.316	.50651	10.944		(Conc=10.5,21.1,52.8,105.
1,1,2-Trichloroethane	.28683	.31540	.26753	.30947	.28921	1.345	.29369	6.531		
4-Methyl-2-pentanone	.30204	.33456	.29209	.32664	.30175	1.245	.31142	5.838		
1,2-Dibromoethane	.54555	.60517	.52935	.60718	.57822	1.420	.57309	6.100		
Bromofluorobenzene	1.05664	.86110	.72710	.80270	.71434	1.697	.83238	16.670		
2-Hexanone	.22931	.25365	.21794	.24690	.24607	.929	.23877	6.155		
1,3-dichloropropane	.66656	.70456	.64321	.69052	.70284	.918	.68154	3.853		
Tetrachloroethene	.65539	.71620	.68096	.64486	.63485	.898	.66645	4.903		
Dibromochloromethane	.77157	.86231	.83961	.93465	.98246	.938	.87812	9.385		
Ethylbenzene	1.68121	1.72949	1.58359	1.63868	1.54043	1.013	1.63468	4.605	*	
[illegible]robenzene	1.04785	1.08468	1.02029	1.05387	.99823	1.002	1.04098	3.178		**
1,1,1,2-Tetrachloroethane	.58125	.65084	.61259	.64752	.61872	1.015	.62218	4.576		
m,p-Xylene	1.46509	1.56802	1.36081	1.47306	1.31935	1.027	1.43727	6.861		(Conc=20.0,40.0,100.0,200
o-Xylene	1.45762	1.53047	1.35874	1.39620	1.30814	1.073	1.41024	6.138		(Conc=20.0,40.0,100.0,200
Styrene	.89779	.97480	.86752	.86267	.81911	1.075	.88438	6.538		(Conc=20.0,40.0,100.0,200
Bromoform	.52008	.63353	.63012	.67682	.64833	1.097	.62178	9.611		**
Isopropylbenzene	2.63478	3.05498	2.81004	2.87308	2.75958	.881	2.82649	5.478		
1,1,2,2-Tetrachloroethane	1.00412	1.06879	1.03661	1.06706	.98176	.916	1.03167	3.724		**
1,2,3-Trichloropropane	.27685	.32623	.31334	.32711	.29764	.919	.30824	6.888		
n-Propyl benzene	3.26626	3.48210	3.25215	3.39278	3.14175	.917	3.30701	4.000		
Bromobenzene	1.83414	1.90729	1.80451	1.94238	1.82580	.909	1.86282	3.165		
1,3,5-Trimethylbenzene	2.38732	2.62742	2.48985	2.48995	2.36927	.935	2.47276	4.169		
2-Chlorotoluene	2.55605	2.68812	2.54816	2.60573	2.47137	.926	2.57389	3.105		
4-Chlorotoluene	2.76200	3.06370	2.77705	2.98069	2.74980	.937	2.86665	5.069		
tert-Butylbenzene	2.47774	2.63181	2.53313	2.62467	2.39448	.961	2.53237	3.969		

RF - Response Factor (Subscript is amount in ug/l)

$\overline{RRT}$ - Average Relative Retention Time (RT Std/RT Istd)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Initial Calibration Data
HSL Compounds

Case No: Instrument ID: HP5970BA

actor: Accredited Labs Calibration Date: 10/06/00

Contract No: CAAS09

Minimum $\overline{RF}$ for SPCC is 0.1 Maximum % RSD for CCC is 20%

Laboratory ID:	>A8435	>A8434	>A8433	>A8436	>A8437					
Compound	RF 10.00	RF 20.00	RF 50.00	RF 100.00	RF 200.00	$\overline{RRT}$	$\overline{RF}$	% RSD	CCC	SPCC
1,2,4-Trimethylbenzene	2.41821	2.70429	2.49890	2.66279	2.45222	.968	2.54728	5.044		
sec-Butylbenzene	3.12048	3.44197	3.28125	3.23909	3.08875	.982	3.23431	4.359		
p-Isopropyltoluene	2.63210	2.92526	2.74757	2.80006	2.50344	.996	2.72168	5.922		
1,3-Dichlorobenzene	1.58411	1.67328	1.56089	1.53995	1.39583	.992	1.55081	6.476		
1,4-Dichlorobenzene	1.62412	1.73398	1.56963	1.61330	1.48223	1.002	1.60465	5.694		
n-Butylbenzene	2.69442	2.87081	2.81756	2.86310	2.60379	1.032	2.76994	4.211		
1,2-Dichlorobenzene	1.45303	1.56050	1.50510	1.48404	1.35286	1.035	1.47110	5.224		
1,2-Dibromo-3-Chloropropane	.20198	.25973	.27999	.27754	.29063	1.109	.26197	13.485		
1,2,4-Trichlorobenzene	1.09690	1.31536	1.26480	1.23594	1.20335	1.179	1.22327	6.683		
Hexachlorobutadiene	.90576	1.04335	.88005	.88047	.87915	1.191	.91775	7.747		
Naphthalene	1.60309	1.99129	1.91806	2.00850	1.95579	1.202	1.89535	8.812		
1,2,3-Trichlorobenzene	.92796	1.23865	1.12806	1.10520	1.08232	1.224	1.09644	10.185		
Methyl t-butyl ether	1.29227	1.34178	1.23262	1.32526	1.21437	.278	1.28126	4.374		

(Conc=100.0,200.0,500.0,1

RF - Response Factor (Subscript is amount in ug/l)

$\overline{RRT}$ - Average Relative Retention Time (RT Std/RT Istd)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

Case No:

Calibration Date: 10/25/00

Contractor: Accredited Labs

Time: 10:26

Contract No: CAAS09

Laboratory ID: >A8760

Instrument ID: HP5970BA

Initial Calibration Date: 10/06/00

Minimum $\overline{RF}$ for SPCC is 0.1

Maximum % Diff for CCC is 30%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
Acrolein	.01274	.01460	14.61			(Conc=250.00)
Acrylonitrile	.04957	.05519	11.35			(Conc=250.00)
Acetone	.06389	.06059	5.17			
Dichlorodifluoromethane	.50933	.46217	9.26			
Chloromethane	.25195	.29385	16.63		**	
Vinyl Chloride	.20544	.23546	14.61	*		
Bromomethane	.26449	.29016	9.71			
Chloroethane	.12703	.14012	10.31			
Trichlorofluoromethane	.96037	.84299	12.22			
1,1-Dichloroethene	.61918	.50973	17.68	*		
Carbon disulfide	.62874	.60037	4.51			
Methylene Chloride	.59024	.49069	16.87			
trans-1,2-Dichloroethene	.57204	.50745	11.29			
1,1-Dichloroethane	.71251	.62525	12.25		**	
Vinyl acetate	.64174	.50416	21.44			
2,2-Dichloropropane	.57197	.50760	11.25			
2-Butanone	.12227	.11036	9.74			
cis-1,2-dichloroethene	.68792	.58120	15.51			
Chloroform	.91422	.75961	16.91	*		
Bromochloromethane	.33888	.33030	2.53			
1,1,1-Trichloroethane	.89849	.72702	19.08			
T-butyl alcohol	.02587	.02350	9.14			(Conc=500.00)
1,2-Dichloroethane-d4	.55028	.42766	22.28			
1,1-Dichloropropene	.72548	.58081	19.94			
Carbon Tetrachloride	.97675	.70564	27.76			
1,2-Dichloroethane	.61962	.48962	20.98			
Benzene	.85304	.77901	8.68			
Trichloroethene	.49092	.45547	7.22			
1,2-Dichloropropane	.36838	.32833	10.87	*		
Bromodichloromethane	.86097	.71598	16.84			
Dibromomethane	.39698	.37038	6.70			
2-Chloroethylvinylether	.16829	.14561	13.48			

RF - Response Factor from daily standard file at 50.00 ug/l

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

Case No: Calibration Date: 10/25/00

[redacted]ractor: Accredited Labs Time: 10:26

Contract No: CAAS09 Laboratory ID: >A8760

Instrument ID: HP5970BA Initial Calibration Date: 10/06/00

Minimum $\overline{RF}$ for SPCC is 0.1 Maximum % Diff for CCC is 30%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
cis-1,3-dichloropropene	.61161	.58409	4.50			(Conc=47.30)
Toluene-d8	1.05446	.95454	9.48			
Toluene	1.04721	.94024	10.21	*		
trans-1,3-Dichloropropene	.50651	.46459	8.28			(Conc=52.80)
1,1,2-Trichloroethane	.29369	.27436	6.58			
4-Methyl-2-pentanone	.31142	.25387	18.48			
1,2-Dibromoethane	.57309	.52229	8.86			
Bromofluorobenzene	.83238	.71461	14.15			
2-Hexanone	.23877	.20406	14.54			
1,3-dichloropropane	.68154	.61588	9.63			
Tetrachloroethene	.66645	.63849	4.20			
Dibromochloromethane	.87812	.77911	11.27			
Ethylbenzene	1.63468	1.43284	12.35	*		
Chlorobenzene	1.04098	.95163	8.58		**	
1,1,1,2-Tetrachloroethane	.62218	.57932	6.89			
[redacted]Xylene	1.43727	1.23270	14.23			(Conc=100.00)
[redacted]ylene	1.41024	1.24223	11.91			(Conc=100.00)
Styrene	.88438	.83033	6.11			(Conc=100.00)
Bromoform	.62178	.54568	12.24		**	
Isopropylbenzene	2.82649	2.65426	6.09			
1,1,2,2-Tetrachloroethane	1.03167	.98032	4.98		**	
1,2,3-Trichloropropane	.30824	.31622	2.59			
n-Propyl benzene	3.30701	2.99406	9.46			
Bromobenzene	1.86282	1.57684	15.35			
1,3,5-Trimethylbenzene	2.47276	2.18630	11.58			
2-Chlorotoluene	2.57389	2.22565	13.53			
4-Chlorotoluene	2.86665	2.47420	13.69			
tert-Butylbenzene	2.53237	2.24782	11.24			
1,2,4-Trimethylbenzene	2.54728	2.20206	13.55			
sec-Butylbenzene	3.23431	2.91582	9.85			
p-Isopropyltoluene	2.72168	2.39980	11.83			
1,3-Dichlorobenzene	1.55081	1.44233	7.00			

RF - Response Factor from daily standard file at 50.00 ug/l

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

Case No:

Calibration Date: 10/25/00

Contractor: Accredited Labs

Time: 10:26

Contract No: CAAS09

Laboratory ID: >A8760

Instrument ID: HP5970BA

Initial Calibration Date: 10/06/00

Minimum $\overline{RF}$ for SPCC is 0.1 Maximum % Diff for CCC is 30%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
1,4-Dichlorobenzene	1.60465	1.56718	2.34			
n-Butylbenzene	2.76994	2.44318	11.80			
1,2-Dichlorobenzene	1.47110	1.38306	5.98			
1,2-Dibromo-3-Chloropropane	.26197	.23481	10.37			
1,2,4-Trichlorobenzene	1.22327	1.07183	12.38			
Hexachlorobutadiene	.91775	.82505	10.10			
Naphthalene	1.89535	1.79319	5.39			
1,2,3-Trichlorobenzene	1.09644	.95769	12.65			
Methyl t-butyl ether	1.28126	1.12657	12.07			(Conc=500.00)

RF - Response Factor from daily standard file at 50.00 ug/l

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

Case No: Calibration Date: 10/26/00

[redacted]actor: Accredited Labs Time: 09:25

Contract No: CAAS09 Laboratory ID: >A8782

Instrument ID: HP5970BA Initial Calibration Date: 10/06/00

Minimum $\overline{RF}$ for SPCC is 0.1 Maximum % Diff for CCC is 30%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
Acrolein	.01274	.01319	3.55			(Conc=250.00)
Acrylonitrile	.04957	.05146	3.82			(Conc=250.00)
Acetone	.06389	.06190	3.13			
Dichlorodifluoromethane	.50933	.47613	6.52			
Chloromethane	.25195	.29425	16.79		**	
Vinyl Chloride	.20544	.22044	7.30	*		
Bromomethane	.26449	.26259	.72			
Chloroethane	.12703	.13799	8.63			
Trichlorofluoromethane	.96037	.77512	19.29			
1,1-Dichloroethene	.61918	.51152	17.39	*		
Carbon disulfide	.62874	.63068	.31			
Methylene Chloride	.59024	.38931	34.04			
trans-1,2-Dichloroethene	.57204	.51278	10.36			
1,1-Dichloroethane	.71251	.64561	9.39		**	
Vinyl acetate	.64174	.53483	16.66			
[redacted]Dichloropropane	.57197	.47641	16.71			
[redacted]utanone	.12227	.12405	1.46			
cis-1,2-dichloroethene	.68792	.59387	13.67			
Chloroform	.91422	.75418	17.51	*		
Bromochloromethane	.33888	.32522	4.03			
1,1,1-Trichloroethane	.89849	.71482	20.44			
T-butyl alcohol	.02587	.02356	8.91			(Conc=500.00)
1,2-Dichloroethane-d4	.55028	.43103	21.67			
1,1-Dichloropropene	.72548	.59156	18.46			
Carbon Tetrachloride	.97675	.69807	28.53			
1,2-Dichloroethane	.61962	.48887	21.10			
Benzene	.85304	.80005	6.21			
Trichloroethene	.49092	.45558	7.20			
1,2-Dichloropropane	.36838	.34927	5.19	*		
Bromodichloromethane	.86097	.70786	17.78			
Dibromomethane	.39698	.37801	4.78			
2-Chloroethylvinylether	.16829	.15236	9.46			

RF - Response Factor from daily standard file at 50.00 ug/l

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

Case No: Calibration Date: 10/26/00

Contractor: Accredited Labs Time: 09:25

Contract No: CAAS09 Laboratory ID: >A8782

Instrument ID: HP5970BA Initial Calibration Date: 10/06/00

Minimum $\overline{RF}$ for SPCC is 0.1 Maximum % Diff for CCC is 30%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
cis-1,3-dichloropropene	.61161	.58864	3.75			(Conc=47.30)
Toluene-d8	1.05446	.94348	10.52			
Toluene	1.04721	.98759	5.69	*		
trans-1,3-Dichloropropene	.50651	.46641	7.92			(Conc=52.80)
1,1,2-Trichloroethane	.29369	.26918	8.35			
4-Methyl-2-pentanone	.31142	.25913	16.79			
1,2-Dibromoethane	.57309	.51197	10.67			
Bromofluorobenzene	.83238	.70948	14.76			
2-Hexanone	.23877	.20133	15.68			
1,3-dichloropropane	.68154	.62708	7.99			
Tetrachloroethene	.66645	.61678	7.45			
Dibromochloromethane	.87812	.77609	11.62			
Ethylbenzene	1.63468	1.46853	10.16	*		
Chlorobenzene	1.04098	.95611	8.15		**	
1,1,1,2-Tetrachloroethane	.62218	.58150	6.54			
m,p-Xylene	1.43727	1.27094	11.57			(Conc=100.00)
o-Xylene	1.41024	1.28479	8.90			(Conc=100.00)
Styrene	.88438	.85537	3.28			(Conc=100.00)
Bromoform	.62178	.56458	9.20		**	
Isopropylbenzene	2.82649	2.68122	5.14			
1,1,2,2-Tetrachloroethane	1.03167	1.00010	3.06		**	
1,2,3-Trichloropropane	.30824	.27963	9.28			
n-Propyl benzene	3.30701	3.05437	7.64			
Bromobenzene	1.86282	1.63963	11.98			
1,3,5-Trimethylbenzene	2.47276	2.24808	9.09			
2-Chlorotoluene	2.57389	2.28816	11.10			
4-Chlorotoluene	2.86665	2.62520	8.42			
tert-Butylbenzene	2.53237	2.29289	9.46			
1,2,4-Trimethylbenzene	2.54728	2.33983	8.14			
sec-Butylbenzene	3.23431	2.99741	7.32			
p-Isopropyltoluene	2.72168	2.48908	8.55			
1,3-Dichlorobenzene	1.55081	1.45680	6.06			

RF - Response Factor from daily standard file at 50.00 ug/l

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

Case No: Calibration Date: 10/26/00

Contractor: Accredited Labs Time: 09:25

Contract No: CAAS09 Laboratory ID: >A8782

Instrument ID: HP5970BA Initial Calibration Date: 10/06/00

Minimum $\overline{RF}$ for SPCC is 0.1 Maximum % Diff for CCC is 30%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
1,4-Dichlorobenzene	1.60465	1.48122	7.69			
n-Butylbenzene	2.76994	2.42702	12.38			
1,2-Dichlorobenzene	1.47110	1.36358	7.31			
1,2-Dibromo-3-Chloropropane	.26197	.24640	5.95			
1,2,4-Trichlorobenzene	1.22327	1.17871	3.64			
Hexachlorobutadiene	.91775	.92556	.85			
Naphthalene	1.89535	1.81917	4.02			
1,2,3-Trichlorobenzene	1.09644	1.05444	3.83			
Methyl t-butyl ether	1.28126	1.15295	10.01			(Conc=500.00)

RF - Response Factor from daily standard file at 50.00 ug/l

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

Case No: | Calibration Date: 10/27/00

Contractor: Accredited Labs | Time: 10:04

Contract No: CAAS09 | Laboratory ID: >A8805

Instrument ID: HP5970BA | Initial Calibration Date: 10/06/00

Minimum $\overline{RF}$ for SPCC is 0.1 Maximum % Diff for CCC is 30%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
Acrolein	.01274	.01194	6.28			(Conc=250.00)
Acrylonitrile	.04957	.05372	8.39			(Conc=250.00)
Acetone	.06389	.05343	16.37			
Dichlorodifluoromethane	.50933	.27425	46.16			
Chloromethane	.25195	.21352	15.25		**	
Vinyl Chloride	.20544	.16825	18.10	*		
Bromomethane	.26449	.21492	18.74			
Chloroethane	.12703	.10087	20.59			
Trichlorofluoromethane	.96037	.71886	25.15			
1,1-Dichloroethene	.61918	.49739	19.67	*		
Carbon disulfide	.62874	.51998	17.30			
Methylene Chloride	.59024	.45704	22.57			
trans-1,2-Dichloroethene	.57204	.50144	12.34			
1,1-Dichloroethane	.71251	.62317	12.54		**	
Vinyl acetate	.64174	.50365	21.52			
-Dichloropropane	.57197	.48731	14.80			
-utanone	.12227	.12122	.85			
cis-1,2-dichloroethene	.68792	.59420	13.62			
Chloroform	.91422	.76888	15.90	*		
Bromochloromethane	.33888	.32394	4.41			
1,1,1-Trichloroethane	.89849	.73507	18.19			
T-butyl alcohol	.02587	.02387	7.73			(Conc=500.00)
1,2-Dichloroethane-d4	.55028	.45536	17.25			
1,1-Dichloropropene	.72548	.58931	18.77			
Carbon Tetrachloride	.97675	.72025	26.26			
1,2-Dichloroethane	.61962	.51485	16.91			
Benzene	.85304	.79832	6.42			
Trichloroethene	.49092	.45636	7.04			
1,2-Dichloropropane	.36838	.34474	6.42	*		
Bromodichloromethane	.86097	.75015	12.87			
Dibromomethane	.39698	.37184	6.33			
2-Chloroethylvinylether	.16829	.16001	4.92			

RF - Response Factor from daily standard file at 50.00 ug/l

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

Case No: [redacted] Calibration Date: 10/27/00

Factor: Accredited Labs Time: 10:04

Contract No: CAAS09 Laboratory ID: >A8805

Instrument ID: HP5970BA Initial Calibration Date: 10/06/00

Minimum $\overline{RF}$ for SPCC is 0.1 Maximum % Diff for CCC is 30%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
cis-1,3-dichloropropene	.61161	.60201	1.57			(Conc=47.30)
Toluene-d8	1.05446	.96554	8.43			
Toluene	1.04721	.98567	5.88	*		
trans-1,3-Dichloropropene	.50651	.48111	5.01			(Conc=52.80)
1,1,2-Trichloroethane	.29369	.27057	7.87			
4-Methyl-2-pentanone	.31142	.26781	14.00			
1,2-Dibromoethane	.57309	.50999	11.01			
Bromofluorobenzene	.83238	.71058	14.63			
2-Hexanone	.23877	.20495	14.17			
1,3-dichloropropane	.68154	.65775	3.49			
Tetrachloroethene	.66645	.64173	3.71			
Dibromochloromethane	.87812	.84419	3.86			
Ethylbenzene	1.63468	1.52664	6.61	*		
Chlorobenzene	1.04098	1.04031	.06		**	
1,1,1,2-Tetrachloroethane	.62218	.59601	4.21			
[redacted]-Xylene	1.43727	1.31809	8.29			(Conc=100.00)
[redacted]ylene	1.41024	1.34855	4.37			(Conc=100.00)
Styrene	.88438	.89343	1.02			(Conc=100.00)
Bromoform	.62178	.55944	10.02		**	
Isopropylbenzene	2.82649	2.60133	7.97			
1,1,2,2-Tetrachloroethane	1.03167	.93650	9.22		**	
1,2,3-Trichloropropane	.30824	.28005	9.15			
n-Propyl benzene	3.30701	3.05543	7.61			
Bromobenzene	1.86282	1.59799	14.22			
1,3,5-Trimethylbenzene	2.47276	2.21677	10.35			
2-Chlorotoluene	2.57389	2.31424	10.09			
4-Chlorotoluene	2.86665	2.52101	12.06			
tert-Butylbenzene	2.53237	2.31456	8.60			
1,2,4-Trimethylbenzene	2.54728	2.24799	11.75			
sec-Butylbenzene	3.23431	3.01392	6.81			
p-Isopropyltoluene	2.72168	2.45926	9.64			
1,3-Dichlorobenzene	1.55081	1.46003	5.85			

RF - Response Factor from daily standard file at 50.00 ug/l

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

Case No:

Calibration Date: 10/27/00

Contractor: Accredited Labs

Time: 10:04

Contract No: CAAS09

Laboratory ID: >A8805

Instrument ID: HP5970BA

Initial Calibration Date: 10/06/00

Minimum $\overline{RF}$ for SPCC is 0.1

Maximum % Diff for CCC is 30%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
1,4-Dichlorobenzene	1.60465	1.49702	6.71			
n-Butylbenzene	2.76994	2.54207	8.23			
1,2-Dichlorobenzene	1.47110	1.38150	6.09			
1,2-Dibromo-3-Chloropropane	.26197	.25136	4.05			
1,2,4-Trichlorobenzene	1.22327	1.19036	2.69			
Hexachlorobutadiene	.91775	.93494	1.87			
Naphthalene	1.89535	1.84179	2.83			
1,2,3-Trichlorobenzene	1.09644	1.07782	1.70			
Methyl t-butyl ether	1.28126	1.18786	7.29			(Conc=500.00)

RF - Response Factor from daily standard file at 50.00 ug/l

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

ACCREDITED LABORATORIES, INC.
WATER/SOIL VOLATILE SURROGATE RECOVERY

	ALI Sample No.	Mtx	S1 (DCE-d4)	S2 (TOL-d8)	S3 (BFB)	TOTAL OUT
1	VBLKA85	S	86	94	94	0
2	VBLKA86	S	84	94	91	0
3	VBLKA87	S	84	95	87	0
4	0012803	S	77	81	81	0
5	0012804	S	70	76 *	76	1
6	0012805	S	77	83	82	0
7	0012806	S	78	84	85	0
8	0012807	S	75	80 *	80	1
9	0012807DL	S	57 *	66 *	67 *	3
10	0012808	S	79	91	133 *	1
11	0012808DL	S	73	84	165	1
12	0012808DL	S	0 *	0 *	0 *	3
13	0012809	S	82	83	93	0
14	0012809DL	S	60 *	62 *	75 ✗	82 (3)
15	0012809DL	S	0 *	0 *	0 *	3
16	0012810	S	79	83	94	0
17	0012811	S	79	86	85	0
18	0012804MS	S	72	72 *	74	1
19	0012804MSD	S	69 *	75 *	75	2

EPA CLP QC Limits for:	WATER	SOIL
S1 (DCE-d4) = 1,2-Dichloroethane-d4	(76-114)	(70-121)
S2 (TOL-d8) = Toluene-d8	(88-110)	(81-117)
S3 (BFB) = Bromofluorobenzene	(86-115)	(74-121)

* Values outside of EPA contract laboratory QC limits

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ACCREDITED LABORATORIES, Contract:

Lab Code: _____ Case No.: 9748 SAS No.: _____ SDG No.:

Lab File ID (Standard): >A8760 Date Analyzed: 10/25/00

Instrument ID: HP5970BA Time Analyzed: 10:26

GC Column: RTX-502 ID: 0.53 (mm) Heated Purge: (Y/N) Y

		IS1(DFB) AREA	#	RT	#	IS2(CBZ) AREA	#	RT	#	IS3(PFB) AREA	#	RT	#
	12 HOUR STD	155695		14.54		126432		21.81		144923		12.63	
	UPPER LIMIT	311390		15.04		252864		22.31		289846		13.13	
	LOWER LIMIT	77848		14.04		63216		21.31		72461		12.13	
	LAB SAMPLE NO.												
01	VBLKA85	111357		14.62		96708		21.89		105718		12.72	
02	0012805	103908		14.63		90823		21.85		99239		12.72	
03	0012806	92061		14.61		79492		21.88		92130		12.71	
04	0012807	112487		14.60		91944		21.87		106293		12.69	
05	0012808	96527		14.61		84820		21.86		93452		12.70	
06	0012809	94729		14.59		80979		21.87		90579		12.73	
07	0012810	102042		14.62		87669		21.84		100633		12.71	
08	0012811	122050		14.62		97790		21.89		116460		12.72	
09													
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													
21													
22													

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (PFB) = Pentafluorobenzene
IS4 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

130

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ACCREDITED LABORATORIES, Contract:

Lab Code: _____ Case No.: 9748 SAS No.: _____ SDG No.:

Lab File ID (Standard): >A8760 Date Analyzed: 10/25/00

Instrument ID: HP5970BA Time Analyzed: 10:26

GC Column: RTX-502 ID: 0.53 (mm) Heated Purge: (Y/N) Y

	IS4(DCB) AREA #	RT #				
12 HOUR STD	76810	27.58				
UPPER LIMIT	153620	28.08				
LOWER LIMIT	38405	27.08				
LAB SAMPLE NO.						
01 VBLKA85	58341	27.66				
02 0012805	58363	27.66				
03 0012806	55840	27.65				
04 0012807	53012	27.69				
05 0012808	44836	27.68				
06 0012809	47098	27.64				
07 0012810	33400*	27.68				
08 0012811	64516	27.66				
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (PFB) = Pentafluorobenzene
IS4 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

131

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ACCREDITED LABORATORIES, Contract:

Code: _____ Case No.: SAS No.: _____ SDG No.:

Lab File ID (Standard): >A8782 Date Analyzed: 10/26/00

Instrument ID: HP5970BA Time Analyzed: 09:25

GC Column: RTX-502 ID: 0.53 (mm) Heated Purge: (Y/N) Y

		IS1(DFB)			IS2(CBZ)			IS3(PFB)		
		AREA	#	RT	#	AREA	#	RT	#	AREA	#	RT	#
	12 HOUR STD	145989		14.57		115846		21.84		136828		12.66	
	UPPER LIMIT	291978		15.07		231692		22.34		273656		13.16	
	LOWER LIMIT	72995		14.07		57923		21.34		68414		12.16	
	LAB SAMPLE NO.												
01	VBLKA86	117306		14.62		103029		21.89		115783		12.71	
02	0012803	107389		14.62		88713		21.84		102455		12.71	
03	0012804	109487		14.58		93676		21.84		107756		12.67	
04	0012807DL	102303		14.59		82587		21.86		96057		12.68	
05	0012808DL	100329		14.63		82603		21.85		96378		12.72	
06	0012809DL	98631		14.62		86631		21.85		93868		12.71	
07	0012810DL	98323		14.62		85963		21.84		93674		12.71	
08	0012804MS	99146		14.63		80744		21.85		91017		12.72	
09	0012804MSD	111758		14.58		92230		21.85		107258		12.72	
10													
11													
12													
13													
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15													
16													
17													
18													
19													
20													
21													
22													

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (PFB) = Pentafluorobenzene
IS4 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

132

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ACCREDITED LABORATORIES, Contract:

Lab Code: _____ Case No.: SAS No.: _____ SDG No.:

Lab File ID (Standard): >A8782 Date Analyzed: 10/26/00

Instrument ID: HP5970BA Time Analyzed: 09:25

GC Column: RTX-502 ID: 0.53 (mm) Heated Purge: (Y/N) Y

		IS4(DCB) AREA #	RT #				
	12 HOUR STD	70353	27.61				
	UPPER LIMIT	140706	28.11				
	LOWER LIMIT	35176	27.11				
	LAB SAMPLE NO.						
01	VBLKA86	63094	27.66				
02	0012803	56921	27.66				
03	0012804	59267	27.66				
04	0012807DL	52215	27.63				
05	0012808DL	52250	27.62				
06	0012809DL	52083	27.66				
07	0012810DL	50748	27.66				
08	0012804MS	54769	27.66				
09	0012804MSD	56936	27.62				
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (PFB) = Pentafluorobenzene
IS4 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

133

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

3A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Name: ACCREDITED LABORATORIES, Contract:

Lab Code: _____ Case No.: 9748 SAS No.: _____ SDG No.:

Lab File ID (Standard): >A8805 Date Analyzed: 10/27/00

Instrument ID: HP5970BA Time Analyzed: 10:04

GC Column: RTX-502 ID: 0.53 (mm) Heated Purge: (Y/N) Y

		IS1(DFB) AREA	#	RT	#	IS2(CBZ) AREA	#	RT	#	IS3(PFB) AREA	#	RT	#
	12 HOUR STD	139733		14.63		106443		21.85		131363		12.72	
	UPPER LIMIT	279466		15.13		212886		22.35		262726		13.22	
	LOWER LIMIT	69866		14.13		53221		21.35		65681		12.22	
	LAB SAMPLE NO.												
01	VBLKA87	119715		14.62		99225		21.89		114105		12.71	
02	0012808DL	102916		14.62		88767		21.84		97441		12.71	
03	0012809DL	92046		14.63		77101		21.85		84319		12.72	
04													
05													
06													
07													
08													
09													
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													
21													
22													

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (PFB) = Pentafluorobenzene
IS4 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

134

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ACCREDITED LABORATORIES, Contract:

Lab Code: _____ Case No.: 9748 SAS No.: _____ SDG No.:

Lab File ID (Standard): >A8805 Date Analyzed: 10/27/00

Instrument ID: HP5970BA Time Analyzed: 10:04

GC Column: RTX-502 ID: 0.53 (mm) Heated Purge: (Y/N) Y

		IS4(DCB) AREA #	RT #				
	12 HOUR STD	69185	27.62				
	UPPER LIMIT	138370	28.12				
	LOWER LIMIT	34593	27.12				
	LAB SAMPLE NO.						
01	VBLKA87	64536	27.66				
02	0012808DL	56082	27.66				
03	0012809DL	50313	27.67				
04							
05							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (PFB) = Pentafluorobenzene
IS4 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

185

SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Accredited Labs, Inc. Contract: _____

Lab Code: GC/MS Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix Spike - ALI Sample No.: 0012804

COMPOUND	SPIKE ADDED (UG/KG)	SAMPLE CONCENTRATION (UG/KG)	MS CONCENTRATION (UG/KG)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	50	0	37	73	59-172
Trichloroethene	50	0	42	83	62-137
Benzene	50	0	47	94	66-142
Toluene	50	6	51	89	59-139
Chlorobenzene	50	0	44	89	60-133

COMPOUND	SPIKE ADDED (UG/KG)	MSD CONCENTRATION (UG/KG)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	50	36	72	2	22	59-172
Trichloroethene	50	44	89	6	24	62-137
Benzene	50	49	98	4	21	66-142
Toluene	50	51	91	2	21	59-139
Chlorobenzene	50	44	88	1	21	60-133

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

RPD: 0 out of 5 outside limits
Spike Recovery: 0 out of 10 outside limits

COMMENTS: _____

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[illegible] LABORATORIES, INC.
VOLATILE ORGANIC ANALYSIS DATA

[illegible] NO:		MATRIX:	Soil
SAMPLE NUMBER:	VBLANK	DILUTION FACTOR:	1.0
DATA FILE:	B0202	DATE EXTRACTED:	
CLIENT NAME:		DATE ANALYZED:	10/25/90
FIELD ID:		ANALYZED BY:	ROBERT

CAS #	COMPOUND	UG/KG	MDL
107028	Acrolein	U	3100
107131	Acrylonitrile	U	3100
74873	Chloromethane	U	630
75014	Vinyl Chloride	U	630
74839	Bromomethane	U	630
75003	Chloroethane	U	630
75694	Trichlorofluoromethane	U	630
75354	1,1-Dichloroethene	U	630
75092	Methylene Chloride	700	630
156605	trans-1,2-Dichloroethene	U	630
75343	1,1-Dichloroethane	U	630
67663	Chloroform	U	630
71556	1,1,1-Trichloroethane	U	630
56235	Carbon Tetrachloride	U	630
107062	1,2-Dichloroethane	U	630
71432	Benzene	U	630
79016	Trichloroethene	U	630
78875	1,2-Dichloropropane	U	630
75274	Bromodichloromethane	U	630
10061015	cis-1,3-dichloropropene	U	630
108883	Toluene	U	630
10061026	trans-1,3-Dichloropropene	U	630
79005	1,1,2-Trichloroethane	U	630
127184	Tetrachloroethene	U	630
124481	Dibromochloromethane	U	630
100414	Ethylbenzene	U	630
108907	Chlorobenzene	U	630
75252	Bromoform	U	630
79345	1,1,2,2-Tetrachloroethane	U	630
110758	2-Chloroethylvinylether	U	630

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	86 %	70-121	OK
Toluene-d8	94 %	81-117	OK
Bromofluorobenzene	94 %	74-121	OK

Percent solid of 100 is used for all target compounds.

J - Indicates compound concentration found below MDL.
U - Indicates compound analyzed for but not detected.
D - Indicates result is based on a dilution.
I - Result exceeds industrial surface soil standards.*
B - Indicates compound found in associated blank.
E - Indicates result exceeds highest calibration standard
R - Result exceeds residential surface soil standards.*

* Flags are based on New Jersey Soil Cleanup Criteria from Site Remediation News Volume 06 Number 1.

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Accredited Labs, Inc. Lab Sample ID: VBLKA85

Client Name: Field ID:

Case No.: Date Extracted:

Lab File ID: >A8762 Date Analyzed: 10/25/00

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown hydrocarbon	5.81	6100	
2.		Unknown	27.30	630	
3.		Unknown	32.43	1100	
4.		Unknown	34.25	830	

* Unknowns are defined as: Compounds that are less than 80% probability or have no database entries from the library.

FORM I SV-TIC

ACCREDITED LABORATORIES, INC
VOLATILE ORGANIC ANALYSIS DATA

CASE NUMBER		MATRIX	[illegible]
SAMPLE NUMBER	VOLKA86	DILUTION FACTOR	[illegible]
DATA FILE	[illegible]	DATE EXTRACTED	
CLIENT NAME		DATE ANALYZED	[illegible]
FIELD ID		ANALYZED BY	ROBERT

CAS #	COMPOUND	UG/KG	MDL	CAS #	COMPOUND	UG/KG	MDL
107029	Acrolein	U	3100	71432	Benzene	U	630
107131	Acrylonitrile	U	3100	79016	Trichloroethene	U	630
74873	Chloromethane	U	630	78875	1,2-Dichloropropane	U	630
75014	Vinyl Chloride	U	630	75274	Bromodichloromethane	U	630
74839	Bromomethane	U	630	10061015	cis-1,3-dichloropropene	U	630
75003	Chloroethane	U	630	108883	Toluene	U	630
75694	Trichlorofluoromethane	U	630	10061026	trans-1,3-Dichloropropene	U	630
75354	1,1-Dichloroethene	U	630	79005	1,1,2-Trichloroethane	U	630
75092	Methylene Chloride	320 J	630	127184	Tetrachloroethene	U	630
156605	trans-1,2-Dichloroethene	U	630	124481	Dibromochloromethane	U	630
75343	1,1-Dichloroethane	U	630	100414	Ethylbenzene	U	630
67663	Chloroform	U	630	108907	Chlorobenzene	U	630
71556	1,1,1-Trichloroethane	U	630	75252	Bromoform	U	630
56235	Carbon Tetrachloride	U	630	79345	1,1,2,2-Tetrachloroethane	U	630
107062	1,2-Dichloroethane	U	630	110758	2-Chloroethylvinylether	U	630

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	84 %	70-121	OK
Toluene-d8	94 %	81-117	OK
Bromofluorobenzene	91 %	74-121	OK

Percent solid of 100 is used for all target compounds.

J - Indicates compound concentration found below MDL.
U - Indicates compound analyzed for but not detected.
D - Indicates result is based on a dilution.
I - Result exceeds industrial surface soil standards.*

B - Indicates compound found in associated blank.
E - Indicates result exceeds highest calibration standard
R - Result exceeds residential surface soil standards.*

* Flags are based on New Jersey Soil Cleanup Criteria from Site Remediation News Volume 06 Number 1.

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Accredited Labs, Inc. Lab Sample ID: VBLKA86

Client Name: Field ID:

Case No.: Date Extracted:

Lab File ID: >A8785 Date Analyzed: 10/26/00

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	30.11	3300	
2.	Unknown	33.47	31000	

* Unknowns are defined as: Compounds that are less than 80% probability or have no database entries from the library.

FORM I SV-TIC

ACCREDITED LABORATORIES, INC.
VOLATILE ORGANIC ANALYSIS DATA

E NUMBER		MATRIX	Soil
MPLE NUMBER	VBLKA87	DILUTION FACTOR	125
TA FILE	>A8806	DATE EXTRACTED	
CLIENT NAME		DATE ANALYZED	10/27/00
FIELD ID		ANALYZED BY	ROBERT

CAS #	COMPOUND	UG/KG	MDL	CAS #	COMPOUND	UG/KG	MDL
107028	Acrolein	U	3100	71432	Benzene	U	630
107131	Acrylonitrile	U	3100	79016	Trichloroethene	U	630
74873	Chloromethane	U	630	78875	1,2-Dichloropropane	U	630
75014	Vinyl Chloride	U	630	75274	Bromodichloromethane	U	630
74839	Bromomethane	U	630	10061015	cis-1,3-dichloropropene	U	630
75003	Chloroethane	U	630	108883	Toluene	U	630
75694	Trichlorofluoromethane	U	630	10061026	trans-1,3-Dichloropropene	U	630
75354	1,1-Dichloroethene	U	630	79005	1,1,2-Trichloroethane	U	630
75092	Methylene Chloride	570 J	630	127184	Tetrachloroethene	U	630
156605	trans-1,2-Dichloroethene	U	630	124481	Dibromochloromethane	U	630
75343	1,1-Dichloroethane	U	630	100414	Ethylbenzene	U	630
67663	Chloroform	U	630	108907	Chlorobenzene	U	630
71556	1,1,1-Trichloroethane	U	630	75252	Bromoform	U	630
56235	Carbon Tetrachloride	U	630	79345	1,1,2,2-Tetrachloroethane	U	630
107062	1,2-Dichloroethane	U	630	110758	2-Chloroethylvinylether	U	630

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	84 %	70-121	OK
Toluene-d8	95 %	81-117	OK
Bromofluorobenzene	87 %	74-121	OK

Percent solid of 100 is used for all target compounds.

J - Indicates compound concentration found below MDL.
U - Indicates compound analyzed for but not detected.
D - Indicates result is based on a dilution.
I - Result exceeds industrial surface soil standards.*
B - Indicates compound found in associated blank.
E - Indicates result exceeds highest calibration standard
R - Result exceeds residential surface soil standards.*

* Flags are based on New Jersey Soil Cleanup Criteria from Site Remediation News Volume 06 Number 1.

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1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Accredited Labs, Inc. Lab Sample ID: VBLKA87

Client Name: Field ID:

Case No.: Date Extracted:

Lab File ID: >A8806 Date Analyzed: 10/27/00

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

* Unknowns are defined as: Compounds that are less than 80% probability or have no database entries from the library.

FORM I SV-TIC

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4A

VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

Lab Name: ACCREDITED LABORATORIES, Contract:

Lab Code: _____ Case No.: 9748 SAS No.: _____ SDG No.:

Lab File ID: >A8762 Lab Sample ID: VBLKA85

Date Analyzed: 10/25/00 Time Analyzed: 12:20

GC Column: RTX-502 ID: 0.53(mm) Heated Purge: (Y/N) Y

Instrument ID: HP5970A

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01		0012805	>A8770	17:36
02		0012806	>A8771	18:16
03		0012807	>A8772	18:56
04		0012808	>A8773	19:36
05		0012809	>A8774	20:16
06		0012810	>A8775	20:55
07		0012811	>A8763	13:11
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

COMMENTS: _____

4A

VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

Name: ACCREDITED LABORATORIES, Contract:

Lab Code: _____ Case No.: SAS No.: _____ SDG No.:

Lab File ID: >A8785 Lab Sample ID: VBLKA86

Date Analyzed: 10/26/00 Time Analyzed: 12:04

GC Column: RTX-502 ID: 0.53(mm) Heated Purge: (Y/N) Y

Instrument ID: HP5970A

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01		0012803	>A8788	14:21
02		0012804	>A8789	15:01
03		0012807DL	>A8790	15:40
04		0012808DL	>A8791	16:20
05		0012809DL	>A8792	17:00
06		0012804MS	>A8794	18:20
07		0012804MSD	>A8795	19:00
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

COMMENTS: _____

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4A

VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

Name: ACCREDITED LABORATORIES, Contract:

Lab Code: _____ Case No.: 9748 SAS No.: _____ SDG No.:

Lab File ID: >A8806 Lab Sample ID: VBLKA87

Date Analyzed: 10/27/00 Time Analyzed: 11:00

GC Column: RTX-502 ID: 0.53(mm) Heated Purge: (Y/N) Y

Instrument ID: HP5970A

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01		0012808DL	>A8810	13:54
02		0012809DL	>A8811	14:26
03				
04				
05				
06				
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

COMMENTS:

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FORM III USA

OLM03.0

SEMIVOLATILE ORGANICS BY GC/MS TUNING AND MASS CALIBRATION
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ACCREDITED LABORATORIES, INC. Contract: _____

Lab File ID: >B0990 DFTPP Injection Date: 10/06/00

Instrument ID: HP59708B DFTPP Injection Time: 12:33

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	51.3
68	Less than 2.0% of mass 69	1.0(1.6)1
69	Mass 69 relative abundance	67.3
70	Less than 2.0% of mass 69	0.0(0.0)1
127	40.0 - 60.0% of mass 198	49.1
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% Relative abundance	100.
199	5.0 - 9.0% of mass 198	6.8
275	10.0 - 30.0% of mass 198	20.7
365	Greater than 1.00% of mass 198	1.91
441	Present, but less than mass 443	8.0
442	Greater than 40.0% of mass 198	59.4
443	17.0 - 23.0% of mass 442	11.1(18.7)2

1-Value is % mass 69 2-Value is % mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050	>B0991	10/06/00	12:48
02		SSTD160	>B0992	10/06/00	13:34
03		SSTD020	>B0993	10/06/00	14:24
04		SSTD080	>B0994	10/06/00	15:11
05		SSTD120	>B0995	10/06/00	15:58
06		SBLK01	>B0996	10/06/00	16:44
07		0012017	>B0997	10/06/00	17:30
08		0012018	>B0998	10/06/00	18:15
09		0012019	>B0999	10/06/00	19:01
10		0012020	>B1000	10/06/00	19:47
11		0012021	>B1001	10/06/00	20:32
12		0012022	>B1002	10/06/00	21:18
13		0012023	>B1003	10/06/00	22:03
14		0012024	>B1004	10/06/00	22:49
15		0012025	>B1005	10/06/00	23:34
16					
17					
18					
19					
20					
21					
22					

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3/89

Lab Name: ACCUTEST LABORATORIES, INC. Contract: _____

Lab File ID: >F2236 DFTPP injection Date: 10/20/00

Instrument ID: HP59/3F DFTPP injection Time: 09:48

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	52.5
68	Less than 2.0% of mass 69	0.0(0.0)1
69	Mass 69 relative abundance	57.2
70	Less than 2.0% of mass 69	.2(.4)1
127	40.0 - 60.0% of mass 198	42.1
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% Relative abundance	100.
199	5.0 - 9.0% of mass 198	6.7
275	10.0 - 30.0% of mass 198	22.3
365	Greater than 1.00% of mass 198	2.25
441	Present, but less than mass 443	9.2
442	Greater than 40.0% of mass 198	59.1
443	17.0 - 23.0% of mass 442	10.9(18.5)2

1-Value is % mass 69 2-Value is % mass 447

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050	>F2236	10/20/00	10:02
02		SSTD160	>F2237	10/20/00	10:46
03		SSTD020	>F2238	10/20/00	11:35
04		SSTD080	>F2239	10/20/00	12:20
05		SSTD120	>F2240	10/20/00	13:06
06		SBLK09	>F2241	10/20/00	13:54
07		SBLK12	>F2242	10/20/00	14:38
08		0012621MS	>F2243	10/20/00	15:22
09		0012621MSD	>F2244	10/20/00	16:06
10		0012715MS	>F2245	10/20/00	16:50
11		0012715MSD	>F2246	10/20/00	17:34
12		0012716DL	>F2247	10/20/00	18:18
13		0012710DL	>F2248	10/20/00	19:02
14		0012577DL	>F2249	10/20/00	19:46
15		0012579DL	>F2250	10/20/00	20:30
16		SBLK16	>F2251	10/20/00	21:14
17		0012798	>F2252	10/20/00	21:57
18		0012798DL	>F2253	10/20/00	22:41
19					
20					
21					
22					

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SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ACCREDITED LABORATORIES, INC Contract: _____

Lab File ID: >F2256 DFTPP Injection Date: 10/23/00

Instrument ID: HP597OBF DFTPP Injection Time: 09:23

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	52.3
68	Less than 2.0% of mass 69	0.0(0.0)1
69	Mass 69 relative abundance	56.5
70	Less than 2.0% of mass 69	.3(.5)1
127	40.0 - 60.0% of mass 198	42.9
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% Relative abundance	100.
199	5.0 - 9.0% of mass 198	6.7
275	10.0 - 30.0% of mass 198	21.8
365	Greater than 1.00% of mass 198	1.94
441	Present, but less than mass 443	7.9
442	Greater than 40.0% of mass 198	52.0
443	17.0 - 23.0% of mass 442	10.1(19.4)2

1-Value is % mass 69 2-Value is % mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	_____	SSTD050	>F2257	10/23/00	09:37
02	_____	0012653	>F2258	10/23/00	10:22
03	_____	0012889	>F2259	10/23/00	11:05
04	_____	0012888DL	>F2260	10/23/00	11:49
05	_____	0012669DL	>F2261	10/23/00	12:33
06	_____	0012805	>F2262	10/23/00	13:16
07	_____	0012806	>F2263	10/23/00	14:00
08	_____	0012807	>F2264	10/23/00	14:44
09	_____	0012769	>F2265	10/23/00	15:27
10	_____	0012803	>F2266	10/23/00	16:11
11	_____	0012804	>F2267	10/23/00	16:54
12	_____	0012808	>F2268	10/23/00	17:38
13	_____	0012809	>F2269	10/23/00	18:21
14	_____	0012810	>F2270	10/23/00	19:05
15	_____	0012764	>F2271	10/23/00	19:48
16	_____	0012766	>F2272	10/23/00	20:32
17	_____	0012667DL	>F2273	10/23/00	21:15
18	_____	_____	_____	_____	_____
19	_____	_____	_____	_____	_____
20	_____	_____	_____	_____	_____
21	_____	_____	_____	_____	_____
22	_____	_____	_____	_____	_____

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[illegible] BROMOFLUOROBENZENE (BFB)

Name: ACCUTEST LABORATORIES, INC. Contract: _____

Lab File ID: >F2274 BFB/PP Injection Date: 10/24/00

Instrument ID: HP5973F BFB/PP Injection Time: 08:45

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	54.2
68	Less than 2.0% of mass 69	0.0(0.0)1
69	Mass 69 relative abundance	56.7
70	Less than 2.0% of mass 69	.2(.4)1
127	40.0 - 60.0% of mass 198	41.5
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% Relative abundance	100.
199	5.0 - 9.0% of mass 198	6.6
275	10.0 - 30.0% of mass 198	22.1
365	Greater than 1.00% of mass 198	2.08
441	Present, but less than mass 443	8.9
442	Greater than 40.0% of mass 198	58.5
443	17.0 - 23.0% of mass 442	10.6(18.1)2

1-Value is % mass 69 2-Value is % mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050	>F2275	10/24/00	09:02
02		0012980	>F2276	10/24/00	09:47
03		0012981	>F2277	10/24/00	10:31
04		0011538	>F2278	10/24/00	11:14
05		0012714	>F2279	10/24/00	11:58
06		0012713	>F2280	10/24/00	12:41
07		SBLK20	>F2281	10/24/00	13:25
08		0012980MS	>F2282	10/24/00	14:08
09		0012988	>F2283	10/24/00	14:52
10		0012989	>F2284	10/24/00	15:35
11		0012747	>F2285	10/24/00	16:19
12		0012764DL	>F2286	10/24/00	17:02
13		0012766DL	>F2287	10/24/00	17:46
14		0012804DL	>F2288	10/24/00	18:29
15		0012808DL	>F2289	10/24/00	19:13
16		0012809DL	>F2290	10/24/00	19:56
17		0012810DL	>F2291	10/24/00	20:40
18					
19					
20					
21					
22					

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SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION
BFB (DECAFLUOROTRIPHENYLPHOSPHINE) DFTPP

Lab Name: ACCREDITED LABORATORIES, INC Contract: _____

Lab File ID: >B1222 DFTPP Injection Date: 10/24/00

Instrument ID: HP5970BB DFTPP Injection Time: 09:41

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	60.0
68	Less than 2.0% of mass 69	.6(.9)1
69	Mass 69 relative abundance	67.6
70	Less than 2.0% of mass 69	.3(.5)1
127	40.0 - 60.0% of mass 198	40.1
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% Relative abundance	100.
199	5.0 - 9.0% of mass 198	6.6
275	10.0 - 30.0% of mass 198	19.7
365	Greater than 1.00% of mass 198	1.98
441	Present, but less than mass 443	11.6
442	Greater than 40.0% of mass 198	83.0
443	17.0 - 23.0% of mass 442	15.8(19.1)2

1-Value is % mass 69 2-Value is % mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050	>B1223	10/24/00	09:55
02		SBLK15	>B1224	10/24/00	10:46
03		SBLK19	>B1225	10/24/00	11:31
04		SBLK14	>B1226	10/24/00	12:17
05		0012773	>B1227	10/24/00	13:02
06		0012773MSD	>B1228	10/24/00	13:48
07		0012777	>B1229	10/24/00	14:33
08		0012771	>B1230	10/24/00	15:18
09		0012772	>B1231	10/24/00	16:04
10		0012773MS	>B1232	10/24/00	16:49
11		0012774	>B1233	10/24/00	17:35
12		0012775	>B1234	10/24/00	18:20
13		0012776	>B1235	10/24/00	19:06
14		0012778	>B1236	10/24/00	19:51
15		0012012	>B1237	10/24/00	20:37
16		0012016	>B1238	10/24/00	21:22
17					
18					
19					
20					
21					
22					

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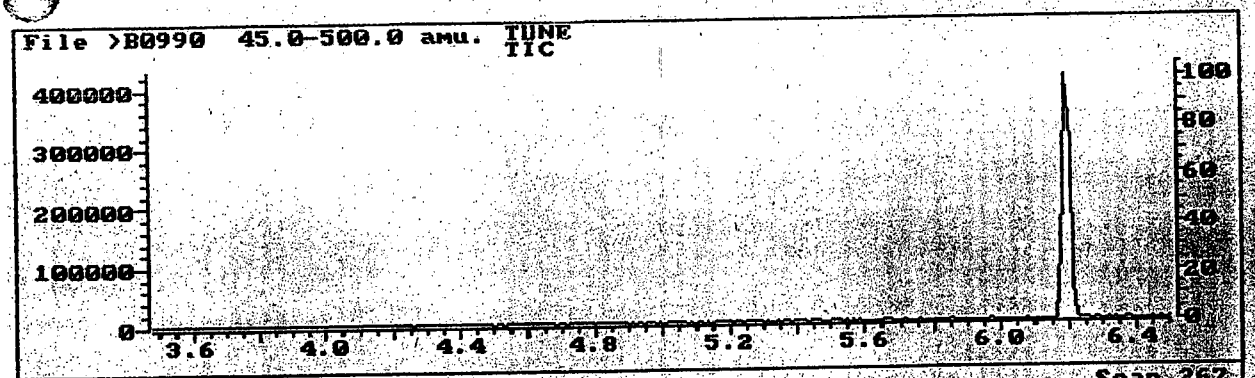
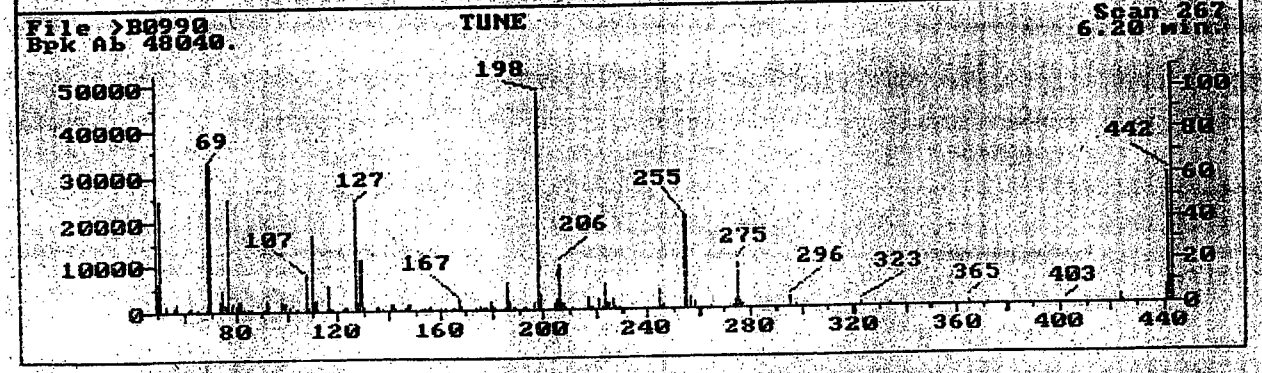
GC/MS PERFORMANCE STANDARD

Decafluorotriphenylphosphine (DFTPP)

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
51	30-60% of mass 198	51.32	51.32	Ok
68	Less than 2% of mass 69	1.05	1.56	Ok
69	(reference only)	67.29	67.29	Ok
70	Less than 2% of mass 69	0.00	0.00	Ok
127	40-60% of mass 198	49.09	49.09	Ok
197	Less than 1% of mass 198	0.00	0.00	Ok
198	Base peak, 100% relative abundance	100.00	100.00	Ok
199	5-9% of mass 198	6.82	6.82	Ok
275	10-30% of mass 198	20.66	20.66	Ok
365	Greater than 1% of mass 198	1.92	1.92	Ok
441	Less than mass 443	8.01	72.01	Ok
442	Greater than 40% of mass 198	59.35	59.35	Ok
443	17-23% of mass 442	11.13	18.75	Ok

Injection Date: 10/06/00
Injection Time: 12:33
Data File: >B0990
Scan: 267



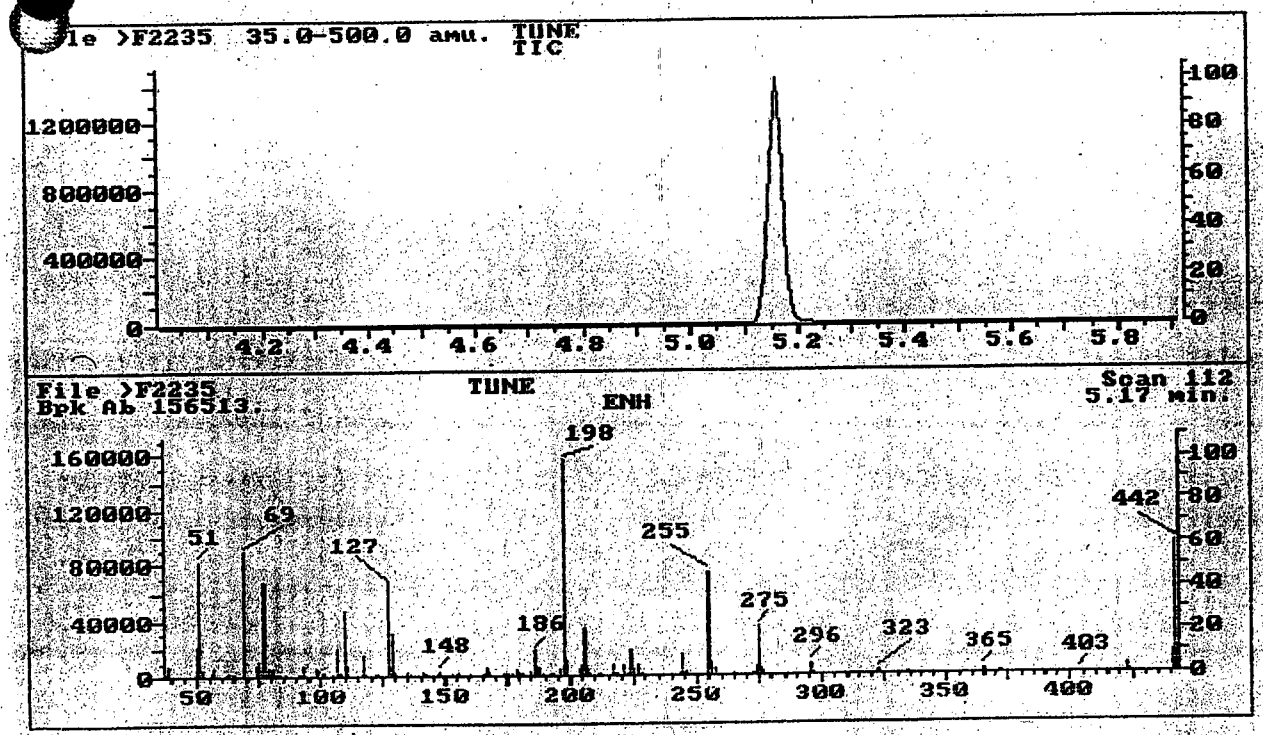


File: 3R0920 Scan #: 267 Retn. time: 6.70

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
49.00	404.0	106.15	705.0	156.10	270.0	205.05	2417.0	269.10	459.0
50.10	6650.0	107.05	2698.0	157.10	209.0	206.15	9859.0	273.05	607.0
51.10	24656.1	108.05	1056.0	158.00	195.0	207.15	1289.0	274.05	1752.0
52.10	1158.0	109.05	189.0	159.10	151.0	208.05	550.0	275.05	9977.0
56.00	723.0	110.05	16808.0	160.10	362.0	209.05	107.0	276.15	1362.0
57.10	1801.0	111.05	7574.0	161.10	517.0	211.15	596.0	277.05	769.0
58.00	71.0	112.15	257.0	162.10	141.0	211.95	64.0	285.10	150.0
61.05	317.0	116.00	352.0	164.95	366.0	216.10	187.0	295.10	150.0
62.05	378.0	117.00	5190.0	166.05	297.0	217.00	7744.0	296.10	2417.0
63.05	1059.0	118.00	442.0	167.05	2055.0	218.00	319.0	297.10	330.0
64.05	170.0	120.10	62.0	168.05	827.0	221.10	2246.0	303.05	284.0
65.05	451.0	122.00	453.0	169.05	184.0	223.10	545.0	304.05	76.0
68.05	504.0	123.00	755.0	171.05	97.0	224.10	5484.0	314.05	98.0
69.05	32328.1	124.00	304.0	171.95	166.0	225.10	1416.0	315.15	268.0
73.05	161.0	125.10	323.0	173.05	230.0	226.10	147.0	316.15	123.0
74.05	2599.0	127.10	23584.1	174.05	441.0	227.10	2224.0	323.10	874.0
75.05	4335.0	128.10	1758.0	175.05	794.0	228.10	319.0	324.10	163.0
76.05	1284.0	129.10	10885.0	176.05	257.0	229.10	454.0	327.00	134.0
77.15	24952.1	130.05	871.0	177.05	376.0	230.00	62.0	333.10	64.0
78.15	1605.0	131.05	191.0	178.05	136.0	231.10	192.0	334.10	487.0
79.00	1732.0	134.05	276.0	179.05	1566.0	234.05	97.0	346.05	159.0
80.00	1429.0	135.05	896.0	180.05	1003.0	235.05	186.0	352.15	195.0
81.00	2143.0	136.05	303.0	181.05	498.0	236.05	99.0	353.15	181.0
82.10	534.0	137.05	358.0	182.00	90.0	237.05	155.0	354.10	236.0
83.10	482.0	138.05	99.0	184.00	98.0	238.95	71.0	365.10	920.0
84.00	245.0	140.05	88.0	185.00	669.0	241.05	104.0	366.10	124.0
85.00	416.0	141.05	1153.0	186.10	5998.0	242.05	247.0	372.05	435.0
86.00	702.0	142.05	402.0	187.10	1658.0	243.15	237.0	373.05	123.0
87.10	255.0	143.05	280.0	188.00	179.0	244.15	4057.0	383.15	101.0
91.10	461.0	144.05	93.0	189.00	319.0	245.15	609.0	402.00	158.0
92.10	464.0	144.95	99.0	191.00	135.0	246.05	873.0	403.10	271.0
93.00	3033.0	146.05	232.0	192.10	456.0	247.05	174.0	404.10	72.0
94.10	232.0	147.00	604.0	193.10	498.0	249.05	155.0	421.15	214.0
95.95	111.0	148.00	1229.0	194.10	115.0	253.00	90.0	422.05	182.0
98.05	2134.0	149.00	239.0	196.10	1380.0	254.10	83.0	423.10	1754.0
98.95	1809.0	150.10	73.0	198.10	48040.1	255.10	20248.1	424.10	315.0
100.05	170.0	151.20	110.0	199.05	3274.0	256.10	2908.0	441.05	3849.0
101.05	1036.0	152.10	90.0	200.05	220.0	257.10	165.0	442.15	28512.1
103.05	294.0	153.10	388.0	201.55	234.0	258.10	1140.0	443.15	5345.0
104.05	650.0	154.00	278.0	202.95	294.0	259.10	185.0	444.15	513.0
105.05	524.0	155.10	618.0	204.05	1328.0				

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
51	30-60% of mass 198	57.55	57.55	Ok
68	Less than 2% of mass 69	0.00	0.00	Ok
69	(reference only)	57.75	57.75	Ok
70	Less than 2% of mass 69	.22	.38	Ok
127	40-60% of mass 198	47.17	47.17	Ok
197	Less than 1% of mass 198	0.00	0.00	Ok
198	Base peak, 100% relative abundance	100.00	100.00	Ok
199	5-9% of mass 198	6.75	6.75	Ok
275	10-30% of mass 198	22.29	22.29	Ok
365	Greater than 1% of mass 198	2.25	2.25	Ok
441	Less than mass 443	9.21	84.21	Ok
442	Greater than 40% of mass 198	59.14	59.14	Ok
443	17-23% of mass 442	10.93	18.48	Ok

Injection Date: 10/20/00
Injection Time: 09:48
Data File: >F2235
Scan: 112



File: SF2235 Scan #: 112 Retn. time: 5.17

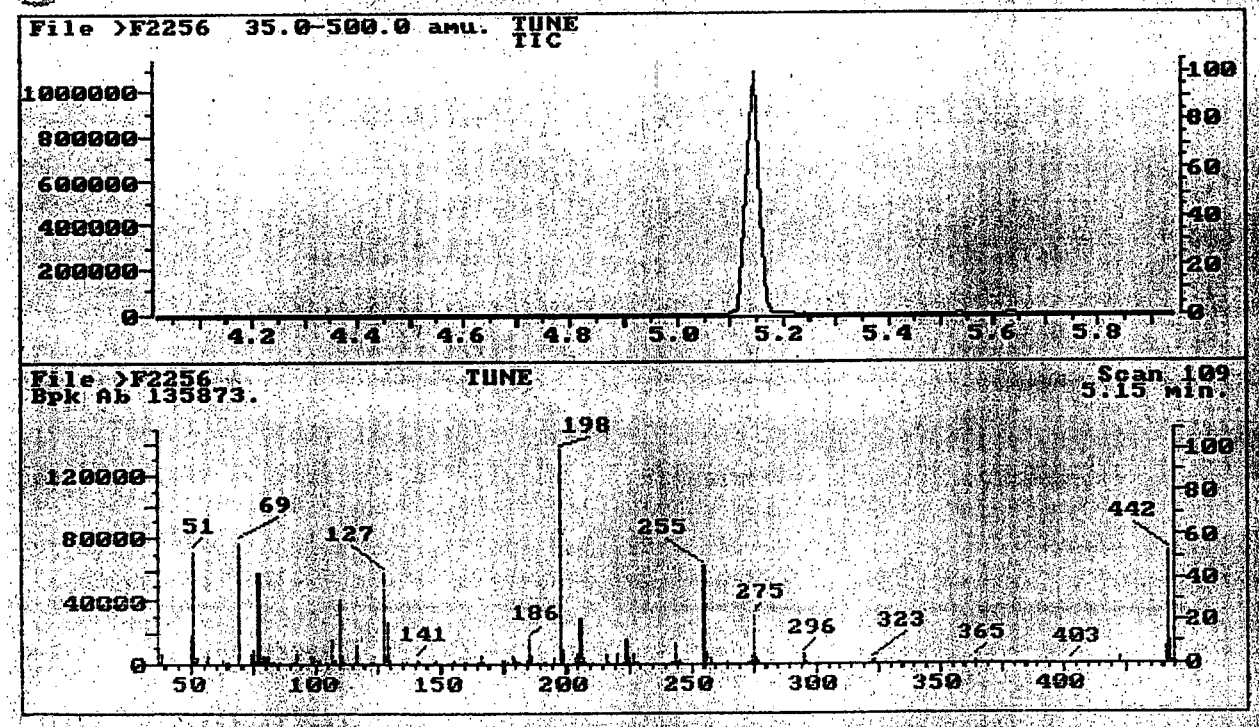
m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
37.05	492.	104.05	1710.	162.00	428.	219.10	155.	293.05	565.
38.05	1789.	105.05	1617.	163.00	149.	221.00	7439.	293.95	137.
39.05	8283.	107.00	19664.	164.10	162.	223.00	1974.	295.95	8386.
40.15	528.	108.00	2937.	165.00	1190.	224.00	17690.	297.05	1098.
41.05	221.	110.00	46880.	166.10	1114.	225.10	4423.	301.05	105.
43.05	41.	111.00	6353.	167.00	5922.	226.10	541.	302.00	166.
44.05	513.	112.00	720.	168.00	2514.	227.00	7458.	303.10	988.
48.15	32.	113.10	275.	169.10	497.	228.00	1045.	304.00	283.
50.00	21468.	115.00	112.	170.10	219.	229.00	1591.	308.00	102.
51.10	82240.	116.10	1286.	171.00	271.	230.00	217.	309.10	95.
52.10	3838.	117.00	14162.	172.00	660.	231.10	631.	310.00	112.
53.10	162.	118.10	1051.	173.10	757.	231.95	101.	313.10	129.
55.10	376.	119.00	163.	174.10	1422.	232.95	142.	314.10	411.
56.00	2318.	119.95	225.	175.10	2288.	233.95	498.	315.00	893.
57.00	5460.	121.05	106.	176.05	805.	234.95	469.	315.95	521.
58.10	266.	122.05	1299.	176.95	1285.	236.05	297.	316.75	101.
61.10	971.	123.05	2109.	178.05	460.	237.05	543.	319.95	22.
62.10	1065.	124.05	912.	178.95	4857.	239.05	305.	321.05	294.
63.10	2985.	125.05	783.	180.05	3156.	239.95	225.	323.05	2910.
64.05	376.	127.05	65924.	181.05	1571.	240.95	397.	324.05	490.
65.05	1326.	128.05	5408.	182.05	263.	242.05	895.	327.05	495.
66.05	133.	129.05	30372.	183.05	139.	243.15	1100.	328.05	267.
66.75	36.	130.05	2448.	184.05	425.	244.05	14745.	332.00	220.
69.05	89600.	130.95	473.	185.05	2478.	245.05	1975.	333.00	250.
70.05	338.	132.05	259.	186.05	18684.	246.00	2753.	334.00	1744.
73.15	532.	134.00	779.	187.05	5244.	247.00	531.	335.10	445.
74.05	6840.	135.00	2418.	188.05	542.	248.00	47.	341.00	308.
75.05	11323.	136.00	912.	189.05	1094.	249.00	595.	345.95	507.
76.15	3785.	137.00	1073.	190.00	172.	250.90	110.	352.05	860.
77.15	67120.	138.10	188.	191.00	514.	252.00	168.	353.05	568.
78.10	4593.	139.00	147.	192.00	1522.	253.10	347.	354.05	886.
79.00	5330.	140.10	375.	193.00	1485.	255.00	72752.	355.15	167.
80.00	3902.	141.00	3386.	194.00	391.	256.00	10179.	365.00	3515.
81.00	5461.	142.10	1173.	195.10	139.	257.00	1755.	366.00	451.
82.00	1299.	143.10	743.	196.00	4176.	258.00	3957.	370.00	95.
83.00	1196.	143.90	173.	198.00	156513.	259.10	577.	371.00	215.
84.00	169.	145.10	170.	199.00	10538.	263.95	130.	372.05	1511.
85.10	952.	146.10	572.	200.00	691.	265.05	1534.	373.05	1344.
86.00	1369.	147.10	1769.	201.60	707.	266.05	222.	383.05	356.
87.10	675.	147.95	3550.	203.00	933.	271.05	179.	391.00	136.
88.00	247.	149.05	762.	204.05	4687.	271.95	196.	400.95	82.
91.10	1232.	150.15	213.	205.05	8026.	273.05	2218.	401.95	578.
92.05	1272.	151.05	445.	206.05	33416.	274.00	5980.	403.05	829.
93.05	7748.	151.75	264.	207.05	4278.	275.00	34884.	404.05	256.
94.05	609.	153.05	1114.	207.95	1142.	276.00	4541.	421.00	667.
94.95	118.	154.05	820.	208.95	316.	277.00	2603.	422.00	607.
96.05	304.	155.05	1954.	210.05	246.	278.00	400.	423.00	5397.
98.05	5742.	156.05	2736.	211.05	1313.	283.10	283.	424.00	1048.
99.05	4675.	157.15	581.	214.95	365.	284.10	196.	441.05	14409.
100.05	457.	157.95	579.	216.05	730.	285.10	441.	442.05	2564.
101.05	2777.	159.05	453.	216.95	8844.	288.95	110.	443.00	12110.
102.05	156.	160.05	991.	218.00	1037.	292.05	146.	444.00	1497.
103.05	817.	161.05	1610.						

BFB/DFTPP PERFORMANCE STANDARD

Decafluorotriphenylphosphine (DFTPP)

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
51	30-60% of mass 198	52.32	52.32	Ok
68	Less than 2% of mass 69	0.00	0.00	Ok
69	(reference only)	56.48	56.48	Ok
70	Less than 2% of mass 69	.26	.45	Ok
127	40-60% of mass 198	42.88	42.88	Ok
197	Less than 1% of mass 198	0.00	0.00	Ok
198	Base peak, 100% relative abundance	100.00	100.00	Ok
199	5-9% of mass 198	6.68	6.68	Ok
275	10-30% of mass 198	21.81	21.81	Ok
365	Greater than 1% of mass 198	1.94	1.94	Ok
441	Less than mass 443	7.91	78.39	Ok
442	Greater than 40% of mass 198	52.03	52.03	Ok
443	17-23% of mass 442	10.09	19.39	Ok

Injection Date: 10/23/00
Injection Time: 09:23
Data File: >F2256
Scan: 109



Time: 2F2256 Scan #: 109 Retn. time: 5.15

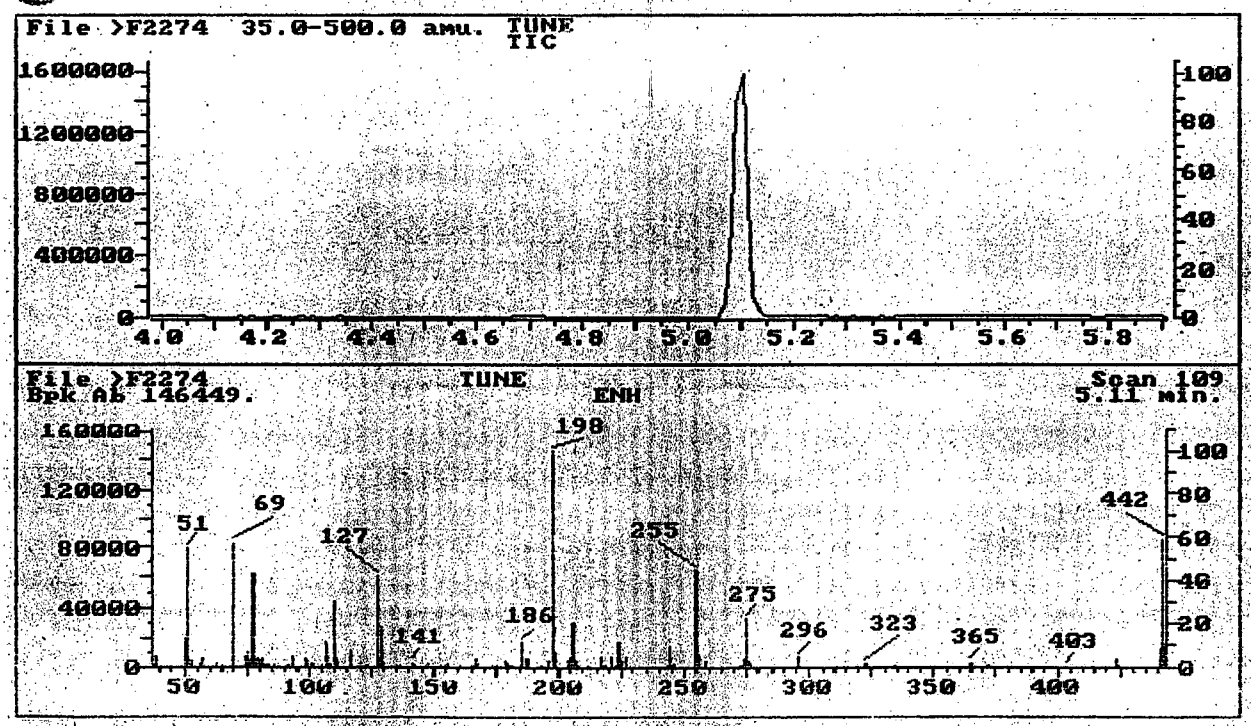
m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
37.05	314.	104.05	1600	164.00	184.	225.00	3930.	296.95	1076.
38.05	1026.	105.05	1416.	165.00	997	227.00	6264	302.00	116.
39.15	6664.	107.00	16552.	166.10	908.	228.00	895.	303.00	843.
40.05	515.	108.10	2629.	167.00	5152.	229.00	1318.	304.00	256.
41.15	242.	110.00	40008.	168.00	1974.	230.00	163.	308.00	90.
44.15	690.	111.10	5333.	169.10	399.	231.10	597.	310.00	83.
45.05	176.	112.10	583.	170.00	173.	232.05	79.	314.00	319.
47.95	66.	113.00	165.	171.10	284.	233.95	388.	315.00	742.
48.15	66.	114.00	84.	172.00	580.	234.95	399.	316.00	443.
50.10	18280.	115.00	76.	173.10	658.	235.95	224.	316.95	97.
51.10	71088.	116.10	1131.	174.10	1275.	236.95	453.	320.95	230.
52.10	3498.	117.00	11213.	175.10	2047.	237.95	66.	321.95	138.
53.10	142.	118.10	907.	176.05	701.	239.05	242.	323.05	2342.
55.10	338.	119.10	154.	176.95	1223.	240.15	149.	324.05	470.
56.10	2125.	120.05	220.	178.05	417.	241.05	352.	326.95	409.
57.10	4528.	122.05	1130.	178.95	4306.	242.05	755.	327.95	251.
58.10	194.	123.05	1846.	180.05	2865.	243.15	938.	332.00	142.
61.10	847.	124.05	715.	181.05	1473.	244.05	12649.	333.00	234.
62.10	838.	125.05	722.	182.15	193.	245.05	1641.	334.00	1429.
63.10	2435.	127.05	58264.	182.75	106.	246.00	2358.	335.00	365.
64.05	402.	128.05	4510.	183.15	132.	247.00	422.	341.00	275.
65.05	1124.	129.05	26136.	184.15	348.	248.00	109.	342.00	86.
67.05	128.	130.05	2251.	185.15	2136.	249.00	494.	345.95	398.
69.05	76736.	131.05	455.	186.05	16233.	250.00	101.	346.95	93.
70.05	347.	132.15	201.	187.05	4497.	250.90	95.	352.05	685.
73.15	456.	132.95	107.	188.05	425.	252.00	142.	352.95	431.
74.05	5602.	134.00	721.	189.05	1014.	253.00	255.	354.05	677.
75.05	9547.	135.00	1906.	190.00	185.	255.00	61432.	354.95	114.
76.15	3107.	136.00	713.	191.10	419.	256.00	8225.	365.00	2640.
77.15	58328.	137.10	889.	192.00	1272.	257.10	607.	366.00	314.
78.10	4007.	138.00	247.	193.00	1391.	258.00	3292.	370.00	80.
79.10	4590.	139.00	131.	194.10	272.	259.00	511.	371.10	188.
80.00	3213.	140.20	334.	195.10	229.	260.95	100.	372.05	1174.
81.10	4692.	141.00	2874.	196.00	3871.	264.05	108.	372.95	293.
82.10	1129.	142.10	1093.	198.00	135873.	264.95	1207.	383.05	315.
83.10	1056.	143.00	677.	199.00	9078.	266.05	211.	383.95	77.
84.00	150.	144.10	200.	200.10	615.	271.05	140.	390.00	142.
85.10	856.	145.10	192.	201.60	611.	272.15	166.	391.10	112.
86.10	1165.	146.10	526.	203.00	811.	273.05	1905.	392.00	71.
87.10	633.	147.10	1510.	204.05	4029.	274.00	4836.	400.95	78.
87.90	160.	148.05	2788.	205.05	6954.	275.00	29632.	402.05	407.
89.10	78.	149.05	607.	206.05	28920.	276.00	3976.	403.05	609.
89.90	46.	150.05	199.	207.05	3685.	277.00	2283.	404.05	206.
91.10	1056.	151.15	399.	208.05	951.	278.00	350.	421.00	541.
92.05	1007.	153.05	902.	209.05	331.	279.00	65.	422.00	490.
93.05	6802.	154.05	783.	210.05	479.	281.90	72.	423.00	4187.
94.05	461.	155.15	1686.	211.05	1148.	283.10	221.	424.00	769.
95.05	119.	156.05	2315.	214.95	347.	284.20	146.	425.10	78.
96.15	251.	157.15	533.	216.05	604.	285.10	388.	439.05	54.
98.05	4552.	158.05	520.	217.05	7596.	288.85	107.	439.65	75.
99.05	3908.	159.05	491.	218.00	904.	290.05	86.	441.05	10746.
100.05	403.	160.05	1006.	219.10	118.	292.05	65.	442.05	70688.
101.05	2276.	161.05	1420.	221.00	7292.	293.05	467.	443.00	13709.
102.05	141.	162.10	347.	223.00	1744.	294.05	130.	444.00	1194.
103.05	786.	163.00	119.	224.00	329	296.05	6991.	445.00	85.

GC/MS PERFORMANCE STANDARD

Decafluorotriphenylphosphine (DFTPP)

m/z	Ion Abundance Criteria	Relative Abundance Base Peak	Relative Abundance Appropriate Peak	Status
51	30-60% of mass 198	54.17	54.17	Ok
68	Less than 2% of mass 69	0.00	0.00	Ok
69	(reference only)	56.65	56.65	Ok
70	Less than 2% of mass 69	.25	.40	Ok
127	40-60% of mass 198	41.55	41.55	Ok
197	Less than 1% of mass 198	0.00	0.00	Ok
198	Base peak, 100% relative abundance	100.00	100.00	Ok
199	5-9% of mass 198	6.56	6.56	Ok
275	10-30% of mass 198	22.14	22.14	Ok
365	Greater than 1% of mass 198	2.08	2.08	Ok
441	Less than mass 443	8.89	83.82	Ok
442	Greater than 40% of mass 198	58.53	58.53	Ok
443	17-23% of mass 442	10.61	18.13	Ok

Injection Date: 10/24/00
Injection Time: 08:45
Data File: >F2274
Scan: 109



A-file: >r22/a Scan #: 10Y Retn time: 5.13

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
37.15	415.	100.15	367.	155.05	1593.	207.05	3893.	276.00	4142.
38.05	1228.	101.05	2365.	156.05	2491.	207.95	956.	277.00	2785.
39.15	7808.	102.25	146.	157.05	563.	208.85	299.	278.00	346.
40.05	561.	103.05	861.	159.05	550.	210.05	132.	283.00	268.
41.15	393.	104.05	1565.	159.95	453.	211.05	1214.	284.00	173.
43.15	249.	105.05	1442.	160.05	917.	212.95	108.	285.10	393.
44.15	456.	107.00	17809.	161.05	1369.	214.95	346.	288.95	110.
45.05	182.	108.00	2778.	162.00	400.	216.05	707.	291.95	112.
50.10	20180.	110.00	43576.	163.10	121.	216.95	7790.	292.95	519.
51.10	79336.	111.00	5741.	164.10	174.	217.90	961.	295.95	7295.
52.10	3909.	112.10	621.	165.00	1057.	219.10	105.	297.05	901.
53.00	188.	113.00	178.	166.00	1021.	221.00	8168.	301.95	165.
55.10	448.	116.10	1087.	167.00	5564.	223.00	1832.	303.00	808.
56.10	2164.	117.00	11539.	168.00	2211.	224.00	16484.	304.00	255.
57.10	5310.	118.10	812.	169.00	431.	225.00	4241.	308.00	126.
58.10	237.	119.10	156.	170.00	192.	226.10	418.	314.10	350.
61.10	1007.	119.95	225.	170.90	256.	227.00	6419.	314.90	735.
62.10	970.	122.05	1198.	171.90	539.	228.00	906.	316.00	458.
63.10	2714.	123.05	1818.	173.10	654.	229.00	1407.	320.95	285.
64.05	436.	124.05	874.	174.10	1274.	229.90	210.	322.05	149.
65.05	1234.	125.05	853.	175.10	2074.	231.10	596.	322.95	2568.
66.25	125.	127.05	60844.	176.05	703.	232.95	119.	323.95	444.
66.55	51.	128.05	4709.	176.95	1157.	233.95	387.	326.95	430.
67.05	65.	129.05	27168.	177.95	134.	235.05	414.	328.05	206.
69.05	82968.	130.05	2247.	178.95	4240.	235.95	296.	331.90	167.
69.95	332.	131.05	439.	180.05	2916.	236.95	502.	332.80	239.
73.25	507.	132.15	256.	181.05	1345.	237.95	92.	333.90	1572.
74.05	5991.	132.95	128.	182.05	184.	239.05	287.	335.00	421.
75.05	10296.	134.00	717.	183.15	123.	240.05	204.	341.00	282.
76.15	3471.	135.00	2109.	184.15	353.	241.05	353.	345.85	450.
77.15	62684.	136.10	838.	185.05	2133.	241.95	844.	351.95	755.
78.10	4107.	137.10	954.	186.05	16992.	243.05	956.	353.05	524.
79.00	4628.	137.90	224.	187.05	4761.	244.05	13751.	354.05	755.
80.00	3436.	139.00	148.	188.05	488.	245.05	1706.	364.90	3046.
81.00	5105.	140.10	372.	189.05	918.	246.00	2470.	366.00	374.
82.10	1153.	141.00	3053.	190.00	177.	246.90	453.	371.10	180.
83.10	1074.	142.00	1210.	191.10	413.	249.00	518.	372.00	1328.
84.00	217.	143.00	702.	192.00	1279.	252.00	150.	372.85	324.
85.10	913.	144.00	189.	193.00	1408.	253.10	292.	382.95	339.
86.10	1277.	145.10	163.	194.00	307.	255.00	65268.	390.00	174.
87.10	658.	146.00	459.	195.00	77.	256.00	9109.	401.85	505.
88.10	224.	147.10	1558.	196.00	4001.	257.00	688.	402.95	725.
91.10	1175.	147.95	2917.	198.00	146449.	258.00	3510.	403.95	270.
92.05	1186.	148.95	720.	199.00	9605.	258.90	522.	420.90	613.
93.05	6928.	150.15	183.	200.10	662.	264.95	1233.	423.00	4850.
94.15	540.	151.05	414.	201.50	672.	266.05	195.	424.00	954.
95.15	180.	151.65	73.	203.10	819.	270.95	164.	441.05	13025.
96.15	329.	151.95	278.	204.05	4122.	273.05	2049.	441.95	85716.
98.05	5098.	153.05	1051.	205.05	7114.	274.00	5450.	442.90	15540.
99.05	4138.	153.95	770.	206.05	30184.	275.00	32420.	443.90	1377.

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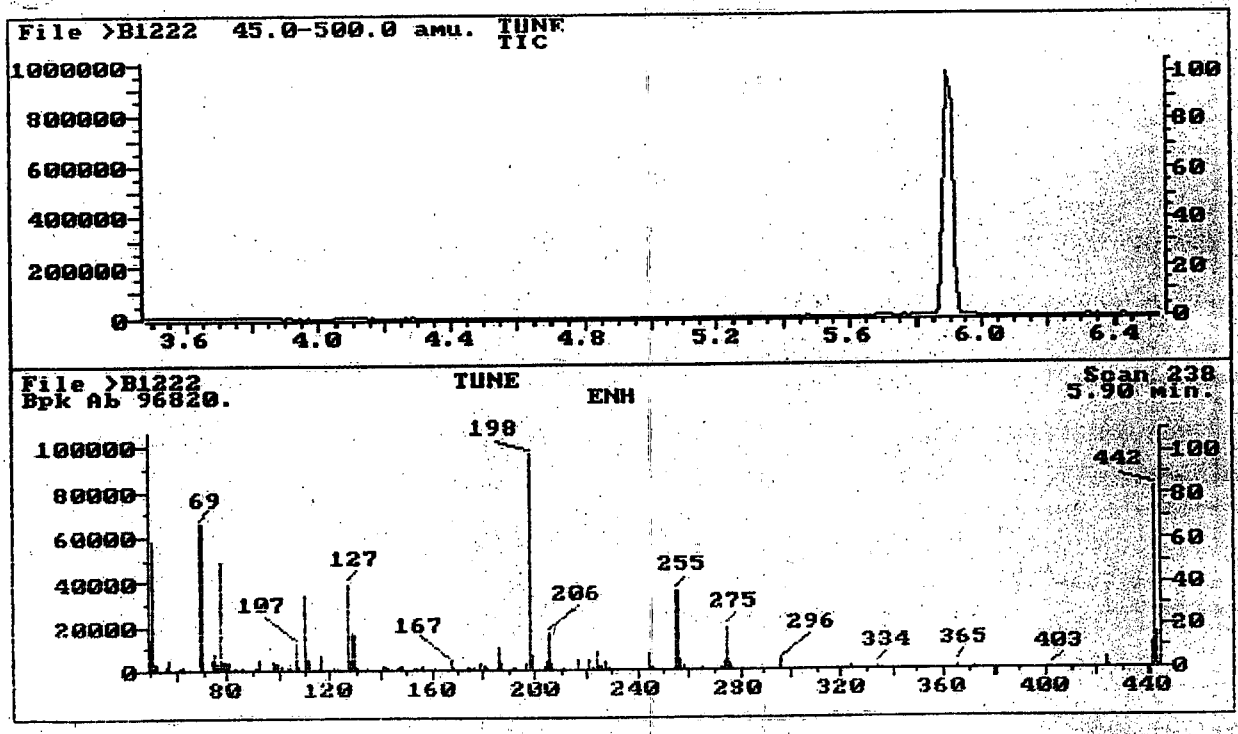
GC/MS PERFORMANCE STANDARD

Decafluorotriphenylphosphine (DFTPP)

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
51	30-60% of mass 198	59.98	59.98	Ok
68	Less than 2% of mass 69	.58	.86	Ok
69	(reference only)	67.56	67.56	Ok
70	Less than 2% of mass 69	.34	.50	Ok
127	40-60% of mass 198	40.08	40.08	Ok
197	Less than 1% of mass 198	0.00	0.00	Ok
198	Base peak, 100% relative abundance	100.00	100.00	Ok
199	5-9% of mass 198	6.60	6.60	Ok
275	10-30% of mass 198	19.69	19.69	Ok
365	Greater than 1% of mass 198	1.98	1.98	Ok
441	Less than mass 443	11.56	73.08	Ok
442	Greater than 40% of mass 198	82.99	82.99	Ok
443	17-23% of mass 442	15.82	19.06	Ok

Injection Date: 10/24/00
Injection Time: 09:41
Data File: >B1222
Scan: 238



m/z	int.	m/z	int.	m/z	int.	m/z	int.	m/z	int.
49.05	481.0	105.05	961.5	159.00	276.5	215.05	1 2.5	272.05	24.5
50.05	14178.0	106.10	884.5	160.10	585.5	216.05	288.5	296.00	4195.0
51.05	58072.2	107.00	12612.5	161.10	817.5	217.05	3904.0	297.00	604.0
57.05	2941.0	108.00	1836.0	162.00	253.5	219.05	494.0	301.70	38.5
59.05	128.0	110.00	33456.1	164.05	95.0	221.10	4513.5	302.00	47.0
65.05	306.5	111.00	4279.0	165.05	580.0	223.00	841.0	303.10	191.0
66.05	1530.0	112.00	438.0	166.05	552.0	224.10	8821.5	304.20	161.5
67.05	4125.0	113.00	155.5	167.05	3191.0	225.10	7196.0	308.10	64.5
68.05	184.0	115.00	26.0	168.05	1212.5	226.00	219.0	314.10	706.0
71.05	664.5	116.10	623.0	169.05	237.5	227.10	3407.5	315.05	458.5
72.05	635.0	117.00	6855.5	170.05	99.5	228.10	494.0	316.05	318.0
73.05	2026.0	118.00	553.5	171.05	121.5	229.10	771.0	321.05	141.0
74.05	252.5	119.10	80.0	172.05	271.0	230.10	41.5	321.95	89.5
75.05	1004.5	120.00	136.5	173.05	369.0	231.10	296.0	323.05	1698.5
76.05	69.0	121.10	65.0	174.05	660.5	234.10	193.5	324.15	321.0
77.15	103.0	122.10	705.5	175.05	1166.0	235.10	238.5	327.05	263.5
78.10	563.0	123.10	1170.5	176.05	385.0	236.00	152.5	328.15	159.0
79.00	65408.7	124.00	532.5	177.05	670.5	237.10	247.5	332.15	110.5
79.90	325.0	125.05	498.5	178.05	165.5	238.95	131.5	333.05	131.0
81.00	111.5	127.05	38804.1	179.05	2332.5	240.05	115.0	334.10	1061.0
83.10	318.0	128.05	3159.0	180.05	1581.0	241.05	170.0	335.00	295.0
84.00	4236.5	129.05	17514.5	181.05	780.0	242.05	442.5	341.00	178.5
85.00	7906.0	130.05	1401.0	182.00	134.5	243.15	431.5	346.10	322.5
86.10	2414.0	131.05	246.5	183.10	51.5	244.05	7574.0	352.10	530.0
87.10	48716.1	132.05	149.5	184.00	212.5	245.05	1015.0	353.05	357.5
88.10	3346.5	132.75	27.0	185.00	1164.0	246.05	1390.0	354.05	587.0
89.00	3281.5	132.95	28.0	186.00	10024.0	247.05	151.0	365.05	1913.5
90.00	2486.0	134.05	469.0	187.10	2733.5	249.05	259.5	366.05	237.5
91.00	3628.5	135.05	1288.5	188.10	311.0	251.05	35.0	370.15	32.5
92.00	912.5	136.05	540.0	189.10	536.0	252.05	37.5	371.15	174.5
93.10	837.0	137.05	573.5	190.00	58.5	253.15	138.0	372.10	1016.5
94.00	197.5	138.15	95.5	191.10	259.5	255.05	35612.1	373.10	251.0
95.10	727.0	140.05	161.0	192.10	709.5	256.05	5197.5	383.10	231.5
96.00	946.5	141.05	1831.0	193.10	812.5	257.15	400.0	390.10	118.5
97.05	453.0	142.05	807.5	194.10	184.0	258.00	1899.5	391.15	102.0
98.05	171.5	143.05	424.0	195.10	114.0	259.00	289.0	392.15	88.5
99.05	62.0	144.10	60.0	196.10	2463.5	261.00	78.5	401.15	38.0
101.05	823.5	145.00	70.0	198.00	96820.3	265.10	731.5	402.05	413.5
102.05	782.5	146.00	258.5	199.00	6387.0	266.00	96.5	403.15	564.0
103.05	4431.0	147.00	963.5	200.00	427.0	271.10	44.0	404.15	230.5
104.05	349.0	148.00	1624.5	201.45	420.0	272.10	94.0	421.10	526.5
105.05	124.0	149.00	373.0	202.95	397.0	273.10	1052.0	422.10	441.0
106.05	267.5	151.20	251.5	204.05	2165.5	274.10	3471.0	423.10	4409.5
107.15	107.5	151.90	178.0	205.05	3659.5	275.10	19064.1	424.10	923.5
108.05	3177.0	153.00	663.5	206.05	17215.0	276.10	2466.0	425.10	83.5
109.05	2813.5	154.10	452.0	207.05	2312.5	277.05	1443.5	441.15	11193.5
109.95	229.5	155.10	1006.5	208.05	555.5	278.05	239.5	442.15	80348.2
111.05	1774.0	156.10	1487.5	209.05	108.0	283.15	146.5	443.15	15316.5
112.05	106.0	157.10	366.0	210.35	182.5	284.05	95.5	444.15	1410.5
112.95	545.0	158.00	305.0	211.05	616.5	285.15	251.0	445.15	82.5
114.05	1067.0								

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[illegible] Calibration Data
[illegible] Compounds

Case No: Instrument ID: [illegible]

Contractor: Accredited Labs Calibration Date: 10/06/00

Contract No: CAL806

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % RSD for CCC is 30%

Laboratory ID:	>B0993	>B0991	>B0994	>B0995	>B0992					
	RF	RF	RF	RF	RF					
Compound	20.00	50.00	80.00	120.00	160.00	$\overline{RRT}$	$\overline{RF}$	% RSD	CCC	SPCC
Pyridine	1.13012	1.07996	1.12667	1.52368	1.21948	.396	1.21598	14.742		
N-Nitrosodimethylamine	.88324	.81318	.93534	.88847	.91255	.402	.88656	5.186		
2-Fluorophenol	1.37167	1.33383	1.41974	1.44685	1.36783	.720	1.38798	3.238		
Aniline	2.87401	2.42843	2.78902	2.82643	2.60113	.939	2.70380	6.861		
Phenol-d5	2.11217	1.90572	2.14885	2.19809	2.02954	.945	2.07887	5.518		
Phenol	2.37517	2.20842	2.25721	2.59334	2.30130	.948	2.34709	6.420	*	
bis(-2-Chloroethyl)Ether	1.86140	1.57683	1.61611	1.51806	1.36904	.957	1.58829	11.284		
2-Chlorophenol	1.62633	1.55498	1.55023	1.51910	1.47450	.961	1.54503	3.601		
1,3-Dichlorobenzene	1.51962	1.40585	1.39905	1.28802	1.25901	.991	1.37431	7.585		
1,4-Dichlorobenzene	1.57366	1.43444	1.41723	1.29105	1.28864	1.004	1.40101	8.438	*	
Benzyl Alcohol	1.12976	.98074	1.02323	1.14251	1.05335	1.048	1.06592	6.496		
1,2-Dichlorobenzene	1.45696	1.33220	1.19642	1.11439	1.09266	1.047	1.23853	12.440		
2-Methylphenol	1.70563	1.40275	1.62193	1.49730	1.38553	1.081	1.52263	9.122		
bis(2-Chloroisopropyl)ether	2.76827	2.13301	2.72022	2.78321	2.42326	1.083	2.56559	11.020		
3&4-Methylphenol	1.77720	1.50727	1.59503	1.51019	1.61739	1.118	1.60141	6.868		
N-Nitroso-Di-n-propylamine	1.67029	1.41418	1.61047	1.69827	1.51371	1.121	1.58138	7.412		**
Hexachloroethane	.66080	.58386	.53023	.54881	.56873	1.117	.57849	8.690		
Nitrobenzene-d5	.49148	.45994	.49313	.51332	.50964	.875	.49351	4.279		
Nitrobenzene	.50626	.46845	.46878	.47769	.48223	.879	.48068	3.218		
Isophorone	1.11777	1.01655	1.07640	1.12528	1.09184	.925	1.08557	3.989		
2-Nitrophenol	.22216	.22175	.21918	.22795	.22661	.937	.22353	1.628	*	
2,4-Dimethylphenol	.37675	.35090	.34512	.34106	.34142	.953	.35105	4.245		
Benzoic Acid	.22274	.23983	.27612	.26500	.26395	.992	.25353	8.566		
bis(-2-Chloroethoxy)Methane	.57618	.51717	.52457	.53127	.54899	.969	.53963	4.370		
2,4-Dichlorophenol	.30836	.31148	.28558	.28157	.28890	.981	.29518	4.658	*	
1,2,4-Trichlorobenzene	.29977	.28287	.26110	.24804	.24467	.994	.26729	8.811		
Naphthalene	1.10518	1.02856	.99055	.85973	.86137	1.004	.96908	11.075		
4-Chloroaniline	.53369	.47451	.45774	.43197	.37953	1.024	.45549	12.422		
Hexachlorobutadiene	.14862	.15295	.12846	.11252	.11386	1.040	.13128	14.420	*	
4-Chloro-3-methylphenol	.48178	.47301	.45204	.46534	.43678	1.117	.46179	3.842	*	

RF - Response Factor (Subscript is amount in ug/l)

$\overline{RRT}$ - Average Relative Retention Time (RT Std/RT Istd)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

[illegible]
PCC Compounds

Case No.: [illegible] Instrument: [illegible]

Contractor: Accredited Labs Calibration Date: 10/06/00

Contract No: CALB06

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % RSD for CCC is 30%

Compound	Laboratory ID: >80993 RF 20.00	>80991 RF 50.00	>80994 RF 80.00	>80995 RF 120.00	>80992 RF 160.00	$\overline{RRT}$	$\overline{RF}$	% RSD	CCC	SPCC
2-Methylnaphthalene	.78258	.68713	.65004	.61686	.58092	1.132	.66351	11.654		
Hexachlorocyclopentadiene	.25703	.24533	.25971	.23666	.23048	.884	.24584	5.136		**
2,4,6-Trichlorophenol	.41133	.38089	.35347	.32994	.31037	.898	.35720	11.235	*	
2,4,5-Trichlorophenol	.41692	.38837	.37456	.31871	.31783	.903	.36328	12.066		
2-Chloronaphthalene	1.21789	1.06563	1.00396	.93620	.85284	.920	1.01530	13.608		
2-Fluorobiphenyl	1.35765	1.15086	1.10887	.96537	.90283	.909	1.09712	16.178		
2-Nitroaniline	.63101	.56617	.62424	.61513	.58529	.944	.60437	4.564		
Dimethyl Phthalate	1.58930	1.42546	1.41392	1.28468	1.18393	.975	1.37946	11.145		
Acenaphthylene	2.09729	1.88353	1.80267	1.56007	1.39932	.979	1.74858	15.669		
3-Nitroaniline	.44098	.42984	.45488	.43580	.38074	1.002	.42845	6.589		
Acenaphthene	1.26733	1.14365	1.06159	.94847	.83690	1.006	1.05159	15.901	*	
2,4-Dinitrophenol	.15696	.21471	.24773	.25822	.25896	1.017	.22732	19.026		**
4-Nitrophenol	.30031	.32151	.31646	.29584	.31270	1.030	.30936	3.518		**
Dibenzofuran	1.83373	1.71096	1.59203	1.50155	1.37689	1.028	1.60303	11.091		
2,6-Dinitrotoluene	.35085	.34432	.36925	.35727	.34998	.984	.35433	2.687		
2,4-Dinitrotoluene	.57513	.59665	.61309	.57631	.58996	1.039	.59023	2.660		
Methylphthalate	1.91452	1.72724	1.54944	1.23583	1.03798	1.075	1.49300	23.891		
4-Chlorophenyl-phenylether	.67032	.62215	.54267	.46344	.38896	1.078	.53751	21.290		
Fluorene	1.53599	1.35837	1.18021	.88794	.76641	1.076	1.14578	27.910		
4-Nitroaniline	.58361	.54782	.60628	.58963	.55287	1.092	.57604	4.331		
2,4,6-Tribromophenol	.21245	.23482	.20543	.18319	.19679	1.113	.20653	9.302		
Carbazole	.07971	.07790	.07108	.06515	.06321	.987	.07141	10.330		
4,6-Dinitro-2-methylphenol	.14620	.16983	.16191	.13923	.10734	.909	.14490	16.748		
N-Nitrosodiphenylamine	.19782	.17881	.15241	.11483	.10180	.910	.14914	27.400	*	
Azobenzene	1.37198	1.27550	1.22431	1.01526	.92603	.912	1.16262	15.980		
4-Bromophenyl-phenylether	.20267	.18752	.16539	.15063	.13977	.950	.16920	15.303		
Hexachlorobenzene	.23593	.21841	.18635	.16515	.16470	.965	.19411	16.501		
Pentachlorophenol	.16735	.16616	.14718	.13785	.13526	.987	.15076	10.125	*	
Phenanthrene	1.22684	1.03996	.94010	.83784	.80385	1.003	.96972	17.624		
Anthracene	1.21326	1.08981	.95816	.87695	.78690	1.009	.98502	17.194		

RF - Response Factor (Subscript is amount in ug/l)

$\overline{RRT}$ - Average Relative Retention Time (RT Std/RT Istd)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Initial Calibration Data
BSL Compounds

Case No: Instrument ID: [illegible]

Contractor: Accredited Labs Calibration Date: 10/06/00

Contract No: CALB06

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % RSD for CCC is 30%

Compound	Laboratory ID: >B0993 RF 20.00	>B0991 RF 50.00	>B0994 RF 80.00	>B0995 RF 120.00	>B0992 RF 160.00	$\overline{RRT}$	$\overline{RF}$	% RSD	CCC	SPCC
Di-n-Butylphthalate	1.85690	1.56119	1.32472	1.09823	.90163	1.079	1.34854	27.909		
Fluoranthene	1.29671	1.09435	.98820	.87225	.81331	1.142	1.01296	18.951	*	
Benzidine	.89123	.41559	.78117	.86377	.84464	.886	.75928	25.861		
Pyrene	1.62858	1.49362	1.50147	1.69325	1.83174	.892	1.62973	8.668		
Terphenyl-d14	.99392	.90744	.89395	.97577	.98008	.908	.95023	4.837		
Butylbenzylphthalate	1.01627	.93176	.98864	1.12265	1.17075	.956	1.04601	9.399		
3,3'-Dichlorobenzidine	.43950	.39949	.36928	.39866	.41524	.999	.40443	6.352		
Benzo(a)Anthracene	1.35418	1.20962	1.17751	1.27959	1.37833	.998	1.27985	6.837		
Bis(2-Ethylhexyl)Phthalate	1.39417	1.23163	1.29932	1.42482	1.42728	1.008	1.35544	6.384		
Chrysene	1.34555	1.22706	1.20179	1.33574	1.36563	1.003	1.29515	5.792		
Di-n-octyl phthalate	2.45422	2.15492	1.78339	1.68100	1.55349	.948	1.92540	19.268	*	
Benzo(b)fluoranthene	1.67361	1.24866	1.34625	1.19672	1.09118	.974	1.31129	16.967		
Benzo(k)Fluoranthene	1.13474	1.22784	.86354	.89248	.93520	.976	1.01076	15.942		
Benzo(a)Pyrene	1.33140	1.21891	1.08155	1.02623	1.00252	.996	1.13212	12.320	*	
Indeno(1,2,3-cd)Pyrene	1.35787	1.14770	1.03069	.97132	.93726	1.070	1.08897	15.639		
Benzo(a,h)Anthracene	1.11353	.95010	.80427	.75735	.71172	1.071	.86739	18.922		
Benzo(g,h,i)Perylene	1.20394	1.04310	.96404	.90979	.90004	1.089	1.00419	12.476		

RF - Response Factor (Subscript is amount in ug/l)

$\overline{RRT}$ - Average Relative Retention Time (RT Std/RT Istd)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Lab Name: [illegible] Instrument ID: [illegible]

Contractor: Accredited Labs Calibration Date: 10/20/00

Contract No: CALF03

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % RSD for CCC is 30%

Compound	Laboratory ID: >F2238 RF 20.00	>F2236 RF 50.00	>F2239 RF 80.00	>F2240 RF 120.00	>F2237 RF 160.00	$\overline{RRT}$	$\overline{RF}$	% RSD	CCC	SPCC
Pyridine	.69888	.84602	.71335	.71398	.74075	.324	.74260	8.048		
N-Nitrosodimethylamine	.81965	.90734	.94245	.97679	.93691	.329	.91663	6.497		
2-Fluorophenol	1.09332	1.26965	1.40106	1.40627	1.45271	.701	1.32460	11.033		
Aniline	2.11405	1.96624	2.17169	2.24580	2.45100	.936	2.18976	8.150		
Phenol-d5	1.80036	1.78977	1.69853	1.51449	1.46869	.964	1.65437	9.347		
Phenol	1.92554	1.87976	1.87284	1.92031	1.73125	.968	1.86594	4.227	*	
bis(-2-Chloroethyl)Ether	1.50220	1.39335	1.40082	1.44059	1.38219	.958	1.42383	3.443		
2-Chlorophenol	1.50977	1.42069	1.35652	1.38162	1.18599	.967	1.37092	8.652		
1,3-Dichlorobenzene	1.45960	1.38023	1.35566	1.38784	1.30159	.989	1.37699	4.155		
1,4-Dichlorobenzene	1.48553	1.41394	1.39602	1.38233	1.28231	1.004	1.39202	5.251	*	
Benzyl Alcohol	1.02494	.97565	1.08194	1.08615	1.16166	1.067	1.06607	6.576		
1,2-Dichlorobenzene	1.43452	1.24283	1.24809	1.25701	1.19226	1.054	1.27494	7.271		
2-Methylphenol	1.48231	1.40119	1.53947	1.57801	1.55422	1.115	1.51104	4.686		
bis(2-Chloroisopropyl)ether	2.64598	2.34538	2.67270	2.77861	2.78433	1.100	2.64540	6.757		
3&4-Methylphenol	1.63421	1.55475	1.67285	1.68871	1.69638	1.158	1.64938	3.521		
N-Nitroso-Di-n-propylamine	1.42150	1.31901	1.40880	1.52708	1.54413	1.143	1.44410	6.412		**
Hexachloroethane	.48093	.45996	.45125	.45194	.41783	1.131	.45238	5.025		
Nitrobenzene-d5	.46084	.42944	.43993	.43335	.42003	.866	.43672	3.501		
Nitrobenzene	.49174	.42554	.44380	.42697	.44418	.871	.44645	6.010		
Isophorone	1.01014	.86693	.93511	.93599	.96802	.921	.94324	5.567		
2-Nitrophenol	.26092	.23326	.22934	.22883	.23075	.933	.23662	5.786	*	
2,4-Dimethylphenol	.37217	.32691	.32294	.31155	.31664	.961	.33004	7.354		
Benzoic Acid	.17634	.17564	.23506	.21779	.23076	1.021	.20712	14.058		
bis(-2-Chloroethoxy)Methane	.50352	.42109	.43091	.43825	.42430	.971	.44361	7.694		
2,4-Dichlorophenol	.34755	.31075	.30756	.30621	.27521	.990	.30946	8.301	*	
1,2,4-Trichlorobenzene	.33707	.29077	.28803	.28594	.26774	.994	.29391	8.767		
Naphthalene	1.13984	1.02002	.97511	.95403	.86807	1.005	.99141	10.052		
4-Chloroaniline	.46518	.40376	.37152	.38463	.34982	1.031	.39498	11.109		
Hexachlorobutadiene	.17989	.14590	.14174	.14012	.12509	1.043	.14655	13.803	*	
4-Chloro-3-methylphenol	.49115	.40434	.37347	.36780	.31306	1.143	.38997	16.778	*	

RF - Response Factor (Subscript is amount in ug/l)

$\overline{RRT}$ - Average Relative Retention Time (RT Std/RT Istd)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

[illegible] Compounds

[illegible] Instrument [illegible]

[illegible]tractor: Accredited Lab= Calibration Date: 10/20/00

[illegible]ntract No: CALF03

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % RSD for CCC is 30%

Compound	Laboratory ID: >F2238 RF 20.00	>F2236 RF 50.00	>F2239 RF 80.00	>F2240 RF 120.00	>F2237 RF 160.00	$\overline{RRT}$	$\overline{RF}$	% RSD	CCC	SPCC
2-Methylnaphthalene	1.14573	.93699	.80760	.80009	.67414	1.144	.87791	20.462		
Hexachlorocyclopentadiene	.15472	.18316	.22775	.21617	.20225	.877	.19681	14.637		**
2,4,6-Trichlorophenol	.39979	.36267	.35914	.34682	.30239	.897	.35416	9.896	*	
2,4,5-Trichlorophenol	.42397	.38738	.35328	.32834	.25346	.906	.34929	18.481		
2-Chloronaphthalene	1.13305	.99497	.95034	.91609	.85173	.915	.96924	10.880		
2-Fluorobiphenyl	1.31248	1.14416	.98581	.92755	.79358	.905	1.05272	19.435		
2-Nitroaniline	.49604	.46449	.51220	.50452	.50353	.945	.49616	3.750		
Dimethyl Phthalate	1.52902	1.25782	1.16716	1.11044	1.15561	.978	1.24401	13.510		
Acenaphthylene	1.89079	1.61068	1.40923	1.36586	1.26946	.977	1.50921	16.363		
3-Nitroaniline	.41310	.38011	.40012	.38893	.39812	1.008	.39608	3.134		
Acenaphthene	1.22627	1.06077	.97969	.94900	.88180	1.005	1.01950	12.973	*	
2,4-Dinitrophenol	.24386	.24736	.30033	.29275	.27832	1.024	.27252	9.481		**
4-Nitrophenol	.22990	.23274	.26882	.26117	.26071	1.053	.25067	7.172		**
Dibenzofuran	1.77779	1.52978	1.42538	1.41799	1.28379	1.030	1.48694	12.412		
2,6-Dinitrotoluene	.39758	.35229	.35786	.36508	.36121	.987	.36680	4.862		
[illegible]4-Dinitrotoluene	.62485	.55624	.57108	.56346	.53634	1.046	.57039	5.797		
[illegible]ethylphthalate	1.71042	1.40438	1.16258	1.04751	1.07665	1.085	1.28031	21.741		
4-Chlorophenyl-phenylether	.69072	.54426	.44225	.43178	.39376	1.084	.50055	23.974		
Fluorene	1.44678	1.26042	1.17467	1.09060	.99119	1.081	1.19273	14.552		
4-Nitroaniline	.47971	.42419	.39489	.34446	.27486	1.105	.38362	20.346		
2,4,6-Tribromophenol	.24567	.19967	.21905	.21983	.21608	1.122	.22006	7.497		
4,6-Dinitro-2-methylphenol	.19921	.17371	.12918	.12408	.12192	.909	.14962	23.338		
N-Nitrosodiphenylamine	.51722	.42397	.34568	.34461	.27463	.908	.38122	24.286	*	
Azobenzene	.95605	.84651	.73162	.68000	.59808	.909	.76245	18.469		
4-Bromophenyl-phenylether	.21976	.18972	.17842	.18211	.17650	.948	.18930	9.382		
Hexachlorobenzene	.24762	.20998	.20567	.20220	.19273	.964	.21164	9.966		
Pentachlorophenol	.14359	.13424	.15017	.14956	.15675	.991	.14686	5.756	*	
Phenanthrene	1.18675	1.02595	.96508	.94450	.89732	1.004	1.00392	11.172		
Anthracene	1.17943	1.02319	.96167	.94483	.87045	1.009	.99591	11.661		
Di-n-Butylphthalate	1.63718	1.47832	1.25619	1.26950	1.18143	1.086	1.36453	13.788		

RF - Response Factor (Subscript is amount in ug/l)

$\overline{RRT}$ - Average Relative Retention Time (RT Std/RT Istd)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Initial Calibration Data
RSD Compounds

Case No: Instrument ID: H[illegible]

Contractor: Accredited Labs Calibration Date: 10/20/00

Contract No: CALF03

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % RSD for CCC is 30%

Laboratory ID:	>F2238	>F2236	>F2239	>F2240	>F2237					
	RF	RF	RF	RF	RF					
Compound	20.00	50.00	80.00	120.00	160.00	$\overline{RRT}$	$\overline{RF}$	% RSD	CCC	SPCC
Fluoranthene	1.43235	1.22225	1.15263	1.12480	1.03244	1.149	1.19289	12.589	*	
Benzidine	.44163	.28974	.46857	.44998	.41177	.883	.41234	17.349		
Pyrene	1.33446	1.24708	1.35816	1.26284	1.26683	.886	1.29388	3.799		
Terphenyl-d14	.87973	.82510	.84671	.80261	.81941	.905	.83471	3.558		
Butylbenzylphthalate	.77145	.71315	.75292	.69912	.71262	.955	.72985	4.214		
3,3'-Dichlorobenzidine	.42393	.37198	.43119	.42124	.36016	1.001	.40170	8.214		
Benzo(a)Anthracene	1.37450	1.24271	1.33608	1.26644	1.30931	.998	1.30581	4.048		
Bis(2-Ethylhexyl)Phthalate	1.06339	.97309	.96094	.92491	.90287	1.010	.96504	6.394		
Chrysene	1.28330	1.16220	1.16494	1.10303	.94404	1.003	1.13150	10.919		
Di-n-octyl phthalate	1.71331	1.53877	1.43718	1.40318	1.24577	.948	1.46764	11.788	*	
Benzo(b)fluoranthene	1.51257	1.19290	1.22742	1.08816	1.25829	.974	1.25587	12.514		
Benzo(k)Fluoranthene	1.10157	1.15830	.99827	1.01313	.92170	.976	1.03860	8.907		
Benzo(a)Pyrene	1.27757	1.14457	1.12355	1.07007	1.02929	.996	1.12901	8.375	*	
Indeno(1,2,3-cd)Pyrene	1.45655	1.31009	1.16547	1.17103	1.01208	1.070	1.22304	13.720		
Dibenzo(a,h)Anthracene	1.19738	1.05967	.94605	.92543	.85190	1.070	.99609	13.548		
Benzo(g,h,i)Perylene	1.29005	1.16367	1.05009	1.06000	.92134	1.085	1.09703	12.576		

RF - Response Factor (Subscript is amount in ug/l)

$\overline{RRT}$ - Average Relative Retention Time (RT Std/RT Istd)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
MS Compounds

Case No:

Calibration Date: 10/23/00

Contractor: Accredited Labs

Time: 09:37

Contract No: CALF03

Laboratory ID: >F2257

Instrument ID: HP5890HF

Initial Calibration Date: 10/20/00

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % Diff for CCC is 30%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC
Pyridine	.74260	.67505	9.10		
N-Nitrosodimethylamine	.91663	.85090	7.17		
2-Fluorophenol	1.32460	1.29896	1.94		
Aniline	2.18976	2.08243	4.90		
Phenol-d5	1.65437	1.84768	11.69		
Phenol	1.86594	2.05997	10.40	*	
bis(-2-Chloroethyl)Ether	1.42383	1.45721	2.34		
2-Chlorophenol	1.37092	1.48913	8.62		
1,3-Dichlorobenzene	1.37699	1.49107	8.28		
1,4-Dichlorobenzene	1.39202	1.50965	8.45	*	
Benzyl Alcohol	1.06607	1.00442	5.78		
1,2-Dichlorobenzene	1.27494	1.43059	12.21		
2-Methylphenol	1.51104	1.47649	2.29		
bis(2-Chloroisopropyl)ether	2.64540	2.71339	2.57		
3&4-Methylphenol	1.64938	1.61216	2.26		
N-Nitroso-Di-n-propylamine	1.44410	1.35071	6.47		**
Hexachloroethane	.45238	.50374	11.35		
Nitrobenzene-d5	.43672	.45450	4.07		
Nitrobenzene	.44645	.42605	4.57		
Isophorone	.94324	.92099	2.36		
2-Nitrophenol	.23662	.24208	2.31	*	
2,4-Dimethylphenol	.33004	.35135	6.46		
Benzoic Acid	.20712	.15332	25.97		
bis(-2-Chloroethoxy)Methane	.44361	.45304	2.12		
2,4-Dichlorophenol	.30946	.32606	5.37	*	
1,2,4-Trichlorobenzene	.29391	.30688	4.41		
Naphthalene	.99141	1.05764	6.68		
4-Chloroaniline	.39498	.41554	5.20		
Hexachlorobutadiene	.14655	.15105	3.07	*	
4-Chloro-3-methylphenol	.38997	.41390	6.14	*	
2-Methylnaphthalene	.87291	.96166	10.17		
Hexachlorocyclopentadiene	.19681	.19033	3.29		**

RF - Response Factor from daily standard file at 50.00 ug/l

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

[illegible]

[illegible]

[illegible]	[illegible]
Contractor: Accredited Labs	Time: [illegible]
Contract No: [illegible]	Laboratory ID: [illegible]
Instrument ID: HP5890RF	Initial Calibration Date: [illegible]

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % Diff for CCC is 50%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC
2,4,6-Trichlorophenol	.35416	.37973	7.22	*	
2,4,5-Trichlorophenol	.34929	.39114	11.98		
2-Chloronaphthalene	.96924	1.07204	10.61		
2-Fluorobiphenyl	1.03272	1.17858	14.12		
2-Nitroaniline	.49616	.51948	4.70		
Dimethyl Phthalate	1.24401	1.28843	3.57		
Acenaphthylene	1.50921	1.63683	8.46		
3-Nitroaniline	.39608	.38709	2.27		
Acenaphthene	1.01950	1.13709	11.53	*	
2,4-Dinitrophenol	.27252	.24385	10.52		**
4-Nitrophenol	.25067	.22695	9.46		**
Dibenzofuran	1.48694	1.61492	8.61		
2,6-Dinitrotoluene	.36680	.37062	1.04		
2,4-Dinitrotoluene	.57039	.58287	2.19		
Diethylphthalate	1.28031	1.38043	7.82		
4-Chlorophenyl-phenylether	.50055	.55962	11.80		
Fluorene	1.19273	1.31222	10.02		
4-Nitroaniline	.38362	.39382	2.66		
2,4,6-Tribromophenol	.22006	.19964	9.28		
4,6-Dinitro-2-methylphenol	.14962	.15958	6.66		
N-Nitrosodiphenylamine	.38122	.45420	19.14	*	
Azobenzene	.76245	.88152	15.62		
4-Bromophenyl-phenylether	.18930	.19104	.92		
Hexachlorobenzene	.21164	.20448	3.38		
Pentachlorophenol	.14686	.13780	6.17	*	
Phenanthrene	1.00392	1.07895	7.47		
Anthracene	.99591	1.06760	7.20		
Di-n-Butylphthalate	1.36453	1.49825	9.80		
Fluoranthene	1.19289	1.25138	4.90	*	
Benzidine	.41234	.25373	38.47		
Pyrene	1.29388	1.34810	4.19		
Terphenyl-d14	.83471	.85874	2.88		

RF - Response Factor from daily standard file at 50.00 ug/l

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

Case No: | Calibration Date: 10/23/00

Contractor: Accredited Labs | Time: 09:37

Contract No: CALF03 | Laboratory ID: >F2257

Instrument ID: HP5890BF | Initial Calibration Date: 10/20/00

Minimum $\overline{RF}$ for SPCC is 0.05 | Maximum % Diff for CCC is 30%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC
Butylbenzylphthalate	.72985	.77523	6.22		
3,3'-Dichlorobenzidine	.40170	.30790	23.35		
Benzo(a)Anthracene	1.30581	1.27406	2.43		
Bis(2-Ethylhexyl)Phthalate	.96504	1.06640	10.50		
Chrysene	1.13150	1.20751	6.72		
Di-n-octyl phthalate	1.46764	1.73170	17.99	*	
Benzo(b)fluoranthene	1.25587	1.22326	2.60		
Benzo(k)Fluoranthene	1.03860	1.22349	17.80		
Benzo(a)Pyrene	1.12901	1.17722	4.27	*	
Indeno(1,2,3-cd)Pyrene	1.22304	1.34332	9.83		
Dibenzo(a,h)Anthracene	.99609	1.04993	5.40		
Benzo(g,h,i)Perylene	1.09703	1.19686	9.10		

RF - Response Factor from daily standard file at 50.00 ug/l

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

[illegible]
[illegible] Company

Case No:

Calibration Date: 10/24/00

Contractor: Accredited Labs

Time: 09:02

Contract No: CALF03

Laboratory ID: [illegible]F2275

Instrument ID: HP5890BF

Initial Calibration Date: 10/20/00

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % Diff for CCC is 30%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC
Pyridine	.74260	.66706	10.17		
N-Nitrosodimethylamine	.91663	.77958	14.95		
2-Fluorophenol	1.32460	1.18661	10.42		
Aniline	2.18976	2.04605	6.56		
Phenol-d5	1.65437	1.83498	10.92		
Phenol	1.86594	1.99814	7.08	*	
bis(-2-Chloroethyl)Ether	1.42383	1.40723	1.17		
2-Chlorophenol	1.37092	1.44227	5.20		
1,3-Dichlorobenzene	1.37699	1.47711	7.27		
1,4-Dichlorobenzene	1.39202	1.49970	7.74	*	
Benzyl Alcohol	1.06607	.99332	6.82		
1,2-Dichlorobenzene	1.27494	1.38380	8.54		
2-Methylphenol	1.51104	1.39989	7.36		
bis(2-Chloroisopropyl)ether	2.64540	2.66701	.82		
3&4-Methylphenol	1.64938	1.54335	6.43		
N-Nitroso-Di-n-propylamine	1.44410	1.27728	11.55		**
Hexachloroethane	.45238	.47593	5.20		
Nitrobenzene-d5	.43672	.43441	.53		
Nitrobenzene	.44645	.41232	7.64		
Isophorone	.94324	.87416	7.32		
2-Nitrophenol	.23662	.24640	4.13	*	
2,4-Dimethylphenol	.33004	.34073	3.24		
Benzoic Acid	.20712	.16543	20.13		
bis(-2-Chloroethoxy)Methane	.44361	.43646	1.61		
2,4-Dichlorophenol	.30946	.32307	4.40	*	
1,2,4-Trichlorobenzene	.29391	.30862	5.00		
Naphthalene	.99141	1.00720	1.59		
4-Chloroaniline	.39498	.40582	2.74		
Hexachlorobutadiene	.14655	.15625	6.62	*	
4-Chloro-3-methylphenol	.38997	.41194	5.64	*	
2-Methylnaphthalene	.87291	.99140	13.57		
Hexachlorocyclopentadiene	.19681	.17698	10.08		**

RF - Response Factor from daily standard file at 50.00 ug/l

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

[illegible]

Case No: [illegible]

Calibration Date: 10/[illegible]/00

Contractor: Accredited Labs

Time: 07:02

Contract No: CALF03

Laboratory ID: [illegible]

Instrument ID: [illegible]

Initial Calibration Date: 10/[illegible]/00

Minimum $\overline{RF}$ for SPCC is 0.05

Maximum % Diff for CCC is 50%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC
2,4,6-Trichlorophenol	.35416	.38127	7.66	*	
2,4,5-Trichlorophenol	.34929	.39649	13.51		
2-Chloronaphthalene	.96924	1.04936	8.27		
2-Fluorobiphenyl	1.03272	1.18259	14.51		
2-Nitroaniline	.49616	.49292	.65		
Dimethyl Phthalate	1.24401	1.28017	2.91		
Acenaphthylene	1.50921	1.63325	8.22		
3-Nitroaniline	.39608	.37783	4.61		
Acenaphthene	1.01950	1.10921	8.80	*	
2,4-Dinitrophenol	.27252	.23733	12.91		**
4-Nitrophenol	.25067	.18435	26.46		**
Dibenzofuran	1.48694	1.54302	3.77		
2,6-Dinitrotoluene	.36680	.36745	.18		
2,4-Dinitrotoluene	.57039	.54917	3.72		
Diethylphthalate	1.28031	1.36342	6.49		
4-Chlorophenyl-phenylether	.50055	.57515	14.90		
Fluorene	1.19273	1.26012	5.65		
4-Nitroaniline	.38362	.39288	2.41		
2,4,6-Tribromophenol	.22006	.21476	2.41		
4,6-Dinitro-2-methylphenol	.14962	.17540	17.23		
N-Nitrosodiphenylamine	.38122	.44663	17.16	*	
Azobenzene	.76245	.84709	11.10		
4-Bromophenyl-phenylether	.18930	.19883	5.04		
Hexachlorobenzene	.21164	.22208	4.93		
Pentachlorophenol	.14686	.13247	9.80	*	
Phenanthrene	1.00392	1.07583	7.16		
Anthracene	.99591	1.06496	6.93		
Di-n-Butylphthalate	1.36453	1.44653	6.01		
Fluoranthene	1.19289	1.23263	3.33	*	
Benzidine	.41234	.27072	34.34		
Pyrene	1.29388	1.26328	2.36		
Terphenyl-d14	.83471	.83706	.28		

RF - Response Factor from daily standard file at 50.00 ug/l

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Case No:

Calibration Date: 10/20/89

Contractor: Accredited Labs

Time: 09:02

Contract No: CALF03

Laboratory ID: SF220

Instrument ID: HP5890SF

Initial Calibration Date: 10/20/89

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % Diff for CCC is 30%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC
Butylbenzylphthalate	.72985	.70140	3.90		
3,3'-Dichlorobenzidine	.40170	.33394	16.87		
Benzo(a)Anthracene	1.30581	1.28829	1.34		
Bis(2-Ethylhexyl)Phthalate	.96504	.96795	.30		
Chrysene	1.13150	1.16441	2.91		
Di-n-octyl phthalate	1.46764	1.51788	3.42	*	
Benzo(b)fluoranthene	1.25587	1.31540	4.74		
Benzo(k)Fluoranthene	1.03860	1.05151	1.24		
Benzo(a)Pyrene	1.12901	1.17552	4.12	*	
Indeno(1,2,3-cd)Pyrene	1.22304	1.32630	8.44		
Dibenzo(a,h)Anthracene	.99609	1.04197	4.61		
Benzo(g,h,i)Perylene	1.09703	1.19422	8.86		

RF - Response Factor from daily standard file at 50.00 ug/l

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Case No: ---------- Calibration Date: 10/06/09

...tractor: Accredited Labs ---------- Time: 09:55

...ontract No: CALB06 ---------- Laboratory ID: >B1223

Instrument ID: HP5890B8 ---------- Initial Calibration Date: 10/06/09

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % Diff for CCC is 30%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC
Pyridine	1.21598	1.45326	19.51		
N-Nitrosodimethylamine	.88656	1.14915	29.62		
2-Fluorophenol	1.38798	1.45187	4.60		
Aniline	2.70380	2.78146	2.87		
Phenol-d5	2.07887	2.28952	10.13		
Phenol	2.34709	2.61821	11.55	*	
bis(-2-Chloroethyl)Ether	1.58829	1.78656	12.48		
2-Chlorophenol	1.54503	1.60061	3.60		
1,3-Dichlorobenzene	1.37431	1.41300	2.82		
1,4-Dichlorobenzene	1.40101	1.41730	1.16	*	
Benzyl Alcohol	1.06592	1.08191	1.50		
1,2-Dichlorobenzene	1.23853	1.26249	1.93		
2-Methylphenol	1.52263	1.67070	9.73		
bis(2-Chloroisopropyl)ether	2.56559	4.27578	66.66		
3&4-Methylphenol	1.60141	1.82439	13.92		
N-Nitroso-Di-n-propylamine	1.58138	1.84135	16.44		**
Hexachloroethane	.57849	.65461	13.16		
Nitrobenzene-d5	.49351	.57467	16.45		
Nitrobenzene	.48068	.55745	15.97		
Isophorone	1.08557	1.20722	11.21		
2-Nitrophenol	.22353	.25491	14.04	*	
2,4-Dimethylphenol	.35105	.38361	9.28		
Benzoic Acid	.25353	.30820	21.57		
bis(-2-Chloroethoxy)Methane	.53963	.59718	10.66		
2,4-Dichlorophenol	.29518	.28901	2.09	*	
1,2,4-Trichlorobenzene	.26729	.26852	.46		
Naphthalene	.96908	1.00886	4.11		
4-Chloroaniline	.45549	.41562	8.75		
Hexachlorobutadiene	.13128	.13557	3.27	*	
4-Chloro-3-methylphenol	.46179	.51628	11.80	*	
2-Methylnaphthalene	.66351	.66668	.48		
Hexachlorocyclopentadiene	.24584	.25670	4.42		**

RF - Response Factor from daily standard file at 50.00 ug/l

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % Diff for CCC is 30%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC
2,4,6-Trichlorophenol	.55316	.56415	1.99	*	
2,4,5-Trichlorophenol	.36328	.37464	3.13		
2-Chloronaphthalene	1.01530	1.02096	.56		
2-Fluorobiphenyl	1.09712	1.10205	.45		
2-Nitroaniline	.60437	.79981	32.34		
Dimethyl Phthalate	1.37946	1.39157	.88		
Acenaphthylene	1.74858	1.84580	5.56		
3-Nitroaniline	.42845	.49397	15.28		
Acenaphthene	1.05159	1.08552	3.23	*	
2,4-Dinitrophenol	.22732	.28157	23.87		**
4-Nitrophenol	.30936	.29012	6.22		**
Dibenzofuran	1.60303	1.63649	2.09		
2,6-Dinitrotoluene	.35433	.37859	6.84		
2,4-Dinitrotoluene	.59023	.62410	5.74		
Diethylphthalate	1.49300	1.33306	10.71		
4-Chlorophenyl-phenylether	.53751	.56113	4.40		
Fluorene	1.14578	1.10397	3.65		
4-Nitroaniline	.57604	.61750	7.20		
2,4,6-Tribromophenol	.20653	.22162	7.30		
Carbazole	.07141	.07289	2.07		
4,6-Dinitro-2-methylphenol	.14490	.21322	47.15		
N-Nitrosodiphenylamine	.14914	.16383	9.85	*	
Azobenzene	1.16262	1.50807	29.71		
4-Bromophenyl-phenylether	.16920	.18215	7.66		
Hexachlorobenzene	.19411	.21859	12.61		
Pentachlorophenol	.15076	.17404	15.45	*	
Phenanthrene	.96972	1.02499	5.70		
Anthracene	.98502	1.04612	6.20		
Di-n-Butylphthalate	1.34854	1.64823	22.22		
Fluoranthene	1.01296	1.17059	15.56	*	
Benzidine	.75928	.54725	27.93		
Pyrene	1.62973	1.57450	3.39		

RF - Response Factor from daily standard file at 50.00 ug/l

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
PSD Compounds

Case No: | Calibration Date: 10/26/00

Contractor: Accredited Labs | Time: 09:55

Contract No: CALB06 | Laboratory ID: >B1223

Instrument ID: HP5890B | Initial Calibration Date: 10/06/00

Minimum $\overline{RF}$ for SPCC is 0.05 | Maximum % Diff for CCC is 30%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC
Terphenyl-d14	.95023	.97696	2.81		
Butylbenzylphthalate	1.04601	1.11615	6.71		
3,3'-Dichlorobenzidine	.40443	.42659	5.48		
Benzo(a)Anthracene	1.27985	1.43889	12.43		
Bis(2-Ethylhexyl)Phthalate	1.35544	1.42063	4.81		
Chrysene	1.29515	1.38011	6.56		
Di-n-octyl phthalate	1.92540	1.82587	5.17	*	
Benzo(b)fluoranthene	1.31129	1.28914	1.69		
Benzo(k)Fluoranthene	1.01076	1.02309	1.22		
Benzo(a)Pyrene	1.13212	1.15765	2.25	*	
Indeno(1,2,3-cd)Pyrene	1.08897	1.20267	10.44		
Dibenzo(a,h)Anthracene	.86739	.88034	1.49		
Benzo(g,h,i)Perylene	1.00419	1.15093	14.61		

RF - Response Factor from daily standard file at 50.00 ug/l

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Lab Name: ACCREDITED LABS, INC. Contract:

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

Level: (low/med) LOW

	LAB SAMPLE NO.	S1 (NBZ)#	S2 (FBP)#	S3 (TPH)#	S4 (PHL)#	S5 (2FP)#	S6 (TBP)#	TOT OUT
01	SBLK14	72	61	54	82	73	64	0
02	0012803	66	76	73	84	73	77	0
03	0012804	70	76	162*	149*	123*	135*	4
04	0012804DL	56	84	84	174*	143*	141*	3
05	0012805	64	80	71	88	77	86	0
06	0012806	62	77	74	93	70	83	0
07	0012807	75	86	75	103	80	94	0
08	0012808	91	18*	86	116*	102	40	2
09	0012808DL	72	101	97	96	67	92	0
10	0012809	69	91	101	92	71	34	0
11	0012810	27	189*	179*	73	33	289*	3
12	0012810DL	88	111	94	102	79	114	0
13	0012773MS	75	62	53	73	66	55	0
14	0012773MSD	80	63	64	84	72	58	0
15								
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30								

	QC LIMITS
S1 (NBZ) = Nitrobenzene-d5	(23-120)
S2 (FBP) = 2-Fluorobiphenyl	(30-115)
S3 (TPH) = Terphenyl-d14	(18-137)
S4 (PHL) = Phenol-d5	(24-113)
S5 (2FP) = 2-Fluorophenol	(25-121)
S6 (TBP) = 2,4,6-Tribromophenol	(19-122)

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

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		IS1(DCB)		IS2(NPT)		IS3(ANT)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	40994	9.25	181178	12.43	173832	16.86
	UPPER LIMIT	81988	9.75	362356	12.93	247664	17.36
	LOWER LIMIT	20497	8.75	90589	11.93	61916	16.36
	LAB SAMPLE NO.						
01	0012803	47967	9.25	207582	12.43	138176	16.89
02	0012804	47401	9.25	202069	12.44	139543	16.89
03	0012805	36039	9.25	156935	12.43	106990	16.88
04	0012806	34137	9.25	153944	12.43	109376	16.88
05	0012807	37617	9.28	161664	12.45	109676	16.90
06	0012808	38625	9.30	158379	12.55	86741	17.11
07	0012809	46728	9.34	182003	12.45	115902	16.93
08	0012810	30208	9.48	126638	12.58	36151*	17.25
09							
10							
11							
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19							
20							
21							
22							

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

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

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Lab Name: ACCUTEST NJ (1005) Job #:

Lab Code: Matrix: (SOIL/SED/WATER) SOIL Sdg No.:

GC Column ID (Standard): DB-5/Rtx

Date Analyzed: 04/13/07

Instrument ID: HP5973/08 Time Analyzed: 0957

	IS4(PHN)			IS5(CRY)			IS6(PRY)		
	AREA	#	RT	#	AREA	#	RT	#	AREA	#	RT	#
12 HOUR STD	237447		20.59		233664		27.32		256012		30.69	
UPPER LIMIT	474894		21.09		467328		27.82		512024		31.19	
LOWER LIMIT	118724		20.09		116832		26.82		128006		30.19	
LAB SAMPLE NO.												
01 0012803	263050		20.59		251033		27.35		167872		30.73	
02 0012804	182103		20.63		85234	*	27.54		41287	*	30.87	
03 0012805	204303		20.57		219881		27.30		215205		30.67	
04 0012806	172191		20.58		209439		27.33		188760		30.71	
05 0012807	213100		20.59		225443		27.33		224033		30.70	
06 0012808	153502		20.91		70471	*	27.62		65385	*	30.15	*
07 0012809	170452		20.81		146738		27.48		55565	*	30.76	
08 0012810	62180	*	20.88		39101	*	27.63		21702	*	30.85	
09												
10												
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22												

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

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

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	IS1(DCB) AREA	#	IS1(DCB) RT	#	IS2(NPT) AREA	#	IS2(NPT) RT	#	IS3(ANT) AREA	#	IS3(ANT) RT	#
12 HOUR STD	36715		9.23		156323		12.41		106611		16.86	
UPPER LIMIT	73430		9.73		312646		12.91		213222		17.36	
LOWER LIMIT	18358		8.73		78161		11.91		53305		16.36	
LAB SAMPLE NO.												
01 0012804DL	37093		9.23		157560		12.41		110470		16.87	
02 0012808DL	38607		9.23		163988		12.41		111077		16.87	
03 0012809DL	38867		9.23		166866		12.41		117949		16.87	
04 0012810DL	39066		9.25		162791		12.41		104785		16.90	
05												
06												
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22												

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

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

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Lab Name: Accredited Laboratories

Matrix Spike - Lab Sample No.: [illegible]

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC LIMITS REC.
Phenol	6700	0	5200	78	26- 90
2-Chlorophenol	6700	0	4400	66	25-102
1,4-Dichlorobenzene	3300	0	2700	82	28-104
N-Nitroso-Di-n-prop.(1)	3300	0	2900	88	41-126
1,2,4-Trichlorobenzene	3300	0	2700	82	38-107
4-Chloro-3-methylphenol	6700	0	4700	70	26-103
Acenaphthene	3300	0	2500	76	31-137
4-Nitrophenol	6700	0	4300	64	11-114
2,4-Dinitrotoluene	3300	0	2600	79	28- 89
Pentachlorophenol	6700	0	4600	69	17-109
Pyrene	3300	0	2000	61	35-142

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Phenol	6700	5000	75	4	35	26- 90
2-Chlorophenol	6700	4900	73	10	50	25-102
1,4-Dichlorobenzene	3300	2900	88	7	27	28-104
N-Nitroso-Di-n-prop.(1)	3300	3500	106	19	38	41-126
1,2,4-Trichlorobenzene	3300	2800	85	4	23	38-107
4-Chloro-3-methylphenol	6700	5100	76	8	33	26-103
Acenaphthene	3300	2600	79	4	19	31-137
4-Nitrophenol	6700	5000	75	16	50	11-114
2,4-Dinitrotoluene	3300	2800	85	7	47	28- 89
Pentachlorophenol	6700	4600	69	0	47	17-109
Pyrene	3300	2500	76	22	36	35-142

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

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

RPD: 0 out of 11 outside limits
Spike Recovery: 0 out of 22 outside limits

COMMENTS:

ACCREDITED LABORATORIES, INC.
BNA ORGANIC ANALYSIS DATA

CASE NUMBER
SAMPLE NUMBER SBLK14
DATA FILE >B1226
CLIENT NAME
FIELD ID

MATRIX Soil
DILUTION FACTOR 1.0
DATE EXTRACTED 10/17/00
DATE ANALYZED 10/24/00
ANALYZED BY DANIEL

CAS #	COMPOUND	UG/KG	MDL	CAS #	COMPOUND	UG/KG	MDL
83329	Acenaphthene	U	330	51285	2,4-Dinitrophenol	U	330
208968	Acenaphthylene	U	330	121142	2,4-Dinitrotoluene	U	330
120127	Anthracene	U	330	606202	2,6-Dinitrotoluene	U	330
56553	Benzo(a)Anthracene	U	330	117840	Di-n-octyl phthalate	U	330
50328	Benzo(a)Pyrene	U	330	206440	Fluoranthene	U	330
205992	Benzo(b)fluoranthene	U	330	86737	Fluorene	U	330
191242	Benzo(g,h,i)Perylene	U	330	118741	Hexachlorobenzene	U	330
207089	Benzo(k)Fluoranthene	U	330	87683	Hexachlorobutadiene	U	330
65850	Benzoic Acid	U	1700	77474	Hexachlorocyclopentadiene	U	330
100516	Benzyl Alcohol	U	330	67721	Hexachloroethane	U	330
111444	bis(-2-Chloroethyl)Ether	U	330	193395	Indeno(1,2,3-cd)Pyrene	U	330
108601	bis(2-Chloroisopropyl)ether	U	330	78591	Isophorone	U	330
117817	Bis(2-Ethylhexyl)Phthalate	U	330	91576	2-Methylnaphthalene	U	330
111911	bis(-2-Chloroethoxy)Methane	U	330	95487	2-Methylphenol	U	330
101553	4-Bromophenyl-phenylether	U	330	108394	3&4-Methylphenol	U	330
85687	Butylbenzylphthalate	U	330	91203	Naphthalene	U	330
106478	4-Chloroaniline	U	330	88744	2-Nitroaniline	U	330
1587	2-Chloronaphthalene	U	330	99092	3-Nitroaniline	U	330
9507	4-Chloro-3-methylphenol	U	330	100016	4-Nitroaniline	U	330
95578	2-Chlorophenol	U	330	98953	Nitrobenzene	U	330
7005723	4-Chlorophenyl-phenylether	U	330	88755	2-Nitrophenol	U	330
218019	Chrysene	U	330	100027	4-Nitrophenol	U	330
53703	Dibenzo(a,h)Anthracene	U	330	62759	N-Nitrosodimethylamine	U	330
132649	Dibenzofuran	U	330	86306	N-Nitrosodiphenylamine	U	330
95501	1,2-Dichlorobenzene	U	330	621647	N-Nitroso-Di-n-propylamine	U	330
541731	1,3-Dichlorobenzene	U	330	87865	Pentachlorophenol	U	330
106467	1,4-Dichlorobenzene	U	330	85018	Phenanthrene	U	330
91941	3,3'-Dichlorobenzidine	U	330	108952	Phenol	U	330
120832	2,4-Dichlorophenol	U	330	129000	Pyrene	U	330
84662	Diethylphthalate	U	330	120821	1,2,4-Trichlorobenzene	U	330
105679	2,4-Dimethylphenol	U	330	95954	2,4,5-Trichlorophenol	U	330
131113	Dimethyl Phthalate	U	330	88062	2,4,6-Trichlorophenol	U	330
84742	Di-n-Butylphthalate	U	330	92875	Benzidine	U	330
534521	4,6-Dinitro-2-methylphenol	U	330	122667	1,2-Diphenylhydrazine	U	330

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
Nitrobenzene-d5	72 %	23-120	OK
2-Fluorobiphenyl	61 %	30-115	OK
Terphenyl-d14	54 %	18-137	OK
Phenol-d5	82 %	24-113	OK
2-Fluorophenol	73 %	25-121	OK
2,4,6-Tribromophenol	64 %	19-122	OK

Percent solid of 100 is used for all target compounds.

J - Indicates compound concentration found below MDL.
U - Indicates compound analyzed for but not detected.
D - Indicates result is based on a dilution.
I - Results exceed industrial surface soil standards.*
B - Indicates compound found in associated blank.
E - Concentration exceeds highest calibration standard.
R - Result exceeds residential surface soil standards.*

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* Flags are based on New Jersey Soil Cleanup Criteria from Site Remediation News Volume 06 Number 1

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Accredited Labs, Inc.

Lab Sample ID: SBLK14

Client Name:

Field ID:

Case No.:

Date Extracted: 10/17/00

Lab File ID: >B1226

Date Analyzed: 10/24/00

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	1118587	1,3-Pentadiene, 2-methyl-	2.30	560	
2.	638040	*** See below	4.66	270	
3.		Unknown hydrocarbon	5.86	310	
4.		Aldol Condensate	6.59	28000	
5.		Unknown hydrocarbon	27.56	170	

*** 2. Cyclohexane, 1,3-dimethyl-, cis-

* Unknowns are defined as: Compounds that are less than 80% probability or have no database entries from the library.

FORM I SV-TIC

Matrix: (soil/water) SOIL

Level: (low/med) LOW

Date Extracted: 10/12/00

Date Analyzed: 10/24/00

Time Analyzed: 17:17

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01		0012803	>F2266	10/23/00
02		0012804	>F2267	10/23/00
03		0012804DL	>F2288	10/24/00
04		0012805	>F2262	10/23/00
05		0012806	>F2263	10/23/00
06		0012807	>F2264	10/23/00
07		0012808	>F2268	10/23/00
08		0012808DL	>F2289	10/24/00
09		0012809	>F2269	10/23/00
10		0012810	>F2270	10/23/00
11		0012810DL	>F2291	10/24/00
12		0012773MS	>B1232	10/24/00
13		0012773MSD	>B1228	10/24/00
14				
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29				
30				

COMMENTS: _____

Initial Calibration Data
HSL Compounds

Case No:

Instrument ID: GC/ECD #7

Contractor: ACCREDITED LABS INC.

Calibration Date: 01/10/00

Contract No: CAPST7

Minimum $\overline{RF}$ for SPCC is 5000 Maximum % RSD for CCC is 20%

Comp No.	Compound	Laboratory ID: >G4980 RF .0200	>G4979 RF .100	>G4978 RF .200	>G4977 RF .400	>G4976 RF .800	$\overline{RRT}$	$\overline{RF}$	% RSD	CORR1	CCC	SPCC	
1)	Tetrachloro-m-xylene	399100.	384190.	404675.	374623.	374520.	6.073	387422.	3.592	.999779			
2)	A-BHC	415250.	424810.	511885.	511450.	565479.	7.285	485775.	13.175	.998898			
3)	B-BHC	195500.	243180.	251575.	259048.	275064.	8.627	244873.	12.248	.999618			
4)	G-BHC (Lindane)	445250.	455690.	529995.	540883.	533540.	8.397	501072.	9.281	.999794			
5)	D-BHC	321550.	334940.	327680.	349942.	406444.	9.631	348111.	9.849	.997238			
6)	Heptachlor	530950.	469210.	523405.	533725.	567116.	10.875	524881.	6.736	.999489			
7)	Aldrin	504050.	498570.	526150.	597590.	608304.	12.179	546933.	9.563	.999526			
8)	Heptachlor Epoxide	584550.	530060.	517940.	571895.	590424.	13.795	558974.	5.886	.999518			
9)	G-Chlordane	513500.	525680.	509005.	564310.	585984.	14.795	539696.	6.265	.999499			
10)	Endosulfan I	431350.	447160.	471020.	523542.	547539.	15.233	484122.	10.275	.999479			
11)	A-Chlordane	536750.	502890.	533965.	556785.	568689.	15.385	539816.	4.658	.999864			
12)	Dieldrin	457200.	479500.	529055.	573733.	601434.	16.280	528184.	11.536	.999577			(Conc=.0
13)	4,4'-DDE	435350.	458435.	485142.	526905.	560326.	16.469	493232.	10.269	.999391			(Conc=.04
14)	Endrin	396275.	403590.	459183.	478476.	504764.	17.149	448458.	10.532	.999610			(Conc=.04
15)	Endosulfan II	423175.	459915.	466417.	500144.	521540.	17.680	474238.	8.017	.999670			(Conc=.04
16)	4,4'-DDD	248025.	309895.	370540.	360155.	385165.	18.303	334756.	16.771	.999507			(Conc=.04
17)	Endrin Aldehyde	329025.	339270.	321150.	329204.	344489.	18.494	332628.	2.777	.999648			(Conc=.04
18)	Endosulfan Sulfate	319025.	228990.	272470.	282639.	338831.	19.489	288391.	14.811	.996172			(Conc=.04
19)	4,4'-DDT	222100.	235805.	309185.	287555.	321186.	19.713	275166.	16.042	.998531			(Conc=.04
20)	Endrin Ketone	419275.	308870.	334280.	351057.	383264.	21.315	359349.	11.976	.998777			(Conc=.04
21)	Methoxychlor	183150.	190610.	210107.	212110.	212894.	22.192	201774.	6.882	.999947			(Conc=.20
22)	Toxaphene Peak 1	5215.00	4489.80	4324.28	5373.82	5130.63	19.959	4906.71	9.540	.998543			(Conc=1.0
23)	Toxaphene Peak 2	6773.00	6110.20	5404.84	7245.70	6684.20	20.829	6443.59	10.974	.997127			(Conc=1.0
24)	Toxaphene Peak 3	7908.00	10200.9	9554.92	8876.32	8478.79	21.199	9003.79	9.979	.999362			(Conc=1.0
25)	DCB	554750.	428895.	448723.	504690.	494412.	28.895	486294.	10.177	.999439			(Conc=.04

RF - Response Factor (Subscript is amount in ug/l)

$\overline{RRT}$ - Average Relative Retention Time (RT Std/RT Istd)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CORRn - Coefficient of Correlation (nth degree)

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Initial Calibration Data
HSL Compounds

Case No: Instrument ID: GC/ECD #7

Contractor: ACCREDITED LABS INC. Calibration Date: 01/11/00

Contract No: CA7PCB

Minimum $\overline{RF}$ for SPCC is 10000 Maximum % RSD for CCC is 20%

Comp No.	Compound	Laboratory ID: >G4995 RF 1.00	>G4994 RF 10.00	>G4993 RF 25.00	>G4992 RF 50.00	>G4991 RF 100.00	$\overline{RRT}$	$\overline{RF}$	% RSD	CORR1	CCC SPCC	
1)	Tetrachloro-m-xylene	464375.	411014.	388830.	352823.	299289.	6.129	383266.	16.167	.997740		(Conc=.200
2)	Aroclor-1016 Peak 1	10431.0	8862.20	8423.72	7563.74	6582.56	9.396	8372.64	17.244	.996199		
3)	Aroclor-1016 Peak 2	22905.0	19867.3	20050.2	18944.3	17172.1	10.517	19787.8	10.524	.998304		
4)	Aroclor-1016 Peak 3	7554.00	7068.10	7132.88	6411.04	6151.62	10.859	6863.53	8.315	.999221		
5)	Aroclor-1260 Peak 1	72871.0	61340.4	56951.3	52941.6	46165.7	18.777	58054.0	17.204	.996772		
6)	Aroclor-1260 Peak 2	63563.0	58345.6	55868.4	52532.6	47371.7	19.892	55536.3	10.957	.998148		
7)	Aroclor-1260 Peak 3	109806.	100842.	98976.8	93276.4	84020.3	22.661	97384.3	9.799	.998092		
8)	DCB	626210.	559026.	515750.	508109.	392872.	28.962	520393.	16.397	.993678		(Conc=.200

RF - Response Factor (Subscript is amount in ug/L)

$\overline{RRT}$ - Average Relative Retention Time (RT Std/RT Istd)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CORRn - Coefficient of Correlation (nth degree)

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

Case No:

Calibration Date: 10/20/00

Contractor: ACCREDITED LABS INC.

Time: 11:41

Contract No: CAPST7

Laboratory ID: >G7599

Instrument ID: GC/ECD #7

Initial Calibration Date: 01/10/00

Minimum $\overline{RF}$ for SPCC is 5000

Maximum % Diff for CCC is 15%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
Tetrachloro-m-xylene	387422.	375135.	3.17			
A-BHC	485775.	482195.	.74			
B-BHC	244873.	212745.	13.12			
G-BHC (Lindane)	501072.	448645.	10.46			
D-BHC	348111.	307140.	11.77			
Heptachlor	524881.	503535.	4.07			
Aldrin	546933.	479755.	12.28			
Heptachlor Epoxide	558974.	495390.	11.38			
G-Chlordane	539696.	493460.	8.57			
Endosulfan I	484122.	445605.	7.96			
A-Chlordane	539816.	476350.	11.76			
Dieldrin	528184.	489955.	7.24			(Conc=.400)
4,4'-DDE	493232.	438205.	11.16			(Conc=.400)
Endrin	448458.	396027.	11.69			(Conc=.400)
Endosulfan II	474238.	419335.	11.58			(Conc=.400)
4,4'-DDD	334756.	287342.	14.16			(Conc=.400)
Endrin Aldehyde	332628.	292332.	12.11			(Conc=.400)
Endosulfan Sulfate	288391.	276863.	4.00			(Conc=.400)
4,4'-DDT	275166.	235198.	14.53			(Conc=.400)
Endrin Ketone	359349.	402505.	12.01			(Conc=.400)
Methoxychlor	201774.	219828.	8.95			(Conc=2.00)
Toxaphene Peak 1	4906.71	5033.76	2.59			(Conc=25.00)
Toxaphene Peak 2	6443.59	7155.04	11.04			(Conc=25.00)
Toxaphene Peak 3	9003.79	8648.48	3.95			(Conc=25.00)
DCB	486294.	451460.	7.16			(Conc=.400)

RF - Response Factor from daily standard file at .200 ug/l

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

[redacted] No:

Calibration Date: 10/23/00

Contractor: ACCREDITED LABS INC.

Time: 17:17

Contract No: CAPST7

Laboratory ID: >G7644

Instrument ID: GC/ECD #7

Initial Calibration Date: 01/10/00

Minimum $\overline{RF}$ for SPCC is 5000 Maximum % Diff for CCC is 15%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
Tetrachloro-m-xylene	387422.	386815.	.16			
A-BHC	485775.	510735.	5.14			
B-BHC	244873.	223975.	8.53			
G-BHC (Lindane)	501072.	463805.	7.44			
D-BHC	348111.	353255.	1.48			
Heptachlor	524881.	494430.	5.80			
Aldrin	546933.	484815.	11.36			
Heptachlor Epoxide	558974.	495565.	11.34			
G-Chlordane	539696.	486100.	9.93			
Endosulfan I	484122.	469780.	2.96			
A-Chlordane	539816.	490150.	9.20			
Dieldrin	528184.	546890.	3.54			(Conc=.400)
4,4'-DDE	493232.	440525.	10.69			(Conc=.400)
Endrin	448458.	416895.	7.04			(Conc=.400)
Endosulfan II	474238.	425705.	10.23			(Conc=.400)
4,4'-DDD	334756.	334032.	.22			(Conc=.400)
Endrin Aldehyde	332628.	300935.	9.53			(Conc=.400)
Endosulfan Sulfate	288391.	301610.	4.58			(Conc=.400)
4,4'-DDT	275166.	288000.	4.66			(Conc=.400)
Endrin Ketone	359349.	404210.	12.48			(Conc=.400)
Methoxychlor	201774.	184243.	8.69			(Conc=2.00)
Toxaphene Peak 1	4906.71	4670.92	4.81			(Conc=25.00)
Toxaphene Peak 2	6443.59	7137.76	10.77			(Conc=25.00)
Toxaphene Peak 3	9003.79	8804.28	2.22			(Conc=25.00)
DCB	486294.	447577.	7.96			(Conc=.400)

RF - Response Factor from daily standard file at .200 ug/l

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

Case No: Calibration Date: 10/20/00

Contractor: ACCREDITED LABS INC. Time: 13:33

Contract No: CA7PCB Laboratory ID: >G7602

Instrument ID: GC/ECD #7 Initial Calibration Date: 01/11/00

Minimum $\overline{RF}$ for SPCC is 10000 Maximum % Diff for CCC is 15%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
Tetrachloro-m-xylene	383266.	375825.	1.94			(Conc=1.00)
Aroclor-1016 Peak 1	8372.64	7740.20	7.55			
Aroclor-1016 Peak 2	19787.8	17882.2	9.63			
Aroclor-1016 Peak 3	6863.53	6497.16	5.34			
Aroclor-1260 Peak 1	58054.0	66597.1	14.72			
Aroclor-1260 Peak 2	55536.3	62702.7	12.90			
Aroclor-1260 Peak 3	97384.3	111262.	14.25			
DCB	520393.	571866.	9.89			(Conc=1.00)

RF - Response Factor from daily standard file at 25.00 ug/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

ase No: | Calibration Date: 10/23/00

Contractor: ACCREDITED LABS INC. | Time: 19:09

Contract No: CA7PCB | Laboratory ID: >G7647

Instrument ID: GC/ECD #7 | Initial Calibration Date: 01/11/00

Minimum $\overline{RF}$ for SPCC is 10000 Maximum % Diff for CCC is 15%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
Tetrachloro-m-xylene	383266.	389455.	1.61			(Conc=1.00)
Aroclor-1016 Peak 1	8372.64	7611.32	9.09			
Aroclor-1016 Peak 2	19787.8	17911.5	9.48			
Aroclor-1016 Peak 3	6863.53	6464.72	5.81			
Aroclor-1260 Peak 1	58054.0	65212.2	12.33			
Aroclor-1260 Peak 2	55536.3	62814.8	13.11			
Aroclor-1260 Peak 3	97384.3	111627.	14.63			
DCB	520393.	514010.	1.23			(Conc=1.00)

RF - Response Factor from daily standard file at 25.00 ug/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

ACCREDITED LABORATORIES, INC.
RETENTION TIME WINDOW

Instrument ID: HP5890-G GC #7 Primary Column
Dates Analyzed: 01/10/00 to 01/11/00

ANALYTE	RETENTION TIMES 1/40 Mix A/B	1/8 Mix A/B	1/4 Mix A/B	1/2 Mix A/B	High Mix A/B	Average
A-BHC	7.27	7.27	7.34	7.27	7.27	7.28
B-BHC	8.62	8.61	8.63	8.66	8.61	8.63
G-BHC (Lindane)	8.38	8.39	8.45	8.38	8.38	8.40
D-BHC	9.63	9.63	9.63	9.66	9.61	9.63
Heptachlor	10.86	10.86	10.94	10.86	10.86	10.88
Aldrin	12.17	12.17	12.18	12.22	12.17	12.18
Heptachlor Epoxide	13.79	13.79	13.79	13.83	13.78	13.80
G-Chlordane	14.79	14.79	14.79	14.83	14.78	14.80
Endosulfan I	15.22	15.22	15.29	15.22	15.22	15.23
A-Chlordane	15.38	15.38	15.38	15.42	15.37	15.39
Dieldrin	16.27	16.27	16.33	16.27	16.26	16.28
4,4'-DDE	16.47	16.46	16.47	16.49	16.46	16.47
Endrin	17.14	17.14	17.20	17.14	17.13	17.15
Endosulfan II	17.67	17.67	17.68	17.71	17.67	17.68
4,4'-DDD	18.31	18.31	18.32	18.30	18.29	18.30
Endrin Aldehyde	18.49	18.49	18.49	18.51	18.48	18.49
Endosulfan Sulfate	19.48	19.48	19.49	19.51	19.48	19.49
4,4'-DDT	19.71	19.71	19.74	19.71	19.70	19.71
Endrin Ketone	21.31	21.31	21.32	21.34	21.30	21.32
Methoxychlor	22.20	22.19	22.21	22.18	22.18	22.19
Toxaphene Peak 1	19.87	19.98	19.97	19.97	20.00	19.96
Toxaphene Peak 2	20.88	20.81	20.81	20.81	20.83	20.83
Toxaphene Peak 3	21.32	21.17	21.16	21.16	21.18	21.20

ANALYTE	RT WINDOW	FROM	TO
A-BHC	± .050	7.23	7.33
B-BHC	± .050	8.58	8.68
G-BHC (Lindane)	± .050	8.35	8.45
D-BHC	± .050	9.58	9.68
Heptachlor	± .050	10.83	10.93
Aldrin	± .050	12.13	12.23
Heptachlor Epoxide	± .070	13.73	13.87
G-Chlordane	± .070	14.73	14.87
Endosulfan I	± .070	15.16	15.30
A-Chlordane	± .070	15.32	15.46
Dieldrin	± .070	16.21	16.35
4,4'-DDE	± .070	16.40	16.54
Endrin	± .070	17.08	17.22
Endosulfan II	± .070	17.61	17.75
4,4'-DDD	± .070	18.23	18.37
Endrin Aldehyde	± .070	18.42	18.56
Endosulfan Sulfate	± .070	19.42	19.56
4,4'-DDT	± .070	19.64	19.78
Endrin Ketone	± .070	21.25	21.39
Methoxychlor	± .070	22.12	22.26
Toxaphene Peak 1	± .070	19.89	20.03
Toxaphene Peak 2	± .070	20.76	20.90
Toxaphene Peak 3	± .070	21.13	21.27

ACCREDITED LABORATORIES, INC.
RETENTION TIME WINDOW

Instrument ID: HP5890-H GC #8 Confirmation Column
Dates Analyzed: 01/10/00 to 01/11/00

ANALYTE	RETENTION TIMES 1/40 Mix A/B	1/8 Mix A/B	1/4 Mix A/B	1/2 Mix A/B	High Mix A/B	Average
A-BHC	7.06	7.06	7.06	7.05	7.06	7.06
G-BHC (Lindane)	8.49	8.50	8.49	8.48	8.49	8.49
Heptachlor	9.14	9.14	9.14	9.14	9.14	9.14
Aldrin	10.14	10.14	10.14	10.14	10.13	10.14
B-BHC	11.69	11.68	11.68	11.67	11.66	11.68
D-BHC	12.50	12.50	12.50	12.49	12.48	12.49
Heptachlor Epoxide	12.80	12.81	12.80	12.80	12.80	12.80
Endosulfan I	13.89	13.89	13.89	13.89	13.89	13.89
G-Chlordane	14.20	14.20	14.20	14.20	14.20	14.20
A-Chlordane	14.41	14.41	14.41	14.41	14.40	14.41
4,4'-DDE	15.15	15.15	15.15	15.14	15.13	15.14
Dieldrin	15.35	15.35	15.35	15.34	15.35	15.35
Endrin	16.16	16.16	16.16	16.16	16.16	16.16
Endosulfan II	18.31	18.31	18.31	18.31	18.30	18.31
4,4'-DDD	18.47	18.46	18.46	18.43	18.45	18.45
4,4'-DDT	19.06	19.06	19.05	19.04	19.05	19.05
Endrin Aldehyde	19.93	19.92	19.92	19.92	19.92	19.92
Endosulfan Sulfate	21.22	21.22	21.22	21.22	21.21	21.22
Methoxychlor	21.81	21.80	21.79	21.78	21.78	21.79
Endrin Ketone	22.78	22.78	22.77	22.77	22.76	22.77
Toxaphene Peak 1	19.73	19.62	19.62	19.61	19.60	19.63
Toxaphene Peak 2	20.57	20.61	20.61	20.60	20.60	20.60
Toxaphene Peak 3	20.92	21.05	21.04	21.03	21.03	21.01

ANALYTE	RT WINDOW	FROM	TO
A-BHC	± .050	7.01	7.11
G-BHC (Lindane)	± .050	8.44	8.54
Heptachlor	± .050	9.09	9.19
Aldrin	± .050	10.09	10.19
B-BHC	± .050	11.63	11.73
D-BHC	± .050	12.44	12.54
Heptachlor Epoxide	± .070	12.73	12.87
Endosulfan I	± .070	13.82	13.96
G-Chlordane	± .070	14.13	14.27
A-Chlordane	± .070	14.34	14.48
4,4'-DDE	± .070	15.07	15.21
Dieldrin	± .070	15.28	15.42
Endrin	± .070	16.09	16.23
Endosulfan II	± .070	18.24	18.38
4,4'-DDD	± .070	18.38	18.52
4,4'-DDT	± .070	18.98	19.12
Endrin Aldehyde	± .070	19.85	19.99
Endosulfan Sulfate	± .070	21.15	21.29
Methoxychlor	± .070	21.72	21.86
Endrin Ketone	± .070	22.70	22.84
Toxaphene Peak 1	± .070	19.56	19.70
Toxaphene Peak 2	± .070	20.53	20.67
Toxaphene Peak 3	± .070	20.94	21.08

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ACCREDITED LABORATORIES, INC.
RETENTION TIME WINDOW

Instrument ID: HP5890-G
Date Analyzed: 01/11/00

GC #7 Primary Column

ANALYTE	RETENTION TIMES 0.10 ug/L	1.0 ug/L	2.5 ug/L	5.0 ug/L	10.0 ug/L	Average
Aroclor-1016 Peak 1	9.41	9.40	9.39	9.39	9.39	9.40
Aroclor-1016 Peak 2	10.55	10.53	10.51	10.50	10.49	10.52
Aroclor-1016 Peak 3	10.89	10.88	10.85	10.84	10.83	10.86
Aroclor-1260 Peak 1	18.80	18.79	18.77	18.77	18.76	18.78
Aroclor-1260 Peak 2	19.91	19.91	19.89	19.88	19.87	19.89
Aroclor-1260 Peak 3	22.68	22.67	22.66	22.65	22.65	22.66

ANALYTE	RT WINDOW	FROM	TO
Aroclor-1016 Peak 1	± .070	9.33	9.47
Aroclor-1016 Peak 2	± .070	10.45	10.59
Aroclor-1016 Peak 3	± .070	10.79	10.93
Aroclor-1260 Peak 1	± .070	18.71	18.85
Aroclor-1260 Peak 2	± .070	19.82	19.96
Aroclor-1260 Peak 3	± .070	22.59	22.73

ACCREDITED LABORATORIES, INC.
RETENTION TIME WINDOW

Instrument ID: HP5890-H
Date Analyzed: 01/11/00

GC #8 Confirmation Column

ANALYTE	RETENTION TIMES 0.10 ug/L	1.0 ug/L	2.5 ug/L	5.0 ug/L	10.0 ug/L	Average
Aroclor-1016 Peak 1	7.42	7.42	7.41	7.40	7.39	7.41
Aroclor-1016 Peak 2	9.26	9.22	9.19	9.17	9.16	9.20
Aroclor-1016 Peak 3	11.32	11.31	11.30	11.29	11.28	11.30
Aroclor-1260 Peak 1	17.04	17.02	17.01	16.99	16.99	17.01
Aroclor-1260 Peak 2	21.04	21.02	21.02	21.00	21.00	21.02
Aroclor-1260 Peak 3	22.42	22.42	22.41	22.40	22.39	22.41

ANALYTE	RT WINDOW	FROM	TO
Aroclor-1016 Peak 1	± .070	7.34	7.48
Aroclor-1016 Peak 2	± .070	9.13	9.27
Aroclor-1016 Peak 3	± .070	11.23	11.37
Aroclor-1260 Peak 1	± .070	16.94	17.08
Aroclor-1260 Peak 2	± .070	20.95	21.09
Aroclor-1260 Peak 3	± .070	22.34	22.48

ACCREDITED LABORATORIES, INC.
PESTICIDE RETENTION TIME WINDOW

Instrument ID: HP5890-G

Primary Column

Date Analyzed: 10/20/00

COMPOUND NAME	RT OF STD	WINDOW FROM	WINDOW TO
A-BHC	6.68	6.63	6.73
B-BHC	8.05	8.00	8.10
G-BHC (Lindane)	7.76	7.71	7.81
D-BHC	9.02	8.97	9.07
Heptachlor	10.13	10.08	10.18
Aldrin	11.41	11.36	11.46
Heptachlor Epoxide	13.03	12.96	13.10
G-Chlordane	14.03	13.96	14.10
Endosulfan I	14.47	14.40	14.54
A-Chlordane	14.62	14.55	14.69
Dieldrin	15.52	15.45	15.59
4,4'-DDE	15.74	15.67	15.81
Endrin	16.39	16.32	16.46
Endosulfan II	16.94	16.87	17.01
4,4'-DDD	17.62	17.55	17.69
Endrin Aldehyde	17.76	17.69	17.83
Endosulfan Sulfate	18.78	18.71	18.85
4,4'-DDT	19.02	18.95	19.09
Endrin Ketone	20.62	20.55	20.69
Methoxychlor	21.55	21.48	21.62
Toxaphene Peak 1	19.28	19.21	19.35
Toxaphene Peak 2	20.12	20.05	20.19
Toxaphene Peak 3	20.48	20.41	20.55

ACCREDITED LABORATORIES, INC.
PESTICIDE RETENTION TIME WINDOW

Instrument ID: HP5890-H

Confirmation Column

Date Analyzed: 10/20/00

COMPOUND NAME	RT OF STD	WINDOW FROM	WINDOW TO
A-BHC	7.03	6.98	7.08
G-BHC (Lindane)	8.49	8.44	8.54
Heptachlor	8.99	8.94	9.04
Aldrin	9.97	9.92	10.02
B-BHC	11.69	11.64	11.74
D-BHC	12.54	12.49	12.59
Heptachlor Epoxide	12.61	12.54	12.68
Endosulfan I	13.76	13.69	13.83
G-Chlordane	14.02	13.95	14.09
A-Chlordane	14.21	14.14	14.28
4,4'-DDE	15.06	14.99	15.13
Dieldrin	15.16	15.09	15.23
Endrin	16.00	15.93	16.07
Endosulfan II	18.18	18.11	18.25
4,4'-DDD	18.40	18.33	18.47
4,4'-DDT	18.93	18.86	19.00
Endrin Aldehyde	19.78	19.71	19.85
Endosulfan Sulfate	21.03	20.96	21.10
Methoxychlor	21.65	21.58	21.72
Endrin Ketone	22.62	22.55	22.69
Toxaphene Peak 1	19.47	19.40	19.54
Toxaphene Peak 2	20.48	20.41	20.55
Toxaphene Peak 3	20.94	20.87	21.01

ACCREDITED LABORATORIES, INC.
PESTICIDE RETENTION TIME WINDOW

Instrument ID: HP5890-G

Primary Column

Date Analyzed: 10/23/00

COMPOUND NAME	RT OF STD	WINDOW FROM	WINDOW TO
A-BHC	6.72	6.67	6.77
B-BHC	8.08	8.03	8.13
G-BHC (Lindane)	7.80	7.75	7.85
D-BHC	9.04	8.99	9.09
Heptachlor	10.19	10.14	10.24
Aldrin	11.47	11.42	11.52
Heptachlor Epoxide	13.09	13.02	13.16
G-Chlordane	14.09	14.02	14.16
Endosulfan I	14.53	14.46	14.60
A-Chlordane	14.68	14.61	14.75
Dieldrin	15.58	15.51	15.65
4,4'-DDE	15.79	15.72	15.86
Endrin	16.45	16.38	16.52
Endosulfan II	17.00	16.93	17.07
4,4'-DDD	17.67	17.60	17.74
Endrin Aldehyde	17.82	17.75	17.89
Endosulfan Sulfate	18.84	18.77	18.91
4,4'-DDT	19.07	19.00	19.14
Endrin Ketone	20.68	20.61	20.75
Methoxychlor	21.60	21.53	21.67
Toxaphene Peak 1	19.34	19.27	19.41
Toxaphene Peak 2	20.19	20.12	20.26
Toxaphene Peak 3	20.54	20.47	20.61

ACCREDITED LABORATORIES, INC.
PESTICIDE RETENTION TIME WINDOW

Instrument ID: HP5890-H

Confirmation Column

Date Analyzed: 10/23/00

COMPOUND NAME	RT OF STD	WINDOW FROM	WINDOW TO
A-BHC	7.04	6.99	7.09
G-BHC (Lindane)	8.49	8.44	8.54
Heptachlor	9.02	8.97	9.07
Aldrin	10.01	9.96	10.06
B-BHC	11.69	11.64	11.74
D-BHC	12.50	12.45	12.55
Heptachlor Epoxide	12.65	12.58	12.72
Endosulfan I	13.79	13.72	13.86
G-Chlordane	14.05	13.98	14.12
A-Chlordane	14.25	14.18	14.32
4,4'-DDE	15.07	15.00	15.14
Dieldrin	15.20	15.13	15.27
Endrin	16.03	15.96	16.10
Endosulfan II	18.20	18.13	18.27
4,4'-DDD	18.40	18.33	18.47
4,4'-DDT	18.95	18.88	19.02
Endrin Aldehyde	19.80	19.73	19.87
Endosulfan Sulfate	21.06	20.99	21.13
Methoxychlor	21.67	21.60	21.74
Endrin Ketone	22.65	22.58	22.72
Toxaphene Peak 1	19.50	19.43	19.57
Toxaphene Peak 2	20.51	20.44	20.58
Toxaphene Peak 3	20.97	20.90	21.04

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ACCREDITED LABORATORIES, INC.
RT WINDOW FOR MULTICOMPONENT ANALYTES

Instrument ID: HP5890-G

Date Analyzed: 10/20/00

COMPOUND NAME	RT OF STD	WINDOW FROM	WINDOW TO
Aroclor-1016 Peak 1	8.72	8.65	8.79
Aroclor-1016 Peak 2	9.85	9.78	9.92
Aroclor-1016 Peak 3	10.18	10.11	10.25
Aroclor-1221 Peak 1	6.22	6.15	6.29
Aroclor-1221 Peak 2	6.54	6.47	6.61
Aroclor-1221 Peak 3	6.75	6.68	6.82
Aroclor-1232 Peak 1	6.75	6.68	6.82
Aroclor-1232 Peak 2	8.05	7.98	8.12
Aroclor-1232 Peak 3	9.85	9.78	9.92
Aroclor-1242 Peak 1	9.85	9.78	9.92
Aroclor-1242 Peak 2	11.84	11.77	11.91
Aroclor-1242 Peak 3	12.34	12.27	12.41
Aroclor-1248 Peak 1	9.85	9.78	9.92
Aroclor-1248 Peak 2	11.04	10.97	11.11
Aroclor-1248 Peak 3	12.34	12.27	12.41
Aroclor-1254 Peak 1	13.53	13.46	13.60
Aroclor-1254 Peak 2	14.54	14.47	14.61
Aroclor-1254 Peak 3	16.06	15.99	16.13
Aroclor-1260 Peak 1	18.06	17.99	18.13
Aroclor-1260 Peak 2	19.19	19.12	19.26
Aroclor-1260 Peak 3	21.99	21.92	22.06

ACCREDITED LABORATORIES, INC.
RT WINDOW FOR MULTICOMPONENT ANALYTES

Instrument ID: HP5890-H

Date Analyzed: 10/20/00

COMPOUND NAME	RT OF STD	WINDOW FROM	WINDOW TO
Aroclor-1016 Peak 1	7.40	7.33	7.47
Aroclor-1016 Peak 2	9.31	9.24	9.38
Aroclor-1016 Peak 3	11.30	11.23	11.37
Aroclor-1221 Peak 1	5.60	5.53	5.67
Aroclor-1221 Peak 2	6.06	5.99	6.13
Aroclor-1221 Peak 3	6.28	6.21	6.35
Aroclor-1232 Peak 1	6.28	6.21	6.35
Aroclor-1232 Peak 2	7.40	7.33	7.47
Aroclor-1232 Peak 3	9.31	9.24	9.38
Aroclor-1242 Peak 1	7.40	7.33	7.47
Aroclor-1242 Peak 2	9.31	9.24	9.38
Aroclor-1242 Peak 3	11.71	11.64	11.78
Aroclor-1248 Peak 1	10.41	10.34	10.48
Aroclor-1248 Peak 2	11.30	11.23	11.37
Aroclor-1248 Peak 3	11.71	11.64	11.78
Aroclor-1254 Peak 1	13.59	13.52	13.66
Aroclor-1254 Peak 2	15.29	15.22	15.36
Aroclor-1254 Peak 3	18.37	18.30	18.44
Aroclor-1260 Peak 1	16.92	16.85	16.99
Aroclor-1260 Peak 2	20.90	20.83	20.97
Aroclor-1260 Peak 3	22.32	22.25	22.39

ACCREDITED LABORATORIES, INC.
RT WINDOW FOR MULTICOMPONENT ANALYTES

Instrument ID: HP5890-G

Date Analyzed: 10/23/00

COMPOUND NAME	RT OF STD	WINDOW FROM	WINDOW TO
Aroclor-1016 Peak 1	8.76	8.69	8.83
Aroclor-1016 Peak 2	9.89	9.82	9.96
Aroclor-1016 Peak 3	10.22	10.15	10.29
Aroclor-1221 Peak 1	6.25	6.18	6.32
Aroclor-1221 Peak 2	6.58	6.51	6.65
Aroclor-1221 Peak 3	6.78	6.71	6.85
Aroclor-1232 Peak 1	6.78	6.71	6.85
Aroclor-1232 Peak 2	8.10	8.03	8.17
Aroclor-1232 Peak 3	9.89	9.82	9.96
Aroclor-1242 Peak 1	9.89	9.82	9.96
Aroclor-1242 Peak 2	11.89	11.82	11.96
Aroclor-1242 Peak 3	12.39	12.32	12.46
Aroclor-1248 Peak 1	9.89	9.82	9.96
Aroclor-1248 Peak 2	11.09	11.02	11.16
Aroclor-1248 Peak 3	12.39	12.32	12.46
Aroclor-1254 Peak 1	13.58	13.51	13.65
Aroclor-1254 Peak 2	14.59	14.52	14.66
Aroclor-1254 Peak 3	16.10	16.03	16.17
Aroclor-1260 Peak 1	18.11	18.04	18.18
Aroclor-1260 Peak 2	19.24	19.17	19.31
Aroclor-1260 Peak 3	22.04	21.97	22.11

ACCREDITED LABORATORIES, INC.
RT WINDOW FOR MULTICOMPONENT ANALYTES

Instrument ID: HP5890-H

Date Analyzed: 10/23/00

COMPOUND NAME	RT OF STD	WINDOW FROM	WINDOW TO
Aroclor-1016 Peak 1	7.40	7.33	7.47
Aroclor-1016 Peak 2	9.29	9.22	9.36
Aroclor-1016 Peak 3	11.29	11.22	11.36
Aroclor-1221 Peak 1	5.59	5.52	5.66
Aroclor-1221 Peak 2	6.05	5.98	6.12
Aroclor-1221 Peak 3	6.27	6.20	6.34
Aroclor-1232 Peak 1	6.27	6.20	6.34
Aroclor-1232 Peak 2	7.40	7.33	7.47
Aroclor-1232 Peak 3	9.29	9.22	9.36
Aroclor-1242 Peak 1	7.40	7.33	7.47
Aroclor-1242 Peak 2	9.29	9.22	9.36
Aroclor-1242 Peak 3	11.70	11.63	11.77
Aroclor-1248 Peak 1	10.42	10.35	10.49
Aroclor-1248 Peak 2	11.29	11.22	11.36
Aroclor-1248 Peak 3	11.70	11.63	11.77
Aroclor-1254 Peak 1	13.60	13.53	13.67
Aroclor-1254 Peak 2	15.31	15.24	15.38
Aroclor-1254 Peak 3	18.39	18.32	18.46
Aroclor-1260 Peak 1	16.94	16.87	17.01
Aroclor-1260 Peak 2	20.91	20.84	20.98
Aroclor-1260 Peak 3	22.33	22.26	22.40

ACCREDITED LABORATORIES, INC.
PESTICIDE SURROGATE RECOVERY

Case Number : 9748 Client Name : ENVIROTACTIC

GC Column : RTX-5 Column ID : 0.53mm

Instrument ID : HP5890-G

	LAB FILE ID	LAB SAMPLE ID	TCX %REC	#	DCB %REC	#	TOT OUT
01	>G7604	PBLK86	110		147		0
02	>G7605	PBLK86-F	95		142		0
03	>G7622	0012803	125		133		0
04	>G7623	0012804	68		1096	*	1
05	>G7624	0012805	73		90		0
06	>G7625	0012806	110		64		0
07	>G7626	0012807	67		76		0
08	>G7627	0012808	778	*	84		1
09	>G7628	0012809	45		839	*	1
10	>G7629	0012810	54		1317	*	1
11	>G7651	0012803DL	125		143		0
12	>G7652	0012808DL	760	*	126		1
13	>G7653	0012808DL	1183	*	121		1
14	>G7654	0012809DL	50		376	*	1
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							

ADVISORY QC LIMITS

TCX = Tetrachloro-m-xylene (30-150)
DCB = Decachlorobiphenyl (30-150)

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

ACCREDITED LABORATORIES, INC.
PESTICIDE ANALYTICAL SEQUENCE

Case Number : 9748 Client Name : ENVIROTACTIC

GC Column : RTX-5 Column ID : 0.53mm

Instrument ID : HP5890-G

THE ANALYTICAL SEQUENCE FOR BLANKS AND SAMPLES IS GIVEN BELOW:

SURROGATE RT FROM CHECK STANDARD
TCX: 5.52 DCB: 28.31

	LAB FILE ID.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TCX RT #	DCB RT #
01	>G7604	PBLK86	10/20/00	17:27	5.53	28.33
02	>G7605	PBLK86-F	10/20/00	18:04	5.53	28.33
03	>G7622	0012803	10/21/00	04:40	5.51	28.30
04	>G7623	0012804	10/21/00	05:17	5.49	28.33
05	>G7624	0012805	10/21/00	05:54	5.50	28.30
06	>G7625	0012806	10/21/00	06:32	5.49	28.30
07	>G7626	0012807	10/21/00	07:09	5.50	28.30
08	>G7627	0012808	10/21/00	07:46	5.50	28.35
09	>G7628	0012809	10/21/00	08:23	5.50	28.34
10	>G7629	0012810	10/21/00	09:00	5.49	28.36
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						

QC LIMITS

TCX = Tetrachloro-m-xylene (± 0.05 MINUTES)
DCB = Decachlorobiphenyl (± 0.10 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

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ACCREDITED LABORATORIES, INC.
PESTICIDE ANALYTICAL SEQUENCE

Case Number : 9748 Client Name : ENVIROTACTIC

GC Column : RTX-5 Column ID : 0.53mm

Instrument ID : HP5890-G

THE ANALYTICAL SEQUENCE FOR BLANKS AND SAMPLES IS GIVEN BELOW:

SURROGATE RT FROM CHECK STANDARD
TCX: 5.56 DCB: 28.38

	LAB FILE ID.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TCX RT #	DCB RT #
01	>G7651	0012803DL	10/23/00	21:38	5.55	28.36
02	>G7652	0012808DL	10/23/00	22:16	5.53	28.38
03	>G7653	0012808DL	10/23/00	22:53	5.53	28.45
04	>G7654	0012809DL	10/23/00	23:31	5.54	28.38
05						
06						
07						
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						

QC LIMITS
TCX = Tetrachloro-m-xylene (± 0.05 MINUTES)
DCB = Decachlorobiphenyl (± 0.10 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

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ACCREDITED LABORATORIES, INC.
PESTICIDE DDT / ENDRIN BREAKDOWN SUMMARY

Lab Sample : DDT/ENDRIN
Data File : >G7598
GC Column : RTX-5
Instrument ID : HP5890-G

Date Analyzed : 10/20/00
Time Analyzed : 11:03
Column ID : 0.53mm

4,4'-DDT % breakdown : 0.0

Endrin % breakdown : 0.0

Combined % breakdown : 0.0

ACCREDITED LABORATORIES, INC.
PESTICIDE DDT / ENDRIN BREAKDOWN SUMMARY

Lab Sample	: DDT/ENDRIN	Date Analyzed	: 10/23/00
Data File	: >G7643	Time Analyzed	: 16:39
GC Column	: RTX-5	Column ID	: 0.53mm
Instrument ID	: HP5890-G		

4,4'-DDT % breakdown : 0.0

Endrin % breakdown : 0.0

Combined % breakdown : 0.0

ACCREDITED LABORATORIES, INC.
SOIL PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Matrix Spike Sample No.: 0012773

Sample Data File: >G7586

Date Extracted: 10/18/00

MS Data file: >G7587

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC LIMITS REC
G-BHC (Lindane)	8.33	0.00	7.98	96	46-127
Heptachlor	8.33	0.00	7.81	94	35-130
Aldrin	8.33	0.00	7.47	90	34-132
Dieldrin	16.7	0.00	14.4	86	31-134
Endrin	16.7	0.00	16.9	101	42-139
4,4'-DDT	16.7	0.00	18.8	113	23-134

MSD Data File: >G7588

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
G-BHC (Lindane)	8.33	6.81	82	16	50	46-127
Heptachlor	8.33	6.84	82	13	31	35-130
Aldrin	8.33	6.86	82	9	43	34-132
Dieldrin	16.7	12.4	74	15	38	31-134
Endrin	16.7	15.4	92	9	45	42-139
4,4'-DDT	16.7	17.8	107	5	50	23-134

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

* Values outside of QC limits

RPD: 0 out of 6 outside limits
Spike Recovery: 0 out of 12 outside limits

COMMENTS: _____

210

ACCREDITED LABORATORIES, INC.
SOIL PCB MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Matrix Spike Sample Number: 0012773

Sample Data File: >G7586

Date Extracted: 10/18/00

MS Data File: >G7589

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC ** LIMITS REC
Aroclor-1260	333	0.000	290	87	40-140

MSD Data File: >G7590

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS ** RPD	QC LIMITS ** REC
Aroclor-1260	333	289	87	0	25	40-140

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

RPD: 0 out of 1 outside limits
Spike Recovery: 0 out of 2 outside limits

** Values were generated within ALI for advisory purposes only

COMMENTS: _____

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ACCREDITED LABORATORIES, INC
PESTICIDE/PCB ORGANIC ANALYSIS DATA

CASE NUMBER		MATRIX	Soil
SAMPLE NUMBER	PBLK86	DILUTION FACTOR	1
DATA FILE	>G7604	DATE EXTRACTED	10/20/00
CLIENT NAME		DATE ANALYZED	10/20/00
FIELD ID		ANALYZED BY	JEFF

CAS#	COMPOUND	UG/KG	MDL
319846	A-BHC	U	.667
319857	B-BHC	U	.667
58899	G-BHC (Lindane)	U	.667
319868	D-BHC	U	.667
76448	Heptachlor	U	.667
309002	Aldrin	U	.667
1024573	Heptachlor Epoxide	U	.667
959988	Endosulfan I	U	.667
5103719	A-Chlordane	U	.667
5103742	G-Chlordane	U	.667
60571	Dieldrin	U	1.33
72559	4,4'-DDE	U	1.33
72208	Endrin	U	1.33
33213659	Endosulfan II	U	1.33
72548	4,4'-DDD	U	1.33
7421934	Endrin Aldehyde	U	1.33
1031078	Endosulfan Sulfate	U	1.33
50293	4,4'-DDT	U	1.33
53494705	Endrin Ketone	U	1.33
72435	Methoxychlor	U	6.67
8001352	Toxaphene	U	33.3
12674112	Aroclor-1016	U	16.7
11104282	Aroclor-1221	U	16.7
11141165	Aroclor-1232	U	16.7
53469219	Aroclor-1242	U	16.7
12672296	Aroclor-1248	U	16.7
11097691	Aroclor-1254	U	16.7
11096825	Aroclor-1260	U	16.7

Percent Solid of 100. is used for all target compounds.

B - Indicates compound found in associated blank.
J - Indicates compound concentration found below MDL.
U - Indicates compound analyzed for but not detected.
E - Indicates result exceeds highest calibration standard.
D - Indicates result is based on a dilution.

ACCREDITED LABORATORIES, INC
PESTICIDE/PCB ORGANIC ANALYSIS DATA

CASE NUMBER		MATRIX	Soil
SAMPLE NUMBER	PBLK86-F	DILUTION FACTOR	1
DATA FILE	>G7605	DATE EXTRACTED	10/20/00
CLIENT NAME		DATE ANALYZED	10/20/00
FIELD ID		ANALYZED BY	JEFF

CAS#	COMPOUND	UG/KG	MDL
319846	A-BHC	U	.667
319857	B-BHC	U	.667
58899	G-BHC (Lindane)	U	.667
319868	D-BHC	U	.667
76448	Heptachlor	U	.667
309002	Aldrin	U	.667
1024573	Heptachlor Epoxide	U	.667
959988	Endosulfan I	U	.667
5103719	A-Chlordane	U	.667
5103742	G-Chlordane	U	.667
60571	Dieldrin	U	1.33
72559	4,4'-DDE	U	1.33
72208	Endrin	U	1.33
33213659	Endosulfan II	U	1.33
72548	4,4'-DDD	U	1.33
7421934	Endrin Aldehyde	U	1.33
1031078	Endosulfan Sulfate	U	1.33
50293	4,4'-DDT	U	1.33
53494705	Endrin Ketone	U	1.33
72435	Methoxychlor	U	6.67
8001352	Toxaphene	U	33.3
12674112	Aroclor-1016	U	16.7
11104282	Aroclor-1221	U	16.7
11141165	Aroclor-1232	U	16.7
53469219	Aroclor-1242	U	16.7
12672296	Aroclor-1248	U	16.7
11097691	Aroclor-1254	U	16.7
11096825	Aroclor-1260	U	16.7

Percent Solid of 100. is used for all target compounds.

B - Indicates compound found in associated blank.
J - Indicates compound concentration found below MDL.
U - Indicates compound analyzed for but not detected.
E - Indicates result exceeds highest calibration standard.
D - Indicates result is based on a dilution.

ACCREDITED LABORATORIES, INC.
INITIAL CALIBRATION

Initial Calibration Source: PE/LEEMAN

Concentration Units: µg/L

Analyte	Initial Calibration True	Found	% Rec	Date	Method
Antimony	7500.0	7630.00	101.7	10/18/00	P
Arsenic	30.0	33.60	112.0	10/17/00	F
Beryllium	7500.0	7660.00	102.1	10/18/00	P
Cadmium	7500.0	7360.00	98.1	10/18/00	P
Chromium	7500.0	7410.00	98.8	10/18/00	P
Copper	7500.0	7030.00	93.7	10/18/00	P
Lead	7500.0	7370.00	98.3	10/18/00	P
Mercury	4.0	4.24	106.0	10/17/00	CV
Nickel	7500.0	7350.00	98.0	10/18/00	P
Selenium	30.0	30.30	101.0	10/17/00	F
Silver	750.0	758.00	101.1	10/18/00	P
Thallium	30.0	32.70	109.0	10/17/00	F
Zinc	7500.0	7840.00	104.5	10/18/00	P

Control Limits:

Mercury 80-120; ICP Metals 90-110; GFA 80-120; CN 85-115

ALI FORM II (Part I) - INORGANICS

ACCREDITED LABORATORIES, INC.
INITIAL CALIBRATION

Initial Calibration Source: PE/LEEMAN

Concentration Units: µg/L

Analyte	Initial Calibration True	Found	% Rec	Date	Method
Antimony	7500.0	7630.00	101.7	10/18/00	P
Arsenic	30.0	30.90	103.0	10/18/00	F
Beryllium	7500.0	7660.00	102.1	10/18/00	P
Cadmium	7500.0	7360.00	98.1	10/18/00	P
Chromium	7500.0	7410.00	98.8	10/18/00	P
Copper	7500.0	7030.00	93.7	10/18/00	P
Lead	7500.0	7370.00	98.3	10/18/00	P
Mercury					
Nickel	7500.0	7350.00	98.0	10/18/00	P
Selenium					
Silver	750.0	758.00	101.1	10/18/00	P
Thallium					
Zinc	7500.0	7840.00	104.5	10/18/00	P

Control Limits:

Mercury 80-120; ICP Metals 90-110; GFA 80-120; CN 85-115

ALI FORM II (Part I) - INORGANICS

ACCREDITED LABORATORIES, INC.
CONTINUING CALIBRATION VERIFICATION

Initial Calibration Source: PE/LEEMAN

Continuing Calibration Source: ALI

Concentration Units: µg/L

Analyte	Continuing Calibration(s) True	Found 1	% Rec	Date 1	Found 2	% Rec	Date 2	M
Antimony	5000.0	4950.00	99.0	10/18/00	4890.00	97.8	10/18/00	P
Arsenic	40.0	37.70	94.3	10/17/00	38.10	95.3	10/17/00	F
Beryllium	5000.0	4940.00	98.8	10/18/00	4980.00	99.6	10/18/00	P
Cadmium	5000.0	4940.00	98.8	10/18/00	4970.00	99.4	10/18/00	P
Chromium	5000.0	4940.00	98.8	10/18/00	4970.00	99.4	10/18/00	P
Copper	5000.0	4920.00	98.4	10/18/00	4980.00	99.6	10/18/00	P
Lead	5000.0	5000.00	100.0	10/18/00	4980.00	99.6	10/18/00	P
Mercury	5.0	5.25	105.0	10/17/00	5.25	105.0	10/17/00	CV
Nickel	5000.0	4930.00	98.6	10/18/00	4940.00	98.8	10/18/00	P
Selenium	40.0	41.00	102.5	10/17/00	39.00	97.5	10/17/00	F
Silver	500.0	486.00	97.2	10/18/00	491.00	98.2	10/18/00	P
Thallium	40.0	39.30	98.3	10/17/00	45.00	112.5	10/17/00	F
Zinc	5000.0	4930.00	98.6	10/18/00	4910.00	98.2	10/18/00	P

Control Limits: Mercury 80-120; ICP Metals 90-110; GFA 80-120; CN 85-115

ALI FORM II (Part II) - INORGANICS

ACCREDITED LABORATORIES, INC.
CONTINUING CALIBRATION VERIFICATION

Initial Calibration Source: PE/LEEMAN

Continuing Calibration Source: ALI

Concentration Units: µg/L

Analyte	True	Continuing Calibration(s) Found 3	% Rec	Date 3	Found 4	% Rec	Date 4	M
Antimony	5000.0	5120.00	102.4	10/18/00				P
Arsenic	40.0	38.60	96.5	10/17/00				F
Beryllium	5000.0	5080.00	101.6	10/18/00				P
Cadmium	5000.0	5030.00	100.6	10/18/00				P
Chromium	5000.0	5050.00	101.0	10/18/00				P
Copper	5000.0	5070.00	101.4	10/18/00				P
Lead	5000.0	5070.00	101.4	10/18/00				CV
Mercury	5.0	5.23	104.6	10/17/00				P
Nickel	5000.0	5060.00	101.2	10/18/00				F
Selenium	40.0	41.50	103.8	10/17/00				P
Silver	500.0	507.00	101.4	10/18/00				F
Thallium	40.0	40.40	101.0	10/17/00				P
Zinc	5000.0	5040.00	100.8	10/18/00				

Control Limits: Mercury 80-120; ICP Metals 90-110; GFA 80-120; CN 85-115

ALI FORM II (Part II) - INORGANICS

ACCREDITED LABORATORIES, INC.
CONTINUING CALIBRATION VERIFICATION

Initial Calibration Source: PE/LEEMAN

Continuing Calibration Source: ALI

Concentration Units: µg/L

Analyte	Continuing Calibration(s) True	Found 1	% Rec	Date 1	Found 2	% Rec	Date 2	M
Antimony	5000.0	4920.00	98.4	10/18/00				P
Arsenic	40.0	42.60	106.5	10/18/00	39.50	98.8	10/18/00	F
Beryllium	5000.0	4950.00	99.0	10/18/00				P
Cadmium	5000.0	4910.00	98.2	10/18/00				P
Chromium	5000.0	4970.00	99.4	10/18/00				P
Copper	5000.0	4950.00	99.0	10/18/00				P
Lead	5000.0	4910.00	98.2	10/18/00				P
Mercury								
Nickel	5000.0	4920.00	98.4	10/18/00				P
Selenium								
Silver	500.0	498.00	99.6	10/18/00				P
Thallium								
Zinc	5000.0	4940.00	98.8	10/18/00				P

Control Limits: Mercury 80-120; ICP Metals 90-110; GFA 80-120; CN 85-115

ALI FORM II (Part II) - INORGANICS

ACCREDITED LABORATORIES, INC.
INITIAL CALIBRATION & PREPARATORY BLANKS

reparation Blank Matrix: Soil

Analyte	Initial Calibration Blank (µg/L) Result	Date	Preparation Blank (mg/kg) Result	Date	Method
Antimony	< 100.0	10/18/00	< 10.0	10/18/00	P
Arsenic	< 5.0	10/17/00	< .5	10/17/00	F
Beryllium	< 10.0	10/18/00	< 1.0	10/18/00	P
Cadmium	< 10.0	10/18/00	< 1.0	10/18/00	P
Chromium	< 30.0	10/18/00	< 3.0	10/18/00	P
Copper	< 30.0	10/18/00	< 3.0	10/18/00	P
Lead	< 200.0	10/18/00	< 20.0	10/18/00	P
Mercury	< .2	10/17/00	< .0	10/17/00	CV
Nickel	< 50.0	10/18/00	< 5.0	10/18/00	P
Selenium	< 5.0	10/17/00	< .5	10/17/00	F
Silver	< 15.0	10/18/00	< 1.5	10/18/00	P
Thallium	< 5.0	10/17/00	< .5	10/17/00	F
Zinc	< 100.0	10/18/00	< 10.0	10/18/00	P

ALI FORM III (Part I) - INORGANICS

ACCREDITED LABORATORIES, INC.
INITIAL CALIBRATION & PREPARATORY BLANKS

Preparation Blank Matrix: _____

Analyte	Initial Calibration Blank (µg/L) Result	Initial Calibration Blank (µg/L) Date	Preparation Blank (_____) Result	Preparation Blank (_____) Date	Method
Antimony	< 100.0	10/18/00			P
Arsenic	< 5.0	10/18/00			F
Beryllium	< 10.0	10/18/00			P
Cadmium	< 10.0	10/18/00			P
Chromium	< 30.0	10/18/00			P
Copper	< 30.0	10/18/00			P
Lead	< 200.0	10/18/00			P
Mercury					
Nickel	< 50.0	10/18/00			P
Selenium					
Silver	< 15.0	10/18/00			P
Thallium					
Zinc	< 100.0	10/18/00			P

ALI FORM III (Part I) - INORGANICS

ACCREDITED LABORATORIES, INC.
CONTINUING CALIBRATION BLANKS

Concentration Units: µg/L

Analyte	Continuing Calibration Blank(s) Result 1	Date 1	Result 2	Date 2	Result 3	Date 3	Method
Antimony	< 100.0	10/18/00	< 100.0	10/18/00	< 100.0	10/18/00	P
Arsenic	< 5.0	10/17/00	< 5.0	10/17/00	< 5.0	10/17/00	F
Beryllium	< 10.0	10/18/00	< 10.0	10/18/00	< 10.0	10/18/00	P
Cadmium	< 10.0	10/18/00	< 10.0	10/18/00	< 10.0	10/18/00	P
Chromium	< 30.0	10/18/00	< 30.0	10/18/00	< 30.0	10/18/00	P
Copper	< 30.0	10/18/00	< 30.0	10/18/00	< 30.0	10/18/00	P
Lead	< 200.0	10/18/00	< 200.0	10/18/00	< 200.0	10/18/00	P
Mercury	< .2	10/17/00	< .2	10/17/00	< .2	10/17/00	CV
Nickel	< 50.0	10/18/00	< 50.0	10/18/00	< 50.0	10/18/00	P
Selenium	< 5.0	10/17/00	< 5.0	10/17/00	< 5.0	10/17/00	F
Silver	< 15.0	10/18/00	< 15.0	10/18/00	< 15.0	10/18/00	P
Thallium	< 5.0	10/17/00	< 5.0	10/17/00	< 5.0	10/17/00	F
Zinc	< 100.0	10/18/00	< 100.0	10/18/00	< 100.0	10/18/00	P

ALI FORM III (Part II) - INORGANICS

ACCREDITED LABORATORIES, INC.
CONTINUING CALIBRATION BLANKS

Concentration Units: µg/L

Analyte	Continuing Calibration Blank(s) Result 1	Date 1	Result 2	Date 2	Result 3	Date 3	Method
Antimony	< 100.0	10/18/00					P
Arsenic	< 5.0	10/18/00	< 5.0	10/18/00			F
Beryllium	< 10.0	10/18/00					P
Cadmium	< 10.0	10/18/00					P
Chromium	< 30.0	10/18/00					P
Copper	< 30.0	10/18/00					P
Lead	< 200.0	10/18/00					P
Mercury							
Nickel	< 50.0	10/18/00					P
Selenium							
Silver	< 15.0	10/18/00					P
Thallium							
Zinc	< 100.0	10/18/00					P

ALI FORM III (Part II) - INORGANICS

ACCREDITED LABORATORIES, INC.
ICP INTERFERENCE CHECK SAMPLE

ICP ID Number: ES-2000

ICS Source: SPEX-3-129AS

Concentration Units: µg/L

Analyte	True Sol A	True Sol AB	Initial Found Sol A	Initial Found Sol AB	Initial Found % Rec	Final Found Sol A	Final Found Sol AB	Final Found % Rec
Antimony								
Arsenic								
Beryllium	0.	500.	34.	529.0	105.8	33.	505.0	101.0
Cadmium	0.	1000.	61.	955.0	95.5	52.	946.0	94.6
Chromium	0.	500.	0.	508.0	101.6	-1.	476.0	95.2
Copper	0.	500.	-7.	521.0	104.2	-15.	493.0	98.6
Lead	0.	1000.	139.	941.0	94.1	50.	945.0	94.5
Mercury								
Nickel	0.	1000.	2.	1020.0	102.0	-5.	1010.0	101.0
Selenium								
Silver	0.	1000.	3.	975.0	97.5	1.	945.0	94.5
Thallium								
Zinc	0.	1000.	33.	966.0	96.6	2.	965.0	96.5

ALI FORM IV - INORGANICS

ACCREDITED LABORATORIES, INC.
ICP INTERFERENCE CHECK SAMPLE

ICP ID Number: ES-2000

ICS Source: SPEX-3-129AS

Concentration Units: µg/L

Analyte	True		Initial Found			Final Found		
	Sol A	Sol AB	Sol A	Sol AB	% Rec	Sol A	Sol AB	% Rec
Antimony								
Arsenic								
Beryllium	0.	500.	34.	529.0	105.8	35.	539.0	107.8
Cadmium	0.	1000.	61.	955.0	95.5	61.	998.0	99.8
Chromium	0.	500.	0.	508.0	101.6	-5.	534.0	106.8
Copper	0.	500.	-7.	521.0	104.2	-13.	537.0	107.4
Lead	0.	1000.	139.	941.0	94.1	80.	1040.0	104.0
Mercury								
Nickel	0.	1000.	2.	1020.0	102.0	0.	1050.0	105.0
Selenium								
Silver	0.	1000.	3.	975.0	97.5	-1.	1020.0	102.0
Thallium								
Zinc	0.	1000.	33.	966.0	96.6	8.	1030.0	103.0

ALI FORM IV - INORGANICS

ACCREDITED LABORATORIES, INC.
SPIKE SAMPLE RECOVERY

Sample #: 0012771 Matrix: Soil

Concentration Units: mg/kg

Analyte	Spike Added	Sample Result	Spiked Sample Result	% Recovery	Q	QC Limits %Rec	Date Analyzed	M
Antimony	31.65	ND	34.6	109.3	_	75-125	10/18/00	P
Arsenic	3.21	2.55	5.13	80.5	_	75-125	10/17/00	F
Beryllium	3.16	ND	3.80	120.1	_	75-125	10/18/00	P
Cadmium	3.16	1.00	4.18	100.5	_	75-125	10/18/00	P
Chromium	12.66	10.1	22.9	101.1	_	75-125	10/18/00	P
Copper	15.82	5.39	19.9	91.7	_	75-125	10/18/00	P
Lead	31.65	ND	37.5	118.5	_	75-125	10/18/00	P
Mercury	2.00	.207	2.15	97.2	_	75-125	10/17/00	CV
Nickel	31.65	5.66	37.5	100.6	_	75-125	10/18/00	P
Selenium	3.21	ND	2.97	92.7	_	75-125	10/17/00	F
Silver	3.16	ND	3.47	109.7	_	75-125	10/18/00	P
Thallium	3.21	ND	3.32	103.6	_	75-125	10/17/00	F
Zinc	31.65	29.6	63.9	108.4	_	75-125	10/18/00	P

Comments:
ND - Element analyzed for but not detected.
P - Analyzed by ICP
F - Analyzed by GFA
CV - Analyzed by cold vapor
A - Analyzed by flame AA

ALI FORM V (Part I) - INORGANICS

ACCREDITED LABORATORIES, INC.
DUPLICATES

Sample #: 0012771 Matrix: Soil

% Solids: 89.7

Concentration Units (µG/L, MG/L or MG/KG dry weight): MG/KG

Analyte	Control Limit	Sample Result	Duplicate Result	RPD	Q	Date Analyzed	M
Antimony		ND	ND			10/18/00	P
Arsenic	.715	2.84	2.44	15.2		10/17/00	F
Beryllium		ND	ND			10/18/00	P
Cadmium	.706	1.11	1.02	8.5		10/18/00	P
Chromium		11.3	11.1	1.8		10/18/00	P
Copper	2.12	6.00	5.84	2.7		10/18/00	P
Lead		ND	ND			10/18/00	P
Mercury	.200	.231	.201	13.9		10/17/00	CV
Nickel	3.53	6.31	6.37	.9		10/18/00	P
Selenium		ND	ND			10/17/00	F
Silver		ND	ND			10/18/00	P
Thallium		ND	ND			10/17/00	F
Zinc	7.06	33.0	32.9	.3		10/18/00	P

ND - Element analyzed for but not detected or detected below MDL.

ALI FORM VI - INORGANICS

ACCREDITED LABORATORIES, INC.
LABORATORY CONTROL SAMPLE

Solid LCS Source: ALI

Aqueous LCS Source: ALI

Analyte	Aqueous (µg/L)					Solid (mg/kg)				
	True	Found	%Rec	Q	M	True	Found	%Rec	Q	M
Antimony						50.0	45.0	90.0		P
Arsenic						5.0	5.0	100.0		F
Beryllium						5.0	5.0	100.0		P
Cadmium						5.0	5.0	100.0		P
Chromium						20.0	20.0	100.0		P
Copper						25.0	23.0	92.0		P
Lead						50.0	45.0	90.0		P
Mercury						2.0	2.0	100.0		CV
Nickel						50.0	51.0	102.0		P
Selenium						5.0	5.0	100.0		F
Silver						5.0	4.0	80.0		P
Thallium						5.0	5.0	100.0		F
Zinc						50.0	51.0	102.0		P

ALI FORM VII - INORGANICS

ACCREDITED LABORATORIES, INC.
ICP SERIAL DILUTION SUMMARY

Sample #: 0012771

Matrix: Soil

Concentration Units: µg/L

Analyte	MDL	Initial Sample Result	Serial Dilution Result	% Difference	Date Date Analyzed	M
Antimony	100	ND	ND		10/18/00	P
Beryllium	10.0	ND	ND		10/18/00	P
Cadmium	10.0	15.8	21.6	36.7	10/18/00	P
Chromium	30.0	160	115	28.1	10/18/00	P
Copper	30.0	85.1	77.5	8.9	10/18/00	P
Lead	200	ND	ND		10/18/00	P
Nickel	50.0	89.4	86.5	3.2	10/18/00	P
Silver	15.0	ND	ND		10/18/00	P
Zinc	100	468	760	62.4	10/18/00	P

ND - Element analyzed for but not detected or detected below MDL.

ALI FORM IX - INORGANICS

ACCREDITED LABORATORIES, INC.
GENERAL CHEMISTRY DUPLICATE SAMPLE RESULTS SUMMARY

Matrix: Soil

ANALYTES	SAMPLE #	ORIGINAL SAMPLE CONCENTRATION	UNITS	DUPICATE SAMPLE CONCENTRATION	RPD	QC LIMITS
Cyanide, Total	0012807	ND	mg/L	ND	.0	20%

ACCREDITED LABORATORIES, INC.
GENERAL CHEMISTRY MATRIX SPIKE SUMMARY

Matrix: Soil

ANALYTES	SAMPLE #	SPIKE ADDED	UNITS	SAMPLE CONCENTRATION	SPIKE CONCENTRATION	% RECOVERY	QC LIMITS
Cyanide, Total	0012807	23.2	mg/L	ND	22.2	95.7	75-125

ACCREDITED LABORATORIES, INC.

TOTAL PETROLEUM HYDROCARBONS
SOIL DUPLICATE AND MATRIX SPIKE SUMMARY

DUPLICATE SAMPLE #: 200012848

ORIGINAL CONCENTRATION (mg/Kg)	DUPLICATE CONCENTRATION (mg/Kg)	RPD	RPD QC LIMIT
ND	ND	0.0	25

MATRIX SPIKE SAMPLE #: 200012848

SPIKE ADDED (mg/Kg)	SAMPLE CONC (mg/Kg)	MS CONC (mg/Kg)	% RECOVERY	RECOVERY QC LIMITS
196	ND	229	116.8	75-125

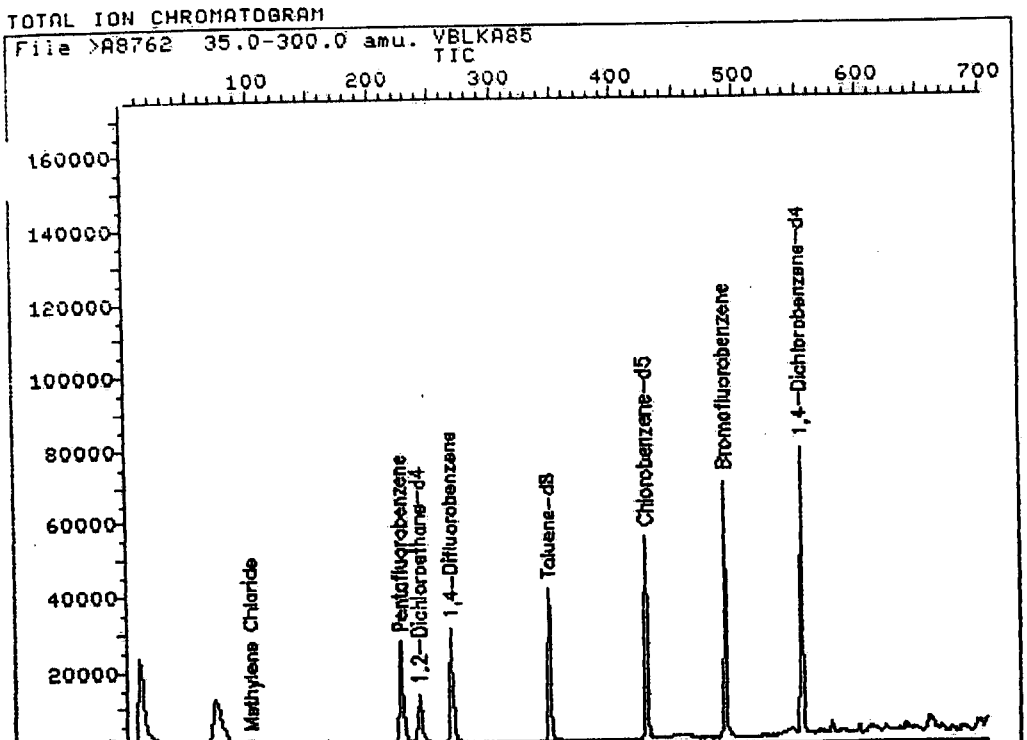
Operator ID: ROBERT
Output File: ^A8762::QT
Data File: >A8762::D1
File: VBLKA85
Misc:

Quant Rev: 7
Quant Time: 001025 12:55
Injected at: 001025 12:20
Dilution Factor: 1.00000
Instrument ID: HP5970BA

ID File: IDAS09::SC
Title: Accredited Labs ID file for 8260
Last Calibration: 001006 13:28
Last Qcal Time: <none>

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Pentafluorobenzene	12.72	221	105718	50.00	ug/l	100
13)	Methylene Chloride	7.13	98	6976	5.59	ug/l	84
24)	*1,4-Difluorobenzene	14.62	263	111357	50.00	ug/l	88
25)	1,2-Dichloroethane-d4	13.44	237	52607	42.93	ug/l	97
36)	Toluene-d8	18.26	343	110502	47.05	ug/l	94
42)	Bromofluorobenzene	24.84	488	86765	46.80	ug/l	75
43)	*Chlorobenzene-d5	21.89	423	96708	50.00	ug/l	100
55)	*1,4-Dichlorobenzene-d4	27.66	550	58341	50.00	ug/l	91

* Compound is ISTD



Data File: >A8762::D1 Quant Output File: ^A8762::QT
Name: VBLKA85 Instrument ID: HP5970BA
Misc:

Id File: IDAS09::SC
Title: Accredited Labs ID file for 8260
Last Calibration: 001006 13:28 Last Qcal Time: <none>

Operator ID: ROBERT
Quant Time : 001025 12:55
Injected at: 001025 12:20

QUANT REPORT

Operator ID: ROBERT
Output File: ^A8785::QT
Data File: >A8785::D1
Name: VBLKA86
Misc:

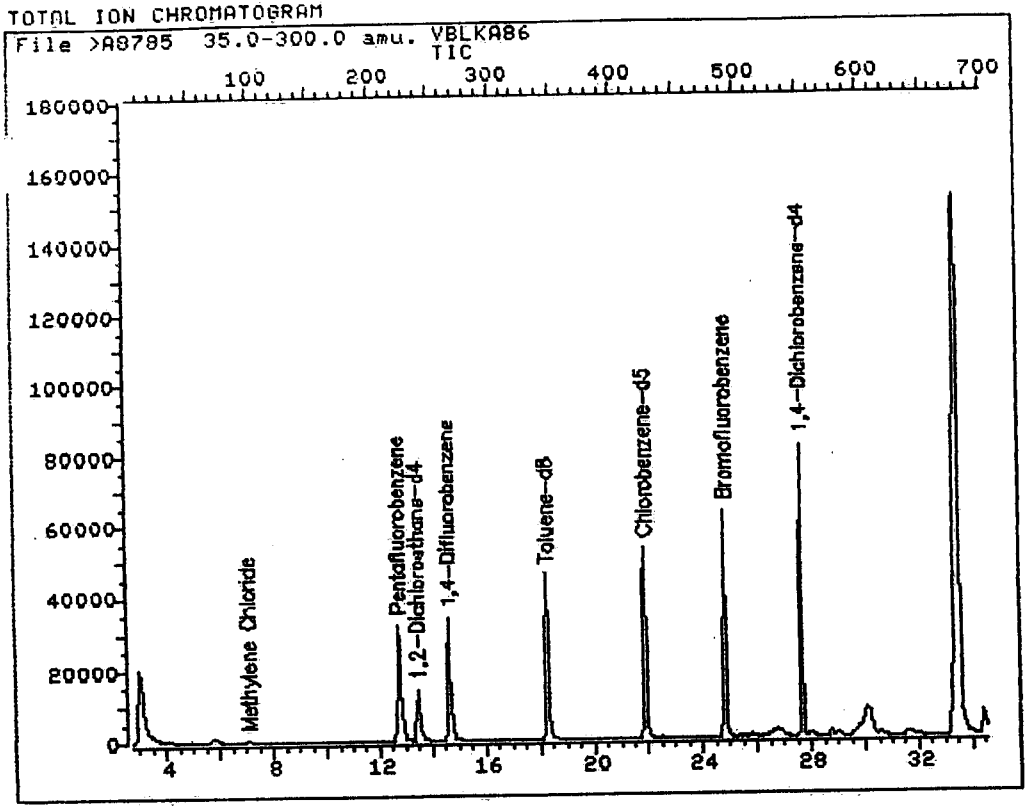
Quant Rev: 7
Quant Time: 001026 12:39
Injected at: 001026 12:04
Dilution Factor: 1.00000
Instrument ID: HP5970BA

ID File: IDAS09::SC
Title: Accredited Labs ID file for 8260
Last Calibration: 001006 13:28
Last Qcal Time: <none>

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Pentafluorobenzene	12.71	221	115783	50.00	ug/l	100
13)	Methylene Chloride	7.08	97	3460	2.53	ug/l	93
24)	*1,4-Difluorobenzene	14.62	263	117306	50.00	ug/l	85
25)	1,2-Dichloroethane-d4	13.44	237	54241	42.01	ug/l	97
36)	Toluene-d8	18.25	343	116782	47.21	ug/l	92
42)	Bromofluorobenzene	24.84	488	89317M	45.74	ug/l	
43)	*Chlorobenzene-d5	21.89	423	103029	50.00	ug/l	100
55)	*1,4-Dichlorobenzene-d4	27.66	550	63094	50.00	ug/l	91

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >A8785::D1 Quant Output File: ^A8785::QT
Name: VBLKA86 Instrument ID: HP5970BA
Misc:

Id File: IDAS09::SC
Title: Accredited Labs ID file for 8260
Last Calibration: 001006 13:28 Last Qcal Time: <none>

Operator ID: ROBERT
Quant Time : 001026 12:39
Injected at: 001026 12:04

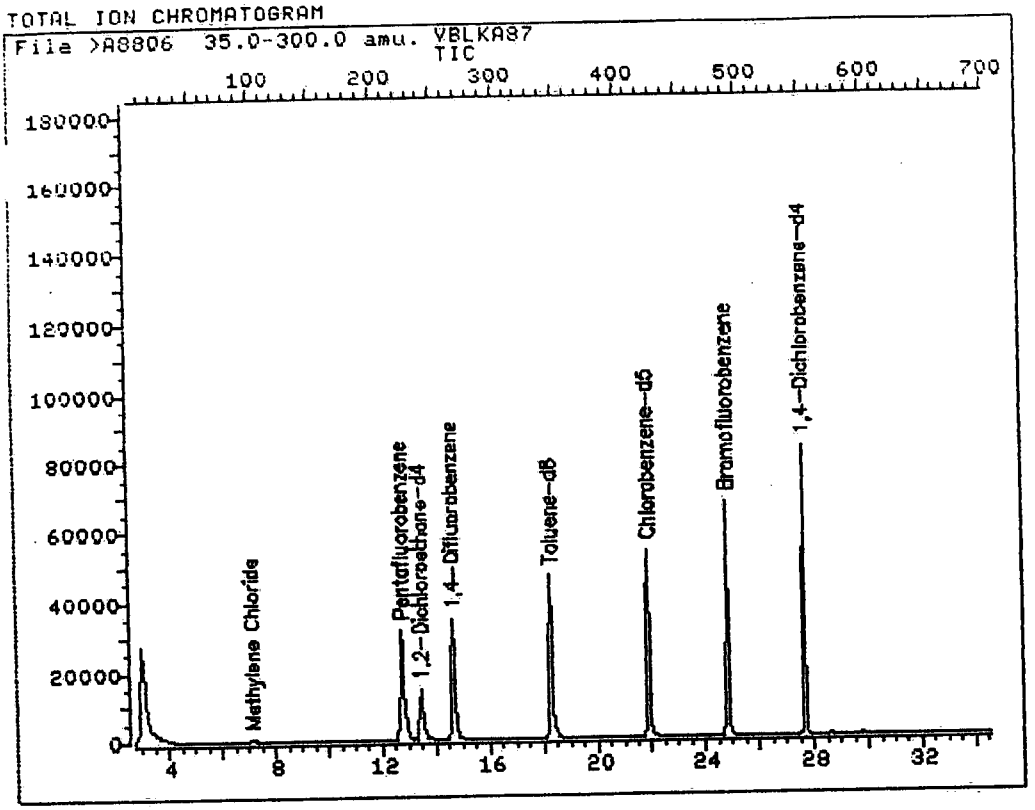
Operator ID: ROBERT
Output File: ^A8806::QT
Data File: >A8806::D1
Name: VBLKA87
Misc:

Quant Rev: 7
Quant Time: 001027 17:06
Injected at: 001027 11:00
Dilution Factor: 1.00000
Instrument ID: HP5970BA

ID File: IDAS09::SC
Title: Accredited Labs ID file for 8260
Last Calibration: 001006 13:28
Last Qcal Time: <none>

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Pentafluorobenzene	12.71	221	114105	50.00	ug/l	100
13)	Methylene Chloride	7.13	98	6128	4.55	ug/l	91
24)	*1,4-Difluorobenzene	14.62	263	119715	50.00	ug/l	85
25)	1,2-Dichloroethane-d4	13.44	237	55545	42.16	ug/l	98
36)	Toluene-d8	18.26	343	119907	47.49	ug/l	94
42)	Bromofluorobenzene	24.84	488	86843	43.57	ug/l	69
43)	*Chlorobenzene-d5	21.89	423	99225	50.00	ug/l	100
55)	*1,4-Dichlorobenzene-d4	27.66	550	64536	50.00	ug/l	91

* Compound is ISTD



Data File: >A8806::D1 Quant Output File: ^A8806::QT
Name: VBLKA87 Instrument ID: HP5970BA
Misc:

Id File: IDAS09::SC
Title: Accredited Labs ID file for 8260
Last Calibration: 001006 13:28 Last Qcal Time: <none>

Operator ID: ROBERT
Quant Time : 001027 17:06
Injected at: 001027 11:00

Operator ID: ROBERT
Data Out File: ^A8788::QT
Data File: >A8788::D1
Name: 0012803
Misc: 9748

Quant Rev: 7 Quant Time: 001026 14:56
Injected at: 001026 14:21
Dilution Factor: 1.00000
Instrument ID: HP5970BA

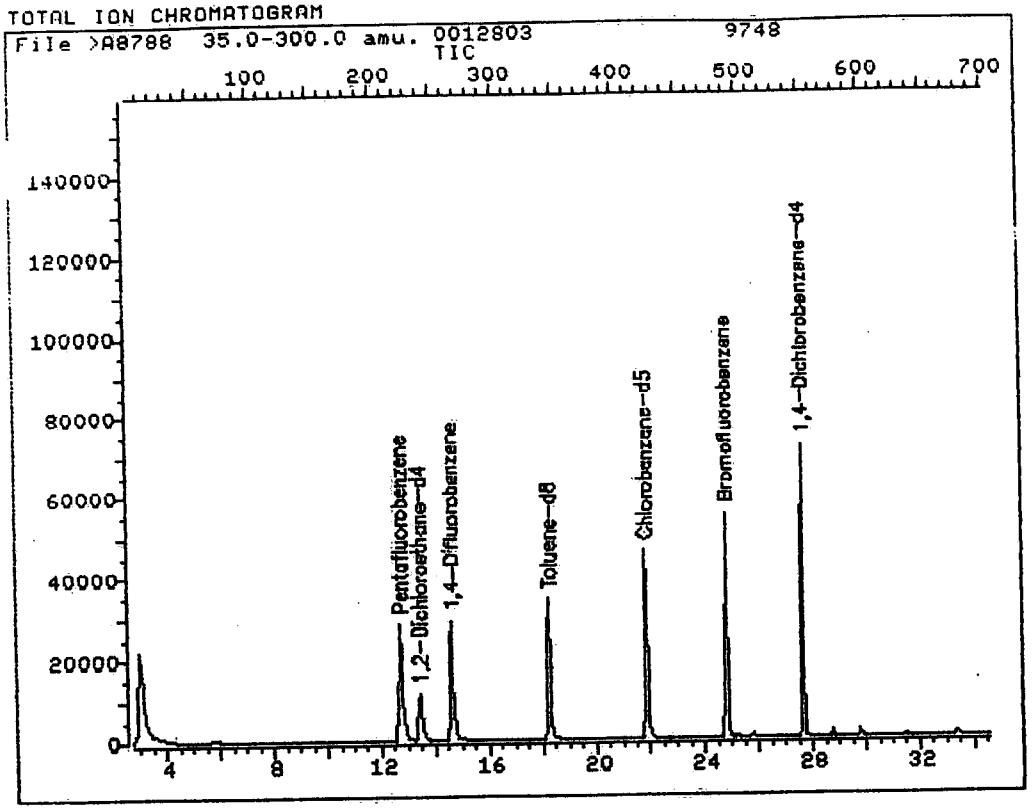
ENVIROTACTICS S-1

ID File: IDAS09::SC
Title: Accredited Labs ID file for 8260
Last Calibration: 001006 13:28 Last Qcal Time: <none>

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Pentafluorobenzene	12.71	221	102455	50.00	ug/l	100
24)	*1,4-Difluorobenzene	14.62	263	107389	50.00	ug/l	81
25)	1,2-Dichloroethane-d4	13.44	237	45478	38.48	ug/l	95
36)	Toluene-d8	18.25	343	92130	40.68	ug/l	95
42)	Bromofluorobenzene	24.80	487	72305	40.44	ug/l	78
43)	*Chlorobenzene-d5	21.84	422	88713	50.00	ug/l	100
55)	*1,4-Dichlorobenzene-d4	27.66	550	56921	50.00	ug/l	91

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >A8788::D1 Quant Output File: ^A8788::QT
Name: 0012803 Instrument ID: HP5970BA
Misc: 9748 ENVIROTACTICS S-1

Id File: IDAS09::SC
Title: Accredited Labs ID file for 8260
Last Calibration: 001006 13:28 Last Qcal Time: <none>

Operator ID: ROBERT
Quant Time : 001026 14:56
Injected at: 001026 14:21

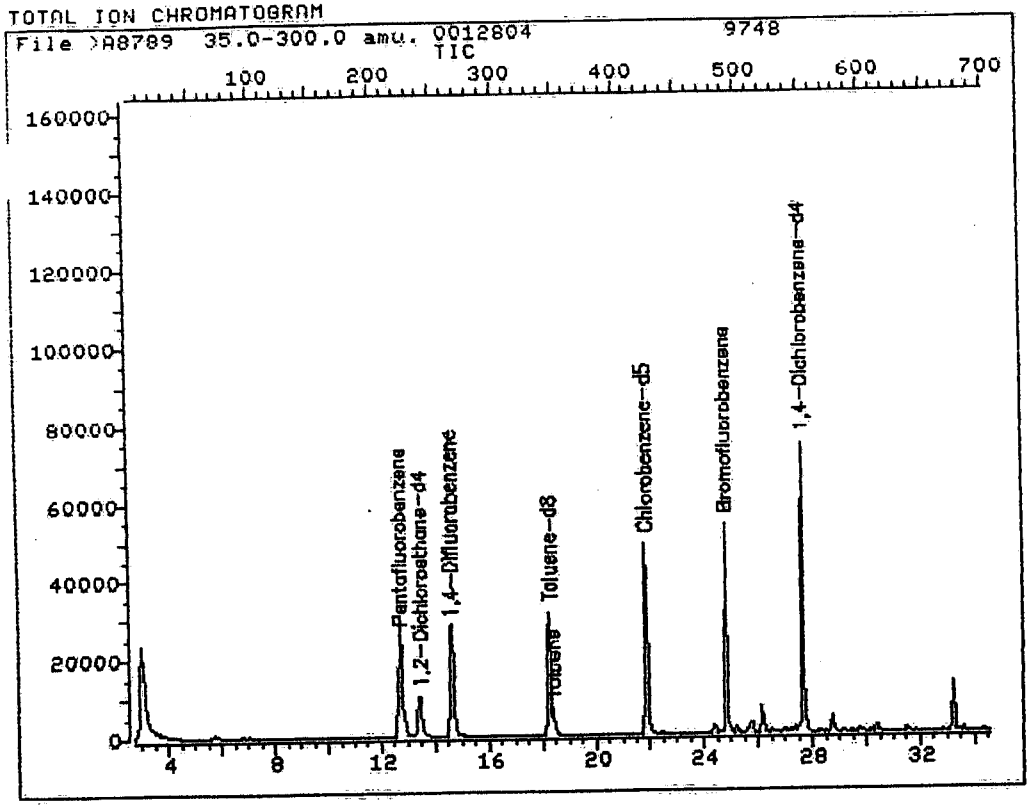
Data File: ^A8789::QT
Method File: >A8789::D1
Name: 0012804
Misc: 9748

Operator ID: ROBERT
Quant Rev: 7
Quant Time: 001026 15:36
Injected at: 001026 15:01
Dilution Factor: 1.00000
Instrument ID: HP5970BA
ENVIROTACTICS S-2

ID File: IDAS09::SC
Title: Accredited Labs ID file for 8260
Last Calibration: 001006 13:28
Last Qcal Time: <none>

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Pentafluorobenzene	12.67	220	107756	50.00	ug/l	100
24)	*1,4-Difluorobenzene	14.58	262	109487	50.00	ug/l	88
25)	1,2-Dichloroethane-d4	13.44	237	42188	35.01	ug/l	96
36)	Toluene-d8	18.26	343	87760	38.01	ug/l	92
37)	Toluene	18.39	346	14289	6.23	ug/l	94
42)	Bromofluorobenzene	24.80	487	69223	37.98	ug/l	81
43)	*Chlorobenzene-d5	21.84	422	93676	50.00	ug/l	100
55)	*1,4-Dichlorobenzene-d4	27.66	550	59267	50.00	ug/l	91

* Compound is ISTD



Data File: >A8789::D1 Quant Output File: ^A8789::QT
Name: 0012804 Instrument ID: HP5970BA
Misc: 9748 ENVIROTACTICS S-2

Id File: IDAS09::SC
Title: Accredited Labs ID file for 8260
Last Calibration: 001006 13:28 Last Qcal Time: <none>

Operator ID: ROBERT
Quant Time : 001026 15:36
Injected at: 001026 15:01

Operator ID: ROBERT
Output File: ^A8770::QT
Data File: >A8770::D1
Name: 0012805
Misc: 9748

Quant Rev: 7 Quant Time: 001025 18:12
Injected at: 001025 17:36
Dilution Factor: 1.00000
Instrument ID: HP5970BA

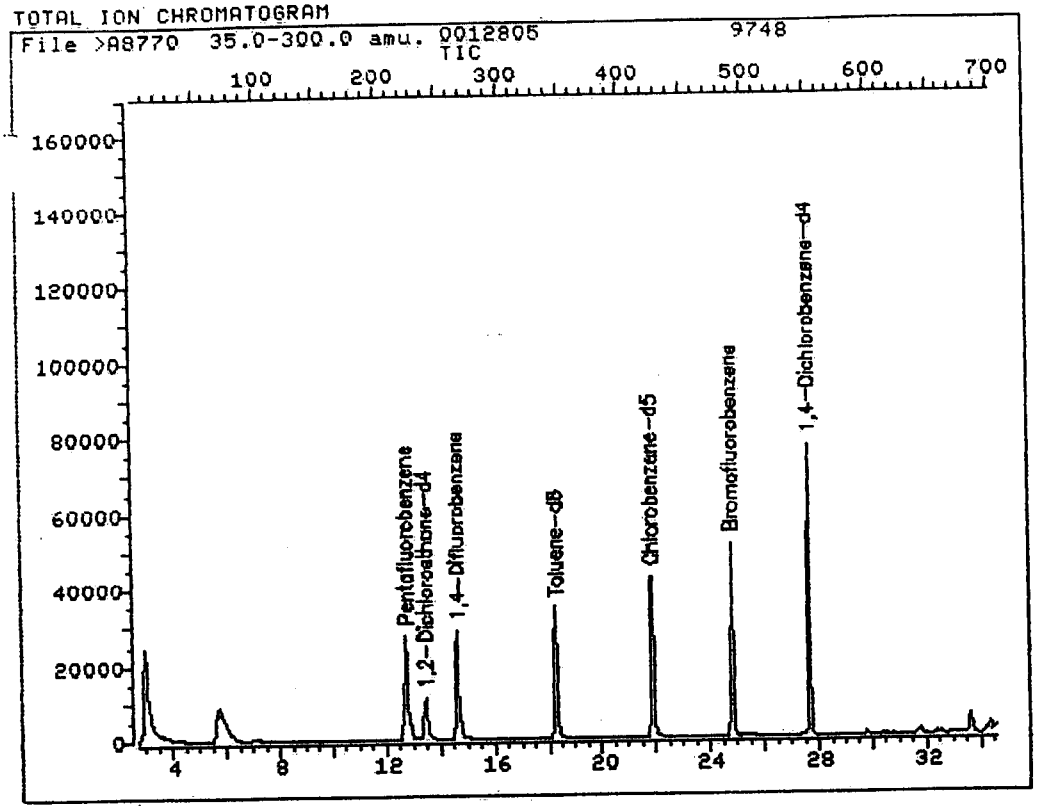
ENVIROTACTICS S-3

ID File: IDAS09::SC
Title: Accredited Labs ID file for 8260
Last Calibration: 001006 13:28

Last Qcal Time: <none>

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Pentafluorobenzene	12.72	221	99239	50.00	ug/l	100
24)	*1,4-Difluorobenzene	14.63	263	103908	50.00	ug/l	81
25)	1,2-Dichloroethane-d4	13.45	237	43977	38.46	ug/l	96
36)	Toluene-d8	18.26	343	90550	41.32	ug/l	90
42)	Bromofluorobenzene	24.80	487	71029	41.06	ug/l	79
43)	*Chlorobenzene-d5	21.85	422	90823	50.00	ug/l	100
55)	*1,4-Dichlorobenzene-d4	27.66	550	58363	50.00	ug/l	89

* Compound is ISTD



Data File: >A8770::D1 Quant Output File: ^A8770::QT
Name: 0012805 Instrument ID: HP5970BA
Misc: 9748 ENVIROTACTICS S-3

Id File: IDAS09::SC
Title: Accredited Labs ID file for 8260
Last Calibration: 001006 13:28 Last Qcal Time: <none>

Operator ID: ROBERT
Quant Time : 001025 18:12
Injected at: 001025 17:36

QUANT REPORT

Operator ID: ROBERT
Output File: ^A8771::QT
Data File: >A8771::D1
Name: 0012806
Misc: 9748

Quant Rev: 7

Quant Time: 001025 18:52
Injected at: 001025 18:16
Dilution Factor: 1.00000
Instrument ID: HP5970BA

ENVIROTACTICS S-4

ID File: IDAS09::SC
Title: Accredited Labs ID file for 8260
Last Calibration: 001006 13:28

Last Qcal Time: <none>

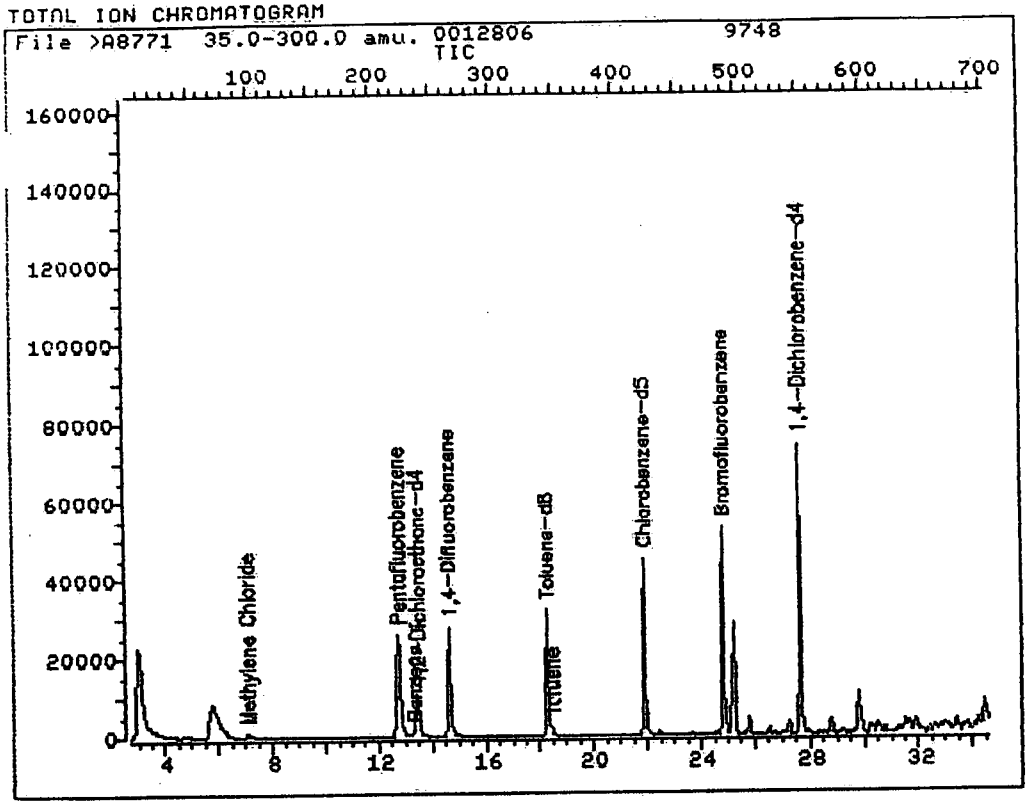
	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Pentafluorobenzene	12.71	221	92130	50.00	ug/l	100
13)	Methylene Chloride	7.07	97	6271	5.77	ug/l	89
24)	*1,4-Difluorobenzene	14.61	263	92061M	50.00	ug/l	83
25)	1,2-Dichloroethane-d4	13.43	237	39589	39.07	ug/l	95
29)	Benzene	13.30	234	3746	2.39	ug/l	100
36)	Toluene-d8	18.25	343	81080	41.76	ug/l	92
37)	Toluene	18.43	347	3916	2.03	ug/l	99
42)	Bromofluorobenzene	24.84	488	65109M	42.48	ug/l	
43)	*Chlorobenzene-d5	21.88	423	79492	50.00	ug/l	100
55)	*1,4-Dichlorobenzene-d4	27.65	550	55840	50.00	ug/l	93

* Compound is ISTD

244

414

TOTAL ION CHROMATOGRAM



Data File: >A8771::D1 Quant Output File: ^A8771::QT
Name: 0012806 Instrument ID: HP5970BA
Misc: 9748 ENVIROTACTICS S-4

Id File: IDAS09::SC
Title: Accredited Labs ID file for 8260
Last Calibration: 001006 13:28 Last Qcal Time: <none>

Operator ID: ROBERT
Quant Time : 001025 18:52
Injected at: 001025 18:16

245

QUANT REPORT

Operator ID: ROBERT
Data File: ^A8772::QT
Meth File: >A8772::D1
Name: 0012807
Misc: 9748

Quant Rev: 7 Quant Time: 001025 19:31
Injected at: 001025 18:56
Dilution Factor: 1.00000
Instrument ID: HP5970BA
S-5

ENVIROTACTICS

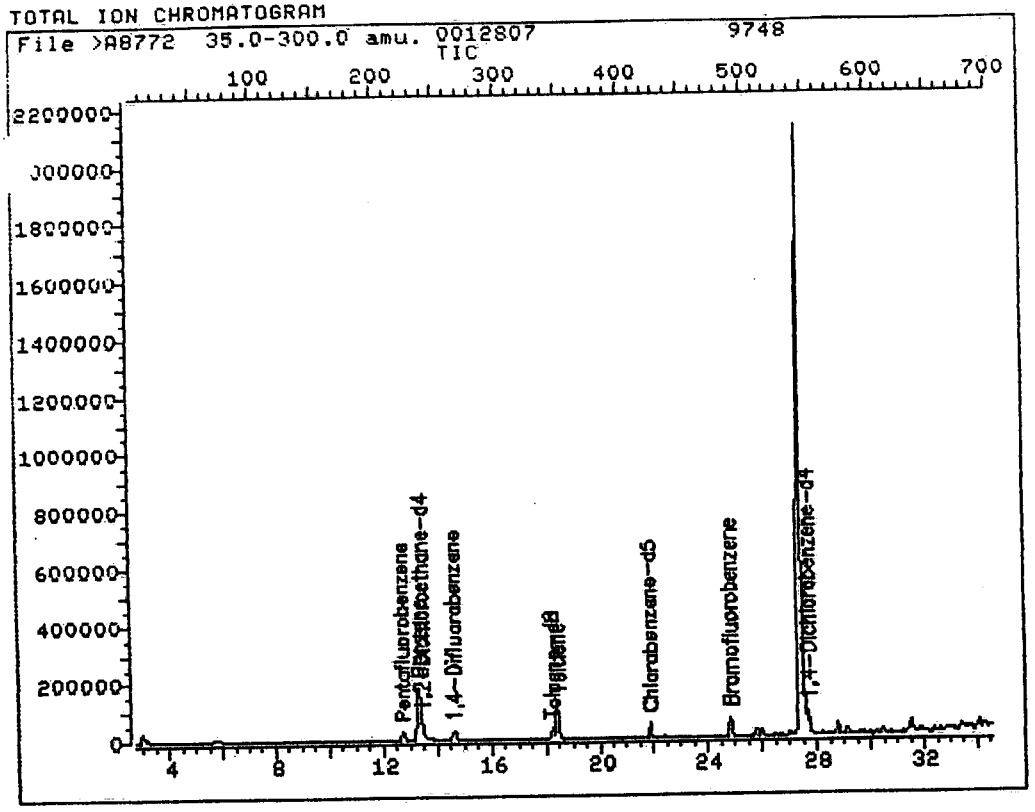
ID File: IDAS09::SC
Title: Accredited Labs ID file for 8260
Last Calibration: 001006 13:28

Last Qcal Time: <none>

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Pentafluorobenzene	12.69	220	106293	50.00	ug/l	100
24)	*1,4-Difluorobenzene	14.60	262	112487	50.00	ug/l	87
25)	1,2-Dichloroethane-d4	13.42	236	46375	37.46	ug/l	97
29)	Benzene	13.33	234	827401	431.13	ug/l	100
36)	Toluene-d8	18.23	342	95366	40.20	ug/l	96
37)	Toluene	18.42	346	325666	138.23	ug/l	95
42)	Bromofluorobenzene	24.82	487	74816	39.95	ug/l	75
43)	*Chlorobenzene-d5	21.87	422	91944	50.00	ug/l	100
55)	*1,4-Dichlorobenzene-d4	27.69	550	53012	50.00	ug/l	91

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >A8772::D1 Quant Output File: ^A8772::QT
Name: 0012807 Instrument ID: HP5970BA
Misc: 9748 ENVIROTACTICS S-5

Id File: IDAS09::SC
Title: Accredited Labs ID file for 8260
Last Calibration: 001006 13:28 Last Qcal Time: <none>

Operator ID: ROBERT
Quant Time : 001025 19:31
Injected at: 001025 18:56

Operator ID: ROBERT
Output File: ^A8790::QT
Data File: >A8790::D1
File: 0012807DL
Sec: 9748

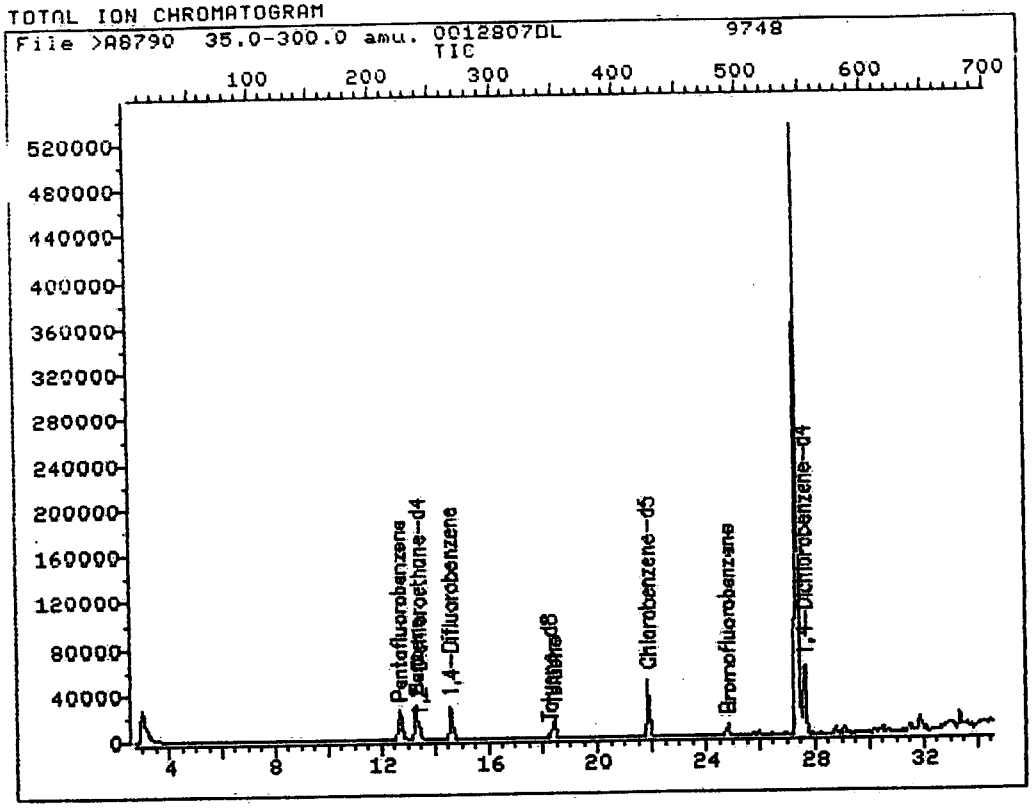
Quant Rev: 7 Quant Time: 001027 16:45
Injected at: 001026 15:40
Dilution Factor: 1.00000
Instrument ID: HP5970BA

ENVIROTACTICS S-5

ID File: IDAS09::SC
Title: Accredited Labs ID file for 8260
Last Calibration: 001006 13:28 Last Qcal Time: <none>

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Pentafluorobenzene	12.68	220	96057	50.00	ug/l	100
24)	*1,4-Difluorobenzene	14.59	262	102303	50.00	ug/l	88
25)	1,2-Dichloroethane-d4	13.41	236	6373	5.66	ug/l	97
29)	Benzene	13.32	234	127471	73.03	ug/l	100
36)	Toluene-d8	18.22	342	14149	6.56	ug/l	92
37)	Toluene	18.41	346	48908	22.83	ug/l	94
42)	Bromofluorobenzene	24.81	487	11471	6.74	ug/l	71
43)	*Chlorobenzene-d5	21.86	422	82587	50.00	ug/l	100
55)	*1,4-Dichlorobenzene-d4	27.63	549	52215	50.00	ug/l	94

* Compound is ISTD



Data File: >A8790::D1 Quant Output File: ^A8790::QT
Name: 0012807DL Instrument ID: HP5970BA
Misc: 9748 ENVIROTACTICS S-5

Id File: IDAS09::SC
Title: Accredited Labs ID file for 8260
Last Calibration: 001006 13:28 Last Qcal Time: <none>

Operator ID: ROBERT
Quant Time : 001027 16:45
Injected at: 001026 15:40

249

QUANT REPORT

Operator ID: ROBERT
Output File: ^A8773::QT
Data File: >A8773::D1
Name: 0012808
Misc: 9748

Quant Rev: 7
Quant Time: 001025 20:11
Injected at: 001025 19:36
Dilution Factor: 1.00000
Instrument ID: HP5970BA

ENVIROTACTICS S-6

ID File: IDAS09::SC
Title: Accredited Labs ID file for 8260
Last Calibration: 001006 13:28
Last Qcal Time: <none>

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Pentafluorobenzene	12.70	221	93452	50.00	ug/l	100
24)	*1,4-Difluorobenzene	14.61	263	96527	50.00	ug/l	85
25)	1,2-Dichloroethane-d4	13.43	237	41699	39.25	ug/l	96
29)	Benzene	13.29	234	448423	272.29	ug/l	100
30)	Trichloroethene	15.11	274	11002	11.61	ug/l	100
36)	Toluene-d8	18.24	343	92202	45.29	ug/l	91
37)	Toluene	18.38	346	1660416	821.31	ug/l	93
42)	Bromofluorobenzene	24.86	487	106580	66.32	ug/l	90
43)	*Chlorobenzene-d5	21.86	421	84820	50.00	ug/l	100
46)	Tetrachloroethene	19.68	373	15562	13.76	ug/l	80
48)	Ethylbenzene	22.18	428	32086M	11.57	ug/l	78
49)	Chlorobenzene	21.95	423	63772	36.11	ug/l	100
55)	*1,4-Dichlorobenzene-d4	27.68	549	44836	50.00	ug/l	89

* Compound is ISTD

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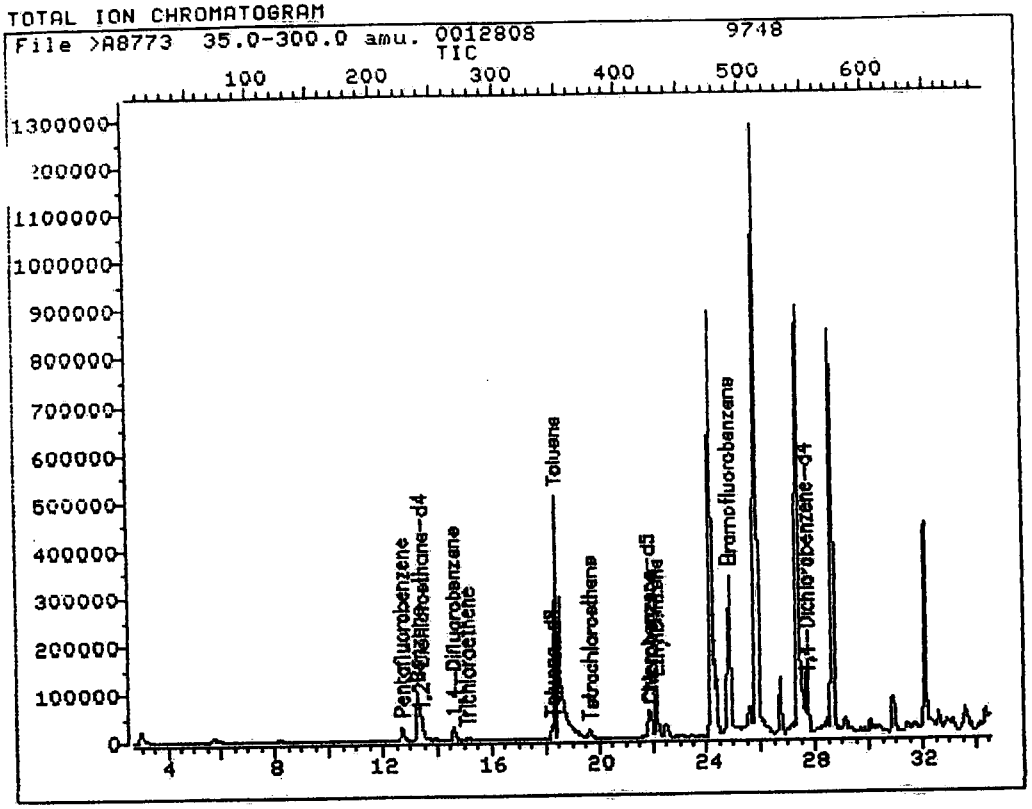
TOTAL ION CHROMATOGRAM



Data File: >A8773::D1 Quant Output File: ^A8773::QT
Name: 0012808 Instrument ID: HP5970BA
Misc: 9748 ENVIROTACTICS S-6

Id File: IDAS09::SC
Title: Accredited Labs ID file for 8260
Last Calibration: 001006 13:28 Last Qcal Time: <none>

Operator ID: ROBERT
Quant Time : 001025 20:11
Injected at: 001025 19:36

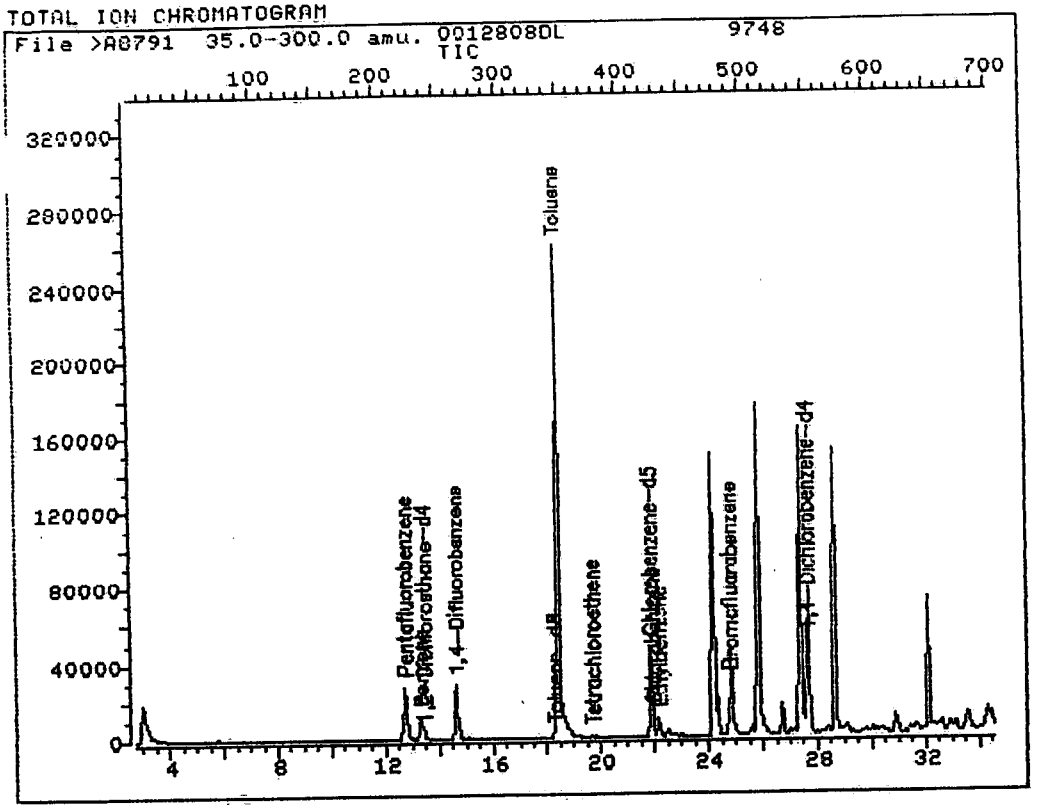
Operator ID: ROBERT
Input File: ^A8791::QT
Data File: >A8791::D1
Name: 0012808DL
Misc: 9748 ENVIROTACTICS

Quant Rev: 7 Quant Time: 001027 16:50
Injected at: 001026 16:20
Dilution Factor: 1.00000
Instrument ID: HP5970BA
S-6

ID File: IDAS09::SC
Title: Accredited Labs ID file for 8260
Last Calibration: 001006 13:28 Last Qcal Time: <none>

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Pentafluorobenzene	12.72	221	96378	50.00	ug/l	100
24)	*1,4-Difluorobenzene	14.63	263	100329	50.00	ug/l	81
25)	1,2-Dichloroethane-d4	13.45	237	4055M	3.67	ug/l	
29)	Benzene	13.31	234	47725	27.88	ug/l	100
36)	Toluene-d8	18.26	343	8849	4.18	ug/l	96
37)	Toluene	18.40	346	756625	360.07	ug/l	94
42)	Bromofluorobenzene	24.81	487	13774	8.25	ug/l	99
43)	*Chlorobenzene-d5	21.85	422	82603	50.00	ug/l	100
46)	Tetrachloroethene	19.67	374	1624	1.47	ug/l	93
48)	Ethylbenzene	22.17	429	4504M	1.67	ug/l	79
49)	Chlorobenzene	21.94	424	7384	4.29	ug/l	100
65)	*1,4-Dichlorobenzene-d4	27.62	549	52250	50.00	ug/l	98

* Compound is ISTD



Data File: >A8791::D1 Quant Output File: ^A8791::QT
Name: 0012808DL Instrument ID: HP5970BA
Misc: 9748 ENVIROTACTICS S-6

Id File: IDAS09::SC
Title: Accredited Labs ID file for 8260
Last Calibration: 001006 13:28 Last Qcal Time: <none>

Operator ID: ROBERT
Quant Time : 001027 16:50
Injected at: 001026 16:20

Operator ID: ROBERT
Output File: ^A8810::QT
Data File: >A8810::D1
Name: 0012808DL
Misc: 9748

Quant Rev: 7 Quant Time: 001027 14:23
Injected at: 001027 13:54
Dilution Factor: 1.00000
Instrument ID: HP5970BA

ENVIROTACTICS S-6

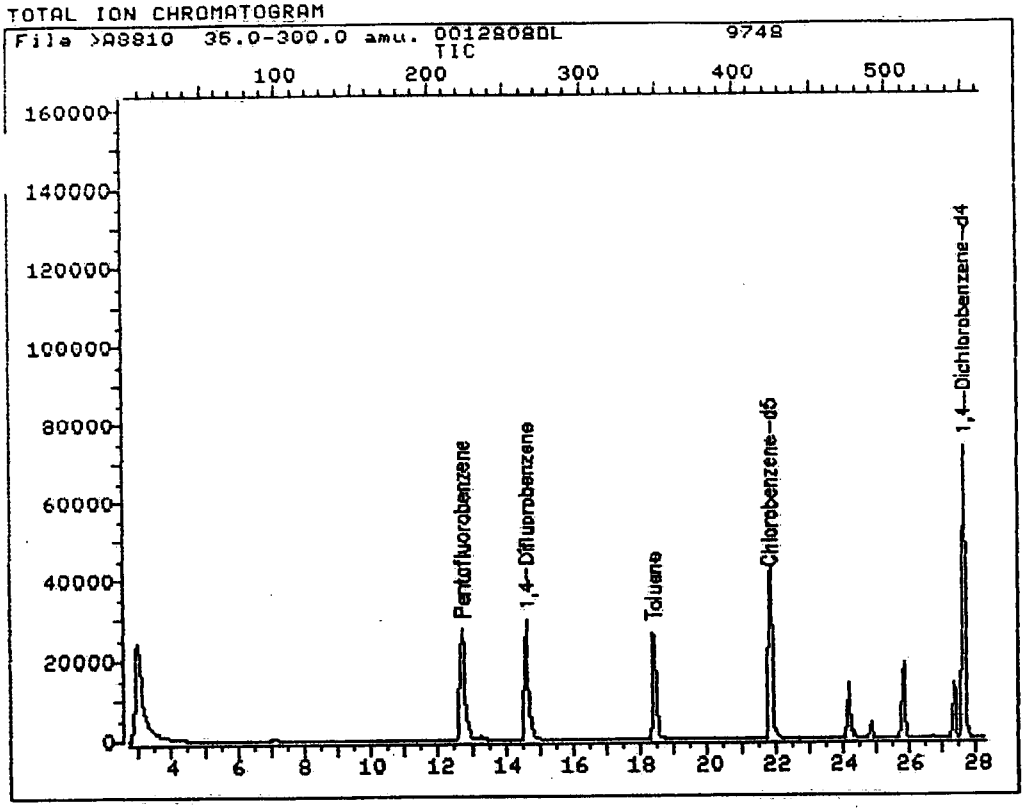
ID File: IDAS09::SC
Title: Accredited Labs ID file for 8260
Last Calibration: 001006 13:28

Last Qcal Time: <none>

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Pentafluorobenzene	12.71	221	97441	50.00	ug/l	100
24)	*1,4-Difluorobenzene	14.62	263	102916	50.00	ug/l	82
37)	Toluene	18.39	346	83388	38.69	ug/l	99
43)	*Chlorobenzene-d5	21.84	422	88767	50.00	ug/l	100
55)	*1,4-Dichlorobenzene-d4	27.66	550	56082	50.00	ug/l	92

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >A8810::D1 Quant Output File: ^A8810::QT
Name: 0012808DL Instrument ID: HP5970BA
Misc: 9748 ENVIROTACTICS S-6

Id File: IDAS09::SC
Title: Accredited Labs ID file for 8260
Last Calibration: 001006 13:28 Last Qcal Time: <none>

Operator ID: ROBERT
Quant Time : 001027 14:23
Injected at: 001027 13:54

Operator ID: ROBERT
Output File: ^A8774::QT
Data File: >A8774::D1
Name: 0012809
Misc: 9748

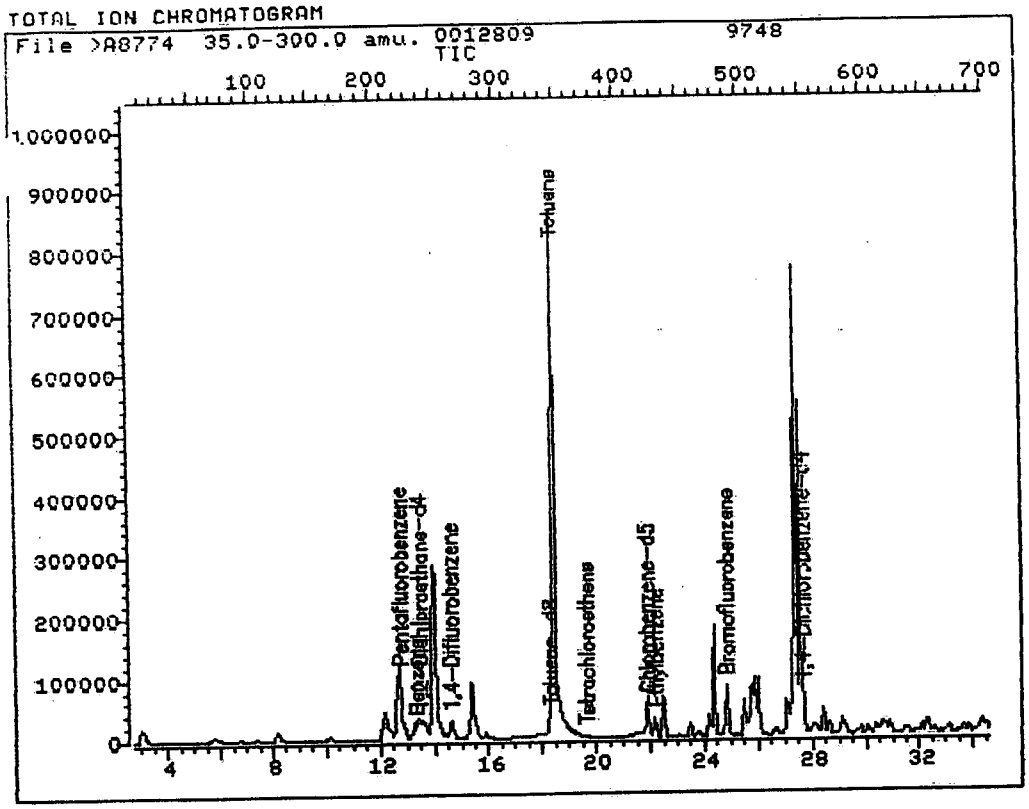
Quant Rev: 7 Quant Time: 001027 16:36
Injected at: 001025 20:16
Dilution Factor: 1.00000
Instrument ID: HP5970BA

ENVIROTACTICS S-7

ID File: IDAS09::SC
Title: Accredited Labs ID file for 8260
Last Calibration: 001006 13:28 Last Qcal Time: <none>

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Pentafluorobenzene	12.73	221	90579	50.00	ug/l	100
24)	*1,4-Difluorobenzene	14.59	262	94729	50.00	ug/l	89
25)	1,2-Dichloroethane-d4	13.46	237	42695	40.95	ug/l	95
29)	Benzene	13.32	234	3543	2.19	ug/l	100
36)	Toluene-d8	18.27	343	82471	41.28	ug/l	93
37)	Toluene	18.41	346	2392117M	1205.69	ug/l	
42)	Bromofluorobenzene	24.82	487	73158	46.39	ug/l	75
43)	*Chlorobenzene-d5	21.87	422	80979	50.00	ug/l	100
46)	Tetrachloroethene	19.64	373	3303	3.06	ug/l	83
48)	Ethylbenzene	22.18	429	64541M	24.38	ug/l	80
55)	*1,4-Dichlorobenzene-d4	27.64	549	47098	50.00	ug/l	91

* Compound is ISTD



Data File: >A8774::D1
Name: 0012809
Misc: 9748

Quant Output File: ^A8774::QT
Instrument ID: HP5970BA

ENVIROTACTICS S-7

Id File: IDAS09::SC
Title: Accredited Labs ID file for 8260
Last Calibration: 001006 13:28 Last Qcal Time: <none>

Operator ID: ROBERT
Quant Time : 001027 16:36
Injected at: 001025 20:16

QUANT REPORT

Operator ID: ROBERT
Output File: ^A8792::QT
Data File: >A8792::D1
Name: 0012809DL
Misc: 9748

Quant Rev: 7
Quant Time: 001027 16:51
Injected at: 001026 17:00
Dilution Factor: 1.00000
Instrument ID: HP5970BA

ENVIROTACTICS S-7

ID File: IDAS09::SC
Title: Accredited Labs ID file for 8260
Last Calibration: 001006 13:28
Last Qcal Time: <none>

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Pentafluorobenzene	12.71	221	93868	50.00	ug/l	100
24)	*1,4-Difluorobenzene	14.62	263	98631	50.00	ug/l	82
25)	1,2-Dichloroethane-d4	13.44	237	6482	5.97	ug/l	96
36)	Toluene-d8	18.26	343	12910	6.21	ug/l	96
37)	Toluene	18.39	346	599126	290.03	ug/l	93
42)	Bromofluorobenzene	24.80	487	12319	7.50	ug/l	84
43)	*Chlorobenzene-d5	21.85	422	86631	50.00	ug/l	100
48)	Ethylbenzene	22.16	429	11818M	4.17	ug/l	79
55)	*1,4-Dichlorobenzene-d4	27.66	550	52083	50.00	ug/l	91

* Compound is ISTD

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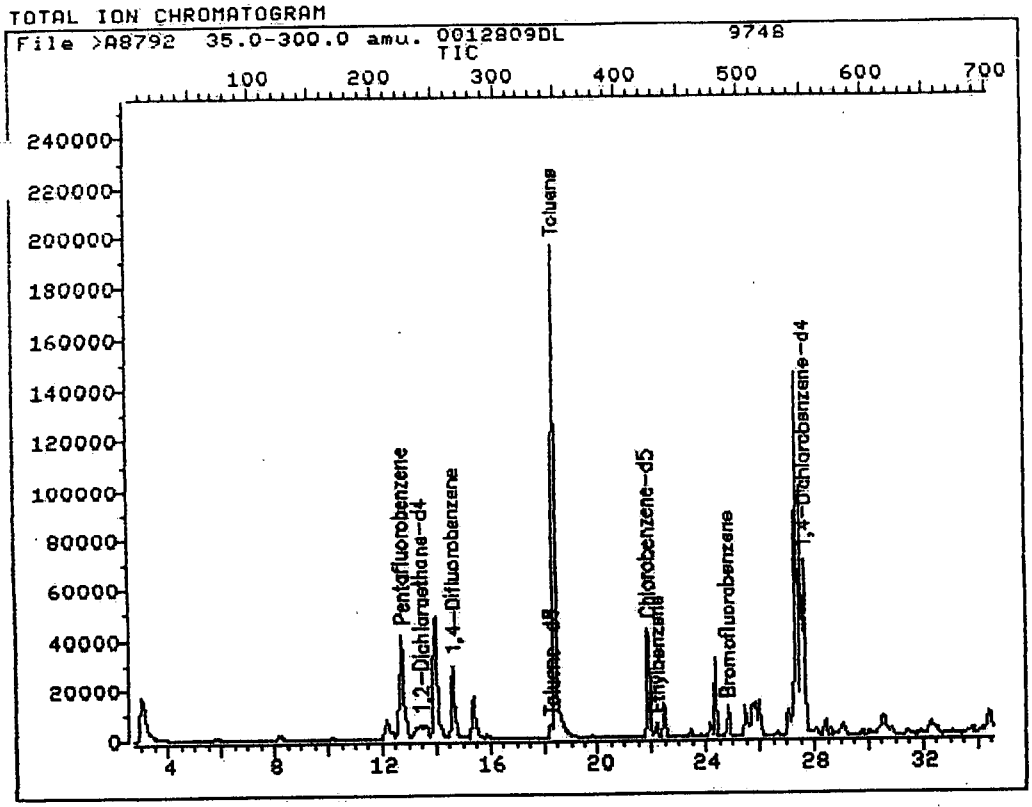
TOTAL ION CHROMATOGRAM



Data File: >A8792::D1 Quant Output File: ^A8792::QT
Name: 0012809DL Instrument ID: HP5970BA
Misc: 9748 ENVIROTACTICS S-7

Id File: IDAS09::SC
Title: Accredited Labs ID file for 8260
Last Calibration: 001006 13:28 Last Qcal Time: <none>

Operator ID: ROBERT
Quant Time : 001027 16:51
Injected at: 001026 17:00

QUANT REPORT

Operator ID: ROBERT
Output File: ^A8811::QT
Data File: >A8811::D1
Name: 0012809DL
Misc: 9748

Quant Rev: 7 Quant Time: 001027 14:56
Injected at: 001027 14:26
Dilution Factor: 1.00000
Instrument ID: HP5970BA

ENVIROTACTICS S-7

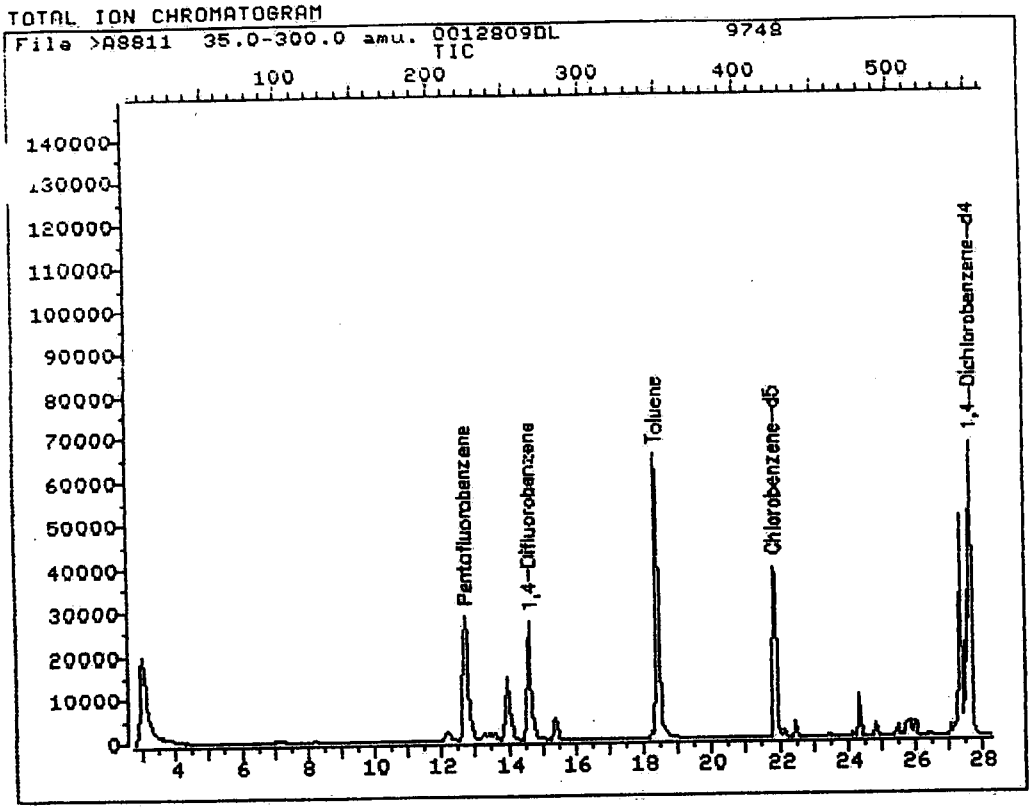
ID File: IDAS09::SC
Title: Accredited Labs ID file for 8260
Last Calibration: 001006 13:28

Last Qcal Time: <none>

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Pentafluorobenzene	12.72	221	84319	50.00	ug/l	100
24)	*1,4-Difluorobenzene	14.63	263	92046	50.00	ug/l	82
37)	Toluene	18.40	346	193279	100.26	ug/l	98
43)	*Chlorobenzene-d5	21.85	422	77101	50.00	ug/l	100
55)	*1,4-Dichlorobenzene-d4	27.67	550	50313	50.00	ug/l	90

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >A8811::D1 Quant Output File: ^A8811::QT
Name: 0012809DL Instrument ID: HP5970BA
Misc: 9748 ENVIROTACTICS S-7

Id File: IDAS09::SC
Title: Accredited Labs ID file for 8260
Last Calibration: 001006 13:28 Last Qcal Time: <none>

Operator ID: ROBERT
Quant Time : 001027 14:56
Injected at: 001027 14:26

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QUANT REPORT

Operator ID: ROBERT
Output File: ^A8775::QT
Data File: >A8775::D1
Name: 0012810
Misc: 9748

Quant Rev: 7
Quant Time: 001025 21:31
Injected at: 001025 20:55
Dilution Factor: 1.00000
Instrument ID: HP5970BA

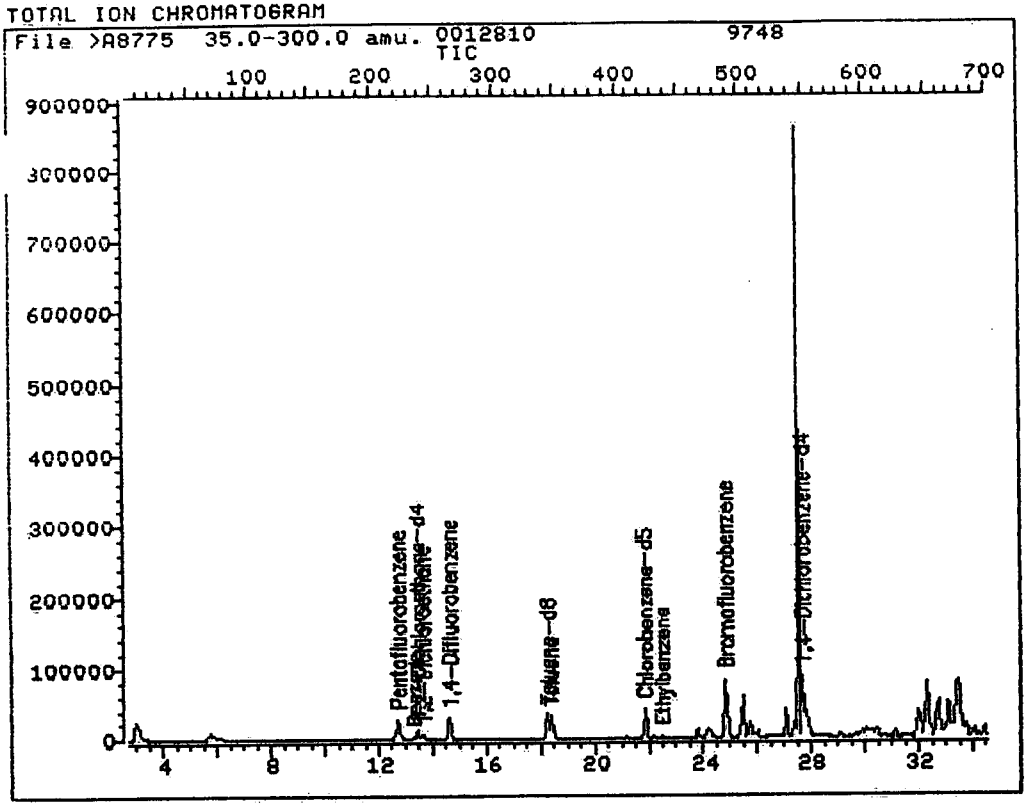
ENVIROTACTICS S-8

ID File: IDAS09::SC
Title: Accredited Labs ID file for 8260
Last Calibration: 001006 13:28
Last Qcal Time: <none>

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Pentafluorobenzene	12.71	221	100633	50.00	ug/l	100
24)	*1,4-Difluorobenzene	14.62	263	102042M	50.00	ug/l	81
25)	1,2-Dichloroethane-d4	13.44	237	44312	39.46	ug/l	96
28)	1,2-Dichloroethane	13.62	241	26287	20.79	ug/l	95
29)	Benzene	13.31	234	9962	5.72	ug/l	100
36)	Toluene-d8	18.26	343	89500	41.59	ug/l	90
37)	Toluene	18.39	346	96946	45.36	ug/l	97
42)	Bromofluorobenzene	24.84	488	80231	47.23	ug/l	75
43)	*Chlorobenzene-d5	21.84	422	87669	50.00	ug/l	100
48)	Ethylbenzene	22.48	436	6720	2.34	ug/l	81
55)	*1,4-Dichlorobenzene-d4	27.68	549	33400	50.00	ug/l	86

M Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >A8775::D1 Quant Output File: ^A8775::QT
Name: 0012810 Instrument ID: HP5970BA
Misc: 9748 ENVIROTACTICS S-8

Id File: IDAS09::SC
Title: Accredited Labs ID file for 8260
Last Calibration: 001006 13:28 Last Qcal Time: <none>

Operator ID: ROBERT
Quant Time : 001025 21:31
Injected at: 001025 20:55

QUANT REPORT

Operator ID: ROBERT
Output File: ^A8763::QT
Data File: >A8763::D1
Name: 0012811
Misc: 9748

Quant Rev: 7

Quant Time: 001025 13:47
Injected at: 001025 13:11
Dilution Factor: 1.00000
Instrument ID: HP5970BA
TB

ENVIROTACTICS

ID File: IDAS09::SC
Title: Accredited Labs ID file for 8260
Last Calibration: 001006 13:28

Last Qcal Time: <none>

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Pentafluorobenzene	12.72	221	116460	50.00	ug/l	100
24)	*1,4-Difluorobenzene	14.62	263	122050	50.00	ug/l	83
25)	1,2-Dichloroethane-d4	13.44	237	52956	39.42	ug/l	98
36)	Toluene-d8	18.26	343	110495	42.93	ug/l	96
42)	Bromofluorobenzene	24.84	488	86273	42.46	ug/l	76
43)	*Chlorobenzene-d5	21.89	423	97790	50.00	ug/l	100
55)	*1,4-Dichlorobenzene-d4	27.66	550	64516	50.00	ug/l	93

* Compound is ISTD

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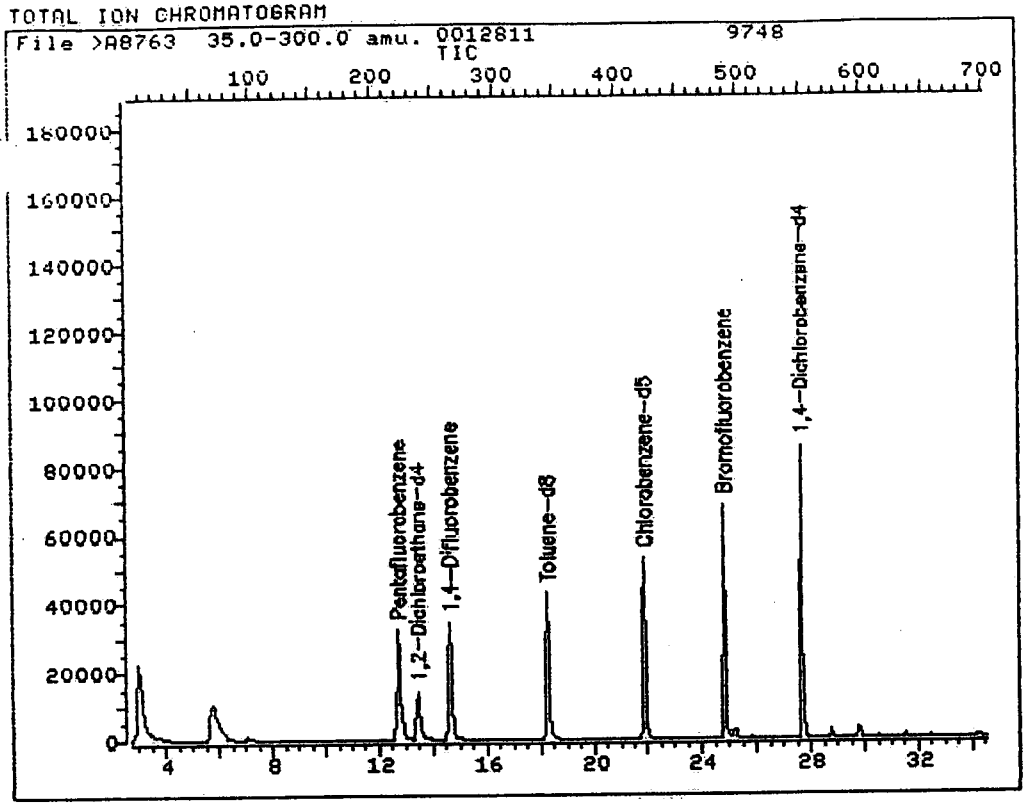
TOTAL ION CHROMATOGRAM



Data File: >A8763::D1 Quant Output File: ^A8763::QT
Name: 0012811 Instrument ID: HP5970BA
Misc: 9748 ENVIROTACTICS TB

Id File: IDAS09::SC
Title: Accredited Labs ID file for 8260
Last Calibration: 001006 13:28 Last Qcal Time: <none>

Operator ID: ROBERT
Quant Time : 001025 13:47
Injected at: 001025 13:11

QUANT REPORT Page 1

Operator ID: DANIEL Quant Rev: / Quant Time: 001024 12:53
Output File: ^B1226::ME Injected at: 001024 12:17
Data File: >B1226::F7 Dilution Factor: 1.00000
Name: SBLK14 Instrument ID: HP5970BB
Misc: 10/17/00 BTI # 3

ID File: IDB06::ME
Title: Accredited Laboratories Base/Neutral/Acid Identity File
Last Calibration: 001007 09:23 Last Qcal Time: 001020 09:08

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	10.22	404	48687	40.00	ug/l	96
4)	2-Fluorophenol	7.37	264	245855	145.53	ug/l	100
6)	Phenol-d5	9.73	380	415730	164.30	ug/l	94
19)	*d8-Naphthalene	13.42	561	217371	40.00	ug/l	92
20)	Nitrobenzene-d5	11.71	477	193897	72.30	ug/l	92
34)	*d10-Acenaphthene	17.94	783	133877	40.00	ug/l	97
39)	2-Fluorobiphenyl	16.27	701	225075	61.30	ug/l	93
54)	2,4,6-Tribromophenol	20.00	884	89139	128.95	ug/l	97
55)	*d10-Phenanthrene	21.69	967	238671	40.00	ug/l	100
68)	*d12-Chrysene	28.50	1301	244758	40.00	ug/l	100
71)	Terphenyl-d14	25.87	1172	316045	54.36	ug/l	95
7)	*d12-Perylene	31.90	1468	250423	40.00	ug/l	100

* Compound is ISTD

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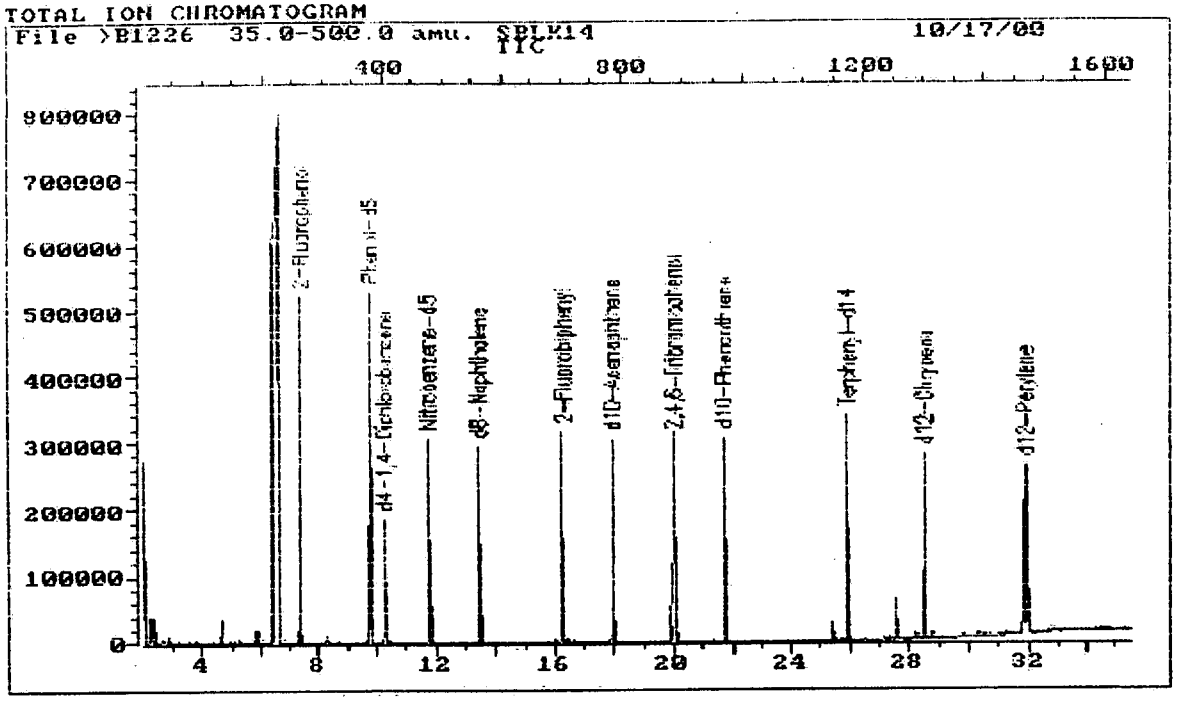
TOTAL ION CHROMATOGRAM



Data File: >B1226::F2 Quant Output File: ^B1226::ME
Name: SBLK14 Instrument ID: HP5970BB
Misc: 10/17/00 BTL# 3

Id File: IDB06::ME
Title: Accredited Laboratories Base/Neutral/Acid Identity File
Last Calibration: 001007 09:23 Last Qcal Time: 001020 09:08

Operator ID: DANIEL
Quant Time : 001024 12:53
Injected at: 001024 12:17

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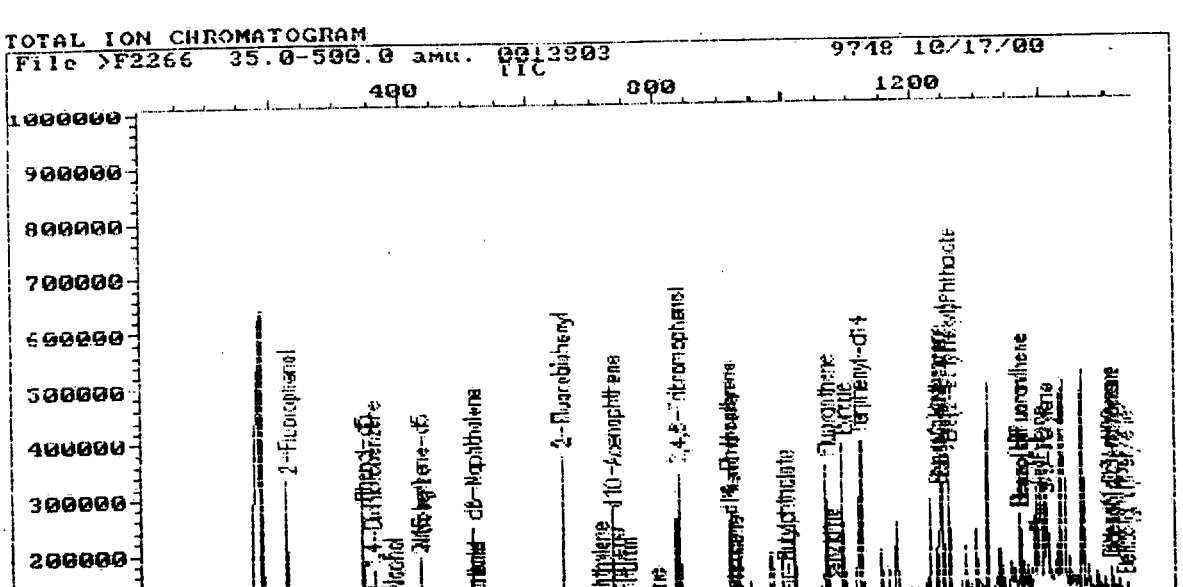
Operator ID: DANIEL
Input File: ^F2266::ME
Data File: >F2266::E2
Name: 0012803
Misc: 9748 10/17/00 ENVIROTACTICS

Quant Rev: 7 Quant Time: 001023 16:45
Injected at: 001023 16:11
Dilution Factor: 1.00000
Instrument ID: AHP5970B
S-1 BTL# 5

ID File: IDF03::ME
Title: Accredited Laboratories Base/Neutral/Acid Identity File
Last Calibration: 001020 14:02 Last Qcal Time: <none>

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	9.25	356	47967	40.00	ug/l	95
4)	2-Fluorophenol	6.52	222	232192	146.18	ug/l	100
6)	Phenol-d5	8.95	341	334971	168.85	ug/l	86
12)	Benzyl Alcohol	9.88	387	2977	2.33	ug/l	88
16)	3&4-Methylphenol	10.76	430	4271	2.16	ug/l	88
19)	*d8-Naphthalene	12.43	512	207582	40.00	ug/l	96
20)	Nitrobenzene-d5	10.78	431	149200	65.83	ug/l	85
25)	Benzoic Acid	12.50	515	10641	9.90	ug/l	90
29)	Naphthalene	12.47	514	7354	1.43	ug/l	79
34)	*d10-Acenaphthene	16.89	730	138176	40.00	ug/l	98
39)	2-Fluorobiphenyl	15.27	651	272672	76.43	ug/l	96
42)	Acenaphthylene	16.48	710	12558	2.41	ug/l	98
44)	Acenaphthene	16.97	734	10074	2.86	ug/l	90
47)	Dibenzofuran	17.38	754	8766	1.71	ug/l	99
52)	Fluorene	18.23	796	12967	3.15	ug/l	98
54)	2,4,6-Tribromophenol	18.97	832	117702	154.83	ug/l	98
55)	*d10-Phenanthrene	20.59	911	263050	40.00	ug/l	100
62)	Phenanthrene	20.65	914	245137	37.13	ug/l	99
63)	Anthracene	20.75	919	57603	8.80	ug/l	82
65)	Di-n-Butylphthalate	22.37	998	24171	2.69	ug/l	94
66)	Fluoranthene	23.69	1062	409966	52.26	ug/l	100
67)	*d12-Chrysene	27.35	1240	251033	40.00	ug/l	100
68)	Benzidine	23.85	1070	54661	21.12	ug/l	91
69)	Pyrene	24.24	1089	381216	46.95	ug/l	82
70)	Terphenyl-d14	24.76	1114	381737	72.87	ug/l	87
73)	Benzo(a)Anthracene	27.31	1238	206110	25.15	ug/l	89
74)	Bis(2-Ethylhexyl)Phthalate	27.66	1255	170765	28.20	ug/l	85
75)	Chrysene	27.41	1243	202852	28.57	ug/l	85
76)	*d12-Perylene	30.73	1404	167872	40.00	ug/l	100
78)	Benzo(b)fluoranthene	29.91	1364	150493M	28.55	ug/l	97
79)	Benzo(k)Fluoranthene	29.93	1365	114651M	26.30	ug/l	86
80)	Benzo(a)Pyrene	30.49	1392	89818	18.96	ug/l	99
81)	Indeno(1,2,3-cd)Pyrene	32.84	1506	43012	8.38	ug/l	82
82)	Dibenzo(a,h)Anthracene	32.84	1506	18852	4.51	ug/l	87
83)	Benzo(g,h,i)Perylene	33.29	1528	32520	7.06	ug/l	96

* Compound is ISTD



Data File: >F2266::E2 Quant Output File: ^F2266::ME
Name: 0012803 Instrument ID: AHP5970B
Misc: 9748 10/17/00 ENVIROTACTICS S-1 BTL# 5

Id File: IDF03::ME
Title: Accredited Laboratories Base/Neutral/Acid Identity File
Last Calibration: 001020 14:02 Last Qcal Time: <none>

Operator ID: DANIEL
Quant Time : 001023 16:45
Injected at: 001023 16:11

[redacted]rator ID: DANIEL
[redacted]put File: ^F2267::ME
Data File: >F2267::F2
Name: 0012804
Misc: 9748 10/17/00 ENVIROTACTICS

Quant Rev: 7 Quant Time: 001023 17:49
Injected at: 001023 16:54
Dilution Factor: 1.00000
Instrument ID: AHP5970B
S-2 BTI # 6

ID File: IDF03::ME
Title: Accredited Laboratories Base/Neutral/Acid Identity File
Last Calibration: 001020 14:02 Last Qcal Time: <none>

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	9.25	356	47401	40.00	ug/l	96
4)	2-Fluorophenol	6.54	223	386315	246.11	ug/l	100
6)	Phenol-d5	8.99	343	583333	297.55	ug/l	92
16)	3&4-Methylphenol	10.80	432	4020	2.06	ug/l	95
19)	*d8-Naphthalene	12.44	512	202069	40.00	ug/l	96
20)	Nitrobenzene-d5	10.78	431	153795	69.71	ug/l	84
29)	Naphthalene	12.50	515	210733	42.08	ug/l	78
33)	2-Methylnaphthalene	14.23	600	109918	24.93	ug/l	89
34)	*d10-Acenaphthene	16.89	730	139543	40.00	ug/l	97
39)	2-Fluorobiphenyl	15.28	651	273719	75.98	ug/l	96
41)	Dimethyl Phthalate	16.49	710	7548	1.74	ug/l	94
42)	Acenaphthylene	16.51	711	57617	10.94	ug/l	90
[redacted])	Acenaphthene	17.00	735	363189	102.12	ug/l	91
[redacted])	Dibenzofuran	17.41	755	401869	77.47	ug/l	98
52)	Fluorene	18.29	798	564603	135.69	ug/l	98
54)	2,4,6-Tribromophenol	19.01	833	207183	269.88	ug/l	98
55)	*d10-Phenanthrene	20.63	912	182103	40.00	ug/l	100
62)	Phenanthrene	20.78	919	2634094	576.34	ug/l	99
63)	Anthracene	20.92	926	915994M	202.03	ug/l	84
65)	Di-n-Butylphthalate	22.44	1000	149869	24.13	ug/l	92
66)	Fluoranthene	23.86	1069	2820448M	519.35	ug/l	100
67)	*d12-Chrysene	27.54	1247	85234	40.00	ug/l	100
69)	Pyrene	24.40	1095	2036975	738.82	ug/l	82
70)	Terphenyl-d14	24.85	1117	288122	161.99	ug/l	88
71)	Butylbenzylphthalate	26.19	1182	54895	35.30	ug/l	89
73)	Benzo(a)Anthracene	27.46	1243	1198028M	430.56	ug/l	88
74)	Bis(2-Ethylhexyl)Phthalate	27.81	1260	2351895M	1143.72	ug/l	89
75)	Chrysene	27.60	1250	703811	291.91	ug/l	86
76)	*d12-Perylene	30.87	1408	41287	40.00	ug/l	100
77)	Di-n-octyl phthalate	29.28	1331	1762310	1163.34	ug/l	87
78)	Benzo(b)fluoranthene	30.10	1371	388664M	299.83	ug/l	96
79)	Benzo(k)Fluoranthene	30.12	1372	334927M	312.43	ug/l	86
80)	Benzo(a)Pyrene	30.77	1403	309168	265.30	ug/l	93
81)	Indeno(1,2,3-cd)Pyrene	32.90	1506	103717	82.16	ug/l	81
82)	Dibenzo(a,h)Anthracene	32.90	1506	47376M	46.08	ug/l	87
83)	Benzo(g,h,i)Perylene	33.35	1528	76936	67.94	ug/l	96

* Compound is ISTD

[redacted]

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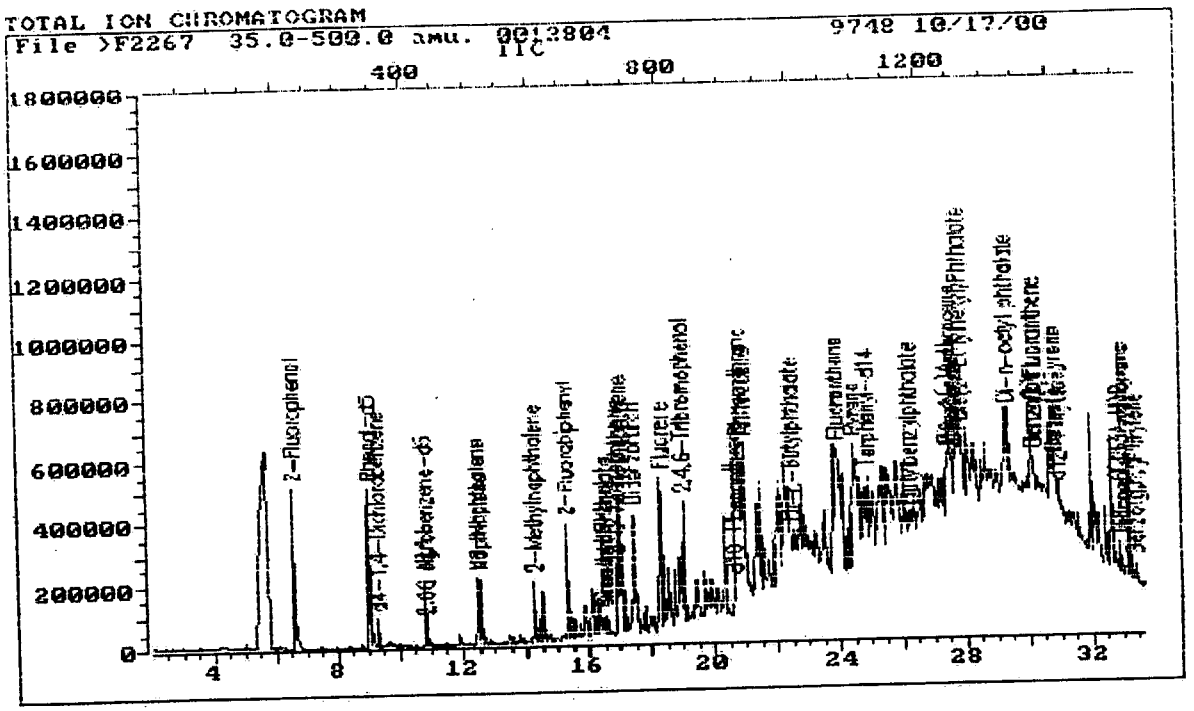


Data File: >F2267::E2 Quant Output File: ^F2267::ME
Name: 0012804 Instrument ID: AHP5970B
Misc: 9748 10/17/00 ENVIROTACTICS S-2 BTL# 6

Id File: IDF03::ME
Title: Accredited Laboratories Base/Neutral/Acid Identity File
Last Calibration: 001020 14:02 Last Qcal Time: <none>

Operator ID: DANIEL
Quant Time : 001023 17:29
Injected at: 001023 16:54

rator ID: DANIEL
put File: ^F2288::MF
ta File: >F2288::F2
Name: 0012804DL
Misc: 9748 10/17/00 ENVIROTACTICS

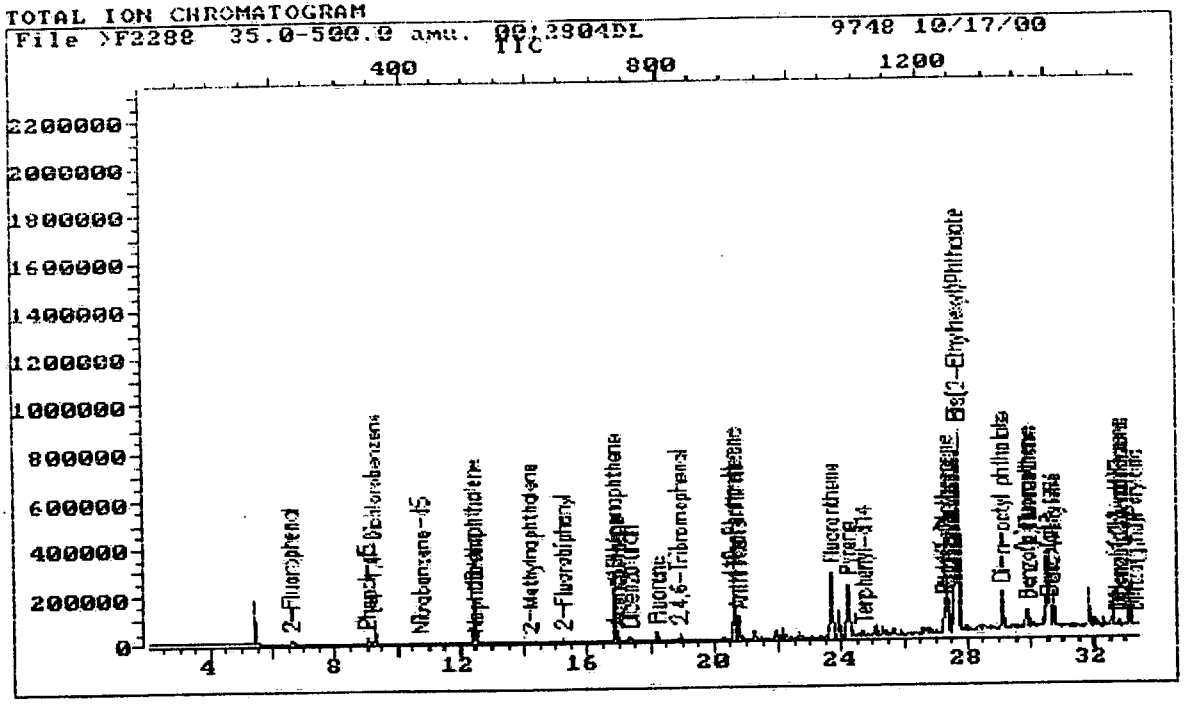
Quant Rev: 7 Quant Time: 001024 19:04
Injected at: 001024 18:29
Dilution Factor: 1.00000
Instrument ID: AHF5970B
S-2 BTI #12

ID File: IDF03::ME
Title: Accredited Laboratories Base/Neutral/Acid Identity File
Last Calibration: 001020 14:02 Last Qcal Time: <none>

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	9.23	355	37093	40.00	ug/l	95
4)	2-Fluorophenol	6.54	223	17329	14.11	ug/l	100
6)	Phenol-d5	9.00	344	26734	17.43	ug/l	91
19)	*d8-Naphthalene	12.41	511	157560	40.00	ug/l	96
20)	Nitrobenzene-d5	10.76	430	4830	2.81	ug/l	91
29)	Naphthalene	12.45	513	7976	2.04	ug/l	76
33)	2-Methylnaphthalene	14.20	599	3646	1.06	ug/l	91
34)	*d10-Acenaphthene	16.87	730	110470	40.00	ug/l	97
39)	2-Fluorobiphenyl	15.24	650	12011	4.21	ug/l	94
44)	Acenaphthene	16.93	733	16495	5.86	ug/l	88
47)	Dibenzofuran	17.34	753	17833	4.34	ug/l	96
52)	Fluorene	18.20	795	29294	8.89	ug/l	99
4)	2,4,6-Tribromophenol	18.91	830	8598	14.15	ug/l	96
5)	*d10-Phenanthrene	20.56	911	212682	40.00	ug/l	100
62)	Phenanthrene	20.62	914	260054	48.72	ug/l	99
63)	Anthracene	20.73	919	87983	16.62	ug/l	81
66)	Fluoranthene	23.64	1062	327279	51.60	ug/l	100
67)	*d12-Chrysene	27.28	1240	209688	40.00	ug/l	100
69)	Pyrene	24.18	1088	263348	38.83	ug/l	79
70)	Terphenyl-d14	24.67	1112	18277	4.18	ug/l	85
73)	Benzo(a)Anthracene	27.24	1238	134332	19.62	ug/l	90
74)	Bis(2-Ethylhexyl)Phthalate	27.65	1258	797251M	157.59	ug/l	87
75)	Chrysene	27.35	1243	112821	19.02	ug/l	85
76)	*d12-Perylene	30.67	1405	150508	40.00	ug/l	100
77)	Di-n-octyl phthalate	29.05	1326	297781	53.92	ug/l	87
78)	Benzo(b)fluoranthene	29.85	1365	104794M	22.18	ug/l	97
79)	Benzo(k)Fluoranthene	29.85	1365	48713M	12.47	ug/l	86
80)	Benzo(a)Pyrene	30.52	1398	69191	16.29	ug/l	93
81)	Indeno(1,2,3-cd)Pyrene	32.76	1507	26456	5.75	ug/l	80
82)	Dibenzo(a,h)Anthracene	32.76	1507	13946	3.72	ug/l	84
83)	Benzo(g,h,i)Perylene	33.23	1530	19986	4.84	ug/l	98

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >F2288::E2 Quant Output File: ^F2288::ME
Name: 0012804DL Instrument ID: AHP5970B
Misc: 9748 10/17/00 ENVIROTACTICS S-2 BTL#12

Id File: IDF03::ME
Title: Accredited Laboratories Base/Neutral/Acid Identity File
Last Calibration: 001020 14:02 Last Qcal Time: <none>

Operator ID: DANIEL
Quant Time : 001024 19:04
Injected at: 001024 18:29

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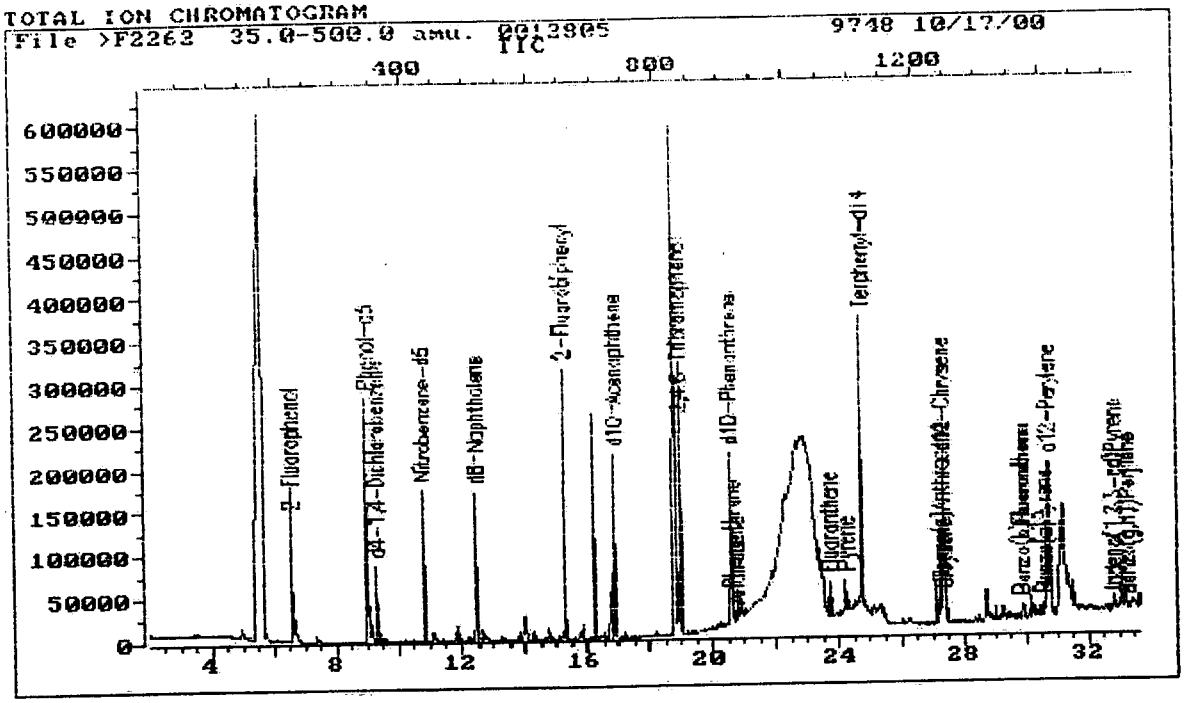
Operator ID: DANIEL
Input File: ^F2262::ME
Data File: >F2262::EZ
Name: 0012805
Misc: 9748 10/17/00 ENVIROTACTICS

Quant Rev: 7 Quant Time: 001023 15:51
Injected at: 001023 13:16
Dilution Factor: 1.00000
Instrument ID: AHP5970B
S-3 BTI # 1

ID File: IDF03::ME
Title: Accredited Laboratories Base/Neutral/Acid Identity File
Last Calibration: 001070 14:02 Last Qcal Time: <none>

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	9.25	356	36039	40.00	ug/l	95
4)	2-Fluorophenol	6.50	221	183044	153.38	ug/l	100
6)	Phenol-d5	8.95	341	260943	175.07	ug/l	91
19)	*d8-Naphthalene	12.43	512	156935	40.00	ug/l	93
20)	Nitrobenzene-d5	10.76	430	110268	64.36	ug/l	92
34)	*d10-Acenaphthene	16.88	730	106990	40.00	ug/l	97
39)	2-Fluorobiphenyl	15.27	651	219733	79.55	ug/l	96
54)	2,4,6-Tribromophenol	18.96	832	101161	171.86	ug/l	98
55)	*d10-Phenanthrene	20.57	911	204303	40.00	ug/l	100
62)	Phenanthrene	20.64	914	25953	5.06	ug/l	98
63)	Anthracene	20.74	919	5739	1.13	ug/l	80
66)	Fluoranthene	23.68	1063	42847	7.03	ug/l	100
[illegible])	*d12-Chrysene	27.30	1240	219881	40.00	ug/l	100
[illegible])	Pyrene	24.21	1089	37983	5.34	ug/l	81
70)	Terphenyl-d14	24.74	1115	324810	70.79	ug/l	88
73)	Benzo(a)Anthracene	27.26	1238	22182	3.09	ug/l	91
75)	Chrysene	27.36	1243	23730	3.82	ug/l	86
76)	*d12-Perylene	30.67	1405	215205	40.00	ug/l	100
78)	Benzo(b)fluoranthene	29.84	1364	15708M	2.32	ug/l	98
79)	Benzo(k)Fluoranthene	29.84	1364	17231M	3.08	ug/l	87
80)	Benzo(a)Pyrene	30.53	1398	16462	2.71	ug/l	96
81)	Indeno(1,2,3-cd)Pyrene	32.78	1508	9766	1.48	ug/l	89
83)	Benzo(g,h,i)Perylene	33.23	1530	8332	1.41	ug/l	98

* Compound is ISTD



Data File: >F2262::E2 Quant Output File: ^F2262::ME
Name: 0012805 Instrument ID: AHP5970B
Misc: 9748 10/17/00 ENVIROTACTICS S-3 BTL# 1

Id File: IDF03::ME
Title: Accredited Laboratories Base/Neutral/Acid Identity File
Last Calibration: 001020 14:02 Last Qcal Time: <none>

Operator ID: DANIEL
Quant Time : 001023 13:51
Injected at: 001023 13:16

rator ID: DANIEL
put File: ^F2263::MF
ta File: >F2263::EZ
Name: 0012806
Misc: 9748 10/17/00 ENVIROTACTICS

Quant Rev: 7 Quant Time: 001023 14:55
Injected at: 001023 14:00
Dilution Factor: 1.00000
Instrument ID: AHP5970B
S-4 BTI # 2

ID File: IDF03::ME
Title: Accredited Laboratories Base/Neutral/Acid Identity File
Last Calibration: 001020 14:02 Last Qcal Time: <none>

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	9.25	355	34137	40.00	ug/l	96
4)	2-Fluorophenol	6.52	221	158817	140.49	ug/l	100
6)	Phenol-d5	8.94	340	262861	186.18	ug/l	89
19)	*d8-Naphthalene	12.43	511	153944	40.00	ug/l	96
20)	Nitrobenzene-d5	10.76	429	103895	61.81	ug/l	91
34)	*d10-Acenaphthene	16.88	729	109376	40.00	ug/l	97
39)	2-Fluorobiphenyl	15.27	650	216070	76.52	ug/l	95
54)	2,4,6-Tribromophenol	18.96	831	100081	166.32	ug/l	99
55)	*d10-Phenanthrene	20.58	910	172191	40.00	ug/l	100
62)	Phenanthrene	20.64	913	19411	4.49	ug/l	97
63)	Anthracene	20.76	919	7483	1.75	ug/l	94
66)	Fluoranthene	23.72	1063	24963	4.86	ug/l	100
67)	*d12-Chrysene	27.33	1239	209439	40.00	ug/l	100
69)	Pyrene	24.23	1088	22140	3.27	ug/l	77
70)	Terphenyl-d14	24.77	1114	323965	74.12	ug/l	89
73)	Benzo(a)Anthracene	27.27	1236	10209M	1.49	ug/l	87
75)	Chrysene	27.38	1241	11615	1.96	ug/l	86
76)	*d12-Perylene	30.71	1403	188760	40.00	ug/l	100
78)	Benzo(b)fluoranthene	29.87	1362	9382M	1.58	ug/l	75
79)	Benzo(k)Fluoranthene	29.87	1362	10137M	2.07	ug/l	86
80)	Benzo(a)Pyrene	30.57	1396	7886	1.48	ug/l	63
81)	Indeno(1,2,3-cd)Pyrene	32.81	1505	6109	1.06	ug/l	96

* Compound is ISTD

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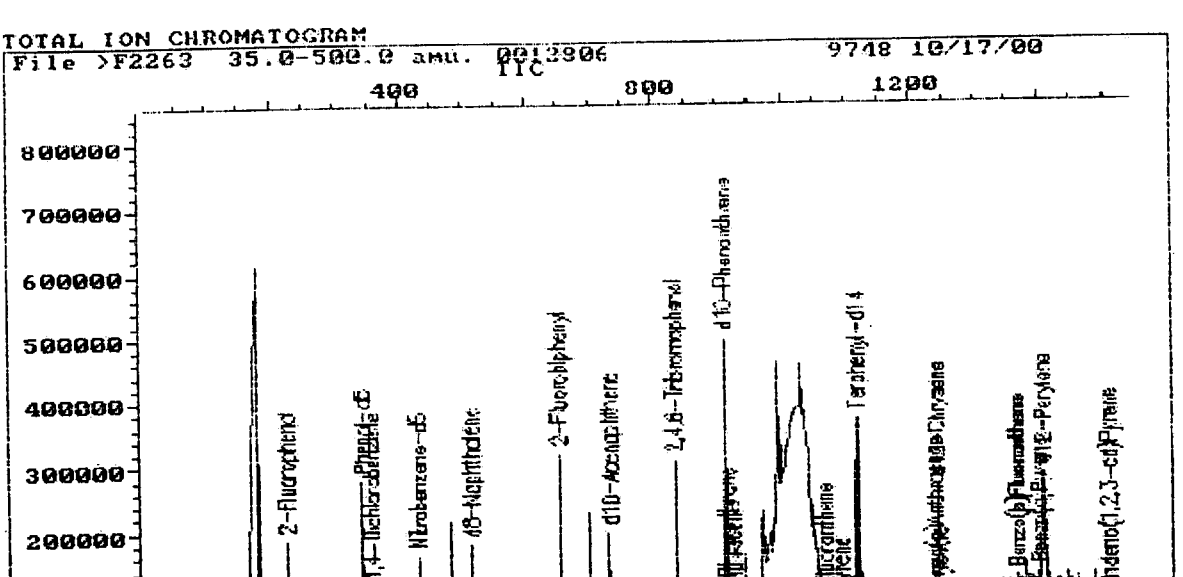
TOTAL ION CHROMATOGRAM



Data File: >F2263::E2 Quant Output File: ^F2263::ME
Name: 0012806 Instrument ID: AHP5970B
Misc: 9748 10/17/00 ENVIROTACTICS S-4 BTL# 2

Id File: IDF03::ME
Title: Accredited Laboratories Base/Neutral/Acid Identity File
Last Calibration: 001020 14:02 Last Qcal Time: <none>

Operator ID: DANIEL
Quant Time : 001023 14:35
Injected at: 001023 14:00

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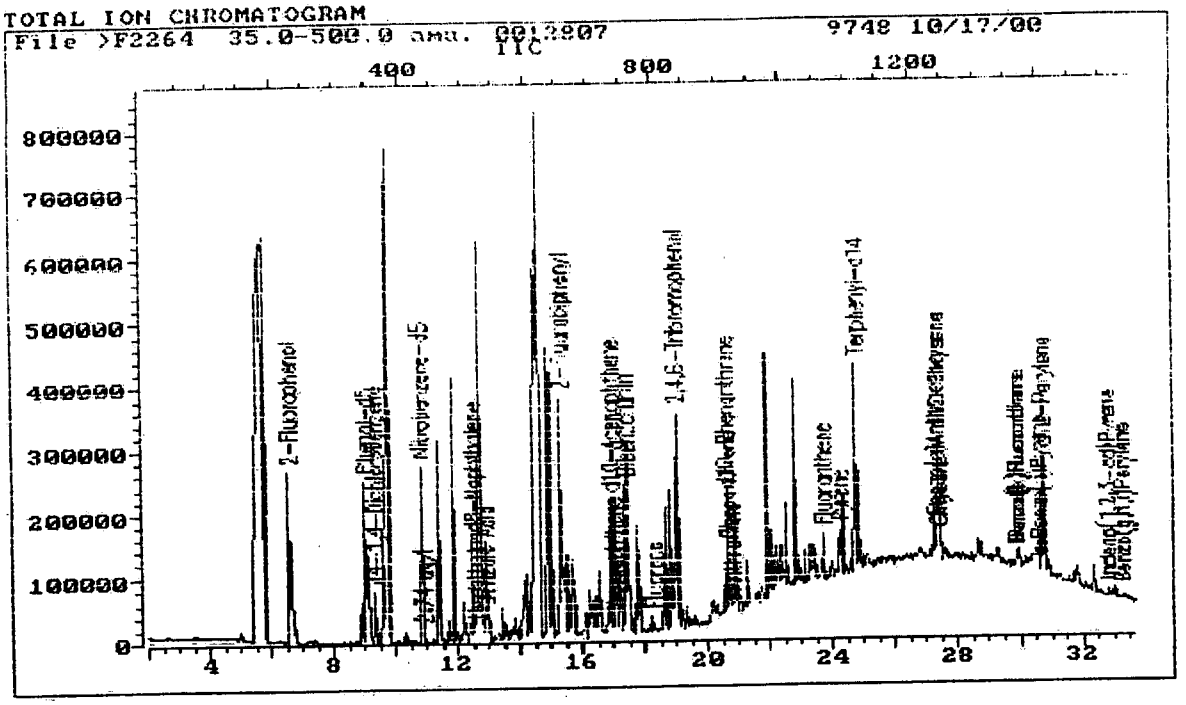
rator ID: DANIEL
put File: ^F2264::ME
ta File: >F2264::E2
Name: 001780Z
Misc: 9748 10/17/00 ENVIROTACTICS

Quant Rev: 7
Quant Time: 001023 15:18
Injected at: 001023 14:44
Dilution Factor: 1.00000
Instrument ID: AHP5970B
S-5 BTL# 3

ID File: IDF03::MF
Title: Accredited Laboratories Base/Neutral/Acid Identity File
Last Calibration: 001020 14:02
Last Qcal Time: <none>

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	9.28	360	37617	40.00	ug/l	93
4)	2-Fluorophenol	6.53	225	199884	160.46	ug/l	100
6)	Phenol-d5	8.98	345	319388	205.29	ug/l	94
16)	3&4-Methylphenol	10.83	436	4253	2.74	ug/l	86
19)	*d8-Naphthalene	12.45	515	161664	40.00	ug/l	93
20)	Nitrobenzene-d5	10.77	433	132555	75.10	ug/l	88
25)	Benzoic Acid	12.85	535	25632	30.62	ug/l	94
29)	Naphthalene	12.49	517	12273	3.06	ug/l	77
34)	*d10-Acenaphthene	16.90	733	109676	40.00	ug/l	97
39)	2-Fluorobiphenyl	15.29	654	242897	85.78	ug/l	96
44)	Acenaphthene	16.96	736	7283	2.61	ug/l	89
47)	Dibenzofuran	17.37	756	7810	1.92	ug/l	91
52)	Fluorene	18.23	798	8325	2.55	ug/l	98
54)	2,4,6-Tribromophenol	18.99	835	113124	187.48	ug/l	98
55)	*d10-Phenanthrene	20.59	913	213100	40.00	ug/l	100
62)	Phenanthrene	20.65	916	91829	17.17	ug/l	99
63)	Anthracene	20.75	921	14093	2.66	ug/l	83
66)	Fluoranthene	23.67	1063	81101	12.76	ug/l	100
67)	*d12-Chrysene	27.33	1241	225443	40.00	ug/l	100
69)	Pyrene	24.22	1090	70970	9.73	ug/l	83
70)	Terphenyl-d14	24.75	1116	351225	74.66	ug/l	88
73)	Benzo(a)Anthracene	27.28	1239	30788	4.18	ug/l	93
75)	Chrysene	27.39	1244	29212	4.58	ug/l	89
76)	*d12-Perylene	30.70	1405	224033	40.00	ug/l	100
78)	Benzo(b)fluoranthene	29.86	1364	26714M	3.80	ug/l	88
79)	Benzo(k)Fluoranthene	29.88	1365	13121M	2.26	ug/l	96
80)	Benzo(a)Pyrene	30.56	1398	21152	3.35	ug/l	94
81)	Indeno(1,2,3-cd)Pyrene	32.80	1507	11485	1.68	ug/l	87
83)	Benzo(g,h,i)Perylene	33.25	1529	9768	1.59	ug/l	98

* Compound is ISTD



Data File: >F2264::E2 Quant Output File: ^F2264::ME
Name: 0012807 Instrument ID: AHP5970B
Misc: 9748 10/17/00 ENVIROTACTICS S-5 BTL# 3

Id File: IDF03::ME
Title: Accredited Laboratories Base/Neutral/Acid Identity File
Last Calibration: 001020 14:02 Last Qcal Time: <none>

Operator ID: DANIEL
Quant Time : 001023 15:18
Injected at: 001023 14:44

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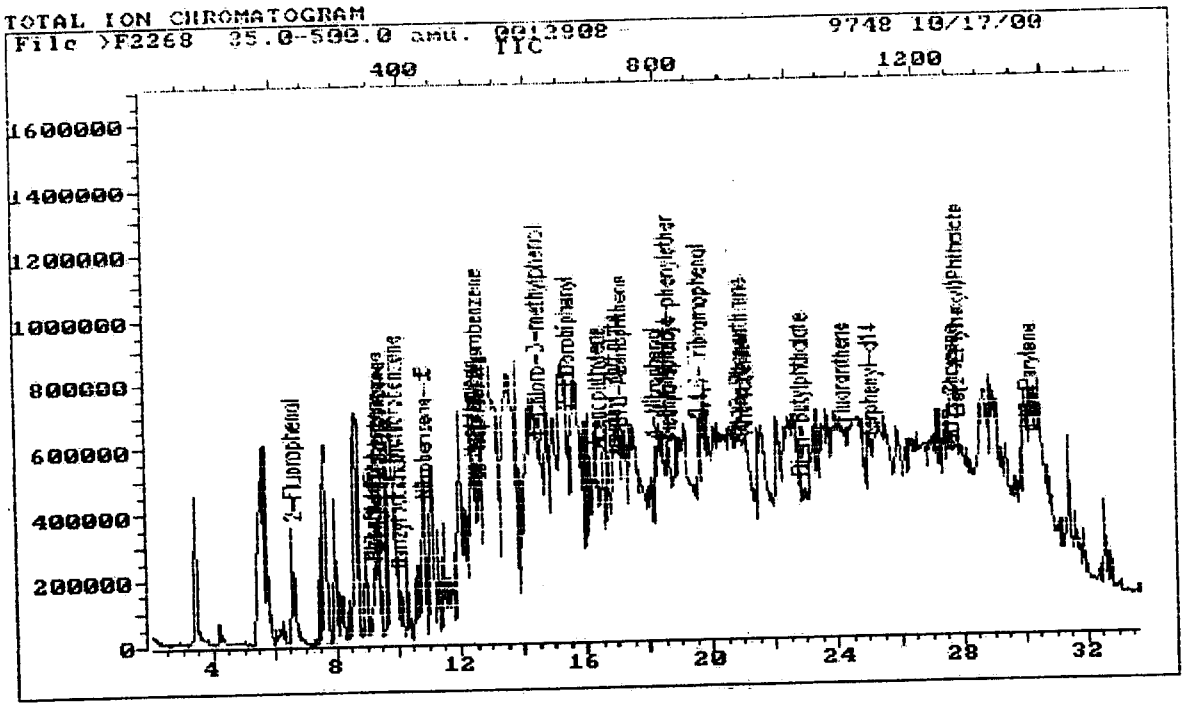
[redacted]ator ID: DANIEL
[redacted]put File: ^F2268::ME
.ta File: >F2268::E2
Name: 0012808
Misc: 9748 10/17/00 ENVIROTACTICS

Quant Rev: 7 Quant Time: 001023 18:17
Injected at: 001023 17:38
Dilution Factor: 1.00000
Instrument ID: AHP5970B
S-6 BTi # 7

ID File: IDF03::ME
Title: Accredited Laboratories Base/Neutral/Acid Identity File
Last Calibration: 001020 14:02 Last Qcal Time: <none>

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	9.30	358	38625	40.00	ug/l	90
4)	2-Fluorophenol	6.58	225	260080	203.34	ug/l	100
6)	Phenol-d5	9.16	351	370798	232.11	ug/l	91
10)	1,3-Dichlorobenzene	9.20	353	73435	55.23	ug/l	98
11)	1,4-Dichlorobenzene	9.36	361	336439	250.29	ug/l	90
12)	Benzyl Alcohol	9.99	392	27455	26.67	ug/l	91
13)	1,2-Dichlorobenzene	9.85	385	1034579	840.36	ug/l	90
19)	*d8-Naphthalene	12.55	517	158379	40.00	ug/l	95
20)	Nitrobenzene-d5	10.83	433	156743	90.65	ug/l	81
28)	1,2,4-Trichlorobenzene	12.49	514	52885	45.44	ug/l	99
29)	Naphthalene	12.37	508	590015M	150.30	ug/l	73
32)	4-Chloro-3-methylphenol	14.48	611	431178	279.25	ug/l	62
[redacted])	*d10-Acenaphthene	17.11	739	86741	40.00	ug/l	87
[redacted])	2-Fluorobiphenyl	15.42	657	41103	18.35	ug/l	95
41)	Dimethyl Phthalate	16.88	728	161437	59.84	ug/l	82
42)	Acenaphthylene	16.37	703	42747	13.06	ug/l	82
46)	4-Nitrophenol	18.19	792	43638	80.28	ug/l	98
50)	Diethylphthalate	18.61	812	37942	13.67	ug/l	59
51)	4-Chlorophenyl-phenylether	18.63	813	18323	16.88	ug/l	55
54)	2,4,6-Tribromophenol	19.61	861	38165	79.98	ug/l	99
55)	*d10-Phenanthrene	20.91	924	153502	40.00	ug/l	100
62)	Phenanthrene	20.95	926	22378	5.81	ug/l	58
63)	Anthracene	21.06	931	21277	5.57	ug/l	88
65)	Di-n-Butylphthalate	22.83	1017	2038661M	389.32	ug/l	93
66)	Fluoranthene	24.13	1080	7761	1.70	ug/l	100
67)	*d12-Chrysene	27.62	1249	70471	40.00	ug/l	100
70)	Terphenyl-d14	25.06	1125	126359	85.92	ug/l	94
74)	Bis(2-Ethylhexyl)Phthalate	27.85	1260	81072	47.68	ug/l	89
76)	*d12-Perylene	30.15	1371	65385	40.00	ug/l	100

* Compound is ISTD



Data File: >F2268::E2 Quant Output File: ^F2268::ME
Name: 0012808 Instrument ID: AHP5970B
Misc: 9748 10/17/00 ENVIROTACTICS S-6 BTL# 7

Id File: IDF03::ME
Title: Accredited Laboratories Base/Neutral/Acid Identity File
Last Calibration: 001020 14:02 Last Qcal Time: <none>

Operator ID: DANIEL
Quant Time : 001023 18:12
Injected at: 001023 17:38

ator ID: DANIEL
put File: ^F2289::MF
ta File: >F2289::E2
Name: 0012808DL
Misc: 9748 10/17/00 ENVIROTACTICS

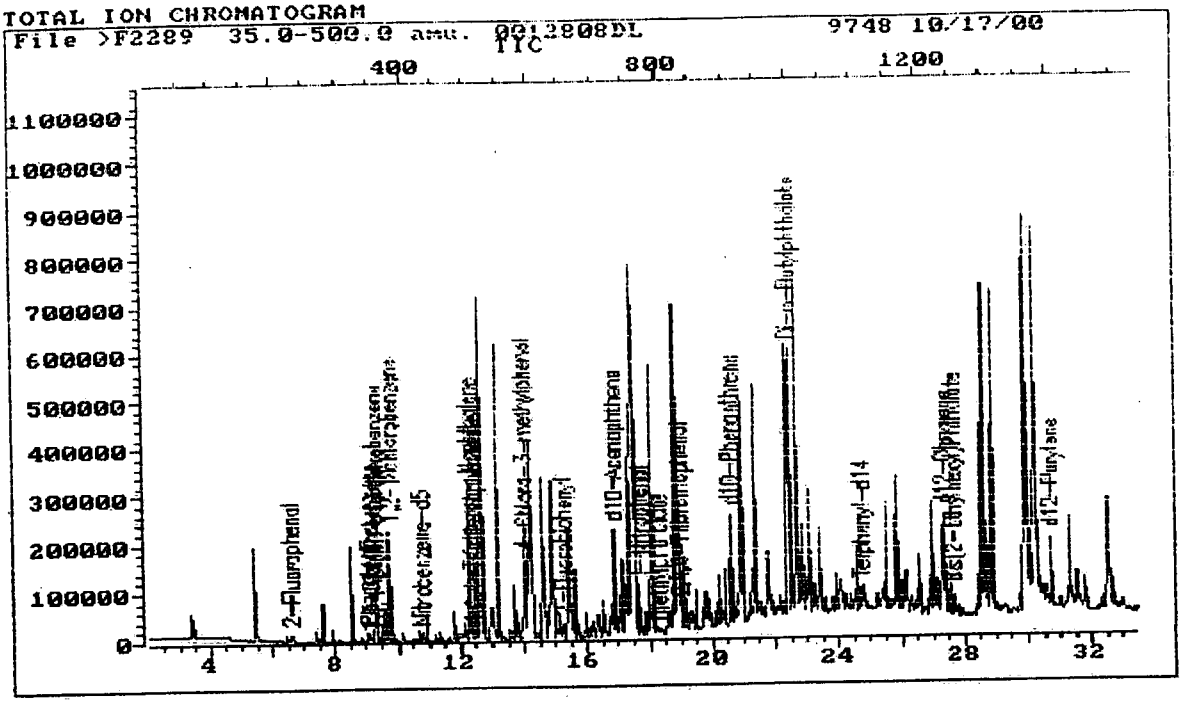
Quant Rev: 7 Quant Time: 001024 19:47
Injected at: 001024 19:13
Dilution Factor: 1.00000
Instrument ID: AHP5970B
S-6 BTL#13

ID File: IDF03::ME
Title: Accredited Laboratories Base/Neutral/Acid Identity File
Last Calibration: 001020 14:02 Last Qcal Time: <none>

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	9.23	355	38607	40.00	ug/l	96
4)	2-Fluorophenol	6.56	224	8559	6.69	ug/l	100
6)	Phenol-d5	9.02	345	15346	9.61	ug/l	89
10)	1,3-Dichlorobenzene	9.13	350	2838	2.14	ug/l	91
11)	1,4-Dichlorobenzene	9.27	357	15673	11.67	ug/l	92
13)	1,2-Dichlorobenzene	9.74	380	155724	126.55	ug/l	89
19)	*d8-Naphthalene	12.41	511	163988	40.00	ug/l	96
20)	Nitrobenzene-d5	10.74	429	6436	3.59	ug/l	98
28)	1,2,4-Trichlorobenzene	12.35	508	3946	3.27	ug/l	95
29)	Naphthalene	12.27	504	82382	20.27	ug/l	90
32)	4-Chloro-3-methylphenol	14.00	589	24647M	15.42	ug/l	
34)	*d10-Acenaphthene	16.87	729	111077	40.00	ug/l	97
[illegible])	2-Fluorobiphenyl	15.25	650	14488	5.05	ug/l	95
[illegible])	4-Nitrophenol	17.66	768	4811	6.91	ug/l	95
50)	Diethylphthalate	18.26	797	5201	1.46	ug/l	92
54)	2,4,6-Tribromophenol	18.95	831	5626	9.21	ug/l	98
55)	*d10-Phenanthrene	20.57	910	210900	40.00	ug/l	100
65)	Di-n-Butylphthalate	22.42	1000	1106074	153.74	ug/l	96
67)	*d12-Chrysene	27.30	1238	211910	40.00	ug/l	100
70)	Terphenyl-d14	24.70	1111	21378	4.83	ug/l	94
74)	Bis(2-Ethylhexyl)Phthalate	27.59	1252	11643	2.28	ug/l	85
76)	*d12-Perylene	30.67	1402	149477	40.00	ug/l	100

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >F2289::E2 Quant Output File: ^F2289::ME
Name: 0012808DL Instrument ID: AHP5970B
Misc: 9748 10/17/00 ENVIROTACTICS S-6 BTL#13

Id File: IDF03::ME
Title: Accredited Laboratories Base/Neutral/Acid Identity File
Last Calibration: 001020 14:02 Last Qcal Time: <none>

Operator ID: DANIEL
Quant Time : 001024 19:47
Injected at: 001024 19:13

Quant Rev: 7 Quant Time: 001023 18:56
Injected at: 001023 18:71
Dilution Factor: 1.00000
Instrument ID: AHP5970B
RTI # 8

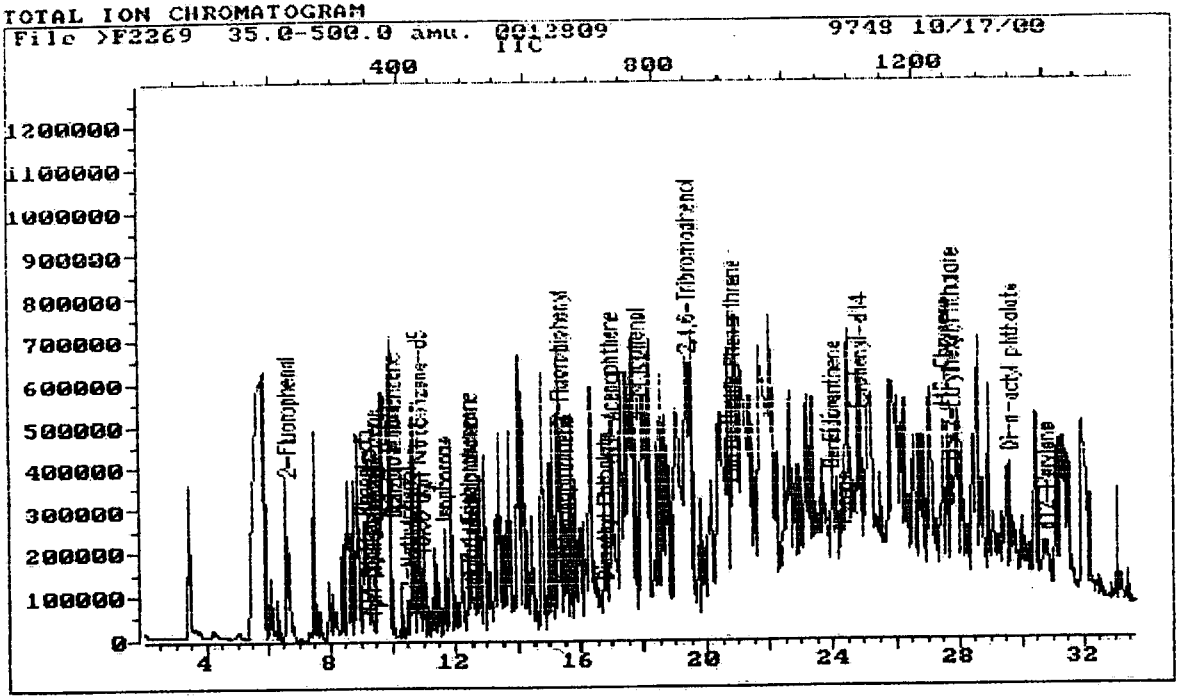
Operator ID: DANIEL
Output File: ^F2269::ME
Data File: >F2269::E2
Name: 001/809
Misc: 9748 10/17/00 ENVIRONTACTICS S-7

ID File: IDF03::ME
Title: Accredited Laboratories Base/Neutral/Acid Identity File
Last Calibration: 001020 14:02 Last Qcal Time: <none>

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	9.34	360	46728	40.00	ug/l	95
4)	2-Fluorophenol	6.58	225	219050	141.56	ug/l	100
6)	Phenol-d5	9.05	346	354566	183.46	ug/l	96
10)	1,3-Dichlorobenzene	9.22	354	3560	2.21	ug/l	97
11)	1,4-Dichlorobenzene	9.38	362	8816	5.42	ug/l	90
12)	Benzyl Alcohol	9.93	389	51579	41.42	ug/l	89
13)	1,2-Dichlorobenzene	9.93	389	41162	27.64	ug/l	85
14)	2-Methylphenol	10.44	414	27503	15.58	ug/l	77
16)	3&4-Methylphenol	10.85	434	34846	18.08	ug/l	90
19)	*d8-Naphthalene	12.45	512	182003	40.00	ug/l	95
20)	Nitrobenzene-d5	10.81	432	136516	68.70	ug/l	87
22)	Isophorone	11.59	470	81762	19.05	ug/l	70
[illegible])	1,2,4-Trichlorobenzene	12.39	509	2680	2.00	ug/l	91
[illegible])	Naphthalene	12.51	515	12967	2.87	ug/l	79
34)	*d10-Acenaphthene	16.93	731	115902	40.00	ug/l	97
38)	2-Chloronaphthalene	15.48	660	7085M	2.52	ug/l	72
39)	2-Fluorobiphenyl	15.31	652	272589	91.10	ug/l	96
41)	Dimethyl Phthalate	16.73	721	10120	2.81	ug/l	96
46)	4-Nitrophenol	17.76	771	25621	35.27	ug/l	89
54)	2,4,6-Tribromophenol	19.38	850	42840	67.19	ug/l	98
55)	*d10-Phenanthrene	20.81	920	170452	40.00	ug/l	100
62)	Phenanthrene	20.73	916	79521M	18.59	ug/l	84
66)	Fluoranthene	23.96	1073	22502	4.43	ug/l	100
67)	*d12-Chrysene	27.48	1244	146738	40.00	ug/l	100
68)	Benzidine	23.94	1072	88888	58.76	ug/l	88
69)	Pyrene	24.33	1091	13090	2.76	ug/l	94
70)	Terphenyl-d14	24.85	1116	309865	101.19	ug/l	91
74)	Bis(2-Ethylhexyl)Phthalate	27.73	1256	169859	47.98	ug/l	91
76)	*d12-Perylene	30.76	1403	55565	40.00	ug/l	100
77)	Di-n-octyl phthalate	29.61	1347	140997	69.16	ug/l	87

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >F2269::E2 Quant Output File: ^F2269::ME
Name: 0012809 Instrument ID: AHP5970B
Misc: 9748 10/17/00 ENVIROTACTICS S-7 BTL# 8

Id File: IDF03::ME
Title: Accredited Laboratories Base/Neutral/Acid Identity File
Last Calibration: 001020 14:02 Last Qcal Time: <none>

Operator ID: DANIEL
Quant Time : 001023 18:56
Injected at: 001023 18:21

285

rator ID: DANIEL
put File: ^F2270::ME
ta File: >F2270::E2
Name: 0012810
Misc: 9748 10/17/00 ENVIROTACTICS

Quant Rev: 7 Quant Time: 001023 19:39
Injected at: 001023 19:05
Dilution Factor: 1.00000
Instrument ID: AHP5970B
S-8 BTL# 9

ID File: IDF03::ME
Title: Accredited Laboratories Base/Neutral/Acid Identity File
Last Calibration: 001020 14:02 Last Qcal Time: <none>

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	9.48	367	30208M	40.00	ug/l	
4)	2-Fluorophenol	7.50	270	66547M	66.52	ug/l	100
6)	Phenol-d5	9.57	371	181300M	145.11	ug/l	
7)	Phenol	9.59	372	67575M	47.95	ug/l	
13)	1,2-Dichlorobenzene	10.04	394	5050	5.24	ug/l	92
19)	*d8-Naphthalene	12.58	518	126638	40.00	ug/l	89
20)	Nitrobenzene-d5	11.08	445	37369M	27.03	ug/l	86
34)	*d10-Acenaphthene	17.25	746	36151	40.00	ug/l	98
39)	2-Fluorobiphenyl	15.63	667	176434	189.03	ug/l	96
47)	Dibenzofuran	17.78	772	13179	9.81	ug/l	92
51)	4-Chlorophenyl-phenylether	18.91	827	13952	30.84	ug/l	62
52)	Fluorene	18.74	819	16547	15.35	ug/l	89
54)	2,4,6-Tribromophenol	19.26	844	115107	578.76	ug/l	99
55)	*d10-Phenanthrene	20.88	923	62180	40.00	ug/l	100
57)	N-Nitrosodiphenylamine	18.89	826	32248	54.42	ug/l	87
65)	Di-n-Butylphthalate	22.64	1008	228006	107.49	ug/l	94
66)	Fluoranthene	23.87	1068	17533M	9.46	ug/l	100
67)	*d12-Chrysene	27.63	1250	39101	40.00	ug/l	100
69)	Pyrene	24.49	1098	18090	14.30	ug/l	88
70)	Terphenyl-d14	25.01	1123	146411	179.44	ug/l	91
71)	Butylbenzylphthalate	26.21	1181	43946	61.60	ug/l	78
74)	Bis(2-Ethylhexyl)Phthalate	28.23	1279	12622	13.38	ug/l	70
76)	*d12-Perylene	30.85	1406	21702	40.00	ug/l	100
77)	Di-n-octyl phthalate	29.65	1348	16910	21.24	ug/l	91

* Compound is ISTD

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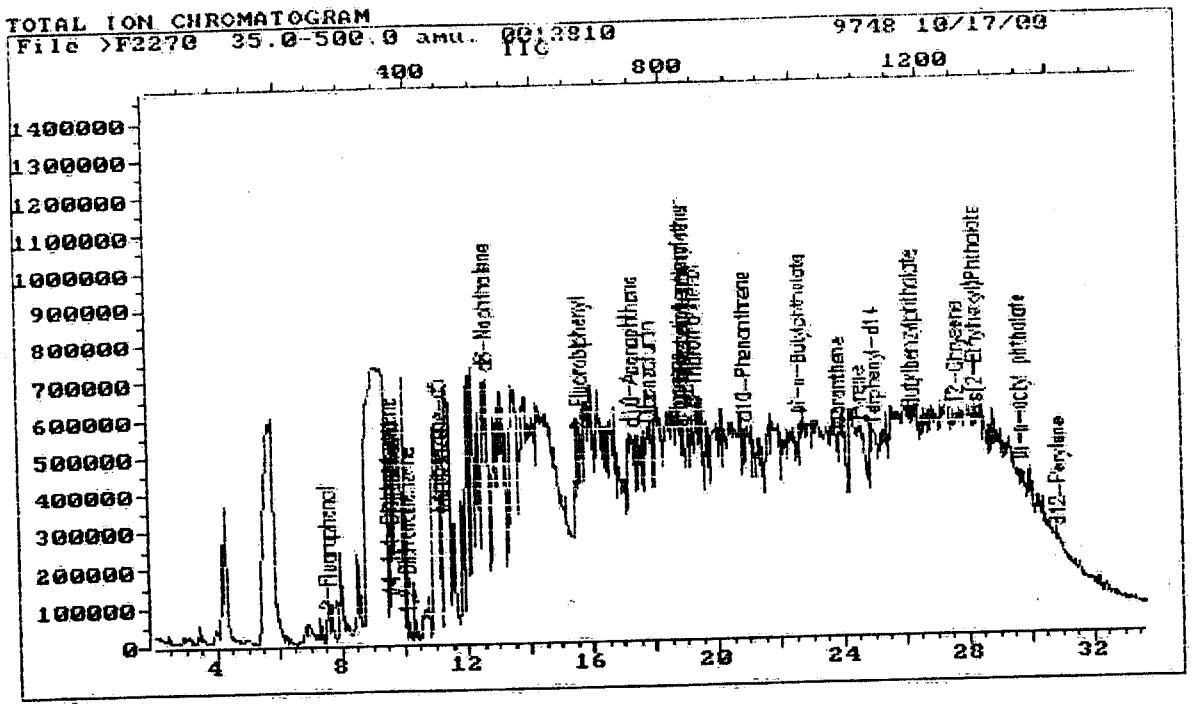


Data File: >F2270::E2 Quant Output File: ^F2270::ME
Name: 0012810 Instrument ID: AHP5970B
Misc: 9748 10/17/00 ENVIROTACTICS S-8 BTL# 9

Id File: IDF03::ME
Title: Accredited Laboratories Base/Neutral/Acid Identity File
Last Calibration: 001020 14:02 Last Qcal Time: <none>

Operator ID: DANIEL
Quant Time : 001023 19:39
Injected at: 001023 19:05

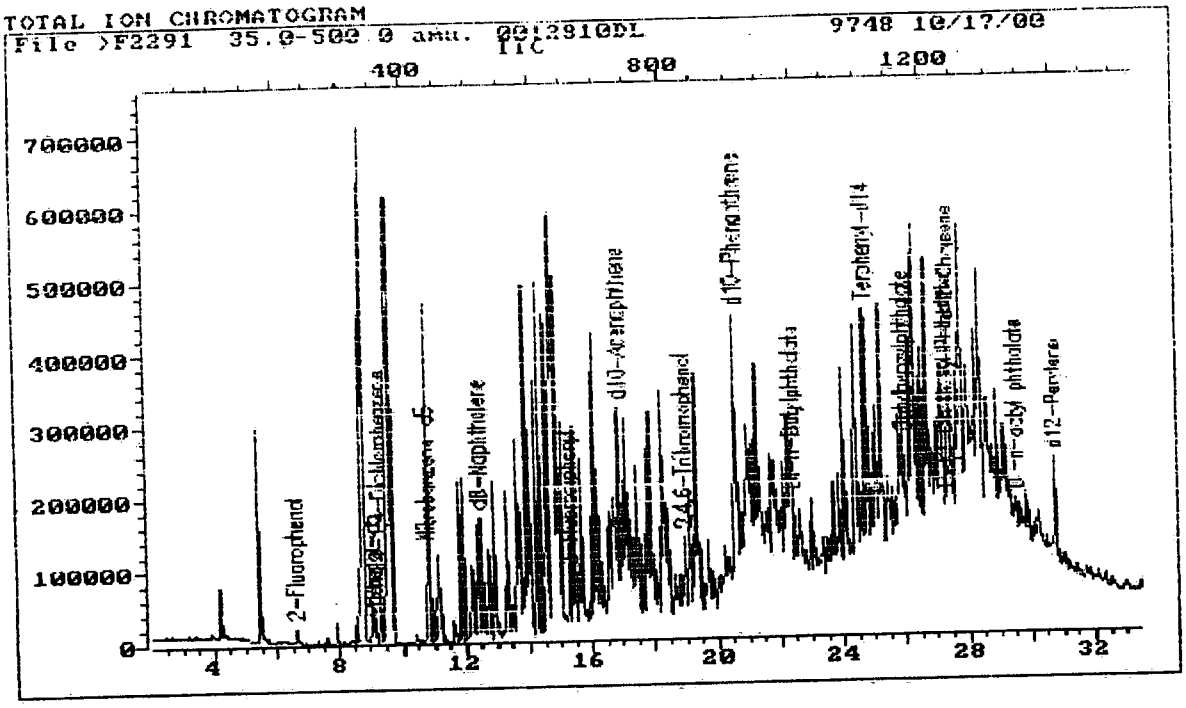
287

Operator ID: DANIEL Quant Req: 7 Quant Time: 001024 21:15
Output File: ^F2291::MF Injected at: 001024 20:40
Data File: >F2291::E2 Dilution Factor: 1.00000
Name: 00128100I Instrument ID: AHP59/0B
Misc: 9748 10/17/00 ENVIROTACTICS S-8 RTI #15

ID File: IDF03::ME
Title: Accredited Laboratories Base/Neutral/Acid Identity File
Last Calibration: 001020 14:02 Last Qcal Time: <none>

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	9.25	356	39068	40.00	ug/l	95
4)	2-Fluorophenol	6.56	224	20317	15.70	ug/l	100
6)	Phenol-d5	9.03	345	32962	20.40	ug/l	89
7)	Phenol	9.07	347	13424	7.37	ug/l	65
19)	*d8-Naphthalene	12.41	511	162791	40.00	ug/l	97
20)	Nitrobenzene-d5	10.76	430	15687	8.83	ug/l	99
34)	*d10-Acenaphthene	16.90	730	104783	40.00	ug/l	97
39)	2-Fluorobiphenyl	15.26	650	29952	11.07	ug/l	95
54)	2,4,6-Tribromophenol	18.93	829	13088	22.70	ug/l	98
55)	*d10-Phenanthrene	20.57	909	193526	40.00	ug/l	100
65)	Di-n-Butylphthalate	22.36	996	110365	16.72	ug/l	94
67)	*d12-Chrysene	27.34	1238	195159	40.00	ug/l	100
[illegible])	Terphenyl-d14	24.70	1110	38306	9.41	ug/l	84
[illegible])	Butylbenzylphthalate	25.90	1168	21228	5.96	ug/l	87
[illegible]4)	Bis(2-Ethylhexyl)Phthalate	27.25	1234	6799	1.44	ug/l	75
76)	*d12-Perylene	30.69	1401	143003	40.00	ug/l	100
77)	Di-n-octyl phthalate	29.45	1341	6278	1.20	ug/l	96

* Compound is ISTD

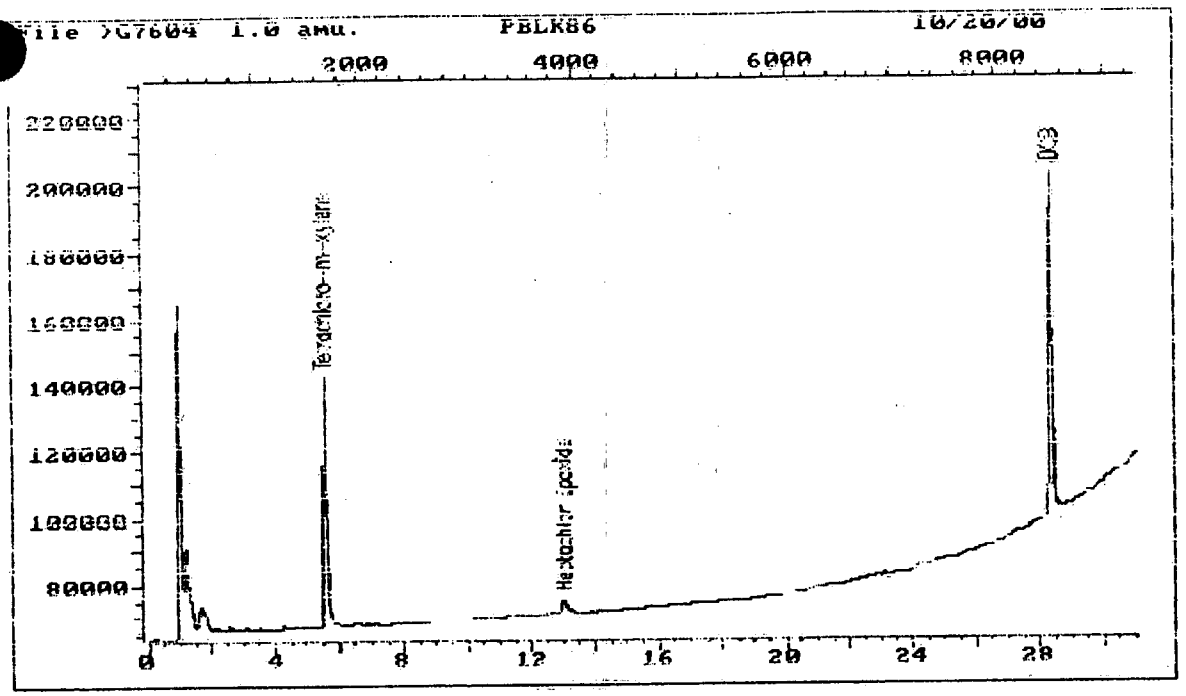


Data File: >F2291::E2 Quant Output File: ^F2291::ME
Name: 0012810DL Instrument ID: AHP5970B
Misc: 9748 10/17/00 ENVIROTACTICS S-8 BTL#15

Id File: IDF03::ME
Title: Accredited Laboratories Base/Neutral/Acid Identity File
Last Calibration: 001020 14:02 Last Qcal Time: <none>

Operator ID: DANIEL
Quant Time : 001024 21:15
Injected at: 001024 20:40

289



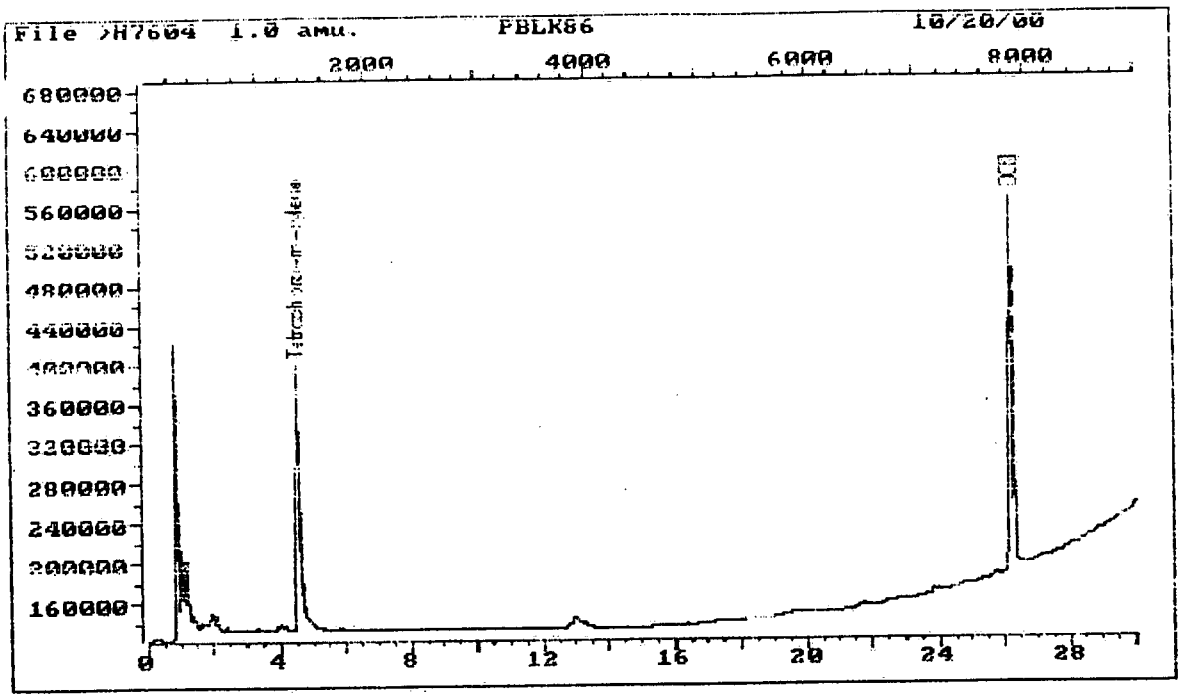
Data File: >G7604::G1
Name: PBLK86
Misc: 10/20/00

Quant Output File: ^G7604::QT
Instrument ID: G

Id File: IDPP7::G5
Title: PESTICIDES/PCB'S HP5890-G RTX-5 0.53mm 1.0uL
Last Calibration: 000112 14:36 Last Qcal Time: 001020 11:41

Operator ID: JEFF
Quant Time : 001020 18:00
Injected at: 001020 17:27

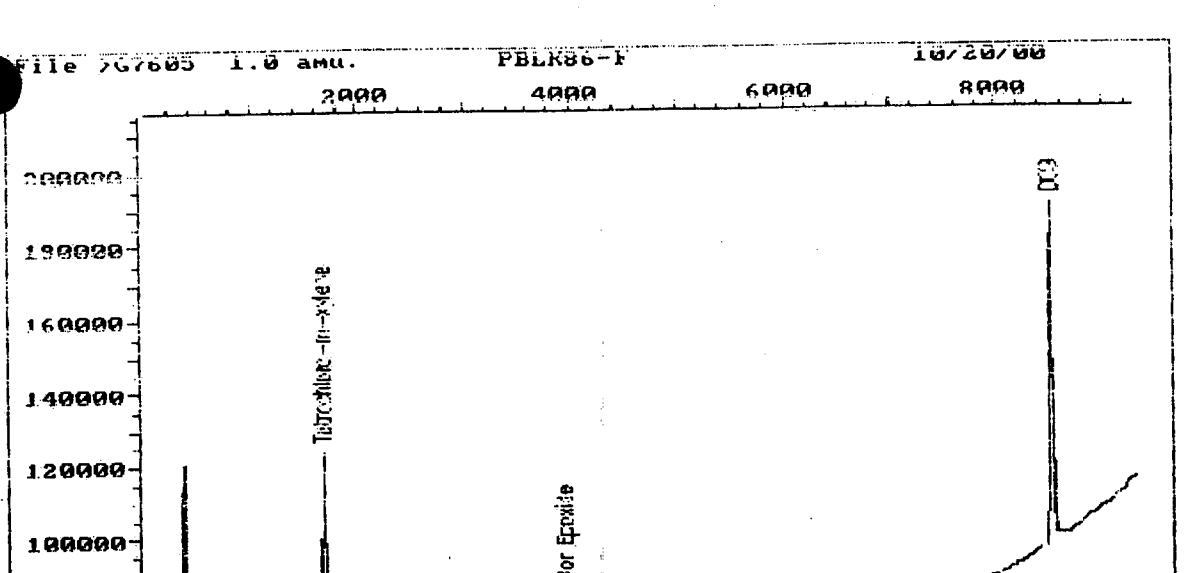
290



Data File: >H7604::G1 Quant Output File: ^H7604::QT
Name: PBLK86 Instrument ID: H
Misc: 10/20/00

Id File: IDPP8::G5
Title: PESTICIDES/PCB'S HP5890-H RTX-1701 0.53mm 1.0uL
Last Calibration: 000112 14:38 Last Qcal Time: 001020 12:19

Operator ID: JEFF
Quant Time : 001020 18:37
Injected at: 001020 18:04

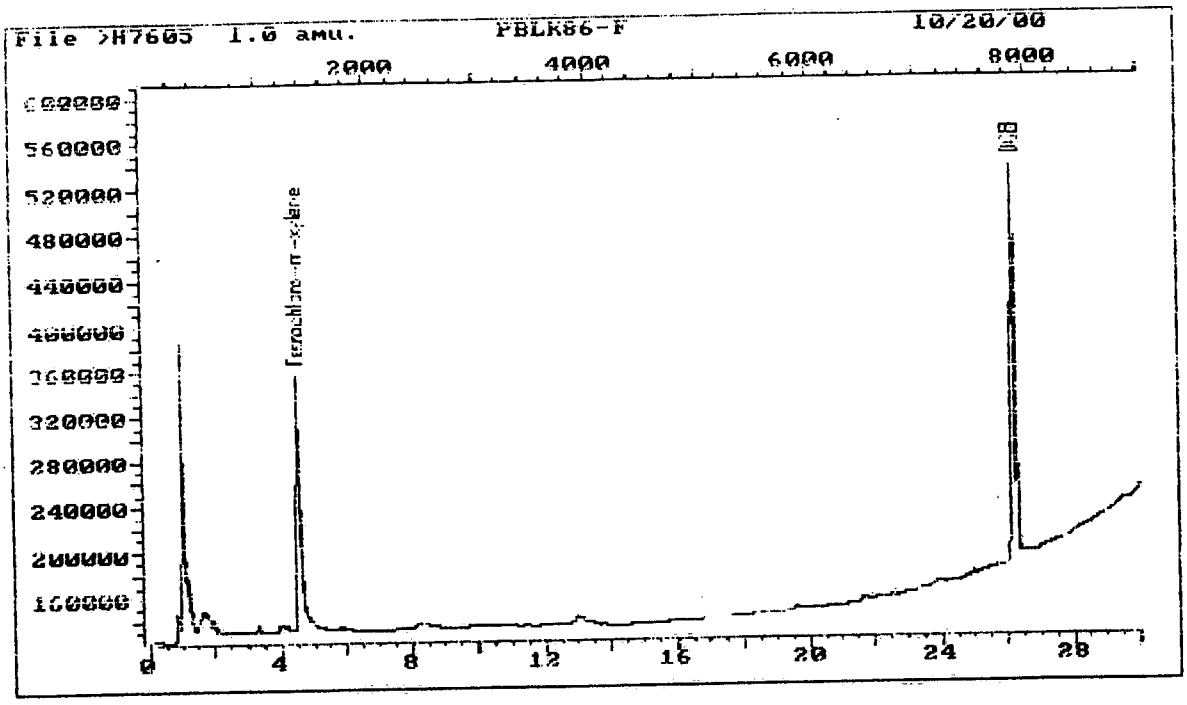


Data File: >G7605::G1
Name: PBLK86-F
Misc: 10/20/00

Quant Output File: ^G7605::QT
Instrument ID: G

Id File: IDPP7::G5
Title: PESTICIDES/PCB'S HP5890-G RTX-5 0.53mm 1.0uL
Last Calibration: 000112 14:36 Last Qcal Time: 001020 11:41

Operator ID: JEFF
Quant Time : 001020 18:40
Injected at: 001020 18:04

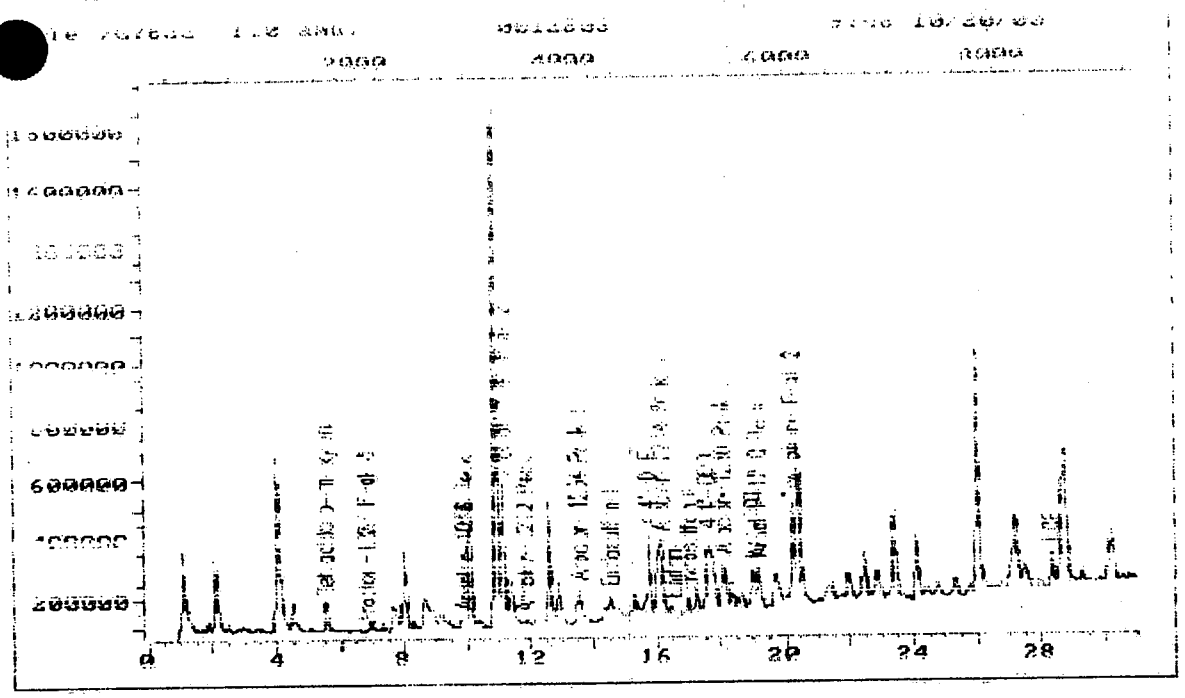


Data File: >H7605::G1
Name: PBLK86-F
Misc: 10/20/00

Quant Output File: ^H7605::QT
Instrument ID: H

Id File: IDPP8::G5
Title: PESTICIDES/PCB'S HP5890-H RTX-1701 0.53mm 1.0uL
Last Calibration: 000112 14:38
Last Qcal Time: 001020 12:19

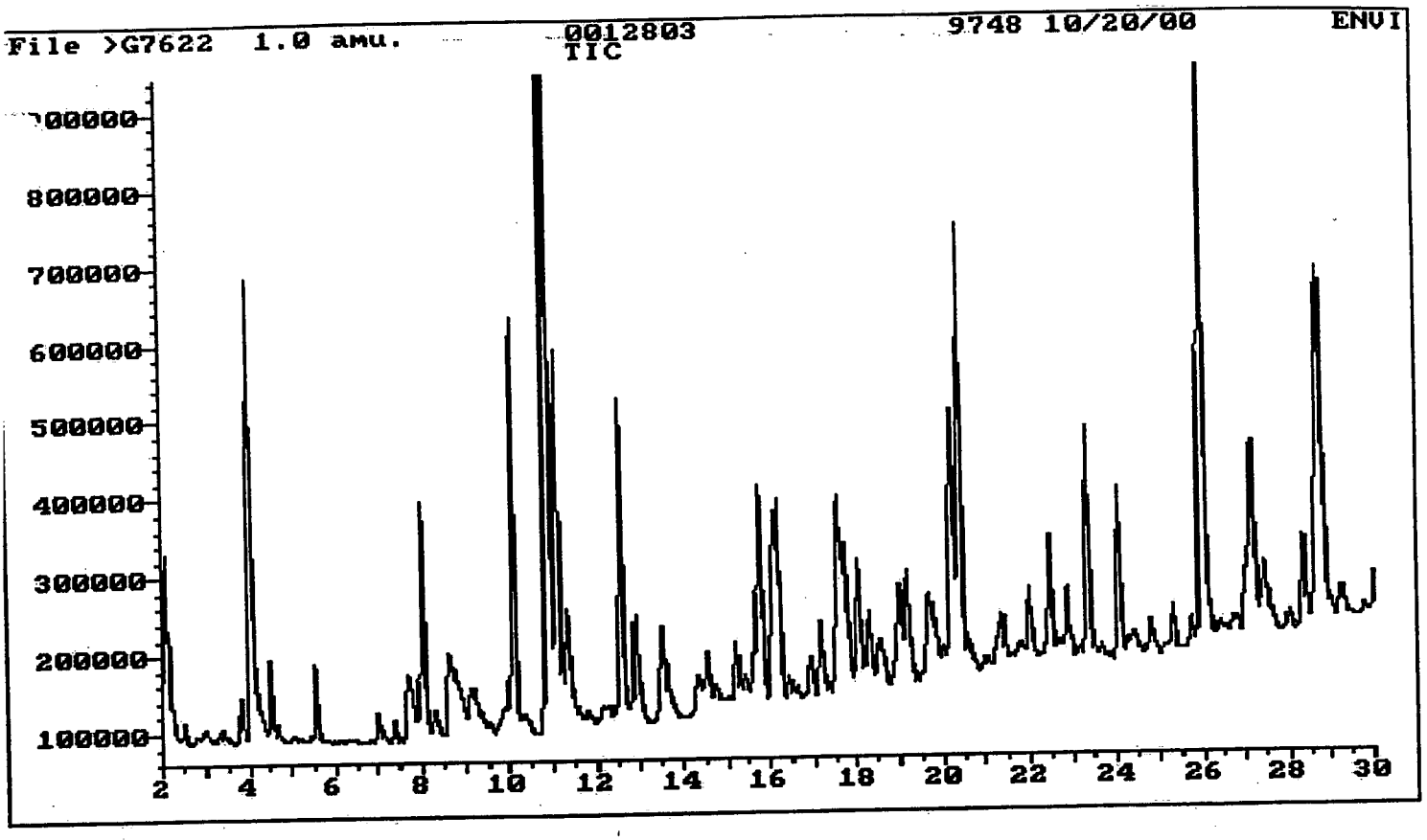
Operator ID: JEFF
Quant Time : 001020 19:14
Injected at: 001020 18:42



Data File: >G7622::G2 Quant Output File: ^G7622::QT
Name: 0012803 Instrument ID: G
Misc: 9748 10/20/00 ENVIROTACTICS S-1

Id File: IDPP7::G5
Title: PESTICIDES/PCB'S HP5890-G RTX-5 0.53mm 1.0uL
Last Calibration: 000112 14:36 Last Qcal Time: 001020 11:41

Operator ID: JEFF
Quant Time : 001021 05:15
Injected at: 001021 04:40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0012803
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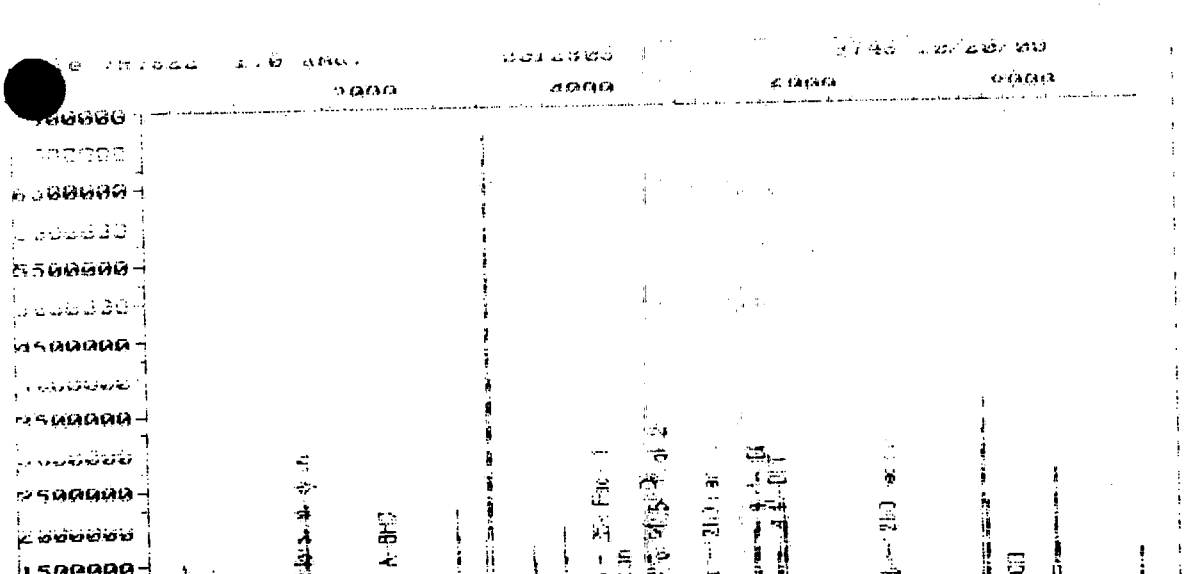
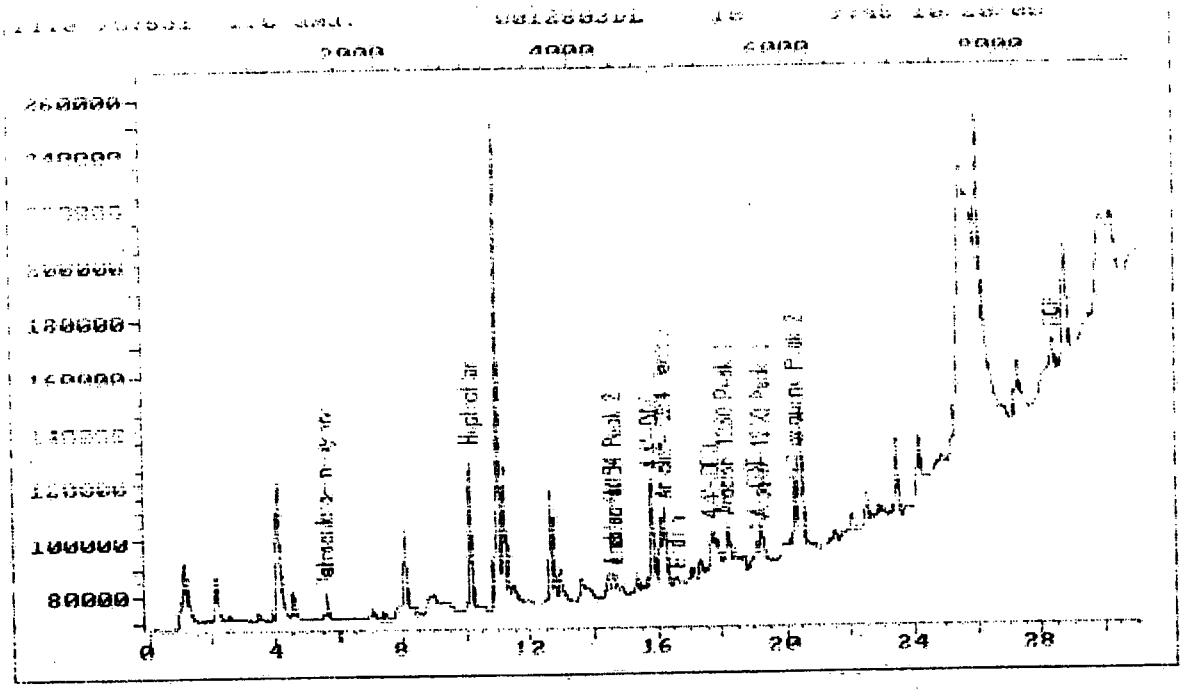


Data File: >H7622::G2 Quant Output File: ^H7622::QT
Name: 0012803 Instrument ID: H
Misc: 9748 10/20/00 ENVIROTACTICS S-1

Id File: IDPP8::G5
Title: PESTICIDES/PCB'S HP5890-H RTX-1701 0.53mm 1.0uL
Last Calibration: 000112 14:38 Last Qcal Time: 001020 12:19

Operator ID: JEFF
Quant Time : 001021 05:50
Injected at: 001021 05:17

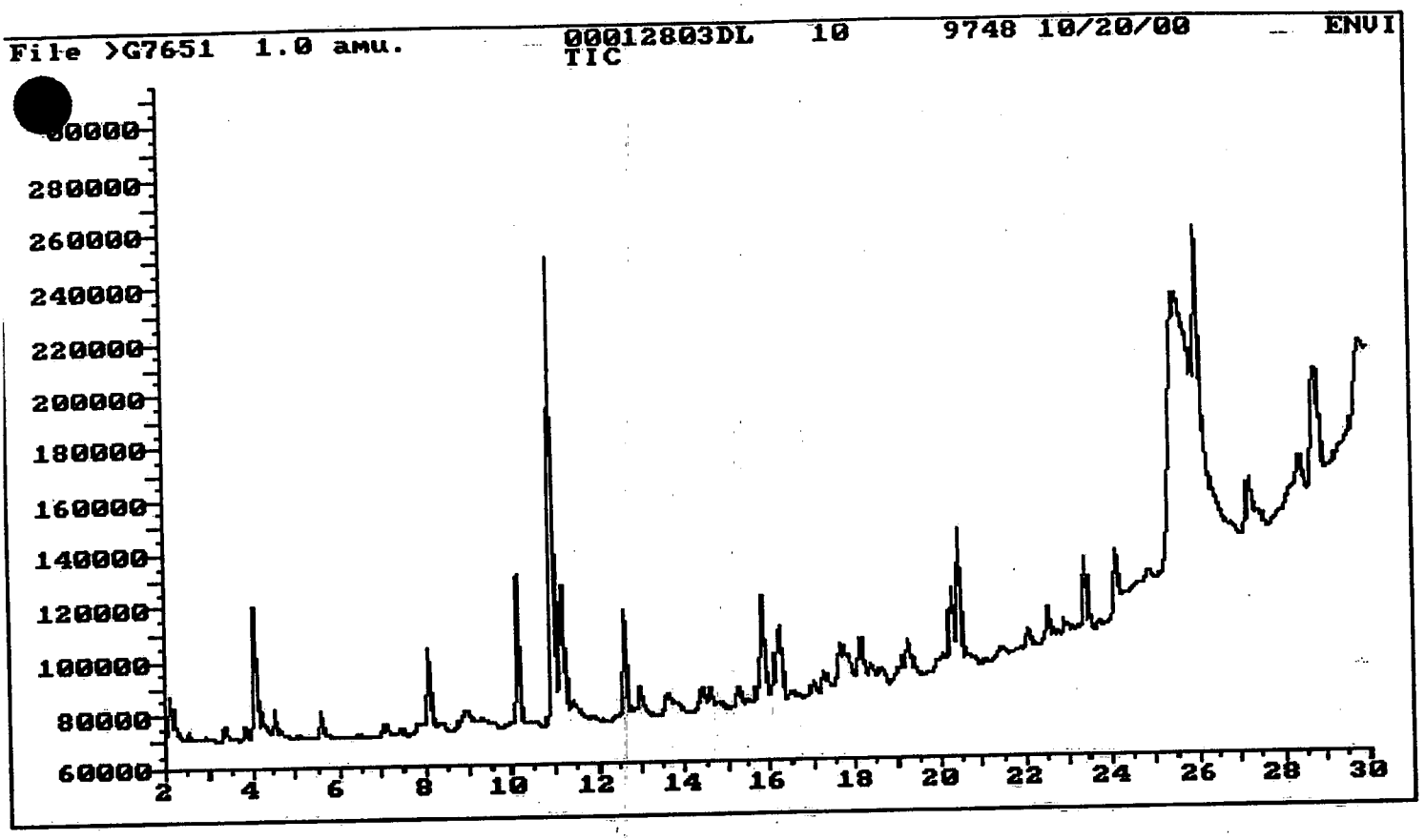
296



Data File: >G7651::G3 Quant Output File: ^G7651::QT
Name: 0012803DL 10 Instrument ID: C
Misc: 9748 10/20/00 ENVIROTACTICS S-1

Id File: IDPP7::G5
Title: PESTICIDES/PCB'S HP5890-G RTX-5 0.53mm 1.0uL
Last Calibration: 000112 14:36 Last Qcal Time: 001023 17:17

Operator ID: JEFF
Quant Time : 001024 09:52
Injected at: 001023 21:38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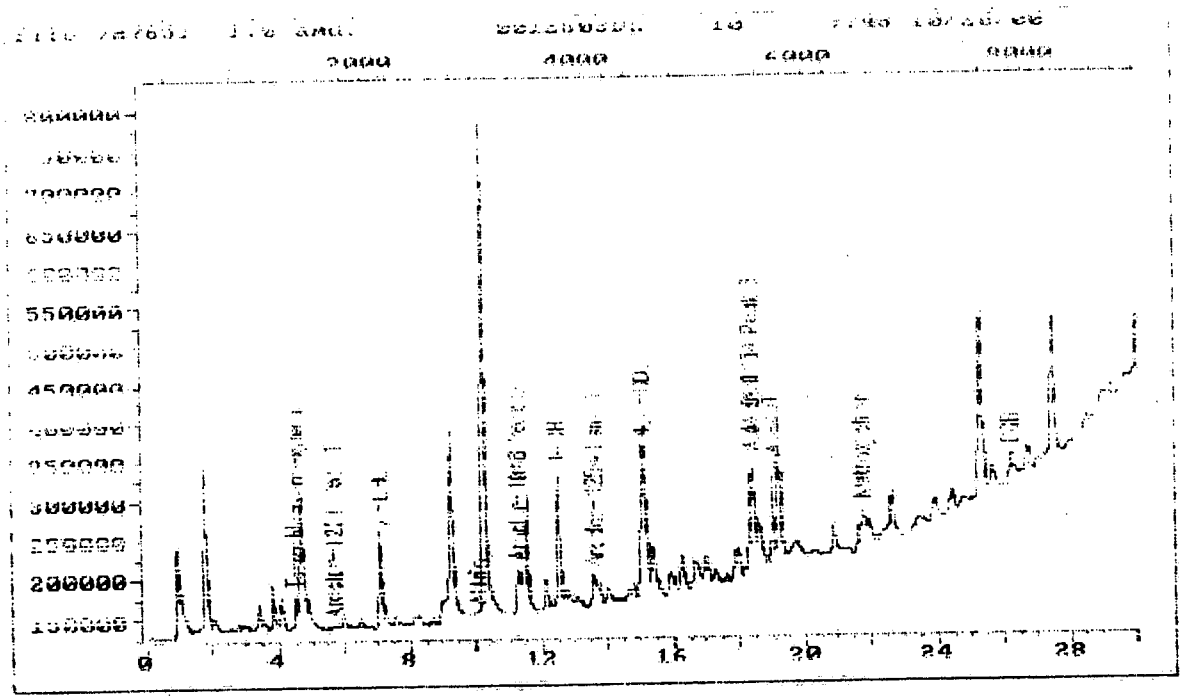
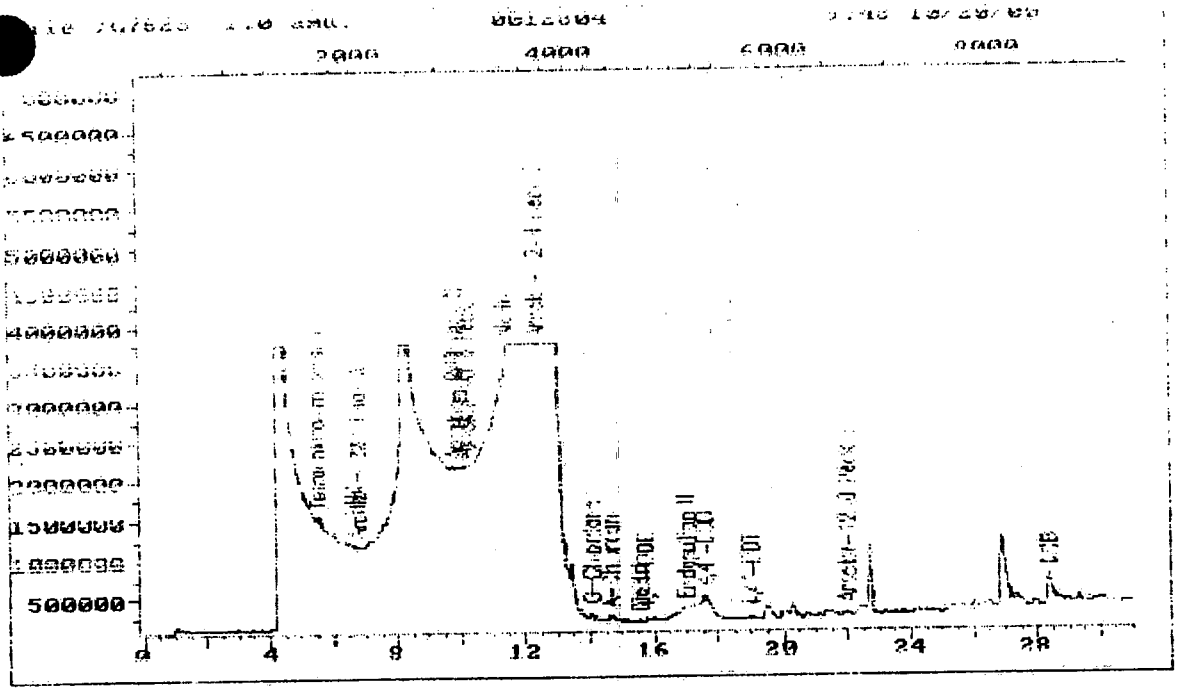


Data File: >H7651::G3 Quant Output File: ^H7651::QT
Name: 0012803DL 10 Instrument ID: H
Misc: 9748 10/20/00 ENVIROTACTICS S-1

Id File: IDPP8::G5
Title: PESTICIDES/PCB'S HP5890-H RTX-1701 0.53mm 1.0uL
Last Calibration: 000112 14:38 Last Qcal Time: 001023 17:54

Operator ID: JEFF
Quant Time : 001024 10:27
Injected at: 001023 22:16

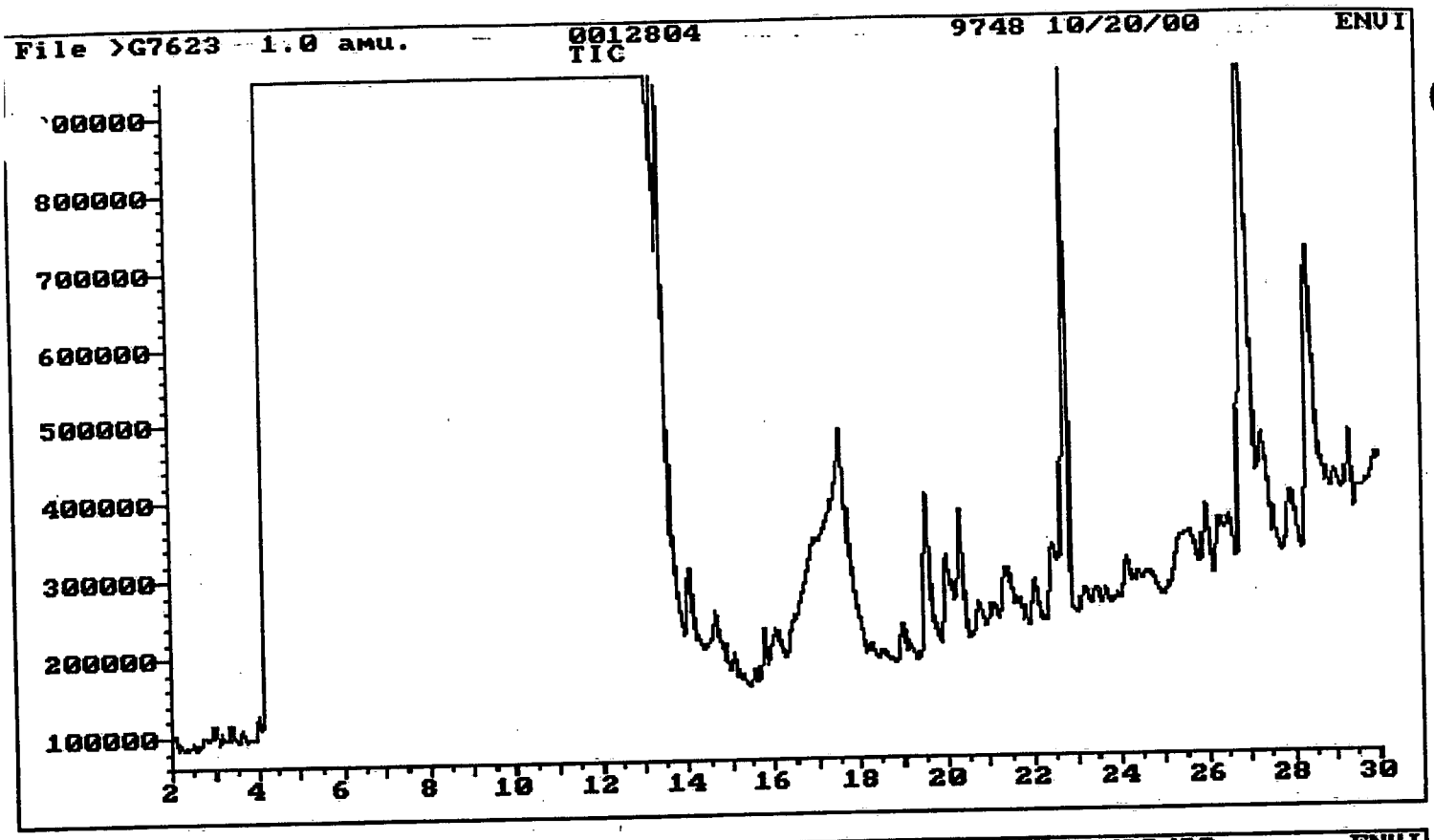


Data File: >G7623::G2 Quant Output File: ^G7623::QT
Name: 0012804 Instrument ID: G
Misc: 9748 10/20/00 ENVIROTACTICS S-2

Id File: IDPP7::G5
Title: PESTICIDES/PCB'S HP5890-G RTX-5 0.53mm 1.0uL
Last Calibration: 000112 14:36 Last Qcal Time: 001020 11:41

Operator ID: JEFF
Quant Time : 001021 05:53
Injected at: 001021 05:17

300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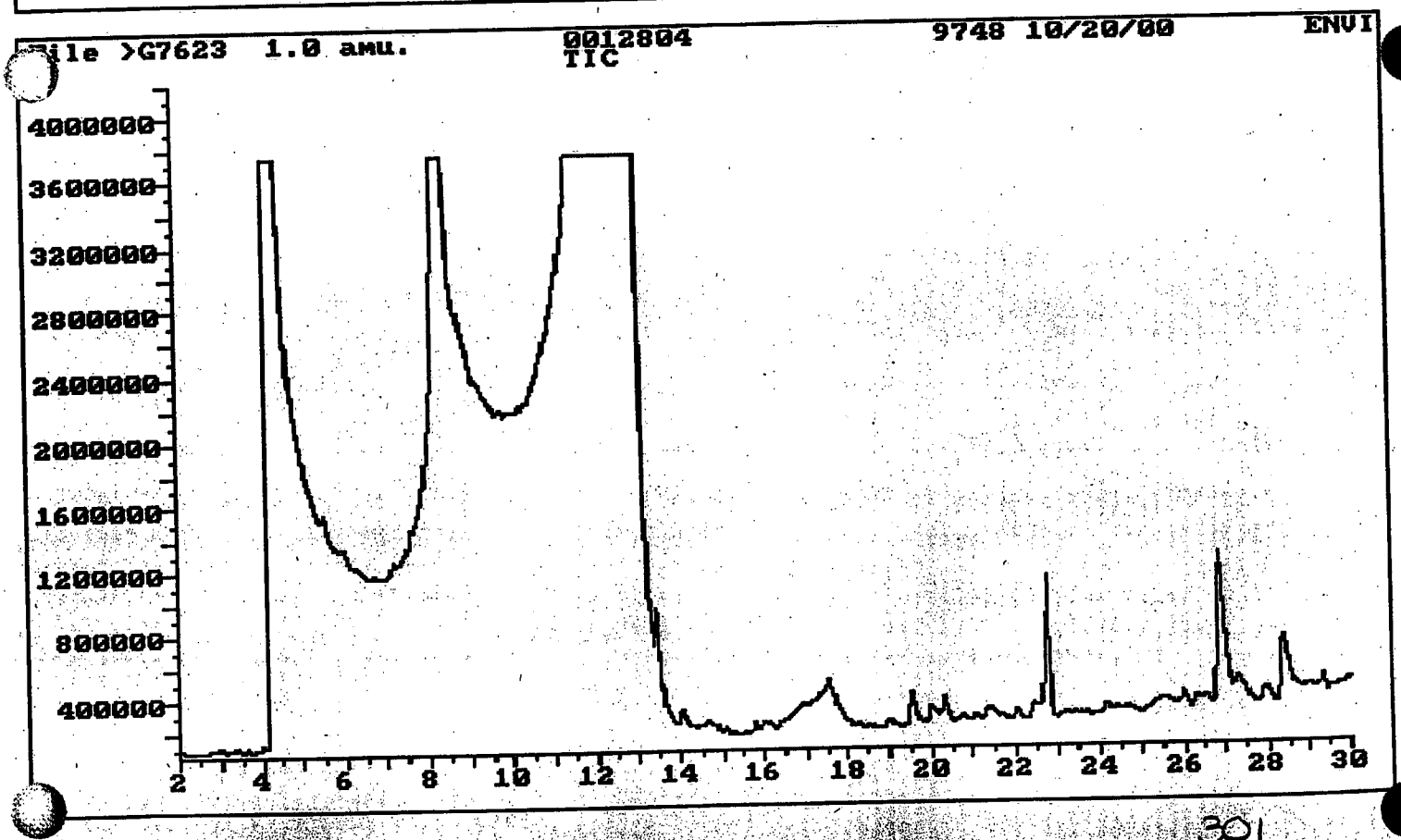
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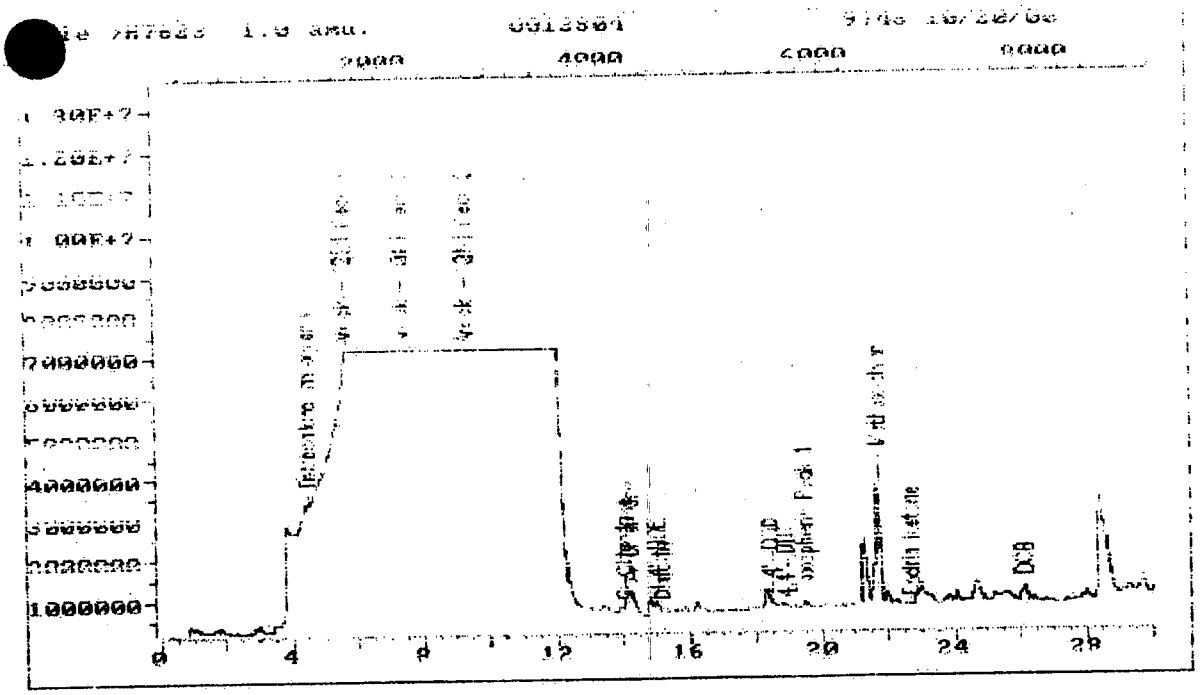
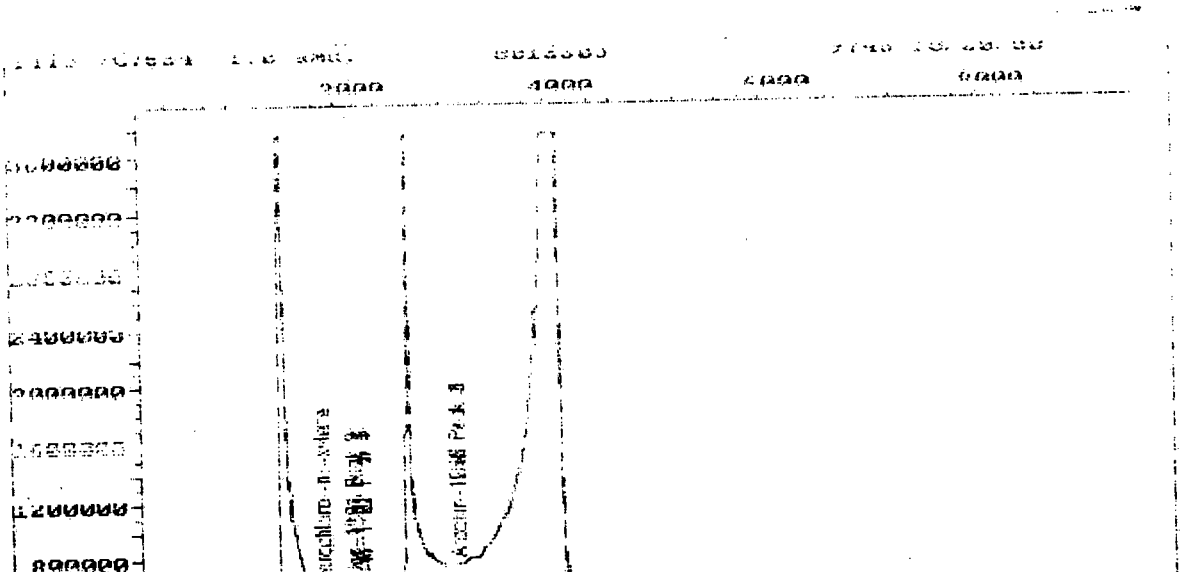
301



Data File: >H7623::G2 Quant Output File: ^H7623::QT
Name: 0012804 Instrument ID: H
Misc: 9748 10/20/00 ENVIROTACTICS S-2

Id File: IDPP8::G5
Title: PESTICIDES/PCB'S HP5890-H RTX-1701 0.53mm 1.0uL
Last Calibration: 000112 14:38 Last Qcal Time: 001020 12:19

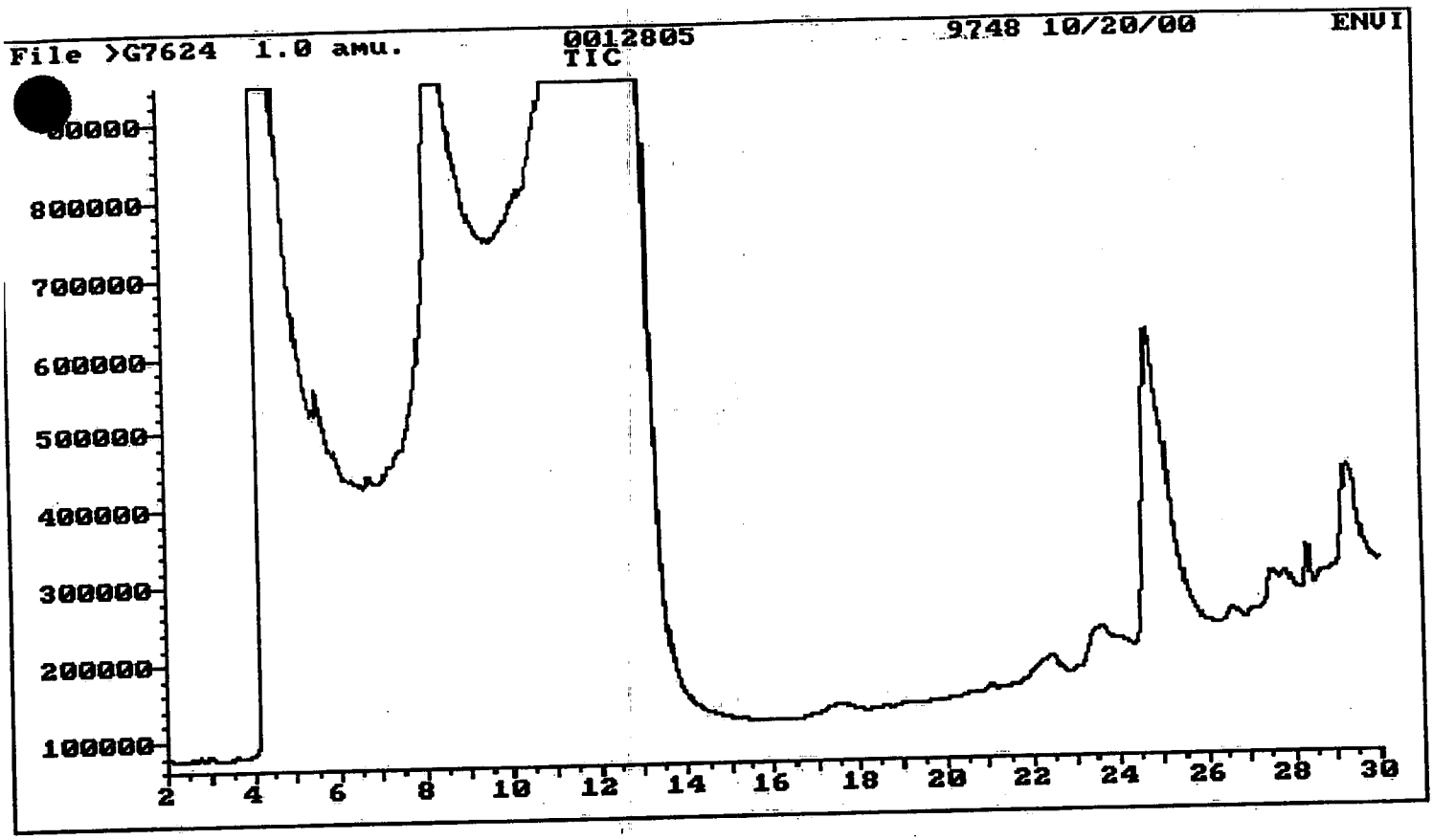
Operator ID: JEFF
Quant Time : 001021 06:27
Injected at: 001021 05:54



Data File: >G7624::G2 Quant Output File: ^G7624::QT
Name: 0012805 Instrument ID: G
Misc: 9748 10/20/00 ENVIROTACTICS S-3

Id File: IDPP7::G5
Title: PESTICIDES/PCB'S HP5890-G RTX-5 0.53mm 1.0uL
Last Calibration: 000112 14:36 Last Qcal Time: 001020 11:41

Operator ID: JEFF
Quant Time : 001021 06:30
Injected at: 001021 05:54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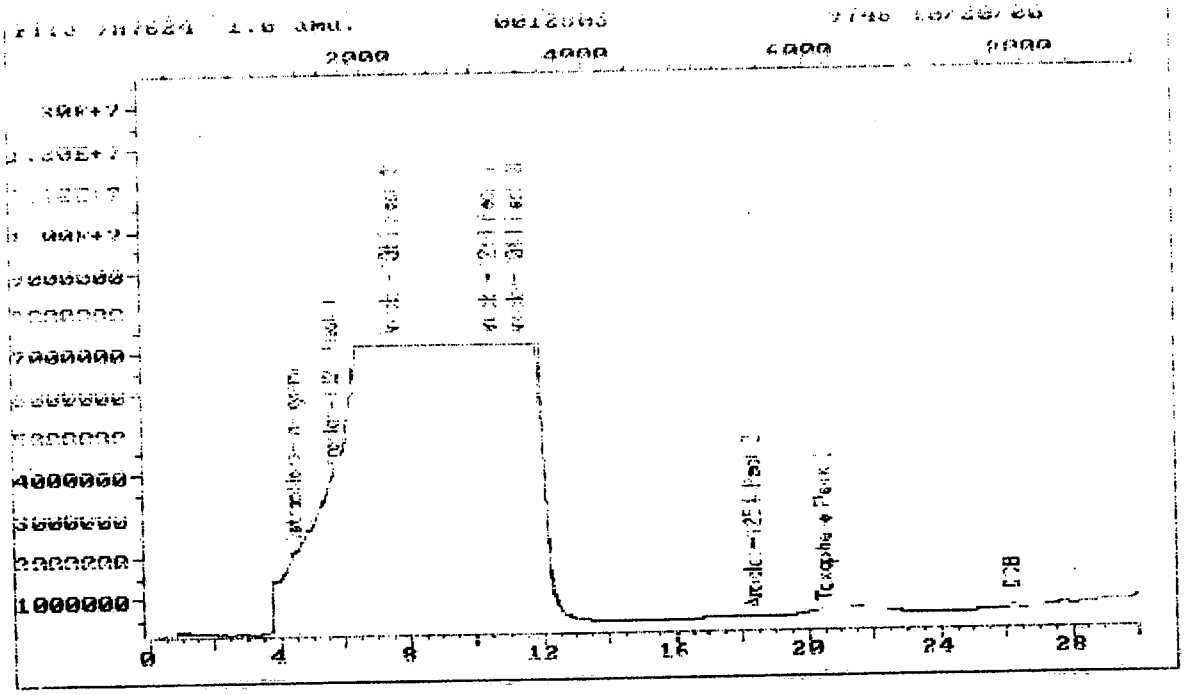
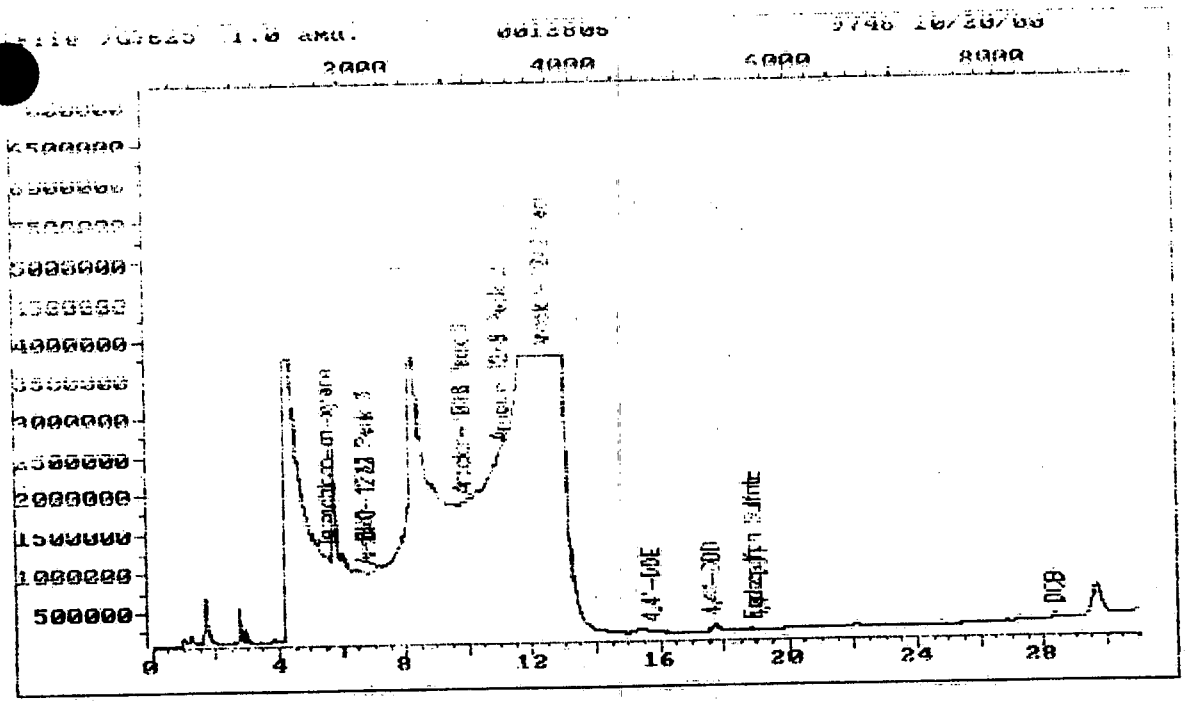
304



Data File: >H7624::G2 Quant Output File: ^H7624::QT
Name: 0012805 Instrument ID: H
Misc: 9748 10/20/00 ENVIROTACTICS S-3

Id File: IDPP8::G5
Title: PESTICIDES/PCB'S HP5890-H RTX-1701 0.53mm 1.0uL
Last Calibration: 000112 14:38 Last Qcal Time: 001020 12:19

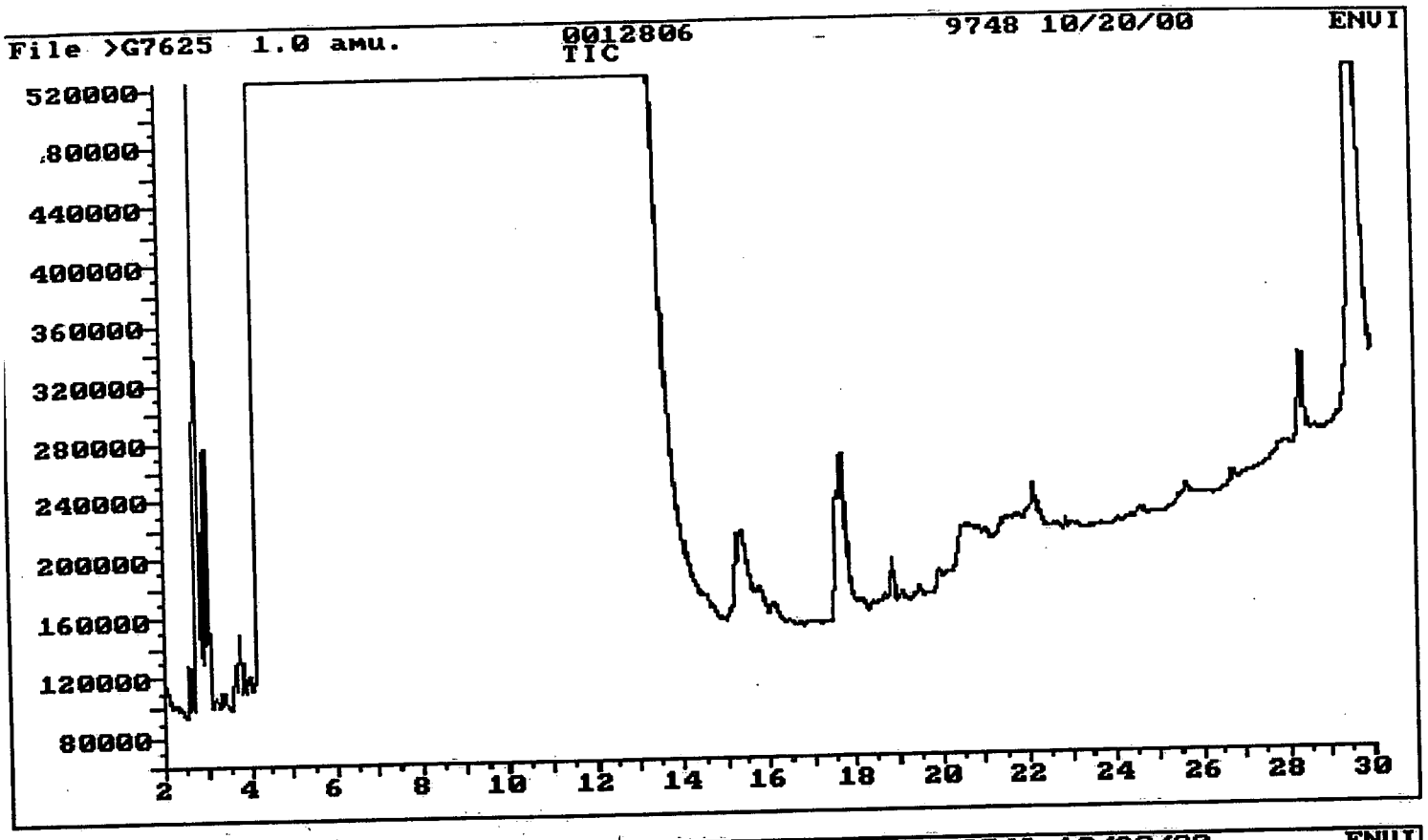
Operator ID: JEFF
Quant Time : 001021 07:05
Injected at: 001021 06:32



Data File: >G7625::G2 Quant Output File: ^G7625::QT
Name: 0012806 Instrument ID: G
Misc: 9748 10/20/00 ENVIROTACTICS S-4

Id File: IDPP7::G5
Title: PESTICIDES/PCB'S HP5890-G RTX-5 0.53mm 1.0uL
Last Calibration: 000112 14:36 Last Qcal Time: 001020 11:41

Operator ID: JEFF
Quant Time : 001021 07:08
Injected at: 001021 06:32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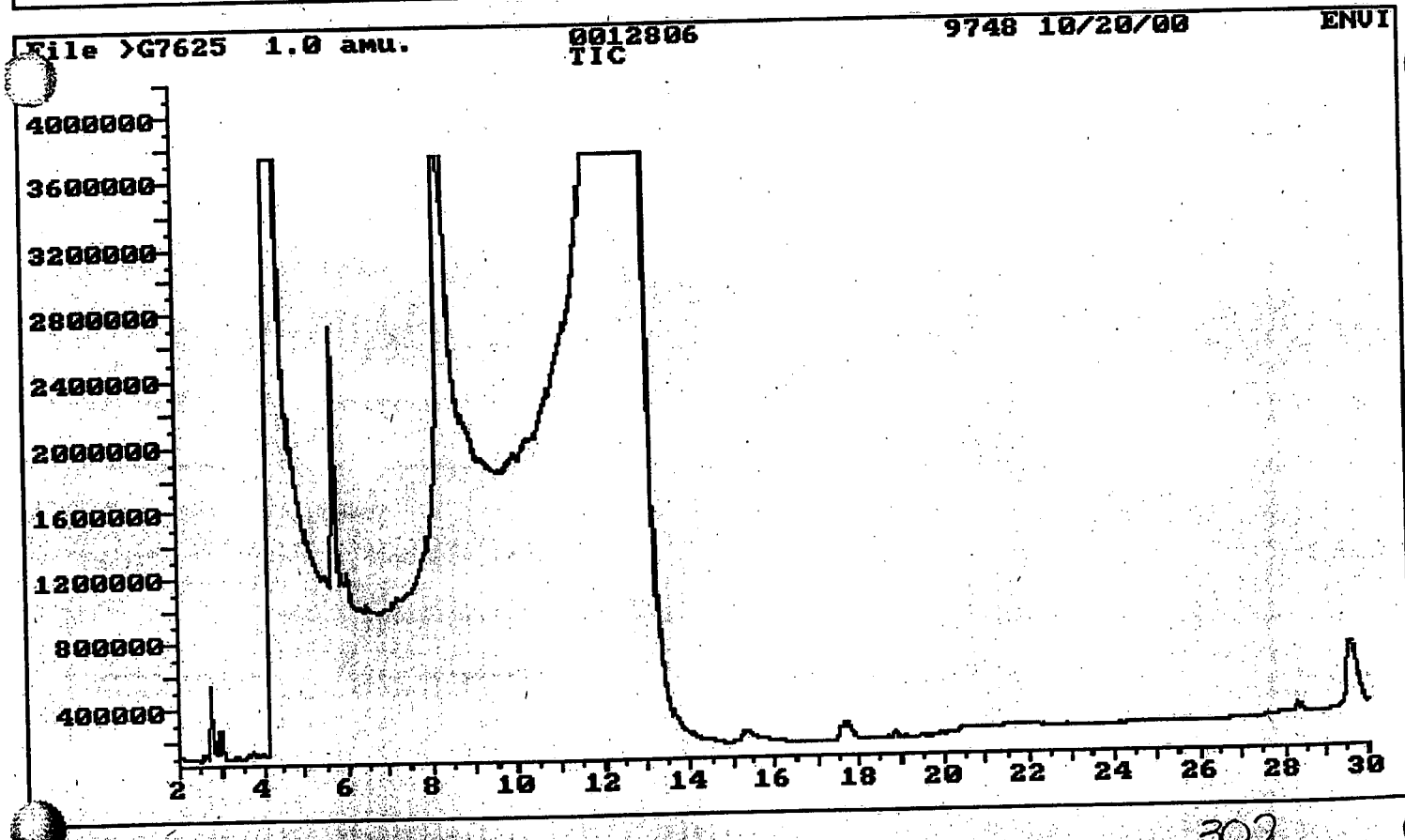
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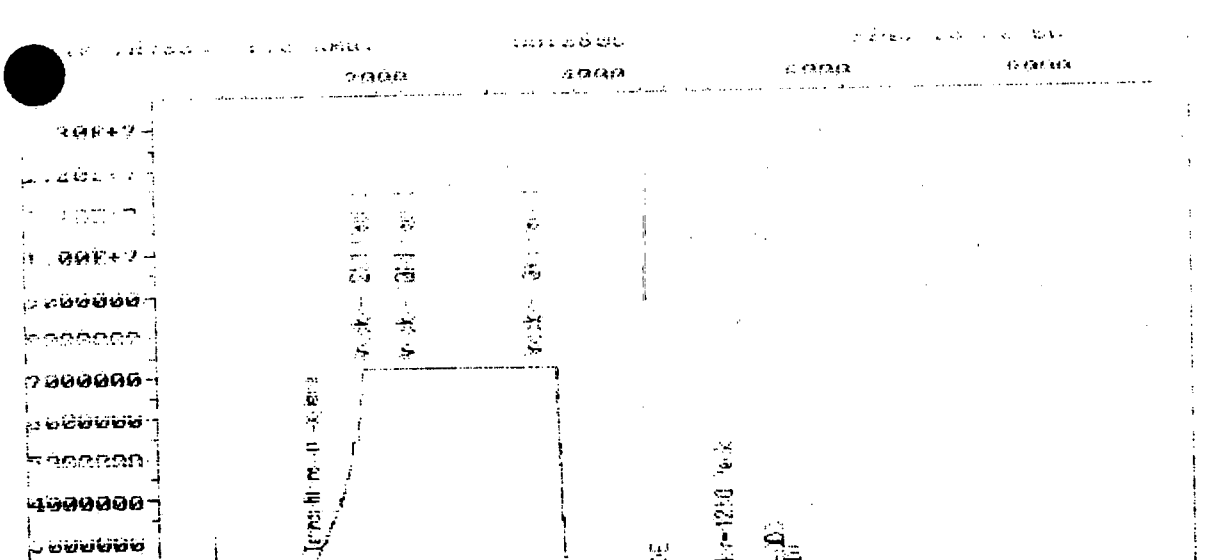
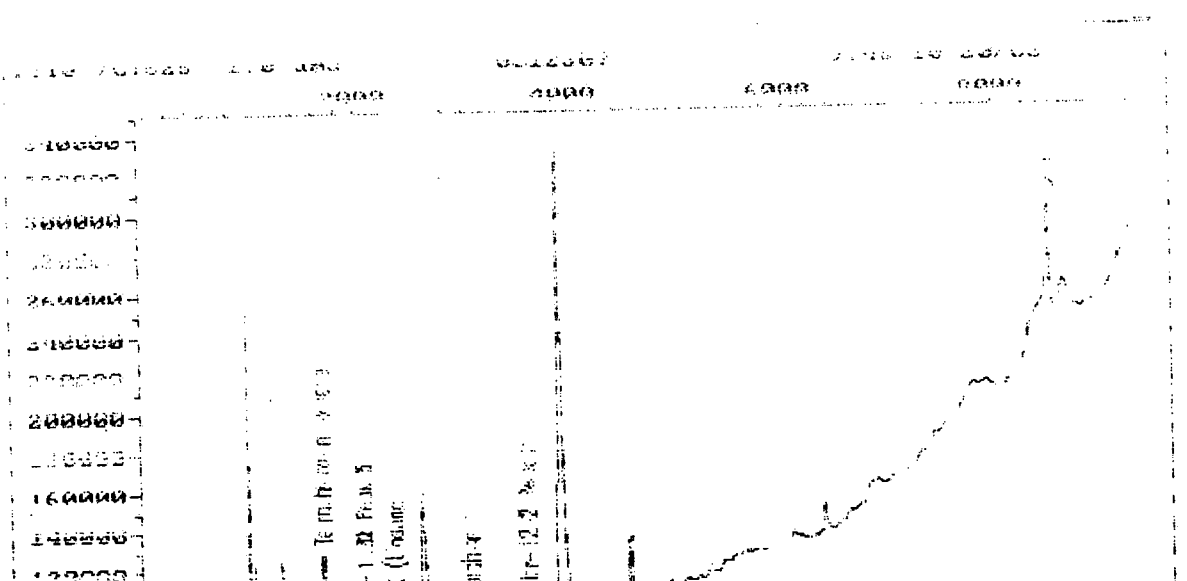


Data File: >H7625::G2 Quant Output File: ^H7625::QT
Name: 0012806 Instrument ID: H
Misc: 9748 10/20/00 ENVIROTACTICS S-4

Id File: IDPP8::G5
Title: PESTICIDES/PCB'S HP5890-II RTX-1701 0.53mm 1.0uL
Last Calibration: 000112 14:38 Last Qcal Time: 001020 12:19

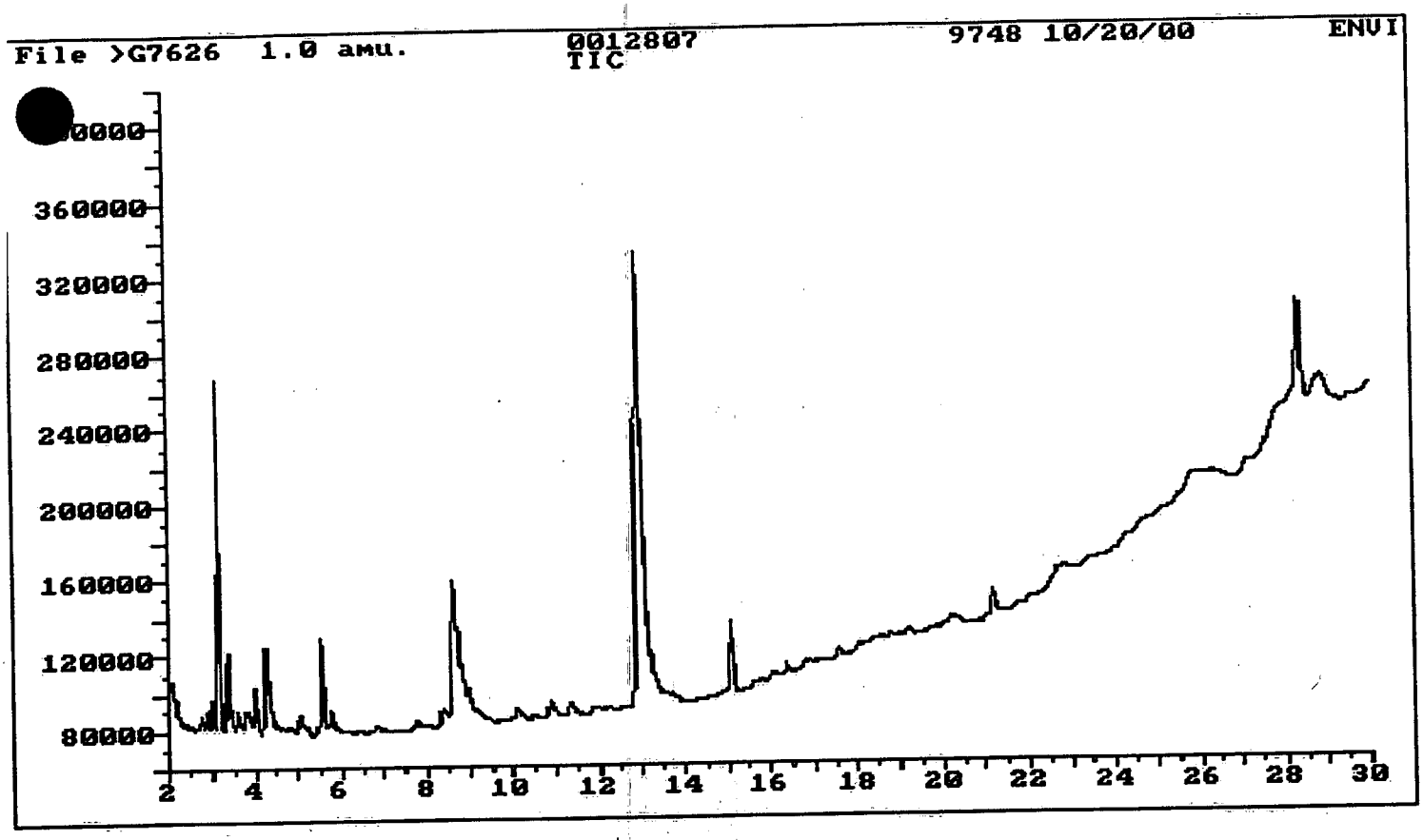
Operator ID: JEFF
Quant Time : 001021 07:42
Injected at: 001021 07:09



Data File: >G7626::G2 Quant Output File: ^G7626::QT
Name: 0012807 Instrument ID: G
Misc: 9748 10/20/00 ENVIROTACTICS S-5

Id File: IDPP7::G5
Title: PESTICIDES/PCB'S HP5890-G RTX-5 0.53mm 1.0uL
Last Calibration: 000112 14:36 Last Qcal Time: 001020 11:41

Operator ID: JEFF
Quant Time : 001021 07:45
Injected at: 001021 07:09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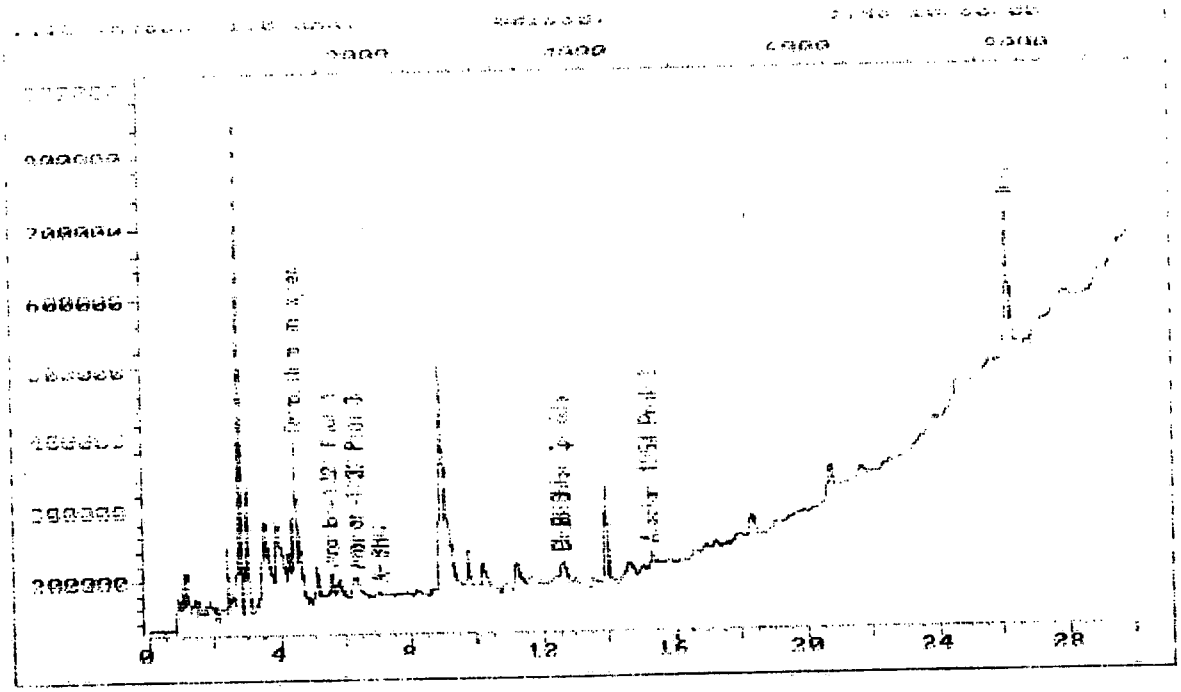
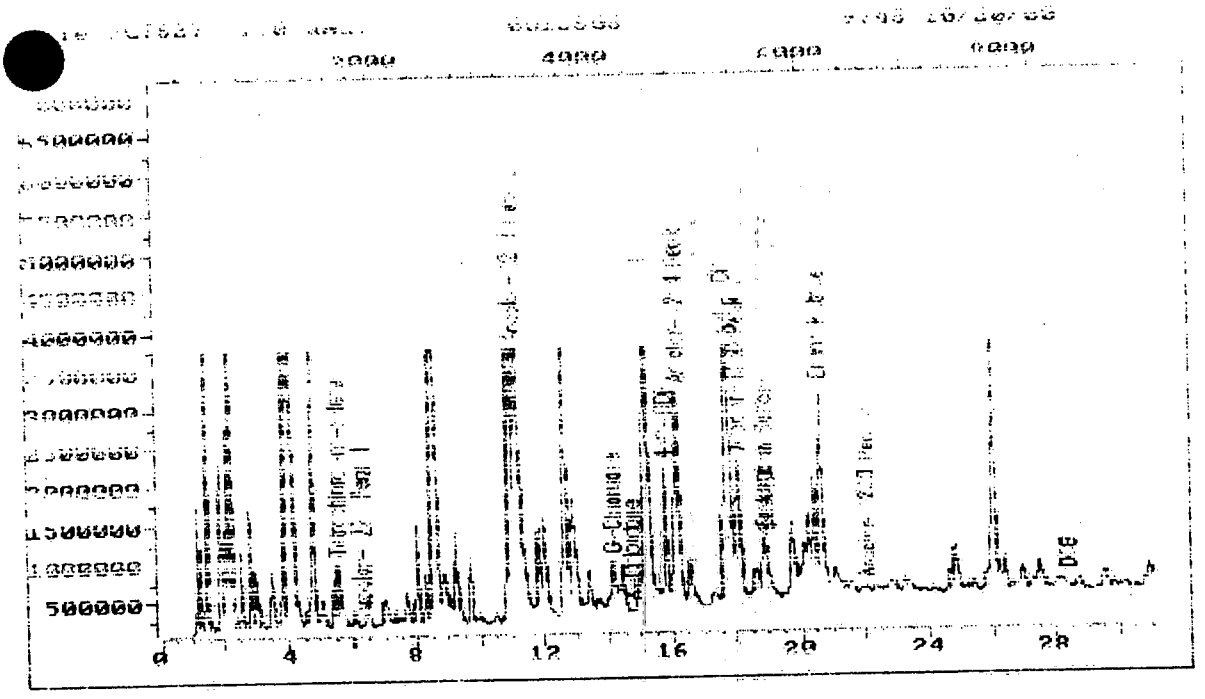


Data File: >H7626::G2 Quant Output File: ^H7626::QT
Name: 0012807 Instrument ID: H
Misc: 9748 10/20/00 ENVIROTACTICS S-5

Id File: IDPP8::G5
Title: PESTICIDES/PCB'S HP5890-H RTX-1701 0.53mm 1.0uL
Last Calibration: 000112 14:38 Last Qcal Time: 001020 12:19

Operator ID: JEFF
Quant Time : 001021 08:19
Injected at: 001021 07:46

4/81

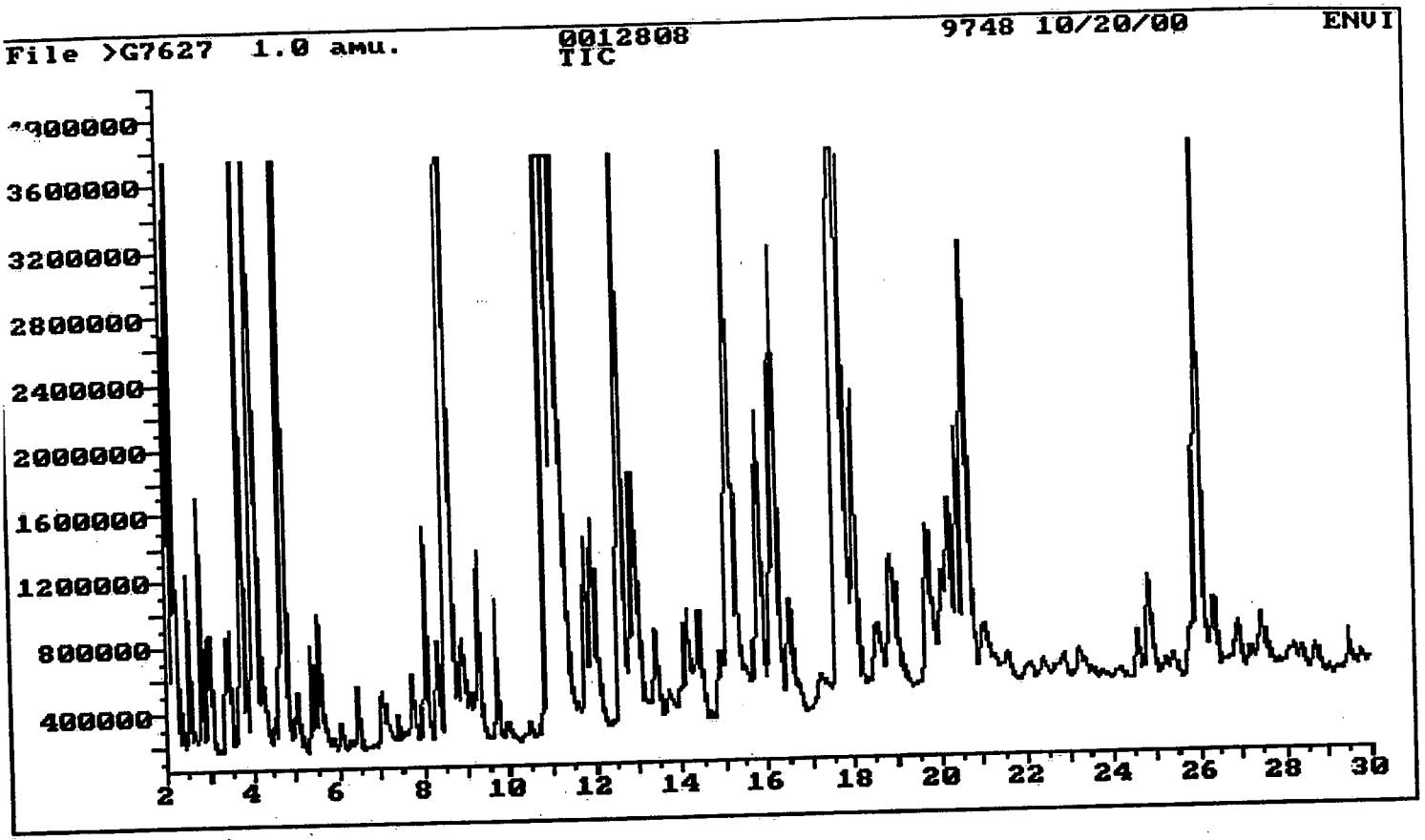


Data File: >G7627::G2 Quant Output File: ^G7627::QT
Name: 0012808 Instrument ID: G
Misc: 0748 10/20/00 ENVIROTACTICS S-6

Id File: IDPP7::G5
Title: PESTICIDES/PCB'S HP5890-G RTX-5 0.53mm 1.0uL
Last Calibration: 000112 14:36 Last Qcal Time: 001020 11:41

Operator ID: JEFF
Quant Time : 001021 08:22
Injected at: 001021 07:46

4/8-2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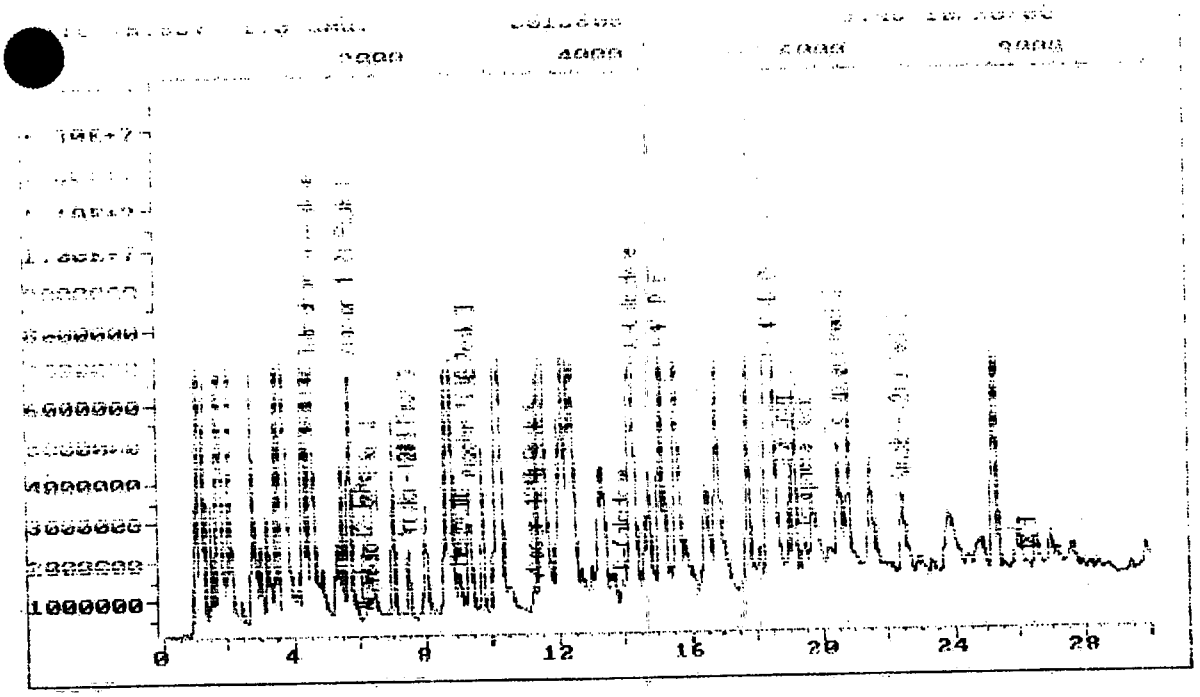
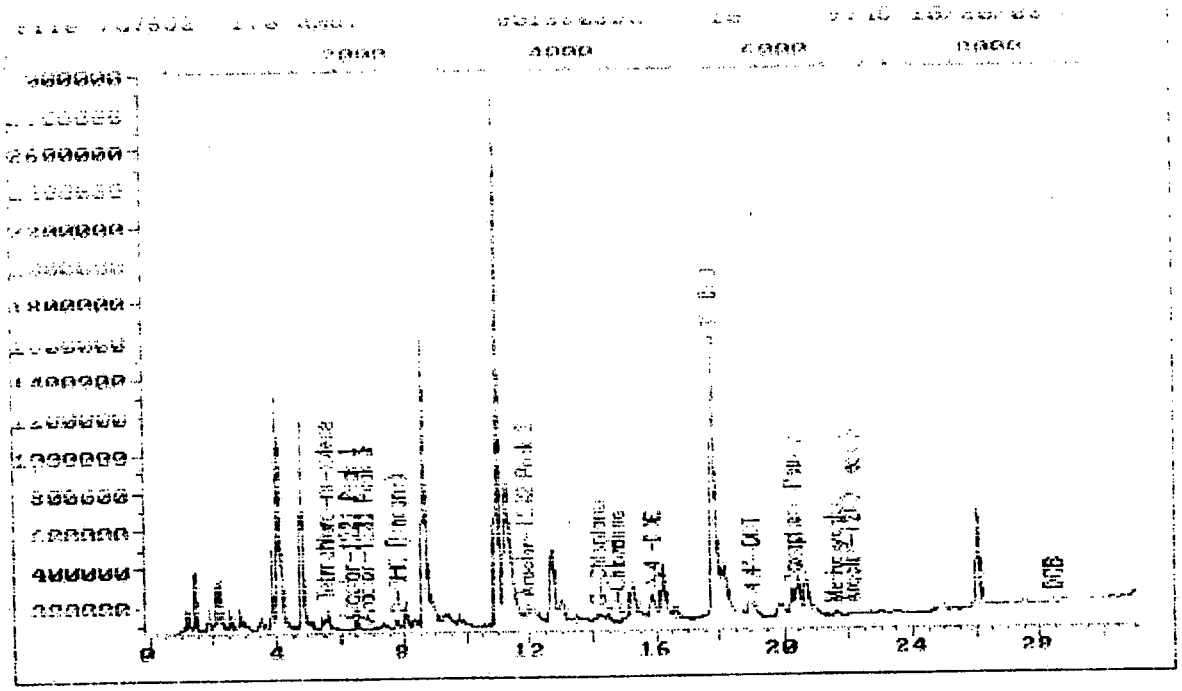


Data File: >H7627::G2 Quant Output File: ^H7627::QT
Name: 0012808 Instrument ID: H
Misc: 9748 10/20/00 ENVIROTACTICS S-6

Id File: IDPP8::G5
Title: PESTICIDES/PCB'S HP5890-H RTX-1701 0.53mm 1.0uL
Last Calibration: 000112 14:38 Last Qcal Time: 001020 12:19

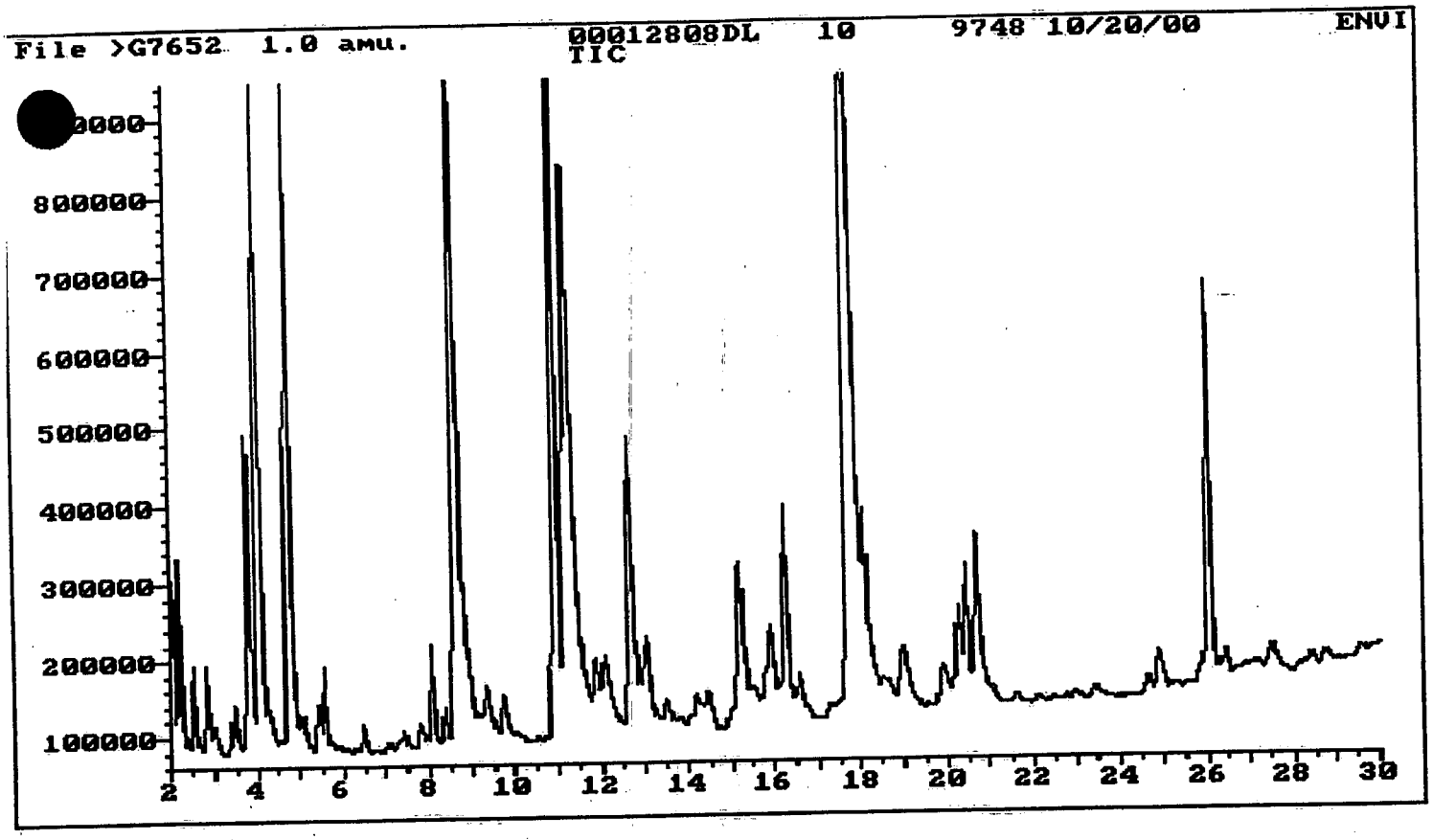
Operator ID: JEFF
Quant Time : 001021 08:56
Injected at: 001021 08:23



Data File: >G7652::G3 Quant Output File: ^G7652::QT
Name: 0012808DL 10 Instrument ID: G
Misc: 9748 10/20/00 ENVIROTACTICS S-6

Id File: IDPP7::G5
Title: PESTICIDES/PCB'S HP5890-G RTX-5 0.53mm 1.0uL
Last Calibration: 000112 14:36 Last Qcal Time: 001023 17:17

Operator ID: JEFF
Quant Time : 001024 09:56
Injected at: 001023 22:16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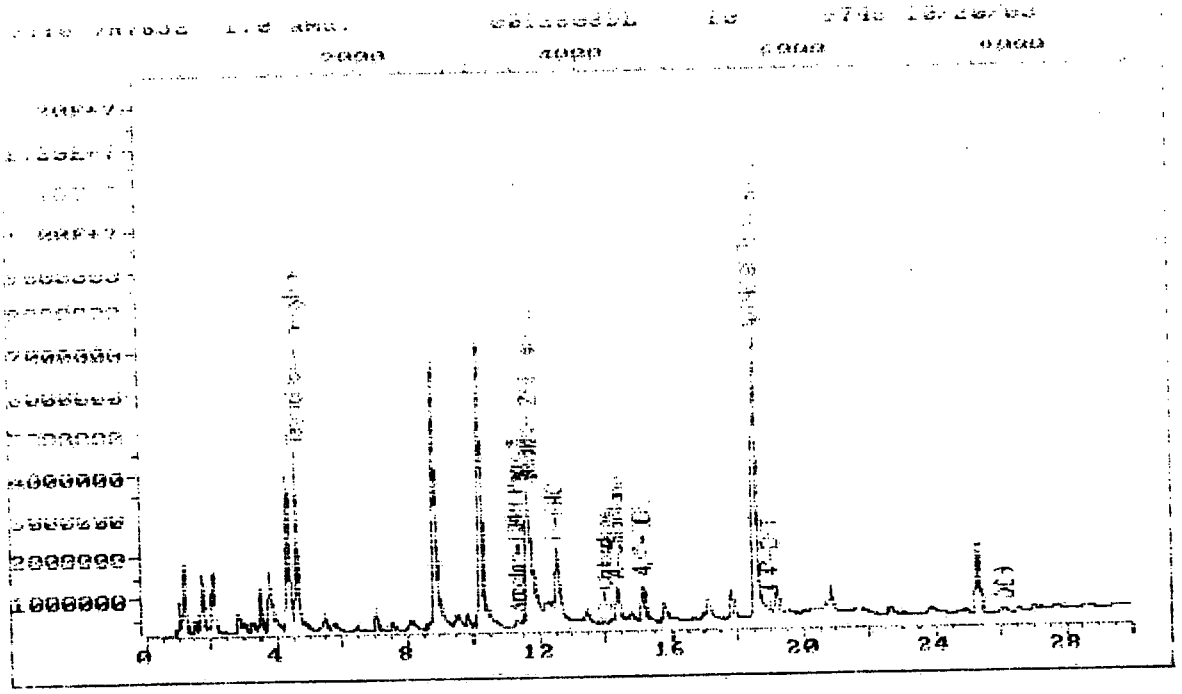
316



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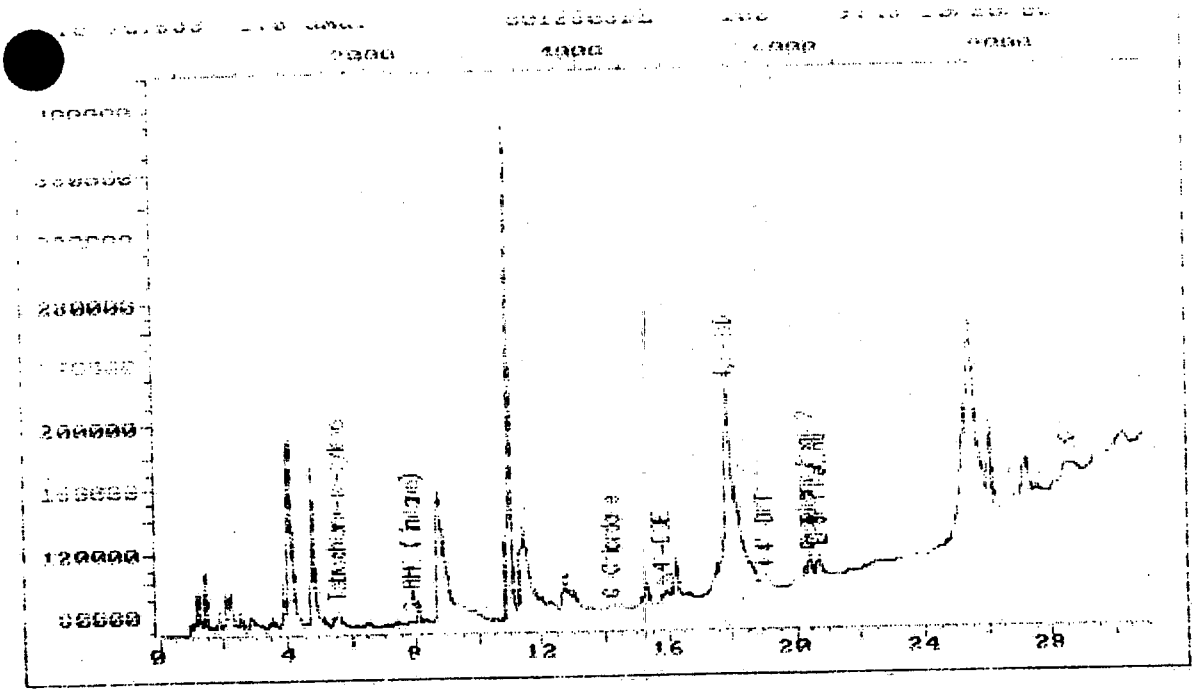
Name: 0012808DL 10 Instrument ID: H
Misc: 9748 10/20/00 ENVIROTACTICS S-6

Id File: IDPP8::G5
Title: PESTICIDES/PCB'S HP5890-H RTX-1701 0.53mm 1.0uL
Last Calibration: 000112 14:38 Last Qcal Time: 001023 17:54

Operator ID: JEFF
Quant Time : 001024 10:30
Injected at: 001023 22:53

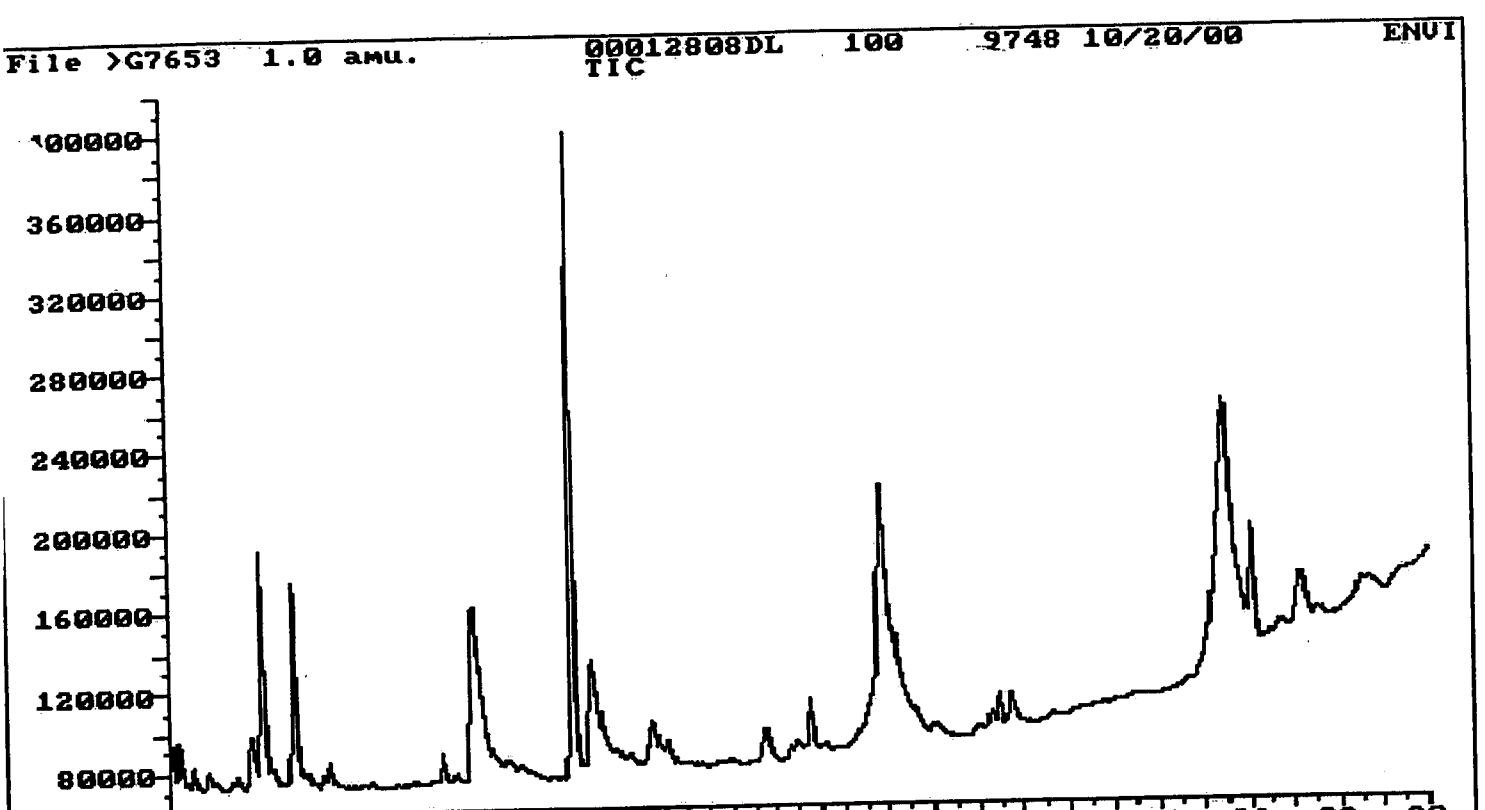


Data File: >G7653::G3 Quant Output File: ^G7653::QT
Name: 0012808DL 100 Instrument ID: G
Misc: 9748 10/20/00 ENVIROTACTICS S-6

Id File: IDPF7::G5
Title: PESTICIDES/PCB'S HP5890-G RTX-5 0.53mm 1.0uL
Last Calibration: 000112 14:36 Last Qcal Time: 001023 17:17

Operator ID: JEFF
Quant Time : 001024 09:58
Injected at: 001023 22:53

318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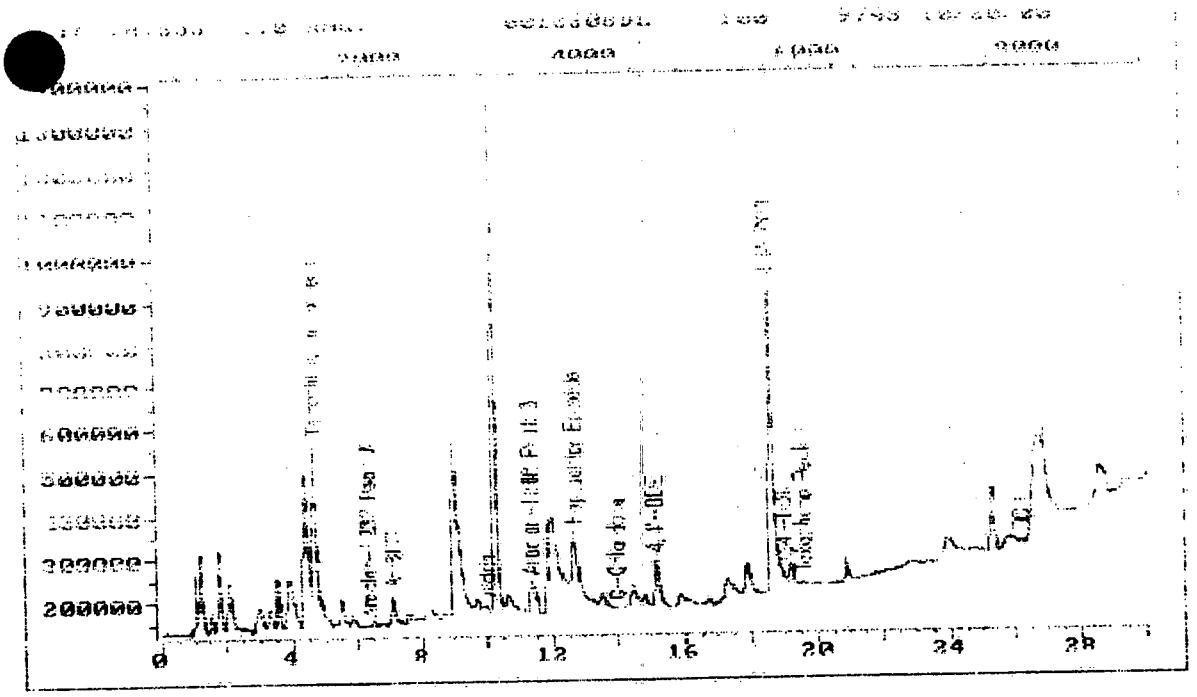
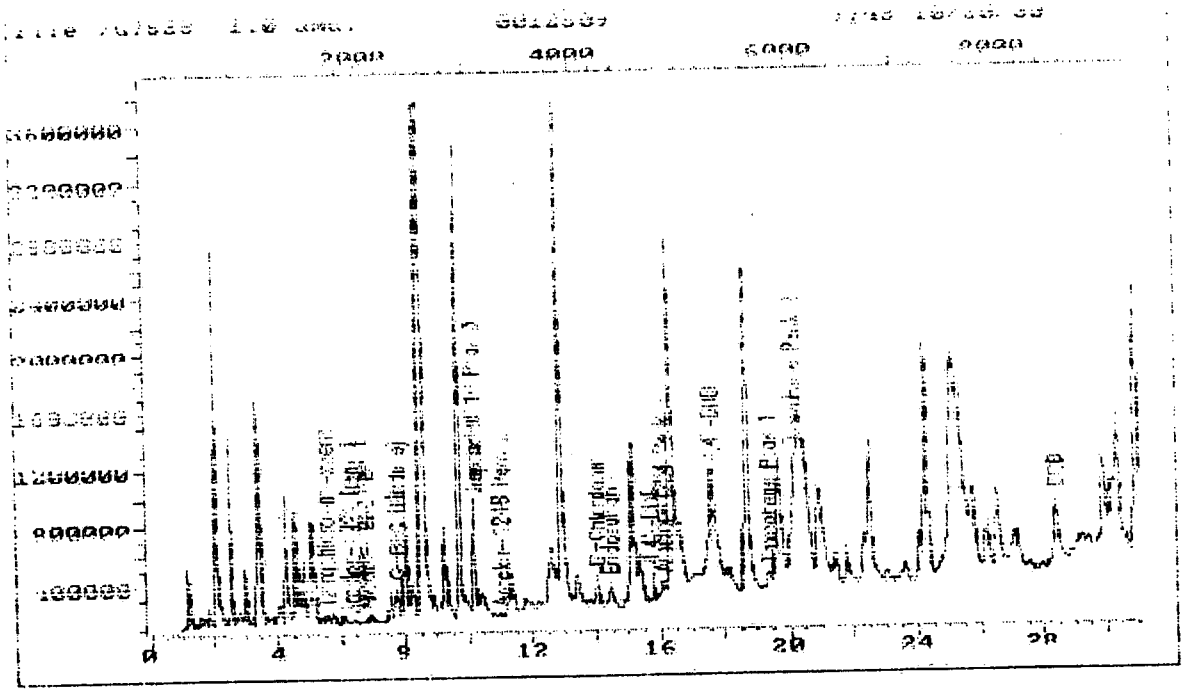
4/89



Data File: >H7653::G3 Quant Output File: ^H7653::QT
Name: 0012808DL 100 Instrument ID: H
Misc: 9748 10/20/00 ENVIROTACTICS S-6

Id File: IDPP8::G5
Title: PESTICIDES/PCB'S HP5890-H RTX-1701 0.53mm 1.0uL
Last Calibration: 000112 14:38 Last Qcal Time: 001023 17:54

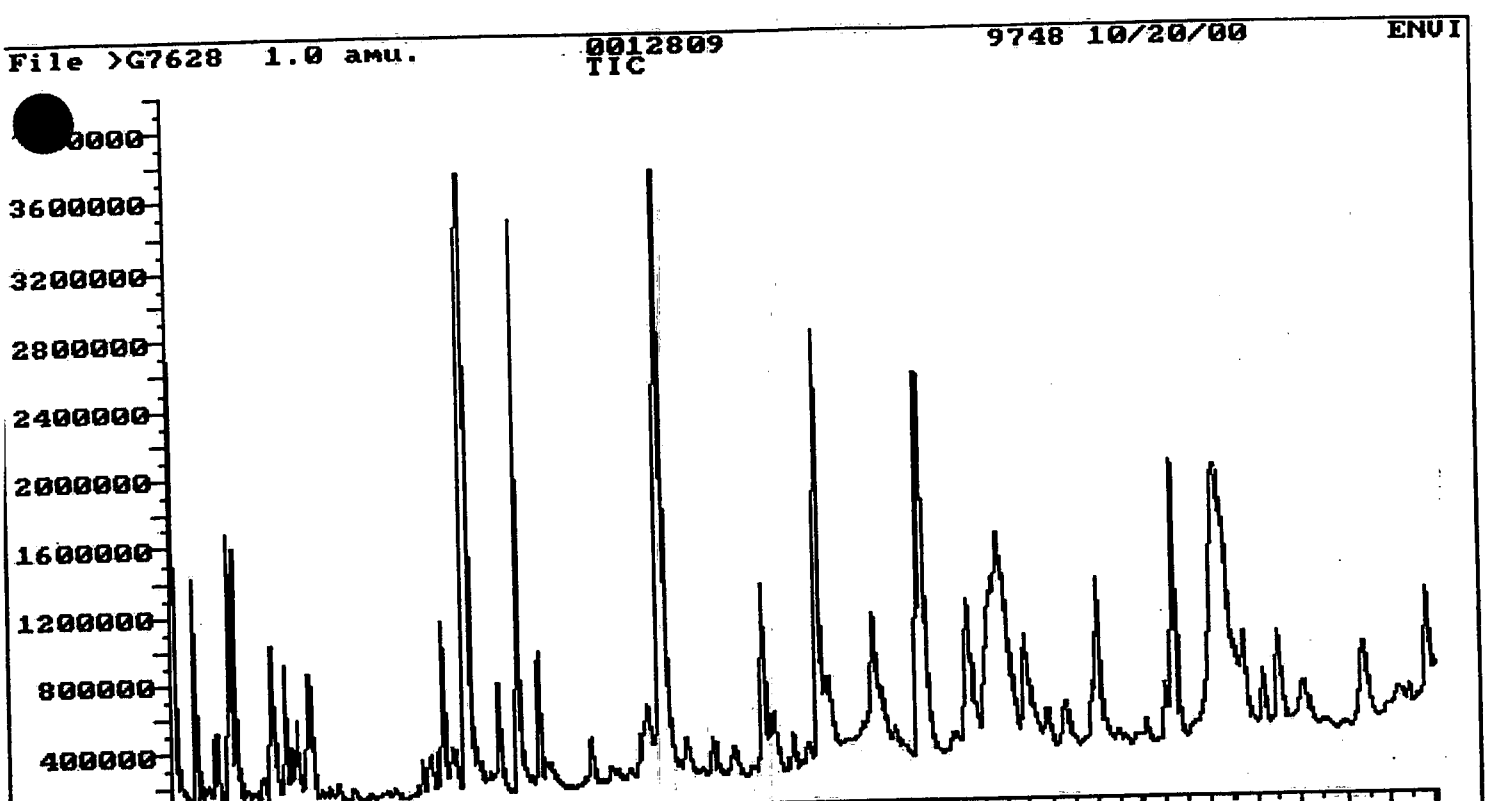
Operator ID: JEFF
Quant Time : 001024 10:32
Injected at: 001023 23:31



Data File: >C7628::G2 Quant Output File: ^C7628::QT
Name: 0012809 Instrument ID: G
Misc: 9748 10/20/00 ENVIROTACTICS S-7

Id File: IDPP7::G5
Title: PESTICIDES/PCB'S HP5890-G RTX-5 0.53mm 1.0uL
Last Calibration: 000112 14:36 Last Qcal Time: 001020 11:41

Operator ID: JEFF
Quant Time : 001021 08:59
Injected at: 001021 08:23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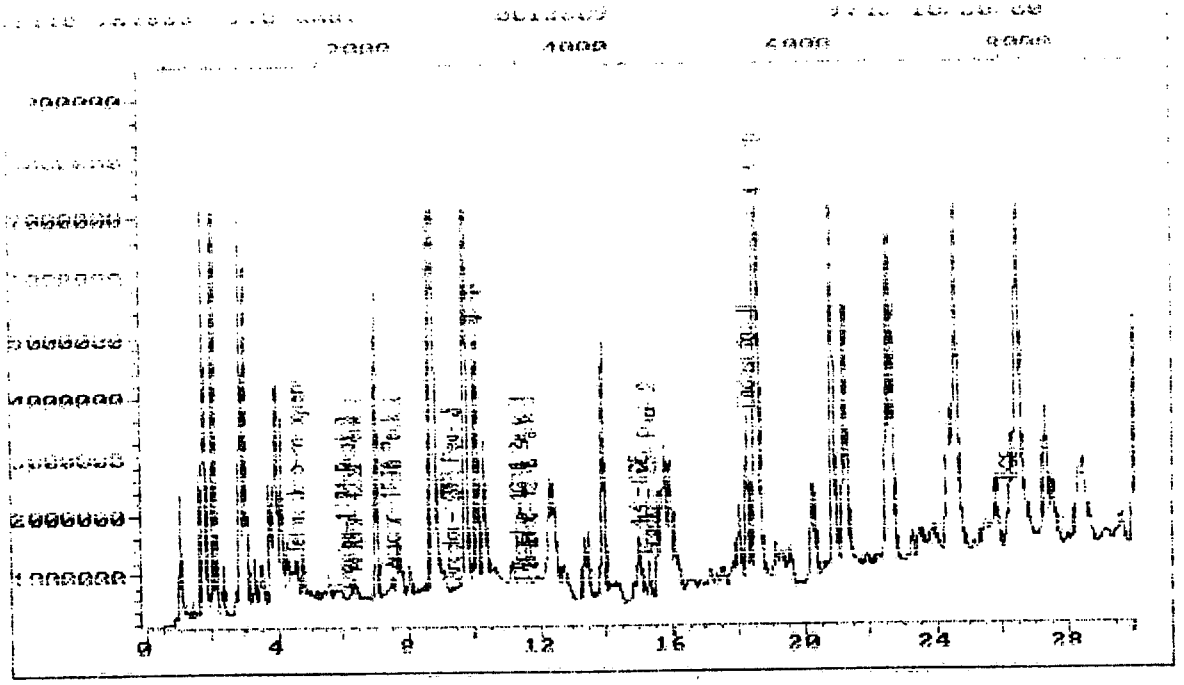
492



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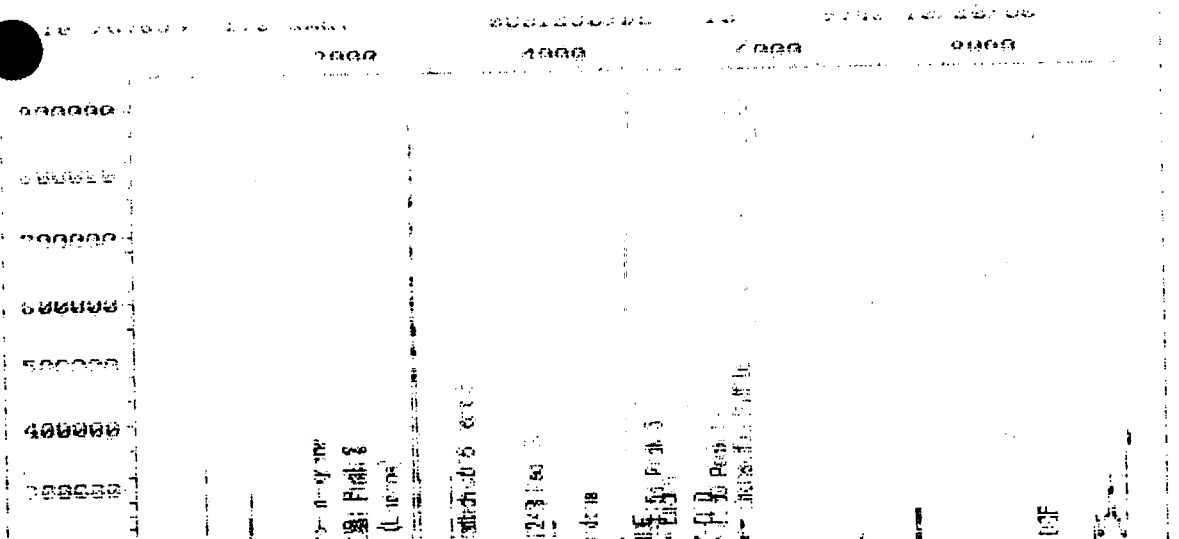
Name: 0012809 Instrument ID: H
Misc: 9748 10/20/00 ENVIROTACTICS S-7

Id File: IDPP8::C5
Title: PESTICIDES/PCB'S HP5890-H RTX-1701 0.53mm 1.0uL
Last Calibration: 000112 14:38 Last Qcal Time: 001020 12:19

Operator ID: JEFF
Quant Time : 001021 09:33
Injected at: 001021 09:00



Data File: >G7654::G3 Quant Output File: ^G7654::QT
Name: 00012809DL 10 Instrument ID: G
Misc: 9748 10/20/00 ENVIROTACTICS S-7

Id File: IDPP7::G5
Title: PESTICIDES/PCB'S HP5890-G RTX-5 0.53mm 1.0uL
Last Calibration: 000112 14:36 Last Qcal Time: 001023 17:17

Operator ID: JEFF
Quant Time : 001024 10:02
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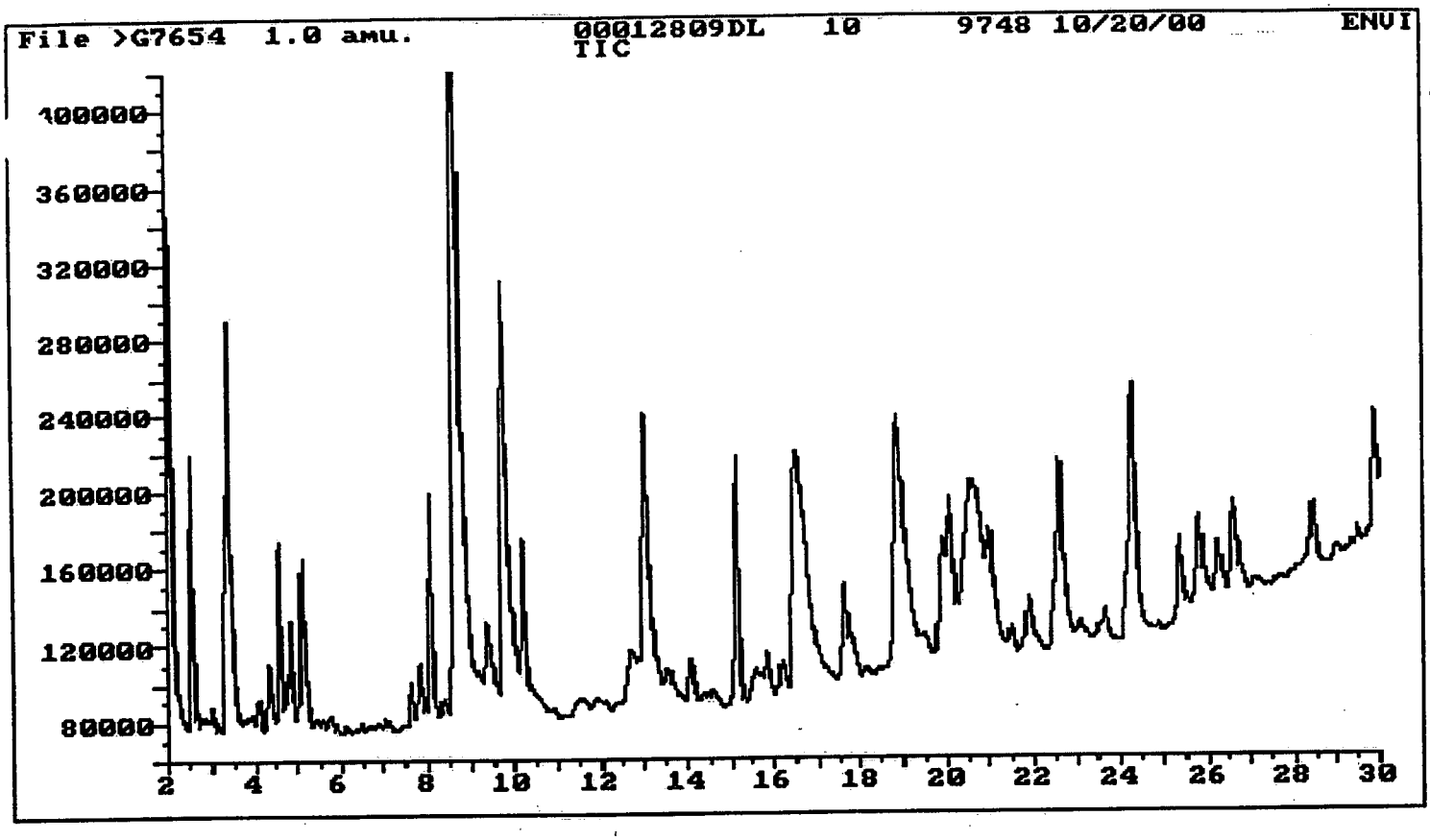
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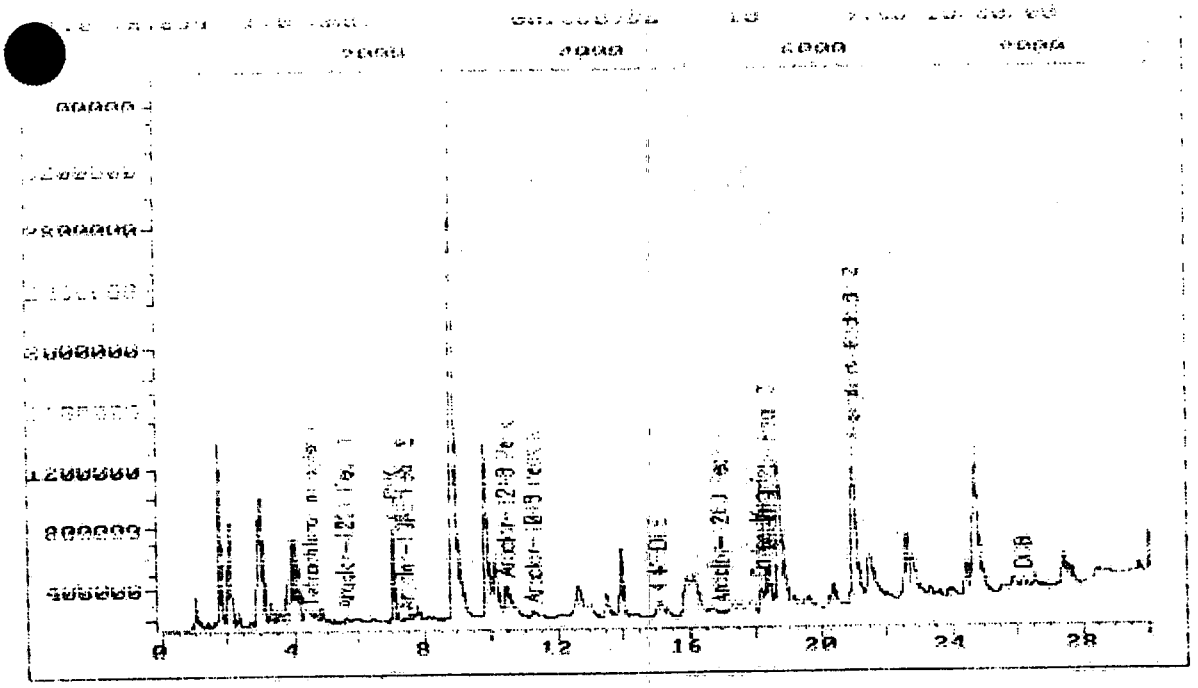
2 4 6 8 10 12 14 16 18 20 22 24 26 28 30

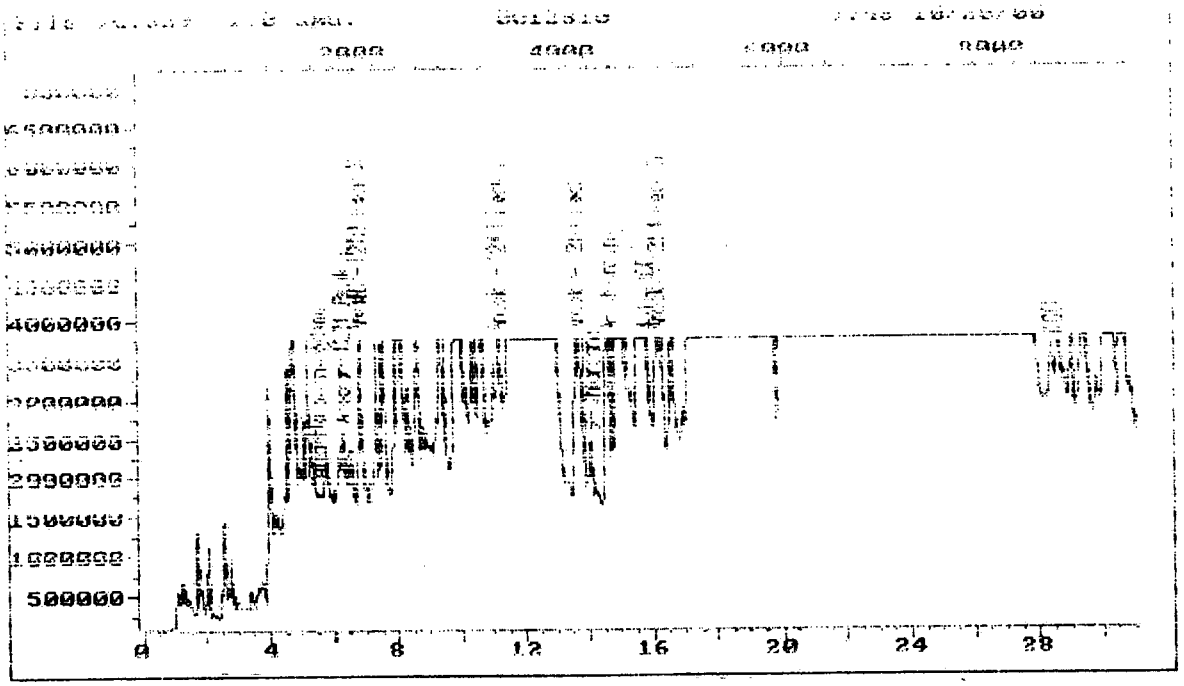


Data File: >H7654::G3 Quant Output File: ^H7654::QT
Name: 0012809DL 10 Instrument ID: H
Misc: 9748 10/20/00 ENVIROTACTICS S-7

Id File: IDPP8::G5
Title: PESTICIDES/PCB'S HP5890-H RTX-1701 0.53mm 1.0uL
Last Calibration: 000112 14:38 Last Qcal Time: 001023 17:54

Operator ID: JEFF
Quant Time : 001024 10:36
Injected at: 001024 00:08

326



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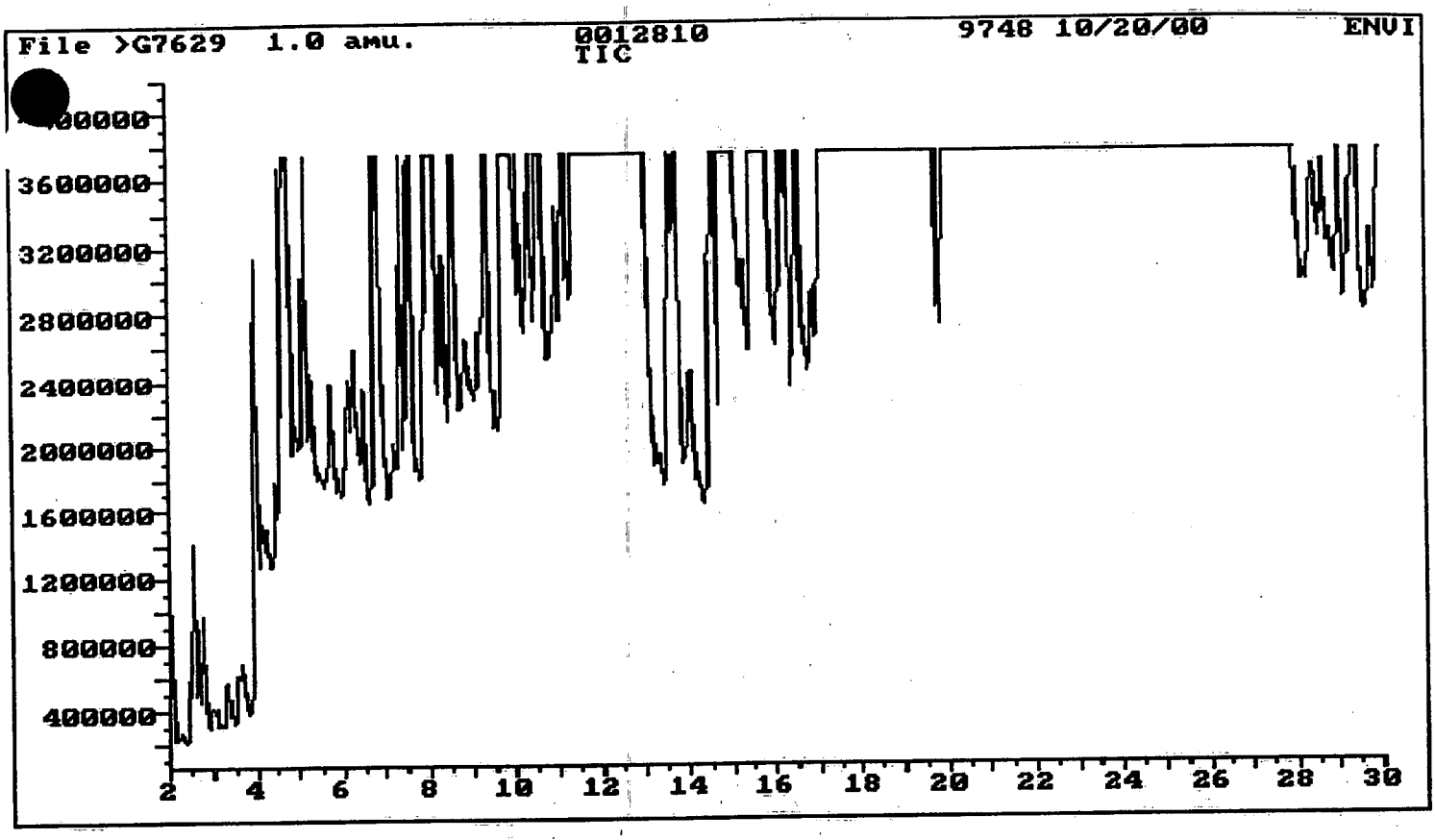
Misc: 9748 10/20/00 ENVIROTACTICS S-8

Id File: IDPP7::G5
Title: PESTICIDES/PCB'S HP5890-G RTX-5 0.53mm 1.0uL
Last Calibration: 000112 14:36 Last Qcal Time: 001020 11:41

Operator ID: JEFF
Quant Time : 001021 09:36
Injected at: 001021 09:00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0012810
TIC
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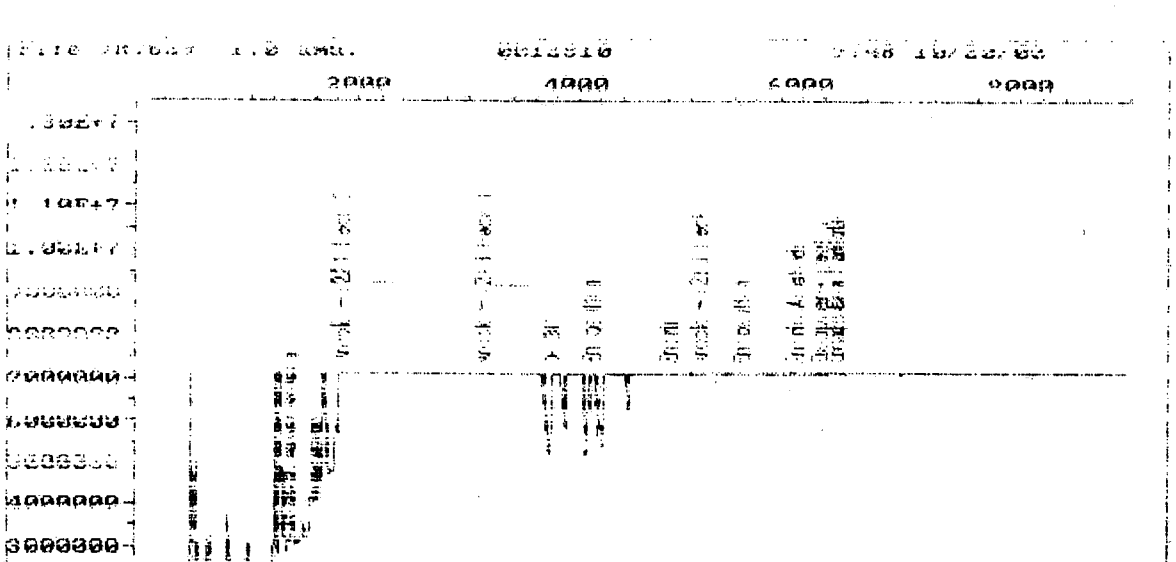
4/98



Data File: >H7629::G2 Quant Output File: ^H7629::QT
Name: 0012810 Instrument ID: H
Misc: 9748 10/20/00 ENVIROTACTICS S-8

Id File: IDPP8::G5
Title: PESTICIDES/PCB'S HP5890-H RTX-1701 0.53mm 1.0uL
Last Calibration: 000112 14:38 Last Qcal Time: 001020 12:19

Operator ID: JEFF
Quant Time : 001021 10:10
Injected at: 001021 09:38

ACCREDITED LABORATORIES, INC.

Implementing Tomorrow's Technology, Today™...

Analytical Data Report

for

Envirotactics
2517 Rt. 35, Bldg. D Suite 202
Manasquan, NJ 08736

Project: Orbis

Accredited Laboratories Case No.: 9867
Date Received: 10/26/00

Field ID	Laboratory Sample #
S-9	200013224
S-10	200013225

Accredited Laboratories, Inc. New Jersey Certification Number 12007. This data has been reviewed and accepted by:

Theodore C. Gaydos
Technical Director

(732) 541-2025

CORPORATE OFFICES
20 Pershing Avenue
Carteret, New Jersey 07008

FAX (732) 541-1383

Printed on RECYCLED paper made with 20% post consumer waste

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Total Petroleum Hydrocarbons:	48
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ACCREDITED LABORATORIES, INC.
20 PERSHING AVENUE
CARTERET, NEW JERSEY 07008
PHONE (732) 541-2025 FAX (732) 541-1383

CHAIN OF CUSTODY FORM

STATE AGENCY (NJ) NY PA CT DE OTHER ____

CLIENT	ENVIROTACTICS INC	PROJECT	ORBIS
DDRESS	25TH HWY 25 BLDG 2	CONTACT	CHRIS NEUFFER
CITY	MANASQUAN	PHONE	732-292-0100
STATE	NJ ZIP 08736	FAX	732-292-2808

ALI SAMPLE #	FIELD ID	*C	**M	DATE / TIME SAMPLED	SAMPLE DESCRIPTION	ANALYSIS
0013224	S-9	2	S	10/24/00 4:30		TPH & HOLD PAH
0013225	S-10	3	S	10/24/00 5:30		TPH VOHO & HOLD PAH

*M = MATRIX: A = AQUEOUS, S = SOIL, C = SLUDGE, P = POTABLE WATER, O = OIL, F = FILTER, K = SOLID, X = OTHER

*C = NO. CONTAINERS TURNAROUND: STANDARD FAX (If Blank, Std. 3 weeks)

DELIVERABLES (circle one): STD (REDUCED) FULL OTHER ____

RELINQUISHED BY PRINT	RELINQUISHED BY SIGN	RECEIVED BY PRINT	RECEIVED BY SIGN	ORGANIZATION	DATE	TIME	REASON
CHRIS NEUFFER	[signature]	JWeber	[signature]	ALI	10/26/00	14:20	Trans
JWeber	[signature]	Jacob Miller	[signature]	ALI	[illegible]	[illegible]	Analysis

PERSON(S) ASSUMING RESPONSIBILITY FOR SAMPLING: PRINT: CHRIS NEUFFER SIGN: [signature]

COMMENTS	HAZSITE	ALI QUOTE#	
		ALI CASE#	9867
		P.O.#	

502

Accredited Laboratories, Inc.

INTERNAL CHAIN OF CUSTODY

Laboratory Person Breaking Field Seal on Sample Shuttle & Accepting Responsibility for Sample — Laboratory: Accredited Laboratories, Inc. Location: Carteret, N.J.

Name: JASON MILLER Title: Sec

Field Sample Seal No. None Date Broken: __/__/__ Military Time Seal Broken _____

Case No. 9867 ✓ Check if No Seal on Sample Shuttle.

Field #	Laboratory #	Test Name	Date Sampled	Date Received
S-10	200013225	MEVO10	10/24/00	10/26/00

DATE	TIME	RELINQUISHED BY	RECEIVED BY	PURPOSE OF CHANGE OF CUSTODY
11/2/00		Printed Name JASON MILLER	Printed Name W. LLORENTE	ANALYSIS
		Signature	Signature	
		Printed Name	Printed Name	
		Signature	Signature	
		Printed Name	Printed Name	
		Signature	Signature	
		Printed Name	Printed Name	
		Signature	Signature	
		Printed Name	Printed Name	
		Signature	Signature	
		Printed Name	Printed Name	
		Signature	Signature	
		Printed Name	Printed Name	
		Signature	Signature	

FORM: 29ICOC

2

Accredited Laboratories, Inc.

INTERNAL CHAIN OF CUSTODY

Laboratory Person Breaking Field Seal on Sample Shuttle & Accepting Responsibility for Sample — Laboratory: Accredited Laboratories, Inc. Location: Carteret, N.J.

Name: JASON MILLER Title: Sao

Field Sample Seal No. None Date Broken: __/__/__ Military Time Seal Broken _____

Case No. 9867 __ Check if No Seal on Sample Shuttle.

Field #	Laboratory #	Test Name	Date Sampled	Date Received
S-9	200013224	TPHC	10/24/00	10/26/00
S-10	200013225	TPHC	10/24/00	10/26/00

DATE	TIME	RELINQUISHED BY	RECEIVED BY	PURPOSE OF CHANGE OF CUSTODY
10/27/00	15:00	Printed Name JASON MILLER Signature	Printed Name RBAUTISTA Signature RB	EXTRACTION
10/27/00	16:00	Printed Name R. BAUTISTA Signature RB	Printed Name JASON MILLER Signature	COLD STORAGE
		Printed Name Signature	Printed Name Signature	
		Printed Name Signature	Printed Name Signature	
		Printed Name Signature	Printed Name Signature	
		Printed Name Signature	Printed Name Signature	
		Printed Name Signature	Printed Name Signature	

FORM: 291COC

3

METHODOLOGY SUMMARY

Volatile Organics - EPA 8260 (soil)

An inert gas is purged through a 5 g sample at elevated temperature. Alternatively the soil is extracted with methanol. A portion of extract is spiked into a purging vessel and purged by an inert gas. The vapor is swept through a sorbent column where the purgeables are trapped. After purging is completed, the sorbent column is heated and back-flushed with the inert gas to desorb the purgeables onto a GC column. The GC is temperature programmed to separate the purgeables which are then detected with a mass spectrometer.

Petroleum Hydrocarbons - Modified EPA 418.1 (soil)

A 30 gram portion of soil is extracted with fluorocarbon 113. Interferences are removed with silica gel adsorbent. Infrared analysis of the extract is performed by direct comparison with standards.

Date: 10/26/00 ACCREDITED LABORATORIES, INC. Time: 15:16:52

ORGANIC ANALYSIS LABORATORY CHRONICLE

FAX TPHC 10/31; PAH CONTINGENT; DISK

Client: Envirotactics Test Date Due: 11/07/00
Fax Data Due: **11/07/00** Hard Copy Due: **11/07/00**

Client Project Name: Orbis

Date Sampled:10/24/00 Date Received:10/26/00 Report Package: Reduced

QC#:_____

Test: MEVO10
Test Description:Methanol Preserved Volatiles+10 (MEVO10)

By Method: _____

SAMPLE IDENTIFICATION			Mtx	EXTRACTION			ANALYSIS			TIC FLAG
Field#	Case#	Sample#		Date	Time	Init	Date	Time	Init	
S-10	9867	200013225	S				11/02/00	03:03	RA.	

Reviewed by: _____ Date: 11/7/00

Abreviations:Sample Matrix:
Mtx:A=Aqueous:S=Soil:O=Oil:K=Solid:F=Filters:P=Potable Water:G=Sludge
X=Other RPT:Report01

5

Date: 10/26/00 ACCREDITED LABORATORIES, INC. Time: 15:16:52

ORGANIC ANALYSIS LABORATORY CHRONICLE

FAX TPHC 10/31; PAH CONTINGENT; DISK

Client: Envirotactics Fax Data Due: **11/07/00** Test Date Due: 10/31/00
Hard Copy Due: **11/07/00**
Client Project Name: Orbis Case #: 9867

Date Sampled:10/24/00 Date Received:10/26/00 Report Pkg: Reduced

Test: TPHC Sample Matrix: S
Test Description:Total Petroleum Hydrocarbons (TPHC)

Mtx:A=Aqueous:S=Soil:O=Oil:K=Solid By Method: _____
:F=Filters:P=Potable Water:G=Sludge:X=Other

SAMPLE IDENTIFICATION		ANALYTICAL DATA			LABORATORY CHRONICLE EXTRACTION		ANALYSIS		
Field#	Sample#	RESULT	MDL	UNITS	DATE	TIME	DATE	TIME	INIT
S-9	200013224	ND	45	MG/KG	10-27-00		10-27-00		RB
S-10	200013225	"	48	"	"		"		"

QUALITY CONTROL:

Method Blank : _____
Mean Percent Spike Recovery : _____
Relative Percent Difference of Duplicate Spikes : _____

Reviewed by: _____ Date: 10-31-00 RPT:Report03

6

CONFORMANCE/NON-CONFORMANCE SUMMARY

Accredited Labs received 2 soil samples (Project: Orbis; ALI Case #9867) from Envirotactics, Inc. on 10/26/00 for the analyses of Volatile Organics +10 and Total Petroleum Hydrocarbons.

All analyses were performed within the required holding time.

All analyses were reported on a dry weight basis.

As of 11/10/00, no further analysis is required.

In the Volatile Organic analysis, the MDL levels were elevated due to the methanol preservation technique used at the time of sampling.

"The laboratory has reviewed the quality assurance and quality control measurements for the sample analysis stated above."

Theodore C. Gaydos
Technical Director

State of New Jersey
Department of Environmental Protection

Certifies That

ACCREDITED LABORATORIES INCORPORATED

LABORATORY CERTIFICATION NO. 2007

Has Been Approved Under the requirements of the

Regulations Governing The Certification Of
Laboratories And Environmental Measurements N.J.A.C. 7:18 et. seq.

Hereby approved as a

State Certified Environmental Laboratory

To perform the analyses as indicated on the Annual Certified Parameter List
which must accompany this certificate to be valid

Expiration Date June 30, 2001

Joseph F. Aiello, Chief
Office of Quality Assurance

THIS CERTIFICATE IS TO BE CONSPICUOUSLY DISPLAYED AT THE LABORATORY WITH THE ANNUAL CERTIFIED PARAMETER LIST IN A LOCATION ON THE PREMISES VISIBLE TO THE PUBLIC.

509

ACCREDITED LABORATORIES, INC.
VOLATILE ORGANIC ANALYSIS DATA

[redacted]UMBER	9867	MATRIX	Soil
[redacted] NUMBER	0013225	DILUTION FACTOR	133
DATA FILE	A8909	DATE EXTRACTED	
CLIENT NAME	ENVIROTACTICS	DATE ANALYZED	11/02/00
FIELD ID	S-10	ANALYZED BY	ROBERT

CAS #	COMPOUND	UG/KG	MDL
107028	Acrolein	U	4200
107131	Acrylonitrile	U	4200
75718	Dichlorodifluoromethane	U	840
74873	Chloromethane	U	840
75014	Vinyl Chloride	U	840
74839	Bromomethane	U	840
75003	Chloroethane	U	840
75694	Trichlorofluoromethane	U	840
75354	1,1-Dichloroethene	U	840
75092	Methylene Chloride	U	840
156605	trans-1,2-Dichloroethene	U	840
75343	1,1-Dichloroethane	U	840
590207	2,2-Dichloropropane	U	840
156592	cis-1,2-dichloroethene	U	840
67663	Chloroform	U	840
74975	Bromochloromethane	U	840
71556	1,1,1-Trichloroethane	U	840
[redacted]86	1,1-Dichloropropene	U	840
[redacted]5	Carbon Tetrachloride	U	840
107062	1,2-Dichloroethane	200 J	840
71432	Benzene	U	840
79016	Trichloroethene	U	840
78875	1,2-Dichloropropane	U	840
75274	Bromodichloromethane	U	840
74953	Dibromomethane	U	840
10061015	cis-1,3-dichloropropene	150000 E	840
108883	Toluene	U	840
10061026	trans-1,3-Dichloropropene	U	840
79005	1,1,2-Trichloroethane	U	840
142289	1,3-Dichloropropane	U	840
127184	Tetrachloroethene	U	840
124481	Dibromochloromethane	U	840
106934	1,2-Dibromoethane	U	840
100414	Ethylbenzene	U	840
108907	Chlorobenzene	U	840
630206	1,1,1,2-Tetrachloroethane	U	840
10330207	m,p-Xylene	U	1700
100425	Styrene	U	840
98828	Isopropylbenzene	U	840
75252	Bromoform	U	840
79345	1,1,2,2-Tetrachloroethane	U	840
96184	1,2,3-Trichloropropane	U	840
103651	n-Propyl benzene	U	840
108861	Bromobenzene	U	840
108678	1,3,5-Trimethylbenzene	U	840
95498	2-Chlorotoluene	U	840
106434	4-Chlorotoluene	U	840
98066	tert-Butylbenzene	U	840
95636	1,2,4-Trimethylbenzene	390 J	840
135988	sec-Butylbenzene	320 J	840
99876	p-Isopropyltoluene	110000 E	840
541731	1,3-Dichlorobenzene	U	840
106467	1,4-Dichlorobenzene	U	840
104518	n-Butylbenzene	U	840
95501	1,2-Dichlorobenzene	U	840
96128	1,2-Dibromo-3-Chloropropane	U	840
120821	1,2,4-Trichlorobenzene	U	840
87683	Hexachlorobutadiene	U	840
91203	Naphthalene	320 J	840
87616	1,2,3-Trichlorobenzene	U	840
95476	o-Xylene	U	840
75150	Carbon disulfide	U	840
110758	2-Chloroethylvinylether	U	840
67641	Acetone	U	840
108054	Vinyl acetate	U	840
789333	2-Butanone	U	840
108101	4-Methyl-2-pentanone	U	840
591786	2-Hexanone	U	840

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	79 %	70-121	OK
Toluene-d8	94 %	81-117	OK
Bromofluorobenzene	84 %	74-121	OK

Percent solid of 79.1 is used for all target compounds.

J - Indicates compound concentration found below MDL.
[redacted] - Indicates compound analyzed for but not detected.
D - Indicates result is based on a dilution.
I - Result exceeds industrial surface soil standards.*

B - Indicates compound found in associated blank.
E - Indicates result exceeds highest calibration standard
R - Result exceeds residential surface soil standards.*

* Flags are based on New Jersey Soil Cleanup Criteria from Site Remediation News Volume 06 Number 1.

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

ab Name: Accredited Labs, Inc. Lab Sample ID: 0013225

lient Name: ENVIROTACTICS Field ID: S-10

ase No.: 9867 Date Extracted:

ab File ID: >A8909 Date Analyzed: 11/02/00

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	5.77	3300	
2.		Unknown	11.40	8700	
3.	33	Benzene, methyl-	19.32	5100	
4.		Unknown	24.19	8700	
5.		Unknown	25.78	1100	
6.		Unknown	26.46	4900	
7.		Unknown	32.34	1600	
8.		Unknown	32.71	900	
9.		Unknown aromatic	33.80	1500	

* Unknowns are defined as: Compounds that are less than 80% probability or have no database entries from the library.

FORM I SV-TIC

ACCREDITED LABORATORIES, INC.
VOLATILE ORGANIC ANALYSIS DATA

[redacted] NUMBER	9867	MATRIX	Soil
FILE NUMBER	0013225DL	DILUTION FACTOR	2660
.A FILE	>A8929	DATE EXTRACTED	
CLIENT NAME	ENVIROTACTICS	DATE ANALYZED	11/03/00
FIELD ID	S-10	ANALYZED BY	ROBERT

CAS #	COMPOUND	UG/KG		MDL
107028	Acrolein	U		84000
107131	Acrylonitrile	U		84000
75718	Dichlorodifluoromethane	U		17000
74873	Chloromethane	U		17000
75014	Vinyl Chloride	U		17000
74839	Bromomethane	U		17000
75003	Chloroethane	U		17000
75694	Trichlorofluoromethane	U		17000
75354	1,1-Dichloroethene	U		17000
75092	Methylene Chloride	U		17000
156605	trans-1,2-Dichloroethene	U		17000
75343	1,1-Dichloroethane	U		17000
590207	2,2-Dichloropropane	U		17000
156592	cis-1,2-dichloroethene	U		17000
67663	Chloroform	U		17000
74975	Bromochloromethane	U		17000
71556	1,1,1-Trichloroethane	U		17000
[redacted]86	1,1-Dichloropropene	U		17000
[redacted]5	Carbon Tetrachloride	U		17000
107062	1,2-Dichloroethane	U		17000
71432	Benzene	U		17000
79016	Trichloroethene	U		17000
78875	1,2-Dichloropropane	U		17000
75274	Bromodichloromethane	U		17000
74953	Dibromomethane	U		17000
10061015	cis-1,3-dichloropropene	U		17000
108883	Toluene	540000	D	17000
10061026	trans-1,3-Dichloropropene	U		17000
79005	1,1,2-Trichloroethane	U		17000
142289	1,3-Dichloropropane	U		17000
127184	Tetrachloroethene	U		17000
124481	Dibromochloromethane	U		17000
106934	1,2-Dibromoethane	U		17000
100414	Ethylbenzene	U		17000

CAS #	COMPOUND	UG/KG		MDL
108907	Chlorobenzene	U		17000
630206	1,1,1,2-Tetrachloroethane	U		17000
10330207	m,p-Xylene	U		34000
100425	Styrene	U		17000
98828	Isopropylbenzene	U		17000
75252	Bromoform	U		17000
79345	1,1,2,2-Tetrachloroethane	U		17000
96184	1,2,3-Trichloropropane	U		17000
103651	n-Propyl benzene	U		17000
108861	Bromobenzene	U		17000
108678	1,3,5-Trimethylbenzene	U		17000
95498	2-Chlorotoluene	U		17000
106434	4-Chlorotoluene	U		17000
98066	tert-Butylbenzene	U		17000
95636	1,2,4-Trimethylbenzene	U		17000
135988	sec-Butylbenzene	U		17000
99876	p-Isopropyltoluene	660000	D	17000
541731	1,3-Dichlorobenzene	U		17000
106467	1,4-Dichlorobenzene	U		17000
104518	n-Butylbenzene	U		17000
95501	1,2-Dichlorobenzene	U		17000
96128	1,2-Dibromo-3-Chloropropane	U		17000
120821	1,2,4-Trichlorobenzene	U		17000
87683	Hexachlorobutadiene	U		17000
91203	Naphthalene	U		17000
87616	1,2,3-Trichlorobenzene	U		17000
95476	o-Xylene	U		17000
75150	Carbon disulfide	U		17000
110758	2-Chloroethylvinylether	U		17000
67641	Acetone	U		17000
108054	Vinyl acetate	U		17000
789333	2-Butanone	U		17000
108101	4-Methyl-2-pentanone	U		17000
591786	2-Hexanone	U		17000

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	60 %	70-121	OUT
Toluene-d8	90 %	81-117	OK
Bromofluorobenzene	96 %	74-121	OK

Percent solid of 79.1 is used for all target compounds.

J - Indicates compound concentration found below MDL.
[redacted] - Indicates compound analyzed for but not detected,
- Indicates result is based on a dilution.
I - Result exceeds industrial surface soil standards.*

B - Indicates compound found in associated blank.
E - Indicates result exceeds highest calibration standard
R - Result exceeds residential surface soil standards.*

* Flags are based on New Jersey Soil Cleanup Criteria from Site Remediation News Volume 06 Number 1.

Accredited Laboratories, Inc.
Total Petroleum Hydrocarbon Analysis

Client: ENVIROTACT
Case #: 9867
Analyst: RB

Matrix: Soil
Date Received: 10/26/00
Date Analyzed: 10/27/00

Field #	Sample #	Amount Used (g)	% S	DF	ABS	Result mg/Kg	MDL mg/Kg
S-9	0013224	15.74	85.1	1	4	ND	45
S-10	0013225	15.92	79.1	1	3	ND	48

Response Factor = .13383944

% S = Percent Solids
DF = Dilution Factor
ABS = Absorbance

Method Blank: < 20 mg/Kg

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION
BROMOFLUOROBENZENE (BFB)

Lab Name: ACCREDITED LABORATORIES, INC. Contract: _____

Lab File ID: >A8432 BFB Injection Date: 10/06/00

Instrument ID: HP5970BA BFB Injection Time: 08:57

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	23.6
75	30.0 - 60.0% of mass 95	57.9
95	Base peak, 100% relative abundance	100.
96	5.0 - 9.0% of mass 95	7.7
173	Less than 2.0% of mass 174	0.0(0.0)1
174	Greater than 50.0% of mass 95	68.8
175	5.0 - 9.0% of mass 174	4.8(7.0)1
176	95.0 - 101.0% of mass 174	65.7(95.6)1
177	5.0 - 9.0% of mass 176	5.2(7.9)2

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		VSTD050	>A8433	10/06/00	09:15
02		VSTD020	>A8434	10/06/00	10:23
03		VSTD010	>A8435	10/06/00	11:03
04		VSTD100	>A8436	10/06/00	11:43
05		VSTD200	>A8437	10/06/00	12:22
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

13

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION
BROMOFLUOROBENZENE (BFB)

Name: ACCREDITED LABORATORIES, INC. Contract: _____

Lab File ID: >A8869 BFB Injection Date: 11/01/00

Instrument ID: HP5970BA BFB Injection Time: 10:40

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	20.9
75	30.0 - 60.0% of mass 95	53.3
95	Base peak, 100% relative abundance	100.
96	5.0 - 9.0% of mass 95	8.4
173	Less than 2.0% of mass 174	0.0(0.0)1
174	Greater than 50.0% of mass 95	76.6
175	5.0 - 9.0% of mass 174	5.5(7.2)1
176	95.0 - 101.0% of mass 174	75.7(98.9)1
177	5.0 - 9.0% of mass 176	5.4(7.1)2

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		VSTD050	>A8870	11/01/00	10:58
02		VBLKA90	>A8871	11/01/00	11:54
03		0013214	>A8872	11/01/00	12:49
04		0013248	>A8873	11/01/00	13:37
05		0013237	>A8874	11/01/00	14:58
06		0013250	>A8875	11/01/00	15:38
07		0013266	>A8876	11/01/00	16:18
08		0013259	>A8877	11/01/00	16:59
09		0013255	>A8878	11/01/00	17:38
10		0013345MS	>A8879	11/01/00	18:18
11		0013345MSD	>A8880	11/01/00	18:58
12		0013345	>A8881	11/01/00	19:38
13		0013375	>A8882	11/01/00	20:18
14		0013065	>A8883	11/01/00	20:58
15		0013103	>A8884	11/01/00	21:38
16		0013101	>A8885	11/01/00	22:17
17					
18					
19					
20					
21					
22					

14

FORM V VOA

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION
BROMOFLUOROBENZENE (BFB)

Name: ACCREDITED LABORATORIES, INC. Contract: _____

Lab File ID: >A8892 BFB Injection Date: 11/02/00

Instrument ID: HP5970BA BFB Injection Time: 11:38

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	22.2
75	30.0 - 60.0% of mass 95	53.7
95	Base peak, 100% relative abundance	100.
96	5.0 - 9.0% of mass 95	7.8
173	Less than 2.0% of mass 174	0.0(0.0)1
174	Greater than 50.0% of mass 95	68.5
175	5.0 - 9.0% of mass 174	4.3(6.3)1
176	95.0 - 101.0% of mass 174	66.7(97.4)1
177	5.0 - 9.0% of mass 176	5.5(8.3)2

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	_____	VSTD050	>A8893	11/02/00	12:03
02	_____	VBLKA91	>A8894	11/02/00	12:58
03	_____	0013380	>A8895	11/02/00	13:51
04	_____	0013377	>A8896	11/02/00	14:31
05	_____	0013378	>A8897	11/02/00	15:11
06	_____	0013379	>A8898	11/02/00	15:51
07	_____	0013077	>A8899	11/02/00	16:31
08	_____	0013103	>A8900	11/02/00	17:04
09	_____	BLANK	>A8901	11/02/00	17:44
10	_____	0013101	>A8902	11/02/00	18:24
11	_____	BLANK	>A8903	11/02/00	19:04
12	_____	0013171	>A8904	11/02/00	19:44
13	_____	BLANK	>A8905	11/02/00	20:23
14	_____	0013344	>A8906	11/02/00	21:04
15	_____	BLANK	>A8907	11/02/00	21:44
16	_____	0013120	>A8908	11/02/00	22:23
17	_____	0013225	>A8909	11/02/00	23:03
18	_____				
19	_____				
20	_____				
21	_____				
22	_____				

15

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION
BROMOFLUOROBENZENE (BFB)

Lab Name: ACCREDITED LABORATORIES, INC. Contract: _____

Lab File ID: >A8917 BFB Injection Date: 11/03/00

Instrument ID: HP5970BA BFB Injection Time: 11:29

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	23.7
75	30.0 - 60.0% of mass 95	58.7
95	Base peak, 100% relative abundance	100.
96	5.0 - 9.0% of mass 95	8.5
173	Less than 2.0% of mass 174	0.0(0.0)1
174	Greater than 50.0% of mass 95	68.5
175	5.0 - 9.0% of mass 174	4.8(7.0)1
176	95.0 - 101.0% of mass 174	66.8(97.5)1
177	5.0 - 9.0% of mass 176	5.0(7.5)2

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		VSTD050	>A8918	11/03/00	11:50
02		VBLKA92	>A8919	11/03/00	12:48
03		0013447	>A8920	11/03/00	13:56
04		0013428	>A8921	11/03/00	14:36
05		0013430	>A8922	11/03/00	15:16
06		0013431	>A8923	11/03/00	15:56
07		0013432	>A8924	11/03/00	16:36
08		0013433	>A8925	11/03/00	17:16
09		0013434	>A8926	11/03/00	17:56
10		0013435	>A8927	11/03/00	18:36
11		0013379DL	>A8928	11/03/00	19:16
12		0013225DL	>A8929	11/03/00	19:56
13		0013120DL	>A8930	11/03/00	20:36
14		0013436	>A8931	11/03/00	21:16
15		0013437	>A8932	11/03/00	21:56
16		0013438	>A8933	11/03/00	22:36
17		0013344	>A8934	11/03/00	23:16
18					
19					
20					
21					
22					

16

FORM V VOA

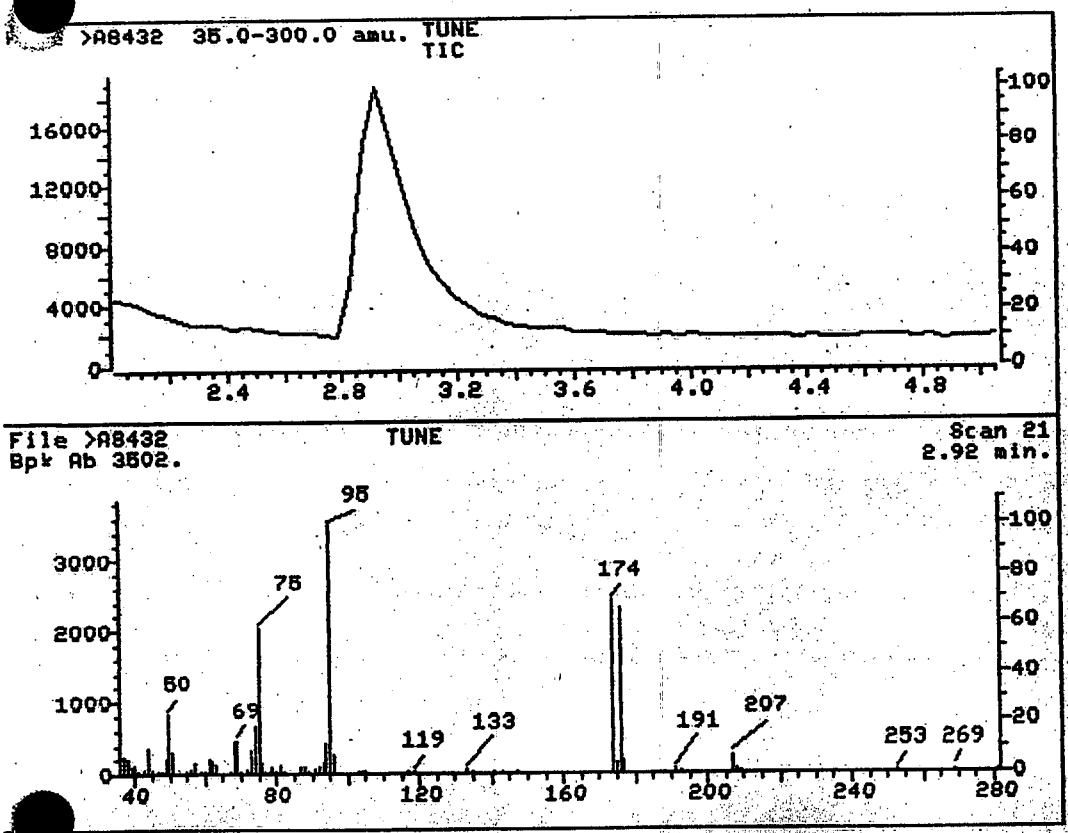
517

GC/MS PERFORMANCE STANDARD

Bromofluorobenzene (BFB)

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
50	15-40% of mass 95	23.56	~~23.56~~	OK
75	30-60% of mass 95	57.94	57.94	OK
95	Base peak, 100% relative abundance	100.00	100.00	OK
96	5-9% of mass 95	7.65	7.65	OK
173	Less than 2% of mass 174	0.00	0.00	OK
174	Greater than 50% of mass 95	68.79	68.79	OK
175	5-9% of mass 174	4.83	7.02	OK
176	95-101% of mass 174	65.73	95.56	OK
177	5-9% of mass 176	5.20	7.91	OK

Injection Date: 10/06/00
Injection Time: 08:57
Data File: >A8432
Scan: 21



A8432 TUNE
21

e: >A8432 Scan #: 21 Retn. time: 2.92

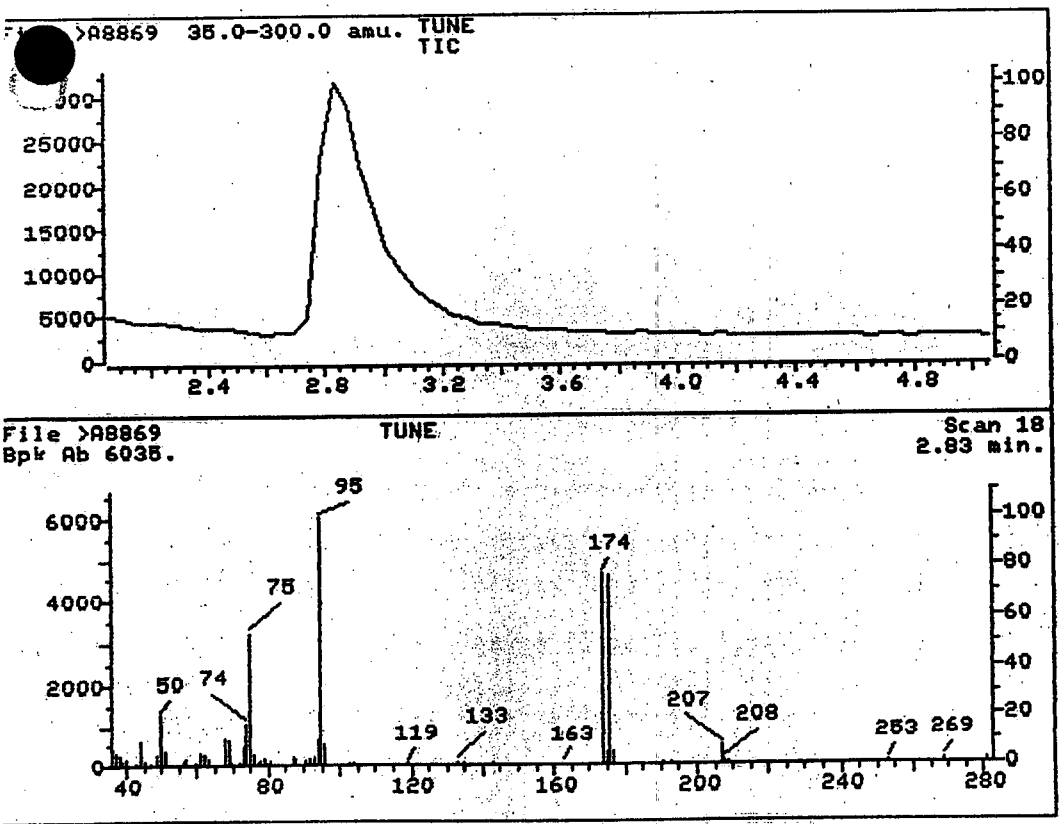
m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
35.90	33.00	56.95	140.00	76.95	37.00	102.95	36.00	174.90	169.00
37.00	233.00	58.85	28.00	78.05	28.00	103.95	43.00	175.90	2302.00
38.00	208.00	60.00	48.00	78.85	96.00	105.05	31.00	176.90	182.00
39.00	90.00	61.00	220.00	79.95	34.00	105.85	19.00	177.90	15.00
39.90	111.00	62.00	173.00	80.95	111.00	114.90	20.00	190.95	54.00
41.00	48.00	63.00	121.00	81.95	28.00	116.90	26.00	193.00	33.00
43.00	75.00	66.90	31.00	87.00	85.00	118.90	35.00	206.95	249.00
43.90	371.00	68.00	448.00	88.00	90.00	127.05	12.00	208.05	55.00
45.00	69.00	68.90	452.00	88.90	29.00	127.95	17.00	209.05	38.00
46.95	45.00	70.00	33.00	90.90	54.00	132.95	56.00	252.90	36.00
48.05	30.00	72.00	62.00	91.90	109.00	134.85	24.00	260.05	17.00
48.95	202.00	73.05	316.00	92.90	167.00	140.90	25.00	268.95	49.00
49.95	825.00	73.95	662.00	93.90	419.00	142.90	26.00	269.85	13.00
50.95	289.00	74.95	2029.00	95.00	3502.00	146.90	24.00	281.00	47.00
54.95	45.00	76.05	160.00	96.00	268.00	173.90	2409.00	281.90	13.00
55.95	71.00								

GC/MS PERFORMANCE STANDARD

Bromofluorobenzene (BFB)

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
50	15-40% of mass 95	20.93	20.93	OK
75	30-60% of mass 95	53.31	53.31	OK
95	Base peak, 100% relative abundance	100.00	100.00	OK
96	5-9% of mass 95	8.38	8.38	OK
173	Less than 2% of mass 174	0.00	0.00	OK
174	Greater than 50% of mass 95	76.57	76.57	OK
175	5-9% of mass 174	5.52	7.21	OK
176	95-101% of mass 174	75.73	98.90	OK
177	5-9% of mass 176	5.39	7.11	OK

Injection Date: 11/01/00
Injection Time: 10:40
Data File: >A8869
Scan: 18



A8869 TUNE
18

e: >A8869 Scan #: 18 Retn. time: 2.83

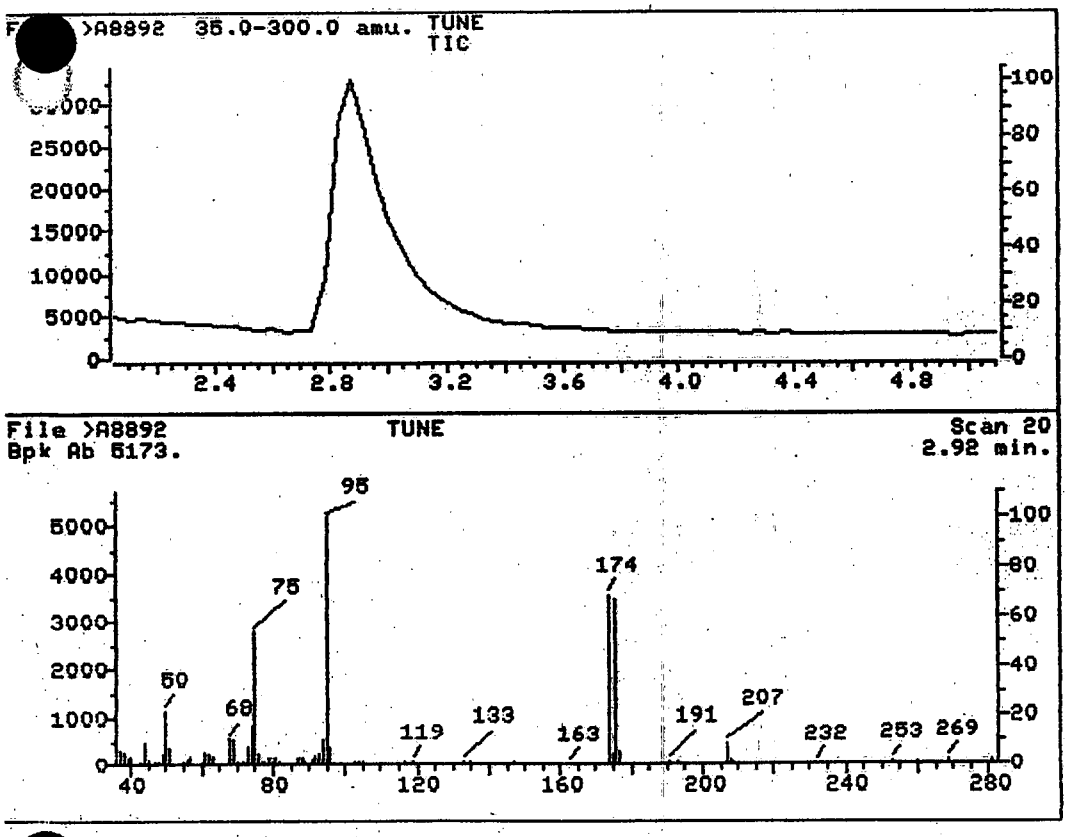
m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
36.00	64.00	60.90	321.00	81.65	26.00	116.80	36.00	176.80	325.00
37.00	320.00	61.90	278.00	86.90	204.00	118.90	50.00	190.85	59.00
38.00	273.00	63.00	177.00	87.90	171.00	126.85	17.00	192.80	51.00
39.00	118.00	64.00	19.00	88.70	34.00	127.85	24.00	194.80	19.00
39.90	173.00	66.90	27.00	90.80	89.00	132.85	74.00	206.85	452.00
42.90	54.00	67.90	661.00	91.90	173.00	134.85	48.00	207.85	90.00
43.90	618.00	68.90	615.00	92.90	234.00	140.80	30.00	208.85	59.00
44.90	99.00	69.90	59.00	93.90	632.00	142.80	44.00	248.60	10.00
46.95	61.00	72.00	61.00	94.90	6035.00	146.80	33.00	252.80	58.00
47.95	28.00	72.90	469.00	95.90	506.00	147.70	21.00	259.75	18.00
48.95	264.00	73.95	1041.00	96.80	33.00	148.90	18.00	259.95	18.00
49.95	1263.00	74.95	3217.00	102.95	46.00	160.75	17.00	266.85	16.00
50.95	391.00	75.95	282.00	103.95	58.00	162.75	22.00	268.85	109.00
54.95	24.00	76.95	53.00	104.95	24.00	164.65	18.00	269.75	20.00
55.95	99.00	77.95	90.00	105.75	21.00	173.80	4621.00	270.75	14.00
56.85	183.00	78.85	140.00	114.90	21.00	174.80	333.00	280.80	102.00
58.95	32.00	79.75	39.00	115.80	26.00	175.80	4570.00	282.90	18.00
60.00	77.00	80.85	134.00						

GC/MS PERFORMANCE STANDARD

Bromofluorobenzene (BFB)

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
50	15-40% of mass 95	22.17	22.17	OK
75	30-60% of mass 95	53.68	53.68	OK
95	Base peak, 100% relative abundance	100.00	100.00	OK
96	5-9% of mass 95	7.85	7.85	OK
173	Less than 2% of mass 174	0.00	0.00	OK
174	Greater than 50% of mass 95	68.49	68.49	OK
175	5-9% of mass 174	4.33	6.32	OK
176	95-101% of mass 174	66.71	97.40	OK
177	5-9% of mass 176	5.55	8.32	OK

Injection Date: 11/02/00
Injection Time: 11:38
Data File: >A8892
Scan: 20



A8892 TUNE
20

e: >A8892 Scan #: 20 Retn. time: 2.92

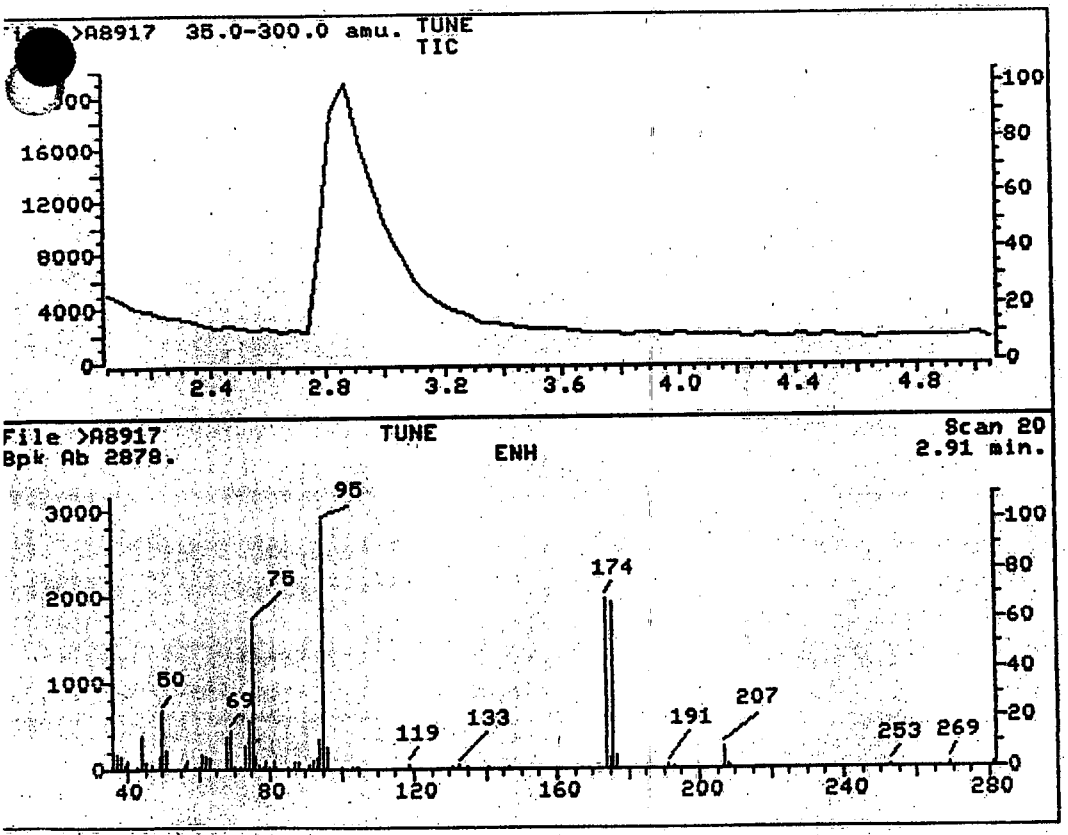
m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
35.90	69.00	61.00	275.00	88.90	36.00	129.85	16.00	191.85	20.00
37.00	297.00	62.00	226.00	91.00	91.00	130.85	17.00	192.90	48.00
38.00	250.00	62.90	176.00	91.90	164.00	132.85	75.00	194.80	13.00
39.00	126.00	67.90	570.00	92.90	207.00	134.05	17.00	206.95	448.00
39.90	188.00	68.90	525.00	93.90	539.00	134.85	47.00	207.95	95.00
42.90	41.00	69.90	51.00	94.90	5173.00	140.90	32.00	208.85	67.00
43.90	467.00	71.90	59.00	95.90	406.00	146.90	35.00	218.85	16.00
44.90	104.00	72.90	405.00	96.80	19.00	147.80	21.00	222.90	11.00
46.95	52.00	73.95	851.00	102.75	34.00	148.80	25.00	231.70	21.00
47.95	40.00	74.95	2777.00	103.95	49.00	154.75	18.00	231.90	22.00
48.95	243.00	75.95	233.00	105.05	36.00	162.85	24.00	252.90	55.00
49.95	1147.00	76.95	53.00	105.85	21.00	164.85	24.00	253.80	21.00
50.95	355.00	77.95	59.00	114.90	26.00	173.80	3543.00	259.95	36.00
51.95	16.00	78.85	131.00	115.90	18.00	174.80	224.00	264.85	16.00
54.95	36.00	79.95	41.00	116.90	36.00	175.80	3451.00	268.95	103.00
55.95	80.00	80.85	127.00	117.80	28.00	176.80	287.00	269.95	26.00
56.95	178.00	81.85	36.00	118.90	63.00	177.80	17.00	280.90	100.00
58.95	30.00	86.90	138.00	126.95	22.00	178.80	17.00	282.00	29.00
60.00	62.00	87.90	142.00	127.95	25.00	190.85	65.00	282.90	18.00

GC/MS PERFORMANCE STANDARD

Bromofluorobenzene (BFB)

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
50	15-40% of mass 95	23.66	23.66	OK
75	30-60% of mass 95	58.67	58.67	OK
95	Base peak, 100% relative abundance	100.00	100.00	OK
96	5-9% of mass 95	8.47	8.47	OK
173	Less than 2% of mass 174	0.00	0.00	OK
174	Greater than 50% of mass 95	68.53	68.53	OK
175	5-9% of mass 174	4.77	6.96	OK
176	95-101% of mass 174	66.83	97.53	OK
177	5-9% of mass 176	4.99	7.47	OK

Injection Date: 11/03/00
Injection Time: 11:29
Data File: >A8917
Scan: 20



A8917 TUNE
20 ENH

d: >A8917 Scan #: 20 Retn. time: 2.91

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
36.00	44.00	59.00	21.00	78.05	39.80	97.00	8.00	173.90	1972.40
37.00	175.80	60.00	34.80	78.95	101.20	99.95	28.00	174.90	137.20
38.00	156.80	61.00	175.80	79.95	38.00	102.95	25.60	175.90	1923.60
39.10	65.60	62.00	150.80	80.95	101.80	104.05	30.40	176.95	143.60
40.00	108.00	63.00	115.00	81.95	35.60	104.95	23.00	191.00	44.20
43.00	37.40	68.00	369.40	85.00	27.00	116.90	14.80	193.00	33.20
44.00	400.40	69.00	445.60	87.00	83.00	119.00	57.80	207.05	255.40
45.00	75.80	70.00	27.80	87.90	82.00	127.95	14.40	208.05	53.20
47.05	50.20	72.05	39.60	91.00	64.20	130.95	30.60	208.95	34.60
49.05	140.60	73.05	262.40	92.00	94.60	132.95	50.00	252.90	37.00
50.05	681.00	74.05	549.80	93.00	128.20	134.95	28.40	269.00	57.20
51.05	224.80	75.05	1688.60	94.00	344.40	141.00	21.00	270.00	6.40
55.05	18.00	76.05	146.20	95.00	2878.20	146.90	22.60	280.95	47.40
55.95	56.80	77.05	43.20	96.00	243.80	147.90	6.40	281.95	13.60
56.95	108.60								

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Initial Calibration Data
HSL Compounds

Case No:

Instrument ID: HP5970BA

[redacted]ctor: Accredited Labs

Calibration Date: 10/06/00

Project No: CAAS89

Minimum $\overline{RF}$ for SPCC is 0.1 Maximum % RSD for CCC is 20%

Laboratory ID:	>A8435	>A8434	>A8433	>A8436	>A8437					
Compound	RF 10.00	RF 20.00	RF 50.00	RF 100.00	RF 200.00	$\overline{RRT}$	$\overline{RF}$	% RSD	CCC	SPCC
Acrolein	.00285	.01341	.01416	.01612	.01715	.452	.01274	44.962		
Acrylonitrile	.04263	.04630	.04756	.05593	.05540	.629	.04957	11.819		
Acetone	.05951	.07312	.06128	.06311	.06245	.481	.06389	8.352		
Dichlorodifluoromethane	.49579	.53496	.53218	.52842	.45533	.265	.50933	6.689		
Chloromethane	.15221	.25466	.30136	.27958	.27196	.287	.25195	23.110		**
Vinyl Chloride	.17412	.19813	.20329	.23382	.21785	.299	.20544	10.879	*	
Bromomethane	.25290	.26556	.27419	.27800	.25178	.338	.26449	4.527		
Chloroethane	.11203	.12942	.12706	.13758	.12906	.345	.12703	7.324		
Trichlorofluoromethane	.93062	1.00017	.92679	1.01300	.93125	.379	.96037	4.422		
1,1-Dichloroethene	.57954	.60693	.59032	.66418	.65493	.456	.61918	6.180	*	
Carbon disulfide	.53332	.59194	.62452	.69042	.70349	.493	.62874	11.210		
Methylene Chloride	.82104	.65010	.42970	.53479	.51557	.557	.59024	25.593		
trans-1,2-Dichloroethene	.54056	.55321	.55069	.63324	.58250	.601	.57204	6.574		
1,1-Dichloroethane	.66821	.68100	.68000	.78828	.74507	.714	.71251	7.297		**
Vinyl acetate	.63439	.67908	.55693	.67582	.66249	.736	.64174	7.881		
[redacted]ichloropropane	.52803	.57575	.54008	.62409	.59188	.854	.57197	6.814		
[redacted]anone	.08734	.11429	.12276	.15858	.12836	.883	.12227	21.009		
cis-1,2-dichloroethene	.64352	.66475	.64094	.74639	.74398	.864	.68792	7.718		
Chloroform	.85769	.89172	.84902	.98528	.98740	.943	.91422	7.410	*	
Bromochloromethane	.30573	.31766	.33833	.36425	.36840	.919	.33888	8.168		
1,1,1-Trichloroethane	.85064	.89246	.84720	.95069	.95148	.964	.89849	5.699		
T-butyl alcohol	.02068	.02410	.02517	.02934	.03004	.600	.02587	14.967		
1,2-Dichloroethane-d4	.57960	.55170	.50164	.57175	.54669	.919	.55028	5.528		
1,1-Dichloropropene	.98575	.82815	.61577	.62756	.57018	.873	.72548	24.272		
Carbon Tetrachloride	1.23568	1.12497	.87159	.85381	.79770	.864	.97675	19.643		
1,2-Dichloroethane	.60087	.65383	.58900	.63332	.62110	.933	.61962	4.153		
Benzene	.83963	.92145	.80839	.86515	.83059	.910	.85304	5.077		
Trichloroethene	.48548	.52462	.48684	.48251	.47516	1.034	.49092	3.946		
1,2-Dichloropropane	.35772	.37933	.34716	.39026	.36744	1.084	.36838	4.629	*	
Bromodichloromethane	.79037	.86194	.81287	.92121	.91846	1.136	.86097	6.928		

(Conc=50.0,100.0,250.0,50			
(Conc=50.0,100.0,250.0,50			
(Conc=100.0,200.0,500.0,1			

RF - Response Factor (Subscript is amount in ug/l)

$\overline{RRT}$ - Average Relative Retention Time (RT Std/RT Istd)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Initial Calibration Data
HSL Compounds

Case No: Instrument ID: HP5970BA

Contractor: Accredited Labs Calibration Date: 10/06/00

Contract No: CAAS09

Minimum $\overline{RF}$ for SPCC is 0.1 Maximum % RSD for CCC is 20%

Laboratory ID:	>A8435	>A8434	>A8433	>A8436	>A8437					
Compound	RF 10.00	RF 20.00	RF 50.00	RF 100.00	RF 200.00	$\overline{RRT}$	$\overline{RF}$	% RSD	CCC	SPCC
Dibromomethane	.35867	.41274	.40323	.42119	.38910	1.103	.39698	6.174		
2-Chloroethylvinylether	.14505	.15687	.15390	.19159	.19403	1.196	.16829	13.560		
cis 1,3-dichloropropene	.56190	.61600	.57436	.65327	.65250	1.214	.61161	6.978		(Conc=9.45,18.9,47.3,94.5
Toluene-d8	1.21708	1.06953	.95473	1.04145	.98951	1.248	1.05446	9.602		
Toluene	1.05183	1.10706	.98061	1.06468	1.03187	1.259	1.04721	4.423	*	
trans-1,3-Dichloropropene	.43381	.50349	.47428	.56851	.55249	1.316	.50651	10.944		(Conc=10.5,21.1,52.8,105.
1,1,2-Trichloroethane	.28683	.31540	.26753	.30947	.28921	1.345	.29369	6.531		
4-Methyl-2-pentanone	.30204	.33456	.29209	.32664	.30175	1.245	.31142	5.838		
1,2-Dibromoethane	.54555	.60517	.52935	.60718	.57822	1.420	.57309	6.100		
Bromofluorobenzene	1.05664	.86110	.72710	.80270	.71434	1.697	.83238	16.670		
2-Hexanone	.22931	.25365	.21794	.24690	.24607	.929	.23877	6.155		
1,3-dichloropropane	.66656	.70456	.64321	.69052	.70284	.918	.68154	3.853		
Tetrachloroethene	.65539	.71620	.68096	.64486	.63485	.898	.66645	4.903		
Dibromochloromethane	.77157	.86231	.83961	.93465	.98246	.938	.87812	9.385		
Ethylbenzene	1.68121	1.72949	1.58359	1.63868	1.54043	1.013	1.63468	4.605	*	
Chlorobenzene	1.04785	1.08468	1.02029	1.05387	.99823	1.002	1.04098	3.178		**
1,1,2,2-Tetrachloroethane	.58125	.65084	.61259	.64752	.61872	1.015	.62218	4.576		
m,p-Xylene	1.46509	1.56802	1.36081	1.47306	1.31935	1.027	1.43727	6.861		(Conc=20.0,40.0,100.0,200
o-Xylene	1.45762	1.53047	1.35874	1.39620	1.30814	1.073	1.41024	6.138		(Conc=20.0,40.0,100.0,200
Styrene	.89779	.97480	.86752	.86267	.81911	1.075	.88438	6.538		(Conc=20.0,40.0,100.0,200
Bromoform	.52008	.63353	.63012	.67682	.64833	1.097	.62178	9.611		**
Isopropylbenzene	2.63478	3.05498	2.81004	2.87308	2.75958	.881	2.82649	5.478		
1,1,2,2-Tetrachloroethane	1.00412	1.06879	1.03661	1.06706	.98176	.916	1.03167	3.724		**
1,2,3-Trichloropropane	.27685	.32623	.31334	.32711	.29764	.919	.30824	6.888		
n-Propyl benzene	3.26626	3.48210	3.25215	3.39278	3.14175	.917	3.30701	4.000		
Bromobenzene	1.83414	1.90729	1.80451	1.94238	1.82580	.909	1.86282	3.165		
1,3,5-Trimethylbenzene	2.38732	2.62742	2.48985	2.48995	2.36927	.935	2.47276	4.169		
2-Chlorotoluene	2.55605	2.68812	2.54816	2.60573	2.47137	.926	2.57389	3.105		
4-Chlorotoluene	2.76200	3.06370	2.77705	2.98069	2.74980	.937	2.86665	5.069		
tert-Butylbenzene	2.47774	2.63181	2.53313	2.62467	2.39448	.961	2.53237	3.969		

RF - Response Factor (Subscript is amount in ug/l)

$\overline{RRT}$ - Average Relative Retention Time (RT Std/RT Istd)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Initial Calibration Data
HSL Compounds

Case No:

Instrument ID: HP5970BA

Factor: Accredited Labs

Calibration Date: 10/06/00

Contract No: CAAS09

Minimum $\overline{RF}$ for SPCC is 0.1

Maximum % RSD for CCC is 20%

Laboratory ID:	>A8435	>A8434	>A8433	>A8436	>A8437					
Compound	RF 10.00	RF 20.00	RF 50.00	RF 100.00	RF 200.00	$\overline{RRT}$	$\overline{RF}$	% RSD	CCC	SPCC
1,2,4 Trimethylbenzene	2.41821	2.70429	2.49890	2.66279	2.45222	.968	2.54728	5.044		
sec-Butylbenzene	3.12048	3.44197	3.28125	3.23909	3.08875	.982	3.23431	4.359		
p-Isopropyltoluene	2.63210	2.92526	2.74757	2.80006	2.50344	.996	2.72168	5.922		
1,3-Dichlorobenzene	1.58411	1.67328	1.56089	1.53995	1.39583	.992	1.55081	6.476		
1,4-Dichlorobenzene	1.62412	1.73398	1.56963	1.61330	1.48223	1.002	1.60465	5.694		
n-Butylbenzene	2.69442	2.87081	2.81756	2.86310	2.60379	1.032	2.76994	4.211		
1,2-Dichlorobenzene	1.45303	1.56050	1.50510	1.48404	1.35286	1.035	1.47110	5.224		
1,2-Dibromo-3-Chloropropane	.20198	.25973	.27999	.27754	.29063	1.109	.26197	13.485		
1,2,4-Trichlorobenzene	1.09690	1.31536	1.26480	1.23594	1.20335	1.179	1.22327	6.683		
Hexachlorobutadiene	.90576	1.04335	.88005	.88047	.87915	1.191	.91775	7.747		
Naphthalene	1.60389	1.99129	1.91806	2.00850	1.95579	1.202	1.89535	8.812		
1,2,3-Trichlorobenzene	.92796	1.23865	1.12806	1.10520	1.08232	1.224	1.09644	10.185		
Methyl t-butyl ether	1.29227	1.34178	1.23262	1.32526	1.21437	.278	1.28126	4.374		(Conc=100.0,200.0,500.0,1

RF - Response Factor (Subscript is amount in ug/l)

$\overline{RRT}$ - Average Relative Retention Time (RT Std/RT Istd)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

Case No: Calibration Date: 11/02/00

Contractor: Accredited Labs Time: 12:03

Contract No: CAAS09 Laboratory ID: >A8893

Instrument ID: HP5970BA Initial Calibration Date: 10/06/00

Minimum $\overline{RF}$ for SPCC is 0.1 Maximum % Diff for CCC is 30%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
Acrolein	.01274	.01585	24.43			(Conc=250.00)
Acrylonitrile	.04957	.05936	19.75			(Conc=250.00)
Acetone	.06389	.05762	9.82			
Dichlorodifluoromethane	.50933	.27799	45.42			
Chloromethane	.25195	.22607	10.27		**	
Vinyl Chloride	.20544	.20470	.36	*		
Bromomethane	.26449	.26937	1.84			
Chloroethane	.12703	.14015	10.33			
Trichlorofluoromethane	.96037	.82895	13.68			
1,1-Dichloroethene	.61918	.50339	18.70	*		
Carbon disulfide	.62874	.55333	11.99			
Methylene Chloride	.59024	.48138	18.44			
trans-1,2-Dichloroethene	.57204	.51302	10.32			
1,1-Dichloroethane	.71251	.65986	7.39		**	
Vinyl acetate	.64174	.53273	16.99			
2,2-Dichloropropane	.57197	.51697	9.62			
2-Butanone	.12227	.12432	1.68			
cis-1,2-dichloroethene	.68792	.62107	9.72			
Chloroform	.91422	.82887	9.34	*		
Bromochloromethane	.33888	.35422	4.53			
1,1,1-Trichloroethane	.89849	.76094	15.31			
T-butyl alcohol	.02587	.02573	.52			(Conc=500.00)
1,2-Dichloroethane-d4	.55028	.44303	19.49			
1,1-Dichloropropene	.72548	.57826	20.29			
Carbon Tetrachloride	.97675	.71822	26.47			
1,2-Dichloroethane	.61962	.50177	19.02			
Benzene	.85304	.80743	5.35			
Trichloroethene	.49092	.45888	6.53			
1,2-Dichloropropane	.36838	.35125	4.65	*		
Bromodichloromethane	.86097	.75866	11.88			
Dibromomethane	.39698	.39610	.22			
2-Chloroethylvinylether	.16829	.15530	7.72			

RF - Response Factor from daily standard file at 50.00 ug/l

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

Case No: Calibration Date: 11/02/00

[redacted]ctor: Accredited Labs Time: 12:03

.ract No: CAAS09 Laboratory ID: >A8893

Instrument ID: HP5970BA Initial Calibration Date: 10/06/00

Minimum $\overline{RF}$ for SPCC is 0.1 Maximum % Diff for CCC is 30%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
cis-1,3-dichloropropene	.61161	.61368	.34			(Conc=47.30)
Toluene-d8	1.05446	1.00399	4.79			
Toluene	1.04721	.98663	5.78	*		
trans-1,3-Dichloropropene	.50651	.49956	1.37			(Conc=52.80)
1,1,2-Trichloroethane	.29369	.29164	.70			
4-Methyl-2-pentanone	.31142	.26916	13.57			
1,2-Dibromoethane	.57309	.54764	4.44			
Bromofluorobenzene	.83238	.70686	15.08			
2-Hexanone	.23877	.19645	17.72			
1,3-dichloropropane	.68154	.64101	5.95			
Tetrachloroethene	.66645	.65924	1.08			
Dibromochloromethane	.87812	.80359	8.49			
Ethylbenzene	1.63468	1.48791	8.98	*		
Chlorobenzene	1.04898	1.00191	3.75		**	
1,1,1,2-Tetrachloroethane	.62218	.60125	3.36			
[redacted]ylene	1.43727	1.27626	11.20			(Conc=100.00)
[redacted]lene	1.41024	1.27654	9.48			(Conc=100.00)
Styrene	.88438	.85278	3.57			(Conc=100.00)
Bromoform	.62178	.55724	10.38		**	
Isopropylbenzene	2.82649	2.51645	10.97			
1,1,2,2-Tetrachloroethane	1.03167	.98392	4.63		**	
1,2,3-Trichloropropane	.30824	.27854	9.63			
n-Propyl benzene	3.30701	2.97547	10.03			
Bromobenzene	1.86282	1.55923	16.30			
1,3,5-Trimethylbenzene	2.47276	2.14967	13.07			
2-Chlorotoluene	2.57389	2.26820	11.88			
4-Chlorotoluene	2.86665	2.44434	14.73			
tert-Butylbenzene	2.53237	2.28527	9.76			
1,2,4-Trimethylbenzene	2.54728	2.17178	14.74			
sec-Butylbenzene	3.23431	2.89472	10.50			
p-Isopropyltoluene	2.72168	2.44561	10.14			
1,3-Dichlorobenzene	1.55081	1.47845	4.67			

RF - Response Factor from daily standard file at 50.00 ug/l

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

Case No:

Calibration Date: 11/02/00

Contractor: Accredited Labs

Time: 12:03

...ract No: CAAS09

Laboratory ID: >A8893

Instrument ID: HP5970BA

Initial Calibration Date: 10/06/00

Minimum $\overline{RF}$ for SPCC is 0.1

Maximum % Diff for CCC is 30%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
1,4-Dichlorobenzene	1.60465	1.53036	4.63			
n-Butylbenzene	2.76994	2.46626	10.96			
1,2-Dichlorobenzene	1.47110	1.40473	4.51			
1,2-Dibromo-3-Chloropropane	.26197	.27402	4.60			
1,2,4-Trichlorobenzene	1.22327	1.22057	.22			
Hexachlorobutadiene	.91775	.92325	.60			
Naphthalene	1.89535	1.78269	5.94			
1,2,3-Trichlorobenzene	1.09644	1.03921	5.22			
Methyl t-butyl ether	1.28126	1.08109	15.62			(Conc=500.00)

RF - Response Factor from daily standard file at 50.00 ug/l

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

Case No: [redacted]

Calibration Date: 11/03/00

[redacted]ctor: Accredited Labs

Time: 11:50

.ract No: CAAS09

Laboratory ID:)A8918

Instrument ID: HP5970BA

Initial Calibration Date: 10/06/00

Minimum $\overline{RF}$ for SPCC is 0.1

Maximum % Diff for CCC is 30%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
Acrolein	.01274	.01351	6.11			(Conc=250.00)
Acrylonitrile	.04957	.05742	15.84			(Conc=250.00)
Acetone	.06389	.06261	2.00			
Dichlorodifluoromethane	.50933	.22887	55.06			
Chloromethane	.25195	.20048	20.43		**	
Vinyl Chloride	.20544	.17629	14.19	*		
Bromomethane	.26449	.24829	6.12			
Chloroethane	.12703	.12395	2.42			
Trichlorofluoromethane	.96037	.89433	6.88			
1,1-Dichloroethene	.61918	.54029	12.74	*		
Carbon disulfide	.62874	.56146	10.70			
Methylene Chloride	.59024	.44884	23.96			
trans-1,2-Dichloroethene	.57204	.54854	4.11			
1,1-Dichloroethane	.71251	.73024	2.49		**	
[redacted]l acetate	.64174	.57812	9.91			
[redacted]ichloropropane	.57197	.57283	.15			
[redacted]tanone	.12227	.14639	19.73			
cis-1,2-dichloroethene	.68792	.69825	1.50			
Chloroform	.91422	.91071	.38	*		
Bromochloromethane	.33888	.34521	1.87			
1,1,1-Trichloroethane	.89849	.85467	4.88			
T-butyl alcohol	.02587	.02681	3.66			(Conc=500.00)
1,2-Dichloroethane-d4	.55028	.53069	3.56			
1,1-Dichloropropene	.72548	.65308	9.98			
Carbon Tetrachloride	.97675	.81601	16.46			
1,2-Dichloroethane	.61962	.59677	3.69			
Benzene	.85304	.89344	4.74			
Trichloroethene	.49092	.49674	1.18			
1,2-Dichloropropane	.36838	.39565	7.40	*		
Bromodichloromethane	.86097	.86522	.49			
Dibromomethane	.39698	.39352	.87			
2-Chloroethylvinylether	.16829	.16700	.76			

RF - Response Factor from daily standard file at 50.00 ug/l

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

Case No: | Calibration Date: 11/03/00

Contractor: Accredited Labs | Time: 11:50

Contract No: CAAS09 | Laboratory ID: >A8918

Instrument ID: HP5970BA | Initial Calibration Date: 10/06/00

Minimum $\overline{RF}$ for SPCC is 0.1 | Maximum % Diff for CCC is 30%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
cis-1,3-dichloropropene	.61161	.65506	7.10			(Conc=47.30)
Toluene-d8	1.05446	1.05923	.45			
Toluene	1.04721	1.04787	.06	*		
trans-1,3-Dichloropropene	.50651	.54370	7.34			(Conc=52.80)
1,1,2-Trichloroethane	.29369	.30931	5.32			
4-Methyl-2-pentanone	.31142	.30845	.95			
1,2-Dibromoethane	.57309	.59006	2.96			
Bromofluorobenzene	.83238	.79589	4.38			
2-Hexanone	.23877	.22674	5.04			
1,3-dichloropropane	.68154	.68532	.56			
Tetrachloroethene	.66645	.63773	4.31			
Dibromochloromethane	.87812	.87424	.44			
Ethylbenzene	1.63468	1.58300	3.16	*		
Chlorobenzene	1.04098	1.05451	1.30		**	
1,1,1,2-Tetrachloroethane	.62218	.62812	.95			
m,p-Xylene	1.43727	1.41195	1.76			(Conc=100.00)
o-Xylene	1.41024	1.42589	1.11			(Conc=100.00)
Styrene	.88438	.95034	7.46			(Conc=100.00)
Bromoform	.62178	.60172	3.23		**	
Isopropylbenzene	2.82649	2.94235	4.10			
1,1,2,2-Tetrachloroethane	1.03167	1.10235	6.85		**	
1,2,3-Trichloropropane	.30824	.31541	2.33			
n-Propyl benzene	3.30701	3.34243	1.07			
Bromobenzene	1.86282	1.81159	2.75			
1,3,5-Trimethylbenzene	2.47276	2.45791	.60			
2-Chlorotoluene	2.57389	2.50059	2.85			
4-Chlorotoluene	2.86665	2.81888	1.67			
tert-Butylbenzene	2.53237	2.55953	1.07			
1,2,4-Trimethylbenzene	2.54728	2.52495	.88			
sec-Butylbenzene	3.23431	3.37106	4.23			
p-Isopropyltoluene	2.72168	2.79635	2.74			
1,3-Dichlorobenzene	1.55081	1.60041	3.20			

RF - Response Factor from daily standard file at 50.00 ug/l

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

Case No:

Calibration Date: 11/03/00

[redacted]ctor: Accredited Labs

Time: 11:50

...tract No: CAAS09

Laboratory ID: >A8918

Instrument ID: HP5970BA

Initial Calibration Date: 10/06/00

Minimum $\overline{RF}$ for SPCC is 0.1 Maximum % Diff for CCC is 30%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
1,4-Dichlorobenzene	1.60465	1.62410	1.21			
n-Butylbenzene	2.76994	2.85252	2.98			
1,2-Dichlorobenzene	1.47110	1.46591	.35			
1,2-Dibromo-3-Chloropropane	.26197	.29836	13.89			
1,2,4-Trichlorobenzene	1.22327	1.35580	10.83			
Hexachlorobutadiene	.91775	1.02785	12.00			
Naphthalene	1.89535	2.10085	10.84			
1,2,3-Trichlorobenzene	1.09644	1.12208	2.34			
Methyl t-butyl ether	1.28126	1.20708	5.79			(Conc=500.00)

RF - Response Factor from daily standard file at 50.00 ug/l

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

ACCREDITED LABORATORIES, INC.
WATER/SOIL VOLATILE SURROGATE RECOVERY

	ALI Sample No.	Mtx	S1 (DCE-d4)	S2 (TOL-d8)	S3 (BFB)	TOTAL OUT
1	VBLKA91	S	89	104	97	0
2	VBLKA92	S	90	93	93	0
3	0013225	S	79	94	84	0
4	0013225DL	S	60 *	90	96	1
5	0013345MS	S	95	95	95	0
6	0013345MSD	S	97	93	92	0

EPA CLP QC Limits for:	WATER	SOIL
S1 (DCE-d4) = 1,2-Dichloroethane-d4	(76-114)	(70-121)
S2 (TOL-d8) = Toluene-d8	(88-110)	(81-117)
S3 (BFB) = Bromofluorobenzene	(86-115)	(74-121)

* Values outside of EPA contract laboratory QC limits

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Name: ACCREDITED LABORATORIES, Contract:

Lab Code: _____ Case No.: SAS No.: _____ SDG No.:

Lab File ID (Standard): >A8870 Date Analyzed: 11/01/00

Instrument ID: HP5970BA Time Analyzed: 10:58

GC Column: RTX-502 ID: 0.53 (mm) Heated Purge: (Y/N) Y

	IS1(DFB) AREA	#	RT	#	IS2(CBZ) AREA	#	RT	#	IS3(PFB) AREA	#	RT	#
	12 HOUR STD		151938		14.58		119367		21.85		145766		12.72	
	UPPER LIMIT		303876		15.08		238734		22.35		291532		13.22	
	LOWER LIMIT		75969		14.08		59684		21.35		72883		12.22	
	LAB SAMPLE NO.													
01	VBLKA90		132036		14.66		110131		21.92		131402		12.75	
02	0013345MS		71427	*	14.66		59068	*	21.89		64092	*	12.75	
03	0013345MSD		71518	*	14.67		60601		21.89		65146	*	12.76	
04														
07														
08														
09														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														
21														
22														

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (PFB) = Pentafluorobenzene
IS4 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

35

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ACCREDITED LABORATORIES, Contract:

Code: _____ Case No.: SAS No.: _____ SDG No.:

Lab File ID (Standard): >A8870 Date Analyzed: 11/01/00

Instrument ID: HP5970BA Time Analyzed: 10:58

GC Column: RTX-502 ID: 0.53 (mm) Heated Purge: (Y/N) Y

	IS4(DCB) AREA #	RT #					
12 HOUR STD	77504	27.62					
UPPER LIMIT	155008	28.12					
LOWER LIMIT	38752	27.12					
LAB SAMPLE NO.							
01 VBLKA90	75030	27.69					
02 0013345MS	36083*	27.70					
03 0013345MSD	37760*	27.71					
04							
05							
06							
07							
08							
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20							
21							
22							

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (PFB) = Pentafluorobenzene
IS4 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

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8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Name: ACCREDITED LABORATORIES, Contract:

Lab Code: _____ Case No.: 9867 SAS No.: _____ SDG No.:

Lab File ID (Standard): >A8893 Date Analyzed: 11/02/00

Instrument ID: HP5970BA Time Analyzed: 12:03

GC Column: RTX-502 ID: 0.53 (mm) Heated Purge: (Y/N) Y

	IS1(DFB) AREA #	RT #	IS2(CBZ) AREA #	RT #	IS3(PFB) AREA #	RT #
12 HOUR STD	155811	14.63	128330	21.85	138284	12.72
UPPER LIMIT	311622	15.13	256660	22.35	276568	13.22
LOWER LIMIT	77905	14.13	64165	21.35	69142	12.22
LAB SAMPLE NO.						
01 VBLKA91	143953	14.64	125396	21.91	143980	12.73
02 0013225	106441	14.67	89045	21.91	92288	12.76
03						
04						
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20						
21						
22						

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (PFB) = Pentafluorobenzene
IS4 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ACCREDITED LABORATORIES, Contract:

Lab Code: _____ Case No.: 9867 SAS No.: _____ SDG No.:

Lab File ID (Standard): >A8893 Date Analyzed: 11/02/00

Instrument ID: HP5970BA Time Analyzed: 12:03

GC Column: RTX-502 ID: 0.53 (mm) Heated Purge: (Y/N) Y

	IS4(DCB) AREA #	RT #				
12 HOUR STD	82454	27.62				
UPPER LIMIT	164908	28.12				
LOWER LIMIT	41227	27.12				
LAB SAMPLE NO.						
01 VBLKA91	81449	27.67				
02 0013225	37851*	27.71				
03						
04						
05						
06						
07						
08						
09						
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12						
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17						
18						
19						
20						
21						
22						

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (PFB) = Pentafluorobenzene
IS4 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

38

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

FORM 539

OLM03.0

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Name: ACCREDITED LABORATORIES, Contract:

Lab Code: _____ Case No.: 9867 SAS No.: _____ SDG No.:

Lab File ID (Standard): >A8918 Date Analyzed: 11/03/00

Instrument ID: HP5970BA Time Analyzed: 11:50

GC Column: RTX-502 ID: 0.53 (mm) Heated Purge: (Y/N) Y

	IS1(DFB) AREA	#	RT	#	IS2(CBZ) AREA	#	RT	#	IS3(PFB) AREA	#	RT	#
	12 HOUR STD		96981		14.60		81566		21.87		88687		12.69	
	UPPER LIMIT		193962		15.10		163132		22.37		177374		13.19	
	LOWER LIMIT		48490		14.10		40783		21.37		44344		12.19	
	LAB SAMPLE NO.													
01	VBLKA92		102032		14.64		81086		21.90		95355		12.73	
02	0013225DL		99799		14.62		87527		21.89		92376		12.76	
03														
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19														
20														
21														
22														

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (PFB) = Pentafluorobenzene
IS4 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

39

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ACCREDITED LABORATORIES, Contract:

Lab Code: _____ Case No.: 9867 SAS No.: _____ SDG No.:

Lab File ID (Standard): >A8918 Date Analyzed: 11/03/00

Instrument ID: HP5970BA Time Analyzed: 11:50

GC Column: RTX-502 ID: 0.53 (mm) Heated Purge: (Y/N) Y

	IS4(DCB) AREA	#	RT	#				
12 HOUR STD	50630		27.64					
UPPER LIMIT	101260		28.14					
LOWER LIMIT	25315		27.14					
LAB SAMPLE NO.								
01 VBLKA92	55336		27.67					
02 0013225DL	55077		27.66					
03								
04								
05								
06								
07								
08								
09								
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20								
21								
22								

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (PFB) = Pentafluorobenzene
IS4 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

40

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

3B

SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Name: Accredited Labs, Inc. Contract: _____

Lab Code: GC/MS Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix Spike - ALI Sample No.: 0013345

COMPOUND	SPIKE ADDED (UG/KG)	SAMPLE CONCENTRATION (UG/KG)	MS CONCENTRATION (UG/KG)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	50	0	34	69	59-172
Trichloroethene	50	0	42	83	62-137
Benzene	50	0	43	87	66-142
Toluene	50	0	43	86	59-139
Chlorobenzene	50	0	39	78	60-133

COMPOUND	SPIKE ADDED (UG/KG)	MSD CONCENTRATION (UG/KG)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	50	39	78	13	22	59-172
Trichloroethene	50	47	95	13	24	62-137
Benzene	50	53	106	20	21	66-142
Toluene	50	50	100	15	21	59-139
Chlorobenzene	50	48	96	21	21	60-133

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

RPD: 0 out of 5 outside limits
Spike Recovery: 0 out of 10 outside limits

COMMENTS: _____

ACCREDITED LABORATORIES, INC.
VOLATILE ORGANIC ANALYSIS DATA

CASE NUMBER
PLE NUMBER VBLKA91
A FILE >A8894
CLIENT NAME
FIELD ID

MATRIX Soil
DILUTION FACTOR 125
DATE EXTRACTED
DATE ANALYZED 11/02/00
ANALYZED BY ROBERT

CAS #	COMPOUND	UG/KG	MDL
107028	Acrolein	U	3100
107131	Acrylonitrile	U	3100
75718	Dichlorodifluoromethane	U	630
74873	Chloromethane	U	630
75014	Vinyl Chloride	U	630
74839	Bromomethane	U	630
75003	Chloroethane	U	630
75694	Trichlorofluoromethane	U	630
75354	1,1-Dichloroethene	U	630
75092	Methylene Chloride	520 J	630
156605	trans-1,2-Dichloroethene	U	630
75343	1,1-Dichloroethane	U	630
590207	2,2-Dichloropropane	U	630
156592	cis-1,2-dichloroethene	U	630
67663	Chloroform	U	630
74975	Bromochloromethane	U	630
71556	1,1,1-Trichloroethane	U	630
[illegible]3586	1,1-Dichloropropene	U	630
[illegible]35	Carbon Tetrachloride	U	630
107062	1,2-Dichloroethane	U	630
71432	Benzene	U	630
79016	Trichloroethene	U	630
78875	1,2-Dichloropropane	U	630
75274	Bromodichloromethane	U	630
74953	Dibromomethane	U	630
10061015	cis-1,3-dichloropropene	U	630
108883	Toluene	U	630
10061026	trans-1,3-Dichloropropene	U	630
79005	1,1,2-Trichloroethane	U	630
142289	1,3-Dichloropropane	U	630
127184	Tetrachloroethene	U	630
124481	Dibromochloromethane	U	630
106934	1,2-Dibromoethane	U	630
100414	Ethylbenzene	U	630

CAS #	COMPOUND	UG/KG	MDL
108907	Chlorobenzene	U	630
630206	1,1,1,2-Tetrachloroethane	U	630
10330207	m,p-Xylene	U	1300
100425	Styrene	U	630
98828	Isopropylbenzene	U	630
75252	Bromoform	U	630
79345	1,1,2,2-Tetrachloroethane	U	630
96184	1,2,3-Trichloropropane	U	630
103651	n-Propyl benzene	U	630
108861	Bromobenzene	U	630
108678	1,3,5-Trimethylbenzene	U	630
95498	2-Chlorotoluene	U	630
106434	4-Chlorotoluene	U	630
98066	tert-Butylbenzene	U	630
95636	1,2,4-Trimethylbenzene	U	630
135988	sec-Butylbenzene	U	630
99876	p-Isopropyltoluene	U	630
541731	1,3-Dichlorobenzene	U	630
106467	1,4-Dichlorobenzene	U	630
104518	n-Butylbenzene	U	630
95501	1,2-Dichlorobenzene	U	630
96128	1,2-Dibromo-3-Chloropropane	U	630
120821	1,2,4-Trichlorobenzene	U	630
87683	Hexachlorobutadiene	U	630
91203	Naphthalene	U	630
87616	1,2,3-Trichlorobenzene	U	630
95476	o-Xylene	U	630
75150	Carbon disulfide	U	630
110758	2-Chloroethylvinylether	U	630
67641	Acetone	U	630
108054	Vinyl acetate	U	630
789333	2-Butanone	U	630
108101	4-Methyl-2-pentanone	U	630
591786	2-Hexanone	U	630

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	89 %	70-121	OK
Toluene-d8	104 %	81-117	OK
Bromofluorobenzene	97 %	74-121	OK

Percent solid of 100 is used for all target compounds.

J - Indicates compound concentration found below MDL.
[illegible] - Indicates compound analyzed for but not detected,
[illegible] - Indicates result is based on a dilution.
! - Result exceeds industrial surface soil standards.*

B - Indicates compound found in associated blank.
E - Indicates result exceeds highest calibration standard
R - Result exceeds residential surface soil standards.*

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* Flags are based on New Jersey Soil Cleanup Criteria from Site Remediation News Volume 06 Number 1.

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

ab Name: Accredited Labs, Inc.

lient Name:

ase No.:

ab File ID: >A8894

Lab Sample ID: VBLKA91

Field ID:

Date Extracted:

Date Analyzed: 11/02/00

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

* **Unknowns are defined as: Compounds that are less than 80% probability or have no database entries from the library.**

FORM I SV-TIC

ACCREDITED LABORATORIES, INC.
VOLATILE ORGANIC ANALYSIS DATA

CASE NUMBER
PLE NUMBER VBLKA92
DATA FILE >A8919
CLIENT NAME
FIELD ID

MATRIX Soil
DILUTION FACTOR 125
DATE EXTRACTED
DATE ANALYZED 11/03/00
ANALYZED BY ROBERT

CAS #	COMPOUND	UG/KG	MDL
107028	Acrolein	U	3100
107131	Acrylonitrile	U	3100
75718	Dichlorodifluoromethane	U	630
74873	Chloromethane	U	630
75014	Vinyl Chloride	U	630
74839	Bromomethane	U	630
75003	Chloroethane	U	630
75694	Trichlorofluoromethane	U	630
75354	1,1-Dichloroethene	U	630
75092	Methylene Chloride	690	630
156605	trans-1,2-Dichloroethene	U	630
75343	1,1-Dichloroethane	U	630
590207	2,2-Dichloropropane	U	630
156592	cis-1,2-dichloroethene	U	630
67663	Chloroform	U	630
74975	Bromochloromethane	U	630
71556	1,1,1-Trichloroethane	U	630
[illegible]3586	1,1-Dichloropropene	U	630
[illegible]35	Carbon Tetrachloride	U	630
107062	1,2-Dichloroethane	U	630
71432	Benzene	U	630
79016	Trichloroethene	U	630
78875	1,2-Dichloropropane	U	630
75274	Bromodichloromethane	U	630
74953	Dibromomethane	U	630
10061015	cis-1,3-dichloropropene	U	630
108883	Toluene	U	630
10061026	trans-1,3-Dichloropropene	U	630
79005	1,1,2-Trichloroethane	U	630
142289	1,3-Dichloropropane	U	630
127184	Tetrachloroethene	U	630
124481	Dibromochloromethane	U	630
106934	1,2-Dibromoethane	U	630
100414	Ethylbenzene	U	630

CAS #	COMPOUND	UG/KG	MDL
108907	Chlorobenzene	U	630
630206	1,1,1,2-Tetrachloroethane	U	630
10330207	m,p-Xylene	U	1300
100425	Styrene	U	630
98828	Isopropylbenzene	U	630
75252	Bromoform	U	630
79345	1,1,2,2-Tetrachloroethane	U	630
96184	1,2,3-Trichloropropane	U	630
103651	n-Propyl benzene	U	630
108861	Bromobenzene	U	630
108678	1,3,5-Trimethylbenzene	U	630
95498	2-Chlorotoluene	U	630
106434	4-Chlorotoluene	U	630
98066	tert-Butylbenzene	U	630
95636	1,2,4-Trimethylbenzene	U	630
135988	sec-Butylbenzene	U	630
99876	p-Isopropyltoluene	U	630
541731	1,3-Dichlorobenzene	U	630
106467	1,4-Dichlorobenzene	U	630
104518	n-Butylbenzene	U	630
95501	1,2-Dichlorobenzene	U	630
96128	1,2-Dibromo-3-Chloropropane	U	630
120821	1,2,4-Trichlorobenzene	U	630
87683	Hexachlorobutadiene	U	630
91203	Naphthalene	U	630
87616	1,2,3-Trichlorobenzene	U	630
95476	o-Xylene	U	630
75150	Carbon disulfide	U	630
110758	2-Chloroethylvinylether	U	630
67641	Acetone	U	630
108054	Vinyl acetate	U	630
789333	2-Butanone	U	630
108101	4-Methyl-2-pentanone	U	630
591786	2-Hexanone	U	630

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	90 %	70-121	OK
Toluene-d8	93 %	81-117	OK
Bromofluorobenzene	93 %	74-121	OK

Percent solid of 100 is used for all target compounds.

J - Indicates compound concentration found below MDL.
- Indicates compound analyzed for but not detected,
D - Indicates result is based on a dilution.
I - Result exceeds industrial surface soil standards.*

B - Indicates compound found in associated blank.
E - Indicates result exceeds highest calibration standard
R - Result exceeds residential surface soil standards.*

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* Flags are based on New Jersey Soil Cleanup Criteria from Site Remediation News Volume 06 Number 1.

4A
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

Name: ACCREDITED LABORATORIES, Contract:

Code: _____ Case No.: SAS No.: _____ SDG No.:

Lab File ID: >A8871 Lab Sample ID: VBLKA90

Date Analyzed: 11/01/00 Time Analyzed: 11:54

GC Column: RTX-502 ID: 0.53(mm) Heated Purge: (Y/N) Y

Instrument ID: HP5970A

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01		0013345MS	>A8879	18:18
02		0013345MSD	>A8880	18:58
03				
04				
05				
06				
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
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21				
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24				
25				
26				
27				
28				
29				
30				

COMMENTS: _____

4A

VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

Name: ACCREDITED LABORATORIES, Contract:

Lab Code: _____ Case No.: 9867 SAS No.: _____ SDG No.:

Lab File ID: >A8894 Lab Sample ID: VBLKA91

Date Analyzed: 11/02/00 Time Analyzed: 12:58

GC Column: RTX-502 ID: 0.53(mm) Heated Purge: (Y/N) Y

Instrument ID: HP5970A

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01		0013225	>A8909	23:03
02				
03				
04				
05				
06				
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

COMMENTS:

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4A

VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

Name: ACCREDITED LABORATORIES, Contract:

Lab Code: _____ Case No.: 9867 SAS No.: _____ SDG No.:

Lab File ID: >A8919 Lab Sample ID: VBLKA92

Date Analyzed: 11/03/00 Time Analyzed: 12:48

GC Column: RTX-502 ID: 0.53(mm) Heated Purge: (Y/N) Y

Instrument ID: HP5970A

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01		0013225DL	>A8929	19:56
02				
03				
04				
05				
06				
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
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23				
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25				
26				
27				
28				
29				
30				

COMMENTS: _____

ACCREDITED LABORATORIES, INC.

TOTAL PETROLEUM HYDROCARBONS
SOIL DUPLICATE AND MATRIX SPIKE SUMMARY

DUPLICATE SAMPLE #: 200013178

ORIGINAL CONCENTRATION (mg/Kg)	DUPLICATE CONCENTRATION (mg/Kg)	RPD	RPD QC LIMIT
ND	ND	0.0	25

MATRIX SPIKE SAMPLE #: 200013178

SPIKE ADDED (mg/Kg)	SAMPLE CONC (mg/Kg)	MS CONC (mg/Kg)	% RECOVERY	RECOVERY QC LIMITS
194	ND	217	111.9	75-125

Operator ID: ROBERT
Data File: ^A8894::QT
Acq File: >A8894::D1
Name: VBLKA91
Misc:

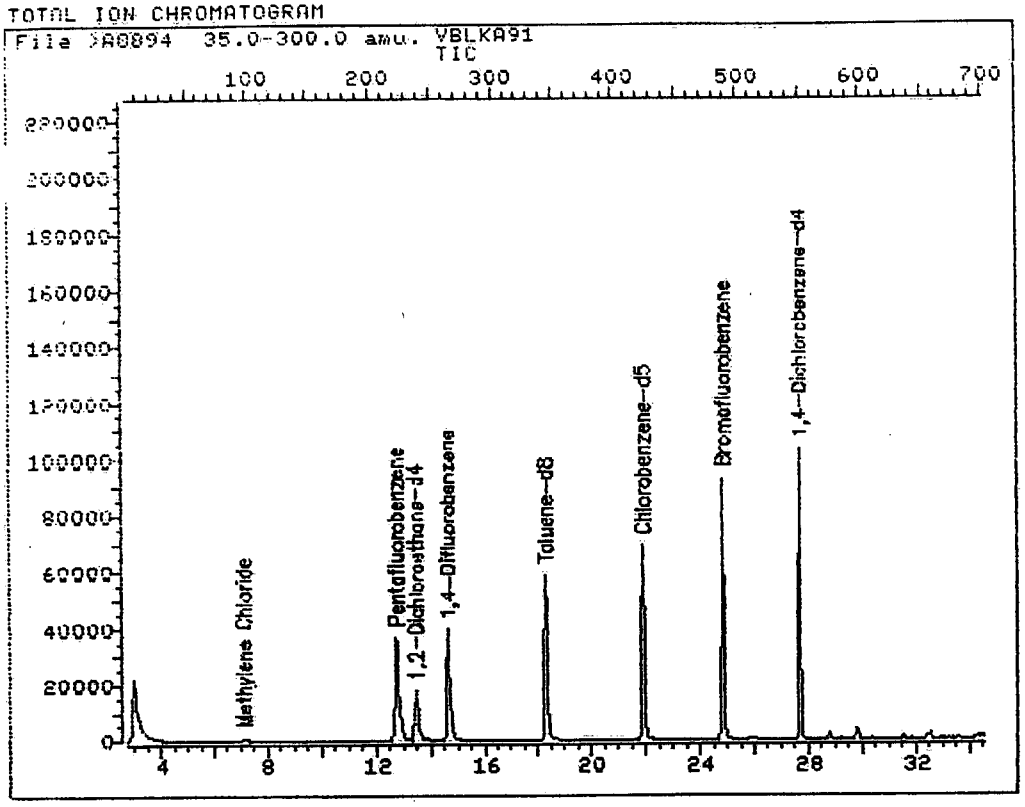
Quant Rev: 7 Quant Time: 001102 13:33
Injected at: 001102 12:58
Dilution Factor: 1.00000
Instrument ID: HP5970BA

ID File: IDAS09::SC
Title: Accredited Labs ID file for 8260
Last Calibration: 001006 13:28 Last Qcal Time: <none>

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Pentafluorobenzene	12.73	221	143980	50.00	ug/l	100
13)	Methylene Chloride	7.10	97	7079	4.16	ug/l	95
24)	*1,4-Difluorobenzene	14.64	263	143953	50.00	ug/l	87
25)	1,2-Dichloroethane-d4	13.46	237	70129	44.27	ug/l	99
36)	Toluene-d8	18.27	343	158126	52.09	ug/l	93
42)	Bromofluorobenzene	24.86	488	115700	48.28	ug/l	71
43)	*Chlorobenzene-d5	21.91	423	125396	50.00	ug/l	100
55)	*1,4-Dichlorobenzene-d4	27.67	550	81449	50.00	ug/l	95

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >A8894::D1 Quant Output File: ^A8894::QT
Name: VBLKA91 Instrument ID: HP5970BA
Misc:

Id File: IDAS09::SC
Title: Accredited Labs ID file for 8260
Last Calibration: 001006 13:28 Last Qcal Time: <none>

Operator ID: ROBERT
Quant Time : 001102 13:33
Injected at: 001102 12:58

Operator ID: ROBERT
Output File: ^A8919::QT
Data File: >A8919::D1
Name: VBLKA92
Misc:

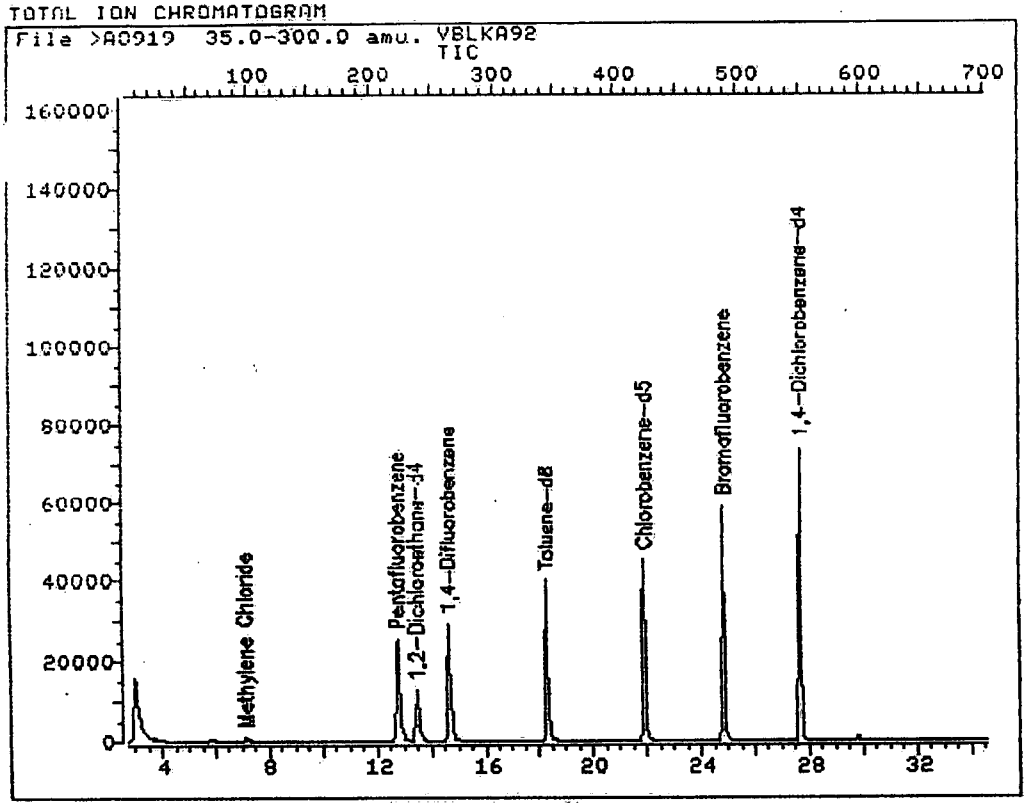
Quant Rev: 7 Quant Time: 001103 13:23
Injected at: 001103 12:48
Dilution Factor: 1.00000
Instrument ID: HP5970BA

ID File: IDAS09::SC
Title: Accredited Labs ID file for 8260
Last Calibration: 001006 13:28 Last Qcal Time: <none>

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Pentafluorobenzene	12.73	221	95355	50.00	ug/l	100
13)	Methylene Chloride	7.10	97	6177	5.49	ug/l	88
24)	*1,4-Difluorobenzene	14.64	263	102032	50.00	ug/l	87
25)	1,2-Dichloroethane-d4	13.46	237	50288	44.78	ug/l	96
36)	Toluene-d8	18.27	343	100273	46.60	ug/l	91
42)	Bromofluorobenzene	24.86	488	78856	46.42	ug/l	72
43)	*Chlorobenzene-d5	21.90	423	81086	50.00	ug/l	100
55)	*1,4-Dichlorobenzene-d4	27.67	550	55336	50.00	ug/l	91

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >A8919::D1 Quant Output File: ^A8919::QT
Name: VBLKA92 Instrument ID: HP5970BA
Misc:

Id File: IDAS09::SC
Title: Accredited Labs ID file for 8260
Last Calibration: 001006 13:28 Last Qcal Time: <none>

Operator ID: ROBERT
Quant Time : 001103 13:23
Injected at: 001103 12:48

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QUANT REPORT

Operator ID: ROBERT
Data File: ^A8909::QT
Meth File: >A8909::D1
Run #: 0013225
Misc: 9867

Quant Rev: 7
ENVIROTACTICS

Quant Time: 001102 23:39
Injected at: 001102 23:03
Dilution Factor: 1.00000
Instrument ID: HP5970BA
S-10

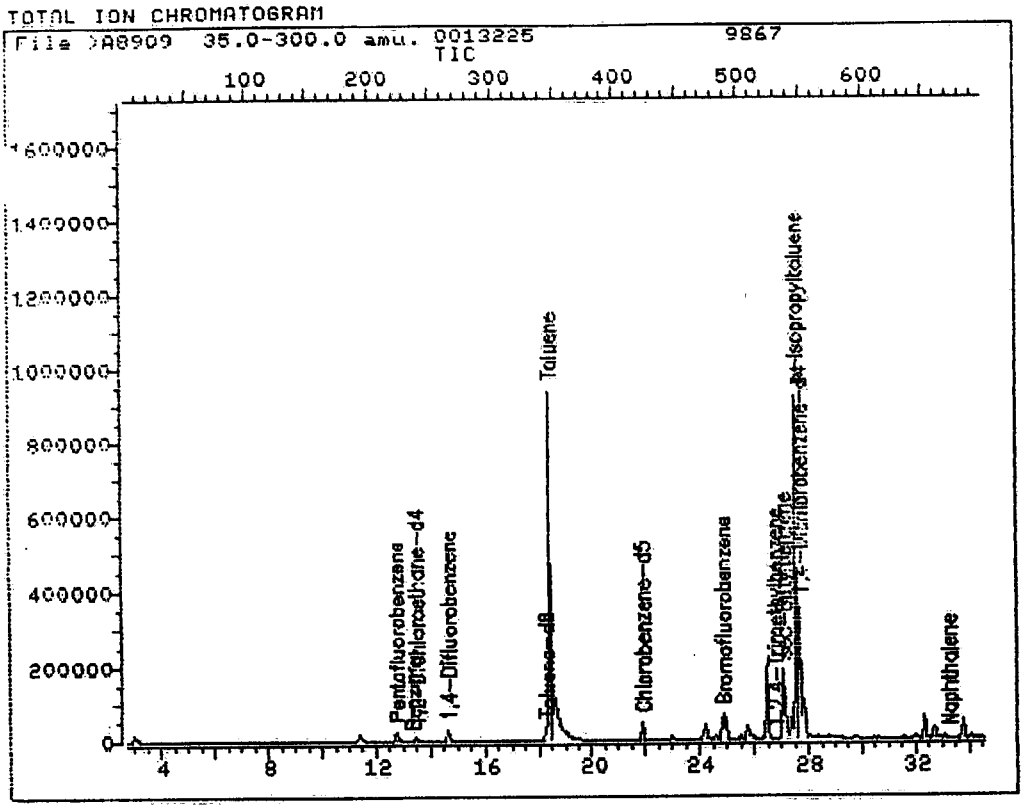
ID File: IDAS09::SC
File: Accredited Labs ID file for 8260
Last Calibration: 001006 13:28

Last Qcal Time: <none>

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Pentafluorobenzene	12.76	222	92288	50.00	ug/l	100
24)	*1,4-Difluorobenzene	14.67	264	106441	50.00	ug/l	85
25)	1,2-Dichloroethane-d4	13.49	238	46009	39.28	ug/l	97
29)	Benzene	13.35	235	2115	1.16	ug/l	100
36)	Toluene-d8	18.30	344	105648	47.06	ug/l	91
37)	Toluene	18.44	347	1928457M	865.04	ug/l	
42)	Bromofluorobenzene	24.87	487	74784	42.20	ug/l	71
43)	*Chlorobenzene-d5	21.91	422	89045	50.00	ug/l	100
55)	*1,4-Dichlorobenzene-d4	27.71	548	37851M	50.00	ug/l	
65)	1,2,4-Trimethylbenzene	26.78	529	4452	2.31	ug/l	77
66)	sec-Butylbenzene	27.09	536	4624	1.89	ug/l	84
67)	p-Isopropyltoluene	27.55	546	1344724	652.66	ug/l	59
75)	Naphthalene	33.25	670	2732M	1.90	ug/l	100

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >A8909::D1 Quant Output File: ^A8909::QT
Name: 0013225 Instrument ID: HP5970BA
Misc: 9867 ENVIROTACTICS S-10

Id File: IDAS09::SC
Title: Accredited Labs ID file for 8260
Last Calibration: 001006 13:28 Last Qcal Time: <none>

Operator ID: ROBERT
Quant Time : 001102 23:39
Injected at: 001102 23:03

QUANT REPORT

rator ID: ROBERT
put File: ^A8929::QT
Data File: >A8929::D1
Name: 0013225DL
Misc: 9867

Quant Rev: 7

Quant Time: 001103 20:32
Injected at: 001103 19:56
Dilution Factor: 1.00000
Instrument ID: HP5970BA
S-10

ENVIROTACTICS

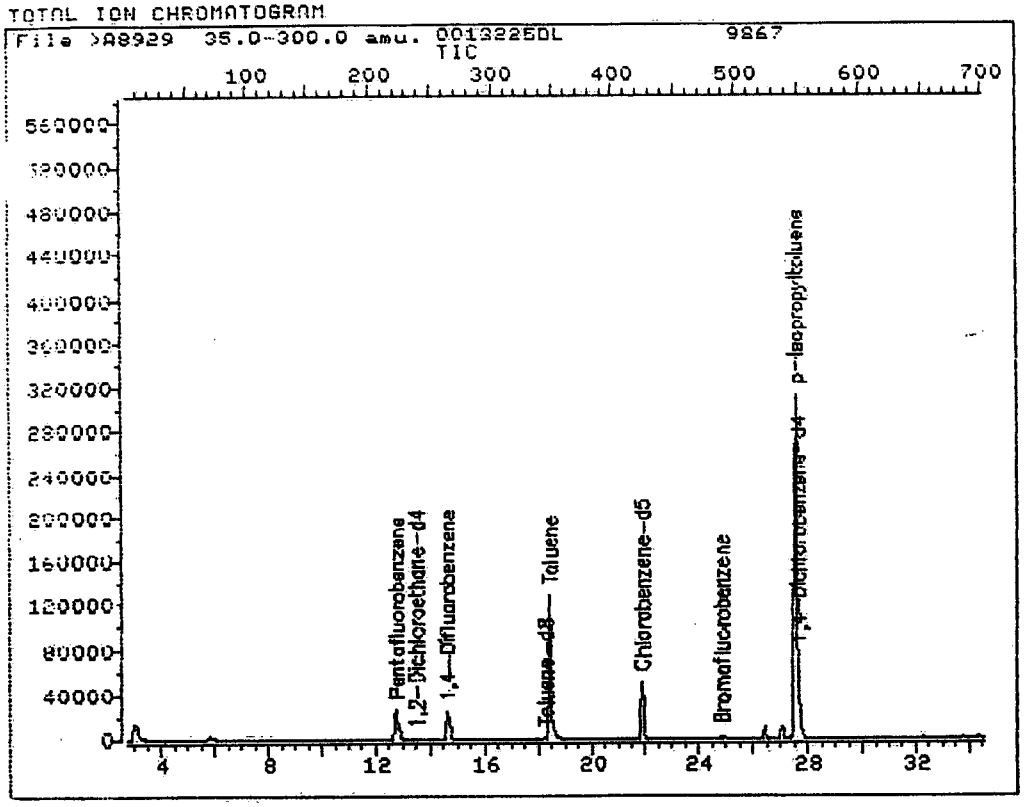
ID File: IDAS09::SC
Title: Accredited Labs ID file for 8260
Last Calibration: 001006 13:28

Last Qcal Date: <none>

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Pentafluorobenzene	12.76	222	92376	50.00	ug/l	100
24)	*1,4-Difluorobenzene	14.62	263	99799	50.00	ug/l	87
25)	1,2-Dichloroethane-d4	13.49	238	1673M	1.52	ug/l	
36)	Toluene-d8	18.25	343	4751M	2.26	ug/l	
37)	Toluene	18.44	347	337257	161.35	ug/l	94
42)	Bromofluorobenzene	24.84	488	3990	2.40	ug/l	78
43)	*Chlorobenzene-d5	21.89	423	87527	50.00	ug/l	100
55)	*1,4-Dichlorobenzene-d4	27.66	550	55077	50.00	ug/l	94
67)	p-Isopropyltoluene	27.57	548	591380M	197.26	ug/l	98

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >A8929::D1 Quant Output File: ^A8929::QT
Name: 0013225DL Instrument ID: HP5970BA
Misc: 9867 ENVIROTACTICS S-10

Id File: IDAS09::SC
Title: Accredited Labs ID file for 8260
Last Calibration: 001006 13:28 Last Qcal Time: <none>

Operator ID: ROBERT
Quant Time : 001103 20:32
Injected at: 001103 19:56

PAR/SIR/RIW

Orbis Products Corporation
55 Virginia Street
Newark, Essex County, NJ
Case #86-11-17-0100
Attachment 10
Soil Laboratory Reports
(2 of 6)

Ref 15

Integrated Analytical Labs

Integrated Analytical Laboratories, LLC.

273 Franklin Road
Randolph, N.J. 07869

Phone: 973 361-4252
Fax: 973 989-5288

ANALYTICAL DATA REPORT

for
Envirotactics Inc.
2517 Route 35
Building D, Suite 202
Manasquan,NJ 08736

Project: 444 ORBIS
Lab Case Number: E01-1840
Date Report Prepared: April 12, 2001

CLIENT SAMPLE ID	LABORATORY SAMPLE ID
S-11	1840-001
S-12	1840-002
S-12A	1840-003
S-13	1840-004
S-14	1840-005
S-15	1840-006
S-16	1840-007
TRIP BLANK	1840-008
S-17	1840-009

All required protocols were followed during analyses. These data have been reviewed and accepted by

Michael H. Leftin, Ph.D.
Laboratory Director

The liability of Integrated Analytical Laboratories, LLC. is limited to the actual cost of the analyses performed.

INTEGRATED ANALYTICAL LABORATORIES, LLC.

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INTEGRATED ANALYTICAL LABORATORIES, LLC.

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INTEGRATED ANALYTICAL LABORATORIES, LLC.

MATRIX QUALIFIERS

A - Indicates the sample is an Aqueous matrix.

O - Indicates the sample is an Oil matrix.

S - Indicates the sample is a Soil, Sludge or Sediment matrix.

X - Indicates the sample is an Other matrix as indicated by Client Chain of Custody.

DATA QUALIFIERS

B - Indicates the analyte was found in the Blank and in the sample. It indicates possible sample contamination and warns the data user to use caution when applying the results of the analyte.

C - Common Laboratory Contaminant.

D - The compound was reported from the Diluted analysis.

D.F. - Dilution Factor.

E - Estimated concentration, reported results are outside the calibrated range of the instrument.

J - Indicates an estimated value. The compound was detected at a value below the method detection limit but greater than zero. For GC/MS procedures, the mass spectral data meets the criteria required to identify the target compound.

MDL - Method Detection Limit.

MI - Indicates compound concentration could not be determined due to Matrix Interferences.

NA - Not Applicable.

ND - Indicates the compound was analyzed for but Not Detected at the MDL.

REPORT QUALIFIERS

All solid sample analyses are reported on a dry weight basis.

All solid sample values are corrected for original sample size and percent solids.

INTEGRATED ANALYTICAL LABORATORIES, LLC.

CONFORMANCE / NONCONFORMANCE SUMMARY

Integrated Analytical Laboratories, LLC. received nine (9) soil sample(s) from Envirotactics Inc. (Project: 444 ORBIS) on March 26, 2001 for the analysis of:

(8) Volatiles + 15
(7) Semivolatiles - BNA + 25
(6) PCB's
(6) Pesticides
(7) PP Metals
(6) Cyanide, Total
(6) Phenols
(6) Total Petroleum Hydrocarbons

A review of the QA/QC measures for the analysis of the sample(s) contained in this report has been performed by:

Reviewed by

4/12/01
Date

000002

INTEGRATED ANALYTICAL LABORATORIES, LLC.

LABORATORY DELIVERABLES CHECK LIST

Lab Case Number: E01-1840

		Check If Complete
1.	Cover Page, Title Page listing Lab Certification #, facility name & address and date of report preparation.	✓
2.	Table of Contents.	✓
3.	Summary Sheets listing analytical results for all targeted and non-targeted compounds.	✓
4.	Summary Table cross-referencing Field ID's vs. Lab ID's.	✓
5.	Document bound, paginated and legible.	✓
6.	Chain of Custody.	✓
7.	Methodology Summary.	✓
8.	Laboratory Chronicle and Holding Time Check.	✓
9.	Results submitted on a dry weight basis (if applicable).	✓
10.	Method Detection Limits.	✓
11.	Lab certified by NJDEP for parameters or appropriate category of parameters or a member of the USEPA CLP.	✓
12.	NonConformance Summary.	✓

[signature]
QC Reviewed by

4/12/01
Date

000003

564

INTEGRATED ANALYTICAL LABORATORIES
CONFORMANCE/NONCONFORMANCE SUMMARY
GC/MS VOLATILE ANALYSIS

Lab Case Number: E01 - 1840

	No	Yes
1. Chromatograms Labeled/Compounds Identified (Field Samples and Method Blanks).		✓
2. GC/MS Tuning Specifications: a. BFB Passed		✓
3. GC/MS Tuning Frequency - Performed every 24 hours for 600 series, 12 hours for 8000 series and 8 hours for 500 series.		✓
4. GC/MS Calibration - Initial calibration performed within 30 days before sample analysis and continuing calibration performed within 24 hours before sample analysis for 600 series, 12 hours for 8000 series		✓
5. GC/MS Calibration Requirements: a. Calibration Check Compounds		✓
b. System Performance Check Compounds		✓
6. Blank Contamination - If yes, list compounds and concentrations in each blank:	✓	
7. Surrogate Recoveries Meet Criteria (If not met, list those compounds and their recoveries which fall outside the acceptable range)		✓
If not met, were the calculations checked and the results qualified as "estimated"?		na
8. Matrix Spike/Matrix Spike Duplicate meet criteria (if not, list those compounds and their recoveries/% differences which fall outside the acceptable range)		✓
9. Internal Standard Area/Retention Time Shift meet criteria		✓
10. Extraction Holding Time Met If not met, list number of days exceeded for each sample:		NA
11. Analysis Holding Time Met If not met, list number of days exceeded for each sample:		✓
12. Sample Dilution Performed	✓	

High Target Compounds	High Nontarget Compounds	Matrix Interference	Other

13. Comments:

Organics Manager

4/8/01
Date

000004

INTEGRATED ANALYTICAL LABORATORIES
CONFORMANCE/NONCONFORMANCE SUMMARY
GC/MS SEMIVOLATILE ANALYSIS

Lab Case Number: E01 - 1840

	No	Yes
1. Chromatograms Labeled/Compounds Identified (Field Samples and Method Blanks).		✓
2. GC/MS Tuning Specifications: a. DFTPP Passed		✓
3. GC/MS Tuning Frequency - Performed every 24 hours for 600 series, 12 hours for 8000 series.		✓
4. GC/MS Calibration - Initial calibration performed within 30 days before sample analysis and continuing calibration performed within 24 hours before sample analysis for 600 series.		✓
5. GC/MS Calibration Requirements: a. Calibration Check Compounds		✓
b. System Performance Check Compounds		✓
6. Blank Contamination - If yes, list compounds and concentrations in each blank:	✓	
a. B/N Fraction		
b. Acid Fraction		
7. Surrogate Recoveries Meet Criteria (If not met, list those compounds and their recoveries which fall outside the acceptable range)		✓
a. B/N Fraction		
b. Acid Fraction		
If not met, were the calculations checked and the results qualified as "estimated"?		na
8. Matrix Spike/Matrix Spike Duplicate meet criteria (if not, list those compounds and their recoveries/% differences which fall outside the acceptable range)		✓
a. B/N Fraction		
b. Acid Fraction		
9. Internal Standard Area/Retention Time Shift meet criteria		✓
10. Extraction Holding Time Met		✓
If not met, list number of days exceeded for each sample:		
11. Analysis Holding Time Met		✓
If not met, list number of days exceeded for each sample:		
12. Sample Dilution Performed		✓

High Target Compounds	High Nontarget Compounds	Matrix Interference	Other
✓	✓		

13. Comments:

Organics Manager

4/06/01
Date

000005

rev 01/01

566

INTEGRATED ANALYTICAL LABORATORIES
CONFORMANCE/NONCONFORMANCE SUMMARY
GC ANALYSIS - PCB'S, PESTICIDES, HERBICIDES

Lab Case Number: E01 - 1840

		No	Yes
1.	Chromatograms Labeled/Compounds Identified (Field Samples and Method Blanks).		✓
2.	Standards Summary submitted.		✓
3.	Calibration - Initial calibration performed within 30 days before sample analysis and continuing calibration performed within 12 hrs of the sample analysis.		✓
4.	Blank Contamination - If yes, list compounds and concentrations in each blank:	✓	
	a. PCB's		
	b. Pesticides		
	c. Herbicides		
5.	Surrogate Recoveries meet criteria (if applicable). If not met, list those compounds and their recoveries which fall outside the acceptable range:		✓
	a. PCB's		
	b. Pesticides		
	c. Herbicides		
6.	Matrix Spike/Matrix Spike Duplicate meet criteria (if not, list those compounds and their recoveries/% differences which fall outside the acceptable range) acceptable range:		✓
	a. PCB's		
	b. Pesticides		
	c. Herbicides		
7.	Retention Time Shift Meet Criteria (if applicable).		✓
8.	Extraction Holding Time Met. If not met, list number of days exceeded for each sample:		✓
9.	Analysis Holding Time Met. If not met, list number of days exceeded for each sample:		✓

Comments:

Organic Manager

03.28.2001
Date

000006

rev 01/01

INTEGRATED ANALYTICAL LABORATORIES

METAL ANALYSIS CONFORMANCE/NONCONFORMANCE SUMMARY

Lab Case Number: E01 - 1840

	No	Yes
1. Calibration Summary Meet Criteria.		✓
2. ICP Interference Check Sample Results Meets Criteria (if applicable)		✓
3. Serial Dilution Summary Submitted (if applicable) / Meets Criteria		✓
4. Internal Standards Meet Criteria (if applicable)		✓
5. Laboratory Control Sample Summary Submitted (if applicable)/Meets Criteria		
6. Blank Contamination: If yes, list compounds and concentrations in each blank:	✓	
7. Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria. (If not, list those compounds and their recoveries which fall outside the acceptable range).		✓
8. Extraction Holding Time Met. If not, list number of days exceeded for each sample:		✓
9. Analysis Holding Time Met. If not, list number of days exceeded for each sample:		✓

Additional Comments:

N. Falk-Jergensen
Inorganics Manager

04/12/01
Date

000007

rev 01/01

568

INTEGRATED ANALYTICAL LABORATORIES

PHC ANALYSIS CONFORMANCE/NONCONFORMANCE SUMMARY

Lab Case Number: E01 - 1840

	No	Yes
1. Blank contamination If yes, list the sample and the concentration in each blank:	✓	
2. Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria (If not met, list the samples and corresponding recovery which falls outside the acceptable range)		✓
3. IR spectra submitted for all standards, blanks & samples (as required).		✓
4. Chromatograms submitted for all standards, blanks & samples if GC fingerprinting was conducted.		NA
5. Extraction Holding Time Met If not met, list number of days exceeded for each sample:		✓
6. Analysis Holding Time Met If not met, list number of days exceeded for each sample:		✓

Additional Comments: _____

jaiCamista
Dept. Supervisor

3-27-01
Date

000008

rev 01/01

569

INTEGRATED ANALYTICAL LABORATORIES, LLC.

SUMMARY REPORT
Client: Envirotactics Inc.
Project: 444 ORBIS
Lab Case No.: E01-1840

Lab ID:	1840-001			1840-002			1840-003			1840-004		
Client ID:	S-11			S-12			S-12A			S-13		
Matrix:	Soil			Soil			Soil			Soil		
Sampled Date:	3/23/2001			3/23/2001			3/23/2001			3/23/2001		
PARAMETER(Units)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
Volatiles (ppb)												
Chloroform	ND		420	ND		358	ND		630	15000		472
Benzene	222	J	420	21900		358	16100		630	69200	D	16500
Toluene	ND		420	1730		358	4180		630	315000	D	16500
Chlorobenzene	ND		420	ND		358	ND		630	540		472
Ethylbenzene	ND		420	ND		358	ND		630	840		472
Total Xylenes	ND		420	ND		358	ND		630	1930		472
1,3-Dichlorobenzene	ND		420	ND		358	ND		630	2320		472
1,4-Dichlorobenzene	ND		420	ND		358	ND		630	21900		472
1,2-Dichlorobenzene	2970		420	ND		358	ND		630	262000	D	16500
TOTAL VO's:	3192	J		23630			20280			688730		
TOTAL TIC's:	22950			39097			3760			1346200		
TOTAL VO's & TIC's:	26142	J		62727			24040			2034930		
Semivolatiles - BNA (ppb)												
[illegible]nol	ND		159	314		72.1	99.4		77.8	250	J	251
[illegible]-Dichlorobenzene	ND		159	ND		72.1	ND		77.8	1350		251
[illegible]2-Dichlorobenzene	639		159	ND		72.1	ND		77.8	23400		251
4-Methylphenol	163		159	8660		72.1	8190		77.8	ND		251
2,4-Dimethylphenol	ND		159	591		72.1	ND		77.8	ND		251
Phenanthrene	ND		159	ND		72.1	ND		77.8	251		251
Anthracene	102	J	159	ND		72.1	ND		77.8	ND		251
Carbazole	17900		159	ND		72.1	99.1		77.8	4380		251
Fluoranthene	ND		159	ND		72.1	ND		77.8	170	J	251
Pyrene	ND		159	ND		72.1	ND		77.8	165	J	251
bis(2-Ethylhexyl)phthalate	ND		159	ND		72.1	ND		77.8	300		251
TOTAL BNA'S:	18804	J		9565			8388.5			30266	J	
TOTAL TIC's:	27717			332			1030			315080		
TOTAL BNA'S & TIC's:	46521	J		9897			9418.5			345346	J	
PCB's (ppb)	ND		80.6	ND		74.3	~		~	ND		87.9

~ = Sample not analyzed for
ND = Analyzed for but Not Detected at the MDL
J = The concentration was detected at a value below the MDL
D = The compound was reported from the Diluted analysis
All qualifiers on individual Volatiles & Semivolatiles are carried down through summation.

000003

INTEGRATED ANALYTICAL LABORATORIES, LLC.

SUMMARY REPORT
Client: Envirotactics Inc.
Project: 444 ORBIS
Lab Case No.: E01-1840

Lab ID:	1840-001			1840-002			1840-003			1840-004		
Client ID:	S-11			S-12			S-12A			S-13		
Matrix:	Soil			Soil			Soil			Soil		
Sampled Date:	3/23/2001			3/23/2001			3/23/2001			3/23/2001		
PARAMETER(Units)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
Pesticides (ppb)												
alpha-BHC	ND		10.1	ND		9.29	~		~	ND		11
beta-BHC	ND		10.1	ND		9.29	~		~	ND		11
gamma-BHC	ND		10.1	ND		9.29	~		~	ND		11
delta-BHC	ND		10.1	ND		9.29	~		~	ND		11
Heptachlor	ND		10.1	ND		9.29	~		~	ND		11
Aldrin	ND		10.1	ND		9.29	~		~	ND		11
Heptachlor Epoxide	ND		10.1	ND		9.29	~		~	ND		11
Endosulfan I	ND		10.1	ND		9.29	~		~	ND		11
4,4'-DDE	ND		10.1	ND		9.29	~		~	89		11
Dieldrin	ND		10.1	ND		9.29	~		~	ND		11
Endrin	ND		10.1	ND		9.29	~		~	ND		11
Endosulfan II	ND		10.1	ND		9.29	~		~	ND		11
4,4'-DDD	32.2		10.1	ND		9.29	~		~	322		11
Endrin aldehyde	ND		10.1	ND		9.29	~		~	ND		11
Endosulfan sulfate	ND		10.1	ND		9.29	~		~	ND		11
4,4'-DDT	17.1		10.1	ND		9.29	~		~	ND		11
[illegible]drin Ketone	ND		50.4	ND		46.4	~		~	ND		54.9
[illegible]ethoxychlor	ND		50.4	ND		46.4	~		~	ND		54.9
Metals (ppm)												
Antimony	ND		2.42	ND		2.27	ND		2.35	ND		2.64
Arsenic	12.4		0.242	1.98		0.227	2.09		0.235	6.13		0.264
Beryllium	0.481		0.242	0.936		0.227	0.743		0.235	ND		0.264
Cadmium	ND		0.242	ND		0.227	ND		0.235	ND		0.264
Chromium	356		0.726	24.0		0.681	19.4		0.705	261		0.792
Copper	22.1		0.484	21.7		0.454	22.4		0.470	20.9		0.528
Lead	19.5		2.42	18.4		2.27	10.2		2.35	99.1		2.64
Mercury	0.0513		0.0151	ND		0.0142	ND		0.0148	0.181		0.0166
Nickel	20.3		0.726	27.1		0.681	23.5		0.705	5.46		0.792
Selenium	ND		2.42	ND		2.27	ND		2.35	ND		2.64
Silver	ND		0.605	ND		0.570	ND		0.584	ND		0.650
Thallium	0.270		0.0968	0.158		0.0908	0.250		0.094	ND		0.106
Zinc	54.0		1.21	76.1		1.14	61.8		1.18	36.8		1.32
General Analytical												
Cyanide, Total (ppm)	ND		1.21	ND		1.14	~		~	ND		1.32
Phenol (ppm)	ND		3.02	ND		2.86	~		~	8.69		3.31
Total Petroleum Hydrocarbons (ppm)	41.1		25.0	ND		25.0	~		~	165		26.5

~ = Sample not analyzed for
ND = Analyzed for but Not Detected at the MDL

INTEGRATED ANALYTICAL LABORATORIES, LLC.

SUMMARY REPORT
Client: Envirotactics Inc.
Project: 444 ORBIS
Lab Case No.: E01-1840

Lab ID:	1840-005			1840-006			1840-007			1840-008		
Client ID:	S-14			S-15			S-16			TRIP BLANK		
Matrix:	Soil			Soil			Soil			Soil		
Sampled Date:	3/23/2001			3/23/2001			3/23/2001			3/23/2001		
PARAMETER(Units)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
Volatiles (ppb)												
Benzene	9330	J	14700	3540		3380	6720		4200	ND		625
Toluene	71400		14700	28700		3380	1020	J	4200	ND		625
Ethylbenzene	5280	J	14700	ND		3380	ND		4200	ND		625
Total Xylenes	105000		14700	ND		3380	ND		4200	ND		625
1,3-Dichlorobenzene	10200	J	14700	ND		3380	ND		4200	ND		625
1,4-Dichlorobenzene	8780	J	14700	ND		3380	2750	J	4200	ND		625
1,2-Dichlorobenzene	416000		14700	1750	J	3380	84300		4200	ND		625
TOTAL VO's:	625990	J		33990	J		94790	J		ND		
TOTAL TIC's:	1430800			603520			ND			ND		
TOTAL VO's & TIC's:	2056790	J		637510	J		94790	J		ND		
Semivolatiles - BNA (ppb)												
1,3-Dichlorobenzene	3200		1710	ND		80.2	259		230	~		~
1,4-Dichlorobenzene	16800		1710	ND		80.2	836		230	~		~
[illegible]-Dichlorobenzene	170000		1710	65.2	J	80.2	28400		230	~		~
[illegible]4-Trichlorobenzene	1320	J	1710	ND		80.2	ND		230	~		~
[illegible]-Methylnaphthalene	8500		1710	ND		80.2	ND		230	~		~
Carbazole	1110	J	1710	ND		80.2	ND		230	~		~
TOTAL BNA'S:	200930	J		65.2	J		29495			~		
TOTAL TIC's:	1348700			78833			34848			~		~
TOTAL BNA'S & TIC's:	1549630	J		78898.2	J		64343			~		~
PCB's (ppb)	ND		78.3	ND		79.9	ND		77.1	~		~

~ = Sample not analyzed for
ND = Analyzed for but Not Detected at the MDL
J = The concentration was detected at a value below the MDL
All qualifiers on individual Volatiles & Semivolatiles are carried down through summation.

INTEGRATED ANALYTICAL LABORATORIES, LLC.

SUMMARY REPORT
Client: Envirotactics Inc.
Project: 444 ORBIS
Lab Case No.: E01-1840

Lab ID:	1840-005			1840-006			1840-007			1840-008		
Client ID:	S-14			S-15			S-16			TRIP BLANK		
Matrix:	Soil			Soil			Soil			Soil		
Sampled Date:	3/23/2001			3/23/2001			3/23/2001			3/23/2001		
PARAMETER(Units)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
Pesticides (ppb)												
alpha-BHC	ND		9.78	ND		9.99	ND		9.63	~		~
beta-BHC	ND		9.78	ND		9.99	ND		9.63	~		~
gamma-BHC	ND		9.78	ND		9.99	ND		9.63	~		~
delta-BHC	ND		9.78	ND		9.99	ND		9.63	~		~
Heptachlor	ND		9.78	ND		9.99	ND		9.63	~		~
Aldrin	ND		9.78	ND		9.99	ND		9.63	~		~
Heptachlor Epoxide	ND		9.78	ND		9.99	ND		9.63	~		~
Endosulfan I	ND		9.78	ND		9.99	ND		9.63	~		~
4,4'-DDE	112		9.78	272		9.99	ND		9.63	~		~
Dieldrin	ND		9.78	ND		9.99	ND		9.63	~		~
Endrin	ND		9.78	ND		9.99	ND		9.63	~		~
Endosulfan II	ND		9.78	ND		9.99	ND		9.63	~		~
4,4'-DDD	403		9.78	ND		9.99	11.9		9.63	~		~
Endrin aldehyde	ND		9.78	ND		9.99	ND		9.63	~		~
Endosulfan sulfate	ND		9.78	ND		9.99	ND		9.63	~		~
4,4'-DDT	ND		9.78	ND		9.99	ND		9.63	~		~
[illegible]drin Ketone	ND		48.9	ND		50	ND		48.2	~		~
[illegible]thoxychlor	ND		48.9	ND		50	ND		48.2	~		~
Metals (ppm)												
Antimony	ND		2.33	ND		2.44	ND		2.36	~		~
Arsenic	38.7		0.233	1.85		0.244	2.72		0.236	~		~
Beryllium	0.421		0.233	0.552		0.244	0.539		0.236	~		~
Cadmium	0.422		0.233	ND		0.244	0.480		0.236	~		~
Chromium	64.5		0.700	20.3		0.732	29.4		0.708	~		~
Copper	143		0.466	18.2		0.488	148		0.472	~		~
Lead	701		2.33	32.3		2.44	113		2.36	~		~
Mercury	0.267		0.0147	0.0556		0.0153	0.146		0.0146	~		~
Nickel	64.5		0.700	18.8		0.732	25.0		0.708	~		~
Selenium	5.28		2.33	ND		2.44	ND		2.36	~		~
Silver	1.27		0.584	ND		0.613	ND		0.590	~		~
Thallium	ND		0.0933	0.129		0.0976	0.105		0.0944	~		~
Zinc	581		1.17	75.5		1.22	173		1.18	~		~
General Analytical												
Cyanide, Total (ppm)	1.25		1.18	ND		1.22	ND		1.18	~		~
Phenol (ppm)	33.6		2.94	ND		3.04	ND		2.94	~		~
Total Petroleum Hydrocarbons (ppm)	3670		118	123		25.0	264		25.0	~		~

Lab ID:	1840-009		
Client ID:	S-17		
Matrix:	Soil		
Sampled Date:	3/23/2001		
PARAMETER(Units)	Conc	Q	MDL
	~		~

~ = Sample not analyzed for
ND = Analyzed for but Not Detected at the MDL

000012

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Client/Project: ENVTACT/444 ORBIS

Lab ID: 1840-001
Client ID: S-11
Date Received: 03/26/2001
Date Analyzed: 03/27/2001
Data file: F9376.D

GC/MS Column: DB-624
Sample wt/vol: 0.036g
Matrix-Units: Soil-µg/Kg (ppb)
Dilution Factor: 1
% Moisture: 17.3

Compound	Concentration	Q	MDL
Chloromethane	ND		420
Vinyl Chloride	ND		420
Bromomethane	ND		420
Chloroethane	ND		420
Trichlorofluoromethane	ND		420
Acrolein	ND		840
1,1-Dichloroethene	ND		420
Methylene Chloride	ND		420
Acrylonitrile	ND		840
trans-1,2-Dichloroethene	ND		420
1,1-Dichloroethane	ND		420
Chloroform	ND		420
1,1,1-Trichloroethane	ND		420
Carbon Tetrachloride	ND		420
1,2-Dichloroethane(EDC)	ND		420
Benzene	222	J	420
Trichloroethene	ND		420
1,2-Dichloropropane	ND		420
Bromodichloromethane	ND		420
2-Chloroethylvinyl Ether	ND		420
cis-1,3-Dichloropropene	ND		420
Toluene	ND		420
trans-1,3-Dichloropropene	ND		420
1,1,2-Trichloroethane	ND		420
Tetrachloroethene	ND		420
Dibromochloromethane	ND		420
Chlorobenzene	ND		420
Ethylbenzene	ND		420
Total Xylenes	ND		420
Bromoform	ND		420
1,1,2,2-Tetrachloroethane	ND		420
1,3-Dichlorobenzene	ND		420
1,4-Dichlorobenzene	ND		420
1,2-Dichlorobenzene	2970		
Total Target Compounds:	3192	J	

000013

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS
Tentatively Identified Compounds

Client/Project: ENVTACT/444 ORBIS

Lab ID: 1840-001
Client ID: S-11
Date Received: 03/26/2001
Date Analyzed: 03/27/2001
Date File: F9376.D

GC/MS Column: DB-624
Sample wt/vol: 0.036g
Matrix-Units: Soil-µg/Kg (ppb)
Dilution Factor: 1
% Moisture: 17.3

CAS #	Compound	Estimated Concentration	Retention Time
	Substituted benzene	6250	18.94
	Unknown aromatic	16700	23.89

Total TICs = 22950

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Client/Project: ENVTACT/444 ORBIS

Lab ID: 1840-002
Client ID: S-12
Date Received: 03/26/2001
Date Analyzed: 03/27/2001
Data file: F9377.D

GC/MS Column: DB-624
Sample wt/vol: 0.04g
Matrix-Units: Soil-µg/Kg (ppb)
Dilution Factor: 1
% Moisture: 12.6

Compound	Concentration	Q	MDL
Chloromethane	ND		358
Vinyl Chloride	ND		358
Bromomethane	ND		358
Chloroethane	ND		358
Trichlorofluoromethane	ND		358
Acrolein	ND		715
1,1-Dichloroethene	ND		358
Methylene Chloride	ND		358
Acrylonitrile	ND		715
trans-1,2-Dichloroethene	ND		358
1,1-Dichloroethane	ND		358
Chloroform	ND		358
1,1,1-Trichloroethane	ND		358
Carbon Tetrachloride	ND		358
1,2-Dichloroethane(EDC)	ND		358
Benzene	21900		358
Trichloroethene	ND		358
1,2-Dichloropropane	ND		358
Bromodichloromethane	ND		358
2-Chloroethylvinyl Ether	ND		358
cis-1,3-Dichloropropene	ND		358
Toluene	1730		358
trans-1,3-Dichloropropene	ND		358
1,1,2-Trichloroethane	ND		358
Tetrachloroethene	ND		358
Dibromochloromethane	ND		358
Chlorobenzene	ND		358
Ethylbenzene	ND		358
Total Xylenes	ND		358
Bromoform	ND		358
1,1,2,2-Tetrachloroethane	ND		358
1,3-Dichlorobenzene	ND		358
1,4-Dichlorobenzene	ND		358
1,2-Dichlorobenzene	ND		358

Total Target Compounds: 23630

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS
Tentatively Identified Compounds

Client/Project: ENVTACT/444 ORBIS

Lab ID: 1840-002
Client ID: S-12
Date Received: 03/26/2001
Date Analyzed: 03/27/2001
Date File: F9377.D

GC/MS Column: DB-624
Sample wt/vol: 0.04g
Matrix-Units: Soil-μg/Kg (ppb)
Dilution Factor: 1
% Moisture: 12.6

CAS #	Compound	Estimated Concentration	Retention Time
	Unknown alkane	787	9.01
	Unknown alkane	2230	9.72
	Unknown cyclic hydrocarbon	9480	10.66
	Substituted benzene	25400	18.94
	Unknown aromatic	1200	23.92

Total TICs = 39097

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Client/Project: ENVTACT/444 ORBIS

Lab ID: 1840-003
Client ID: S-12A
Date Received: 03/26/2001
Date Analyzed: 04/06/2001
Data file: J8722.D

GC/MS Column: DB-624
Sample wt/vol: 0.047g
Matrix-Units: Soil-µg/Kg (ppb)
Dilution Factor: 1
% Moisture: 15.6

Compound	Concentration	Q	MDL
Chloromethane	ND		630
Vinyl Chloride	ND		630
Bromomethane	ND		630
Chloroethane	ND		630
Trichlorofluoromethane	ND		630
Acrolein	ND		1260
1,1-Dichloroethene	ND		630
Methylene Chloride	ND		630
Acrylonitrile	ND		1260
trans-1,2-Dichloroethene	ND		630
1,1-Dichloroethane	ND		630
Chloroform	ND		630
1,1,1-Trichloroethane	ND		630
Carbon Tetrachloride	ND		630
1,2-Dichloroethane(EDC)	ND		630
Benzene	16100		630
Trichloroethene	ND		630
1,2-Dichloropropane	ND		630
Bromodichloromethane	ND		630
2-Chloroethylvinyl Ether	ND		630
cis-1,3-Dichloropropene	ND		630
Toluene	4180		630
trans-1,3-Dichloropropene	ND		630
1,1,2-Trichloroethane	ND		630
Tetrachloroethene	ND		630
Dibromochloromethane	ND		630
Chlorobenzene	ND		630
Ethylbenzene	ND		630
Total Xylenes	ND		630
Bromoform	ND		630
1,1,2,2-Tetrachloroethane	ND		630
1,3-Dichlorobenzene	ND		630
1,4-Dichlorobenzene	ND		630
1,2-Dichlorobenzene	ND		630

Total Target Compounds: 20280

000017

578

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Tentatively Identified Compounds

Client/Project: ENVTACT/444 ORBIS

Lab ID: 1840-003
Client ID: S-12A
Date Received: 03/26/2001
Date Analyzed: 04/06/2001
Date File: J8722.D

GC/MS Column: DB-624
Sample wt/vol: 0.047g
Matrix-Units: Soil-µg/Kg (ppb)
Dilution Factor: 1
% Moisture: 15.6

CAS #	Compound	Estimated Concentration	Retention Time
	Unknown cyclic hydrocarbon	1550	7.75
	Substituted benzene	2210	13.35

Total TICs = 3760

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Client/Project: ENVTACT/444 ORBIS

Lab ID: 1840-004
Client ID: S-13
Date Received: 03/26/2001
Date Analyzed: 03/27/2001
Data file: F9378.D

GC/MS Column: DB-624
Sample wt/vol: 0.035g
Matrix-Units: Soil-µg/Kg (ppb)
Dilution Factor: 1
% Moisture: 24.4

Compound	Concentration	Q	MDL
Chloromethane	ND		472
Vinyl Chloride	ND		472
Bromomethane	ND		472
Chloroethane	ND		472
Trichlorofluoromethane	ND		472
Acrolein	ND		945
1,1-Dichloroethene	ND		472
Methylene Chloride	ND		472
Acrylonitrile	ND		945
trans-1,2-Dichloroethene	ND		472
1,1-Dichloroethane	ND		472
Chloroform	15000		472
1,1,1-Trichloroethane	ND		472
Carbon Tetrachloride	ND		472
1,2-Dichloroethane(EDC)	ND		472
Benzene	83800	E	472
Trichloroethene	ND		472
1,2-Dichloropropane	ND		472
Bromodichloromethane	ND		472
2-Chloroethylvinyl Ether	ND		472
cis-1,3-Dichloropropene	ND		472
Toluene	255000	E	472
trans-1,3-Dichloropropene	ND		472
1,1,2-Trichloroethane	ND		472
Tetrachloroethene	ND		472
Dibromochloromethane	ND		472
Chlorobenzene	540		472
Ethylbenzene	840		472
Total Xylenes	1930		472
Bromoform	ND		472
1,1,2,2-Tetrachloroethane	ND		472
1,3-Dichlorobenzene	2320		472
1,4-Dichlorobenzene	21900		472
1,2-Dichlorobenzene	226000	E	
Total Target Compounds:	607330	E	

000013

580

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Client/Project: ENVTACT/444 ORBIS

Lab ID: 1840-004DIL
Client ID: S-13
Date Received: 03/26/2001
Date Analyzed: 03/28/2001
Data file: F9400.D

GC/MS Column: DB-624
Sample wt/vol: 0.002g
Matrix-Units: Soil-μg/Kg (ppb)
Dilution Factor: 20
% Moisture: 24.4

Compound	Concentration	Q	MDL
Chloromethane	ND		16500
Vinyl Chloride	ND		16500
Bromomethane	ND		16500
Chloroethane	ND		16500
Trichlorofluoromethane	ND		16500
Acrolein	ND		33100
1,1-Dichloroethene	ND		16500
Methylene Chloride	ND		16500
Acrylonitrile	ND		33100
trans-1,2-Dichloroethene	ND		16500
1,1-Dichloroethane	ND		16500
Chloroform	13000	J	16500
1,1,1-Trichloroethane	ND		16500
Carbon Tetrachloride	ND		16500
1,2-Dichloroethane(EDC)	ND		16500
Benzene	69200		16500
Trichloroethene	ND		16500
1,2-Dichloropropane	ND		16500
Bromodichloromethane	ND		16500
2-Chloroethylvinyl Ether	ND		16500
cis-1,3-Dichloropropene	ND		16500
Toluene	315000		16500
trans-1,3-Dichloropropene	ND		16500
1,1,2-Trichloroethane	ND		16500
Tetrachloroethene	ND		16500
Dibromochloromethane	ND		16500
Chlorobenzene	ND		16500
Ethylbenzene	ND		16500
Total Xylenes	ND		16500
Bromoform	ND		16500
1,1,2,2-Tetrachloroethane	ND		16500
1,3-Dichlorobenzene	17100		16500
1,4-Dichlorobenzene	262000		16500
1,2-Dichlorobenzene			
Total Target Compounds:	676300	J	

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS
Tentatively Identified Compounds

Client/Project: ENVTACT/444 ORBIS

Lab ID: 1840-004
Client ID: S-13
Date Received: 03/26/2001
Date Analyzed: 03/27/2001
Date File: F9378.D

GC/MS Column: DB-624
Sample wt/vol: 0.035g
Matrix-Units: Soil-μg/Kg (ppb)
Dilution Factor: 1
% Moisture: 24.4

CAS #	Compound	Estimated Concentration	Retention Time
	Unknown cyclic hydrocarbon	19700	10.66
	Unknown aromatic	25000	16.32
	Unknown aromatic	330000	17.10
	Unknown alkane	15000	17.71
	Unknown alkane	34300	18.65
	Substituted benzene	42300	19.17
	Unknown alkane	28300	19.56
	Unknown aromatic	14300	20.71
	Unknown aromatic	186000	22.53
	Unknown aromatic	63400	23.93
	Unknown aromatic	19100	24.32
	Unknown aromatic	58700	24.61
	Unknown	448000	24.86
	Unknown	13300	25.61
	Unknown	48800	26.90

Total TICs = 1346200

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Client/Project: ENVTACT/444 ORBIS

Lab ID: 1840-005
Client ID: S-14
Date Received: 03/26/2001
Date Analyzed: 03/27/2001
Data file: F9381.D

GC/MS Column: DB-624
Sample wt/vol: 0.002g
Matrix-Units: Soil-µg/Kg (ppb)
Dilution Factor: 20
% Moisture: 15.1

Compound	Concentration	Q	MDL
Chloromethane	ND		14700
Vinyl Chloride	ND		14700
Bromomethane	ND		14700
Chloroethane	ND		14700
Trichlorofluoromethane	ND		14700
Acrolein	ND		29400
1,1-Dichloroethene	ND		14700
Methylene Chloride	ND		14700
Acrylonitrile	ND		29400
trans-1,2-Dichloroethene	ND		14700
1,1-Dichloroethane	ND		14700
Chloroform	ND		14700
1,1,1-Trichloroethane	ND		14700
Carbon Tetrachloride	ND		14700
1,2-Dichloroethane(EDC)	ND		14700
Benzene	9330	J	14700
Trichloroethene	ND		14700
1,2-Dichloropropane	ND		14700
Bromodichloromethane	ND		14700
2-Chloroethylvinyl Ether	ND		14700
cis-1,3-Dichloropropene	ND		14700
Toluene	71400		14700
trans-1,3-Dichloropropene	ND		14700
1,1,2-Trichloroethane	ND		14700
Tetrachloroethene	ND		14700
Dibromochloromethane	ND		14700
Chlorobenzene	ND		14700
Ethylbenzene	5280	J	14700
Total Xylenes	105000		14700
Bromoform	ND		14700
1,1,2,2-Tetrachloroethane	ND		14700
1,3-Dichlorobenzene	10200	J	14700
1,4-Dichlorobenzene	8780	J	14700
1,2-Dichlorobenzene	416000		
Total Target Compounds:	625990	J	

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS
Tentatively Identified Compounds

Client/Project: ENVTACT/444 ORBIS

Lab ID: 1840-005
Client ID: S-14
Date Received: 03/26/2001
Date Analyzed: 03/27/2001
Date File: F9381.D

GC/MS Column: DB-624
Sample wt/vol: 0.002g
Matrix-Units: Soil-µg/Kg (ppb)
Dilution Factor: 20
% Moisture: 15.1

CAS #	Compound	Estimated Concentration	Retention Time
	Unknown aromatic	35600	16.56
	Unknown aromatic	134000	17.10
	Unknown hydrocarbon	16500	17.79
	Unknown aromatic	243000	18.65
	Unknown aromatic	613000	18.84
	Substituted benzene	64800	19.05
	Unknown hydrocarbon	39200	20.31
	Unknown aromatic	44200	21.00
	Unknown	28000	22.12
	Unknown aromatic	115000	22.77
	Substituted benzene	23600	23.69
	Unknown aromatic	15600	23.93
	Unknown hydrocarbon	14700	24.66
	Unknown	21800	24.84
	Unknown aromatic	21800	26.57

Total TICs = 1430800

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Client/Project: ENVTACT/444 ORBIS

Lab ID: 1840-006
Client ID: S-15
Date Received: 03/26/2001
Date Analyzed: 03/27/2001
Data file: F9380.D

GC/MS Column: DB-624
Sample wt/vol: 0.009g
Matrix-Units: Soil-µg/Kg (ppb)
Dilution Factor: 5
% Moisture: 17.7

Compound	Concentration	Q	MDL
Chloromethane	ND		3380
Vinyl Chloride	ND		3380
Bromomethane	ND		3380
Chloroethane	ND		3380
Trichlorofluoromethane	ND		3380
Acrolein	ND		6750
1,1-Dichloroethene	ND		3380
Methylene Chloride	ND		3380
Acrylonitrile	ND		6750
trans-1,2-Dichloroethene	ND		3380
1,1-Dichloroethane	ND		3380
Chloroform	ND		3380
1,1,1-Trichloroethane	ND		3380
Carbon Tetrachloride	ND		3380
1,2-Dichloroethane(EDC)	ND		3380
Benzene	3540		3380
Trichloroethene	ND		3380
1,2-Dichloropropane	ND		3380
Bromodichloromethane	ND		3380
2-Chloroethylvinyl Ether	ND		3380
cis-1,3-Dichloropropene	ND		3380
Toluene	28700		3380
trans-1,3-Dichloropropene	ND		3380
1,1,2-Trichloroethane	ND		3380
Tetrachloroethene	ND		3380
Dibromochloromethane	ND		3380
Chlorobenzene	ND		3380
Ethylbenzene	ND		3380
Total Xylenes	ND		3380
Bromoform	ND		3380
1,1,2,2-Tetrachloroethane	ND		3380
1,3-Dichlorobenzene	ND		3380
1,4-Dichlorobenzene	1750	J	3380
1,2-Dichlorobenzene			
Total Target Compounds:	33990	J	

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Tentatively Identified Compounds

Client/Project: ENVTACT/444 ORBIS

Lab ID: 1840-006
Client ID: S-15
Date Received: 03/26/2001
Date Analyzed: 03/27/2001
Date File: F9380.D

GC/MS Column: DB-624
Sample wt/vol: 0.009g
Matrix-Units: Soil-μg/Kg (ppb)
Dilution Factor: 5
% Moisture: 17.7

CAS #	Compound	Estimated Concentration	Retention Time
	Unknown aromatic	50900	17.10
	Unknown hydrocarbon	12000	17.52
	Unknown cyclic hydrocarbon	35700	18.65
	Unknown aromatic	30800	18.81
	Substituted benzene	401000	18.93
	Unknown aromatic	5400	20.13
	Unknown	11300	22.10
	Unknown aromatic	28000	22.81
	Unknown	7290	23.52
	Unknown	4860	24.84
	Unknown aromatic	4050	25.63
	Unknown aromatic	4660	26.57
	Unknown	7560	26.88

Total TICs = 603520

000025

586

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Client/Project: ENVTACT/444 ORBIS

Lab ID: 1840-007
Client ID: S-16
Date Received: 03/26/2001
Date Analyzed: 03/29/2001
Data file: F9437.D

GC/MS Column: DB-624
Sample wt/vol: 0.007g
Matrix-Units: Soil-µg/Kg (ppb)
Dilution Factor: 5
% Moisture: 14.9

Compound	Concentration	Q	MDL
Chloromethane	ND		4200
Vinyl Chloride	ND		4200
Bromomethane	ND		4200
Chloroethane	ND		4200
Trichlorofluoromethane	ND		4200
Acrolein	ND		8390
1,1-Dichloroethene	ND		4200
Methylene Chloride	ND		4200
Acrylonitrile	ND		8390
trans-1,2-Dichloroethene	ND		4200
1,1-Dichloroethane	ND		4200
Chloroform	ND		4200
1,1,1-Trichloroethane	ND		4200
Carbon Tetrachloride	ND		4200
1,2-Dichloroethane(EDC)	ND		4200
Benzene	6720		4200
Trichloroethene	ND		4200
1,2-Dichloropropane	ND		4200
Bromodichloromethane	ND		4200
2-Chloroethylvinyl Ether	ND		4200
cis-1,3-Dichloropropene	ND		4200
Toluene	1020	J	4200
trans-1,3-Dichloropropene	ND		4200
1,1,2-Trichloroethane	ND		4200
Tetrachloroethene	ND		4200
Dibromochloromethane	ND		4200
Chlorobenzene	ND		4200
Ethylbenzene	ND		4200
Total Xylenes	ND		4200
Bromoform	ND		4200
1,1,2,2-Tetrachloroethane	ND		4200
1,3-Dichlorobenzene	ND		4200
1,4-Dichlorobenzene	2750	J	4200
1,2-Dichlorobenzene	84300		4200
Total Target Compounds:	94790	J	

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS
Tentatively Identified Compounds

Client/Project: ENVTACT/444 ORBIS

Lab ID: 1840-007
Client ID: S-16
Date Received: 03/26/2001
Date Analyzed: 03/29/2001
Data file: F9437.D

GC/MS Column: DB-624
Sample wt/vol: 0.007g
Matrix-Units: Soil-µg/Kg (ppb)
Dilution Factor: 5
% Moisture: 14.9

CAS #	Compound	Estimated Concentration	Retention Time
	No peaks detected		

Total TICs = 0

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Client/Project: ENVTACT/444 ORBIS

Lab ID: 1840-008
Client ID: TRIP_BLANK
Date Received: 03/26/2001
Date Analyzed: 03/27/2001
Data file: F9393.D

GC/MS Column: DB-624
Sample wt/vol: 0.04g
Matrix-Units: Soil-µg/Kg (ppb)
Dilution Factor: 1
% Moisture: 0

Compound	Concentration	Q	MDL
Chloromethane	ND		625
Vinyl Chloride	ND		625
Bromomethane	ND		625
Chloroethane	ND		625
Trichlorofluoromethane	ND		625
Acrolein	ND		1250
1,1-Dichloroethene	ND		625
Methylene Chloride	ND		625
Acrylonitrile	ND		1250
trans-1,2-Dichloroethene	ND		625
1,1-Dichloroethane	ND		625
Chloroform	ND		625
1,1,1-Trichloroethane	ND		625
Carbon Tetrachloride	ND		625
1,2-Dichloroethane(EDC)	ND		625
Benzene	ND		625
Trichloroethene	ND		625
1,2-Dichloropropane	ND		625
Bromodichloromethane	ND		625
2-Chloroethylvinyl Ether	ND		625
cis-1,3-Dichloropropene	ND		625
Toluene	ND		625
trans-1,3-Dichloropropene	ND		625
1,1,2-Trichloroethane	ND		625
Tetrachloroethene	ND		625
Dibromochloromethane	ND		625
Chlorobenzene	ND		625
Ethylbenzene	ND		625
Total Xylenes	ND		625
Bromoform	ND		625
1,1,2,2-Tetrachloroethane	ND		625
1,3-Dichlorobenzene	ND		625
1,4-Dichlorobenzene	ND		625
1,2-Dichlorobenzene	ND		625

Total Target Compounds: 0

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Tentatively Identified Compounds

Client/Project: ENVTACT/444 ORBIS

Lab ID: 1840-008
Client ID: TRIP_BLANK
Date Received: 03/26/2001
Date Analyzed: 03/27/2001
Data file: F9393.D

GC/MS Column: DB-624
Sample wt/vol: 0.04g
Matrix-Units: Soil-µg/Kg (ppb)
Dilution Factor: 1
% Moisture: 0

CAS #	Compound	Estimated Concentration	Retention Time
	No peaks detected		

Total TICs = 0

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: ENVTACT/444 ORBIS

Lab ID: 1840-001
Client ID: S-11
Date Received: 03/26/2001
Date Extracted: 03/26/2001
Date Analyzed: 03/27/2001
Data file: A5437.D

GC/MS Column: DB-5
Sample wt/vol: 15.18g
Matrix-Units: Soil-µg/Kg (ppb)
Dilution Factor: 2
% Moisture: 17.3

Compound	Concentration	Q	MDL
N-Nitrosodimethylamine	ND		159
Phenol	ND		159
Aniline	ND		159
bis(2-Chloroethyl)ether	ND		159
2-Chlorophenol	ND		159
1,3-Dichlorobenzene	ND		159
1,4-Dichlorobenzene	ND		159
Benzyl alcohol	ND		159
1,2-Dichlorobenzene	639		159
2-Methylphenol	ND		159
bis(2-chloroisopropyl)ether	ND		159
4-Methylphenol	163		159
N-Nitroso-di-n-propylamine	ND		159
Hexachloroethane	ND		159
Nitrobenzene	ND		159
Isophorone	ND		159
2-Nitrophenol	ND		159
2,4-Dimethylphenol	ND		159
bis(2-Chloroethoxy)methane	ND		159
Benzoic acid	ND		159
2,4-Dichlorophenol	ND		159
1,2,4-Trichlorobenzene	ND		159
Naphthalene	ND		159
4-Chloroaniline	ND		159
Hexachlorobutadiene	ND		159
4-Chloro-3-methylphenol	ND		159
2-Methylnaphthalene	ND		159
Hexachlorocyclopentadiene	ND		159
2,4,6-Trichlorophenol	ND		159
2,4,5-Trichlorophenol	ND		159
2-Chloronaphthalene	ND		159
2-Nitroaniline	ND		159
Dimethylphthalate	ND		159
2,6-Dinitrotoluene	ND		159
Acenaphthylene	ND		159

000030

591

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: ENVTACT/444 ORBIS

Lab ID: 1840-001
Client ID: S-11
Date Received: 03/26/2001
Date Extracted: 03/26/2001
Date Analyzed: 03/27/2001
Data file: A5437.D

GC/MS Column: DB-5
Sample wt/vol: 15.18g
Matrix-Units: Soil-µg/Kg (ppb)
Dilution Factor: 2
% Moisture: 17.3

Compound	Concentration	Q	MDL
3-Nitroaniline	ND		159
Acenaphthene	ND		159
2,4-Dinitrophenol	ND		159
4-Nitrophenol	ND		159
2,4-Dinitrotoluene	ND		159
Dibenzofuran	ND		159
Diethylphthalate	ND		159
Fluorene	ND		159
4-Chlorophenyl-phenylether	ND		159
4-Nitroaniline	ND		159
4,6-Dinitro-2-methylphenol	ND		159
N-Nitrosodiphenylamine	ND		159
1,2-Diphenylhydrazine/Azobenzene	ND		159
4-Bromophenyl-phenylether	ND		159
Hexachlorobenzene	ND		159
Pentachlorophenol	ND		159
Phenanthrene	ND		159
Anthracene	102	J	159
Carbazole	17900		159
Di-n-butylphthalate	ND		159
Fluoranthene	ND		159
Benzidine	ND		159
Pyrene	ND		159
3,3'-Dimethylbenzidine	ND		319
Butylbenzylphthalate	ND		159
3,3'-Dichlorobenzidine	ND		159
Benzo[a]anthracene	ND		159
Chrysene	ND		159
bis(2-Ethylhexyl)phthalate	ND		159
Di-n-octylphthalate	ND		159
Benzo[b]fluoranthene	ND		159
Benzo[k]fluoranthene	ND		159
Benzo[a]pyrene	ND		159
Indeno[1,2,3-cd]pyrene	ND		159
Dibenz[a,h]anthracene	ND		159
Benzo[g,h,i]perylene	ND		159
Total Target Compounds:	18804	J	

000031

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS
Tentatively Identified Compounds

Client/Project: ENVTACT/444 ORBIS

Lab ID: 1840-001
Client ID: S-11
Date Received: 03/26/2001
Date Extracted: 03/26/2001
Date Analyzed: 03/27/2001
Date File: A5437.D

GC/MS Column: DB-5
Sample wt/vol: 15.18g
Matrix-Units: Soil-µg/Kg (ppb)
Dilution Factor: 2
% Moisture: 17.3

CAS #	Compound	Estimated Concentration	Retention Time
	Substituted benzene	3490	8.19
	Substituted benzene	8380	10.09
	Substituted benzene	1080	10.85
	Substituted benzene	988	12.23
000119-61-9	Benzophenone	765	12.40
	Substituted benzene	3470	13.06
	Substituted benzene	5740	13.78
	Substituted phenol	2370	13.87
	Substituted benzene	797	14.11
	Unknown	637	20.93

Total TICs = 27717

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: ENVTACT/444 ORBIS

Lab ID: 1840-002
Client ID: S-12
Date Received: 03/26/2001
Date Extracted: 03/26/2001
Date Analyzed: 03/27/2001
Data file: A5435.D

GC/MS Column: DB-5
Sample wt/vol: 15.86g
Matrix-Units: Soil-μg/Kg (ppb)
Dilution Factor: 1
% Moisture: 12.6

Compound	Concentration	Q	MDL
N-Nitrosodimethylamine	ND		72.1
Phenol	314		72.1
Aniline	ND		72.1
bis(2-Chloroethyl)ether	ND		72.1
2-Chlorophenol	ND		72.1
1,3-Dichlorobenzene	ND		72.1
1,4-Dichlorobenzene	ND		72.1
Benzyl alcohol	ND		72.1
1,2-Dichlorobenzene	ND		72.1
2-Methylphenol	ND		72.1
bis(2-chloroisopropyl)ether	ND		72.1
4-Methylphenol	8660		72.1
N-Nitroso-di-n-propylamine	ND		72.1
Hexachloroethane	ND		72.1
Nitrobenzene	ND		72.1
Isophorone	ND		72.1
2-Nitrophenol	ND		72.1
2,4-Dimethylphenol	591		72.1
bis(2-Chloroethoxy)methane	ND		72.1
Benzoic acid	ND		72.1
2,4-Dichlorophenol	ND		72.1
1,2,4-Trichlorobenzene	ND		72.1
Naphthalene	ND		72.1
4-Chloroaniline	ND		72.1
Hexachlorobutadiene	ND		72.1
4-Chloro-3-methylphenol	ND		72.1
2-Methylnaphthalene	ND		72.1
Hexachlorocyclopentadiene	ND		72.1
2,4,6-Trichlorophenol	ND		72.1
2,4,5-Trichlorophenol	ND		72.1
2-Chloronaphthalene	ND		72.1
2-Nitroaniline	ND		72.1
Dimethylphthalate	ND		72.1
2,6-Dinitrotoluene	ND		72.1
Acenaphthylene	ND		72.1

594

000033

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: ENVTACT/444 ORBIS

Lab ID: 1840-002
Client ID: S-12
Date Received: 03/26/2001
Date Extracted: 03/26/2001
Date Analyzed: 03/27/2001
Data file: A5435.D

GC/MS Column: DB-5
Sample wt/vol: 15.86g
Matrix-Units: Soil-µg/Kg (ppb)
Dilution Factor: 1
% Moisture: 12.6

Compound	Concentration	Q	MDL
3-Nitroaniline	ND		72.1
Acenaphthene	ND		72.1
2,4-Dinitrophenol	ND		72.1
4-Nitrophenol	ND		72.1
2,4-Dinitrotoluene	ND		72.1
Dibenzofuran	ND		72.1
Diethylphthalate	ND		72.1
Fluorene	ND		72.1
4-Chlorophenyl-phenylether	ND		72.1
4-Nitroaniline	ND		72.1
4,6-Dinitro-2-methylphenol	ND		72.1
N-Nitrosodiphenylamine	ND		72.1
1,2-Diphenylhydrazine/Azobenzene	ND		72.1
4-Bromophenyl-phenylether	ND		72.1
Hexachlorobenzene	ND		72.1
Pentachlorophenol	ND		72.1
Phenanthrene	ND		72.1
Anthracene	ND		72.1
Carbazole	ND		72.1
Di-n-butylphthalate	ND		72.1
Fluoranthene	ND		72.1
Benzidine	ND		72.1
Pyrene	ND		144
3,3'-Dimethylbenzidine	ND		72.1
Butylbenzylphthalate	ND		72.1
3,3'-Dichlorobenzidine	ND		72.1
Benzo[a]anthracene	ND		72.1
Chrysene	ND		72.1
bis(2-Ethylhexyl)phthalate	ND		72.1
Di-n-octylphthalate	ND		72.1
Benzo[b]fluoranthene	ND		72.1
Benzo[k]fluoranthene	ND		72.1
Benzo[a]pyrene	ND		72.1
Indeno[1,2,3-cd]pyrene	ND		72.1
Dibenz[a,h]anthracene	ND		72.1
Benzo[g,h,i]perylene	ND		72.1

Total Target Compounds: 9565

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS
Tentatively Identified Compounds

Client/Project: ENVTACT/444 ORBIS

Lab ID: 1840-002
Client ID: S-12
Date Received: 03/26/2001
Date Extracted: 03/26/2001
Date Analyzed: 03/27/2001
Date File: A5435.D

GC/MS Column: DB-5
Sample wt/vol: 15.86g
Matrix-Units: Soil-µg/Kg (ppb)
Dilution Factor: 1
% Moisture: 12.6

CAS #	Compound	Estimated Concentration	Retention Time
	Substituted benzene	332	8.18

Total TICs = 332

000035

596

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: ENVTACT/444 ORBIS

Lab ID: 1840-003
Client ID: S-12A
Date Received: 03/26/2001
Date Extracted: 03/26/2001
Date Analyzed: 03/27/2001
Data file: A5436.D

GC/MS Column: DB-5
Sample wt/vol: 15.24g
Matrix-Units: Soil-µg/Kg (ppb)
Dilution Factor: 1
% Moisture: 15.6

Compound	Concentration	Q	MDL
N-Nitrosodimethylamine	ND		77.8
Phenol	99.4		77.8
Aniline	ND		77.8
bis(2-Chloroethyl)ether	ND		77.8
2-Chlorophenol	ND		77.8
1,3-Dichlorobenzene	ND		77.8
1,4-Dichlorobenzene	ND		77.8
Benzyl alcohol	ND		77.8
1,2-Dichlorobenzene	ND		77.8
2-Methylphenol	ND		77.8
bis(2-chloroisopropyl)ether	ND		77.8
4-Methylphenol	8190		77.8
N-Nitroso-di-n-propylamine	ND		77.8
Hexachloroethane	ND		77.8
Nitrobenzene	ND		77.8
Isophorone	ND		77.8
2-Nitrophenol	ND		77.8
2,4-Dimethylphenol	ND		77.8
bis(2-Chloroethoxy)methane	ND		77.8
Benzoic acid	ND		77.8
2,4-Dichlorophenol	ND		77.8
1,2,4-Trichlorobenzene	ND		77.8
Naphthalene	ND		77.8
4-Chloroaniline	ND		77.8
Hexachlorobutadiene	ND		77.8
4-Chloro-3-methylphenol	ND		77.8
2-Methylnaphthalene	ND		77.8
Hexachlorocyclopentadiene	ND		77.8
2,4,6-Trichlorophenol	ND		77.8
2,4,5-Trichlorophenol	ND		77.8
2-Chloronaphthalene	ND		77.8
2-Nitroaniline	ND		77.8
Dimethylphthalate	ND		77.8
2,6-Dinitrotoluene	ND		77.8
Acenaphthylene	ND		

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: ENVTACT/444 ORBIS

Lab ID: 1840-003
Client ID: S-12A
Date Received: 03/26/2001
Date Extracted: 03/26/2001
Date Analyzed: 03/27/2001
Data file: A5436.D

GC/MS Column: DB-5
Sample wt/vol: 15.24g
Matrix-Units: Soil-µg/Kg (ppb)
Dilution Factor: 1
% Moisture: 15.6

Compound	Concentration	Q	MDL
3-Nitroaniline	ND		77.8
Acenaphthene	ND		77.8
2,4-Dinitrophenol	ND		77.8
4-Nitrophenol	ND		77.8
2,4-Dinitrotoluene	ND		77.8
Dibenzofuran	ND		77.8
Diethylphthalate	ND		77.8
Fluorene	ND		77.8
4-Chlorophenyl-phenylether	ND		77.8
4-Nitroaniline	ND		77.8
4,6-Dinitro-2-methylphenol	ND		77.8
N-Nitrosodiphenylamine	ND		77.8
1,2-Diphenylhydrazine/Azobenzene	ND		77.8
4-Bromophenyl-phenylether	ND		77.8
Hexachlorobenzene	ND		77.8
Pentachlorophenol	ND		77.8
Phenanthrene	ND		77.8
Anthracene	ND		77.8
Carbazole	99.1		77.8
Di-n-butylphthalate	ND		77.8
Fluoranthene	ND		77.8
Benzidine	ND		77.8
Pyrene	ND		156
3,3'-Dimethylbenzidine	ND		77.8
Butylbenzylphthalate	ND		77.8
3,3'-Dichlorobenzidine	ND		77.8
Benzo[a]anthracene	ND		77.8
Chrysene	ND		77.8
bis(2-Ethylhexyl)phthalate	ND		77.8
Di-n-octylphthalate	ND		77.8
Benzo[b]fluoranthene	ND		77.8
Benzo[k]fluoranthene	ND		77.8
Benzo[a]pyrene	ND		77.8
Indeno[1,2,3-cd]pyrene	ND		77.8
Dibenz[a,h]anthracene	ND		77.8
Benzo[g,h,i]perylene	ND		77.8

Total Target Compounds: 8388.5

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INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS
Tentatively Identified Compounds

Client/Project: ENVTACT/444 ORBIS

Lab ID: 1840-003
Client ID: S-12A
Date Received: 03/26/2001
Date Extracted: 03/26/2001
Date Analyzed: 03/27/2001
Date File: A5436.D

GC/MS Column: DB-5
Sample wt/vol: 15.24g
Matrix-Units: Soil-µg/Kg (ppb)
Dilution Factor: 1
% Moisture: 15.6

CAS #	Compound	Estimated Concentration	Retention Time
	Substituted benzene	1030	8.18

Total TICs = 1030

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: ENVTACT/444 ORBIS

Lab ID: 1840-004
Client ID: S-13
Date Received: 03/26/2001
Date Extracted: 03/26/2001
Date Analyzed: 03/27/2001
Data file: A5433.D

GC/MS Column: DB-5
Sample wt/vol: 15.84g
Matrix-Units: Soil-µg/Kg (ppb)
Dilution Factor: 3
% Moisture: 24.4

Compound	Concentration	Q	MDL
N-Nitrosodimethylamine	ND		251
Phenol	250	J	251
Aniline	ND		251
bis(2-Chloroethyl)ether	ND		251
2-Chlorophenol	ND		251
1,3-Dichlorobenzene	ND		251
1,4-Dichlorobenzene	1350		251
Benzyl alcohol	ND		251
1,2-Dichlorobenzene	23400		251
2-Methylphenol	ND		251
bis(2-chloroisopropyl)ether	ND		251
4-Methylphenol	ND		251
N-Nitroso-di-n-propylamine	ND		251
Hexachloroethane	ND		251
Nitrobenzene	ND		251
Isophorone	ND		251
2-Nitrophenol	ND		251
2,4-Dimethylphenol	ND		251
bis(2-Chloroethoxy)methane	ND		251
Benzoic acid	ND		251
2,4-Dichlorophenol	ND		251
1,2,4-Trichlorobenzene	ND		251
Naphthalene	ND		251
4-Chloroaniline	ND		251
Hexachlorobutadiene	ND		251
4-Chloro-3-methylphenol	ND		251
2-Methylnaphthalene	ND		251
Hexachlorocyclopentadiene	ND		251
2,4,6-Trichlorophenol	ND		251
2,4,5-Trichlorophenol	ND		251
2-Chloronaphthalene	ND		251
2-Nitroaniline	ND		251
Dimethylphthalate	ND		251
2,6-Dinitrotoluene	ND		251
Acenaphthylene	ND		251

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INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: ENVTACT/444 ORBIS

Lab ID: 1840-004
Client ID: S-13
Date Received: 03/26/2001
Date Extracted: 03/26/2001
Date Analyzed: 03/27/2001
Data file: A5433.D

GC/MS Column: DB-5
Sample wt/vol: 15.84g
Matrix-Units: Soil-µg/Kg (ppb)
Dilution Factor: 3
% Moisture: 24.4

Compound	Concentration	Q	MDL
3-Nitroaniline	ND		251
Acenaphthene	ND		251
2,4-Dinitrophenol	ND		251
4-Nitrophenol	ND		251
2,4-Dinitrotoluene	ND		251
Dibenzofuran	ND		251
Diethylphthalate	ND		251
Fluorene	ND		251
4-Chlorophenyl-phenylether	ND		251
4-Nitroaniline	ND		251
4,6-Dinitro-2-methylphenol	ND		251
N-Nitrosodiphenylamine	ND		251
1,2-Diphenylhydrazine/Azobenzene	ND		251
4-Bromophenyl-phenylether	ND		251
Hexachlorobenzene	ND		251
Pentachlorophenol	ND		251
Phenanthrene	251		251
Anthracene	ND		251
Carbazole	4380		251
Di-n-butylphthalate	ND		251
Fluoranthene	170	J	251
Benzidine	ND		251
Pyrene	165	J	251
3,3'-Dimethylbenzidine	ND		501
Butylbenzylphthalate	ND		251
3,3'-Dichlorobenzidine	ND		251
Benzo[a]anthracene	ND		251
Chrysene	ND		251
bis(2-Ethylhexyl)phthalate	300		251
Di-n-octylphthalate	ND		251
Benzo[b]fluoranthene	ND		251
Benzo[k]fluoranthene	ND		251
Benzo[a]pyrene	ND		251
Indeno[1,2,3-cd]pyrene	ND		251
Dibenz[a,h]anthracene	ND		251
Benzo[g,h,i]perylene	ND		251

Total Target Compounds: 30266 J

000040

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INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS
Tentatively Identified Compounds

Client/Project: ENVTACT/444 ORBIS

Lab ID: 1840-004
Client ID: S-13
Date Received: 03/26/2001
Date Extracted: 03/26/2001
Date Analyzed: 03/27/2001
Date File: A5433.D

GC/MS Column: DB-5
Sample wt/vol: 15.84g
Matrix-Units: Soil-µg/Kg (ppb)
Dilution Factor: 3
% Moisture: 24.4

CAS #	Compound	Estimated Concentration	Retention Time
	Substituted benzene	4360	3.88
000079-92-5	Camphene	9800	7.28
	Substituted benzene	5390	8.18
000138-86-3	Limonene	4060	8.24
000076-22-2	Camphor	54500	9.45
000124-76-5	Isoborneol	8570	9.56
	Substituted benzene	6840	10.09
	Unknown alkane	3280	10.32
	Unknown alkane	5860	10.37
000125-12-2	Isobornyl acetate	33400	10.42
	Unknown alkane	4260	10.66
	Unknown alkane	7740	10.75
002756-56-1	Isobornyl propionate	38300	11.02
	Unknown	44400	11.76
	Substituted phenol	3180	13.07
	Unknown aromatic	6010	13.29
	Unknown alkane	4410	13.31
	Unknown alkane	6510	13.43
	Unknown alkane	10100	13.55
	Unknown alkane	3010	13.62
	Unknown aromatic	12500	13.78
	Unknown alkane	5290	13.84
	Substituted phenol	6510	13.88
	Unknown alkane	12500	14.16
	Substituted phenol	14300	14.38
	Total TICs =	315080	

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INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: ENVTACT/444 ORBIS

Lab ID: 1840-005
Client ID: S-14
Date Received: 03/26/2001
Date Extracted: 03/26/2001
Date Analyzed: 03/27/2001
Data file: A5430.D

GC/MS Column: DB-5
Sample wt/vol: 10.34g
Matrix-Units: Soil-µg/Kg (ppb)
Dilution Factor: 15
% Moisture: 15.1

Compound	Concentration	Q	MDL
N-Nitrosodimethylamine	ND		1710
Phenol	ND		1710
Aniline	ND		1710
bis(2-Chloroethyl)ether	ND		1710
2-Chlorophenol	ND		1710
1,3-Dichlorobenzene	3200		1710
1,4-Dichlorobenzene	16800		1710
Benzyl alcohol	ND		1710
1,2-Dichlorobenzene	170000		1710
2-Methylphenol	ND		1710
bis(2-chloroisopropyl)ether	ND		1710
4-Methylphenol	ND		1710
N-Nitroso-di-n-propylamine	ND		1710
Hexachloroethane	ND		1710
Nitrobenzene	ND		1710
Isophorone	ND		1710
2-Nitrophenol	ND		1710
2,4-Dimethylphenol	ND		1710
bis(2-Chloroethoxy)methane	ND		1710
Benzoic acid	ND		1710
2,4-Dichlorophenol	ND		1710
1,2,4-Trichlorobenzene	1320	J	1710
Naphthalene	ND		1710
4-Chloroaniline	ND		1710
Hexachlorobutadiene	ND		1710
4-Chloro-3-methylphenol	ND		1710
2-Methylnaphthalene	8500		1710
Hexachlorocyclopentadiene	ND		1710
2,4,6-Trichlorophenol	ND		1710
2,4,5-Trichlorophenol	ND		1710
2-Chloronaphthalene	ND		1710
2-Nitroaniline	ND		1710
Dimethylphthalate	ND		1710
2,6-Dinitrotoluene	ND		1710
Acenaphthylene	ND		1710

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INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: ENVTACT/444 ORBIS

Lab ID: 1840-005
Client ID: S-14
Date Received: 03/26/2001
Date Extracted: 03/26/2001
Date Analyzed: 03/27/2001
Data file: A5430.D

GC/MS Column: DB-5
Sample wt/vol: 10.34g
Matrix-Units: Soil-µg/Kg (ppb)
Dilution Factor: 15
% Moisture: 15.1

Compound	Concentration	Q	MDL
3-Nitroaniline	ND		1710
Acenaphthene	ND		1710
2,4-Dinitrophenol	ND		1710
4-Nitrophenol	ND		1710
2,4-Dinitrotoluene	ND		1710
Dibenzofuran	ND		1710
Diethylphthalate	ND		1710
Fluorene	ND		1710
4-Chlorophenyl-phenylether	ND		1710
4-Nitroaniline	ND		1710
4,6-Dinitro-2-methylphenol	ND		1710
N-Nitrosodiphenylamine	ND		1710
1,2-Diphenylhydrazine/Azobenzene	ND		1710
4-Bromophenyl-phenylether	ND		1710
Hexachlorobenzene	ND		1710
Pentachlorophenol	ND		1710
Phenanthrene	ND		1710
Anthracene	1110	J	1710
Carbazole	ND		1710
Di-n-butylphthalate	ND		1710
Fluoranthene	ND		1710
Benzidine	ND		1710
Pyrene	ND		3420
3,3'-Dimethylbenzidine	ND		1710
Butylbenzylphthalate	ND		1710
3,3'-Dichlorobenzidine	ND		1710
Benzo[a]anthracene	ND		1710
Chrysene	ND		1710
bis(2-Ethylhexyl)phthalate	ND		1710
Di-n-octylphthalate	ND		1710
Benzo[b]fluoranthene	ND		1710
Benzo[k]fluoranthene	ND		1710
Benzo[a]pyrene	ND		1710
Indeno[1,2,3-cd]pyrene	ND		1710
Dibenz[a,h]anthracene	ND		1710
Benzo[g,h,i]perylene	ND		1710

Total Target Compounds: 200930 J

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INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS
Tentatively Identified Compounds

Client/Project: ENVTACT/444 ORBIS

Lab ID: 1840-005
Client ID: S-14
Date Received: 03/26/2001
Date Extracted: 03/26/2001
Date Analyzed: 03/27/2001
Date File: A5430.D

GC/MS Column: DB-5
Sample wt/vol: 10.34g
Matrix-Units: Soil-μg/Kg (ppb)
Dilution Factor: 15
% Moisture: 15.1

CAS #	Compound	Estimated Concentration	Retention Time
	Unknown alkane	103000	8.18
000138-86-3	Limonene	162000	8.25
	Unknown	48500	9.40
	Unknown alkane	36700	9.89
	Unknown alkane	40000	10.41
	Unknown alkane	39600	10.67
	Unknown alkane	28400	10.84
	Unknown alkane	21200	11.22
	Unknown alkane	83000	11.31
	Unknown alkane	105000	11.78
	Unknown alkane	58900	11.87
	Unknown alkane	60800	11.92
	Unknown alkane	37400	12.06
000119-61-9	Benzophenone	33000	12.40
	Unknown alkane	25800	13.12
	Unknown alkane	22400	13.17
	Unknown aromatic	77600	13.77
	Unknown alkane	54200	13.98
	Unknown alkane	22700	14.35
	Unknown alkane	21900	14.60
	Unknown aromatic	28400	14.98
	Unknown alkane	28500	16.43
	Unknown alkane	32800	17.07
	Unknown alkane	88000	17.28
	Unknown aromatic	88900	18.77
	Total TICs =	1348700	

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: ENVTACT/444 ORBIS

Lab ID: 1840-006
Client ID: S-15
Date Received: 03/26/2001
Date Extracted: 03/26/2001
Date Analyzed: 03/27/2001
Data file: A5431.D

GC/MS Column: DB-5
Sample wt/vol: 15.15g
Matrix-Units: Soil-µg/Kg (ppb)
Dilution Factor: 1
% Moisture: 17.7

Compound	Concentration	Q	MDL
N-Nitrosodimethylamine	ND		80.2
Phenol	ND		80.2
Aniline	ND		80.2
bis(2-Chloroethyl)ether	ND		80.2
2-Chlorophenol	ND		80.2
1,3-Dichlorobenzene	ND		80.2
1,4-Dichlorobenzene	ND		80.2
Benzyl alcohol	ND		80.2
1,2-Dichlorobenzene	65.2	J	80.2
2-Methylphenol	ND		80.2
bis(2-chloroisopropyl)ether	ND		80.2
4-Methylphenol	ND		80.2
N-Nitroso-di-n-propylamine	ND		80.2
Hexachloroethane	ND		80.2
Nitrobenzene	ND		80.2
Isophorone	ND		80.2
2-Nitrophenol	ND		80.2
2,4-Dimethylphenol	ND		80.2
bis(2-Chloroethoxy)methane	ND		80.2
Benzoic acid	ND		80.2
2,4-Dichlorophenol	ND		80.2
1,2,4-Trichlorobenzene	ND		80.2
Naphthalene	ND		80.2
4-Chloroaniline	ND		80.2
Hexachlorobutadiene	ND		80.2
4-Chloro-3-methylphenol	ND		80.2
2-Methylnaphthalene	ND		80.2
Hexachlorocyclopentadiene	ND		80.2
2,4,6-Trichlorophenol	ND		80.2
2,4,5-Trichlorophenol	ND		80.2
2-Chloronaphthalene	ND		80.2
2-Nitroaniline	ND		80.2
Dimethylphthalate	ND		80.2
2,6-Dinitrotoluene	ND		80.2
Acenaphthylene	ND		80.2

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000045

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: ENVTACT/444 ORBIS

Lab ID: 1840-006
Client ID: S-15
Date Received: 03/26/2001
Date Extracted: 03/26/2001
Date Analyzed: 03/27/2001
Data file: A5431.D

GC/MS Column: DB-5
Sample wt/vol: 15.15g
Matrix-Units: Soil-µg/Kg (ppb)
Dilution Factor: 1
% Moisture: 17.7

Compound	Concentration	Q	MDL
3-Nitroaniline	ND		80.2
Acenaphthene	ND		80.2
2,4-Dinitrophenol	ND		80.2
4-Nitrophenol	ND		80.2
2,4-Dinitrotoluene	ND		80.2
Dibenzofuran	ND		80.2
Diethylphthalate	ND		80.2
Fluorene	ND		80.2
4-Chlorophenyl-phenylether	ND		80.2
4-Nitroaniline	ND		80.2
4,6-Dinitro-2-methylphenol	ND		80.2
N-Nitrosodiphenylamine	ND		80.2
1,2-Diphenylhydrazine/Azobenzene	ND		80.2
4-Bromophenyl-phenylether	ND		80.2
Hexachlorobenzene	ND		80.2
Pentachlorophenol	ND		80.2
Phenanthrene	ND		80.2
Anthracene	ND		80.2
Carbazole	ND		80.2
Di-n-butylphthalate	ND		80.2
Fluoranthene	ND		80.2
Benzidine	ND		80.2
Pyrene	ND		80.2
3,3'-Dimethylbenzidine	ND		160
Butylbenzylphthalate	ND		80.2
3,3'-Dichlorobenzidine	ND		80.2
Benzo[a]anthracene	ND		80.2
Chrysene	ND		80.2
bis(2-Ethylhexyl)phthalate	ND		80.2
Di-n-octylphthalate	ND		80.2
Benzo[b]fluoranthene	ND		80.2
Benzo[k]fluoranthene	ND		80.2
Benzo[a]pyrene	ND		80.2
Indeno[1,2,3-cd]pyrene	ND		80.2
Dibenz[a,h]anthracene	ND		80.2
Benzo[g,h,i]perylene	ND		80.2
Total Target Compounds:	65.2	J	

000046

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INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS
Tentatively Identified Compounds

Client/Project: ENVTACT/444 ORBIS

Lab ID: 1840-006
Client ID: S-15
Date Received: 03/26/2001
Date Extracted: 03/26/2001
Date Analyzed: 03/27/2001
Date File: A5431.D

GC/MS Column: DB-5
Sample wt/vol: 15.15g
Matrix-Units: Soil-µg/Kg (ppb)
Dilution Factor: 1
% Moisture: 17.7

CAS #	Compound	Estimated Concentration	Retention Time
	Substituted benzene	810	3.89
	Unknown alkane	521	6.59
	Unknown alkane	1680	7.64
	Substituted benzene	50600	8.21
	Unknown alkane	6920	8.25
	Unknown alkane	10100	9.40
	Unknown alkane	473	9.53
	Unknown alkane	2710	9.82
	Substituted phenol	449	10.41
	Substituted phenol	714	10.49
	Unknown aromatic	369	13.76
	Substituted benzene	802	14.01
	Unknown	505	14.51
	Substituted benzene	850	17.01
	Unknown aromatic	1330	17.17

Total TICs = 78833

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: ENVTACT/444 ORBIS

Lab ID: 1840-007
Client ID: S-16
Date Received: 03/26/2001
Date Extracted: 03/26/2001
Date Analyzed: 03/27/2001
Data file: A5429.D

GC/MS Column: DB-5
Sample wt/vol: 15.30g
Matrix-Units: Soil-µg/Kg (ppb)
Dilution Factor: 3
% Moisture: 14.9

Compound	Concentration	Q	MDL
N-Nitrosodimethylamine	ND		230
Phenol	ND		230
Aniline	ND		230
bis(2-Chloroethyl)ether	ND		230
2-Chlorophenol	ND		230
1,3-Dichlorobenzene	259		230
1,4-Dichlorobenzene	836		230
Benzyl alcohol	ND		230
1,2-Dichlorobenzene	28400		230
2-Methylphenol	ND		230
bis(2-chloroisopropyl)ether	ND		230
4-Methylphenol	ND		230
N-Nitroso-di-n-propylamine	ND		230
Hexachloroethane	ND		230
Nitrobenzene	ND		230
Isophorone	ND		230
2-Nitrophenol	ND		230
2,4-Dimethylphenol	ND		230
bis(2-Chloroethoxy)methane	ND		230
Benzoic acid	ND		230
2,4-Dichlorophenol	ND		230
1,2,4-Trichlorobenzene	ND		230
Naphthalene	ND		230
4-Chloroaniline	ND		230
Hexachlorobutadiene	ND		230
4-Chloro-3-methylphenol	ND		230
2-Methylnaphthalene	ND		230
Hexachlorocyclopentadiene	ND		230
2,4,6-Trichlorophenol	ND		230
2,4,5-Trichlorophenol	ND		230
2-Chloronaphthalene	ND		230
2-Nitroaniline	ND		230
Dimethylphthalate	ND		230
2,6-Dinitrotoluene	ND		230
Acenaphthylene	ND		230

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000048

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: ENVTACT/444 ORBIS

Lab ID: 1840-007
Client ID: S-16
Date Received: 03/26/2001
Date Extracted: 03/26/2001
Date Analyzed: 03/27/2001
Data file: A5429.D

GC/MS Column: DB-5
Sample wt/vol: 15.30g
Matrix-Units: Soil-µg/Kg (ppb)
Dilution Factor: 3
% Moisture: 14.9

Compound	Concentration	Q	MDL
3-Nitroaniline	ND		230
Acenaphthene	ND		230
2,4-Dinitrophenol	ND		230
4-Nitrophenol	ND		230
2,4-Dinitrotoluene	ND		230
Dibenzofuran	ND		230
Diethylphthalate	ND		230
Fluorene	ND		230
4-Chlorophenyl-phenylether	ND		230
4-Nitroaniline	ND		230
4,6-Dinitro-2-methylphenol	ND		230
N-Nitrosodiphenylamine	ND		230
1,2-Diphenylhydrazine/Azobenzene	ND		230
4-Bromophenyl-phenylether	ND		230
Hexachlorobenzene	ND		230
Pentachlorophenol	ND		230
Phenanthrene	ND		230
Anthracene	ND		230
Carbazole	ND		230
Di-n-butylphthalate	ND		230
Fluoranthene	ND		230
Benzidine	ND		230
Pyrene	ND		461
3,3'-Dimethylbenzidine	ND		230
Butylbenzylphthalate	ND		230
3,3'-Dichlorobenzidine	ND		230
Benzo[a]anthracene	ND		230
Chrysene	ND		230
bis(2-Ethylhexyl)phthalate	ND		230
Di-n-octylphthalate	ND		230
Benzo[b]fluoranthene	ND		230
Benzo[k]fluoranthene	ND		230
Benzo[a]pyrene	ND		230
Indeno[1,2,3-cd]pyrene	ND		230
Dibenz[a,h]anthracene	ND		230
Benzo[g,h,i]perylene	ND		230

Total Target Compounds: 29495

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INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS
Tentatively Identified Compounds

Client/Project: ENVTACT/444 ORBIS

Lab ID: 1840-007
Client ID: S-16
Date Received: 03/26/2001
Date Extracted: 03/26/2001
Date Analyzed: 03/27/2001
Date File: A5429.D

GC/MS Column: DB-5
Sample wt/vol: 15.30g
Matrix-Units: Soil-µg/Kg (ppb)
Dilution Factor: 3
% Moisture: 14.9

CAS #	Compound	Estimated Concentration	Retention Time
	Unknown	8890	11.78
	Substituted naphthalene	1290	11.81
	Unknown alkane	1610	11.91
	Unknown alkane	968	12.44
	Unknown alkane	1770	12.60
	Unknown alkane	1980	13.57
	Unknown alkane	11800	13.88
	Unknown alkane	1410	17.31
	Unknown alkane	1310	17.33
	Unknown alkane	3820	17.40
	Unknown alkane		

Total TICs = 34848

INTEGRATED ANALYTICAL LABORATORIES

PCB's

Client/Project: ENVTACT/444 ORBIS

Lab ID: 1840-001
Client ID: S-11
Date Received: 03/26/2001
Date Extracted: 03/27/2001
Date Analyzed: 03/28/2001
Data file: R3682.D

GC Column: DB-5/DB1701P
Sample wt/vol: 30.0g
Matrix-Units: Soil-µg/Kg (ppb)
Dilution Factor: 100
% Moisture: 17.3

Compound	Concentration	Q	MDL
Aroclor-1016	ND		80.6
Aroclor-1221	ND		80.6
Aroclor-1232	ND		80.6
Aroclor-1242	ND		80.6
Aroclor-1248	ND		80.6
Aroclor-1254	ND		80.6
Aroclor-1260	ND		80.6

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INTEGRATED ANALYTICAL LABORATORIES

PCB's

Client/Project: ENVTACT/444 ORBIS

Lab ID: 1840-002
Client ID: S-12
Date Received: 03/26/2001
Date Extracted: 03/27/2001
Date Analyzed: 03/28/2001
Data file: R3683.D

GC Column: DB-5/DB1701P
Sample wt/vol: 30.8g
Matrix-Units: Soil-µg/Kg (ppb)
Dilution Factor: 100
% Moisture: 12.6

Compound	Concentration	Q	MDL
Aroclor-1016	ND		74.3
Aroclor-1221	ND		74.3
Aroclor-1232	ND		74.3
Aroclor-1242	ND		74.3
Aroclor-1248	ND		74.3
Aroclor-1254	ND		74.3
Aroclor-1260	ND		74.3

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INTEGRATED ANALYTICAL LABORATORIES

PCB's

Client/Project: ENVTACT/444 ORBIS

Lab ID: 1840-004
Client ID: S-13
Date Received: 03/26/2001
Date Extracted: 03/27/2001
Date Analyzed: 03/28/2001
Data file: R3684.D

GC Column: DB-5/DB1701P
Sample wt/vol: 30.1g
Matrix-Units: Soil-µg/Kg (ppb)
Dilution Factor: 100
% Moisture: 24.4

Compound	Concentration	Q	MDL
Aroclor-1016	ND		87.9
Aroclor-1221	ND		87.9
Aroclor-1232	ND		87.9
Aroclor-1242	ND		87.9
Aroclor-1248	ND		87.9
Aroclor-1254	ND		87.9
Aroclor-1260	ND		87.9

614

000053

INTEGRATED ANALYTICAL LABORATORIES

PCB's

Client/Project: ENVTACT/444 ORBIS

Lab ID: 1840-005
Client ID: S-14
Date Received: 03/26/2001
Date Extracted: 03/27/2001
Date Analyzed: 03/28/2001
Data file: R3685.D

GC Column: DB-5/DB1701P
Sample wt/vol: 30.1g
Matrix-Units: Soil-µg/Kg (ppb)
Dilution Factor: 100
% Moisture: 15.1

Compound	Concentration	Q	MDL
Aroclor-1016	ND		78.3
Aroclor-1221	ND		78.3
Aroclor-1232	ND		78.3
Aroclor-1242	ND		78.3
Aroclor-1248	ND		78.3
Aroclor-1254	ND		78.3
Aroclor-1260	ND		78.3

000054

615

INTEGRATED ANALYTICAL LABORATORIES

PCB's

Client/Project: ENVTACT/444 ORBIS

Lab ID: 1840-006
Client ID: S-15
Date Received: 03/26/2001
Date Extracted: 03/27/2001
Date Analyzed: 03/28/2001
Data file: R3686.D

GC Column: DB-5/DB1701P
Sample wt/vol: 30.4g
Matrix-Units: Soil-µg/Kg (ppb)
Dilution Factor: 100
% Moisture: 17.7

Compound	Concentration	Q	MDL
Aroclor-1016	ND		79.9
Aroclor-1221	ND		79.9
Aroclor-1232	ND		79.9
Aroclor-1242	ND		79.9
Aroclor-1248	ND		79.9
Aroclor-1254	ND		79.9
Aroclor-1260	ND		79.9

616

000055

INTEGRATED ANALYTICAL LABORATORIES

PCB's

Client/Project: ENVTACT/444 ORBIS

Lab ID: 1840-007
Client ID: S-16
Date Received: 03/26/2001
Date Extracted: 03/27/2001
Date Analyzed: 03/28/2001
Data file: R3687.D

GC Column: DB-5/DB1701P
Sample wt/vol: 30.5g
Matrix-Units: Soil-µg/Kg (ppb)
Dilution Factor: 100
% Moisture: 14.9

Compound	Concentration	Q	MDL
Aroclor-1016	ND		77.1
Aroclor-1221	ND		77.1
Aroclor-1232	ND		77.1
Aroclor-1242	ND		77.1
Aroclor-1248	ND		77.1
Aroclor-1254	ND		77.1
Aroclor-1260	ND		77.1

617

000056

INTEGRATED ANALYTICAL LABORATORIES

PESTICIDES

Client/Project: ENVTACT/444 ORBIS

Lab ID: 1840-001
Client ID: S-11
Date Received: 03/26/2001
Date Extracted: 03/27/2001
Date Analyzed: 03/28/2001
Data file: W5469.D

GC Column: DB-5/DB1701P
Sample wt/vol: 30.0g
Matrix-Units: Soil-μg/Kg (ppb)
Dilution Factor: 50
% Moisture: 17.3

Compound	Concentration	Q	MDL
alpha-BHC	ND		10.1
beta-BHC	ND		10.1
gamma-BHC	ND		10.1
delta-BHC	ND		10.1
Heptachlor	ND		10.1
Aldrin	ND		10.1
Heptachlor epoxide	ND		10.1
Endosulfan I	ND		10.1
4,4'-DDE	ND		10.1
Dieldrin	ND		10.1
Endrin	ND		10.1
Endosulfan II	ND		10.1
4,4'-DDD	32.2		10.1
Endrin aldehyde	ND		10.1
Endosulfan sulfate	ND		10.1
4,4'-DDT	17.1		10.1
Chlordane	ND		50.4
Toxaphene	ND		50.4

000057

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INTEGRATED ANALYTICAL LABORATORIES

PESTICIDES

Client/Project: ENVTACT/444 ORBIS

Lab ID: 1840-002
Client ID: S-12
Date Received: 03/26/2001
Date Extracted: 03/27/2001
Date Analyzed: 03/28/2001
Data file: W5470.D

GC Column: DB-5/DB1701P
Sample wt/vol: 30.8g
Matrix-Units: Soil-µg/Kg (ppb)
Dilution Factor: 50
% Moisture: 12.6

Compound	Concentration	Q	MDL
alpha-BHC	ND		9.29
beta-BHC	ND		9.29
gamma-BHC	ND		9.29
delta-BHC	ND		9.29
Heptachlor	ND		9.29
Aldrin	ND		9.29
Heptachlor epoxide	ND		9.29
Endosulfan I	ND		9.29
4,4'-DDE	ND		9.29
Dieldrin	ND		9.29
Endrin	ND		9.29
Endosulfan II	ND		9.29
4,4'-DDD	ND		9.29
Endrin aldehyde	ND		9.29
Endosulfan sulfate	ND		9.29
4,4'-DDT	ND		9.29
Chlordane	ND		46.4
Toxaphene	ND		46.4

00058

619

INTEGRATED ANALYTICAL LABORATORIES

PESTICIDES

Client/Project: ENVTACT/444 ORBIS

Lab ID: 1840-004
Client ID: S-13
Date Received: 03/26/2001
Date Extracted: 03/27/2001
Date Analyzed: 03/28/2001
Data file: W5471.D

GC Column: DB-5/DB1701P
Sample wt/vol: 30.1g
Matrix-Units: Soil-µg/Kg (ppb)
Dilution Factor: 50
% Moisture: 24.4

Compound	Concentration	Q	MDL
alpha-BHC	ND		11
beta-BHC	ND		11
gamma-BHC	ND		11
delta-BHC	ND		11
Heptachlor	ND		11
Aldrin	ND		11
Heptachlor epoxide	ND		11
Endosulfan I	ND		11
4,4'-DDE	89		11
Dieldrin	ND		11
Endrin	ND		11
Endosulfan II	ND		11
4,4'-DDD	322		11
Endrin aldehyde	ND		11
Endosulfan sulfate	ND		11
4,4'-DDT	ND		11
Chlordane	ND		54.9
Toxaphene	ND		54.9

000059

620

INTEGRATED ANALYTICAL LABORATORIES

PESTICIDES

Client/Project: ENVTACT/444 ORBIS

Lab ID: 1840-005
Client ID: S-14
Date Received: 03/26/2001
Date Extracted: 03/27/2001
Date Analyzed: 03/28/2001
Data file: W5472.D

GC Column: DB-5/DB1701P
Sample wt/vol: 30.1g
Matrix-Units: Soil-µg/Kg (ppb)
Dilution Factor: 50
% Moisture: 15.1

Compound	Concentration	Q	MDL
alpha-BHC	ND		9.78
beta-BHC	ND		9.78
gamma-BHC	ND		9.78
delta-BHC	ND		9.78
Heptachlor	ND		9.78
Aldrin	ND		9.78
Heptachlor epoxide	ND		9.78
Endosulfan I	ND		9.78
4,4'-DDE	112		9.78
Dieldrin	ND		9.78
Endrin	ND		9.78
Endosulfan II	ND		9.78
4,4'-DDD	403		9.78
Endrin aldehyde	ND		9.78
Endosulfan sulfate	ND		9.78
4,4'-DDT	ND		9.78
Chlordane	ND		48.9
Toxaphene	ND		48.9

INTEGRATED ANALYTICAL LABORATORIES

PESTICIDES

Client/Project: ENVTACT/444 ORBIS

Lab ID: 1840-006
Client ID: S-15
Date Received: 03/26/2001
Date Extracted: 03/27/2001
Date Analyzed: 03/28/2001
Data file: W5473.D

GC Column: DB-5/DB1701P
Sample wt/vol: 30.4g
Matrix-Units: Soil-μg/Kg (ppb)
Dilution Factor: 50
% Moisture: 17.7

Compound	Concentration	Q	MDL
alpha-BHC	ND		9.99
beta-BHC	ND		9.99
gamma-BHC	ND		9.99
delta-BHC	ND		9.99
Heptachlor	ND		9.99
Aldrin	ND		9.99
Heptachlor epoxide	ND		9.99
Endosulfan I	ND		9.99
4,4'-DDE	272		9.99
Dieldrin	ND		9.99
Endrin	ND		9.99
Endosulfan II	ND		9.99
4,4'-DDD	ND		9.99
Endrin aldehyde	ND		9.99
Endosulfan sulfate	ND		9.99
4,4'-DDT	ND		50
Chlordane	ND		50
Toxaphene	ND		

622

000061

INTEGRATED ANALYTICAL LABORATORIES

PESTICIDES

Client/Project: ENVTACT/444 ORBIS

Lab ID: 1840-007
Client ID: S-16
Date Received: 03/26/2001
Date Extracted: 03/27/2001
Date Analyzed: 03/28/2001
Data file: W5474.D

GC Column: DB-5/DB1701P
Sample wt/vol: 30.5g
Matrix-Units: Soil-μg/Kg (ppb)
Dilution Factor: 50
% Moisture: 14.9

Compound	Concentration	Q	MDL
alpha-BHC	ND		9.63
beta-BHC	ND		9.63
gamma-BHC	ND		9.63
delta-BHC	ND		9.63
Heptachlor	ND		9.63
Aldrin	ND		9.63
Heptachlor epoxide	ND		9.63
Endosulfan I	ND		9.63
4,4'-DDE	ND		9.63
Dieldrin	ND		9.63
Endrin	ND		9.63
Endosulfan II	ND		9.63
4,4'-DDD	11.9		9.63
Endrin aldehyde	ND		9.63
Endosulfan sulfate	ND		9.63
4,4'-DDT	ND		9.63
Chlordane	ND		48.2
Toxaphene	ND		48.2

000062

623

INTEGRATED ANALYTICAL LABORATORIES, LLC.

METALS

Client/Project: ENVTACT/444 ORBIS

Lab ID: 1840-001
Client ID: S-11
Date Received: 3/26/01
Date Analyzed: 3/28/01
Matrix-Units: Soil-mg/Kg (ppm)
% Moisture: 17.3

Compound	Result	Q	DF	MDL
Antimony	ND		1	2.42
Arsenic	12.4		1	0.242
Beryllium	0.481		1	0.242
Cadmium	ND		1	0.242
Chromium	356		1	0.726
Copper	22.1		1	0.484
Lead	19.5		1	2.42
Mercury	0.0513		1	0.0151
Nickel	20.3		1	0.726
Selenium	ND		1	2.42
Silver	ND		1	0.605
Thallium	0.270		1	0.0968
Zinc	54.0		1	1.21

INTEGRATED ANALYTICAL LABORATORIES, LLC.

METALS

Client/Project: ENVTACT/444 ORBIS

Lab ID: 1840-002
Client ID: S-12
Date Received: 3/26/01
Date Analyzed: 3/28/01
Matrix-Units: Soil-mg/Kg (ppm)
% Moisture: 12.6

Compound	Result	Q	DF	MDL
Antimony	ND		1	2.27
Arsenic	1.98		1	0.227
Beryllium	0.936		1	0.227
Cadmium	ND		1	0.227
Chromium	24.0		1	0.681
Copper	21.7		1	0.454
Lead	18.4		1	2.27
Mercury	ND		1	0.0142
Nickel	27.1		1	0.681
Selenium	ND		1	2.27
Silver	ND		1	0.570
Thallium	0.158		1	0.0908
Zinc	76.1		1	1.14

INTEGRATED ANALYTICAL LABORATORIES, LLC.

METALS

Client/Project: ENVTACT/444 ORBIS

Lab ID: 1840-003
Client ID: S-12A
Date Received: 3/26/01
Date Analyzed: 4/10/01
Matrix-Units: Soil-mg/Kg (ppm)
% Moisture: 15.6

Compound	Result	Q	DF	MDL
Antimony	ND		1	2.35
Arsenic	2.09		1	0.235
Beryllium	0.743		1	0.235
Cadmium	ND		1	0.235
Chromium	19.4		1	0.705
Copper	22.4		1	0.470
Lead	10.2		1	2.35
Mercury	ND		1	0.0148
Nickel	23.5		1	0.705
Selenium	ND		1	2.35
Silver	ND		1	0.584
Thallium	0.250		1	0.094
Zinc	61.8		1	1.18

INTEGRATED ANALYTICAL LABORATORIES, LLC.

METALS

Client/Project: ENVTACT/444 ORBIS

Lab ID: 1840-004
Client ID: S-13
Date Received: 3/26/01
Date Analyzed: 3/28/01
Matrix-Units: Soil-mg/Kg (ppm)
% Moisture: 24.4

Compound	Result	Q	DF	MDL
Antimony	ND		1	2.64
Arsenic	6.13		1	0.264
Beryllium	ND		1	0.264
Cadmium	ND		1	0.264
Chromium	261		1	0.792
Copper	20.9		1	0.528
Lead	99.1		1	2.64
Mercury	0.181		1	0.0166
Nickel	5.46		1	0.792
Selenium	ND		1	2.64
Silver	ND		1	0.650
Thallium	ND		1	0.106
Zinc	36.8		1	1.32

INTEGRATED ANALYTICAL LABORATORIES, LLC.

METALS

Client/Project: ENVTACT/444 ORBIS

Lab ID: 1840-005
Client ID: S-14
Date Received: 3/26/01
Date Analyzed: 3/28/01
Matrix-Units: Soil-mg/Kg (ppm)
% Moisture: 15.1

Compound	Result	Q	DF	MDL
Antimony	ND		1	2.33
Arsenic	38.7		1	0.233
Beryllium	0.421		1	0.233
Cadmium	0.422		1	0.233
Chromium	64.5		1	0.700
Copper	143		1	0.466
Lead	701		1	2.33
Mercury	0.267		1	0.0147
Nickel	64.5		1	0.700
Selenium	5.28		1	2.33
Silver	1.27		1	0.584
Thallium	ND		1	0.0933
Zinc	581		1	1.17

INTEGRATED ANALYTICAL LABORATORIES, LLC.

METALS

Client/Project: ENVTACT/444 ORBIS

Lab ID: 1840-006
Client ID: S-15
Date Received: 3/26/01
Date Analyzed: 3/28/01
Matrix-Units: Soil-mg/Kg (ppm)
% Moisture: 17.7

Compound	Result	Q	DF	MDL
Antimony	ND		1	2.44
Arsenic	1.85		1	0.244
Beryllium	0.552		1	0.244
Cadmium	ND		1	0.244
Chromium	20.3		1	0.732
Copper	18.2		1	0.488
Lead	32.3		1	2.44
Mercury	0.0556		1	0.0153
Nickel	18.8		1	0.732
Selenium	ND		1	2.44
Silver	ND		1	0.613
Thallium	0.129		1	0.0976
Zinc	75.5		1	1.22

INTEGRATED ANALYTICAL LABORATORIES, LLC.

METALS

Client/Project: ENVTACT/444 ORBIS

Lab ID: 1840-007
Client ID: S-16
Date Received: 3/26/01
Date Analyzed: 3/28/01
Matrix-Units: Soil-mg/Kg (ppm)
% Moisture: 14.9

Compound	Result	Q	DF	MDL
Antimony	ND		1	2.36
Arsenic	2.72		1	0.236
Beryllium	0.539		1	0.236
Cadmium	0.480		1	0.236
Chromium	29.4		1	0.708
Copper	148		1	0.472
Lead	113		1	2.36
Mercury	0.146		1	0.0146
Nickel	25.0		1	0.708
Selenium	ND		1	2.36
Silver	ND		1	0.590
Thallium	0.105		1	0.0944
Zinc	173		1	1.18

INTEGRATED ANALYTICAL LABORATORIES, LLC.

CYANIDE, TOTAL

Client/Project: ENVTACT/444 ORBIS

Date Received: 3/26/01

Lab ID	Client ID	Result	Q	DF	Matrix-Units	MDL	% Moist	Date Analyzed
1840-001	S-11	ND		1	Soil-mg/Kg	1.21	17.3	3/30/01
1840-002	S-12	ND		1	Soil-mg/Kg	1.14	12.6	3/30/01
1840-004	S-13	ND		1	Soil-mg/Kg	1.32	24.4	3/30/01
1840-005	S-14	1.25		1	Soil-mg/Kg	1.18	15.1	3/30/01
1840-006	S-15	ND		1	Soil-mg/Kg	1.22	17.7	3/30/01
1840-007	S-16	ND		1	Soil-mg/Kg	1.18	14.9	3/30/01

INTEGRATED ANALYTICAL LABORATORIES, LLC.

PHENOL

Client/Project: ENVTACT/444 ORBIS

Date Received: 3/26/01

Lab ID	Client ID	Result	Q	DF	Matrix-Units	MDL	% Moist	Date Analyzed
1840-001	S-11	ND		1	Soil-mg/Kg	3.02	17.3	3/29/01
1840-002	S-12	ND		1	Soil-mg/Kg	2.86	12.6	3/29/01
1840-004	S-13	8.69		1	Soil-mg/Kg	3.31	24.4	3/29/01
1840-005	S-14	33.6		2	Soil-mg/Kg	2.94	15.1	3/29/01
1840-006	S-15	ND		1	Soil-mg/Kg	3.04	17.7	3/29/01
1840-007	S-16	ND		1	Soil-mg/Kg	2.94	14.9	3/29/01

INTEGRATED ANALYTICAL LABORATORIES, LLC.

TOTAL PETROLEUM HYDROCARBONS

Client/Project: ENVTACT/444 ORBIS

Date Received: 3/26/01

Lab ID	Client ID	Result	Q	DF	Matrix-Units	MDL	% Moist	Date Analyzed
1840-001	S-11	41.1		1	Soil-mg/Kg	25.0	17.3	3/27/01
1840-002	S-12	ND		1	Soil-mg/Kg	25.0	12.6	3/27/01
1840-004	S-13	165		1	Soil-mg/Kg	26.5	24.4	3/27/01
1840-005	S-14	3670		5	Soil-mg/Kg	118	15.1	3/27/01
1840-006	S-15	123		1	Soil-mg/Kg	25.0	17.7	3/27/01
1840-007	S-16	264		1	Soil-mg/Kg	25.0	14.9	3/27/01

INTEGRATED ANALYTICAL LABORATORIES, LLC.

METHODOLOGY SUMMARY

Analytical Parameter	Aqueous Samples Method #	Soil/Other Samples Method #
Volatiles + 15	NA	EPA 8260B
Semivolatiles - BNA + 25	NA	EPA 8270C
PCB's	NA	EPA 8082
Pesticides	NA	EPA 8081A
P.P. Metals	NA	EPA 6020
Metals (Mercury)	NA	EPA 7471A
Metals (Silver)	NA	EPA 7760A
Cyanide, Total	NA	EPA 9012 A
Phenols	NA	EPA 9066
Total Petroleum Hydrocarbons	NA	EPA 418.1 M

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: F9097.D BFB Injection Date: 03/16/2001

Inst ID: MSD_F BFB Injection Time: 11:25

m/z	Ion Abudance Criteria	%Relative Abundance			
50	15 - 40.0% of mass 95	21.4			
75	30.0 - 60.0% of mass 95	45.4			
95	Base peak, 100% relative abundance	100.0			
96	5.0 - 9.0% of mass 95	6.8			
173	Less than 2.0% of mass 174	0.0	(	0.0	)1
174	Great than 50.0% of mass 95	54.5			
175	5.0 - 9.0% of mass 174	4.6	(	8.5	)1
176	95.0 - 101.0% of mass 174	53.1	(	97.4	)1
177	5.0 - 9.0% of mass 176	4.4	(	8.2	)2
	1-Value is % mass 174	2-Value is % mass 176			

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
100	100_PPB_STD	F9098.D	03/16/2001	11:58
200	200_PPB_STD	F9099.D	03/16/2001	12:31
150	150_PPB_STD	F9100.D	03/16/2001	13:04
50	50_PPB_STD	F9101.D	03/16/2001	13:37
20	20_PPB_STD	F9102.D	03/16/2001	14:09
N/A	METHOD_BLK	F9104.D	03/16/2001	15:15
N/A	METHOD_BLK	F9105.D	03/16/2001	15:47
FB	1623-006	F9106.D	03/16/2001	16:20
NWUST-FB-1	1625-021	F9107.D	03/16/2001	16:53
NWUST-TB-1	1625-022	F9108.D	03/16/2001	17:26
NWUST-TB-2	1625-026	F9109.D	03/16/2001	17:58
MS	1625-026MS	F9110.D	03/16/2001	18:32
MSD	1625-026MSD	F9111.D	03/16/2001	19:04
TB	1623-005	F9112.D	03/16/2001	19:37
SED9A	1623-001	F9113.D	03/16/2001	20:11
MS	1623-002MS	F9114.D	03/16/2001	20:44
MSD	1623-002MSD	F9115.D	03/16/2001	21:17
SED9B	1623-002	F9116.D	03/16/2001	21:49
SED9C	1623-003	F9117.D	03/16/2001	22:22
SED9D	1623-004	F9118.D	03/16/2001	22:55

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: F9360.D

BFB Injection Date: 03/27/2001

Inst ID: MSD_F

BFB Injection Time: 2:58

m/z	Ion Abudance Criteria	%Relative Abundance
50	15 - 40.0% of mass 95	20.5
75	30.0 - 60.0% of mass 95	46.6
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.5
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Great than 50.0% of mass 95	59.0
175	5.0 - 9.0% of mass 174	4.5 (7.7)1
176	95.0 - 101.0% of mass 174	58.1 (98.4)1
177	5.0 - 9.0% of mass 176	4.1 (7.0)2

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
100	100_PPB_STD	F9361.D	03/27/2001	3:31
N/A	METHOD_BLK	F9364.D	03/27/2001	5:10
TB	1836-009	F9365.D	03/27/2001	5:43
NDW-2	1836-002	F9368.D	03/27/2001	7:21
W-OWS	1836-004	F9369.D	03/27/2001	7:54
W-OWS-A1	1836-005	F9370.D	03/27/2001	8:26
W-OWS-A2	1836-006	F9371.D	03/27/2001	8:59
E-OWS	1836-007	F9372.D	03/27/2001	9:32
NDRAIN	1836-003	F9373.D	03/27/2001	10:04
S-11	1840-001	F9376.D	03/27/2001	11:43
S-12	1840-002	F9377.D	03/27/2001	12:16
S-13	1840-004	F9378.D	03/27/2001	12:48
S-15	1840-006	F9380.D	03/27/2001	13:54
S-14	1840-005	F9381.D	03/27/2001	14:27

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: F9384.D

BFB Injection Date: 03/27/2001

Inst ID: MSD_F

BFB Injection Time: 16:18

m/z	Ion Abudance Criteria	%Relative Abundance			
50	15 - 40.0% of mass 95	21.3			
75	30.0 - 60.0% of mass 95	44.8			
95	Base peak, 100% relative abundance	100.0			
96	5.0 - 9.0% of mass 95	6.8			
173	Less than 2.0% of mass 174	0.0	(	0.0	)1
174	Great than 50.0% of mass 95	55.6			
175	5.0 - 9.0% of mass 174	4.2	(	7.5	)1
176	95.0 - 101.0% of mass 174	52.9	(	95.1	)1
177	5.0 - 9.0% of mass 176	3.7	(	7.0	)2
	1-Value is % mass 174	2-Value is % mass 176			

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
100	100_PPB_STD	F9386.D	03/27/2001	17:23
N/A	METHOD_BLK	F9389.D	03/27/2001	19:02
PIPE-1	1726-003	F9390.D	03/27/2001	19:35
MS	1648-001MS	F9391.D	03/27/2001	20:07
MSD	1648-001MSD	F9392.D	03/27/2001	20:40
TRIP_BLANK	1840-008	F9393.D	03/27/2001	21:13
DRUM_PIT_1	1648-001	F9394.D	03/27/2001	21:45
NDW-1	1836-001	F9396.D	03/27/2001	22:51
S-13	1840-004DIL	F9400.D	03/28/2001	1:03
1013-UST3	1765-003	F9402.D	03/28/2001	2:09

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: F9432.D

BFB Injection Date: 03/29/2001

Inst ID: MSD_F

BFB Injection Time: 10:00

m/z	Ion Abudance Criteria	%Relative Abundance			
50	15 - 40.0% of mass 95	20.1			
75	30.0 - 60.0% of mass 95	46.3			
95	Base peak, 100% relative abundance	100.0			
96	5.0 - 9.0% of mass 95	6.9			
173	Less than 2.0% of mass 174	0.9	(	1.8	)1
174	Great than 50.0% of mass 95	50.9			
175	5.0 - 9.0% of mass 174	3.5	(	6.8	)1
176	95.0 - 101.0% of mass 174	50.3	(	98.9	)1
177	5.0 - 9.0% of mass 176	4.2	(	8.4	)2
	1-Value is % mass 174	2-Value is % mass 176			

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
100	100_PPB_STD	F9433.D	03/29/2001	10:27
N/A	METHOD_BLK	F9435.D	03/29/2001	11:32
P-B	1897-006	F9436.D	03/29/2001	12:05
S-16	1840-007	F9437.D	03/29/2001	12:37
MS	1909-002MS	F9438.D	03/29/2001	13:09
MSD	1909-002MSD	F9439.D	03/29/2001	13:42
TB-032801	1920-004	F9440.D	03/29/2001	14:15
TRIP	1870-007	F9441.D	03/29/2001	14:47
12-4_2.5-3'	1920-001	F9442.D	03/29/2001	15:20
12-2_7.5-8'	1920-002	F9443.D	03/29/2001	15:53
AX-8N_12.5-13'	1920-005	F9445.D	03/29/2001	17:00
PE-9	1909-001	F9446.D	03/29/2001	17:33
PE-10	1909-002	F9447.D	03/29/2001	18:06
SB10_17.5-18	1914-001	F9448.D	03/29/2001	18:39
SB11_17.5-18	1914-002	F9449.D	03/29/2001	19:12
SB13_14.5-15	1914-003	F9450.D	03/29/2001	19:45
SB13_19-19.5	1914-004	F9451.D	03/29/2001	20:18
B3	1870-003	F9453.D	03/29/2001	21:23

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: J8713.D

BFB Injection Date: 04/06/2001

Inst ID: MSD_J

BFB Injection Time: 15:45

m/z	Ion Abudance Criteria	%Relative Abundance			
50	15 - 40.0% of mass 95	18.3			
75	30.0 - 60.0% of mass 95	46.5			
95	Base peak, 100% relative abundance	100.0			
96	5.0 - 9.0% of mass 95	7.0			
173	Less than 2.0% of mass 174	0.3	(	0.4	)1
174	Great than 50.0% of mass 95	74.1			
175	5.0 - 9.0% of mass 174	5.5	(	7.4	)1
176	95.0 - 101.0% of mass 174	71.0	(	95.8	)1
177	5.0 - 9.0% of mass 176	4.6	(	6.5	)2
	1-Value is % mass 174	2-Value is % mass 176			

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
20PPB	STD-20PPB	J8714.D	04/06/2001	16:14
50PPB	STD-50PPB	J8715.D	04/06/2001	16:43
100PPB	STD-100PPB	J8716.D	04/06/2001	17:12
150PPB	STD-150PPB	J8717.D	04/06/2001	17:41
200PPB	STD-200PPB	J8718.D	04/06/2001	18:10
N/A	METHOD-BLK	J8721.D	04/06/2001	19:36
S-12A	1840-003	J8722.D	04/06/2001	20:05
AC-27__10.5-11'	2044-001	J8723.D	04/06/2001	20:34
TRIP	2044-002	J8724.D	04/06/2001	21:03
S-34	2006-004	J8726.D	04/06/2001	22:01
S-38	2006-008	J8727.D	04/06/2001	22:29
AOC_#4	2045-001	J8728.D	04/06/2001	22:59
AOC_#4-B	2045-002	J8729.D	04/06/2001	23:27
WC-328	1996-001DIL	J8730.D	04/06/2001	23:56
TRIP_BLANK	2095-006	J8731.D	04/07/2001	0:26
PR-4	2095-004	J8732.D	04/07/2001	0:54
MS	2044-001MS	J8733.D	04/07/2001	1:23
MSD	2044-001MSD	J8734.D	04/07/2001	1:52
MS	2045-002MS	J8736.D	04/07/2001	2:49
MSD	2045-002MSD	J8737.D	04/07/2001	3:18

VOLATILE METHOD BLANK SUMMARY

Lab File ID: F9364.D

Instrument ID: MSD_F

Date Analyzed: 03/27/2001

Time Analyzed: 05:10

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

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed
TB	1836-009	03/27/2001	5:43
NDW-2	1836-002	03/27/2001	7:21
W-OWS	1836-004	03/27/2001	7:54
W-OWS-A1	1836-005	03/27/2001	8:26
W-OWS-A2	1836-006	03/27/2001	8:59
E-OWS	1836-007	03/27/2001	9:32
NDRAIN	1836-003	03/27/2001	10:04
S-11	1840-001	03/27/2001	11:43
S-12	1840-002	03/27/2001	12:16
S-13	1840-004	03/27/2001	12:48
S-15	1840-006	03/27/2001	13:54
S-14	1840-005	03/27/2001	14:27

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Client/Project: N/A

Lab ID: METHOD_BLK
Client ID: N/A
Date Received: N/A
Date Analyzed: 03/27/2001
Data file: F9364.D

GC/MS Column: DB-624
Sample wt/vol: 0.1g
Matrix-Units: Soil-µg/Kg (ppb)
Dilution Factor: 50
% Moisture: 0

Compound	Concentration	Q	MDL
Chloromethane	ND		250
Vinyl Chloride	ND		250
Bromomethane	ND		250
Chloroethane	ND		250
Trichlorofluoromethane	ND		250
Acrolein	ND		500
1,1-Dichloroethene	ND		250
Methylene Chloride	ND		250
Acrylonitrile	ND		500
trans-1,2-Dichloroethene	ND		250
1,1-Dichloroethane	ND		250
Chloroform	ND		250
1,1,1-Trichloroethane	ND		250
Carbon Tetrachloride	ND		250
1,2-Dichloroethane(EDC)	ND		250
Benzene	ND		250
Trichloroethene	ND		250
1,2-Dichloropropane	ND		250
Bromodichloromethane	ND		250
2-Chloroethylvinyl Ether	ND		250
cis-1,3-Dichloropropene	ND		250
Toluene	ND		250
trans-1,3-Dichloropropene	ND		250
1,1,2-Trichloroethane	ND		250
Tetrachloroethene	ND		250
Dibromochloromethane	ND		250
Chlorobenzene	ND		250
Ethylbenzene	ND		250
Total Xylenes	ND		250
Bromoform	ND		250
1,1,2,2-Tetrachloroethane	ND		250
1,3-Dichlorobenzene	ND		250
1,4-Dichlorobenzene	ND		250
1,2-Dichlorobenzene	ND		250

Total Target Compounds: 0

000080

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INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Tentatively Identified Compounds

Client/Project: N/A

Lab ID: METHOD_BLK
Client ID: N/A
Date Received: N/A
Date Analyzed: 03/27/2001
Data file: F9364.D

GC/MS Column: DB-624
Sample wt/vol: 0.1g
Matrix-Units: Soil-µg/Kg (ppb)
Dilution Factor: 50
% Moisture: 0

CAS #	Compound	Estimated Concentration	Retention Time

No peaks detected

Total TICs = 0

642

VOLATILE METHOD BLANK SUMMARY

Lab File ID: F9389.D

Instrument ID: MSD_F

Date Analyzed: 03/27/2001

Time Analyzed: 19:02

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

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed
PIPE-1	1726-003	03/27/2001	19:35
MS	1648-001MS	03/27/2001	20:07
MSD	1648-001MSD	03/27/2001	20:40
TRIP_BLANK	1840-008	03/27/2001	21:13
DRUM_PIT_1	1648-001	03/27/2001	21:45
NDW-1	1836-001	03/27/2001	22:51
S-13	1840-004DIL	03/28/2001	1:03
1013-UST3	1765-003	03/28/2001	2:09

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Client/Project: N/A

Lab ID: METHOD_BLK
Client ID: N/A
Date Received: N/A
Date Analyzed: 03/27/2001
Data file: F9389.D

GC/MS Column: DB-624
Sample wt/vol: 0.1g
Matrix-Units: Soil-µg/Kg (ppb)
Dilution Factor: 50
% Moisture: 0

Compound	Concentration	Q	MDL
Chloromethane	ND		250
Vinyl Chloride	ND		250
Bromomethane	ND		250
Chloroethane	ND		250
Trichlorofluoromethane	ND		250
Acrolein	ND		500
1,1-Dichloroethene	ND		250
Methylene Chloride	ND		250
Acrylonitrile	ND		500
trans-1,2-Dichloroethene	ND		250
1,1-Dichloroethane	ND		250
Chloroform	ND		250
1,1,1-Trichloroethane	ND		250
Carbon Tetrachloride	ND		250
1,2-Dichloroethane(EDC)	ND		250
Benzene	ND		250
Trichloroethene	ND		250
1,2-Dichloropropane	ND		250
Bromodichloromethane	ND		250
2-Chloroethylvinyl Ether	ND		250
cis-1,3-Dichloropropene	ND		250
Toluene	ND		250
trans-1,3-Dichloropropene	ND		250
1,1,2-Trichloroethane	ND		250
Tetrachloroethene	ND		250
Dibromochloromethane	ND		250
Chlorobenzene	ND		250
Ethylbenzene	ND		250
Total Xylenes	ND		250
Bromoform	ND		250
1,1,2,2-Tetrachloroethane	ND		250
1,3-Dichlorobenzene	ND		250
1,4-Dichlorobenzene	ND		250
1,2-Dichlorobenzene	ND		250

Total Target Compounds: 0

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS
Tentatively Identified Compounds

Client/Project: N/A

Lab ID: METHOD_BLK
Client ID: N/A
Date Received: N/A
Date Analyzed: 03/27/2001
Data file: F9389.D

GC/MS Column: DB-624
Sample wt/vol: 0.1g
Matrix-Units: Soil-µg/Kg (ppb)
Dilution Factor: 50
% Moisture: 0

CAS #	Compound	Estimated Concentration	Retention Time

No peaks detected

Total TICs = 0

VOLATILE METHOD BLANK SUMMARY

Lab File ID: F9435.D

Instrument ID: MSD_F

Date Analyzed: 03/29/2001

Time Analyzed: 11:32

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

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed
P-B	1897-006	03/29/2001	12:05
S-16	1840-007	03/29/2001	12:37
MS	1909-002MS	03/29/2001	13:09
MSD	1909-002MSD	03/29/2001	13:42
TB-032801	1920-004	03/29/2001	14:15
TRIP	1870-007	03/29/2001	14:47
12-4_2.5-3'	1920-001	03/29/2001	15:20
12-2_7.5-8'	1920-002	03/29/2001	15:53
AX-8N_12.5-13'	1920-005	03/29/2001	17:00
PE-9	1909-001	03/29/2001	17:33
PE-10	1909-002	03/29/2001	18:06
SB10_17.5-18	1914-001	03/29/2001	18:39
SB11_17.5-18	1914-002	03/29/2001	19:12
SB13_14.5-15	1914-003	03/29/2001	19:45
SB13_19-19.5	1914-004	03/29/2001	20:18
B3	1870-003	03/29/2001	21:23

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Client/Project: N/A

Lab ID: METHOD_BLK
Client ID: N/A
Date Received: N/A
Date Analyzed: 03/29/2001
Data file: F9435.D

GC/MS Column: DB-624
Sample wt/vol: 0.1g
Matrix-Units: Soil-µg/Kg (ppb)
Dilution Factor: 50
% Moisture: 0

Compound	Concentration	Q	MDL
Chloromethane	ND		250
Vinyl Chloride	ND		250
Bromomethane	ND		250
Chloroethane	ND		250
Trichlorofluoromethane	ND		250
Acrolein	ND		500
1,1-Dichloroethene	ND		250
Methylene Chloride	ND		250
Acrylonitrile	ND		500
trans-1,2-Dichloroethene	ND		250
1,1-Dichloroethane	ND		250
Chloroform	ND		250
1,1,1-Trichloroethane	ND		250
Carbon Tetrachloride	ND		250
1,2-Dichloroethane(EDC)	ND		250
Benzene	ND		250
Trichloroethene	ND		250
1,2-Dichloropropane	ND		250
Bromodichloromethane	ND		250
2-Chloroethylvinyl Ether	ND		250
cis-1,3-Dichloropropene	ND		250
Toluene	ND		250
trans-1,3-Dichloropropene	ND		250
1,1,2-Trichloroethane	ND		250
Tetrachloroethene	ND		250
Dibromochloromethane	ND		250
Chlorobenzene	ND		250
Ethylbenzene	ND		250
Total Xylenes	ND		250
Bromoform	ND		250
1,1,2,2-Tetrachloroethane	ND		250
1,3-Dichlorobenzene	ND		250
1,4-Dichlorobenzene	ND		250
1,2-Dichlorobenzene	ND		250

Total Target Compounds: 0

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS
Tentatively Identified Compounds

Client/Project: N/A

Lab ID: METHOD_BLK
Client ID: N/A
Date Received: N/A
Date Analyzed: 03/29/2001
Data file: F9435.D

GC/MS Column: DB-624
Sample wt/vol: 0.1g
Matrix-Units: Soil-μg/Kg (ppb)
Dilution Factor: 50
% Moisture: 0

CAS #	Compound	Estimated Concentration	Retention Time
	No peaks detected		

Total TICs = 0

000087

VOLATILE METHOD BLANK SUMMARY

Lab File ID: J8721.D

Instrument ID: MSD J

Date Analyzed: 04/06/2001

Time Analyzed: 19:36

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

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed
S-12A	1840-003	04/06/2001	20:05
AC-27__10.5-11'	2044-001	04/06/2001	20:34
TRIP	2044-002	04/06/2001	21:03
S-34	2006-004	04/06/2001	22:01
S-38	2006-008	04/06/2001	22:29
AOC_#4	2045-001	04/06/2001	22:59
AOC_#4-B	2045-002	04/06/2001	23:27
WC-328	1996-001DIL	04/06/2001	23:56
TRIP_BLANK	2095-006	04/07/2001	0:26
PR-4	2095-004	04/07/2001	0:54
MS	2044-001MS	04/07/2001	1:23
MSD	2044-001MSD	04/07/2001	1:52
MS	2045-002MS	04/07/2001	2:49
MSD	2045-002MSD	04/07/2001	3:18

FORM 4

VOLATILE ORGANICS

Client/Project:

Lab ID: METHOD-BLK
Client ID: N/A
Date Received:
Date Analyzed: 04/06/2001
Data file: J8721.D

GC/MS Column: DB-624
Sample wt/vol: 0.1g
Matrix-Units: Soil-µg/Kg (ppb)
Dilution Factor: 50
% Moisture: 0

Compound	Concentration	Q	MDL
Chloromethane	ND		250
Vinyl Chloride	ND		250
Bromomethane	ND		250
Chloroethane	ND		250
Trichlorofluoromethane	ND		250
Acrolein	ND		500
1,1-Dichloroethene	ND		250
Methylene Chloride	ND		250
Acrylonitrile	ND		500
trans-1,2-Dichloroethene	ND		250
1,1-Dichloroethane	ND		250
Chloroform	ND		250
1,1,1-Trichloroethane	ND		250
Carbon Tetrachloride	ND		250
1,2-Dichloroethane(EDC)	ND		250
Benzene	ND		250
Trichloroethene	ND		250
1,2-Dichloropropane	ND		250
Bromodichloromethane	ND		250
2-Chloroethylvinyl Ether	ND		250
cis-1,3-Dichloropropene	ND		250
Toluene	ND		250
trans-1,3-Dichloropropene	ND		250
1,1,2-Trichloroethane	ND		250
Tetrachloroethene	ND		250
Dibromochloromethane	ND		250
Chlorobenzene	ND		250
Ethylbenzene	ND		250
Total Xylenes	ND		250
Bromoform	ND		250
1,1,2,2-Tetrachloroethane	ND		250
1,3-Dichlorobenzene	ND		250
1,4-Dichlorobenzene	ND		250
1,2-Dichlorobenzene	ND		250

Total Target Compounds: 0

000089

650

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS
Tentatively Identified Compounds

Client/Project:

Lab ID: METHOD-BLK
Client ID: N/A
Date Received:
Date Analyzed: 04/06/2001
Data file: J8721.D

GC/MS Column: DB-624
Sample wt/vol: 0.1g
Matrix-Units: Soil-µg/Kg (ppb)
Dilution Factor: 50
% Moisture: 0

CAS #	Compound	Estimated Concentration	Retention Time

No peaks detected

Total TICs = 0

Response Factor Report 5970 - In

Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Last Update : Fri Mar 16 14:54:56 2001
Response via : Initial Calibration

Calibration Files
20 =F9102.D 50 =F9101.D 100 =F9098.D
150 =F9100.D 200 =F9099.D

		Compound	20	50	100	150	200	Avg	%RSD
1)	I	Pentafluorobenzene	ISTD						
2)	T	Dichlorodifluorometha	0.462	0.500	0.433	0.507	0.434	0.467	7.51
3)	P	Chloromethane	0.390	0.351	0.289	0.347	0.296	0.335	12.53
4)	C	Vinyl Chloride	0.327	0.317	0.263	0.328	0.278	0.302	9.97
5)	T	Bromomethane	0.324	0.277	0.221	0.255	0.212	0.258	17.55
6)	T	Chloroethane	0.222	0.198	0.161	0.185	0.152	0.184	15.49
7)	T	Trichlorofluoromethan	0.353	0.416	0.371	0.438	0.380	0.392	8.86
8)	T	Acrolein	0.044	0.036	0.033	0.039	0.038	0.038	10.68
9)	MC	1,1-Dichloroethene	0.324	0.288	0.227	0.268	0.232	0.268	15.12
10)	T	Acetone	0.171	0.122	0.087	0.113	0.093	0.117	28.30
11)	T	Carbon Disulfide	0.898	0.891	0.755	0.847	0.751	0.828	8.65
12)	T	Vinyl Acetate	1.801	1.504	1.358	1.376	1.395	1.487	12.41
13)	T	Methylene Chloride	0.452	0.365	0.297	0.343	0.309	0.353	17.37
14)	T	Acrylonitrile	0.092	0.090	0.080	0.094	0.091	0.090	6.12
15)	T	t-Butyl Alcohol(TBA)	0.065	0.054	0.041	0.044	0.040	0.049	22.02
16)	T	trans-1,2-Dichloroeth	0.438	0.372	0.296	0.328	0.308	0.348	16.60
17)	T	Methyl-t-Butyl Ether(	1.748	1.329	1.149	1.232	1.156	1.323	18.77
[illegible])	P	1,1-Dichloroethane	0.913	0.823	0.703	0.738	0.716	0.778	11.36
[illegible])	T	Diisopropyl Ether(DIP	2.631	2.219	1.885	1.911	1.897	2.109	15.36
20)	T	cis-1,2-Dichloroethen	0.509	0.417	0.364	0.366	0.359	0.403	15.79
21)	T	2,2-Dichloropropane	0.609	0.614	0.586	0.562	0.576	0.589	3.71
22)	T	2-Butanone(MEK)	0.260	0.197	0.164	0.162	0.173	0.191	21.40
23)	T	Bromochloromethane	0.293	0.247	0.222	0.230	0.224	0.243	12.12
25)	C	Chloroform	0.941	0.792	0.751	0.718	0.734	0.787	11.45
26)	T	1,1,1-Trichloroethane	0.631	0.634	0.591	0.567	0.579	0.600	5.09
27)	T	Carbon Tetrachloride	0.463	0.496	0.457	0.451	0.457	0.465	3.89
28)	T	1,1-Dichloropropene	0.518	0.532	0.497	0.472	0.495	0.503	4.62
29)	T	1,2-Dichloroethane(ED	0.768	0.647	0.620	0.591	0.605	0.646	11.04
30)	S	1,2-Dichloroethane-d4	0.462	0.471	0.502	0.517	0.546	0.500	6.81
31)	I	1,4-Difluorobenzene	ISTD						
32)	M	Benzene	1.294	1.172	1.045	1.011	1.034	1.111	10.80
33)	M	Trichloroethene	0.516	0.492	0.451	0.463	0.447	0.474	6.20
34)	C	1,2-Dichloropropane	0.618	0.522	0.468	0.464	0.459	0.506	13.37
35)	T	Dibromomethane	0.468	0.407	0.381	0.364	0.362	0.396	11.13
37)	T	Bromodichloromethane	0.944	0.781	0.738	0.744	0.716	0.785	11.72
38)	T	2-Chloroethylvinyl Et	0.226	0.219	0.213	0.232	0.227	0.223	3.33
39)	T	cis-1,3-Dichloroprope	0.902	0.738	0.679	0.694	0.687	0.740	12.64
40)	T	4-Methyl-2-pentanone(	0.648	0.599	0.511	0.522	0.518	0.559	10.89
41)	S	Toluene-d8	0.912	0.923	0.927	0.919	0.914	0.919	0.68
42)	MC	Toluene	0.787	0.707	0.668	0.650	0.633	0.689	8.86
43)	T	trans-1,3-Dichloropro	0.773	0.670	0.602	0.625	0.612	0.657	10.69
44)	T	1,1,2-Trichloroethane	0.457	0.388	0.346	0.345	0.332	0.374	13.65
[illegible])	T	Tetrachloroethene	0.447	0.442	0.412	0.410	0.385	0.419	6.02
[illegible])	T	1,3-Dichloropropane	0.846	0.703	0.633	0.629	0.616	0.685	13.98
47)	T	2-Hexanone	0.381	0.368	0.325	0.343	0.342	0.352	6.33
48)	T	Dibromochloromethane	0.706	0.612	0.569	0.564	0.550	0.600	10.57
49)	T	1,2-Dibromoethane(EDB	0.637	0.543	0.493	0.481	0.492	0.529	12.29

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50)	I	Chlorobenzene-d5	----------ISTD----------						
51)	MP	Chlorobenzene	1.569	1.366	1.244	1.203	1.214	1.319	11.66
52)	T	1,1,1,2-Tetrachloroet	0.766	0.658	0.610	0.585	0.585	0.641	11.90
53)	C	Ethylbenzene	2.350	2.198	1.966	1.883	1.873	2.054	10.28
54)	T	m,p-Xylene	0.840	0.798	0.696	0.661	0.676	0.734	10.91
55)	T	o-Xylene	0.878	0.729	0.686	0.650	0.653	0.719	13.08
6)	T	Styrene	1.529	1.375	1.248	1.186	1.214	1.310	10.85
57)	P	Bromoform	0.836	0.766	0.706	0.689	0.702	0.740	8.32
58)	T	Isopropylbenzene	2.157	1.990	1.832	1.821	1.784	1.917	8.13
59)	S	Bromofluorobenzene	1.063	1.059	1.076	1.111	1.097	1.081	2.06
60)	P	1,1,2,2-Tetrachloroet	1.193	0.990	0.887	0.858	0.873	0.960	14.58
61)	T	Bromobenzene	0.805	0.703	0.667	0.629	0.623	0.685	10.81
62)	T	1,2,3-Trichloropropan	1.098	0.896	0.783	0.769	0.778	0.865	16.22
63)	T	n-Propylbenzene	2.452	2.381	2.150	2.153	2.112	2.250	6.91
64)	T	2-Chlorotoluene	2.120	1.891	1.755	1.761	1.714	1.848	8.97
65)	T	1,3,5-Trimethylbenzen	1.990	1.768	1.581	1.609	1.547	1.699	10.79
66)	T	4-Chlorotoluene	2.403	2.154	1.964	1.979	1.926	2.085	9.49
67)	T	tert-Butylbenzene	1.658	1.537	1.374	1.393	1.336	1.460	9.22
68)	T	1,2,4-Trimethylbenzen	1.967	1.687	1.522	1.562	1.518	1.651	11.46
69)	T	sec-Butylbenzene	1.967	1.864	1.668	1.758	1.665	1.784	7.31
70)	T	1,3-Dichlorobenzene	1.126	0.944	0.883	0.943	0.898	0.959	10.15
71)	T	4-Isopropyltoluene	1.646	1.525	1.353	1.336	1.302	1.432	10.27
72)	T	1,4-Dichlorobenzene	1.335	1.141	1.008	1.052	1.017	1.111	12.26
73)	T	n-Butylbenzene	1.471	1.427	1.263	1.340	1.273	1.355	6.82
74)	T	1,2-Dichlorobenzene	1.163	1.001	0.877	0.915	0.874	0.966	12.59
75)	T	1,2-Dibromo-3-chlorop	0.276	0.263	0.225	0.240	0.234	0.247	8.60
76)	T	1,2,4-Trichlorobenzen	0.748	0.638	0.530	0.584	0.554	0.611	14.21
77)	T	Hexachlorobutadiene	0.479	0.451	0.374	0.401	0.379	0.417	11.08
78)	T	Naphthalene	1.228	1.105	0.884	0.977	0.946	1.028	13.41
79)	T	1,2,3-Trichlorobenzen	0.607	0.570	0.431	0.486	0.447	0.508	15.17
80)	T	1,1,2-Trichloro-1,2,2	0.907	0.975	0.828	0.898	0.811	0.884	7.50
81)	T	Methyl Acetate	0.960	0.813	0.615	0.697	0.683	0.754	18.00
82)	T	Cyclohexane	0.483	0.550	0.515	0.475	0.483	0.501	6.30
83)	T	Methylcyclohexane	0.609	0.717	0.661	0.638	0.634	0.652	6.23

(#) = Out of Range

FME0316.M Fri Mar 16 14:55:22 2001 MSD_F

Instrument ID: MSD_F
Method ID: FME0316.M
Date: 03/16/2001

Average %RSD = 11.33

Refer to SW846 Method 8000B Section 7.5.1.

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\03-26-01\F9361.D
Acq On : 27 Mar 2001 3:31
Sample : 100,100_PPB_STD,W,5.0mL,100
Misc : N/A,N/A,N/A
MS Integration Params: rteint.p

Vial: 25
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Last Update : Fri Mar 16 14:54:56 2001
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene	1.000	1.000	0.0	153	0.07
2	T	Dichlorodifluoromethane	0.467	0.378	19.1	134	0.03
3	P	Chloromethane	0.335	0.314	6.3	167	0.03
4	C	Vinyl Chloride	0.302	0.300	0.7	175	0.04
5	T	Bromomethane	0.258	0.244	5.4	170	0.07
6	T	Chloroethane	0.184	0.184	0.0	176	0.06
7	T	Trichlorofluoromethane	0.392	0.371	5.4	153	0.06
8	T	Acrolein	0.038	0.029	23.7	133	0.06
9	MC	1,1-Dichloroethene	0.268	0.256	4.5	173	0.07
10	T	Acetone	0.117	0.130	-11.1	230	0.04
11	T	Carbon Disulfide	0.828	0.786	5.1	160	0.06
12	T	Vinyl Acetate	1.487	1.269	14.7	143	0.07
13	T	Methylene Chloride	0.353	0.325	7.9	168	0.07
14	T	Acrylonitrile	0.090	0.103	-14.4	197	0.06
15	T	t-Butyl Alcohol(TBA)	0.049	0.051	-4.1	193	0.07
16	T	trans-1,2-Dichloroethene	0.348	0.333	4.3	173	0.07
17	T	Methyl-t-Butyl Ether(MTBE)	1.323	1.264	4.5	169	0.07
18	P	1,1-Dichloroethane	0.778	0.790	-1.5	172	0.07
19	T	Diisopropyl Ether(DIPE)	2.109	2.039	3.3	166	0.07
20	T	cis-1,2-Dichloroethene	0.403	0.383	5.0	161	0.07
21	T	2,2-Dichloropropane	0.589	0.448	23.9	117	0.06
22	T	2-Butanone(MEK)	0.191	0.207	-8.4	193	0.06
23	T	Bromochloromethane	0.243	0.248	-2.1	171	0.06
25	C	Chloroform	0.787	0.827	-5.1	169	0.07
26	T	1,1,1-Trichloroethane	0.600	0.634	-5.7	165	0.06
27	T	Carbon Tetrachloride	0.465	0.489	-5.2	164	0.06
28	T	1,1-Dichloropropene	0.503	0.514	-2.2	159	0.08
29	T	1,2-Dichloroethane(EDC)	0.646	0.673	-4.2	166	0.07
30	S	1,2-Dichloroethane-d4	0.500	0.506	-1.2	154	0.07
31	I	1,4-Difluorobenzene	1.000	1.000	0.0	155	0.07
32	M	Benzene	1.111	1.079	2.9	160	0.07
33	M	Trichloroethene	0.474	0.519	-9.5	178	0.07
34	C	1,2-Dichloropropane	0.506	0.501	1.0	166	0.07
35	T	Dibromomethane	0.396	0.393	0.8	159	0.07
37	T	Bromodichloromethane	0.785	0.777	1.0	163	0.07
38	T	2-Chloroethylvinyl Ether	0.223	0.257	-15.2	186	0.05
39	T	cis-1,3-Dichloropropene	0.740	0.671	9.3	153	0.07
40	T	4-Methyl-2-pentanone(MIBK)	0.559	0.585	-4.7	177	0.07
41	S	Toluene-d8	0.919	0.919	0.0	153	0.07
42	MC	Toluene	0.689	0.691	-0.3	160	0.07
43	T	trans-1,3-Dichloropropene	0.657	0.616	6.2	158	0.05
44	T	1,1,2-Trichloroethane	0.374	0.365	2.4	163	0.07
45	T	Tetrachloroethene	0.419	0.430	-2.6	161	0.07
46	T	1,3-Dichloropropane	0.685	0.688	-0.4	168	0.07

47	T	2-Hexanone	0.352	0.387	-9.9	184	0.05
48	T	Dibromochloromethane	0.600	0.572	4.7	156	0.07
49	T	1,2-Dibromoethane(EDB)	0.529	0.517	2.3	162	0.07
[illegible]	I	Chlorobenzene-d5	1.000	1.000	0.0	165	0.07
[illegible]	MP	Chlorobenzene	1.319	1.216	7.8	161	0.05
2	T	1,1,1,2-Tetrachloroethane	0.641	0.597	6.9	161	0.07
53	C	Ethylbenzene	2.054	1.973	3.9	166	0.07
54	T	m,p-Xylene	0.734	0.675	8.0	160	0.07
55	T	o-Xylene	0.719	0.642	10.7	154	0.05
56	T	Styrene	1.310	1.201	8.3	159	0.07
57	P	Bromoform	0.740	0.689	6.9	161	0.07
58	T	Isopropylbenzene	1.917	1.868	2.6	168	0.07
59	S	Bromofluorobenzene	1.081	1.075	0.6	165	0.07
60	P	1,1,2,2-Tetrachloroethane	0.960	0.837	12.8	156	0.07
61	T	Bromobenzene	0.685	0.653	4.7	162	0.07
62	T	1,2,3-Trichloropropane	0.865	0.809	6.5	170	0.07
63	T	n-Propylbenzene	2.250	2.178	3.2	167	0.05
64	T	2-Chlorotoluene	1.848	1.674	9.4	157	0.05
65	T	1,3,5-Trimethylbenzene	1.699	1.577	7.2	165	0.07
66	T	4-Chlorotoluene	2.085	1.906	8.6	160	0.07
67	T	tert-Butylbenzene	1.460	1.364	6.6	164	0.05
68	T	1,2,4-Trimethylbenzene	1.651	1.557	5.7	169	0.05
69	T	sec-Butylbenzene	1.784	1.654	7.3	164	0.05
70	T	1,3-Dichlorobenzene	0.959	0.864	9.9	161	0.05
71	T	4-Isopropyltoluene	1.432	1.319	7.9	161	0.07
72	T	1,4-Dichlorobenzene	1.111	1.045	5.9	171	0.05
73	T	n-Butylbenzene	1.355	1.226	9.5	160	0.07
74	T	1,2-Dichlorobenzene	0.966	0.880	8.9	166	0.07
75	T	1,2-Dibromo-3-chloropropane	0.247	0.224	9.3	164	0.05
[illegible]	T	1,2,4-Trichlorobenzene	0.611	0.558	8.7	174	0.07
[illegible]	T	Hexachlorobutadiene	0.417	0.361	13.4	159	0.07
[illegible]	T	Naphthalene	1.028	0.998	2.9	186	0.07
79	T	1,2,3-Trichlorobenzene	0.508	0.470	7.5	180	0.05
80	T	1,1,2-Trichloro-1,2,2-trifl	0.884	0.736	16.7	146	0.07
81	T	Methyl Acetate	0.754	0.724	4.0	194	0.06
82	T	Cyclohexane	0.501	0.442	11.8	141	0.06
83	T	Methylcyclohexane	0.652	0.579	11.2	145	0.08

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

F3394.D FME0316.M Tue Mar 27 08:30:44 2001 MSD_F

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\03-27-01\F9386.D
Acq On : 27 Mar 2001 17:23
Sample : 100,100_PPB_STD,W,5.0mL,100
Misc : N/A,N/A,N/A
3 Integration Params: rteint.p

Vial: 3
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Last Update : Fri Mar 16 14:54:56 2001
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene	1.000	1.000	0.0	154	0.06
2	T	Dichlorodifluoromethane	0.467	0.400	14.3	142	0.03
3	P	Chloromethane	0.335	0.283	15.5	150	0.03
4	C	Vinyl Chloride	0.302	0.266	11.9	156	0.04
5	T	Bromomethane	0.258	0.218	15.5	152	0.07
6	T	Chloroethane	0.184	0.160	13.0	153	0.07
7	T	Trichlorofluoromethane	0.392	0.369	5.9	153	0.06
8	T	Acrolein	0.038	0.047	-23.7	215	0.06
9	MC	1,1-Dichloroethene	0.268	0.235	12.3	159	0.06
10	T	Acetone	0.117	0.118	-0.9	209	0.03
11	T	Carbon Disulfide	0.828	0.725	12.4	148	0.06
12	T	Vinyl Acetate	1.487	1.477	0.7	167	0.06
13	T	Methylene Chloride	0.353	0.323	8.5	167	0.06
14	T	Acrylonitrile	0.090	0.101	-12.2	193	0.07
15	T	t-Butyl Alcohol(TBA)	0.049	0.047	4.1	176	0.07
16	T	trans-1,2-Dichloroethene	0.348	0.304	12.6	158	0.07
17	T	Methyl-t-Butyl Ether(MTBE)	1.323	1.215	8.2	162	0.07
18	P	1,1-Dichloroethane	0.778	0.748	3.9	164	0.06
19	T	Diisopropyl Ether(DIPE)	2.109	2.062	2.2	168	0.06
20	T	cis-1,2-Dichloroethene	0.403	0.373	7.4	158	0.07
21	T	2,2-Dichloropropane	0.589	0.625	-6.1	164	0.06
22	T	2-Butanone(MEK)	0.191	0.199	-4.2	186	0.06
23	T	Bromochloromethane	0.243	0.244	-0.4	169	0.06
25	C	Chloroform	0.787	0.803	-2.0	164	0.06
26	T	1,1,1-Trichloroethane	0.600	0.621	-3.5	161	0.06
27	T	Carbon Tetrachloride	0.465	0.477	-2.6	160	0.06
28	T	1,1-Dichloropropene	0.503	0.515	-2.4	159	0.07
29	T	1,2-Dichloroethane(EDC)	0.646	0.684	-5.9	169	0.07
30	S	1,2-Dichloroethane-d4	0.500	0.508	-1.6	156	0.06
31	I	1,4-Difluorobenzene	1.000	1.000	0.0	155	0.04
32	M	Benzene	1.111	1.113	-0.2	165	0.06
33	M	Trichloroethene	0.474	0.477	-0.6	164	0.06
34	C	1,2-Dichloropropane	0.506	0.518	-2.4	172	0.05
35	T	Dibromomethane	0.396	0.411	-3.8	167	0.07
37	T	Bromodichloromethane	0.785	0.807	-2.8	170	0.07
38	T	2-Chloroethylvinyl Ether	0.223	0.270	-21.1	196	0.05
39	T	cis-1,3-Dichloropropene	0.740	0.749	-1.2	171	0.07
40	T	4-Methyl-2-pentanone(MIBK)	0.559	0.633	-13.2	192	0.05
41	S	Toluene-d8	0.919	0.953	-3.7	159	0.07
42	MC	Toluene	0.689	0.708	-2.8	164	0.05
43	T	trans-1,3-Dichloropropene	0.657	0.662	-0.8	171	0.04
44	T	1,1,2-Trichloroethane	0.374	0.381	-1.9	171	0.07
45	T	Tetrachloroethene	0.419	0.435	-3.8	164	0.05
46	T	1,3-Dichloropropane	0.685	0.694	-1.3	170	0.05

47	T	2-Hexanone	0.352	0.387	-9.9	184	0.05
48	T	Dibromochloromethane	0.600	0.601	-0.2	164	0.05
49	T	1,2-Dibromoethane(EDB)	0.529	0.545	-3.0	172	0.07
[illegible]	I	Chlorobenzene-d5	1.000	1.000	0.0	172	0.05
[illegible]	MP	Chlorobenzene	1.319	1.192	9.6	165	0.04
[illegible]	T	1,1,1,2-Tetrachloroethane	0.641	0.582	9.2	164	0.05
[illegible]	C	Ethylbenzene	2.054	1.867	9.1	163	0.07
54	T	m,p-Xylene	0.734	0.657	10.5	162	0.05
55	T	o-Xylene	0.719	0.621	13.6	156	0.05
56	T	Styrene	1.310	1.160	11.5	160	0.05
57	P	Bromoform	0.740	0.671	9.3	164	0.05
58	T	Isopropylbenzene	1.917	1.733	9.6	163	0.05
59	S	Bromofluorobenzene	1.081	1.044	3.4	167	0.05
60	P	1,1,2,2-Tetrachloroethane	0.960	0.869	9.5	169	0.05
61	T	Bromobenzene	0.685	0.608	11.2	157	0.05
62	T	1,2,3-Trichloropropane	0.865	0.775	10.4	170	0.05
63	T	n-Propylbenzene	2.250	1.988	11.6	159	0.05
64	T	2-Chlorotoluene	1.848	1.621	12.3	159	0.05
65	T	1,3,5-Trimethylbenzene	1.699	1.479	12.9	161	0.07
66	T	4-Chlorotoluene	2.085	1.864	10.6	163	0.05
67	T	tert-Butylbenzene	1.460	1.278	12.5	160	0.05
68	T	1,2,4-Trimethylbenzene	1.651	1.482	10.2	168	0.05
69	T	sec-Butylbenzene	1.784	1.522	14.7	157	0.05
70	T	1,3-Dichlorobenzene	0.959	0.845	11.9	165	0.05
71	T	4-Isopropyltoluene	1.432	1.243	13.2	158	0.05
72	T	1,4-Dichlorobenzene	1.111	0.976	12.2	167	0.05
73	T	n-Butylbenzene	1.355	1.160	14.4	158	0.07
74	T	1,2-Dichlorobenzene	0.966	0.851	11.9	167	0.05
75	T	1,2-Dibromo-3-chloropropane	0.247	0.198	19.8	152	0.05
76	T	1,2,4-Trichlorobenzene	0.611	0.492	19.5	160	0.05
[illegible]	T	Hexachlorobutadiene	0.417	0.348	16.5	160	0.05
[illegible]	T	Naphthalene	1.028	0.835	18.8	163	0.05
79	T	1,2,3-Trichlorobenzene	0.508	0.400	21.3	160	0.05
80	T	1,1,2-Trichloro-1,2,2-trifl	0.884	0.755	14.6	157	0.06
81	T	Methyl Acetate	0.754	0.676	10.3	189	0.04
82	T	Cyclohexane	0.501	0.476	5.0	159	0.04
83	T	Methylcyclohexane	0.652	0.632	3.1	165	0.07

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

F3394.D FME0316.M Wed Mar 28 08:35:21 2001 MSD_F

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\03-29-01\F9433.D
Acq On : 29 Mar 2001 10:27
Sample : 100,100_PPB_STD,W,5.0mL,100
Misc : N/A,N/A,N/A
'S Integration Params: rteint.p

Vial: 1
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Last Update : Fri Mar 16 14:54:56 2001
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene	1.000	1.000	0.0	126	0.07
2	T	Dichlorodifluoromethane	0.467	0.459	1.7	133	0.04
3	P	Chloromethane	0.335	0.245	26.9	106	0.04
4	C	Vinyl Chloride	0.302	0.302	0.0	144	0.04
5	T	Bromomethane	0.258	0.233	9.7	132	0.07
6	T	Chloroethane	0.184	0.162	12.0	127	0.07
7	T	Trichlorofluoromethane	0.392	0.416	-6.1	141	0.07
8	T	Acrolein	0.038	0.039	-2.6	146	0.07
9	MC	1,1-Dichloroethene	0.268	0.237	11.6	131	0.06
10	T	Acetone	0.117	0.094	19.7	136	0.04
11	T	Carbon Disulfide	0.828	0.717	13.4	119	0.06
12	T	Vinyl Acetate	1.487	1.477	0.7	137	0.07
13	T	Methylene Chloride	0.353	0.314	11.0	133	0.06
14	T	Acrylonitrile	0.090	0.082	8.9	129	0.06
15	T	t-Butyl Alcohol(TBA)	0.049	0.040	18.4	122	0.07
16	T	trans-1,2-Dichloroethene	0.348	0.314	9.8	133	0.07
17	T	Methyl-t-Butyl Ether(MTBE)	1.323	1.173	11.3	128	0.07
18	P	1,1-Dichloroethane	0.778	0.758	2.6	135	0.07
19	T	Diisopropyl Ether(DIPE)	2.109	2.033	3.6	135	0.07
20	T	cis-1,2-Dichloroethene	0.403	0.382	5.2	132	0.07
21	T	2,2-Dichloropropane	0.589	0.650	-10.4	139	0.06
22	T	2-Butanone(MEK)	0.191	0.167	12.6	128	0.07
23	T	Bromochloromethane	0.243	0.233	4.1	132	0.06
25	C	Chloroform	0.787	0.791	-0.5	132	0.06
26	T	1,1,1-Trichloroethane	0.600	0.653	-8.8	139	0.07
27	T	Carbon Tetrachloride	0.465	0.524	-12.7	144	0.05
28	T	1,1-Dichloropropene	0.503	0.540	-7.4	137	0.07
29	T	1,2-Dichloroethane(EDC)	0.646	0.699	-8.2	142	0.07
30	S	1,2-Dichloroethane-d4	0.500	0.513	-2.6	128	0.08
31	I	1,4-Difluorobenzene	1.000	1.000	0.0	136	0.05
32	M	Benzene	1.111	1.046	5.9	136	0.05
33	M	Trichloroethene	0.474	0.477	-0.6	143	0.05
34	C	1,2-Dichloropropane	0.506	0.525	-3.8	152	0.05
35	T	Dibromomethane	0.396	0.392	1.0	139	0.07
37	T	Bromodichloromethane	0.785	0.787	-0.3	145	0.07
38	T	2-Chloroethylvinyl Ether	0.223	0.236	-5.8	150	0.04
39	T	cis-1,3-Dichloropropene	0.740	0.762	-3.0	152	0.05
40	T	4-Methyl-2-pentanone(MIBK)	0.559	0.550	1.6	146	0.05
41	S	Toluene-d8	0.919	1.011	-10.0	148	0.07
42	MC	Toluene	0.689	0.764	-10.9	155	0.05
43	T	trans-1,3-Dichloropropene	0.657	0.693	-5.5	156	0.04
44	T	1,1,2-Trichloroethane	0.374	0.385	-2.9	151	0.05
45	T	Tetrachloroethene	0.419	0.479	-14.3	158	0.05
46	T	1,3-Dichloropropane	0.685	0.734	-7.2	157	0.05

47	T	2-Hexanone	0.352	0.338	4.0	141	0.04
48	T	Dibromochloromethane	0.600	0.630	-5.0	150	0.05
49	T	1,2-Dibromoethane(EDB)	0.529	0.551	-4.2	152	0.05
50	I	Chlorobenzene-d5	1.000	1.000	0.0	166	0.05
	MP	Chlorobenzene	1.319	1.226	7.1	164	0.04
	T	1,1,1,2-Tetrachloroethane	0.641	0.581	9.4	158	0.05
	C	Ethylbenzene	2.054	1.969	4.1	167	0.05
54	T	m,p-Xylene	0.734	0.682	7.1	163	0.05
55	T	o-Xylene	0.719	0.661	8.1	160	0.05
56	T	Styrene	1.310	1.216	7.2	162	0.05
57	P	Bromoform	0.740	0.634	14.3	149	0.04
58	T	Isopropylbenzene	1.917	1.877	2.1	170	0.05
59	S	Bromofluorobenzene	1.081	1.155	-6.8	178	0.04
60	P	1,1,2,2-Tetrachloroethane	0.960	0.836	12.9	157	0.05
61	T	Bromobenzene	0.685	0.642	6.3	160	0.04
62	T	1,2,3-Trichloropropane	0.865	0.748	13.5	159	0.04
63	T	n-Propylbenzene	2.250	2.176	3.3	168	0.04
64	T	2-Chlorotoluene	1.848	1.793	3.0	170	0.04
65	T	1,3,5-Trimethylbenzene	1.699	1.607	5.4	169	0.05
66	T	4-Chlorotoluene	2.085	1.971	5.5	167	0.05
67	T	tert-Butylbenzene	1.460	1.352	7.4	164	0.04
68	T	1,2,4-Trimethylbenzene	1.651	1.546	6.4	169	0.04
69	T	sec-Butylbenzene	1.784	1.721	3.5	172	0.04
70	T	1,3-Dichlorobenzene	0.959	0.859	10.4	162	0.05
71	T	4-Isopropyltoluene	1.432	1.309	8.6	161	0.04
72	T	1,4-Dichlorobenzene	1.111	0.996	10.4	164	0.05
73	T	n-Butylbenzene	1.355	1.254	7.5	165	0.05
74	T	1,2-Dichlorobenzene	0.966	0.836	13.5	159	0.04
75	T	1,2-Dibromo-3-chloropropane	0.247	0.167	32.4	123	0.05
76	T	1,2,4-Trichlorobenzene	0.611	0.394	35.5	124	0.05
	T	Hexachlorobutadiene	0.417	0.328	21.3	146	0.05
	T	Naphthalene	1.028	0.671	34.7	126	0.03
79	T	1,2,3-Trichlorobenzene	0.508	0.315	38.0	121	0.05
80	T	1,1,2-Trichloro-1,2,2-trifl	0.884	0.664	24.9	133	0.06
81	T	Methyl Acetate	0.754	0.531	29.6	144	0.04
82	T	Cyclohexane	0.501	0.436	13.0	141	0.05
83	T	Methylcyclohexane	0.652	0.625	4.1	157	0.07

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

F3394.D FME0316.M Thu Mar 29 11:19:25 2001 MSD_F

Response Factor Report MSD_J

\\EDOCDEM\J\METHODS\JM8406.M (RTE Integrator)
File : VOLATILE ORGANICS BY EPA METHOD 8260B
Last Update : Sun Apr 08 10:17:55 2001
Response via : Initial Calibration

Calibration Files
20 =J8714.D 100 =J8716.D 50 =J8715.D
150 =J8717.D 200 =J8718.D

		Compound	20	100	50	150	200	Avg	%RSD
1)	I	Pentafluorobenzene	ISTD						
2)	T	Dichlorodifluoromet	0.231	0.345	0.351	0.327	0.336	0.318	15.65
3)	P	Chloromethane	0.341	0.456	0.446	0.459	0.474	0.435	12.35
4)	C	Vinyl Chloride	0.254	0.362	0.361	0.361	0.380	0.344	14.71
5)	T	Bromomethane	0.145	0.114	0.144	0.090	0.080	0.115	25.88
6)	T	Chloroethane	0.165	0.169	0.197	0.133	0.117	0.156	20.14
7)	T	Trichlorofluorometh	0.290	0.435	0.438	0.407	0.409	0.396	15.31
8)	T	Acrolein	0.046	0.042	0.045	0.042	0.042	0.043	4.72
9)	MC	1,1-Dichloroethene	0.184	0.257	0.258	0.250	0.256	0.241	13.28
10)	T	Acetone	0.140	0.150	0.162	0.149	0.146	0.149	5.32
11)	T	Carbon Disulfide	0.643	0.941	0.924	0.933	0.966	0.882	15.22
12)	T	Vinyl Acetate	1.244	1.484	1.612	1.443	1.356	1.428	9.68
13)	T	Methylene Chloride	0.262	0.326	0.333	0.326	0.326	0.314	9.42
14)	T	Acrylonitrile	0.144	0.131	0.141	0.132	0.136	0.137	4.22
15)	T	t-Butyl Alcohol(TBA	0.037	0.039	0.044	0.040	0.040	0.040	6.10
16)	T	trans-1,2-Dichloroe	0.222	0.284	0.292	0.278	0.281	0.272	10.28
17)	T	Methyl-t-Butyl Ethe	0.966	1.221	1.271	1.243	1.228	1.186	10.49
18)	P	1,1-Dichloroethane	0.459	0.590	0.598	0.586	0.592	0.565	10.55
19)	T	Diisopropyl Ether(D	0.980	1.225	1.258	1.227	1.212	1.180	9.62
20)	T	cis-1,2-Dichloroeth	0.349	0.443	0.452	0.432	0.428	0.421	9.79
21)	T	2,2-Dichloropropane	0.396	0.540	0.546	0.521	0.527	0.506	12.33
22)	T	2-Butanone(MEK)	0.195	0.242	0.263	0.248	0.244	0.239	10.75
23)	T	Bromochloromethane	0.165	0.212	0.217	0.213	0.210	0.203	10.61
25)	C	Chloroform	0.563	0.730	0.735	0.727	0.725	0.696	10.69
26)	T	1,1,1-Trichloroetha	0.399	0.585	0.577	0.576	0.594	0.546	15.17
27)	T	Carbon Tetrachlorid	0.295	0.456	0.446	0.450	0.465	0.423	16.92
28)	T	1,1-Dichloropropene	0.344	0.493	0.495	0.478	0.487	0.460	14.19
29)	T	1,2-Dichloroethane(	0.488	0.608	0.628	0.609	0.597	0.586	9.56
30)	S	1,2-Dichloroethane-	0.617	0.612	0.622	0.620	0.620	0.618	0.64
31)	I	1,4-Difluorobenzene	ISTD						
32)	M	Benzene	0.912	1.148	1.184	1.114	1.094	1.090	9.67
33)	M	Trichloroethene	0.201	0.277	0.277	0.272	0.275	0.260	12.72
34)	C	1,2-Dichloropropane	0.236	0.299	0.303	0.295	0.289	0.284	9.66
35)	T	Dibromomethane	0.130	0.168	0.171	0.168	0.164	0.160	10.85
37)	T	Bromodichloromethan	0.258	0.371	0.363	0.375	0.372	0.348	14.51
38)	T	2-Chloroethylvinyl	0.131	0.205	0.207	0.210	0.207	0.192	17.88
39)	T	cis-1,3-Dichloropro	0.332	0.475	0.472	0.477	0.468	0.445	14.18
40)	T	4-Methyl-2-pentanon	0.211	0.310	0.326	0.320	0.318	0.297	16.22
41)	S	Toluene-d8	1.015	1.014	1.011	1.009	1.017	1.013	0.32
42)	MC	Toluene	0.547	0.706	0.718	0.688	0.677	0.667	10.31
43)	T	trans-1,3-Dichlorop	0.307	0.448	0.442	0.449	0.443	0.418	14.78
44)	T	1,1,2-Trichloroetha	0.166	0.211	0.218	0.212	0.206	0.203	10.29
45)	T	Tetrachloroethene	0.178	0.237	0.244	0.227	0.224	0.222	11.55
46)	T	1,3-Dichloropropane	0.352	0.449	0.469	0.443	0.428	0.428	10.55
47)	T	2-Hexanone	0.148	0.225	0.235	0.233	0.231	0.215	17.36
48)	T	Dibromochloromethan	0.165	0.260	0.251	0.265	0.264	0.241	17.69
49)	T	1,2-Dibromoethane(E	0.190	0.260	0.267	0.264	0.258	0.248	13.10

000100

			ISTD						
50)	I	Chlorobenzene-d5							
51)	MP	Chlorobenzene	0.743	0.927	0.952	0.904	0.883	0.882	9.27
		[illegible]	0.238	0.322	0.322	0.321	0.313	0.30[illegible]	[illegible]
[illegible]	[illegible]	Ethylbenzene	1.192	1.578	1.595	1.531	1.510	1.483	11.06
[illegible]	[illegible]	m,p-Xylene	0.479	0.590	0.623	0.565	0.542	0.560	9.70
[illegible]	[illegible]	o-Xylene	0.472	0.601	0.625	0.576	0.554	0.566	10.37
[illegible]	T	Styrene	0.828	1.065	1.102	1.030	0.978	1.000	10.68
[illegible]	P	Bromoform	0.109	0.187	0.176	0.198	0.198	0.174	21.39
58)	T	Isopropylbenzene	1.003	1.422	1.421	1.394	1.386	1.325	13.65
59)	S	Bromofluorobenzene	0.641	0.643	0.639	0.638	0.641	0.640	0.30
60)	P	1,1,2,2-Tetrachloro	0.290	0.369	0.392	0.371	0.358	0.356	10.96
61)	T	Bromobenzene	0.302	0.378	0.389	0.367	0.356	0.359	9.47
62)	T	1,2,3-Trichloroprop	0.290	0.361	0.388	0.365	0.355	0.352	10.43
63)	T	n-Propylbenzene	1.199	1.666	1.663	1.621	1.617	1.553	12.83
64)	T	2-Chlorotoluene	0.857	1.100	1.114	1.078	1.061	1.042	10.13
65)	T	1,3,5-Trimethylbenz	0.915	1.200	1.226	1.166	1.151	1.132	11.01
66)	T	4-Chlorotoluene	1.028	1.280	1.316	1.243	1.221	1.218	9.18
67)	T	tert-Butylbenzene	0.642	0.930	0.921	0.903	0.907	0.861	14.23
68)	T	1,2,4-Trimethylbenz	0.996	1.282	1.306	1.258	1.235	1.215	10.32
69)	T	sec-Butylbenzene	0.872	1.274	1.274	1.243	1.257	1.184	14.76
70)	T	1,3-Dichlorobenzene	0.549	0.674	0.701	0.657	0.641	0.645	8.96
71)	T	4-Isopropyltoluene	0.761	1.052	1.062	1.029	1.023	0.985	12.83
72)	T	1,4-Dichlorobenzene	0.578	0.705	0.726	0.692	0.671	0.674	8.53
73)	T	n-Butylbenzene	0.340	0.497	0.495	0.487	0.486	0.461	14.70
74)	T	1,2-Dichlorobenzene	0.543	0.657	0.689	0.645	0.621	0.631	8.68
75)	T	1,2-Dibromo-3-chlor	0.035	0.052	0.055	0.057	0.057	0.051	18.31
76)	T	1,2,4-Trichlorobenz	0.201	0.256	0.281	0.270	0.265	0.255	12.18
77)	T	Hexachlorobutadiene	0.076	0.101	0.102	0.102	0.104	0.097	11.93
78)	T	Naphthalene	0.473	0.614	0.704	0.655	0.650	0.619	14.14
79)	T	1,2,3-Trichlorobenz	0.113	0.153	0.168	0.171	0.169	0.155	15.77
80)	T	1,1,2-Trichloro-1,2	0.147	0.216	0.222	0.202	0.204	0.198	15.08
[illegible]	T	Methyl acetate	0.203	0.263	0.279	0.278	0.281	0.261	12.75
[illegible]	T	Cyclohexane	0.325	0.505	0.519	0.478	0.489	0.463	16.99
83)	T	Methyl cyclohexane	0.189	0.301	0.303	0.284	0.290	0.273	17.50

(#) = Out of Range

JME0406.M Sun Apr 08 10:18:10 2001 MSD_J

000101

Instrument ID: MSD_J
Method ID: JME0406.M
Date: 04/08/2001

Average %RSD = 12.46

Refer to SW846 Method 8000B Section 7.5.1.

000102

663

VOLATILE SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 03/27/2001

Lab Sample ID	Matrix	File ID	SMC1 #	SMC2 #	SMC3 #
METHOD_BLK	SOIL	F9364.D	91	101	90
1836-009	MEOH	F9365.D	132	130	104
1836-002	MEOH	F9368.D	112	115	85
1836-004	MEOH	F9369.D	112	118	94
1836-005	MEOH	F9370.D	117	119	92
1836-006	MEOH	F9371.D	113	113	91
1836-007	MEOH	F9372.D	110	109	90
1836-003	MEOH	F9373.D	105	103	90
1840-001	MEOH	F9376.D	117	121	99
1840-002	MEOH	F9377.D	116	116	96
1840-004	MEOH	F9378.D	106	111	83
1840-006	MEOH	F9380.D	103	109	77
1840-005	MEOH	F9381.D	125	122	89

	Concentration	Aqueous/Meoh	Soil
SMC1 = 1,2-Dichloroethane-d4	50 ppb	27-175	60-112
SMC2 = Toluene-d8	50 ppb	24-164	50-148
SMC3 = Bromofluorobenzene	50 ppb	24-150	69-113

Column to be used to flag recovery values

VOLATILE SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 03/27/2001

Lab Sample ID	Matrix	File ID	SMC1 #	SMC2 #	SMC3 #
METHOD_BLK	SOIL	F9389.D	88	101	93
1726-003	SOIL	F9390.D	92	106	96
1648-001MS	MEOH	F9391.D	94	103	98
1648-001MSD	MEOH	F9392.D	93	107	95
1840-008	MEOH	F9393.D	136	144	108
1648-001	MEOH	F9394.D	123	127	92
1836-001	MEOH	F9396.D	120	127	99
1840-004DIL	MEOH	F9400.D	102	99	84
1765-003	MEOH	F9402.D	104	116	93

	Concentration	Aqueous/Meoh	Soil
SMC1 = 1,2-Dichloroethane-d4	50 ppb	27-175	60-112
SMC2 = Toluene-d8	50 ppb	24-164	50-148
SMC3 = Bromofluorobenzene	50 ppb	24-150	69-113

Column to be used to flag recovery values

VOLATILE SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 03/29/2001

Lab Sample ID	Matrix	File ID	SMC1 #	SMC2 #	SMC3 #
METHOD_BLK	SOIL	F9435.D	85	98	92
1897-006	MEOH	F9436.D	121	118	99
1840-007	MEOH	F9437.D	119	124	101
1909-002MS	MEOH	F9438.D	113	100	110
1909-002MSD	MEOH	F9439.D	120	103	107
1920-004	MEOH	F9440.D	122	122	102
1870-007	MEOH	F9441.D	125	128	101
1920-001	MEOH	F9442.D	120	125	101
1920-002	MEOH	F9443.D	122	131	108
1920-005	MEOH	F9445.D	119	118	92
1909-001	MEOH	F9446.D	100	83	88
1909-002	MEOH	F9447.D	113	95	95
1914-001	MEOH	F9448.D	120	121	96
1914-002	MEOH	F9449.D	116	112	90
1914-003	MEOH	F9450.D	121	126	97
1914-004	MEOH	F9451.D	119	123	96
1870-003	MEOH	F9453.D	102	107	91

	Concentration	Aqueous/Meoh	Soil
SMC1 = 1,2-Dichloroethane-d4	50 ppb	27-175	60-112
SMC2 = Toluene-d8	50 ppb	24-164	50-148
SMC3 = Bromofluorobenzene	50 ppb	24-150	69-113

Column to be used to flag recovery values

FORM 2

VOLATILE SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 04/06/2001

Lab Sample ID	Matrix	File ID	SMC1 #	SMC2 #	SMC3 #
METHOD-BLK	SOIL	J8721.D	101	98	98
1840-003	MEOH	J8722.D	90	98	72
2044-001	MEOH	J8723.D	91	83	79
2044-002	MEOH	J8724.D	111	106	100
2006-004	MEOH	J8726.D	95	75	70
2006-008	MEOH	J8727.D	77	72	71
2045-001	MEOH	J8728.D	88	99	72
2045-002	MEOH	J8729.D	86	96	70
1996-001DIL	MEOH	J8730.D	97	100	85
2095-006	MEOH	J8731.D	98	107	80
2095-004	MEOH	J8732.D	85	90	70
2044-001MS	MEOH	J8733.D	90	85	74
2044-001MSD	MEOH	J8734.D	89	85	73
2045-002MS	MEOH	J8736.D	81	79	68
2045-002MSD	MEOH	J8737.D	92	90	77

	Concentration	Aqueous/Meoh	Soil
SMC1 = 1,2-Dichloroethane-d4	50 ppb	53-138	43-133
SMC2 = Toluene-d8	50 ppb	46-111	39-137
SMC3 = Bromofluorobenzene	50 ppb	38-147	23-145

Column to be used to flag recovery values

FORM 2

MEOH VOLATILE MATRIX SPIKE/SPIKE DUPLICATE RECOVERY

Matrix spike Lab sample ID: 1648-001

Batch No.: FM0041

Compound	SPIKE ADDED (ug/Kg)	SAMPLE CONC. (ug/Kg)	MS CONC. (ug/Kg)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	50.0	0.0	52.0	104	31 - 137
Benzene	50.0	0.0	49.5	99	63 - 130
Trichloroethene	50.0	0.0	48.2	96	71 - 115
Toluene	50.0	0.0	51.9	104	74 - 126
Chlorobenzene	50.0	0.0	44.2	88	74 - 126

Compound	SAMPLE CONC. (ug/Kg)	MSD CONC. (ug/Kg)	#	MSD % REC	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	0.0	48.9		98	6	18	31 - 137
Benzene	0.0	51.6		103	4	11	63 - 130
Trichloroethene	0.0	48.7		97	1	7	71 - 115
Toluene	0.0	55.2		110	6	9	74 - 126
Chlorobenzene	0.0	42.8		86	2	8	74 - 126

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

* Values outside of QC limits

NC Non calculable

RPD: __0___ out of __5__ outside limits

Spike Recovery: __0___ out of __10__ outside limits

MEOH VOLATILE MATRIX SPIKE/SPIKE DUPLICATE RECOVERY

Matrix spike Lab sample ID: 1909-002

Batch No.: FM0043

Compound	SPIKE ADDED (ug/Kg)	SAMPLE CONC. (ug/Kg)	MS CONC. (ug/Kg)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	50.0	0.0	44.6	89	31 - 137
Benzene	50.0	0.0	46.4	93	63 - 130
Trichloroethene	50.0	0.0	43.0	86	71 - 115
Toluene	50.0	0.0	46.2	92	74 - 126
Chlorobenzene	50.0	0.0	41.3	83	74 - 126

Compound	SAMPLE CONC. (ug/Kg)	MSD CONC. (ug/Kg)	MSD #	% REC	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	0.0	47.8		96	8	18	31 - 137
Benzene	0.0	46.3		93	0	11	63 - 130
Trichloroethene	0.0	42.2		84	2	7	71 - 115
Toluene	0.0	46.7		93	1	9	74 - 126
Chlorobenzene	0.0	41.7		83	0	8	74 - 126

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

* Values outside of QC limits

NC Non calculable

RPD: __0___ out of __5__ outside limits

Spike Recovery: __0___ out of __10__ outside limits

MEOH VOLATILE MATRIX SPIKE/SPIKE DUPLICATE RECOVERY

Matrix spike Lab sample ID: 2045-002

Batch No.: JM0067

Compound	SPIKE ADDED (ug/Kg)	SAMPLE CONC. (ug/Kg)	MS CONC. (ug/Kg)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	50.0	0.0	33.2	66	56 - 120
Benzene	50.0	0.0	56.0	112	64 - 126
Trichloroethene	50.0	0.0	51.5	103	66 - 120
Toluene	50.0	0.0	55.6	111	65 - 122
Chlorobenzene	50.0	0.0	57.1	114	68 - 120

Compound	SAMPLE CONC. (ug/Kg)	MSD CONC. (ug/Kg)	MSD #	% REC	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	0.0	36.7		73	10	11	56 - 120
Benzene	0.0	56.1		112	0	10	64 - 126
Trichloroethene	0.0	52.9		106	3	9	66 - 120
Toluene	0.0	56.0		112	1	9	65 - 122
Chlorobenzene	0.0	57.4		115	1	9	68 - 120

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

* Values outside of QC limits

NC Non calculable

RPD: __0___ out of __5__ outside limits

Spike Recovery: __0___ out of __10__ outside limits

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): F9098.D

Date Analyzed: 03/16/2001

Instrument ID: MSD_F

Time Analyzed: 11:58

	50UG/L	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	12 HOUR STD	2151032	8.74	2157050	9.91	1393382	14.78
	UPPER LIMIT	4302064	9.24	4314100	10.41	2786764	15.28
	LOWER LIMIT	1075516	8.24	1078525	9.41	696691	14.28
	LAB SAMPLE ID						
01	200_PPB_STD	2108795	8.74	2140742	9.92	1379714	14.77
02	150_PPB_STD	2154203	8.79	2121332	9.95	1428885	14.81
03	50_PPB_STD	2224331	8.78	2176614	9.96	1405295	14.82
04	20_PPB_STD	2181659	8.78	2127289	9.96	1389941	14.81
05	METHOD_BLK	2173658	8.78	2080601	9.95	1391689	14.83
06	METHOD_BLK	2129248	8.79	2119006	9.95	1363535	14.80
07	1623-006	2042805	8.78	2075967	9.95	1445640	14.80
08	1625-021	1989365	8.78	1995662	9.95	1470807	14.80
09	1625-022	2093862	8.78	2106910	9.95	1472311	14.82
10	1625-026	2103476	8.78	2043055	9.94	1491588	14.80
11	1625-026MS	2131635	8.78	2250252	9.94	1460698	14.80
12	1625-026MSD	2369607	8.78	2225577	9.95	1512169	14.80
13	1623-005	2161833	8.76	2116518	9.94	1467748	14.80
14	1623-001	2299696	8.76	2238303	9.94	1510897	14.80
15	1623-002MS	2317943	8.78	2236930	9.94	1567539	14.81
16	1623-002MSD	2222111	8.78	2214964	9.94	1566593	14.81
17	1623-002	2264776	8.78	2201657	9.95	1508377	14.80
18	1623-003	2186066	8.76	2284282	9.94	1537741	14.80
19	1623-004	2158467	8.76	2099705	9.94	1530510	14.82
20							
21							
22							

IS1 = PENTAFLUOROBENZENE
IS2 = 1,4-DIFLUOROBENZENE
IS3 = CHLOROBENZENE-D5

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): F9361.D

Date Analyzed: 03/27/2001

Instrument ID: MSD_F

Time Analyzed: 3:31

	50UG/L	IS1 AREA	#	RT	#	IS2 AREA	#	RT	#	IS3 AREA	#	RT	#
	12 HOUR STD	3298175		8.80		3335735		9.98		2298381		14.83	
	UPPER LIMIT	6596350		9.30		6671470		10.48		4596762		15.33	
	LOWER LIMIT	1649087.5		8.30		1667867.5		9.48		1149190.5		14.33	
	LAB SAMPLE ID												
01	METHOD_BLK	3347388		8.80		3307913		9.96		2387963		14.83	
02	1836-009	3211187		8.79		3295859		9.95		2397411		14.83	
03	1836-002	2932549		8.78		2983205		9.95		2333326		14.83	
04	1836-004	2896613		8.76		3041672		9.95		2391502		14.81	
05	1836-005	3003584		8.77		3089534		9.95		2414362		14.83	
06	1836-006	3257340		8.79		3360085		9.97		2440568		14.83	
07	1836-007	3422030		8.79		3324570		9.97		2458143		14.83	
08	1836-003	3437199		8.77		3368430		9.95		2410101		14.83	
09	1840-001	3415273		8.79		3313902		9.95		2461261		14.83	
10	1840-002	3512856		8.79		3400551		9.97		2453729		14.83	
11	1840-004	3478051		8.79		3273864		9.97		2409442		14.83	
12	1840-006	3289214		8.79		3297624		9.96		2454901		14.83	
13	1840-005	3309720		8.80		3316653		9.98		2353362		14.84	
14													
15													
16													
17													
18													
19													
20													
21													
22													

IS1 = PENTAFLUOROBENZENE
IS2 = 1,4-DIFLUOROBENZENE
IS3 = CHLOROBENZENE-D5

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): F9386.D

Date Analyzed: 03/27/2001

Instrument ID: MSD_F

Time Analyzed: 17:23

	50UG/L	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	12 HOUR STD	3305220	8.78	3345788	9.95	2398253	14.82
	UPPER LIMIT	6610440	9.28	6691576	10.45	4796506	15.32
	LOWER LIMIT	1652610	8.28	1672894	9.45	1199126.5	14.32
	LAB SAMPLE ID						
01	METHOD_BLK	3460635	8.80	3260955	9.96	2313149	14.82
02	1726-003	3420895	8.77	3402228	9.96	2502506	14.81
03	1648-001MS	3143656	8.79	3211486	9.96	2310360	14.84
04	1648-001MSD	2915325	8.79	2959825	9.96	2351616	14.83
05	1840-008	2847272	8.77	2982711	9.95	2370913	14.81
06	1648-001	2867304	8.77	3035898	9.95	2402769	14.82
07	1836-001	3191916	8.76	3172651	9.95	2422856	14.81
08	1840-004DIL	3309812	8.79	3373277	9.96	2394610	14.81
09	1765-003	3397919	8.79	3351978	9.96	2449690	14.83
10							
11							
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17							
18							
19							
20							
21							
22							

IS1 = PENTAFLUOROBENZENE
IS2 = 1,4-DIFLUOROBENZENE
IS3 = CHLOROBENZENE-D5

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): F9433.D

Date Analyzed: 03/29/2001

Instrument ID: MSD_F

Time Analyzed: 10:27

	50UG/L	IS1 AREA	#	RT	#	IS2 AREA	#	RT	#	IS3 AREA	#	RT	#
	12 HOUR STD	2700120		8.80		2926196		9.96		2317023		14.82	
	UPPER LIMIT	5400240		9.30		5852392		10.46		4634046		15.32	
	LOWER LIMIT	1350060		8.30		1463098		9.46		1158511.5		14.32	
	LAB SAMPLE ID												
01	METHOD_BLK	3728841		8.80		3461050		9.96		2434807		14.83	
02	1897-006	3428605		8.79		3435477		9.97		2422740		14.83	
03	1840-007	3458648		8.79		3330575		9.96		2376498		14.83	
04	1909-002MS	3623770		8.79		3480273		9.95		2477533		14.83	
05	1909-002MSD	3444684		8.78		3435634		9.97		2407154		14.83	
06	1920-004	3574635		8.77		3471848		9.95		2361143		14.81	
07	1870-007	3335459		8.77		3335380		9.95		2518407		14.83	
08	1920-001	3049992		8.77		3133125		9.95		2307219		14.81	
09	1920-002	3009583		8.78		3169118		9.94		2328712		14.81	
10	1920-005	3264716		8.77		3444535		9.95		2468269		14.82	
11	1909-001	3457763		8.77		3481069		9.95		2447272		14.83	
12	1909-002	3156431		8.77		3217785		9.93		2327831		14.82	
13	1914-001	3334179		8.77		3341646		9.95		2410905		14.81	
14	1914-002	3276787		8.79		3310678		9.95		2419389		14.81	
15	1914-003	3048171		8.76		3103570		9.95		2381749		14.82	
16	1914-004	3133691		8.77		3175678		9.95		2313756		14.83	
17	1870-003	3116175		8.77		3150117		9.96		2324350		14.81	
18													
19													
20													
21													
22													

IS1 = PENTAFLUOROBENZENE
IS2 = 1,4-DIFLUOROBENZENE
IS3 = CHLOROBENZENE-D5

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

E INTERNAL STANDARD AREA AND RT SUMMARY

J8716.D

Date Analyzed: [illegible]/06/2001

Instrument ID: MSD_J

Time Analyzed: 17:12

	50UG/L	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	12 HOUR STD	513567	6.39	751960	7.22	613907	10.58
	UPPER LIMIT	1027134	6.89	1503920	7.72	1227814	11.08
	LOWER LIMIT	256783.5	5.89	375980	6.72	306953.5	10.08
	LAB SAMPLE ID						
01	STD-20PPB	522866	6.39	756759	7.22	610060	10.58
02	STD-50PPB	517192	6.39	752725	7.22	614693	10.58
03	STD-150PPB	509011	6.39	755394	7.22	616821	10.58
04	STD-200PPB	506927	6.39	760721	7.22	622861	10.58
05	METHOD-BLK	510479	6.39	737984	7.22	588556	10.58
06	1840-003	486585	6.39	702070	7.22	557167	10.58
07	2044-001	491455	6.39	707328	7.22	565245	10.58
08	2044-002	513345	6.39	736573	7.21	586212	10.58
09	2006-004	459418	6.39	660979	7.22	528456	10.58
10	2006-008	518393	6.39	739418	7.22	595865	10.58
11	2045-001	488269	6.39	702508	7.22	576556	10.58
12	2045-002	520688	6.39	741407	7.22	600845	10.58
13	1996-001DIL	459882	6.39	662045	7.22	535600	10.58
14	2095-006	482463	6.39	696892	7.22	555834	10.58
15	2095-004	526939	6.39	754597	7.22	627206	10.58
16	2044-001MS	468887	6.39	677246	7.21	543419	10.58
17	2044-001MSD	487953	6.39	704532	7.21	562524	10.58
18	2045-002MS	493677	6.38	710013	7.21	571735	10.58
19	2045-002MSD	478138	6.39	686566	7.21	553458	10.58
20							
21							
22							

IS1 = PENTAFLUOROBENZENE
IS2 = 1,4-DIFLUOROBENZENE
IS3 = CHLOROBENZENE-D5

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

FORM 8

VOLATILE METHANOL PRESERVATION CONTAINER SUMMARY

Sample ID	Client ID	Bottle ID	Date Prepared	Inital Wgt.(g)	Final Wgt.(g)	Sample Wgt.(g)	MeOH Lot #	Surrogate Lot #
1840-001	S-11	103310	3/21/01	106.2	115.3	9.1	CA591	LS169
1840-002	S-12	103312	3/21/01	106.4	116.3	9.9	CA591	LS169
1840-004	S-13	103306	3/21/01	106.7	115.4	8.7	CA591	LS169
1840-005	S-14	103299	3/21/01	106.0	115.6	9.6	CA591	LS169
1840-006	S-15	103305	3/21/01	106.1	117.4	11.3	CA591	LS169
1840-007	S-16	103304	3/21/01	106.5	115.5	9.0	CA591	LS169
1840-008	TRIP BLANK	103303	3/21/01	106.0	116.0	10.0	CA591	LS169

Limits : Sample Weight = 8 to 12 grams, * = Outside limits

Comments : _____

_____

_____

Sample weight is reported on a wet weight basis

VOLATILE METHANOL PRESERVATION CONTAINER SUMMARY

Sample ID	Client ID	Bottle ID	Date Prepared	Inital Wgt.(g)	Final Wgt.(g)	Sample Wgt.(g)	MeOH Lot #	Surrogate Lot #
1840-003	S-12A	103300	3/21/01	105.8	117.7	11.8	CA591	LS169

Limits : Sample Weight = 8 to 12 grams, * = Outside limits

Comments : _____

_____

_____

Sample weight is reported on a wet weight basis

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\03-26-01\F9376.D
Acq On : 27 Mar 2001 11:43
Sample : S-11,1840-001,M,0.036g
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01
IS Integration Params: rteint.p
Quant Time: Mar 27 15:02 2001

Vial: 40
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

Quant Results File: FME0316.RES

Quant Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Last Update : Fri Mar 16 14:54:56 2001
Response via : Initial Calibration
DataAcq Meth : VOAF

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	8.79	168	3415273	50.00	UG		0.06
31) 1,4-Difluorobenzene	9.95	114	3313902	50.00	UG		0.04
50) Chlorobenzene-d5	14.83	117	2461261	50.00	UG		0.06
System Monitoring Compounds							
30) 1,2-Dichloroethane-d4	9.26	65	1996491	58.50	UG		0.06
Spiked Amount 50.000	Range 27 - 176		Recovery = 117.00%				
41) Toluene-d8	12.36	98	3686688	60.51	UG		0.07
Spiked Amount 50.000	Range 20 - 158		Recovery = 121.02%				
59) Bromofluorobenzene	16.91	95	2626590	49.35	UG		0.06
Spiked Amount 50.000	Range 28 - 148		Recovery = 98.70%				
Target Compounds							Qvalue
32) Benzene	9.33	78	97251	1.32	UG		100
74) 1,2-Dichlorobenzene	19.76	146	839608	17.66	UG	#	67

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

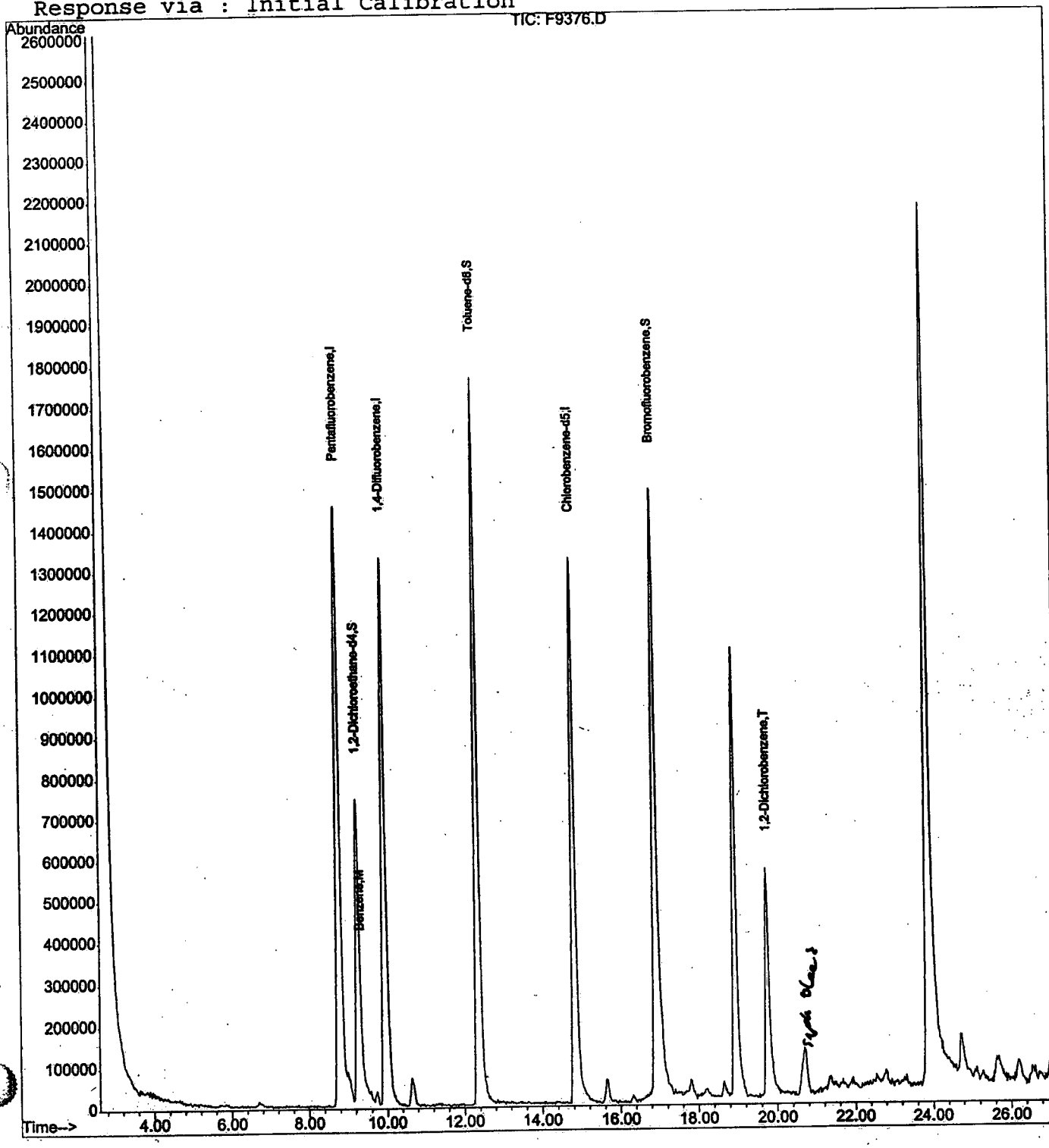
Quantitation Report

Data File : C:\HPCHEM\1\DATA\03-26-01\F9376.D
Acq On : 27 Mar 2001 11:43
Sample : S-11,1840-001,M,0.036g
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01
MS Integration Params: rteint.p
Quant Time: Mar 27 15:02 2001

Vial: 40
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

Quant Results File: FME0316.RES

Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Last Update : Fri Mar 16 14:54:56 2001
Response via : Initial Calibration



000118

679

LSC Area Percent Report

Data File : C:\HPCHEM\1\DATA\03-26-01\F9376.D
Acq On : 27 Mar 2001 11:43
Sample : S-11,1840-001,M,0.036g
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01
ALS Integration Params: LSCINT.P

Vial: 40
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Smoothing : ON
Sampling : 1
Start Thrs: 0.2
Stop Thrs : 0

Filtering: 5
Min Area: 3 % of largest Peak
Max Peaks: 100
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Signal : TIC

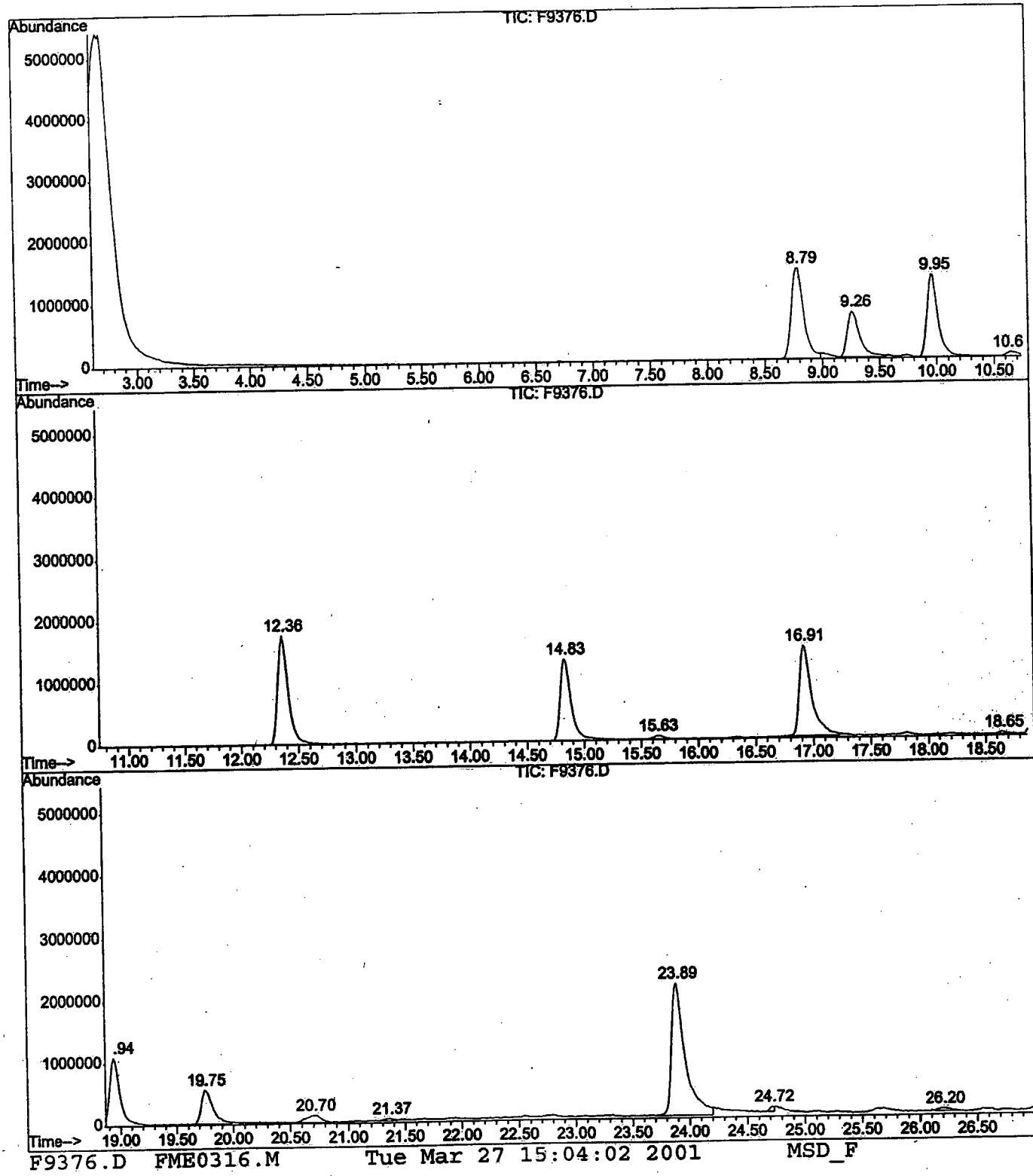
peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	8.790	411	422	435	rBV	1453862	10741042	60.76%	12.278%
2	9.260	446	454	474	rBV2	732181	5510424	31.17%	6.299%
3	9.951	493	501	520	rBV	1323951	8970205	50.75%	10.254%
4	10.641	542	548	558	rBV5	65941	413471	2.34%	0.473%
5	12.359	656	665	683	rBV	1761877	11211374	63.42%	12.815%
6	14.827	826	833	858	rBV	1323630	8887404	50.28%	10.159%
7	15.635	880	888	901	rBV5	59414	398893	2.26%	0.456%
8	16.912	965	975	996	rBV	1469529	11094159	62.76%	12.681%
9	18.646	1088	1093	1102	rBV5	38337	203650	1.15%	0.233%
10	18.940	1106	1113	1128	rBV3	1082580	6607285	37.38%	7.553%
11	19.749	1160	1168	1184	rBV3	550223	3933668	22.25%	4.496%
12	20.704	1219	1233	1243	rBV3	116810	1080800	6.11%	1.235%
13	21.365	1271	1278	1282	rBV7	34329	213413	1.21%	0.244%
14	23.893	1437	1450	1471	rBV	2142593	17676929	100.00%	20.206%
15	24.717	1502	1506	1507	rBV4	84747	229706	1.30%	0.263%
16	26.202	1602	1607	1614	rBV8	44874	311601	1.76%	0.356%

Sum of corrected areas: 87484024

F9376.D FME0316.M Tue Mar 27 15:04:02 2001 MSD_F

LSC Report - Integrated Chromatogram

File : C:\HPCHEM\1\DATA\03-26-01\F9376.D
Operator : GREGG
Acquired : 27 Mar 2001 11:43 using AcqMethod VOAF
Instrument : 5970 - In
Sample Name: S-11,1840-001,M,0.036g
Misc Info : ENVTACT/444_ORBIS,03/23/01,03/26/01
Vial Number: 40
Quant File :FME0316.RES (RTE Integrator)



F9376.D FME0316.M Tue Mar 27 15:04:02 2001 MSD_F

000120

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-26-01\F9376.D
Acq On : 27 Mar 2001 11:43
Sample : S-11,1840-001,M,0.036g
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01
MS Integration Params: LSCINT.P

Vial: 40
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

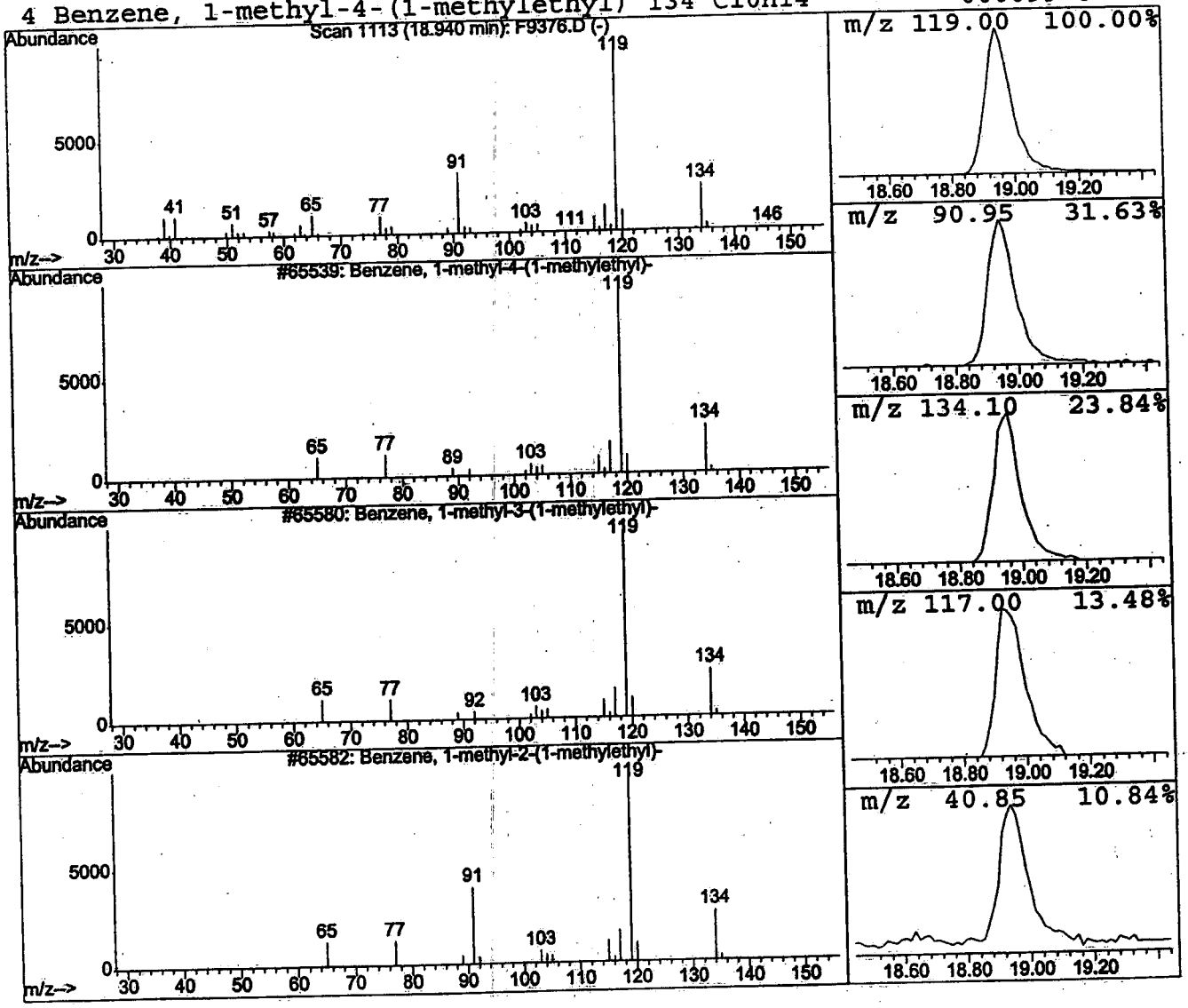
Quant Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Library : C:\DATABASE\NBS75K.L

****

Peak Number 1 Substituted benzene Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
18.94	37.17 UG	6607290	Chlorobenzene-d5	14.83

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-methyl-4-(1-methylethyl)	134	C10H14	000099-87-6	97
2	Benzene, 1-methyl-3-(1-methylethyl)	134	C10H14	000535-77-3	96
3	Benzene, 1-methyl-2-(1-methylethyl)	134	C10H14	000527-84-4	95
4	Benzene, 1-methyl-4-(1-methylethyl)	134	C10H14	000099-87-6	94



000121

682

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-26-01\F9376.D
Acq On : 27 Mar 2001 11:43
Sample : S-11,1840-001,M,0.036g
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01
MS Integration Params: LSCINT.P

Vial: 40
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

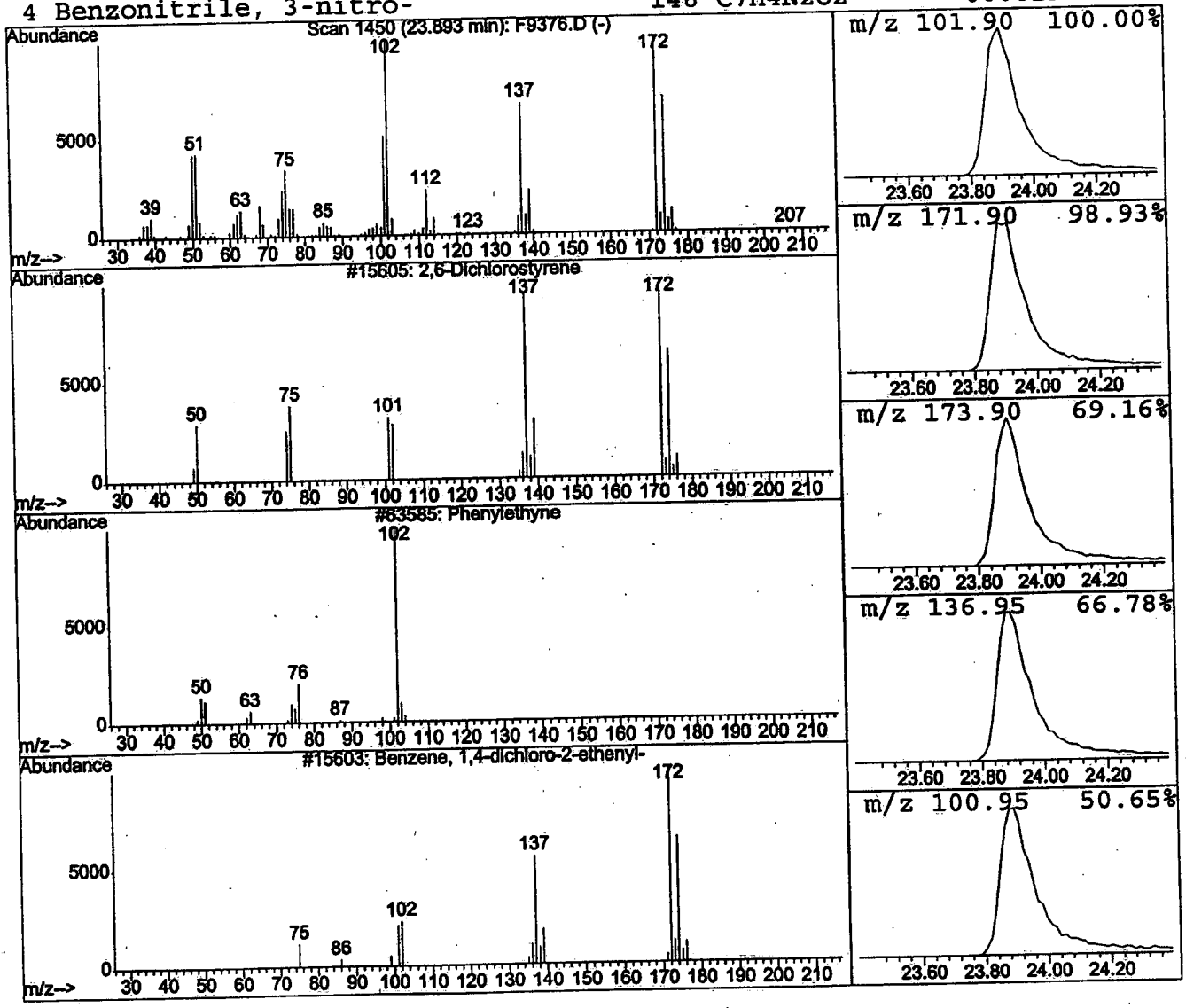
Quant Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Library : C:\DATABASE\NBS75K.L

****

Peak Number 2 Unknown aromatic — Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
23.89	99.45 UG	17676900	Chlorobenzene-d5	14.83

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2,6-Dichlorostyrene	172	C8H6Cl2	028469-92-3	56
2	Phenylethyne	102	C8H6	000536-74-3	49
3	Benzene, 1,4-dichloro-2-ethenyl-	172	C8H6Cl2	001123-84-8	42
4	Benzonitrile, 3-nitro-	148	C7H4N2O2	000619-24-9	32



683

000122

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\03-26-01\F9377.D
Acq On : 27 Mar 2001 12:16
Sample : S-12,1840-002,M,0.04g
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01
MS Integration Params: rteint.p
Quant Time: Mar 27 15:05 2001

Vial: 41
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

Quant Results File: FME0316.RES

Quant Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Last Update : Fri Mar 16 14:54:56 2001
Response via : Initial Calibration
DataAcq Meth : VOAF

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	8.79	168	3512856	50.00	UG	0.06
31) 1,4-Difluorobenzene	9.97	114	3400551	50.00	UG	0.06
50) Chlorobenzene-d5	14.83	117	2453729	50.00	UG	0.07
System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	9.27	65	2042568	58.19	UG	0.08
Spiked Amount 50.000	Range 27 - 176		Recovery = 116.38%			
41) Toluene-d8	12.36	98	3618164	57.87	UG	0.07
Spiked Amount 50.000	Range 20 - 158		Recovery = 115.74%			
59) Bromofluorobenzene	16.91	95	2548443	48.03	UG	0.06
Spiked Amount 50.000	Range 28 - 148		Recovery = 96.06%			
Target Compounds						Qvalue
32) Benzene	9.33	78	11583730	153.26	UG	100
42) Toluene	12.46	92	566616	12.09	UG	96

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

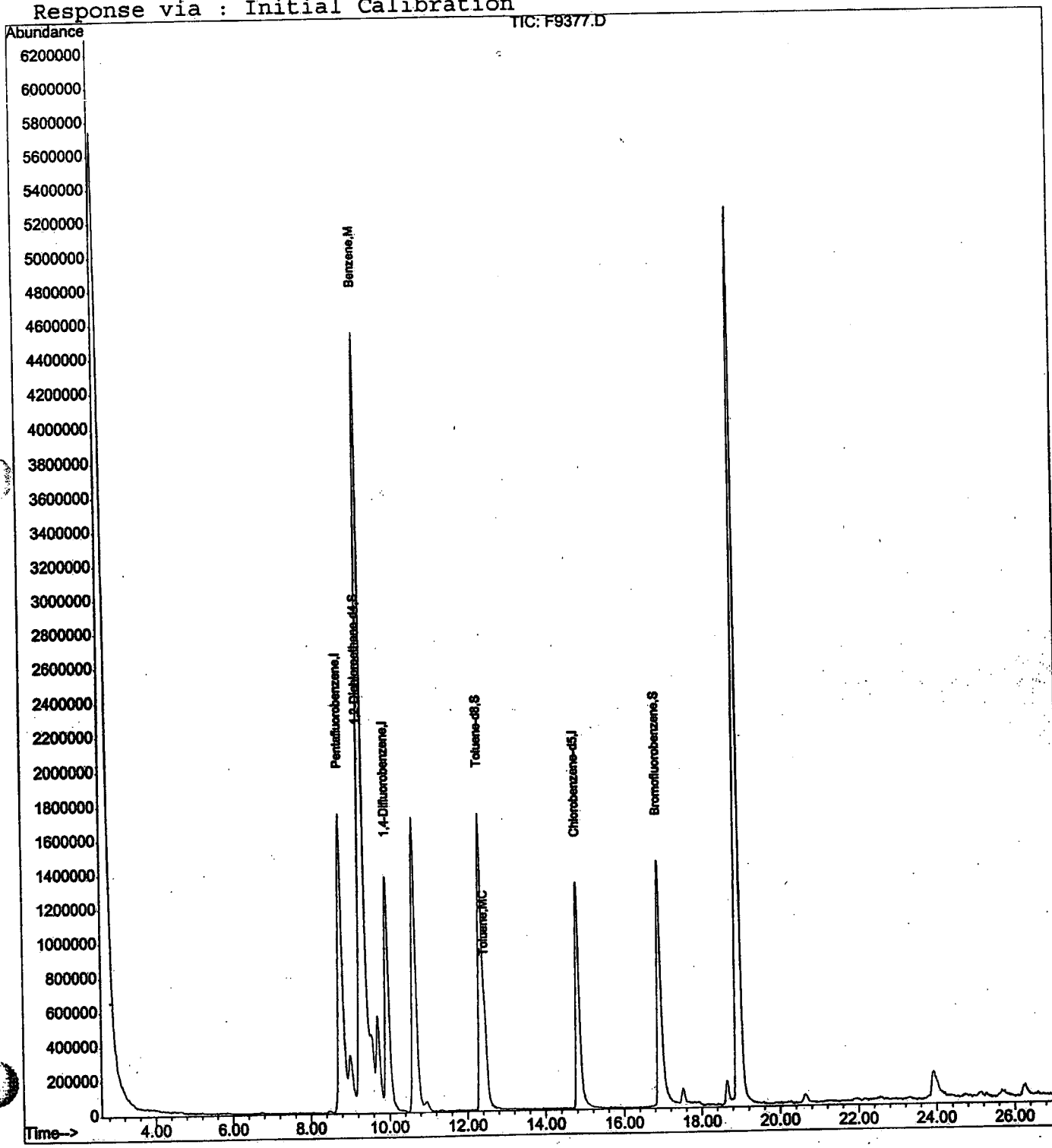
Quantitation Report

Data File : C:\HPCHEM\1\DATA\03-26-01\F9377.D
Acq On : 27 Mar 2001 12:16
Sample : S-12,1840-002,M,0.04g
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01
MS Integration Params: rteint.p
Quant Time: Mar 27 15:05 2001

Vial: 41
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

Quant Results File: FME0316.RES

Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Last Update : Fri Mar 16 14:54:56 2001
Response via : Initial Calibration



685

000124

LSC Area Percent Report

Data File : C:\HPCHEM\1\DATA\03-26-01\F9377.D
Acq On : 27 Mar 2001 12:16
Sample : S-12,1840-002,M,0.04g
[redacted] : ENVTACT/444_ORBIS,03/23/01,03/26/01
Integration Params: LSCINT.P

Vial: 41
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Smoothing : ON
Sampling : 1
Start Thrs: 0.2
Stop Thrs : 0

Filtering: 5
Min Area: 3 % of largest Peak
Max Peaks: 100
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	8.790	409	422	433	rBV	1742106	13835060	39.25%	9.684%
2	9.010	433	437	447	rVB3	239632	1517159	4.30%	1.062%
3	9.334	447	459	472	rBV2	4447362	35252386	100.00%	24.674%
4	9.717	480	485	494	rVB	477164	2912940	8.26%	2.039%
5	9.952	494	501	522	rVB	1360777	9335675	26.48%	6.534%
6	10.657	539	549	564	rBV2	1719713	12375477	35.11%	8.662%
7	12.361	657	665	684	rBV2	1735388	13835983	39.25%	9.684%
[redacted]	14.828	825	833	857	rBV	1320158	8868250	25.16%	6.207%
[redacted]	16.914	968	975	993	rBV	1428195	10174539	28.86%	7.121%
10	17.517	1010	1016	1024	rBV4	88839	478748	1.36%	0.335%
11	18.648	1083	1093	1099	rBV4	143915	850623	2.41%	0.595%
12	18.942	1105	1113	1129	rBV	5207448	31542585	89.48%	22.078%
13	20.646	1215	1229	1237	rBV	50014	404383	1.15%	0.283%
14	23.922	1446	1452	1467	rBV9	145714	1487856	4.22%	1.041%

Sum of corrected areas: 142871664

F9377.D FME0316.M Tue Mar 27 15:06:22 2001 MSD_F

000125

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-26-01\F9377.D
Acq On : 27 Mar 2001 12:16
Sample : S-12,1840-002,M,0.04g
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01
MS Integration Params: LSCINT.P

Vial: 41
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

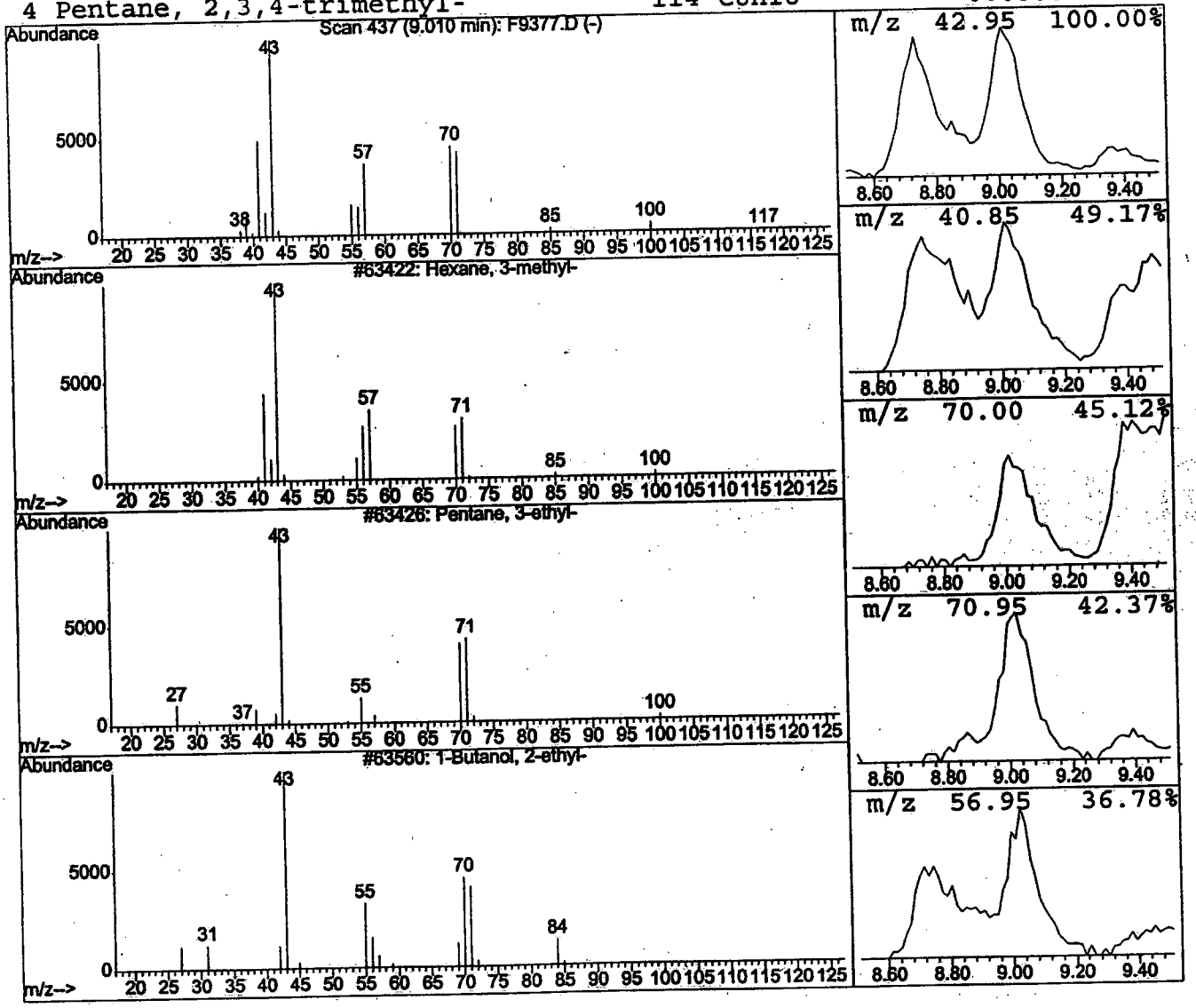
Quant Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Library : C:\DATABASE\NBS75K.L

****

Peak Number 1 Unknown alkane Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.01	5.48 UG	1517160	Pentafluorobenzene	8.79

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Hexane, 3-methyl-	100	C7H16	000589-34-4	64
2	Pentane, 3-ethyl-	100	C7H16	000617-78-7	64
3	1-Butanol, 2-ethyl-	102	C6H14O	000097-95-0	56
4	Pentane, 2,3,4-trimethyl-	114	C8H18	000565-75-3	56



000127

687

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-26-01\F9377.D
Acq On : 27 Mar 2001 12:16
Sample : S-12,1840-002,M,0.04g
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01
MS Integration Params: LSCINT.P

Vial: 41
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

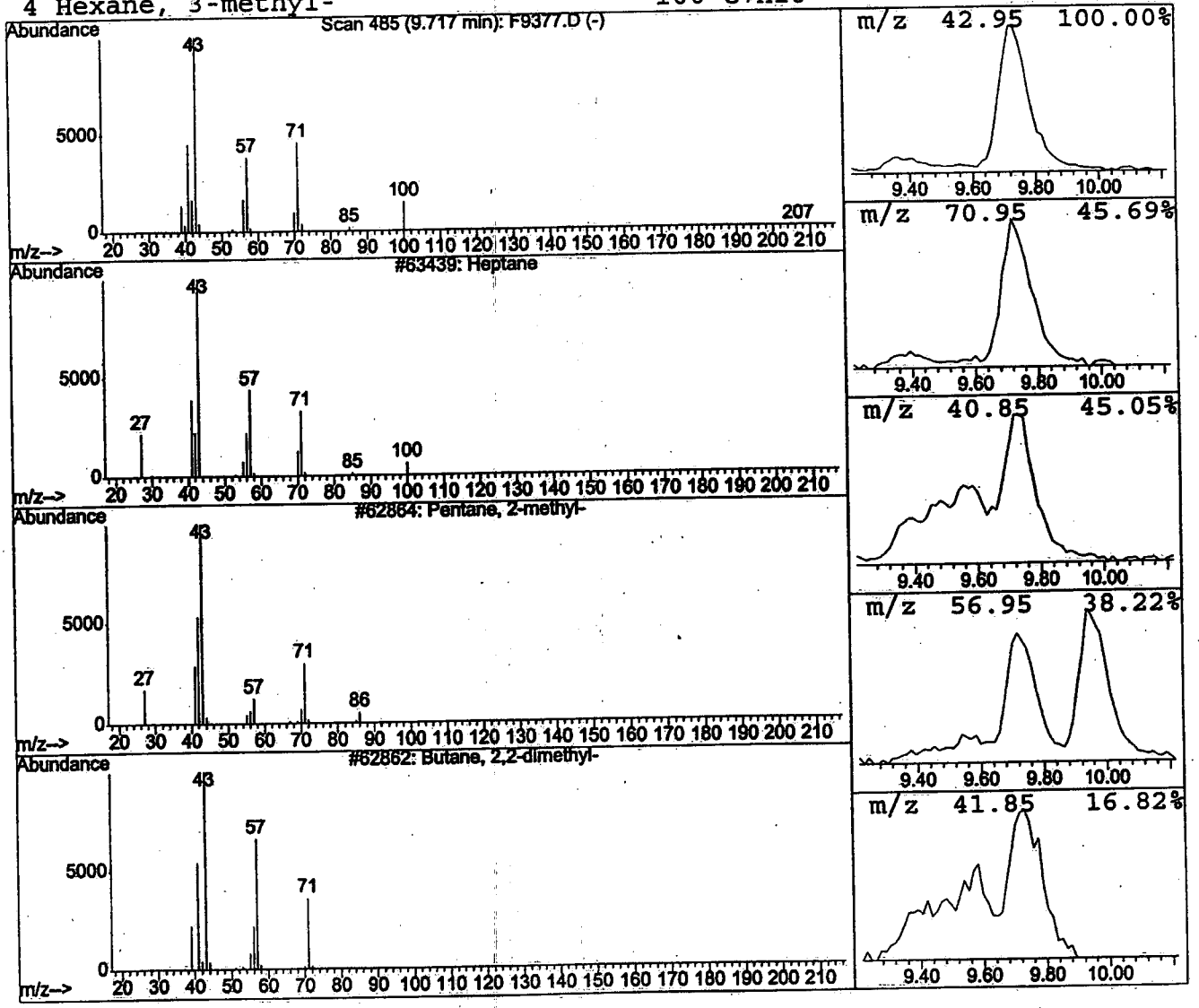
Quant Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Library : C:\DATABASE\NBS75K.L

****

Peak Number 2 Unknown alkane Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.72	15.60 UG	2912940	1,4-Difluorobenzene	9.97

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Heptane	100	C7H16	000142-82-5	53
2	Pentane, 2-methyl-	86	C6H14	000107-83-5	50
3	Butane, 2,2-dimethyl-	86	C6H14	000075-83-2	45
4	Hexane, 3-methyl-	100	C7H16	000589-34-4	45



688

000128

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-26-01\F9377.D
Acq On : 27 Mar 2001 12:16
Sample : S-12,1840-002,M,0.04g
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01
MS Integration Params: LSCINT.P

Vial: 41
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

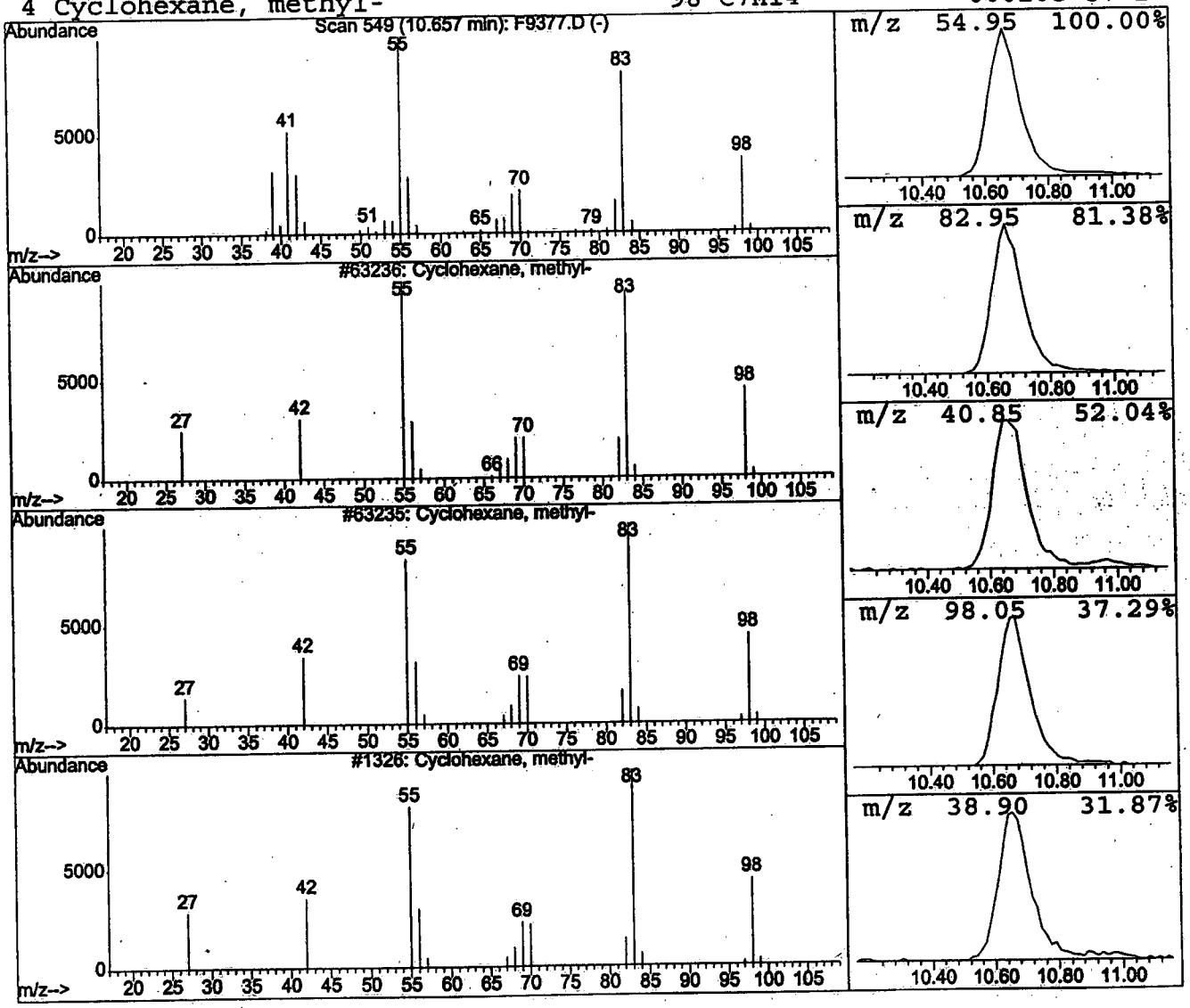
Quant Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Library : C:\DATABASE\NBS75K.L

****

Peak Number 3 Unknown cyclic hydrocarbon Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
10.66	66.28 UG	12375500	1,4-Difluorobenzene	9.97

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexane, methyl-	98	C7H14	000108-87-2	97
2	Cyclohexane, methyl-	98	C7H14	000108-87-2	94
3	Cyclohexane, methyl-	98	C7H14	000108-87-2	94
4	Cyclohexane, methyl-	98	C7H14	000108-87-2	78



689

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-26-01\F9377.D
Acq On : 27 Mar 2001 12:16
Sample : S-12,1840-002,M,0.04g
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01
MS Integration Params: LSCINT.P

Vial: 41
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

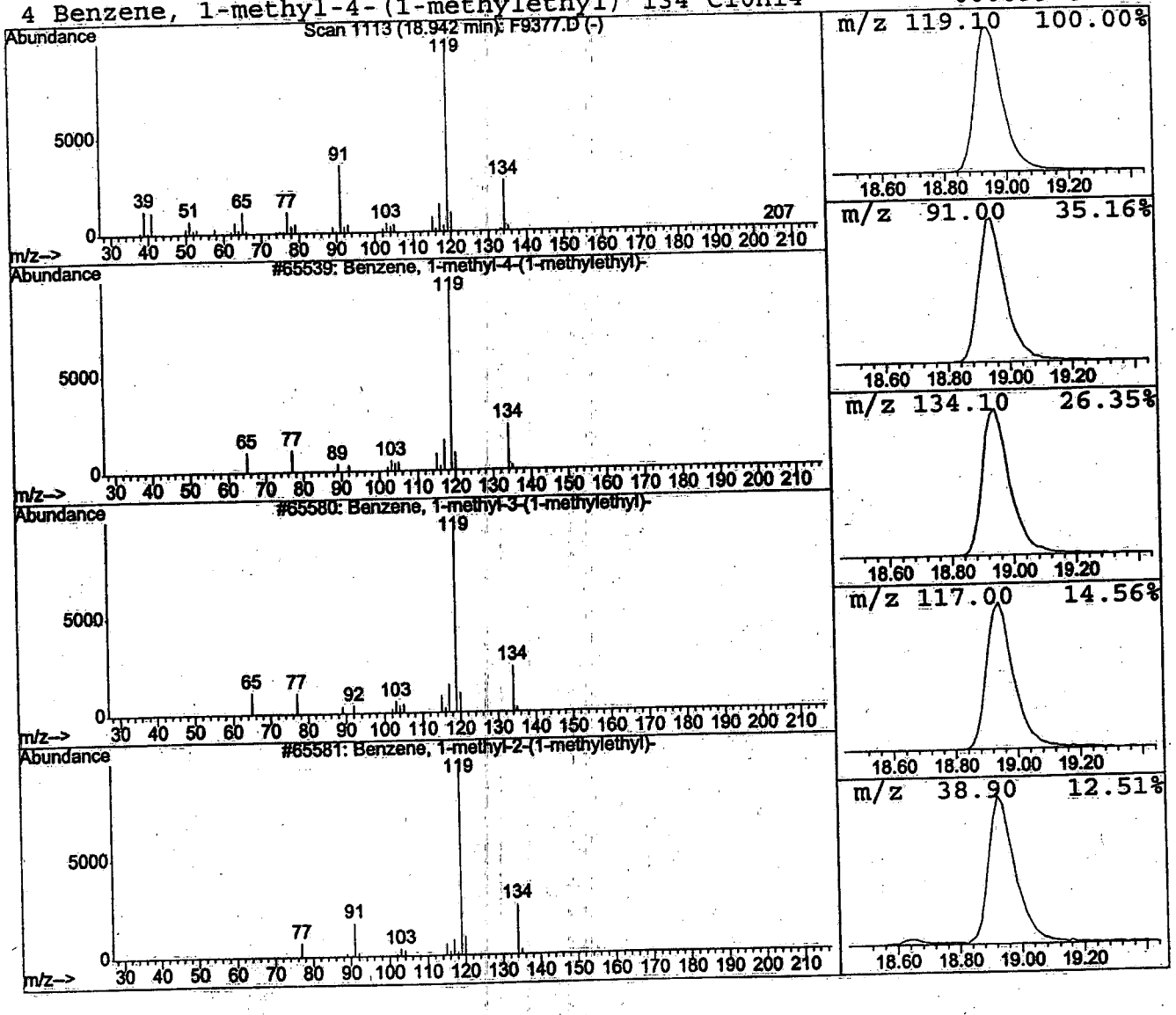
Quant Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Library : C:\DATABASE\NBS75K.L

****

Peak Number 4 Substituted benzene Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
18.94	177.84 UG	31542600	Chlorobenzene-d5	14.83

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-methyl-4-(1-methylethyl)	134	C10H14	000099-87-6	97
2	Benzene, 1-methyl-3-(1-methylethyl)	134	C10H14	000535-77-3	96
3	Benzene, 1-methyl-2-(1-methylethyl)	134	C10H14	000527-84-4	93
4	Benzene, 1-methyl-4-(1-methylethyl)	134	C10H14	000099-87-6	93



690

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-26-01\F9377.D
Acq On : 27 Mar 2001 12:16
Sample : S-12,1840-002,M,0.04g
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01
MS Integration Params: LSCINT.P

Vial: 41
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

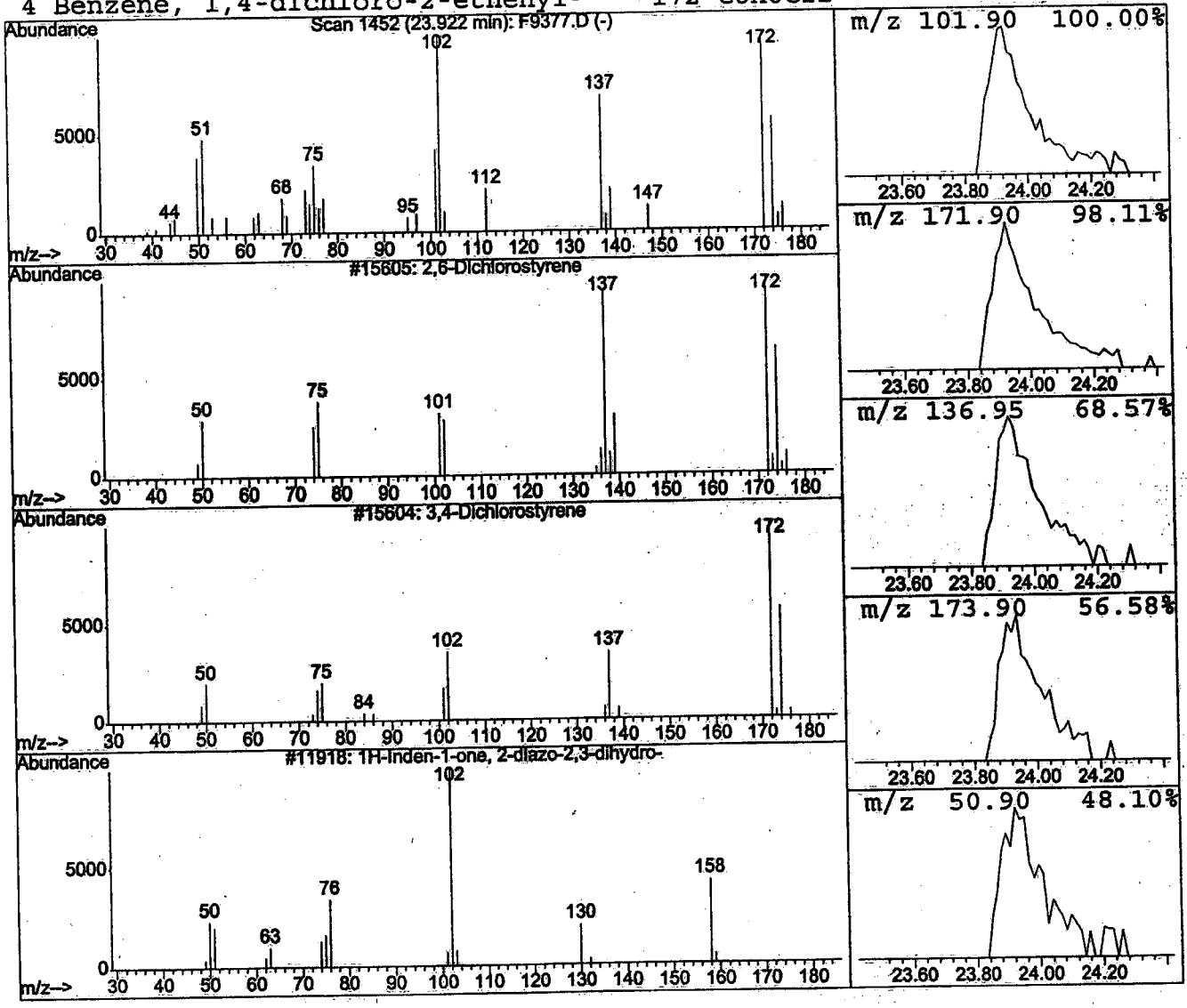
Quant Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Library : C:\DATABASE\NBS75K.L

****

Peak Number 5 Unknown aromatic Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
23.92	8.39 UG	1487860	Chlorobenzene-d5	14.83

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2,6-Dichlorostyrene	172	C8H6Cl2	028469-92-3	70
2	3,4-Dichlorostyrene	172	C8H6Cl2	002039-83-0	43
3	1H-Inden-1-one, 2-diazo-2,3-dihydro	158	C9H6N2O	001775-23-1	32
4	Benzene, 1,4-dichloro-2-ethenyl-	172	C8H6Cl2	001123-84-8	25



691

000131

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\04-06-01\J8722.D
Acq On : 6 Apr 2001 20:05
Sample : S-12A,1840-003,M,0.047g,15.6
Misc : ENVTACT/444_ORBIS,3/23/01,3/26/01,1
IS Integration Params: LSCINT.P
Quant Time: Apr 08 10:26:00 2001

Vial: 10
Operator: XINGFANG WANG
Inst : MSD_J
Multiplr: 1.00
Quant Results File: JME0406.RES

Quant Method : C:\MSDCHEM\1\METHODS\JME0406.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Last Update : Sun Apr 08 10:17:55 2001
Response via : Initial Calibration
DataAcq Meth : JME0406

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.39	168	486585	50.00	UG	0.00
31) 1,4-Difluorobenzene	7.22	114	702070	50.00	UG	0.00
50) Chlorobenzene-d5	10.58	117	557167	50.00	UG	0.00
System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	6.73	65	270434	44.94	UG	0.00
Spiked Amount 50.000	Range 43 - 133		Recovery = 89.88%			
41) Toluene-d8	8.89	98	699948	49.20	UG	0.00
Spiked Amount 50.000	Range 39 - 137		Recovery = 98.40%			
59) Bromofluorobenzene	11.98	95	256212	35.90	UG	0.00
Spiked Amount 50.000	Range 23 - 145		Recovery = 71.80%			
Target Compounds						Qvalue
32) Benzene	6.80	78	1959899	128.00	UG	# 100
42) Toluene	8.97	92	310312	33.13	UG	# 100

(#) = qualifier out of range (m) = manual integration
J8722.D JME0406.M Sun Apr 08 10:26:52 2001 MSD_J

000132

692

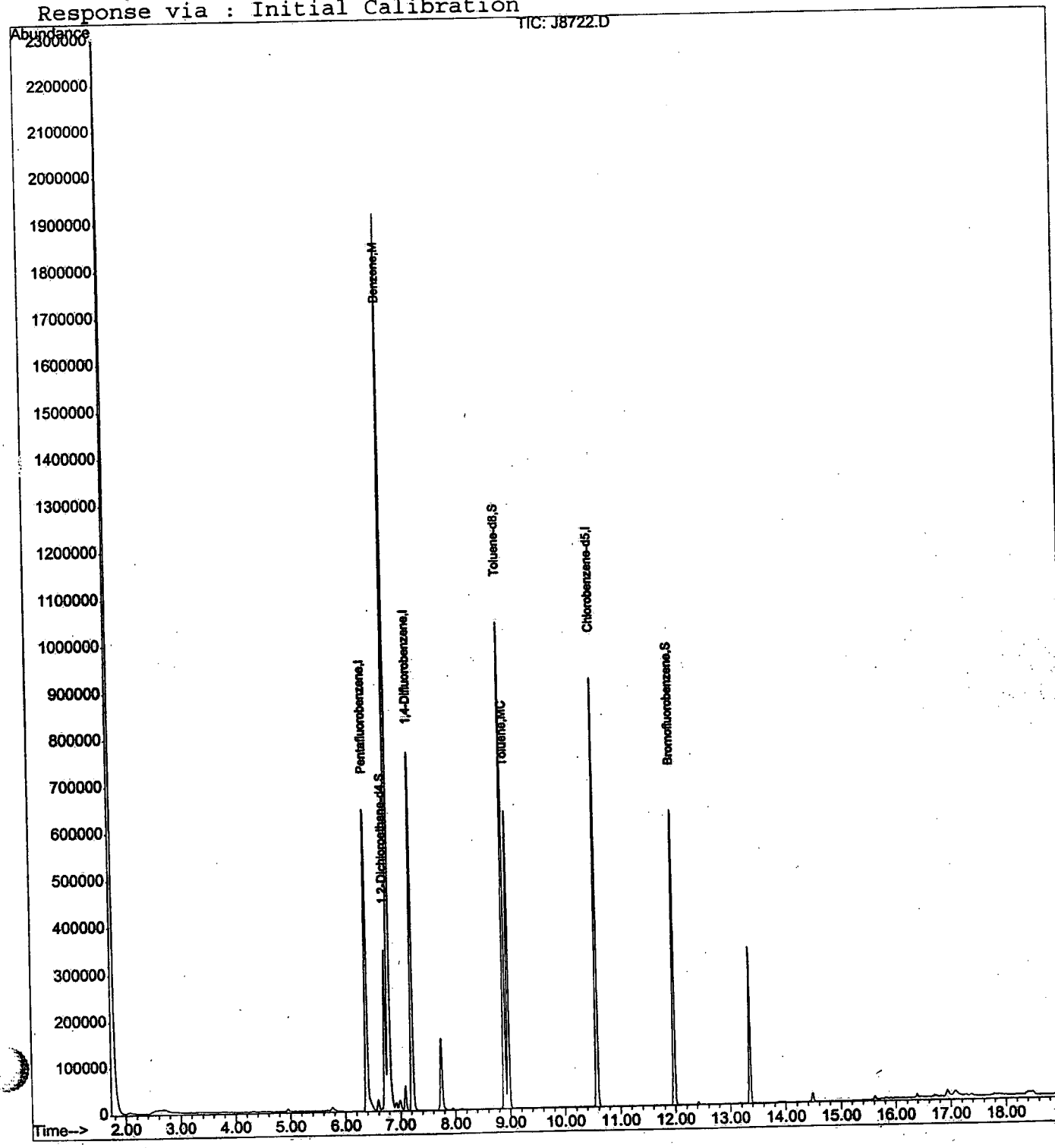
Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\04-06-01\J8722.D
Acq On : 6 Apr 2001 20:05
Sample : S-12A,1840-003,M,0.047g,15.6
Misc : ENVTACT/444_ORBIS,3/23/01,3/26/01,1
MS Integration Params: LSCINT.P
Quant Time: Apr 8 10:26 2001

Vial: 10
Operator: XINGFANG WAN
Inst : MSD_J
Multiplr: 1.00

Quant Results File: JME0406.RES

Method : C:\MSDCHEM\1\METHODS\JME0406.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Last Update : Sun Apr 08 10:17:55 2001
Response via : Initial Calibration



000133

693

LSC Area Percent Report

Data File : C:\MSDCHEM\1\DATA\04-06-01\J8722.D
Acq On : 6 Apr 2001 20:05
Sample : S-12A,1840-003,M,0.047g,15.6
Lsc : ENVTACT/444_ORBIS,3/23/01,3/26/01,1
S Integration Params: Lscint.p

Vial: 10
Operator: XINGFANG WANG
Inst : MSD_J
Multiplr: 1.00

Method : C:\MSDCHEM\1\METHODS\JME0406.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Smoothing : ON
Sampling : 1
Start Thrs: 0.2
Stop Thrs : 0

Filtering: 5
Min Area: 1 % of largest Peak
Max Peaks: 100
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Signal : TIC

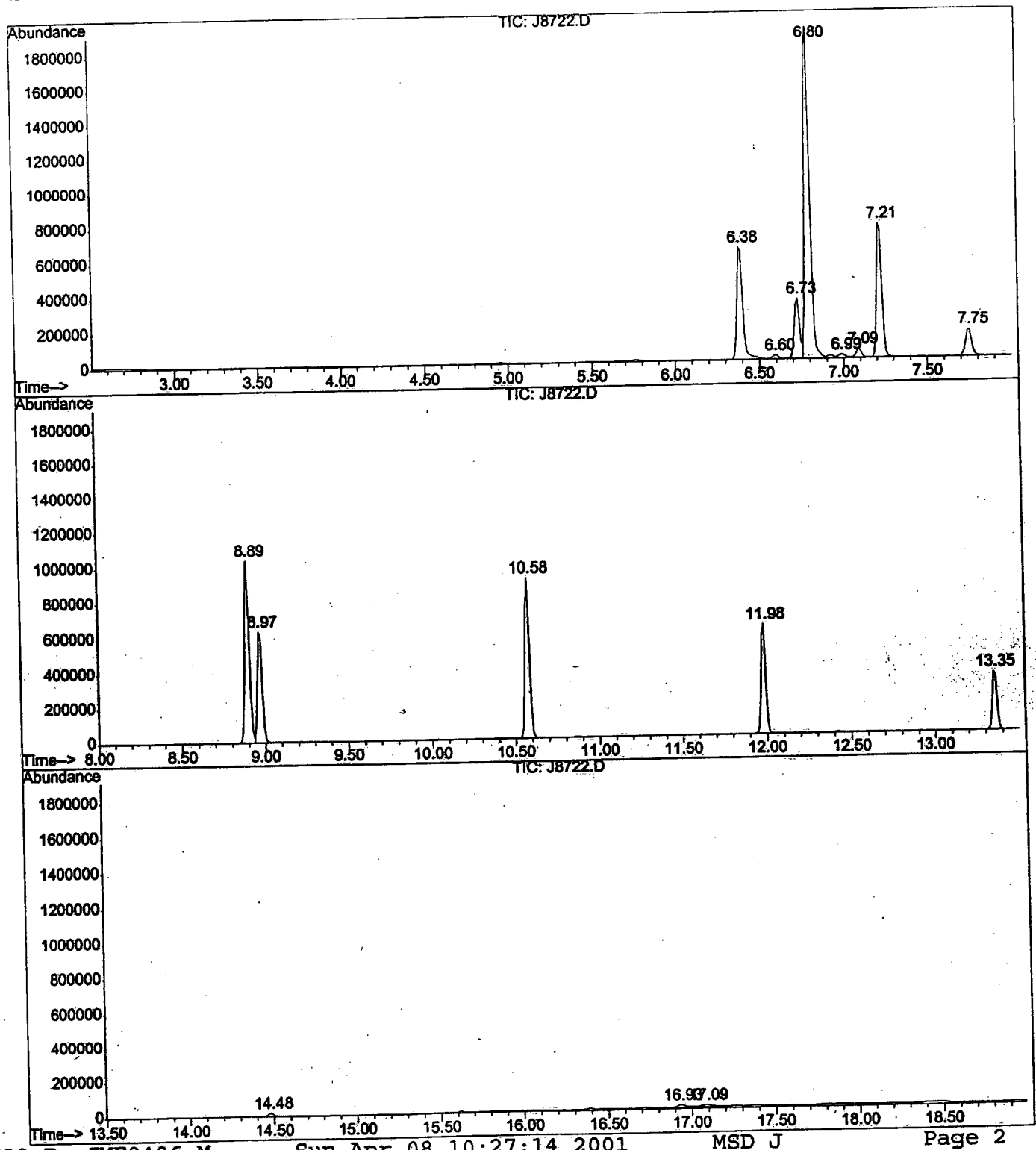
peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	6.383	454	460	476	rBV	645031	1544325	35.79%	9.765%
2	6.596	476	481	485	rVV	24102	59756	1.39%	0.378%
3	6.727	485	494	497	rVV	346094	789361	18.30%	4.991%
4	6.798	497	501	510	rVV	1916214	4314400	100.00%	27.281%
5	6.991	516	520	525	rVV	21632	62253	1.44%	0.394%
6	7.092	525	530	537	rVB	53019	115806	2.68%	0.732%
7	7.213	537	542	553	rBV	766154	1634085	37.88%	10.333%
8	7.750	585	595	611	rBV	155302	401507	9.31%	2.539%
9	8.894	698	708	712	rBV	1041714	1991640	46.16%	12.594%
10	8.965	712	715	728	rVB	636621	1263155	29.28%	7.987%
11	10.575	866	874	885	rBV	918470	1707575	39.58%	10.797%
12	11.983	1005	1013	1021	rBV	631056	1172960	27.19%	7.417%
13	13.350	1141	1148	1154	rBV	337007	598527	13.87%	3.785%
14	14.484	1253	1260	1268	rBV	19138	43677	1.01%	0.276%
15	16.935	1496	1502	1509	rBV2	14662	57353	1.33%	0.363%
16	17.086	1511	1517	1530	rVB6	11416	58283	1.35%	0.369%

Sum of corrected areas: 15814663

694

LSC Report - Integrated Chromatogram

File : C:\MSDCHEM\1\DATA\04-06-01\J8722.D
Operator : XINGFANG WANG
Acquired : 6 Apr 2001 20:05 using AcqMethod JME0406
Instrument : MSD_J
Sample Name: S-12A,1840-003,M,0.047g,15.6
Misc Info : ENVTACT/444_ORBIS,3/23/01,3/26/01,1
Vial Number: 10
Quant File :JME0406.RES (RTE Integrator)



695

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\04-06-01\J8722.D
Acq On : 6 Apr 2001 20:05
Sample : S-12A,1840-003,M,0.047g,15.6
Misc : ENVTACT/444_ORBIS,3/23/01,3/26/01,1
S Integration Params: Lscint.p

Vial: 10
Operator: XINGFANG WANG
Inst : MSD_J
Multiplr: 1.00

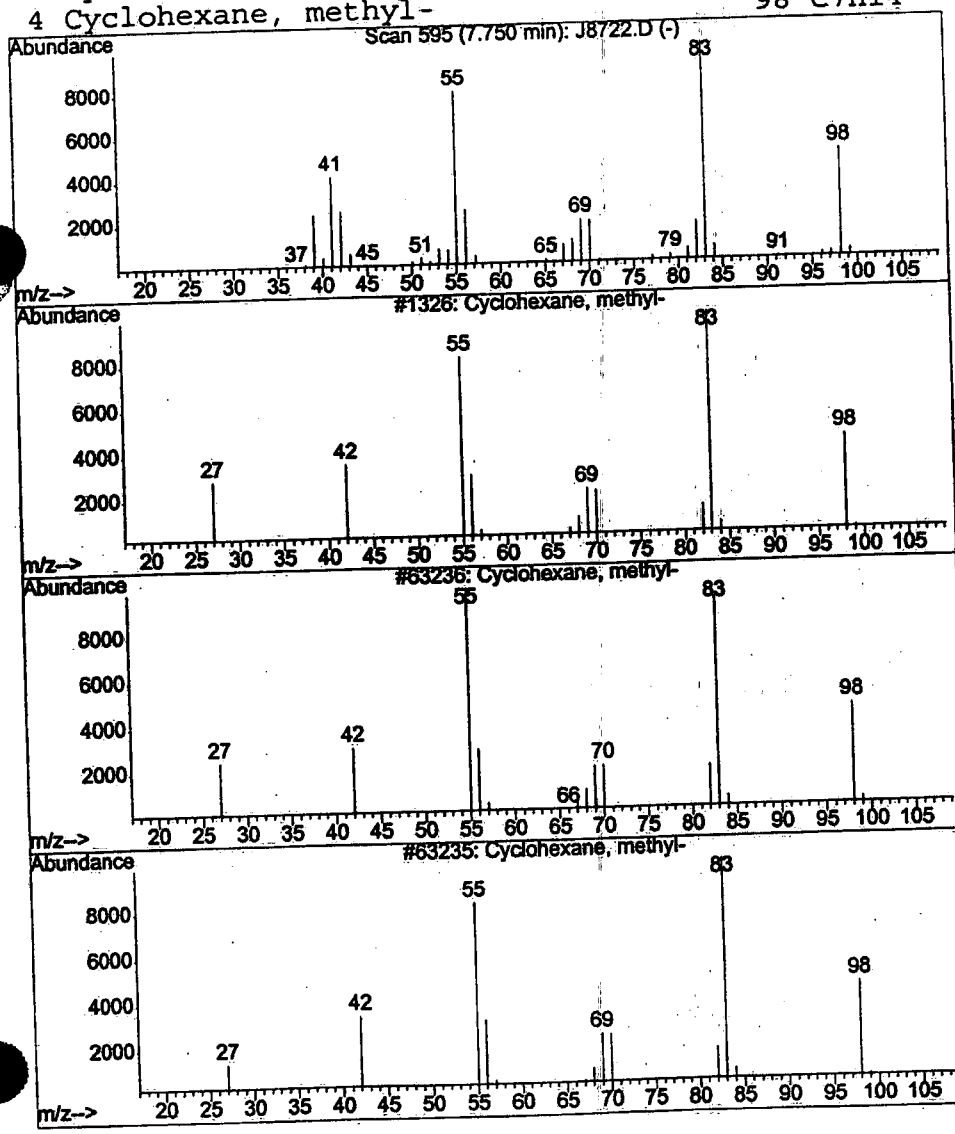
Quant Method : C:\MSDCHEM\1\METHODS\JME0406.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Library : C:\DATABASE\NBS75K.L

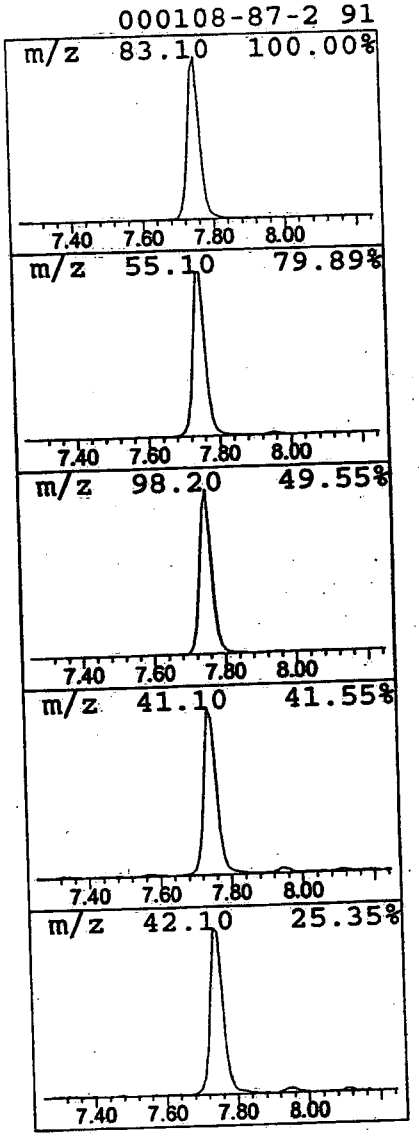
****

Peak Number 1 Unknown cyclic hydrocarbon Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
7.75	12.29 UG	401507	1,4-Difluorobenzene	7.22

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexane, methyl-	98	C7H14	000108-87-2	96
2	Cyclohexane, methyl-	98	C7H14	000108-87-2	96
3	Cyclohexane, methyl-	98	C7H14	000108-87-2	94
4	Cyclohexane, methyl-	98	C7H14	000108-87-2	91





696

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\04-06-01\J8722.D
Acq On : 6 Apr 2001 20:05
Sample : S-12A,1840-003,M,0.047g,15.6
Misc : ENVTACT/444_ORBIS,3/23/01,3/26/01,1
MS Integration Params: Lscint.p

Vial: 10
Operator: XINGFANG WANG
Inst : MSD_8
Multiplr: 1.00

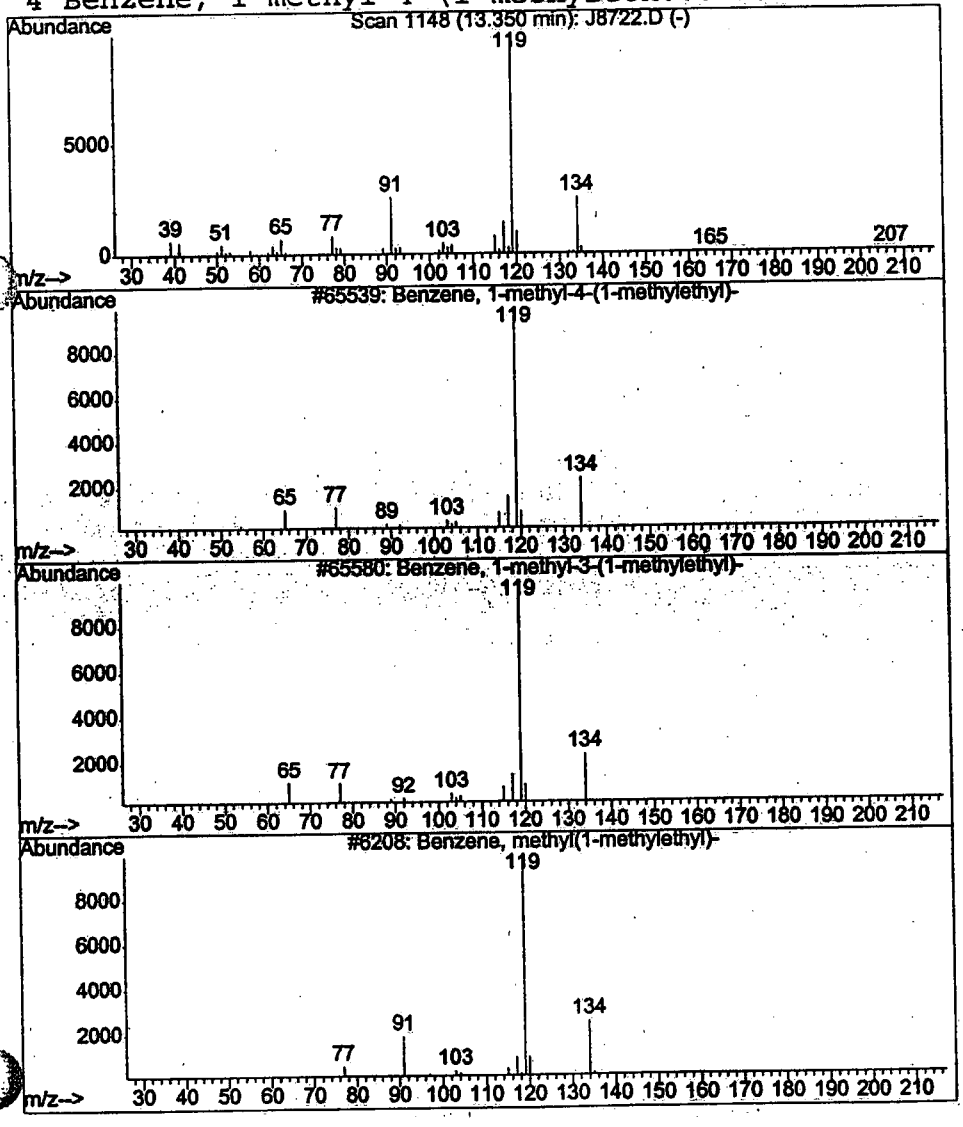
Quant Method : C:\MSDCHEM\1\METHODS\JME0406.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Library : C:\DATABASE\NBS75K.L

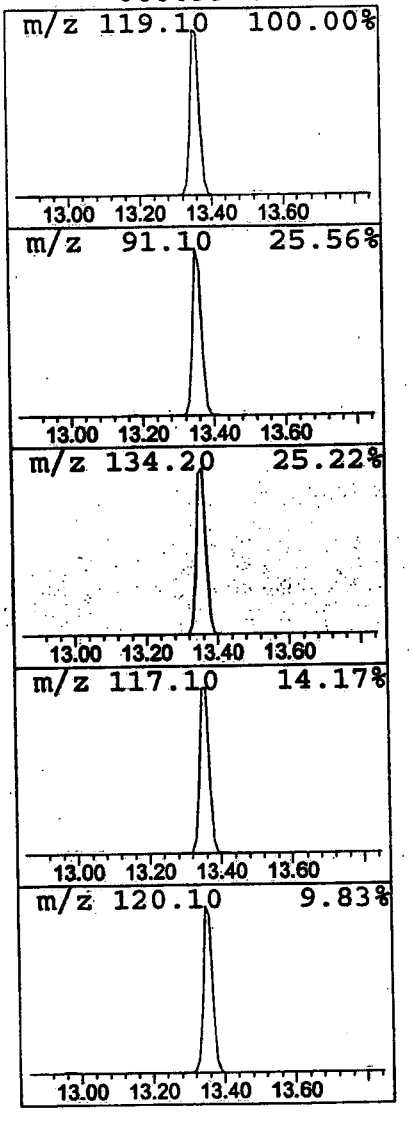
****

Peak Number 2 Substituted benzene Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
13.35	17.53 UG	598527	Chlorobenzene-d5	10.58

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-methyl-4-(1-methyleth...	134	C10H14	000099-87-6	95
2	Benzene, 1-methyl-3-(1-methyleth...	134	C10H14	000535-77-3	95
3	Benzene, methyl(1-methylethyl)-	134	C10H14	025155-15-1	94
4	Benzene, 1-methyl-4-(1-methyleth...	134	C10H14	000099-87-6	94





305137

697

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\03-26-01\F9378.D
Acq On : 27 Mar 2001 12:48
Sample : S-13,1840-004,M,0.035g
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01
IS Integration Params: rteint.p
Quant Time: Mar 28 9:06 2001

Vial: 42
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

Quant Results File: FME0316.RES

Quant Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Last Update : Fri Mar 16 14:54:56 2001
Response via : Initial Calibration
DataAcq Meth : VOAF

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	8.79	168	3478051	50.00	UG		0.06
31) 1,4-Difluorobenzene	9.97	114	3273864	50.00	UG		0.06
50) Chlorobenzene-d5	14.83	117	2409442	50.00	UG		0.07
System Monitoring Compounds							
30) 1,2-Dichloroethane-d4	9.26	65	1841938	53.00	UG		0.06
Spiked Amount 50.000	Range 27 - 176		Recovery = 106.00%				
41) Toluene-d8	12.36	98	3339150	55.48	UG		0.07
Spiked Amount 50.000	Range 20 - 158		Recovery = 110.96%				
59) Bromofluorobenzene	16.91	95	2167581	41.60	UG		0.06
Spiked Amount 50.000	Range 28 - 148		Recovery = 83.20%				
Target Compounds							Qvalue
25) Chloroform	8.47	83	4347674	79.39	UG		99
32) Benzene	9.34	78	32268993	443.46	UG		100
42) Toluene	12.47	92	60826515	1348.10	UG	#	23
51) Chlorobenzene	14.89	112	181711	2.86	UG	#	100
53) Ethylbenzene	15.07	91	439936	4.45	UG		100
54) m,p-Xylene	15.25	106	345393	9.76	UG		93
70) 1,3-Dichlorobenzene	18.91	146	568364	12.30	UG	#	67
72) 1,4-Dichlorobenzene	19.06	146	6216003	116.16	UG		100
74) 1,2-Dichlorobenzene	19.76	146	55728520	1197.16	UG	#	95

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

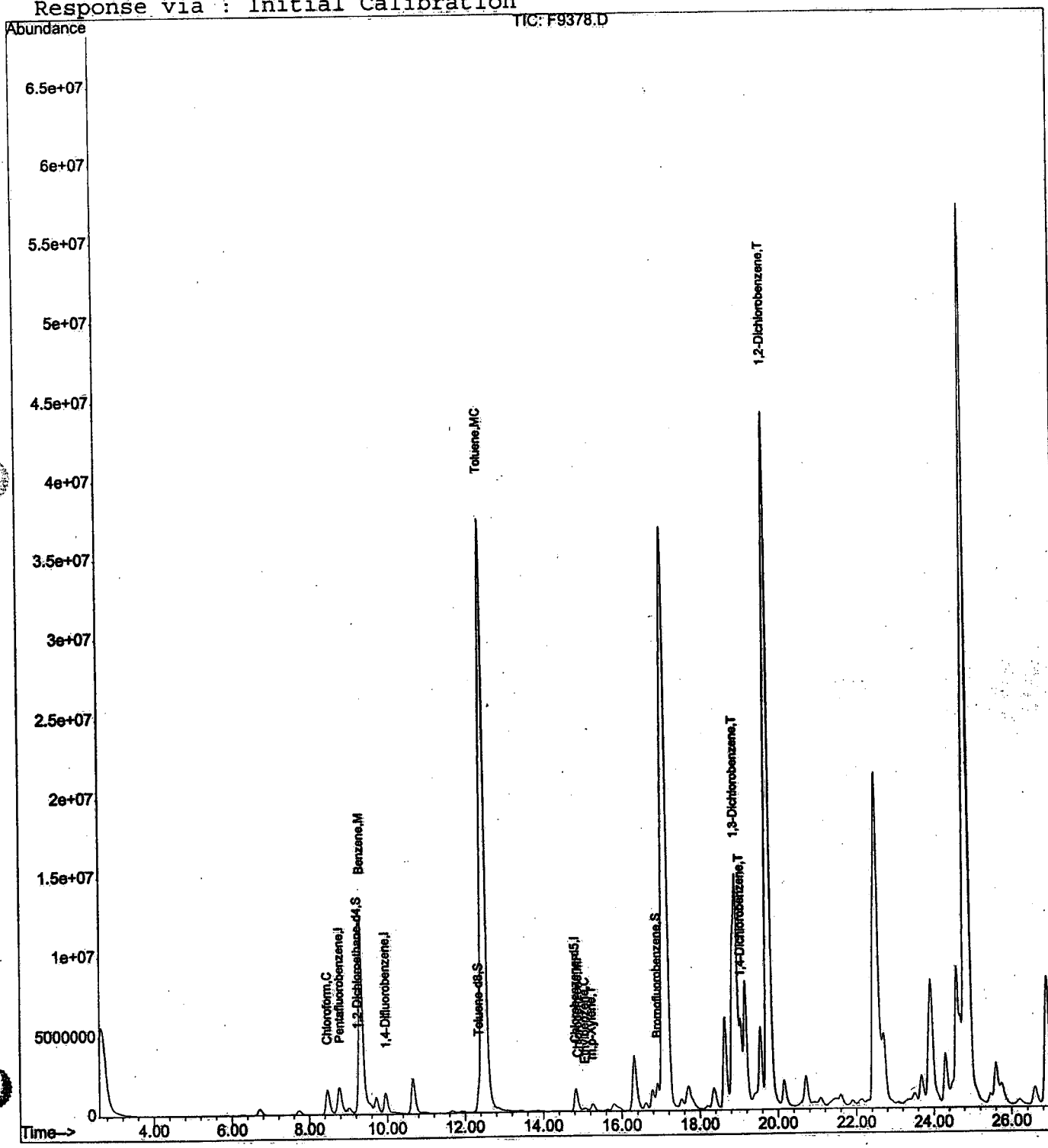
Quantitation Report

Data File : C:\HPCHEM\1\DATA\03-26-01\F9378.D
Acq On : 27 Mar 2001 12:48
Sample : S-13,1840-004,M,0.035g
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01
MS Integration Params: rteint.p
Quant Time: Mar 28 9:06 2001

Vial: 42
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

Quant Results File: FME0316.RES

Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Last Update : Fri Mar 16 14:54:56 2001
Response via : Initial Calibration



699

LSC Area Percent Report

Data File : C:\HPCHEM\1\DATA\03-26-01\F9378.D
Acq On : 27 Mar 2001 12:48
Sample : S-13,1840-004,M,0.035g
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01
ALS Integration Params: LSCINT.P

Vial: 42
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Smoothing : ON
Sampling : 1
Start Thrs: 0.2
Stop Thrs : 0

Filtering: 5
Min Area: 3 % of largest Peak
Max Peaks: 100
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	8.467	389	400	412	rBV	1612197	11395197	2.52%	0.498%
2	8.776	412	421	431	rVV3	1717072	13682230	3.03%	0.598%
3	9.335	447	459	480	rVV	12225287	91708882	20.32%	4.011%
4	9.718	480	485	495	rVV	1013992	6614602	1.47%	0.289%
5	9.953	495	501	513	rVB	1271477	7960118	1.76%	0.348%
6	10.659	539	549	565	rBV2	2259820	16600806	3.68%	0.726%
7	12.467	653	672	696	rBV2	37463173	306858265	67.98%	13.422%
8	14.835	825	833	843	rBV	1463353	9530243	2.11%	0.417%
9	15.805	892	899	917	rVB5	433654	4564597	1.01%	0.200%
10	16.320	925	934	948	rBV	3521172	25225300	5.59%	1.103%
11	16.777	959	965	970	rBV	1166225	7037228	1.56%	0.308%
12	17.101	977	987	1010	rVB2	36607038	332590414	73.68%	14.548%
13	17.706	1021	1028	1051	rVB5	1517680	15124229	3.35%	0.662%
14	18.368	1065	1073	1084	rVB3	1278533	9202255	2.04%	0.403%
15	18.648	1084	1092	1099	rBV	5756148	34556702	7.66%	1.512%
16	18.929	1099	1111	1117	rBV3	13878928	126894236	28.11%	5.550%
17	19.165	1123	1127	1139	rVB	7558893	42692308	9.46%	1.867%
18	19.564	1139	1154	1159	rVV2	4699680	28537873	6.32%	1.248%
19	19.756	1159	1167	1187	rVB	43704125	305376112	67.65%	13.357%
20	20.154	1188	1194	1213	rVB	1720669	11563956	2.56%	0.506%
21	20.714	1215	1232	1241	rBV2	1961960	14472534	3.21%	0.633%
22	22.528	1342	1355	1364	rBV4	20770009	187589531	41.56%	8.205%
23	23.694	1427	1434	1441	rVV4	1636803	10617434	2.35%	0.464%
24	23.931	1441	1450	1468	rVB2	7723246	63923212	14.16%	2.796%
25	24.315	1469	1476	1483	rBV	3064810	19313629	4.28%	0.845%
26	24.610	1484	1496	1501	rVV	8087438	59254714	13.13%	2.592%
27	24.862	1505	1513	1546	rVB2	56730217	451408694	100.00%	19.745%
28	25.615	1557	1564	1570	rBV2	2118586	13393820	2.97%	0.586%
29	26.603	1620	1631	1641	rBV3	1152060	9219344	2.04%	0.403%
30	26.898	1641	1651	1654	rBV	7984684	49271204	10.91%	2.155%

000140

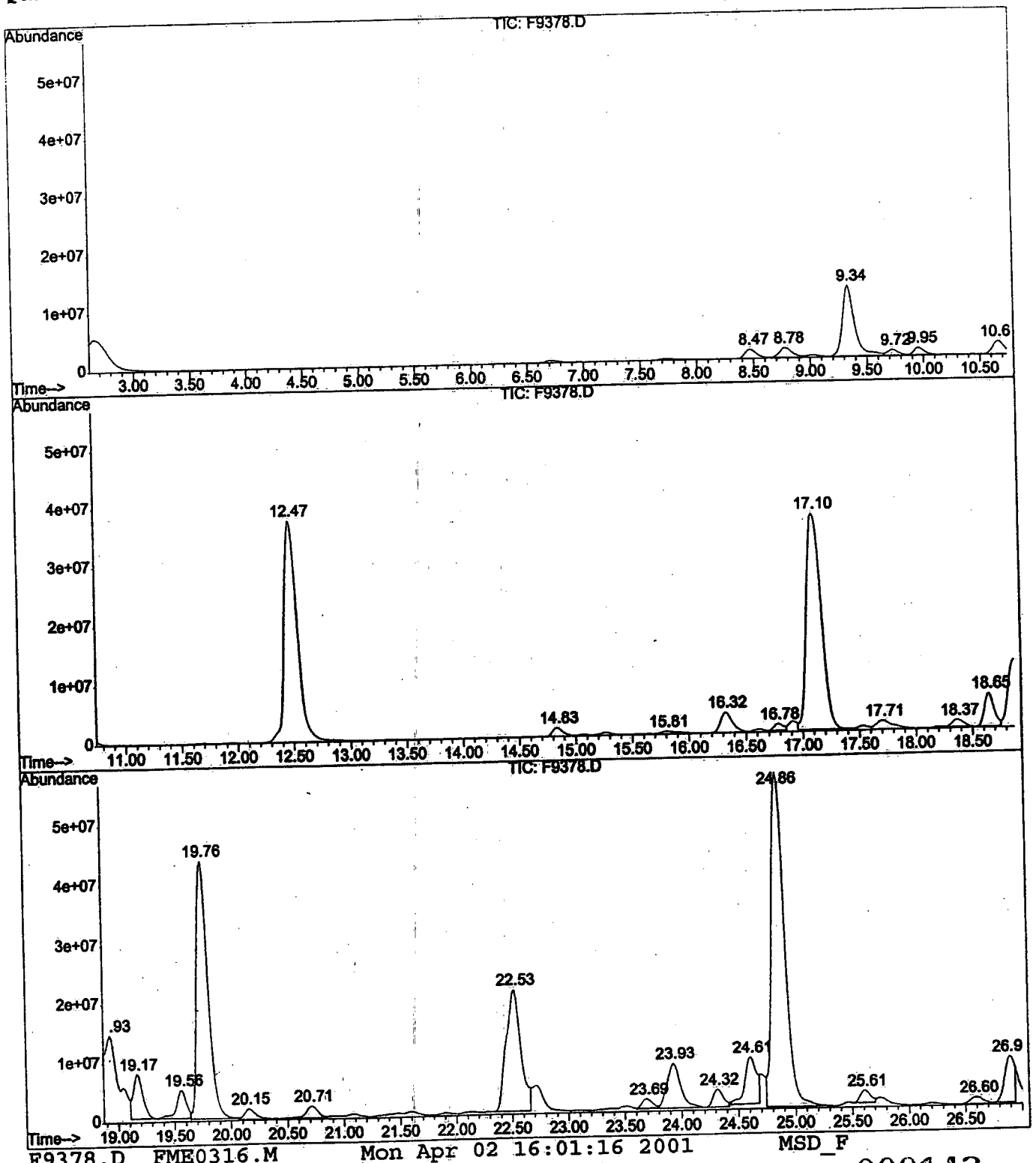
700

Sum of corrected areas: 2286179669

F9378.D FME0316.M Mon Apr 02 16:01:15 2001 MSD_F

LSC Report - Integrated Chromatogram

File : C:\HPCHEM\1\DATA\03-26-01\F9378.D
Operator : GREGG
Acquired : 27 Mar 2001 12:48 using AcqMethod VOAF
Instrument : 5970 - In
Sample Name: S-13,1840-004,M,0.035g
Misc Info : ENVTACT/444_ORBIS,03/23/01,03/26/01
Vial Number: 42
Quant File :FME0316.RES (RTE Integrator)



F9378.D FME0316.M Mon Apr 02 16:01:16 2001 MSD_F

000142

702

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-26-01\F9378.D
Acq On : 27 Mar 2001 12:48
Sample : S-13,1840-004,M,0.035g
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01
MS Integration Params: LSCINT.P

Vial: 42
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

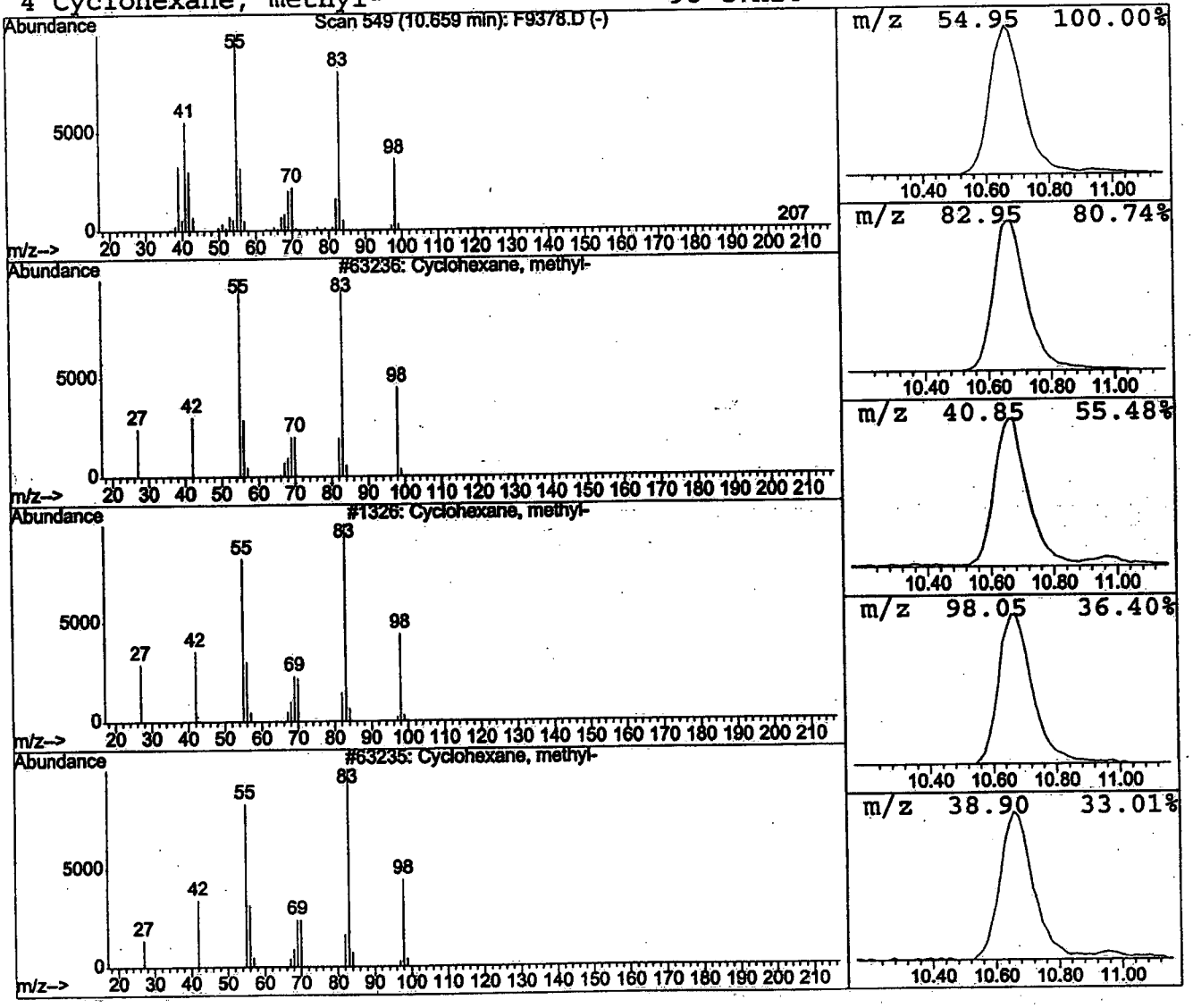
Quant Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Library : C:\DATABASE\NBS75K.L

****

Peak Number 1 Unknown cyclic hydrocarbon Concentration Rank 11

R.T.	EstConc	Area	Relative to ISTD	R.T.
10.66	104.28 UG	16600800	1,4-Difluorobenzene	9.97

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexane, methyl-	98	C7H14	000108-87-2	96
2	Cyclohexane, methyl-	98	C7H14	000108-87-2	95
3	Cyclohexane, methyl-	98	C7H14	000108-87-2	94
4	Cyclohexane, methyl-	98	C7H14	000108-87-2	78



Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-26-01\F9378.D
Acq On : 27 Mar 2001 12:48
Sample : S-13,1840-004,M,0.035g
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01
MS Integration Params: LSCINT.P

Vial: 42
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

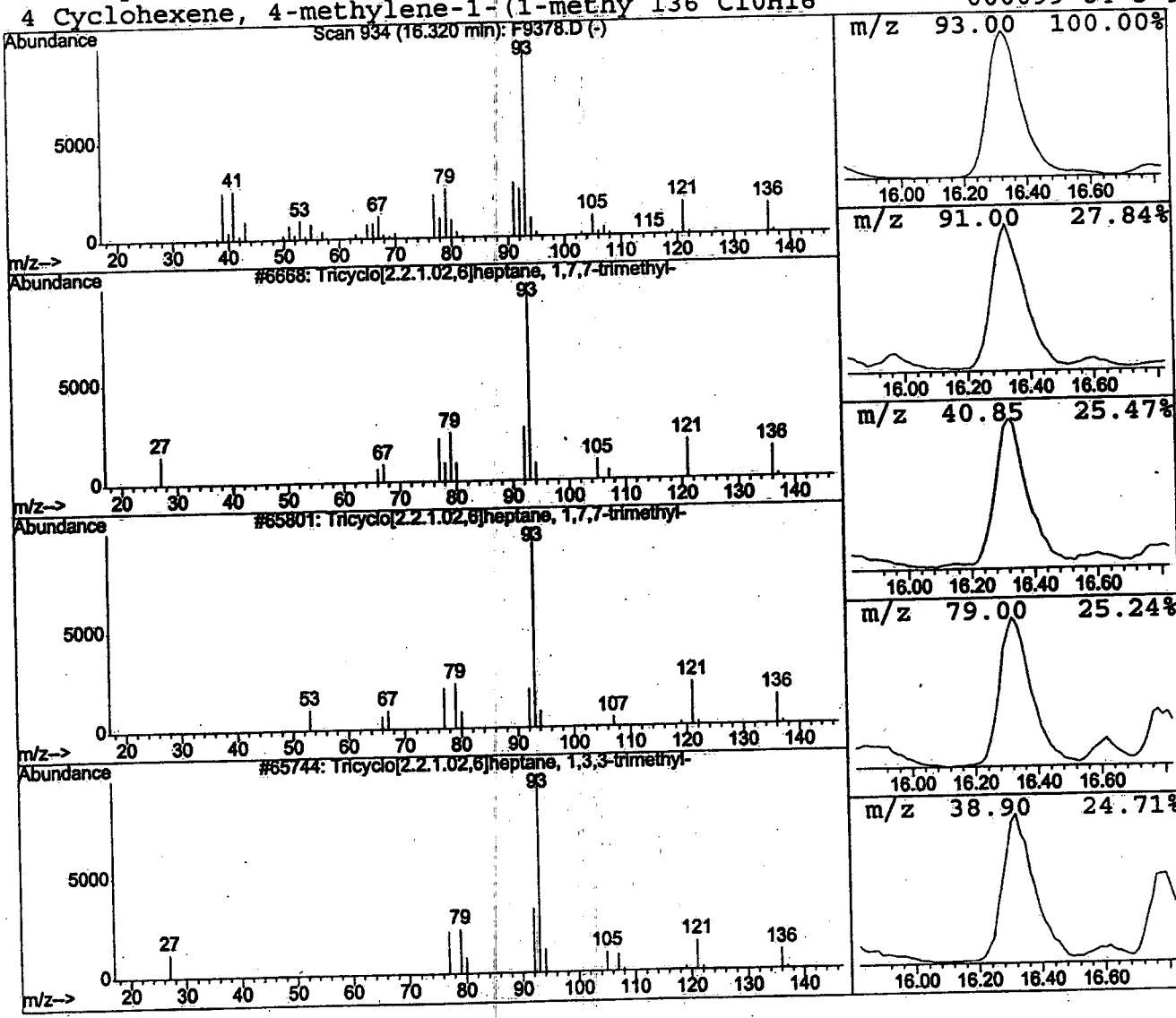
Quant Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Library : C:\DATABASE\NBS75K.L

****

Peak Number 2 Unknown aromatic — Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.32	132.34 UG	25225300	Chlorobenzene-d5	14.83

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Tricyclo[2.2.1.02,6]heptane, 1,7,7-	136	C10H16	000508-32-7	96
2	Tricyclo[2.2.1.02,6]heptane, 1,7,7-	136	C10H16	000508-32-7	93
3	Tricyclo[2.2.1.02,6]heptane, 1,3,3-	136	C10H16	000488-97-1	91
4	Cyclohexene, 4-methylene-1-(1-methy	136	C10H16	000099-84-3	90



704

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-26-01\F9378.D
Acq On : 27 Mar 2001 12:48
Sample : S-13,1840-004,M,0.035g
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01
MS Integration Params: LSCINT.P

Vial: 42
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

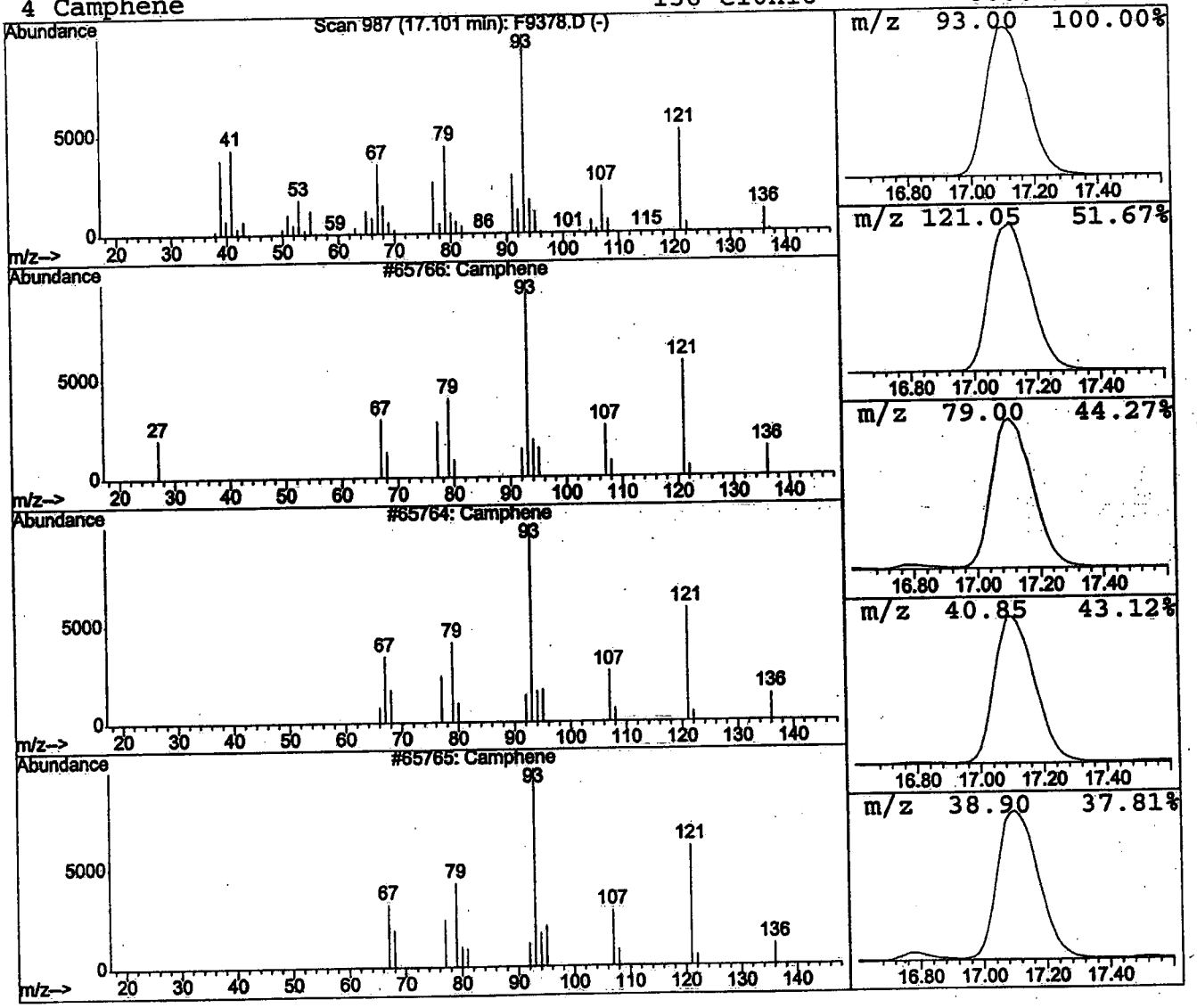
Quant Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Library : C:\DATABASE\NBS75K.L

****

Peak Number 3 Unknown aromatic — Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.10	1744.92 UG	332590000	Chlorobenzene-d5	14.83

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Camphene	136	C10H16	000079-92-5	96
2	Camphene	136	C10H16	000079-92-5	95
3	Camphene	136	C10H16	000079-92-5	91
4	Camphene	136	C10H16	000079-92-5	91



705

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-26-01\F9378.D
Acq On : 27 Mar 2001 12:48
Sample : S-13,1840-004,M,0.035g
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01
MS Integration Params: LSCINT.P

Vial: 42
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

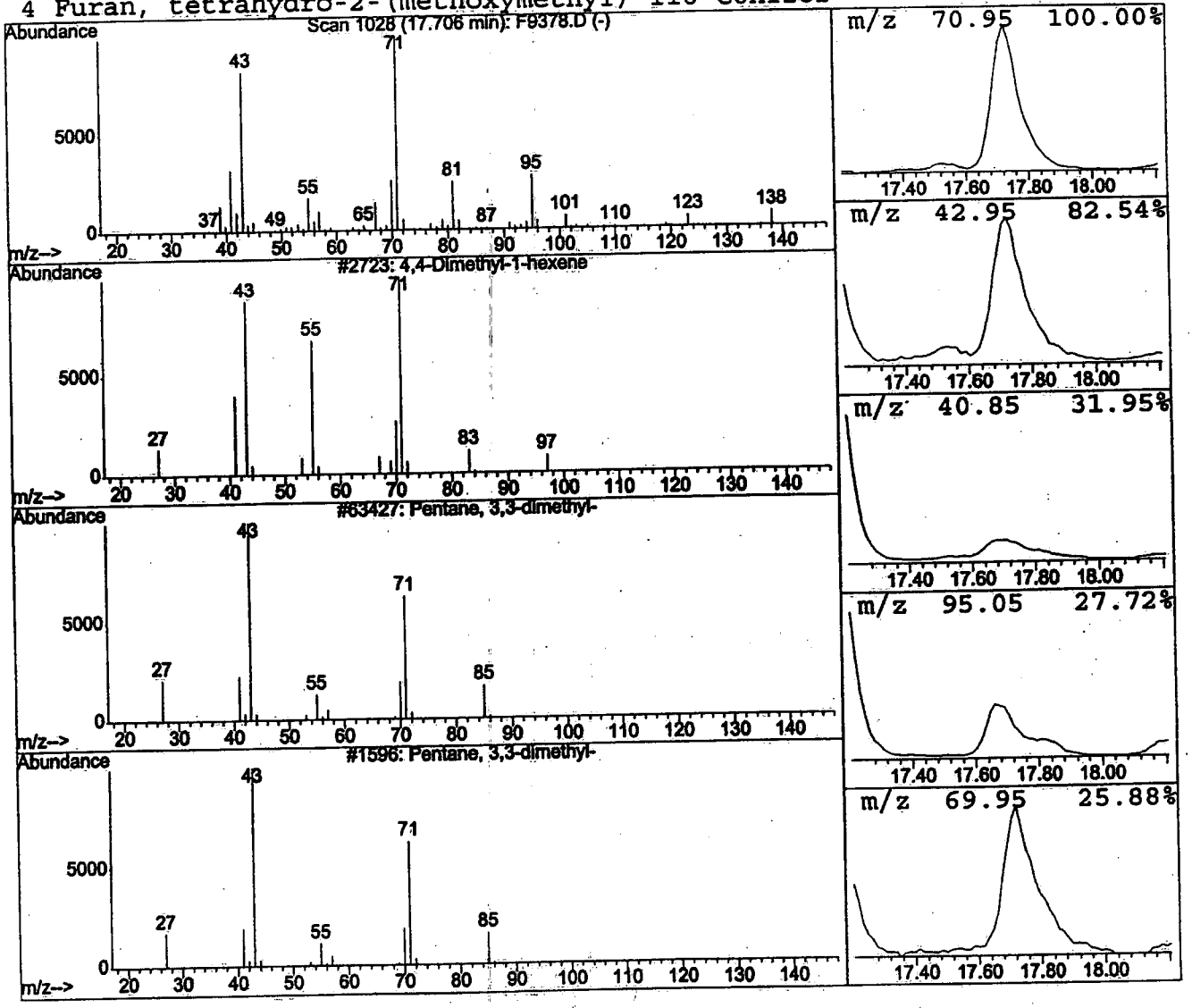
Quant Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Library : C:\DATABASE\NBS75K.L

****

Peak Number 4 Unknown alkane Concentration Rank 13

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.71	79.35 UG	15124200	Chlorobenzene-d5	14.83

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	4,4-Dimethyl-1-hexene	112	C8H16	001647-08-1	53
2	Pentane, 3,3-dimethyl-	100	C7H16	000562-49-2	50
3	Pentane, 3,3-dimethyl-	100	C7H16	000562-49-2	50
4	Furan, tetrahydro-2-(methoxymethyl)	116	C6H12O2	019354-27-9	47



Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-26-01\F9378.D
Acq On : 27 Mar 2001 12:48
Sample : S-13,1840-004,M,0.035g
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01
MS Integration Params: LSCINT.P

Vial: 42
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

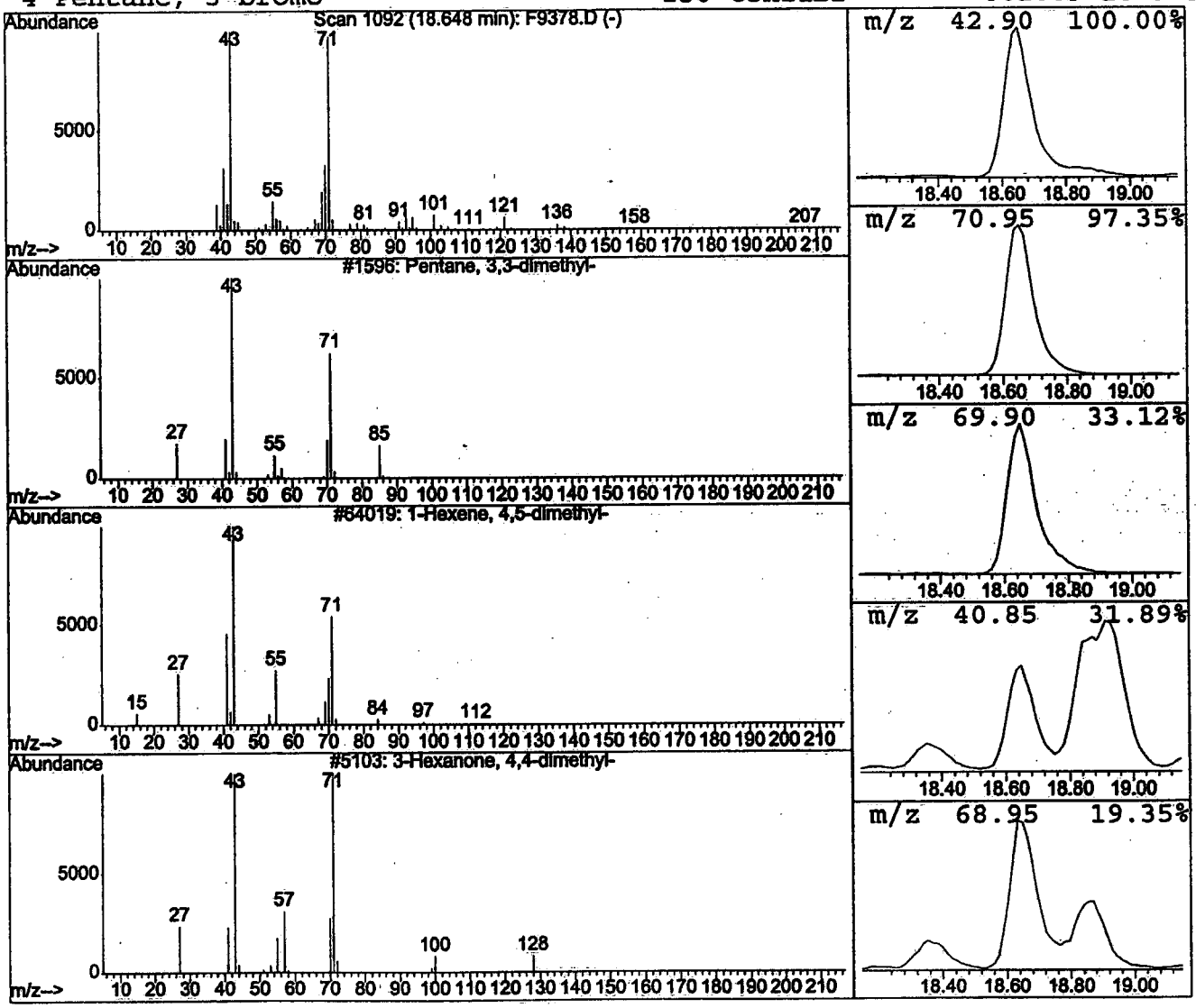
Quant Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Library : C:\DATABASE\NBS75K.L

****

Peak Number 5 Unknown alkane Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
18.65	181.30 UG	34556700	Chlorobenzene-d5	14.83

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane, 3,3-dimethyl-	100	C7H16	000562-49-2	64
2	1-Hexene, 4,5-dimethyl-	112	C8H16	016106-59-5	64
3	3-Hexanone, 4,4-dimethyl-	128	C8H16O	019550-14-2	64
4	Pentane, 3-bromo-	150	C5H11Br	001809-10-5	59



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Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-26-01\F9378.D
Acq On : 27 Mar 2001 12:48
Sample : S-13,1840-004,M,0.035g
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01
MS Integration Params: LSCINT.P

Vial: 42
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

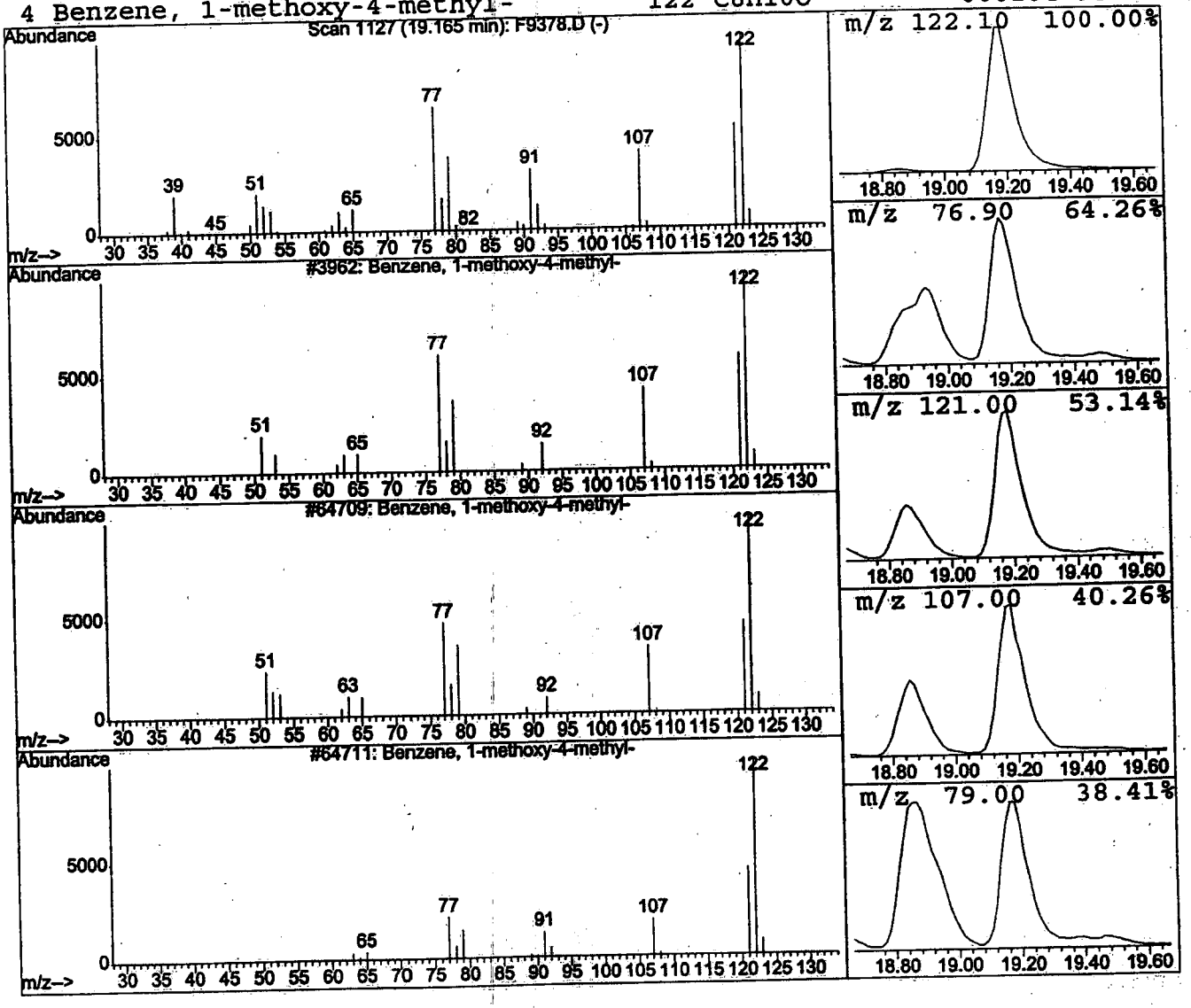
Quant Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Library : C:\DATABASE\NBS75K.L

****

Peak Number 6 Substituted benzene Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
19.17	223.98 UG	42692300	Chlorobenzene-d5	14.83

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-methoxy-4-methyl-	122	C8H10O	000104-93-8	98
2	Benzene, 1-methoxy-4-methyl-	122	C8H10O	000104-93-8	96
3	Benzene, 1-methoxy-4-methyl-	122	C8H10O	000104-93-8	96
4	Benzene, 1-methoxy-4-methyl-	122	C8H10O	000104-93-8	93



708

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-26-01\F9378.D
Acq On : 27 Mar 2001 12:48
Sample : S-13,1840-004,M,0.035g
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01
MS Integration Params: LSCINT.P

Vial: 42
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

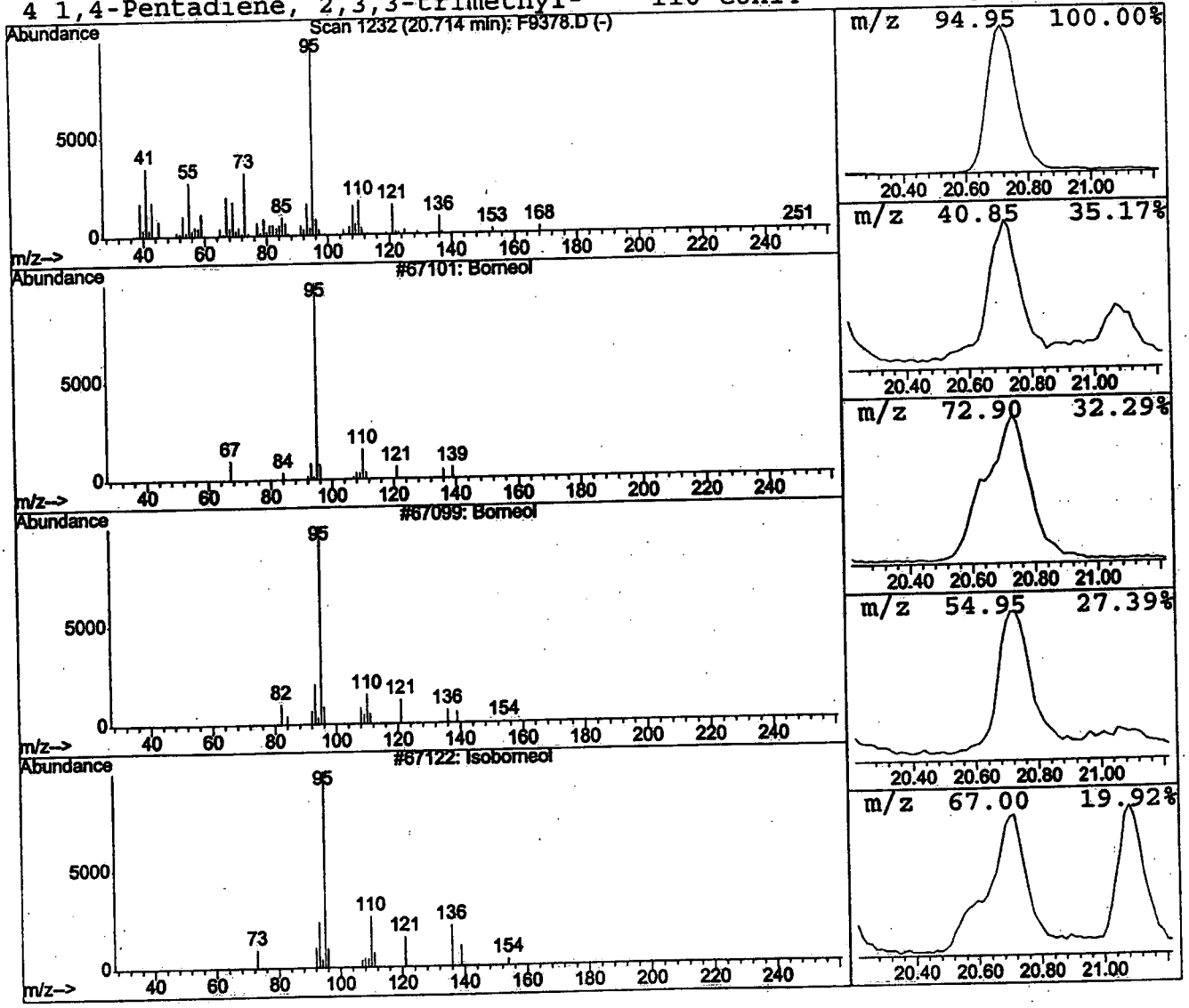
Quant Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Library : C:\DATABASE\NBS75K.L

****

Peak Number 8 Unknown aromatic — Concentration Rank 14

R.T.	EstConc	Area	Relative to ISTD	R.T.
20.71	75.93 UG	14472500	Chlorobenzene-d5	14.83

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Borneol	154	C10H18O	000507-70-0	50
2	Borneol	154	C10H18O	000507-70-0	50
3	Isoborneol	154	C10H18O	000124-76-5	50
4	1,4-Pentadiene, 2,3,3-trimethyl-	110	C8H14	000756-02-5	47



7/0

000150

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-26-01\F9378.D
Acq On : 27 Mar 2001 12:48
Sample : S-13,1840-004,M,0.035g
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01
MS Integration Params: LSCINT.P

Vial: 42
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

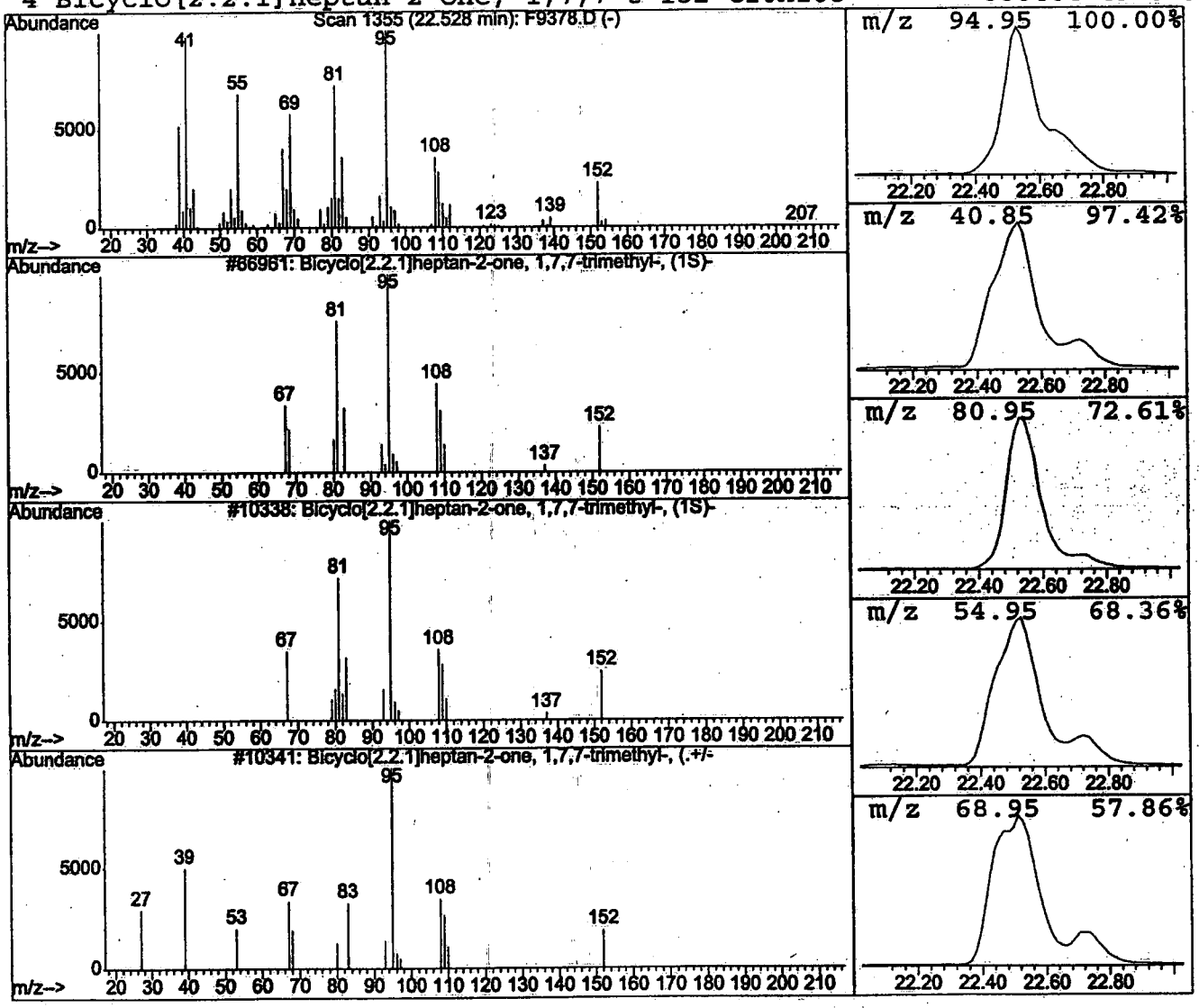
Quant Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Library : C:\DATABASE\NBS75K.L

****

Peak Number 9 Unknown aromatic Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
22.53	984.18 UG	187590000	Chlorobenzene-d5	14.83

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Bicyclo[2.2.1]heptan-2-one, 1,7,7-t	152	C10H16O	000464-48-2	98
2	Bicyclo[2.2.1]heptan-2-one, 1,7,7-t	152	C10H16O	000464-48-2	98
3	Bicyclo[2.2.1]heptan-2-one, 1,7,7-t	152	C10H16O	021368-68-3	98
4	Bicyclo[2.2.1]heptan-2-one, 1,7,7-t	152	C10H16O	000464-49-3	96



711

000151

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-26-01\F9378.D
Acq On : 27 Mar 2001 12:48
Sample : S-13,1840-004,M,0.035g
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01
MS Integration Params: LSCINT.P

Vial: 42
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

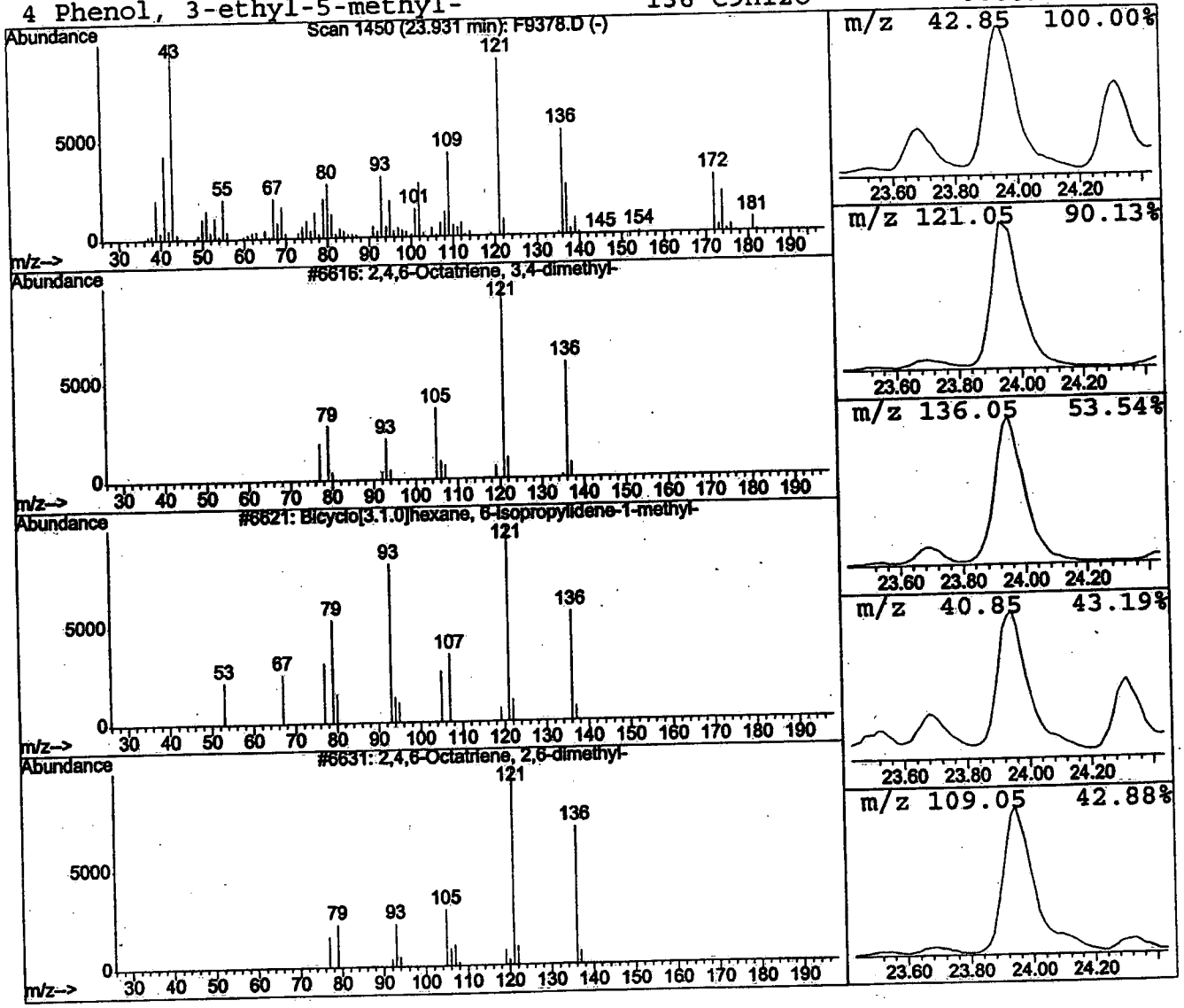
Quant Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Library : C:\DATABASE\NBS75K.L

****

Peak Number 10 Unknown aromatic — Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
23.93	335.37 UG	63923200	Chlorobenzene-d5	14.83

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2,4,6-Octatriene, 3,4-dimethyl-	136	C10H16	057396-75-5	46
2	Bicyclo[3.1.0]hexane, 6-isopropylid	136	C10H16	024524-57-0	38
3	2,4,6-Octatriene, 2,6-dimethyl-	136	C10H16	000673-84-7	38
4	Phenol, 3-ethyl-5-methyl-	136	C9H12O	000698-71-5	35



712

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-26-01\F9378.D
Acq On : 27 Mar 2001 12:48
Sample : S-13,1840-004,M,0.035g
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01
MS Integration Params: LSCINT.P

Vial: 42
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

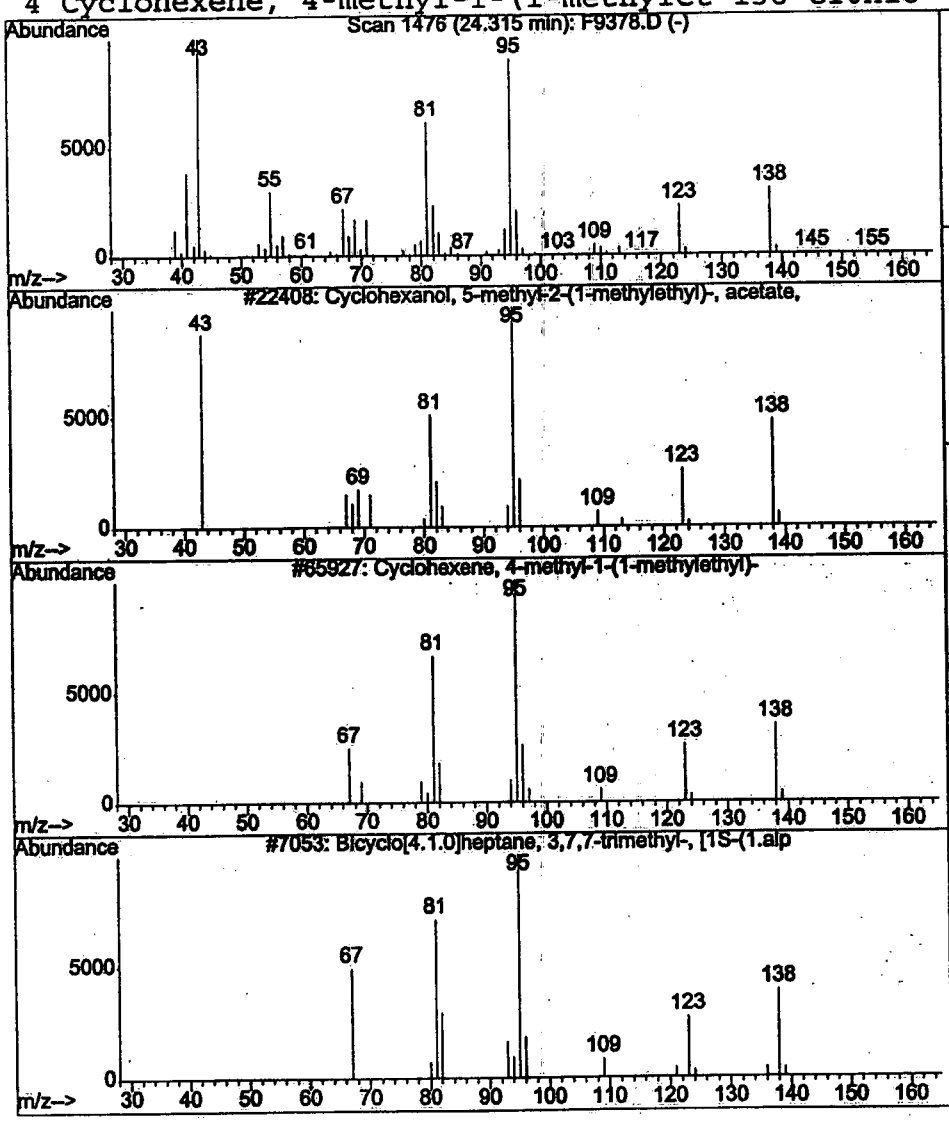
Quant Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Library : C:\DATABASE\NBS75K.L

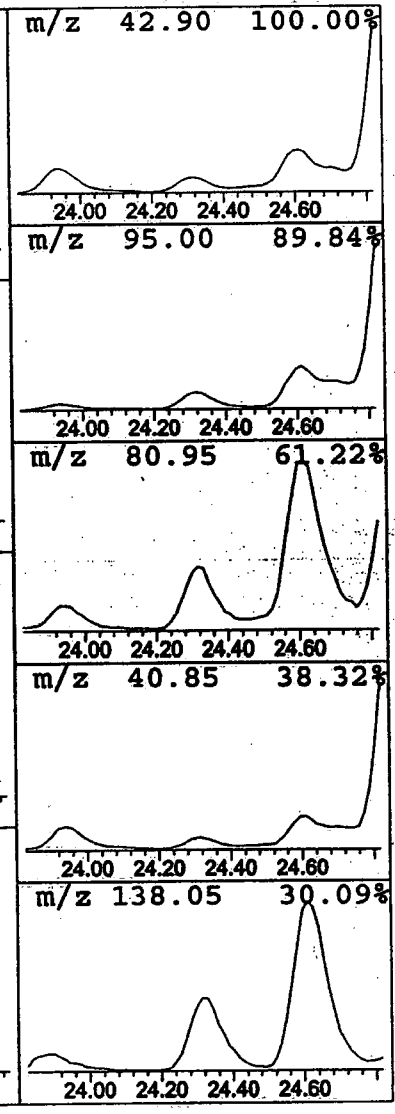
****

Peak Number 11 Unknown aromatic Concentration Rank 12

R.T.	EstConc	Area	Relative to ISTD	R.T.
24.32	101.33 UG	19313600	Chlorobenzene-d5	14.83

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexanol, 5-methyl-2-(1-methyle	198	C12H22O2	002230-87-7	90
2	Cyclohexene, 4-methyl-1-(1-methylet	138	C10H18	000500-00-5	90
3	Bicyclo[4.1.0]heptane, 3,7,7-trimet	138	C10H18	002778-68-9	87
4	Cyclohexene, 4-methyl-1-(1-methylet	138	C10H18	000500-00-5	87





713

000153

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-26-01\F9378.D
Acq On : 27 Mar 2001 12:48
Sample : S-13,1840-004,M,0.035g
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01
MS Integration Params: LSCINT.P

Vial: 42
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

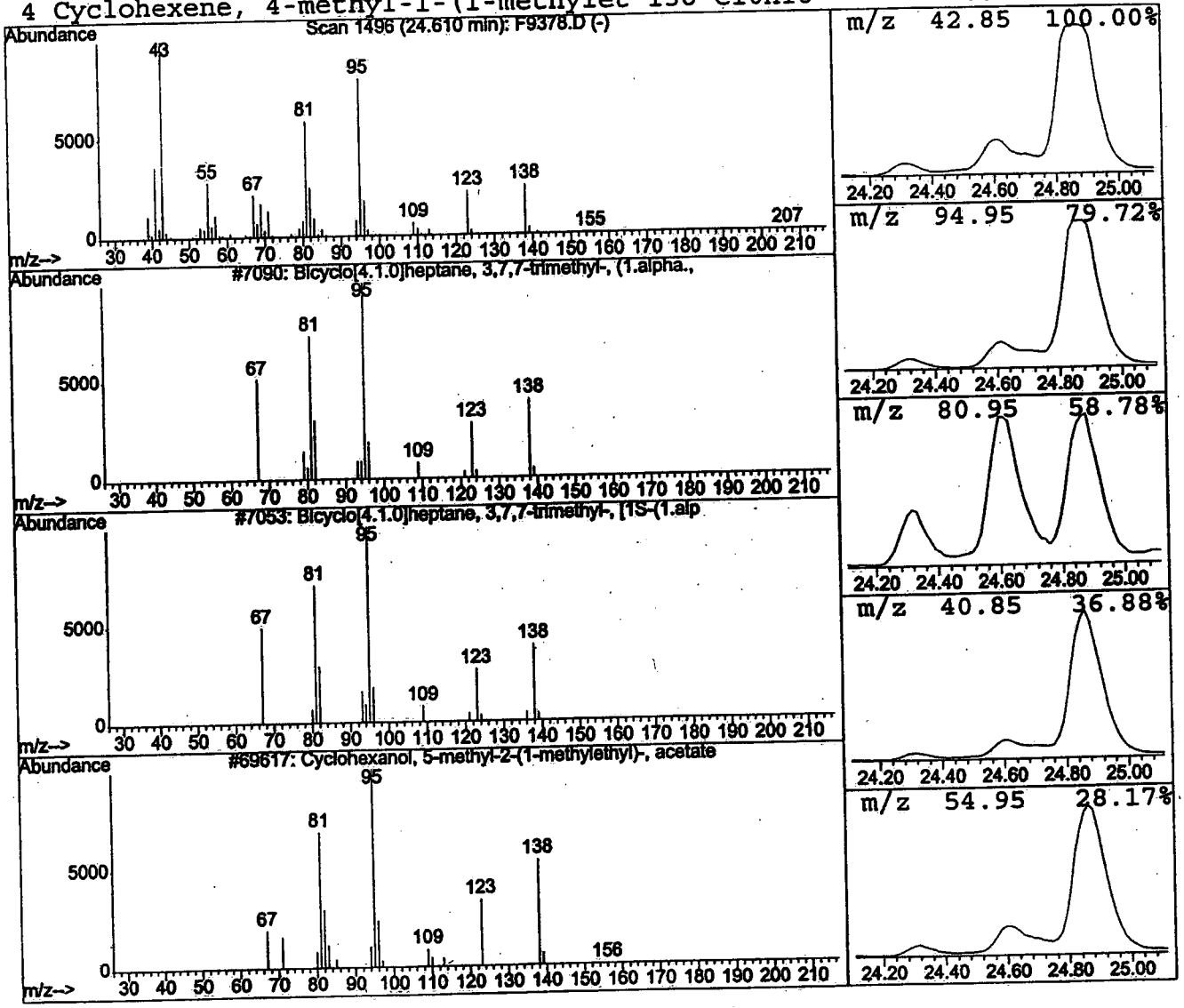
Quant Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Library : C:\DATABASE\NBS75K.L

****

Peak Number 12 Unknown aromatic Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
24.61	310.88 UG	59254700	Chlorobenzene-d5	14.83

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Bicyclo[4.1.0]heptane, 3,7,7-trimet	138	C10H18	018968-23-5	91
2	Bicyclo[4.1.0]heptane, 3,7,7-trimet	138	C10H18	002778-68-9	91
3	Cyclohexanol, 5-methyl-2-(1-methyle	198	C12H22O2	016409-45-3	91
4	Cyclohexene, 4-methyl-1-(1-methylet	138	C10H18	000500-00-5	90



714

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-26-01\F9378.D
Acq-On : 27 Mar 2001 12:48
Sample : S-13,1840-004,M,0.035g
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01
MS Integration Params: LSCINT.P

Vial: 42
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Library : C:\DATABASE\NBS75K.L

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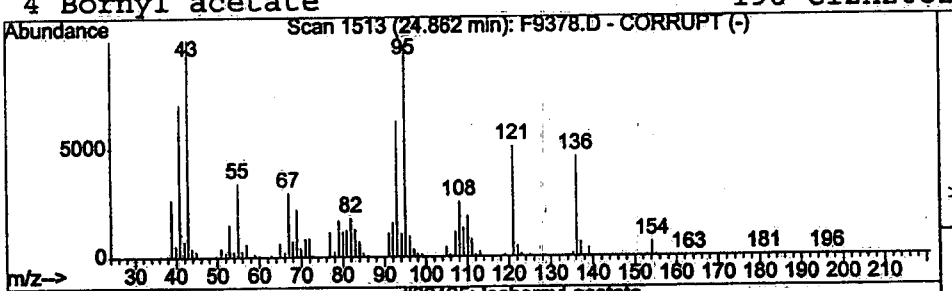
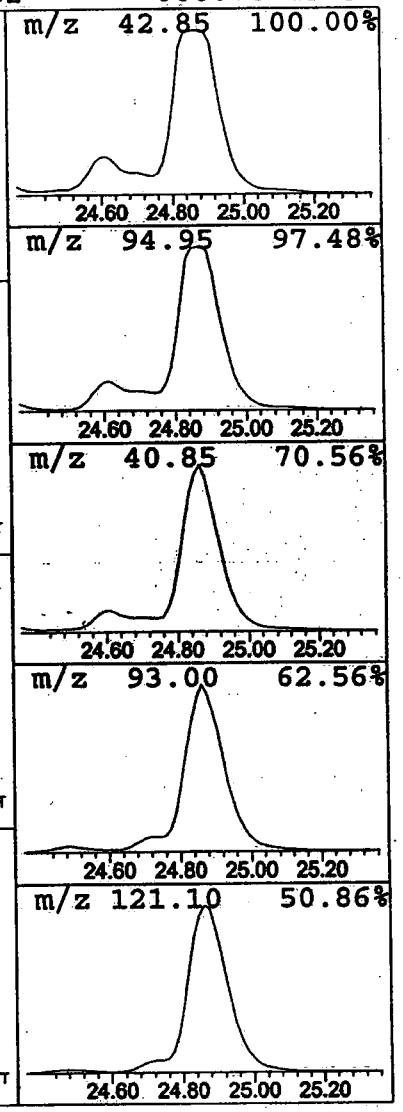
Peak Number 13 Unknown — Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
24.86	2368.30 UG	451409000	Chlorobenzene-d5	14.83

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Isobornyl acetate	196	C12H20O2	000125-12-2	91
2	Isobornyl acetate	196	C12H20O2	000125-12-2	90
3	Isobornyl thiocyanoacetate	253	C13H19NO2S	000115-31-1	86
4	Bornyl acetate	196	C12H20O2	000076-49-3	86





715

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-26-01\F9378.D
Acq On : 27 Mar 2001 12:48
Sample : S-13,1840-004,M,0.035g
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01
MS Integration Params: LSCINT.P

Vial: 42
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Library : C:\DATABASE\NBS75K.L

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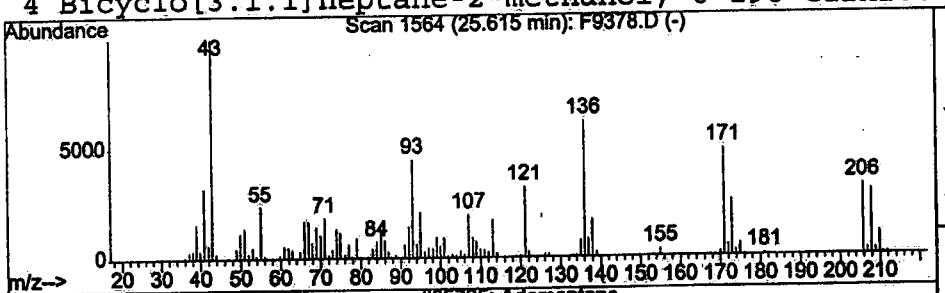
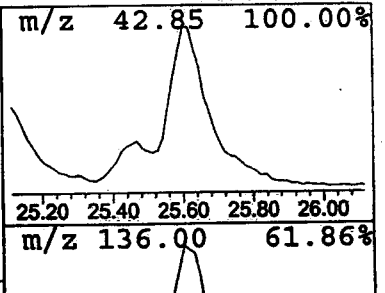
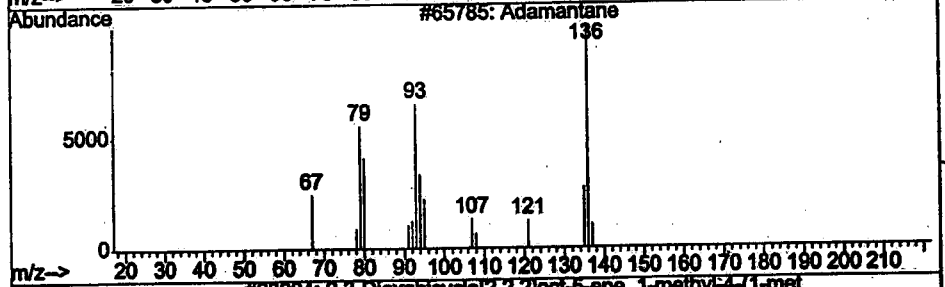
Peak Number 14 - Unknown Concentration Rank 15

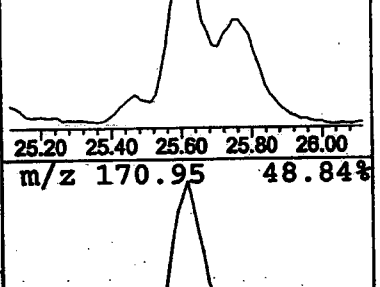
R.T.	EstConc	Area	Relative to ISTD	R.T.
25.61	70.27 UG	13393800	Chlorobenzene-d5	14.83

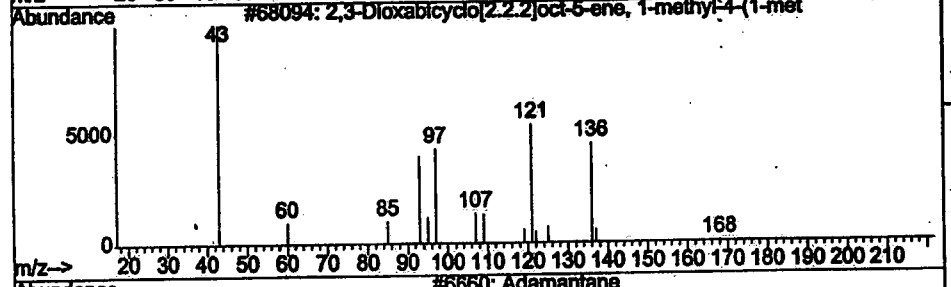
Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Adamantane	136	C10H16	000281-23-2	27
2	2,3-Dioxabicyclo[2.2.2]oct-5-ene, 1	168	C10H16O2	000512-85-6	25
3	Adamantane	136	C10H16	000281-23-2	25
4	Bicyclo[3.1.1]heptane-2-methanol, 6	196	C12H20O2	000000-00-0	16

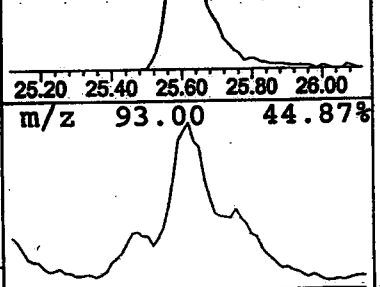


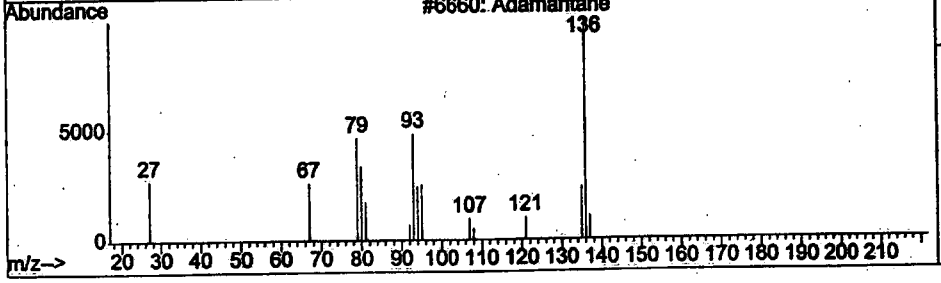


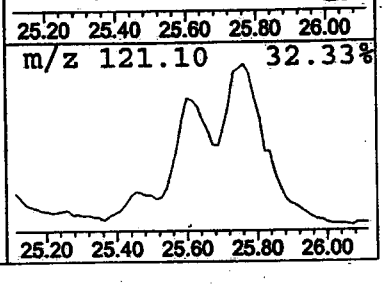












716

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-26-01\F9378.D
Acq On : 27 Mar 2001 12:48
Sample : S-13,1840-004,M,0.035g
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01
MS Integration Params: LSCINT.P

Vial: 42
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

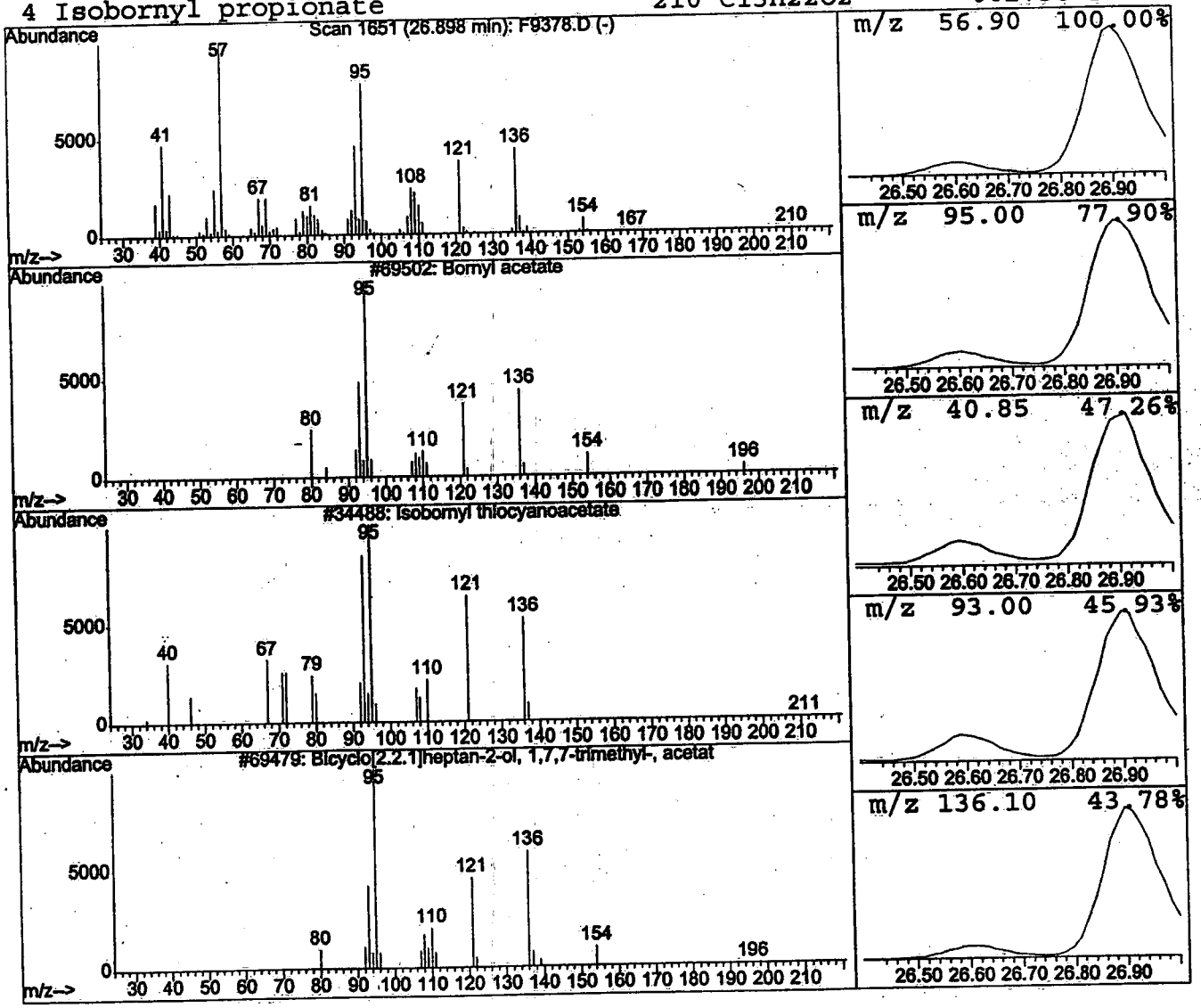
Quant Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Library : C:\DATABASE\NBS75K.L

****

Peak Number 15 Unknown — Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
26.90	258.50 UG	49271200	Chlorobenzene-d5	14.83

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Bornyl acetate	196	C12H20O2	000076-49-3	72
2	Isobornyl thiocyanoacetate	253	C13H19NO2S	000115-31-1	68
3	Bicyclo[2.2.1]heptan-2-ol, 1,7,7-tr	196	C12H20O2	005655-61-8	68
4	Isobornyl propionate	210	C13H22O2	002756-56-1	64



717

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\03-27-01\F9400.D
Acq On : 28 Mar 2001 1:03
Sample : S-13,1840-004DIL,M,0.002g
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01,20
Vial: 17
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

IS Integration Params: rteint.p
Quant Time: Mar 28 9:01 2001
Quant Results File: FME0316.RES

Quant Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Last Update : Fri Mar 16 14:54:56 2001
Response via : Initial Calibration
DataAcq Meth : VOAF

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	8.79	168	3309812	50.00	UG		0.06
31) 1,4-Difluorobenzene	9.96	114	3373277	50.00	UG		0.06
50) Chlorobenzene-d5	14.81	117	2394610	50.00	UG		0.05
System Monitoring Compounds							
30) 1,2-Dichloroethane-d4	9.27	65	84746	2.56	UG		0.07
Spiked Amount 50.000	Range 27 - 176		Recovery =	5.12%#			
41) Toluene-d8	12.34	98	153016	2.47	UG		0.05
Spiked Amount 50.000	Range 20 - 158		Recovery =	4.94%#			
59) Bromofluorobenzene	17.01	95	108375m	2.09	UG		0.16
Spiked Amount 50.000	Range 28 - 148		Recovery =	4.18%#			
Target Compounds							Qvalue
25) Chloroform	8.48	83	204874	3.93	UG		100
32) Benzene	9.33	78	1568041	20.91	UG		100
42) Toluene	12.46	92	4422623	95.13	UG		98
72) 1,4-Dichlorobenzene	19.06	146	274551	5.16	UG		97
74) 1,2-Dichlorobenzene	19.73	146	3669023	79.31	UG	#	100

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

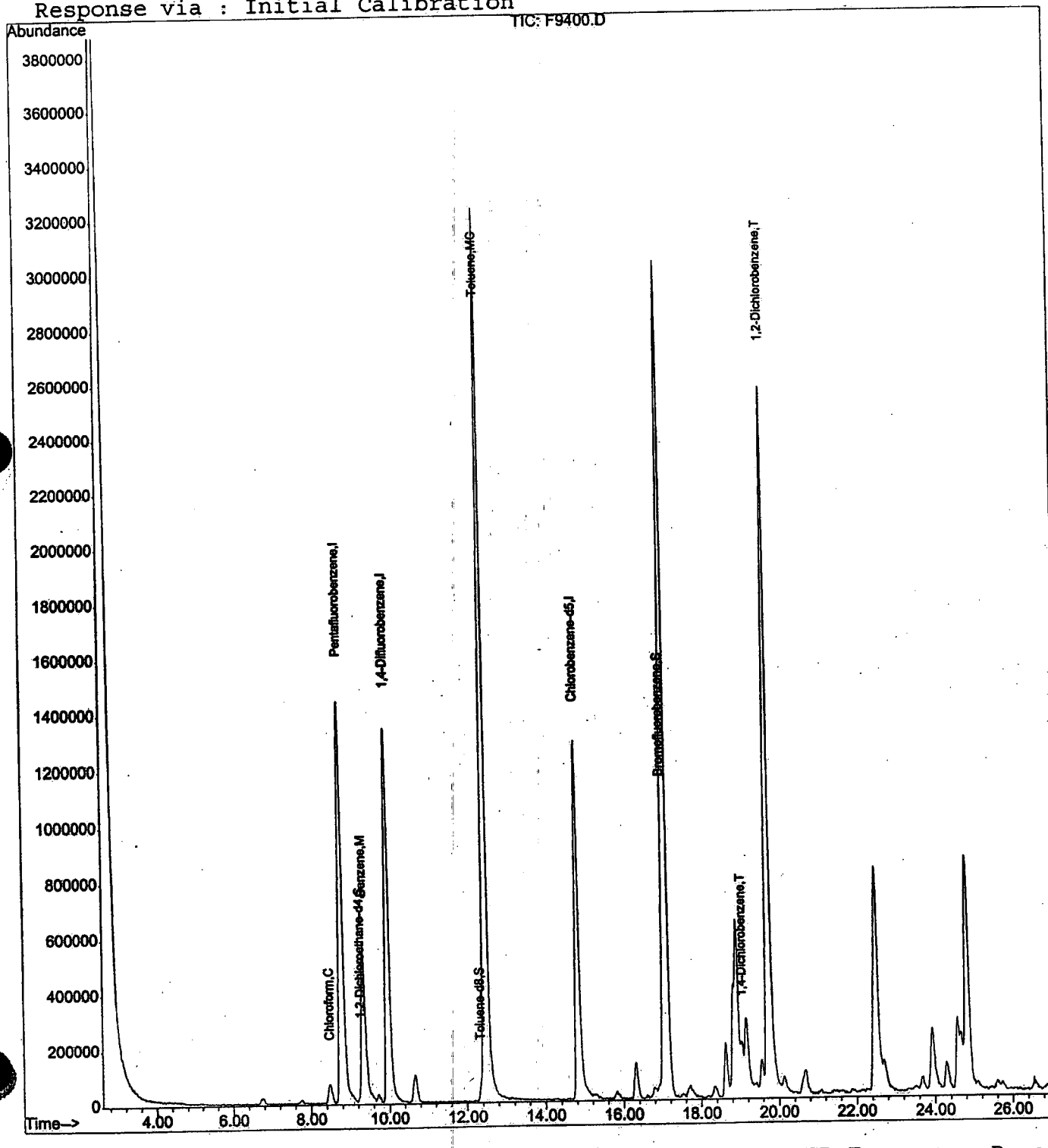
Quantitation Report

Data File : C:\HPCHEM\1\DATA\03-27-01\F9400.D
Acq On : 28 Mar 2001 1:03
Sample : S-13,1840-004DIL,M,0.002g
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01,20
MS Integration Params: rteint.p
Quant Time: Mar 28 9:01 2001

Vial: 17
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

Quant Results File: FME0316.RES

Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Last Update : Fri Mar 16 14:54:56 2001
Response via : Initial Calibration



719

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\03-26-01\F9381.D
Acq On : 27 Mar 2001 14:27
Sample : S-14,1840-005,M,0.002g
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01,20
Vial: 45
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00
} Integration Params: rteint.p
Quant Time: Mar 27 15:23 2001
Quant Results File: FME0316.RES

Quant Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Last Update : Fri Mar 16 14:54:56 2001
Response via : Initial Calibration
DataAcq Meth : VOAF

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	8.80	168	3309720	50.00	UG		0.08
31) 1,4-Difluorobenzene	9.98	114	3316653	50.00	UG		0.07
50) Chlorobenzene-d5	14.84	117	2353362	50.00	UG		0.08
System Monitoring Compounds							
30) 1,2-Dichloroethane-d4	9.27	65	103646	3.13	UG		0.07
Spiked Amount 50.000	Range 27 - 176		Recovery =	6.26%	#		
41) Toluene-d8	12.37	98	186304	3.06	UG		0.08
Spiked Amount 50.000	Range 20 - 158		Recovery =	6.12%	#		
59) Bromofluorobenzene	16.96	95	113011	2.22	UG		0.10
Spiked Amount 50.000	Range 28 - 148		Recovery =	4.44%	#		
Target Compounds							Qvalue
32) Benzene	9.36	78	233451	3.17	UG		100
42) Toluene	12.48	92	1108841	24.26	UG		97
53) Ethylbenzene	15.06	91	173258	1.79	UG		98
54) m,p-Xylene	15.25	106	530334	15.35	UG		96
55) o-Xylene	15.97	106	689629	20.37	UG		95
70) 1,3-Dichlorobenzene	18.91	146	155776	3.45	UG	#	67
72) 1,4-Dichlorobenzene	18.91	146	155776	2.98	UG		99
74) 1,2-Dichlorobenzene	19.74	146	6426607	141.35	UG	#	100

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

LSC Area Percent Report

Data File : C:\HPCHEM\1\DATA\03-26-01\F9381.D
Acq On : 27 Mar 2001 14:27
Sample : S-14,1840-005,M,0.002g
[redacted] : ENVTACT/444_ORBIS,03/23/01,03/26/01,20
Integration Params: LSCINT.P

Vial: 45
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Smoothing : ON
Sampling : 1
Start Thrs: 0.2
Stop Thrs : 0

Filtering: 5
Min Area: 3 % of largest Peak
Max Peaks: 100
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

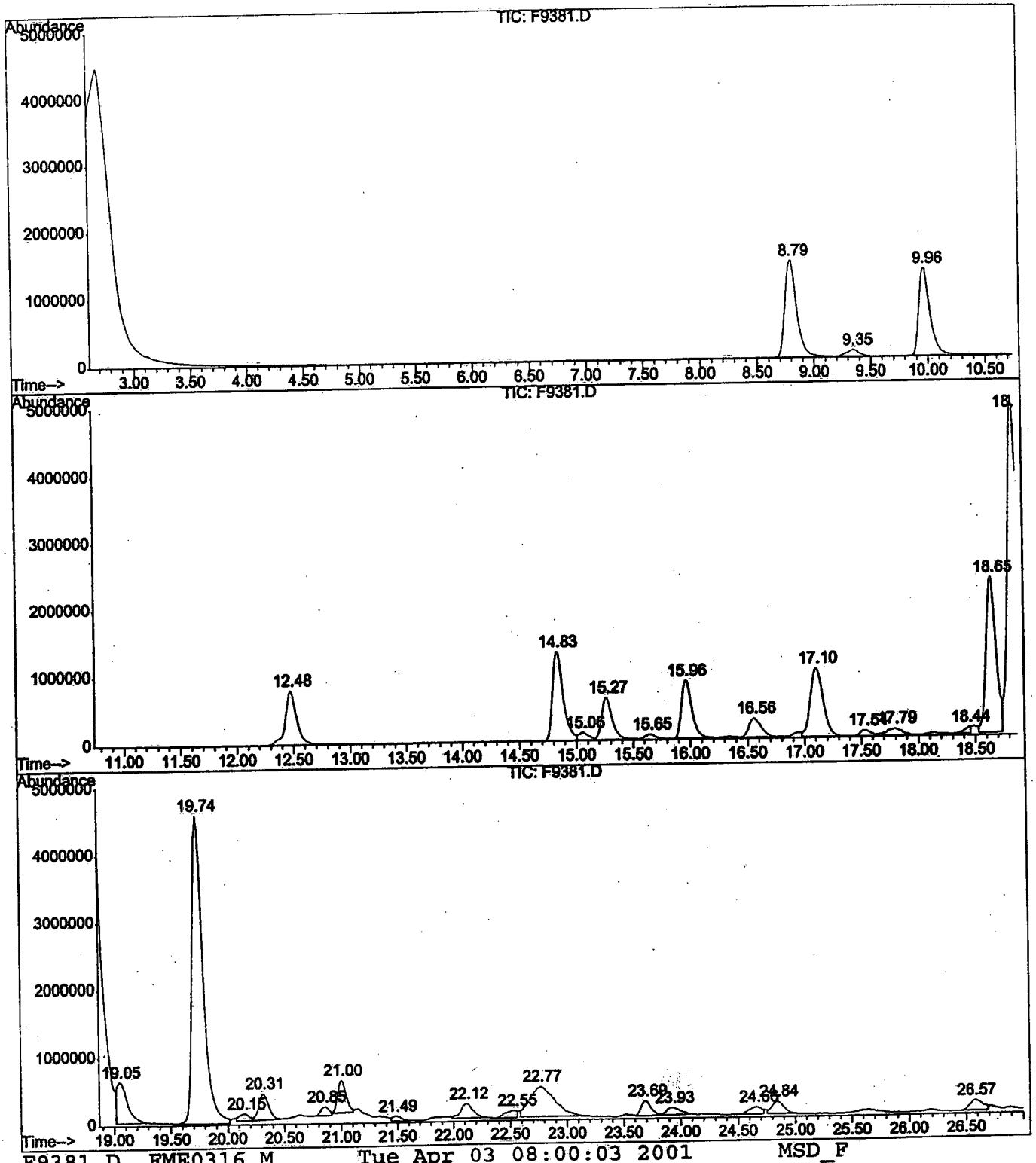
Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	8.789	412	422	440	rBV2	1445706	10470400	29.53%	6.485%
2	9.347	450	460	469	rVB6	97989	738060	2.08%	0.457%
3	9.964	493	502	521	rBV2	1309427	9038224	25.49%	5.598%
4	12.475	658	673	690	rBV	790348	5449144	15.37%	3.375%
5	14.825	825	833	845	rBV	1303868	8510619	24.00%	5.271%
6	15.060	845	849	856	rVV6	109106	640658	1.81%	0.397%
7	15.266	856	863	877	rVB2	612832	3879620	10.94%	2.403%
[redacted]	15.648	882	889	899	rVB5	76747	518747	1.46%	0.321%
[redacted]	15.957	903	910	925	rBV	844615	5291874	14.92%	3.278%
10	16.560	942	951	964	rVB5	278274	2066247	5.83%	1.280%
11	17.104	979	988	1004	rVB4	999795	7764099	21.90%	4.809%
12	17.545	1011	1018	1023	rBV4	83591	521918	1.47%	0.323%
13	17.794	1023	1035	1047	rVB8	101088	945500	2.67%	0.586%
14	18.441	1070	1079	1080	rBV3	99255	428660	1.21%	0.265%
15	18.647	1085	1093	1099	rVV2	2299705	14029480	39.57%	8.689%
16	18.838	1099	1106	1117	rVV2	4980429	35456714	100.00%	21.960%
17	19.045	1118	1120	1137	rVB2	599428	3737519	10.54%	2.315%
18	19.736	1155	1167	1186	rBV	4576905	30731786	86.67%	19.034%
19	20.148	1190	1195	1200	rVV7	99338	643894	1.82%	0.399%
20	20.310	1200	1206	1216	rVB2	380439	2261887	6.38%	1.401%
21	20.855	1238	1243	1247	rBV2	128868	668669	1.89%	0.414%
22	21.002	1247	1253	1260	rVV2	471371	2561026	7.22%	1.586%
23	21.487	1283	1286	1294	rVB5	75651	409462	1.15%	0.254%
24	22.119	1320	1329	1341	rVB2	213606	1617683	4.56%	1.002%
25	22.546	1346	1358	1359	rBV8	108892	789390	2.23%	0.489%
26	22.767	1361	1373	1399	rVB10	447084	6661636	18.79%	4.126%
27	23.694	1430	1436	1445	rVV3	223542	1360305	3.84%	0.843%
28	23.929	1445	1452	1462	rVV8	103341	903303	2.55%	0.559%
29	24.664	1490	1502	1506	rBV7	110348	853197	2.41%	0.528%
[redacted]	24.840	1508	1514	1523	rVB7	183357	1253452	3.54%	0.776%
31	26.575	1624	1632	1640	rBV8	154630	1254790	3.54%	0.777%

000162

LSC Report - Integrated Chromatogram

File : C:\HPCHEM\1\DATA\03-26-01\F9381.D
Operator : GREGG
Acquired : 27 Mar 2001 14:27 using AcqMethod VOAF
Instrument : 5970 - In
Sample Name: S-14,1840-005,M,0.002g
Misc Info : ENVTACT/444_ORBIS,03/23/01,03/26/01,20
Vial Number: 45
Quant File :FME0316.RES (RTE Integrator)



F9381.D FME0316.M Tue Apr 03 08:00:03 2001 MSD_F

000164

722

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-26-01\F9381.D
Acq On : 27 Mar 2001 14:27
Sample : S-14,1840-005,M,0.002g
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01,20
MS Integration Params: LSCINT.P

Vial: 45
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

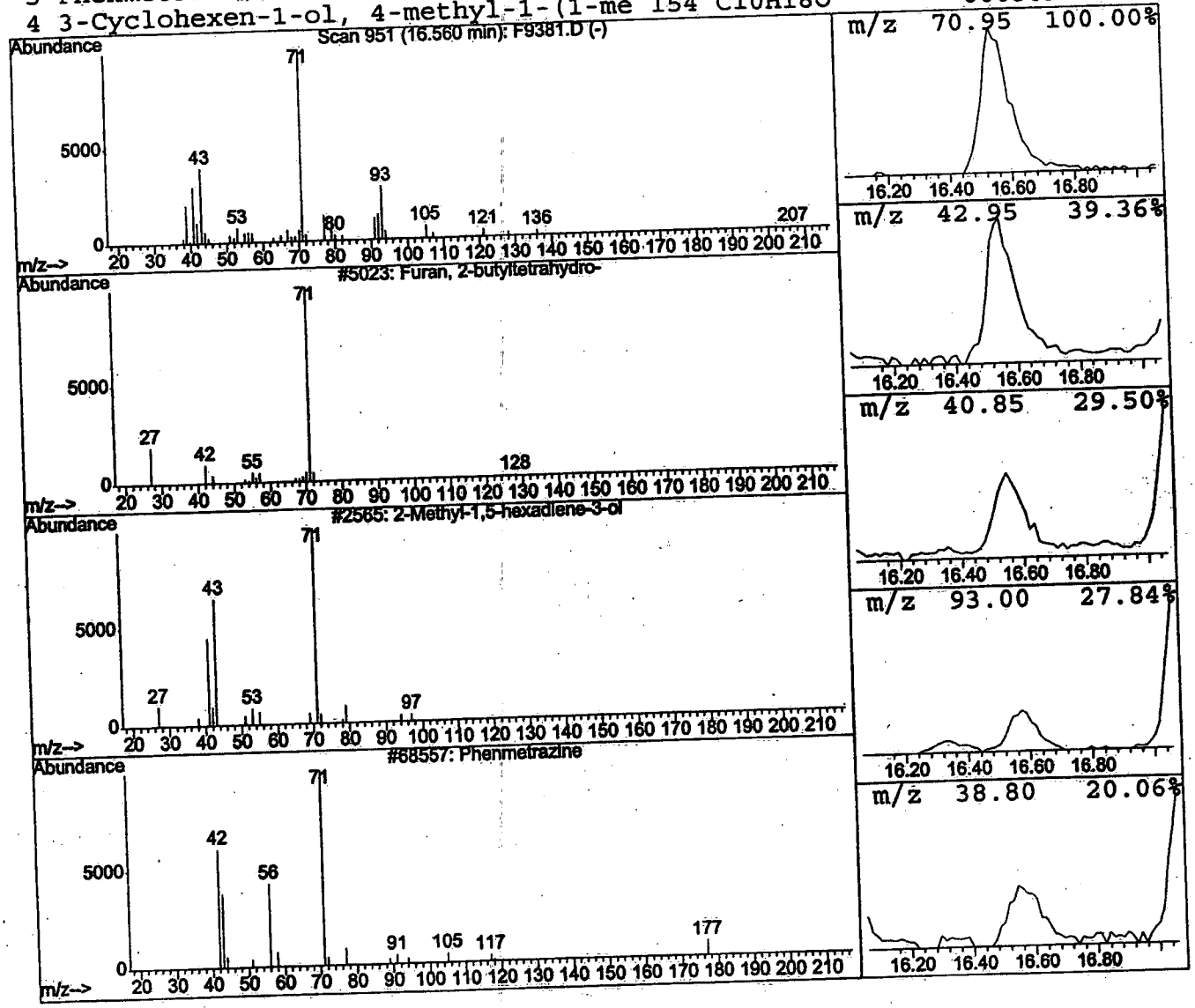
Quant Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Library : C:\DATABASE\NBS75K.L

****

Peak Number 1 Unknown aromatic — Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.56	12.14 UG	2066250	Chlorobenzene-d5	14.84

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Furan, 2-butyltetrahydro-	128	C8H16O	001004-29-1	43
2	2-Methyl-1,5-hexadiene-3-ol	112	C7H12O	017123-60-3	40
3	Phenmetrazine	177	C11H15NO	000134-49-6	38
4	3-Cyclohexen-1-ol, 4-methyl-1-(1-me	154	C10H18O	000562-74-3	36



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Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-26-01\F9381.D
Acq On : 27 Mar 2001 14:27
Sample : S-14,1840-005,M,0.002g
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01,20
MS Integration Params: LSCINT.P

Vial: 45
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

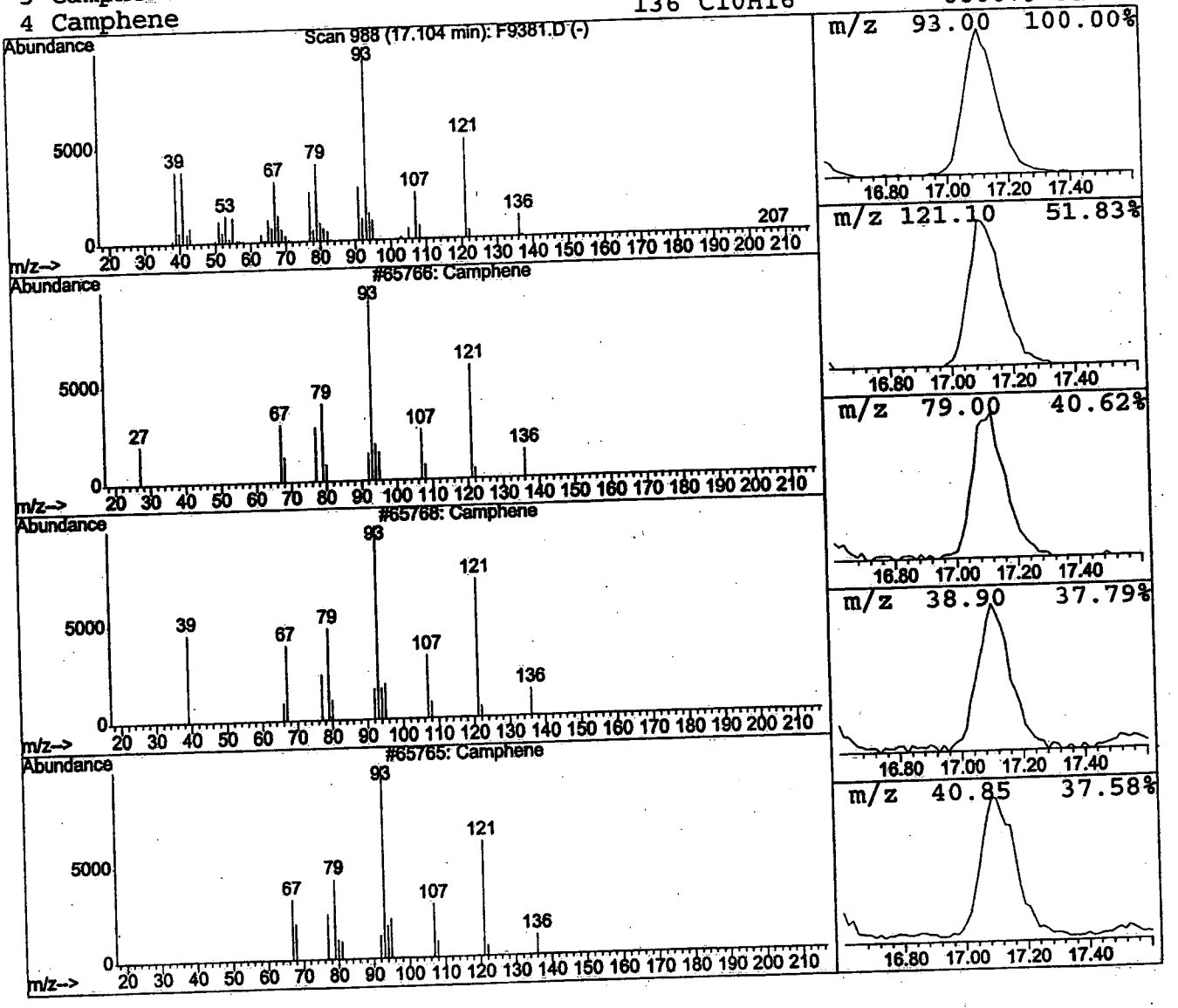
Quant Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Library : C:\DATABASE\NBS75K.L

****

Peak Number 2 Unknown aromatic — Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.10	45.61 UG	7764100	Chlorobenzene-d5	14.84

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Camphene	136	C10H16	000079-92-5	97
2	Camphene	136	C10H16	000079-92-5	95
3	Camphene	136	C10H16	000079-92-5	91
4	Camphene	136	C10H16	000079-92-5	91



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Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-26-01\F9381.D
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Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01,20
MS Integration Params: LSCINT.P

Vial: 45
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Library : C:\DATABASE\NBS75K.L

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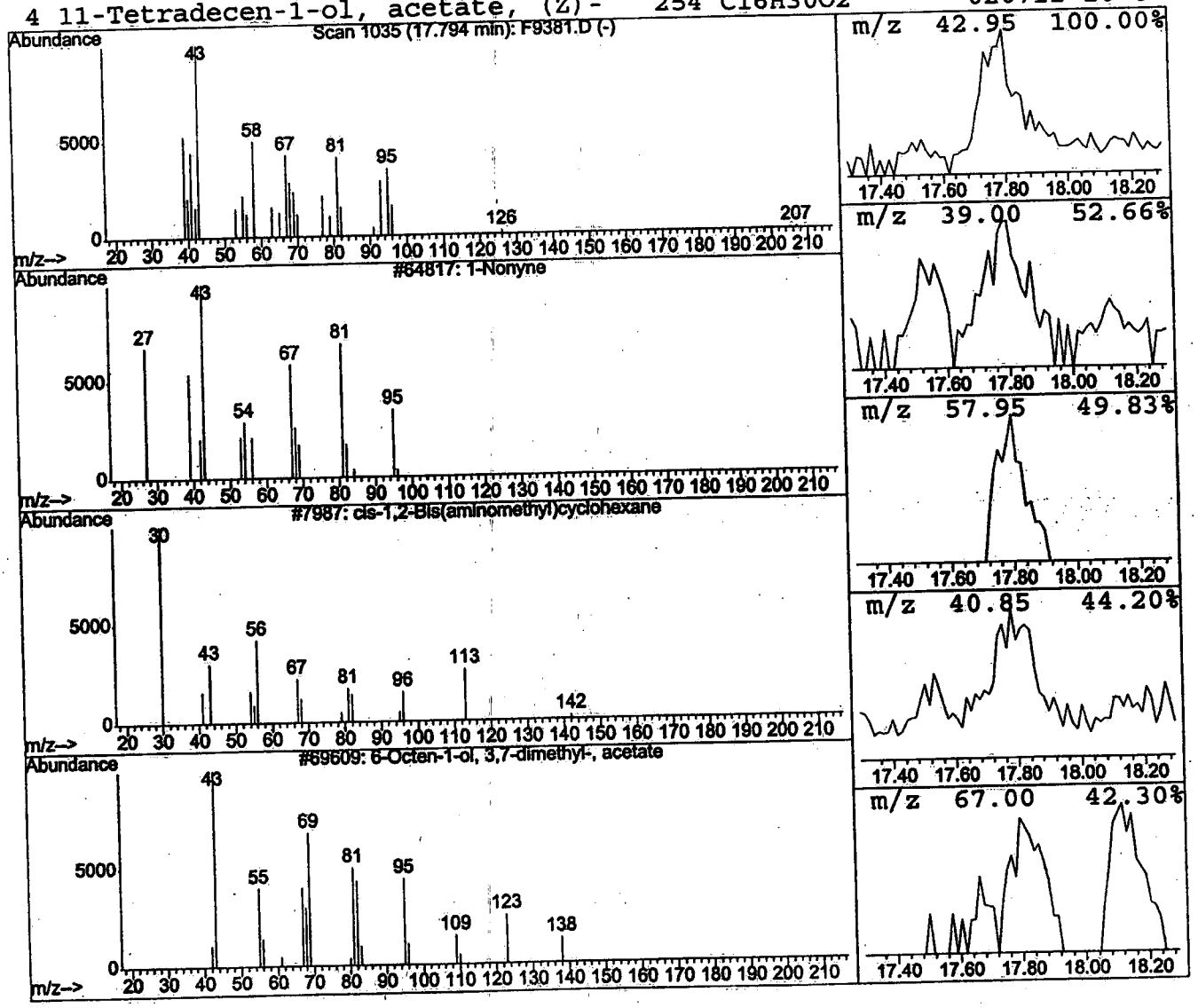
Peak Number 3 Unknown hydrocarbon Concentration Rank 13

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.79	5.55 UG	945500	Chlorobenzene-d5	14.84

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1-Nonyne	124	C9H16	003452-09-3	12
2	cis-1,2-Bis(aminomethyl)cyclohexane	142	C8H18N2	070795-45-8	10
3	6-Octen-1-ol, 3,7-dimethyl-, acetat	198	C12H22O2	000150-84-5	10
4	11-Tetradecen-1-ol, acetate, (Z)-	254	C16H30O2	020711-10-8	10



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Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-26-01\F9381.D
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Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01,20
MS Integration Params: LSCINT.P

Vial: 45
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

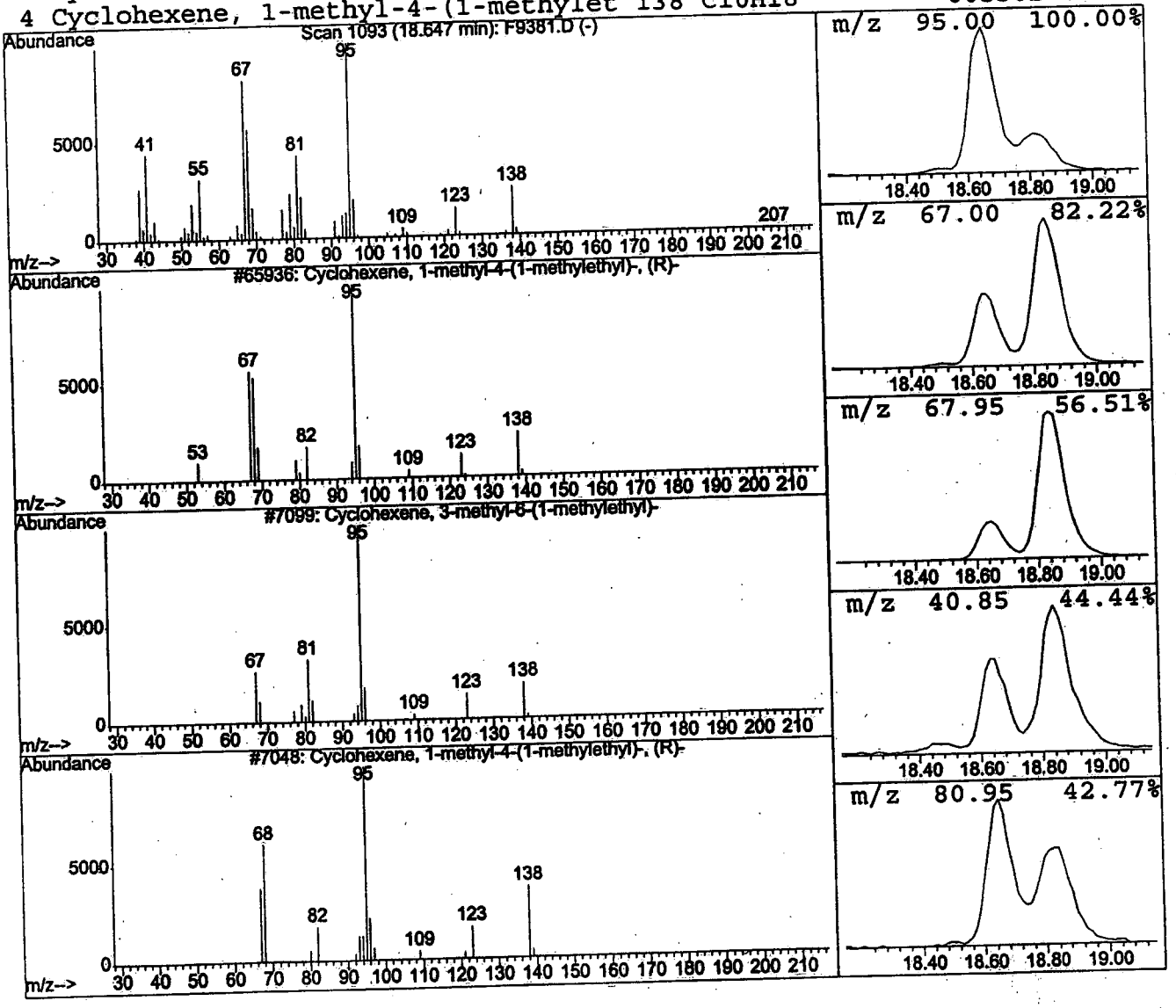
Quant Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Library : C:\DATABASE\NBS75K.L

****

Peak Number 4 Unknown aromatic — Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
18.65	82.42 UG	14029500	Chlorobenzene-d5	14.84

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexene, 1-methyl-4-(1-methylet	138	C10H18	001195-31-9	94
2	Cyclohexene, 3-methyl-6-(1-methylet	138	C10H18	005256-65-5	90
3	Cyclohexene, 1-methyl-4-(1-methylet	138	C10H18	001195-31-9	86
4	Cyclohexene, 1-methyl-4-(1-methylet	138	C10H18	005502-88-5	81



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Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-26-01\F9381.D
Acq On : 27 Mar 2001 14:27
Sample : S-14,1840-005,M,0.002g
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01,20
MS Integration Params: LSCINT.P

Vial: 45
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Library : C:\DATABASE\NBS75K.L

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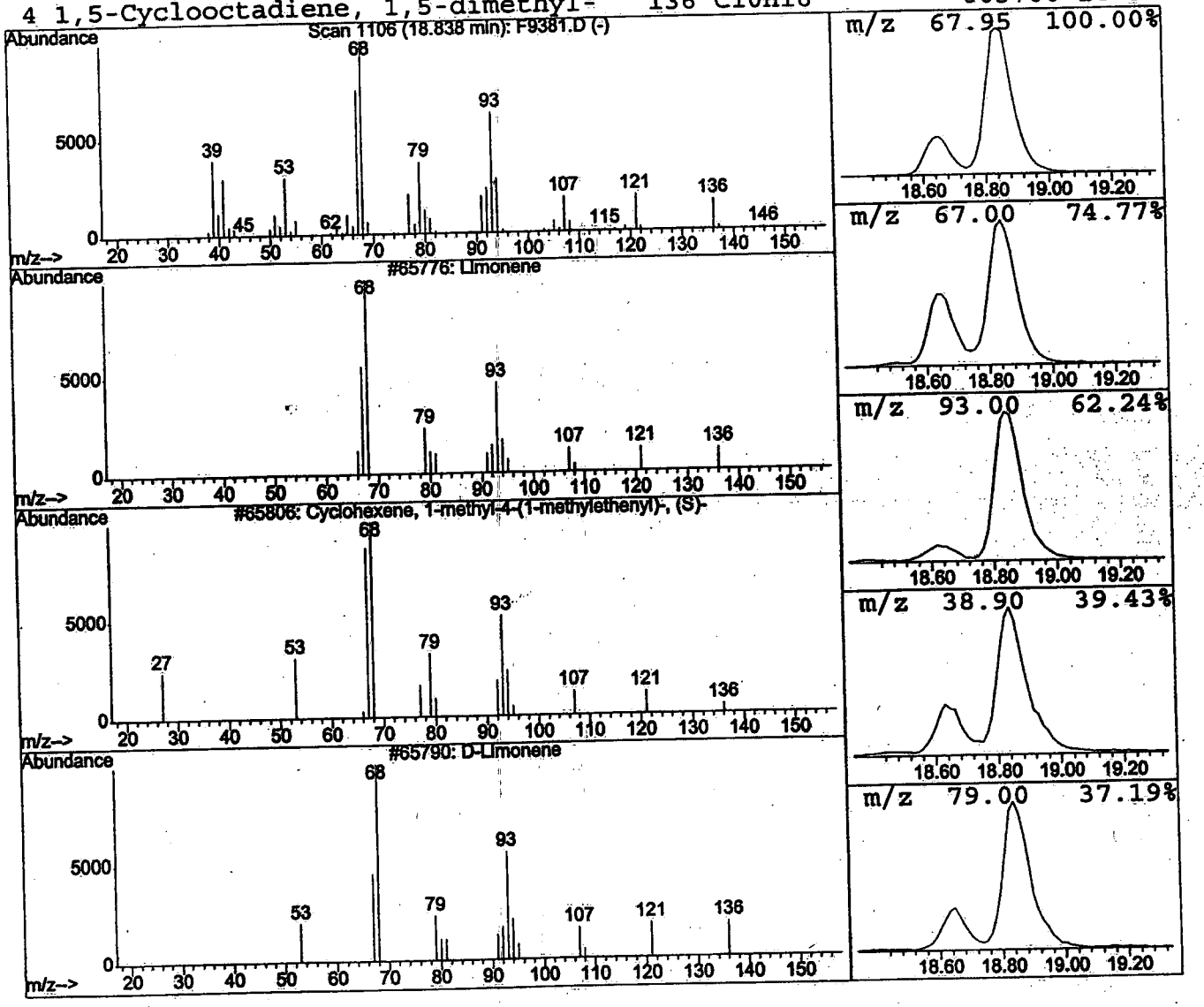
Peak Number 5 Unknown aromatic Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
18.84	208.31 UG	35456700	Chlorobenzene-d5	14.84

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Limonene	136	C10H16	000138-86-3	94
2	Cyclohexene, 1-methyl-4-(1-methylet	136	C10H16	005989-54-8	90
3	D-Limonene	136	C10H16	005989-27-5	87
4	1,5-Cyclooctadiene, 1,5-dimethyl-	136	C10H16	003760-14-3	83



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Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-26-01\F9381.D
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Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01,20
MS Integration Params: LSCINT.P

Vial: 45
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

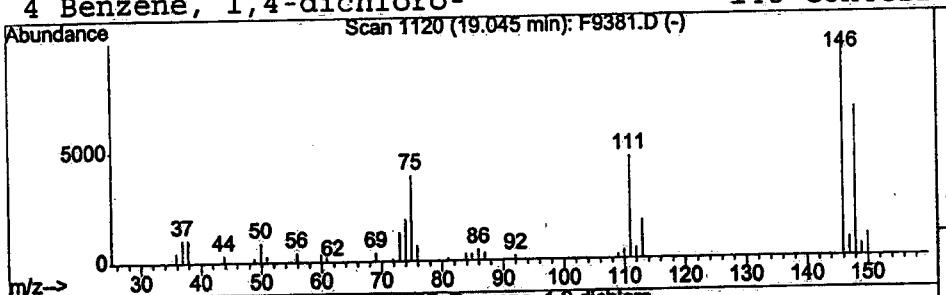
Quant Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Library : C:\DATABASE\NBS75K.L

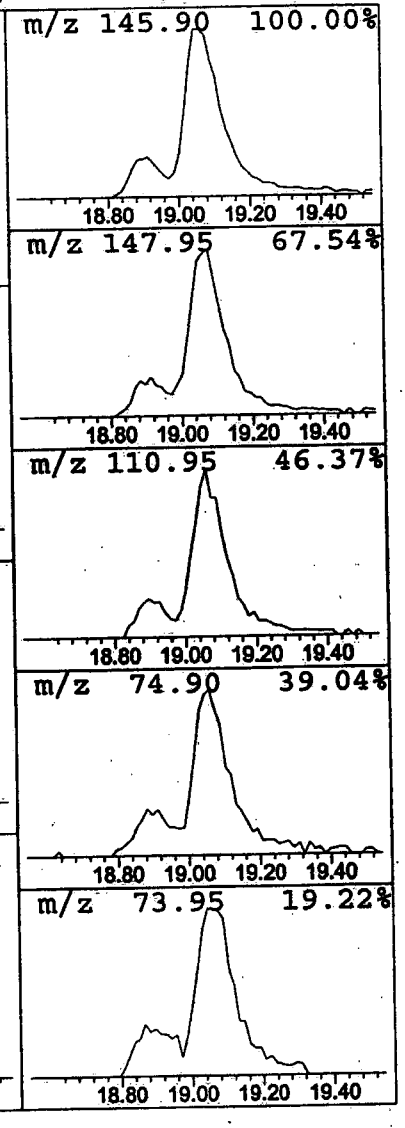
****

Peak Number 6 Substituted benzene — Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
19.05	21.96 UG	3737520	Chlorobenzene-d5	14.84

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2-dichloro-	146	C6H4Cl2	000095-50-1	92
2	Benzene, 1,2-dichloro-	146	C6H4Cl2	000095-50-1	91
3	Benzene, 1,4-dichloro-	146	C6H4Cl2	000106-46-7	87
4	Benzene, 1,4-dichloro-	146	C6H4Cl2	000106-46-7	87





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Library Search Compound Report

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Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01,20
MS Integration Params: LSCINT.P

Vial: 45
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Library : C:\DATABASE\NBS75K.L

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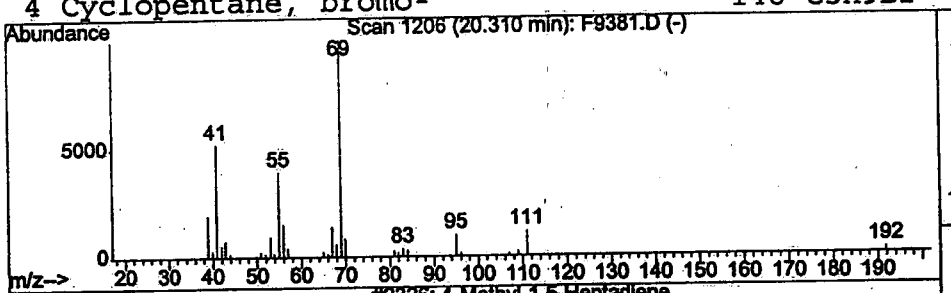
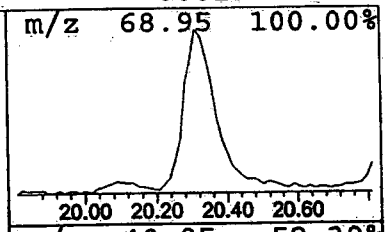
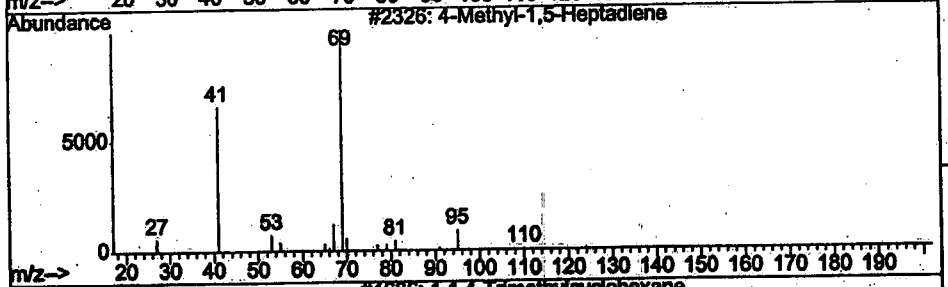
Peak Number 7 Unknown hydrocarbon Concentration Rank 7

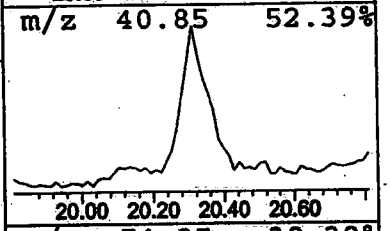
R.T.	EstConc	Area	Relative to ISTD	R.T.
20.31	13.29 UG	2261890	Chlorobenzene-d5	14.84

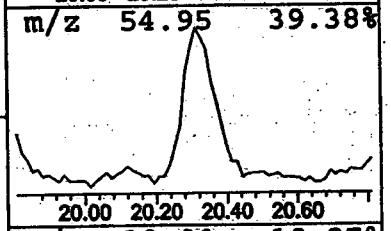
Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	4-Methyl-1,5-Heptadiene	110	C8H14	000998-94-7	59
2	1,1,4-Trimethylcyclohexane	126	C9H18	007094-27-1	56
3	1,6-Octadiene, 3,5-dimethyl-, cis-	138	C10H18	000000-00-0	53
4	Cyclopentane, bromo-	148	C5H9Br	000137-43-9	50

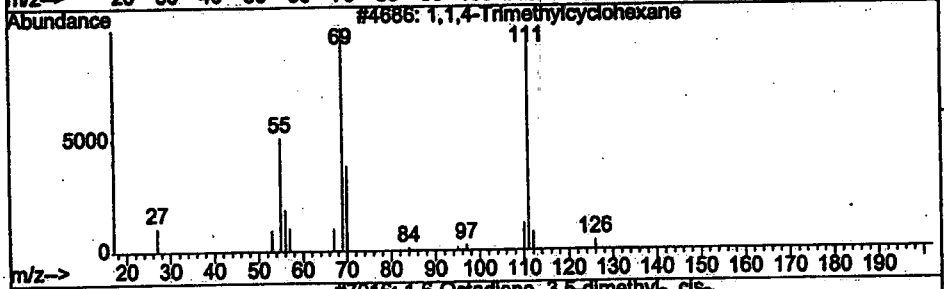


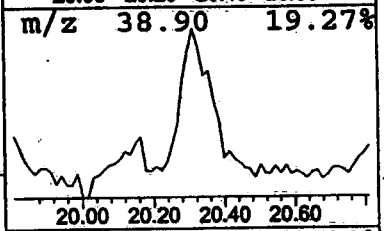


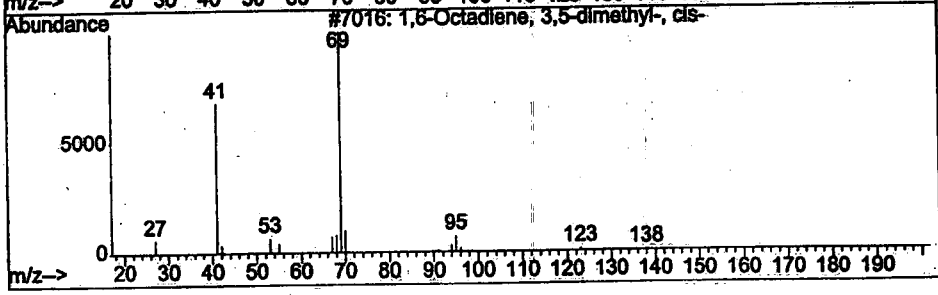


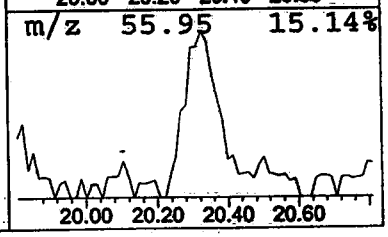












Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-26-01\F9381.D
Acq On : 27 Mar 2001 14:27
Sample : S-14,1840-005,M,0.002g
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01,20
MS Integration Params: LSCINT.P

Vial: 45
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

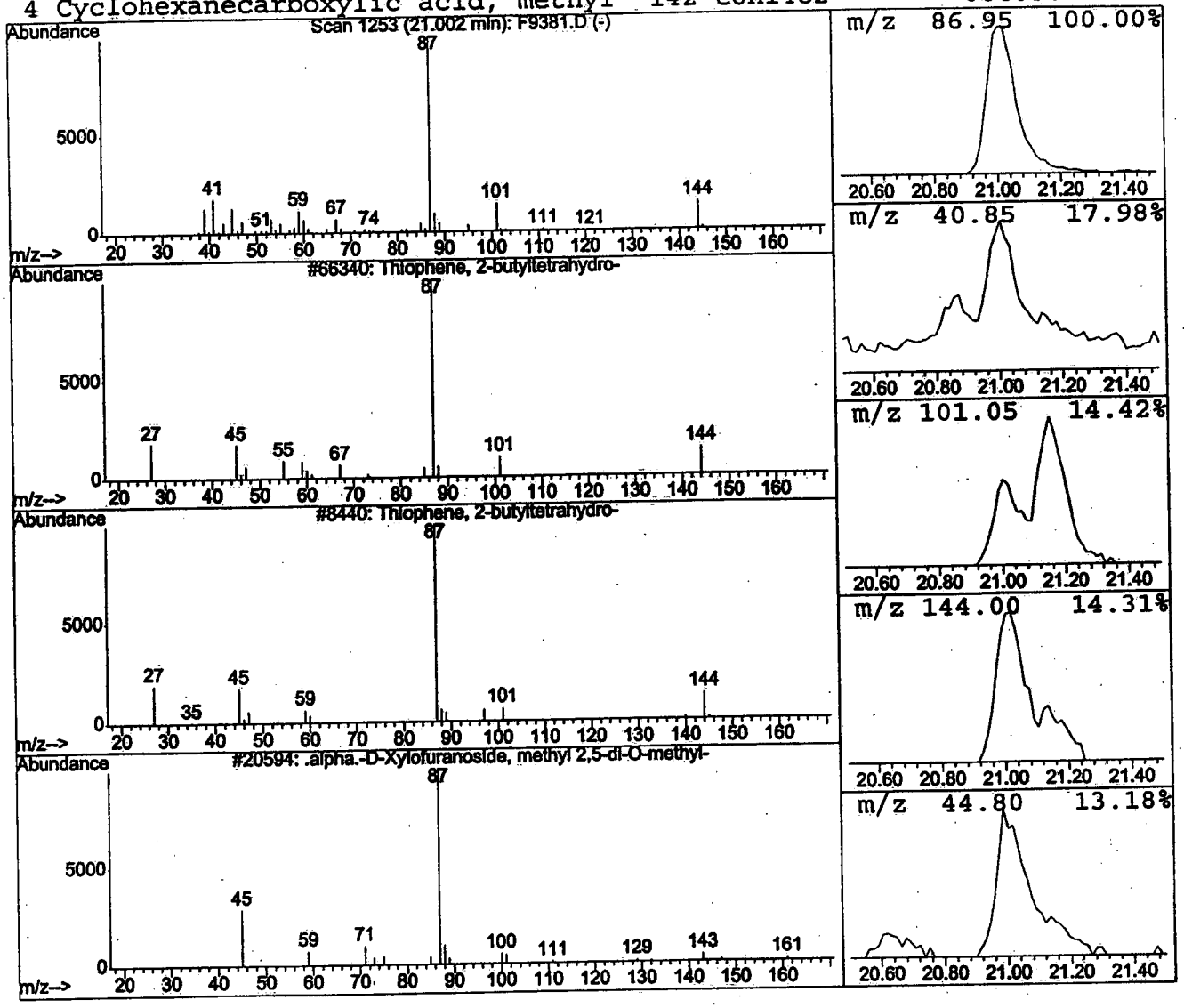
Quant Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Library : C:\DATABASE\NBS75K.L

****

Peak Number 8 Unknown aromatic Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
21.00	15.05 UG	2561030	Chlorobenzene-d5	14.84

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Thiophene, 2-butyltetrahydro-	144	C8H16S	001613-49-6	87
2	Thiophene, 2-butyltetrahydro-	144	C8H16S	001613-49-6	80
3	.alpha.-D-Xylofuranoside, methyl 2,	192	C8H16O5	035007-52-4	64
4	Cyclohexanecarboxylic acid, methyl	142	C8H14O2	004630-82-4	53



730

Library Search Compound Report

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Sample : S-14,1840-005,M,0.002g
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01,20
MS Integration Params: LSCINT.P

Vial: 45
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

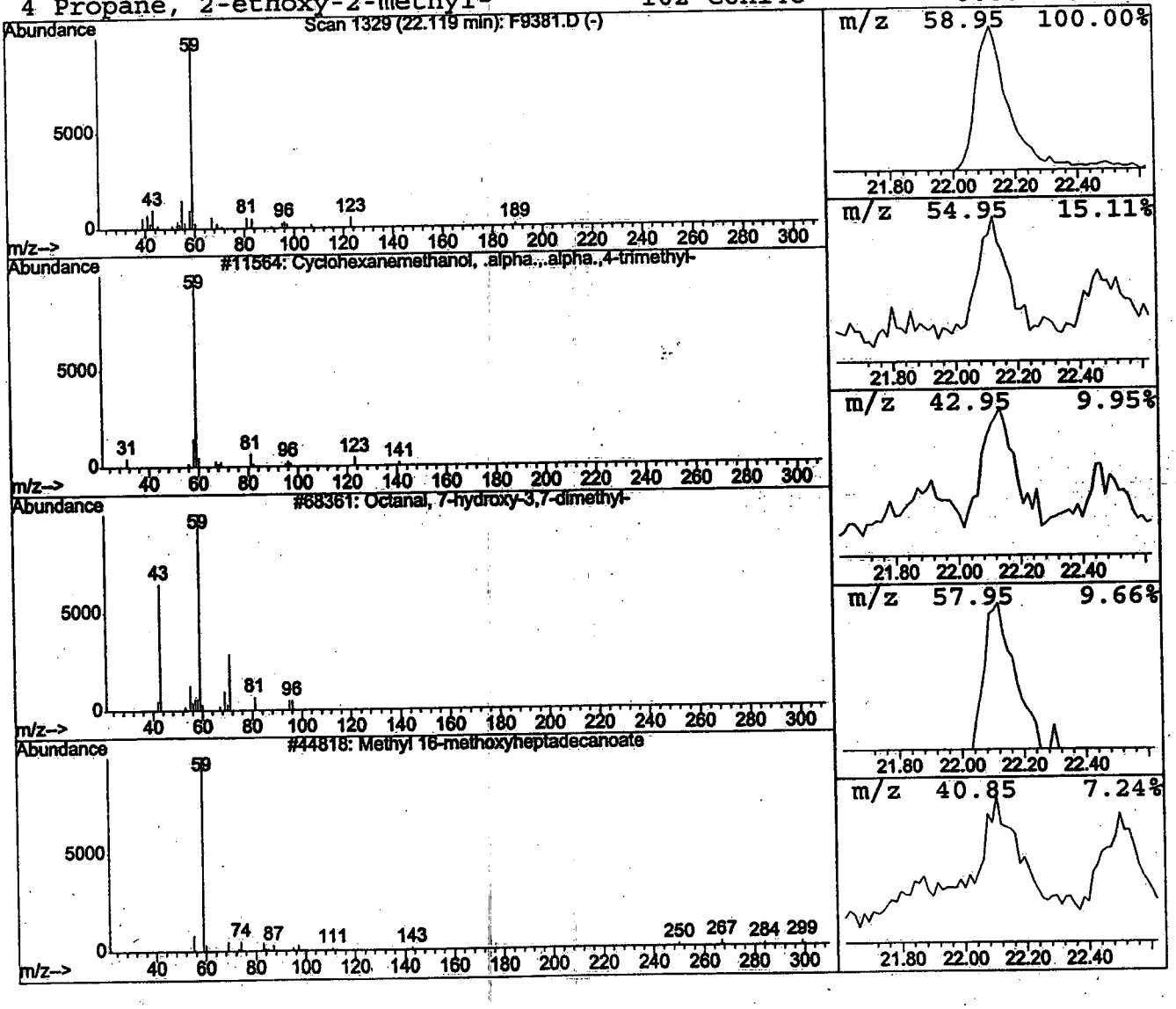
Quant Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Library : C:\DATABASE\NBS75K.L

****

Peak Number 9 Unknown — Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
22.12	9.50 UG	1617680	Chlorobenzene-d5	14.84

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexanemethanol, .alpha.,.alpha	156	C10H20O	000498-81-7	45
2	Octanal, 7-hydroxy-3,7-dimethyl-	172	C10H20O2	000107-75-5	39
3	Methyl 16-methoxyheptadecanoate	314	C19H38O3	000000-00-0	38
4	Propane, 2-ethoxy-2-methyl-	102	C6H14O	000637-92-3	36



000123

Library Search Compound Report

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Sample : S-14,1840-005,M,0.002g
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01,20
MS Integration Params: LSCINT.P

Vial: 45
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

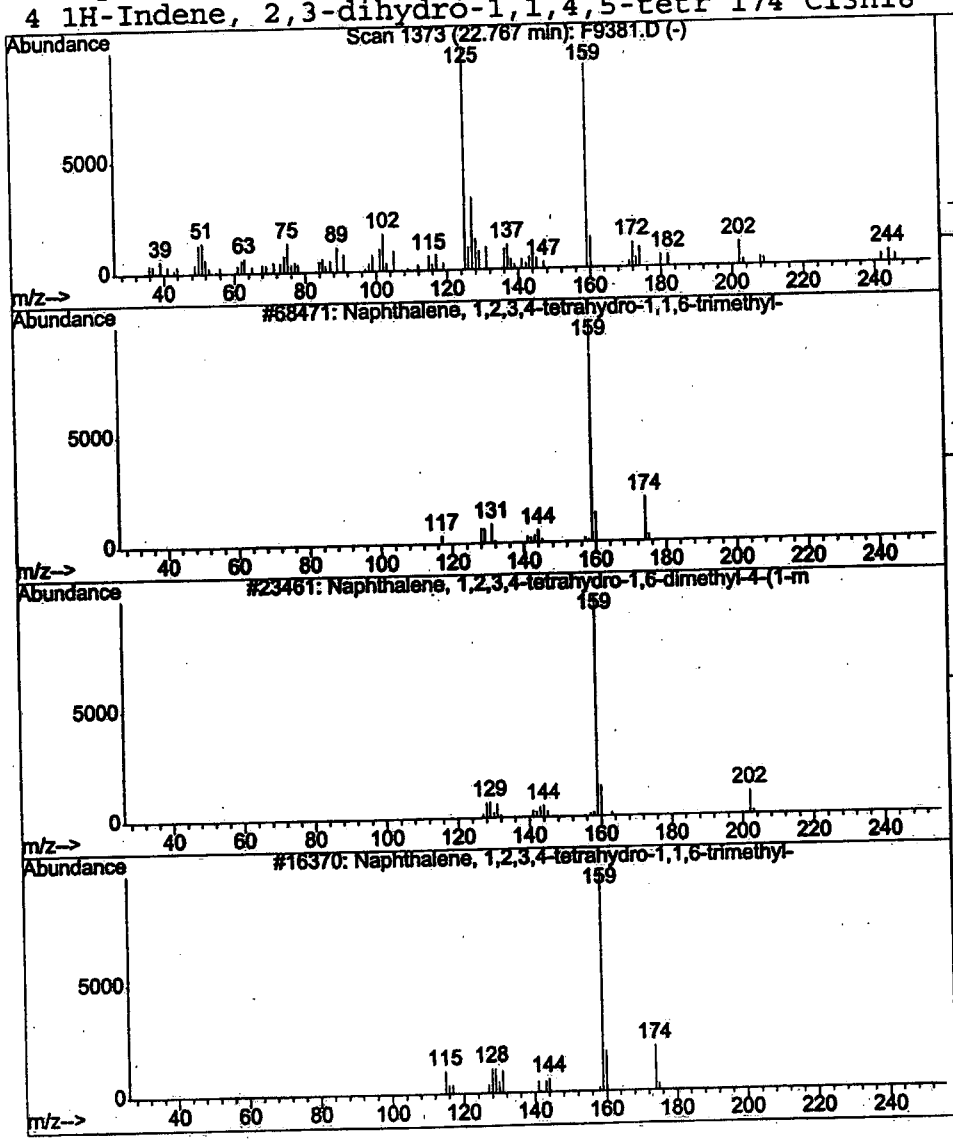
Quant Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Library : C:\DATABASE\NBS75K.L

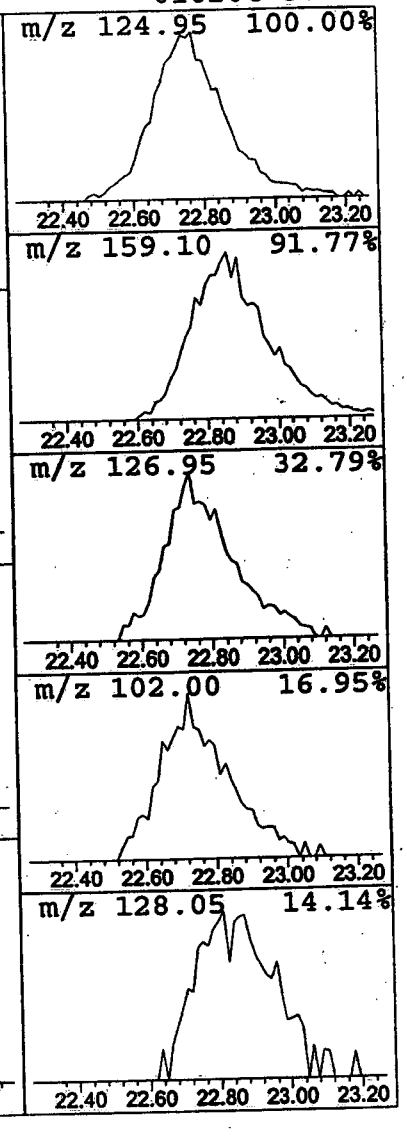
****

Peak Number 10 Unknown aromatic — Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
22.77	39.14 UG	6661640	Chlorobenzene-d5	14.84

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Naphthalene, 1,2,3,4-tetrahydro-1,1	174	C13H18	000475-03-6	42
2	Naphthalene, 1,2,3,4-tetrahydro-1,6	202	C15H22	000483-77-2	42
3	Naphthalene, 1,2,3,4-tetrahydro-1,1	174	C13H18	000475-03-6	42
4	1H-Indene, 2,3-dihydro-1,1,4,5-tetr	174	C13H18	016204-57-2	38





732

Library Search Compound Report

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Sample : S-14,1840-005,M,0.002g
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01,20
MS Integration Params: LSCINT.P

Vial: 45
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Library : C:\DATABASE\NBS75K.L

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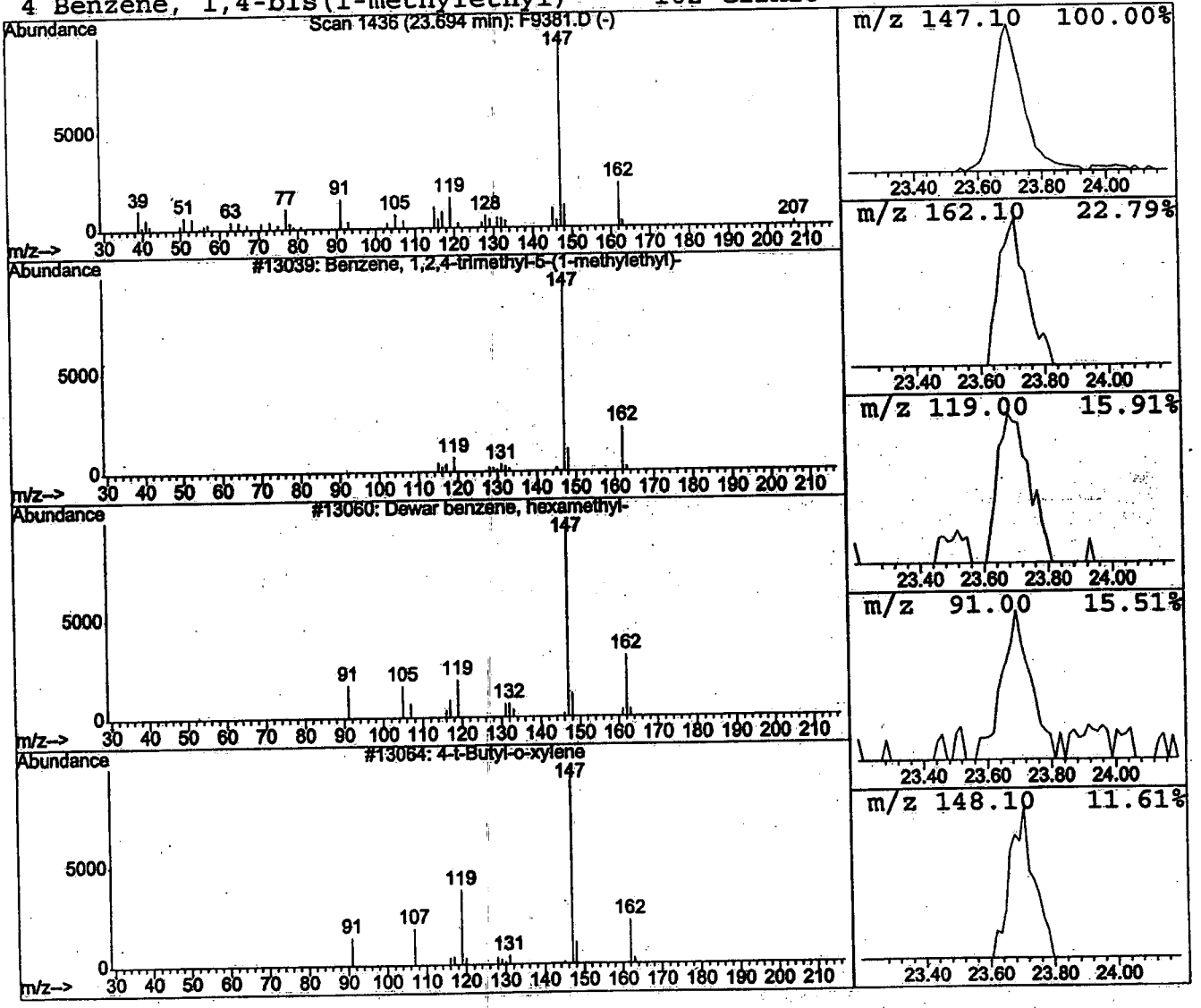
Peak Number 11 Substituted benzene Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
23.69	7.99 UG	1360310	Chlorobenzene-d5	14.84

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,4-trimethyl-5-(1-methy	162	C12H18	010222-95-4	93
2	Dewar benzene, hexamethyl-	162	C12H18	007641-77-2	87
3	4-t-Butyl-o-xylene	162	C12H18	007397-06-0	81
4	Benzene, 1,4-bis(1-methylethyl)-	162	C12H18	000100-18-5	74



000175

733

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-26-01\F9381.D
Acq On : 27 Mar 2001 14:27
Sample : S-14,1840-005,M,0.002g
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01,20
MS Integration Params: LSCINT.P

Vial: 45
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

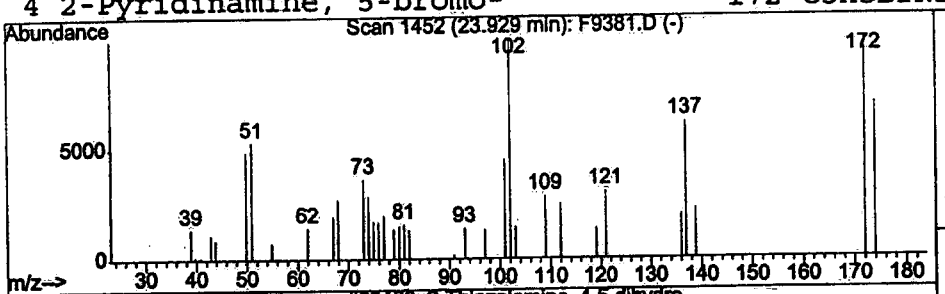
Quant Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Library : C:\DATABASE\NBS75K.L

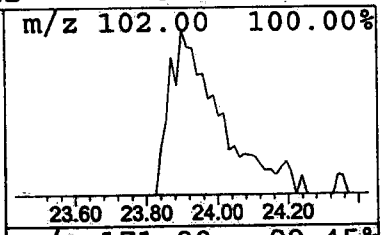
****

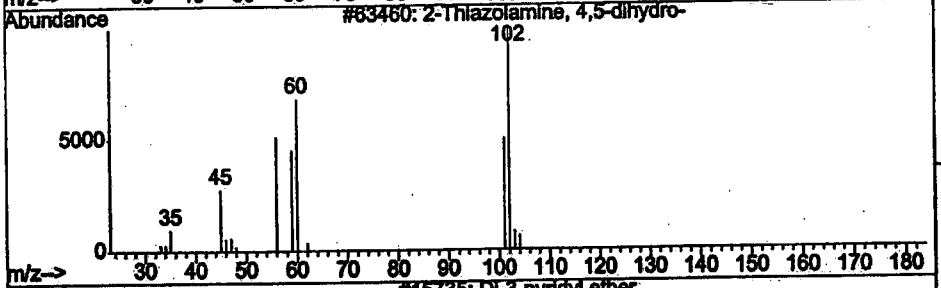
Peak Number 12 Unknown aromatic Concentration Rank 14

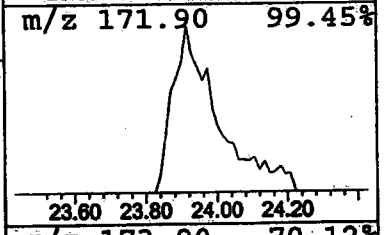
R.T.	EstConc	Area	Relative to ISTD	R.T.
23.93	5.31 UG	903303	Chlorobenzene-d5	14.84

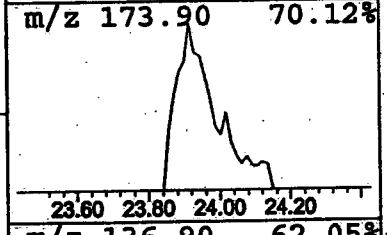
Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2-Thiazolamine, 4,5-dihydro-	102	C3H6N2S	001779-81-3	9
2	Di-3-pyridyl ether	172	C10H8N2O	053258-95-0	9
3	Thiophene, 3-(dihydro-3(2H)-thienyl	172	C8H12S2	040697-97-0	9
4	2-Pyridinamine, 5-bromo-	172	C5H5BrN2	001072-97-5	9

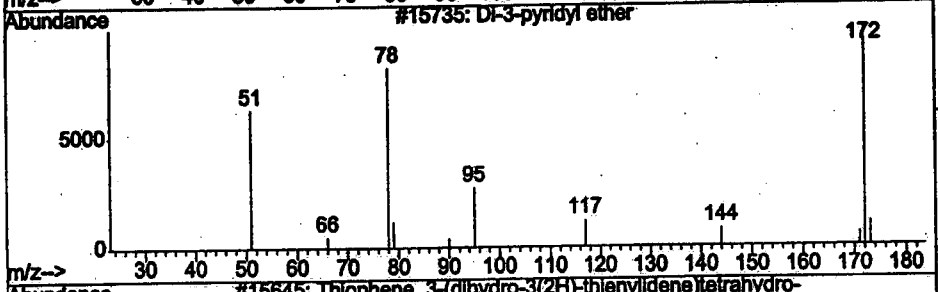


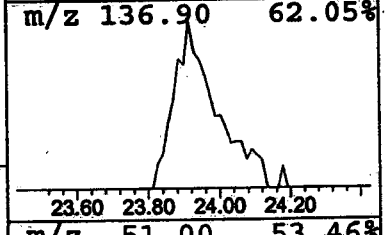


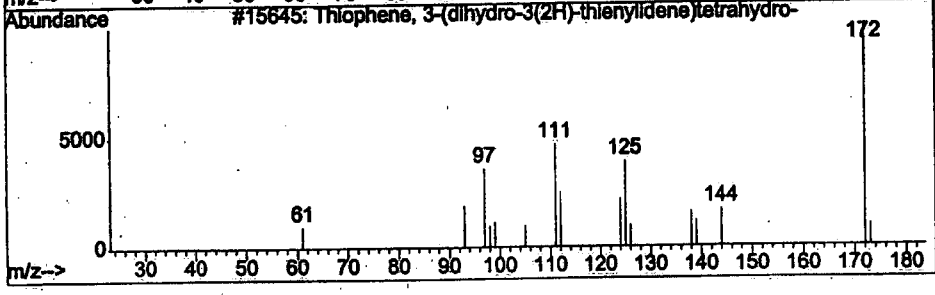


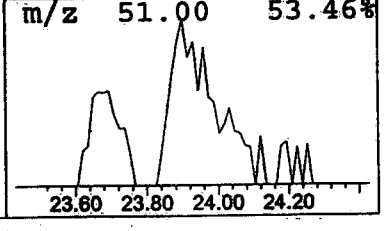












734

000176

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-26-01\F9381.D
Acq On : 27 Mar 2001 14:27
Sample : S-14,1840-005,M,0.002g
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01,20
MS Integration Params: LSCINT.P

Vial: 45
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

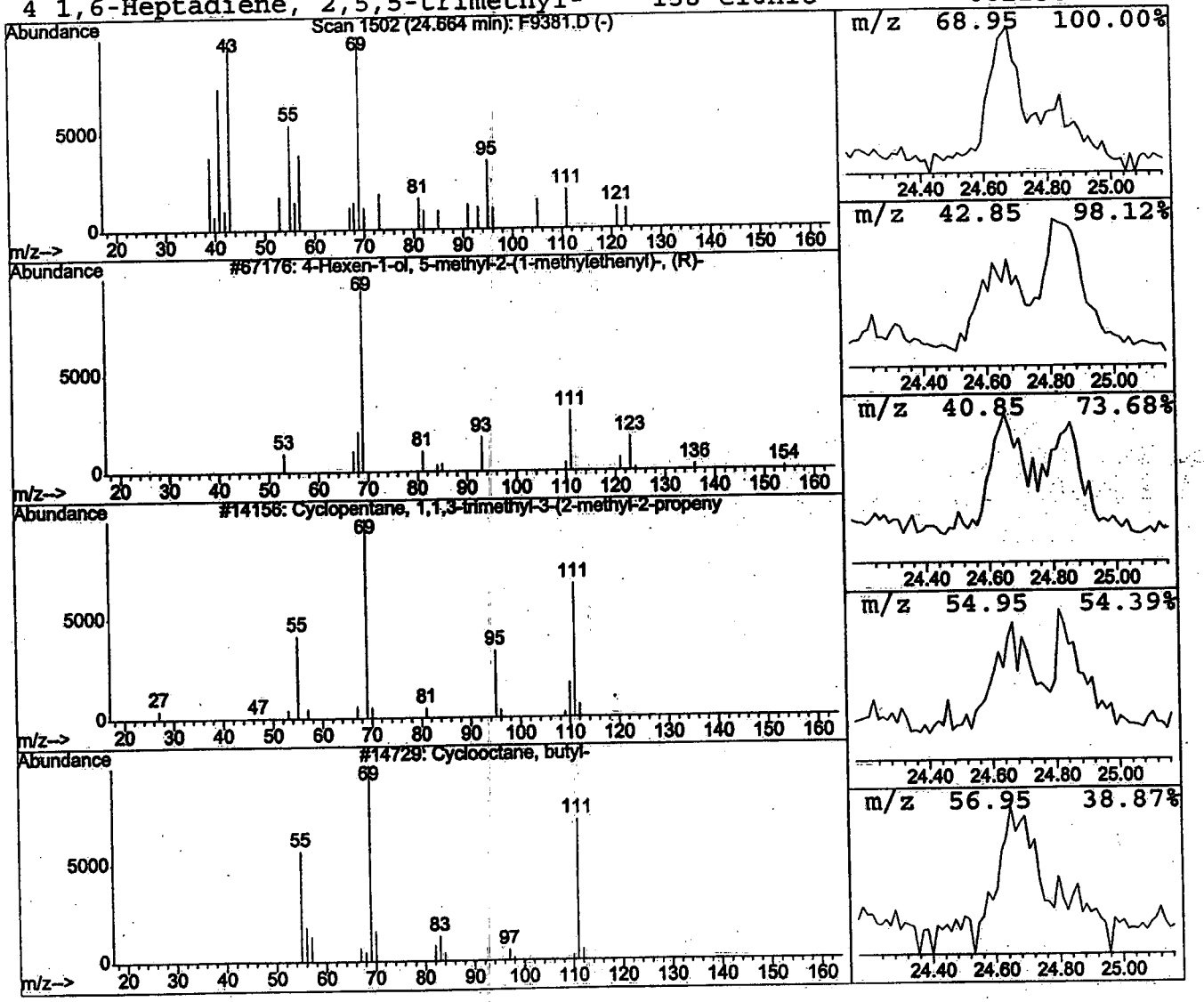
Quant Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Library : C:\DATABASE\NBS75K.L

****

Peak Number 13 Unknown hydrocarbon Concentration Rank 15

R.T.	EstConc	Area	Relative to ISTD	R.T.
24.66	5.01 UG	853197	Chlorobenzene-d5	14.84

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	4-Hexen-1-ol, 5-methyl-2-(1-methyle	154	C10H18O	000498-16-8	38
2	Cyclopentane, 1,1,3-trimethyl-3-(2-	166	C12H22	074421-09-3	37
3	Cyclooctane, butyl-	168	C12H24	016538-93-5	35
4	1,6-Heptadiene, 2,5,5-trimethyl-	138	C10H18	062238-28-2	32



735

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-26-01\F9381.D
Acq On : 27 Mar 2001 14:27
Sample : S-14,1840-005,M,0.002g
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01,20
MS Integration Params: LSCINT.P

Vial: 45
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

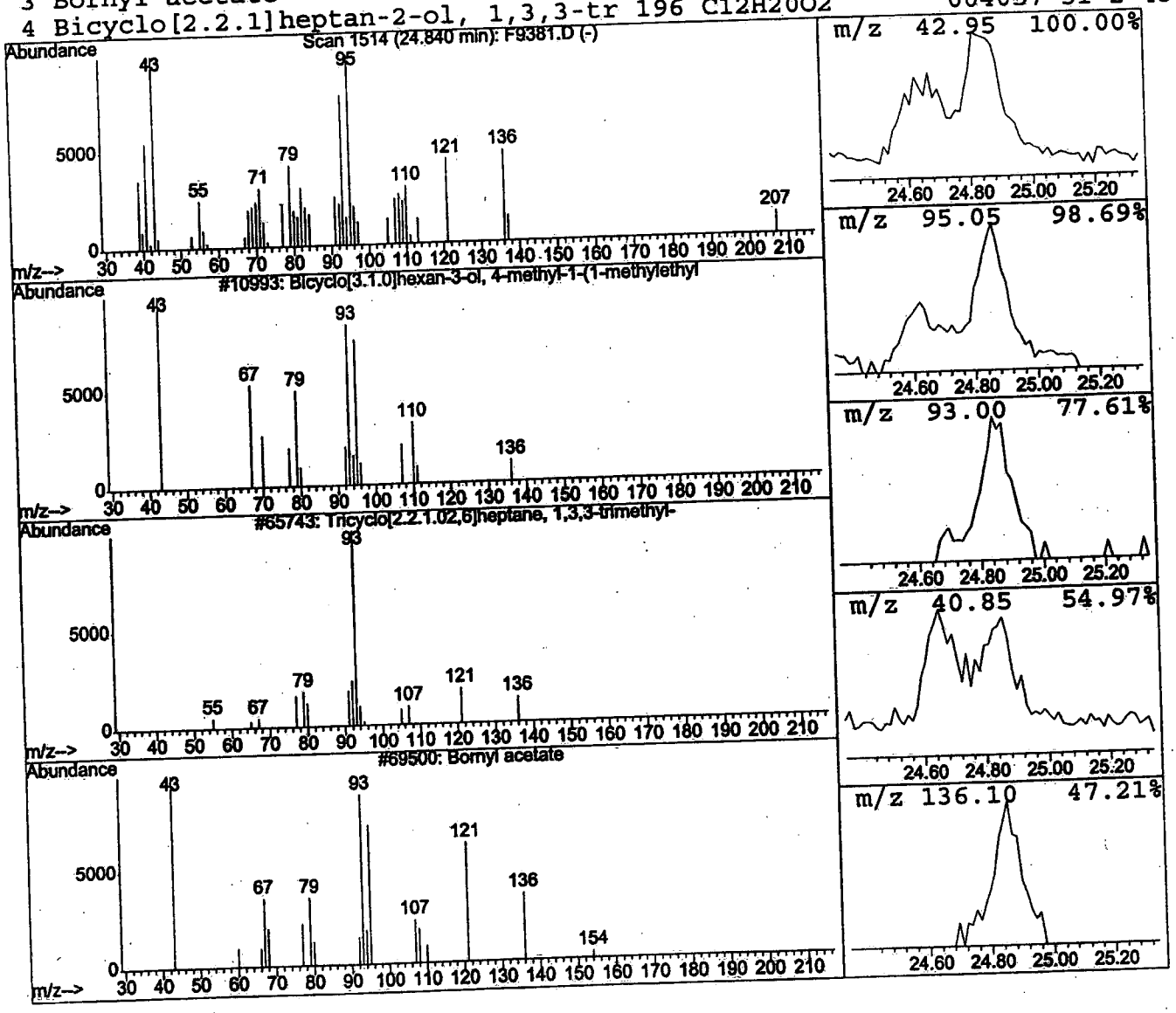
Quant Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Library : C:\DATABASE\NBS75K.L

****

Peak Number 14 Unknown Concentration Rank 12

R.T.	EstConc	Area	Relative to ISTD	R.T.
24.84	7.36 UG	1253450	Chlorobenzene-d5	14.84

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Bicyclo[3.1.0]hexan-3-ol, 4-methyl-	154	C10H18O	000513-23-5	50
2	Tricyclo[2.2.1.02,6]heptane, 1,3,3-	136	C10H16	000488-97-1	46
3	Bornyl acetate	196	C12H20O2	000076-49-3	43
4	Bicyclo[2.2.1]heptan-2-ol, 1,3,3-tr	196	C12H20O2	004057-31-2	43



000178

736

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-26-01\F9381.D
Acq On : 27 Mar 2001 14:27
Sample : S-14,1840-005,M,0.002g
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01,20
MS Integration Params: LSCINT.P

Vial: 45
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

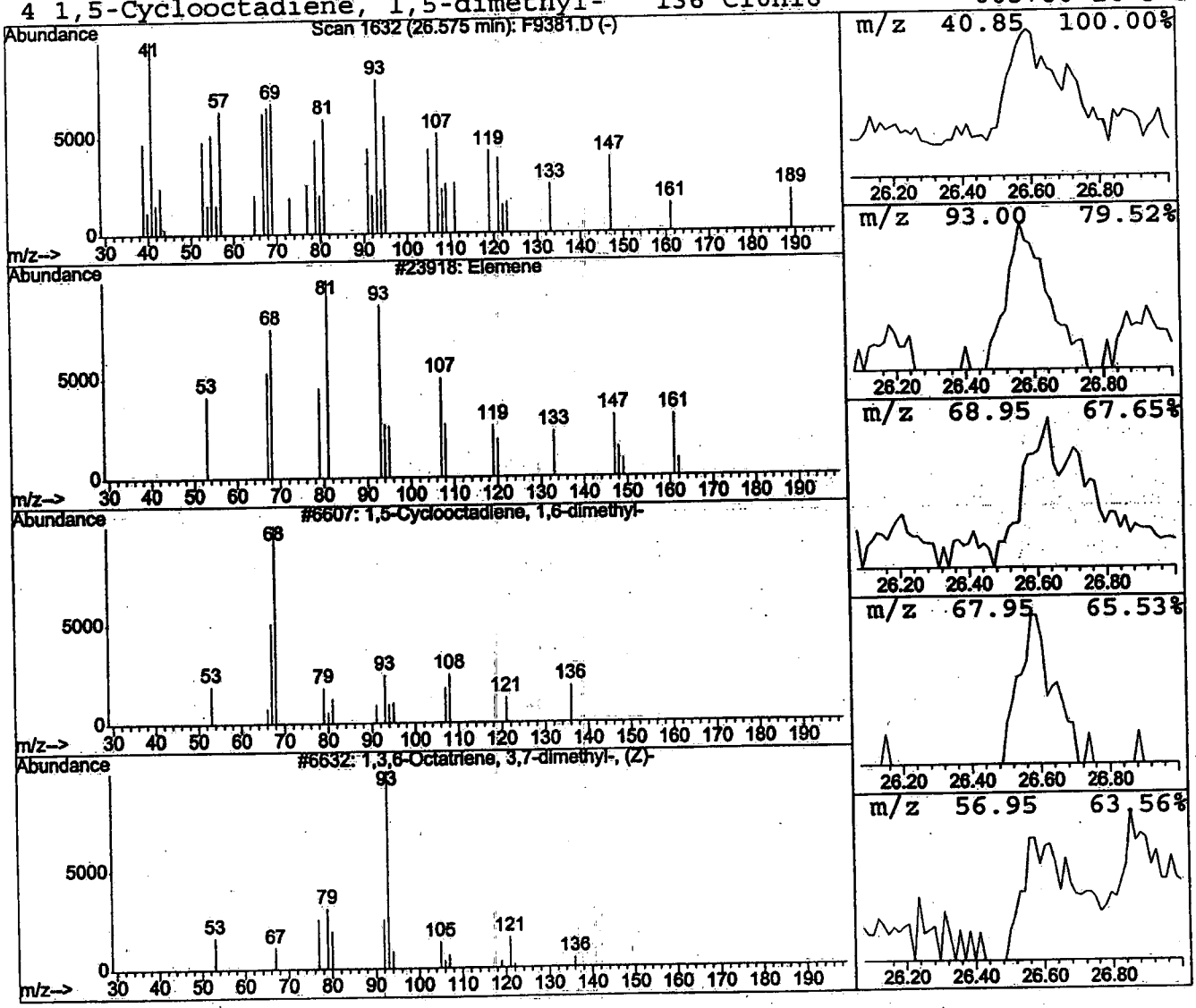
Quant Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Library : C:\DATABASE\NBS75K.L

****

Peak Number 15 Unknown aromatic — Concentration Rank 11

R.T.	EstConc	Area	Relative to ISTD	R.T.
26.57	7.37 UG	1254790	Chlorobenzene-d5	14.84

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Elemene	204	C15H24	011029-06-4	64
2	1,5-Cyclooctadiene, 1,6-dimethyl-	136	C10H16	003760-13-2	38
3	1,3,6-Octatriene, 3,7-dimethyl-, (Z	136	C10H16	003338-55-4	38
4	1,5-Cyclooctadiene, 1,5-dimethyl-	136	C10H16	003760-14-3	38



737

Quantitation Report (QT/LSC Reviewed)

Data File : C:\HPCHEM\1\DATA\03-26-01\F9380.D
Acq On : 27 Mar 2001 13:54
Sample : S-15,1840-006,M,0.009g
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01,5
Vial: 44
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

IS Integration Params: rteint.p
Quant Time: Mar 27 14:58 2001
Quant Results File: FME0316.RES

Quant Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Last Update : Fri Mar 16 14:54:56 2001
Response via : Initial Calibration
DataAcq Meth : VOAF

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	8.79	168	3289214	50.00	UG		0.06
31) 1,4-Difluorobenzene	9.96	114	3297624	50.00	UG		0.06
50) Chlorobenzene-d5	14.83	117	2454901	50.00	UG		0.06
System Monitoring Compounds							
30) 1,2-Dichloroethane-d4	9.27	65	339765	10.34	UG		0.07
Spiked Amount 50.000	Range 27 - 176		Recovery =	20.68%#			
41) Toluene-d8	12.37	98	660912	10.90	UG		0.08
Spiked Amount 50.000	Range 20 - 158		Recovery =	21.80%			
59) Bromofluorobenzene	16.93	95	410422	7.73	UG		0.07
Spiked Amount 50.000	Range 28 - 148		Recovery =	15.46%#			
Target Compounds							Qvalue
32) Benzene	9.36	78	384711	5.25	UG		99
42) Toluene	12.48	92	1933168	42.54	UG		99
74) 1,2-Dichlorobenzene	19.77	146	123052	2.59	UG	#	67

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

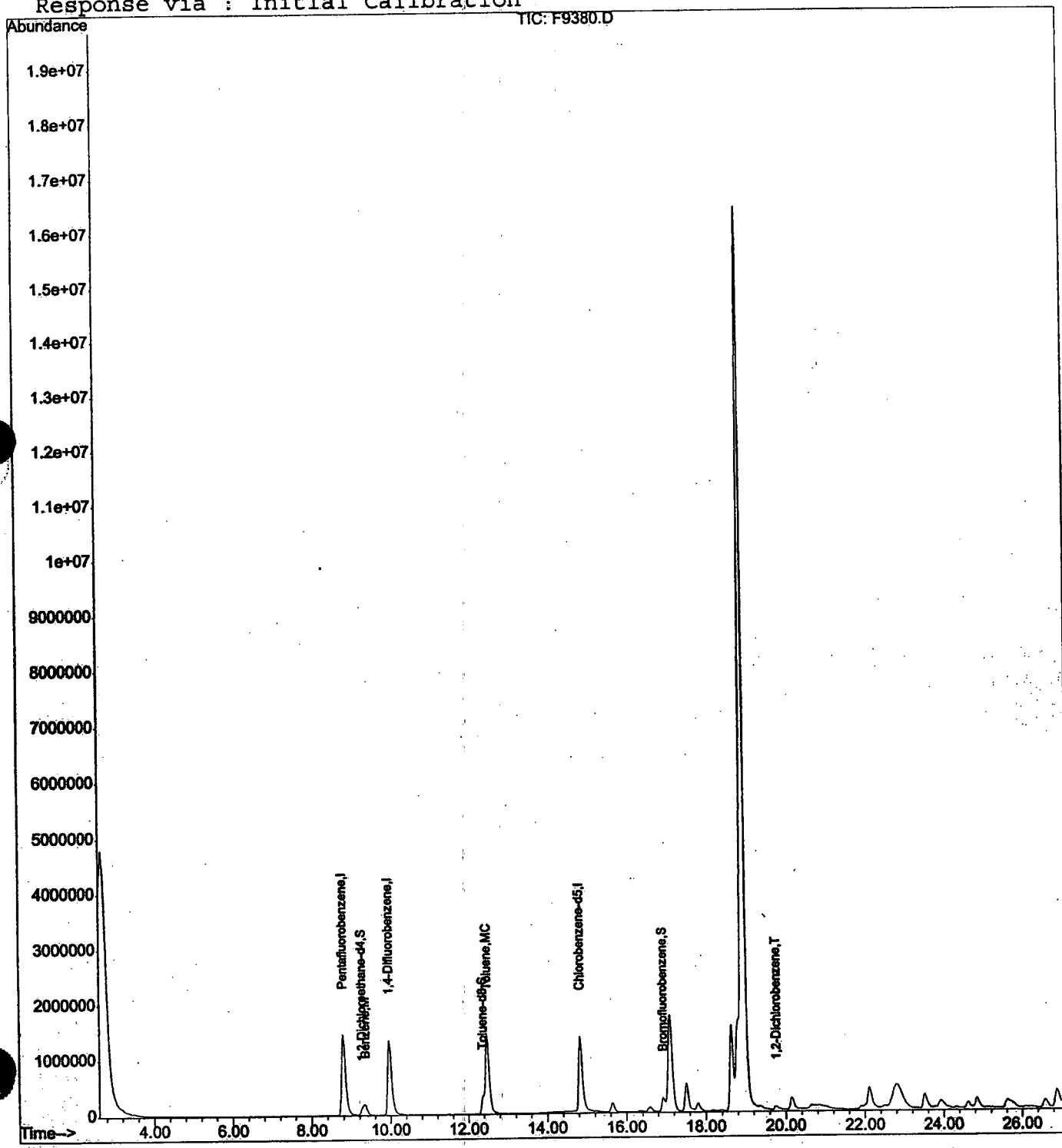
Quantitation Report

Data File : C:\HPCHEM\1\DATA\03-26-01\F9380.D
Acq On : 27 Mar 2001 13:54
Sample : S-15,1840-006,M,0.009g
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01,5
MS Integration Params: rteint.p
Quant Time: Mar 27 14:58 2001

Vial: 44
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

Quant Results File: FME0316.RES

Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Last Update : Fri Mar 16 14:54:56 2001
Response via : Initial Calibration



739

LSC Area Percent Report

Data File : C:\HPCHEM\1\DATA\03-26-01\F9380.D
Acq On : 27 Mar 2001 13:54
Sample : S-15,1840-006,M,0.009g
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01,5
MS Integration Params: LSCINT.P

Vial: 44
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Smoothing : ON
Sampling : 1
Start Thrs: 0.2
Stop Thrs : 0

Filtering: 5
Min Area: 3 % of largest Peak
Max Peaks: 100
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Signal : TIC

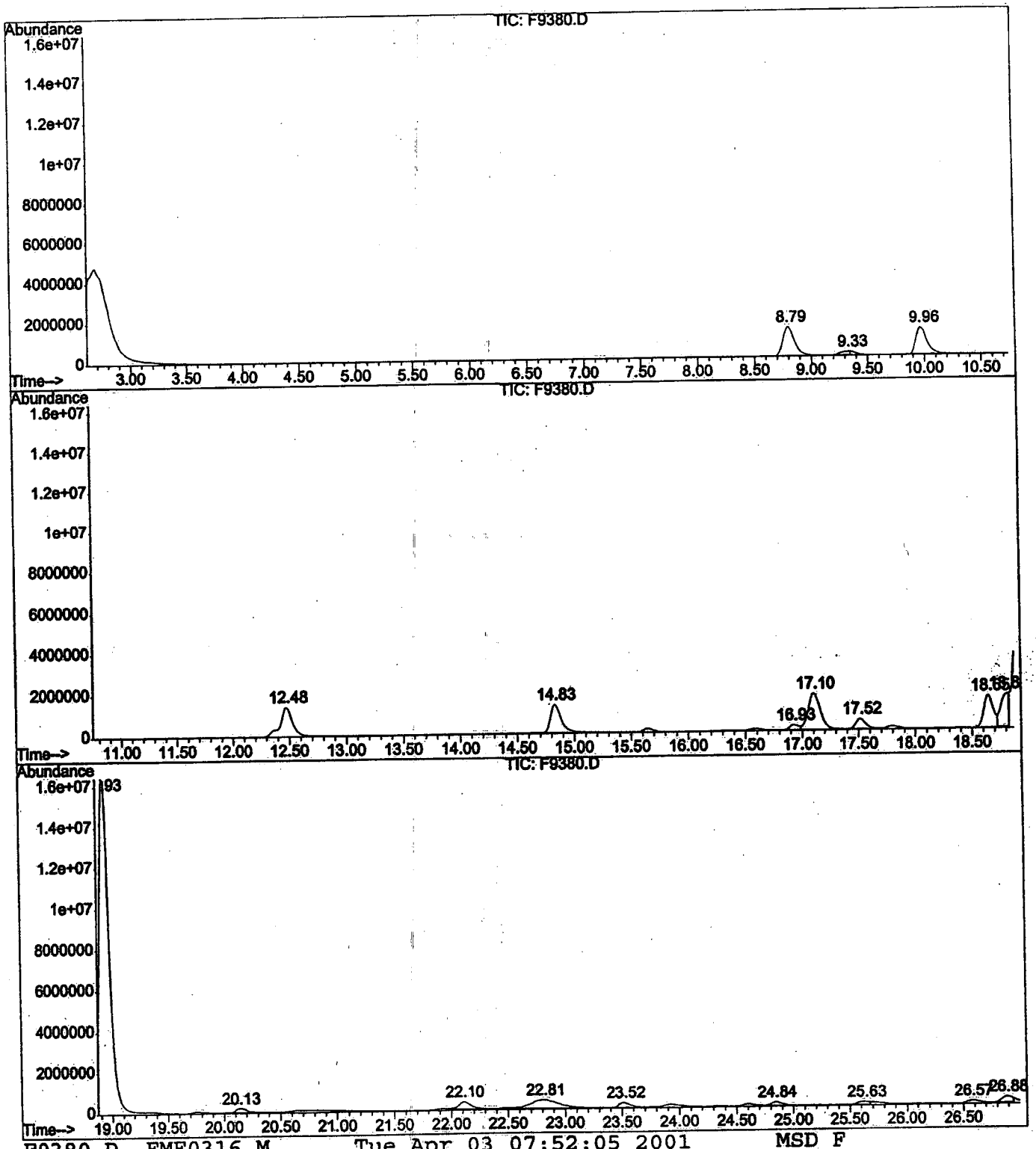
peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	8.789	413	422	440	rBV	1453852	10397000	10.05%	5.268%
2	9.333	447	459	460	rBV3	188040	1185669	1.15%	0.601%
3	9.964	494	502	522	rBV	1346417	9082732	8.78%	4.602%
4	12.476	658	673	687	rBV2	1416598	10827880	10.46%	5.486%
5	14.826	825	833	849	rBV	1349787	8706005	8.41%	4.411%
6	16.927	970	976	980	rBV2	244166	1421671	1.37%	0.720%
7	17.104	980	988	1008	rVV2	1742524	13134679	12.69%	6.655%
8	17.516	1008	1016	1029	rVV	498838	3103366	3.00%	1.572%
9	18.647	1084	1093	1098	rBV2	1553197	9215865	8.90%	4.669%
10	18.809	1098	1104	1105	rVV2	1609053	7955495	7.69%	4.031%
11	18.927	1105	1112	1130	rVB	16334829	103497532	100.00%	52.439%
12	20.133	1188	1194	1206	rBV4	206287	1394752	1.35%	0.707%
13	22.103	1319	1328	1343	rVB2	366505	2904884	2.81%	1.472%
14	22.810	1361	1376	1403	rVB8	424778	7220228	6.98%	3.658%
15	23.516	1415	1424	1435	rBV5	266132	1881139	1.82%	0.953%
16	24.839	1508	1514	1526	rVB5	180315	1254111	1.21%	0.635%
17	25.632	1560	1568	1571	rBV7	151378	1036615	1.00%	0.525%
18	26.573	1624	1632	1644	rBV6	144205	1198163	1.16%	0.607%
19	26.882	1645	1653	1657	rBV3	311220	1948985	1.88%	0.987%

Sum of corrected areas: 197366771

F9380.D FME0316.M Tue Apr 03 07:52:05 2001 MSD_F

LSC Report - Integrated Chromatogram

File : C:\HPCHEM\1\DATA\03-26-01\F9380.D
Operator : GREGG
Acquired : 27 Mar 2001 13:54 using AcqMethod VOAF
Instrument : 5970 - In
Sample Name: S-15,1840-006,M,0.009g
Misc Info : ENVTACT/444_ORBIS,03/23/01,03/26/01,5
Vial Number: 44
Quant File :FME0316.RES (RTE Integrator)



F9380.D FME0316.M Tue Apr 03 07:52:05 2001 MSD_F

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-26-01\F9380.D
Acq On : 27 Mar 2001 13:54
Sample : S-15,1840-006,M,0.009g
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01,5
MS Integration Params: LSCINT.P

Vial: 44
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Library : C:\DATABASE\NBS75K.L

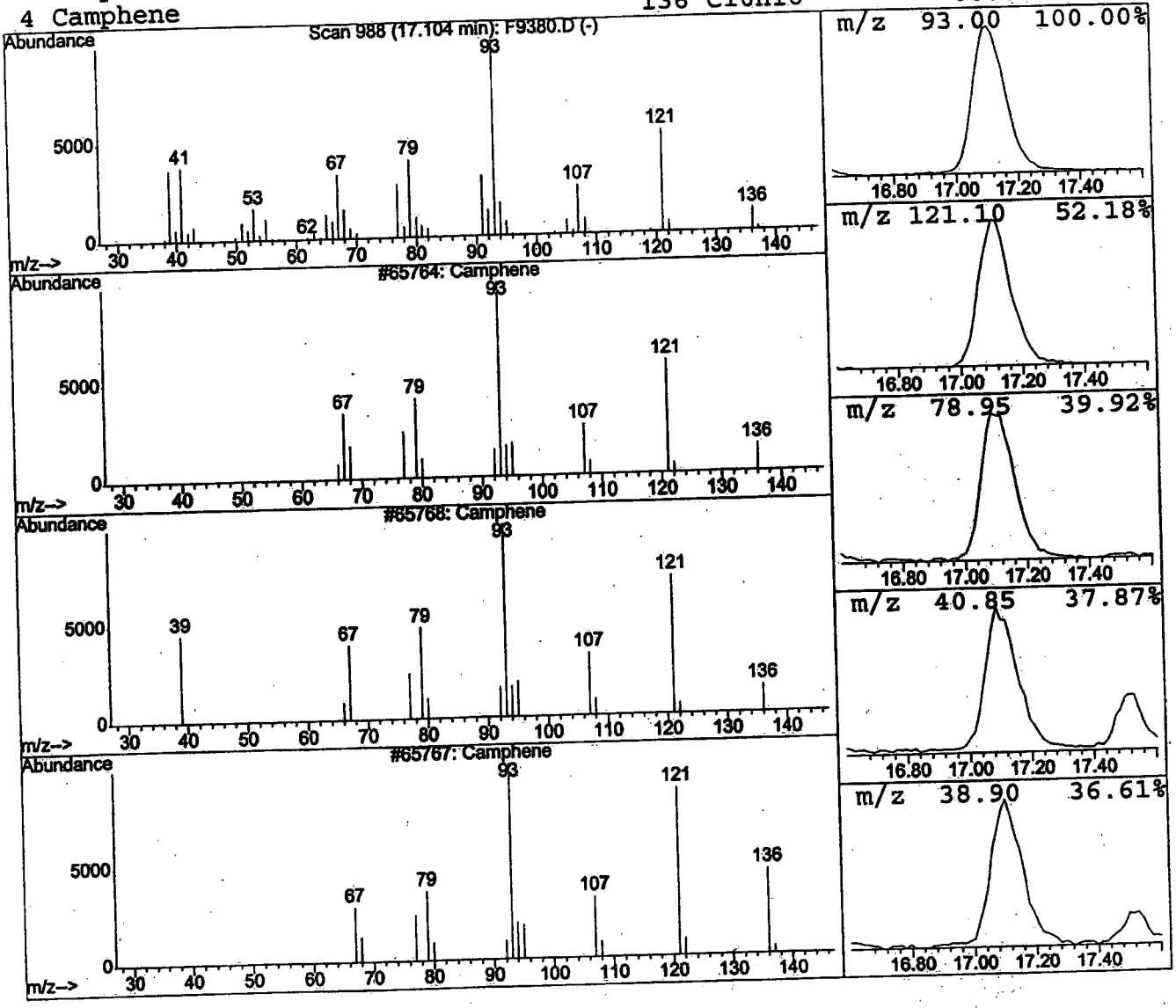
****

Peak Number 1 Unknown aromatic

Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.10	75.43 UG	13134700	Chlorobenzene-d5	14.83

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Camphene	136	C10H16	000079-92-5	95
2	Camphene	136	C10H16	000079-92-5	95
3	Camphene	136	C10H16	000079-92-5	94
4	Camphene	136	C10H16	000079-92-5	94



000184

742

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-26-01\F9380.D
Acq On : 27 Mar 2001 13:54
Sample : S-15,1840-006,M,0.009g
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01,5
MS Integration Params: LSCINT.P

Vial: 44
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

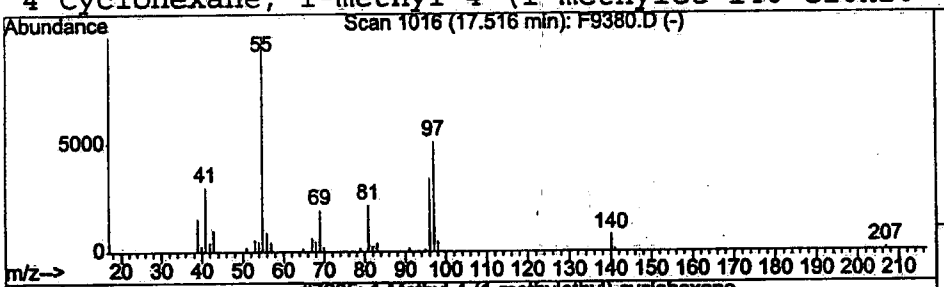
Quant Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Library : C:\DATABASE\NBS75K.L

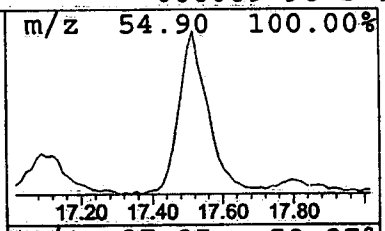
****

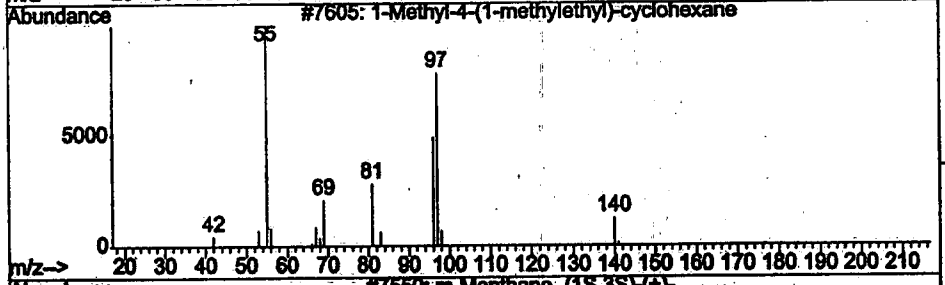
Peak Number 2 Unknown hydrocarbon Concentration Rank 6

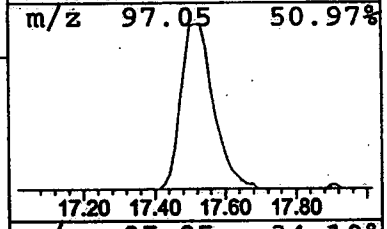
R.T.	EstConc	Area	Relative to ISTD	R.T.
17.52	17.82 UG	3103370	Chlorobenzene-d5	14.83

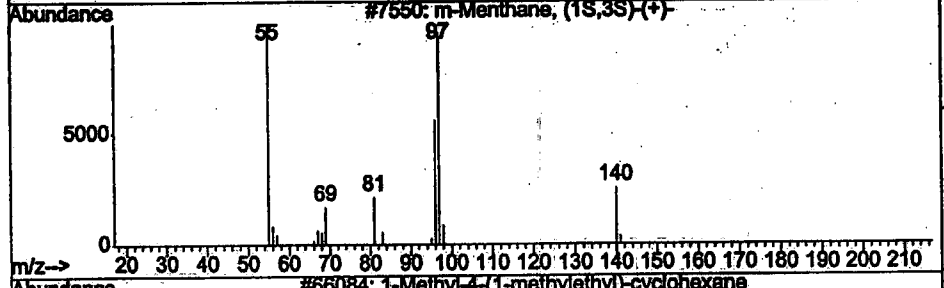
Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1-Methyl-4-(1-methylethyl)-cyclohex	140	C10H20	000099-82-1	91
2	m-Menthane, (1S,3S)-(+)-	140	C10H20	013837-67-7	91
3	1-Methyl-4-(1-methylethyl)-cyclohex	140	C10H20	000099-82-1	90
4	Cyclohexane, 1-methyl-4-(1-methylet	140	C10H20	006069-98-3	90

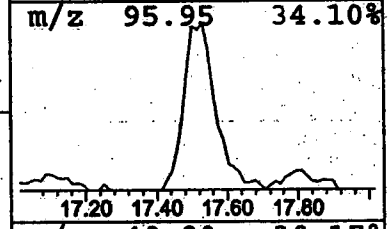


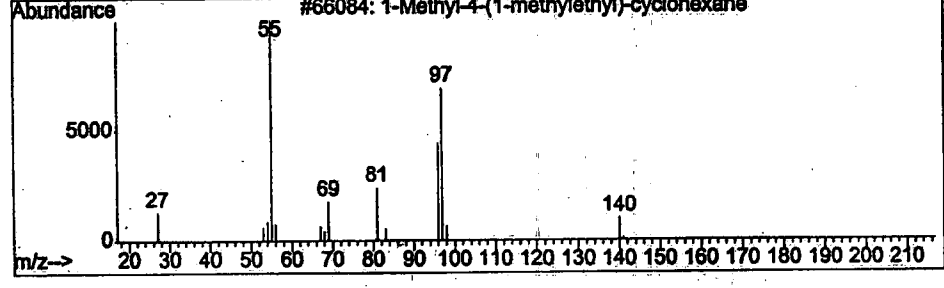


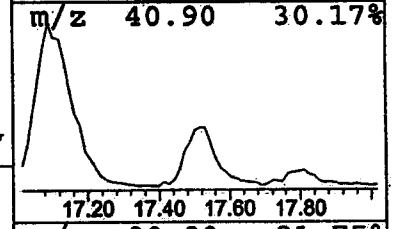


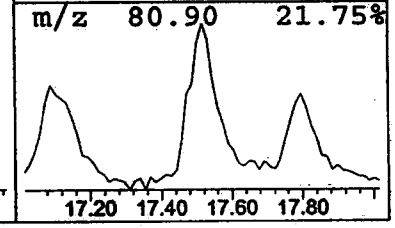












743

000185

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-26-01\F9380.D
Acq On : 27 Mar 2001 13:54
Sample : S-15,1840-006,M,0.009g
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01,5
MS Integration Params: LSCINT.P

Vial: 44
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

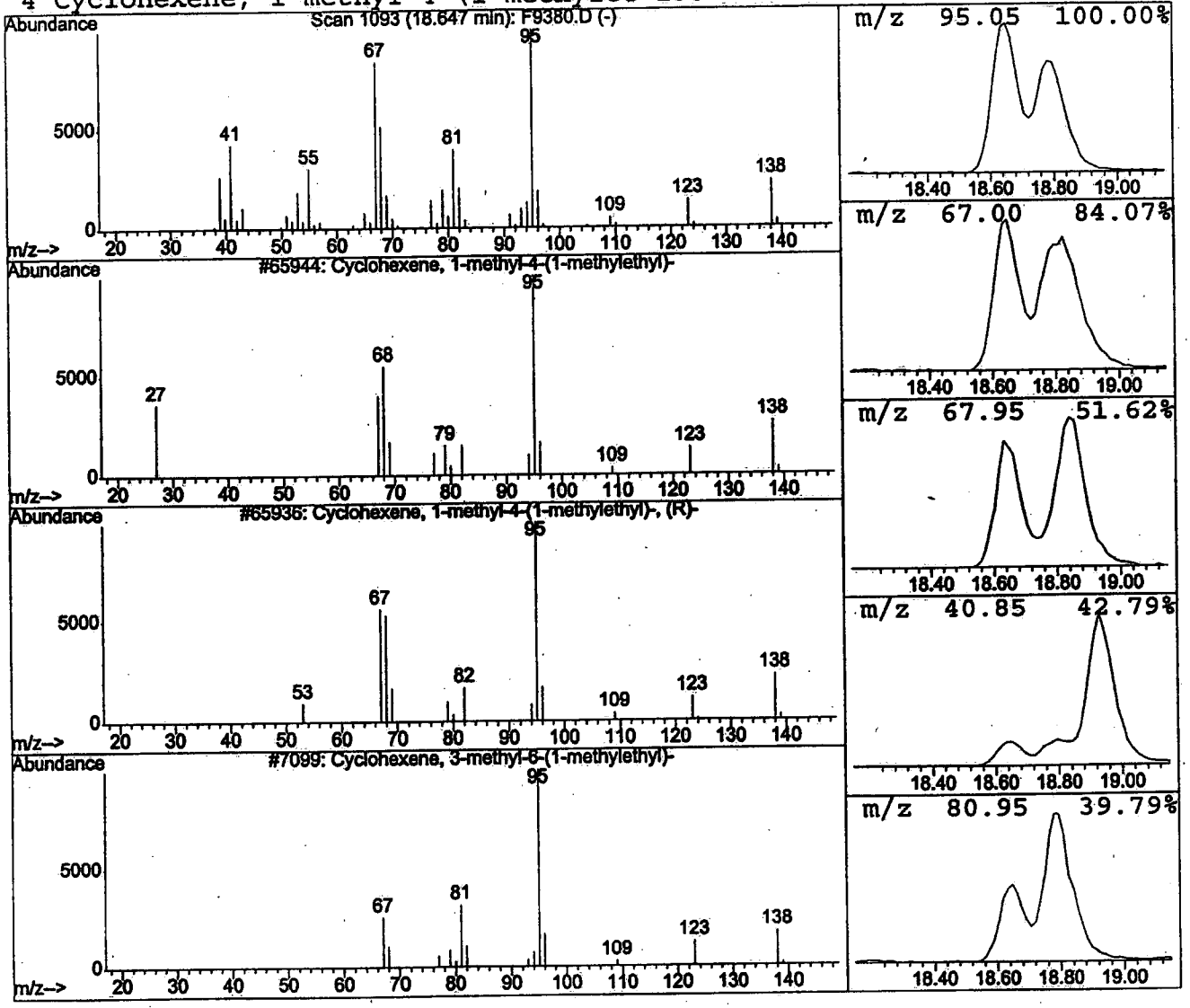
Quant Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Library : C:\DATABASE\NBS75K.L

****

Peak Number 3 Unknown cyclic hydrocarbon Concentration Rank = 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
18.65	52.93 UG	9215870	Chlorobenzene-d5	14.83

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexene, 1-methyl-4-(1-methylet	138	C10H18	005502-88-5	95
2	Cyclohexene, 1-methyl-4-(1-methylet	138	C10H18	001195-31-9	94
3	Cyclohexene, 3-methyl-6-(1-methylet	138	C10H18	005256-65-5	90
4	Cyclohexene, 1-methyl-4-(1-methylet	138	C10H18	005502-88-5	90



000186

744

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-26-01\F9380.D
Acq On : 27 Mar 2001 13:54
Sample : S-15,1840-006,M,0.009g
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01,5
MS Integration Params: LSCINT.P

Vial: 44
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Library : C:\DATABASE\NBS75K.L

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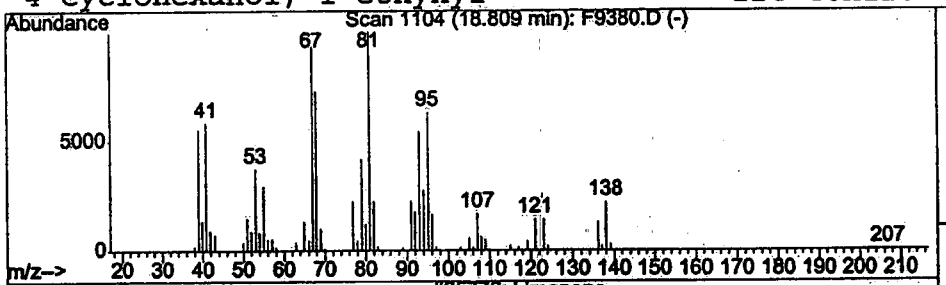
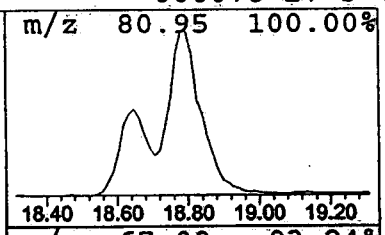
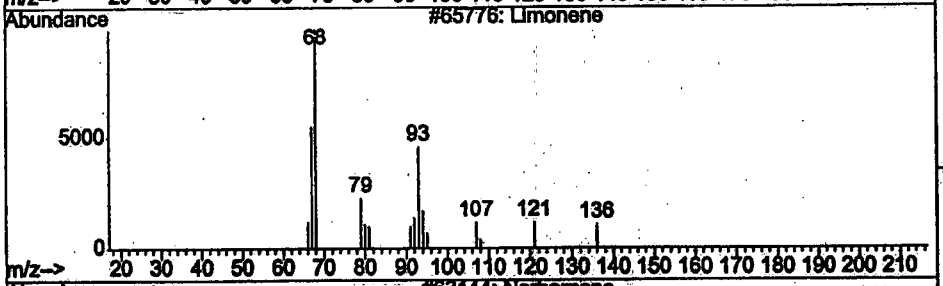
Peak Number 4 Unknown aromatic Concentration Rank 4

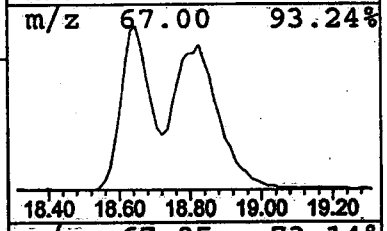
R.T.	EstConc	Area	Relative to ISTD	R.T.
18.81	45.69 UG	7955500	Chlorobenzene-d5	14.83

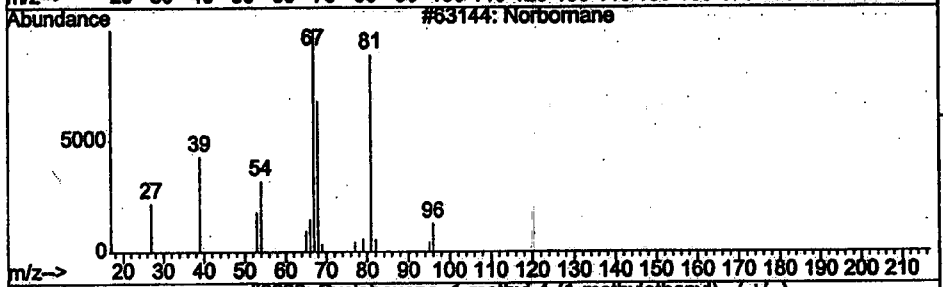
Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Limonene	136	C10H16	000138-86-3	50
2	Norbornane	96	C7H12	000279-23-2	49
3	Cyclohexene, 1-methyl-4-(1-methylet	136	C10H16	007705-14-8	46
4	Cyclohexanol, 1-ethynyl-	124	C8H12O	000078-27-3	43

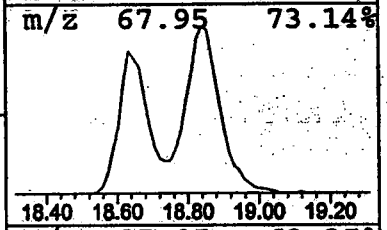


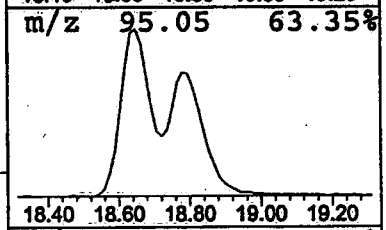


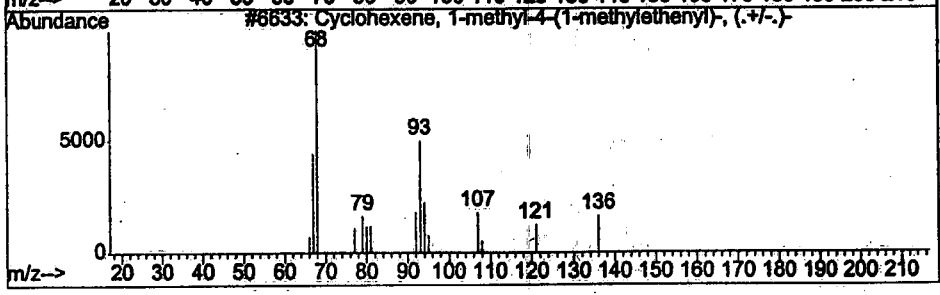


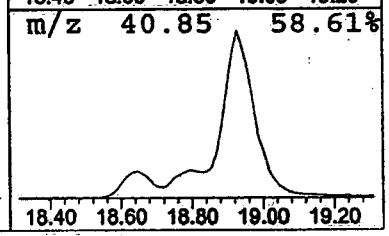












Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-26-01\F9380.D
Acq On : 27 Mar 2001 13:54
Sample : S-15,1840-006,M,0.009g
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01,5
MS Integration Params: LSCINT.P

Vial: 44
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

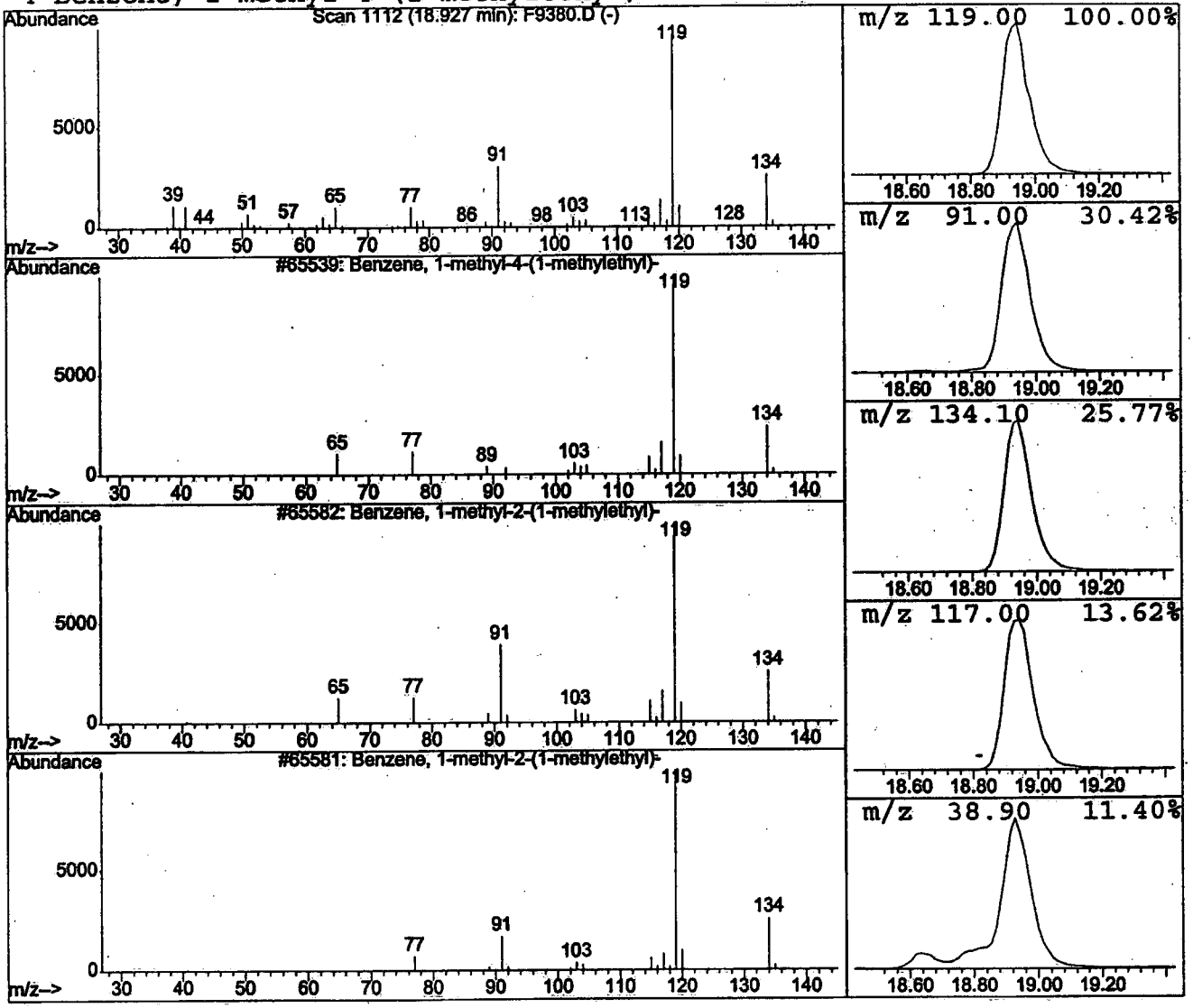
Quant Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Library : C:\DATABASE\NBS75K.L

****

Peak Number 5 Substituted benzene Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
18.93	594.40 UG	103498000	Chlorobenzene-d5	14.83

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-methyl-4-(1-methylethyl)	134	C10H14	000099-87-6	94
2	Benzene, 1-methyl-2-(1-methylethyl)	134	C10H14	000527-84-4	94
3	Benzene, 1-methyl-2-(1-methylethyl)	134	C10H14	000527-84-4	93
4	Benzene, 1-methyl-4-(1-methylethyl)	134	C10H14	000099-87-6	93



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000188

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-26-01\F9380.D
Acq On : 27 Mar 2001 13:54
Sample : S-15,1840-006,M,0.009g
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01,5
MS Integration Params: LSCINT.P

Vial: 44
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

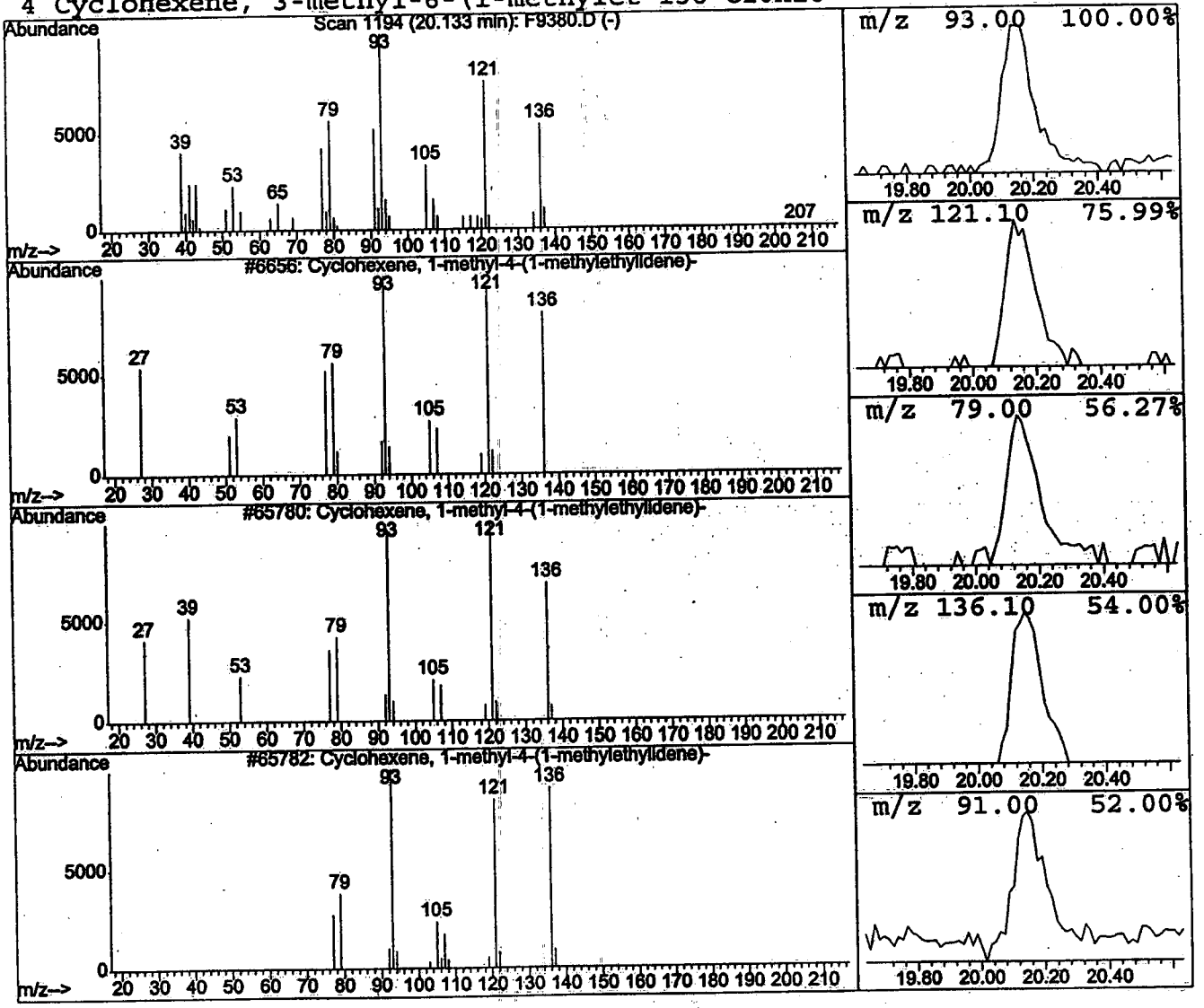
Quant Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Library : C:\DATABASE\NBS75K.L

****

Peak Number 6 Unknown aromatic Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
20.13	8.01 UG	1394750	Chlorobenzene-d5	14.83

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexene, 1-methyl-4-(1-methylet	136	C10H16	000586-62-9	95
2	Cyclohexene, 1-methyl-4-(1-methylet	136	C10H16	000586-62-9	93
3	Cyclohexene, 1-methyl-4-(1-methylet	136	C10H16	000586-62-9	91
4	Cyclohexene, 3-methyl-6-(1-methylet	136	C10H16	000586-63-0	91



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000189

Library Search Compound Report

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Acq On : 27 Mar 2001 13:54
Sample : S-15,1840-006,M,0.009g
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01,5
MS Integration Params: LSCINT.P

Vial: 44
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Library : C:\DATABASE\NBS75K.L

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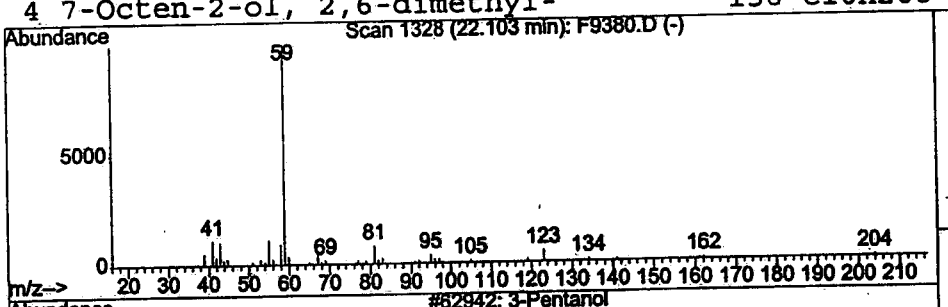
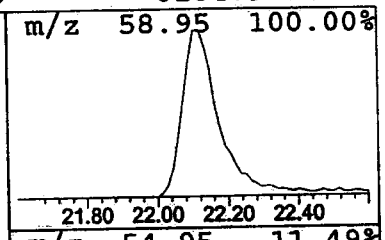
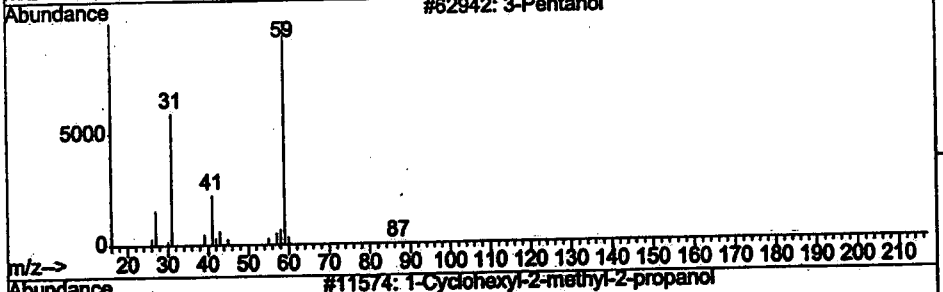
Peak Number 7 Unknown — Concentration Rank 7

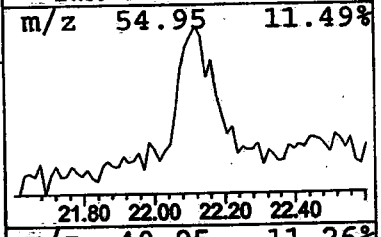
R.T.	EstConc	Area	Relative to ISTD	R.T.
22.10	16.68 UG	2904880	Chlorobenzene-d5	14.83

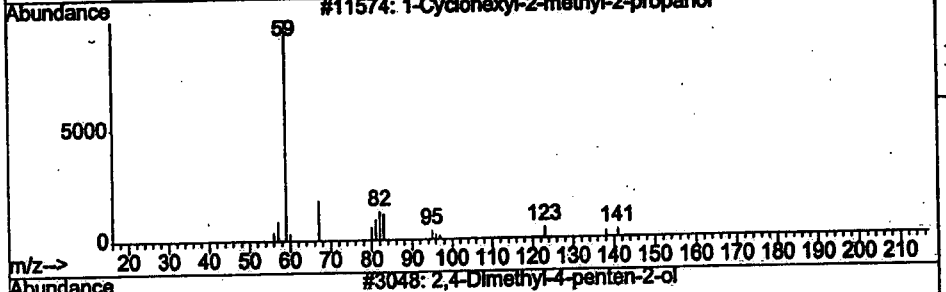
Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	3-Pentanol	88	C5H12O	000584-02-1	50
2	1-Cyclohexyl-2-methyl-2-propanol	156	C10H20O	005531-30-6	50
3	2,4-Dimethyl-4-penten-2-ol	114	C7H14O	019781-53-4	42
4	7-Octen-2-ol, 2,6-dimethyl-	156	C10H20O	018479-58-8	39

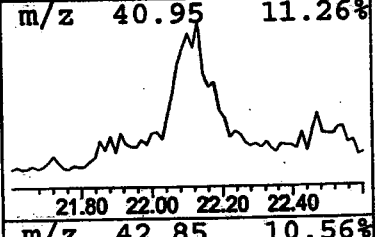


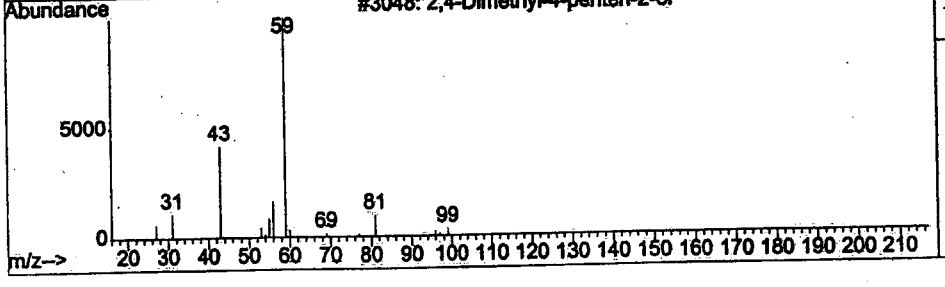


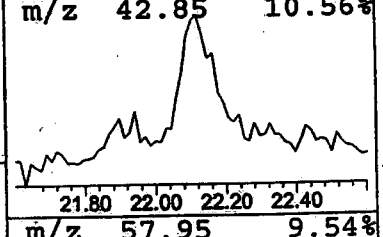


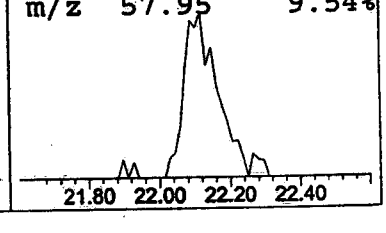












748

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-26-01\F9380.D
Acq On : 27 Mar 2001 13:54
Sample : S-15,1840-006,M,0.009g
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01,5
MS Integration Params: LSCINT.P

Vial: 44
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

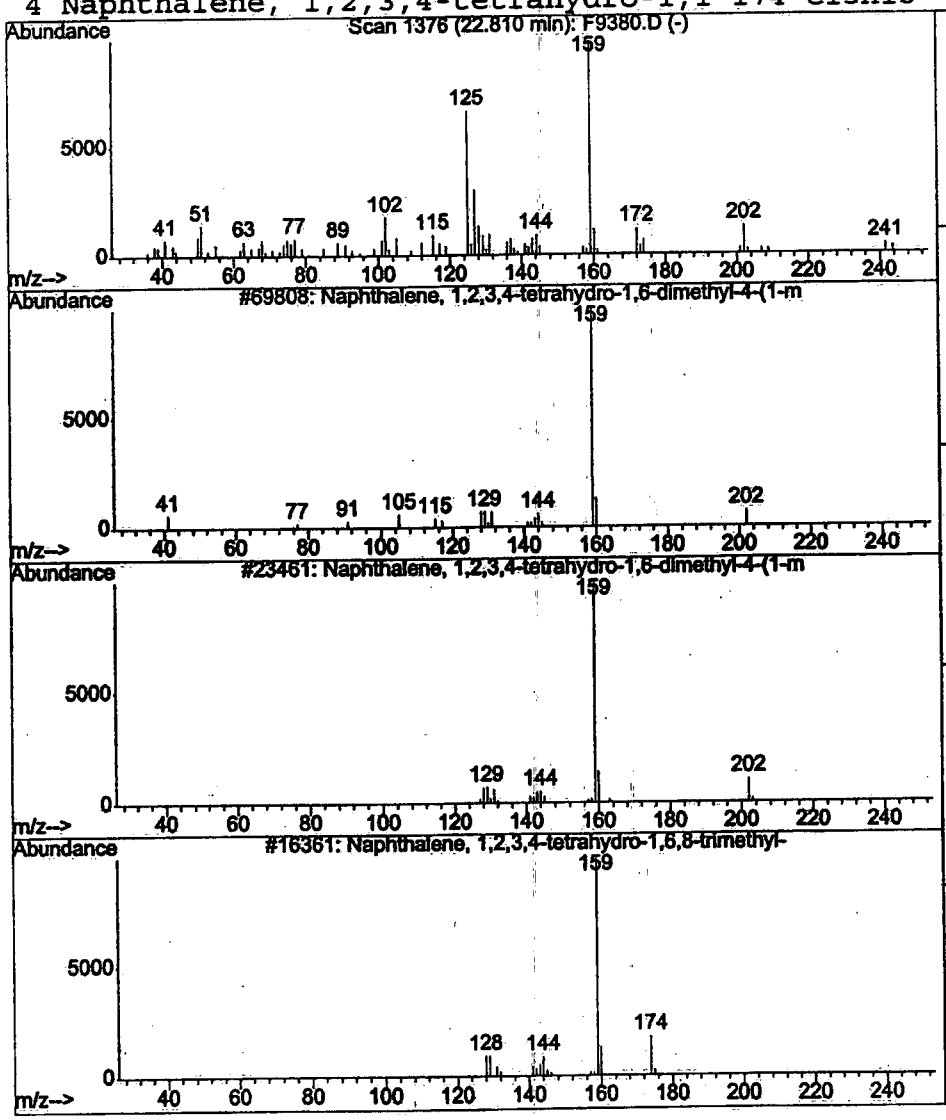
Quant Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Library : C:\DATABASE\NBS75K.L

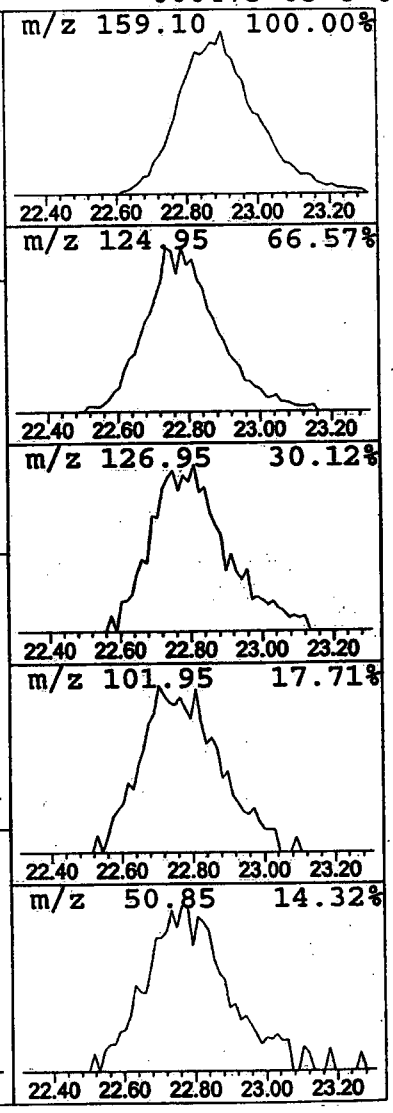
****

Peak Number 8 Unknown aromatic Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
22.81	41.47 UG	7220230	Chlorobenzene-d5	14.83

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Naphthalene, 1,2,3,4-tetrahydro-1,6	202	C15H22	000483-77-2	91
2	Naphthalene, 1,2,3,4-tetrahydro-1,6	202	C15H22	000483-77-2	64
3	Naphthalene, 1,2,3,4-tetrahydro-1,6	174	C13H18	030316-36-0	60
4	Naphthalene, 1,2,3,4-tetrahydro-1,1	174	C13H18	000475-03-6	60





000191

749

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-26-01\F9380.D
Acq On : 27 Mar 2001 13:54
Sample : S-15,1840-006,M,0.009g
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01,5
MS Integration Params: LSCINT.P

Vial: 44
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

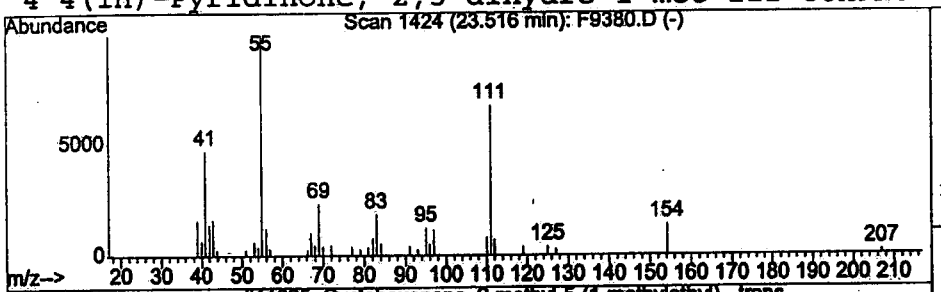
Quant Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Library : C:\DATABASE\NBS75K.L

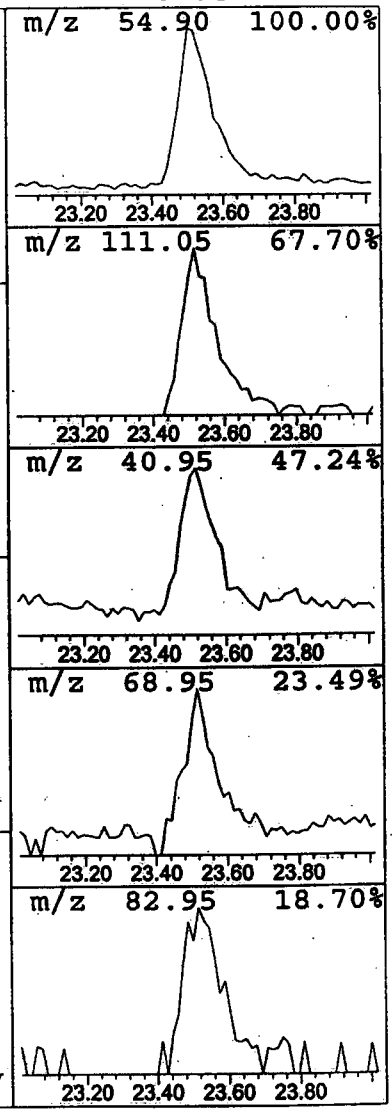
****

Peak Number 9 Unknown — Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
23.52	10.80 UG	1881140	Chlorobenzene-d5	14.83

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexanone, 2-methyl-5-(1-methyl	154	C10H18O	000499-70-7	76
2	Furan, 2-(2-ethoxy-1-methoxyethyl)-	170	C9H14O3	072403-07-7	43
3	4-Hepten-3-one, 2,5,6-trimethyl-	154	C10H18O	016466-21-0	38
4	4(1H)-Pyridinone, 2,3-dihydro-1-met	111	C6H9NO	035488-00-7	35





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000192

Library Search Compound Report

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Sample : S-15,1840-006,M,0.009g
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01,5
MS Integration Params: LSCINT.P

Vial: 44
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

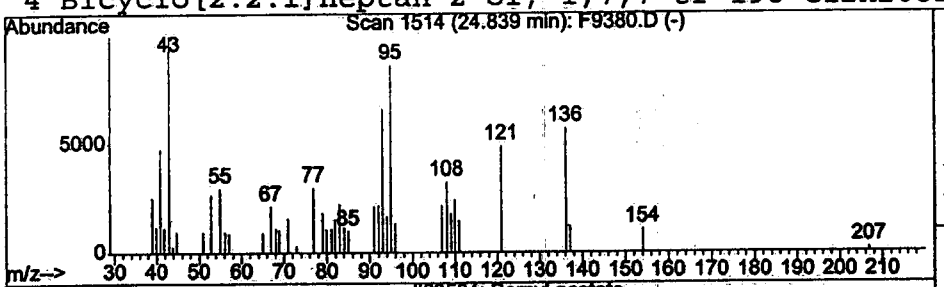
Quant Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Library : C:\DATABASE\NBS75K.L

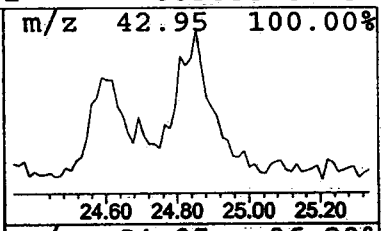
****

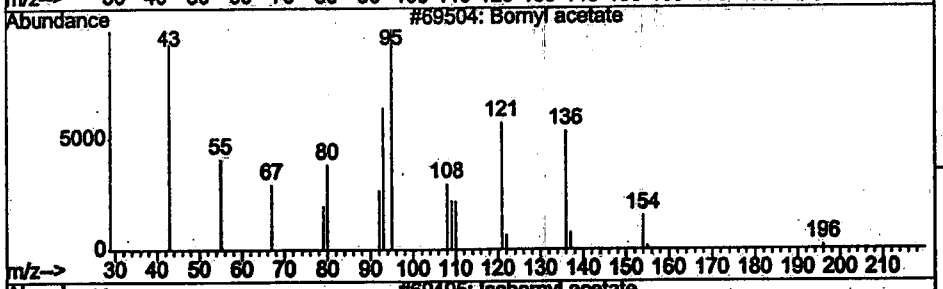
Peak Number 10 Unknown — Concentration Rank 11

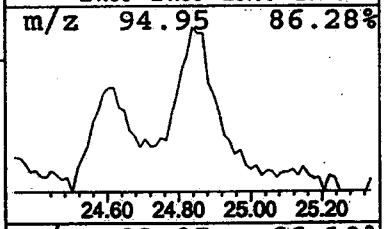
R.T.	EstConc	Area	Relative to ISTD	R.T.
24.84	7.20 UG	1254110	Chlorobenzene-d5	14.83

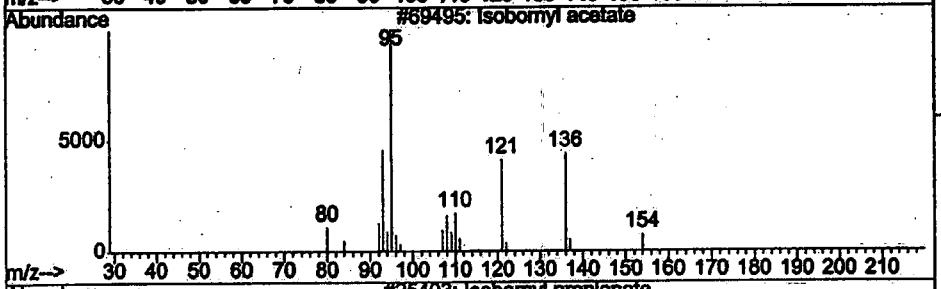
Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Bornyl acetate	196	C12H20O2	000076-49-3	80
2	Isobornyl acetate	196	C12H20O2	000125-12-2	72
3	Isobornyl propionate	210	C13H22O2	002756-56-1	64
4	Bicyclo[2.2.1]heptan-2-ol, 1,7,7-tr	196	C12H20O2	005655-61-8	64

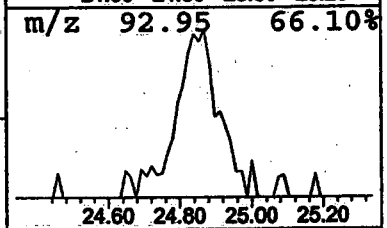


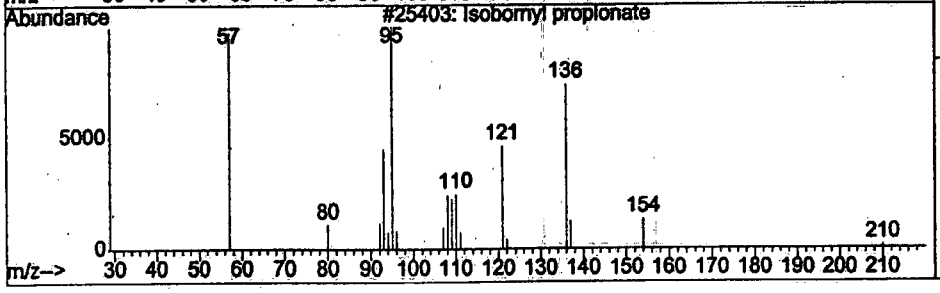


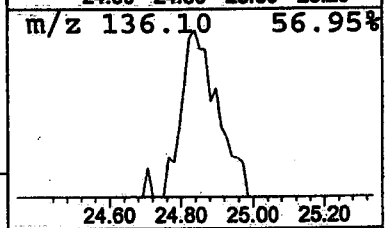


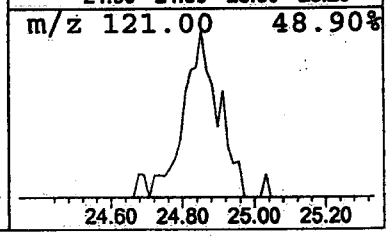












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000193

Library Search Compound Report

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Acq On : 27 Mar 2001 13:54
Sample : S-15,1840-006,M,0.009g
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01,5
MS Integration Params: LSCINT.P

Vial: 44
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

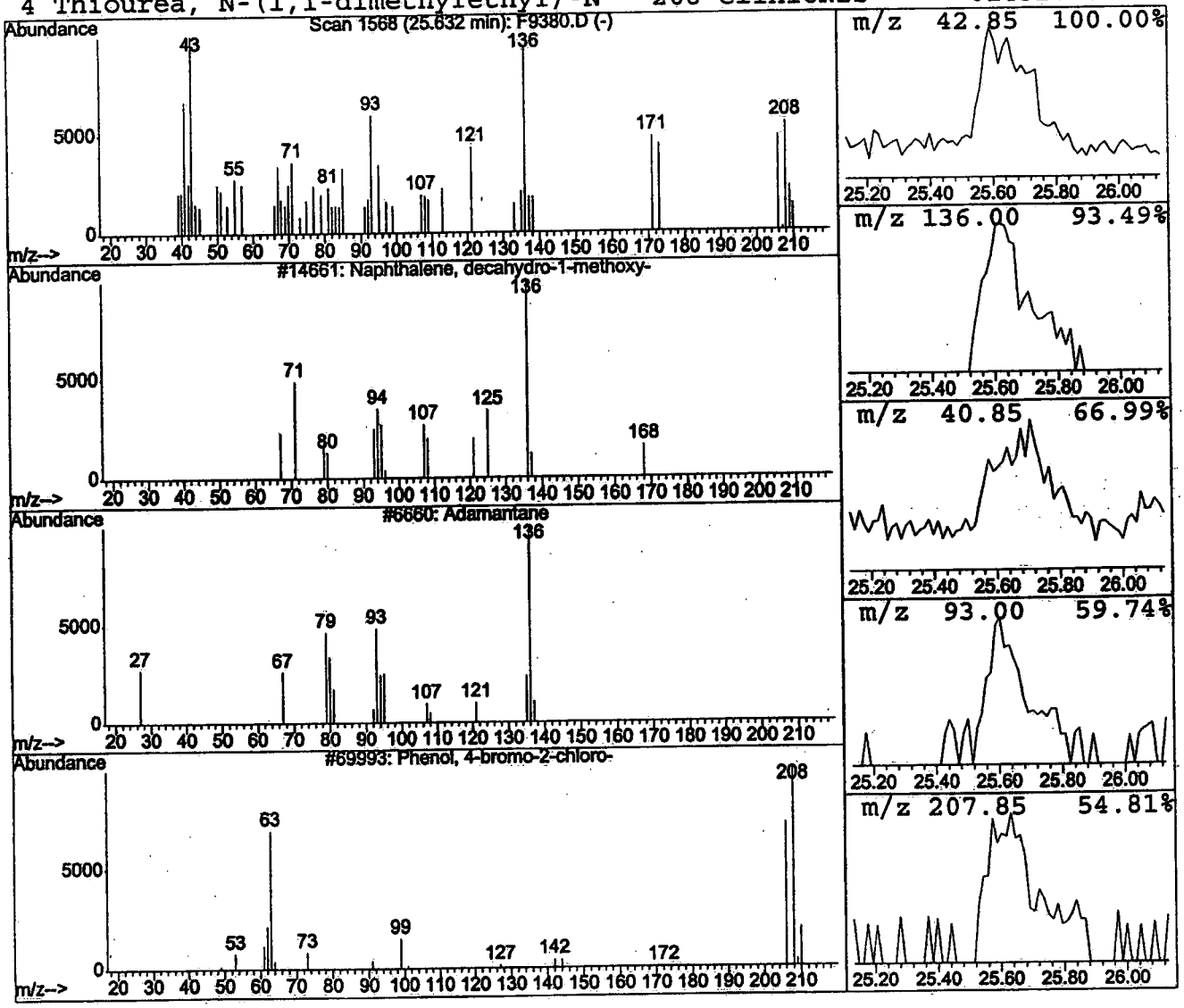
Quant Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Library : C:\DATABASE\NBS75K.L

****

Peak Number 11 Unknown aromatic Concentration Rank 13

R.T.	EstConc	Area	Relative to ISTD	R.T.
25.63	5.95 UG	1036620	Chlorobenzene-d5	14.83

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Naphthalene, decahydro-1-methoxy-	168	C11H20O	021720-89-8	14
2	Adamantane	136	C10H16	000281-23-2	14
3	Phenol, 4-bromo-2-chloro-	206	C6H4BrClO	003964-56-5	11
4	Thiourea, N-(1,1-dimethylethyl)-N'-	208	C11H16N2S	014327-04-9	11



752

000194

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-26-01\F9380.D
Acq On : 27 Mar 2001 13:54
Sample : S-15,1840-006,M,0.009g
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01,5
MS Integration Params: LSCINT.P

Vial: 44
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

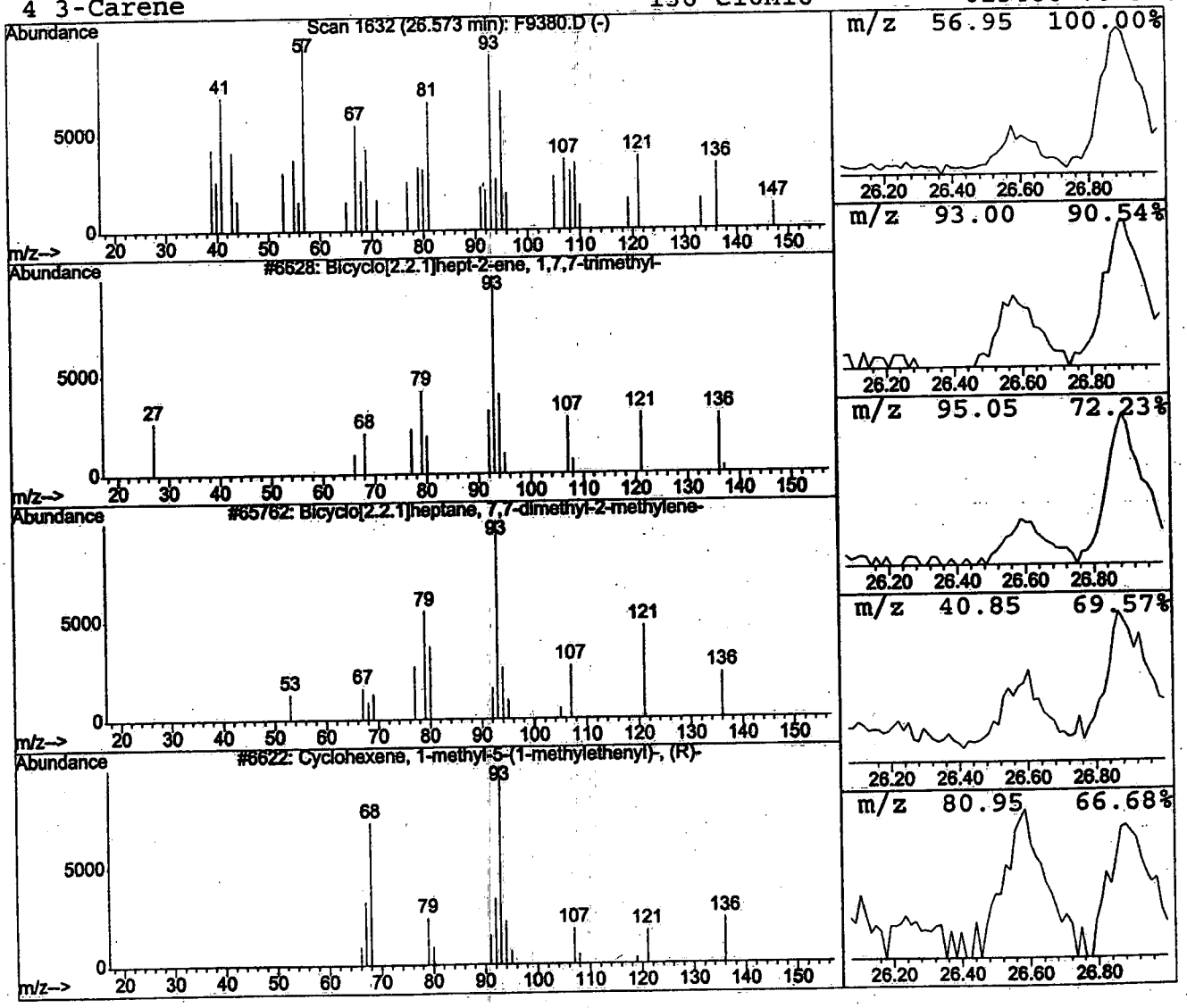
Quant Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Library : C:\DATABASE\NBS75K.L

****

Peak Number 12 Unknown aromatic Concentration Rank 12

R.T.	EstConc	Area	Relative to ISTD	R.T.
26.57	6.88 UG	1198160	Chlorobenzene-d5	14.83

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Bicyclo[2.2.1]hept-2-ene, 1,7,7-tri	136	C10H16	000464-17-5	50
2	Bicyclo[2.2.1]heptane, 7,7-dimethyl	136	C10H16	000471-84-1	43
3	Cyclohexene, 1-methyl-5-(1-methylet	136	C10H16	001461-27-4	43
4	3-Carene	136	C10H16	013466-78-9	38



753

000135

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-26-01\F9380.D
Acq On : 27 Mar 2001 13:54
Sample : S-15,1840-006,M,0.009g
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01,5
MS Integration Params: LSCINT.P

Vial: 44
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

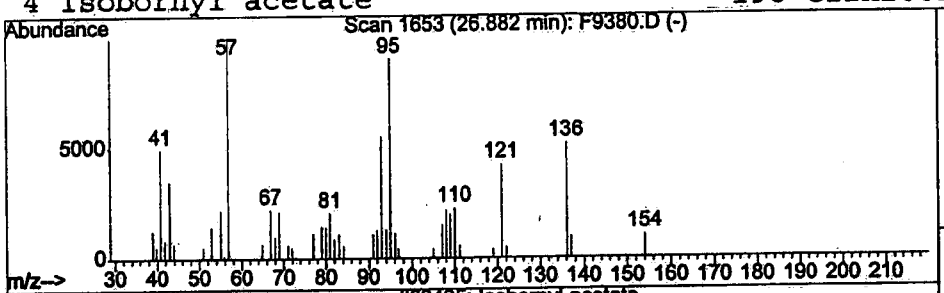
Quant Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Library : C:\DATABASE\NBS75K.L

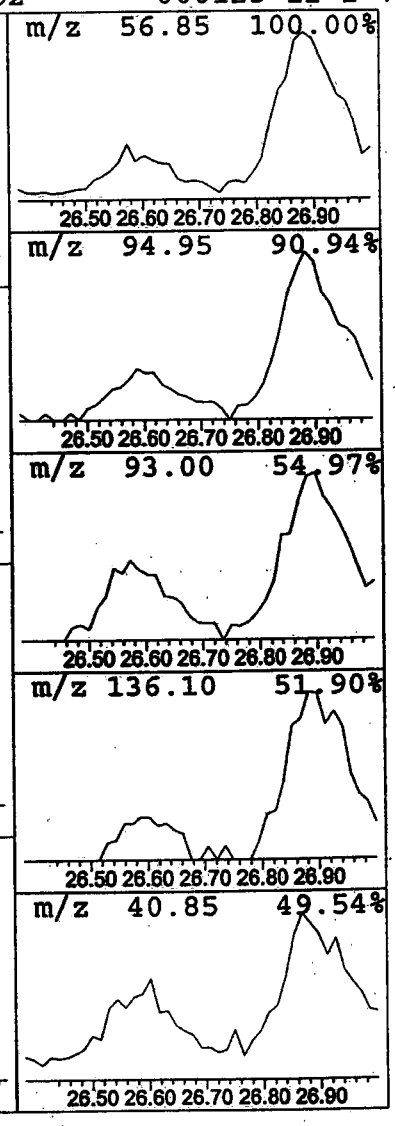
****

Peak Number 13 Unknown — Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
26.88	11.19 UG	1948990	Chlorobenzene-d5	14.83

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Isobornyl acetate	196	C12H20O2	000125-12-2	91
2	Isobornyl propionate	210	C13H22O2	002756-56-1	90
3	Isobornyl acetate	196	C12H20O2	000125-12-2	90
4	Isobornyl acetate	196	C12H20O2	000125-12-2	72





754

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\03-29-01\F9437.D
Acq On : 29 Mar 2001 12:37
Sample : S-16,1840-007,M,0.007g
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01,5
MS Integration Params: rteint.p
Quant Time: Mar 29 16:04 2001

Vial: 5
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

Quant Results File: FME0316.RES

Quant Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Last Update : Fri Mar 16 14:54:56 2001
Response via : Initial Calibration
DataAcq Meth : VOAF

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	8.79	168	3458648	50.00	UG		0.06
31) 1,4-Difluorobenzene	9.96	114	3330575	50.00	UG		0.06
50) Chlorobenzene-d5	14.83	117	2376498	50.00	UG		0.06
System Monitoring Compounds							
30) 1,2-Dichloroethane-d4	9.26	65	409930	11.86	UG		0.06
Spiked Amount 50.000	Range 27 - 176		Recovery =	23.72%#			
41) Toluene-d8	12.36	98	759153	12.40	UG		0.07
Spiked Amount 50.000	Range 20 - 158		Recovery =	24.80%			
59) Bromofluorobenzene	16.93	95	520754	10.13	UG		0.07
Spiked Amount 50.000	Range 28 - 148		Recovery =	20.26%#			
Target Compounds							Qvalue
32) Benzene	9.35	78	592951	8.01	UG		100
42) Toluene	12.46	92	55594	1.21	UG		94
72) 1,4-Dichlorobenzene	19.07	146	173076	3.28	UG		97
74) 1,2-Dichlorobenzene	19.73	146	4612579	100.46	UG	#	99

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

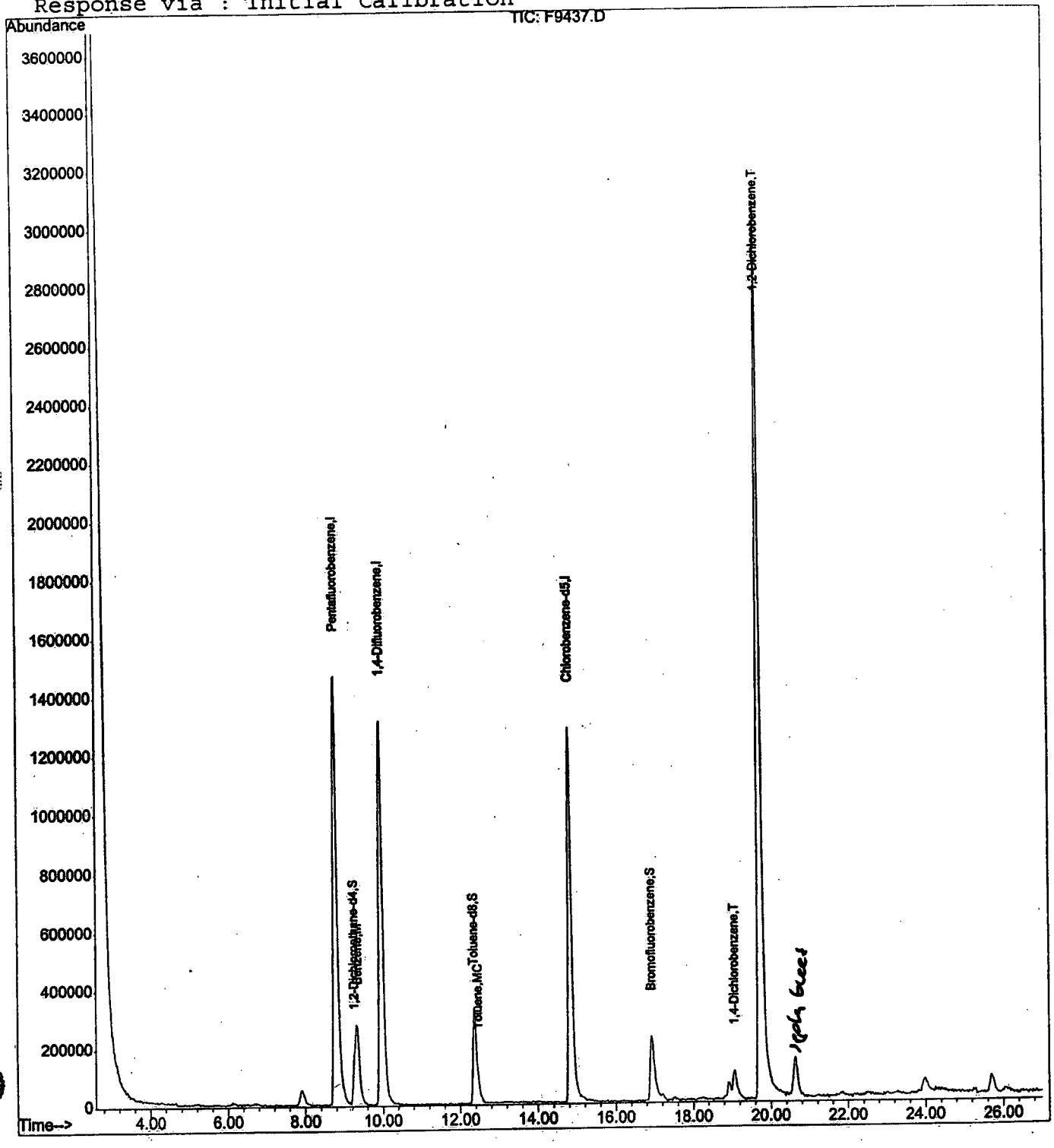
Quantitation Report

Data File : C:\HPCHEM\1\DATA\03-29-01\F9437.D
Acq On : 29 Mar 2001 12:37
Sample : S-16,1840-007,M,0.007g
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01,5
MS Integration Params: rteint.p
Quant Time: Mar 29 16:04 2001

Vial: 5
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

Quant Results File: FME0316.RES

Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Last Update : Fri Mar 16 14:54:56 2001
Response via : Initial Calibration



LSC Area Percent Report

Data File : C:\HPCHEM\1\DATA\03-29-01\F9437.D
Acq On : 29 Mar 2001 12:37
Sample : S-16,1840-007,M,0.007g
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01,5
MS Integration Params: LSCINT.P

Vial: 5
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Smoothing : ON
Sampling : 1
Start Thrs: 0.2
Stop Thrs : 0

Filtering: 5
Min Area: 3 % of largest Peak
Max Peaks: 100
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Signal : TIC

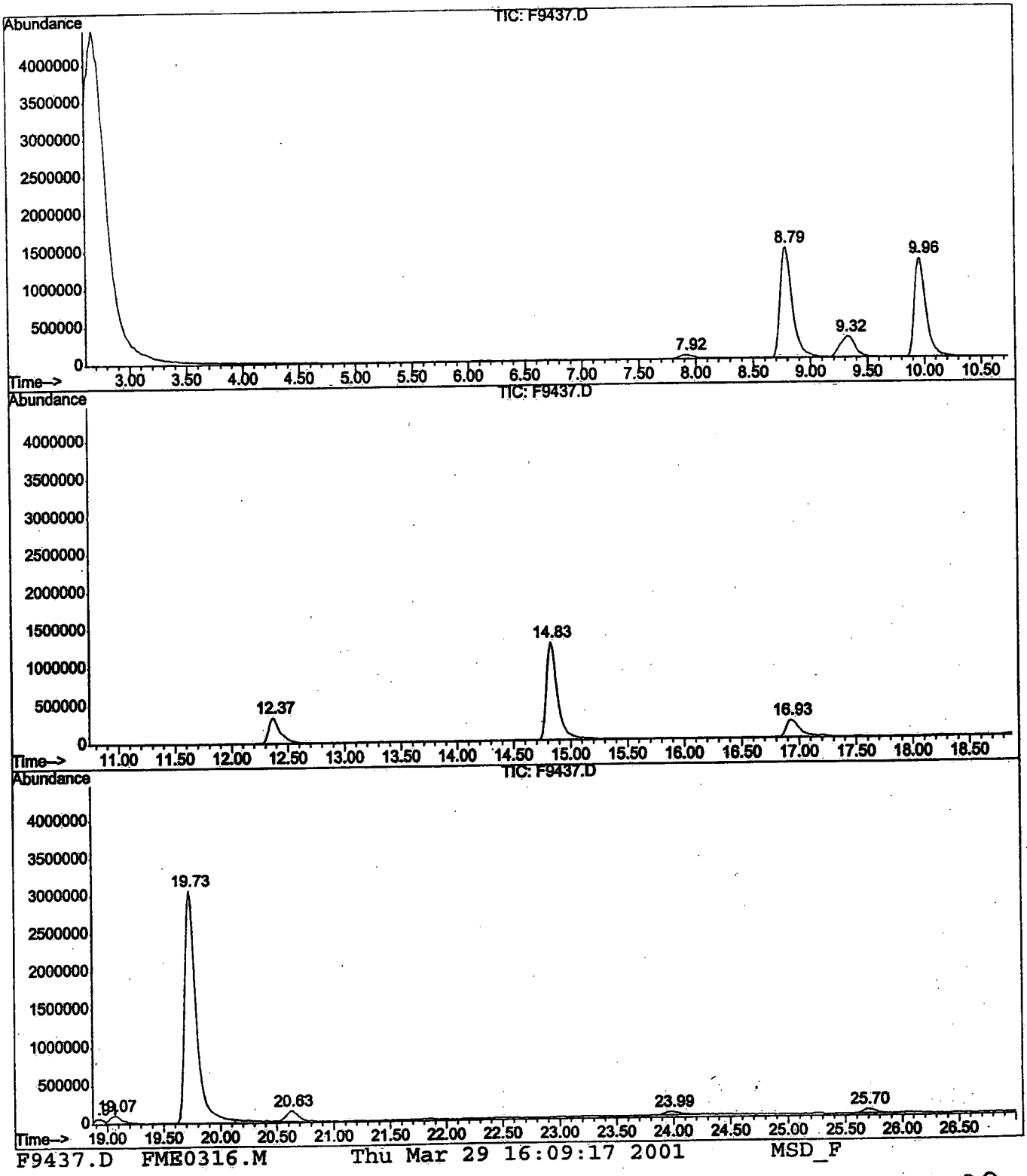
peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	7.923	353	363	375	rBV3	51932	435739	2.04%	0.727%
2	8.789	413	422	444	rBV	1466621	10870366	50.81%	18.146%
3	9.319	448	458	473	rBV4	273651	2492909	11.65%	4.161%
4	9.965	493	502	524	rBV	1309412	9075065	42.42%	15.149%
5	12.373	658	666	684	rBV2	333773	2417509	11.30%	4.036%
6	14.826	826	833	851	rBV	1283828	8479137	39.63%	14.154%
7	16.926	969	976	992	rBV3	224355	1842767	8.61%	3.076%
8	18.908	1108	1111	1116	rBV5	47102	245262	1.15%	0.409%
9	19.070	1116	1122	1137	rVB6	98836	746748	3.49%	1.247%
10	19.731	1158	1167	1194	rBV	3068797	21394132	100.00%	35.714%
11	20.628	1219	1228	1238	rVV	138857	1079328	5.04%	1.802%
12	23.991	1450	1457	1465	rBV4	45866	358488	1.68%	0.598%
13	25.695	1567	1573	1585	rVB6	62183	467430	2.18%	0.780%

Sum of corrected areas: 59904880

F9437.D FME0316.M Thu Mar 29 16:09:16 2001 MSD_F

LSC Report - Integrated Chromatogram

File : C:\HPCHEM\1\DATA\03-29-01\F9437.D
Operator : GREGG
Acquired : 29 Mar 2001 12:37 using AcqMethod VOAF
Instrument : 5970 - In
Sample Name: S-16,1840-007,M,0.007g
Misc Info : ENVTACT/444_ORBIS,03/23/01,03/26/01,5
Vial Number: 5
Quant File :FME0316.RES (RTE Integrator)



F9437.D FME0316.M Thu Mar 29 16:09:17 2001 MSD_F

000200

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\03-27-01\F9393.D
Acq On : 27 Mar 2001 21:13
Sample : TRIP_BLANK,1840-008,MB,0.04g,0
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01
IS Integration Params: rteint.p
Quant Time: Mar 29 8:42 2001

Vial: 10
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

Quant Results File: FME0316.RES

Quant Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Last Update : Fri Mar 16 14:54:56 2001
Response via : Initial Calibration
DataAcq Meth : VOAF

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	8.77	168	2847272	50.00	UG	0.05
31) 1,4-Difluorobenzene	9.95	114	2982711	50.00	UG	0.04
50) Chlorobenzene-d5	14.81	117	2370913	50.00	UG	0.05
System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	9.24	65	1938643	68.14	UG	0.04
Spiked Amount 50.000	Range 27 - 176		Recovery = 136.28%			
41) Toluene-d8	12.34	98	3952746	72.08	UG	0.05
Spiked Amount 50.000	Range 20 - 158		Recovery = 144.16%			
59) Bromofluorobenzene	16.89	95	2762763	53.89	UG	0.04
Spiked Amount 50.000	Range 28 - 148		Recovery = 107.78%			

Target Compounds Qvalue

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

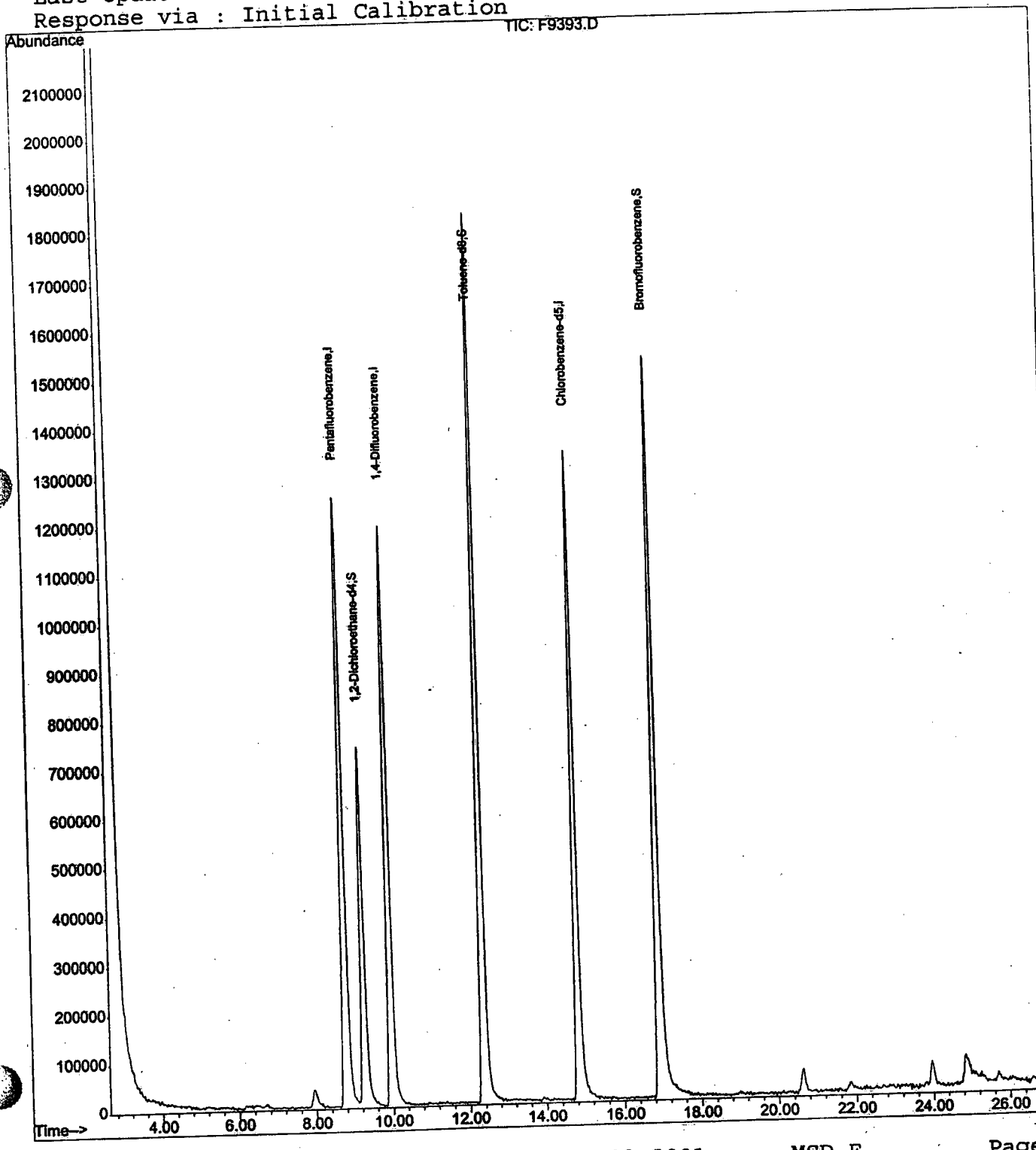
Quantitation Report

Data File : C:\HPCHEM\1\DATA\03-27-01\F9393.D
Acq On : 27 Mar 2001 21:13
Sample : TRIP_BLANK,1840-008,MB,0.04g,0
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01
MS Integration Params: rteint.p
Quant Time: Mar 29 8:42 2001

Vial: 10
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

Quant Results File: FME0316.RES

Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Last Update : Fri Mar 16 14:54:56 2001
Response via : Initial Calibration



760

000202

LSC Area Percent Report

Data File : C:\HPCHEM\1\DATA\03-27-01\F9393.D
Acq On : 27 Mar 2001 21:13
Sample : TRIP_BLANK,1840-008,MB,0.04g,0
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01
ALS Integration Params: LSCINT.P

Vial: 10
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Smoothing : ON
Sampling : 1
Start Thrs: 0.2
Stop Thrs : 0

Filtering: 5
Min Area: 3 % of largest Peak
Max Peaks: 100
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Signal : TIC

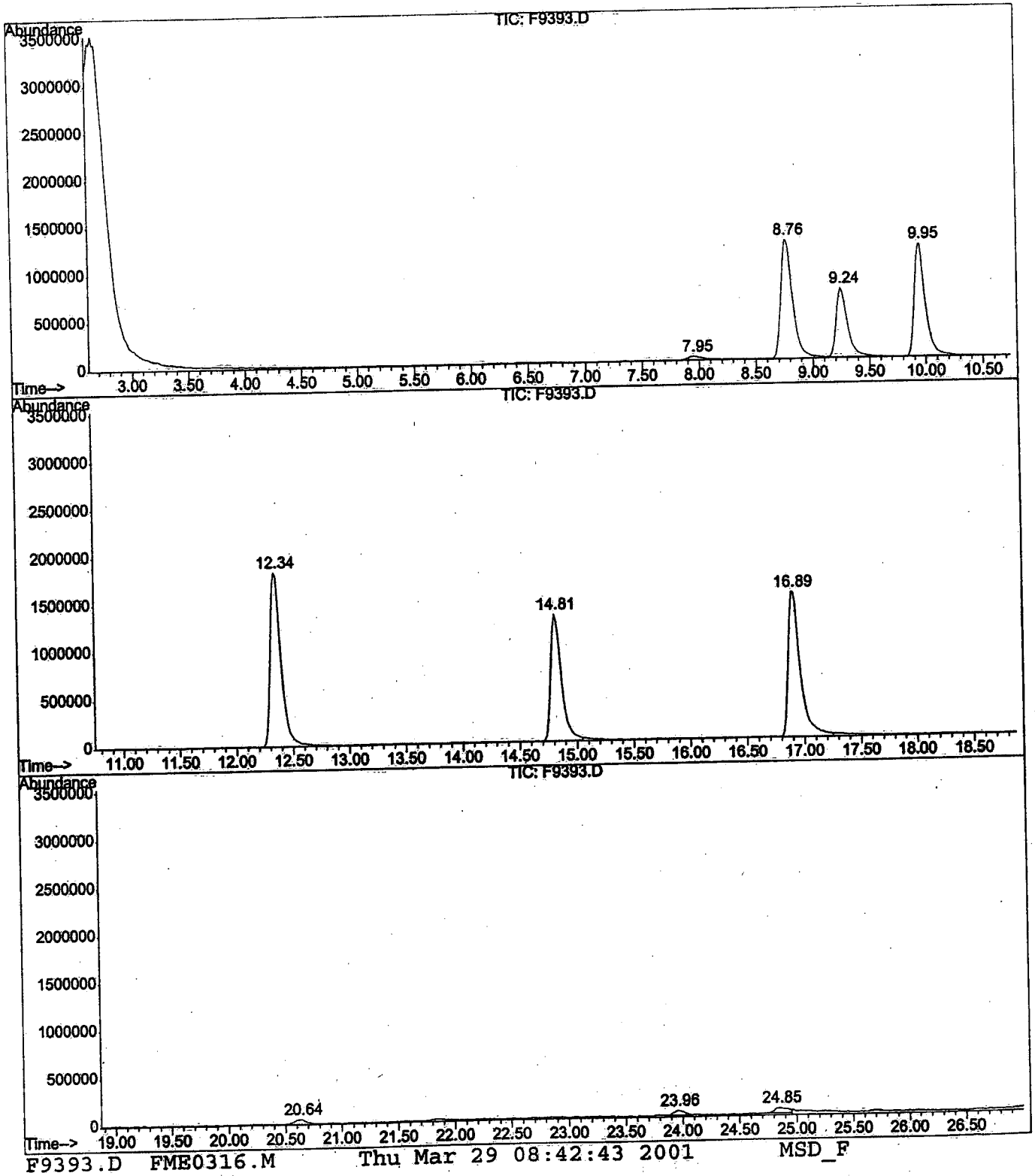
peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	7.951	357	365	375	rBV2	36915	303007	2.52%	0.547%
2	8.759	410	420	437	rBV2	1252077	8998910	74.78%	16.249%
3	9.244	445	453	475	rVB	731671	4988678	41.46%	9.008%
4	9.949	492	501	525	rBV2	1190733	8201983	68.16%	14.810%
5	12.343	656	664	687	rBV2	1827744	12033914	100.00%	21.729%
6	14.810	825	832	848	rBV	1332421	8523610	70.83%	15.391%
7	16.895	966	974	998	rBV2	1525435	11088054	92.14%	20.021%
8	20.639	1218	1229	1236	rBV2	52796	402642	3.35%	0.727%
9	23.958	1448	1455	1464	rVV3	51615	352000	2.93%	0.636%
10	24.853	1509	1516	1523	rBV8	58807	488422	4.06%	0.882%

Sum of corrected areas: 55381220

F9393.D FME0316.M Thu Mar 29 08:42:42 2001 MSD_F

LSC Report - Integrated Chromatogram

File : C:\HPCHEM\1\DATA\03-27-01\F9393.D
Operator : GREGG
Acquired : 27 Mar 2001 21:13 using AcqMethod VOAF
Instrument : 5970 - In
Sample Name: TRIP_BLANK,1840-008,MB,0.04g,0
Misc Info : ENVTACT/444_ORBIS,03/23/01,03/26/01
Vial Number: 10
Quant File :FME0316.RES (RTE Integrator)



F9393.D FME0316.M Thu Mar 29 08:42:43 2001 MSD_F

762

000204

Quantitation Report (QT Reviewed)

Data : C:\MSDCHEM\1\DATA\04-06-01\08721.D
Acq On : 6 Apr 2001 19:36
Sample : N/A,METHOD BLK,S,0.1g,9
Misc :
Vial: 9
Operator: XIN-HUANG WANG
Inst : MSD_J
Multiplr: 1.00

Integration Params: LSCINT.P
Quant Time: Apr 06 19:55:45 2001 Quant Results File: JME0406.RES

Quant Method : C:\MSDCHEM\1\METHODS\JME0406.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Last Update : Thu Apr 05 13:14:23 2001
Response via : Initial Calibration
DataAcq Meth : JME0406

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.39	168	510479	50.00	UG	0.00
31) 1,4-Difluorobenzene	7.22	114	737984	50.00	UG	0.00
50) Chlorobenzene-d5	10.58	117	588556	50.00	UG	0.00
System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	6.73	65	321281	50.33	UG	0.00
Spiked Amount 50.000	Range 43 - 133		Recovery = 100.66%			
41) Toluene-d8	8.89	98	741260	48.94	UG	0.00
Spiked Amount 50.000	Range 39 - 137		Recovery = 97.88%			
59) Bromofluorobenzene	11.98	95	368340	48.93	UG	0.00
Spiked Amount 50.000	Range 23 - 145		Recovery = 97.86%			

Target Compounds Qvalue

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

LSC Area Percent Report

Data Path : C:\MSDCHEM\1\DATA\04-06-01\J8721.D
Vial: 9
Acq On : 5 Apr 2001 19:36
Operator: XINGPANG WANG
Sample : 8/A METHOD-BLK,S,0.1g,0
Inst : MSD J
Misc :
Multiplr: 1.00

Integration Params: Lscint.p

Method : C:\MSDCHEM\1\METHODS\JME0406.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

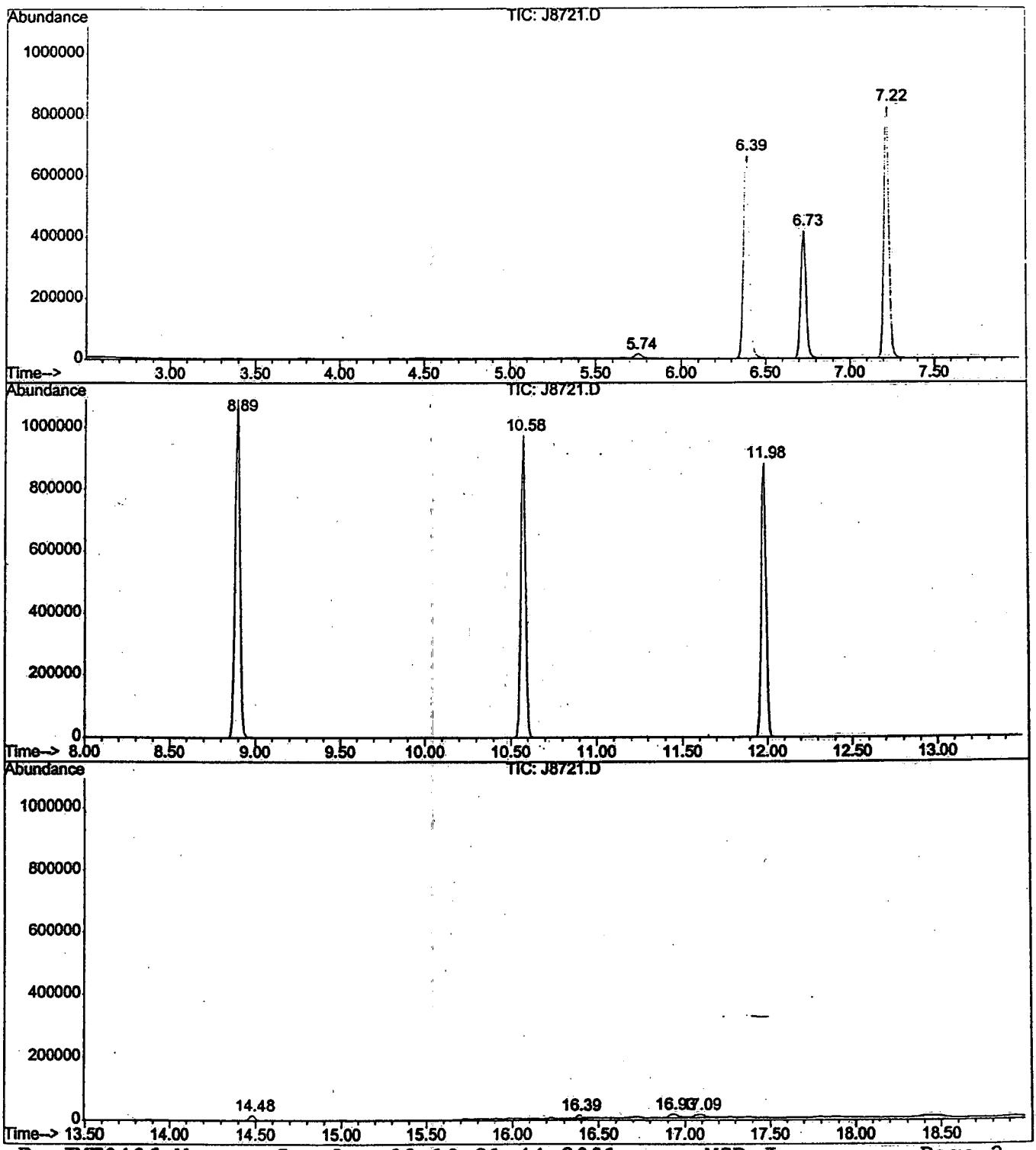
Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	5.745	392	397	409	rVB	14220	47433	2.26%	0.479%
2	6.393	453	461	474	rBV	663867	1500396	71.53%	15.148%
3	6.727	484	494	510	rBV	417224	896562	42.75%	9.052%
4	7.223	535	543	555	rBV	822767	1722474	82.12%	17.390%
5	8.894	701	708	722	rBV	1092715	2097448	100.00%	21.176%
6	10.575	866	874	882	rBV	975219	1807040	86.15%	18.244%
7	11.983	1007	1013	1028	rBV	885749	1677252	79.97%	16.933%
8	14.484	1254	1260	1265	rBV	16073	35311	1.68%	0.356%
9	16.388	1445	1448	1453	rBV	10098	22345	1.07%	0.226%
10	16.934	1496	1502	1510	rBV4	12432	50701	2.42%	0.512%
11	17.086	1511	1517	1528	rVB6	10133	48016	2.29%	0.485%

Sum of corrected areas: 9904978

LSC Report - Integrated Chromatogram

File : C:\MSDCHEM\1\DATA\04-06-01\J8721.D
Operator : XINGYANG WANG
Acquired : 6 Apr 2001 19:36 using AcqMethod JME0406
Instrument : MSD_J
Sample Name: N/A,METHOD-BLK,S,0.1g,0
Misc Info :
Vial Number: 9
Quant File :JME0406.RES (RTE Integrator)



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\03-27-01\F9389.D
Acq On : 27 Mar 2001 19:02
Sample : N/A,METHOD_BLK,S,0.1g,0
Misc : N/A,N/A,N/A
IS Integration Params: rteint.p
Quant Time: Mar 28 8:37 2001

Vial: 6
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

Quant Results File: FME0316.RES

Quant Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Last Update : Fri Mar 16 14:54:56 2001
Response via : Initial Calibration
DataAcq Meth : VOAF

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	8.80	168	3460635	50.00	UG	0.08
31) 1,4-Difluorobenzene	9.96	114	3260955	50.00	UG	0.06
50) Chlorobenzene-d5	14.82	117	2313149	50.00	UG	0.06
System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	9.27	65	1523618	44.06	UG	0.07
Spiked Amount 50.000	Range 27 - 176		Recovery = 88.12%			
41) Toluene-d8	12.37	98	3042408	50.75	UG	0.08
Spiked Amount 50.000	Range 20 - 158		Recovery = 101.50%			
59) Bromofluorobenzene	16.92	95	2313405	46.25	UG	0.07
Spiked Amount 50.000	Range 28 - 148		Recovery = 92.50%			

Target Compounds Qvalue

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

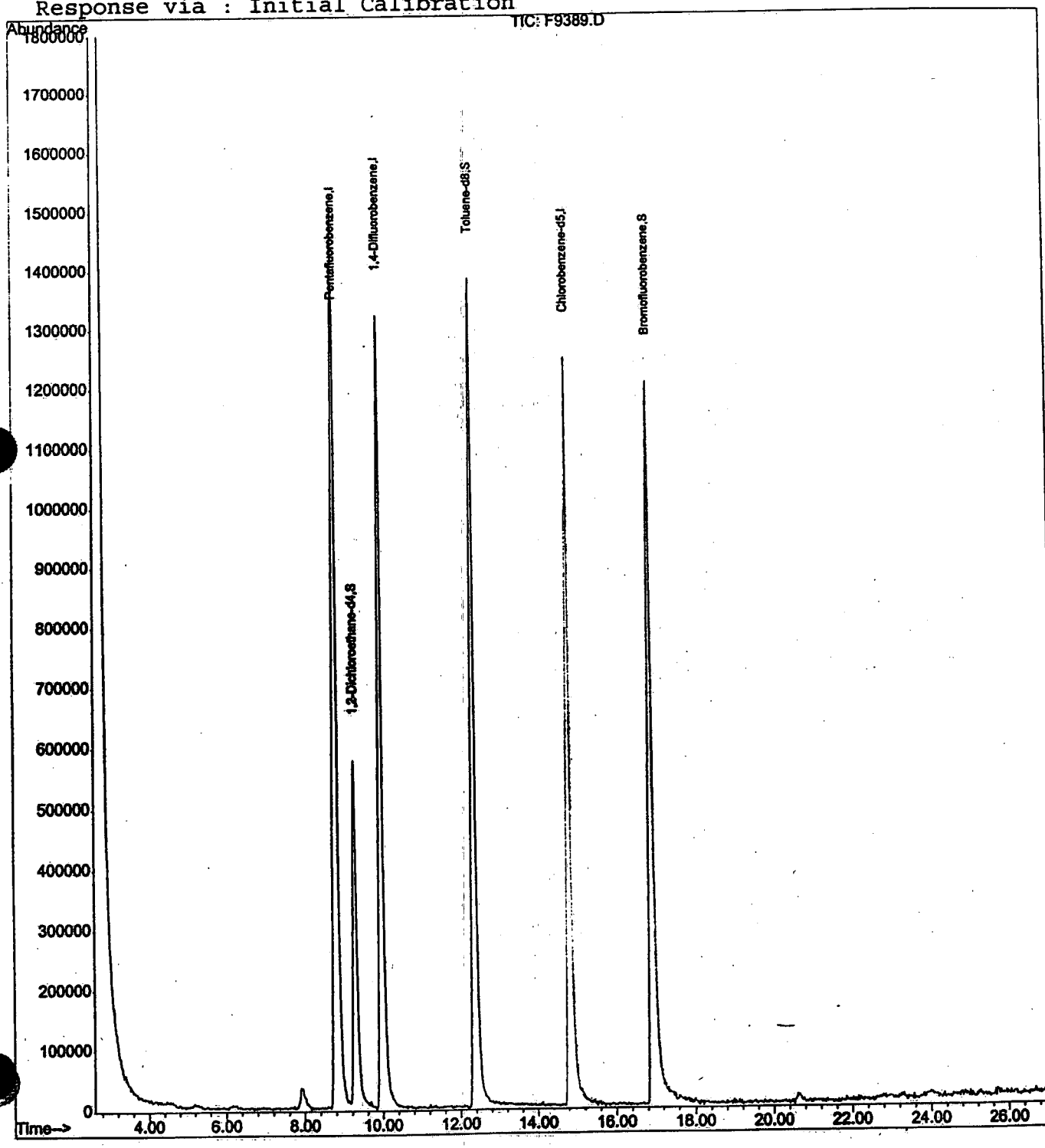
Quantitation Report

Data File : C:\HPCHEM\1\DATA\03-27-01\F9389.D
Acq On : 27 Mar 2001 19:02
Sample : N/A,METHOD_BLK,S,0.1g,0
Misc : N/A,N/A,N/A
MS Integration Params: rteint.p
Quant Time: Mar 28 8:37 2001

Vial: 6
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

Quant Results File: FME0316.RES

Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Last Update : Fri Mar 16 14:54:56 2001
Response via : Initial Calibration



LSC Area Percent Report

Data File : C:\HPCHEM\1\DATA\03-27-01\F9389.D
Acq On : 27 Mar 2001 19:02
Sample : N/A,METHOD_BLK,S,0.1g,0
Misc : N/A,N/A,N/A
IS Integration Params: LSCINT.P

Vial: 6
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Smoothing : ON
Sampling : 1
Start Thrs: 0.2
Stop Thrs : 0

Filtering: 5
Min Area: 3 % of largest Peak
Max Peaks: 100
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	7.893	356	361	363	rBV3	33464	127051	1.18%	0.253%
2	8.803	413	423	442	rBV	1498363	10768307	100.00%	21.431%
3	9.273	447	455	470	rBV	568764	3855451	35.80%	7.673%
4	9.964	494	502	522	rBV	1320911	9019972	83.76%	17.951%
5	12.372	657	666	684	rBV	1383095	9170798	85.16%	18.251%
6	14.824	824	833	852	rBV	1245814	8212662	76.27%	16.345%
7	16.924	968	976	997	rBV2	1202674	9092944	84.44%	18.096%

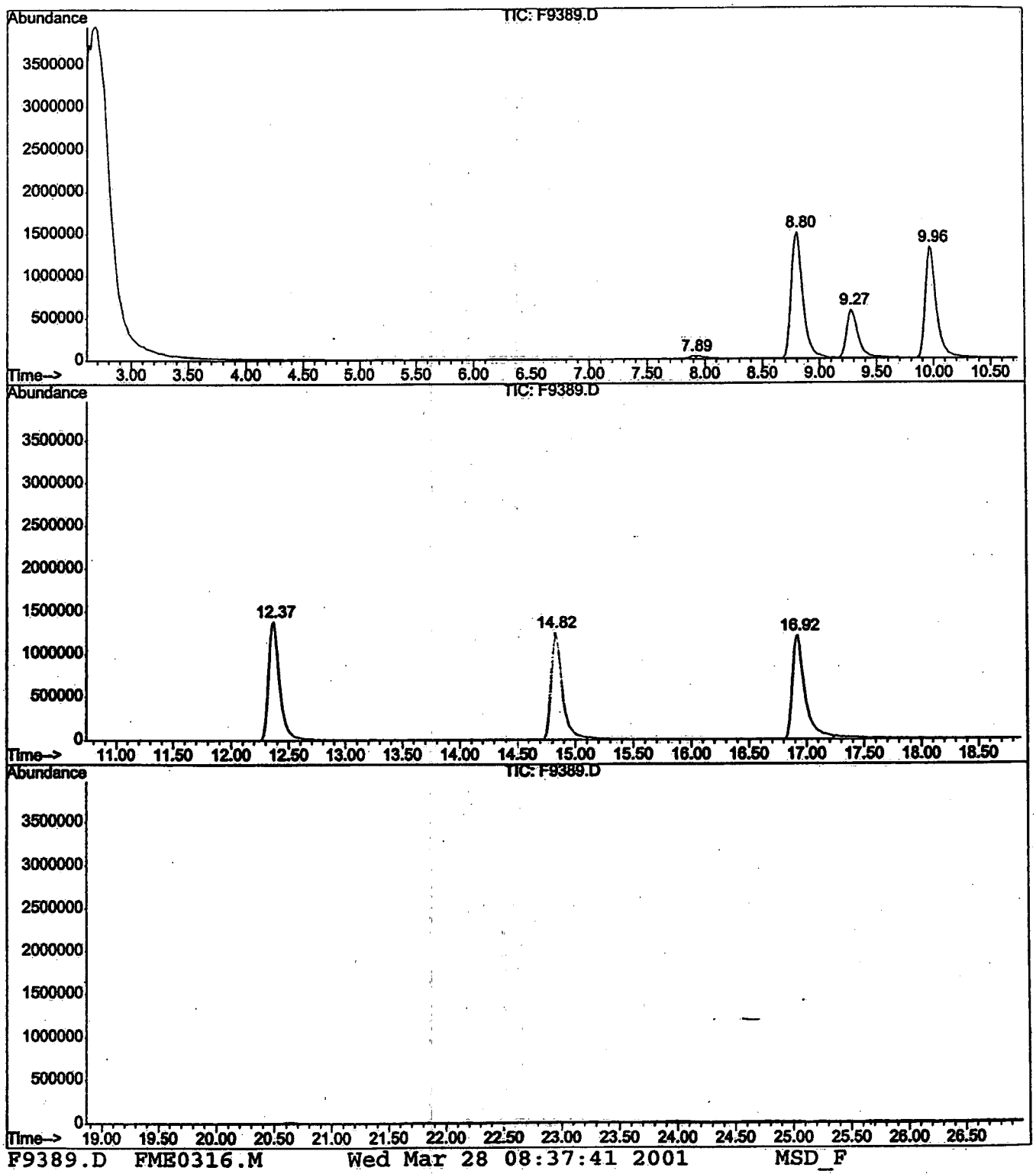
Sum of corrected areas: 50247185

F9389.D FME0316.M Wed Mar 28 08:37:40 2001 MSD_F

000211

LSC Report - Integrated Chromatogram

File : C:\HPCHEM\1\DATA\03-27-01\F9389.D
Operator : GREGG
Acquired : 27 Mar 2001 19:02 using AcqMethod VOAF
Instrument : 5970 - In
Sample Name: N/A,METHOD_BLK,S,0.1g,0
Misc Info : N/A,N/A,N/A
Vial Number: 6
Quant File :FME0316.RES (RTE Integrator)



F9389.D FME0316.M Wed Mar 28 08:37:41 2001 MSD_F

000212

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\03-29-01\F9435.D
Acq On : 29 Mar 2001 11:32
Sample : N/A,METHOD_BLK,S,0.1g,0
Misc : N/A,N/A,N/A
IS Integration Params: rteint.p
Quant Time: Mar 29 13:41 2001

Vial: 3
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00
Quant Results File: FME0316.RES

Quant Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Last Update : Fri Mar 16 14:54:56 2001
Response via : Initial Calibration
DataAcq Meth : VOAF

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	8.80	168	3728841	50.00	UG	0.08
31) 1,4-Difluorobenzene	9.96	114	3461050	50.00	UG	0.06
50) Chlorobenzene-d5	14.83	117	2434807	50.00	UG	0.06
System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	9.27	65	1587521	42.61	UG	0.07
Spiked Amount 50.000	Range 27 - 176		Recovery = 85.22%			
41) Toluene-d8	12.36	98	3129973	49.19	UG	0.07
Spiked Amount 50.000	Range 20 - 158		Recovery = 98.38%			
59) Bromofluorobenzene	16.91	95	2412394	45.82	UG	0.06
Spiked Amount 50.000	Range 28 - 148		Recovery = 91.64%			

Target Compounds Qvalue

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

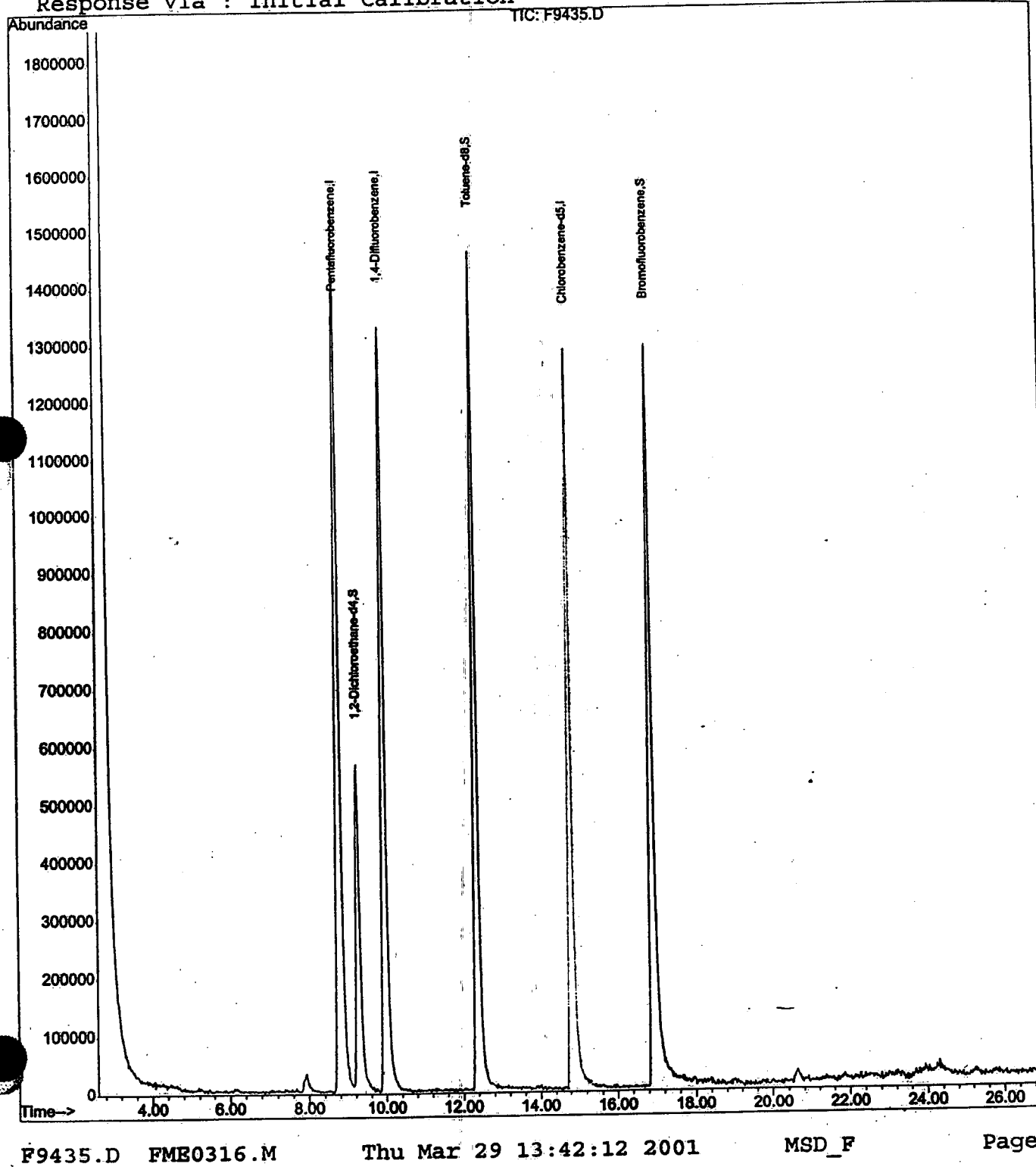
Quantitation Report

Data File : C:\HPCHEM\1\DATA\03-29-01\F9435.D
Acq On : 29 Mar 2001 11:32
Sample : N/A,METHOD_BLK,S,0.1g,0
Misc : N/A,N/A,N/A
MS Integration Params: rteint.p
Quant Time: Mar 29 13:41 2001

Vial: 3
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

Quant Results File: FME0316.RES

Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Last Update : Fri Mar 16 14:54:56 2001
Response via : Initial Calibration



LSC Area Percent Report

Data File : C:\HPCHEM\1\DATA\03-29-01\F9435.D
Acq On : 29 Mar 2001 11:32
Sample : N/A,METHOD_BLK,S,0.1g,0
Misc : N/A,N/A,N/A
'S Integration Params: LSCINT.P

Vial: 3
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Smoothing : ON
Sampling : 1
Start Thrs: 0.2
Stop Thrs : 0

Filtering: 5
Min Area: 3 % of largest Peak
Max Peaks: 100
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Signal : TIC

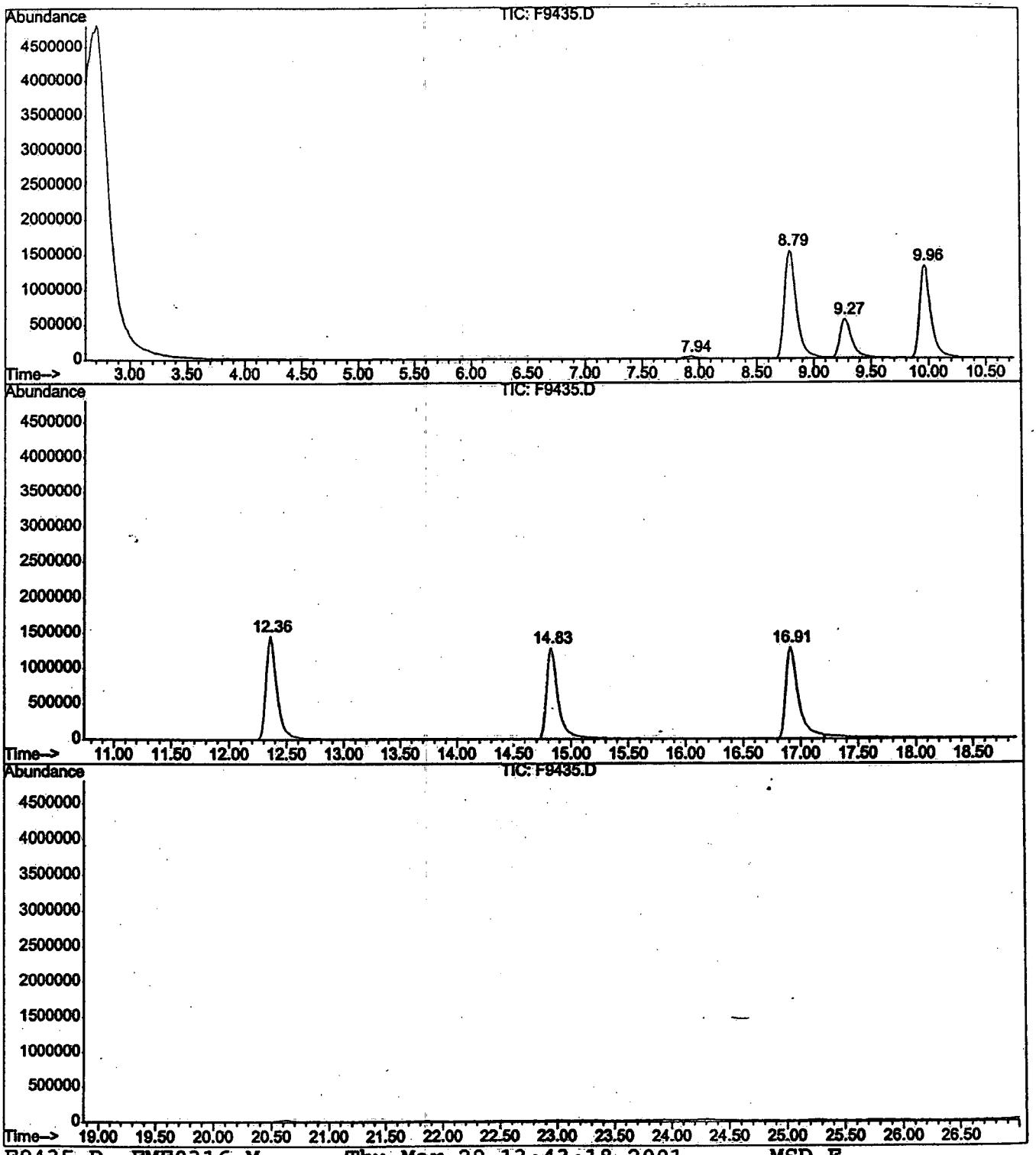
peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	7.937	354	364	370	rBV3	31088	225422	1.98%	0.422%
2	8.789	412	422	443	rBV2	1547558	11395326	100.00%	21.356%
3	9.274	447	455	474	rVB	558258	4028933	35.36%	7.551%
4	9.965	493	502	525	rBV2	1329306	9459208	83.01%	17.728%
5	12.359	657	665	687	rBV	1459740	9627212	84.48%	18.043%
6	14.826	825	833	855	rBV	1286153	8795637	77.19%	16.484%
7	16.911	967	975	995	rBV	1289967	9826552	86.23%	18.416%

Sum of corrected areas: 53358290

F9435.D FME0316.M Thu Mar 29 13:43:17 2001 MSD_F

LSC Report - Integrated Chromatogram

File : C:\HPCHEM\1\DATA\03-29-01\F9435.D
Operator : GREGG
Acquired : 29 Mar 2001 11:32 using AcqMethod VOAF
Instrument : 5970 - In
Sample Name: N/A,METHOD_BLK,S,0.1g,0
Misc Info : N/A,N/A,N/A
Vial Number: 3
Quant File :FME0316.RES (RTE Integrator)



F9435.D FME0316.M Thu Mar 29 13:43:18 2001 MSD_F

000216

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\03-26-01\F9364.D
Acq On : 27 Mar 2001 5:10
Sample : N/A,METHOD_BLK,S,0.1g,0
Misc : N/A,N/A,N/A
MS Integration Params: rteint.p
Quant Time: Mar 27 8:33 2001

Vial: 28
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

Quant Results File: FME0316.RES

Quant Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Last Update : Fri Mar 16 14:54:56 2001
Response via : Initial Calibration
DataAcq Meth : VOAF

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	8.80	168	3347388	50.00	UG	0.08
31) 1,4-Difluorobenzene	9.96	114	3307913	50.00	UG	0.06
50) Chlorobenzene-d5	14.83	117	2387963	50.00	UG	0.06
System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	9.29	65	1520282	45.45	UG	0.09
Spiked Amount 50.000	Range 27 - 176		Recovery = 90.90%			
41) Toluene-d8	12.37	98	3074299	50.55	UG	0.08
Spiked Amount 50.000	Range 20 - 158		Recovery = 101.10%			
59) Bromofluorobenzene	16.91	95	2332439	45.17	UG	0.06
Spiked Amount 50.000	Range 28 - 148		Recovery = 90.34%			

Target Compounds Qvalue

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

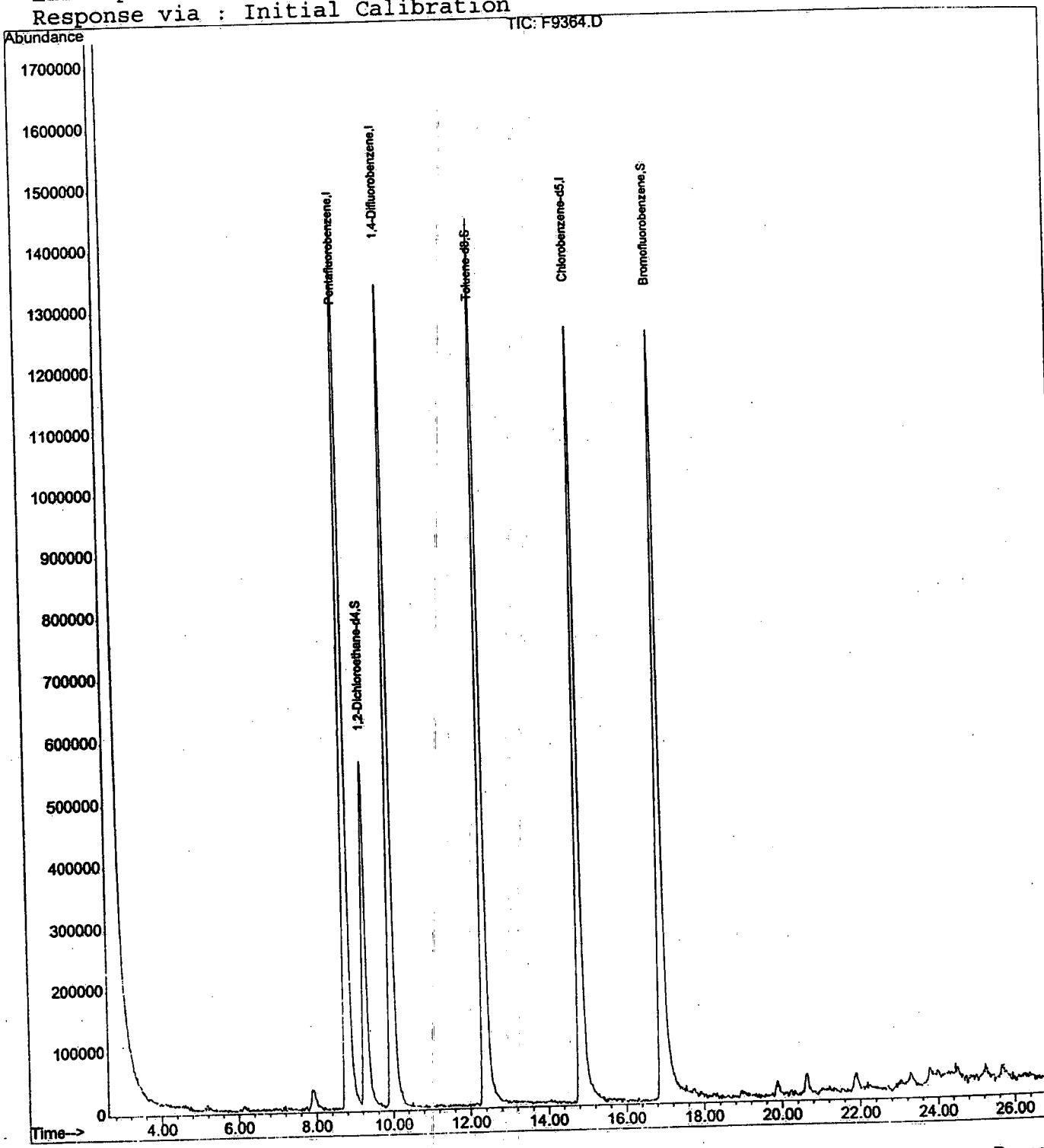
Quantitation Report

Data File : C:\HPCHEM\1\DATA\03-26-01\F9364.D
Acq On : 27 Mar 2001 5:10
Sample : N/A,METHOD_BLK,S,0.1g,0
Misc : N/A,N/A,N/A
MS Integration Params: rteint.p
Quant Time: Mar 27 8:33 2001

Vial: 28
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

Quant Results File: FME0316.RES

Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Last Update : Fri Mar 16 14:54:56 2001
Response via : Initial Calibration



775

000218

LSC Area Percent Report

Data File : C:\HPCHEM\1\DATA\03-26-01\F9364.D
Acq On : 27 Mar 2001 5:10
Sample : N/A,METHOD_BLK,S,0.1g,0
Misc : N/A,N/A,N/A
MS Integration Params: LSCINT.P

Vial: 28
Operator: GREGG
Inst : 5970 - In
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\FME0316.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 8260B
Smoothing : ON
Sampling : 1
Start Thrs: 0.2
Stop Thrs : 0

Filtering: 5
Min Area: 3 % of largest Peak
Max Peaks: 100
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Signal : TIC

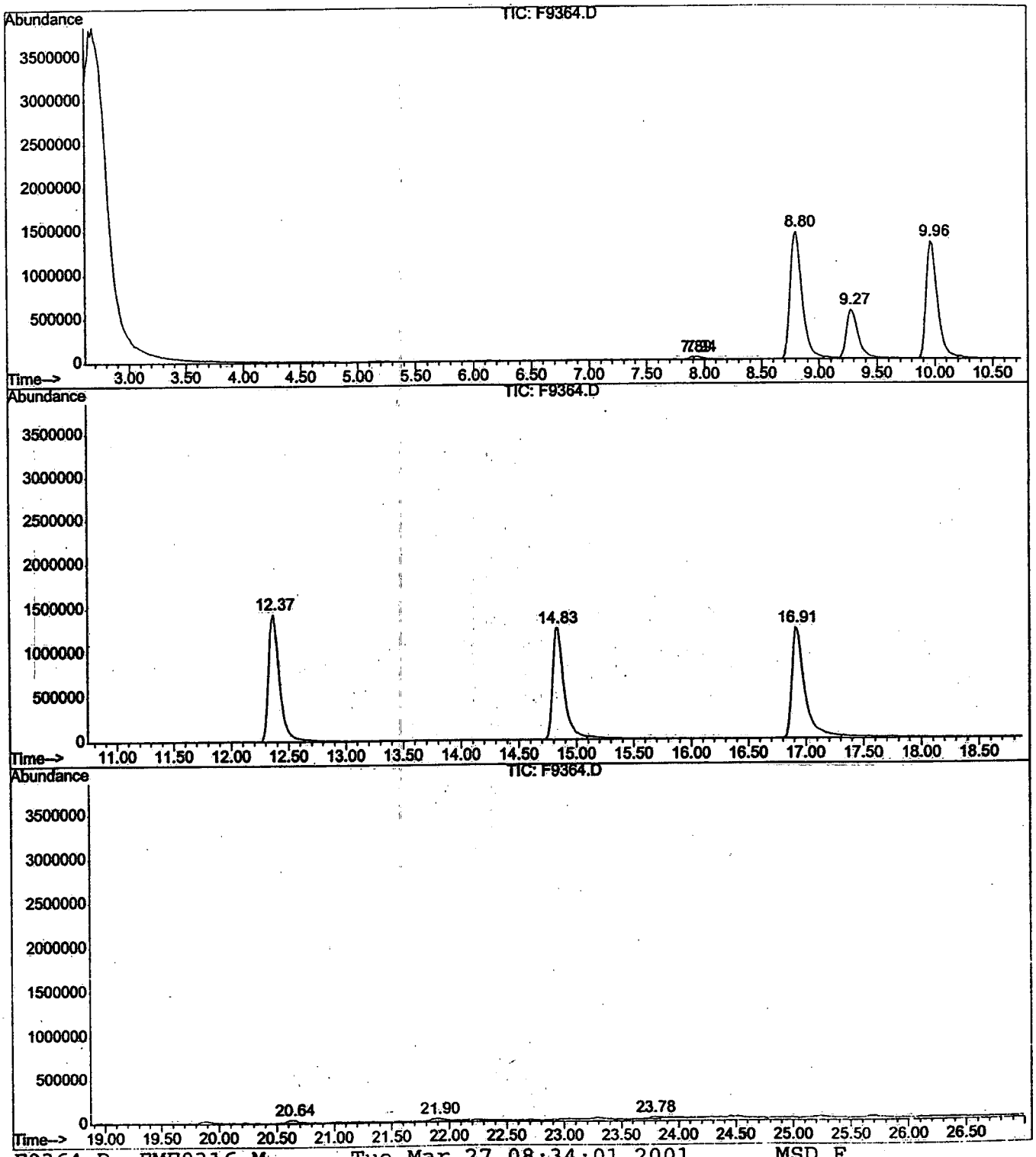
peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	7.893	354	361	362	rBV2	35234	111618	1.07%	0.216%
2	7.937	362	364	372	rVB3	29647	133364	1.28%	0.258%
3	8.804	414	423	439	rBV	1447958	10395816	100.00%	20.138%
4	9.274	448	455	478	rVB2	553970	3902321	37.54%	7.559%
5	9.964	493	502	518	rBV	1333500	8907301	85.68%	17.255%
6	12.373	656	666	684	rBV2	1441416	9488705	91.27%	18.381%
7	14.825	825	833	851	rBV	1258378	8543257	82.18%	16.549%
8	16.911	967	975	1002	rBV	1246079	9562033	91.98%	18.523%
9	20.641	1223	1229	1233	rBV3	31430	181012	1.74%	0.351%
10	21.904	1305	1315	1323	rBV6	31339	257909	2.48%	0.500%
11	23.784	1436	1443	1447	rBV6	25428	139672	1.34%	0.271%

Sum of corrected areas: 51623008

F9364.D FME0316.M Tue Mar 27 08:34:01 2001 MSD_F

LSC Report - Integrated Chromatogram

File : C:\HPCHEM\1\DATA\03-26-01\F9364.D
Operator : GREGG
Acquired : 27 Mar 2001 5:10 using AcqMethod VOAF
Instrument : 5970 - In
Sample Name: N/A,METHOD_BLK,S,0.1g,0
Misc Info : N/A,N/A,N/A
Vial Number: 28
Quant File :FME0316.RES (RTE Integrator)



F9364.D FME0316.M Tue Mar 27 08:34:01 2001 MSD_F

000220

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SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: A5384.D DFTPP Injection Date : 03/20/2001

Inst ID: MSDA DFTPP Injection Time: 07:54

m/z	Ion Abudance Criteria	%Relative Abundance			
51	30.0 - 60.0% of mass 198	43.2			
68	Less than 2.0% of mass 69	0.0	(	0.0	)1
69	Mass 69 relative abundance	63.7			
70	Less than 2.0% of mass 69	1.0	(	1.5	)1
127	40.0 - 60.0% of mass 198	56.1			
197	Less than 1.0% of mass 198	0.0			
198	Base peak, 100% relative abundance	100.0			
199	5.0 - 9.0% of mass 198	7.1			
275	10.0 - 30.0% of mass 198	21.7			
365	Greater than 1.0% of mass 198	2.8			
441	Present, but less than mass 443	10.64	(	85.0	)3
442	40.0 - 100.0% of mass 198	63.2			
443	17.0 - 23.0% of mass 442	12.5	(	19.8	)2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
.	50ppb-STD-FOR-	A5385.D	03/20/2001	08:37
.	OLMO4-STD-FO	A5386.D	03/20/2001	09:06
.	80-STD-FOR-03/	A5387.D	03/20/2001	09:34
.	20ppb-STD-FOR-	A5389.D	03/20/2001	10:35
.	OLMO4-STD-FO	A5390.D	03/20/2001	11:03
.	120ppb-STD-FO	A5391.D	03/20/2001	11:32
.	160ppb-STD-FO	A5392.D	03/20/2001	12:01
.	OLMO4-STD-FO	A5393.D	03/20/2001	12:29
.	OLMO4-STD-FO	A5394.D	03/20/2001	12:58
.	OLMO4-STD-FO	A5395.D	03/20/2001	13:27

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: A5418.D

DFTPP Injection Date : 03/27/2001

Inst ID: MSDA

DFTPP Injection Time: 06:30

m/z	Ion Abudance Criteria	%Relative Abundance			
51	30.0 - 60.0% of mass 198	34.4			
68	Less than 2.0% of mass 69	0.0	(	0.0	)1
69	Mass 69 relative abundance	53.4			
70	Less than 2.0% of mass 69	0.7	(	1.3	)1
127	40.0 - 60.0% of mass 198	47.6			
197	Less than 1.0% of mass 198	0.0			
198	Base peak, 100% relative abundance	100.0			
199	5.0 - 9.0% of mass 198	6.8			
275	10.0 - 30.0% of mass 198	24.7			
365	Greater than 1.0% of mass 198	3.3			
441	Present, but less than mass 443	14.46	(	84.4	)3
442	40.0 - 100.0% of mass 198	91.1			
443	17.0 - 23.0% of mass 442	17.1	(	18.8	)2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
.	50ppb-STD-FOR-	A5419.D	03/27/2001	06:41
.	OLMO4-STD-FO	A5420.D	03/27/2001	07:16
.	Method-Blk	A5421.D	03/27/2001	07:44
SS-1	1793-002	A5422.D	03/27/2001	08:12
SS-2	1793-003	A5423.D	03/27/2001	08:41
SS-3	1793-004	A5424.D	03/27/2001	09:09
SS-4	1793-005	A5425.D	03/27/2001	09:38
SS-2	1793-003	A5426.D	03/27/2001	10:41
SS-4	1793-005	A5427.D	03/27/2001	11:09
S-14	1840-005	A5428.D	03/27/2001	11:38
S-16	1840-007	A5429.D	03/27/2001	12:07
S-14	1840-005	A5430.D	03/27/2001	12:35
S-15	1840-006	A5431.D	03/27/2001	13:04
S-13	1840-004	A5432.D	03/27/2001	13:32
S-13	1840-004	A5433.D	03/27/2001	14:01
S-11	1840-001	A5434.D	03/27/2001	14:30
S-12	1840-002	A5435.D	03/27/2001	15:04
S-12A	1840-003	A5436.D	03/27/2001	15:33
S-11	1840-001	A5437.D	03/27/2001	16:02
.	Blank_MS	A5438.D	03/27/2001	16:30
.	Blank_MSD	A5439.D	03/27/2001	16:59
W-OWS	1836-004	A5440.D	03/27/2001	17:27
W-OWS-A1	1836-005	A5441.D	03/27/2001	17:55

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: A5418.D

DFTPP Injection Date : 03/27/2001

Inst ID: MSDA

DFTPP Injection Time: 06:30

m/z	Ion Abudance Criteria	%Relative Abundance			
51	30.0 - 60.0% of mass 198	34.4			
68	Less than 2.0% of mass 69	0.0	(	0.0	)1
69	Mass 69 relative abundance	53.4			
70	Less than 2.0% of mass 69	0.7	(	1.3	)1
127	40.0 - 60.0% of mass 198	47.6			
197	Less than 1.0% of mass 198	0.0			
198	Base peak, 100% relative abundance	100.0			
199	5.0 - 9.0% of mass 198	6.8			
275	10.0 - 30.0% of mass 198	24.7			
365	Greater than 1.0% of mass 198	3.3			
441	Present, but less than mass 443	14.5	(	84.4	)3
442	40.0 - 100.0% of mass 198	91.1			
443	17.0 - 23.0% of mass 442	17.1	(	18.8	)2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
W-OWS-A2	1836-006	A5442.D	03/27/2001	18:24
E-OWS	1836-007	A5443.D	03/27/2001	18:52

SEMIVOLATILE METHOD BLANK SUMMARY

Lab File ID: A5421.D

Instrument ID: MSDA

Date Extracted: 03/26/01

Matrix: SOIL

Date Analyzed: 03/27/2001

Time Analyzed: 07:44

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

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed
SS-1	1793-002	03/27/2001	08:12
SS-2	1793-003	03/27/2001	08:41
SS-3	1793-004	03/27/2001	09:09
SS-4	1793-005	03/27/2001	09:38
SS-2	1793-003	03/27/2001	10:41
SS-4	1793-005	03/27/2001	11:09
S-14	1840-005	03/27/2001	11:38
S-16	1840-007	03/27/2001	12:07
S-14	1840-005	03/27/2001	12:35
S-15	1840-006	03/27/2001	13:04
S-13	1840-004	03/27/2001	13:32
S-13	1840-004	03/27/2001	14:01
S-11	1840-001	03/27/2001	14:30
S-12	1840-002	03/27/2001	15:04
S-12A	1840-003	03/27/2001	15:33
S-11	1840-001	03/27/2001	16:02
.	Blank_MS	03/27/2001	16:30
.	Blank_MSD	03/27/2001	16:59
W-OWS	1836-004	03/27/2001	17:27
W-OWS-A1	1836-005	03/27/2001	17:55
W-OWS-A2	1836-006	03/27/2001	18:24
E-OWS	1836-007	03/27/2001	18:52
E-OWS	1836-007	03/28/2001	08:23

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: N/A

Lab ID: Method-Blk
Client ID: .
Date Received: N/A
Date Extracted: 03/26/2001
Date Analyzed: 03/27/2001
Data file: A5421.D

GC/MS Column: DB-5
Sample wt/vol: 30.0g
Matrix-Units: Soil-µg/Kg (ppb)
Dilution Factor: 1
% Moisture: 0.0

Compound	Concentration	Q	MDL
N-Nitrosodimethylamine	ND		33.3
Benzaldehyde	ND		66.7
Phenol	ND		33.3
Aniline	ND		33.3
bis(2-Chloroethyl)ether	ND		33.3
2-Chlorophenol	ND		33.3
1,3-Dichlorobenzene	ND		33.3
1,4-Dichlorobenzene	ND		33.3
Benzyl alcohol	ND		33.3
1,2-Dichlorobenzene	ND		33.3
2-Methylphenol	ND		33.3
bis(2-chloroisopropyl)ether	ND		33.3
4-Methylphenol	ND		33.3
N-Nitroso-di-n-propylamine	ND		33.3
Acetophenone	ND		33.3
Hexachloroethane	ND		33.3
Nitrobenzene	ND		33.3
Isophorone	ND		33.3
2-Nitrophenol	ND		33.3
2,4-Dimethylphenol	ND		33.3
bis(2-Chloroethoxy)methane	ND		33.3
Benzoic acid	ND		33.3
2,4-Dichlorophenol	ND		33.3
1,2,4-Trichlorobenzene	ND		33.3
Naphthalene	ND		33.3
4-Chloroaniline	ND		33.3
Hexachlorobutadiene	ND		33.3
Caprolactam	ND		33.3
4-Chloro-3-methylphenol	ND		33.3
2-Methylnaphthalene	ND		33.3
Hexachlorocyclopentadiene	ND		33.3
2,4,6-Trichlorophenol	ND		33.3
2,4,5-Trichlorophenol	ND		33.3
1-1'-Biphenyl	ND		33.3
2-Chloronaphthalene	ND		33.3
2-Nitroaniline	ND		33.3
Dimethylphthalate	ND		33.3
2,6-Dinitrotoluene	ND		33.3
Acenaphthylene	ND		33.3

000225

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INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: N/A

Lab ID: Method-Blk
Client ID: .
Date Received: N/A
Date Extracted: 03/26/2001
Date Analyzed: 03/27/2001
Data file: A5421.D

GC/MS Column: DB-5
Sample wt/vol: 30.0g
Matrix-Units: Soil-µg/Kg (ppb)
Dilution Factor: 1
% Moisture: 0.0

Compound	Concentration	Q	MDL
3-Nitroaniline	ND		33.3
Acenaphthene	ND		33.3
2,4-Dinitrophenol	ND		33.3
4-Nitrophenol	ND		33.3
2,4-Dinitrotoluene	ND		33.3
Dibenzofuran	ND		33.3
Diethylphthalate	ND		33.3
Fluorene	ND		33.3
4-Chlorophenyl-phenylether	ND		33.3
4-Nitroaniline	ND		33.3
4,6-Dinitro-2-methylphenol	ND		33.3
N-Nitrosodiphenylamine	ND		33.3
1,2-Diphenylhydrazine/Azobenzene	ND		33.3
4-Bromophenyl-phenylether	ND		33.3
Hexachlorobenzene	ND		33.3
Atrazine	ND		33.3
Pentachlorophenol	ND		33.3
Phenanthrene	ND		33.3
Anthracene	ND		33.3
Carbazole	ND		33.3
Di-n-butylphthalate	ND		33.3
Fluoranthene	ND		33.3
Benzidine	ND		33.3
Pyrene	ND		33.3
3,3'-Dimethylbenzidine	ND		66.7
Butylbenzylphthalate	ND		33.3
3,3'-Dichlorobenzidine	ND		33.3
Benzo[a]anthracene	ND		33.3
Chrysene	ND		33.3
bis(2-Ethylhexyl)phthalate	ND		33.3
Di-n-octylphthalate	ND		33.3
Benzo[b]fluoranthene	ND		33.3
Benzo[k]fluoranthene	ND		33.3
Benzo[a]pyrene	ND		33.3
Indeno[1,2,3-cd]pyrene	ND		33.3
Dibenz[a,h]anthracene	ND		33.3
Benzo[g,h,i]perylene	ND		33.3

Total Target Compounds: 0

000226

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS
Tentatively Identified Compounds

Client/Project: N/A

Lab ID: Method-Blk
Client ID: .
Date Received: N/A
Date Extracted: 03/26/2001
Date Analyzed: 03/27/2001
Data file: A5421.D

GC/MS Column: DB-5
Sample wt/vol: 30.0g
Matrix-Units: Soil-µg/Kg (ppb)
Dilution Factor: 1
% Moisture: 0.0

CAS #	Compound	Estimated Concentration	Retention Time

No peaks detected

Total TICs = 0

000227

784

Response Factor Report MSD-A

Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Tue Mar 20 12:36:46 2001
Response via : Initial Calibration

Calibration Files
160 =A5392.D 80 =A5387.D 50 =A5385.D
20 =A5389.D 120 =A5391.D

		Compound	160	80	50	20	120	Avg	%RSD
1)	I	1,4-Dichlorobenzene-d	----------ISTD----------						
2)	T	N-Nitrosodimethylamin	1.047	0.874	0.864	1.045	1.155	0.997	12.52
3)	T	Pyridine	1.214	1.018	0.987	1.216	1.344	1.156	12.95
4)	S	2-Fluorophenol	1.382	1.296	1.298	1.260	1.313	1.310	3.43
5)	T	Benzaldehyde	1.049	0.946	1.006	0.912	1.028	0.988	5.82
6)	S	Phenol-d5	1.716	1.639	1.664	1.571	1.652	1.649	3.17
7)	MC	Phenol	1.449	1.495	1.574	1.519	1.513	1.510	3.00
8)	T	Aniline	1.654	1.808	1.959	1.878	1.770	1.814	6.32
9)	T	bis(2-Chloroethyl)eth	1.125	1.235	1.273	1.279	1.241	1.231	5.06
10)	M	2-Chlorophenol	1.364	1.416	1.479	1.440	1.443	1.428	2.97
11)	T	1,3-Dichlorobenzene	1.473	1.446	1.447	1.431	1.486	1.457	1.53
12)	MC	1,4-Dichlorobenzene	1.554	1.592	1.549	1.544	1.738	1.595	5.13
13)	T	Benzyl alcohol	0.754	0.809	0.863	0.821	0.803	0.810	4.83
14)	T	1,2-Dichlorobenzene	1.416	1.435	1.401	1.401	1.506	1.432	3.06
15)	T	2-Methylphenol	1.120	1.191	1.253	1.202	1.209	1.195	4.03
16)	T	bis(2-chloroisopropyl	1.636	1.733	1.773	1.836	1.749	1.745	4.15
[illegible]	T	4-Methylphenol	1.586	1.447	1.356	1.263	1.620	1.454	10.38
[illegible]	MP	N-Nitroso-di-n-propyl	1.130	1.303	1.265	1.301	1.274	1.254	5.72
[illegible]	T	Acetophenone	2.033	2.086	2.008	2.007	2.185	2.064	3.63
20)	T	2-Aminotoluene +4-Ami	4.854	4.678	4.337	4.386	5.260	4.703	8.02
21)	T	Hexachloroethane	0.734	0.774	0.765	0.803	0.808	0.777	3.88
22)	I	Naphthalene-d8	----------ISTD----------						
23)	S	Nitrobenzene-d5	0.411	0.405	0.391	0.393	0.394	0.399	2.19
24)	T	Nitrobenzene	0.360	0.413	0.413	0.432	0.403	0.404	6.59
25)	T	Isophorone	0.644	0.729	0.746	0.753	0.714	0.717	6.07
26)	TC	2-Nitrophenol	0.192	0.200	0.197	0.189	0.193	0.194	2.21
27)	T	2,4-Dimethylphenol	0.337	0.380	0.375	0.364	0.378	0.367	4.79
28)	T	bis(2-Chloroethoxy)me	0.333	0.360	0.369	0.348	0.358	0.354	3.85
29)	T	Benzoic acid	0.101	0.069	0.088	0.080	0.103	0.088	16.12
30)	T	2,4-Dimethylaniline	0.561	0.556	0.555	0.546	0.580	0.560	2.22
31)	TC	2,4-Dichlorophenol	0.264	0.260	0.256	0.229	0.290	0.260	8.46
32)	M	1,2,4-Trichlorobenzen	0.304	0.291	0.284	0.271	0.316	0.293	5.98
33)	T	Naphthalene	0.986	1.001	1.001	0.898	1.159	1.009	9.31
34)	T	4-Chloroaniline	0.397	0.411	0.429	0.379	0.452	0.413	6.85
35)	TC	Hexachlorobutadiene	0.230	0.208	0.196	0.186	0.228	0.210	9.31
36)	T	Caprolactam	0.151	0.166	0.166	0.150	0.165	0.160	5.21
37)	MC	4-Chloro-3-methylphen	0.294	0.344	0.326	0.301	0.317	0.316	6.37
38)	T	2-Methylnaphthalene	0.735	0.741	0.675	0.602	0.833	0.717	11.95
39)	I	Acenaphthene-d10	----------ISTD----------						
40)	TP	Hexachlorocyclopentad	0.249	0.241	0.230	0.137	0.274	0.226	23.30
[illegible]	TC	2,4,6-Trichlorophenol	0.383	0.378	0.375	0.354	0.411	0.380	5.33
[illegible]	T	2,4,5-Trichlorophenol	0.416	0.414	0.438	0.375	0.443	0.417	6.48
43)	S	2-Fluorobiphenyl	1.251	1.091	1.158	1.126	1.196	1.164	5.33
44)	T	1-1'-Biphenyl	1.700	1.563	1.250	1.301	1.733	1.509	14.81
45)	T	2-Chloronaphthalene	1.043	1.049	0.981	0.987	1.208	1.054	8.70
46)	T	2-Nitroaniline	0.432	0.470	0.486	0.497	0.490	0.475	5.50
47)	T	Dimethylphthalate	1.223	1.314	1.242	1.272	1.338	1.278	3.78

48)	T	2,6-Dinitrotoluene	0.312	0.293	0.306	0.290	0.327	0.306	4.98
49)	T	Acenaphthylene	2.063	1.773	1.758	1.665	1.917	1.835	8.49
50)	T	3-Nitroaniline	0.312	0.340	0.330	0.276	0.348	0.321	8.87
51)	MC	Acenaphthene	1.318	1.251	1.056	1.020	1.410	1.211	13.88
52)	T	2,4-Dinitrophenol	0.178	0.172	0.151	0.076	0.183	0.152	28.91
53)	MP	4-Nitrophenol	0.301	0.321	0.331	0.298	0.341	0.318	5.89
54)	M	2,4-Dinitrotoluene	0.366	0.413	0.403	0.399	0.399	0.396	4.48
55)	T	Dibenzofuran	1.659	1.529	1.460	1.403	1.598	1.530	6.72
56)	T	Diethylphthalate	1.641	1.541	1.488	1.530	1.596	1.559	3.82
57)	T	Fluorene	1.506	1.360	1.158	1.154	1.433	1.322	12.13
58)	T	4-Chlorophenyl-phenyl	0.728	0.677	0.565	0.575	0.818	0.673	15.84
59)	T	4-Nitroaniline	0.348	0.323	0.295	0.287	0.327	0.316	7.92
60)	I	Phenanthrene-d10	----------ISTD----------						
61)	T	4,6-Dinitro-2-methylp	0.117	0.123	0.115	0.095	0.128	0.116	10.89
62)	TC	N-Nitrosodiphenylamin	0.398	0.412	0.372	0.352	0.447	0.396	9.30
63)	T	1,2-Diphenylhydrazine	0.786	0.869	0.833	0.839	0.901	0.846	5.05
64)	S	2,4,6-Tribromophenol	0.158	0.150	0.157	0.144	0.152	0.152	3.75
65)	T	4-Bromophenyl-phenyle	0.200	0.182	0.182	0.162	0.210	0.187	9.81
66)	T	Hexachlorobenzene	0.239	0.234	0.235	0.215	0.279	0.240	9.72
67)	T	Atrazine	0.197	0.169	0.204	0.164	0.183	0.183	9.30
68)	MC	Pentachlorophenol	0.109	0.106	0.103	0.067	0.115	0.100	19.20
69)	T	Phenanthrene	0.925	0.882	0.913	0.774	1.061	0.911	11.29
70)	T	Anthracene	1.058	0.961	0.886	0.768	1.103	0.955	14.08
71)	T	Carbazole	0.706	0.687	0.647	0.504	0.726	0.654	13.57
72)	T	Di-n-butylphthalate	1.361	1.382	1.234	1.180	1.527	1.337	10.16
73)	TC	Fluoranthene	1.031	1.080	0.962	0.859	1.223	1.031	13.15
74)	T	Benzidine	0.295	0.256	0.268	0.061	0.333	0.243	43.50
75)	I	Chrysene-d12	----------ISTD----------						
76)	M	Pyrene	1.250	1.330	1.207	1.143	1.549	1.296	12.13
77)	S	Terphenyl-d14	0.816	0.856	0.907	0.965	0.866	0.882	6.43
78)	T	3,3'-Dimethylbenzidin	0.358	0.354	0.307	0.160	0.362	0.308	27.90
79)	T	Butylbenzylphthalate	0.700	0.675	0.603	0.612	0.671	0.652	6.52
80)	T	3,3'-Dichlorobenzidin	0.288	0.295	0.290	0.244	0.294	0.282	7.69
81)	T	Benzo[a]anthracene	0.881	0.956	0.906	0.954	1.005	0.941	5.10
82)	T	Chrysene	0.954	0.963	0.934	0.834	1.020	0.941	7.20
83)	T	bis(2-Ethylhexyl)phth	0.899	0.950	0.847	0.876	1.044	0.923	8.37
84)	I	Perylene-d12	----------ISTD----------						
85)	TC	Di-n-octylphthalate	2.052	1.829	1.639	1.530	2.019	1.814	12.64
86)	T	Benzo[b]fluoranthene	1.142	1.065	0.959	0.889	1.176	1.046	11.56
87)	T	Benzo[k]fluoranthene	0.871	0.929	0.904	0.902	0.952	0.912	3.35
88)	TC	Benzo[a]pyrene	0.834	0.913	0.835	0.806	0.918	0.861	5.92
89)	T	Indeno[1,2,3-cd]pyren	0.700	0.948	0.919	0.866	0.882	0.863	11.21
90)	T	Dibenz[a,h]anthracene	0.730	0.959	0.932	0.869	0.897	0.877	10.18
91)	T	Benzo[g,h,i]perylene	0.434	0.705	0.709	0.695	0.598	0.628	18.75

(#) = Out of Range

AS0601.M Tue Mar 20 14:00:08 2001 MSD-A

Instrument ID: MSD_A
Method ID: AS0601.M
Date: 03/20/2001

Average %RSD = 9.14

Refer to SW846 Method 8000B Section 7.5.1.

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\03-27-01\A5419.D
Acq On : 27 Mar 2001 6:41
Sample : .,50ppb-STD-FOR-03/27/01
'isc : N/A,N/A,N/A,1
.S Integration Params: rteint.p

Vial: 2
Operator: JC
Inst : MSD-A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Fri Mar 23 07:24:54 2001
Response via : Multiple Level Calibration

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	139	0.01
2	T	N-Nitrosodimethylamine	0.997	0.951	4.6	153	-0.01
3	T	Pyridine	1.156	1.130	2.2	159	0.02
4	S	2-Fluorophenol	1.310	1.294	1.2	139	0.00
5	T	Benzaldehyde	0.988	1.199	-21.4	125	0.01
6	S	Phenol-d5	1.649	1.626	1.4	136	-0.02
7	MC	Phenol	1.510	1.565	-3.6	138	-0.02
8	T	Aniline	1.814	1.929	-6.3	137	0.00
9	T	bis(2-Chloroethyl)ether	1.231	1.245	-1.1	136	-0.01
10	M	2-Chlorophenol	1.428	1.456	-2.0	137	-0.01
11	T	1,3-Dichlorobenzene	1.457	1.457	0.0	140	0.00
12	MC	1,4-Dichlorobenzene	1.595	1.519	4.8	136	0.00
13	T	Benzyl alcohol	0.810	0.824	-1.7	133	-0.03
14	T	1,2-Dichlorobenzene	1.432	1.389	3.0	138	0.00
15	T	2-Methylphenol	1.195	1.170	2.1	130	-0.03
[illegible]	T	bis(2-chloroisopropyl)ether	1.745	1.760	-0.9	138	0.00
[illegible]	T	4-Methylphenol	1.454	1.255	13.7	129	-0.03
18	MP	N-Nitroso-di-n-propylamine	1.254	1.128	10.0	124	-0.04
19	T	Acetophenone	2.064	1.779	13.8	123	-0.03
20	T	2-Aminotoluene +4-Aminotolu	4.703	3.842	18.3	123	-0.02
21	T	Hexachloroethane	0.777	0.724	6.8	132	0.00
22	I	Naphthalene-d8	1.000	1.000	0.0	129	0.00
23	S	Nitrobenzene-d5	0.399	0.389	2.5	128	-0.01
24	T	Nitrobenzene	0.404	0.391	3.2	122	-0.02
25	T	Isophorone	0.717	0.709	1.1	123	-0.03
26	TC	2-Nitrophenol	0.194	0.202	-4.1	132	-0.01
27	T	2,4-Dimethylphenol	0.367	0.351	4.4	121	-0.03
28	T	bis(2-Chloroethoxy)methane	0.354	0.352	0.6	123	-0.01
29	T	Benzoic acid	0.088	0.085	3.4	125	-0.01
30	T	2,4-Dimethylaniline	0.560	0.527	5.9	122	-0.02
31	TC	2,4-Dichlorophenol	0.260	0.242	6.9	122	-0.03
32	M	1,2,4-Trichlorobenzene	0.293	0.276	5.8	125	-0.01
33	T	Naphthalene	1.009	0.912	9.6	118	-0.01
34	T	4-Chloroaniline	0.413	0.412	0.2	124	-0.01
35	TC	Hexachlorobutadiene	0.210	0.181	13.8	119	-0.01
36	T	Caprolactam	0.160	0.160	0.0	125	-0.08
37	MC	4-Chloro-3-methylphenol	0.316	0.307	2.8	121	-0.02
38	T	2-Methylnaphthalene	0.717	0.666	7.1	127	0.00
[illegible]	I	Acenaphthene-d10	1.000	1.000	0.0	120	0.00
[illegible]	TP	Hexachlorocyclopentadiene	0.226	0.269	-19.0	140	0.00
41	TC	2,4,6-Trichlorophenol	0.380	0.396	-4.2	126	-0.01
42	T	2,4,5-Trichlorophenol	0.417	0.439	-5.3	120	-0.01
43	S	2-Fluorobiphenyl	1.164	1.115	4.2	115	0.00
44	T	1-1'-Biphenyl	1.509	1.417	6.1	136	-0.01
45	T	2-Chloronaphthalene	1.054	0.989	6.2	121	0.00

46	T	2-Nitroaniline	0.475	0.500	-5.3	123	-0.01
47	T	Dimethylphthalate	1.278	1.295	-1.3	125	-0.01
48	T	2,6-Dinitrotoluene	0.306	0.309	-1.0	121	-0.02
49	T	Acenaphthylene	1.835	1.781	2.9	121	-0.01
	T	3-Nitroaniline	0.321	0.354	-10.3	128	-0.02
	MC	Acenaphthene	1.211	1.117	7.8	127	-0.01
2	T	2,4-Dinitrophenol	0.152	0.169	-11.2	134	-0.01
53	MP	4-Nitrophenol	0.318	0.327	-2.8	118	-0.03
54	M	2,4-Dinitrotoluene	0.396	0.370	6.6	110	-0.02
55	T	Dibenzofuran	1.530	1.450	5.2	119	-0.01
56	T	Diethylphthalate	1.559	1.372	12.0	110	-0.02
57	T	Fluorene	1.322	1.204	8.9	124	-0.01
58	T	4-Chlorophenyl-phenylether	0.673	0.605	10.1	128	-0.01
59	T	4-Nitroaniline	0.316	0.332	-5.1	135	-0.04
60	I	Phenanthrene-d10	1.000	1.000	0.0	116	0.00
61	T	4,6-Dinitro-2-methylphenol	0.116	0.136	-17.2	136	-0.02
62	TC	N-Nitrosodiphenylamine	0.396	0.411	-3.8	127	-0.01
63	T	1,2-Diphenylhydrazine/Azobe	0.846	0.819	3.2	114	-0.01
64	S	2,4,6-Tribromophenol	0.152	0.159	-4.6	117	0.00
65	T	4-Bromophenyl-phenylether	0.187	0.176	5.9	112	-0.01
66	T	Hexachlorobenzene	0.240	0.224	6.7	110	-0.01
67	T	Atrazine	0.183	0.148	19.1	84	0.00
68	MC	Pentachlorophenol	0.100	0.117	-17.0	131	-0.01
69	T	Phenanthrene	0.911	0.834	8.5	106	-0.01
70	T	Anthracene	0.955	0.907	5.0	118	-0.01
71	T	Carbazole	0.654	0.655	-0.2	117	-0.01
72	T	Di-n-butylphthalate	1.337	1.309	2.1	123	0.00
73	TC	Fluoranthene	1.031	0.997	3.3	120	0.00
74	T	Benzidine	0.243	0.279	-14.8	120	-0.01
	I	Chrysene-d12	1.000	1.000	0.0	111	-0.01
76	M	Pyrene	1.296	1.216	6.2	112	-0.01
77	S	Terphenyl-d14	0.882	0.867	1.7	106	0.00
78	T	3,3'-Dimethylbenzidine	0.308	0.359	-16.6	130	0.00
79	T	Butylbenzylphthalate	0.652	0.653	-0.2	120	-0.01
80	T	3,3'-Dichlorobenzidine	0.282	0.305	-8.2	117	-0.02
81	T	Benzo[a]anthracene	0.941	0.973	-3.4	119	-0.01
82	T	Chrysene	0.941	0.976	-3.7	116	-0.02
83	T	bis(2-Ethylhexyl)phthalate	0.923	0.932	-1.0	122	0.00
84	I	Perylene-d12	1.000	1.000	0.0	117	0.01
85	TC	Di-n-octylphthalate	1.814	1.688	6.9	120	-0.01
86	T	Benzo[b]fluoranthene	1.046	1.008	3.6	123	-0.03
87	T	Benzo[k]fluoranthene	0.912	0.908	0.4	118	-0.03
88	TC	Benzo[a]pyrene	0.861	0.856	0.6	120	-0.02
89	T	Indeno[1,2,3-cd]pyrene	0.863	0.863	0.0	110	-0.03
90	T	Dibenz[a,h]anthracene	0.877	0.863	1.6	108	-0.02
91	T	Benzo[g,h,i]perylene	0.628	0.635	-1.1	105	-0.01

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

A5385.D AS0601.M Tue Mar 27 07:40:25 2001 MSD-A

SEMIVOLATILE SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 03/27/2001

Lab Sample ID	Matrix	File ID	S1	S2	S3	S4	S5	S6
Method-Blk	SOIL	A5421.	64	74	79	80	76	113
1793-002	SOIL	A5422.	67	79	86	85	92	115
1793-004	SOIL	A5424.	59	68	70	76	92	121
1793-003	SOIL	A5426.	51	62	66	66	68	80
1793-005	SOIL	A5427.	51	63	64	64	70	82
1840-007	SOIL	A5429.	57	70	73	68	77	84
1840-005	SOIL	A5430.	50	55	61	57	61	68
1840-006	SOIL	A5431.	62	69	70	71	97	109
1840-004	SOIL	A5433.	47	56	61	62	62	74
1840-002	SOIL	A5435.	68	75	76	76	83	107
1840-003	SOIL	A5436.	64	71	76	78	82	110
1840-001	SOIL	A5437.	54	65	70	70	77	87
Blank_MS	SOIL	A5438.	67	76	81	82	101	108
Blank_MSD	SOIL	A5439.	67	74	78	77	94	107
1836-004	SOIL	A5440.	N/A	N/A	71	73	N/A	97
1836-005	SOIL	A5441.	N/A	N/A	72	67	N/A	72
1836-006	SOIL	A5442.	N/A	N/A	83	81	N/A	98

EPA CLP QC LIMITS FOR:	Soil	Aqueous
S1 (2FP) = 2-Fluorophenol	37-100	42-83
S2 (PHL) = Phenol-d5	37-104	63-101
S3 (NBZ) = Nitrobenzene-d5	48-104	47-120
S4 (FBP) = 2-Fluorobiphenyl	52-107	55-112
S5 (TBP) = 2,4,6-Tribromophenol	60-155	52-151
S6 (TPH) = Terphenyl-d14	58-157	63-132

* Column to be used to flag recovery values

SOIL SEMIVOLATILE MATRIX SPIKE/SPIKE DUPLICATE RECOVERY

Matrix spike Lab sample ID: Blank_MS Batch No.: 032601S

Compound	SPIKE ADDED (ug/Kg)	SAMPLE CONC. (ug/Kg)	MS CONC. (ug/Kg)	MS % REC #	QC LIMITS REC.
Phenol	100.0	0.0	72.3	72	26 - 90
2-Chlorophenol	100.0	0.0	70.6	71	25 - 102
1,4-Dichlorobenzene	50.0	0.0	31.3	63	28 - 104
N-Nitroso-di-n-propylamine	50.0	0.0	42.7	85	41 - 126
1,2,4-Trichlorobenzene	50.0	0.0	33.0	66	38 - 107
4-Chloro-3-methylphenol	100.0	0.0	85.5	86	26 - 103
Acenaphthene	50.0	0.0	36.3	73	31 - 137
4-Nitrophenol	100.0	0.0	92.1	92	11 - 114
2,4-Dinitrotoluene	50.0	0.0	41.7	83	28 - 89
Pentachlorophenol	100.0	0.0	105.8	106	17 - 109
Pyrene	50.0	0.0	44.6	89	35 - 142

Compound	SAMPLE CONC. (ug/Kg)	MSD CONC. (ug/Kg)	MSD % # REC	% RPD #	QC LIMITS RPD	REC.
Phenol	0.0	72.7	73	1	42	26 - 90
2-Chlorophenol	0.0	71.1	71	0	40	25 - 102
1,4-Dichlorobenzene	0.0	30.3	61	3	28	28 - 104
N-Nitroso-di-n-propylamine	0.0	42.2	84	1	38	41 - 126
1,2,4-Trichlorobenzene	0.0	32.7	65	2	28	38 - 107
4-Chloro-3-methylphenol	0.0	86.9	87	1	42	26 - 103
Acenaphthene	0.0	35.4	71	3	31	31 - 137
4-Nitrophenol	0.0	92.1	92	0	50	11 - 114
2,4-Dinitrotoluene	0.0	40.8	82	1	38	28 - 89
Pentachlorophenol	0.0	101.4	101	5	50	17 - 109
Pyrene	0.0	43.1	86	3	31	35 - 142

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

* Values outside of QC limits

NC Non calculable

RPD: __0___ out of __11__ outside limits

Spike Recovery: __0___ out of __22__ outside limits

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): A5385.D

Date Analyzed: 03/20/2001

Instrument ID: MSDA

Time Analyzed: 08:37

	40UG/L	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	12 HOUR STD	87043	8.09	376399	9.75	199030	11.69
	UPPER LIMIT	174086	8.59	752798	10.25	398060	12.19
	LOWER LIMIT	43522	7.59	188200	9.25	99515	11.19
	LAB SAMPLE ID						
01	OLMO4-STD-FOR-0	70211	8.09	326691	9.74	170320	11.68
02	80-STD-FOR-03/20/0	77358	8.09	329995	9.75	177356	11.69
03	20ppb-STD-FOR-03/	82894	8.09	361582	9.74	180349	11.68
04	OLMO4-STD-FOR-0	72942	8.08	325917	9.74	168307	11.68
05	120ppb-STD-FOR-03	76535	8.09	330768	9.76	172779	11.69
06	160ppb-STD-FOR-03	80239	8.09	344671	9.75	177617	11.69
07	OLMO4-STD-FOR-0	80223	8.08	354834	9.74	193073	11.68
08	OLMO4-STD-FOR-0	77802	8.09	345305	9.74	173098	11.68
09	OLMO4-STD-FOR-0	74988	8.08	323252	9.74	168286	11.68
10							
11							
12							
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16							
17							
18							
19							
20							
21							
22							

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): A5385.D

Date Analyzed: 03/20/2001

Instrument ID: MSDA

Time Analyzed: 08:37

	40UG/L	IS4 AREA #	RT #	IS5 AREA #	RT #	IS6 AREA #	RT #
	12 HOUR STD	386602	13.22	356985	15.95	304334	18.05
	UPPER LIMIT	773204	13.72	713970	16.45	608668	18.55
	LOWER LIMIT	193301	12.72	178493	15.45	152167	17.55
	LAB SAMPLE ID						
01	OLMO4-STD-FOR-0	349091	13.22	284347	15.93	257048	18.03
02	80-STD-FOR-03/20/0	355720	13.22	325233	15.95	262609	18.05
03	20ppb-STD-FOR-03/	371361	13.22	301914	15.94	267331	18.03
04	OLMO4-STD-FOR-0	341692	13.22	296875	15.94	249429	18.02
05	120ppb-STD-FOR-03	350204	13.22	327227	15.96	242769	18.05
06	160ppb-STD-FOR-03	358702	13.23	341445	15.96	230393	18.05
07	OLMO4-STD-FOR-0	357238	13.22	293540	15.94	257677	18.02
08	OLMO4-STD-FOR-0	363028	13.22	281973	15.93	257840	18.03
09	OLMO4-STD-FOR-0	325916	13.22	289503	15.94	258777	18.04
10							
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22							

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): A5419.D

Date Analyzed: 03/27/2001

Instrument ID: MSDA

Time Analyzed: 06:41

	40UG/L	IS1 AREA	#	RT	#	IS2 AREA	#	RT	#	IS3 AREA	#	RT	#
	12 HOUR STD	120986		8.10		485654		9.75		238169		11.69	
	UPPER LIMIT	241972		8.60		971308		10.25		476338		12.19	
	LOWER LIMIT	60493		7.60		242827		9.25		119085		11.19	
	LAB SAMPLE ID												
01	OLMO4-STD-FOR-0	91048		8.09		397098		9.74		213942		11.68	
02	Method-Blk	69936		8.09		312184		9.74		156588		11.68	
03	1793-002	70510		8.09		306525		9.74		154603		11.68	
04	1793-003	87641		8.09		380137		9.74		194101		11.68	
05	1793-004	61644		8.09		287498		9.75		152070		11.68	
06	1793-005	66761		8.11		311110		9.75		164015		11.69	
07	1793-003	92016		8.09		417476		9.74		205700		11.69	
08	1793-005	92912		8.08		427315		9.74		228154		11.68	
09	1840-005	90863		8.09		419593		9.74		229322		11.69	
10	1840-007	93887		8.09		428077		9.74		215516		11.68	
11	1840-005	93560		8.08		422560		9.74		217159		11.68	
12	1840-006	88355		8.08		398686		9.74		210076		11.68	
13	1840-004	93324		8.08		452064		9.75		203249		11.68	
14	1840-004	94824		8.09		418437		9.74		199169		11.68	
15	1840-001	90276		8.08		398497		9.74		197731		11.68	
16	1840-002	82528		8.09		381267		9.75		189541		11.68	
17	1840-003	84558		8.09		378039		9.74		187810		11.68	
18	1840-001	95601		8.08		439554		9.74		225990		11.68	
19	Blank_MS	80628		8.08		361829		9.74		185464		11.68	
20	Blank_MSD	79490		8.08		361954		9.74		182637		11.68	
21	1836-004	80975		8.08		365612		9.74		181147		11.68	
22	1836-005	104990		8.08		450734		9.74		242130		11.68	

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

000237

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): A5419.D

Date Analyzed: 03/27/2001

Instrument ID: MSDA

Time Analyzed: 06:41

	40UG/L	IS1 AREA	#	RT	#	IS2 AREA	#	RT	#	IS3 AREA	#	RT	#
	12 HOUR STD	120986		8.10		485654		9.75		238169		11.69	
	UPPER LIMIT	241972		8.60		971308		10.25		476338		12.19	
	LOWER LIMIT	60493		7.60		242827		9.25		119085		11.19	
	LAB SAMPLE ID												
01	1836-006	89139		8.09		390380		9.73		194166		11.68	
02	1836-007	102847		8.08		455859		9.74		223929		11.68	
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22													

IS1 = 1,4-Dichlorobenzene-d4

IS2 = Naphthalene-d8

IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = -50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk

* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): A5419.D

Date Analyzed: 03/27/2001

nstrument ID: MSDA

Time Analyzed: 06:41

	40UG/L	IS4 AREA	#	RT	#	IS5 AREA	#	RT	#	IS6 AREA	#	RT	#
	12 HOUR STD	446935		13.23		395350		15.95		355927		18.06	
	UPPER LIMIT	893870		13.73		790700		16.45		711854		18.56	
	LOWER LIMIT	223468		12.73		197675		15.45		177964		17.56	
	LAB SAMPLE ID												
01	OLMO4-STD-FOR-0	401657		13.23		338776		15.94		323364		18.04	
02	Method-Blk	321781		13.22		261968		15.94		245754		18.04	
03	1793-002	288956		13.23		241776		15.94		181967		18.04	
04	1793-003	349846		13.22		269977		15.94		175512*		18.03	
05	1793-004	300681		13.23		231036		15.94		187663		18.04	
06	1793-005	321790		13.23		236454		15.95		157478*		18.04	
07	1793-003	382947		13.22		321169		15.94		251899		18.04	
08	1793-005	400056		13.22		339871		15.94		270174		18.03	
09	1840-005	408707		13.23		357126		15.95		212640		18.04	
10	1840-007	412714		13.22		330674		15.94		244514		18.03	
11	1840-005	369143		13.23		349565		15.95		215688		18.03	
12	1840-006	385682		13.22		318621		15.94		208788		18.03	
13	1840-004	423595		13.22		344102		15.95		260692		18.05	
14	1840-004	425124		13.22		341487		15.94		288202		18.04	
15	1840-001	387219		13.22		329364		15.93		272316		18.03	
16	1840-002	384078		13.22		325087		15.94		277134		18.03	
17	1840-003	390484		13.22		320342		15.94		276359		18.03	
18	1840-001	442600		13.22		386528		15.94		327907		18.03	
19	Blank_MS	354733		13.22		320143		15.94		265879		18.02	
20	Blank_MSD	355316		13.22		331812		15.94		274349		18.03	
21	1836-004	340995		13.22		313603		15.94		262681		18.04	
22	1836-005	452991		13.22		394086		15.94		312139		18.04	

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

000239

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): A5419.D

Date Analyzed: 03/27/2001

Instrument ID: MSDA

Time Analyzed: 06:41

	50UG/L	IS4 AREA	#	RT	#	IS5 AREA	#	RT	#	IS6 AREA	#	RT	#
	12 HOUR STD	446935		13.23		395350		15.95		355927		18.06	
	UPPER LIMIT	893870		13.73		790700		16.45		711854		18.56	
	LOWER LIMIT	223468		12.73		197675		15.45		177964		17.56	
	LAB SAMPLE ID												
01	1836-006	373425		13.22		322116		15.94		215666		18.04	
02	1836-007	412199		13.21		370046		15.95		199500		18.05	
03													
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21													
22													

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\03-27-01\A5437.D Vial: 13
Acq On : 27 Mar 2001 16:02 Operator: JC
Sample : S-11,1840-001,s,15.18g,17.3,03/26/01 Inst : MSD-A
Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,2 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Mar 28 6:52 2001 Quant Results File: AS0601.RES

Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Tue Mar 20 13:59:45 2001
Response via : Initial Calibration
DataAcq Meth : AS0601

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.08	152	95601	40.00	UG		0.00
22) Naphthalene-d8	9.74	136	439554	40.00	UG		-0.01
39) Acenaphthene-d10	11.68	164	225990	40.00	UG		0.00
60) Phenanthrene-d10	13.22	188	442600	40.00	UG		-0.01
75) Chrysene-d12	15.94	240	386528	40.00	UG		-0.02
84) Perylene-d12	18.03	264	327907	40.00	UG		-0.01
System Monitoring Compounds							
4) 2-Fluorophenol	5.94	112	85164	27.21	UG		-0.01
Spiked Amount 100.000	Range 37 - 100		Recovery = 27.21%#				
6) Phenol-d5	7.50	99	128800	32.69	UG		-0.04
Spiked Amount 100.000	Range 37 - 104		Recovery = 32.69%#				
23) Nitrobenzene-d5	8.84	82	76740	17.51	UG		-0.03
Spiked Amount 50.000	Range 48 - 104		Recovery = 35.02%#				
43) 2-Fluorobiphenyl	10.94	172	115455	17.55	UG		0.00
Spiked Amount 50.000	Range 52 - 107		Recovery = 35.10%#				
64) 2,4,6-Tribromophenol	12.50	330	64695	38.36	UG		-0.01
Spiked Amount 100.000	Range 60 - 155		Recovery = 38.36%#				
77) Terphenyl-d14	14.79	244	186434	21.87	UG		0.00
Spiked Amount 50.000	Range 58 - 157		Recovery = 43.74%#				
Target Compounds							Qvalue
14) 1,2-Dichlorobenzene	8.32	146	13724	4.01	UG		99
17) 4-Methylphenol	8.62	108	3566	1.03	UG		91
70) Anthracene	13.30	178	6756m	0.64	UG		
71) Carbazole	13.37	167	815121	112.66	UG	#	78

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

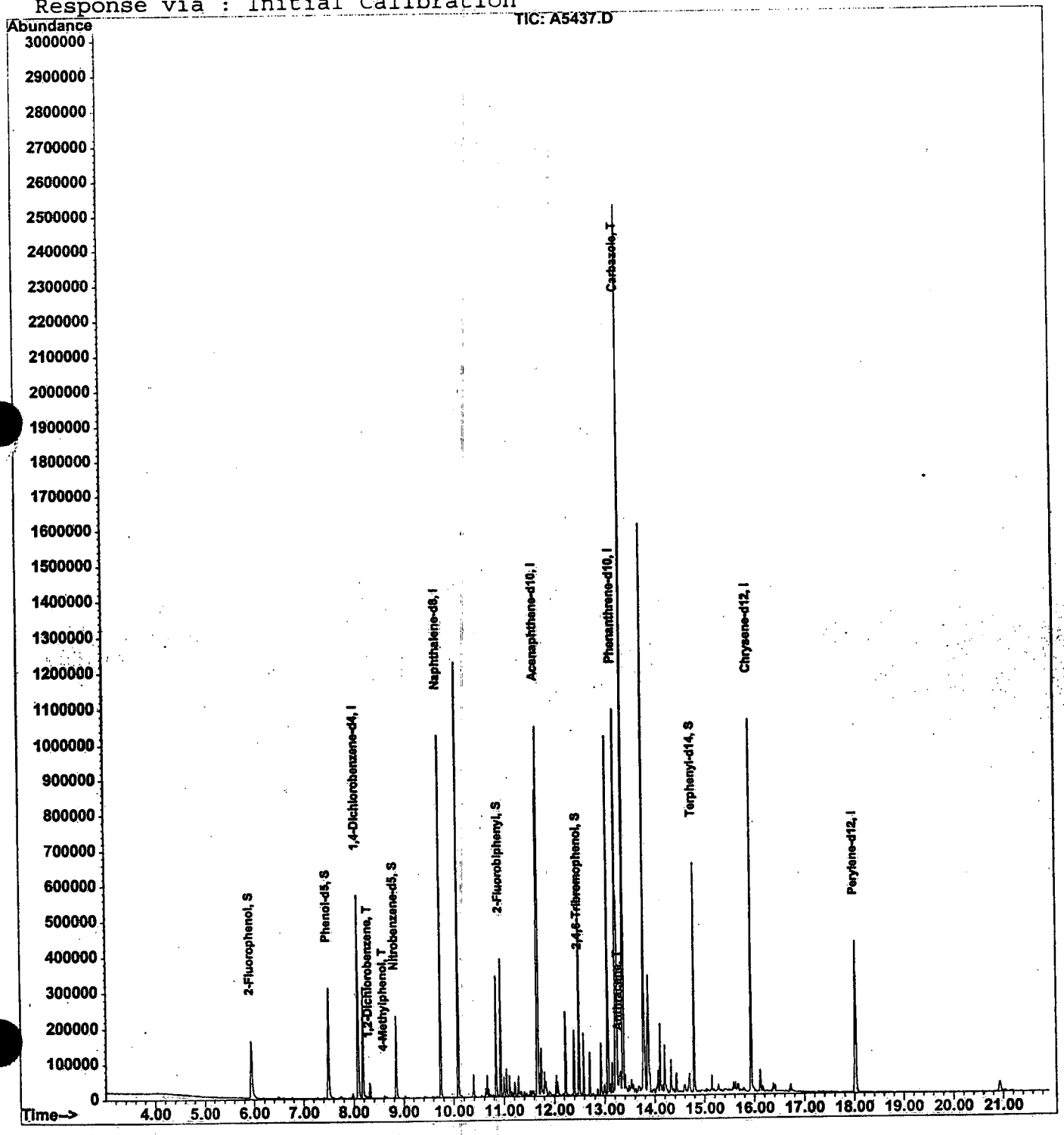
Quantitation Report

Data File : C:\HPCHEM\1\DATA\03-27-01\A5437.D
Acq On : 27 Mar 2001 16:02
Sample : S-11,1840-001,s,15.18g,17.3,03/26/01
Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,2
MS Integration Params: rteint.p
Quant Time: Mar 28 6:52 2001

Vial: 13
Operator: JC
Inst : MSD-A
Multiplr: 1.00

Quant Results File: AS0601.RES

Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Tue Mar 20 13:59:45 2001
Response via : Initial Calibration



799

000242

LSC Area Percent Report

Data File : C:\HPCHEM\1\DATA\03-27-01\A5437.D
Acq On : 27 Mar 2001 16:02
Sample : S-11,1840-001,s,15.18g,17.3,03/26/01
Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,2
MS Integration Params: LSCINT.P

Vial: 13
Operator: JC
Inst : MSD-A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Smoothing : ON
Sampling : 1
Start Thrs: 0.02
Stop Thrs : 0

Filtering: 5
Min Area: 3 % of largest Peak
Max Peaks: 100
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	peak area	peak % max.	% of total
1	5.937	285	288	299	rBV	161983	340002	13.35%	1.612%
2	7.501	437	441	453	rVB	311251	495142	19.44%	2.347%
3	8.084	495	498	505	rBV	570610	741291	29.10%	3.514%
4	8.186	505	508	512	rBV	310388	406309	15.95%	1.926%
5	8.319	519	521	525	rVB	43480	56530	2.22%	0.268%
6	8.841	569	572	578	rBV	231599	290412	11.40%	1.377%
7	9.741	657	660	663	rBV	1022312	968160	38.01%	4.590%
8	10.089	692	694	697	rBV	1224222	1272181	49.94%	6.031%
9	10.395	720	724	726	rBV	64607	67898	2.67%	0.322%
10	10.631	745	747	749	rBV	26215	31227	1.23%	0.148%
11	10.661	749	750	752	rVB	61840	44347	1.74%	0.210%
12	10.845	766	768	770	rBV	339584	306525	12.03%	1.453%
13	10.937	774	777	779	rVV	388173	401813	15.77%	1.905%
14	10.999	779	783	785	rVV2	55327	58841	2.31%	0.279%
15	11.050	785	788	792	rVB	78569	72698	2.85%	0.345%
16	11.111	792	794	796	rBV	59049	52765	2.07%	0.250%
17	11.214	803	804	807	rVB	41865	47137	1.85%	0.223%
18	11.285	808	811	813	rBV	57438	57156	2.24%	0.271%
19	11.684	845	850	852	rBV2	1039839	1806718	70.93%	8.565%
20	11.745	854	856	857	rVV	134228	158571	6.23%	0.752%
21	11.807	860	862	864	rVV	66853	74914	2.94%	0.355%
22	11.837	864	865	869	rVV3	39581	46424	1.82%	0.220%
23	11.909	869	872	877	rVB2	12767	25708	1.01%	0.122%
24	12.042	882	885	886	rVV	58178	67983	2.67%	0.322%
25	12.062	886	887	894	rVB	40726	51712	2.03%	0.245%
26	12.226	901	903	906	rBV	238144	279095	10.96%	1.323%
27	12.400	917	920	922	rBV	185853	218961	8.60%	1.038%
28	12.492	927	929	932	rVV2	616661	620963	24.38%	2.944%
29	12.584	936	938	940	rVB	176863	149410	5.87%	0.708%
30	12.707	947	950	953	rVB	123588	121844	4.78%	0.578%
31	12.932	969	972	974	rBV	148587	149996	5.89%	0.711%

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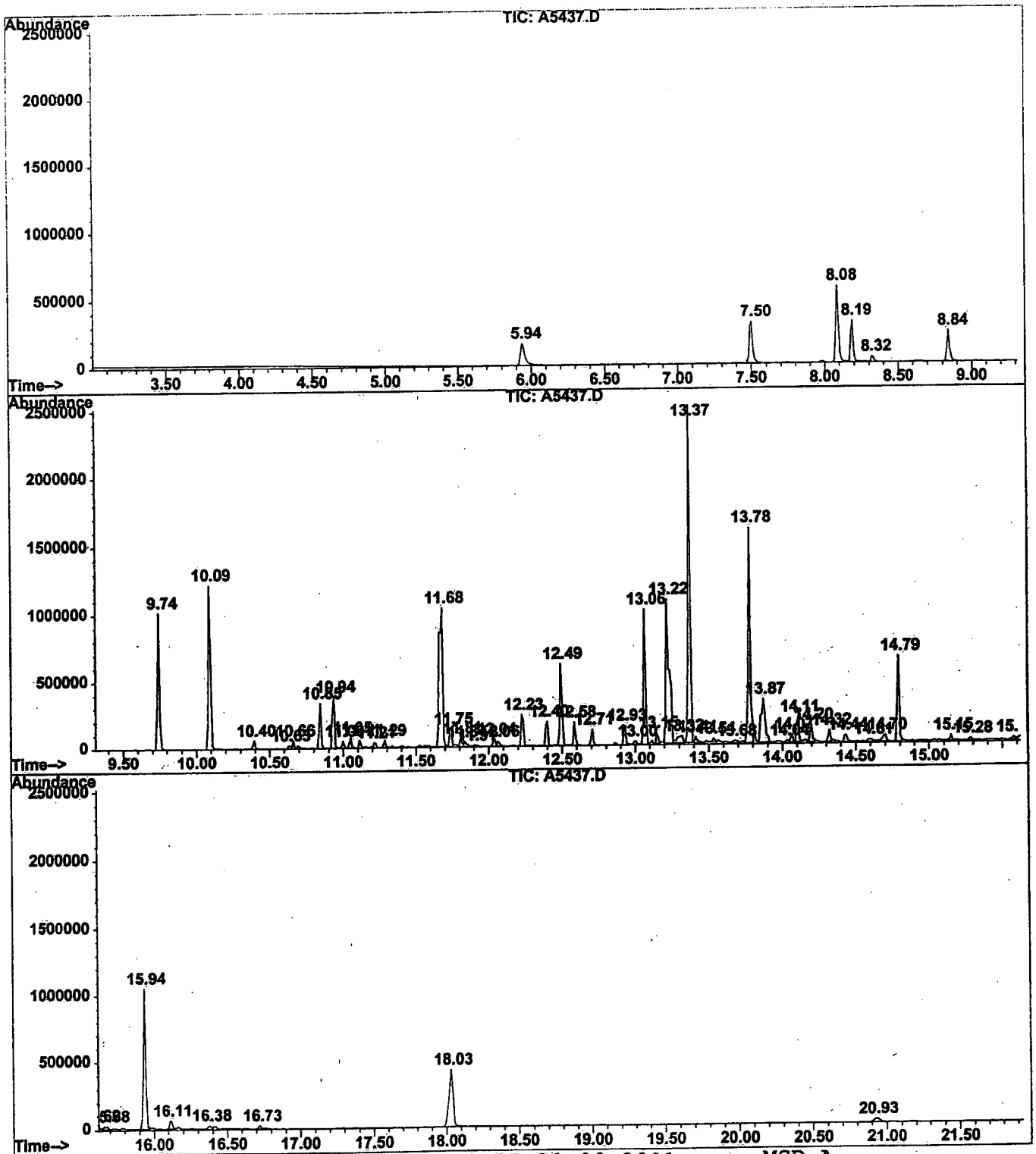
32	13.003	975	979	982	rVB2	29009	43758	1.72%	0.207%
33	13.065	982	985	988	rBV	1012931	945860	37.13%	4.484%
34	13.147	991	993	995	rVV	85994	86050	3.38%	0.408%
35	13.218	998	1000	1004	rVV2	1079292	1737254	68.20%	8.236%
	13.320	1004	1010	1012	rVV4	57033	157641	6.19%	0.747%
	13.372	1012	1015	1018	rVV	2508063	2547308	100.00%	12.076%
38	13.412	1018	1019	1024	rVB	48706	53062	2.08%	0.252%
39	13.535	1027	1031	1033	rBV3	32571	40870	1.60%	0.194%
40	13.678	1041	1045	1049	rBV2	19410	48413	1.90%	0.230%
41	13.781	1051	1055	1057	rVV	1599694	1565110	61.44%	7.420%
42	13.873	1060	1064	1068	rVB3	329024	647359	25.41%	3.069%
43	14.036	1077	1080	1081	rBV	20360	31229	1.23%	0.148%
44	14.067	1081	1083	1085	rVB	60289	60920	2.39%	0.289%
45	14.108	1085	1087	1089	rBV	191583	219057	8.60%	1.038%
46	14.200	1093	1096	1098	rBV	132484	153425	6.02%	0.727%
47	14.323	1105	1108	1109	rBV	94643	100535	3.95%	0.477%
48	14.435	1117	1119	1123	rBV2	55861	75834	2.98%	0.360%
49	14.609	1132	1136	1139	rBV	22583	46601	1.83%	0.221%
50	14.701	1141	1145	1149	rVB4	53651	87950	3.45%	0.417%
51	14.793	1151	1154	1156	rBV	644944	609539	23.93%	2.890%
52	15.151	1185	1189	1191	rBV2	44667	40600	1.59%	0.192%
53	15.284	1199	1202	1206	rVB2	20404	27519	1.08%	0.130%
54	15.581	1227	1231	1233	rBV	25815	33881	1.33%	0.161%
55	15.621	1233	1235	1237	rVV	26015	32653	1.28%	0.155%
56	15.683	1237	1241	1243	rVB3	21470	40640	1.60%	0.193%
	15.938	1262	1266	1269	rBV	1047817	1124703	44.15%	5.332%
	16.112	1281	1283	1286	rBV2	60993	79469	3.12%	0.377%
59	16.378	1305	1309	1311	rBV	24450	36954	1.45%	0.175%
60	16.726	1339	1343	1345	rBV	24375	37594	1.48%	0.178%
61	18.035	1465	1471	1477	rBV	426118	817493	32.09%	3.875%
62	20.929	1748	1754	1760	rBV2	29503	82028	3.22%	0.389%

Sum of corrected areas: 21094042

A5437.D AS0601.M Wed Mar 28 07:30:08 2001 MSD-A

LSC Report - Integrated Chromatogram

File : C:\HPCHEM\1\DATA\03-27-01\A5437.D
Operator : JC
Acquired : 27 Mar 2001 16:02 using AcqMethod AS0601
Instrument : MSD-A
Sample Name: S-11,1840-001,s,15.18g,17.3,03/26/01
Misc Info : ENVTACT/444 ORBIS,03/23/01,03/26/01,2
Vial Number: 13
Quant File :AS0601.RES (RTE Integrator)



A5437.D AS0601.M Wed Mar 28 07:30:09 2001 MSD-A

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Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-27-01\A5437.D
Acq On : 27 Mar 2001 16:02
Sample : S-11,1840-001,s,15.18g,17.3,03/26/01
Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,2
MS Integration Params: LSCINT.P

Vial: 13
Operator: JC
Inst : MSD-A
Multiplr: 1.00

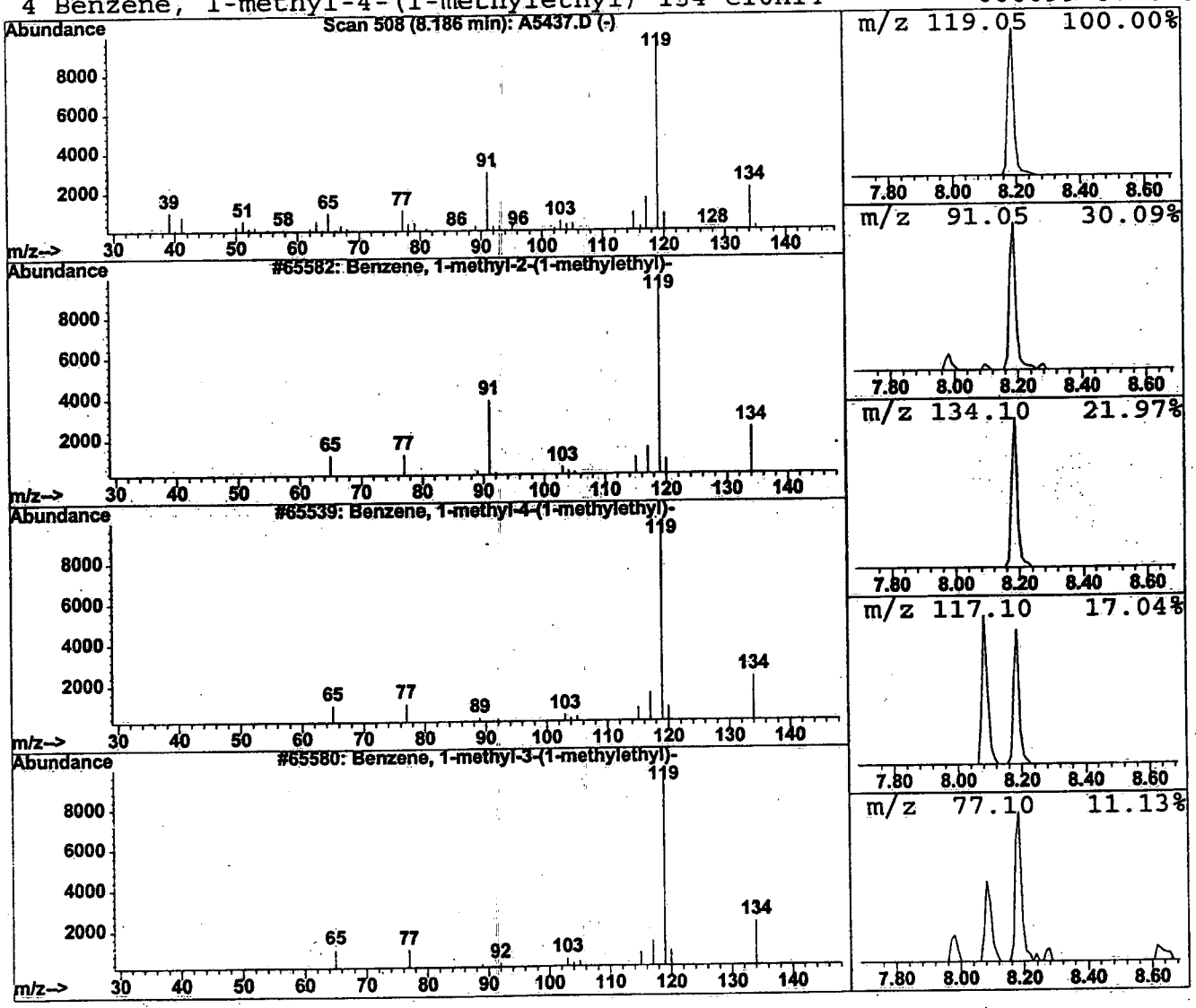
Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 1 Substituted benzene Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.19	21.92 UG	406309	1,4-Dichlorobenzene-d4	8.08

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-methyl-2-(1-methylethyl)	134	C10H14	000527-84-4	97
2	Benzene, 1-methyl-4-(1-methylethyl)	134	C10H14	000099-87-6	96
3	Benzene, 1-methyl-3-(1-methylethyl)	134	C10H14	000535-77-3	95
4	Benzene, 1-methyl-4-(1-methylethyl)	134	C10H14	000099-87-6	87



803

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-27-01\A5437.D Vial: 13
Acq On : 27 Mar 2001 16:02 Operator: JC
Sample : S-11,1840-001,s,15.18g,17.3,03/26/01 Inst : MSD-A
Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,2 Multiplr: 1.00
MS Integration Params: LSCINT.P

Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

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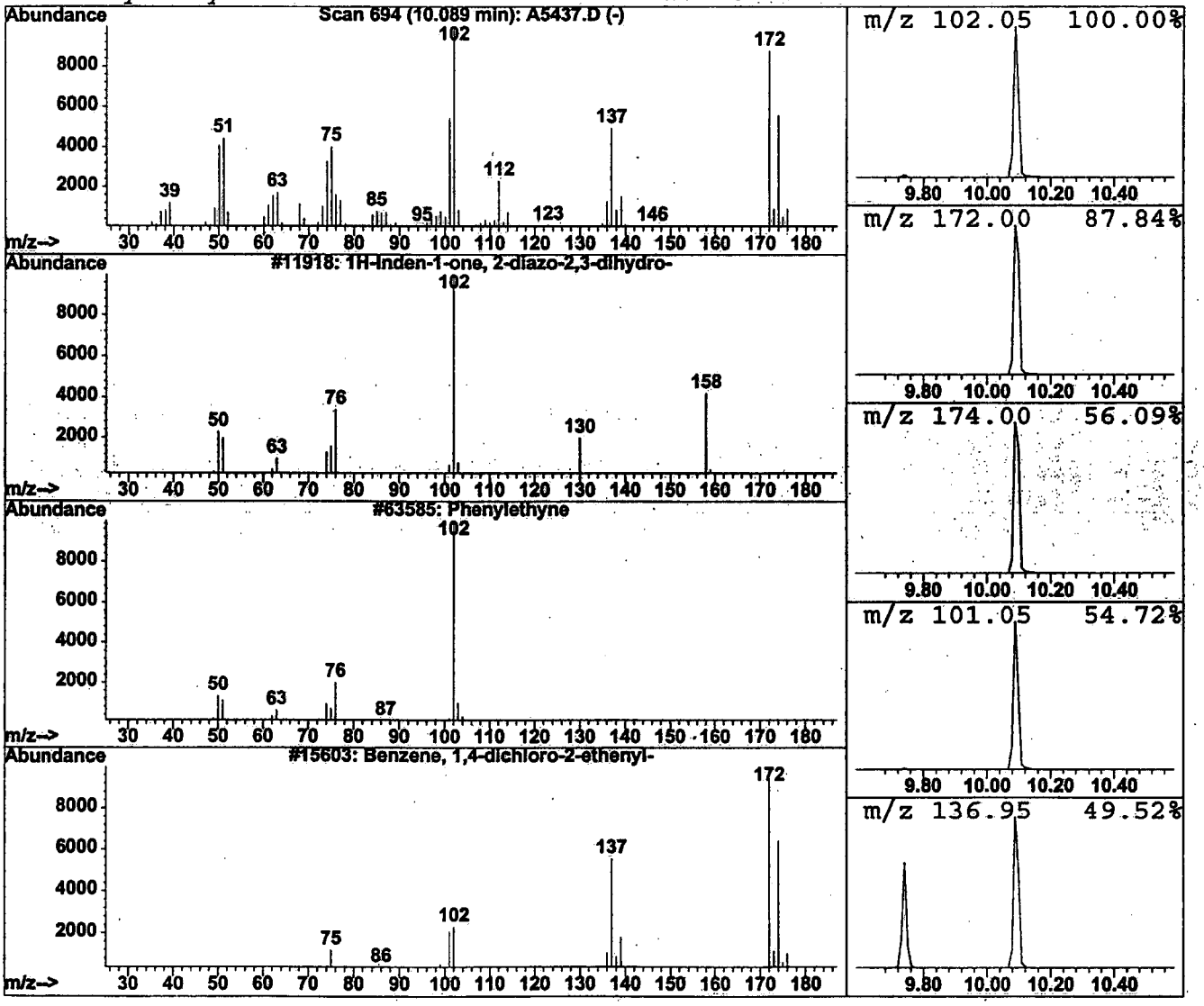
Peak Number 2 Substituted benzene Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
10.09	52.56 UG	1272180	Naphthalene-d8	9.74

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1H-Inden-1-one, 2-diazo-2,3-dihydro	158	C9H6N2O	001775-23-1	38
2	Phenylethyne	102	C8H6	000536-74-3	37
3	Benzene, 1,4-dichloro-2-ethenyl-	172	C8H6Cl2	001123-84-8	35
4	Phenylethyne	102	C8H6	000536-74-3	27



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Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-27-01\A5437.D
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Sample : S-11,1840-001,s,15.18g,17.3,03/26/01
Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,2
MS Integration Params: LSCINT.P

Vial: 13
Operator: JC
Inst : MSD-A
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

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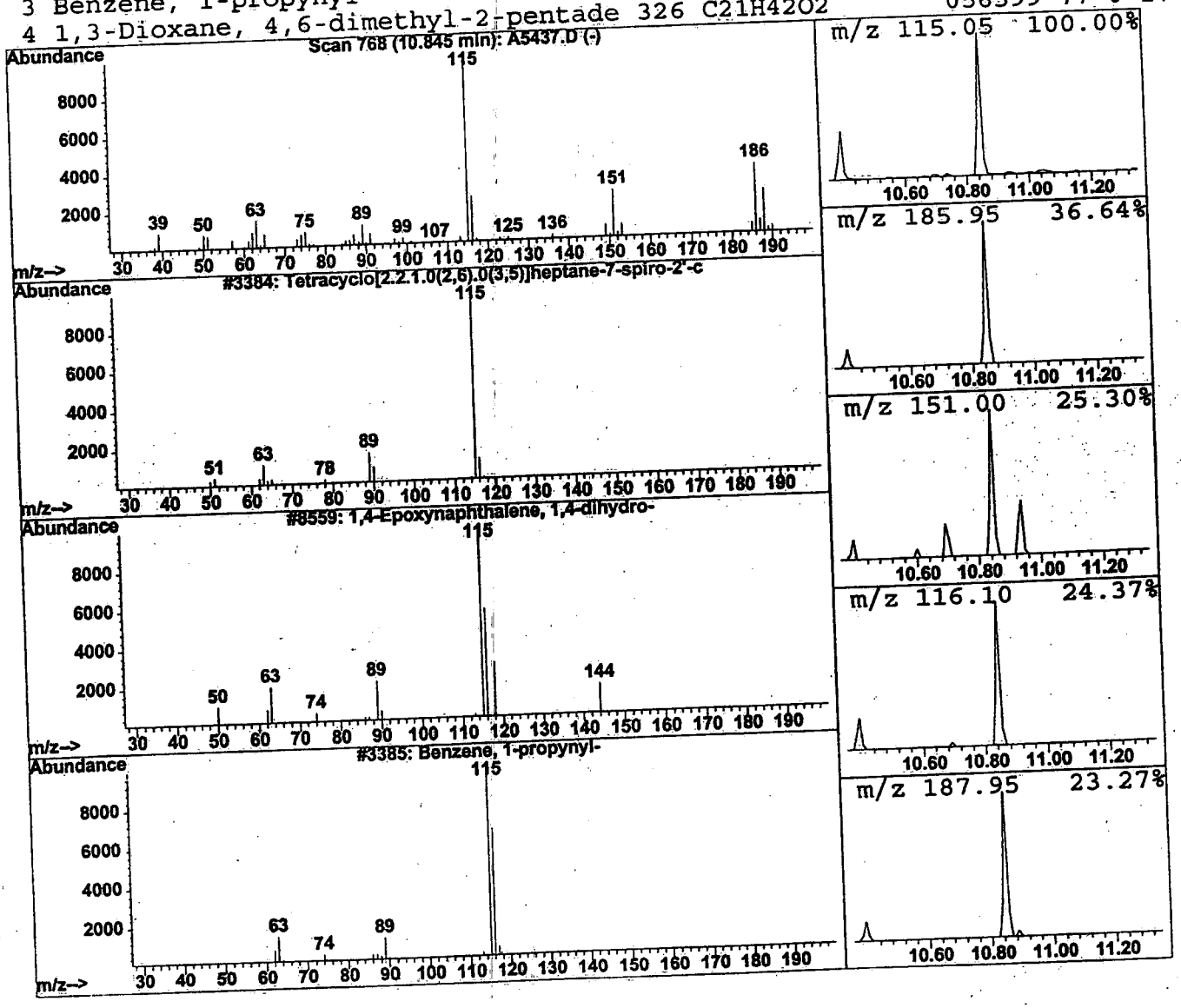
Peak Number 3 Substituted benzene Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
10.85	6.79 UG	306525	Acenaphthene-d10	11.68

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Tetracyclo[2.2.1.0(2,6).0(3,5)]hept	116	C9H8	000000-00-0	32
2	1,4-Epoxynaphthalene, 1,4-dihydro-	144	C10H8O	000573-57-9	27
3	Benzene, 1-propynyl-	116	C9H8	000673-32-5	25
4	1,3-Dioxane, 4,6-dimethyl-2-pentade	326	C21H42O2	056599-77-0	17



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Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-27-01\A5437.D
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Sample : S-11,1840-001,s,15.18g,17.3,03/26/01
Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,2
MS Integration Params: LSCINT.P

Vial: 13
Operator: JC
Inst : MSD-A
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

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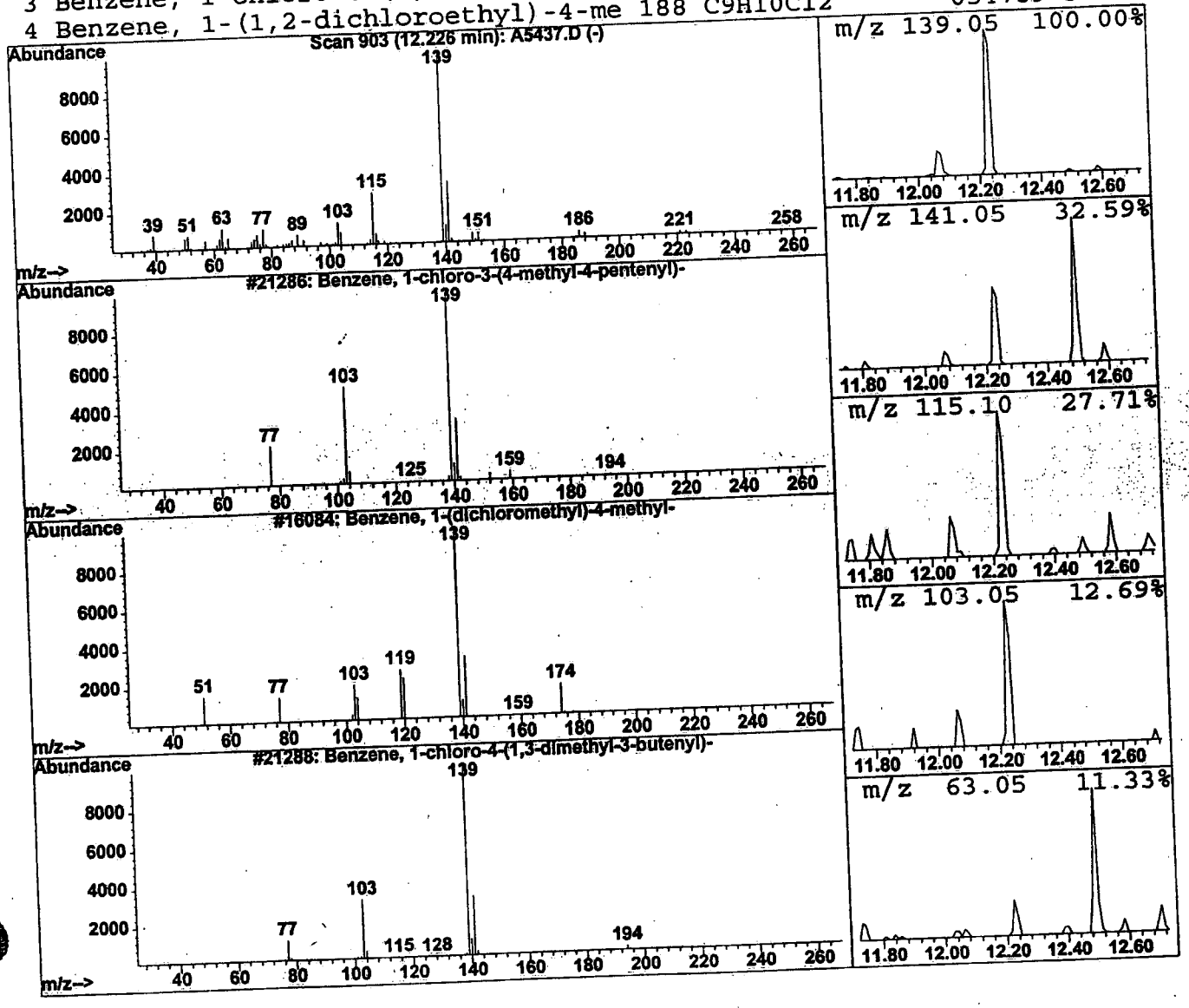
Peak Number 4 Substituted benzene Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.23	6.18 UG	279095	Acenaphthene-d10	11.68

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-chloro-3-(4-methyl-4-pen	194	C12H15Cl	074672-13-2	59
2	Benzene, 1-(dichloromethyl)-4-methy	174	C8H8Cl2	023063-36-7	59
3	Benzene, 1-chloro-4-(1,3-dimethyl-3	194	C12H15Cl	074672-10-9	53
4	Benzene, 1-(1,2-dichloroethyl)-4-me	188	C9H10Cl2	054789-31-0	50



806

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-27-01\A5437.D
Acq On : 27 Mar 2001 16:02
Sample : S-11,1840-001,s,15.18g,17.3,03/26/01
Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,2
MS Integration Params: LSCINT.P

Vial: 13
Operator: JC
Inst : MSD-A
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

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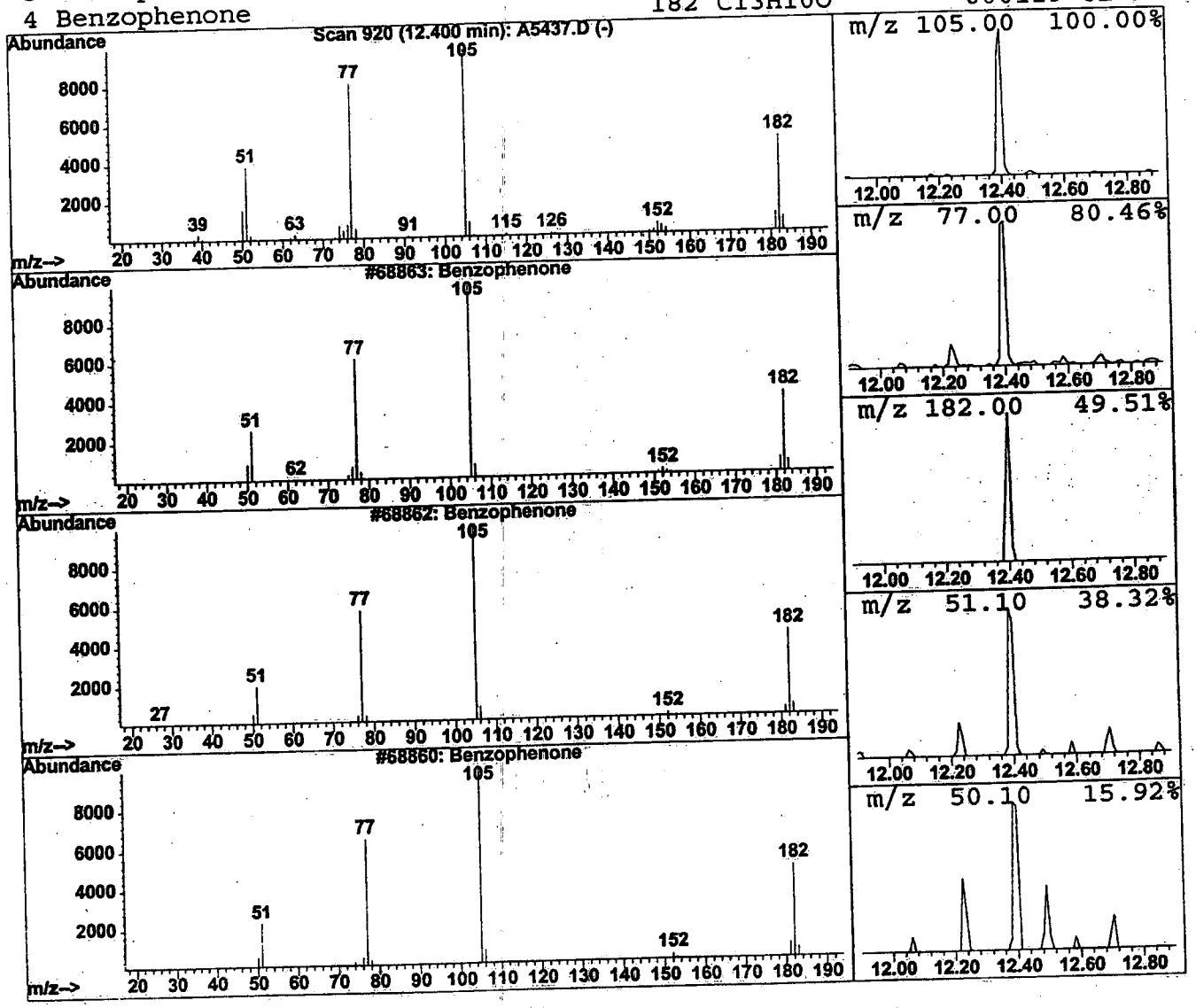
Peak Number 5 Benzophenone — Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.40	4.85 UG	218961	Acenaphthene-d10	11.68

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzophenone	182	C13H10O	000119-61-9	97
2	Benzophenone	182	C13H10O	000119-61-9	91
3	Benzophenone	182	C13H10O	000119-61-9	91
4	Benzophenone	182	C13H10O	000119-61-9	91



807

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-27-01\A5437.D
Acq On : 27 Mar 2001 16:02
Sample : S-11,1840-001,s,15.18g,17.3,03/26/01
Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,2
MS Integration Params: LSCINT.P

Vial: 13
Operator: JC
Inst : MSD-A
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

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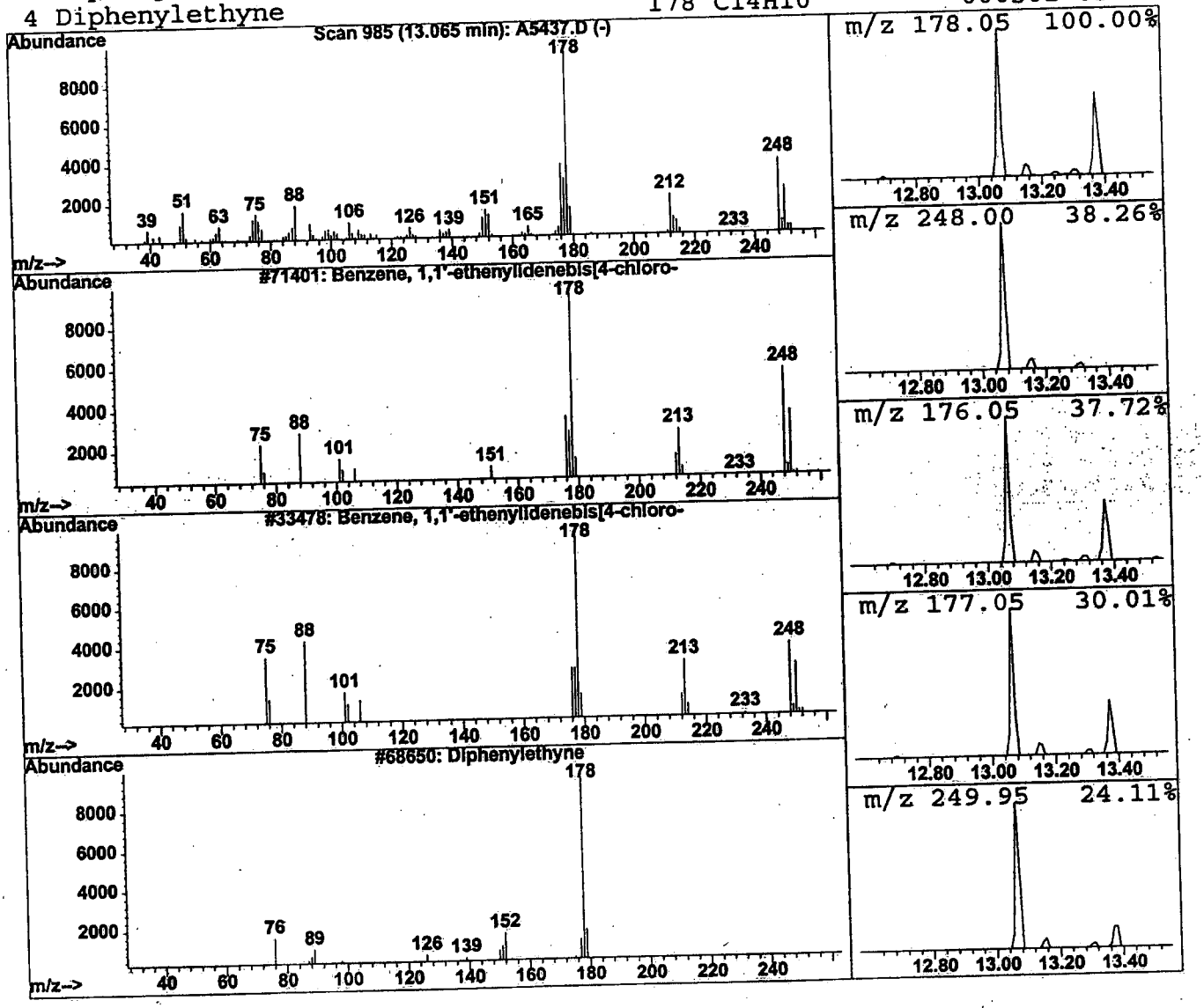
Peak Number 6 Substituted benzene Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
13.06	21.78 UG	945860	Phenanthrene-d10	13.22

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,1'-ethenylidenebis[4-chl	248	C14H10Cl2	002642-81-1	94
2	Benzene, 1,1'-ethenylidenebis[4-chl	248	C14H10Cl2	002642-81-1	91
3	Diphenylethyne	178	C14H10	000501-65-5	42
4	Diphenylethyne	178	C14H10	000501-65-5	42



Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-27-01\A5437.D
Acq On : 27 Mar 2001 16:02
Sample : S-11,1840-001,s,15.18g,17.3,03/26/01
Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,2
MS Integration Params: LSCINT.P

Vial: 13
Operator: JC
Inst : MSD-A
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

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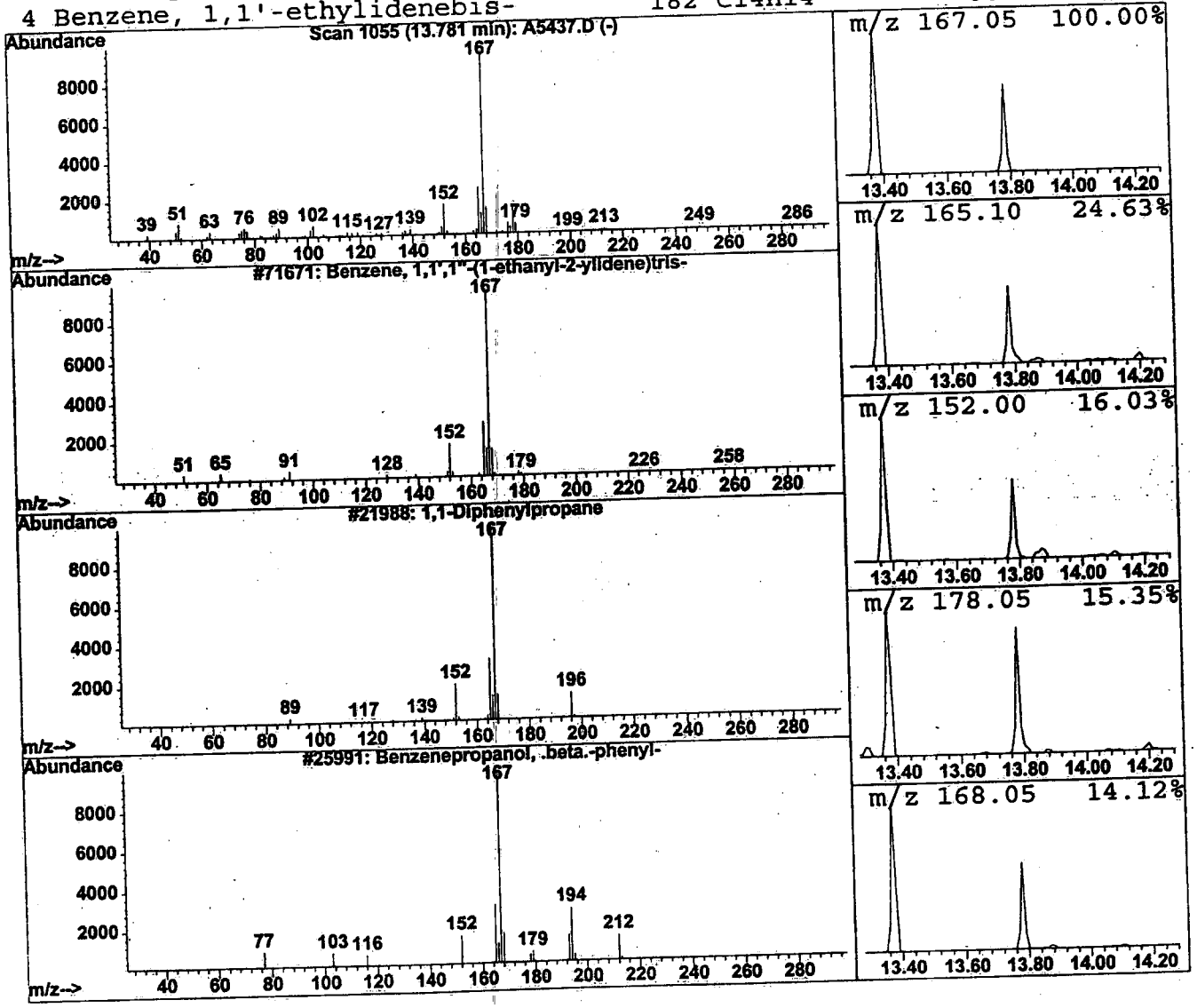
Peak Number 7 Substituted benzene Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
13.78	36.04 UG	1565110	Phenanthrene-d10	13.22

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,1',1''-(1-ethanyl-2-ylid	258	C20H18	001520-42-9	72
2	1,1-Diphenylpropane	196	C15H16	000000-00-0	72
3	Benzenepropanol, .beta.-phenyl-	212	C15H16O	003536-29-6	72
4	Benzene, 1,1'-ethylidenebis-	182	C14H14	000612-00-0	72



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Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-27-01\A5437.D
Acq On : 27 Mar 2001 16:02
Sample : S-11,1840-001,s,15.18g,17.3,03/26/01
Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,2
MS Integration Params: LSCINT.P

Vial: 13
Operator: JC
Inst : MSD-A
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

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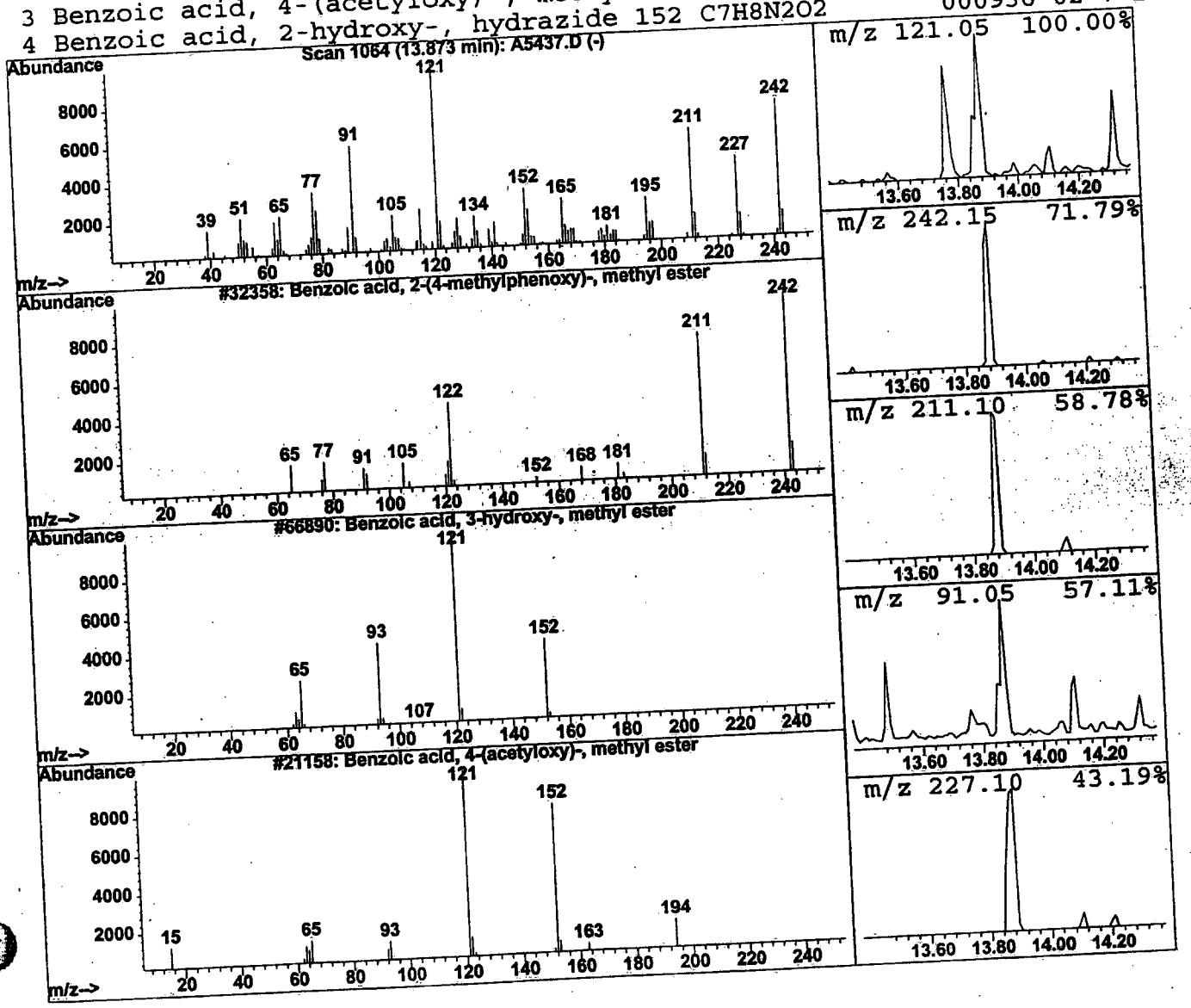
Peak Number 8 Substituted phenol Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
13.87	14.91 UG	647359	Phenanthrene-d10	13.22

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzoic acid, 2-(4-methylphenoxy)-,	242	C15H14O3	021905-72-6	30
2	Benzoic acid, 3-hydroxy-, methyl es	152	C8H8O3	019438-10-9	22
3	Benzoic acid, 4-(acetyloxy)-, methy	194	C10H10O4	024262-66-6	22
4	Benzoic acid, 2-hydroxy-, hydrazide	152	C7H8N2O2	000936-02-7	22



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Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-27-01\A5437.D
Acq On : 27 Mar 2001 16:02
Sample : S-11,1840-001,s,15.18g,17.3,03/26/01
Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,2
MS Integration Params: LSCINT.P

Vial: 13
Operator: JC
Inst : MSD-A
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

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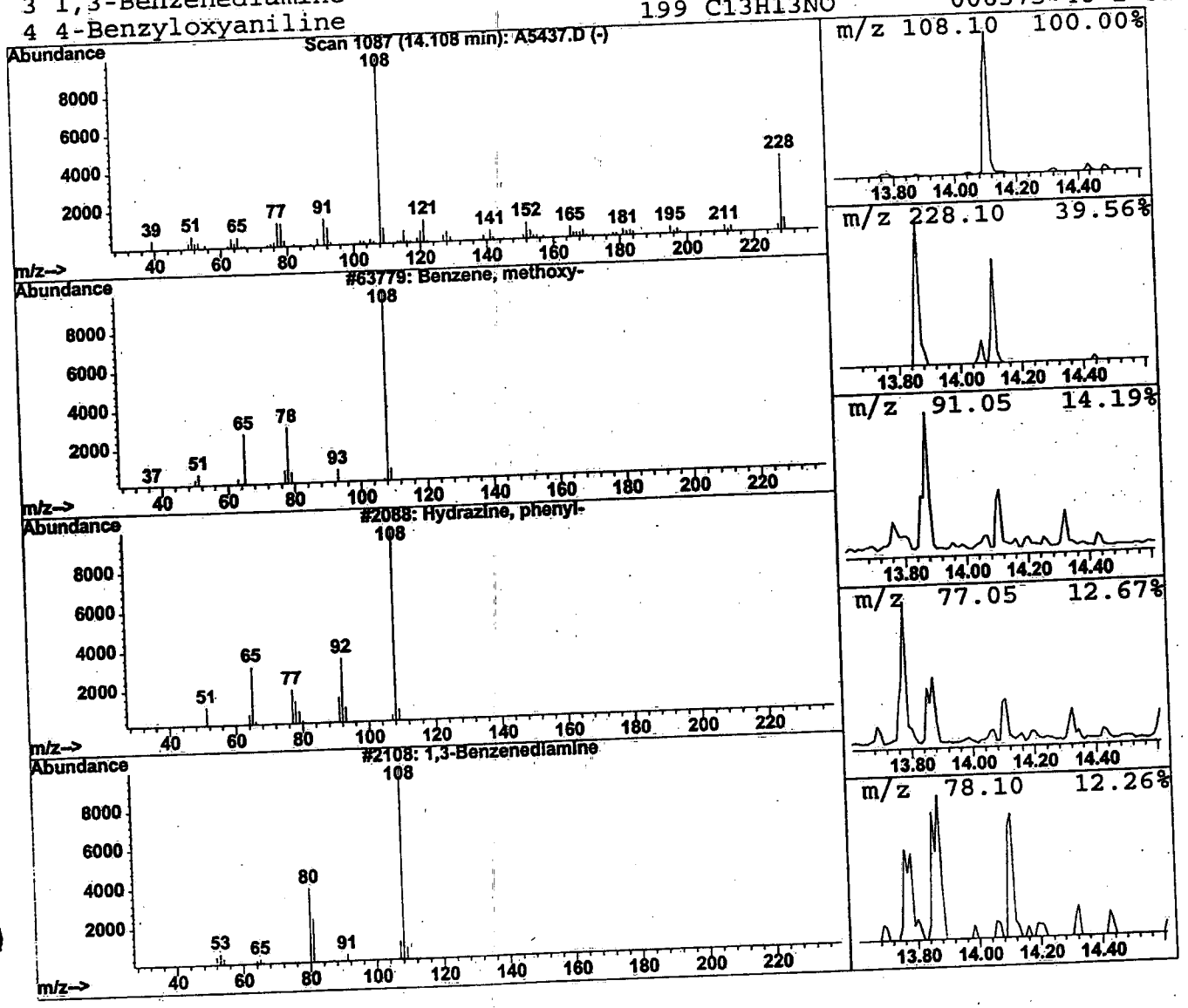
Peak Number 9 Substituted benzene Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
14.11	5.04 UG	219057	Phenanthrene-d10	13.22

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, methoxy-	108	C7H8O	000100-66-3	38
2	Hydrazine, phenyl-	108	C6H8N2	000100-63-0	38
3	1,3-Benzenediamine	108	C6H8N2	000108-45-2	32
4	4-Benzyloxyaniline	199	C13H13NO	006373-46-2	32



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Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-27-01\A5437.D
Acq On : 27 Mar 2001 16:02
Sample : S-11,1840-001,s,15.18g,17.3,03/26/01
Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,2
MS Integration Params: LSCINT.P

Vial: 13
Operator: JC
Inst : MSD-A
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

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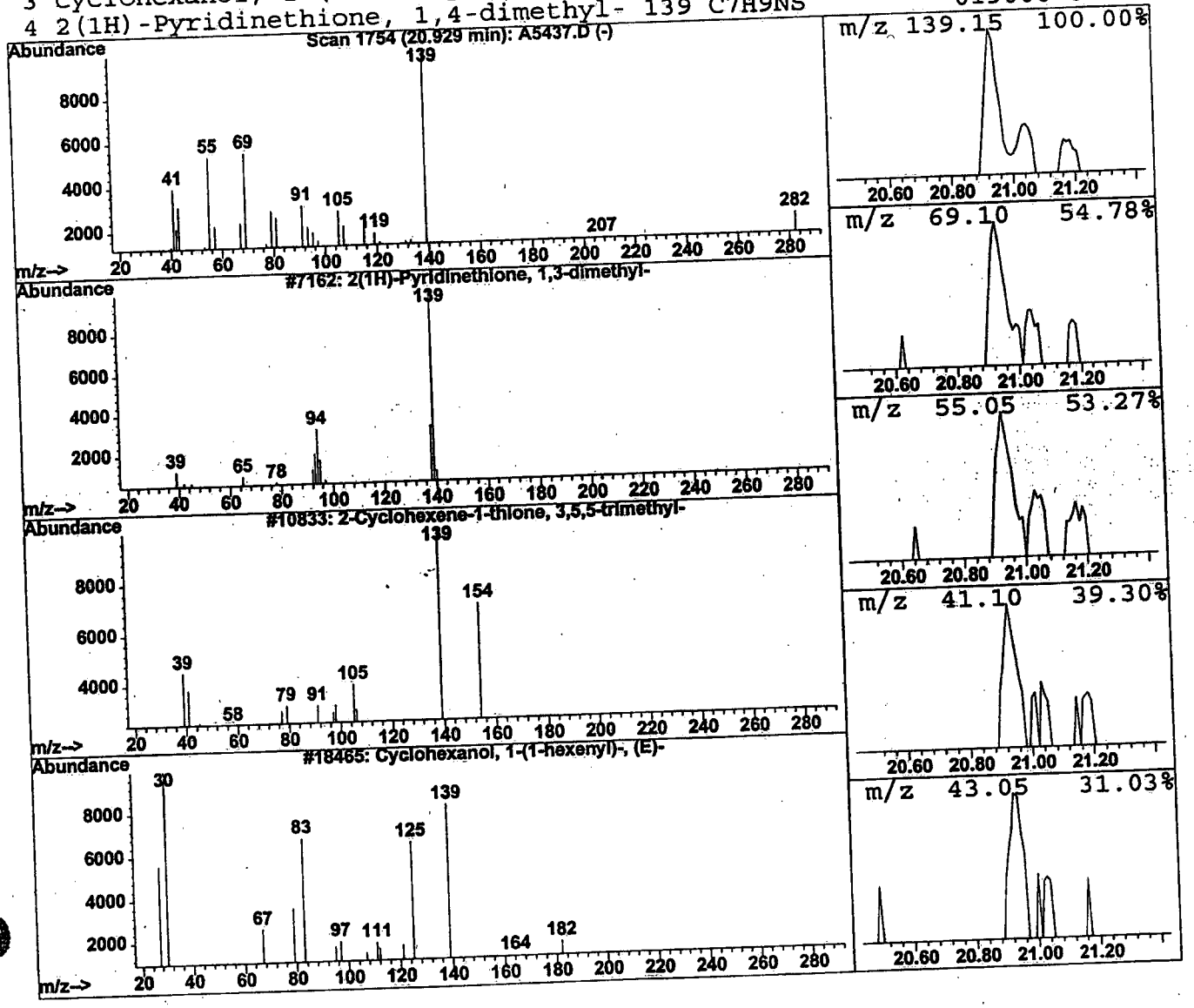
Peak Number 10 Unknown — Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
20.93	4.01 UG	82028	Perylene-d12	18.04

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2(1H)-Pyridinethione, 1,3-dimethyl-	139	C7H9NS	019006-66-7	16
2	2-Cyclohexene-1-thione, 3,5,5-trime	154	C9H14S	030221-55-7	12
3	Cyclohexanol, 1-(1-hexenyl)-, (E)-	182	C12H22O	034678-40-5	10
4	2(1H)-Pyridinethione, 1,4-dimethyl-	139	C7H9NS	019006-67-8	9



8/12

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\03-27-01\A5435.D
Acq On : 27 Mar 2001 15:04
Sample : S-12,1840-002,s,15.86g,12.6,03/26/01
Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,1
MS Integration Params: rteint.p
Quant Time: Mar 28 6:48 2001

Vial: 14
Operator: JC
Inst : MSD-A
Multiplr: 1.00
Quant Results File: AS0601.RES

Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Tue Mar 20 13:59:45 2001
Response via : Initial Calibration
DataAcq Meth : AS0601

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.09	152	82528	40.00	UG	0.00
22) Naphthalene-d8	9.75	136	381267	40.00	UG	0.00
39) Acenaphthene-d10	11.68	164	189541	40.00	UG	0.00
60) Phenanthrene-d10	13.22	188	384078	40.00	UG	0.00
75) Chrysene-d12	15.94	240	325087	40.00	UG	-0.02
84) Perylene-d12	18.03	264	277134	40.00	UG	-0.02
System Monitoring Compounds						
4) 2-Fluorophenol	5.94	112	183673	67.97	UG	0.00
Spiked Amount 100.000	Range 37 - 100		Recovery = 67.97%			
6) Phenol-d5	7.51	99	254868	74.93	UG	-0.04
Spiked Amount 100.000	Range 37 - 104		Recovery = 74.93%			
23) Nitrobenzene-d5	8.85	82	145153	38.19	UG	-0.03
Spiked Amount 50.000	Range 48 - 104		Recovery = 76.38%			
43) 2-Fluorobiphenyl	10.93	172	210364	38.13	UG	0.00
Spiked Amount 50.000	Range 52 - 107		Recovery = 76.26%			
64) 2,4,6-Tribromophenol	12.50	330	122141	83.45	UG	-0.02
Spiked Amount 100.000	Range 60 - 155		Recovery = 83.45%			
77) Terphenyl-d14	14.80	244	384731	53.67	UG	0.00
Spiked Amount 50.000	Range 58 - 157		Recovery = 107.34%			
Target Compounds						Qvalue
7) Phenol	7.52	94	13542	4.35	UG	# 1
17) 4-Methylphenol	8.62	108	360323m	120.08	UG	
27) 2,4-Dimethylphenol	9.30	107	28612	8.19	UG	93

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

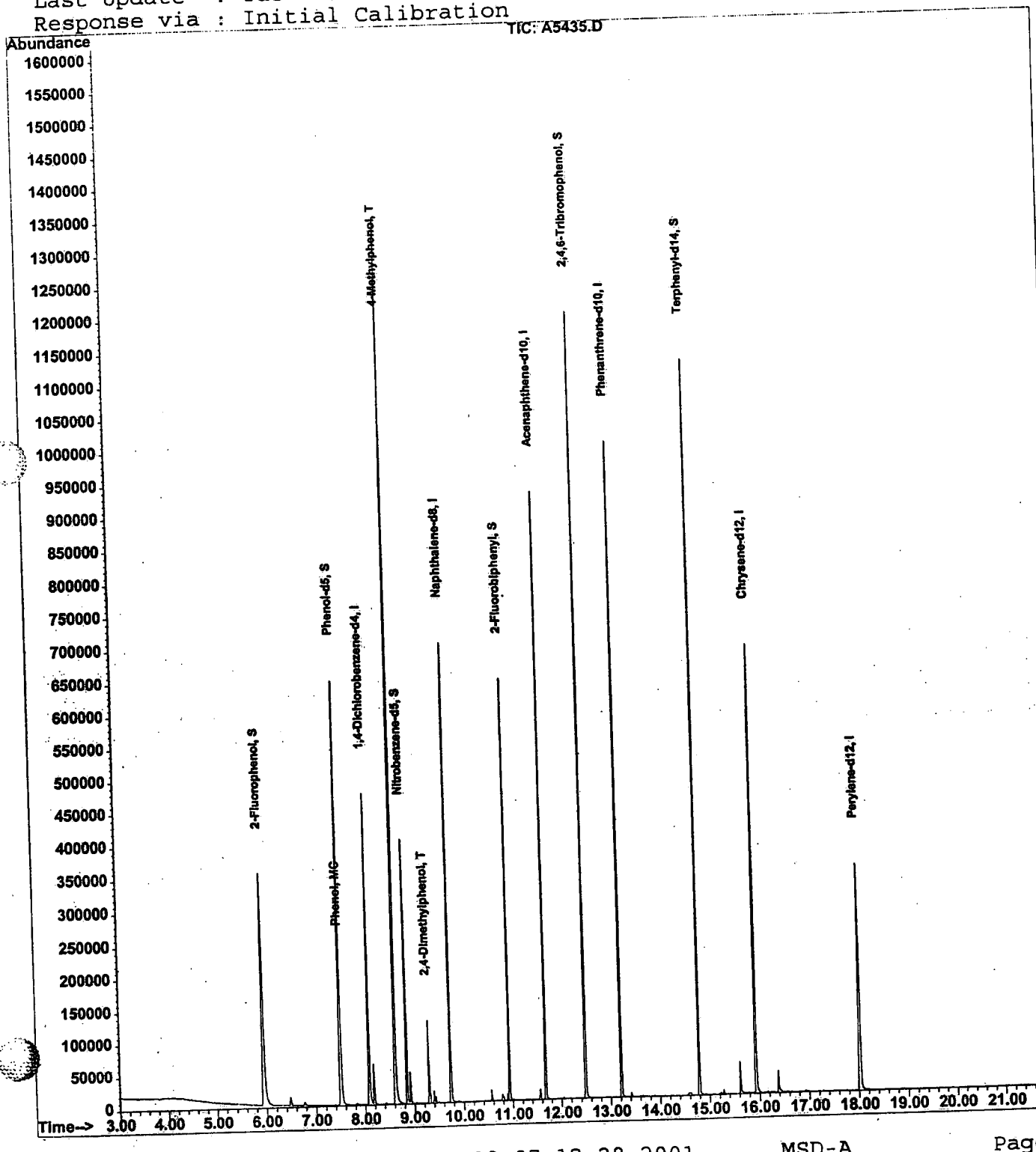
Quantitation Report

Data File : C:\HPCHEM\1\DATA\03-27-01\A5435.D
Acq On : 27 Mar 2001 15:04
Sample : S-12,1840-002,s,15.86g,12.6,03/26/01
Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,1
MS Integration Params: rteint.p
Quant Time: Mar 28 6:48 2001

Vial: 14
Operator: JC
Inst : MSD-A
Multiplr: 1.00

Quant Results File: AS0601.RES

Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Tue Mar 20 13:59:45 2001
Response via : Initial Calibration



814

LSC Area Percent Report

Data File : C:\HPCHEM\1\DATA\03-27-01\A5435.D
Acq On : 27 Mar 2001 15:04
[redacted]ple : S-12,1840-002,s,15.86g,12.6,03/26/01
[redacted]c : ENVTACT/444 ORBIS,03/23/01,03/26/01,1
.S Integration Params: LSCINT.P

Vial: 14
Operator: JC
Inst : MSD-A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Smoothing : ON
Sampling : 1
Start Thrs: 0.02
Stop Thrs : 0

Filtering: 5
Min Area: 3 % of largest Peak
Max Peaks: 100
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Signal : TIC

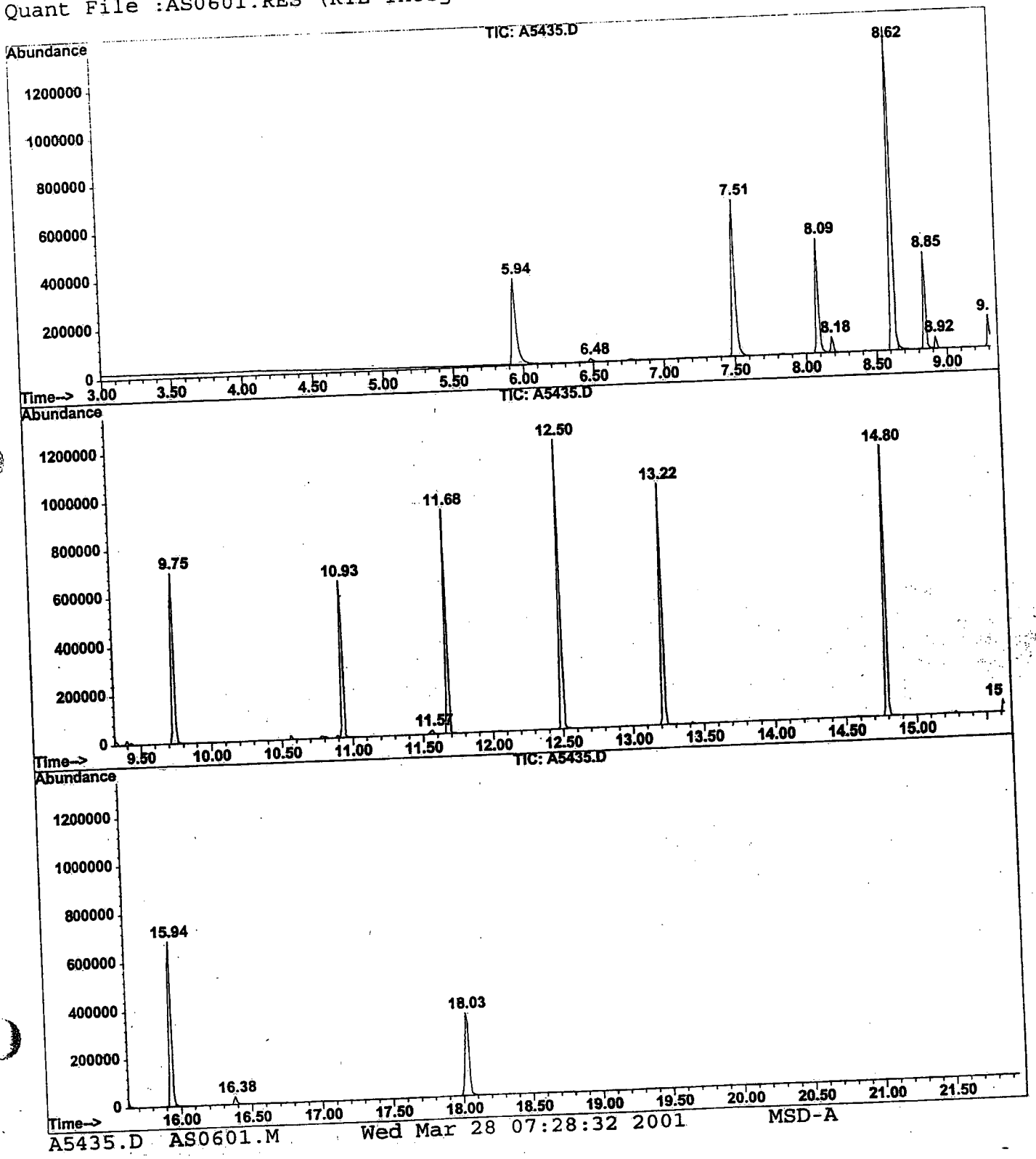
peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	peak area	peak % max.	% of total
1	5.941	285	289	310	rVB	355032	776619	39.92%	6.210%
2	6.483	339	342	346	rVB	12675	19553	1.01%	0.156%
3	7.505	438	442	454	rVB	648382	1023908	52.64%	8.187%
4	8.088	496	499	506	rBV	474319	626189	32.19%	5.007%
5	8.180	506	508	514	rVB	62445	71435	3.67%	0.571%
6	8.620	548	551	554	rBV	1349121	1945239	100.00%	15.554%
[redacted]	8.845	570	573	576	rBV	402996	473363	24.33%	3.785%
[redacted]	8.917	578	580	583	rVB	47901	51046	2.62%	0.408%
9	9.295	615	617	621	rVB	128058	139722	7.18%	1.117%
10	9.745	658	661	663	rBV	701804	856702	44.04%	6.850%
11	10.931	775	777	780	rBV	645241	716834	36.85%	5.732%
12	11.566	834	839	842	rBB	16182	24069	1.24%	0.192%
13	11.678	848	850	853	rBV	927092	875244	44.99%	6.998%
14	12.496	927	930	933	rBV	1198188	1141449	58.68%	9.127%
15	13.222	998	1001	1003	rBV	999926	954132	49.05%	7.629%
16	14.797	1152	1155	1157	rBV	1122114	1133442	58.27%	9.063%
17	15.615	1233	1235	1243	rBV	50313	59401	3.05%	0.475%
18	15.943	1263	1267	1269	rBV	685819	895971	46.06%	7.164%
19	16.382	1307	1310	1319	rBV	34240	54914	2.82%	0.439%
20	18.029	1466	1471	1475	rBV	346431	667086	34.29%	5.334%

Sum of corrected areas: 12506318

A5435.D AS0601.M Wed Mar 28 07:28:31 2001 MSD-A

LSC Report - Integrated Chromatogram

File : C:\HPCHEM\1\DATA\03-27-01\A5435.D
Operator : JC
Acquired : 27 Mar 2001 15:04 using AcqMethod AS0601
Instrument : MSD-A
Sample Name: S-12,1840-002,s,15.86g,12.6,03/26/01
Misc Info : ENVTACT/444 ORBIS,03/23/01,03/26/01,1
Vial Number: 14
Quant File :AS0601.RES (RTE Integrator)



A5435.D AS0601.M Wed Mar 28 07:28:32 2001 MSD-A

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Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-27-01\A5435.D
Acq On : 27 Mar 2001 15:04
Sample : S-12,1840-002,s,15.86g,12.6,03/26/01
Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,1
MS Integration Params: LSCINT.P

Vial: 14
Operator: JC
Inst : MSD-A
Multiplr: 1.00

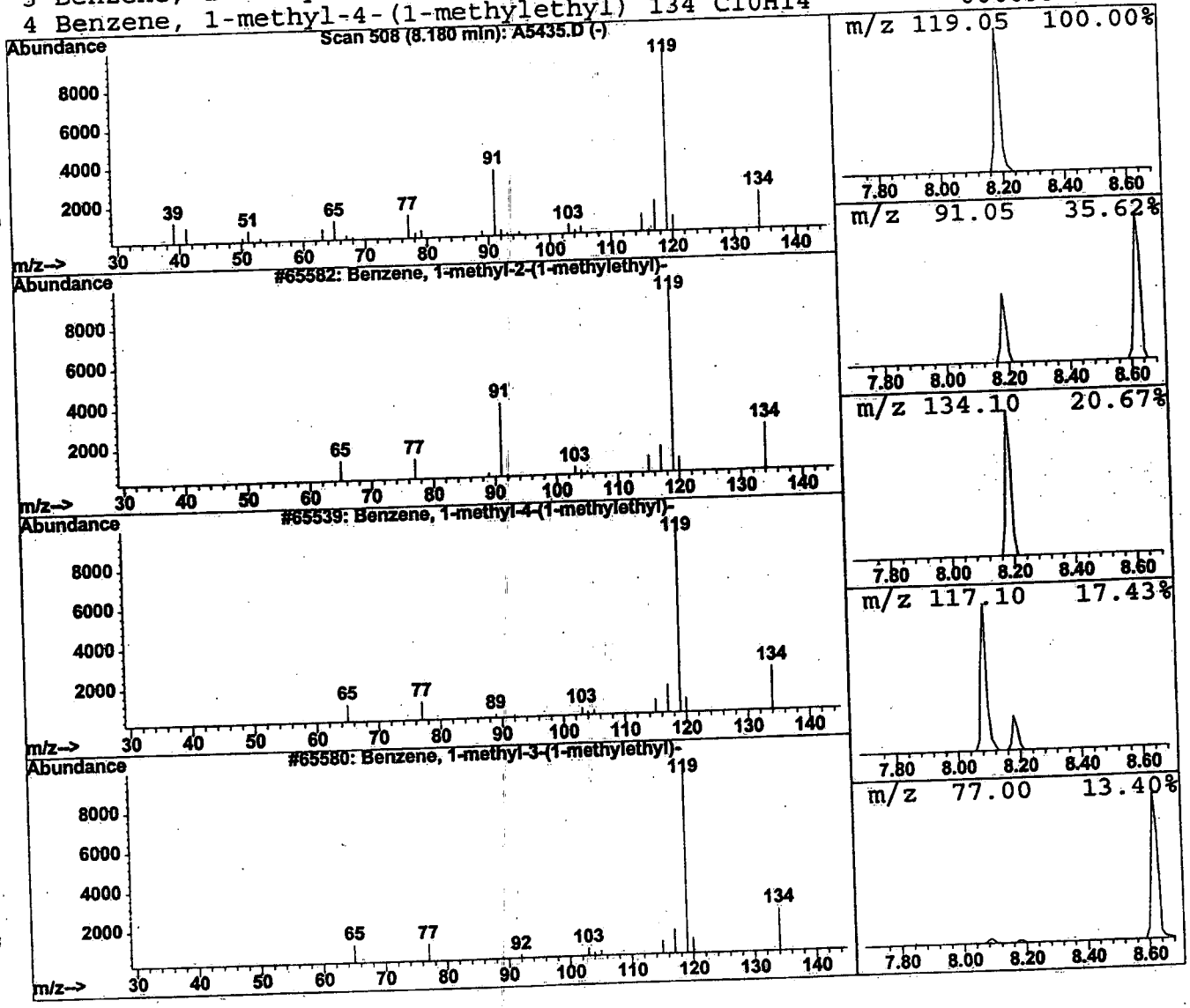
Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 1 Substituted benzene Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.18	4.56 UG	71435	1,4-Dichlorobenzene-d4	8.09

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-methyl-2-(1-methylethyl)	134	C10H14	000527-84-4	95
2	Benzene, 1-methyl-4-(1-methylethyl)	134	C10H14	000099-87-6	95
3	Benzene, 1-methyl-3-(1-methylethyl)	134	C10H14	000535-77-3	91
4	Benzene, 1-methyl-4-(1-methylethyl)	134	C10H14	000099-87-6	87



000260

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Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\03-27-01\A5436.D
Acq On : 27 Mar 2001 15:33
Sample : S-12A,1840-003,s,15.24g,15.6,03/26/01
Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,1
MS Integration Params: rteint.p
Quant Time: Mar 28 6:50 2001

Vial: 15
Operator: JC
Inst : MSD-A
Multiplr: 1.00

Quant Results File: AS0601.RES

Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Tue Mar 20 13:59:45 2001
Response via : Initial Calibration
DataAcq Meth : AS0601

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.09	152	84558	40.00	UG	0.00
22) Naphthalene-d8	9.74	136	378039	40.00	UG	0.00
39) Acenaphthene-d10	11.68	164	187810	40.00	UG	0.00
60) Phenanthrene-d10	13.22	188	390484	40.00	UG	0.00
75) Chrysene-d12	15.94	240	320342	40.00	UG	-0.02
84) Perylene-d12	18.03	264	276359	40.00	UG	-0.02
System Monitoring Compounds						
4) 2-Fluorophenol	5.94	112	176011	63.57	UG	0.00
Spiked Amount 100.000	Range 37 - 100		Recovery = 63.57%			
6) Phenol-d5	7.51	99	249019	71.45	UG	-0.04
Spiked Amount 100.000	Range 37 - 104		Recovery = 71.45%			
23) Nitrobenzene-d5	8.84	82	142965	37.94	UG	-0.03
Spiked Amount 50.000	Range 48 - 104		Recovery = 75.88%			
43) 2-Fluorobiphenyl	10.93	172	213097	38.98	UG	0.00
Spiked Amount 50.000	Range 52 - 107		Recovery = 77.96%			
64) 2,4,6-Tribromophenol	12.50	330	121868	81.90	UG	-0.02
Spiked Amount 100.000	Range 60 - 155		Recovery = 81.90%			
77) Terphenyl-d14	14.80	244	389108	55.09	UG	0.00
Spiked Amount 50.000	Range 58 - 157		Recovery = 110.18%			
Target Compounds						Qvalue
7) Phenol	7.52	94	4080	1.28	UG	# 1
17) 4-Methylphenol	8.62	108	323706	105.29	UG	100
71) Carbazole	13.37	167	8137	1.27	UG	# 72

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

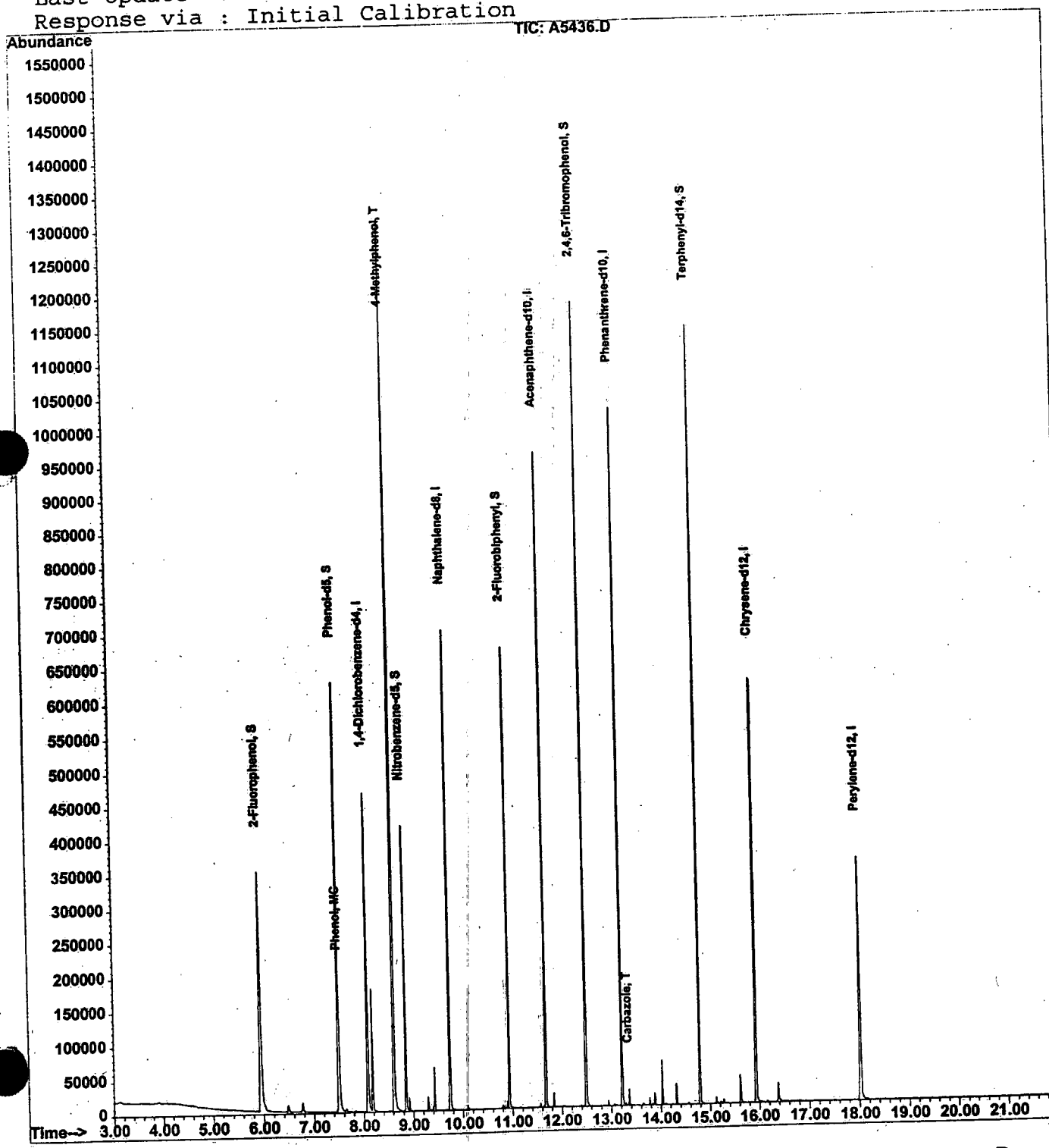
Quantitation Report

Data File : C:\HPCHEM\1\DATA\03-27-01\A5436.D
Acq On : 27 Mar 2001 15:33
Sample : S-12A,1840-003,s,15.24g,15.6,03/26/01
Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,1
MS Integration Params: rteint.p
Quant Time: Mar 28 6:50 2001

Vial: 15
Operator: JC
Inst : MSD-A
Multiplr: 1.00

Quant Results File: AS0601.RES

Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Tue Mar 20 13:59:45 2001
Response via : Initial Calibration



000262

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LSC Area Percent Report

Data File : C:\HPCHEM\1\DATA\03-27-01\A5436.D
Acq On : 27 Mar 2001 15:33
Sample : S-12A,1840-003,s,15.24g,15.6,03/26/01
Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,1
Integration Params: LSCINT.P

Vial: 15
Operator: JC
Inst : MSD-A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Smoothing : ON
Sampling : 1
Start Thrs: 0.02
Stop Thrs : 0

Filtering: 5
Min Area: 3 % of largest Peak
Max Peaks: 100
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Signal : TIC

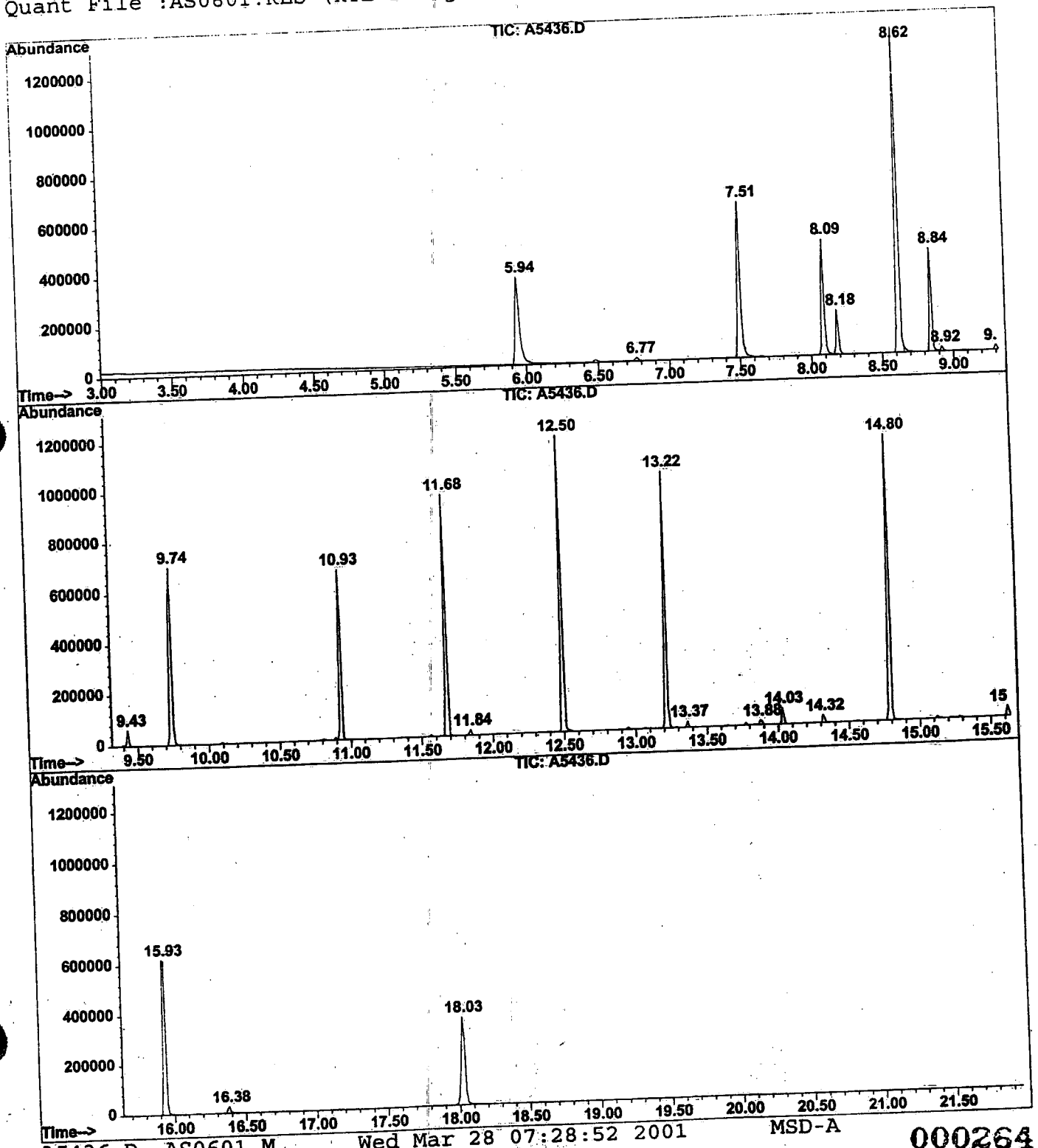
peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	peak area	peak % max.	% of total
1	5.940	285	289	302	rBV	350968	748986	42.95%	6.046%
2	6.769	367	370	374	rVB	13422	19089	1.09%	0.154%
3	7.505	438	442	454	rBV	627010	950025	54.48%	7.669%
4	8.088	496	499	506	rBV	466544	635140	36.42%	5.127%
5	8.180	506	508	518	rVB	179100	211633	12.14%	1.708%
6	8.620	548	551	554	rBV	1312068	1743939	100.00%	14.078%
7	8.845	570	573	576	rBV	417758	467815	26.83%	3.776%
8	8.916	579	580	583	rVB	18880	18408	1.06%	0.149%
9	9.295	615	617	621	rVB	20357	24557	1.41%	0.198%
10	9.428	628	630	632	rVB	62809	57507	3.30%	0.464%
11	9.745	658	661	663	rBV	700980	845556	48.49%	6.826%
12	10.931	775	777	780	rBV	673738	732044	41.98%	5.909%
13	11.678	847	850	853	rBV	960951	886911	50.86%	7.159%
14	11.841	864	866	868	rVB	20641	20270	1.16%	0.164%
15	12.496	927	930	933	rBV	1182545	1133581	65.00%	9.151%
16	13.222	998	1001	1003	rBV	1024472	972888	55.79%	7.853%
17	13.365	1013	1015	1017	rBB	24517	18919	1.08%	0.153%
18	13.876	1064	1065	1068	rBB	17922	20463	1.17%	0.165%
19	14.030	1078	1080	1083	rBB	65087	62447	3.58%	0.504%
20	14.316	1107	1108	1111	rBB	31208	30422	1.74%	0.246%
21	14.797	1152	1155	1157	rBV	1143386	1140080	65.37%	9.203%
22	15.615	1233	1235	1239	rBV	41322	46823	2.68%	0.378%
23	15.932	1263	1266	1269	rBV	619931	887005	50.86%	7.160%
24	16.382	1307	1310	1317	rVB	27465	40523	2.32%	0.327%
25	18.029	1466	1471	1475	rBV	356340	673014	38.59%	5.433%

Sum of corrected areas: 12388045

5436.D AS0601.M Wed Mar 28 07:28:51 2001 MSD-A

LSC Report - Integrated Chromatogram

File : C:\HPCHEM\1\DATA\03-27-01\A5436.D
Operator : JC
Acquired : 27 Mar 2001 15:33 using AcqMethod AS0601
Instrument : MSD-A
Sample Name: S-12A,1840-003,s,15.24g,15.6,03/26/01
Misc Info : ENVTACT/444 ORBIS,03/23/01,03/26/01,1
Vial Number: 15
Quant File :AS0601.RES (RTE Integrator)



A5436.D AS0601.M Wed Mar 28 07:28:52 2001 MSD-A

000264

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Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-27-01\A5436.D
Acq On : 27 Mar 2001 15:33
Sample : S-12A,1840-003,s,15.24g,15.6,03/26/01
Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,1
MS Integration Params: LSCINT.P

Vial: 15
Operator: JC
Inst : MSD-A
Multiplr: 1.00

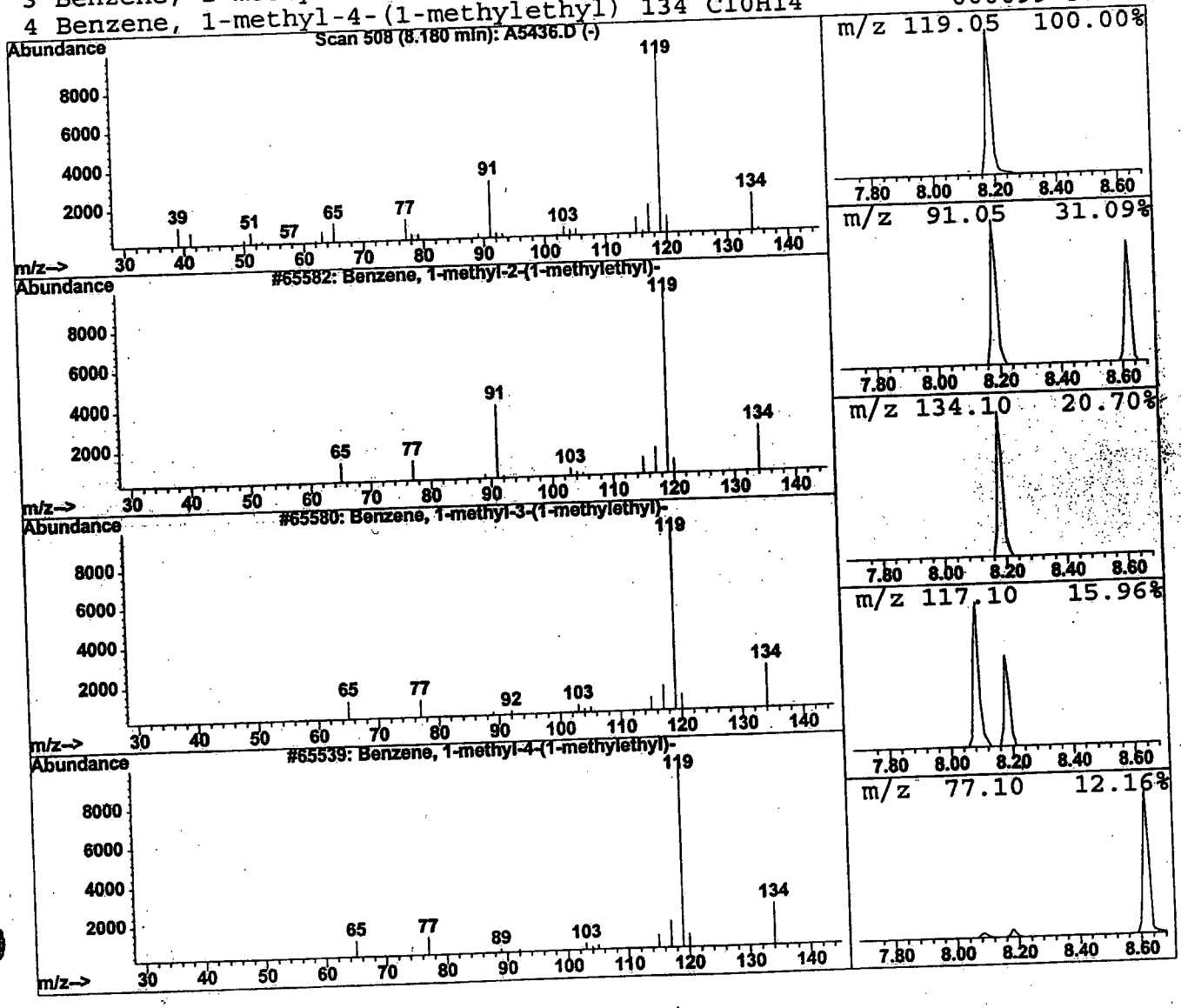
Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 1 Substituted benzene — Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.18	13.33 UG	211633	1,4-Dichlorobenzene-d4	8.09

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-methyl-2-(1-methylethyl)	134	C10H14	000527-84-4	96
2	Benzene, 1-methyl-3-(1-methylethyl)	134	C10H14	000535-77-3	96
3	Benzene, 1-methyl-4-(1-methylethyl)	134	C10H14	000099-87-6	96
4	Benzene, 1-methyl-4-(1-methylethyl)	134	C10H14	000099-87-6	91



000265

877

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\03-27-01\A5433.D
Acq On : 27 Mar 2001 14:01
Sample : S-13,1840-004,s,15.84g,24.4,03/26/01
Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,3
MS Integration Params: rteint.p
Quant Time: Mar 28 6:46 2001

Vial: 12
Operator: JC
Inst : MSD-A
Multiplr: 1.00

Quant Results File: AS0601.RES

Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Tue Mar 20 13:59:45 2001
Response via : Initial Calibration
DataAcq Meth : AS0601

	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	8.09	152	94824	40.00	UG	0.00
22) Naphthalene-d8	9.74	136	418437	40.00	UG	0.00
39) Acenaphthene-d10	11.68	164	199169	40.00	UG	0.00
60) Phenanthrene-d10	13.22	188	425124	40.00	UG	0.00
75) Chrysene-d12	15.94	240	341487	40.00	UG	-0.02
84) Perylene-d12	18.04	264	288202	40.00	UG	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	5.94	112	49029	15.79	UG	0.00
Spiked Amount 100.000	Range 37 - 100		Recovery = 15.79%#			
6) Phenol-d5	7.50	99	72540	18.56	UG	-0.05
Spiked Amount 100.000	Range 37 - 104		Recovery = 18.56%#			
23) Nitrobenzene-d5	8.83	82	42607	10.21	UG	-0.04
Spiked Amount 50.000	Range 48 - 104		Recovery = 20.42%#			
43) 2-Fluorobiphenyl	10.93	172	59456	10.26	UG	0.00
Spiked Amount 50.000	Range 52 - 107		Recovery = 20.52%#			
64) 2,4,6-Tribromophenol	12.50	330	33636	20.76	UG	-0.02
Spiked Amount 100.000	Range 60 - 155		Recovery = 20.76%#			
77) Terphenyl-d14	14.80	244	92556	12.29	UG	0.00
Spiked Amount 50.000	Range 58 - 157		Recovery = 24.58%#			

						Qvalue
Target Compounds						
7) Phenol	7.52	94	3572m	1.00	UG	
12) 1,4-Dichlorobenzene	8.11	146	20376m	5.39	UG	
14) 1,2-Dichlorobenzene	8.33	146	317161	93.46	UG	97
69) Phenanthrene	13.24	178	9686	1.00	UG #	69
71) Carbazole	13.37	167	121387m	17.47	UG	
73) Fluoranthene	14.46	202	7445	0.68	UG #	88
76) Pyrene	14.69	202	7300	0.66	UG #	81
83) bis(2-Ethylhexyl)phthalate	15.79	149	9435	1.20	UG #	82

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

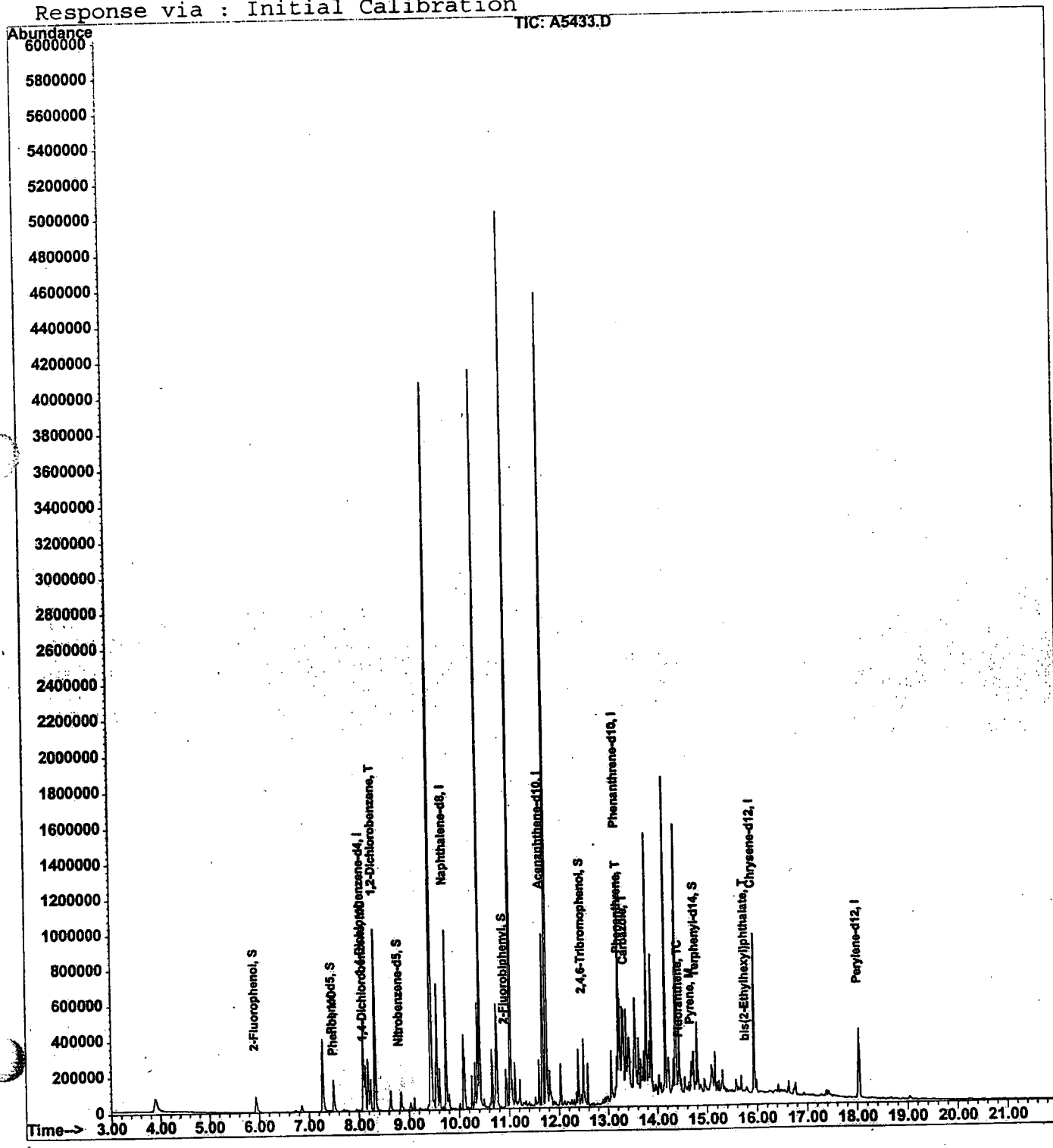
Quantitation Report

Data File : C:\HPCHEM\1\DATA\03-27-01\A5433.D
Acq On : 27 Mar 2001 14:01
Sample : S-13,1840-004,s,15.84g,24.4,03/26/01
Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,3
MS Integration Params: rteint.p
Quant Time: Mar 28 6:46 2001

Vial: 12
Operator: JC
Inst : MSD-A
Multiplr: 1.00

Quant Results File: AS0601.RES

Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Tue Mar 20 13:59:45 2001
Response via : Initial Calibration



824

LSC Area Percent Report

Data File : C:\HPCHEM\1\DATA\03-27-01\A5433.D
Acq On : 27 Mar 2001 14:01
Sample : S-13,1840-004,s,15.84g,24.4,03/26/01
Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,3
S Integration Params: LSCINT.P

Vial: 12
Operator: JC
Inst : MSD-A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Smoothing : ON
Sampling : 1
Start Thrs: 0.02
Stop Thrs : 0

Filtering: 5
Min Area: 3 % of largest Peak
Max Peaks: 100
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	peak area	peak % max.	% of total
1	3.885	82	88	110	rBV	70599	328382	4.92%	0.554%
2	5.941	286	289	303	rVB	88282	199978	3.00%	0.337%
3	6.851	375	378	385	rVB	34135	70206	1.05%	0.118%
4	7.280	416	420	428	rBV	400971	736354	11.03%	1.243%
5	7.495	439	441	451	rVB	174838	285352	4.27%	0.482%
6	8.088	496	499	501	rBV	501719	753365	11.28%	1.271%
[redacted]	8.129	501	503	506	rVV	248528	325529	4.88%	0.549%
[redacted]	8.180	506	508	511	rVV	285810	405688	6.08%	0.685%
9	8.242	511	514	517	rVV2	174519	304299	4.56%	0.514%
10	8.323	519	522	530	rVB	1019231	1510459	22.62%	2.549%
11	8.640	549	553	558	rVB2	110242	155875	2.33%	0.263%
12	8.835	570	572	576	rBV2	100412	181501	2.72%	0.306%
13	9.039	588	592	594	rBV2	42914	81462	1.22%	0.137%
14	9.111	596	599	602	rVB	70004	73798	1.11%	0.125%
15	9.448	627	632	636	rBV	4053451	6046310	90.57%	10.204%
16	9.561	639	643	646	rBV2	694352	950838	14.24%	1.605%
17	9.612	646	648	651	rVB	223524	237257	3.55%	0.400%
18	9.745	658	661	663	rBV	1002065	1111627	16.65%	1.876%
19	9.806	665	667	672	rVB2	83028	107080	1.60%	0.181%
20	10.093	692	695	701	rVB3	415098	757476	11.35%	1.278%
21	10.256	708	711	713	rVB	183296	168706	2.53%	0.285%
22	10.318	713	717	720	rBV2	255335	364301	5.46%	0.615%
23	10.369	720	722	724	rVV	556363	648978	9.72%	1.095%
24	10.420	724	727	729	rVB	4090625	3708074	55.54%	6.258%
25	10.655	745	750	753	rBV3	327620	472840	7.08%	0.798%
26	10.747	753	759	762	rBV3	577959	1163456	17.43%	1.963%
27	10.931	775	777	778	rBV	209454	208091	3.12%	0.351%
28	11.023	783	786	788	rVV	5013250	5752186	86.16%	9.708%
[redacted]	11.054	788	789	793	rVV2	150725	154422	2.31%	0.261%
[redacted]	11.115	793	795	798	rVV	242359	265729	3.98%	0.448%
31	11.218	802	805	809	rVB	146817	166935	2.50%	0.282%

000268

825

32	11.524	832	835	837	rBV2	51676	66850	1.00%	0.113%
33	11.596	840	842	844	rVV	255642	231995	3.48%	0.392%
34	11.678	846	850	853	rVV2	966464	1505647	22.55%	2.541%
35	11.760	853	858	860	rVV	4554120	6676070	100.00%	11.267%
	11.811	861	863	864	rVV	193731	196462	2.94%	0.332%
	11.831	864	865	870	rVB3	76708	139860	2.09%	0.236%
38	12.036	883	885	888	rVB	228608	228366	3.42%	0.385%
39	12.394	917	920	923	rVB	308328	309412	4.63%	0.522%
40	12.455	923	926	928	rBV3	54268	90548	1.36%	0.153%
41	12.496	928	930	931	rBV	357982	344587	5.16%	0.582%
42	12.588	937	939	941	rVB	230448	197683	2.96%	0.334%
43	12.946	970	974	975	rBV	36134	67390	1.01%	0.114%
44	12.997	975	979	981	rVV2	37737	94208	1.41%	0.159%
45	13.069	981	986	991	rVV	287662	434366	6.51%	0.733%
46	13.151	991	994	995	rVV3	82416	140492	2.10%	0.237%
47	13.181	995	997	999	rVV2	252158	448003	6.71%	0.756%
48	13.222	999	1001	1002	rVV	1285338	1372160	20.55%	2.316%
49	13.294	1005	1008	1009	rVV	524458	822270	12.32%	1.388%
50	13.314	1009	1010	1012	rVV2	506659	605030	9.06%	1.021%
51	13.365	1014	1015	1017	rVV	505110	560951	8.40%	0.947%
52	13.427	1019	1021	1028	rVV3	342978	891931	13.36%	1.505%
53	13.549	1028	1033	1038	rVV	562801	1386326	20.77%	2.340%
54	13.621	1038	1040	1042	rVV2	330759	411538	6.16%	0.695%
55	13.662	1042	1044	1046	rVV2	212110	334009	5.00%	0.564%
56	13.703	1046	1048	1049	rVV	166460	222497	3.33%	0.375%
57	13.733	1049	1051	1052	rVV	255045	327495	4.91%	0.553%
	13.785	1052	1056	1058	rVV	1485183	1712998	25.66%	2.891%
59	13.836	1058	1061	1064	rVV	305274	723911	10.84%	1.222%
60	13.877	1064	1065	1068	rVV	793331	893482	13.38%	1.508%
61	13.969	1072	1074	1078	rVB3	58076	123128	1.84%	0.208%
62	14.030	1078	1080	1082	rBV2	109259	139838	2.09%	0.236%
63	14.071	1082	1084	1086	rVV2	61425	75734	1.13%	0.128%
64	14.122	1086	1089	1090	rVV2	46803	77483	1.16%	0.131%
65	14.163	1090	1093	1095	rVV	1778761	1705108	25.54%	2.878%
66	14.204	1095	1097	1098	rVV2	126038	214920	3.22%	0.363%
67	14.224	1098	1099	1103	rVB	200398	223915	3.35%	0.378%
68	14.327	1103	1109	1110	rBV2	194218	288411	4.32%	0.487%
69	14.378	1110	1114	1116	rVV	1506949	1957797	29.33%	3.304%
70	14.408	1116	1117	1118	rVV	111884	101553	1.52%	0.171%
71	14.439	1118	1120	1123	rVV2	396465	419421	6.28%	0.708%
72	14.552	1129	1131	1135	rBV3	86164	135156	2.02%	0.228%
73	14.685	1140	1144	1146	rVV2	177092	363845	5.45%	0.614%
74	14.726	1146	1148	1150	rVV	231124	319049	4.78%	0.538%
75	14.756	1150	1151	1153	rVV2	62251	93948	1.41%	0.159%
76	14.797	1153	1155	1156	rVV	391347	481798	7.22%	0.813%
77	14.818	1156	1157	1159	rVV2	120919	120579	1.81%	0.203%
78	14.858	1159	1161	1166	rVB3	43161	110713	1.66%	0.187%
	14.940	1167	1169	1175	rVV2	71564	158482	2.37%	0.267%
80	15.083	1178	1183	1184	rVV2	143963	217057	3.25%	0.366%
81	15.155	1187	1190	1192	rVB2	219601	260502	3.90%	0.440%

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82	15.308	1200	1205	1207	rBV2	120244	200800	3.01%	0.339%
83	15.574	1229	1231	1234	rBV2	71889	107946	1.62%	0.182%
84	15.687	1239	1242	1244	rVB2	87419	105970	1.59%	0.179%
85	15.943	1261	1267	1269	rVV	899228	1052892	15.77%	1.777%
	15.983	1269	1271	1275	rVB2	75248	121267	1.82%	0.205%
	16.628	1331	1334	1337	rVB	70384	95854	1.44%	0.162%
88	16.771	1346	1348	1355	rVB	70018	104589	1.57%	0.177%
89	18.039	1466	1472	1477	rBV	384246	743891	11.14%	1.255%

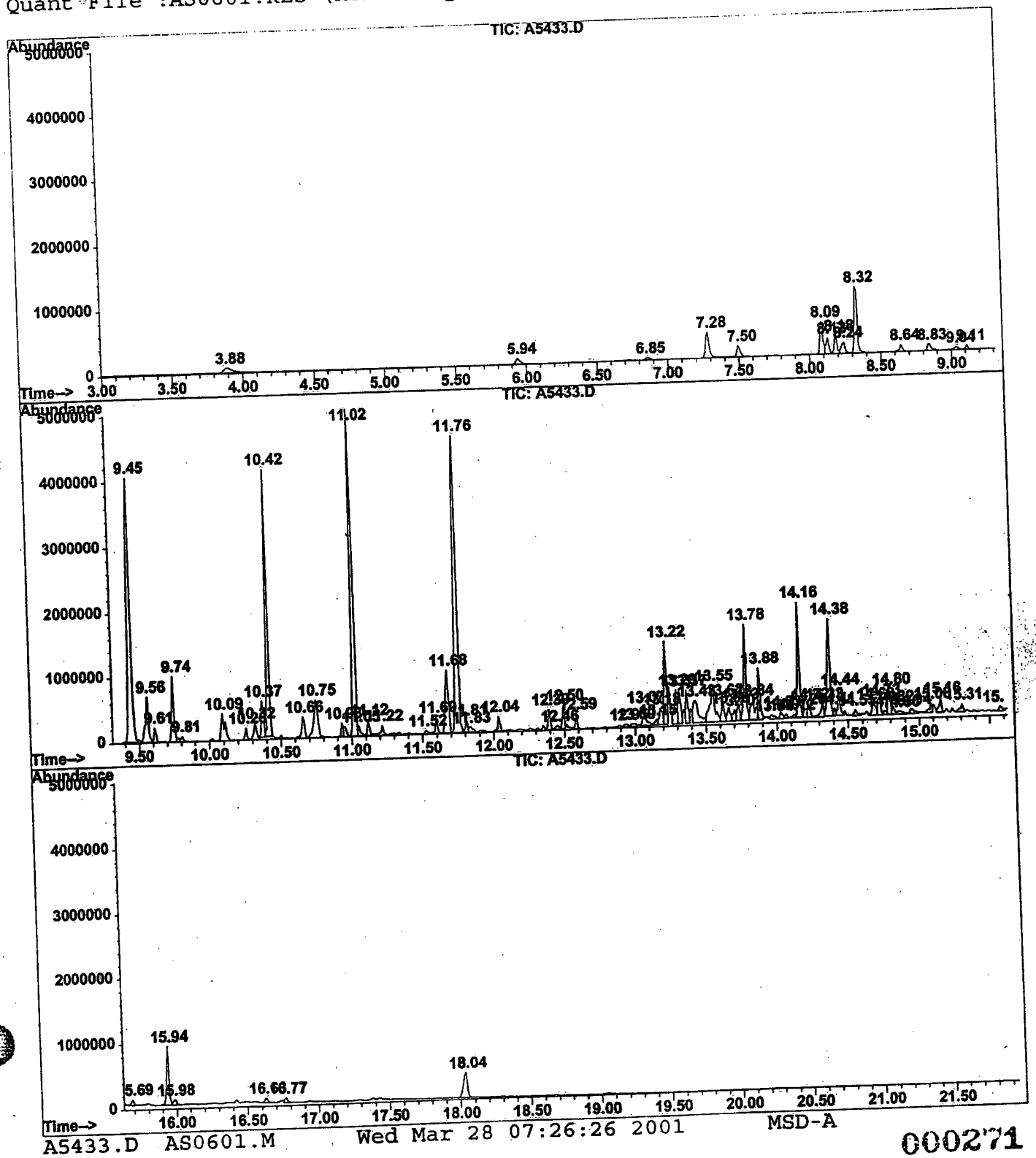
Sum of corrected areas: 59254737

A5433.D AS0601.M Wed Mar 28 07:26:25 2001 MSD-A

000270

LSC Report - Integrated Chromatogram

File : C:\HPCHEM\1\DATA\03-27-01\A5433.D
Operator : JC
Acquired : 27 Mar 2001 14:01 using AcqMethod AS0601
Instrument : MSD-A
Sample Name: S-13,1840-004,s,15.84g,24.4,03/26/01
Misc Info : ENVTACT/444 ORBIS,03/23/01,03/26/01,3
Vial Number: 12
Quant File :AS0601.RES (RTE Integrator)



A5433.D AS0601.M Wed Mar 28 07:26:26 2001 MSD-A

000271

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Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-27-01\A5433.D
Acq On : 27 Mar 2001 14:01
Sample : S-13,1840-004,s,15.84g,24.4,03/26/01
Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,3
MS Integration Params: LSCINT.P

Vial: 12
Operator: JC
Inst : MSD-A
Multiplr: 1.00

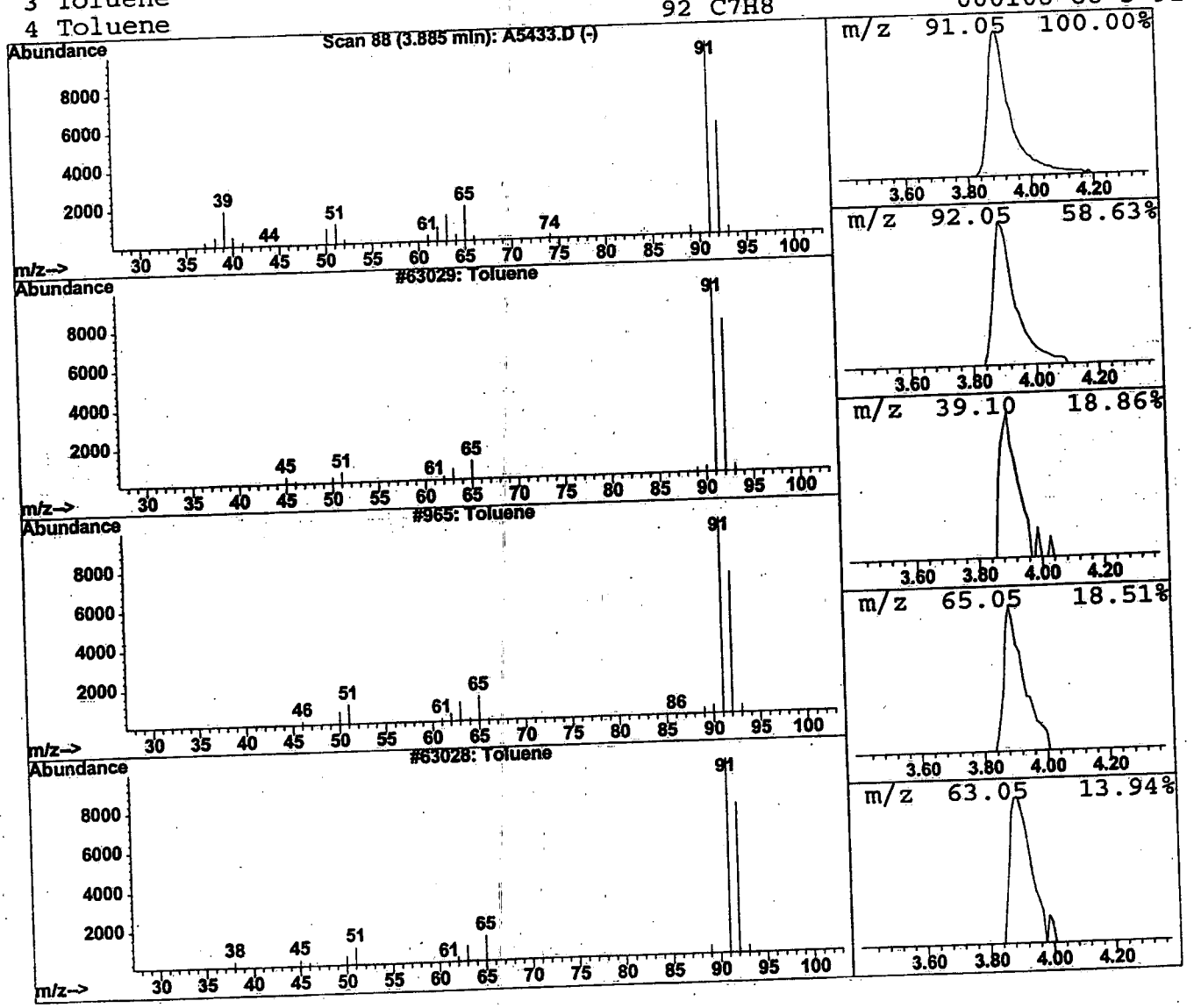
Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 1 Substituted benzene Concentration Rank 20

R.T.	EstConc	Area	Relative to ISTD	R.T.
3.88	17.44 UG	328382	1,4-Dichlorobenzene-d4	8.09

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Toluene	92	C7H8	000108-88-3	91
2	Toluene	92	C7H8	000108-88-3	91
3	Toluene	92	C7H8	000108-88-3	91
4	Toluene	92	C7H8	000108-88-3	91



829

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-27-01\A5433.D
Acq On : 27 Mar 2001 14:01
Sample : S-13,1840-004,s,15.84g,24.4,03/26/01
Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,3
MS Integration Params: LSCINT.P

Vial: 12
Operator: JC
Inst : MSD-A
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

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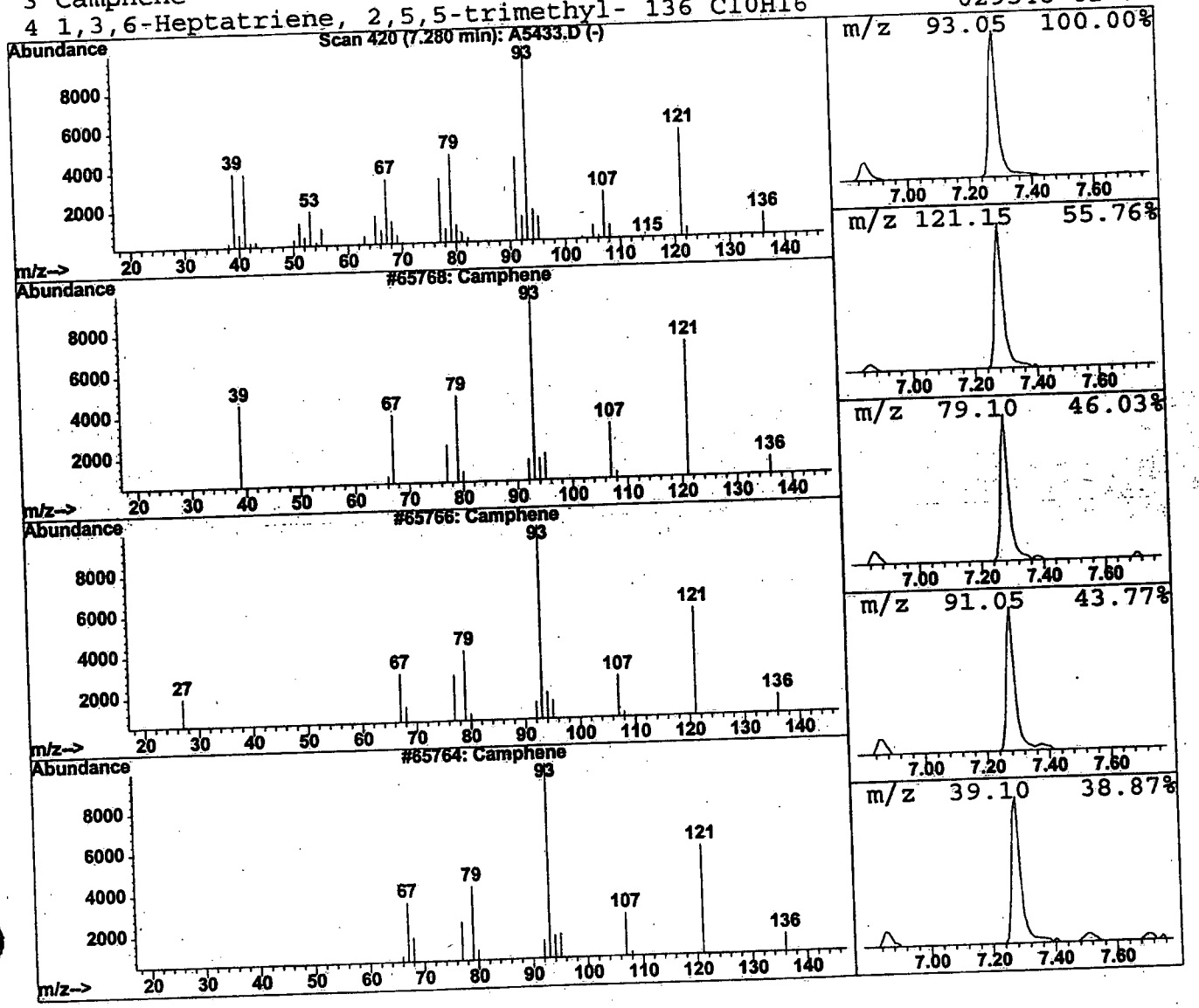
Peak Number 2 Camphene — Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
7.28	39.10 UG	736354	1,4-Dichlorobenzene-d4	8.09

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Camphene	136	C10H16	000079-92-5	98
2	Camphene	136	C10H16	000079-92-5	96
3	Camphene	136	C10H16	000079-92-5	96
4	1,3,6-Heptatriene, 2,5,5-trimethyl-	136	C10H16	029548-02-5	94



Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-27-01\A5433.D
Acq On : 27 Mar 2001 14:01
Sample : S-13,1840-004,s,15.84g,24.4,03/26/01
Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,3
MS Integration Params: LSCINT.P

Vial: 12
Operator: JC
Inst : MSD-A
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

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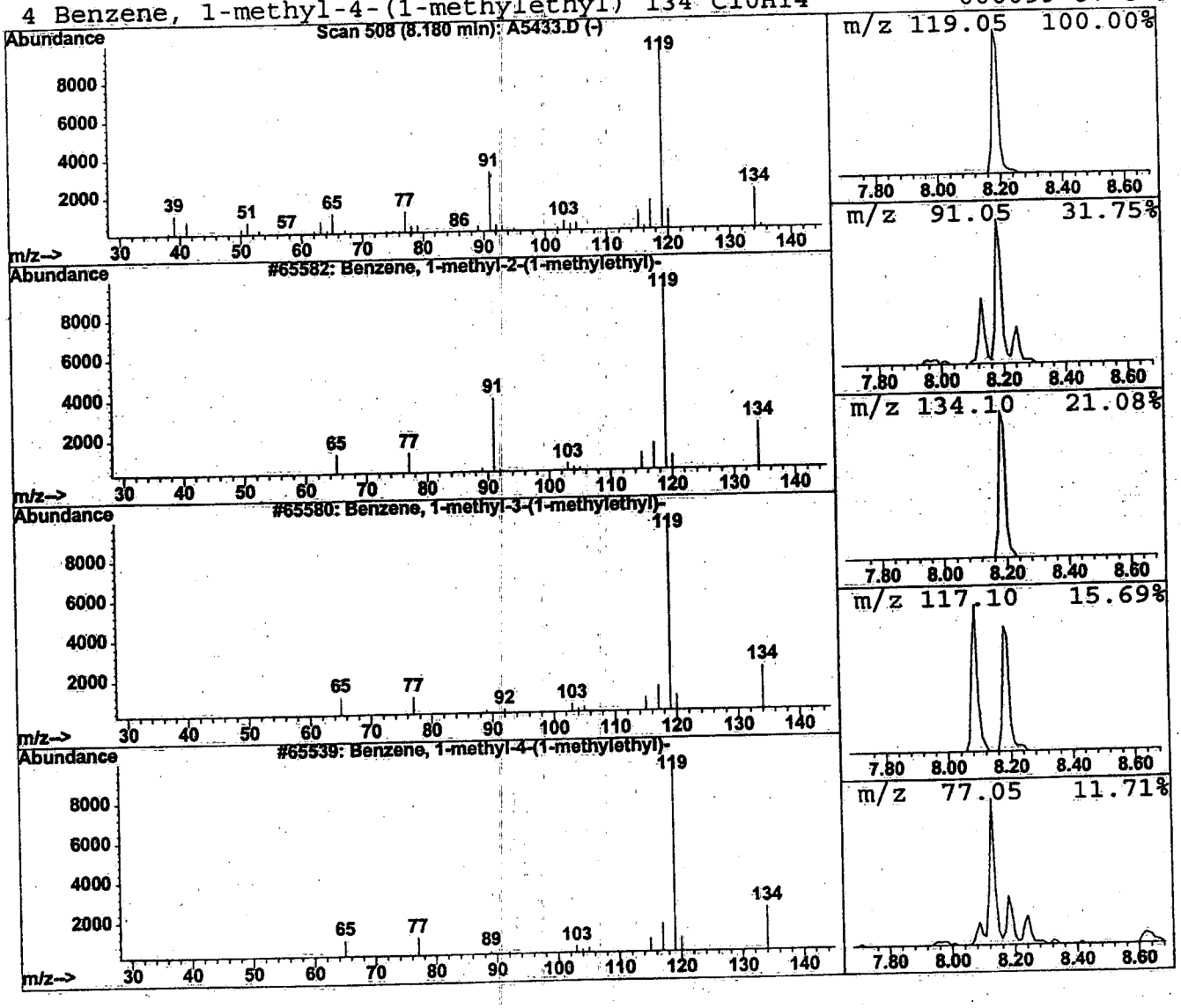
Peak Number 3 Substituted benzene Concentration Rank 17

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.18	21.54 UG	405688	1,4-Dichlorobenzene-d4	8.09

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-methyl-2-(1-methylethyl)	134	C10H14	000527-84-4	96
2	Benzene, 1-methyl-3-(1-methylethyl)	134	C10H14	000535-77-3	96
3	Benzene, 1-methyl-4-(1-methylethyl)	134	C10H14	000099-87-6	96
4	Benzene, 1-methyl-4-(1-methylethyl)	134	C10H14	000099-87-6	94



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Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-27-01\A5433.D
Acq On : 27 Mar 2001 14:01
Sample : S-13,1840-004,s,15.84g,24.4,03/26/01
Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,3
MS Integration Params: LSCINT.P

Vial: 12
Operator: JC
Inst : MSD-A
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

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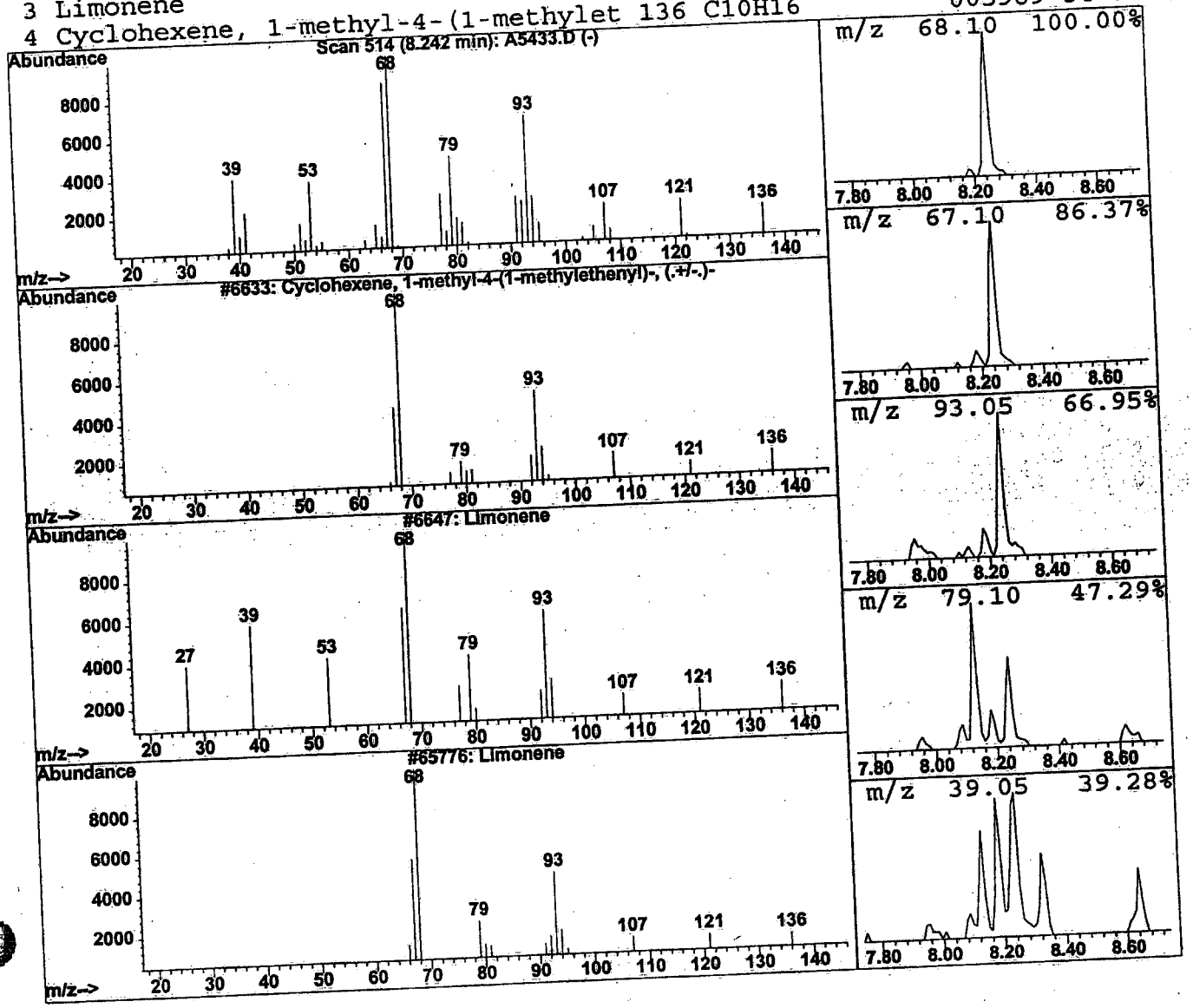
Peak Number 4 Limonene — Concentration Rank 22

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.24	16.16 UG	304299	1,4-Dichlorobenzene-d4	8.09

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexene, 1-methyl-4-(1-methylet	136	C10H16	007705-14-8	93
2	Limonene	136	C10H16	000138-86-3	91
3	Limonene	136	C10H16	000138-86-3	86
4	Cyclohexene, 1-methyl-4-(1-methylet	136	C10H16	005989-54-8	81



Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-27-01\A5433.D
Acq On : 27 Mar 2001 14:01
Sample : S-13,1840-004,s,15.84g,24.4,03/26/01
Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,3
MS Integration Params: LSCINT.P

Vial: 12
Operator: JC
Inst : MSD-A
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

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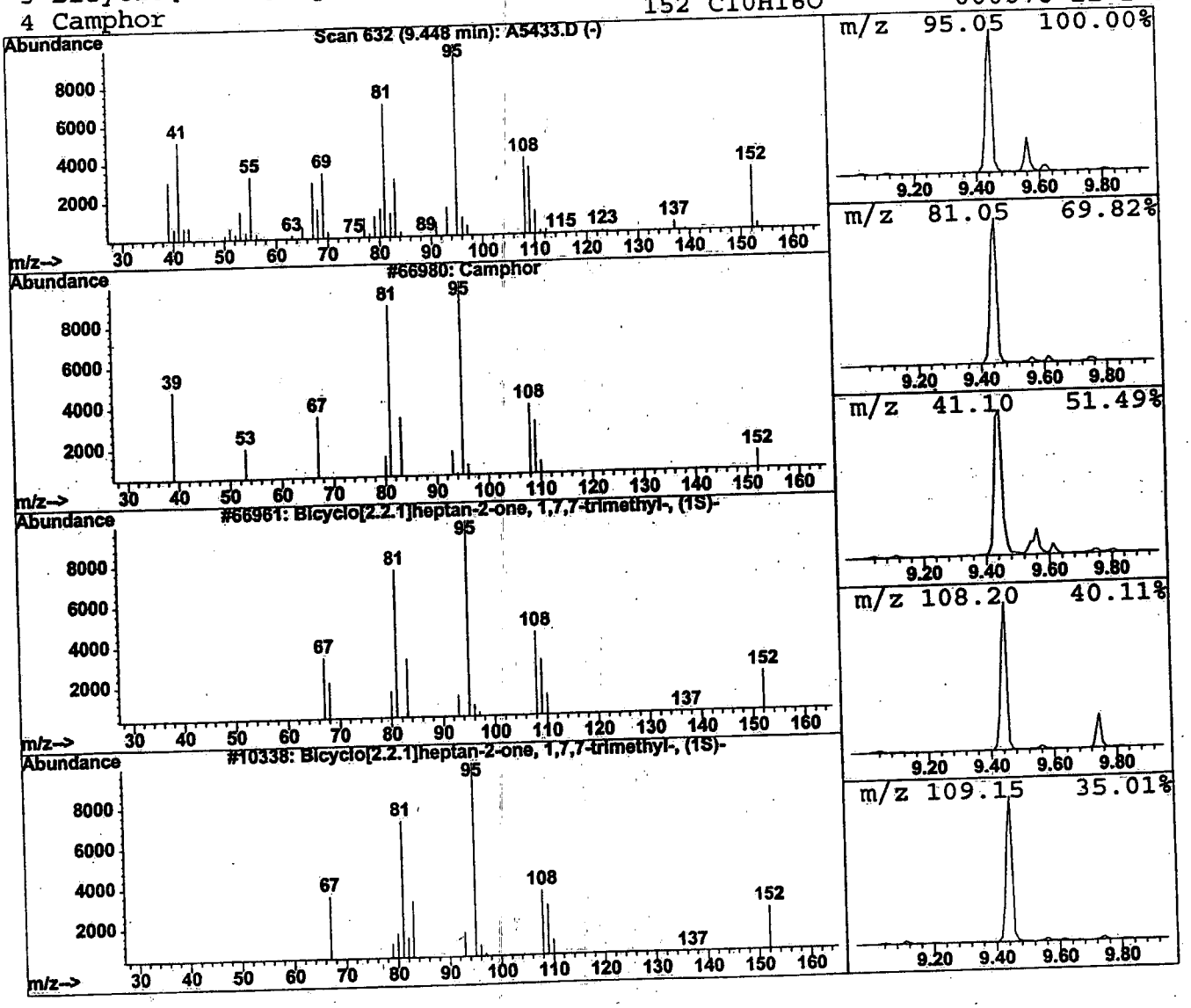
Peak Number 5 Camphor — Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.45	217.57 UG	6046310	Naphthalene-d8	9.74

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Camphor	152	C10H16O	000076-22-2	97
2	Bicyclo[2.2.1]heptan-2-one, 1,7,7-t	152	C10H16O	000464-48-2	97
3	Bicyclo[2.2.1]heptan-2-one, 1,7,7-t	152	C10H16O	000464-48-2	97
4	Camphor	152	C10H16O	000076-22-2	97



833

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-27-01\A5433.D
Acq On : 27 Mar 2001 14:01
Sample : S-13,1840-004,s,15.84g,24.4,03/26/01
Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,3
MS Integration Params: LSCINT.P

Vial: 12
Operator: JC
Inst : MSD-A
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

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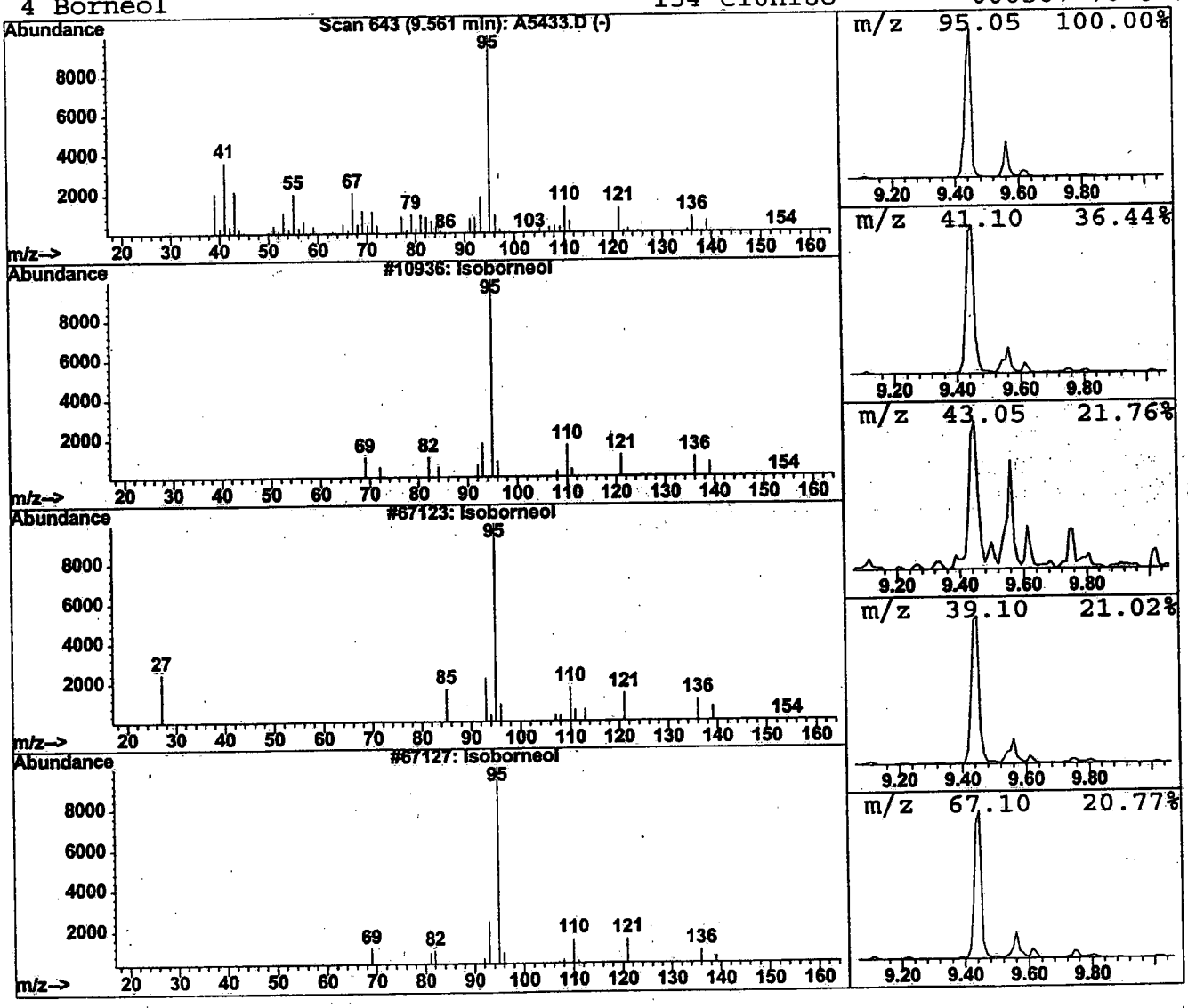
Peak Number 6 Isoborneol Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.56	34.21 UG	950838	Naphthalene-d8	9.74

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Isoborneol	154	C10H18O	000124-76-5	91
2	Isoborneol	154	C10H18O	000124-76-5	87
3	Isoborneol	154	C10H18O	000124-76-5	83
4	Borneol	154	C10H18O	000507-70-0	78



834

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-27-01\A5433.D
Acq On : 27 Mar 2001 14:01
Sample : S-13,1840-004,s,15.84g,24.4,03/26/01
Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,3
MS Integration Params: LSCINT.P

Vial: 12
Operator: JC
Inst : MSD-A
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

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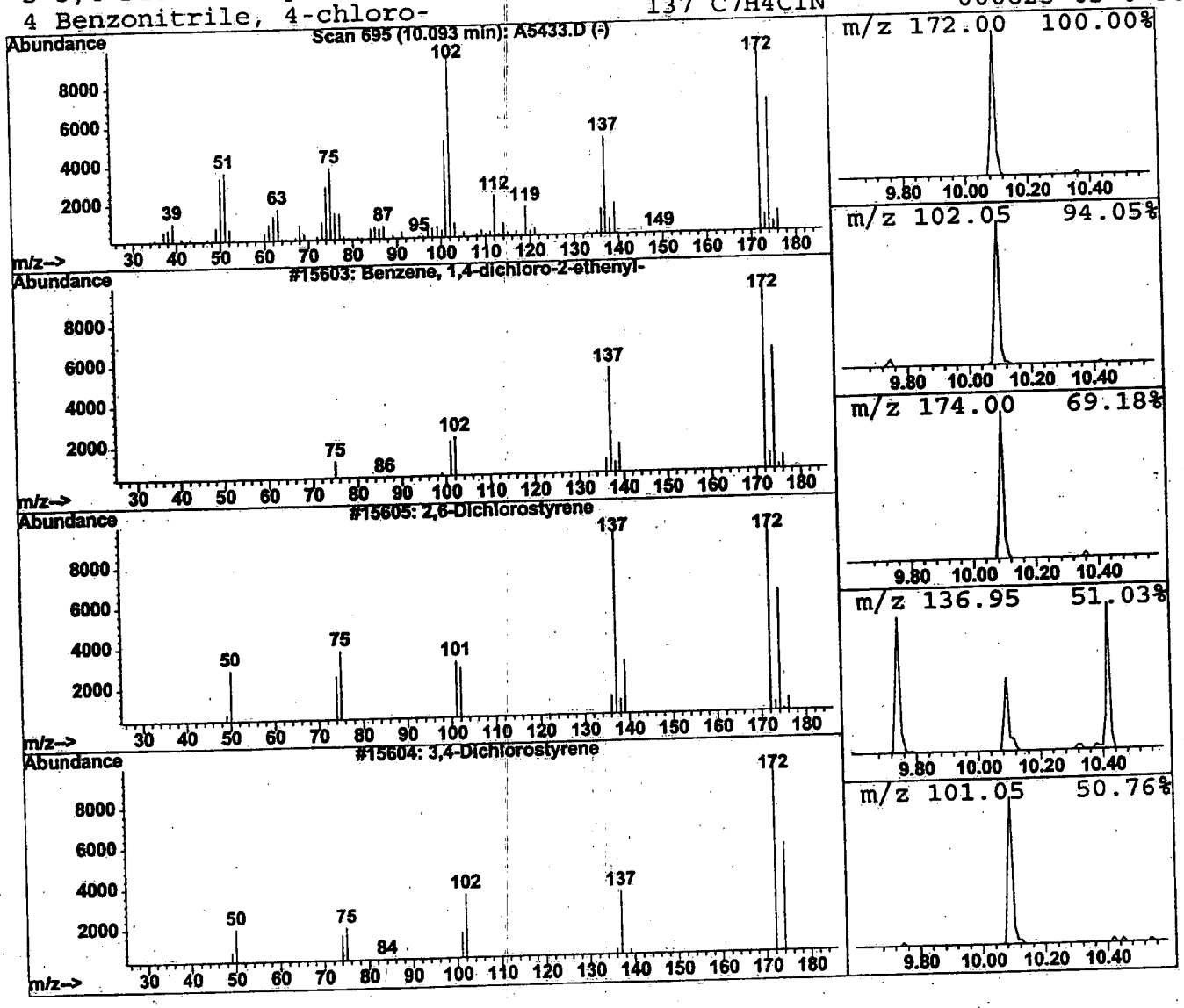
Peak Number 7 Substituted benzene Concentration Rank 12

R.T.	EstConc	Area	Relative to ISTD	R.T.
10.09	27.26 UG	757476	Naphthalene-d8	9.74

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,4-dichloro-2-ethenyl-	172	C8H6Cl2	001123-84-8	70
2	2,6-Dichlorostyrene	172	C8H6Cl2	028469-92-3	41
3	3,4-Dichlorostyrene	172	C8H6Cl2	002039-83-0	38
4	Benzonitrile, 4-chloro-	137	C7H4ClN	000623-03-0	38



835

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-27-01\A5433.D
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Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,3
MS Integration Params: LSCINT.P

Vial: 12
Operator: JC
Inst : MSD-A
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

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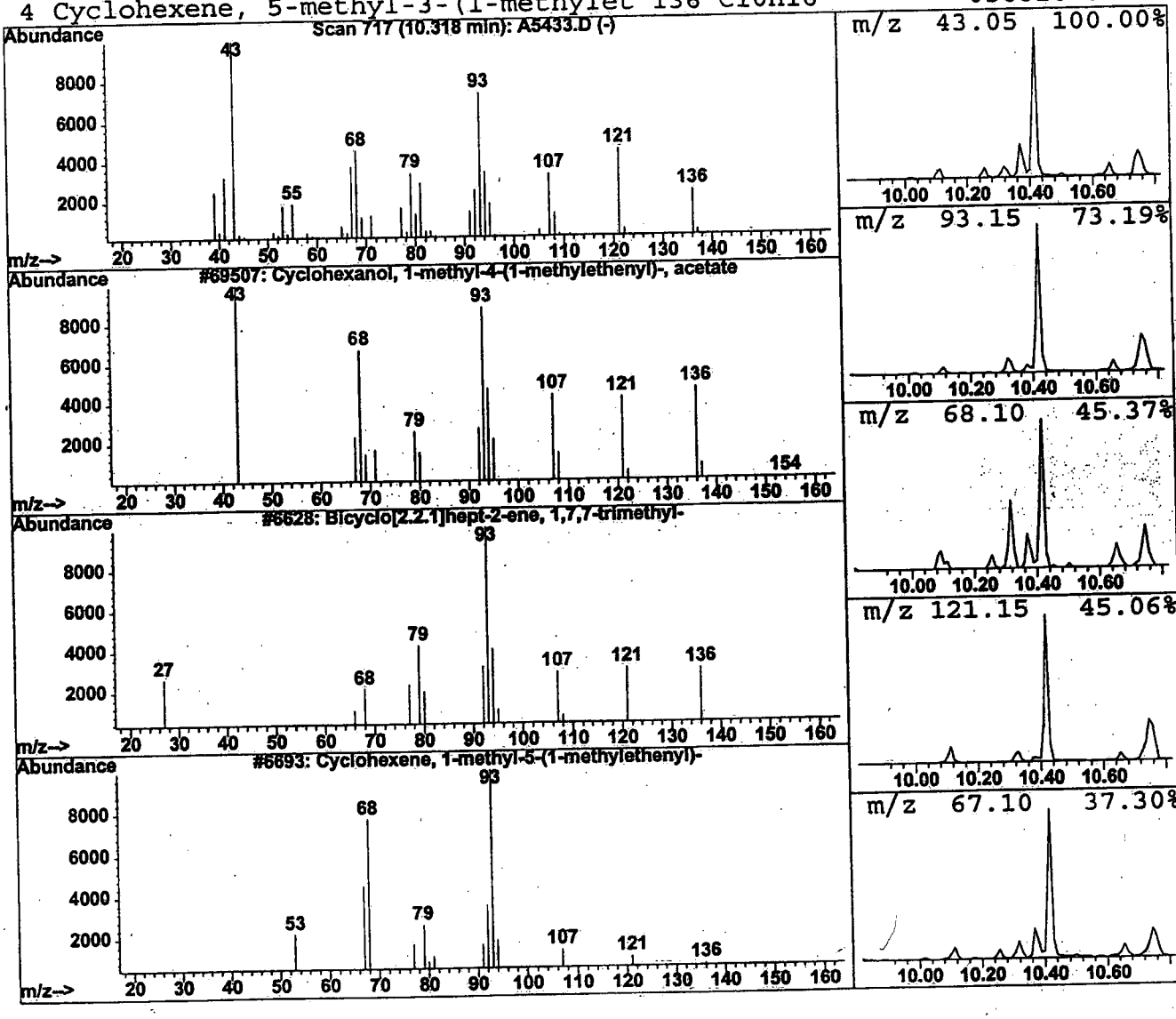
Peak Number 8 Unknown alkane Concentration Rank 23

R.T.	EstConc	Area	Relative to ISTD	R.T.
10.32	13.11 UG	364301	Naphthalene-d8	9.74

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexanol, 1-methyl-4-(1-methyle	196	C12H20O2	010198-23-9	86
2	Bicyclo[2.2.1]hept-2-ene, 1,7,7-tri	136	C10H16	000464-17-5	81
3	Cyclohexene, 1-methyl-5-(1-methylet	136	C10H16	013898-73-2	64
4	Cyclohexene, 5-methyl-3-(1-methylet	136	C10H16	056816-08-1	62



A5433.D AS0601.M Wed Mar 28 07:26:35 2001 MSD-A

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Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-27-01\A5433.D
Acq On : 27 Mar 2001 14:01
Sample : S-13,1840-004,s,15.84g,24.4,03/26/01
Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,3
MS Integration Params: LSCINT.P

Vial: 12
Operator: JC
Inst : MSD-A
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

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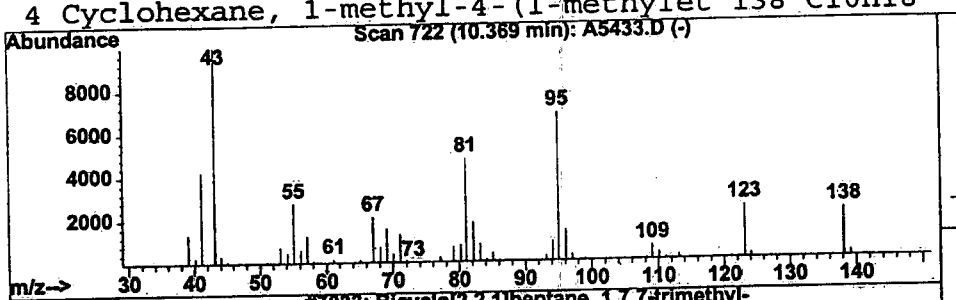
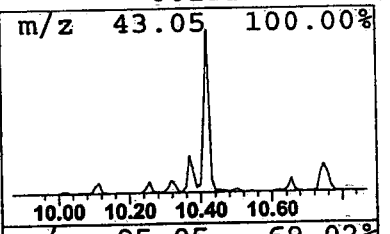
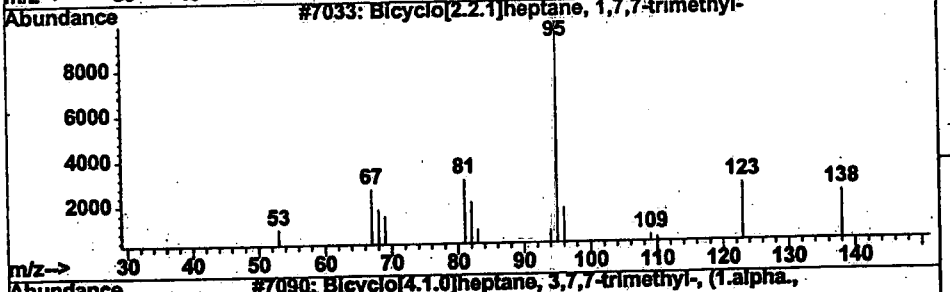
Peak Number 9 Unknown alkane Concentration Rank 16

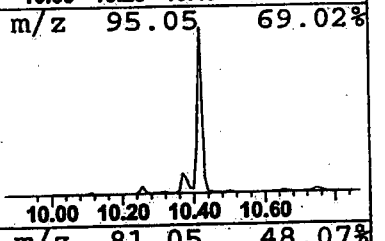
R.T.	EstConc	Area	Relative to ISTD	R.T.
10.37	23.35 UG	648978	Naphthalene-d8	9.74

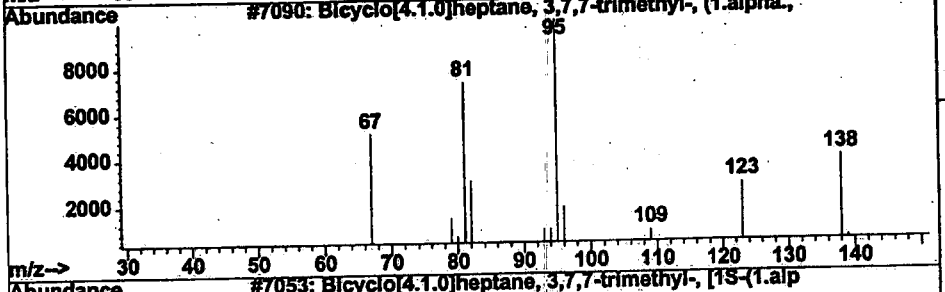
Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Bicyclo[2.2.1]heptane, 1,7,7-trimet	138	C10H18	000464-15-3	94
2	Bicyclo[4.1.0]heptane, 3,7,7-trimet	138	C10H18	018968-23-5	93
3	Bicyclo[4.1.0]heptane, 3,7,7-trimet	138	C10H18	002778-68-9	90
4	Cyclohexane, 1-methyl-4-(1-methylet	138	C10H18	001124-27-2	90

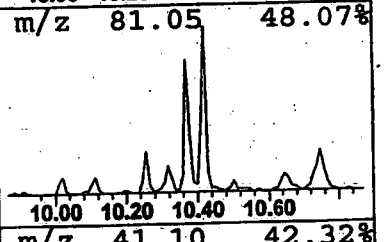


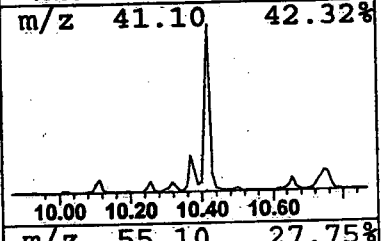


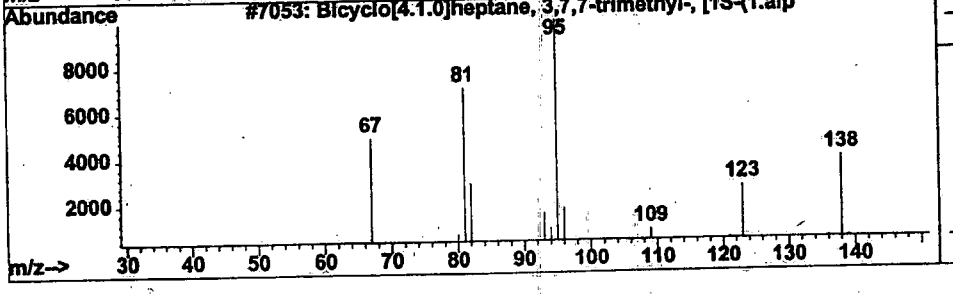


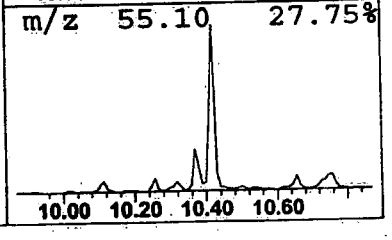












Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-27-01\A5433.D
Acq On : 27 Mar 2001 14:01
Sample : S-13,1840-004,s,15.84g,24.4,03/26/01
Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,3
MS Integration Params: LSCINT.P

Vial: 12
Operator: JC
Inst : MSD-A
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

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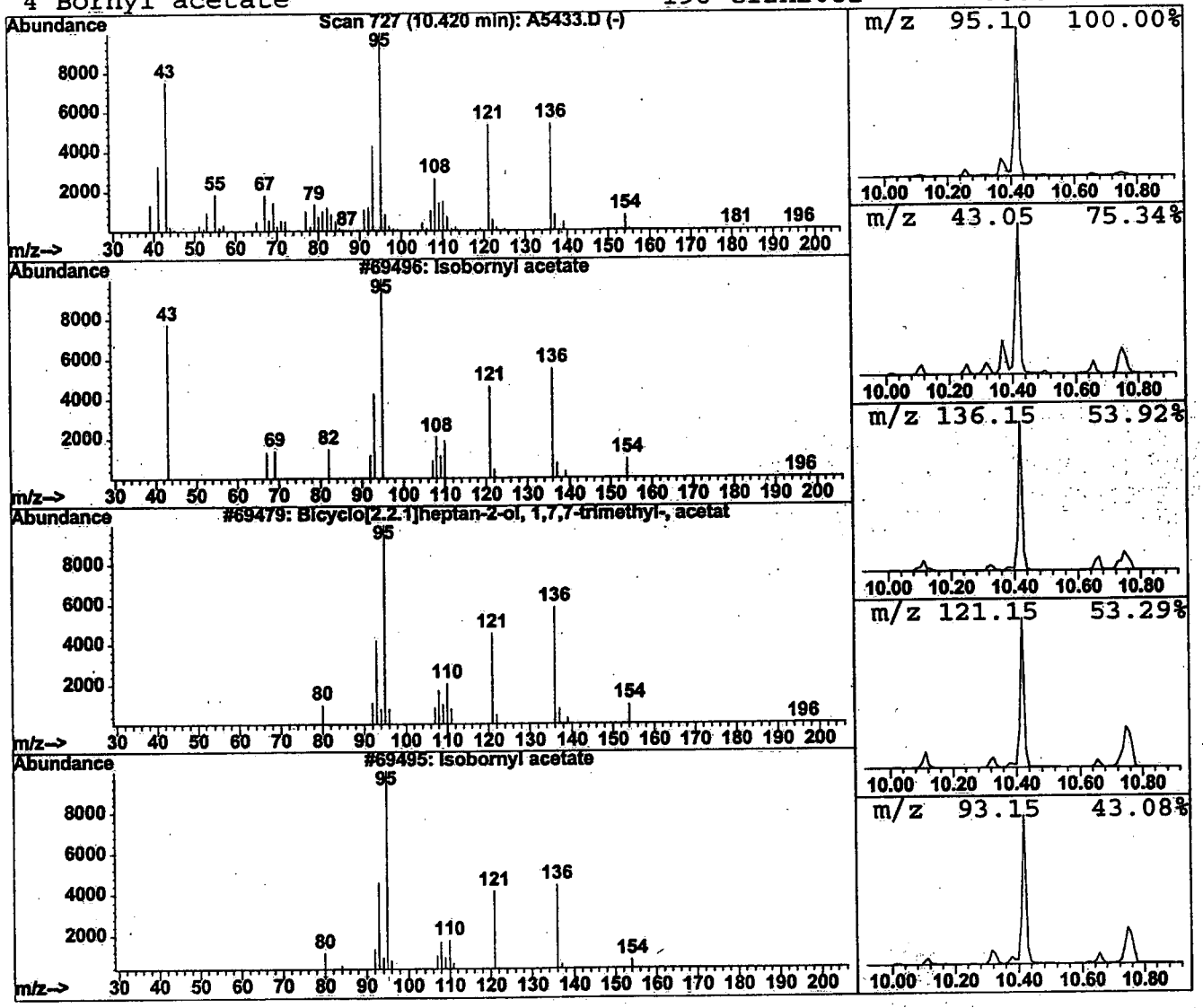
Peak Number 10 Isobornyl acetate Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
10.42	133.43 UG	3708070	Naphthalene-d8	9.74

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Isobornyl acetate	196	C12H20O2	000125-12-2	98
2	Bicyclo[2.2.1]heptan-2-ol, 1,7,7-tr	196	C12H20O2	005655-61-8	92
3	Isobornyl acetate	196	C12H20O2	000125-12-2	91
4	Bornyl acetate	196	C12H20O2	000076-49-3	86



838

Library Search Compound Report

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Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,3
MS Integration Params: LSCINT.P

Vial: 12
Operator: JC
Inst : MSD-A
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

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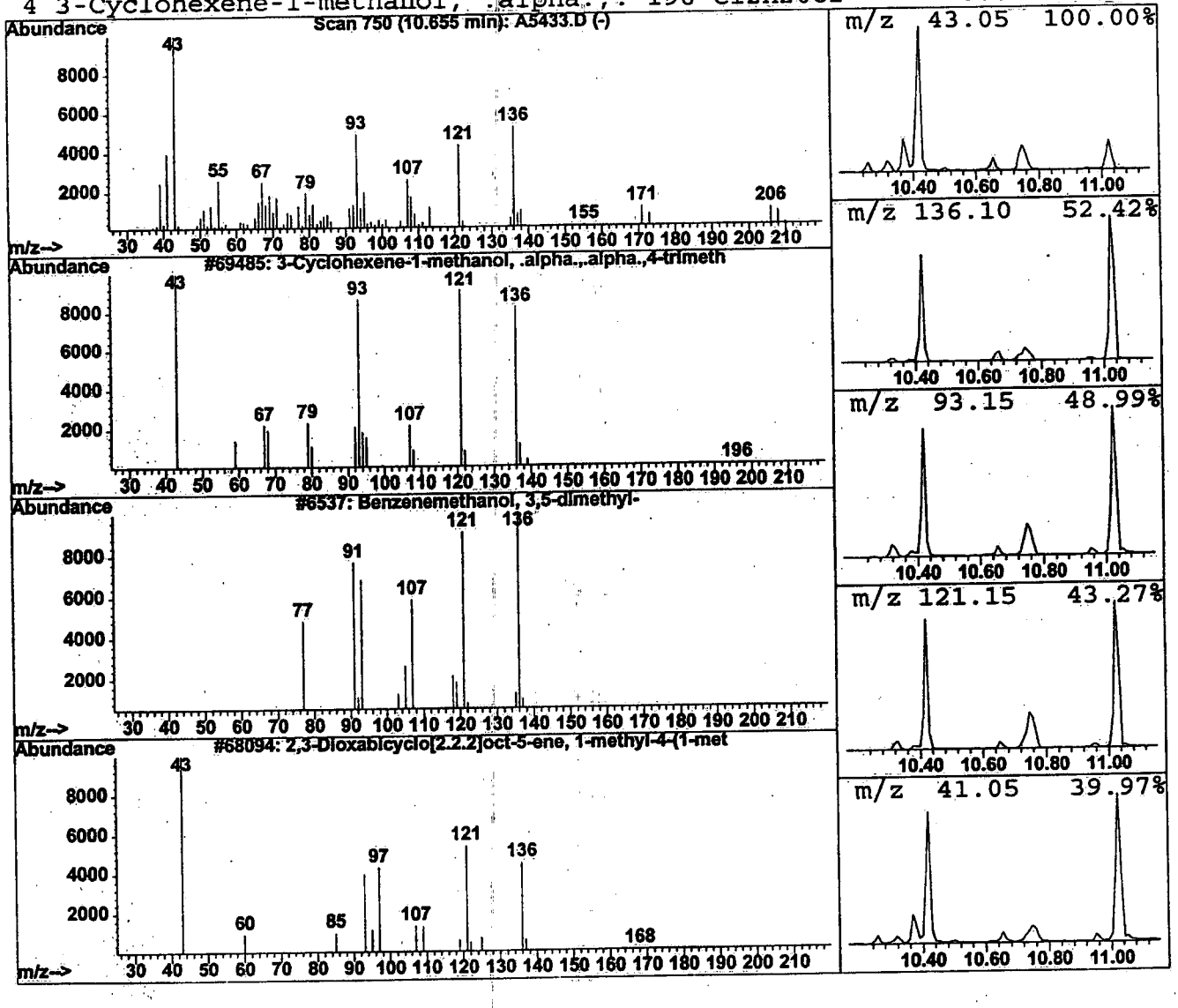
Peak Number 11 Unknown alkane — Concentration Rank 21

R.T.	EstConc	Area	Relative to ISTD	R.T.
10.66	17.01 UG	472840	Naphthalene-d8	9.74

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	3-Cyclohexene-1-methanol, .alpha.,.	196	C12H20O2	000080-26-2	47
2	Benzenemethanol, 3,5-dimethyl-	136	C9H12O	027129-87-9	38
3	2,3-Dioxabicyclo[2.2.2]oct-5-ene, 1	168	C10H16O2	000512-85-6	35
4	3-Cyclohexene-1-methanol, .alpha.,.	196	C12H20O2	000080-26-2	35



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Library Search Compound Report

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Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,3
MS Integration Params: LSCINT.P

Vial: 12
Operator: JC
Inst : MSD-A
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

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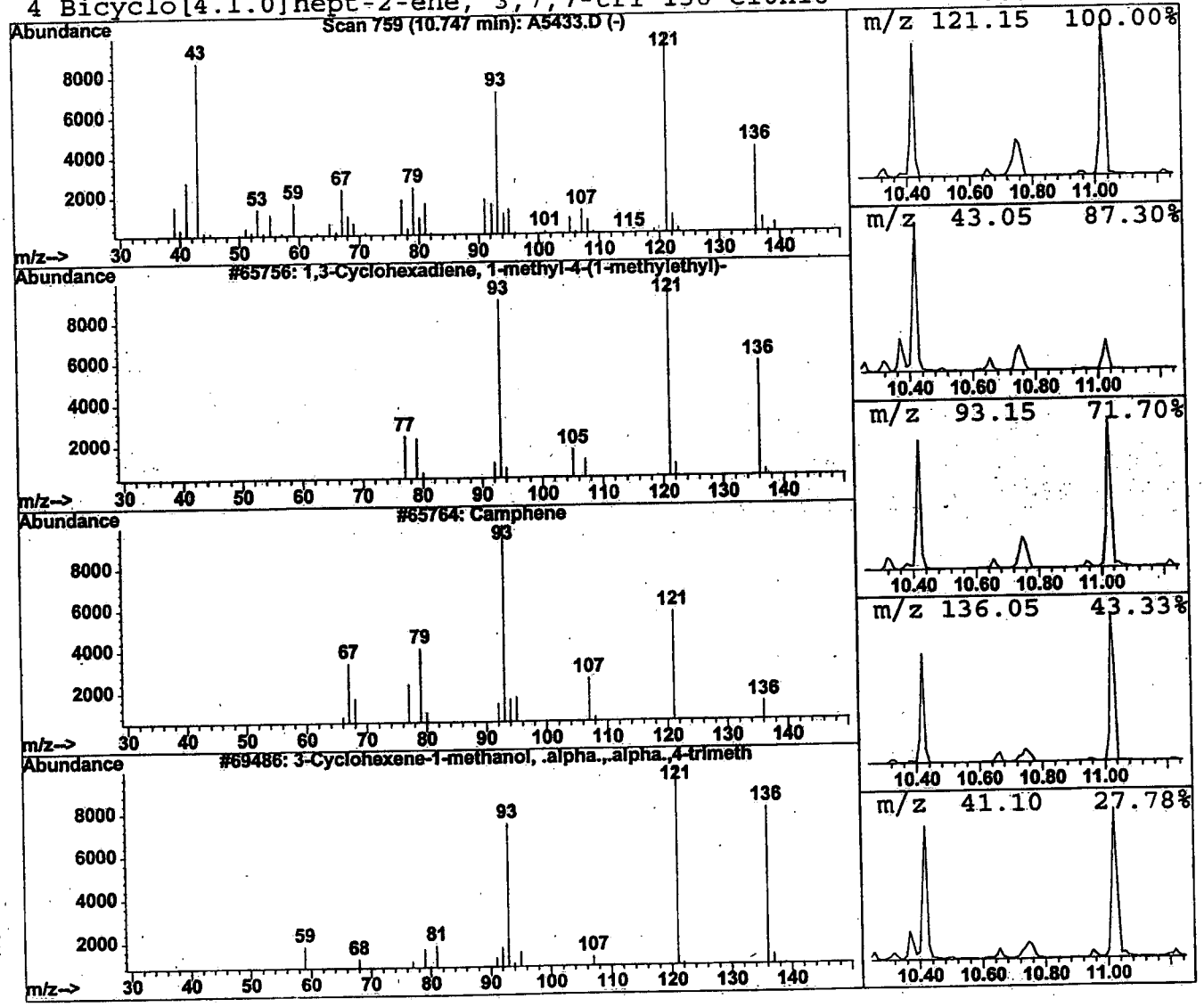
Peak Number 12 Unknown alkane — Concentration Rank 11

R.T.	EstConc	Area	Relative to ISTD	R.T.
10.75	30.91 UG	1163460	Acenaphthene-d10	11.68

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1,3-Cyclohexadiene, 1-methyl-4-(1-m	136	C10H16	000099-86-5	94
2	Camphene	136	C10H16	000079-92-5	94
3	3-Cyclohexene-1-methanol, .alpha.,.	196	C12H20O2	000080-26-2	91
4	Bicyclo[4.1.0]hept-2-ene, 3,7,7-tri	136	C10H16	000554-61-0	90



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840

Library Search Compound Report

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Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,3
MS Integration Params: LSCINT.P

Vial: 12
Operator: JC
Inst : MSD-A
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

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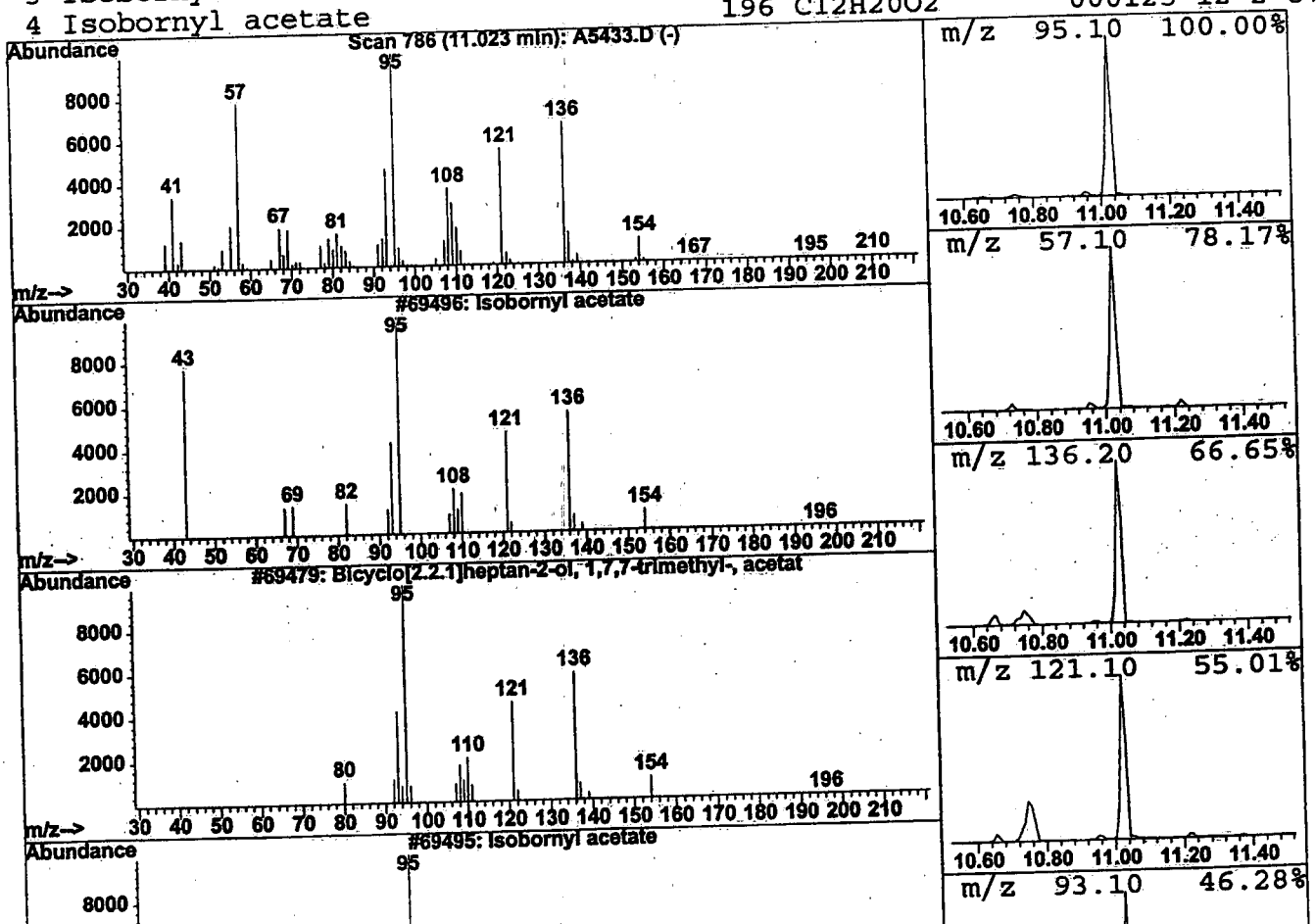
Peak Number 13 Isobornyl propionate Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
11.02	152.82 UG	5752190	Acenaphthene-d10	11.68

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Isobornyl acetate	196	C12H20O2	000125-12-2	90
2	Bicyclo[2.2.1]heptan-2-ol, 1,7,7-tr	196	C12H20O2	005655-61-8	87
3	Isobornyl acetate	196	C12H20O2	000125-12-2	87
4	Isobornyl acetate	196	C12H20O2	000125-12-2	87



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Library Search Compound Report

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Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,3
MS Integration Params: LSCINT.P

Vial: 12
Operator: JC
Inst : MSD-A
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

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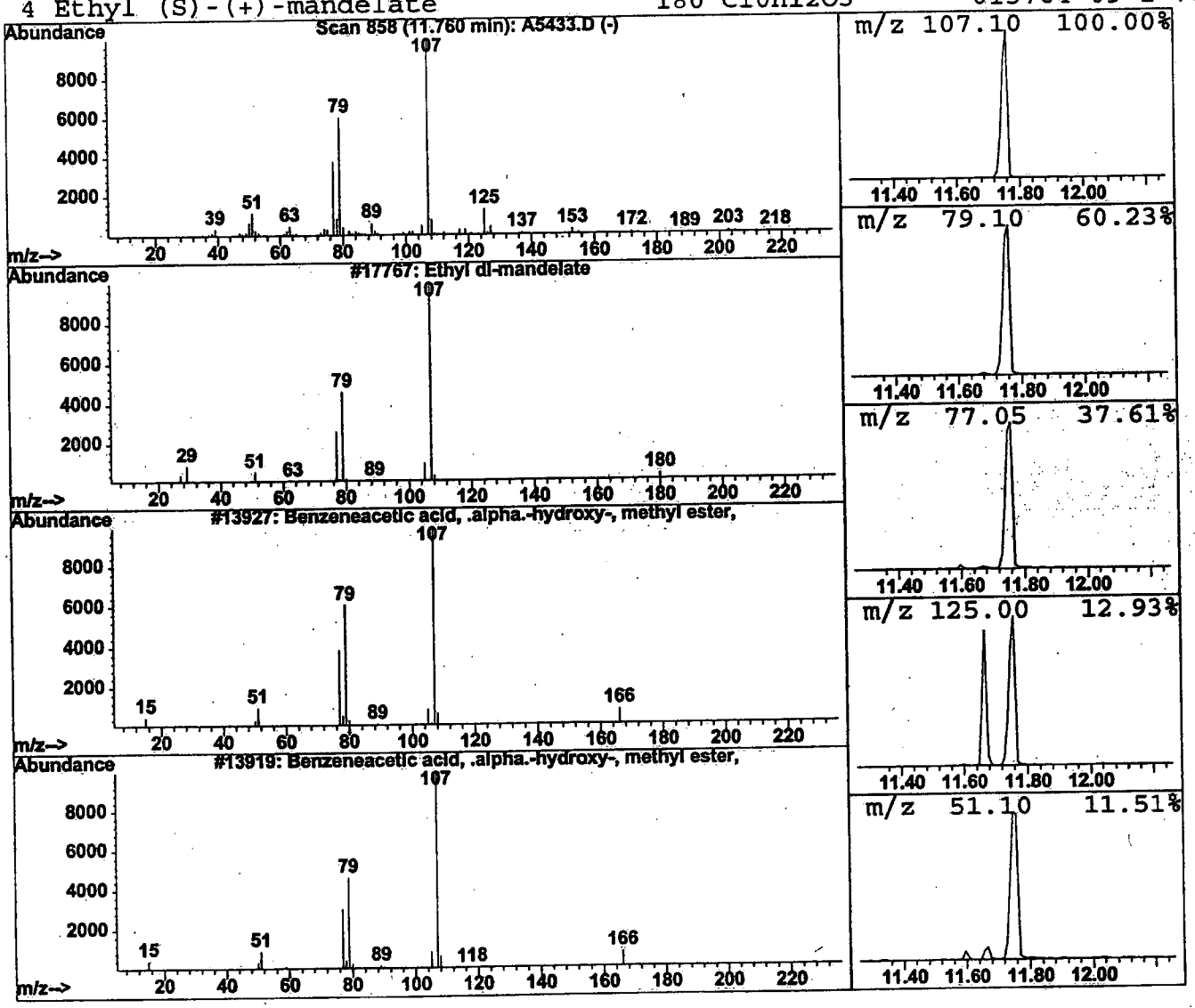
Peak Number 14 Unknown — Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
11.76	177.36 UG	6676070	Acenaphthene-d10	11.68

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Ethyl dl-mandelate	180	C10H12O3	004358-88-7	78
2	Benzeneacetic acid, .alpha.-hydroxy	166	C9H10O3	021210-43-5	78
3	Benzeneacetic acid, .alpha.-hydroxy	166	C9H10O3	020698-91-3	78
4	Ethyl (S)-(+)-mandelate	180	C10H12O3	013704-09-1	78



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Library Search Compound Report

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MS Integration Params: LSCINT.P

Vial: 12
Operator: JC
Inst : MSD-A
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

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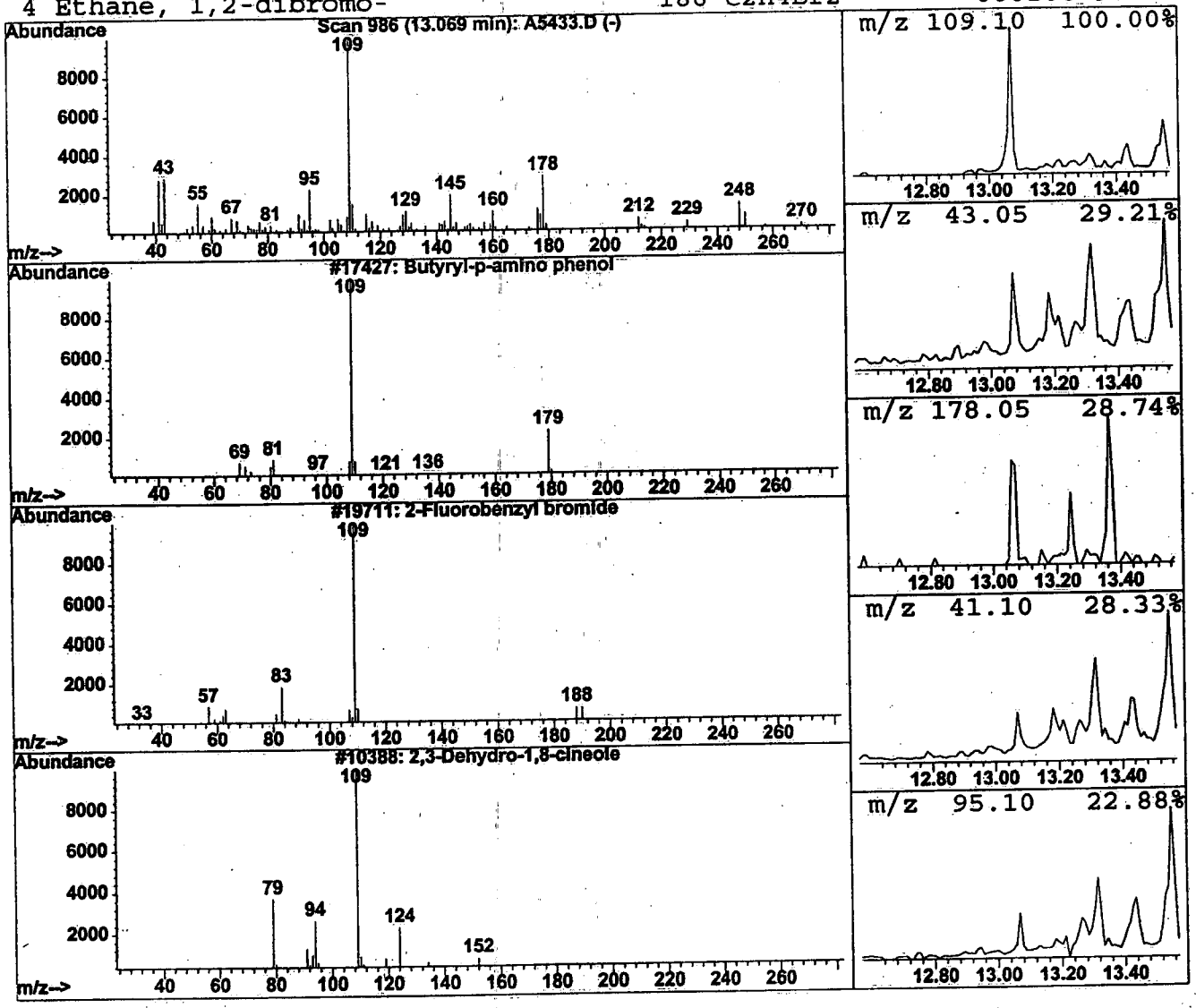
Peak Number 15 Substituted phenol Concentration Rank 24

R.T.	EstConc	Area	Relative to ISTD	R.T.
13.07	12.66 UG	434366	Phenanthrene-d10	13.22

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butyryl-p-amino phenol	179	C10H13NO2	000000-00-0	30
2	2-Fluorobenzyl bromide	188	C7H6BrF	000446-48-0	27
3	2,3-Dehydro-1,8-cineole	152	C10H16O	092760-25-3	25
4	Ethane, 1,2-dibromo-	186	C2H4Br2	000106-93-4	25



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Library Search Compound Report

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Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,3
MS Integration Params: LSCINT.P

Vial: 12
Operator: JC
Inst : MSD-A
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

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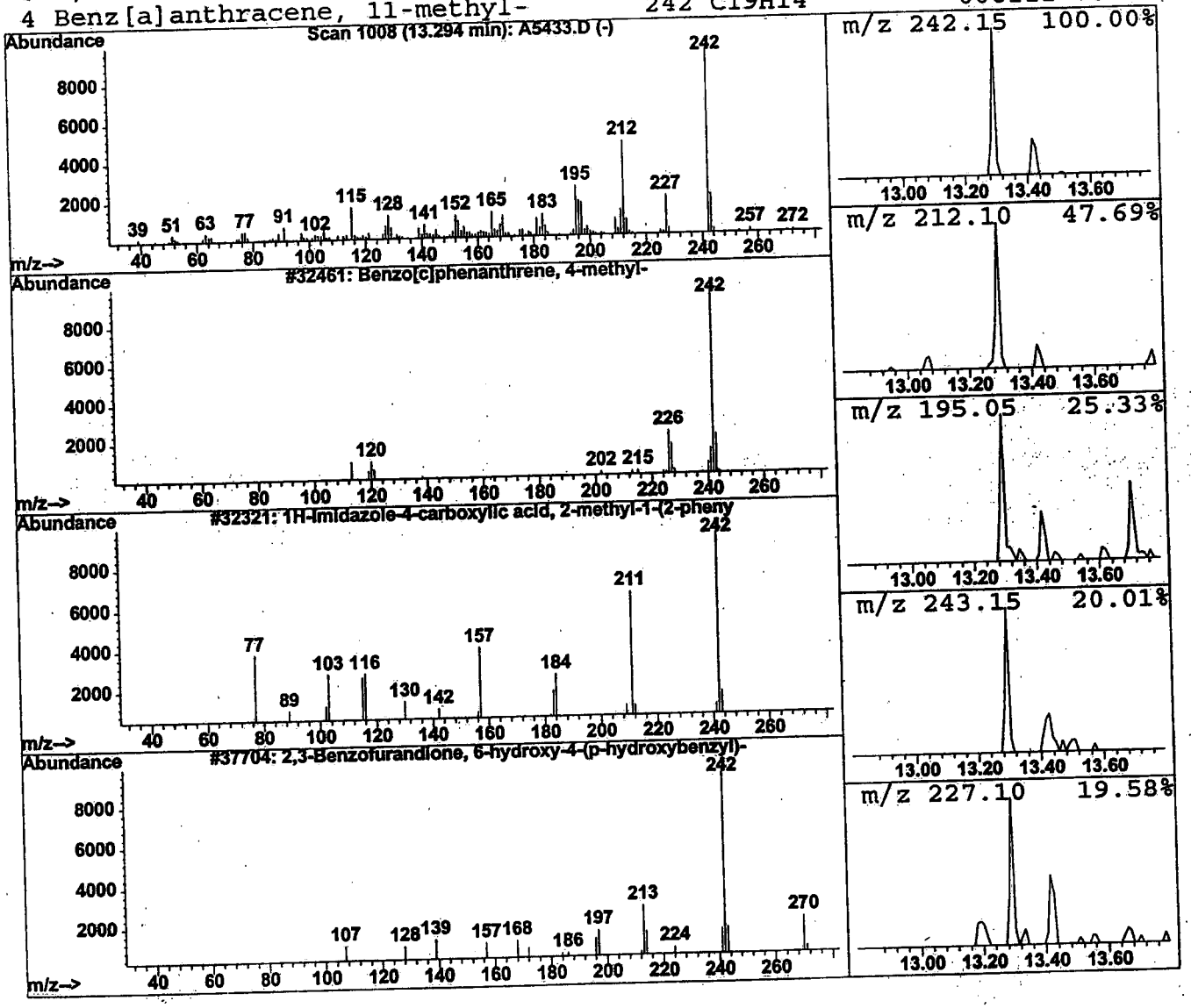
Peak Number 16 Unknown aromatic — Concentration Rank 15

R.T.	EstConc	Area	Relative to ISTD	R.T.
13.29	23.97 UG	822270	Phenanthrene-d10	13.22

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzo[c]phenanthrene, 4-methyl-	242	C19H14	004076-40-8	43
2	1H-Imidazole-4-carboxylic acid, 2-m	242	C14H14N2O2	056410-90-3	38
3	2,3-Benzofurandione, 6-hydroxy-4-(p	270	C15H10O5	014309-90-1	37
4	Benz[a]anthracene, 11-methyl-	242	C19H14	006111-78-0	35



844

Library Search Compound Report

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Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,3
MS Integration Params: LSCINT.P

Vial: 12
Operator: JC
Inst : MSD-A
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

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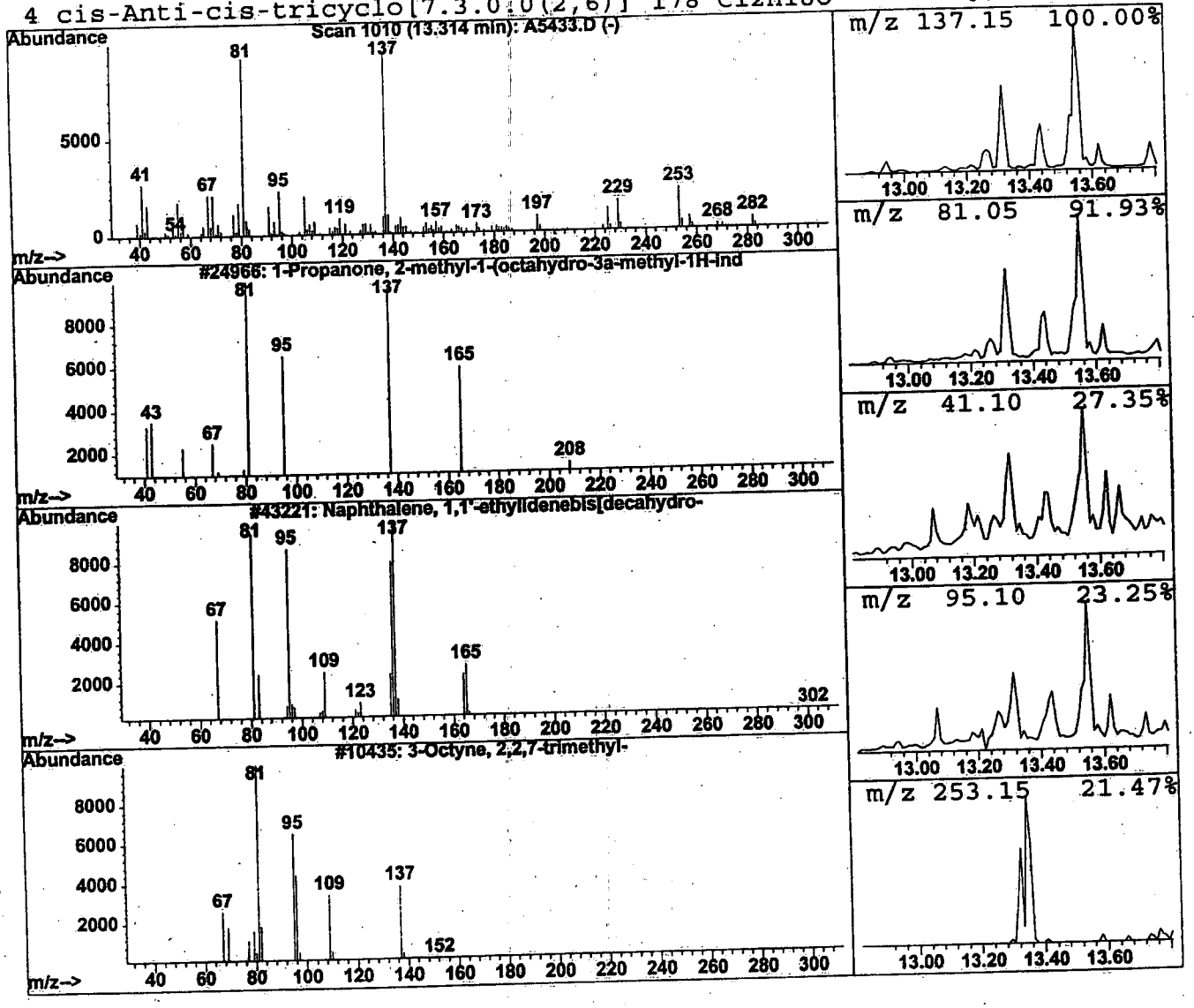
Peak Number 17 Unknown alkane — Concentration Rank 19

R.T.	EstConc	Area	Relative to ISTD	R.T.
13.31	17.64 UG	605030	Phenanthrene-d10	13.22

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1-Propanone, 2-methyl-1-(octahydro-	208	C14H24O	066708-25-6	50
2	Naphthalene, 1,1'-ethylidenebis[dec	302	C22H38	054934-70-2	40
3	3-Octyne, 2,2,7-trimethyl-	152	C11H20	055402-13-6	27
4	cis-Anti-cis-tricyclo[7.3.0.0(2,6)]	178	C12H18O	073306-76-0	25



845

Library Search Compound Report

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Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,3
MS Integration Params: LSCINT.P

Vial: 12
Operator: JC
Inst : MSD-A
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

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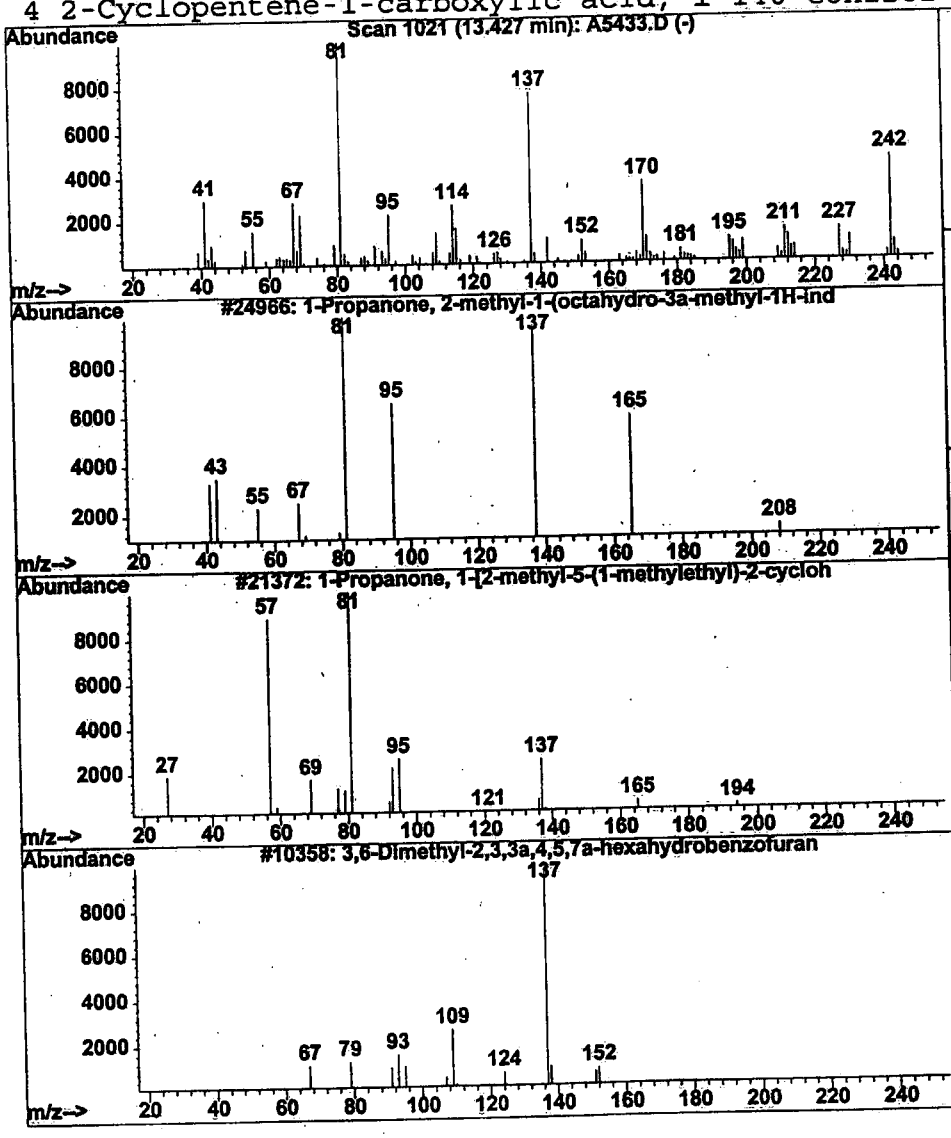
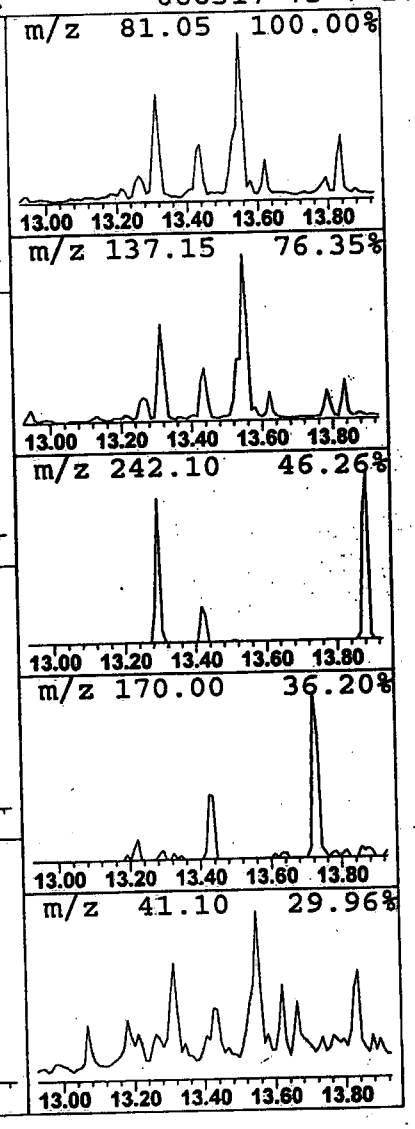
Peak Number 18 Unknown alkane — Concentration Rank 14

R.T.	EstConc	Area	Relative to ISTD	R.T.
13.43	26.00 UG	891931	Phenanthrene-d10	13.22

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1-Propanone, 2-methyl-1-(octahydro-	208	C14H24O	066708-25-6	25
2	1-Propanone, 1-[2-methyl-5-(1-methy	194	C13H22O	031375-17-4	12
3	3,6-Dimethyl-2,3,3a,4,5,7a-hexahydr	152	C10H16O	070786-44-6	10
4	2-Cyclopentene-1-carboxylic acid, 1	140	C8H12O2	068317-73-7	10





846

Library Search Compound Report

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Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,3
MS Integration Params: LSCINT.P

Vial: 12
Operator: JC
Inst : MSD-A
Multiplr: 1.00

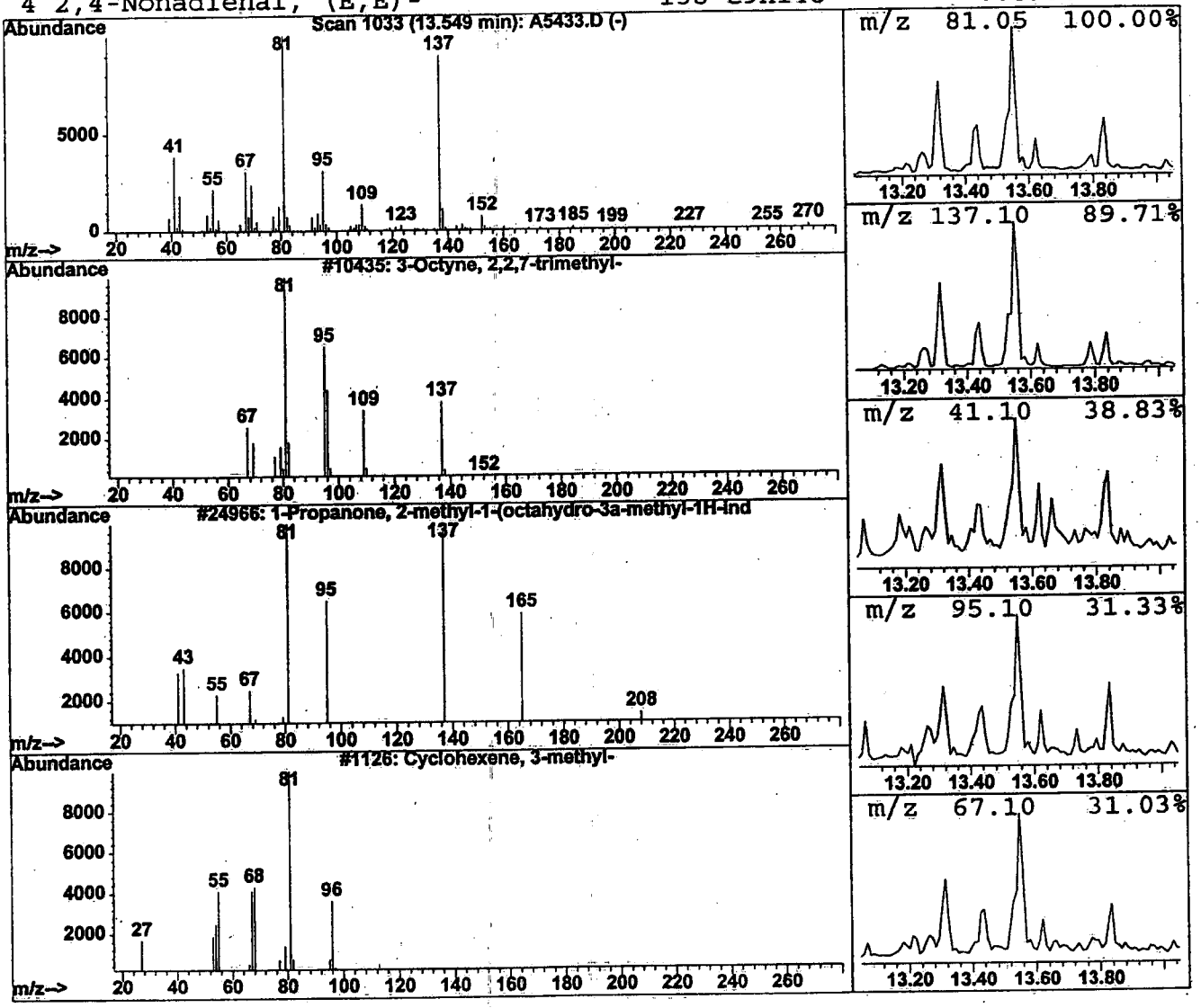
Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 19 Unknown alkane — Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
13.55	40.41 UG	1386330	Phenanthrene-d10	13.22

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	3-Octyne, 2,2,7-trimethyl-	152	C11H20	055402-13-6	64
2	1-Propanone, 2-methyl-1-(octahydro-	208	C14H24O	066708-25-6	45
3	Cyclohexene, 3-methyl-	96	C7H12	000591-48-0	35
4	2,4-Nonadienal, (E,E)-	138	C9H14O	005910-87-2	25



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Library Search Compound Report

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Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,3
MS Integration Params: LSCINT.P

Vial: 12
Operator: JC
Inst : MSD-A
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

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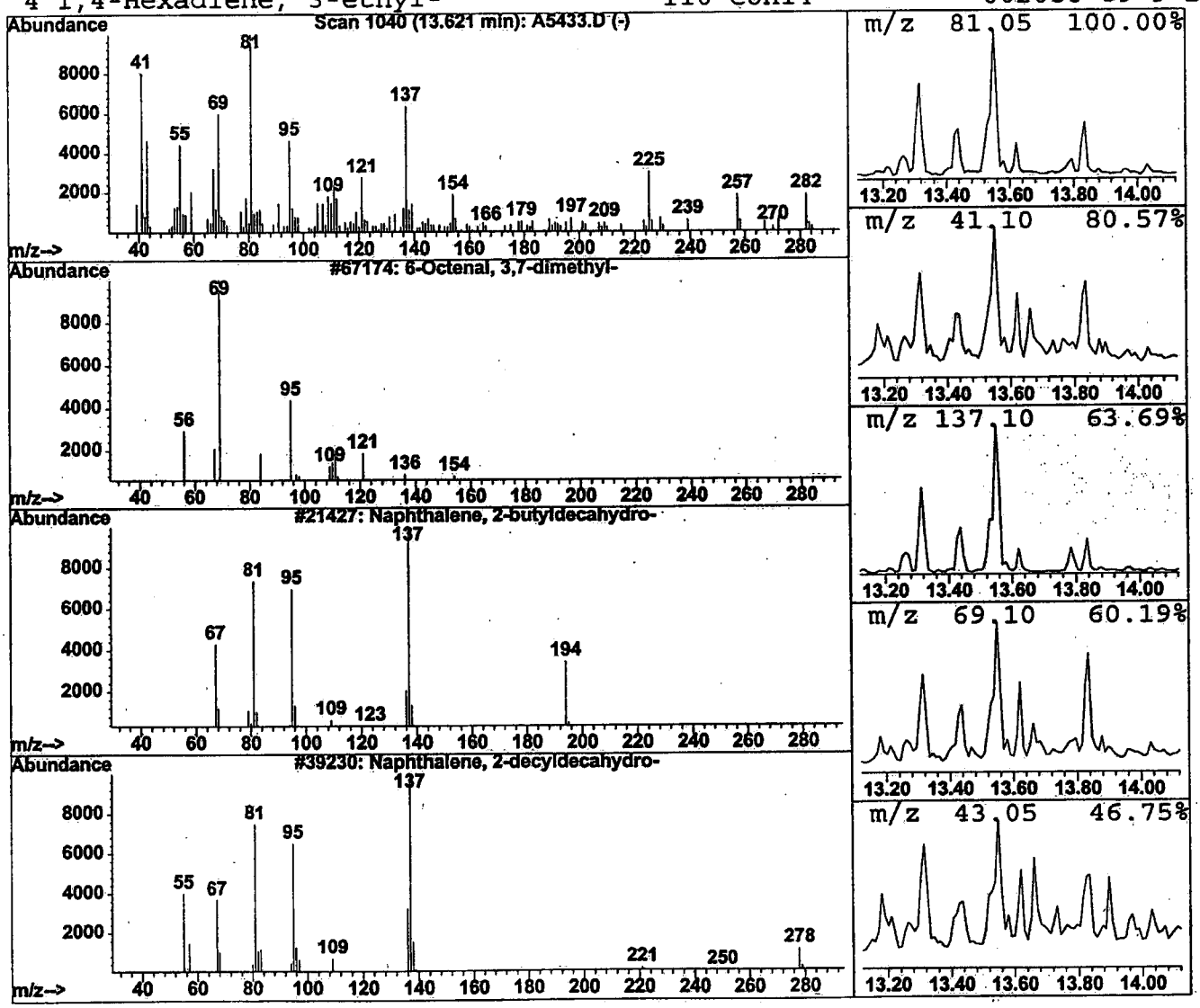
Peak Number 20 Unknown alkane Concentration Rank 25

R.T.	EstConc	Area	Relative to ISTD	R.T.
13.62	12.00 UG	411538	Phenanthrene-d10	13.22

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	6-Octenal, 3,7-dimethyl-	154	C10H18O	000106-23-0	40
2	Naphthalene, 2-butyldecahydro-	194	C14H26	006305-52-8	25
3	Naphthalene, 2-decyldecahydro-	278	C20H38	054964-84-0	25
4	1,4-Hexadiene, 3-ethyl-	110	C8H14	002080-89-9	25



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Library Search Compound Report

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Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,3
MS Integration Params: LSCINT.P

Vial: 12
Operator: JC
Inst : MSD-A
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

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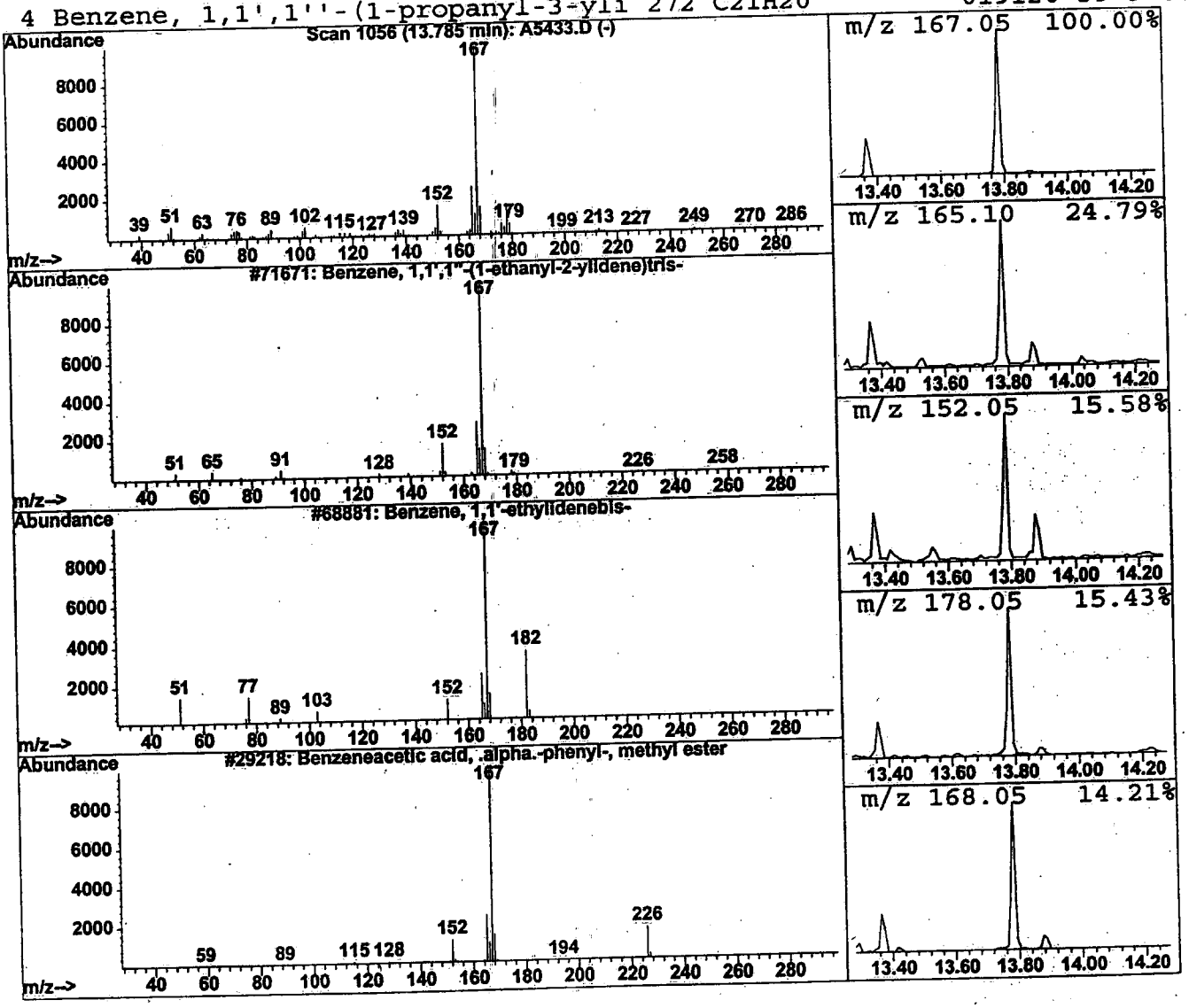
Peak Number 21 Unknown aromatic

Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
13.78	49.94 UG	1713000	Phenanthrene-d10	13.22

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,1',1''-(1-ethanyl-2-ylid	258	C20H18	001520-42-9	72
2	Benzene, 1,1'-ethylidenebis-	182	C14H14	000612-00-0	72
3	Benzeneacetic acid, .alpha.-phenyl-	226	C15H14O2	003469-00-9	64
4	Benzene, 1,1',1''-(1-propanyl-3-yli	272	C21H20	019120-39-9	64



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849

Library Search Compound Report

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Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,3
MS Integration Params: LSCINT.P

Vial: 12
Operator: JC
Inst : MSD-A
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

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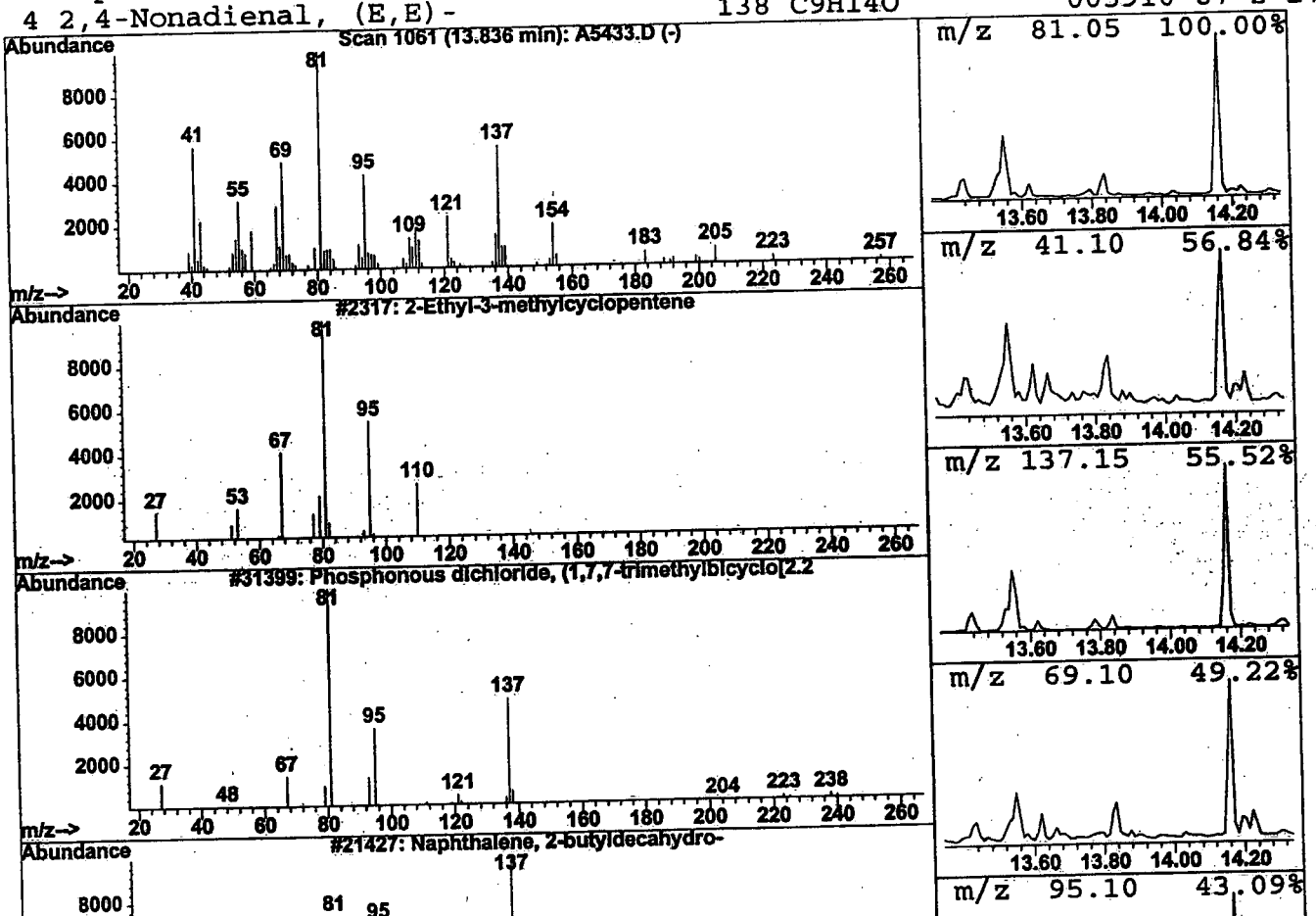
Peak Number 22 Unknown alkane — Concentration Rank 18

R.T.	EstConc	Area	Relative to ISTD	R.T.
13.84	21.10 UG	723911	Phenanthrene-d10	13.22

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2-Ethyl-3-methylcyclopentene	110	C8H14	000000-00-0	43
2	Phosphonous dichloride, (1,7,7-trim	238	C10H17Cl2P	074630-16-3	42
3	Naphthalene, 2-butyldecahydro-	194	C14H26	006305-52-8	38
4	2,4-Nonadienal, (E,E)-	138	C9H14O	005910-87-2	27



Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-27-01\A5433.D
Acq On : 27 Mar 2001 14:01
Sample : S-13,1840-004,s,15.84g,24.4,03/26/01
Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,3
MS Integration Params: LSCINT.P

Vial: 12
Operator: JC
Inst : MSD-A
Multiplr: 1.00

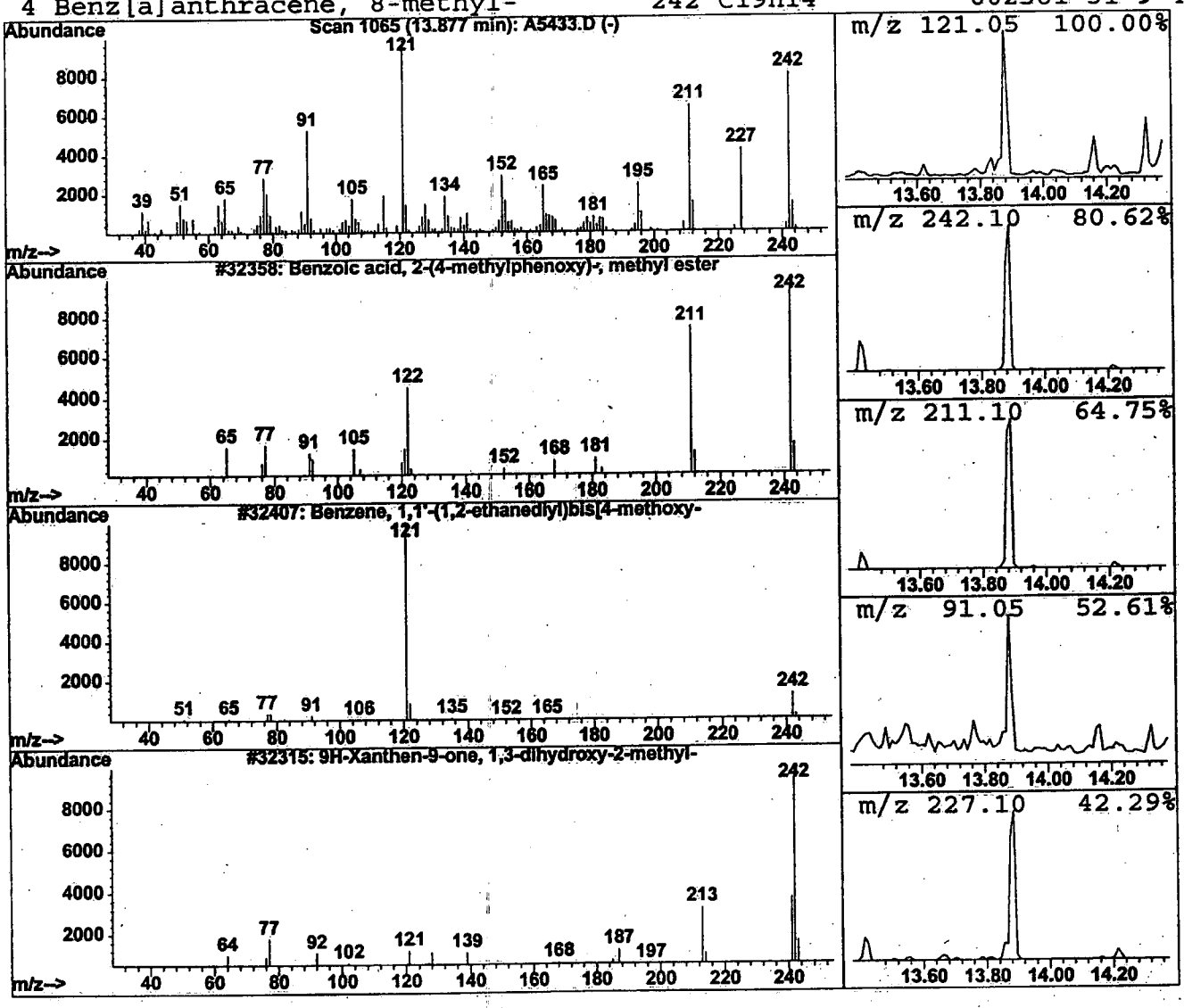
Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 23 Substituted phenol Concentration Rank 13

R.T.	EstConc	Area	Relative to ISTD	R.T.
13.88	26.05 UG	893482	Phenanthrene-d10	13.22

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzoic acid, 2-(4-methylphenoxy)-,	242	C15H14O3	021905-72-6	53
2	Benzene, 1,1'-(1,2-ethanediyl)bis[4	242	C16H18O2	001657-55-2	45
3	9H-Xanthen-9-one, 1,3-dihydroxy-2-m	242	C14H10O4	023366-99-6	44
4	Benz[a]anthracene, 8-methyl-	242	C19H14	002381-31-9	43



000294

851

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-27-01\A5433.D
Acq On : 27 Mar 2001 14:01
Sample : S-13,1840-004,s,15.84g,24.4,03/26/01
Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,3
MS Integration Params: LSCINT.P

Vial: 12
Operator: JC
Inst : MSD-A
Multiplr: 1.00

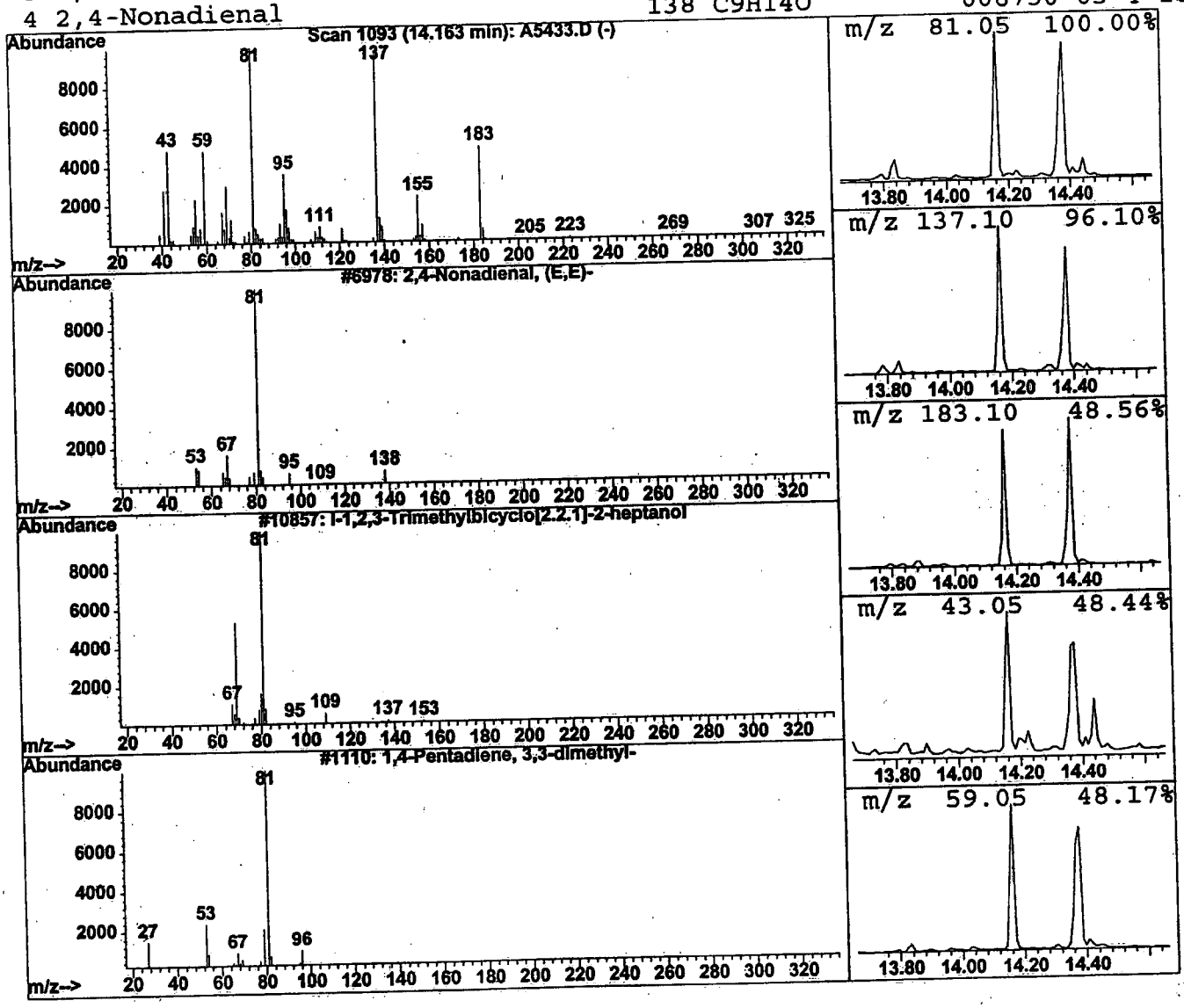
Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 24 Unknown alkane — Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
14.16	49.71 UG	1705110	Phenanthrene-d10	13.22

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2,4-Nonadienal, (E,E)-	138	C9H14O	005910-87-2	18
2	1-1,2,3-Trimethylbicyclo[2.2.1]-2-h	154	C10H18O	000000-00-0	14
3	1,4-Pentadiene, 3,3-dimethyl-	96	C7H12	001112-35-2	14
4	2,4-Nonadienal	138	C9H14O	006750-03-4	10



Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-27-01\A5433.D
Acq On : 27 Mar 2001 14:01
Sample : S-13,1840-004,s,15.84g,24.4,03/26/01
Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,3
MS Integration Params: LSCINT.P

Vial: 12
Operator: JC
Inst : MSD-A
Multiplr: 1.00

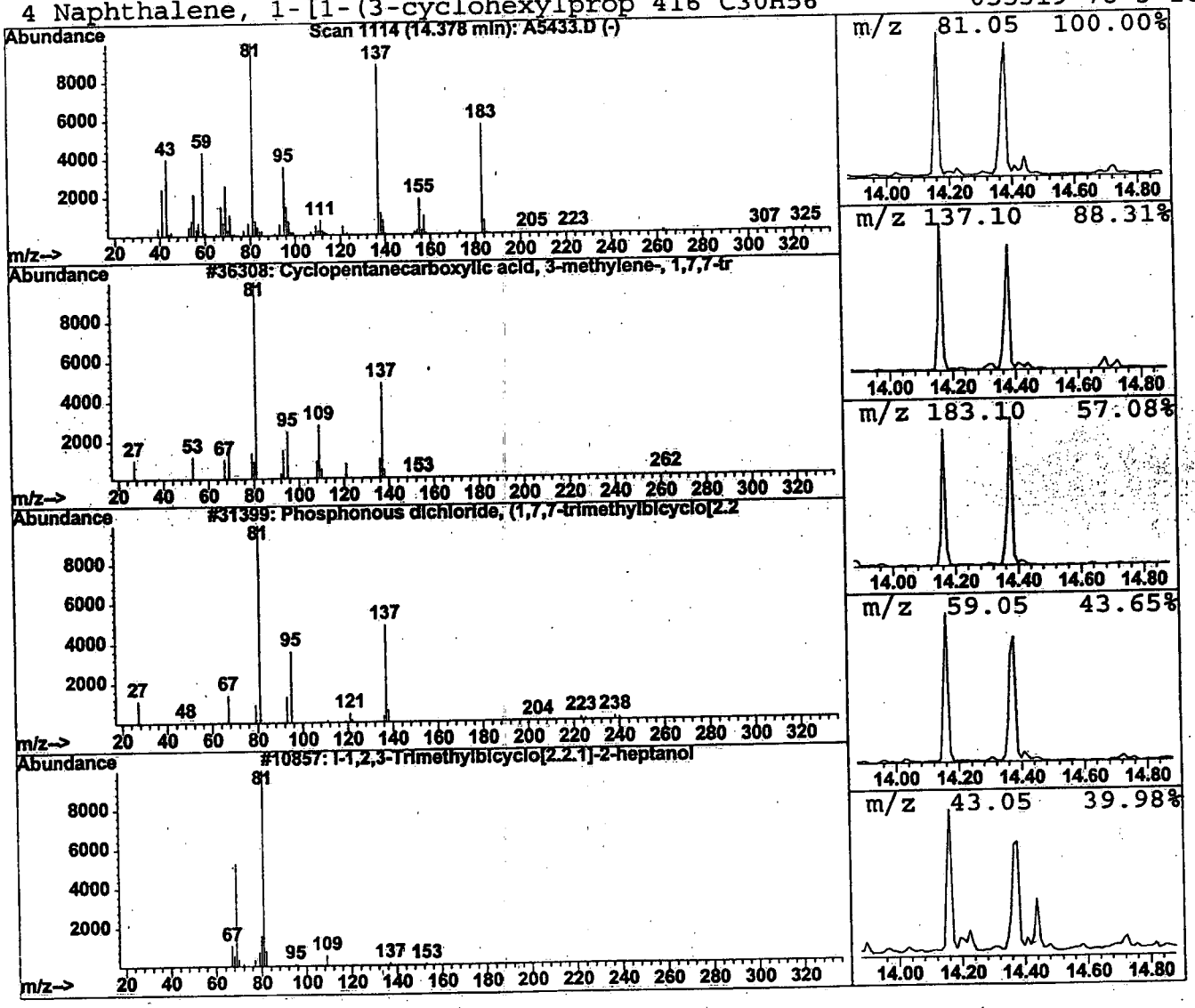
Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 25 Substituted phenol Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
14.38	57.07 UG	1957800	Phenanthrene-d10	13.22

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopentanecarboxylic acid, 3-meth	262	C17H26O2	074793-59-2	23
2	Phosphonous dichloride, (1,7,7-trim	238	C10H17Cl2P	074630-16-3	23
3	1-1,2,3-Trimethylbicyclo[2.2.1]-2-h	154	C10H18O	000000-00-0	22
4	Naphthalene, 1-[1-(3-cyclohexylprop	416	C30H56	055319-78-3	16



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\03-27-01\A5430.D
Acq On : 27 Mar 2001 12:35
Sample : S-14,1840-005,s,10.34g,15.1,03/26/01
Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,15
.S Integration Params: rteint.p
Quant Time: Mar 27 13:02 2001

Vial: 9
Operator: JC
Inst : MSD-A
Multiplr: 1.00
Quant Results File: AS0601.RES

Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Tue Mar 20 13:59:45 2001
Response via : Initial Calibration
DataAcq Meth : AS0601

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.08	152	93560	40.00	UG		0.00
22) Naphthalene-d8	9.74	136	422560	40.00	UG		-0.02
39) Acenaphthene-d10	11.68	164	217159	40.00	UG		0.00
60) Phenanthrene-d10	13.23	188	369143	40.00	UG		0.00
75) Chrysene-d12	15.95	240	349565	40.00	UG		-0.02
84) Perylene-d12	18.03	264	215688	40.00	UG		-0.02
System Monitoring Compounds							
4) 2-Fluorophenol	5.94	112	10212	3.33	UG		0.00
Spiked Amount 100.000	Range 37 - 100		Recovery = 3.33%#				
6) Phenol-d5	7.50	99	14243	3.69	UG		-0.05
Spiked Amount 100.000	Range 37 - 104		Recovery = 3.69%#				
23) Nitrobenzene-d5	8.84	82	8594	2.04	UG		-0.04
Spiked Amount 50.000	Range 48 - 104		Recovery = 4.08%#				
43) 2-Fluorobiphenyl	10.93	172	12102	1.91	UG		0.00
Spiked Amount 50.000	Range 52 - 107		Recovery = 3.82%#				
64) 2,4,6-Tribromophenol	12.50	330	5702	4.05	UG		-0.02
Spiked Amount 100.000	Range 60 - 155		Recovery = 4.05%#				
77) Terphenyl-d14	14.79	244	17539	2.28	UG		0.00
Spiked Amount 50.000	Range 58 - 157		Recovery = 4.56%#				
Target Compounds							Qvalue
11) 1,3-Dichlorobenzene	8.00	146	6377m	1.87	UG		
12) 1,4-Dichlorobenzene	8.11	146	36678m	9.83	UG		
14) 1,2-Dichlorobenzene	8.34	146	332179	99.21	UG		98
32) 1,2,4-Trichlorobenzene	9.67	180	2396	0.77	UG	#	90
38) 2-Methylnaphthalene	10.23	142	37710	4.98	UG	#	100
71) Carbazole	13.45	167	3906	0.65	UG	#	

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

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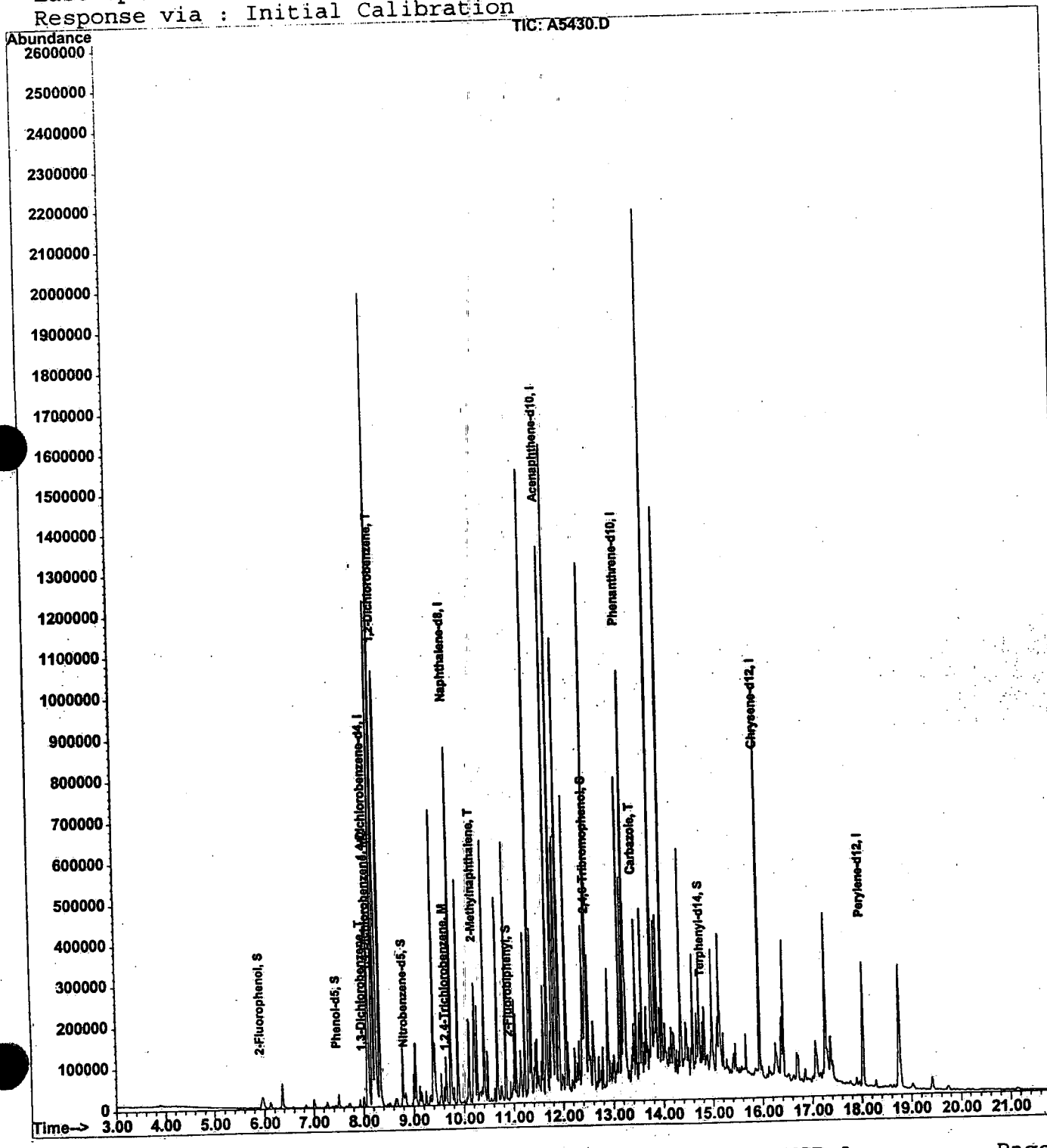
Quantitation Report

Data File : C:\HPCHEM\1\DATA\03-27-01\A5430.D
Acq On : 27 Mar 2001 12:35
Sample : S-14,1840-005,s,10.34g,15.1,03/26/01
Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,15
MS Integration Params: rteint.p
Quant Time: Mar 27 13:02 2001

Vial: 9
Operator: JC
Inst : MSD-A
Multiplr: 1.00

Quant Results File: AS0601.RES

Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Tue Mar 20 13:59:45 2001
Response via : Initial Calibration



LSC Area Percent Report

Data File : C:\HPCHEM\1\DATA\03-27-01\A5430.D
Acq On : 27 Mar 2001 12:35
Sample : S-14,1840-005,s,10.34g,15.1,03/26/01
isc : ENVTACT/444 ORBIS,03/23/01,03/26/01,15
MS Integration Params: LSCINT.P

Vial: 9
Operator: JC
Inst : MSD-A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Smoothing : ON
Sampling : 1
Start Thrs: 0.02
Stop Thrs : 0

Filtering: 5
Min Area: 3 % of largest Peak
Max Peaks: 100
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	peak area	peak % max.	% of total
1	5.964	286	291	300	rVB3	27367	96131	3.85%	0.209%
2	6.363	327	330	338	rBV	59478	110160	4.41%	0.239%
3	8.081	495	498	505	rBV2	489784	1055357	42.25%	2.294%
4	8.184	505	508	511	rBV	1226755	1586754	63.52%	3.449%
5	8.245	511	514	517	rVV	1954402	2497897	100.00%	5.430%
6	8.327	520	522	525	rBV	1035362	1461878	58.52%	3.178%
7	8.777	563	566	568	rBV	154519	182651	7.31%	0.397%
8	9.002	583	588	590	rBV	76467	93596	3.75%	0.203%
9	9.043	590	592	597	rVB	152263	222122	8.89%	0.483%
10	9.401	623	627	629	rVV	711845	821383	32.88%	1.786%
11	9.431	629	630	634	rVB	147958	150344	6.02%	0.327%
12	9.646	649	651	657	rVB2	114729	146482	5.86%	0.318%
13	9.738	657	660	665	rBV	868343	1157977	46.36%	2.517%
14	9.892	672	675	677	rBV	543761	623573	24.96%	1.356%
15	10.106	693	696	699	rVV2	205490	328428	13.15%	0.714%
16	10.219	702	707	710	rVV2	292514	644122	25.79%	1.400%
17	10.270	710	712	714	rVV	236170	219629	8.79%	0.477%
18	10.413	723	726	730	rVV	639208	678086	27.15%	1.474%
19	10.475	730	732	735	rVB2	123081	158665	6.35%	0.345%
20	10.669	748	751	754	rBV	499166	671994	26.90%	1.461%
21	10.761	756	760	764	rVB4	36754	84023	3.36%	0.183%
22	10.843	766	768	771	rVV	630543	564921	22.62%	1.228%
23	11.017	783	785	787	rVV	240703	232810	9.32%	0.506%
24	11.047	787	788	791	rVV	205054	175216	7.01%	0.381%
25	11.139	793	797	801	rVV3	114947	211877	8.48%	0.461%
26	11.221	803	805	808	rVB	402394	423423	16.95%	0.920%
27	11.313	811	814	816	rVV	1532393	1656046	66.30%	3.600%
28	11.364	816	819	821	rVV	409163	421576	16.88%	0.916%
29	11.415	821	824	825	rVV	67868	99540	3.98%	0.216%
30	11.446	825	827	828	rVV	128975	133187	5.33%	0.290%
31	11.477	828	830	831	rVV	136648	132762	5.31%	0.289%

000299

32	11.507	831	833	837	rVV2	45730	84184	3.37%	0.183%
33	11.559	837	838	840	rVV2	79818	96476	3.86%	0.210%
34	11.600	840	842	845	rVB	263889	249663	9.99%	0.543%
35	11.651	845	847	848	rBV	70541	111989	4.48%	0.243%
	11.681	848	850	852	rVV	1333985	1363420	54.58%	2.964%
	11.743	852	856	857	rVV	150891	183675	7.35%	0.399%
38	11.784	857	860	863	rVV2	1584978	2101192	84.12%	4.568%
39	11.865	864	868	869	rVV2	624756	1174927	47.04%	2.554%
40	11.917	871	873	877	rVV	1104236	1213483	48.58%	2.638%
41	11.988	877	880	884	rVV3	40793	90302	3.62%	0.196%
42	12.060	884	887	889	rVV	720077	746756	29.90%	1.623%
43	12.101	889	891	897	rVB2	120720	185982	7.45%	0.404%
44	12.234	903	904	907	rVV	100496	139082	5.57%	0.302%
45	12.285	907	909	911	rVV3	63419	100623	4.03%	0.219%
46	12.326	911	913	915	rVV	116294	132115	5.29%	0.287%
47	12.397	915	920	922	rVV2	396473	658081	26.35%	1.431%
48	12.469	922	927	929	rVV	1277975	1669817	66.85%	3.630%
49	12.510	929	931	933	rVV2	322179	484597	19.40%	1.053%
50	12.540	933	934	937	rVV2	75700	101808	4.08%	0.221%
51	12.602	937	940	944	rVB2	166700	322593	12.91%	0.701%
52	12.714	948	951	952	rBV	74111	88725	3.55%	0.193%
53	12.796	957	959	961	rBV	102561	124001	4.96%	0.270%
54	12.898	966	969	971	rBV	279779	342369	13.71%	0.744%
55	13.011	978	980	982	rVB2	67863	91288	3.65%	0.198%
56	13.123	989	991	993	rVB	723017	619748	24.81%	1.347%
	13.174	993	996	997	rBV	479060	538370	21.55%	1.170%
	13.226	999	1001	1008	rVB	993796	1643519	65.80%	3.573%
59	13.369	1012	1015	1016	rBV	66471	91102	3.65%	0.198%
60	13.410	1016	1019	1021	rVB2	125312	192494	7.71%	0.418%
61	13.451	1021	1023	1027	rVB	391469	424139	16.98%	0.922%
62	13.532	1027	1031	1033	rBV3	161674	328319	13.14%	0.714%
63	13.573	1033	1035	1038	rVB	401814	388024	15.53%	0.844%
64	13.614	1038	1039	1041	rBV	73721	96821	3.88%	0.210%
65	13.665	1041	1044	1045	rBV	140491	175733	7.04%	0.382%
66	13.727	1048	1050	1052	rBV2	49393	87318	3.50%	0.190%
67	13.768	1052	1054	1058	rBV	2079855	1867191	74.75%	4.059%
68	13.839	1058	1061	1062	rVV	328849	397803	15.93%	0.865%
69	13.880	1062	1065	1067	rVB2	352259	335218	13.42%	0.729%
70	13.931	1067	1070	1072	rVB2	132705	240079	9.61%	0.522%
71	13.982	1072	1075	1077	rBV	1355190	1300522	52.06%	2.827%
72	14.034	1077	1080	1081	rBV2	90752	82435	3.30%	0.179%
73	14.156	1090	1092	1094	rBV	89224	80066	3.21%	0.174%
74	14.197	1094	1096	1100	rVB3	97523	196759	7.88%	0.428%
75	14.310	1105	1107	1109	rBV2	55086	84256	3.37%	0.183%
76	14.351	1109	1111	1115	rVB	532996	545558	21.84%	1.186%
77	14.453	1119	1121	1124	rVB3	92621	162472	6.50%	0.353%
78	14.504	1124	1126	1129	rVB2	68601	94570	3.79%	0.206%
	14.555	1129	1131	1132	rBV	67666	88880	3.56%	0.193%
	14.596	1132	1135	1137	rVB	280270	362727	14.52%	0.789%
81	14.668	1140	1142	1144	rBV2	124079	198071	7.93%	0.431%

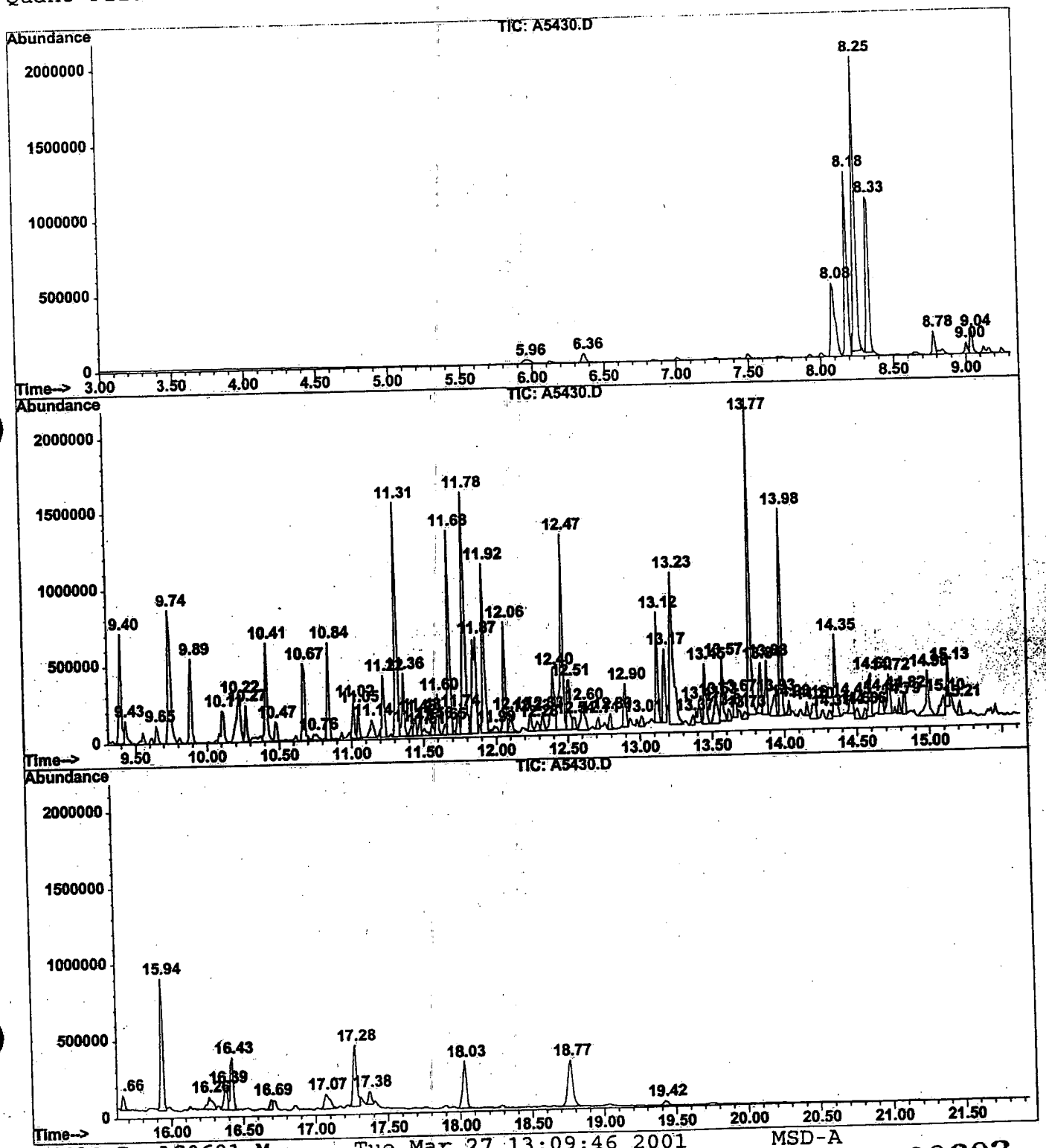
82	14.719	1144	1147	1150	rVB3	256717	330155	13.22%	0.718%
83	14.790	1152	1154	1156	rBV	100267	86345	3.46%	0.188%
84	14.821	1156	1157	1159	rVB	143586	171592	6.87%	0.373%
85	14.985	1166	1173	1179	rVB3	297150	471063	18.86%	1.024%
	15.097	1179	1184	1185	rBV2	131965	271405	10.87%	0.590%
87	15.128	1185	1187	1188	rBV	277161	287308	11.50%	0.625%
88	15.210	1193	1195	1197	rVV	91328	99024	3.96%	0.215%
89	15.660	1237	1239	1243	rVB2	95721	118194	4.73%	0.257%
90	15.936	1263	1266	1269	rVV	856964	1134853	45.43%	2.467%
91	16.263	1294	1298	1303	rBV3	79043	206156	8.25%	0.448%
92	16.386	1306	1310	1311	rVV	146357	259532	10.39%	0.564%
93	16.427	1311	1314	1317	rVV	337287	473404	18.95%	1.029%
94	16.693	1337	1340	1341	rBV	65860	96286	3.85%	0.209%
95	17.071	1374	1377	1384	rVV3	96982	266575	10.67%	0.580%
96	17.275	1393	1397	1400	rBV	393871	713745	28.57%	1.552%
97	17.378	1404	1407	1409	rBV	82762	133592	5.35%	0.290%
98	18.032	1466	1471	1475	rBV	302367	554733	22.21%	1.206%
99	18.769	1535	1543	1549	rBV	297875	720820	28.86%	1.567%
100	19.423	1602	1607	1616	rVB	31865	83946	3.36%	0.182%

Sum of corrected areas: 46000680

A5430.D AS0601.M Tue Mar 27 13:09:45 2001 MSD-A

LSC Report - Integrated Chromatogram

File : C:\HPCHEM\1\DATA\03-27-01\A5430.D
Operator : JC
Acquired : 27 Mar 2001 12:35 using AcqMethod AS0601
Instrument : MSD-A
Sample Name: S-14,1840-005,s,10.34g,15.1,03/26/01
Misc Info : ENVTACT/444 ORBIS,03/23/01,03/26/01,15
Vial Number: 9
Quant File :AS0601.RES (RTE Integrator)



A5430.D AS0601.M Tue Mar 27 13:09:46 2001 MSD-A

000302

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Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-27-01\A5430.D
Acq On : 27 Mar 2001 12:35
Sample : S-14,1840-005,s,10.34g,15.1,03/26/01
Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,15
MS Integration Params: LSCINT.P

Vial: 9
Operator: JC
Inst : MSD-A
Multiplr: 1.00

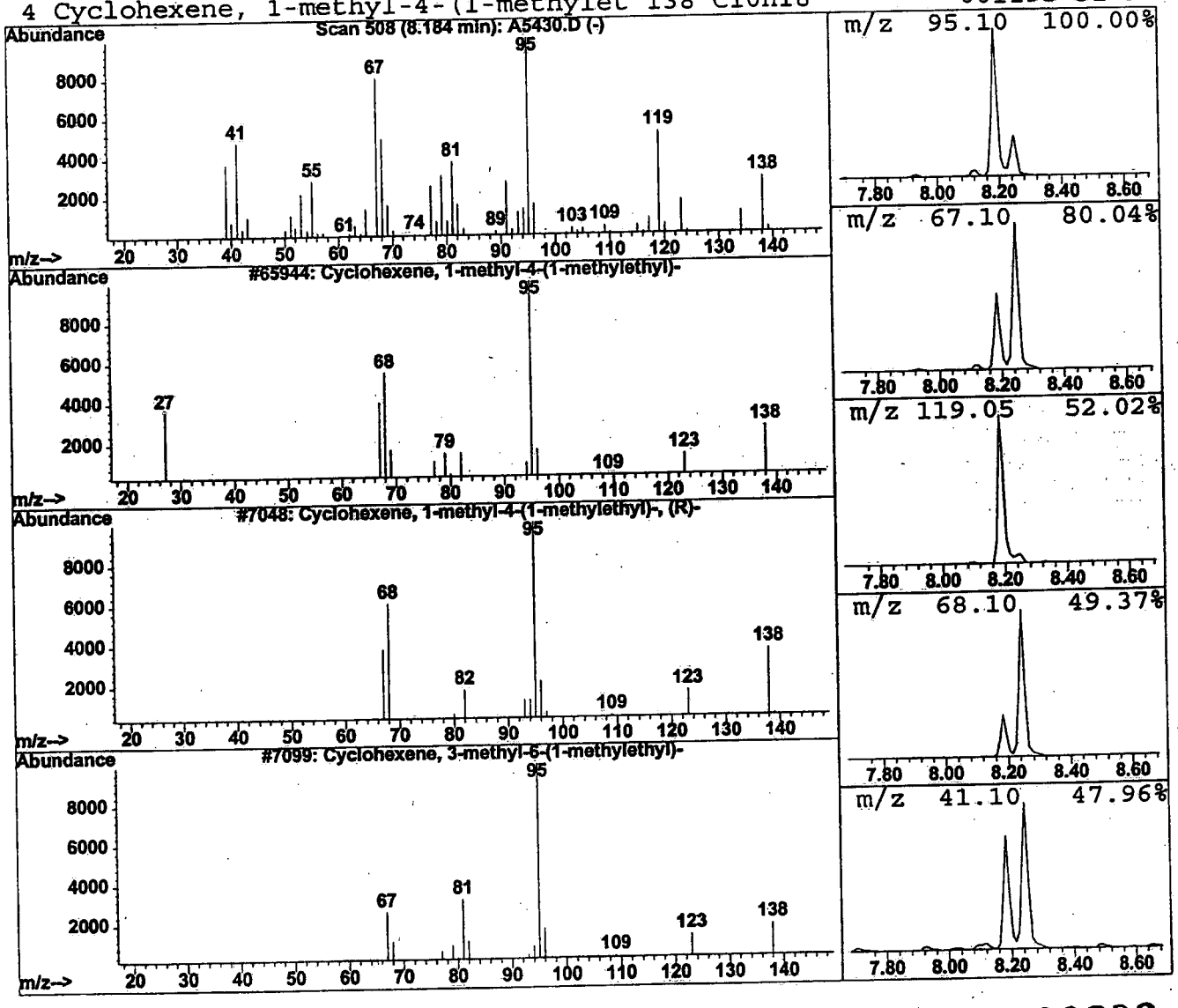
Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 1 Unknown alkane — Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.18	60.14 UG	1586750	1,4-Dichlorobenzene-d4	8.08

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexene, 1-methyl-4-(1-methylet	138	C10H18	005502-88-5	90
2	Cyclohexene, 1-methyl-4-(1-methylet	138	C10H18	001195-31-9	78
3	Cyclohexene, 3-methyl-6-(1-methylet	138	C10H18	005256-65-5	68
4	Cyclohexene, 1-methyl-4-(1-methylet	138	C10H18	001195-31-9	64



000303

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-27-01\A5430.D
Acq On : 27 Mar 2001 12:35
Sample : S-14,1840-005,s,10.34g,15.1,03/26/01
Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,15
MS Integration Params: LSCINT.P

Vial: 9
Operator: JC
Inst : MSD-A
Multiplr: 1.00

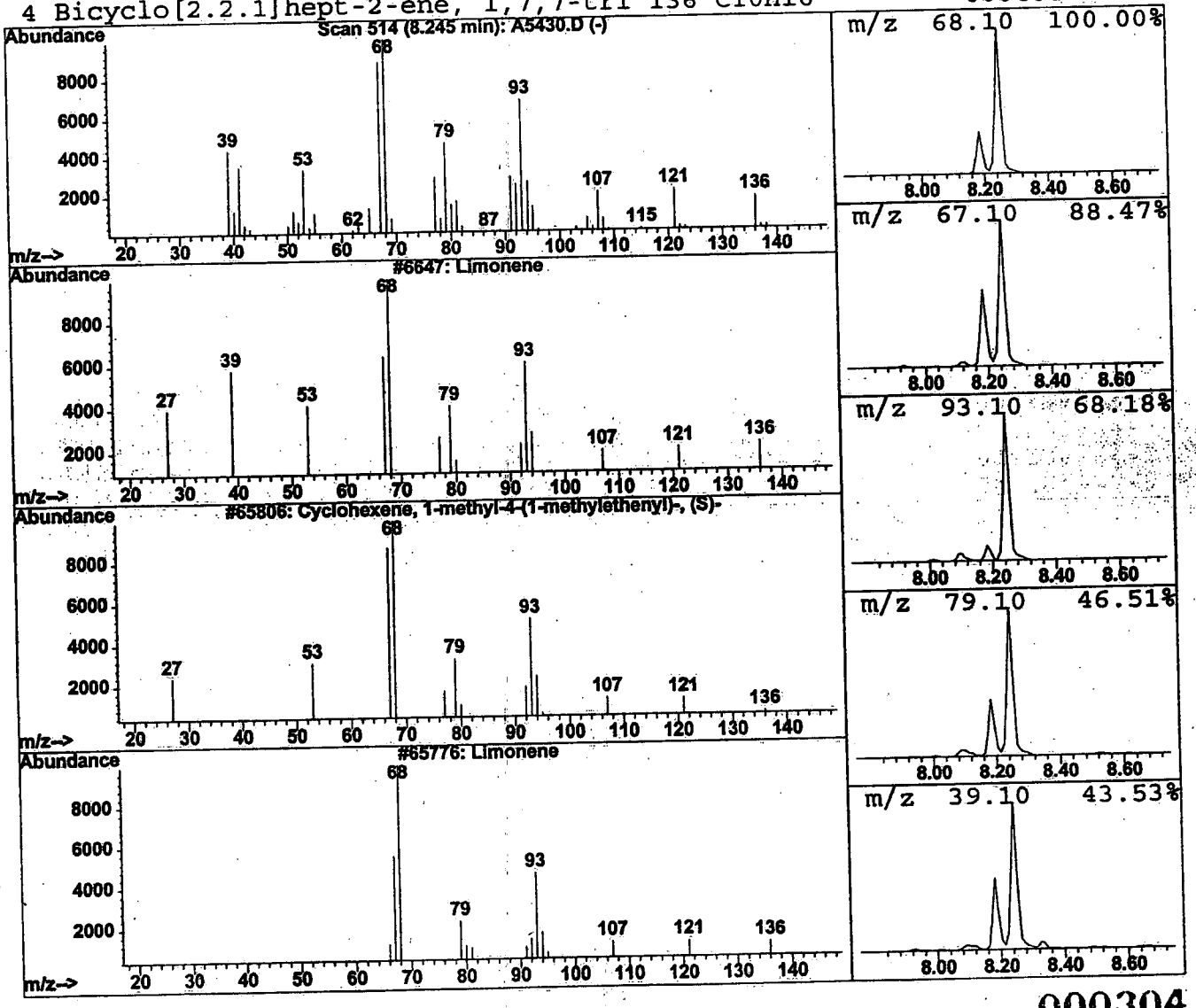
Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 2 Limonene — Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.25	94.68 UG	2497900	1,4-Dichlorobenzene-d4	8.08

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Limonene	136	C10H16	000138-86-3	94
2	Cyclohexene, 1-methyl-4-(1-methylet	136	C10H16	005989-54-8	90
3	Limonene	136	C10H16	000138-86-3	86
4	Bicyclo[2.2.1]hept-2-ene, 1,7,7-tri	136	C10H16	000464-17-5	83



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Library Search Compound Report

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MS Integration Params: LSCINT.P

Vial: 9
Operator: JC
Inst : MSD-A
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Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

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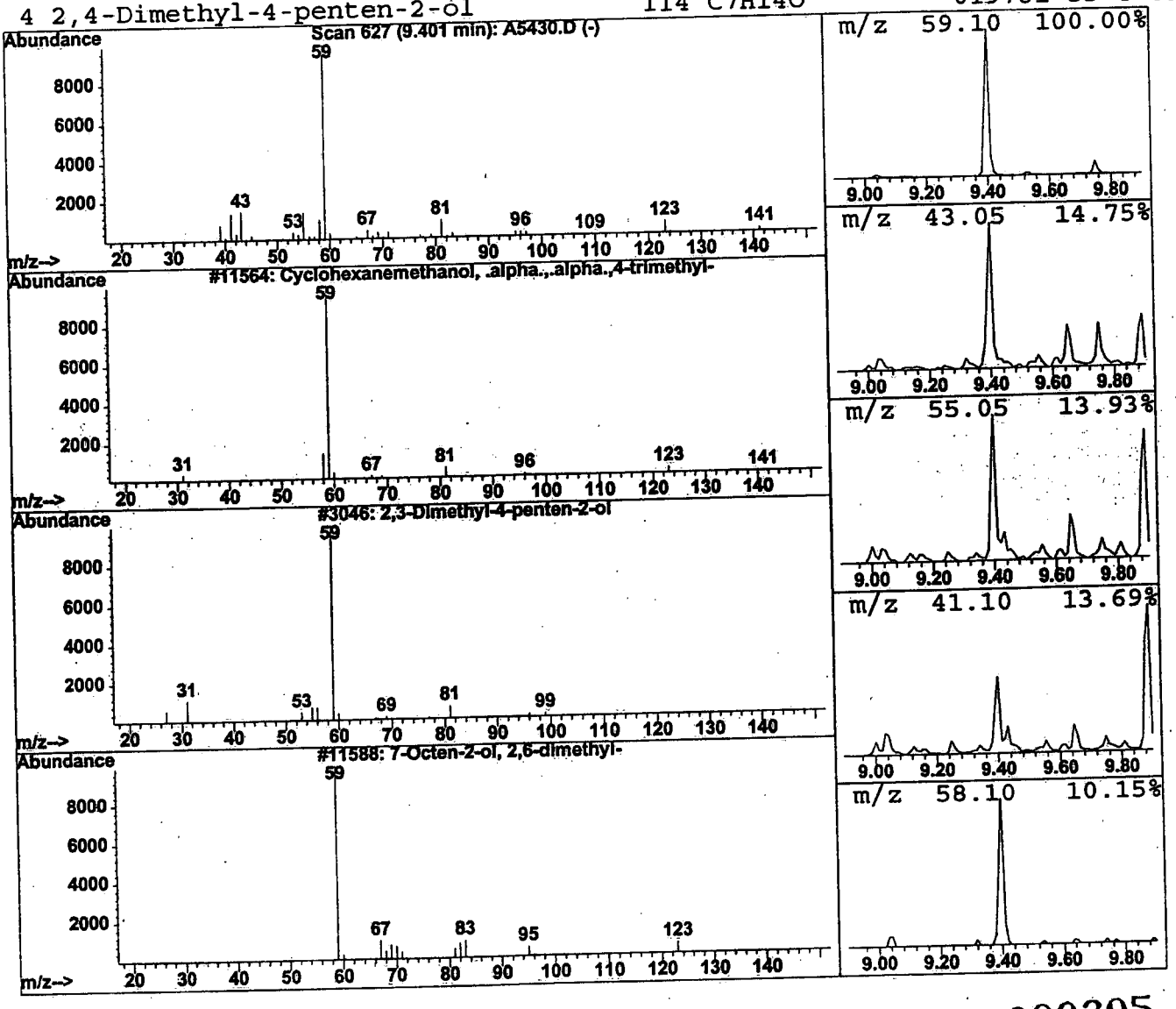
Peak Number 3 Unknown — Concentration Rank 11

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.40	28.37 UG	821383	Naphthalene-d8	9.74

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexanemethanol, .alpha.,.alpha	156	C10H20O	000498-81-7	50
2	2,3-Dimethyl-4-penten-2-ol	114	C7H14O	019781-52-3	45
3	7-Octen-2-ol, 2,6-dimethyl-	156	C10H20O	018479-58-8	45
4	2,4-Dimethyl-4-penten-2-ol	114	C7H14O	019781-53-4	45



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Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,15
MS Integration Params: LSCINT.P

Vial: 9
Operator: JC
Inst : MSD-A
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

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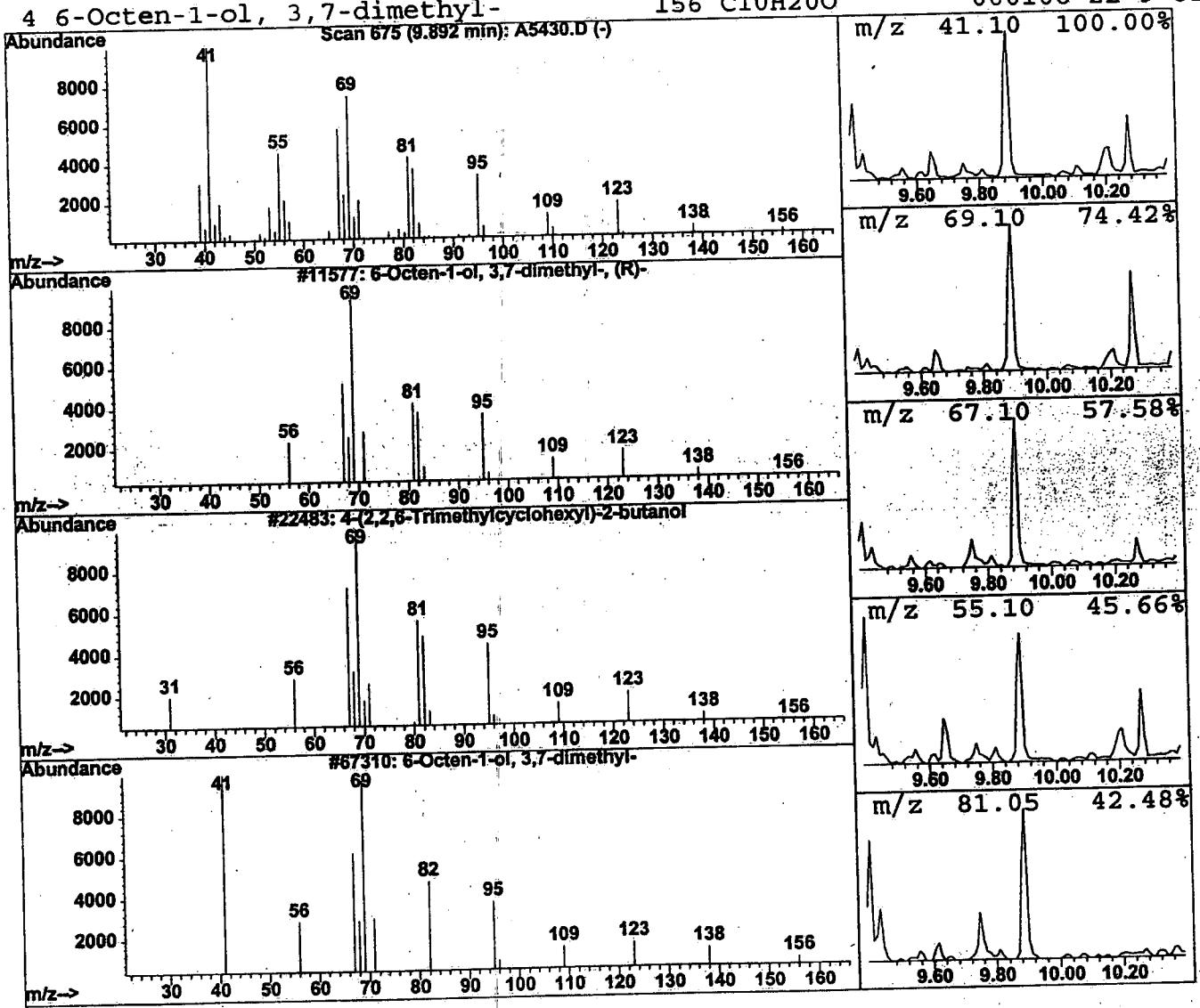
Peak Number 4 Unknown alkane — Concentration Rank 15

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.89	21.54 UG	623573	Naphthalene-d8	9.74

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	6-Octen-1-ol, 3,7-dimethyl-, (R)-	156	C10H20O	001117-61-9	96
2	4-(2,2,6-Trimethylcyclohexyl)-2-but	198	C13H26O	000000-00-0	91
3	6-Octen-1-ol, 3,7-dimethyl-	156	C10H20O	000106-22-9	90
4	6-Octen-1-ol, 3,7-dimethyl-	156	C10H20O	000106-22-9	81



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MS Integration Params: LSCINT.P

Vial: 9
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Inst : MSD-A
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

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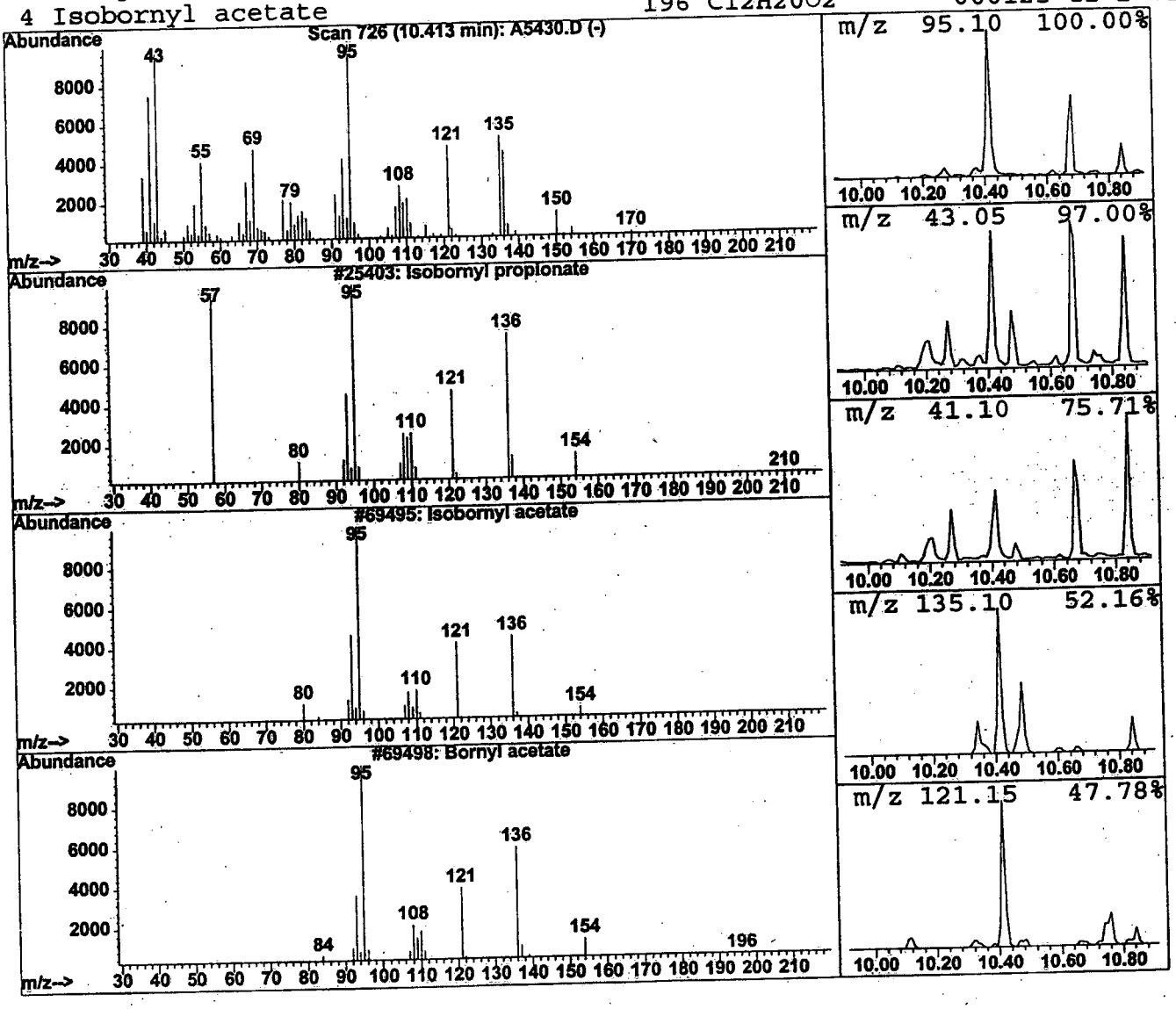
Peak Number 5 Unknown alkane — Concentration Rank 12

R.T.	EstConc	Area	Relative to ISTD	R.T.
10.41	23.42 UG	678086	Naphthalene-d8	9.74

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Isobornyl propionate	210	C13H22O2	002756-56-1	74
2	Isobornyl acetate	196	C12H20O2	000125-12-2	72
3	Bornyl acetate	196	C12H20O2	000076-49-3	72
4	Isobornyl acetate	196	C12H20O2	000125-12-2	72



Library Search Compound Report

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Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,15
MS Integration Params: LSCINT.P

Vial: 9
Operator: JC
Inst : MSD-A
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

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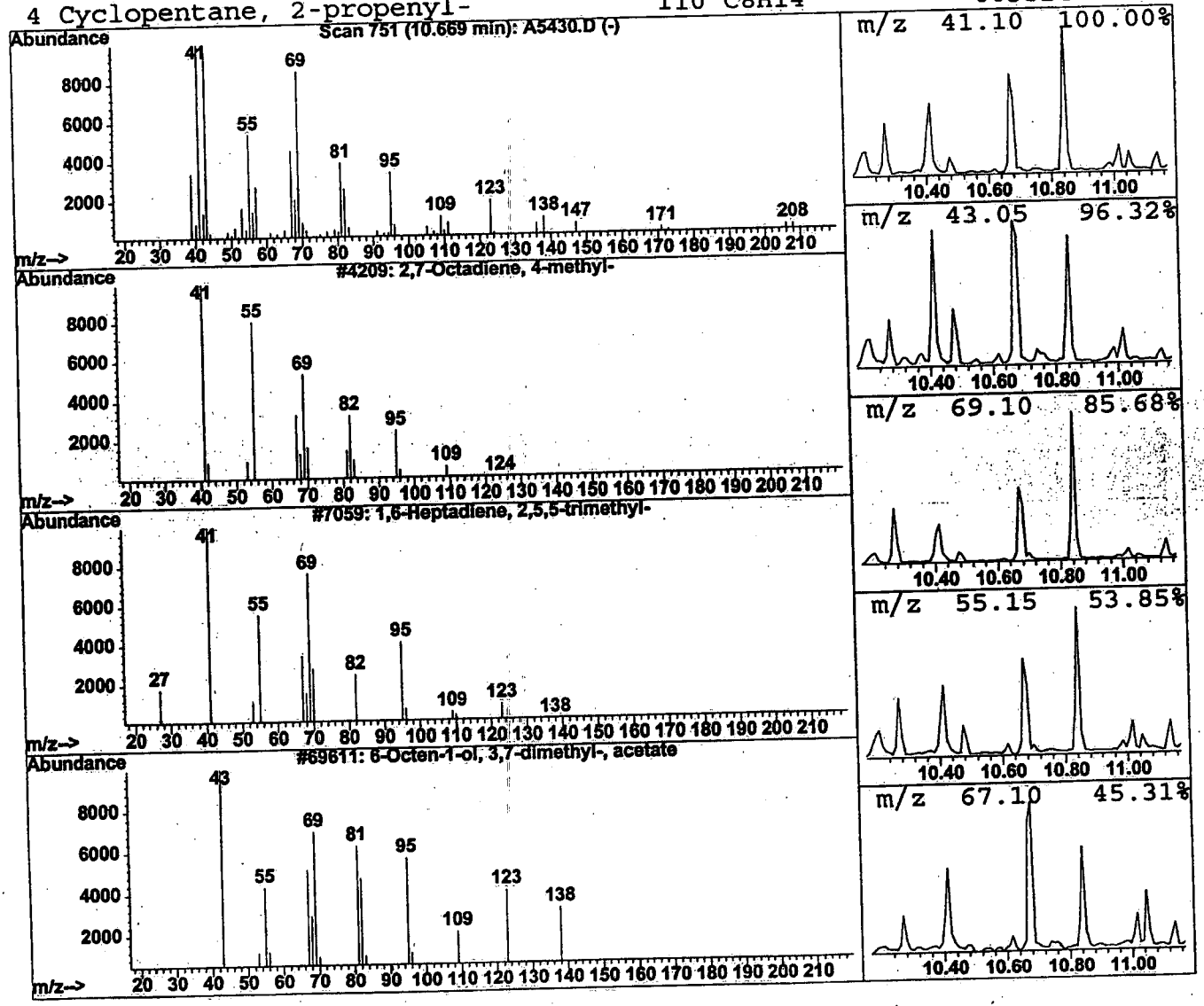
Peak Number 6 Unknown alkane — Concentration Rank 13

R.T.	EstConc	Area	Relative to ISTD	R.T.
10.67	23.21 UG	671994	Naphthalene-d8	9.74

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2,7-Octadiene, 4-methyl-	124	C9H16	000000-00-0	68
2	1,6-Heptadiene, 2,5,5-trimethyl-	138	C10H18	062238-28-2	53
3	6-Octen-1-ol, 3,7-dimethyl-, acetat	198	C12H22O2	000150-84-5	49
4	Cyclopentane, 2-propenyl-	110	C8H14	003524-75-2	46



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Library Search Compound Report

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Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,15
MS Integration Params: LSCINT.P

Vial: 9
Operator: JC
Inst : MSD-A
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

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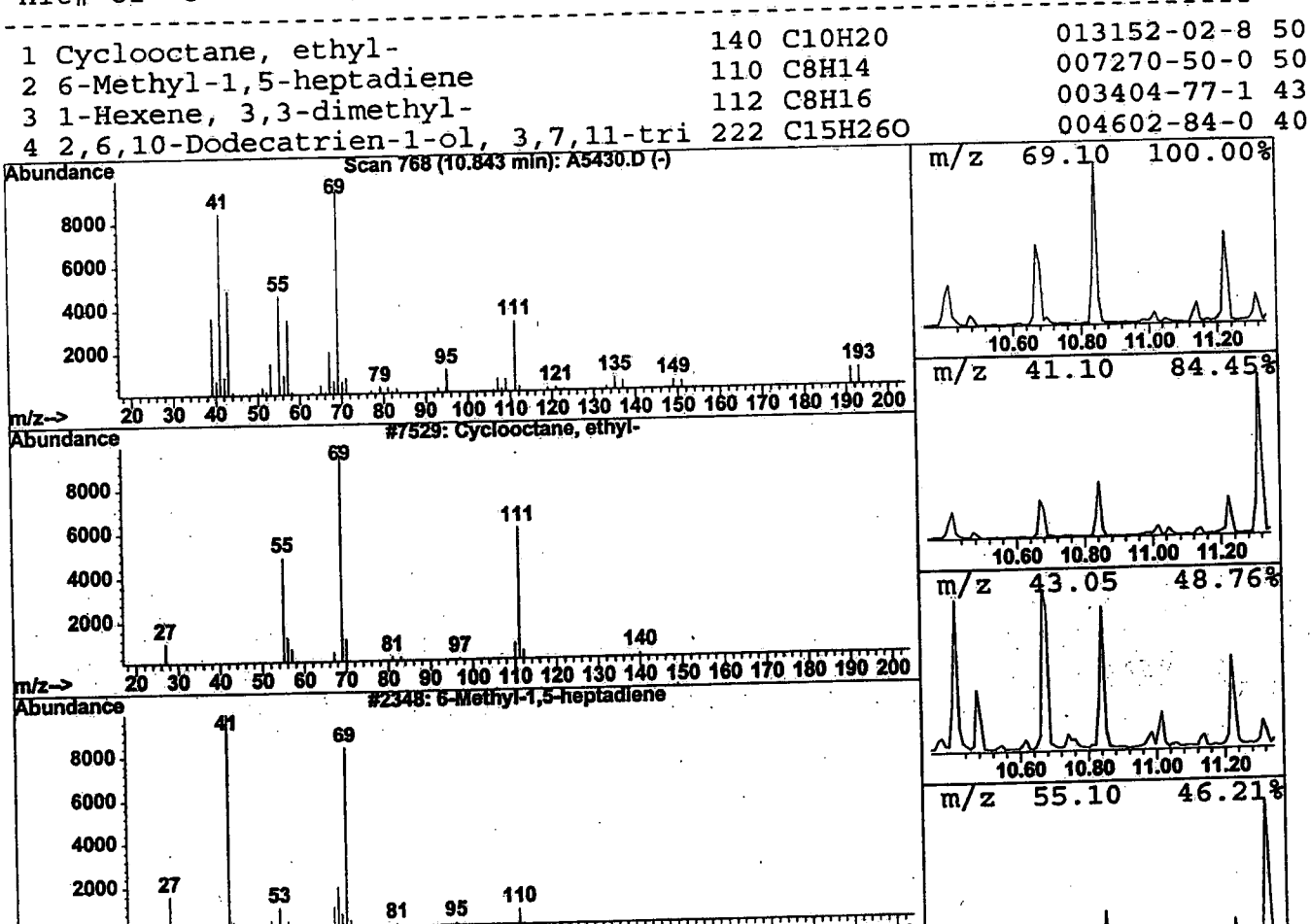
Peak Number 7 Unknown alkane — Concentration Rank 20

R.T.	EstConc	Area	Relative to ISTD	R.T.
10.84	16.57 UG	564921	Acenaphthene-d10	11.68

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclooctane, ethyl-	140	C10H20	013152-02-8	50
2	6-Methyl-1,5-heptadiene	110	C8H14	007270-50-0	50
3	1-Hexene, 3,3-dimethyl-	112	C8H16	003404-77-1	43
4	2,6,10-Dodecatrien-1-ol, 3,7,11-tri	222	C15H26O	004602-84-0	40



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Library Search Compound Report

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Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,15
MS Integration Params: LSCINT.P

Vial: 9
Operator: JC
Inst : MSD-A
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

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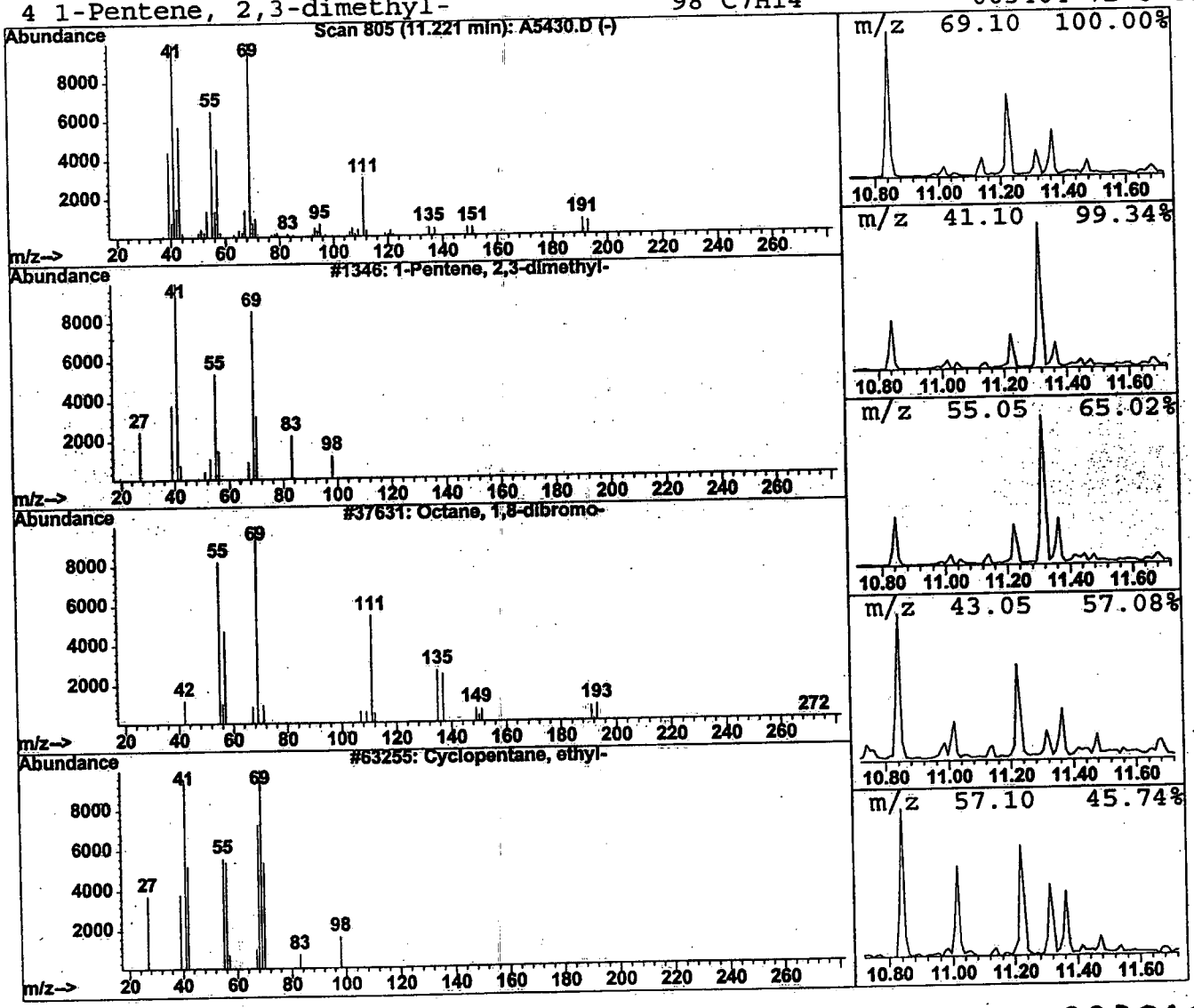
Peak Number 8 Unknown alkane Concentration Rank 25

R.T.	EstConc	Area	Relative to ISTD	R.T.
11.22	12.42 UG	423423	Acenaphthene-d10	11.68

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1-Pentene, 2,3-dimethyl-	98	C7H14	003404-72-6	50
2	Octane, 1,8-dibromo-	270	C8H16Br2	004549-32-0	50
3	Cyclopentane, ethyl-	98	C7H14	001640-89-7	40
4	1-Pentene, 2,3-dimethyl-	98	C7H14	003404-72-6	40



000310

Library Search Compound Report

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MS Integration Params: LSCINT.P

Vial: 9
Operator: JC
Inst : MSD-A
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

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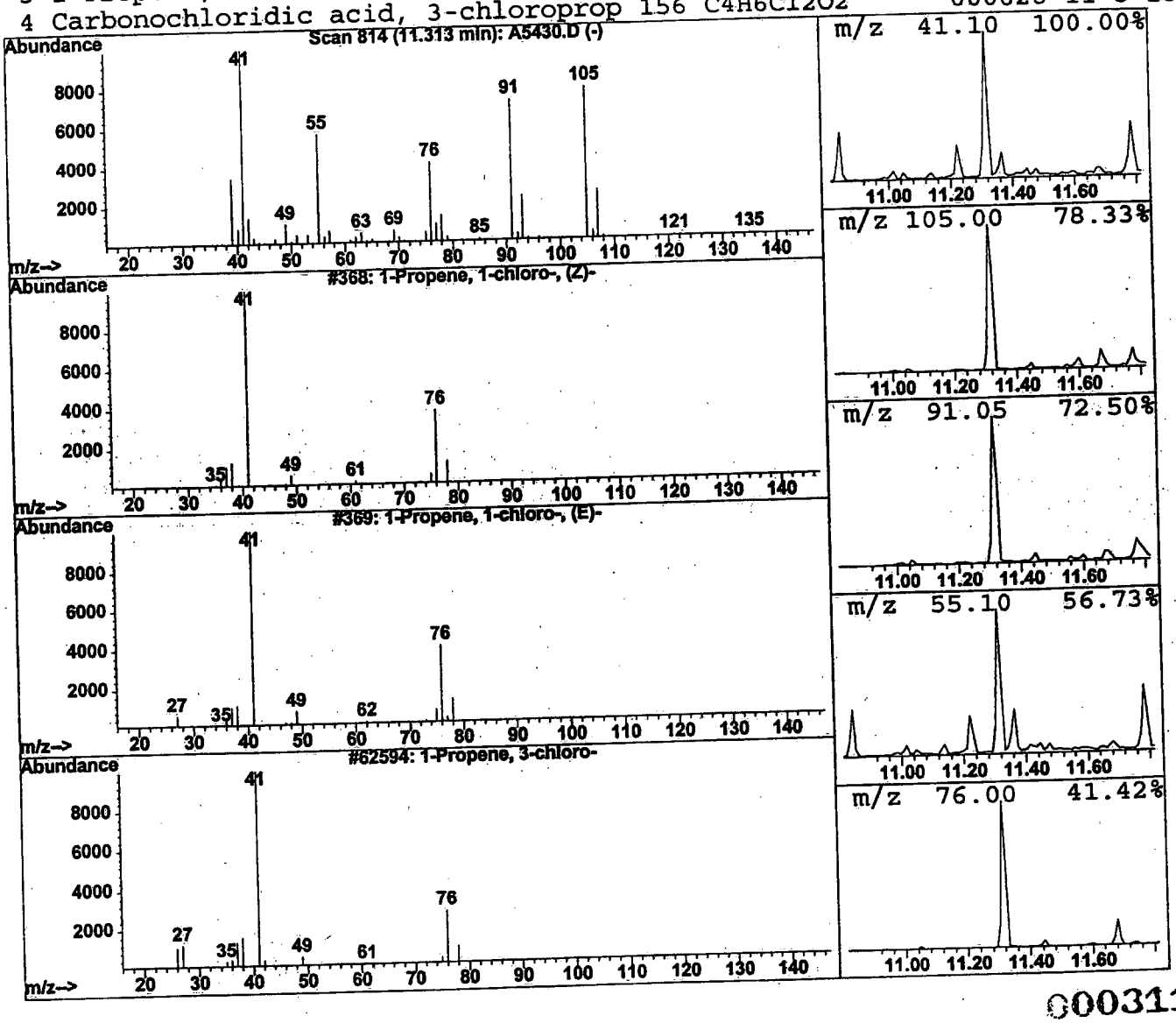
Peak Number 9 Unknown alkane — Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
11.31	48.59 UG	1656050	Acenaphthene-d10	11.68

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1-Propene, 1-chloro-, (Z)-	76	C3H5Cl	016136-84-8	30
2	1-Propene, 1-chloro-, (E)-	76	C3H5Cl	016136-85-9	27
3	1-Propene, 3-chloro-	76	C3H5Cl	000107-05-1	27
4	Carbonochloridic acid, 3-chloroprop	156	C4H6Cl2O2	000628-11-5	23



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Library Search Compound Report

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MS Integration Params: LSCINT.P

Vial: 9
Operator: JC
Inst : MSD-A
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

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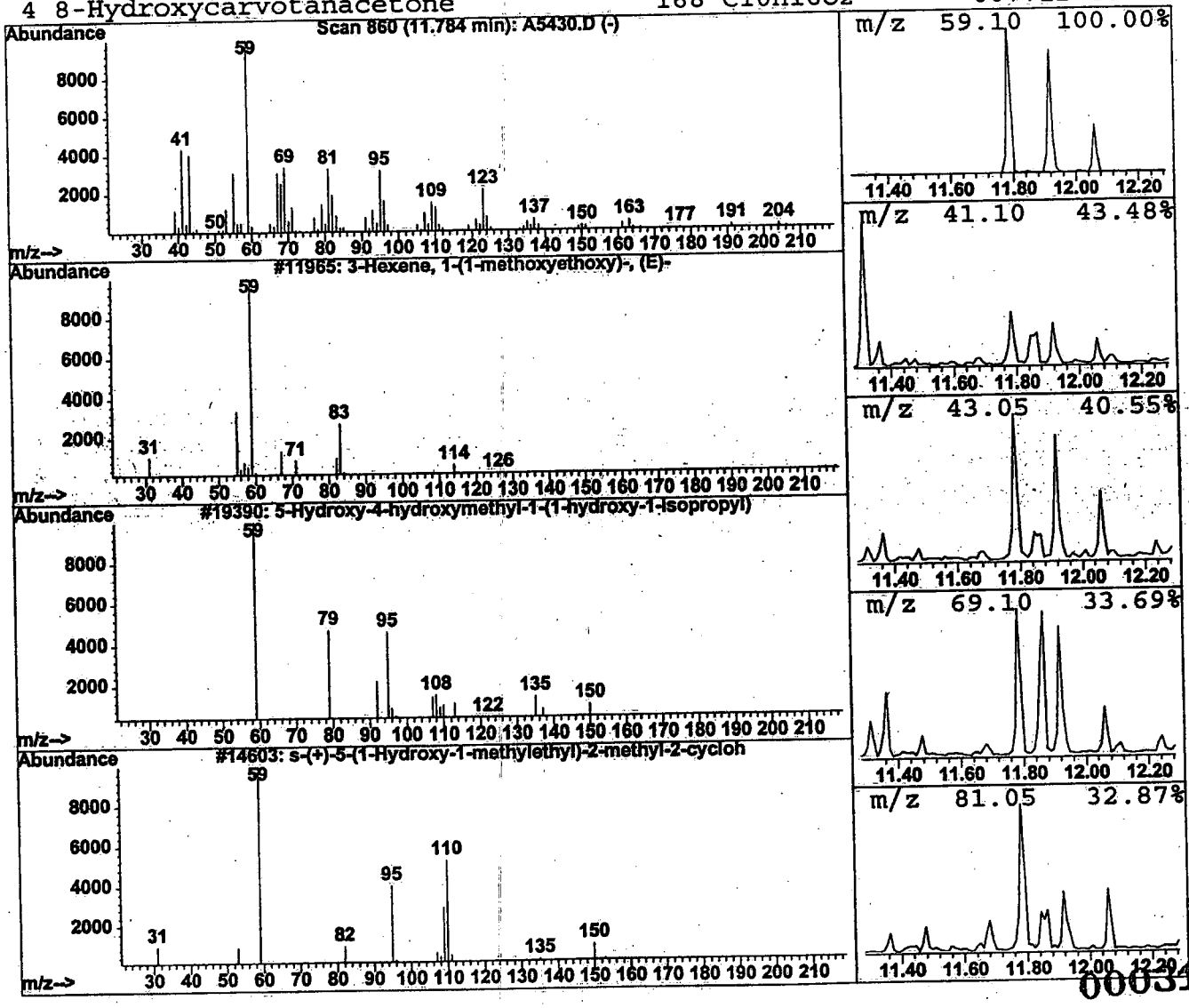
Peak Number 10 Unknown alkane Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
11.78	61.64 UG	2101190	Acenaphthene-d10	11.68

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	3-Hexene, 1-(1-methoxyethoxy)-, (E)	158	C9H18O2	054340-97-5	38
2	5-Hydroxy-4-hydroxymethyl-1-(1-hydr	186	C10H18O3	087096-72-8	38
3	s-(+)-5-(1-Hydroxy-1-methylethyl)-2	168	C10H16O2	060593-11-5	37
4	8-Hydroxycarvotanacetone	168	C10H16O2	007712-46-1	37



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869

Library Search Compound Report

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MS Integration Params: LSCINT.P

Vial: 9
Operator: JC
Inst : MSD-A
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

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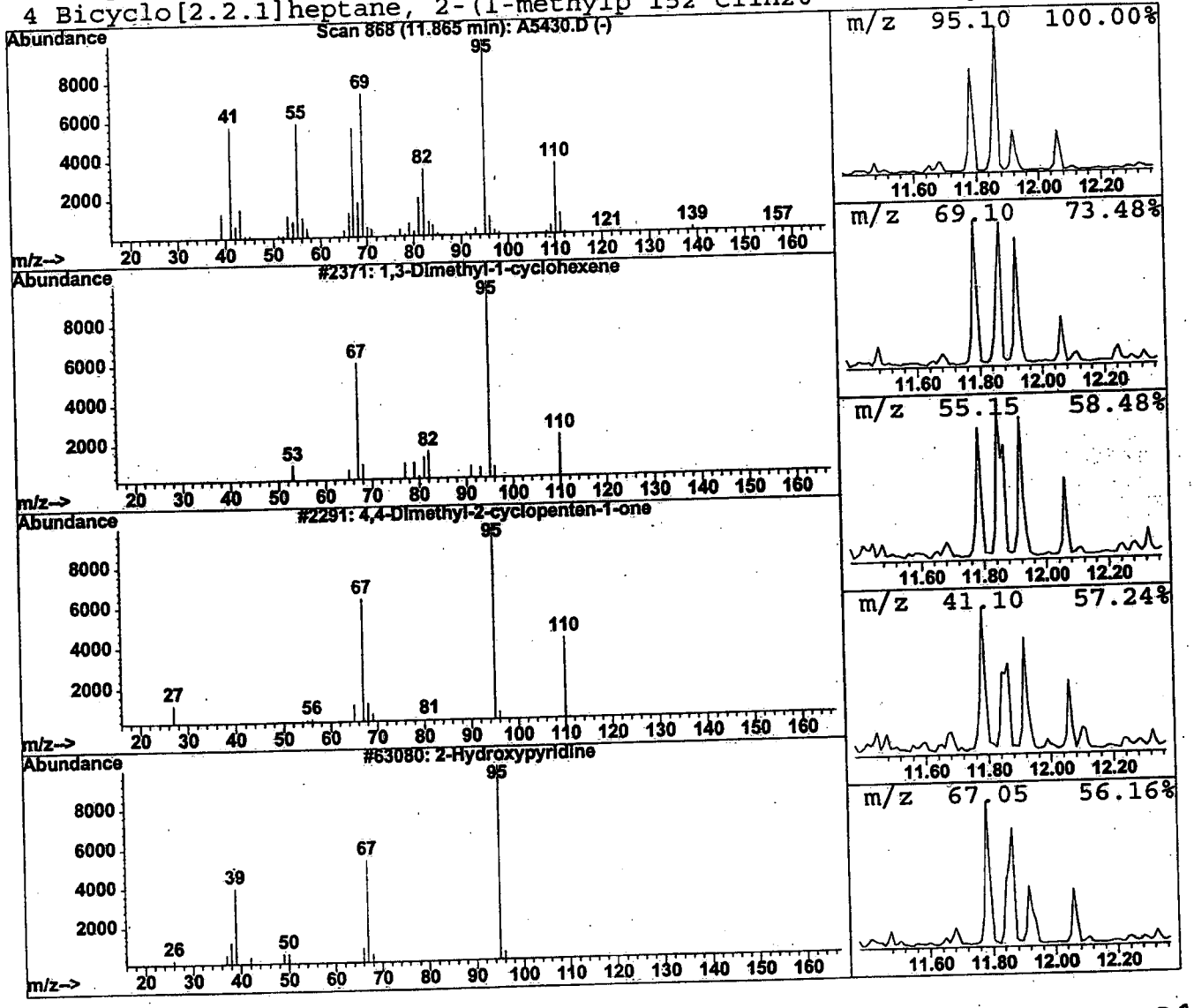
Peak Number 11 Unknown alkane — Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
11.87	34.47 UG	1174930	Acenaphthene-d10	11.68

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1,3-Dimethyl-1-cyclohexene	110	C8H14	002808-76-6	46
2	4,4-Dimethyl-2-cyclopenten-1-one	110	C7H10O	022748-16-9	43
3	2-Hydroxypyridine	95	C5H5NO	000142-08-5	43
4	Bicyclo[2.2.1]heptane, 2-(1-methylp	152	C11H20	074663-93-7	38



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Vial: 9
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Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

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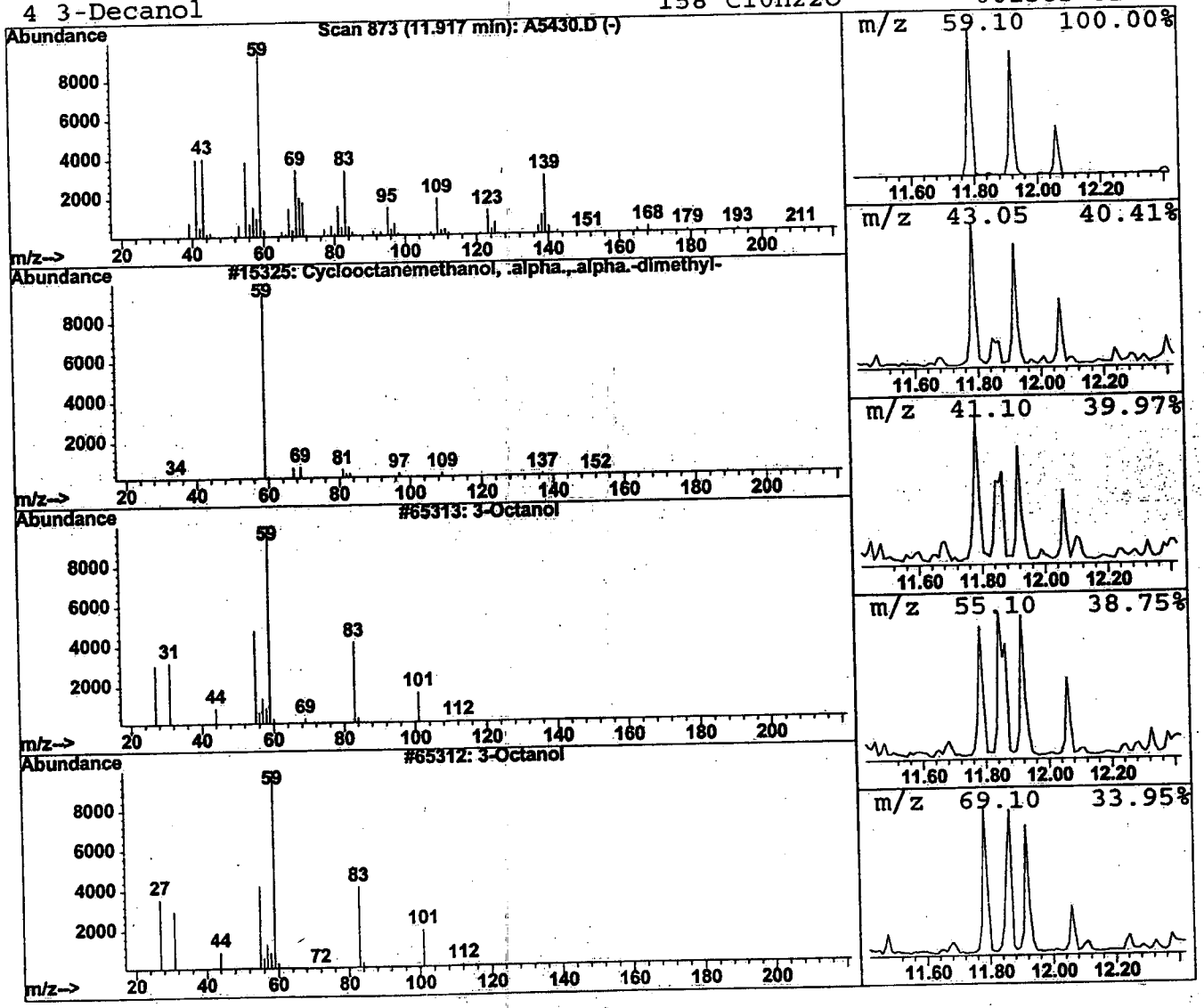
Peak Number 12 Unknown alkane Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
11.92	35.60 UG	1213480	Acenaphthene-d10	11.68

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclooctanemethanol, .alpha.,.alpha	170	C11H22O	016624-06-9	38
2	3-Octanol	130	C8H18O	000589-98-0	38
3	3-Octanol	130	C8H18O	000589-98-0	38
4	3-Decanol	158	C10H22O	001565-81-7	35



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MS Integration Params: LSCINT.P

Vial: 9
Operator: JC
Inst : MSD-A
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Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

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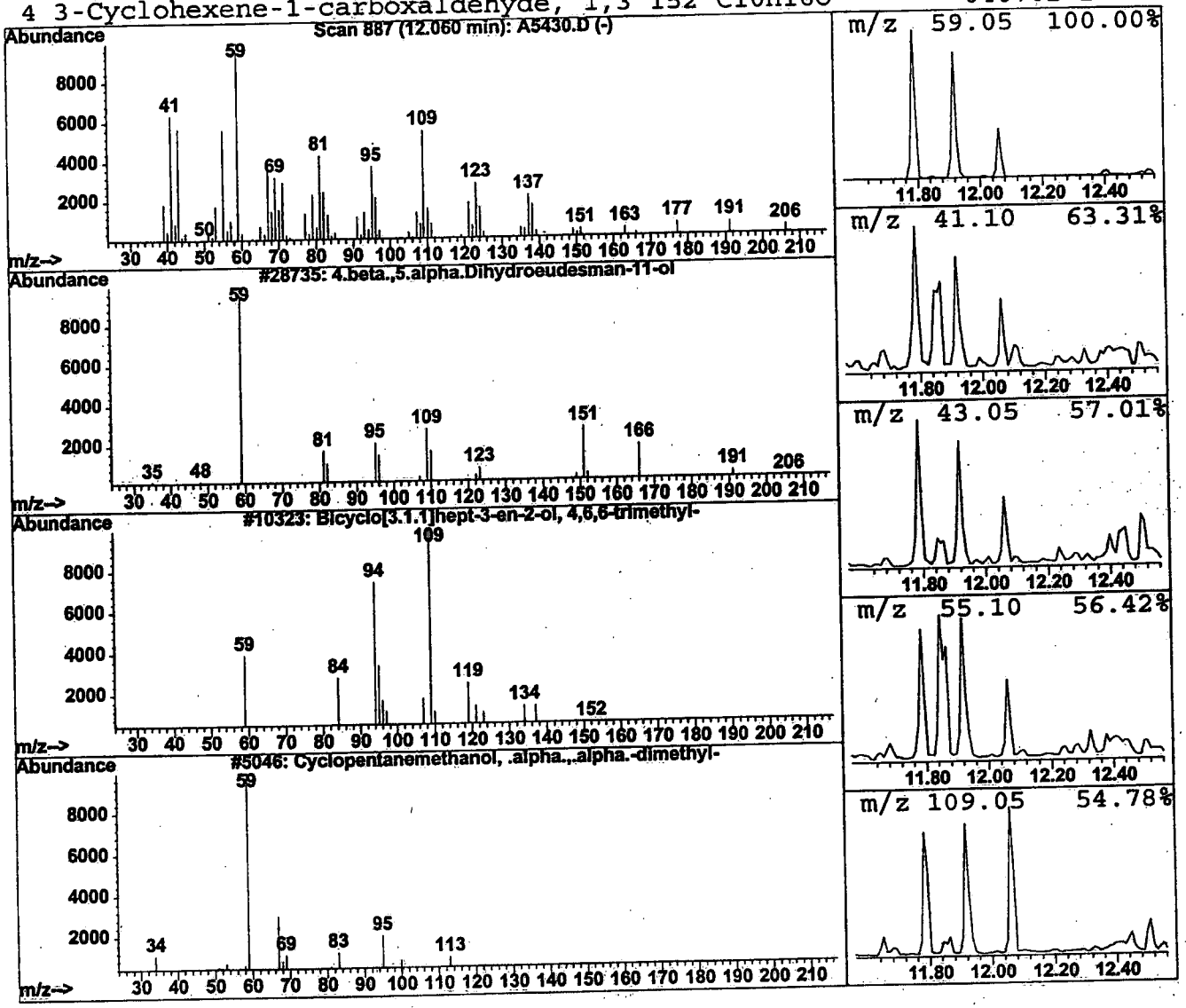
Peak Number 13 Unknown alkane — Concentration Rank 14

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.06	21.91 UG	746756	Acenaphthene-d10	11.68

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	4.beta.,5.alpha.Dihydroeudesman-11-	224	C15H28O	000000-00-0	53
2	Bicyclo[3.1.1]hept-3-en-2-ol, 4,6,6	152	C10H16O	000473-67-6	42
3	Cyclopentanemethanol, .alpha.,.alph	128	C8H16O	001462-06-2	22
4	3-Cyclohexene-1-carboxaldehyde, 1,3	152	C10H16O	040702-26-9	22



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Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

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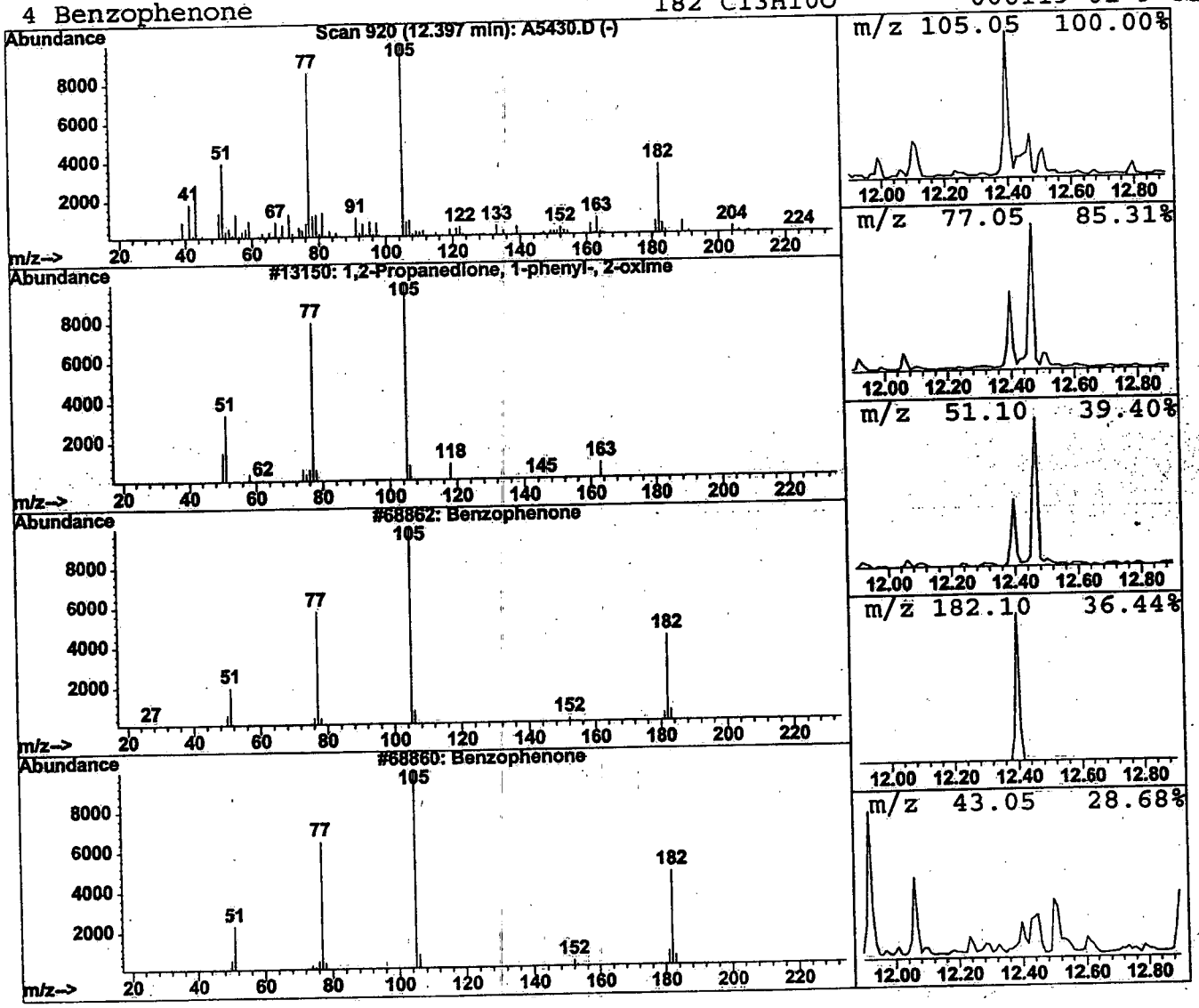
Peak Number 14 Benzophenone — Concentration Rank 16

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.40	19.31 UG	658081	Acenaphthene-d10	11.68

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1,2-Propanedione, 1-phenyl-, 2-oxim	163	C9H9NO2	000119-51-7	93
2	Benzophenone	182	C13H10O	000119-61-9	81
3	Benzophenone	182	C13H10O	000119-61-9	81
4	Benzophenone	182	C13H10O	000119-61-9	81



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Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,15
MS Integration Params: LSCINT.P

Vial: 9
Operator: JC
Inst : MSD-A
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

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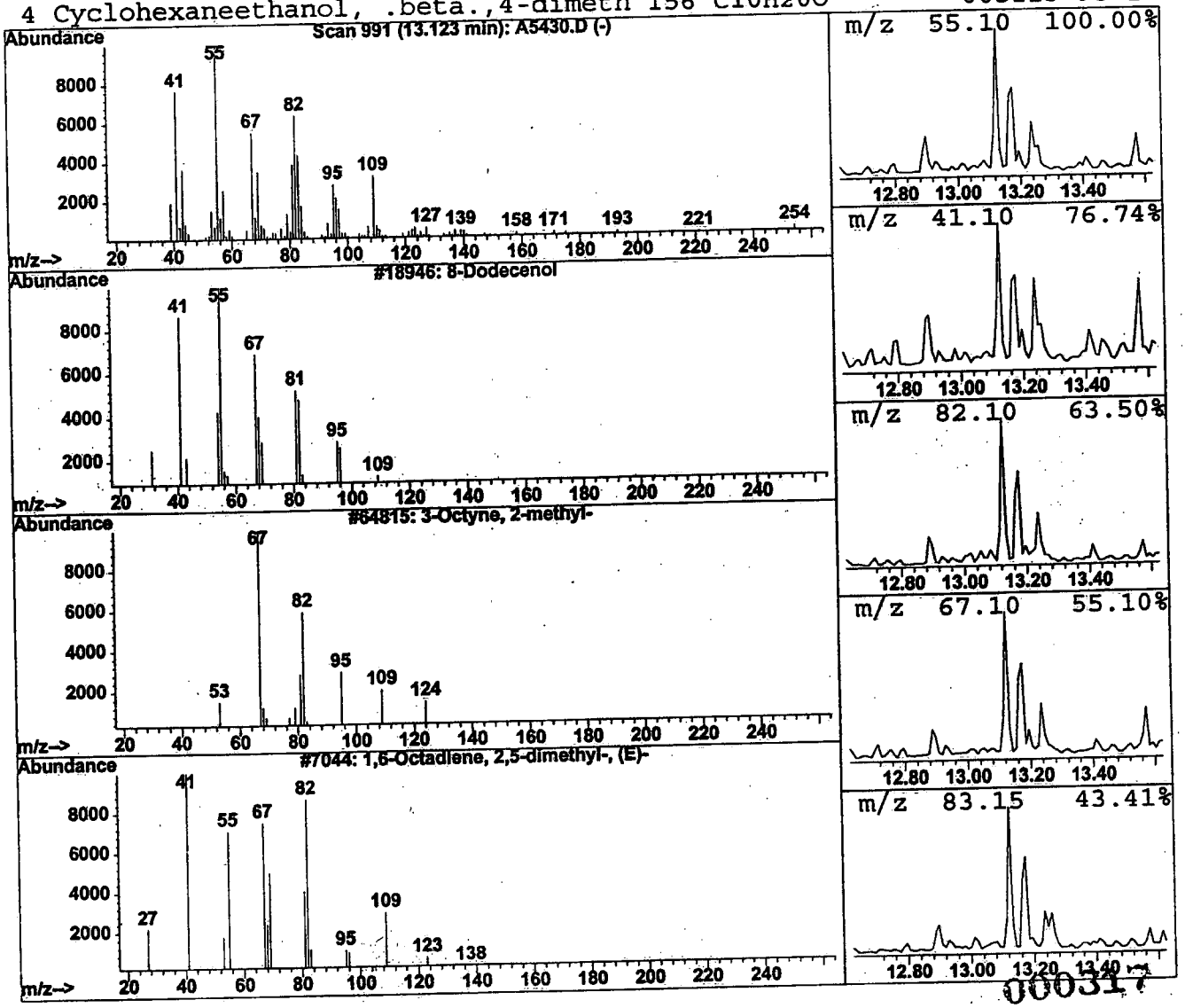
Peak Number 15 Unknown alkane — Concentration Rank 21

R.T.	EstConc	Area	Relative to ISTD	R.T.
13.12	15.08 UG	619748	Phenanthrene-d10	13.23

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	8-Dodecenol	184	C12H24O	042513-42-8	43
2	3-Octyne, 2-methyl-	124	C9H16	055402-15-8	38
3	1,6-Octadiene, 2,5-dimethyl-, (E)-	138	C10H18	068702-25-0	38
4	Cyclohexaneethanol, .beta.,4-dimeth	156	C10H20O	005113-95-1	22



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874

Library Search Compound Report

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Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,15
MS Integration Params: LSCINT.P

Vial: 9
Operator: JC
Inst : MSD-A
Multiplr: 1.00

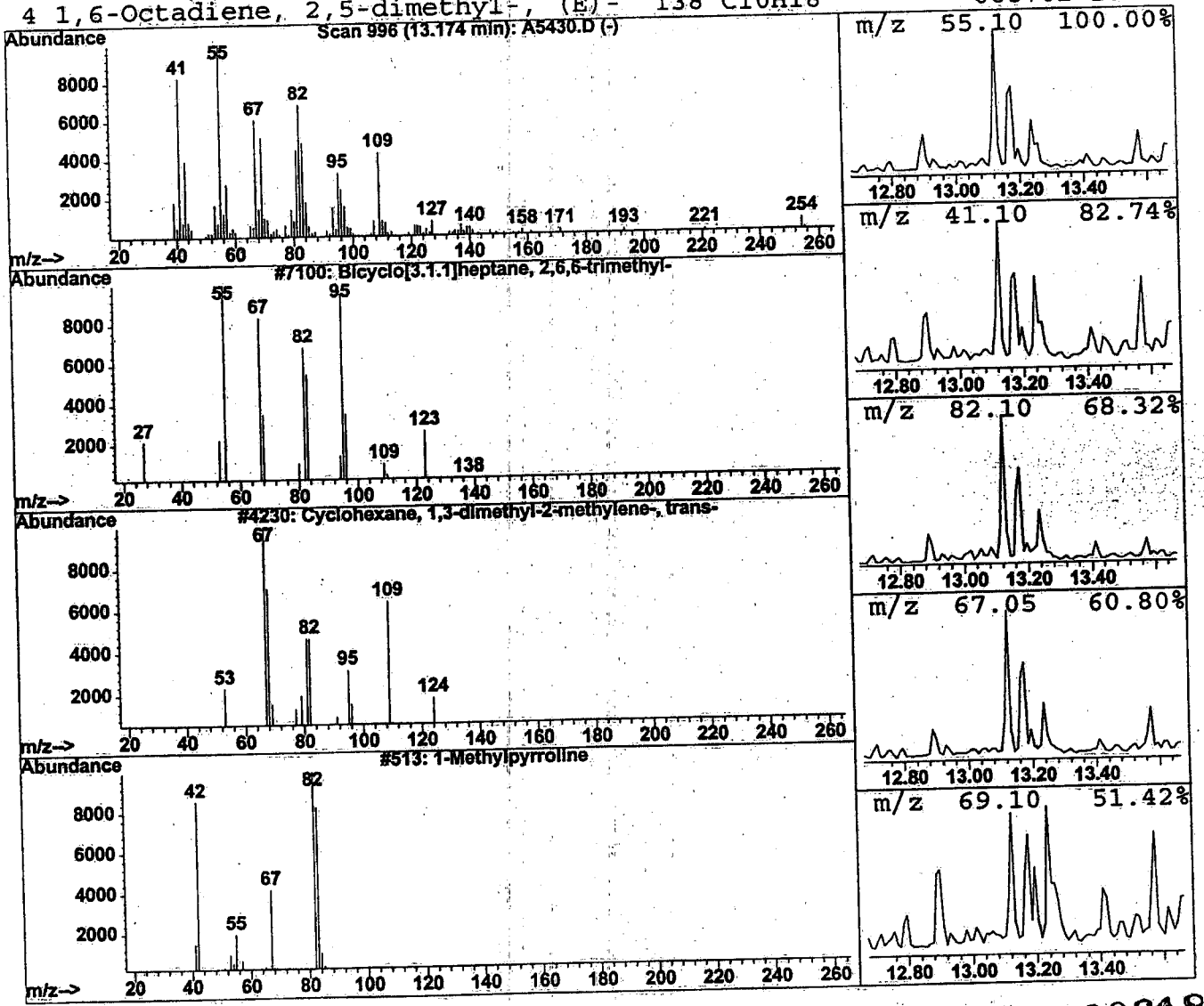
Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 16 Unknown alkane — Concentration Rank 23

R.T.	EstConc	Area	Relative to ISTD	R.T.
13.17	13.10 UG	538370	Phenanthrene-d10	13.23

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Bicyclo[3.1.1]heptane, 2,6,6-trimet	138	C10H18	000473-55-2	50
2	Cyclohexane, 1,3-dimethyl-2-methyle	124	C9H16	020348-74-7	49
3	1-Methylpyrroline	83	C5H9N	000000-00-0	43
4	1,6-Octadiene, 2,5-dimethyl-, (E)-	138	C10H18	068702-25-0	38



000318

875

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-27-01\A5430.D
Acq On : 27 Mar 2001 12:35
Sample : S-14,1840-005,s,10.34g,15.1,03/26/01
Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,15
MS Integration Params: LSCINT.P

Vial: 9
Operator: JC
Inst : MSD-A
Multiplr: 1.00

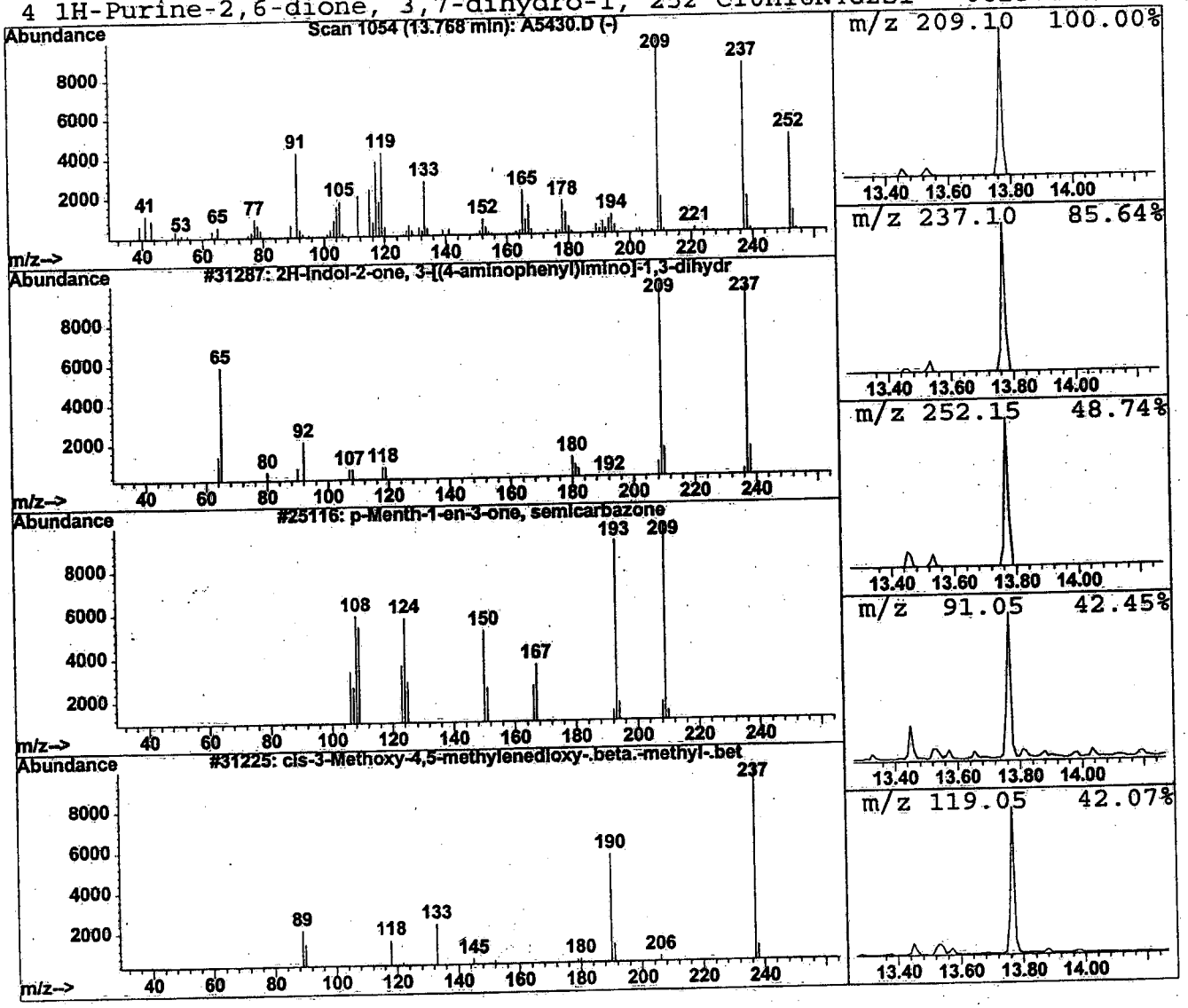
Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 17 Unknown aromatic — Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
13.77	45.44 UG	1867190	Phenanthrene-d10	13.23

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2H-Indol-2-one, 3-[(4-aminophenyl)i	237	C14H11N3O	033829-07-1	43
2	p-Menth-1-en-3-one, semicarbazone	209	C11H19N3O	004713-41-1	35
3	cis-3-Methoxy-4,5-methylenedioxy-.b	237	C11H11NO5	000000-00-0	18
4	1H-Purine-2,6-dione, 3,7-dihydro-1,	252	C10H16N4O2Si	062374-32-7	16



000319

876

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-27-01\A5430.D
Acq On : 27 Mar 2001 12:35
Sample : S-14,1840-005,s,10.34g,15.1,03/26/01
Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,15
MS Integration Params: LSCINT.P

Vial: 9
Operator: JC
Inst : MSD-A
Multiplr: 1.00

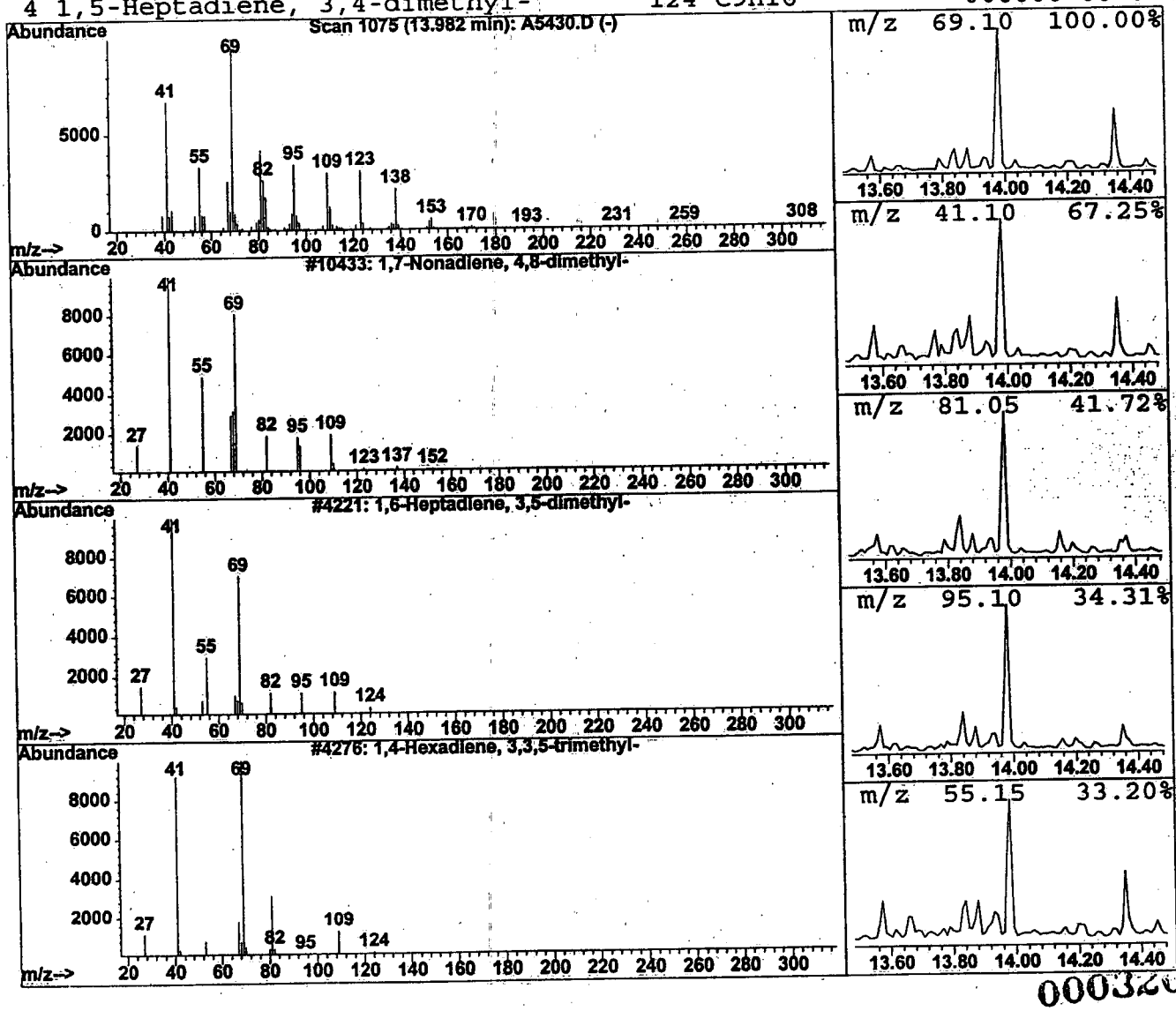
Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 18 Unknown alkane Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
13.98	31.65 UG	1300520	Phenanthrene-d10	13.23

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1,7-Nonadiene, 4,8-dimethyl-	152	C11H20	062108-28-5	50
2	1,6-Heptadiene, 3,5-dimethyl-	124	C9H16	068701-99-5	50
3	1,4-Hexadiene, 3,3,5-trimethyl-	124	C9H16	074753-00-7	46
4	1,5-Heptadiene, 3,4-dimethyl-	124	C9H16	000000-00-0	43



000320

877

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-27-01\A5430.D
Acq On : 27 Mar 2001 12:35
Sample : S-14,1840-005,s,10.34g,15.1,03/26/01
Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,15
MS Integration Params: LSCINT.P

Vial: 9
Operator: JC
Inst : MSD-A
Multiplr: 1.00

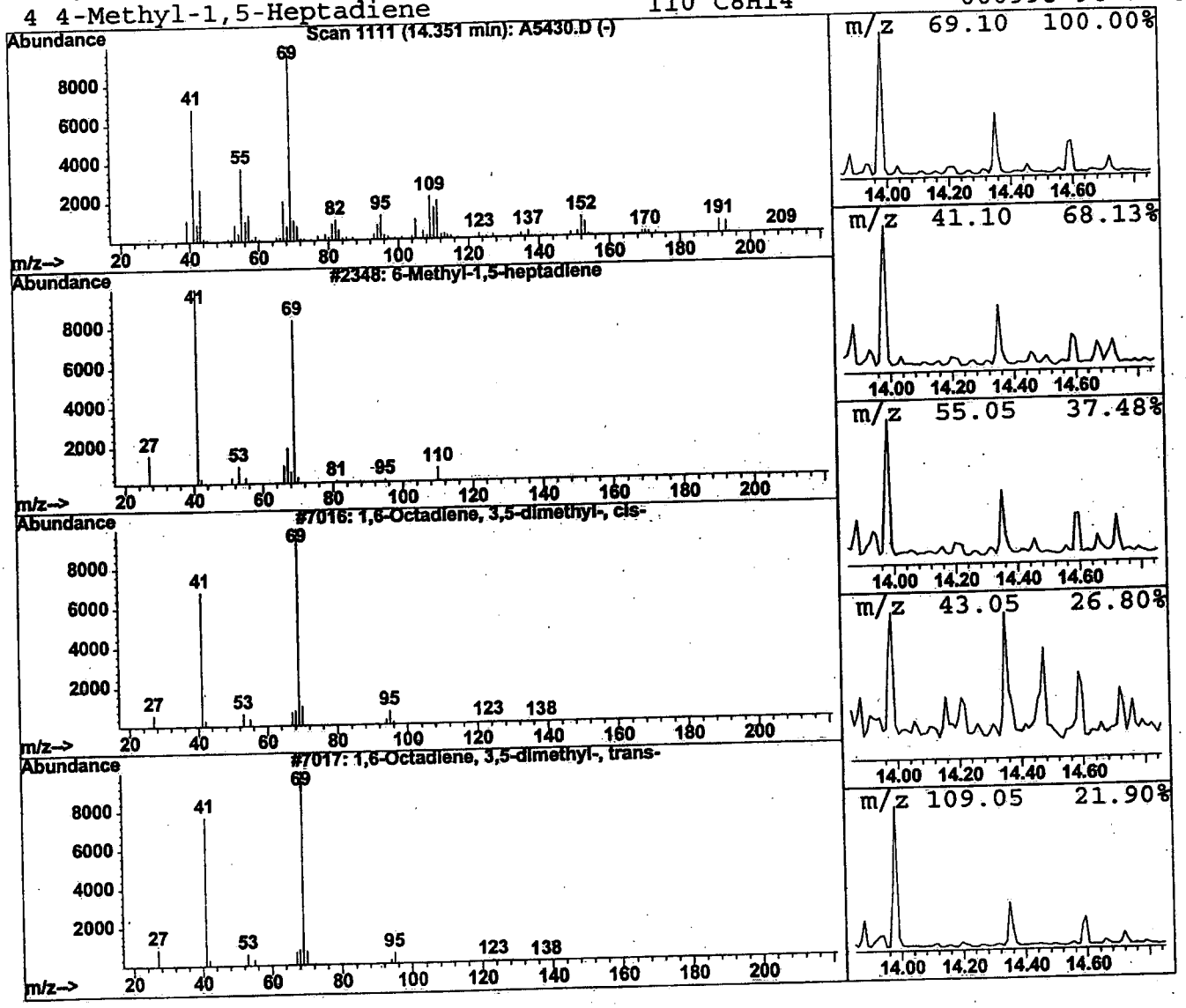
Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 19 Unknown alkane — Concentration Rank 22

R.T.	EstConc	Area	Relative to ISTD	R.T.
14.35	13.28 UG	545558	Phenanthrene-d10	13.23

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	6-Methyl-1,5-heptadiene	110	C8H14	007270-50-0	47
2	1,6-Octadiene, 3,5-dimethyl-, cis-	138	C10H18	000000-00-0	43
3	1,6-Octadiene, 3,5-dimethyl-, trans	138	C10H18	000000-00-0	43
4	4-Methyl-1,5-Heptadiene	110	C8H14	000998-94-7	43



000321

878

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-27-01\A5430.D
Acq On : 27 Mar 2001 12:35
Sample : S-14,1840-005,s,10.34g,15.1,03/26/01
Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,15
MS Integration Params: LSCINT.P

Vial: 9
Operator: JC
Inst : MSD-A
Multiplr: 1.00

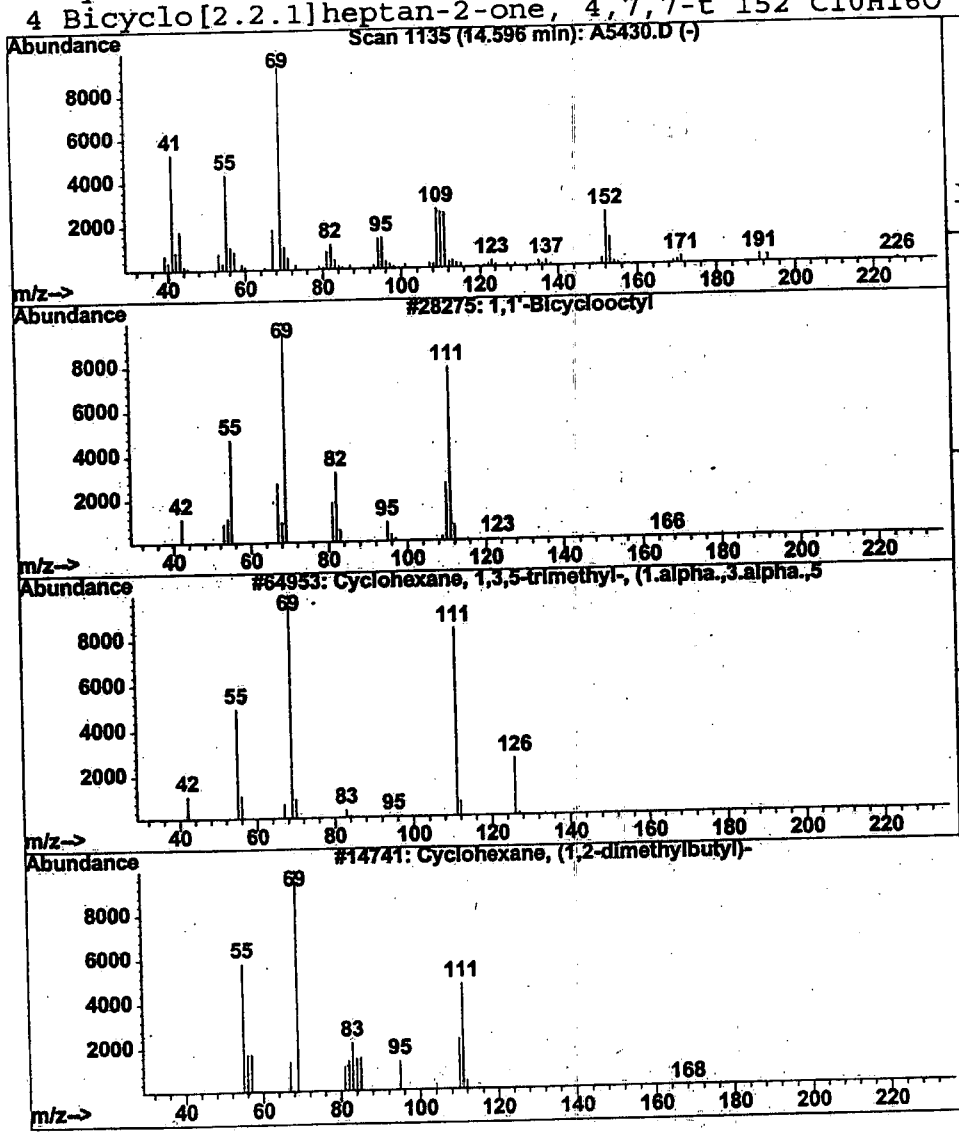
Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

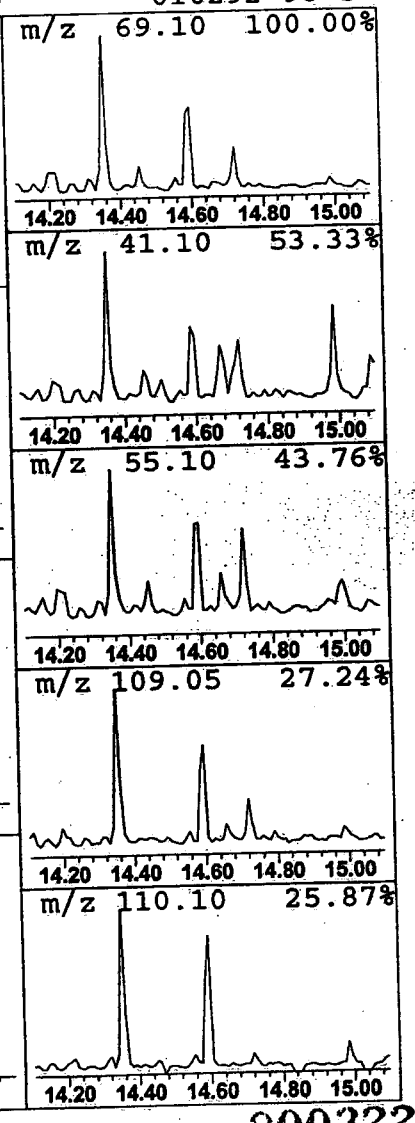
****

Peak Number 20 Unknown alkane — Concentration Rank 24

R.T.	EstConc	Area	Relative to ISTD	R.T.
14.60	12.79 UG	362727	Chrysene-d12	15.95

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1,1'-Bicyclooctyl	222	C16H30	006708-17-4	38
2	Cyclohexane, 1,3,5-trimethyl-, (1.a	126	C9H18	001795-27-3	38
3	Cyclohexane, (1,2-dimethylbutyl)-	168	C12H24	061142-37-8	38
4	Bicyclo[2.2.1]heptan-2-one, 4,7,7-t	152	C10H16O	010292-98-5	38





000322

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-27-01\A5430.D
Acq On : 27 Mar 2001 12:35
Sample : S-14,1840-005,s,10.34g,15.1,03/26/01
Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,15
MS Integration Params: LSCINT.P

Vial: 9
Operator: JC
Inst : MSD-A
Multiplr: 1.00

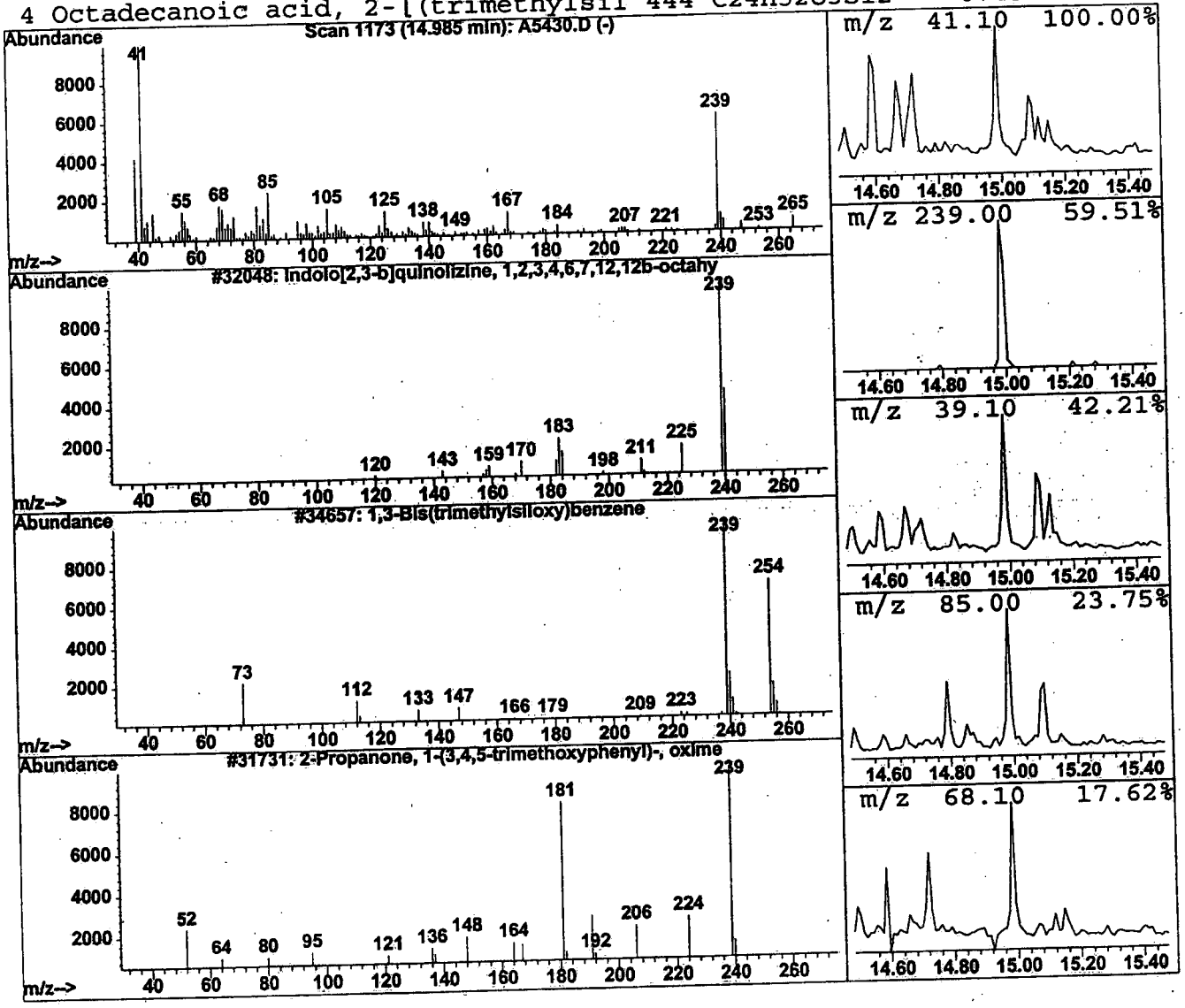
Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 21 Unknown aromatic — Concentration Rank 19

R.T.	EstConc	Area	Relative to ISTD	R.T.
14.98	16.60 UG	471063	Chrysene-d12	15.95

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Indolo[2,3-b]quinolizine, 1,2,3,4,6	240	C16H20N2	013233-45-9	27
2	1,3-Bis(trimethylsiloxy)benzene	254	C12H22O2Si2	004520-29-0	25
3	2-Propanone, 1-(3,4,5-trimethoxyphe	239	C12H17NO4	043022-02-2	25
4	Octadecanoic acid, 2-[(trimethylsil	444	C24H52O3Si2	074367-66-1	16



880

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-27-01\A5430.D
Acq On : 27 Mar 2001 12:35
Sample : S-14,1840-005,s,10.34g,15.1,03/26/01
Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,15
MS Integration Params: LSCINT.P

Vial: 9
Operator: JC
Inst : MSD-A
Multiplr: 1.00

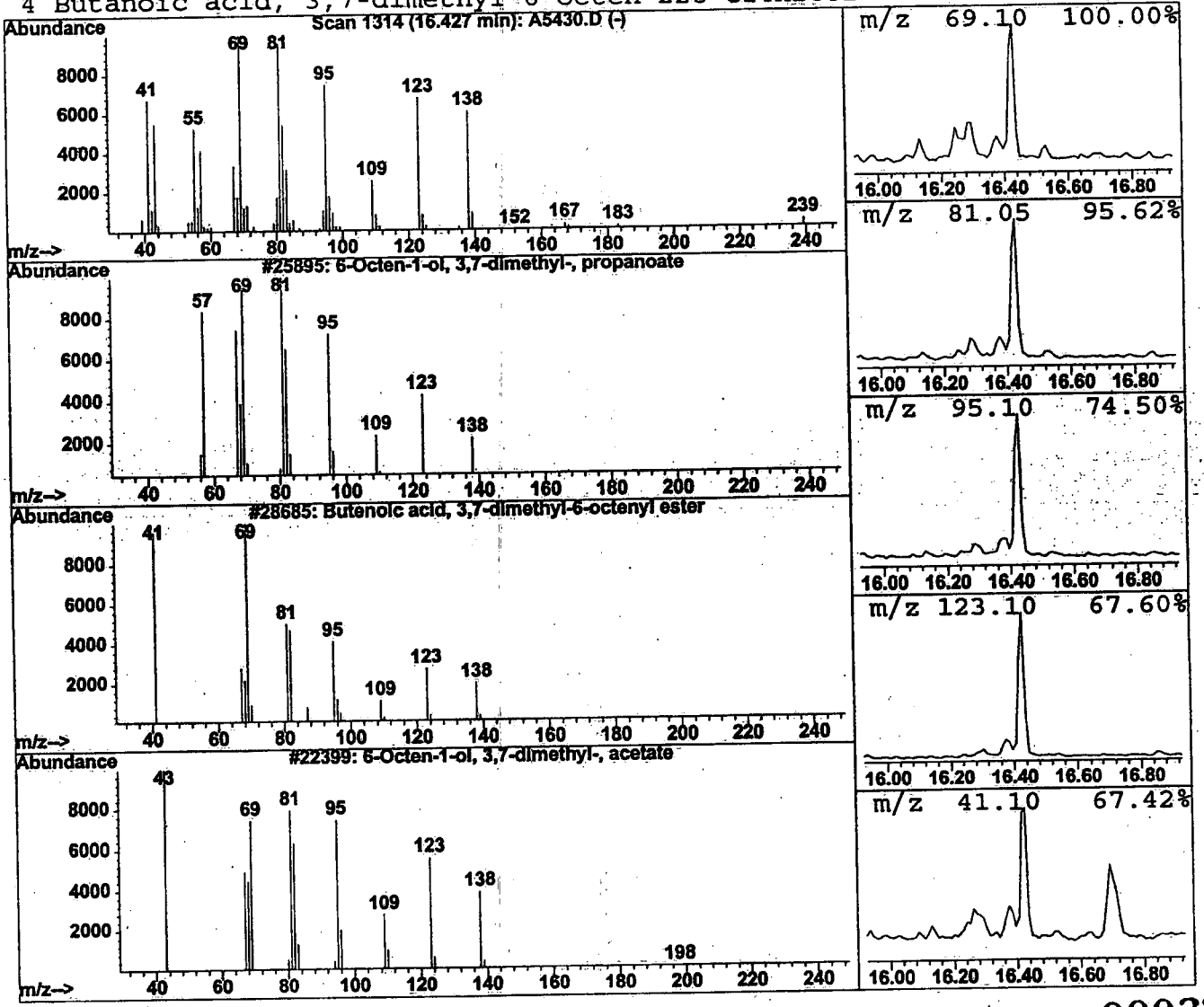
Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 22 Unknown alkane Concentration Rank 18

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.43	16.69 UG	473404	Chrysene-d12	15.95

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	6-Octen-1-ol, 3,7-dimethyl-, propan	212	C13H24O2	000141-14-0	83
2	Butenoic acid, 3,7-dimethyl-6-octen	224	C14H24O2	000000-00-0	72
3	6-Octen-1-ol, 3,7-dimethyl-, acetat	198	C12H22O2	000150-84-5	59
4	Butanoic acid, 3,7-dimethyl-6-octen	226	C14H26O2	000141-16-2	58



000324

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-27-01\A5430.D
Acq On : 27 Mar 2001 12:35
Sample : S-14,1840-005,s,10.34g,15.1,03/26/01
Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,15
MS Integration Params: LSCINT.P

Vial: 9
Operator: JC
Inst : MSD-A
Multiplr: 1.00

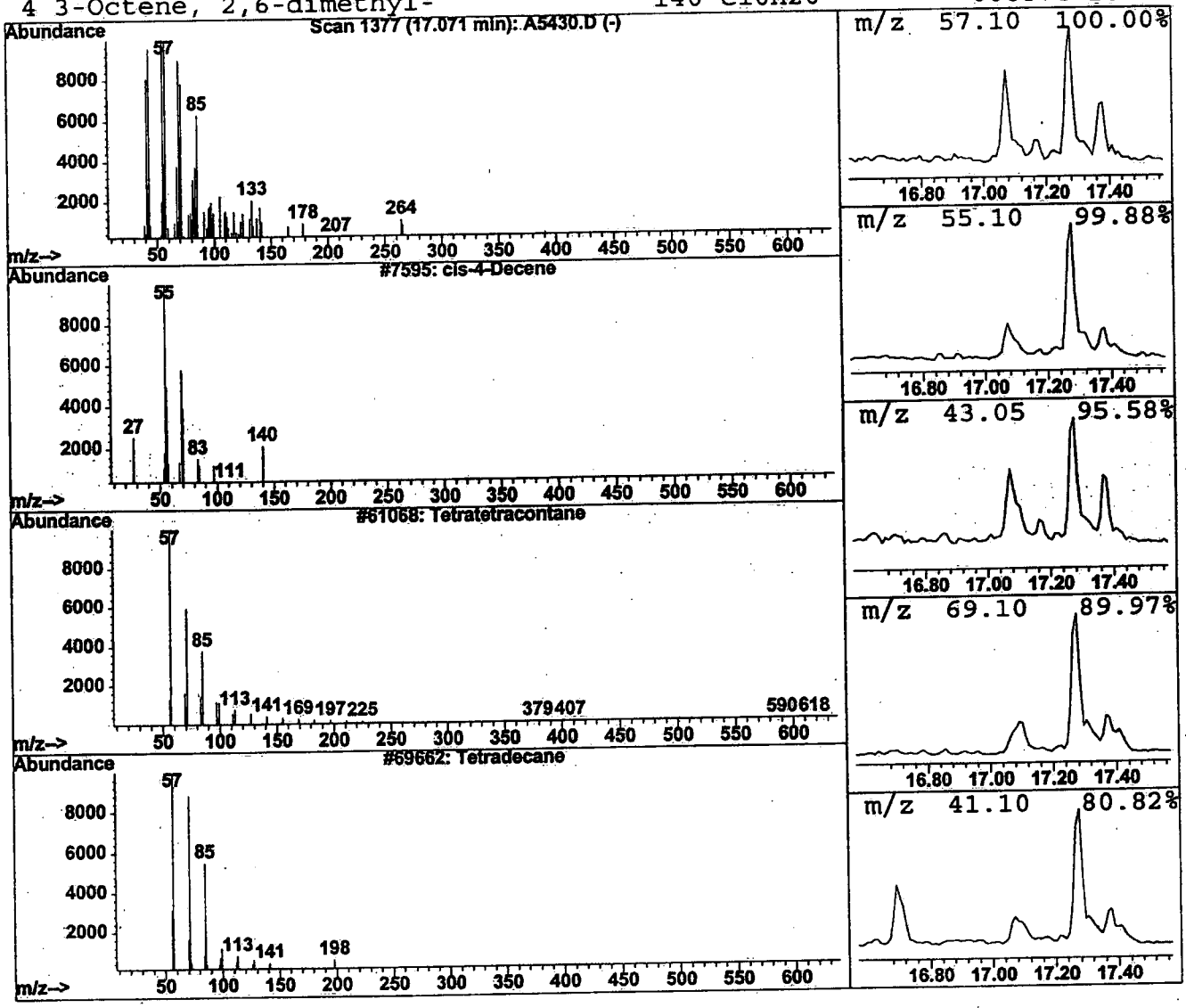
Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 23 Unknown alkane — Concentration Rank 17

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.07	19.22 UG	266575	Perylene-d12	18.03

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	cis-4-Decene	140	C10H20	019398-88-0	45
2	Tetratetracontane	619	C44H90	007098-22-8	38
3	Tetradecane	198	C14H30	000629-59-4	38
4	3-Octene, 2,6-dimethyl-	140	C10H20	006874-28-8	38



000325

887

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-27-01\A5430.D
Acq On : 27 Mar 2001 12:35
Sample : S-14,1840-005,s,10.34g,15.1,03/26/01
Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,15
MS Integration Params: LSCINT.P

Vial: 9
Operator: JC
Inst : MSD-A
Multiplr: 1.00

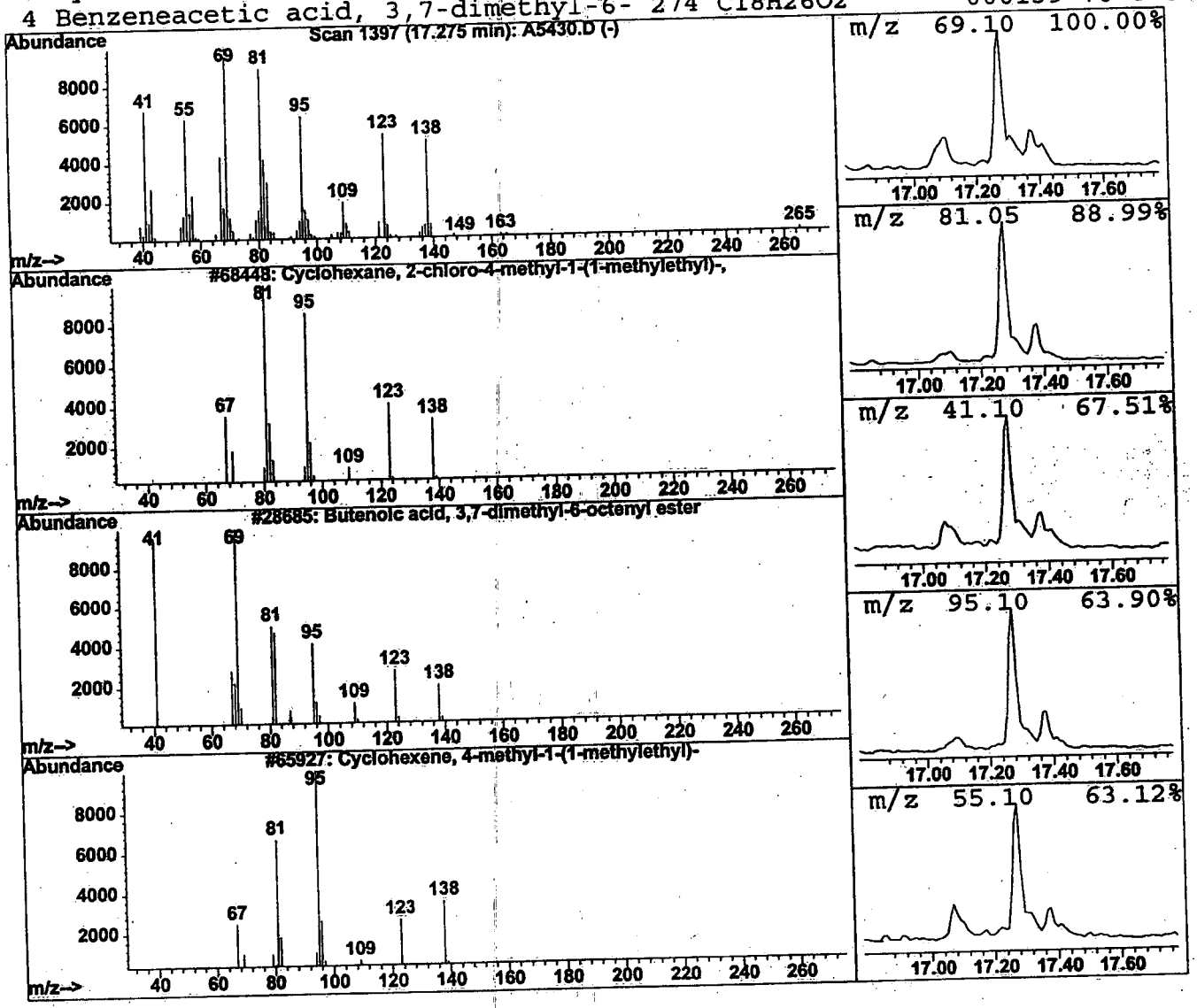
Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 24 Unknown alkane — Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.28	51.47 UG	713745	Perylene-d12	18.03

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexane, 2-chloro-4-methyl-1-(1	174	C10H19Cl	016052-42-9	64
2	Butenoic acid, 3,7-dimethyl-6-octen	224	C14H24O2	000000-00-0	64
3	Cyclohexene, 4-methyl-1-(1-methylet	138	C10H18	000500-00-5	64
4	Benzeneacetic acid, 3,7-dimethyl-6-	274	C18H26O2	000139-70-8	58



883

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-27-01\A5430.D
Acq On : 27 Mar 2001 12:35
Sample : S-14,1840-005,s,10.34g,15.1,03/26/01
Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,15
MS Integration Params: LSCINT.P

Vial: 9
Operator: JC
Inst : MSD-A
Multiplr: 1.00

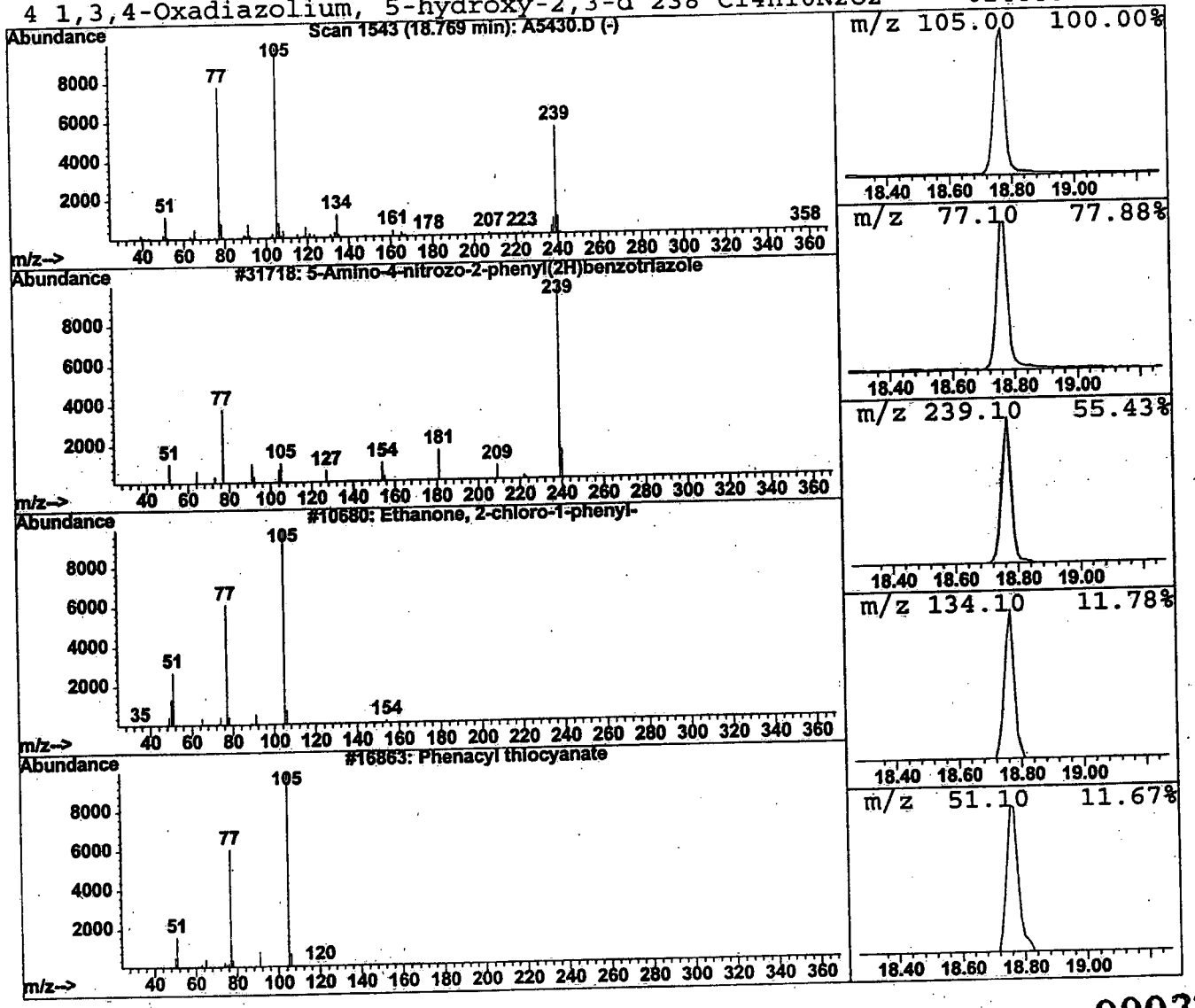
Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 25 Unknown aromatic — Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
18.77	51.98 UG	720820	Perylene-d12	18.03

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	5-Amino-4-nitrozo-2-phenyl(2H)benzo	239	C12H9N5O	000000-00-0	45
2	Ethanone, 2-chloro-1-phenyl-	154	C8H7ClO	000532-27-4	43
3	Phenacyl thiocyanate	177	C9H7NOS	005399-30-4	43
4	1,3,4-Oxadiazolium, 5-hydroxy-2,3-d	238	C14H10N2O2	024660-41-1	32



000327

884

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\03-27-01\A5431.D
Acq On : 27 Mar 2001 13:04
Sample : S-15,1840-006,s,15.15g,17.7,03/26/01
Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,1
MS Integration Params: rteint.p
Quant Time: Mar 27 13:29 2001

Vial: 11
Operator: JC
Inst : MSD-A
Multiplr: 1.00
Quant Results File: AS0601.RES

Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Tue Mar 20 13:59:45 2001
Response via : Initial Calibration
DataAcq Meth : AS0601

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.08	152	88355	40.00	UG	0.00
22) Naphthalene-d8	9.74	136	398686	40.00	UG	-0.01
39) Acenaphthene-d10	11.68	164	210076	40.00	UG	0.00
60) Phenanthrene-d10	13.22	188	385682	40.00	UG	-0.01
75) Chrysene-d12	15.94	240	318621	40.00	UG	-0.02
84) Perylene-d12	18.03	264	208788	40.00	UG	-0.01
System Monitoring Compounds						
4) 2-Fluorophenol	5.94	112	178669	61.76	UG	-0.01
Spiked Amount 100.000	Range 37 - 100		Recovery = 61.76%			
6) Phenol-d5	7.50	99	251169	68.97	UG	-0.04
Spiked Amount 100.000	Range 37 - 104		Recovery = 68.97%			
23) Nitrobenzene-d5	8.84	82	139364	35.07	UG	-0.03
Spiked Amount 50.000	Range 48 - 104		Recovery = 70.14%			
43) 2-Fluorobiphenyl	10.94	172	216049	35.33	UG	0.00
Spiked Amount 50.000	Range 52 - 107		Recovery = 70.66%			
64) 2,4,6-Tribromophenol	12.50	330	143226	97.45	UG	-0.01
Spiked Amount 100.000	Range 60 - 155		Recovery = 97.45%			
77) Terphenyl-d14	14.79	244	382231	54.40	UG	0.00
Spiked Amount 50.000	Range 58 - 157		Recovery = 108.80%			
Target Compounds						Qvalue
14) 1,2-Dichlorobenzene	8.33	146	2571	0.81	UG	# 92

000328

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

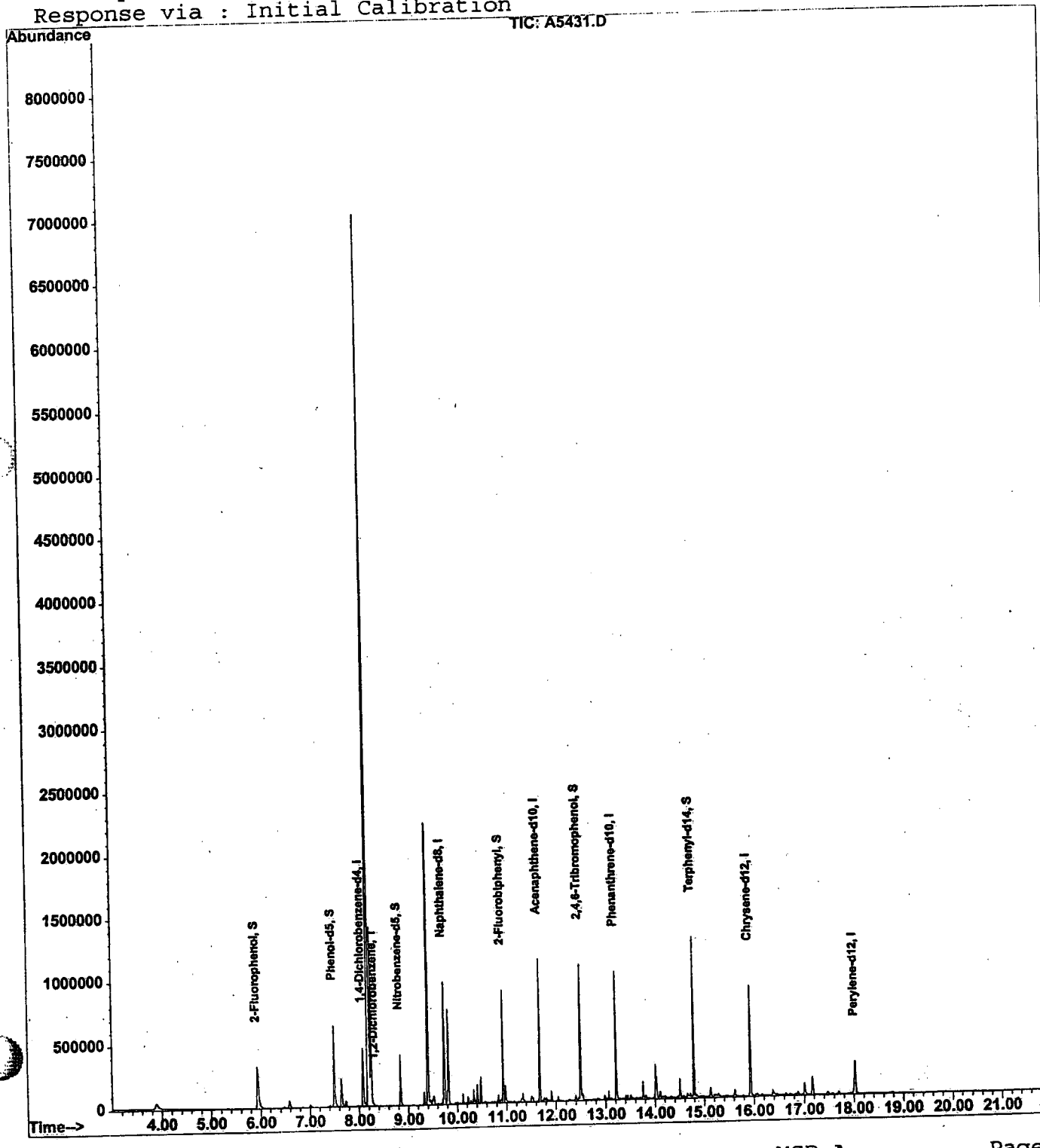
Quantitation Report

Data File : C:\HPCHEM\1\DATA\03-27-01\A5431.D
Acq On : 27 Mar 2001 13:04
Sample : S-15,1840-006,s,15.15g,17.7,03/26/01
Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,1
MS Integration Params: rteint.p
Quant Time: Mar 27 13:29 2001

Vial: 11
Operator: JC
Inst : MSD-A
Multiplr: 1.00

Quant Results File: AS0601.RES

Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Tue Mar 20 13:59:45 2001
Response via : Initial Calibration



886

LSC Area Percent Report

Data File : C:\HPCHEM\1\DATA\03-27-01\A5431.D
Acq On : 27 Mar 2001 13:04
Sample : S-15,1840-006,s,15.15g,17.7,03/26/01
Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,1
.S Integration Params: LSCINT.P

Vial: 11
Operator: JC
Inst : MSD-A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Smoothing : ON
Sampling : 1
Start Thrs: 0.02
Stop Thrs : 0

Filtering: 5
Min Area: 3 % of largest Peak
Max Peaks: 100
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

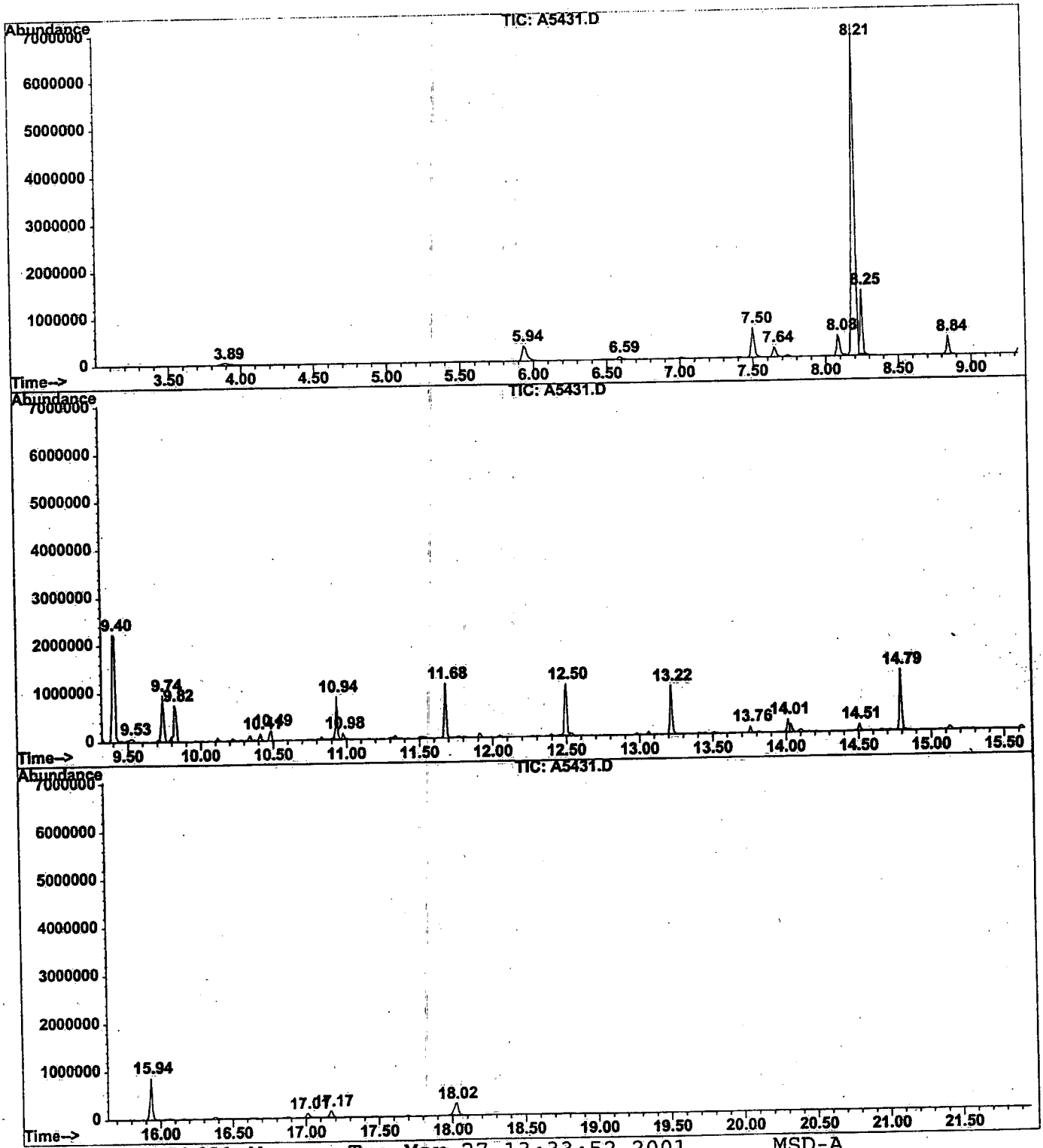
Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	peak area	peak % max.	% of total
1	3.890	82	88	98	rBV	41049	170237	1.60%	0.587%
2	5.935	285	288	306	rVB	323549	750017	7.05%	2.588%
3	6.590	348	352	360	rVB	56665	109652	1.03%	0.378%
4	7.500	438	441	452	rBV	637231	960233	9.03%	3.314%
5	7.643	452	455	460	rBV	218433	352832	3.32%	1.218%
6	8.083	495	498	502	rBV	454775	673528	6.34%	2.324%
7	8.206	505	510	512	rBV	7032625	10631206	100.00%	36.686%
8	8.247	512	514	517	rVB	1377646	1453409	13.67%	5.015%
9	8.840	570	572	577	rVB	394723	456689	4.30%	1.576%
10	9.402	624	627	630	rVV	2232716	3257154	30.64%	11.240%
11	9.525	634	639	642	rVB3	64353	153214	1.44%	0.529%
12	9.740	658	660	663	rVB	952460	1034341	9.73%	3.569%
13	9.822	666	668	671	rVB	740135	875147	8.23%	3.020%
14	10.415	724	726	728	rBV	148622	145774	1.37%	0.503%
15	10.486	730	733	735	rVB	205883	229118	2.16%	0.791%
16	10.936	775	777	779	rVB	879894	749894	7.05%	2.588%
17	10.977	779	781	783	rBV	124111	111338	1.05%	0.384%
18	11.683	847	850	852	rBV	1124412	1059550	9.97%	3.656%
19	12.501	927	930	932	rBV	1065017	1271045	11.96%	4.386%
20	13.217	997	1000	1003	rBV	1007406	1001743	9.42%	3.457%
21	13.759	1051	1053	1057	rVB	133375	115842	1.09%	0.400%
22	14.015	1076	1078	1079	rBV	266447	249226	2.34%	0.860%
23	14.506	1121	1126	1129	rVB	144571	156613	1.47%	0.540%
24	14.792	1151	1154	1156	rBV	1260191	1191417	11.21%	4.111%
25	15.937	1263	1266	1269	rBV	869281	926629	8.72%	3.198%
26	17.011	1368	1371	1376	rVB	92047	140421	1.32%	0.485%
27	17.175	1383	1387	1390	rBV	138911	221283	2.08%	0.764%
28	18.024	1465	1470	1474	rBV	257563	531703	5.00%	1.835%

Sum of corrected areas: 28979255

LSC Report - Integrated Chromatogram

File : C:\HPCHEM\1\DATA\03-27-01\A5431.D
Operator : JC
Acquired : 27 Mar 2001 13:04 using AcqMethod AS0601
Instrument : MSD-A
Sample Name: S-15,1840-006,s,15.15g,17.7,03/26/01
Misc Info : ENVTACT/444 ORBIS,03/23/01,03/26/01,1
Vial Number: 11
Quant File :AS0601.RES (RTE Integrator)



A5431.D AS0601.M Tue Mar 27 13:33:52 2001 MSD-A

000332

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-27-01\A5431.D
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Sample : S-15,1840-006,s,15.15g,17.7,03/26/01
Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,1
MS Integration Params: LSCINT.P

Vial: 11
Operator: JC
Inst : MSD-A
Multiplr: 1.00

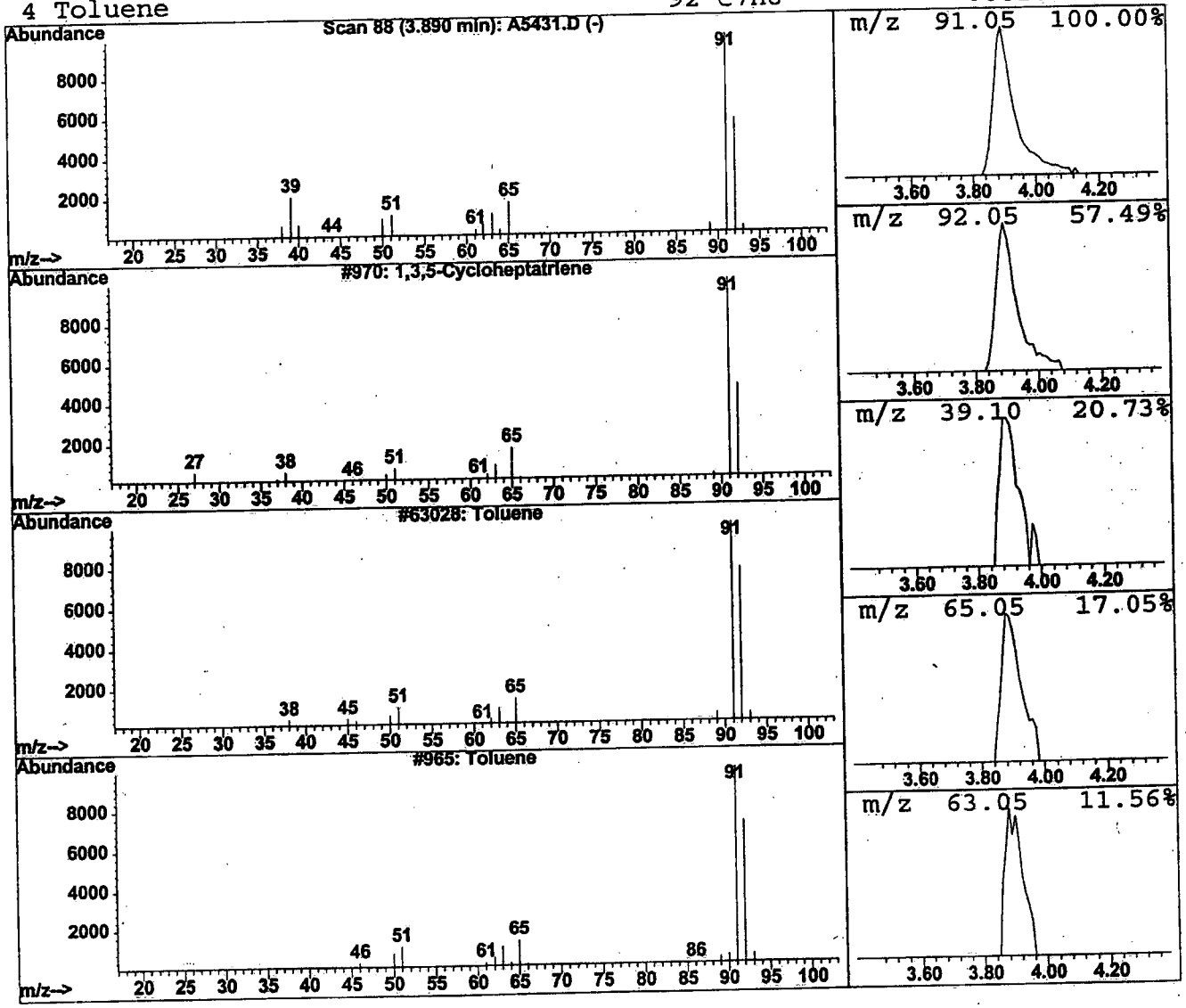
Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 1 Substituted benzene Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
3.89	10.11 UG	170237	1,4-Dichlorobenzene-d4	8.08

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1,3,5-Cycloheptatriene	92	C7H8	000544-25-2	91
2	Toluene	92	C7H8	000108-88-3	91
3	Toluene	92	C7H8	000108-88-3	91
4	Toluene	92	C7H8	000108-88-3	86



Library Search Compound Report

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MS Integration Params: LSCINT.P

Vial: 11
Operator: JC
Inst : MSD-A
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

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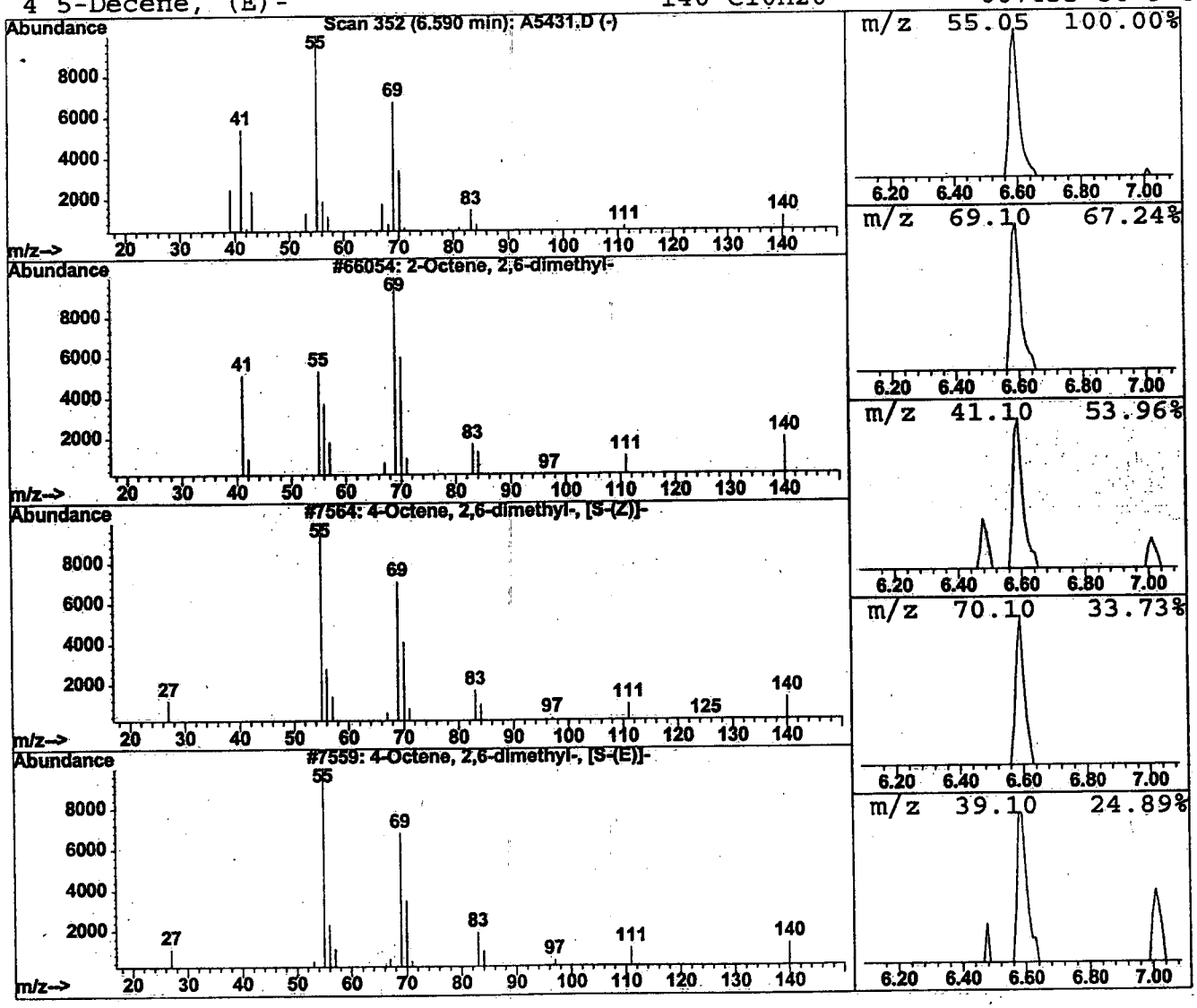
Peak Number 2 Unknown alkane Concentration Rank 11

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.59	6.51 UG	109652	1,4-Dichlorobenzene-d4	8.08

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2-Octene, 2,6-dimethyl-	140	C10H20	004057-42-5	81
2	4-Octene, 2,6-dimethyl-, [S-(Z)]-	140	C10H20	062960-77-4	80
3	4-Octene, 2,6-dimethyl-, [S-(E)]-	140	C10H20	062960-76-3	72
4	5-Decene, (E)-	140	C10H20	007433-56-9	59



491

Library Search Compound Report

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MS Integration Params: LSCINT.P

Vial: 11
Operator: JC
Inst : MSD-A
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

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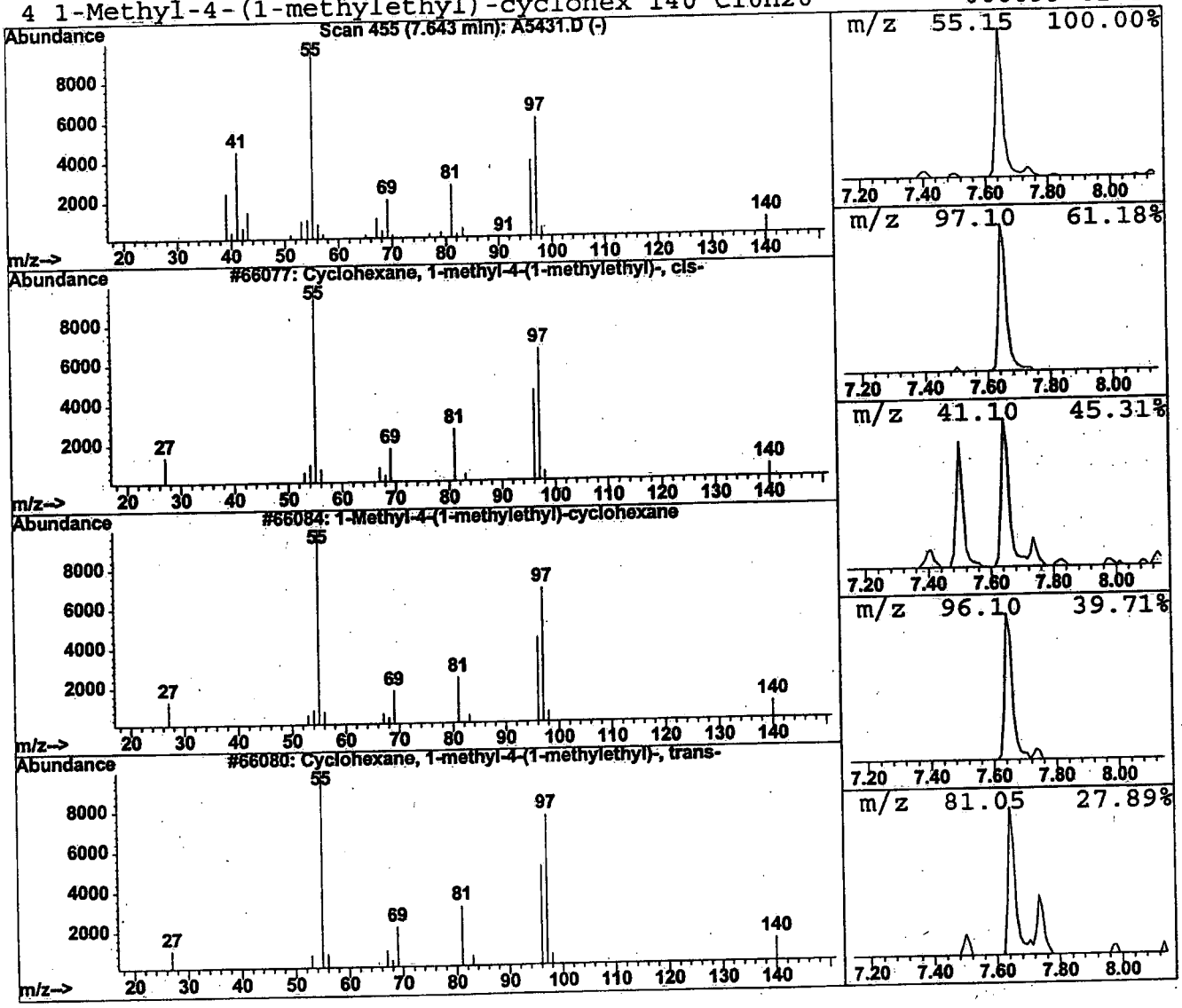
Peak Number 3 Unknown alkane — Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
7.64	20.95 UG	352832	1,4-Dichlorobenzene-d4	8.08

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexane, 1-methyl-4-(1-methylet	140	C10H20	006069-98-3	95
2	1-Methyl-4-(1-methylethyl)-cyclohex	140	C10H20	000099-82-1	94
3	Cyclohexane, 1-methyl-4-(1-methylet	140	C10H20	001678-82-6	94
4	1-Methyl-4-(1-methylethyl)-cyclohex	140	C10H20	000099-82-1	94



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Library Search Compound Report

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MS Integration Params: LSCINT.P

Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

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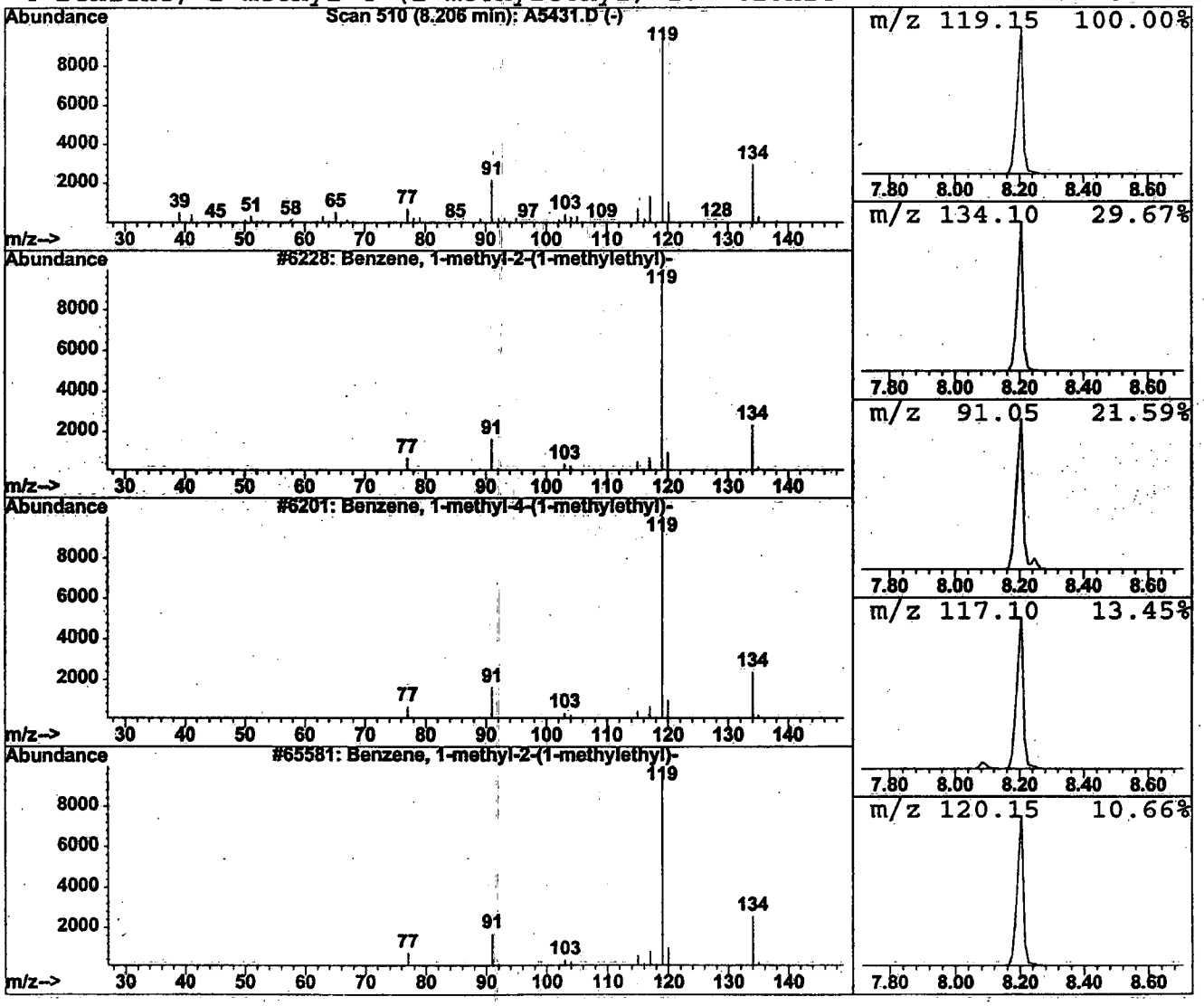
Peak Number 4 Substituted benzene Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.21	631.37 UG	10631200	1,4-Dichlorobenzene-d4	8.08

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-methyl-2-(1-methylethyl)	134	C10H14	000527-84-4	95
2	Benzene, 1-methyl-4-(1-methylethyl)	134	C10H14	000099-87-6	95
3	Benzene, 1-methyl-2-(1-methylethyl)	134	C10H14	000527-84-4	95
4	Benzene, 1-methyl-4-(1-methylethyl)	134	C10H14	000099-87-6	95



Library Search Compound Report

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MS Integration Params: LSCINT.P

Vial: 11
Operator: JC
Inst : MSD-A
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

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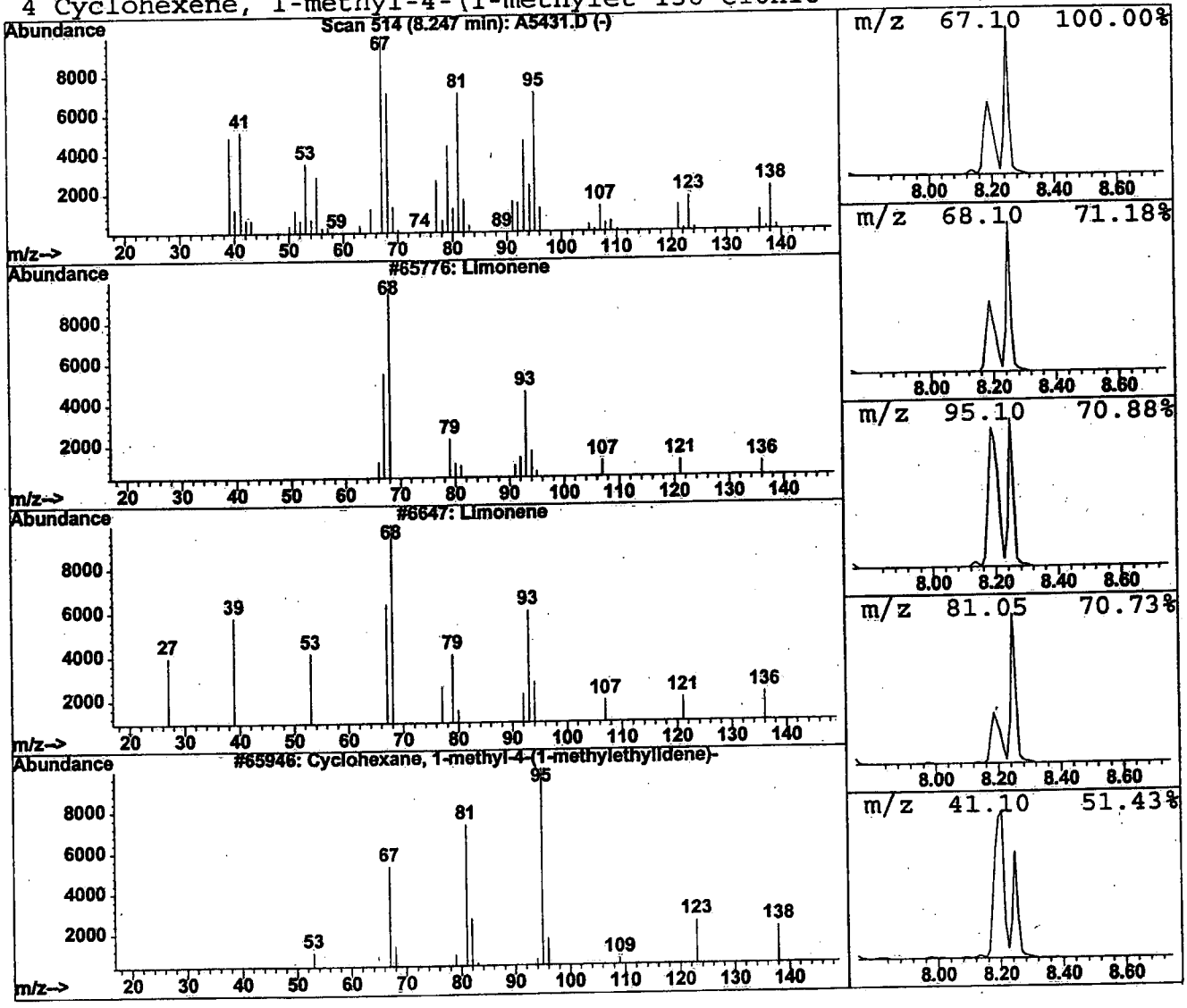
Peak Number 5 Unknown alkane Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.25	86.32 UG	1453410	1,4-Dichlorobenzene-d4	8.08

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Limonene	136	C10H16	000138-86-3	60
2	Limonene	136	C10H16	000138-86-3	55
3	Cyclohexane, 1-methyl-4-(1-methylet	138	C10H18	001124-27-2	53
4	Cyclohexene, 1-methyl-4-(1-methylet	136	C10H16	007705-14-8	50



Library Search Compound Report

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MS Integration Params: LSCINT.P

Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

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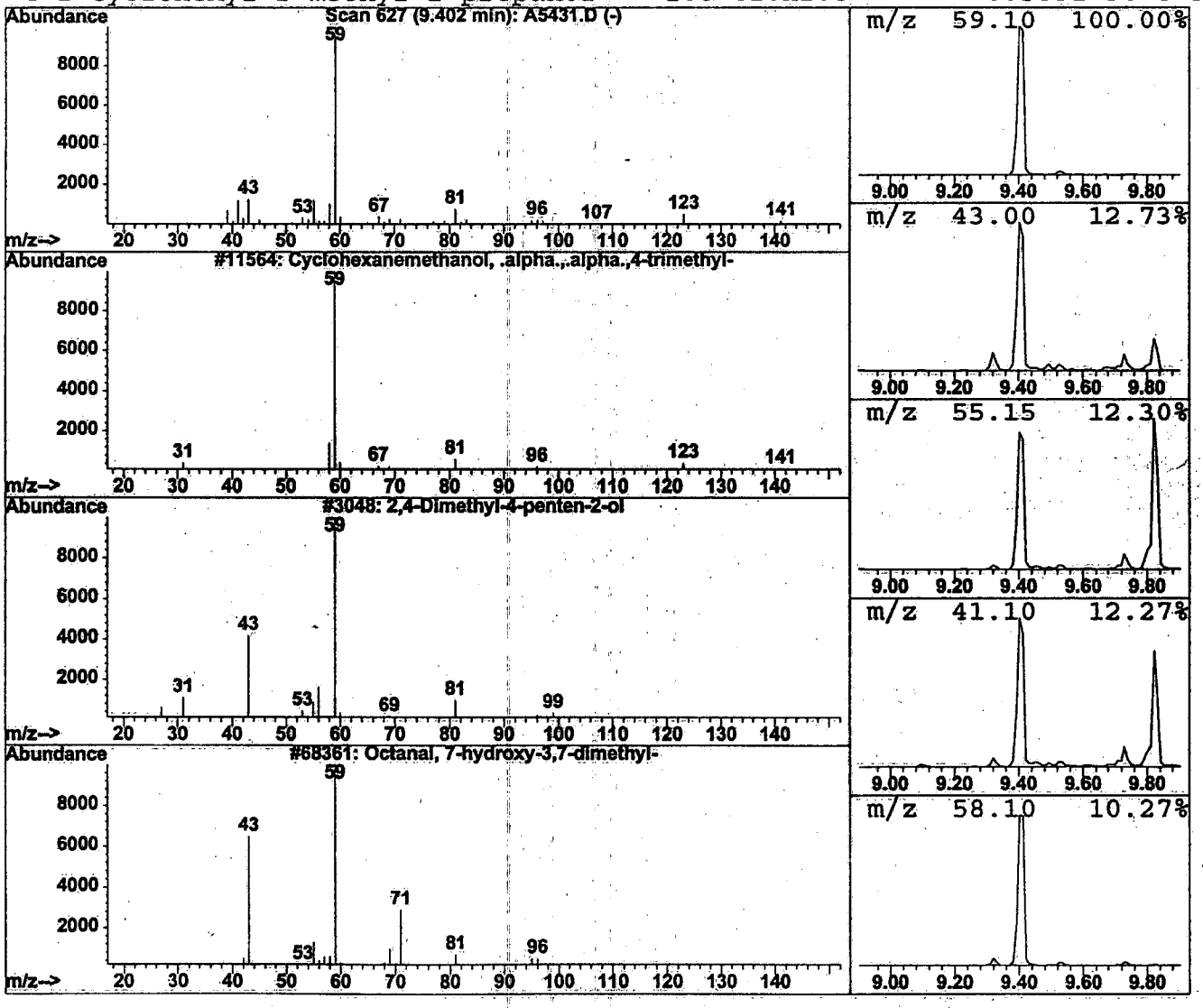
Peak Number 6 Unknown alkane Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.40	125.96 UG	3257150	Naphthalene-d8	9.74

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexanemethanol, .alpha.,.alpha	156	C10H20O	000498-81-7	83
2	2,4-Dimethyl-4-penten-2-ol	114	C7H14O	019781-53-4	50
3	Octanal, 7-hydroxy-3,7-dimethyl-	172	C10H20O2	000107-75-5	40
4	1-Cyclohexyl-2-methyl-2-propanol	156	C10H20O	005531-30-6	39



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Library Search Compound Report

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Vial: 11
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Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

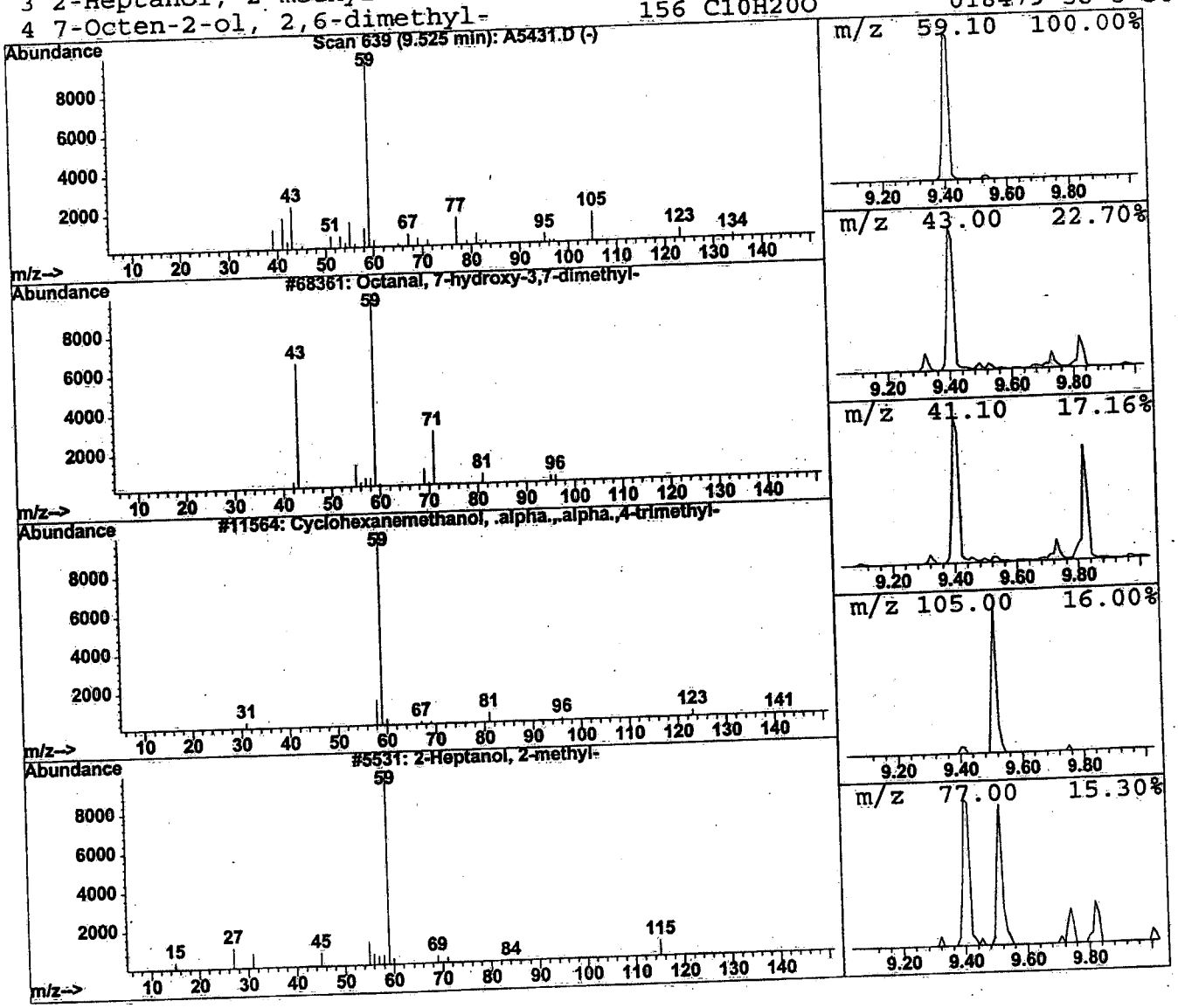
****

Peak Number 7 Unknown alkane

Concentration Rank 13

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.53	5.93 UG	153214	Naphthalene-d8	9.74

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Octanal, 7-hydroxy-3,7-dimethyl-	172	C10H20O2	000107-75-5	45
2	Cyclohexanemethanol, .alpha.,.alpha	156	C10H20O	000498-81-7	42
3	2-Heptanol, 2-methyl-	130	C8H18O	000625-25-2	36
4	7-Octen-2-ol, 2,6-dimethyl-	156	C10H20O	018479-58-8	36



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Library Search Compound Report

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MS Integration Params: LSCINT.P

Vial: 11
Operator: JC
Inst : MSD-A
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

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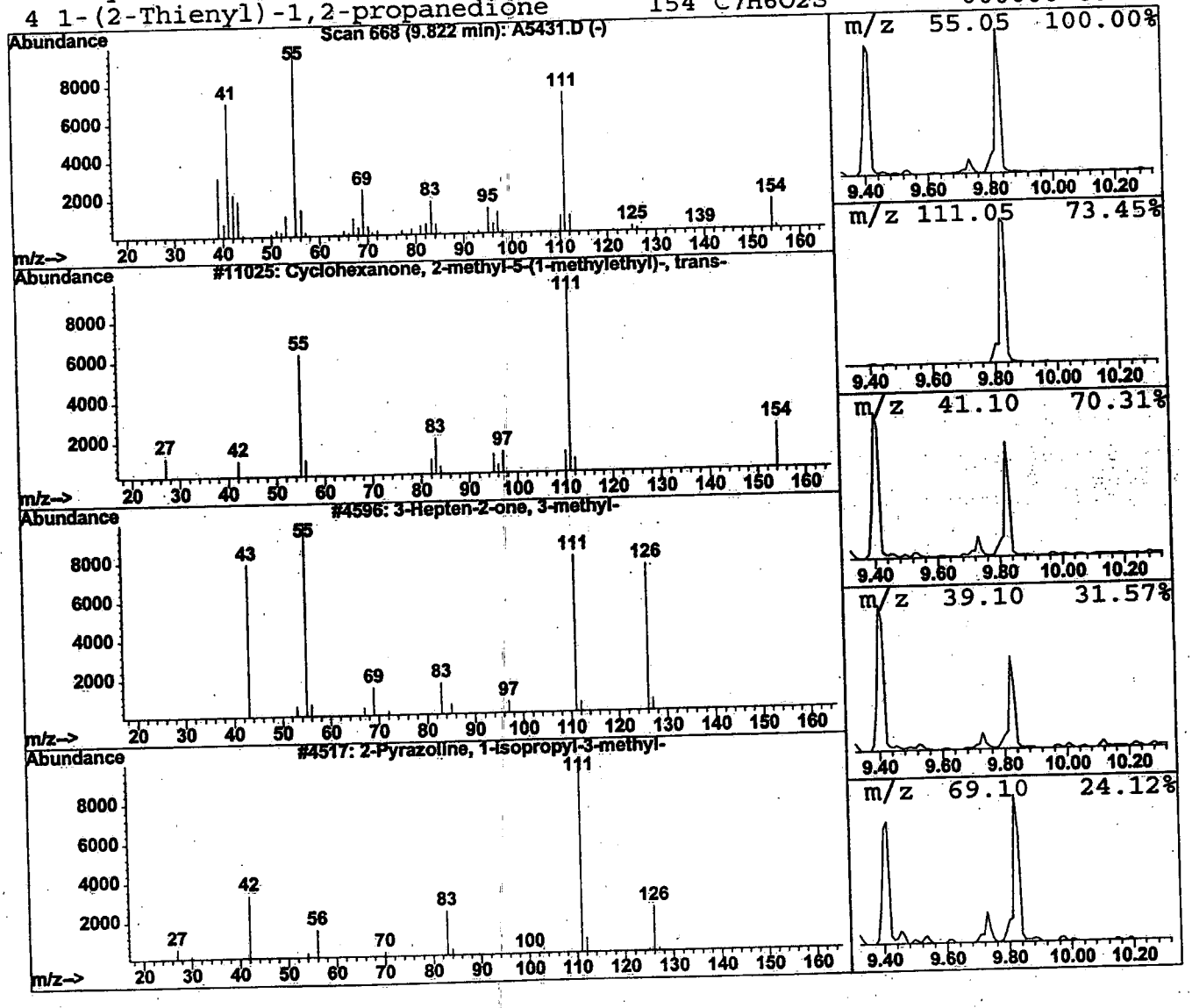
Peak Number 8 Unknown alkane

Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.82	33.84 UG	875147	Naphthalene-d8	9.74

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexanone, 2-methyl-5-(1-methyl	154	C10H18O	000499-70-7	91
2	3-Hepten-2-one, 3-methyl-	126	C8H14O	039899-08-6	52
3	2-Pyrazoline, 1-isopropyl-3-methyl-	126	C7H14N2	022581-48-2	50
4	1-(2-Thienyl)-1,2-propanedione	154	C7H6O2S	000000-00-0	47



Library Search Compound Report

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Vial: 11
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Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

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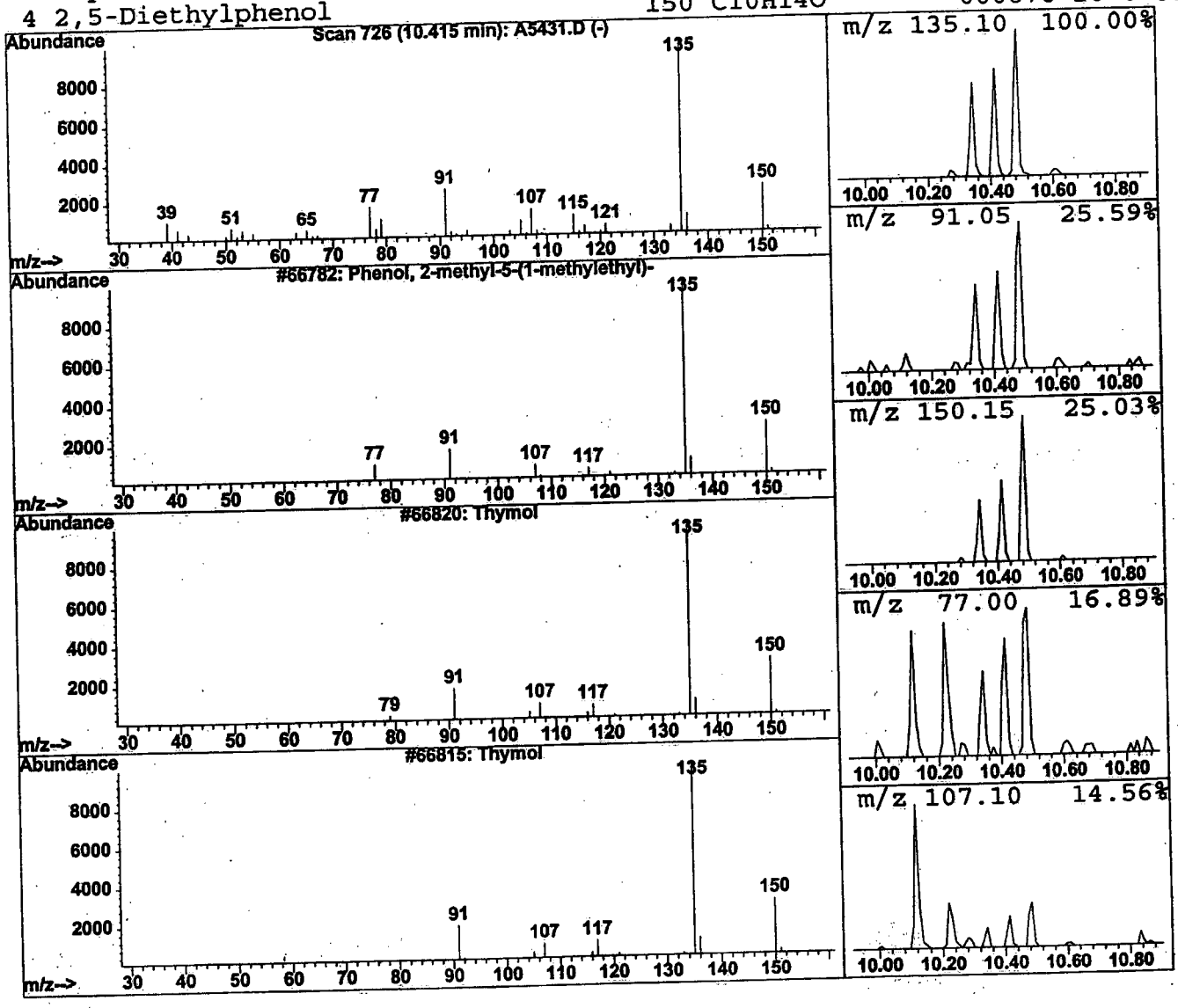
Peak Number 9 Substituted phenol Concentration Rank 14

R.T.	EstConc	Area	Relative to ISTD	R.T.
10.41	5.64 UG	145774	Naphthalene-d8	9.74

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Phenol, 2-methyl-5-(1-methylethyl)-	150	C10H14O	000499-75-2	87
2	Thymol	150	C10H14O	000089-83-8	87
3	Thymol	150	C10H14O	000089-83-8	83
4	2,5-Diethylphenol	150	C10H14O	000876-20-0	83



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MS Integration Params: LSCINT.P

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Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

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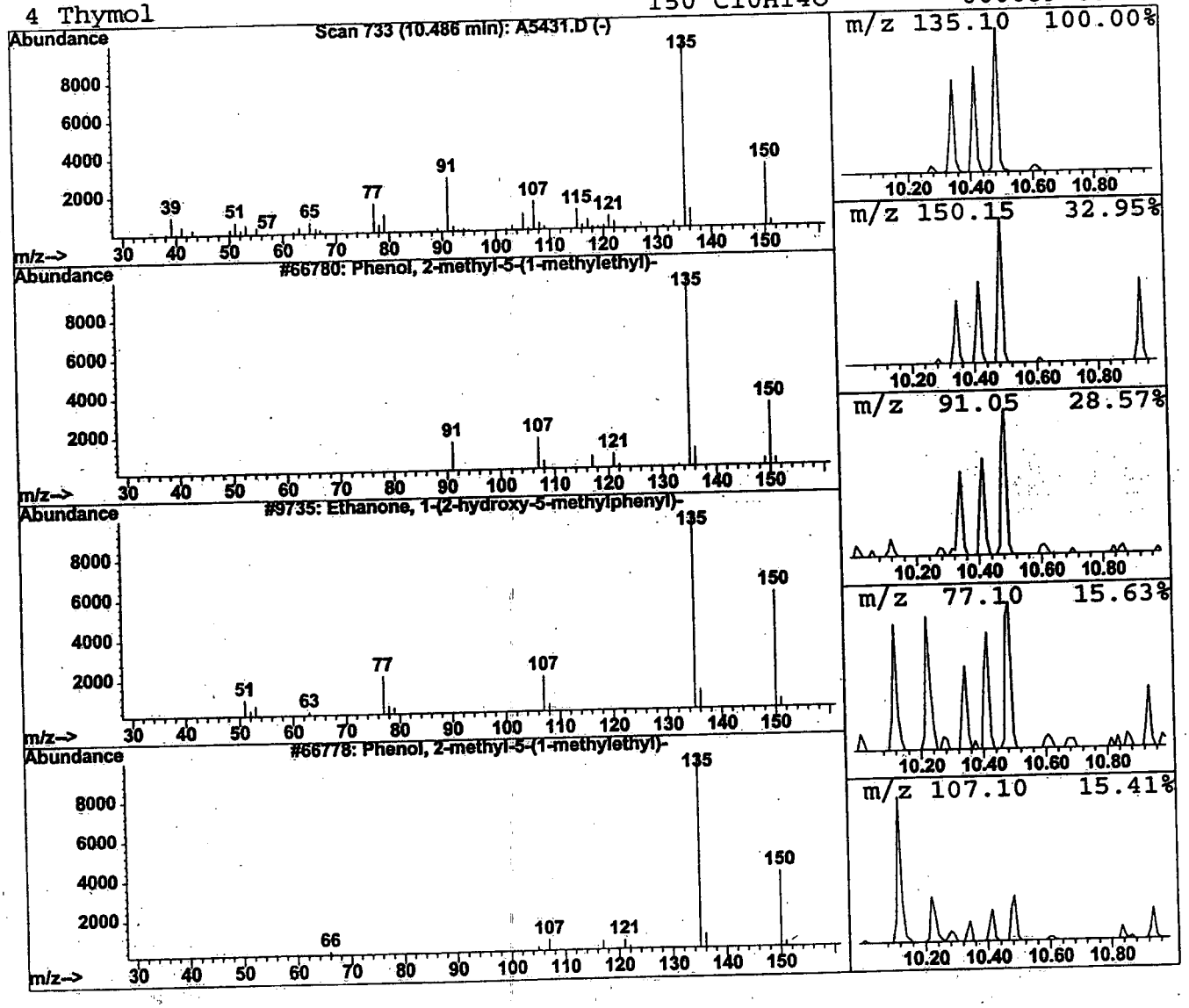
Peak Number 10 Substituted phenol Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
10.49	8.86 UG	229118	Naphthalene-d8	9.74

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Phenol, 2-methyl-5-(1-methylethyl)-	150	C10H14O	000499-75-2	90
2	Ethanone, 1-(2-hydroxy-5-methylphen	150	C9H10O2	001450-72-2	87
3	Phenol, 2-methyl-5-(1-methylethyl)-	150	C10H14O	000499-75-2	87
4	Thymol	150	C10H14O	000089-83-8	87



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Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

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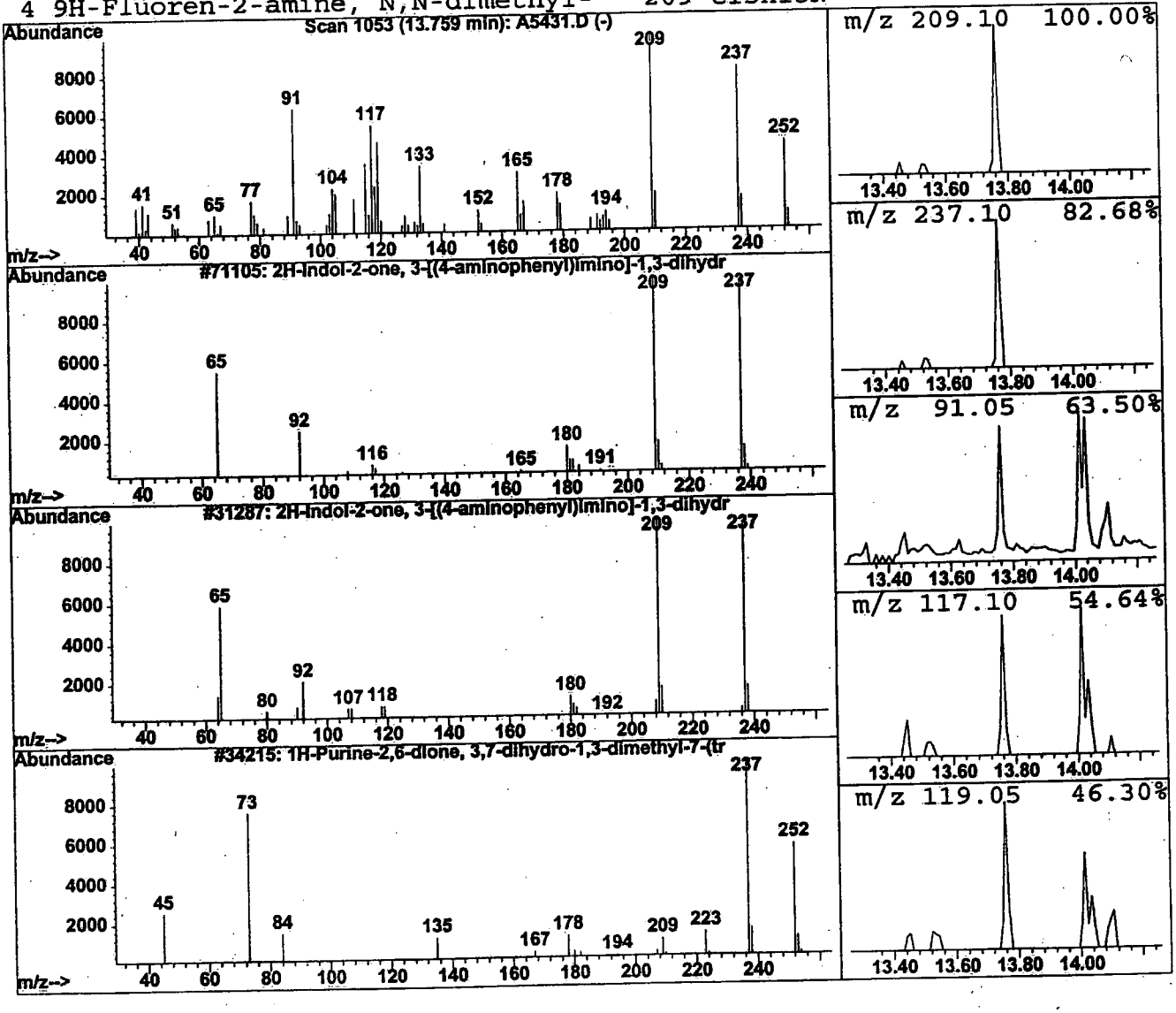
Peak Number 11 Unknown aromatic — Concentration Rank 15

R.T.	EstConc	Area	Relative to ISTD	R.T.
13.76	4.63 UG	115842	Phenanthrene-d10	13.22

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2H-Indol-2-one, 3-[(4-aminophenyl)i	237	C14H11N3O	033829-07-1	43
2	2H-Indol-2-one, 3-[(4-aminophenyl)i	237	C14H11N3O	033829-07-1	37
3	1H-Purine-2,6-dione, 3,7-dihydro-1,	252	C10H16N4O2Si	062374-32-7	27
4	9H-Fluoren-2-amine, N,N-dimethyl-	209	C15H15N	013261-62-6	22



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MS Integration Params: LSCINT.P

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Operator: JC
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Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

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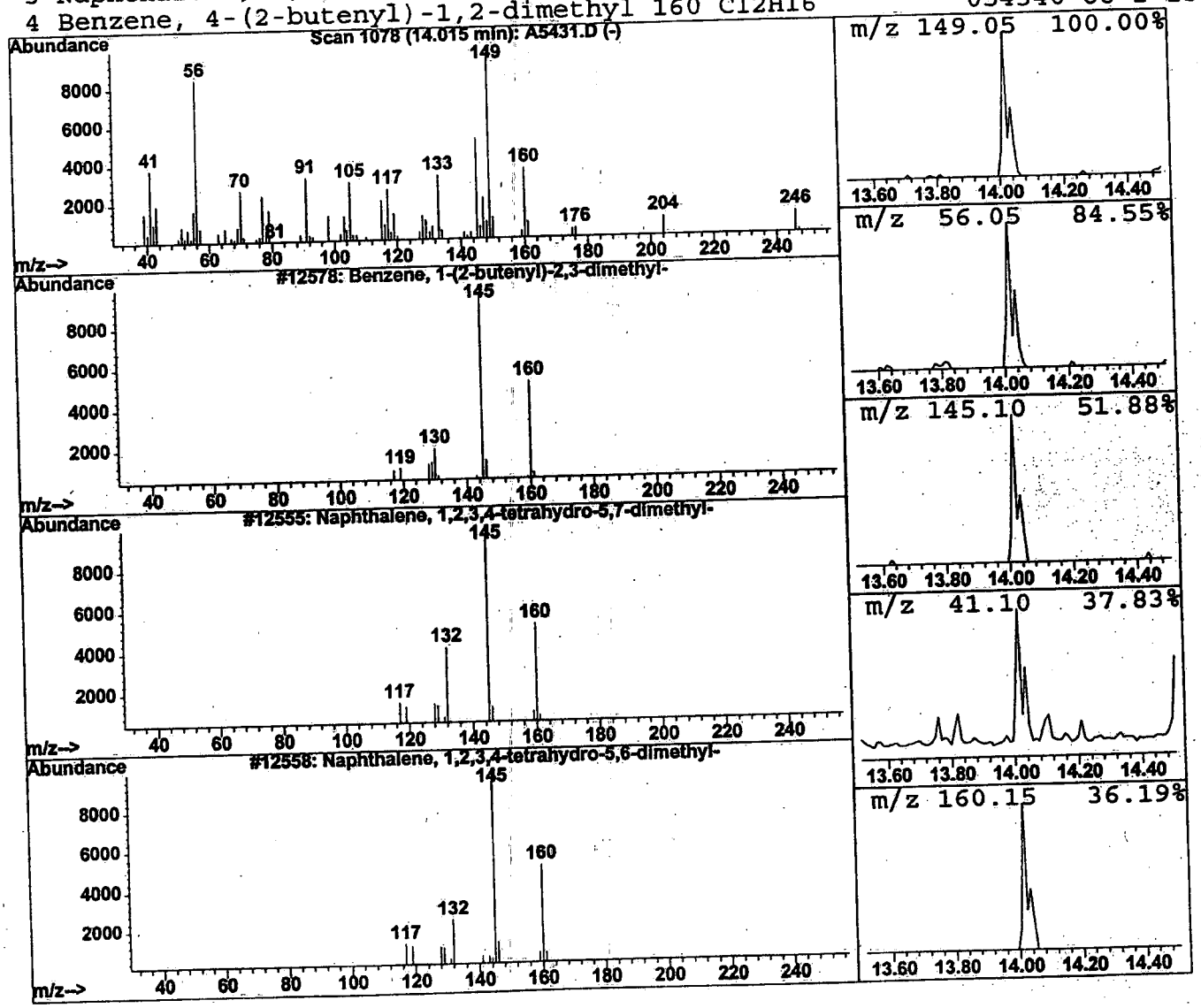
Peak Number 12 Substituted benzene Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
14.01	9.95 UG	249226	Phenanthrene-d10	13.22

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-(2-butenyl)-2,3-dimethyl	160	C12H16	054340-85-1	43
2	Naphthalene, 1,2,3,4-tetrahydro-5,7	160	C12H16	021693-54-9	25
3	Naphthalene, 1,2,3,4-tetrahydro-5,6	160	C12H16	020027-77-4	15
4	Benzene, 4-(2-butenyl)-1,2-dimethyl	160	C12H16	054340-86-2	15



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Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,1
MS Integration Params: LSCINT.P

Vial: 11
Operator: JC
Inst : MSD-A
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

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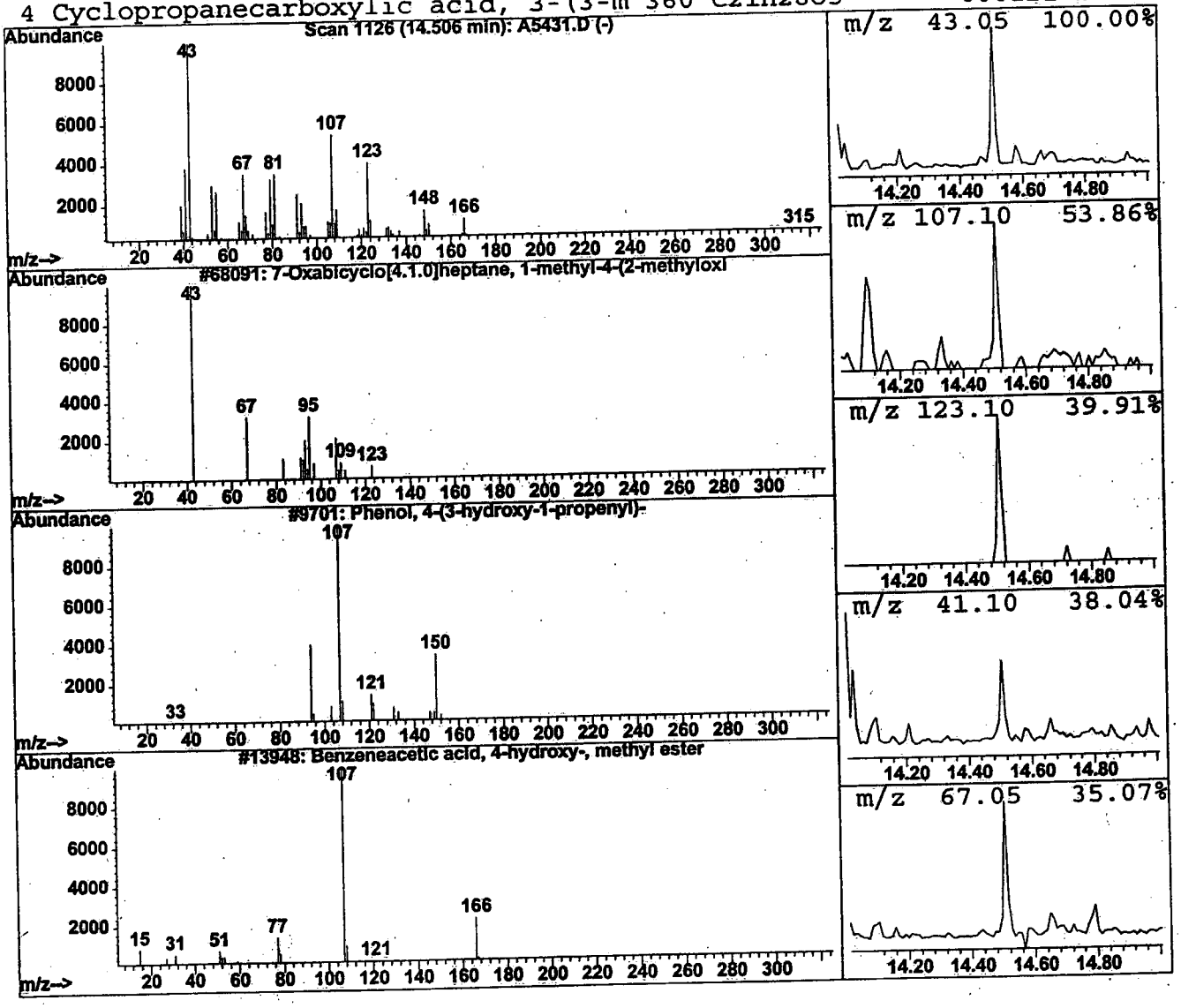
Peak Number 13 Unknown — Concentration Rank 12

R.T.	EstConc	Area	Relative to ISTD	R.T.
14.51	6.25 UG	156613	Phenanthrene-d10	13.22

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	7-Oxabicyclo[4.1.0]heptane, 1-methy	168	C10H16O2	000096-08-2	32
2	Phenol, 4-(3-hydroxy-1-propenyl)-	150	C9H10O2	003690-05-9	27
3	Benzeneacetic acid, 4-hydroxy-, met	166	C9H10O3	014199-15-6	22
4	Cyclopropanecarboxylic acid, 3-(3-m	360	C21H28O5	000121-20-0	16



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Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,1
MS Integration Params: LSCINT.P

Vial: 11
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Inst : MSD-A
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

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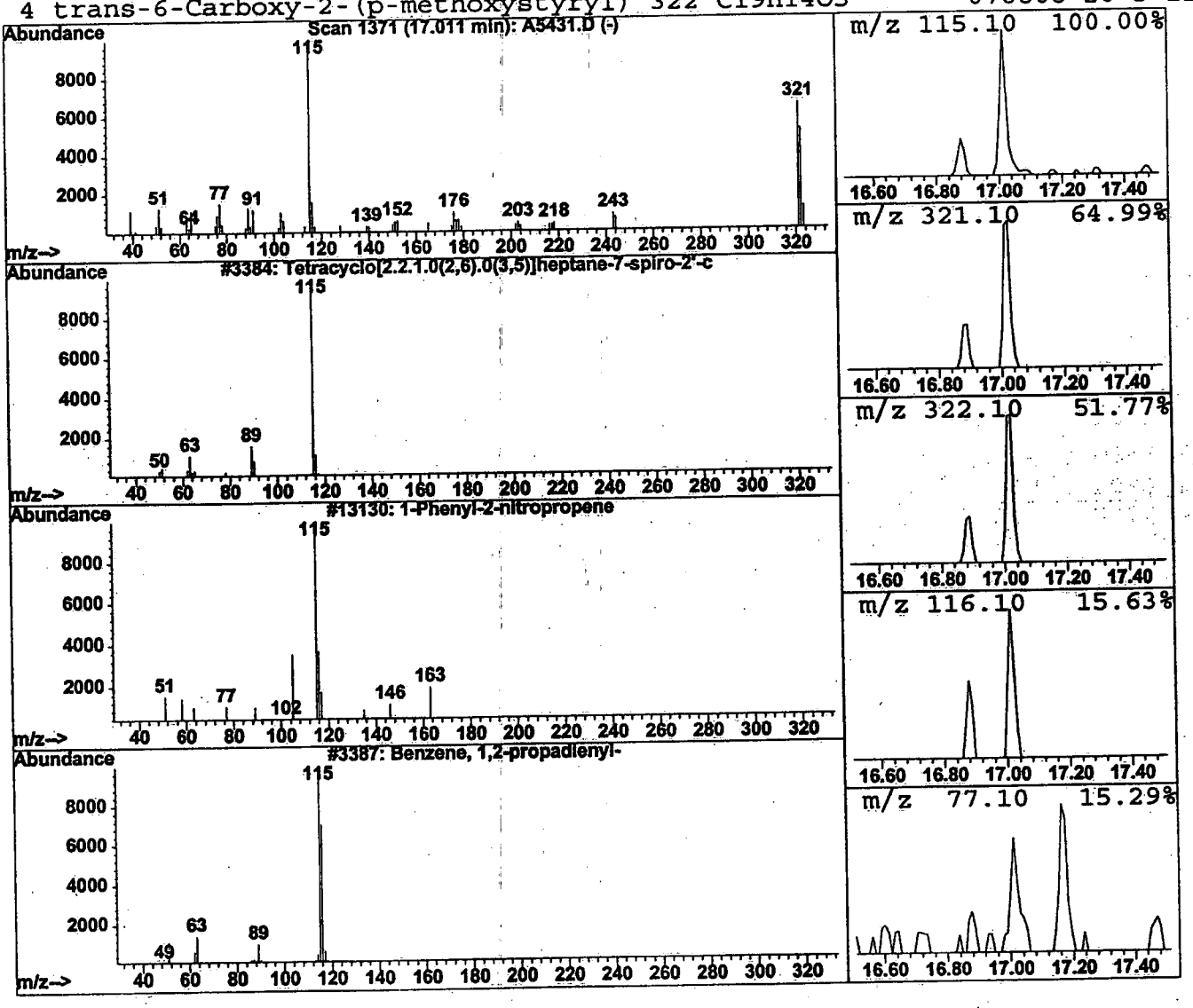
Peak Number 14 Substituted benzene Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.01	10.56 UG	140421	Perylene-d12	18.03

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Tetracyclo[2.2.1.0(2,6).0(3,5)]hept	116	C9H8	000000-00-0	25
2	1-Phenyl-2-nitropropene	163	C9H9NO2	000000-00-0	12
3	Benzene, 1,2-propadienyl-	116	C9H8	002327-99-3	12
4	trans-6-Carboxy-2-(p-methoxystyryl)	322	C19H14O5	076808-20-3	12



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Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,1
MS Integration Params: LSCINT.P

Vial: 11
Operator: JC
Inst : MSD-A
Multiplr: 1.00

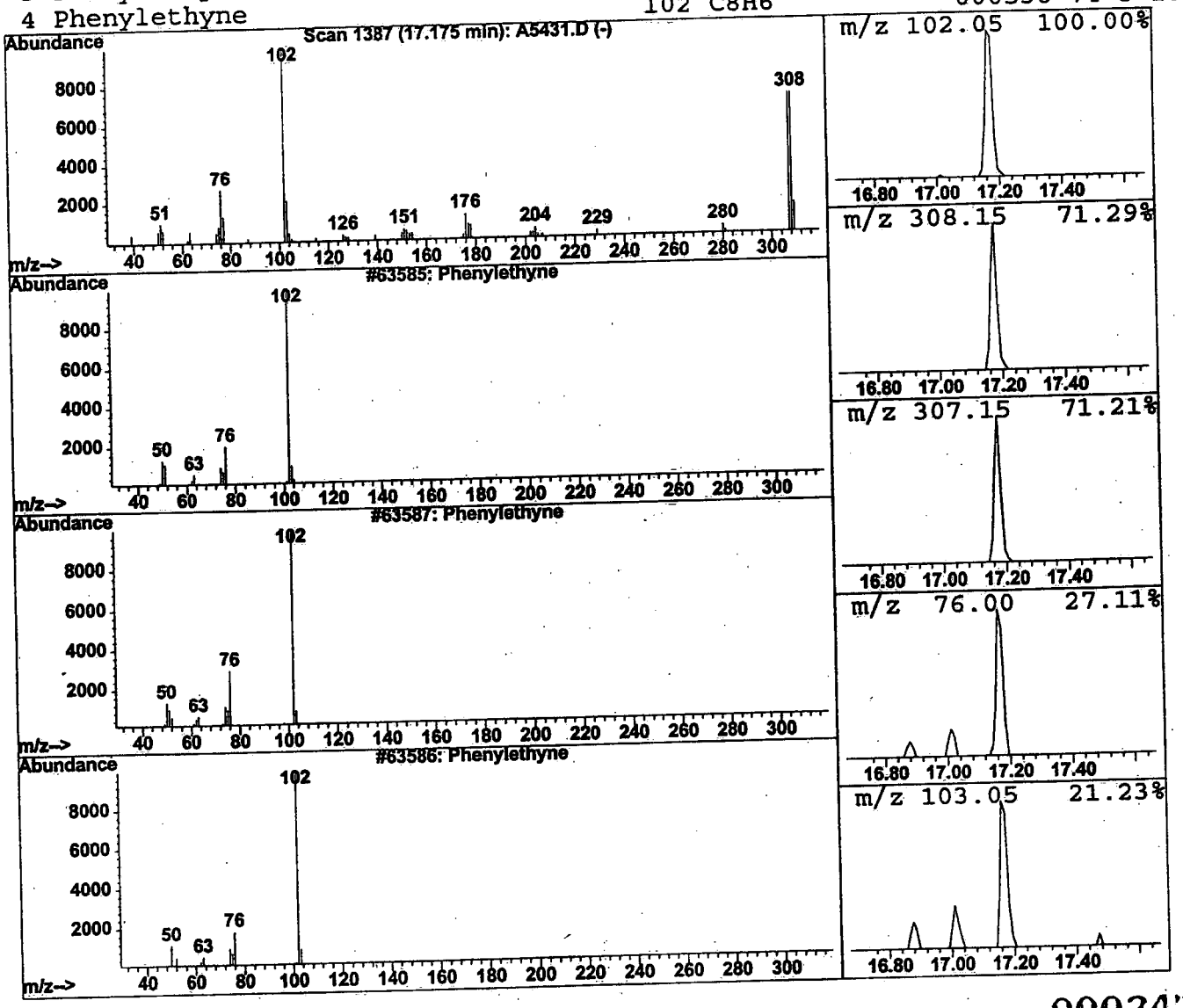
Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 15 Unknown aromatic — Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.17	16.65 UG	221283	Perylene-d12	18.03

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Phenylethyne	102	C8H6	000536-74-3	35
2	Phenylethyne	102	C8H6	000536-74-3	25
3	Phenylethyne	102	C8H6	000536-74-3	25
4	Phenylethyne	102	C8H6	000536-74-3	25



000347

904

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\03-27-01\A5429.D Vial: 10
Acq On : 27 Mar 2001 12:07 Operator: JC
Sample : S-16,1840-007,s,15.30g,14.9,03/26/01 Inst : MSD-A
Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,3 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Mar 27 12:36 2001 Quant Results File: AS0601.RES

Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Tue Mar 20 13:59:45 2001
Response via : Initial Calibration
DataAcq Meth : AS0601

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.09	152	93887	40.00	UG	0.00
22) Naphthalene-d8	9.74	136	428077	40.00	UG	0.00
39) Acenaphthene-d10	11.68	164	215516	40.00	UG	0.00
60) Phenanthrene-d10	13.22	188	412714	40.00	UG	0.00
75) Chrysene-d12	15.94	240	330674	40.00	UG	-0.02
84) Perylene-d12	18.03	264	244514	40.00	UG	-0.02
System Monitoring Compounds						
4) 2-Fluorophenol	5.94	112	58388	18.99	UG	0.00
Spiked Amount 100.000	Range 37 - 100		Recovery = 18.99%#			
6) Phenol-d5	7.49	99	90627	23.42	UG	-0.05
Spiked Amount 100.000	Range 37 - 104		Recovery = 23.42%#			
23) Nitrobenzene-d5	8.83	82	51774	12.13	UG	-0.04
Spiked Amount 50.000	Range 48 - 104		Recovery = 24.26%#			
43) 2-Fluorobiphenyl	10.93	172	71393	11.38	UG	-0.01
Spiked Amount 50.000	Range 52 - 107		Recovery = 22.76%#			
64) 2,4,6-Tribromophenol	12.50	330	40418	25.70	UG	-0.02
Spiked Amount 100.000	Range 60 - 155		Recovery = 25.70%#			
77) Terphenyl-d14	14.79	244	102518	14.06	UG	0.00
Spiked Amount 50.000	Range 58 - 157		Recovery = 28.12%#			
Target Compounds						Qvalue
11) 1,3-Dichlorobenzene	8.01	146	3844m	1.12	UG	
12) 1,4-Dichlorobenzene	8.11	146	13582m	3.63	UG	
14) 1,2-Dichlorobenzene	8.33	146	414683	123.42	UG	98

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

000348

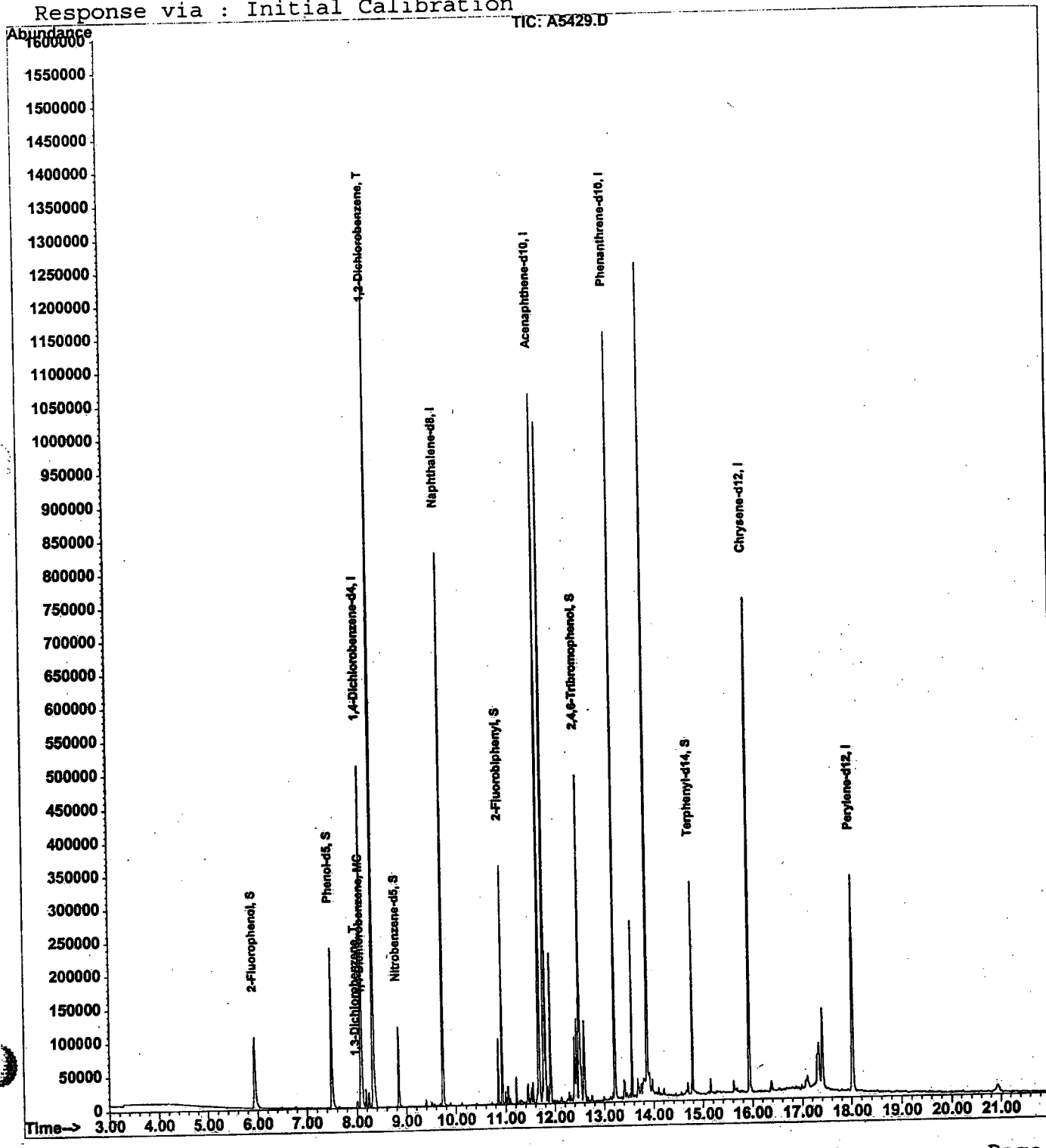
Quantitation Report

Data File : C:\HPCHEM\1\DATA\03-27-01\A5429.D
Acq On : 27 Mar 2001 12:07
Sample : S-16,1840-007,s,15.30g,14.9,03/26/01
Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,3
MS Integration Params: rteint.p
Quant Time: Mar 27 12:36 2001

Vial: 10
Operator: JC
Inst : MSD-A
Multiplr: 1.00

Quant Results File: AS0601.RES

Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Tue Mar 20 13:59:45 2001
Response via : Initial Calibration



000349

906

LSC Area Percent Report

Data File : C:\HPCHEM\1\DATA\03-27-01\A5429.D
Acq On : 27 Mar 2001 12:07
Sample : S-16,1840-007,s,15.30g,14.9,03/26/01
Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,3
MS Integration Params: LSCINT.P

Vial: 10
Operator: JC
Inst : MSD-A
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Smoothing : ON
Sampling : 1
Start Thrs: 0.02
Stop Thrs : 0

Filtering: 5
Min Area: 3 % of largest Peak
Max Peaks: 100
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	peak area	peak % max.	% of total
1	5.940	286	289	305	rVB	105798	237399	12.23%	1.635%
2	7.494	438	441	449	rBV	238789	344605	17.75%	2.374%
3	8.087	496	499	506	rBV	509923	775023	39.93%	5.338%
4	8.179	506	508	511	rVB	27009	29668	1.53%	0.204%
5	8.241	511	514	516	rBV	21926	23492	1.21%	0.162%
[redacted]	8.333	519	523	532	rVB	1334857	1941077	100.00%	13.369%
[redacted]	8.834	570	572	578	rBV	118516	163755	8.44%	1.128%
[redacted]	9.744	658	661	663	rBV	826510	949709	48.93%	6.541%
9	10.859	767	770	772	rVB	98271	104469	5.38%	0.720%
10	10.930	775	777	780	rBV	358275	328402	16.92%	2.262%
11	11.053	786	789	790	rBV	26690	33818	1.74%	0.233%
12	11.217	803	805	808	rVB	40240	31924	1.64%	0.220%
13	11.452	823	828	829	rBV2	29438	37555	1.93%	0.259%
14	11.524	831	835	837	rBV3	23566	30721	1.58%	0.212%
15	11.554	837	838	843	rVB	31217	28877	1.49%	0.199%
16	11.636	843	846	847	rBV	12748	19521	1.01%	0.134%
17	11.677	847	850	853	rVV	1059141	1268673	65.36%	8.738%
18	11.749	855	857	858	rVV	23770	29963	1.54%	0.206%
19	11.779	858	860	862	rVV	1016381	1225345	63.13%	8.440%
20	11.810	862	863	865	rVV	226870	179050	9.22%	1.233%
21	11.851	865	867	869	rVV	23213	23671	1.22%	0.163%
22	11.912	871	873	877	rVB	222948	221436	11.41%	1.525%
23	12.403	919	921	923	rBV	91926	110537	5.69%	0.761%
24	12.444	923	925	928	rVV	119893	134001	6.90%	0.923%
25	12.495	928	930	936	rVV3	487395	667380	34.38%	4.597%
26	12.597	936	940	945	rVB2	121123	202696	10.44%	1.396%
27	13.221	998	1001	1003	rBV	1144754	1048204	54.00%	7.220%
28	13.405	1016	1019	1023	rBV2	29863	57443	2.96%	0.396%
[redacted]	13.569	1033	1035	1038	rBV	265109	224193	11.55%	1.544%
30	13.682	1043	1046	1050	rBV2	28565	50054	2.58%	0.345%
31	13.763	1050	1054	1055	rVV2	19175	33848	1.74%	0.233%

000350

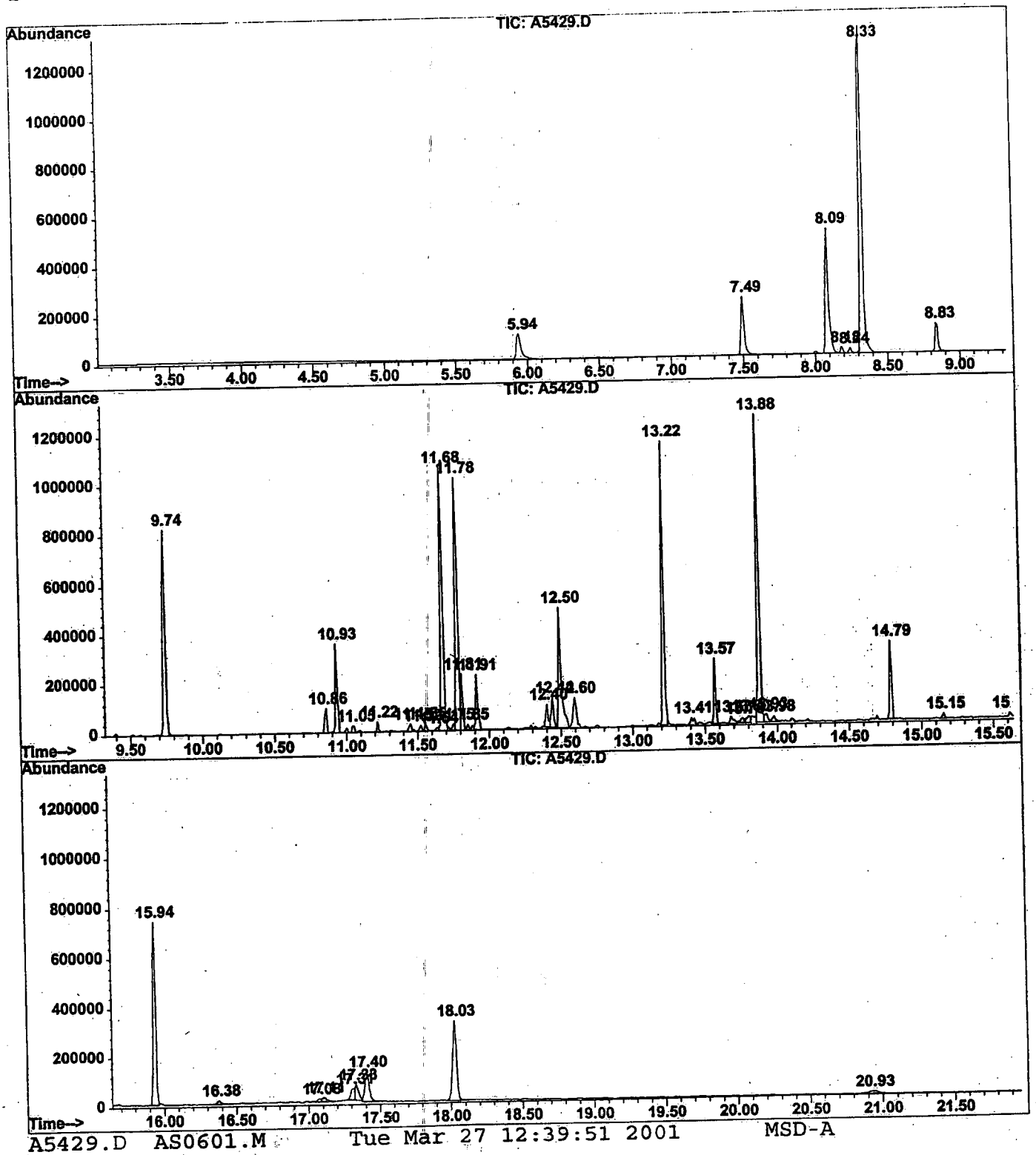
32	13.804	1055	1058	1059	rVV	27058	50755	2.61%	0.350%
33	13.876	1063	1065	1068	rVV	1245418	1346573	69.37%	9.275%
34	13.927	1068	1070	1072	rVV2	33844	49400	2.54%	0.340%
35	13.978	1072	1075	1079	rVB2	22809	37645	1.94%	0.259%
-	14.786	1152	1154	1157	rBV	316808	320724	16.52%	2.209%
-	15.154	1187	1190	1192	rBV2	22489	22916	1.18%	0.158%
38	15.614	1234	1235	1238	rBV	17505	21523	1.11%	0.148%
39	15.942	1263	1267	1269	rBV	738709	934657	48.15%	6.438%
40	16.381	1306	1310	1313	rBV2	15913	28333	1.46%	0.195%
41	17.077	1375	1378	1379	rBV2	11795	21747	1.12%	0.150%
42	17.108	1379	1381	1387	rVB4	17473	35261	1.82%	0.243%
43	17.312	1397	1401	1402	rBV2	44525	93797	4.83%	0.646%
44	17.333	1402	1403	1407	rVV	63371	87828	4.52%	0.605%
45	17.404	1407	1410	1418	rVB	121233	255173	13.15%	1.758%
46	18.028	1465	1471	1478	rVB	325025	613059	31.58%	4.223%
47	20.932	1746	1755	1761	rBV4	9733	42941	2.21%	0.296%

Sum of corrected areas: 14518841

A5429.D AS0601.M Tue Mar 27 12:39:51 2001 MSD-A

LSC Report - Integrated Chromatogram

File : C:\HPCHEM\1\DATA\03-27-01\A5429.D
Operator : JC
Acquired : 27 Mar 2001 12:07 using AcqMethod AS0601
Instrument : MSD-A
Sample Name: S-16,1840-007,s,15.30g,14.9,03/26/01
Misc Info : ENVTACT/444 ORBIS,03/23/01,03/26/01,3
Vial Number: 10
Quant File :AS0601.RES (RTE Integrator)



A5429.D AS0601.M Tue Mar 27 12:39:51 2001 MSD-A

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-27-01\A5429.D
Acq On : 27 Mar 2001 12:07
Sample : S-16,1840-007,s,15.30g,14.9,03/26/01
Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,3
MS Integration Params: LSCINT.P

Vial: 10
Operator: JC
Inst : MSD-A
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

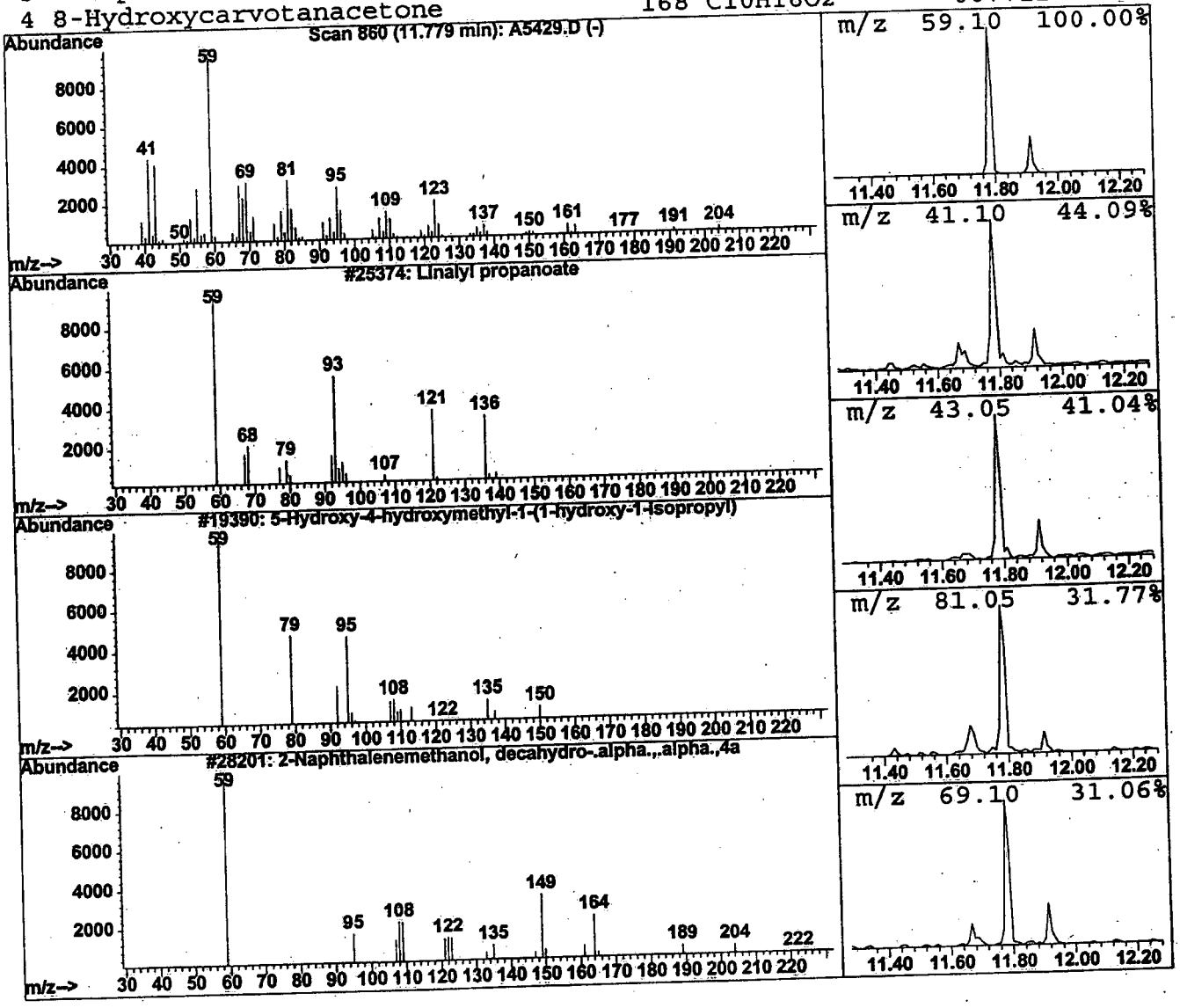
****

Peak Number 1 Unknown

Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
11.78	38.63 UG	1225350	Acenaphthene-d10	11.68

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Linalyl propanoate	210	C13H22O2	000000-00-0	38
2	5-Hydroxy-4-hydroxymethyl-1-(1-hydr	186	C10H18O3	087096-72-8	38
3	2-Naphthalenemethanol, decahydro-.a	222	C15H26O	000473-15-4	37
4	8-Hydroxycarvotanacetone	168	C10H16O2	007712-46-1	37



Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-27-01\A5429.D
Acq On : 27 Mar 2001 12:07
Sample : S-16,1840-007,s,15.30g,14.9,03/26/01
Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,3
MS Integration Params: LSCINT.P

Vial: 10
Operator: JC
Inst : MSD-A
Multiplr: 1.00

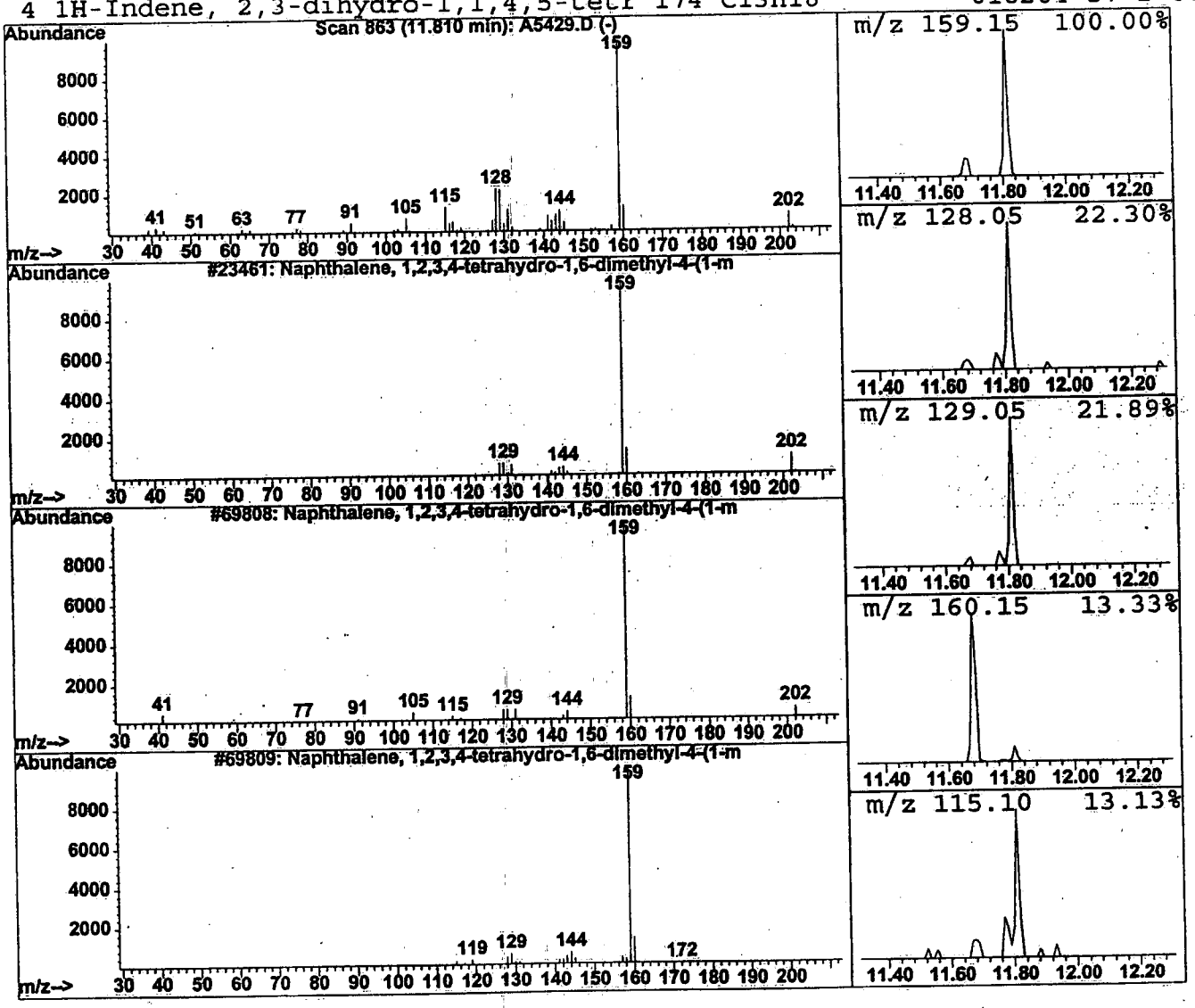
Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 2 Substituted naphthalene Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
11.81	5.65 UG	179050	Acenaphthene-d10	11.68

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Naphthalene, 1,2,3,4-tetrahydro-1,6	202	C15H22	000483-77-2	94
2	Naphthalene, 1,2,3,4-tetrahydro-1,6	202	C15H22	000483-77-2	72
3	Naphthalene, 1,2,3,4-tetrahydro-1,6	202	C15H22	000483-77-2	72
4	1H-Indene, 2,3-dihydro-1,1,4,5-tetr	174	C13H18	016204-57-2	64



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Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-27-01\A5429.D
Acq On : 27 Mar 2001 12:07
Sample : S-16,1840-007,s,15.30g,14.9,03/26/01
Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,3
MS Integration Params: LSCINT.P

Vial: 10
Operator: JC
Inst : MSD-A
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

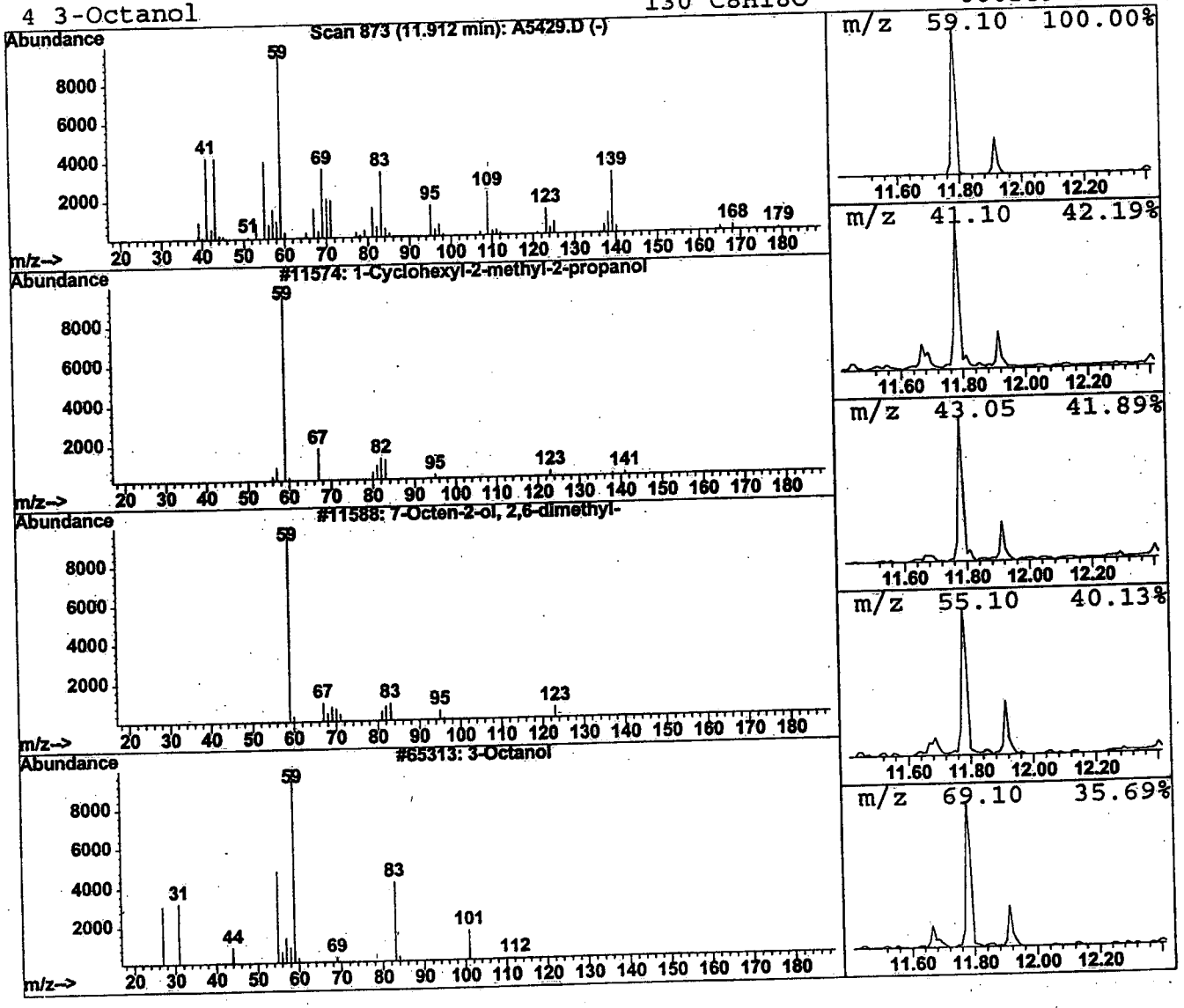
****

Peak Number 3 Unknown alkane

Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
11.91	6.98 UG	221436	Acenaphthene-d10	11.68

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1-Cyclohexyl-2-methyl-2-propanol	156	C10H20O	005531-30-6	38
2	7-Octen-2-ol, 2,6-dimethyl-	156	C10H20O	018479-58-8	38
3	3-Octanol	130	C8H18O	000589-98-0	35
4	3-Octanol	130	C8H18O	000589-98-0	35



Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-27-01\A5429.D
Acq On : 27 Mar 2001 12:07
Sample : S-16,1840-007,s,15.30g,14.9,03/26/01
Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,3
MS Integration Params: LSCINT.P

Vial: 10
Operator: JC
Inst : MSD-A
Multiplr: 1.00

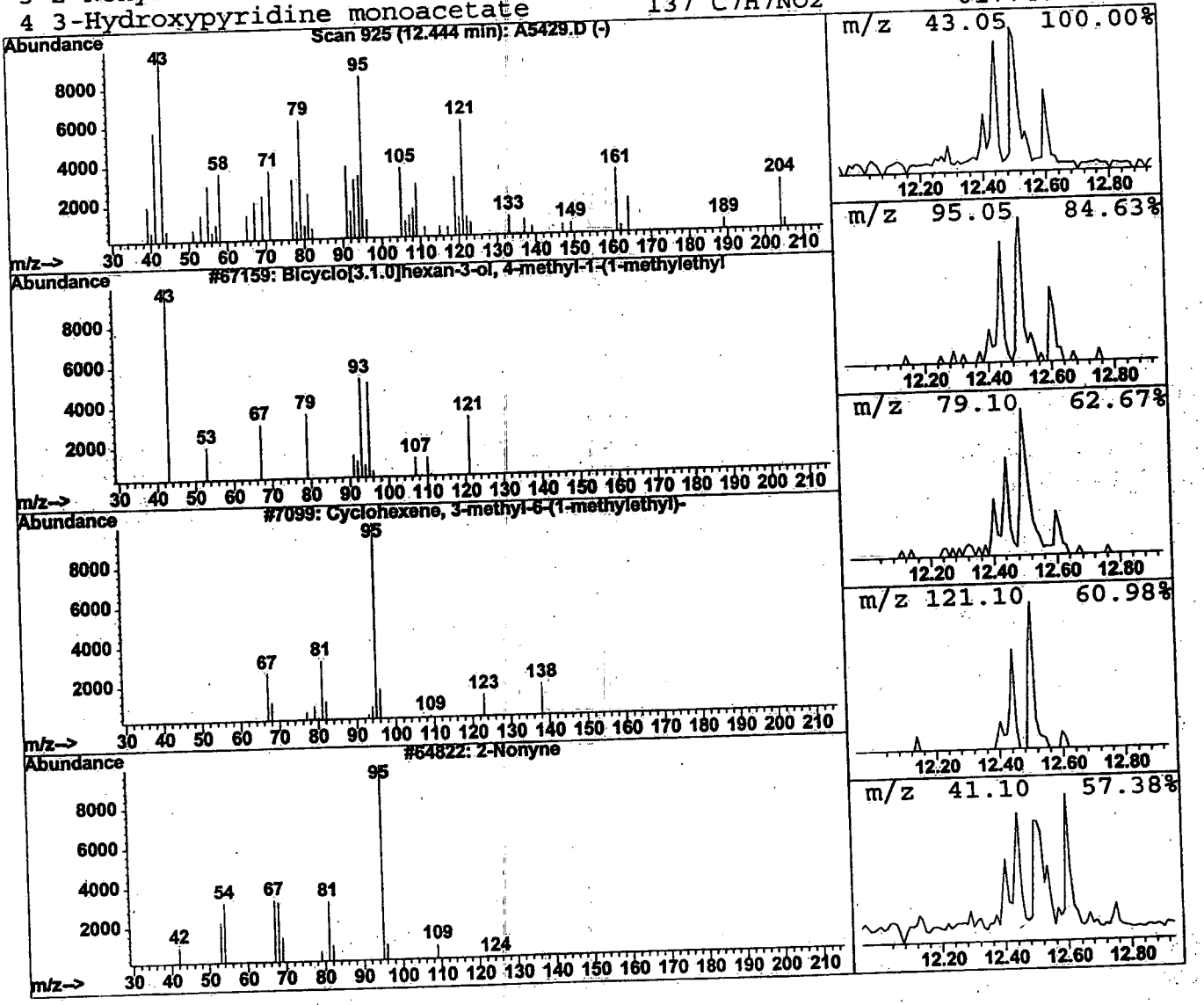
Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 4 Unknown alkane — Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.44	4.22 UG	134001	Acenaphthene-d10	11.68

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Bicyclo[3.1.0]hexan-3-ol, 4-methyl-	154	C10H18O	000513-23-5	32
2	Cyclohexene, 3-methyl-6-(1-methylet	138	C10H18	005256-65-5	22
3	2-Nonyne	124	C9H16	019447-29-1	22
4	3-Hydroxypyridine monoacetate	137	C7H7NO2	017747-43-2	22



9/3

000356

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-27-01\A5429.D
Acq On : 27 Mar 2001 12:07
Sample : S-16,1840-007,s,15.30g,14.9,03/26/01
Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,3
MS Integration Params: LSCINT.P

Vial: 10
Operator: JC
Inst : MSD-A
Multiplr: 1.00

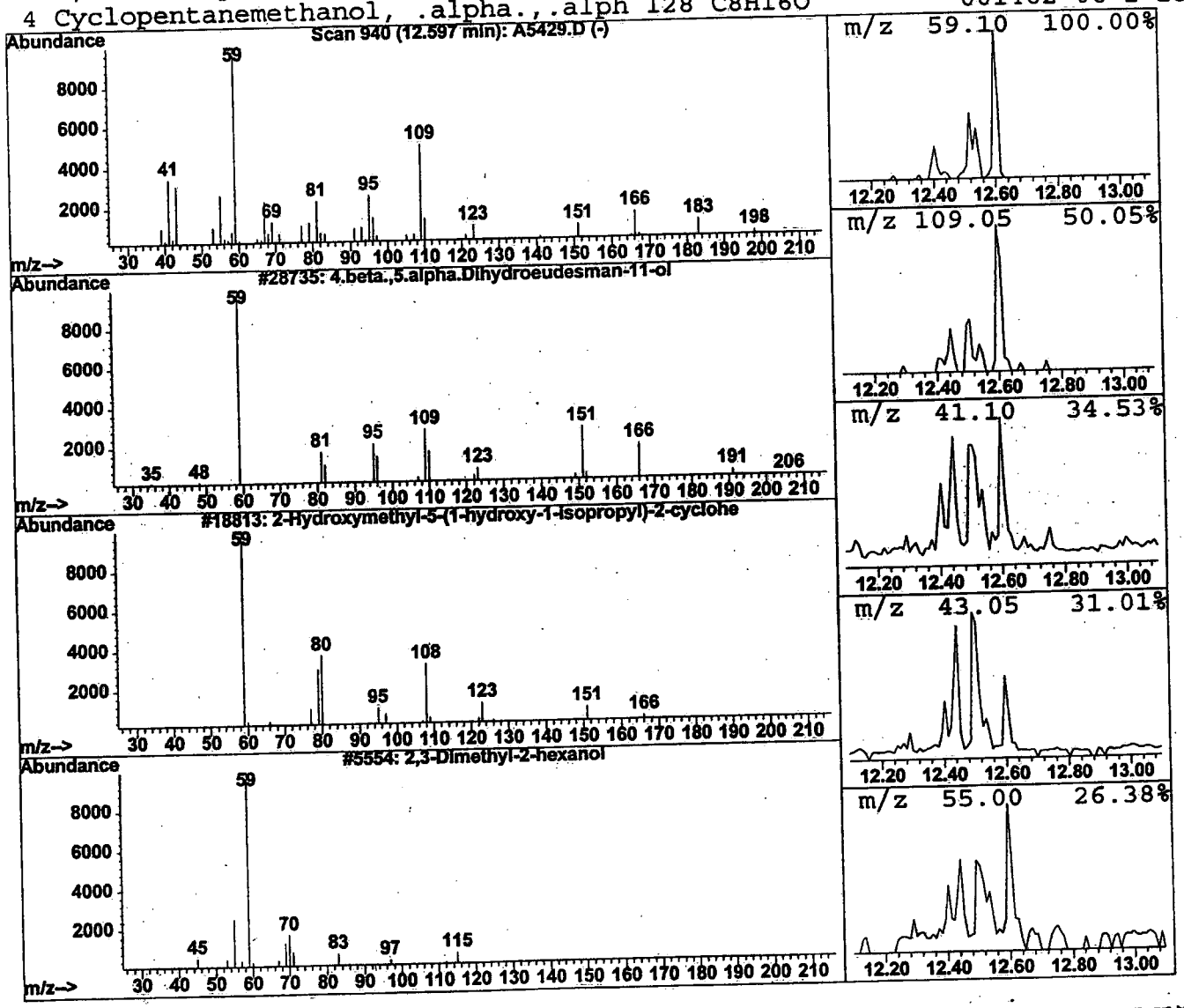
Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 5 Unknown alkane Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.60	7.73 UG	202696	Phenanthrene-d10	13.22

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	4.beta.,5.alpha.Dihydroeudesman-11-	224	C15H28O	000000-00-0	40
2	2-Hydroxymethyl-5-(1-hydroxy-1-isop	184	C10H16O3	097762-06-6	32
3	2,3-Dimethyl-2-hexanol	130	C8H18O	001955-03-9	27
4	Cyclopentanemethanol, .alpha.,.alph	128	C8H16O	001462-06-2	25



000357

914

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-27-01\A5429.D
Acq On : 27 Mar 2001 12:07
Sample : S-16,1840-007,s,15.30g,14.9,03/26/01
Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,3
MS Integration Params: LSCINT.P

Vial: 10
Operator: JC
Inst : MSD-A
Multiplr: 1.00

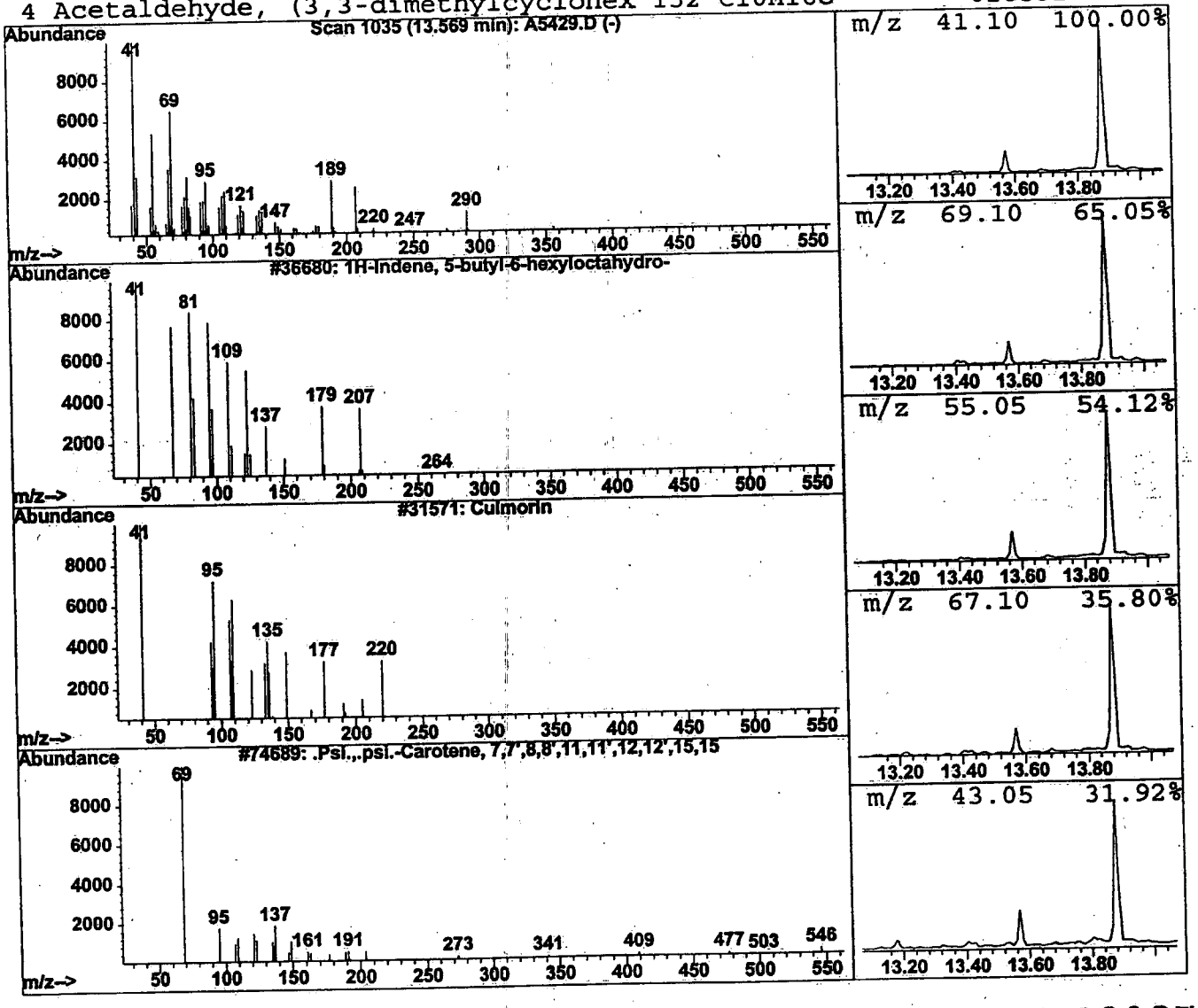
Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 6 Unknown alkane — Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
13.57	8.56 UG	224193	Phenanthrene-d10	13.22

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1H-Indene, 5-butyl-6-hexyloctahydro	264	C19H36	055044-36-5	32
2	Culmorin	238	C15H26O2	000000-00-0	17
3	.Psi.,.psi.-Carotene, 7,7',8,8',11,	547	C40H66	000502-62-5	10
4	Acetaldehyde, (3,3-dimethylcyclohex	152	C10H16O	026532-24-1	10



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915

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-27-01\A5429.D
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Sample : S-16,1840-007,s,15.30g,14.9,03/26/01
Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,3
MS Integration Params: LSCINT.P

Vial: 10
Operator: JC
Inst : MSD-A
Multiplr: 1.00

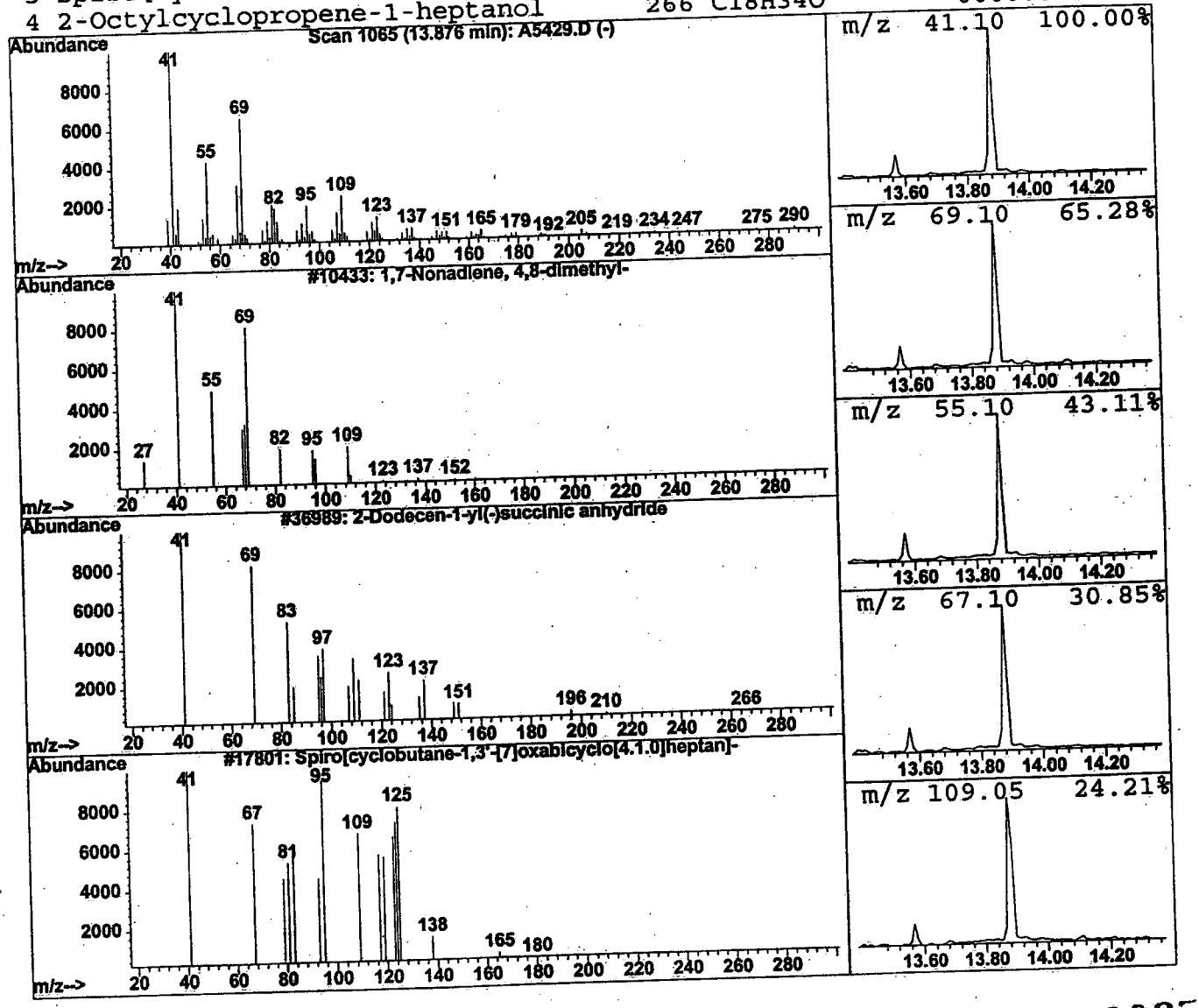
Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 7 Unknown alkane — Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
13.88	51.39 UG	1346570	Phenanthrene-d10	13.22

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1,7-Nonadiene, 4,8-dimethyl-	152	C11H20	062108-28-5	43
2	2-Dodecen-1-yl(-)succinic anhydride	266	C16H26O3	019780-11-1	37
3	Spiro[cyclobutane-1,3'-[7]oxabicycl	180	C11H16O2	075314-18-0	35
4	2-Octylcyclopropene-1-heptanol	266	C18H34O	000000-00-0	27



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9/6

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-27-01\A5429.D
Acq On : 27 Mar 2001 12:07
Sample : S-16,1840-007,s,15.30g,14.9,03/26/01
Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,3
MS Integration Params: LSCINT.P

Vial: 10
Operator: JC
Inst : MSD-A
Multiplr: 1.00

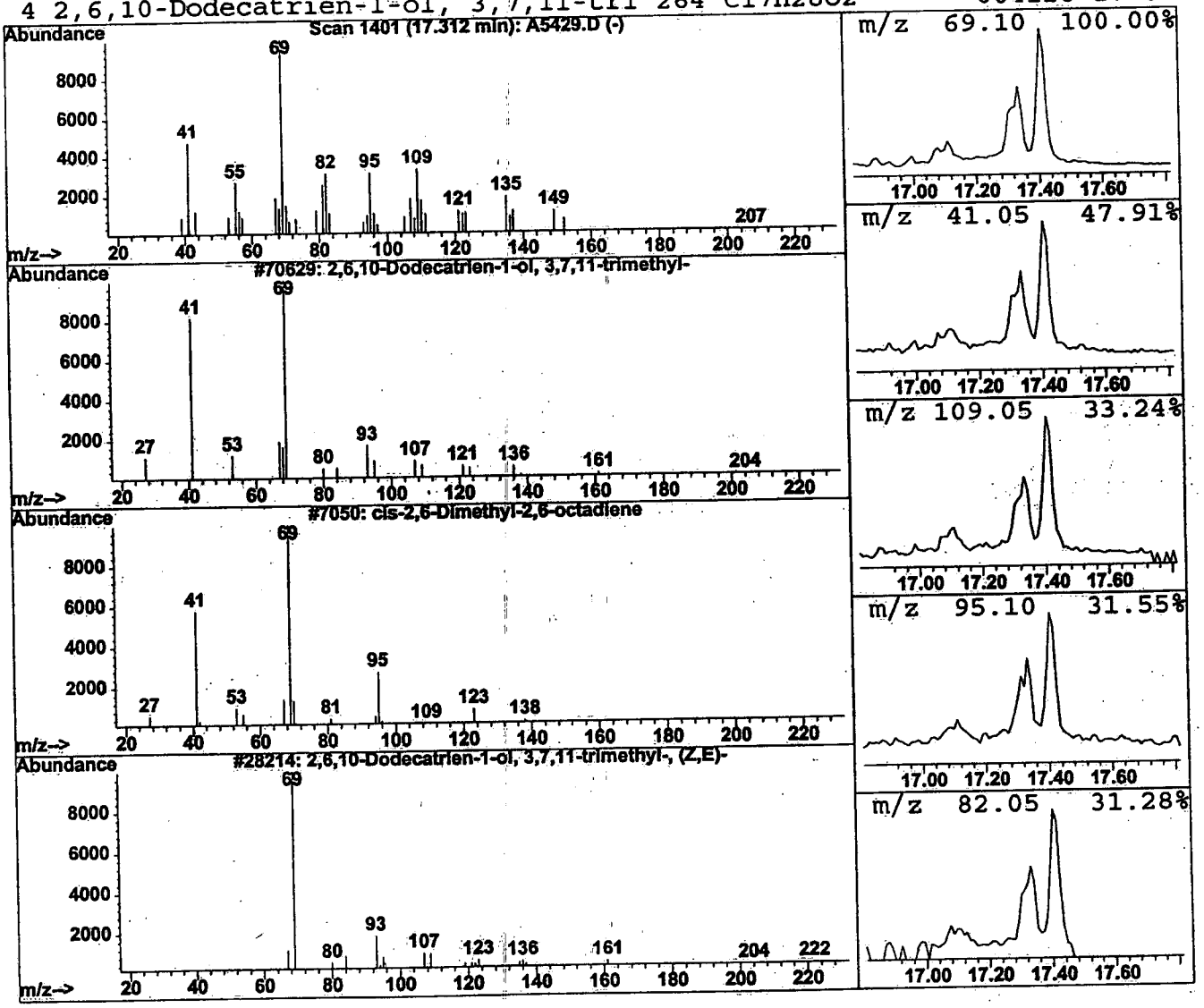
Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 8 Unknown alkane — Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.31	6.12 UG	93797	Perylene-d12	18.03

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2,6,10-Dodecatrien-1-ol, 3,7,11-tri	222	C15H26O	004602-84-0	47
2	cis-2,6-Dimethyl-2,6-octadiene	138	C10H18	002492-22-0	47
3	2,6,10-Dodecatrien-1-ol, 3,7,11-tri	222	C15H26O	003790-71-4	45
4	2,6,10-Dodecatrien-1-ol, 3,7,11-tri	264	C17H28O2	004128-17-0	40



Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-27-01\A5429.D
Acq On : 27 Mar 2001 12:07
Sample : S-16,1840-007,s,15.30g,14.9,03/26/01
Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,3
MS Integration Params: LSCINT.P

Vial: 10
Operator: JC
Inst : MSD-A
Multiplr: 1.00

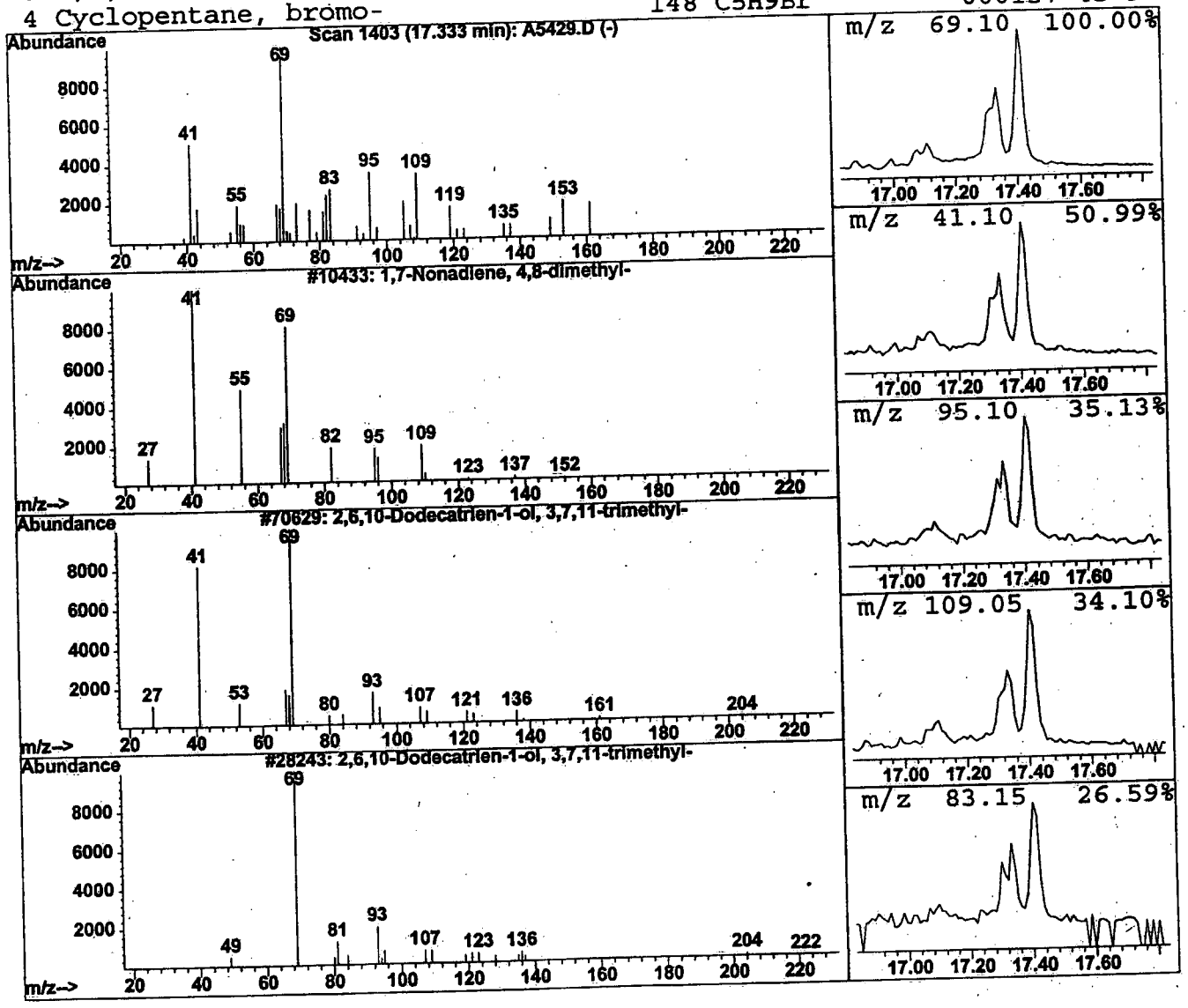
Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 9 Unknown alkane — Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.33	5.73 UG	87828	Perylene-d12	18.03

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1,7-Nonadiene, 4,8-dimethyl-	152	C11H20	062108-28-5	25
2	2,6,10-Dodecatrien-1-ol, 3,7,11-tri	222	C15H26O	004602-84-0	12
3	2,6,10-Dodecatrien-1-ol, 3,7,11-tri	222	C15H26O	004602-84-0	12
4	Cyclopentane, bromo-	148	C5H9Br	000137-43-9	12



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9/18

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-27-01\A5429.D
Acq On : 27 Mar 2001 12:07
Sample : S-16,1840-007,s,15.30g,14.9,03/26/01
Misc : ENVTACT/444 ORBIS,03/23/01,03/26/01,3
MS Integration Params: LSCINT.P

Vial: 10
Operator: JC
Inst : MSD-A
Multiplr: 1.00

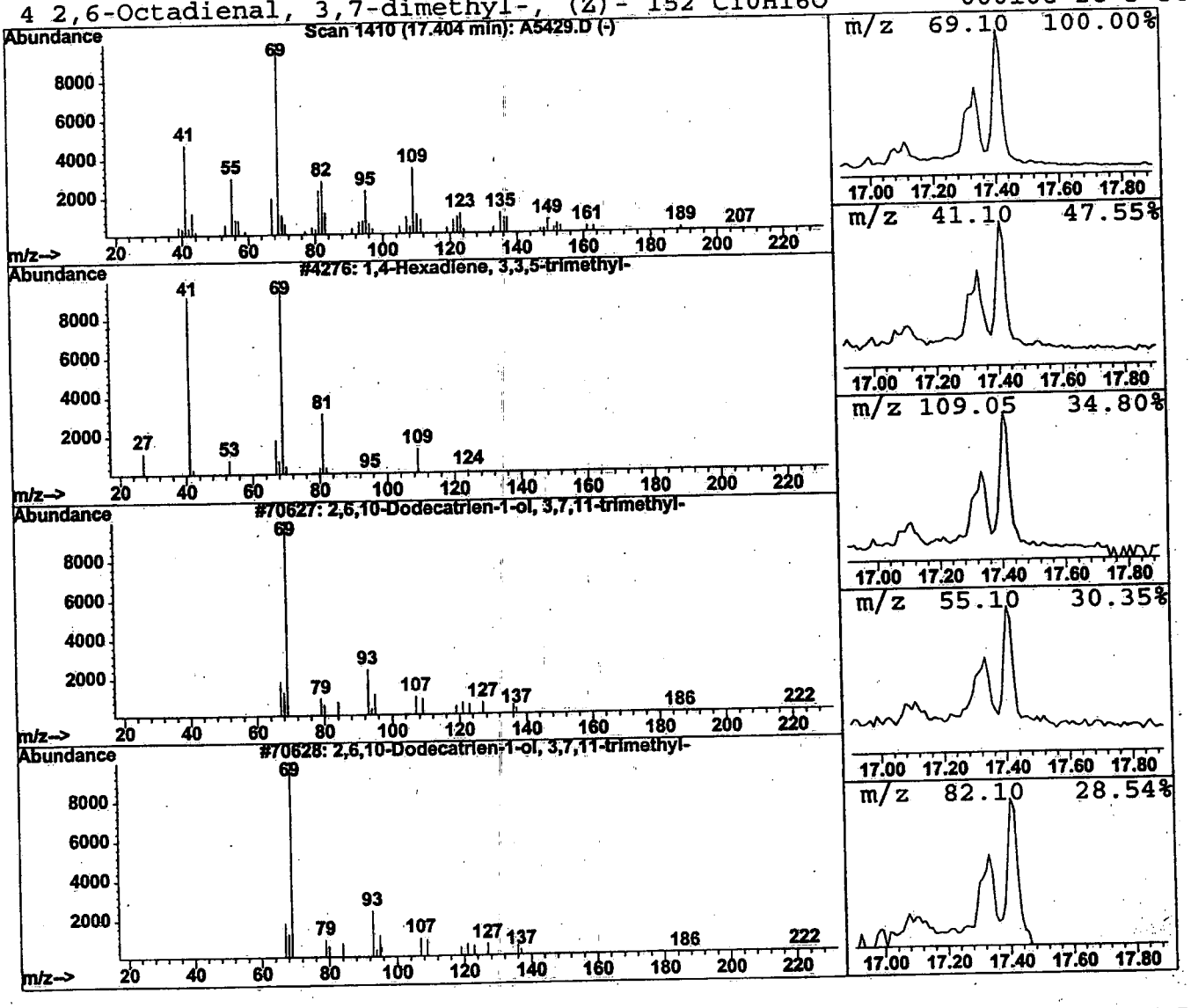
Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 10 Unknown alkane — Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.40	16.65 UG	255173	Perylene-d12	18.03

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1,4-Hexadiene, 3,3,5-trimethyl-	124	C9H16	074753-00-7	43
2	2,6,10-Dodecatrien-1-ol, 3,7,11-tri	222	C15H26O	004602-84-0	40
3	2,6,10-Dodecatrien-1-ol, 3,7,11-tri	222	C15H26O	004602-84-0	40
4	2,6-Octadienal, 3,7-dimethyl-, (Z)-	152	C10H16O	000106-26-3	38



000362

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\03-27-01\A5421.D
Acq On : 27 Mar 2001 7:44
Sample : .,Method-Blk,s,30.0g,0.0,03/26/01
Misc : N/A,N/A,N/A,1
MS Integration Params: rteint.p
Quant Time: Mar 27 8:38 2001

Vial: 4
Operator: JC
Inst : MSD-A
Multiplr: 1.00

Quant Results File: AS0601.RES

Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Tue Mar 20 13:59:45 2001
Response via : Initial Calibration
DataAcq Meth : AS0601

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.09	152	69936	40.00	UG	0.00
22) Naphthalene-d8	9.74	136	312184	40.00	UG	0.00
39) Acenaphthene-d10	11.68	164	156588	40.00	UG	0.00
60) Phenanthrene-d10	13.22	188	321781	40.00	UG	0.00
75) Chrysene-d12	15.94	240	261968	40.00	UG	-0.02
84) Perylene-d12	18.04	264	245754	40.00	UG	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	5.94	112	146279	63.88	UG	0.00
Spiked Amount 100.000	Range 37 - 100		Recovery = 63.88%			
6) Phenol-d5	7.51	99	212064	73.57	UG	-0.04
Spiked Amount 100.000	Range 37 - 104		Recovery = 73.57%			
23) Nitrobenzene-d5	8.84	82	122336	39.31	UG	-0.03
Spiked Amount 50.000	Range 48 - 104		Recovery = 78.62%			
43) 2-Fluorobiphenyl	10.94	172	181507	39.82	UG	0.00
Spiked Amount 50.000	Range 52 - 107		Recovery = 79.64%			
64) 2,4,6-Tribromophenol	12.50	330	92900	75.76	UG	-0.02
Spiked Amount 100.000	Range 60 - 155		Recovery = 75.76%			
77) Terphenyl-d14	14.80	244	325271	56.31	UG	0.00
Spiked Amount 50.000	Range 58 - 157		Recovery = 112.62%			

Target Compounds Qvalue

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

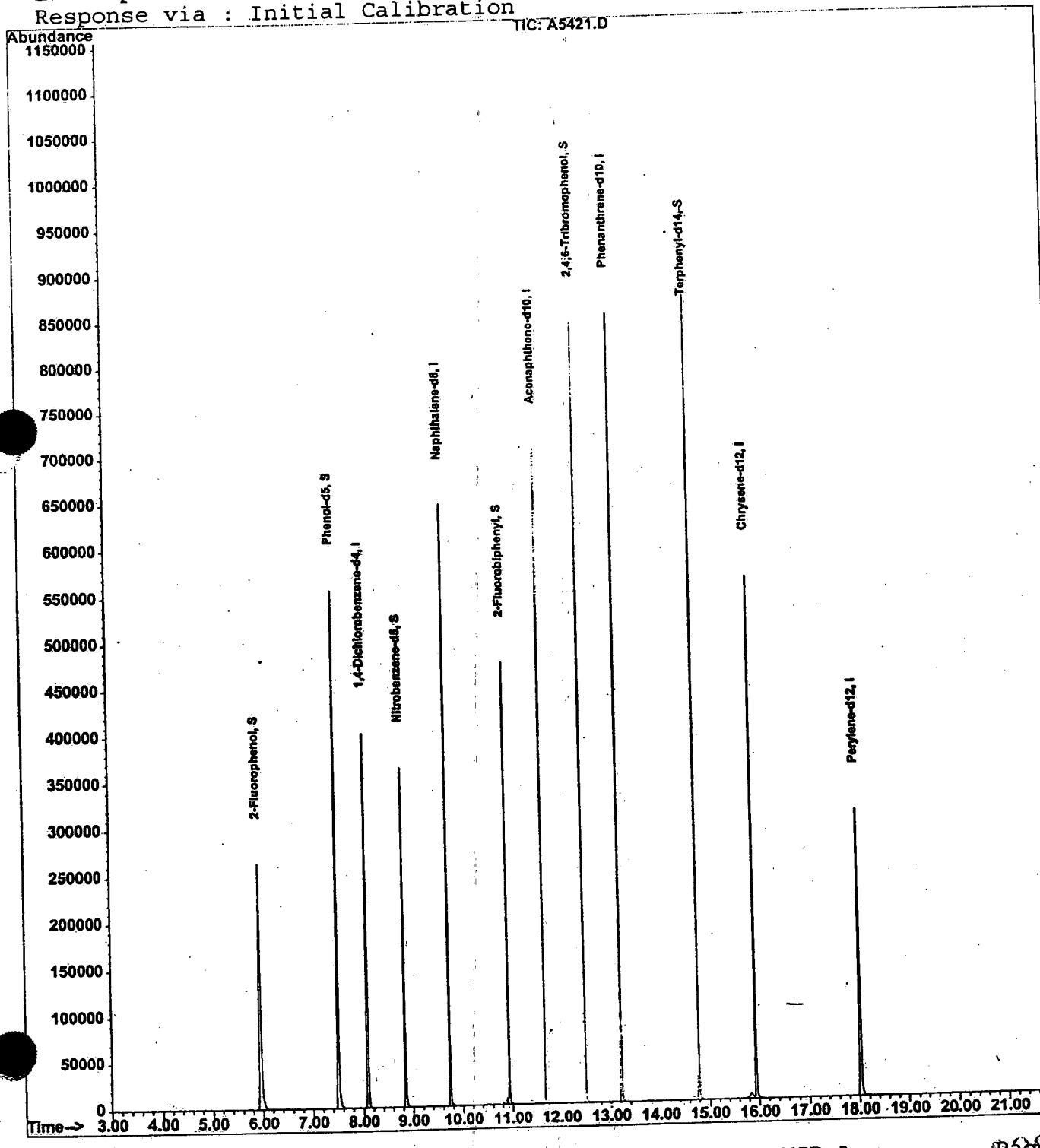
Quantitation Report

Data File : C:\HPCHEM\1\DATA\03-27-01\A5421.D
Acq On : 27 Mar 2001 7:44
Sample : .,Method-Blk,s,30.0g,0.0,03/26/01
Misc : N/A,N/A,N/A,1
MS Integration Params: rteint.p
Quant Time: Mar 27 8:38 2001

Vial: 4
Operator: JC
Inst : MSD-A
Multiplr: 1.00

Quant Results File: AS0601.RES

Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Tue Mar 20 13:59:45 2001
Response via : Initial Calibration



A5421.D AS0601.M Tue Mar 27 08:40:34 2001 MSD-A

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Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\03-27-01\A5421.D
Acq On : 27 Mar 2001 7:44
Sample : .,Method-Blk,s,30.0g,0.0,03/26/01
isc : N/A,N/A,N/A,1
MS Integration Params: LSCINT.P
Quant Method : C:\HPCHEM\1\METHODS\AS0601.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

Vial: 4
Operator: JC
Inst : MSD-A
Multiplr: 1.00

No Library Search Compounds Detected

****
A5421.D AS0601.M Tue Mar 27 08:41:22 2001 MSD-A

PCB METHOD BLANK SUMMARY

Lab File ID: R3640.D

Instrument ID: GC-R

Date Extracted: 03/26/2001

Matrix: SOIL

Date Analyzed: 03/26/2001

Time Analyzed: 21:27

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

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed
SS-1	1793-002	03/26/2001	21:53
SS-2	1793-003	03/26/2001	22:19
SS-3	1793-004	03/26/2001	22:46
SS-4	1793-005	03/26/2001	23:12
SAMPLE_#1	1776-001	03/26/2001	23:38
SS99	1816-007	03/27/2001	00:04
E-OWS	1836-007	03/27/2001	01:49
PCB	1816-007-MS2	03/27/2001	02:15
PCB	1816-007-MSD2	03/27/2001	02:42
PCB	PBS0326-MS2	03/27/2001	03:08
W-OWS	1836-004	03/27/2001	10:49
W-OWS-A1	1836-005	03/27/2001	11:15
W-OWS-A2	1836-006	03/27/2001	11:42

INTEGRATED ANALYTICAL LABORATORIES

PCB's

Client/Project: NA

Lab ID: 0326-BLK2
Client ID: (1776..1836)
Date Received: NA
Date Extracted: 03/26/2001
Date Analyzed: 03/26/2001
Data file: R3640.D

GC Column: DB-5/DB1701P
Sample wt/vol: 30.0g
Matrix-Units: Soil-µg/Kg (ppb)
Dilution Factor: 1
% Moisture: 0

Compound	Concentration	Q	MDL
Aroclor-1016	ND		0.668
Aroclor-1221	ND		0.668
Aroclor-1232	ND		0.668
Aroclor-1242	ND		0.668
Aroclor-1248	ND		0.668
Aroclor-1254	ND		0.668
Aroclor-1260	ND		0.668

000367

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PCB METHOD BLANK SUMMARY

Lab File ID: R3665.D

Instrument ID: GC-R

Date Extracted: 03/27/2001

Matrix: SOIL

Date Analyzed: 03/27/2001

Time Analyzed: 14:20

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

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed
S-1	1854-001	03/27/2001	17:24
4033-COMP1	1855-001	03/27/2001	17:50
4033-COMP2	1855-002	03/27/2001	18:17
WC1	1838-001	03/27/2001	18:43
PCB	PBS0327-MS1	03/27/2001	19:09
S-11	1840-001	03/28/2001	08:36
S-12	1840-002	03/28/2001	09:03
S-13	1840-004	03/28/2001	09:29
S-14	1840-005	03/28/2001	09:55
S-15	1840-006	03/28/2001	10:21
S-16	1840-007	03/28/2001	10:48

INTEGRATED ANALYTICAL LABORATORIES

PCB's

Client/Project: NA

Lab ID: 0327-BLK1
Client ID: (1838..1855)
Date Received: NA
Date Extracted: 03/27/2001
Date Analyzed: 03/27/2001
Data file: R3665.D

GC Column: DB-5/DB1701P
Sample wt/vol: 30.0g
Matrix-Units: Soil-µg/Kg (ppb)
Dilution Factor: 1
% Moisture: 0

Compound	Concentration	Q	MDL
Aroclor-1016	ND		0.668
Aroclor-1221	ND		0.668
Aroclor-1232	ND		0.668
Aroclor-1242	ND		0.668
Aroclor-1248	ND		0.668
Aroclor-1254	ND		0.668
Aroclor-1260	ND		0.668

000369

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PCB INITIAL CALIBRATION SUMMARY

Date Analyzed: 03/07/2001

Instrument ID: GC-R

GC Column (1st): DB-5

Data File: R3330.D R3331.D R3332.D R3333.D R3334.D

Compound	RT OF STANDARDS 50	100	500	1000	2000	MEAN RT	RT WINDOW FROM	TO
Aroclor-1016	4.68	4.68	4.68	4.68	4.68	4.68	4.61	4.75
Aroclor-1016 {2}	5.61	5.61	5.61	5.61	5.61	5.61	5.54	5.68
Aroclor-1016 {3}	6.06	6.06	6.06	6.06	6.06	6.06	5.99	6.13
Aroclor-1016 {4}	7.82	7.82	7.82	7.81	7.81	7.81	7.74	7.88
Aroclor-1016 {5}	8.26	8.27	8.26	8.26	8.26	8.26	8.19	8.33
Aroclor-1221			2.97				2.90	3.04
Aroclor-1221 {2}			4.35				4.28	4.42
Aroclor-1221 {3}			4.55				4.48	4.62
Aroclor-1221 {4}			4.68				4.61	4.75
Aroclor-1221 {5}			5.65				5.58	5.72
Aroclor-1232			4.68				4.61	4.75
Aroclor-1232 {2}			6.06				5.99	6.13
Aroclor-1232 {3}			7.01				6.94	7.08
Aroclor-1232 {4}			7.81				7.74	7.88
Aroclor-1232 {5}			8.61				8.54	8.68
Aroclor-1242			6.06				5.99	6.13
Aroclor-1242 {2}			7.81				7.74	7.88
Aroclor-1242 {3}			8.35				8.28	8.42
Aroclor-1242 {4}			9.51				9.44	9.58
Aroclor-1242 {5}			10.01				9.94	10.08
Aroclor-1248			6.75				6.68	6.82
Aroclor-1248 {2}			7.81				7.74	7.88
Aroclor-1248 {3}			8.35				8.28	8.42
Aroclor-1248 {4}			9.52				9.45	9.59
Aroclor-1248 {5}			10.01				9.94	10.08
Aroclor-1254			10.25				10.18	10.32
Aroclor-1254 {2}			11.04				10.97	11.11
Aroclor-1254 {3}			11.35				11.28	11.42
Aroclor-1254 {4}			12.17				12.10	12.24
Aroclor-1254 {5}			12.91				12.84	12.98
Aroclor-1260	13.75	13.75	13.75	13.74	13.74	13.75	13.68	13.82
Aroclor-1260 {2}	14.31	14.30	14.30	14.30	14.30	14.30	14.23	14.37
Aroclor-1260 {3}	15.92	15.92	15.92	15.92	15.92	15.92	15.85	15.99
Aroclor-1260 {4}	16.83	16.83	16.83	16.83	16.83	16.83	16.76	16.90
Aroclor-1260 {5}	18.85	18.86	18.85	18.85	18.85	18.85	18.78	18.92

PCB INITIAL CALIBRATION SUMMARY

Date Analyzed: 03/07/2001

Instrument ID: GC-R

GC Column (1st): DB-5

Data File: R3330.D R3331.D R3332.D R3333.D R3334.D

Compound	CALIBRATION FACTORS 50	100	500	1000	2000	MEAN	%RSD
Aroclor-1016	188357	180539	154060	160217	150043	166643	10.13
Aroclor-1016 {2}	193369	192604	149412	154111	143345	166568	14.66
Aroclor-1016 {3}	247365	243412	199574	209880	196956	219437	11.04
Aroclor-1016 {4}	160475	150814	129116	133205	125063	139734	10.87
Aroclor-1016 {5}	211571	195228	170276	175314	165523	183582	10.52
Aroclor-1221			94416				
Aroclor-1221 {2}			117591				
Aroclor-1221 {3}			105351				
Aroclor-1221 {4}			310766				
Aroclor-1221 {5}			72554				
Aroclor-1232			201496				
Aroclor-1232 {2}			114936				
Aroclor-1232 {3}			142945				
Aroclor-1232 {4}			74096				
Aroclor-1232 {5}			132663				
Aroclor-1242			208065				
Aroclor-1242 {2}			129887				
Aroclor-1242 {3}			165363				
Aroclor-1242 {4}			269569				
Aroclor-1242 {5}			247210				
Aroclor-1248			552070				
Aroclor-1248 {2}			194084				
Aroclor-1248 {3}			180859				
Aroclor-1248 {4}			474353				
Aroclor-1248 {5}			424555				
Aroclor-1254			508120				
Aroclor-1254 {2}			402048				
Aroclor-1254 {3}			739869				
Aroclor-1254 {4}			796355				
Aroclor-1254 {5}			350473				
Aroclor-1260	692164	666494	572127	614707	580096	625118	8.45
Aroclor-1260 {2}	419935	405873	336447	355071	329625	369390	11.13
Aroclor-1260 {3}	930041	936971	819559	915331	860926	892566	5.66
Aroclor-1260 {4}	433561	453976	385605	444499	422817	428092	6.18
Aroclor-1260 {5}	236224	244121	213201	241671	233740	233791	5.23
					Average %RSD		9.39

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PCB INITIAL CALIBRATION SUMMARY

Date Analyzed: 03/07/2001

Instrument ID: GC-R

GC Column (2nd): DB-1701P

Data File: R3330.C R3331.C R3332.C R3333.C R3334.C

Compound	RT OF STANDARDS					MEAN	RT WINDOW	
	50	100	500	1000	2000	RT	FROM	TO
Aroclor-1016	5.00	5.00	5.00	5.00	5.00	5.00	4.93	5.07
Aroclor-1016 {2}	5.97	5.97	5.97	5.97	5.97	5.97	5.90	6.04
Aroclor-1016 {3}	7.15	7.15	7.15	7.14	7.14	7.15	7.08	7.22
Aroclor-1016 {4}	7.53	7.53	7.53	7.53	7.53	7.53	7.46	7.60
Aroclor-1016 {5}	7.81	7.81	7.81	7.81	7.81	7.81	7.74	7.88
Aroclor-1221			3.12				3.05	3.19
Aroclor-1221 {2}			4.53				4.46	4.60
Aroclor-1221 {3}			4.87				4.80	4.94
Aroclor-1221 {4}			5.00				4.93	5.07
Aroclor-1221 {5}			6.24				6.17	6.31
Aroclor-1232			5.00				4.93	5.07
Aroclor-1232 {2}			6.59				6.52	6.66
Aroclor-1232 {3}			7.53				7.46	7.60
Aroclor-1232 {4}			7.81				7.74	7.88
Aroclor-1232 {5}			8.88				8.81	8.95
Aroclor-1242			6.47				6.40	6.54
Aroclor-1242 {2}			7.81				7.74	7.88
Aroclor-1242 {3}			8.88				8.81	8.95
Aroclor-1242 {4}			10.04				9.97	10.11
Aroclor-1242 {5}			10.73				10.66	10.80
Aroclor-1248			7.14				7.07	7.21
Aroclor-1248 {2}			8.19				8.12	8.26
Aroclor-1248 {3}			8.88				8.81	8.95
Aroclor-1248 {4}			9.17				9.10	9.24
Aroclor-1248 {5}			9.74				9.67	9.81
Aroclor-1254			10.76				10.69	10.83
Aroclor-1254 {2}			11.80				11.73	11.87
Aroclor-1254 {3}			12.84				12.77	12.91
Aroclor-1254 {4}			13.34				13.27	13.41
Aroclor-1254 {5}			14.42				14.35	14.49
Aroclor-1260	13.34	13.35	13.34	13.34	13.34	13.34	13.27	13.41
Aroclor-1260 {2}	14.42	14.42	14.41	14.41	14.41	14.41	14.34	14.48
Aroclor-1260 {3}	15.62	15.62	15.62	15.62	15.62	15.62	15.55	15.69
Aroclor-1260 {4}	16.53	16.54	16.54	16.53	16.53	16.53	16.46	16.60
Aroclor-1260 {5}	19.63	19.63	19.63	19.63	19.63	19.63	19.56	19.70

000372

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PCB INITIAL CALIBRATION SUMMARY

Date Analyzed: 03/07/2001

Instrument ID: GC-R

GC Column (2nd): DB-1701P

Data File: R3330.C R3331.C R3332.C R3333.C R3334.C

Compound	CALIBRATION FACTORS 50	100	500	1000	2000	MEAN	%RSD
Aroclor-1016	273493	269889	216228	218743	201186	235908	14.15
Aroclor-1016 {2}	541234	524026	411495	417359	384724	455768	15.69
Aroclor-1016 {3}	1142940	1092386	882272	921975	871028	982120	12.87
Aroclor-1016 {4}	499332	487818	383902	392159	363947	425432	14.85
Aroclor-1016 {5}	290225	286499	229684	237330	222968	253341	12.79
Aroclor-1221			129791				
Aroclor-1221 {2}			165371				
Aroclor-1221 {3}			110260				
Aroclor-1221 {4}			409437				
Aroclor-1221 {5}			63243				
Aroclor-1232			268482				
Aroclor-1232 {2}			112119				
Aroclor-1232 {3}			207021				
Aroclor-1232 {4}			124280				
Aroclor-1232 {5}			230564				
Aroclor-1242			127469				
Aroclor-1242 {2}			236009				
Aroclor-1242 {3}			398732				
Aroclor-1242 {4}			280614				
Aroclor-1242 {5}			247760				
Aroclor-1248			732754				
Aroclor-1248 {2}			575069				
Aroclor-1248 {3}			575086				
Aroclor-1248 {4}			568653				
Aroclor-1248 {5}			346517				
Aroclor-1254			302889				
Aroclor-1254 {2}			218959				
Aroclor-1254 {3}			689024				
Aroclor-1254 {4}			484944				
Aroclor-1254 {5}			1066822				
Aroclor-1260	861580	799024	616564	632714	597266	701430	17.16
Aroclor-1260 {2}	1157595	1061140	840118	883219	846560	957726	14.98
Aroclor-1260 {3}	676235	630690	491848	508902	483935	558322	15.90
Aroclor-1260 {4}	1408998	1332394	1075476	1149397	1117322	1216717	11.96
Aroclor-1260 {5}	416730	400654	314553	327336	312186	354292	14.20
					Average %RSD		14.46

000373

PCB CALIBRATION VERIFICATION SUMMARY

Date/Time Analyzed: 03/27/2001 Instrument ID: GC-R

Data File: R3661.D GC Column (1st): DB-5

Compound	RT	RT WINDOW FROM	RT WINDOW TO	Avg CF	CC CF	%D
Aroclor-1016	4.69	4.62	4.76	166643	168266	0.97
Aroclor-1016 {2}	5.62	5.55	5.69	166568	175552	5.39
Aroclor-1016 {3}	6.07	6.00	6.14	219437	218639	0.36
Aroclor-1016 {4}	7.82	7.75	7.89	139734	148071	5.97
Aroclor-1016 {5}	8.27	8.20	8.34	183582	200016	8.95
Aroclor-1260	13.75	13.68	13.82	625118	635634	1.68
Aroclor-1260 {2}	14.31	14.24	14.38	369390	373162	1.02
Aroclor-1260 {3}	15.92	15.85	15.99	892566	897988	0.61
Aroclor-1260 {4}	16.83	16.76	16.90	428092	439908	2.76
Aroclor-1260 {5}	18.86	18.79	18.93	233791	204003	12.74
					Average %D	4.05

Data File: R3661.C GC Column (2nd): DB-1701P

Compound	RT	RT WINDOW FROM	RT WINDOW TO	Avg CF	CC CF	%D
Aroclor-1016	5.00	4.93	5.07	235908	229673	2.64
Aroclor-1016 {2}	5.96	5.89	6.03	455768	442215	2.97
Aroclor-1016 {3}	7.13	7.06	7.20	982120	970536	1.18
Aroclor-1016 {4}	7.52	7.45	7.59	425432	419037	1.50
Aroclor-1016 {5}	7.79	7.72	7.86	253341	273986	8.15
Aroclor-1260	13.32	13.25	13.39	701430	698403	0.43
Aroclor-1260 {2}	14.39	14.32	14.46	957726	957986	0.03
Aroclor-1260 {3}	15.60	15.53	15.67	558322	561215	0.52
Aroclor-1260 {4}	16.51	16.44	16.58	1216717	1191710	2.06
Aroclor-1260 {5}	19.60	19.53	19.67	354292	358160	1.09
					Average %D	2.06

PCB CALIBRATION VERIFICATION SUMMARY

Date/Time Analyzed: 03/27/2001 Instrument ID: GC-R

Data File: R3677.D GC Column (1st): DB-5

Compound	RT	RT WINDOW FROM	RT WINDOW TO	Avg CF	CC CF	%D
Aroclor-1016	4.69	4.62	4.76	166643	175527	5.33
Aroclor-1016 {2}	5.62	5.55	5.69	166568	192313	15.46
Aroclor-1016 {3}	6.07	6.00	6.14	219437	232799	6.09
Aroclor-1016 {4}	7.82	7.75	7.89	139734	155242	11.10
Aroclor-1016 {5}	8.27	8.20	8.34	183582	208859	13.77
Aroclor-1260	13.75	13.68	13.82	625118	683389	9.32
Aroclor-1260 {2}	14.30	14.23	14.37	369390	396422	7.32
Aroclor-1260 {3}	15.92	15.85	15.99	892566	964449	8.05
Aroclor-1260 {4}	16.83	16.76	16.90	428092	479348	11.97
Aroclor-1260 {5}	18.85	18.78	18.92	233791	218158	6.69
					Average %D	9.51

Data File: R3677.C GC Column (2nd): DB-1701P

Compound	RT	RT WINDOW FROM	RT WINDOW TO	Avg CF	CC CF	%D
Aroclor-1016	5.00	4.93	5.07	235908	249459	5.74
Aroclor-1016 {2}	5.96	5.89	6.03	455768	481036	5.54
Aroclor-1016 {3}	7.13	7.06	7.20	982120	1063843	8.32
Aroclor-1016 {4}	7.51	7.44	7.58	425432	458226	7.71
Aroclor-1016 {5}	7.79	7.72	7.86	253341	287910	13.65
Aroclor-1260	13.32	13.25	13.39	701430	757623	8.01
Aroclor-1260 {2}	14.39	14.32	14.46	957726	1043009	8.90
Aroclor-1260 {3}	15.60	15.53	15.67	558322	611211	9.47
Aroclor-1260 {4}	16.51	16.44	16.58	1216717	1337878	9.96
Aroclor-1260 {5}	19.60	19.53	19.67	354292	389245	9.87
					Average %D	8.72

PCB CALIBRATION VERIFICATION SUMMARY

Date/Time Analyzed: 03/28/2001 Instrument ID: GC-R

Data File: R3680.D GC Column (1st): DB-5

Compound	RT	RT WINDOW FROM	RT WINDOW TO	Avg CF	CC CF	%D
Aroclor-1016	4.69	4.62	4.76	166643	192482	15.51
Aroclor-1016 {2}	5.62	5.55	5.69	166568	183668	10.27
Aroclor-1016 {3}	6.07	6.00	6.14	219437	245289	11.78
Aroclor-1016 {4}	7.82	7.75	7.89	139734	161345	15.47
Aroclor-1016 {5}	8.27	8.20	8.34	183582	216087	17.71
Aroclor-1260	13.75	13.68	13.82	625118	641947	2.69
Aroclor-1260 {2}	14.30	14.23	14.37	369390	395414	7.05
Aroclor-1260 {3}	15.92	15.85	15.99	892566	952844	6.75
Aroclor-1260 {4}	16.82	16.75	16.89	428092	426621	0.34
Aroclor-1260 {5}	18.85	18.78	18.92	233791	215376	7.88
					Average %D	9.54

Data File: R3680.C GC Column (2nd): DB-1701P

Compound	RT	RT WINDOW FROM	RT WINDOW TO	Avg CF	CC CF	%D
Aroclor-1016	5.00	4.93	5.07	235908	259039	9.81
Aroclor-1016 {2}	5.96	5.89	6.03	455768	494806	8.57
Aroclor-1016 {3}	7.14	7.07	7.21	982120	1096586	11.65
Aroclor-1016 {4}	7.52	7.45	7.59	425432	469826	10.44
Aroclor-1016 {5}	7.80	7.73	7.87	253341	313623	23.79
Aroclor-1260	13.32	13.25	13.39	701430	770352	9.83
Aroclor-1260 {2}	14.39	14.32	14.46	957726	1058709	10.54
Aroclor-1260 {3}	15.59	15.52	15.66	558322	623776	11.72
Aroclor-1260 {4}	16.51	16.44	16.58	1216717	1357543	11.57
Aroclor-1260 {5}	19.60	19.53	19.67	354292	369955	4.42
					Average %D	11.23

000375

PCB CALIBRATION VERIFICATION SUMMARY

Date/Time Analyzed: 03/28/2001 Instrument ID: GC-R

Data File: R3690.D GC Column (1st): DB-5

Compound	RT	RT WINDOW FROM	RT WINDOW TO	Avg CF	CC CF	%D
Aroclor-1016	4.68	4.61	4.75	166643	164211	1.46
Aroclor-1016 {2}	5.61	5.54	5.68	166568	172429	3.52
Aroclor-1016 {3}	6.06	5.99	6.13	219437	214556	2.22
Aroclor-1016 {4}	7.81	7.74	7.88	139734	146011	4.49
Aroclor-1016 {5}	8.26	8.19	8.33	183582	194378	5.88
Aroclor-1260	13.74	13.67	13.81	625118	611870	2.12
Aroclor-1260 {2}	14.30	14.23	14.37	369390	347717	5.87
Aroclor-1260 {3}	15.92	15.85	15.99	892566	858326	3.84
Aroclor-1260 {4}	16.82	16.75	16.89	428092	424423	0.86
Aroclor-1260 {5}	18.85	18.78	18.92	233791	203313	13.04
					Average %D	4.33

Data File: R3690.C GC Column (2nd): DB-1701P

Compound	RT	RT WINDOW FROM	RT WINDOW TO	Avg CF	CC CF	%D
Aroclor-1016	4.98	4.91	5.05	235908	226337	4.06
Aroclor-1016 {2}	5.95	5.88	6.02	455768	439504	3.57
Aroclor-1016 {3}	7.12	7.05	7.19	982120	962861	1.96
Aroclor-1016 {4}	7.51	7.44	7.58	425432	416789	2.03
Aroclor-1016 {5}	7.79	7.72	7.86	253341	271474	7.16
Aroclor-1260	13.31	13.24	13.38	701430	698096	0.48
Aroclor-1260 {2}	14.39	14.32	14.46	957726	932562	2.63
Aroclor-1260 {3}	15.59	15.52	15.66	558322	564852	1.17
Aroclor-1260 {4}	16.50	16.43	16.57	1216717	1238721	1.81
Aroclor-1260 {5}	19.60	19.53	19.67	354292	385189	8.72
					Average %D	3.36

PCB SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 03/27/2001

Client ID	Lab Sample ID	Matrix	TCMX 1 % rec	#	DCB 1 % rec	#	TCMX 2 % rec	#	DCB 2 % rec	#
(1834)	0327-BLK2	SOIL	79		71		79		75	
PCB	PBS0327-MS2	SOIL	79		77		81		82	
(1838..1855)	0327-BLK1	SOIL	78		74		80		76	
S-1	1854-001	SOIL	70		80		80		90	
4033-COMP1	1855-001	SOIL	60		80		70		100	
4033-COMP2	1855-002	SOIL	60		80		70		100	
WC1	1838-001	SOIL	60		90		70		100	
PCB	PBS0327-MS1	SOIL	80		77		83		81	

Surrogate QC Limits	Soil	Aqueous
TCMX = Tetrachloro-m-xylene	59-147	59-151
DCB = Decachlorobiphenyl	63-179	60-150

 # Column to be used to flag recovery values
*** Values outside of QC limits**
D Surrogate diluted out
M Matrix interference

PCB SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 03/27/2001

Client ID	Lab Sample ID	Matrix	TCMX 1 % rec	#	DCB 1 % rec	#	TCMX 2 % rec	#	DCB 2 % rec	#
01	1844-001	SOIL	80		90		90		120	
S-11	1840-001	SOIL	80		120		100		120	
S-12	1840-002	SOIL	80		130		50	*	120	
S-13	1840-004	SOIL	80		120		110		320	*
S-14	1840-005	SOIL	80		80		40	*	100	
S-15	1840-006	SOIL	70		110		90		100	
S-16	1840-007	SOIL	70		80		90		100	

Surrogate QC Limits	Soil	Aqueous
TCMX = Tetrachloro-m-xylene	59-147	59-151
DCB = Decachlorobiphenyl	63-179	60-150

\# Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out
M Matrix interference

SOIL PCB MATRIX SPIKE/SPIKE DUPLICATE RECOVERY

Matrix spike Lab sample ID: 1816-007-MSD2

Compound	SPIKE ADDED (ug/Kg)	SAMPLE CONC. (ug/Kg)	MS CONC. (ug/Kg)	MS % REC #	QC LIMITS REC.
Aroclor-1016	10.0	0.0	11.8	118	77 - 168
Aroclor-1260	10.0	0.0	12.6	126	81 - 177

Compound	SAMPLE CONC. (ug/Kg)	MSD CONC. (ug/Kg)	MSD % # REC	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Aroclor-1016	0.0	11.5	115	3	18	77 - 168
Aroclor-1260	0.0	12.1	121	4	19	81 - 177

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

RPD: __0___ out of __2__ outside limits

Spike Recovery: __0___ out of __4__ outside limits

SOIL PCB BLANK SPIKE RECOVERY

Matrix spike Lab sample ID: PBS0327-MS1

Compound	SPIKE ADDED (ug/Kg)	SAMPLE CONC. (ug/Kg)	MS CONC. (ug/Kg)	MS % REC #	QC LIMITS REC.
Aroclor-1016	10.0	0.0	9.3	93	77 - 168
Aroclor-1260	10.0	0.0	8.9	89	81 - 177

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

* Values outside of QC limits

NC Non calculable

Spike Recovery: __0___ out of __2__ outside limits

PCB RETENTION TIME SHIFT SUMMARY

Instrument ID: GC-R **Column:** DB-5/DB-1701P

Surrogate RT from initial calibration :

TCMX 1 3.94 DCB 1 20.94 TCMX 2 3.79 DCB 2 20.95

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed	TCMX 1 RT	#	DCB 1 RT	#	TCMX 2 RT	#	DCB 2 RT	#
(1834)	0327-BLK2	03/27/2001	13:01	3.94		20.94		3.79		20.95	
PCB	PBS0327-MS2	03/27/2001	13:54	3.94		20.94		3.79		20.95	
(1838..1855)	0327-BLK1	03/27/2001	14:20	3.94		20.94		3.80		20.95	
S-1	1854-001	03/27/2001	17:24	3.94		20.94		3.79		20.95	
4033-COMP1	1855-001	03/27/2001	17:50	3.94		20.94		3.79		20.95	
4033-COMP2	1855-002	03/27/2001	18:17	3.93		20.94		3.79		20.95	
WC1	1838-001	03/27/2001	18:43	3.93		20.94		3.79		20.95	
PCB	PBS0327-MS1	03/27/2001	19:09	3.94		20.94		3.79		20.95	

Surrogate QC Limits

TCMX = Tetrachloro-m-xylene **(± 0.05 Minutes)**

DCB = Decachlorobiphenyl **(_ 0.05 Minutes)**

 # Column to be used to flag recovery values
*** Values outside of QC limits**
D Surrogate diluted out
M Matrix interference

PCB RETENTION TIME SHIFT SUMMARY

Instrument ID: GC-R Column: DB-5/DB-1701P

Surrogate RT from initial calibration :

TCMX 1 3.94 DCB 1 20.94 TCMX 2 3.79 DCB 2 20.95

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed	TCMX 1 RT	#	DCB 1 RT	#	TCMX 2 RT	#	DCB 2 RT	#
01	1844-001	03/28/2001	08:10	3.94		20.94		3.79		20.95	
S-11	1840-001	03/28/2001	08:36	3.94		20.94		3.79		20.95	
S-12	1840-002	03/28/2001	09:03	3.94		20.94		3.79		20.95	
S-13	1840-004	03/28/2001	09:29	3.94		20.94		3.79		21.00	
S-14	1840-005	03/28/2001	09:55	3.94		20.94		3.79		20.95	
S-15	1840-006	03/28/2001	10:21	3.94		20.94		3.80		20.95	
S-16	1840-007	03/28/2001	10:48	3.94		20.94		3.80		20.95	

Surrogate QC Limits

TCMX = Tetrachloro-m-xylene (± 0.05 Minutes)

DCB = Decachlorobiphenyl (_ 0.05 Minutes)

Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out
M Matrix interference

000383

Quantitation Report (QT Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\03-27-01\R3682.D\ECD1B.CH Vial: 4
Signal #2 : C:\MSDCHEM\1\DATA\03-27-01\R3682.D\ECD2A.CH
Acq On : 28 Mar 2001 8:36 Operator:
Sample : S-11,1840-001,S,30.0g,17.3,03/27/01 Inst : GC_R
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01,100 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Mar 28 09:00:10 2001 Quant Results File: RPCB0307.RES

Quant Method : C:\MSDCHEM\1\METHODS\RPCB0307.M (Chemstation Integrator)
Title :
Last Update : Thu Mar 08 07:28:43 2001
Response via : Initial Calibration
DataAcq Meth : RPCB0307.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
System Monitoring Compounds						
1) S TCMX	3.94	3.79	15533122	25602338	1.667	2.013
Spiked Amount 205.000	Range 75 - 125		Recovery =		0.81%#	0.98%#
2) S DCB	20.94	20.95	19647470	27468170	2.381	2.404
Spiked Amount 205.000			Recovery =		1.16%	1.17%
Target Compounds						
Sum Aroclor-1016			0	0	N.D.	N.D.
Average Aroclor-1016					0.000	0.000
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
Sum Aroclor-1260			0	0	N.D.	N.D.
Average Aroclor-1260					0.000	0.000

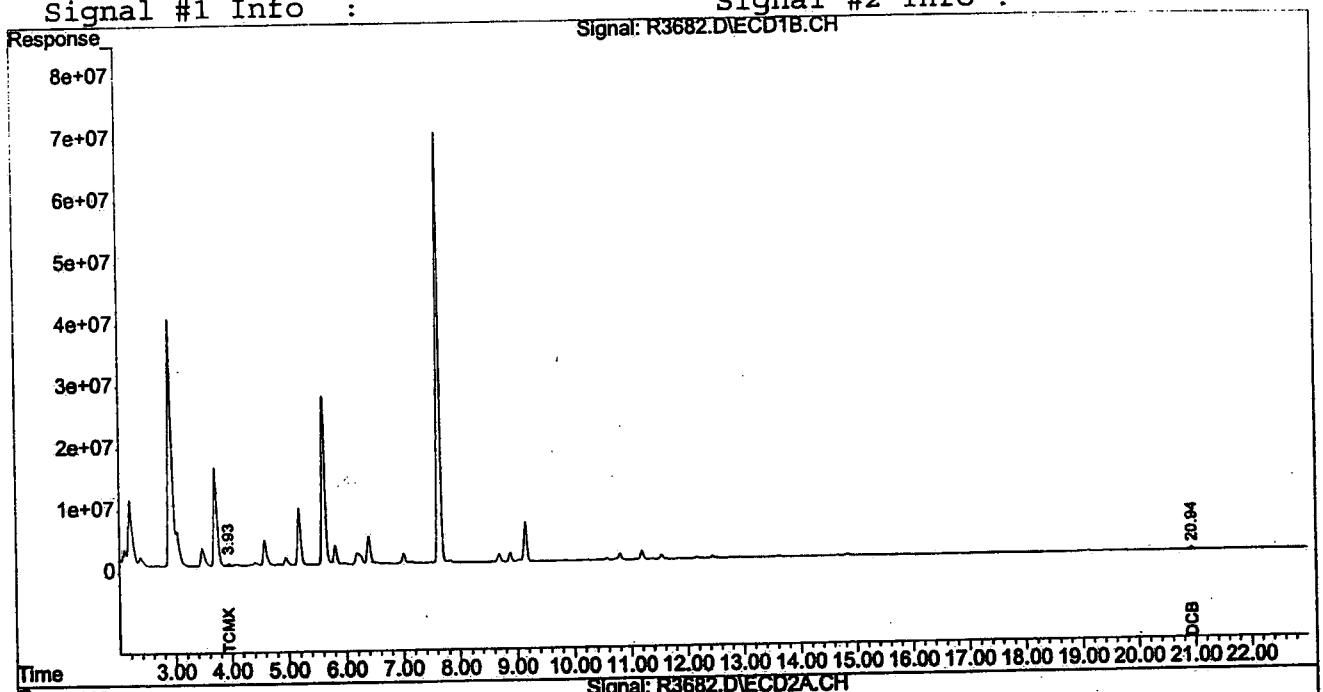
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int

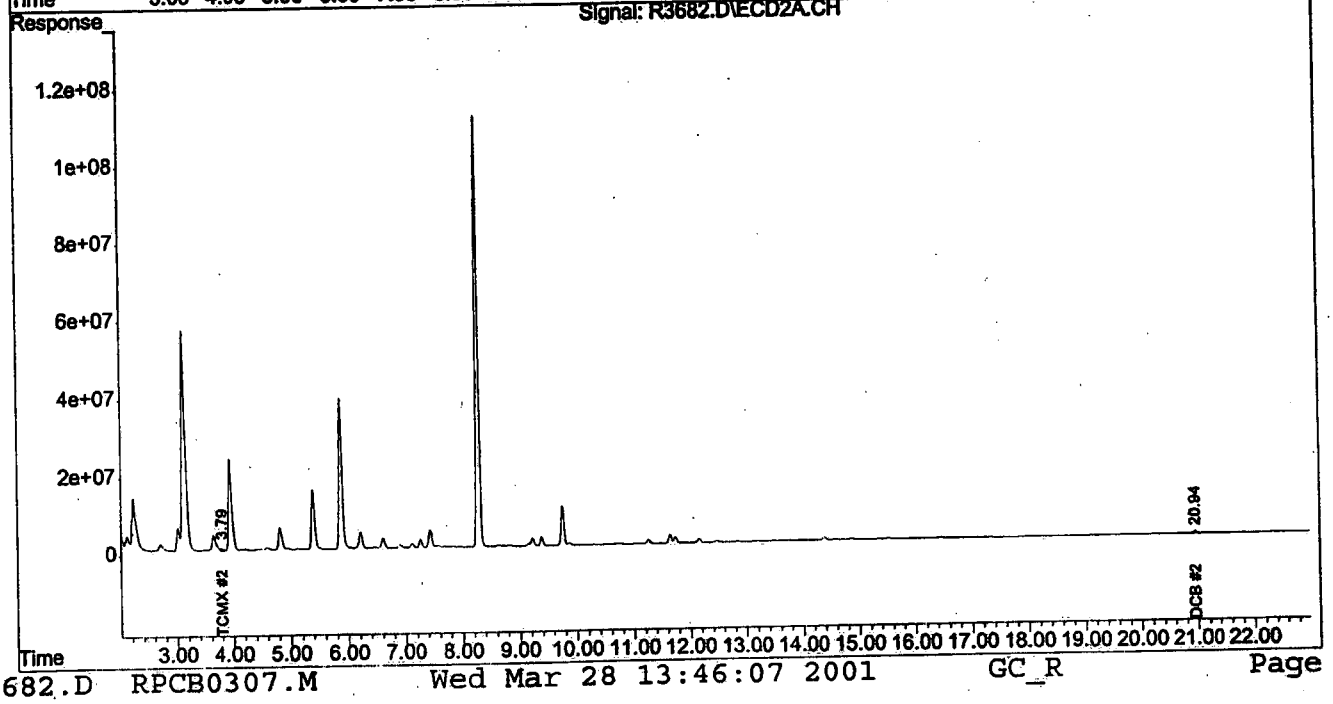
Quantitation Report (QT Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\03-27-01\R3682.D\ECD1B.CH Vial: 4
Signal #2 : C:\MSDCHEM\1\DATA\03-27-01\R3682.D\ECD2A.CH
Acq On : 28 Mar 2001 8:36 Operator:
Sample : S-11,1840-001,S,30.0g,17.3,03/27/01 Inst : GC_R
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01,100 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Mar 28 9:23 2001 Quant Results File: RPCB0307.RES

Quant Method : C:\MSDCHEM\1\METHODS\RPCB0307.M (Chemstation Integrator)
Title :
Last Update : Thu Mar 08 07:28:43 2001
Response via : Multiple Level Calibration
DataAcq Meth : RPCB0307.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





942

Quantitation Report (QT Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\03-27-01\R3683.D\ECD1B.CH Vial: 5
Signal #2 : C:\MSDCHEM\1\DATA\03-27-01\R3683.D\ECD2A.CH
Acq On : 28 Mar 2001 9:03 Operator:
Sample : S-12,1840-002,S,30.8g,12.6,03/27/01 Inst : GC_R
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01,100 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Mar 28 09:26:23 2001 Quant Results File: RPCB0307.RES

Quant Method : C:\MSDCHEM\1\METHODS\RPCB0307.M (Chemstation Integrator)
Title :
Last Update : Thu Mar 08 07:28:43 2001
Response via : Initial Calibration
DataAcq Meth : RPCB0307.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
System Monitoring Compounds						
1) S TCMX	3.94	3.79	16176396	14218894	1.736	1.118 #
Spiked Amount 205.000	Range 75 - 125		Recovery =		0.85%#	0.55%#
2) S DCB	20.94	20.95	22155285	27372577	2.685	2.396
Spiked Amount 205.000			Recovery =		1.31%	1.17%
Target Compounds						
Sum Aroclor-1016			0	0	N.D.	N.D.
Average Aroclor-1016					0.000	0.000
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
Sum Aroclor-1260			0	0	N.D.	N.D.
Average Aroclor-1260					0.000	0.000

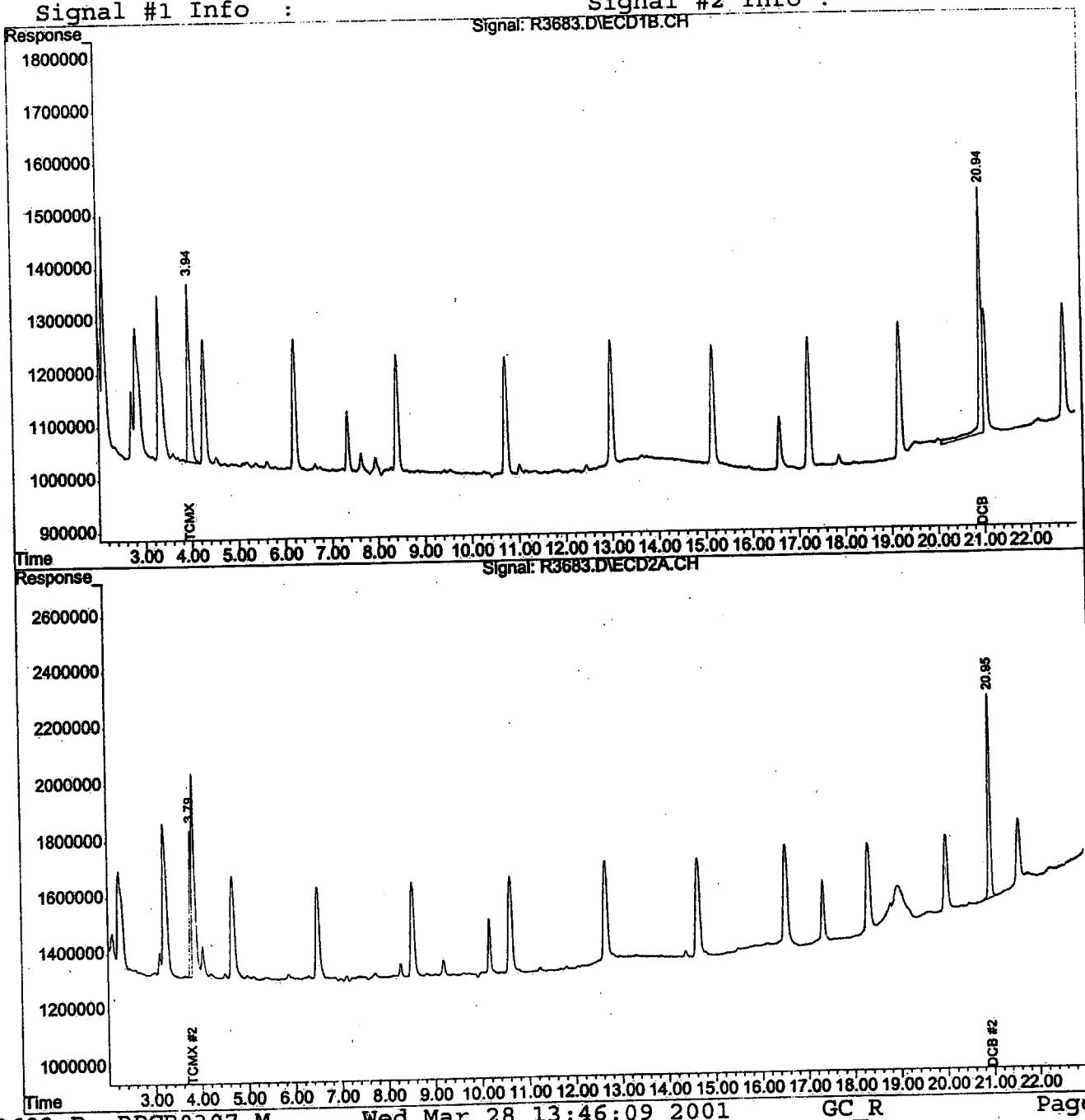
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\03-27-01\R3683.D\ECD1B.CH Vial: 5
Signal #2 : C:\MSDCHEM\1\DATA\03-27-01\R3683.D\ECD2A.CH
Acq On : 28 Mar 2001 9:03 Operator:
Sample : S-12,1840-002,S,30.8g,12.6,03/27/01 Inst : GC_R
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01,100 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Mar 28 13:20 2001 Quant Results File: RPCB0307.RES

Quant Method : C:\MSDCHEM\1\METHODS\RPCB0307.M (Chemstation Integrator)
Title :
Last Update : Thu Mar 08 07:28:43 2001
Response via : Multiple Level Calibration
DataAcq Meth : RPCB0307.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



00038?

944

Quantitation Report (QT Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\03-27-01\R3684.D\ECD1B.CH Vial: 6
Signal #2 : C:\MSDCHEM\1\DATA\03-27-01\R3684.D\ECD2A.CH
Acq On : 28 Mar 2001 9:29 Operator:
Sample : S-13,1840-004,S,30.1g,24.4,03/27/01 Inst : GC_R
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01,100 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Mar 28 09:52:38 2001 Quant Results File: RPCB0307.RES

Quant Method : C:\MSDCHEM\1\METHODS\RPCB0307.M (Chemstation Integrator)
Title :
Last Update : Thu Mar 08 07:28:43 2001
Response via : Initial Calibration
DataAcq Meth : RPCB0307.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
System Monitoring Compounds						
1) S TCMX	3.94	3.79	15019541	28605951	1.612	2.249 #
Spiked Amount 205.000	Range 75 - 125		Recovery =		0.79%#	1.10%#
2) S DCB	20.94	21.00	20863444	73902245	2.528	6.469 #
Spiked Amount 205.000			Recovery =		1.23%	3.16%
Target Compounds						
Sum Aroclor-1016			0	0	N.D.	N.D.
Average Aroclor-1016					0.000	0.000
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
Sum Aroclor-1260			0	0	N.D.	N.D.
Average Aroclor-1260					0.000	0.000

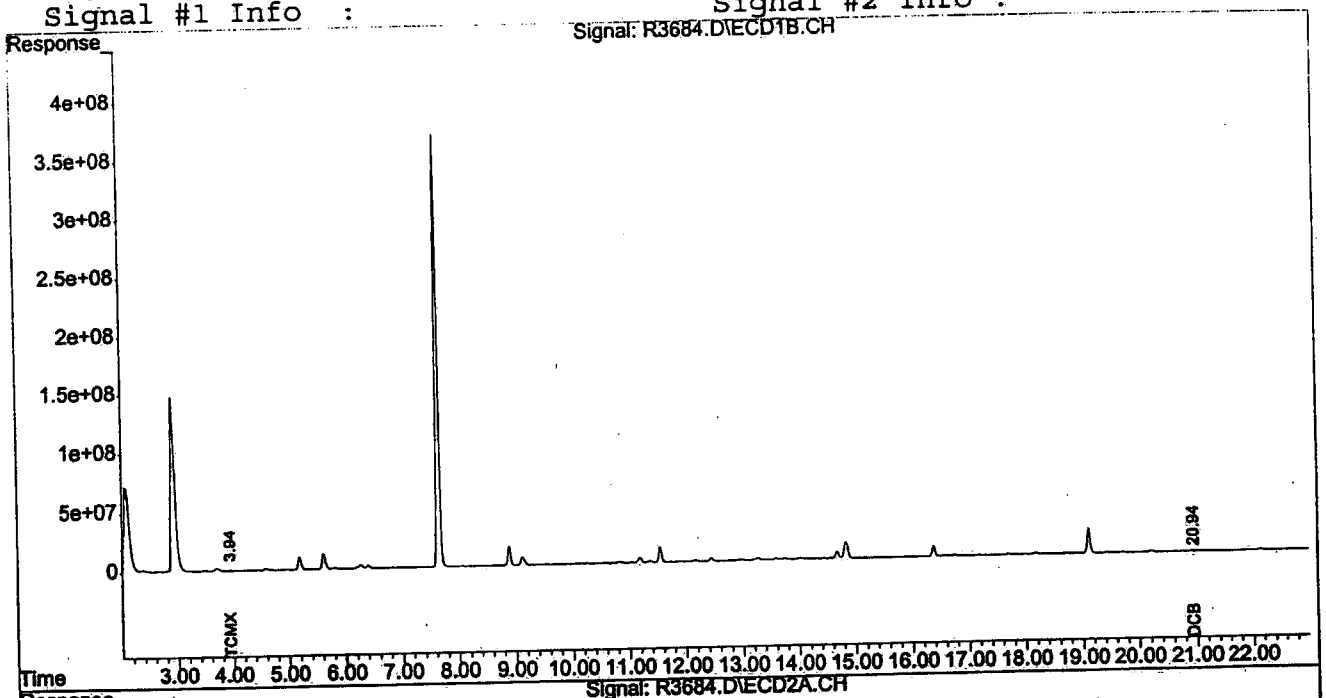
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

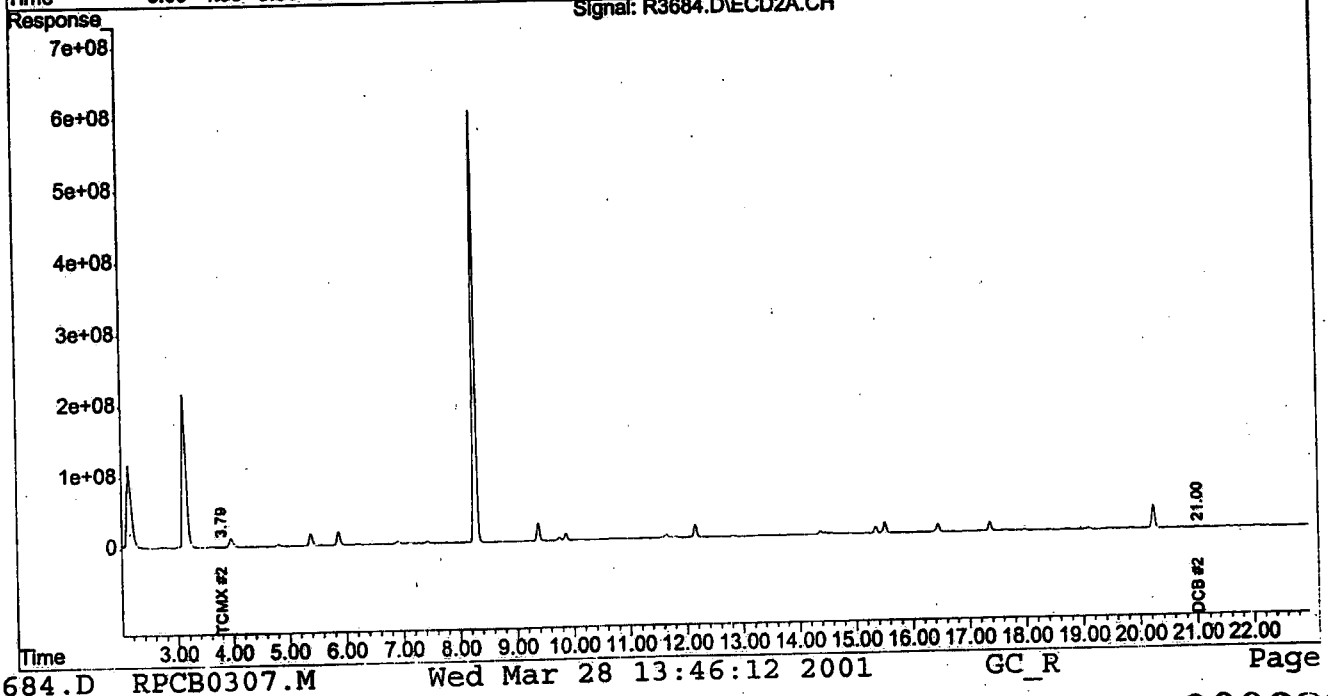
Quantitation Report (QT Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\03-27-01\R3684.D\ECD1B.CH Vial: 6
Signal #2 : C:\MSDCHEM\1\DATA\03-27-01\R3684.D\ECD2A.CH
Acq On : 28 Mar 2001 9:29 Operator:
Sample : S-13,1840-004,S,30.1g,24.4,03/27/01 Inst : GC_R
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01,100 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Mar 28 13:20 2001 Quant Results File: RPCB0307.RES

Quant Method : C:\MSDCHEM\1\METHODS\RPCB0307.M (Chemstation Integrator)
Title :
Last Update : Thu Mar 08 07:28:43 2001
Response via : Multiple Level Calibration
DataAcq Meth : RPCB0307.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





000389

946

Quantitation Report (QT Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\03-27-01\R3685.D\ECD1B.CH Vial: 7
Signal #2 : C:\MSDCHEM\1\DATA\03-27-01\R3685.D\ECD2A.CH
Acq On : 28 Mar 2001 9:55 Operator:
Sample : S-14,1840-005,S,30.1g,15.1,03/27/01 Inst : GC_R
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01,100 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Mar 28 10:19:07 2001 Quant Results File: RPCB0307.RES

Quant Method : C:\MSDCHEM\1\METHODS\RPCB0307.M (Chemstation Integrator)
Title :
Last Update : Thu Mar 08 07:28:43 2001
Response via : Initial Calibration
DataAcq Meth : RPCB0307.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

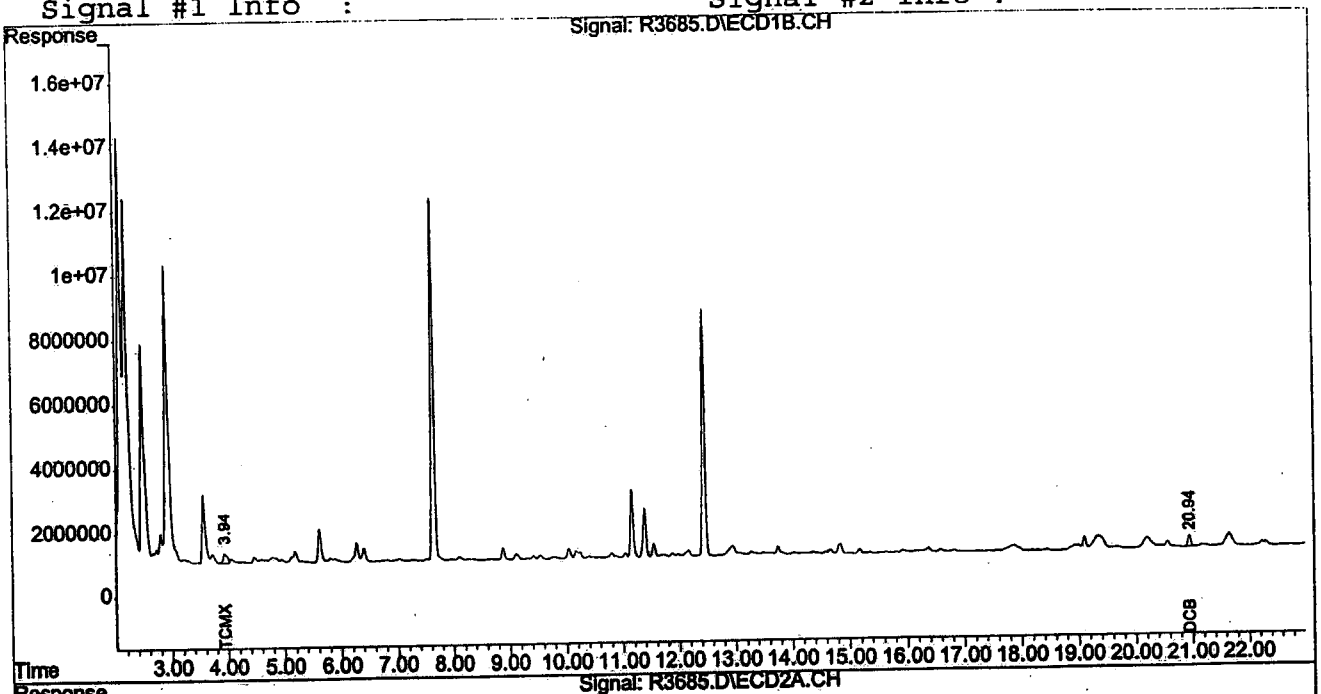
Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
System Monitoring Compounds						
1) S TCMX	3.94	3.79	15804808	10181784	1.696	0.801 #
Spiked Amount 205.000	Range 75 - 125			Recovery =	0.83%#	0.39%#
2) S DCB	20.94	20.95	13821988	24421194	1.675	2.138 #
Spiked Amount 205.000				Recovery =	0.82%	1.04%
Target Compounds						
Sum Aroclor-1016			0	0	N.D.	N.D.
Average Aroclor-1016					0.000	0.000
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
Sum Aroclor-1260			0	0	N.D.	N.D.
Average Aroclor-1260					0.000	0.000

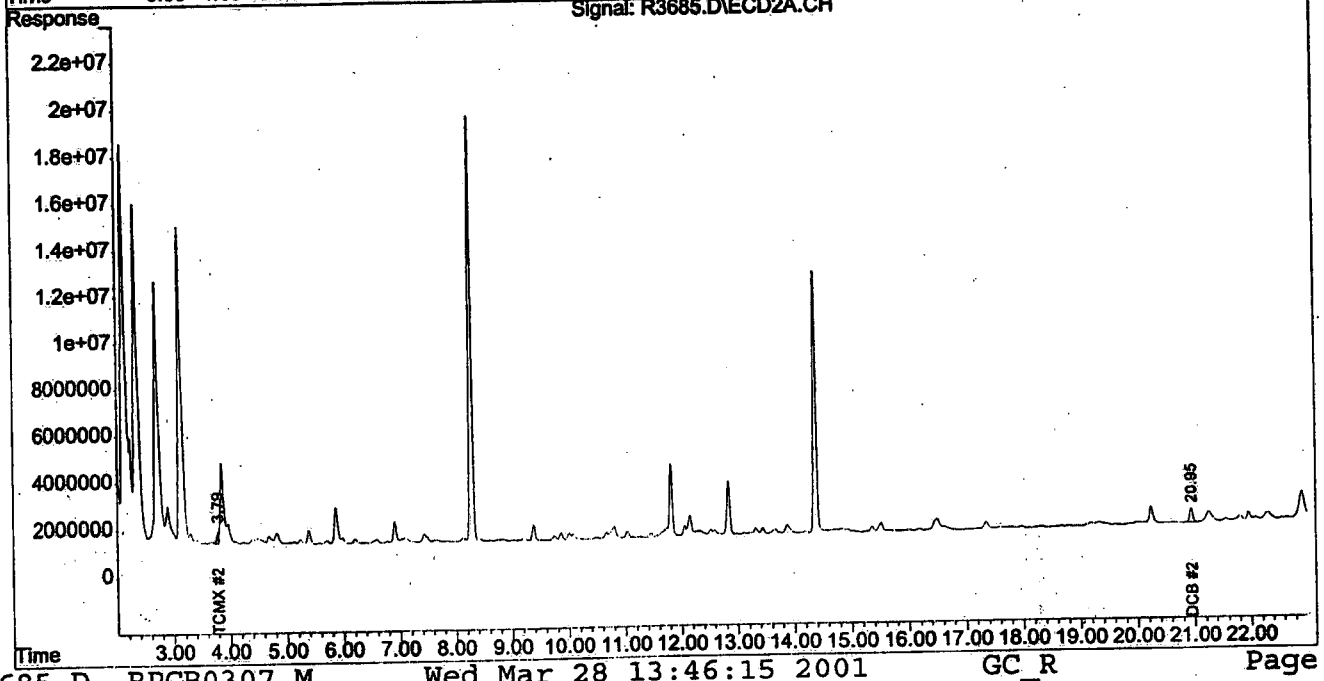
Quantitation Report (QT Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\03-27-01\R3685.D\ECD1B.CH Vial: 7
Signal #2 : C:\MSDCHEM\1\DATA\03-27-01\R3685.D\ECD2A.CH
Acq On : 28 Mar 2001 9:55 Operator:
Sample : S-14,1840-005,S,30.1g,15.1,03/27/01 Inst : GC_R
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01,100 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Mar 28 13:20 2001 Quant Results File: RPCB0307.RES

Quant Method : C:\MSDCHEM\1\METHODS\RPCB0307.M (Chemstation Integrator)
Title :
Last Update : Thu Mar 08 07:28:43 2001
Response via : Multiple Level Calibration
DataAcq Meth : RPCB0307.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





948

000391

Quantitation Report (QT Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\03-27-01\R3686.D\ECD1B.CH Vial: 8
Signal #2 : C:\MSDCHEM\1\DATA\03-27-01\R3686.D\ECD2A.CH
Acq On : 28 Mar 2001 10:21 Operator:
Sample : S-15,1840-006,S,30.4g,17.7,03/27/01 Inst : GC_R
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01,100 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Mar 28 10:45:23 2001 Quant Results File: RPCB0307.RES

Quant Method : C:\MSDCHEM\1\METHODS\RPCB0307.M (Chemstation Integrator)
Title :
Last Update : Thu Mar 08 07:28:43 2001
Response via : Initial Calibration
DataAcq Meth : RPCB0307.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
System Monitoring Compounds						
1) S TCMX	3.94	3.80	13783652	24090988	1.479	1.894 #
Spiked Amount 205.000	Range 75 - 125		Recovery =		0.72%#	0.92%#
2) S DCB	20.94	20.95	19107140	24116808	2.315	2.111
Spiked Amount 205.000			Recovery =		1.13%	1.03%
Target Compounds						
Sum Aroclor-1016			0	0	N.D.	N.D.
Average Aroclor-1016					0.000	0.000
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
Sum Aroclor-1260			0	0	N.D.	N.D.
Average Aroclor-1260					0.000	0.000

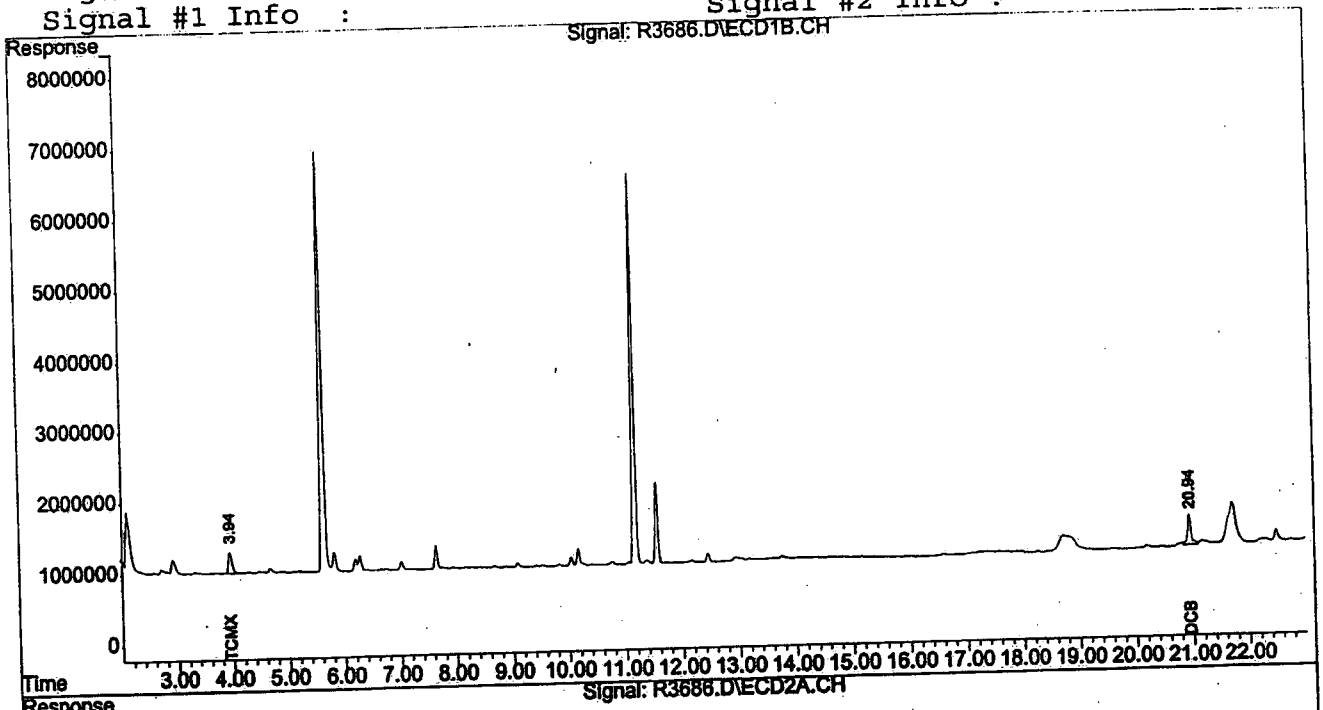
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

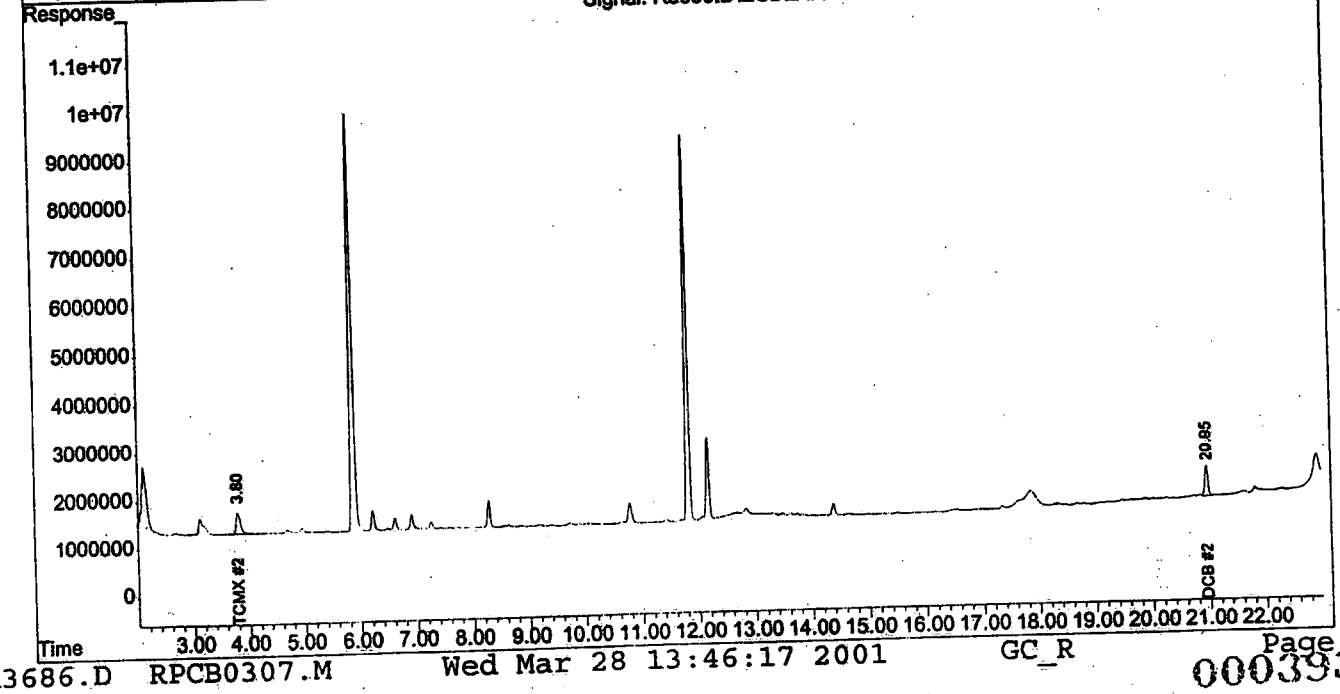
Quantitation Report (QT Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\03-27-01\R3686.D\ECD1B.CH Vial: 8
Signal #2 : C:\MSDCHEM\1\DATA\03-27-01\R3686.D\ECD2A.CH
Acq On : 28 Mar 2001 10:21 Operator:
Sample : S-15,1840-006,S,30.4g,17.7,03/27/01 Inst : GC_R
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01,100 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Mar 28 13:19 2001 Quant Results File: RPCB0307.RES

Quant Method : C:\MSDCHEM\1\METHODS\RPCB0307.M (Chemstation Integrator)
Title :
Last Update : Thu Mar 08 07:28:43 2001
Response via : Multiple Level Calibration
DataAcq Meth : RPCB0307.M

Volume Inj. :
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :





Quantitation Report (Not Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\03-27-01\R3687.D\ECD1B.CH Vial: 9
Signal #2 : C:\MSDCHEM\1\DATA\03-27-01\R3687.D\ECD2A.CH
Acq On : 28 Mar 2001 10:48 Operator:
Sample : S-16,1840-007,S,30.5g,14.9,03/27/01 Inst : GC_R
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01,100 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Mar 28 11:11:34 2001 Quant Results File: RPCB0307.RES

Quant Method : C:\MSDCHEM\1\METHODS\RPCB0307.M (Chemstation Integrator)
Title :
Last Update : Thu Mar 08 07:28:43 2001
Response via : Initial Calibration
DataAcq Meth : RPCB0307.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

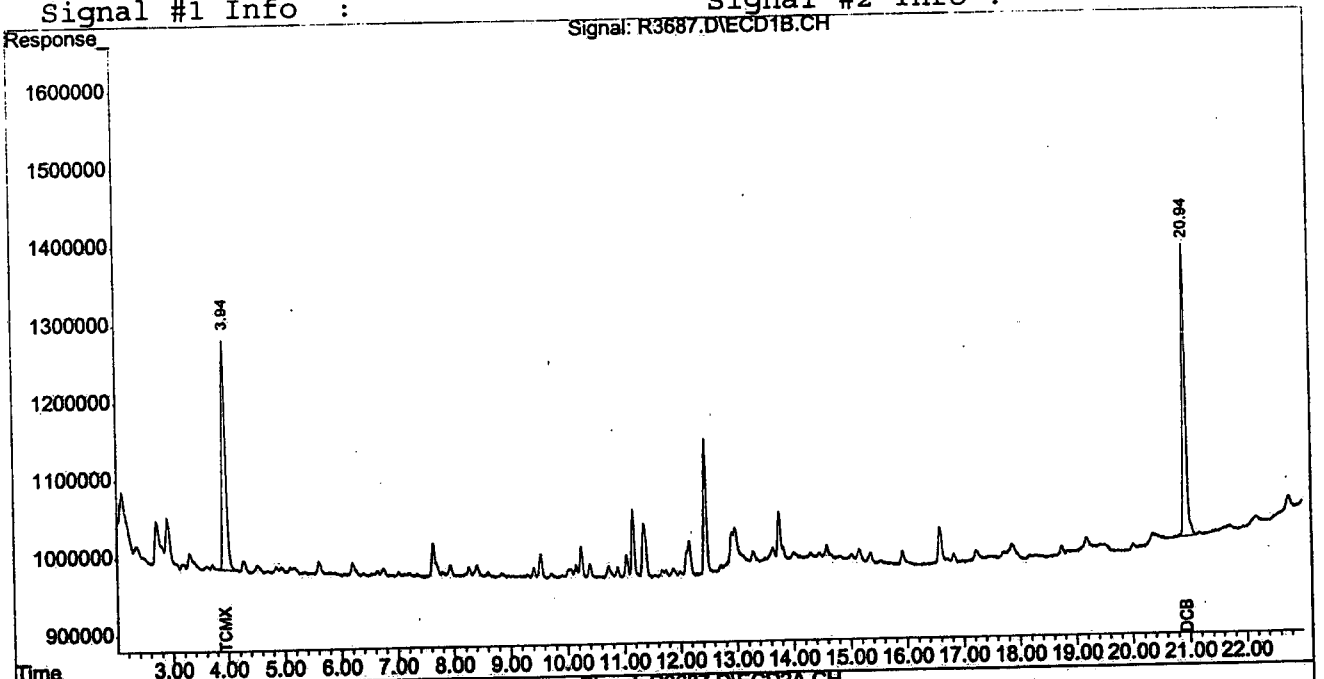
Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
System Monitoring Compounds						
1) S TCMX	3.94	3.80	13625653	23725737	1.462	1.866 #
Spiked Amount 205.000	Range 75 - 125		Recovery =		0.71%#	0.91%#
2) S DCB	20.94	20.95	14127561	23990184	1.712	2.100
Spiked Amount 205.000			Recovery =		0.84%	1.02%
Target Compounds						
Sum Aroclor-1016			0	0	N.D.	N.D.
Average Aroclor-1016					0.000	0.000
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
Sum Aroclor-1260			0	0	N.D.	N.D.
Average Aroclor-1260					0.000	0.000

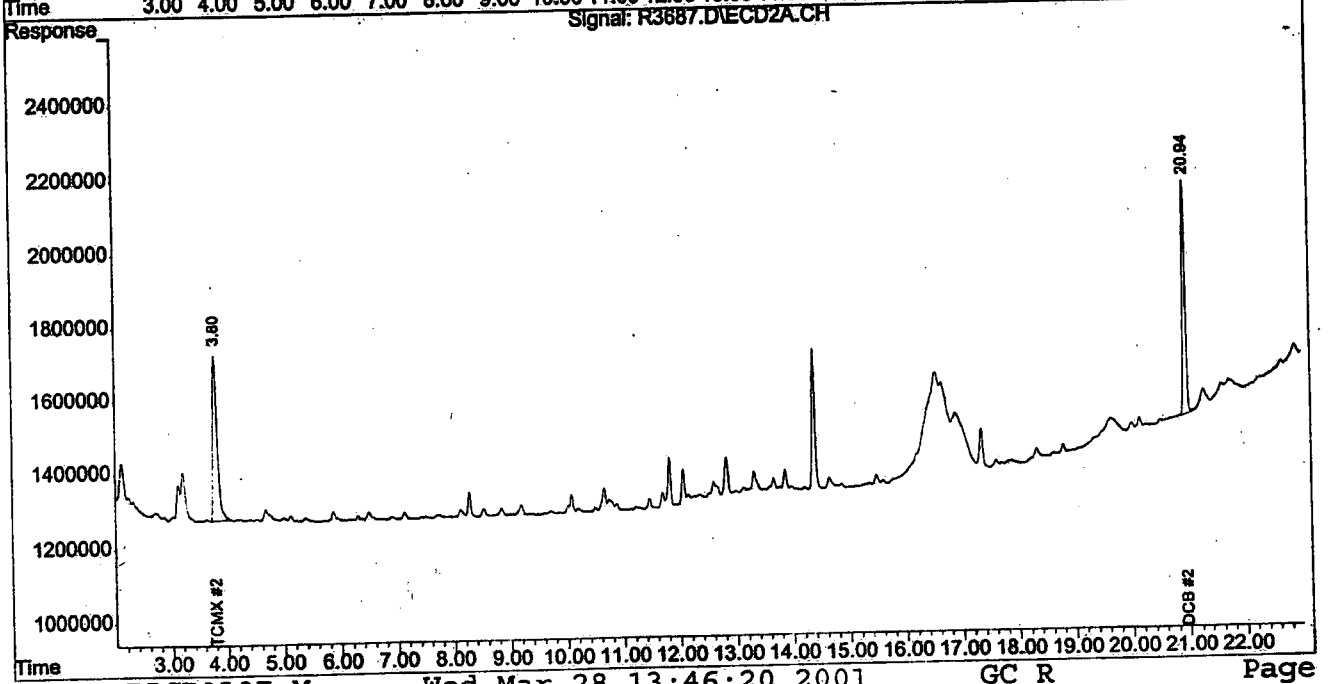
Quantitation Report (Not Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\03-27-01\R3687.D\ECD1B.CH Vial: 9
Signal #2 : C:\MSDCHEM\1\DATA\03-27-01\R3687.D\ECD2A.CH
Acq On : 28 Mar 2001 10:48 Operator:
Sample : S-16,1840-007,S,30.5g,14.9,03/27/01 Inst : GC_R
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01,100 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Mar 28 13:19 2001 Quant Results File: RPCB0307.RES

Quant Method : C:\MSDCHEM\1\METHODS\RPCB0307.M (Chemstation Integrator)
Title :
Last Update : Thu Mar 08 07:28:43 2001
Response via : Multiple Level Calibration
DataAcq Meth : RPCB0307.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





952

000395

Quantitation Report (QT Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\03-27-01\R3665.D\ECD1B.CH Vial: 3
Signal #2 : C:\MSDCHEM\1\DATA\03-27-01\R3665.D\ECD2A.CH
Acq On : 27 Mar 2001 14:20 Operator:
Sample : (1838..1855),0327-BLK1,S,30.0g,0,03/27/0 Inst : GC_R
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Mar 27 14:44:04 2001 Quant Results File: RPCB0307.RES

Quant Method : C:\MSDCHEM\1\METHODS\RPCB0307.M (Chemstation Integrator)
Title :
Last Update : Thu Mar 08 07:28:43 2001
Response via : Initial Calibration
DataAcq Meth : RPCB0307.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
System Monitoring Compounds						
1) S TCMX	3.94	3.80	1492.9E6	2079.4E6	160.182	163.514
Spiked Amount 205.000	Range 75 - 125		Recovery =		78.14%	79.76%
2) S DCB	20.94	20.95	1252.4E6	1773.8E6	151.752	155.263
Spiked Amount 205.000			Recovery =		74.03%	75.74%
Target Compounds						
Sum Aroclor-1016			0	0	N.D.	N.D.
Average Aroclor-1016					0.000	0.000
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
Sum Aroclor-1260			0	0	N.D.	N.D.
Average Aroclor-1260					0.000	0.000

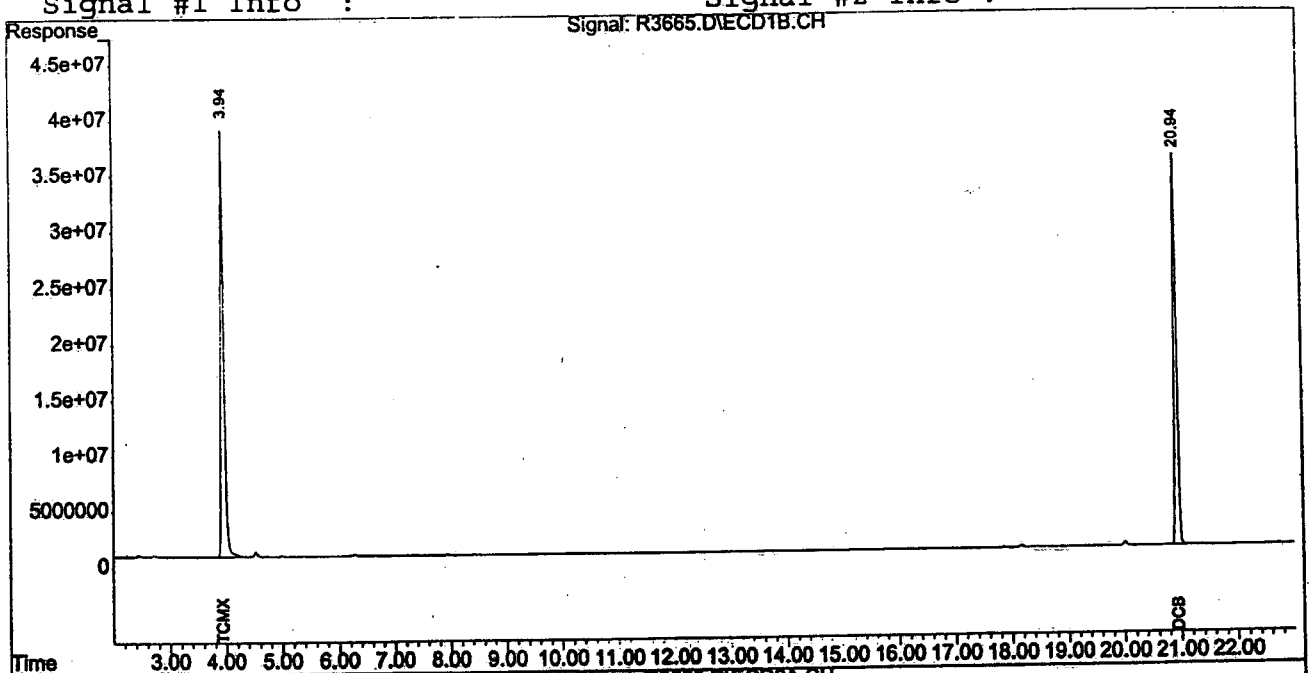
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

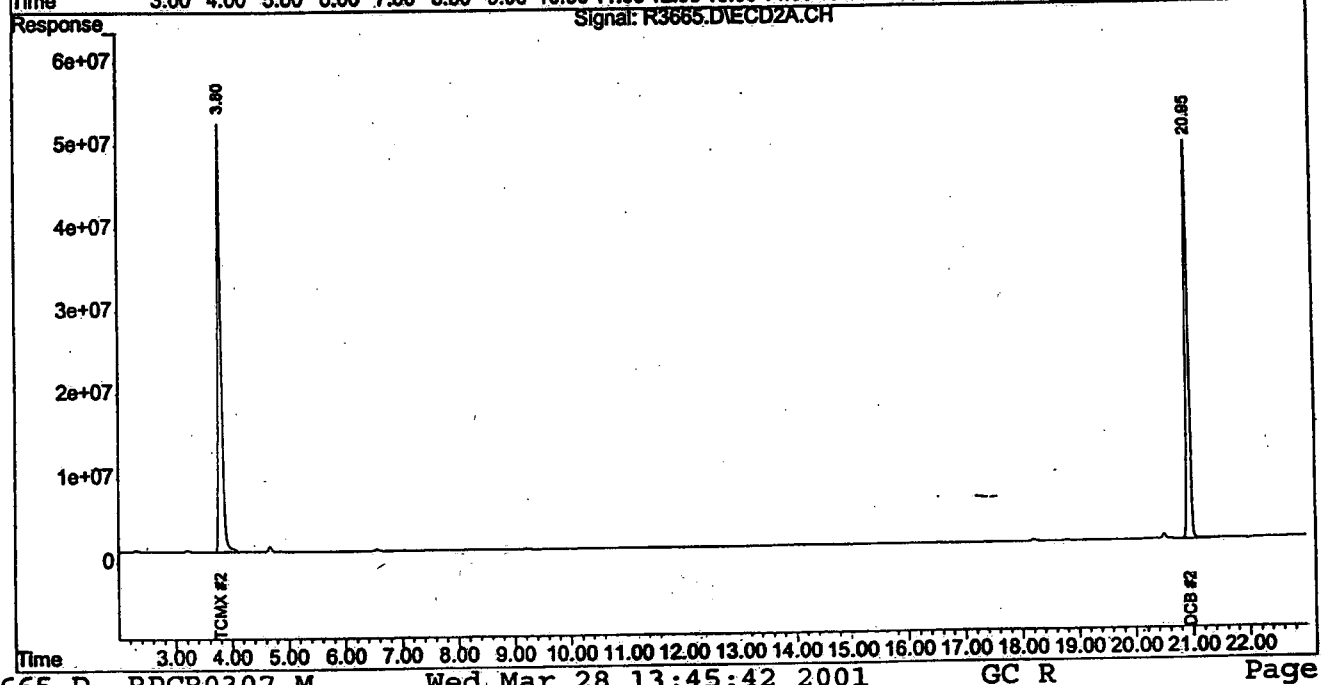
Quantitation Report (QT Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\03-27-01\R3665.D\ECD1B.CH Vial: 3
Signal #2 : C:\MSDCHEM\1\DATA\03-27-01\R3665.D\ECD2A.CH
Acq On : 27 Mar 2001 14:20 Operator:
Sample : (1838..1855),0327-BLK1,S,30.0g,0,03/27/0 Inst : GC_R
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Mar 28 11:02 2001 Quant Results File: RPCB0307.RES

Quant Method : C:\MSDCHEM\1\METHODS\RPCB0307.M (Chemstation Integrator)
Title :
Last Update : Thu Mar 08 07:28:43 2001
Response via : Multiple Level Calibration
DataAcq Meth : RPCB0307.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\03-27-01\R3661.D\ECD1B.CH Vial: 2
Signal #2 : C:\MSDCHEM\1\DATA\03-27-01\R3661.D\ECD2A.CH
Acq On : 27 Mar 2001 12:34 Operator:
Sample : 8082_C_IAS1427,0.5_PPM Inst : GC_R
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Mar 27 12:58:56 2001 Quant Results File: RPCB0307.RES

Quant Method : C:\MSDCHEM\1\METHODS\RPCB0307.M (Chemstation Integrator)
Title :
Last Update : Thu Mar 08 07:28:43 2001
Response via : Initial Calibration
DataAcq Meth : RPCB0307.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Compound		RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
System Monitoring Compounds							
1) S TCMX		3.95	3.81	1008.1E6	1362.9E6	108.173	107.172
Spiked Amount 205.000		Range 75 - 125			Recovery =	52.77%#	52.28%#
2) S DCB		20.94	20.95	771.1E6	1139.1E6	93.435	99.702
Spiked Amount 205.000					Recovery =	45.58%	48.64%
Target Compounds							
3) L2 Aroclor-1016		4.69	5.00	84133199	114.8E6	510.797	491.746
4) L2 Aroclor-1016	(2)	5.62	5.96	87776073	221.1E6	530.155m	487.411
5) L2 Aroclor-1016	(3)	6.07	7.13	109.3E6	485.3E6	504.120	495.925
6) L2 Aroclor-1016	(4)	7.82	7.52	74035346	209.5E6	536.681	495.596
7) L2 Aroclor-1016	(5)	8.27	7.79	100.0E6	137.0E6	552.377	550.126
Sum Aroclor-1016				455.3E6	1167.7E6	2634.130	2520.805
Average Aroclor-1016						526.826	504.161
Sum Aroclor-1221				0	0	N.D.	N.D.
Average Aroclor-1221						0.000	0.000
Sum Aroclor-1232				0	0	N.D.	N.D.
Average Aroclor-1232						0.000	0.000
Sum Aroclor-1242				0	0	N.D.	N.D.
Average Aroclor-1242						0.000	0.000
Sum Aroclor-1248				0	0	N.D.	N.D.
Average Aroclor-1248						0.000	0.000
Sum Aroclor-1254				0	0	N.D.	N.D.
Average Aroclor-1254						0.000	0.000
33) L8 Aroclor-1260		13.75	13.32	317.8E6	349.2E6	508.412	498.498
34) L8 Aroclor-1260	(2)	14.31	14.39	186.6E6	479.0E6	505.106	501.239
35) L8 Aroclor-1260	(3)	15.92	15.60	449.0E6	280.6E6	505.606	509.115
36) L8 Aroclor-1260	(4)	16.83	16.51	220.0E6	595.9E6	512.794	492.251
37) L8 Aroclor-1260	(5)	18.86	19.60	102.0E6	179.1E6	436.913	509.664
Sum Aroclor-1260				1275.3E6	1883.7E6	2468.830	2510.767
Average Aroclor-1260						493.766	502.153

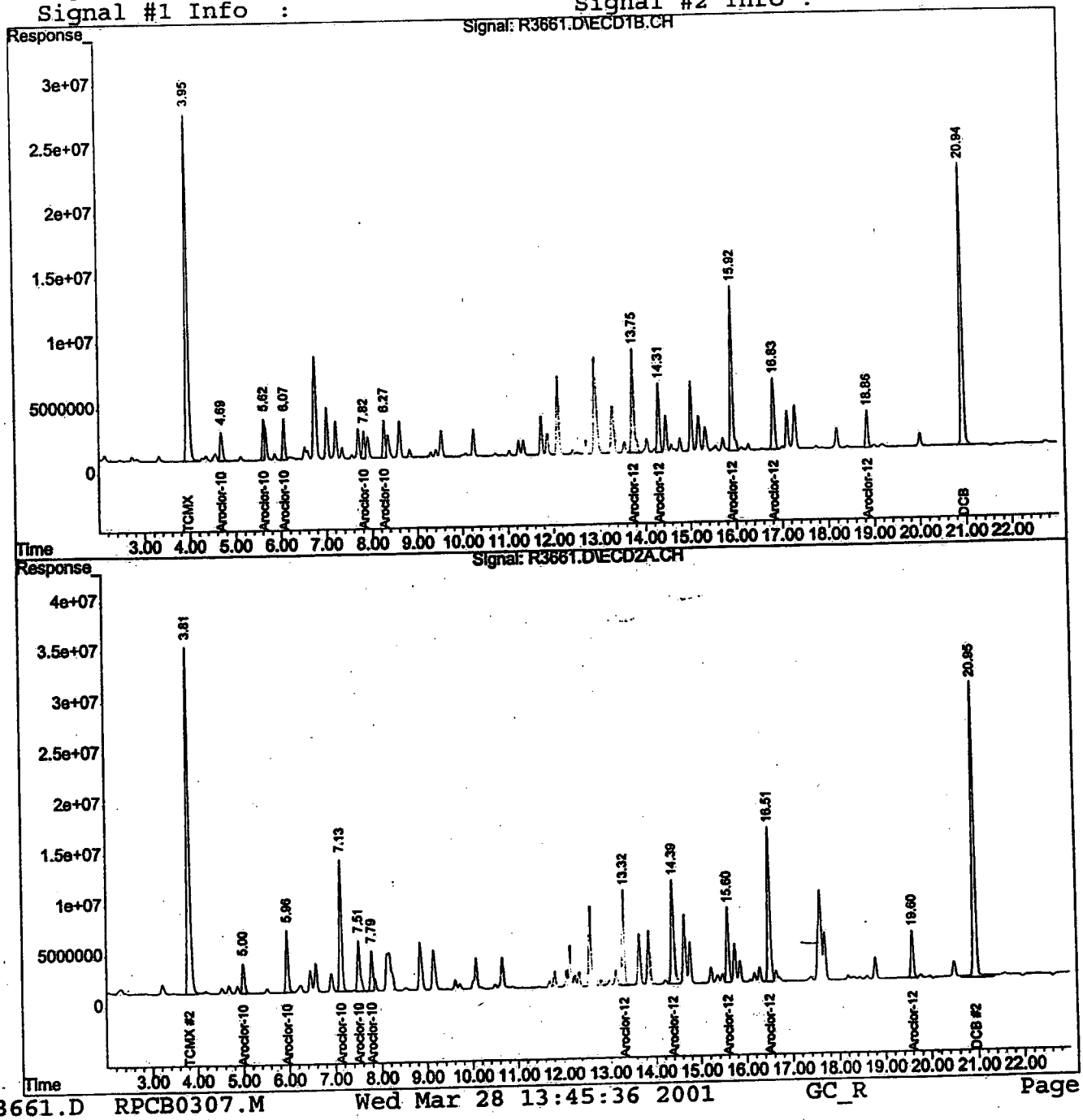
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\03-27-01\R3661.D\ECD1B.CH Vial: 2
Signal #2 : C:\MSDCHEM\1\DATA\03-27-01\R3661.D\ECD2A.CH
Acq On : 27 Mar 2001 12:34 Operator:
Sample : 8082_C_IAS1427,0.5_PPM Inst : GC_R
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Mar 28 11:01 2001 Quant Results File: RPCB0307.RES

Quant Method : C:\MSDCHEM\1\METHODS\RPCB0307.M (Chemstation Integrator)
Title :
Last Update : Thu Mar 08 07:28:43 2001
Response via : Multiple Level Calibration
DataAcq Meth : RPCB0307.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



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956

Quantitation Report (QT Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\03-27-01\R3677.D\ECD1B.CH Vial: 18
Signal #2 : C:\MSDCHEM\1\DATA\03-27-01\R3677.D\ECD2A.CH
Acq On : 27 Mar 2001 19:35 Operator:
Sample : 8082_C_IAS1427,0.5_PPM Inst : GC_R
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Mar 27 19:59:13 2001 Quant Results File: RPCB0307.RES

Quant Method : C:\MSDCHEM\1\METHODS\RPCB0307.M (Chemstation Integrator)
Title :
Last Update : Thu Mar 08 07:28:43 2001
Response via : Initial Calibration
DataAcq Meth : RPCB0307.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Compound		RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
System Monitoring Compounds							
1) S TCMX		3.95	3.81	1048.8E6	1474.7E6	112.538	115.965
Spiked Amount 205.000		Range 75 - 125		Recovery =		54.90%#	56.57%#
2) S DCB		20.94	20.95	814.7E6	1149.3E6	98.719	100.600
Spiked Amount 205.000				Recovery =		48.16%	49.07%
Target Compounds							
3) L2 Aroclor-1016		4.69	5.00	87763511	124.7E6	532.838	534.109
L2 Aroclor-1016	(2)	5.62	5.96	96156515	240.5E6	580.772m	530.200
L2 Aroclor-1016	(3)	6.07	7.13	116.4E6	531.9E6	536.771	543.603
6) L2 Aroclor-1016	(4)	7.82	7.51	77620858	229.1E6	562.672	541.945
7) L2 Aroclor-1016	(5)	8.27	7.79	104.4E6	144.0E6	576.798	578.085m
Sum Aroclor-1016				482.4E6	1270.2E6	2789.850	2727.942
Average Aroclor-1016						557.970	545.588
Sum Aroclor-1221				0	0	N.D.	N.D.
Average Aroclor-1221						0.000	0.000
Sum Aroclor-1232				0	0	N.D.	N.D.
Average Aroclor-1232						0.000	0.000
Sum Aroclor-1242				0	0	N.D.	N.D.
Average Aroclor-1242						0.000	0.000
Sum Aroclor-1248				0	0	N.D.	N.D.
Average Aroclor-1248						0.000	0.000
Sum Aroclor-1254				0	0	N.D.	N.D.
Average Aroclor-1254						0.000	0.000
33) L8 Aroclor-1260		13.75	13.32	341.7E6	378.8E6	546.609	540.766
34) L8 Aroclor-1260	(2)	14.30	14.39	198.2E6	521.5E6	536.589	545.726
35) L8 Aroclor-1260	(3)	15.92	15.60	482.2E6	305.6E6	543.026	554.469
36) L8 Aroclor-1260	(4)	16.83	16.51	239.7E6	668.9E6	558.768	552.628
L8 Aroclor-1260	(5)	18.85	19.60	109.1E6	194.6E6	467.230	553.898
Sum Aroclor-1260				1370.9E6	2069.5E6	2652.222	2747.487
Average Aroclor-1260						530.444	549.497

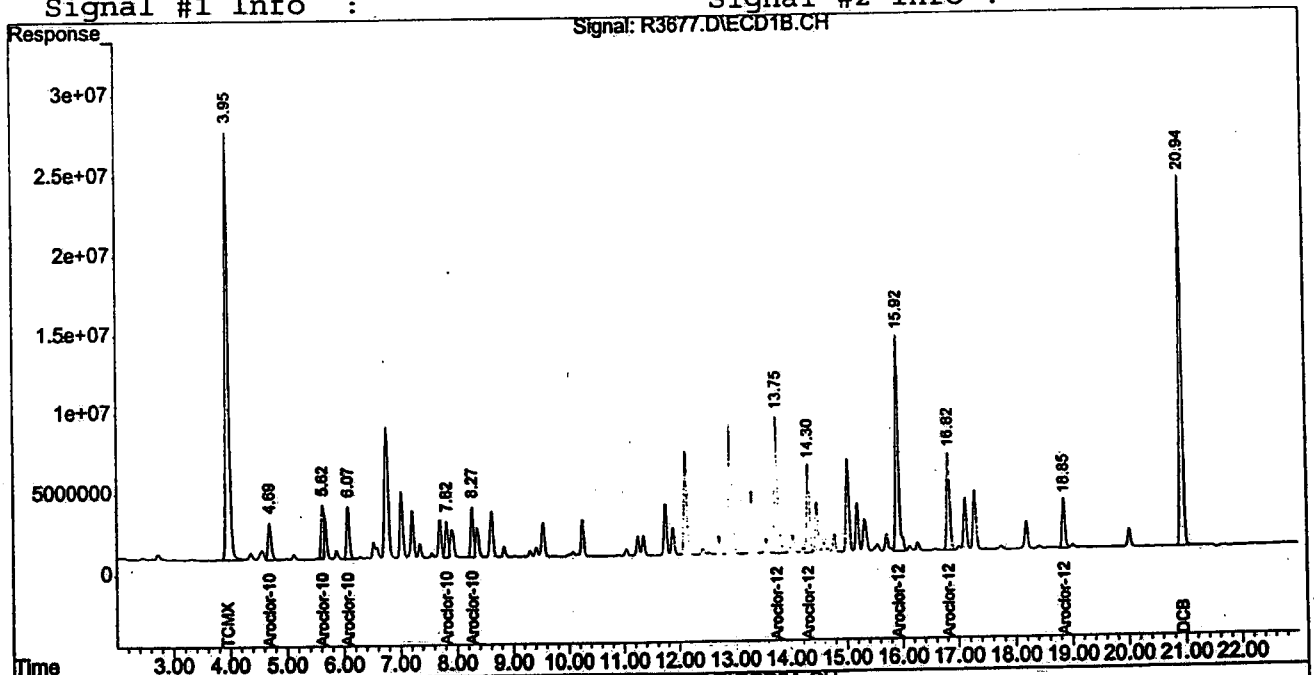
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

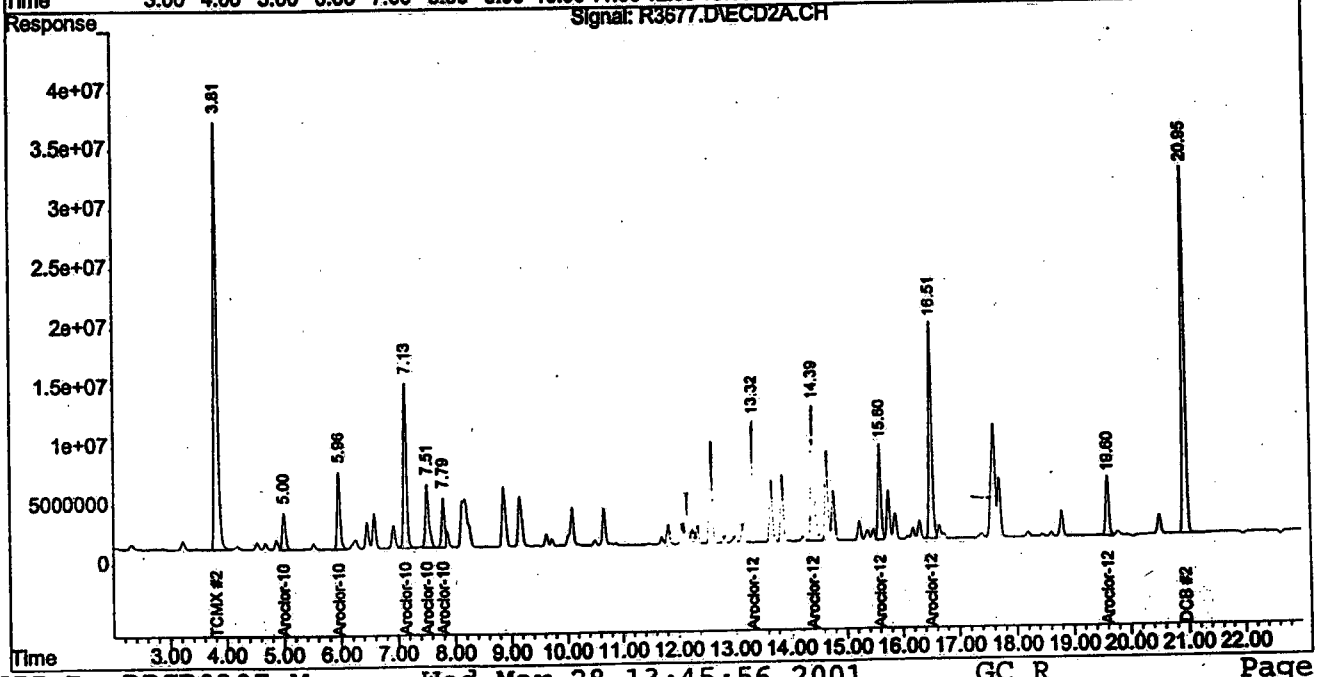
Quantitation Report (QT Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\03-27-01\R3677.D\ECD1B.CH Vial: 18
Signal #2 : C:\MSDCHEM\1\DATA\03-27-01\R3677.D\ECD2A.CH
Acq On : 27 Mar 2001 19:35 Operator:
Sample : 8082_C_IAS1427,0.5_PPM Inst : GC_R
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Mar 28 11:03 2001 Quant Results File: RPCB0307.RES

Quant Method : C:\MSDCHEM\1\METHODS\RPCB0307.M (Chemstation Integrator)
Title :
Last Update : Thu Mar 08 07:28:43 2001
Response via : Multiple Level Calibration
DataAcq Meth : RPCB0307.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\03-27-01\R3680.D\ECD1B.CH Vial: 2
Signal #2 : C:\MSDCHEM\1\DATA\03-27-01\R3680.D\ECD2A.CH
Acq On : 28 Mar 2001 7:44 Operator:
Sample : 8082_C_IAS1427,0.5_PPM Inst : GC_R
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Mar 28 08:07:35 2001 Quant Results File: RPCB0307.RES

Quant Method : C:\MSDCHEM\1\METHODS\RPCB0307.M (Chemstation Integrator)
Title :
Last Update : Thu Mar 08 07:28:43 2001
Response via : Initial Calibration
DataAcq Meth : RPCB0307.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Compound		RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
System Monitoring Compounds							
1) S TCMX		3.96	3.81	1155.6E6	1527.7E6	123.996	120.131
Spiked Amount 205.000	Range 75 - 125			Recovery =		60.49%#	58.60%#
2) S DCB		20.94	20.95	797.6E6	1184.5E6	96.641	103.676
Spiked Amount 205.000				Recovery =		47.14%	50.57%
Target Compounds							
3) L2 Aroclor-1016		4.69	5.00	96241250	129.5E6	584.308	554.621
4) L2 Aroclor-1016	(2)	5.62	5.96	91833896	247.4E6	554.664m	545.377
5) L2 Aroclor-1016	(3)	6.07	7.14	122.6E6	548.3E6	565.567	560.334
6) L2 Aroclor-1016	(4)	7.82	7.52	80672679	234.9E6	584.794m	555.665
7) L2 Aroclor-1016	(5)	8.27	7.80	108.0E6	156.8E6	596.761m	629.713
Sum Aroclor-1016				499.4E6	1316.9E6	2886.095	2845.711
Average Aroclor-1016						577.219	569.142
Sum Aroclor-1221				0	0	N.D.	N.D.
Average Aroclor-1221						0.000	0.000
Sum Aroclor-1232				0	0	N.D.	N.D.
Average Aroclor-1232						0.000	0.000
Sum Aroclor-1242				0	0	N.D.	N.D.
Average Aroclor-1242						0.000	0.000
Sum Aroclor-1248				0	0	N.D.	N.D.
Average Aroclor-1248						0.000	0.000
Sum Aroclor-1254				0	0	N.D.	N.D.
Average Aroclor-1254						0.000	0.000
33) L8 Aroclor-1260		13.75	13.32	321.0E6	385.2E6	513.461	549.852
34) L8 Aroclor-1260	(2)	14.30	14.39	197.7E6	529.4E6	535.225	553.940
35) L8 Aroclor-1260	(3)	15.92	15.59	476.4E6	311.9E6	536.492	565.867
36) L8 Aroclor-1260	(4)	16.82	16.51	213.3E6	678.8E6	497.306	560.751
37) L8 Aroclor-1260	(5)	18.85	19.60	107.7E6	185.0E6	461.271	526.448m
Sum Aroclor-1260				1316.1E6	2090.2E6	2543.755	2756.859
Average Aroclor-1260						508.751	551.372

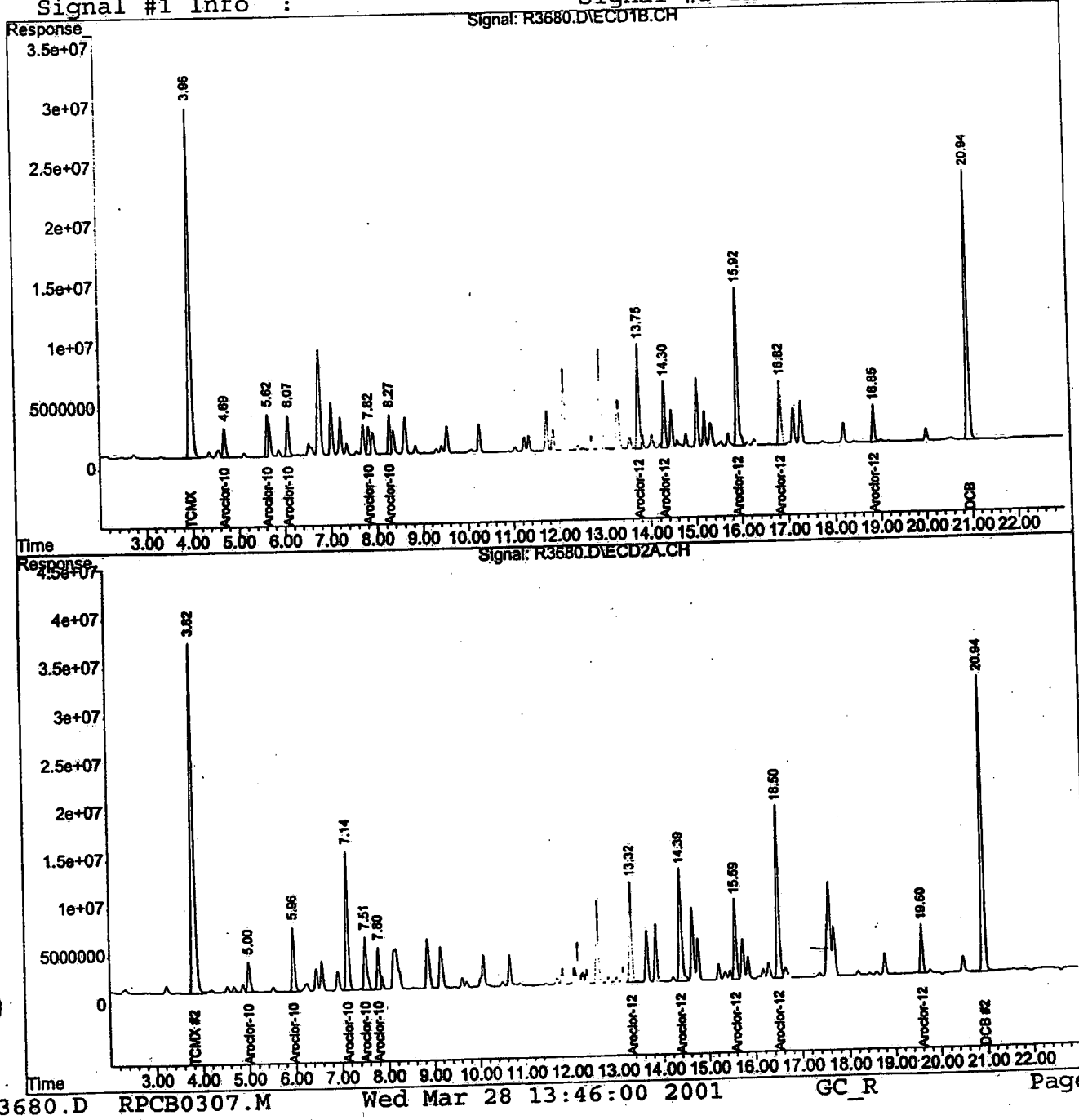
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\03-27-01\R3680.D\ECD1B.CH Vial: 2
Signal #2 : C:\MSDCHEM\1\DATA\03-27-01\R3680.D\ECD2A.CH
Acq On : 28 Mar 2001 7:44 Operator:
Sample : 8082_C_IAS1427,0.5_PPM Inst : GC_R
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Mar 28 8:22 2001 Quant Results File: RPCB0307.RES

Quant Method : C:\MSDCHEM\1\METHODS\RPCB0307.M (Chemstation Integrator)
Title :
Last Update : Thu Mar 08 07:28:43 2001
Response via : Multiple Level Calibration
DataAcq Meth : RPCB0307.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



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000403

Quantitation Report (Not Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\03-27-01\R3690.D\ECD1B.CH Vial: 11
Signal #2 : C:\MSDCHEM\1\DATA\03-27-01\R3690.D\ECD2A.CH
Acq On : 28 Mar 2001 12:07 Operator:
Sample : 8082_C_IAS1427,0.5_PPM Inst : GC_R
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Mar 28 12:30:25 2001 Quant Results File: RPCB0307.RES

Quant Method : C:\MSDCHEM\1\METHODS\RPCB0307.M (Chemstation Integrator)
Title :
Last Update : Thu Mar 08 07:28:43 2001
Response via : Initial Calibration
DataAcq Meth : RPCB0307.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Compound		RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
System Monitoring Compounds							
1) S TCMX		3.94	3.79	1003.2E6	1343.3E6	107.639	105.631
Spiked Amount 205.000	Range 75 - 125			Recovery =		52.51%#	51.53%#
2) S DCB		20.94	20.95	795.1E6	1154.3E6	96.346	101.038
Spiked Amount 205.000				Recovery =		47.00%	49.29%
Target Compounds							
3) L2 Aroclor-1016		4.68	4.98	82105372	113.2E6	498.485	484.603
4) L2 Aroclor-1016	{2}	5.61	5.95	86214300	219.8E6	520.722m	484.422
5) L2 Aroclor-1016	{3}	6.06	7.12	107.3E6	481.4E6	494.707	492.003
6) L2 Aroclor-1016	{4}	7.81	7.51	73005537	208.4E6	529.216	492.937
7) L2 Aroclor-1016	{5}	8.26	7.79	97189211	135.7E6	536.809	545.083
Sum Aroclor-1016				445.8E6	1158.5E6	2579.938	2499.049
Average Aroclor-1016						515.988	499.810
Sum Aroclor-1221				0	0	N.D.	N.D.
Average Aroclor-1221						0.000	0.000
Sum Aroclor-1232				0	0	N.D.	N.D.
Average Aroclor-1232						0.000	0.000
Sum Aroclor-1242				0	0	N.D.	N.D.
Average Aroclor-1242						0.000	0.000
Sum Aroclor-1248				0	0	N.D.	N.D.
Average Aroclor-1248						0.000	0.000
Sum Aroclor-1254				0	0	N.D.	N.D.
Average Aroclor-1254						0.000	0.000
33) L8 Aroclor-1260		13.74	13.31	305.9E6	349.0E6	489.404	498.278
34) L8 Aroclor-1260	{2}	14.30	14.39	173.9E6	466.3E6	470.664	487.937
35) L8 Aroclor-1260	{3}	15.92	15.59	429.2E6	282.4E6	483.274	512.414
36) L8 Aroclor-1260	{4}	16.82	16.50	212.2E6	619.4E6	494.743	511.670
37) L8 Aroclor-1260	{5}	18.85	19.60	101.7E6	192.6E6	435.435	548.127 #
Sum Aroclor-1260				1222.8E6	1909.7E6	2373.521	2558.427
Average Aroclor-1260						474.704	511.685

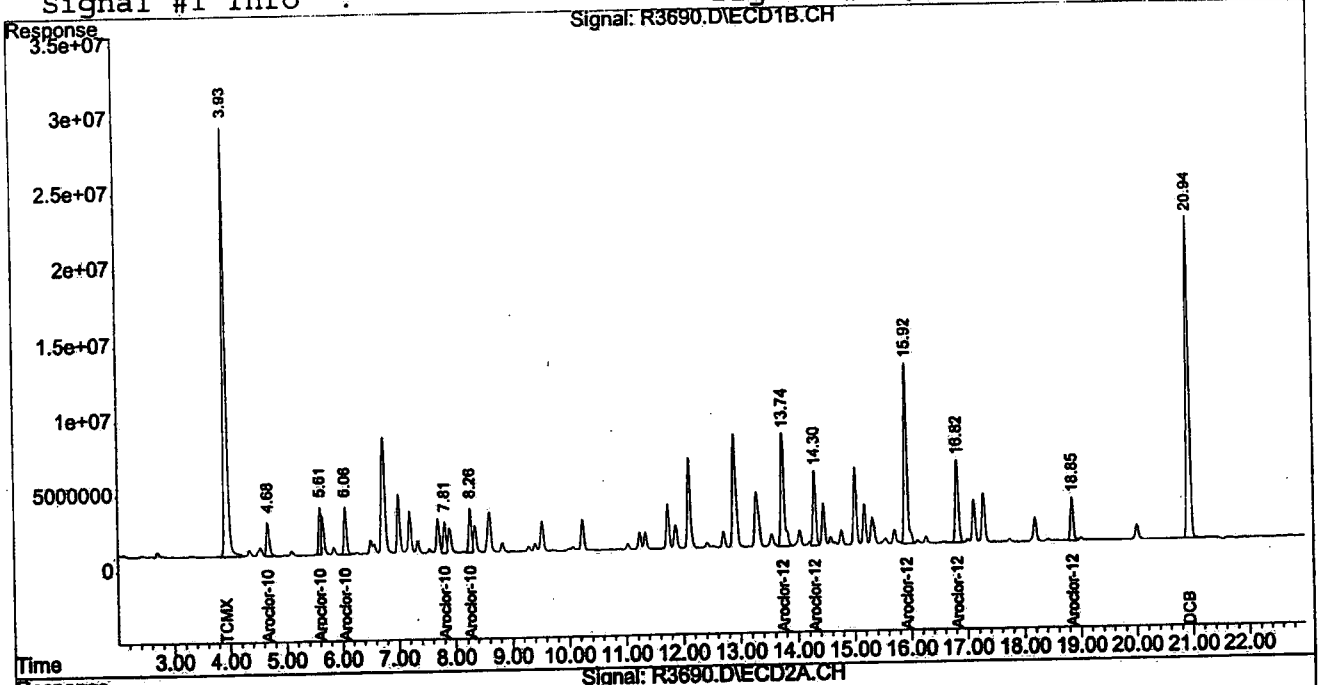
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

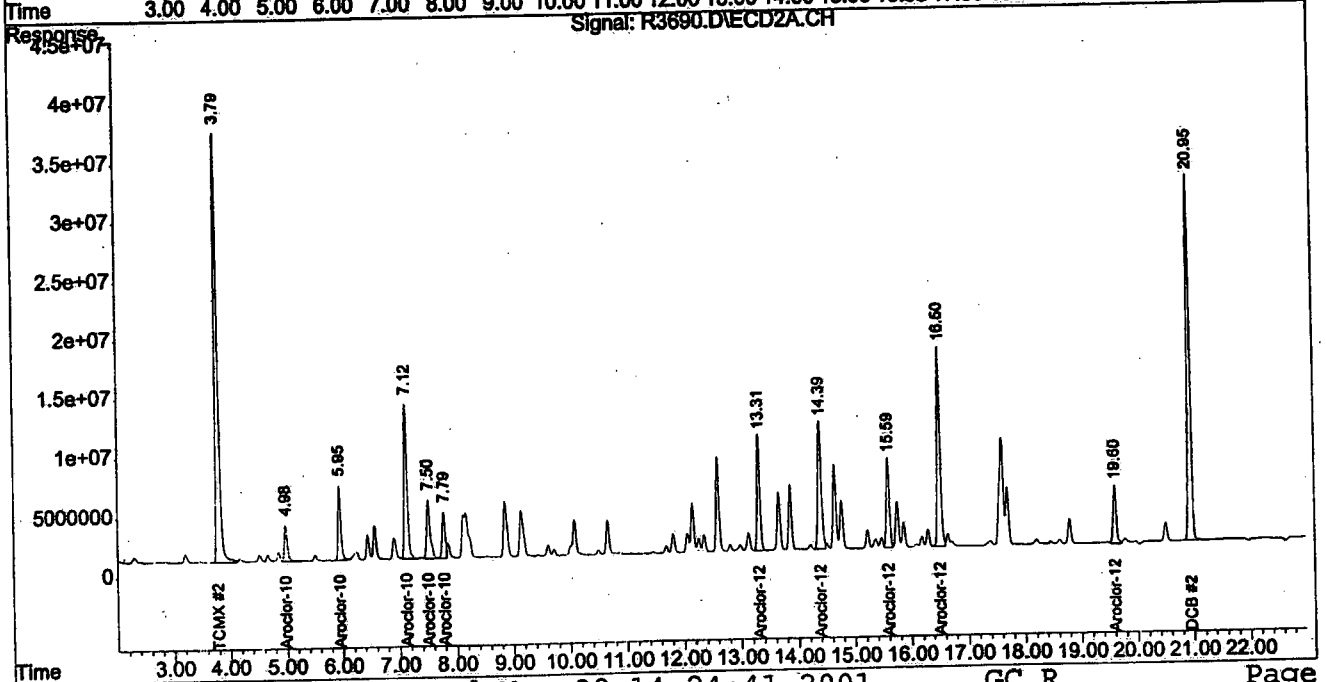
Quantitation Report (Not Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\03-27-01\R3690.D\ECD1B.CH Vial: 11
Signal #2 : C:\MSDCHEM\1\DATA\03-27-01\R3690.D\ECD2A.CH
Acq On : 28 Mar 2001 12:07 Operator:
Sample : 8082_C_IAS1427,0.5_PPM Inst : GC_R
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Mar 28 13:56 2001 Quant Results File: RPCB0307.RES

Quant Method : C:\MSDCHEM\1\METHODS\RPCB0307.M (Chemstation Integrator)
Title :
Last Update : Thu Mar 08 07:28:43 2001
Response via : Multiple Level Calibration
DataAcq Meth : RPCB0307.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





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PESTICIDE METHOD BLANK SUMMARY

Lab File ID: W5468.D

Instrument ID: GC-W

Date Extracted: 03/27/2001

Matrix: SOIL

Date Analyzed: 03/28/2001

Time Analyzed: 00:24

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

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed
S-11	1840-001	03/28/2001	00:49
S-12	1840-002	03/28/2001	01:14
S-13	1840-004	03/28/2001	01:39
S-14	1840-005	03/28/2001	02:04
S-15	1840-006	03/28/2001	02:29
S-16	1840-007	03/28/2001	02:54
PEST	1855-002-MS1	03/28/2001	03:19
PEST	1855-002-MSD1	03/28/2001	03:44
PEST	PBS0327-MS1	03/28/2001	04:09

INTEGRATED ANALYTICAL LABORATORIES

PESTICIDES

Client/Project: NA

Lab ID: 0327-BK1
Client ID: (1840.1856)
Date Received: NA
Date Extracted: 03/27/2001
Date Analyzed: 03/28/2001
Data file: W5468.D

GC Column: DB-5/DB1701P
Sample wt/vol: 30.0g
Matrix-Units: Soil-µg/Kg (ppb)
Dilution Factor: 1
% Moisture: 0.0

Compound	Concentration	Q	MDL
alpha-BHC	ND		0.167
beta-BHC	ND		0.167
gamma-BHC	ND		0.167
delta-BHC	ND		0.167
Heptachlor	ND		0.167
Aldrin	ND		0.167
Heptachlor epoxide	ND		0.167
Endosulfan I	ND		0.167
4,4'-DDE	ND		0.167
Dieldrin	ND		0.167
Endrin	ND		0.167
Endosulfan II	ND		0.167
4,4'-DDD	ND		0.167
Endrin aldehyde	ND		0.167
Endosulfan sulfate	ND		0.167
4,4'-DDT	ND		0.167
Chlordane	ND		0.835
Toxaphene	ND		0.835

PESTICIDE INITIAL CALIBRATION SUMMARY

Date Analyzed: 03/27/2001

Instrument ID: GC-W

GC Column (1st): DB-5

Data File: W5445.D W5444.D W5443.D W5442.D W5441.D

Compound	RT OF STANDARDS 10	50	100	200	300	MEAN RT	RT WINDOW FROM	TO
alpha-BHC	4.53	4.53	4.54	4.54	4.54	4.53	4.46	4.60
beta-BHC	5.02	5.02	5.03	5.03	5.03	5.03	4.96	5.10
gamma-BHC	5.15	5.15	5.16	5.16	5.16	5.16	5.09	5.23
delta-BHC	5.63	5.63	5.63	5.63	5.63	5.63	5.56	5.70
Heptachlor	6.73	6.73	6.74	6.74	6.74	6.73	6.66	6.80
Aldrin	7.55	7.55	7.55	7.55	7.55	7.55	7.48	7.62
Heptachlor epoxide	8.56	8.56	8.56	8.56	8.56	8.56	8.49	8.63
Endosulfan I	9.48	9.47	9.48	9.48	9.48	9.48	9.41	9.55
4,4'-DDE	10.24	10.24	10.25	10.24	10.24	10.24	10.17	10.31
Dieldrin	10.17	10.17	10.17	10.17	10.17	10.17	10.10	10.24
Endrin	10.72	10.72	10.73	10.72	10.72	10.72	10.65	10.79
Endosulfan II	10.97	10.98	10.98	10.98	10.98	10.98	10.91	11.05
4,4'-DDD	11.36	11.36	11.36	11.36	11.36	11.36	11.29	11.43
Endrin aldehyde	11.50	11.50	11.50	11.50	11.50	11.50	11.43	11.57
Endosulfan sulfate	12.15	12.15	12.16	12.16	12.16	12.15	12.08	12.22
4,4'-DDT	12.38	12.38	12.38	12.39	12.39	12.38	12.31	12.45
Endrin ketone	13.36	13.36	13.36	13.36	13.36	13.36	13.29	13.43
Methoxychlor	14.06	14.06	14.06	14.06	14.06	14.06	13.99	14.13
alpha-Chlordane	9.58	9.58	9.58	9.58	9.58	9.58	9.51	9.65
gamma-Chlordane	9.17	9.17	9.17	9.17	9.17	9.17	9.10	9.24
Chlordane 500 ppb			9.17				9.10	9.24
Chlordane {2}			9.37				9.30	9.44
Chlordane {3}			9.58				9.51	9.65
Chlordane {4}			9.72				9.65	9.79
Chlordane {5}			11.58				11.51	11.65
Toxaphene 500 ppb			13.17				13.10	13.24
Toxaphene {2}			13.30				13.23	13.37
Toxaphene {3}			13.58				13.51	13.65
Toxaphene {4}			14.04				13.97	14.11
Toxaphene {5}			14.55				14.48	14.62

PESTICIDE INITIAL CALIBRATION SUMMARY

Date Analyzed: 03/27/2001 **Instrument ID:** GC-W
GC Column (1st): DB-5

Data File: W5445.D W5444.D W5443.D W5442.D W5441.D

Compound	CALIBRATION FACTORS 10	50	100	200	300	MEAN	%RSD
alpha-BHC	40725423	47595178	46033498	44338254	43874893	44513449	5.79
beta-BHC	16660652	17528656	17061368	16355211	15905566	16702291	3.75
gamma-BHC	36936658	42011081	40164246	37805958	36622614	38708111	5.97
delta-BHC	36933656	43048260	42749164	41685348	40490182	40981322	6.04
Heptachlor	37492374	33987895	33105299	31730029	31375788	33538277	7.30
Aldrin	35343631	41141110	39866597	37599577	36653827	38120948	6.19
Heptachlor epoxide	32921166	36969121	35547160	33110601	32153951	34140400	5.94
Endosulfan I	30774444	34455577	33178583	30870920	30014495	31858804	5.88
4,4'-DDE	30870844	36510085	35165622	32640223	31588113	33354977	7.19
Dieldrin	31880819	36743796	35858620	33548370	32587208	34123763	6.15
Endrin	28041921	31557484	30418680	28878161	28148129	29408875	5.21
Endosulfan II	29071952	31584076	30644885	28776692	27837404	29583002	5.10
4,4'-DDD	25938568	29102656	28581656	26712986	25697603	27206694	5.70
Endrin aldehyde	21201412	21058274	20020796	18028474	16970883	19455968	9.67
Endosulfan sulfate	25837404	27672015	27232161	25684332	24904680	26266118	4.38
4,4'-DDT	18015304	22266826	22893292	22542621	22360440	21615697	9.38
Endrin ketone	34056609	35140944	33722485	30848973	29697386	32693279	7.06
Methoxychlor	9210051	10161611	10012739	9466857	9151543	9600560	4.82
alpha-Chlordane	33115993	36888606	35690405	33396801	32543248	34327011	5.44
gamma-Chlordane	33455286	38558076	37526714	35173552	34231249	35788975	6.08
Chlordane 500 ppb			3870447				
Chlordane {2}			702592				
Chlordane {3}			3590415				
Chlordane {4}			1812788				
Chlordane {5}			1143328				
Toxaphene 500 ppb			574192				
Toxaphene {2}			454152				
Toxaphene {3}			313615				
Toxaphene {4}			397567				
Toxaphene {5}			586496				

PESTICIDE INITIAL CALIBRATION SUMMARY

Date Analyzed: 03/27/2001

Instrument ID: GC-W

GC Column (2nd): DB-1701P

Data File: W5445.C W5444.C W5443.C W5442.C W5441.C

Compound	RT OF STANDARDS					MEAN	RT WI NDOW	
	10	50	100	200	300	RT	FROM	TO
alpha-BHC	5.59	5.59	5.59	5.60	5.59	5.59	5.52	5.66
beta-BHC	8.65	8.65	8.65	8.66	8.65	8.65	8.58	8.72
gamma-BHC	6.54	6.54	6.55	6.55	6.55	6.55	6.48	6.62
delta-BHC	9.22	9.22	9.22	9.22	9.22	9.22	9.15	9.29
Heptachlor	7.02	7.02	7.03	7.03	7.03	7.03	6.96	7.10
Aldrin	7.69	7.70	7.70	7.70	7.70	7.70	7.63	7.77
Heptachlor epoxide	9.54	9.54	9.54	9.55	9.55	9.54	9.47	9.61
Endosulfan I	10.23	10.23	10.23	10.23	10.23	10.23	10.16	10.30
4,4'-DDE	11.00	11.00	11.00	11.01	11.01	11.00	10.93	11.07
Dieldrin	11.27	11.27	11.27	11.27	11.27	11.27	11.20	11.34
Endrin	11.79	11.79	11.79	11.80	11.79	11.79	11.72	11.86
Endosulfan II	13.24	13.24	13.24	13.24	13.24	13.24	13.17	13.31
4,4'-DDD	13.24	13.24	13.24	13.24	13.24	13.24	13.17	13.31
Endrin aldehyde	14.38	14.38	14.38	14.38	14.38	14.38	14.31	14.45
Endosulfan sulfate	15.28	15.28	15.28	15.29	15.29	15.28	15.21	15.35
4,4'-DDT	13.69	13.69	13.69	13.69	13.69	13.69	13.62	13.76
Endrin ketone	16.31	16.31	16.31	16.31	16.31	16.31	16.24	16.38
Methoxychlor	15.56	15.55	15.56	15.56	15.56	15.56	15.49	15.63
alpha-Chlordane	10.62	10.62	10.62	10.63	10.62	10.62	10.55	10.69
gamma-Chlordane	10.47	10.47	10.47	10.47	10.47	10.47	10.40	10.54
Chlordane 500 ppb			8.40				8.33	8.47
Chlordane {2}			10.08				10.01	10.15
Chlordane {3}			10.48				10.41	10.55
Chlordane {4}			10.64				10.57	10.71
Chlordane {5}			10.69				10.62	10.76
Toxaphene 500 ppb			14.04				13.97	14.11
Toxaphene {2}			14.76				14.69	14.83
Toxaphene {3}			15.03				14.96	15.10
Toxaphene {4}			15.22				15.15	15.29
Toxaphene {5}			15.67				15.60	15.74

PESTICIDE INITIAL CALIBRATION SUMMARY

Date Analyzed: 03/27/2001

Instrument ID: GC-W

GC Column (2nd): DB-1701P

Data File: W5445.C W5444.C W5443.C W5442.C W5441.C

Compound	CALIBRATION FACTORS 10	50	100	200	300	MEAN	%RSD
alpha-BHC	17579926	20402040	19703291	18494601	17831744	18802320	6.46
beta-BHC	8443328	8446808	8048844	7579331	7295935	7962849	6.48
gamma-BHC	16478159	18573707	17914242	16788581	16174528	17185843	5.92
delta-BHC	15850082	17745785	17240234	16116783	15390735	16468724	5.99
Heptachlor	12729131	14246200	13864279	13232796	12794195	13373320	4.98
Aldrin	15537718	17275530	16545101	15310773	14767299	15887284	6.35
Heptachlor epoxide	15071947	15845407	15136053	13978913	13475857	14701636	6.51
Endosulfan I	13778262	14866755	14265288	13142831	12671531	13744933	6.35
4,4'-DDE	13593048	15452642	15040597	13996187	13458179	14308131	6.23
Dieldrin	14430403	16007363	15520734	14447807	13950995	14871461	5.76
Endrin	12867618	14179831	13720125	12950309	12529057	13249388	5.12
Endosulfan II	25374766	26598108	25403141	23247282	22117022	24548064	7.41
4,4'-DDD	25374766	26598108	25403141	23247282	22117022	24548064	7.41
Endrin aldehyde	9466956	9315581	8804289	8282539	7966026	8767078	7.37
Endosulfan sulfate	11478493	11866448	11703787	11033850	10585579	11333632	4.61
4,4'-DDT	6681756	8675461	9027125	9046331	8980842	8482303	12.00
Endrin ketone	14176630	14371299	13968904	12841780	12306782	13533079	6.70
Methoxychlor	4224097	4674649	4686743	4555735	4507956	4529836	4.13
alpha-Chlordane	14729385	15778201	15128181	13988011	13514444	14627644	6.15
gamma-Chlordane	14700649	16101763	15527651	14415950	13912530	14931708	5.88
Chlordane 500 ppb			396796				
Chlordane {2}			370932				
Chlordane {3}			1629775				
Chlordane {4}			1481068				
Chlordane {5}			723720				
Toxaphene 500 ppb			260893				
Toxaphene {2}			228773				
Toxaphene {3}			173018				
Toxaphene {4}			137186				
Toxaphene {5}			207213				

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Date/Time Analyzed: 03/27/2001 **Instrument ID:** GC-W

Data File: W5465.D **GC Column (1st):** DB-5

Compound	RT	RT WINDOW FROM	RT WINDOW TO	Avg CF	CC CF	%D
alpha-BHC	4.54	4.47	4.61	44513449	46648059	4.80
beta-BHC	5.03	4.96	5.10	16702291	17336513	3.80
gamma-BHC	5.16	5.09	5.23	38708111	40734104	5.23
delta-BHC	5.63	5.56	5.70	40981322	43366621	5.82
Heptachlor	6.74	6.67	6.81	33538277	34562088	3.05
Aldrin	7.55	7.48	7.62	38120948	40377979	5.92
Heptachlor epoxide	8.56	8.49	8.63	34140400	36041375	5.57
Endosulfan I	9.48	9.41	9.55	31858804	33666534	5.67
4,4'-DDE	10.24	10.17	10.31	33354977	35770167	7.24
Dieldrin	10.17	10.10	10.24	34123763	36584288	7.21
Endrin	10.72	10.65	10.79	29408875	31570662	7.35
Endosulfan II	10.98	10.91	11.05	29583002	31028910	4.89
4,4'-DDD	11.36	11.29	11.43	27206694	29890878	9.87
Endrin aldehyde	11.50	11.43	11.57	19455968	21978396	12.96
Endosulfan sulfate	12.15	12.08	12.22	26266118	27669536	5.34
4,4'-DDT	12.38	12.31	12.45	21615697	24048175	11.25
Endrin ketone	13.36	13.29	13.43	32693279	34598547	5.83
Methoxychlor	14.06	13.99	14.13	9600560	10839014	12.90
alpha-Chlordane	9.58	9.51	9.65	34327011	36270318	5.66
gamma-Chlordane	9.17	9.10	9.24	35788975	38055558	6.33
					Average %D	6.84
Chlordane 500 ppb	9.18	9.11	9.25	3870447	3813567	1.47
Chlordane {2}	9.37	9.30	9.44	702592	693866	1.24
Chlordane {3}	9.58	9.51	9.65	3590415	3535928	1.52
Chlordane {4}	9.73	9.66	9.80	1812788	1786078	1.47
Chlordane {5}	11.58	11.51	11.65	1143328	1136939	0.56
Toxaphene 500 ppb	13.18	13.11	13.25	574192	642883	11.96
Toxaphene {2}	13.30	13.23	13.37	454152	506089	11.44
Toxaphene {3}	13.58	13.51	13.65	313615	324372	3.43
Toxaphene {4}	14.04	13.97	14.11	397567	431259	8.47
Toxaphene {5}	14.55	14.48	14.62	586496	640926	9.28
					Average %D	5.08

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Date/Time Analyzed: 03/27/2001 Instrument ID: GC-W

Data File: W5465.C GC Column (2nd): DB-1701P

Compound	RT	RT WINDOW FROM	RT WINDOW TO	Avg CF	CC CF	%D
alpha-BHC	5.59	5.52	5.66	18802320	19745937	5.02
beta-BHC	8.65	8.58	8.72	7962849	8012773	0.63
gamma-BHC	6.55	6.48	6.62	17185843	17963557	4.53
delta-BHC	9.22	9.15	9.29	16468724	17234831	4.65
Heptachlor	7.02	6.95	7.09	13373320	14099245	5.43
Aldrin	7.70	7.63	7.77	15887284	16531877	4.06
Heptachlor epoxide	9.54	9.47	9.61	14701636	15097626	2.69
Endosulfan I	10.23	10.16	10.30	13744933	14199714	3.31
4,4'-DDE	11.00	10.93	11.07	14308131	15034452	5.08
Dieldrin	11.27	11.20	11.34	14871461	15519820	4.36
Endrin	11.79	11.72	11.86	13249388	13748967	3.77
Endosulfan II	13.24	13.17	13.31	24548064	25481467	3.80
4,4'-DDD	13.24	13.17	13.31	24548064	25481467	3.80
Endrin aldehyde	14.38	14.31	14.45	8767078	9502138	8.38
Endosulfan sulfate	15.28	15.21	15.35	11333632	11671710	2.98
4,4'-DDT	13.69	13.62	13.76	8482303	9194950	8.40
Endrin ketone	16.30	16.23	16.37	13533079	14109055	4.26
Methoxychlor	15.55	15.48	15.62	4529836	4801459	6.00
alpha-Chlordane	10.62	10.55	10.69	14627644	15088578	3.15
gamma-Chlordane	10.47	10.40	10.54	14931708	15527637	3.99
					Average %D	4.41
Chlordane 500 ppb	8.39	8.32	8.46	396796	375092	5.47
Chlordane {2}	10.07	10.00	10.14	370932	365759	1.39
Chlordane {3}	10.47	10.40	10.54	1629775	1594556	2.16
Chlordane {4}	10.62	10.55	10.69	1481068	1444608	2.46
Chlordane {5}	10.68	10.61	10.75	723720	711265	1.72
Toxaphene 500 ppb	14.02	13.95	14.09	260893	283085	8.51
Toxaphene {2}	14.75	14.68	14.82	228773	241806	5.70
Toxaphene {3}	15.02	14.95	15.09	173018	187528	8.39
Toxaphene {4}	15.21	15.14	15.28	137186	150373	9.61
Toxaphene {5}	15.66	15.59	15.73	207213	220472	6.40
					Average %D	5.18

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Date/Time Analyzed: 03/28/2001 Instrument ID: GC-W

Data File: W5483.D GC Column (1st): DB-5

Compound	RT	RT WINDOW FROM	RT WINDOW TO	Avg CF	CC CF	%D
alpha-BHC	4.54	4.47	4.61	44513449	46174127	3.73
beta-BHC	5.03	4.96	5.10	16702291	17089444	2.32
gamma-BHC	5.16	5.09	5.23	38708111	39798544	2.82
delta-BHC	5.64	5.57	5.71	40981322	43370349	5.83
Heptachlor	6.74	6.67	6.81	33538277	34276076	2.20
Aldrin	7.55	7.48	7.62	38120948	39800264	4.41
Heptachlor epoxide	8.56	8.49	8.63	34140400	35426006	3.77
Endosulfan I	9.48	9.41	9.55	31858804	33023926	3.66
4,4'-DDE	10.25	10.18	10.32	33354977	35103875	5.24
Dieldrin	10.17	10.10	10.24	34123763	36083809	5.74
Endrin	10.73	10.66	10.80	29408875	31674908	7.71
Endosulfan II	10.98	10.91	11.05	29583002	30648736	3.60
4,4'-DDD	11.36	11.29	11.43	27206694	30611593	12.51
Endrin aldehyde	11.50	11.43	11.57	19455968	22356594	14.91
Endosulfan sulfate	12.16	12.09	12.23	26266118	27734949	5.59
4,4'-DDT	12.38	12.31	12.45	21615697	19903413	7.92
Endrin ketone	13.36	13.29	13.43	32693279	33887721	3.65
Methoxychlor	14.06	13.99	14.13	9600560	9869872	2.81
alpha-Chlordane	9.58	9.51	9.65	34327011	35323187	2.90
gamma-Chlordane	9.17	9.10	9.24	35788975	37224871	4.01
					Average %D	5.27

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Date/Time Analyzed: 03/28/2001 Instrument ID: GC-W

Data File: W5483.C GC Column (2nd): DB-1701P

Compound	RT	RT WINDOW FROM	RT WINDOW TO	Avg CF	CC CF	%D
alpha-BHC	5.59	5.52	5.66	18802320	19370462	3.02
beta-BHC	8.65	8.58	8.72	7962849	7913466	0.62
gamma-BHC	6.55	6.48	6.62	17185843	17630519	2.59
delta-BHC	9.22	9.15	9.29	16468724	17314345	5.13
Heptachlor	7.03	6.96	7.10	13373320	13067361	2.29
Aldrin	7.70	7.63	7.77	15887284	16315261	2.69
Heptachlor epoxide	9.54	9.47	9.61	14701636	14891695	1.29
Endosulfan I	10.23	10.16	10.30	13744933	13995226	1.82
4,4'-DDE	11.00	10.93	11.07	14308131	14672120	2.54
Dieldrin	11.27	11.20	11.34	14871461	15200674	2.21
Endrin	11.79	11.72	11.86	13249388	13376327	0.96
Endosulfan II	13.24	13.17	13.31	24548064	25396701	3.46
4,4'-DDD	13.24	13.17	13.31	24548064	25396701	3.46
Endrin aldehyde	14.38	14.31	14.45	8767078	9343884	6.58
Endosulfan sulfate	15.28	15.21	15.35	11333632	11493823	1.41
4,4'-DDT	13.69	13.62	13.76	8482303	7213802	14.95
Endrin ketone	16.31	16.24	16.38	13533079	13384306	1.10
Methoxychlor	15.55	15.48	15.62	4529836	3928633	13.27
alpha-Chlordane	10.62	10.55	10.69	14627644	14718203	0.62
gamma-Chlordane	10.47	10.40	10.54	14931708	15160011	1.53
					Average %D	3.58

PESTICIDE SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 03/28/2001

Client ID	Lab Sample ID	Matrix	TCMX 1 % rec	#	DCB 1 % rec	#	TCMX 2 % rec	#	DCB 2 % rec	#
(1840.1856)	0327-BK1	SOIL	95		91		92		88	
S-11	1840-001	SOIL	75		90		115		100	
S-12	1840-002	SOIL	65		90		75		95	
S-13	1840-004	SOIL	80		110		125		90	
S-14	1840-005	SOIL	120		150		110		100	
S-15	1840-006	SOIL	55	*	90		70		110	
S-16	1840-007	SOIL	70		90		85		95	
PEST	1855-002-MS1	SOIL	81		89		81		91	
PEST	1855-002-MSD1	SOIL	82		91		83		93	
PEST	PBS0327-MS1	SOIL	89		83		88		83	
(1649.1726)	0321-BK2	SOIL	99		92		95		92	
ROLLOFF-01	1726-001	SOIL	80		100		90		105	
POOL-01	1726-002	SOIL	80		90		95		105	
PIPE-01	1726-003	SOIL	60		50	*	45	*	95	
KITCHEN-01	1726-004	SOIL	65		75		85		85	

Surrogate QC Limits	Soil	Aqueous
TCMX = Tetrachloro-m-xylene	59-147	59-151
DCB = Decachlorobiphenyl	63-179	60-150

\# Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out
M Matrix interference

SOIL PESTICIDES MATRIX SPIKE/SPIKE DUPLICATE RECOVERY

Matrix spike Lab sample ID: 1855-002-MSD1

Compound	SPIKE ADDED (ug/Kg)	SAMPLE CONC. (ug/Kg)	MS CONC. (ug/Kg)	MS % REC #	QC LIMITS REC.
gamma-BHC	100.0	0.0	90.9	91	44 - 149
Heptachlor	100.0	0.0	87.9	88	50 - 157
Aldrin	100.0	0.0	86.8	87	40 - 150
Dieldrin	100.0	0.0	90.1	90	56 - 134
Endrin	100.0	0.0	94.1	94	65 - 148
4,4'-DDT	100.0	0.0	100.7	101	42 - 175

Compound	SAMPLE CONC. (ug/Kg)	MSD CONC. (ug/Kg)	MSD % # REC	% RPD #	QC LIMITS RPD	QC LIMITS REC.
gamma-BHC	0.0	92.8	93	2	18	44 - 149
Heptachlor	0.0	89.8	90	2	18	50 - 157
Aldrin	0.0	88.7	89	2	18	40 - 150
Dieldrin	0.0	91.7	92	2	13	56 - 134
Endrin	0.0	95.0	95	1	14	65 - 148
4,4'-DDT	0.0	102.9	103	2	27	42 - 175

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

*** Values outside of QC limits**

NC Non calculable

RPD: __0___ out of __6__ outside limits

Spike Recovery: __0___ out of __12__ outside limits

000417

SOIL PESTICIDES BLANK SPIKE RECOVERY

Matrix spike Lab sample ID: PBS0327-MS1

Compound	SPIKE ADDED (ug/Kg)	SAMPLE CONC. (ug/Kg)	MS CONC. (ug/Kg)	MS % REC #	QC LIMITS REC.
gamma-BHC	100.0	0.0	99.2	99	44 - 149
Heptachlor	100.0	0.0	94.3	94	50 - 157
Aldrin	100.0	0.0	94.2	94	40 - 150
Dieldrin	100.0	0.0	92.0	92	56 - 134
Endrin	100.0	0.0	93.4	93	65 - 148
4,4'-DDT	100.0	0.0	92.0	92	42 - 175

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

*** Values outside of QC limits**

NC Non calculable

Spike Recovery: __0___ out of __6__ outside limits

PESTICIDE RETENTION TIME SHIFT SUMMARY

Instrument ID: GC-W **Column:** DB-5/DB-1701P

Surrogate RT from initial calibration :

TCMX 1 3.85 DCB 1 18.69 TCMX 2 3.69 DCB 2 18.65

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed	TCMX 1 RT	#	DCB 1 RT	#	TCMX 2 RT	#	DCB 2 RT	#
(1840,1856)	0327-BK1	03/28/2001	00:24	3.85		18.69		3.69		18.65	
S-11	1840-001	03/28/2001	00:49	3.85		18.68		3.68		18.65	
S-12	1840-002	03/28/2001	01:14	3.85		18.69		3.69		18.65	
S-13	1840-004	03/28/2001	01:39	3.84		18.68		3.68		18.65	
S-14	1840-005	03/28/2001	02:04	3.84		18.68		3.68		18.63	
S-15	1840-006	03/28/2001	02:29	3.85		18.68		3.69		18.65	
S-16	1840-007	03/28/2001	02:54	3.85		18.68		3.69		18.65	
PEST	1855-002-MS1	03/28/2001	03:19	3.85		18.69		3.68		18.65	
PEST	1855-002-MSD1	03/28/2001	03:44	3.85		18.69		3.69		18.65	
PEST	PBS0327-MS1	03/28/2001	04:09	3.85		18.69		3.69		18.65	
(1649,1726)	0321-BK2	03/28/2001	04:33	3.85		18.68		3.69		18.65	
ROLLOFF-01	1726-001	03/28/2001	04:58	3.85		18.68		3.68		18.65	
POOL-01	1726-002	03/28/2001	05:23	3.85		18.68		3.69		18.65	
PIPE-01	1726-003	03/28/2001	05:48	3.85		18.69		3.68		18.65	
KITCHEN-01	1726-004	03/28/2001	06:13	3.85		18.68		3.68		18.65	

Surrogate QC Limits

TCMX = Tetrachloro-m-xylene (± 0.05 Minutes)

DCB = Decachlorobiphenyl (_ 0.05 Minutes)

\# Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out
M Matrix interference

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\03-27-01\W5469.D\ECD1B.CH Vial: 30
Signal #2 : C:\HPCHEM\1\DATA\03-27-01\W5469.D\ECD2A.CH
Acq On : 3-28-01 00:49:39 Operator:
Sample : S-11,1840-001,S,30.0g,17.3,03/27/01 Inst : GC_W
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01,50 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Mar 28 11:06 2001 Quant Results File: WPTC0327.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC0327.M (Chemstation Integrator)
Title :
Last Update : Tue Mar 27 15:57:26 2001
Response via : Initial Calibration
DataAcq Meth : WPTC0327.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
System Monitoring Compounds						
1) S TCMX	3.85	3.68	65252990	46197637	1.487	2.345m#
Spiked Amount 100.000			Recovery =		1.49%	2.35%
2) S DCB	18.68	18.65	76026712	34377964	1.798	2.030
Spiked Amount 100.000			Recovery =		1.80%	2.03%
Target Compounds						
15) T 4,4'-DDD	11.36	13.25	70651412	39304836	2.597m	3.202m
T 4,4'-DDT	12.39	13.68	36635361	13588309	1.695m	1.602m
Sum Chlordane			0	0	N.D.	N.D.
Average Chlordane					0.000	0.000
Sum Toxaphene			0	0	N.D.	N.D.
Average Toxaphene					0.000	0.000

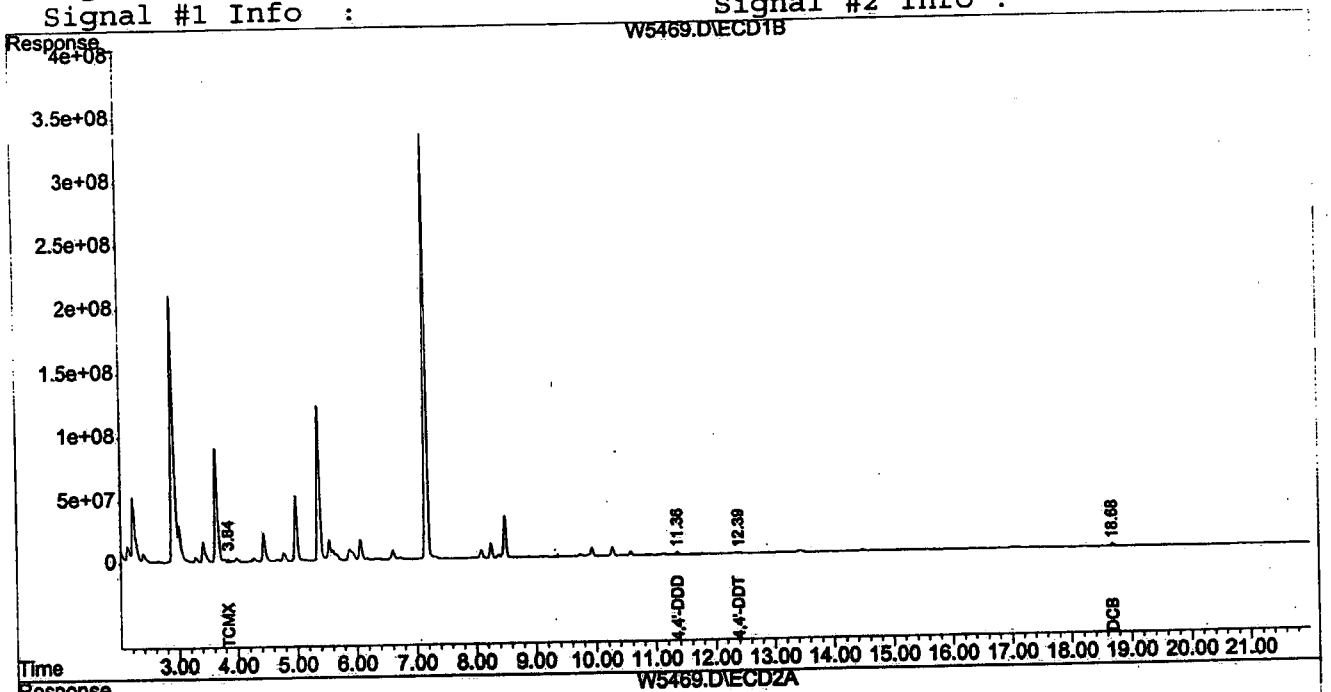
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
W5469.D WPTC0327.M Wed Mar 28 11:24:45 2001 GC_W Page 1

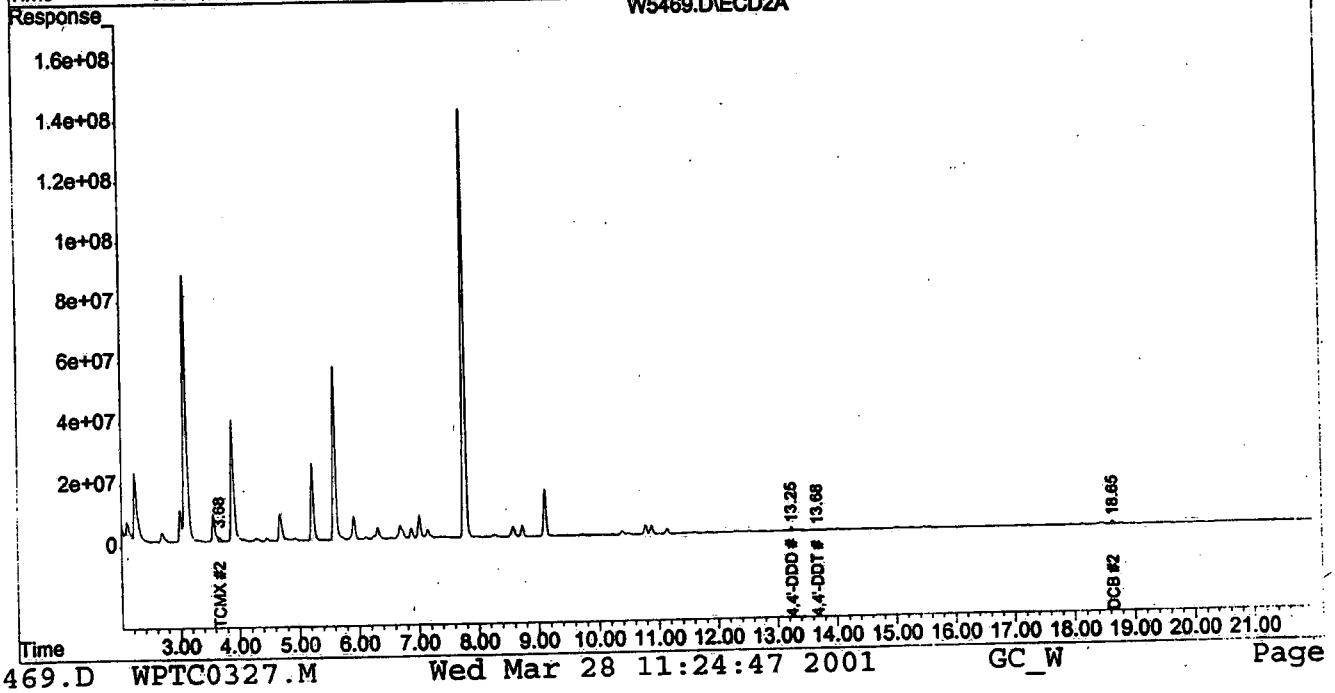
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\03-27-01\W5469.D\ECD1B.CH Vial: 30
Signal #2 : C:\HPCHEM\1\DATA\03-27-01\W5469.D\ECD2A.CH
Acq On : 3-28-01 00:49:39 Operator:
Sample : S-11,1840-001,S,30.0g,17.3,03/27/01 Inst : GC_W
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01,50 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Mar 28 11:06 2001 Quant Results File: WPTC0327.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC0327.M (Chemstation Integrator)
Title :
Last Update : Tue Mar 27 15:57:26 2001
Response via : Multiple Level Calibration
DataAcq Meth : WPTC0327.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





978

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\03-27-01\W5470.D\ECD1B.CH Vial: 31
Signal #2 : C:\HPCHEM\1\DATA\03-27-01\W5470.D\ECD2A.CH
Acq On : 3-28-01 1:14:33 Operator:
Sample : S-12,1840-002,S,30.8g,12.6,03/27/01 Inst : GC_W
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01,50 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Mar 28 11:06 2001 Quant Results File: WPTC0327.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC0327.M (Chemstation Integrator)
Title :
Last Update : Tue Mar 27 15:57:26 2001
Response via : Initial Calibration
DataAcq Meth : WPTC0327.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
System Monitoring Compounds						
1) S TCMX	3.85	3.69	58706060	29136180	1.338	1.479
Spiked Amount 100.000			Recovery	=	1.34%	1.48%
2) S DCB	18.69	18.65	74699667	32876676	1.767	1.942
Spiked Amount 100.000			Recovery	=	1.77%	1.94%
Target Compounds						
Sum Chlordane			0	0	N.D.	N.D.
Average Chlordane					0.000	0.000
Sum Toxaphene			0	0	N.D.	N.D.
Average Toxaphene					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
W5470.D WPTC0327.M Wed Mar 28 11:24:52 2001 GC_W Page 1

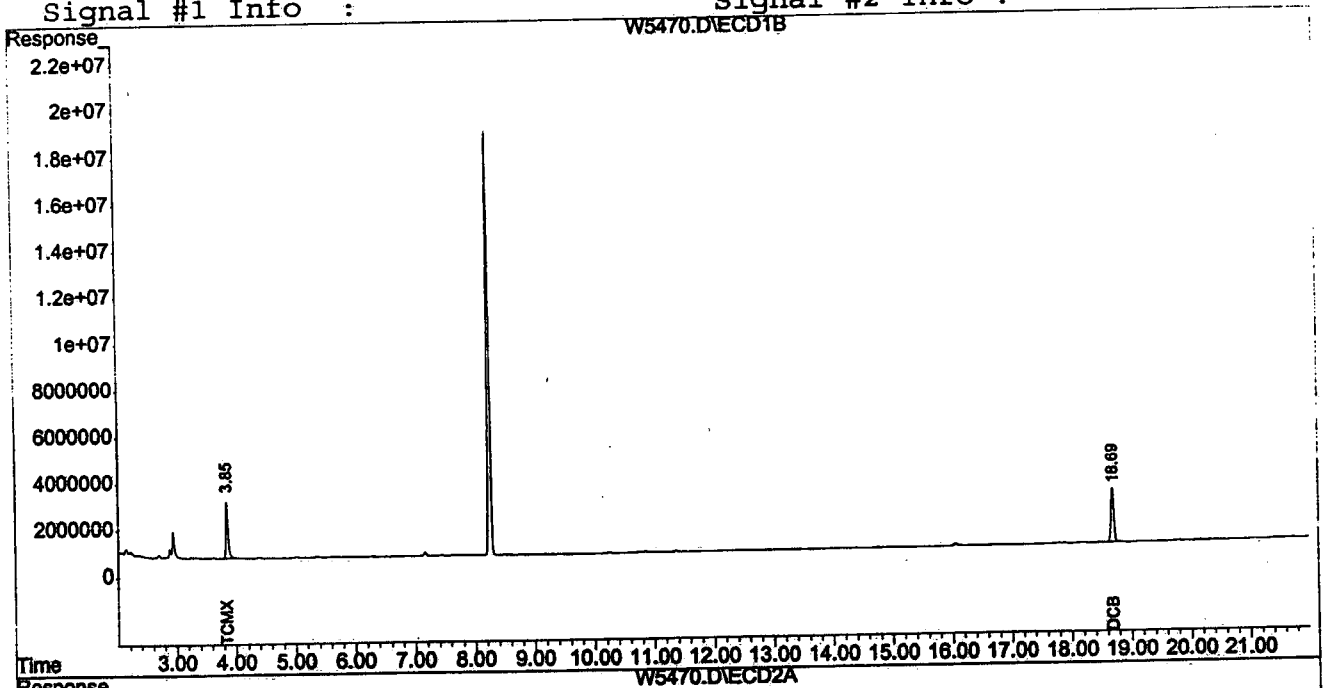
000432

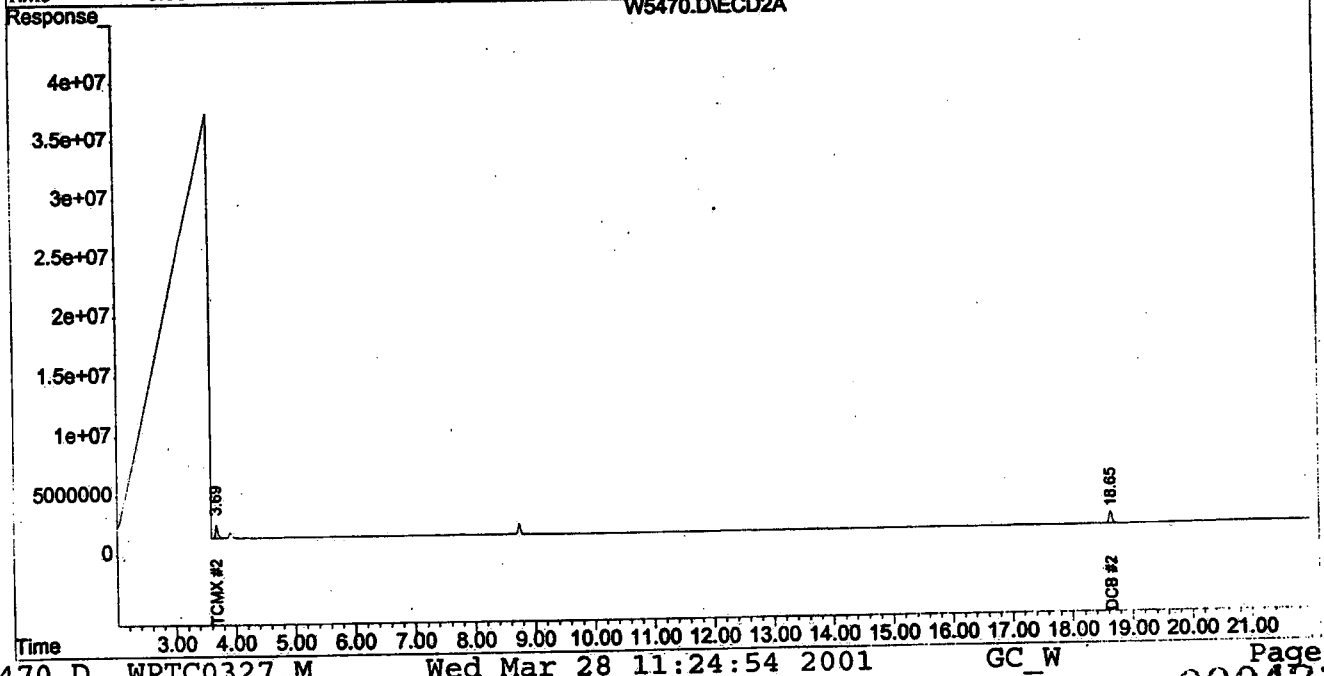
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\03-27-01\W5470.D\ECD1B.CH Vial: 31
Signal #2 : C:\HPCHEM\1\DATA\03-27-01\W5470.D\ECD2A.CH
Acq On : 3-28-01 1:14:33 Operator:
Sample : S-12,1840-002,S,30.8g,12.6,03/27/01 Inst : GC_W
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01,50 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Mar 28 11:06 2001 Quant Results File: WPTC0327.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC0327.M (Chemstation Integrator)
Title :
Last Update : Tue Mar 27 15:57:26 2001
Response via : Multiple Level Calibration
DataAcq Meth : WPTC0327.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





000423

980

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\03-27-01\W5471.D\ECD1B.CH Vial: 32
Signal #2 : C:\HPCHEM\1\DATA\03-27-01\W5471.D\ECD2A.CH
Acq On : 3-28-01 1:39:29 Operator:
Sample : S-13,1840-004,S,30.1g,24.4,03/27/01 Inst : GC_W
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01,50 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Mar 28 11:09 2001 Quant Results File: WPTC0327.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC0327.M (Chemstation Integrator)
Title :
Last Update : Tue Mar 27 15:57:26 2001
Response via : Initial Calibration
DataAcq Meth : WPTC0327.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
System Monitoring Compounds						
1) S TCMX	3.84	3.68	70435775	48437794	1.605	2.459m#
Spiked Amount 100.000			Recovery =		1.60%	2.46%
2) S DCB	18.68	18.65	91240578	30611028	2.158m	1.808
Spiked Amount 100.000			Recovery =		2.16%	1.81%
Target Compounds						
11) T 4,4'-DDE	10.25	11.00	224.7E6	115.9E6	6.737m	8.100
T 4,4'-DDD	11.36	13.25	520.5E6	359.8E6	19.131	29.314m#
Sum Chlordane			0	0	N.D.	N.D.
Average Chlordane					0.000	0.000
Sum Toxaphene			0	0	N.D.	N.D.
Average Toxaphene					0.000	0.000

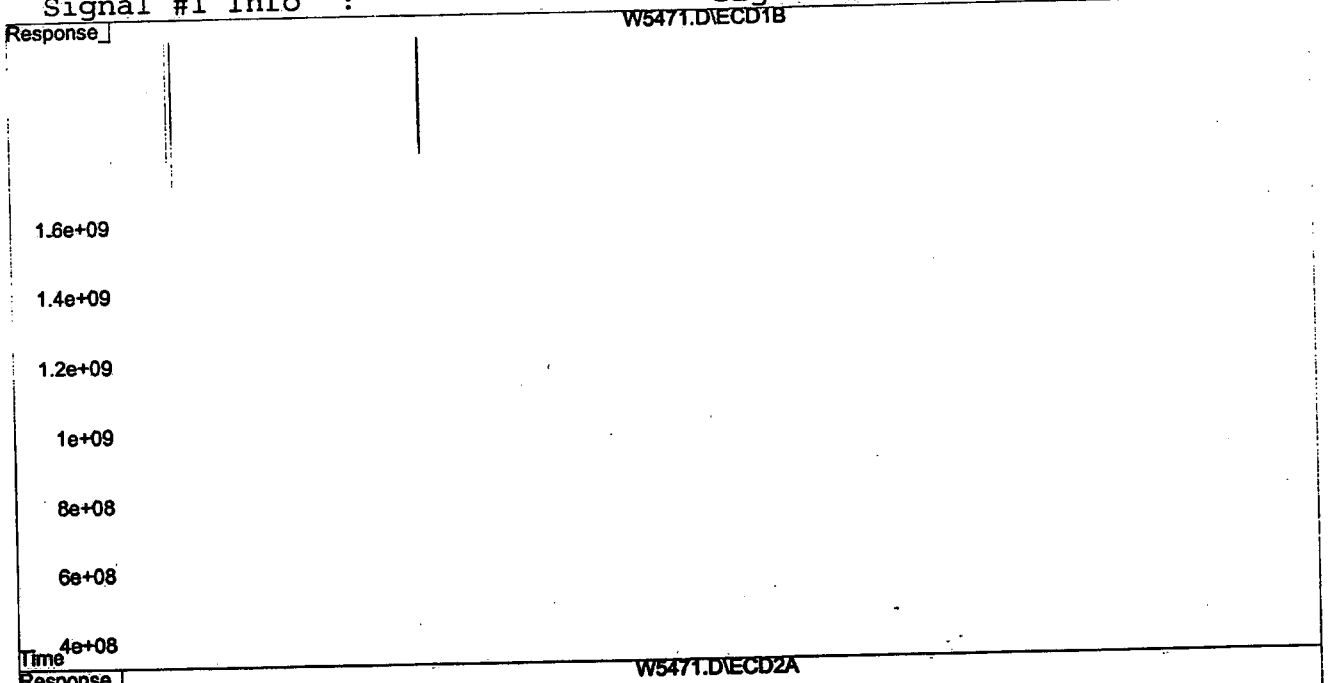
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

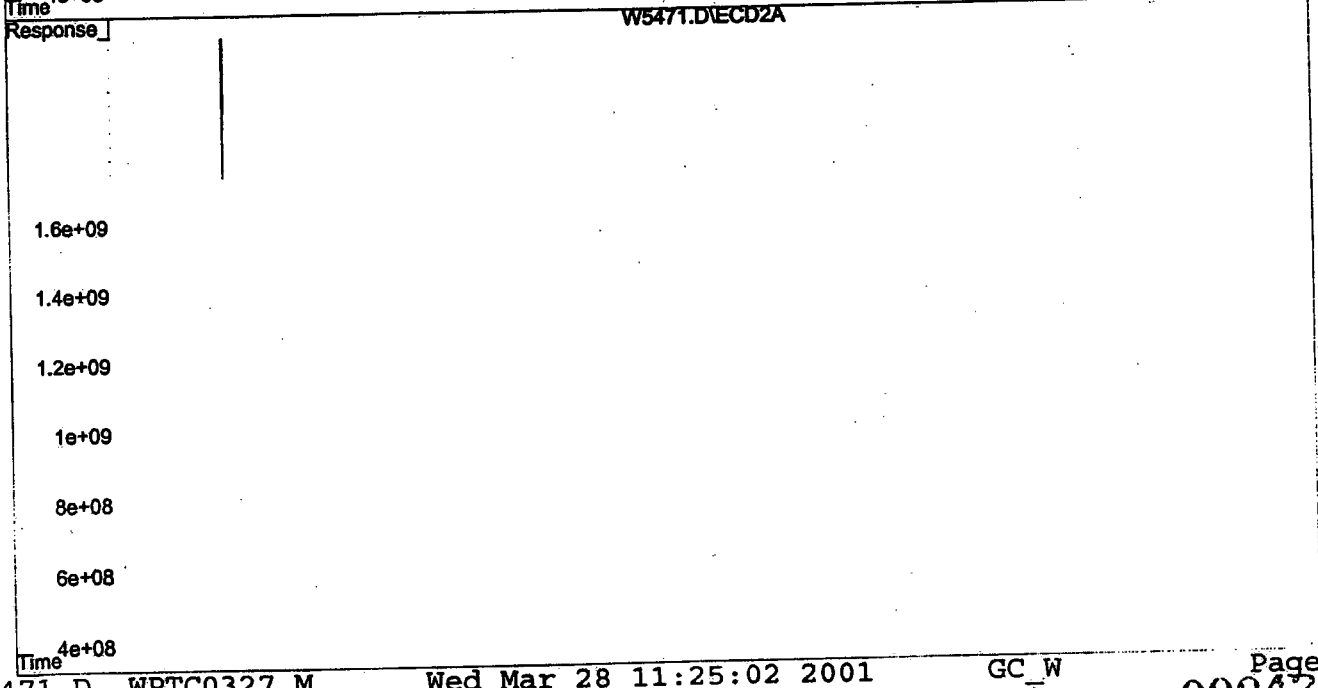
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\03-27-01\W5471.D\ECD1B.CH Vial: 32
Signal #2 : C:\HPCHEM\1\DATA\03-27-01\W5471.D\ECD2A.CH
Acq On : 3-28-01 1:39:29 Operator:
Sample : S-13,1840-004,S,30.1g,24.4,03/27/01 Inst : GC_W
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01,50 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Mar 28 11:09 2001 Quant Results File: WPTC0327.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC0327.M (Chemstation Integrator)
Title :
Last Update : Tue Mar 27 15:57:26 2001
Response via : Multiple Level Calibration
DataAcq Meth : WPTC0327.M

Volume Inj. :
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :

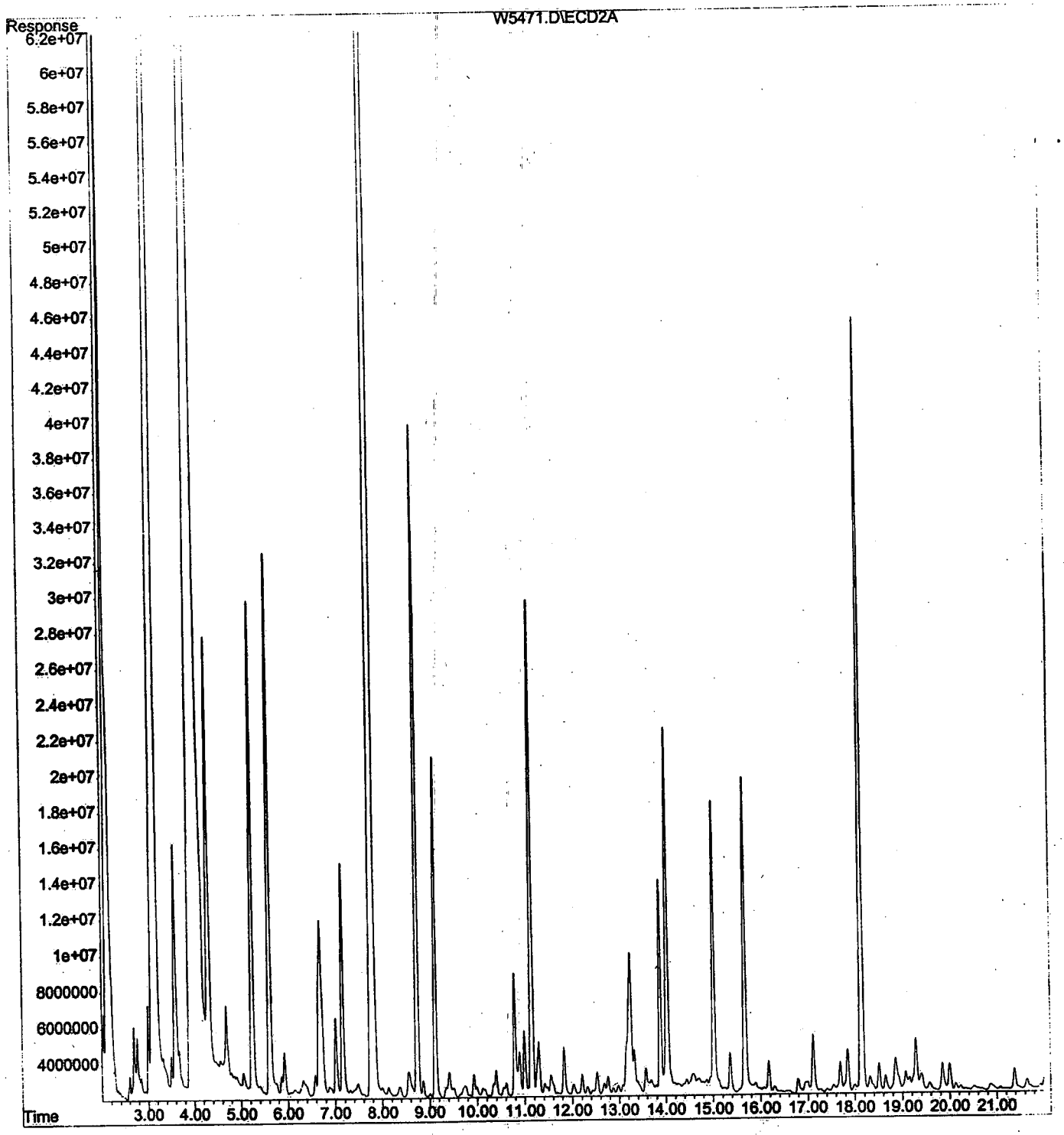




000425

982

File : C:\HPCHEM\1\DATA\03-27-01\W5471.D
Operator :
Acquired : 3-28-01 1:39:29 using AcqMethod WPTC0327.M
Instrument : GC_W
Sample Name: S-13,1840-004,S,30.1g,24.4,03/27/01
Misc Info : ENVTACT/444_ORBIS,03/23/01,03/26/01,50
Vial Number: 32



Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\03-27-01\W5472.D\ECD1B.CH Vial: 33
Signal #2 : C:\HPCHEM\1\DATA\03-27-01\W5472.D\ECD2A.CH
Acq On : 3-28-01 2:04:23 Operator:
Sample : S-14,1840-005,S,30.1g,15.1,03/27/01 Inst : GC_W
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01,50 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Mar 28 11:11 2001 Quant Results File: WPTC0327.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC0327.M (Chemstation Integrator)
Title :
Last Update : Tue Mar 27 15:57:26 2001
Response via : Initial Calibration
DataAcq Meth : WPTC0327.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
System Monitoring Compounds						
1) S TCMX	3.84	3.68	106.6E6	44058156	2.430m	2.236m
Spiked Amount 100.000			Recovery	=	2.43%	2.24%
2) S DCB	18.68	18.63	127.4E6	33850146	3.012m	1.999m#
Spiked Amount 100.000			Recovery	=	3.01%	2.00%
Target Compounds						
11) T 4,4'-DDE	10.24	11.00	380.3E6	150.0E6	11.402	10.485
15) T 4,4'-DDD	11.36	13.25	1041.1E6	506.2E6	38.266	41.241
Sum Chlordane			0	0	N.D.	N.D.
Average Chlordane					0.000	0.000
Sum Toxaphene			0	0	N.D.	N.D.
Average Toxaphene					0.000	0.000

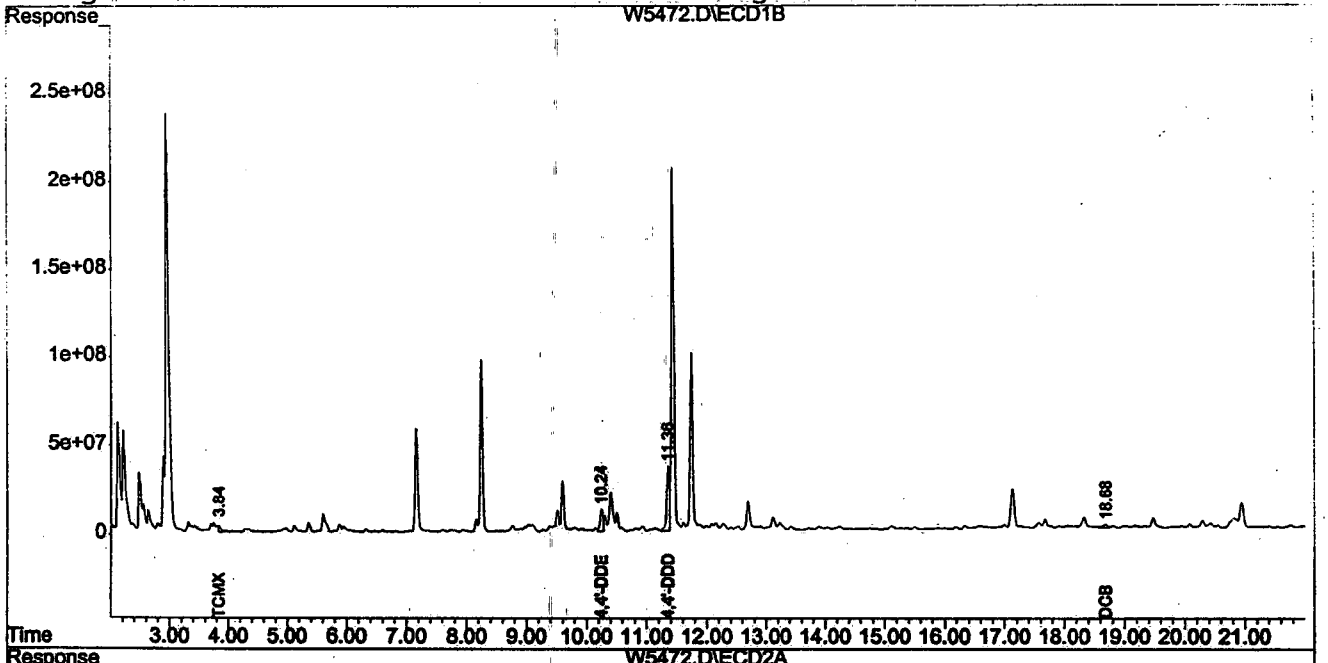
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

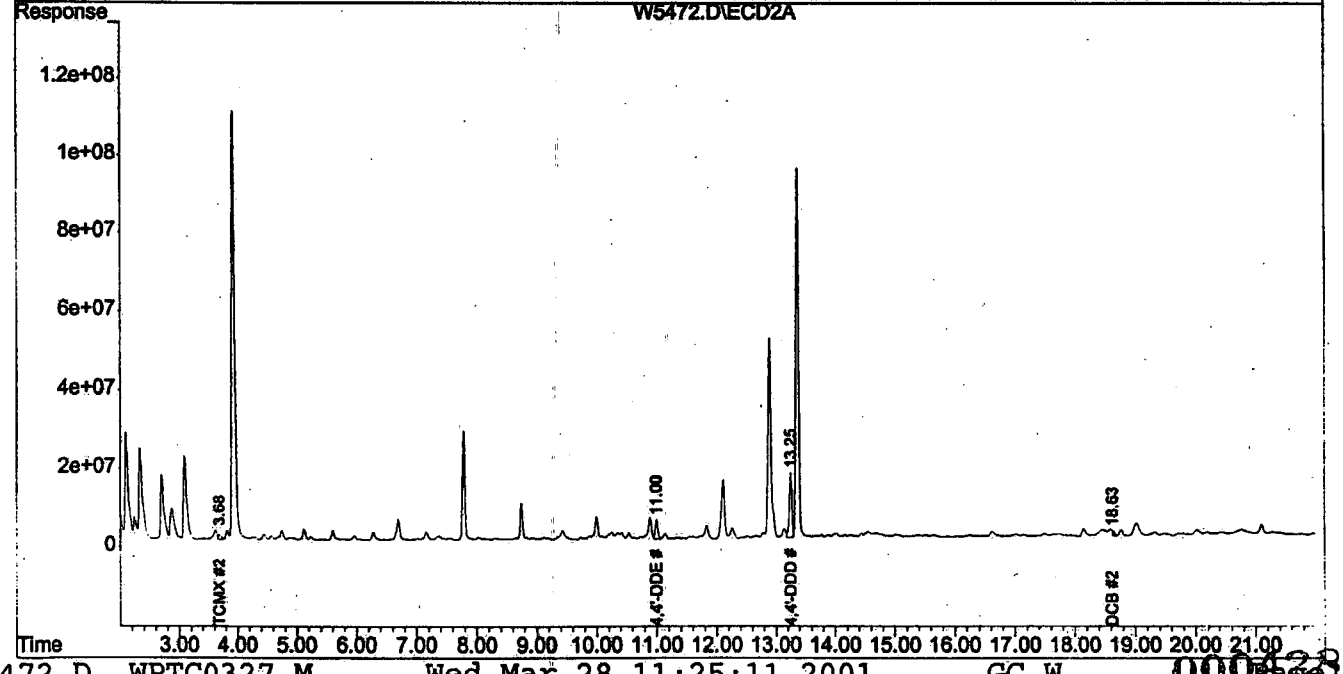
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\03-27-01\W5472.D\ECD1B.CH Vial: 33
Signal #2 : C:\HPCHEM\1\DATA\03-27-01\W5472.D\ECD2A.CH
Acq On : 3-28-01 2:04:23 Operator:
Sample : S-14,1840-005,S,30.1g,15.1,03/27/01 Inst : GC_W
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01,50 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Mar 28 11:11 2001 Quant Results File: WPTC0327.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC0327.M (Chemstation Integrator)
Title :
Last Update : Tue Mar 27 15:57:26 2001
Response via : Multiple Level Calibration
DataAcq Meth : WPTC0327.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\03-27-01\W5473.D\ECD1B.CH Vial: 34
Signal #2 : C:\HPCHEM\1\DATA\03-27-01\W5473.D\ECD2A.CH
Acq On : 3-28-01 2:29:13 Operator:
Sample : S-15,1840-006,S,30.4g,17.7,03/27/01 Inst : GC_W
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01,50 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Mar 28 11:12 2001 Quant Results File: WPTC0327.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC0327.M (Chemstation Integrator)
Title :
Last Update : Tue Mar 27 15:57:26 2001
Response via : Initial Calibration
DataAcq Meth : WPTC0327.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
System Monitoring Compounds						
1) S TCMX	3.85	3.69	48306540	28128292	1.101m	1.428 #
Spiked Amount 100.000			Recovery =		1.10%	1.43%
2) S DCB	18.68	18.65	75158425	37885495	1.777m	2.238 #
Spiked Amount 100.000			Recovery =		1.78%	2.24%
Target Compounds						
11) T 4,4'-DDE	10.24	11.00	875.9E6	389.8E6	26.260	27.243
Sum Chlordane			0	0	N.D.	N.D.
rage Chlordane					0.000	0.000
Sum Toxaphene			0	0	N.D.	N.D.
Average Toxaphene					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
W5473.D WPTC0327.M Wed Mar 28 11:25:16 2001 GC_W Page 1

000429

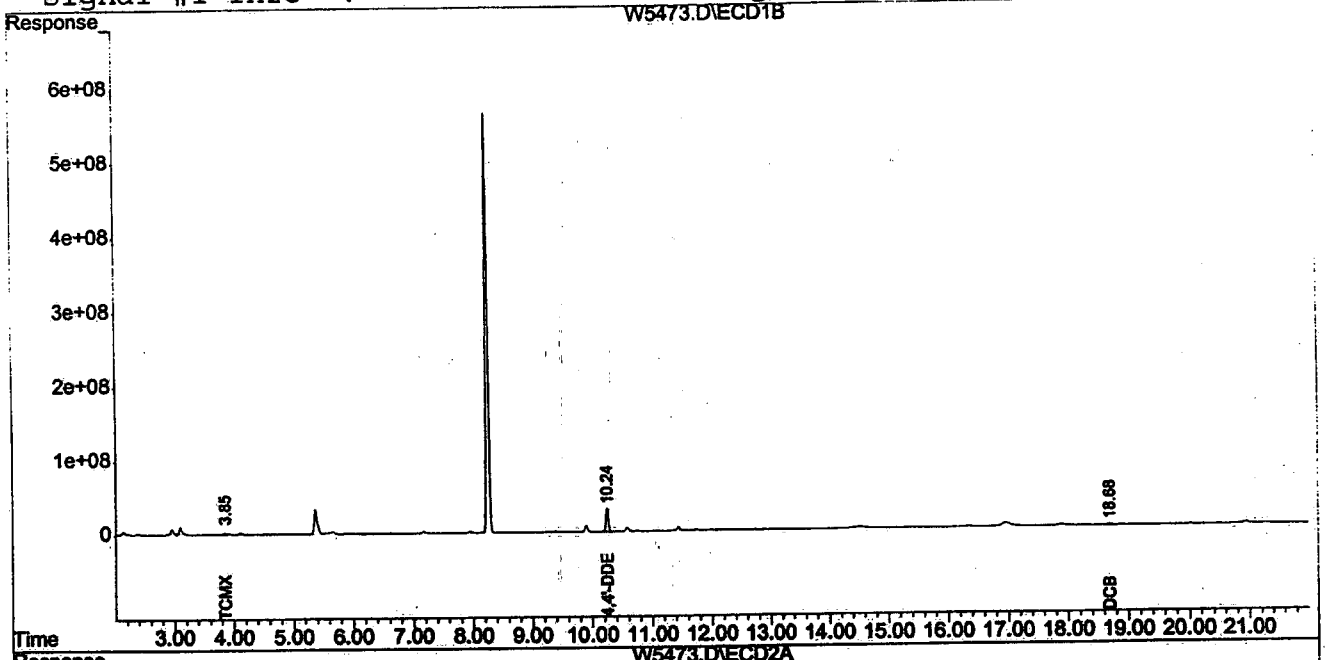
986

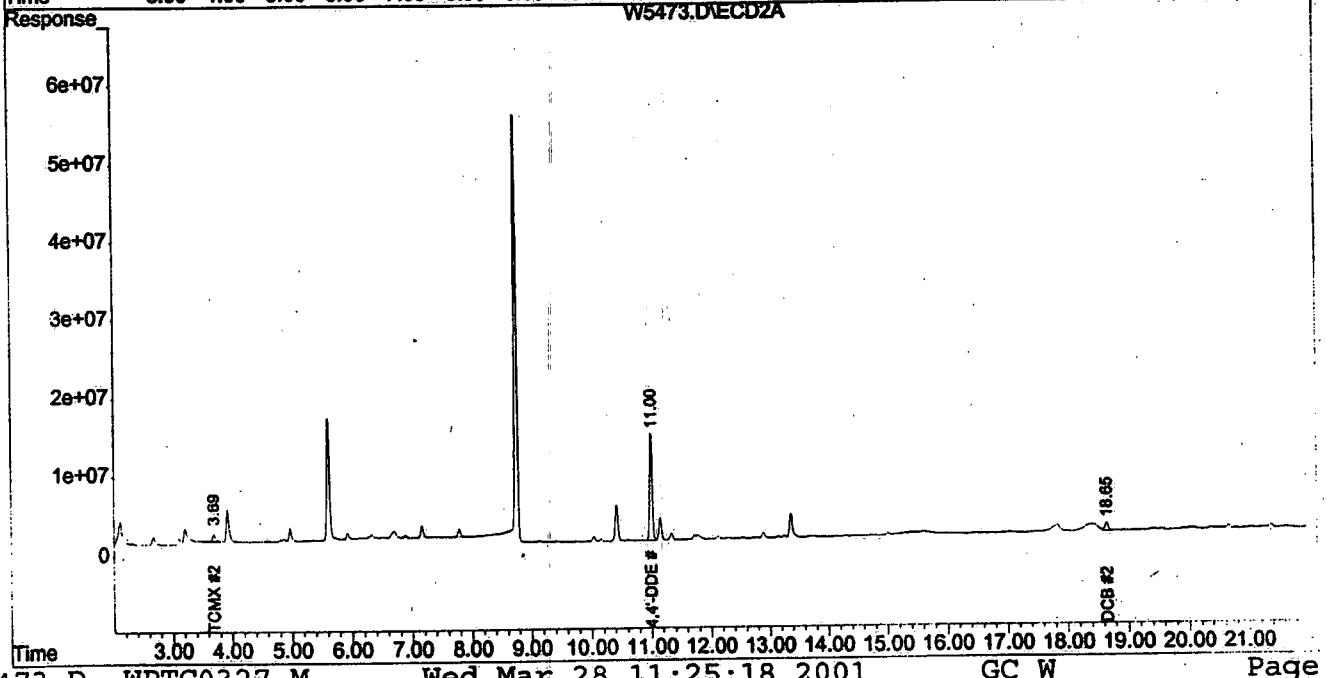
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\03-27-01\W5473.D\ECD1B.CH Vial: 34
Signal #2 : C:\HPCHEM\1\DATA\03-27-01\W5473.D\ECD2A.CH
Acq On : 3-28-01 2:29:13 Operator:
Sample : S-15,1840-006,S,30.4g,17.7,03/27/01 Inst : GC_W
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01,50 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Mar 28 11:12 2001 Quant Results File: WPTC0327.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC0327.M (Chemstation Integrator)
Title :
Last Update : Tue Mar 27 15:57:26 2001
Response via : Multiple Level Calibration
DataAcq Meth : WPTC0327.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\03-27-01\W5474.D\ECD1B.CH Vial: 35
Signal #2 : C:\HPCHEM\1\DATA\03-27-01\W5474.D\ECD2A.CH
Acq On : 3-28-01 2:54:11 Operator:
Sample : S-16,1840-007,S,30.5g,14.9,03/27/01 Inst : GC_W
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01,50 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Mar 28 11:13 2001 Quant Results File: WPTC0327.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC0327.M (Chemstation Integrator)
Title :
Last Update : Tue Mar 27 15:57:26 2001
Response via : Initial Calibration
DataAcq Meth : WPTC0327.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
System Monitoring Compounds						
1) S TCMX	3.85	3.69	62964976	33582513	1.435m	1.705m
Spiked Amount 100.000			Recovery	=	1.44%	1.70%
2) S DCB	18.68	18.65	77767814	32801307	1.839m	1.937
Spiked Amount 100.000			Recovery	=	1.84%	1.94%
Target Compounds						
15) T 4,4'-DDD	11.36	13.25	29669992	15252990	1.091m	1.243
Sum Chlordane			0	0	N.D.	N.D.
Average Chlordane					0.000	0.000
Sum Toxaphene			0	0	N.D.	N.D.
Average Toxaphene					0.000	0.000

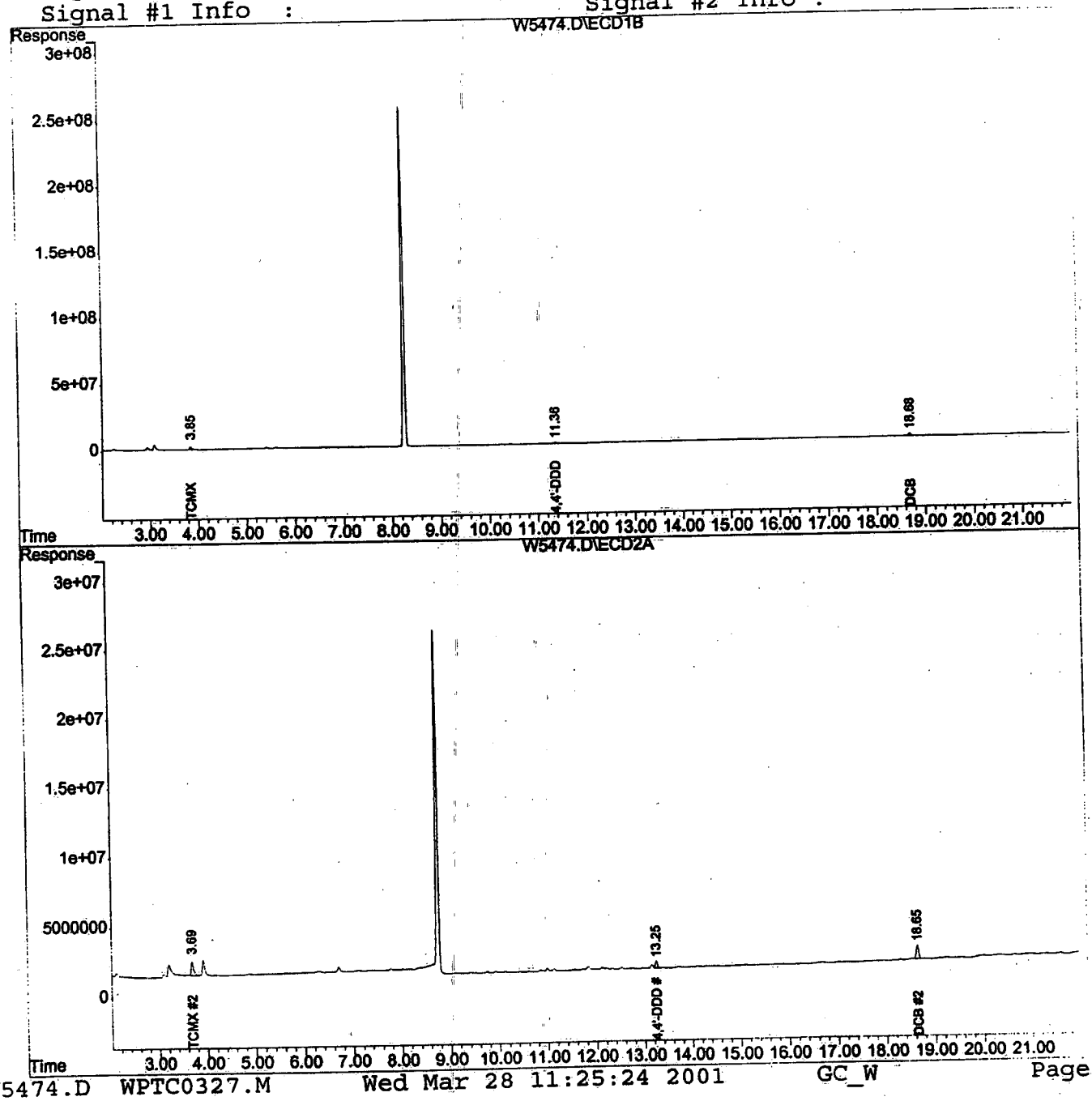
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
W5474.D WPTC0327.M Wed Mar 28 11:25:22 2001 GC_W Page 1

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\03-27-01\W5474.D\ECD1B.CH Vial: 35
Signal #2 : C:\HPCHEM\1\DATA\03-27-01\W5474.D\ECD2A.CH
Acq On : 3-28-01 2:54:11 Operator:
Sample : S-16,1840-007,S,30.5g,14.9,03/27/01 Inst : GC_W
Misc : ENVTACT/444_ORBIS,03/23/01,03/26/01,50 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Mar 28 11:13 2001 Quant Results File: WPTC0327.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC0327.M (Chemstation Integrator)
Title :
Last Update : Tue Mar 27 15:57:26 2001
Response via : Multiple Level Calibration
DataAcq Meth : WPTC0327.M

Volume Inj. :
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :



Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\03-27-01\W5468.D\ECD1B.CH Vial: 29
Signal #2 : C:\HPCHEM\1\DATA\03-27-01\W5468.D\ECD2A.CH
Acq On : 3-28-01 00:24:49 Operator:
Sample : (1840.1856),0327-BK1,S,30.0g,0.0,03/27/0 Inst : GC_W
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Mar 28 11:03 2001 Quant Results File: WPTC0327.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC0327.M (Chemstation Integrator)
Title :
Last Update : Tue Mar 27 15:57:26 2001
Response via : Initial Calibration
DataAcq Meth : WPTC0327.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
System Monitoring Compounds						
1) S TCMX	3.85	3.69	4147.6E6	1818.8E6	94.518	92.323
Spiked Amount 100.000			Recovery	=	94.52%	92.32%
2) S DCB	18.69	18.65	3834.3E6	1486.5E6	90.676	87.798
Spiked Amount 100.000			Recovery	=	90.68%	87.80%
Target Compounds						
Sum Chlordane			0	0	N.D.	N.D.
Average Chlordane					0.000	0.000
Sum Toxaphene			0	0	N.D.	N.D.
Average Toxaphene					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
W5468.D WPTC0327.M Wed Mar 28 11:24:38 2001 GC_W Page 1

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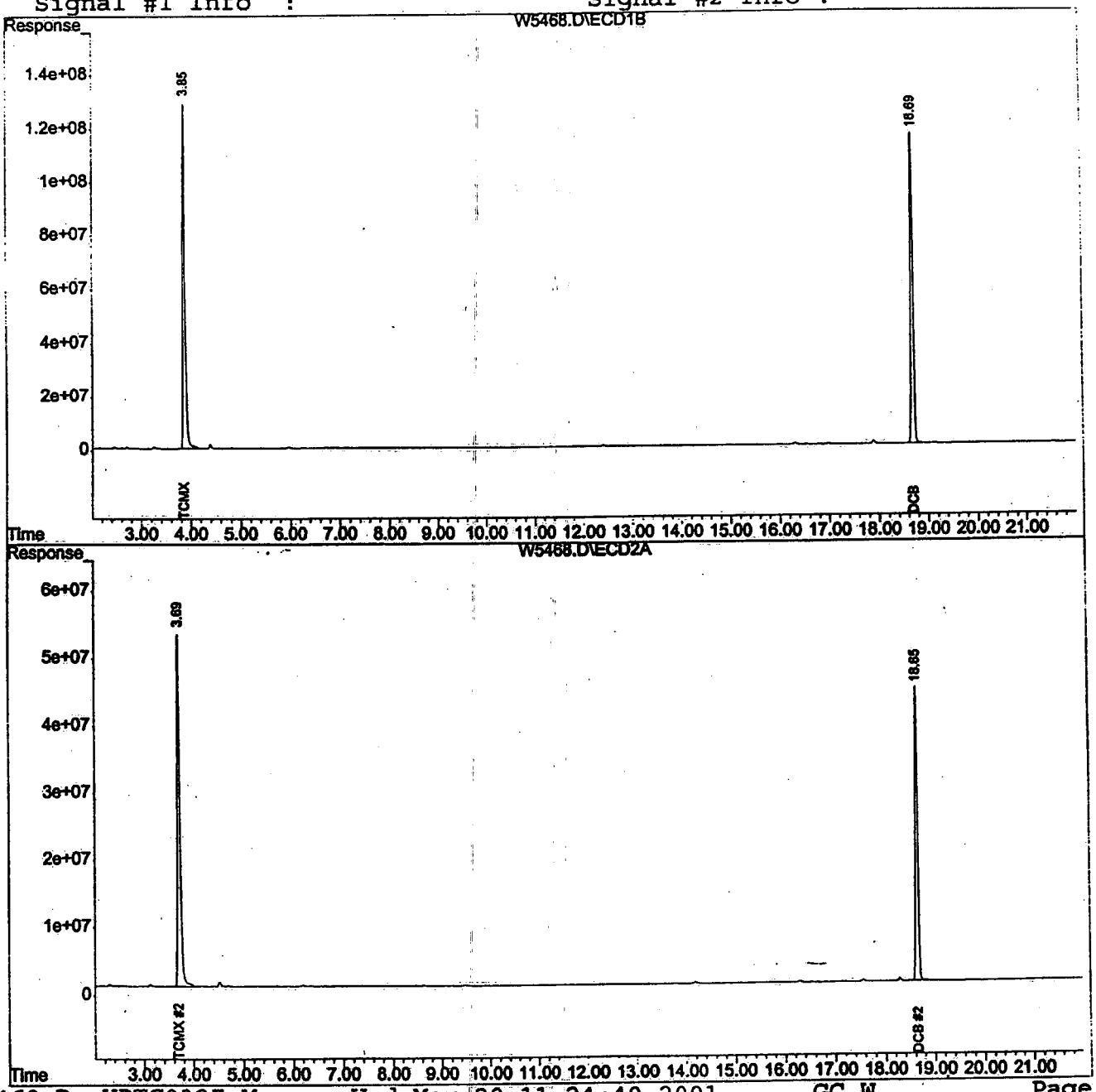
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\03-27-01\W5468.D\ECD1B.CH Vial: 29
Signal #2 : C:\HPCHEM\1\DATA\03-27-01\W5468.D\ECD2A.CH
Acq On : 3-28-01 00:24:49 Operator:
Sample : (1840.1856),0327-BK1,S,30.0g,0.0,03/27/0 Inst : GC_W
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Mar 28 11:03 2001 Quant Results File: WPTC0327.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC0327.M (Chemstation Integrator)
Title :
Last Update : Tue Mar 27 15:57:26 2001
Response via : Multiple Level Calibration
DataAcq Meth : WPTC0327.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\03-27-01\W5465.D\ECD1B.CH Vial: 26
Signal #2 : C:\HPCHEM\1\DATA\03-27-01\W5465.D\ECD2A.CH
Acq On : 3-27-01 23:10:02 Operator:
Sample : PEST_C_IAS_1441,100_PPB Inst : GC_W
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Mar 28 9:28 2001 Quant Results File: WPTC0327.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC0327.M (Chemstation Integrator)
Title :
Last Update : Tue Mar 27 15:57:26 2001
Response via : Initial Calibration
DataAcq Meth : WPTC0327.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2	
	System Monitoring Compounds							
1) S	TCMX	3.86	3.70	4562.8E6	2010.6E6	103.981	102.058	
Spiked Amount	100.000			Recovery	=	103.98%	102.06%	
2) S	DCB	18.68	18.65	4324.8E6	1709.9E6	102.273	100.993	
Spiked Amount	100.000			Recovery	=	102.27%	100.99%	
	Target Compounds							
3) T	alpha-BHC	4.54	5.59	4664.8E6	1974.6E6	104.795	105.019	
4) T	beta-BHC	5.03	8.65	1733.7E6	801.3E6	103.797	100.627	
T	gamma-BHC	5.16	6.55	4073.4E6	1796.4E6	105.234	104.525	
T	delta-BHC	5.63	9.22	4336.7E6	1723.5E6	105.820	104.652	
7) T	Heptachlor	6.74	7.02	3456.2E6	1409.9E6	103.053	105.428	
8) T	Aldrin	7.55	7.70	4037.8E6	1653.2E6	105.921	104.057	
9) T	Heptachlor epoxi	8.56	9.54	3604.1E6	1509.8E6	105.568	102.694	
10) T	Endosulfan I	9.48	10.23	3366.7E6	1420.0E6	105.674	103.309	
11) T	4,4'-DDE	10.24	11.00	3577.0E6	1503.4E6	107.241	105.076	
12) T	Dieldrin	10.17	11.27	3658.4E6	1552.0E6	107.211	104.360	
13) T	Endrin	10.72	11.79	3157.1E6	1374.9E6	107.351	103.771	
14) T	Endosulfan II	10.98	13.24	3102.9E6	2548.1E6	104.888	207.605	#
15) T	4,4'-DDD	11.36	13.24	2989.1E6	2548.1E6	109.866	207.605	#
16) T	Endrin aldehyde	11.50	14.38	2197.8E6	950.2E6	112.965	108.384	
17) T	Endosulfan sulfa	12.15	15.28	2767.0E6	1167.2E6	105.343	102.983	
18) T	4,4'-DDT	12.38	13.69	2404.8E6	919.5E6	111.253	108.402	
19) T	Endrin ketone	13.36	16.30	3459.9E6	1410.9E6	105.828	104.256	
20) T	Methoxychlor	14.06	15.55	1083.9E6	480.1E6	112.900	105.996	
21) T	alpha-Chlordane	9.58	10.62	3627.0E6	1508.9E6	105.661	103.151	
22) T	gamma-Chlordane	9.17	10.47	3805.6E6	1552.8E6	106.333	103.991	
Sum	Chlordane			0	0	N.D.	N.D.	
Average	Chlordane					0.000	0.000	
Sum	Toxaphene			0	0	N.D.	N.D.	
Average	Toxaphene					0.000	0.000	

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
W5465.D WPTC0327.M Wed Mar 28 11:00:57 2001 GC_W Page 1

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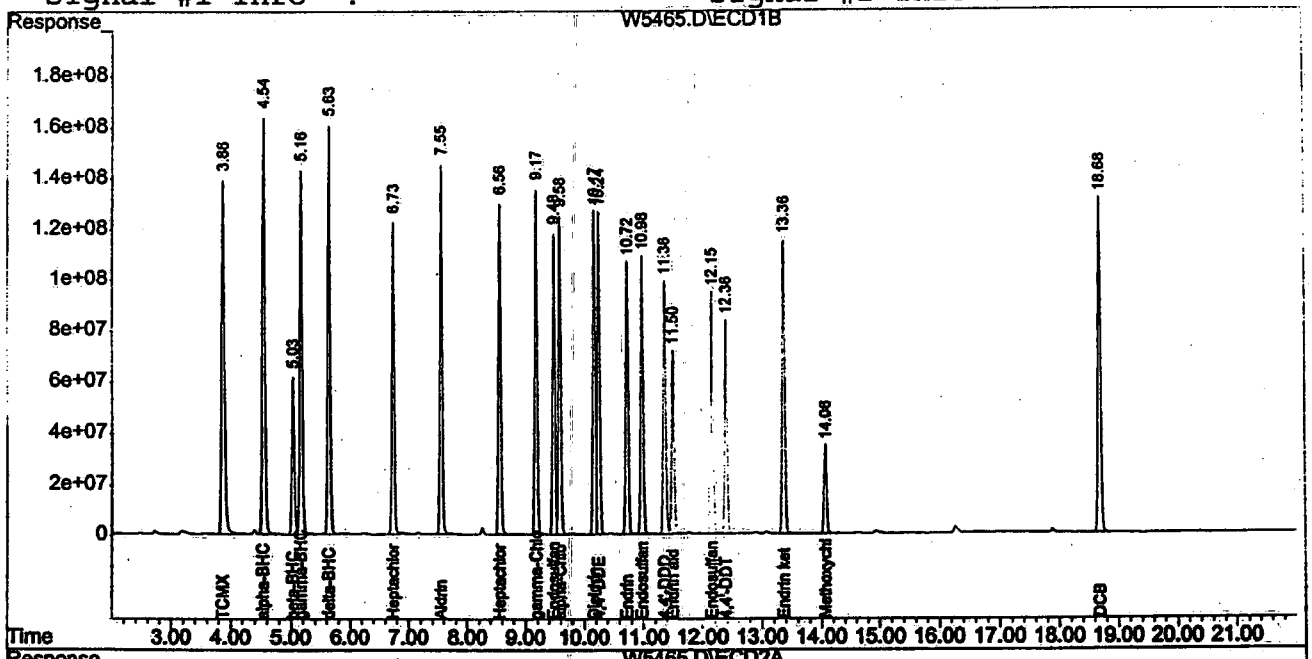
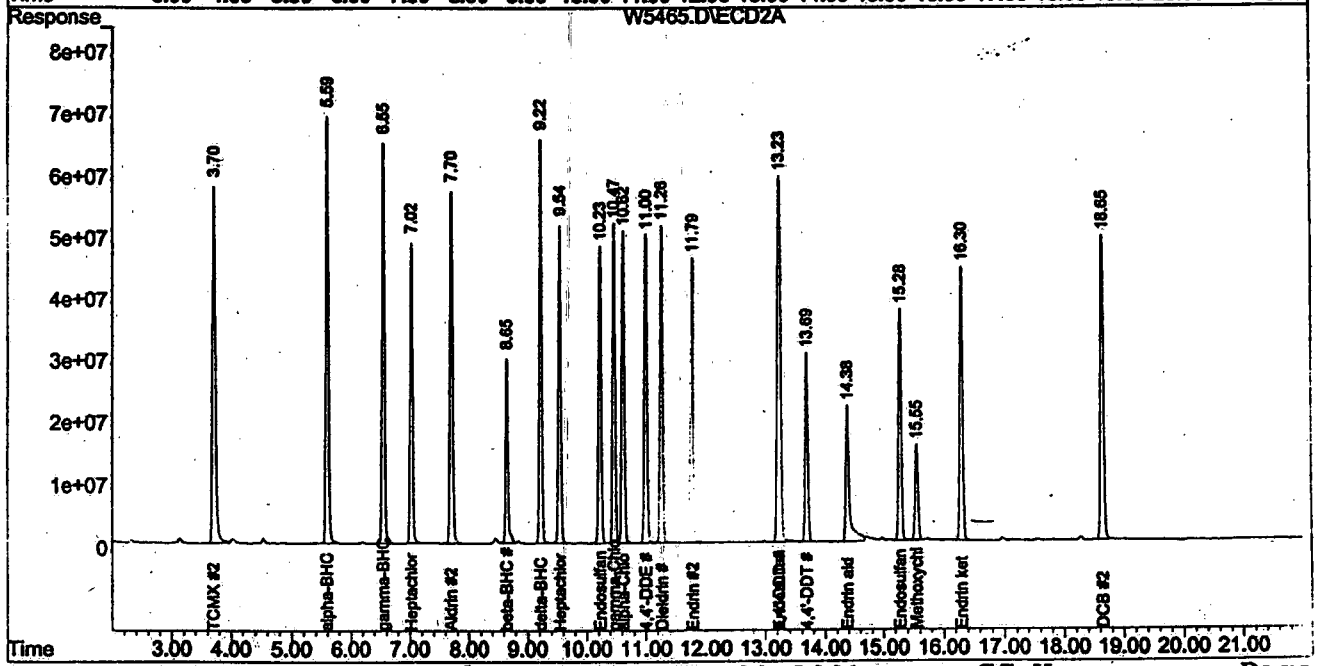
Signal #1 : C:\HPCHEM\1\DATA\03-27-01\W5465.D\ECD1B.CH Vial: 26
Signal #2 : C:\HPCHEM\1\DATA\03-27-01\W5465.D\ECD2A.CH
Acq On : 3-27-01 23:10:02 Operator:
Sample : PEST_C_IAS_1441,100_PPB Inst : GC_W
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Mar 28 9:28 2001 Quant Results File: WPTC0327.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC0327.M (Chemstation Integrator)
Title :
Last Update : Tue Mar 27 15:57:26 2001
Response via : Multiple Level Calibration
DataAcq Meth : WPTC0327.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





000436

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Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\03-27-01\W5483.D\ECD1B.CH Vial: 44
Signal #2 : C:\HPCHEM\1\DATA\03-27-01\W5483.D\ECD2A.CH
Acq On : 3-28-01 6:38:53 Operator:
Sample : PEST_C_IAS_1441,100_PPB Inst : GC_W
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Mar 28 9:32 2001 Quant Results File: WPTC0327.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC0327.M (Chemstation Integrator)
Title :
Last Update : Tue Mar 27 15:57:26 2001
Response via : Initial Calibration
DataAcq Meth : WPTC0327.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
	System Monitoring Compounds						
1) S	TCMX	3.87	3.71	4501.5E6	1991.5E6	102.583	101.088
Spiked Amount	100.000			Recovery	=	102.58%	101.09%
2) S	DCB	18.69	18.65	4103.9E6	1605.2E6	97.050	94.810
Spiked Amount	100.000			Recovery	=	97.05%	94.81%
	Target Compounds						
3) T	alpha-BHC	4.54	5.59	4617.4E6	1937.0E6	103.731	103.022
4) T	beta-BHC	5.03	8.65	1708.9E6	791.3E6	102.318	99.380
5) T	gamma-BHC	5.16	6.55	3979.9E6	1763.1E6	102.817	102.587
6) T	delta-BHC	5.64	9.22	4337.0E6	1731.4E6	105.830	105.135
7) T	Heptachlor	6.74	7.03	3427.6E6	1306.7E6	102.200	97.712
8) T	Aldrin	7.55	7.70	3980.0E6	1631.5E6	104.405	102.694
9) T	Heptachlor epoxi	8.56	9.54	3542.6E6	1489.2E6	103.766	101.293
10) T	Endosulfan I	9.48	10.23	3302.4E6	1399.5E6	103.657	101.821
11) T	4,4'-DDE	10.25	11.00	3510.4E6	1467.2E6	105.243	102.544
12) T	Dieldrin	10.17	11.27	3608.4E6	1520.1E6	105.744	102.214
13) T	Endrin	10.73	11.79	3167.5E6	1337.6E6	107.705	100.958
14) T	Endosulfan II	10.98	13.24	3064.9E6	2539.7E6	103.603	206.914 #
15) T	4,4'-DDD	11.36	13.24	3061.2E6	2539.7E6	112.515	206.914 #
16) T	Endrin aldehyde	11.50	14.38	2235.7E6	934.4E6	114.909m	106.579
17) T	Endosulfan sulfa	12.16	15.28	2773.5E6	1149.4E6	105.592	101.413
18) T	4,4'-DDT	12.38	13.69	1990.3E6	721.4E6	92.079	85.045m
19) T	Endrin ketone	13.36	16.31	3388.8E6	1338.4E6	103.653	98.901
20) T	Methoxychlor	14.06	15.55	987.0E6	392.9E6	102.805	86.728
21) T	alpha-Chlordane	9.58	10.62	3532.3E6	1471.8E6	102.902	100.619
22) T	gamma-Chlordane	9.17	10.47	3722.5E6	1516.0E6	104.012	101.529
Sum	Chlordane			0	0	N.D.	N.D.
Average	Chlordane					0.000	0.000
Sum	Toxaphene			0	0	N.D.	N.D.
Average	Toxaphene					0.000	0.000

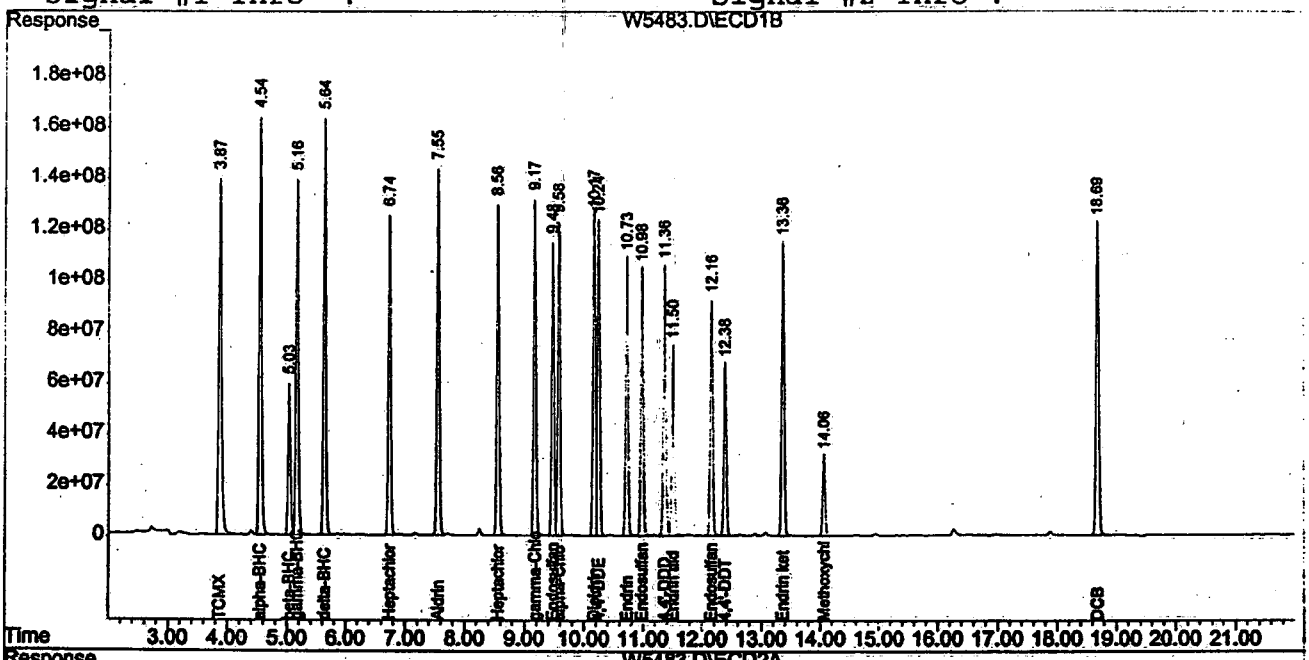
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

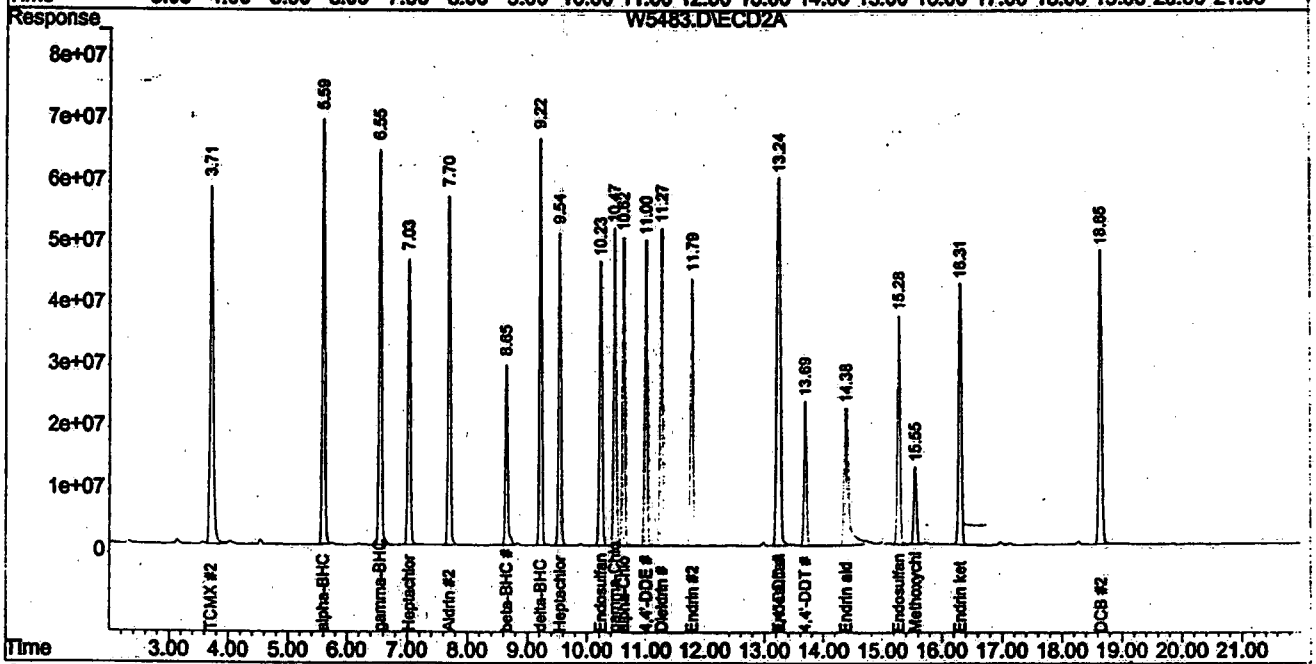
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\03-27-01\W5483.D\ECD1B.CH Vial: 44
Signal #2 : C:\HPCHEM\1\DATA\03-27-01\W5483.D\ECD2A.CH
Acq On : 3-28-01 6:38:53 Operator:
Sample : PEST_C_IAS_1441,100_PPB Inst : GC_W
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Mar 28 9:32 2001 Quant Results File: WPTC0327.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC0327.M (Chemstation Integrator)
Title :
Last Update : Tue Mar 27 15:57:26 2001
Response via : Multiple Level Calibration
DataAcq Meth : WPTC0327.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\03-27-01\W5466.D\ECD1B.CH Vial: 27
Signal #2 : C:\HPCHEM\1\DATA\03-27-01\W5466.D\ECD2A.CH
Acq On : 3-27-01 23:34:55 Operator:
Sample : TOX_C_IAS_1436,0.5_PPM Inst : GC_W
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Mar 28 9:29 2001 Quant Results File: WPTC0327.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC0327.M (Chemstation Integrator)
Title :
Last Update : Tue Mar 27 15:57:26 2001
Response via : Initial Calibration
DataAcq Meth : WPTC0327.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
System Monitoring Compounds						
1) S TCMX	3.87	3.71	4646.7E6	2043.0E6	105.892	103.705
Spiked Amount 100.000			Recovery =		105.89%	103.71%
2) S DCB	18.69	18.65	4221.3E6	1667.0E6	99.826	98.457
Spiked Amount 100.000			Recovery =		99.83%	98.46%
Target Compounds						
Sum Chlordane			0	0	N.D.	N.D.
Average Chlordane					0.000	0.000
L2 Toxaphene	13.18	14.02	321.4E6	141.5E6	559.816	542.531
9) L2 Toxaphene {2}	13.30	14.75	253.0E6	120.9E6	557.180	528.485
0) L2 Toxaphene {3}	13.58	15.02	162.2E6	93763908	517.151	541.931
1) L2 Toxaphene {4}	14.04	15.21	215.6E6	75186281	542.372	548.062
2) L2 Toxaphene {5}	14.55	15.66	320.5E6	110.2E6	546.402	531.993
Sum Toxaphene			1272.8E6	541.6E6	2722.921	2693.002
Average Toxaphene					544.584	538.600

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
W5466.D WPTC0327.M Wed Mar 28 11:01:39 2001 GC_W Page 1

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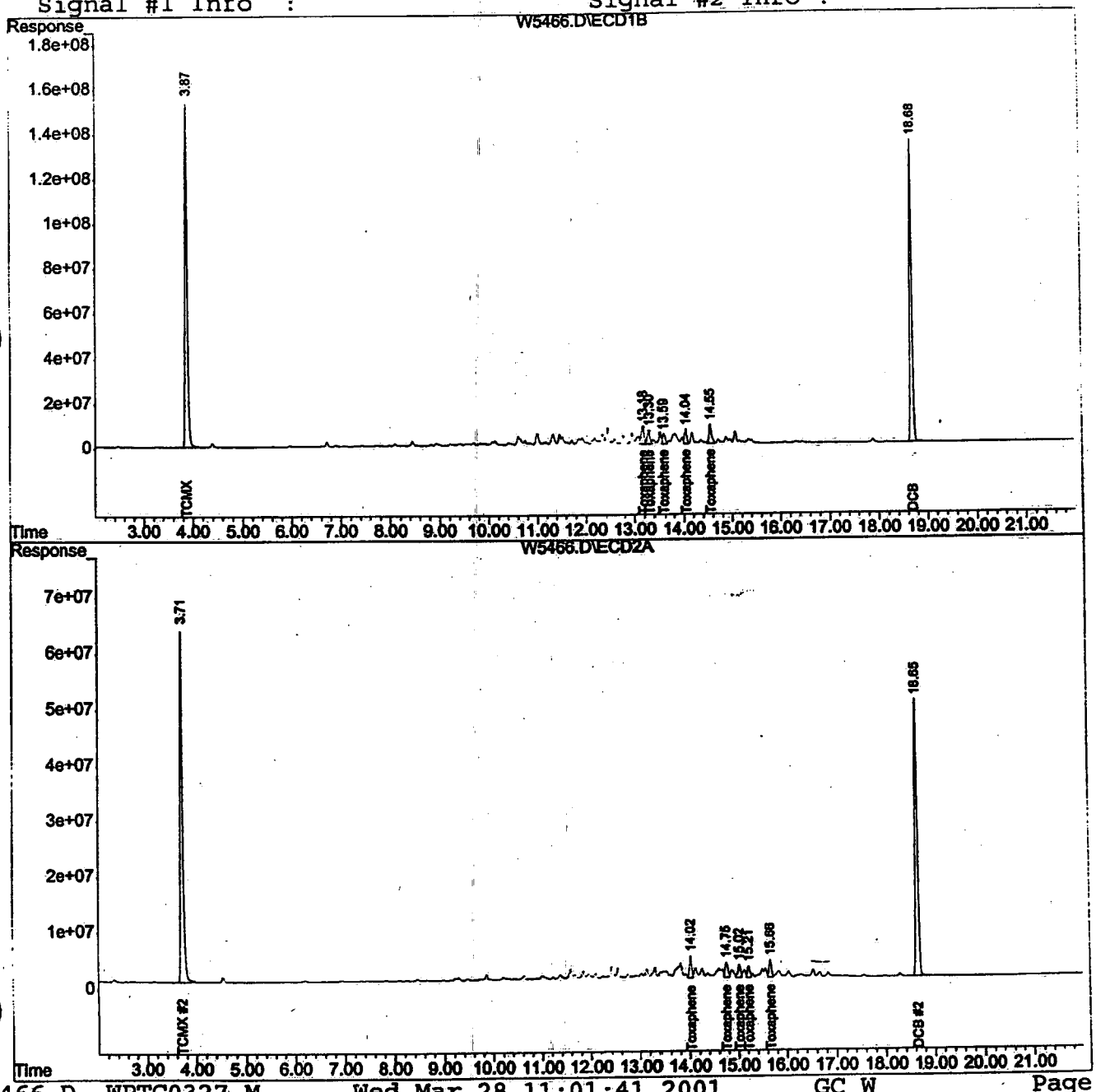
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\03-27-01\W5466.D\ECD1B.CH Vial: 27
Signal #2 : C:\HPCHEM\1\DATA\03-27-01\W5466.D\ECD2A.CH
Acq On : 3-27-01 23:34:55 Operator:
Sample : TOX_C_IAS_1436,0.5_PPM Inst : GC_W
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Mar 28 9:29 2001 Quant Results File: WPTC0327.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC0327.M (Chemstation Integrator)
Title :
Last Update : Tue Mar 27 15:57:26 2001
Response via : Multiple Level Calibration
DataAcq Meth : WPTC0327.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\03-27-01\W5467.D\ECD1B.CH Vial: 28
Signal #2 : C:\HPCHEM\1\DATA\03-27-01\W5467.D\ECD2A.CH
Acq On : 3-27-01 23:59:49 Operator:
Sample : CHLOR_C_IAS_1437,0.5_PPM Inst : GC_W
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Mar 28 9:29 2001 Quant Results File: WPTC0327.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC0327.M (Chemstation Integrator)
Title :
Last Update : Tue Mar 27 15:57:26 2001
Response via : Initial Calibration
DataAcq Meth : WPTC0327.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
System Monitoring Compounds						
1) S TCMX	3.87	3.71	4308.9E6	1925.5E6	98.194	97.739
Spiked Amount 100.000			Recovery	=	98.19%	97.74%
2) S DCB	18.69	18.65	3941.4E6	1556.8E6	93.207	91.951
Spiked Amount 100.000			Recovery	=	93.21%	91.95%
Target Compounds						
23) L1 Chlordane	9.18	8.39	1906.8E6	187.5E6	492.652	472.651
24) L1 Chlordane {2}	9.37	10.07	346.9E6	182.9E6	493.790	493.027
25) L1 Chlordane {3}	9.58	10.47	1768.0E6	797.3E6	492.412	489.195
26) L1 Chlordane {4}	9.73	10.62	893.0E6	722.3E6	492.633	487.691
27) L1 Chlordane {5}	11.58	10.68	568.5E6	355.6E6	497.206	491.395
Sum Chlordane			5483.2E6	2245.6E6	2468.693	2433.960
Average Chlordane					493.739	486.792
Sum Toxaphene			0	0	N.D.	N.D.
Average Toxaphene					0.000	0.000

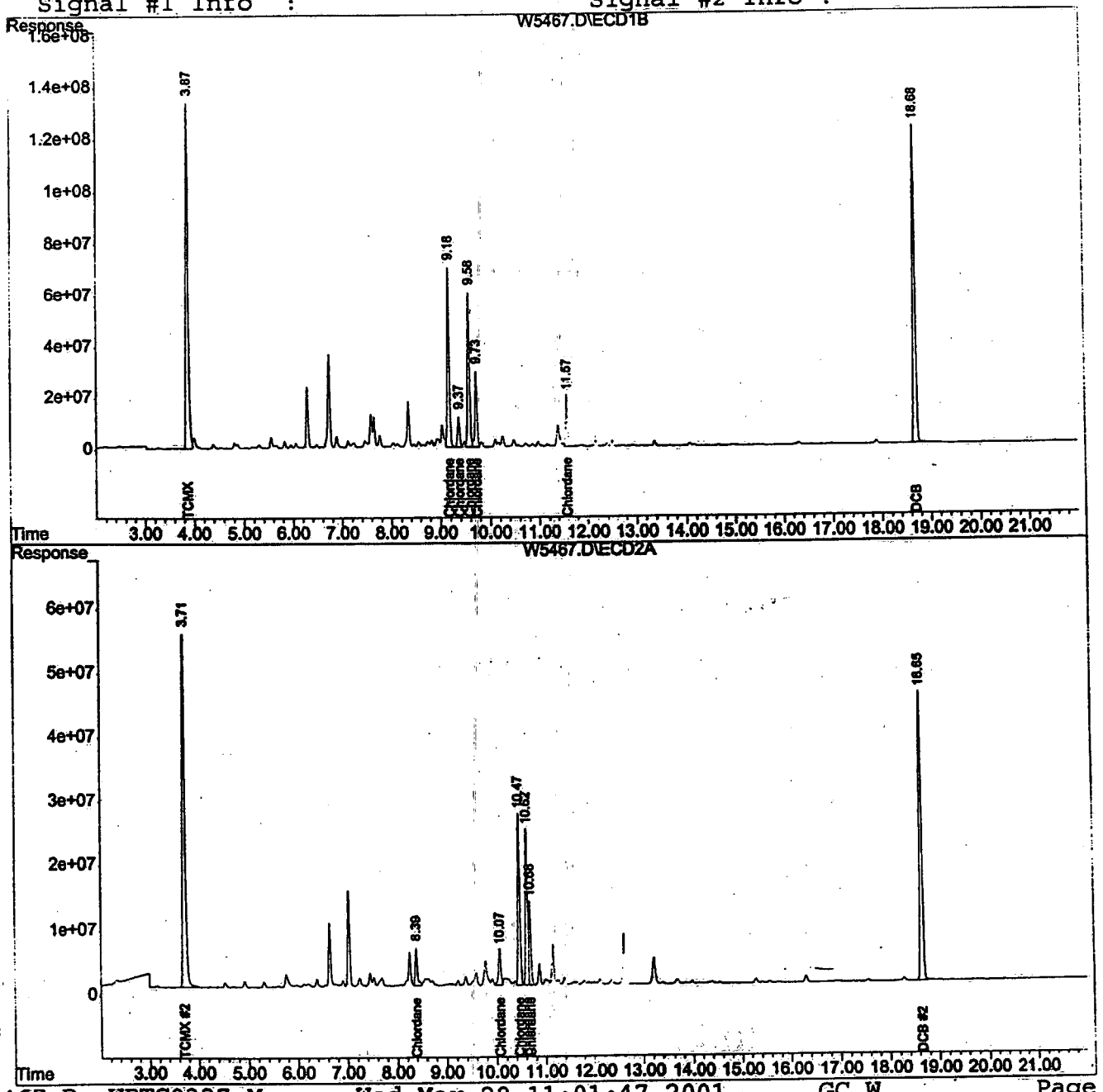
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
W5467.D WPTC0327.M Wed Mar 28 11:01:46 2001 GC_W Page 1

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\03-27-01\W5467.D\ECD1B.CH Vial: 28
Signal #2 : C:\HPCHEM\1\DATA\03-27-01\W5467.D\ECD2A.CH
Acq On : 3-27-01 23:59:49 Operator:
Sample : CHLOR_C_IAS_1437,0.5_PPM Inst : GC_W
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Mar 28 9:29 2001 Quant Results File: WPTC0327.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC0327.M (Chemstation Integrator)
Title :
Last Update : Tue Mar 27 15:57:26 2001
Response via : Multiple Level Calibration
DataAcq Meth : WPTC0327.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



000412

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INTEGRATED ANALYTICAL LABORATORIES

METALS QUALITY CONTROL

BLANK RESULTS SUMMARY

Lab Case Number: E01- 1840, 1937, 2117, 2154, 2155, 2158, 2159, 2185, 2195

Matrix: Soil Concentration/Units: ppm (mg/kg)

ANALYTE	INITIAL CALIBRATION	CONTINUING CALIBRATION 1	CONTINUING CALIBRATION 2	INST. MDL	REAGENT BLANK	MDL	IDL
Antimony	ND	ND	ND	0.100	ND	2.00	
Arsenic	ND	ND	ND	0.010	ND	0.200	
Beryllium	ND	ND	ND	0.010	ND	0.200	
Cadmium	ND	ND	ND	0.010	ND	0.200	
Chromium	ND	ND	ND	0.030	ND	0.600	
Copper	ND	ND	ND	0.020	ND	0.400	
Lead	ND	ND	ND	0.100	ND	2.00	
Mercury	ND	ND	ND	0.00025	ND	0.013	
Nickel	ND	ND	ND	0.030	ND	0.600	
Selenium	ND	ND	ND	0.100	ND	2.00	
Silver	ND	ND	ND	0.020	ND	0.500	
Thallium	ND	ND	ND	0.004	ND	0.080	
Zinc	ND	ND	ND	0.050	ND	1.00	

This QC Blank applies to the following samples:

1840-003; 1937-004; 2117-001~007
2154-001~020; 2155-001, 003, 004, 010~016
2158-006~007; 2159-001~009
2185-001~003; 2195-001

INTEGRATED ANALYTICAL LABORATORIES

METALS QUALITY CONTROL

BLANK RESULTS SUMMARY

Lab Case Number: E01- 633, 1731, 1745, 1783, 1793, 1836, 1840, 1854, 1855, 1856 1861, 1867, 1874

Matrix: Soil Concentration/Units: ppm (mg/kg)

ANALYTE	INITIAL CALIBRATION	CONTINUING CALIBRATION 1	CONTINUING CALIBRATION 2	INST. MDL	REAGENT BLANK	MDL	IDL
Aluminum	ND	ND	ND	0.100	ND	2.00	
Antimony	ND	ND	ND	0.100	ND	2.00	
Arsenic	ND	ND	ND	0.010	ND	0.200	
Barium	ND	ND	ND	0.250	ND	5.00	
Beryllium	ND	ND	ND	0.010	ND	0.200	
Cadmium	ND	ND	ND	0.010	ND	0.200	
Calcium	ND	ND	ND	1.00	ND	20.0	
Chromium	ND	ND	ND	0.030	ND	0.600	
Cobalt	ND	ND	ND	0.020	ND	0.400	
Copper	ND	ND	ND	0.020	ND	0.400	
Iron	ND	ND	ND	0.150	ND	3.00	
Lead	ND	ND	ND	0.100	ND	2.00	
Magnesium	ND	ND	ND	1.00	ND	20.0	
Manganese	ND	ND	ND	0.020	ND	0.400	
Mercury	ND	ND	ND	0.00025	ND	0.013	
Nickel	ND	ND	ND	0.030	ND	0.600	
Potassium	ND	ND	ND	1.00	ND	20.0	
Selenium	ND	ND	ND	0.100	ND	2.00	
Silver	ND	ND	ND	0.020	ND	0.500	
Sodium	ND	ND	ND	1.00	ND	20.0	
Thallium	ND	ND	ND	0.004	ND	0.080	
Vanadium	ND	ND	ND	0.015	ND	0.300	
Zinc	ND	ND	ND	0.050	ND	1.00	

This QC Blank applies to the following samples:

633-001; 1731-001; 1745-001-007; 1783-001; 1854-001
1793-002-005; 1836-004-007; 1840-001-002, 004-007
1855-002; 1856-001-002; 1861-021-029
1867-001-019; 1874-001

000444

/001/

INTEGRATED ANALYTICAL LABORATORIES

METALS QUALITY CONTROL

INITIAL & CONTINUING CALIBRATION VERIFICATION

Lab Case Number: E01- 1840, 1937, 2117, 2154, 2155, 2158, 2159, 2185, 2195

Concentration/Units: ppb (µg/L)

ANALYTE	INITIAL CALIBRATION			CONTINUING CALIBRATION					MDL	IDL
	TRUE	FOUND	%R (1)	TRUE	FOUND	%R (1)	FOUND	%R (1)		
Antimony	120	123	103	120	119	99.2	112	93.3	100	
Arsenic	20.0	18.9	94.5	20.0	19.4	97.0	18.6	93.0	10.0	
Beryllium	10.0	9.42	94.2	10.0	9.36	93.6	9.89	98.9	10.0	
Cadmium	10.0	9.76	97.6	10.0	9.58	95.8	9.32	93.2	10.0	
Chromium	20.0	19.9	99.5	20.0	19.6	98.0	19.2	96.0	30.0	
Copper	50.0	49.6	99.2	50.0	51.4	103	50.3	101	20.0	
Lead	10.0	10.2	102	10.0	9.98	99.8	10.3	103	100	
Mercury	5.00	4.83	96.6	5.00	4.97	99.4	5.00	100	0.250	
Nickel	80.0	76.5	95.6	80.0	77.8	97.3	75.8	94.8	30.0	
Selenium	10.0	10.2	102	10.0	10.5	105	9.51	95.1	100	
Silver	500	502	100	500	483	96.6	482	96.4	20.0	
Thallium	20.0	20.2	101	20.0	21.2	106	20.4	102	4.00	
Zinc	40.0	40.9	102	40.0	43.0	108	41.8	105	50.0	

(1) Control Limits: Mercury 80-120, Other Metals 90-110

INTEGRATED ANALYTICAL LABORATORIES

METALS QUALITY CONTROL

INITIAL & CONTINUING CALIBRATION VERIFICATION

Lab Case Number: E01- 633, 1731, 1745, 1783, 1793, 1836, 1840, 1854, 1855, 1856 1861, 1867, 1874

Concentration/Units: ppb (µg/L)

ANALYTE	INITIAL CALIBRATION			CONTINUING CALIBRATION					MDL	IDL
	TRUE	FOUND	%R (1)	TRUE	FOUND	%R (1)	FOUND	%R (1)		
Aluminum	400	436	109	400	420	105	392	98.0	100	
Antimony	120	115	95.8	120	112	93.3	120	100	100	
Arsenic	20.0	19.7	98.5	20.0	19.1	95.5	18.7	93.5	10.0	
Barium	400	387	96.8	400	384	96.0	426	107	250	
Beryllium	10.0	9.66	96.6	10.0	10.0	100	9.17	91.7	10.0	
Cadmium	10.0	10.2	102	10.0	9.88	98.8	9.53	95.3	10.0	
Calcium	10000	10800	108	10000	10700	107	10300	103	1000	
Chromium	20.0	21.3	107	20.0	20.4	102	20.2	101	30.0	
Cobalt	100	104	104	100	99.5	99.5	97.8	97.8	20.0	
Copper	50.0	51.6	103	50.0	49.5	99.0	48.0	96.0	20.0	
Iron	200	214	107	200	215	108	220	110	150	
Lead	10.0	10.5	105	10.0	10.0	100	10.8	108	100	
Magnesium	10000	10600	106	10000	10700	107	10300	103	1000	
Manganese	30.0	32.0	107	30.0	30.9	103	30.2	101	20.0	
Mercury	5.00	5.06	101	5.00	4.93	98.6	5.02	100	0.250	
Nickel	80.0	81.9	102	80.0	78.6	98.3	77.8	97.3	30.0	
Potassium	10000	10800	108	10000	10700	107	10600	106	1000	
Selenium	10.0	10.8	108	10.0	10.3	103	9.47	94.7	100	
Silver	500	475	95.0	500	467	93.4	486	97.2	20.0	
Sodium	10000	10700	107	10000	10800	108	10300	103	1000	
Thallium	20.0	20.3	102	20.0	19.4	97.0	21.2	106	4.00	
Vanadium	100	108	108	100	105	105	102	102	15.0	
Zinc	40.0	43.0	108	40.0	42.0	105	41.9	105	50.0	

(1) Control Limits: Mercury 80-120, Other Metals 90-110

INTEGRATED ANALYTICAL LABORATORIES

METALS QUALITY CONTROL

ICP-MS ICSAB RESULTS SUMMARY

Lab Case Number: E01- 1840, 1937, 2117, 2154, 2155, 2158, 2159, 2185, 2195

Matrix: Aqueous Concentration/Units: ppb(ug/L)

ANALYTE / MASS	INITIAL			FINAL		
	SOL A	SOL AB	%R	SOL A	SOL AB	%R
Arsenic / 75	0.45	9.26	88.1	0.48	8.96	84.8
Copper / 65	3.27	11.7	84.3	3.43	12.0	85.7
Nickel / 60	1.35	9.90	85.5	1.57	10.3	87.3
Zinc / 66	10.10	17.6	75.0	9.79	17.7	79.1

TRUE VALUE SOLN. B = 10 ppb

THERE ARE NO CONTROL LIMITS FOR SOLUTION AB

INTEGRATED ANALYTICAL LABORATORIES

METALS QUALITY CONTROL

ICP-MS ICSAB RESULTS SUMMARY

Lab Case Number: E01- 633, 1731, 1745, 1783, 1793, 1836, 1840, 1854, 1855, 1856 1861, 1867, 1874

Matrix: Aqueous Concentration/Units: ppb(ug/L)

ANALYTE / MASS	INITIAL			FINAL		
	SOL A	SOL AB	%R	SOL A	SOL AB	%R
Arsenic / 75	0.57	9.32	87.5	0.18	9.01	88.3
Cobalt / 59	0.31	10.6	102.9	0.30	10.3	100.0
Copper / 65	3.09	12.1	90.1	3.01	12.0	89.9
Manganese / 55	3.50	14.2	107.0	3.46	13.6	101.4
Nickel / 60	1.30	10.4	91.0	1.21	10.3	90.9
Zinc / 66	9.53	18.3	87.7	9.79	18.8	90.1

TRUE VALUE SOLN. B = 10 ppb

THERE ARE NO CONTROL LIMITS FOR SOLUTION AB

INTEGRATED ANALYTICAL LABORATORIES

METALS QUALITY CONTROL

SPIKE SAMPLE RECOVERY

Lab Case Number: E01- 1840, 1937, 2117, 2154, 2155, 2158, 2159, 2185, 2195

Matrix: Soil

Concentration/Units: ppm (mg/kg)

ANALYTE	SSR1	SR1	%R1	SA1	SSR2	SR2	%R2	SA2	CONTROL LIMIT %R
Antimony	47.0	ND	110	42.8	47.2	ND	109	43.2	70-130
Arsenic	51.7	6.42	106	42.8	46.4	0.928	105	43.2	70-130
Beryllium	41.8	0.432	96.7	42.8	42.0	ND	97.2	43.2	70-130
Cadmium	41.9	ND	97.9	42.8	42.1	ND	97.5	43.2	70-130
Chromium	56.7	13.9	100	42.8	49.0	6.07	99.4	43.2	70-130
Copper	67.7	22.1	107	42.8	139	95.0	102	43.2	70-130
Lead	63.4	14.2	115	42.8	56.9	7.96	113	43.2	70-130
Mercury	0.296	0.038	96.3	0.268	0.267	ND	98.9	0.270	75-125
Nickel	62.3	19.6	99.8	42.8	47.7	3.64	102	43.2	70-130
Selenium	46.5	ND	109	42.8	46.8	ND	108	43.2	70-130
Silver	24.7	ND	92.2	26.8	26.3	ND	97.4	27.0	75-125
Thallium	47.1	0.155	110	42.8	47.1	0.088	109	43.2	70-130
Zinc	144	97.5	109	42.8	90.4	47.8	98.6	43.2	70-130

SSR = Spike Sample Result
SA = Spike Added

SR = Sample Result
%R = Percent Recovery

NC = Non-calculable % R; Sample concentration > 4 x Spike Concentration.

QC Sample 1 2155-012

QC Sample 1 for following samples:

1840-003; 1937-004; 2117-001~007
2154-001~020; 2155-001, 003, 004, 010~016
2158-006~007; 2159-001~009
2185-001~003; 2195-001

QC Sample 2 2158-007

QC Sample 2 for following samples:

1840-003; 1937-004; 2117-001~007
2154-001~020; 2155-001, 003, 004, 010~016
2158-006~007; 2159-001~009
2185-001~003; 2195-001

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INTEGRATED ANALYTICAL LABORATORIES

METALS QUALITY CONTROL

SPIKE SAMPLE RECOVERY

Lab Case Number: E01- 1840, 1937, 2117, 2154, 2155, 2158, 2159, 2185, 2195

Matrix: Soil

Concentration/Units: ppm (mg/kg)

ANALYTE	SSR3	SR3	%R3	SA3	SSR4	SR4	%R4	SA4	CONTROL LIMIT %R
Antimony	51.0	ND	111	46.0					70-130
Arsenic	52.4	4.81	103	46.0					70-130
Cadmium	43.9	ND	95.4	46.0					70-130
Copper	77.3	29.8	103	46.0					70-130
Lead	56.2	10.5	99.3	46.0					70-130
Selenium	49.7	ND	108	46.0					70-130
Zinc	101	54.2	102	46.0					70-130

R = Spike Sample Result
A = Spike Added

SR = Sample Result
%R = Percent Recovery

NC = Non-calculable % R; Sample concentration > 4 x Spike Concentration.

QC Sample 3 2154-002

QC Sample 3 for following samples:

1840-003; 1937-004; 2117-001~007
2154-001~020; 2155-001, 003, 004, 010~016
2158-006~007; 2159-001~009
2185-001~003; 2195-001

QC Sample 4 _____

QC Sample 4 for following samples:

INTEGRATED ANALYTICAL LABORATORIES

METALS QUALITY CONTROL

SPIKE SAMPLE RECOVERY

Lab Case Number: E01- 633, 1731, 1745, 1783, 1793, 1836, 1840, 1854, 1855, 1856 1861, 1867, 1874

Matrix: Soil Concentration/Units: ppm (mg/kg)

ANALYTE	SSR1	SR1	%R1	SA1	SSR2	SR2	%R2	SA2	CONTROL LIMIT %R
Aluminum	1620	14000	ND	220					70-130
Antimony	53.2	ND	121	44.0	51.1	ND	106	48.4	70-130
Arsenic	51.6	1.39	114	44.0	61.6	12.4	102	48.4	70-130
Barium	80.2	32.2	109	44.0					70-130
Beryllium	47.8	0.496	108	44.0	45.5	0.481	93.0	48.4	70-130
Cadmium	50.4	ND	115	44.0	47.8	ND	98.8	48.4	70-130
Calcium	604	332	124	220					70-130
Chromium	69.1	17.8	117	44.0	407	356	105	48.4	70-130
Cobalt	57.2	7.59	113	44.0					70-130
Copper	61.3	11.7	113	44.0	68.0	22.1	94.8	48.4	70-130
Iron	17600	15900	NC	220					70-130
Lead	61.3	7.73	122	44.0	68.9	19.4	102	48.4	70-130
Magnesium	5250	4510	NC	220					70-130
Manganese	353	283	NC	44.0					70-130
Mercury	0.279	ND	101	0.275	0.361	0.051	102	0.303	75-125
Nickel	66.4	17.5	111	44.0	67.2	20.3	96.9	48.4	70-130
Potassium	2380	1910	NC	220					70-130
Selenium	54.1	ND	123	44.0	53.8	ND	111	48.4	70-130
Silver	24.9	ND	90.5	27.5	27.5	ND	90.8	30.3	75-125
Sodium	406	183	101	220					70-130
Thallium	48.4	0.145	110	44.0	48.5	0.269	99.7	48.4	70-130
Vanadium	70.4	19.2	116	44.0					70-130
Zinc	93.8	40.8	120	44.0	100	54.0	95.0	48.4	70-130

SSR = Spike Sample Result
SA = Spike Added

SR = Sample Result
%R = Percent Recovery

NC = Non-calculable % R; Sample concentration > 4 x Spike Concentration.

QC Sample 1 1745-001

QC Sample 1 for following samples:
633-001; 1731-001; 1745-001~007; 1783-001; 1854-001
1793-002~005; 1836-004~007; 1840-001~002, 004~007
1855-002; 1856-001~002; 1861-021~029
1867-001~019; 1874-001

QC Sample 2 1840-001

QC Sample 2 for following samples:
633-001; 1731-001; 1745-001~007; 1783-001; 1854-001
1793-002~005; 1836-004~007; 1840-001~002, 004~007
1855-002; 1856-001~002; 1861-021~029
1867-001~019; 1874-001

000451

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INTEGRATED ANALYTICAL LABORATORIES

METALS QUALITY CONTROL

SPIKE SAMPLE RECOVERY

Lab Case Number: E01- 633, 1731, 1745, 1783, 1793, 1836, 1840, 1854, 1855, 1856 1861, 1867, 1874

Matrix: Soil

Concentration/Units: ppm (mg/kg)

ANALYTE	SSR3	SR3	%R3	SA3	SSR4	SR4	%R4	SA4	CONTROL LIMIT %R
Beryllium	40.4	0.311	88.7	45.2					70-130
Chromium	62.1	17.6	98.5	45.2					70-130

SSR = Spike Sample Result
SA = Spike Added

SR = Sample Result
%R = Percent Recovery

NC = Non-calculable % R; Sample concentration > 4 x Spike Concentration.

QC Sample 3 1867-014

QC Sample 3 for following samples:
633-001; 1731-001; 1745-001~007; 1783-001; 1854-001
1793-002~005; 1836-004~007; 1840-001~002, 004~007
1855-002; 1856-001~002; 1861-021~029
1867-001~019; 1874-001

QC Sample 4 _____

QC Sample 4 for following samples:

000452

INTEGRATED ANALYTICAL LABORATORIES

METALS QUALITY CONTROL

DUPLICATE SAMPLE RECOVERY

Lab Case Number: E01- 1840, 1937, 2117, 2154, 2155, 2158, 2159, 2185, 2195

Matrix: Soil Concentration/Units: ppm (mg/kg)

ANALYTE	CONTROL LIMIT 1	S1	D1	RPD1	CONTROL LIMIT 2	S2	D2	RPD2
Antimony	NA	ND	ND	NC	NA	ND	ND	NC
Arsenic	20	6.42	6.54	1.85	20	0.928	0.928	0
Beryllium	20	0.432	0.449	3.86	NA	ND	ND	NC
Cadmium	NA	ND	ND	NC	NA	ND	ND	NC
Chromium	20	13.9	14.4	3.53	20	6.07	6.14	1.15
Copper	20	22.1	23.1	4.42	20	95.0	97.2	2.29
Lead	20	14.2	14.0	1.42	20	7.96	7.88	1.01
Mercury	20	0.038	0.038	0	NA	ND	ND	NC
Nickel	20	19.6	19.9	1.52	20	3.64	3.63	0.275
Selenium	NA	ND	ND	NC	NA	ND	ND	NC
Silver	NA	ND	ND	NC	NA	ND	ND	NC
Thallium	20	0.155	0.179	14.4	20	0.088	0.087	1.14
Zinc	20	97.5	101	3.53	20	47.8	47.4	0.840

S1 = Sample 1
D1 = Duplicate 1

S2 = Sample 2
D2 = Duplicate 2

NA = Not Applicable
NC = Non-calculable RPD due to result (s) less than the detection limit.

QC Sample 1 2155-012

QC Sample 1 for following samples:

1840-003; 1937-004; 2117-001~007
2154-001~020; 2155-001, 003, 004, 010~016
2158-006~007; 2159-001~009
2185-001~003; 2195-001

QC Sample 2 2158-007

QC Sample 2 for following samples:

1840-003; 1937-004; 2117-001~007
2154-001~020; 2155-001, 003, 004, 010~016
2158-006~007; 2159-001~009
2185-001~003; 2195-001

INTEGRATED ANALYTICAL LABORATORIES

METALS QUALITY CONTROL

DUPLICATE SAMPLE RECOVERY

Lab Case Number: E01- 1840, 1937, 2117, 2154, 2155, 2158, 2159, 2185, 2195

Matrix: Soil Concentration/Units: ppm (mg/kg)

ANALYTE	CONTROL LIMIT 3	S3	D3	RPD3	CONTROL LIMIT 4	S4	D4	RPD4
Antimony	NA	ND	ND	NC				
Arsenic	20	4.81	5.20	7.79				
Cadmium	NA	ND	ND	NC				
Copper	20	29.8	29.0	2.72				
Lead	20	10.5	9.84	6.49				
Selenium	NA	ND	ND	NC				
Zinc	20	54.2	54.2	0				

= Sample 3
= Duplicate 3

S4 = Sample 4
D4 = Duplicate 4

NA = Not Applicable
NC = Non-calculable RPD due to result (s) less than the detection limit.

QC Sample 3 2154-002

QC Sample 3 for following samples:

1840-003; 1937-004; 2117-001~007
2154-001~020; 2155-001, 003, 004, 010~016
2158-006~007; 2159-001~009
2185-001~003; 2195-001

QC Sample 4 _____

QC Sample 4 for following samples:

INTEGRATED ANALYTICAL LABORATORIES

METALS QUALITY CONTROL

DUPLICATE SAMPLE RECOVERY

Lab Case Number: E01- 633, 1731, 1745, 1783, 1793, 1836, 1840, 1854, 1855, 1856 1861, 1867, 1874

Matrix: Soil Concentration/Units: ppm (mg/kg)

ANALYTE	CONTROL LIMIT 1	S1	D1	RPD1	CONTROL LIMIT 2	S2	D2	RPD2
Aluminum	20	14000	15300	8.87				
Antimony	NA	ND	ND	NC	NA	ND	ND	NC
Arsenic	20	1.39	1.47	5.59	20	12.4	12.3	0.810
Barium	20	32.2	38.0	16.5				
Beryllium	20	0.496	0.603	19.5	20	0.481	0.489	1.65
Cadmium	NA	ND	ND	NC	NA	ND	ND	NC
Calcium	20	332	358	7.54				
Chromium	20	17.8	19.8	10.6	20	356	354	0.563
Cobalt	20	7.59	8.28	8.70				
Copper	20	11.7	13.0	10.5	20	22.1	22.3	0.901
Iron	20	15900	16900	6.10				
Lead	20	7.73	8.53	9.84	20	19.4	19.3	0.517
Magnesium	20	4510	4860	7.47				
Manganese	20	283	308	8.46				
Mercury	NA	ND	ND	NC	20	0.051	0.055	7.55
Nickel	20	17.5	19.5	10.8	20	20.3	20.5	0.980
Potassium	20	1910	2120	10.4				
Selenium	NA	ND	ND	NC	NA	ND	ND	NC
Silver	NA	ND	ND	NC	NA	ND	ND	NC
Sodium	20	183	223	19.7				
Thallium	20	0.145	0.126	14.0	20	0.269	0.244	9.75
Vanadium	20	19.2	20.5	6.55				
Zinc	20	40.8	44.4	8.45	20	54.0	55.1	2.02

S1 = Sample 1
D1 = Duplicate 1

S2 = Sample 2
D2 = Duplicate 2

NA = Not Applicable
NC = Non-calculable RPD due to result (s) less than the detection limit.

QC Sample 1 1745-001

QC Sample 1 for following samples:
633-001; 1731-001; 1745-001~007; 1783-001; 1854-001
1793-002~005; 1836-004~007; 1840-001~002, 004~007
1855-002; 1856-001~002; 1861-021~029
1867-001~019; 1874-001

QC Sample 2 1840-001

QC Sample 2 for following samples:
633-001; 1731-001; 1745-001~007; 1783-001; 1854-001
1793-002~005; 1836-004~007; 1840-001~002, 004~007
1855-002; 1856-001~002; 1861-021~029
1867-001~019; 1874-001

INTEGRATED ANALYTICAL LABORATORIES

METALS QUALITY CONTROL

DUPLICATE SAMPLE RECOVERY

Lab Case Number: E01- 633, 1731, 1745, 1783, 1793, 1836, 1840, 1854, 1855, 1856 1861, 1867, 1874

Matrix: Soil Concentration/Units: ppm (mg/kg)

ANALYTE	CONTROL LIMIT 3	S3	D3	RPD3	CONTROL LIMIT 4	S4	D4	RPD4
Beryllium	20	0.311	0.333	6.83				
Chromium	20	17.6	18.5	4.99				

S3 = Sample 3
D3 = Duplicate 3

S4 = Sample 4
D4 = Duplicate 4

NA = Not Applicable
NC = Non-calculable RPD due to result (s) less than the detection limit.

QC Sample 3 1867-014

QC Sample 3 for following samples:
633-001; 1731-001; 1745-001~007; 1783-001; 1854-001
1793-002~005; 1836-004~007; 1840-001~002, 004~007
1855-002; 1856-001~002; 1861-021~029
1867-001~019; 1874-001

QC Sample 4 _____

QC Sample 4 for following samples:

INTEGRATED ANALYTICAL LABORATORIES

METALS QUALITY CONTROL

LABORATORY CONTROL SAMPLE

Lab Case Number: E01- 1840, 1937, 2117, 2154, 2155, 2158, 2159, 2185, 2195

ANALYTE	AQUEOUS (ug/L)			SOLID (mg/kg)			
	TRUE	FOUND	%R(1)	TRUE	FOUND	LIMITS	%R(2)
Antimony				26.2	10.3	D.L.-53.1	39.3
Arsenic				36.2	38.4	26.9-45.4	106
Beryllium				59.4	73.7	60.4-93.7	124
Cadmium				35.6	32.1	27.4-43.8	90.2
Chromium				108	112	79.2-137	104
Copper				63.7	65.6	52.2-75.2	103
Lead				52.4	48.4	37.3-67.6	92.4
Mercury				1.00	0.902	.614-1.39	90.2
Nickel				49.8	49.5	39-60.6	99.4
Selenium				56.8	47.7	41-72.6	84.0
Silver				34.1	34.5	25.4-42.9	101
Thallium				68.2	68.2	39-97.3	100
Zinc				151	150	117-185	99.3

(1) Control Limits = 90-110%
(2)Manufacture's Recomended Limits

Aqueous LCS Source: MV Laboratories

Solid LCS Source: Environmental Resource Associates: PriorityPollutnT/CLP Inorganics Soils

INTEGRATED ANALYTICAL LABORATORIES

METALS QUALITY CONTROL

LABORATORY CONTROL SAMPLE

Lab Case Number: E01- 633, 1731, 1745, 1783, 1793, 1836, 1840, 1854, 1855, 1856 1861, 1867, 1874

ANALYTE	AQUEOUS (ug/L)			SOLID (mg/kg)			
	TRUE	FOUND	%R(1)	TRUE	FOUND	LIMITS	%R(2)
Aluminum				5760	5490	3750-7760	95.3
Antimony				26.2	10.3	D.L.-53.1	39.3
Arsenic				36.2	38.4	26.9-45.4	106
Barium				117	119	90.2-144	102
Beryllium				59.4	73.7	60.4-93.7	124
Cadmium				35.6	32.1	27.4-43.8	90.2
Calcium				1320	1350	989-1660	102
Chromium				108	112	79.2-137	104
Cobalt				67.2	65.9	53.4-80.9	98.1
Copper				63.7	65.6	52.2-75.2	103
Iron				7540	8040	4290-10800	107
Lead				52.4	48.4	37.3-67.6	92.4
Magnesium				1190	1410	815-1570	118
Manganese				151	170	128-189	113
Mercury				1.00	0.902	.614-1.39	90.2
Nickel				49.8	49.5	39-60.6	99.4
Potassium				2130	2050	1660-2600	96.2
Selenium				56.8	47.7	41-72.6	84.0
Silver				34.1	34.5	25.4-42.9	101
Sodium				487	535	354-911	110
Thallium				68.2	68.2	39-97.3	100
Vanadium				80.0	82.0	54.6-105	103
Zinc				151	150	117-185	99.3

(1) Control Limits = 90-110%
(2)Manufacture's Recomended Limits

Aqueous LCS Source: MV Laboratories

Solid LCS Source: Environmental Resource Associates: PriorityPollutnT/CLP Inorganics Soils

000458

1015

INTEGRATED ANALYTICAL LABORATORIES

METALS QUALITY CONTROL

SERIAL DILUTIONS & POST SPIKES

Lab Case Number: E01- 1840, 1937, 2117, 2154, 2155, 2158, 2159, 2185, 2195

Matrix: Soil Concentration/Units: ppm (mg/kg)

ANALYTE	SERIAL DILUTION		%	POST SPIKE		%
	SR	SDR	Difference	SPR	SA	Recovery
Antimony	ND			38.0	42.8	88.8
Arsenic	6.42	6.53	1.70			
Beryllium	0.432			38.3	42.8	88.5
Cadmium	ND			38.9	42.8	90.9
Chromium	13.9	14.5	4.23			
Copper	22.1	23.2	4.86			
Lead	14.2	13.0	8.82			
Mercury	0.038			0.302	0.268	98.5
Nickel	19.6	20.6	4.98			
Selenium	ND			40.1	42.8	93.7
Silver	ND			26.4	26.8	98.5
Thallium	0.155			45.7	42.8	106.0
Zinc	97.5	106	8.35			

SR = Sample Result
SDR = Sample Dilution Result

SPR = Sample Post Spike Result
SA = Spike Added

Control Limits: (+) or (-) 10% Difference or 85 - 115% Recovery

QC Sample : 2155-012

QC Sample for following samples:

1840-003; 1937-004; 2117-001~007
2154-001~020; 2155-001, 003, 004, 010~016
2158-006~007; 2159-001~009
2185-001~003; 2195-001

INTEGRATED ANALYTICAL LABORATORIES

METALS QUALITY CONTROL

SERIAL DILUTIONS & POST SPIKES

Lab Case Number: E01- 633, 1731, 1745, 1783, 1793, 1836, 1840, 1854, 1855, 1856 1861, 1867, 1874

Matrix: Soil Concentration/Units: ppm (mg/kg)

ANALYTE	SERIAL DILUTION		%	POST SPIKE		%
	SR	SDR	Difference	SPR	SA	Recovery
Aluminum	14000	13900	0.717			
Antimony	ND			37.0	44.0	84.1
Arsenic	1.39			50.2	44.0	111.0
Barium	32.2	35.3	9.19			
Beryllium	0.496			48.5	44.0	109.0
Cadmium	ND			50.2	44.0	114
Calcium	332	331	0.302			
Chromium	17.8	17.4	2.27			
Cobalt	7.59	7.42	2.27			
Copper	11.7	12.6	7.41			
Iron	15900	16000	0.627			
Lead	7.73	7.26	6.27			
Magnesium	4510	4460	1.11			
Manganese	283	278	1.78			
Mercury	ND			0.288	0.275	105
Nickel	17.5	17.6	0.570			
Potassium	1910	1890	1.05			
Selenium	ND			51.4	44.0	117
Silver	ND			27.8	27.5	101
Sodium	183	174	5.04			
Thallium	0.145			49.3	44.0	112.0
Vanadium	19.2	18.4	4.26			
Zinc	40.8	42.5	4.08			

SR = Sample Result
SDR = Sample Dilution Result

SPR = Sample Post Spike Result
SA = Spike Added

Control Limits: (+) or (-) 10% Difference or 75-125% Recovery

QC Sample : 1745-001

QC Sample for following samples:
633-001; 1731-001; 1745-001~007; 1783-001; 1854-001
1793-002~005; 1836-004~007; 1840-001~002, 004~007
1855-002; 1856-001~002; 1861-021~029
1867-001~019; 1874-001

000460

1017

Integrated Analytical Labs
273 Franklin Road
Randolph, NJ 07869
3/30/01

Certified for NJDEP, NY(DOH)
NJ ID#14751
NY ID#11402

General Chemistry Quality Control

Matrix: Soil
Units: S-mg/Kg

Batch ID: AP013-0010

Blank

Parameter	Method Blank	MDL	Analysis Date
Total Cyanide	ND	1.00	03/30/01

Duplicate Recovery

Parameter	QC Sample	Result	Duplicate Result	RPD	RPD Limits
Total Cyanide	1731-001S	25.5	25.7	1	20

Spike Recovery

Parameter	QC Sample	Result	Spike Added	Spike Result	%Spike Recovery	%Rec. Limits
Total Cyanide	1731-001	9.21	16	25.5	102	75 - 125

The above blank result applies to the follow samples E01-

1731-001
1731-001S
1731-001SD
1783-001
1793-002
1793-003
1793-004
1793-005
1840-001
1840-002
1840-004
1840-005
1840-006
1840-007
1854-001
1855-001
1855-002
1874-001

++ = No Flash - Sample boiled at 100C
NA = Not Applicable
ND = Not Detected
NC = Non calculable RPD due to value less than the detection limit
No = Does Not Ignite
Yes = Sample Ignites

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Integrated Analytical Labs
273 Franklin Road
Randolph, NJ 07869
3/29/01

Certified for NJDEP, NY(DOH)
NJ ID#14751
NY ID#11402

General Chemistry Quality Control

Matrix: Soil
Units: S-mg/Kg

Batch ID: AP024-0014

Blank

Parameter	Method Blank	MDL	Analysis Date
Total Recoverable Phenol	ND	0.050	03/29/01

Duplicate Recovery

Parameter	QC Sample	Result	Duplicate Result	RPD	RPD Limits
Total Recoverable Phenol	1793-002S	13.4	11.8	13	20

Spike Recovery

Parameter	QC Sample	Result	Spike Added	Spike Result	%Spike Recovery	%Rec. Limits
Total Recoverable Phenol	1793-002	ND	14	13.4	98.5	75 - 125

The above blank result applies to the follow samples E01-

1793-002
1793-002S
1793-002SD
1793-003
1793-004
1793-005
1840-001
1840-002
1840-004
1840-006
1840-007
1855-001
1855-002
1874-001
1840-005
1854-001

++ = No Flash - Sample boiled at 100C
NA = Not Applicable
ND = Not Detected
NC = Non calculable RPD due to value less than the detection limit
No = Does Not Ignite
Yes = Sample Ignites

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INTEGRATED ANALYTICAL LABORATORIES

General Chemistry Quality Control

Method Blank Results Summary

TPHC

Blank ID	Matrix-Unit	Blank Result	MDL
B0327	S-mg/Kg	ND	25

The above blank result applies to the follow samples E01-

LCS1-001
1847-002SQC
1847-002SQCD
1847-002SQCS
1824-001
1824-002
1824-003
1824-004
1824-005
1840-001
1840-002
1840-004
1840-005
1840-006
1840-007
1847-001
1847-002
1847-003
1845-001
1845-002
1845-003
1845-004
1854-001

1020

INTEGRATED ANALYTICAL LABORATORIES

General Chemistry Quality Control

Spike Sample Results Summary

TPHC

QC Sample	Spiked Result	Sample Result	% Recovery	Spike Added	Matrix-Units	Control Limit
1847-002SQC	515	32.7	78.9 %	611.25	S-mg/Kg	75%-125%

NC - Non-Calculable, Sample Result > 4x Spike Added.

The above spike result applies to the following samples E01-

1824-001
1824-002
1824-003
1824-004
1824-005
1840-001
1840-002
1840-004
1840-005
1840-006
1840-007
1847-001
1847-002
1847-003
1845-001
1845-002
1845-003
1845-004
1854-001
B-0327
LCS1-001

1021

0464

INTEGRATED ANALYTICAL LABORATORIES

General Chemistry Quality Control

Duplicate Sample Results Summary

TPHC

QC Sample	Sample Result	Duplicate Result	Matrix-Units	RPD	Control Limit
1847-002SQC	32.7	32.7	S-mg/Kg	0.00	20.0

The above duplicate results applies to the following samples E01-

1824-001
1824-002
1824-003
1824-004
1824-005
1840-001
1840-002
1840-004
1840-005
1840-006
1840-007
1847-001
1847-002
1847-003
1845-001
1845-002
1845-003
1845-004
1854-001
B-0327
LCS1-001

1022

000465

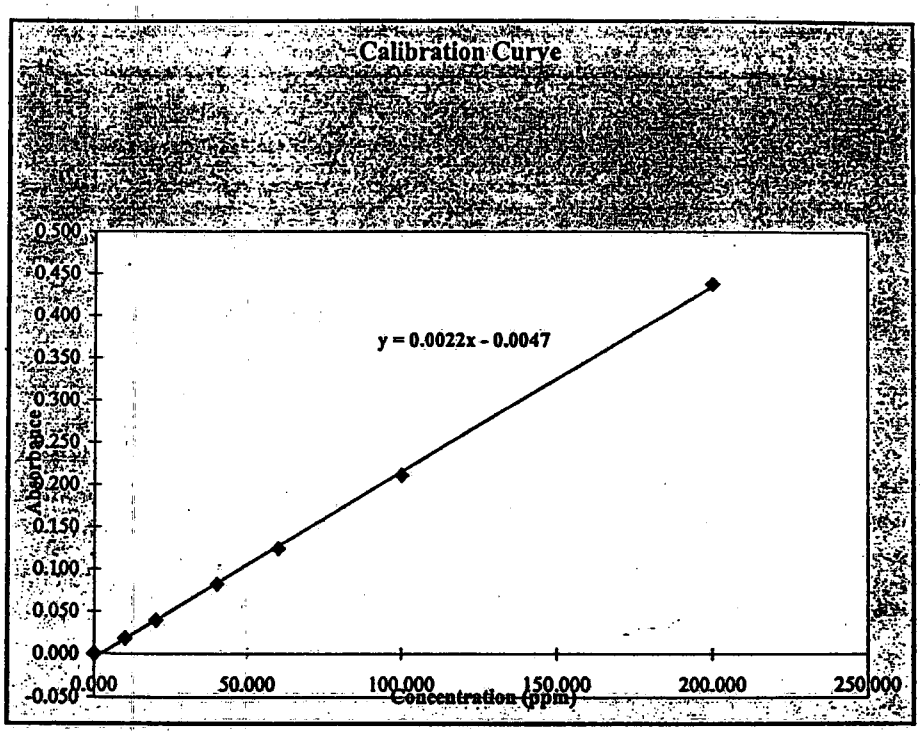
Integrated Analytical Laboratories

TPH

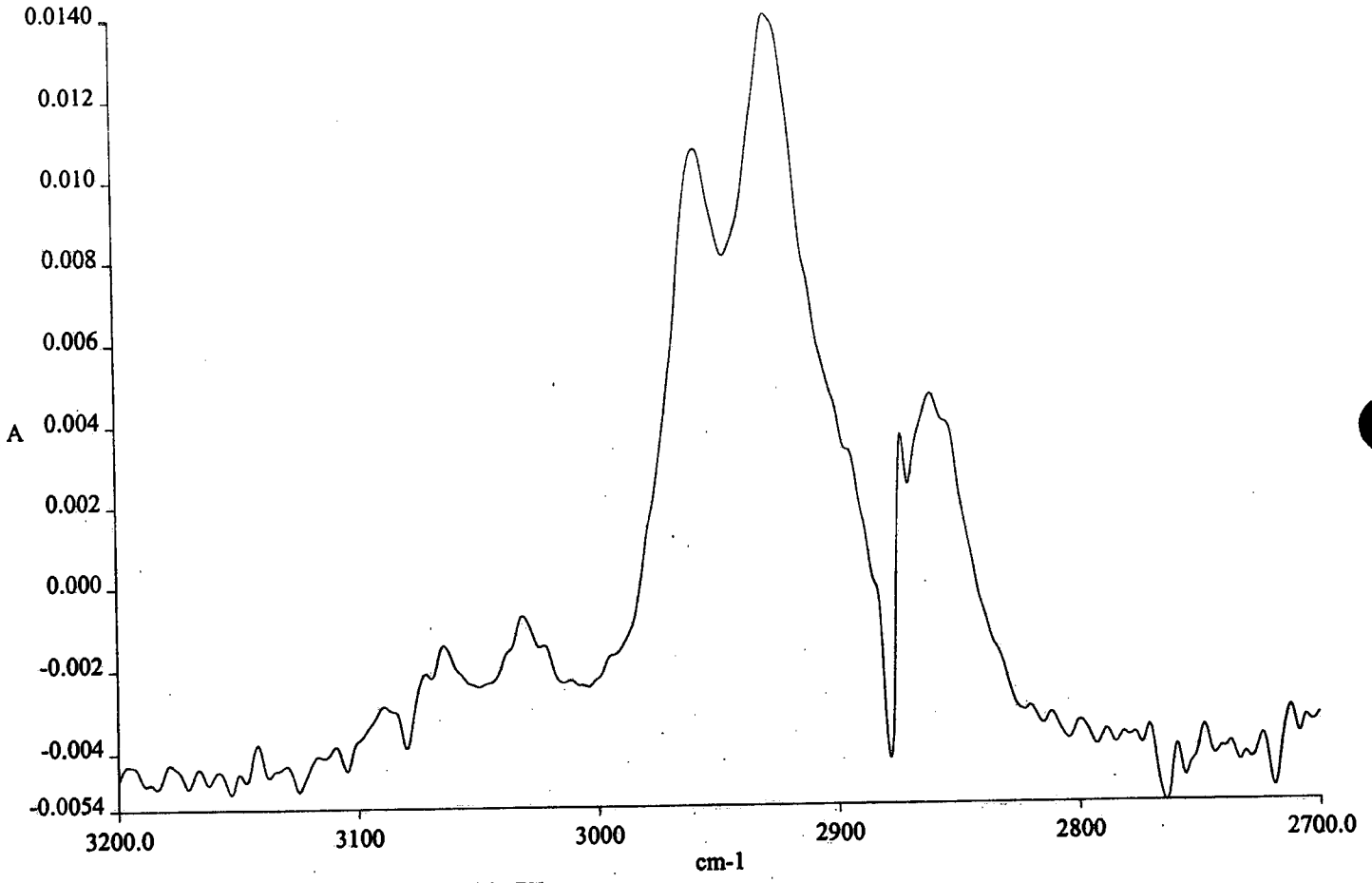
Date:	29-Jan-01
Method:	418.1
Matrix:	S/A
Analyst:	EDC

Conc.	Abs.
0.000	0.000
10.000	0.018
20.000	0.039
40.000	0.082
60.000	0.124
100.000	0.211
200.000	0.438

R^2=	0.999785534
Slope=	0.0022
Intercept=	-0.00471



Comments:



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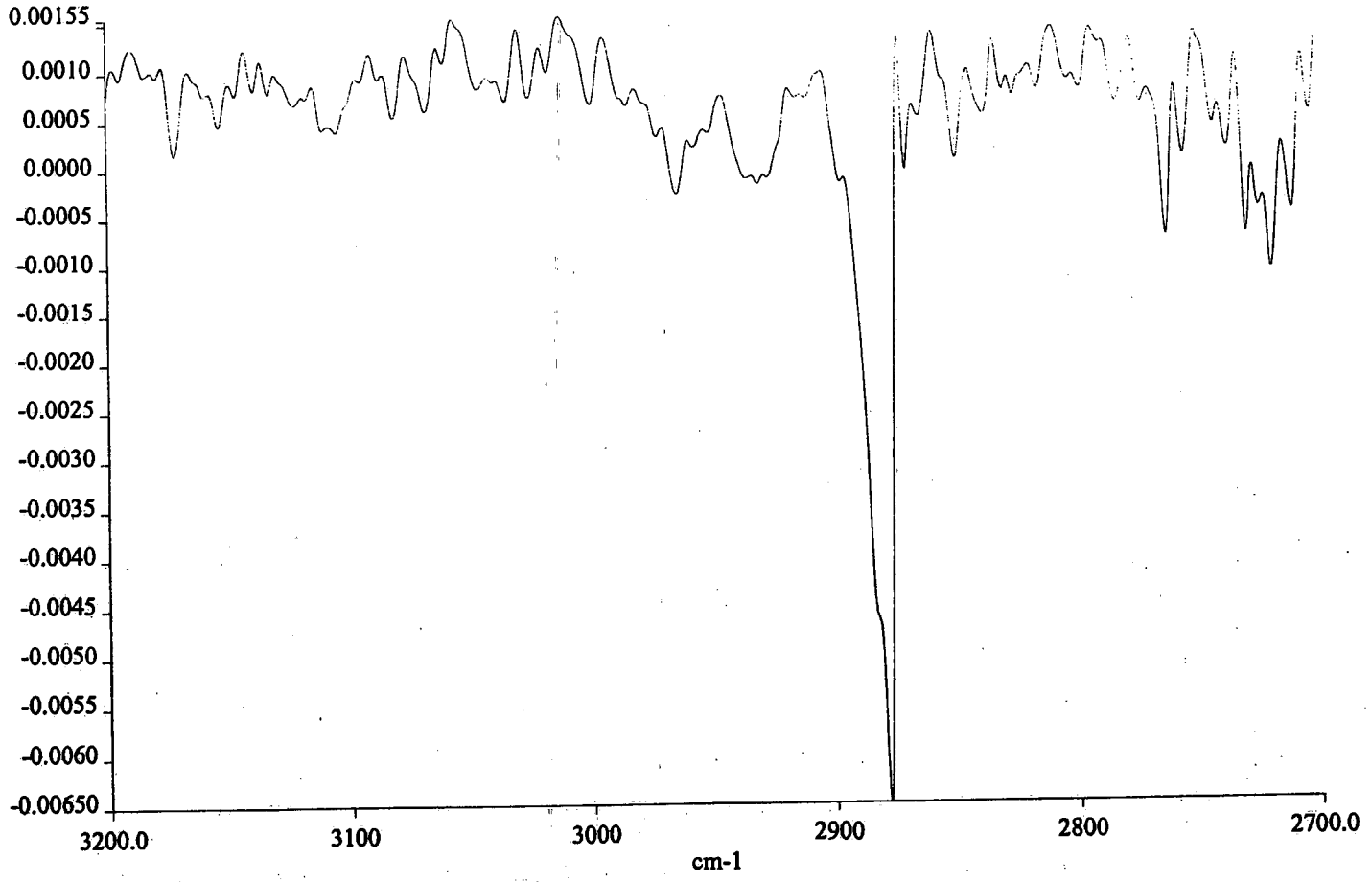

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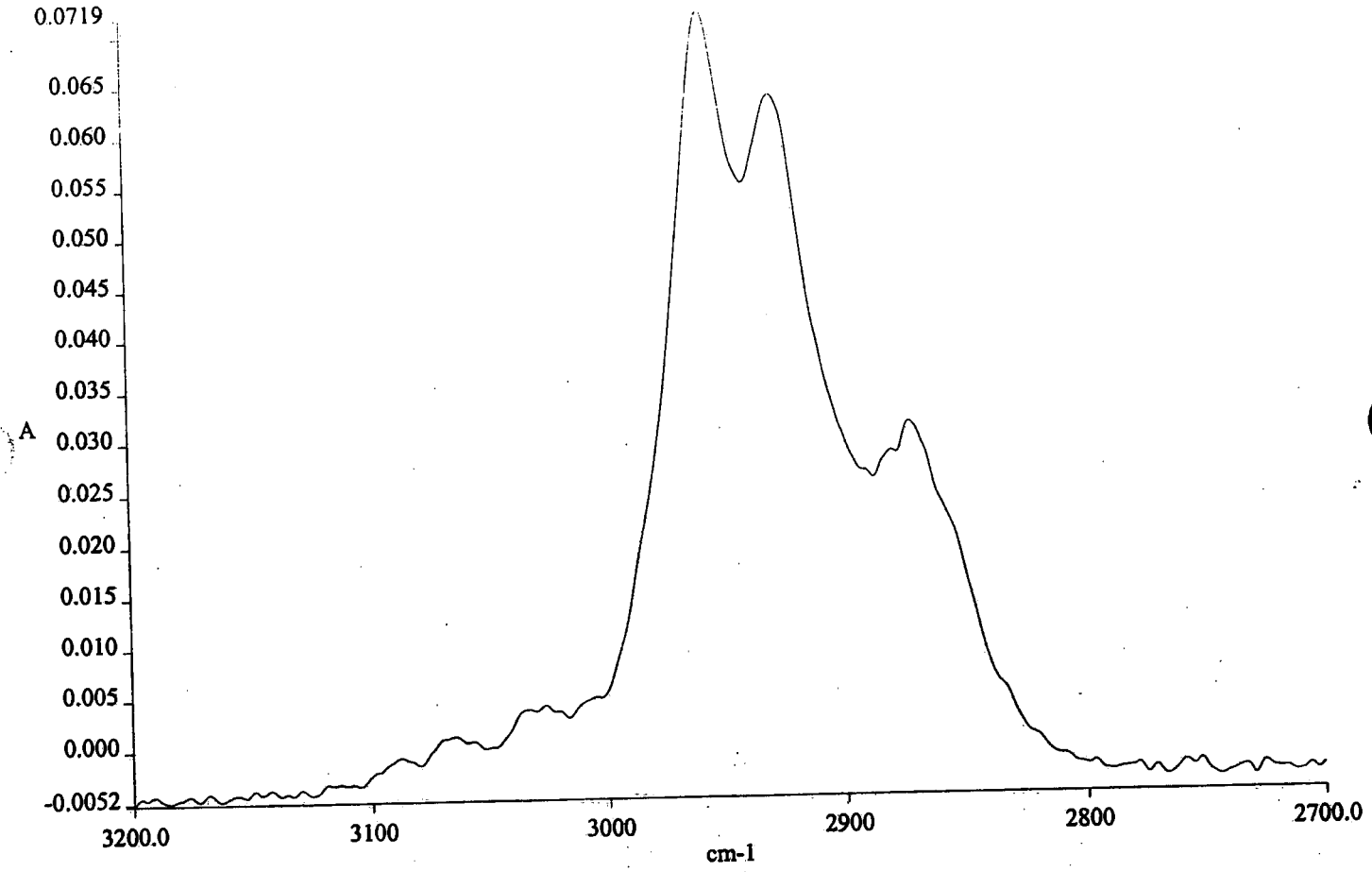

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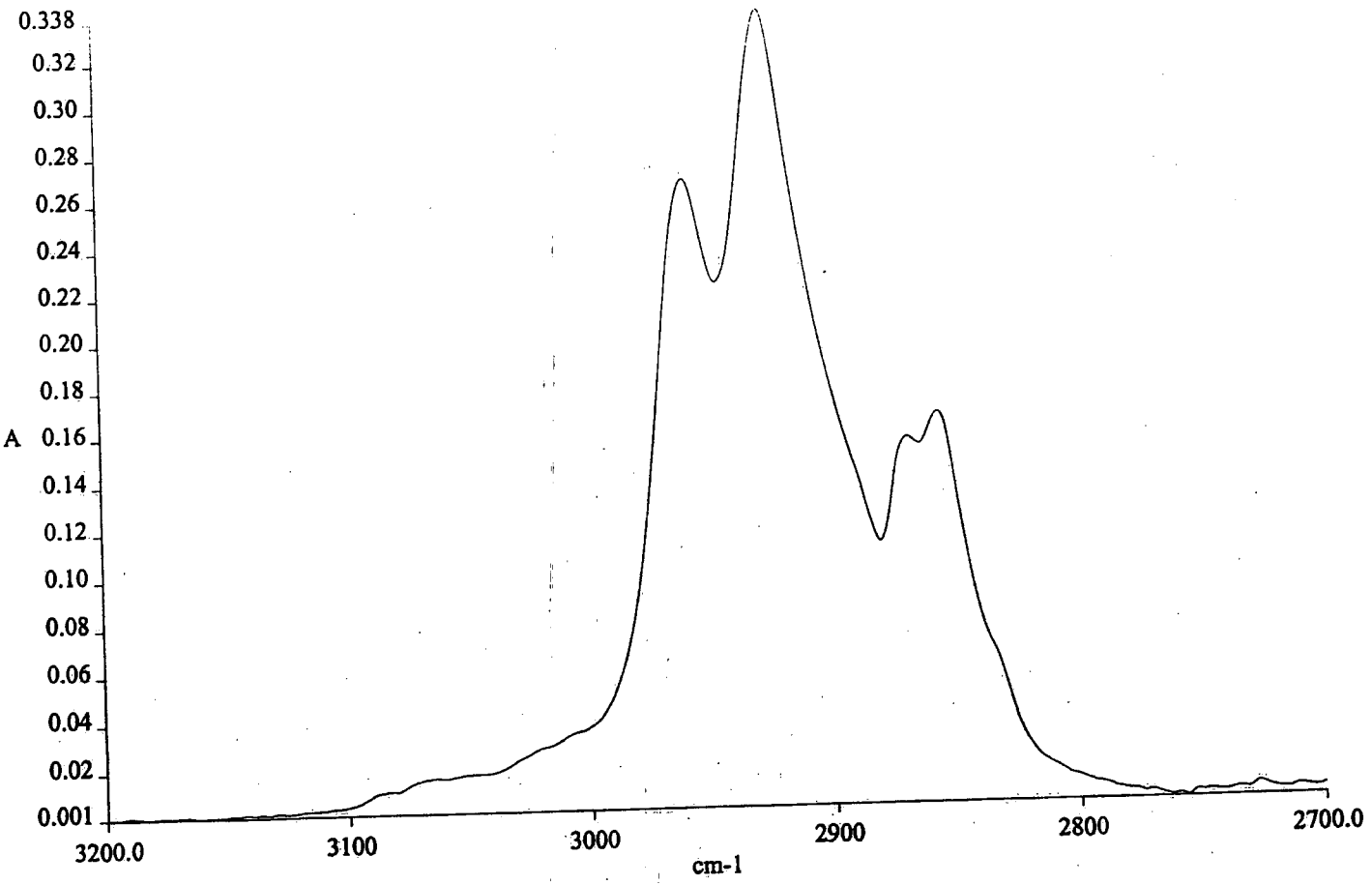

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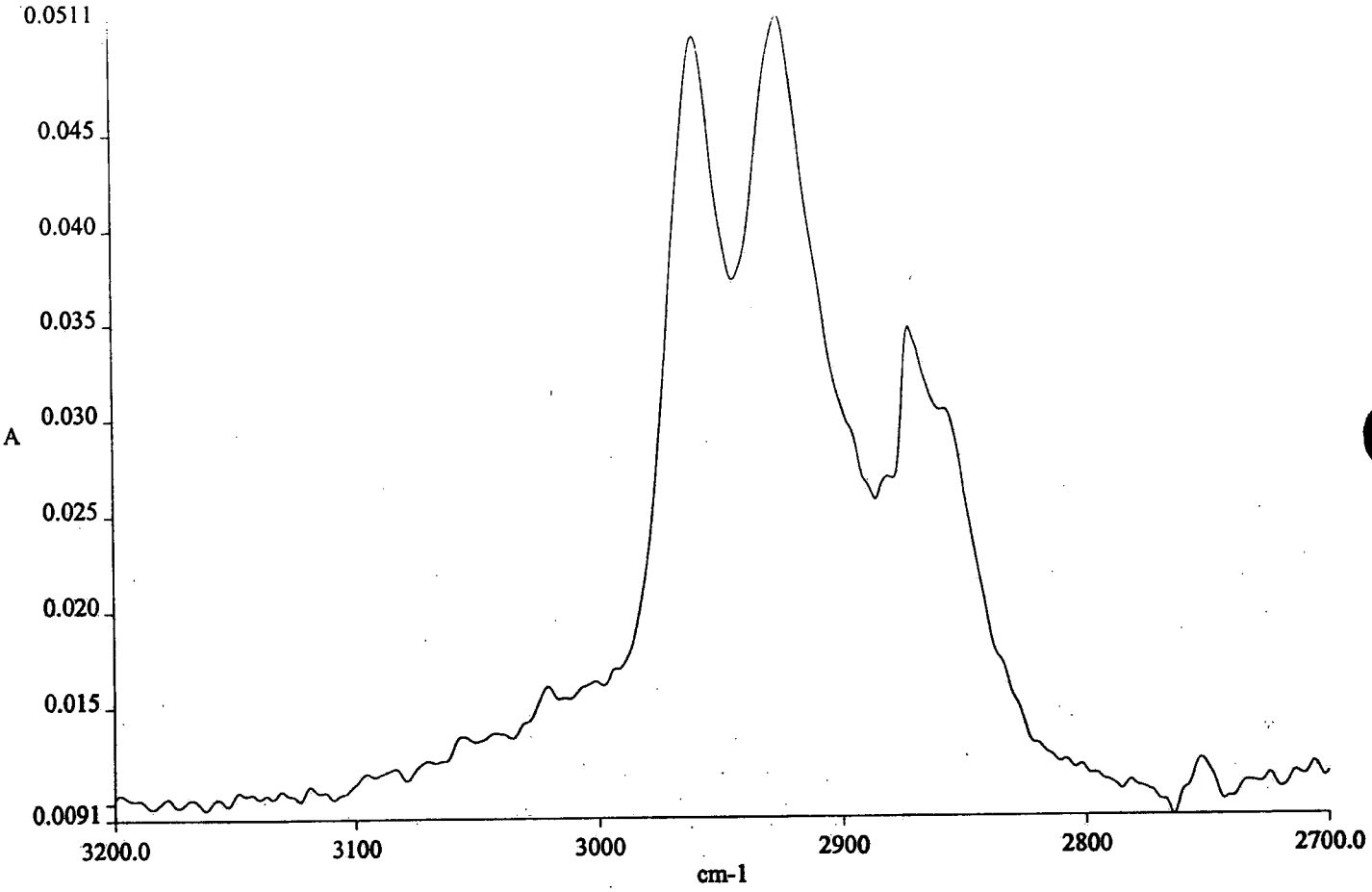
b-0327-3.sp



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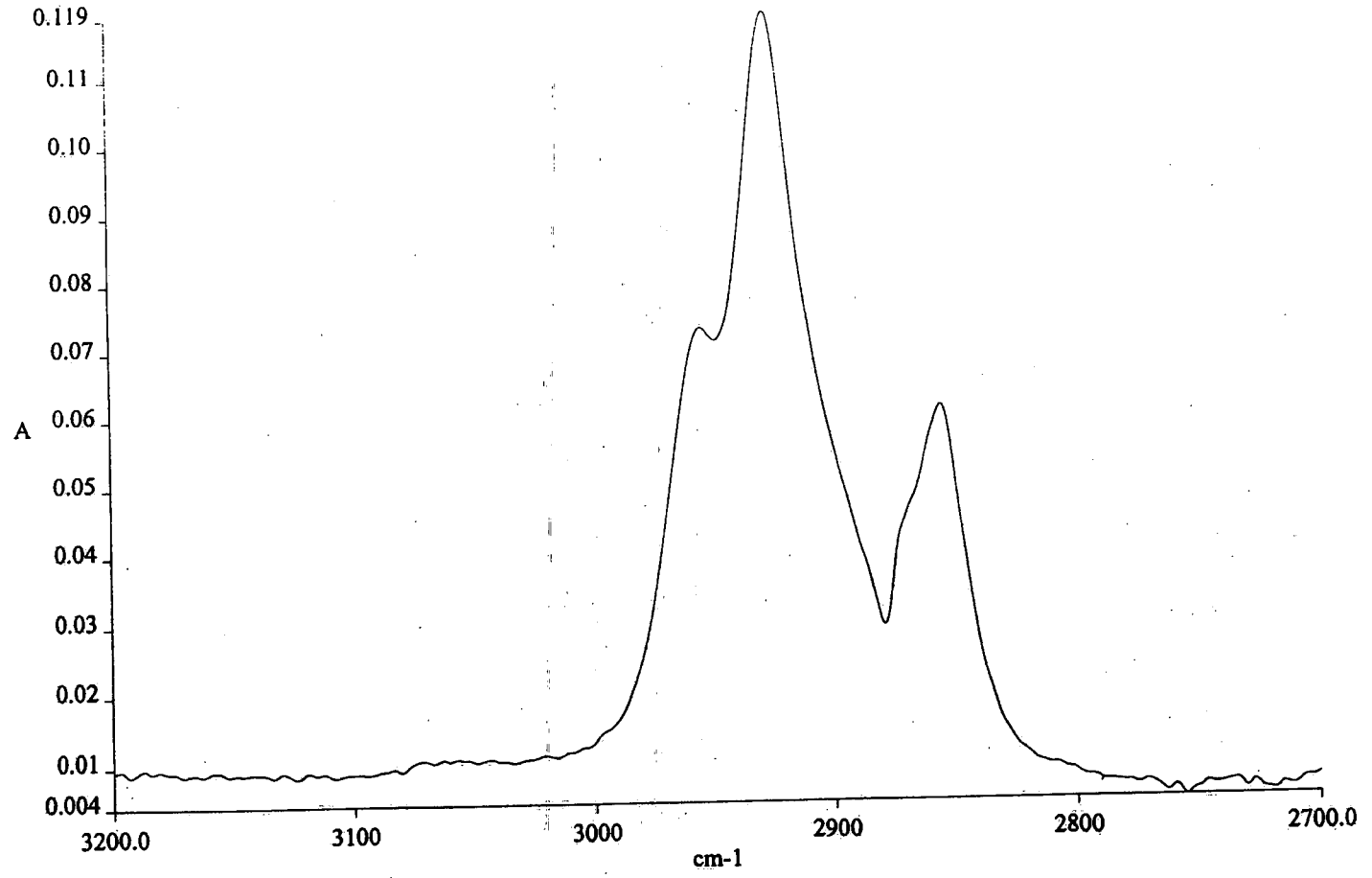

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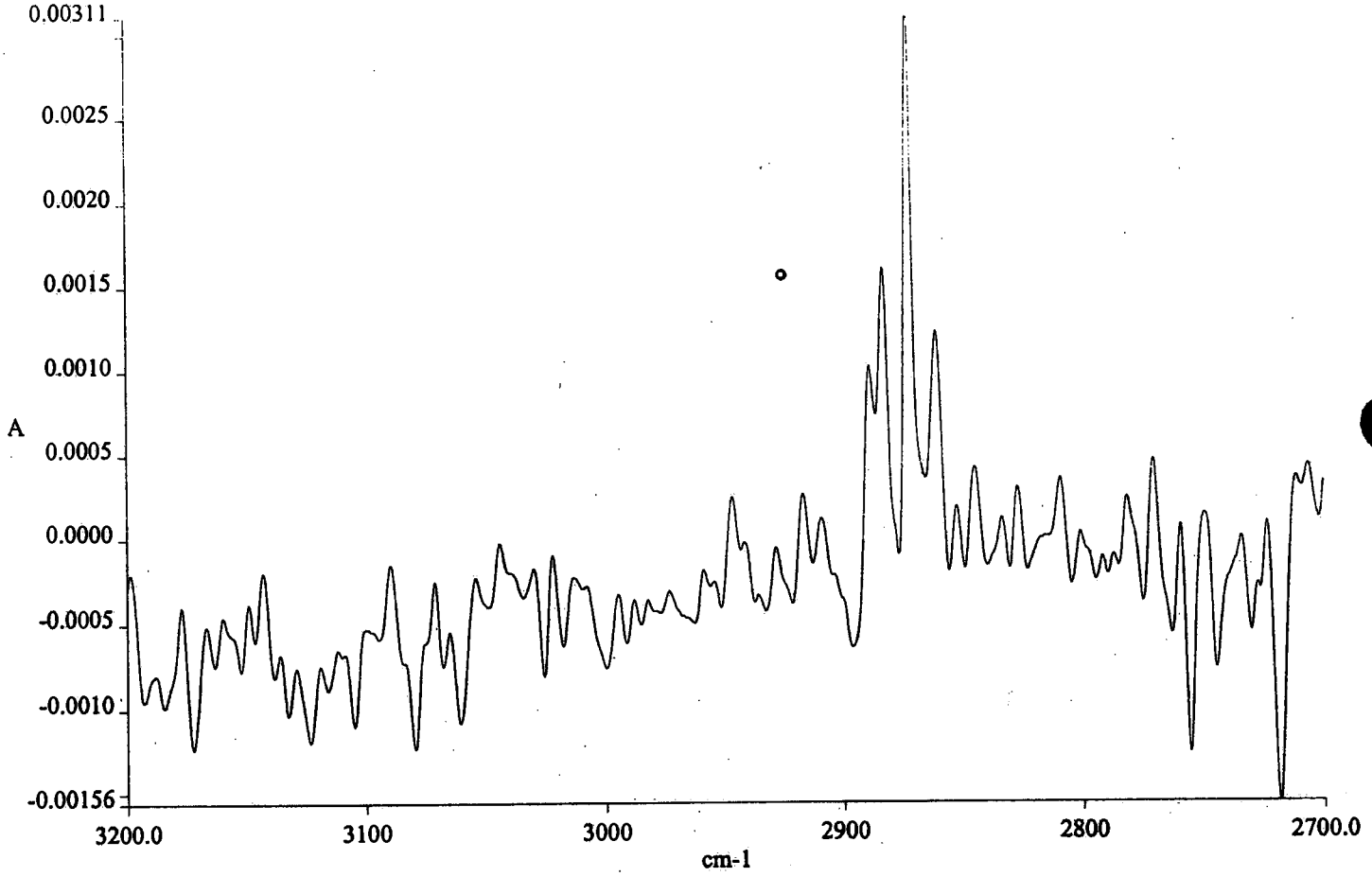
b-0327-3.sp

000472

1029



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Phone # (973) 361-42[illegible]
Fax # (973) 989-5288

INTEGRATED ANALYT[illegible] LABORATORIES
CHAIN OF C[illegible]ODY

[illegible] Rd
[illegible]07869

CLIENT & PROJECT

Company Name:	Envirotactics Inc
Address:	2517 Hwy 35 Bld D Suite 202 Manasquan NJ 08736
Telephone #:	732-292-0100
Fax #:	732-292-2808
Project Name:	444 ORBIS
Project Manager:	Chris Neuffer
Reference ID#:	PO#:

REPORTING

Fax to:	
Fax #:	732-292-2808
Report to:	
Address:	
Invoice to:	
Address:	Same

Turnaround Time

Conditional / TPHC
24 hr* 48 hr 72 hr 1 wk NA Other:

Verbal/Fax
24 hr* 48 hr* 72 hr* 1 wk* 2 wk Other:

Hard Copy
72 hr* 1 wk* 2 wk* 3 wk Other:

*Prior to sample arrival, Lab notification is required.

Report Format

Results Only
Reduced
Regulatory
SRP Disk**: dbf or wk1
Other:

** Circle format required

ANALYTICAL PARAMETERS / PRESERVATIVES

Preservatives: 1. HCL 2. NaOH 3. HNO_3 4. H_2SO_4 5. MeOH 6. Other

COOLER TEMP 4 °C

SAMPLE MATRIX: W - Waste, SL - Sludge, A - Aqueous, O - Oil, X - Other, S - Soil, GW - Groundwater, SOL - Solid

SAMPLE INFORMATION

Sample ID	Sample Description	Sampling Date	Sampling Time	am	pm	Matrix	# of Containers	Lab ID	PP+40 TPH	VO+10									Comments
S-11		3/23/01	9:05	/		S	2	1	✓										00103310
S-12			9:35	/		S	2	2	✓										312
S-12A			945	/		S	2	3	*									300	* Hold Analysis
S-13			11:15	/		S	2	4	✓										306
S-14			1:00		/	S	2	5	✓										299
S-15			1:25		/	S	2	6	✓										305
S-16			2:15		/	S	2	7	✓										304
Trip Blank			—			S	1	8		✓									303 ~~311~~ 3/26 JM
S-17							2	9			Rec'd S-17 not listed on COC								311

Please print legibly and fill out completely. Samples cannot be processed and the turnaround time will not start until any ambiguities have been resolved.

Concentrations Expected: LOW MED HIGH

Known Hazard yes no
Describe

CUSTODY LOG

	Signature	Date	Time		Signature
Relinquished by:	Basil Ellmers	3/23/01	4:05	Received by:	[signature]
Relinquished by:	[signature]	3/23/01	6:15	Received by:	IAL Fridge
Relinquished by:	IAL Fridge	3/26/01	6:30	Received by:	[signature]
Relinquished by:				Received by:	
Relinquished by:				Received by:	

Comments: * Hold Analysis on Sample S-12A until further Notice

Lab Case #: HAZSITE 1940

PAGE: 1 OF 1

LAB COPIES - WHITE & YELLOW; CLIENT COPY - PINK

1031

REV 02

CHAIN OF CUSTODY

Case No.: E01-1840 P.O. #: _____
Project : 444 ORBIS
Client/Project: ENVTACT/444 ORBIS

Client Address:
Envirotactics Inc.
2517 Route 35
Building D, Suite 202
Manasquan, NJ 08736

Billing Address:
Envirotactics Inc.
2517 Route 35
Building D, Suite 20
Manasquan, NJ 08736

Date Received: 03/26/01
Time Received: 06:30
Report Format: Reduced

Verbal Due: Apr 9
Report Due: Apr 16

# of Containers	2	2	2	2	2	2
IAL ID #	1840-001	1840-002	1840-003	1840-004	1840-005	1840-006
Client ID #	S-11	S-12	S-12A	S-13	S-14	S-15
Matrix	Soil	Soil	Soil	Soil	Soil	Soil
Sample Date	03/23/01	03/23/01	03/23/01	03/23/01	03/23/01	03/23/01
Sample Time	09:15	09:35	09:45	11:15	13:00	13:25
Methanol Kit	√	√	√	√	√	√
Balance Rent	√					
VO+15, PP MP	√	√	√	√	√	√
Pesticides	√	√	C	√	√	√
PCB	√	√	C	√	√	√
BNA + 25	√	√	√	√	√	√
PP Metals-HIGH	√	√	√	√	√	√
Cyanide, Total	√	√	C	√	√	√
Phenols	√	√	C	√	√	√
TPHC	√	√	C	√	√	√
% Solids	√	√	√	√	√	√
Electronic Del.	√					

Comments: NOTE 1: EXTRA SAMPLE (S-17) RECEIVED BUT NOT ON COC. AS PER CHRIS N., DO NOT ANALYZE. 3/26/01 (ES)
NOTE 2: SAMPLE #3 ON HOLD PENDING RESULTS OF SAMPLE #2. WOULD LIKE RESULTS SOONER FOR SAMPLE #2 IF POSSIBLE.
REV 01: PER JIM H., RUN PP+40 & TPHC ANALYSIS ON SAMPLE #3 4/5/01 (HOLD TIME EXPIRES 4/6/01). RESULTS DUE 4/16/01. dgk
REV 02: PER JIM H., CANCEL PHENOL, CYANIDE, TPHC & PEST/PCB ANALYSIS ON SAMPLE #3 4/5/01. dgk

INTEGRATED ANALYTICAL LABORATORIES, LLC

SAMPLE RECEIPT VERIFICATION

CASE NO: 1340 CLIENT: Envirotactics Inc

COOLER TEMPERATURE: 2° - 6°C: ✓ (See Chain of Custody)

CHAIN OF CUSTODY: (COMPLETE) / INCOMPLETE Comments:

		Comments:
Sample Bottles Intact:	✓	
Sample Labels Intact/ Correct:	✓	
Sufficient Sample Volume:	✓	
Correct bottles/ preservative:	✓	
Samples received in holding time/ prep time:	✓	
Headspace/ bubbles in voa samples:	✓	
Samples to be subcontracted:	X	

Preserved Sample pH checked: ✓
(Excluding voa samples)

KEY
✓ = YES
X = NO
(✓) = N/A

ADDITIONAL COMMENTS: Reed S-17. (2 jars - 1 soil / 1 MeOH) not listed on COC

SAMPLE(S) VERIFIED BY: INITIAL DATE

CORRECTIVE ACTION REQUIRED: YES ✓ (SEE BELOW) NO

CLIENT NOTIFIED: YES ✓ Date/ Time: left message 3/26 1100 NO

PROJECT CONTACT: Chris Neuffer

SUBCONTRACTED LAB:

DATE SHIPPED:

ADDITIONAL COMMENTS:

VERIFIED/TAKEN BY: INITIAL DATE

REV 10/00

1033

Integrated Analytical Laboratories, LLC.

Laboratory Custody Chronicle

Case No : E01-1840
Client : Envirotactics Inc.
Project : 444 ORBIS

	GC/MS V		EXTRACT DATE	EXTRACT TIME	EXTRACT INITIAL	ANALYSIS DATE	ANALYSIS TIME	ANALYSIS INITIAL
Methanol Kit	1840-001	S				3/26	940	MP
	1840-002	S						
	1840-003	S						
	1840-004	S						
	1840-005	S						
	1840-006	S						
	1840-007	S						
	1840-008	S						
	1840-009	S						
Balance Rent	1840-001	S						
VO+15, PP MP	1840-001	S						
	1840-002	S						
	1840	S						
	1840-004	S						
	1840-005	S						
	1840-006	S						
	1840-007	S						
	1840-008	S						
	1840	S						

	GC EX		EXTRACT DATE	EXTRACT TIME	EXTRACT INITIAL	ANALYSIS DATE	ANALYSIS TIME	ANALYSIS INITIAL
Pesticides	1840-001	S	3/27	900	EDM2	3.28	100	MP
	1840-002	S						
	1840	S						
	1840-004	S	3/27	900	EDM2	3.28	200	MP
	1840-005	S						
	1840-006	S						
	1840-007	S						
	1840	S						
PCB	1840-001	S	3/27	900	EDM2	3.28	800	MP
	1840-002	S						
	1840	S						
	1840-004	S	3/27	900	EDM2	3.28	800	MP
	1840-005	S						
	1840-006	S						
	1840-007	S						
	1840	S						

	GC/MS X		EXTRACT DATE	EXTRACT TIME	EXTRACT INITIAL	ANALYSIS DATE	ANALYSIS TIME	ANALYSIS INITIAL
BNA + 25	1840-001	S	3/26		DL	3/27		DL
	1840-002	S						
	1840 ?	S						
	1840-004	S						
	1840-005	S						
	1840-006	S						
	1840-007	S						
	1840	S						

000478

1034

Integrated Analytical Laboratories, LLC.

Laboratory Custody Chronicle

Case No : E01-1840
Client : Envirotactics Inc.
Project : 444 ORBIS

	METALS		EXTRACT DATE	EXTRACT TIME	EXTRACT INITIAL	ANALYSIS DATE	ANALYSIS TIME	ANALYSIS INITIAL
PP Metals-HIGH	1840-001	S	3/27	2pm	L.C	3/28	1100	2c
	1840-002	S		↓			— " —	
	1840 - 3	S	4/9	2pm	L.C	4/10	1200	2
	1840-004	S	3/27	2pm	L.C	3/28	1100	2c
	1840-005	S		↓	↓		↓	
	1840-006	S						
	1840-007	S		↓	↓		↓	
	1840	S						
	WETCHEM							
Cyanide, Total	1840-001	S	3/26		SM	3/30	↓	SM
	1840-002	S		↓			↓	
	1840	S		—			—	
	1840-004	S	3/26		SM	3/30	↓	SM
	1840-005	S		↓			↓	
	1840-006	S						
	1840-007	S		↓			↓	
	1840	S		—			—	
Phenols	1840-001	S	3/23	800	DM	3/29	1200	DM
	1840-002	S		↓			↓	
	1840	S						
	1840-004	S	3/23	800	DM	3/29	1200	DM
	1840-005	S		↓			↓	
	1840-006	S		↓			↓	
	1840-007	S		—			—	
	1840	S		—			—	
TPHC	1840-001	S	3/27	800	DM	3/27	1440	ZC
	1840-002	S		↓			↓	
	1840	S						
	1840-004	S		↓			↓	
	1840-005	S						
	1840-006	S						
	1840-007	S		↓			↓	
	1840	S		—			—	
% Solids	1840-001	S	3/26		KC			
	1840-002	S		↓				
	1840	S						
	1840-004	S		↓				
	1840-005	S						
	1840-006	S						
	1840-007	S		↓				
	1840	S		—				
	AIR							
Electronic Del.	1840-001	S		—			—	

REVIEW & APPROVAL: [signature]
REMARKS :

PAR/SIR/RIW

Orbis Products Corporation
55 Virginia Street
Newark, Essex County, NJ
Case #86-11-17-0100
Attachment 10
Soil Laboratory Reports
(3 of 6)

Ref 15

Integrated Analytical Laboratories, LLC.

273 Franklin Road
Randolph, N.J. 07869

Phone: 973 361-4252
Fax: 973 989-5288

ANALYTICAL DATA REPORT

for

Envirotactics Inc.
2517 Route 35
Building D, Suite 202
Manasquan,NJ 08736

Project: ORBIS - 444
Lab Case Number: E01-1922
Date Report Prepared: April 13, 2001

CLIENT SAMPLE ID	LABORATORY SAMPLE ID
S-17	1922-001
S-18	1922-002
S-19	1922-003
S-20	1922-004
S-21	1922-005
S-22	1922-006
S-23	1922-007
S-24	1922-008
S-25	1922-009
S-26	1922-010
S-27	1922-011
S-28	1922-012
S-29	1922-013
TB	1922-014
S-30	1922-015

All required protocols were followed during analyses. These data have been reviewed and accepted by

Michael Leftin ck

Michael H. Leftin, Ph.D.
Laboratory Director

The liability of Integrated Analytical Laboratories, LLC. is limited to the actual cost of the analyses performed.

INTEGRATED ANALYTICAL LABORATORIES, LLC.

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INTEGRATED ANALYTICAL LABORATORIES, LLC.

MATRIX QUALIFIERS

A - Indicates the sample is an Aqueous matrix.

O - Indicates the sample is an Oil matrix.

S - Indicates the sample is a Soil, Sludge or Sediment matrix.

X - Indicates the sample is an Other matrix as indicated by Client Chain of Custody.

DATA QUALIFIERS

B - Indicates the analyte was found in the Blank and in the sample. It indicates possible sample contamination and warns the data user to use caution when applying the results of the analyte.

C - Common Laboratory Contaminant.

D - The compound was reported from the Diluted analysis.

D.F. - Dilution Factor.

E - Estimated concentration, reported results are outside the calibrated range of the instrument.

J - Indicates an estimated value. The compound was detected at a value below the method detection limit but greater than zero. For GC/MS procedures, the mass spectral data meets the criteria required to identify the target compound.

MDL - Method Detection Limit.

MI - Indicates compound concentration could not be determined due to Matrix Interferences.

NA - Not Applicable.

ND - Indicates the compound was analyzed for but Not Detected at the MDL.

REPORT QUALIFIERS

All solid sample analyses are reported on a dry weight basis.

All solid sample values are corrected for original sample size and percent solids.

INTEGRATED ANALYTICAL LABORATORIES, LLC.

CONFORMANCE / NONCONFORMANCE SUMMARY

Integrated Analytical Laboratories, LLC. received fifteen (15) soil sample(s) from Envirotactics Inc. (Project: ORBIS - 444) on March 28, 2001 for the analysis of:

(13) Volatiles + 15
(1) Volatiles + 10
(13) Semivolatiles - BNA + 25
(13) PCB's
(13) Pesticides
(13) PP Metals
(13) Cyanide, Total
(13) Phenols
(13) Total Petroleum Hydrocarbons

A review of the QA/QC measures for the analysis of the sample(s) contained in this report has been performed by:

Reviewed by

4/19/01
Date

000002

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INTEGRATED ANALYTICAL LABORATORIES, LLC.

CONFORMANCE / NONCONFORMANCE SUMMARY

Integrated Analytical Laboratories, LLC. received fifteen (15) soil sample(s) from Envirotactics Inc. (Project: ORBIS - 444) on March 28, 2001 for the analysis of:

(13) Volatiles + 15
(1) Volatiles + 10
(13) Semivolatiles - BNA + 25
(13) PCB's
(13) Pesticides
(13) PP Metals
(13) Cyanide, Total
(13) Phenols
(13) Total Petroleum Hydrocarbons

A review of the QA/QC measures for the analysis of the sample(s) contained in this report has been performed by:

Reviewed by

4/19/01
Date

000002

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INTEGRATED ANALYTICAL LABORATORIES, LLC.

LABORATORY DELIVERABLES CHECK LIST

Lab Case Number: E01-1922

		Check If Complete
1.	Cover Page, Title Page listing Lab Certification #, facility name & address and date of report preparation.	✓
2.	Table of Contents.	✓
3.	Summary Sheets listing analytical results for all targeted and non-targeted compounds.	✓
4.	Summary Table cross-referencing Field ID's vs. Lab ID's.	✓
5.	Document bound, paginated and legible.	✓
6.	Chain of Custody.	✓
7.	Methodology Summary.	✓
8.	Laboratory Chronicle and Holding Time Check.	✓
9.	Results submitted on a dry weight basis (if applicable).	✓
10.	Method Detection Limits.	✓
11.	Lab certified by NJDEP for parameters or appropriate category of parameters or a member of the USEPA CLP.	✓
12.	NonConformance Summary.	✓

QC Reviewed by

4/19/01
Date

INTEGRATED ANALYTICAL LABORATORIES
CONFORMANCE/NONCONFORMANCE SUMMARY
GC/MS VOLATILE ANALYSIS

Lab Case Number: E01 - 1922

	No	Yes
1. Chromatograms Labeled/Compounds Identified (Field Samples and Method Blanks).		✓
2. GC/MS Tuning Specifications: a. BFB Passed		✓
3. GC/MS Tuning Frequency - Performed every 24 hours for 600 series, 12 hours for 8000 series and 8 hours for 500 series.		✓
4. GC/MS Calibration - Initial calibration performed within 30 days before sample analysis and continuing calibration performed within 24 hours before sample analysis for 600 series, 12 hours for 8000 series		✓
5. GC/MS Calibration Requirements: a. Calibration Check Compounds		✓
b. System Performance Check Compounds		✓
6. Blank Contamination - If yes, list compounds and concentrations in each blank:	✓	
7. Surrogate Recoveries Meet Criteria (If not met, list those compounds and their recoveries which fall outside the acceptable range)		✓
If not met, were the calculations checked and the results qualified as "estimated"?		na
8. Matrix Spike/Matrix Spike Duplicate meet criteria (if not, list those compounds and their recoveries/% differences which fall outside the acceptable range)		✓
9. Internal Standard Area/Retention Time Shift meet criteria		✓
10. Extraction Holding Time Met If not met, list number of days exceeded for each sample:		NA
11. Analysis Holding Time Met If not met, list number of days exceeded for each sample:		✓
12. Sample Dilution Performed		✓

High Target Compounds	High Nontarget Compounds	Matrix Interference	Other
✓			

13. Comments:

Organics Manager

4/10/01
Date

rev 01/01

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INTEGRATED ANALYTICAL LABORATORIES
CONFORMANCE/NONCONFORMANCE SUMMARY
GC/MS SEMIVOLATILE ANALYSIS

Lab Case Number: E01 - 1922

	No	Yes
1. Chromatograms Labeled/Compounds Identified (Field Samples and Method Blanks).		✓
2. GC/MS Tuning Specifications: a. DFTPP Passed		✓
3. GC/MS Tuning Frequency - Performed every 24 hours for 600 series, 12 hours for 8000 series.		✓
4. GC/MS Calibration - Initial calibration performed within 30 days before sample analysis and continuing calibration performed within 24 hours before sample analysis for 600 series.		✓
5. GC/MS Calibration Requirements: a. Calibration Check Compounds		✓
b. System Performance Check Compounds		✓
6. Blank Contamination - If yes, list compounds and concentrations in each blank: a. B/N Fraction b. Acid Fraction	✓	
7. Surrogate Recoveries Meet Criteria (If not met, list those compounds and their recoveries which fall outside the acceptable range) a. B/N Fraction b. Acid Fraction		✓
If not met, were the calculations checked and the results qualified as "estimated"?		na
8. Matrix Spike/Matrix Spike Duplicate meet criteria (if not, list those compounds and their recoveries/% differences which fall outside the acceptable range) a. B/N Fraction b. Acid Fraction		✓
9. Internal Standard Area/Retention Time Shift meet criteria		✓
10. Extraction Holding Time Met If not met, list number of days exceeded for each sample:		✓
11. Analysis Holding Time Met If not met, list number of days exceeded for each sample:		✓
12. Sample Dilution Performed		✓

High Target Compounds	High Nontarget Compounds	Matrix Interference	Other
		✓	

13. Comments:

Organics Manager

04/10/01
Date

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rev 01/01

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INTEGRATED ANALYTICAL LABORATORIES
CONFORMANCE/NONCONFORMANCE SUMMARY
GC ANALYSIS - PCB'S, PESTICIDES, HERBICIDES

Lab Case Number: E01 - 1922

		No	Yes
1.	Chromatograms Labeled/Compounds Identified (Field Samples and Method Blanks).		✓
2.	Standards Summary submitted.		✓
3.	Calibration - Initial calibration performed within 30 days before sample analysis and continuing calibration performed within 12 hrs of the sample analysis.		✓
4.	Blank Contamination - If yes, list compounds and concentrations in each blank:	✓	
	a. PCB's		
	b. Pesticides		
	c. Herbicides		
5.	Surrogate Recoveries meet criteria (if applicable). If not met, list those compounds and their recoveries which fall outside the acceptable range:		✓
	a. PCB's		
	b. Pesticides		
	c. Herbicides		
6.	Matrix Spike/Matrix Spike Duplicate meet criteria (if not, list those compounds and their recoveries/% differences which fall outside the acceptable range) acceptable range:		✓
	a. PCB's		
	b. Pesticides		
	c. Herbicides		
7.	Retention Time Shift Meet Criteria (if applicable).		✓
8.	Extraction Holding Time Met. If not met, list number of days exceeded for each sample:		✓
9.	Analysis Holding Time Met. If not met, list number of days exceeded for each sample:		✓

Comments:

Organic Manager

4.4.01
Date

rev 01/01

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INTEGRATED ANALYTICAL LABORATORIES

METAL ANALYSIS CONFORMANCE/NONCONFORMANCE SUMMARY

Lab Case Number: E01 - 1922

	No	Yes
1. Calibration Summary Meet Criteria.		✓
2. ICP Interference Check Sample Results Meets Criteria (if applicable)		✓
3. Serial Dilution Summary Submitted (if applicable) / Meets Criteria		✓
4. Internal Standards Meet Criteria (if applicable)		✓
5. Laboratory Control Sample Summary Submitted (if applicable)/Meets Criteria		
6. Blank Contamination: If yes, list compounds and concentrations in each blank:	✓	
7. Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria. (If not, list those compounds and their recoveries which fall outside the acceptable range). Sample # 1922-001: RPD 1st. dig. As, 34.7 Pb, 58.6 Zn, 58.9 2nd dig. " 36.5 " 21.1 " 58.4	✓	
8. Extraction Holding Time Met. If not, list number of days exceeded for each sample:		✓
9. Analysis Holding Time Met. If not, list number of days exceeded for each sample:		✓

Additional Comments:
QC sample was digested twice, both times RPD exceeded 20% which indicates a none homogenious sample. However the other 3 QC sets in same batch passed

H. Falk-Jorgensen
Inorganics Manager

04/04/01
Date

rev 01/01

INTEGRATED ANALYTICAL LABORATORIES

PHC ANALYSIS CONFORMANCE/NONCONFORMANCE SUMMARY

Lab Case Number: E01 - 1922

	No	Yes
1. Blank contamination If yes, list the sample and the concentration in each blank:	✓	
2. Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria (If not met, list the samples and corresponding recovery which falls outside the acceptable range)		✓
3. IR spectra submitted for all standards, blanks & samples (as required).		✓
4. Chromatograms submitted for all standards, blanks & samples if GC fingerprinting was conducted.		NA
5. Extraction Holding Time Met If not met, list number of days exceeded for each sample:		✓
6. Analysis Holding Time Met If not met, list number of days exceeded for each sample:		✓

Additional Comments:

paul camista
Dept. Supervisor

3-30-01
Date

INTEGRATED ANALYTICAL LABORATORIES, LLC.

SUMMARY REPORT

Client: Envirotactics Inc.
Project: ORBIS - 444
Lab Case No.: E01-1922

Lab ID:	1922-001			1922-002			1922-003			1922-004		
Client ID:	S-17			S-18			S-19			S-20		
Matrix:	Soil			Soil			Soil			Soil		
Sampled Date:	3/27/2001			3/27/2001			3/27/2001			3/27/2001		
PARAMETER(Units)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
Volatiles (ppb)												
Benzene	14200		775	ND		1000	5090	J	8090	4220		741
Toluene	ND		775	205	J	1000	1400000	D	80900	16800		741
Tetrachloroethene	ND		775	ND		1000	ND		8090	295	J	741
Chlorobenzene	ND		775	ND		1000	21200		8090	236	J	741
Ethylbenzene	ND		775	ND		1000	4120	J	8090	ND		741
Total Xylenes	ND		775	ND		1000	11800		8090	637	J	741
1,2-Dichlorobenzene	ND		775	ND		1000	5060	J	8090	ND		741
TOTAL VO's:	14200			205	J		1447270	J		22188	J	
TOTAL TIC's:	ND			1280			6737000			33538		
TOTAL VO's & TIC's:	14200			1485	J		8184270	J		55726	J	
Semivolatiles - BNA (ppb)												
Aniline	ND		110	ND		268	20100		255	ND		228
1,2,4-Trichlorobenzene	ND		110	ND		268	ND		255	242		228
Naphthalene	ND		110	234	J	268	2220		255	ND		228
2-Methylnaphthalene	ND		110	ND		268	372		255	ND		228
Acenaphthylene	ND		110	208	J	268	ND		255	ND		228
Acenaphthene	ND		110	758		268	ND		255	ND		228
benzofuran	ND		110	417		268	ND		255	ND		228
luorene	ND		110	822		268	ND		255	ND		228
Phenanthrene	ND		110	8180		268	1310		255	618		228
Anthracene	ND		110	1780		268	1410		255	ND		228
Carbazole	ND		110	778		268	727		255	633		228
Di-n-butylphthalate	ND		110	8460		268	ND		255	ND		228
Fluoranthene	ND		110	10500		268	ND		255	ND		228
Pyrene	ND		110	10500		268	ND		255	ND		228
Benzo[a]anthracene	ND		110	5100		268	ND		255	ND		228
Chrysene	ND		110	4620		268	ND		255	ND		228
bis(2-Ethylhexyl)phthalate	ND		110	5320		268	913		255	3000		228
Benzo[b]fluoranthene	ND		110	3690		268	ND		255	ND		228
Benzo[k]fluoranthene	ND		110	3110		268	ND		255	ND		228
Benzo[a]pyrene	ND		110	4530		268	ND		255	ND		228
Indeno[1,2,3-cd]pyrene	ND		110	2920		268	ND		255	ND		228
Dibenz[a,h]anthracene	ND		110	979		268	ND		255	ND		228
Benzo[g,h,i]perylene	ND		110	3210		268	ND		255	ND		228
TOTAL BNA'S:	ND			76116	J		27052			4493		
TOTAL TIC's:	9863			9420			641220			322460		
TOTAL BNA'S & TIC's:	9863			85536	J		668272			326953		
PCB's (ppb)												
Aroclor-1016	ND		78	ND		89.8	ND		86	ND		78.6
Aroclor-1221	ND		78	ND		89.8	ND		86	ND		78.6
Aroclor-1232	ND		78	ND		89.8	ND		86	ND		78.6
Aroclor-1242	ND		78	ND		89.8	ND		86	ND		78.6
roclor-1248	ND		78	ND		89.8	ND		86	ND		78.6
Aroclor-1254	ND		78	ND		89.8	ND		86	1440		78.6
Aroclor-1260	ND		78	2720		89.8	ND		86	ND		78.6

ND = Analyzed for but Not Detected at the MDL
J = The concentration was detected at a value below the MDL
D = The compound was reported from the Diluted analysis
All qualifiers on individual Volatiles & Semivolatiles are carried down through summation.

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INTEGRATED ANALYTICAL LABORATORIES, LLC.

SUMMARY REPORT

Client: Envirotactics Inc.
Project: ORBIS - 444
Lab Case No.: E01-1922

PARAMETER(Units)	Lab ID: 1922-001 Client ID: S-17 Matrix: Soil Sampled Date: 3/27/2001 Conc	Q	MDL	1922-002 S-18 Soil 3/27/2001 Conc	Q	MDL	1922-003 S-19 Soil 3/27/2001 Conc	Q	MDL	1922-004 S-20 Soil 3/27/2001 Conc	Q	MDL
Pesticides (ppb)												
alpha-BHC	ND		9.75	ND		11.2	ND		10.7	ND		9.82
beta-BHC	ND		9.75	ND		11.2	ND		10.7	ND		9.82
gamma-BHC	ND		9.75	ND		11.2	ND		10.7	ND		9.82
delta-BHC	ND		9.75	ND		11.2	ND		10.7	ND		9.82
Heptachlor	ND		9.75	ND		11.2	ND		10.7	ND		9.82
Aldrin	ND		9.75	ND		11.2	ND		10.7	ND		9.82
Heptachlor epoxide	ND		9.75	ND		11.2	ND		10.7	ND		9.82
Endosulfan I	ND		9.75	ND		11.2	ND		10.7	ND		9.82
4,4'-DDE	ND		9.75	ND		11.2	ND		10.7	89		9.82
Dieldrin	ND		9.75	ND		11.2	ND		10.7	ND		9.82
Endrin	ND		9.75	ND		11.2	ND		10.7	ND		9.82
Endosulfan II	ND		9.75	ND		11.2	ND		10.7	ND		9.82
4,4'-DDD	ND		9.75	ND		11.2	ND		10.7	61.1		9.82
Endrin aldehyde	ND		9.75	ND		11.2	ND		10.7	ND		9.82
Endosulfan sulfate	ND		9.75	ND		11.2	ND		10.7	ND		9.82
4,4'-DDT	ND		9.75	ND		11.2	ND		10.7	ND		9.82
Chlordane	ND		48.8	ND		56.1	ND		53.7	ND		49.1
Toxaphene	ND		48.8	ND		56.1	ND		53.7	ND		49.1
tals (ppm)												
Antimony	ND		2.36	ND		2.71	ND		2.58	ND		2.35
Arsenic	1.40		0.236	11.6		0.271	2.48		0.258	1.96		0.235
Beryllium	ND		0.236	0.594		0.271	0.609		0.258	0.355		0.235
Cadmium	0.573		0.236	1.67		0.271	1.06		0.258	4.39		0.235
Chromium	13.4		0.708	26.7		0.813	23.0		0.774	23.5		0.706
Copper	63.3		0.472	224		0.542	29.6		0.516	45.2		0.470
Lead	87.1		2.36	330		2.71	205		2.58	93.6		2.35
Mercury	0.125		0.0147	0.315		0.0169	0.0834		0.0161	0.481		0.0148
Nickel	3.95		0.708	31.7		0.813	14.1		0.774	771		0.706
Selenium	ND		2.36	ND		2.71	ND		2.58	ND		2.35
Silver	ND		0.590	ND		0.677	ND		0.648	ND		0.589
Thallium	ND		0.0944	0.148		0.108	0.214		0.103	0.0953		0.0941
Zinc	129		1.18	391		1.35	225		1.29	1680		1.18
General Analytical												
Cyanide, Total (ppm)	ND		1.18	ND		1.36	3.31		1.29	5.94		1.19
Phenol (ppm)	ND		2.94	ND		3.41	19.4		3.23	3.14		2.97
Total Petroleum Hydrocarbons (ppm)	239		25.0	170		27.3	30500		1035	137		25.0

ND = Analyzed for but Not Detected at the MDL

INTEGRATED ANALYTICAL LABORATORIES, LLC.

SUMMARY REPORT

Client: Envirotactics Inc.
Project: ORBIS - 444
Lab Case No.: E01-1922

PARAMETER(Units)	Lab ID: / Client ID: / Matrix: / Sampled Date: 1922-005 S-21 Soil 3/27/2001 Conc	Q	MDL	1922-006 S-22 Soil 3/27/2001 Conc	Q	MDL	1922-007 S-23 Soil 3/28/2001 Conc	Q	MDL	1922-008 S-24 Soil 3/28/2001 Conc	Q	MDL
Volatiles (ppb)												
1,2-Dichloroethane(EDC)	ND		697	ND		1580	1140		760	ND		913
Benzene	709		697	ND		1580	571	J	760	ND		913
Trichloroethene	ND		697	1090	J	1580	3120		760	ND		913
Toluene	4760		697	1910		1580	2540		760	399	J	913
Tetrachloroethene	ND		697	1440	J	1580	ND		760	ND		913
Chlorobenzene	ND		697	1830		1580	ND		760	ND		913
Ethylbenzene	ND		697	1340	J	1580	ND		760	ND		913
Total Xylenes	ND		697	2690		1580	ND		760	ND		913
1,3-Dichlorobenzene	ND		697	449	J	1580	ND		760	ND		913
1,4-Dichlorobenzene	ND		697	2010		1580	ND		760	ND		913
1,2-Dichlorobenzene	266	J	697	13500		1580	ND		760	ND		913
TOTAL VO's:	5735	J		26259	J		7371	J		399	J	
TOTAL TIC's:	47916			559910			ND			ND		
TOTAL VO's & TIC's:	53651	J		586169	J		7371	J		399	J	
Semivolatiles - BNA (ppb)												
1,4-Dichlorobenzene	ND		849	323	J	449	ND		243	ND		444
1,2-Dichlorobenzene	ND		849	2080		449	ND		243	ND		444
1,2,4-Trichlorobenzene	ND		849	534		449	ND		243	ND		444
Acenaphthylene	ND		849	ND		449	283		243	ND		444
Phenanthrene	ND		849	554		449	670		243	ND		444
Anthracene	ND		849	ND		449	186	J	243	ND		444
Carbazole	ND		849	601		449	ND		243	514		444
Fluoranthene	ND		849	317	J	449	1050		243	ND		444
Pyrene	ND		849	ND		449	1390		243	ND		444
Benzo[a]anthracene	ND		849	ND		449	781		243	ND		444
Chrysene	ND		849	304	J	449	1020		243	ND		444
bis(2-Ethylhexyl)phthalate	ND		849	ND		449	372		243	4210		444
Benzo[b]fluoranthene	ND		849	ND		449	1060		243	ND		444
Benzo[k]fluoranthene	ND		849	ND		449	824		243	ND		444
Benzo[a]pyrene	ND		849	ND		449	1150		243	ND		444
Indeno[1,2,3-cd]pyrene	ND		849	ND		449	959		243	ND		444
Dibenz[a,h]anthracene	ND		849	ND		449	346		243	ND		444
Benzo[g,h,i]perylene	ND		849	ND		449	1200		243	ND		444
TOTAL BNA'S:	ND			4713	J		11291	J		4724		
TOTAL TIC's:	156560			199160			72330			114150		
TOTAL BNA'S & TIC's:	156560			203873	J		83621	J		118874		
PCB's (ppb)												
Aroclor-1016	ND		75.8	ND		77.5	ND		79	ND		85.3
Aroclor-1221	ND		75.8	ND		77.5	ND		79	ND		85.3
Aroclor-1232	ND		75.8	ND		77.5	ND		79	ND		85.3
Aroclor-1242	ND		75.8	ND		77.5	ND		79	ND		85.3
Aroclor-1248	ND		75.8	ND		77.5	ND		79	ND		85.3
Aroclor-1254	245		75.8	983		77.5	23600		79	1200		85.3
Aroclor-1260	ND		75.8	ND		77.5	ND		79	ND		85.3

ND = Analyzed for but Not Detected at the MDL
J = The concentration was detected at a value below the MDL
All qualifiers on individual Volatiles & Semivolatiles are carried down through summation.

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INTEGRATED ANALYTICAL LABORATORIES, LLC.

SUMMARY REPORT

Client: Envirotactics Inc.
Project: ORBIS - 444
Lab Case No.: E01-1922

Lab ID:	1922-005			1922-006			1922-007			1922-008		
Client ID:	S-21			S-22			S-23			S-24		
Matrix:	Soil			Soil			Soil			Soil		
Sampled Date:	3/27/2001			3/27/2001			3/28/2001			3/28/2001		
PARAMETER(Units)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
Pesticides (ppb)												
alpha-BHC	ND		9.47	ND		9.69	ND		9.88	ND		10.7
beta-BHC	ND		9.47	ND		9.69	ND		9.88	ND		10.7
gamma-BHC	ND		9.47	ND		9.69	ND		9.88	ND		10.7
delta-BHC	ND		9.47	ND		9.69	ND		9.88	ND		10.7
Heptachlor	ND		9.47	ND		9.69	ND		9.88	ND		10.7
Aldrin	ND		9.47	ND		9.69	ND		9.88	ND		10.7
Heptachlor epoxide	ND		9.47	ND		9.69	ND		9.88	ND		10.7
Endosulfan I	36.9		9.47	35.4		9.69	1150		9.88	322		10.7
4,4'-DDE	ND		9.47	ND		9.69	ND		9.88	ND		10.7
Dieldrin	ND		9.47	ND		9.69	ND		9.88	ND		10.7
Endrin	ND		9.47	ND		9.69	ND		9.88	ND		10.7
Endosulfan II	58.4		9.47	62.8		9.69	4450	D	19.7	180		10.7
4,4'-DDD	ND		9.47	ND		9.69	ND		9.88	ND		10.7
Endrin aldehyde	ND		9.47	ND		9.69	ND		9.88	ND		10.7
Endosulfan sulfate	ND		9.47	ND		9.69	ND		9.88	55.4		10.7
4,4'-DDT	ND		47.4	ND		48.4	ND		49.4	ND		53.3
Chlordane	ND		47.4	ND		48.4	ND		49.4	ND		53.3
Toxaphene												
Metals (ppm)												
Antimony	ND		2.33	ND		2.40	ND		2.42	ND		2.55
Arsenic	0.972		0.233	2.02		0.240	27.1		0.242	15.0		0.255
Beryllium	0.511		0.233	ND		0.240	0.617		0.242	0.289		0.255
Cadmium	ND		0.233	ND		0.240	2.68		0.242	10.4		0.255
Chromium	27.8		0.699	19.8		0.720	51.6		0.726	251		0.765
Copper	23.9		0.466	7.56		0.480	76.8		0.484	435		0.510
Lead	17.0		2.33	83.9		2.40	238		2.42	464		2.55
Mercury	0.0354		0.0146	0.0408		0.0149	0.819		0.0763	34.7		1.58
Nickel	73.3		0.699	78.7		0.720	31.0		0.726	385		0.765
Selenium	ND		2.33	ND		2.40	ND		2.42	2.95		2.55
Silver	ND		0.579	ND		0.600	ND		0.610	2.06		0.634
Thallium	0.108		0.0932	ND		0.096	0.127		0.0968	ND		0.102
Zinc	80.3		1.17	111		1.20	531		1.21	2090		1.27
General Analytical												
Cyanide, Total (ppm)	ND		1.17	ND		1.20	126		1.22	2.45		1.28
Phenol (ppm)	ND		2.93	3.26		2.99	ND		3.04	ND		3.20
Total Petroleum Hydrocarbons (ppm)	1150		46.8	9390		479	307		25.0	1150		51.2

ND = Analyzed for but Not Detected at the MDL
D = The compound was reported from the Diluted analysis

INTEGRATED ANALYTICAL LABORATORIES, LLC.

SUMMARY REPORT

Client: Envirotactics Inc.
Project: ORBIS - 444
Lab Case No.: E01-1922

Lab ID:	1922-009			1922-010			1922-011			1922-012		
Client ID:	S-25			S-26			S-27			S-28		
Matrix:	Soil			Soil			Soil			Soil		
Sampled Date:	3/28/2001			3/28/2001			3/28/2001			3/28/2001		
PARAMETER(Units)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
Volatiles (ppb)												
Toluene	2170	J	7650	~			301	J	861	1080	J	1470
Ethylbenzene	29900		7650	~			ND		861	861	J	1470
Total Xylenes	207000		7650	~			ND		861	732	J	1470
1,2-Dichlorobenzene	ND		7650	~			412	J	861	600	J	1470
TOTAL VO's:	239070	J		~			713	J		3273	J	
TOTAL TIC's:	1450100			~			24321			379260		
TOTAL VO's & TIC's:	1689170	J		~			25034	J		382533	J	
Semivolatiles - BNA (ppb)												
Naphthalene	3470		211	~			ND		234	ND		1330
2-Methylnaphthalene	2110		211	~			ND		234	ND		1330
Acenaphthylene	ND		211	~			ND		234	6360		1330
Fluorene	ND		211	~			ND		234	1580		1330
Phenanthrene	260		211	~			ND		234	8750		1330
Anthracene	ND		211	~			ND		234	3330		1330
Carbazole	ND		211	~			ND		234	3070		1330
Fluoranthene	487		211	~			ND		234	1190	J	1330
rene	466		211	~			ND		234	1450		1330
nzo[a]anthracene	336		211	~			ND		234	1790		1330
Chrysene	277		211	~			ND		234	ND		1330
bis(2-Ethylhexyl)phthalate	ND		211	~			300		234	28100		1330
Benzo[b]fluoranthene	325		211	~			ND		234	ND		1330
Benzo[k]fluoranthene	153	J	211	~			ND		234	ND		1330
Benzo[a]pyrene	299		211	~			ND		234	ND		1330
Indeno[1,2,3-cd]pyrene	226		211	~			ND		234	ND		1330
Benzo[g,h,i]perylene	241		211	~			ND		234	ND		1330
TOTAL BNA'S:	8650	J		~			300			55620	J	
TOTAL TIC's:	42390			~			ND			362850		
TOTAL BNA'S & TIC's:	51040	J		~			300			418470	J	
PCB's (ppb)												
Aroclor-1016	ND		80.5	~			ND		78.2	ND		85.7
Aroclor-1221	ND		80.5	~			ND		78.2	ND		85.7
Aroclor-1232	ND		80.5	~			ND		78.2	ND		85.7
Aroclor-1242	ND		80.5	~			ND		78.2	ND		85.7
Aroclor-1248	ND		80.5	~			ND		78.2	ND		85.7
Aroclor-1254	ND		80.5	~			161		78.2	1860		85.7
Aroclor-1260	ND		80.5	~			ND		78.2	ND		85.7

ND = Analyzed for but Not Detected at the MDL
J = The concentration was detected at a value below the MDL
All qualifiers on individual Volatiles & Semivolatiles are carried down through summation.
~ = Sample not analyzed for

INTEGRATED ANALYTICAL LABORATORIES, LLC.

SUMMARY REPORT

Client: Envirotactics Inc.
Project: ORBIS - 444
Lab Case No.: E01-1922

Lab ID:	1922-009			1922-010			1922-011			1922-012		
Client ID:	S-25			S-26			S-27			S-28		
Matrix:	Soil			Soil			Soil			Soil		
Sampled Date:	3/28/2001			3/28/2001			3/28/2001			3/28/2001		
PARAMETER(Units)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
Pesticides (ppb)												
alpha-BHC	ND		10.1		~		ND		9.78	ND		10.7
beta-BHC	ND		10.1		~		ND		9.78	ND		10.7
gamma-BHC	ND		10.1		~		ND		9.78	ND		10.7
delta-BHC	ND		10.1		~		ND		9.78	ND		10.7
Heptachlor	ND		10.1		~		ND		9.78	ND		10.7
Aldrin	ND		10.1		~		ND		9.78	ND		10.7
Heptachlor epoxide	ND		10.1		~		ND		9.78	ND		10.7
Endosulfan I	ND		10.1		~		ND		9.78	ND		10.7
4,4'-DDE	ND		10.1		~		ND		9.78	79		10.7
Dieldrin	ND		10.1		~		ND		9.78	ND		10.7
Endrin	ND		10.1		~		ND		9.78	ND		10.7
Endosulfan II	ND		10.1		~		ND		9.78	ND		10.7
4,4'-DDD	ND		10.1		~		ND		9.78	ND		10.7
Endrin aldehyde	ND		10.1		~		ND		9.78	ND		10.7
Endosulfan sulfate	ND		10.1		~		ND		9.78	ND		10.7
4,4'-DDT	ND		10.1		~		ND		9.78	ND		10.7
Chlordane	ND		50.3		~		ND		48.9	ND		53.5
Toxaphene	ND		50.3		~		ND		48.9	ND		53.5
Metals (ppm)												
Antimony	ND		2.44		~		ND		2.38	ND		2.56
Arsenic	2.01		0.244		~		1.21		0.238	5.31		0.256
Beryllium	0.477		0.244		~		0.406		0.238	0.658		0.256
Cadmium	0.322		0.244		~		0.676		0.238	3.14		0.256
Chromium	23.7		0.732		~		42.1		0.714	71.0		0.768
Copper	32.9		0.488		~		60.8		0.476	181		0.512
Lead	39.6		2.44		~		81.5		2.38	284		2.56
Mercury	0.309		0.0152		~		0.139		0.015	0.905		0.0798
Nickel	15.4		0.732		~		28.5		0.714	275		0.768
Selenium	ND		2.44		~		ND		2.38	ND		2.56
Silver	ND		0.613		~		ND		0.597	ND		0.645
Thallium	ND		0.0976		~		0.105		0.0952	0.182		0.102
Zinc	142		1.22		~		152		1.19	558		1.28
General Analytical												
Cyanide, Total (ppm)	ND		1.22		~		ND		1.20	2.00		1.29
Phenol (ppm)	9.84		3.06		~		ND		3.01	ND		3.23
Total Petroleum Hydrocarbons (ppm)	195		25.0		~		129		25.0	10200		259

ND = Analyzed for but Not Detected at the MDL
~ = Sample not analyzed for

INTEGRATED ANALYTICAL LABORATORIES, LLC.

SUMMARY REPORT

Client: Envirotactics Inc.
Project: ORBIS - 444
Lab Case No.: E01-1922

Lab ID:	1922-013			1922-014			1922-015		
Client ID:	S-29			TB			S-30		
Matrix:	Soil			Soil			Soil		
Sampled Date:	3/28/2001			3/27/2001			3/28/2001		
PARAMETER(Units)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
Volatiles (ppb)									
Benzene	17200		763	ND		625	13100	J	37700
Toluene	630	J	763	ND		625	1450000		37700
TOTAL VO's:	17830	J		ND			1463100	J	
TOTAL TIC's:	ND			ND			7036900		
TOTAL VO's & TIC's:	17830	J		ND			8500000	J	
Semivolatiles - BNA (ppb)									
Phenanthrene	ND		238	~			322		269
Di-n-butylphthalate	ND		238	~			170	J	269
Fluoranthene	ND		238	~			254	J	269
TOTAL BNA'S:	ND			~			746	J	
TOTAL TIC's:	22740			~			384950		
TOTAL BNA'S & TIC's:	22740			~			385696	J	
PCB's (ppb)									
Aroclor-1016	ND		85.5	~			ND		89.1
Aroclor-1221	ND		85.5	~			ND		89.1
Aroclor-1232	ND		85.5	~			ND		89.1
Aroclor-1242	ND		85.5	~			ND		89.1
Aroclor-1248	ND		85.5	~			ND		89.1
Aroclor-1254	ND		85.5	~			ND		89.1
Aroclor-1260	ND		85.5	~			ND		89.1
Pesticides (ppb)									
alpha-BHC	ND		10.7	~			ND		11.1
beta-BHC	ND		10.7	~			ND		11.1
gamma-BHC	ND		10.7	~			ND		11.1
delta-BHC	ND		10.7	~			ND		11.1
Heptachlor	ND		10.7	~			ND		11.1
Aldrin	ND		10.7	~			ND		11.1
Heptachlor epoxide	ND		10.7	~			ND		11.1
Endosulfan I	ND		10.7	~			ND		11.1
4,4'-DDE	ND		10.7	~			ND		11.1
Dieldrin	ND		10.7	~			ND		11.1
Endrin	ND		10.7	~			ND		11.1
Endosulfan II	ND		10.7	~			ND		11.1
4,4'-DDD	ND		10.7	~			ND		11.1
Endrin aldehyde	ND		10.7	~			ND		11.1
Endosulfan sulfate	ND		10.7	~			ND		11.1
4,4'-DDT	ND		10.7	~			ND		11.1
Chlordane	ND		53.4	~			ND		55.7
Toxaphene	ND		53.4	~			ND		55.7

~ = Sample not analyzed for
ND = Analyzed for but Not Detected at the MDL
J = The concentration was detected at a value below the MDL
All qualifiers on individual Volatiles & Semivolatiles are carried down through summation.