

# Road Transportable Analytical Laboratory (RTAL) System Volume III, Appendices C through J

**Final Report**

by  
**Stanley M. Finger**  
**J. Carlos De Avila**  
**Virgil F. Keith**

**August 1996**

Work Performed Under Contract No.: DE-AC21-92MC29109

U.S. Department of Energy  
Office of Environmental Management  
Office of Technology Development  
Washington, DC

for

U.S. Department of Energy  
Office of Fossil Energy  
Morgantown Energy Technology Center  
Morgantown, West Virginia

by  
Engineering Computer Optecnomics (ECO), Inc.  
Annapolis, Maryland

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**MASTER**

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Morgantown, West Virginia 26507-0880

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1356 Cape St., Claire Center  
Annapolis, Maryland 21401



APPENDIX C  
SOIL SAMPLE TCLP-VOA REPORT

2A  
 WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: ECO Contract: N/A  
 Lab Code: RTAL Case No.: N/A SAS No.: N/A SDG No.: SDG 1

	EPA SAMPLE NO.	SMC1 #	SMC2 #	SMC3 (BFB) #	TOT OUT
01	VBLK01	96	101	98	0
02	TCLP BLANK	94	99	95	0
03	VOA TCLP-01	98	102	97	0
04	VOA TCLP-02	96	100	95	0
05	VOA TCLP-03	98	99	95	0
06	VOA TCLP-04	106	100	94	0
07	VOA TCLP-05	102	99	95	0
08	VOA TCLP-06	103	96	91	0
09	VOA TCLP-07	102	95	90	0
10	VOA TCLP-01	99	102	98	0
11	VOA TCLP-02	96	100	96	0
12	VOA TCLP-03	99	102	99	0
13	VOA TCLP-04	100	99	93	0
14	VOA TCLP-05	100	99	93	0
15	VOA TCLP-06	99	99	92	0
16	VOA TCLP-07	100	101	96	0

SMC1 = dibromofluoromethane (86-118) QC LIMITS  
 SMC2 = toluene-d8 (88-110)  
 SMC3 (BFB) = 4-bromofluorobenzene (86-115)

# Column to be used to flag recovery values  
 • Values outside of contract required QC limits  
 D System Monitoring Compound diluted out

5A  
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK  
BROMOFLUOROBENZENE (BFB)

Lab Name: ECO Contract: N/A  
 Lab Code: RTAL Case No.: N/A SAS No.: N/A SDG No.: SDG 1  
 Lab File ID: V0063.D BFB Injection Date: 01/16/96  
 Instrument ID: 5972 A BFB Injection Time: 07:52  
 GC Column: HP-VOC ID: 0.53 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	16.5
75	30.0 - 66.0% of mass 95	44.0
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	50.0 - 120.0% of mass 95	93.8
175	4.0 - 9.0% of mass 174	7.0 ( 7.4 )1
176	93.0 - 101.0% of mass 174	93.2 ( 99.4 )1
177	5.0 - 9.0% of mass 176	6.5 ( 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:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD50	VSTD50	V0065.D	01/16/96	09:08
02	VBLK01	VBLK01	V0066.D	01/16/96	09:51
03	TCLP BLANK	TCLP BLANK	V0067.D	01/16/96	10:30
04	VOA TCLP-01DL	ECO-002-1ADL	V0068.D	01/16/96	11:03
05	VOA TCLP-02DL	ECO-002-2ADL	V0069.D	01/16/96	11:39
06	VOA TCLP-03DL	ECO-002-3ADL	V0070.D	01/16/96	12:14
07	VOA TCLP-04DL	ECO-002-4ADL	V0071.D	01/16/96	12:49
08	VOA TCLP-05DL	ECO-002-5ADL	V0072.D	01/16/96	13:24
09	VOA TCLP-06DL	ECO-002-6ADL	V0073.D	01/16/96	14:00
10	VOA TCLP-07DL	ECO-002-7ADL	V0074.D	01/16/96	14:36
11	VOA TCLP-01	ECO-002-1A	V0075.D	01/16/96	15:12
12	VOA TCLP-02	ECO-002-2A	V0076.D	01/16/96	15:47
13	VOA TCLP-03	ECO-002-3A	V0077.D	01/16/96	16:23
14	VOA TCLP-04	ECO-002-4A	V0078.D	01/16/96	16:59
15	VOA TCLP-05	ECO-002-5A	V0079.D	01/16/96	17:35
16	VOA TCLP-06	ECO-002-6A	V0080.D	01/16/96	18:11
17	VOA TCLP-07	ECO-002-7A	V0081.D	01/16/96	18:47

4A  
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLK01

Lab Name: ECO Contract: N/A  
 Lab Code: RTAL Case No.: N/A SAS No.: N/A SDG No.: SDG 1  
 Lab File ID: V0066.D Lab Sample ID: VBLK01  
 Date Analyzed: 01/16/96 Time Analyzed: 09:51  
 GC Column: HP-VOC ID: 0.53 (mm) Heated Purge: (Y/N) N  
 Instrument ID: 5972 A

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	TCLP BLANK	TCLP BLANK	V0067.D	10:30
02	VOA TCLP-01DL	ECO-002-1ADL	V0068.D	11:03
03	VOA TCLP-02DL	ECO-002-2ADL	V0069.D	11:39
04	VOA TCLP-03DL	ECO-002-3ADL	V0070.D	12:14
05	VOA TCLP-04DL	ECO-002-4ADL	V0071.D	12:49
06	VOA TCLP-05DL	ECO-002-5ADL	V0072.D	13:24
07	VOA TCLP-06DL	ECO-002-6ADL	V0073.D	14:00
08	VOA TCLP-07DL	ECO-002-7ADL	V0074.D	14:36
09	VOA TCLP-01	ECO-002-1A	V0075.D	15:12
10	VOA TCLP-02	ECO-002-2A	V0076.D	15:47
11	VOA TCLP-03	ECO-002-3A	V0077.D	16:23
12	VOA TCLP-04	ECO-002-4A	V0078.D	16:59
13	VOA TCLP-05	ECO-002-5A	V0079.D	17:35
14	VOA TCLP-06	ECO-002-6A	V0080.D	18:11
15	VOA TCLP-07	ECO-002-7A	V0081.D	18:47

COMMENTS

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8A  
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ECO Contract: N/A  
 Lab Code: RTAL Case No.: N/A SAS No.: N/A SDG No.: SDG 1  
 Lab File ID (Standard): V0065.D Date Analyzed: 01/16/96  
 Instrument ID: 5972 A Time Analyzed: 09:08  
 GC Column: HP-VOC ID: 0.53 (mm) Heated Purge (Y/N): Y

	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
12 HOUR STD	925036	9.34	966952	10.71	771328	15.71
UPPER LIMIT	1850072	8.84	1933904	10.21	1542656	15.21
LOWER LIMIT	462518	9.84	483476	11.21	385664	16.21
EPA SAMPLE NO.						
01 VBLK01	741607	9.34	771344	10.71	618447	15.71
02 TCLP BLANK	969389	9.34	1006293	10.71	802695	15.71
03 VOA TCLP-01	921136	9.35	959516	10.71	765398	15.73
04 VOA TCLP-02	910260	9.34	954277	10.72	765874	15.71
05 VOA TCLP-03	893472	9.34	935906	10.72	750463	15.71
06 VOA TCLP-04	851344	9.34	854131	10.71	699891	15.71
07 VOA TCLP-05	850537	9.35	866700	10.71	696187	15.73
08 VOA TCLP-06	832522	9.35	818730	10.71	664933	15.73
09 VOA TCLP-07	837828	9.35	821196	10.72	670868	15.73
10 VOA TCLP-01	887621	9.35	924029	10.73	738075	15.73
11 VOA TCLP-02	901316	9.35	939635	10.73	752922	15.73
12 VOA TCLP-03	877697	9.35	916338	10.73	737277	15.73
13 VOA TCLP-04	860011	9.35	895091	10.73	724103	15.73
14 VOA TCLP-05	861557	9.37	882876	10.73	717712	15.73
15 VOA TCLP-06	868271	9.37	882893	10.73	712476	15.73
16 VOA TCLP-07	865764	9.37	912796	10.74	732324	15.73

IS1 = pentafluorobenzene  
 IS2 = 1,4-difluorobenzene  
 IS3 = Chlorobenzene-d5  
 IS4 = 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 to be used to flag values outside QC limit with an asterisk:

\* Values outside of contract required QC limits

8A  
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ECO Contract: N/A  
 Lab Code: RTAL Case No.: N/A SAS No.: N/A SDG No.: SDG 1  
 Lab File ID (Standard): V0065.D Date Analyzed: 01/16/96  
 Instrument ID: 5972 A Time Analyzed: 09:08  
 GC Column: HP-VOC ID: 0.53 (mm) Heated Purge (Y/N): Y

	IS4 AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	484554	19.97				
UPPER LIMIT	969108	19.47				
LOWER LIMIT	242277	20.47				
EPA SAMPLE NO.						
01 VBLK01	398275	19.97				
02 TCLP BLANK	515701	19.97				
03 VOA TCLP-01	497145	19.97				
04 VOA TCLP-02	499729	19.97				
05 VOA TCLP-03	486352	19.97				
06 VOA TCLP-04	474320	19.97				
07 VOA TCLP-05	456686	19.97				
08 VOA TCLP-06	455919	19.97				
09 VOA TCLP-07	457209	19.97				
10 VOA TCLP-01	477406	19.97				
11 VOA TCLP-02	492784	19.97				
12 VOA TCLP-03	474918	19.97				
13 VOA TCLP-04	482399	19.97				
14 VOA TCLP-05	481335	19.97				
15 VOA TCLP-06	478695	19.97				
16 VOA TCLP-07	477891	19.98				

IS1 = pentafluorobenzene  
 IS2 = 1,4-difluorobenzene  
 IS3 = Chlorobenzene-d5  
 IS4 = 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 to be used to flag values outside QC limit with an asterisk.

\* Values outside of contract required QC limits

Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN1695\V0068.D  
 Acq On : 16 Jan 96 11:03 am  
 Sample : ECO-002-1A  
 Misc : VOATCLP-01,W,5,TCLP,10X  
 Quant Time: Jan 16 14:10 1996

Vial: 5  
 Operator: WF  
 Inst : 5972 - In  
 Multiplr: 10.00

Method : C:\HPCHEM\1\METHODS\VTCLP.M  
 Title : SW-846 TCLP Method  
 Last Update : Tue Jan 16 13:11:07 1996  
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) pentafluorobenzene	9.35	168	921136	50.00	ug/L	0.02
6) 1,4-difluorobenzene	10.71	114	959516	50.00	ug/L	0.00
13) Chlorobenzene-d5	15.73	117	765398	50.00	ug/L	0.02
16) 1,4-dichlorobenzene-d4	19.97	152	497145	50.00	ug/L	0.00
						%Recovery
System Monitoring Compounds						
5) dibromofluoromethane	9.17	113	410969	48.93	ug/L	97.86%
12) toluene-d8	13.28	98	923316	50.79	ug/L	101.59%
17) 4-bromofluorobenzene	17.80	95	584710	48.74	ug/L	97.48%
						Qvalue
Target Compounds						
9) benzene	10.28	78	4297	2.38	ug/L #	51
14) tetrachloroethene	14.63	166	2901	3.29	ug/L #	71

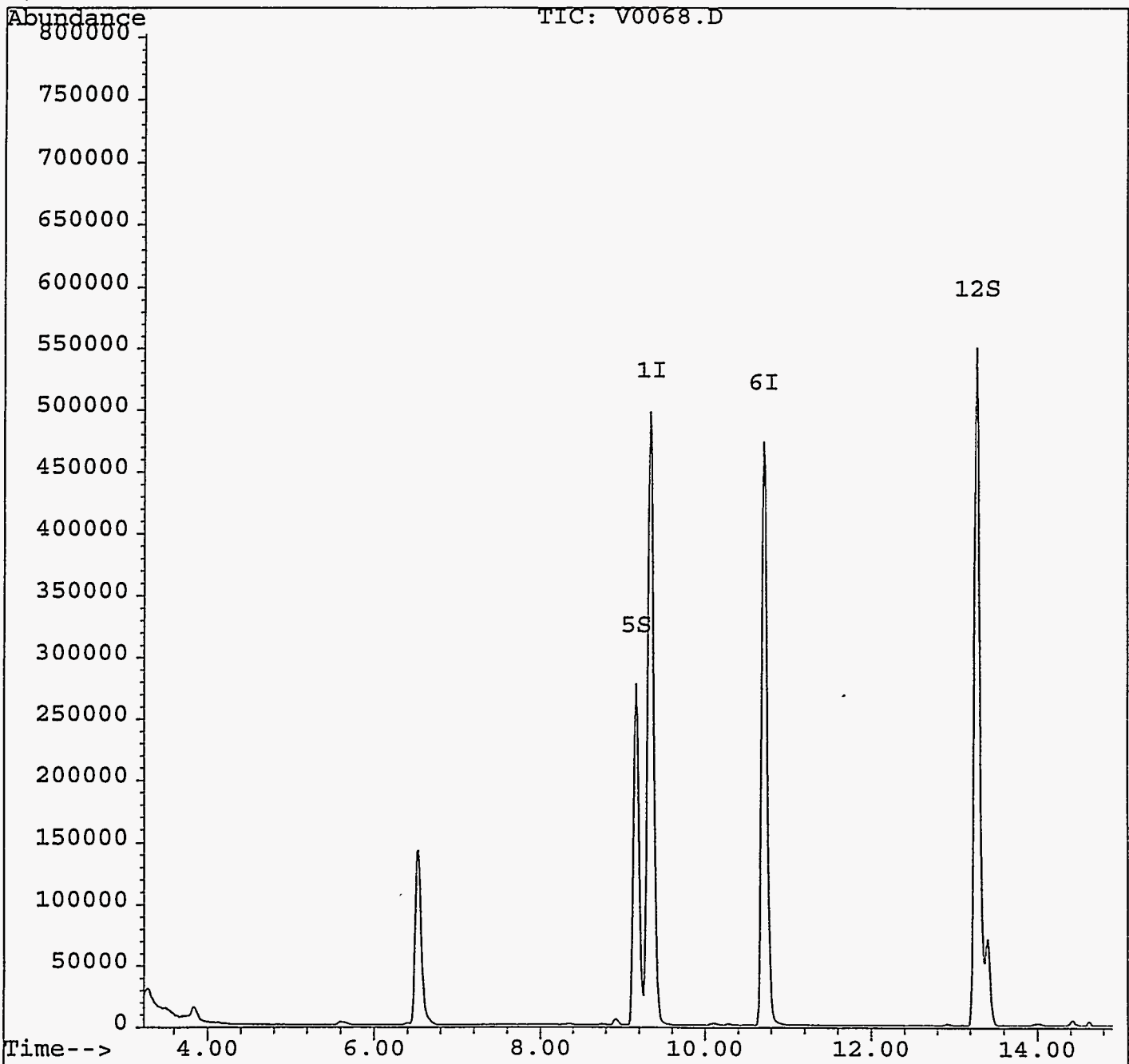
(#) = qualifier out of range (m) = manual integration

Quantitation Report

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Acq On : 16 Jan 96 11:03 am  
Sample : ECO-002-1A  
Misc : VOATCLP-01,W,5,TCLP,10X  
Quant Time: Jan 16 14:10 1996

Vial: 5  
Operator: WF  
Inst : 5972 - In  
Multiplr: 10.00

Method : C:\HPCHEM\1\METHODS\VTCLP.M  
Title : SW-846 TCLP Method  
Last Update : Tue Jan 16 13:11:07 1996  
Response via : Multiple Level Calibration

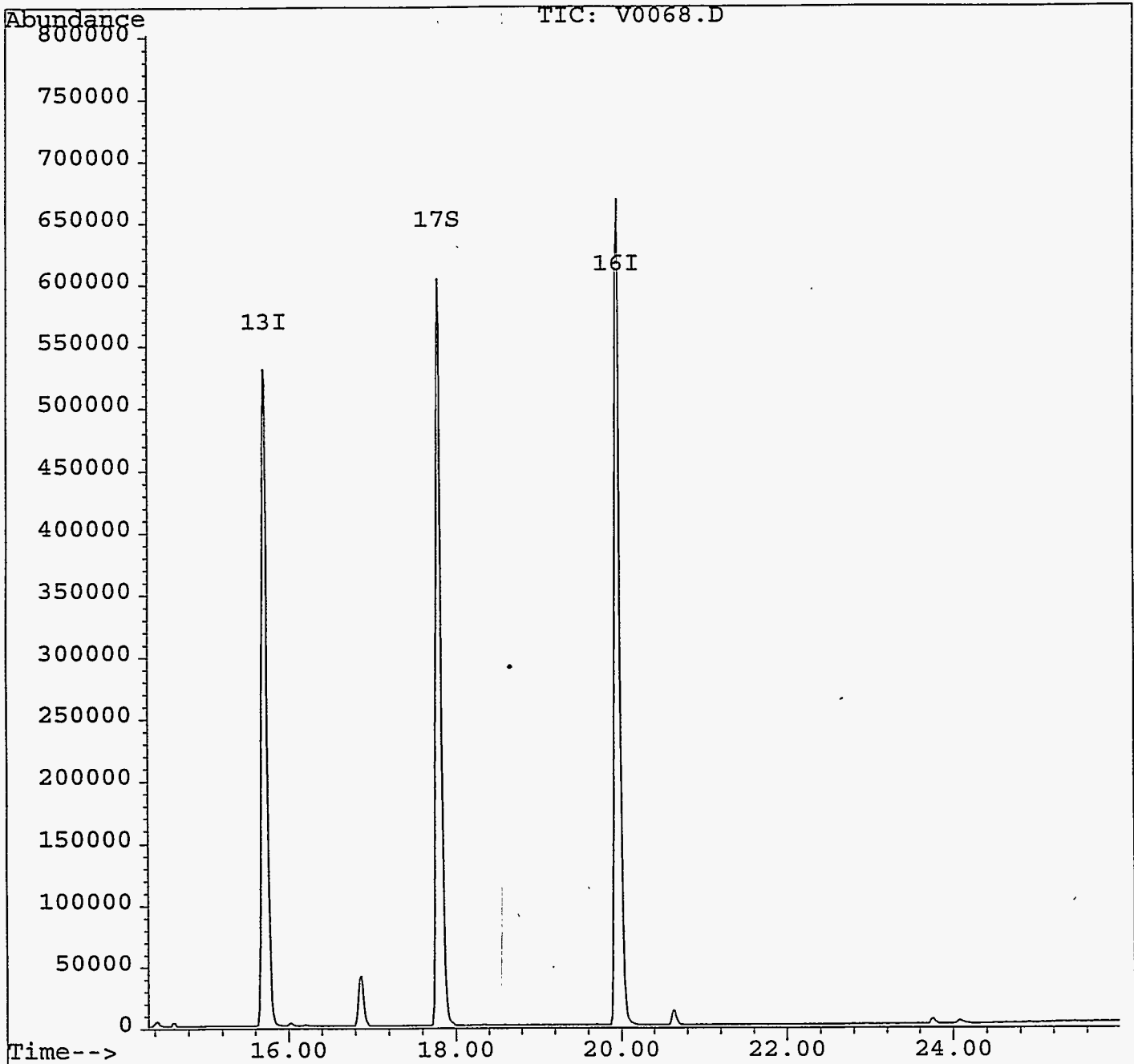


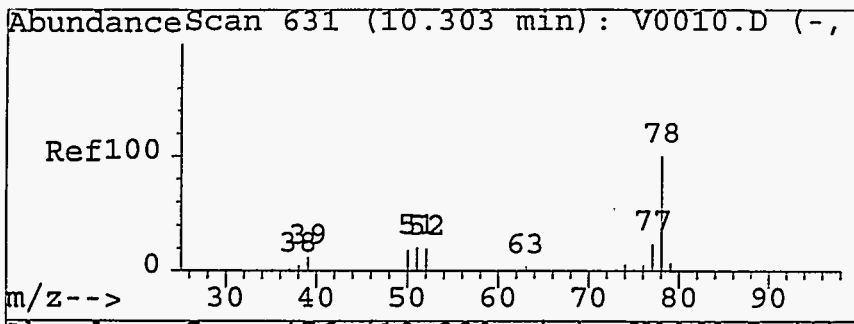
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Acq On : 16 Jan 96 11:03 am  
Sample : ECO-002-1A  
Misc : VOATCLP-01,W,5,TCLP,10X  
Quant Time: Jan 16 14:10 1996

Vial: 5  
Operator: WF  
Inst : 5972 - In  
Multiplr: 10.00

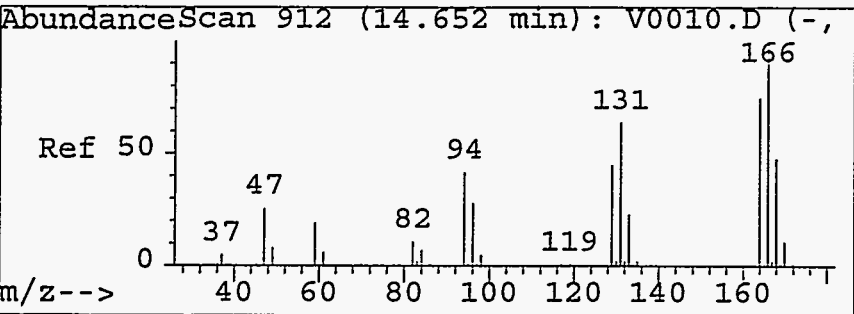
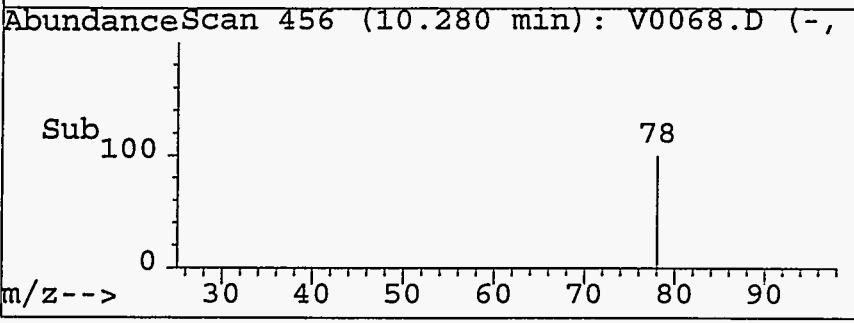
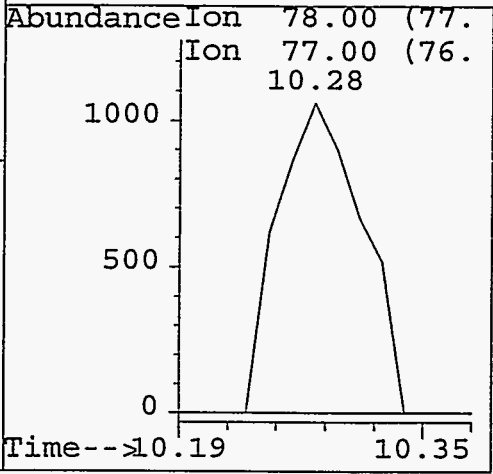
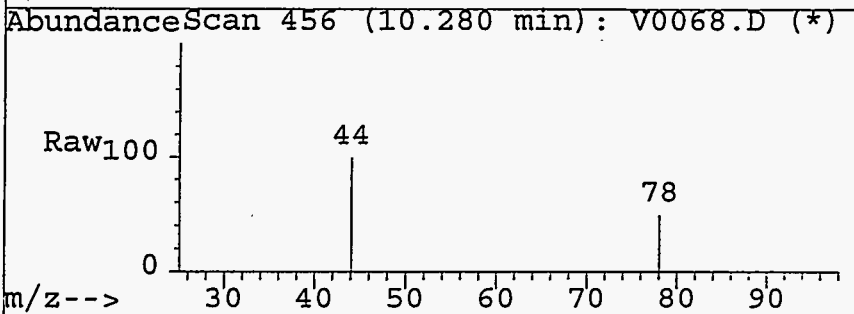
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Title : SW-846 TCLP Method  
Last Update : Tue Jan 16 13:11:07 1996  
Response via : Multiple Level Calibration





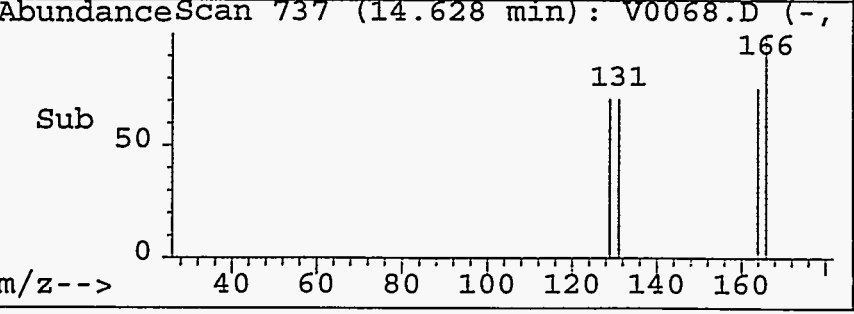
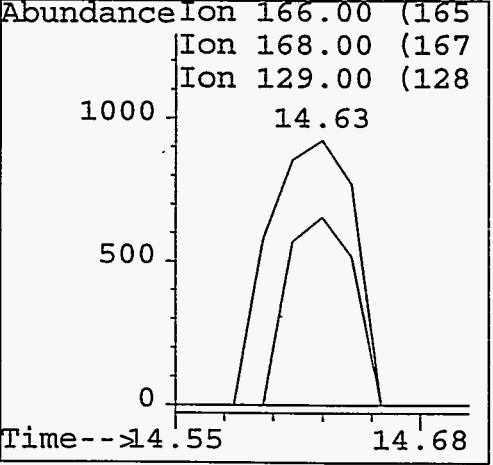
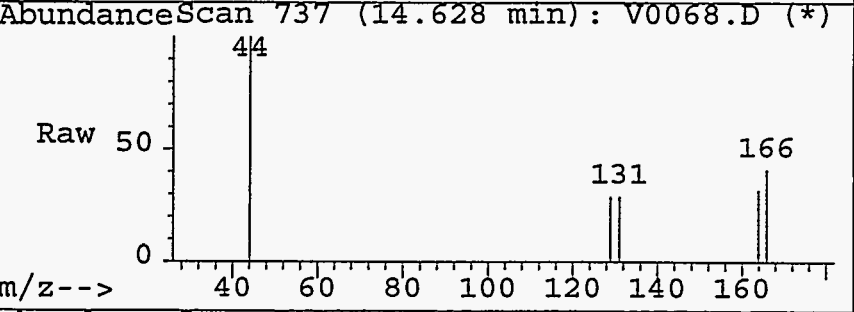
#9  
benzene  
Concen: 2.38 ug/L  
RT: 10.28 min Scan# 456  
Delta R.T. 0.02 min  
Lab File: V0068.D  
Acq: 16 Jan 96 11:03 am

Tgt Ion	Ratio	Lower	Upper
78	100		
77	0.0	4.3	44.3#
0	0.0	0.0	0.0
0	0.0	0.0	0.0



#14  
tetrachloroethene  
Concen: 3.29 ug/L  
RT: 14.63 min Scan# 737  
Delta R.T. 0.02 min  
Lab File: V0068.D  
Acq: 16 Jan 96 11:03 am

Tgt Ion	Ratio	Lower	Upper
166	100		
168	0.0	28.4	68.4#
129	71.0	51.9	91.9
0	0.0	0.0	0.0



Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN1695\V0069.D  
 Acq On : 16 Jan 96 11:39 am  
 Sample : ECO-002-2A  
 Misc : VOATCLP-02,W,5,TCLP,10X  
 Quant Time: Jan 16 14:10 1996

Vial: 6  
 Operator: WF  
 Inst : 5972 - In  
 Multiplr: 10.00

Method : C:\HPCHEM\1\METHODS\VTCLP.M  
 Title : SW-846 TCLP Method  
 Last Update : Tue Jan 16 13:11:07 1996  
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) pentafluorobenzene	9.34	168	910260	50.00	ug/L	0.00
6) 1,4-difluorobenzene	10.72	114	954277	50.00	ug/L	0.00
13) Chlorobenzene-d5	15.71	117	765874	50.00	ug/L	0.00
16) 1,4-dichlorobenzene-d4	19.97	152	499729	50.00	ug/L	0.00
						%Recovery
System Monitoring Compounds						
5) dibromofluoromethane	9.17	113	396962	47.83	ug/L	95.65%
12) toluene-d8	13.28	98	900924	49.83	ug/L	99.67%
17) 4-bromofluorobenzene	17.80	95	575292	47.71	ug/L	95.42%
						Qvalue
Target Compounds						
9) benzene	10.28	78	51003	28.43	ug/L	99
14) tetrachloroethene	14.63	166	10122	11.49	ug/L	96

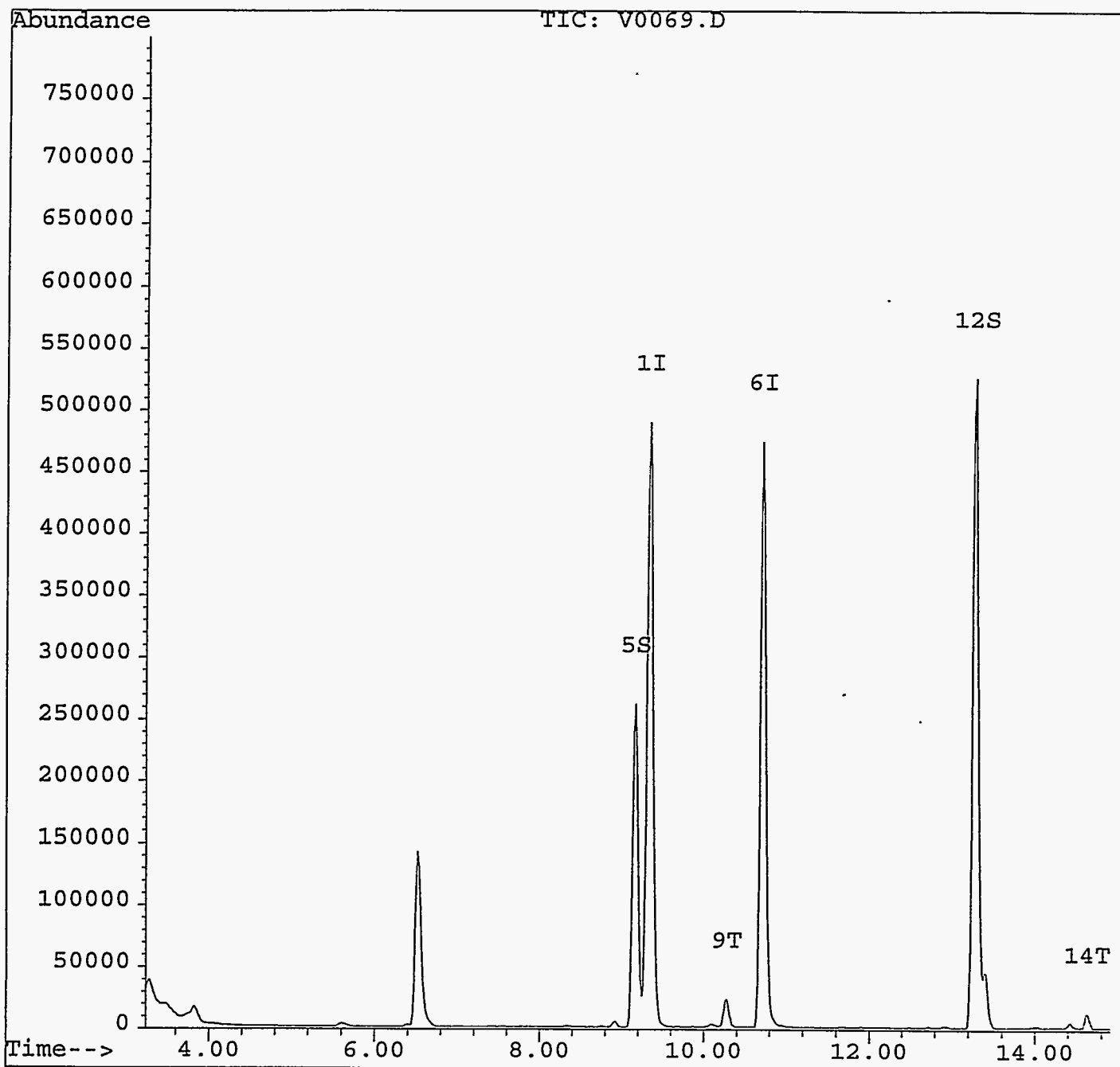
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN1695\V0069.D  
Acq On : 16 Jan 96 11:39 am  
Sample : ECO-002-2A  
Misc : VOATCLP-02,W,5,TCLP,10X  
Quant Time: Jan 16 14:10 1996

Vial: 6  
Operator: WF  
Inst : 5972 - In  
Multiplr: 10.00

Method : C:\HPCHEM\1\METHODS\VTCLP.M  
Title : SW-846 TCLP Method  
Last Update : Tue Jan 16 13:11:07 1996  
Response via : Multiple Level Calibration



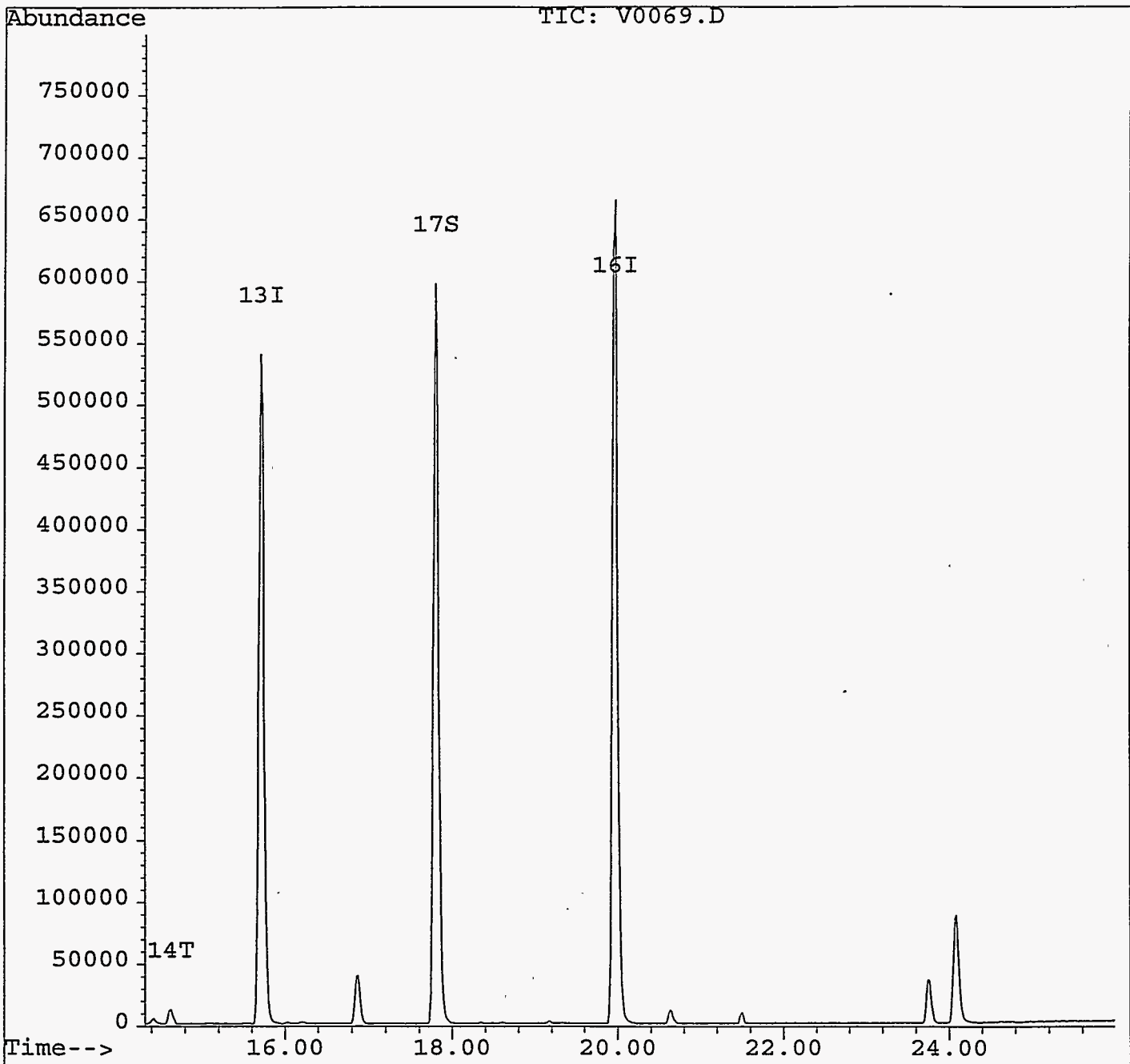


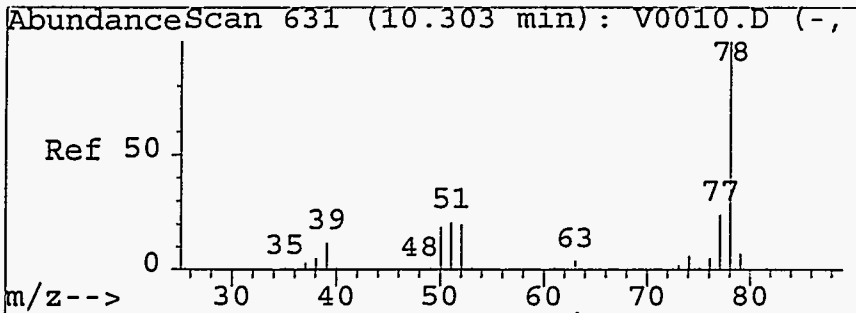
Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN1695\V0069.D  
Acq On : 16 Jan 96 11:39 am  
Sample : ECO-002-2A  
Misc : VOATCLP-02,W,5,TCLP,10X  
Quant Time: Jan 16 14:10 1996

Vial: 6  
Operator: WF  
Inst : 5972 - In  
Multiplr: 10.00

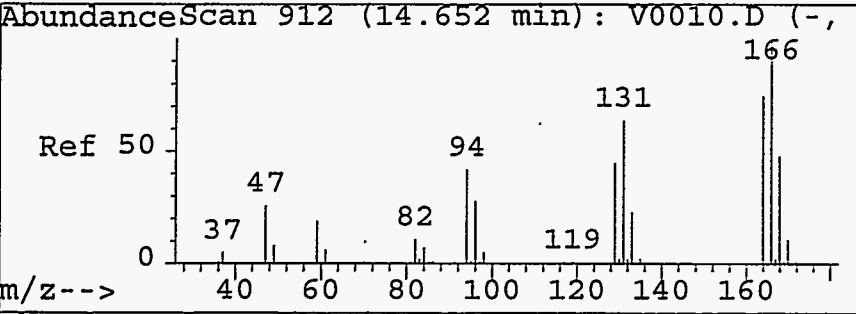
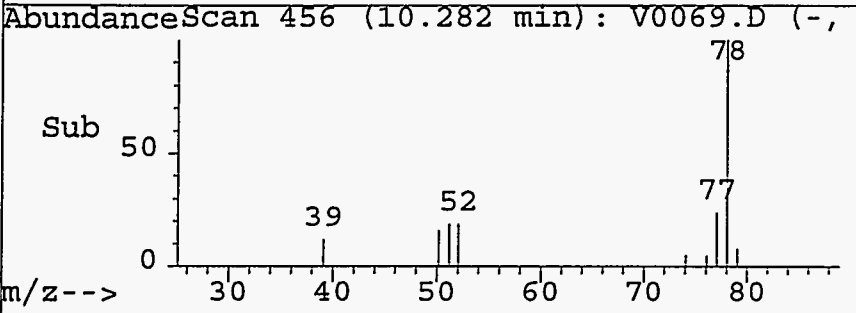
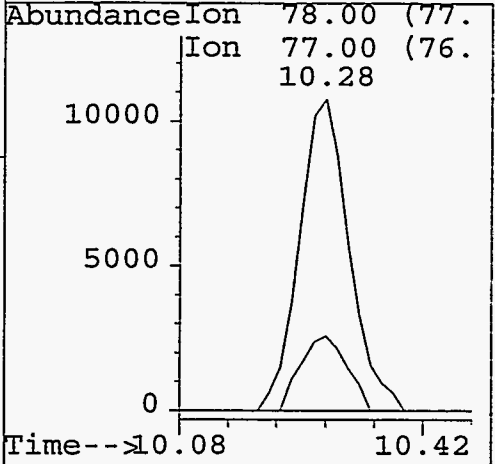
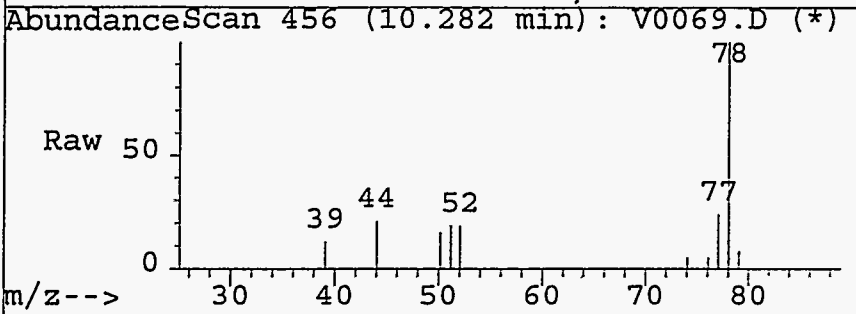
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Response via : Multiple Level Calibration





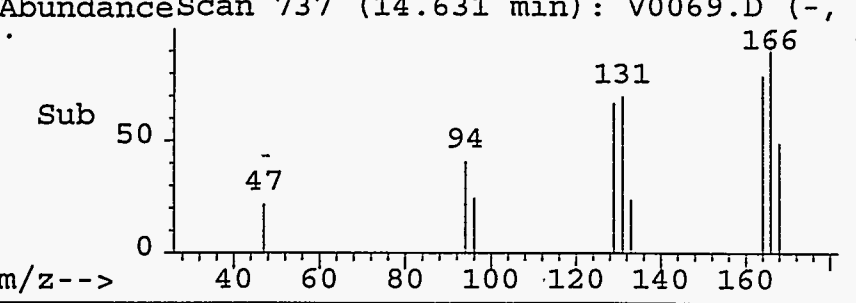
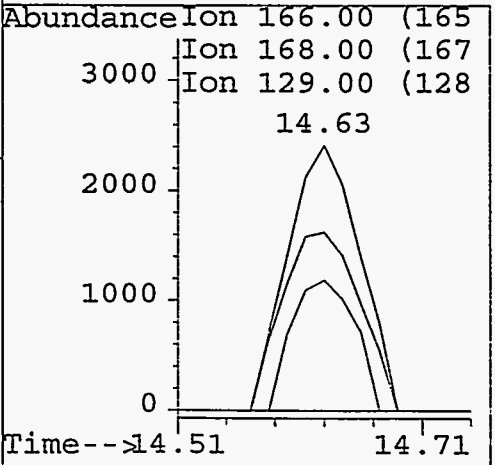
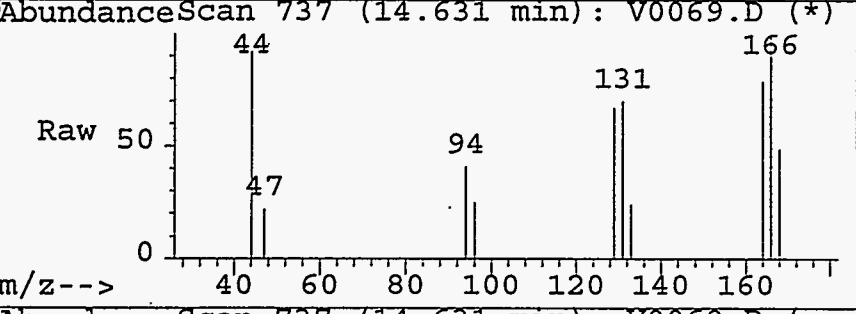
#9  
benzene  
Concen: 28.43 ug/L  
RT: 10.28 min Scan# 456  
Delta R.T. 0.02 min  
Lab File: V0069.D  
Acq: 16 Jan 96 11:39 am

Tgt Ion	Resp	Lower	Upper
78	51003		
77	23.9	4.3	44.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0



#14  
tetrachloroethene  
Concen: 11.49 ug/L  
RT: 14.63 min Scan# 737  
Delta R.T. 0.02 min  
Lab File: V0069.D  
Acq: 16 Jan 96 11:39 am

Tgt Ion	Resp	Lower	Upper
166	10122		
168	49.2	28.4	68.4
129	67.3	51.9	91.9
0	0.0	0.0	0.0



Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN1695\V0070.D  
 Acq On : 16 Jan 96 12:14 pm  
 Sample : ECO-002-3A  
 Misc : VOATCLP-03,W,5,TCLP,10X  
 Quant Time: Jan 16 14:04 1996

Vial: 7  
 Operator: WF  
 Inst : 5972 - In  
 Multiplr: 10.00

Method : C:\HPCHEM\1\METHODS\VTCLP.M  
 Title : SW-846 TCLP Method  
 Last Update : Tue Jan 16 13:11:07 1996  
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) pentafluorobenzene	9.34	168	893472	50.00	ug/L	0.00
6) 1,4-difluorobenzene	10.72	114	935906	50.00	ug/L	0.00
13) Chlorobenzene-d5	15.71	117	750463	50.00	ug/L	0.00
16) 1,4-dichlorobenzene-d4	19.97	152	486352	50.00	ug/L	0.00
						%Recovery
System Monitoring Compounds						
5) dibromofluoromethane	9.15	113	398759	48.95	ug/L	97.89%
12) toluene-d8	13.28	98	878002	49.52	ug/L	99.04%
17) 4-bromofluorobenzene	17.80	95	559260	47.65	ug/L	95.31%
						Qvalue
Target Compounds						
9) benzene	10.27	78	43200	24.55	ug/L	99
14) tetrachloroethene	14.63	166	8327	9.65	ug/L	99

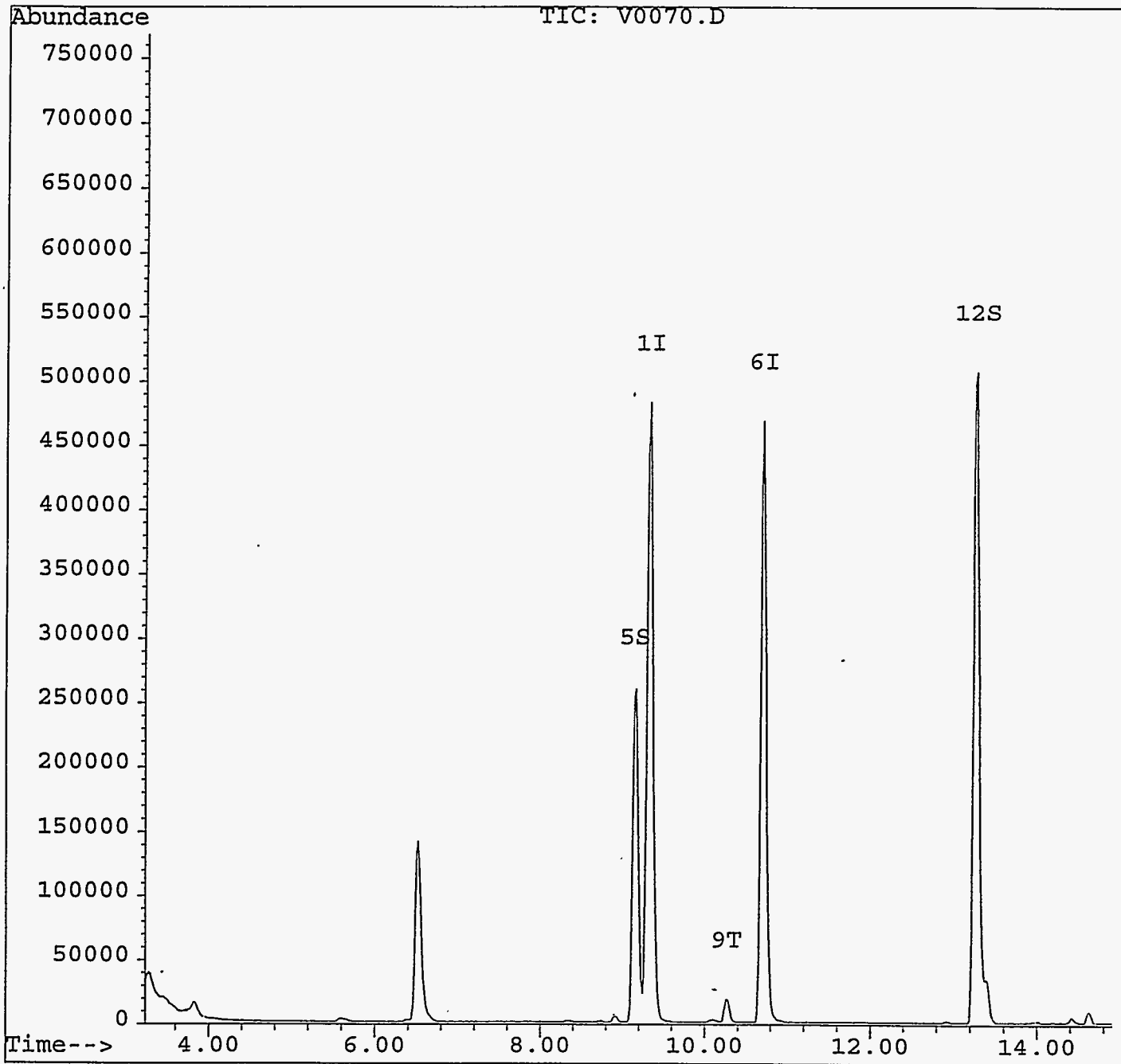
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN1695\V0070.D  
Acq On : 16 Jan 96 12:14 pm  
Sample : ECO-002-3A  
Misc : VOATCLP-03,W,5,TCLP,10X  
Quant Time: Jan 16 14:04 1996

Vial: 7  
Operator: WF  
Inst : 5972 - In  
Multiplr: 10.00

Method : C:\HPCHEM\1\METHODS\VTCLP.M  
Title : SW-846 TCLP Method  
Last Update : Tue Jan 16 13:11:07 1996  
Response via : Multiple Level Calibration

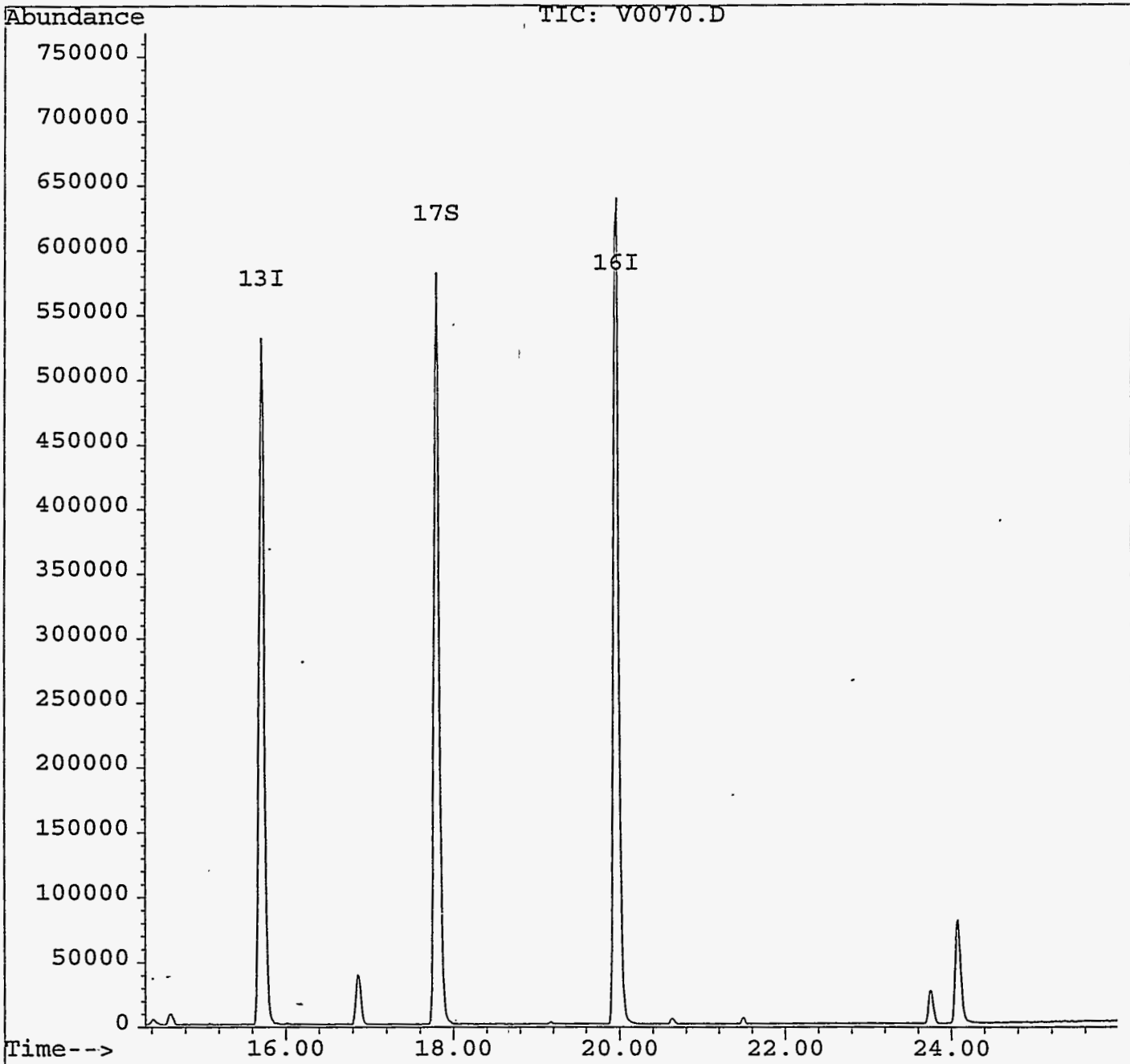


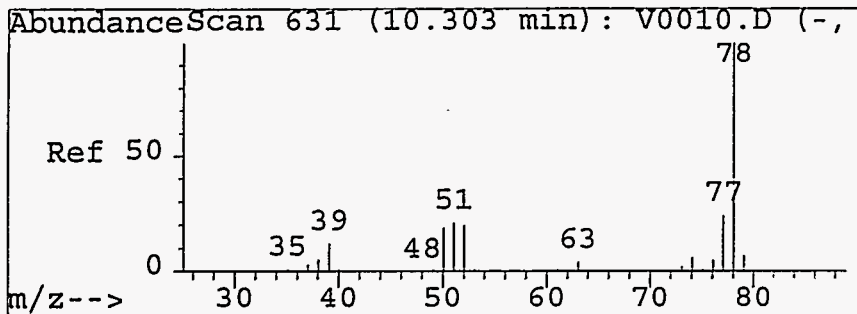
Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN1695\V0070.D  
Acq On : 16 Jan 96 12:14 pm  
Sample : ECO-002-3A  
Misc : VOATCLP-03,W,5,TCLP,10X  
Quant Time: Jan 16 14:04 1996

Vial: 7  
Operator: WF  
Inst : 5972 - In  
Multiplr: 10.00

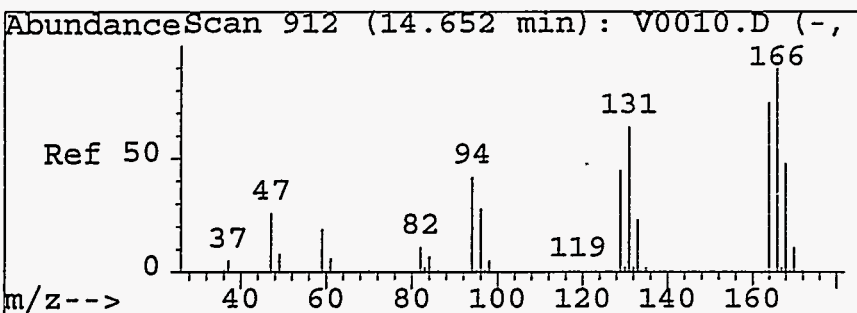
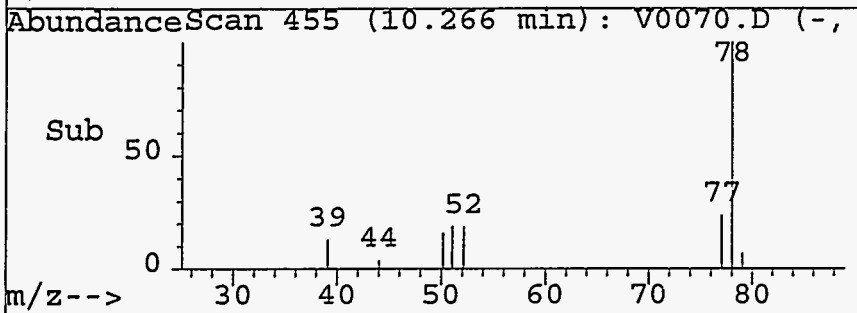
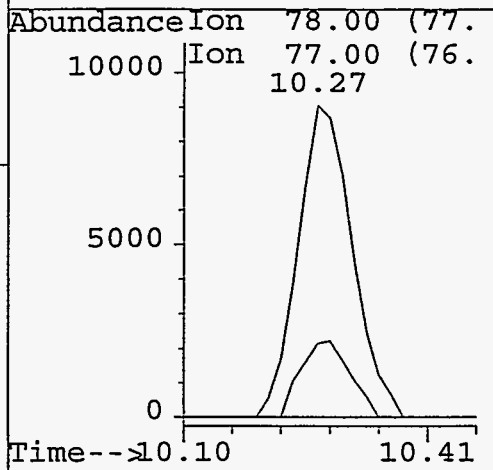
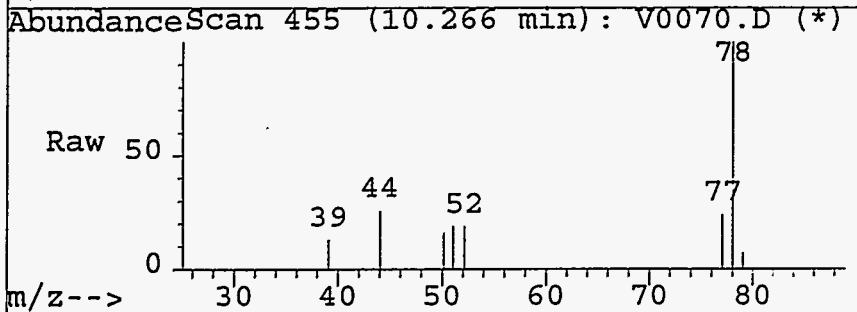
Method : C:\HPCHEM\1\METHODS\VTCLP.M  
Title : SW-846 TCLP Method  
Last Update : Tue Jan 16 13:11:07 1996  
Response via : Multiple Level Calibration





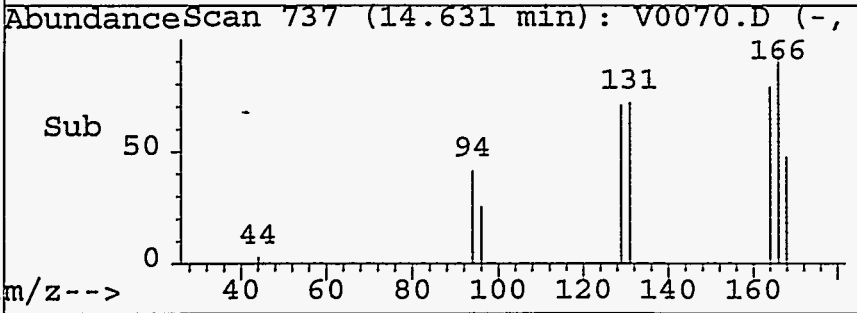
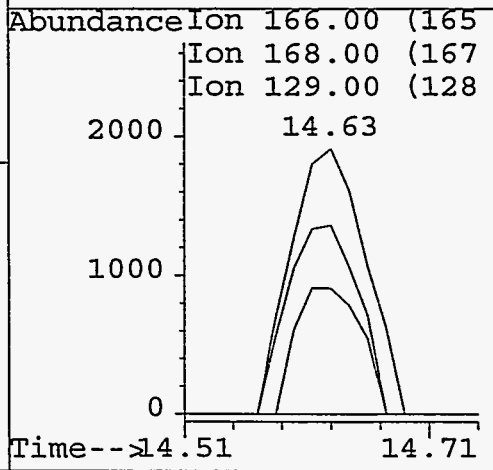
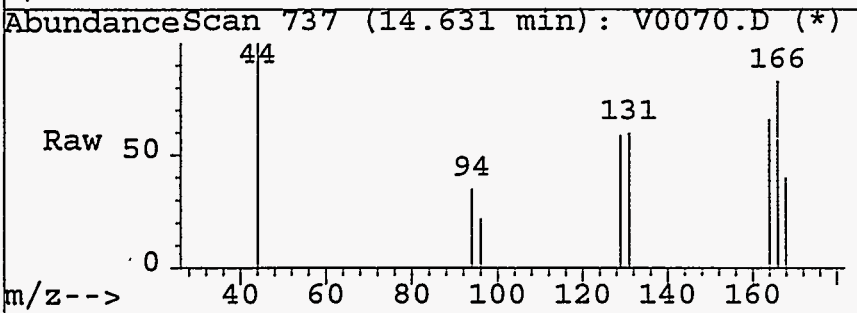
#9  
benzene  
Concen: 24.55 ug/L  
RT: 10.27 min Scan# 455  
Delta R.T. 0.00 min  
Lab File: V0070.D  
Acq: 16 Jan 96 12:14 pm

Tgt Ion	Resp	Lower	Upper
78	100		
77	23.9	4.3	44.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0



#14  
tetrachloroethene  
Concen: 9.65 ug/L  
RT: 14.63 min Scan# 737  
Delta R.T. 0.02 min  
Lab File: V0070.D  
Acq: 16 Jan 96 12:14 pm

Tgt Ion	Resp	Lower	Upper
166	100		
168	47.5	28.4	68.4
129	71.2	51.9	91.9
0	0.0	0.0	0.0



Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN1695\V0071.D  
 Acq On : 16 Jan 96 12:49 pm  
 Sample : ECO-002-4A  
 Misc : VOATCLP-04,W,5,TCLP,10X  
 Quant Time: Jan 16 14:05 1996

Vial: 8  
 Operator: WF  
 Inst : 5972 - In  
 Multiplr: 10.00

Method : C:\HPCHEM\1\METHODS\VTCLP.M  
 Title : SW-846 TCLP Method  
 Last Update : Tue Jan 16 13:11:07 1996  
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) pentafluorobenzene	9.34	168	851344	50.00	ug/L	0.00
6) 1,4-difluorobenzene	10.71	114	854131	50.00	ug/L	0.00
13) Chlorobenzene-d5	15.71	117	699891	50.00	ug/L	0.00
16) 1,4-dichlorobenzene-d4	19.97	152	474320	50.00	ug/L	0.00
System Monitoring Compounds						%Recovery
5) dibromofluoromethane	9.17	113	410704	52.91	ug/L	105.81%
12) toluene-d8	13.28	98	809358	50.02	ug/L	100.04%
17) 4-bromofluorobenzene	17.80	95	540166	47.19	ug/L	94.39%
Target Compounds						Qvalue
9) benzene	10.28	78	3094	1.93	ug/L #	51
18) 1,4-dichlorobenzene	20.01	146	146134	99.85	ug/L m	99

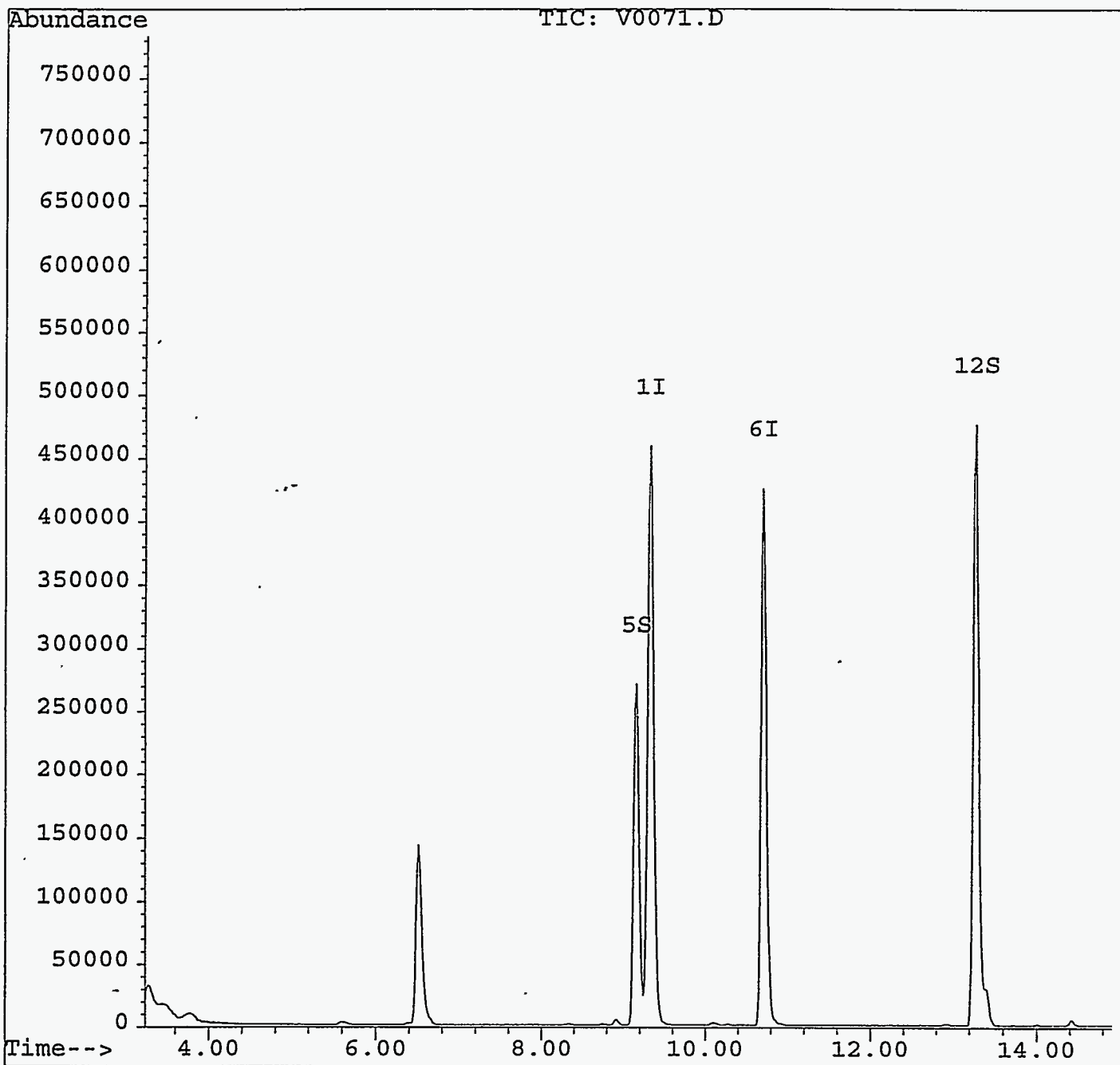
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN1695\V0071.D  
Acq On : 16 Jan 96 12:49 pm  
Sample : ECO-002-4A  
Misc : VOATCLP-04,W,5,TCLP,10X  
Quant Time: Jan 16 14:05 1996

Vial: 8  
Operator: WF  
Inst : 5972 - In  
Multiplr: 10.00

Method : C:\HPCHEM\1\METHODS\VTCLP.M  
Title : SW-846 TCLP Method  
Last Update : Tue Jan 16 13:11:07 1996  
Response via : Multiple Level Calibration



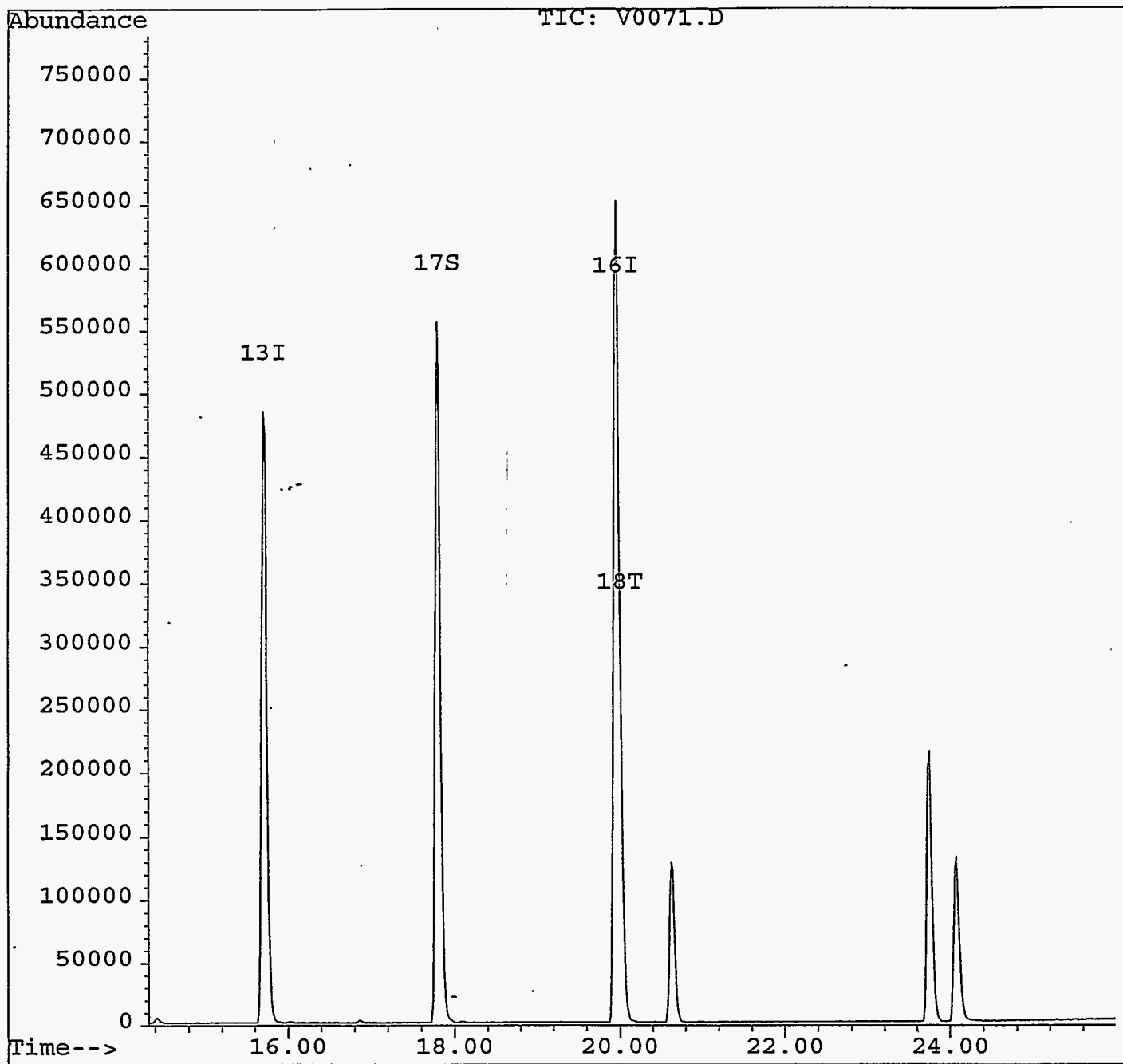


Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN1695\V0071.D  
Acq On : 16 Jan 96 12:49 pm  
Sample : ECO-002-4A  
Misc : VOATCLP-04,W,5,TCLP,10X  
Quant Time: Jan 16 14:05 1996

Vial: 8  
Operator: WF  
Inst : 5972 - In  
Multiplr: 10.00

Method : C:\HPCHEM\1\METHODS\VTCLP.M  
Title : SW-846 TCLP Method  
Last Update : Tue Jan 16 13:11:07 1996  
Response via : Multiple Level Calibration



Quantitation Report

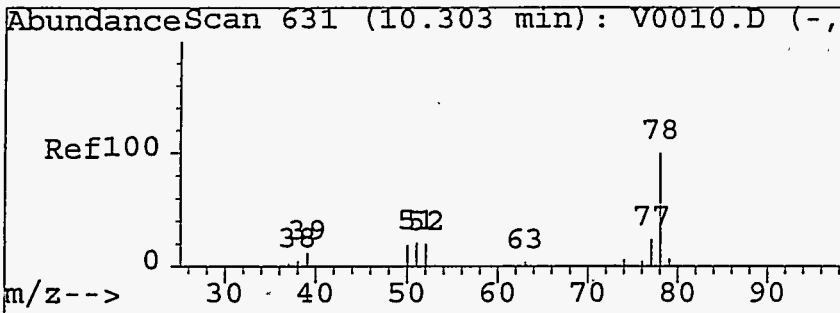
Data File : C:\HPCHEM\1\DATA\JAN1695\V0072.D  
 Acq On : 16 Jan 96 1:24 pm  
 Sample : ECO-002-5A  
 Misc : VOATCLP-05,W,5,TCLP,10X  
 Quant Time: Jan 16 14:07 1996

Vial: 9  
 Operator: WF  
 Inst : 5972 - In  
 Multiplr: 10.00

Method : C:\HPCHEM\1\METHODS\VTCLP.M  
 Title : SW-846 TCLP Method  
 Last Update : Tue Jan 16 13:11:07 1996  
 Response via : Multiple Level Calibration

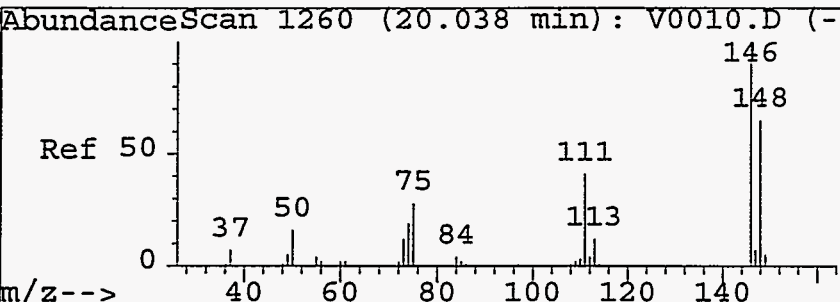
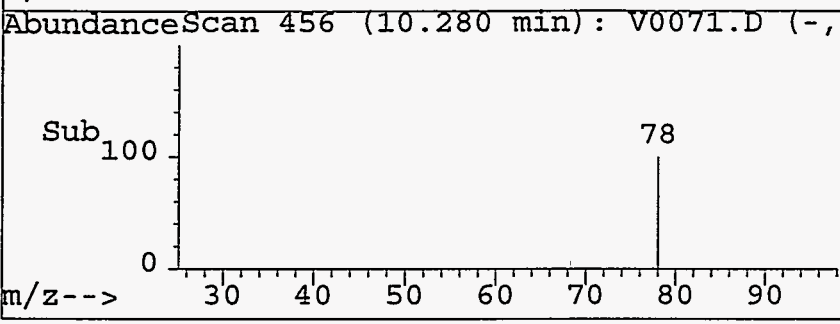
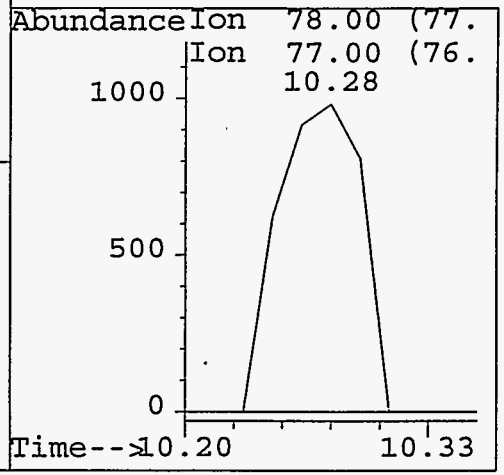
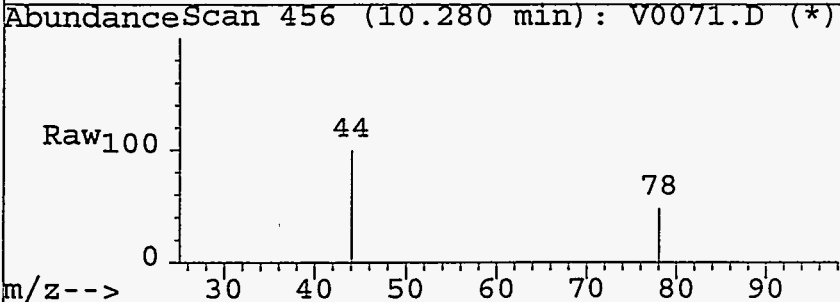
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) pentafluorobenzene	9.35	168	850537	50.00	ug/L	0.01
6) 1,4-difluorobenzene	10.71	114	866700	50.00	ug/L	0.00
13) Chlorobenzene-d5	15.73	117	696187	50.00	ug/L	0.01
16) 1,4-dichlorobenzene-d4	19.97	152	456686	50.00	ug/L	0.00
						%Recovery
System Monitoring Compounds						
5) dibromofluoromethane	9.16	113	396251	51.09	ug/L	102.19%
12) toluene-d8	13.28	98	808570	49.25	ug/L	98.49%
17) 4-bromofluorobenzene	17.80	95	525343	47.67	ug/L	95.34%
						Qvalue
Target Compounds						
9) benzene	10.28	78	5390	3.31	ug/L #	51
18) 1,4-dichlorobenzene	20.03	146	122250	86.76	ug/L m	97

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



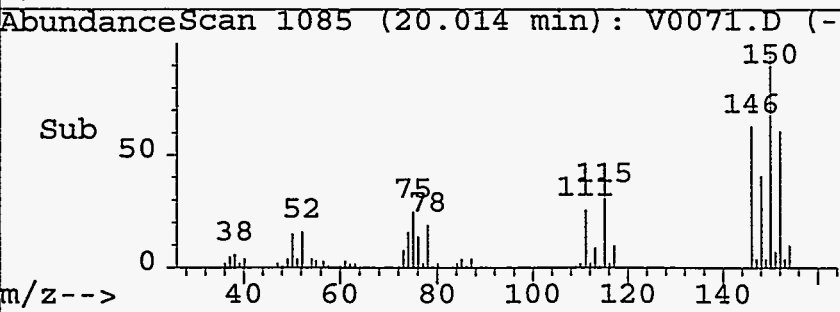
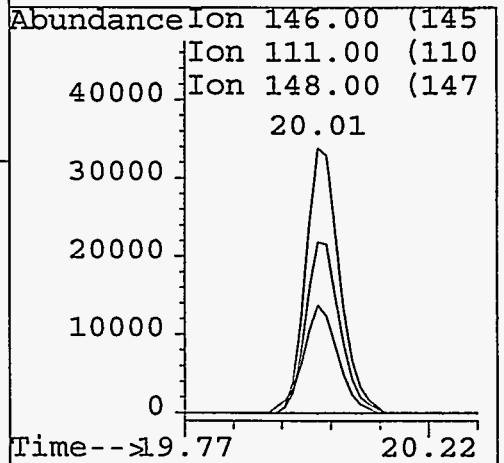
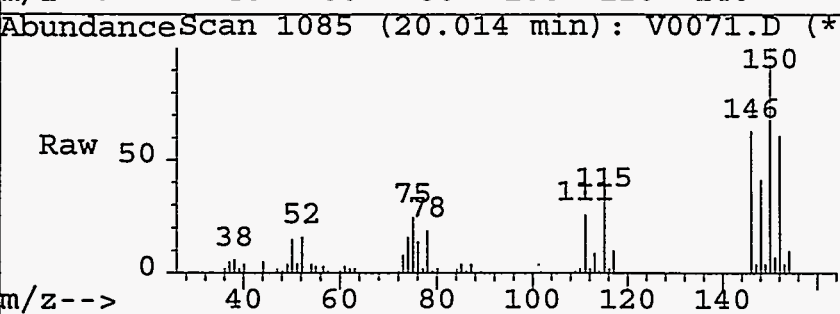
#9  
benzene  
Concen: 1.93 ug/L  
RT: 10.28 min Scan# 456  
Delta R.T. 0.02 min  
Lab File: V0071.D  
Acq: 16 Jan 96 12:49 pm

Tgt Ion	Resp	Lower	Upper
78	3094		
77	0.0	4.3	44.3#
0	0.0	0.0	0.0
0	0.0	0.0	0.0



#18  
1,4-dichlorobenzene  
Concen: 99.85 ug/L m  
RT: 20.01 min Scan# 1085  
Delta R.T. 0.00 min  
Lab File: V0071.D  
Acq: 16 Jan 96 12:49 pm

Tgt Ion	Resp	Lower	Upper
146	146134		
111	40.6	22.2	62.2
148	64.5	44.8	84.8
0	0.0	0.0	0.0

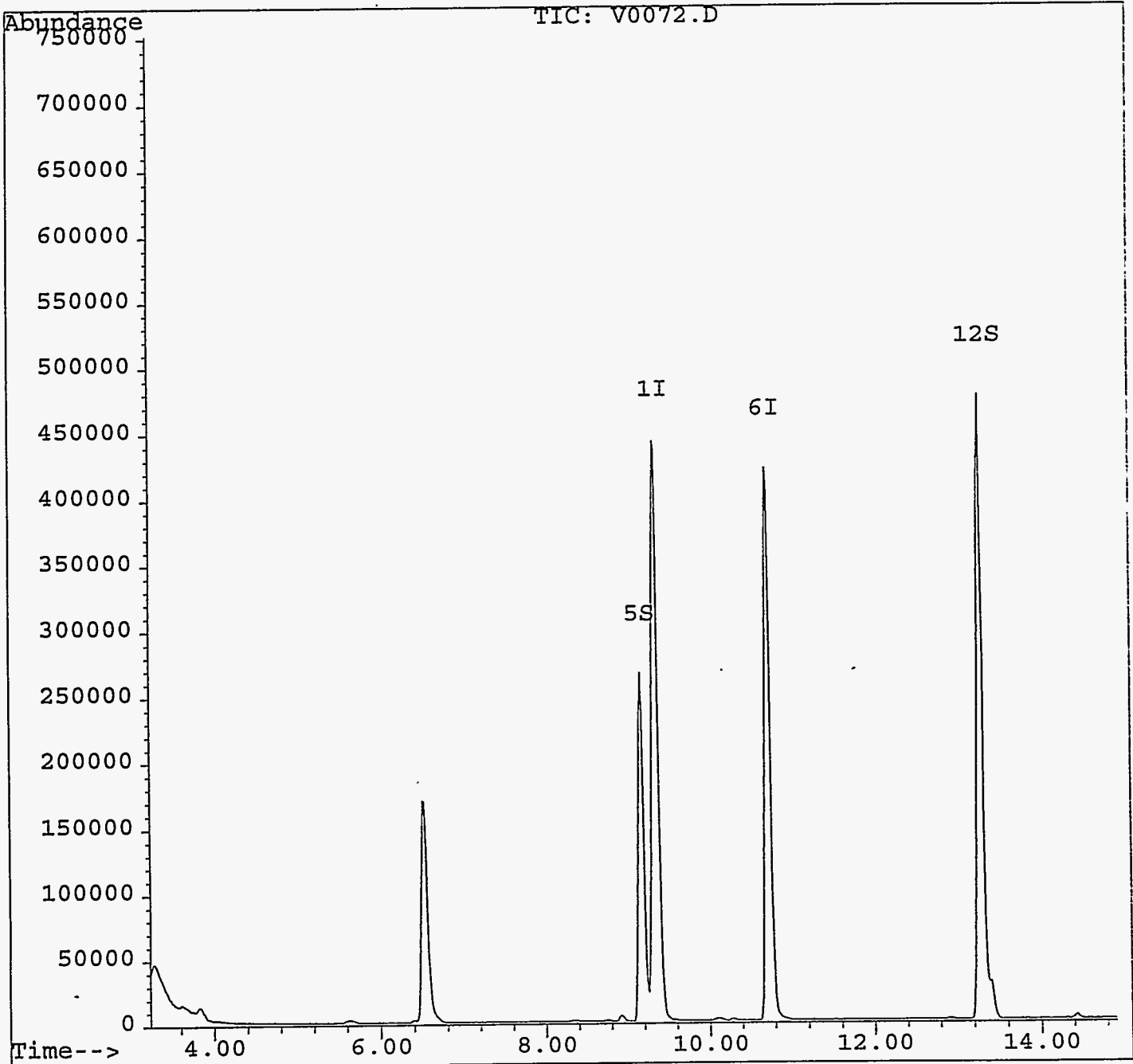


Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN1695\V0072.D  
Acq On : 16 Jan 96 1:24 pm  
Sample : ECO-002-5A  
Misc : VOATCLP-05,W,5,TCLP,10X  
Quant Time: Jan 16 14:07 1996

Vial: 9  
Operator: WF  
Inst : 5972 - In  
Multiplr: 10.00

Method : C:\HPCHEM\1\METHODS\VTCLP.M  
Title : SW-846 TCLP Method  
Last Update : Tue Jan 16 13:11:07 1996  
Response via : Multiple Level Calibration

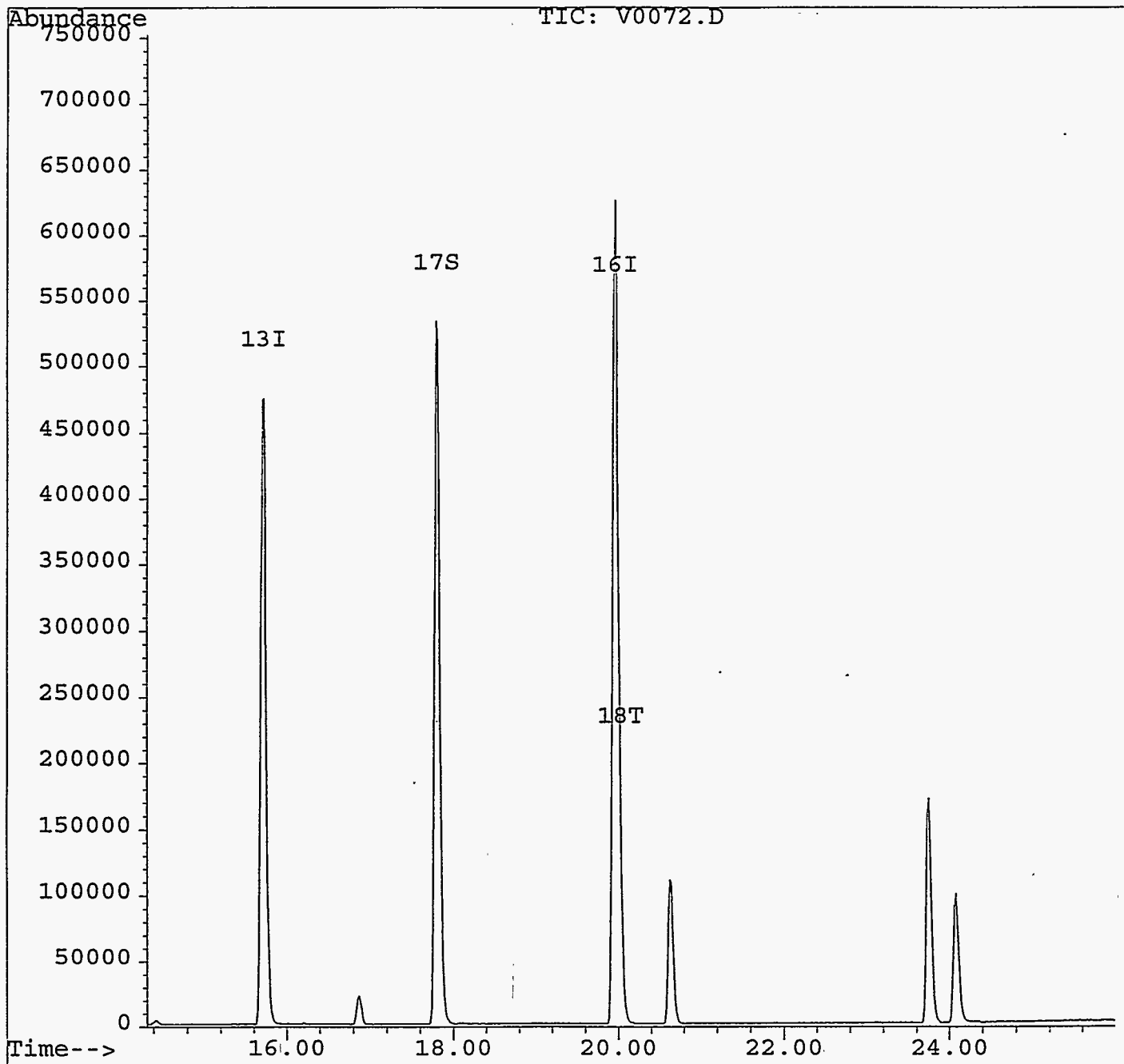


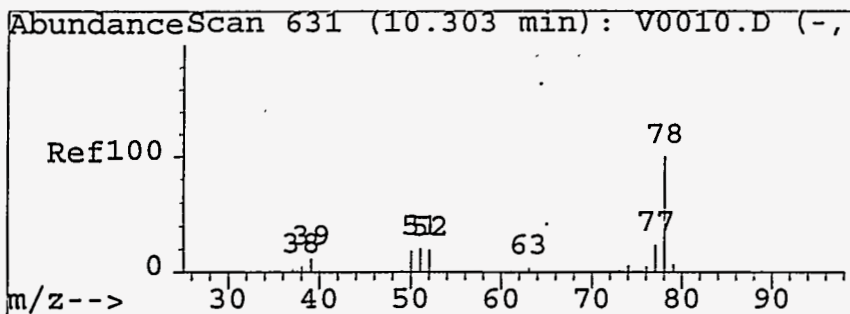
Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN1695\V0072.D  
Acq On : 16 Jan 96 1:24 pm  
Sample : ECO-002-5A  
Misc : VOATCLP-05,W,5,TCLP,10X  
Quant Time: Jan 16 14:07 1996

Vial: 9  
Operator: WF  
Inst : 5972 - In  
Multiplr: 10.00

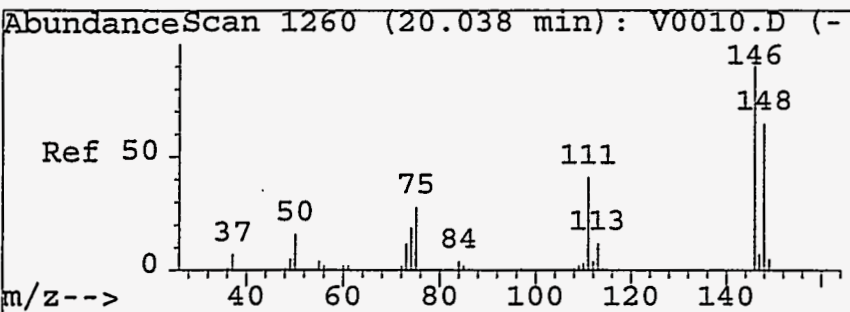
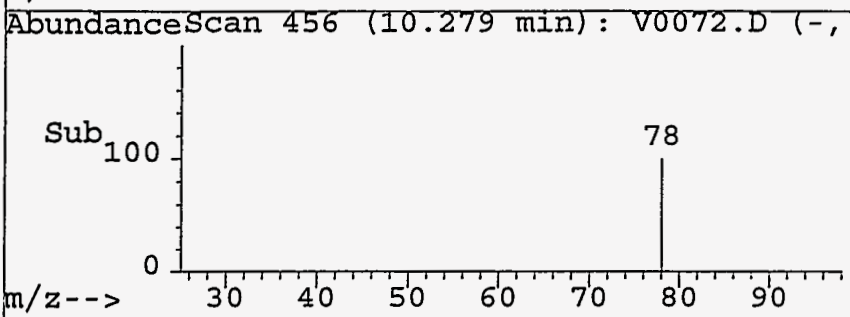
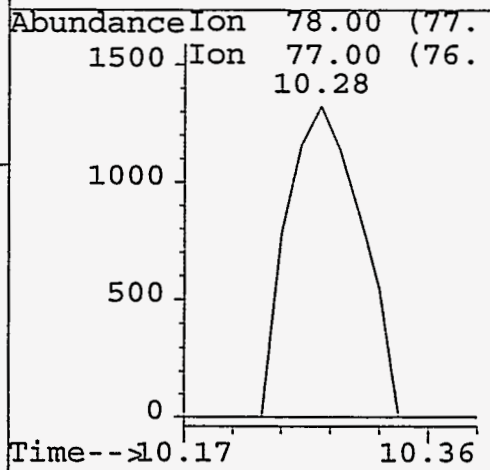
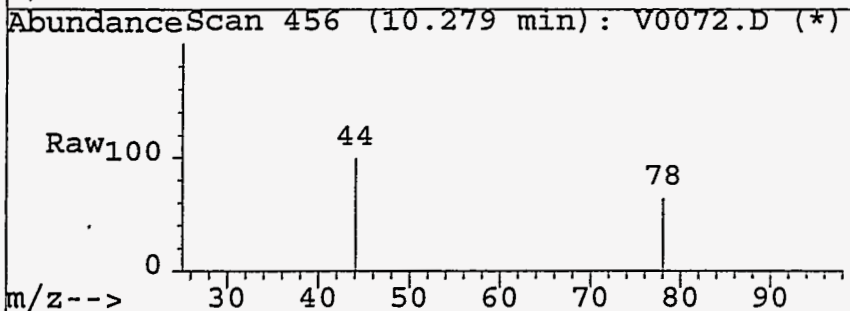
Method : C:\HPCHEM\1\METHODS\VTCLP.M  
Title : SW-846 TCLP Method  
Last Update : Tue Jan 16 13:11:07 1996  
Response via : Multiple Level Calibration





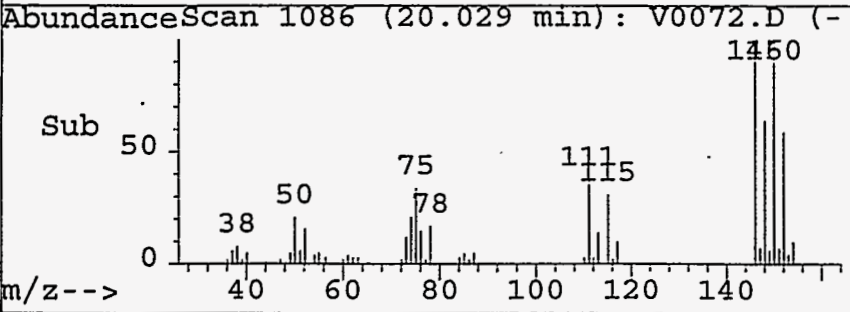
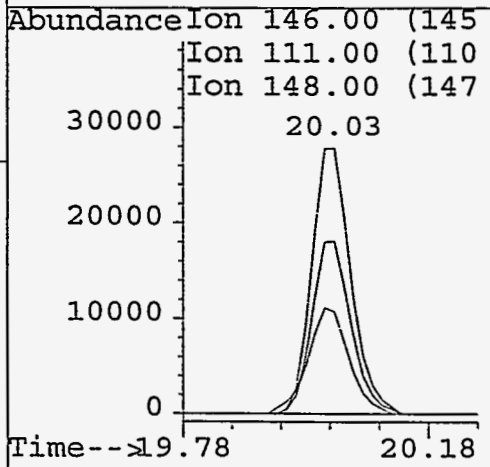
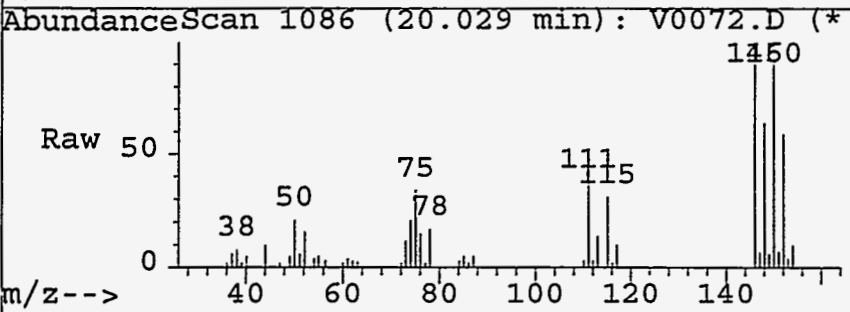
#9  
benzene  
Concen: 3.31 ug/L  
RT: 10.28 min Scan# 456  
Delta R.T. 0.01 min  
Lab File: V0072.D  
Acq: 16 Jan 96 1:24 pm

Tgt Ion	Ratio	Lower	Upper
78	100		
77	0.0	4.3	44.3#
0	0.0	0.0	0.0
0	0.0	0.0	0.0



#18  
1,4-dichlorobenzene  
Concen: 86.76 ug/L m  
RT: 20.03 min Scan# 1086  
Delta R.T. 0.01 min  
Lab File: V0072.D  
Acq: 16 Jan 96 1:24 pm

Tgt Ion	Ratio	Lower	Upper
146	100		
111	38.5	22.2	62.2
148	65.1	44.8	84.8
0	0.0	0.0	0.0



Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN1695\V0073.D  
 Acq On : 16 Jan 96 2:00 pm  
 Sample : ECO-002-6A  
 Misc : VOATCLP-06,W,5,TCLP,10X  
 Quant Time: Jan 17 9:38 1996

Vial: 11  
 Operator: WF  
 Inst : 5972 - In  
 Multiplr: 10.00

Method : C:\HPCHEM\1\METHODS\VTCLP.M  
 Title : SW-846 TCLP Method  
 Last Update : Tue Jan 16 13:11:07 1996  
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) pentafluorobenzene	9.35	168	832522	50.00	ug/L	0.01
6) 1,4-difluorobenzene	10.71	114	818730	50.00	ug/L	0.00
13) Chlorobenzene-d5	15.73	117	664933	50.00	ug/L	0.01
16) 1,4-dichlorobenzene-d4	19.97	152	455919	50.00	ug/L	0.00
						%Recovery
System Monitoring Compounds						
5) dibromofluoromethane	9.16	113	389686	51.33	ug/L	102.67%
12) toluene-d8	13.28	98	743541	47.94	ug/L	95.88%
17) 4-bromofluorobenzene	17.80	95	499014	45.36	ug/L	90.72%
						Qvalue
Target Compounds						
18) 1,4-dichlorobenzene	20.01	146	2570	1.83	ug/L m	79

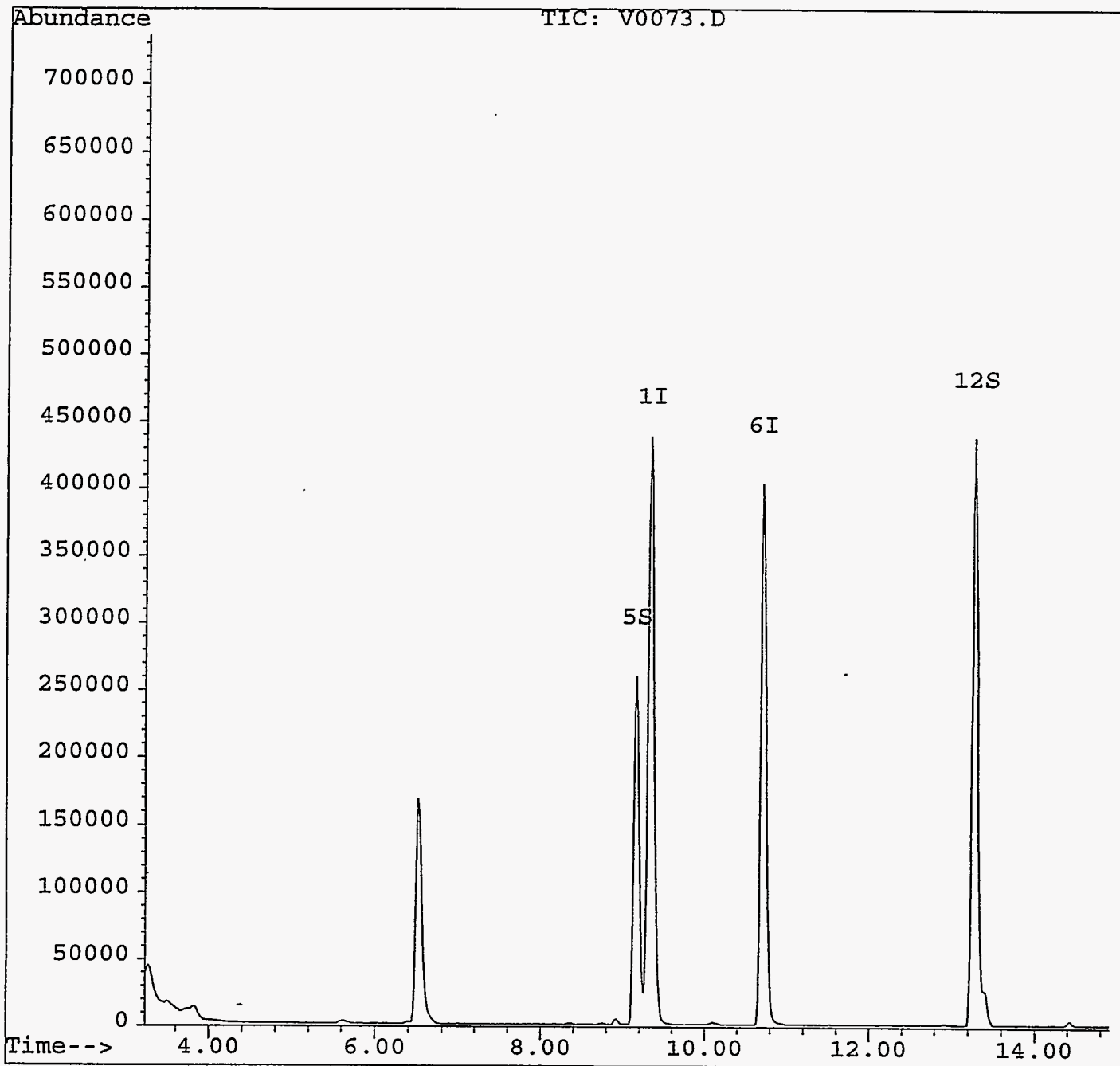
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN1695\V0073.D  
Acq On : 16 Jan 96 2:00 pm  
Sample : ECO-002-6A  
Misc : VOATCLP-06,W,5,TCLP,10X  
Quant Time: Jan 17 9:38 1996

Vial: 11  
Operator: WF  
Inst : 5972 - In  
Multiplr: 10.00

Method : C:\HPCHEM\1\METHODS\VTCLP.M  
Title : SW-846 TCLP Method  
Last Update : Tue Jan 16 13:11:07 1996  
Response via : Multiple Level Calibration



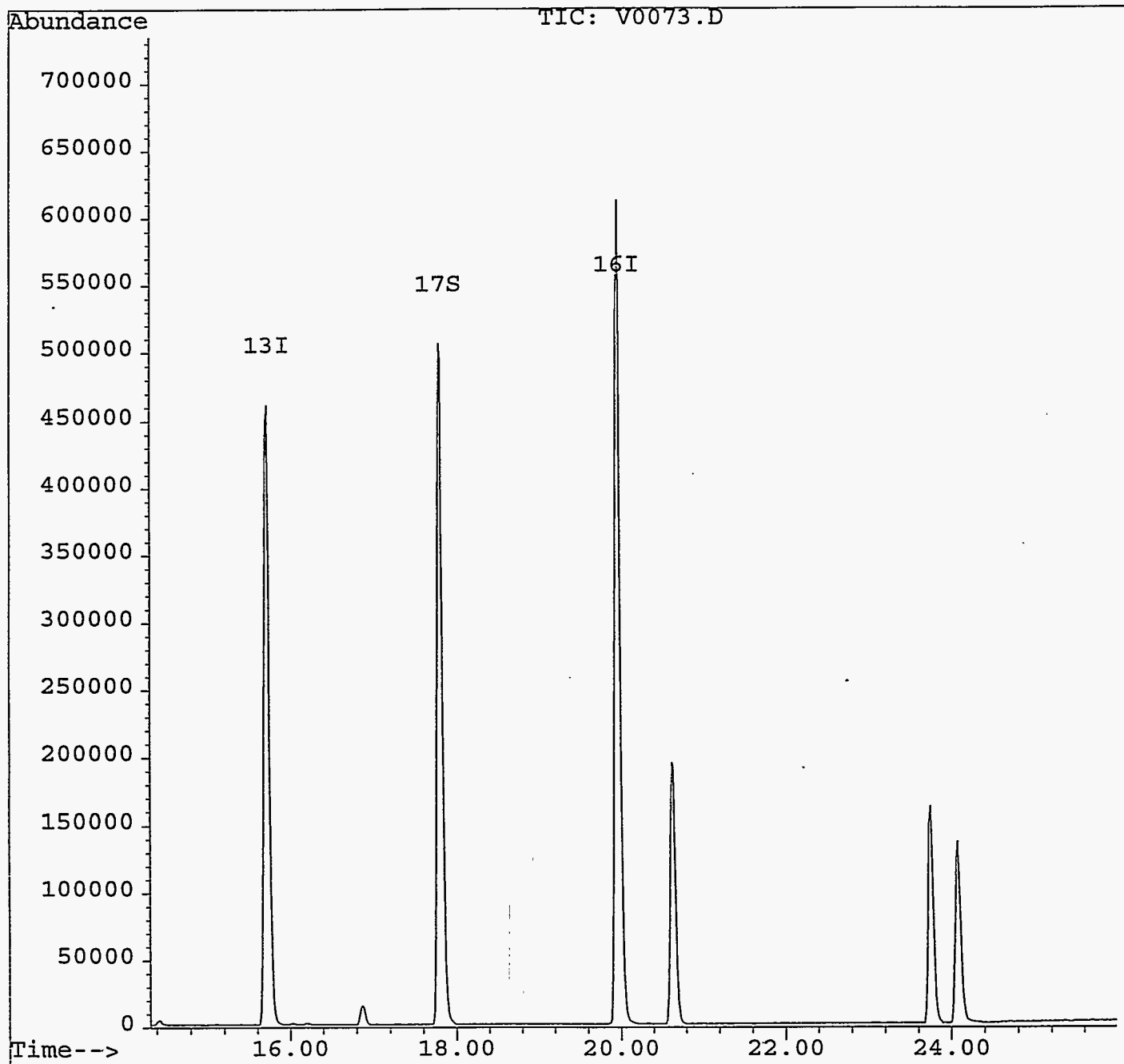


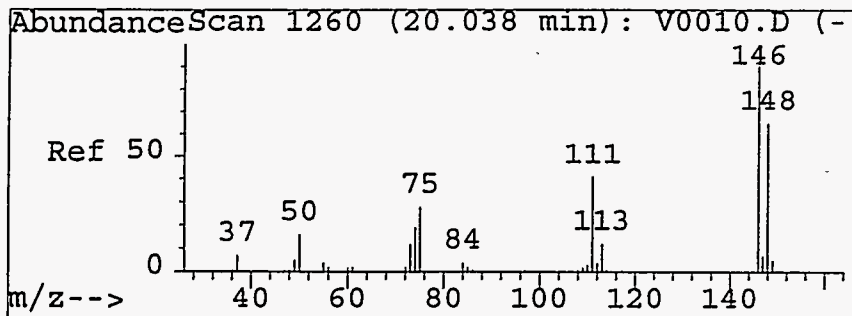
Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN1695\V0073.D  
Acq On : 16 Jan 96 2:00 pm  
Sample : ECO-002-6A  
Misc : VOATCLP-06,W,5,TCLP,10X  
Quant Time: Jan 17 9:38 1996

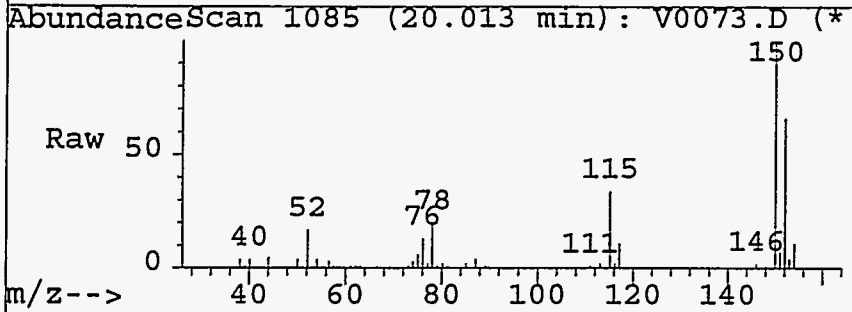
Vial: 11  
Operator: WF  
Inst : 5972 - In  
Multiplr: 10.00

Method : C:\HPCHEM\1\METHODS\VTCLP.M  
Title : SW-846 TCLP Method  
Last Update : Tue Jan 16 13:11:07 1996  
Response via : Multiple Level Calibration

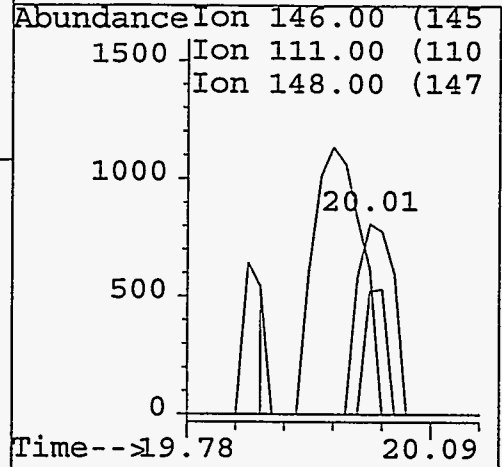
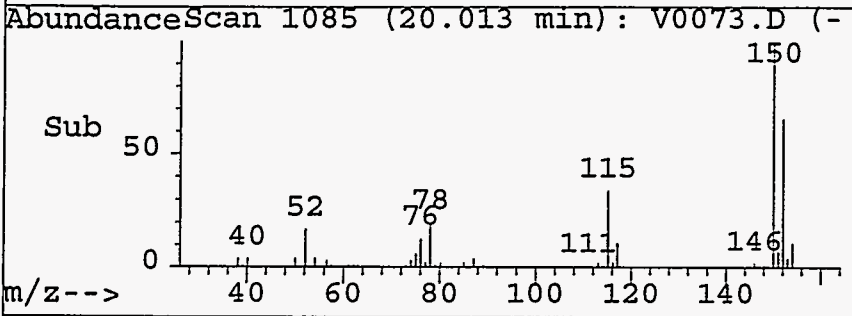




#18  
 1,4-dichlorobenzene  
 Concen: 1.83 ug/L m  
 RT: 20.01 min Scan# 1085  
 Delta R.T. -0.00 min  
 Lab File: V0073.D  
 Acq: 16 Jan 96 2:00 pm



Tgt Ion:	146	Resp:	2570
Ion Ratio	Lower	Upper	
146	100		
111	76.0	22.2	62.2#
148	64.5	44.8	84.8
0	0.0	0.0	0.0



Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN1695\V0074.D  
 Acq On : 16 Jan 96 2:36 pm  
 Sample : ECO-002-7A  
 Misc : VOATCLP-07,W,5,TCLP,10X  
 Quant Time: Jan 17 9:07 1996

Vial: 12  
 Operator: WF  
 Inst : 5972 - In  
 Multiplr: 10.00

Method : C:\HPCHEM\1\METHODS\VTCLP.M  
 Title : SW-846 TCLP Method  
 Last Update : Tue Jan 16 13:11:07 1996  
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) pentafluorobenzene	9.35	168	837828	50.00	ug/L	0.02
6) 1,4-difluorobenzene	10.72	114	821196	50.00	ug/L	0.00
13) Chlorobenzene-d5	15.73	117	670868	50.00	ug/L	0.02
16) 1,4-dichlorobenzene-d4	19.97	152	457209	50.00	ug/L	0.00
System Monitoring Compounds						%Recovery
5) dibromofluoromethane	9.17	113	391444	51.24	ug/L	102.48%
12) toluene-d8	13.28	98	741549	47.67	ug/L	95.33%
17) 4-bromofluorobenzene	17.80	95	498420	45.18	ug/L	90.35%

Target Compounds

Qvalue

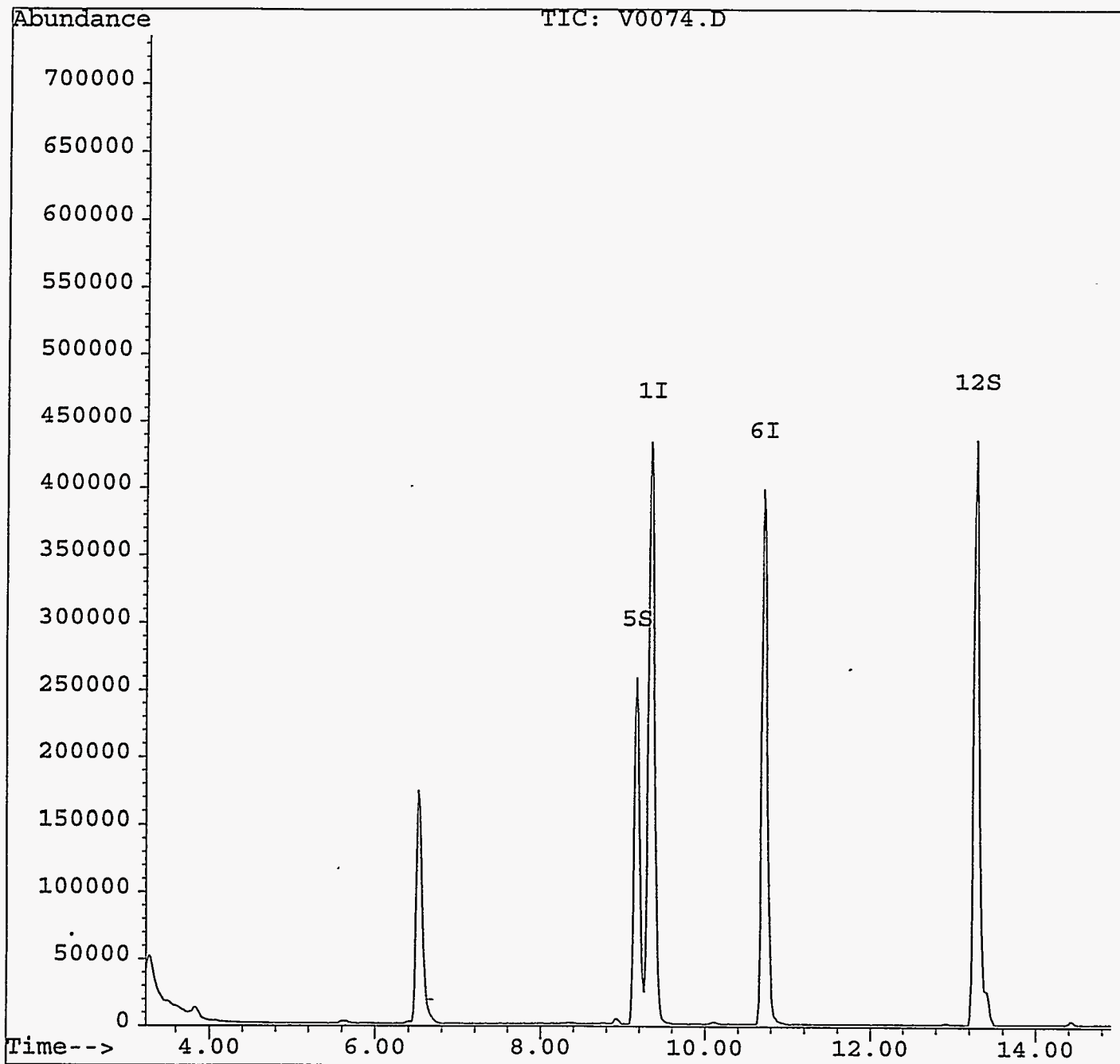
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN1695\V0074.D  
Acq On : 16 Jan 96 2:36 pm  
Sample : ECO-002-7A  
Misc : VOATCLP-07,W,5,TCLP,10X  
Quant Time: Jan 17 9:07 1996

Vial: 12  
Operator: WF  
Inst : 5972 - In  
Multiplr: 10.00

Method : C:\HPCHEM\1\METHODS\VTCLP.M  
Title : SW-846 TCLP Method  
Last Update : Tue Jan 16 13:11:07 1996  
Response via : Multiple Level Calibration

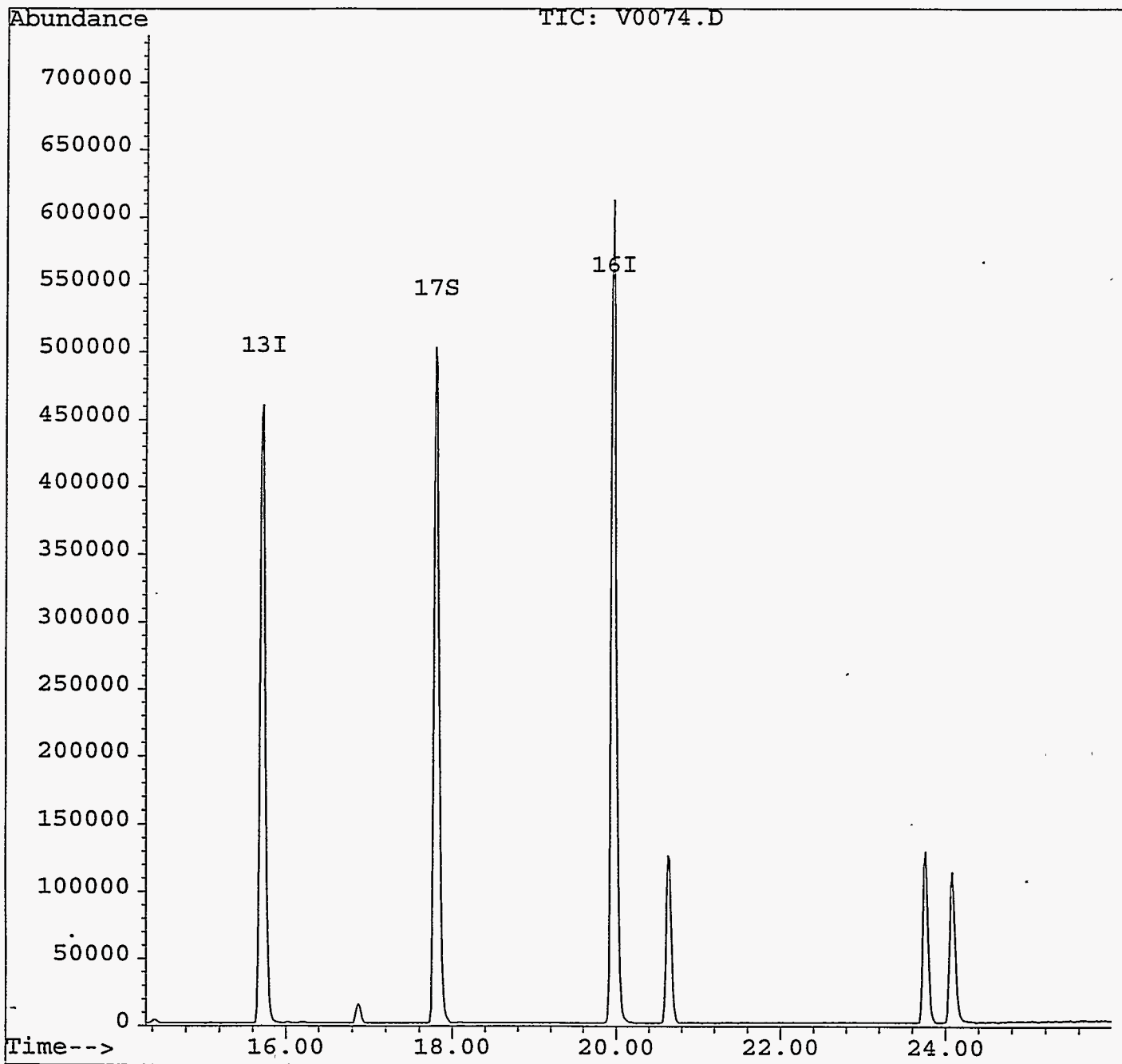


Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN1695\V0074.D  
Acq On : 16 Jan 96. 2:36 pm  
Sample : ECO-002-7A  
Misc : VOATCLP-07,W,5,TCLP,10X  
Quant Time: Jan 17 9:07 1996

Vial: 12  
Operator: WF  
Inst : 5972 - In  
Multiplr: 10.00

Method : C:\HPCHEM\1\METHODS\VTCLP.M  
Title : SW-846 TCLP Method  
Last Update : Tue Jan 16 13:11:07 1996  
Response via : Multiple Level Calibration



Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN1695\V0075.D  
 Acq On : 16 Jan 96 3:12 pm  
 Sample : ECO-002-1A  
 Misc : VOATCLP-01,W,5,TCLP  
 Quant Time: Jan 17 9:14 1996

Vial: 5  
 Operator: WF  
 Inst : 5972 - In  
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\VTCLP.M  
 Title : SW-846 TCLP Method  
 Last Update : Tue Jan 16 13:11:07 1996  
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) pentafluorobenzene	9.35	168	887621	50.00	ug/L	0.02
6) 1,4-difluorobenzene	10.73	114	924029	50.00	ug/L	0.02
13) Chlorobenzene-d5	15.73	117	738075	50.00	ug/L	0.02
16) 1,4-dichlorobenzene-d4	19.97	152	477406	50.00	ug/L	0.00
System Monitoring Compounds						%Recovery
5) dibromofluoromethane	9.17	113	398873	49.28	ug/L	98.57%
12) toluene-d8	13.28	98	892108	50.96	ug/L	101.92%
17) 4-bromofluorobenzene	17.82	95	564657	49.02	ug/L	98.03%
Target Compounds						Qvalue
9) benzene	10.28	78	26964	1.55	ug/L	96

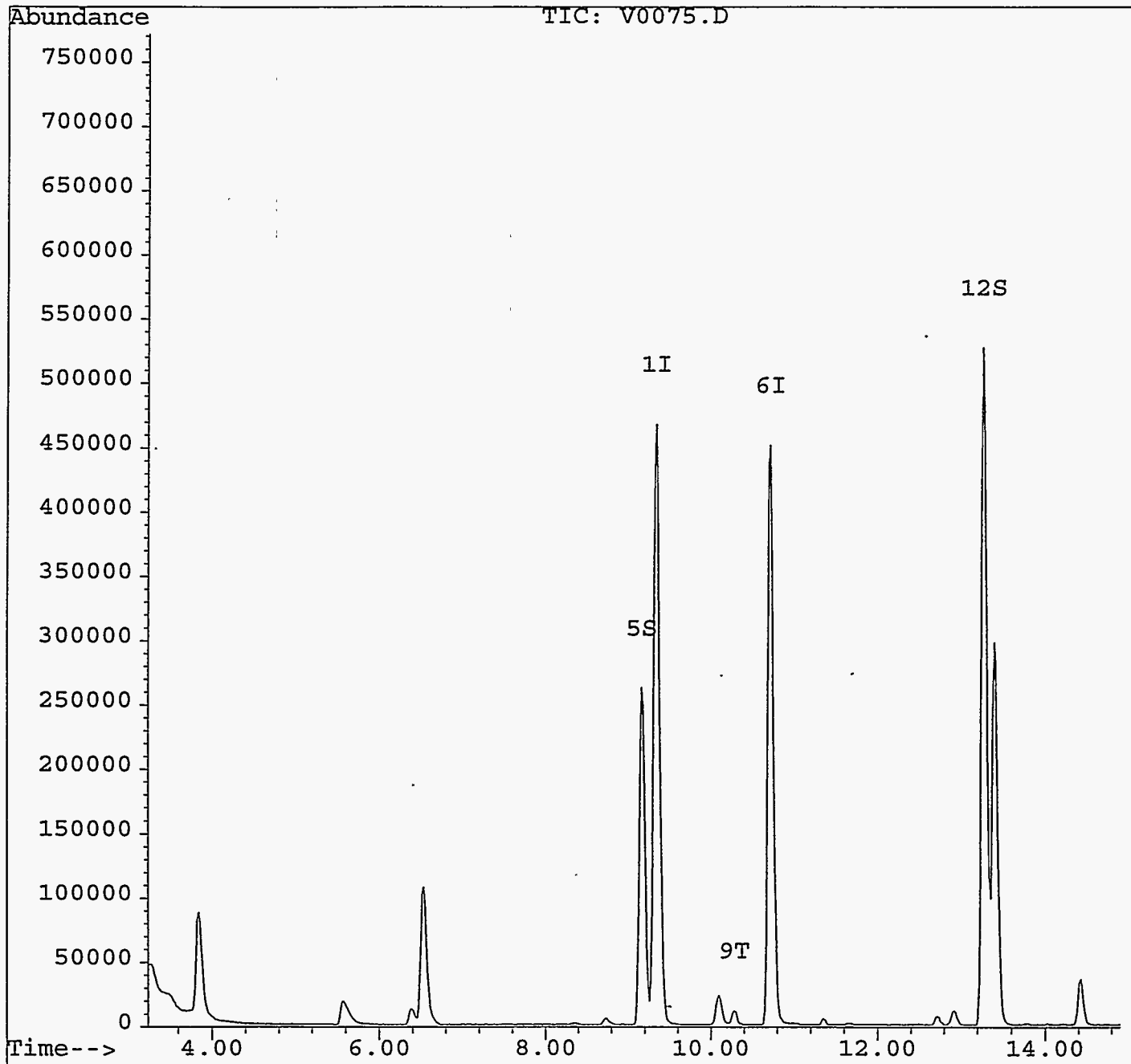
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN1695\V0075.D  
Acq On : 16 Jan 96 3:12 pm  
Sample : ECO-002-1A  
Misc : VOATCLP-01,W,5,TCLP  
Quant Time: Jan 17 9:14 1996

Vial: 5  
Operator: WF  
Inst : 5972 - In  
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\VTCLP.M  
Title : SW-846 TCLP Method  
Last Update : Tue Jan 16 13:11:07 1996  
Response via : Multiple Level Calibration

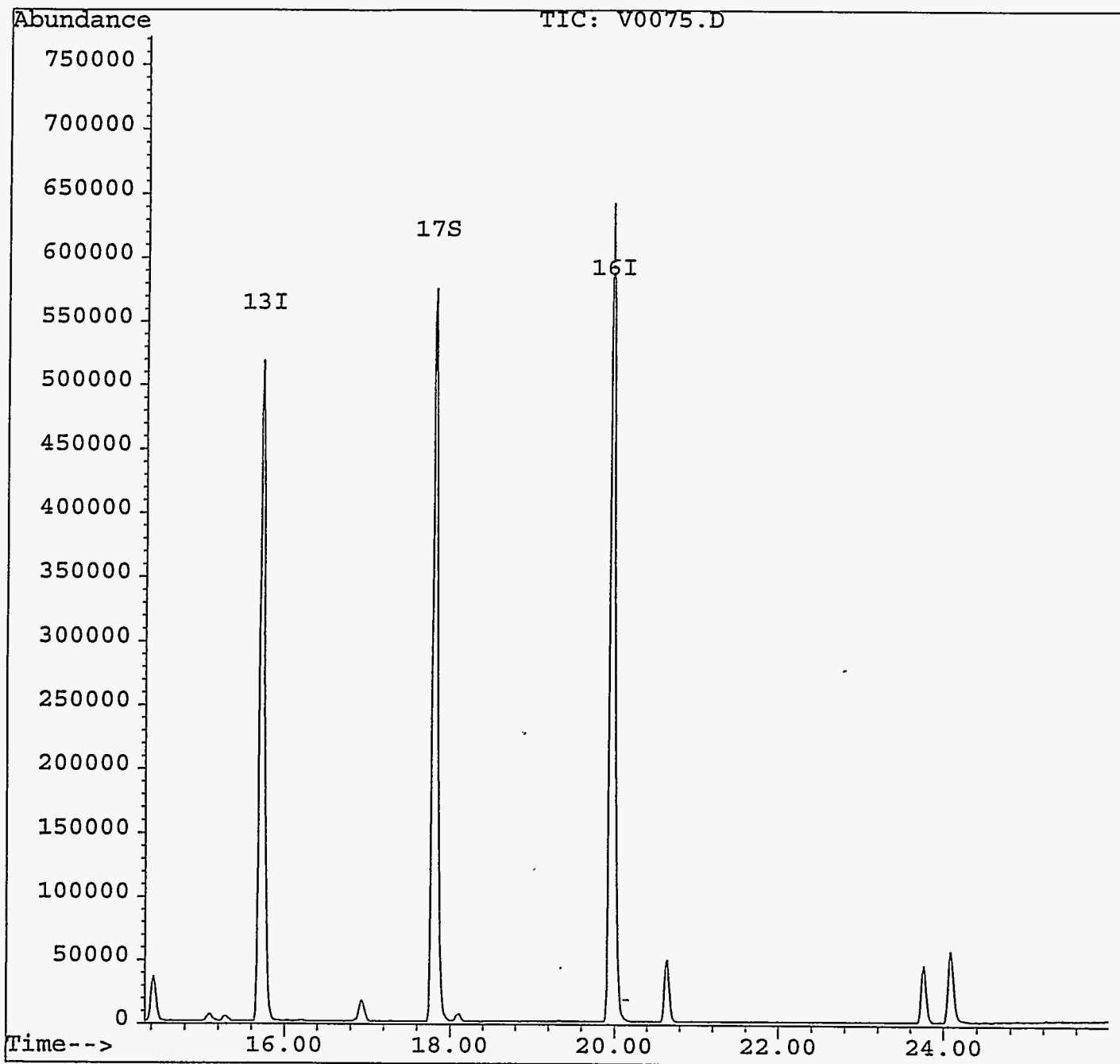


Quantitation Report

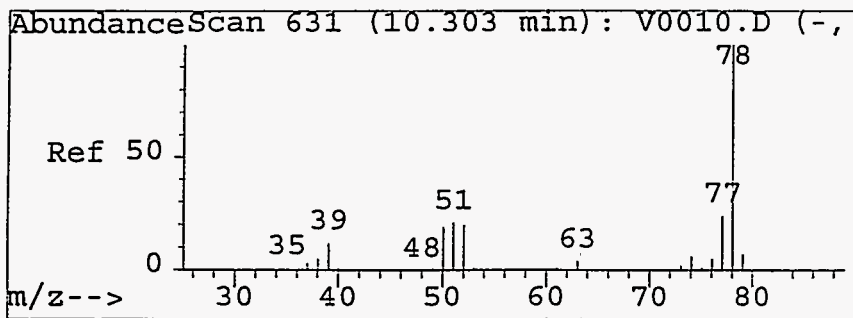
Data File : C:\HPCHEM\1\DATA\JAN1695\V0075.D  
Acq On : 16 Jan 96 3:12 pm  
Sample : ECO-002-1A  
Misc : VOATCLP-01,W,5,TCLP  
Quant Time: Jan 17 9:14 1996

Vial: 5  
Operator: WF  
Inst : 5972 - In  
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\VTCLP.M  
Title : SW-846 TCLP Method  
Last Update : Tue Jan 16 13:11:07 1996  
Response via : Multiple Level Calibration

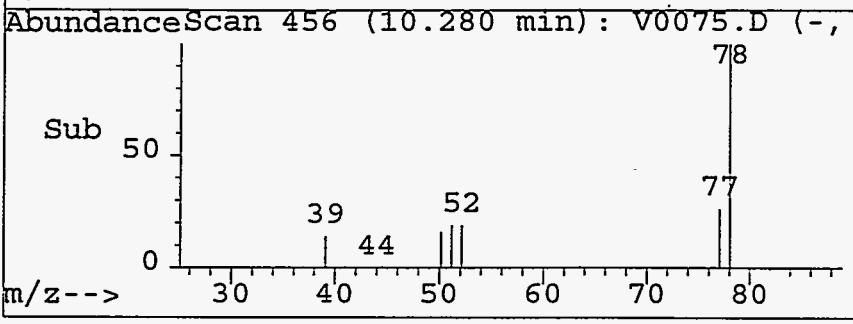
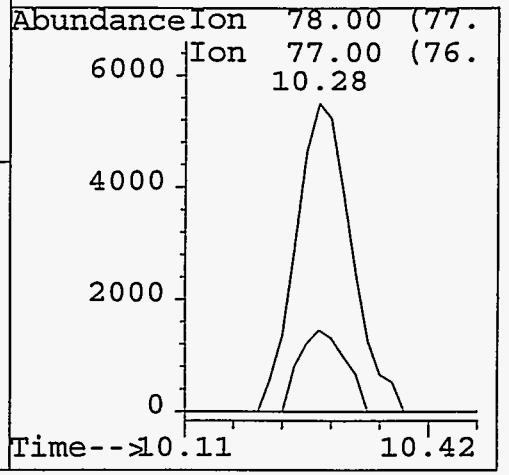
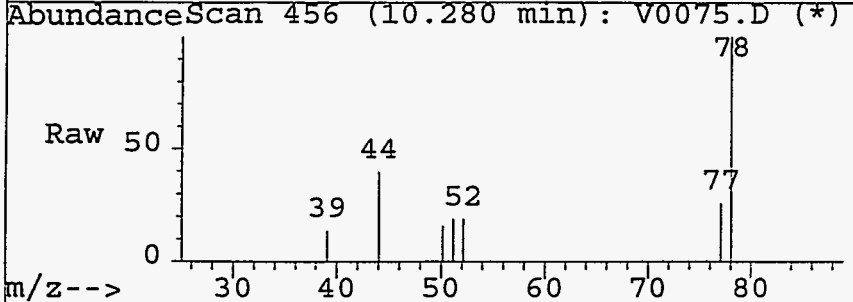






#9  
 benzene  
 Concen: 1.55 ug/L  
 RT: 10.28 min Scan# 456  
 Delta R.T. 0.02 min  
 Lab File: V0075.D  
 Acq: 16 Jan 96 3:12 pm

Tgt Ion	Resp	Lower	Upper
78	26964		
77	26.3	4.3	44.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0



## Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN1695\V0076.D  
 Acq On : 16 Jan 96 3:47 pm  
 Sample : ECO-002-2A  
 Misc : VOATCLP-02,W,5,TCLP  
 Quant Time: Jan 17 9:16 1996

Vial: 6  
 Operator: WF  
 Inst : 5972 - In  
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\VTCLP.M  
 Title : SW-846 TCLP Method  
 Last Update : Tue Jan 16 13:11:07 1996  
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) pentafluorobenzene	9.35	168	901316	50.00	ug/L	0.02
6) 1,4-difluorobenzene	10.73	114	939635	50.00	ug/L	0.02
13) Chlorobenzene-d5	15.73	117	752922	50.00	ug/L	0.02
16) 1,4-dichlorobenzene-d4	19.97	152	492784	50.00	ug/L	0.00
System Monitoring Compounds						%Recovery
5) dibromofluoromethane	9.17	113	394583	48.01	ug/L	96.02%
12) toluene-d8	13.29	98	892705	50.15	ug/L	100.30%
17) 4-bromofluorobenzene	17.80	95	568884	47.84	ug/L	95.68%
Target Compounds						Qvalue
9) benzene	10.28	78	484542	27.43	ug/L	100
11) trichloroethene	11.35	95	7292	1.01	ug/L	95
14) tetrachloroethene	14.63	166	76102	8.79	ug/L	99

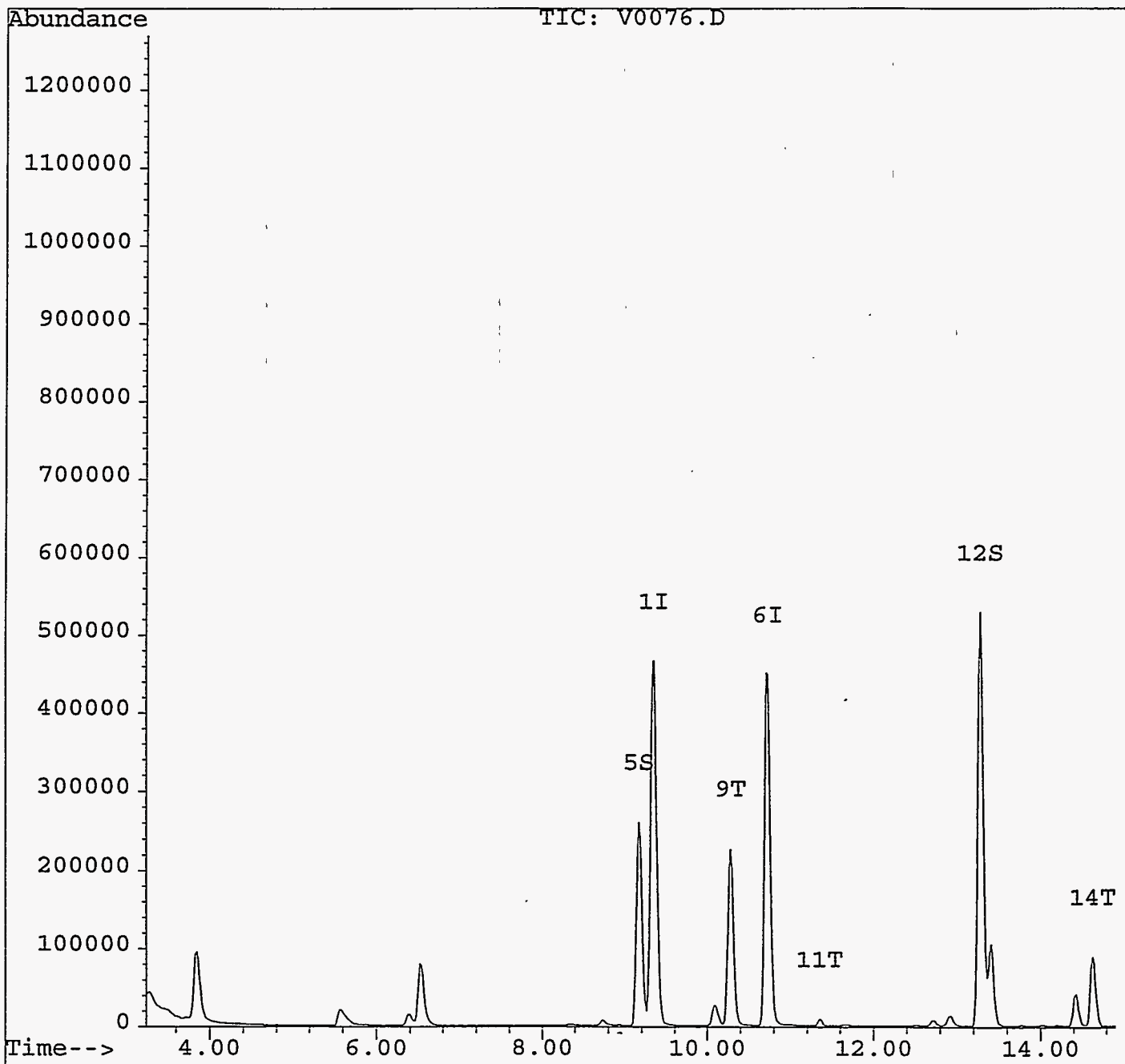
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN1695\V0076.D  
Acq On : 16 Jan 96 3:47 pm  
Sample : ECO-002-2A  
Misc : VOATCLP-02,W,5,TCLP  
Quant Time: Jan 17 9:16 1996

Vial: 6  
Operator: WF  
Inst : 5972 - In  
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\VTCLP.M  
Title : SW-846 TCLP Method  
Last Update : Tue Jan 16 13:11:07 1996  
Response via : Multiple Level Calibration

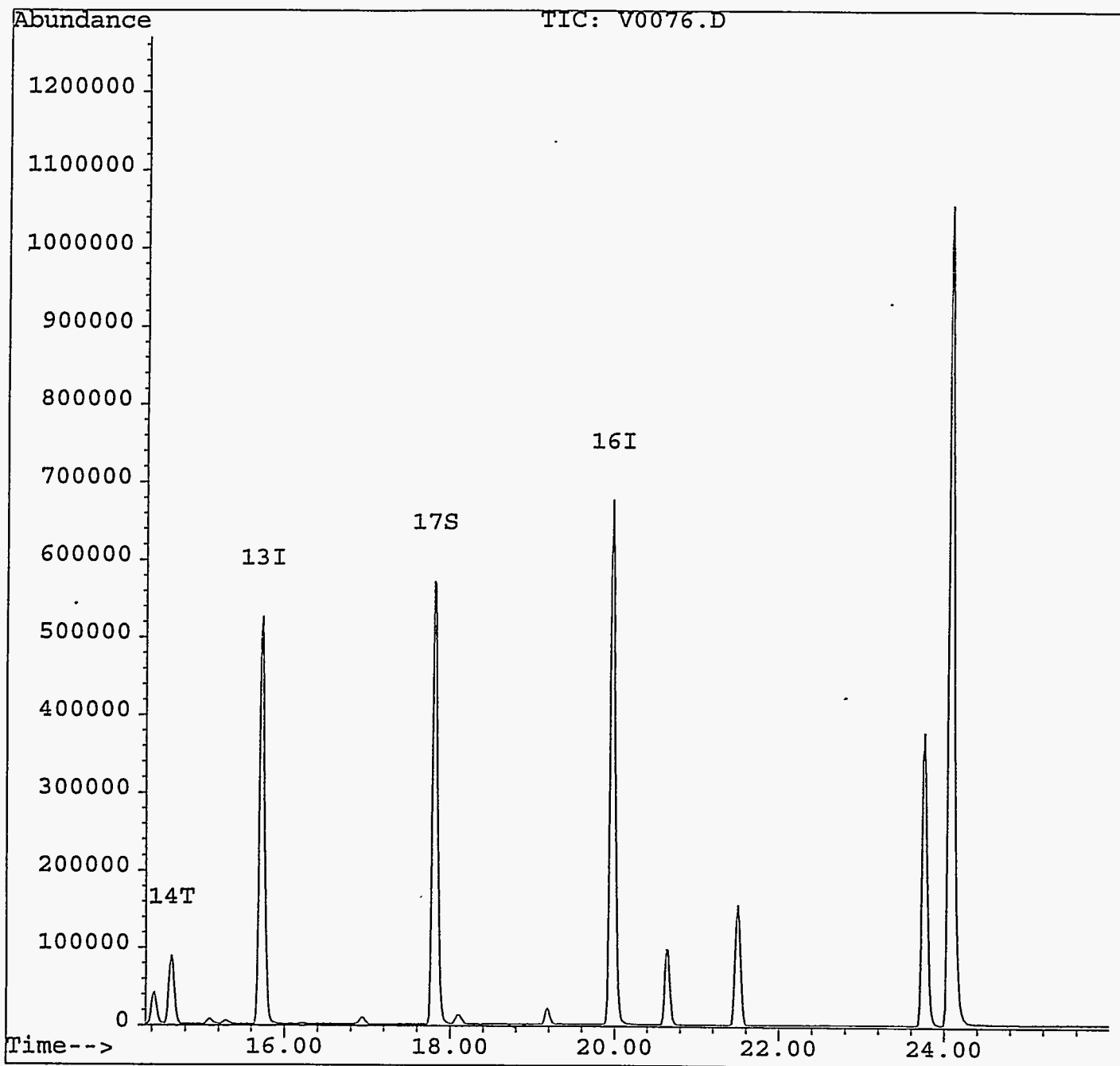


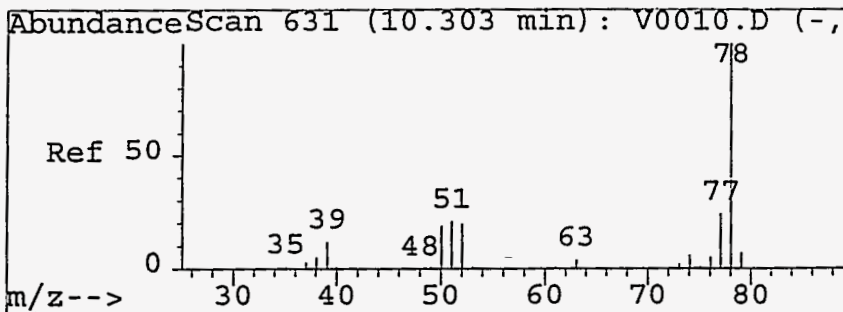
Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN1695\V0076.D  
Acq On : 16 Jan 96 3:47 pm  
Sample : ECO-002-2A  
Misc : VOATCLP-02,W,5,TCLP  
Quant Time: Jan 17 9:16 1996

Vial: 6  
Operator: WF  
Inst : 5972 - In  
Multiplr: 1.00

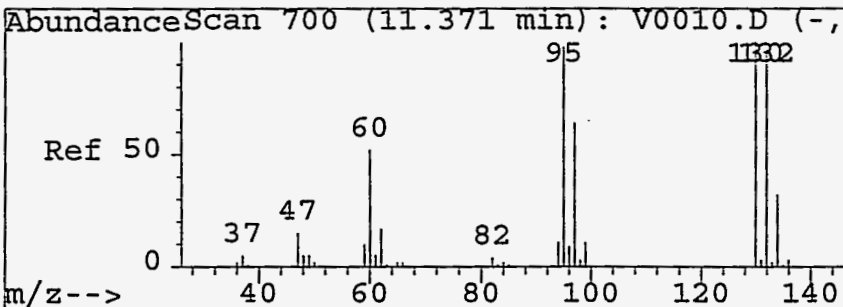
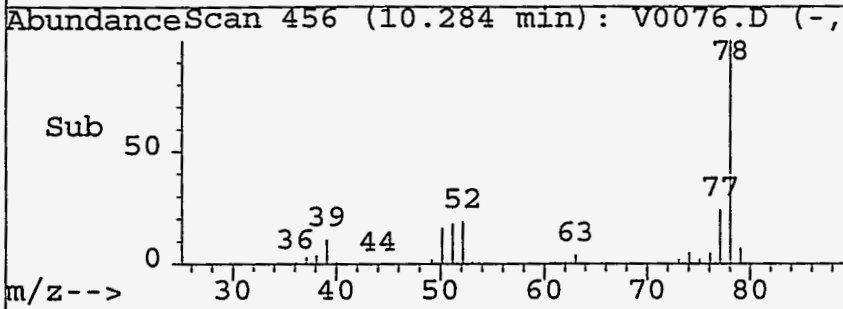
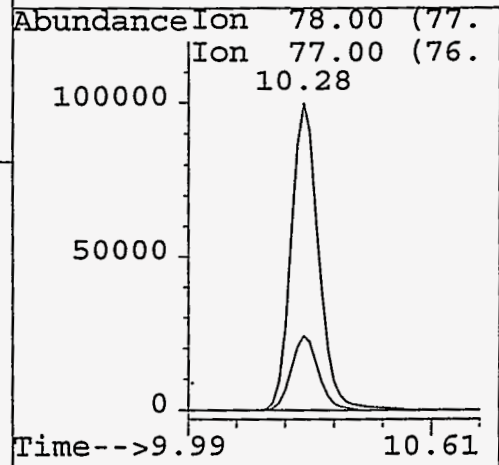
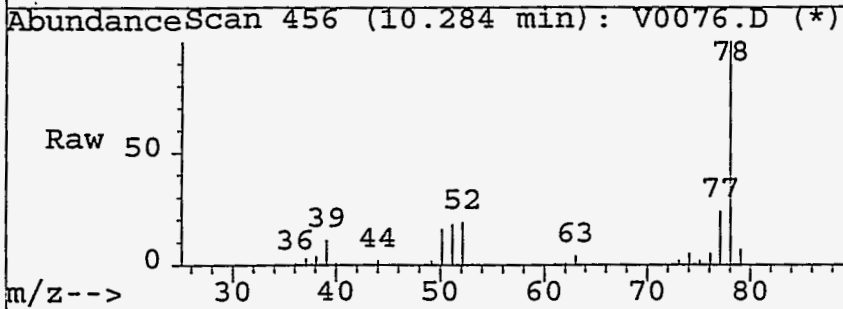
Method : C:\HPCHEM\1\METHODS\VTCLP.M  
Title : SW-846 TCLP Method  
Last Update : Tue Jan 16 13:11:07 1996  
Response via : Multiple Level Calibration





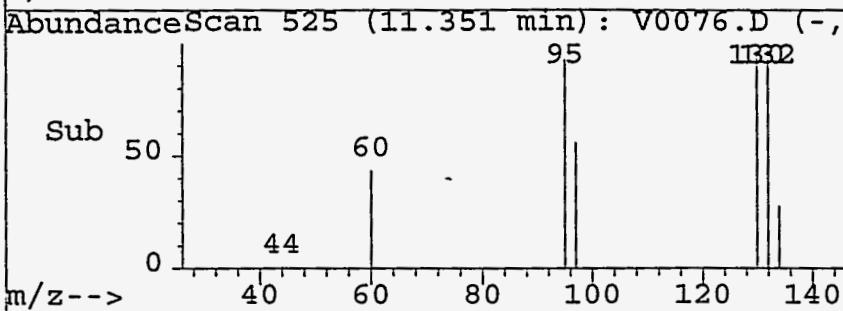
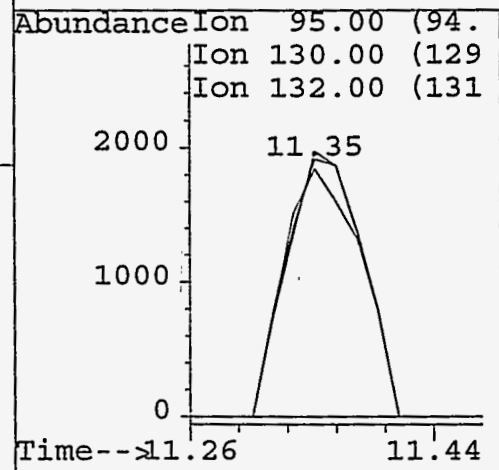
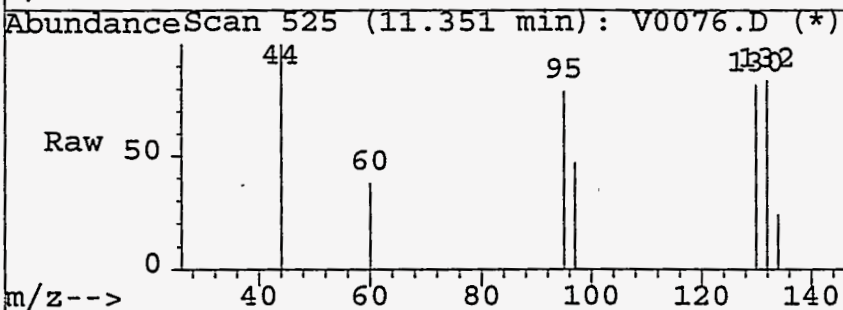
#9  
benzene  
Concen: 27.43 ug/L  
RT: 10.28 min Scan# 456  
Delta R.T. 0.02 min  
Lab File: V0076.D  
Acq: 16 Jan 96 3:47 pm

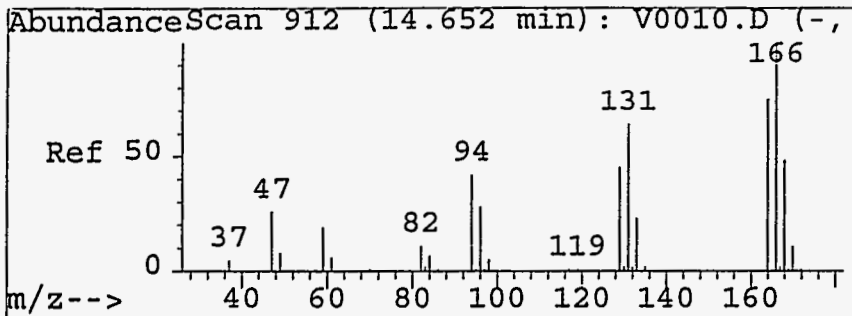
Tgt Ion	Resp	Lower	Upper
78	100		
77	24.1	4.3	44.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0



#11  
trichloroethene  
Concen: 1.01 ug/L  
RT: 11.35 min Scan# 525  
Delta R.T. 0.02 min  
Lab File: V0076.D  
Acq: 16 Jan 96 3:47 pm

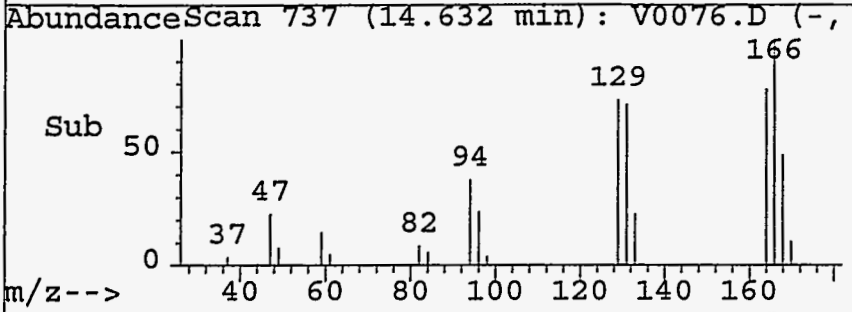
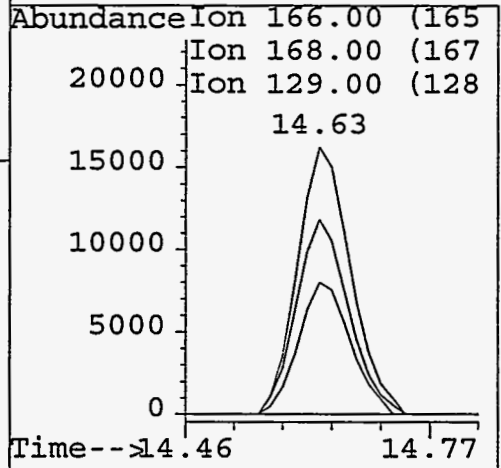
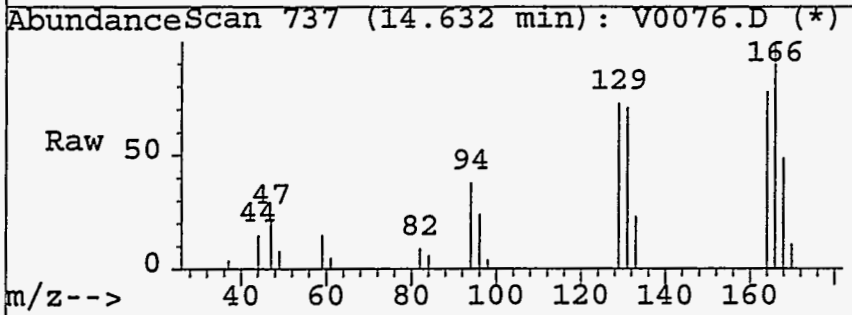
Tgt Ion	Resp	Lower	Upper
95	100		
130	104.0	82.4	122.4
132	107.0	79.0	119.0
0	0.0	0.0	0.0





#14  
 tetrachloroethene  
 Concen: 8.79 ug/L  
 RT: 14.63 min Scan# 737  
 Delta R.T. 0.02 min  
 Lab File: V0076.D  
 Acq: 16 Jan 96 3:47 pm

Tgt Ion:	166	Resp:	76102
Ion	Ratio	Lower	Upper
166	100		
168	49.3	28.4	68.4
129	72.9	51.9	91.9
0	0.0	0.0	0.0



Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN1695\V0077.D  
 Acq On : 16 Jan 96 4:23 pm  
 Sample : ECO-002-3A  
 Misc : VOATCLP-03,W,5,TCLP  
 Quant Time: Jan 17 9:21 1996

Vial: 7  
 Operator: WF  
 Inst : 5972 - In  
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\VTCLP.M  
 Title : SW-846 TCLP Method  
 Last Update : Tue Jan 16 13:11:07 1996  
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) pentafluorobenzene	9.35	168	877697	50.00	ug/L	0.02
6) 1,4-difluorobenzene	10.73	114	916338	50.00	ug/L	0.02
13) Chlorobenzene-d5	15.73	117	737277	50.00	ug/L	0.02
16) 1,4-dichlorobenzene-d4	19.97	152	474918	50.00	ug/L	0.00
System Monitoring Compounds						%Recovery
5) dibromofluoromethane	9.18	113	395271	49.39	ug/L	98.78%
12) toluene-d8	13.29	98	888339	51.17	ug/L	102.35%
17) 4-bromofluorobenzene	17.80	95	567291	49.50	ug/L	99.00%
Target Compounds						Qvalue
9) benzene	10.30	78	392289	22.77	ug/L	100
14) tetrachloroethene	14.63	166	57347	6.76	ug/L	99

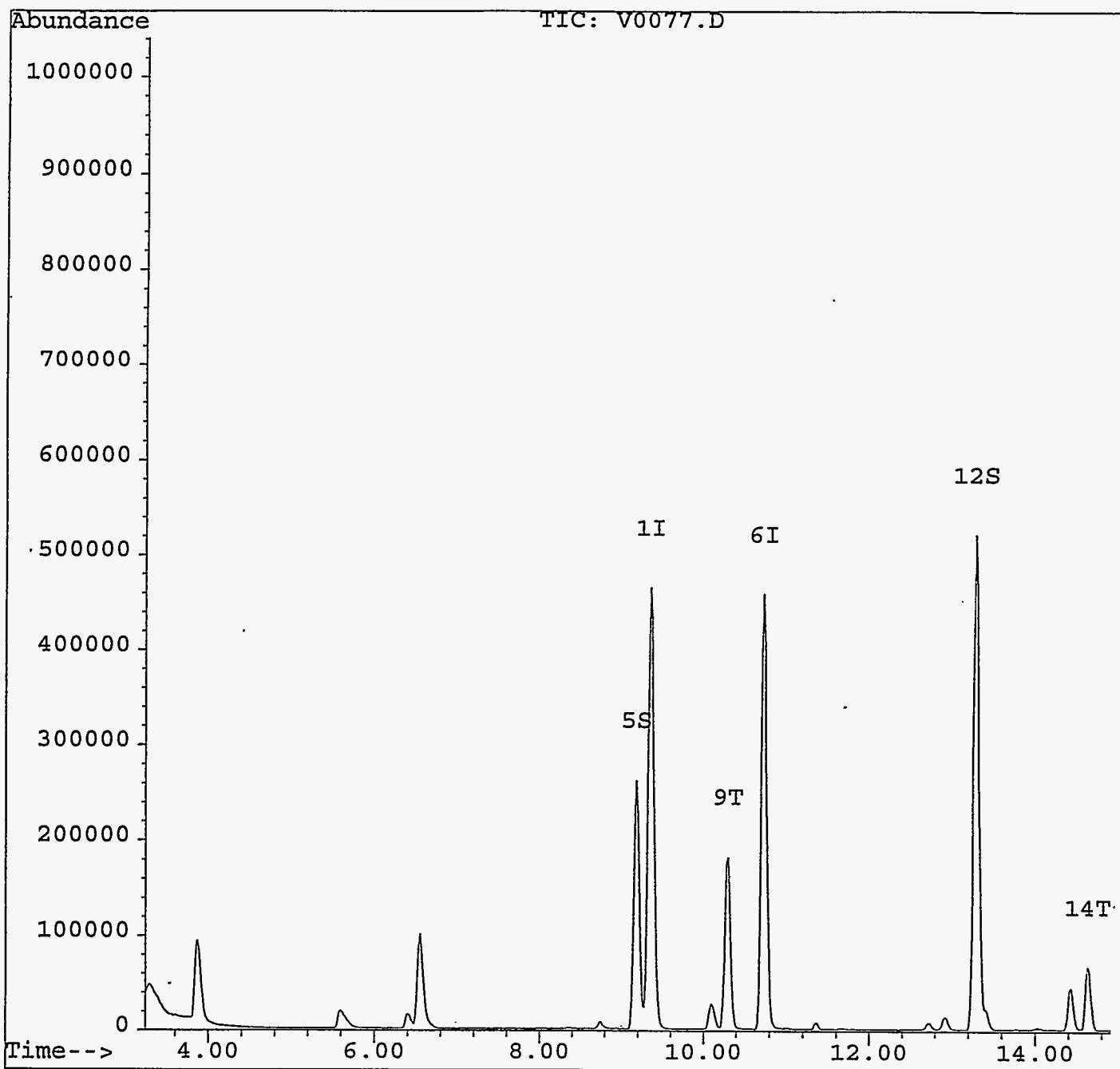
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN1695\V0077.D  
Acq On : 16 Jan 96 4:23 pm  
Sample : ECO-002-3A  
Misc : VOATCLP-03,W,5,TCLP  
Quant Time: Jan 17 9:21 1996

Vial: 7  
Operator: WF  
Inst : 5972 - In  
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\VTCLP.M  
Title : SW-846 TCLP Method  
Last Update : Tue Jan 16 13:11:07 1996  
Response via : Multiple Level Calibration



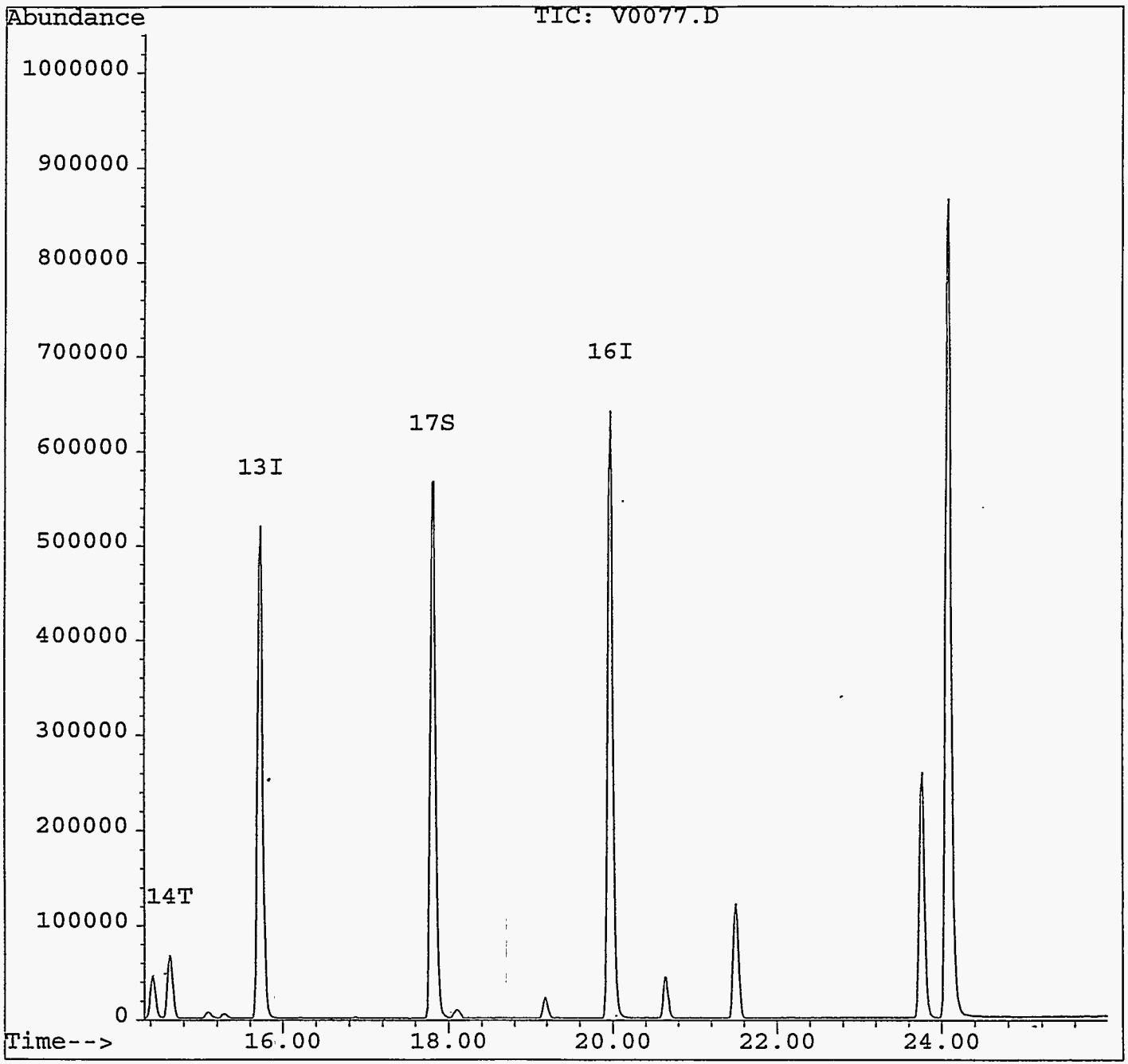


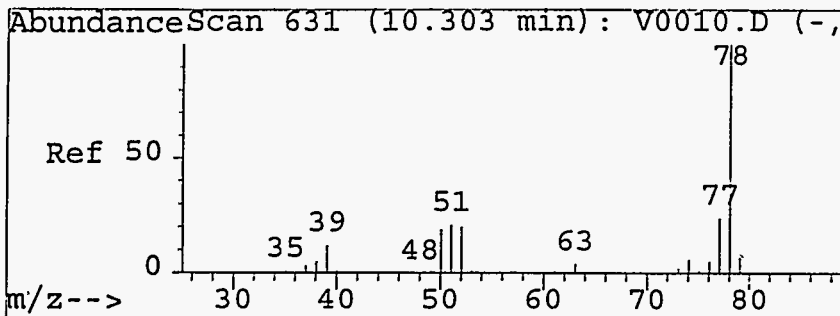
Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN1695\V0077.D  
Acq On : 16 Jan 96 4:23 pm  
Sample : ECO-002-3A  
Misc : VOATCLP-03,W,5,TCLP  
Quant Time: Jan 17 9:21 1996

Vial: 7  
Operator: WF  
Inst : 5972 - In  
Multiplr: 1.00

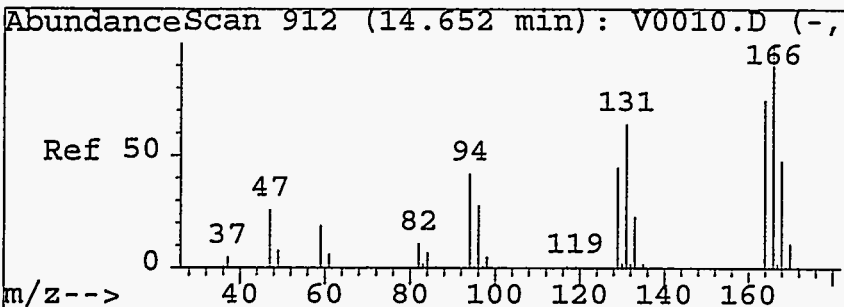
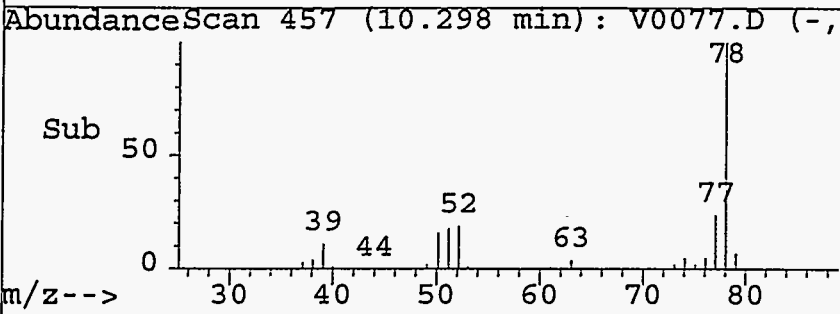
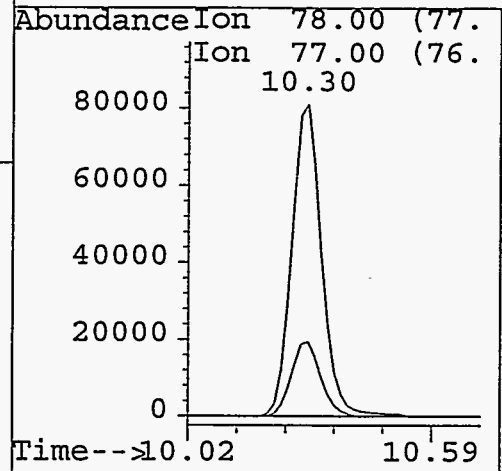
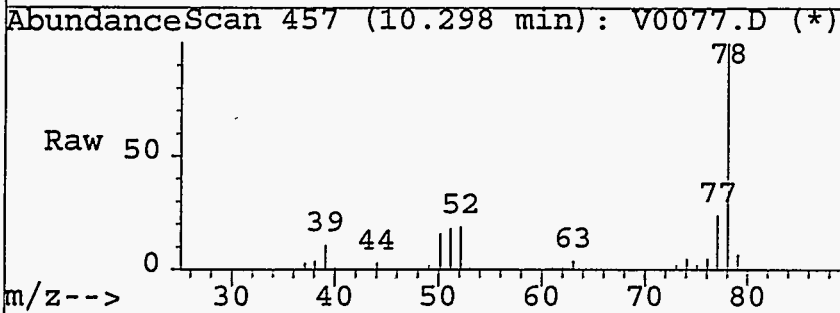
Method : C:\HPCHEM\1\METHODS\VTCLP.M  
Title : SW-846 TCLP Method  
Last Update : Tue Jan 16 13:11:07 1996  
Response via : Multiple Level Calibration





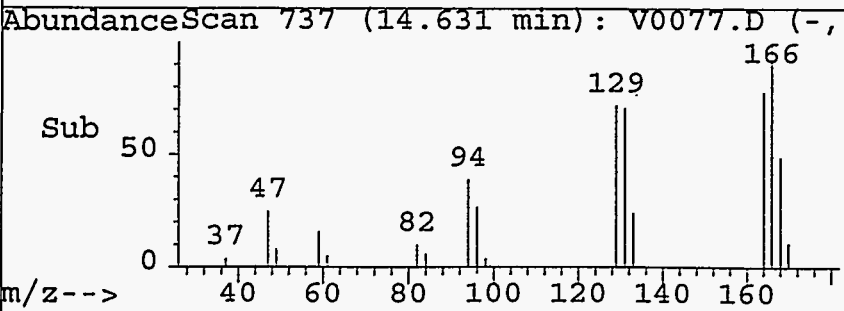
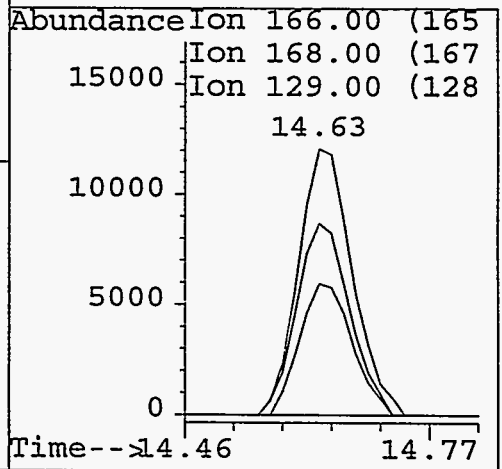
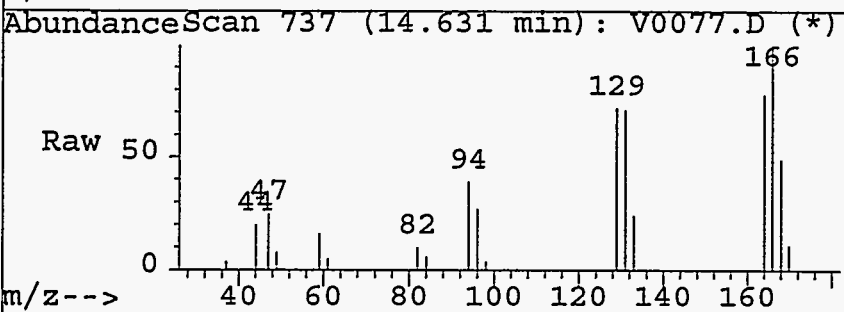
#9  
benzene  
Concen: 22.77 ug/L  
RT: 10.30 min Scan# 457  
Delta R.T. 0.03 min  
Lab File: V0077.D  
Acq: 16 Jan 96 4:23 pm

Tgt Ion	Resp	Lower	Upper
78	392289		
77	24.1	4.3	44.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0



#14  
tetrachloroethene  
Concen: 6.76 ug/L  
RT: 14.63 min Scan# 737  
Delta R.T. 0.02 min  
Lab File: V0077.D  
Acq: 16 Jan 96 4:23 pm

Tgt Ion	Resp	Lower	Upper
166	57347		
168	49.2	28.4	68.4
129	72.0	51.9	91.9
0	0.0	0.0	0.0



Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN1695\V0078.D  
 Acq On : 16 Jan 96 4:59 pm  
 Sample : ECO-002-4A  
 Misc : VOATCLP-04,W,5,TCLP  
 Quant Time: Jan 17 9:22 1996

Vial: 8  
 Operator: WF  
 Inst : 5972 - In  
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\VTCLP.M  
 Title : SW-846 TCLP Method  
 Last Update : Tue Jan 16 13:11:07 1996  
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) pentafluorobenzene	9.35	168	860011	50.00	ug/L	0.02
6) 1,4-difluorobenzene	10.73	114	895091	50.00	ug/L	0.02
13) Chlorobenzene-d5	15.73	117	724103	50.00	ug/L	0.02
16) 1,4-dichlorobenzene-d4	19.97	152	482399	50.00	ug/L	0.00
						%Recovery
System Monitoring Compounds						
5) dibromofluoromethane	9.18	113	391192	49.89	ug/L	99.77%
12) toluene-d8	13.28	98	841504	49.63	ug/L	99.25%
17) 4-bromofluorobenzene	17.82	95	541803	46.54	ug/L	93.09%
						Qvalue
Target Compounds						
9) benzene	10.30	78	27851	1.66	ug/L	97
18) 1,4-dichlorobenzene	20.03	146	1164695	78.25	ug/L	97

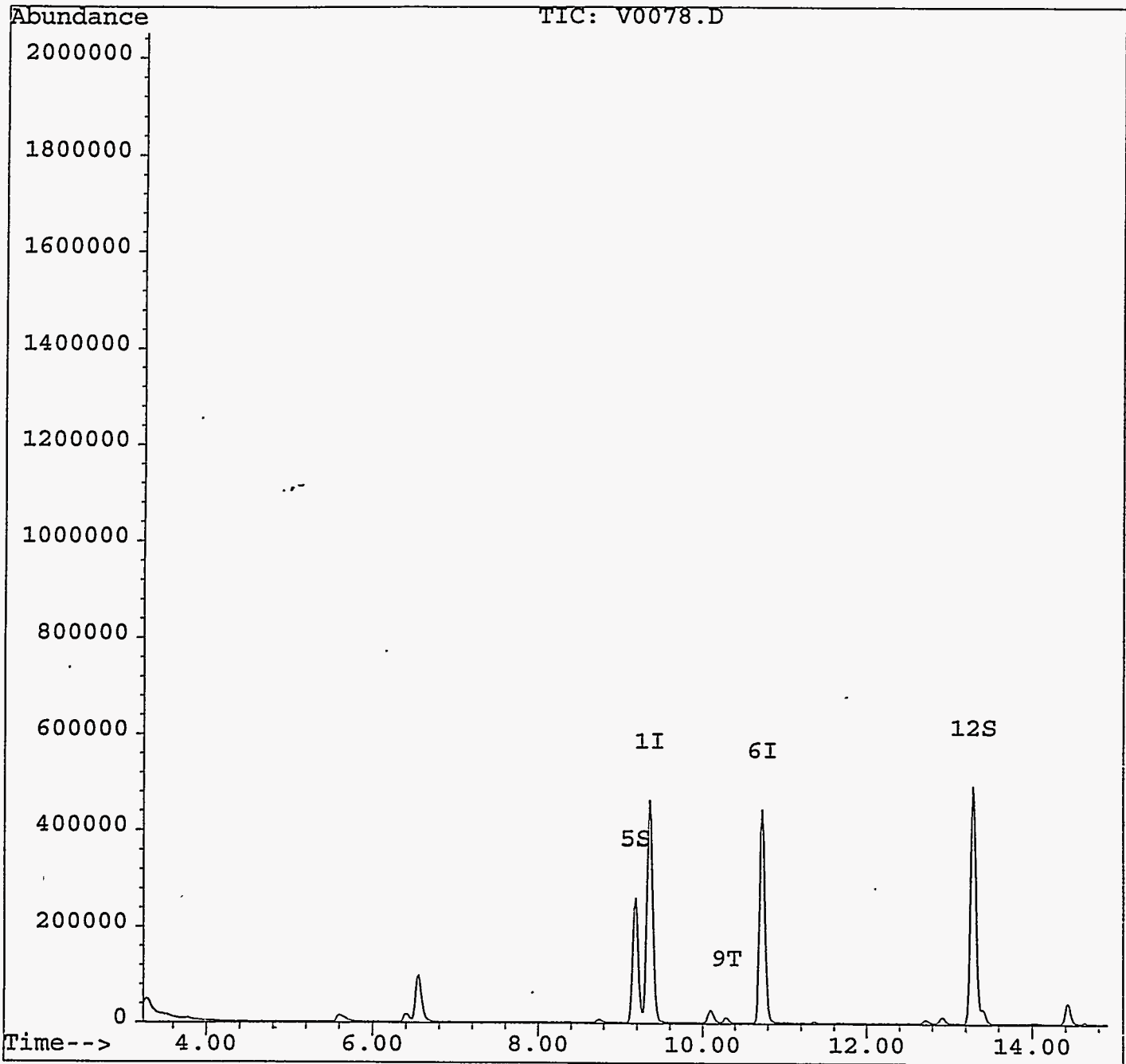
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN1695\V0078.D  
Acq On : 16 Jan 96 4:59 pm  
Sample : ECO-002-4A  
Misc : VOATCLP-04,W,5,TCLP  
Quant Time: Jan 17 9:22 1996

Vial: 8  
Operator: WF  
Inst : 5972 - In  
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\VTCLP.M  
Title : SW-846 TCLP Method  
Last Update : Tue Jan 16 13:11:07 1996  
Response via : Multiple Level Calibration

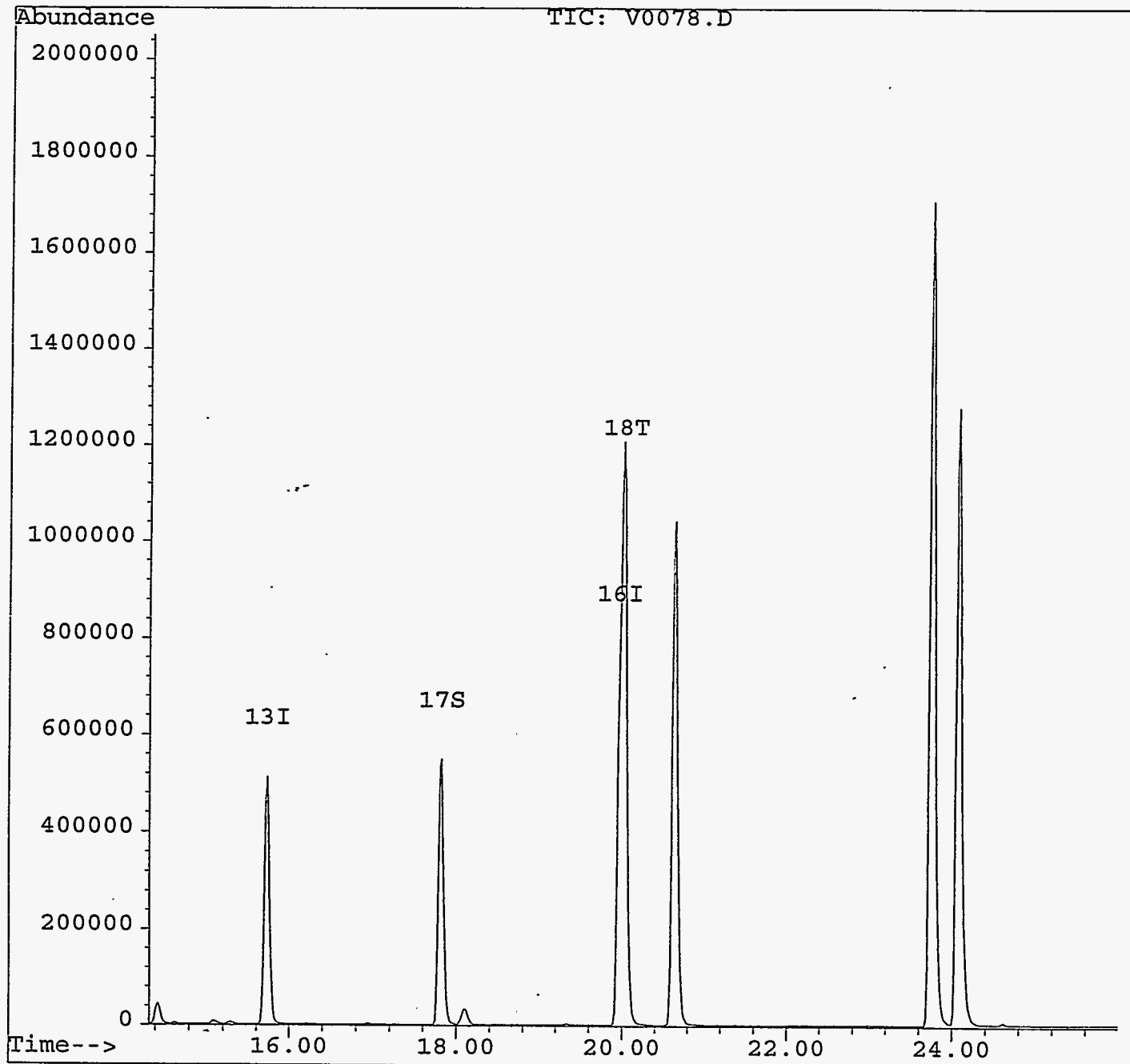


Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN1695\V0078.D  
Acq On : 16 Jan 96 4:59 pm  
Sample : ECO-002-4A  
Misc : VOATCLP-04,W,5,TCLP  
Quant Time: Jan 17 9:22 1996

Vial: 8  
Operator: WF  
Inst : 5972 - In  
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\VTCLP.M  
Title : SW-846 TCLP Method  
Last Update : Tue Jan 16 13:11:07 1996  
Response via : Multiple Level Calibration



Quantitation Report

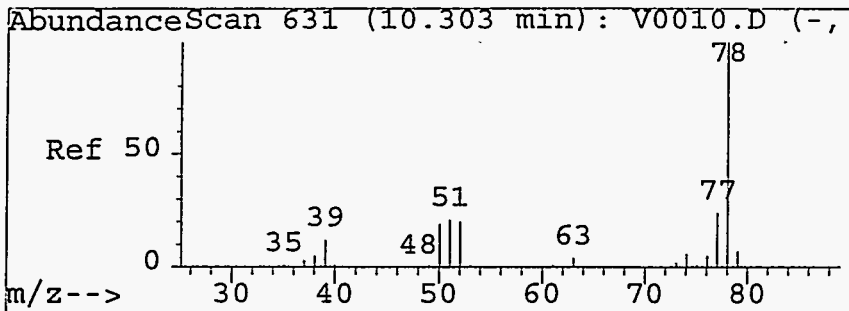
Data File : C:\HPCHEM\1\DATA\JAN1695\V0079.D  
 Acq On : 16 Jan 96 5:35 pm  
 Sample : ECO-002-5A  
 Misc : VOATCLP-05,W,5,TCLP  
 Quant Time: Jan 17 9:23 1996

Vial: 9  
 Operator: WF  
 Inst : 5972 - In  
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\VTCLP.M  
 Title : SW-846 TCLP Method  
 Last Update : Tue Jan 16 13:11:07 1996  
 Response via : Multiple Level Calibration

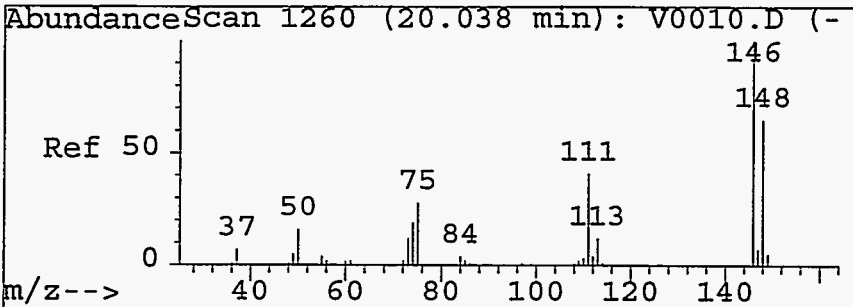
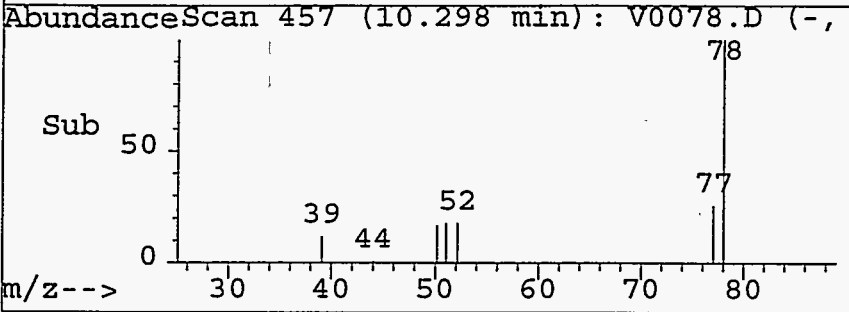
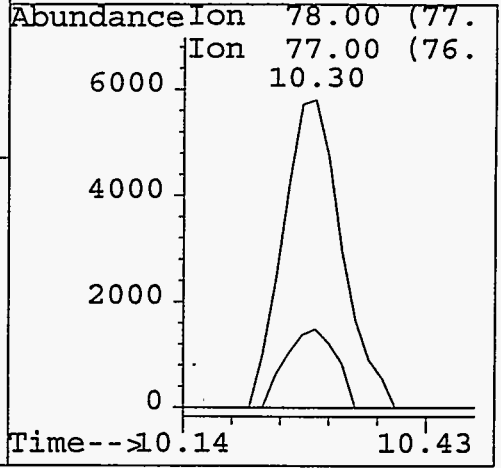
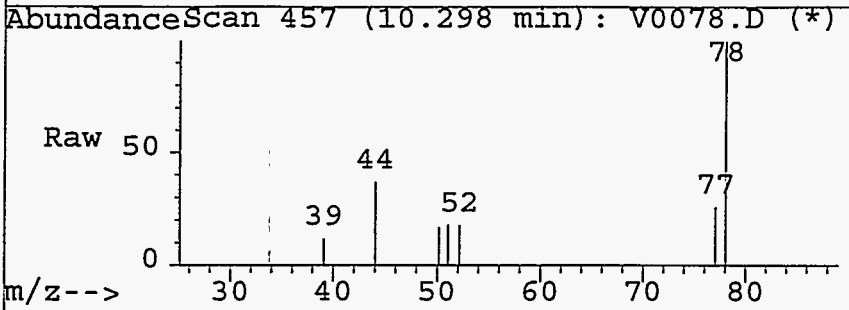
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) pentafluorobenzene	9.37	168	861557	50.00	ug/L	0.03
6) 1,4-difluorobenzene	10.73	114	882876	50.00	ug/L	0.02
13) Chlorobenzene-d5	15.73	117	717712	50.00	ug/L	0.02
16) 1,4-dichlorobenzene-d4	19.97	152	481335	50.00	ug/L	0.00
System Monitoring Compounds						%Recovery
5) dibromofluoromethane	9.18	113	393024	50.03	ug/L	100.06%
12) toluene-d8	13.29	98	825527	49.36	ug/L	98.71%
17) 4-bromofluorobenzene	17.82	95	538153	46.33	ug/L	92.67%
Target Compounds						Qvalue
9) benzene	10.30	78	41909	2.53	ug/L	99
18) 1,4-dichlorobenzene	20.03	146	989920	66.65	ug/L	97

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



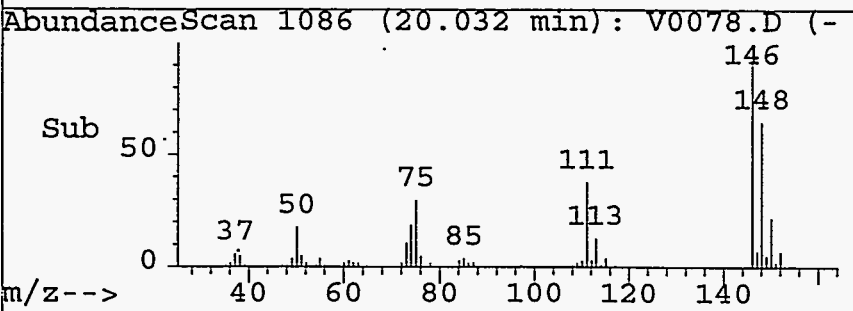
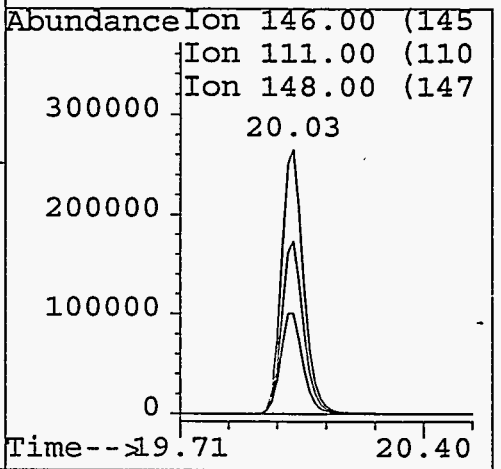
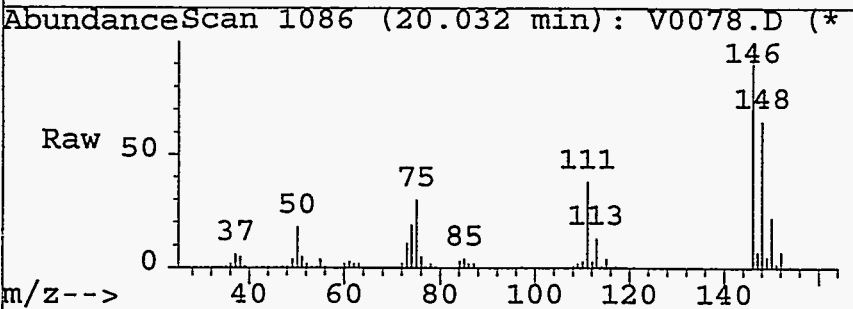
#9  
benzene  
Concen: 1.66 ug/L  
RT: 10.30 min Scan# 457  
Delta R.T. 0.03 min  
Lab File: V0078.D  
Acq: 16 Jan 96 4:59 pm

Tgt Ion	Resp	Lower	Upper
78	100		
77	25.6	4.3	44.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0



#18  
1,4-dichlorobenzene  
Concen: 78.25 ug/L  
RT: 20.03 min Scan# 1086  
Delta R.T. 0.02 min  
Lab File: V0078.D  
Acq: 16 Jan 96 4:59 pm

Tgt Ion	Resp	Lower	Upper
146	100		
111	38.0	22.2	62.2
148	65.4	44.8	84.8
0	0.0	0.0	0.0

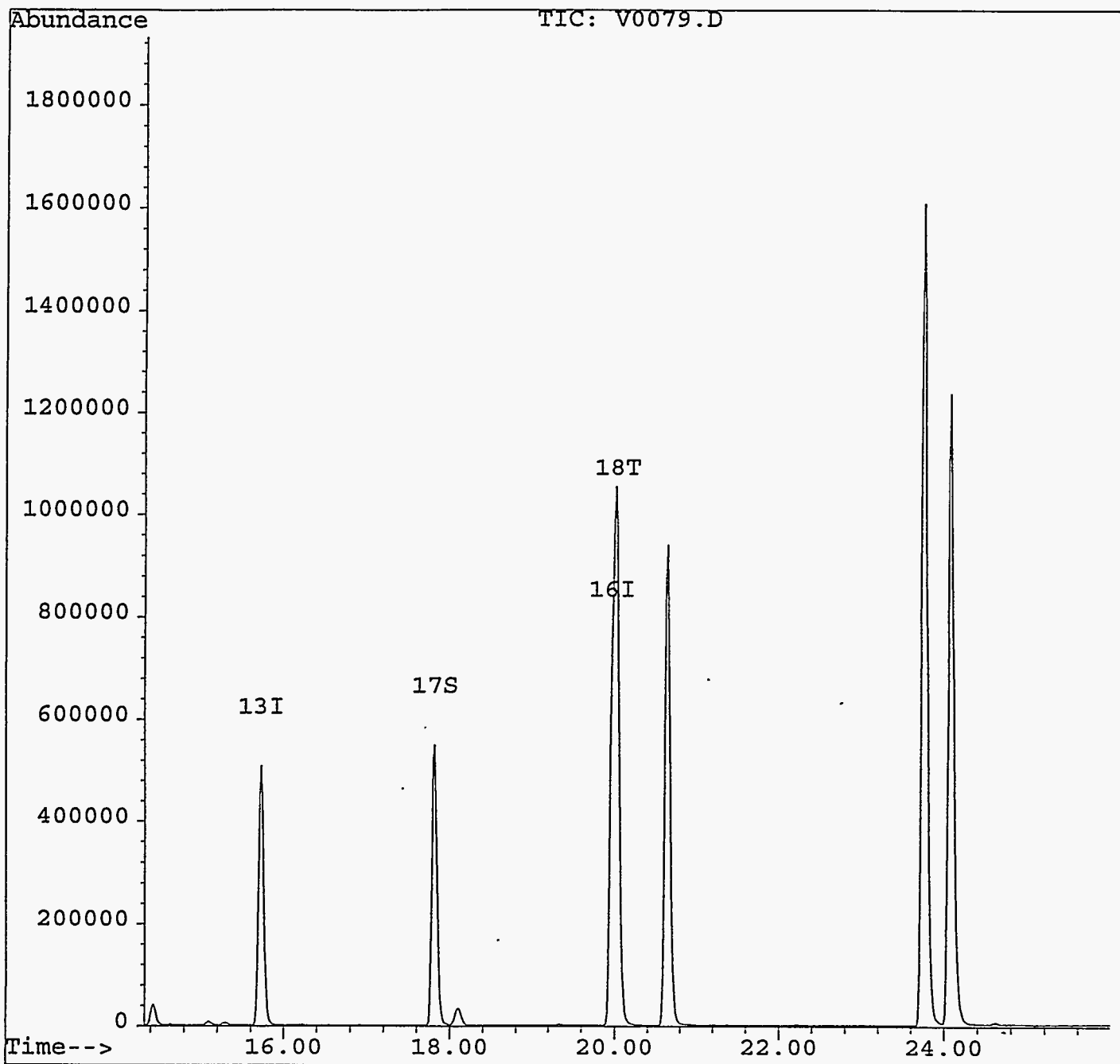


Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN1695\V0079.D  
Acq On : 16 Jan 96 5:35 pm  
Sample : ECO-002-5A  
Misc : VOATCLP-05,W,5,TCLP  
Quant Time: Jan 17 9:23 1996

Vial: 9  
Operator: WF  
Inst : 5972 - In  
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\VTCLP.M  
Title : SW-846 TCLP Method  
Last Update : Tue Jan 16 13:11:07 1996  
Response via : Multiple Level Calibration



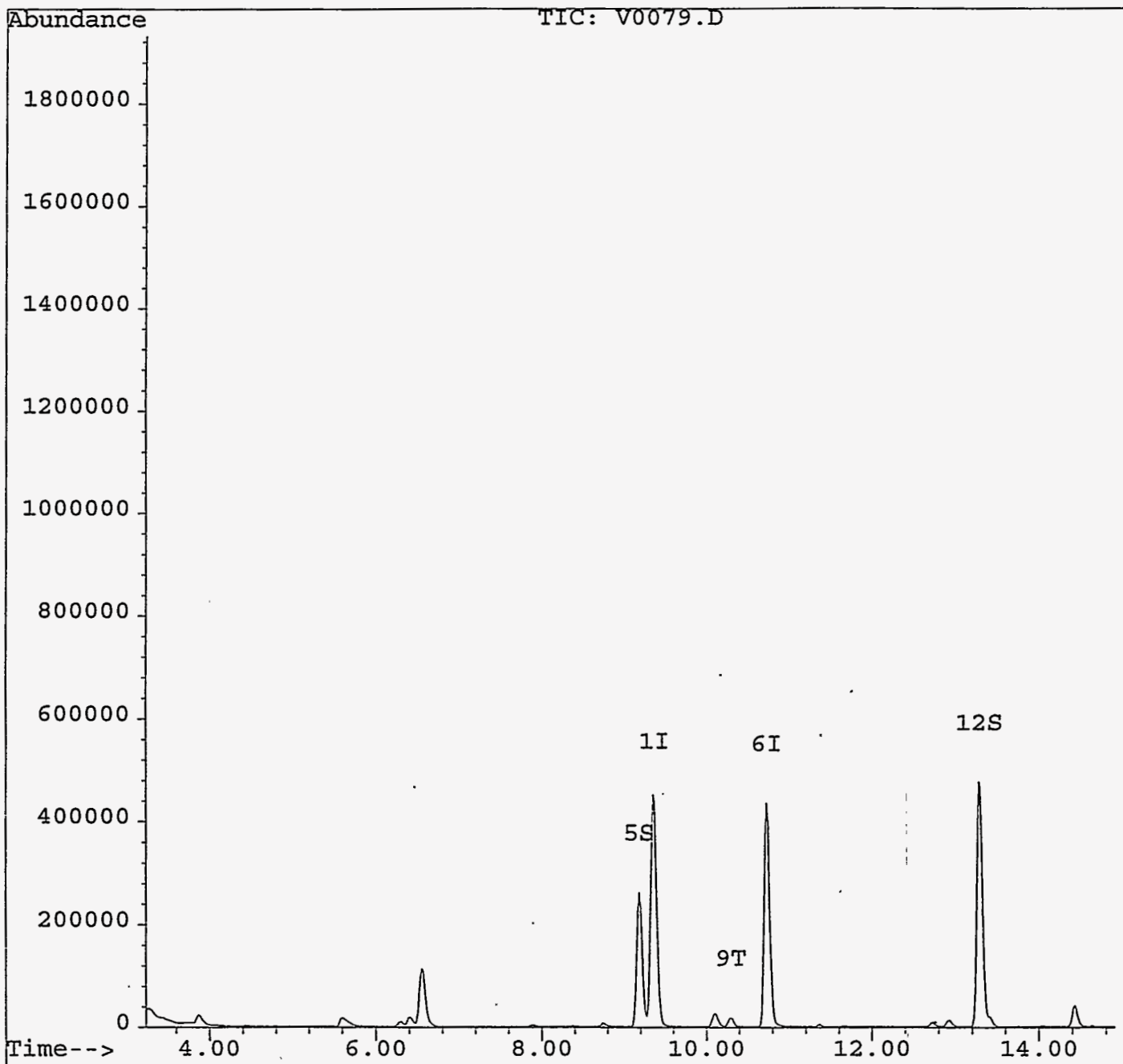


Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN1695\V0079.D  
Acq On : 16 Jan 96 5:35 pm  
Sample : ECO-002-5A  
Misc : VOATCLP-05,W,5,TCLP  
Quant Time: Jan 17 9:23 1996

Vial: 9  
Operator: WF  
Inst : 5972 - In  
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\VTCLP.M  
Title : SW-846 TCLP Method  
Last Update : Tue Jan 16 13:11:07 1996  
Response via : Multiple Level Calibration



Quantitation Report

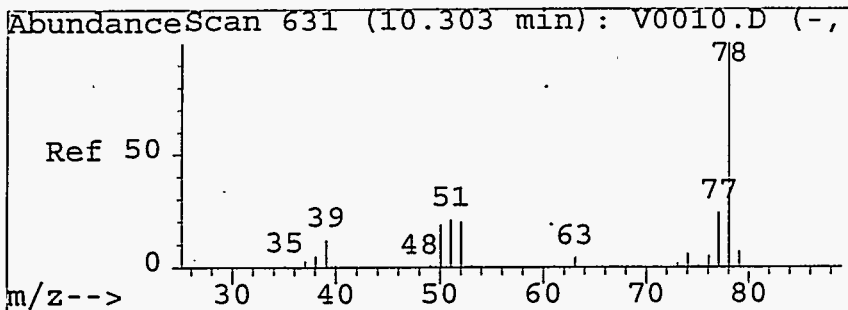
Data File : C:\HPCHEM\1\DATA\JAN1695\V0080.D  
 Acq On : 16 Jan 96 6:11 pm  
 Sample : ECO-002-6A  
 Misc : VOATCLP-06,W,5,TCLP  
 Quant Time: Jan 17 9:24 1996

Vial: 11  
 Operator: WF  
 Inst : 5972 - In  
 Multiplr: 1.00

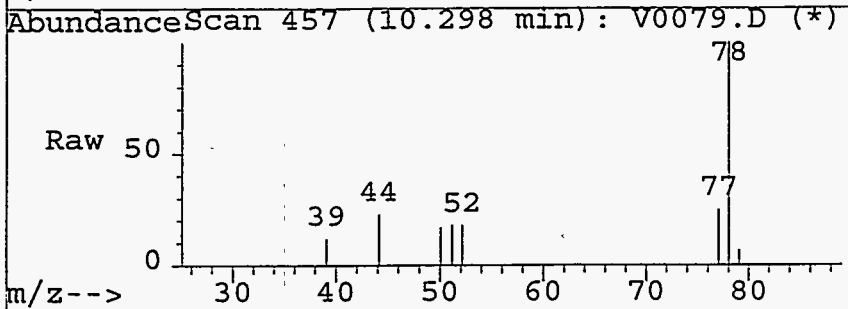
Method : C:\HPCHEM\1\METHODS\VTCLP.M  
 Title : SW-846 TCLP Method  
 Last Update : Tue Jan 16 13:11:07 1996  
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) pentafluorobenzene	9.37	168	868271	50.00	ug/L	0.03
6) 1,4-difluorobenzene	10.73	114	882893	50.00	ug/L	0.02
13) Chlorobenzene-d5	15.73	117	712476	50.00	ug/L	0.02
16) 1,4-dichlorobenzene-d4	19.97	152	478695	50.00	ug/L	0.00
						%Recovery
System Monitoring Compounds						
5) dibromofluoromethane	9.18	113	392579	49.59	ug/L	99.17%
12) toluene-d8	13.30	98	828918	49.56	ug/L	99.12%
17) 4-bromofluorobenzene	17.82	95	533669	46.20	ug/L	92.40%
						Qvalue
Target Compounds						
18) 1,4-dichlorobenzene	20.03	146	16746	1.13	ug/L	97

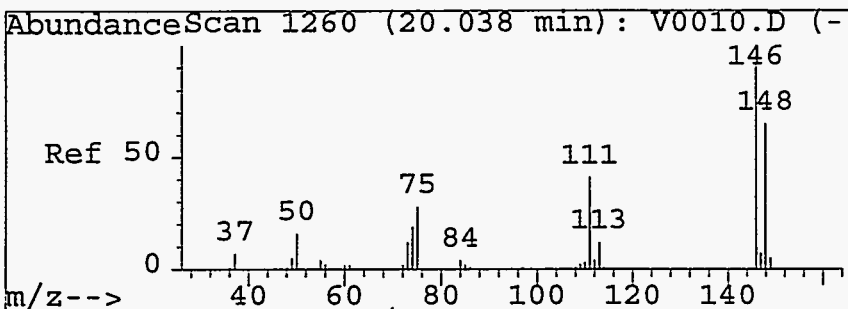
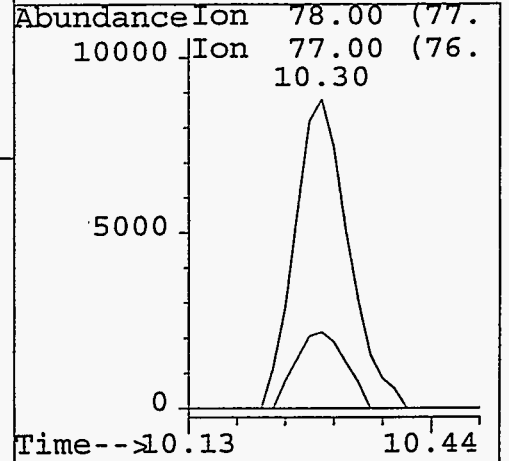
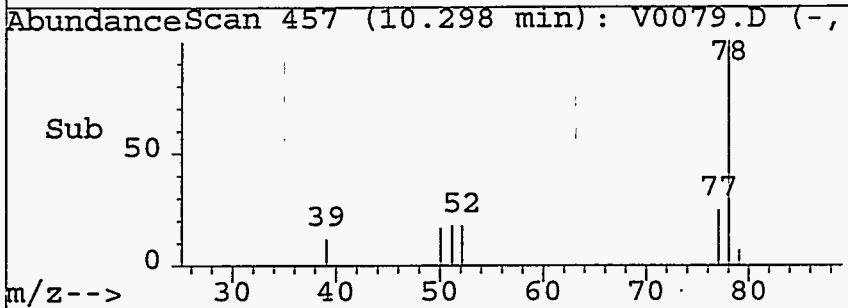
(#) = qualifier out of range (m) = manual integration



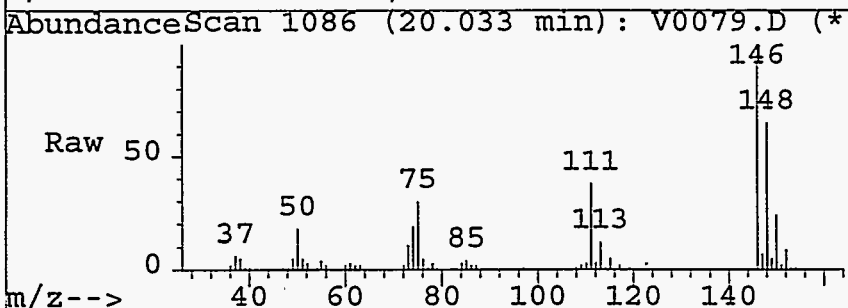
#9  
benzene  
Concen: 2.53 ug/L  
RT: 10.30 min Scan# 457  
Delta R.T. 0.03 min  
Lab File: V0079.D  
Acq: 16 Jan 96 5:35 pm



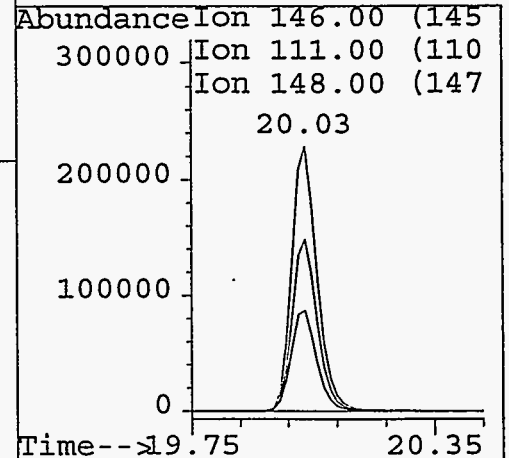
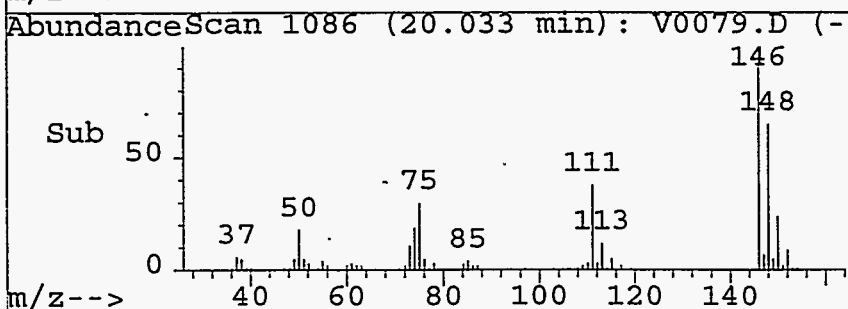
Tgt Ion	Resp	Lower	Upper
78	41909		
77	24.7	4.3	44.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0



#18  
1,4-dichlorobenzene  
Concen: 66.65 ug/L  
RT: 20.03 min Scan# 1086  
Delta R.T. 0.02 min  
Lab File: V0079.D  
Acq: 16 Jan 96 5:35 pm



Tgt Ion	Resp	Lower	Upper
146	989920		
111	38.1	22.2	62.2
148	64.9	44.8	84.8
0	0.0	0.0	0.0

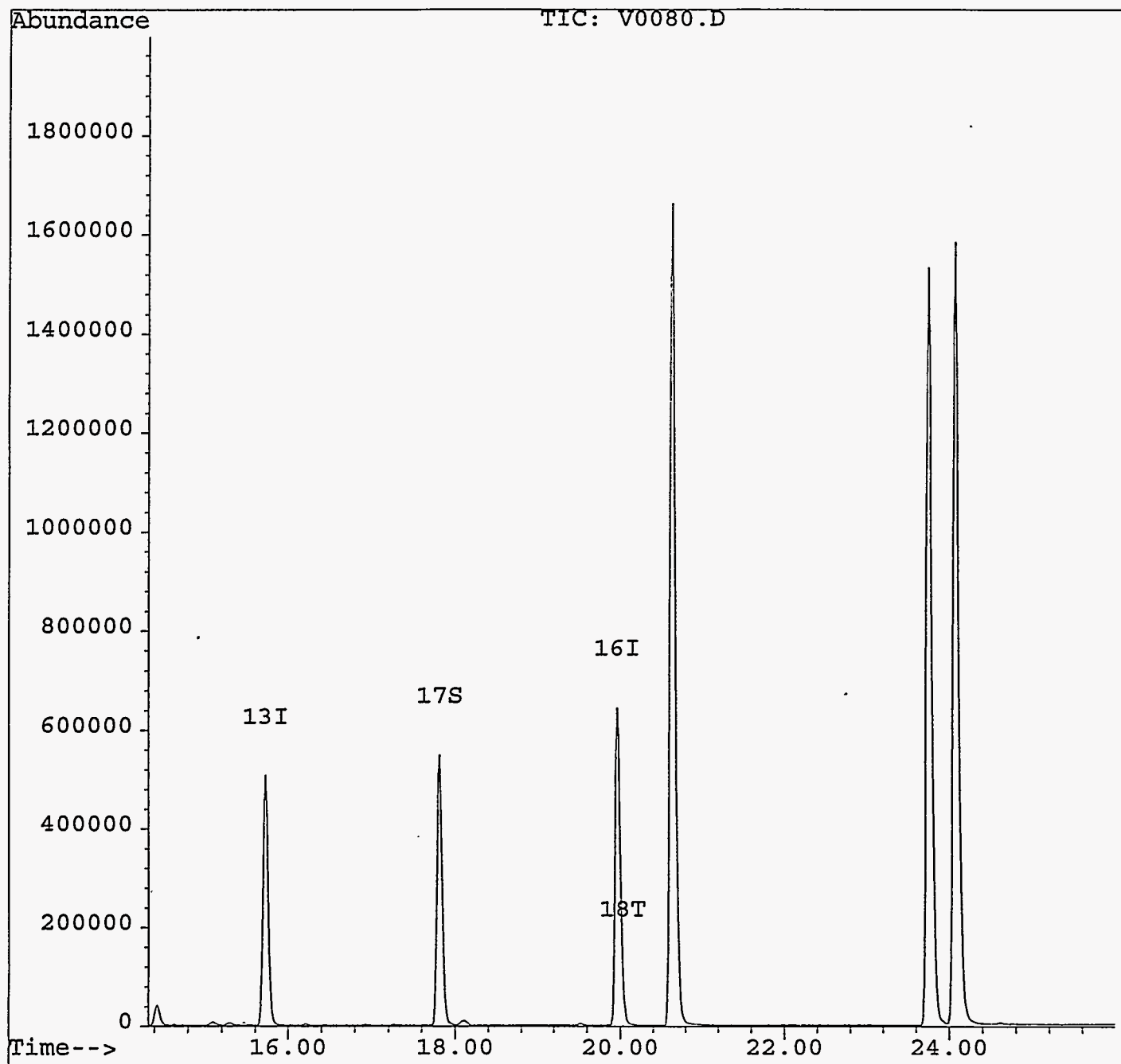


Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN1695\V0080.D  
Acq On : 16 Jan 96 6:11 pm  
Sample : ECO-002-6A  
Misc : VOATCLP-06,W,5,TCLP  
Quant Time: Jan 17 9:24 1996

Vial: 11  
Operator: WF  
Inst : 5972 - In  
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\VTCLP.M  
Title : SW-846 TCLP Method  
Last Update : Tue Jan 16 13:11:07 1996  
Response via : Multiple Level Calibration

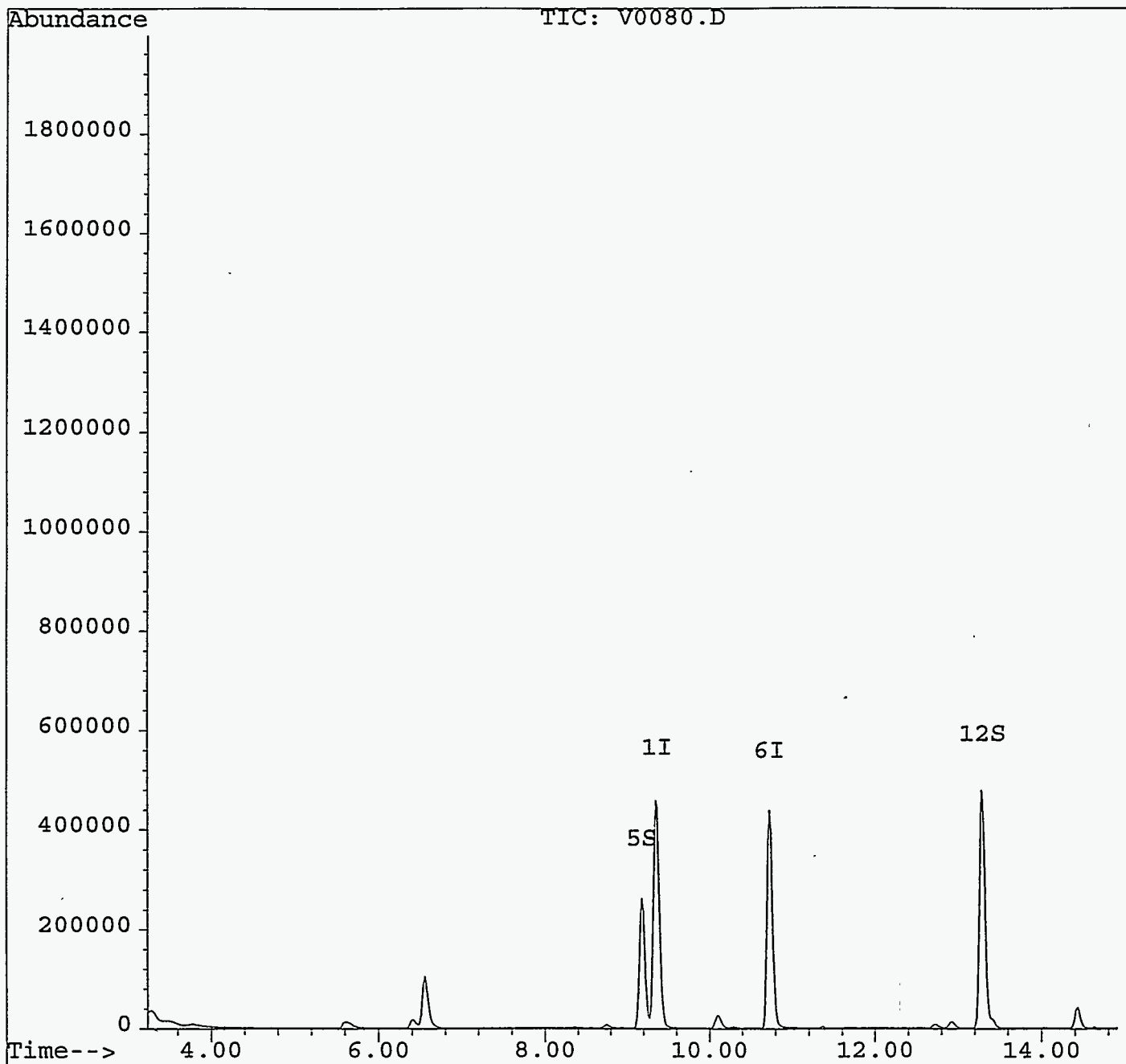


Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN1695\V0080.D  
Acq On : 16 Jan 96 6:11 pm  
Sample : ECO-002-6A  
Misc : VOATCLP-06,W,5,TCLP  
Quant Time: Jan 17 9:24 1996

Vial: 11  
Operator: WF  
Inst : 5972 - In  
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\VTCLP.M  
Title : SW-846 TCLP Method  
Last Update : Tue Jan 16 13:11:07 1996  
Response via : Multiple Level Calibration

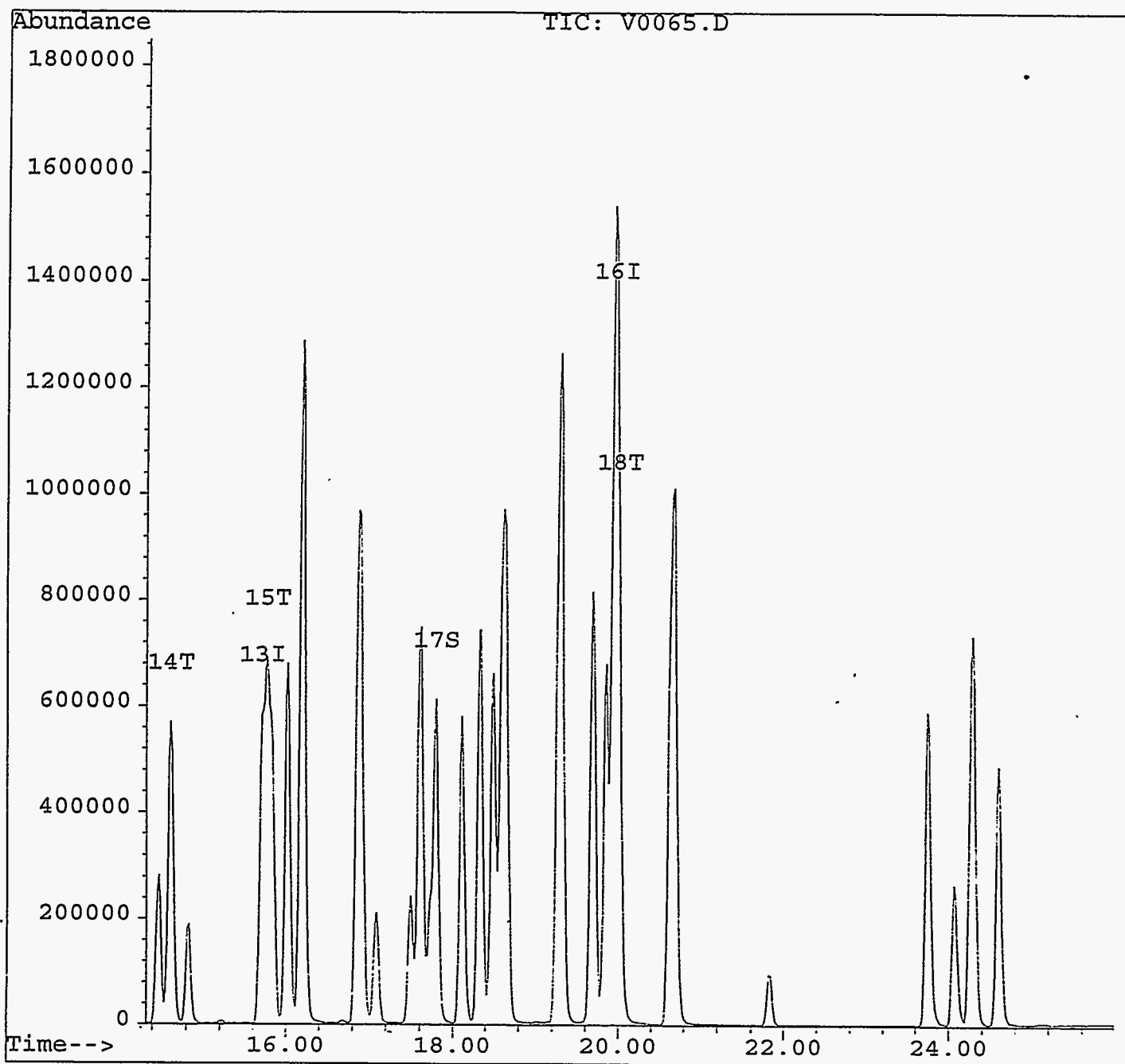


Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN1695\V0065.D  
Acq On : 16 Jan 96 9:08 am  
Sample : VSTD50  
Misc : STD #V37,50PPB STD,W,5,TCLP  
Quant Time: Jan 16 9:34 1996

Vial: 1  
Operator: WF  
Inst : 5972 - In  
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\VTCLP.M  
Title : SW-846 TCLP Method  
Last Update : Tue Jan 16 08:08:45 1996  
Response via : Multiple Level Calibration

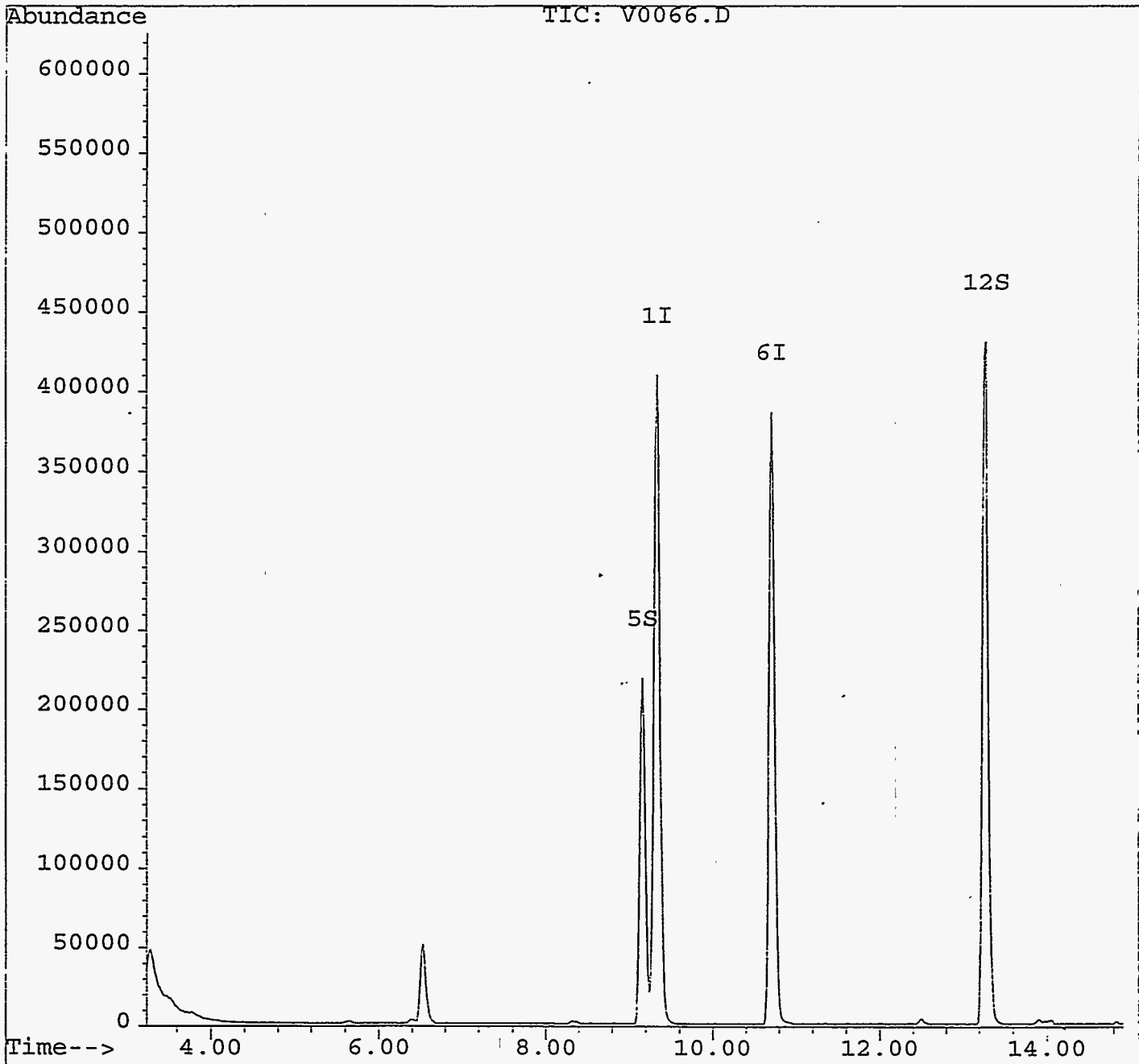


Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN1695\V0066.D  
Acq On : 16 Jan 96 9:51 am  
Sample : VBLK01  
Misc : METHOD BLANK,W,5,TCLP  
Quant Time: Jan 16 10:35 1996

Vial: 3  
Operator: WF  
Inst : 5972 - In  
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\VTCLP.M  
Title : SW-846 TCLP Method  
Last Update : Tue Jan 16 10:33:14 1996  
Response via : Multiple Level Calibration



Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN1695\V0065.D  
 Acq On : 16 Jan 96 9:08 am  
 Sample : VSTD50  
 Misc : STD #V37,50PPB STD,W,5,TCLP  
 Quant Time: Jan 16 9:34 1996

Vial: 1  
 Operator: WF  
 Inst : 5972 - In  
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\VTCLP.M  
 Title : SW-846 TCLP Method  
 Last Update : Tue Jan 16 08:08:45 1996  
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) pentafluorobenzene	9.34	168	925036	50.00	ug/L	0.02
6) 1,4-difluorobenzene	10.71	114	966952	50.00	ug/L	0.02
13) Chlorobenzene-d5	15.71	117	771328	50.00	ug/L	0.02
16) 1,4-dichlorobenzene-d4	19.97	152	484554	50.00	ug/L	0.02

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recovery
5) dibromofluoromethane	9.15	113	400557	47.49	ug/L	94.98%
12) toluene-d8	13.27	98	903540	49.32	ug/L	98.65%
17) 4-bromofluorobenzene	17.80	95	564625	48.29	ug/L	96.58%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) vinyl chloride	3.78	62	240657	44.25	ug/L	100
3) 1,1-dichloroethene	6.01	96	270276	47.73	ug/L #	85
4) chloroform	8.90	83	536359	46.96	ug/L	100
7) 2-Butanone	8.28	43	79781	39.49	ug/L	95
8) carbon tetrachloride	10.20	117	402719	55.83	ug/L	99
9) benzene	10.26	78	903257	49.69	ug/L	100
10) 1,2-dichloroethane	10.00	62	325563	47.77	ug/L	94
11) trichloroethene	11.33	95	365283	49.28	ug/L	99
14) tetrachloroethene	14.61	166	465755	52.49	ug/L	99
15) chlorobenzene	15.77	112	767093	50.59	ug/L	96
18) 1,4-dichlorobenzene	20.01	146	769256	51.45	ug/L	98

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

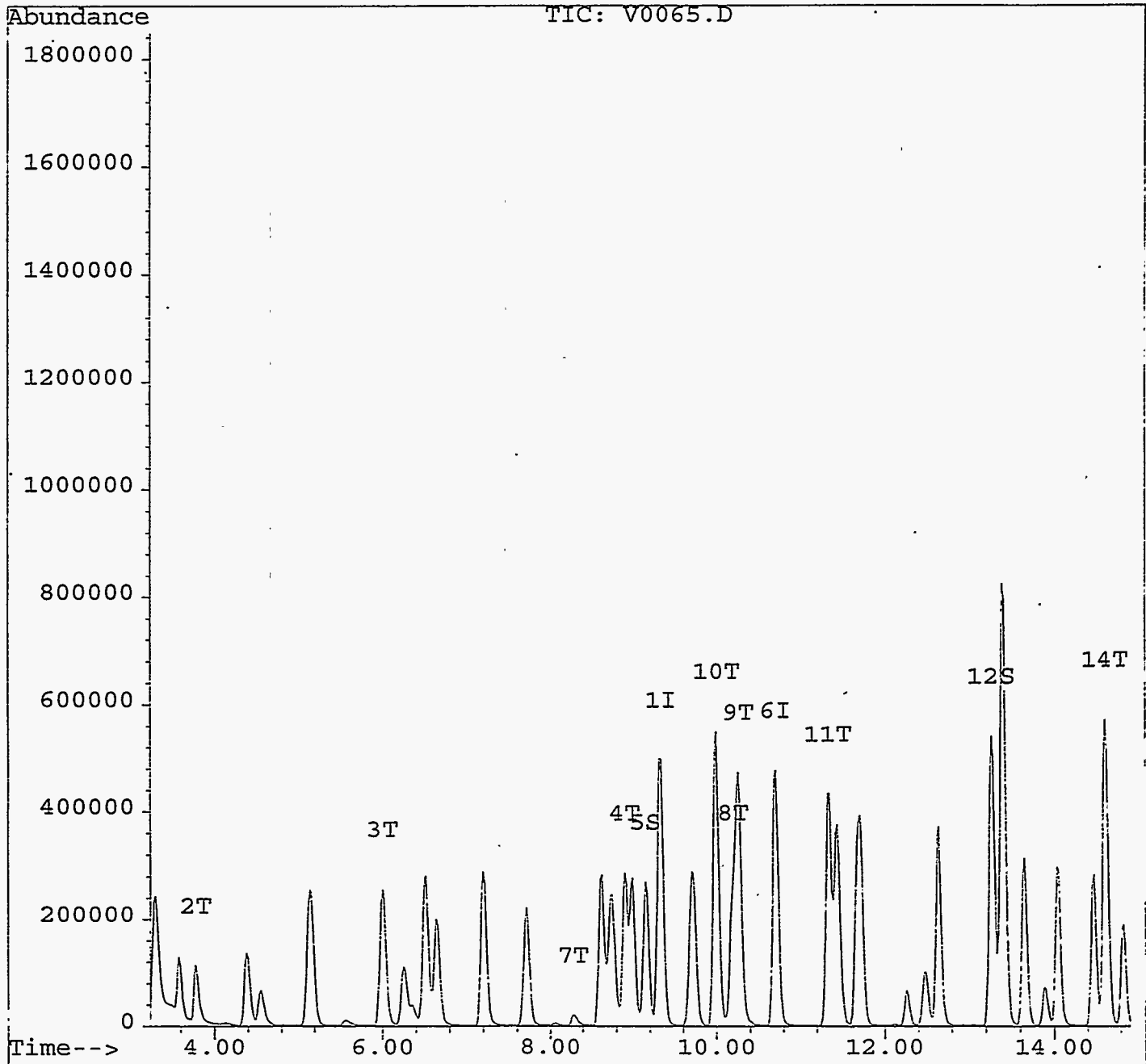


Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN1695\V0065.D  
Acq On : 16 Jan 96 9:08 am  
Sample : VSTD50  
Misc : STD #V37,50PPB STD,W,5,TCLP  
Quant Time: Jan 16 9:34 1996

Vial: 1  
Operator: WF  
Inst : 5972 - In  
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\VTCLP.M  
Title : SW-846 TCLP Method  
Last Update : Tue Jan 16 08:08:45 1996  
Response via : Multiple Level Calibration

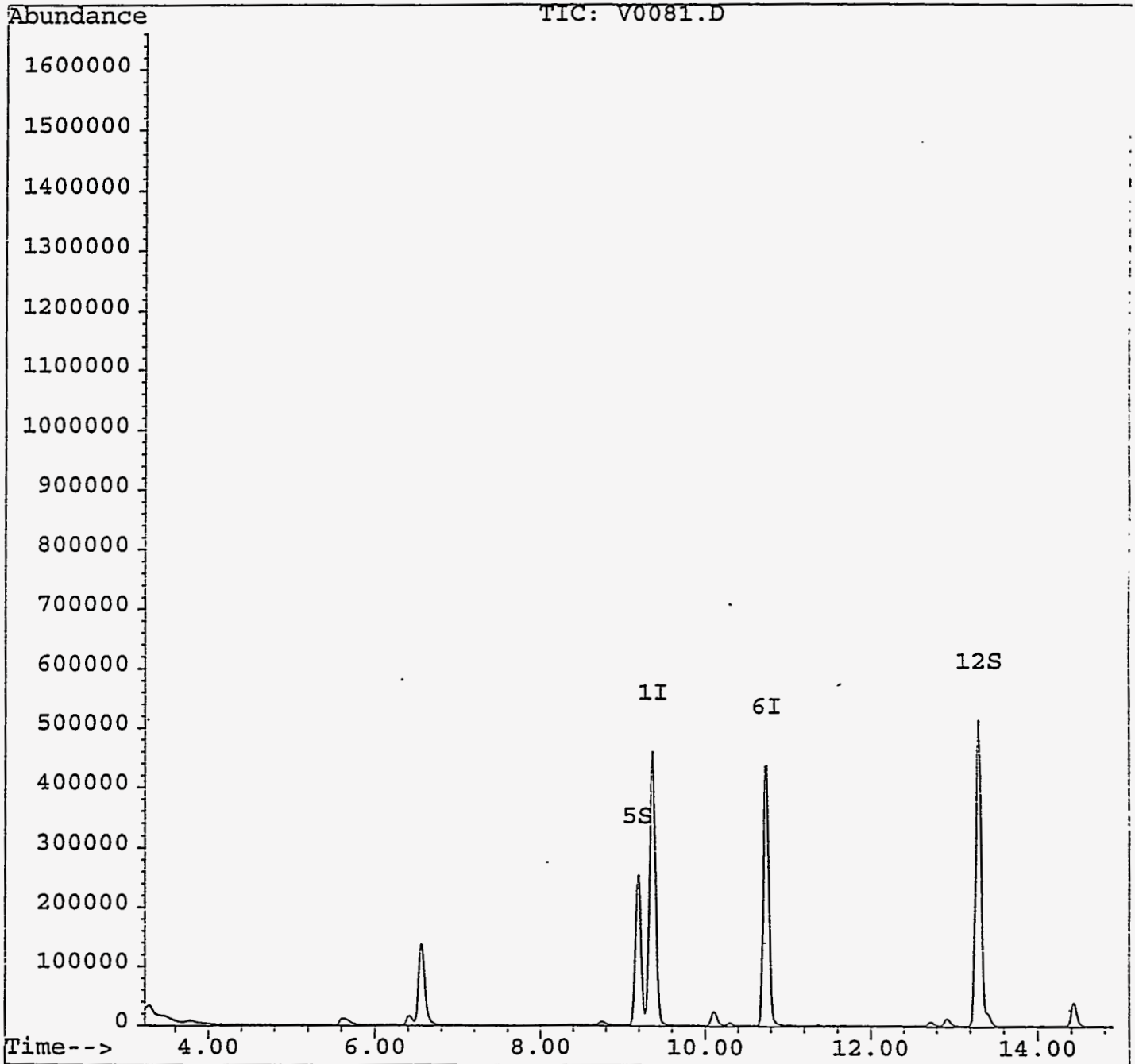


Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN1695\V0081.D  
Acq On : 16 Jan 96 6:47 pm  
Sample : ECO-002-7A  
Misc : VOATCLP-07,W,5,TCLP  
Quant Time: Jan 17 9:25 1996

Vial: 12  
Operator: WF  
Inst : 5972 - In  
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\VTCLP.M  
Title : SW-846 TCLP Method  
Last Update : Tue Jan 16 13:11:07 1996  
Response via : Multiple Level Calibration

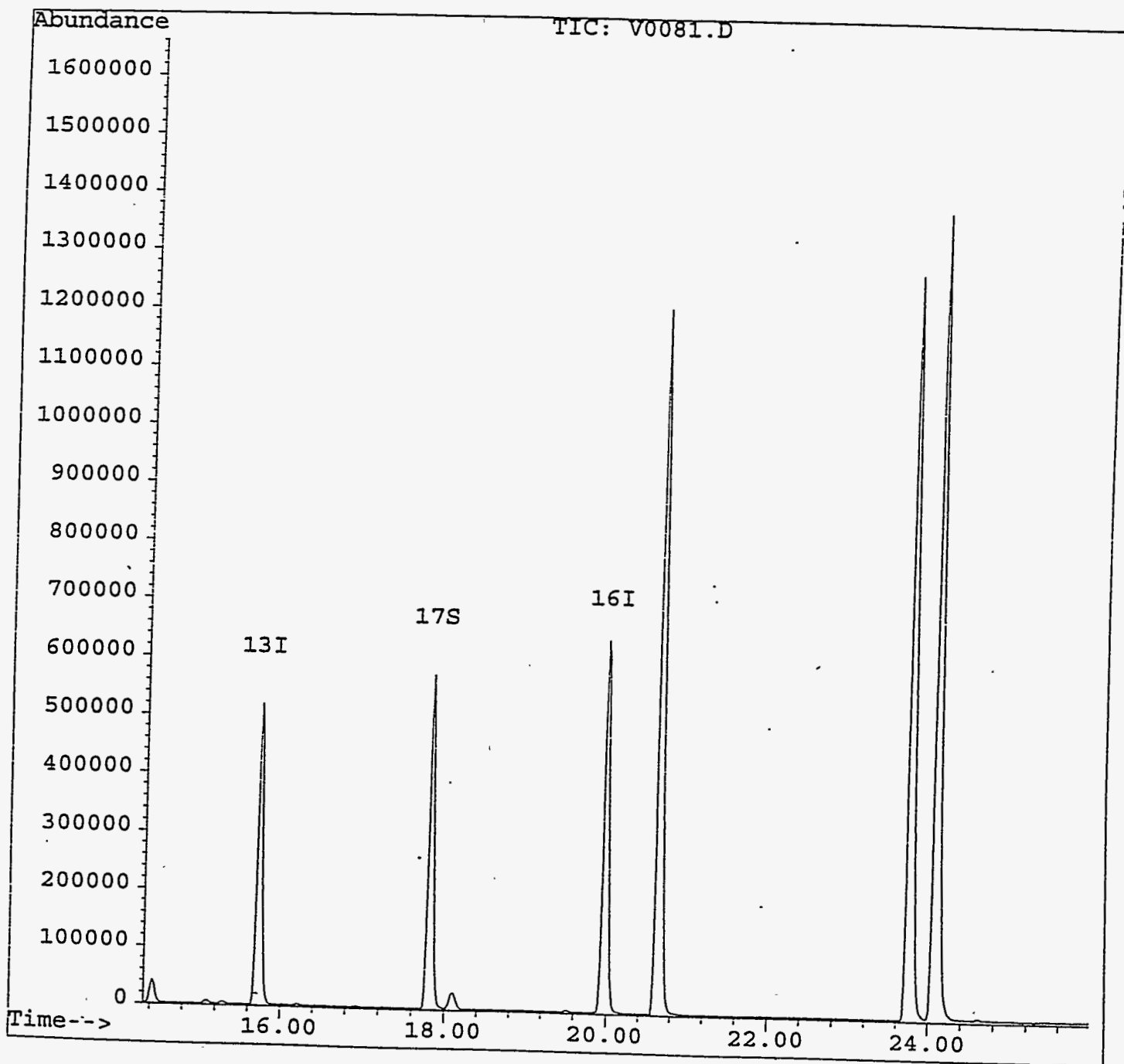


Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN1695\V0081.D  
Acq On : 16 Jan 96 6:47 pm  
Sample : ECO-002-7A  
Misc : VOATCLP-07,W,5,TCLP  
Quant Time: Jan 17 9:25 1996

Vial: 12  
Operator: WF  
Inst : 5972 - In  
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\VTCLP.M  
Title : SW-846 TCLP Method  
Last Update : Tue Jan 16 13:11:07 1996  
Response via : Multiple Level Calibration



Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN1695\V0081.D  
 Acq On : 16 Jan 96 6:47 pm  
 Sample : ECO-002-7A  
 Misc : VOATCLP-07,W,5,TCLP  
 Quant Time: Jan 17 9:25 1996

Vial: 12  
 Operator: WF  
 Inst : 5972 - In  
 Multiplr: 1.00

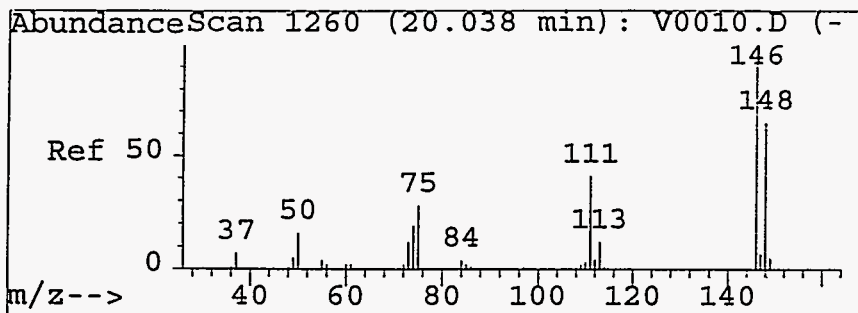
Method : C:\HPCHEM\1\METHODS\VTCLP.M  
 Title : SW-846 TCLP Method  
 Last Update : Tue Jan 16 13:11:07 1996  
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) pentafluorobenzene	9.37	168	865764	50.00	ug/L	0.03
6) 1,4-difluorobenzene	10.74	114	912796	50.00	ug/L	0.03
13) Chlorobenzene-d5	15.73	117	732324	50.00	ug/L	0.01
16) 1,4-dichlorobenzene-d4	19.98	152	477891	50.00	ug/L	0.01

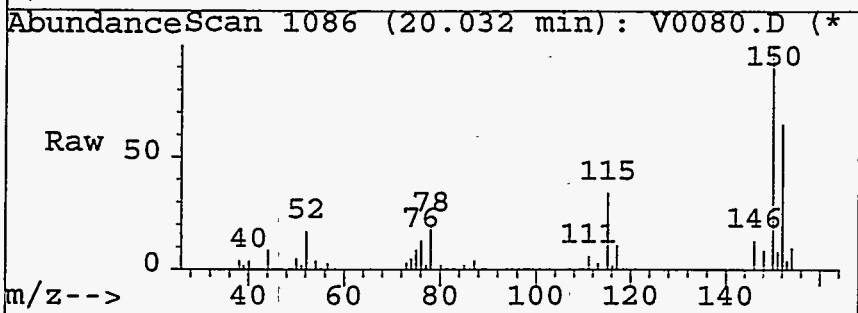
System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recovery
5) dibromofluoromethane	9.18	113	392808	49.76	ug/L	99.52%
12) toluene-d8	13.30	98	874637	50.58	ug/L	101.16%
17) 4-bromofluorobenzene	17.82	95	552912	47.95	ug/L	95.89%

Target Compounds Qvalue

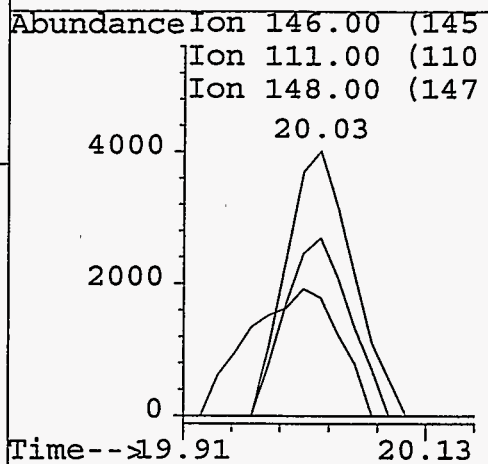
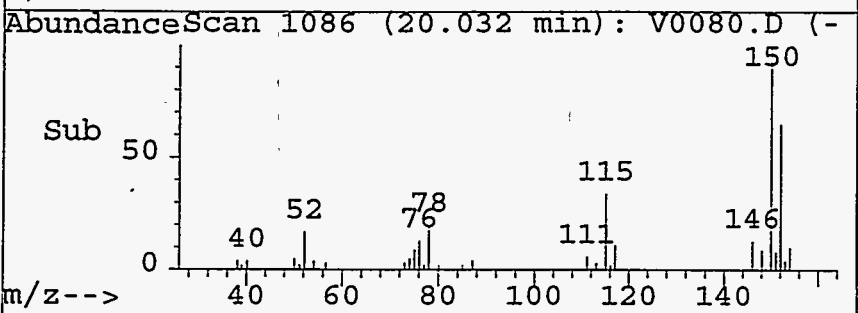
(#) = qualifier out of range (m) = manual integration



#18  
 1,4-dichlorobenzene  
 Concen: 1.13 ug/L  
 RT: 20.03 min Scan# 1086  
 Delta R.T. 0.02 min  
 Lab File: V0080.D  
 Acq: 16 Jan 96 6:11 pm



Tgt Ion:	146	Resp:	16746
Ion Ratio	Lower	Upper	
146	100		
111	44.6	22.2	62.2
148	67.1	44.8	84.8
0	0.0	0.0	0.0



Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN1695\V0066.D  
 Acq On : 16 Jan 96 9:51 am  
 Sample : VBLK01  
 Misc : METHOD BLANK,W,5,TCLP  
 Quant Time: Jan 16 10:35 1996

Vial: 3  
 Operator: WF  
 Inst : 5972 - In  
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\VTCLP.M  
 Title : SW-846 TCLP Method  
 Last Update : Tue Jan 16 10:33:14 1996  
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) pentafluorobenzene	9.34	168	741607	50.00	ug/L	0.02
6) 1,4-difluorobenzene	10.71	114	771344	50.00	ug/L	0.02
13) Chlorobenzene-d5	15.71	117	618447	50.00	ug/L	0.02
16) 1,4-dichlorobenzene-d4	19.97	152	398275	50.00	ug/L	0.02

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recovery
5) dibromofluoromethane	9.16	113	323883	47.90	ug/L	95.79%
12) toluene-d8	13.28	98	739763	50.62	ug/L	101.25%
17) 4-bromofluorobenzene	17.80	95	470099	48.92	ug/L	97.83%

Target Compounds Qvalue

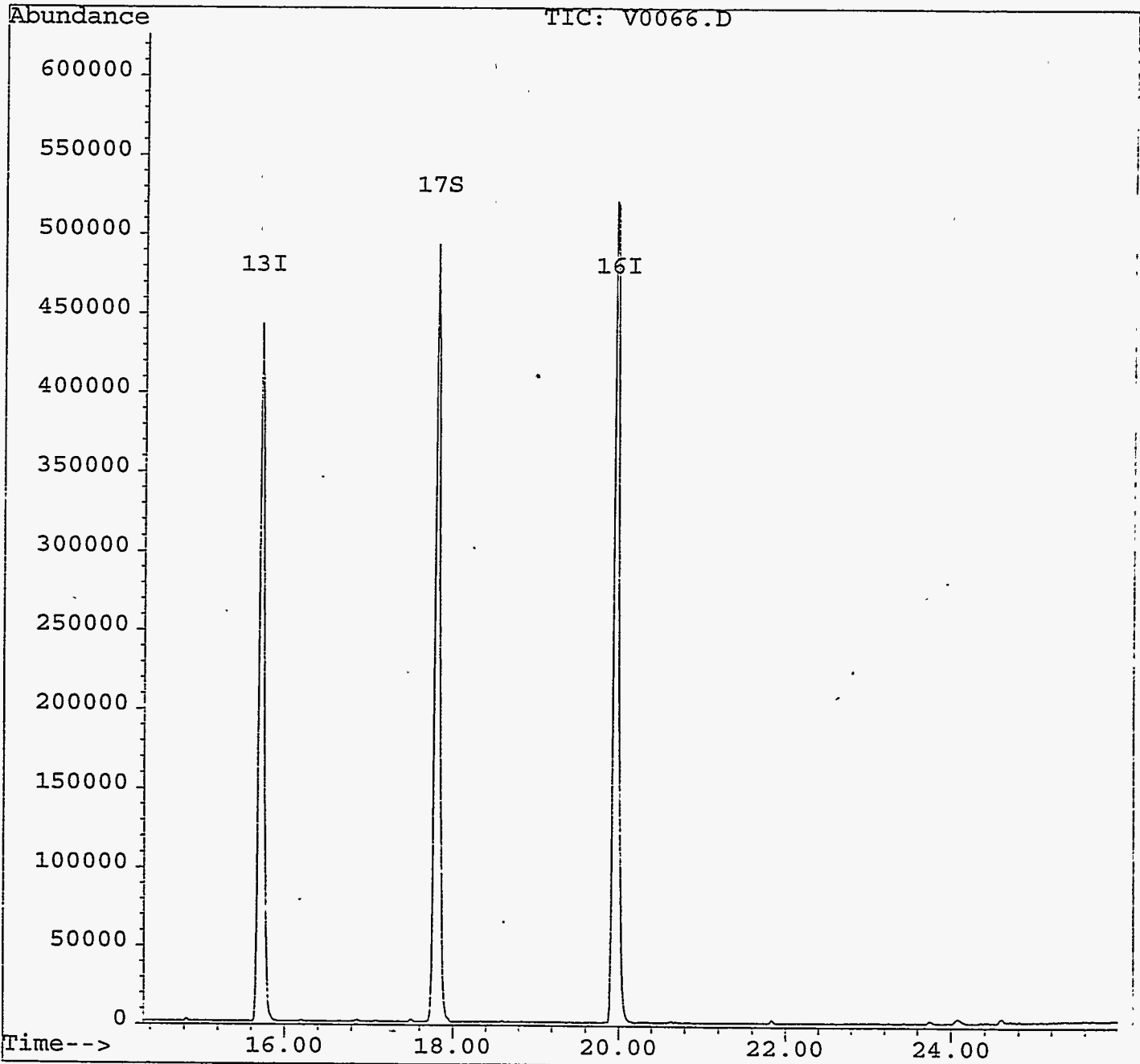
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 (#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN1695\V0066.D  
Acq On : 16 Jan 96 9:51 am  
Sample : VBLK01  
Misc : METHOD BLANK,W,5,TCLP  
Quant Time: Jan 16 10:35 1996

Vial: 3  
Operator: WF  
Inst : 5972 - Ir  
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\VTCLP.M  
Title : SW-846 TCLP Method  
Last Update : Tue Jan 16 10:33:14 1996  
Response via : Multiple Level Calibration



File I.D.	ALS	ECC. I.D.	DATE	Time	Dil	MARKER	PH	WF ANALYST
V0063	-	50MG BFB	4/16/96	7:52AM	N/A	W	N/A	WF
V0064	1	VSTDSO	4/16/96	8:13	N/A	W	N/A	5.4 = V37 S. ppb S.
V0065	1	VSTDSO <del>VSTDSO</del> WF		9:08	N/A	W		5.4 = V38 S. ppb S.
V0066	3	VBLK01		09:51	N/A	W	7	VBLK, method BLANK
V0067 TCLP B.LA	4	TCLP BLANK		10:30	10	W	4.98	TCLP BLANK,
V0068	5	ECO-002-1A		11:03	10	W	4.98	VOATCLP-01
V0069	6	ECO-002-2A		11:39	10	W		VOATCLP-02
V0070	7	ECO-002-3A		12:14	10	W		VOATCLP03
V0071	8	ECO-002-4A		12:49	10	W		VOATCLP04
V0072	9	ECO-002-5A		01:24	10	W		VOATCLP05
V0073	11	ECO-002-6A		2:00	10	W		VOATCLP06
V0074	12	ECO-002-7A		2:36	10	W		VOATCLP07
V0075	3 13	ECO-002-1A <del>TCLP LCS</del> WF		3:12	N/A	W	4.98 N/A	WF 20 ppb LCS VOATCLP

STANDARDS	DATE PREPARED	Conc.
V20	4/12/96	50 ppm
V22	4/12/96	50 ppm
V27	4/12/96	50 ppm
V23	4/14/96	50 ppm

Continued on Page \_\_\_\_\_

Read and Understood By \_\_\_\_\_

Signed _____	Date _____	Signed _____	Date _____
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PROJECT \_\_\_\_\_

File I.D	NIS	ECO I.D	DATE	TIME	Dil.	MATRIX	PH	Analyst	Comments
V0075	5	ECO-002-1A	1/16/95	3:12	1	W	4.98	WJF	VOATCLP-01
V0076	6	ECO-002-2A		3:47	1				VOATCLP-02
V0077	7	ECO-002-3A		4:23	1				VOATCLP-03
V0078	8	ECO-002-4A		4:59	1				VOATCLP-04
V0079	9	ECO-002-5A		5:35	1				VOATCLP-05
V0080	11	ECO-002-6A		6:11	1				VOATCLP-06
V0081	12	ECO-002-7A		6:47	1				VOATCLP-07
V0082	13	TCLP LCS		7:23	1		N/A		20 PPB LCS
V0083	14	ECO-002-4A		7:59	10	S	-		VOATCLP-04
V0084	16	ECO-002-1A		8:36	10	S	-		VOATCLP-01

Continued on Page \_\_\_\_\_

Read and Understood By \_\_\_\_\_

Signed \_\_\_\_\_

Date \_\_\_\_\_

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Date \_\_\_\_\_

PROJECT \_\_\_\_\_

FILE I.D	ECO. I.D	DATE	Time	Dil	MATRIX	Int	PH	Comments
V0039	SONG BFB	1/12/96	11:30 AM	H/A	H/A	WF	H/A	2ul Direct injecti-
V0040	VSTD 20	↓			W			20 ppb Std Std # V28
V0041	VSTD 50							50 ppb Std Std # V29
V0042	VSTD 100							100 ppb Std Std # V30
V0043	VSTD 150							150 ppb Std Std # V31
V0044	VSTD 200				↓	↓	↓	↓
V0045	VBLK 01			1	W	WF	7	method BLANK
V0046	VBLK 01	1/11/96		1	W	WF	7	method BLANK

STANDARDS	DATE Prepared	Conc.
V26	1/12/96 ↓	50 ppm
V22		50 ppm
V27		50 ppm
V23		50 ppm

Continued on Page \_\_\_\_\_

Read and Understood By \_\_\_\_\_

REC. DATE	SAMPLE I.D.	ECO I.D.	TEST	NO COUNT	MATRIX	VC
1/15/96	VOA TEST SOIL 01	ECO-002-01A	TCLP VOA	2	SOIL	60
1/15/96	VOA TEST SOIL 02	ECO-002-02A	TCLP VOA	2	SOIL	60
1/15/96	VOA TEST SOIL 03	ECO-002-03A	TCLP VOA	2	SOIL	60
1/15/96	VOA TEST SOIL 04	ECO-002-04A	TCLP VOA	2	SOIL	60
1/15/96	VOA TEST SOIL 05	ECO-002-05A	TCLP VOA	2	SOIL	60
1/15/96	VOA TEST SOIL 06	ECO-002-06A	TCLP VOA	2	SOIL	60
1/15/96	VOA TEST SOIL 07	ECO-002-07A	TCLP VOA	2	SOIL	60
1/15/96	VOA TEST SOIL 08	ECO-002-08A	% SOLIDS	1	SOIL	60

Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN1695\V0067.D  
 Acq On : 16 Jan 96 10:30 am  
 Sample : TCLP BLANK  
 Misc : TCLP BLANK,W,5,TCLP,10X  
 Quant Time: Jan 16 11:02 1996

Vial: 4  
 Operator: WF  
 Inst : 5972 - In  
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\VTCLP.M  
 Title : SW-846 TCLP Method  
 Last Update : Tue Jan 16 10:33:14 1996  
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) pentafluorobenzene	9.34	168	969389	50.00	ug/L	0.00
6) 1,4-difluorobenzene	10.71	114	1006293	50.00	ug/L	0.00
13) Chlorobenzene-d5	15.71	117	802695	50.00	ug/L	0.00
16) 1,4-dichlorobenzene-d4	19.97	152	515701	50.00	ug/L	0.00
System Monitoring Compounds						%Recovery
5) dibromofluoromethane	9.17	113	415084	46.96	ug/L	93.92%
12) toluene-d8	13.28	98	940921	49.36	ug/L	98.71%
17) 4-bromofluorobenzene	17.80	95	589880	47.40	ug/L	94.81%

Target Compounds

Qvalue

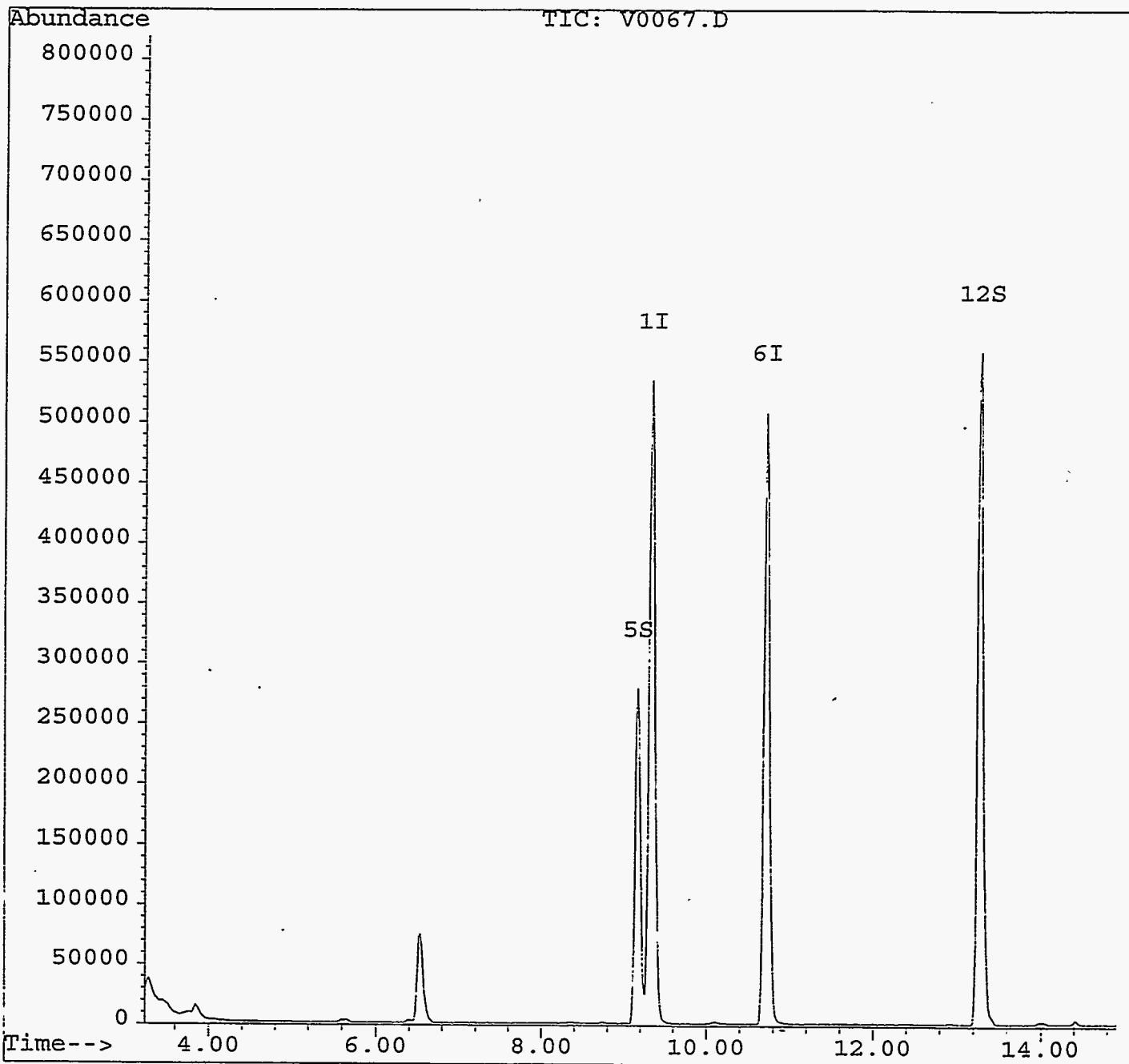
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 (#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN1695\V0067.D  
Acq On : 16 Jan 96 10:30 am  
Sample : TCLP BLANK  
Misc : TCLP BLANK,W,5,TCLP,10X  
Quant Time: Jan 16 11:02 1996

Vial: 4  
Operator: WF  
Inst : 5972 - Ir  
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\VTCLP.M  
Title : SW-846 TCLP Method  
Last Update : Tue Jan 16 10:33:14 1996  
Response via : Multiple Level Calibration

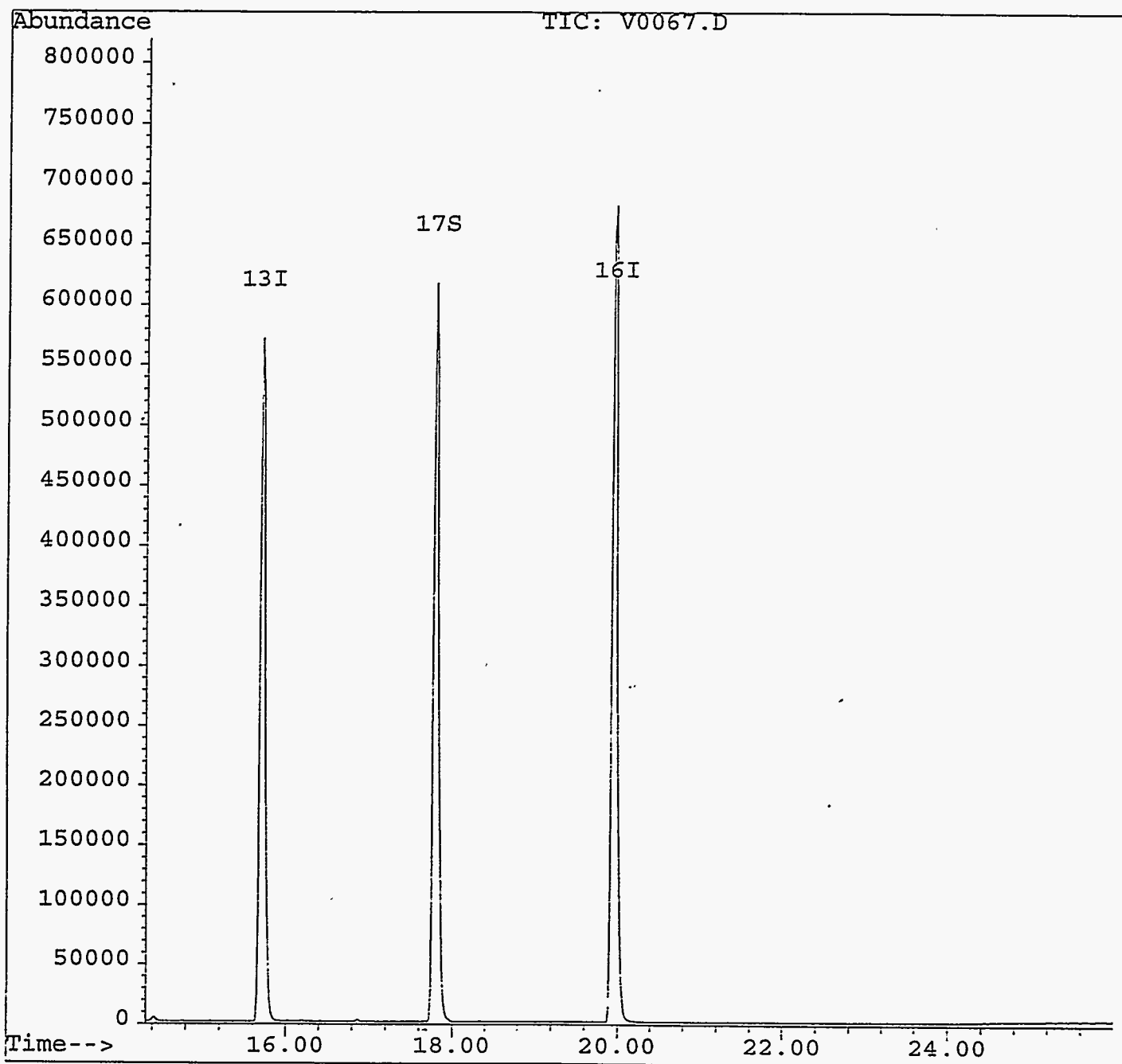


Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN1695\V0067.D  
Acq On : 16 Jan 96 10:30 am  
Sample : TCLP BLANK  
Misc : TCLP BLANK,W,5,TCLP,10X  
Quant Time: Jan 16 11:02 1996

Vial: 4  
Operator: WF  
Inst : 5972 - In  
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\VTCLP.M  
Title : SW-846 TCLP Method  
Last Update : Tue Jan 16 10:33:14 1996  
Response via : Multiple Level Calibration



Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN1695\V0066.D  
 Acq On : 16 Jan 96 9:51 am  
 Sample : VBLK01  
 Misc : METHOD BLANK,W,5,TCLP  
 Quant Time: Jan 16 10:35 1996

Vial: 3  
 Operator: WF  
 Inst : 5972 - In  
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\VTCLP.M  
 Title : SW-846 TCLP Method  
 Last Update : Tue Jan 16 13:11:07 1996  
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) pentafluorobenzene	9.34	168	741607	50.00	ug/L	0.02
6) 1,4-difluorobenzene	10.71	114	771344	50.00	ug/L	0.02
13) Chlorobenzene-d5	15.71	117	618447	50.00	ug/L	0.02
16) 1,4-dichlorobenzene-d4	19.97	152	398275	50.00	ug/L	0.02

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recovery
5) dibromofluoromethane	9.16	113	323883	47.90	ug/L	95.79%
12) toluene-d8	13.28	98	739763	50.62	ug/L	101.25%
17) 4-bromofluorobenzene	17.80	95	470099	48.92	ug/L	97.83%

Target Compounds

Qvalue

*WF 1/17/96*

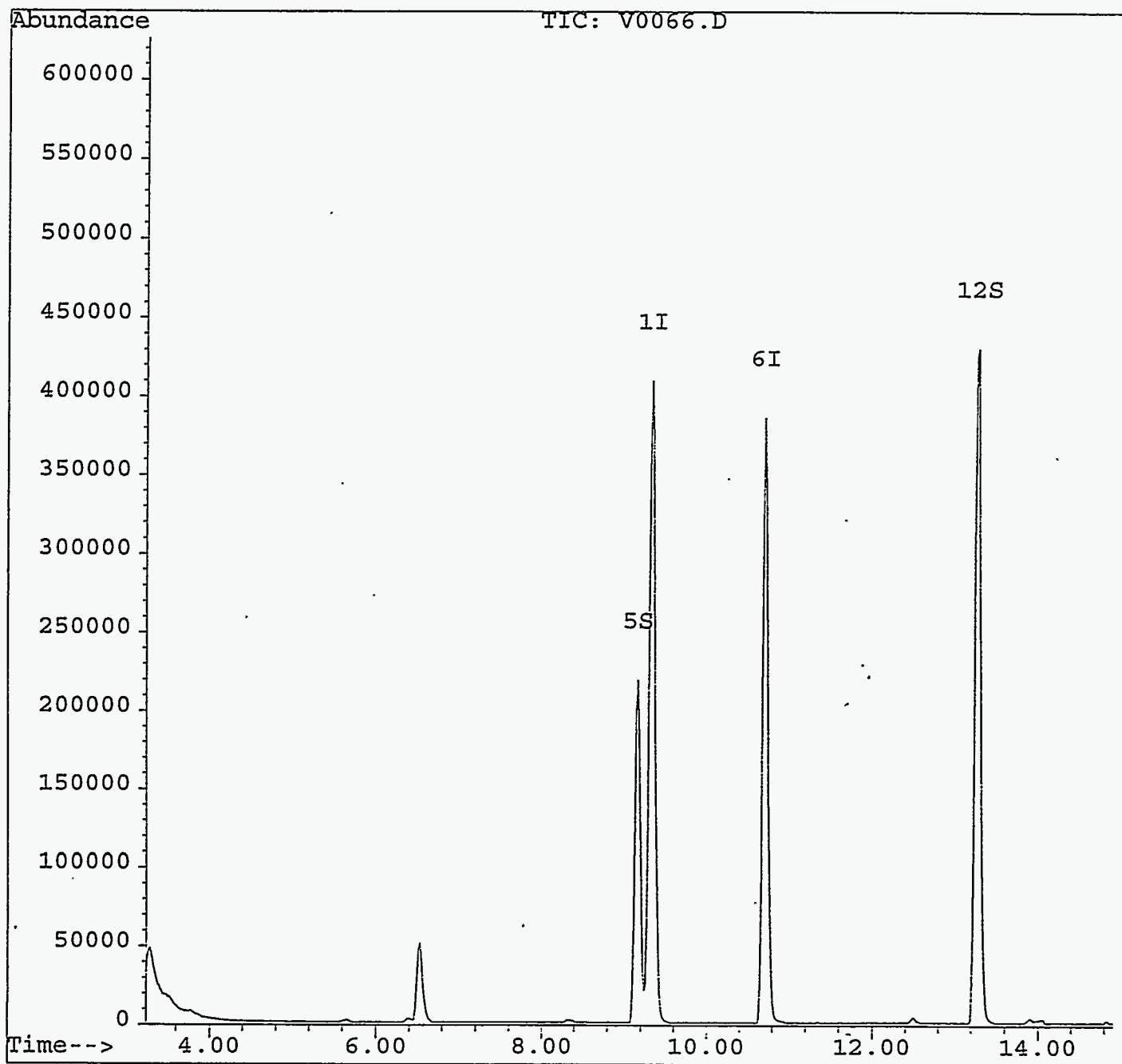
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN1695\V0066.D  
Acq On : 16 Jan 96 9:51 am  
Sample : VBLK01  
Misc : METHOD BLANK,W,5,TCLP  
Quant Time: Jan 16 10:35 1996

Vial: 3  
Operator: WF  
Inst : 5972 - In  
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\VTCLP.M  
Title : SW-846 TCLP Method  
Last Update : Tue Jan 16 13:11:07 1996  
Response via : Multiple Level Calibration



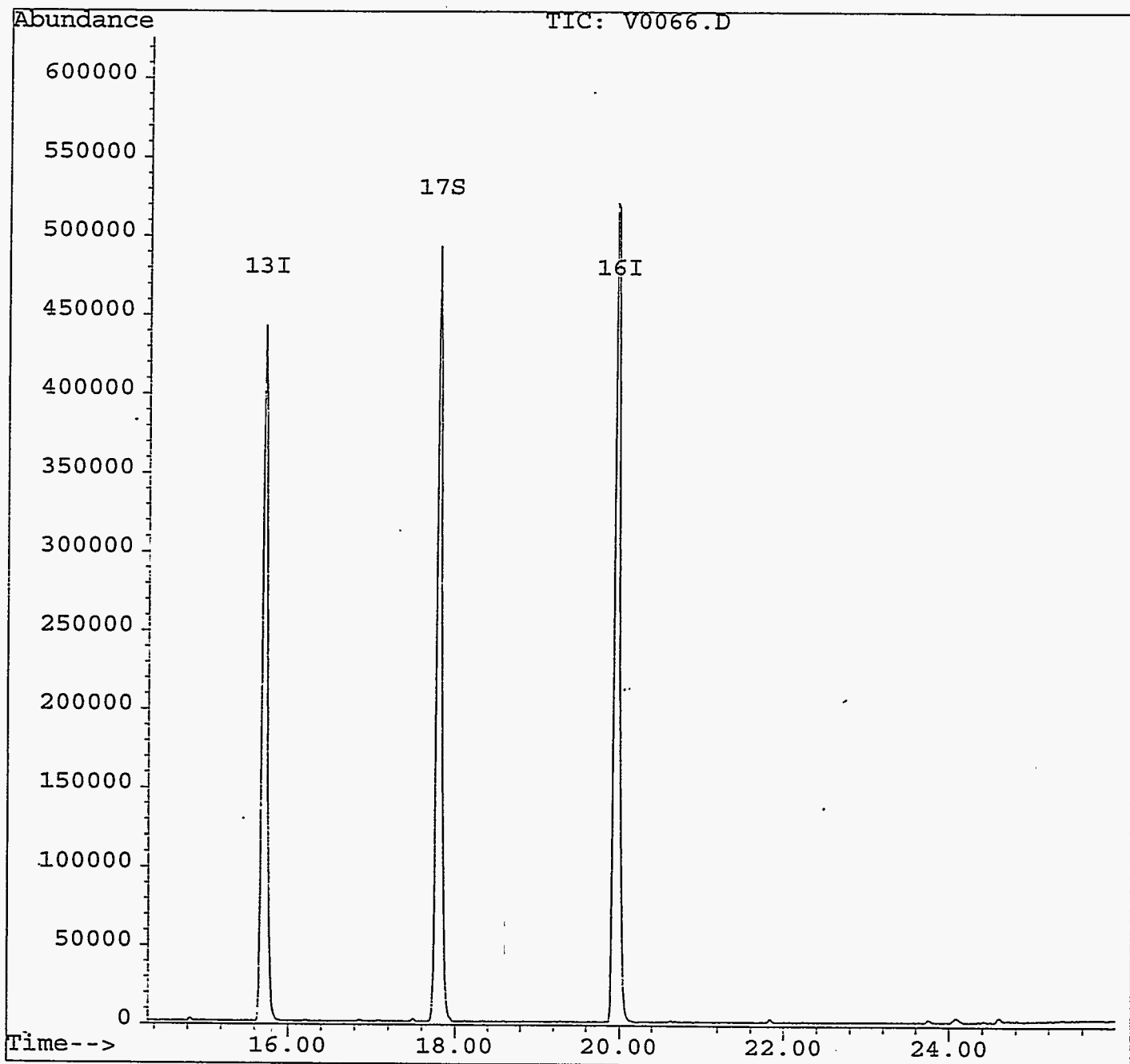


Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN1695\V0066.D  
Acq On : 16 Jan 96 9:51 am  
Sample : VBLK01  
Misc : METHOD BLANK,W,5,TCLP  
Quant Time: Jan 16 10:35 1996

Vial: 3  
Operator: WF  
Inst : 5972 - In  
Multiplr: 1.00

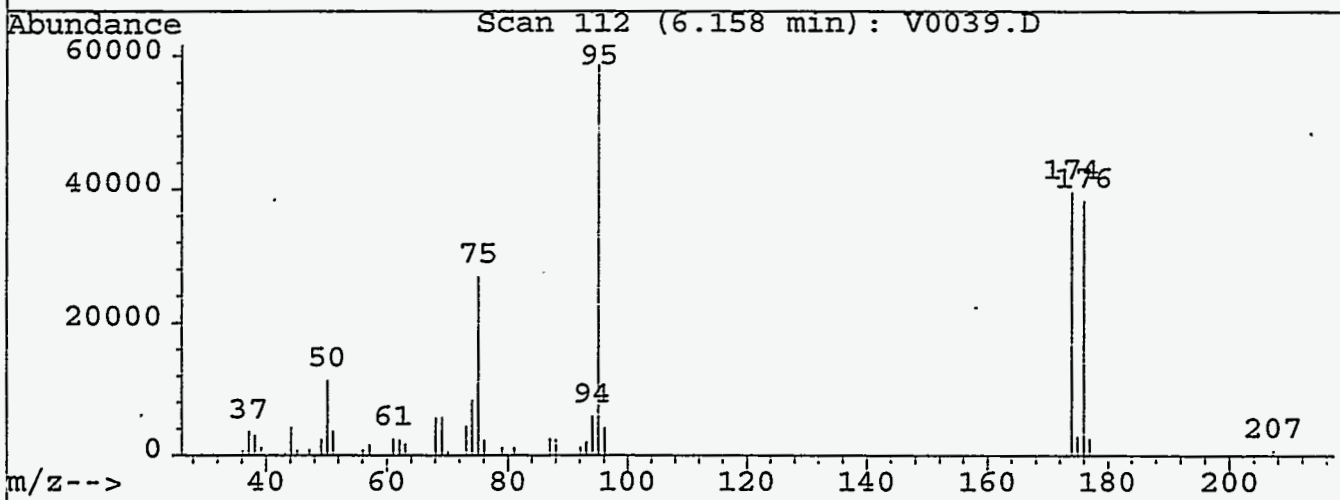
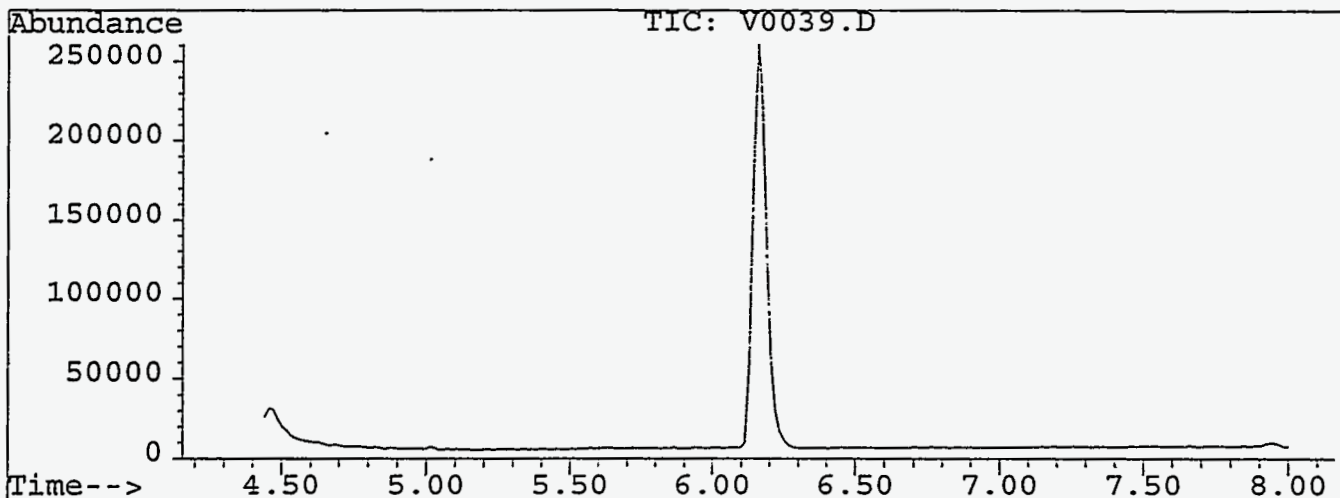
Method : C:\HPCHEM\1\METHODS\VTCLP.M  
Title : SW-846 TCLP Method  
Last Update : Tue Jan 16 13:11:07 1996  
Response via : Multiple Level Calibration



Data File : C:\HPCHEM\1\DATA\JAN1296\V0039.D  
 Acq On : 12 Jan 96 11:30 am  
 Sample : 50nG BFB  
 Misc : 2ul direct injection

Vial: 1  
 Operator: WF  
 Inst : 5972 - In  
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\VTCLP.M  
 Title : SW-846 TCLP Method



Peak Apex is scan: 112

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	19.4	11410	PASS
75	95	30	60	45.9	26984	PASS
95	95	100	100	100.0	58744	PASS
96	95	5	9	7.1	4170	PASS
173	174	0	2	0.0	0	PASS
174	95	50	100	67.5	39672	PASS
175	174	5	9	7.3	2892	PASS
176	174	95	101	96.7	38352	PASS
177	176	5	9	6.9	2650	PASS

Response Factor Report 5972 - In

Method : C:\HPCHEM\1\METHODS\VTCLP.M  
 Title : SW-846 TCLP Method  
 Last Update : Tue Jan 16 13:11:07 1996  
 Response via : Initial Calibration

Calibration Files

20 =V0040.D 50 =V0041.D 100 =V0042.D  
 150 =V0043.D 200 =V0044.D

Compound	20	50	100	150	200	Avg	%RSD
1) I pentafluorobenzene	-----ISTD-----						
2) T vinyl chloride	0.327	0.320	0.291	0.275	0.257	0.294	9.95
3) T 1,1-dichloroethene	0.332	0.320	0.296	0.293	0.289	0.306	6.23
4) T chloroform	0.618	0.630	0.604	0.590	0.583	0.605	3.18
5) S dibromofluoromethane	0.433	0.471	0.463	0.456	0.456	0.456	3.09
6) I 1,4-difluorobenzene	-----ISTD-----						
7) T 2-Butanone	0.088	0.107	0.110	0.102	0.115	0.104	10.03
8) T carbon tetrachloride	0.268	0.356	0.395	0.420	0.425	0.373	17.32
9) T benzene	0.987	0.970	0.931	0.915	0.897	0.940	4.04
10) T 1,2-dichloroethane	0.330	0.369	0.364	0.351	0.348	0.352	4.32
11) T trichloroethene	0.404	0.383	0.371	0.368	0.390	0.383	3.81
12) S toluene-d8	0.961	0.982	0.938	0.924	0.932	0.947	2.53
13) I Chlorobenzene-d5	-----ISTD-----						
14) T tetrachloroethene	0.590	0.564	0.567	0.574	0.581	0.575	1.86
15) T chlorobenzene	0.993	1.001	0.980	0.957	0.984	0.983	1.69
16) I 1,4-dichlorobenzene-d	-----ISTD-----						
17) S 4-bromofluorobenzene	1.226	1.238	1.189	1.191	1.188	1.207	1.99
18) T 1,4-dichlorobenzene	1.599	1.571	1.528	1.514	1.501	1.543	2.67

Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN1296\V0040.D  
 Acq On : 12 Jan 96 11:48 am  
 Sample : VSTD20, 20PPB  
 Misc : STD #V28 ,W,8260  
 Quant Time: Jan 12 16:25 1996

Vial: 2  
 Operator: WF  
 Inst : 5972 - In  
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\VTCLP.M  
 Title : SW-846 TCLP Method  
 Last Update : Tue Jan 16 13:11:07 1996  
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) pentafluorobenzene	9.39	168	953354	50.00	ug/L	0.04
20) 1,4-difluorobenzene	10.75	114	1063865	50.00	ug/L	0.02
35) Chlorobenzene-d5	15.76	117	817211	50.00	ug/L	0.04
49) 1,4-dichlorobenzene-d4	20.00	152	498664	50.00	ug/L	0.02

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recovery
18) dibromofluoromethane	9.20	113	165233	19.01	ug/L	38.02%
31) toluene-d8	13.32	98	409020	20.29	ug/L	40.59%
51) 4-bromofluorobenzene	17.84	95	244623	20.33	ug/L	40.66%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) dichlorodifluoromethane	3.32	85	212792	21.46	ug/L	98
3) chloromethane	3.61	50	128003	22.01	ug/L	99
4) vinyl chloride	3.81	62	124522	22.22	ug/L	99
5) bromomethane	4.42	96	87921	20.16	ug/L	99
6) chloroethane	4.59	64	84069	21.57	ug/L	99
7) Acetone	5.61	43	30159	23.60	ug/L	88
8) trichlorofluoromethane	5.19	101	249050	20.30	ug/L	98
9) 1,1-dichloroethene	6.06	96	126709	21.71	ug/L	# 86
10) methylene chloride	6.55	84	145522	23.96	ug/L	96
11) Carbon disulfide	6.69	76	317833	21.54	ug/L	100
12) trans-1,2-dichloroethene	7.25	96	127384	21.09	ug/L	94
13) 1,1-dichloroethane	7.76	63	256469	21.23	ug/L	99
14) 2,2-dichloropropane	8.78	77	171057	19.36	ug/L	95
15) cis-1,2-dichloroethene	8.66	96	139319	20.91	ug/L	98
16) bromochloromethane	9.04	128	67510	18.58	ug/L	97
17) chloroform	8.95	83	235514	18.08	ug/L	99
19) 1,1,1-trichloroethane	9.76	97	217044	20.31	ug/L	99
21) 2-Butanone	8.35	43	37315	16.79	ug/L	90
22) carbon tetrachloride	10.24	117	114136	14.38	ug/L	99
23) 1,1-dichloropropene	10.04	75	210419	21.06	ug/L	99
24) benzene	10.31	78	420096	21.01	ug/L	99
25) 1,2-dichloroethane	10.04	62	140516	18.74	ug/L	96
26) trichloroethene	11.38	95	171984	21.09	ug/L	100
27) 1,2-dichloropropane	11.47	63	159719	20.35	ug/L	99
28) dibromomethane	11.71	93	100096	18.27	ug/L	98
29) bromodichloromethane	11.75	83	180399	17.72	ug/L	99
30) cis-1,3-dichloropropene	12.68	75	207017	18.23	ug/L	100
32) toluene	13.44	92	278212	20.51	ug/L	98
33) trans-1,3-dichloropropene	13.44	75	120980	15.85	ug/L	99
34) 1,1,2-trichloroethane	13.69	83	89478	17.93	ug/L	98
36) 4-Methyl-2-pentanone	12.53	43	109756	17.70	ug/L	98
37) 2-Hexanone	13.94	43	56577	14.14	ug/L	95

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

Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN1296\V0040.D  
 Acq On : 12 Jan 96 11:48 am  
 Sample : VSTD20, 20PPB  
 Misc : STD #V28 ,W,8260  
 Quant Time: Jan 12 16:25 1996

Vial: 2  
 Operator: WF  
 Inst : 5972 - In  
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\VTCLP.M  
 Title : SW-846 TCLP Method  
 Last Update : Tue Jan 16 13:11:07 1996  
 Response via : Multiple Level Calibration

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38) tetrachloroethene	14.66	166	192979	20.53	ug/L	99
39) 1,3-dichloropropane	14.09	76	181683	18.78	ug/L	99
40) dibromochloromethane	14.51	129	122941	15.39	ug/L	99
41) 1,2-dibromoethane	14.86	107	128503	17.31	ug/L	99
42) chlorobenzene	15.82	112	324606	20.21	ug/L	96
43) 1,1,1,2-tetrachloroethane	15.87	131	124851	17.79	ug/L	97
44) ethylbenzene	16.06	91	582299	21.13	ug/L	100
45) m,p-xylene	16.24	106	450575	42.93	ug/L	96
46) o-xylene	16.94	106	216800	21.33	ug/L	93
47) styrene	16.91	104	347263	20.42	ug/L	93
48) bromoform	17.12	173	71577	12.73	ug/L	98
50) isopropylbenzene	17.65	105	655360	22.02	ug/L	100
52) bromobenzene	18.16	156	162793	19.59	ug/L	98
53) 1,1,2,2-tetrachloroethane	17.53	83	105292	15.27	ug/L	100
54) 1,2,3-trichloropropane	17.76	77	38259	18.76	ug/L #	67
55) n-propylbenzene	18.38	91	764774	22.08	ug/L	99
56) 2-chlorotoluene	18.53	91	470809	21.17	ug/L	92
57) 4-chlorotoluene	18.62	91	522852	22.12	ug/L	98
58) 1,3,5-trimethylbenzene	18.69	105	510713	22.42	ug/L	97
59) tert-butylbenzene	19.32	91	391871	22.51	ug/L	95
60) 1,2,4-trimethylbenzene	18.69	105	510713	22.42	ug/L	97
61) sec-butylbenzene	19.72	105	777627	22.52	ug/L	99
62) 1,3-dichlorobenzene	19.89	146	311810	20.65	ug/L	98
63) 4-isopropyltoluene	19.99	119	644752	22.38	ug/L	98
64) 1,4-dichlorobenzene	20.05	146	318978	20.73	ug/L	98
65) 1,2-dichlorobenzene	20.67	146	286151	20.28	ug/L	98
66) n-butylbenzene	20.71	91	613717	23.20	ug/L	99
67) 1,2-dibromo-3-chloropropan	21.86	75	21476	12.38	ug/L	90
68) 1,2,4-trichlorobenzene	23.78	180	210945	20.30	ug/L	99
69) hexachlorobutadiene	24.32	225	187315	21.19	ug/L	99
70) naphthalene	24.12	128	225045	16.56	ug/L	100
71) 1,2,3-trichlorobenzene	24.63	180	170252	19.20	ug/L	99

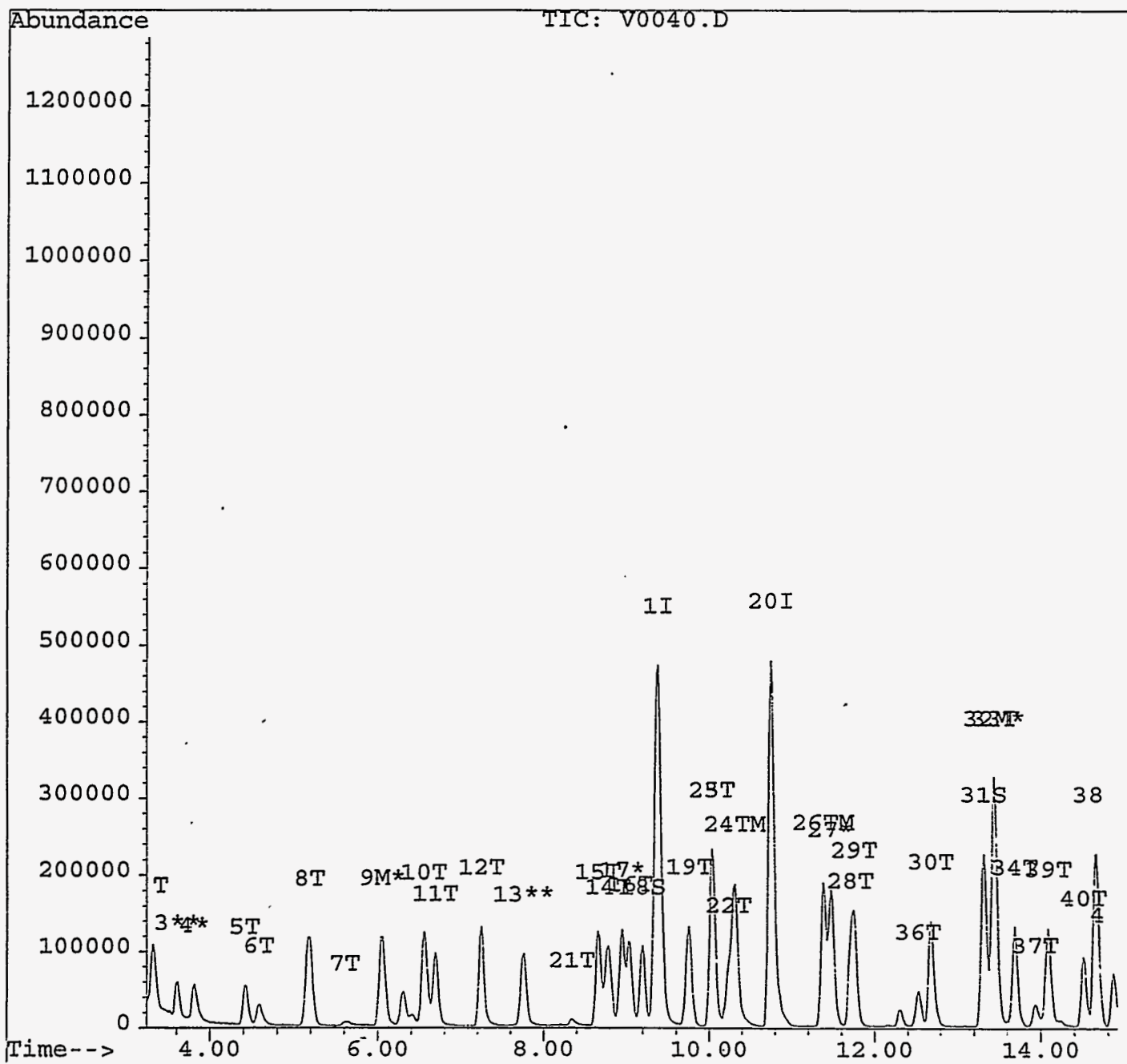
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN1296\V0040.D  
 Acq On : 12 Jan 96 11:48 am  
 Sample : VSTD20, 20PPB  
 Misc : STD #V28 ,W,8260  
 Quant Time: Jan 12 16:25 1996

Vial: 2  
 Operator: WF  
 Inst : 5972 - In  
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\VTCLP.M  
 Title : SW-846 TCLP Method  
 Last Update : Tue Jan 16 13:11:07 1996  
 Response via : Multiple Level Calibration

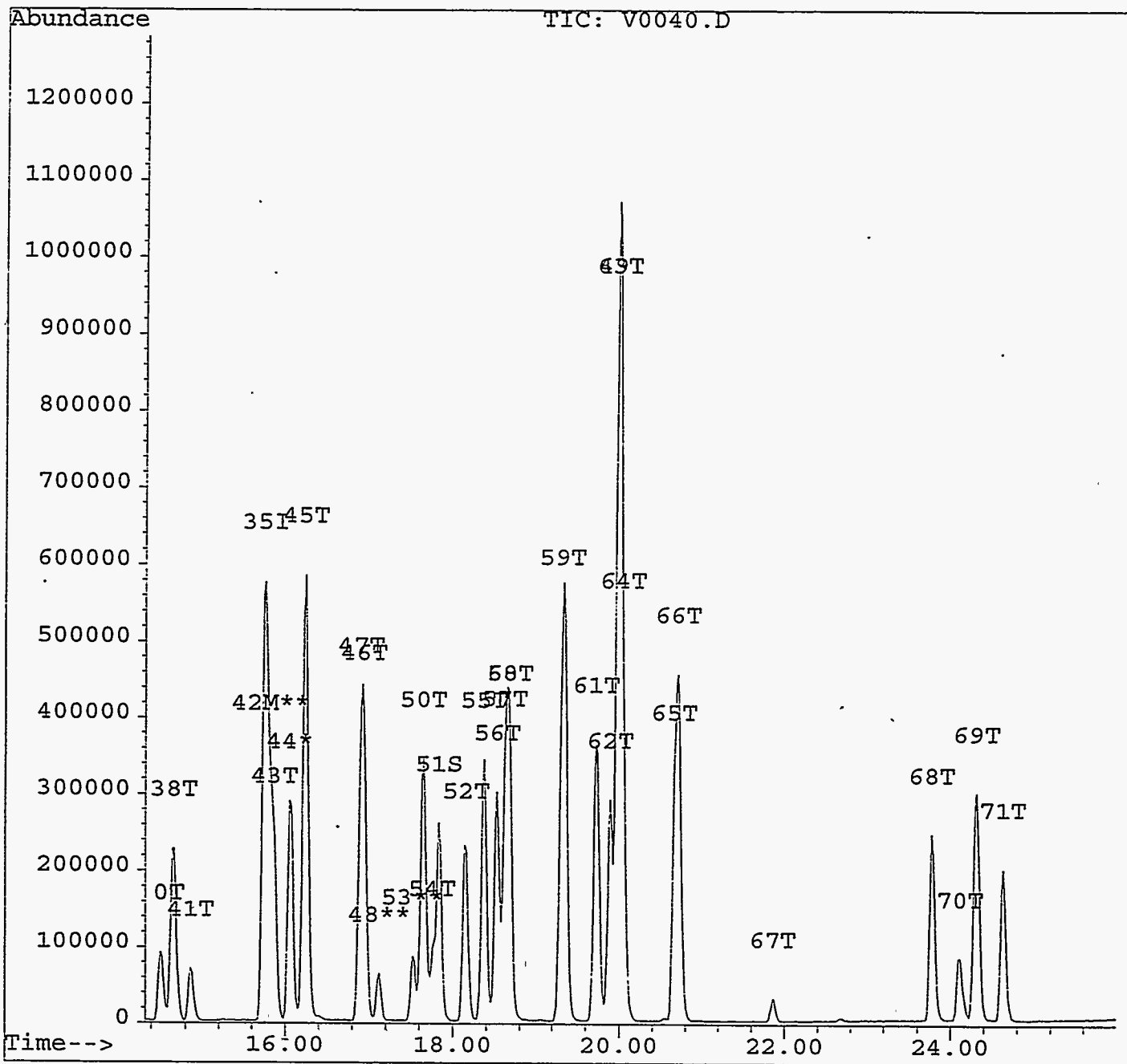


Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN1296\V0040.D  
Acq On : 12 Jan 96 11:48 am  
Sample : VSTD20, 20PPB  
Misc : STD #V28 ,W,8260  
Quant Time: Jan 12 16:25 1996

Vial: 2  
Operator: WF  
Inst : 5972 - In  
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\VTCLP.M  
Title : SW-846 TCLP Method  
Last Update : Tue Jan 16 13:11:07 1996  
Response via : Multiple Level Calibration



## Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN1296\V0041.D  
 Acq On : 12 Jan 96 12:22 pm  
 Sample : VSTD50, 50PPB  
 Misc : STD #V29 ,W,8260  
 Quant Time: Jan 12 16:26 1996

Vial: 3  
 Operator: WF  
 Inst : 5972 - In  
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\VTCLP.M  
 Title : SW-846 TCLP Method  
 Last Update : Tue Jan 16 13:11:07 1996  
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) pentafluorobenzene	9.37	168	1000473	50.00	ug/L	0.02
20) 1,4-difluorobenzene	10.74	114	1107917	50.00	ug/L	0.02
35) Chlorobenzene-d5	15.74	117	904373	50.00	ug/L	0.02
49) 1,4-dichlorobenzene-d4	19.98	152	555948	50.00	ug/L	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recovery
18) dibromofluoromethane	9.20	113	471246	51.66	ug/L	103.31%
31) toluene-d8	13.31	98	1088070	51.84	ug/L	103.68%
51) 4-bromofluorobenzene	17.83	95	688391	51.31	ug/L	102.63%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) dichlorodifluoromethane	3.32	85	548151	52.67	ug/L	100
3) chloromethane	3.61	50	319929	52.41	ug/L	98
4) vinyl chloride	3.81	62	319720	54.36	ug/L	100
5) bromomethane	4.41	96	251403	54.94	ug/L	99
6) chloroethane	4.58	64	219941	53.76	ug/L	100
7) Acetone	5.61	43	65551	48.87	ug/L	92
8) trichlorofluoromethane	5.19	101	659230	51.21	ug/L	100
9) 1,1-dichloroethene	6.04	96	320328	52.31	ug/L	89
10) methylene chloride	6.55	84	331263	51.98	ug/L	96
11) Carbon disulfide	6.69	76	808189	52.18	ug/L	100
12) trans-1,2-dichloroethene	7.25	96	327557	51.68	ug/L	94
13) 1,1-dichloroethane	7.74	63	665545	52.49	ug/L	99
14) 2,2-dichloropropane	8.78	77	469605	50.65	ug/L	97
15) cis-1,2-dichloroethene	8.65	96	362342	51.83	ug/L	97
16) bromochloromethane	9.03	128	203078	53.25	ug/L	100
17) chloroform	8.95	83	629932	51.28	ug/L	100
19) 1,1,1-trichloroethane	9.75	97	577399	51.48	ug/L	97
21) 2-Butanone	8.33	43	118656	51.26	ug/L	96
22) carbon tetrachloride	10.23	117	394665	47.75	ug/L	100
23) 1,1-dichloropropene	10.03	75	533295	51.25	ug/L	98
24) benzene	10.31	78	1075150	51.62	ug/L	100
25) 1,2-dichloroethane	10.03	62	409287	52.42	ug/L	96
26) trichloroethene	11.38	95	424870	50.02	ug/L	97
27) 1,2-dichloropropane	11.47	63	424904	51.99	ug/L	99
28) dibromomethane	11.70	93	299390	52.48	ug/L	97
29) bromodichloromethane	11.75	83	542698	51.19	ug/L	100
30) cis-1,3-dichloropropene	12.68	75	620586	52.47	ug/L	98
32) toluene	13.44	92	737242	52.18	ug/L	98
33) trans-1,3-dichloropropene	13.44	75	415912	52.34	ug/L	98
34) 1,1,2-trichloroethane	13.68	83	270570	52.08	ug/L	100
36) 4-Methyl-2-pentanone	12.51	43	338971	49.39	ug/L	99
37) 2-Hexanone	13.92	43	226107	51.07	ug/L	98

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



Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN1296\V0041.D  
 Acq On : 12 Jan 96 12:22 pm  
 Sample : VSTD50, 50PPB  
 Misc : STD #V29 ,W,8260  
 Quant Time: Jan 12 16:26 1996

Vial: 3  
 Operator: WF  
 Inst : 5972 - In  
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\VTCLP.M  
 Title : SW-846 TCLP Method  
 Last Update : Tue Jan 16 13:11:07 1996  
 Response via : Multiple Level Calibration

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38) tetrachloroethene	14.64	166	509789	49.00	ug/L	98
39) 1,3-dichloropropane	14.09	76	543061	50.73	ug/L	100
40) dibromochloromethane	14.50	129	439551	49.71	ug/L	100
41) 1,2-dibromoethane	14.86	107	420290	51.17	ug/L	100
42) chlorobenzene	15.80	112	905218	50.92	ug/L	97
43) 1,1,1,2-tetrachloroethane	15.87	131	380577	48.99	ug/L	98
44) ethylbenzene	16.05	91	1541847	50.56	ug/L	98
45) m,p-xylene	16.24	106	1166308	100.42	ug/L	96
46) o-xylene	16.93	106	565114	50.23	ug/L	94
47) styrene	16.89	104	955284	50.77	ug/L	93
48) bromoform	17.12	173	301018	48.38	ug/L	99
50) isopropylbenzene	17.65	105	1676380	50.52	ug/L	100
52) bromobenzene	18.14	156	476316	51.40	ug/L	98
53) 1,1,2,2-tetrachloroethane	17.52	83	405473	52.76	ug/L	99
54) 1,2,3-trichloropropane	17.75	77	118712	52.21	ug/L #	84
55) n-propylbenzene	18.36	91	1959613	50.74	ug/L	99
56) 2-chlorotoluene	18.53	91	1247562	50.33	ug/L	91
57) 4-chlorotoluene	18.62	91	1361046	51.65	ug/L	97
58) 1,3,5-trimethylbenzene	18.67	105	1281998	50.49	ug/L	98
59) tert-butylbenzene	19.32	91	975350	50.26	ug/L	94
60) 1,2,4-trimethylbenzene	18.67	105	1281998	50.49	ug/L	98
61) sec-butylbenzene	19.72	105	1941489	50.43	ug/L	100
62) 1,3-dichlorobenzene	19.89	146	852189	50.63	ug/L	97
63) 4-isopropyltoluene	19.98	119	1617830	50.36	ug/L	98
64) 1,4-dichlorobenzene	20.05	146	873502	50.92	ug/L	98
65) 1,2-dichlorobenzene	20.66	146	805212	51.18	ug/L	98
66) n-butylbenzene	20.71	91	1478236	50.13	ug/L	98
67) 1,2-dibromo-3-chloropropan	21.86	75	100153	51.78	ug/L	89
68) 1,2,4-trichlorobenzene	23.77	180	574518	49.59	ug/L	100
69) hexachlorobutadiene	24.32	225	475071	48.20	ug/L	97
70) naphthalene	24.10	128	760581	50.21	ug/L	100
71) 1,2,3-trichlorobenzene	24.63	180	487518	49.31	ug/L	100

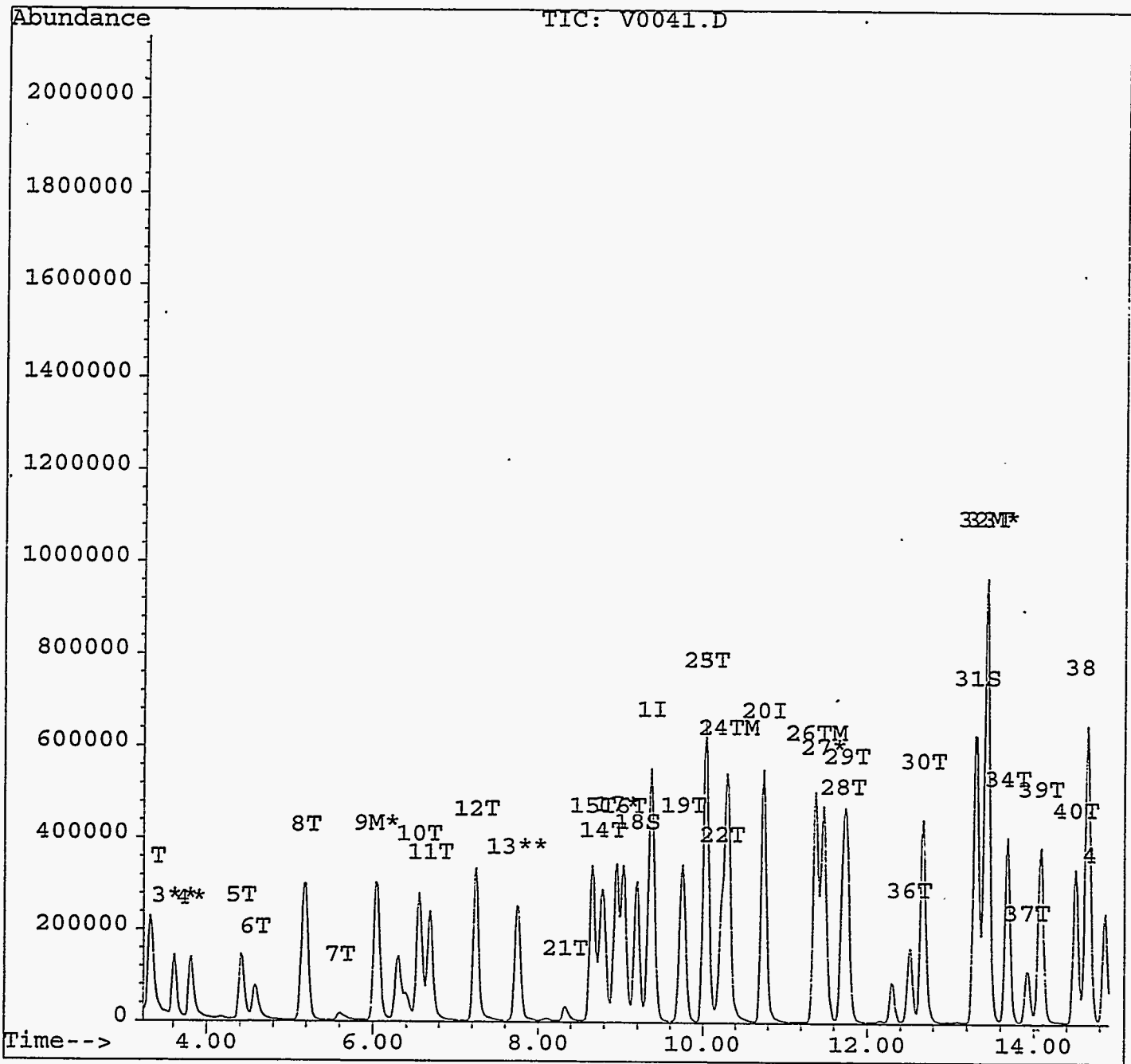
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN1296\V0041.D  
Acq On : 12 Jan 96 12:22 pm  
Sample : VSTD50, 50PPB  
Misc : STD #V29 ,W,8260  
Quant Time: Jan 12 16:26 1996

Vial: 3  
Operator: WF  
Inst : 5972 - In  
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\VTCLP.M  
Title : SW-846 TCLP Method  
Last Update : Tue Jan 16 13:11:07 1996  
Response via : Multiple Level Calibration

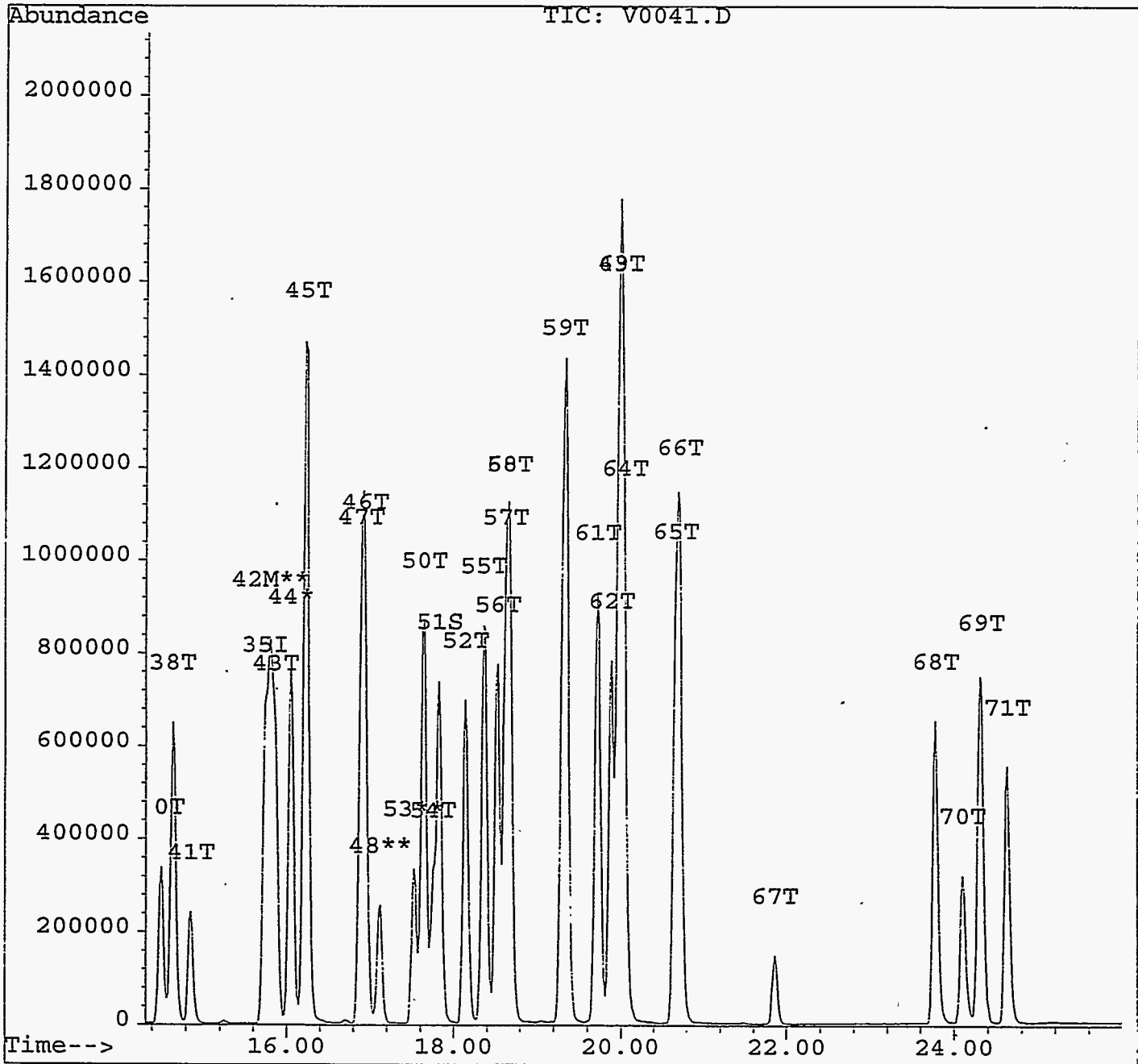


Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN1296\V0041.D  
Acq On : 12 Jan 96 12:22 pm  
Sample : VSTD50, 50PPB  
Misc : STD #V29 ,W,8260  
Quant Time: Jan 12 16:26 1996

Vial: 3  
Operator: WF  
Inst : 5972 - In  
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\VTCLP.M  
Title : SW-846 TCLP Method  
Last Update : Tue Jan 16 13:11:07 1996  
Response via : Multiple Level Calibration



Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN1296\V0042.D  
 Acq On : 12 Jan 96 12:58 pm  
 Sample : VSTD100, 100PPB  
 Misc : STD #V30 ,W,8260  
 Quant Time: Jan 12 16:26 1996

Vial: 4  
 Operator: WF  
 Inst : 5972 - In  
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\VTCLP.M  
 Title : SW-846 TCLP Method  
 Last Update : Tue Jan 16 13:11:07 1996  
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) pentafluorobenzene	9.37	168	998185	50.00	ug/L	0.02
20) 1,4-difluorobenzene	10.73	114	1085510	50.00	ug/L	0.00
35) Chlorobenzene-d5	15.75	117	868084	50.00	ug/L	0.02
49) 1,4-dichlorobenzene-d4	19.99	152	544370	50.00	ug/L	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recovery
18) dibromofluoromethane	9.18	113	925100	101.64	ug/L	203.28%
31) toluene-d8	13.30	98	2035847	99.00	ug/L	198.00%
51) 4-bromofluorobenzene	17.82	95	1294130	98.52	ug/L	197.04%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) dichlorodifluoromethane	3.32	85	1035083	99.70	ug/L	99
3) chloromethane	3.60	50	584692	96.00	ug/L	99
4) vinyl chloride	3.80	62	581166	99.03	ug/L	100
5) bromomethane	4.40	96	442319	96.89	ug/L	100
6) chloroethane	4.57	64	397886	97.49	ug/L	100
7) Acetone	5.59	43	131191	98.04	ug/L	92
8) trichlorofluoromethane	5.18	101	1290309	100.47	ug/L	100
9) 1,1-dichloroethene	6.03	96	590861	96.71	ug/L	90
10) methylene chloride	6.54	84	596230	93.77	ug/L	96
11) Carbon disulfide	6.68	76	1509155	97.66	ug/L	100
12) trans-1,2-dichloroethene	7.23	96	620476	98.11	ug/L	94
13) 1,1-dichloroethane	7.74	63	1245021	98.42	ug/L	100
14) 2,2-dichloropropane	8.77	77	941957	101.83	ug/L	96
15) cis-1,2-dichloroethene	8.66	96	690007	98.92	ug/L	94
16) bromochloromethane	9.03	128	393281	103.35	ug/L	93
17) chloroform	8.94	83	1205130	101.41	ug/L	100
19) 1,1,1-trichloroethane	9.74	97	1115734	99.70	ug/L	99
21) 2-Butanone	8.32	43	238459	105.14	ug/L	96
22) carbon tetrachloride	10.24	117	858069	105.97	ug/L	100
23) 1,1-dichloropropene	10.02	75	1010084	99.07	ug/L	98
24) benzene	10.30	78	2020204	99.00	ug/L	100
25) 1,2-dichloroethane	10.02	62	789213	103.16	ug/L	96
26) trichloroethene	11.37	95	806271	96.88	ug/L	99
27) 1,2-dichloropropane	11.47	63	803942	100.40	ug/L	100
28) dibromomethane	11.71	93	583214	104.34	ug/L	93
29) bromodichloromethane	11.75	83	1077566	103.73	ug/L	99
30) cis-1,3-dichloropropene	12.67	75	1208321	104.27	ug/L	100
32) toluene	13.42	92	1378797	99.61	ug/L	98
33) trans-1,3-dichloropropene	13.42	75	843719	108.37	ug/L	98
34) 1,1,2-trichloroethane	13.67	83	529835	104.08	ug/L	99
36) 4-Methyl-2-pentanone	12.51	43	678468	102.98	ug/L	97
37) 2-Hexanone	13.92	43	458280	107.84	ug/L	97

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

Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN1296\V0042.D  
 Acq On : 12 Jan 96 12:58 pm  
 Sample : VSTD100, 100PPB  
 Misc : STD #V30 ,W,8260  
 Quant Time: Jan 12 16:26 1996

Vial: 4  
 Operator: WF  
 Inst : 5972 - In  
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\VTCLP.M  
 Title : SW-846 TCLP Method  
 Last Update : Tue Jan 16 13:11:07 1996  
 Response via : Multiple Level Calibration

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38) tetrachloroethene	14.65	166	984653	98.60	ug/L	100
39) 1,3-dichloropropane	14.07	76	1053932	102.58	ug/L	99
40) dibromochloromethane	14.51	129	893905	105.32	ug/L	100
41) 1,2-dibromoethane	14.85	107	831587	105.48	ug/L	100
42) chlorobenzene	15.81	112	1700827	99.67	ug/L	96
43) 1,1,1,2-tetrachloroethane	15.87	131	761304	102.10	ug/L	98
44) ethylbenzene	16.06	91	2892504	98.81	ug/L	97
45) m,p-xylene	16.23	106	2189838	196.43	ug/L	96
46) o-xylene	16.92	106	1069967	99.09	ug/L	96
47) styrene	16.89	104	1802603	99.81	ug/L	93
48) bromoform	17.11	173	653912	109.50	ug/L	100
50) isopropylbenzene	17.63	105	3164544	97.40	ug/L	99
52) bromobenzene	18.14	156	910909	100.39	ug/L	97
53) 1,1,2,2-tetrachloroethane	17.53	83	832931	110.68	ug/L	100
54) 1,2,3-trichloropropane	17.76	77	222511	99.94	ug/L	97
55) n-propylbenzene	18.36	91	3689387	97.56	ug/L	99
56) 2-chlorotoluene	18.52	91	2416290	99.55	ug/L	94
57) 4-chlorotoluene	18.62	91	2477430	96.02	ug/L	96
58) 1,3,5-trimethylbenzene	18.67	105	2399360	96.50	ug/L	97
59) tert-butylbenzene	19.31	91	1839105	96.78	ug/L	95
60) 1,2,4-trimethylbenzene	18.67	105	2399360	96.50	ug/L	97
61) sec-butylbenzene	19.72	105	3652213	96.88	ug/L	98
62) 1,3-dichlorobenzene	19.89	146	1636819	99.32	ug/L	97
63) 4-isopropyltoluene	19.97	119	3060714	97.30	ug/L	98
64) 1,4-dichlorobenzene	20.05	146	1664009	99.07	ug/L	97
65) 1,2-dichlorobenzene	20.67	146	1529835	99.30	ug/L	97
66) n-butylbenzene	20.71	91	2780966	96.31	ug/L	95
67) 1,2-dibromo-3-chloropropan	21.86	75	215179	113.61	ug/L	80
68) 1,2,4-trichlorobenzene	23.78	180	1130355	99.65	ug/L	100
69) hexachlorobutadiene	24.30	225	964777	99.98	ug/L	98
70) naphthalene	24.10	128	1570622	105.90	ug/L	100
71) 1,2,3-trichlorobenzene	24.63	180	977336	100.95	ug/L	99

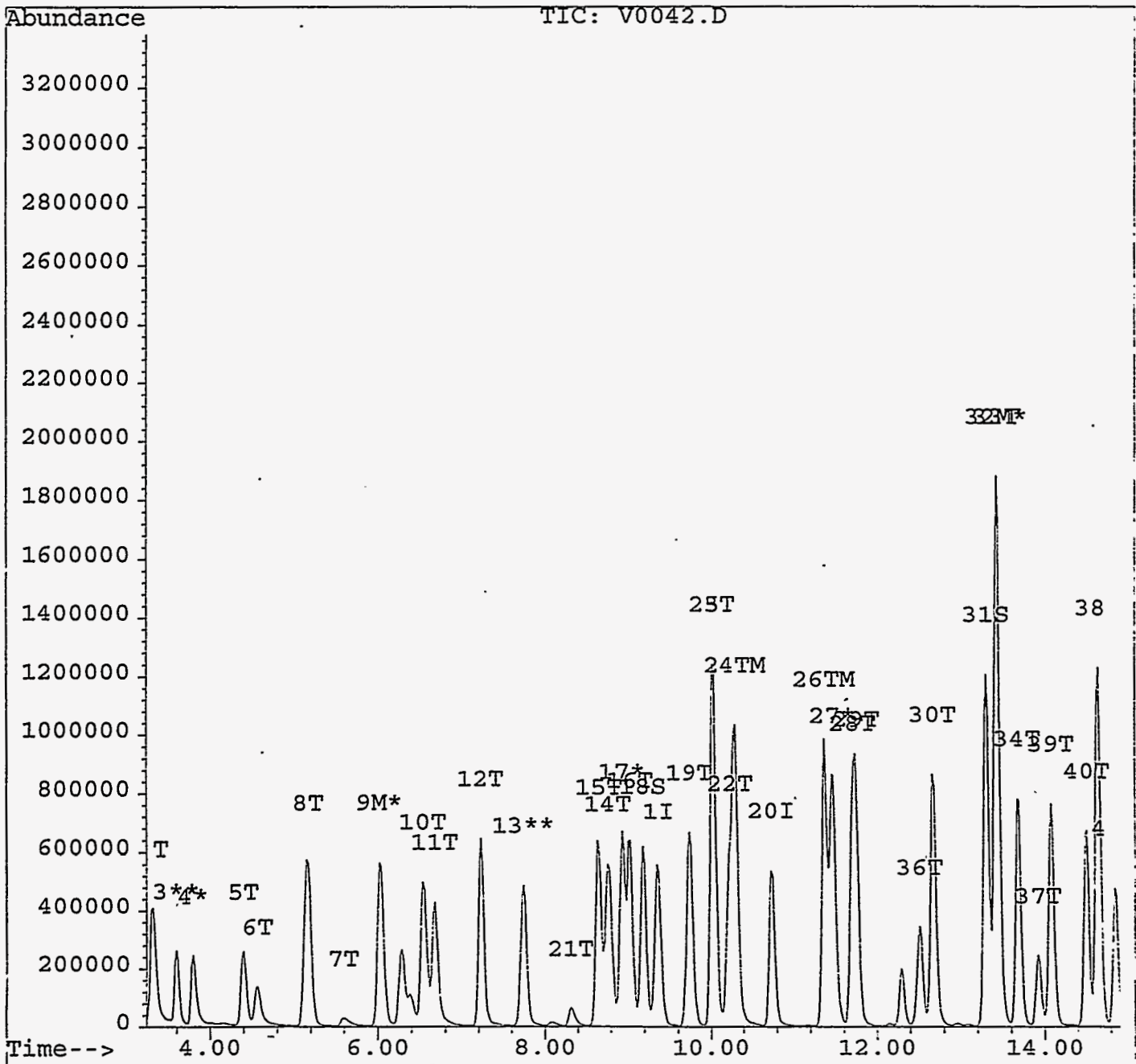
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN1296\V0042.D  
 Acq On : 12 Jan 96 12:58 pm  
 Sample : VSTD100, 100PPB  
 Misc : STD #V30 ,W,8260  
 Quant Time: Jan 12 16:26 1996

Vial: 4  
 Operator: WF  
 Inst : 5972 - In  
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\VTCLP.M  
 Title : SW-846 TCLP Method  
 Last Update : Tue Jan 16 13:11:07 1996  
 Response via : Multiple Level Calibration

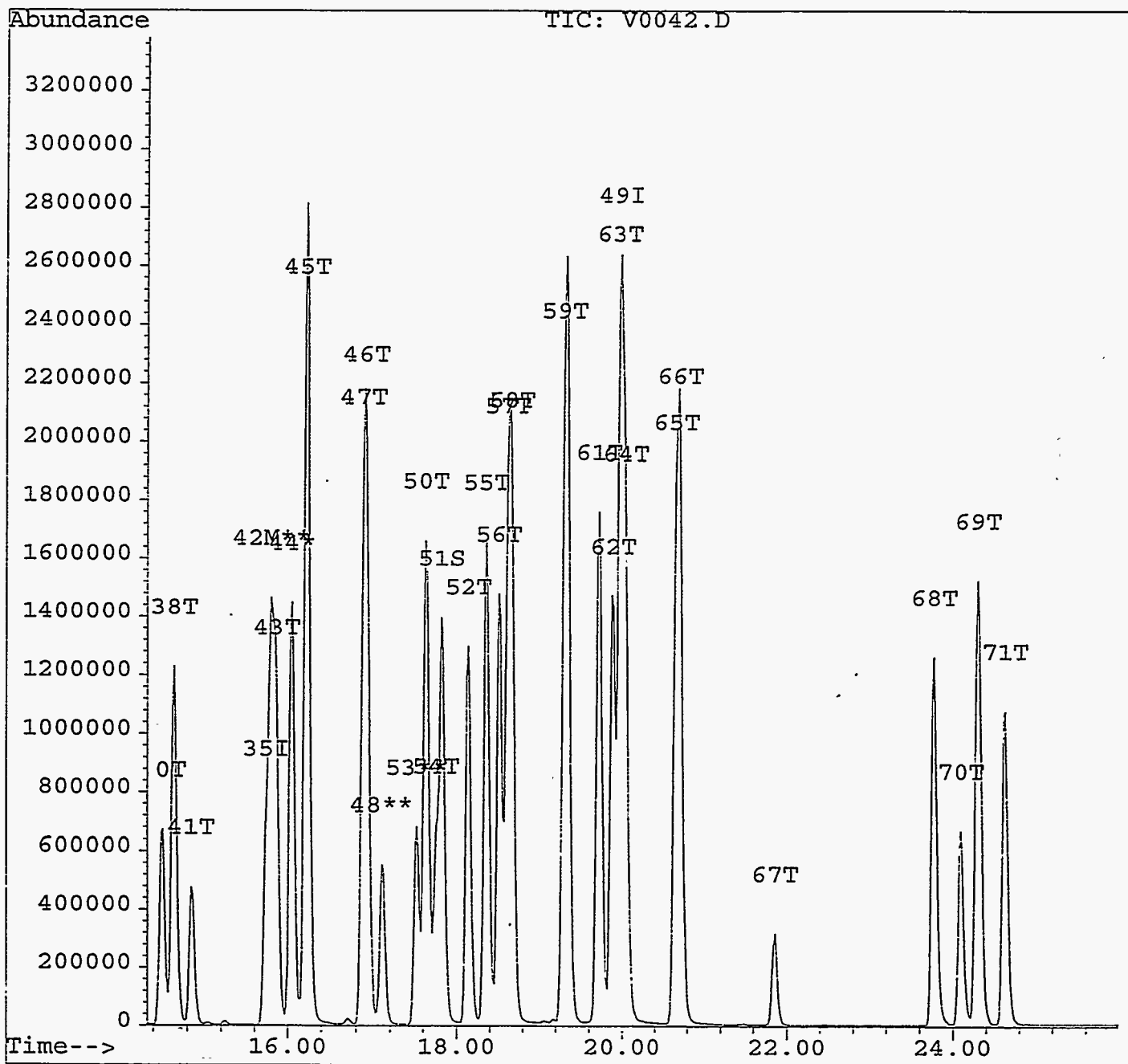


Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN1296\V0042.D  
Acq On : 12 Jan 96 12:58 pm  
Sample : VSTD100, 100PPB  
Misc : STD #V30 ,W,8260  
Quant Time: Jan 12 16:26 1996

Vial: 4  
Operator: WF  
Inst : 5972 - In  
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\VTCLP.M  
Title : SW-846 TCLP Method  
Last Update : Tue Jan 16 13:11:07 1996  
Response via : Multiple Level Calibration



## Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN1296\V0043.D  
 Acq On : 12 Jan 96 2:23 pm  
 Sample : VSTD150, 150PPB  
 Misc : STD #V31 ,W,8260  
 Quant Time: Jan 12 16:27 1996

Vial: 5  
 Operator: WF  
 Inst : 5972 - In  
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\VTCLP.M  
 Title : SW-846 TCLP Method  
 Last Update : Tue Jan 16 13:11:07 1996  
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) pentafluorobenzene	9.34	168	1047019	50.00	ug/L	-0.01
20) 1,4-difluorobenzene	10.71	114	1119872	50.00	ug/L	-0.01
35) Chlorobenzene-d5	15.73	117	876328	50.00	ug/L	0.00
49) 1,4-dichlorobenzene-d4	19.97	152	540868	50.00	ug/L	-0.01

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recovery
18) dibromofluoromethane	9.17	113	1431448	149.94	ug/L	299.88%
31) toluene-d8	13.28	98	3102672	146.25	ug/L	292.49%
51) 4-bromofluorobenzene	17.82	95	1933277	148.13	ug/L	296.26%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) dichlorodifluoromethane	3.30	85	1549477	142.28	ug/L	99
3) chloromethane	3.59	50	926194	144.98	ug/L	99
4) vinyl chloride	3.78	62	864748	140.48	ug/L	99
5) bromomethane	4.38	96	704881	147.20	ug/L	97
6) chloroethane	4.55	64	626379	146.31	ug/L	100
7) Acetone	5.59	43	182836	130.26	ug/L	97
8) trichlorofluoromethane	5.14	101	2032819	150.90	ug/L	100
9) 1,1-dichloroethene	6.01	96	919735	143.51	ug/L	89
10) methylene chloride	6.52	84	920916	138.08	ug/L	95
11) Carbon disulfide	6.66	76	2357879	145.47	ug/L	100
12) trans-1,2-dichloroethene	7.22	96	968505	146.00	ug/L	93
13) 1,1-dichloroethane	7.73	63	1913834	144.24	ug/L	100
14) 2,2-dichloropropane	8.75	77	1477590	152.28	ug/L	97
15) cis-1,2-dichloroethene	8.62	96	1064366	145.47	ug/L	97
16) bromochloromethane	9.01	128	591514	148.20	ug/L	93
17) chloroform	8.92	83	1853536	150.26	ug/L	99
19) 1,1,1-trichloroethane	9.72	97	1746281	148.77	ug/L	98
21) 2-Butanone	8.30	43	343978	147.02	ug/L	95
22) carbon tetrachloride	10.20	117	1411475	168.97	ug/L	99
23) 1,1-dichloropropene	10.00	75	1536964	146.12	ug/L	98
24) benzene	10.28	78	3073601	146.00	ug/L	100
25) 1,2-dichloroethane	10.00	62	1178084	149.26	ug/L	96
26) trichloroethene	11.35	95	1236164	143.98	ug/L	97
27) 1,2-dichloropropane	11.44	63	1213514	146.90	ug/L	100
28) dibromomethane	11.67	93	849198	147.26	ug/L	97
29) bromodichloromethane	11.74	83	1668100	155.65	ug/L	99
30) cis-1,3-dichloropropene	12.65	75	1806336	151.10	ug/L	99
32) toluene	13.41	92	2084399	145.96	ug/L	97
33) trans-1,3-dichloropropene	13.41	75	1250224	155.65	ug/L	97
34) 1,1,2-trichloroethane	13.65	83	787707	149.99	ug/L	99
36) 4-Methyl-2-pentanone	12.49	43	987732	148.51	ug/L	98
37) 2-Hexanone	13.90	43	651934	151.96	ug/L	98

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



## Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN1296\V0043.D  
 Acq On : 12 Jan 96 2:23 pm  
 Sample : VSTD150, 150PPB  
 Misc : STD #V31 ,W,8260  
 Quant Time: Jan 12 16:27 1996

Vial: 5  
 Operator: WF  
 Inst : 5972 - In  
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\VTCLP.M  
 Title : SW-846 TCLP Method  
 Last Update : Tue Jan 16 13:11:07 1996  
 Response via : Multiple Level Calibration

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38) tetrachloroethene	14.63	166	1509070	149.70	ug/L	99
39) 1,3-dichloropropane	14.06	76	1548882	149.33	ug/L	99
40) dibromochloromethane	14.49	129	1364816	159.29	ug/L	100
41) 1,2-dibromoethane	14.83	107	1189992	149.52	ug/L	99
42) chlorobenzene	15.79	112	2516227	146.07	ug/L	96
43) 1,1,1,2-tetrachloroethane	15.85	131	1194319	158.66	ug/L	98
44) ethylbenzene	16.04	91	4301621	145.56	ug/L	97
45) m,p-xylene	16.21	106	3271266	290.67	ug/L	95
46) o-xylene	16.92	106	1585791	145.48	ug/L	93
47) styrene	16.87	104	2657205	145.75	ug/L	93
48) bromoform	17.11	173	987246	163.77	ug/L	100
50) isopropylbenzene	17.63	105	4724429	146.36	ug/L	98
52) bromobenzene	18.13	156	1338659	148.49	ug/L	98
53) 1,1,2,2-tetrachloroethane	17.51	83	1216944	162.75	ug/L	100
54) 1,2,3-trichloropropane	17.74	77	329817	149.10	ug/L	94
55) n-propylbenzene	18.34	91	5401908	143.77	ug/L	99
56) 2-chlorotoluene	18.51	91	3518421	145.89	ug/L	90
57) 4-chlorotoluene	18.61	91	3740729	145.92	ug/L	96
58) 1,3,5-trimethylbenzene	18.65	105	3521692	142.56	ug/L	96
59) tert-butylbenzene	19.30	91	2713674	143.73	ug/L	94
60) 1,2,4-trimethylbenzene	18.65	105	3521692	142.56	ug/L	96
61) sec-butylbenzene	19.71	105	5336796	142.49	ug/L	98
62) 1,3-dichlorobenzene	19.88	146	2420634	147.83	ug/L	97
63) 4-isopropyltoluene	19.97	119	4436659	141.96	ug/L	97
64) 1,4-dichlorobenzene	20.03	146	2457079	147.23	ug/L	97
65) 1,2-dichlorobenzene	20.65	146	2280789	149.00	ug/L	98
66) n-butylbenzene	20.70	91	3957246	137.93	ug/L	95
67) 1,2-dibromo-3-chloropropan	21.84	75	315756	167.80	ug/L	81
68) 1,2,4-trichlorobenzene	23.76	180	1617981	143.56	ug/L	99
69) hexachlorobutadiene	24.30	225	1400853	146.10	ug/L	96
70) naphthalene	24.09	128	2140744	145.27	ug/L	100
71) 1,2,3-trichlorobenzene	24.61	180	1396931	145.23	ug/L	99

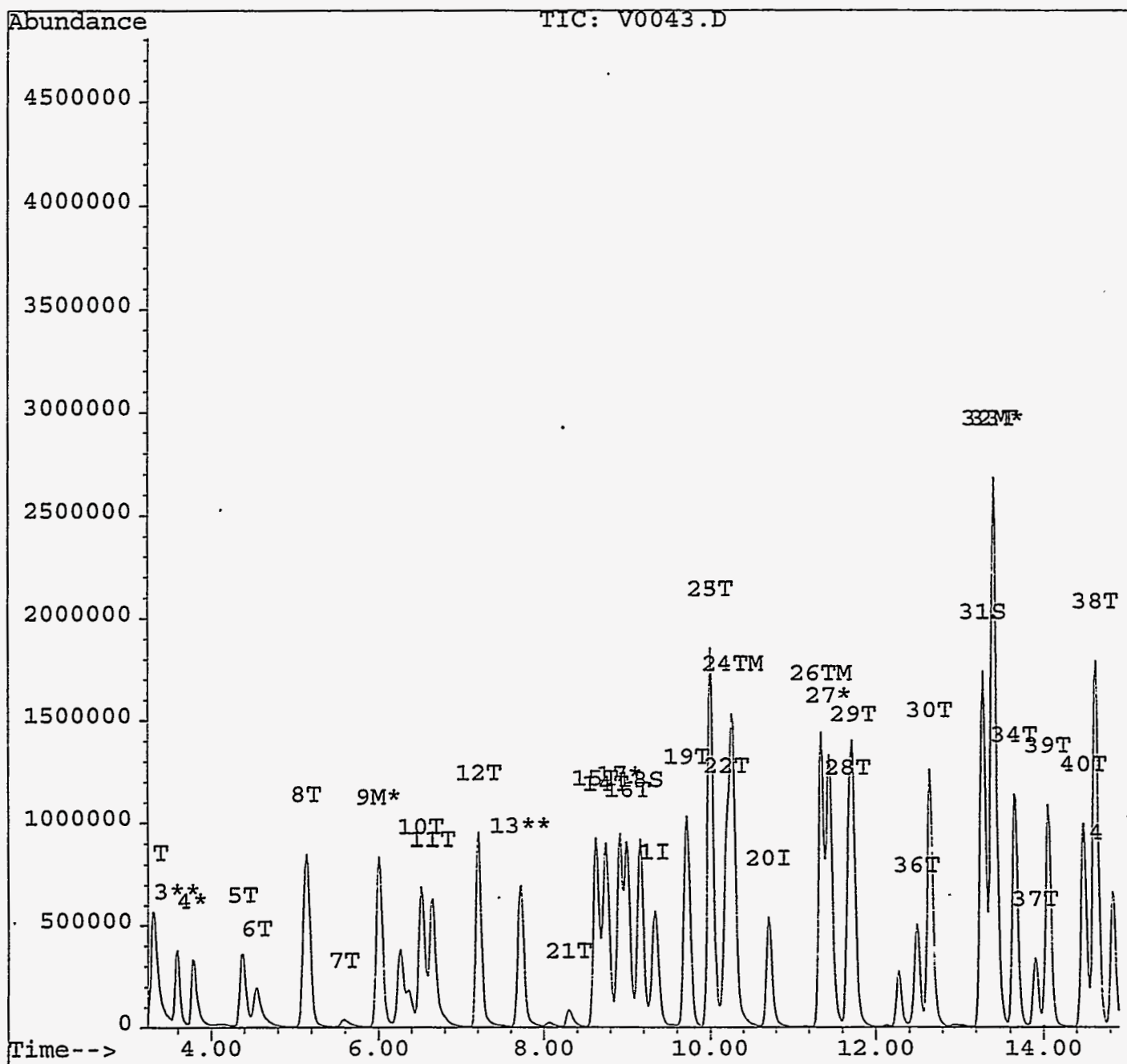
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN1296\V0043.D  
 Acq On : 12 Jan 96 2:23 pm  
 Sample : VSTD150, 150PPB  
 Misc : STD #V31 ,W,8260  
 Quant Time: Jan 12 16:27 1996

Vial: 5  
 Operator: WF  
 Inst : 5972 - In  
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\VTCLP.M  
 Title : SW-846 TCLP Method  
 Last Update : Tue Jan 16 13:11:07 1996  
 Response via : Multiple Level Calibration

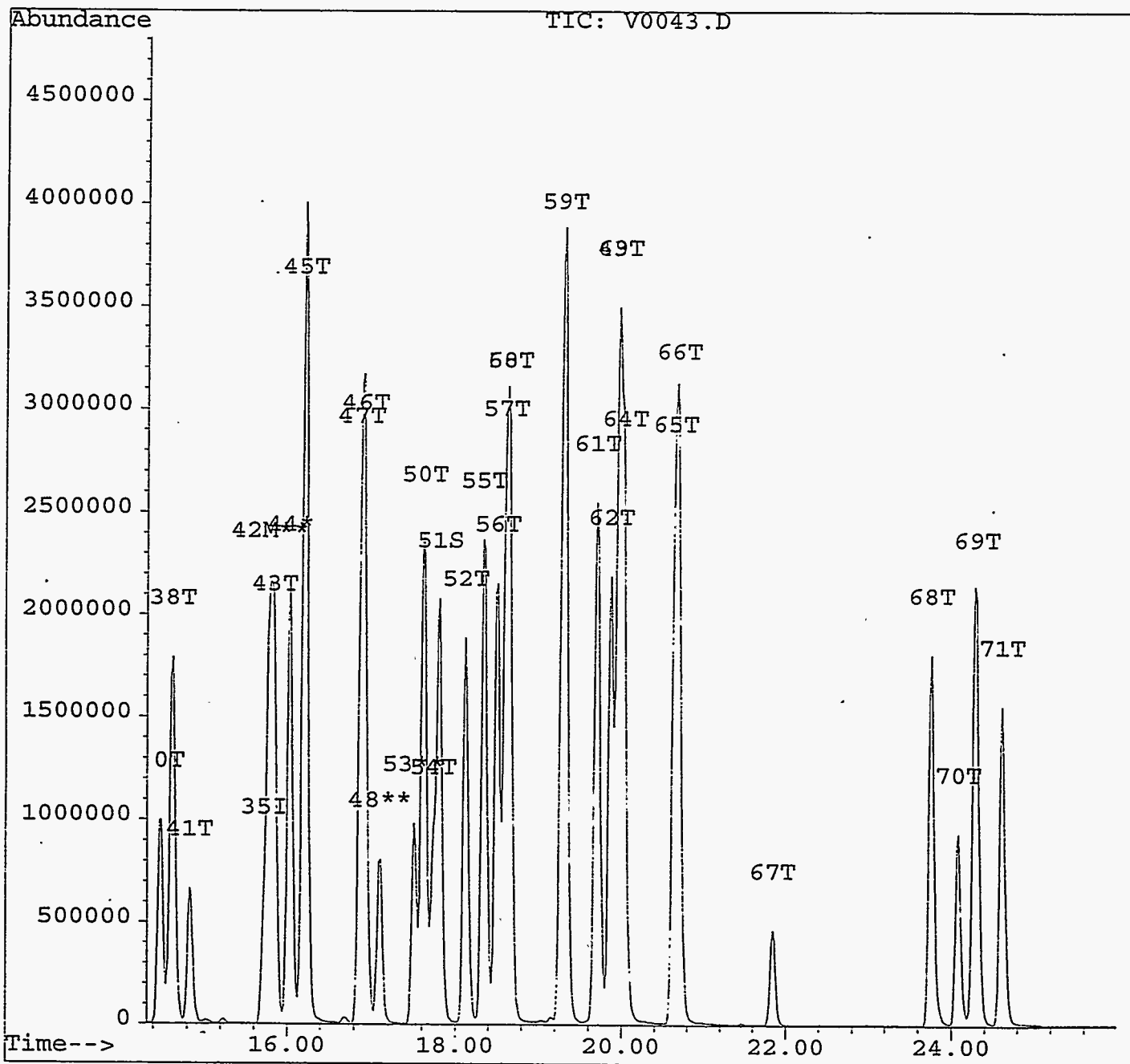


Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN1296\V0043.D  
Acq On : 12 Jan 96 2:23 pm  
Sample : VSTD150, 150PPB  
Misc : STD #V31 ,W,8260  
Quant Time: Jan 12 16:27 1996

Vial: 5  
Operator: WF  
Inst : 5972 - In  
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\VTCLP.M  
Title : SW-846 TCLP Method  
Last Update : Tue Jan 16 13:11:07 1996  
Response via : Multiple Level Calibration



Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN1296\V0044.D  
 Acq On : 12 Jan 96 2:58 pm  
 Sample : VSTD200, 200PPB  
 Misc : STD #V32 ,W,8260  
 Quant Time: Jan 12 16:28 1996

Vial: 6  
 Operator: WF  
 Inst : 5972 - In  
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\VTCLP.M  
 Title : SW-846 TCLP Method  
 Last Update : Tue Jan 16 13:11:07 1996  
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) pentafluorobenzene	9.35	168	1036260	50.00	ug/L	0.00
20) 1,4-difluorobenzene	10.73	114	1112700	50.00	ug/L	0.00
35) Chlorobenzene-d5	15.73	117	857699	50.00	ug/L	0.00
49) 1,4-dichlorobenzene-d4	19.98	152	550045	50.00	ug/L	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recovery
18) dibromofluoromethane	9.18	113	1890663	200.09	ug/L	400.19%
31) toluene-d8	13.30	98	4146566	196.71	ug/L	393.42%
51) 4-bromofluorobenzene	17.82	95	2613449	196.90	ug/L	393.81%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) dichlorodifluoromethane	3.30	85	2000647	185.61	ug/L	99
3) chloromethane	3.59	50	1169742	185.00	ug/L	98
4) vinyl chloride	3.78	62	1066396	175.04	ug/L	100
5) bromomethane	4.37	96	893549	188.54	ug/L	99
6) chloroethane	4.54	64	759419	179.23	ug/L	99
7) Acetone	5.59	43	276162	198.79	ug/L	93
8) trichlorofluoromethane	5.14	101	2530909	189.82	ug/L	99
9) 1,1-dichloroethene	6.01	96	1197028	188.72	ug/L	88
10) methylene chloride	6.53	84	1193295	180.78	ug/L	93
11) Carbon disulfide	6.66	76	2989364	186.34	ug/L	100
12) trans-1,2-dichloroethene	7.21	96	1257182	191.49	ug/L	93
13) 1,1-dichloroethane	7.73	63	2475621	188.52	ug/L	100
14) 2,2-dichloropropane	8.76	77	1892545	197.08	ug/L	96
15) cis-1,2-dichloroethene	8.64	96	1388917	191.79	ug/L	94
16) bromochloromethane	9.01	128	778083	196.96	ug/L	95
17) chloroform	8.93	83	2416222	198.97	ug/L	100
19) 1,1,1-trichloroethane	9.72	97	2245010	193.24	ug/L	98
21) 2-Butanone	8.31	43	513237	220.77	ug/L	96
22) carbon tetrachloride	10.22	117	1891789	227.92	ug/L	100
23) 1,1-dichloropropene	10.02	75	2000964	191.46	ug/L	97
24) benzene	10.28	78	3990674	190.78	ug/L	100
25) 1,2-dichloroethane	10.02	62	1549647	197.60	ug/L	95
26) trichloroethene	11.36	95	1734199	203.30	ug/L	96
27) 1,2-dichloropropane	11.46	63	1574434	191.82	ug/L	100
28) dibromomethane	11.69	93	1159367	202.34	ug/L	95
29) bromodichloromethane	11.73	83	2162271	203.06	ug/L	99
30) cis-1,3-dichloropropene	12.66	75	2349745	197.82	ug/L	98
32) toluene	13.42	92	2729492	192.37	ug/L	97
33) trans-1,3-dichloropropene	13.42	75	1658615	207.83	ug/L	96
34) 1,1,2-trichloroethane	13.67	83	1065517	204.20	ug/L	99
36) 4-Methyl-2-pentanone	12.51	43	1441867	221.51	ug/L	97
37) 2-Hexanone	13.92	43	990976	236.01	ug/L	98

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

## Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN1296\V0044.D  
 Acq On : 12 Jan 96 2:58 pm  
 Sample : VSTD200, 200PPB  
 Misc : STD #V32 ,W,8260  
 Quant Time: Jan 12 16:28 1996

Vial: 6  
 Operator: WF  
 Inst : 5972 - In  
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\VTCLP.M  
 Title : SW-846 TCLP Method  
 Last Update : Tue Jan 16 13:11:07 1996  
 Response via : Multiple Level Calibration

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38) tetrachloroethene	14.64	166	1992159	201.91	ug/L	99
39) 1,3-dichloropropane	14.07	76	2080666	204.96	ug/L	99
40) dibromochloromethane	14.50	129	1880784	224.28	ug/L	99
41) 1,2-dibromoethane	14.84	107	1650049	211.83	ug/L	99
42) chlorobenzene	15.80	112	3374574	200.15	ug/L	95
43) 1,1,1,2-tetrachloroethane	15.85	131	1550410	210.44	ug/L	98
44) ethylbenzene	16.04	91	5633546	194.77	ug/L	97
45) m,p-xylene	16.22	106	4282198	388.77	ug/L	93
46) o-xylene	16.92	106	2066045	193.65	ug/L	94
47) styrene	16.89	104	3548715	198.87	ug/L	94
48) bromoform	17.12	173	1426589	241.78	ug/L	100
50) isopropylbenzene	17.63	105	6157421	187.57	ug/L	98
52) bromobenzene	18.14	156	1831631	199.78	ug/L	96
53) 1,1,2,2-tetrachloroethane	17.52	83	1504799	197.89	ug/L	100
54) 1,2,3-trichloropropane	17.75	77	460955	204.90	ug/L	96
55) n-propylbenzene	18.36	91	7240051	189.47	ug/L	98
56) 2-chlorotoluene	18.51	91	4741307	193.32	ug/L	92
57) 4-chlorotoluene	18.62	91	4838013	185.57	ug/L	95
58) 1,3,5-trimethylbenzene	18.67	105	4790979	190.71	ug/L	95
59) tert-butylbenzene	19.30	91	3621713	188.63	ug/L	95
60) 1,2,4-trimethylbenzene	18.67	105	4790979	190.71	ug/L	95
61) sec-butylbenzene	19.72	105	7211410	189.33	ug/L	97
62) 1,3-dichlorobenzene	19.89	146	3249738	195.16	ug/L	97
63) 4-isopropyltoluene	19.97	119	6067610	190.91	ug/L	97
64) 1,4-dichlorobenzene	20.04	146	3301720	194.55	ug/L	97
65) 1,2-dichlorobenzene	20.66	146	3039883	195.28	ug/L	97
66) n-butylbenzene	20.71	91	5572049	190.97	ug/L	93
67) 1,2-dibromo-3-chloropropan	21.85	75	417449	218.14	ug/L #	78
68) 1,2,4-trichlorobenzene	23.77	180	2382811	207.90	ug/L	99
69) hexachlorobutadiene	24.30	225	1955280	200.53	ug/L	97
70) naphthalene	24.10	128	3416762	228.00	ug/L	100
71) 1,2,3-trichlorobenzene	24.63	180	2105531	215.24	ug/L	100

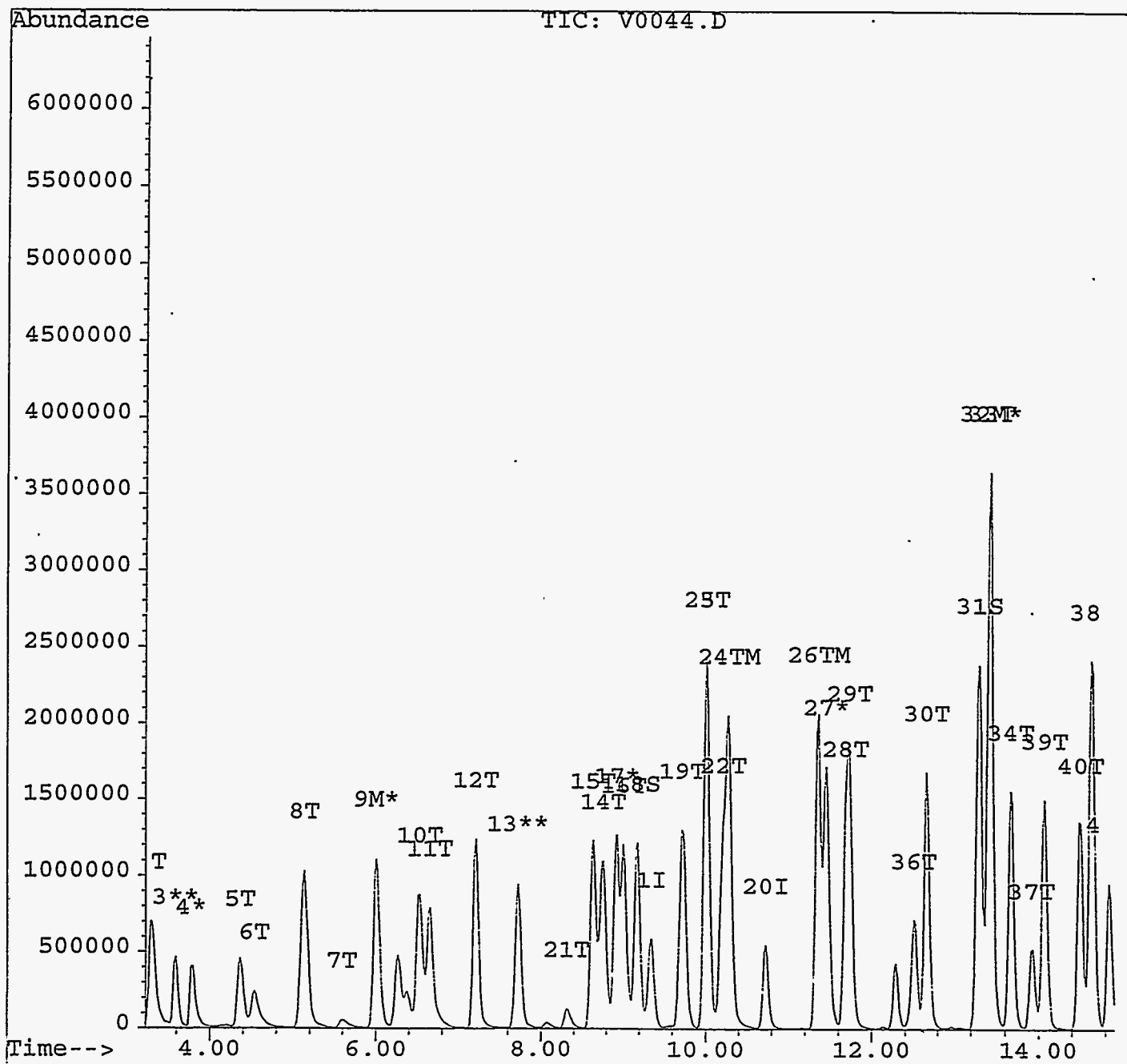
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN1296\V0044.D  
Acq On : 12 Jan 96 2:58 pm  
Sample : VSTD200, 200PPB  
Misc : STD #V32 ,W,8260  
Quant Time: Jan 12 16:28 1996

Vial: 6  
Operator: WF  
Inst : 5972 - In  
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\VTCLP.M  
Title : SW-846 TCLP Method  
Last Update : Tue Jan 16 13:11:07 1996  
Response via : Multiple Level Calibration

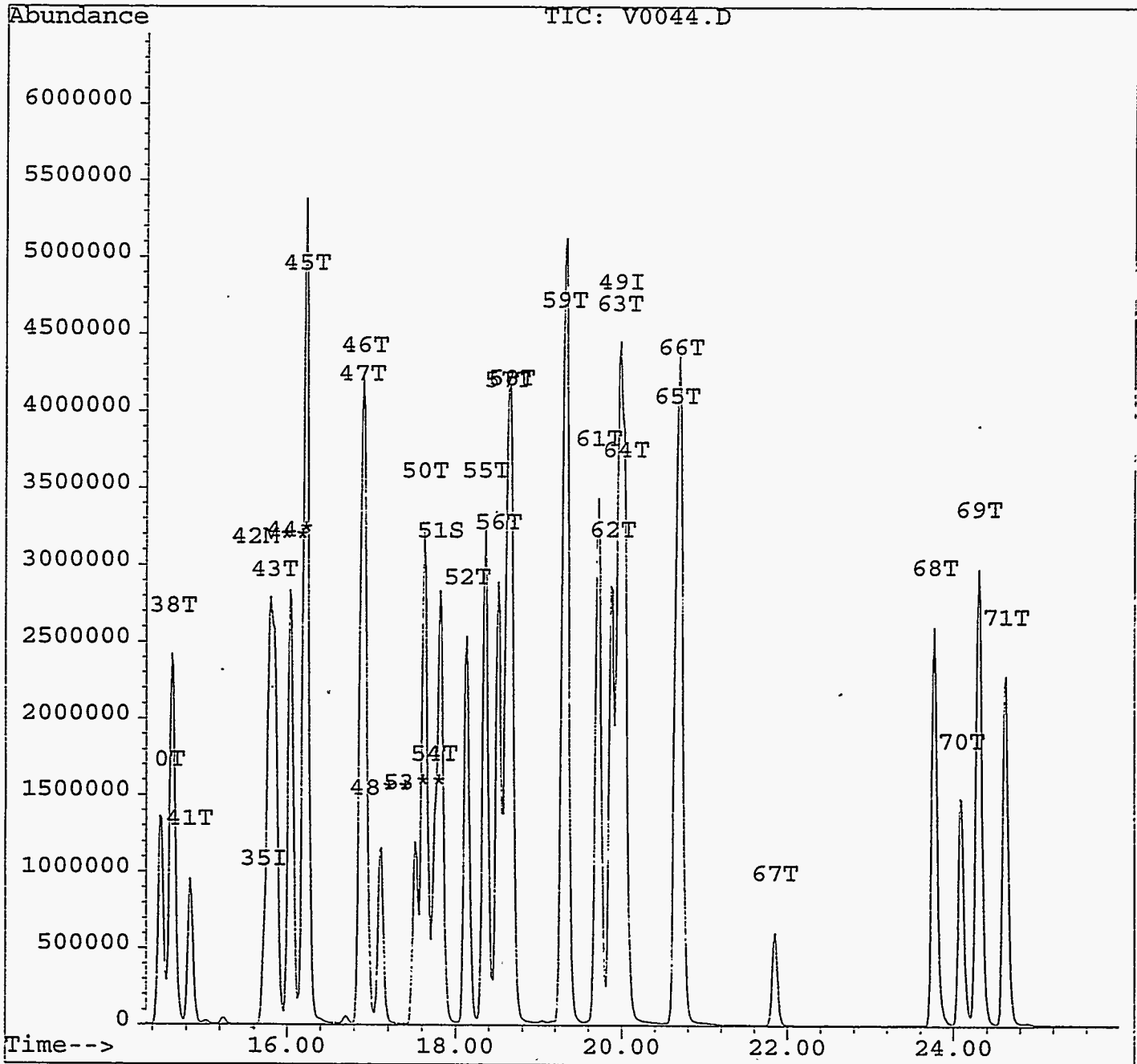


Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN1296\V0044.D  
Acq On : 12 Jan 96 2:58 pm  
Sample : VSTD200, 200PPB  
Misc : STD #V32 ,W,8260  
Quant Time: Jan 12 16:28 1996

Vial: 6  
Operator: WF  
Inst : 5972 - In  
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\VTCLP.M  
Title : SW-846 TCLP Method  
Last Update : Tue Jan 16 13:11:07 1996  
Response via : Multiple Level Calibration



Method : C:\HPCHEM\1\METHODS\VTCLP.M  
 Title : SW-846 TCLP Method  
 Last Update : Tue Jan 16 10:33:04 1996  
 Response via : Initial Calibration

Continuing Calibration File: V0065.D

Min. RRF : 0.000 Min. Rel. Area : 50%  
 Max. RRF Dev : 25% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%
1 I	pentafluorobenzene	1.000	1.000	0.0	92
2 T	vinyl chloride	0.294	0.260	11.5	75
3 T	1,1-dichloroethene	0.306	0.292	4.5	84
4 T	chloroform	0.605	0.580	4.1	85
5 S	dibromofluoromethane	0.456	0.433	5.0	85
6 I	1,4-difluorobenzene	1.000	1.000	0.0	87
7 T	2-Butanone	0.104	0.083	21.0	67
8 T	carbon tetrachloride	0.373	0.416	-11.7	102
9 T	benzene	0.940	0.934	0.6	84
10 T	1,2-dichloroethane	0.352	0.337	4.5	80
11 T	trichloroethene	0.383	0.378	1.4	86
12 S	toluene-d8	0.947	0.934	1.4	83
13 I	Chlorobenzene-d5	1.000	1.000	0.0	85
14 T	tetrachloroethene	0.575	0.604	-5.0	91
15 T	chlorobenzene	0.983	0.995	-1.2	85
16 I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	87
17 S	4-bromofluorobenzene	1.207	1.165	3.4	82
18 T	1,4-dichlorobenzene	1.543	1.588	-2.9	88

(#) = Out of Range SPCC's out = 0 CCC's out = 0  
 V0065.D VTCLP.M Tue Jan 16 10:33:25 1996 CASPER

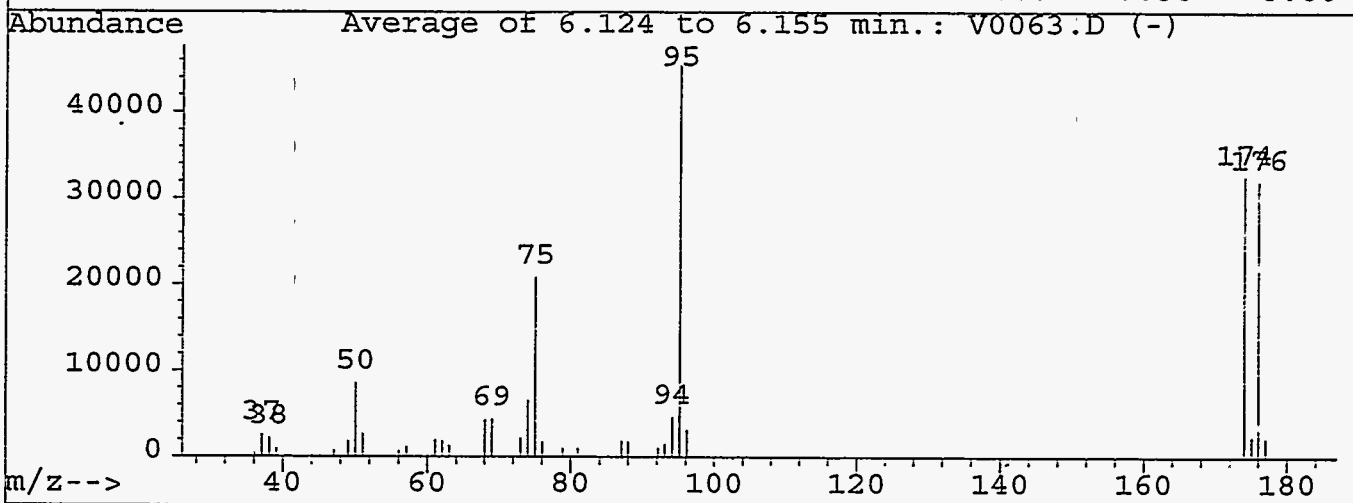
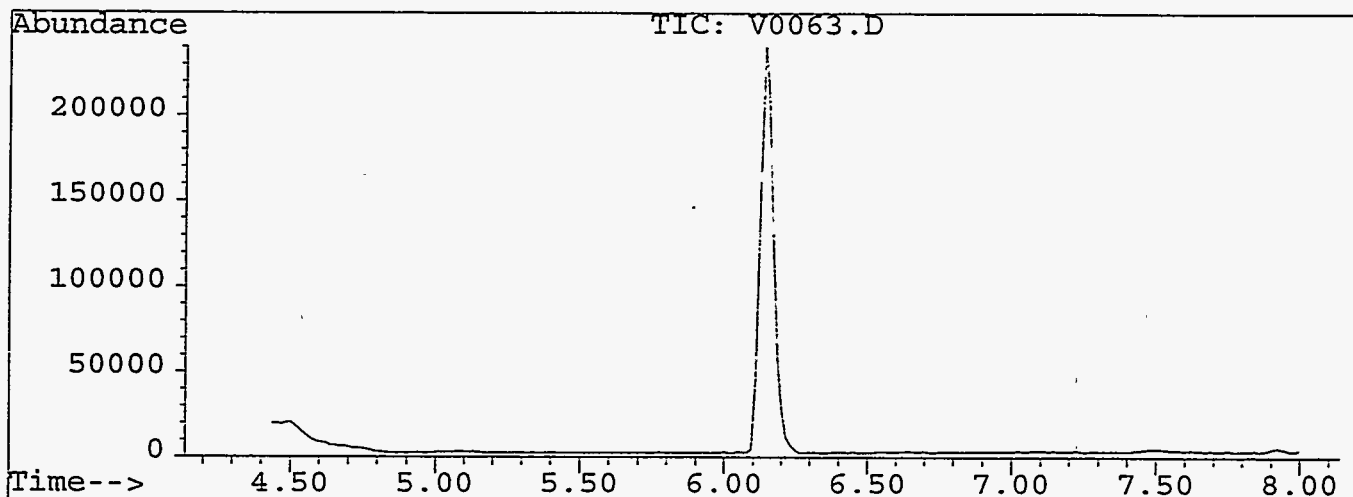


BFB

Data File : C:\HPCHEM\1\DATA\JAN1695\V0063.D  
 Acq On : 16 Jan 96 7:52 am  
 Sample : 50nG BFB  
 Misc : 2ul direct injection

Vial: 1  
 Operator: WF  
 Inst : 5972 - In  
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\METBFB.M  
 Title :



Peak Apex is scan: 111

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	18.9	8593	PASS
75	95	30	60	46.0	20875	PASS
95	95	100	100	100.0	45392	PASS
96	95	5	9	6.9	3148	PASS
173	174	0	-2	0.0	0	PASS
174	95	50	100	71.8	32571	PASS
175	174	5	9	7.4	2396	PASS
176	174	95	101	98.2	31995	PASS
177	176	5	9	7.0	2224	PASS

REC. DATE	SAMPLE I.D.	ECO I.D.	TEST	NO CONT	MATRIX	VOL
11/15/96	VOA TEST WATER-01	ECO-001-01A	8260	1	WATER	40ml
11/15/96	VOA TEST WATER-02	ECO-001-02A	8260	1	WATER	40ml
11/15/96	VOA TEST WATER-03	ECO-001-03A	8260	3	WATER	40ml
11/15/96	VOA TEST WATER-04	ECO-001-04A	8260	1	WATER	40ml
11/15/96	VOA TEST WATER-05	ECO-001-05A	8260	1	WATER	40ml
11/15/96	VOA TEST WATER-06	ECO-001-06A	8260	1	WATER	40ml
11/15/96	VOA TEST WATER-07	ECO-001-07A	8260	1	WATER	40ml

(4)

11/16/96

1 2 3 4 5 6 7 8 9 10





**APPENDIX D**

**SOIL SAMPLE TCLP-SVOA REPORT**

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

2C  
WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: ECO Contract: N/A  
 Lab Code: RTAL Case No.: N/A SAS No.: N/A SDG No.: 1

	EPA SAMPLE NO.	S1 (2FP) #	S2 (PHL) #	S3 (NBZ) #	S4 (FBP) #	S5 (TBP) #	S6 (TPH) #	TOT OUT
01	SBLK01	43	41	83	82	92	87	0
02	TCLP BLANK	42	40	74	75	84	73	0
03	SVTCLP01	42	42	80	77	85	56	0
04	SVTCLP02	42	42	81	80	86	49	0
05	SVTCLP03	24 *	25	70	68	49	14 *	2
06	SVTCLP04	39	39	84	80	86	57	0
07	SVTCLP05	46	41	84	79	89	67	0
08	SVTCLP06	28	26	58	55	51	38	0
09	SVTCLP07	48	44	87	81	99	55	0

**QC LIMITS**

S1 (2FP) = 2-Fluorophenol (21-110)  
 S2 (PHL) = Phenol-d5 (10-110)  
 S3 (NBZ) = Nitrobenzene-d5 (34-114)  
 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

2C  
WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: ECO Contract: N/A  
 Lab Code: RTAL Case No.: N/A SAS No.: N/A SDG No.: 1

	EPA SAMPLE NO.	S1 (2FP) #	S2 (PHL) #	S3 (NBZ) #	S4 (FBP) #	S5 (TBP) #	S6 (TPH) #	TOT OUT
01	SVTCLP03DL	21 *	23 *	62	65	33	13 *	3
02	SVTCLP04DL	34	36	66	74	59	52	0
03	SVTCLP05DL	43	38	66	75	79	59	0
04	SVTCLP06DL	27	24	47	54	35	33	0
05	SVTCLP07DL	44	38	70	73	62	42	0
06	SVTCLP01DL	39	39	64	70	62	46	0
07	SVTCLP02DL	36	36	64	67	59	40	0

**QC LIMITS**

S1 (2FP) = 2-Fluorophenol (21-110)  
 S2 (PHL) = Phenol-d5 (10-110)  
 S3 (NBZ) = Nitrobenzene-d5 (34-114)  
 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

4B  
SEMIVOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

SBLK01

Lab Name: ECO Contract: N/A  
 Lab Code: RTAL Case No.: N/A SAS No.: N/A SDG No.: 1  
 Lab File ID: SV0130.D Lab Sample ID: SBLK01  
 Instrument ID: 5972-B Date Extracted: 01/23/96  
 Matrix: (soil/water) WATER Date Analyzed: 01/24/96  
 Level: (low/med) LOW Time Analyzed: 12:30

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	TCLP BLANK	TC BLK	SV0131.D	01/24/96
02	SVTCLP01	ECO-004-01A	SV0132.D	01/24/96
03	SVTCLP02	ECO-004-02A	SV0133.D	01/24/96
04	SVTCLP03DL	ECO-004-03A	SV0134.D	01/24/96
05	SVTCLP04DL	ECO-004-04A	SV0135.D	01/24/96
06	SVTCLP05DL	ECO-004-05A	SV0136.D	01/24/96
07	SVTCLP06DL	ECO-004-06A	SV0137.D	01/24/96
08	SVTCLP07DL	ECO-004-07A	SV0138.D	01/24/96
09	SVTCLP01DL	ECO-004-01A	SV0139.D	01/24/96
10	SVTCLP02DL	ECO-004-02A	SV0140.D	01/24/96
11	SVTCLP03	ECO-004-03A	SV0141.D	01/24/96
12	SVTCLP04	ECO-004-04A	SV0142.D	01/24/96
13	SVTCLP05	ECO-004-05A	SV0143.D	01/24/96
14	SVTCLP06	ECO-004-06A	SV0144.D	01/24/96
15	SVTCLP07	ECO-004-07A	SV0145.D	01/24/96

COMMENTS:

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SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK  
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ECO Contract: N/A  
 Lab Code: RTAL Case No.: N/A SAS No.: N/A SDG No.: 1  
 Lab File ID: SV0122.D DFTPP Injection Date: 01/24/96  
 Instrument ID: 5972-B DFTPP Injection Time: 07:35

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	40.8
68	Less than 2.0% of mass 69	0.0 ( 0.0 )1
69	Mass 69 Relative abundance	54.9
70	Less than 2.0% of mass 69	0.3 ( 0.5 )1
127	25.0 - 75.0% of mass 198	42.4
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	6.5
275	10.0 - 30.0% of mass 198	19.2
365	Greater than 0.75% of mass 198	2.4
441	Present, but less than mass 443	8.6
442	40.0 - 110.0% of mass 198	55.9
443	15.0 - 24.0% of mass 442	10.6 ( 19.0 )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	SSTD50	SSTD50	SV0123.D	01/24/96	07:59
02	SSTD160	SSTD160	SV0124.D	01/24/96	09:09
03	SSTD20	SSTD20	SV0125.D	01/24/96	09:46
04	SSTD80	SSTD80	SV0126.D	01/24/96	10:24
05	SSTD120	SSTD120	SV0127.D	01/24/96	11:01

5B  
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK  
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ECO Contract: N/A  
 Lab Code: RTAL Case No.: N/A SAS No.: N/A SDG No.: 1  
 Lab File ID: SV0128.D DFTPP Injection Date: 01/24/96  
 Instrument ID: 5972-B DFTPP Injection Time: 11:27

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	42.5
68	Less than 2.0% of mass 69	0.0 ( 0.0 )1
69	Mass 69 Relative abundance	58.8
70	Less than 2.0% of mass 69	0.4 ( 0.6 )1
127	25.0 - 75.0% of mass 198	43.8
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	7.0
275	10.0 - 30.0% of mass 198	17.7
365	Greater than 0.75% of mass 198	2.1
441	Present, but less than mass 443	6.6
442	40.0 - 110.0% of mass 198	39.8
443	15.0 - 24.0% of mass 442	7.9 ( 19.9 )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	SSTD50	SSTD01	SV0129.D	01/24/96	11:54
02	SBLK01	SBLK01	SV0130.D	01/24/96	12:30
03	TCLP BLANK	TC BLK	SV0131.D	01/24/96	13:07
04	SVTCLP01	ECO-004-01A	SV0132.D	01/24/96	13:44
05	SVTCLP02	ECO-004-02A	SV0133.D	01/24/96	14:32
06	SVTCLP03DL	ECO-004-03A	SV0134.D	01/24/96	15:10
07	SVTCLP04DL	ECO-004-04A	SV0135.D	01/24/96	15:44
08	SVTCLP05DL	ECO-004-05A	SV0136.D	01/24/96	16:29
09	SVTCLP06DL	ECO-004-06A	SV0137.D	01/24/96	16:59
10	SVTCLP07DL	ECO-004-07A	SV0138.D	01/24/96	17:36
11	SVTCLP01DL	ECO-004-01A	SV0139.D	01/24/96	18:09
12	SVTCLP02DL	ECO-004-02A	SV0140.D	01/24/96	18:42
13	SVTCLP03	ECO-004-03A	SV0141.D	01/24/96	19:17
14	SVTCLP04	ECO-004-04A	SV0142.D	01/24/96	19:52
15	SVTCLP05	ECO-004-05A	SV0143.D	01/24/96	20:27
16	SVTCLP06	ECO-004-06A	SV0144.D	01/24/96	21:02
17	SVTCLP07	ECO-004-07A	SV0145.D	01/24/96	21:38

8B  
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ECO Contract: N/A  
 Lab Code: RTAL Case No.: N/A SAS No.: N/A SDG No.: 1  
 Lab File ID (Standard): SV0129.D Date Analyzed: 01/24/96  
 Instrument ID: 5972-B Time Analyzed: 11:54

	IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
12 HOUR STD	379566	5.62	1223120	7.05	623080	9.81
UPPER LIMIT	759132	5.12	2446240	6.55	1246160	9.31
LOWER LIMIT	189783	6.12	611560	7.55	311540	10.31
EPA SAMPLE NO.						
01 SBLK01	425037	5.62	1323511	7.05	681775	9.81
02 TCLP BLANK	305382	5.62	958758	7.05	509925	9.81
03 SVTCLP01	310186	5.62	984280	7.05	538365	9.81
04 SVTCLP02	315342	5.62	1010542	7.05	538347	9.81
05 SVTCLP03DL	378908	5.62	1150335	7.05	576311	9.80
06 SVTCLP04DL	376369	5.62	1201556	7.04	621286	9.81
07 SVTCLP05DL	330364	5.61	1045140	7.05	546857	9.81
08 SVTCLP06DL	271552	5.62	851353	7.03	429841	9.79
09 SVTCLP07DL	311569	5.62	1004570	7.03	516031	9.79
10 SVTCLP01DL	355478	5.62	1173450	7.03	624036	9.79
11 SVTCLP02DL	363584	5.60	1165828	7.03	616731	9.79
12 SVTCLP03	457459	5.61	1419160	7.03	736041	9.79
13 SVTCLP04	416391	5.61	1240621	7.03	641256	9.80
14 SVTCLP05	399631	5.60	1212927	7.03	628691	9.79
15 SVTCLP06	426705	5.61	1341822	7.04	684895	9.79
16 SVTCLP07	439811	5.61	1417534	7.04	757872	9.79

IS1 (DCB) = 1,4-Dichlorobenzene-d4  
 IS2 (NPT) = Naphthalene-d8  
 IS3 (ANT) = Acenaphthene-d10  
 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 to be used to flag values outside QC limit with an asterisk.

\*Values outside of contract required QC limits

8C  
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ECO Contract: N/A  
 Lab Code: RTAL Case No.: N/A SAS No.: N/A SDG No.: 1  
 Lab File ID (Standard): SV0129.D Date Analyzed: 01/24/96  
 Instrument ID: 5972-B Time Analyzed: 11:54

	IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
12 HOUR STD	864318	12.57	517364	17.88	509942	20.97
UPPER LIMIT	1728636	12.07	1034728	17.38	1019884	20.47
LOWER LIMIT	432159	13.07	258682	18.38	254971	21.47
EPA SAMPLE NO.						
01 SBLK01	956105	12.57	583312	17.87	566323	20.97
02 TCLP BLANK	708710	12.57	443048	17.88	465002	20.96
03 SVTCLP01	736104	12.57	459070	17.87	448085	20.96
04 SVTCLP02	719077	12.57	441028	17.87	441361	20.96
05 SVTCLP03DL	793606	12.56	489667	17.86	481053	20.95
06 SVTCLP04DL	829413	12.57	486413	17.87	508104	20.96
07 SVTCLP05DL	765829	12.57	492467	17.87	507763	20.96
08 SVTCLP06DL	621189	12.56	397421	17.86	400204	20.93
09 SVTCLP07DL	701660	12.56	450427	17.86	498438	20.95
10 SVTCLP01DL	861240	12.55	533040	17.86	527511	20.93
11 SVTCLP02DL	874887	12.55	553053	17.86	594394	20.94
12 SVTCLP03	1051360	12.56	693980	17.86	720483	20.93
13 SVTCLP04	863038	12.54	588669	17.86	607254	20.93
14 SVTCLP05	837051	12.54	570689	17.86	594025	20.93
15 SVTCLP06	905238	12.55	600941	17.85	612552	20.94
16 SVTCLP07	1055183	12.55	682960	17.85	687289	20.94

- IS1 (DCB) = 1,4-Dichlorobenzene-d4
- IS2 (NPT) = Naphthalene-d8
- IS3 (ANT) = Acenaphthene-d10
- 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 to be used to flag values outside QC limit with an asterisk.  
 \* Values outside of contract required QC limits

Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN2495\SV0132.D  
 Acq On : 24 Jan 96 1:44 pm  
 Sample : ECO-004-01A  
 Misc : SEMI TEST TCLP SOIL01  
 Quant Time: Jan 25 8:43 1996

Vial: 11  
 Operator:  
 Inst : 5972 - 35  
 Multiplr: 2.00

Method : C:\HPCHEM\1\METHODS\METCLP.M  
 Title : Method 8270  
 Last Update : Thu Jan 25 08:20:05 1996  
 Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) 1,4-Dichlorobenzene-d4	5.62	152	310186	40.00	ug/L	0.00
9) Naphthalene-d8	7.05	136	984280	40.00	ug/L	0.00
13) Acenaphthene-d10	9.81	164	538365	40.00	ug/L	0.00
19) Phenanthrene-d10	12.57	188	736104	40.00	ug/L	0.00
22) Chrysene-d12	17.87	240	459070	40.00	ug/L	0.00
24) Perylene-d12	20.96	264	448085	40.00	ug/L	-0.01

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recovery
3) 2-Fluorophenol	4.50	112	408066	83.81	ug/L	41.90%
4) Phenol-d5	5.28	99	474049	83.97	ug/L	41.99%
10) Nitrobenzene-d5	6.20	82	319151	80.08	ug/L	40.04%
16) 2-Fluorobiphenyl	8.64	172	560605	77.10	ug/L	77.10%
18) 2,4,6-Tribromophenol	11.27	330	113670	170.87	ug/L	85.44%
23) Terphenyl-d14	15.79	244	282682	56.00	ug/L	56.00%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
5) 1,4-Dichlorobenzene	5.64	146	272739	58.34	ug/L	98
6) 2-Methylphenol	5.86	108	242262	63.77	ug/L	99
7) 3&4-Methylphenol	5.99	108	229586	57.79	ug/L	100
14) 2,4,6-Trichlorophenol	8.51	196	586422	344.77	ug/L	98
17) 2,4-Dinitrotoluene	10.21	165	548016	321.94	ug/L	83
21) Pentachlorophenol	12.32	266	103215	124.12	ug/L	96

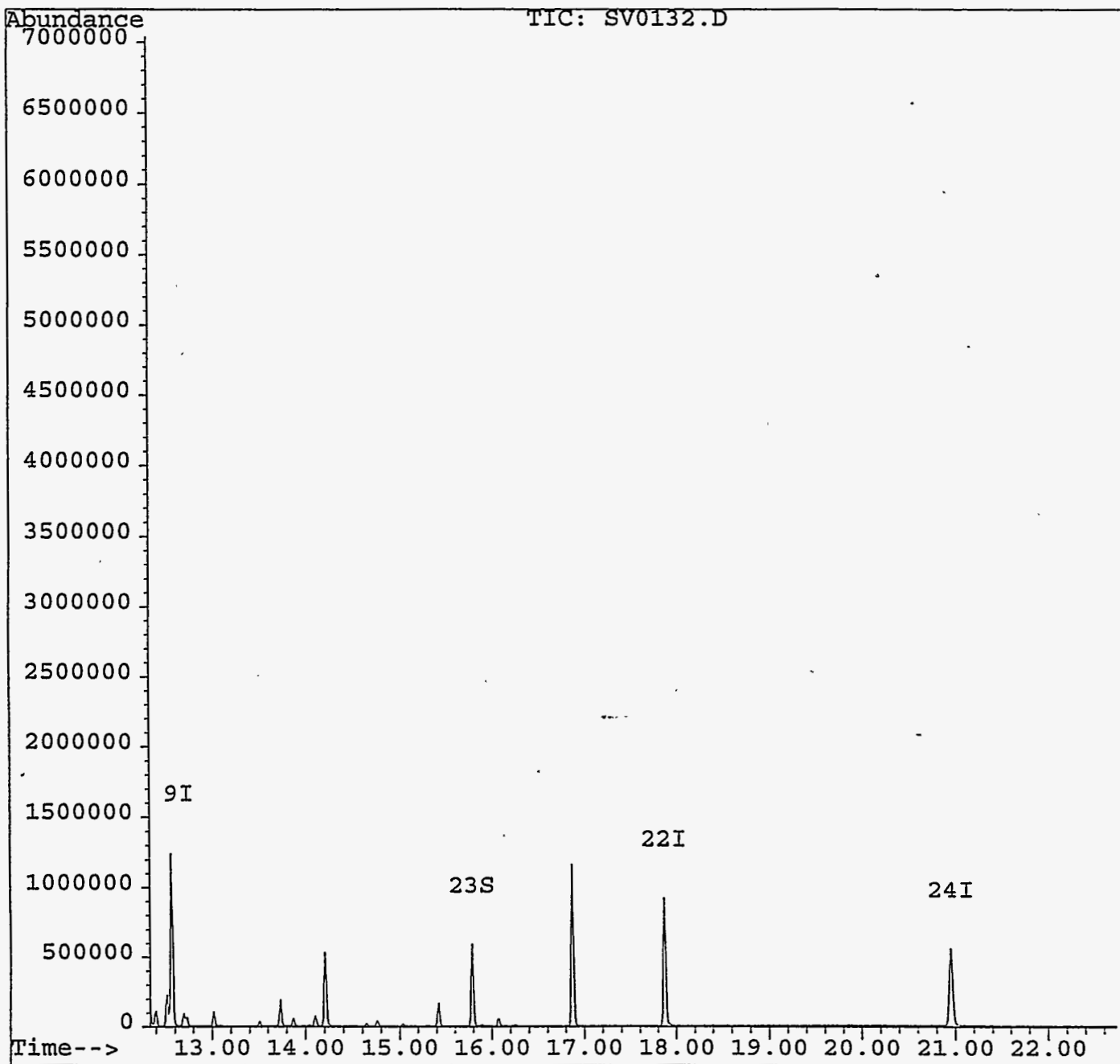
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN2495\SV0132.D  
Acq On : 24 Jan 96 1:44 pm  
Sample : ECO-004-01A  
Misc : SEMI TEST TCLP SOIL01  
Quant Time: Jan 25 8:43 1996

Vial: 11  
Operator:  
Inst : 5972 - 35  
Multiplr: 2.00

Method : C:\HPCHEM\1\METHODS\METCLP.M  
Title : Method 8270  
Last Update : Thu Jan 25 08:20:05 1996  
Response via : Single Level Calibration

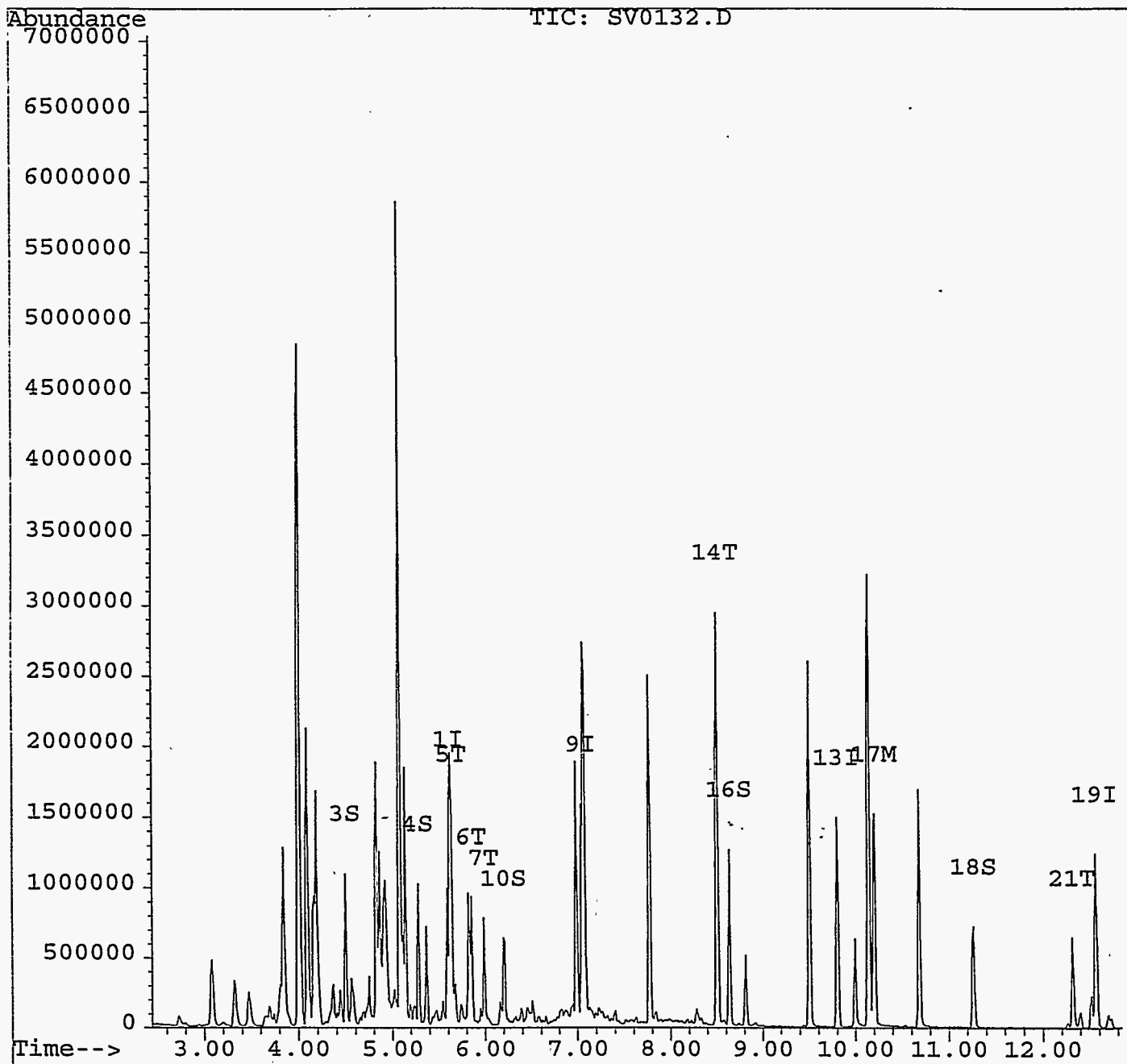


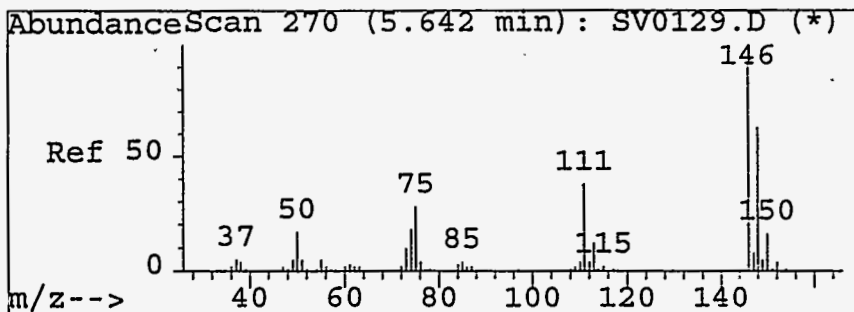
Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN2495\SV0132.D  
Acq On : 24 Jan 96 1:44 pm  
Sample : ECO-004-01A  
Misc : SEMI TEST TCLP SOIL01  
Quant Time: Jan 25 8:43 1996

Vial: 11  
Operator:  
Inst : 5972 - 35  
Multiplr: 2.00

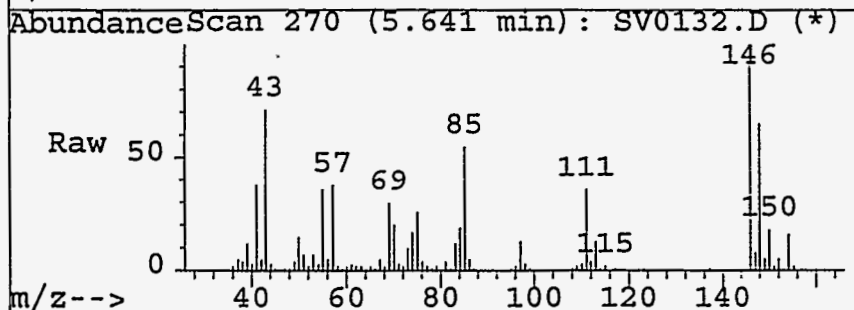
Method : C:\HPCHEM\1\METHODS\METCLP.M  
Title : Method 8270  
Last Update : Thu Jan 25 08:20:05 1996  
Response via : Single Level Calibration



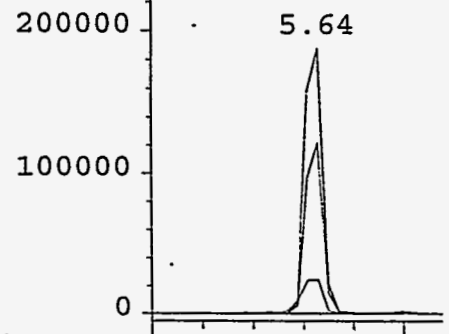


#5  
 1,4-Dichlorobenzene  
 Concen: 58.34 ug/L  
 RT: 5.64 min Scan# 270  
 Delta R.T. -0.00 min  
 Lab File: SV0132.D  
 Acq: 24 Jan 96 1:44 pm

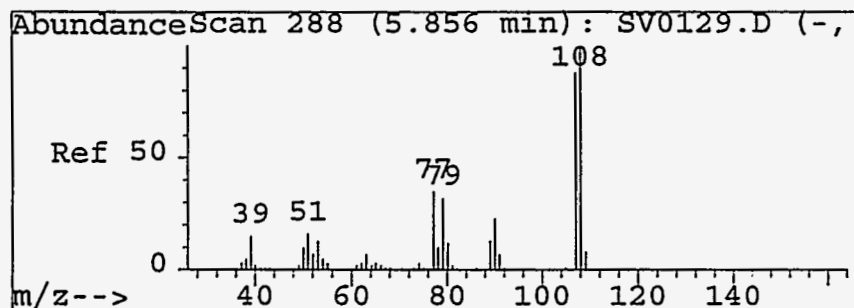
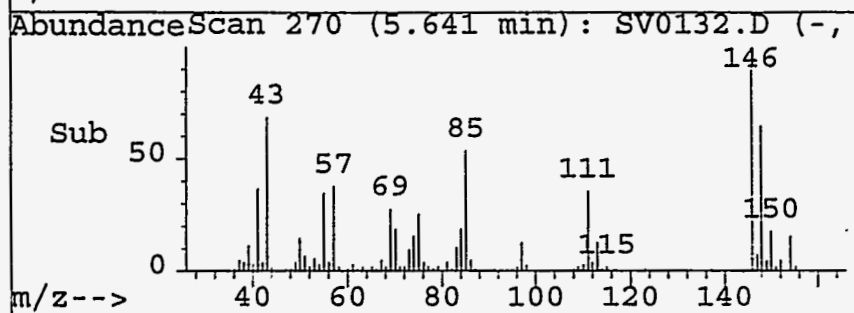
Tgt Ion	Ratio	Lower	Upper
146	100		
148	64.8	43.5	83.5
113	12.9	0.0	34.6
0	0.0	0.0	0.0



Abundance Ion 146.00 (145)  
 Ion 148.00 (147)  
 Ion 113.00 (112)

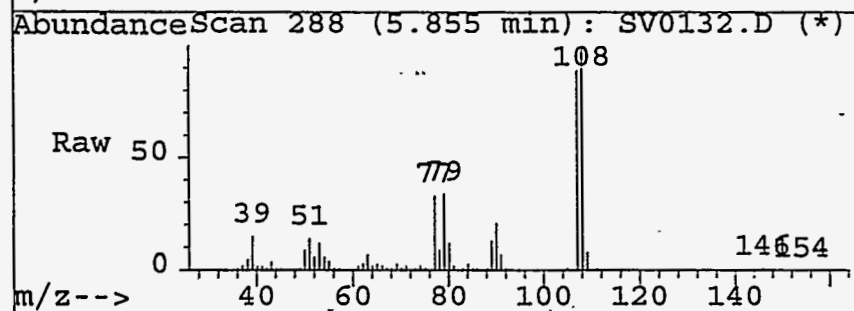


Time-->5.45 5.74

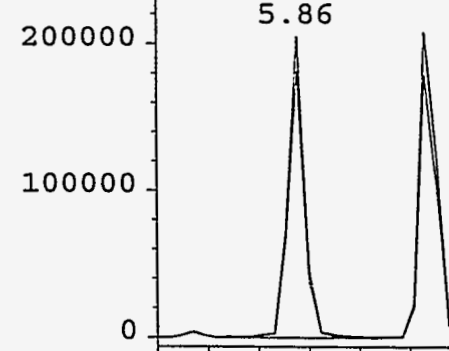


#6  
 2-Methylphenol  
 Concen: 63.77 ug/L  
 RT: 5.86 min Scan# 288  
 Delta R.T. -0.00 min  
 Lab File: SV0132.D  
 Acq: 24 Jan 96 1:44 pm

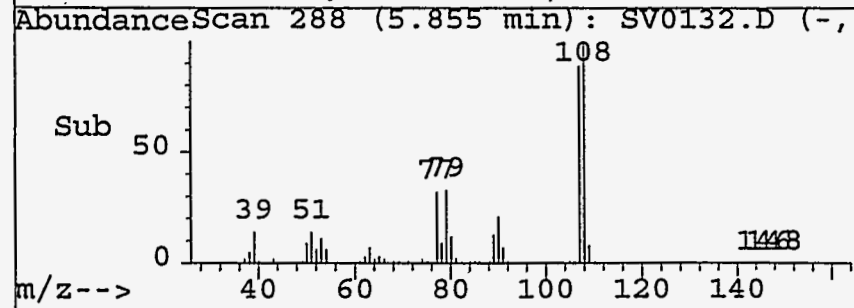
Tgt Ion	Ratio	Lower	Upper
108	100		
107	88.4	69.3	109.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0



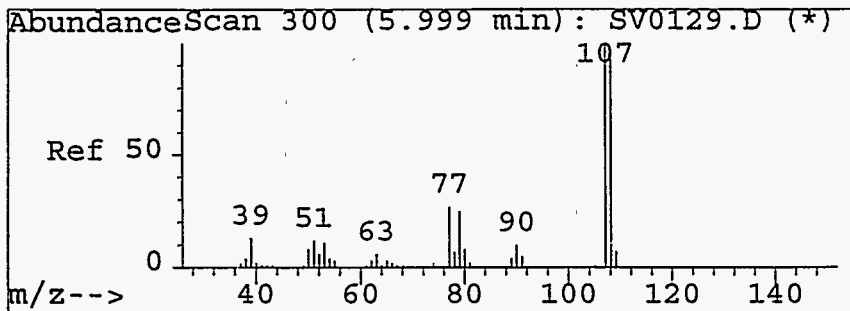
Abundance Ion 108.00 (107)  
 Ion 107.00 (106)



Time-->5.71 5.97

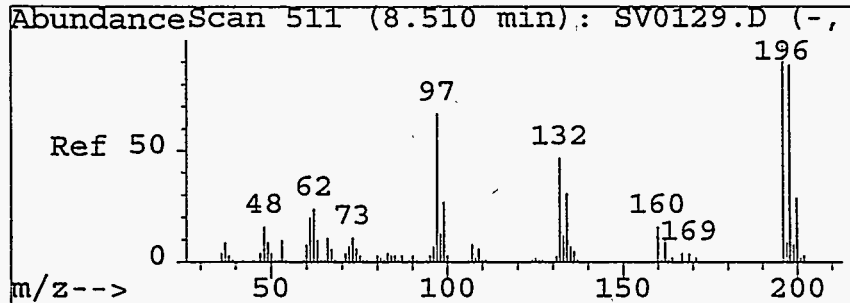
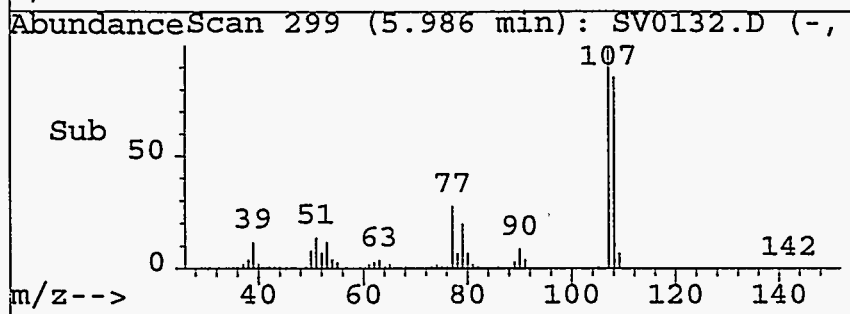
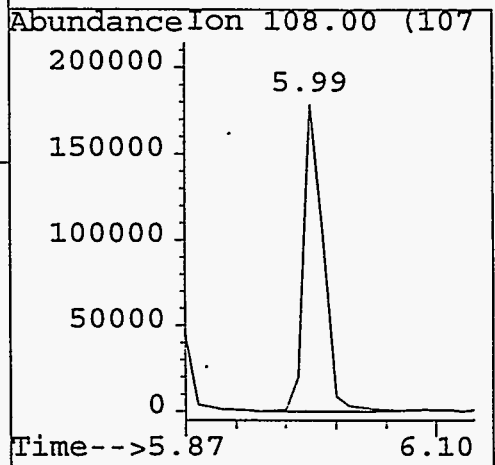
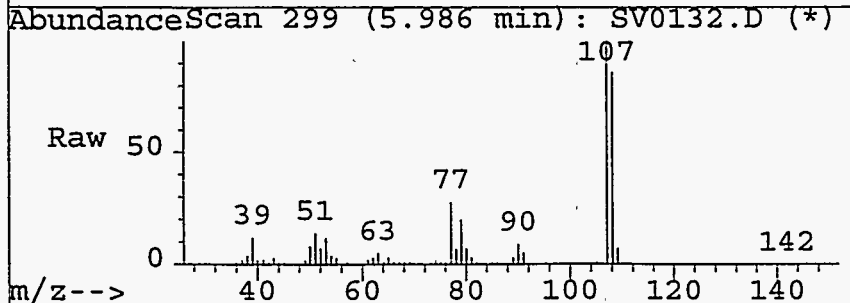






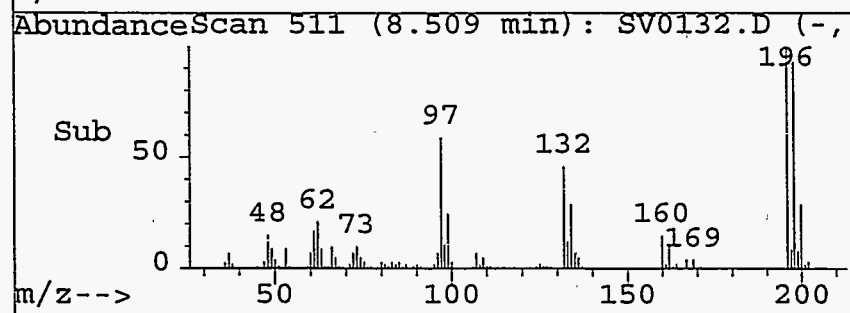
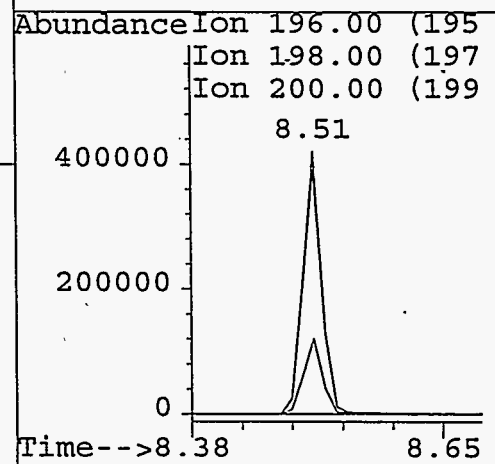
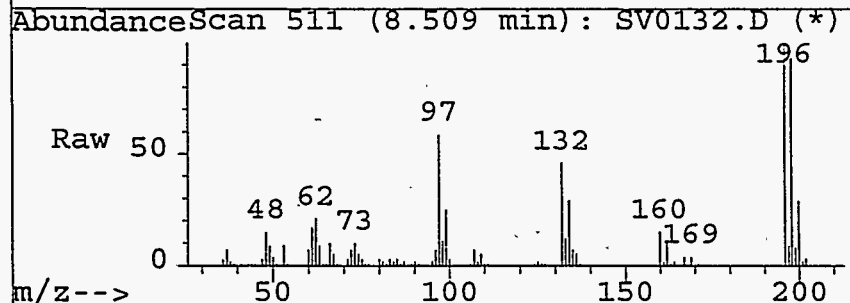
#7  
 3&4-Methylphenol  
 Concen: 57.79 ug/L  
 RT: 5.99 min Scan# 299  
 Delta R.T. -0.01 min  
 Lab File: SV0132.D  
 Acq: 24 Jan 96 1:44 pm

Tgt Ion	Ratio	Lower	Upper
108	100		
0	0.0	0.0	0.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

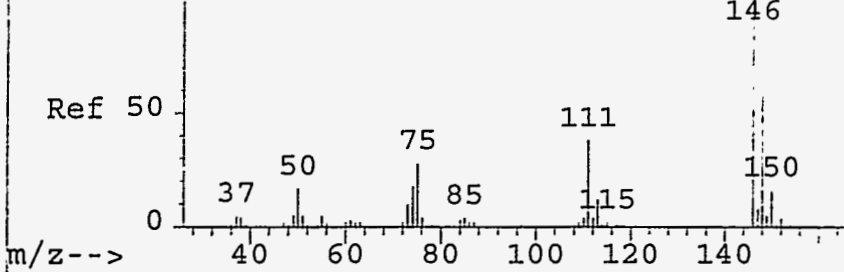


#14  
 2,4,6-Trichlorophenol  
 Concen: 344.77 ug/L  
 RT: 8.51 min Scan# 511  
 Delta R.T. -0.00 min  
 Lab File: SV0132.D  
 Acq: 24 Jan 96 1:44 pm

Tgt Ion	Ratio	Lower	Upper
196	100		
198	92.9	71.5	111.5
200	28.8	7.8	47.8
0	0.0	0.0	0.0



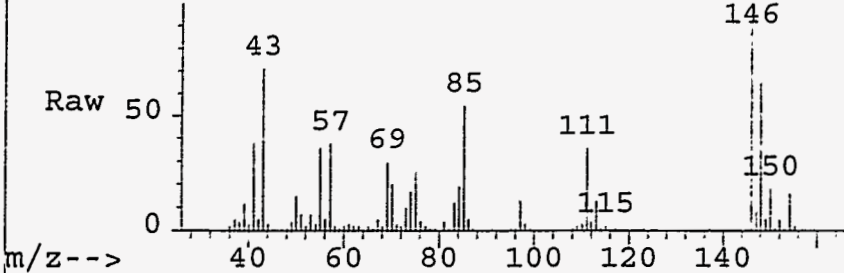
AbundanceScan 270 (5.642 min): SV0129.D (\*)



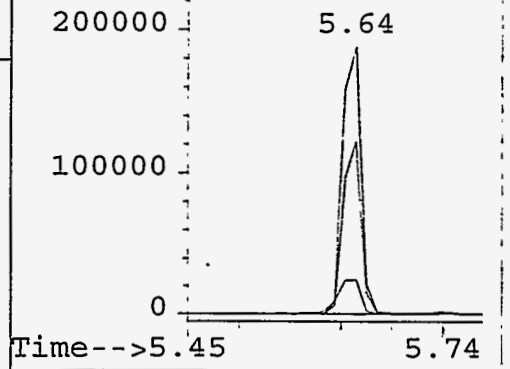
#5  
1,4-Dichlorobenzene  
Concen: 58.34 ug/L  
RT: 5.64 min Scan# 270  
Delta R.T. -0.00 min  
Lab File: SV0132.D  
Acq: 24 Jan 96 1:44 pm

Tgt Ion	Resp	Lower	Upper
146	100		
148	64.8	43.5	83.5
113	12.9	0.0	34.6
0	0.0	0.0	0.0

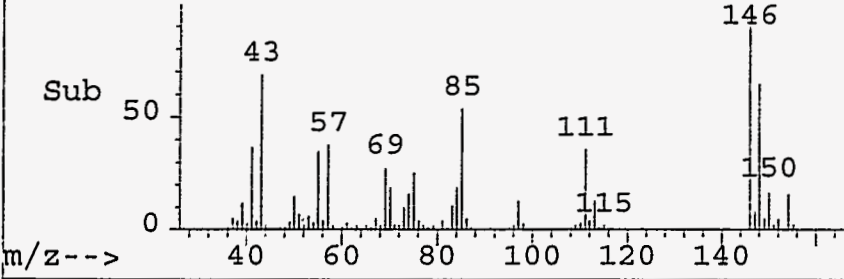
AbundanceScan 270 (5.641 min): SV0132.D (\*)



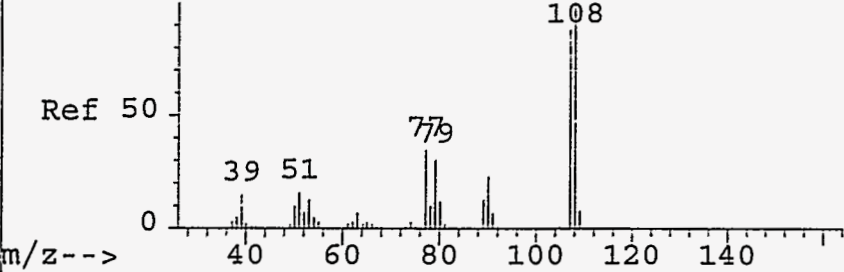
Abundance Ion 146.00 (145)  
Ion 148.00 (147)  
Ion 113.00 (112)



AbundanceScan 270 (5.641 min): SV0132.D (-,



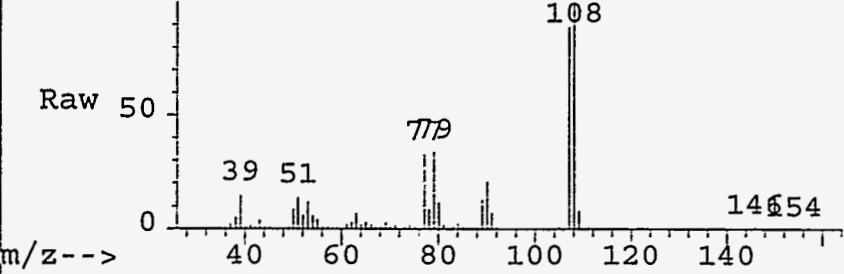
AbundanceScan 288 (5.856 min): SV0129.D (-,



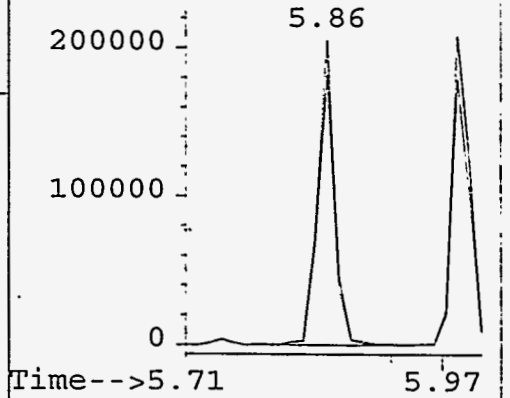
#6  
2-Methylphenol  
Concen: 63.77 ug/L  
RT: 5.86 min Scan# 288  
Delta R.T. -0.00 min  
Lab File: SV0132.D  
Acq: 24 Jan 96 1:44 pm

Tgt Ion	Resp	Lower	Upper
108	100		
107	88.4	69.3	109.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0

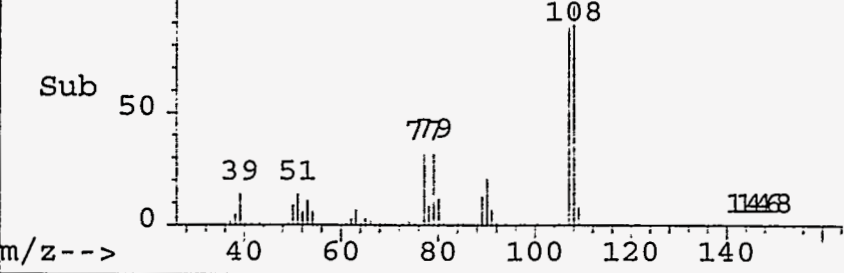
AbundanceScan 288 (5.855 min): SV0132.D (\*)



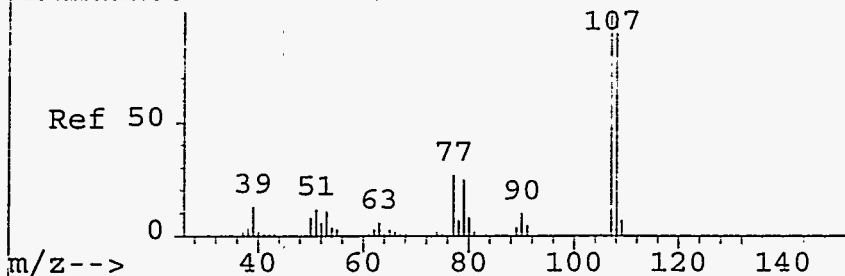
Abundance Ion 108.00 (107)  
Ion 107.00 (106)



AbundanceScan 288 (5.855 min): SV0132.D (-,



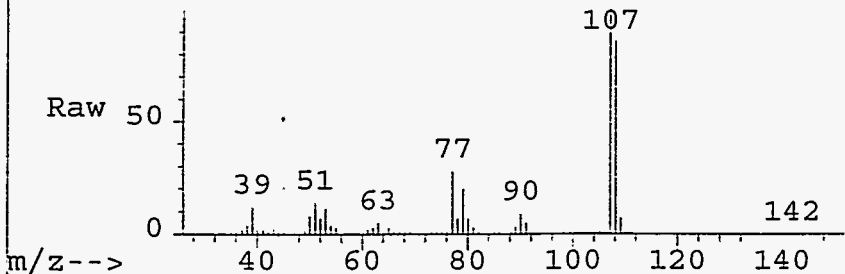
AbundanceScan 300 (5.999 min): SV0129.D (\*)



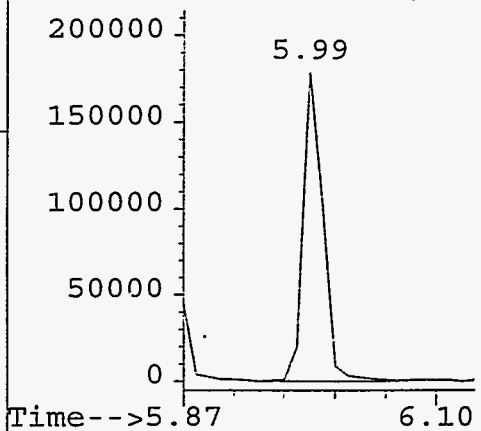
#7  
3&4-Methylphenol  
Concen: 57.79 ug/L  
RT: 5.99 min Scan# 299  
Delta R.T. -0.01 min  
Lab File: SV0132.D  
Acq: 24 Jan 96 1:44 pm

Tgt Ion	Ratio	Lower	Upper
108	100		
0	0.0	0.0	0.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

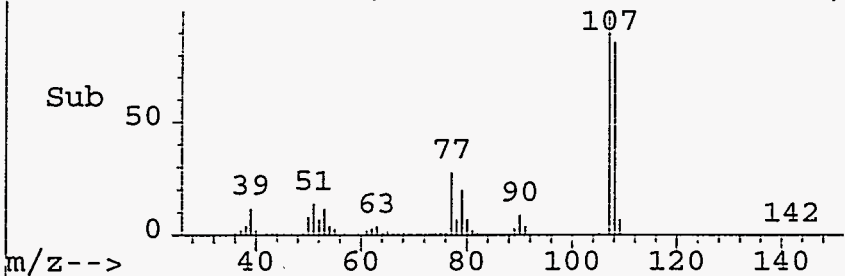
AbundanceScan 299 (5.986 min): SV0132.D (\*)



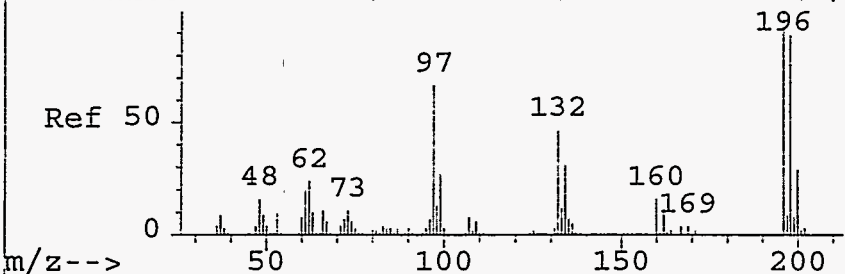
Abundance Ion 108.00 (107)



AbundanceScan 299 (5.986 min): SV0132.D (-,



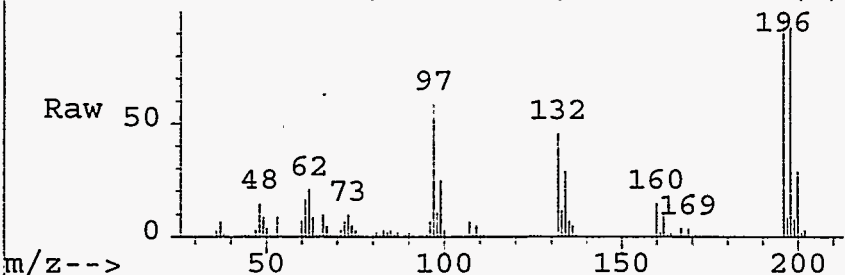
AbundanceScan 511 (8.510 min): SV0129.D (-,



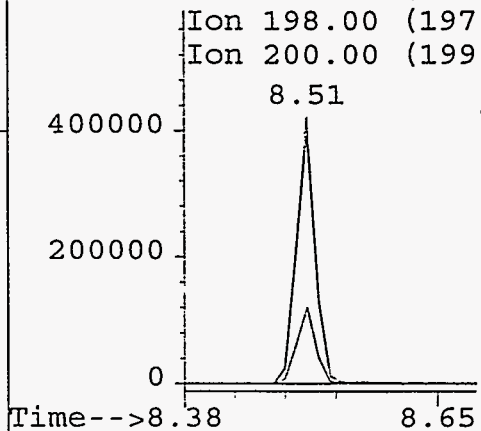
#14  
2,4,6-Trichlorophenol  
Concen: 344.77 ug/L  
RT: 8.51 min Scan# 511  
Delta R.T. -0.00 min  
Lab File: SV0132.D  
Acq: 24 Jan 96 1:44 pm

Tgt Ion	Ratio	Lower	Upper
196	100		
198	92.9	71.5	111.5
200	28.8	7.8	47.8
0	0.0	0.0	0.0

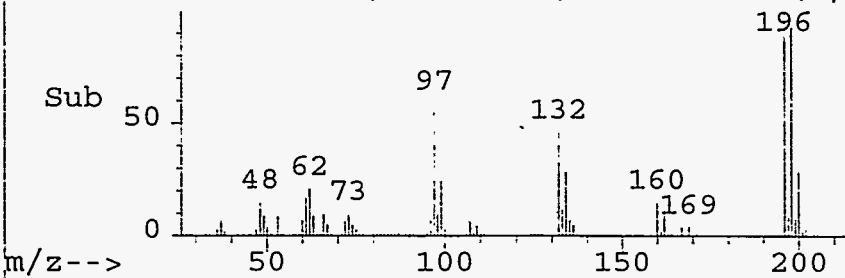
AbundanceScan 511 (8.509 min): SV0132.D (\*)



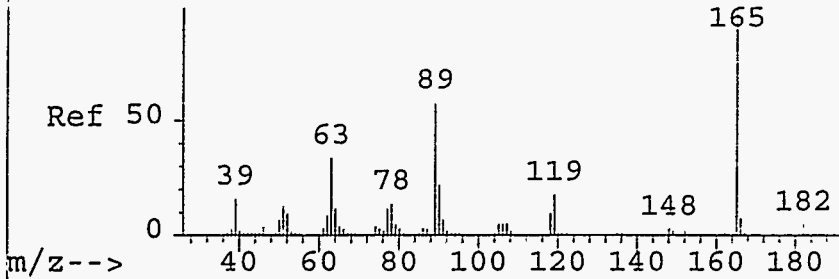
Abundance Ion 196.00 (195



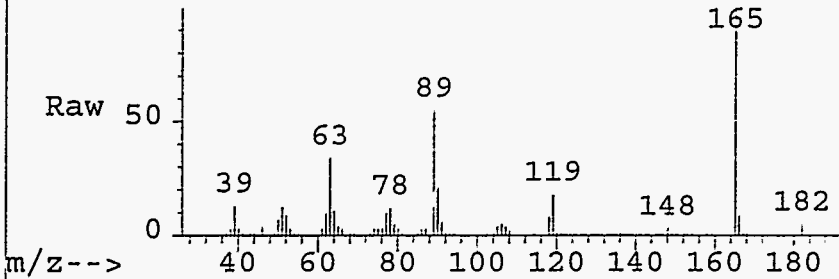
AbundanceScan 511 (8.509 min): SV0132.D (-,



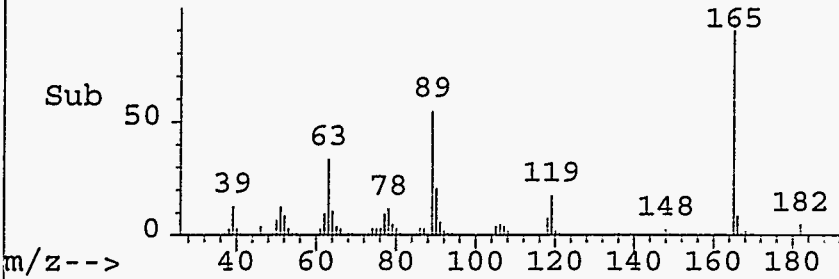
AbundanceScan 654 (10.211 min): SV0129.D (-



AbundanceScan 654 (10.211 min): SV0132.D (\*



AbundanceScan 654 (10.211 min): SV0132.D (-

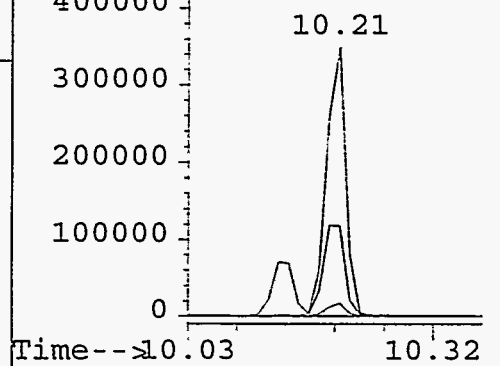


#17  
2,4-Dinitrotoluene  
Concen: 321.94 ug/L  
RT: 10.21 min Scan# 654  
Delta R.T. -0.00 min  
Lab File: SV0132.D  
Acq: 24 Jan 96 1:44 pm

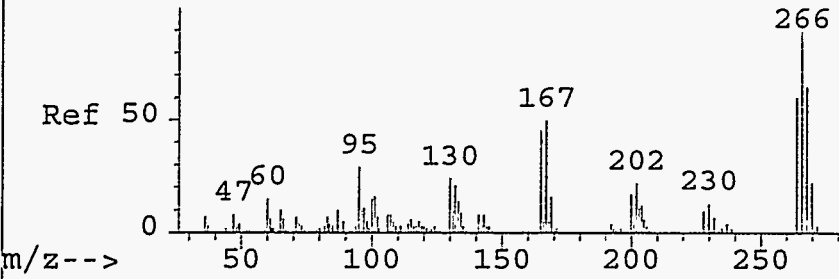
Tgt Ion	Ratio	Lower	Upper
165	100		
63	33.7	25.9	65.9
182	5.0	0.0	24.6
0	0.0	0.0	0.0

AbundanceIon 165.00 (164

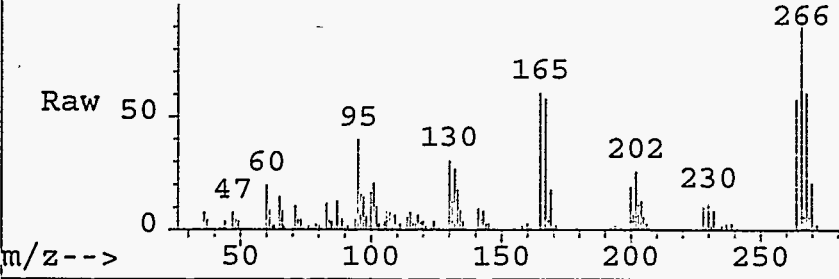
Ion 63.00 (62.  
Ion 182.00 (181



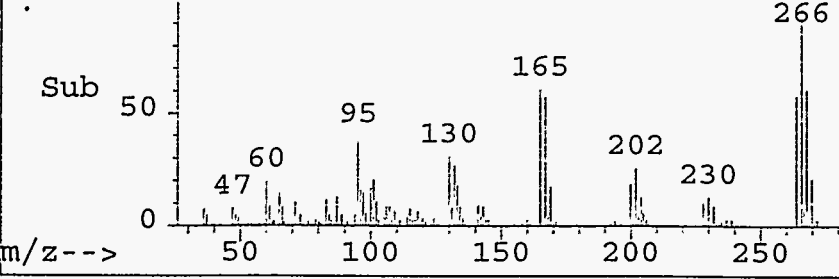
AbundanceScan 832 (12.330 min): SV0129.D (-



AbundanceScan 831 (12.317 min): SV0132.D (\*



AbundanceScan 831 (12.317 min): SV0132.D (-

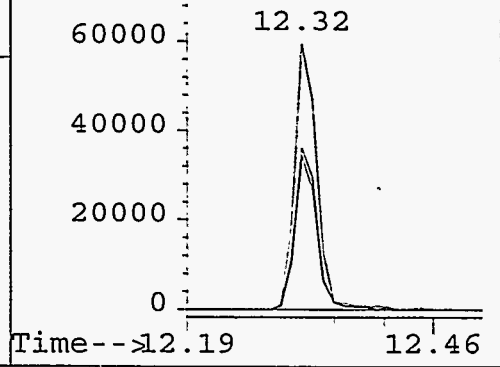


#21  
Pentachlorophenol  
Concen: 124.12 ug/L  
RT: 12.32 min Scan# 831  
Delta R.T. -0.01 min  
Lab File: SV0132.D  
Acq: 24 Jan 96 1:44 pm

Tgt Ion	Ratio	Lower	Upper
266	100		
264	57.9	41.0	81.0
268	60.7	38.2	78.2
0	0.0	0.0	0.0

AbundanceIon 266.00 (265

Ion 264.00 (263  
Ion 268.00 (267



Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN2495\SV0139.D  
 Acq On : 24 Jan 96 6:09 pm  
 Sample : ECO-004-01A  
 Misc : SEMI TEST TCLP SOIL01A 1:5  
 Quant Time: Jan 25 8:26 1996

Vial: 18  
 Operator:  
 Inst : 5972 - 35  
 Multiplr: 10.00

Method : C:\HPCHEM\1\METHODS\METCLP.M  
 Title : Method 8270  
 Last Update : Thu Jan 25 08:20:05 1996  
 Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.62	152	355478	40.00	ug/L	0.00
9) Naphthalene-d8	7.03	136	1173450	40.00	ug/L	-0.01
13) Acenaphthene-d10	9.79	164	624036	40.00	ug/L	-0.01
19) Phenanthrene-d10	12.55	188	861240	40.00	ug/L	-0.01
22) Chrysene-d12	17.86	240	533040	40.00	ug/L	-0.01
24) Perylene-d12	20.93	264	527511	40.00	ug/L	-0.04

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recovery
3) 2-Fluorophenol	4.49	112	86651	77.64	ug/L	38.82%
4) Phenol-d5	5.27	99	101404	78.37	ug/L	39.18%
10) Nitrobenzene-d5	6.20	82	60761	63.94	ug/L	31.97%
16) 2-Fluorobiphenyl	8.63	172	117786	69.88	ug/L	69.88%
18) 2,4,6-Tribromophenol	11.26	330	18971	123.01	ug/L	61.51%
23) Terphenyl-d14	15.78	244	53469	45.61	ug/L	45.61%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
5) 1,4-Dichlorobenzene	5.63	146	58799	54.88	ug/L	98
6) 2-Methylphenol	5.84	108	51365	58.99	ug/L	94
7) 3&4-Methylphenol	5.99	108	45282	49.73	ug/L	100
14) 2,4,6-Trichlorophenol	8.50	196	116915	296.50	ug/L	99
17) 2,4-Dinitrotoluene	10.19	165	94041	238.30	ug/L	100
21) Pentachlorophenol	12.30	266	13109	67.37	ug/L	88

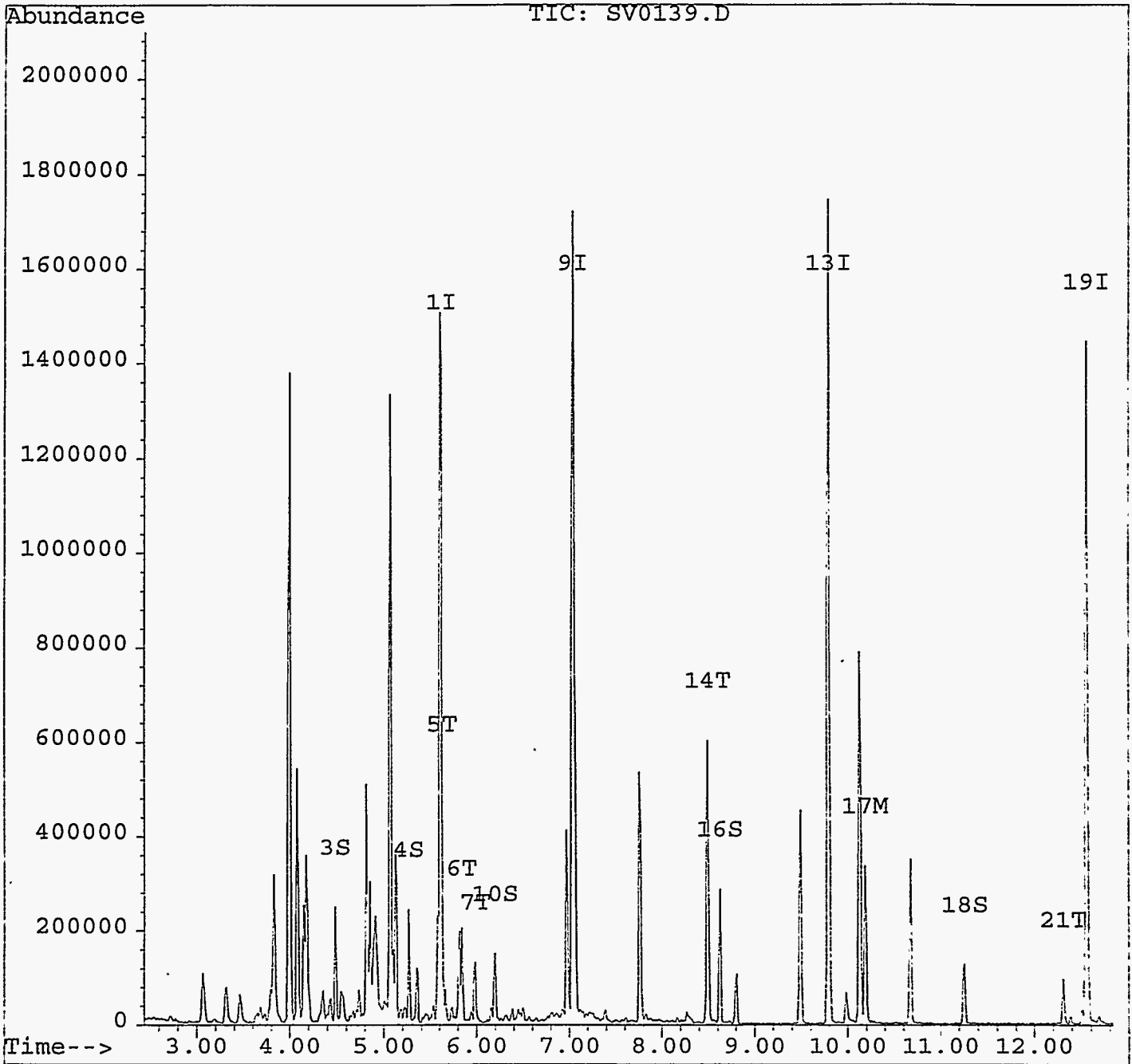
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN2495\SV0139.D  
Acq On : 24 Jan 96 6:09 pm  
Sample : ECO-004-01A  
Misc : SEMI TEST TCLP SOIL01A 1:5  
Quant Time: Jan 25 8:26 1996

Vial: 18  
Operator:  
Inst : 5972 - 35  
Multiplr: 10.00

Method : C:\HPCHEM\1\METHODS\METCLP.M  
Title : Method 8270  
Last Update : Thu Jan 25 08:20:05 1996  
Response via : Single Level Calibration

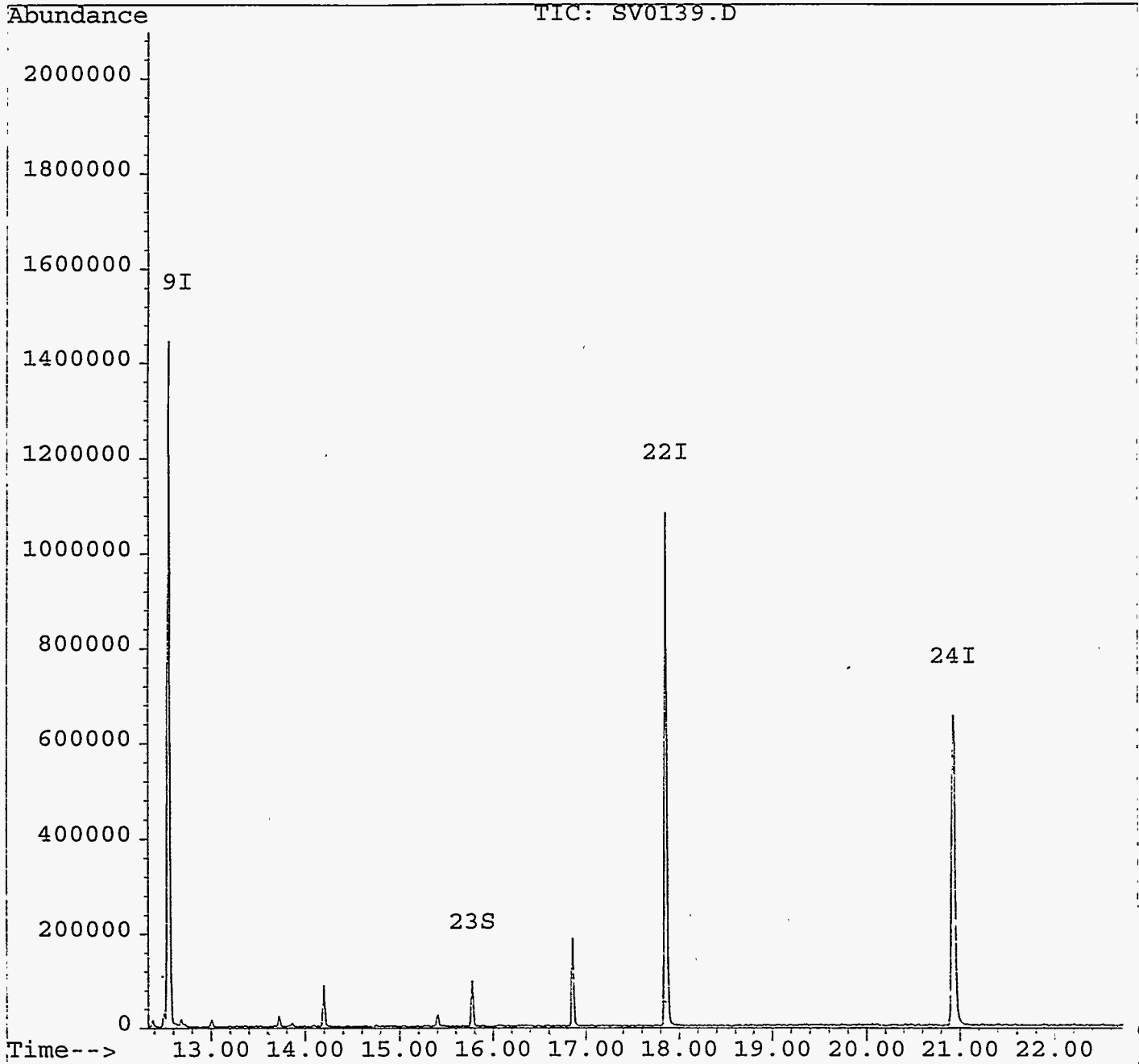


Quantitation Report

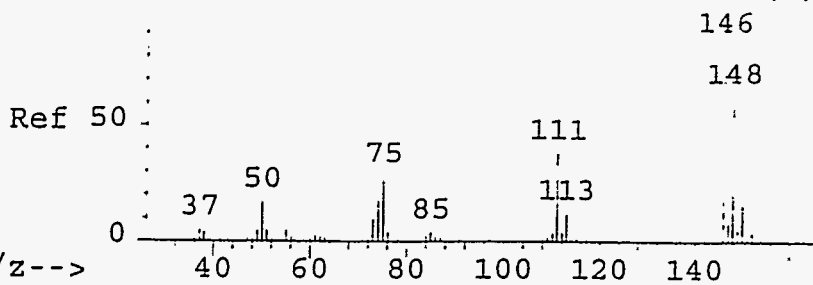
Data File : C:\HPCHEM\1\DATA\JAN2495\SV0139.D  
Acq On : 24 Jan 96 6:09 pm  
Sample : ECO-004-01A  
Misc : SEMI TEST TCLP SOIL01A 1:5  
Quant Time: Jan 25 8:26 1996

Vial: 18  
Operator:  
Inst : 5972 - 35  
Multiplr: 10.00

Method : C:\HPCHEM\1\METHODS\METCLP.M  
Title : Method 8270  
Last Update : Thu Jan 25 08:20:05 1996  
Response via : Single Level Calibration



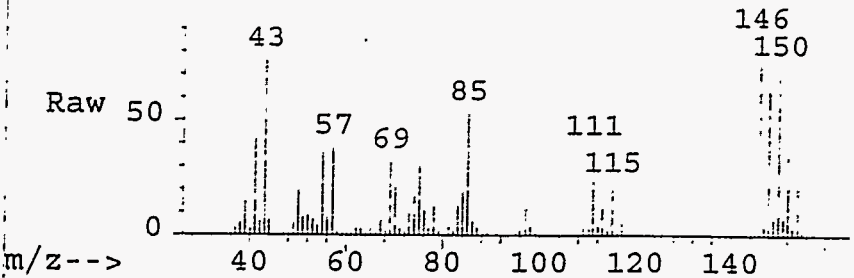
AbundanceScan 270 (5.642 min): SV0129.D (\*)



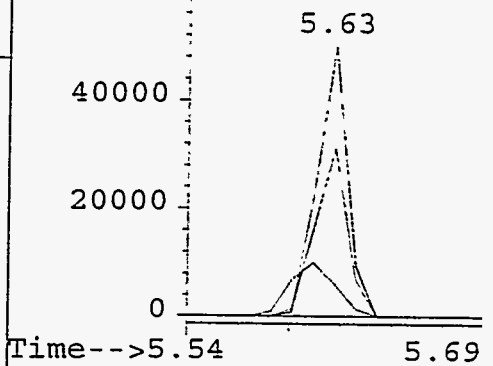
#5  
 1,4-Dichlorobenzene  
 Concen: 54.88 ug/L  
 RT: 5.63 min Scan# 269  
 Delta R.T. -0.01 min  
 Lab File: SV0139.D  
 Acq: 24 Jan 96 6:09 pm

Tgt Ion	Ratio	Lower	Upper	Resp
146	100			58799
148	62.5	43.5	83.5	
113	12.4	0.0	34.6	
0	0.0	0.0	0.0	

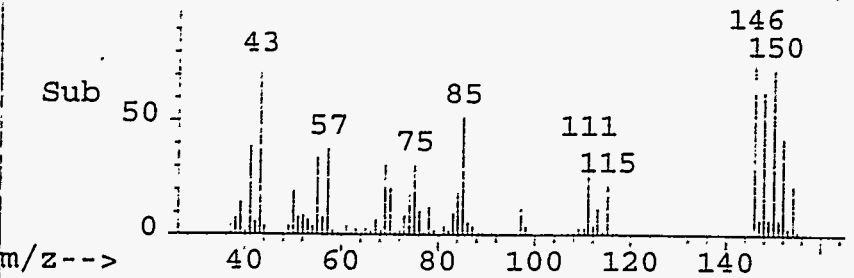
AbundanceScan 269 (5.628 min): SV0139.D (\*)



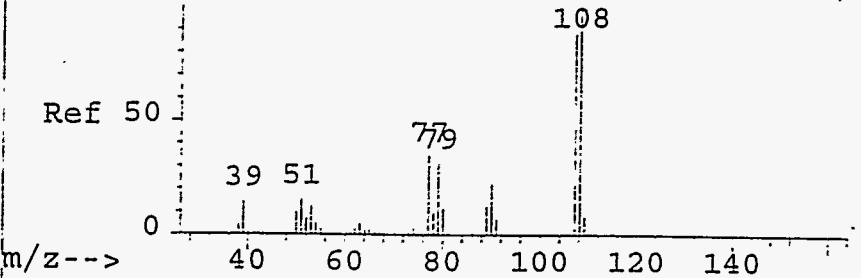
Abundance	Ion	Label
60000	146.00	(145)
	148.00	(147)
	113.00	(112)



AbundanceScan 269 (5.628 min): SV0139.D (-, -)



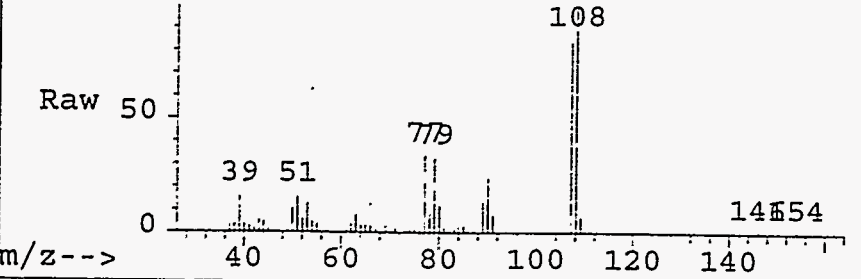
AbundanceScan 288 (5.856 min): SV0129.D (-, -)



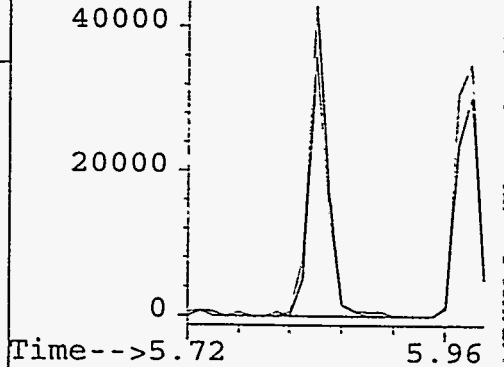
#6  
 2-Methylphenol  
 Concen: 58.99 ug/L  
 RT: 5.84 min Scan# 287  
 Delta R.T. -0.01 min  
 Lab File: SV0139.D  
 Acq: 24 Jan 96 6:09 pm

Tgt Ion	Ratio	Lower	Upper	Resp
108	100			51365
107	83.6	69.3	109.3	
0	0.0	0.0	0.0	
0	0.0	0.0	0.0	

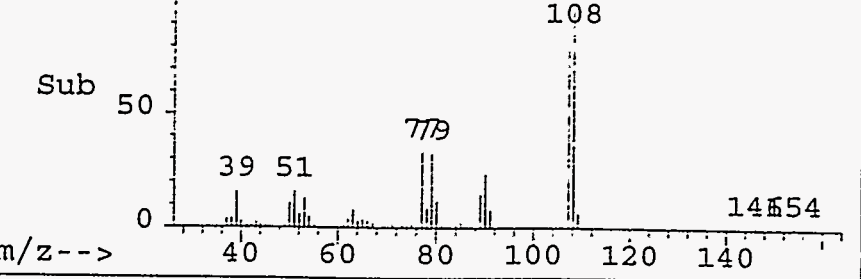
AbundanceScan 287 (5.842 min): SV0139.D (\*)



Abundance	Ion	Label
40000	108.00	(107)
	107.00	(106)



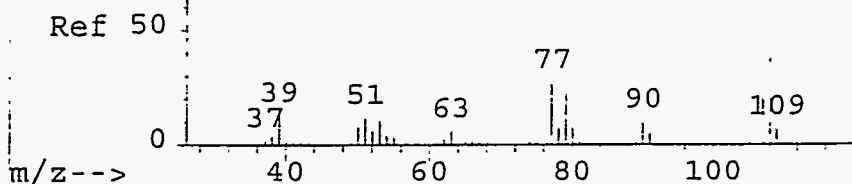
AbundanceScan 287 (5.842 min): SV0139.D (-, -)





AbundanceScan 300 (5.999 min): SV0129.D (\*)

107



#7

3&4-Methylphenol

Concen: 49.73 ug/L

RT: 5.99 min Scan# 299

Delta R.T. -0.01 min

Lab File: SV0139.D

Acq: 24 Jan 96 6:09 pm

Tgt Ion:108 Resp: 45282

Ion Ratio Lower Upper

108 100

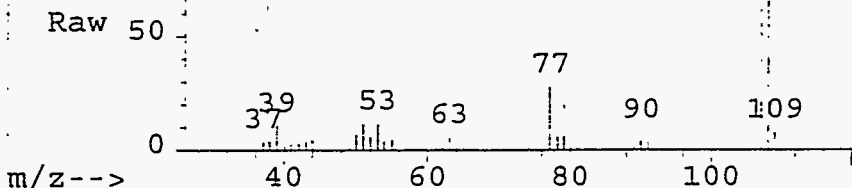
0 0.0 0.0 0.0

0 0.0 0.0 0.0

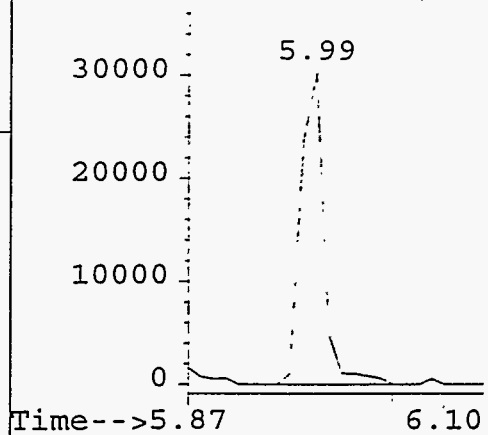
0 0.0 0.0 0.0

AbundanceScan 299 (5.985 min): SV0139.D (\*)

107

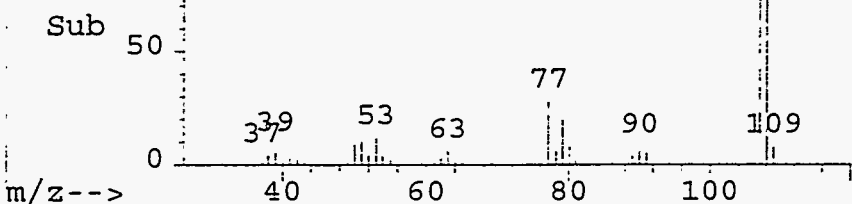


AbundanceIon 108.00 (107)



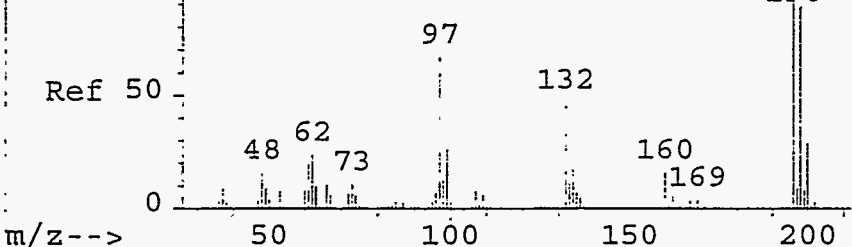
AbundanceScan 299 (5.985 min): SV0139.D (-,

107



AbundanceScan 511 (8.510 min): SV0129.D (-,

196



#14

2,4,6-Trichlorophenol

Concen: 296.50 ug/L

RT: 8.50 min Scan# 510

Delta R.T. -0.01 min

Lab File: SV0139.D

Acq: 24 Jan 96 6:09 pm

Tgt Ion:196 Resp: 116915

Ion Ratio Lower Upper

196 100

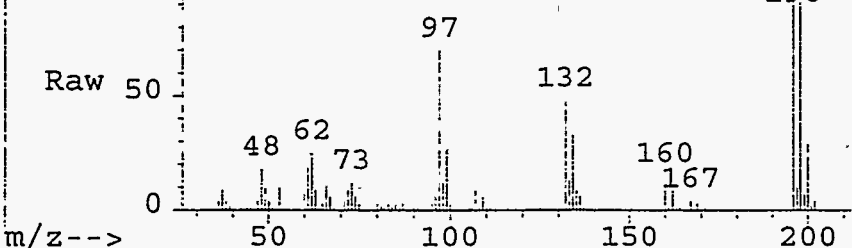
198 90.7 71.5 111.5

200 29.1 7.8 47.8

0 0.0 0.0 0.0

AbundanceScan 510 (8.496 min): SV0139.D (\*)

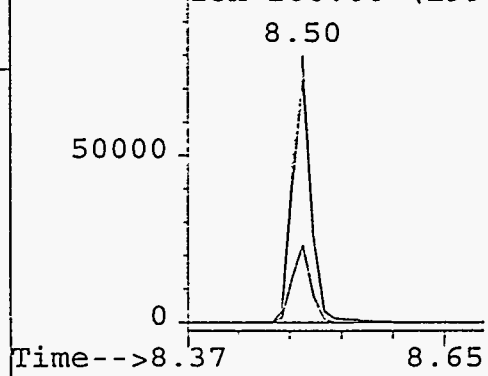
196



AbundanceIon 196.00 (195

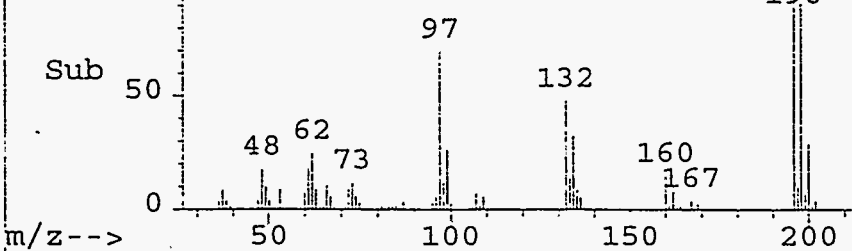
Ion 198.00 (197

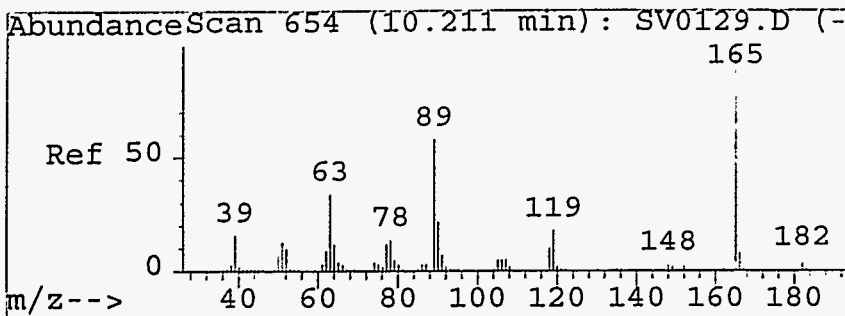
Ion 200.00 (199



AbundanceScan 510 (8.496 min): SV0139.D (-,

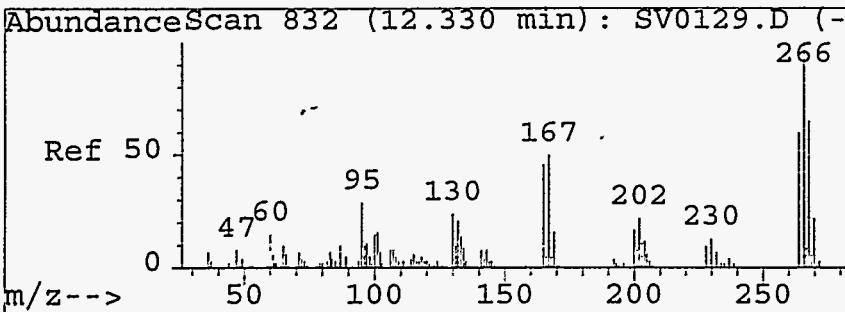
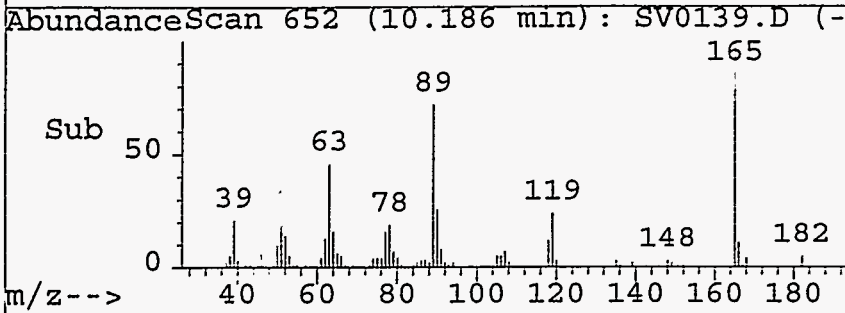
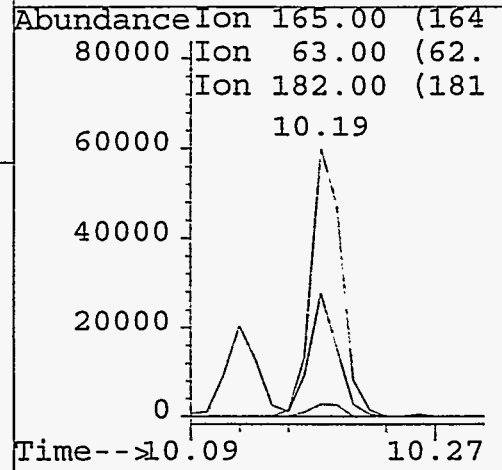
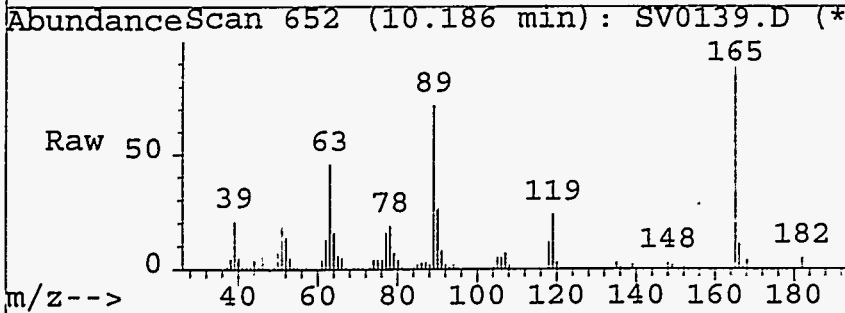
196





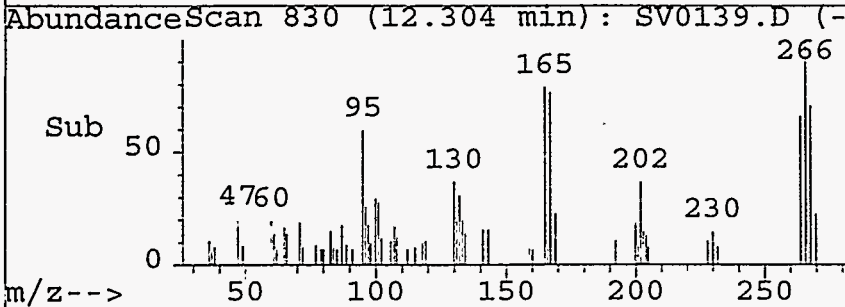
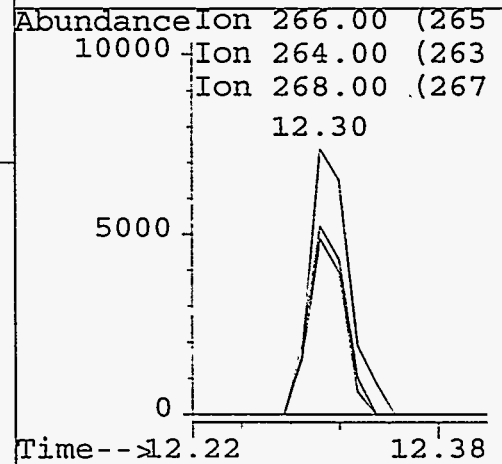
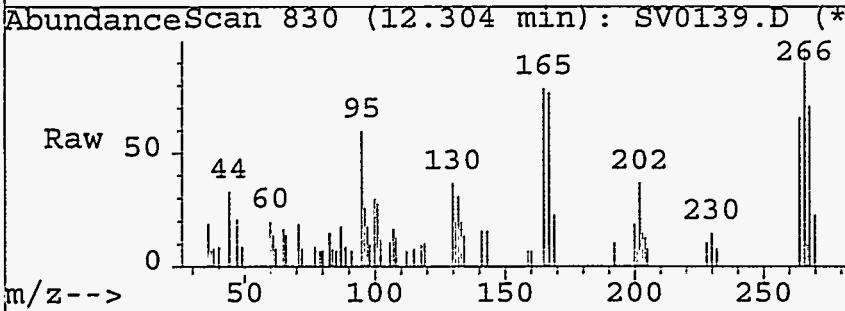
#17  
 2,4-Dinitrotoluene  
 Concen: 238.30 ug/L  
 RT: 10.19 min Scan# 652  
 Delta R.T. -0.03 min  
 Lab File: SV0139.D  
 Acq: 24 Jan 96 6:09 pm

Tgt Ion	Ratio	Lower	Upper
165	100		
63	46.2	25.9	65.9
182	4.6	0.0	24.6
0	0.0	0.0	0.0



#21  
 Pentachlorophenol  
 Concen: 67.37 ug/L  
 RT: 12.30 min Scan# 830  
 Delta R.T. -0.03 min  
 Lab File: SV0139.D  
 Acq: 24 Jan 96 6:09 pm

Tgt Ion	Ratio	Lower	Upper
266	100		
264	66.1	41.0	81.0
268	70.9	38.2	78.2
0	0.0	0.0	0.0



Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN2495\SV0140.D  
 Acq On : 24 Jan 96 6:42 pm  
 Sample : ECO-004-02A  
 Misc : SEMI TEST TCLP SOIL02A 1:5  
 Quant Time: Jan 25 9:53 1996

Vial: 19  
 Operator:  
 Inst : 5972 - 35  
 Multiplr: 10.00

Method : C:\HPCHEM\1\METHODS\METCLP.M  
 Title : Method 8270  
 Last Update : Thu Jan 25 08:20:05 1996  
 Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.60	152	363584	40.00	ug/L	-0.01
9) Naphthalene-d8	7.03	136	1165828	40.00	ug/L	-0.01
13) Acenaphthene-d10	9.79	164	616731	40.00	ug/L	-0.01
19) Phenanthrene-d10	12.55	188	874887	40.00	ug/L	-0.01
22) Chrysene-d12	17.86	240	553053	40.00	ug/L	-0.01
24) Perylene-d12	20.94	264	594394	40.00	ug/L	-0.02

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recovery
3) 2-Fluorophenol	4.49	112	81739	71.61	ug/L	35.80%
4) Phenol-d5	5.27	99	95163	71.90	ug/L	35.95%
10) Nitrobenzene-d5	6.20	82	60166	63.73	ug/L	31.87%
16) 2-Fluorobiphenyl	8.63	172	111535	66.95	ug/L	66.95%
18) 2,4,6-Tribromophenol	11.26	330	18019	118.22	ug/L	59.11%
23) Terphenyl-d14	15.78	244	48355	39.76	ug/L	39.76%

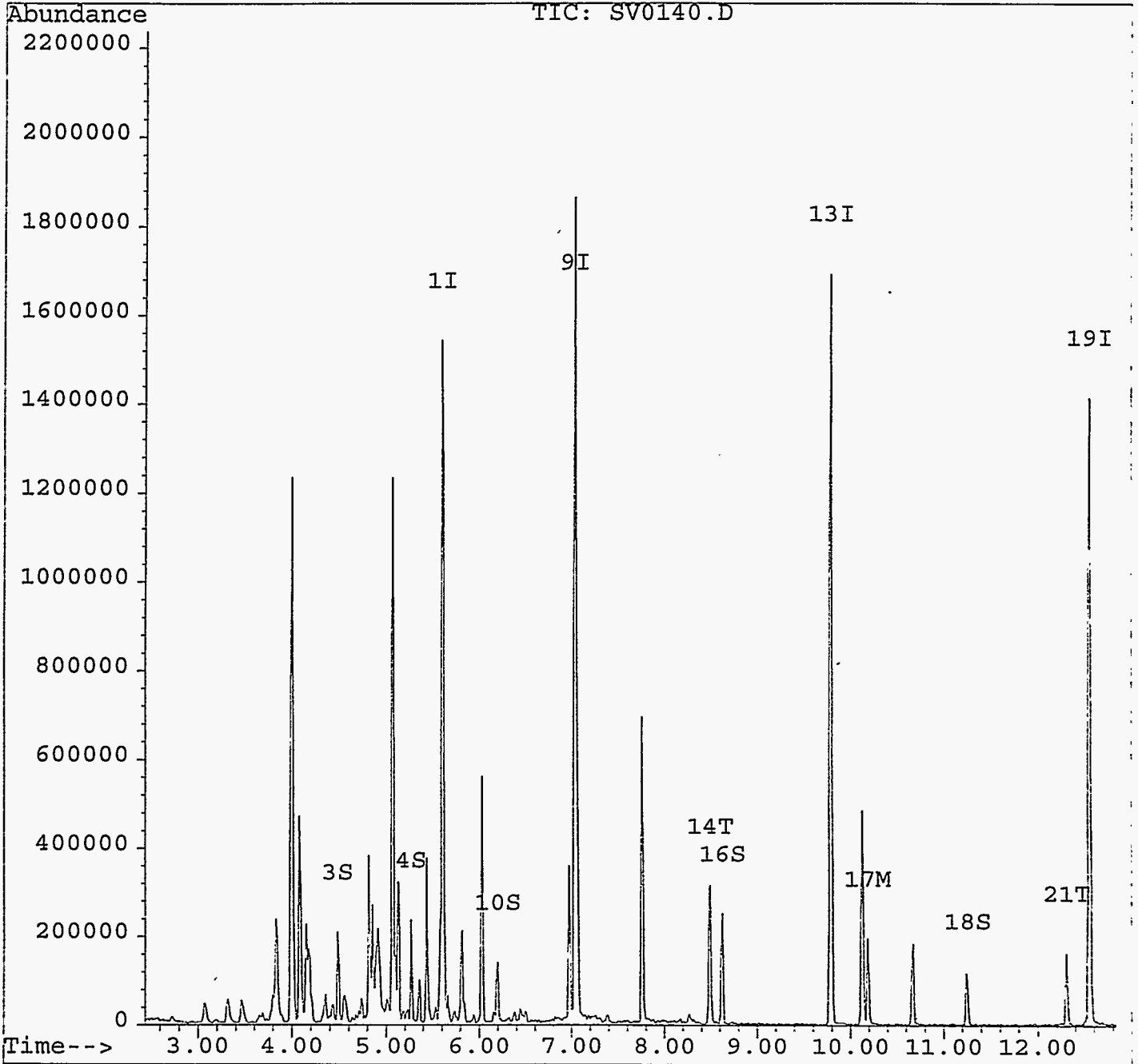
Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
6) 2-Methylphenol	5.84	108	7966	8.95	ug/L	100
14) 2,4,6-Trichlorophenol	8.50	196	61884	158.80	ug/L	97
17) 2,4-Dinitrotoluene	10.19	165	47787	122.53	ug/L	99
21) Pentachlorophenol	12.30	266	23338	118.06	ug/L	92

Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN2495\SV0140.D  
Acq On : 24 Jan 96 6:42 pm  
Sample : ECO-004-02A  
Misc : SEMI TEST TCLP SOIL02A 1:5  
Quant Time: Jan 25 9:53 1996

Vial: 19  
Operator:  
Inst : 5972 - 35  
Multiplr: 10.00

Method : C:\HPCHEM\1\METHODS\METCLP.M  
Title : Method 8270  
Last Update : Thu Jan 25 08:20:05 1996  
Response via : Single Level Calibration

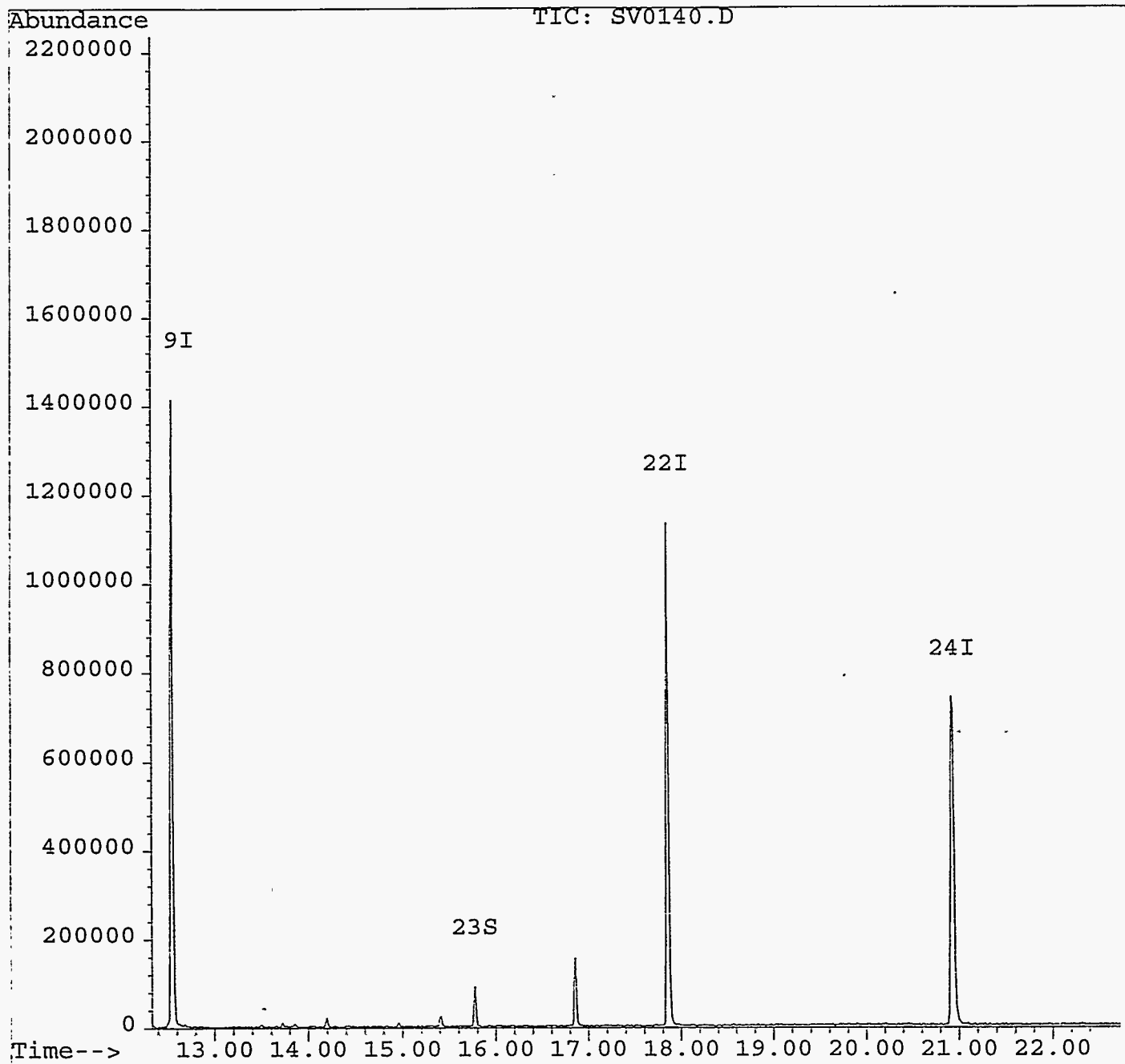


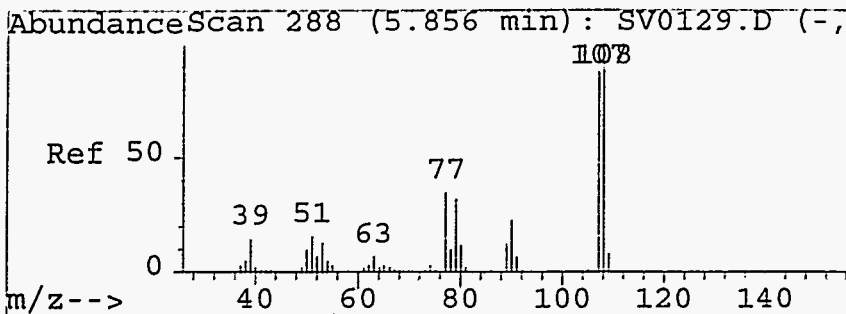
Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN2495\SV0140.D  
Acq On : 24 Jan 96 6:42 pm  
Sample : ECO-004-02A  
Misc : SEMI TEST TCLP SOIL02A 1:5  
Quant Time: Jan 25 9:53 1996

Vial: 19  
Operator:  
Inst : 5972 - 35  
Multiplr: 10.00

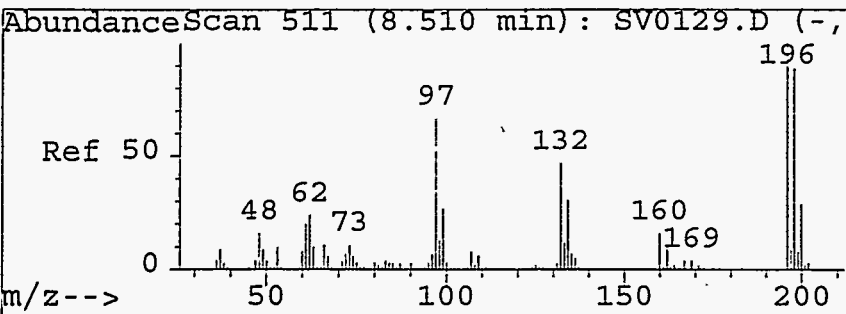
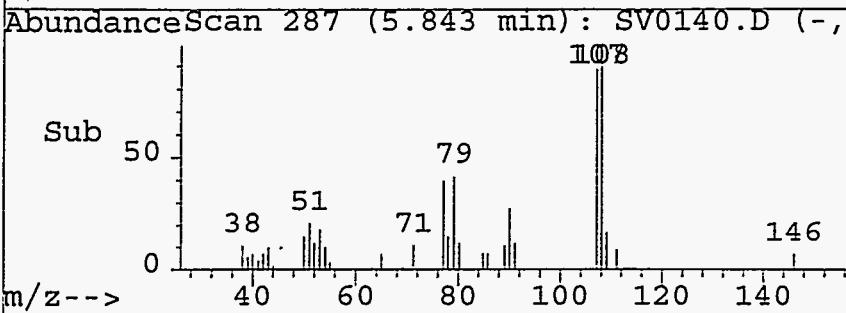
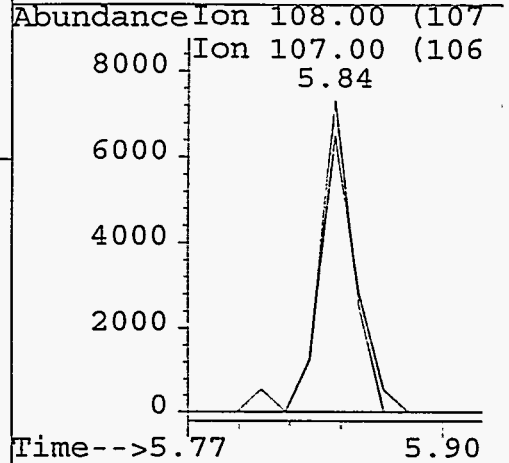
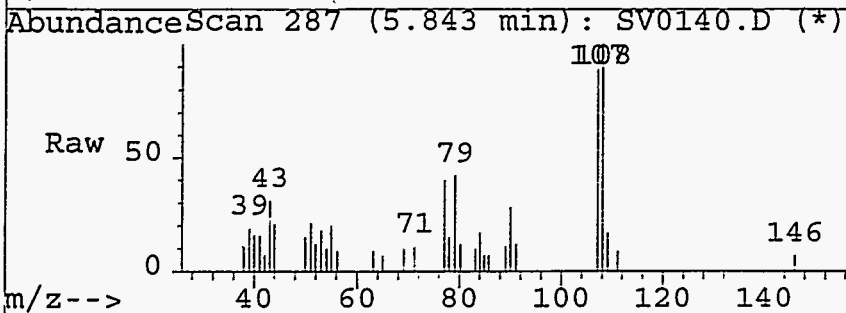
Method : C:\HPCHEM\1\METHODS\METCLP.M  
Title : Method 8270  
Last Update : Thu Jan 25 08:20:05 1996  
Response via : Single Level Calibration





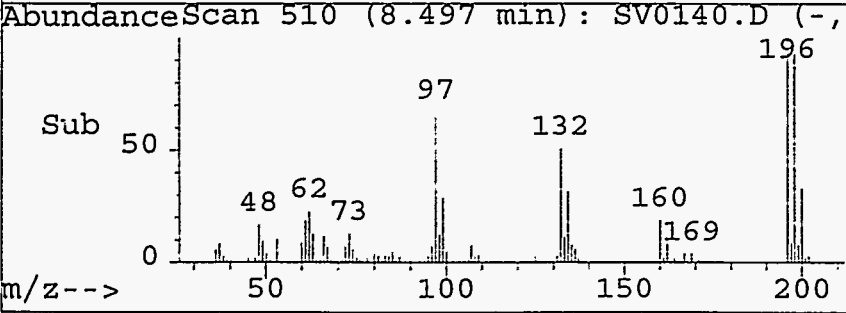
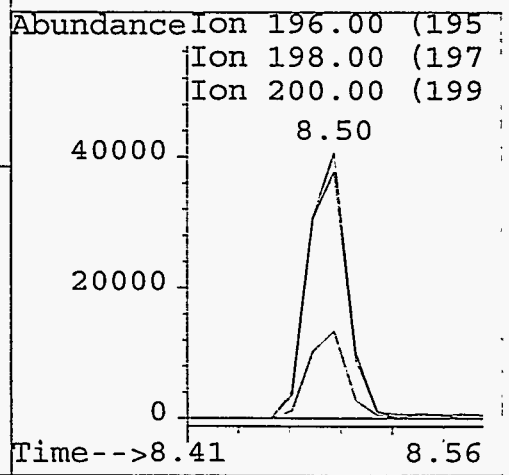
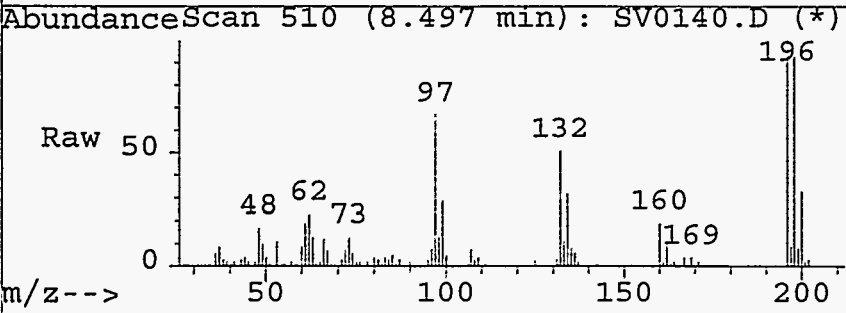
#6  
 2-Methylphenol  
 Concen: 8.95 ug/L  
 RT: 5.84 min Scan# 287  
 Delta R.T. -0.01 min  
 Lab File: SV0140.D  
 Acq: 24 Jan 96 6:42 pm

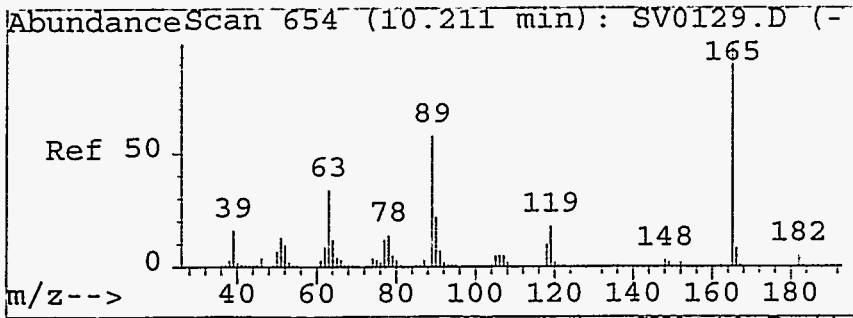
Tgt Ion	Ratio	Lower	Upper
108	100		
107	89.0	69.3	109.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0



#14  
 2,4,6-Trichlorophenol  
 Concen: 158.80 ug/L  
 RT: 8.50 min Scan# 510  
 Delta R.T. -0.01 min  
 Lab File: SV0140.D  
 Acq: 24 Jan 96 6:42 pm

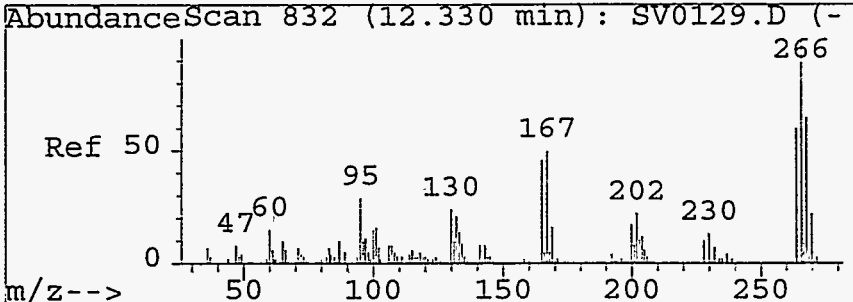
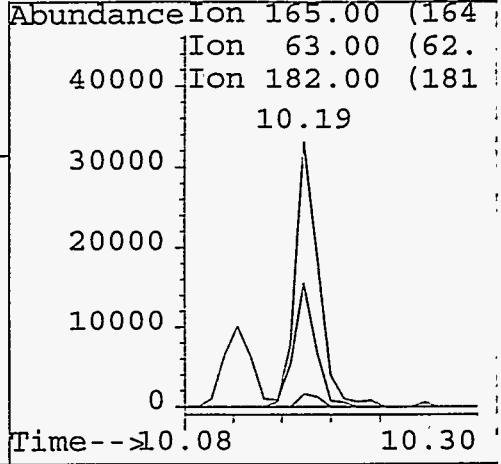
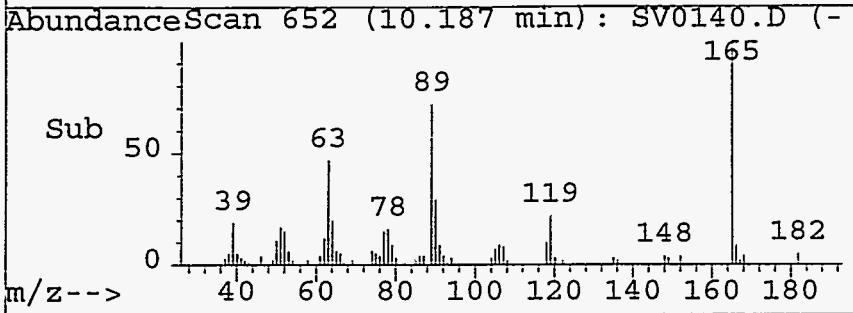
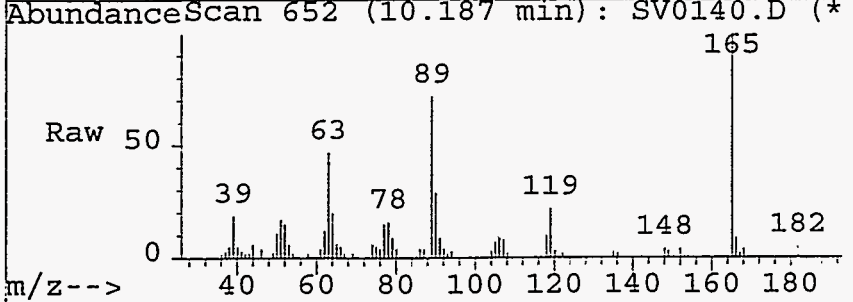
Tgt Ion	Ratio	Lower	Upper
196	100		
198	93.0	71.5	111.5
200	32.9	7.8	47.8
0	0.0	0.0	0.0





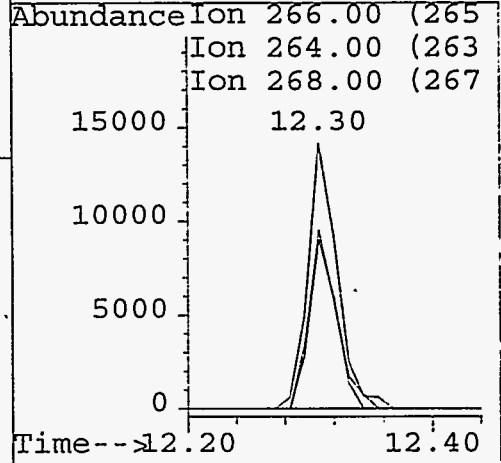
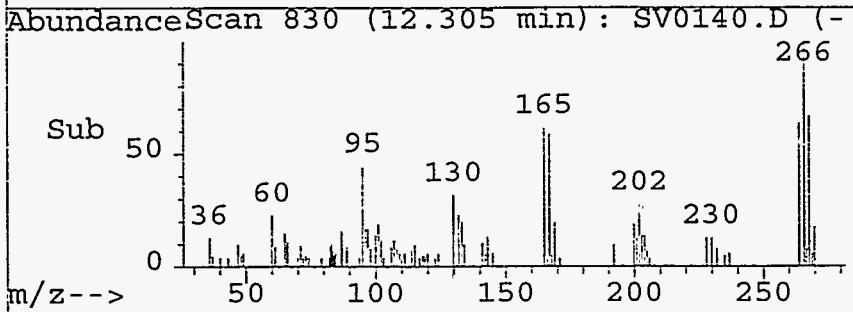
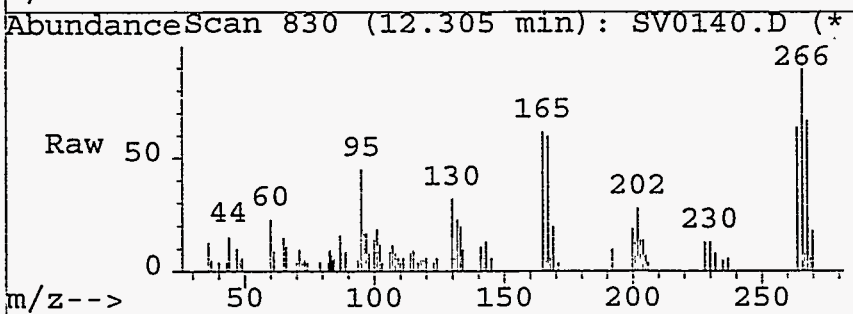
#17  
 2,4-Dinitrotoluene  
 Concen: 122.53 ug/L  
 RT: 10.19 min Scan# 652  
 Delta R.T. -0.02 min  
 Lab File: SV0140.D  
 Acq: 24 Jan 96 6:42 pm

Tgt Ion	Resp	Lower	Upper
165	47787		
63	46.9	25.9	65.9
182	4.9	0.0	24.6
0	0.0	0.0	0.0



#21  
 Pentachlorophenol  
 Concen: 118.06 ug/L  
 RT: 12.30 min Scan# 830  
 Delta R.T. -0.02 min  
 Lab File: SV0140.D  
 Acq: 24 Jan 96 6:42 pm

Tgt Ion	Resp	Lower	Upper
266	23338		
264	63.6	41.0	81.0
268	67.5	38.2	78.2
0	0.0	0.0	0.0



Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN2495\SV0133.D  
 Acq On : 24 Jan 96 2:32 pm  
 Sample : ECO-004-02A  
 Misc : SEMI TEST TCLP SOIL02A  
 Quant Time: Jan 25 9:50 1996

Vial: 12  
 Operator:  
 Inst : 5972 - 35  
 Multiplr: 2.00

Method : C:\HPCHEM\1\METHODS\METCLP.M  
 Title : Method 8270  
 Last Update : Thu Jan 25 08:20:05 1996  
 Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) 1,4-Dichlorobenzene-d4	5.62	152	315342	40.00	ug/L	0.00
9) Naphthalene-d8	7.05	136	1010542	40.00	ug/L	0.00
13) Acenaphthene-d10	9.81	164	538347	40.00	ug/L	0.00
19) Phenanthrene-d10	12.57	188	719077	40.00	ug/L	0.00
22) Chrysene-d12	17.87	240	441028	40.00	ug/L	0.00
24) Perylene-d12	20.96	264	441361	40.00	ug/L	-0.01

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recovery
3) 2-Fluorophenol	4.49	112	413126	83.46	ug/L	41.73%
4) Phenol-d5	5.27	99	478054	83.30	ug/L	41.65%
10) Nitrobenzene-d5	6.20	82	330408	80.75	ug/L	40.38%
16) 2-Fluorobiphenyl	8.64	172	580565	79.85	ug/L	79.85%
18) 2,4,6-Tribromophenol	11.27	330	114339	171.88	ug/L	85.94%
23) Terphenyl-d14	15.79	244	239960	49.48	ug/L	49.48%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
6) 2-Methylphenol	5.86	108	44903	11.63	ug/L	98
14) 2,4,6-Trichlorophenol	8.51	196	357187	210.00	ug/L	97
17) 2,4-Dinitrotoluene	10.20	165	363005	213.26	ug/L	91
21) Pentachlorophenol	12.32	266	160312	197.34	ug/L	95

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

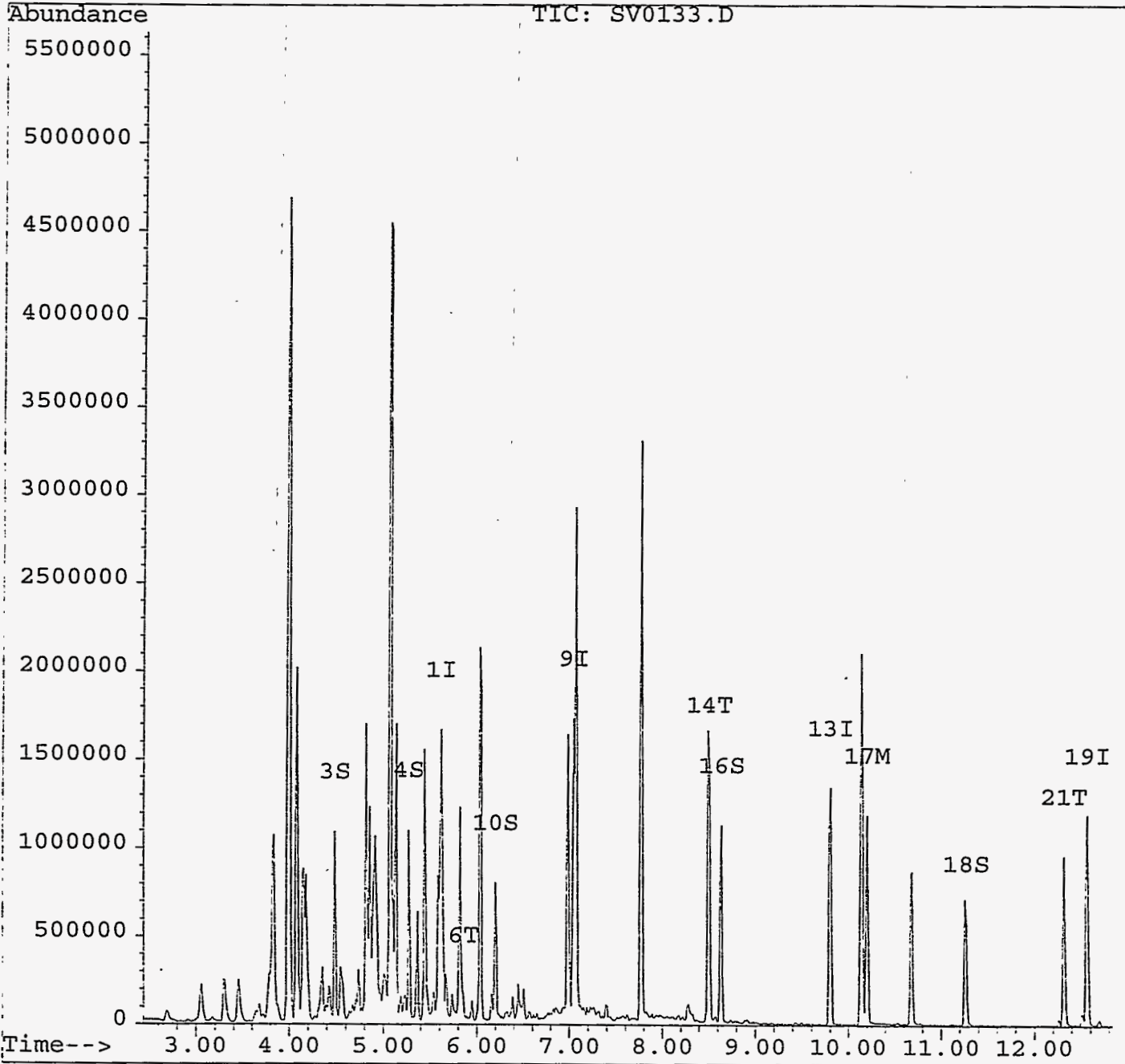


Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN2495\SV0133.D  
Acq On : 24 Jan 96 2:32 pm  
Sample : ECO-004-02A  
Misc : SEMI TEST TCLP SOIL02A  
Quant Time: Jan 25 9:50 1996

Vial: 12  
Operator:  
Inst : 5972 - 35  
Multiplr: 2.00

Method : C:\HPCHEM\1\METHODS\METCLP.M  
Title : Method 8270  
Last Update : Thu Jan 25 08:20:05 1996  
Response via : Single Level Calibration

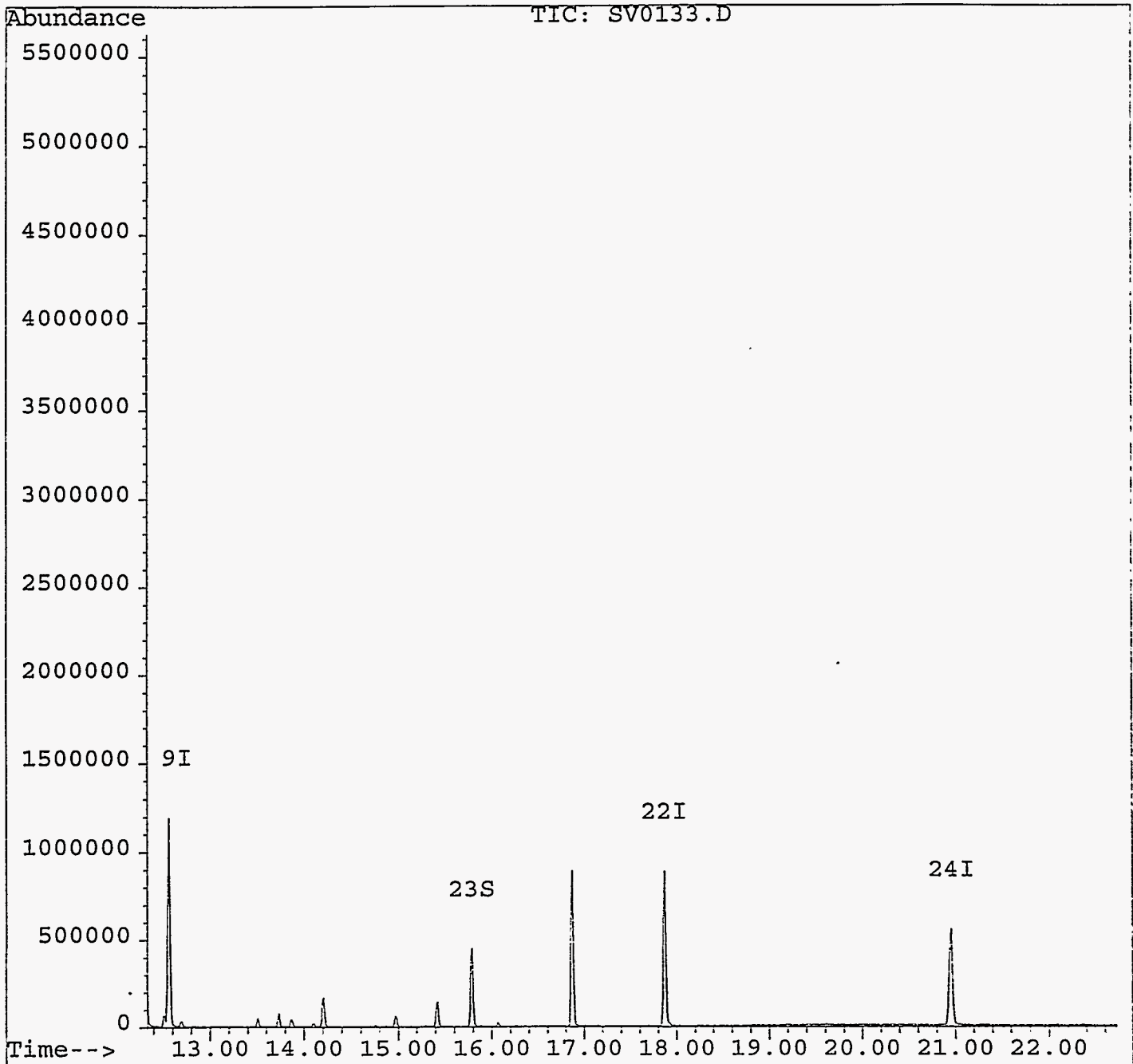


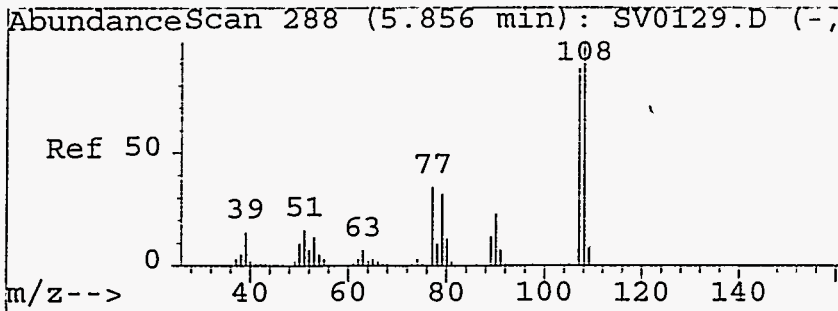
Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN2495\SV0133.D  
Acq On : 24 Jan 96 2:32 pm  
Sample : ECO-004-02A  
Misc : SEMI TEST TCLP SOIL02A  
Quant Time: Jan 25 9:50 1996

Vial: 12  
Operator:  
Inst : 5972 - 35  
Multiplr: 2.00

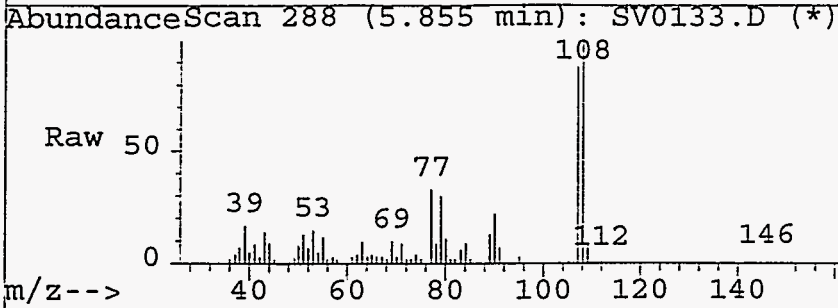
Method : C:\HPCHEM\1\METHODS\METCLP.M  
Title : Method 8270  
Last Update : Thu Jan 25 08:20:05 1996  
Response via : Single Level Calibration





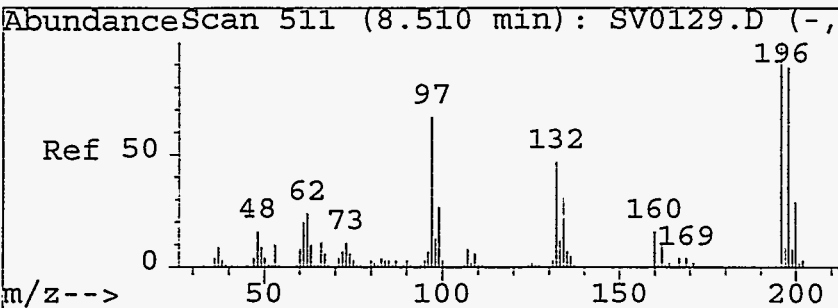
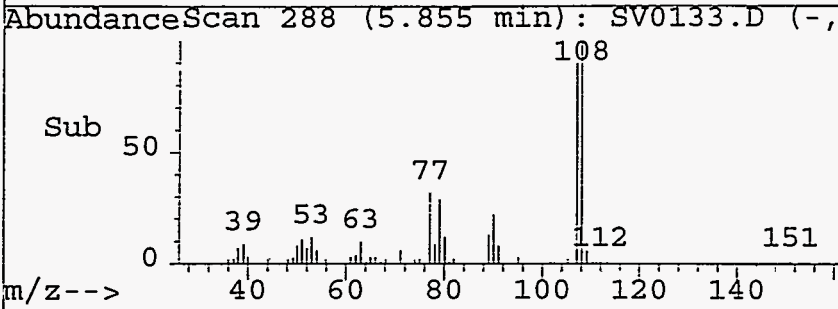
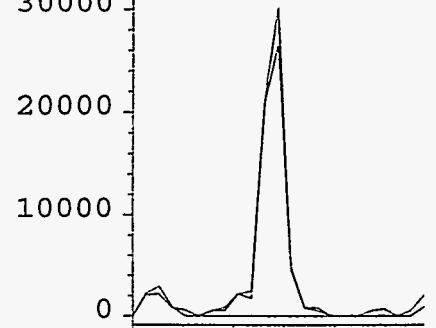
#6  
 2-Methylphenol  
 Concen: 11.63 ug/L  
 RT: 5.86 min Scan# 288  
 Delta R.T. -0.00 min  
 Lab File: SV0133.D  
 Acq: 24 Jan 96 2:32 pm

Tgt Ion	Resp	Lower	Upper
108	44903		
107	87.7	69.3	109.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0



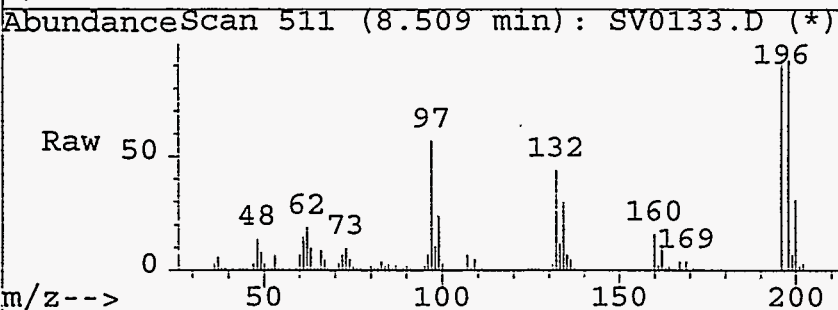
AbundanceIon 108.00 (107

Ion 107.00 (106



#14  
 2,4,6-Trichlorophenol  
 Concen: 210.00 ug/L  
 RT: 8.51 min Scan# 511  
 Delta R.T. -0.00 min  
 Lab File: SV0133.D  
 Acq: 24 Jan 96 2:32 pm

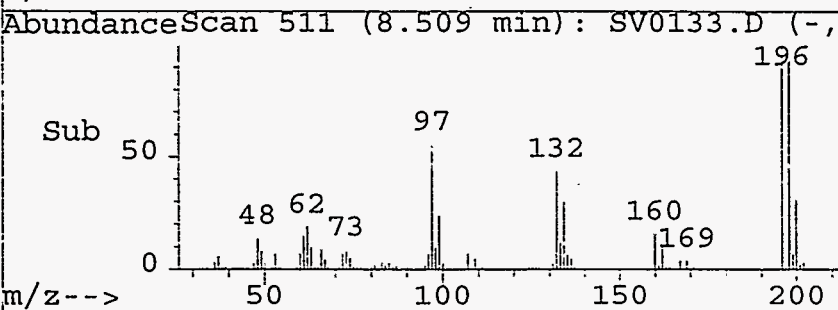
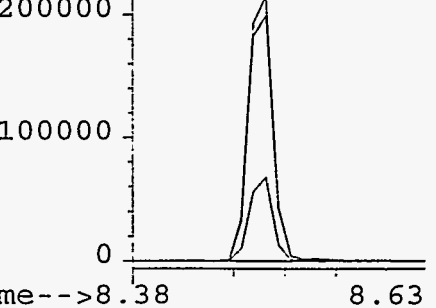
Tgt Ion	Resp	Lower	Upper
196	357187		
198	92.6	71.5	111.5
200	31.5	7.8	47.8
0	0.0	0.0	0.0

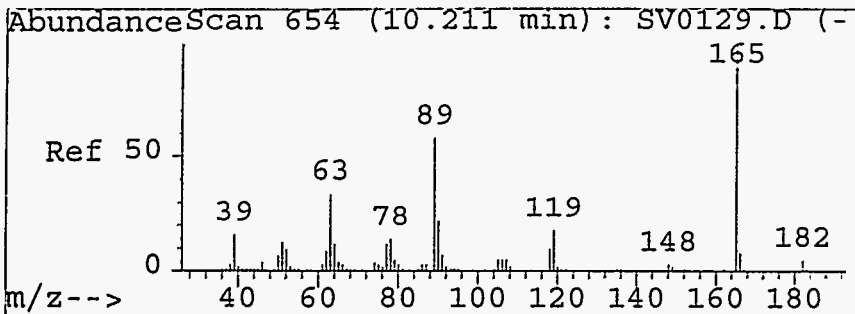


AbundanceIon 196.00 (195

Ion 198.00 (197

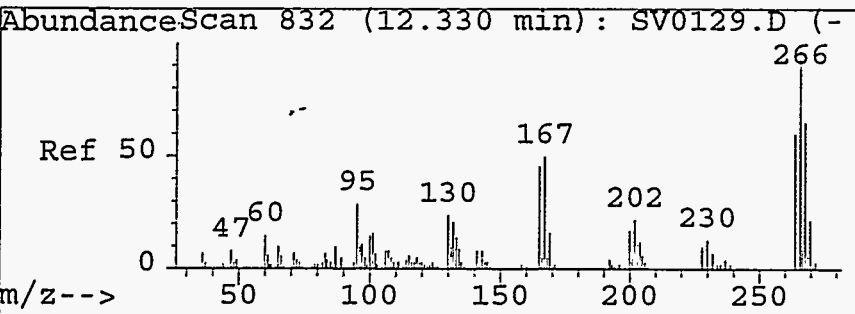
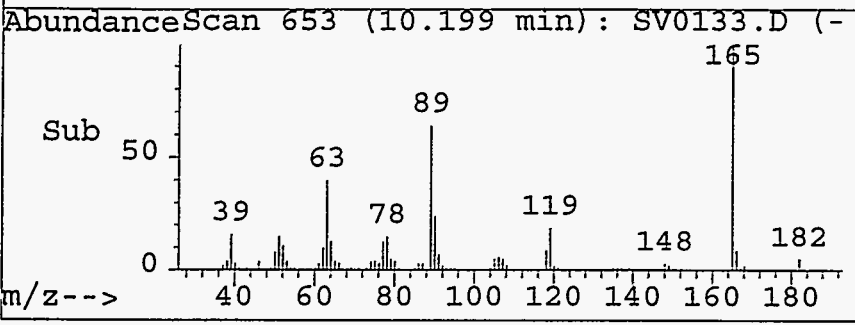
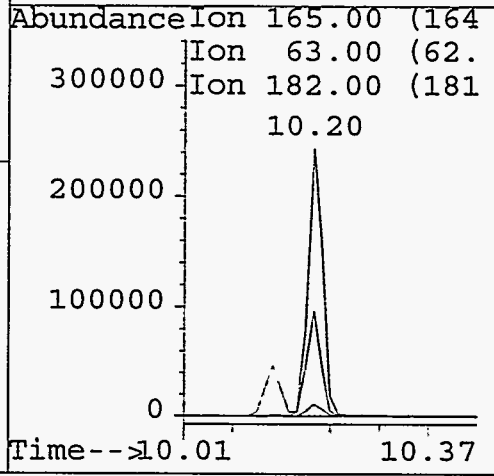
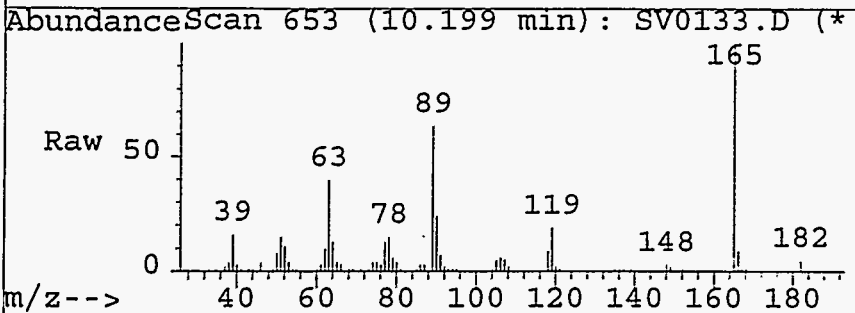
Ion 200.00 (199





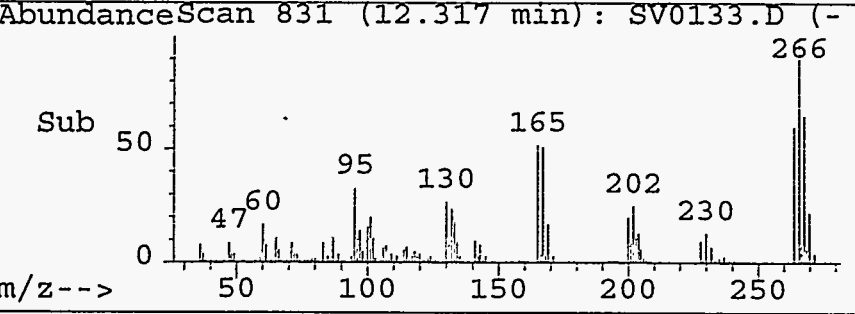
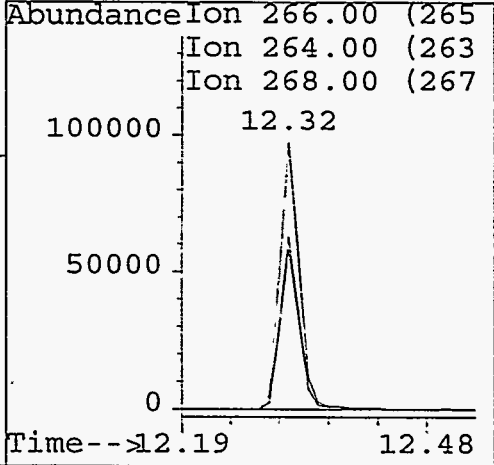
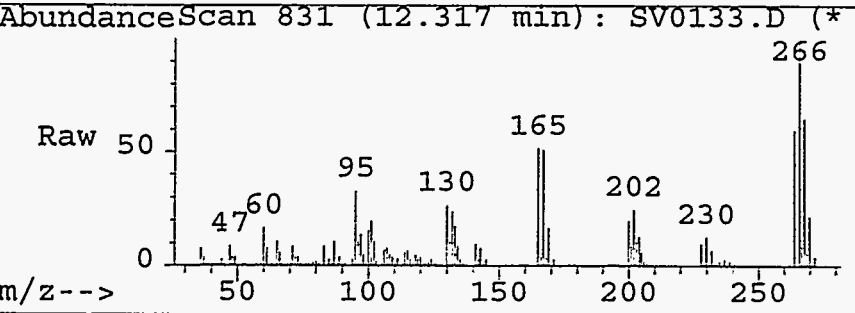
#17  
 2,4-Dinitrotoluene  
 Concen: 213.26 ug/L  
 RT: 10.20 min Scan# 653  
 Delta R.T. -0.01 min  
 Lab File: SV0133.D  
 Acq: 24 Jan 96 2:32 pm

Tgt Ion	Resp	Lower	Upper
165	100		
63	39.7	25.9	65.9
182	4.6	0.0	24.6
0	0.0	0.0	0.0



#21  
 Pentachlorophenol  
 Concen: 197.34 ug/L  
 RT: 12.32 min Scan# 831  
 Delta R.T. -0.01 min  
 Lab File: SV0133.D  
 Acq: 24 Jan 96 2:32 pm

Tgt Ion	Resp	Lower	Upper
266	100		
264	59.7	41.0	81.0
268	64.7	38.2	78.2
0	0.0	0.0	0.0



Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN2495\SV0134.D  
 Acq On : 24 Jan 96 3:10 pm  
 Sample : ECO-004-03A  
 Misc : SEMI TEST TCLP SOIL03A 1:5  
 Quant Time: Jan 25 9:54 1996

Vial: 13  
 Operator:  
 Inst : 5972 - 35  
 Multiplr: 10.00

Method : C:\HPCHEM\1\METHODS\METCLP.M  
 Title : Method 8270  
 Last Update : Thu Jan 25 08:20:05 1996  
 Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) 1,4-Dichlorobenzene-d4	5.62	152	378908	40.00	ug/L	0.00
9) Naphthalene-d8	7.05	136	1150335	40.00	ug/L	0.00
13) Acenaphthene-d10	9.80	164	576311	40.00	ug/L	-0.01
19) Phenanthrene-d10	12.56	188	793606	40.00	ug/L	-0.01
22) Chrysene-d12	17.86	240	489667	40.00	ug/L	-0.01
24) Perylene-d12	20.95	264	481053	40.00	ug/L	-0.02

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recovery
3) 2-Fluorophenol	4.49	112	50708	42.63	ug/L	21.31%
4) Phenol-d5	5.27	99	63172	45.80	ug/L	22.90%
10) Nitrobenzene-d5	6.20	82	57391	61.61	ug/L	30.80%
16) 2-Fluorobiphenyl	8.63	172	100614	64.63	ug/L	64.63%
18) 2,4,6-Tribromophenol	11.26	330	9404	66.03	ug/L	33.01%
23) Terphenyl-d14	15.78	244	13693	12.72	ug/L	12.72%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
6) 2-Methylphenol	5.84	108	8452	9.11	ug/L m	87
14) 2,4,6-Trichlorophenol	8.50	196	38774	106.47	ug/L	93
17) 2,4-Dinitrotoluene	10.20	165	37756	103.60	ug/L	88
21) Pentachlorophenol	12.32	266	12896	71.92	ug/L	94

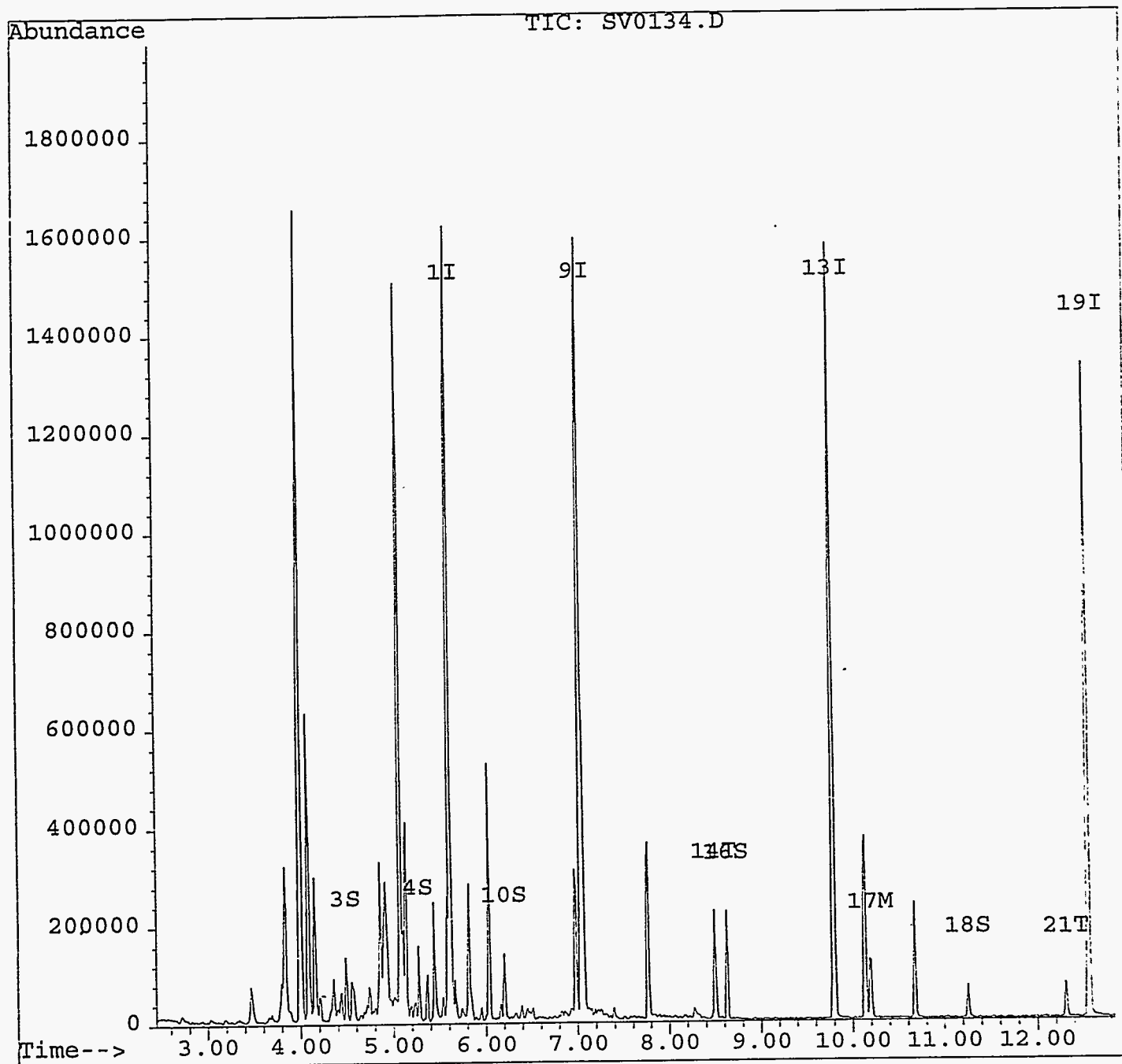
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN2495\SV0134.D  
Acq On : 24 Jan 96 3:10 pm  
Sample : ECO-004-03A  
Misc : SEMI TEST TCLP SOIL03A 1:5  
Quant Time: Jan 25 9:54 1996

Vial: 13  
Operator:  
Inst : 5972 - 35  
Multiplr: 10.00

Method : C:\HPCHEM\1\METHODS\METCLP.M  
Title : Method 8270  
Last Update : Thu Jan 25 08:20:05 1996  
Response via : Single Level Calibration

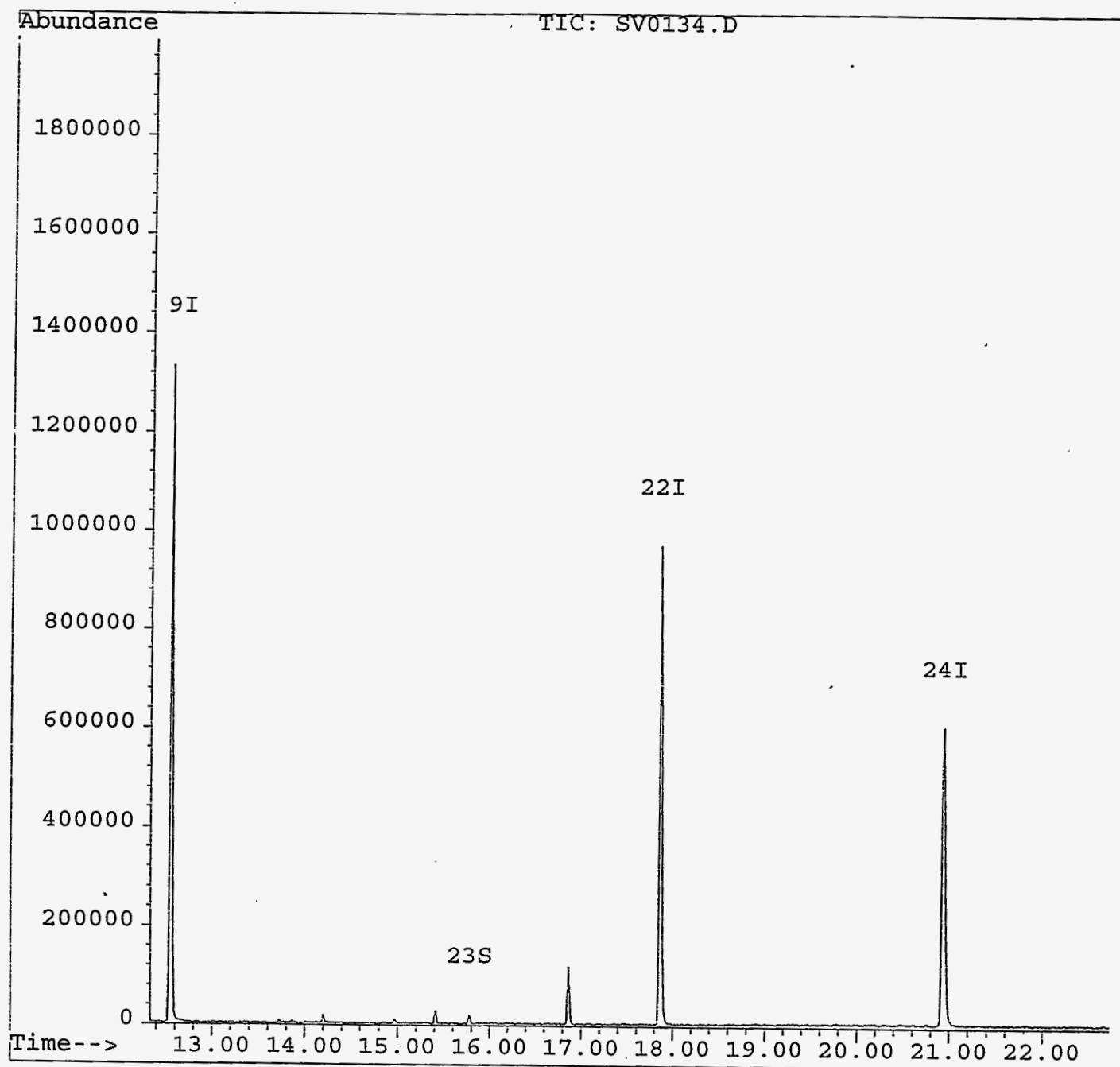


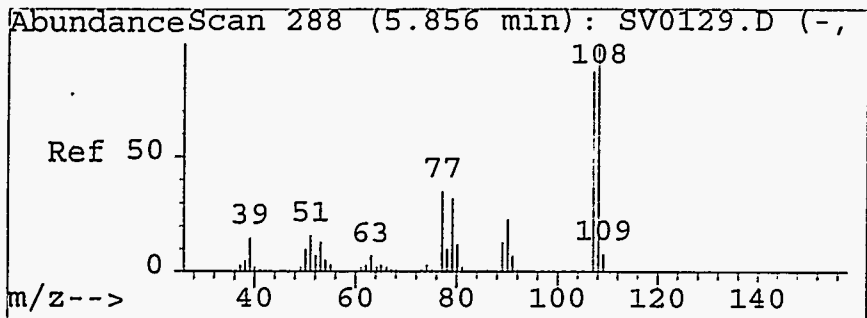
Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN2495\SV0134.D  
Acq On : 24 Jan 96 3:10 pm  
Sample : ECO-004-03A  
Misc : SEMI TEST TCLP SOIL03A 1:5  
Quant Time: Jan 25 9:54 1996

Vial: 13  
Operator:  
Inst : 5972 - 35  
Multiplr: 10.00

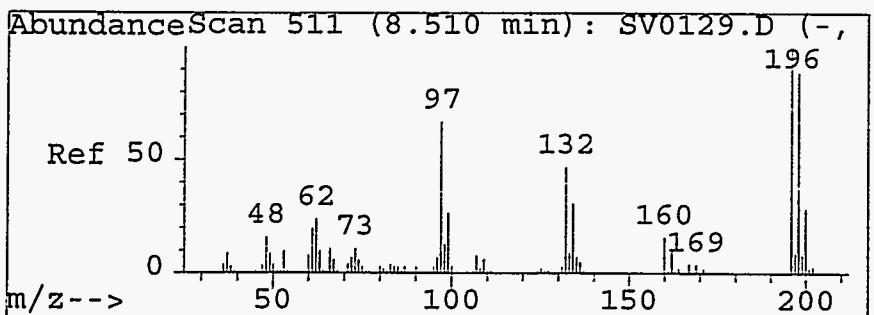
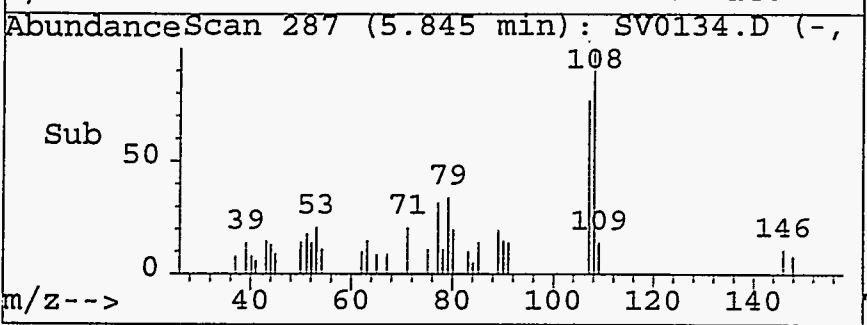
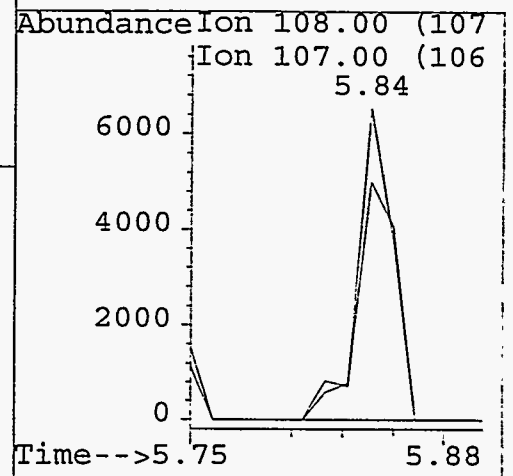
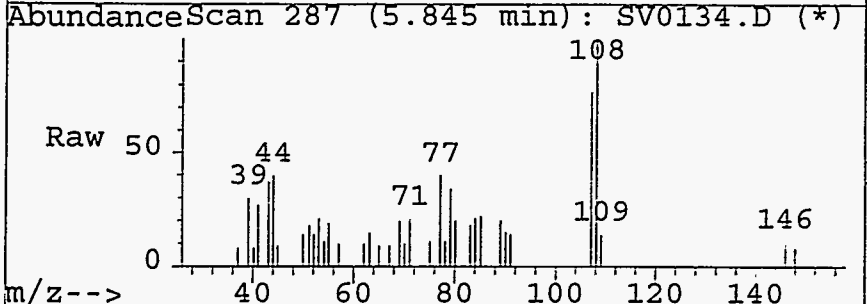
Method : C:\HPCHEM\1\METHODS\METCLP.M  
Title : Method 8270  
Last Update : Thu Jan 25 08:20:05 1996  
Response via : Single Level Calibration





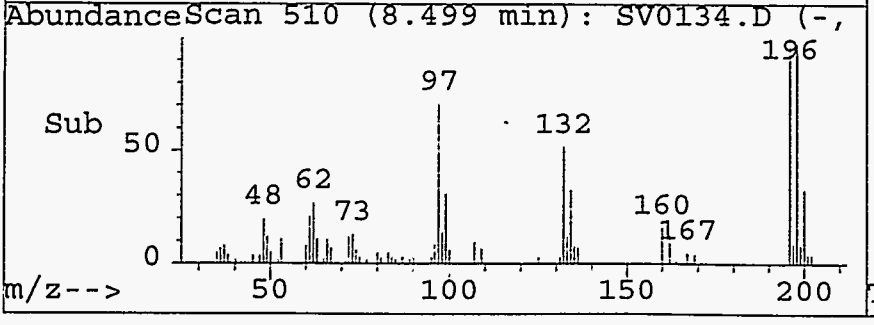
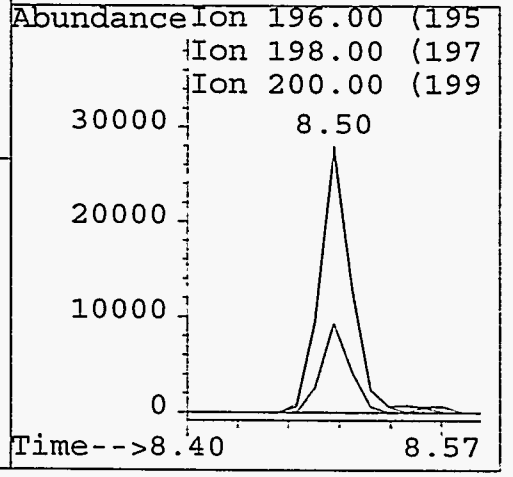
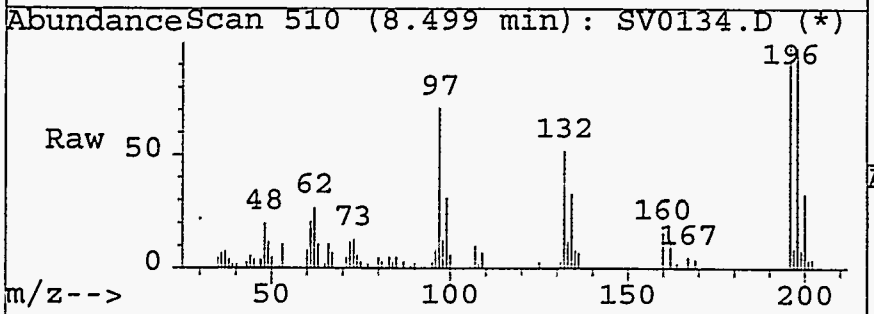
#6  
 2-Methylphenol  
 Concen: 9.11 ug/L m  
 RT: 5.84 min Scan# 287  
 Delta R.T. -0.01 min  
 Lab File: SV0134.D  
 Acq: 24 Jan 96 3:10 pm

Tgt Ion	Resp	Lower	Upper
108	100		
107	76.8	69.3	109.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0

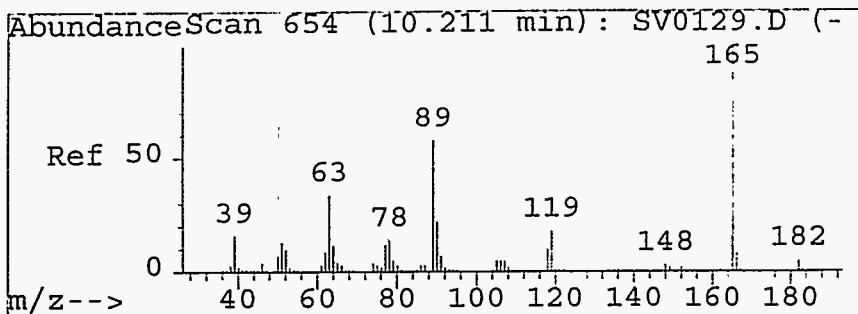


#14  
 2,4,6-Trichlorophenol  
 Concen: 106.47 ug/L  
 RT: 8.50 min Scan# 510  
 Delta R.T. -0.01 min  
 Lab File: SV0134.D  
 Acq: 24 Jan 96 3:10 pm

Tgt Ion	Resp	Lower	Upper
196	100		
198	97.6	71.5	111.5
200	33.4	7.8	47.8
0	0.0	0.0	0.0

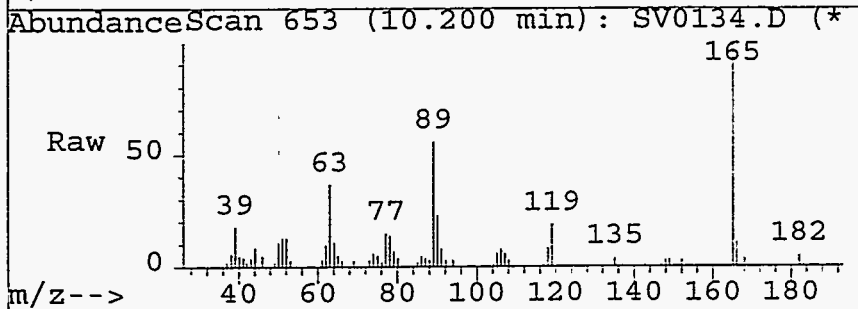




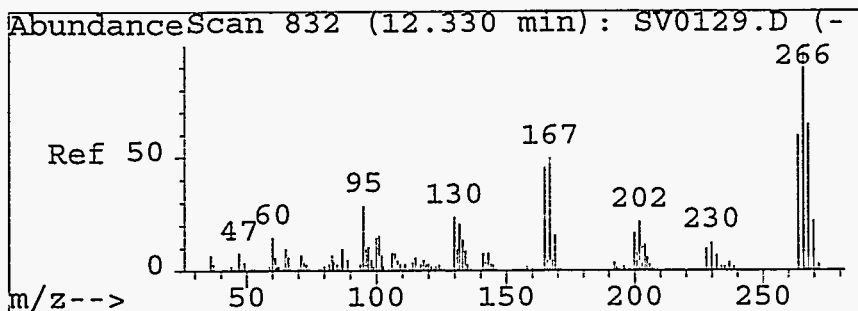
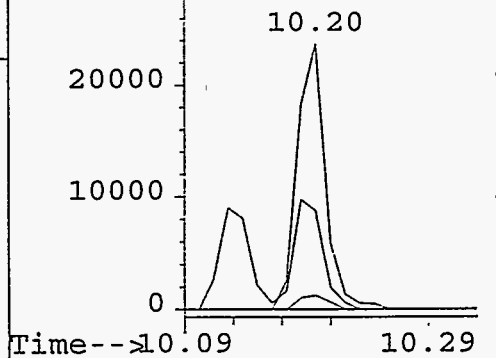
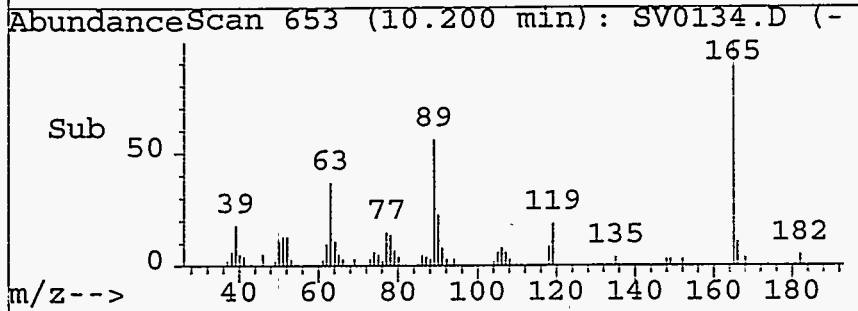


#17  
 2,4-Dinitrotoluene  
 Concen: 103.60 ug/L  
 RT: 10.20 min Scan# 653  
 Delta R.T. -0.01 min  
 Lab File: SV0134.D  
 Acq: 24 Jan 96 3:10 pm

Tgt Ion	Resp	Lower	Upper
165	37756		
63	37.2	25.9	65.9
182	5.3	0.0	24.6
0	0.0	0.0	0.0

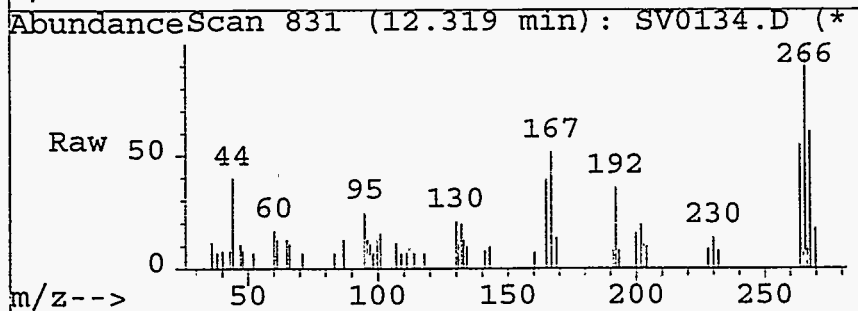


Abundance	Ion	Retention
30000	165.00	10.20
	63.00	62.
	182.00	181

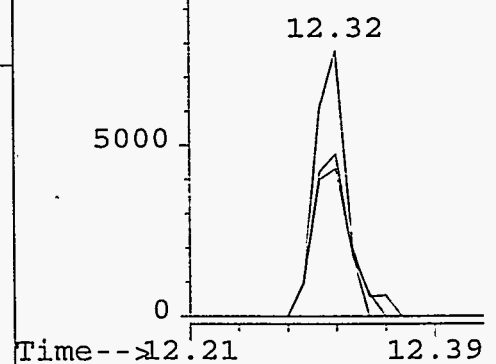
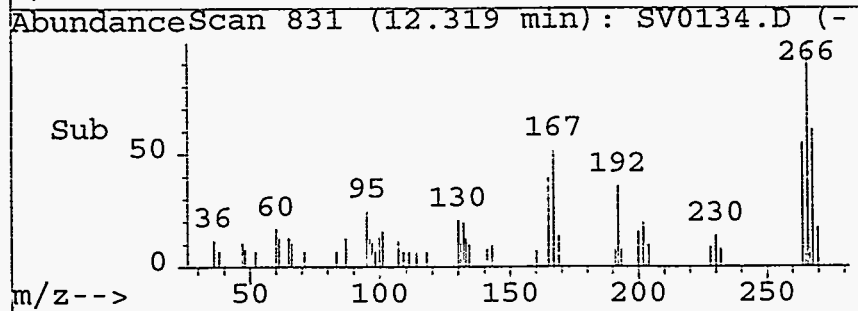


#21  
 Pentachlorophenol  
 Concen: 71.92 ug/L  
 RT: 12.32 min Scan# 831  
 Delta R.T. -0.01 min  
 Lab File: SV0134.D  
 Acq: 24 Jan 96 3:10 pm

Tgt Ion	Resp	Lower	Upper
266	12896		
264	55.3	41.0	81.0
268	60.9	38.2	78.2
0	0.0	0.0	0.0



Abundance	Ion	Retention
10000	266.00	12.32
	264.00	263
	268.00	267

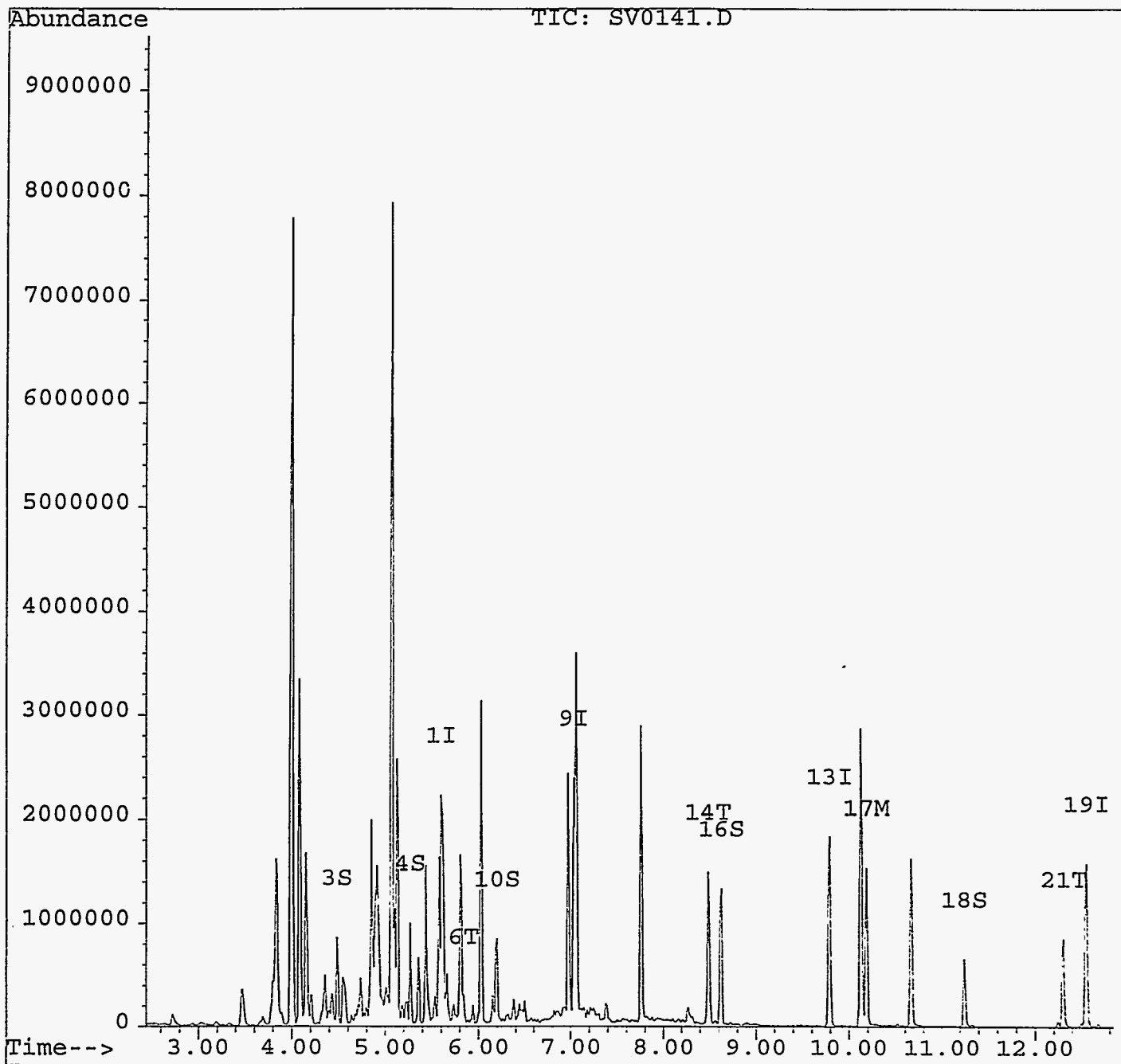


Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN2495\SV0141.D  
Acq On : 24 Jan 96 7:17 pm  
Sample : ECO-004-03A  
Misc : SEMI TEST TCLP SOIL03A  
Quant Time: Jan 25 9:54 1996

Vial: 20  
Operator:  
Inst : 5972 - 35  
Multiplr: 2.00

Method : C:\HPCHEM\1\METHODS\METCLP.M  
Title : Method 8270  
Last Update : Thu Jan 25 08:20:05 1996  
Response via : Single Level Calibration



Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN2495\SV0141.D  
 Acq On : 24 Jan 96 7:17 pm  
 Sample : ECO-004-03A  
 Misc : SEMI TEST TCLP SOIL03A  
 Quant Time: Jan 25 9:54 1996

Vial: 20  
 Operator:  
 Inst : 5972 - 35  
 Multiplr: 2.00

Method : C:\HPCHEM\1\METHODS\METCLP.M  
 Title : Method 8270  
 Last Update : Thu Jan 25 08:20:05 1996  
 Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.61	152	457459	40.00	ug/L	-0.01
9) Naphthalene-d8	7.03	136	1419160	40.00	ug/L	-0.01
13) Acenaphthene-d10	9.79	164	736041	40.00	ug/L	-0.01
19) Phenanthrene-d10	12.56	188	1051360	40.00	ug/L	-0.01
22) Chrysene-d12	17.86	240	693980	40.00	ug/L	-0.01
24) Perylene-d12	20.93	264	720483	40.00	ug/L	-0.04

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recovery
3) 2-Fluorophenol	4.49	112	339678	47.30	ug/L	23.65%
4) Phenol-d5	5.27	99	417680	50.17	ug/L	25.08%
10) Nitrobenzene-d5	6.20	82	404785	70.45	ug/L	35.22%
16) 2-Fluorobiphenyl	8.63	172	673803	67.78	ug/L	67.78%
18) 2,4,6-Tribromophenol	11.25	330	89536	98.45	ug/L	49.22%
23) Terphenyl-d14	15.77	244	110197	14.44	ug/L	14.44%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
6) 2-Methylphenol	5.84	108	64541	11.52	ug/L	95
14) 2,4,6-Trichlorophenol	8.49	196	292971	125.98	ug/L	99
17) 2,4-Dinitrotoluene	10.19	165	460313	197.79	ug/L	92
21) Pentachlorophenol	12.31	266	137966	116.16	ug/L	95

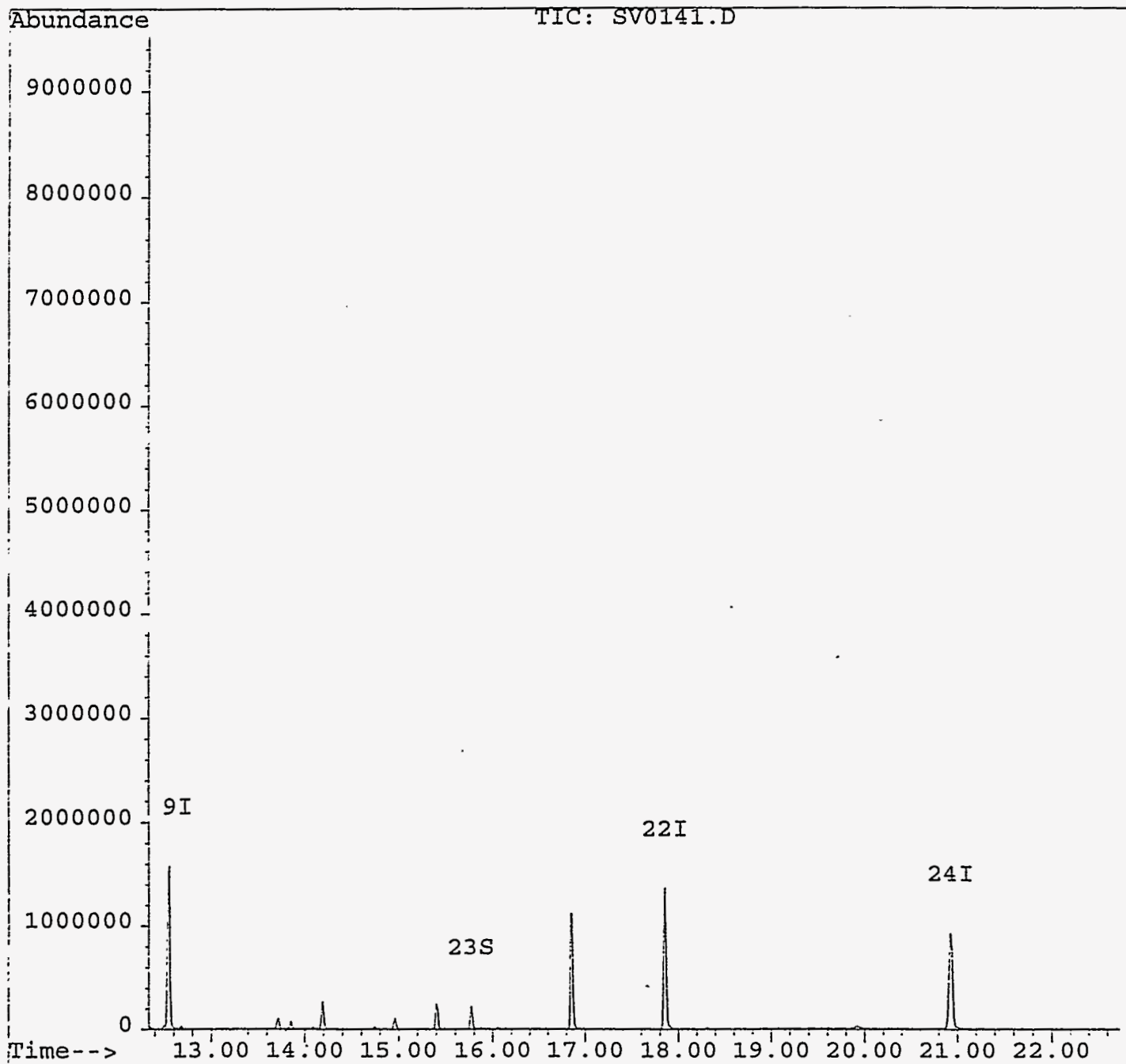
(#) = qualifier out of range (m) = manual integration

Quantitation Report

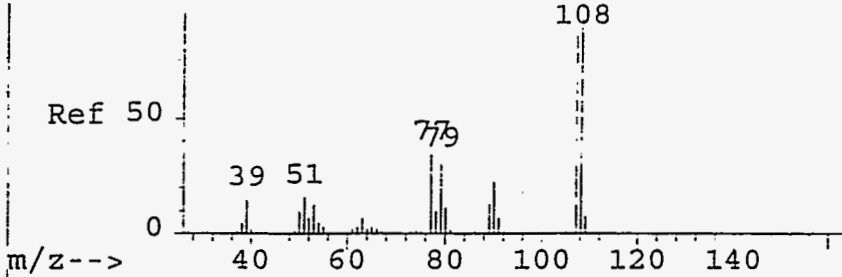
Data File : C:\HPCHEM\1\DATA\JAN2495\SV0141.D  
Acq On : 24 Jan 96 7:17 pm  
Sample : ECO-004-03A  
Misc : SEMI TEST TCLP SOIL03A  
Quant Time: Jan 25 9:54 1996

Vial: 20  
Operator:  
Inst : 5972 - 35  
Multiplr: 2.00

Method : C:\HPCHEM\1\METHODS\METCLP.M  
Title : Method 8270  
Last Update : Thu Jan 25 08:20:05 1996  
Response via : Single Level Calibration



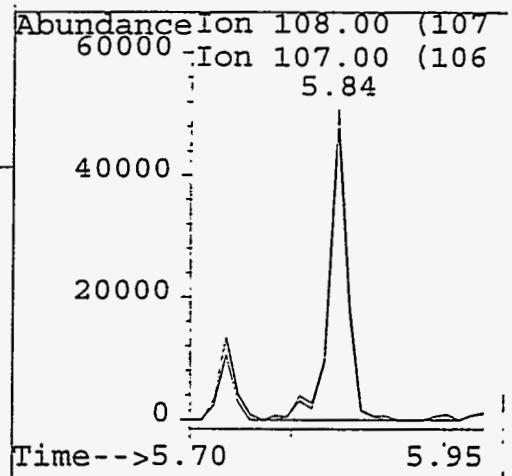
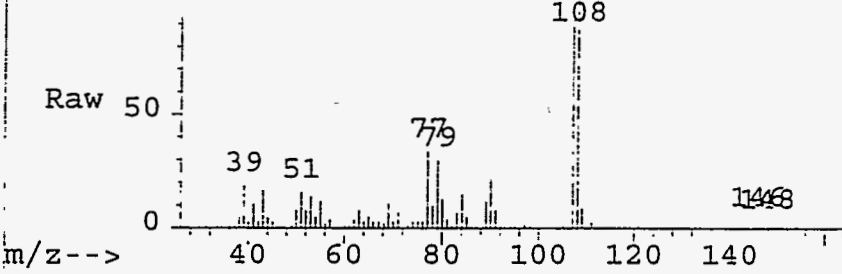
AbundanceScan 288 (5.856 min): SV0129.D (-, #6



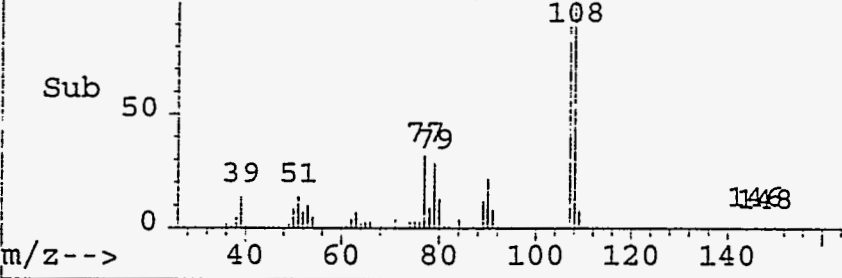
2-Methylphenol  
Concen: 11.52 ug/L  
RT: 5.84 min Scan# 287  
Delta R.T. -0.01 min  
Lab File: SV0141.D  
Acq: 24 Jan 96 7:17 pm

Tgt Ion	Resp	Lower	Upper
108	64541		
107	93.6	69.3	109.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0

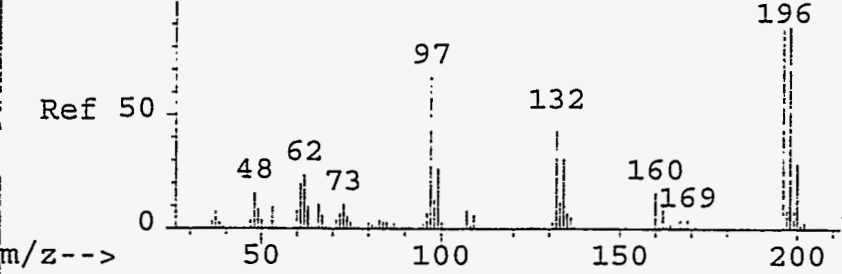
AbundanceScan 287 (5.844 min): SV0141.D (\*)



AbundanceScan 287 (5.844 min): SV0141.D (-, Sub



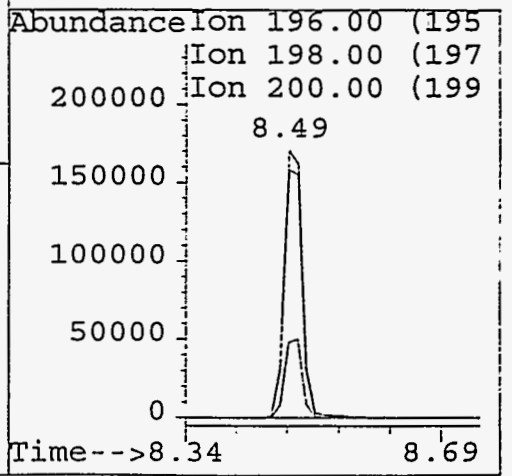
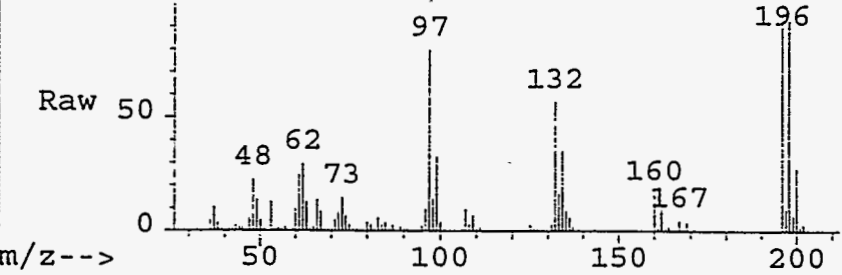
AbundanceScan 511 (8.510 min): SV0129.D (-, #14



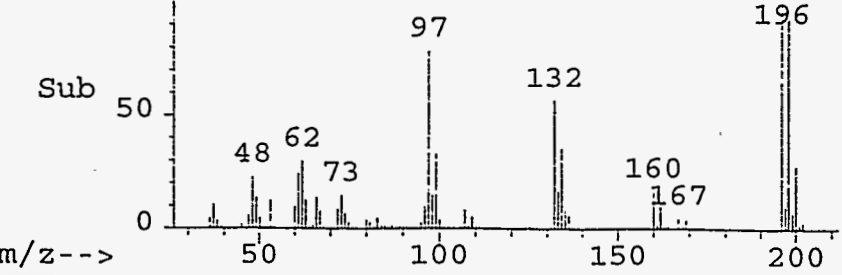
2,4,6-Trichlorophenol  
Concen: 125.98 ug/L  
RT: 8.49 min Scan# 509  
Delta R.T. -0.02 min  
Lab File: SV0141.D  
Acq: 24 Jan 96 7:17 pm

Tgt Ion	Resp	Lower	Upper
196	292971		
198	92.7	71.5	111.5
200	28.2	7.8	47.8
0	0.0	0.0	0.0

AbundanceScan 509 (8.486 min): SV0141.D (\*)



AbundanceScan 509 (8.486 min): SV0141.D (-, Sub



Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN2495\SV0135.D  
 Acq On : 24 Jan 96 3:44 pm  
 Sample : ECO-004-04A  
 Misc : SEMI TEST TCLP SOIL04A 1:5  
 Quant Time: Jan 25 9:32 1996

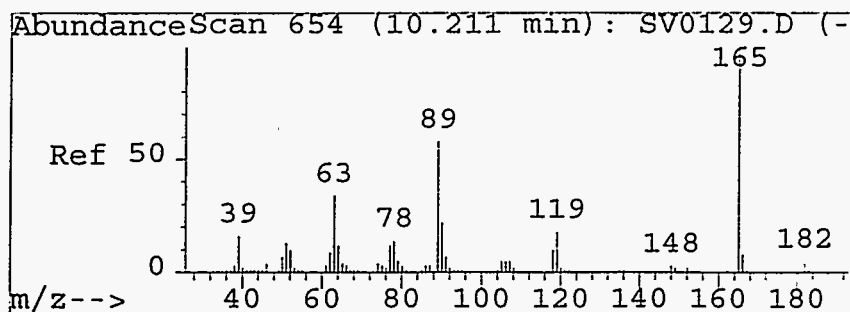
Vial: 14  
 Operator:  
 Inst : 5972 - 35  
 Multiplr: 10.00

Method : C:\HPCHEM\1\METHODS\METCLP.M  
 Title : Method 8270  
 Last Update : Thu Jan 25 08:20:05 1996  
 Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) 1,4-Dichlorobenzene-d4	5.62	152	376369	40.00	ug/L	0.00
9) Naphthalene-d8	7.04	136	1201556	40.00	ug/L	0.00
13) Acenaphthene-d10	9.81	164	621286	40.00	ug/L	0.00
19) Phenanthrene-d10	12.57	188	829413	40.00	ug/L	0.00
22) Chrysene-d12	17.87	240	486413	40.00	ug/L	0.00
24) Perylene-d12	20.96	264	508104	40.00	ug/L	-0.01

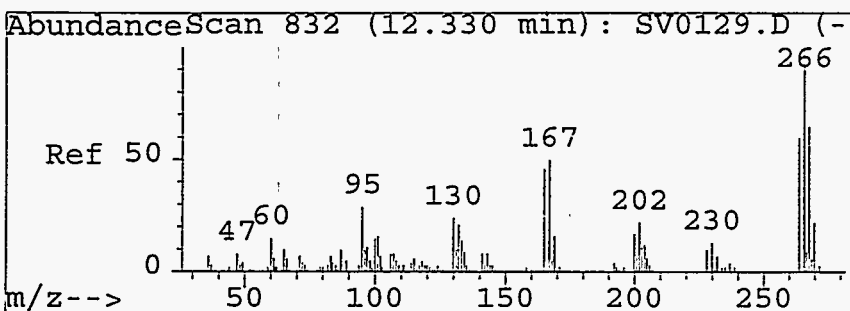
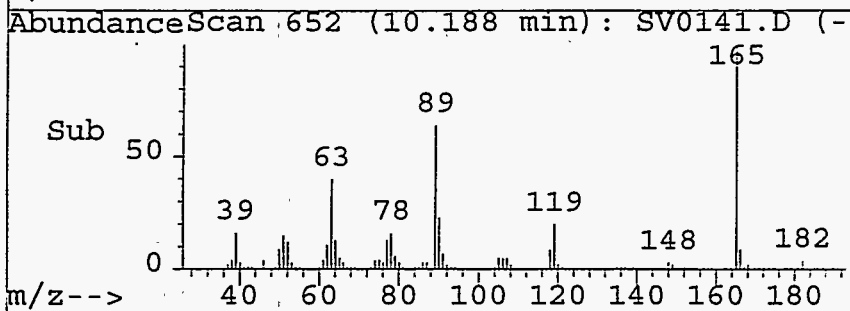
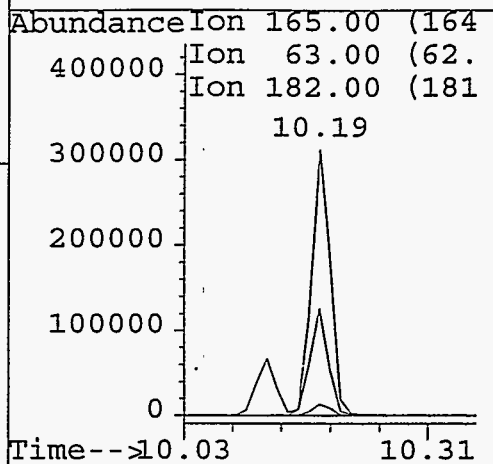
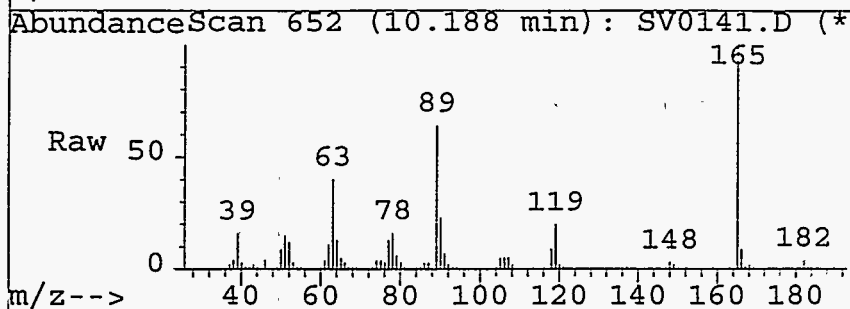
System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recovery
3) 2-Fluorophenol	4.47	112	79852	67.58	ug/L	33.79%
4) Phenol-d5	5.27	99	98936	72.22	ug/L	36.11%
10) Nitrobenzene-d5	6.20	82	63886	65.66	ug/L	32.83%
16) 2-Fluorobiphenyl	8.64	172	124596	74.24	ug/L	74.24%
18) 2,4,6-Tribromophenol	11.27	330	18250	118.86	ug/L	59.43%
23) Terphenyl-d14	15.79	244	55515	51.90	ug/L	51.90%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
5) 1,4-Dichlorobenzene	5.63	146	77228	68.08	ug/L	94
6) 2-Methylphenol	5.84	108	60055	65.15	ug/L	93
7) 3&4-Methylphenol	5.99	108	57579	59.72	ug/L m	100
14) 2,4,6-Trichlorophenol	8.51	196	126056	321.10	ug/L	98
17) 2,4-Dinitrotoluene	10.20	165	92907	236.47	ug/L	93
21) Pentachlorophenol	12.32	266	15388	82.11	ug/L	91



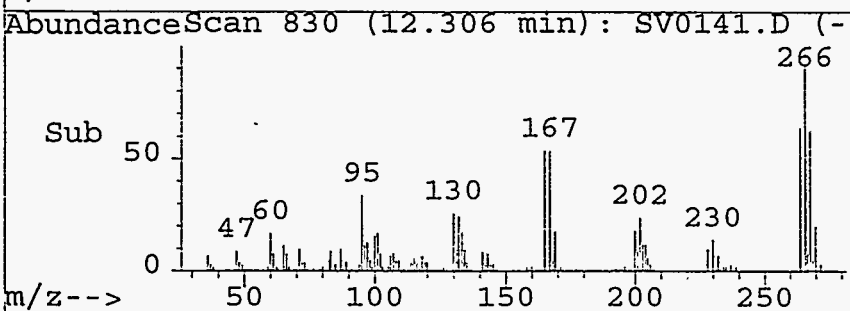
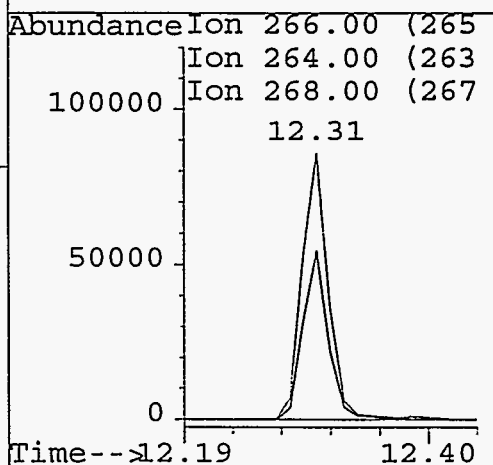
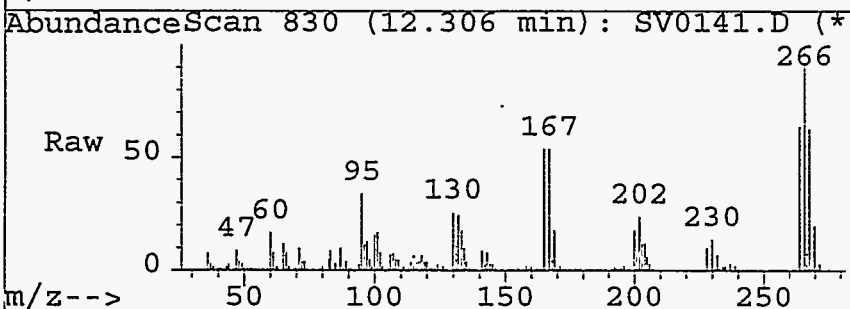
#17  
 2,4-Dinitrotoluene  
 Concen: 197.79 ug/L  
 RT: 10.19 min Scan# 652  
 Delta R.T. -0.02 min  
 Lab File: SV0141.D  
 Acq: 24 Jan 96 7:17 pm

Tgt Ion	Resp	Lower	Upper
165	460313		
63	40.3	25.9	65.9
182	4.3	0.0	24.6
0	0.0	0.0	0.0



#21  
 Pentachlorophenol  
 Concen: 116.16 ug/L  
 RT: 12.31 min Scan# 830  
 Delta R.T. -0.02 min  
 Lab File: SV0141.D  
 Acq: 24 Jan 96 7:17 pm

Tgt Ion	Resp	Lower	Upper
266	137966		
264	63.6	41.0	81.0
268	63.0	38.2	78.2
0	0.0	0.0	0.0

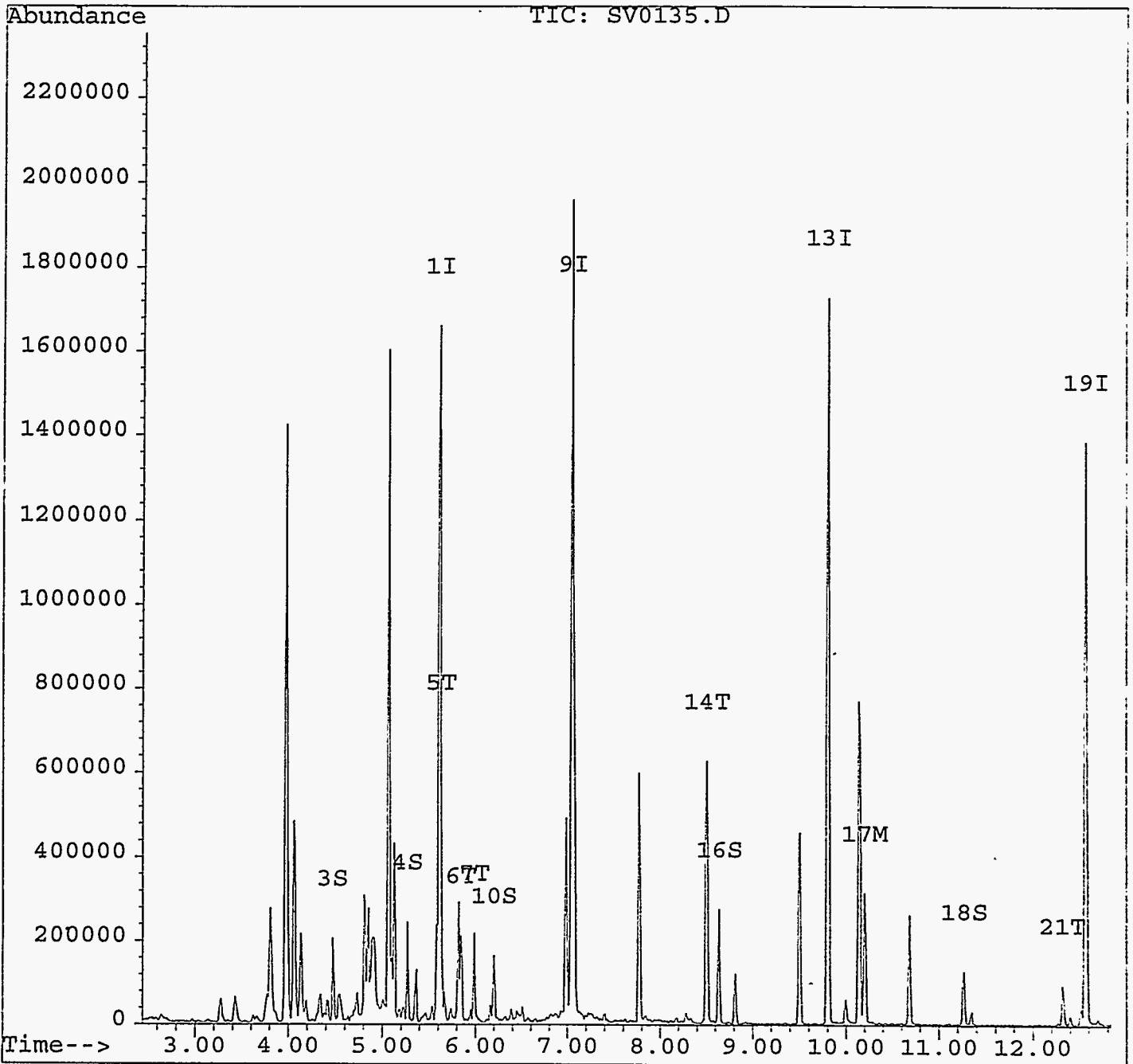


Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN2495\SV0135.D  
Acq On : 24 Jan 96 3:44 pm  
Sample : ECO-004-04A  
Misc : SEMI TEST TCLP SOIL04A 1:5  
Quant Time: Jan 25 9:32 1996

Vial: 14  
Operator:  
Inst : 5972 - 35  
Multiplr: 10.00

Method : C:\HPCHEM\1\METHODS\METCLP.M  
Title : Method 8270  
Last Update : Thu Jan 25 08:20:05 1996  
Response via : Single Level Calibration



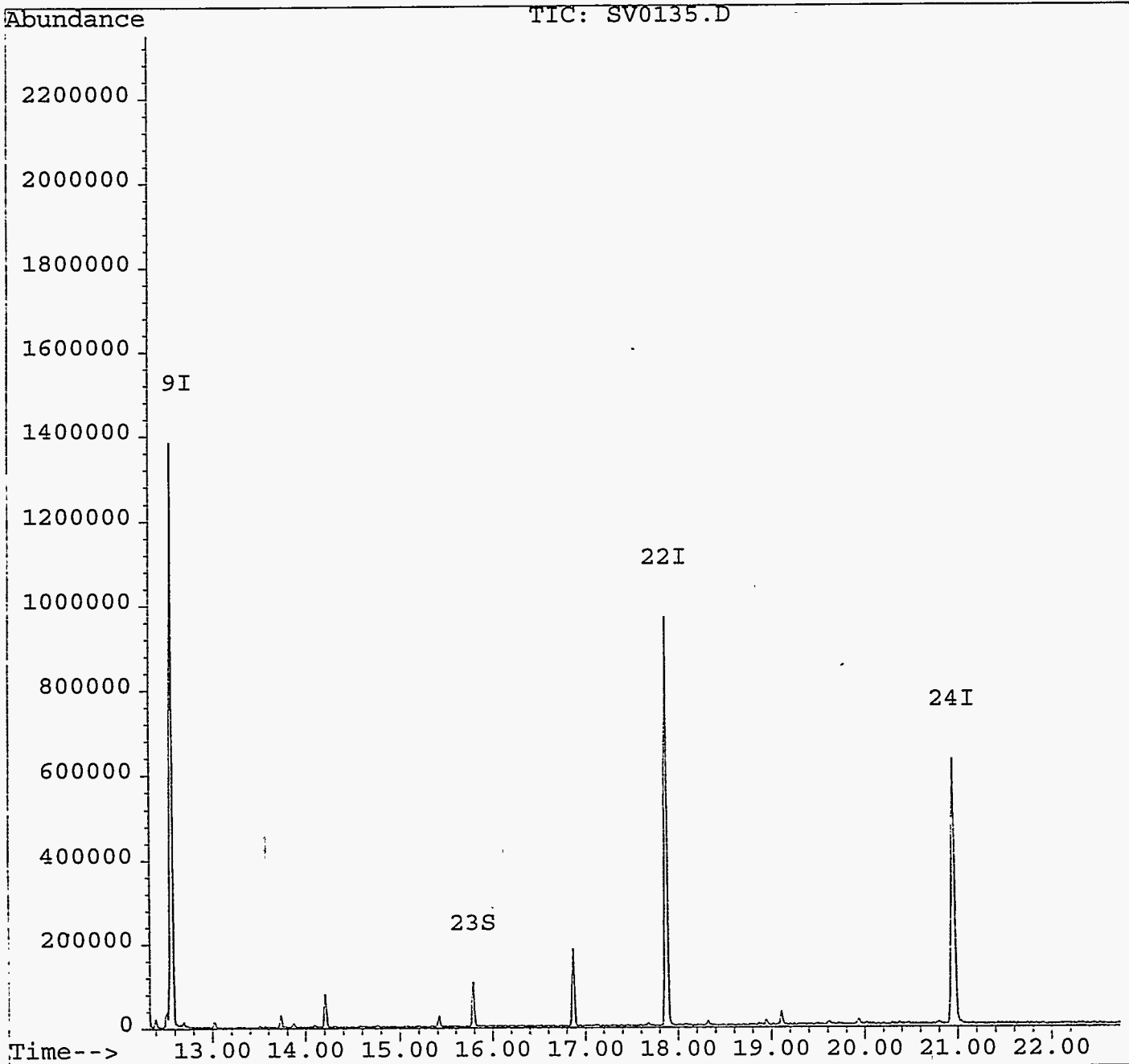


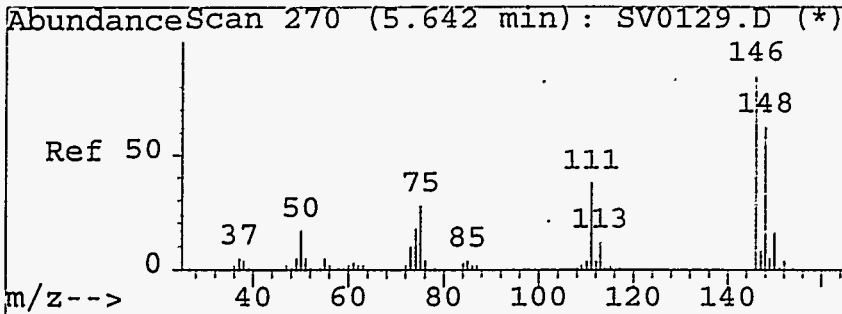
Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN2495\SV0135.D  
Acq On : 24 Jan 96 3:44 pm  
Sample : ECO-004-04A  
Misc : SEMI TEST TCLP SOIL04A 1:5  
Quant Time: Jan 25 9:32 1996

Vial: 14  
Operator:  
Inst : 5972 - 35  
Multiplr: 10.00

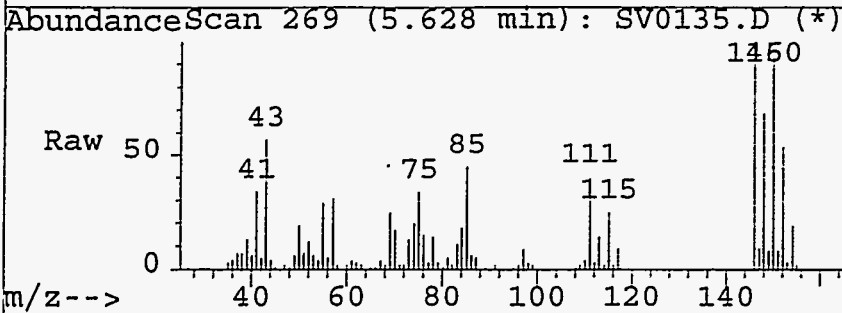
Method : C:\HPCHEM\1\METHODS\METCLP.M  
Title : Method 8270  
Last Update : Thu Jan 25 08:20:05 1996  
Response via : Single Level Calibration



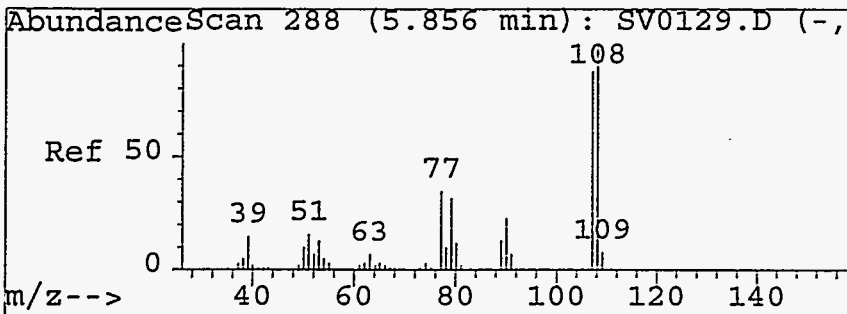
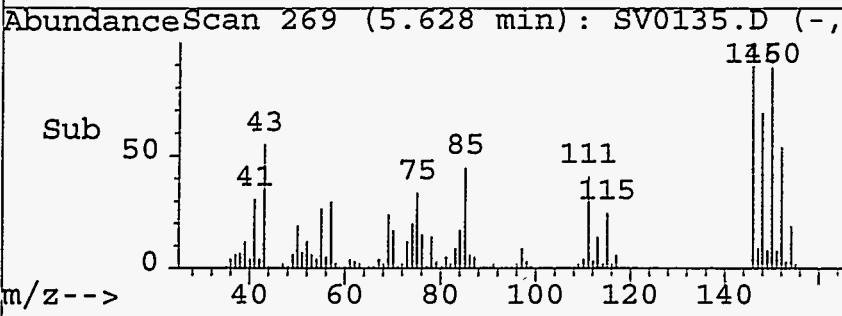
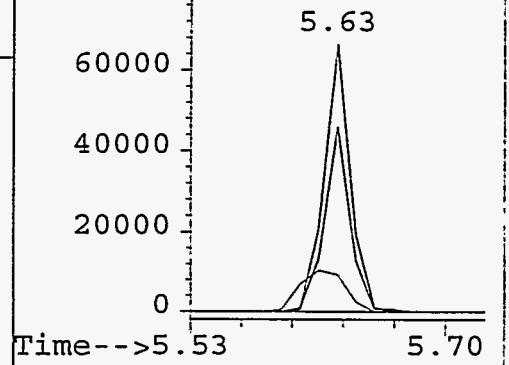


#5  
 1,4-Dichlorobenzene  
 Concen: 68.08 ug/L  
 RT: 5.63 min Scan# 269  
 Delta R.T. -0.01 min  
 Lab File: SV0135.D  
 Acq: 24 Jan 96 3:44 pm

Tgt Ion	Resp	Lower	Upper
146	100		
148	69.4	43.5	83.5
113	14.0	0.0	34.6
0	0.0	0.0	0.0

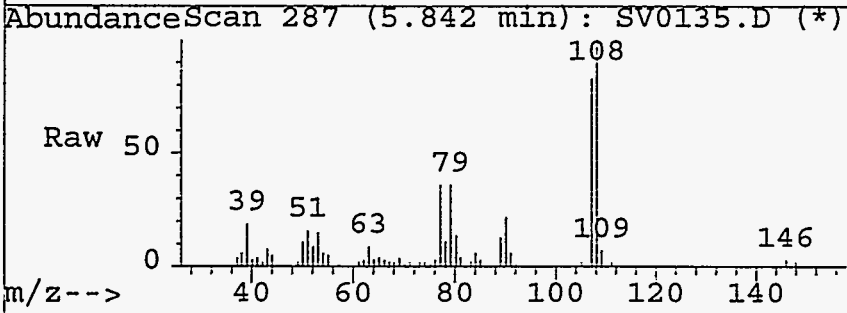


Abundance	Ion	Time
80000	146.00	(145)
	148.00	(147)
	113.00	(112)

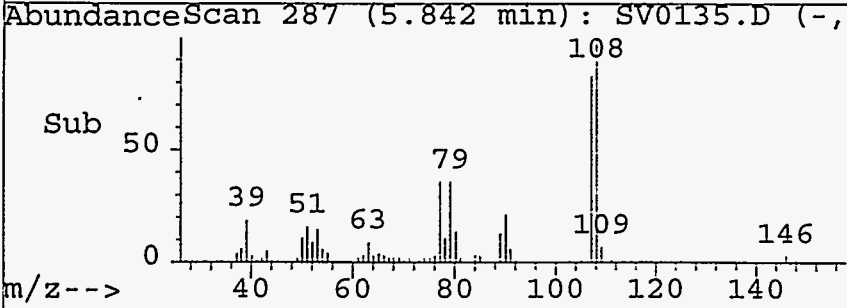
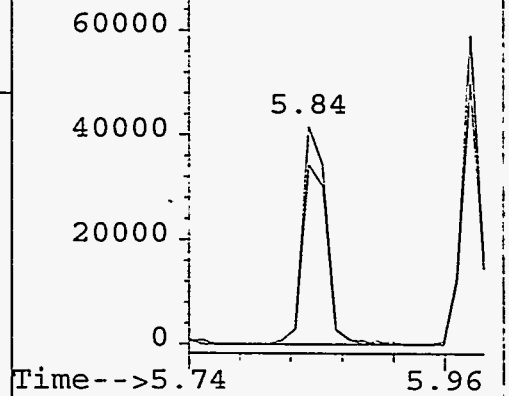


#6  
 2-Methylphenol  
 Concen: 65.15 ug/L  
 RT: 5.84 min Scan# 287  
 Delta R.T. -0.01 min  
 Lab File: SV0135.D  
 Acq: 24 Jan 96 3:44 pm

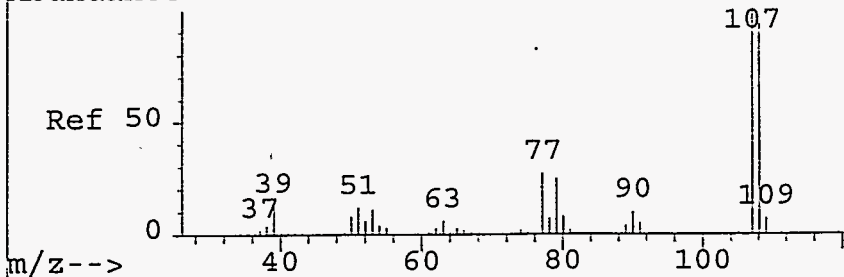
Tgt Ion	Resp	Lower	Upper
108	100		
107	82.5	69.3	109.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0



Abundance	Ion	Time
60000	108.00	(107)
	107.00	(106)



AbundanceScan 300 (5.999 min): SV0129.D (\*)



#7

3&4-Methylphenol

Concen: 59.72 ug/L m

RT: 5.99 min Scan# 299

Delta R.T. -0.01 min

Lab File: SV0135.D

Acq: 24 Jan 96 3:44 pm

Tgt Ion:108 Resp: 57579

Ion Ratio Lower Upper

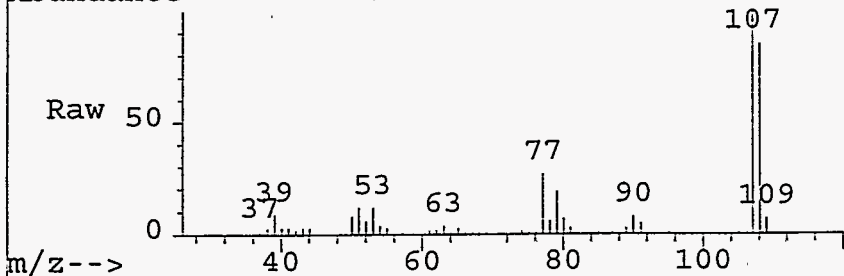
108 100

0 0.0 0.0 0.0

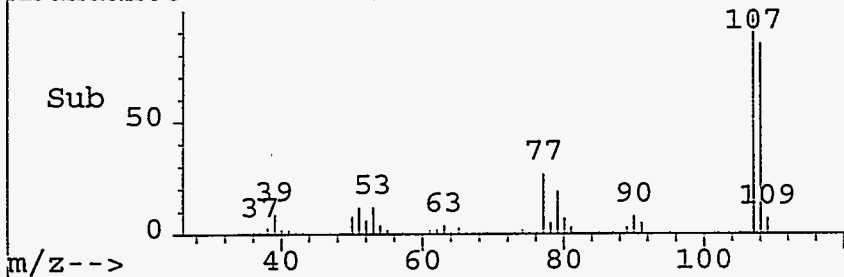
0 0.0 0.0 0.0

0 0.0 0.0 0.0

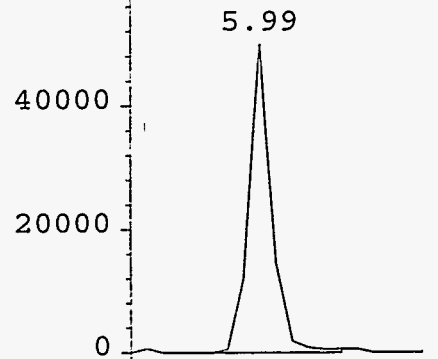
AbundanceScan 299 (5.985 min): SV0135.D (\*)



AbundanceScan 299 (5.985 min): SV0135.D (-,

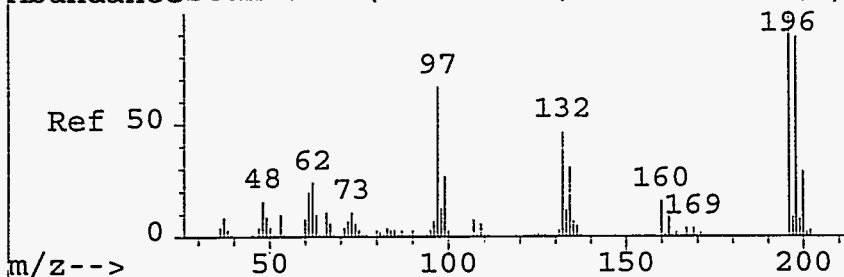


AbundanceIon 108.00 (107

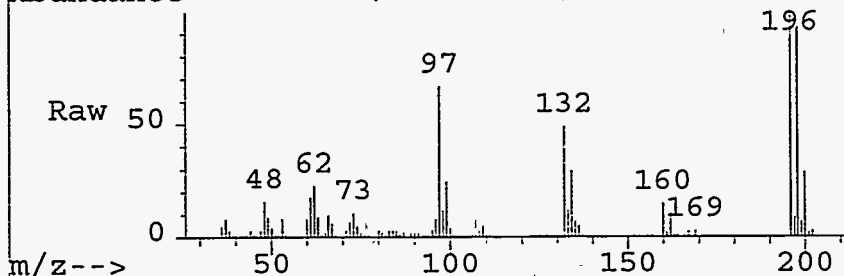


Time-->5.89 6.08

AbundanceScan 511 (8.510 min): SV0129.D (-,



AbundanceScan 511 (8.508 min): SV0135.D (\*)



#14

2,4,6-Trichlorophenol

Concen: 321.10 ug/L

RT: 8.51 min Scan# 511

Delta R.T. -0.00 min

Lab File: SV0135.D

Acq: 24 Jan 96 3:44 pm

Tgt Ion:196 Resp: 126056

Ion Ratio Lower Upper

196 100

198 92.6 71.5 111.5

200 29.4 7.8 47.8

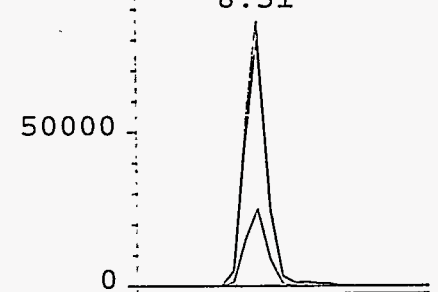
0 0.0 0.0 0.0

AbundanceIon 196.00 (195

Ion 198.00 (197

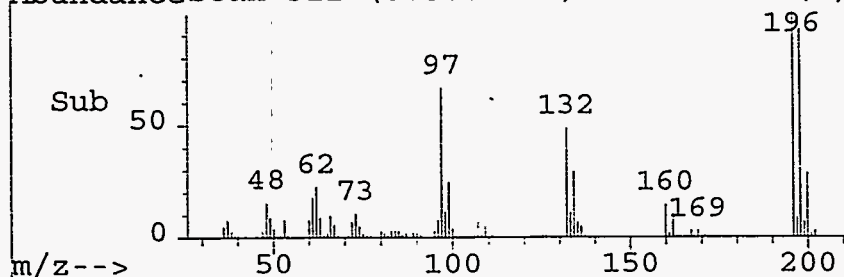
Ion 200.00 (199

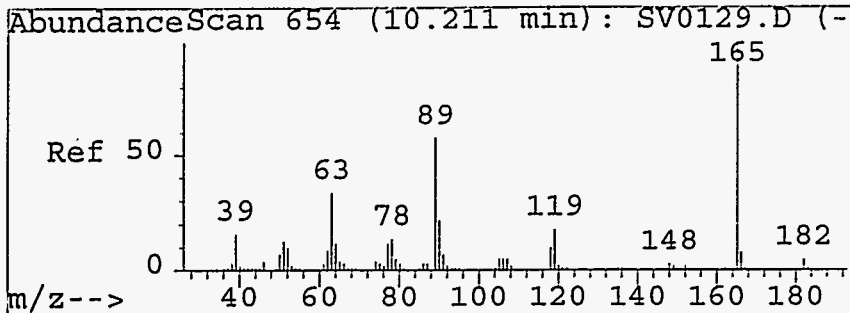
100000



Time-->8.39 8.64

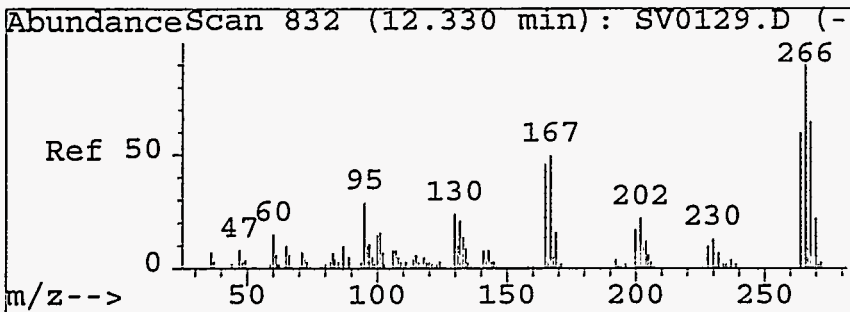
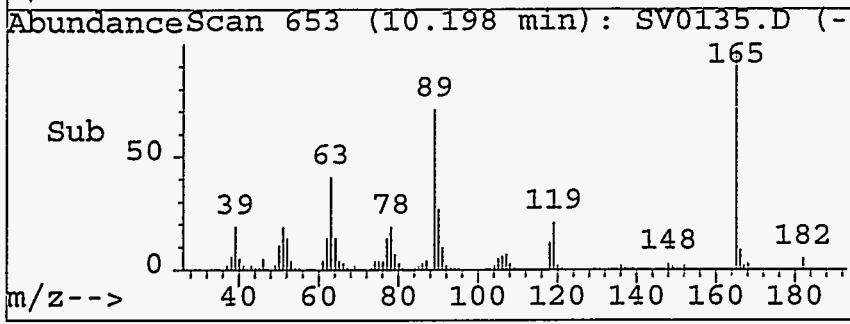
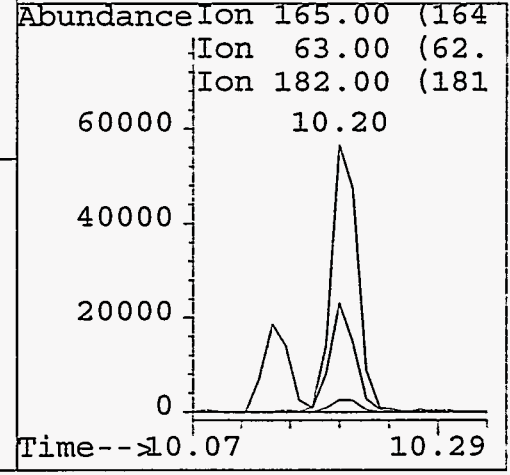
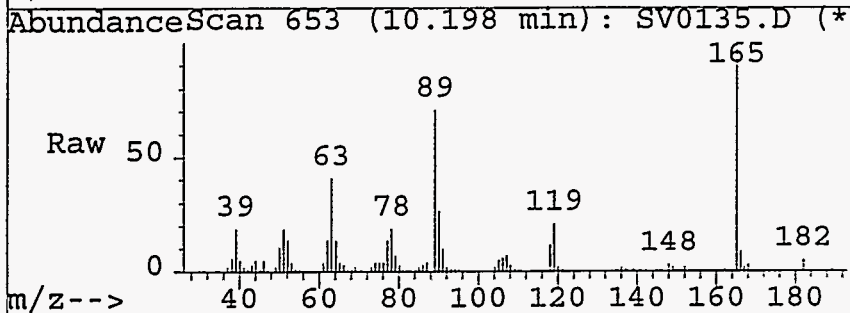
AbundanceScan 511 (8.508 min): SV0135.D (-,





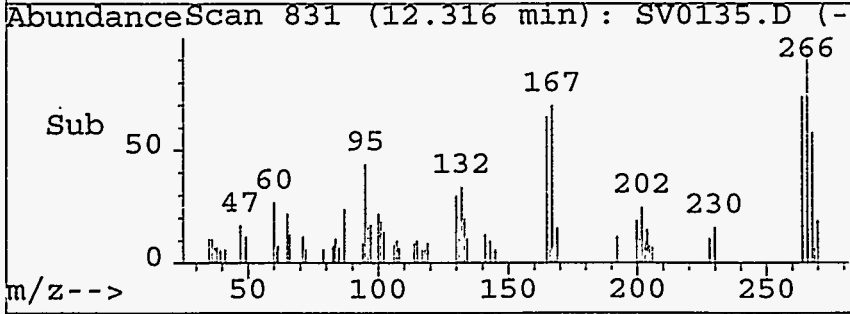
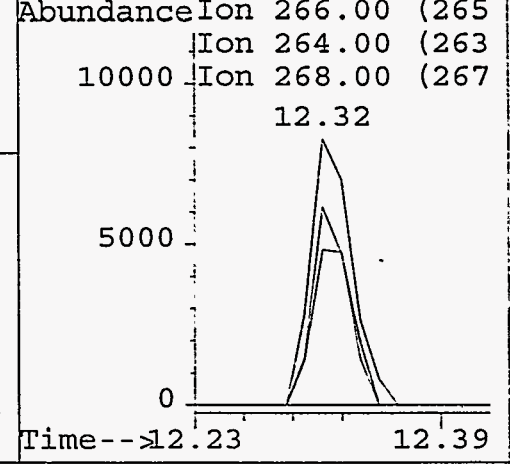
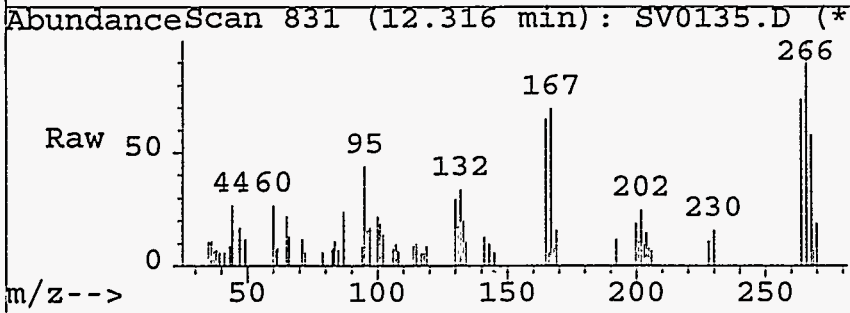
#17  
 2,4-Dinitrotoluene  
 Concen: 236.47 ug/L  
 RT: 10.20 min Scan# 653  
 Delta R.T. -0.01 min  
 Lab File: SV0135.D  
 Acq: 24 Jan 96 3:44 pm

Tgt Ion	Ratio	Lower	Upper
165	100		
63	40.9	25.9	65.9
182	4.5	0.0	24.6
0	0.0	0.0	0.0



#21  
 Pentachlorophenol  
 Concen: 82.11 ug/L  
 RT: 12.32 min Scan# 831  
 Delta R.T. -0.01 min  
 Lab File: SV0135.D  
 Acq: 24 Jan 96 3:44 pm

Tgt Ion	Ratio	Lower	Upper
266	100		
264	74.4	41.0	81.0
268	58.3	38.2	78.2
0	0.0	0.0	0.0



Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN2495\SV0142.D  
 Acq On : 24 Jan 96 7:52 pm  
 Sample : ECO-004-04A  
 Misc : SEMI TEST TCLP SOIL04A  
 Quant Time: Jan 25 9:05 1996

Vial: 21  
 Operator:  
 Inst : 5972 - 35  
 Multiplr: 2.00

Method : C:\HPCHEM\1\METHODS\METCLP.M  
 Title : Method 8270  
 Last Update : Thu Jan 25 08:20:05 1996  
 Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) 1,4-Dichlorobenzene-d4	5.61	152	416391	40.00	ug/L	-0.01
9) Naphthalene-d8	7.03	136	1240621	40.00	ug/L	-0.01
13) Acenaphthene-d10	9.80	164	641256	40.00	ug/L	-0.01
19) Phenanthrene-d10	12.54	188	863038	40.00	ug/L	-0.02
22) Chrysene-d12	17.86	240	588669	40.00	ug/L	-0.01
24) Perylene-d12	20.93	264	607254	40.00	ug/L	-0.04

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recovery
3) 2-Fluorophenol	4.49	112	509815	78.00	ug/L	39.00%
4) Phenol-d5	5.27	99	586730	77.42	ug/L	38.71%
10) Nitrobenzene-d5	6.19	82	422195	84.05	ug/L	42.02%
16) 2-Fluorobiphenyl	8.63	172	691241	79.81	ug/L	79.81%
18) 2,4,6-Tribromophenol	11.25	330	136680	172.50	ug/L	86.25%
23) Terphenyl-d14	15.77	244	369332	57.06	ug/L	57.06%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
5) 1,4-Dichlorobenzene	5.63	146	463642	73.88	ug/L	99
6) 2-Methylphenol	5.84	108	343459	67.35	ug/L	99
7) 3&4-Methylphenol	5.98	108	311804	58.46	ug/L	100
14) 2,4,6-Trichlorophenol	8.49	196	736255	363.40	ug/L	99
17) 2,4-Dinitrotoluene	10.19	165	683608	337.16	ug/L	93
21) Pentachlorophenol	12.31	266	132958	136.37	ug/L	97

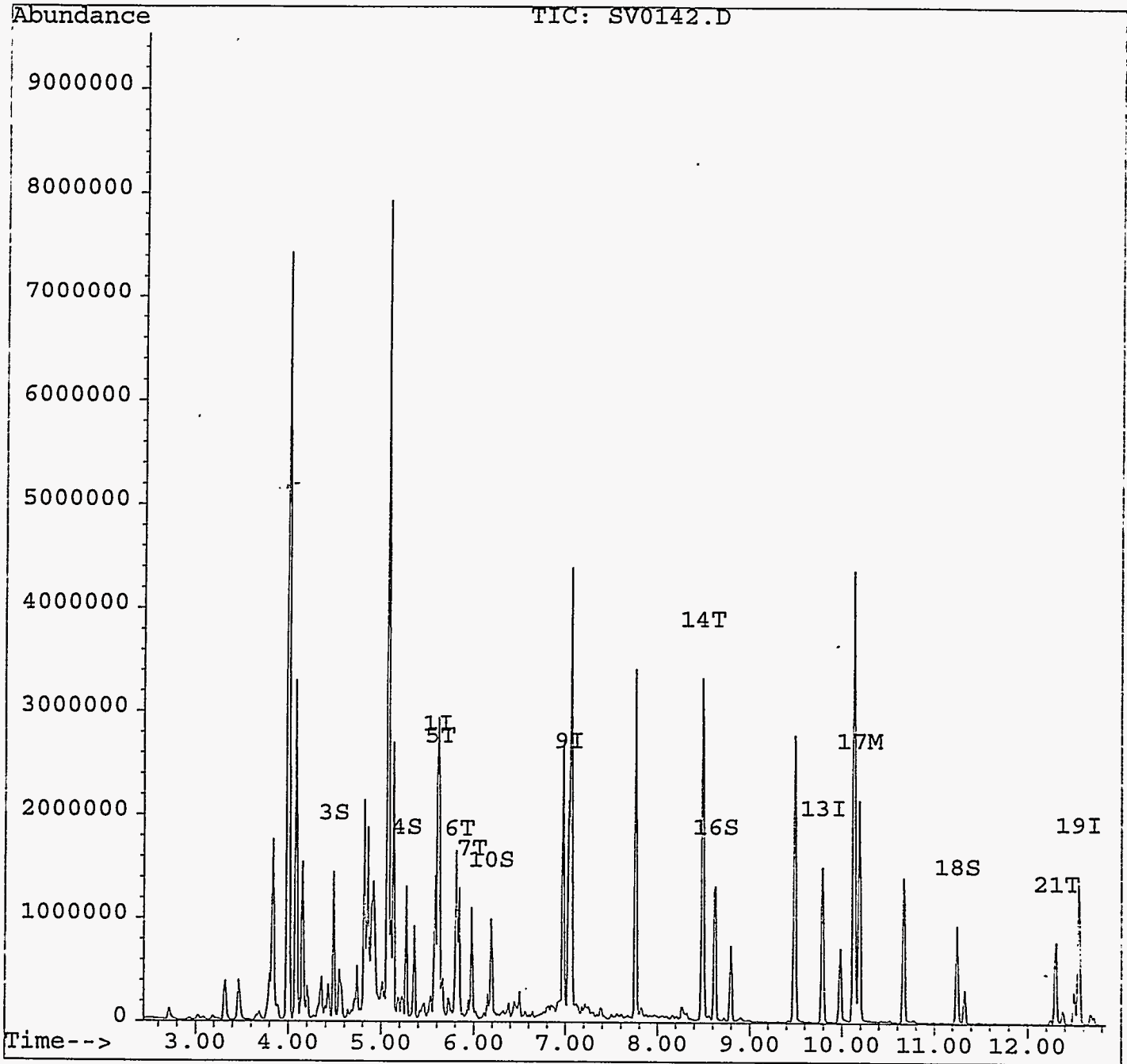
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN2495\SV0142.D  
Acq On : 24 Jan 96 7:52 pm  
Sample : ECO-004-04A  
Misc : SEMI TEST TCLP SOIL04A  
Quant Time: Jan 25 9:05 1996

Vial: 21  
Operator:  
Inst : 5972 - 35  
Multiplr: 2.00

Method : C:\HPCHEM\1\METHODS\METCLP.M  
Title : Method 8270  
Last Update : Thu Jan 25 08:20:05 1996  
Response via : Single Level Calibration

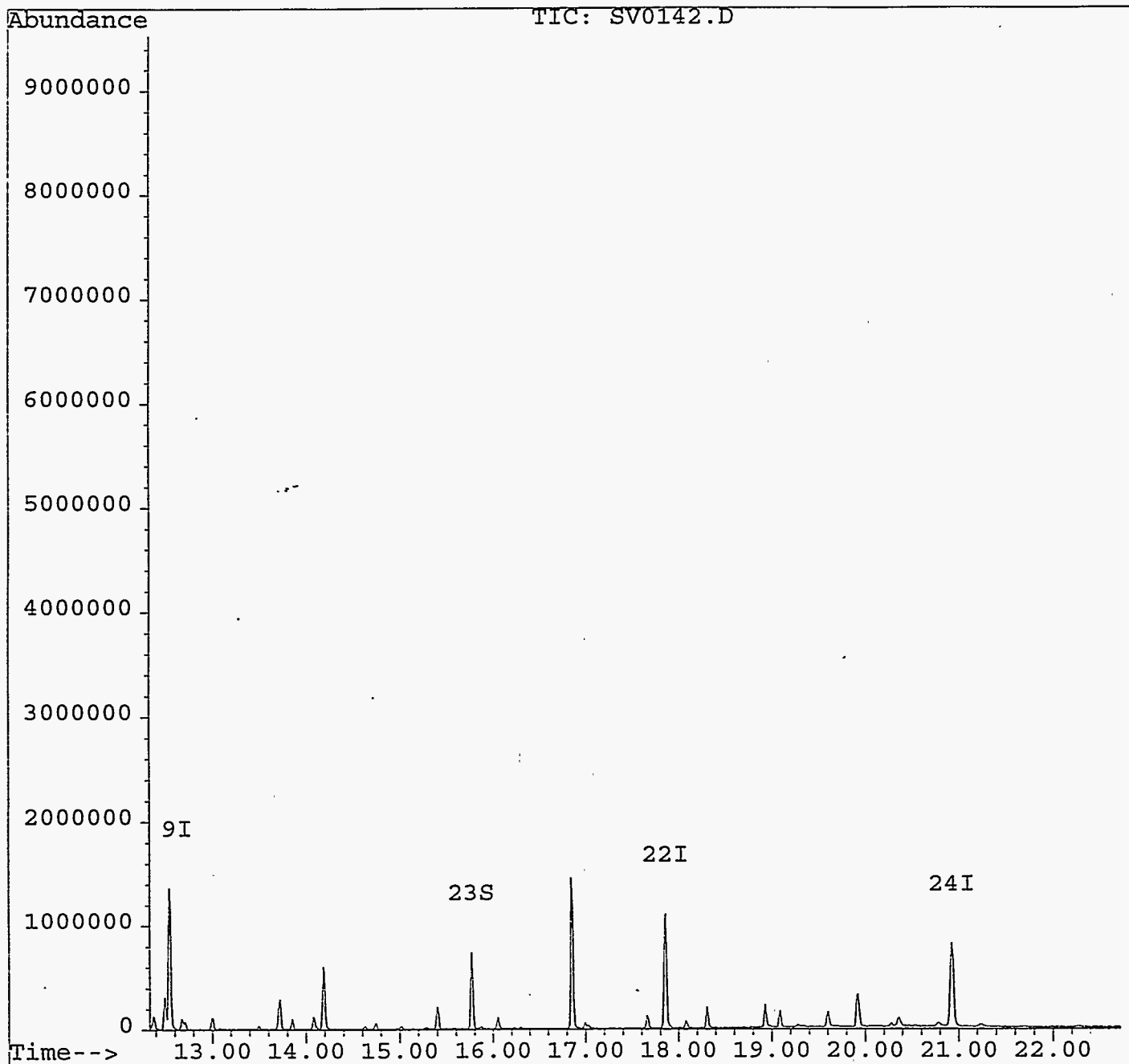


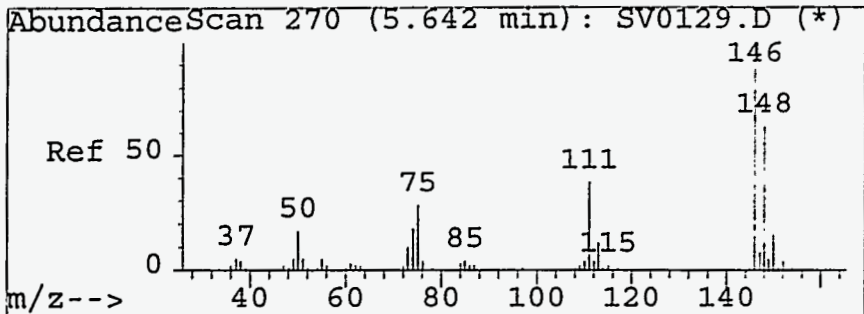
Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN2495\SV0142.D  
Acq On : 24 Jan 96 7:52 pm  
Sample : ECO-004-04A  
Misc : SEMI TEST TCLP SOIL04A  
Quant Time: Jan 25 9:05 1996

Vial: 21  
Operator:  
Inst : 5972 - 35  
Multiplr: 2.00

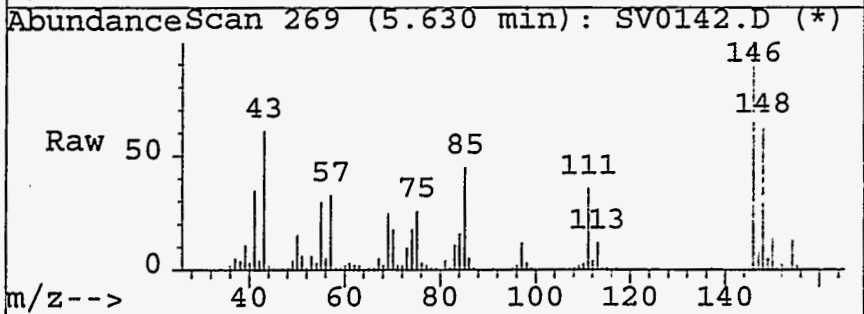
Method : C:\HPCHEM\1\METHODS\METCLP.M  
Title : Method 8270  
Last Update : Thu Jan 25 08:20:05 1996  
Response via : Single Level Calibration



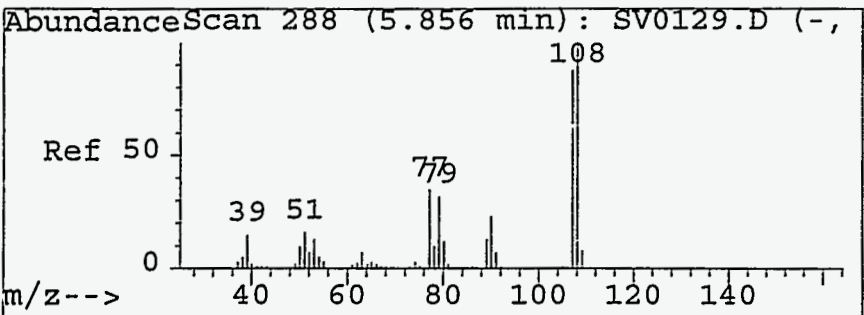
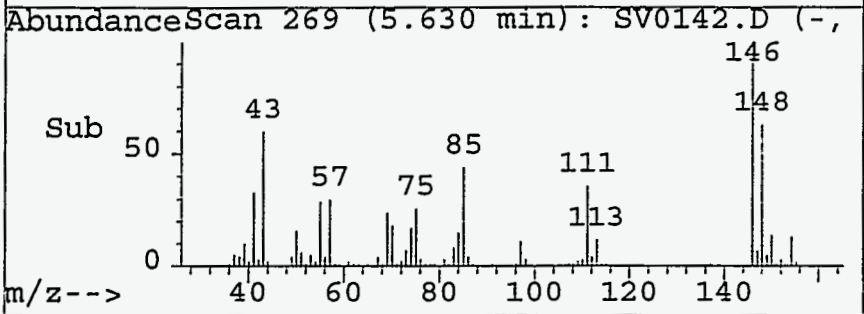
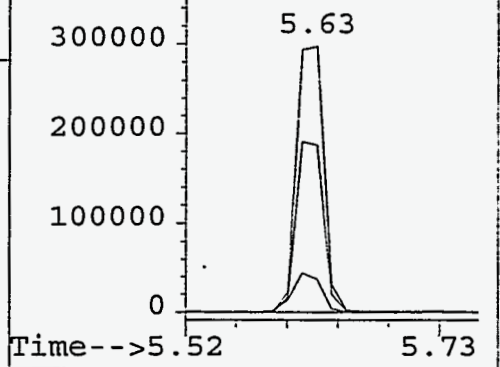


#5  
 1,4-Dichlorobenzene  
 Concen: 73.88 ug/L  
 RT: 5.63 min Scan# 269  
 Delta R.T. -0.01 min  
 Lab File: SV0142.D  
 Acq: 24 Jan 96 7:52 pm

Tgt Ion	Ratio	Lower	Upper
146	100		
148	63.1	43.5	83.5
113	12.4	0.0	34.6
0	0.0	0.0	0.0

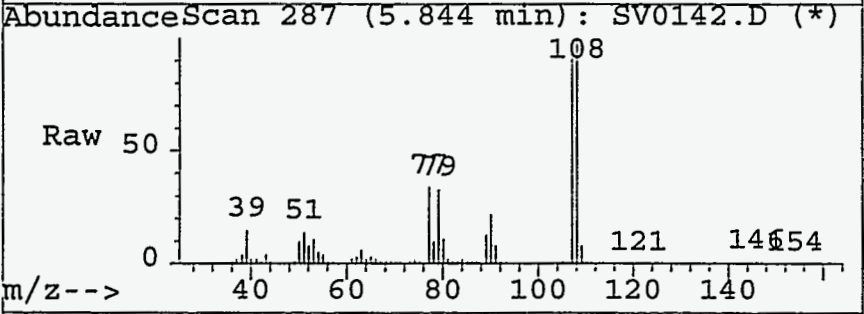


Abundance	Ion	Label
400000	146.00	(145)
	148.00	(147)
	113.00	(112)

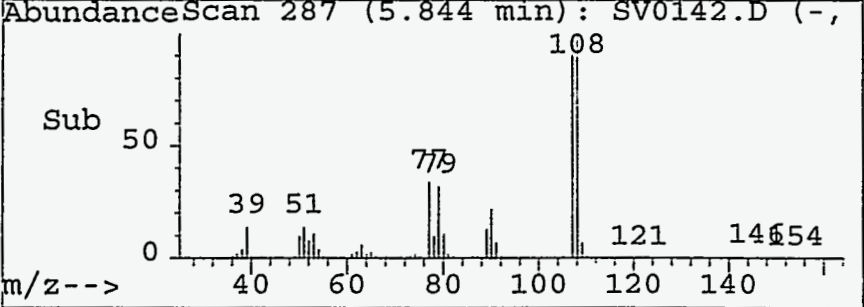
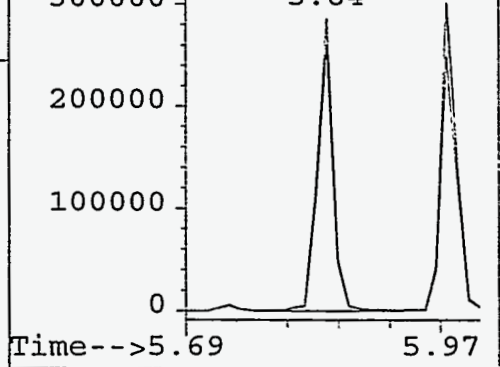


#6  
 2-Methylphenol  
 Concen: 67.35 ug/L  
 RT: 5.84 min Scan# 287  
 Delta R.T. -0.01 min  
 Lab File: SV0142.D  
 Acq: 24 Jan 96 7:52 pm

Tgt Ion	Ratio	Lower	Upper
108	100		
107	90.6	69.3	109.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0

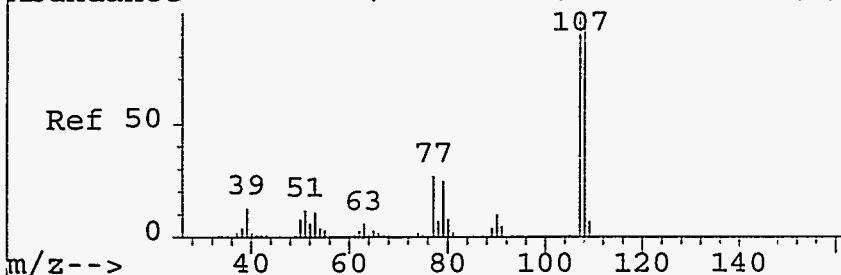


Abundance	Ion	Label
300000	108.00	(107)
	107.00	(106)

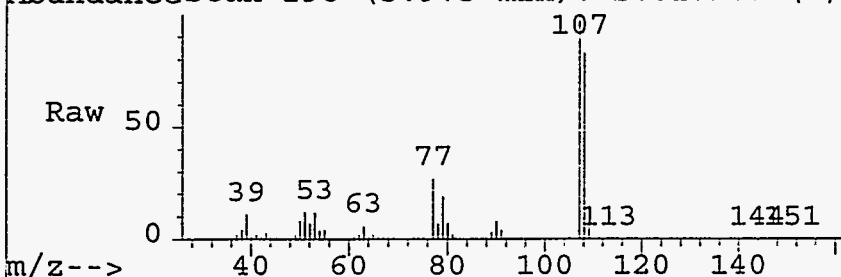




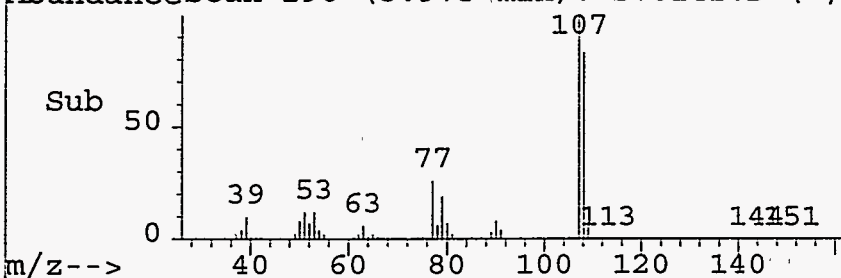
AbundanceScan 300 (5.999 min): SV0129.D (\*)



AbundanceScan 298 (5.975 min): SV0142.D (\*)



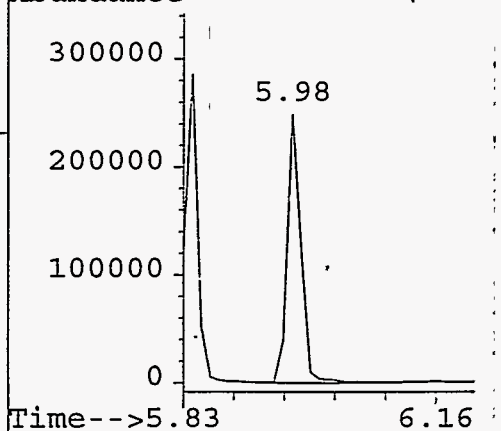
AbundanceScan 298 (5.975 min): SV0142.D (-, Sub



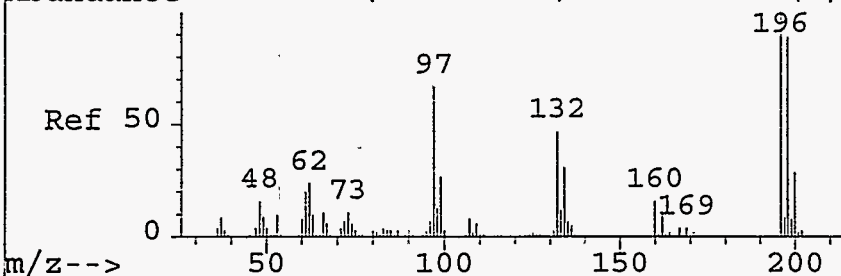
#7  
 3&4-Methylphenol  
 Concen: 58.46 ug/L  
 RT: 5.98 min Scan# 298  
 Delta R.T. -0.02 min  
 Lab File: SV0142.D  
 Acq: 24 Jan 96 7:52 pm

Tgt Ion	Ratio	Resp	Lower	Upper
108	100	311804		
0	0.0	0.0	0.0	0.0
0	0.0	0.0	0.0	0.0
0	0.0	0.0	0.0	0.0

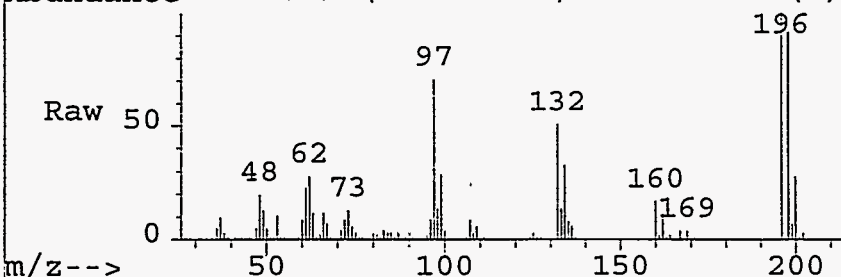
AbundanceIon 108.00 (107



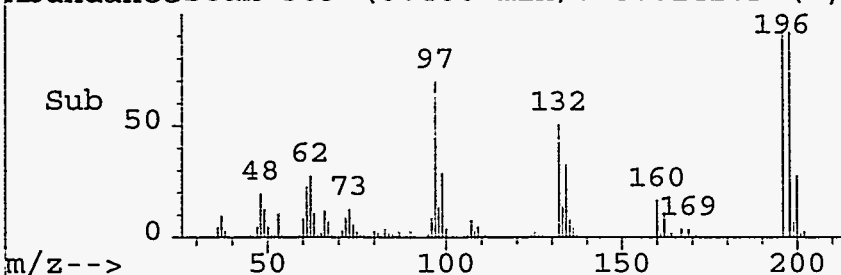
AbundanceScan 511 (8.510 min): SV0129.D (-, Ref



AbundanceScan 509 (8.486 min): SV0142.D (\*)



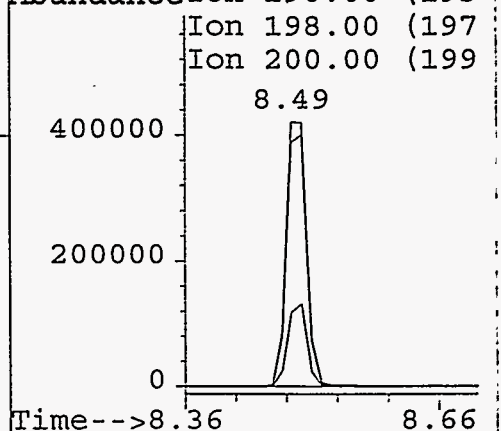
AbundanceScan 509 (8.486 min): SV0142.D (-, Sub

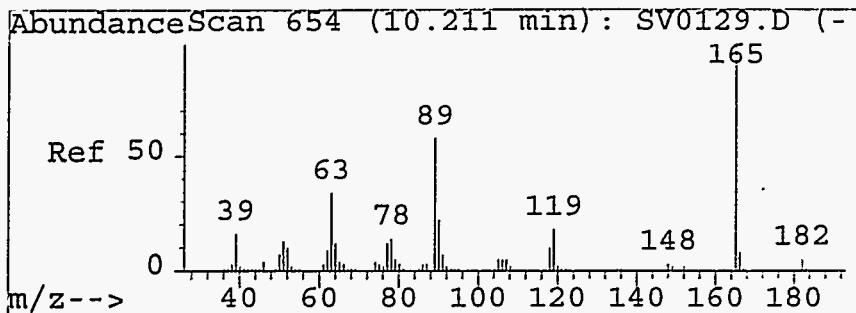


#14  
 2,4,6-Trichlorophenol  
 Concen: 363.40 ug/L  
 RT: 8.49 min Scan# 509  
 Delta R.T. -0.02 min  
 Lab File: SV0142.D  
 Acq: 24 Jan 96 7:52 pm

Tgt Ion	Ratio	Resp	Lower	Upper
196	100	736255		
198	92.3	71.5	111.5	
200	28.3	7.8	47.8	
0	0.0	0.0	0.0	0.0

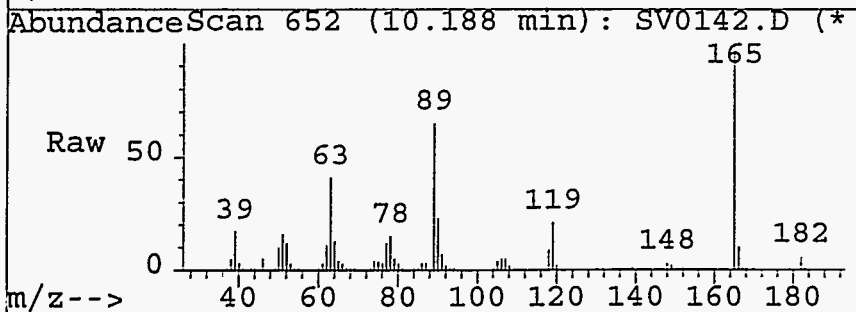
AbundanceIon 196.00 (195



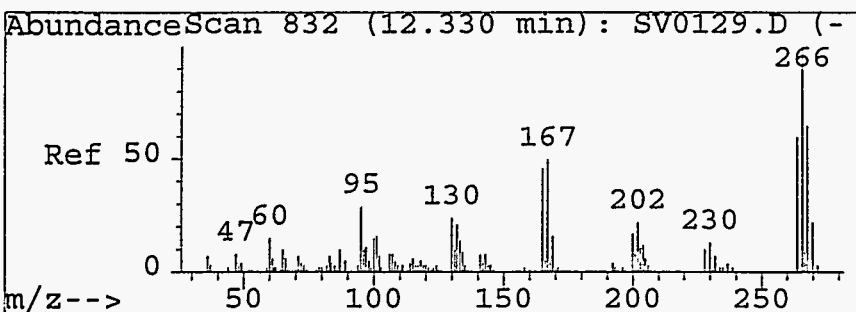
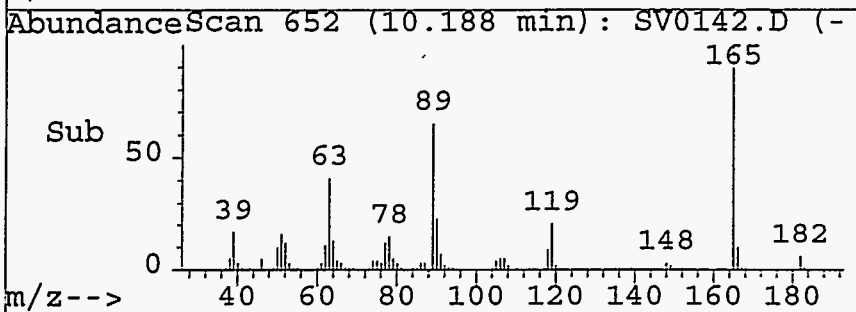
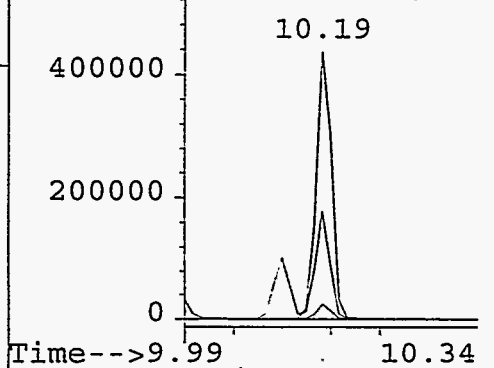


#17  
 2,4-Dinitrotoluene  
 Concen: 337.16 ug/L  
 RT: 10.19 min Scan# 652  
 Delta R.T. -0.02 min  
 Lab File: SV0142.D  
 Acq: 24 Jan 96 7:52 pm

Tgt Ion	Resp	Lower	Upper
165	100		
63	40.6	25.9	65.9
182	5.6	0.0	24.6
0	0.0	0.0	0.0

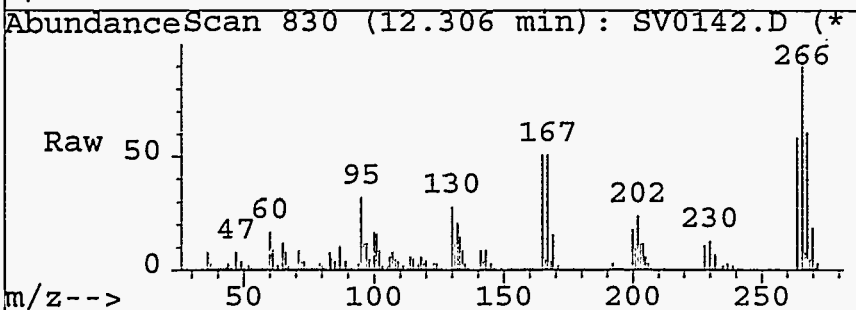


Abundance Ion 165.00 (164  
 600000 Ion 63.00 (62.  
 Ion 182.00 (181

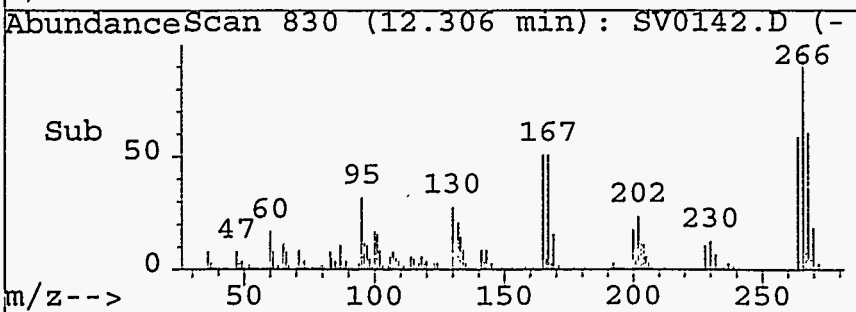
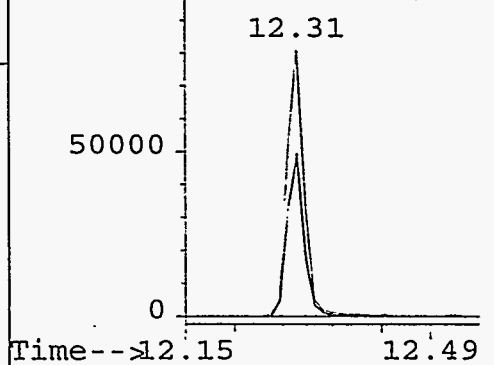


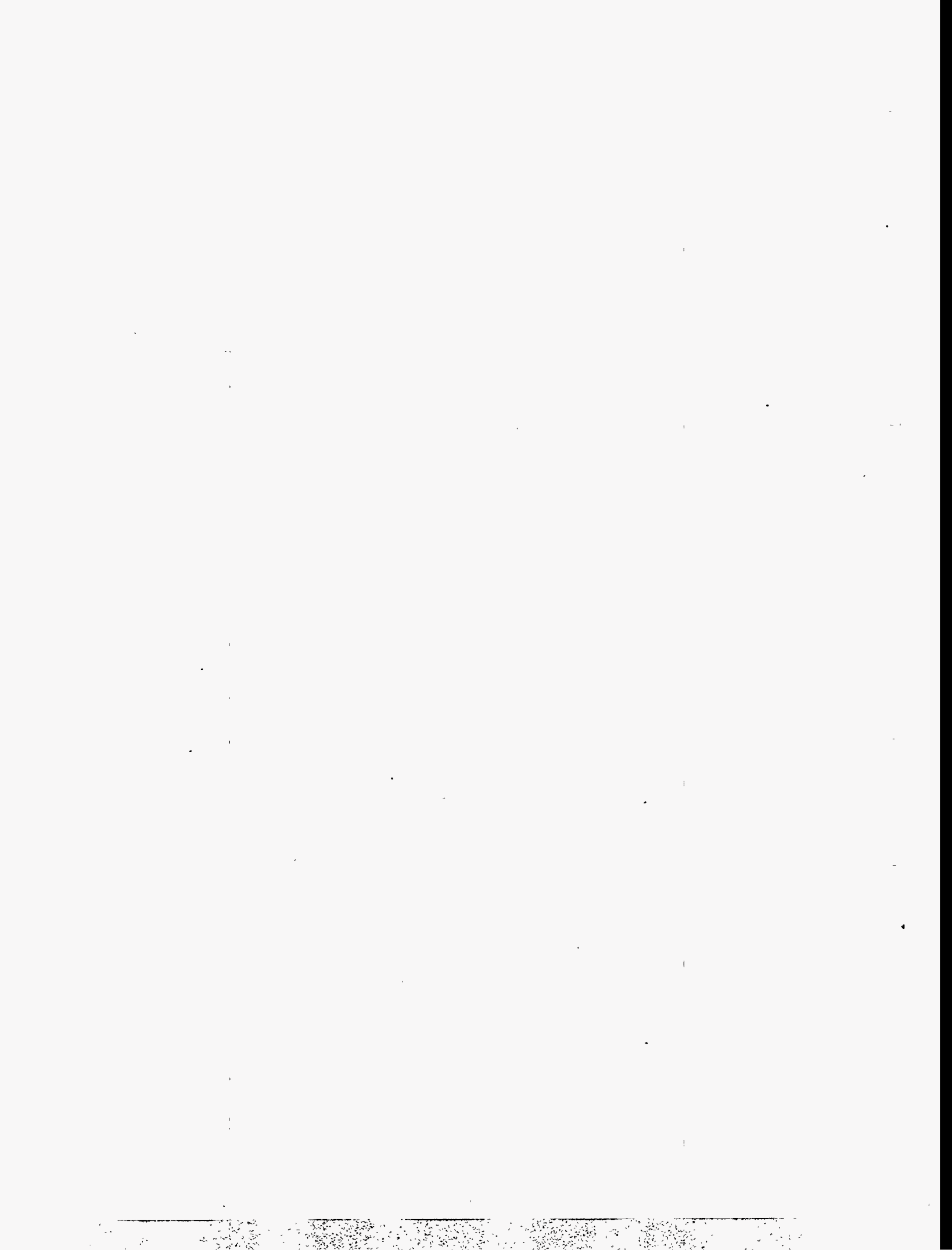
#21  
 Pentachlorophenol  
 Concen: 136.37 ug/L  
 RT: 12.31 min Scan# 830  
 Delta R.T. -0.02 min  
 Lab File: SV0142.D  
 Acq: 24 Jan 96 7:52 pm

Tgt Ion	Resp	Lower	Upper
266	100		
264	59.1	41.0	81.0
268	61.3	38.2	78.2
0	0.0	0.0	0.0



Abundance Ion 266.00 (265  
 100000 Ion 264.00 (263  
 Ion 268.00 (267





Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN2495\SV0136.D  
 Acq On : 24 Jan 96 4:29 pm  
 Sample : ECO-004-05A  
 Misc : SEMI TEST TCLP SOIL05A 1:5  
 Quant Time: Jan 25 8:56 1996

Vial: 15  
 Operator:  
 Inst : 5972 - 35  
 Multiplr: 10.00

Method : C:\HPCHEM\1\METHODS\METCLP.M  
 Title : Method 8270  
 Last Update : Thu Jan 25 08:20:05 1996  
 Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.61	152	330364	40.00	ug/L	-0.01
9) Naphthalene-d8	7.05	136	1045140	40.00	ug/L	0.00
13) Acenaphthene-d10	9.81	164	546857	40.00	ug/L	0.00
19) Phenanthrene-d10	12.57	188	765829	40.00	ug/L	0.00
22) Chrysene-d12	17.87	240	492467	40.00	ug/L	0.00
24) Perylene-d12	20.96	264	507763	40.00	ug/L	-0.01

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recovery
3) 2-Fluorophenol	4.47	112	89930	86.71	ug/L	43.35%
4) Phenol-d5	5.27	99	91797	76.34	ug/L	38.17%
10) Nitrobenzene-d5	6.20	82	56016	66.19	ug/L	33.09%
16) 2-Fluorobiphenyl	8.64	172	110167	74.58	ug/L	74.58%
18) 2,4,6-Tribromophenol	11.27	330	21276	157.43	ug/L	78.72%
23) Terphenyl-d14	15.79	244	64339	59.41	ug/L	59.41%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
5) 1,4-Dichlorobenzene	5.63	146	67111	67.40	ug/L	98
6) 2-Methylphenol	5.84	108	54257	67.05	ug/L	91
7) 3&4-Methylphenol	5.99	108	49871	58.93	ug/L	100
14) 2,4,6-Trichlorophenol	8.50	196	114256	330.65	ug/L	99
17) 2,4-Dinitrotoluene	10.20	165	89101	257.65	ug/L	94
21) Pentachlorophenol	12.32	266	14662	84.73	ug/L	94

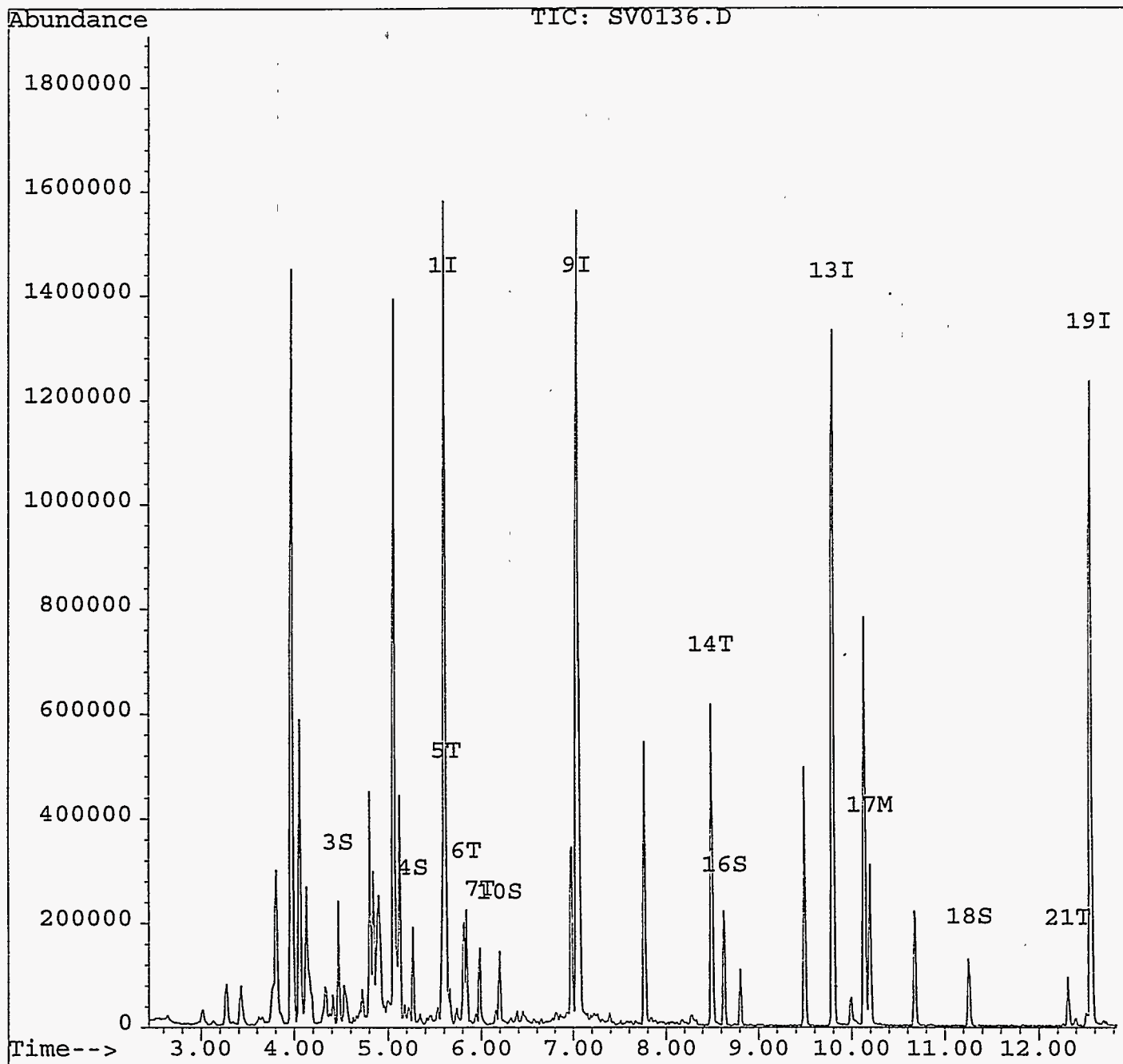
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN2495\SV0136.D  
Acq On : 24 Jan 96 4:29 pm  
Sample : ECO-004-05A  
Misc : SEMI TEST TCLP SOIL05A 1:5  
Quant Time: Jan 25 8:56 1996

Vial: 15  
Operator:  
Inst : 5972 - 35  
Multiplr: 10.00

Method : C:\HPCHEM\1\METHODS\METCLP.M  
Title : Method 8270  
Last Update : Thu Jan 25 08:20:05 1996  
Response via : Single Level Calibration

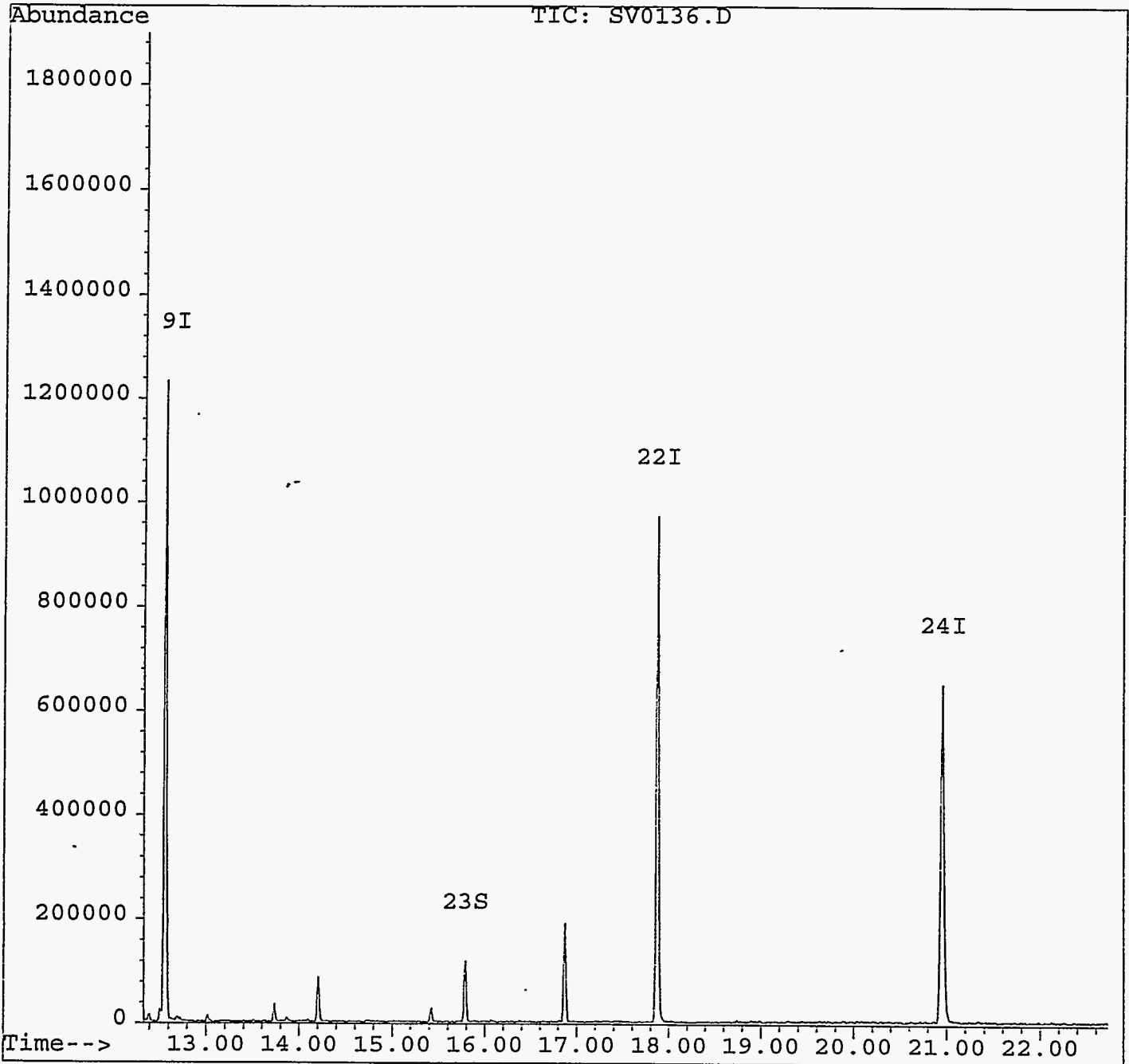


Quantitation Report

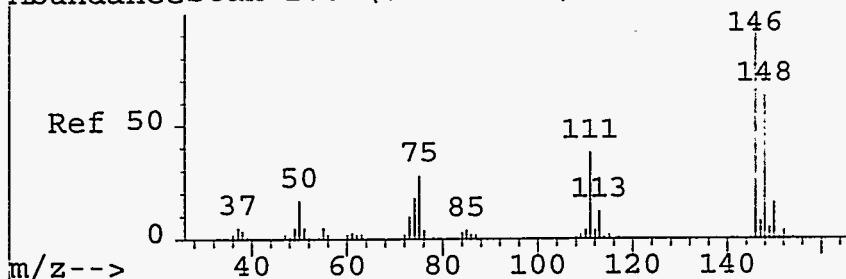
Data File : C:\HPCHEM\1\DATA\JAN2495\SV0136.D  
Acq On : 24 Jan 96 4:29 pm  
Sample : ECO-004-05A  
Misc : SEMI TEST TCLP SOIL05A 1:5  
Quant Time: Jan 25 8:56 1996

Vial: 15  
Operator:  
Inst : 5972 - 35  
Multiplr: 10.00

Method : C:\HPCHEM\1\METHODS\METCLP.M  
Title : Method 8270  
Last Update : Thu Jan 25 08:20:05 1996  
Response via : Single Level Calibration



AbundanceScan 270 (5.642 min): SV0129.D (\*)

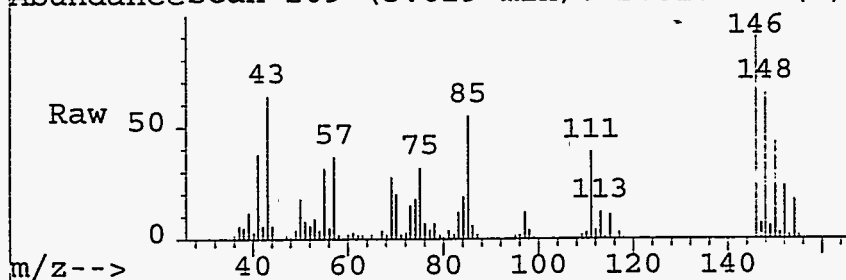


#5  
1,4-Dichlorobenzene  
Concen: 67.40 ug/L  
RT: 5.63 min Scan# 269  
Delta R.T. -0.01 min  
Lab File: SV0136.D  
Acq: 24 Jan 96 4:29 pm

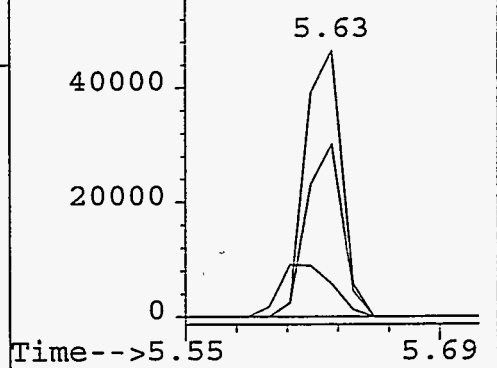
Tgt Ion:146 Resp: 67111

Ion	Ratio	Lower	Upper
146	100		
148	64.7	43.5	83.5
113	12.3	0.0	34.6
0	0.0	0.0	0.0

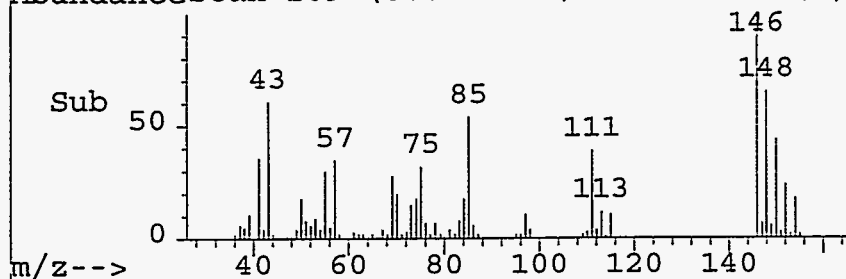
AbundanceScan 269 (5.629 min): SV0136.D (\*)



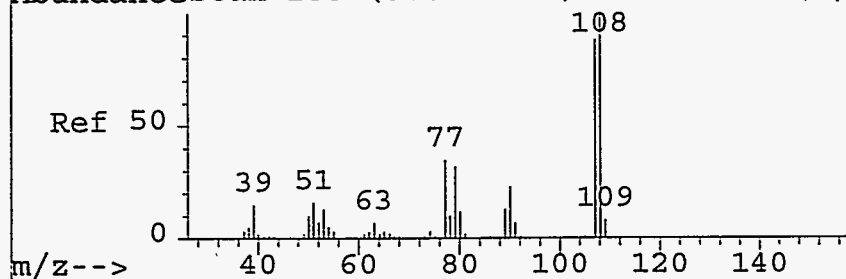
AbundanceIon 146.00 (145  
60000 Ion 148.00 (147  
Ion 113.00 (112



AbundanceScan 269 (5.629 min): SV0136.D (-,



AbundanceScan 288 (5.856 min): SV0129.D (-,

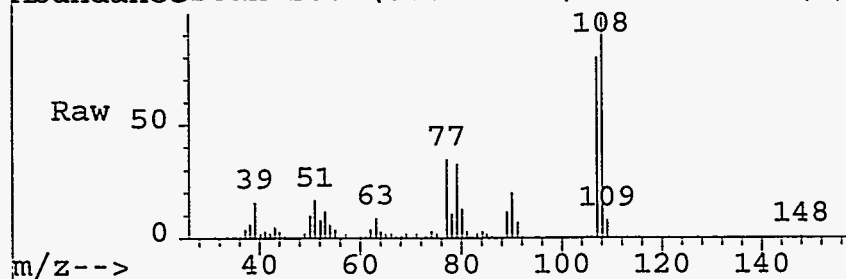


#6  
2-Methylphenol  
Concen: 67.05 ug/L  
RT: 5.84 min Scan# 287  
Delta R.T. -0.01 min  
Lab File: SV0136.D  
Acq: 24 Jan 96 4:29 pm

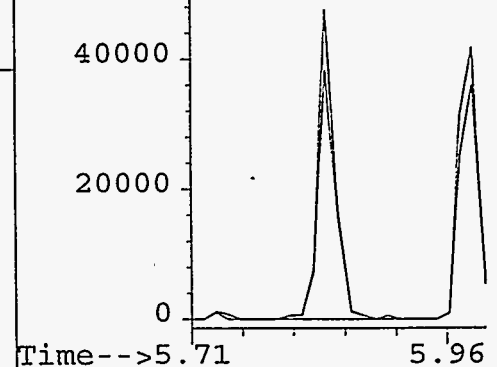
Tgt Ion:108 Resp: 54257

Ion	Ratio	Lower	Upper
108	100		
107	80.5	69.3	109.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0

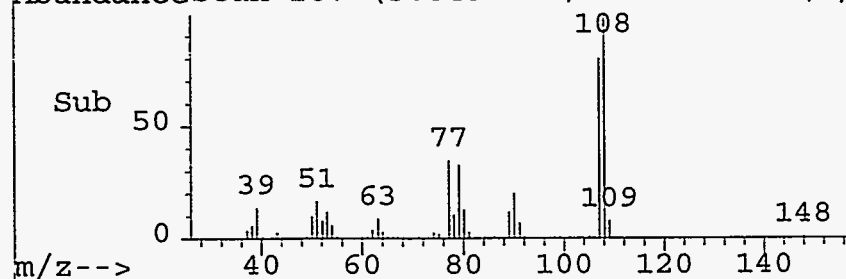
AbundanceScan 287 (5.843 min): SV0136.D (\*)

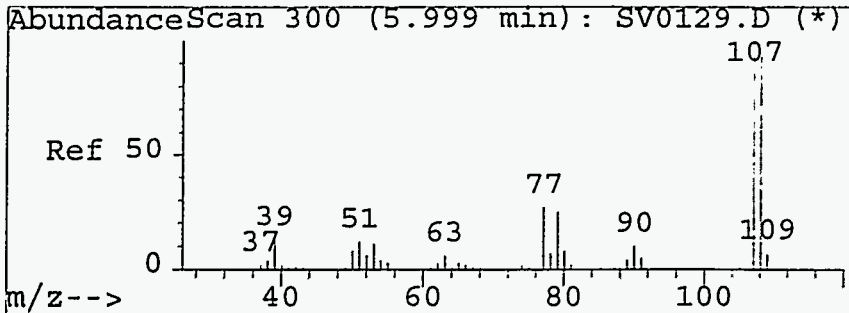


AbundanceIon 108.00 (107  
Ion 107.00 (106  
5.84



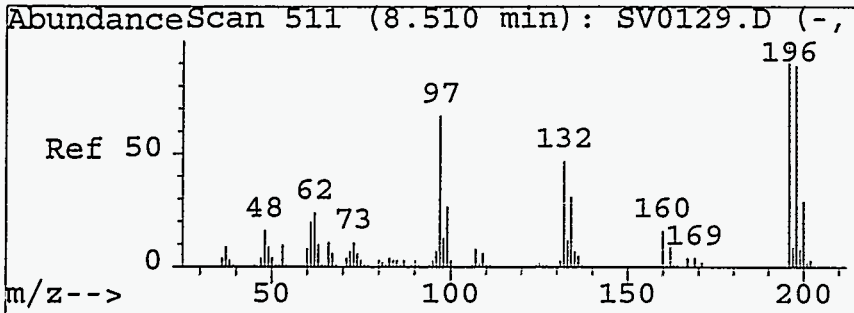
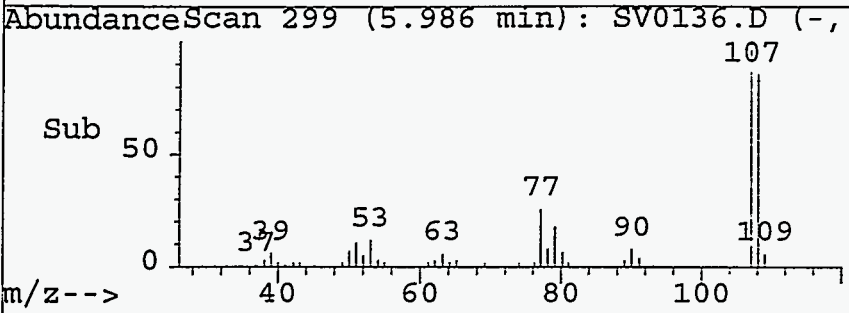
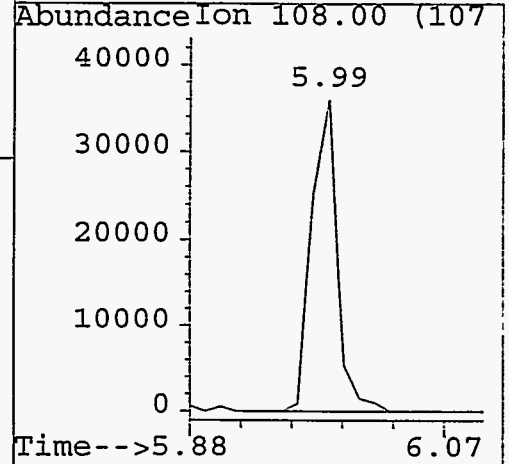
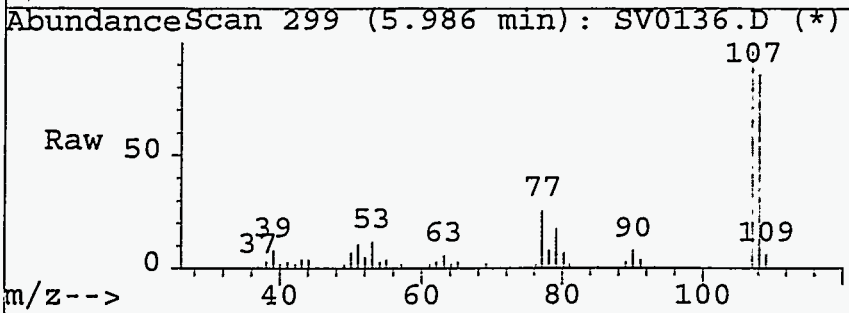
AbundanceScan 287 (5.843 min): SV0136.D (-,





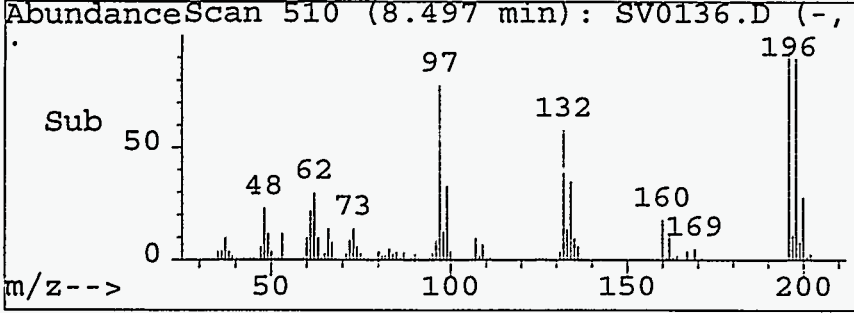
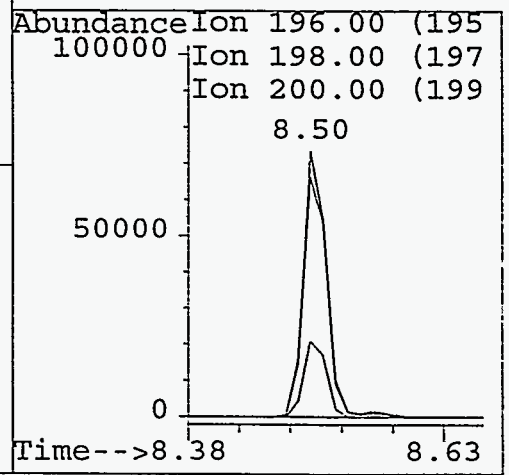
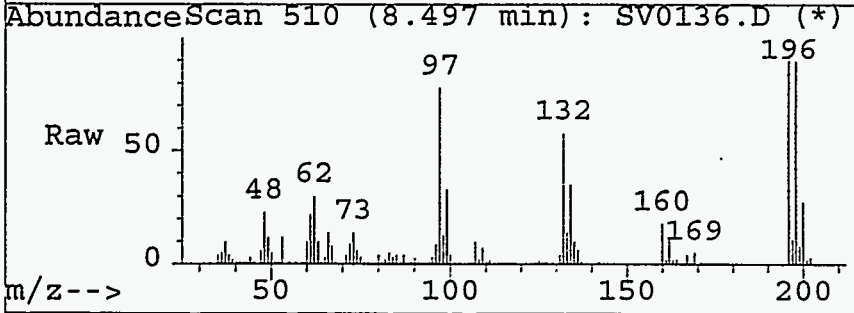
#7  
 3&4-Methylphenol  
 Concen: 58.93 ug/L  
 RT: 5.99 min Scan# 299  
 Delta R.T. -0.01 min  
 Lab File: SV0136.D  
 Acq: 24 Jan 96 4:29 pm

Tgt Ion	Resp	Lower	Upper
108	49871		
108	100		
0	0.0	0.0	0.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

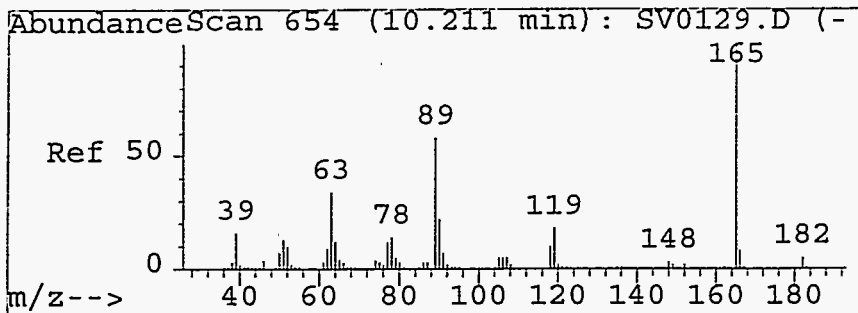


#14  
 2,4,6-Trichlorophenol  
 Concen: 330.65 ug/L  
 RT: 8.50 min Scan# 510  
 Delta R.T. -0.01 min  
 Lab File: SV0136.D  
 Acq: 24 Jan 96 4:29 pm

Tgt Ion	Resp	Lower	Upper
196	114256		
196	100		
198	90.3	71.5	111.5
200	28.4	7.8	47.8
0	0.0	0.0	0.0

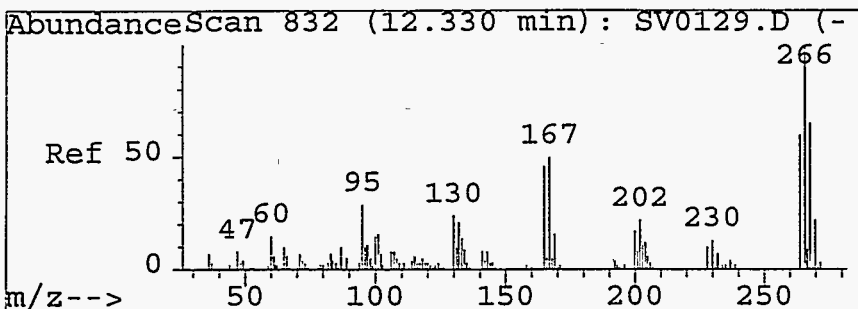
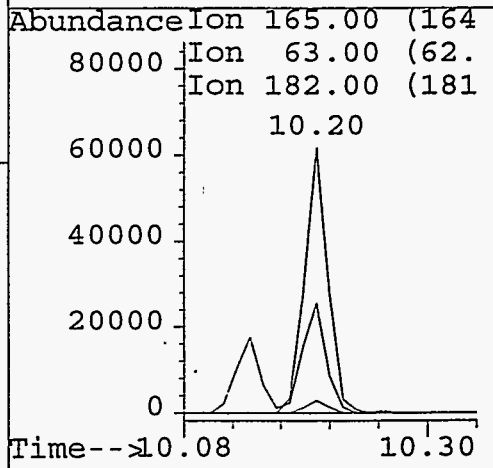
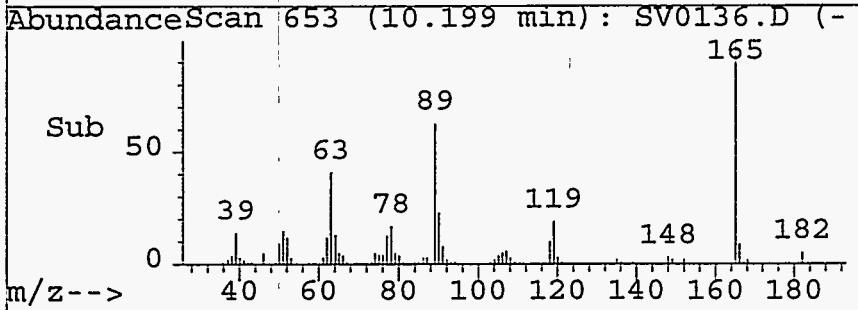
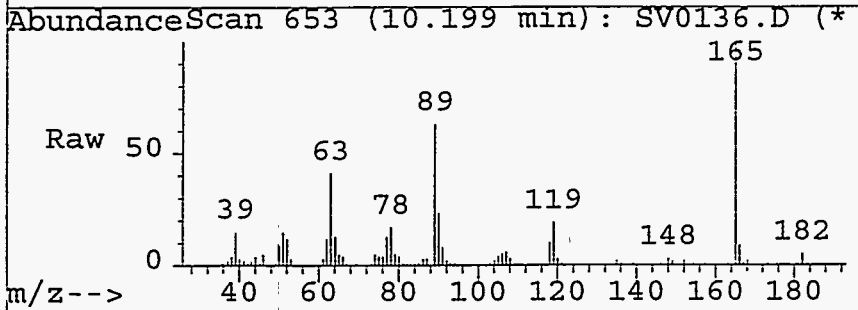






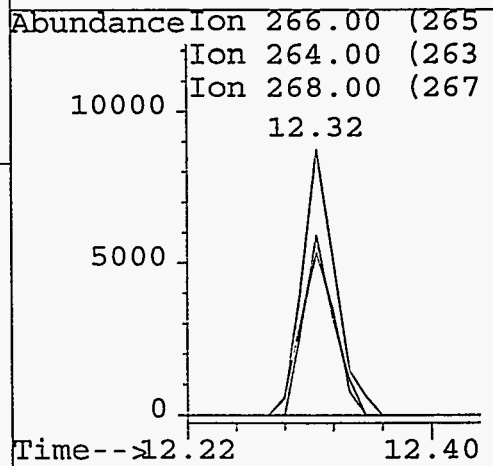
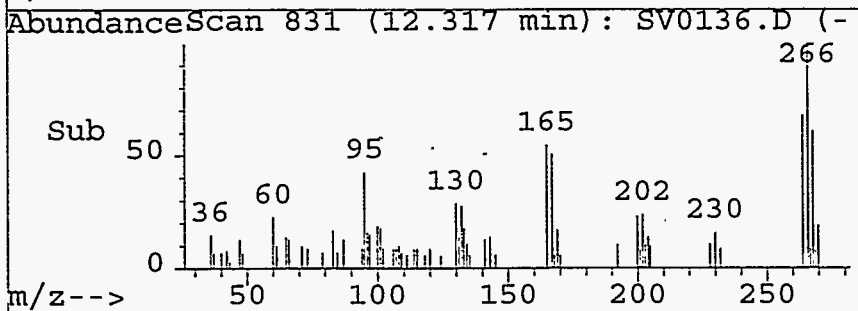
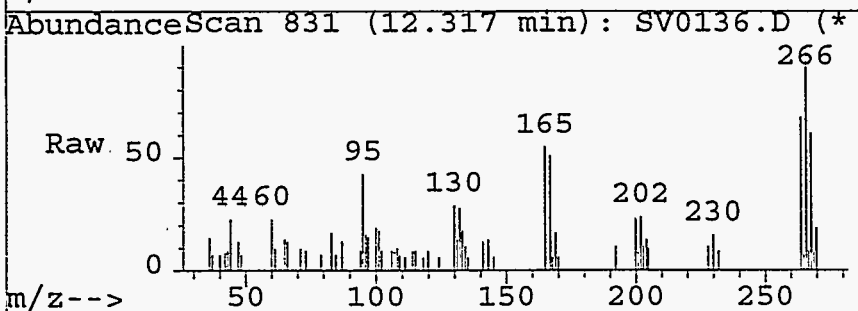
#17  
 2,4-Dinitrotoluene  
 Concen: 257.65 ug/L  
 RT: 10.20 min Scan# 653  
 Delta R.T. -0.01 min  
 Lab File: SV0136.D  
 Acq: 24 Jan 96 4:29 pm

Tgt Ion	Ratio	Lower	Upper
165	100		
63	41.4	25.9	65.9
182	4.6	0.0	24.6
0	0.0	0.0	0.0



#21  
 Pentachlorophenol  
 Concen: 84.73 ug/L  
 RT: 12.32 min Scan# 831  
 Delta R.T. -0.01 min  
 Lab File: SV0136.D  
 Acq: 24 Jan 96 4:29 pm

Tgt Ion	Ratio	Lower	Upper
266	100		
264	67.7	41.0	81.0
268	61.1	38.2	78.2
0	0.0	0.0	0.0



Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN2495\SV0143.D  
 Acq On : 24 Jan 96 8:27 pm  
 Sample : ECO-004-05A  
 Misc : SEMI TEST TCLP SOIL05A  
 Quant Time: Jan 25 9:06 1996

Vial: 22  
 Operator:  
 Inst : 5972 - 35  
 Multiplr: 2.00

Method : C:\HPCHEM\1\METHODS\METCLP.M  
 Title : Method 8270  
 Last Update : Thu Jan 25 08:20:05 1996  
 Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) 1,4-Dichlorobenzene-d4	5.60	152	399631	40.00	ug/L	-0.01
9) Naphthalene-d8	7.03	136	1212927	40.00	ug/L	-0.01
13) Acenaphthene-d10	9.79	164	628691	40.00	ug/L	-0.01
19) Phenanthrene-d10	12.54	188	837051	40.00	ug/L	-0.02
22) Chrysene-d12	17.86	240	570689	40.00	ug/L	-0.01
24) Perylene-d12	20.93	264	594025	40.00	ug/L	-0.04

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recovery
3) 2-Fluorophenol	4.49	112	576230	91.86	ug/L	45.93%
4) Phenol-d5	5.27	99	598636	82.31	ug/L	41.15%
10) Nitrobenzene-d5	6.19	82	414346	84.37	ug/L	42.19%
16) 2-Fluorobiphenyl	8.63	172	670944	79.02	ug/L	79.02%
18) 2,4,6-Tribromophenol	11.25	330	137618	177.15	ug/L	88.58%
23) Terphenyl-d14	15.77	244	420755	67.05	ug/L	67.05%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
5) 1,4-Dichlorobenzene	5.63	146	400942	66.57	ug/L	96
6) 2-Methylphenol	5.84	108	341359	69.75	ug/L	99
7) 3&4-Methylphenol	5.97	108	315832	61.70	ug/L	100
14) 2,4,6-Trichlorophenol	8.48	196	732938	369.00	ug/L	98
17) 2,4-Dinitrotoluene	10.19	165	655898	329.95	ug/L	90
21) Pentachlorophenol	12.30	266	127106	134.41	ug/L	97

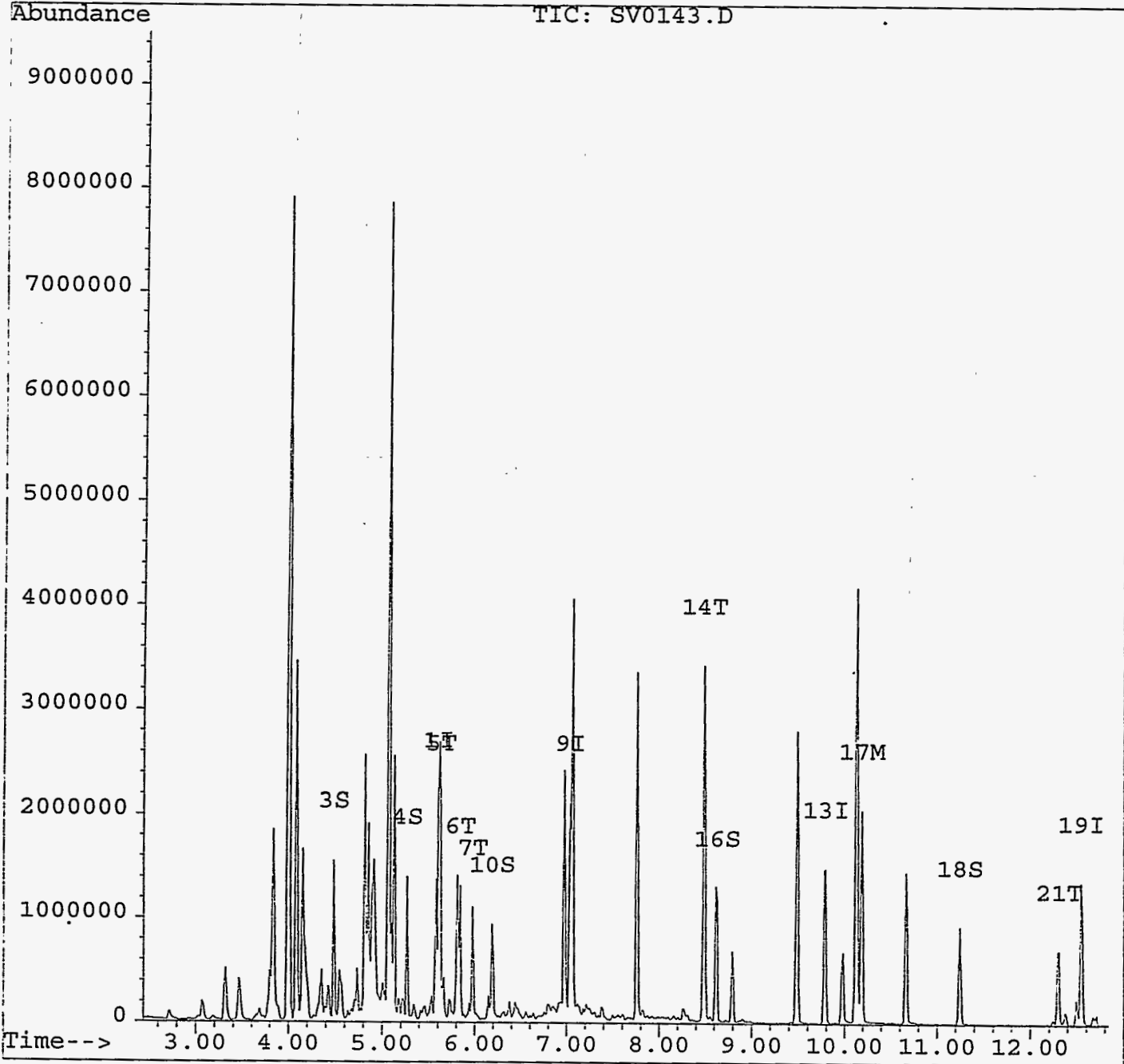
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN2495\SV0143.D  
Acq On : 24 Jan 96 8:27 pm  
Sample : ECO-004-05A  
Misc : SEMI TEST TCLP SOIL05A  
Quant Time: Jan 25 9:06 1996

Vial: 22  
Operator:  
Inst : 5972 - 35  
Multiplr: 2.00

Method : C:\HPCHEM\1\METHODS\METCLP.M  
Title : Method 8270  
Last Update : Thu Jan 25 08:20:05 1996  
Response via : Single Level Calibration

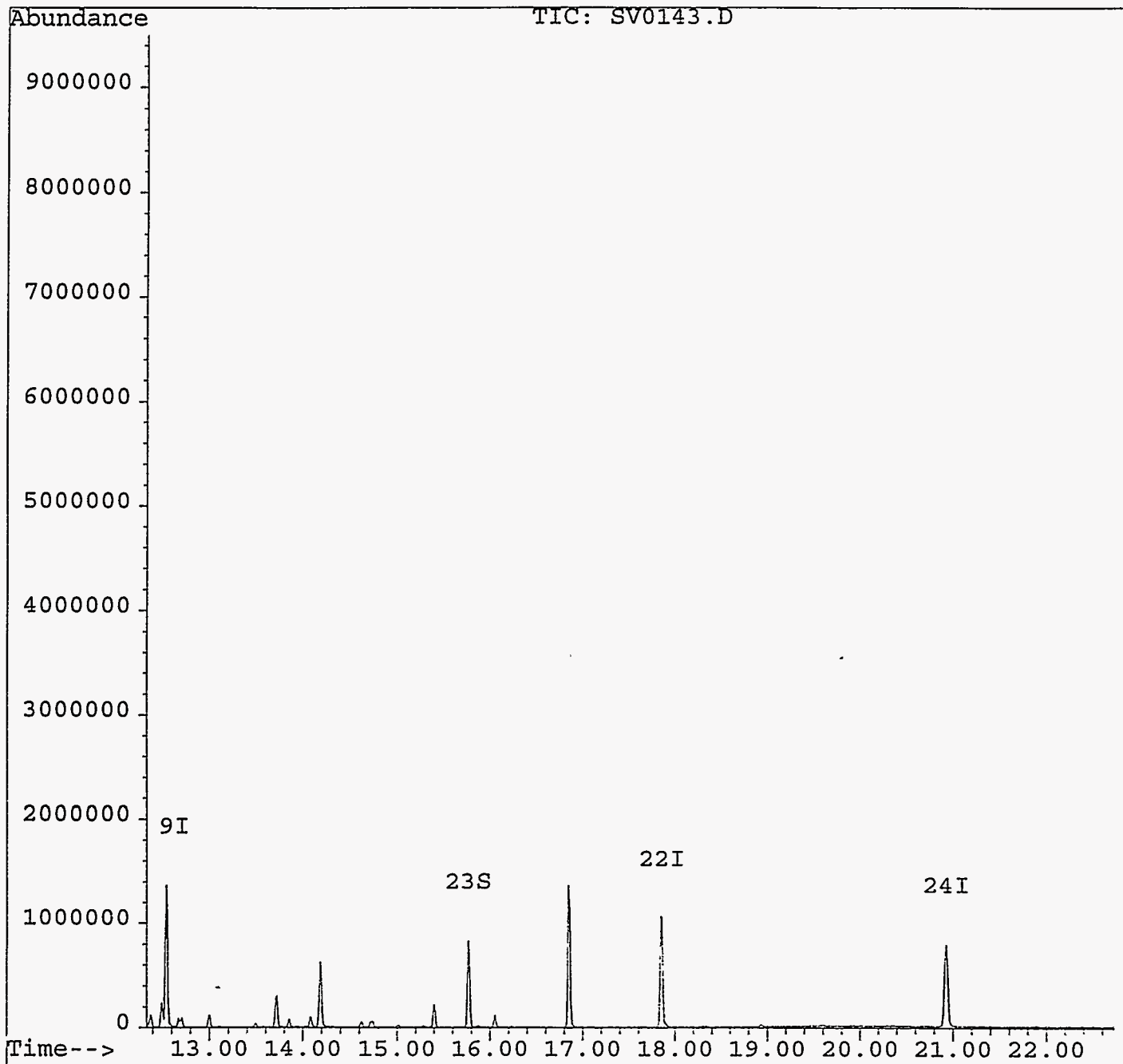


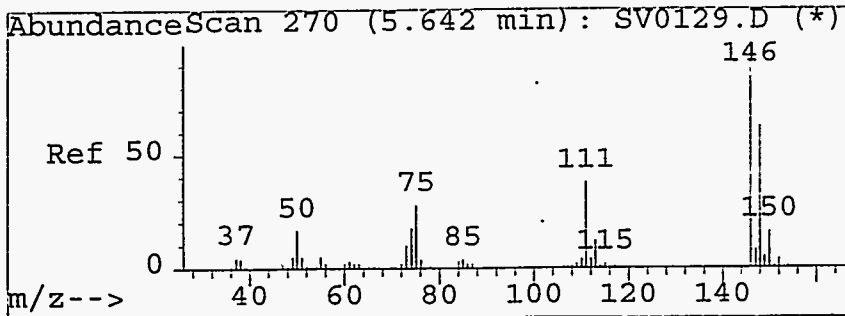
Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN2495\SV0143.D  
Acq On : 24 Jan 96 8:27 pm  
Sample : ECO-004-05A  
Misc : SEMI TEST TCLP SOIL05A  
Quant Time: Jan 25 9:06 1996

Vial: 22  
Operator:  
Inst : 5972 - 35  
Multiplr: 2.00

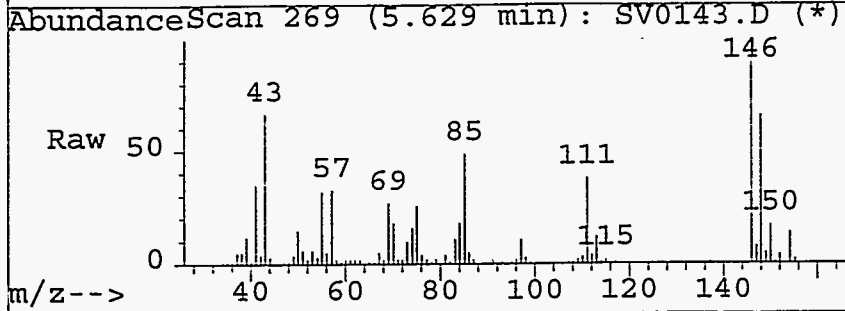
Method : C:\HPCHEM\1\METHODS\METCLP.M  
Title : Method 8270  
Last Update : Thu Jan 25 08:20:05 1996  
Response via : Single Level Calibration



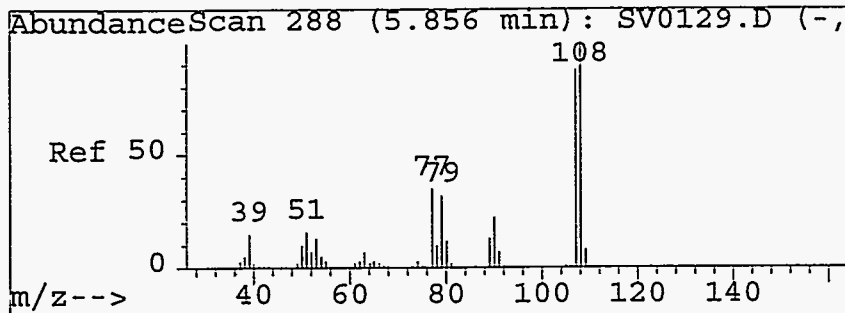
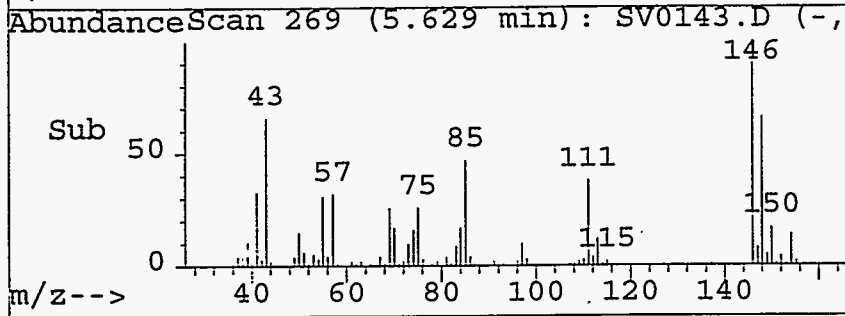
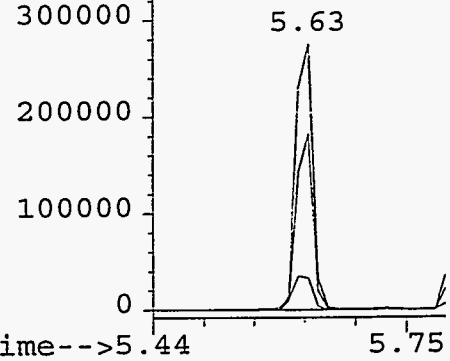


#5  
 1,4-Dichlorobenzene  
 Concen: 66.57 ug/L  
 RT: 5.63 min Scan# 269  
 Delta R.T. -0.01 min  
 Lab File: SV0143.D  
 Acq: 24 Jan 96 8:27 pm

Tgt Ion	Ratio	Lower	Upper
146	100		
148	66.2	43.5	83.5
113	11.9	0.0	34.6
0	0.0	0.0	0.0

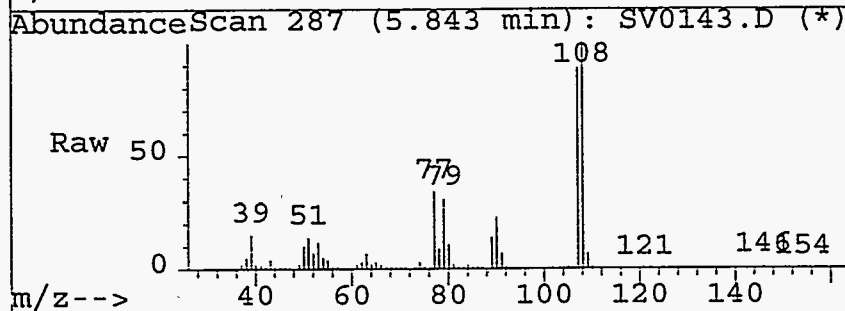


Abundance Ion 146.00 (145)  
 Ion 148.00 (147)  
 Ion 113.00 (112)

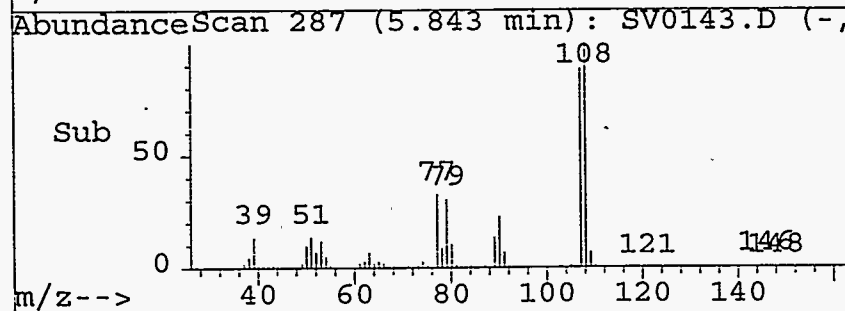
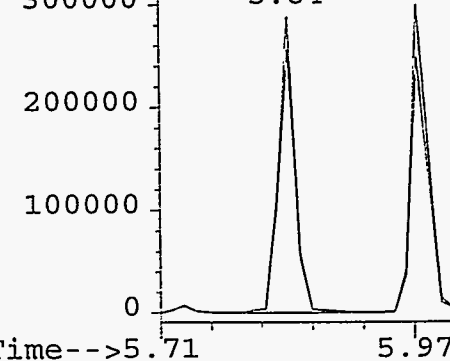


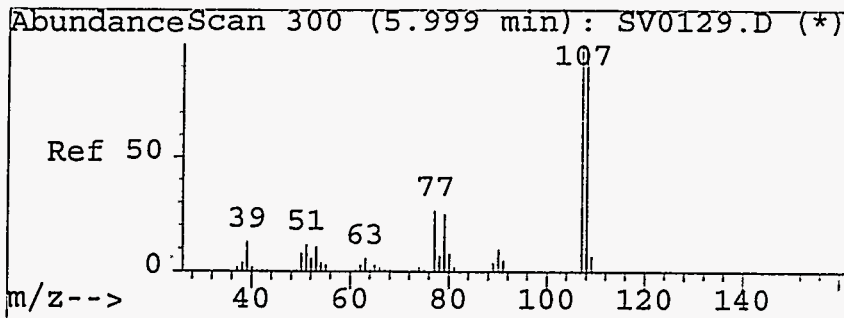
#6  
 2-Methylphenol  
 Concen: 69.75 ug/L  
 RT: 5.84 min Scan# 287  
 Delta R.T. -0.01 min  
 Lab File: SV0143.D  
 Acq: 24 Jan 96 8:27 pm

Tgt Ion	Ratio	Lower	Upper
108	100		
107	88.6	69.3	109.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0

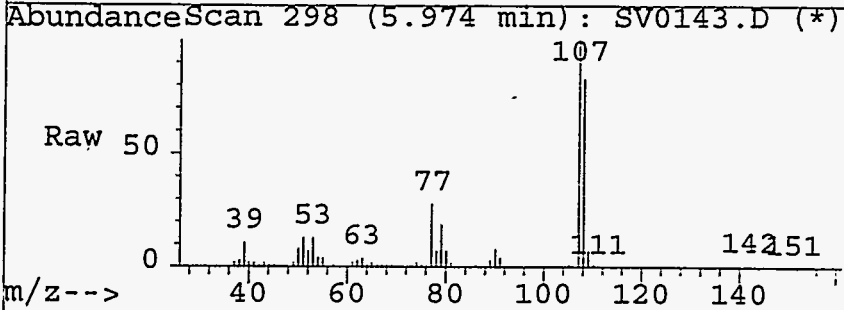


Abundance Ion 108.00 (107)  
 Ion 107.00 (106)



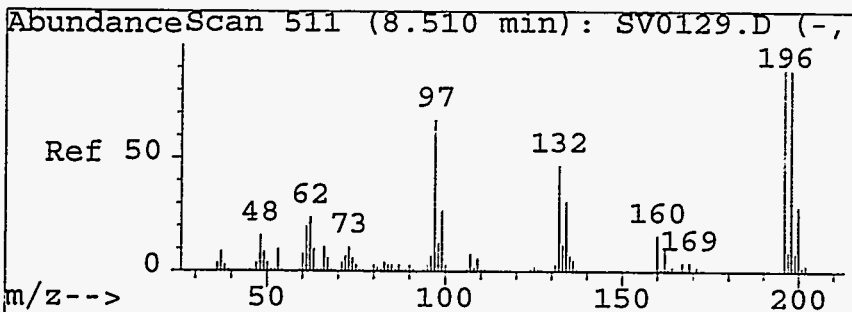
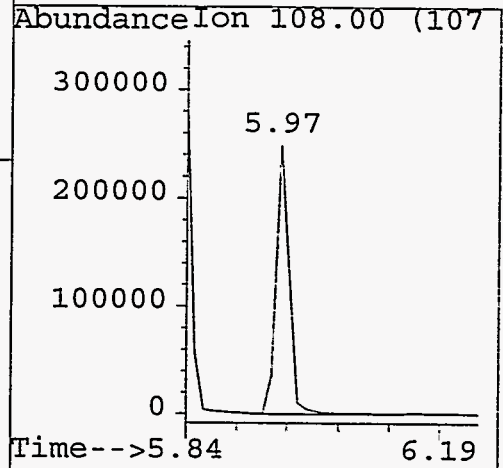
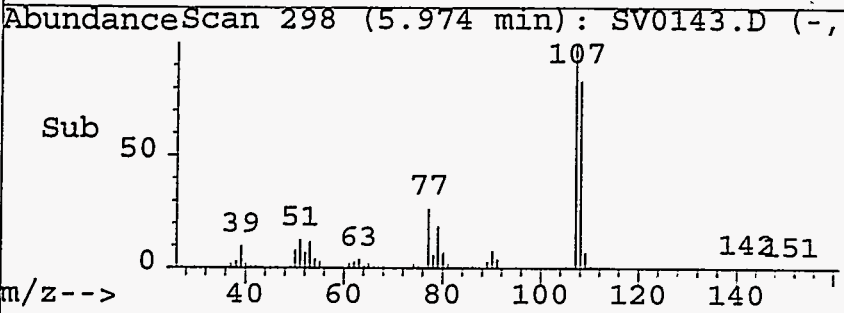


#7  
 3&4-Methylphenol  
 Concen: 61.70 ug/L  
 RT: 5.97 min Scan# 298  
 Delta R.T. -0.02 min  
 Lab File: SV0143.D  
 Acq: 24 Jan 96 8:27 pm

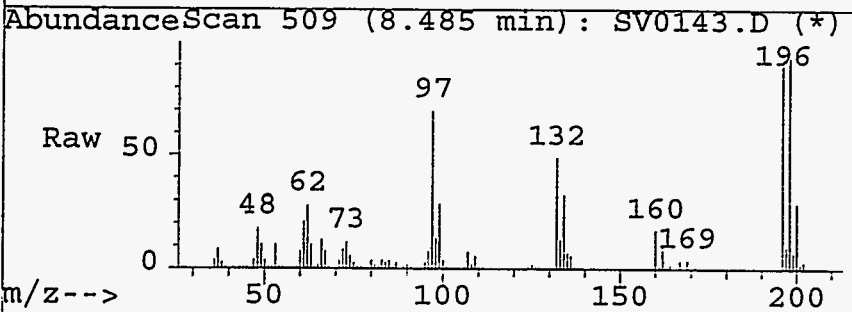


Tgt Ion:108 Resp: 315832

Ion	Ratio	Lower	Upper
108	100		
0	0.0	0.0	0.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

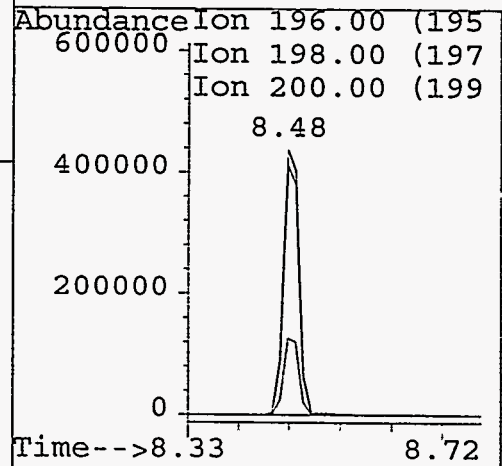
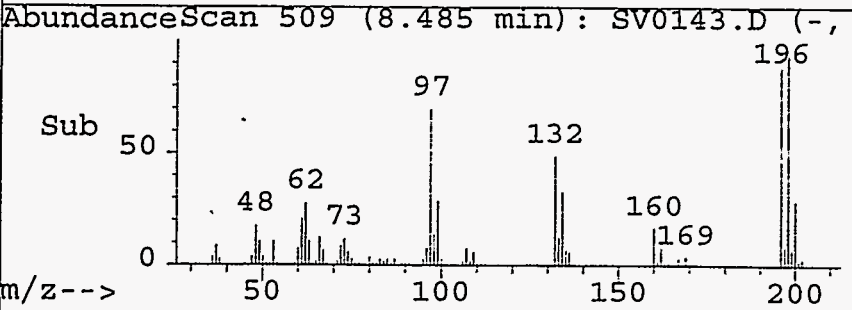


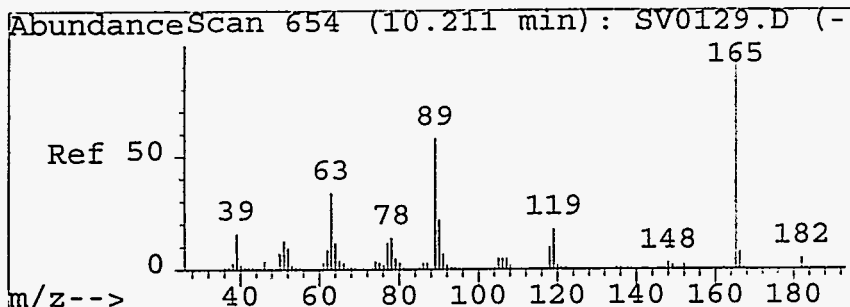
#14  
 2,4,6-Trichlorophenol  
 Concen: 369.00 ug/L  
 RT: 8.48 min Scan# 509  
 Delta R.T. -0.02 min  
 Lab File: SV0143.D  
 Acq: 24 Jan 96 8:27 pm



Tgt Ion:196 Resp: 732938

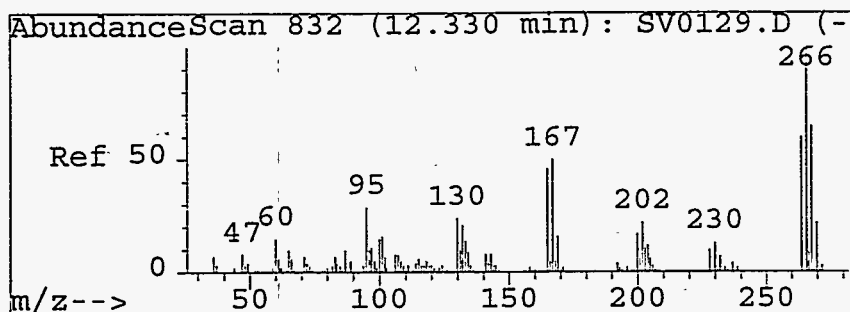
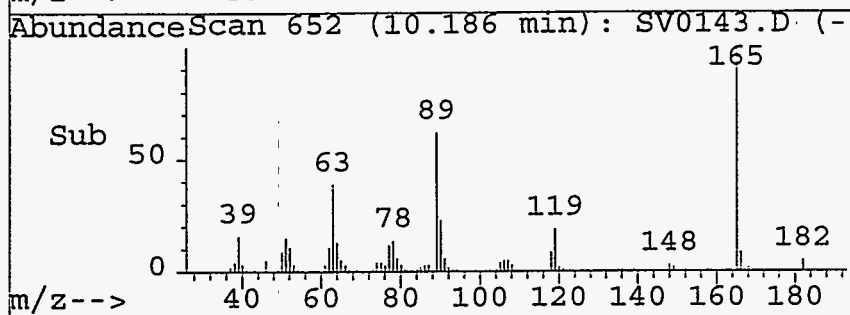
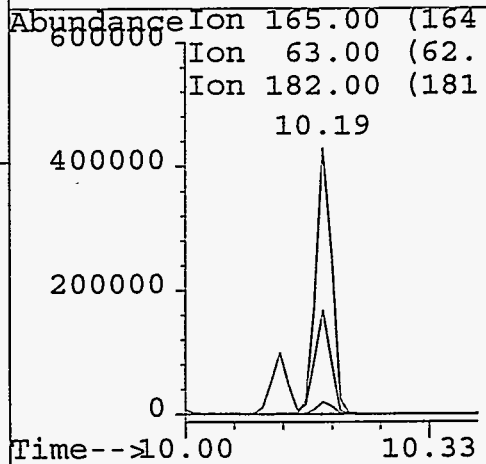
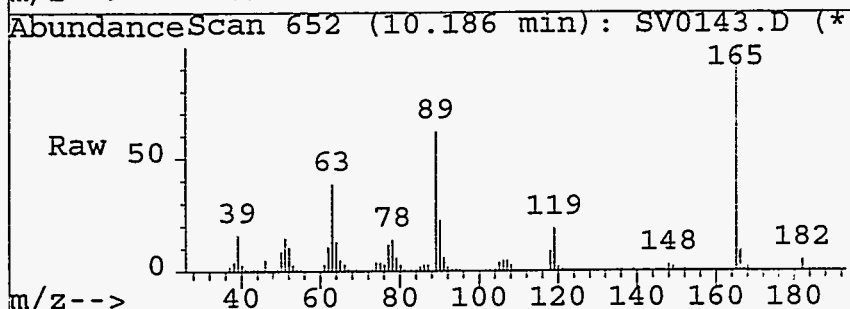
Ion	Ratio	Lower	Upper
196	100		
198	93.8	71.5	111.5
200	28.9	7.8	47.8
0	0.0	0.0	0.0





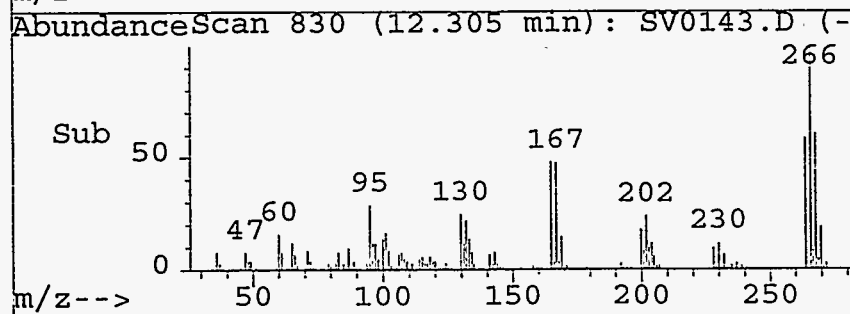
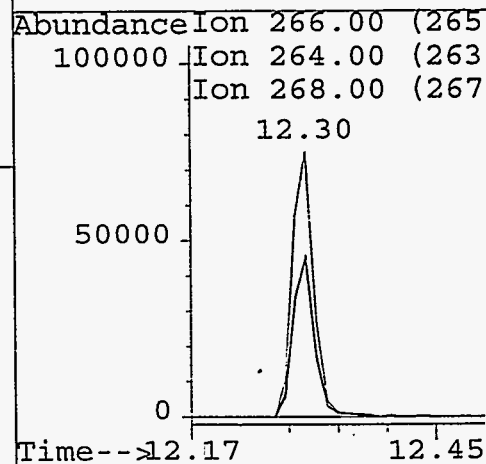
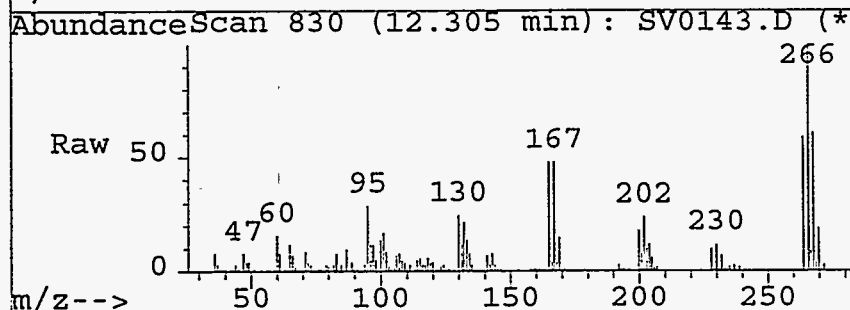
#17  
 2,4-Dinitrotoluene  
 Concen: 329.95 ug/L  
 RT: 10.19 min Scan# 652  
 Delta R.T. -0.02 min  
 Lab File: SV0143.D  
 Acq: 24 Jan 96 8:27 pm

Tgt Ion	Ratio	Lower	Upper
165	100		
63	39.0	25.9	65.9
182	4.7	0.0	24.6
0	0.0	0.0	0.0



#21  
 Pentachlorophenol  
 Concen: 134.41 ug/L  
 RT: 12.30 min Scan# 830  
 Delta R.T. -0.02 min  
 Lab File: SV0143.D  
 Acq: 24 Jan 96 8:27 pm

Tgt Ion	Ratio	Lower	Upper
266	100		
264	59.2	41.0	81.0
268	61.0	38.2	78.2
0	0.0	0.0	0.0



Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN2495\SV0137.D  
 Acq On : 24 Jan 96 4:59 pm  
 Sample : ECO-004-06A  
 Misc : SEMI TEST TCLP SOIL06A 1:5  
 Quant Time: Jan 25 9:55 1996

Vial: 16  
 Operator:  
 Inst : 5972 - 35  
 Multiplr: 10.00

Method : C:\HPCHEM\1\METHODS\METCLP.M  
 Title : Method 8270  
 Last Update : Thu Jan 25 08:20:05 1996  
 Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) 1,4-Dichlorobenzene-d4	5.62	152	271552	40.00	ug/L	0.00
9) Naphthalene-d8	7.03	136	851353	40.00	ug/L	-0.01
13) Acenaphthene-d10	9.79	164	429841	40.00	ug/L	-0.01
19) Phenanthrene-d10	12.56	188	621189	40.00	ug/L	-0.01
22) Chrysene-d12	17.86	240	397421	40.00	ug/L	-0.01
24) Perylene-d12	20.93	264	400204	40.00	ug/L	-0.04

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recovery
3) 2-Fluorophenol	4.49	112	45652	53.55	ug/L	26.77%
4) Phenol-d5	5.27	99	48062	48.62	ug/L	24.31%
10) Nitrobenzene-d5	6.20	82	32468	47.10	ug/L	23.55%
16) 2-Fluorobiphenyl	8.63	172	62186	53.56	ug/L	53.56%
18) 2,4,6-Tribromophenol	11.26	330	7458	70.21	ug/L	35.10%
23) Terphenyl-d14	15.78	244	28907	33.07	ug/L	33.07%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
6) 2-Methylphenol	5.84	108	11383	17.11	ug/L	100
14) 2,4,6-Trichlorophenol	8.50	196	35935	132.30	ug/L	97
17) 2,4-Dinitrotoluene	10.20	165	22213	81.72	ug/L	89
21) Pentachlorophenol	12.32	266	8443	60.15	ug/L	99

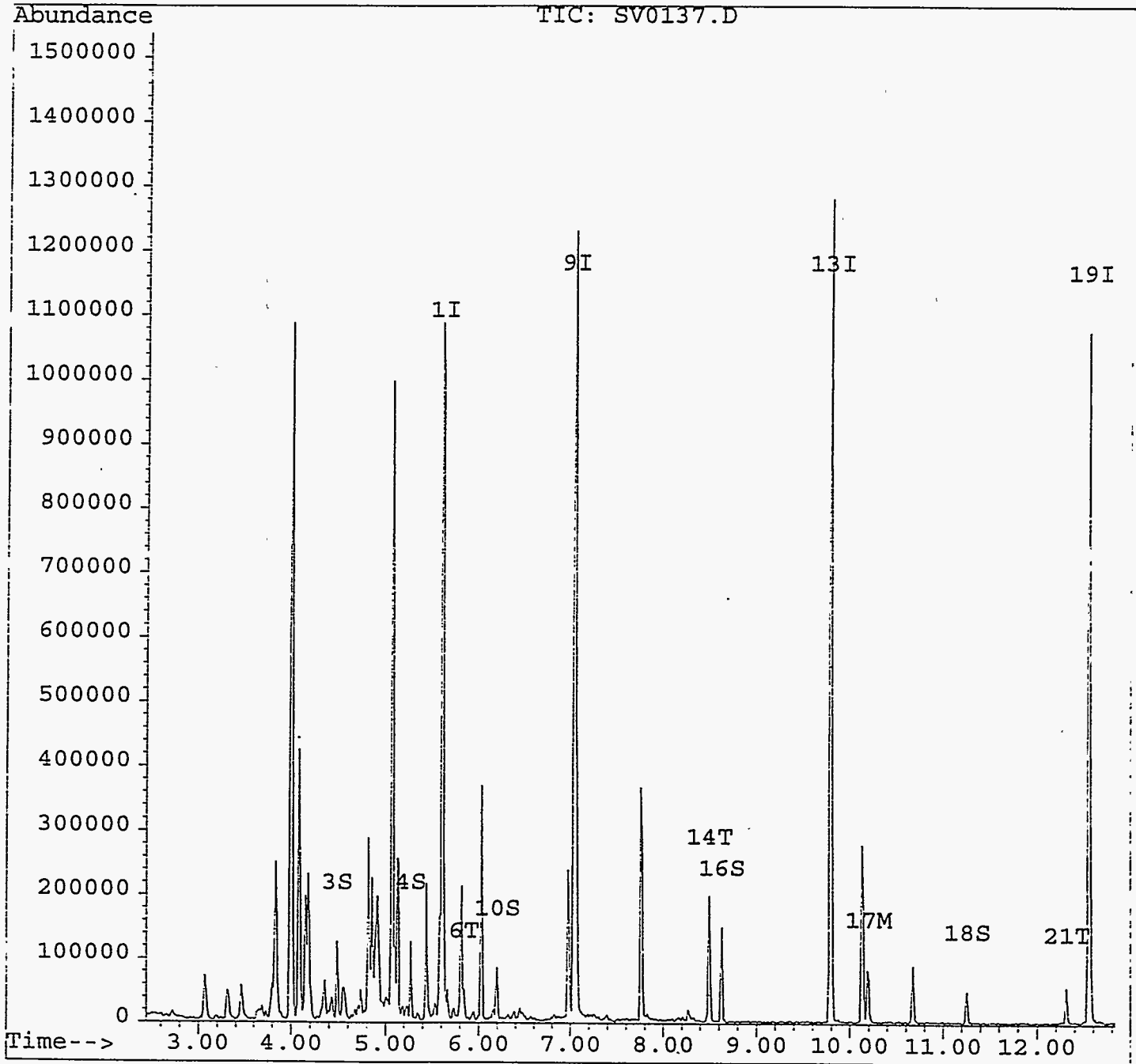


Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN2495\SV0137.D  
Acq On : 24 Jan 96 4:59 pm  
Sample : ECO-004-06A  
Misc : SEMI TEST TCLP SOIL06A 1:5  
Quant Time: Jan 25 9:55 1996

Vial: 16  
Operator:  
Inst : 5972 - 35  
Multiplr: 10.00

Method : C:\HPCHEM\1\METHODS\METCLP.M  
Title : Method 8270  
Last Update : Thu Jan 25 08:20:05 1996  
Response via : Single Level Calibration

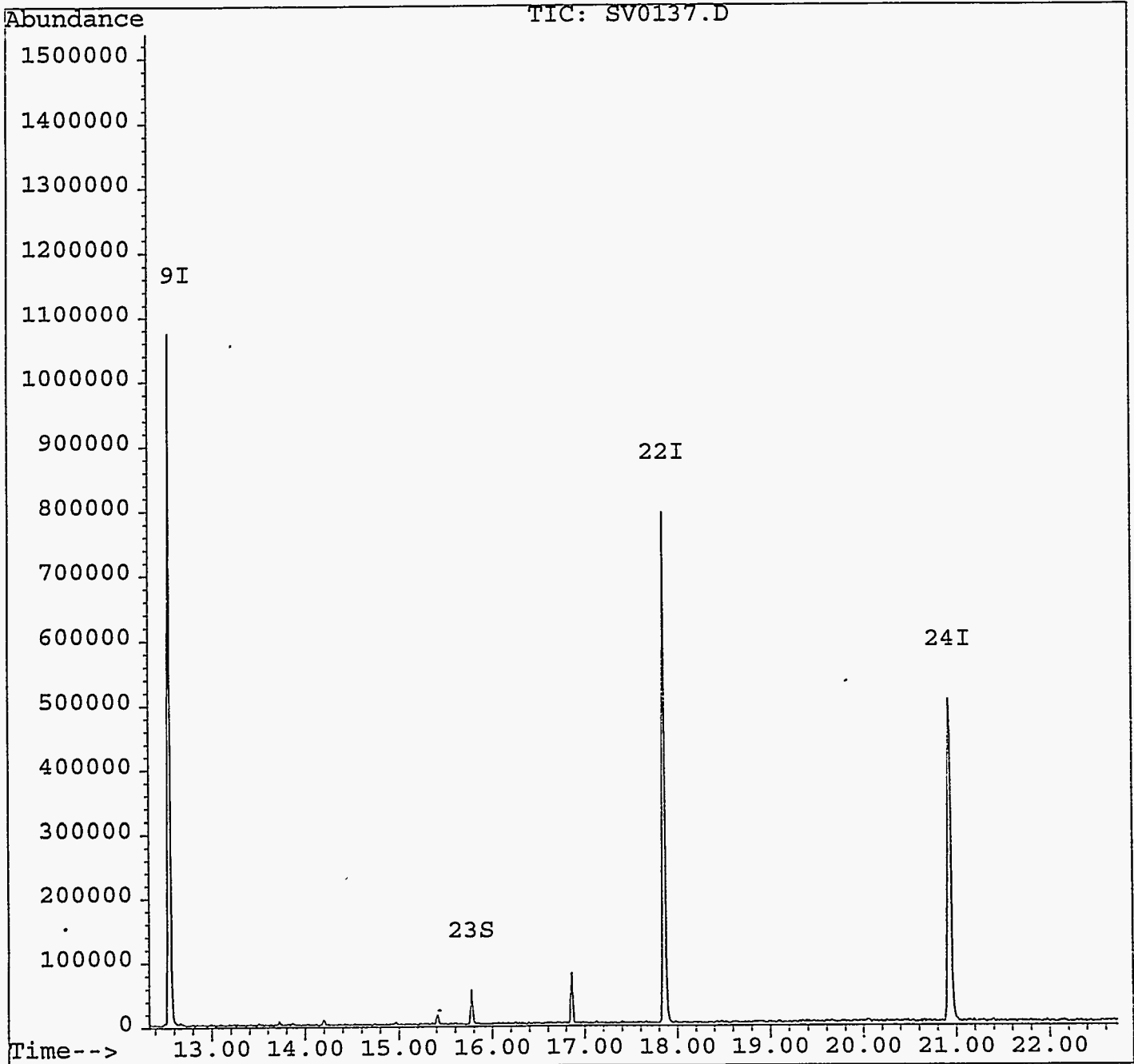


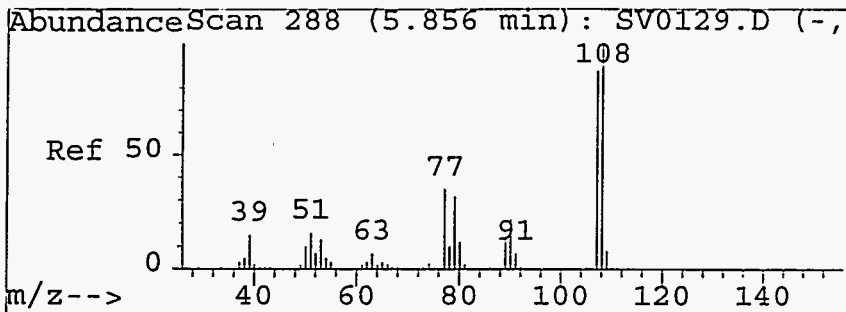
Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN2495\SV0137.D  
Acq On : 24 Jan 96 4:59 pm  
Sample : ECO-004-06A  
Misc : SEMI TEST TCLP SOIL06A 1:5  
Quant Time: Jan 25 9:55 1996

Vial: 16  
Operator:  
Inst : 5972 - 35  
Multiplr: 10.00

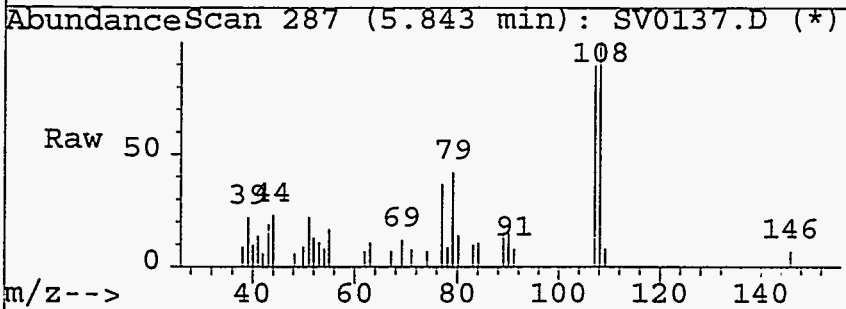
Method : C:\HPCHEM\1\METHODS\METCLP.M  
Title : Method 8270  
Last Update : Thu Jan 25 08:20:05 1996  
Response via : Single Level Calibration



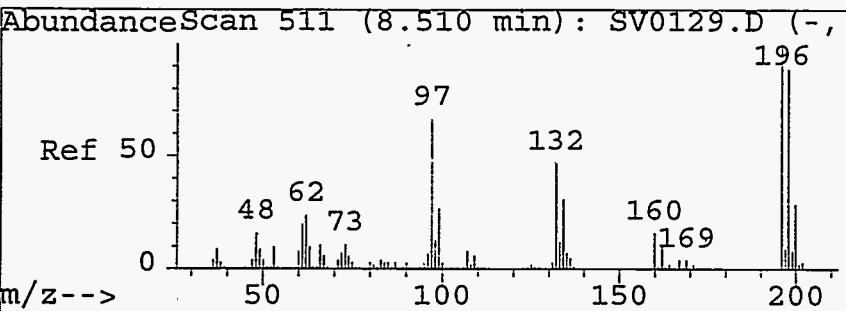
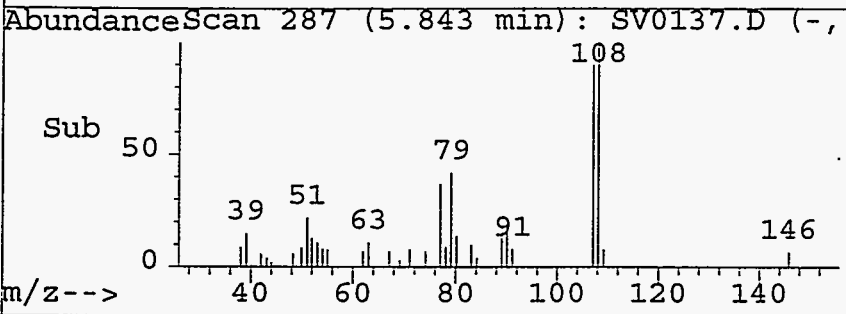
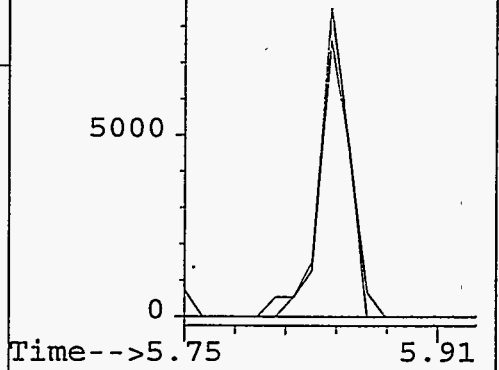


#6  
 2-Methylphenol  
 Concen: 17.11 ug/L  
 RT: 5.84 min Scan# 287  
 Delta R.T. -0.01 min  
 Lab File: SV0137.D  
 Acq: 24 Jan 96 4:59 pm

Tgt Ion	Ratio	Lower	Upper
108	100		
107	89.6	69.3	109.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0

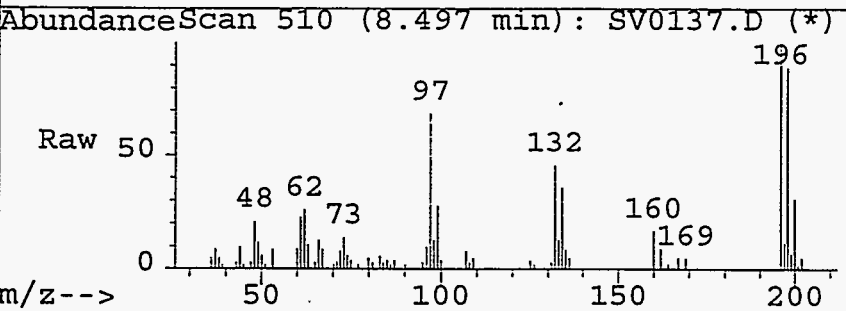


Abundance Ion 108.00 (107  
 10000 Ion 107.00 (106  
 5.84

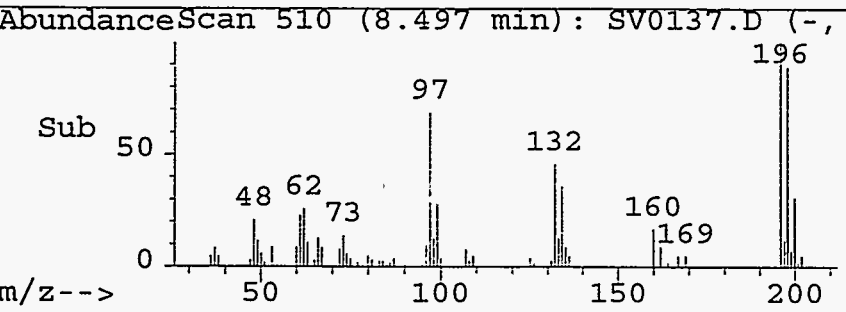
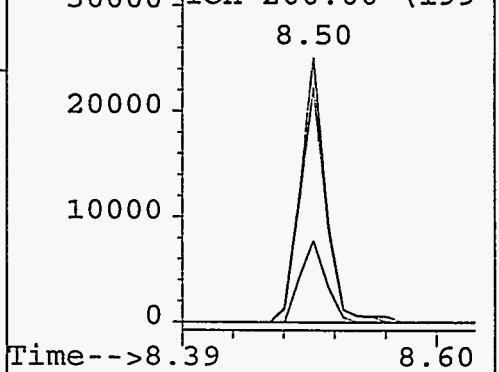


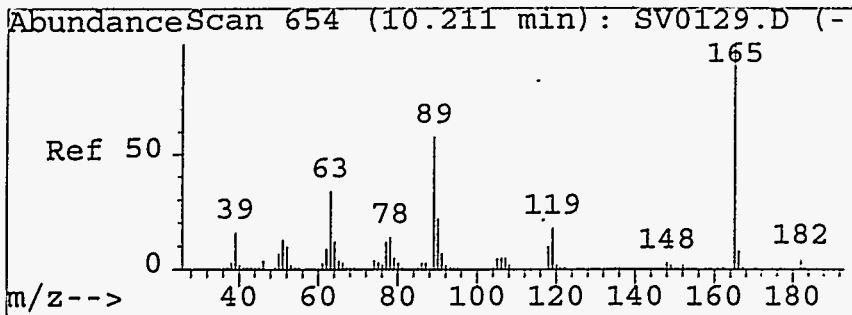
#14  
 2,4,6-Trichlorophenol  
 Concen: 132.30 ug/L  
 RT: 8.50 min Scan# 510  
 Delta R.T. -0.01 min  
 Lab File: SV0137.D  
 Acq: 24 Jan 96 4:59 pm

Tgt Ion	Ratio	Lower	Upper
196	100		
198	88.9	71.5	111.5
200	31.0	7.8	47.8
0	0.0	0.0	0.0



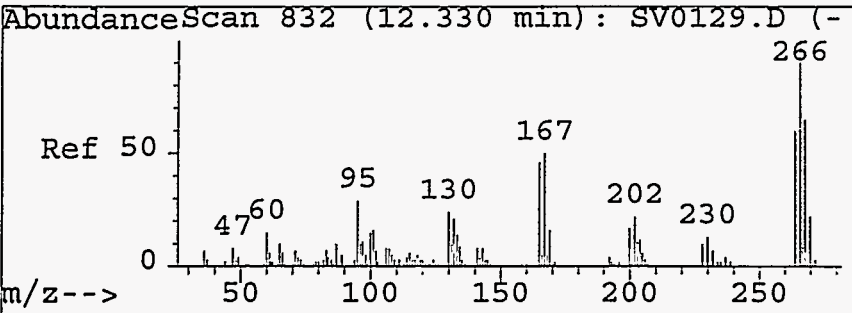
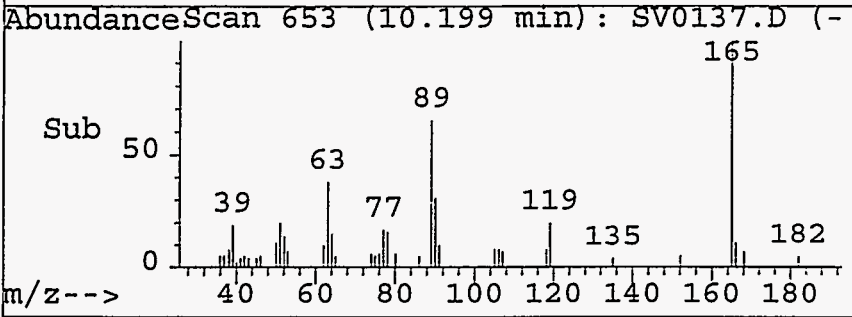
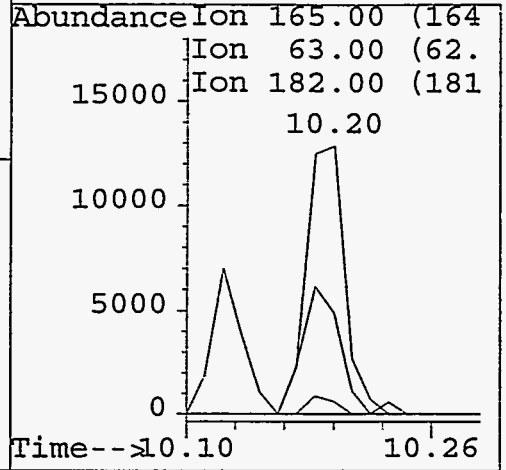
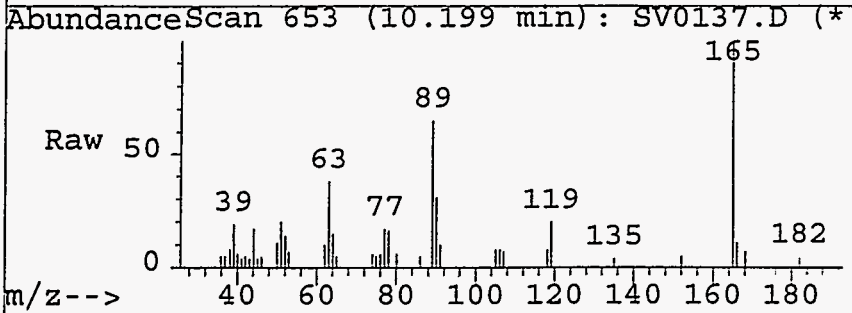
Abundance Ion 196.00 (195  
 30000 Ion 198.00 (197  
 Ion 200.00 (199  
 8.50





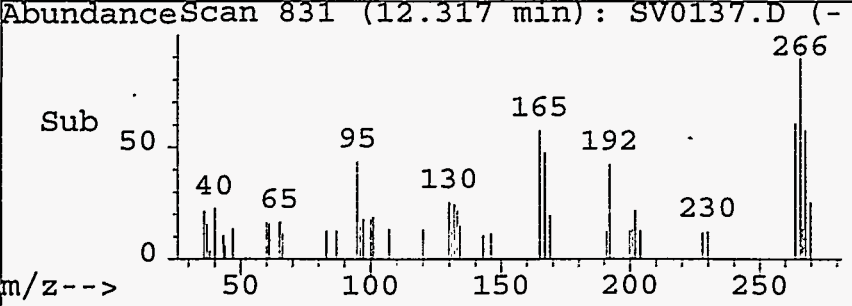
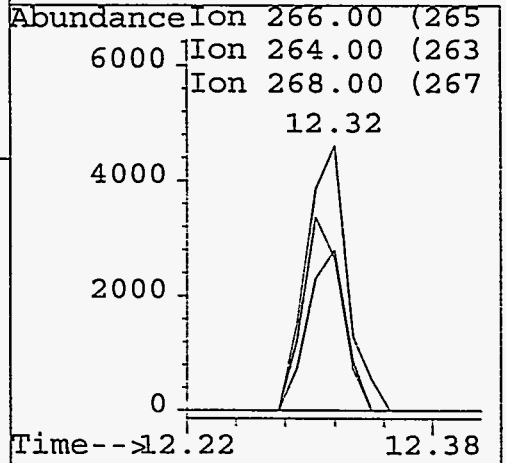
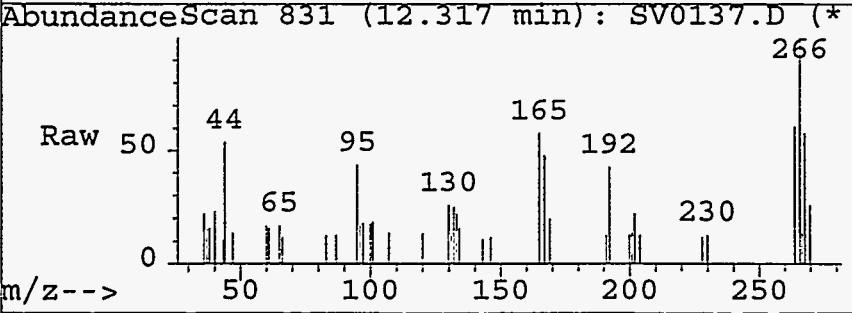
#17  
 2,4-Dinitrotoluene  
 Concen: 81.72 ug/L  
 RT: 10.20 min Scan# 653  
 Delta R.T. -0.01 min  
 Lab File: SV0137.D  
 Acq: 24 Jan 96 4:59 pm

Tgt Ion	Resp	Lower	Upper
165	22213	100	
63	38.2	25.9	65.9
182	4.8	0.0	24.6
0	0.0	0.0	0.0



#21  
 Pentachlorophenol  
 Concen: 60.15 ug/L  
 RT: 12.32 min Scan# 831  
 Delta R.T. -0.01 min  
 Lab File: SV0137.D  
 Acq: 24 Jan 96 4:59 pm

Tgt Ion	Resp	Lower	Upper
266	8443	100	
264	60.6	41.0	81.0
268	57.6	38.2	78.2
0	0.0	0.0	0.0



Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN2495\SV0144.D  
 Acq On : 24 Jan 96 9:02 pm  
 Sample : ECO-004-06A  
 Misc : SEMI TEST TCLP SOIL06A  
 Quant Time: Jan 25 9:56 1996

Vial: 23  
 Operator:  
 Inst : 5972 - 35  
 Multiplr: 2.00

Method : C:\HPCHEM\1\METHODS\METCLP.M  
 Title : Method 8270  
 Last Update : Thu Jan 25 08:20:05 1996  
 Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) 1,4-Dichlorobenzene-d4	5.61	152	426705	40.00	ug/L	0.00
9) Naphthalene-d8	7.04	136	1341822	40.00	ug/L	0.00
13) Acenaphthene-d10	9.79	164	684895	40.00	ug/L	-0.02
19) Phenanthrene-d10	12.55	188	905238	40.00	ug/L	-0.02
22) Chrysene-d12	17.85	240	600941	40.00	ug/L	-0.02
24) Perylene-d12	20.94	264	612552	40.00	ug/L	-0.03

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recovery
3) 2-Fluorophenol	4.49	112	375148	56.01	ug/L	28.00%
4) Phenol-d5	5.26	99	409018	52.67	ug/L	26.33%
10) Nitrobenzene-d5	6.19	82	315871	58.14	ug/L	29.07%
16) 2-Fluorobiphenyl	8.62	172	512198	55.37	ug/L	55.37%
18) 2,4,6-Tribromophenol	11.25	330	86078	101.71	ug/L	50.86%
23) Terphenyl-d14	15.77	244	252090	38.15	ug/L	38.15%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
6) 2-Methylphenol	5.85	108	92020	17.61	ug/L	96
14) 2,4,6-Trichlorophenol	8.49	196	310192	143.35	ug/L	98
17) 2,4-Dinitrotoluene	10.19	165	341709	157.79	ug/L	84
21) Pentachlorophenol	12.30	266	119876	117.22	ug/L	91

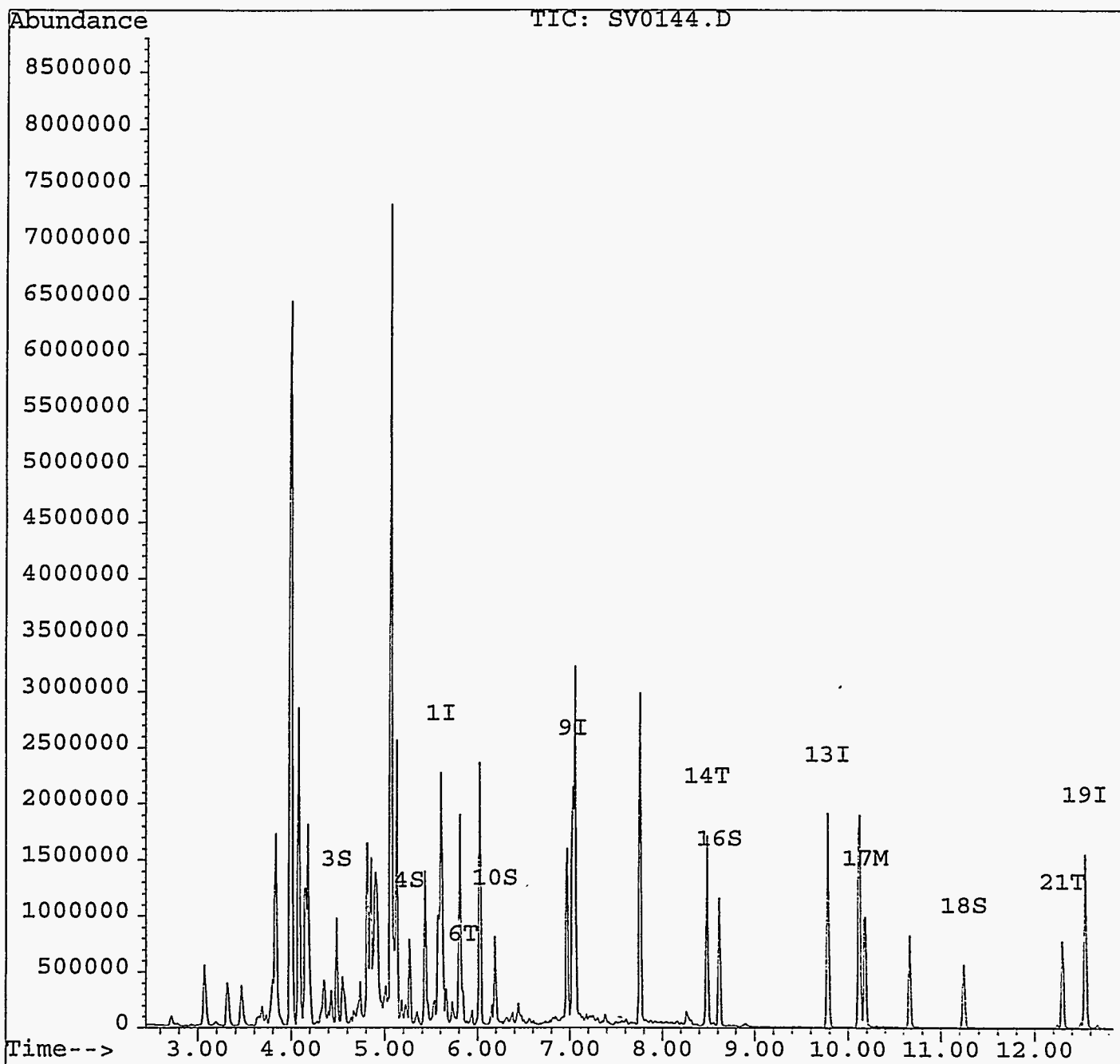
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN2495\SV0144.D  
Acq On : 24 Jan 96 9:02 pm  
Sample : ECO-004-06A  
Misc : SEMI TEST TCLP SOIL06A  
Quant Time: Jan 25 9:56 1996

Vial: 23  
Operator:  
Inst : 5972 - 35  
Multiplr: 2.00

Method : C:\HPCHEM\1\METHODS\METCLP.M  
Title : Method 8270  
Last Update : Thu Jan 25 08:20:05 1996  
Response via : Single Level Calibration

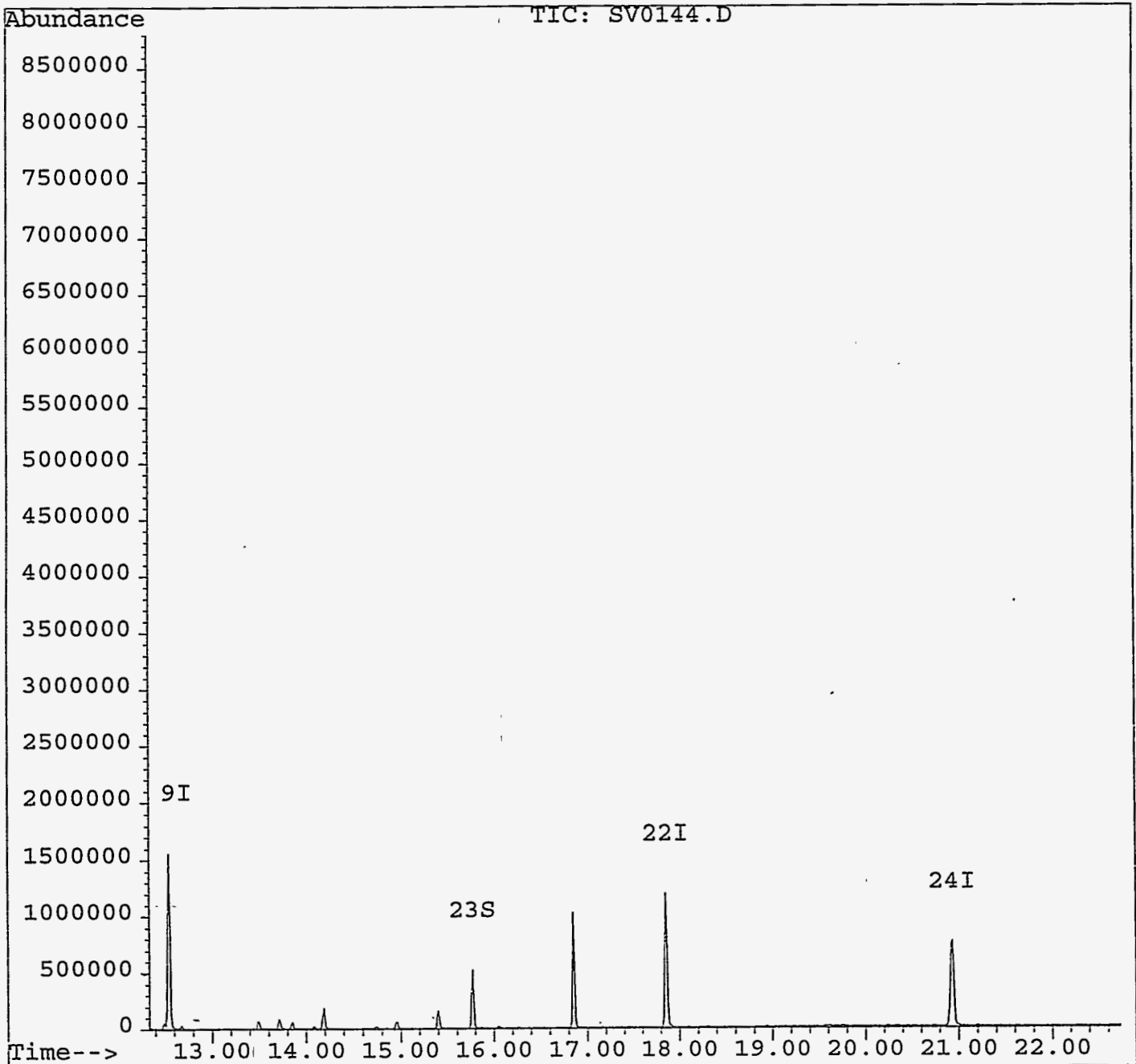


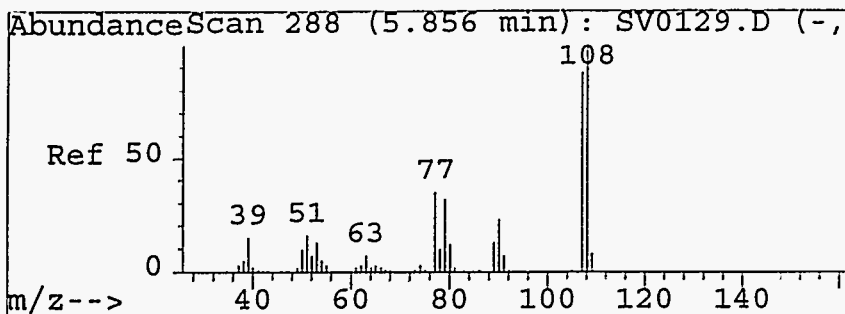
Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN2495\SV0144.D  
Acq On : 24 Jan 96 9:02 pm  
Sample : ECO-004-06A  
Misc : SEMI TEST TCLP SOIL06A  
Quant Time: Jan 25 9:56 1996

Vial: 23  
Operator:  
Inst : 5972 - 35  
Multiplr: 2.00

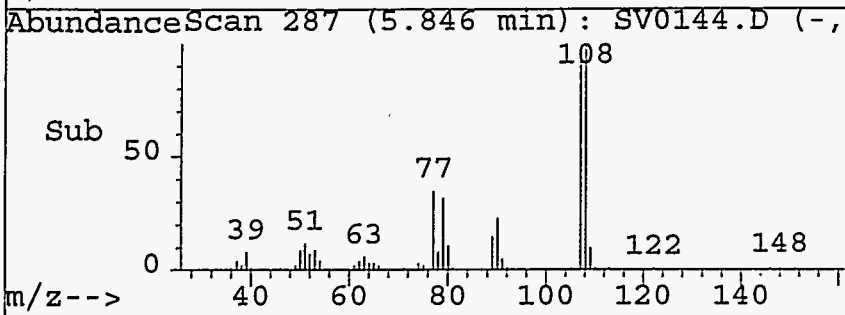
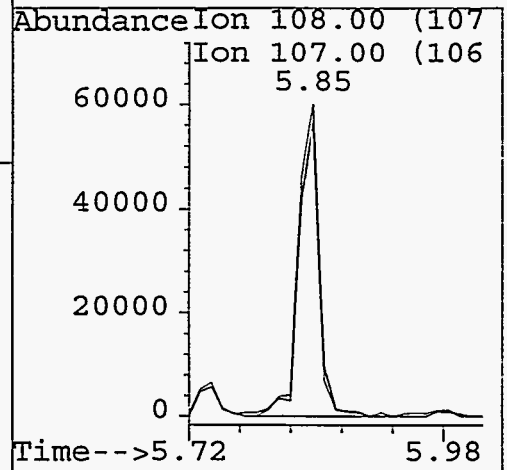
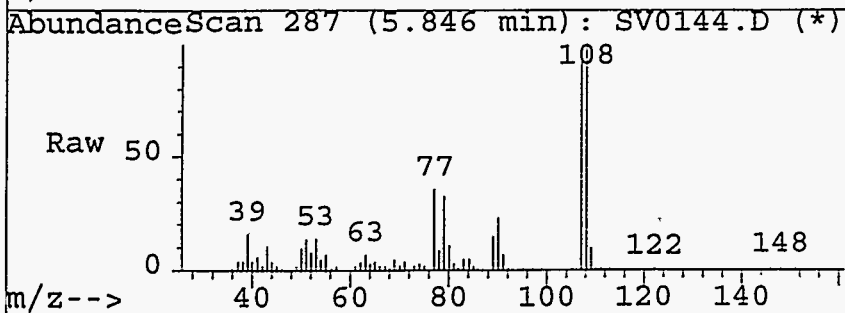
Method : C:\HPCHEM\1\METHODS\METCLP.M  
Title : Method 8270  
Last Update : Thu Jan 25 08:20:05 1996  
Response via : Single Level Calibration





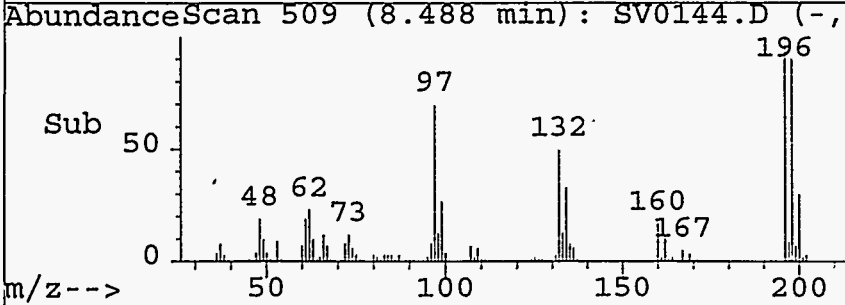
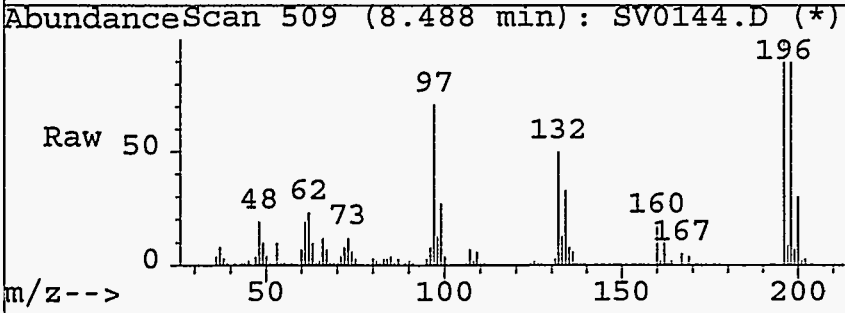
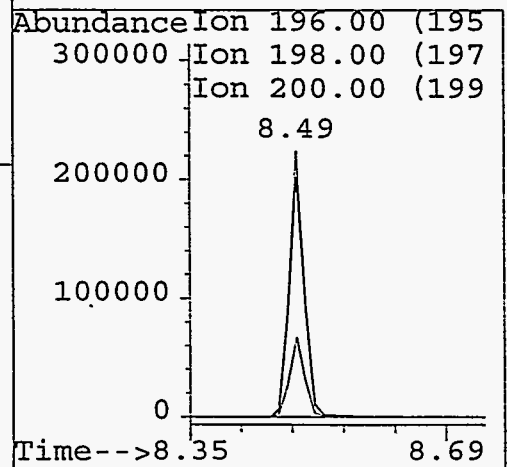
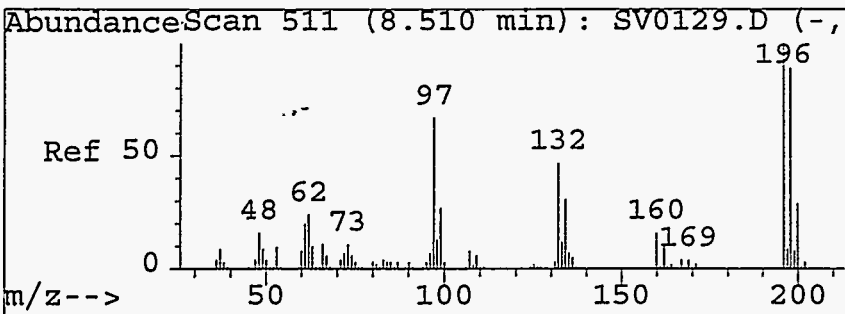
#6  
 2-Methylphenol  
 Concen: 17.61 ug/L  
 RT: 5.85 min Scan# 287  
 Delta R.T. -0.01 min  
 Lab File: SV0144.D  
 Acq: 24 Jan 96 9:02 pm

Tgt Ion	Ratio	Lower	Upper
108	100		
107	93.2	69.3	109.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0

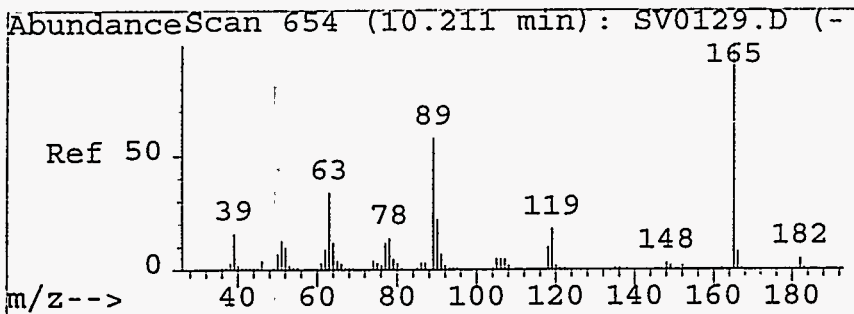


#14  
 2,4,6-Trichlorophenol  
 Concen: 143.35 ug/L  
 RT: 8.49 min Scan# 509  
 Delta R.T. -0.02 min  
 Lab File: SV0144.D  
 Acq: 24 Jan 96 9:02 pm

Tgt Ion	Ratio	Lower	Upper
196	100		
198	90.1	71.5	111.5
200	30.0	7.8	47.8
0	0.0	0.0	0.0

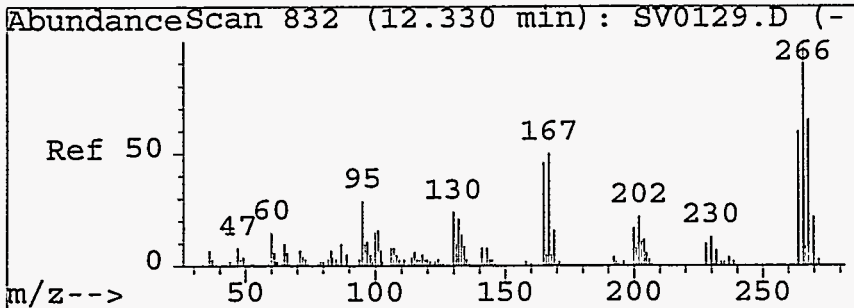
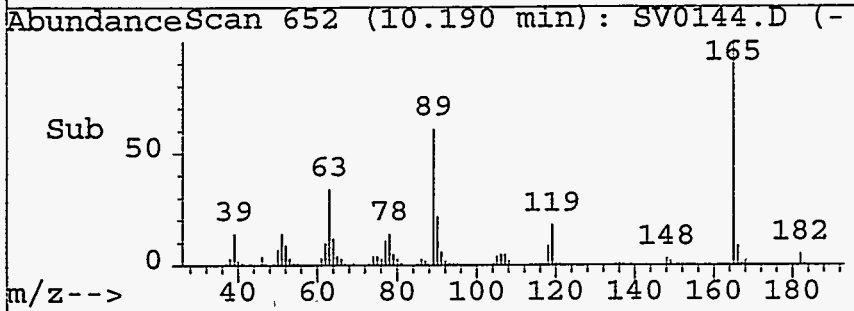
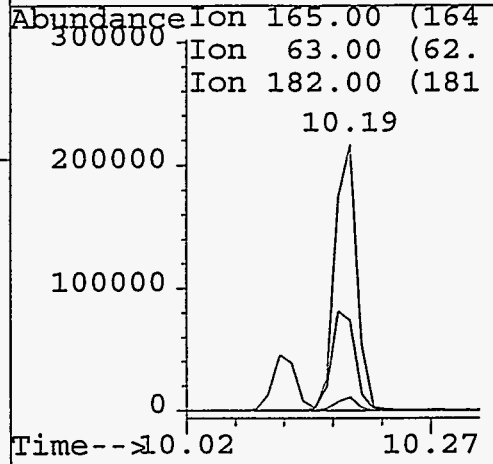
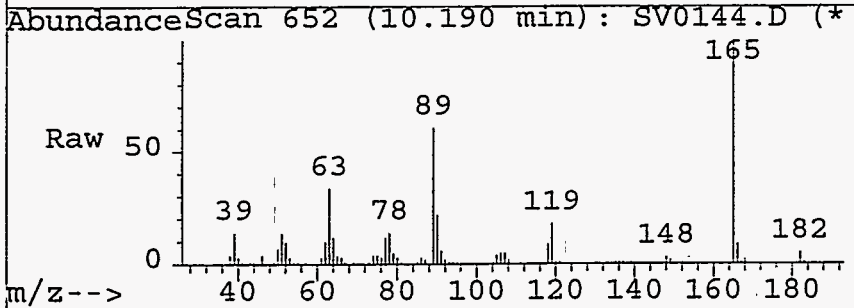






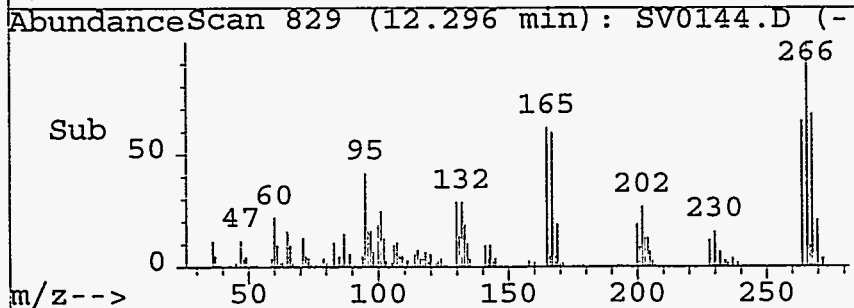
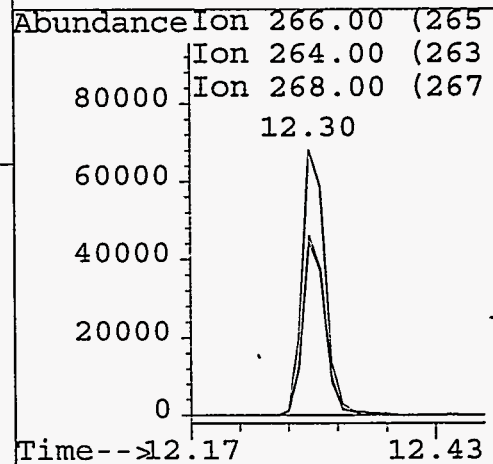
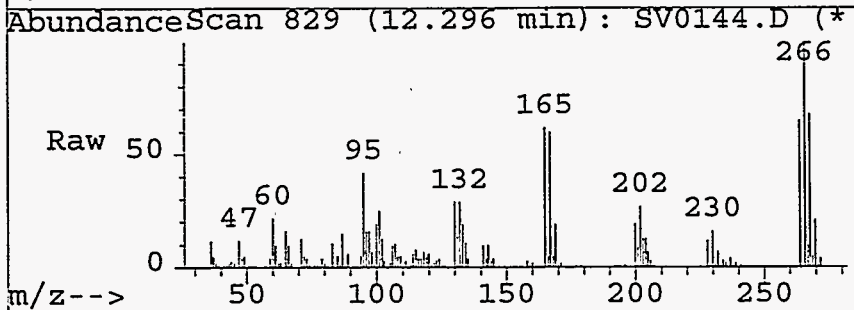
#17  
 2,4-Dinitrotoluene  
 Concen: 157.79 ug/L  
 RT: 10.19 min Scan# 652  
 Delta R.T. -0.02 min  
 Lab File: SV0144.D  
 Acq: 24 Jan 96 9:02 pm

Tgt Ion	Ratio	Lower	Upper
165	100		
63	34.1	25.9	65.9
182	5.1	0.0	24.6
0	0.0	0.0	0.0



#21  
 Pentachlorophenol  
 Concen: 117.22 ug/L  
 RT: 12.30 min Scan# 829  
 Delta R.T. -0.03 min  
 Lab File: SV0144.D  
 Acq: 24 Jan 96 9:02 pm

Tgt Ion	Ratio	Lower	Upper
266	100		
264	65.0	41.0	81.0
268	67.6	38.2	78.2
0	0.0	0.0	0.0



Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN2495\SV0138.D  
 Acq On : 24 Jan 96 5:36 pm  
 Sample : ECO-004-07A  
 Misc : SEMI TEST TCLP SOIL07A 1:5  
 Quant Time: Jan 25 9:56 1996

Vial: 17  
 Operator:  
 Inst : 5972 - 35  
 Multiplr: 10.00

Method : C:\HPCHEM\1\METHODS\METCLP.M  
 Title : Method 8270  
 Last Update : Thu Jan 25 08:20:05 1996  
 Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) 1,4-Dichlorobenzene-d4	5.62	152	311569	40.00	ug/L	0.00
9) Naphthalene-d8	7.03	136	1004570	40.00	ug/L	-0.01
13) Acenaphthene-d10	9.79	164	516031	40.00	ug/L	-0.01
19) Phenanthrene-d10	12.56	188	701660	40.00	ug/L	-0.01
22) Chrysene-d12	17.86	240	450427	40.00	ug/L	-0.01
24) Perylene-d12	20.95	264	498438	40.00	ug/L	-0.02
System Monitoring Compounds						%Recovery
3) 2-Fluorophenol	4.49	112	86440	88.37	ug/L	44.18%
4) Phenol-d5	5.27	99	86727	76.47	ug/L	38.24%
10) Nitrobenzene-d5	6.20	82	57167	70.27	ug/L	35.14%
16) 2-Fluorobiphenyl	8.63	172	102115	73.26	ug/L	73.26%
18) 2,4,6-Tribromophenol	11.26	330	15813	124.00	ug/L	62.00%
23) Terphenyl-d14	15.78	244	41701	42.10	ug/L	42.10%
Target Compounds						Qvalue
6) 2-Methylphenol	5.84	108	24987	32.74	ug/L	97
14) 2,4,6-Trichlorophenol	8.50	196	70519	216.27	ug/L	91
17) 2,4-Dinitrotoluene	10.19	165	41032	125.74	ug/L	97
21) Pentachlorophenol	12.31	266	21964	138.54	ug/L	91

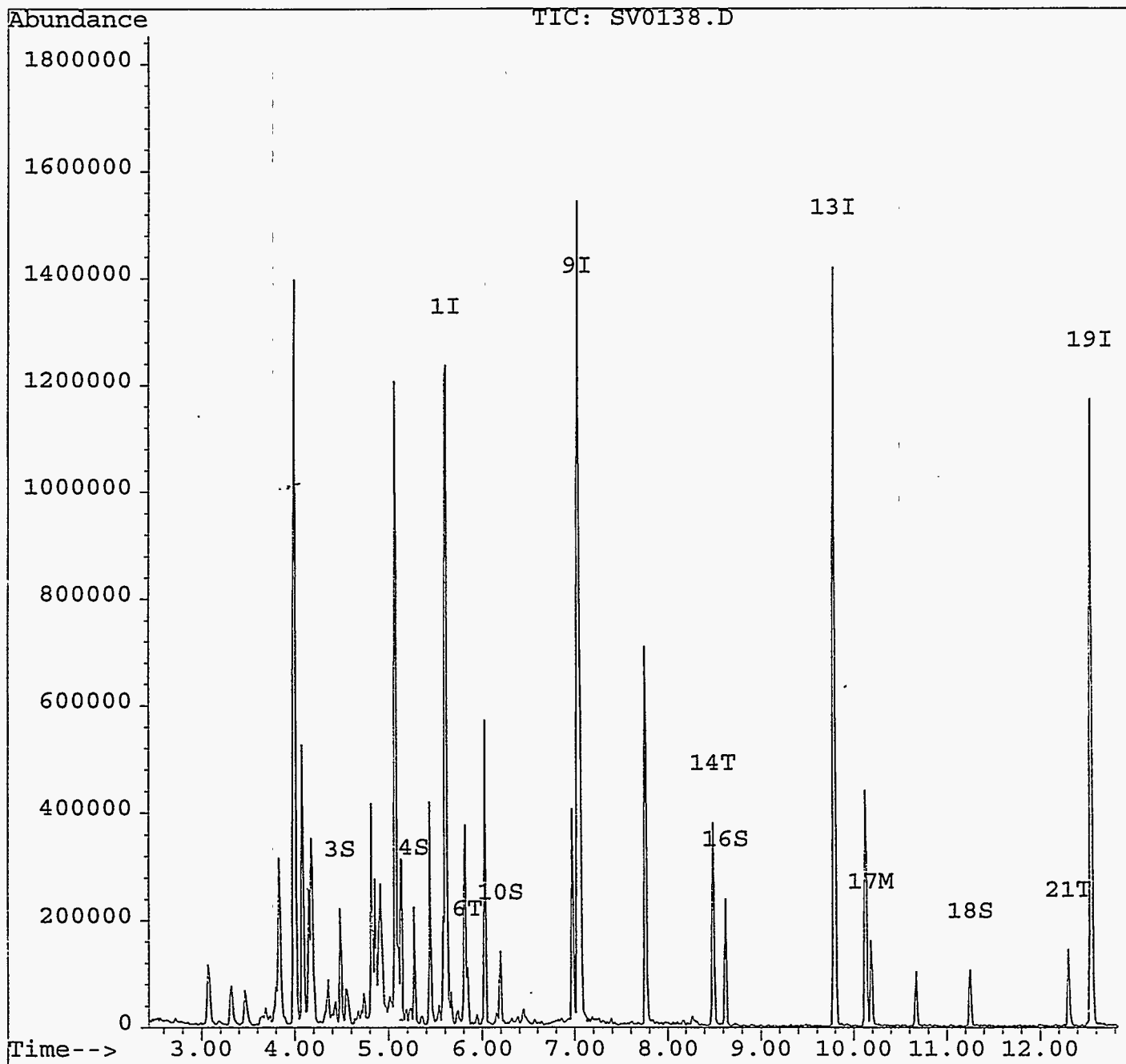
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN2495\SV0138.D  
Acq On : 24 Jan 96 5:36 pm  
Sample : ECO-004-07A  
Misc : SEMI TEST TCLP SOIL07A 1:5  
Quant Time: Jan 25 9:56 1996

Vial: 17  
Operator:  
Inst : 5972 - 35  
Multiplr: 10.00

Method : C:\HPCHEM\1\METHODS\METCLP.M  
Title : Method 8270  
Last Update : Thu Jan 25 08:20:05 1996  
Response via : Single Level Calibration

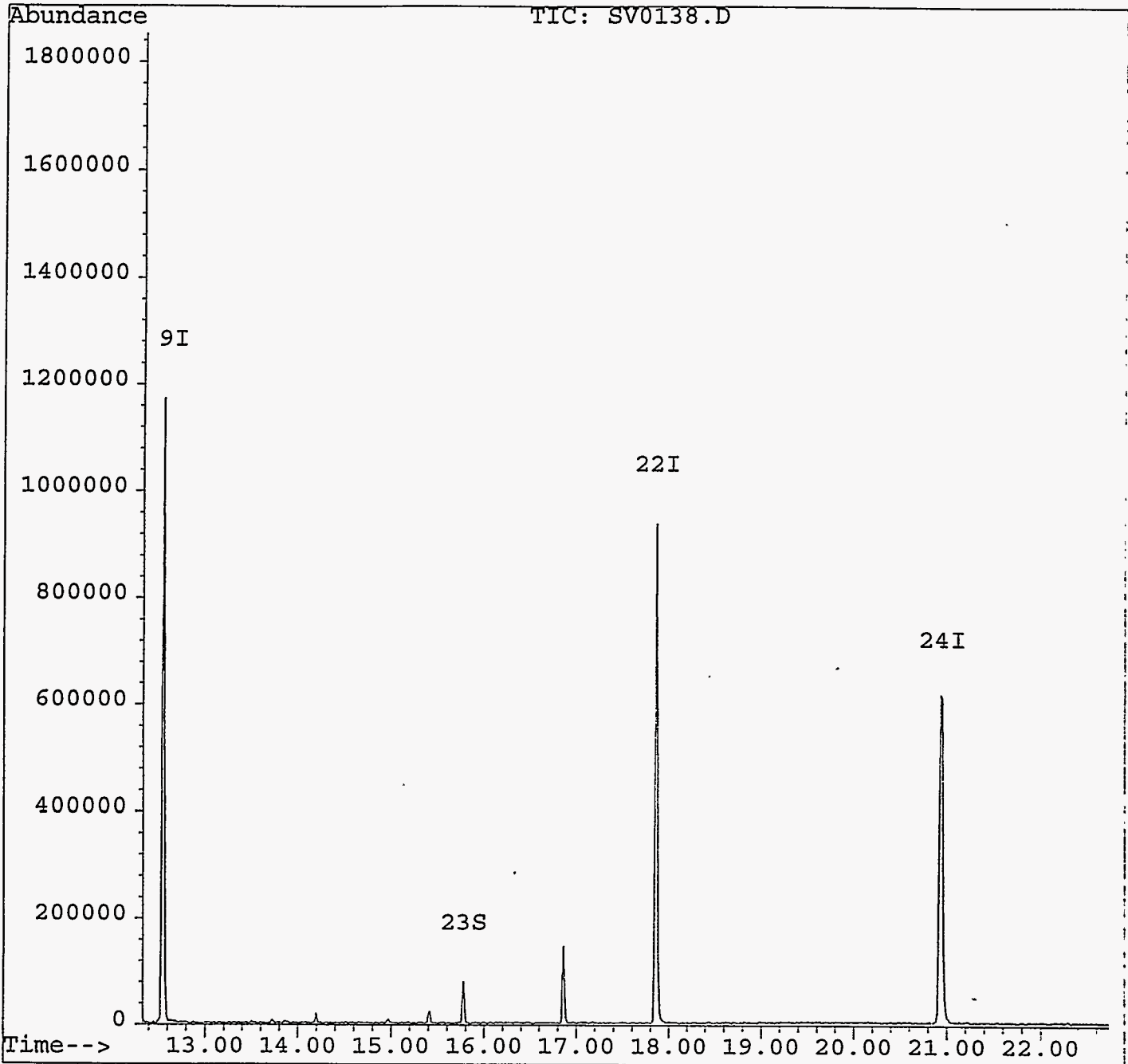


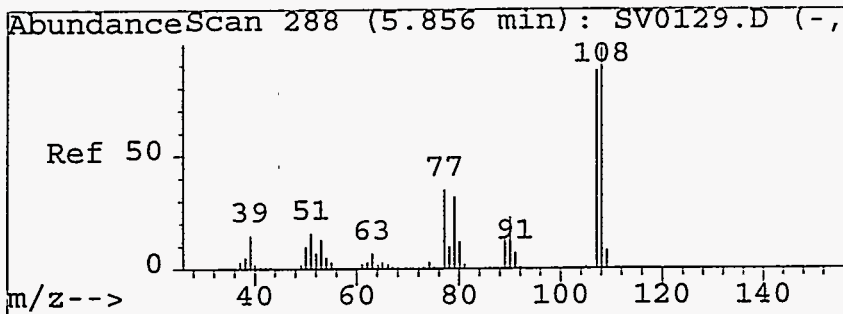
Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN2495\SV0138.D  
Acq On : 24 Jan 96 5:36 pm  
Sample : ECO-004-07A  
Misc : SEMI TEST TCLP SOIL07A 1:5  
Quant Time: Jan 25 9:56 1996

Vial: 17  
Operator:  
Inst : 5972 - 35  
Multiplr: 10.00

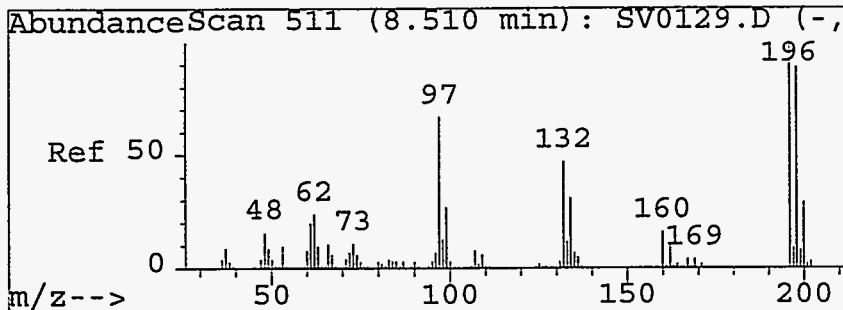
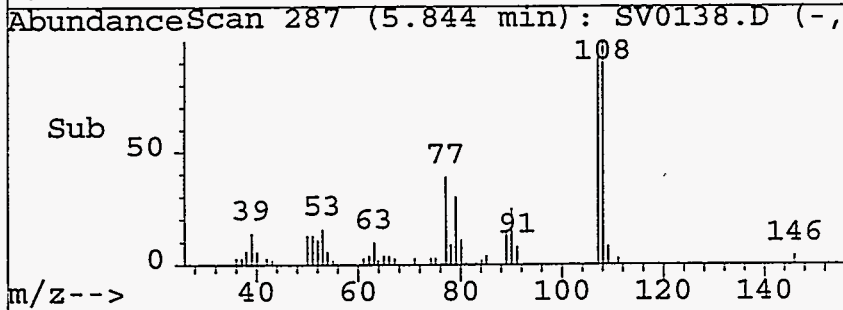
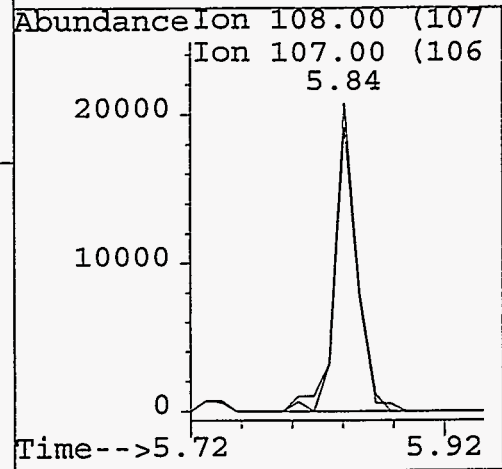
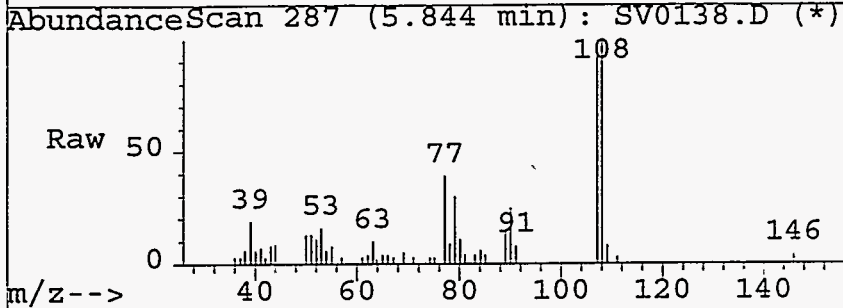
Method : C:\HPCHEM\1\METHODS\METCLP.M  
Title : Method 8270  
Last Update : Thu Jan 25 08:20:05 1996  
Response via : Single Level Calibration





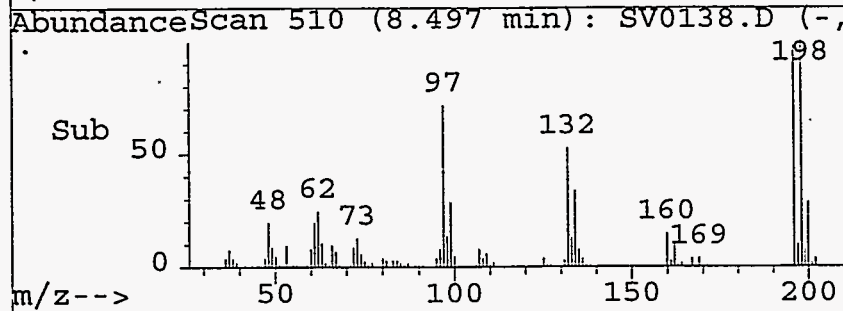
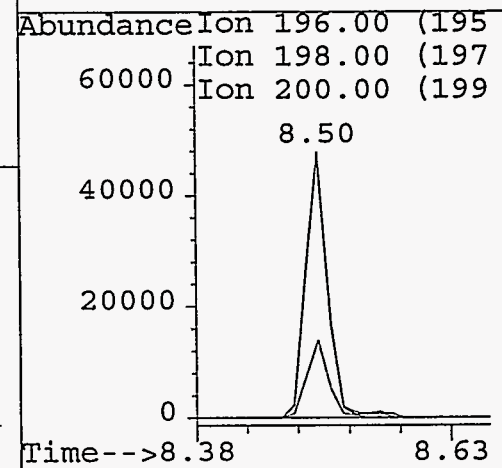
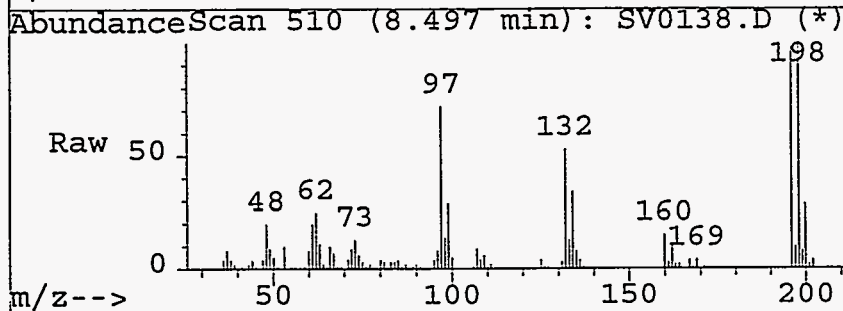
#6  
 2-Methylphenol  
 Concen: 32.74 ug/L  
 RT: 5.84 min Scan# 287  
 Delta R.T. -0.01 min  
 Lab File: SV0138.D  
 Acq: 24 Jan 96 5:36 pm

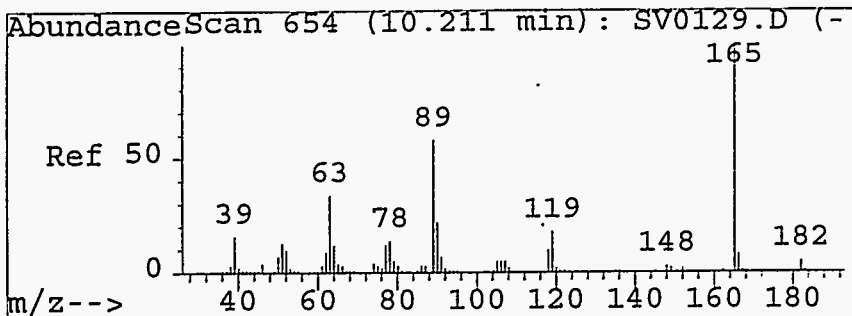
Tgt Ion	Ratio	Lower	Upper
108	100		
107	92.2	69.3	109.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0



#14  
 2,4,6-Trichlorophenol  
 Concen: 216.27 ug/L  
 RT: 8.50 min Scan# 510  
 Delta R.T. -0.01 min  
 Lab File: SV0138.D  
 Acq: 24 Jan 96 5:36 pm

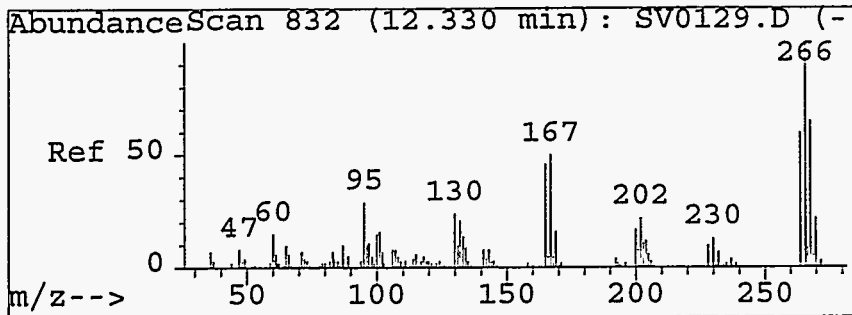
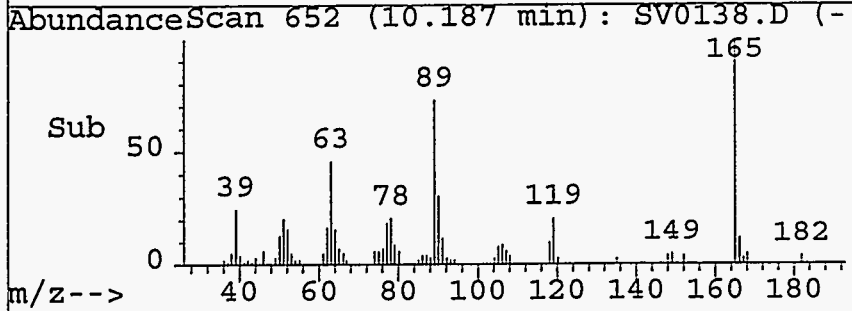
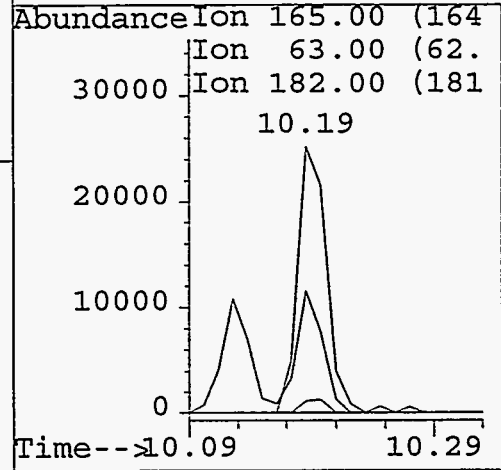
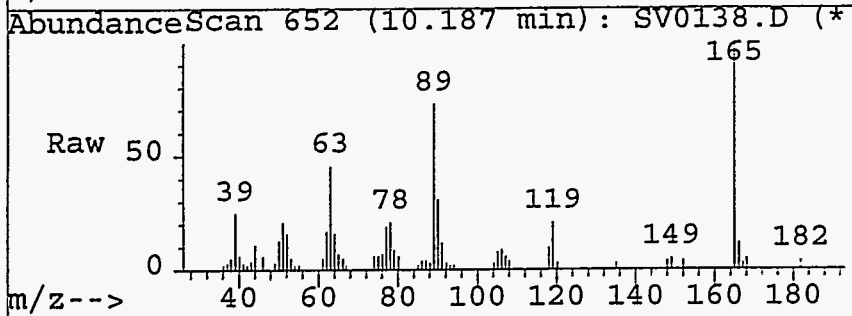
Tgt Ion	Ratio	Lower	Upper
196	100		
198	101.6	71.5	111.5
200	29.7	7.8	47.8
0	0.0	0.0	0.0





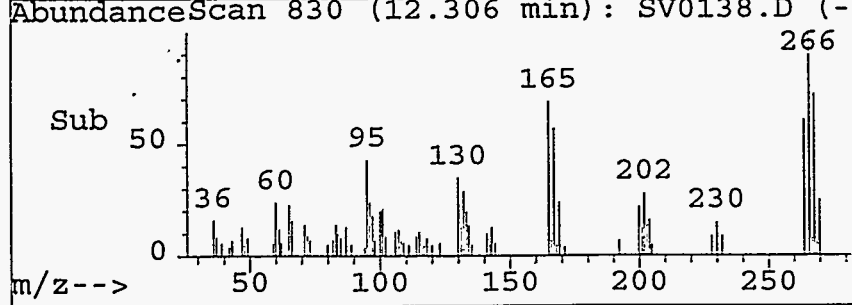
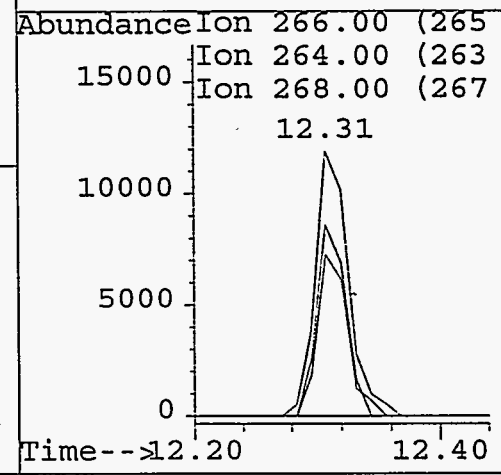
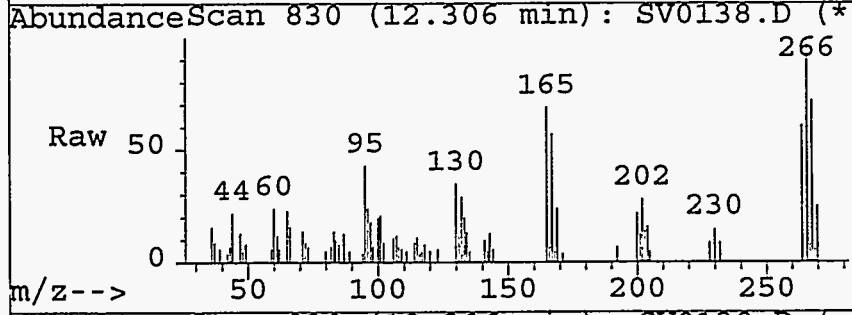
#17  
 2,4-Dinitrotoluene  
 Concen: 125.74 ug/L  
 RT: 10.19 min Scan# 652  
 Delta R.T. -0.02 min  
 Lab File: SV0138.D  
 Acq: 24 Jan 96 5:36 pm

Tgt Ion	Resp	Lower	Upper
165	41032		
63	43.5	25.9	65.9
182	4.4	0.0	24.6
0	0.0	0.0	0.0



#21  
 Pentachlorophenol  
 Concen: 138.54 ug/L  
 RT: 12.31 min Scan# 830  
 Delta R.T. -0.02 min  
 Lab File: SV0138.D  
 Acq: 24 Jan 96 5:36 pm

Tgt Ion	Resp	Lower	Upper
266	21964		
264	60.9	41.0	81.0
268	72.2	38.2	78.2
0	0.0	0.0	0.0



Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN2495\SV0145.D  
 Acq On : 24 Jan 96 9:38 pm  
 Sample : ECO-004-07A  
 Misc : SEMI TEST TCLP SOIL07A  
 Quant Time: Jan 25 7:59 1996

Vial: 24  
 Operator:  
 Inst : 5972 - 35  
 Multiplr: 2.00

Method : C:\HPCHEM\1\METHODS\METCLP.M  
 Title : Method 8270  
 Last Update : Wed Jan 24 16:17:35 1996  
 Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) 1,4-Dichlorobenzene-d4	5.61	152	439811	40.00	ug/L	0.00
9) Naphthalene-d8	7.04	136	1417534	40.00	ug/L	0.00
13) Acenaphthene-d10	9.79	164	757872	40.00	ug/L	-0.02
19) Phenanthrene-d10	12.55	188	1055183	40.00	ug/L	-0.02
22) Chrysene-d12	17.85	240	682960	40.00	ug/L	-0.02
24) Perylene-d12	20.94	264	687289	40.00	ug/L	-0.03
System Monitoring Compounds						%Recovery
3) 2-Fluorophenol	4.49	112	668388	96.81	ug/L	48.41%
4) Phenol-d5	5.26	99	711146	88.84	ug/L	44.42%
10) Nitrobenzene-d5	6.19	82	501680	87.41	ug/L	43.70%
16) 2-Fluorobiphenyl	8.62	172	829995	81.09	ug/L	81.09%
18) 2,4,6-Tribromophenol	11.25	330	185626	198.22	ug/L	99.11%
23) Terphenyl-d14	15.77	244	411122	54.74	ug/L	54.74%
Target Compounds						Qvalue
6) 2-Methylphenol	5.85	108	202497	37.60	ug/L	95
14) 2,4,6-Trichlorophenol	8.49	196	617604	257.93	ug/L	99
17) 2,4-Dinitrotoluene	10.19	165	613628	256.07	ug/L	85
21) Pentachlorophenol	12.30	266	268369	225.13	ug/L	96

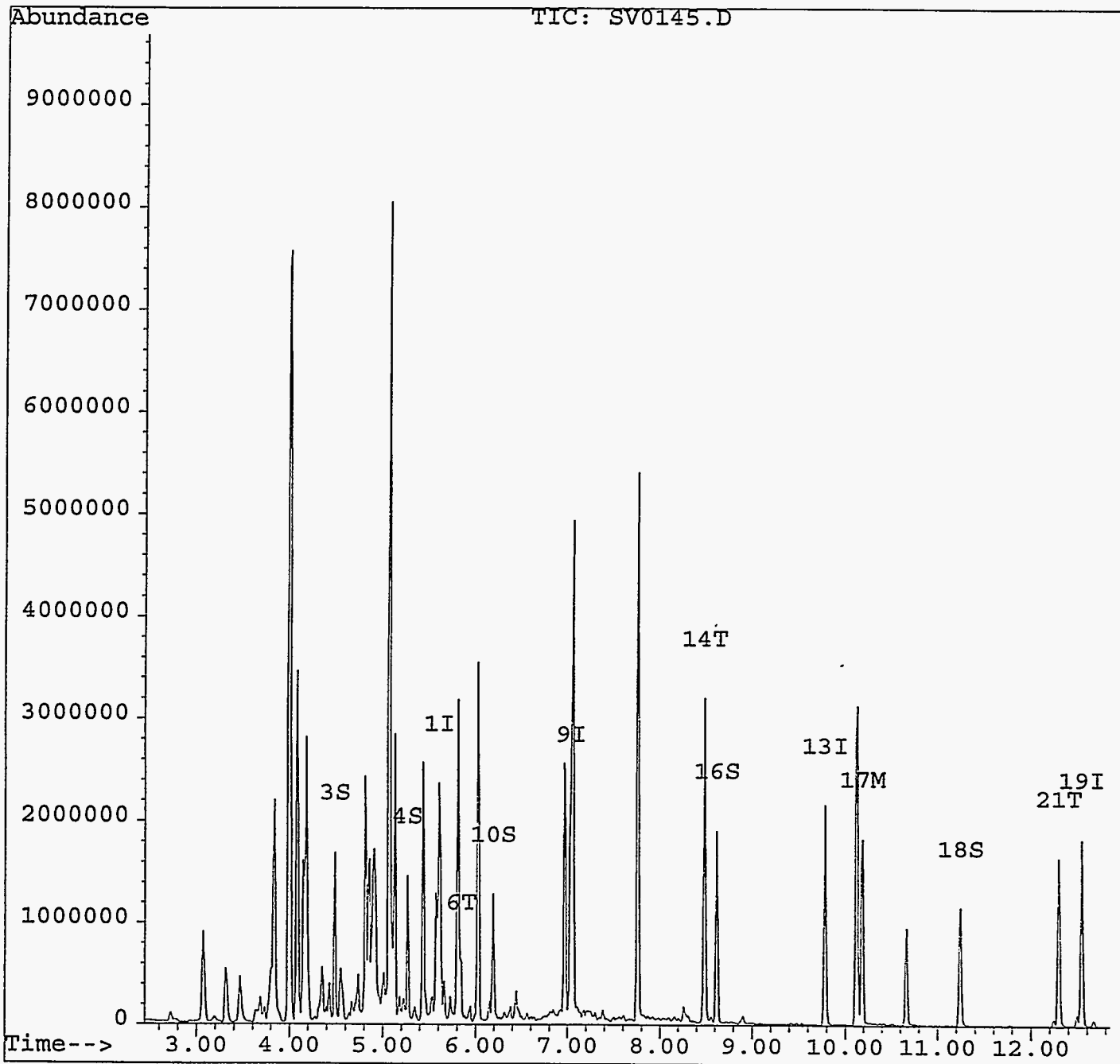
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN2495\SV0145.D  
Acq On : 24 Jan 96 9:38 pm  
Sample : ECO-004-07A  
Misc : SEMI TEST TCLP SOIL07A  
Quant Time: Jan 25 7:59 1996

Vial: 24  
Operator:  
Inst : 5972 - 35  
Multiplr: 2.00

Method : C:\HPCHEM\1\METHODS\METCLP.M  
Title : Method 8270  
Last Update : Wed Jan 24 16:17:35 1996  
Response via : Single Level Calibration



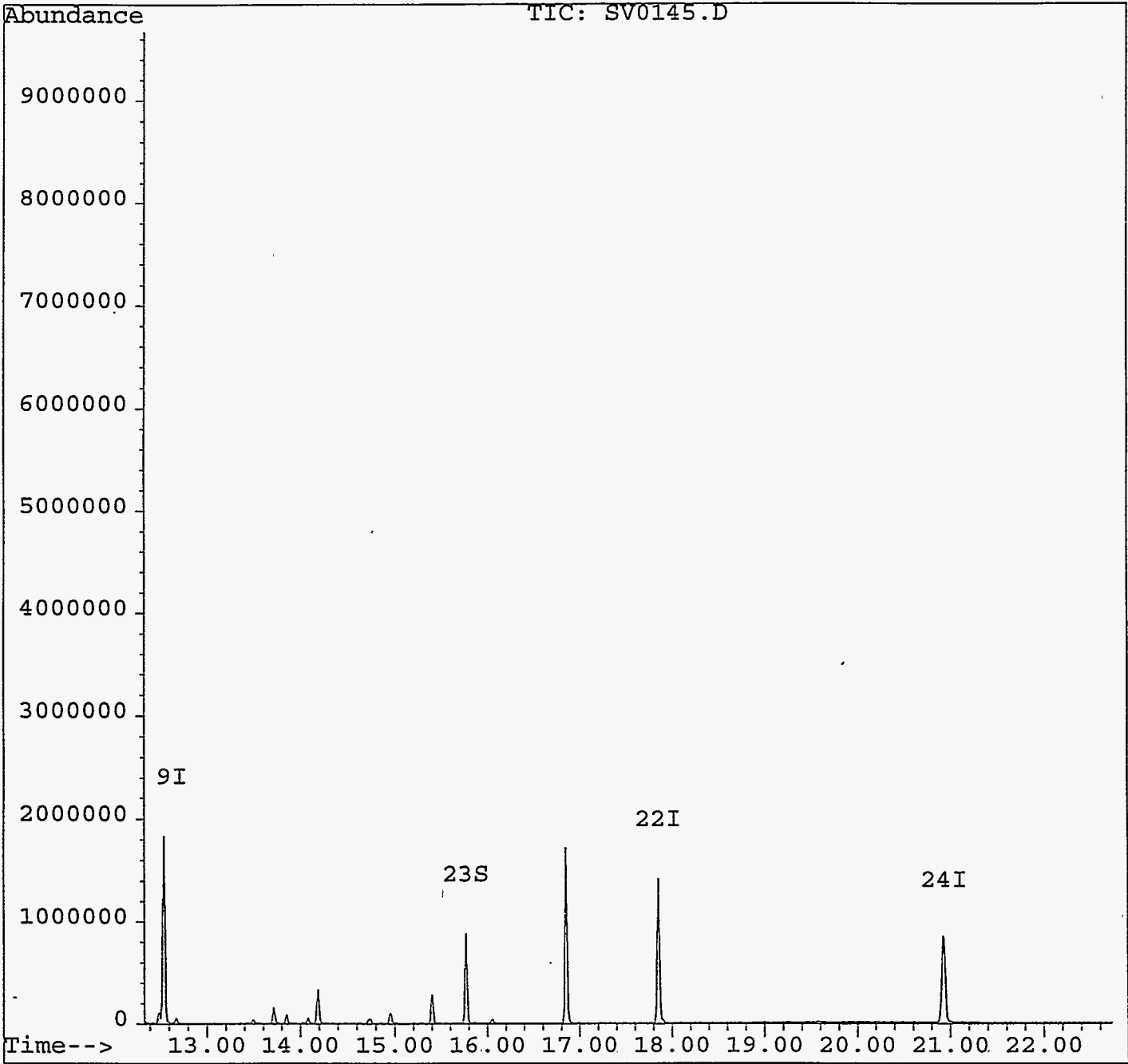


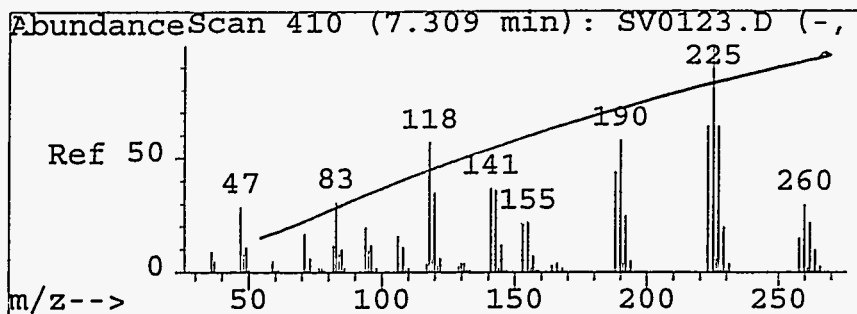
Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN2495\SV0145.D  
Acq On : 24 Jan 96 9:38 pm  
Sample : ECO-004-07A  
Misc : SEMI TEST TCLP SOIL07A  
Quant Time: Jan 25 7:59 1996

Vial: 24  
Operator:  
Inst : 5972 - 35  
Multiplr: 2.00

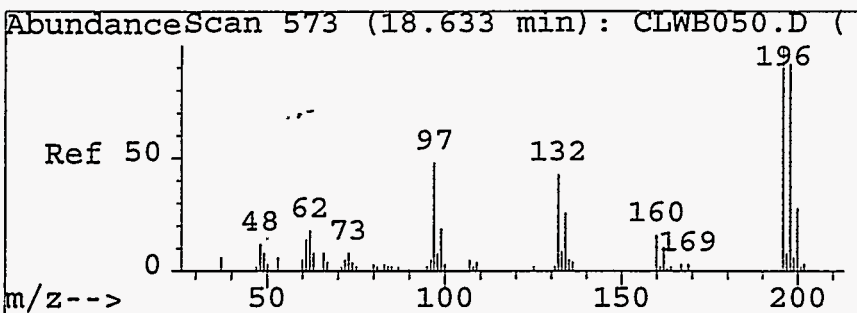
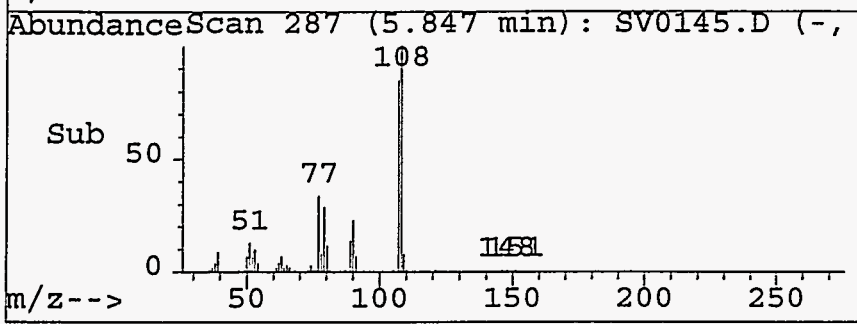
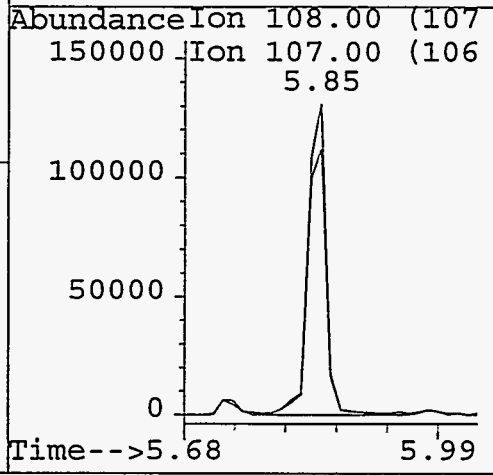
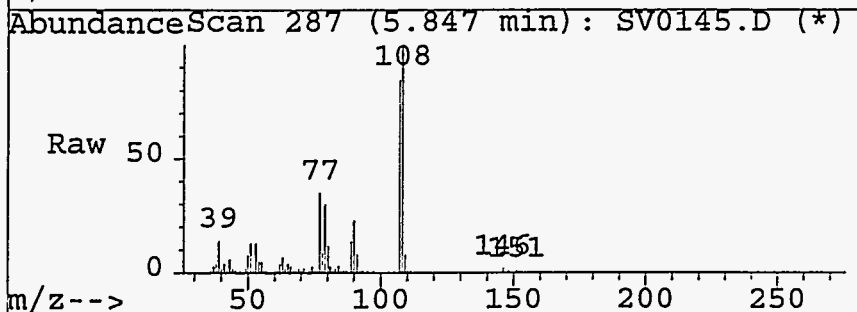
Method : C:\HPCHEM\1\METHODS\METCLP.M  
Title : Method 8270  
Last Update : Wed Jan 24 16:17:35 1996  
Response via : Single Level Calibration





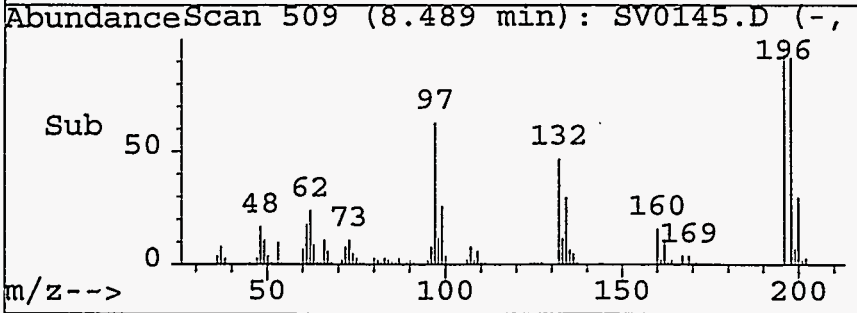
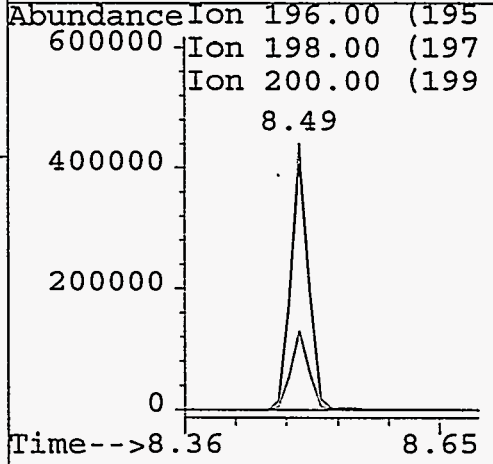
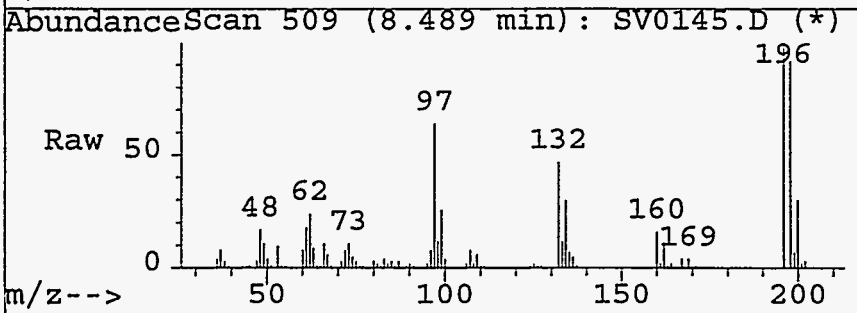
#6  
 2-Methylphenol  
 Concen: 37.60 ug/L  
 RT: 5.85 min Scan# 287  
 Delta R.T. -0.01 min  
 Lab File: SV0145.D  
 Acq: 24 Jan 96 9:38 pm

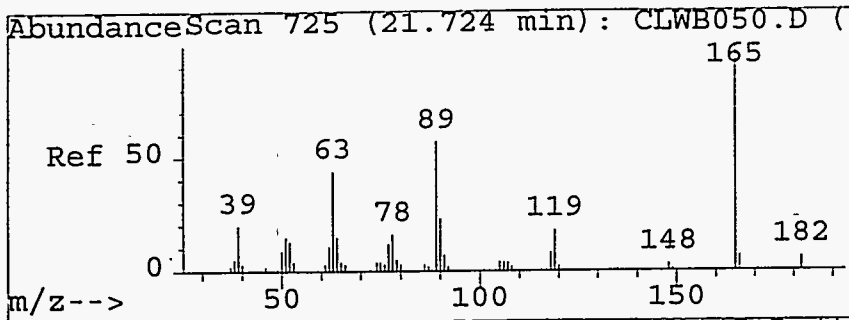
Tgt Ion	Resp	Lower	Upper
108	202497		
107	84.6	69.3	109.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0



#14  
 2,4,6-Trichlorophenol  
 Concen: 257.93 ug/L  
 RT: 8.49 min Scan# 509  
 Delta R.T. -0.02 min  
 Lab File: SV0145.D  
 Acq: 24 Jan 96 9:38 pm

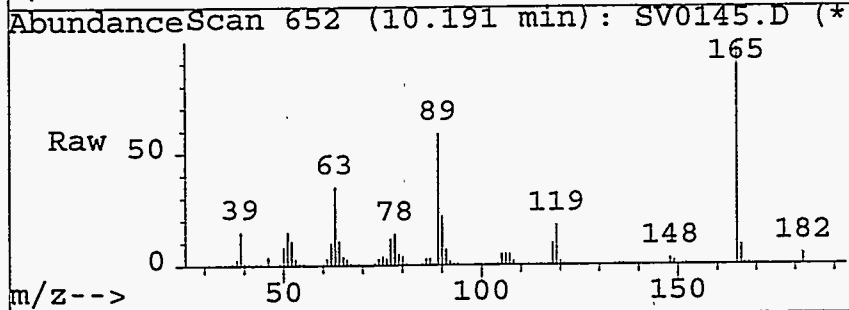
Tgt Ion	Resp	Lower	Upper
196	617604		
198	92.0	71.5	111.5
200	29.7	7.8	47.8
0	0.0	0.0	0.0



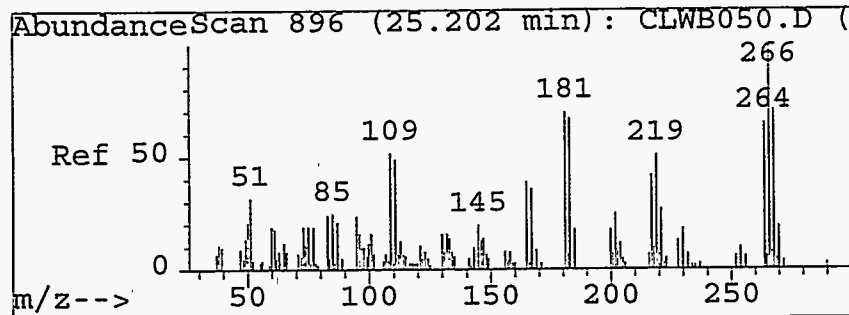
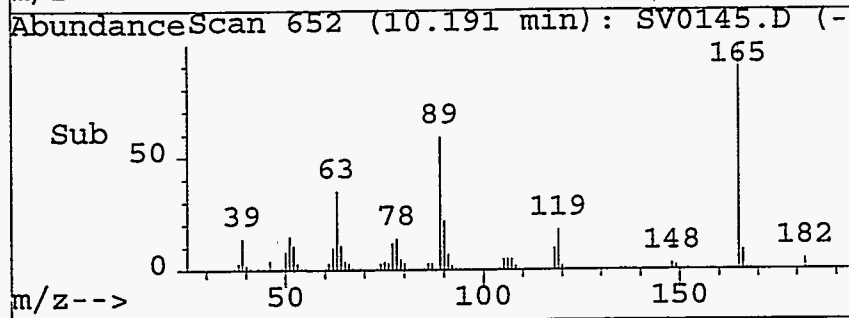
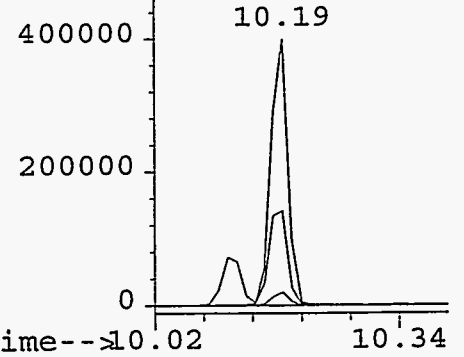


#17  
 2,4-Dinitrotoluene  
 Concen: 256.07 ug/L  
 RT: 10.19 min Scan# 652  
 Delta R.T. -0.02 min  
 Lab File: SV0145.D  
 Acq: 24 Jan 96 9:38 pm

Tgt Ion	Ratio	Lower	Upper
165	100		
63	35.2	25.9	65.9
182	4.9	0.0	24.6
0	0.0	0.0	0.0

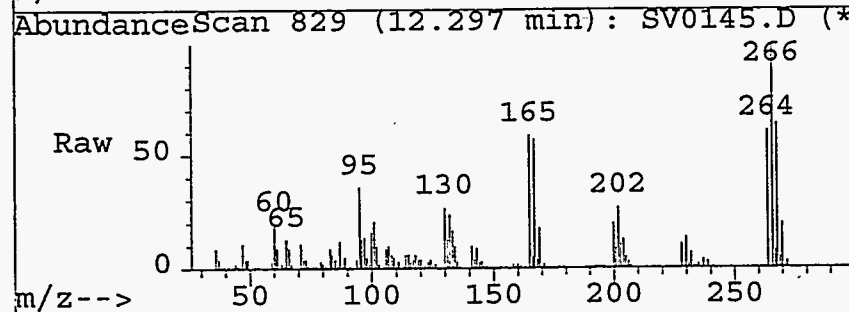


AbundanceIon 165.00 (164  
 Ion 63.00 (62.  
 Ion 182.00 (181

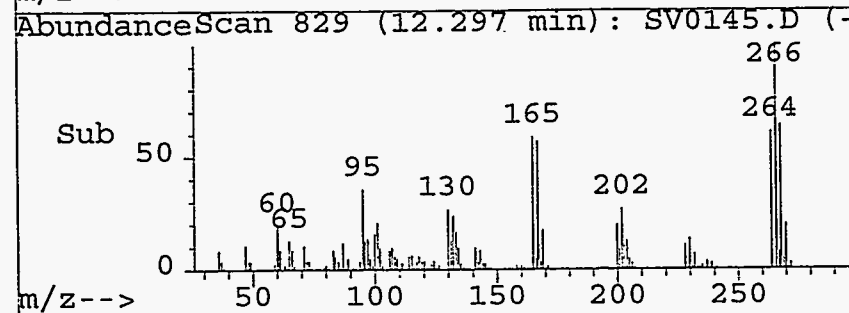
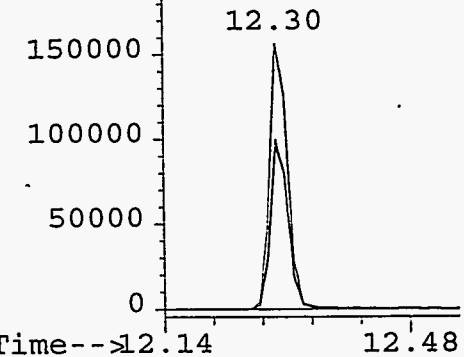


#21  
 Pentachlorophenol  
 Concen: 225.13 ug/L  
 RT: 12.30 min Scan# 829  
 Delta R.T. -0.03 min  
 Lab File: SV0145.D  
 Acq: 24 Jan 96 9:38 pm

Tgt Ion	Ratio	Lower	Upper
266	100		
264	60.6	41.0	81.0
268	63.6	38.2	78.2
0	0.0	0.0	0.0



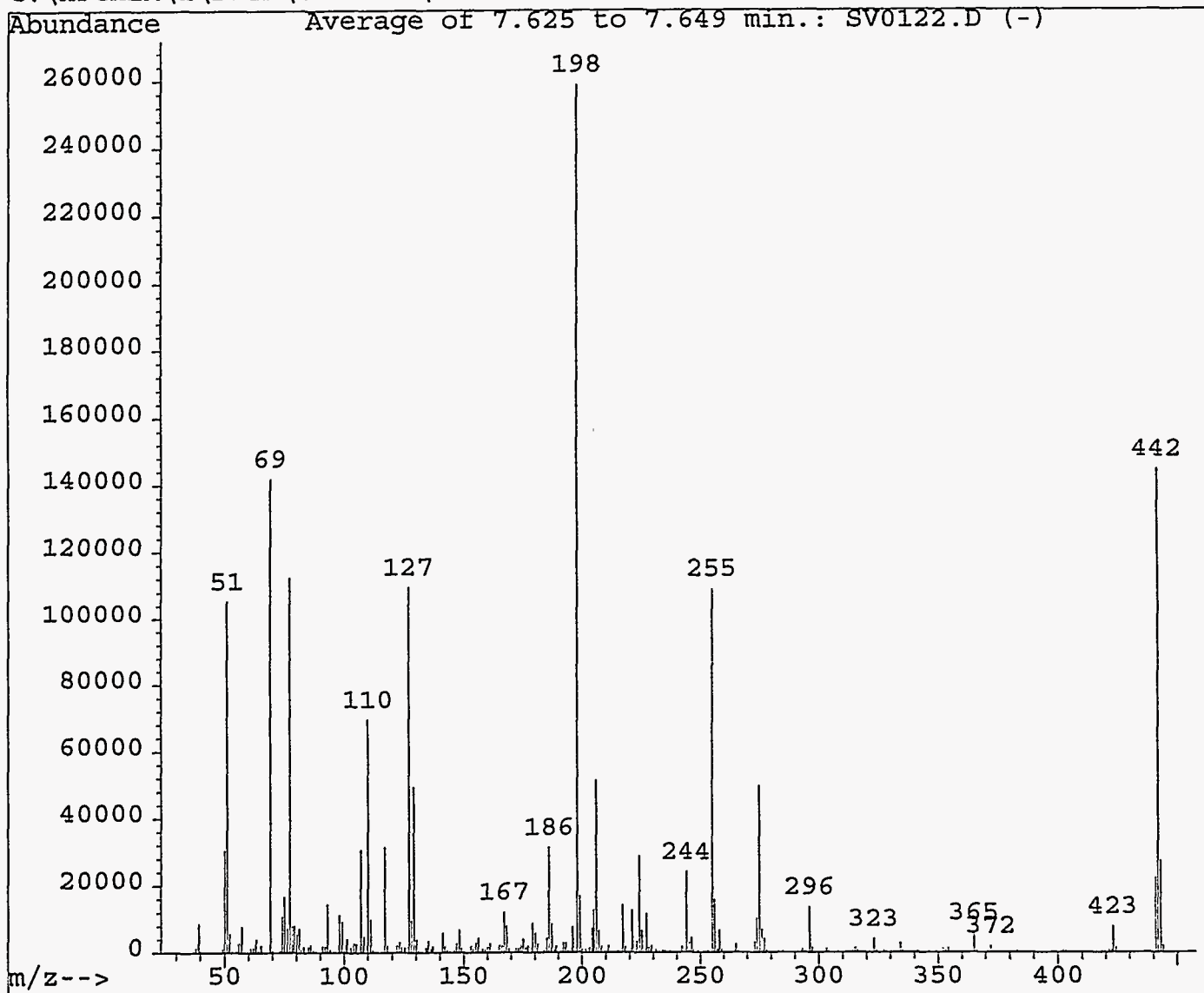
AbundanceIon 266.00 (265  
 Ion 264.00 (263  
 Ion 268.00 (267



Method 8270 Results

C:\HPCHEM\1\DATA\JAN2495\SV0122.D

Wed Jan 24 07:45:32 1996



Peak Apex is scan: 303

Average of 3 scans: 302,303,304 minus background scan 299

Target Mass	Comparison Mass	Lower Limit, %	Upper Limit, %	Relative Abundance, %	Result Pass/Fail
51	198	30	60	40.8	PASS
68	69	0	2	0.0	PASS
69	198	0	100	54.9	PASS
70	69	0	2	0.5	PASS
127	198	40	60	42.4	PASS
197	198	0	1	0.0	PASS
198	198	100	100	100.0	PASS
199	198	5	9	6.5	PASS
275	198	10	30	19.2	PASS
365	198	1	100	2.4	PASS
441	443	0	100	81.3	PASS
442	198	40	100	55.9	PASS
443	442	17	23	19.0	PASS

Method : C:\HPCHEM\1\METHODS\METCLP.M  
 Title : Method 8270  
 Last Update : Wed Jan 24 14:34:31 1996  
 Response via : Continuing Calibration

## Calibration Files

20 =SV0125.D 50 =SV0123.D 80 =SV0126.D  
 120 =SV0127.D 160 =SV0124.D

Compound		20	50	80	120	160	Avg	%RSD
1) I	1,4-Dichlorobenzene-d	-----ISTD-----						
2) T	Pyridine	1.319	1.475	1.474	1.601	1.565	1.487	7.34
3) S	2-Fluorophenol	1.096	1.252	1.295	1.357	1.339	1.268	8.22
4) S	Phenol-d5	1.281	1.454	1.508	1.556	1.573	1.474	7.98
5) T	1,4-Dichlorobenzene	1.070	1.173	1.259	1.253	1.225	1.196	6.55
6) T	2-Methylphenol	0.868	0.967	1.016	1.056	1.044	0.990	7.72
7) T	3&4-Methylphenol	0.924	1.021	1.034	1.029	0.945	0.990	5.26
8) T	Hexachloroethane	0.431	0.487	0.516	0.527	0.529	0.498	8.20
9) I	Naphthalene-d8	-----ISTD-----						
10) S	Nitrobenzene-d5	0.280	0.329	0.348	0.354	0.348	0.332	9.12
11) T	Nitrobenzene	0.287	0.333	0.357	0.353	0.343	0.335	8.48
12) T	Hexachlorobutadiene	0.104	0.115	0.127	0.130	0.128	0.121	9.14
13) I	Acenaphthene-d10	-----ISTD-----						
14) T	2,4,6-Trichlorophenol	0.190	0.244	0.277	0.293	0.294	0.260	16.81
15) T	2,4,5-Trichlorophenol	0.219	0.262	0.288	0.323	0.322	0.283	15.52
16) S	2-Fluorobiphenyl	0.963	1.079	1.167	1.235	1.154	1.120	9.23
17) M	2,4-Dinitrotoluene	0.147	0.240	0.280	0.331	0.347	0.269	29.83
18) S	2,4,6-Tribromophenol	0.068	0.101	0.109	0.121	0.125	0.105	21.62
19) I	Phenanthrene-d10	-----ISTD-----						
20) T	Hexachlorobenzene	0.136	0.158	0.166	0.176	0.180	0.163	10.76
21) T	Pentachlorophenol	0.053	0.091	0.103	0.122	0.126	0.099	29.46
22) I	Chrysene-d12	-----ISTD-----						
23) S	Terphenyl-d14	0.717	0.824	0.932	0.980	0.950	0.881	12.34
24) I	Perylene-d12	-----ISTD-----						

Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN2495\SV0123.D  
 Acq On : 24 Jan 96 7:59 am  
 Sample : SSTD50  
 Misc :  
 Quant Time: Jan 24 14:22 1996

Vial: 2  
 Operator:  
 Inst : 5972 - 35  
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\METCLP.M  
 Title : Method 8270  
 Last Update : Wed Jan 24 14:21:24 1996  
 Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) 1,4-Dichlorobenzene-d4	5.63	152	304886	40.00	ug/L	0.01
9) Naphthalene-d8	7.06	136	953719	40.00	ug/L	0.01
13) Acenaphthene-d10	9.82	164	478738	40.00	ug/L	0.01
19) Phenanthrene-d10	12.58	188	659693	40.00	ug/L	0.01
22) Chrysene-d12	17.89	240	414905	40.00	ug/L	0.01
24) Perylene-d12	20.98	264	437838	40.00	ug/L	0.01

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recovery
3) 2-Fluorophenol	4.51	112	477081	49.84	ug/L	24.92%
4) Phenol-d5	5.29	99	553961	49.92	ug/L	24.96%
10) Nitrobenzene-d5	6.21	82	392615	50.84	ug/L	25.42%
16) 2-Fluorobiphenyl	8.65	172	645719	49.93	ug/L	49.93%
18) 2,4,6-Tribromophenol	11.28	330	60607	51.23	ug/L	25.61%
23) Terphenyl-d14	15.81	244	427511	46.85	ug/L	46.85%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Pyridine	2.82	79	562254	51.21	ug/L	100
5) 1,4-Dichlorobenzene	5.64	146	446910	48.63	ug/L	100
6) 2-Methylphenol	5.87	108	368530	49.35	ug/L	100
7) 3&4-Methylphenol	6.00	108	787572	100.84	ug/L	100
8) Hexachloroethane	6.15	117	185631	48.80	ug/L	100
11) Nitrobenzene	6.24	77	396993	49.12	ug/L	100
12) Hexachlorobutadiene	7.31	225	136838	50.45	ug/L	100
14) 2,4,6-Trichlorophenol	8.52	196	146298	48.36	ug/L	100
15) 2,4,5-Trichlorophenol	8.57	196	156904	47.17	ug/L	100
17) 2,4-Dinitrotoluene	10.21	165	143578	47.43	ug/L	100
20) Hexachlorobenzene	12.00	284	130120	52.05	ug/L	100
21) Pentachlorophenol	12.33	266	75321	50.53	ug/L	100

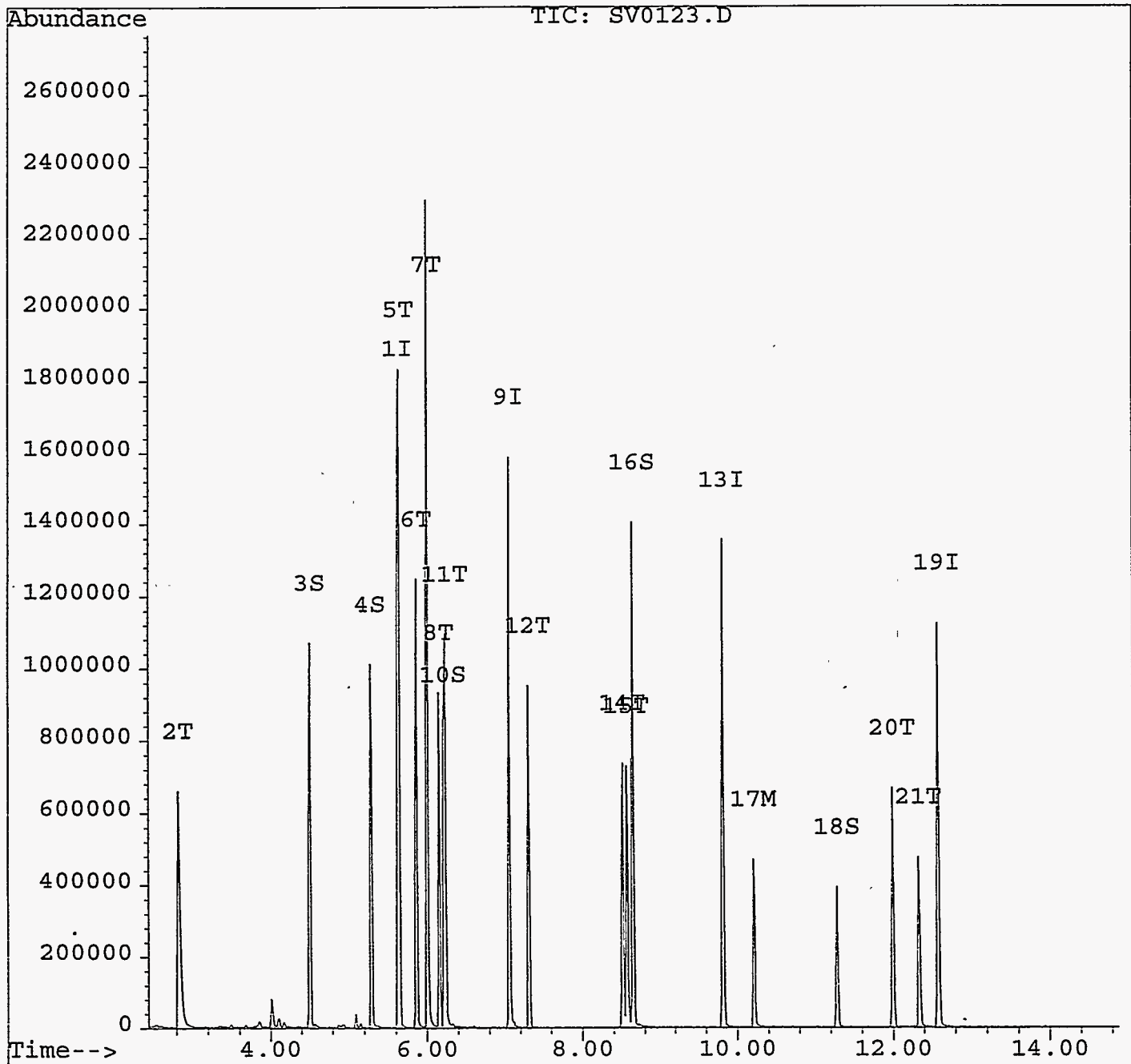
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN2495\SV0123.D  
Acq On : 24 Jan 96 7:59 am  
Sample : SSTD50  
Misc :  
Quant Time: Jan 24 14:22 1996

Vial: 2  
Operator:  
Inst : 5972 - 35  
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\METCLP.M  
Title : Method 8270  
Last Update : Wed Jan 24 14:21:24 1996  
Response via : Single Level Calibration

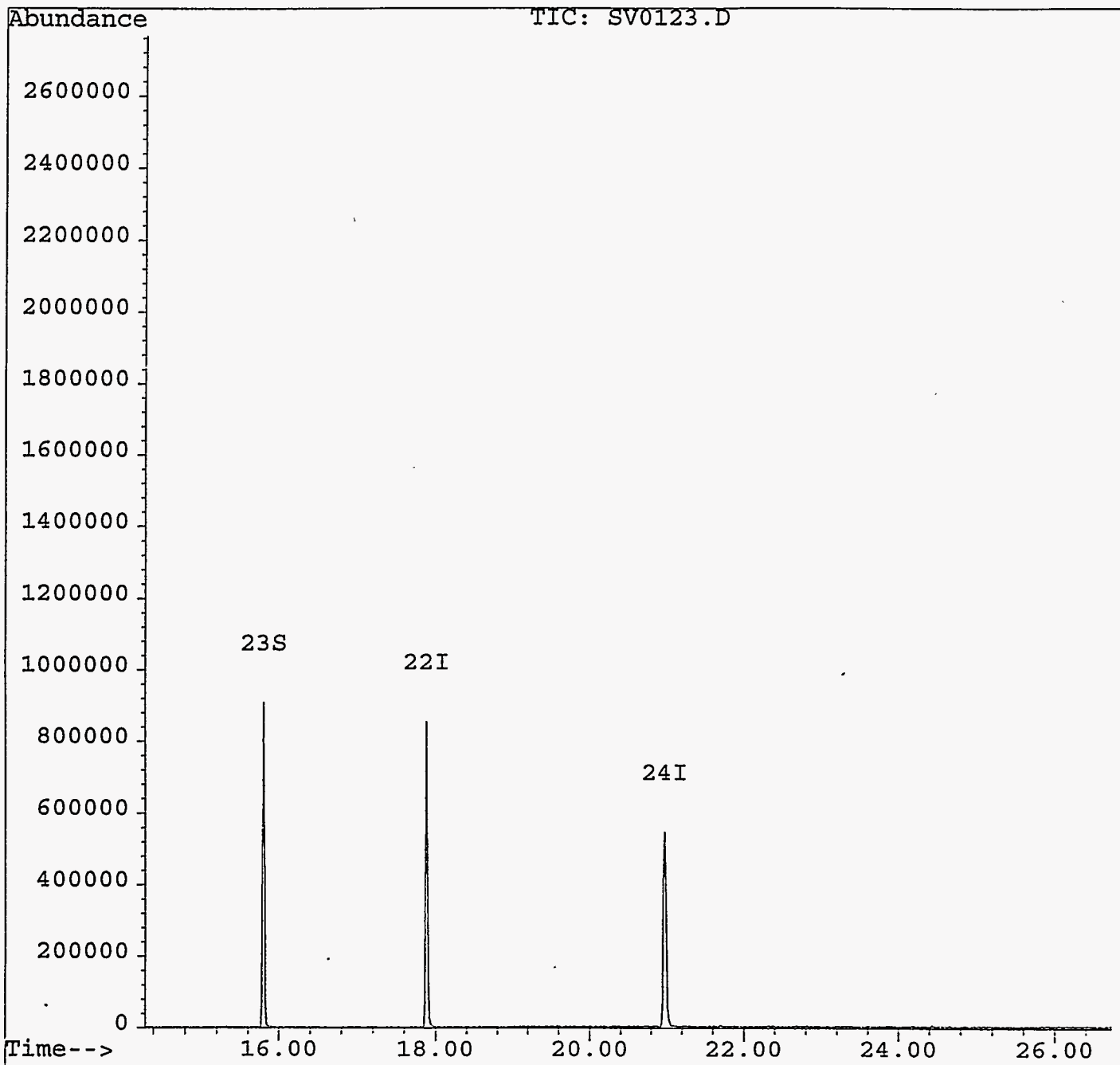


Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN2495\SV0123.D  
Acq On : 24 Jan 96 7:59 am  
Sample : SSTD50  
Misc :  
Quant Time: Jan 24 14:22 1996

Vial: 2  
Operator:  
Inst : 5972 - 35  
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\METCLP.M  
Title : Method 8270  
Last Update : Wed Jan 24 14:21:24 1996  
Response via : Single Level Calibration





Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN2495\SV0124.D  
 Acq On : 24 Jan 96 9:09 am  
 Sample : SSTD160  
 Misc :  
 Quant Time: Jan 24 14:29 1996

Vial: 3  
 Operator:  
 Inst : 5972 - 35  
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\METCLP.M  
 Title : Method 8270  
 Last Update : Wed Jan 24 14:21:24 1996  
 Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) 1,4-Dichlorobenzene-d4	5.63	152	395704	40.00	ug/L	0.01
9) Naphthalene-d8	7.06	136	1286032	40.00	ug/L	0.01
13) Acenaphthene-d10	9.82	164	656400	40.00	ug/L	0.01
19) Phenanthrene-d10	12.58	188	905575	40.00	ug/L	0.01
22) Chrysene-d12	17.89	240	598954	40.00	ug/L	0.01
24) Perylene-d12	20.97	264	578742	40.00	ug/L	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recovery
3) 2-Fluorophenol	4.51	112	2118629	170.54	ug/L	85.27%
4) Phenol-d5	5.30	99	2491650	172.99	ug/L	86.49%
10) Nitrobenzene-d5	6.22	82	1794142	172.28	ug/L	86.14%
16) 2-Fluorobiphenyl	8.65	172	3029807	170.88	ug/L	170.88%
18) 2,4,6-Tribromophenol	11.28	330	328981	202.80	ug/L	101.40%
23) Terphenyl-d14	15.80	244	2276734	172.84	ug/L	172.84%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Pyridine	2.82	79	2478483	173.91	ug/L	100
5) 1,4-Dichlorobenzene	5.64	146	1939645	162.62	ug/L	98
6) 2-Methylphenol	5.87	108	1651805	170.43	ug/L	98
7) 3&4-Methylphenol	6.01	108	2985897	294.56	ug/L	100
8) Hexachloroethane	6.15	117	836817	169.52	ug/L	87
11) Nitrobenzene	6.24	77	1764825	161.95	ug/L	100
12) Hexachlorobutadiene	7.31	225	659569	180.35	ug/L	98
14) 2,4,6-Trichlorophenol	8.52	196	772971	186.36	ug/L	96
15) 2,4,5-Trichlorophenol	8.57	196	843330	184.89	ug/L	96
17) 2,4-Dinitrotoluene	10.22	165	910229	219.28	ug/L	84
20) Hexachlorobenzene	12.00	284	652702	190.21	ug/L	95
21) Pentachlorophenol	12.33	266	454864	222.31	ug/L	95

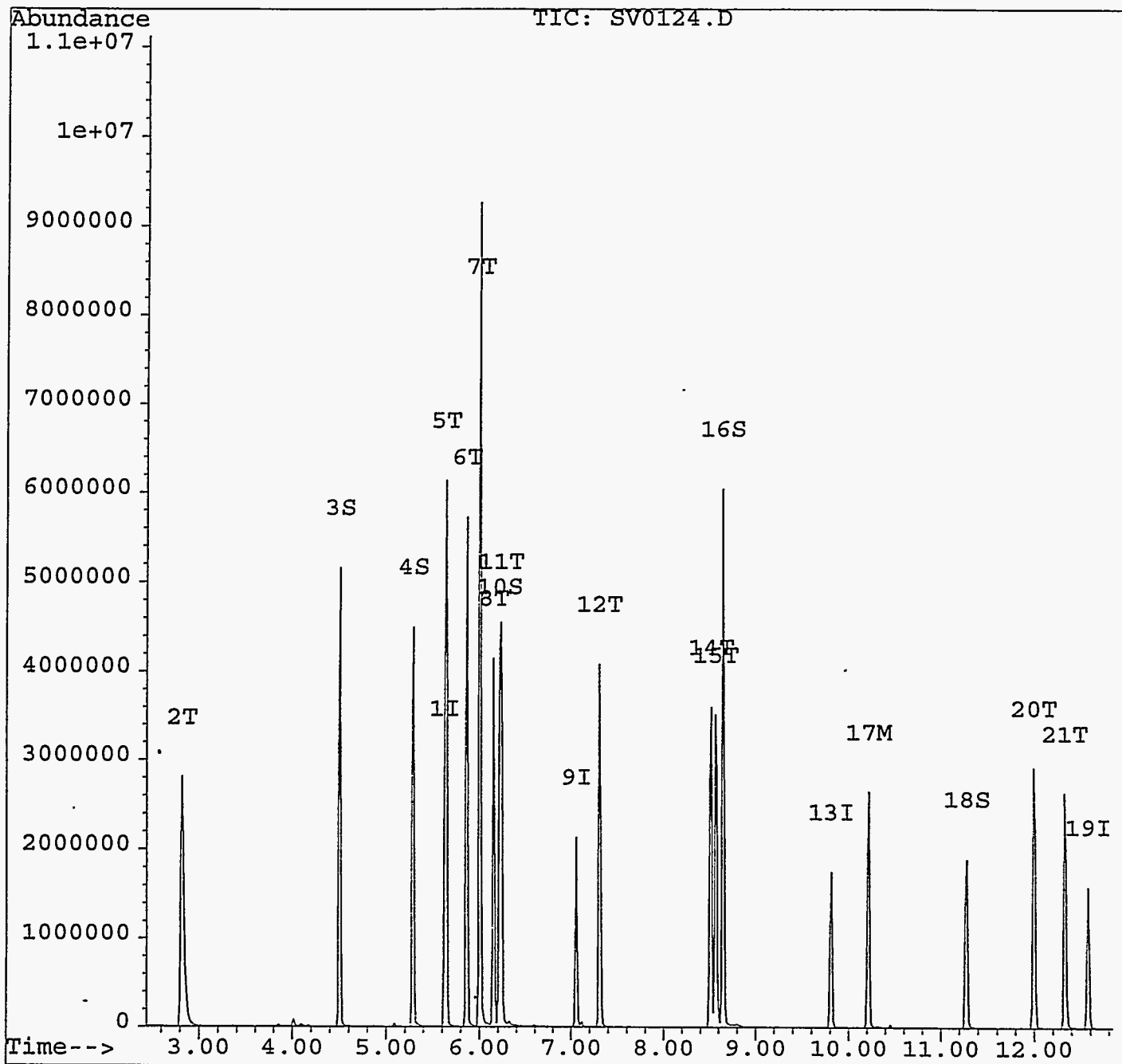
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN2495\SV0124.D  
Acq On : 24 Jan 96 9:09 am  
Sample : SSTD160  
Misc :  
Quant Time: Jan 24 14:29 1996

Vial: 3  
Operator:  
Inst : 5972 - 35  
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\METCLP.M  
Title : Method 8270  
Last Update : Wed Jan 24 14:21:24 1996  
Response via : Single Level Calibration

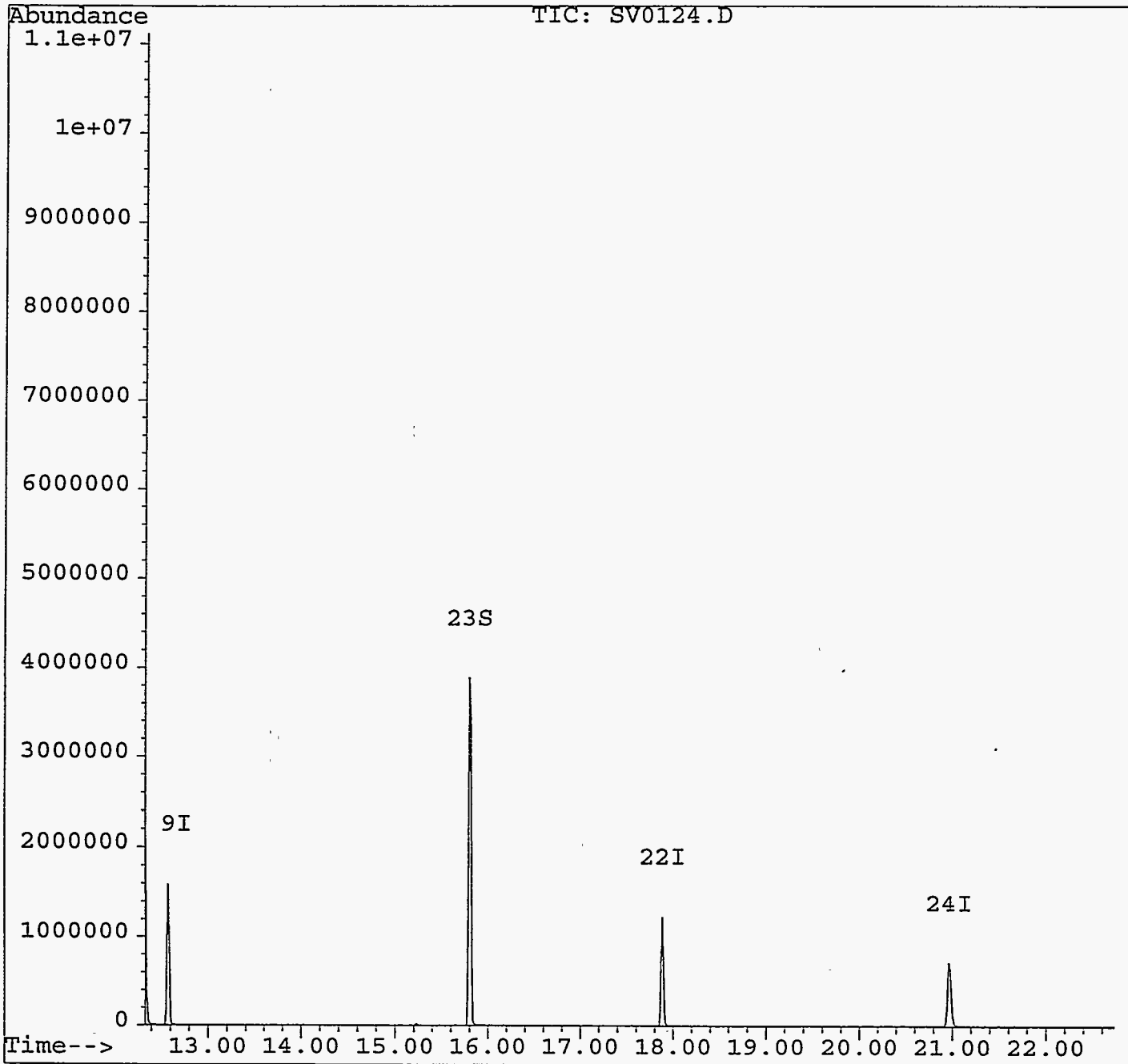


Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN2495\SV0124.D  
Acq On : 24 Jan 96 9:09 am  
Sample : SSTD160  
Misc :  
Quant Time: Jan 24 14:29 1996

Vial: 3  
Operator:  
Inst : 5972 - 35  
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\METCLP.M  
Title : Method 8270  
Last Update : Wed Jan 24 14:21:24 1996  
Response via : Single Level Calibration



Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN2495\SV0125.D  
 Acq On : 24 Jan 96 9:46 am  
 Sample : SSTD20  
 Misc :  
 Quant Time: Jan 24 14:25 1996

Vial: 4  
 Operator:  
 Inst : 5972 - 35  
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\METCLP.M  
 Title : Method 8270  
 Last Update : Wed Jan 24 14:21:24 1996  
 Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) 1,4-Dichlorobenzene-d4	5.63	152	347123	40.00	ug/L	0.01
9) Naphthalene-d8	7.06	136	1112022	40.00	ug/L	0.01
13) Acenaphthene-d10	9.82	164	582035	40.00	ug/L	0.01
19) Phenanthrene-d10	12.58	188	772269	40.00	ug/L	0.01
22) Chrysene-d12	17.89	240	449247	40.00	ug/L	0.01
24) Perylene-d12	20.97	264	460342	40.00	ug/L	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recovery
3) 2-Fluorophenol	4.51	112	190237	17.46	ug/L	8.73%
4) Phenol-d5	5.28	99	222309	17.59	ug/L	8.80%
10) Nitrobenzene-d5	6.21	82	155950	17.32	ug/L	8.66%
16) 2-Fluorobiphenyl	8.65	172	280356	17.83	ug/L	17.83%
18) 2,4,6-Tribromophenol	11.28	330	19828	13.78	ug/L	6.89%
23) Terphenyl-d14	15.80	244	161092	16.30	ug/L	16.30%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Pyridine	2.82	79	228908	18.31	ug/L	100
5) 1,4-Dichlorobenzene	5.64	146	185669	17.75	ug/L	99
6) 2-Methylphenol	5.87	108	150625	17.72	ug/L	96
7) 3&4-Methylphenol	6.00	108	322077	36.22	ug/L	100
8) Hexachloroethane	6.15	117	74861	17.29	ug/L	94
11) Nitrobenzene	6.24	77	159483	16.93	ug/L	100
12) Hexachlorobutadiene	7.31	225	57990	18.34	ug/L	99
14) 2,4,6-Trichlorophenol	8.52	196	55387	15.06	ug/L	97
15) 2,4,5-Trichlorophenol	8.57	196	63698	15.75	ug/L	99
17) 2,4-Dinitrotoluene	10.21	165	42761	11.62	ug/L	99
20) Hexachlorobenzene	12.00	284	52472	17.93	ug/L	91
21) Pentachlorophenol	12.33	266	20563	11.78	ug/L	83

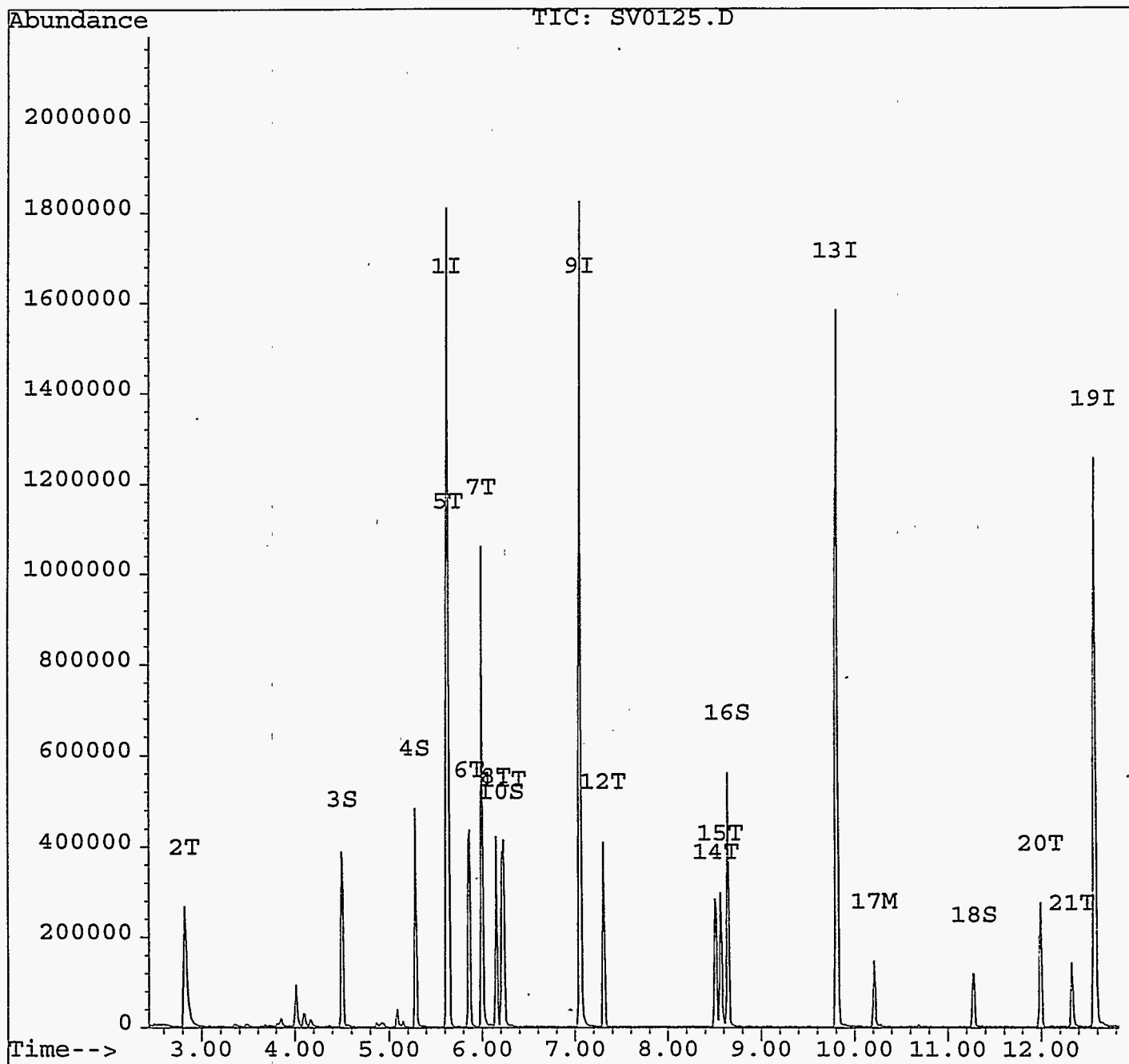
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN2495\SV0125.D  
Acq On : 24 Jan 96 9:46 am  
Sample : SSTD20  
Misc :  
Quant Time: Jan 24 14:25 1996

Vial: 4  
Operator:  
Inst : 5972 - 35  
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\METCLP.M  
Title : Method 8270  
Last Update : Wed Jan 24 14:21:24 1996  
Response via : Single Level Calibration

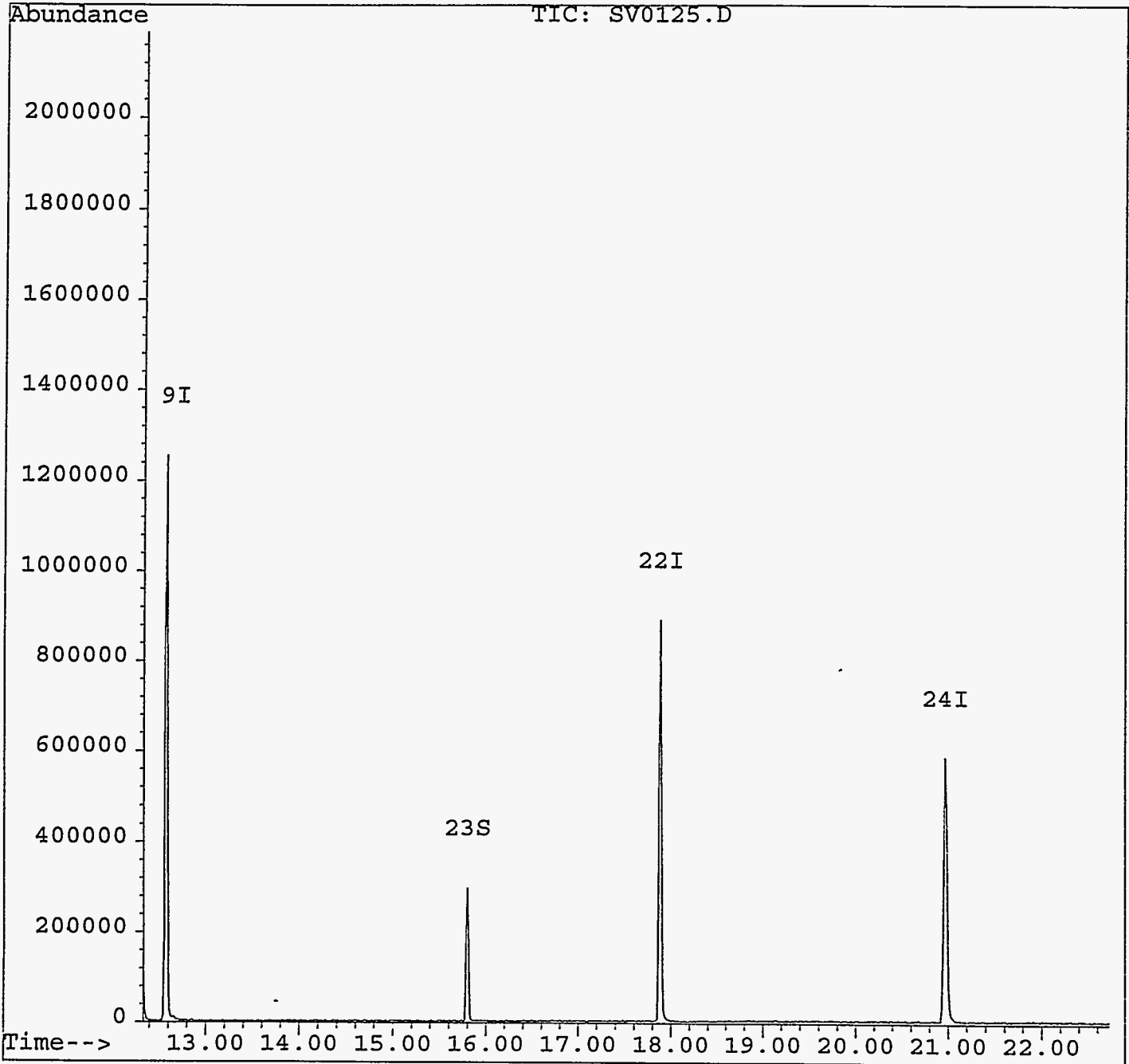


Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN2495\SV0125.D  
Acq On : 24 Jan 96 9:46 am  
Sample : SSTD20  
Misc :  
Quant Time: Jan 24 14:25 1996

Vial: 4  
Operator:  
Inst : 5972 - 35  
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\METCLP.M  
Title : Method 8270  
Last Update : Wed Jan 24 14:21:24 1996  
Response via : Single Level Calibration



Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN2495\SV0126.D  
 Acq On : 24 Jan 96 10:24 am  
 Sample : SSTD80  
 Misc :  
 Quant Time: Jan 24 14:25 1996

Vial: 5  
 Operator:  
 Inst : 5972 - 35  
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\METCLP.M  
 Title : Method 8270  
 Last Update : Wed Jan 24 14:21:24 1996  
 Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) 1,4-Dichlorobenzene-d4	5.63	152	264357	40.00	ug/L	0.01
9) Naphthalene-d8	7.06	136	811140	40.00	ug/L	0.01
13) Acenaphthene-d10	9.82	164	401086	40.00	ug/L	0.01
19) Phenanthrene-d10	12.58	188	575281	40.00	ug/L	0.01
22) Chrysene-d12	17.89	240	374217	40.00	ug/L	0.01
24) Perylene-d12	20.97	264	359754	40.00	ug/L	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recovery
3) 2-Fluorophenol	4.50	112	684533	82.48	ug/L	41.24%
4) Phenol-d5	5.28	99	797253	82.85	ug/L	41.43%
10) Nitrobenzene-d5	6.21	82	563929	85.85	ug/L	42.93%
16) 2-Fluorobiphenyl	8.65	172	936027	86.40	ug/L	86.40%
18) 2,4,6-Tribromophenol	11.28	330	87329	88.10	ug/L	44.05%
23) Terphenyl-d14	15.80	244	697899	84.80	ug/L	84.80%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Pyridine	2.82	79	779298	81.85	ug/L	100
5) 1,4-Dichlorobenzene	5.64	146	665537	83.52	ug/L	99
6) 2-Methylphenol	5.86	108	537158	82.96	ug/L	99
7) 3&4-Methylphenol	6.00	108	1093613	161.49	ug/L	100
8) Hexachloroethane	6.15	117	272922	82.76	ug/L	90
11) Nitrobenzene	6.24	77	579585	84.32	ug/L	100
12) Hexachlorobutadiene	7.31	225	205680	89.17	ug/L	98
14) 2,4,6-Trichlorophenol	8.51	196	221971	87.58	ug/L	98
15) 2,4,5-Trichlorophenol	8.57	196	230686	82.77	ug/L	98
17) 2,4-Dinitrotoluene	10.21	165	224939	88.69	ug/L	95
20) Hexachlorobenzene	12.00	284	191229	87.72	ug/L	95
21) Pentachlorophenol	12.33	266	118459	91.14	ug/L	96

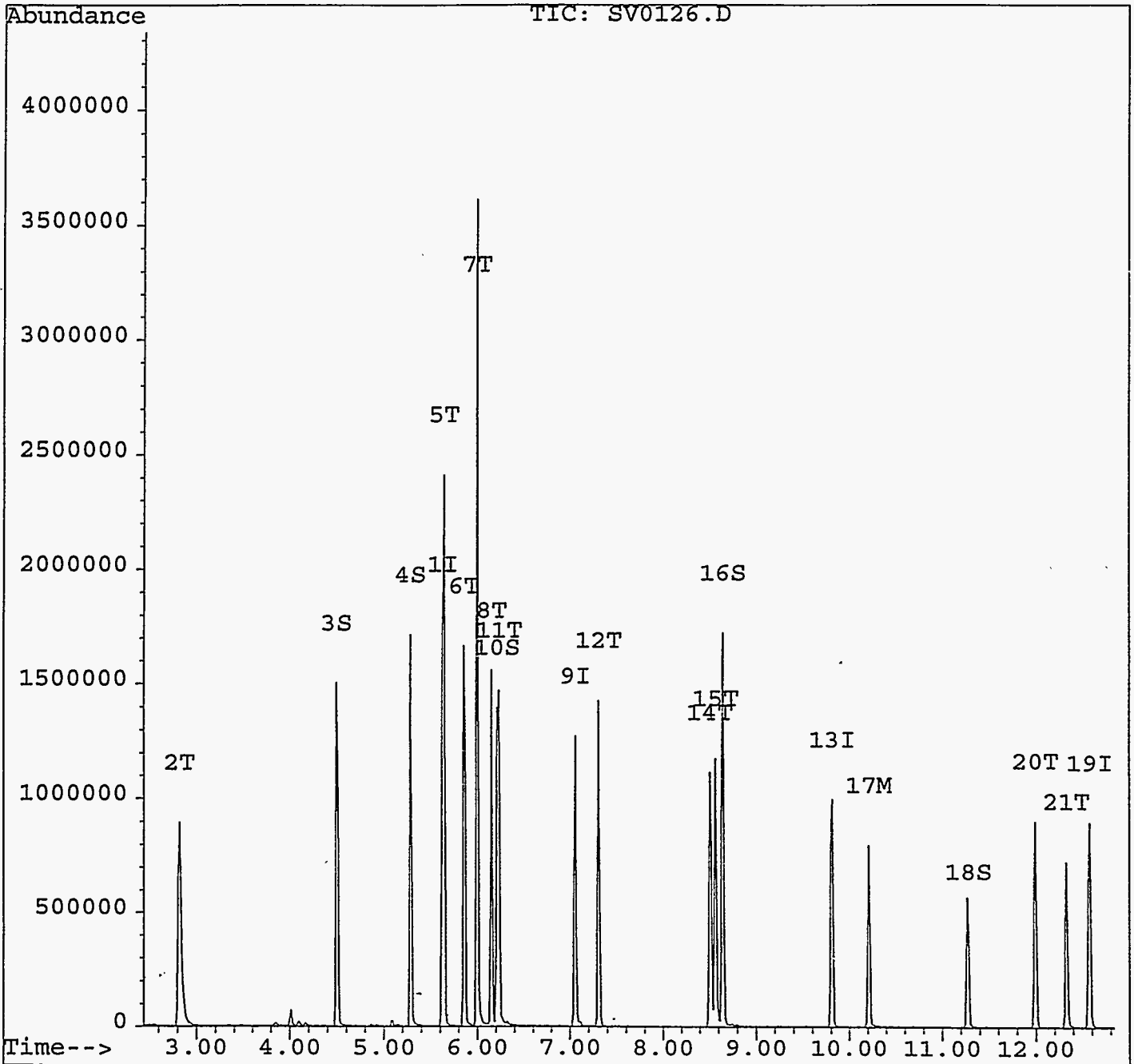
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN2495\SV0126.D  
Acq On : 24 Jan 96 10:24 am  
Sample : SSTD80  
Misc :  
Quant Time: Jan 24 14:25 1996

Vial: 5  
Operator:  
Inst : 5972 - 35  
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\METCLP.M  
Title : Method 8270  
Last Update : Wed Jan 24 14:21:24 1996  
Response via : Single Level Calibration



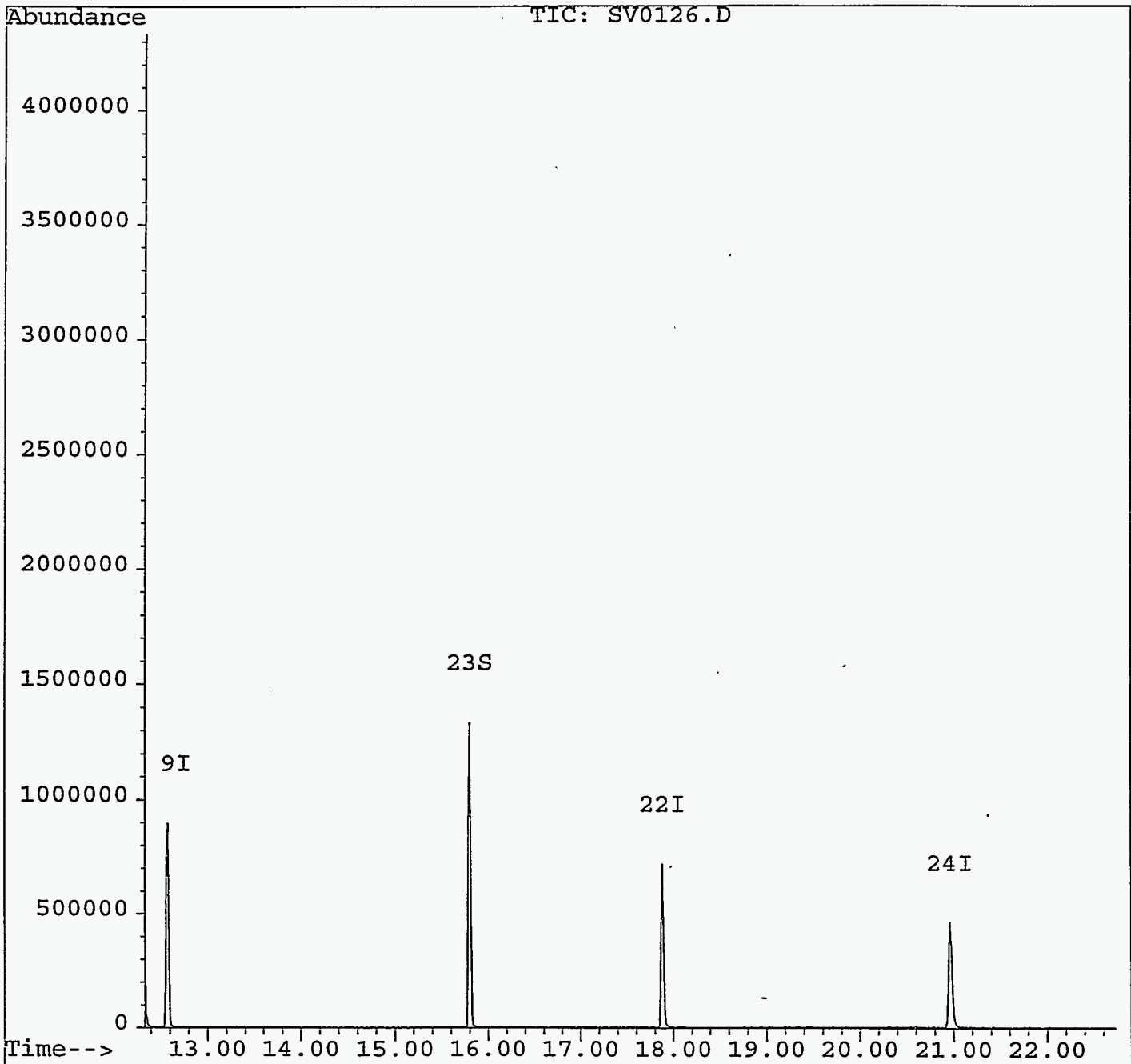


Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN2495\SV0126.D  
Acq On : 24 Jan 96 10:24 am  
Sample : SSTD80  
Misc :  
Quant Time: Jan 24 14:25 1996

Vial: 5  
Operator:  
Inst : 5972 - 35  
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\METCLP.M  
Title : Method 8270  
Last Update : Wed Jan 24 14:21:24 1996  
Response via : Single Level Calibration



Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN2495\SV0127.D  
 Acq On : 24 Jan 96 11:01 am  
 Sample : SSTD120  
 Misc :  
 Quant Time: Jan 24 14:26 1996

Vial: 6  
 Operator:  
 Inst : 5972 - 35  
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\METCLP.M  
 Title : Method 8270  
 Last Update : Wed Jan 24 14:21:24 1996  
 Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.62	152	335281	40.00	ug/L	0.00
9) Naphthalene-d8	7.05	136	1068815	40.00	ug/L	0.00
13) Acenaphthene-d10	9.81	164	537156	40.00	ug/L	0.00
19) Phenanthrene-d10	12.57	188	735680	40.00	ug/L	0.00
22) Chrysene-d12	17.88	240	456957	40.00	ug/L	0.00
24) Perylene-d12	20.97	264	450923	40.00	ug/L	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recovery
3) 2-Fluorophenol	4.50	112	1364652	129.64	ug/L	64.82%
4) Phenol-d5	5.29	99	1565485	128.27	ug/L	64.14%
10) Nitrobenzene-d5	6.22	82	1136252	131.28	ug/L	65.64%
16) 2-Fluorobiphenyl	8.64	172	1989893	137.14	ug/L	137.14%
18) 2,4,6-Tribromophenol	11.27	330	195155	147.01	ug/L	73.51%
23) Terphenyl-d14	15.80	244	1343366	133.67	ug/L	133.67%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Pyridine	2.82	79	1610366	133.36	ug/L	100
5) 1,4-Dichlorobenzene	5.64	146	1260601	124.74	ug/L	98
6) 2-Methylphenol	5.86	108	1062308	129.36	ug/L	98
7) 3&4-Methylphenol	6.00	108	2069253	240.92	ug/L	100
8) Hexachloroethane	6.16	117	529998	126.71	ug/L #	73
11) Nitrobenzene	6.24	77	1132835	125.08	ug/L	100
12) Hexachlorobutadiene	7.31	225	417614	137.40	ug/L	98
14) 2,4,6-Trichlorophenol	8.51	196	471576	138.94	ug/L	99
15) 2,4,5-Trichlorophenol	8.57	196	520849	139.54	ug/L	98
17) 2,4-Dinitrotoluene	10.21	165	533479	157.05	ug/L	87
20) Hexachlorobenzene	12.00	284	388100	139.22	ug/L	87
21) Pentachlorophenol	12.33	266	269421	162.08	ug/L	97

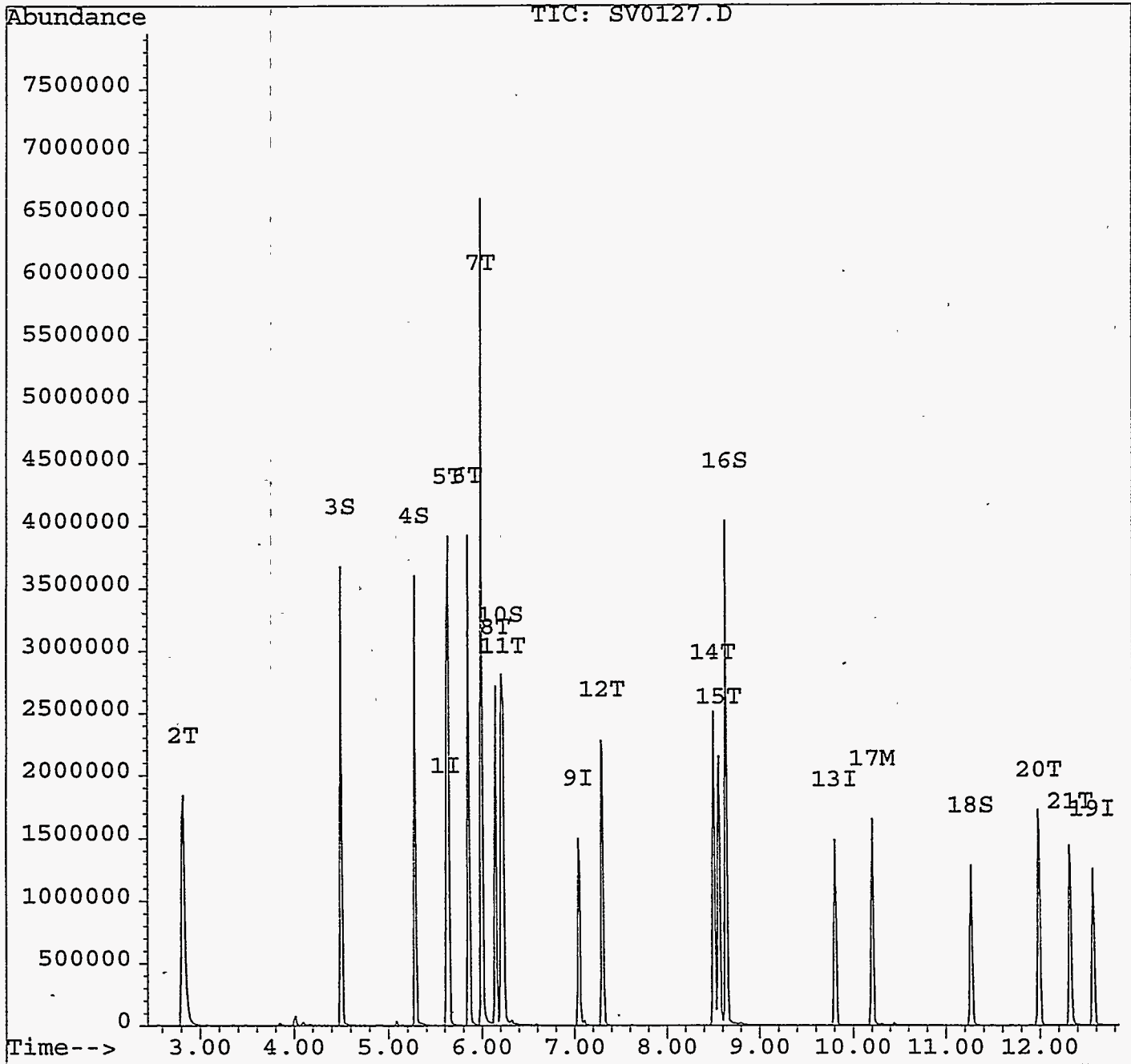
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN2495\SV0127.D  
Acq On : 24 Jan 96 11:01 am  
Sample : SSTD120  
Misc :  
Quant Time: Jan 24 14:26 1996

Vial: 6  
Operator:  
Inst : 5972 - 35  
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\METCLP.M  
Title : Method 8270  
Last Update : Wed Jan 24 14:21:24 1996  
Response via : Single Level Calibration

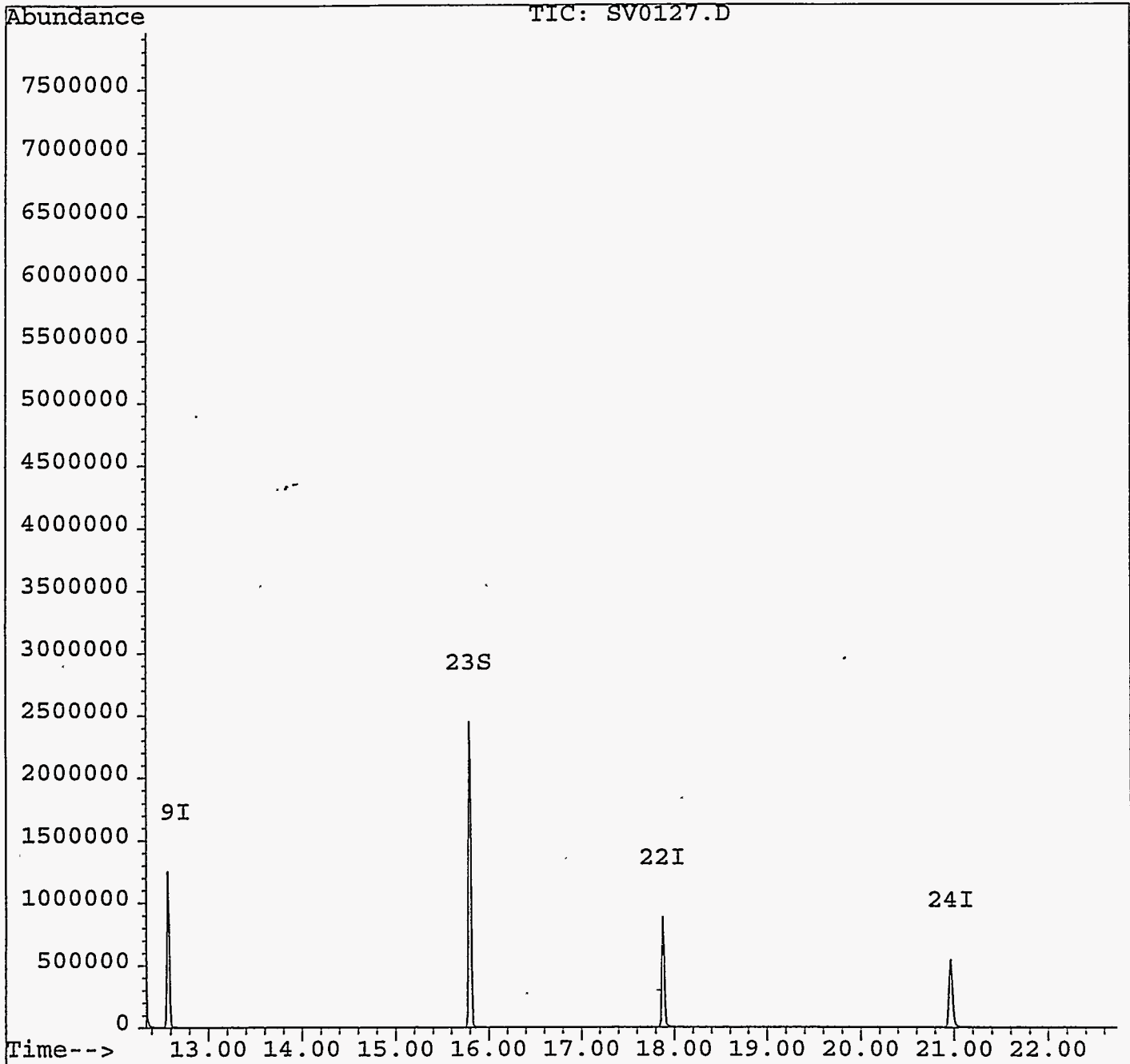


Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN2495\SV0127.D  
Acq On : 24 Jan 96 11:01 am  
Sample : SSTD120  
Misc :  
Quant Time: Jan 24 14:26 1996

Vial: 6  
Operator:  
Inst : 5972 - 35  
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\METCLP.M  
Title : Method 8270  
Last Update : Wed Jan 24 14:21:24 1996  
Response via : Single Level Calibration

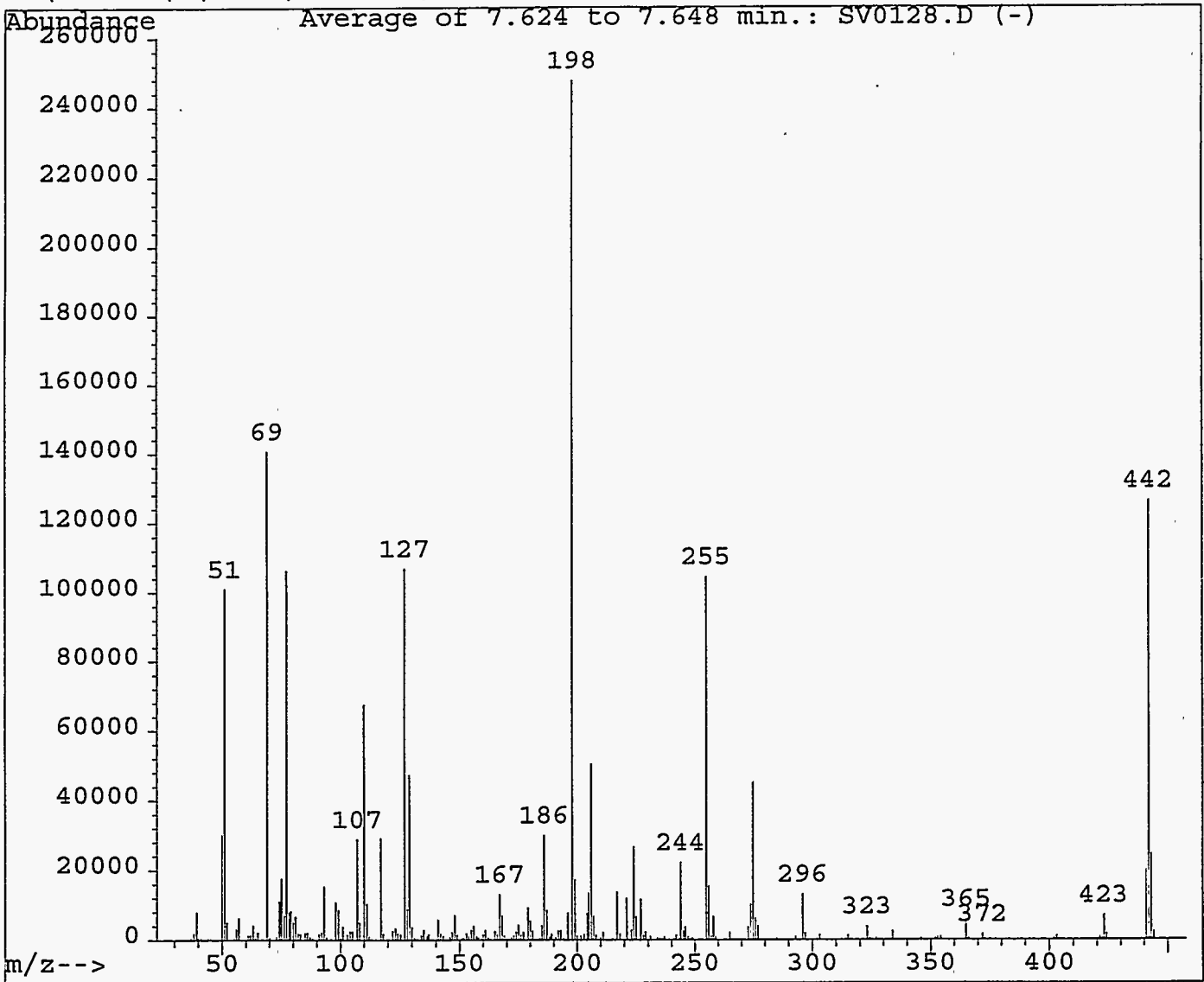


Method 8270 Results

..

C:\HPCHEM\1\DATA\JAN2495\SV0128.D

Wed Jan 24 11:38:14 1996



Peak Apex is scan: 303

Average of 3 scans: 302,303,304 minus background scan 298

Target Mass	Comparison Mass	Lower Limit, %	Upper Limit, %	Relative Abundance, %	Result Pass/Fail
51	198	30	60	40.8	PASS
68	69	0	2	0.0	PASS
69	198	0	100	56.8	PASS
70	69	0	2	0.6	PASS
127	198	40	60	43.2	PASS
197	198	0	1	0.0	PASS
198	198	100	100	100.0	PASS
199	198	5	9	7.0	PASS
275	198	10	30	18.2	PASS
365	198	1	100	2.4	PASS
441	443	0	100	81.7	PASS
442	198	40	100	50.9	PASS
443	442	17	23	19.4	PASS

Method : C:\HPCHEM\1\METHODS\METCLP.M  
 Title : Method 8270  
 Last Update : Wed Jan 24 14:30:34 1996  
 Response via : Continuing Calibration

Continuing Calibration File: SV0129.D

Min. RRF : 0.000 Min. Rel. Area : 50%  
 Max. RRF Dev : 25% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%
1 I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	124
2 T	Pyridine	1.487	1.441	3.1	122
3 S	2-Fluorophenol	1.268	1.256	0.9	125
4 S	Phenol-d5	1.474	1.456	1.2	125
5 T	1,4-Dichlorobenzene	1.196	1.206	-0.8	128
6 T	2-Methylphenol	0.990	0.980	1.0	126
7 T	3&4-Methylphenol	0.990	1.025	-3.5	125
8 T	Hexachloroethane	0.498	0.499	-0.2	128
9 I	Naphthalene-d8	1.000	1.000	0.0	128
10 S	Nitrobenzene-d5	0.332	0.324	2.4	126
11 T	Nitrobenzene	0.335	0.339	-1.3	131
12 T	Hexachlorobutadiene	0.121	0.114	5.9	127
13 I	Acenaphthene-d10	1.000	1.000	0.0	130
14 T	2,4,6-Trichlorophenol	0.260	0.253	2.7	135
15 T	2,4,5-Trichlorophenol	0.283	0.278	1.7	138
16 S	2-Fluorobiphenyl	1.120	1.080	3.5	130
17 M	2,4-Dinitrotoluene	0.269	0.253	6.0	137
18 S	2,4,6-Tribromophenol	0.105	0.099	5.8	127
19 I	Phenanthrene-d10	1.000	1.000	0.0	131
20 T	Hexachlorobenzene	0.163	0.152	7.1	126
21 T	Pentachlorophenol	0.099	0.090	8.7	130
22 I	Chrysene-d12	1.000	1.000	0.0	125
23 S	Terphenyl-d14	0.881	0.880	0.1	133
24 I	Perylene-d12	1.000	1.000	0.0	116

Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN2495\SV0129.D  
 Acq On : 24 Jan 96 11:54 am  
 Sample : SSTD01  
 Misc :  
 Quant Time: Jan 24 14:26 1996

Vial: 8  
 Operator:  
 Inst : 5972 - 35  
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\METCLP.M  
 Title : Method 8270  
 Last Update : Wed Jan 24 14:21:24 1996  
 Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) 1,4-Dichlorobenzene-d4	5.62	152	379566	40.00	ug/L	0.00
9) Naphthalene-d8	7.05	136	1223120	40.00	ug/L	0.00
13) Acenaphthene-d10	9.81	164	623080	40.00	ug/L	0.00
19) Phenanthrene-d10	12.57	188	864318	40.00	ug/L	0.00
22) Chrysene-d12	17.88	240	517364	40.00	ug/L	0.00
24) Perylene-d12	20.97	264	509942	40.00	ug/L	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recovery
3) 2-Fluorophenol	4.50	112	595827	50.00	ug/L	25.00%
4) Phenol-d5	5.28	99	690816	50.00	ug/L	25.00%
10) Nitrobenzene-d5	6.21	82	495231	50.00	ug/L	25.00%
16) 2-Fluorobiphenyl	8.64	172	841528	50.00	ug/L	50.00%
18) 2,4,6-Tribromophenol	11.27	330	76991	50.00	ug/L	25.00%
23) Terphenyl-d14	15.79	244	568904	50.00	ug/L	50.00%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Pyridine	2.82	79	683502	50.00	ug/L	100
5) 1,4-Dichlorobenzene	5.64	146	572040	50.00	ug/L	98
6) 2-Methylphenol	5.86	108	464845	50.00	ug/L	99
7) 3&4-Methylphenol	6.00	108	972333	100.00	ug/L	100
8) Hexachloroethane	6.15	117	236759	50.00	ug/L	85
11) Nitrobenzene	6.22	77	518210	50.00	ug/L	100
12) Hexachlorobutadiene	7.31	225	173913	50.00	ug/L	99
14) 2,4,6-Trichlorophenol	8.51	196	196857	50.00	ug/L	98
15) 2,4,5-Trichlorophenol	8.57	196	216486	50.00	ug/L	98
17) 2,4-Dinitrotoluene	10.21	165	197010	50.00	ug/L	83
20) Hexachlorobenzene	11.98	284	163759	50.00	ug/L	95
21) Pentachlorophenol	12.33	266	97644	50.00	ug/L	95

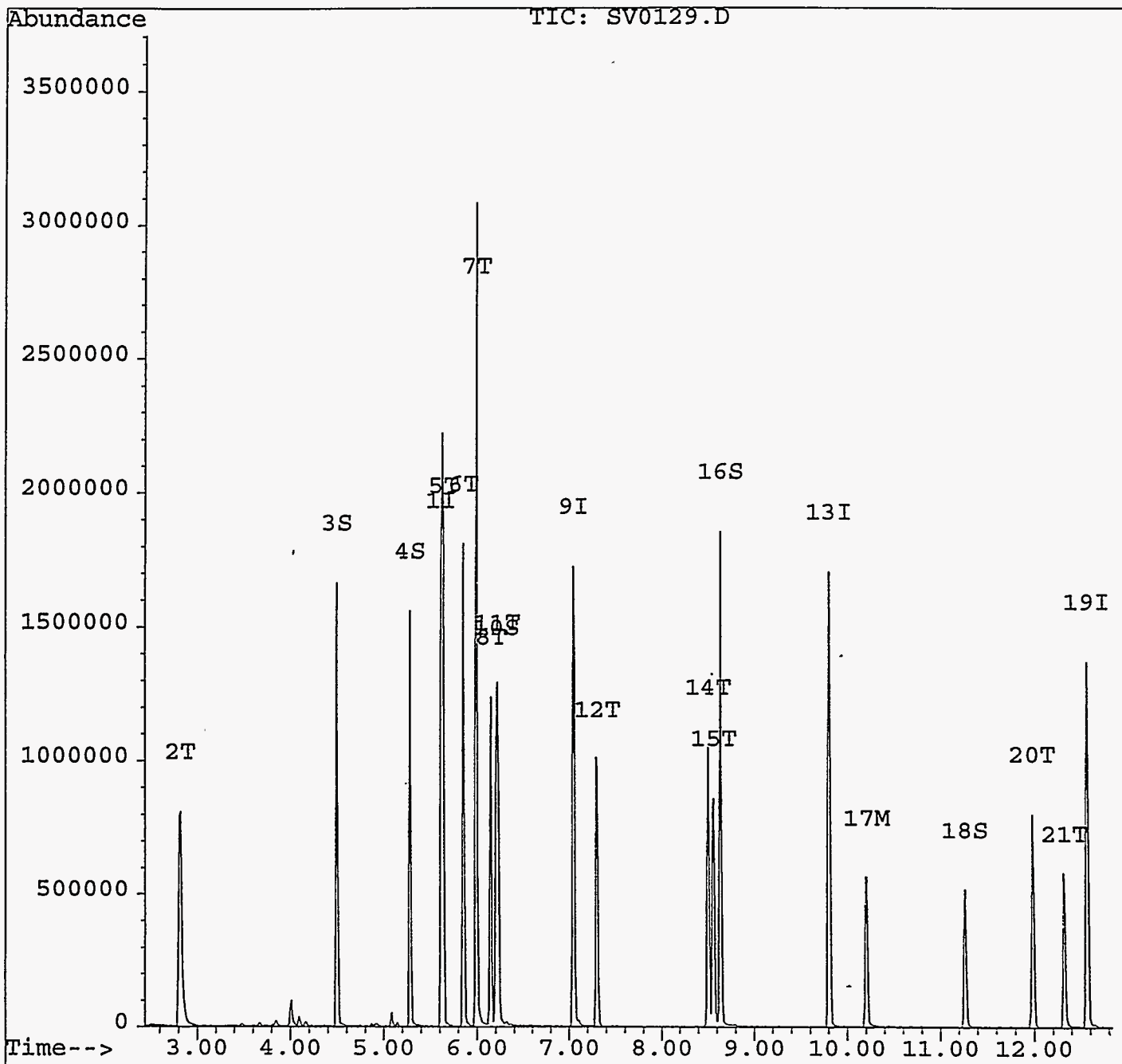
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN2495\SV0129.D  
Acq On : 24 Jan 96 11:54 am  
Sample : SSTD01  
Misc :  
Quant Time: Jan 24 14:26 1996

Vial: 8  
Operator:  
Inst : 5972 - 35  
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\METCLP.M  
Title : Method 8270  
Last Update : Wed Jan 24 14:21:24 1996  
Response via : Single Level Calibration



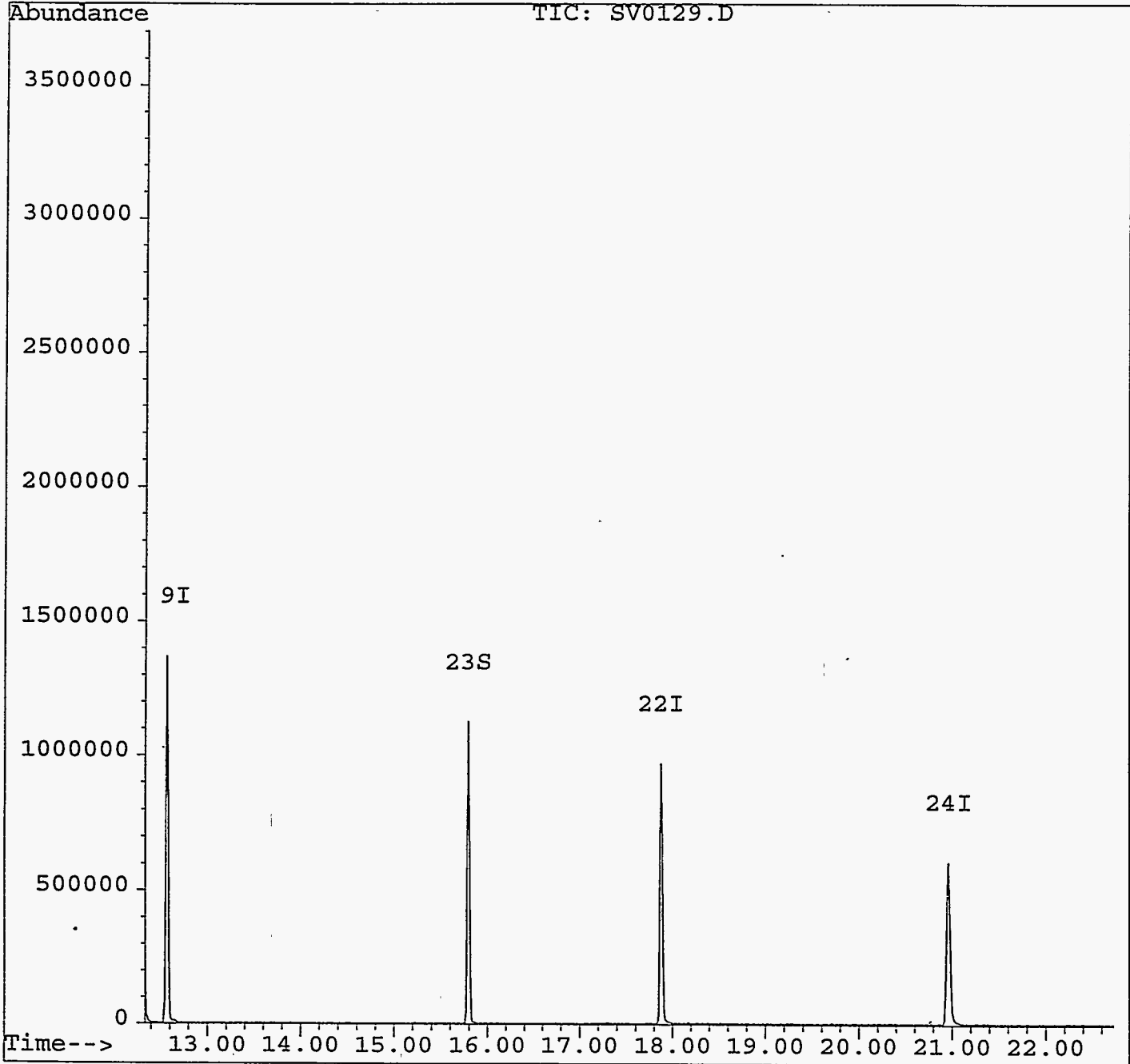


Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN2495\SV0129.D  
Acq On : 24 Jan 96 11:54 am  
Sample : SSTD01  
Misc :  
Quant Time: Jan 24 14:26 1996

Vial: 8  
Operator:  
Inst : 5972 - 35  
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\METCLP.M  
Title : Method 8270  
Last Update : Wed Jan 24 14:21:24 1996  
Response via : Single Level Calibration



Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN2495\SV0130.D  
 Acq On : 24 Jan 96 12:30 pm  
 Sample : SBLK01  
 Misc : Method blank  
 Quant Time: Jan 24 13:49 1996

Vial: 9  
 Operator:  
 Inst : 5972 - 35  
 Multiplr: 2.00

Method : C:\HPCHEM\1\METHODS\METCLP.M  
 Title : Method 8270  
 Last Update : Wed Jan 24 14:34:31 1996  
 Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) 1,4-Dichlorobenzene-d4	5.62	152	425037	40.00	ug/L	0.00
10) Naphthalene-d8	7.05	136	1323511	40.00	ug/L	0.00
14) Acenaphthene-d10	9.81	164	681775	40.00	ug/L	0.00
20) Phenanthrene-d10	12.57	188	956105	40.00	ug/L	0.00
23) Chrysene-d12	17.87	240	583312	40.00	ug/L	0.00
25) Perylene-d12	20.97	264	566323	40.00	ug/L	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recovery
3) 2-Fluorophenol	4.49	112	574114	86.05	ug/L	43.02%
4) Phenol-d5	5.28	99	635606	82.16	ug/L	41.08%
11) Nitrobenzene-d5	6.21	82	444272	82.91	ug/L	41.45%
17) 2-Fluorobiphenyl	8.64	172	752343	81.71	ug/L	81.71%
19) 2,4,6-Tribromophenol	11.27	330	155199	184.23	ug/L	92.11%
24) Terphenyl-d14	15.79	244	561111	87.48	ug/L	87.48%

Target Compounds

Qvalue

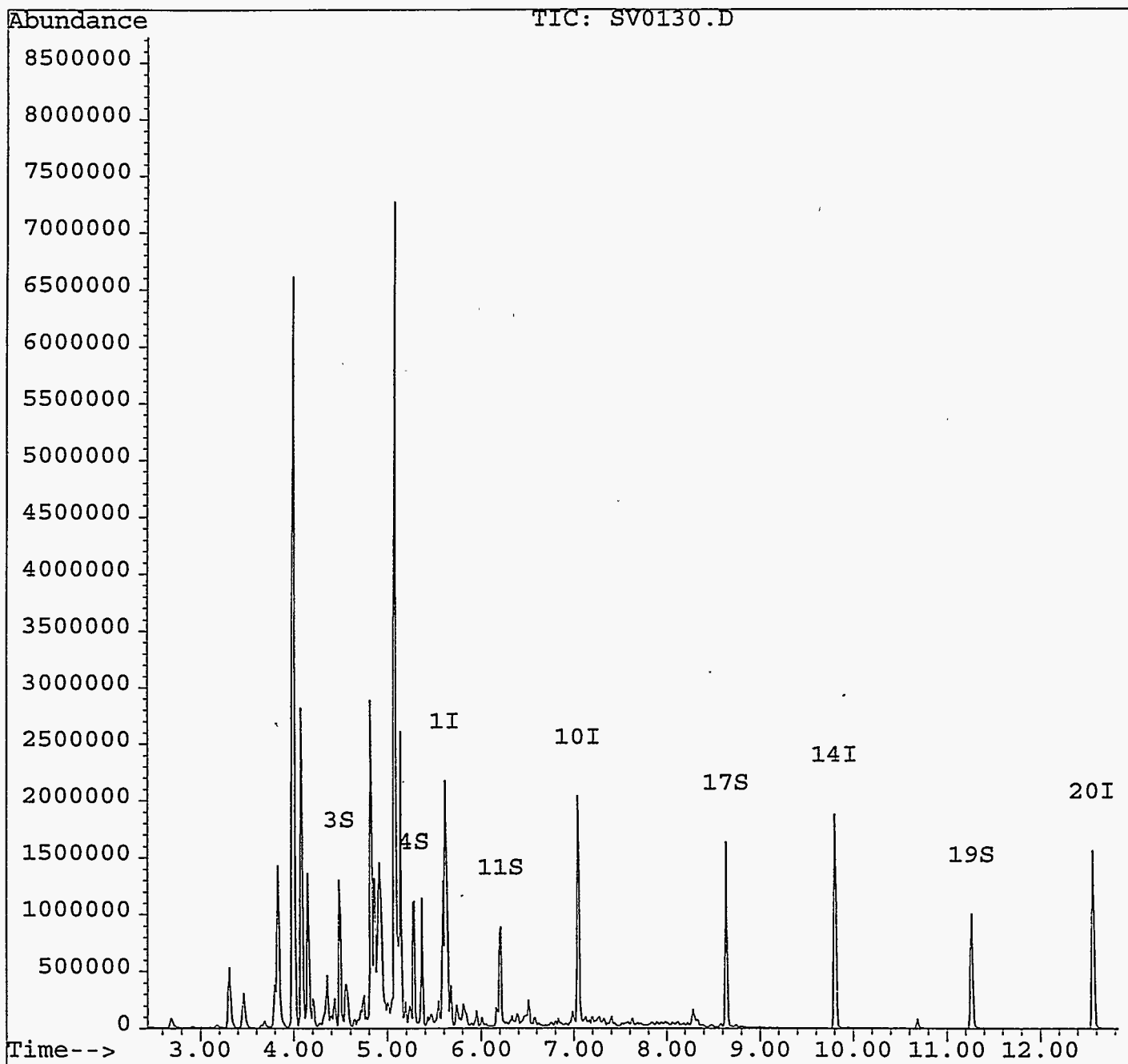
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 (#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN2495\SV0130.D  
Acq On : 24 Jan 96 12:30 pm  
Sample : SBLK01  
Misc : Method blank  
Quant Time: Jan 24 13:49 1996

Vial: 9  
Operator:  
Inst : 5972 - 35  
Multiplr: 2.00

Method : C:\HPCHEM\1\METHODS\METCLP.M  
Title : Method 8270  
Last Update : Wed Jan 24 14:34:31 1996  
Response via : Single Level Calibration

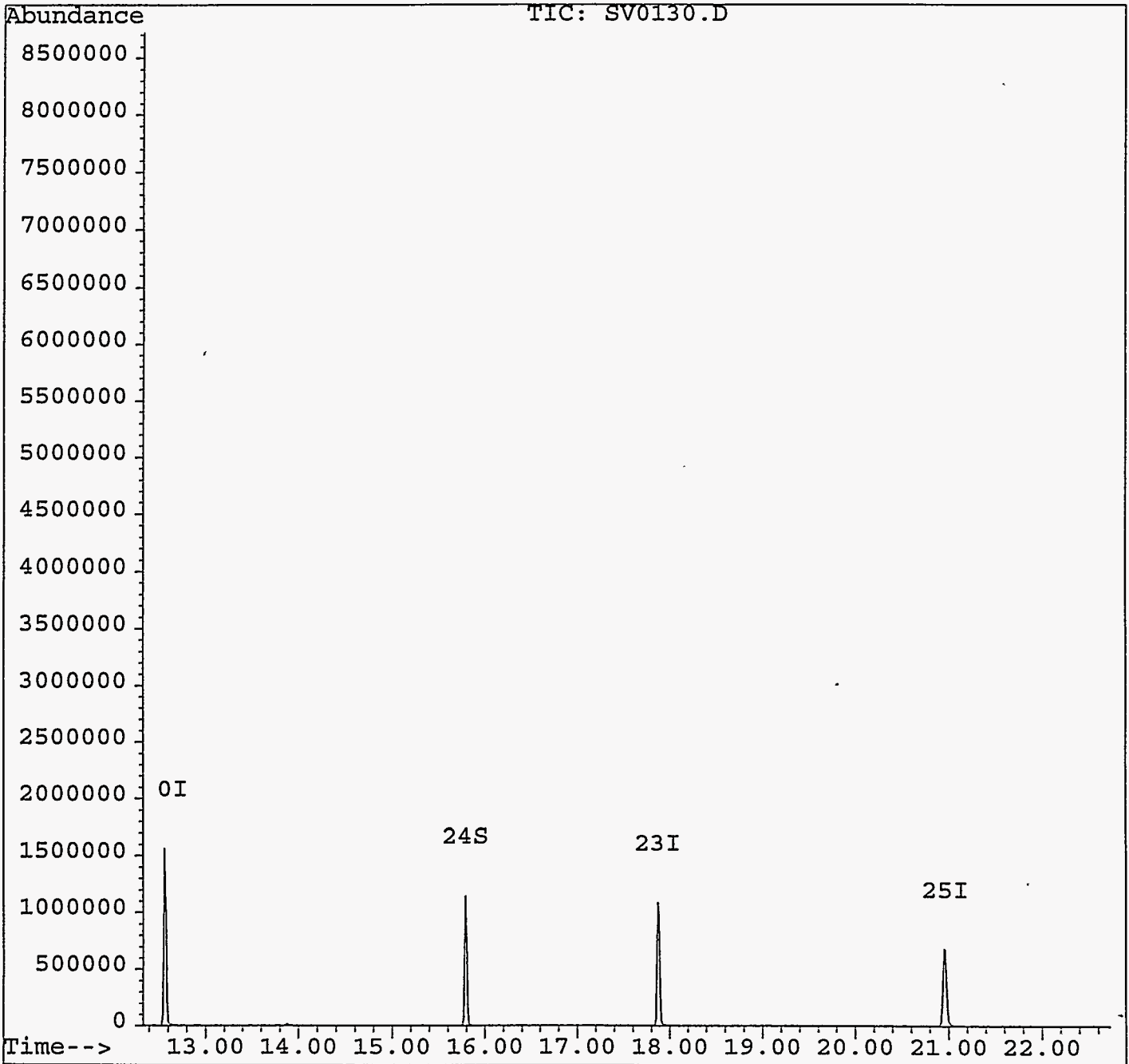


Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN2495\SV0130.D  
Acq On : 24 Jan 96 12:30 pm  
Sample : SBLK01  
Misc : Method blank  
Quant Time: Jan 24 13:49 1996

Vial: 9  
Operator:  
Inst : 5972 - 35  
Multiplr: 2.00

Method : C:\HPCHEM\1\METHODS\METCLP.M  
Title : Method 8270  
Last Update : Wed Jan 24 14:34:31 1996  
Response via : Single Level Calibration



Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN2495\SV0131.D  
 Acq On : 24 Jan 96 1:07 pm  
 Sample : TC BLK  
 Misc : TC blank  
 Quant Time: Jan 24 13:49 1996

Vial: 10  
 Operator:  
 Inst : 5972 - 35  
 Multiplr: 2.00

Method : C:\HPCHEM\1\METHODS\METCLP.M  
 Title : Method 8270  
 Last Update : Wed Jan 24 14:34:31 1996  
 Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) 1,4-Dichlorobenzene-d4	5.62	152	305382	40.00	ug/L	0.00
10) Naphthalene-d8	7.05	136	958758	40.00	ug/L	0.00
14) Acenaphthene-d10	9.81	164	509925	40.00	ug/L	0.00
20) Phenanthrene-d10	12.57	188	708710	40.00	ug/L	0.00
23) Chrysene-d12	17.88	240	443048	40.00	ug/L	0.00
25) Perylene-d12	20.96	264	465002	40.00	ug/L	-0.01

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recovery
3) 2-Fluorophenol	4.50	112	400716	83.59	ug/L	41.80%
4) Phenol-d5	5.28	99	447220	80.46	ug/L	40.23%
11) Nitrobenzene-d5	6.21	82	288982	74.44	ug/L	37.22%
17) 2-Fluorobiphenyl	8.64	172	516728	75.03	ug/L	75.03%
19) 2,4,6-Tribromophenol	11.27	330	106296	168.70	ug/L	84.35%
24) Terphenyl-d14	15.79	244	355370	72.94	ug/L	72.94%

Target Compounds

Qvalue

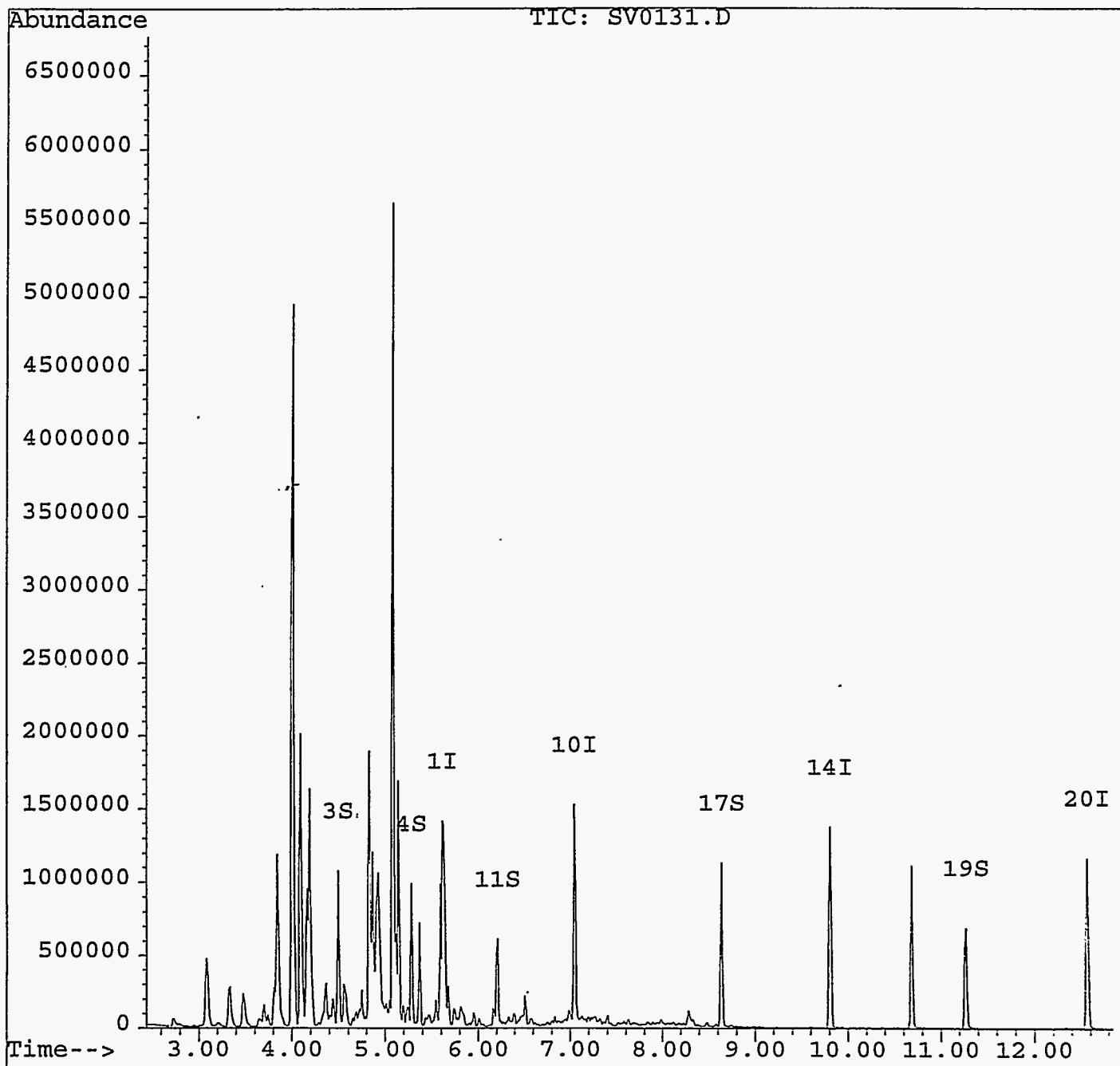
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN2495\SV0131.D  
Acq On : 24 Jan 96 1:07 pm  
Sample : TC BLK  
Misc : TC blank  
Quant Time: Jan 24 13:49 1996

Vial: 10  
Operator:  
Inst : 5972 - 35  
Multiplr: 2.00

Method : C:\HPCHEM\1\METHODS\METCLP.M  
Title : Method 8270  
Last Update : Wed Jan 24 14:34:31 1996  
Response via : Single Level Calibration

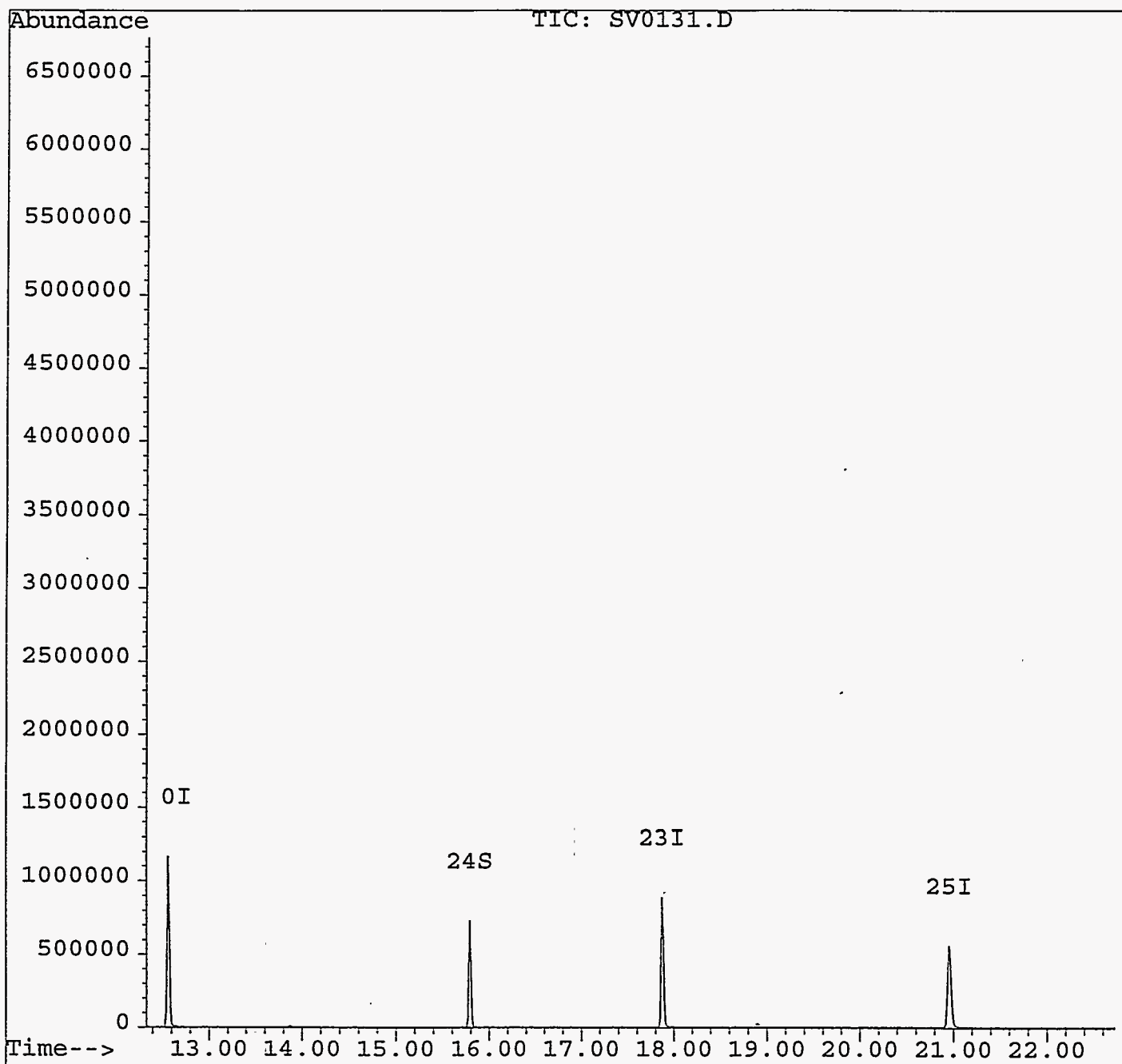


Quantitation Report

Data File : C:\HPCHEM\1\DATA\JAN2495\SV0131.D  
Acq On : 24 Jan 96 1:07 pm  
Sample : TC BLK  
Misc : TC blank  
Quant Time: Jan 24 13:49 1996

Vial: 10  
Operator:  
Inst : 5972 - 35  
Multiplr: 2.00

Method : C:\HPCHEM\1\METHODS\METCLP.M  
Title : Method 8270  
Last Update : Wed Jan 24 14:34:31 1996  
Response via : Single Level Calibration



001

ANALYST - Extraction Y.Y. W.F.

DATE 11/22/96

METHOD 1.1.1' (see 001.111)

ANALYST - Filtration Y.Y. W.F.

DATE 11/23/96

PROJECT NO. \_\_\_\_\_

CLIENT FCMCC

TUMBLER START TIME	TUMBLING STOP TIME RANGE 16-20 HOURS	TUMBLER STOP TIME	TOTAL ROTATION TIME	ROTATION SPEED	MIN/MAX TEMPERATURES (During Rotation)	CHECKED BY
3:10 pm		7:30 AM	16 hrs 20 min	30 RPM	22 / 23	WF

Pos	Lab No.	Site Name	Initial Mass	Extraction Vessel Used	1st pH	Determination of pH per Method to Determine Extraction Fluid #	2nd pH	Ext. Fluid #	ml Ext. Fluid	% Solids	Grams of Filtrate to be Added Back to the Leachate	Init. After Add Back	Final pH
1	ECO-004-1A	Semi Test Soil	100.3g		7		1	1	2000	-	-		4.96
2	ECO-004-2A	Semi test soil-02	100.1g		7		1	1	2000	-	-		4.96
3	ECO-004-3A	Semi test soil-03	100.7g		7		1	1	2000	-	-		4.96
4	ECO-004-4A	Semi test soil-04	100.3g		7		1	1	2000	-	-		4.96
5	ECO-004-5A	Semi test soil-05	100.1g		7		1	1	2000	-	-		4.96
6	ECO-004-6A	Semi test soil-06	100.4g		7		1	1	2000	-	-		4.96
7	ECO-004-7A	Semi test soil-07	100.6g		7		1	1	2000	-	-		4.96
8	ECO-004-8A	Semi test soil-08								99%			
9	TCLP BLANK	TCLP BLANK	-		4.96			1					4.96
10													

EXTRACTION CUSTODY RECORD

Ext. Transferred	Relinquished By	Date	Time	Rec'd Fr

NOTES:

$$\% \text{ Solids} = \frac{\text{Total wgt of solids}}{\text{Total wgt of solids} + \text{Wgt of filtrate}} \cdot 100$$

$$\text{Grams of filtrate to be added back to the leachate} = \frac{\text{Wgt of solids to be leached}}{\text{Total wgt of solids}} \cdot \text{Wgt of filtrate}$$

MAXIM

314 426 4212

13:46

12/15/95



SEMIVOLATILE EXTRACTION LOG - WATER

Notebook: GP170

Page No.: 0161

Approval: \_\_\_\_\_

Extraction Method: \$270 EXCEL Concentration Method: AUTOVAP

Sample Received: 1/22/96 Analysis Due Date: 1/26/96

Lab Ext Chemist: Y.Y. WF Date: 1/23/96 BN Conc Chemist: Y.Y. Date: 1/23/96

Field Ext Chemist: Y.Y. WF Date: 1/23/96 Acid Conc Chemist: WF Date: 1/24/96

Preparation Method: \_\_\_\_\_

Base/Neut. Acids

Work Order No.	Dash No.	Client	Client ID	Sample pH	Sample Amount (ml)	Surr Amt (ml)	Spike Amt (ml)	Adj pH	Final Vol (ml)	Adj pH	Final Vol (ml)
EXT BLANK	-	FERMCO	EXT. BLANK	6	1000	1		≥12	1	≤2	1
TCLP BLANK	-		TCLP BLANK	4.96	1000	1		≥12	1	≤2	1
CO-004	1A		SV Test Soil 01	4.96	1000	1		≥12	1	≤2	1
CO-004	2A		SV Test Soil-02	4.96	1000	1		≥12	1	≤2	1
CO-004	3A		SV Test Soil-03	4.96	1000	1		≥12	1	≤2	1
CO-004	4A		SV Test Soil-04	4.96	1000	1		≥12	1	≤2	1
CO-004	5A	FERMCO	SV Test Soil-05	4.96	1000	1		≥12	1	≤2	1
CO-004	6A		SV Test Soil-06	4.96	1000	1		≥12	1	≤2	1
CO-004	7A		SV Test Soil-07	4.96	1000	1		≥12	1	≤2	1
TCLP LCS	LCS		TCLP LCS	6	1000	1	1	≥12	1	≤2	1

Solvent Lot No.: 9528NB <sup>FISHER HPLC</sup> BN Surrogate Code: BN-SURR-01 <sup>100 PPM</sup> Acid Surrogate Code: ACID SURR-VIA 200PPM

Reagents Used/Lot No.: \_\_\_\_\_ BN Matrix Spike Codes: SPK <sup>(u)</sup> Acid Matrix Spike Code: SPK-VIA 01 200PPM <sup>(u)</sup>

Comments: TCLP SPIKE - 01 MS

Approval: \_\_\_\_\_

Notebook: GP170

Action Method: 8270 (EXCEL) Concentration Method: AUTOVAP

Page No.: 0161

Date Received: 1/18/96 Analysis Due Date: 1/23/96

Ext Chemist: Y.Y./w.f Date: 1/18/96 BN Conc Chemist: Y.Y. Date: 1/18/96

Acid Ext Chemist: Y.Y. Date: 1/18/96 Acid Conc Chemist: Y.Y. Date: 1/18/96

Set-up Method: \_\_\_\_\_

Base/Neut. Acids

Work Order No.	Dash No.	Client	Client ID	Sample pH	Sample Amount (ml)	Surr Amt (ml)	Spike Amt (ml)	Adj pH	Final Vol (ml)	Adj pH	Final Vol (ml)
EXT. BLANK	-	FERMCO	EXT. BLANK	6	1000	1		≥12		≤2	
CO-003	01A		S.V. Test-01	6	1000	1		≥12		≤2	
CO-003	02A		S.V. Test-02	6	1000	1		≥12		≤2	
CO-003	03A		S.V. Test-03	6	1000	1		≥12		≤2	
CO-003	04A		S.V. Test-04	6	1000	1		≥12		≤2	
CO-003	05A		S.V. Test-05	6	1000	1		≥12		≤2	
CO-003	06A	Ferenco	S.V. Test-06	6	1000	1		≥12		≤2	
CO-003	07A		S.V. Test-07	6	1000	1		≥12		≤2	
CO-003	06AMS		S.V. Test-06MS	6	1000	1	1	≥12		≤2	
CO-003	06AMSD		S.V. Test-06MSD	6	1000	1	1	≥12		≤2	
CS	A		LCS-A	6	1000		0.5ml	≥12		≤2	
CS	B		LCS-B	6	1000	1	1	≥12		≤2	

Solvent Lot No.: Fisher Mezel 95294R BN Surrogate Code: 100 PPM BN Surr-01 Acid Surrogate Code: 200 PPM Acid Surr-01A

Reagents Used/Lot No.: NA2S2O4 3247546 BN Matrix Spike Code: BN-100 PPM BNAms-01 Acid Matrix Spike Code: Acid-200 PPM BNAms-01

Comments: Sulfuric acid - 1M 304K PPM HACH - 954775 LCSA - SVST.D01  
LCSB - SVST.D02

PROJECT \_\_\_\_\_

FILE I.D.	ECO I.D.	DATE	TIME	DIL	MATRIX	ANALYST INI	COMMENTS
SV0139	ECO-004-01	12/19	N/A	5	W	TI	
SV0140	ECO-004-02	-	-	5	W	TI	
SV0141	ECO-004-03	-	-	1	W	TI	
SV0142	ECO-004-04	-	-	1	W	TI	
SV0143	ECO-004-05	-	-	1	W	TI	
SV0144	ECO-004-06	-	-	1	W	TI	
SV0145	ECO-004-07	-	21 <sup>39</sup>	1	W	TI	

Read and Understood By \_\_\_\_\_

Signed \_\_\_\_\_

Date \_\_\_\_\_

Signed \_\_\_\_\_

PROJECT \_\_\_\_\_

FILE I.D.	ECO I.D.	DATE	TIME	ISIL	MATRIX	ANALYSIS INI	COMMENTS
SV0122	DFAPP10	1/24/80	7 <sup>45</sup> AM	M/A	STAN	7.1	
SV0123	SST050	"	N/A	M/A	STAN	7.1	
SV0124	SST0160	"	"	N/A	"	7.1	
SV0125	SST020	"	"	N/A	"	7.2	
SV0126	SST080	"	"	N/A	"	7.2	
SV0127	SST0120	"	"	N/A	"	7.2	
SV0128	DFAPP10	4 <sup>35</sup> AM	"	M/A	"	7.2	
SV0129	SST020	"	"	N/A	"	7.1	
SV0130	SBLK01	"	"	N/A	W	7.1	
SV0131	TC BLK	"	"	N/A	W	7.1	
SV0132	ECO-004-01	"	"	1	W	7.1	
SV0133	ECO-004-02	"	"	1	W	7.1	
SV0134	ECO-004-03	"	"	5	W	7.1	
SV0135	ECO-004-04	"	"	5	W	7.1	
SV0136	ECO-004-05	"	"	5	W	7.1	
SV0137	ECO-004-06	"	"	5	W	7.1	
SV0138	ECO-004-07	"	"	5	W	7.1	

Continued on Page \_\_\_\_\_

Read and Understood By \_\_\_\_\_

Signed \_\_\_\_\_

Date \_\_\_\_\_

Signed \_\_\_\_\_

Date \_\_\_\_\_

DATE REC.	SAMPLE I.D.	ECO I.D.	TEST	# CONT	MATRIX	VOL
1/22/95	SEMI TEST SOIL 01	ECO-004-01	8270 TC	2	SOIL	4
1/22/95	SEMI TEST SOIL 02	ECO-004-02	8270 TC	2	SOIL	4
1/22/95	SEMI TEST SOIL 03	ECO 004-03	8270 TC	2	SOIL	4
1/22/95	SEMI TEST SOIL 04	ECO-004-04	8270 TC	2	SOIL	4
1/22/95	SEMI TEST SOIL 05	ECO-004-05	8270 TC	2	SOIL	4
1/22/95	SEMI TEST SOIL 06	ECO-004-06	8270 TC	2	SOIL	4
1/22/95	SEMI TEST SOIL 07	ECO-004-07	8270 TC	2	SOIL	4
1/24/95	SEMI TEST SOIL 08	ECO-004-08	% SOLIDS	1	SOIL	4



**APPENDIX E**  
**AQUEOUS SAMPLE RCRA METALS REPORT**



Department of the Army  
U.S. Army Biomedical Research and Development Laboratory  
Research Methods Branch

**Inorganic Data Package**

Date of Sampling 4/16/96  
Date of Analysis 4/16/96  
Analyst William E. Dennis, Geo-Centers, Inc. for USABRDL  
Requestor Fermco

This package contains data for the following samples:

FERMCO ID	Chemistry Accession #	Analytes	Date Analyzed
Metals in Water 12	96-1001	Ag, As, Ba, Cd, Cr, Pb, Se	4/16/96
Metals in Water 01	96-1002	Ag, As, Ba, Cd, Cr, Pb, Se	4/16/96
Metals in Water 02	96-1003	Ag, As, Ba, Cd, Cr, Pb, Se	4/16/96
Metals in Water 03	96-1004	Ag, As, Ba, Cd, Cr, Pb, Se	4/16/96
Metals in Water 04	96-1005	Ag, As, Ba, Cd, Cr, Pb, Se	4/16/96
Metals in Water 05	96-1006	Ag, As, Ba, Cd, Cr, Pb, Se	4/16/96
Metals in Water 06	96-1007	Ag, As, Ba, Cd, Cr, Pb, Se	4/16/96
Metals in Water 07	96-1008	Ag, As, Ba, Cd, Cr, Pb, Se	4/16/96
Metals in Water 08	96-1009	Ag, As, Ba, Cd, Cr, Pb, Se	4/16/96
Metals in Water 09	96-1010	Ag, As, Ba, Cd, Cr, Pb, Se	4/16/96
Metals in Water 10	96-1011	Ag, As, Ba, Cd, Cr, Pb, Se	4/16/96
Metals in Water 11	96-1012	Ag, As, Ba, Cd, Cr, Pb, Se	4/16/96
Metals in Water 13	96-1013	Ag, As, Ba, Cd, Cr, Pb, Se	4/16/96
Metals in Water 14	96-1014	Ag, As, Ba, Cd, Cr, Pb, Se	4/16/96

Samples were analyzed by SW-846 method 6010A methodology and prepared using method 3015.

This package contains the following data:

Analytical Chemistry Reports for the samples

Initial Calibration Blank

Continuing Calibration Blank

Initial Calibration Verification

Continuing Calibration Verification

Laboratory Control Blank

Laboratory Control Spike

Matrix Spike

Laboratory Duplicate Recovery

Instrumental Detection Limits

ICP Background Detection Points

Linear Range Table

Sample Preparation Log

Analysis Run Log

Chemist

*William E. Dennis*

Date

*4/17/96*













Department of the Army  
 U.S. Army Biomedical Research and Development Laboratory  
 Research Methods Branch

**ANALYTICAL CHEMISTRY REPORT**

TEST NUMBER	NA	DATE REPORTED	4/16/96
ANALYSIS/MATRIX	Trace Metals / Water		
Collection Site	Date(s) Collected	Date(s) Analyzed	
Fernald	4/16/96	4/16/96	

Chemistry Accession Number	Sample Identification	Element	Concentration	units
96-1007	Metals in Water 06			
		Ag	0.271	mg/L
		As	BDL	mg/L
		Ba	0.296	mg/L
		Cd	0.302	mg/L
		Cr	0.288	mg/L
		Pb	0.271	mg/L
		Se	BDL	mg/L

BDL = Below Detectable Limit  
 The Detectable limit for this method is Ag <0.05 mg/L, As <0.10 mg/L, Ba <0.05 mg/L  
 Cd <0.05 mg/L, Cr <0.05 mg/L, Pb <0.05 mg/L, Se <0.20 mg/L.

Comments:

Chemist *William R. ...* Date 4/16/96

Reviewed by \_\_\_\_\_ Date \_\_\_\_\_



















Department of the Army  
U.S. Army Biomedical Research and Development Laboratory  
Research Methods Branch  
ANALYTICAL CHEMISTRY REPORT

**Initial Calibration Blank**

Date of determination 4/16/96

Sample ID Initial Calibration Blank

Sequence line 60

Element	Detection Limit mg/L	Concentration mg/L	Within control Limits Y/N
Ag	0.05	BDL	Y
As	0.10	BDL	Y
Ba	0.05	BDL	Y
Cd	0.05	BDL	Y
Cr	0.05	BDL	Y
Pb	0.05	BDL	Y
Se	0.20	BDL	Y

BDL = Below Detection Limit

Comments:

Chemist

*William Dennis*

Date

*4/17/96*

Department of the Army  
U.S. Army Biomedical Research and Development Laboratory  
Research Methods Branch  
ANALYTICAL CHEMISTRY REPORT

**Continuing Calibration Blank**

Date of determination 4/16/96

Sample ID Continuing Calibration Blank

Sequence line 72

	Detection Limit mg/L	Concentration mg/L	Within control Limits Y/N
Ag	0.05	BDL	Y
As	0.10	BDL	Y
Ba	0.05	BDL	Y
Cd	0.05	BDL	Y
Cr	0.05	BDL	Y
Pb	0.05	BDL	Y
Se	0.20	BDL	Y

BDL = Below Detection Limit

Comments:

Chemist

*William Dennis*

Date

*4/17/96*



Department of the Army  
U.S. Army Biomedical Research and Development Laboratory  
Research Methods Branch  
ANALYTICAL CHEMISTRY REPORT

**Continuing Calibration Blank**

Date of determination 4/16/96

Sample ID Continuing Calibration Blank

Sequence line 80

	Detection Limit mg/L	Concentration mg/L	Within control Limits Y/N
Ag	0.05	BDL	Y
As	0.10	BDL	Y
Ba	0.05	BDL	Y
Cd	0.05	BDL	Y
Cr	0.05	BDL	Y
Pb	0.05	BDL	Y
Se	0.20	BDL	Y

BDL = Below Detection Limit

Comments:

Chemist

*William Demin*

Date

*4/17/96*

Department of the Army  
U.S. Army Biomedical Research and Development Laboratory  
Research Methods Branch  
ANALYTICAL CHEMISTRY REPORT

**Continuing Calibration Blank**

Date of determination 4/16/96

Sample ID Continuing Calibration Blank

Sequence line 88

	Detection Limit mg/L	Concentration mg/L	Within control Limits Y/N
Ag	0.05	BDL	Y
As	0.10	BDL	Y
Ba	0.05	BDL	Y
Cd	0.05	BDL	Y
Cr	0.05	BDL	Y
Pb	0.05	BDL	Y
Se	0.20	BDL	Y

BDL = Below Detection Limit

Comments:

Chemist

*William Quinn*

Date

*4/17/96*

Department of the Army  
U.S. Army Biomedical Research and Development Laboratory  
Research Methods Branch  
ANALYTICAL CHEMISTRY REPORT

**Continuing Calibration Blank**

Date of determination 4/16/96

Sample ID Continuing Calibration Blank

Sequence line 96

	Detection Limit mg/L	Concentration mg/L	Within control Limits Y/N
Ag	0.05	BDL	Y
As	0.10	BDL	Y
Ba	0.05	BDL	Y
Cd	0.05	BDL	Y
Cr	0.05	BDL	Y
Pb	0.05	BDL	Y
Se	0.20	BDL	Y

BDL = Below Detection Limit

Comments:

Chemist

*William Davis*

Date 4/17/96

Department of the Army  
U.S. Army Biomedical Research and Development Laboratory  
Research Methods Branch  
ANALYTICAL CHEMISTRY REPORT

**Initial Calibration Verification**

Date of determination \_\_\_\_\_

Sequence Lines 61-62

Sample ID Initial Calibration Verification

	Actual Concentration mg/L	Concentration mg/L	Control Limits mg/L	Within control Limits Y/N
Ag	1	1.01	0.900-1.100	Y
As	1	0.970	0.900-1.100	Y
Ba	1	1.01	0.900-1.100	Y
Cd	1	0.998	0.900-1.100	Y
Cr	1	0.991	0.900-1.100	Y
Pb	1	1.02	0.900-1.100	Y
Se	1	1.01	0.900-1.100	Y

BDL = Below Detection Limit

Comments:

Chemist



Date 4/17/96

Department of the Army  
U.S. Army Biomedical Research and Development Laboratory  
Research Methods Branch  
ANALYTICAL CHEMISTRY REPORT

**Continuing Calibration Verification**

Date of determination 4/16/96 Sequence Lines 81-82

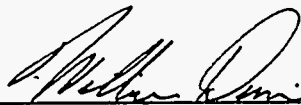
Sample ID Continuing Calibration Verification

	Actual Concentration mg/L	Concentration mg/L	Control Limits mg/L	Within control Limits Y/N
Ag	1	0.990	0.900-1.100	Y
As	1	1.00	0.900-1.100	Y
Ba	1	1.00	0.900-1.100	Y
Cd	1	0.999	0.900-1.100	Y
Cr	1	0.996	0.900-1.100	Y
Pb	1	0.982	0.900-1.100	Y
Se	1	1.00	0.900-1.100	Y

BDL = Below Detection Limit

Comments:

Chemist



Date

4/17/96

Department of the Army  
U.S. Army Biomedical Research and Development Laboratory  
Research Methods Branch  
ANALYTICAL CHEMISTRY REPORT

**Continuing Calibration Verification**

Date of determination 4/16/96

Sequence Lines 89-90


Sample ID Continuing Calibration Verification

	Actual Concentration mg/L	Concentration mg/L	Control Limits mg/L	Within control Limits Y/N
Ag	1	0.991	0.900-1.100	Y
As	1	1.00	0.900-1.100	Y
Ba	1	0.988	0.900-1.100	Y
Cd	1	0.990	0.900-1.100	Y
Cr	1	0.995	0.900-1.100	Y
Pb	1	0.980	0.900-1.100	Y
Se	1	1.03	0.900-1.100	Y

BDL = Below Detection Limit

Comments:

Chemist



Date

4/17/96

Department of the Army  
U.S. Army Biomedical Research and Development Laboratory  
Research Methods Branch  
ANALYTICAL CHEMISTRY REPORT

**Continuing Calibration Verification**

Date of determination 4/16/96 Sequence Lines 97-98

Sample ID Continuing Calibration Verification

	Actual Concentration mg/L	Concentration mg/L	Control Limits mg/L	Within control Limits Y/N
Ag	1	0.983	0.900-1.100	Y
As	1	1.02	0.900-1.100	Y
Ba	1	1.00	0.900-1.100	Y
Cd	1	1.000	0.900-1.100	Y
Cr	1	1.01	0.900-1.100	Y
Pb	1	0.979	0.900-1.100	Y
Se	1	1.01	0.900-1.100	Y

BDL = Below Detection Limit

Comments:

Chemist



Date

4/17/96

Department of the Army  
U.S. Army Biomedical Research and Development Laboratory  
Research Methods Branch  
ANALYTICAL CHEMISTRY REPORT

**Laboratory Control Blank**

Date of determination 4/16/96

Sample ID Laboratory Control Blank

Element	Detection Limit mg/L	Concentration mg/L	Within control Limits Y/N
Ag	0.05	BDL	Y
As	0.1	BDL	Y
Ba	0.05	BDL	Y
Cd	0.05	BDL	Y
Cr	0.05	BDL	Y
Pb	0.05	BDL	Y
Se	0.20	BDL	Y

BDL = Below Detection Limit

Comments:

Chemist

*William Durin*

Date

4/17/96



Department of the Army  
 U.S. Army Biomedical Research and Development Laboratory  
 Research Methods Branch  
 ANALYTICAL CHEMISTRY REPORT

**Laboratory Control Spike**

Sample ID Laboratory Control Sample

Date 4/16/96

Element	LCB Blank		Volume of Sample mL	Volume of Spike mL	Volume of Acid mL	Total Volume mL	LCS Actual		% Recovery	Acceptable Range	Witin Acceptable Limits Y/N
	Conc of Sample mg/L	Conc of spike mg/L					Recovery Conc of Spike mg/L	Theoretical Recovery Calculated mg/L			
Ag	0.000	10	40	5	5	50	0.976	1.000	97.6	80-120	Y
As	0.005	10	40	5	5	50	0.894	1.004	89.0	80-120	Y
Ba	0.011	10	40	5	5	50	0.909	1.009	90.1	80-120	Y
Cd	0.000	10	40	5	5	50	0.892	1.000	89.2	80-120	Y
Cr	0.000	10	40	5	5	50	0.902	1.000	90.2	80-120	Y
Pb	0.000	10	40	5	5	50	0.908	1.000	90.8	80-120	Y
Se	0.008	10	40	5	5	50	0.897	1.006	89.1	80-120	Y

Comments:

% Recovery = Actual Recovery / Theoretical Recovery \* 100%.

Silver was spiked separately and the data for the two spikes were combined for the % Recovery Calculations.

LCB = Laboratory Control Blank

LCS = Laboratory Control Spike

Chemist William D. Quinn

Date 4/17/96

Department of the Army  
 U.S. Army Biomedical Research and Development Laboratory  
 Research Methods Branch  
 ANALYTICAL CHEMISTRY REPORT

**Matrix Spike**

Sample ID 96-1001, 96-1001MES and 96-1001AGS

Date 4/16/96

Element	Conc of Sample mg/L	Conc of spike mg/L	Volume of Sample mL	Volume of Spike mL	Volume of Acid mL	Total Volume mL	Actual Recovery Conc of Spike mg/L	Theoretical Recovery mg/L	% Recovery %	Acceptable Range %	Within Acceptable Limits Y/N
Ag	0.950	10	40	5	5	50	1.850	1.760	105.1	75-125	Y
As	0.007	10	40	5	5	50	0.984	1.006	97.9	75-125	Y
Ba	0.917	10	40	5	5	50	1.780	1.734	102.7	75-125	Y
Cd	0.951	10	40	5	5	50	1.760	1.761	100.0	75-125	Y
Cr	0.908	10	40	5	5	50	1.740	1.726	100.8	75-125	Y
Pb	0.911	10	40	5	5	50	1.780	1.729	103.0	75-125	Y
Se	0.00	10	40	5	5	50	0.981	1.000	98.1	75-125	Y

Comments:

% Recovery = Actual Recovery / Theoretical Recovery \* 100%.

Silver was spiked separately and the data for the two spikes were combined for the % Recovery calculations.

Chemist

*William R. Quinn*

Date

4/17/96

Department of the Army  
U.S. Army Biomedical Research and Development Laboratory  
Research Methods Branch  
ANALYTICAL CHEMISTRY REPORT

**Laboratory Duplicate Recovery**

Sample Identification 96-1001 and 96-1001D

Date of determination 4/16/96

	Sample Measured Concentration mg/L	Sample Duplicate Concentration mg/L	Recovery Meas/Dup*100% %
Ag	0.950	1.00	95.0
As	BDL	BDL	-
Ba	0.917	0.973	94.2
Cd	0.951	1.01	94.2
Cr	0.908	0.966	94.0
Pb	0.911	0.960	94.9
Se	BDL	BDL	-

Comments:

Chemist

*William Davis*

Date

*4/17/96*

Department of the Army  
U.S. Army Biomedical Research and Development Laboratory  
Research Methods Branch  
ANALYTICAL CHEMISTRY REPORT

**Instrumental Detection Limits**

Date of determination	<u>4/15/96</u>			
	Measured Concentration mg/L	IDL Actual Concentration mg/L	Recovery Meas/Act*100% %	RSD 10 Replicates %
Ag	0.046	0.05	92	0.73
As	0.092	0.10	92	6.23
Ba	0.048	0.05	96	0.75
Cd	0.046	0.05	92	0.85
Cr	0.047	0.05	94	1.28
Pb	0.048	0.05	96	4.94
Se	0.213	0.20	106.5	9.29

Comments:

The Instrumental Detection Limit is defined as a concentration which 10 replicates can be analyzed and reported within 10 percent of the actual value with a Relative Standard Deviation of less than 10 %.

Chemist

*William R. Davis*

Date

*4/17/96*

Department of the Army  
U.S. Army Biomedical Research and Development Laboratory  
Research Methods Branch  
ANALYTICAL CHEMISTRY REPORT

**ICP Background Correction Points**

Date of determination 4/16/96

Element	Wavelength of Analysis nm	Background Correction nm
Ag	328.068	328.030
As	193.695	193.673
Ba	493.409	493.352
Cd	226.502	266.476
Cr	205.552	205.528
Pb	220.353	220.328
Se	196.025	196.002

Comments:

Chemist

*William Dennis*

Date

*4/17/96*

Department of the Army  
U.S. Army Biomedical Research and Development Laboratory  
Research Methods Branch  
ANALYTICAL CHEMISTRY REPORT

**Linear Range Table**

Date of determination

4/16/96

	Measured Concentration mg/L	Actual Concentration mg/L	Recovery Meas/Act*100% %
Ag	2.02	2	101
As	1.93	2	96.5
Ba	1.97	2	98.5
Cd	1.93	2	96.5
Cr	1.91	2	95.5
Pb	2.02	2	101
Se	2.00	2	100

Comments:

Following calibration standards containing 2 mg/L were analyzed.

Chemist

*Milva Davis*

Date

*4/17/96*

Department of the Army  
 U.S. Army Biomedical Research and Development Laboratory  
 Research Methods Branch  
 ANALYTICAL CHEMISTRY REPORT

**Sample Preparation Log**

Date

Chem Acc #

Sample ID #

Preparation

Digestion  
Vessel #

Control Vessel	NA	45 mL DI Water + 5mL HNO3	1
LCS Blank	LCS Blank	45 mL DI Water + 5mL HNO3	2
LCS ME	LCS ME	40 mL DI water + 5 mL 10 ppm Multielement Stock + 5 mL HNO3	3
LCS Ag	LCS Ag	40 mL DI water + 5 mL 10 ppm Ag Stock+ 5 mL HNO3	4
96-1001	metals in water 12	45 mL Sample + 5 mL HNO3	5
96-1001D	metals in water 12 dup	45 mL Sample + 5 mL HNO3	6
96-1001MES	metals in water 12 MES	40 mL Sample + 5 ml 10 ppm Multielement Stock + 5 mL HNO3	7
96-1001AGS	metals in water 12 AGS	40 mL Sample + 5 ml 10 ppm Ag Stock+ 5 ml HNO3	8
96-1002	metals in water 1	45 mL Sample + 5 mL HNO3	9
96-1003	metals in water 2	45 mL Sample + 5 mL HNO3	10
96-1004	metals in water 3	45 mL Sample + 5 mL HNO3	11
96-1005	metals in water 4	45 mL Sample + 5 mL HNO3	12
Control Vessel	NA	45 mL DI Water + 5mL HNO3	13
96-1006	metals in water 5	45 mL Sample + 5 mL HNO3	14
96-1007	metals in water 6	45 mL Sample + 5 mL HNO3	15
96-1008	metals in water 7	45 mL Sample + 5 mL HNO3	16
96-1009	metals in water 8	45 mL Sample + 5 mL HNO3	17
96-1010	metals in water 9	45 mL Sample + 5 mL HNO3	18
96-1011	metals in water 10	45 mL Sample + 5 mL HNO3	19
96-1012	metals in water 11	45 mL Sample + 5 mL HNO3	20
96-1013	metals in water 13	45 mL Sample + 5 mL HNO3	21
96-1014	metals in water 14	45 mL Sample + 5 mL HNO3	22
blank	NA	45 mL DI Water + 5mL HNO3	23
blank	NA	45 mL DI Water + 5mL HNO3	24

Comments:

MES = Multielement Spike

AGS = Silver Spike

Chemist

*William D. ...*

Date

4/17/96

Department of the Army  
 U.S. Army Biomedical Research and Development Laboratory  
 Research Methods Branch  
 ANALYTICAL CHEMISTRY REPORT

**Sample Preparation Log**

Date	4/16/96					Within Acceptable	
Chem Acc #	Sample ID #	Digestion Vessel #	weight before g	weight after g	percent difference %	Limit <10 % Y/N	Sample Cup
Control Vessel	NA	1					
LCS Blank	LCS Blank	2	354.4	354.4	0.00	Y	1
LCS ME	LCS ME	3	352.6	352.6	0.00	Y	2
LCS Ag	LCS Ag	4	353.3	353.3	0.00	Y	3
96-1001	metals in water 12	5	351.7	351.7	0.00	Y	4
96-1001D	metals in water 12 dup	6	352.9	352.4	-0.14	Y	5
96-1001MES	metals in water 12 MES	7	353.2	352.9	-0.08	Y	6
96-1001AGS	metals in water 12 AGS	8	353.2	353.2	0.00	Y	7
96-1002	metals in water 1	9	353.9	353.8	-0.03	Y	8
96-1003	metals in water 2	10	352.7	352.7	0.00	Y	9
96-1004	metals in water 3	11	352.9	352.8	-0.03	Y	10
96-1005	metals in water 4	12	353.5	353.4	-0.03	Y	11
Control Vessel	NA	13					
96-1006	metals in water 5	14	353.2	353.1	-0.03	Y	12
96-1007	metals in water 6	15	352	351.9	-0.03	Y	13
96-1008	metals in water 7	16	353.3	353.2	-0.03	Y	14
96-1009	metals in water 8	17	351.9	351.8	-0.03	Y	15
96-1010	metals in water 9	18	352.3	352.3	0.00	Y	16
96-1011	metals in water 10	19	353.7	353.7	0.00	Y	17
96-1012	metals in water 11	20	353.6	353.4	-0.06	Y	18
96-1013	metals in water 13	21	352.9	352.7	-0.06	Y	19
96-1014	metals in water 14	22	353.3	353.1	-0.06	Y	20
blank	NA	23	355.1	355	-0.03	Y	
blank	NA	24	353.7	353.6	-0.03	Y	

Comments:

MES = Multielement Spike

AGS = Silver Spike

All samples were filtered prior to analysis.

Chemist

*William E. Davis*

Date

4/17/96



Department of the Army  
 U.S. Army Biomedical Research and Development Laboratory  
 Research Methods Branch  
 ANALYTICAL CHEMISTRY REPORT

**Analysis Run Log**

Date 4/16/96

Sequence Name APR1696

Sequence#	Analysis	Chem Acc#	Sample ID
53	Standard 1		Standard 1
54	Standard 2		Standard 2
55	Standard 3		Standard 3
56	Standard 4		Standard 4
57	Standard 5		Standard 5
58	Peak Optics		Peak Optics
59	Standard 6		Standard 6
60	Ck1		Initial Calibration Blank
61	Ck2		Initial Calibration Verification Multielement
62	Ck3		Initial Calibration Verification Silver
63	Ck4		Linear Range Sample ME
64	Peak Optics		Peak Optics
65	Ck5		Linear Range Sample Ag
66	Ck6		SPEX QC Sample
67	LCS Blank		LCS Blank
68	LCS ME		Laboratory Control Sample Multielement
69	LCS Ag		Laboratory Control Sample Silver
70	96-1001	96-1001	Metals in water 12
71	96-1001D	96-1001D	Metals in water 12 Duplicate
72	Ck1		Continuing Calibration Blank
73	Ck2		Continuing Calibration Verification Multielement
74	Ck3		Continuing Calibration Verification Silver
75	96-1001 MES	96-1001MES	Metals in Water 12 Multielement Spike
76	96-1001 AGS	96-1001AGS	Metals in Water 12 Silver Spike
77	96-1002	96-1002	Metals in Water 01
78	96-1003	96-1003	Metals in Water 02
79	96-1004	96-1004	Metals in Water 03
80	Ck1		Continuing Calibration Blank
81	Ck2		Continuing Calibration Verification Multielement
82	Ck3		Continuing Calibration Verification Silver

Comments:

Sequence lines 1-52 were used to calibrate the instrument and run check standards, due to a power failure the instrument had to be recalibrated and check standards repeated.

Chemist *William Davis*

Date 4/17/96

Department of the Army  
U.S. Army Biomedical Research and Development Laboratory  
Research Methods Branch  
ANALYTICAL CHEMISTRY REPORT

**Analysis Run Log (Continued)**

Date 4/16/96

Sequence Name APR1696

Sequence#	Analysis	Chem Acc#	Sample ID
83	96-1005	96-1005	Metals in Water 04
84	96-1006	96-1006	Metals in Water 05
85	96-1007	96-1007	Metals in Water 06
86	96-1008	96-1008	Metals in Water 07
87	96-1009	96-1009	Metals in Water 08
88	Ck1		Continuing Calibration Blank
89	Ck2		Continuing Calibration Verification Multielement
90	Ck3		Continuing Calibration Verification Silver
91	96-1010	96-1010	Metals in Water 09
92	96-1011	96-1011	Metals in Water 10
93	96-1012	96-1012	Metals in Water 11
94	96-1013	96-1013	Metals in Water 13
95	96-1014	96-1014	Metals in Water 14
96	Ck1		Continuing Calibration Blank
97	Ck2		Continuing Calibration Verification Multielement
98	Ck3		Continuing Calibration Verification Silver

Chemist *William Dennis*

Date 4/17/96

1 1 1 1 1





**APPENDIX F**

**SOIL SAMPLE TOTAL AND ISOTOPIC URANIUM REPORT**



# ENGINEERING COMPUTER OPTECNOMICS (ECO), INC.

## Road Transportable Analytical Laboratory

### Analysis Summary of FERMCO Test Case Soil Samples

RAD TEST SOIL 1			
Isotope	ECO Result (pCi/g)	2-sigma (pCi/g)	MDC (pCi/g)
U-232	3.726E+00	4.686E-01	7.473E-03
U-234	6.232E-01	1.191E-01	2.030E-02
U-235	3.742E-02	2.314E-02	9.219E-03
U-238	6.864E-01	1.281E-01	2.021E-02

RAD TEST SOIL 2			
Isotope	ECO Result (pCi/g)	2-sigma (pCi/g)	MDC (pCi/g)
U-232	3.739E+00	5.097E-01	1.454E-02
U-234	2.212E+01	3.311E+00	1.454E-02
U-235	1.634E+00	3.170E-01	1.793E-02
U-238	2.374E+01	3.547E+00	3.931E-02

RAD TEST SOIL 3			
Isotope	ECO Result (pCi/g)	2-sigma (pCi/g)	MDC (pCi/g)
U-232	3.737E+00	4.915E-01	4.401E-02
U-234	8.912E+00	1.323E+00	1.108E-02
U-235	4.337E-01	1.120E-01	1.367E-02
U-238	8.740E+00	1.298E+00	1.103E-02

RAD TEST SOIL 4			
Isotope	ECO Result (pCi/g)	2-sigma (pCi/g)	MDC (pCi/g)
U-232	3.724E+00	4.919E-01	1.153E-02
U-234	9.240E+00	1.376E+00	1.153E-02
U-235	4.725E-01	1.203E-01	1.423E-02
U-238	9.620E+00	1.430E+00	3.119E-02

RAD TEST SOIL 5			
Isotope	ECO Result (pCi/g)	2-sigma (pCi/g)	MDC (pCi/g)
U-232	3.682E+00	4.741E-01	2.507E-02
U-234	5.333E+00	7.913E-01	9.229E-03
U-235	3.403E-01	8.929E-02	1.139E-02
U-238	5.253E+00	7.799E-01	2.496E-02

RAD TEST SOIL 6			
Isotope	ECO Result (pCi/g)	2-sigma (pCi/g)	MDC (pCi/g)
U-232	3.724E+00	5.194E-01	1.654E-02
U-234	1.845E+01	2.840E+00	1.654E-02
U-235	1.355E+00	2.862E-01	2.041E-02
U-238	2.117E+01	3.247E+00	1.647E-02

RAD TEST SOIL 7			
Isotope	ECO Result (pCi/g)	2-sigma (pCi/g)	MDC (pCi/g)
U-232	3.725E+00	4.771E-01	8.940E-03
U-234	5.763E+00	8.461E-01	8.940E-03
U-235	4.273E-01	1.023E-01	1.103E-02
U-238	6.201E+00	9.069E-01	8.901E-03

BLANK / LSC			
Isotope	ECO Result (pCi)	2-sigma (pCi)	MDC (pCi)
U-232	3.746E+00	4.722E-01	7.696E-03
U-234	1.988E-02	1.527E-02	7.696E-03
U-235	3.503E-03	7.023E-03	9.494E-03
U-238	1.697E-02	1.405E-02	7.663E-03

ALPHA SPECTROSCOPY REPORT  
25-JAN-1996 08:41:42

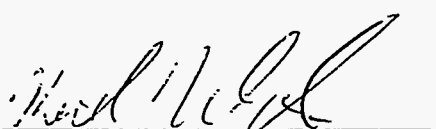
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Spectral File: ND\_AMS\_ARCHIVE\_R:R\_JAN96002\$960118008\_UU.CNF  
\*\*\*\*\*

BATCH ID:	JAN96002	*	SAMPLE ID:	960118008
SAMPLE DATE:	22-JAN-1996 00:00	*	ALIQOT:	1.000E+00 sample
SAMPLE TITLE:	LSC / BLANK	*	DETECTOR NUMBER:	012
ACQ DATE:	23-JAN-1996 16:11	*	AVERAGE EFFICIENCY:	23.6%
ELAPSED LIVE TIME:	60002.	*	RECOVERY:	67.49%
TRACER ID:	SRM-4324A-ECO1	*	TRACER FWHM (kev):	43.41
LAMBDA VALUE:	500.	*	ROI TYPE:	STANDARD
TRACER DPM AT SAMPLE DATE:	8.316	*	CONFIDENCE LEVEL:	4.65
SAMPLE MATRIX:	SOIL	*	LLD CONSTANT:	2.71
ENERGY CAL DATE:	22-JAN-1996 13:39	*	EFF CAL DATE:	22-JAN-1996 13:39
BKG FILENAME:	B_012_19JAN96	*	BKG ELAPSED TIME:	60002.

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NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	NET AREA	BKG	%ABN	ACTIVITY pCi/sample	TPU/ERROR 2-SIGMA	MDC pCi/sample
U-232	5302.5	1319.00	0.00	99.8	3.746E+00	4.722E-01	7.696E-03
U-234	4761.5	7.00	0.00	99.8	1.988E-02	1.527E-02	7.696E-03
U-235	4385.5	1.00	0.00	80.9	3.503E-03	7.023E-03	9.494E-03
U-238	4184.4	6.00	0.00	100.2	1.697E-02	1.405E-02	7.663E-03

\*\*\*\*\*

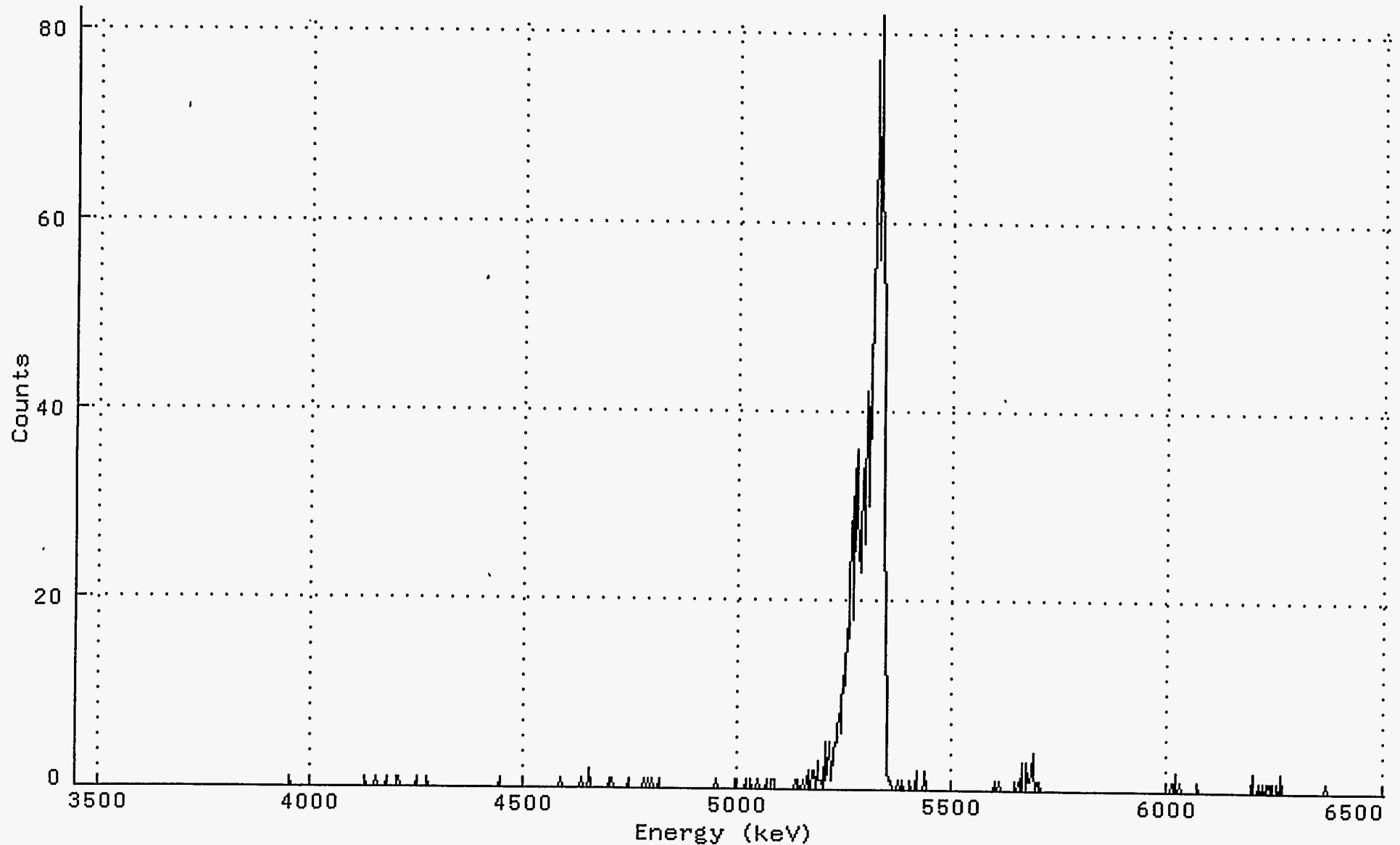
  
\_\_\_\_\_  
Analyst

1/25/96  
\_\_\_\_\_  
Date

\_\_\_\_\_  
Reviewer

\_\_\_\_\_  
Date

Spectrum : DKA200:[ALPHA.ALUSR.ARCHIVE.R]R\_JAN96002\$960118008\_UU.CNF;3  
Title : 012  
Sample Title: LSC / BLANK  
Start Time: 23-JAN-1996 16:11 Sample Time: 22-JAN-1996 00:00 Energy Offset: 3.43600E+03  
Real Time : 0 16:40:02.00 Sample ID : 960118008 Energy Slope : 3.18975E+00  
Live Time : 0 16:40:02.00 Sample Type: UU Energy Quad : -1.91183E-04





ENGINEERING COMPUTER OPTECNOMICS (ECO), INC.  
ROAD TRANSPORTABLE ANALYTICAL LABORATORY

ALPHA SPECTROSCOPY REPORT  
25-JAN-1996 08:42:09

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Spectral File: ND\_AMS\_ARCHIVE\_S:S\_JAN96002\$960118001\_UU.CNF  
\*\*\*\*\*

BATCH ID:	JAN96002	*	SAMPLE ID:	960118001
SAMPLE DATE:	22-JAN-1996 00:00	*	ALIQUOT:	1.005E+00 gram
SAMPLE TITLE:	RAD TEST SOIL 01	*	DETECTOR NUMBER:	009
ACQ DATE:	23-JAN-1996 16:06	*	AVERAGE EFFICIENCY:	22.9%
ELAPSED LIVE TIME:	60004.	*	RECOVERY:	70.94%
TRACER ID:	SRM-4324A-ECO1	*	TRACER FWHM (kev):	39.00
LAMBDA VALUE:	500.	*	ROI TYPE:	STANDARD
TRACER DPM AT SAMPLE DATE:	8.316	*	CONFIDENCE LEVEL:	4.65
SAMPLE MATRIX:	SOIL	*	LLD CONSTANT:	2.71
ENERGY CAL DATE:	22-JAN-1996 13:38	*	EFF CAL DATE:	22-JAN-1996 13:38
BKG FILENAME:	B_009_19JAN96	*	BKG ELAPSED TIME:	60002.

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	NET AREA	BKG	%ABN	ACTIVITY pCi/ gram	TPU/ERROR 2-SIGMA	MDC pCi/ gram
U-232	5302.5	1351.00	0.00	99.8	3.726E+00	4.686E-01	7.473E-03
U-234	4761.5	226.00	1.00	99.8	6.232E-01	1.191E-01	2.030E-02
U-235	4385.5	11.00	0.00	80.9	3.742E-02	2.314E-02	9.219E-03
U-238	4184.4	250.00	1.00	100.2	6.864E-01	1.281E-01	2.021E-02

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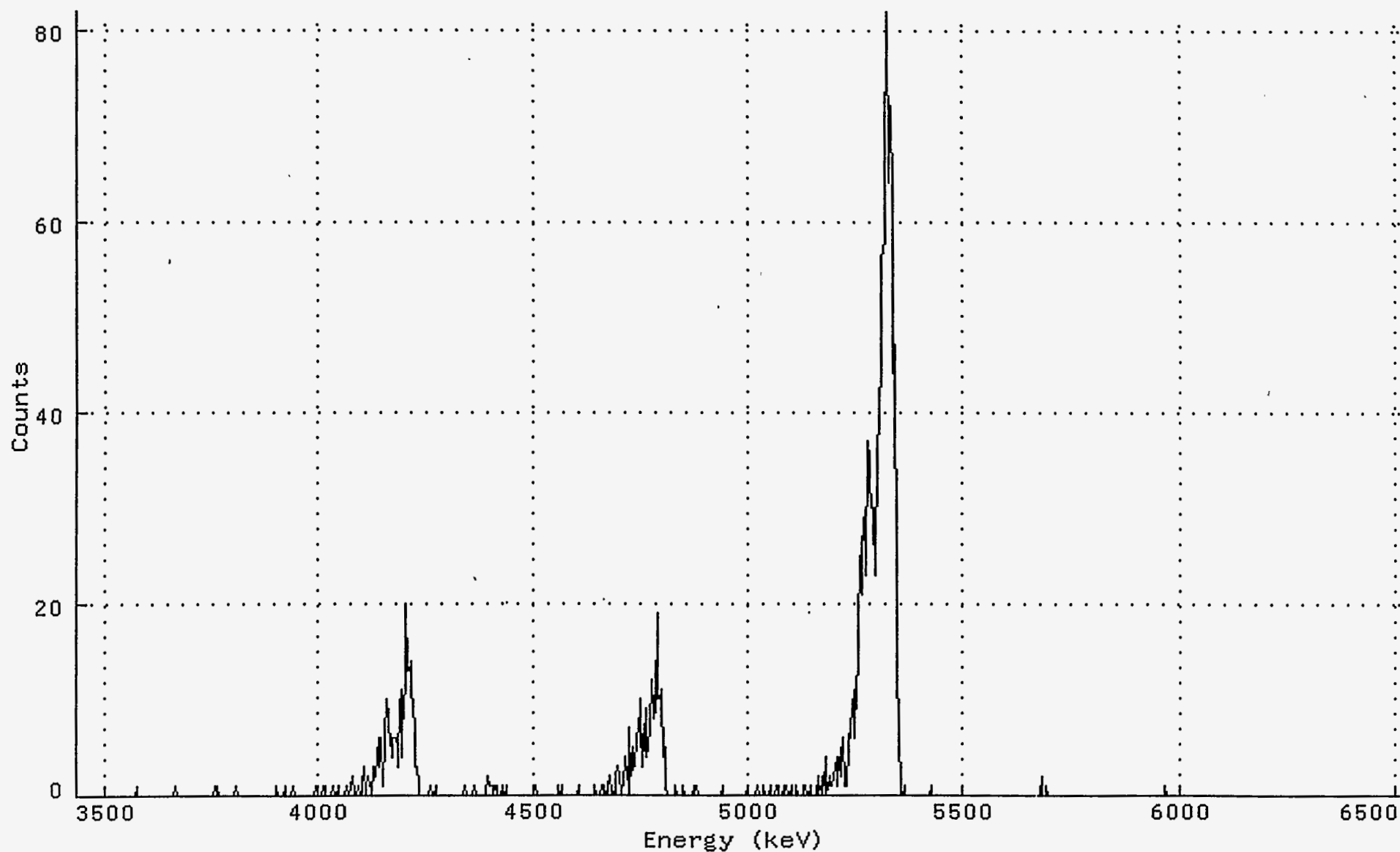
W. C. G.  
Analyst

1/25/96  
Date

\_\_\_\_\_  
Reviewer

\_\_\_\_\_  
Date

Spectrum : DKA200:[ALPHA.ALUSR.ARCHIVE.S]S\_JAN96002\$960118001\_UU.CNF; 3  
Title : 009  
Sample Title: RAD TEST SOIL 01  
Start Time: 23-JAN-1996 16:06 Sample Time: 22-JAN-1996 00:00 Energy Offset: 3.42500E+03  
Real Time : 0 16:40:04.00 Sample ID : 960118001 Energy Slope : 3.18890E+00  
Live Time : 0 16:40:04.00 Sample Type: UU Energy Quad : -1.78661E-04



ENGINEERING COMPUTER OPTECNOMICS (ECO), INC.  
ROAD TRANSPORTABLE ANALYTICAL LABORATORY

ALPHA SPECTROSCOPY REPORT  
25-JAN-1996 08:43:34

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Spectral File: ND\_AMS\_ARCHIVE\_S:S\_JAN96002\$960118002\_UU.CNF  
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BATCH ID:	JAN96002	*	SAMPLE ID:	960118002
SAMPLE DATE:	22-JAN-1996 00:00	*	ALIQOT:	1.002E+00 gram
SAMPLE TITLE:	RAD TEST SOIL #2	*	DETECTOR NUMBER:	001
ACQ DATE:	24-JAN-1996 15:54	*	AVERAGE EFFICIENCY:	24.0%
ELAPSED LIVE TIME:	60002.	*	RECOVERY:	35.04%
TRACER ID:	SRM-4324A-ECO1	*	TRACER FWHM (kev):	76.76
LAMBDA VALUE:	500.	*	ROI TYPE:	EXPANDED
TRACER DPM AT SAMPLE DATE:	8.316	*	CONFIDENCE LEVEL:	4.65
SAMPLE MATRIX:	SOIL	*	LLD CONSTANT:	2.71
ENERGY CAL DATE:	22-JAN-1996 09:00	*	EFF CAL DATE:	22-JAN-1996 09:00
BKG FILENAME:	B_001_19JAN96	*	BKG ELAPSED TIME:	60001.

\*\*\*\*\*  
NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	NET AREA	BKG	%ABN	ACTIVITY pCi/ gram	TPU/ERROR 2-SIGMA	MDC pCi/ gram
U-232	5302.5	697.00	0.00	99.8	3.739E+00	5.097E-01	1.454E-02
U-234	4761.5	4124.00	0.00	99.8	2.212E+01	3.311E+00	1.454E-02
U-235	4385.5	247.00	0.00	80.9	1.634E+00	3.170E-01	1.793E-02
U-238	4184.4	4445.00	1.00	100.2	2.374E+01	3.547E+00	3.931E-02

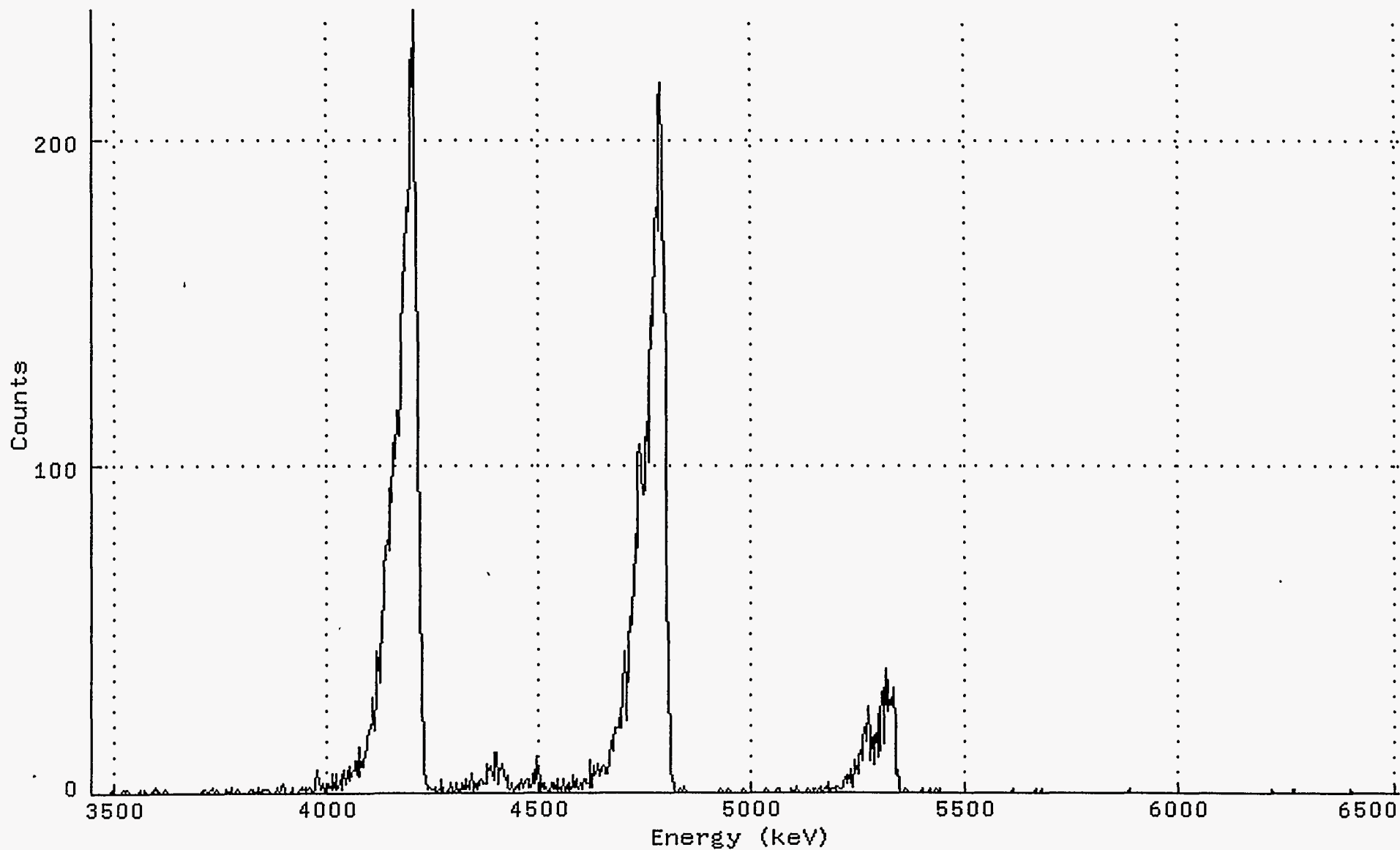
\*\*\*\*\*  
*M. J. G. L.*  
Analyst

1/25/96  
Date

\_\_\_\_\_  
Reviewer

\_\_\_\_\_  
Date

Spectrum : DKA200:[ALPHA.ALUSR.ARCHIVE.S]S\_JAN96002\$960118002\_UU.CNF;1  
Title : 001  
Sample Title: RAD TEST SOIL #2  
Start Time: 24-JAN-1996 15:54 Sample Time: 22-JAN-1996 00:00 Energy Offset: 3.43579E+03  
Real Time : 0 16:40:02.00 Sample ID : 960118002 Energy Slope : 3.18809E+00  
Live Time : 0 16:40:02.00 Sample Type: UU Energy Quad : -1.85884E-04



ENGINEERING COMPUTER OPTECNOMICS (ECO), INC.  
ROAD TRANSPORTABLE ANALYTICAL LABORATORY

ALPHA SPECTROSCOPY REPORT  
25-JAN-1996 08:44:08

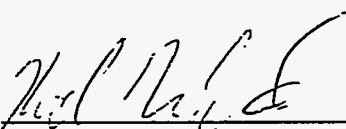
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Spectral File: ND\_AMS\_ARCHIVE\_S:S\_JAN96002\$960118003\_UU.CNF  
\*\*\*\*\*

BATCH ID: JAN96002 \* SAMPLE ID: 960118003  
SAMPLE DATE: 22-JAN-1996 00:00 \* ALIQUOT: 1.002E+00 gram  
SAMPLE TITLE: RAD TEST SOIL03 \* DETECTOR NUMBER: 010  
ACQ DATE: 23-JAN-1996 16:08 \* AVERAGE EFFICIENCY: 21.9%  
ELAPSED LIVE TIME: 60000. \* RECOVERY: 50.21%  
TRACER ID: SRM-4324A-ECO1 \* TRACER FWHM (kev): 38.05  
LAMBDA VALUE: 500. \* ROI TYPE: STANDARD  
TRACER DPM AT SAMPLE DATE: 8.316 \* CONFIDENCE LEVEL: 4.65  
SAMPLE MATRIX: SOIL \* LLD CONSTANT: 2.71  
ENERGY CAL DATE: 22-JAN-1996 13:39 \* EFF CAL DATE: 22-JAN-1996 13:39  
BKG FILENAME: B\_010\_19JAN96 \* BKG ELAPSED TIME: 60004.  
\*\*\*\*\*

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	NET AREA	BKG	%ABN	ACTIVITY pCi/ gram	TPU/ERROR 2-SIGMA	MDC pCi/ gram
U-232	5302.5	914.00	3.00	99.8	3.737E+00	4.915E-01	4.401E-02
U-234	4761.5	2180.00	0.00	99.8	8.912E+00	1.323E+00	1.108E-02
U-235	4385.5	86.00	0.00	80.9	4.337E-01	1.120E-01	1.367E-02
U-238	4184.4	2147.00	0.00	100.2	8.740E+00	1.298E+00	1.103E-02

\*\*\*\*\*

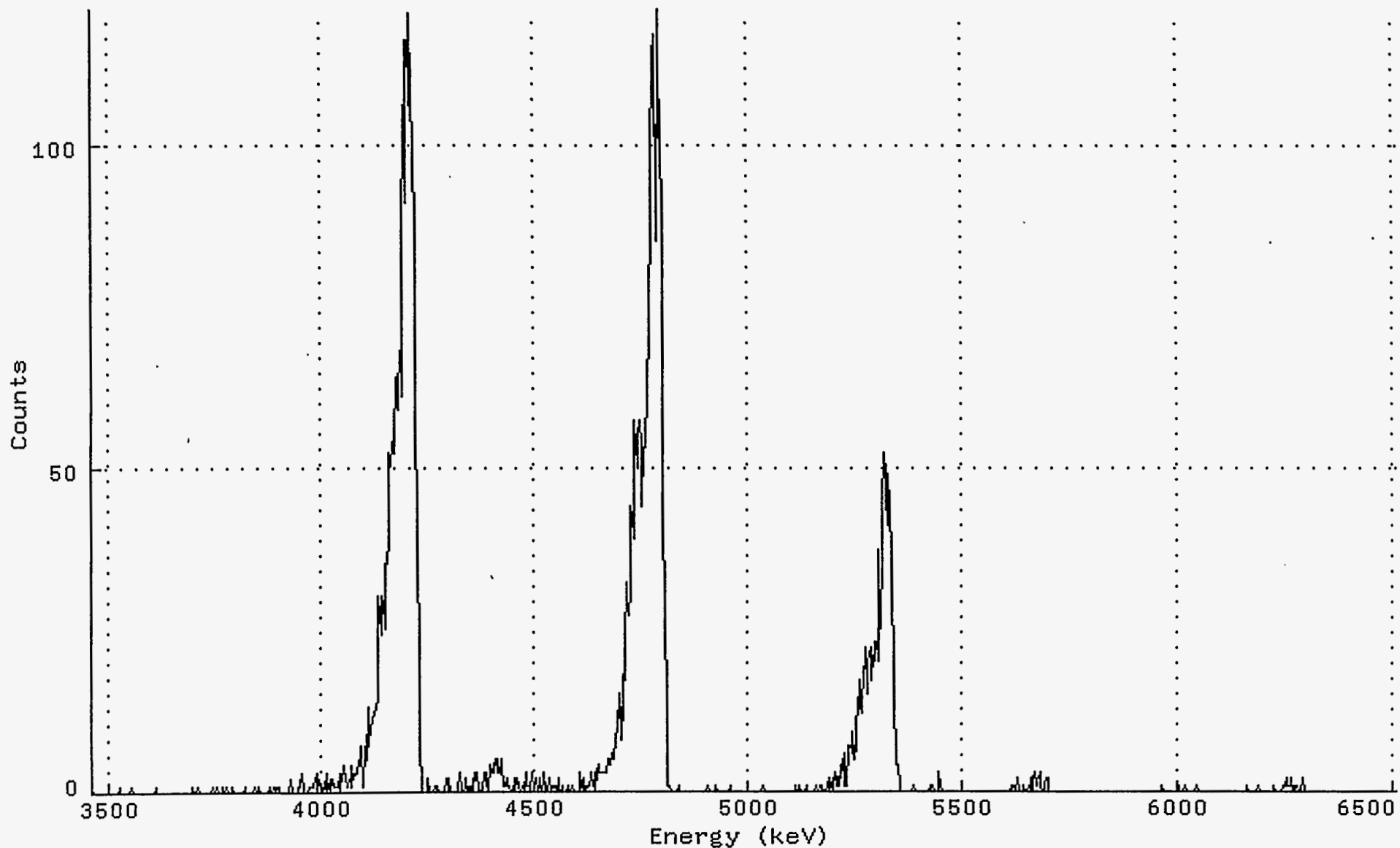
  
\_\_\_\_\_  
Analyst

1/25/96  
\_\_\_\_\_  
Date

\_\_\_\_\_  
Reviewer

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Date

Spectrum : DKA200:[ALPHA.ALUSR.ARCHIVE.S]S\_JAN96002\$960118003\_UU.CNF;3  
Title : 010  
Sample Title: RAD TEST SOIL03  
Start Time: 23-JAN-1996 16:08 Sample Time: 22-JAN-1996 00:00 Energy Offset: 3.45100E+03  
Real Time : 0 16:40:01.00 Sample ID : 960118003 Energy Slope : 3.14258E+00  
Live Time : 0 16:40:00.00 Sample Type: UU Energy Quad : -1.56167E-04



ENGINEERING COMPUTER OPTECNOMICS (ECO), INC.  
ROAD TRANSPORTABLE ANALYTICAL LABORATORY

ALPHA SPECTROSCOPY REPORT  
25-JAN-1996 08:44:50

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Spectral File: ND\_AMS\_ARCHIVE\_S:S\_JAN96002\$960118004\_UU.CNF  
\*\*\*\*\*

BATCH ID: JAN96002 \* SAMPLE ID: 960118004  
SAMPLE DATE: 22-JAN-1996 00:00 \* ALIQUOT: 1.006E+00 gram  
SAMPLE TITLE: RAD TEST SOIL04 \* DETECTOR NUMBER: 011  
ACQ DATE: 23-JAN-1996 16:09 \* AVERAGE EFFICIENCY: 23.1%  
ELAPSED LIVE TIME: 60002. \* RECOVERY: 45.71%  
TRACER ID: SRM-4324A-ECO1 \* TRACER FWHM (kev): 66.69  
LAMBDA VALUE: 500. \* ROI TYPE: EXPANDED  
TRACER DPM AT SAMPLE DATE: 8.316 \* CONFIDENCE LEVEL: 4.65  
SAMPLE MATRIX: SOIL \* LLD CONSTANT: 2.71  
ENERGY CAL DATE: 22-JAN-1996 13:39 \* EFF CAL DATE: 22-JAN-1996 13:39  
BKG FILENAME: B\_011\_19JAN96 \* BKG ELAPSED TIME: 60005.  
\*

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NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	NET AREA	BKG	%ABN	ACTIVITY pCi/ gram	TPU/ERROR 2-SIGMA	MDC pCi/ gram
U-232	5302.5	875.00	0.00	99.8	3.724E+00	4.919E-01	1.153E-02
U-234	4761.5	2171.00	0.00	99.8	9.240E+00	1.376E+00	1.153E-02
U-235	4385.5	90.00	0.00	80.9	4.725E-01	1.203E-01	1.423E-02
U-238	4184.4	2270.00	1.00	100.2	9.620E+00	1.430E+00	3.119E-02

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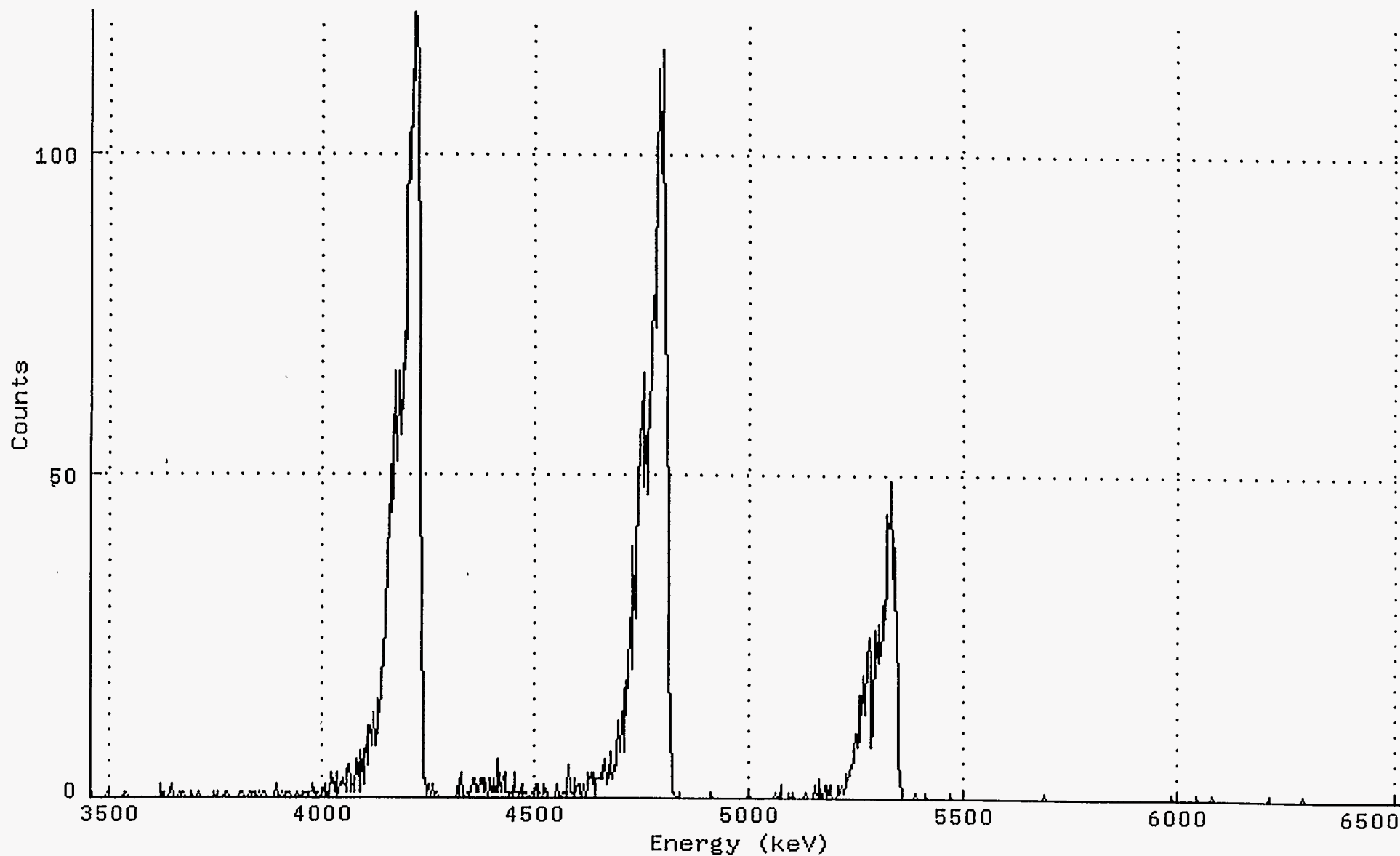
*Kel VLG*  
Analyst

1/25/96  
Date

\_\_\_\_\_  
Reviewer

\_\_\_\_\_  
Date

Spectrum : DKA200:[ALPHA.ALUSR.ARCHIVE.S]S\_JAN96002\$960118004\_UU.CNF; 3  
Title : 011  
Sample Title: RAD TEST SOIL04  
Start Time: 23-JAN-1996 16:09 Sample Time: 22-JAN-1996 00:00 Energy Offset: 3.44500E+03  
Real Time : 0 16:40:02.00 Sample ID : 960118004 Energy Slope : 3.15108E+00  
Live Time : 0 16:40:02.00 Sample Type: UU Energy Quad : -1.54941E-04





Spectrum : DKA200:[ALPHA.ALUSR.ARCHIVE.S]S\_JAN96002\$960118005\_UU.CNF;1

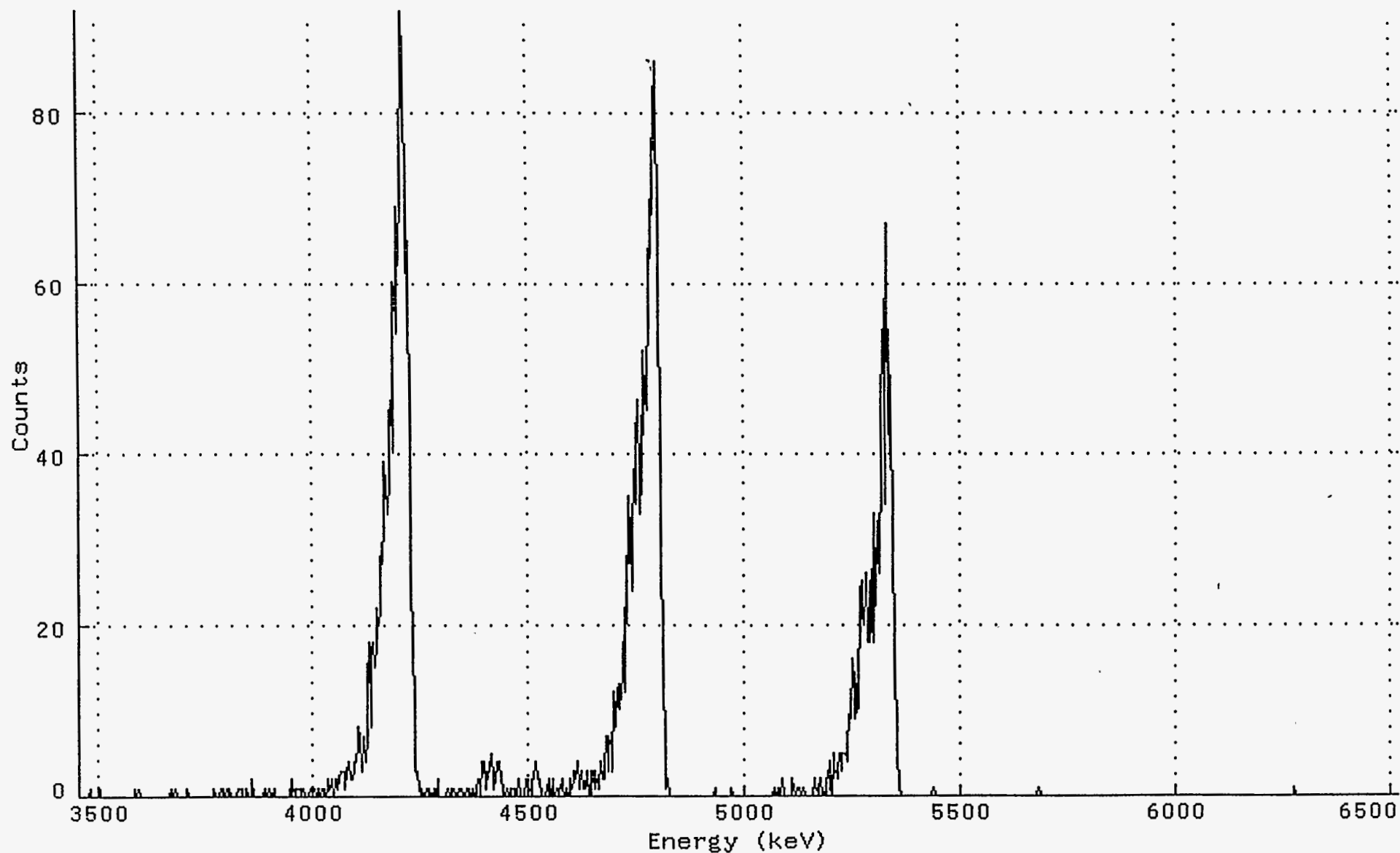
Title : 002

Sample Title: RAD TEST SOIL #5

Start Time: 24-JAN-1996 15:55 Sample Time: 22-JAN-1996 00:00 Energy Offset: 3.44812E+03

Real Time : 0 16:40:02.00 Sample ID : 960118005 Energy Slope : 3.16348E+00

Live Time : 0 16:40:02.00 Sample Type: UU Energy Quad : -1.66580E-04



Spectrum : DKA200:[ALPHA.ALUSR.ARCHIVE.S]S\_JAN96002\$960118005\_UU.CNF;1

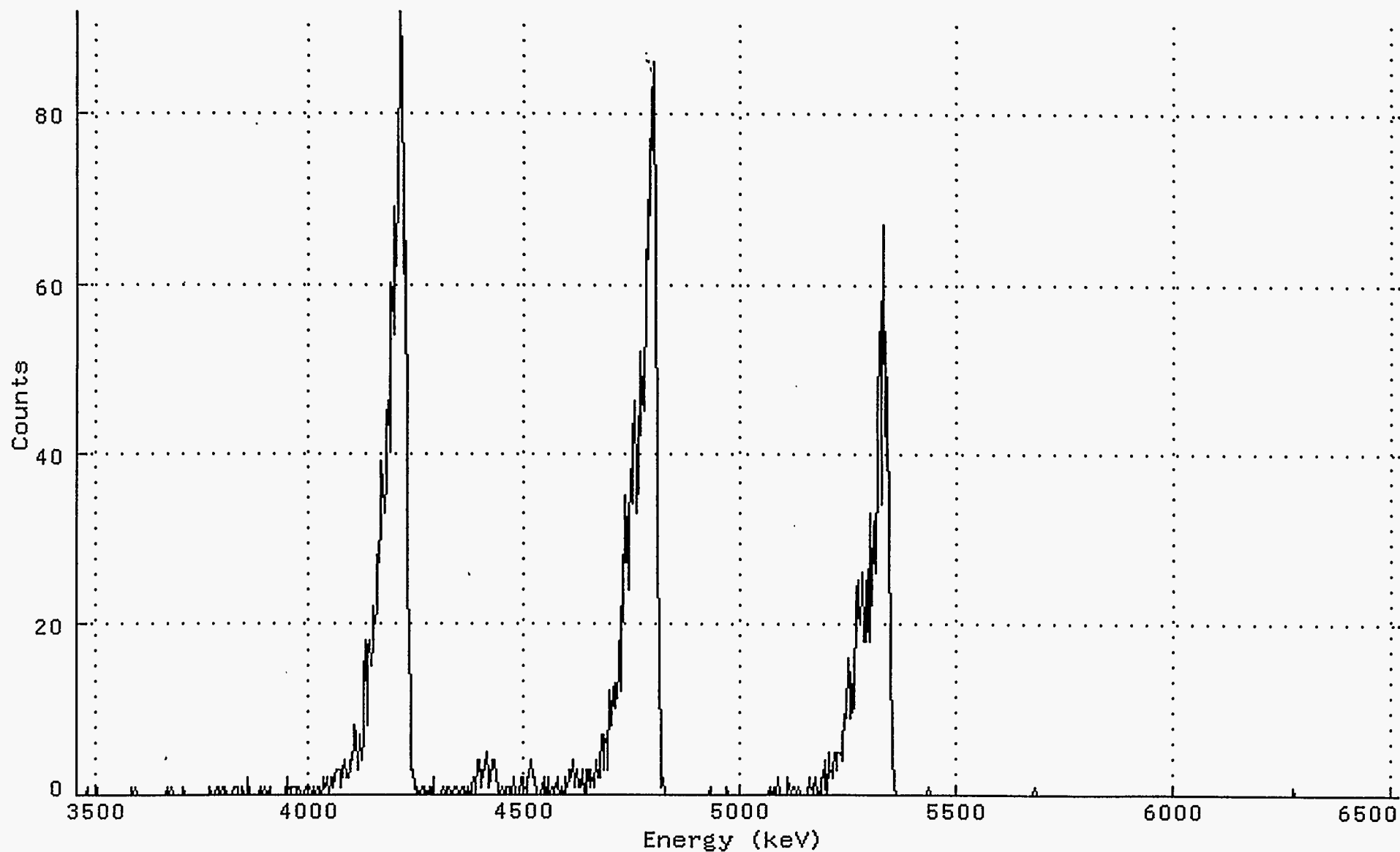
Title : 002

Sample Title: RAD TEST SOIL #5

Start Time: 24-JAN-1996 15:55 Sample Time: 22-JAN-1996 00:00 Energy Offset: 3.44812E+03

Real Time : 0 16:40:02.00 Sample ID : 960118005 Energy Slope : 3.16348E+00

Live Time : 0 16:40:02.00 Sample Type: UU Energy Quad : -1.66580E-04



ENGINEERING COMPUTER OPTECNOMICS (ECO), INC.  
ROAD TRANSPORTABLE ANALYTICAL LABORATORY

ALPHA SPECTROSCOPY REPORT  
25-JAN-1996 08:45:59

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Spectral File: ND\_AMS\_ARCHIVE\_S:S\_JAN96002\$960118006\_UU.CNF  
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BATCH ID:	JAN96002	*	SAMPLE ID:	960118006
SAMPLE DATE:	22-JAN-1996 00:00	*	ALIQOUT:	1.006E+00 gram
SAMPLE TITLE:	RAD TEST SOIL #6	*	DETECTOR NUMBER:	003
ACQ DATE:	24-JAN-1996 15:56	*	AVERAGE EFFICIENCY:	21.4%
ELAPSED LIVE TIME:	60000.	*	RECOVERY:	34.35%
TRACER ID:	SRM-4324A-ECO1	*	TRACER FWHM (kev):	30.16
LAMBDA VALUE:	500.	*	ROI TYPE:	EXPANDED
TRACER DPM AT SAMPLE DATE:	8.316	*	CONFIDENCE LEVEL:	4.65
SAMPLE MATRIX:	SOIL	*	LLD CONSTANT:	2.71
ENERGY CAL DATE:	22-JAN-1996 09:01	*	EFF CAL DATE:	22-JAN-1996 09:01
BKG FILENAME:	B_003_19JAN96	*	BKG ELAPSED TIME:	60002.

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NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	NET AREA	BKG	%ABN	ACTIVITY pCi/ gram	TPU/ERROR 2-SIGMA	MDC pCi/ gram
U-232	5302.5	610.00	0.00	99.8	3.724E+00	5.194E-01	1.654E-02
U-234	4761.5	3023.00	0.00	99.8	1.845E+01	2.840E+00	1.654E-02
U-235	4385.5	180.00	0.00	80.9	1.355E+00	2.862E-01	2.041E-02
U-238	4184.4	3484.00	0.00	100.2	2.117E+01	3.247E+00	1.647E-02

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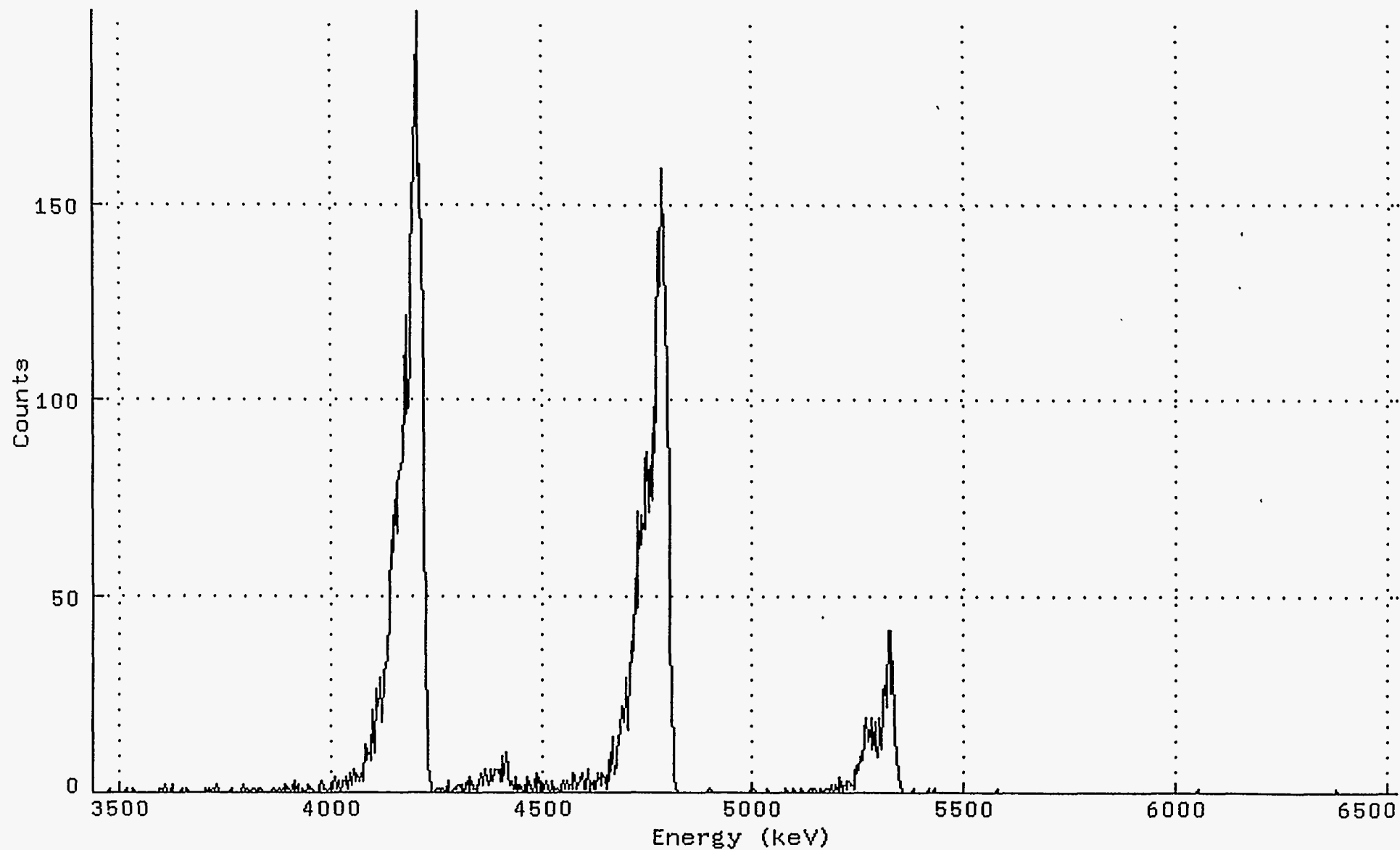
Neil Wilcox  
Analyst

1/25/96  
Date

\_\_\_\_\_  
Reviewer

\_\_\_\_\_  
Date

Spectrum : DKA200:[ALPHA.ALUSR.ARCHIVE.S]S\_JAN96002\$960118006\_UU.CNF;1  
Title : 003  
Sample Title: RAD TEST SOIL #6  
Start Time: 24-JAN-1996 15:56 Sample Time: 22-JAN-1996 00:00 Energy Offset: 3.42523E+03  
Real Time : 0 16:40:01.00 Sample ID : 960118006 Energy Slope : 3.20381E+00  
Live Time : 0 16:40:00.00 Sample Type: UU Energy Quad : -1.79833E-04



ALPHA SPECTROSCOPY REPORT  
25-JAN-1996 08:45:59

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Spectral File: ND\_AMS\_ARCHIVE\_S:S\_JAN96002\$960118006\_UU.CNF  
\*\*\*\*\*

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*
BATCH ID:          JAN96002      *      SAMPLE ID:          960118006
SAMPLE DATE:       22-JAN-1996 00:00 *      ALIQUOT:            1.006E+00 gram
SAMPLE TITLE:      RAD TEST SOIL #6 *      DETECTOR NUMBER:    003
ACQ DATE:          24-JAN-1996 15:56 *      AVERAGE EFFICIENCY: 21.4%
ELAPSED LIVE TIME: 60000.         *      RECOVERY:           34.35%
TRACER ID:         SRM-4324A-ECO1 *      TRACER FWHM (kev):   30.16
LAMBDA VALUE:      500.           *      ROI TYPE:           EXPANDED
TRACER DPM AT SAMPLE DATE: 8.316 *      CONFIDENCE LEVEL:   4.65
SAMPLE MATRIX:     SOIL           *      LLD CONSTANT:       2.71
ENERGY CAL DATE:  22-JAN-1996 09:01 *      EFF CAL DATE:       22-JAN-1996 09:01
BKG FILENAME:      B_003_19JAN96 *      BKG ELAPSED TIME:   60002.
*

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NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	NET AREA	BKG	%ABN	ACTIVITY pCi/ gram	TPU/ERROR 2-SIGMA	MDC pCi/ gram
U-232	5302.5	610.00	0.00	99.8	3.724E+00	5.194E-01	1.654E-02
U-234	4761.5	3023.00	0.00	99.8	1.845E+01	2.840E+00	1.654E-02
U-235	4385.5	180.00	0.00	80.9	1.355E+00	2.862E-01	2.041E-02
U-238	4184.4	3484.00	0.00	100.2	2.117E+01	3.247E+00	1.647E-02

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Neil Wilcox  
Analyst

1/25/96  
Date

\_\_\_\_\_  
Reviewer

\_\_\_\_\_  
Date


ALPHA SPECTROSCOPY REPORT  
25-JAN-1996 08:46:30

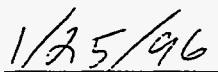
\*\*\*\*\*  
Spectral File: ND\_AMS\_ARCHIVE\_S:S\_JAN96002\$960118007\_UU.CNF  
\*\*\*\*\*

\*  
BATCH ID: JAN96002 \* SAMPLE ID: 960118007  
SAMPLE DATE: 22-JAN-1996 00:00 \* ALIQUOT: 1.006E+00 gram  
SAMPLE TITLE: RAD TEST SOIL #7 \* DETECTOR NUMBER: 004  
ACQ DATE: 24-JAN-1996 15:57 \* AVERAGE EFFICIENCY: 23.5%  
ELAPSED LIVE TIME: 60001. \* RECOVERY: 58.00%  
TRACER ID: SRM-4324A-ECO1 \* TRACER FWHM (kev): 70.72  
LAMBDA VALUE: 500. \* ROI TYPE: EXPANDED  
TRACER DPM AT SAMPLE DATE: 8.316 \* CONFIDENCE LEVEL: 4.65  
SAMPLE MATRIX: SOIL \* LLD CONSTANT: 2.71  
ENERGY CAL DATE: 22-JAN-1996 09:01 \* EFF CAL DATE: 22-JAN-1996 09:01  
BKG FILENAME: B\_004\_19JAN96 \* BKG ELAPSED TIME: 60001.  
\*

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NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	NET AREA	BKG	%ABN	ACTIVITY pCi/ gram	TPU/ERROR 2-SIGMA	MDC pCi/ gram
J-232	5302.5	1129.00	0.00	99.8	3.725E+00	4.771E-01	8.940E-03
J-234	4761.5	1747.00	0.00	99.8	5.763E+00	8.461E-01	8.940E-03
U-235	4385.5	105.00	0.00	80.9	4.273E-01	1.023E-01	1.103E-02
J-238	4184.4	1888.00	0.00	100.2	6.201E+00	9.069E-01	8.901E-03

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\_\_\_\_\_  
Analyst

  
\_\_\_\_\_  
Date

\_\_\_\_\_  
Reviewer

\_\_\_\_\_  
Date

Spectrum : DKA200:[ALPHA.ALUSR.ARCHIVE.S]S\_JAN96002\$960118007\_UU.CNF;1

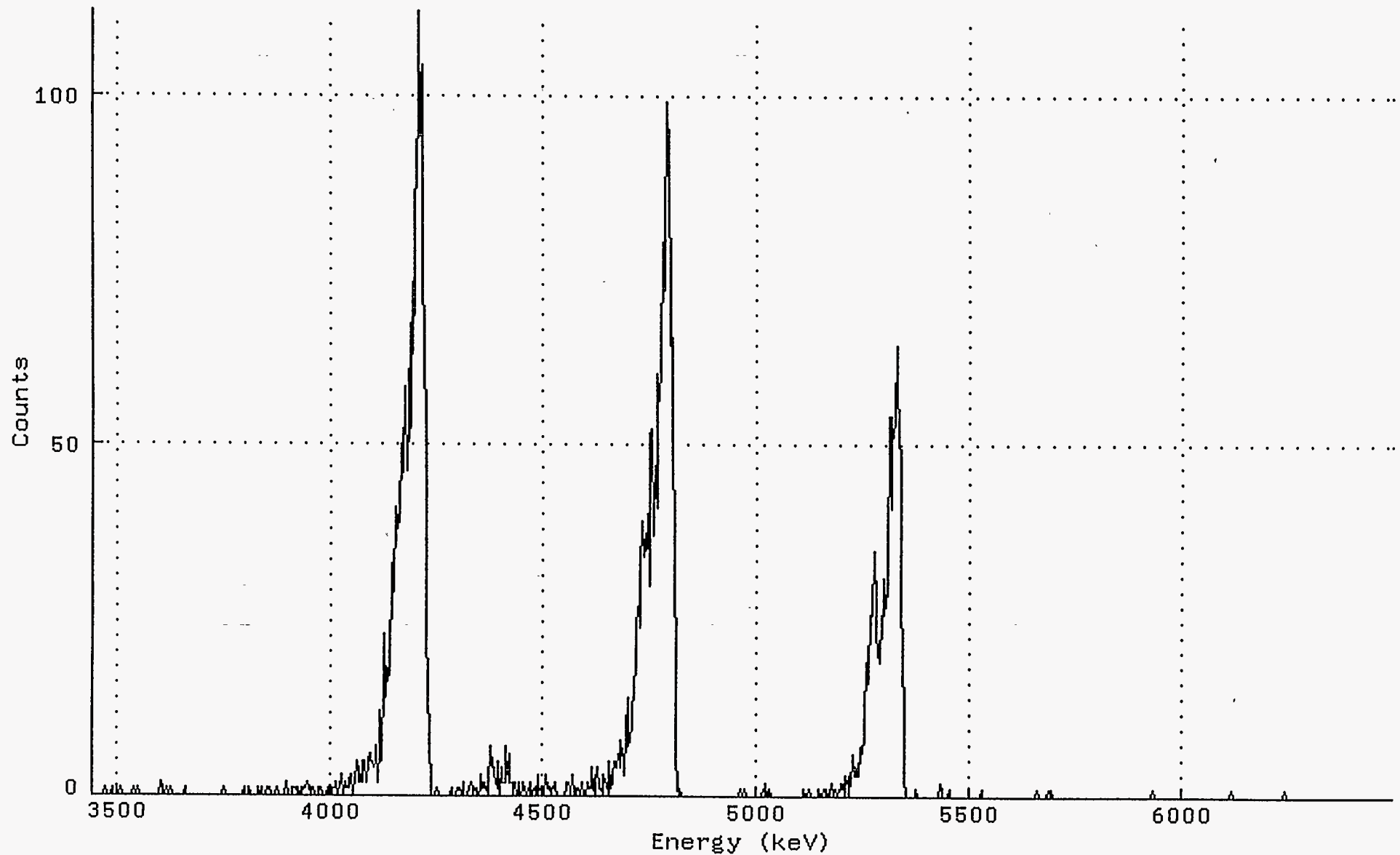
Title : 004

Sample Title: RAD TEST SOIL #7

Start Time: 24-JAN-1996 15:57 Sample Time: 22-JAN-1996 00:00 Energy Offset: 3.43260E+03

Real Time : 0 16:40:01.00 Sample ID : 960118007 Energy Slope : 3.16799E+00

Live Time : 0 16:40:01.00 Sample Type: UU Energy Quad : -1.74750E-04



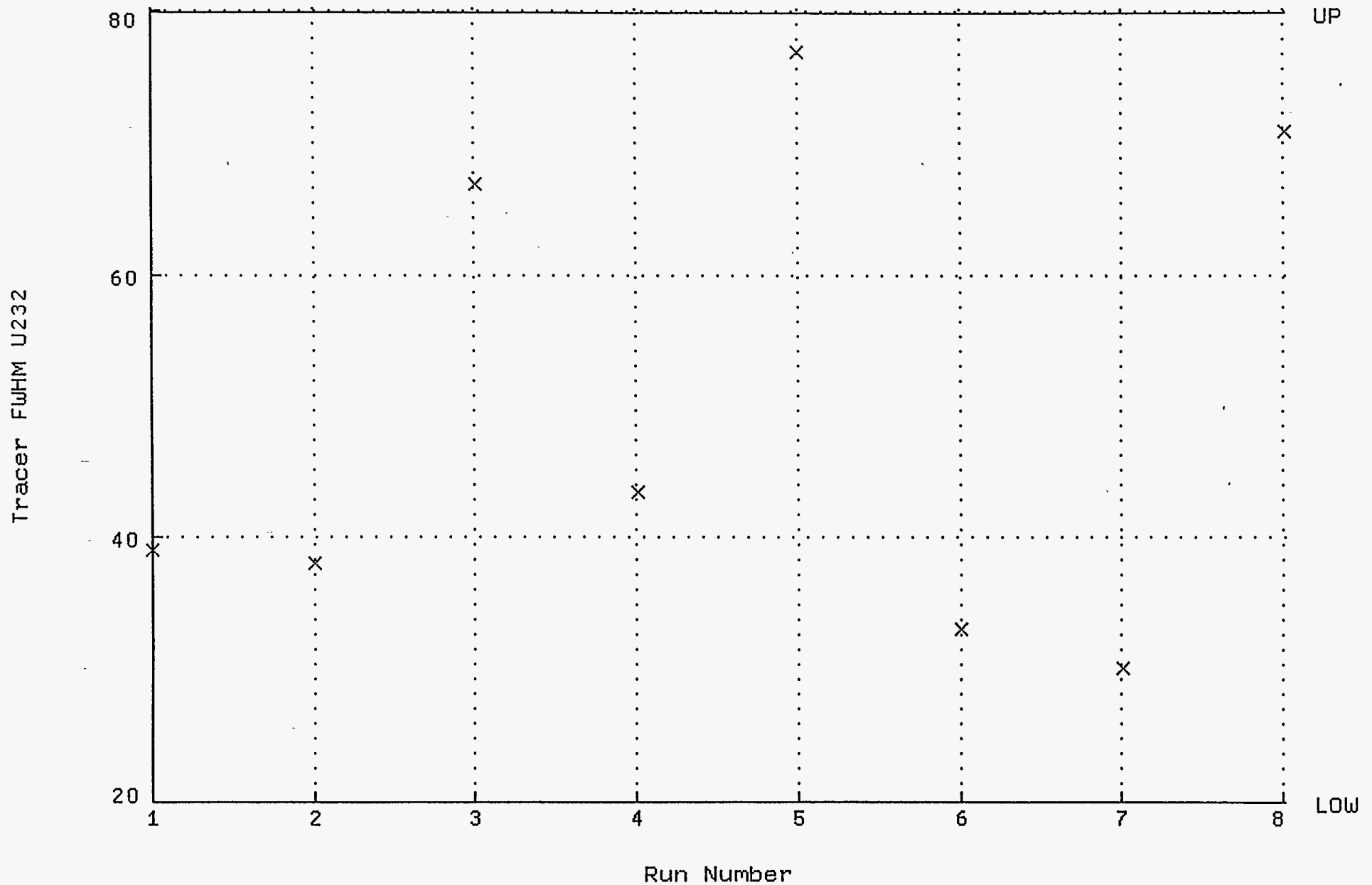
\_A filename : DKA200:[ALPHA.ALUSR.QA.Y]JAN96002\_Y\_UU\_SOIL.QAF;1

Parameter Name	: NCLSP1-U232	Parameter Type	: CONFIGURATION
Description	: Yield U232	Num Records Read	: 8
Parameter Units	: %	Start Date	: 23-JAN-1996 16:06:33
Num Points Used	: 8	End Date	: 24-JAN-1996 15:57:25
Minimum Value	: 34.3469	Minimum Date	: 24-JAN-1996 15:56:39
Maximum Value	: 70.9361	Maximum Date	: 23-JAN-1996 16:06:33
Out-of-range Test	: BOUNDARY	Test Source	: QAANALYZE COMMAND
Lower Limit	: 25	Upper Limit	: 115

Measurement Time	Sample ID	Value	Flags
23-JAN-1996 16:06:33	960118001	70.9361	
23-JAN-1996 16:08:08	960118003	50.2093	
23-JAN-1996 16:09:58	960118004	45.7133	
23-JAN-1996 16:11:13	960118008	67.4864	
23-JAN-1996 15:54:39	960118002	35.0446	
24-JAN-1996 15:55:43	960118005	56.0274	
24-JAN-1996 15:56:39	960118006	34.3469	
24-JAN-1996 15:57:25	960118007	57.9988	



QA filename : DKA200:[ALPHA.ALUSR.QA.Y]JAN96002\_Y\_UU\_SOIL.QAF;1  
Parameter Name : PSFWHM-U232 (Tracer FWHM U232)  
Start/End Dates : 23-JAN-1996 16:06:33 through 24-JAN-1996 15:57:25  
Lower/Upper Lmts: 20.0000 through 80.0000



Filename : DKA200:[ALPHA.ALUSR.QA.Y]JAN96002\_Y\_UU\_SOIL.QAF;1

Parameter Name	: PSFWHM-U232	Parameter Type	: CONFIGURATION
Description	: Tracer FWHM U232	Num Records Read	: 8
Parameter Units	: KEV	End Date	: 24-JAN-1996 15:57:25
Num Points Used	: 8	Minimum Date	: 24-JAN-1996 15:56:39
Start Date	: 23-JAN-1996 16:06:33	Maximum Date	: 24-JAN-1996 15:54:39
Minimum Value	: 30.1599	Test Source	: QAANALYZE COMMAND
Maximum Value	: 76.7552	Upper Limit	: 80
Out-of-range Test	: BOUNDARY		
Lower Limit	: 20		

Measurement Time	Sample ID	Value	Flags
23-JAN-1996 16:06:33	960118001	39.0005	
23-JAN-1996 16:08:08	960118003	38.0509	
23-JAN-1996 16:09:58	960118004	66.6946	
23-JAN-1996 16:11:13	960118008	43.4064	
24-JAN-1996 15:54:39	960118002	76.7552	
24-JAN-1996 15:55:43	960118005	33.1528	
24-JAN-1996 15:56:39	960118006	30.1599	
24-JAN-1996 15:57:25	960118007	70.7168	

QA filename : DKA200:[ALPHA.ALUSR.QA.Y]JAN96002\_Y\_UU\_SOIL.QAF;1

Parameter Name	: PSFWM-U232	Parameter Type	: CONFIGURATION
Description	: Tracer FWHM U232	Num Records Read	: 8
Parameter Units	: KEV	Start Date	: 23-JAN-1996 16:06:33
Num Points Used	: 8	End Date	: 24-JAN-1996 15:57:15
Minimum Value	: 30.1599	Minimum Date	: 24-JAN-1996 15:56:09
Maximum Value	: 76.7552	Maximum Date	: 24-JAN-1996 15:54:39
Out-of-range Test	: BOUNDARY	Test Source	: QAANALYZE COMMAND
Lower Limit	: 20	Upper Limit	: 80

Measurement Time	Sample ID	Value	Flags
23-JAN-1996 16:06:33	960118001	39.0005	
23-JAN-1996 16:08:08	960118003	38.0509	
23-JAN-1996 16:09:58	960118004	66.6946	
23-JAN-1996 16:11:13	960118008	43.4064	
24-JAN-1996 15:54:39	960118002	76.7552	
24-JAN-1996 15:55:43	960118005	33.1528	
24-JAN-1996 15:56:39	960118006	30.1599	
24-JAN-1996 15:57:25	960118007	70.7168	

ALPHA CALIBRATION REPORT  
 25-JAN-1996 11:18:35

Det	Offset	Energy Slope	Quad	FWHM Const	Avg %Eff	Calib Date	Eff Date
1	3440.	3.18	-1.782E-04	11.23	23.97	22-JAN-1996	22-JAN-1996
2	3448.	3.16	-1.652E-04	10.56	23.25	22-JAN-1996	22-JAN-1996
3	3425.	3.20	-1.805E-04	10.51	21.40	22-JAN-1996	22-JAN-1996
4	3433.	3.17	-1.747E-04	11.16	23.46	22-JAN-1996	22-JAN-1996
5	3443.	3.16	-1.728E-04	10.29	23.39	22-JAN-1996	22-JAN-1996
6	3444.	3.14	-1.680E-04	11.16	23.94	19-DEC-1995	19-DEC-1995
7	3437.	3.16	-1.467E-04	10.45	22.43	22-JAN-1996	22-JAN-1996
8	3447.	3.18	-1.948E-04	10.71	23.49	22-JAN-1996	22-JAN-1996
9	3424.	3.19	-1.768E-04	10.00	22.95	22-JAN-1996	22-JAN-1996
10	3447.	3.14	-1.562E-04	10.85	21.94	22-JAN-1996	22-JAN-1996
11	3436.	3.15	-1.549E-04	10.81	23.06	22-JAN-1996	22-JAN-1996
12	3434.	3.19	-1.886E-04	11.25	23.55	22-JAN-1996	22-JAN-1996
13	3434.	3.17	-1.680E-04	10.42	22.75	23-JAN-1996	23-JAN-1996
14	3440.	3.15	-1.736E-04	11.11	23.60	23-JAN-1996	23-JAN-1996
15	3444.	3.18	-1.915E-04	10.96	23.22	23-JAN-1996	23-JAN-1996
16	3453.	3.18	-1.913E-04	11.10	22.98	23-JAN-1996	23-JAN-1996
17	3453.	3.15	-1.528E-04	10.91	24.02	23-JAN-1996	23-JAN-1996
18	3442.	3.14	-1.436E-04	10.28	23.22	23-JAN-1996	23-JAN-1996
19	3446.	3.15	-1.783E-04	9.80	22.70	23-JAN-1996	23-JAN-1996
20	3437.	3.15	-1.824E-04	9.86	22.50	23-JAN-1996	23-JAN-1996
21	3429.	3.14	-1.596E-04	10.90	23.23	12-JAN-1996	12-JAN-1996
22	3436.	3.19	-1.927E-04	10.84	23.46	12-JAN-1996	12-JAN-1996
23	3460.	3.14	-1.646E-04	10.91	23.41	12-JAN-1996	12-JAN-1996
24	3434.	3.15	-1.574E-04	10.15	21.78	12-JAN-1996	12-JAN-1996

Detector	Parameter	Flag	Filename
12	ALL	Passed	R_JAN96002\$960118008_U
9	ALL	Passed	S_JAN96002\$960118001_U
1	ALL	Passed	S_JAN96002\$960118002_UU
10	ALL	Passed	S_JAN96002\$960118003_U
11	ALL	Passed	S_JAN96002\$960118004_U
2	ALL	Passed	S_JAN96002\$960118005_UU
3	ALL	Passed	S_JAN96002\$960118006_U
4	ALL	Passed	S_JAN96002\$960118007_U

ND\_AMS\_QA\_Y:JAN96002\_Y\_UU\_SOIL.QAF

APPROVAL DATE: 1/25/96 APPROVAL TIME: 1100

APPROVED BY: [Signature] PROCEDURE # \_\_\_\_\_

Report completed at 25-JAN-1996 08:46:57.90

Title : Purified U-232 Tracer from NIST SRM 4324A Standard Solution  
Quantity : 250 Assay date : 12-JAN-1996 00:00:00

Tracer Name	Half Life	DPM/ml Rate	% Err
U-232	72.00Y	16.64	5.00

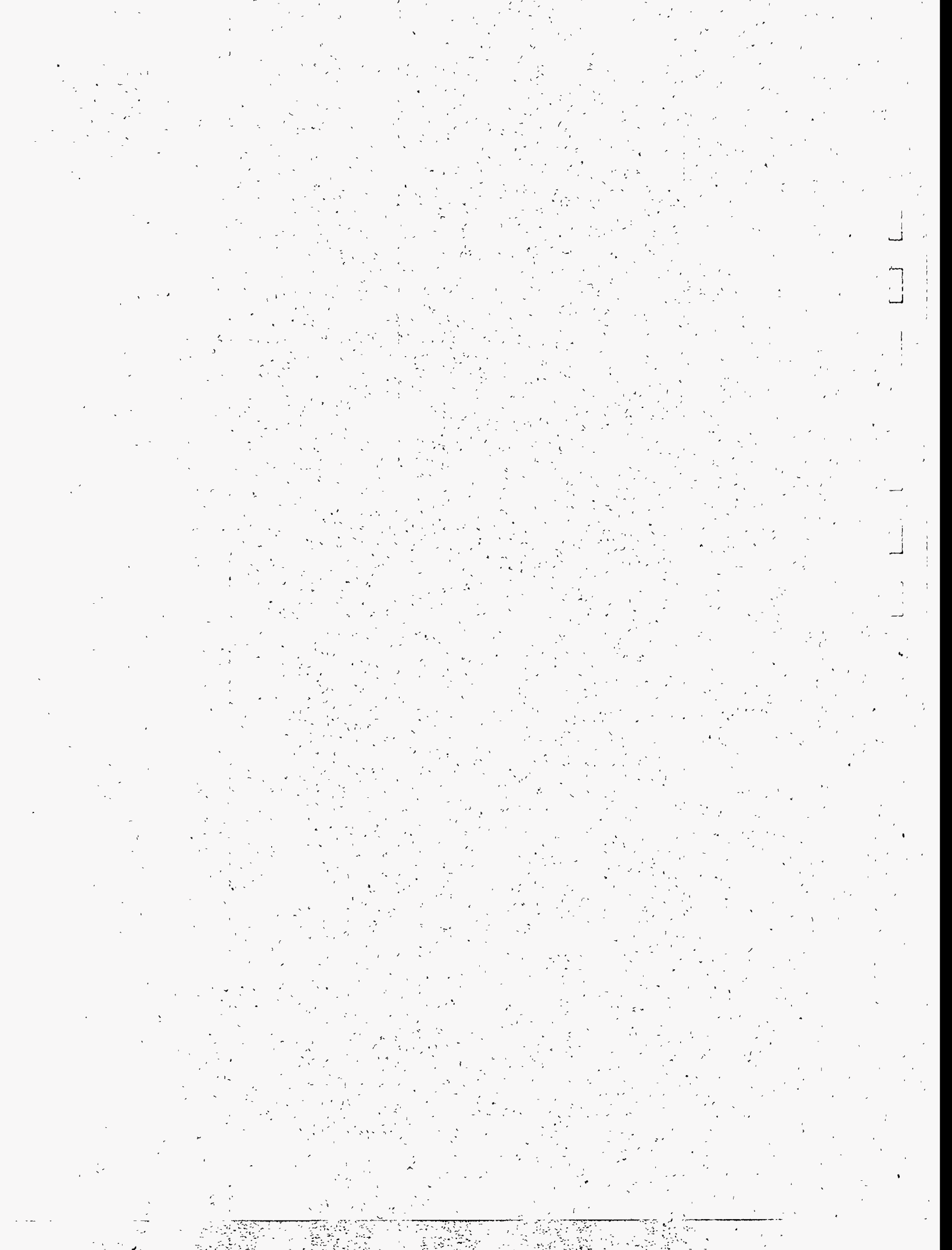




**APPENDIX G**

**VOA SAMPLE ANALYTICAL PERFORMANCE**





Accuracy Estimate for Volatile Waters  
Analysis - Volatiles by 8260

Sample ID - VOATESTWATER01

<u>Analyte</u>	<u>Reported Value ug/L</u>	<u>Actual Value ug/L</u>	<u>Percent Recovery</u>
Benzene	17.52	17.9	97.9
Bromodichloromethane	101.85	106	96.1
Bromoform	134.43	144	93.4
Carbon Tetrachloride	57.66	60.2	95.8
Chlorobenzene	24.78	24.5	101.1
Chlorodibromomethane	92.05	96.7	95.2
Chloroform	99.73	111	89.8
1,2-Dichlorobenzene	37.24	36.5	102.0
1,3-Dichlorobenzene	148.37	155	95.7
1,4-Dichlorobenzene	45.67	47.4	96.4
1,2-Dichloroethane	99.82	110	90.7
1,1-Dichloroethylene	77.72	94.4	82.3
Ethylbenzene	99.01	106	93.4
Methylene Chloride	105.12	121	86.9
4-Methyl-2-pentanone	69.92	82.1	85.2
1,1,1,2-Tetrachloroethane	85.36	89.6	95.3
Tetrachloroethylene	57.17	60.1	95.1
Toluene	37.56	39.6	94.8
1,1,1-Trichloroethane	87.42	100	87.4
Trichloroethylene	48.79	55.4	88.1
m-xylene	64.55	67.3	95.9
o-xylene	175.06	192	91.2

Sample ID - VOATESTWATER02

<u>Analyte</u>	<u>Reported Value ug/L</u>	<u>Actual Value ug/L</u>	<u>Percent Recovery</u>
Benzene	49.54	58.3	85.0
Bromodichloromethane	52.86	60.1	88.0
Bromoform	86.86	91.3	95.1
Carbon Tetrachloride	71.07	80.3	88.5
Chlorobenzene	27.38	30.3	90.4
Chloroform	78.07	93.4	83.6
1,2-Dichlorobenzene	164.36	189	87.0
1,2-Dichloroethane	132.94	157	84.7
trans-1,2-Dichloroethylene	29.71	38.5	77.2
Ethylbenzene	113.59	132	86.1
Methylene Chloride	110.01	136	80.9
4-Methyl-2-pentanone	113.16	116	97.6
Styrene	20.65	22.7	91.0
Tetrachloroethylene	107.26	127	84.5
1,1,1-Trichloroethylene	49.26	63.4	77.7
1,1,2-Trichloroethane	26.8	31.4	85.4
Trichloroethylene	97.15	120	81.0
Toluene	19.44	22.5	86.4
o-xylene	22.8	26.2	87.0
2-Butanone	16	0	

## Sample ID - VOATESTWATER03

<u>Analyte</u>	<u>Reported Value ug/L</u>	<u>Actual Value ug/L</u>	<u>Percent Recovery</u>
Benzene	16.37	17.9	91.5
Bromodichloromethane	102.7	106	96.9
Bromoform	161.04	144	111.8
Carbon Tetrachloride	51.32	60.2	85.2
Chlorobenzene	23.01	24.5	93.9
Chlorodibromomethane	100.75	96.7	104.2
Chloroform	96.83	111	87.2
1,2-Dichlorobenzene	35.77	36.5	98.0
1,3-Dichlorobenzene	140.04	155	90.3
1,4-Dichlorobenzene	41.46	47.4	87.5
1,2-Dichloroethane	103.65	110	94.2
1,1-Dichloroethylene	67.28	94.4	71.3
Ethylbenzene	90.45	106	85.3
Methylene Chloride	119.51	121	98.8
4-Methyl-2-pentanone	84.26	82.1	102.6
1,1,1,2-Tetrachloroethane	85.41	89.6	95.3
Tetrachloroethylene	49.83	60.1	82.9
Toluene	34.7	39.6	87.6
1,1,1-Trichloroethane	79.18	100	79.2
Trichloroethylene	44.45	55.4	80.2
m-xylene	59.32	67.3	88.1
o-xylene	165.15	192	86.0

## Sample ID - VOATESTWATER04

<u>Analyte</u>	<u>Reported Value ug/L</u>	<u>Actual Value ug/L</u>	<u>Percent Recovery</u>
Benzene	50.08	58.3	85.9
Bromodichloromethane	54.42	60.1	90.5
Bromoform	91.25	91.3	99.9
Carbon Tetrachloride	71.12	80.3	88.6
Chlorobenzene	27.59	30.3	91.1
Chloroform	79.22	93.4	84.8
1,2-Dichlorobenzene	168.02	189	88.9
1,2-Dichloroethane	138.93	157	88.5
trans-1,2-Dichloroethylene	29.87	38.5	77.6
Ethylbenzene	113.81	132	86.2
Methylene Chloride	112.01	136	82.4
4-Methyl-2-pentanone	119.07	116	102.6
Styrene	20.64	22.7	90.9
Tetrachloroethylene	106.71	127	84.0
1,1,1-Trichloroethylene	49.11	63.4	77.5
1,1,2-Trichloroethane	28.52	31.4	90.8
Trichloroethylene	97.07	120	80.9
Toluene	19.48	22.5	86.6
o-xylene	22.74	26.2	86.8
2-Butanone	18.05	0	

## Sample ID - VOATESTWATER05

<u>Analyte</u>	<u>Reported Value ug/L</u>	<u>Actual Value ug/L</u>	<u>Percent Recovery</u>
Benzene	53.85	58.3	92.4
Bromodichloromethane	59.69	60.1	99.3
Bromoform	109.56	91.3	120.0
Carbon Tetrachloride	75.23	80.3	93.7
Chlorobenzene	29.46	30.3	97.2
Chloroform	86.68	93.4	92.8
1,2-Dichlorobenzene	180.41	189	95.5
1,2-Dichloroethane	154.53	157	98.4
trans-1,2-Dichloroethylene	32.57	38.5	84.6
Ethylbenzene	121.19	132	91.8
Methylene Chloride	122.31	136	89.9
4-Methyl-2-pentanone	155.22	116	133.8
Styrene	22.39	22.7	98.6
Tetrachloroethylene	111.26	127	87.6
1,1,1-Trichloroethylene	52.62	63.4	83.0
1,1,2-Trichloroethane	32.48	31.4	103.4
Trichloroethylene	104.04	120	86.7
Toluene	21.04	22.5	93.5
o-xylene	24.4	26.2	93.1
2-Butanone	23.26	0	

Sample ID - VOATESTWATER06

<u>Analyte</u>	<u>Reported Value ug/L</u>	<u>Actual Value ug/L</u>	<u>Percent Recovery</u>
Benzene	17.43	17.9	97.4
Bromodichloromethane	103.37	106	97.5
Bromoform	157.19	144	109.2
Carbon Tetrachloride	58.54	60.2	97.2
Chlorobenzene	24.86	24.5	101.5
Chlorodibromomethane	99.99	96.7	103.4
Chloroform	99.38	111	89.5
1,2-Dichlorobenzene	36.65	36.5	100.4
1,3-Dichlorobenzene	145.58	155	93.9
1,4-Dichlorobenzene	43.79	47.4	92.4
1,2-Dichloroethane	102.1	110	92.8
1,1-Dichloroethylene	76.94	94.4	81.5
Ethylbenzene	99.48	106	93.8
Methylene Chloride	107.52	121	88.9
4-Methyl-2-pentanone	81.45	82.1	99.2
1,1,1,2-Tetrachloroethane	88.49	89.6	98.8
Tetrachloroethylene	56.81	60.1	94.5
Toluene	37.32	39.6	94.2
1,1,1-Trichloroethane	86.65	100	86.7
Trichloroethylene	48.48	55.4	87.5
m-xylene	65.2	67.3	96.9
o-xylene	177.02	192	92.2

## Sample ID - VOATESTWATER07

<u>Analyte</u>	<u>Reported Value ug/L</u>	<u>Actual Value ug/L</u>	<u>Percent Recovery</u>
Benzene	50.55	58.3	86.7
Bromodichloromethane	57.26	60.1	95.3
Bromoform	98.37	91.3	107.7
Carbon Tetrachloride	68.42	80.3	85.2
Chlorobenzene	28	30.3	92.4
Chloroform	81.28	93.4	87.0
1,2-Dichlorobenzene	170.98	189	90.5
1,2-Dichloroethane	145.02	157	92.4
trans-1,2-Dichloroethylene	29.28	38.5	76.1
Ethylbenzene	113.37	132	85.9
Methylene Chloride	117.01	136	86.0
4-Methyl-2-pentanone	122.19	116	105.3
Styrene	21.18	22.7	93.3
Tetrachloroethylene	103.31	127	81.3
1,1,1-Trichloroethylene	47.83	63.4	75.4
1,1,2-Trichloroethane	30.09	31.4	95.8
Trichloroethylene	96.71	120	80.6
Toluene	19.64	22.5	87.3
o-xylene	23.25	26.2	88.7
2-Butanone	18.49	0	



Precision Estimate for Volatile Waters

<u>Analyte</u>	<u>VOATEST WATER01 Reported Value ug/L</u>	<u>VOATEST WATER03 Reported Value ug/L</u>	<u>VOATEST WATER06 Reported Value ug/L</u>	<u>Relative Standard Deviation</u>
Benzene	17.52	16.37	17.43	0.49
Bromodichloromethane	101.85	102.7	103.37	0.53
Bromoform	134.43	161.04	157.19	10.97
Carbon Tetrachloride	57.66	51.32	58.54	3.01
Chlorobenzene	24.78	23.01	24.86	0.80
Chlorodibromomethane	92.05	100.75	99.99	3.70
Chloroform	99.73	96.83	99.38	1.21
1,2-Dichlorobenzene	37.24	35.77	36.65	0.52
1,3-Dichlorobenzene	148.37	140.04	145.58	3.08
1,4-Dichlorobenzene	45.67	41.46	43.79	1.45
1,2-Dichloroethane	99.82	103.65	102.1	1.36
1,1-Dichloroethylene	77.72	67.28	76.94	4.47
Ethylbenzene	99.01	90.45	99.48	3.91
Methylene Chloride	105.12	119.51	107.52	5.86
4-Methyl-2-pentanone	69.92	84.26	81.45	5.75
1,1,1,2-Tetrachloroethane	85.36	85.41	88.49	1.38
Tetrachloroethylene	57.17	49.83	56.81	3.18
Toluene	37.56	34.7	37.32	1.22
1,1,1-Trichloroethane	87.42	79.18	86.65	3.49
Trichloroethylene	48.79	44.45	48.48	1.86
m-xylene	64.55	59.32	65.2	2.47
o-xylene	175.06	165.15	177.02	4.84

<u>Analyte</u>	<u>VOATEST WATER02 Reported Value ug/L</u>	<u>VOATEST WATER04 Reported Value ug/L</u>	<u>VOATEST WATER05 Reported Value ug/L</u>	<u>VOATEST WATER07 Reported Value ug/L</u>
Benzene	49.54	50.08	53.85	50.55
Bromodichloromethane	52.86	54.42	59.69	57.26
Bromoform	86.86	91.25	109.56	98.37
Carbon Tetrachloride	71.07	71.12	75.23	68.42
Chlorobenzene	27.38	27.59	29.46	28
Chloroform	78.07	79.22	86.68	81.28
1,2-Dichlorobenzene	164.36	168.02	180.41	170.98
1,2-Dichloroethane	132.94	138.93	154.53	145.02
trans-1,2-Dichloroethylene	29.71	29.87	32.57	29.28
Ethylbenzene	113.59	113.81	121.19	113.37
Methylene Chloride	110.01	112.01	122.31	117.01
4-Methyl-2-pentanone	113.16	119.07	155.22	122.19
Styrene	20.65	20.64	22.39	21.18
Tetrachloroethylene	107.26	106.71	111.26	103.31
1,1,1-Trichloroethylene	49.26	49.11	52.62	47.83
1,1,2-Trichloroethane	26.8	28.52	32.48	30.09
Trichloroethylene	97.15	97.07	104.04	96.71
Toluene	19.44	19.48	21.04	19.64
o-xylene	22.8	22.74	24.4	23.25



APPENDIX H

SVOA SAMPLE ANALYTICAL PERFORMANCE



Accuracy Estimate for Semivolatile Waters  
 Analysis - Semivolatiles by 8270

Sample ID - SEMITESTWATER1

<u>Analyte</u>	<u>Reported Value ug/L</u>	<u>Actual Value ug/L</u>	<u>Percent Recovery</u>
Hexachlorobenzene	47.02	100	47.0
Hexachlorobutadiene	20.38	100	20.4
Hexachlorocyclopentadiene	84.65	100	84.7
Hexachloroethane	28.54	100	28.5
Isophorone	81.93	100	81.9
Nitrobenzene	70.04	100	70.0
1,2-Dichlorobenzene	44.61	100	44.6
1,2,4-Trichlorobenzene	44.34	100	44.3
1,3-Dichlorobenzene	38.24	100	38.2
1,4-Dichlorobenzene	40.95	100	41.0
2-Chloronaphthalene	57.39	100	57.4
2,4-Dinitrotoluene	66.23	100	66.2
2,6-Dinitrotoluene	71.26	100	71.3

Sample ID - SEMITESTWATER2

<u>Analyte</u>	<u>Reported Value ug/L</u>	<u>Actual Value ug/L</u>	<u>Percent Recovery</u>
Acenaphthene	25.67	50	51.3
Acenaphthylene	40.67	50	81.3
Anthracene	12.92	50	25.8
Benzo(a)anthracene	8.9	50	17.8
Benzo(a)pyrene	7.27	50	14.5
Benzo(b)fluoranthene	7.44	50	14.9
Benzo(g,h,i)perylene	10.01	50	20.0
Benzo(k)fluoranthene	8.76	50	17.5
Chrysene	9.56	50	19.1
Dibenzo(a,h)anthracene	8.94	50	17.9
Fluoranthene	12.89	50	25.8
Fluorene	23.86	50	47.7
Indeno(1,2,3-cd)pyrene	10.86	50	21.7
Naphthylene	25.31	50	50.6
Phenanthrene	18.47	50	36.9
Pyrene	11.27	50	22.5

Sample ID - SEMITESTWATER3

<u>Analyte</u>	<u>Reported Value ug/L</u>	<u>Actual Value ug/L</u>	<u>Percent Recovery</u>
Hexachlorobenzene	43.98	100	44.0
Hexachlorobutadiene	23.88	100	23.9
Hexachlorocyclopentadiene	92.16	100	92.2
Hexachloroethane	33.27	100	33.3
Isophorone	81.39	100	81.4
Nitrobenzene	67.67	100	67.7
1,2-Dichlorobenzene	45.67	100	45.7
1,2,4-Trichlorobenzene	44.21	100	44.2
1,3-Dichlorobenzene	40.7	100	40.7
1,4-Dichlorobenzene	40.86	100	40.9
2-Chloronaphthalene	55.31	100	55.3
2,4-Dinitrotoluene	62.04	100	62.0
2,6-Dinitrotoluene	67.07	100	67.1

Sample ID - SEMITESTWATER4

<u>Analyte</u>	<u>Reported Value ug/L</u>	<u>Actual Value ug/L</u>	<u>Percent Recovery</u>
Acenaphthene	31.76	50	63.5
Acenaphthylene	49.1	50	98.2
Anthracene	36.88	50	73.8
Benzo(a)anthracene	32.6	50	65.2
Benzo(a)pyrene	27.31	50	54.6
Benzo(b)fluoranthene	29.58	50	59.2
Benzo(g,h,i)perylene	32.97	50	65.9
Benzo(k)fluoranthene	33.73	50	67.5
Chrysene	34.62	50	69.2
Dibenzo(a,h)anthracene	30.22	50	60.4
Fluoranthene	37.28	50	74.6
Fluorene	35.67	50	71.3
Indeno(1,2,3-cd)pyrene	32.34	50	64.7
Naphthylene	30.72	50	61.4
Phenanthrene	37.88	50	75.8
Pyrene	35.89	50	71.8

Sample ID - SEMITESTWATER5

<u>Analyte</u>	<u>Reported Value ug/L</u>	<u>Actual Value ug/L</u>	<u>Percent Recovery</u>
Acenaphthene	30.31	50	60.6
Acenaphthylene	46.42	50	92.8
Anthracene	17.5	50	35.0
Benzo(a)anthracene	13.73	50	27.5
Benzo(a)pyrene	11.07	50	22.1
Benzo(b)fluoranthene	11.86	50	23.7
Benzo(g,h,i)perylene	11.65	50	23.3
Benzo(k)fluoranthene	12.57	50	25.1
Chrysene	14.46	50	28.9
Dibenzo(a,h)anthracene	11.19	50	22.4
Fluoranthene	18.12	50	36.2
Fluorene	27.96	50	55.9
Indeno(1,2,3-cd)pyrene	10.79	50	21.6
Napthylene	29.34	50	58.7
Phenanthrene	23.89	50	47.8
Pyrene	17.43	50	34.9

Sample ID - SEMITESTWATER6

<u>Analyte</u>	<u>Reported Value ug/L</u>	<u>Actual Value ug/L</u>	<u>Percent Recovery</u>
Hexachlorobenzene	19.38	100	19.4
Hexachlorobutadiene	19.63	100	19.6
Hexachlorocyclopentadiene	70.02	100	70.0
Hexachloroethane	23.75	100	23.8
Isophorone	78.89	100	78.9
Nitrobenzene	63.18	100	63.2
1,2-Dichlorobenzene	37.82	100	37.8
1,2,4-Trichlorobenzene	34.83	100	34.8
1,3-Dichlorobenzene	32.45	100	32.5
1,4-Dichlorobenzene	34.02	100	34.0
2-Chloronapthalene	41.76	100	41.8
2,4-Dinitrotoluene	58.53	100	58.5
2,6-Dinitrotoluene	62.73	100	62.7

Sample ID - SEMITESTWATER7

<u>Analyte</u>	<u>Reported Value ug/L</u>	<u>Actual Value ug/L</u>	<u>Percent Recovery</u>
Acenaphthene	34.54	50	69.1
Acenaphthylene	51.22	50	102.4
Anthracene	12.02	50	24.0
Benzo(a)anthracene	3.09	50	6.2
Benzo(a)pyrene	2.12	50	4.2
Benzo(b)fluoranthene	2.5	50	5.0
Benzo(g,h,i)perylene	2.12	50	4.2
Benzo(k)fluoranthene	2.79	50	5.6
Chrysene	3.33	50	6.7
Dibenzo(a,h)anthracene	1.9	50	3.8
Fluoranthene	16.38	50	32.8
Fluorene	31.36	50	62.7
Indeno(1,2,3-cd)pyrene	2.27	50	4.5
Napthylene	27.7	50	55.4
Phenanthrene	26.53	50	53.1
Pyrene	13.24	50	26.5

Precision Estimate for Semivolatile Waters

<u>Analyte</u>	<u>WATER01</u> Reported Value ug/L	<u>WATER03</u> Reported Value ug/L	<u>WATER06</u> Reported Value ug/L	Relative Standard Deviation
Hexachlorobenzene	47.02	43.98	19.38	11.61
Hexachlorobutadiene	20.38	23.88	19.63	1.72
Hexachlorocyclopentadiene	84.65	92.16	70.02	8.17
Hexachloroethane	28.54	33.27	23.75	3.18
Isophorone	81.93	81.39	78.89	1.23
Nitrobenzene	70.04	67.67	63.18	2.52
1,2-Dichlorobenzene	44.61	45.67	37.82	3.25
1,2,4-Trichlorobenzene	44.34	44.21	34.83	4.20
1,3-Dichlorobenzene	38.24	40.7	32.45	3.12
1,4-Dichlorobenzene	40.95	40.86	34.02	3.06
2-Chloronaphthalene	57.39	55.31	41.76	6.48
2,4-Dinitrotoluene	66.23	62.04	58.53	2.64
2,6-Dinitrotoluene	71.26	67.07	62.73	2.86

<u>Analyte</u>	<u>WATER02</u> Reported Value ug/L	<u>WATER04</u> Reported Value ug/L	<u>WATER05</u> Reported Value ug/L	<u>WATER07</u> Reported Value ug/L	Relative Standard Deviation
Acenaphthene	25.67	31.76	30.31	34.54	2.58
Acenaphthylene	40.67	49.1	46.42	51.22	3.31
Anthracene	12.92	36.88	17.5	12.02	8.53
Benzo(a)anthracene	8.9	32.6	13.73	3.09	9.01
Benzo(a)pyrene	7.27	27.31	11.07	2.12	7.68
Benzo(b)fluoranthene	7.44	29.58	11.86	2.5	8.37
Benzo(g,h,i)perylene	10.01	32.97	11.65	2.12	9.39
Benzo(k)fluoranthene	8.76	33.73	12.57	2.79	9.63
Chrysene	9.56	34.62	14.46	3.33	9.56
Dibenzo(a,h)anthracene	8.94	30.22	11.19	1.9	8.58
Fluoranthene	12.89	37.28	18.12	16.38	8.06
Fluorene	23.86	35.67	27.96	31.36	3.80
Indeno(1,2,3-cd)pyrene	10.86	32.34	10.79	2.27	9.14
Naphthylene	25.31	30.72	29.34	27.7	1.76
Phenanthrene	18.47	37.88	23.89	26.53	5.59
Pyrene	11.27	35.89	17.43	13.24	8.22







APPENDIX I

RCRA METAL SAMPLE ANALYTICAL PERFORMANCE



**FERMCO**  
P. O. Box 538704  
Cincinnati, OH 45253-8704

**FACSIMILE LEAD SHEET**

**No. of Pages: 15**  
Including Lead Sheet

**DATE:** April 26, 1996

**TO:** Dr. Stanley Finger

**COMPANY NAME:** ECO, Inc

**LOCATION:** Annapolis, MD

**FAX NO. TO BE CALLED:** 410-757-8265

**TELEPHONE NO.:** 410-757-3245

**FROM:** Roy J. Cohen

**TELEPHONE NO.:** (513) 648-3924  
**Fax No.** 513-648-5451

**PROJECT NAME:** Fernald Environmental Mgt

**CONTRACT NO.:** DE-AC24-92OR21972

**MESSAGE**

**SUBJECT:** results of Army Chemical Lab demonstration (ICP metals)

Stan,

Following this cover page, you should have all the sample data produced by Bill Dennis as he analyzed 14 samples for RCRA metals (Silver, barium, cadmium, chromium, and lead). As I mentioned over the phone, all the recoveries were 80% and 120 %, which are the specifications for SW-846 analyses.

Bill generated a complete data package, a copy of which I gave to Jeet when he was here on the 18th. I am waiting for a report from Mark regarding the results of the ventilatory test he ran on the 18th-19th.

It was a pleasure to work with ECO on this project. As of today, we are transferring ownership of the units to the Aquifer restoration project (Aka. CRU5). They will be running analyses of waste water and treated process water.

I guess that is it from here. If you need anything else, please let me know.

Sincerely,

A handwritten signature in cursive script, appearing to read "Roy", with a long horizontal flourish extending to the right.

Roy Cohen  
RJC



Department of the Army  
 U.S. Army Biomedical Research and Development Laboratory  
 Research Methods Branch

**ANALYTICAL CHEMISTRY REPORT**

TEST NUMBER	NA	DATE REPORTED	4/16/96
ANALYSIS/MATRIX	Trace Metals / Water		
Collection Site	Date(s) Collected	Date(s) Analyzed	
Fernald	4/16/96	4/16/96	

Chemistry Accession Number	Sample Identification	Element	Concentration	units	
96-1002	Metals in Water 01				97.8
		Ag	0.275	mg/L	91.7
		As	BDL	mg/L	n/a
		Ba	0.292	mg/L	97.3
		Cd	0.301	mg/L	100.
		Cr	0.287	mg/L	95.7
		Pb	0.273	mg/L	91.0
		Se	BDL	mg/L	n/a
			TV = 0.30	mg/l	

BDL = Below Detectable Limit  
 The Detectable limit for this method is Ag < 0.05 mg/L, As < 0.10 mg/L, Ba < 0.05 mg/L, Cd < 0.05 mg/L, Cr < 0.05 mg/L, Pb < 0.05 mg/L, Se < 0.20 mg/L.

Comments:

Chemist *[Signature]* Date 4/16/96

Reviewed by \_\_\_\_\_ Date \_\_\_\_\_

Department of the Army  
 U.S. Army Biomedical Research and Development Laboratory  
 Research Methods Branch

**ANALYTICAL CHEMISTRY REPORT**

TEST NUMBER NA DATE REPORTED 4/16/98

ANALYSIS/MATRIX Trace Metals / Water

Collection Site Fernald Date(s) Collected 4/16/98 Date(s) Analyzed 4/16/98

Chemistry Accession Number	Sample Identification	Element	Concentration	units	
96-1003	Metals in Water 02				90 R
		Ag	0.277	mg/L	92.3
		As	BDL	mg/L	n/c
		Ba	0.293	mg/L	97.7
		Cd	0.307	mg/L	102
		Cr	0.293	mg/L	97.7
		Pb	0.278	mg/L	92.7
		Se	BDL	mg/L	n/c
			TV = 0.30	mg/l	

BDL = Below Detectable Limit  
 The Detectable limit for this method is Ag < 0.05 mg/L, As < 0.10 mg/L, Ba < 0.05 mg/L  
 Cd < 0.05 mg/L, Cr < 0.05 mg/L, Pb < 0.05 mg/L, Se < 0.20 mg/L.

Comments:

Chemist AED Date 4/16/98

Reviewed by \_\_\_\_\_ Date \_\_\_\_\_



Department of the Army  
 U.S. Army Biomedical Research and Development Laboratory  
 Research Methods Branch

**ANALYTICAL CHEMISTRY REPORT**

TEST NUMBER NA DATE REPORTED 4/18/96

ANALYSIS/MATRIX Trace Metals / Water

Collection Site Fernald Date(s) Collected 4/18/96 Date(s) Analyzed 4/18/96

Chemistry Accession Number	Sample Identification	Element	Concentration	units	
96-1005	Metals in Water 04				970P
		Ag	0.273	mg/L	91.0
		As	BDL	mg/L	n/a
		Ba	0.289	mg/L	46.3
		Cd	0.302	mg/L	101
		Cr	0.285	mg/L	45.0
		Pb	0.274	mg/L	91.3
		Se	BDL	mg/L	n/a
			TV=0.30	mg/l	

BDL = Below Detectable Limit  
 The Detectable limit for this method is Ag < 0.05 mg/L, As < 0.10 mg/L, Ba < 0.05 mg/L  
 Cd < 0.05 mg/L, Cr < 0.05 mg/L, Pb < 0.05 mg/L, Se < 0.20 mg/L.

Comments:

Chemist [Signature] Date 4/16/96

Reviewed by \_\_\_\_\_ Date \_\_\_\_\_



Department of the Army  
 U.S. Army Biomedical Research and Development Laboratory  
 Research Methods Branch

**ANALYTICAL CHEMISTRY REPORT**

TEST NUMBER NA DATE REPORTED 4/16/96

ANALYSIS/MATRIX Trace Metals / Water

Collection Site Fernald Date(s) Collected 4/16/96 Date(s) Analyzed 4/16/96

Chemistry Accession Number	Sample Identification	Element	Concentration	units	
96-1006	Metals in Water 05				90 R
		Ag	0.252	mg/L	84.0
		As	BDL	mg/L	n/a
		Ba	0.286	mg/L	45.3
		Cd	0.284	mg/L	44.7
		Cr	0.267	mg/L	89.0
		Pb	0.250	mg/L	83.3
		Se	BDL	mg/L	n/a
			TV = 0.30	mg/L	

BDL = Below Detectable Limit  
 The Detectable limit for this method is Ag < 0.05 mg/L, As < 0.10 mg/L, Ba < 0.05 mg/L  
Cd < 0.05 mg/L, Cr < 0.05 mg/L, Pb < 0.05 mg/L, Se < 0.20 mg/L.

Comments:

Chemist [Signature] Date 4/16/96

Reviewed by \_\_\_\_\_ Date \_\_\_\_\_





Department of the Army  
 U.S. Army Biomedical Research and Development Laboratory  
 Research Methods Branch

**ANALYTICAL CHEMISTRY REPORT**

TEST NUMBER NA DATE REPORTED 4/18/96

ANALYSIS/MATRIX Trace Metals / Water

Collection Site Fernald Date(s) Collected 4/16/96 Date(s) Analyzed 4/16/96

Chemistry Accession Number	Sample Identification	Element	Concentration	units	
96-1009	Metals in Water 08				90R
		Ag	1.00	mg/L	100
		As	BDL	mg/L	N/A
		Ba	0.973	mg/L	97.3
		Cd	1.02	mg/L	102
		Cr	0.987	mg/L	98.7
		Pb	0.960	mg/L	96
		Se	BDL	mg/L	N/A
			TV=1.0	mg/l	

BDL = Below Detectable Limit  
 The Detectable limit for this method is Ag < 0.05 mg/L, As < 0.10 mg/L, Ba < 0.05 mg/L  
 Cd < 0.05 mg/L, Cr < 0.05 mg/L, Pb < 0.05 mg/L, Se < 0.20 mg/L.

Comments:

Chemist MED Date 4/16/96

Reviewed by \_\_\_\_\_ Date \_\_\_\_\_

Department of the Army  
 U.S. Army Biomedical Research and Development Laboratory  
 Research Methods Branch

**ANALYTICAL CHEMISTRY REPORT**

TEST NUMBER NA DATE REPORTED 4/16/96

ANALYSIS/MATRIX Trace Metals / Water

Collection Site Fernald Date(s) Collected 4/16/96 Date(s) Analyzed 4/16/96

Chemistry Accession Number	Sample Identification	Element	Concentration	units	
98-1010	Metals in Water 09				70 R
		Ag	1.00	mg/L	100
		As	BDL	mg/L	n/a
		Ba	0.973	mg/L	97.3
		Cd	1.02	mg/L	102
		Cr	0.972	mg/L	97.2
		Pb	0.946	mg/L	94.6
		Se	BDL	mg/L	n/a
			FV = 1.0	mg/l	

BDL = Below Detectable Limit  
 The Detectable limit for this method is Ag < 0.05 mg/L, As < 0.10 mg/L, Ba < 0.06 mg/L  
 Cd < 0.05 mg/L, Cr < 0.05 mg/L, Pb < 0.05 mg/L, Se < 0.20 mg/L.

Comments:

Chemist [Signature] Date 4/16/96

Reviewed by \_\_\_\_\_ Date \_\_\_\_\_

Department of the Army,  
 U.S. Army Biomedical Research and Development Laboratory  
 Research Methods Branch

**ANALYTICAL CHEMISTRY REPORT**

TEST NUMBER NA DATE REPORTED 4/18/98

ANALYSIS/MATRIX Trace Metals / Water

Collection Site Fernald Date(s) Collected 4/18/98 Date(s) Analyzed 4/18/98

Chemistry Accession Number	Sample Identification	Element	Concentration	units	
96-1011	Metals in Water 10				90 R
		Ag	1.00	mg/L	100
		As	BDL	mg/L	n/a
		Ba	0.979	mg/L	97.9
		Cd	1.02	mg/L	102
		Cr	0.976	mg/L	97.6
		Pb	0.959	mg/L	95.9
		Sa	BDL	mg/L	n/a
			TV = 1.0	mg/L	

BDL = Below Detectable Limit  
 The Detectable limit for this method is Ag < 0.05 mg/L, As < 0.10 mg/L, Ba < 0.05 mg/L  
 Cd < 0.05 mg/L, Cr < 0.05 mg/L, Pb < 0.05 mg/L, Sa < 0.20 mg/L.

Comments:

Chemist *[Signature]* Date 4/16/98

Reviewed by \_\_\_\_\_ Date \_\_\_\_\_

Department of the Army  
 U.S. Army Biomedical Research and Development Laboratory  
 Research Methods Branch

**ANALYTICAL CHEMISTRY REPORT**

TEST NUMBER	NA	DATE REPORTED	4/18/96
ANALYSIS/MATRIX	Trace Metals / Water		
Collection Site	Date(s) Collected	Date(s) Analyzed	
Fernald	4/18/96	4/18/96	

Chemistry Accession Number	Sample Identification	Element	Concentration	units	
96-1012	Metals in Water 11				OR
		Ag	0.985	mg/L	98.5
		As	BDL	mg/L	n/c
		Ba	0.966	mg/L	96.6
		Cd	1.00	mg/L	100
		Cr	0.965	mg/L	96.5
		Pb	0.932	mg/L	93.2
		Se	BDL	mg/L	n/c
			TV = 1.0	mg/l	

BDL = Below Detectable Limit  
 The Detectable limit for this method is Ag < 0.05 mg/L, As < 0.10 mg/L, Ba < 0.05 mg/L  
 Cd < 0.05 mg/L, Cr < 0.05 mg/L, Pb < 0.05 mg/L, Se < 0.20 mg/L.

Comments:

Chemist *AED* Date 4/16/96

Reviewed by \_\_\_\_\_ Date \_\_\_\_\_

Department of the Army  
 U.S. Army Biomedical Research and Development Laboratory  
 Research Methods Branch

**ANALYTICAL CHEMISTRY REPORT**

TEST NUMBER NA DATE REPORTED 4/16/98

ANALYSIS/MATRIX Trace Metals / Water

Collection Site Fernald Date(s) Collected 4/16/98 Date(s) Analyzed 4/16/98

Chemistry Accession Number	Sample Identification	Element	Concentration	units	
96-1001	Metals in Water 12	Ag	0.960	mg/L	9.5
		As	BDL	mg/L	N/A
		Ba	0.917	mg/L	9.57
		Cd	0.951	mg/L	9.51
		Cr	0.908	mg/L	9.08
		Pb	0.911	mg/L	9.11
		Se	BDL	mg/L	N/A
			TV = 2.0	mg/L	

BDL = Below Detectable Limit  
 The Detectable limit for this method is Ag < 0.05 mg/L, As < 0.10 mg/L, Ba < 0.05 mg/L  
 Cd < 0.05 mg/L, Cr < 0.05 mg/L, Pb < 0.05 mg/L, Se < 0.20 mg/L.

Comments:

Chemist [Signature] Date 4/16/98

Reviewed by \_\_\_\_\_ Date \_\_\_\_\_



Department of the Army  
 U.S. Army Biomedical Research and Development Laboratory  
 Research Methods Branch

**ANALYTICAL CHEMISTRY REPORT**

TEST NUMBER NA DATE REPORTED 4/16/96

ANALYSIS/MATRIX Trace Metals / Water

Collection Site Fernald Date(s) Collected 4/16/96 Date(s) Analyzed 4/16/96

Chemistry Accession Number	Sample Identification	Element	Concentration	units	
96-1013	Metals in Water 13				70 R
		Ag	0.993	mg/L	44.3
		As	BDL	mg/L	n/a
		Ba	0.971	mg/L	97.1
		Cd	1.01	mg/L	101
		Cr	0.980	mg/L	98.0
		Pb	0.942	mg/L	94.2
		Se	BDL	mg/L	n/a
			TV = 1.0	mg/L	

BDL = Below Detectable Limit  
 The Detectable limit for this method is Ag < 0.05 mg/L, As < 0.10 mg/L, Ba < 0.05 mg/L  
 Cd < 0.05 mg/L, Cr < 0.05 mg/L, Pb < 0.05 mg/L, Se < 0.20 mg/L.

Comments:

Chemist *[Signature]* Date 4/16/96

Reviewed by \_\_\_\_\_ Date \_\_\_\_\_

Department of the Army  
 U.S. Army Biomedical Research and Development Laboratory  
 Research Methods Branch


**ANALYTICAL CHEMISTRY REPORT**

TEST NUMBER	<u>NA</u>	DATE REPORTED	<u>4/16/96</u>
ANALYSIS/MATRIX	<u>Trace Metals / Water</u>		
Collection Site	Date(s) Collected	Date(s) Analyzed	
<u>Fernald</u>	<u>4/16/96</u>	<u>4/16/96</u>	

Chemistry Accession Number	Sample Identification	Element	Concentration	units	
<u>96-1014</u>	<u>Metals in Water 14</u>				<u>OR</u>
		Ag	0.982	mg/L	<u>98.2</u>
		As	BDL	mg/L	<u>N/A</u>
		Ba	0.963	mg/L	<u>96.3</u>
		Cd	1.01	mg/L	<u>101</u>
		Cr	0.976	mg/L	<u>97.6</u>
		Pb	0.937	mg/L	<u>93.7</u>
		Se	BDL	mg/L	<u>N/A</u>
			<u>TV = 1.0</u>	<u>mg/L</u>	

BDL = Below Detectable Limit  
 The Detectable limit for this method is Ag < 0.05 mg/L, As < 0.10 mg/L, Ba < 0.05 mg/L  
Cd < 0.05 mg/L, Cr < 0.05 mg/L, Pb < 0.05 mg/L, Se < 0.20 mg/L.

Comments:

Chemist  Date 4/16/96

Reviewed by \_\_\_\_\_ Date \_\_\_\_\_



**APPENDIX J**

**URANIUM SAMPLE ANALYTICAL PERFORMANCE**

**Accuracy Estimate for Uranium soils  
Analysis - Isotopic Uranium by Alpha Spectroscopy**

**Sample ID - RADTESTSOIL1**

<u>Analyte</u>	<u>Reported Value pCi/g</u>	<u>Actual Value pCi/g</u>	<u>Acceptance Range</u>	
U-232	3.726	-	-	Actual
U-234	0.623	-	-	FEMP
U-235	0.037	-	-	Sample
U-238	0.686	-	-	
U-Total	1.35	-	5 - 20	

**Sample ID - RADTESTSOIL2**

<u>Analyte</u>	<u>Reported Value pCi/g</u>	<u>Actual Value ug/g</u>	<u>Acceptance Range</u>	
U-232	3.739	-	-	
U-234	22.212	-	-	FEMP
U-235	1.634	-	-	Surrogate
U-238	23.740	-	-	Sample
U-Total	71.5 ug/g	57.8	40.68 - 71.88	

**Sample ID - RADTESTSOIL3**

<u>Analyte</u>	<u>Reported Value pCi/g</u>	<u>Actual Value pCi/g</u>	<u>Acceptance Range</u>	
U-232	3.737	-	-	Actual
U-234	8.912	-	-	FEMP
U-235	0.434	-	-	Sample
U-238	8.740	-	-	
U-Total	18.1	-	10 - 20	

**Sample ID - RADTESTSOIL4**

<u>Analyte</u>	<u>Reported Value pCi/g</u>	<u>Actual Value pCi/g</u>	<u>Acceptance Range</u>	
U-232	3.724	-	-	Actual
U-234	9.240	-	-	FEMP
U-235	0.473	-	-	Sample
U-238	9.620	-	-	
U-Total	19.3	-	10 - 20	

Sample ID - RADTESTSOIL5

<u>Analyte</u>	<u>Reported Value pCi/g</u>	<u>Actual Value pCi/g</u>	<u>Acceptance Range</u>	
U-232	3.682	-	-	Actual FEMP Sample
U-234	5.333	-	-	
U-235	0.340	-	-	
U-238	5.253	-	-	
U-Total	10.9	-	10 - 20	

Sample ID - RADTESTSOIL6

<u>Analyte</u>	<u>Reported Value pCi/g</u>	<u>Actual Value pCi/g</u>	<u>Acceptance Range</u>	
U-232	3.724	-	-	FEMP Surrogate Sample
U-234	18.450	-	-	
U-235	1.355	-	-	
U-238	21.170	-	-	
U-Total	63.72	65.7	46.08 - 82.44	

Sample ID - RADTESTSOIL7

<u>Analyte</u>	<u>Reported Value pCi/g</u>	<u>Actual Value pCi/g</u>	<u>Acceptance Range</u>	
U-232	3.725	-	-	Actual FEMP Sample
U-234	5.763	-	-	
U-235	0.427	-	-	
U-238	6.201	-	-	
U-Total	12.4	-	10 - 20	

-, Data not available