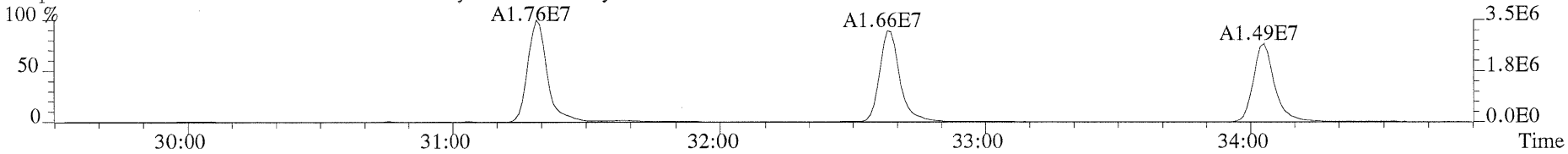
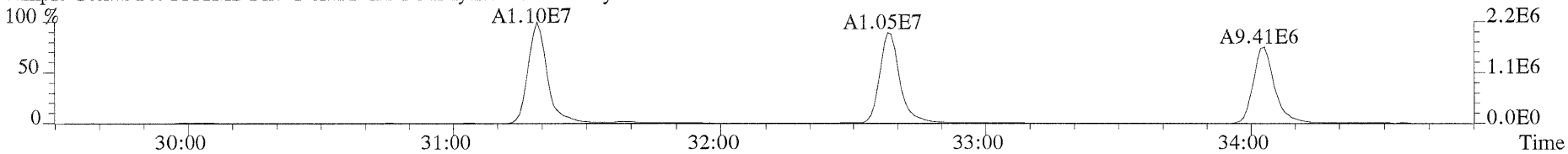
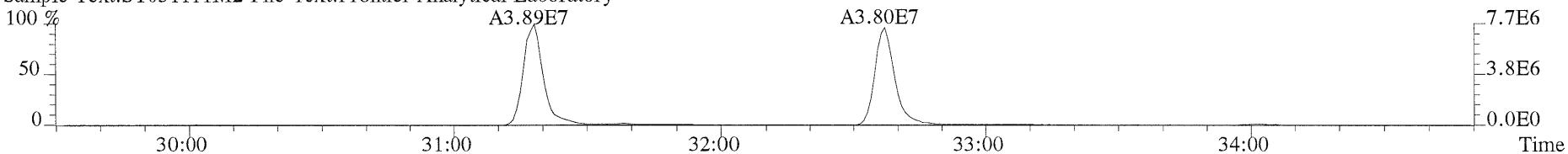
File:11MAY11M #1-412 Acq:11-MAY-2011 17:10:23 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051111M2 File Text:Frontier Analytical Laboratory



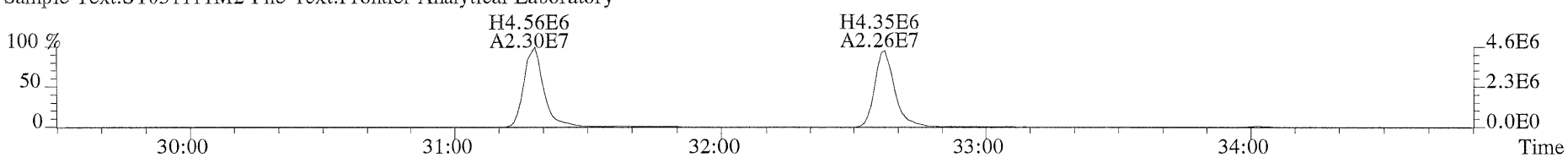
File:11MAY11M #1-412 Acq:11-MAY-2011 17:10:23 GC EI+ Voltage SIR Autospec-Ultima
341.8568 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051111M2 File Text:Frontier Analytical Laboratory



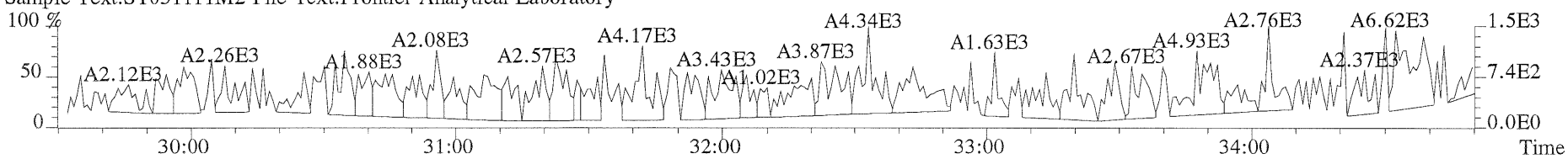
File:11MAY11M #1-412 Acq:11-MAY-2011 17:10:23 GC EI+ Voltage SIR Autospec-Ultima
351.9000 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051111M2 File Text:Frontier Analytical Laboratory



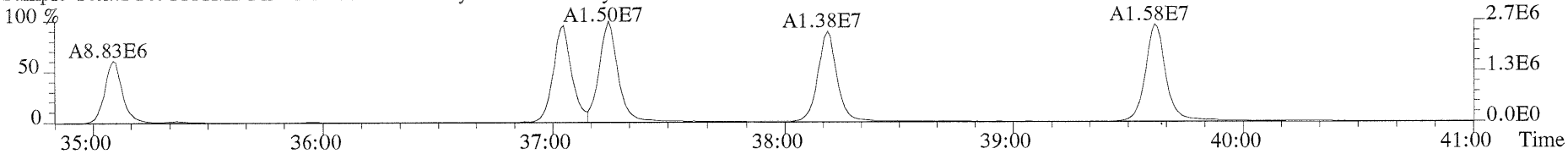
File:11MAY11M #1-412 Acq:11-MAY-2011 17:10:23 GC EI+ Voltage SIR Autospec-Ultima
353.8970 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051111M2 File Text:Frontier Analytical Laboratory



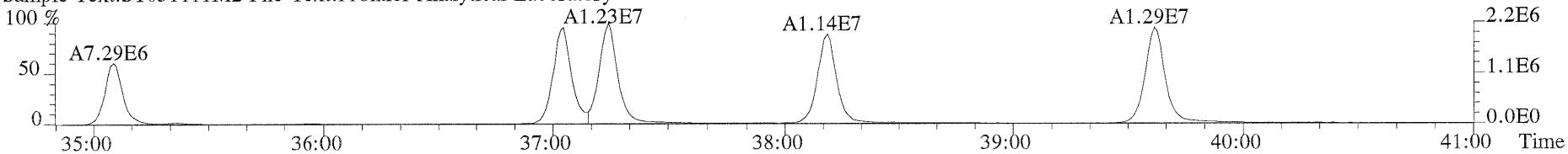
File:11MAY11M #1-412 Acq:11-MAY-2011 17:10:23 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051111M2 File Text:Frontier Analytical Laboratory



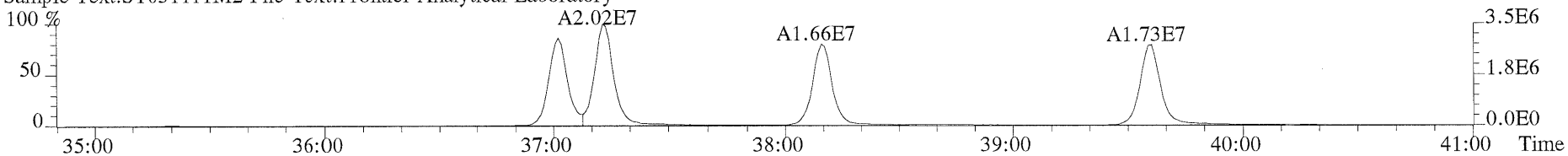
File:11MAY11M #1-477 Acq:11-MAY-2011 17:10:23 GC EI+ Voltage SIR Autospec-Ultima
373.8207 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051111M2 File Text:Frontier Analytical Laboratory



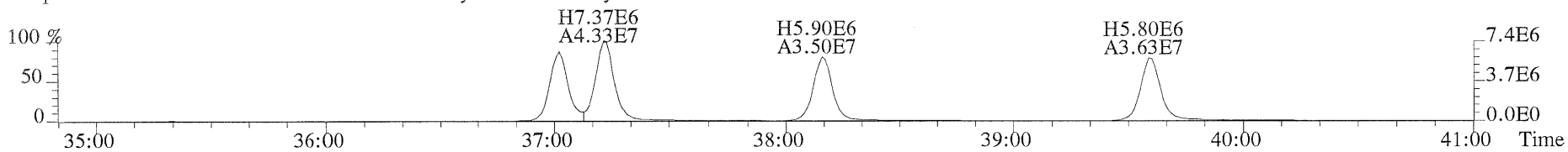
File:11MAY11M #1-477 Acq:11-MAY-2011 17:10:23 GC EI+ Voltage SIR Autospec-Ultima
375.8178 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051111M2 File Text:Frontier Analytical Laboratory



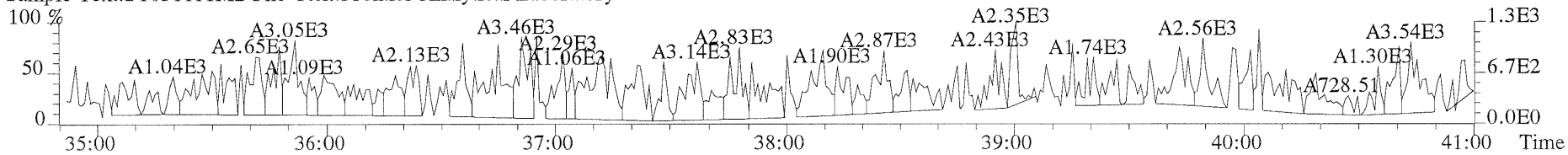
File:11MAY11M #1-477 Acq:11-MAY-2011 17:10:23 GC EI+ Voltage SIR Autospec-Ultima
383.8639 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051111M2 File Text:Frontier Analytical Laboratory



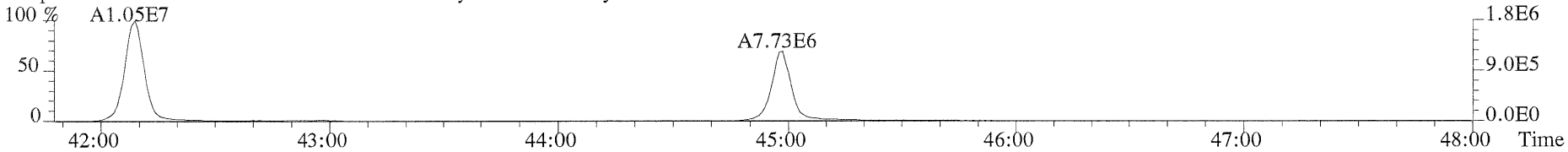
File:11MAY11M #1-477 Acq:11-MAY-2011 17:10:23 GC EI+ Voltage SIR Autospec-Ultima
385.8610 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051111M2 File Text:Frontier Analytical Laboratory



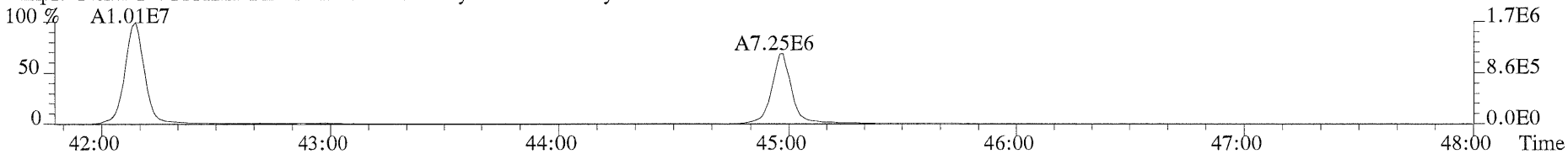
File:11MAY11M #1-477 Acq:11-MAY-2011 17:10:23 GC EI+ Voltage SIR Autospec-Ultima
445.7555 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051111M2 File Text:Frontier Analytical Laboratory



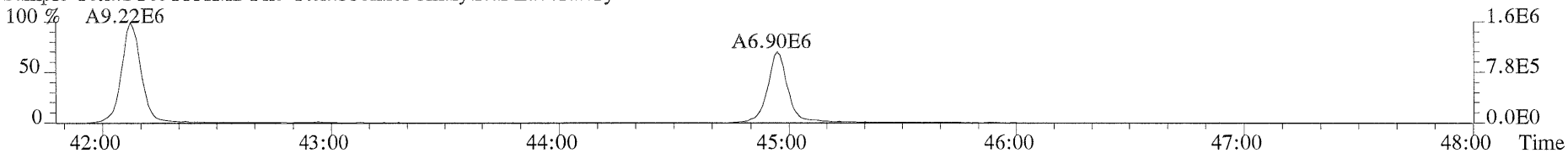
File:11MAY11M #1-541 Acq:11-MAY-2011 17:10:23 GC EI+ Voltage SIR Autospec-Ultima
407.7818 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051111M2 File Text:Frontier Analytical Laboratory



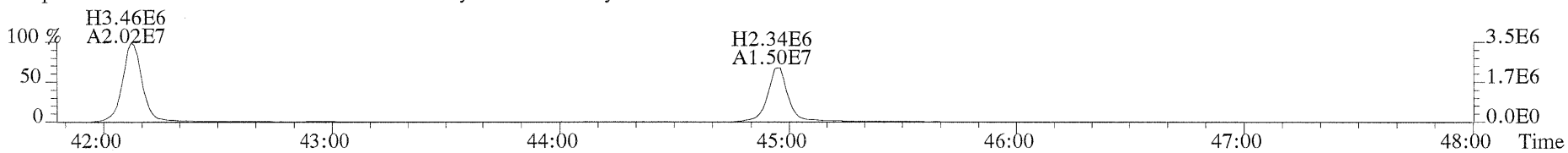
File:11MAY11M #1-541 Acq:11-MAY-2011 17:10:23 GC EI+ Voltage SIR Autospec-Ultima
409.7788 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051111M2 File Text:Frontier Analytical Laboratory



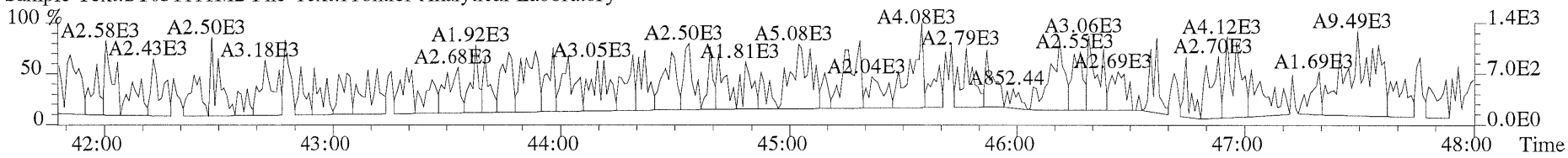
File:11MAY11M #1-541 Acq:11-MAY-2011 17:10:23 GC EI+ Voltage SIR Autospec-Ultima
417.8253 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051111M2 File Text:Frontier Analytical Laboratory



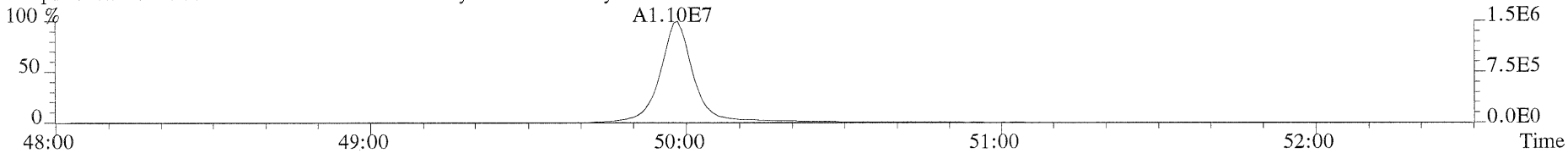
File:11MAY11M #1-541 Acq:11-MAY-2011 17:10:23 GC EI+ Voltage SIR Autospec-Ultima
419.8220 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051111M2 File Text:Frontier Analytical Laboratory



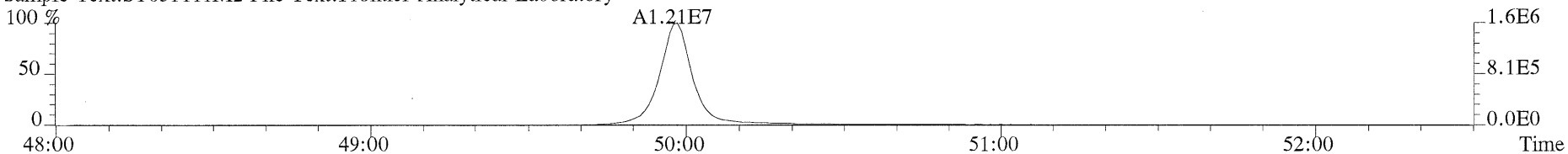
File:11MAY11M #1-541 Acq:11-MAY-2011 17:10:23 GC EI+ Voltage SIR Autospec-Ultima
479.7165 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051111M2 File Text:Frontier Analytical Laboratory



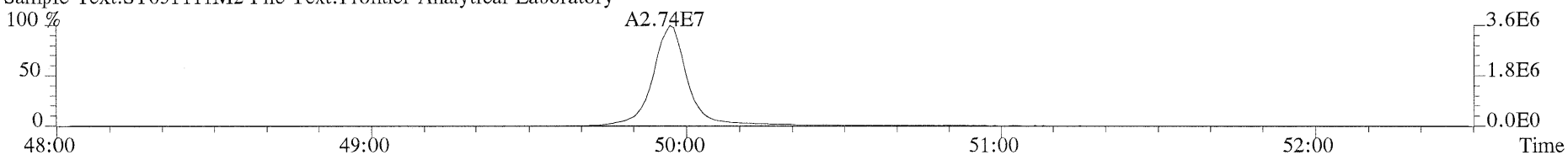
File:11MAY11M #1-347 Acq:11-MAY-2011 17:10:23 GC EI+ Voltage SIR Autospec-Ultima
441.7428 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051111M2 File Text:Frontier Analytical Laboratory



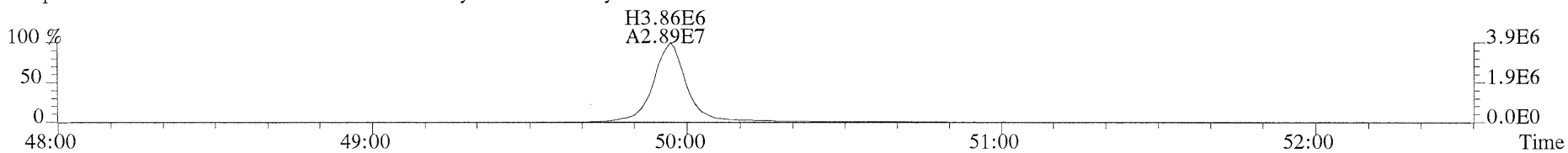
File:11MAY11M #1-347 Acq:11-MAY-2011 17:10:23 GC EI+ Voltage SIR Autospec-Ultima
443.7398 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051111M2 File Text:Frontier Analytical Laboratory



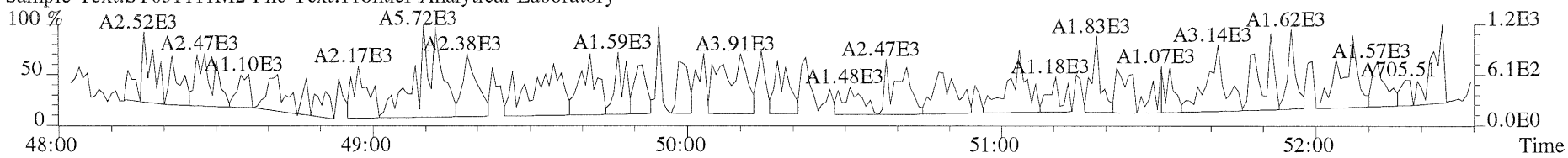
File:11MAY11M #1-347 Acq:11-MAY-2011 17:10:23 GC EI+ Voltage SIR Autospec-Ultima
453.7831 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051111M2 File Text:Frontier Analytical Laboratory



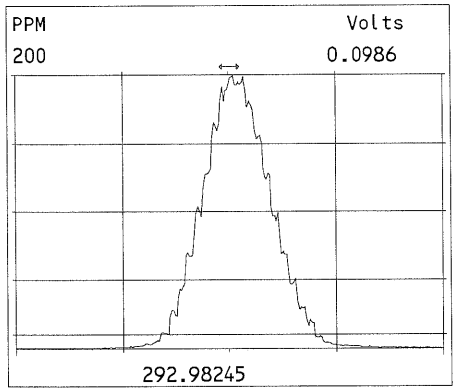
File:11MAY11M #1-347 Acq:11-MAY-2011 17:10:23 GC EI+ Voltage SIR Autospec-Ultima
455.7801 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051111M2 File Text:Frontier Analytical Laboratory

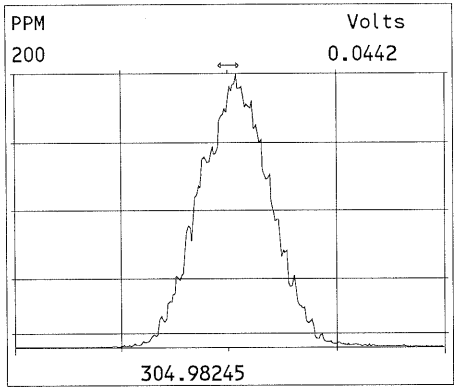


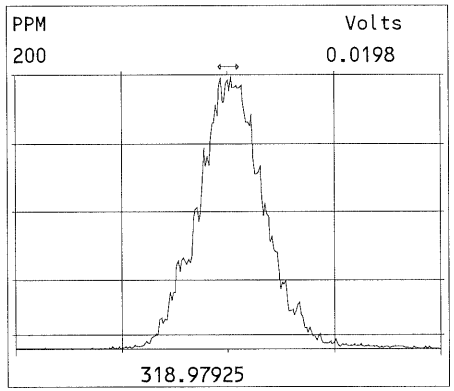
File:11MAY11M #1-347 Acq:11-MAY-2011 17:10:23 GC EI+ Voltage SIR Autospec-Ultima
513.6775 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051111M2 File Text:Frontier Analytical Laboratory

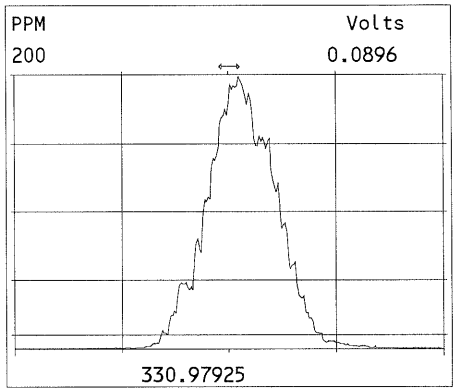


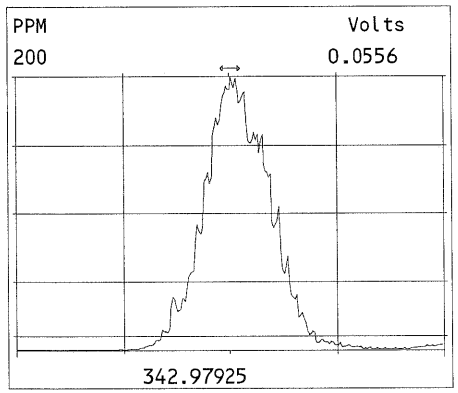
Peak Locate Examination:12-MAY-2011:07:58 File:11MAY11M_RES_CHECK
Experiment:OCDD Function:1 Reference:PFK

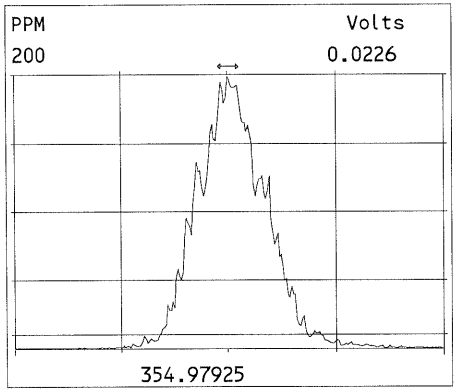


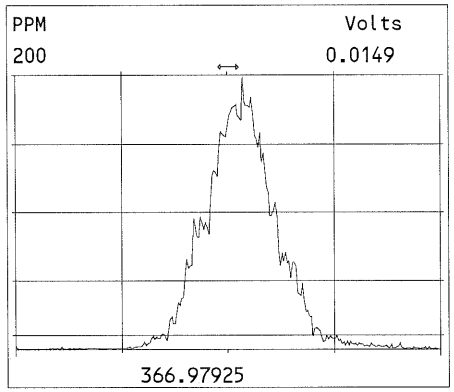


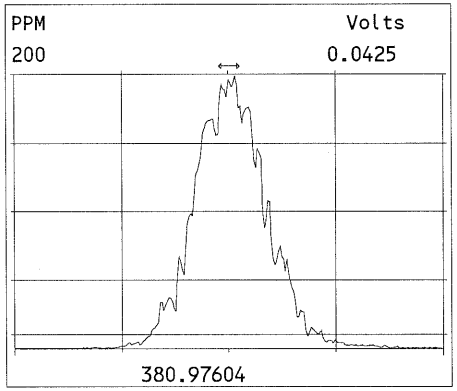


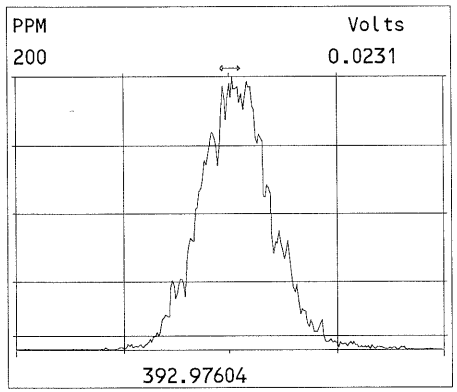


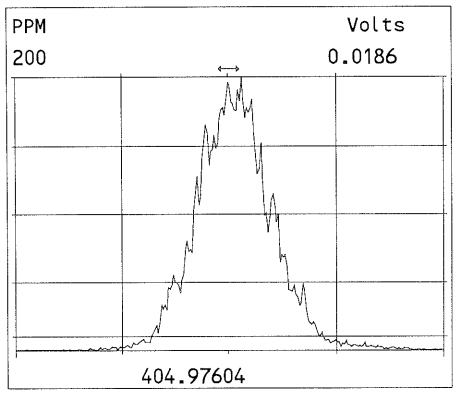


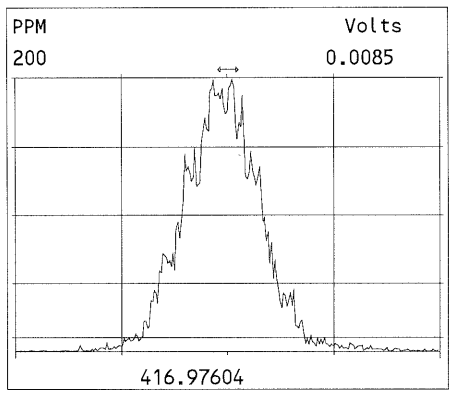




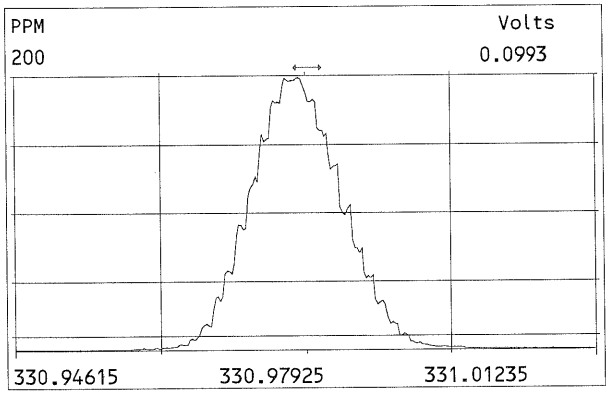


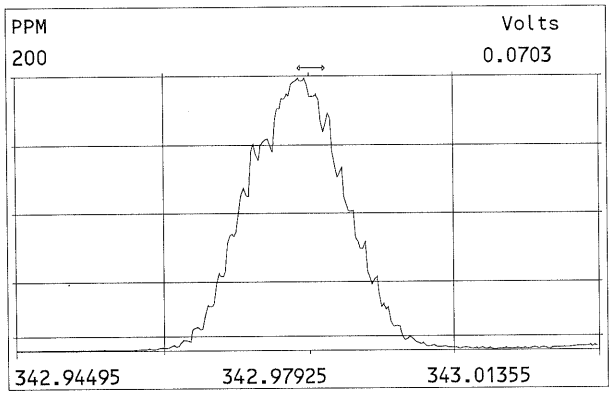


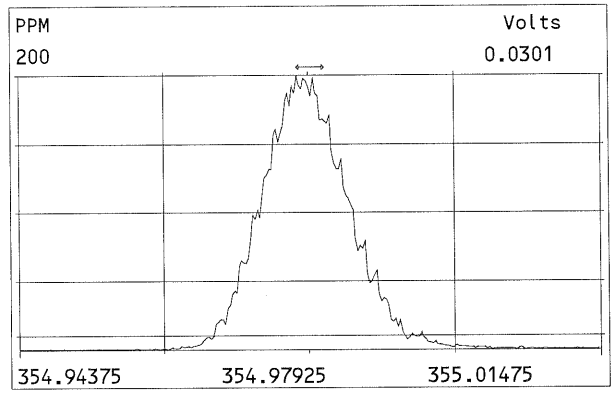


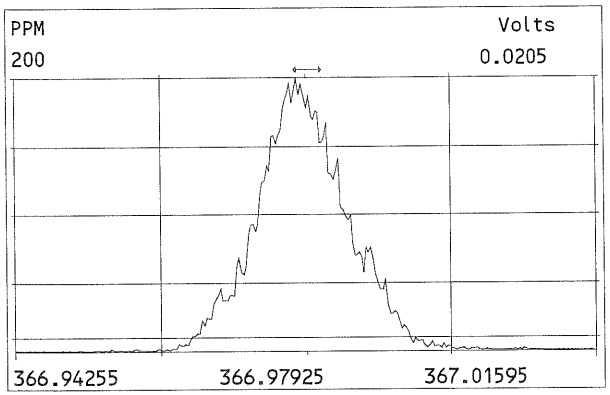


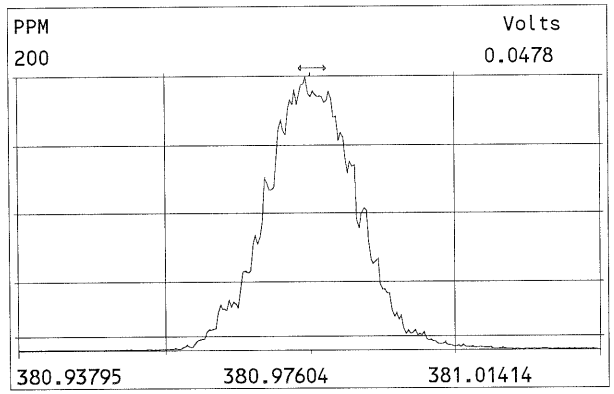
Peak Locate Examination:12-MAY-2011:07:58 File:11MAY11M_RES_CHECK
Experiment:OCDD Function:2 Reference:PFK

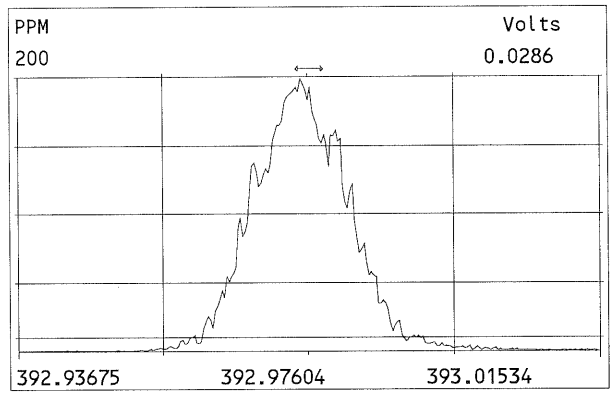


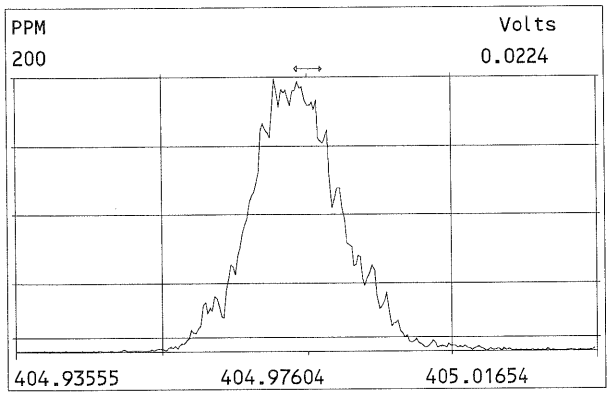


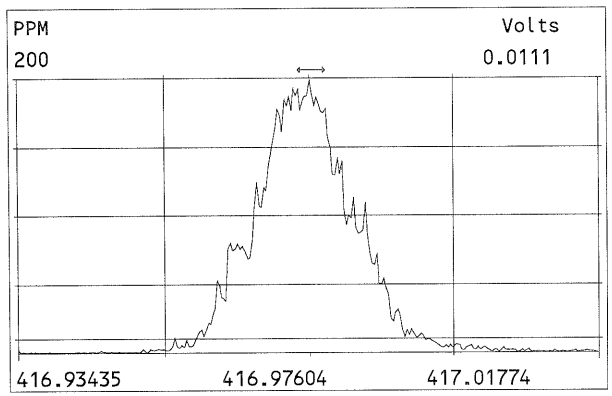




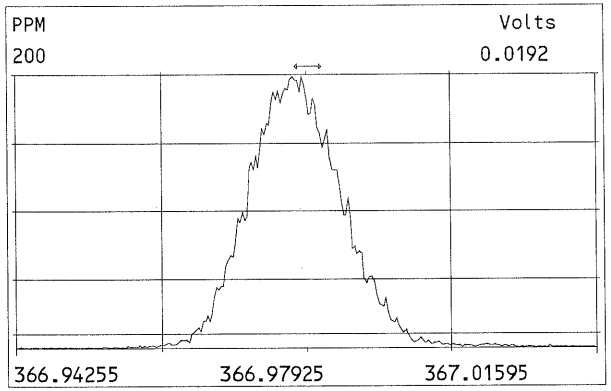


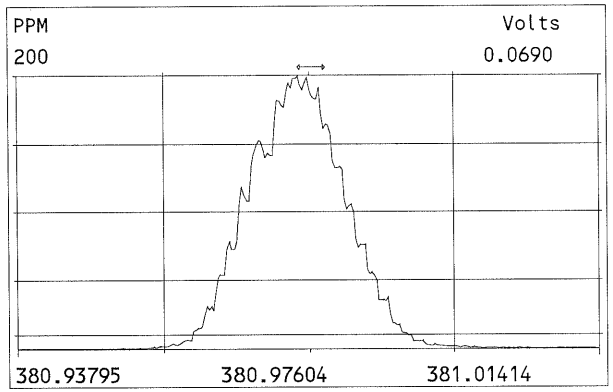


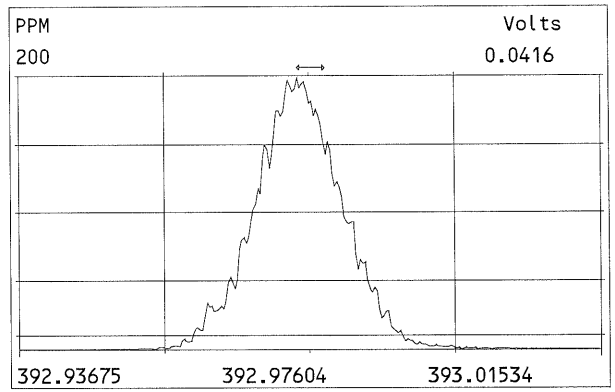


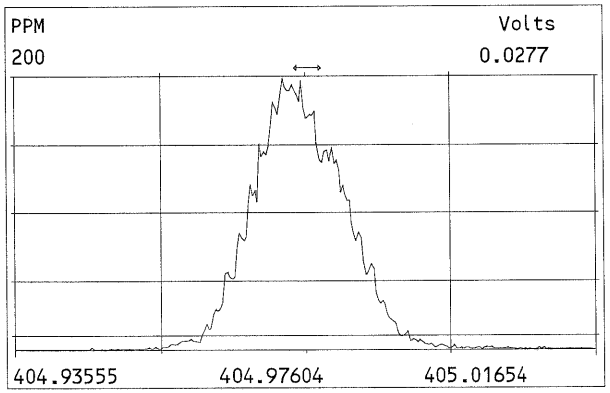


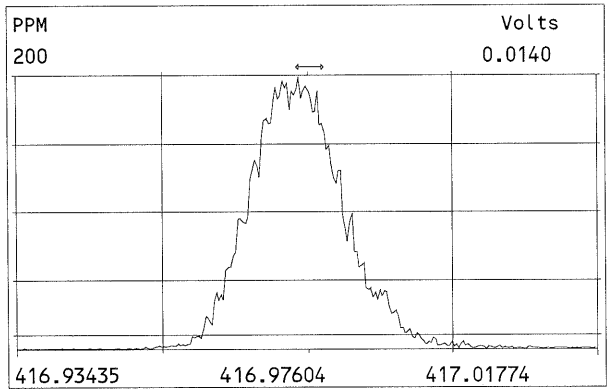
Peak Locate Examination:12-MAY-2011:07:59 File:11MAY11M_RES_CHECK
Experiment:OCDD Function:3 Reference:PFK

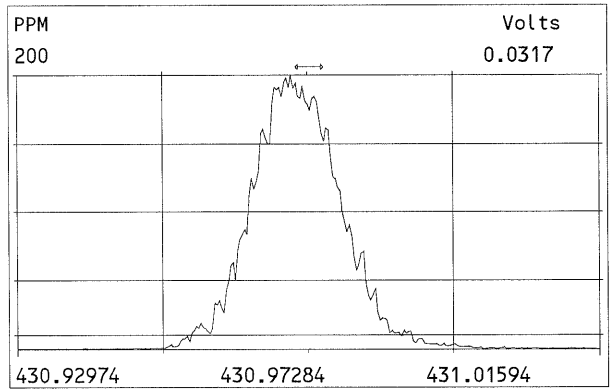


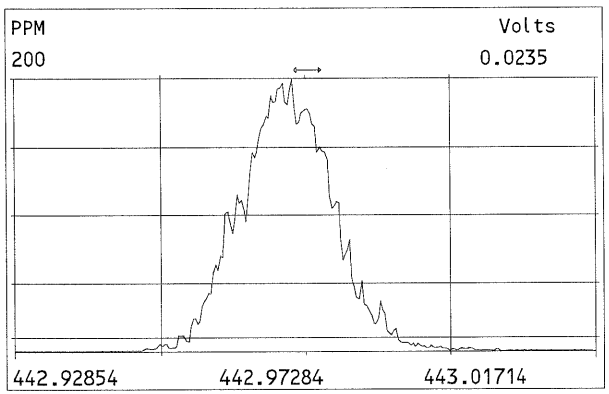


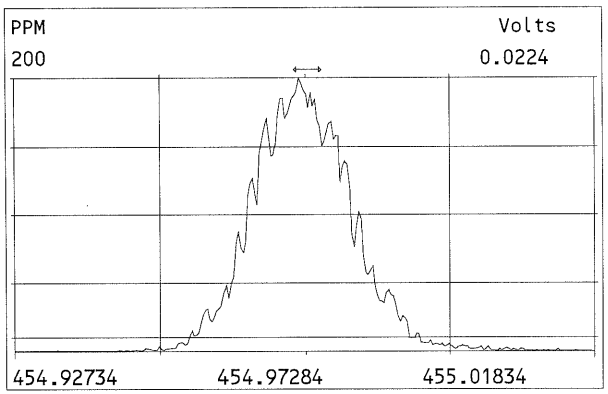




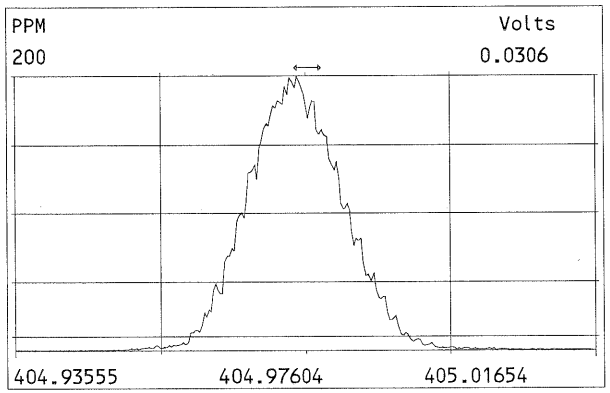


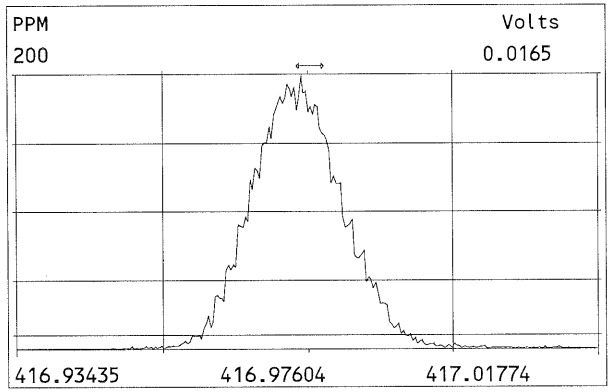


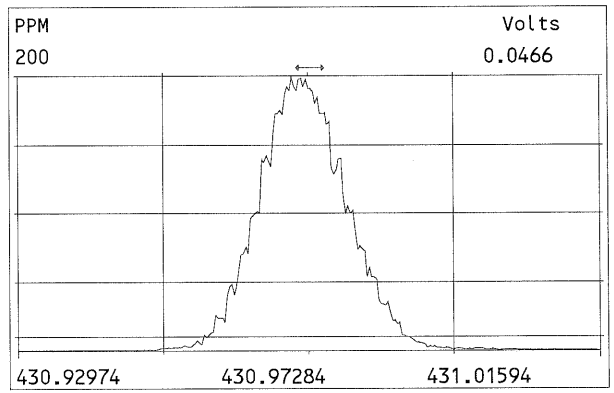


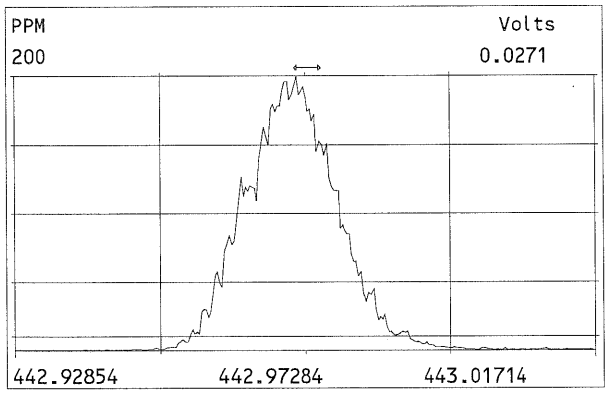


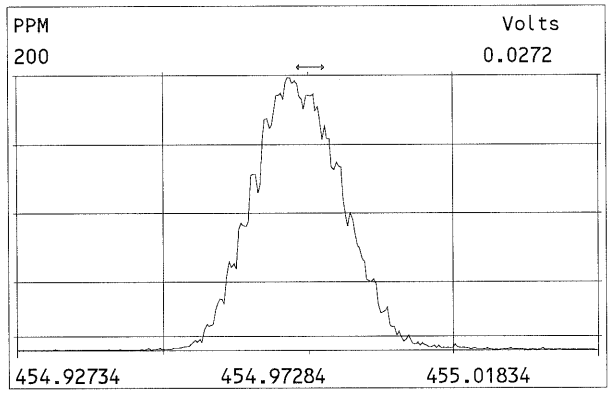
Peak Locate Examination:12-MAY-2011:07:59 File:11MAY11M_RES_CHECK
Experiment:OCDD Function:4 Reference:PFK

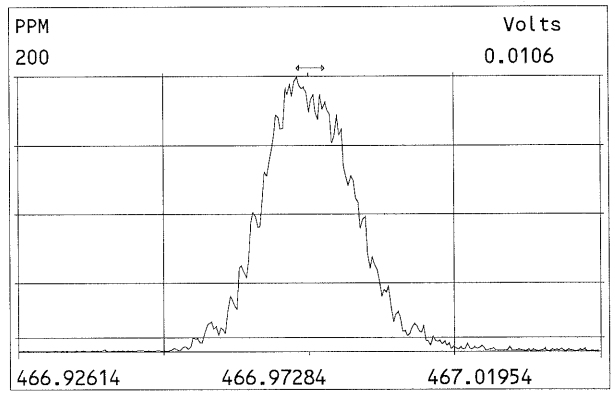


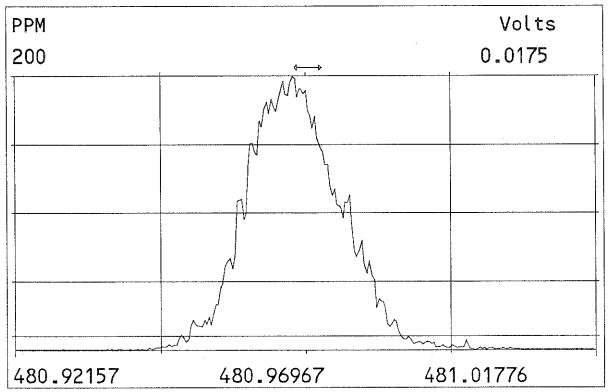




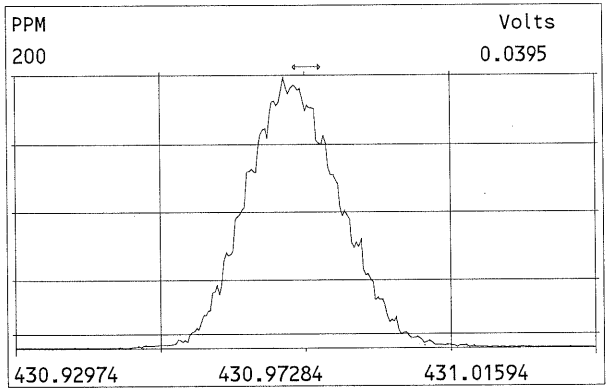


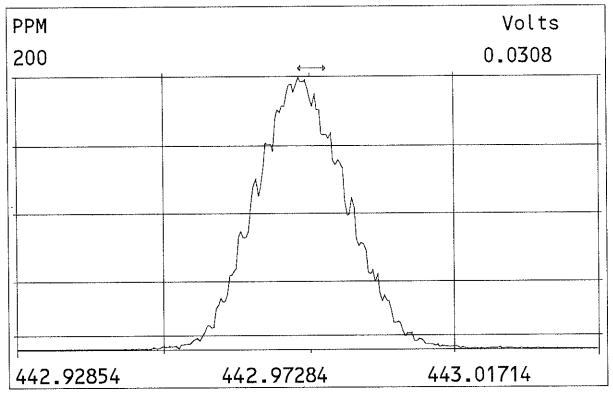


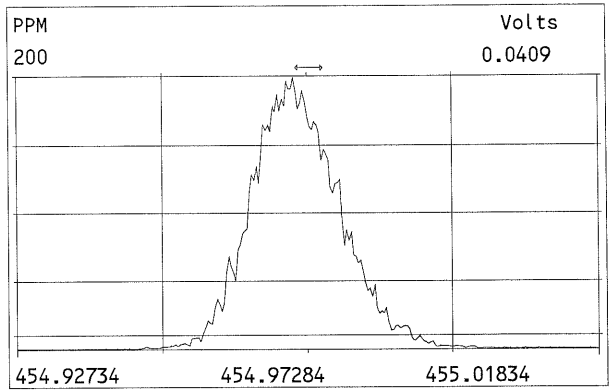


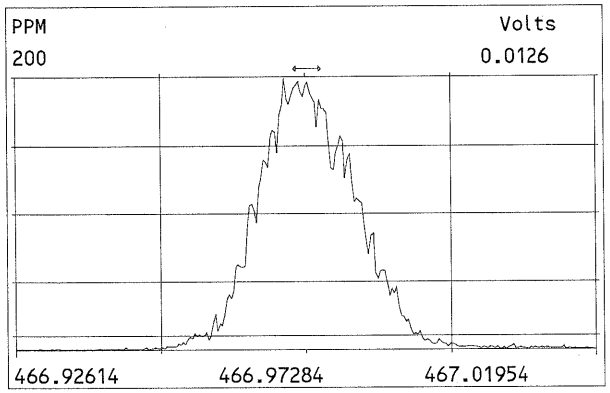


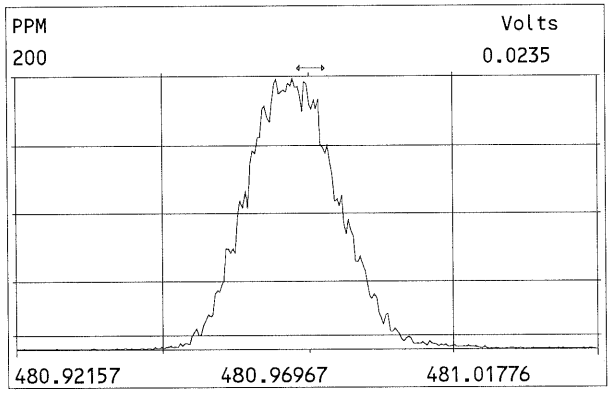
Peak Locate Examination:12-MAY-2011:07:59 File:11MAY11M_RES_CHECK
Experiment:OCDD Function:5 Reference:PFK

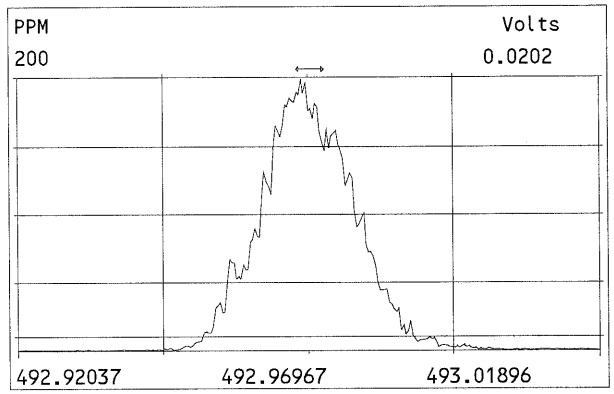


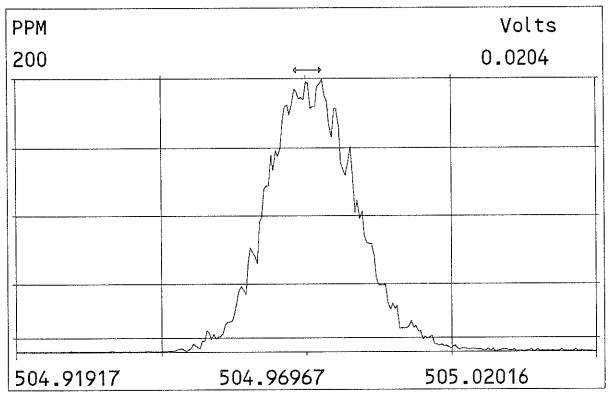


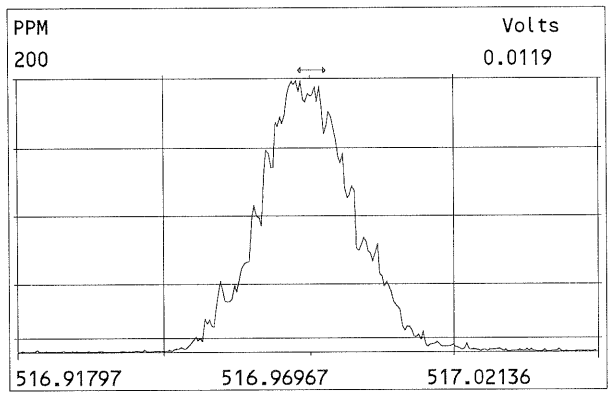












USEPA - ITD

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 3/7/11

Instrument ID: FAL3 GC Column ID: DB5

VER Data Filename: 11MAY11M Sam:20 Analysis Date: 12-MAY-11 07:00:38

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	ACCEPT	CONC. FOUND	CONC. RANGE (ng/mL) (3)
2,3,7,8-TCDD	M/M+2	0.78	0.65-0.89	y	10.3	7.80 - 12.9
1,2,3,7,8-PeCDD	M+2/M+4	1.55	1.32-1.78	y	50.2	39.0 - 65.0
1,2,3,4,7,8-HxCDD	M+2/M+4	1.28	1.05-1.43	y	45.9	39.0 - 64.0
1,2,3,6,7,8-HxCDD	M+2/M+4	1.29	1.05-1.43	y	49.3	39.0 - 64.0
1,2,3,7,8,9-HxCDD	M+2/M+4	1.29	1.05-1.43	y	50.5	41.0 - 61.0
1,2,3,4,6,7,8-HpCDD	M+2/M+4	0.92	0.88-1.20	y	48.5	43.0 - 58.0
OCDD	M+2/M+4	0.97	0.76-1.02	y	101	79.0 - 126
2,3,7,8-TCDF	M/M+2	0.68	0.65-0.89	y	10.7	8.40 - 12.0
1,2,3,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	y	51.7	41.0 - 60.0
2,3,4,7,8-PeCDF	M+2/M+4	1.60	1.32-1.78	y	49.7	41.0 - 60.0
1,2,3,4,7,8-HxCDF	M+2/M+4	1.24	1.05-1.43	y	48.0	45.0 - 56.0
1,2,3,6,7,8-HxCDF	M+2/M+4	1.24	1.05-1.43	y	48.6	44.0 - 57.0
2,3,4,6,7,8-HxCDF	M+2/M+4	1.20	1.05-1.43	y	47.2	44.0 - 57.0
1,2,3,7,8,9-HxCDF	M+2/M+4	1.22	1.05-1.43	y	47.6	45.0 - 56.0
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.04	0.88-1.20	y	47.8	45.0 - 55.0
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.05	0.88-1.20	y	49.4	43.0 - 58.0
OCDF	M+2/M+4	0.93	0.76-1.02	y	98.6	63.0 - 159

(1) See Table 8, Method 1613, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613.

(3) Contract-required concentration range as specified in Table 6, Method 1613.

Analyst: _____ Date: 5/12/11

USEPA - ITD

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 3/7/11

Instrument ID: FAL3 GC Column ID: DB5

VER Data Filename: 11MAY11M Sam:20 Analysis Date: 12-MAY-11 07:00:38

	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	ACCEPT	CONC. FOUND	CONC. RANGE (ng/mL) (3)
LABELED COMPOUNDS						
13C-2,3,7,8-TCDD	M/M+2	0.77	0.65-0.89	y	93.3	82.0 - 121
13C-1,2,3,7,8-PeCDD	M+2/M+4	1.76	1.32-1.78	y	105	62.0 - 160
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	y	93.4	85.0 - 117
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.28	1.05-1.43	y	95.9	85.0 - 118
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.02	0.88-1.20	y	108	72.0 - 138
13C-OCDD	M+2/M+4	1.02	0.76-1.02	y	177	96.0 - 415
13C-2,3,7,8-TCDF	M/M+2	0.88	0.65-0.89	y	98.8	71.0 - 140
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.68	1.32-1.78	y	114	76.0 - 130
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.67	1.32-1.78	y	115	77.0 - 130
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.49	0.43-0.59	y	90.8	76.0 - 131
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.48	0.43-0.59	y	89.1	70.0 - 143
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.48	0.43-0.59	y	90.9	73.0 - 137
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.47	0.43-0.59	y	94.8	74.0 - 135
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.46	0.37-0.51	y	105	78.0 - 129
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.46	0.37-0.51	y	101	77.0 - 129
13C-OCDF	M+2/M+4	0.96	0.76-1.02	y	166	96.0 - 415
CLEANUP STANDARD (4)						
37Cl-2,3,7,8-TCDD					8.77	7.80 - 12.8

(1) See Table 8, Method 1613, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613.

(3) Contract-required concentration range as specified in Table 6, Method 1613.

(4) No ion abundance ratio; report concentration found.

Analyst: _____ Date: 5/12/11

FORM 5

PCDD/PCDF RT WINDOW AND ISOMER SPECIFICITY STANDARDS

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Instrument ID: FAL3 Initial Calibration Date: 3/7/11

RT Window Data Filename: 11MAY11M Sam:20 Analysis Date: 12-MAY-11 Time: 07:00:38

DB-5 IS Data Filename: 11MAY11M Sam:20 Analysis Date: 12-MAY-11 Time: 07:00:38

DB-225 IS Date Filename: Analysis Date: Time:

DB-5 RT WINDOW DEFINING STANDARDS RESULTS

ISOMERS	ABSOLUTE RT	ISOMERS	ABSOLUTE RT
1,3,6,8-TCDD (F)	24:13	1,3,6,8-TCDF (F)	22:52
1,2,8,9-TCDD (L)	28:09	1,2,8,9-TCDF (L)	28:21
1,2,4,7,9-PeCDD (F)	30:03	1,3,4,6,8-PeCDF (F)	28:14
1,2,3,8,9-PeCDD (L)	33:37	1,2,3,8,9-PeCDF (L)	34:02
1,2,4,6,7,9-HxCDD (F)	35:57	1,2,3,4,6,8-HxCDF (F)	35:04
1,2,3,7,8,9-HxCDD (L)	39:02	1,2,3,7,8,9-HxCDF (L)	39:36
1,2,3,4,6,7,9-HpCDD (F)	42:39	1,2,3,4,6,7,8-HpCDF (F)	42:08
1,2,3,4,6,7,8-HpCDD (L)	44:02	1,2,3,4,7,8,9-HpCDF (L)	44:56

(F) = First eluting iosmer (DB-5); (L) = Last eluting isomer (DB-5)

==========

ISOMER SPECIFICITY (IS) TEST STANDARD RESULTS

COMPARED PEAKS (1)	% VALLEY HEIGHT BETWEEN
	<25%

(1) To meet contract requirement, %Valley Height Between Compared Peaks shall not exceed 25% (section 15.4.2.2, Method 1613).

Analyst: _____ Date: 5/12/11

USEPA - ITD

FORM 6A
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.: Init. Cal. Date: 3/7/11

Instrument ID: FAL3 GC Column ID: DB5

Analysis Date: 12-MAY-11 07:00:38 CS3 or VER Data Filename: 11MAY11M Sam:20

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS (1)
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999-1.002 ✓
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999-1.003 ✓
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.001	0.999-1.002 ✓
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.000	0.999-1.002 ✓
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.000	0.999-1.002 ✓
LABELED COMPOUNDS			
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.022	0.989-1.052 ✓
13C-2,3,7,8-TCDD		1.022	0.976-1.043 ✓
13C-2,3,7,8-TCDF		0.993	0.923-1.103 ✓
13C-1,2,3,7,8-PeCDD		1.241	1.000-1.567 ✓
13C-1,2,3,7,8-PeCDF		1.175	0.923-1.203 ✓
13C-2,3,4,7,8-PeCDF		1.225	0.923-1.303 ✓

(1) Contract-required limits for Relative Retention Times (RRT) as specified in Table 2, Method 1613.

Analyst: _____ Date: 5/12/11

USEPA - ITD

FORM 6B
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.: Init. Cal. Date: 3/7/11

Instrument ID: FAL3 GC Column ID: DB5

Analysis Date: 12-MAY-11 07:00:38 CS3 or VER Data Filename: 11MAY11M Sam:20

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS (1)
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.000	0.999-1.001
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.001	0.998-1.004
1,2,3,7,8,9-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.012	1.000-1.019
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.000	0.999-1.001
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.001	0.997-1.005
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.001	0.999-1.001
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.001	0.999-1.001
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.000	0.999-1.001
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.001	0.999-1.001
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999-1.001
OCDD	13C-OCDD	1.001	0.999-1.001
OCDF	13C-OCDF	1.001	0.999-1.001
LABELED COMPOUNDS			
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.985	0.977-1.000
13C-1,2,3,6,7,8-HxCDD		0.989	0.981-1.003
13C-1,2,3,4,7,8-HxCDF		0.949	0.944-0.970
13C-1,2,3,6,7,8-HxCDF		0.954	0.949-0.975
13C-2,3,4,6,7,8-HxCDF		0.978	0.959-1.021
13C-1,2,3,7,8,9-HxCDF		1.015	0.977-1.047
13C-1,2,3,4,6,7,8-HpCDD		1.129	1.086-1.130
13C-1,2,3,4,6,7,8-HpCDF		1.080	1.043-1.085
13C-1,2,3,4,7,8,9-HpCDF		1.152	1.057-1.154
13C-OCDD		1.270	1.032-1.311
13C-OCDF		1.280	1.000-1.311

(1) Contract-required limits for Relative Retention Times (RRT) as specified in Table 2, Method 1613.

Analyst: _____ Date: 5/12/11

FAL ID: STO51111M3 Filename: 11MAY11M Sam:20 Acquired: 12-MAY-11 07:00:38 ICal: PCDDFAL3-3-7-11
Client ID: 1613 CS3 100511J ConCal: STO51111M2 EndCal: STO51111M3
Results: 6735MS GC Column: DB5 Amount: 1.000 NATO 1989 Tox: 99.3
WHO 1998 Tox: 124 WHO 2005 Tox: 113

Name	Resp	RA	RT	RRF	Conc	Qual	Fac	Noise-1	Noise-2	DL
2,3,7,8-TCDD	3.57e+06	0.78 y	27:12	1.13	10.3		2.50	-	-	*
1,2,3,7,8-PeCDD	1.72e+07	1.55 y	33:02	1.02	50.2		2.50	-	-	*
1,2,3,4,7,8-HxCDD	1.95e+07	1.28 y	38:24	1.45	45.9		2.50	-	-	*
1,2,3,6,7,8-HxCDD	1.69e+07	1.29 y	38:35	1.45	49.3		2.50	-	-	*
1,2,3,7,8,9-HxCDD	1.96e+07	1.29 y	39:02	1.47	50.5		2.50	-	-	*
1,2,3,4,6,7,8-HpCDD	1.49e+07	0.92 y	44:02	1.30	48.5		2.50	-	-	*
OCDD	2.07e+07	0.97 y	49:35	1.45	101		2.50	-	-	*
2,3,7,8-TCDF	6.29e+06	0.68 y	26:27	1.15	10.7		2.50	-	-	*
1,2,3,7,8-PeCDF	2.30e+07	1.59 y	31:18	0.89	51.7		2.50	-	-	*
2,3,4,7,8-PeCDF	2.16e+07	1.60 y	32:36	0.89	49.7		2.50	-	-	*
1,2,3,4,7,8-HxCDF	2.13e+07	1.24 y	37:01	1.01	48.0		2.50	-	-	*
1,2,3,6,7,8-HxCDF	2.33e+07	1.24 y	37:13	0.89	48.6		2.50	-	-	*
2,3,4,6,7,8-HxCDF	2.14e+07	1.20 y	38:10	1.02	47.2		2.50	-	-	*
1,2,3,7,8,9-HxCDF	2.60e+07	1.22 y	39:36	1.10	47.6		2.50	-	-	*
1,2,3,4,6,7,8-HpCDF	1.93e+07	1.04 y	42:08	1.48	47.8		2.50	-	-	*
1,2,3,4,7,8,9-HpCDF	1.44e+07	1.05 y	44:56	1.43	49.4		2.50	-	-	*
OCDF	2.12e+07	0.93 y	49:56	0.84	98.6		2.50	-	-	*
										Rec
13C-2,3,7,8-TCDD	3.05e+07	0.77 y	27:11	1.03	93.3					93.3
13C-1,2,3,7,8-PeCDD	3.38e+07	1.76 y	33:01	1.01	105					105
13C-1,2,3,4,7,8-HxCDD	2.93e+07	1.26 y	38:24	1.19	93.4					93.4
13C-1,2,3,6,7,8-HxCDD	2.36e+07	1.28 y	38:34	0.94	95.9					95.9
13C-1,2,3,4,6,7,8-HpCDD	2.36e+07	1.02 y	44:01	0.83	108					108
13C-OCDD	2.83e+07	1.02 y	49:32	0.61	177					88.4
13C-2,3,7,8-TCDF	5.11e+07	0.88 y	26:26	0.98	98.8					98.8
13C-1,2,3,7,8-PeCDF	5.02e+07	1.68 y	31:17	0.83	114					114
13C-2,3,4,7,8-PeCDF	4.87e+07	1.67 y	32:36	0.80	115					115
13C-1,2,3,4,7,8-HxCDF	4.40e+07	0.49 y	36:60	1.84	90.8					90.8
13C-1,2,3,6,7,8-HxCDF	5.38e+07	0.48 y	37:12	2.29	89.1					89.1
13C-2,3,4,6,7,8-HxCDF	4.46e+07	0.48 y	38:08	1.86	90.9					90.9
13C-1,2,3,7,8,9-HxCDF	4.95e+07	0.47 y	39:34	1.98	94.8					94.8
13C-1,2,3,4,6,7,8-HpCDF	2.73e+07	0.46 y	42:06	0.99	105					105
13C-1,2,3,4,7,8,9-HpCDF	2.05e+07	0.46 y	44:56	0.77	101					101
13C-OCDF	5.11e+07	0.96 y	49:55	1.17	166					83.2
37Cl-2,3,7,8-TCDD	2.03e+06		27:12	0.73	8.77					87.7
13C-1,2,3,4-TCDD	3.18e+07	0.79 y	26:37	-	83.6					
13C-1,2,3,4-TCDF	5.28e+07	0.88 y	25:21	-	73.4					
13C-1,2,3,7,8,9-HxCDD	2.63e+07	1.27 y	38:60	-	106					

						Fac	Noise-1	Noise-2	DL		#Hom
Total Tetra-Dioxins	1.86e+07		24:13	1.13	53.8	2.50	-	-	*		18
Total Penta-Dioxins	3.75e+07		30:03	1.02	109	2.50	-	-	*		7
Total Hexa-Dioxins	6.32e+07		35:57	1.46	164	2.50	-	-	*		14
Total Hepta-Dioxins	3.19e+07		41:42	1.30	104	2.50	-	-	*		14
Total Tetra-Furans	3.03e+07		22:52	1.15	51.6	2.50	-	-	*		15
1st Fn. Tot Penta-Furans	2.40e+07		28:14	0.89	54.7	2.50	-	-	*	PeCDF	1
Total Penta-Furans	6.50e+07		29:59	0.89	148	2.50	-	-	*	203	10
Total Hexa-Furans	1.06e+08		35:04	1.00	220	2.50	-	-	*		14
Total Hepta-Furans	3.41e+07		42:08	1.46	98.3	2.50	-	-	*		8

Analyst: _____ Date: 5/10/11

Frontier Analytical Laboratory - Acquisition Log

Run Name:11MAY11M Instrument: FAL3 GC: DB5 Experiment:OCDD

Data File	S	FAL ID	Client ID	Acquired	ConCal	EndCal	Analyst
11MAY11M	1	ST051111M1	1613 CS3 100511J	11-MAY-11 13:29:01	ST051111M1	ST051111M2	TC
11MAY11M	2	6735-015-0002-MS	DMA-TP3-5-6-042011	11-MAY-11 14:24:23	ST051111M1	ST051111M2	TC
11MAY11M	3	6735-015-0002-MSD	DMA-TP3-5-6-042011	11-MAY-11 15:19:42	ST051111M1	ST051111M2	TC
11MAY11M	4	SB051111M1	Solvent Blank	11-MAY-11 16:15:00	ST051111M1	ST051111M2	TC
11MAY11M	5	ST051111M2	1613 CS3 100511J	11-MAY-11 17:10:23	ST051111M2	ST051111M3	TC
11MAY11M	6	2289-001-0001-OPR	OPR	11-MAY-11 18:05:42	ST051111M2	ST051111M3	TC
11MAY11M	7	2289-001-0001-MB	Method Blank	11-MAY-11 19:01:01	ST051111M2	ST051111M3	TC
11MAY11M	8	6647-005-0001-SA	B-121@30'	11-MAY-11 19:56:24	ST051111M2	ST051111M3	TC
11MAY11M	9	6647-004-0001-SA	B-121@20'	11-MAY-11 20:51:47	ST051111M2	ST051111M3	TC
11MAY11M	10	6645-006-0001-SA	B-110@3.75	11-MAY-11 21:47:07	ST051111M2	ST051111M3	TC
11MAY11M	11	6644-008-0001-SA	B-104@0.0	11-MAY-11 22:42:30	ST051111M2	ST051111M3	TC
11MAY11M	12	6644-010-0001-SA	B-105@0.0	11-MAY-11 23:37:53	ST051111M2	ST051111M3	TC
11MAY11M	13	6644-012-0001-SA	B-106@0.0	12-MAY-11 00:33:11	ST051111M2	ST051111M3	TC
11MAY11M	14	6645-001-0001-SA	B-108@0.0	12-MAY-11 01:28:30	ST051111M2	ST051111M3	TC
11MAY11M	15	6645-009-0001-SA	B-112@0.0	12-MAY-11 02:23:53	ST051111M2	ST051111M3	TC
11MAY11M	16	SB051111M2	Solvent Blank	12-MAY-11 03:19:18	ST051111M2	ST051111M3	TC
11MAY11M	17	SB051111M3	Solvent Blank	12-MAY-11 04:14:37	ST051111M2	ST051111M3	TC
11MAY11M	18	SB051111M4	Solvent Blank	12-MAY-11 05:09:56	ST051111M2	ST051111M3	TC
11MAY11M	19	SB051111M5	Solvent Blank	12-MAY-11 06:05:19	ST051111M2	ST051111M3	TC
11MAY11M	20	ST051111M3	1613 CS3 100511J	12-MAY-11 07:00:38	ST051111M2	ST051111M3	TC

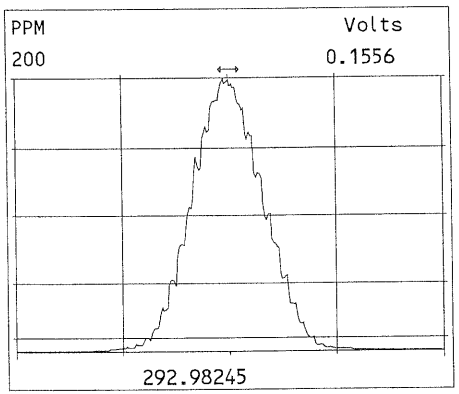
5/12/11

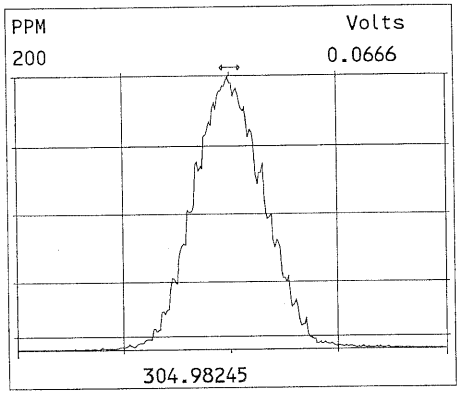
/

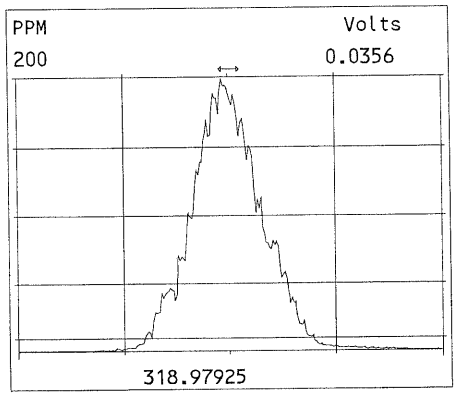
Data Backed Up:_____

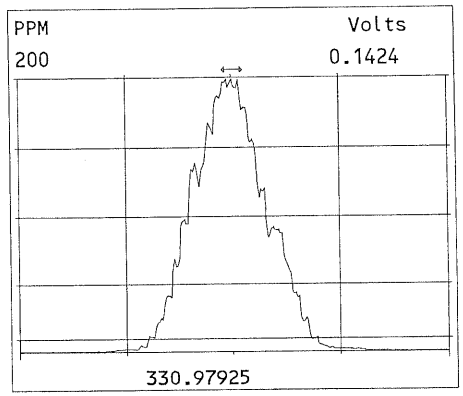
Date:_____

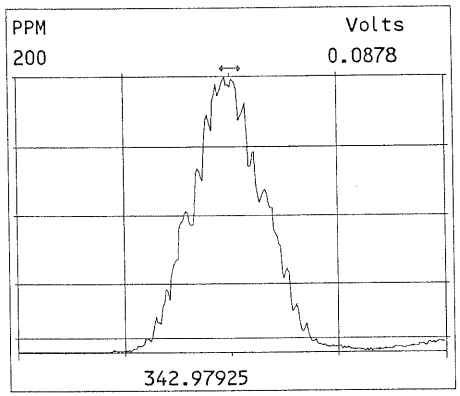
Peak Locate Examination:11-MAY-2011:13:27 File:11MAY11M
Experiment:OCDD Function:1 Reference:PFK

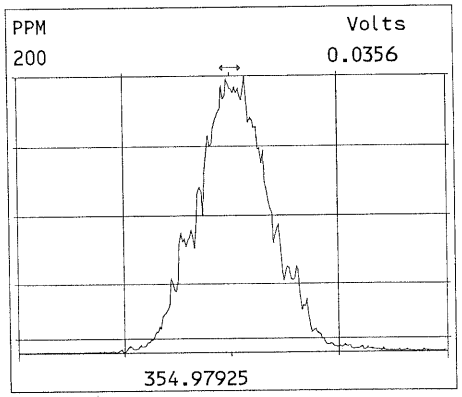


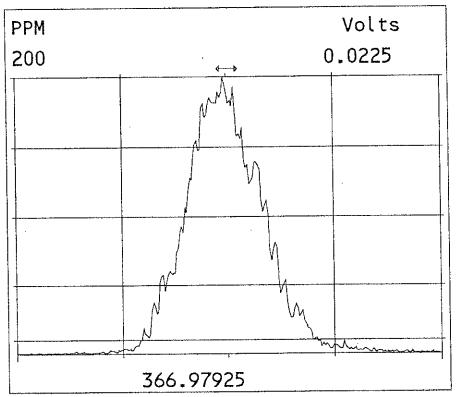


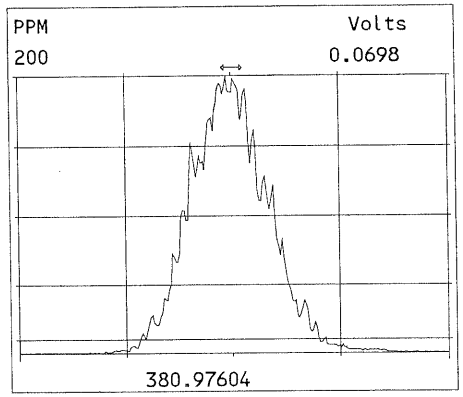


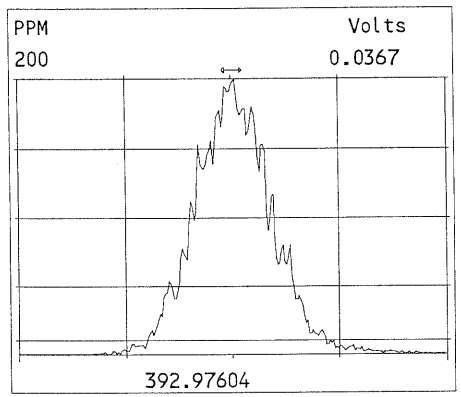


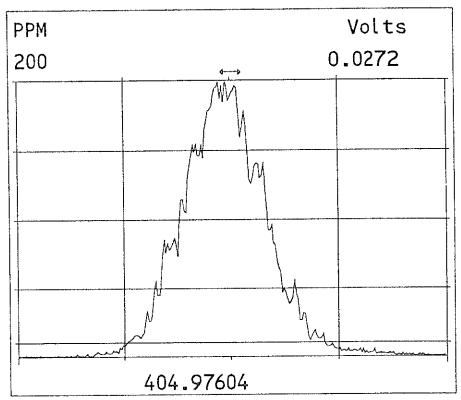


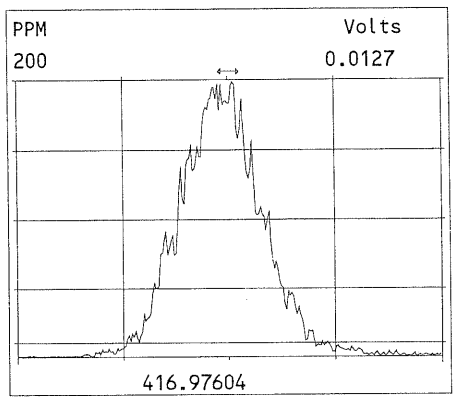




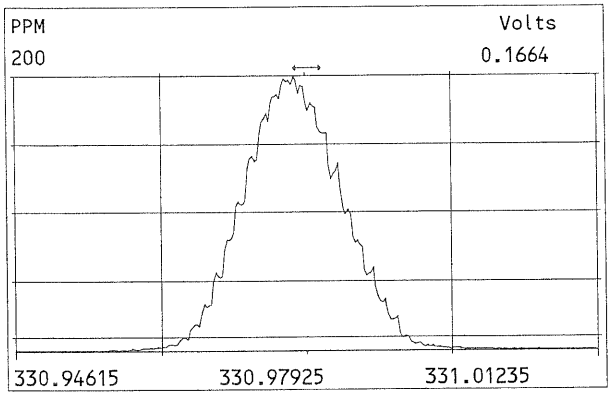


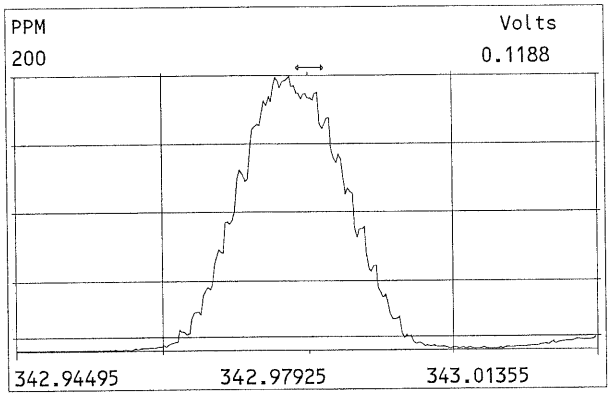


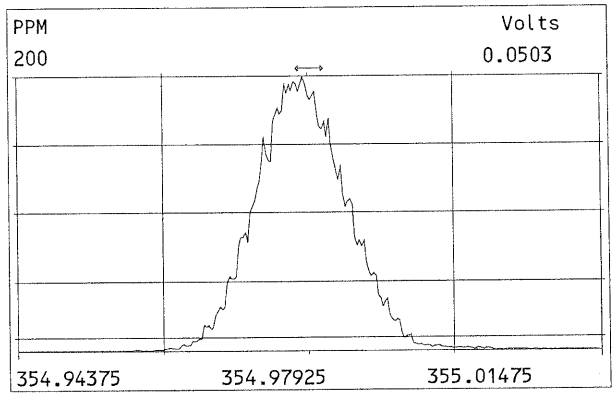


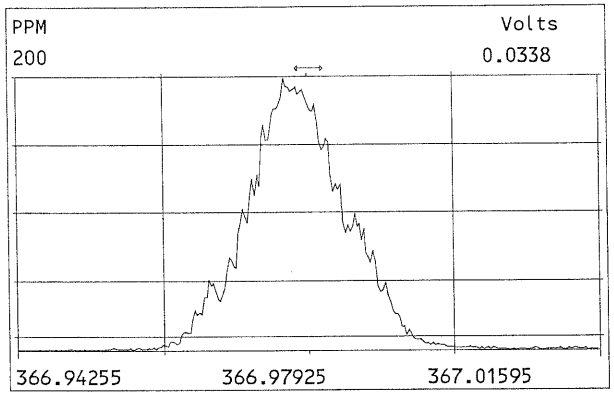


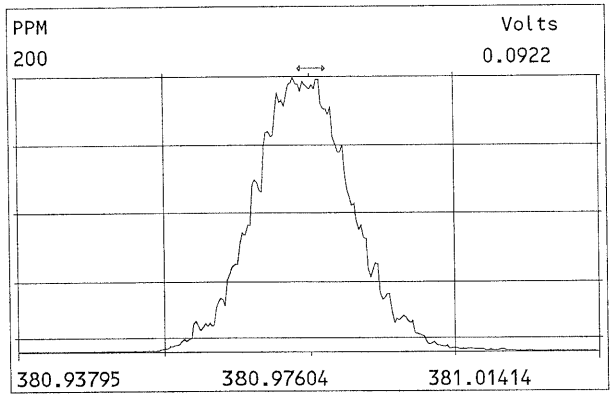
Peak Locate Examination:11-MAY-2011:13:27 File:11MAY11M
Experiment:OCDD Function:2 Reference:PFK

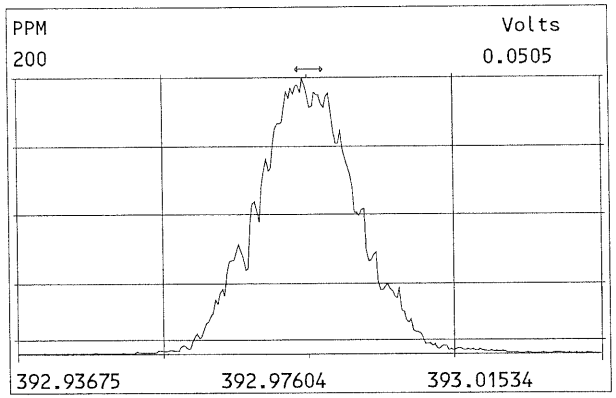


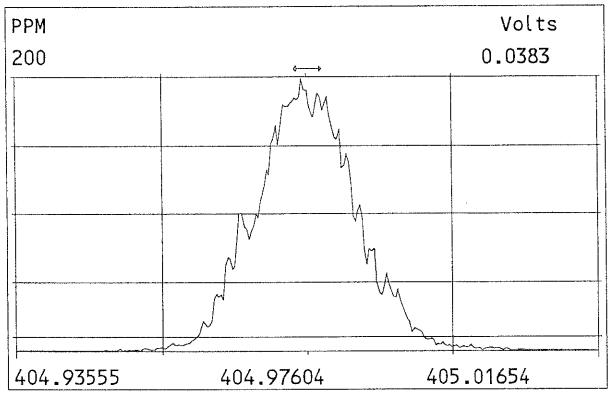


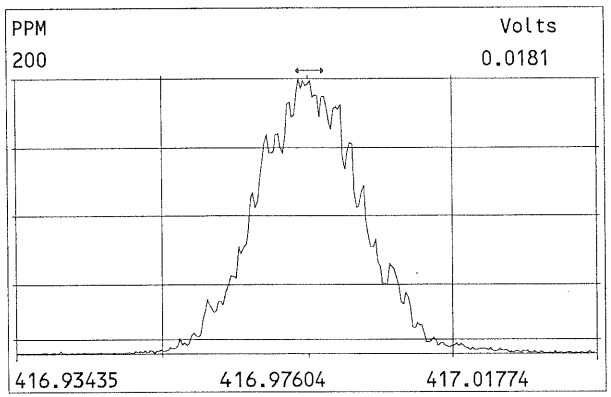




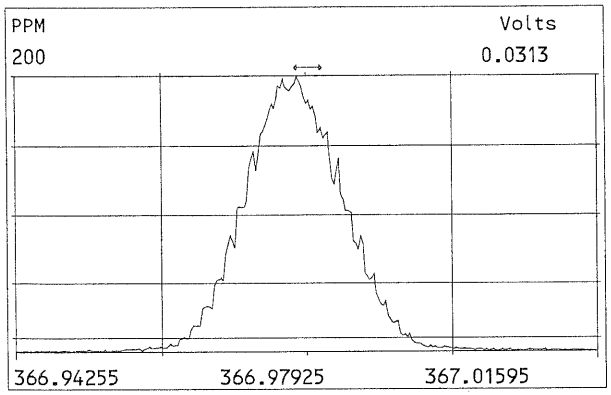


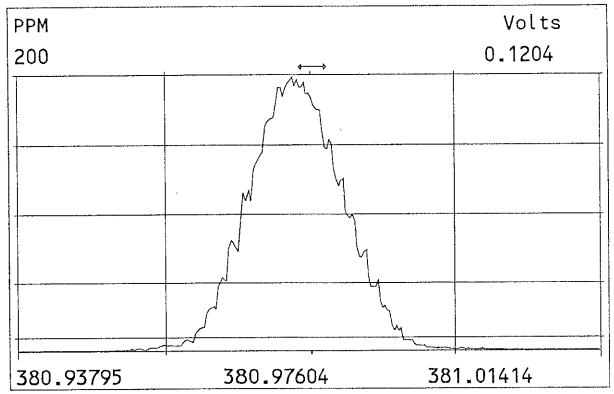


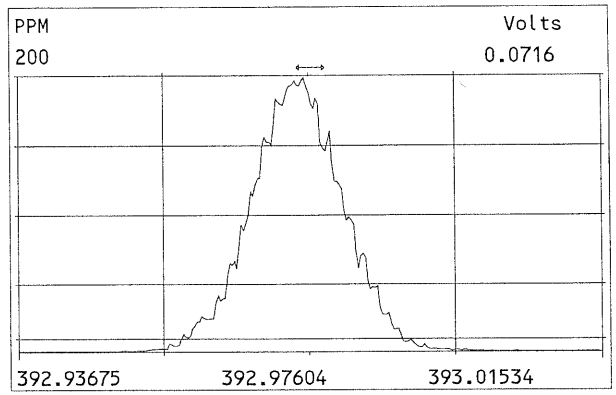


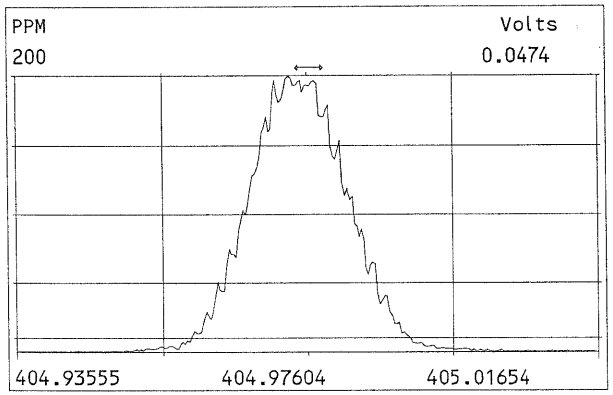


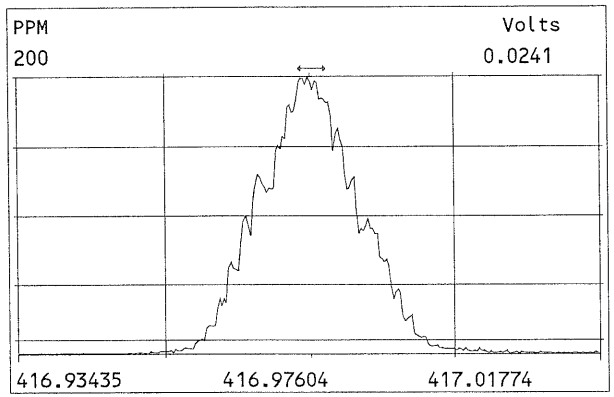
Peak Locate Examination:11-MAY-2011:13:27 File:11MAY11M
Experiment:OCDD Function:3 Reference:PFK

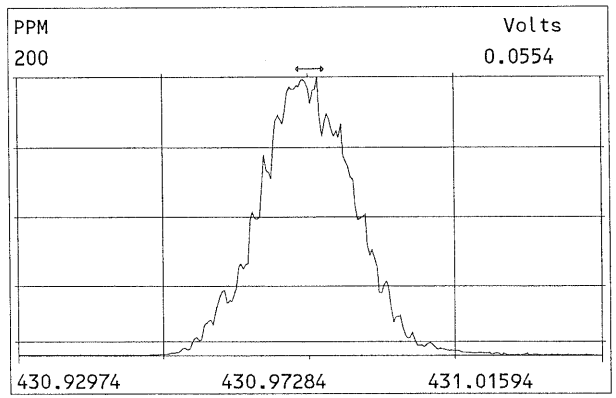


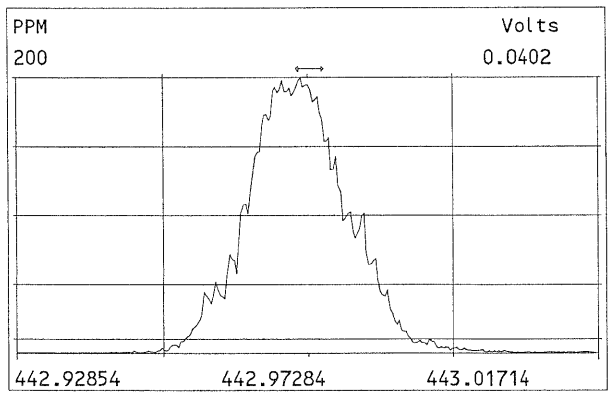


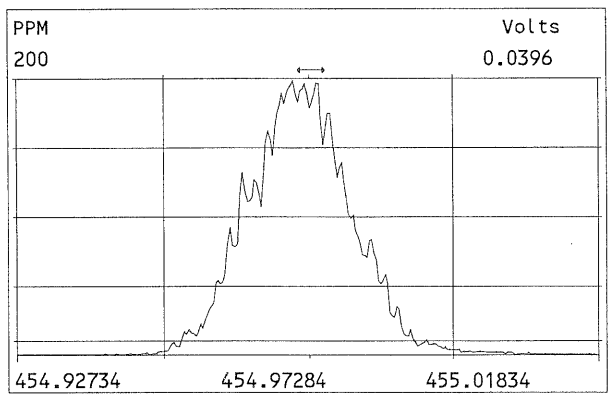




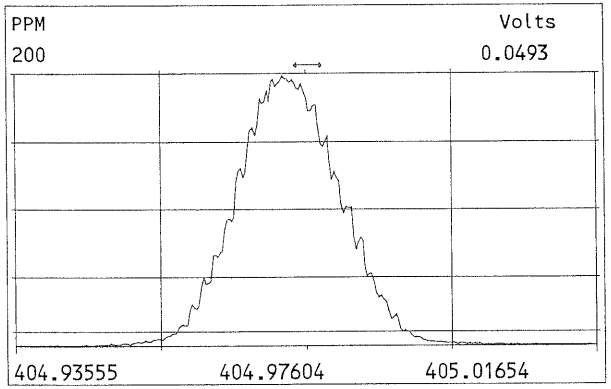


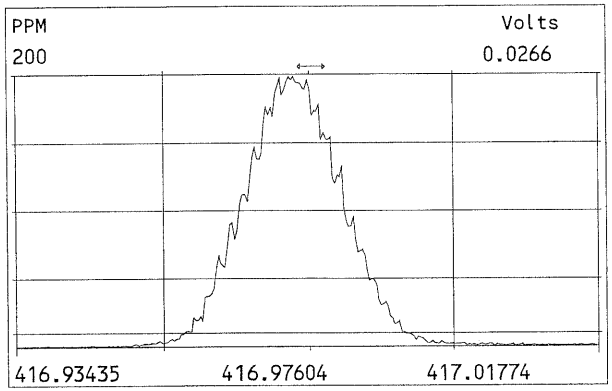


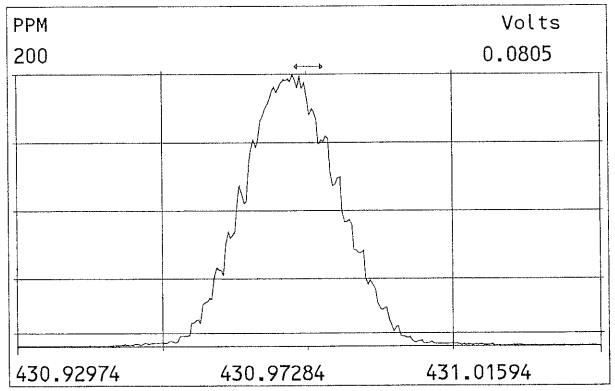


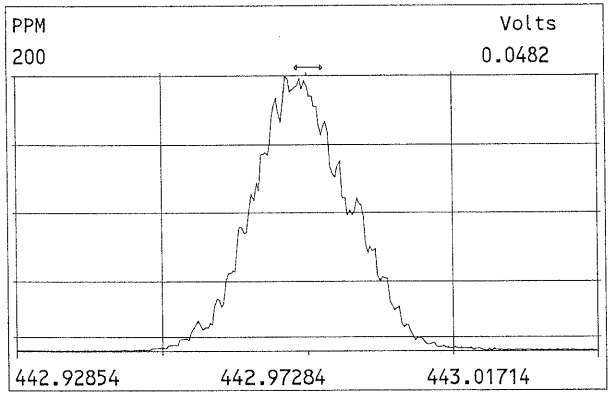


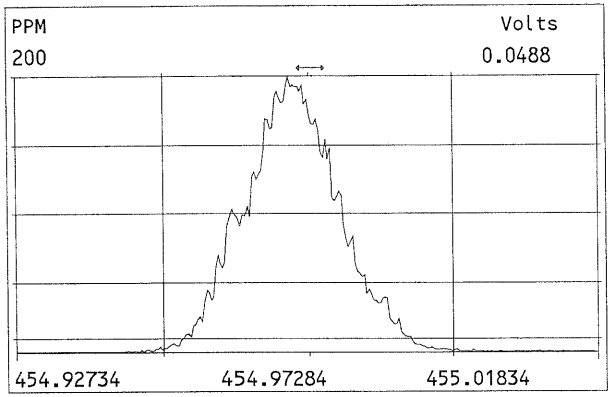
Peak Locate Examination:11-MAY-2011:13:28 File:11MAY11M
Experiment:OCDD Function:4 Reference:PFK

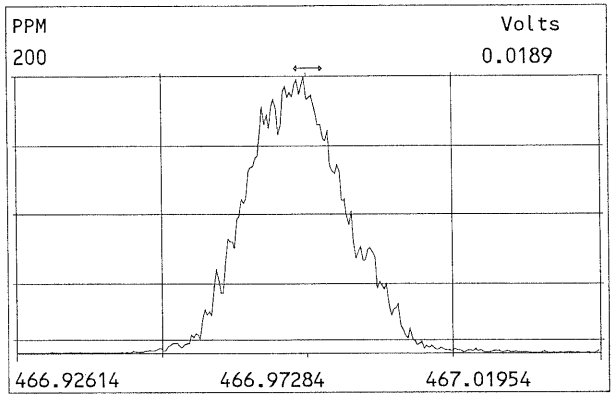


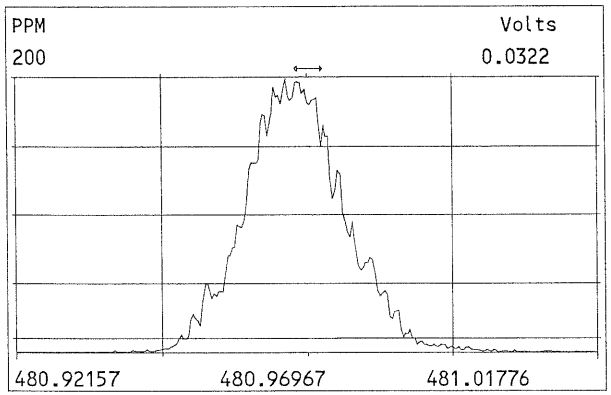




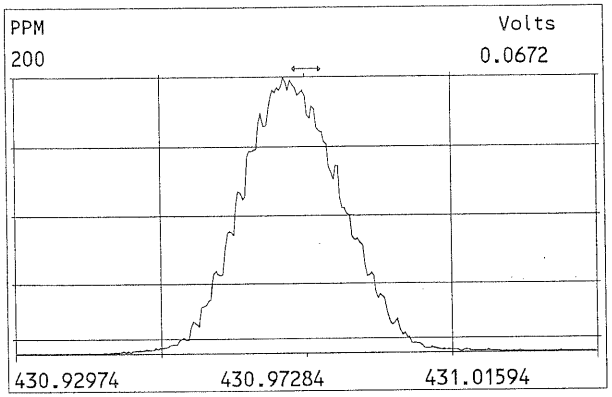


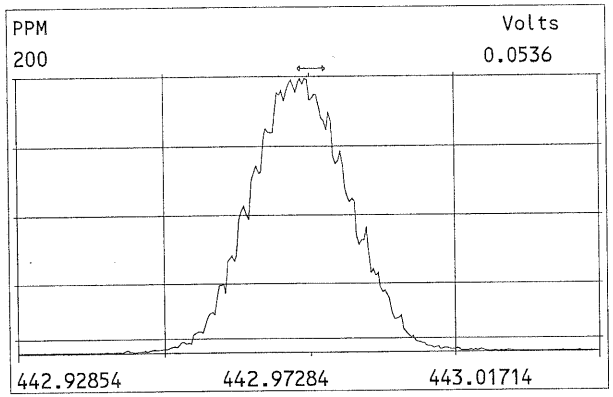


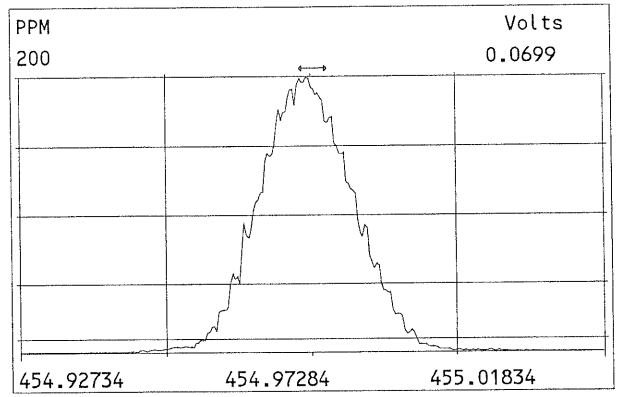


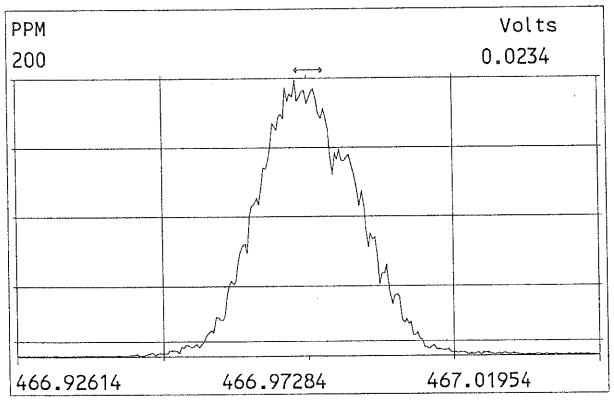


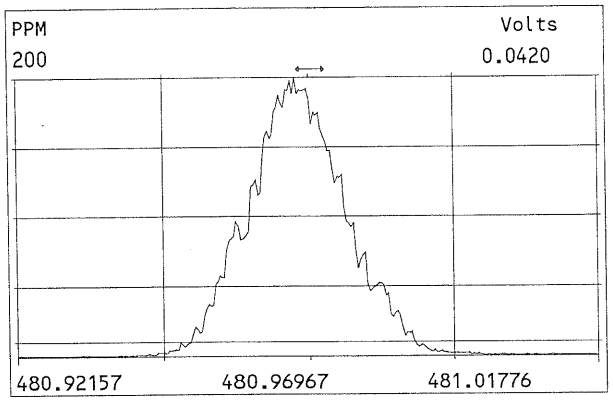
Peak Locate Examination:11-MAY-2011:13:28 File:11MAY11M
Experiment:OCDD Function:5 Reference:PFK

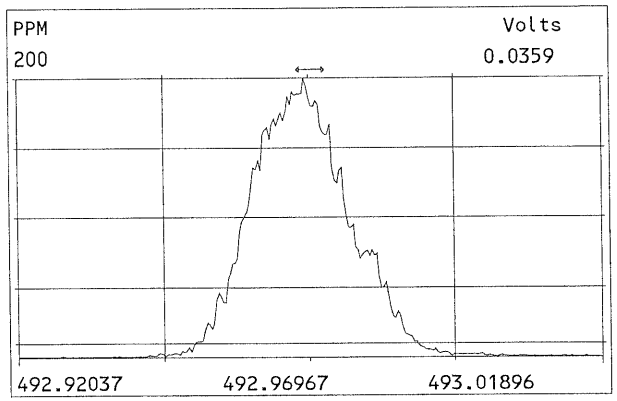


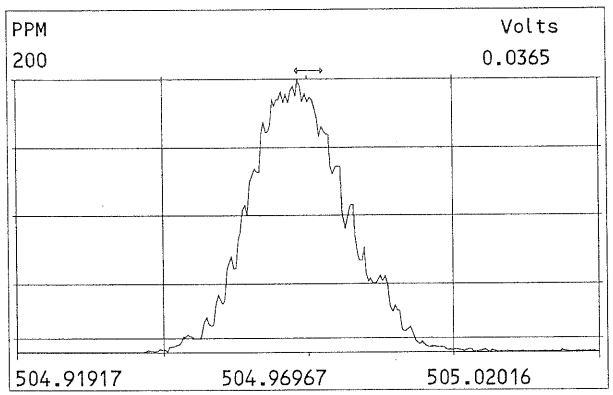


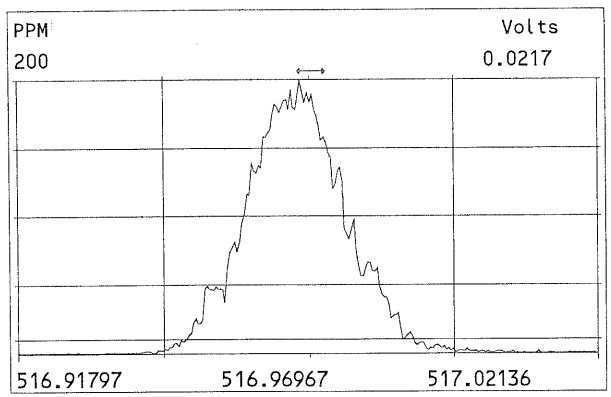




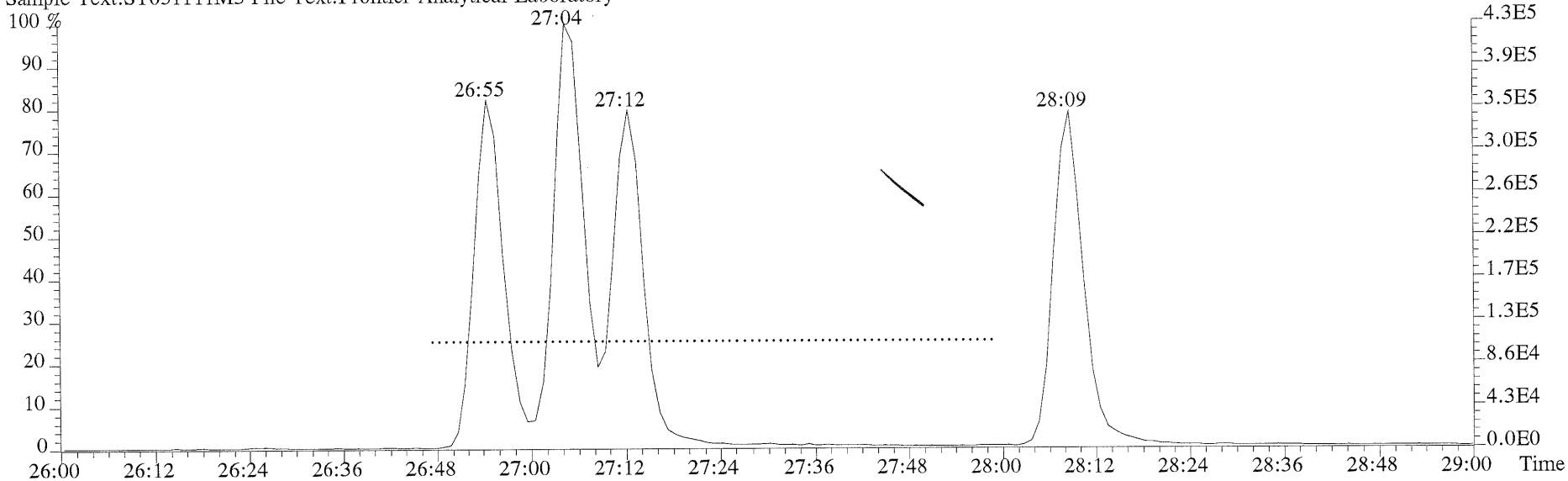




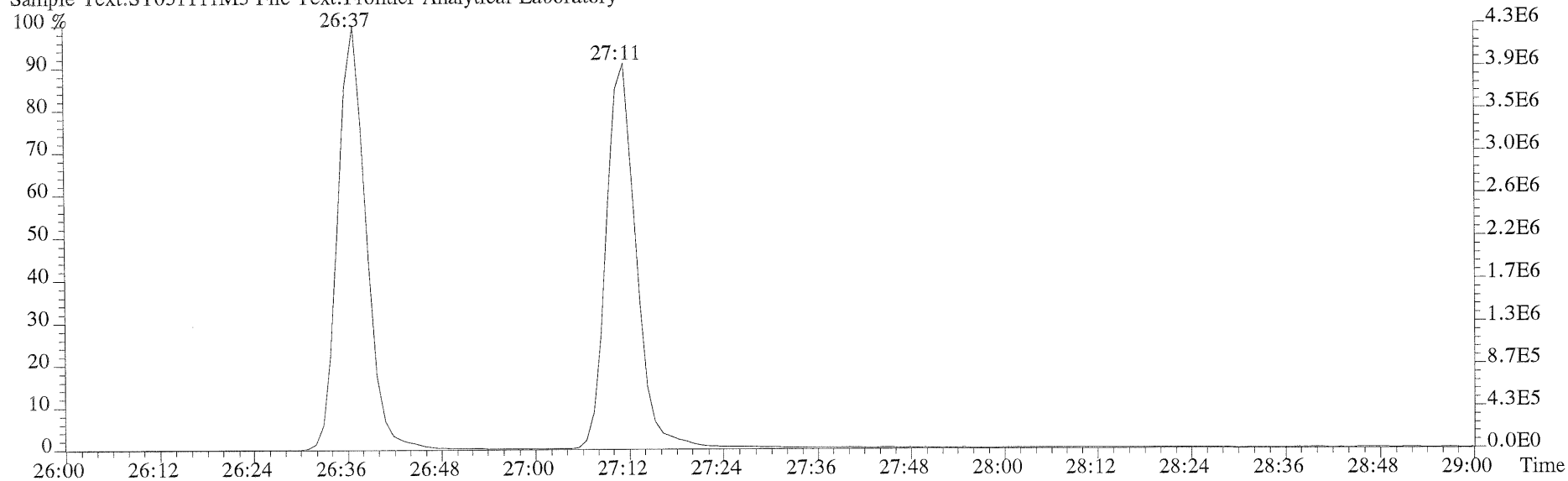




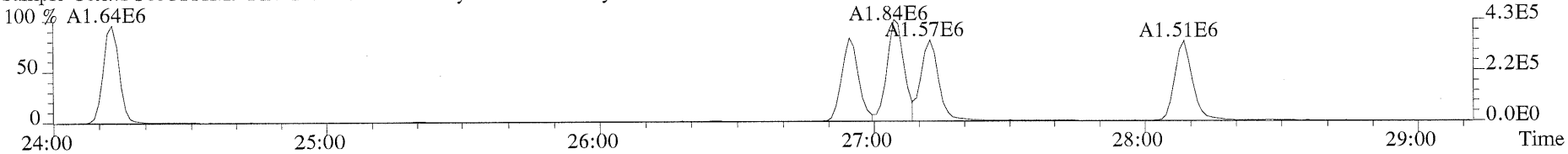
File:11MAY11M #1-426 Acq:12-MAY-2011 07:00:38 GC EI+ Voltage SIR Autospec-Ultima
319.8965 S:20 Exp:OCDD
Sample Text:ST051111M3 File Text:Frontier Analytical Laboratory



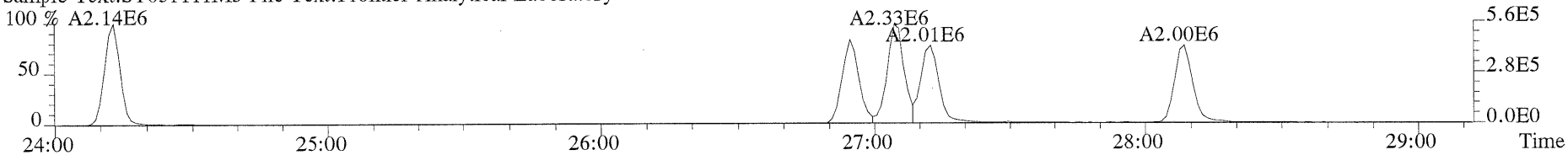
File:11MAY11M #1-426 Acq:12-MAY-2011 07:00:38 GC EI+ Voltage SIR Autospec-Ultima
333.9339 S:20 Exp:OCDD
Sample Text:ST051111M3 File Text:Frontier Analytical Laboratory



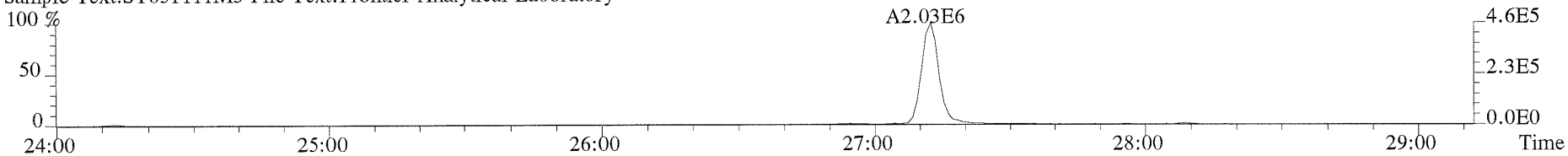
File:11MAY11M #1-426 Acq:12-MAY-2011 07:00:38 GC EI+ Voltage SIR Autospec-Ultima
319.8965 S:20 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051111M3 File Text:Frontier Analytical Laboratory



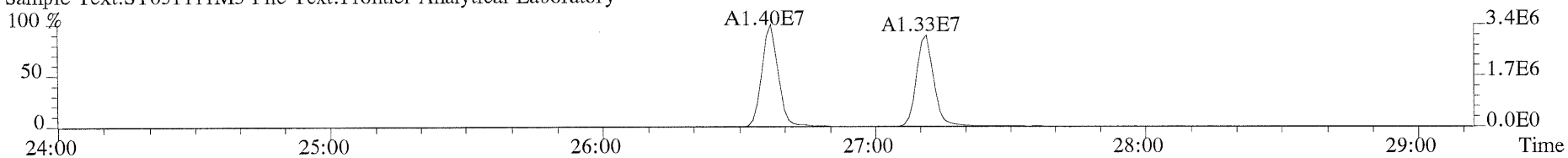
File:11MAY11M #1-426 Acq:12-MAY-2011 07:00:38 GC EI+ Voltage SIR Autospec-Ultima
321.8936 S:20 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051111M3 File Text:Frontier Analytical Laboratory



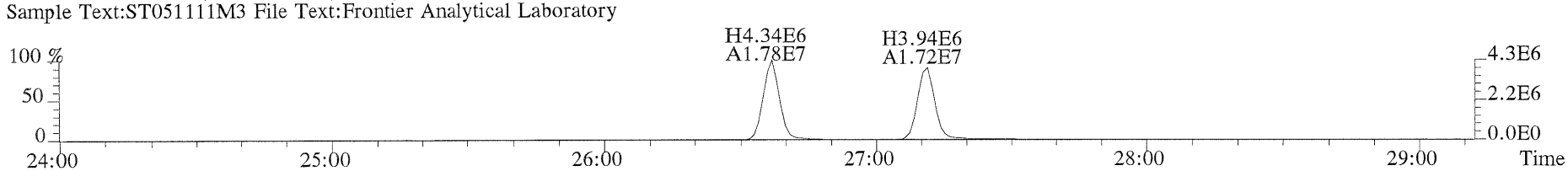
File:11MAY11M #1-426 Acq:12-MAY-2011 07:00:38 GC EI+ Voltage SIR Autospec-Ultima
327.8847 S:20 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051111M3 File Text:Frontier Analytical Laboratory



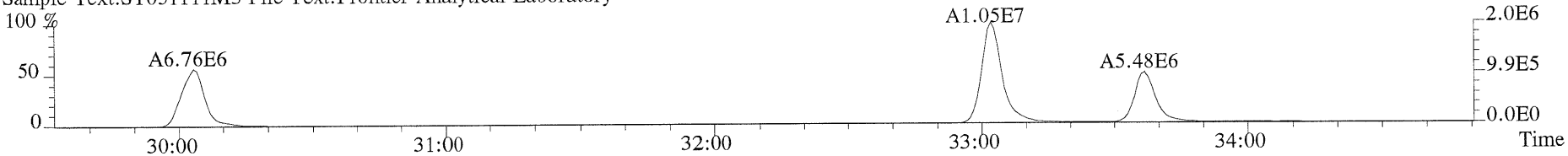
File:11MAY11M #1-426 Acq:12-MAY-2011 07:00:38 GC EI+ Voltage SIR Autospec-Ultima
331.9368 S:20 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051111M3 File Text:Frontier Analytical Laboratory



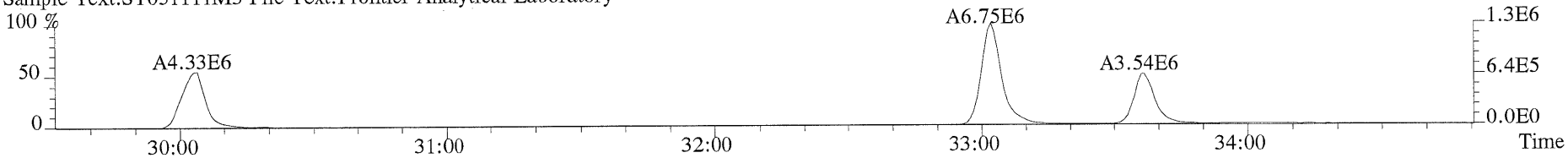
File:11MAY11M #1-426 Acq:12-MAY-2011 07:00:38 GC EI+ Voltage SIR Autospec-Ultima
333.9339 S:20 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051111M3 File Text:Frontier Analytical Laboratory



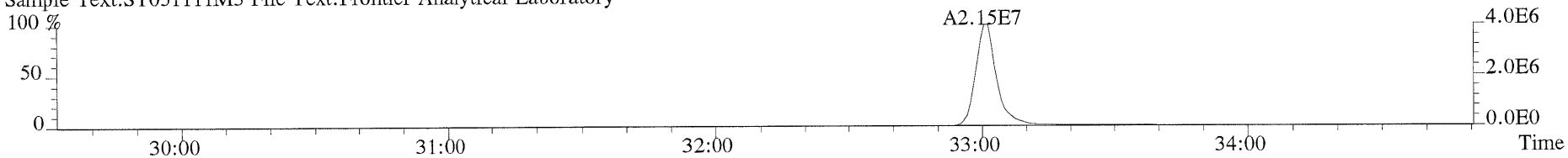
File:11MAY11M #1-412 Acq:12-MAY-2011 07:00:38 GC EI+ Voltage SIR Autospec-Ultima
355.8546 S:20 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051111M3 File Text:Frontier Analytical Laboratory



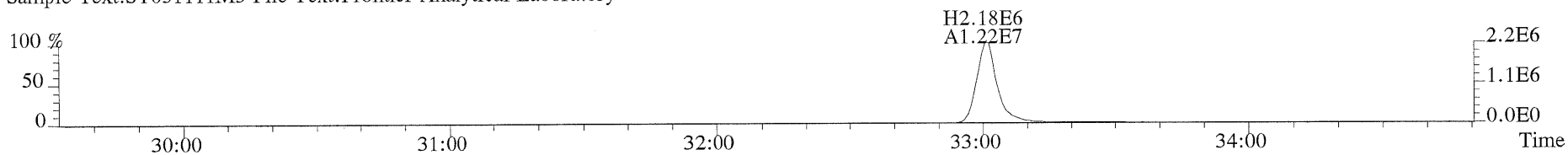
File:11MAY11M #1-412 Acq:12-MAY-2011 07:00:38 GC EI+ Voltage SIR Autospec-Ultima
357.8517 S:20 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051111M3 File Text:Frontier Analytical Laboratory



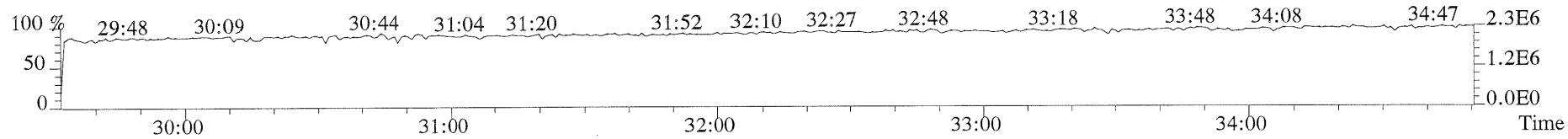
File:11MAY11M #1-412 Acq:12-MAY-2011 07:00:38 GC EI+ Voltage SIR Autospec-Ultima
367.8949 S:20 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051111M3 File Text:Frontier Analytical Laboratory



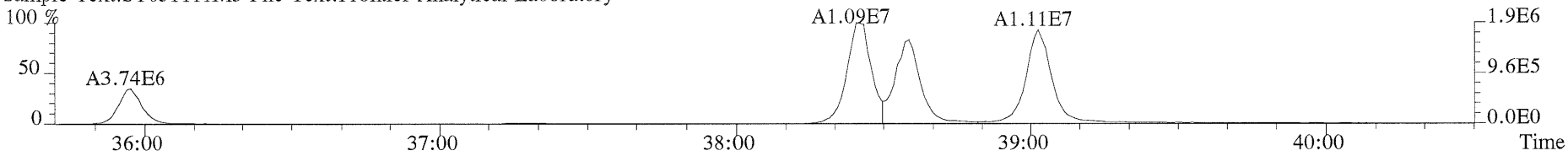
File:11MAY11M #1-412 Acq:12-MAY-2011 07:00:38 GC EI+ Voltage SIR Autospec-Ultima
369.8919 S:20 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051111M3 File Text:Frontier Analytical Laboratory



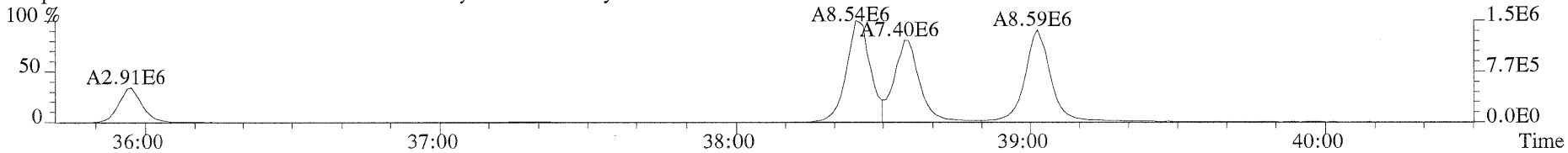
File:11MAY11M #1-412 Acq:12-MAY-2011 07:00:38 GC EI+ Voltage SIR Autospec-Ultima
366.9792 S:20 F:2 Exp:OCDD
Sample Text:ST051111M3 File Text:Frontier Analytical Laboratory



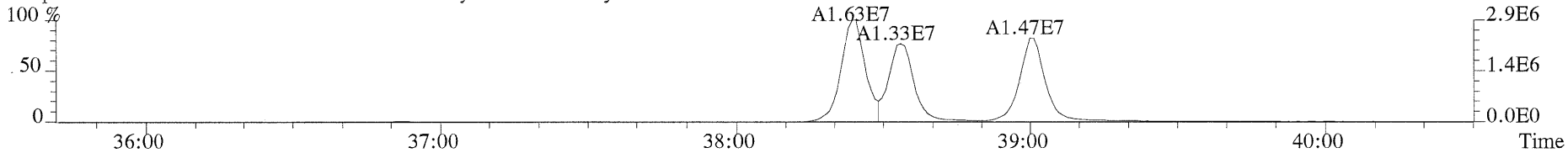
File:11MAY11M #1-477 Acq:12-MAY-2011 07:00:38 GC EI+ Voltage SIR Autospec-Ultima
389.8156 S:20 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051111M3 File Text:Frontier Analytical Laboratory



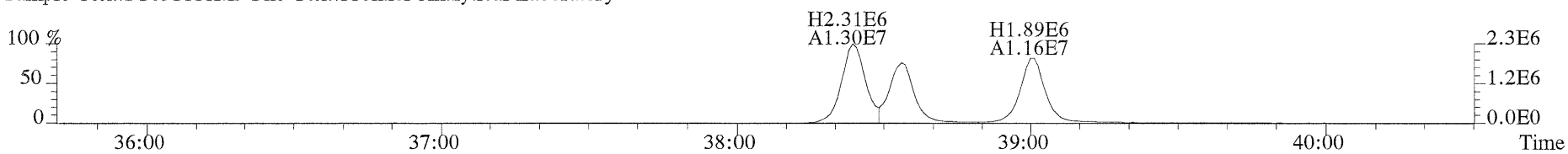
File:11MAY11M #1-477 Acq:12-MAY-2011 07:00:38 GC EI+ Voltage SIR Autospec-Ultima
391.8127 S:20 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051111M3 File Text:Frontier Analytical Laboratory



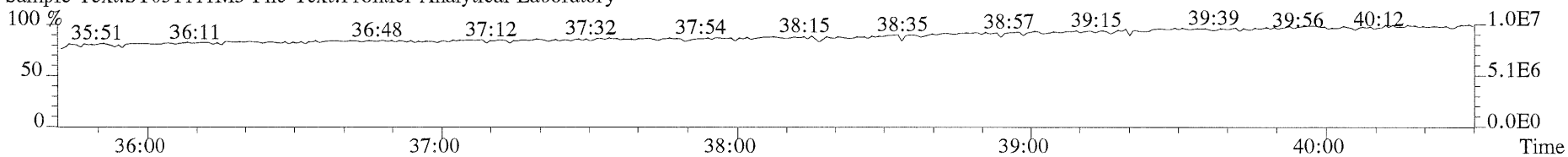
File:11MAY11M #1-477 Acq:12-MAY-2011 07:00:38 GC EI+ Voltage SIR Autospec-Ultima
401.8559 S:20 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051111M3 File Text:Frontier Analytical Laboratory



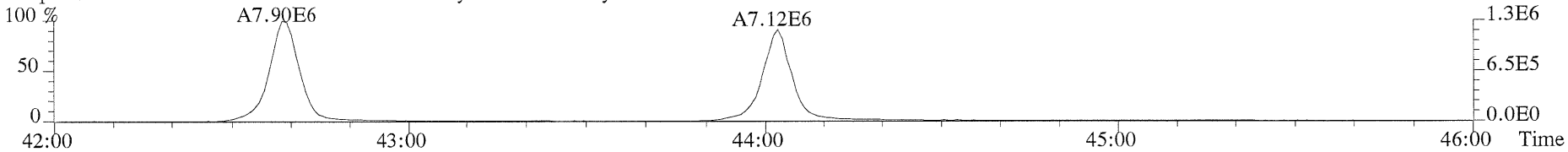
File:11MAY11M #1-477 Acq:12-MAY-2011 07:00:38 GC EI+ Voltage SIR Autospec-Ultima
403.8530 S:20 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051111M3 File Text:Frontier Analytical Laboratory



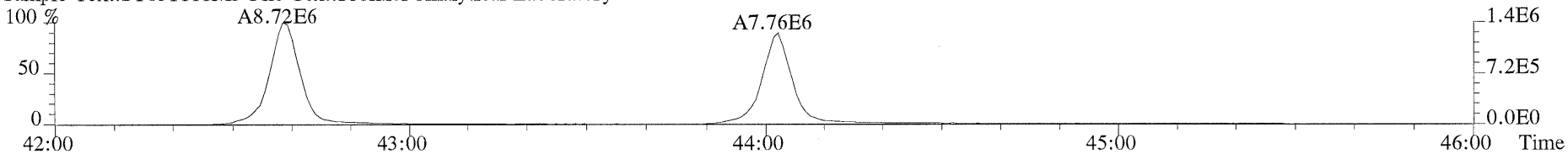
File:11MAY11M #1-477 Acq:12-MAY-2011 07:00:38 GC EI+ Voltage SIR Autospec-Ultima
380.9760 S:20 F:3 Exp:OCDD
Sample Text:ST051111M3 File Text:Frontier Analytical Laboratory



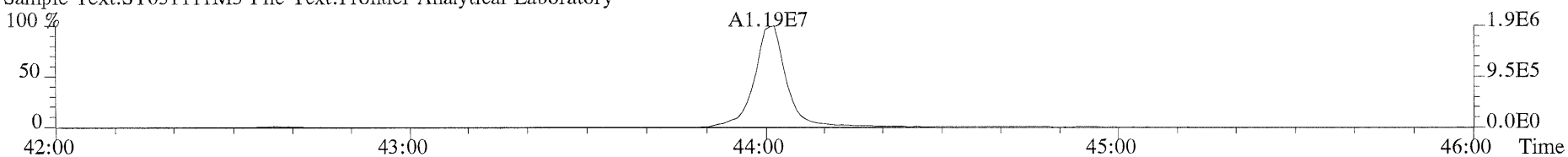
File:11MAY11M #1-541 Acq:12-MAY-2011 07:00:38 GC EI+ Voltage SIR Autospec-Ultima
423.7767 S:20 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051111M3 File Text:Frontier Analytical Laboratory



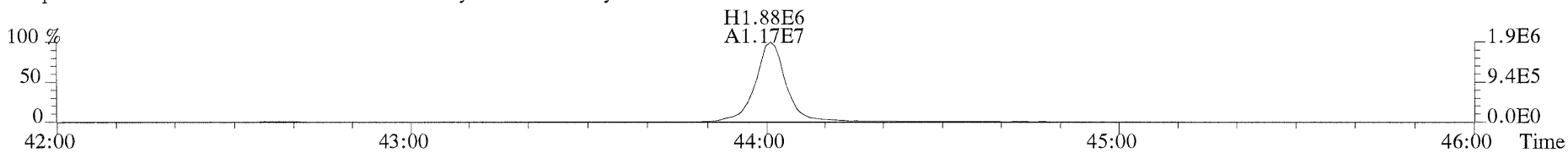
File:11MAY11M #1-541 Acq:12-MAY-2011 07:00:38 GC EI+ Voltage SIR Autospec-Ultima
425.7737 S:20 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051111M3 File Text:Frontier Analytical Laboratory



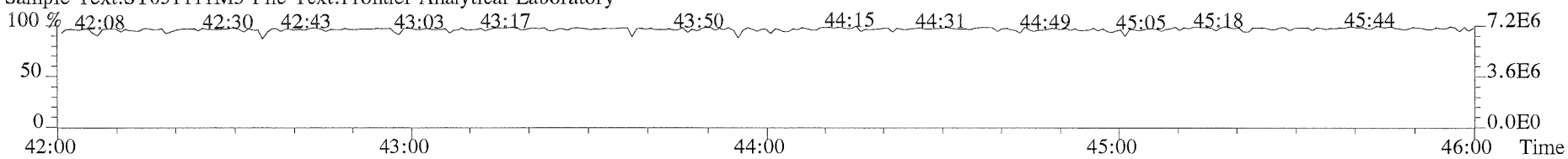
File:11MAY11M #1-541 Acq:12-MAY-2011 07:00:38 GC EI+ Voltage SIR Autospec-Ultima
435.8169 S:20 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051111M3 File Text:Frontier Analytical Laboratory



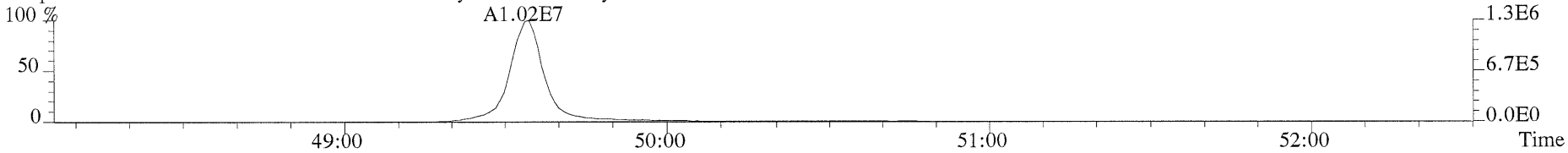
File:11MAY11M #1-541 Acq:12-MAY-2011 07:00:38 GC EI+ Voltage SIR Autospec-Ultima
437.8140 S:20 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051111M3 File Text:Frontier Analytical Laboratory



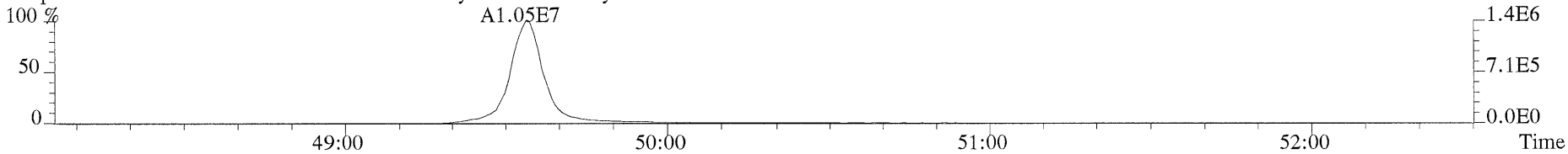
File:11MAY11M #1-541 Acq:12-MAY-2011 07:00:38 GC EI+ Voltage SIR Autospec-Ultima
430.9728 S:20 F:4 Exp:OCDD
Sample Text:ST051111M3 File Text:Frontier Analytical Laboratory



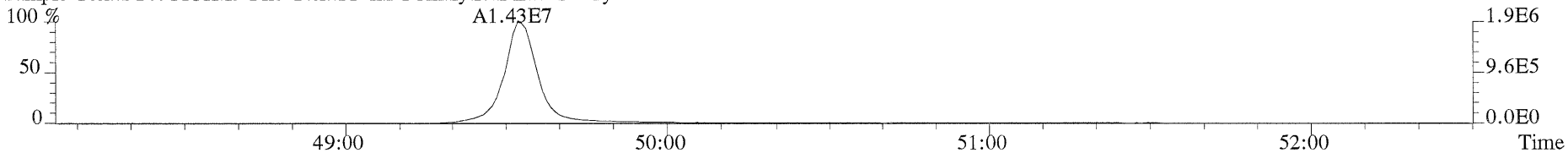
File:11MAY11M #1-347 Acq:12-MAY-2011 07:00:38 GC EI+ Voltage SIR Autospec-Ultima
457.7377 S:20 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051111M3 File Text:Frontier Analytical Laboratory



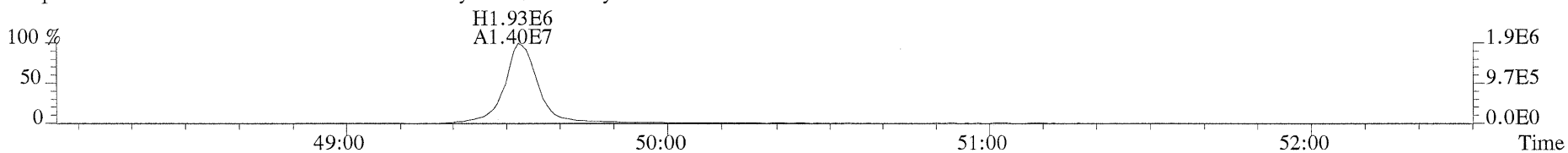
File:11MAY11M #1-347 Acq:12-MAY-2011 07:00:38 GC EI+ Voltage SIR Autospec-Ultima
459.7348 S:20 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051111M3 File Text:Frontier Analytical Laboratory



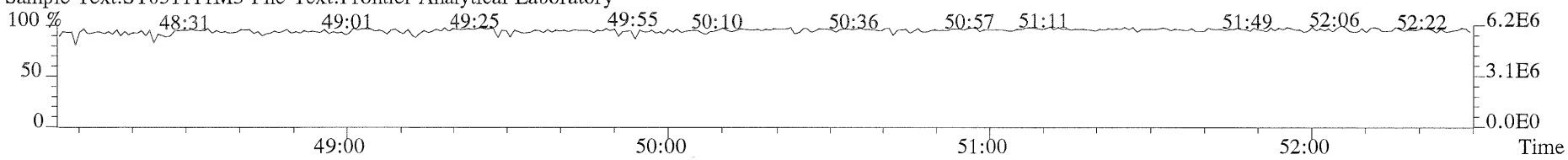
File:11MAY11M #1-347 Acq:12-MAY-2011 07:00:38 GC EI+ Voltage SIR Autospec-Ultima
469.7780 S:20 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051111M3 File Text:Frontier Analytical Laboratory



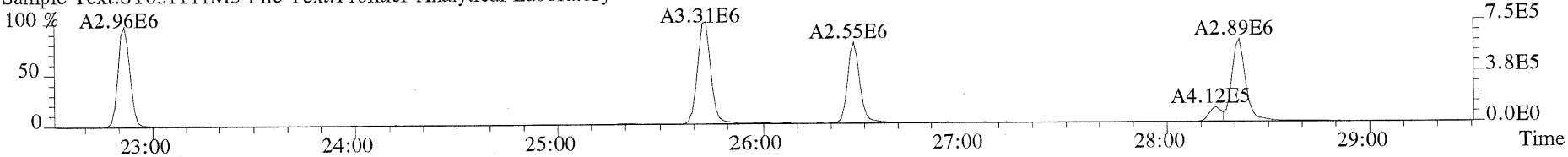
File:11MAY11M #1-347 Acq:12-MAY-2011 07:00:38 GC EI+ Voltage SIR Autospec-Ultima
471.7750 S:20 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051111M3 File Text:Frontier Analytical Laboratory



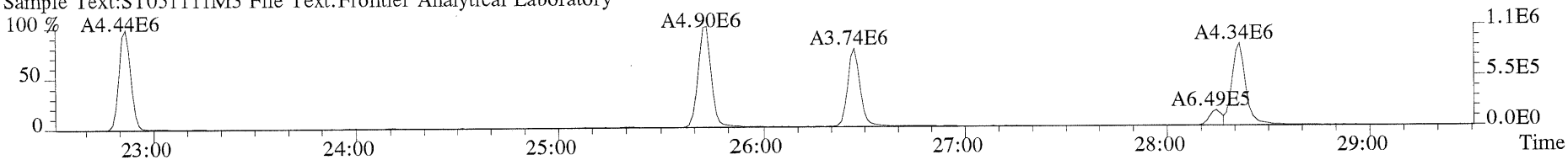
File:11MAY11M #1-347 Acq:12-MAY-2011 07:00:38 GC EI+ Voltage SIR Autospec-Ultima
454.9728 S:20 F:5 Exp:OCDD
Sample Text:ST051111M3 File Text:Frontier Analytical Laboratory



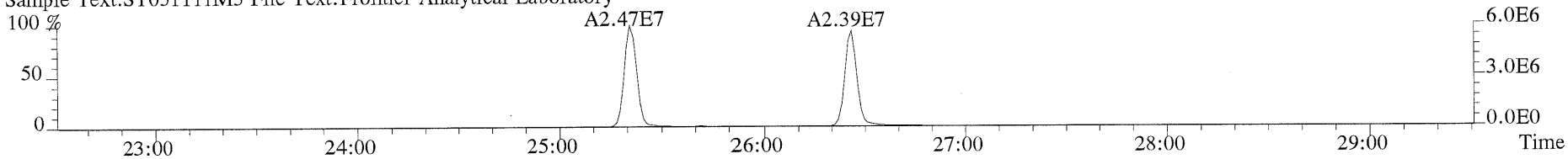
File:11MAY11M #1-426 Acq:12-MAY-2011 07:00:38 GC EI+ Voltage SIR Autospec-Ultima
303.9016 S:20 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051111M3 File Text:Frontier Analytical Laboratory



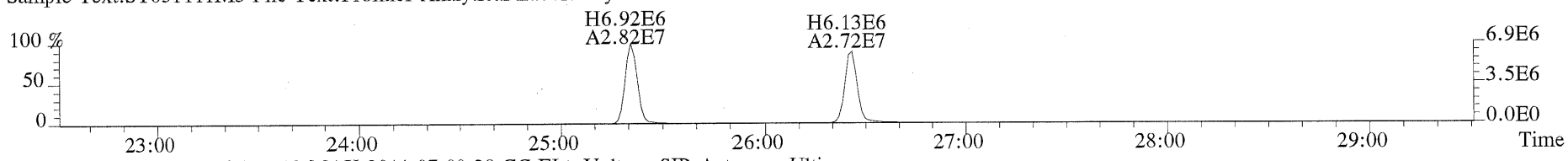
File:11MAY11M #1-426 Acq:12-MAY-2011 07:00:38 GC EI+ Voltage SIR Autospec-Ultima
305.8987 S:20 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051111M3 File Text:Frontier Analytical Laboratory



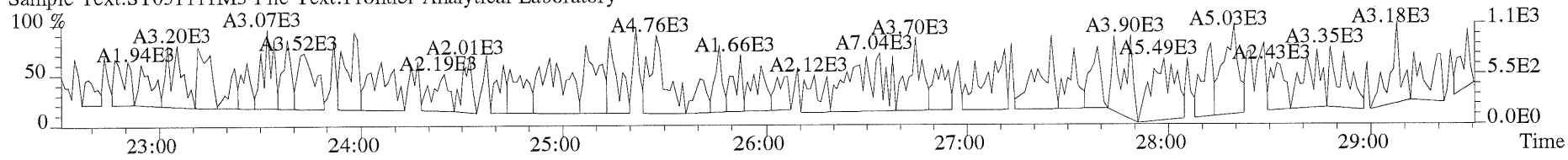
File:11MAY11M #1-426 Acq:12-MAY-2011 07:00:38 GC EI+ Voltage SIR Autospec-Ultima
315.9419 S:20 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051111M3 File Text:Frontier Analytical Laboratory



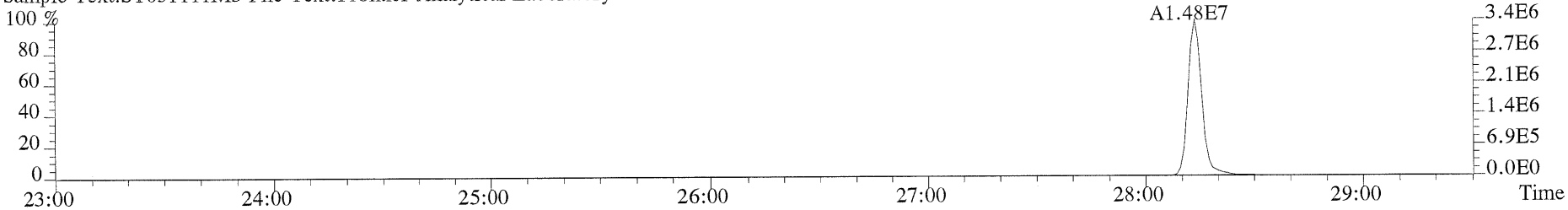
File:11MAY11M #1-426 Acq:12-MAY-2011 07:00:38 GC EI+ Voltage SIR Autospec-Ultima
317.9389 S:20 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051111M3 File Text:Frontier Analytical Laboratory



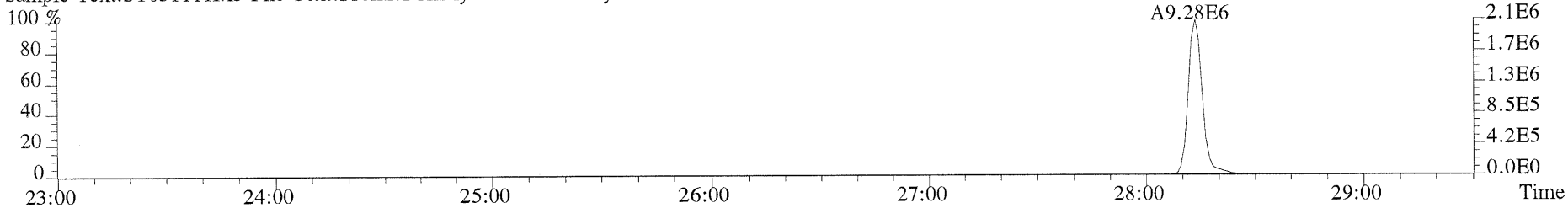
File:11MAY11M #1-426 Acq:12-MAY-2011 07:00:38 GC EI+ Voltage SIR Autospec-Ultima
375.8364 S:20 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051111M3 File Text:Frontier Analytical Laboratory



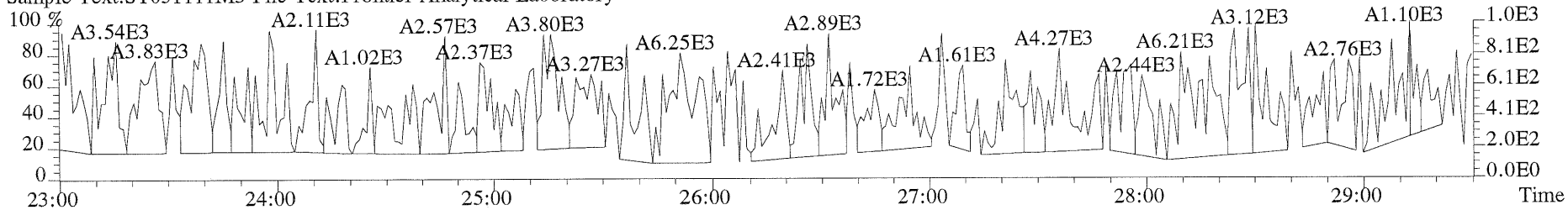
File:11MAY11M #1-426 Acq:12-MAY-2011 07:00:38 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:20 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051111M3 File Text:Frontier Analytical Laboratory



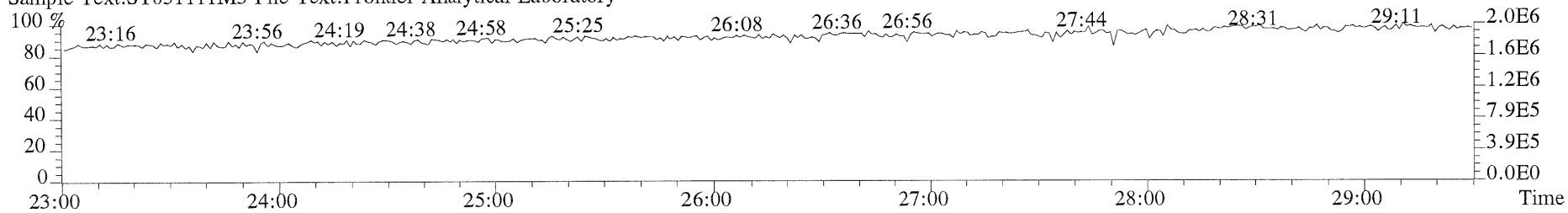
File:11MAY11M #1-426 Acq:12-MAY-2011 07:00:38 GC EI+ Voltage SIR Autospec-Ultima
341.8568 S:20 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051111M3 File Text:Frontier Analytical Laboratory



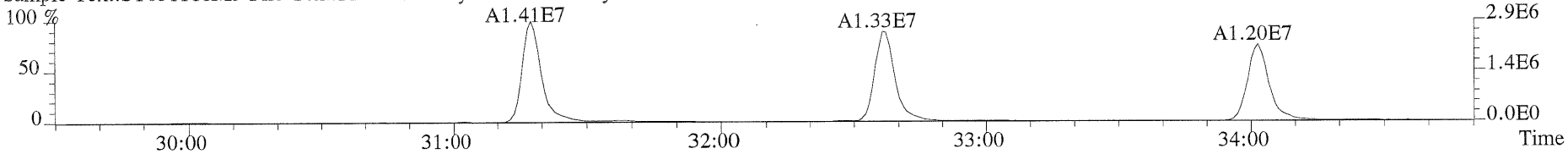
File:11MAY11M #1-426 Acq:12-MAY-2011 07:00:38 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:20 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051111M3 File Text:Frontier Analytical Laboratory



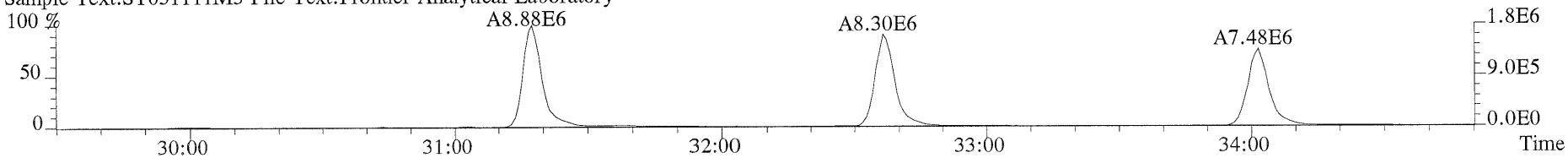
File:11MAY11M #1-426 Acq:12-MAY-2011 07:00:38 GC EI+ Voltage SIR Autospec-Ultima
316.9824 S:20 Exp:OCDD
Sample Text:ST051111M3 File Text:Frontier Analytical Laboratory



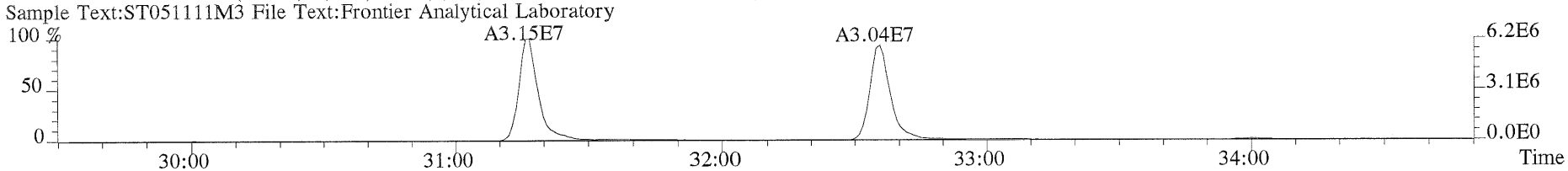
File:11MAY11M #1-412 Acq:12-MAY-2011 07:00:38 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:20 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051111M3 File Text:Frontier Analytical Laboratory



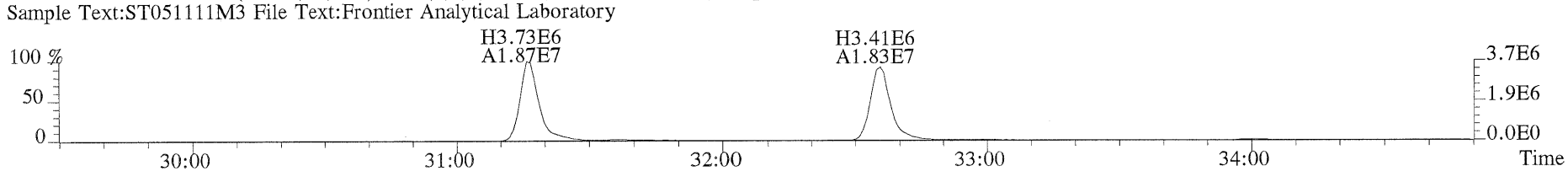
File:11MAY11M #1-412 Acq:12-MAY-2011 07:00:38 GC EI+ Voltage SIR Autospec-Ultima
341.8568 S:20 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051111M3 File Text:Frontier Analytical Laboratory



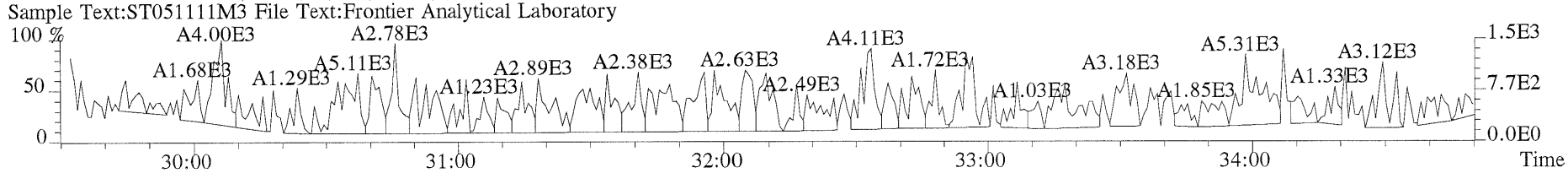
File:11MAY11M #1-412 Acq:12-MAY-2011 07:00:38 GC EI+ Voltage SIR Autospec-Ultima
351.9000 S:20 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051111M3 File Text:Frontier Analytical Laboratory



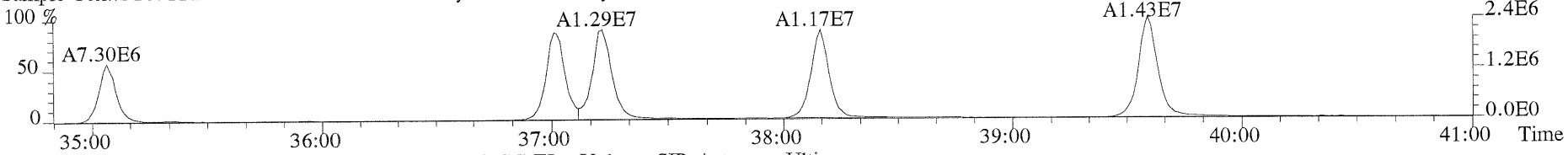
File:11MAY11M #1-412 Acq:12-MAY-2011 07:00:38 GC EI+ Voltage SIR Autospec-Ultima
353.8970 S:20 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051111M3 File Text:Frontier Analytical Laboratory



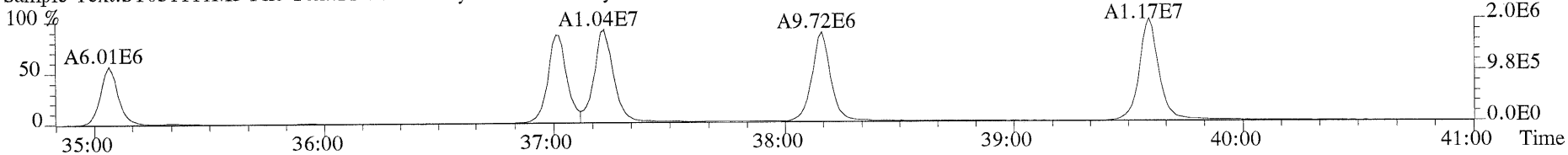
File:11MAY11M #1-412 Acq:12-MAY-2011 07:00:38 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:20 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051111M3 File Text:Frontier Analytical Laboratory



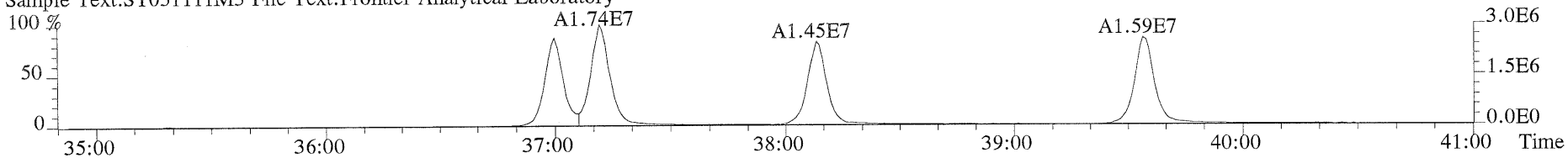
File:11MAY11M #1-477 Acq:12-MAY-2011 07:00:38 GC EI+ Voltage SIR Autospec-Ultima
373.8207 S:20 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051111M3 File Text:Frontier Analytical Laboratory



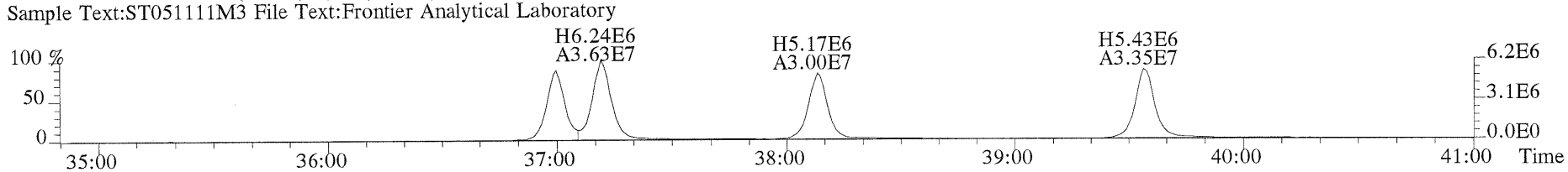
File:11MAY11M #1-477 Acq:12-MAY-2011 07:00:38 GC EI+ Voltage SIR Autospec-Ultima
375.8178 S:20 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051111M3 File Text:Frontier Analytical Laboratory



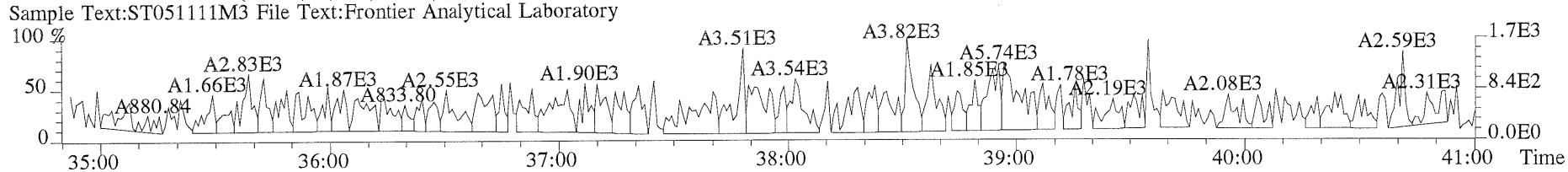
File:11MAY11M #1-477 Acq:12-MAY-2011 07:00:38 GC EI+ Voltage SIR Autospec-Ultima
383.8639 S:20 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051111M3 File Text:Frontier Analytical Laboratory



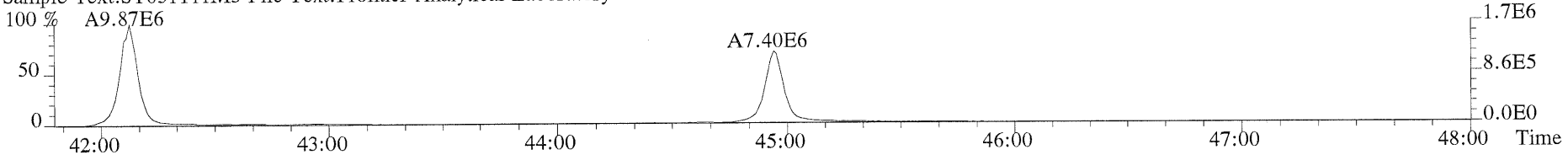
File:11MAY11M #1-477 Acq:12-MAY-2011 07:00:38 GC EI+ Voltage SIR Autospec-Ultima
385.8610 S:20 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051111M3 File Text:Frontier Analytical Laboratory



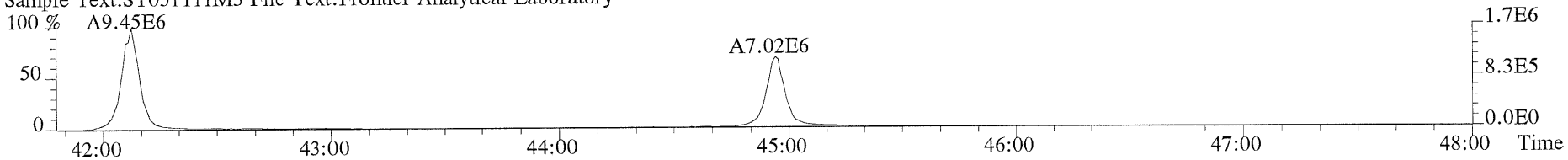
File:11MAY11M #1-477 Acq:12-MAY-2011 07:00:38 GC EI+ Voltage SIR Autospec-Ultima
445.7555 S:20 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051111M3 File Text:Frontier Analytical Laboratory



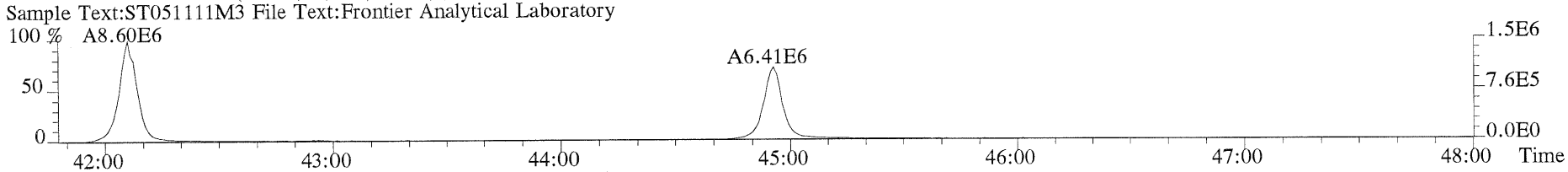
File:11MAY11M #1-541 Acq:12-MAY-2011 07:00:38 GC EI+ Voltage SIR Autospec-Ultima
407.7818 S:20 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051111M3 File Text:Frontier Analytical Laboratory



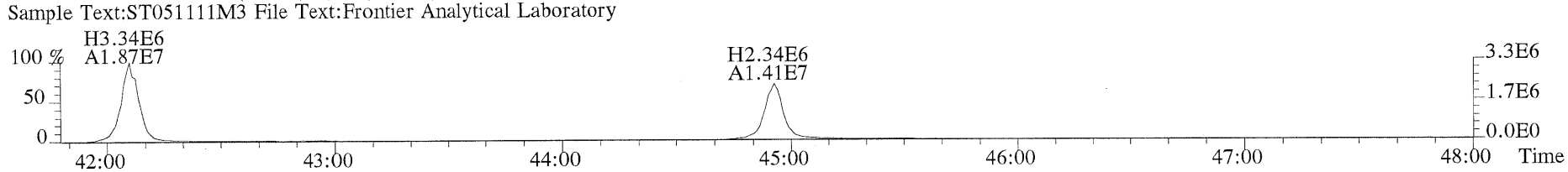
File:11MAY11M #1-541 Acq:12-MAY-2011 07:00:38 GC EI+ Voltage SIR Autospec-Ultima
409.7788 S:20 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051111M3 File Text:Frontier Analytical Laboratory



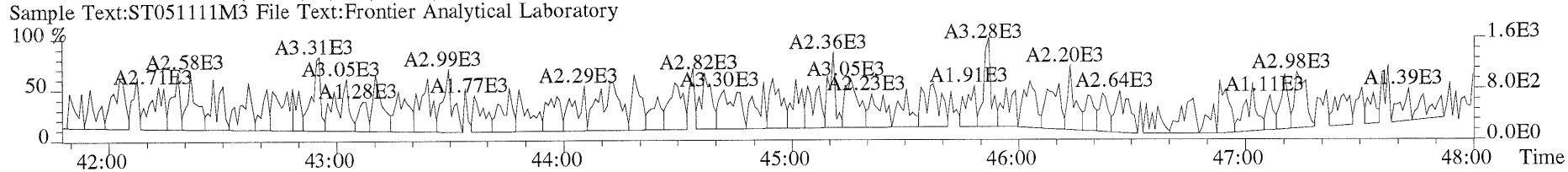
File:11MAY11M #1-541 Acq:12-MAY-2011 07:00:38 GC EI+ Voltage SIR Autospec-Ultima
417.8253 S:20 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051111M3 File Text:Frontier Analytical Laboratory



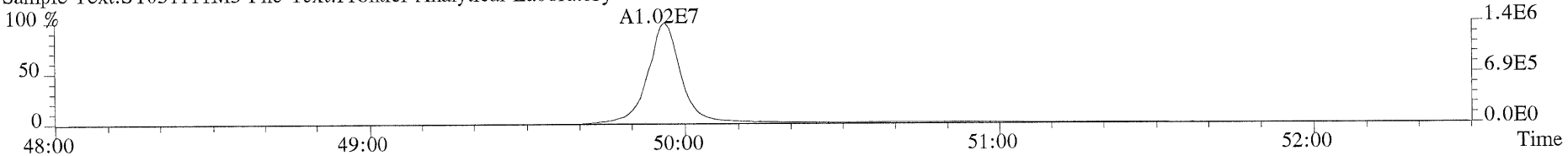
File:11MAY11M #1-541 Acq:12-MAY-2011 07:00:38 GC EI+ Voltage SIR Autospec-Ultima
419.8220 S:20 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051111M3 File Text:Frontier Analytical Laboratory



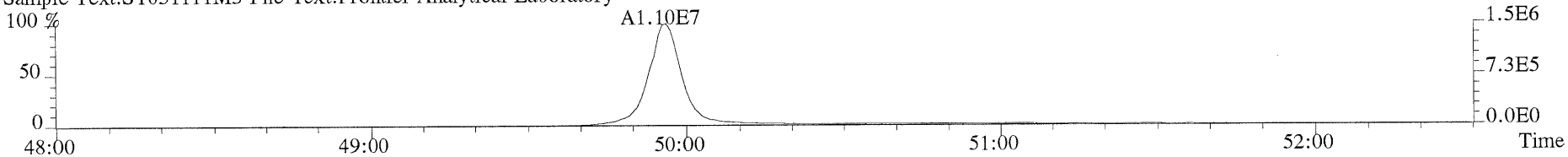
File:11MAY11M #1-541 Acq:12-MAY-2011 07:00:38 GC EI+ Voltage SIR Autospec-Ultima
479.7165 S:20 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051111M3 File Text:Frontier Analytical Laboratory



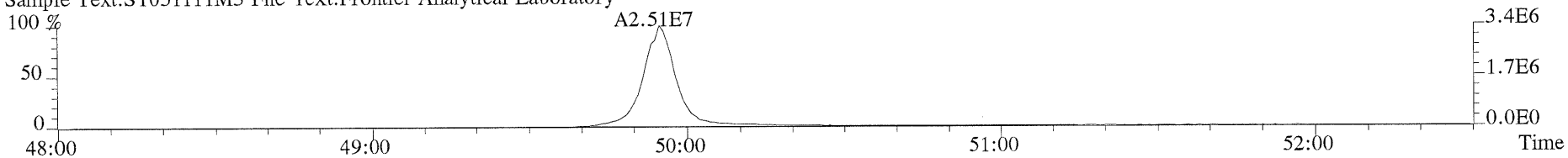
File:11MAY11M #1-347 Acq:12-MAY-2011 07:00:38 GC EI+ Voltage SIR Autospec-Ultima
441.7428 S:20 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051111M3 File Text:Frontier Analytical Laboratory



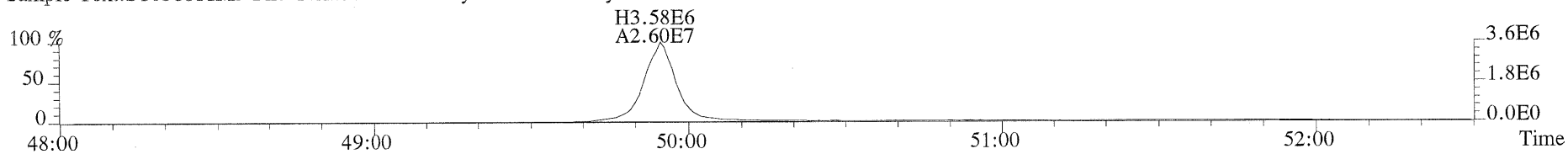
File:11MAY11M #1-347 Acq:12-MAY-2011 07:00:38 GC EI+ Voltage SIR Autospec-Ultima
443.7398 S:20 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051111M3 File Text:Frontier Analytical Laboratory



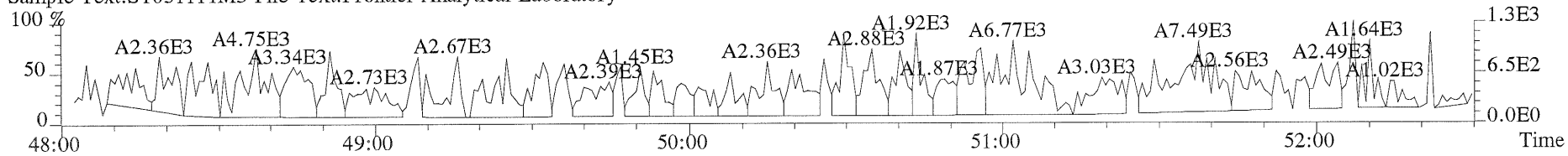
File:11MAY11M #1-347 Acq:12-MAY-2011 07:00:38 GC EI+ Voltage SIR Autospec-Ultima
453.7831 S:20 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051111M3 File Text:Frontier Analytical Laboratory



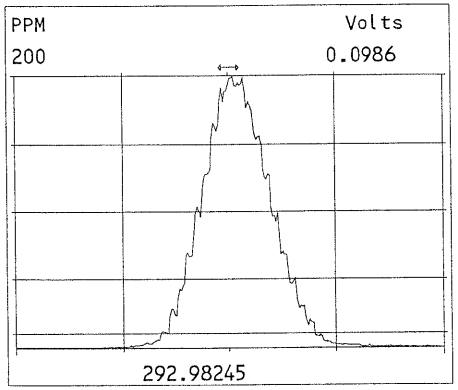
File:11MAY11M #1-347 Acq:12-MAY-2011 07:00:38 GC EI+ Voltage SIR Autospec-Ultima
455.7801 S:20 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051111M3 File Text:Frontier Analytical Laboratory

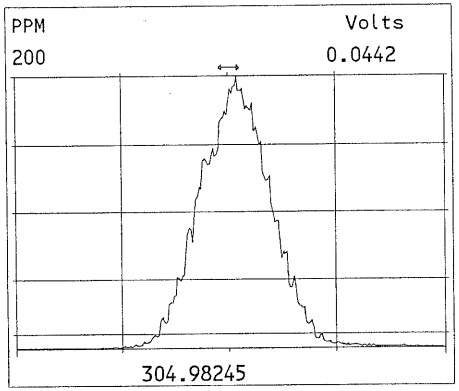


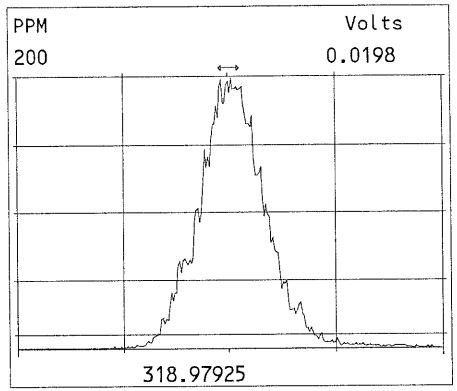
File:11MAY11M #1-347 Acq:12-MAY-2011 07:00:38 GC EI+ Voltage SIR Autospec-Ultima
513.6775 S:20 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051111M3 File Text:Frontier Analytical Laboratory

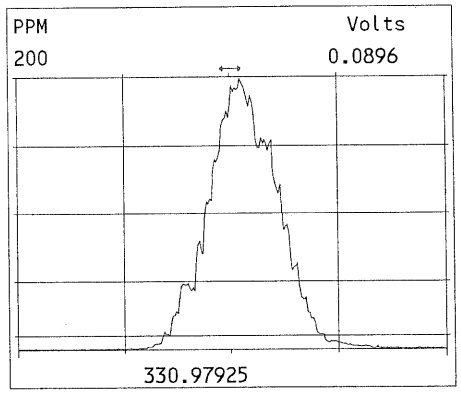


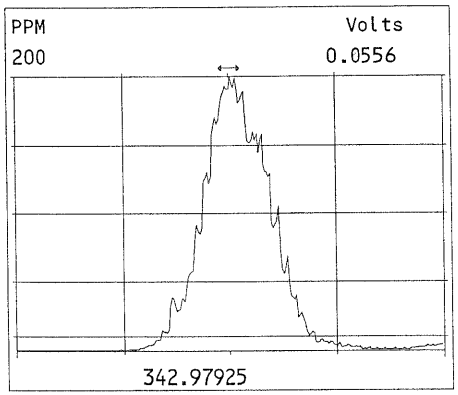
Peak Locate Examination:12-MAY-2011:07:58 File:11MAY11M_RES_CHECK
Experiment:OCDD Function:1 Reference:PFK

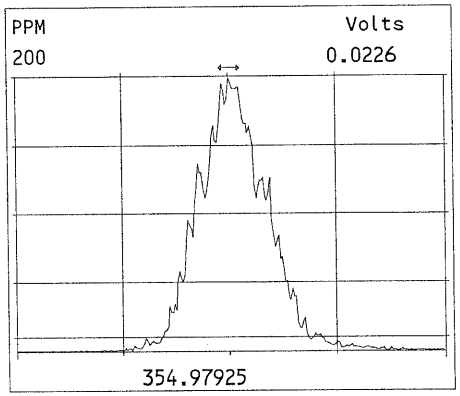


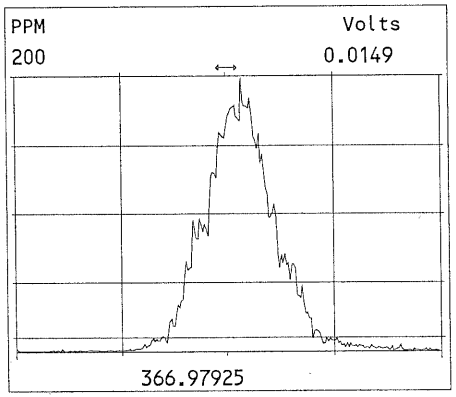


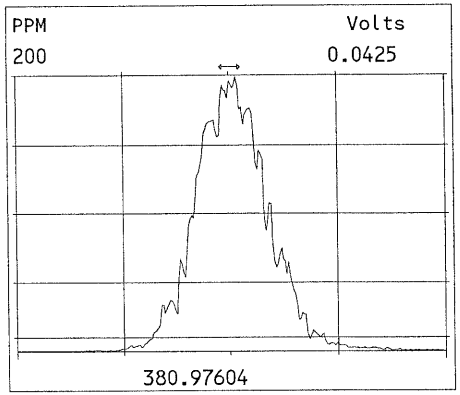


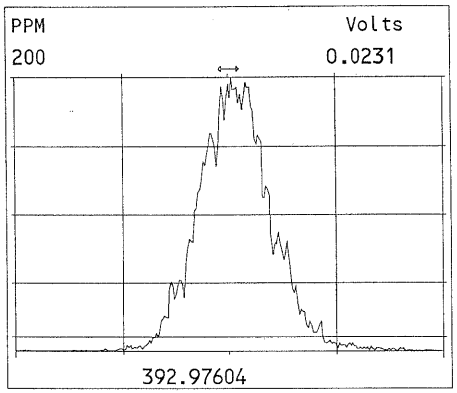


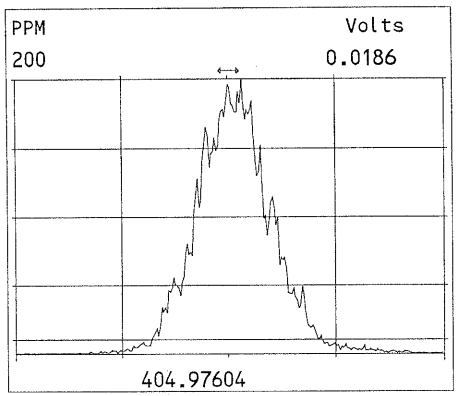


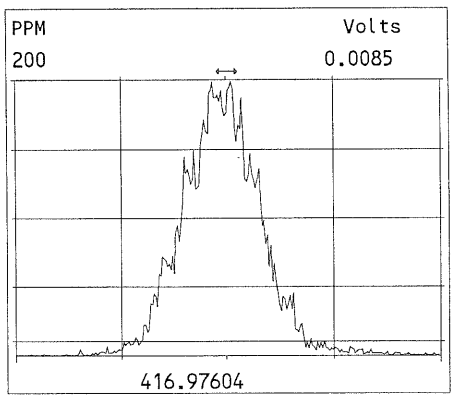




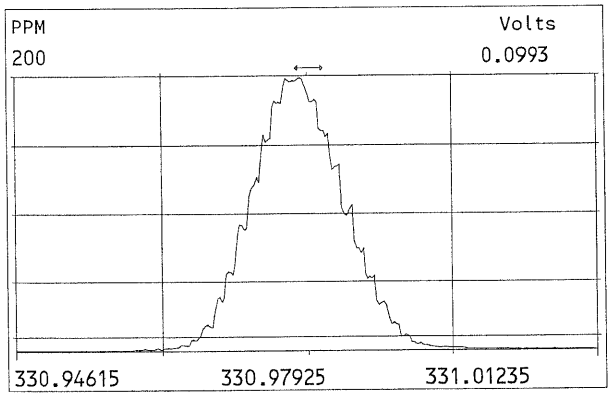


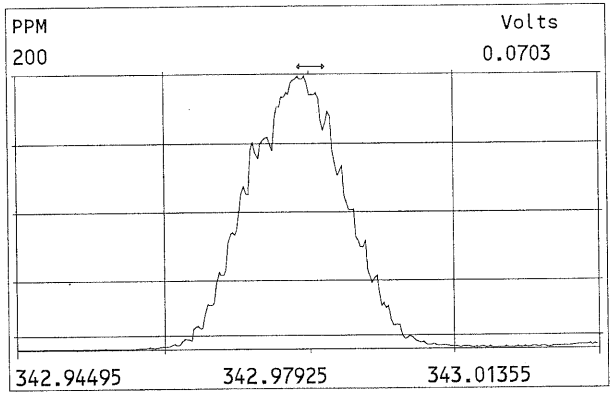


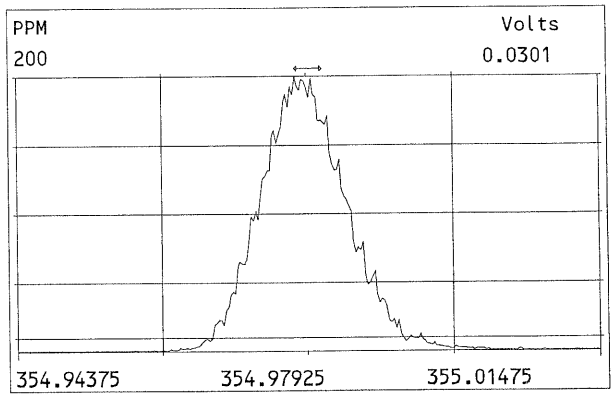


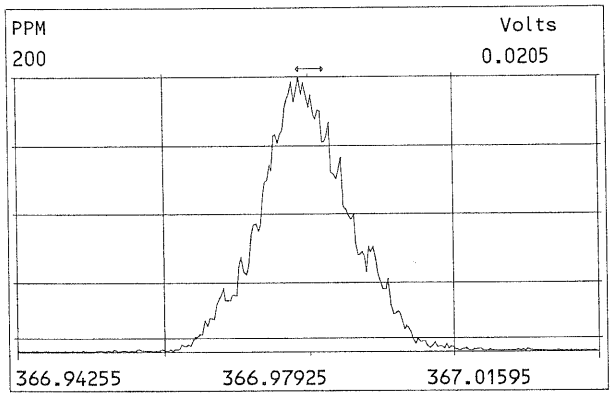


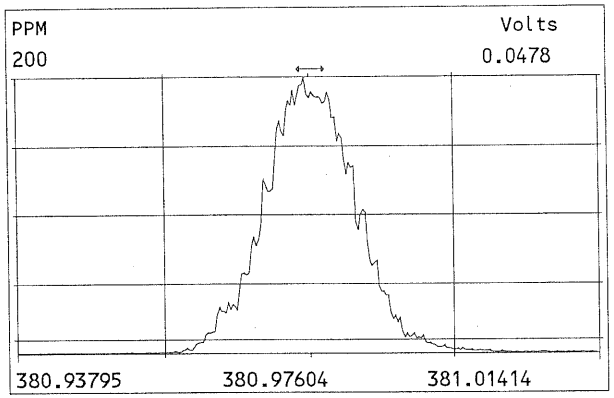
Peak Locate Examination:12-MAY-2011:07:58 File:11MAY11M_RES_CHECK
Experiment:OCDD Function:2 Reference:PFK

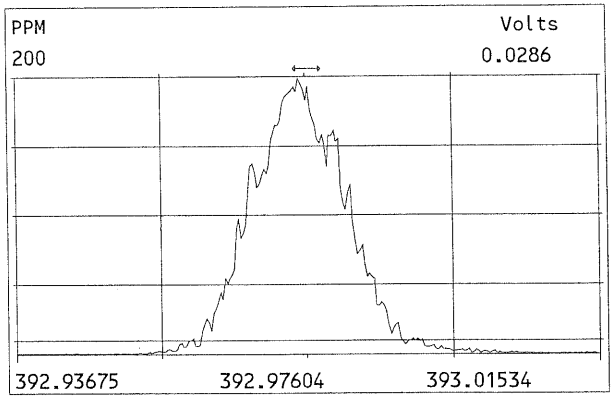


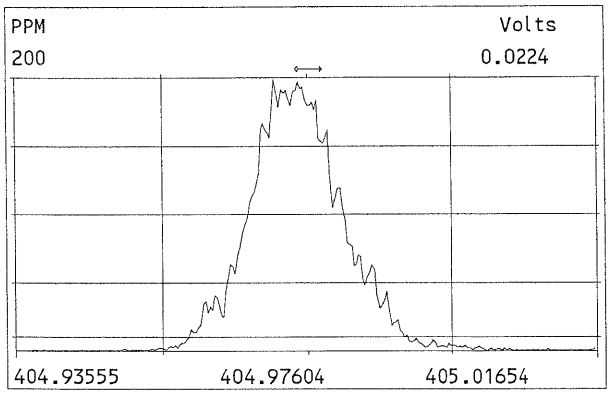


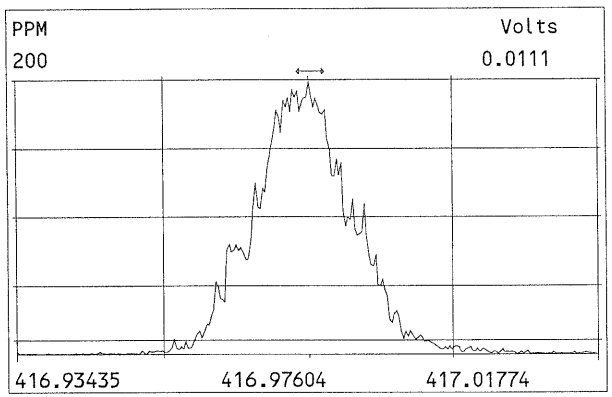




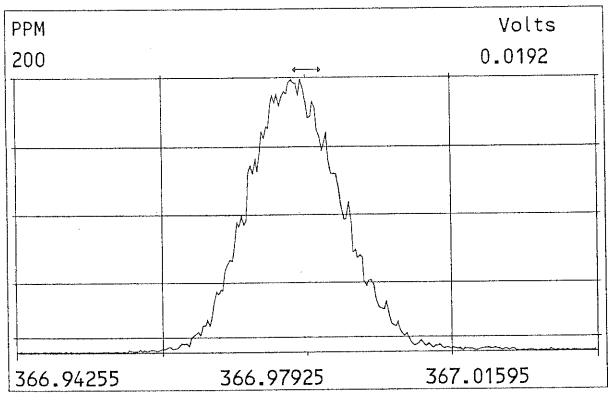


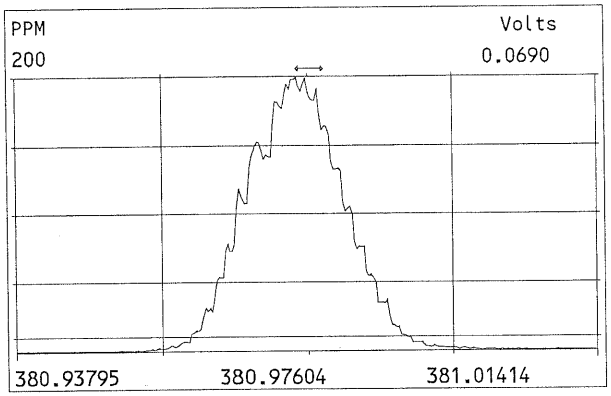


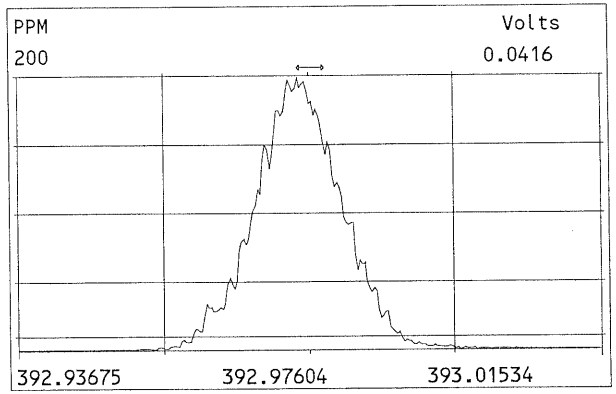


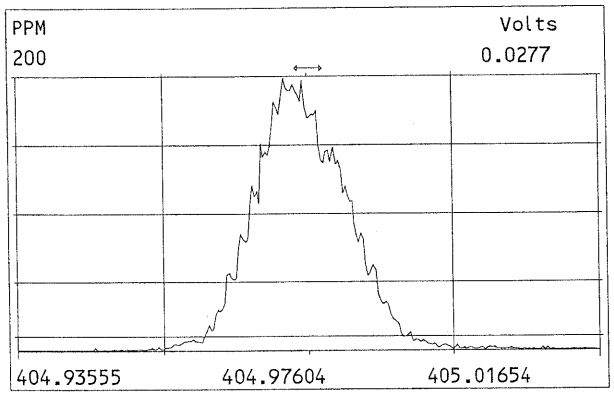


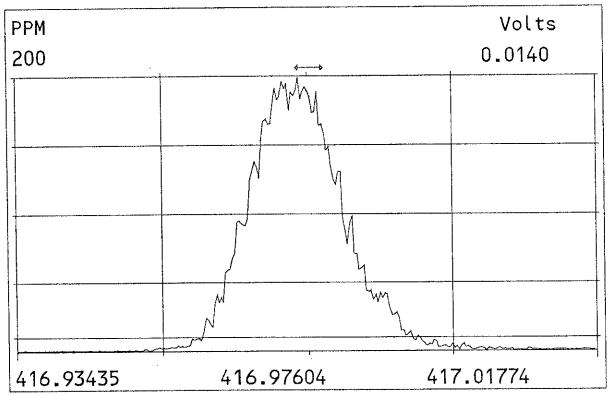
Peak Locate Examination:12-MAY-2011:07:59 File:11MAY11M_RES_CHECK
Experiment:OCDD Function:3 Reference:PFK

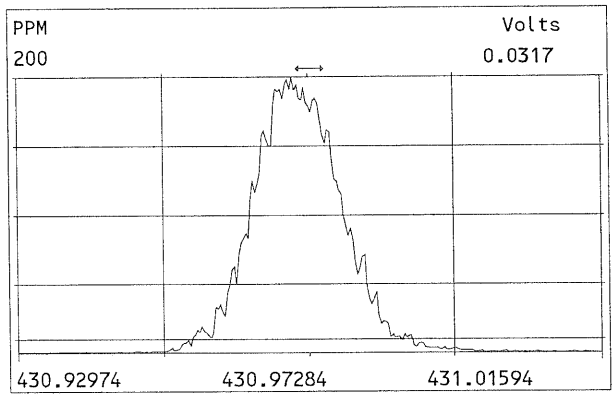


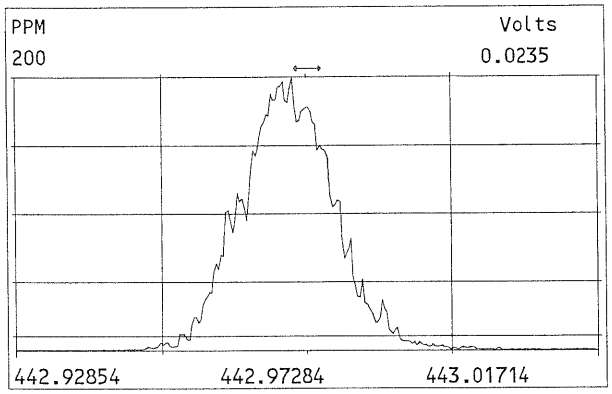


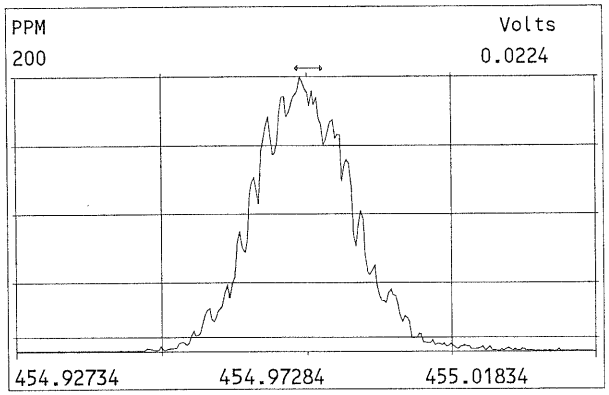




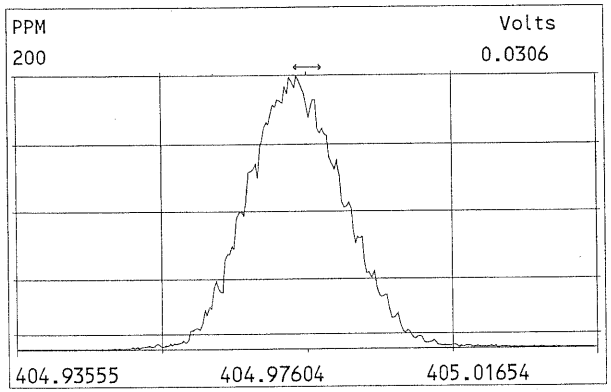


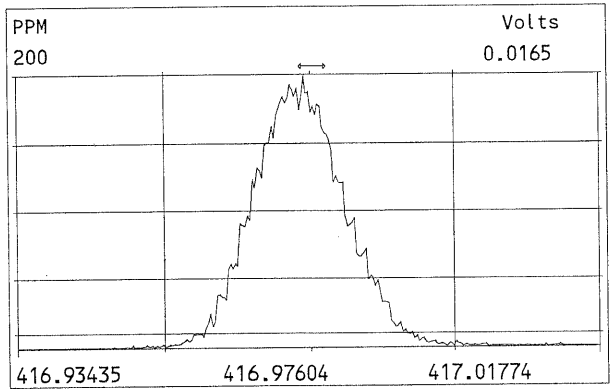


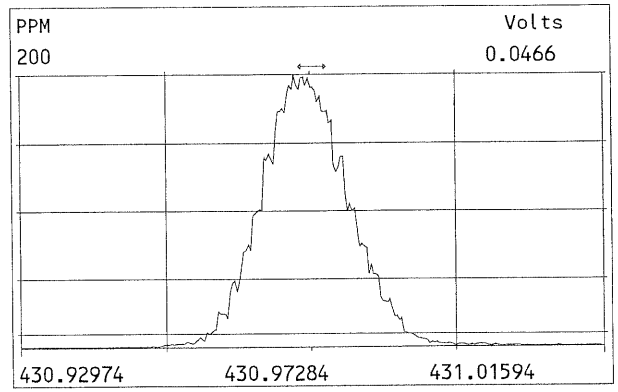


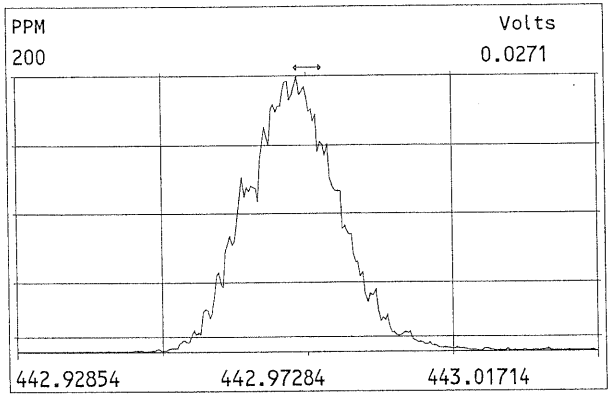


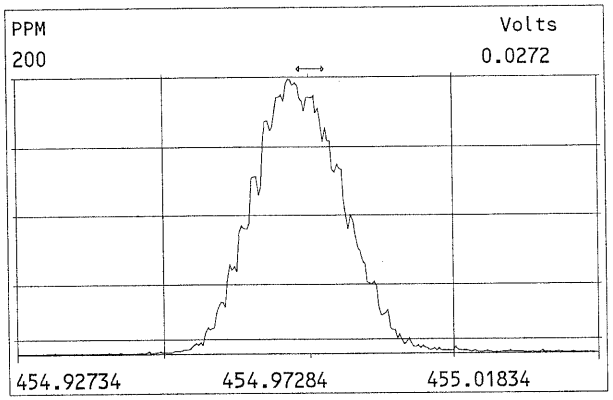
Peak Locate Examination:12-MAY-2011:07:59 File:11MAY11M_RES_CHECK
Experiment:OCDD Function:4 Reference:PFK

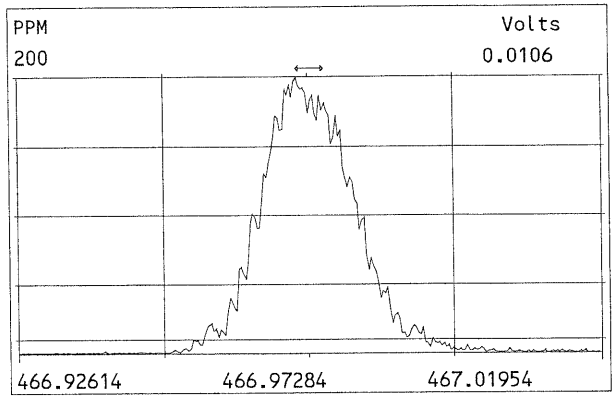


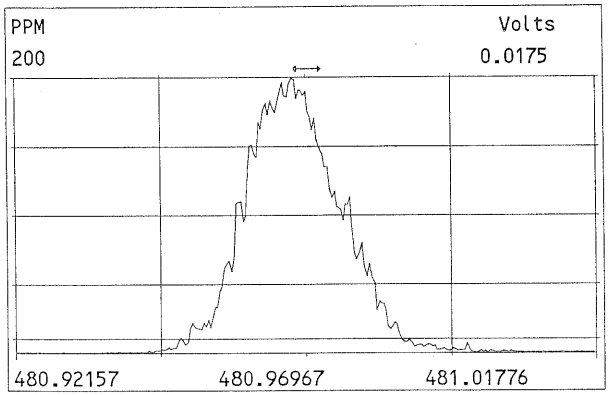




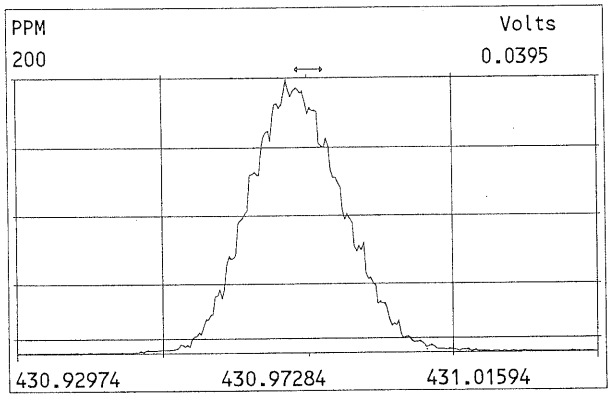


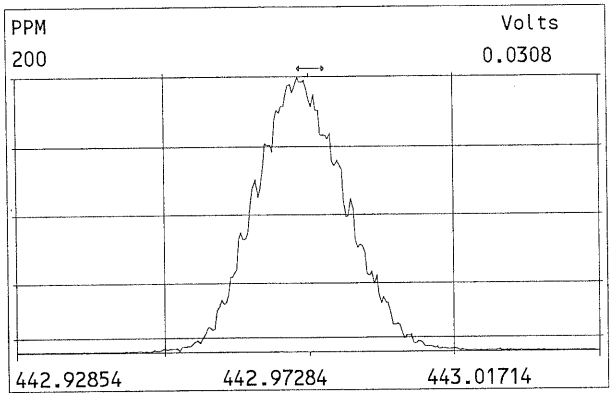


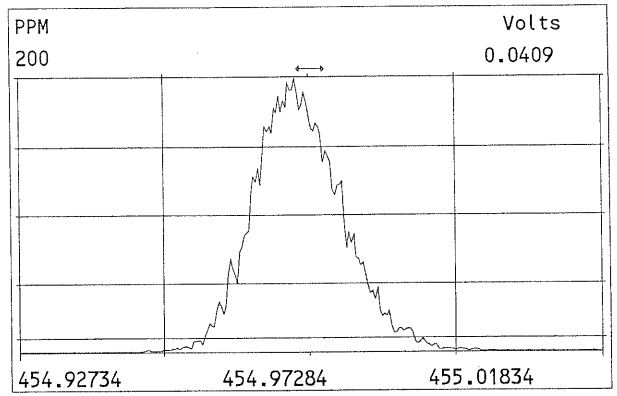


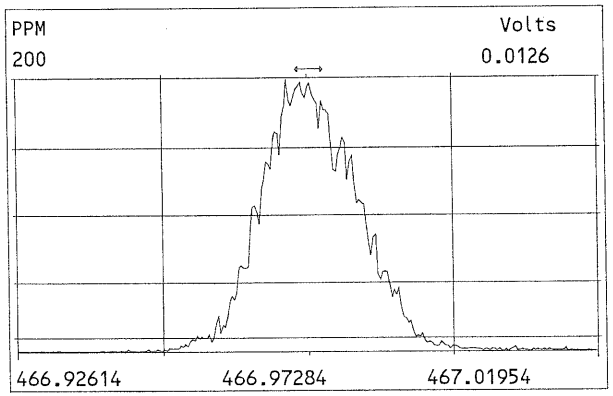


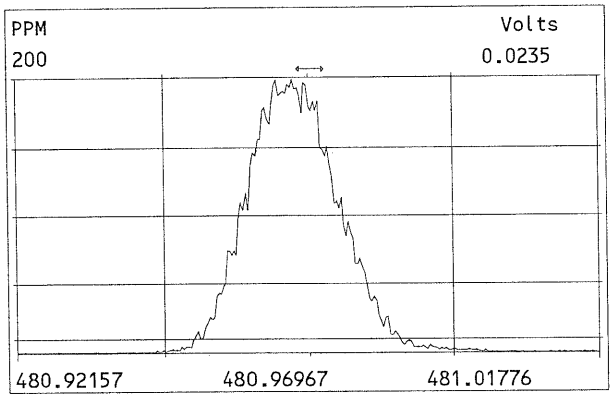
Peak Locate Examination:12-MAY-2011:07:59 File:11MAY11M_RES_CHECK
Experiment:OCDD Function:5 Reference:PFK

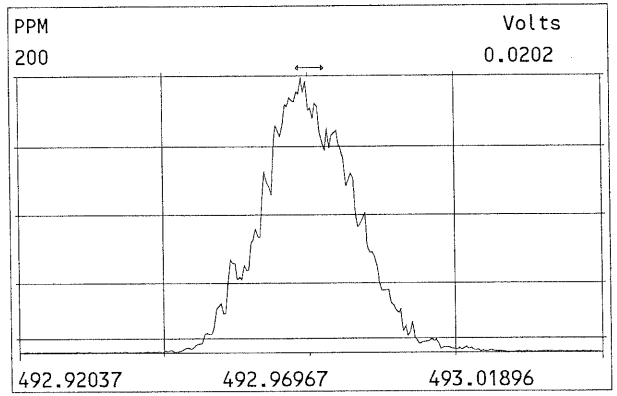


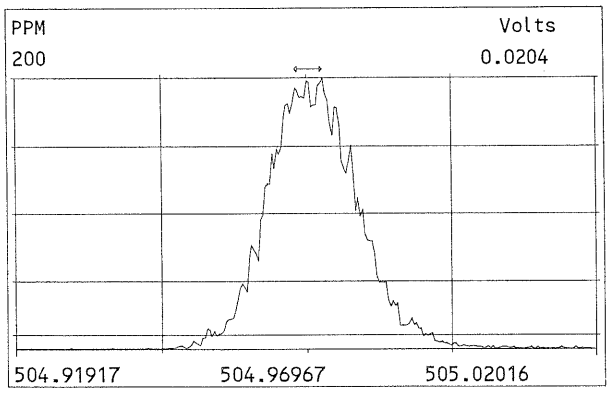


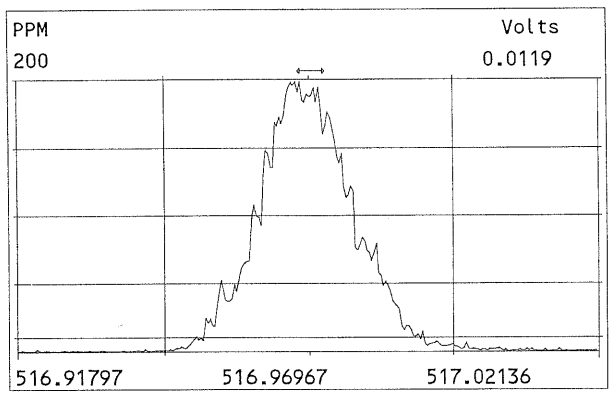












USEPA - ITD

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 3/7/11

Instrument ID: FAL3 GC Column ID: DB5

VER Data Filename: 12MAY11M Sam:1 Analysis Date: 12-MAY-11 09:47:22

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	ACCEPT	CONC. FOUND	CONC. RANGE (ng/mL) (3)
2,3,7,8-TCDD	M/M+2	0.80	0.65-0.89	y	10.7	7.80 - 12.9
1,2,3,7,8-PeCDD	M+2/M+4	1.55	1.32-1.78	y	51.3	39.0 - 65.0
1,2,3,4,7,8-HxCDD	M+2/M+4	1.29	1.05-1.43	y	51.2	39.0 - 64.0
1,2,3,6,7,8-HxCDD	M+2/M+4	1.29	1.05-1.43	y	50.4	39.0 - 64.0
1,2,3,7,8,9-HxCDD	M+2/M+4	1.29	1.05-1.43	y	53.7	41.0 - 61.0
1,2,3,4,6,7,8-HpCDD	M+2/M+4	0.93	0.88-1.20	y	48.3	43.0 - 58.0
OCDD	M+2/M+4	0.95	0.76-1.02	y	100	79.0 - 126
2,3,7,8-TCDF	M/M+2	0.69	0.65-0.89	y	11.3	8.40 - 12.0
1,2,3,7,8-PeCDF	M+2/M+4	1.58	1.32-1.78	y	51.9	41.0 - 60.0
2,3,4,7,8-PeCDF	M+2/M+4	1.55	1.32-1.78	y	49.8	41.0 - 60.0
1,2,3,4,7,8-HxCDF	M+2/M+4	1.20	1.05-1.43	y	46.3	45.0 - 56.0
1,2,3,6,7,8-HxCDF	M+2/M+4	1.23	1.05-1.43	y	48.6	44.0 - 57.0
2,3,4,6,7,8-HxCDF	M+2/M+4	1.21	1.05-1.43	y	47.2	44.0 - 57.0
1,2,3,7,8,9-HxCDF	M+2/M+4	1.20	1.05-1.43	y	47.0	45.0 - 56.0
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.02	0.88-1.20	y	47.4	45.0 - 55.0
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.02	0.88-1.20	y	48.3	43.0 - 58.0
OCDF	M+2/M+4	0.92	0.76-1.02	y	97.3	63.0 - 159

(1) See Table 8, Method 1613, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613.

(3) Contract-required concentration range as specified in Table 6, Method 1613.

Analyst: _____ Date: 5/12/11

USEPA - ITD

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 3/7/11

Instrument ID: FAL3 GC Column ID: DB5

VER Data Filename: 12MAY11M Sam:1 Analysis Date: 12-MAY-11 09:47:22

	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	ACCEPT	CONC. FOUND	CONC. RANGE (ng/mL) (3)
LABELED COMPOUNDS						
13C-2,3,7,8-TCDD	M/M+2	0.74	0.65-0.89	y	91.8	82.0 - 121
13C-1,2,3,7,8-PeCDD	M+2/M+4	1.78	1.32-1.78	y	105	62.0 - 160
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	y	94.1	85.0 - 117
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	y	102	85.0 - 118
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.04	0.88-1.20	y	121	72.0 - 138
13C-OCDD	M+2/M+4	1.00	0.76-1.02	y	211	96.0 - 415
13C-2,3,7,8-TCDF	M/M+2	0.88	0.65-0.89	y	99.9	71.0 - 140
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.66	1.32-1.78	y	112	76.0 - 130
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.65	1.32-1.78	y	113	77.0 - 130
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.48	0.43-0.59	y	103	76.0 - 131
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.49	0.43-0.59	y	100	70.0 - 143
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.48	0.43-0.59	y	99.7	73.0 - 137
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.48	0.43-0.59	y	104	74.0 - 135
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.44	0.37-0.51	y	111	78.0 - 129
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.45	0.37-0.51	y	118	77.0 - 129
13C-OCDF	M+2/M+4	0.93	0.76-1.02	y	205	96.0 - 415
CLEANUP STANDARD (4)						
37Cl-2,3,7,8-TCDD					8.66	7.80 - 12.8

(1) See Table 8, Method 1613, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613.

(3) Contract-required concentration range as specified in Table 6, Method 1613.

(4) No ion abundance ratio; report concentration found.

Analyst: _____ Date: 5/12/11

FORM 5

PCDD/PCDF RT WINDOW AND ISOMER SPECIFICITY STANDARDS

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Instrument ID: FAL3 Initial Calibration Date: 3/7/11

RT Window Data Filename: 12MAY11M Sam:1 Analysis Date: 12-MAY-11 Time: 09:47:22

DB-5 IS Data Filename: 12MAY11M Sam:1 Analysis Date: 12-MAY-11 Time: 09:47:22

DB-225 IS Date Filename: Analysis Date: Time:

DB-5 RT WINDOW DEFINING STANDARDS RESULTS

ISOMERS	ABSOLUTE RT	ISOMERS	ABSOLUTE RT
1,3,6,8-TCDD (F)	24:18	1,3,6,8-TCDF (F)	22:57
1,2,8,9-TCDD (L)	28:14	1,2,8,9-TCDF (L)	28:27
1,2,4,7,9-PeCDD (F)	30:08	1,3,4,6,8-PeCDF (F)	28:19
1,2,3,8,9-PeCDD (L)	33:41	1,2,3,8,9-PeCDF (L)	34:07
1,2,4,6,7,9-HxCDD (F)	36:01	1,2,3,4,6,8-HxCDF (F)	35:09
1,2,3,7,8,9-HxCDD (L)	39:06	1,2,3,7,8,9-HxCDF (L)	39:39
1,2,3,4,6,7,9-HpCDD (F)	42:42	1,2,3,4,6,7,8-HpCDF (F)	42:11
1,2,3,4,6,7,8-HpCDD (L)	44:05	1,2,3,4,7,8,9-HpCDF (L)	44:60

(F) = First eluting iosmer (DB-5); (L) = Last eluting isomer (DB-5)

==========

ISOMER SPECIFICITY (IS) TEST STANDARD RESULTS

COMPARED PEAKS (1)	% VALLEY HEIGHT BETWEEN
	<25%

(1) To meet contract requirement, %Valley Height Between Compared Peaks shall not exceed 25% (section 15.4.2.2, Method 1613).

Analyst: _____ Date: 5/10/11

USEPA - ITD

FORM 6A
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.: Init. Cal. Date: 3/7/11

Instrument ID: FAL3 GC Column ID: DB5

Analysis Date: 12-MAY-11 09:47:22 CS3 or VER Data Filename: 12MAY11M Sam:1

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS (1)
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999-1.002
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999-1.003
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.001	0.999-1.002
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.001	0.999-1.002
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.001	0.999-1.002
LABELED COMPOUNDS			
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.022	0.989-1.052
13C-2,3,7,8-TCDD		1.022	0.976-1.043
13C-2,3,7,8-TCDF		0.993	0.923-1.103
13C-1,2,3,7,8-PeCDD		1.239	1.000-1.567
13C-1,2,3,7,8-PeCDF		1.174	0.923-1.203
13C-2,3,4,7,8-PeCDF		1.223	0.923-1.303

(1) Contract-required limits for Relative Retention Times (RRT) as specified in Table 2, Method 1613.

Analyst: _____ Date: 5/12/11

USEPA - ITD

FORM 6B
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.: Init. Cal. Date: 3/7/11

Instrument ID: FAL3 GC Column ID: DB5

Analysis Date: 12-MAY-11 09:47:22 CS3 or VER Data Filename: 12MAY11M Sam:1

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS (1)
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.000	0.999-1.001
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.000	0.998-1.004
1,2,3,7,8,9-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.012	1.000-1.019
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.001	0.999-1.001
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.001	0.997-1.005
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.000	0.999-1.001
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.000	0.999-1.001
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.000	0.999-1.001
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.001	0.999-1.001
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.001	0.999-1.001
OCDD	13C-OCDD	1.001	0.999-1.001
OCDF	13C-OCDF	1.001	0.999-1.001
LABELED COMPOUNDS			
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.984	0.977-1.000
13C-1,2,3,6,7,8-HxCDD		0.989	0.981-1.003
13C-1,2,3,4,7,8-HxCDF		0.949	0.944-0.970
13C-1,2,3,6,7,8-HxCDF		0.954	0.949-0.975
13C-2,3,4,6,7,8-HxCDF		0.978	0.959-1.021
13C-1,2,3,7,8,9-HxCDF		1.015	0.977-1.047
13C-1,2,3,4,6,7,8-HpCDD		1.128	1.086-1.130
13C-1,2,3,4,6,7,8-HpCDF		1.079	1.043-1.085
13C-1,2,3,4,7,8,9-HpCDF		1.151	1.057-1.154
13C-OCDD		1.269	1.032-1.311
13C-OCDF		1.279	1.000-1.311

(1) Contract-required limits for Relative Retention Times (RRT) as specified in Table 2, Method 1613.

Analyst: _____ Date: 5/10/11

FAL ID: ST051211M1 Filename: 12MAY11M Sam:1 Acquired: 12-MAY-11 09:47:22 ICal: PCDDFAL3-3-7-11
Client ID: 1613 CS3 100511J ConCal: ST051211M1 EndCal: ST051211M2
Results: GC Column: DB5 Amount: 1.000 NATO 1989 Tox: 101
WHO 1998 Tox: 127 WHO 2005 Tox: 116

Name	Resp	RA	RT	RRF	Conc	Qual	Fac	Noise-1	Noise-2	DL
2,3,7,8-TCDD	3.69e+06	0.80 y	27:18	1.13	10.7		2.50	-	-	*
1,2,3,7,8-PeCDD	1.78e+07	1.55 y	33:07	1.02	51.3		2.50	-	-	*
1,2,3,4,7,8-HxCDD	2.07e+07	1.29 y	38:29	1.45	51.2		2.50	-	-	*
1,2,3,6,7,8-HxCDD	1.74e+07	1.29 y	38:39	1.45	50.4		2.50	-	-	*
1,2,3,7,8,9-HxCDD	2.04e+07	1.29 y	39:06	1.47	53.7		2.50	-	-	*
1,2,3,4,6,7,8-HpCDD	1.56e+07	0.93 y	44:05	1.30	48.3		2.50	-	-	*
OCDD	2.31e+07	0.95 y	49:37	1.45	100		2.50	-	-	*
2,3,7,8-TCDF	6.90e+06	0.69 y	26:32	1.15	11.3		2.50	-	-	*
1,2,3,7,8-PeCDF	2.32e+07	1.58 y	31:23	0.89	51.9		2.50	-	-	*
2,3,4,7,8-PeCDF	2.20e+07	1.55 y	32:41	0.89	49.8		2.50	-	-	*
1,2,3,4,7,8-HxCDF	2.22e+07	1.20 y	37:06	1.01	46.3		2.50	-	-	*
1,2,3,6,7,8-HxCDF	2.49e+07	1.23 y	37:17	0.89	48.6		2.50	-	-	*
2,3,4,6,7,8-HxCDF	2.22e+07	1.21 y	38:13	1.02	47.2		2.50	-	-	*
1,2,3,7,8,9-HxCDF	2.66e+07	1.20 y	39:39	1.10	47.0		2.50	-	-	*
1,2,3,4,6,7,8-HpCDF	1.92e+07	1.02 y	42:11	1.48	47.4		2.50	-	-	*
1,2,3,4,7,8,9-HpCDF	1.55e+07	1.02 y	44:60	1.43	48.3		2.50	-	-	*
OCDF	2.44e+07	0.92 y	49:60	0.84	97.3		2.50	-	-	*

						Rec
13C-2,3,7,8-TCDD	3.04e+07	0.74 y	27:17	1.03	91.8	91.8
13C-1,2,3,7,8-PeCDD	3.41e+07	1.78 y	33:05	1.01	105	105
13C-1,2,3,4,7,8-HxCDD	2.80e+07	1.26 y	38:28	1.19	94.1	94.1
13C-1,2,3,6,7,8-HxCDD	2.37e+07	1.26 y	38:38	0.94	102	102
13C-1,2,3,4,6,7,8-HpCDD	2.49e+07	1.04 y	44:04	0.83	121	121
13C-OCDD	3.19e+07	1.00 y	49:36	0.61	211	105
13C-2,3,7,8-TCDF	5.33e+07	0.88 y	26:31	0.98	99.9	99.9
13C-1,2,3,7,8-PeCDF	5.05e+07	1.66 y	31:21	0.83	112	112
13C-2,3,4,7,8-PeCDF	4.95e+07	1.65 y	32:40	0.80	113	113
13C-1,2,3,4,7,8-HxCDF	4.75e+07	0.48 y	37:04	1.84	103	103
13C-1,2,3,6,7,8-HxCDF	5.73e+07	0.49 y	37:16	2.29	100	100
13C-2,3,4,6,7,8-HxCDF	4.63e+07	0.48 y	38:12	1.86	99.7	99.7
13C-1,2,3,7,8,9-HxCDF	5.13e+07	0.48 y	39:38	1.98	104	104
13C-1,2,3,4,6,7,8-HpCDF	2.73e+07	0.44 y	42:10	0.99	111	111
13C-1,2,3,4,7,8,9-HpCDF	2.26e+07	0.45 y	44:58	0.77	118	118
13C-OCDF	5.96e+07	0.93 y	49:58	1.17	205	102
37Cl-2,3,7,8-TCDD	2.04e+06		27:18	0.73	8.66	86.6

13C-1,2,3,4-TCDD	3.22e+07	0.78 y	26:42	-	84.8
13C-1,2,3,4-TCDF	5.44e+07	0.88 y	25:26	-	75.6
13C-1,2,3,7,8,9-HxCDD	2.50e+07	1.26 y	39:04	-	101

						Fac	Noise-1	Noise-2	DL		#Hom
Total Tetra-Dioxins	1.94e+07		24:18	1.13	56.2	2.50	-	-	*		19
Total Penta-Dioxins	3.81e+07		30:08	1.02	110	2.50	-	-	*		7
Total Hexa-Dioxins	6.64e+07		36:01	1.46	176	2.50	-	-	*		12
Total Hepta-Dioxins	3.23e+07		42:42	1.30	100.0	2.50	-	-	*		5
Total Tetra-Furans	3.16e+07		22:57	1.15	51.6	2.50	-	-	*		23
1st Fn. Tot Penta-Furans	2.33e+07		28:19	0.89	52.3	2.50	-	-	*	PeCDF	1
Total Penta-Furans	6.69e+07		30:04	0.89	150	2.50	-	-	*	203	13
Total Hexa-Furans	1.10e+08		35:09	1.00	217	2.50	-	-	*		10
Total Hepta-Furans	3.52e+07		42:11	1.46	96.9	2.50	-	-	*		14

Analyst: _____ Date: 5/12/11

Frontier Analytical Laboratory - Acquisition Log

Run Name:12MAY11M Instrument: FAL3 GC: DB5 Experiment:OCDD

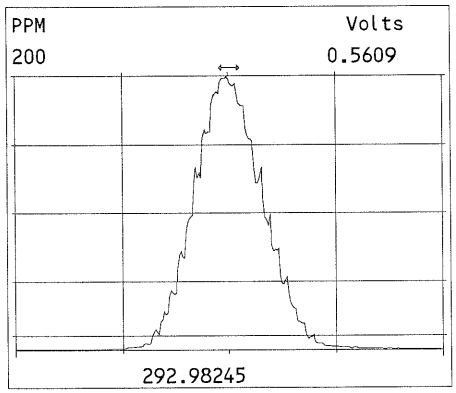
Data File	S	FAL ID	Client ID	Acquired	ConCal	EndCal	Analyst
12MAY11M	1	ST051211M1	1613 CS3 100511J	12-MAY-11 09:47:22	ST051211M1	ST051211M2	BS
12MAY11M	2	6735-008-0001-SA	DMA-TP4-0-1.5-042011 1:¶	12-MAY-11 10:42:41	ST051211M1	ST051211M2	BS
12MAY11M	3	6735-014-0001-SA	DMA-TP3-3-4-042011 1:10	12-MAY-11 11:38:00	ST051211M1	ST051211M2	BS
12MAY11M	4	6735-011-0001-SA	DMA-TP5-1.5-2-042011-D ¶	12-MAY-11 12:33:19	ST051211M1	ST051211M2	BS
12MAY11M	5	6735-010-0001-SA	DMA-TP5-1.5-2-042011 1:¶	12-MAY-11 13:28:38	ST051211M1	ST051211M2	BS
12MAY11M	6	6644-010-0001-SA	B-105@0.0 1:10	12-MAY-11 14:23:57	ST051211M1	ST051211M2	BS
12MAY11M	7	6645-001-0001-SA	B-108@0.0 1:10	12-MAY-11 15:19:19	ST051211M1	ST051211M2	BS
12MAY11M	8	6644-012-0001-SA	B-106@0.0 1:20	12-MAY-11 16:14:42	ST051211M1	ST051211M2	BS
12MAY11M	9	6645-009-0001-SA	B-112@0.0 1:50	12-MAY-11 17:10:05	ST051211M1	ST051211M2	BS
12MAY11M	10	SB051211M1	Solvent Blank	12-MAY-11 18:05:25	ST051211M1	ST051211M2	BS
12MAY11M	11	SB051211M2	Solvent Blank	12-MAY-11 19:00:47	ST051211M1	ST051211M2	BS
12MAY11M	12	SB051211M3	Solvent Blank	12-MAY-11 19:56:06	ST051211M1	ST051211M2	BS
12MAY11M	13	SB051211M4	Solvent Blank	12-MAY-11 20:51:29	ST051211M1	ST051211M2	BS
12MAY11M	14	ST051211M2	1613 CS3 100511J	12-MAY-11 21:46:48	ST051211M1	ST051211M2	BS

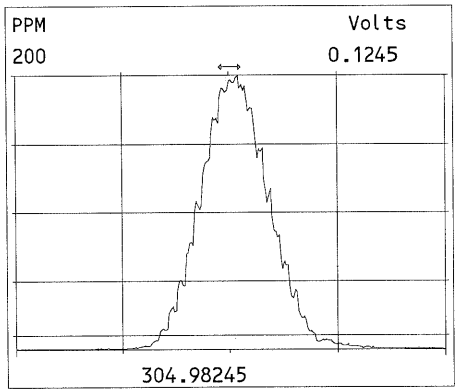
5/11/11

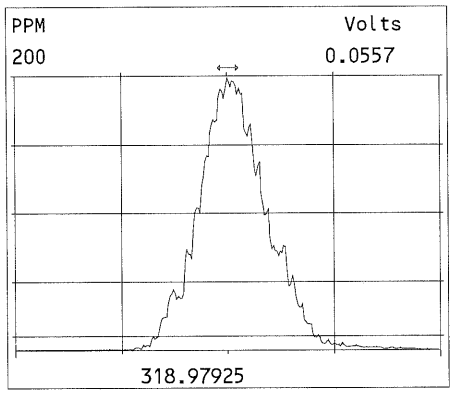
Data Backed Up:_____

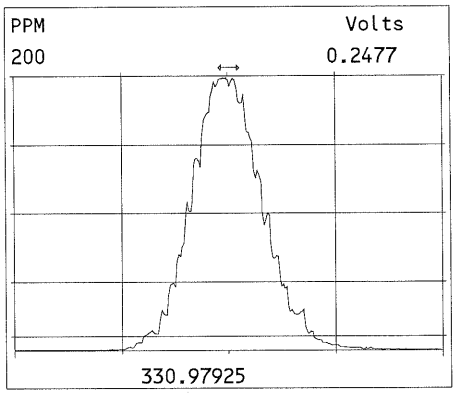
Date:_____

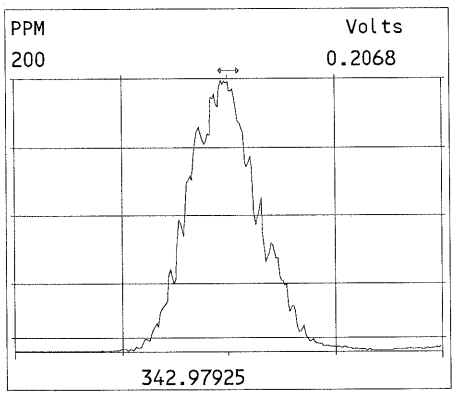
Peak Locate Examination:12-MAY-2011:09:45 File:12MAY11M
Experiment:OCDD Function:1 Reference:PFK

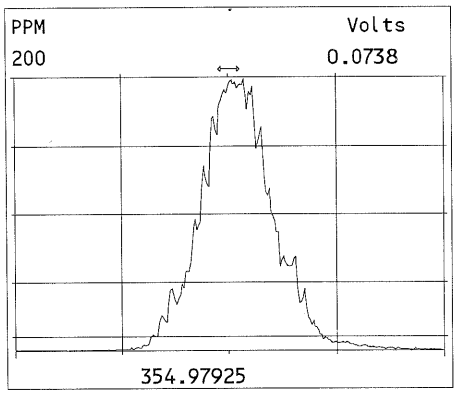


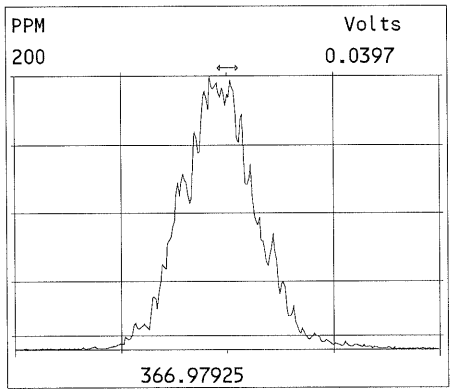


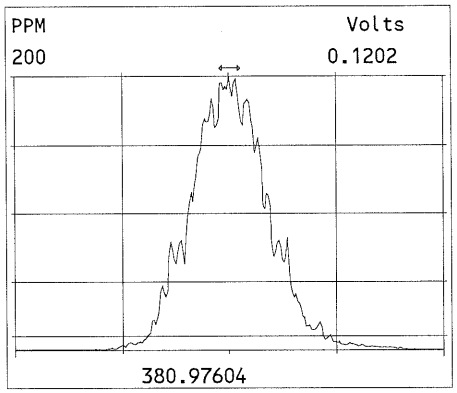


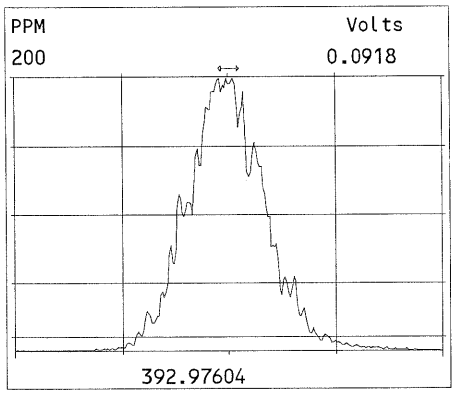


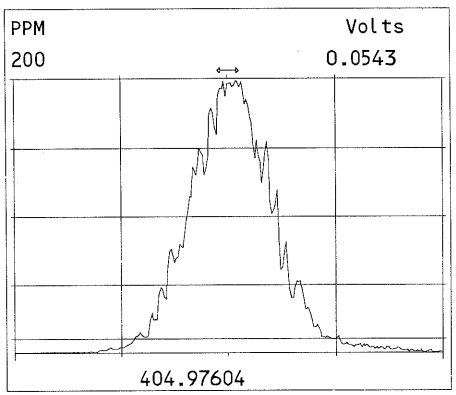


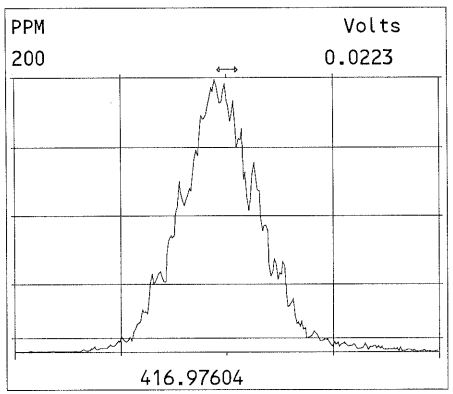




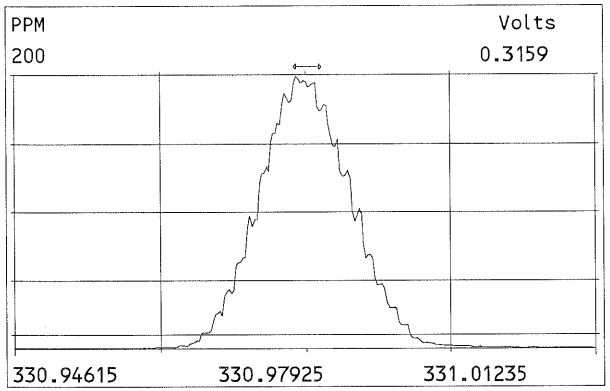


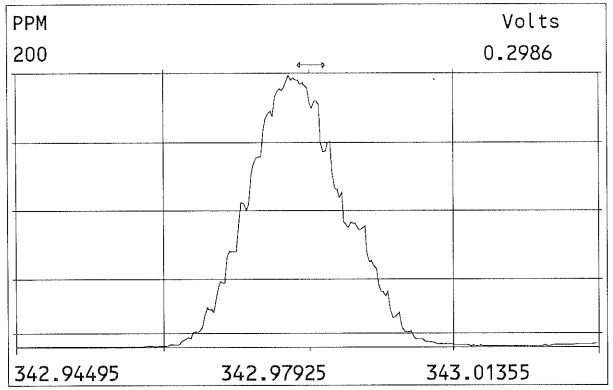


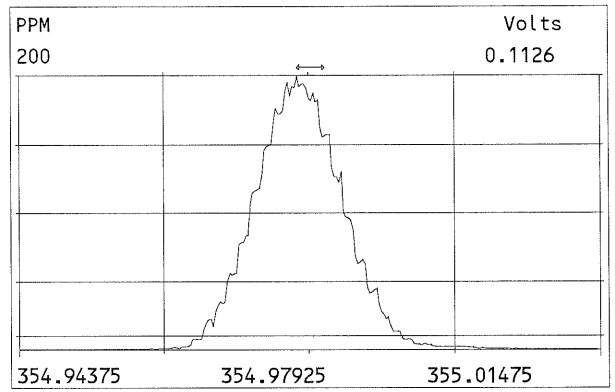


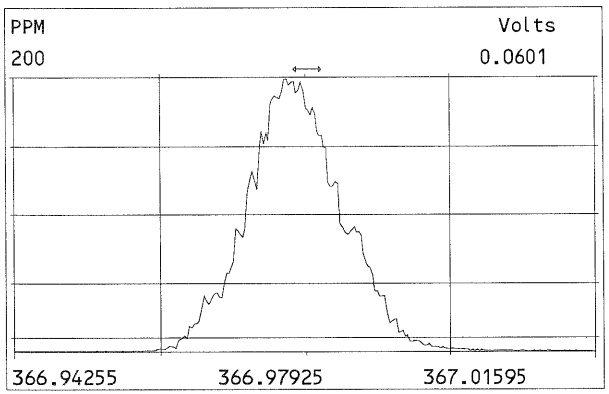


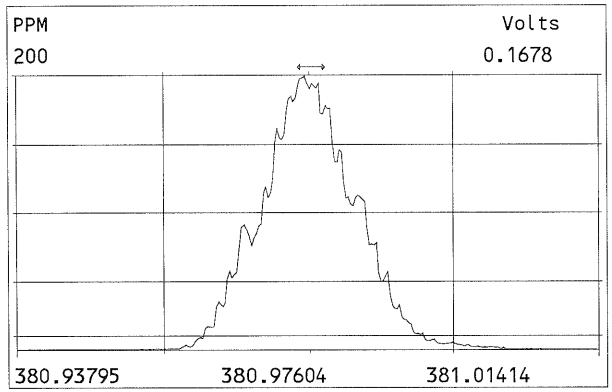
Peak Locate Examination:12-MAY-2011:09:45 File:12MAY11M
Experiment:OCDD Function:2 Reference:PFK

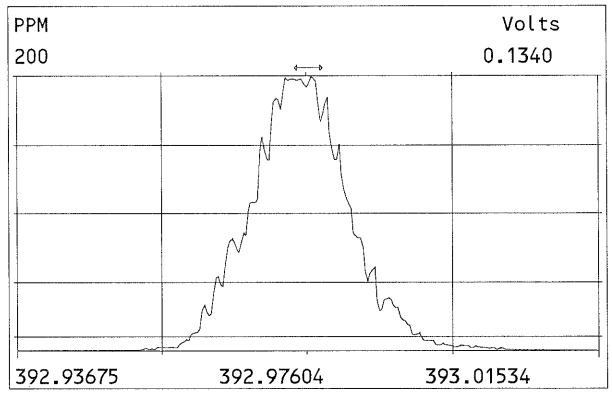


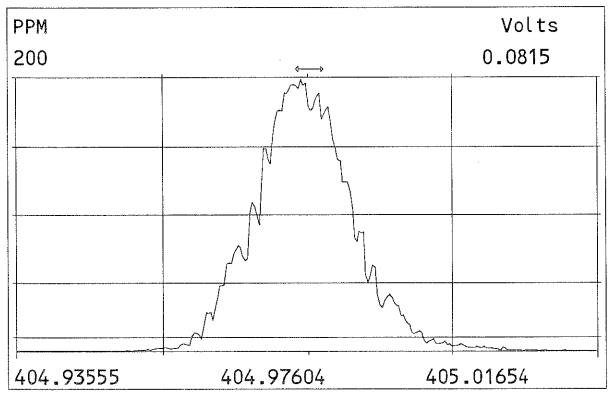


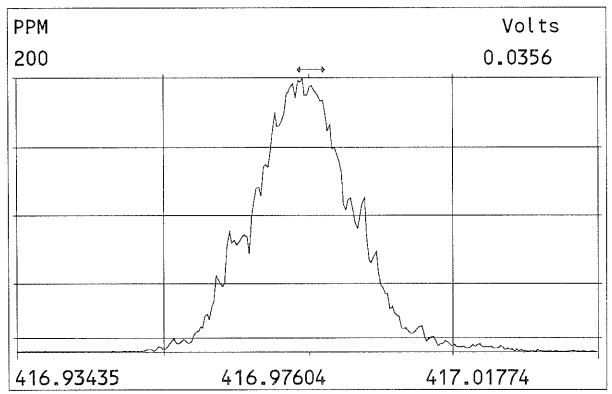




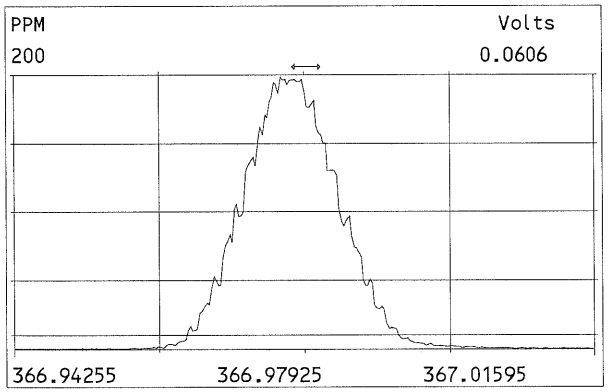


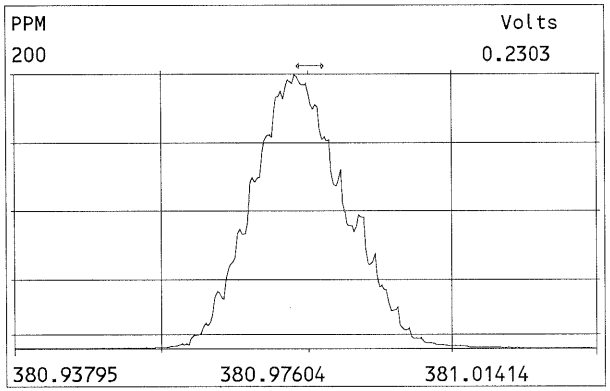


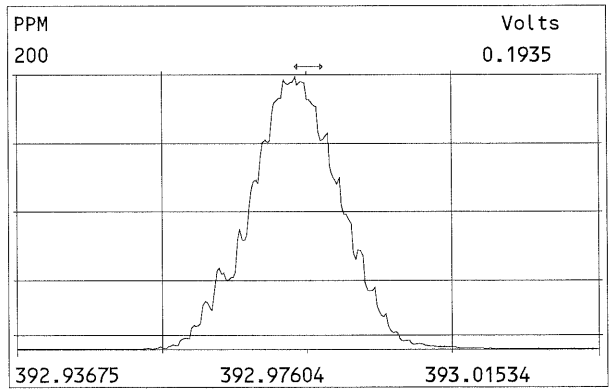


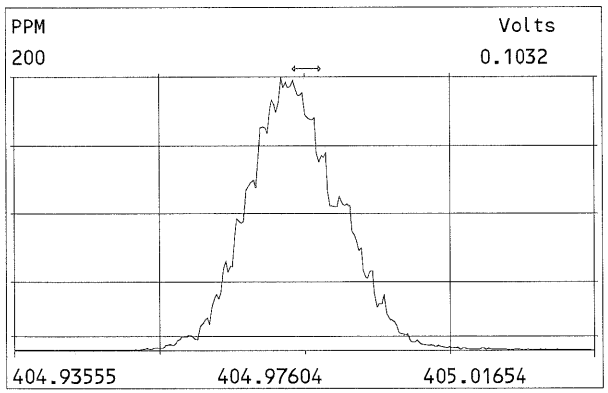


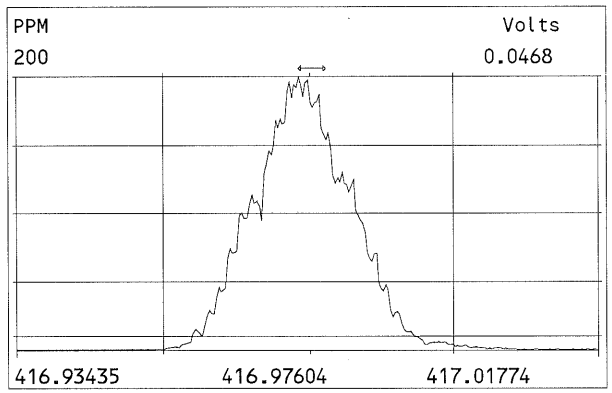
Peak Locate Examination:12-MAY-2011:09:46 File:12MAY11M
Experiment:OCDD Function:3 Reference:PFK

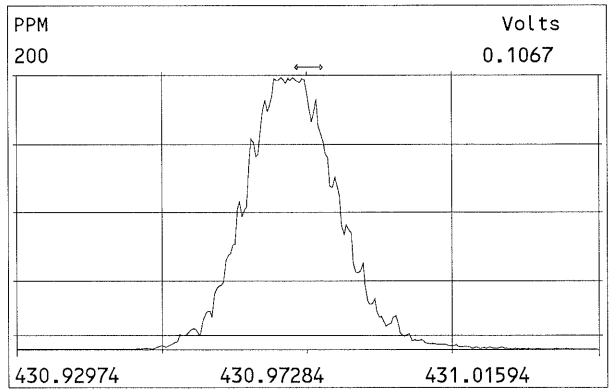


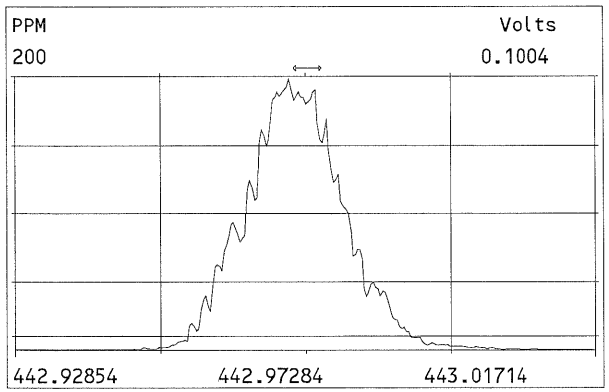


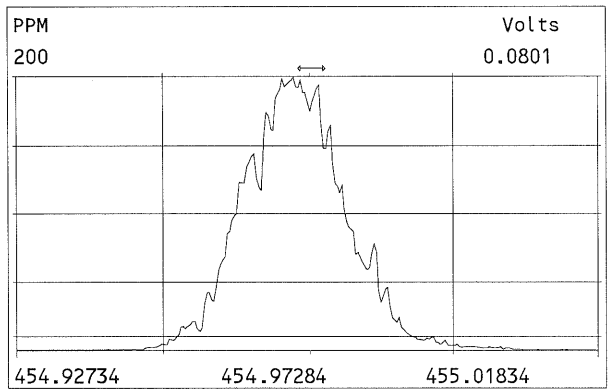




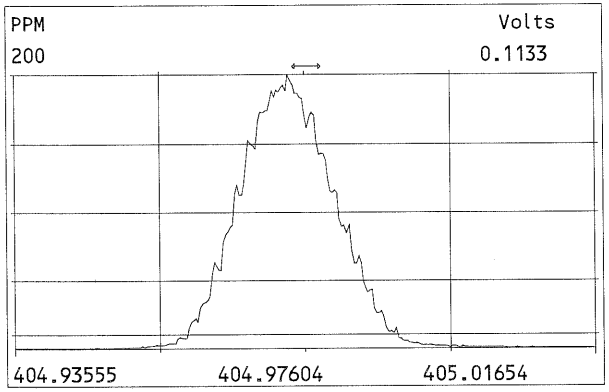


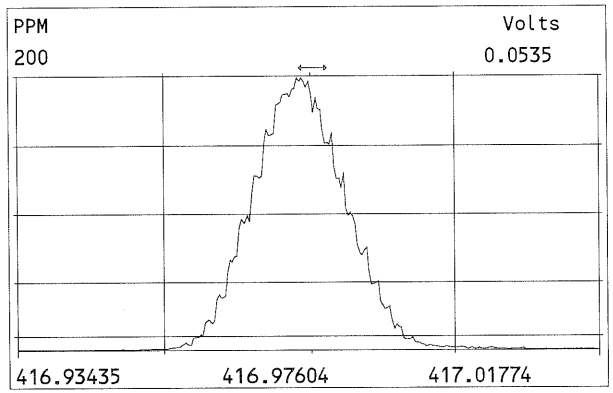


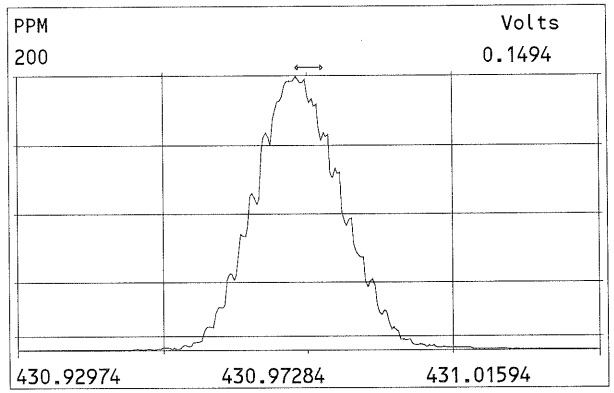


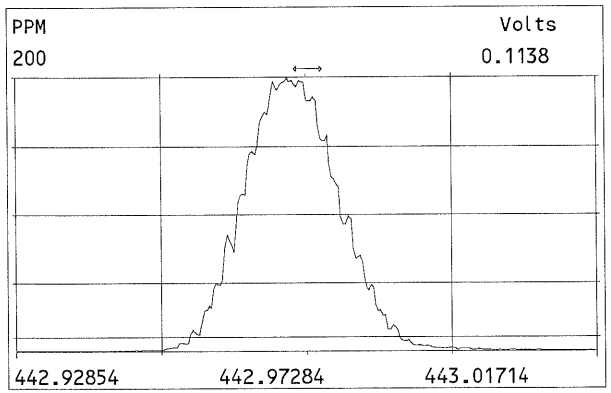


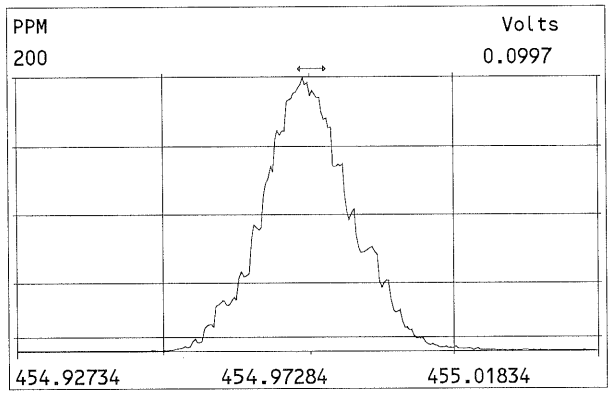
Peak Locate Examination:12-MAY-2011:09:46 File:12MAY11M
Experiment:OCDD Function:4 Reference:PFK

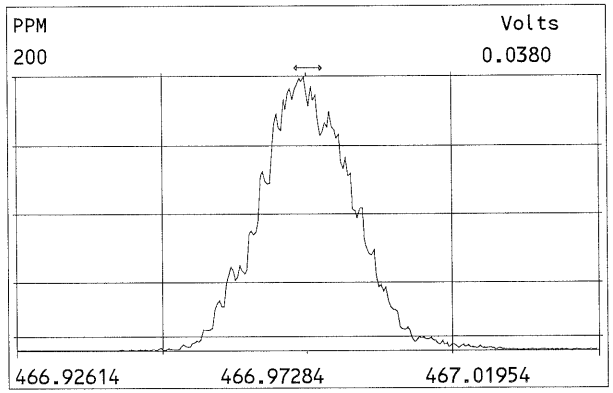


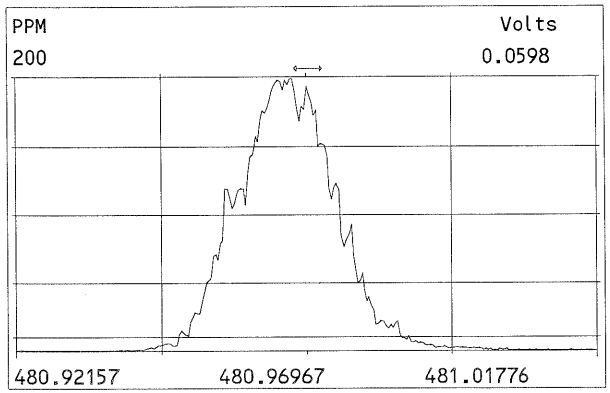




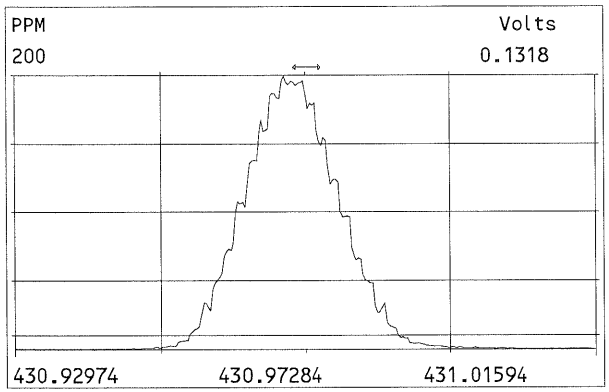


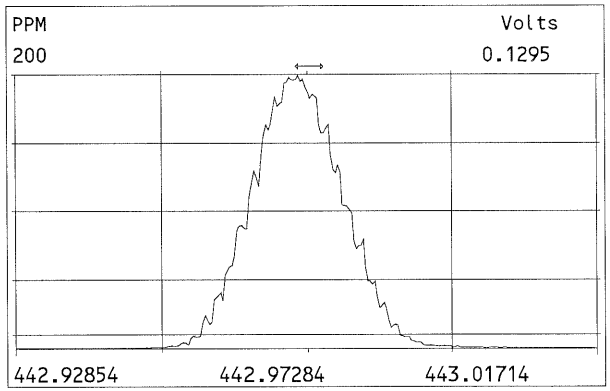


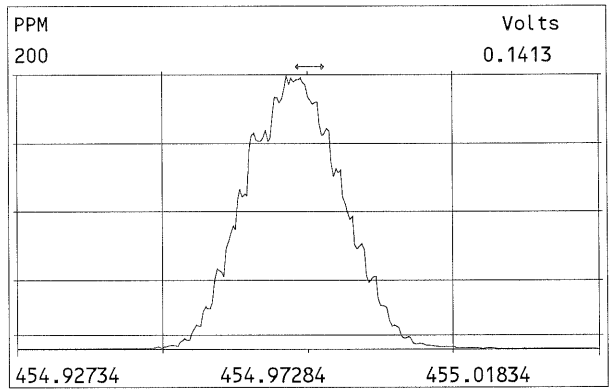


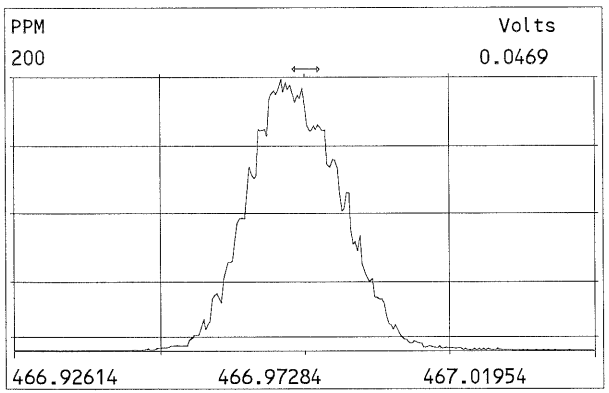


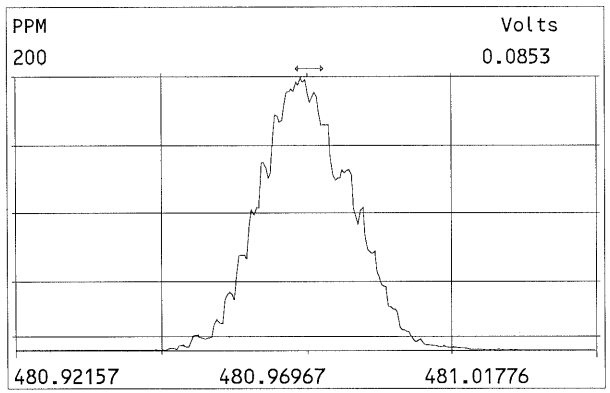
Peak Locate Examination:12-MAY-2011:09:46 File:12MAY11M
Experiment:OCDD Function:5 Reference:PFK

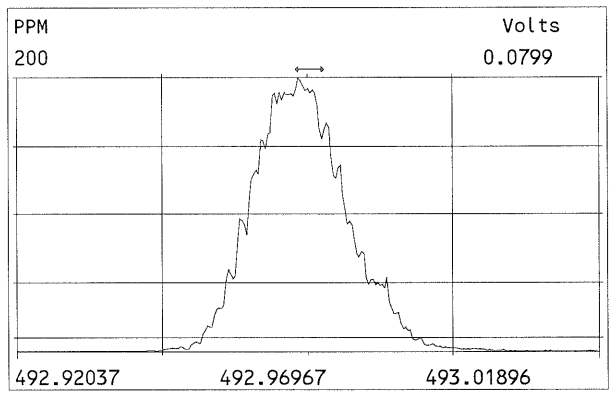


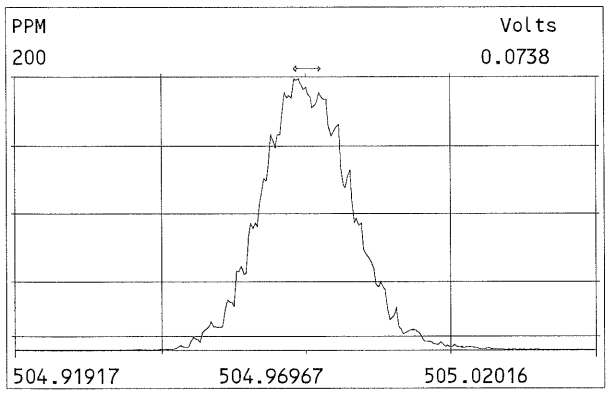


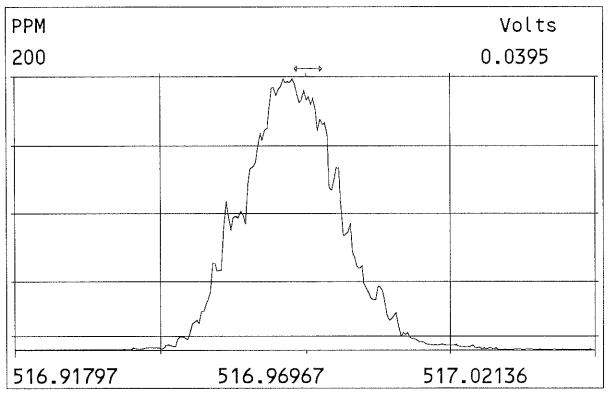












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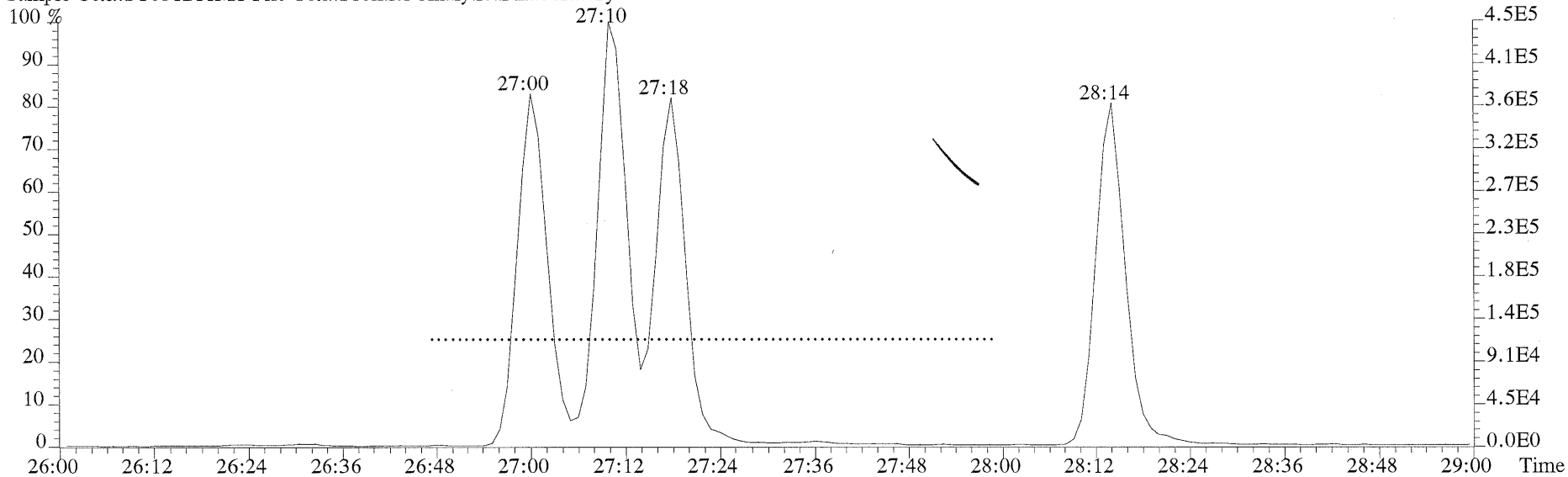
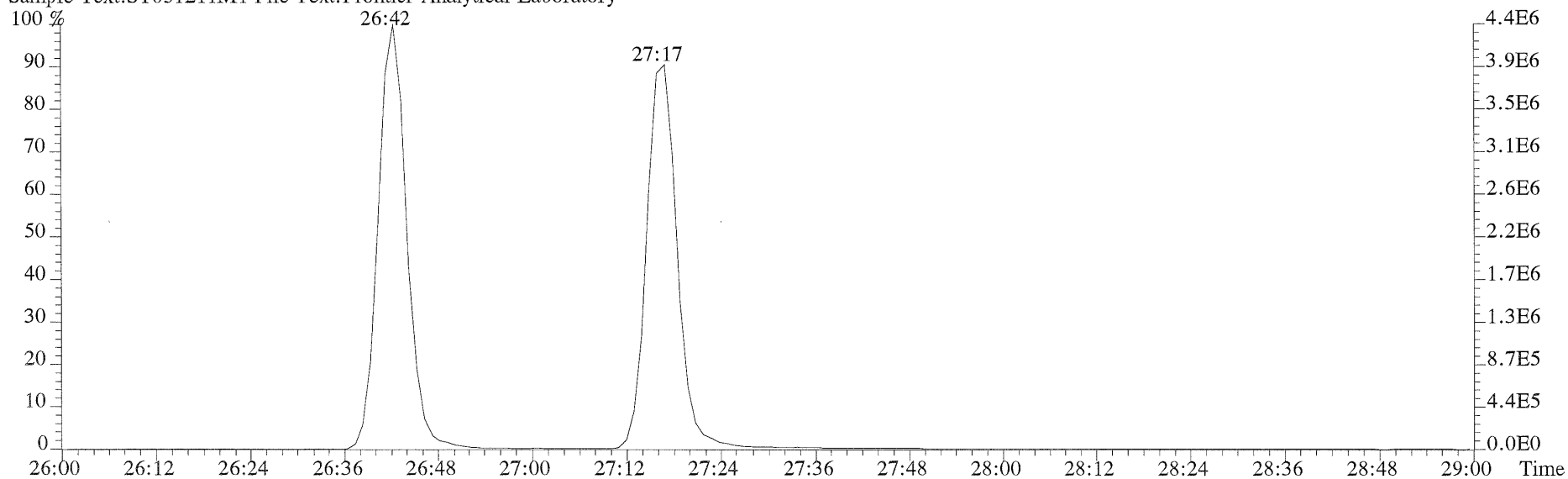
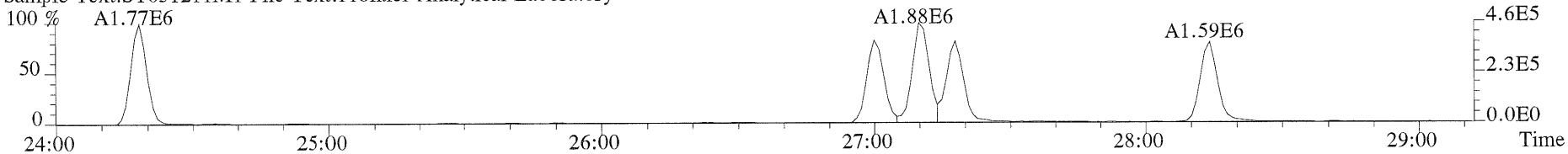
319.8965 Exp:OCDD
Sample Text:ST051211M1 File Text:Frontier Analytical Laboratory



File:12MAY11M #1-425 Acq:12-MAY-2011 09:47:22 GC EI+ Voltage SIR Autospec-Ultima
333.9339 Exp:OCDD
Sample Text:ST051211M1 File Text:Frontier Analytical Laboratory



File:12MAY11M #1-425 Acq:12-MAY-2011 09:47:22 GC EI+ Voltage SIR Autospec-Ultima
319.8965 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M1 File Text:Frontier Analytical Laboratory



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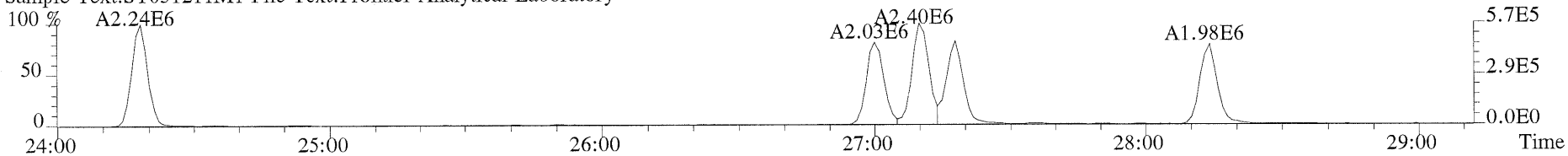
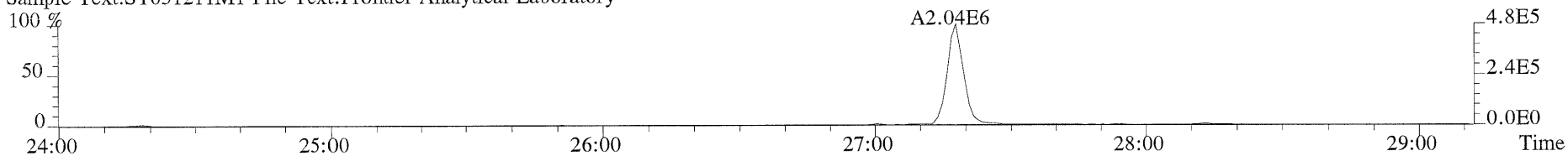
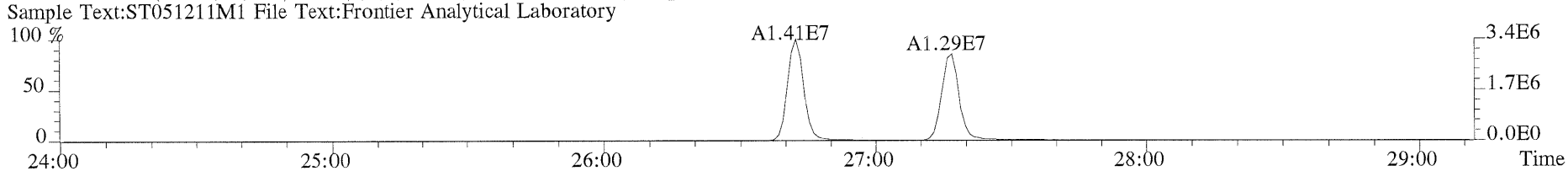
321.8936 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M1 File Text:Frontier Analytical Laboratory



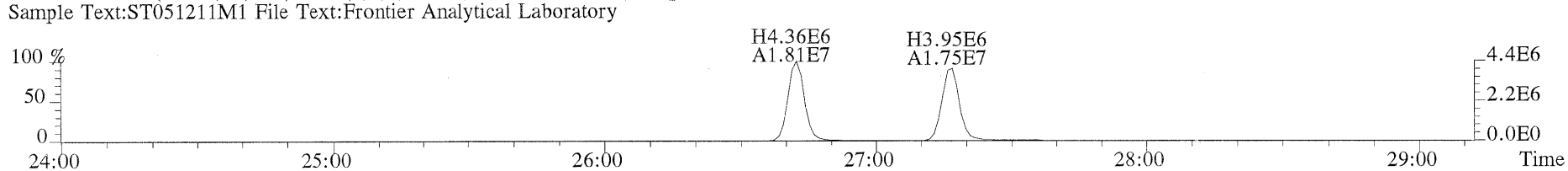
File:12MAY11M #1-425 Acq:12-MAY-2011 09:47:22 GC EI+ Voltage SIR Autospec-Ultima
327.8847 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M1 File Text:Frontier Analytical Laboratory



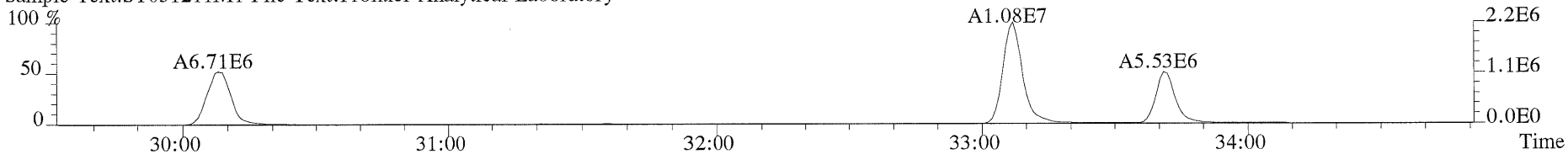
File:12MAY11M #1-425 Acq:12-MAY-2011 09:47:22 GC EI+ Voltage SIR Autospec-Ultima
331.9368 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M1 File Text:Frontier Analytical Laboratory



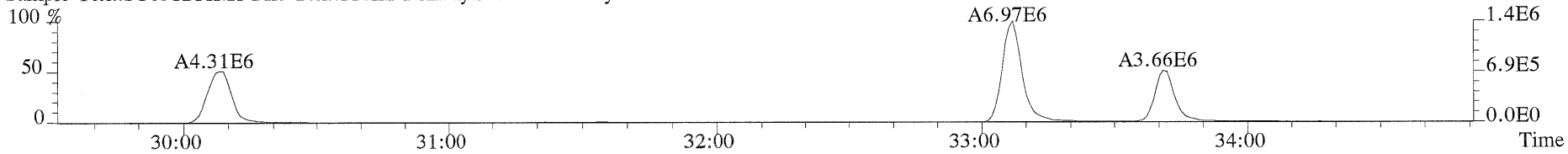
File:12MAY11M #1-425 Acq:12-MAY-2011 09:47:22 GC EI+ Voltage SIR Autospec-Ultima
333.9339 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M1 File Text:Frontier Analytical Laboratory



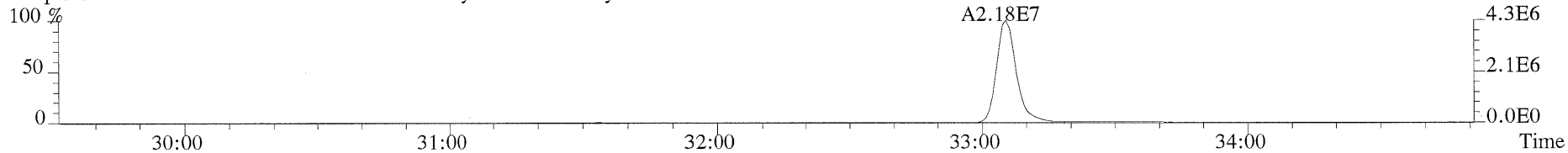
File:12MAY11M #1-413 Acq:12-MAY-2011 09:47:22 GC EI+ Voltage SIR Autospec-Ultima
355.8546 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M1 File Text:Frontier Analytical Laboratory



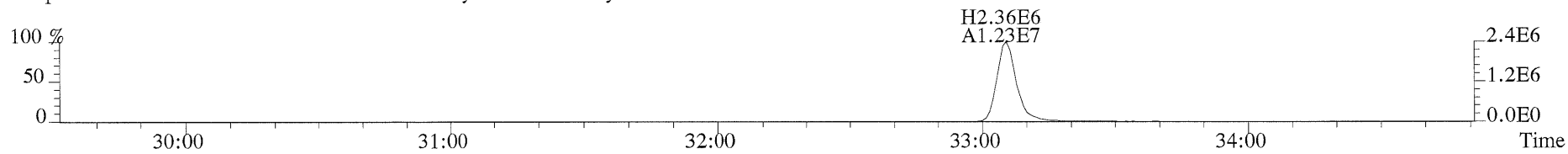
File:12MAY11M #1-413 Acq:12-MAY-2011 09:47:22 GC EI+ Voltage SIR Autospec-Ultima
357.8517 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M1 File Text:Frontier Analytical Laboratory



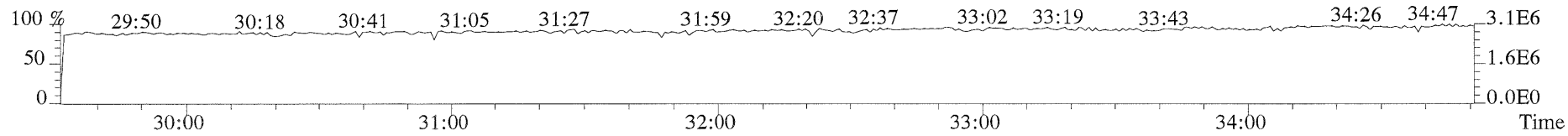
File:12MAY11M #1-413 Acq:12-MAY-2011 09:47:22 GC EI+ Voltage SIR Autospec-Ultima
367.8949 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M1 File Text:Frontier Analytical Laboratory



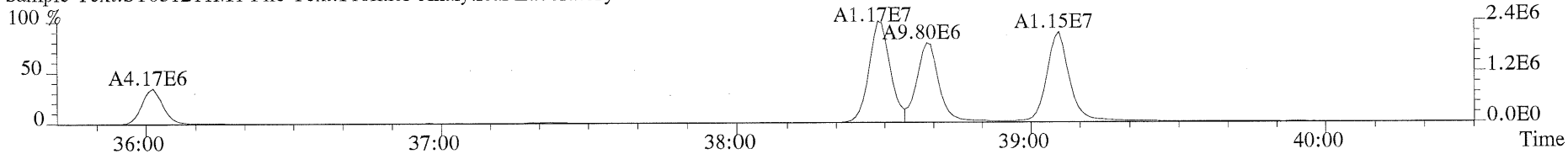
File:12MAY11M #1-413 Acq:12-MAY-2011 09:47:22 GC EI+ Voltage SIR Autospec-Ultima
369.8919 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M1 File Text:Frontier Analytical Laboratory



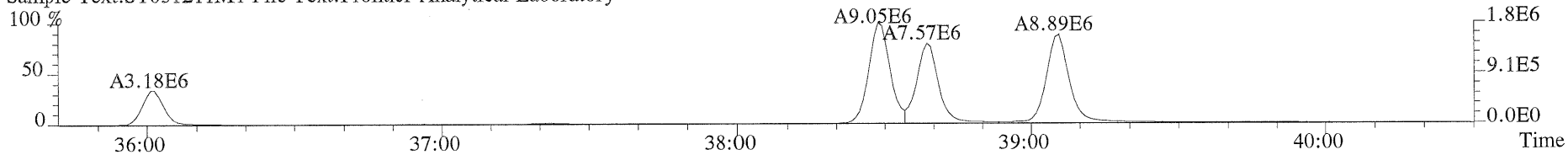
File:12MAY11M #1-413 Acq:12-MAY-2011 09:47:22 GC EI+ Voltage SIR Autospec-Ultima
366.9792 F:2 Exp:OCDD
Sample Text:ST051211M1 File Text:Frontier Analytical Laboratory



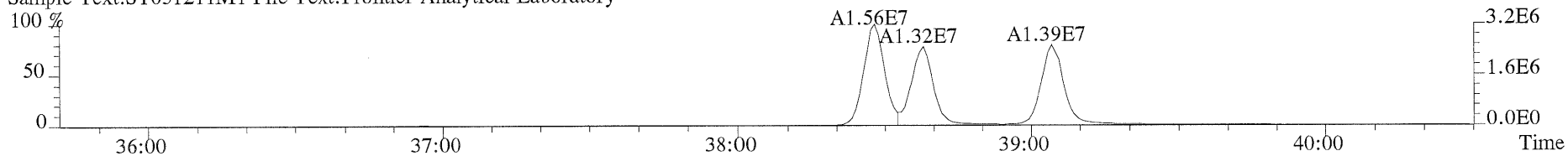
File:12MAY11M #1-476 Acq:12-MAY-2011 09:47:22 GC EI+ Voltage SIR Autospec-Ultima
389.8156 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M1 File Text:Frontier Analytical Laboratory



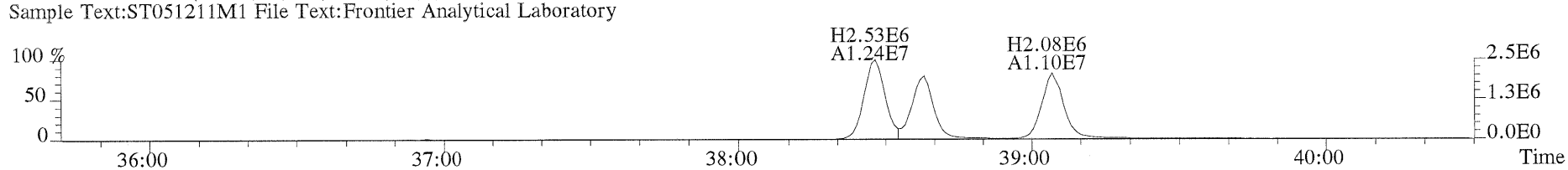
File:12MAY11M #1-476 Acq:12-MAY-2011 09:47:22 GC EI+ Voltage SIR Autospec-Ultima
391.8127 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M1 File Text:Frontier Analytical Laboratory



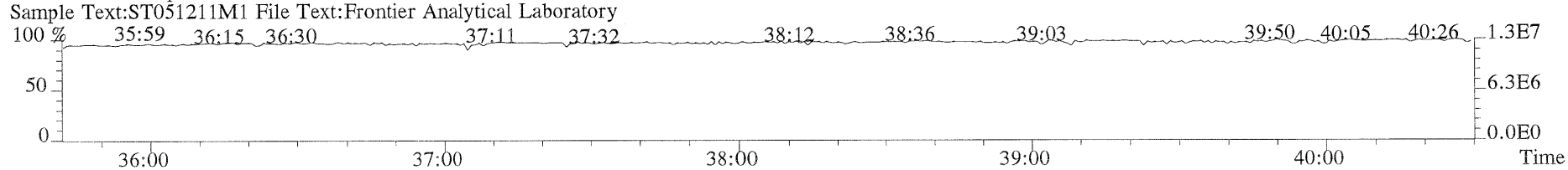
File:12MAY11M #1-476 Acq:12-MAY-2011 09:47:22 GC EI+ Voltage SIR Autospec-Ultima
401.8559 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M1 File Text:Frontier Analytical Laboratory



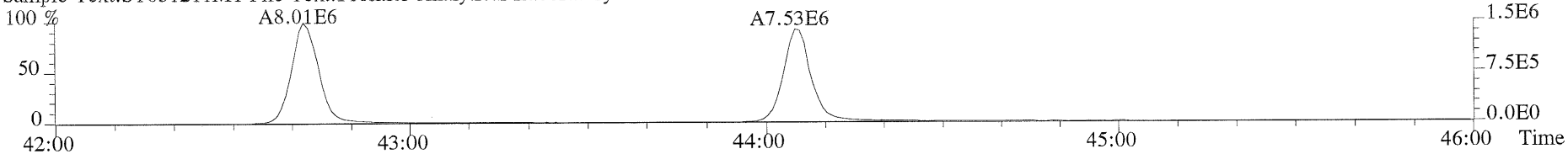
File:12MAY11M #1-476 Acq:12-MAY-2011 09:47:22 GC EI+ Voltage SIR Autospec-Ultima
403.8530 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M1 File Text:Frontier Analytical Laboratory



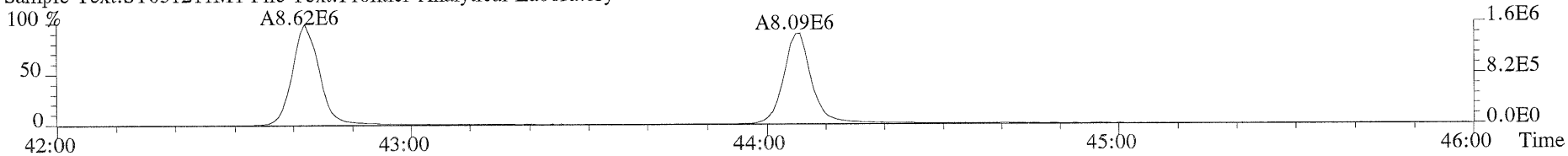
File:12MAY11M #1-476 Acq:12-MAY-2011 09:47:22 GC EI+ Voltage SIR Autospec-Ultima
380.9760 F:3 Exp:OCDD
Sample Text:ST051211M1 File Text:Frontier Analytical Laboratory



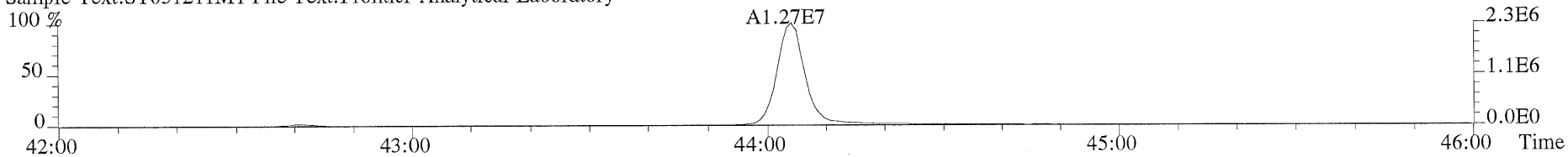
File:12MAY11M #1-541 Acq:12-MAY-2011 09:47:22 GC EI+ Voltage SIR Autospec-Ultima
423.7767 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M1 File Text:Frontier Analytical Laboratory



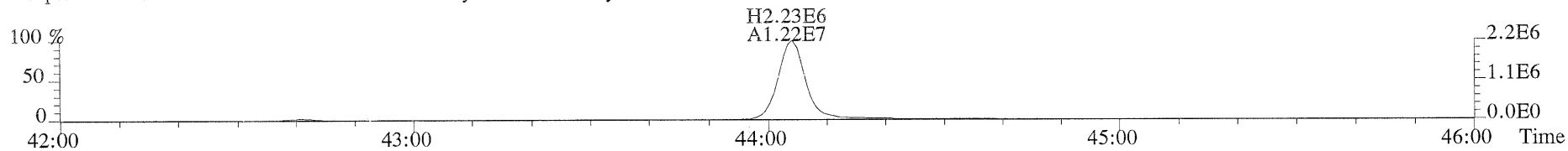
File:12MAY11M #1-541 Acq:12-MAY-2011 09:47:22 GC EI+ Voltage SIR Autospec-Ultima
425.7737 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M1 File Text:Frontier Analytical Laboratory



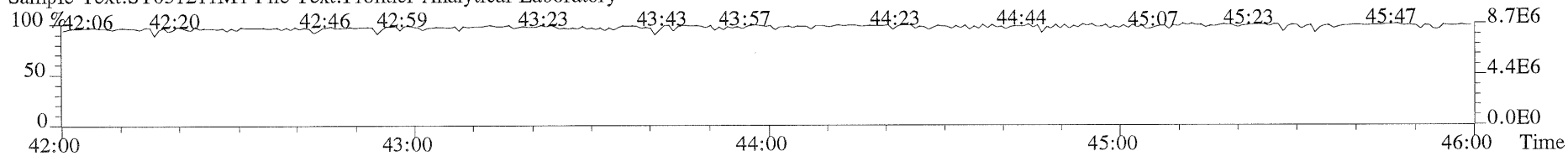
File:12MAY11M #1-541 Acq:12-MAY-2011 09:47:22 GC EI+ Voltage SIR Autospec-Ultima
435.8169 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M1 File Text:Frontier Analytical Laboratory



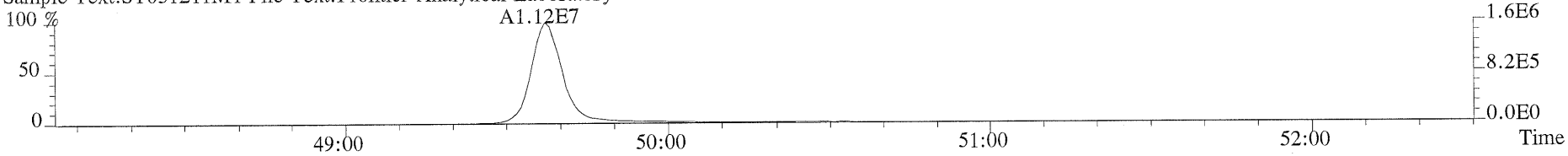
File:12MAY11M #1-541 Acq:12-MAY-2011 09:47:22 GC EI+ Voltage SIR Autospec-Ultima
437.8140 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M1 File Text:Frontier Analytical Laboratory



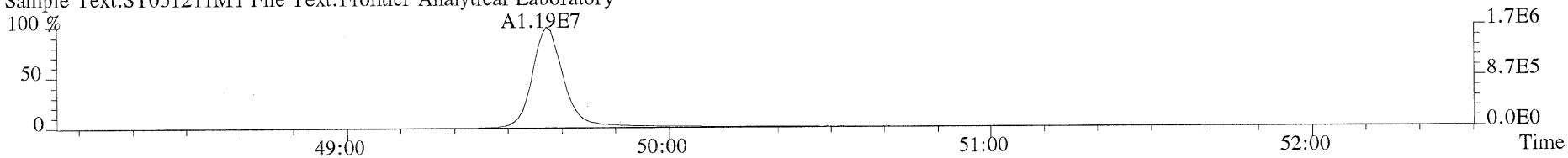
File:12MAY11M #1-541 Acq:12-MAY-2011 09:47:22 GC EI+ Voltage SIR Autospec-Ultima
430.9728 F:4 Exp:OCDD
Sample Text:ST051211M1 File Text:Frontier Analytical Laboratory



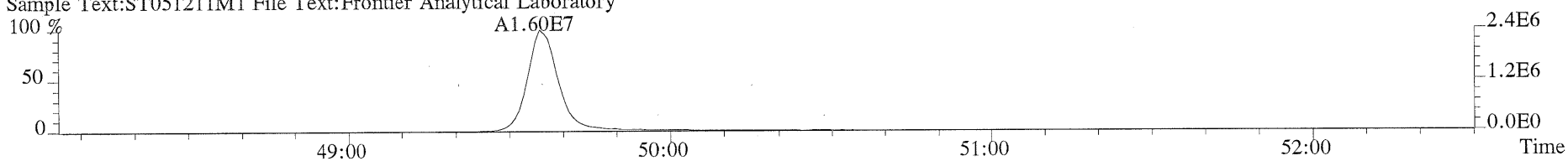
File:12MAY11M #1-348 Acq:12-MAY-2011 09:47:22 GC EI+ Voltage SIR Autospec-Ultima
457.7377 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M1 File Text:Frontier Analytical Laboratory



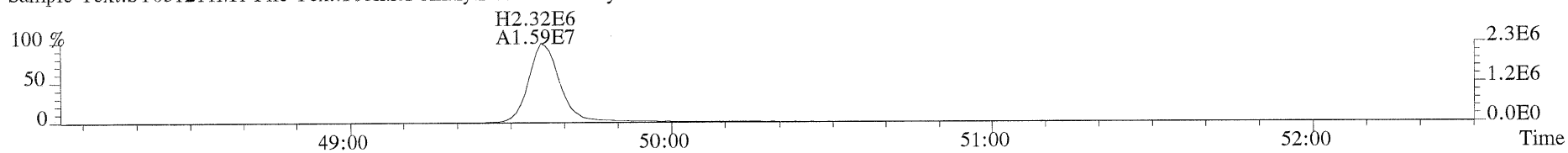
File:12MAY11M #1-348 Acq:12-MAY-2011 09:47:22 GC EI+ Voltage SIR Autospec-Ultima
459.7348 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M1 File Text:Frontier Analytical Laboratory



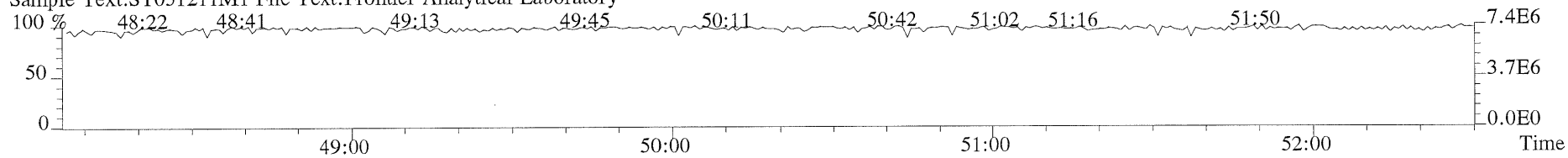
File:12MAY11M #1-348 Acq:12-MAY-2011 09:47:22 GC EI+ Voltage SIR Autospec-Ultima
469.7780 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M1 File Text:Frontier Analytical Laboratory



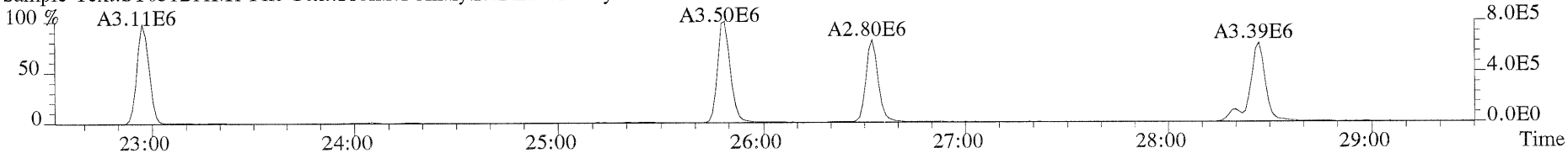
File:12MAY11M #1-348 Acq:12-MAY-2011 09:47:22 GC EI+ Voltage SIR Autospec-Ultima
471.7750 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M1 File Text:Frontier Analytical Laboratory



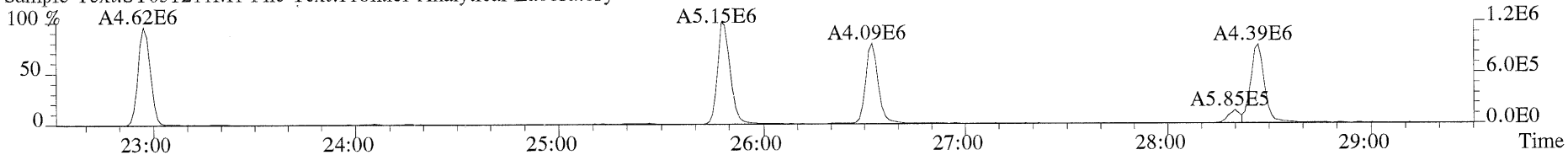
File:12MAY11M #1-348 Acq:12-MAY-2011 09:47:22 GC EI+ Voltage SIR Autospec-Ultima
454.9728 F:5 Exp:OCDD
Sample Text:ST051211M1 File Text:Frontier Analytical Laboratory



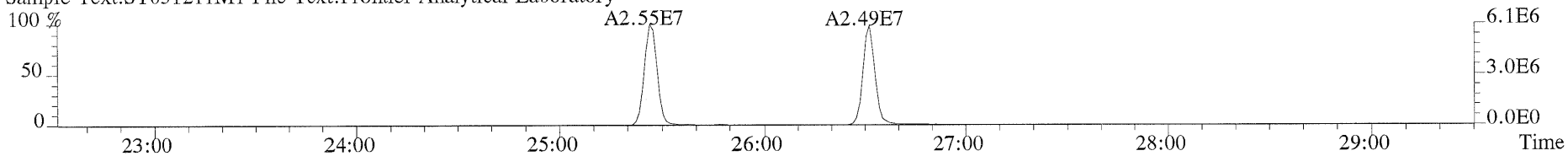
File:12MAY11M #1-425 Acq:12-MAY-2011 09:47:22 GC EI+ Voltage SIR Autospec-Ultima
303.9016 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M1 File Text:Frontier Analytical Laboratory



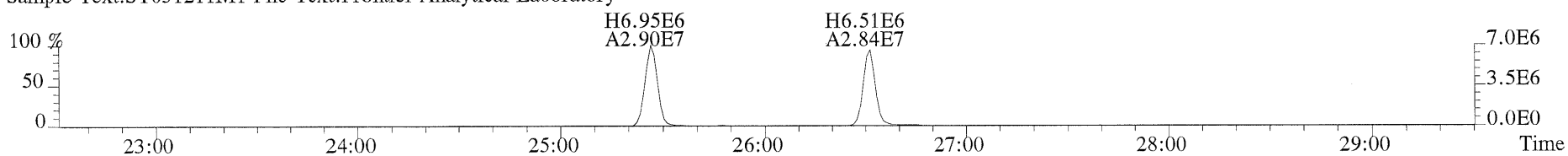
File:12MAY11M #1-425 Acq:12-MAY-2011 09:47:22 GC EI+ Voltage SIR Autospec-Ultima
305.8987 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M1 File Text:Frontier Analytical Laboratory



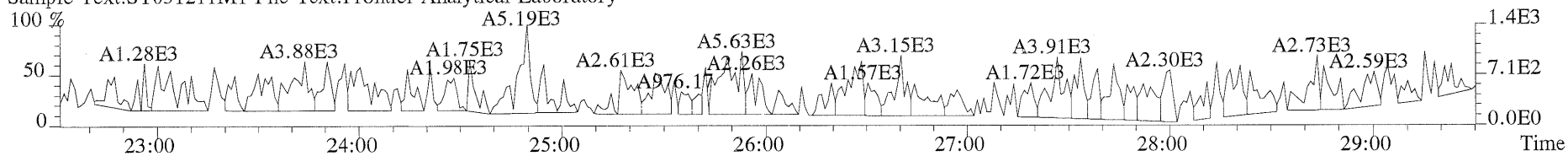
File:12MAY11M #1-425 Acq:12-MAY-2011 09:47:22 GC EI+ Voltage SIR Autospec-Ultima
315.9419 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M1 File Text:Frontier Analytical Laboratory



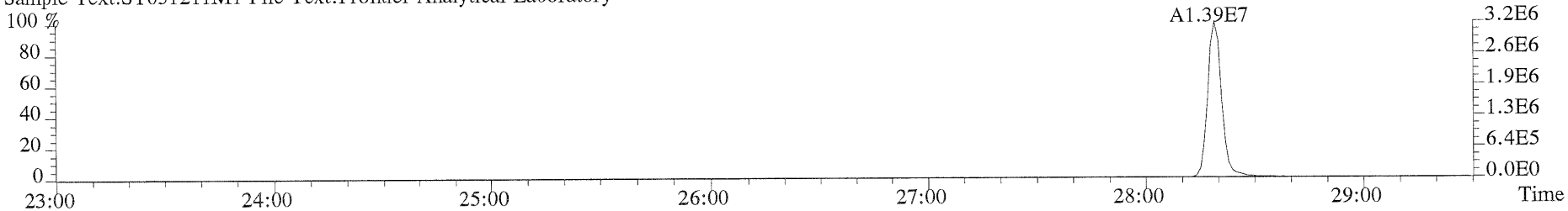
File:12MAY11M #1-425 Acq:12-MAY-2011 09:47:22 GC EI+ Voltage SIR Autospec-Ultima
317.9389 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M1 File Text:Frontier Analytical Laboratory



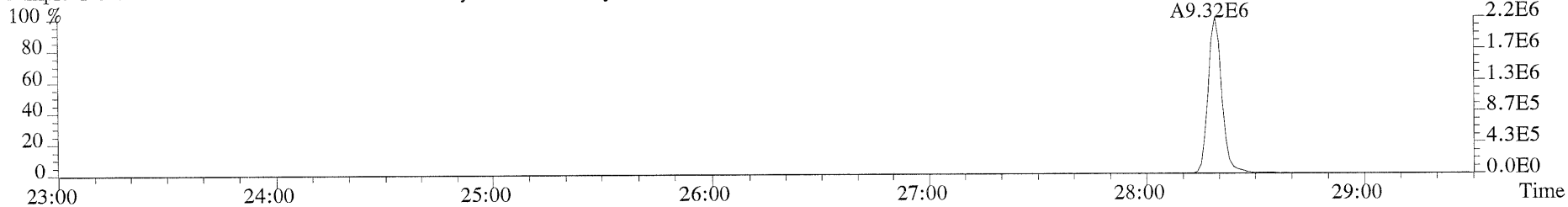
File:12MAY11M #1-425 Acq:12-MAY-2011 09:47:22 GC EI+ Voltage SIR Autospec-Ultima
375.8364 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M1 File Text:Frontier Analytical Laboratory



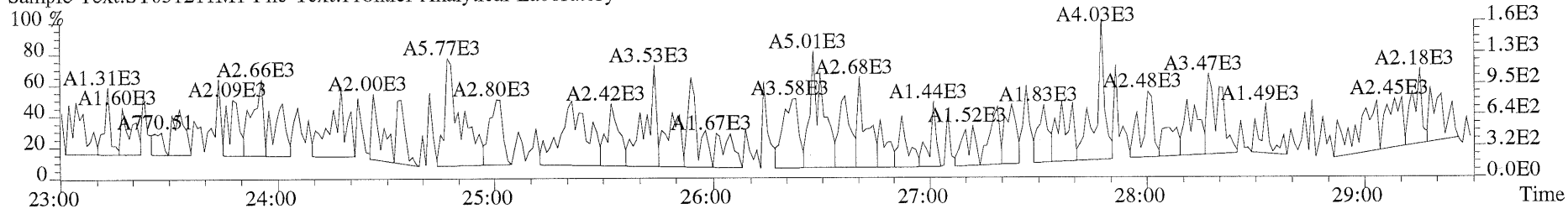
File:12MAY11M #1-425 Acq:12-MAY-2011 09:47:22 GC EI+ Voltage SIR Autospec-Ultima
339.8597 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M1 File Text:Frontier Analytical Laboratory



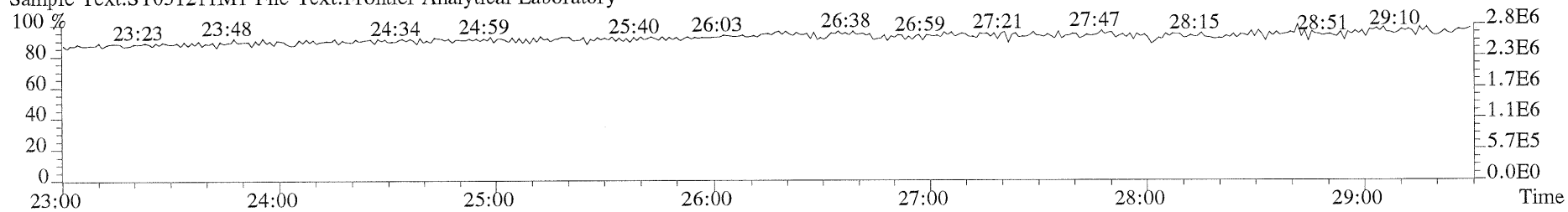
File:12MAY11M #1-425 Acq:12-MAY-2011 09:47:22 GC EI+ Voltage SIR Autospec-Ultima
341.8568 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M1 File Text:Frontier Analytical Laboratory



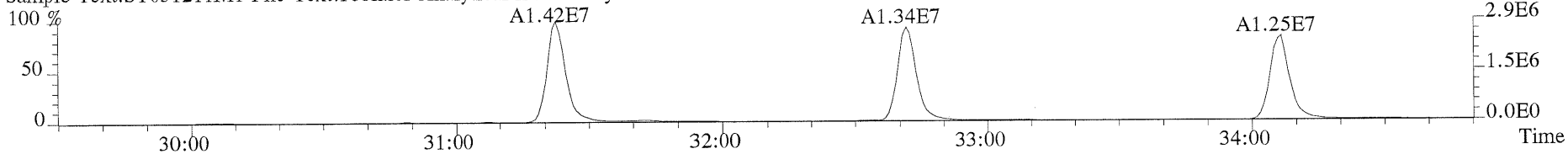
File:12MAY11M #1-425 Acq:12-MAY-2011 09:47:22 GC EI+ Voltage SIR Autospec-Ultima
409.7974 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M1 File Text:Frontier Analytical Laboratory



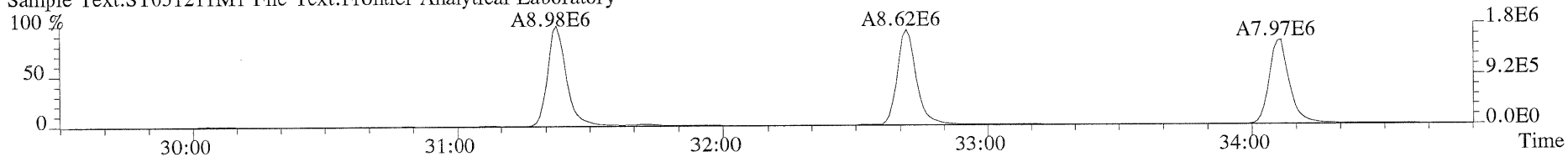
File:12MAY11M #1-425 Acq:12-MAY-2011 09:47:22 GC EI+ Voltage SIR Autospec-Ultima
316.9824 Exp:OCDD
Sample Text:ST051211M1 File Text:Frontier Analytical Laboratory



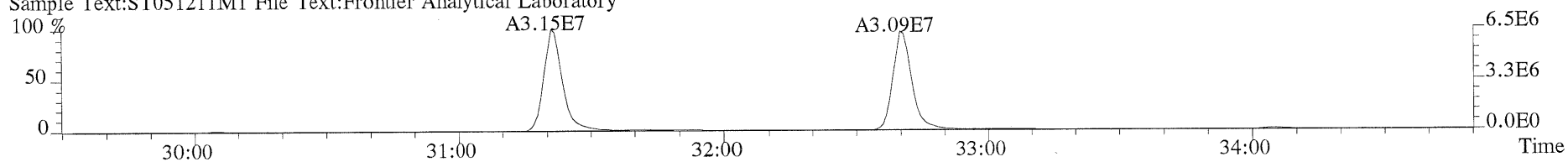
File:12MAY11M #1-413 Acq:12-MAY-2011 09:47:22 GC EI+ Voltage SIR Autospec-Ultima
339.8597 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M1 File Text:Frontier Analytical Laboratory



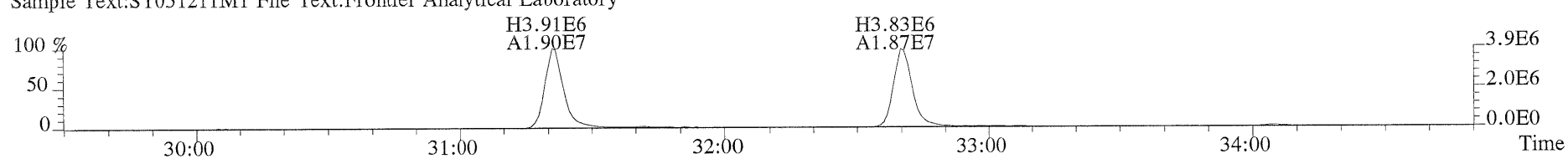
File:12MAY11M #1-413 Acq:12-MAY-2011 09:47:22 GC EI+ Voltage SIR Autospec-Ultima
341.8568 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M1 File Text:Frontier Analytical Laboratory



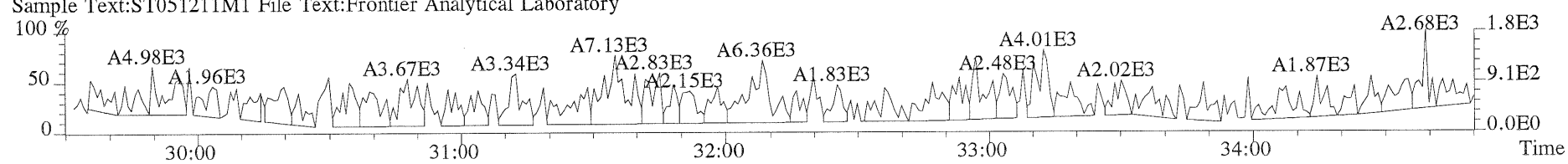
File:12MAY11M #1-413 Acq:12-MAY-2011 09:47:22 GC EI+ Voltage SIR Autospec-Ultima
351.9000 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M1 File Text:Frontier Analytical Laboratory



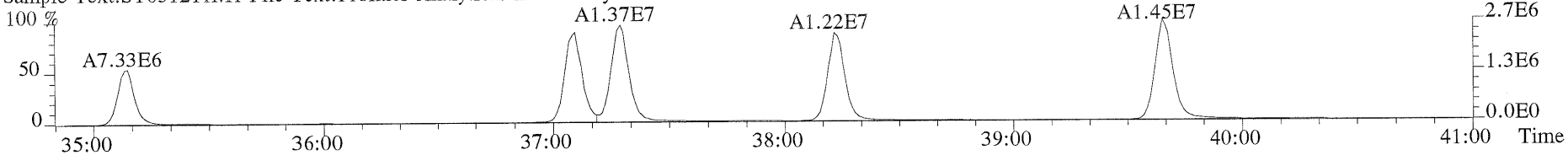
File:12MAY11M #1-413 Acq:12-MAY-2011 09:47:22 GC EI+ Voltage SIR Autospec-Ultima
353.8970 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M1 File Text:Frontier Analytical Laboratory



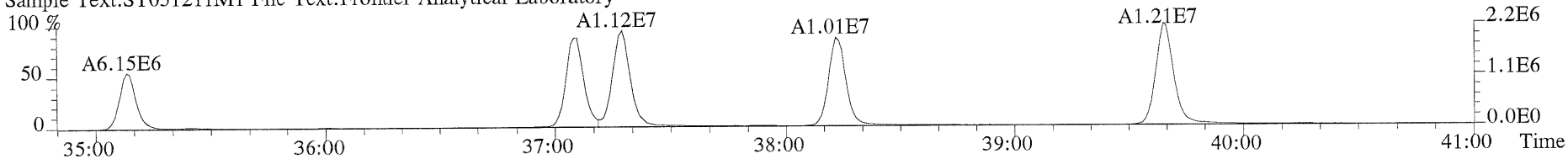
File:12MAY11M #1-413 Acq:12-MAY-2011 09:47:22 GC EI+ Voltage SIR Autospec-Ultima
409.7974 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M1 File Text:Frontier Analytical Laboratory



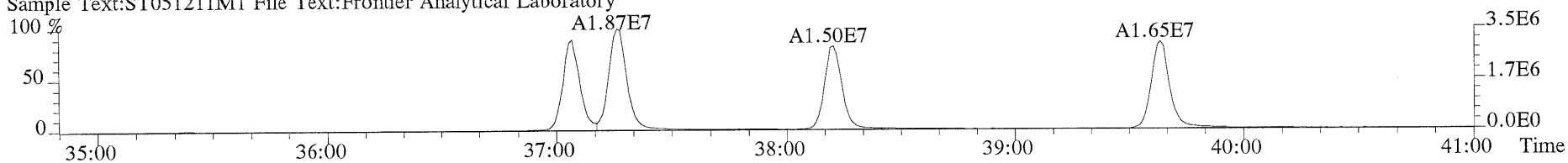
File:12MAY11M #1-476 Acq:12-MAY-2011 09:47:22 GC EI+ Voltage SIR Autospec-Ultima
373.8207 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M1 File Text:Frontier Analytical Laboratory



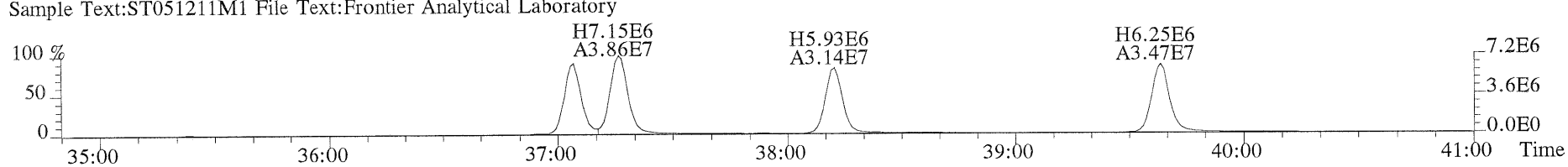
File:12MAY11M #1-476 Acq:12-MAY-2011 09:47:22 GC EI+ Voltage SIR Autospec-Ultima
375.8178 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M1 File Text:Frontier Analytical Laboratory



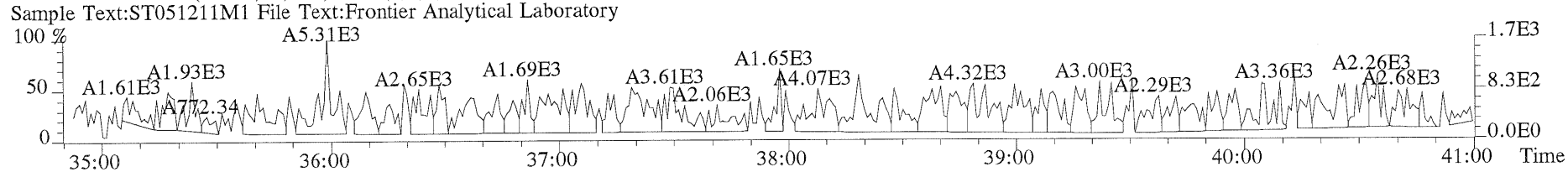
File:12MAY11M #1-476 Acq:12-MAY-2011 09:47:22 GC EI+ Voltage SIR Autospec-Ultima
383.8639 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M1 File Text:Frontier Analytical Laboratory



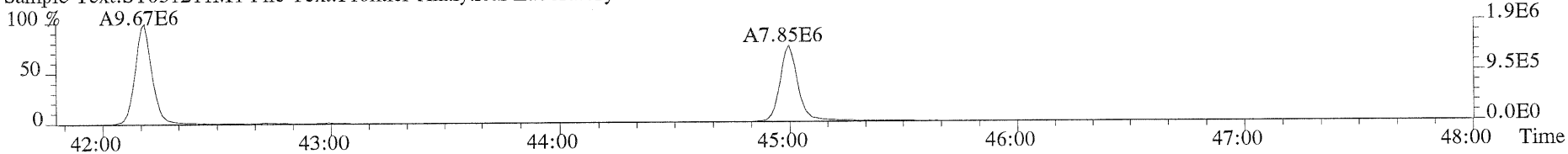
File:12MAY11M #1-476 Acq:12-MAY-2011 09:47:22 GC EI+ Voltage SIR Autospec-Ultima
385.8610 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M1 File Text:Frontier Analytical Laboratory



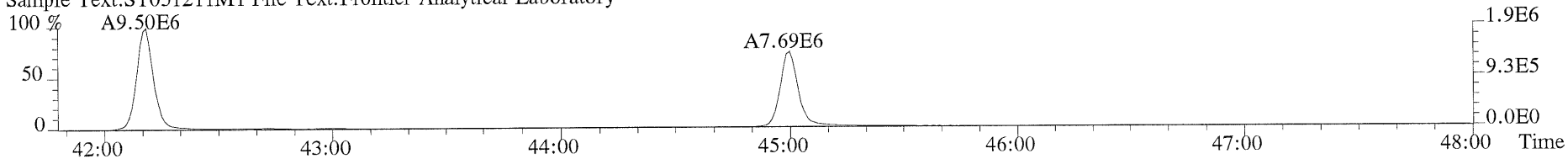
File:12MAY11M #1-476 Acq:12-MAY-2011 09:47:22 GC EI+ Voltage SIR Autospec-Ultima
445.7555 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M1 File Text:Frontier Analytical Laboratory



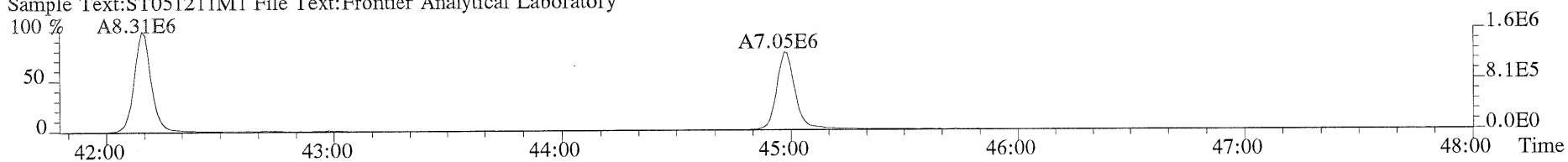
File:12MAY11M #1-541 Acq:12-MAY-2011 09:47:22 GC EI+ Voltage SIR Autospec-Ultima
407.7818 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M1 File Text:Frontier Analytical Laboratory



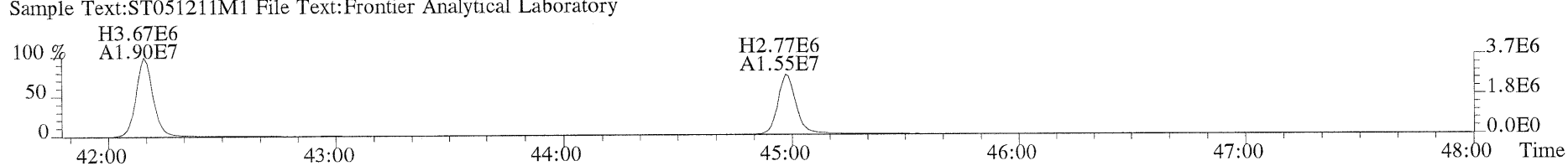
File:12MAY11M #1-541 Acq:12-MAY-2011 09:47:22 GC EI+ Voltage SIR Autospec-Ultima
409.7788 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M1 File Text:Frontier Analytical Laboratory



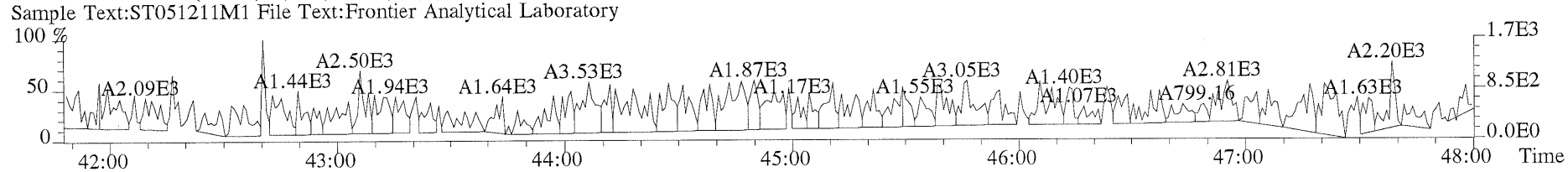
File:12MAY11M #1-541 Acq:12-MAY-2011 09:47:22 GC EI+ Voltage SIR Autospec-Ultima
417.8253 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M1 File Text:Frontier Analytical Laboratory



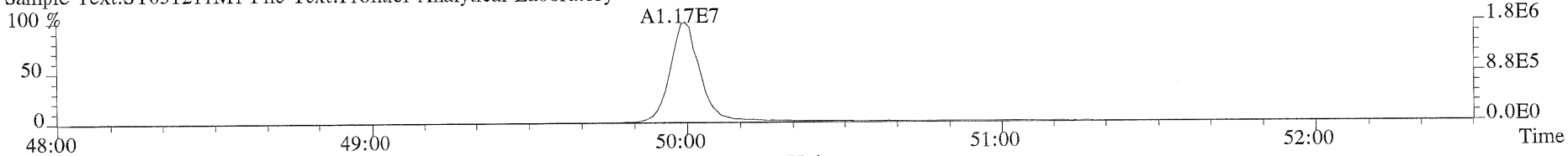
File:12MAY11M #1-541 Acq:12-MAY-2011 09:47:22 GC EI+ Voltage SIR Autospec-Ultima
419.8220 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M1 File Text:Frontier Analytical Laboratory



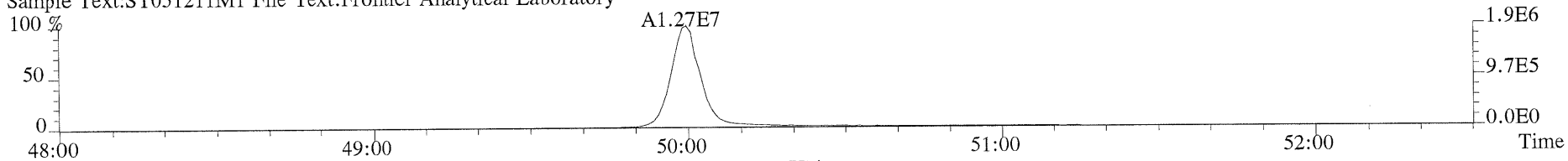
File:12MAY11M #1-541 Acq:12-MAY-2011 09:47:22 GC EI+ Voltage SIR Autospec-Ultima
479.7165 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M1 File Text:Frontier Analytical Laboratory



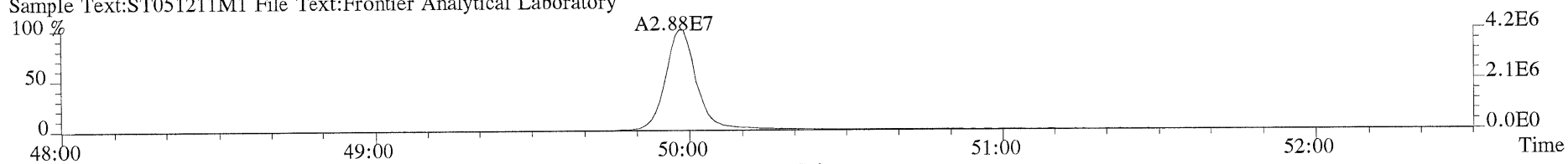
File:12MAY11M #1-348 Acq:12-MAY-2011 09:47:22 GC EI+ Voltage SIR Autospec-Ultima
441.7428 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M1 File Text:Frontier Analytical Laboratory



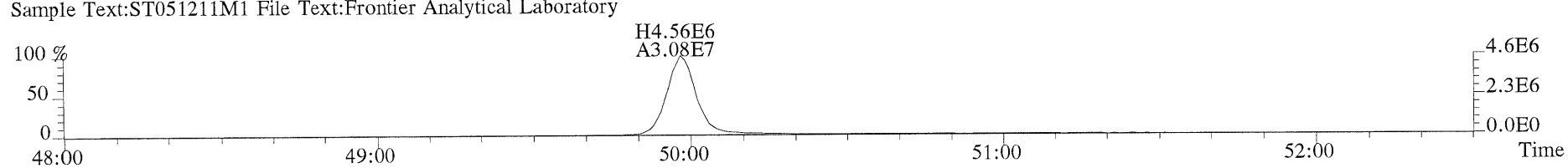
File:12MAY11M #1-348 Acq:12-MAY-2011 09:47:22 GC EI+ Voltage SIR Autospec-Ultima
443.7398 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M1 File Text:Frontier Analytical Laboratory



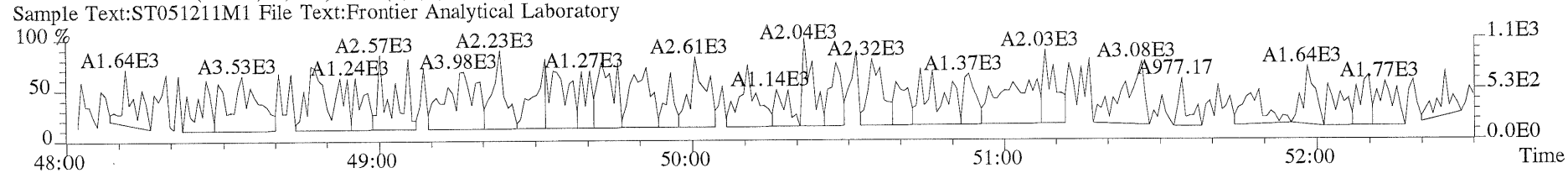
File:12MAY11M #1-348 Acq:12-MAY-2011 09:47:22 GC EI+ Voltage SIR Autospec-Ultima
453.7831 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M1 File Text:Frontier Analytical Laboratory



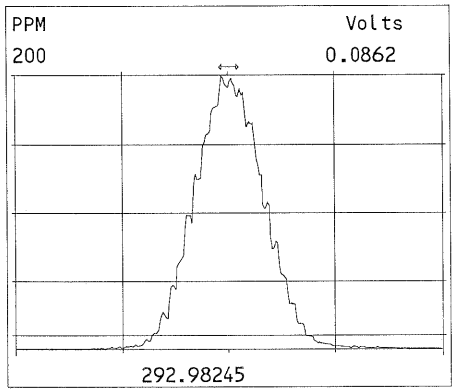
File:12MAY11M #1-348 Acq:12-MAY-2011 09:47:22 GC EI+ Voltage SIR Autospec-Ultima
455.7801 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M1 File Text:Frontier Analytical Laboratory

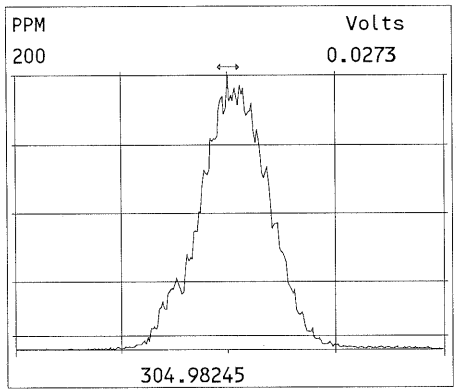


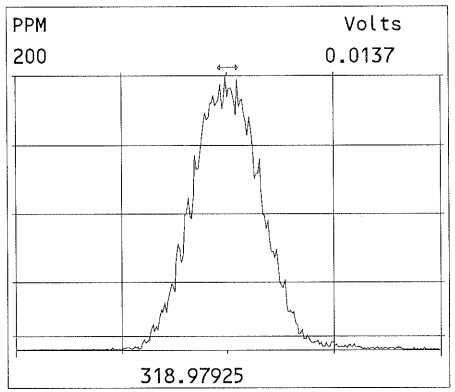
File:12MAY11M #1-348 Acq:12-MAY-2011 09:47:22 GC EI+ Voltage SIR Autospec-Ultima
513.6775 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M1 File Text:Frontier Analytical Laboratory

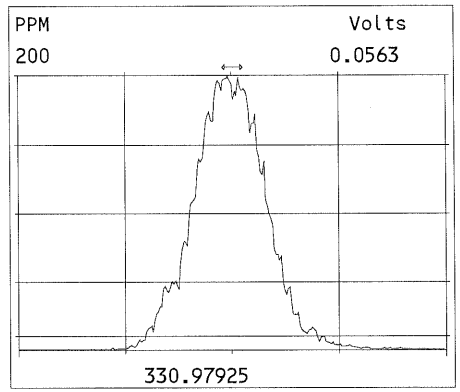


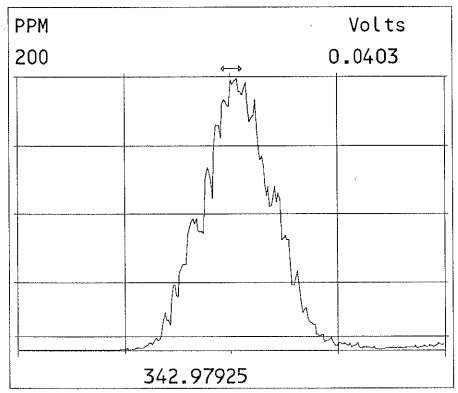
Peak Locate Examination:12-MAY-2011:22:43 File:12MAY11M_RES_CHECK
Experiment:OCDD Function:1 Reference:PFK

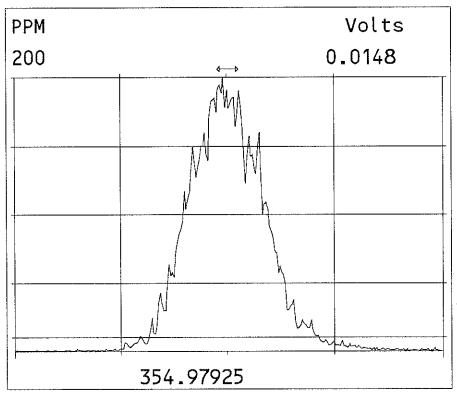


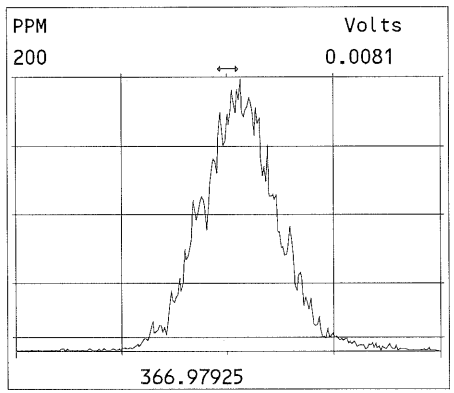


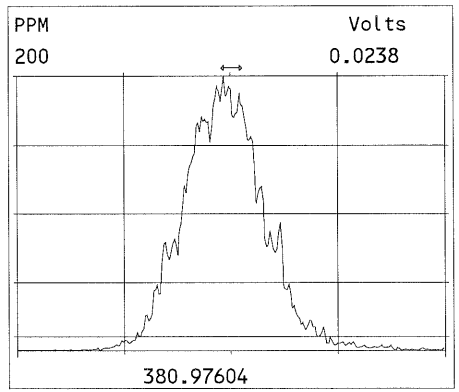


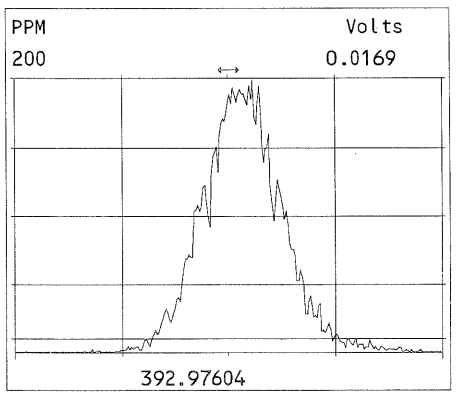


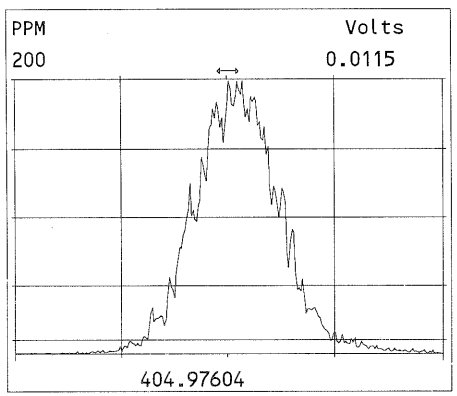


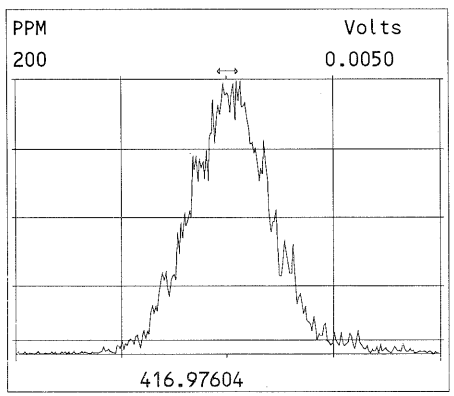




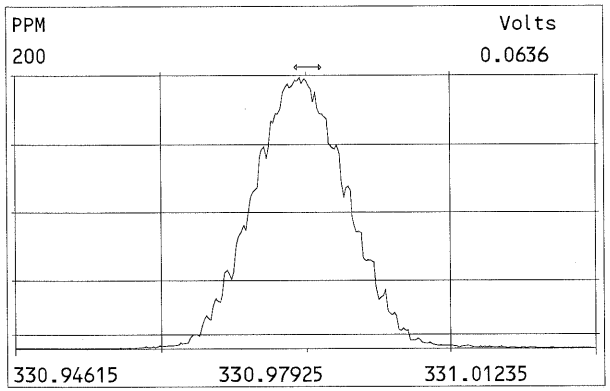


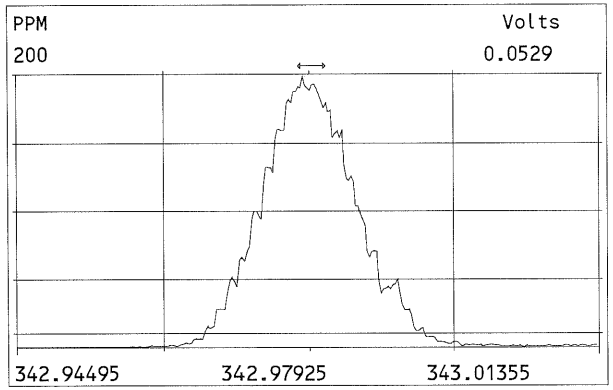


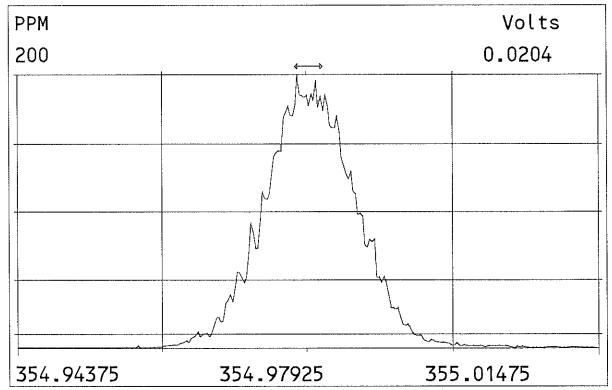


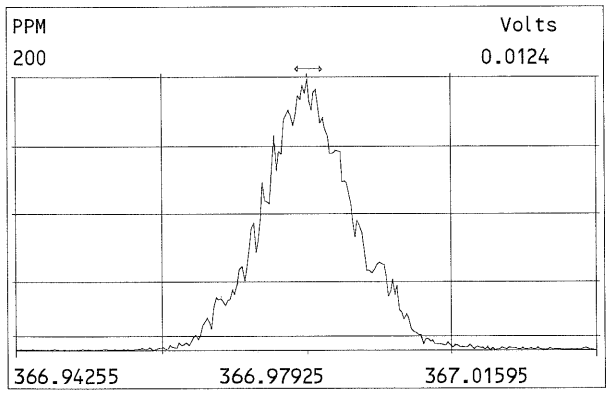


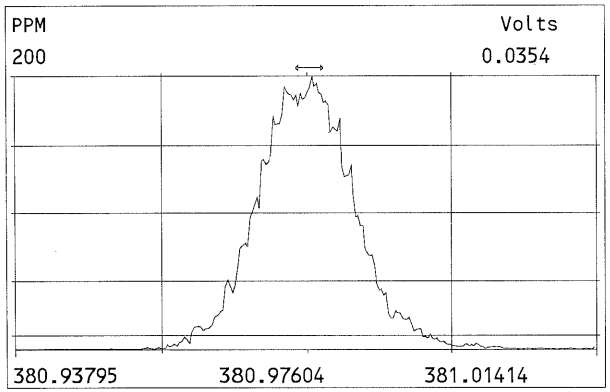
Peak Locate Examination:12-MAY-2011:22:45 File:12MAY11M_RES_CHECK
Experiment:OCDD Function:2 Reference:PFK

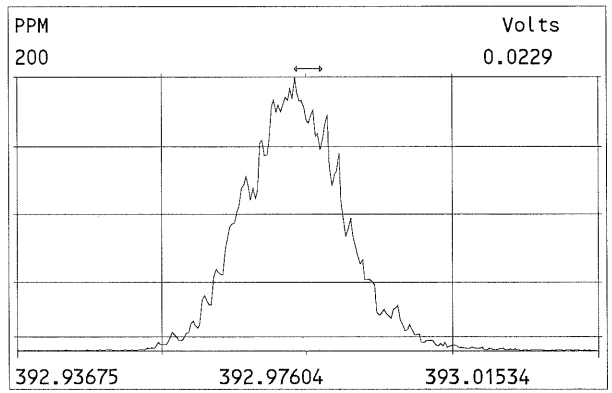


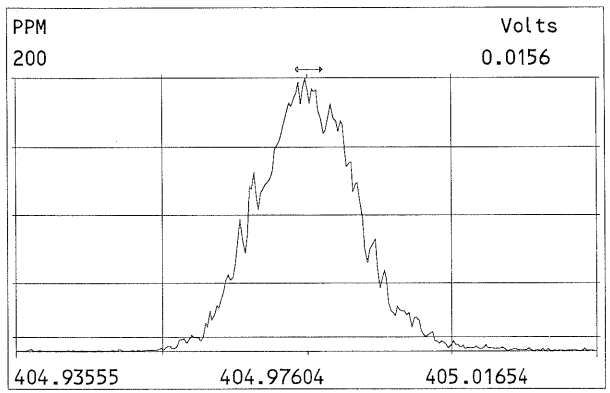


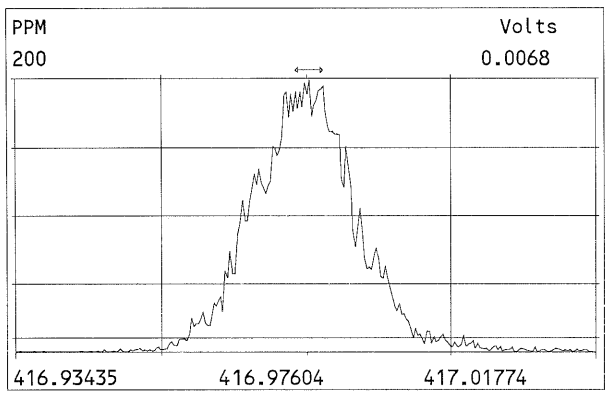




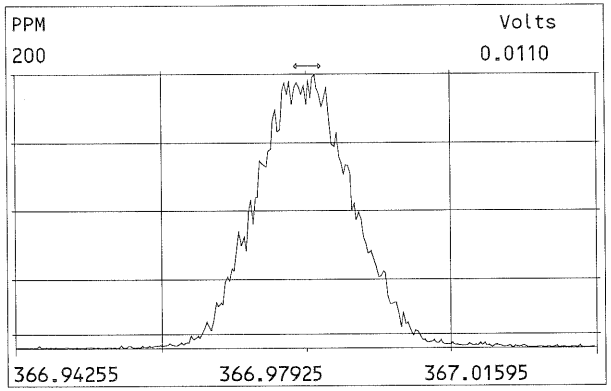


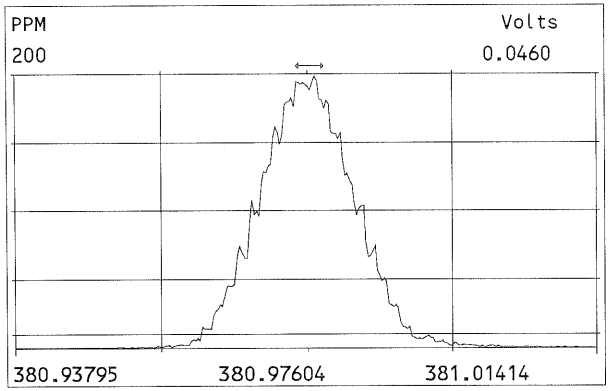


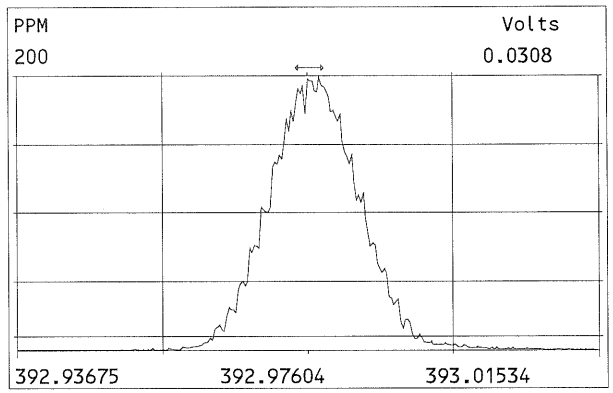


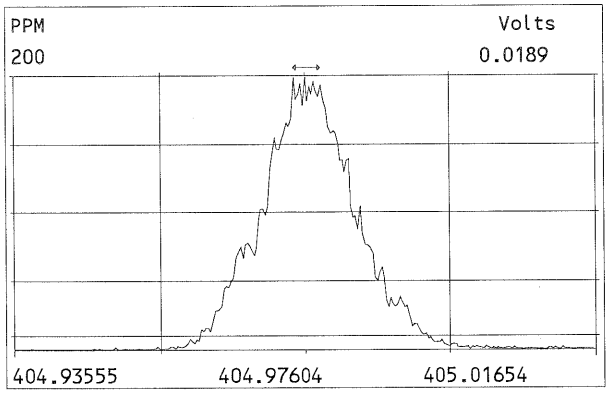


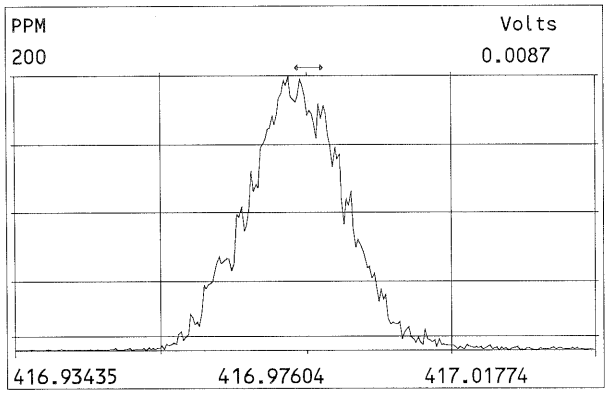
Peak Locate Examination:12-MAY-2011:22:47 File:12MAY11M_RES_CHECK
Experiment:OCDD Function:3 Reference:PFK

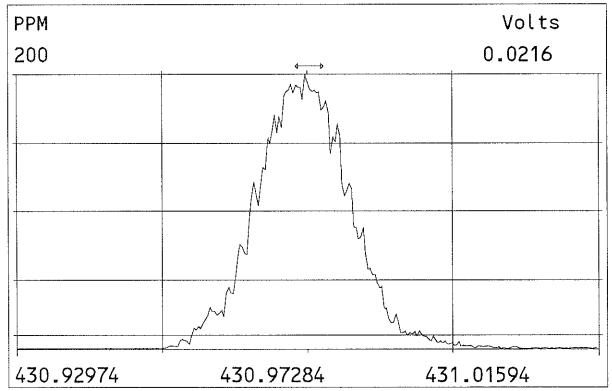


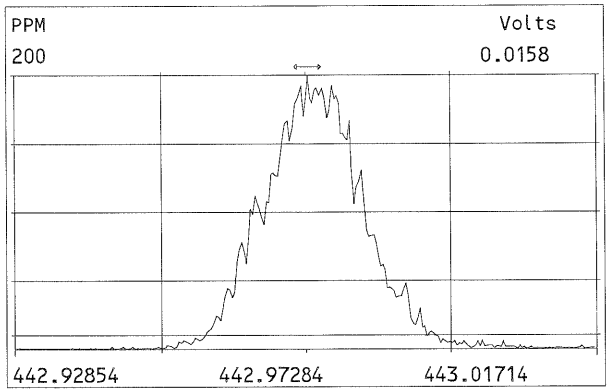


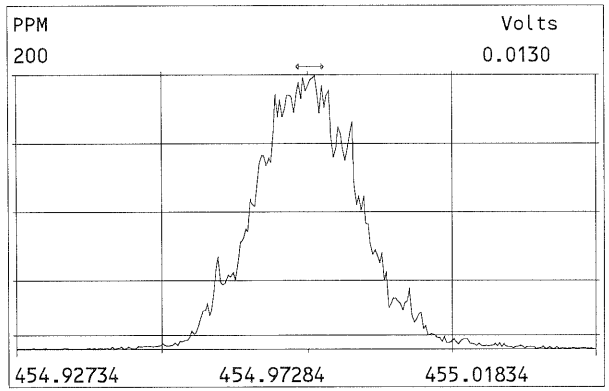




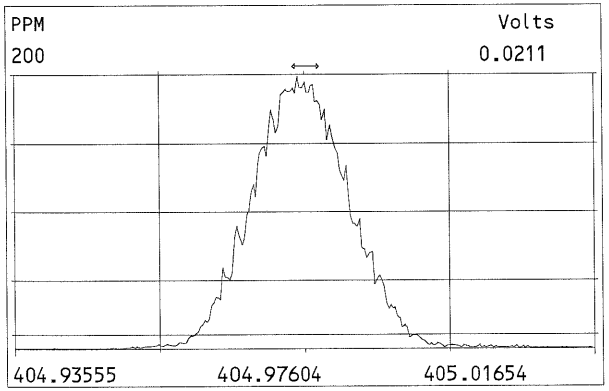


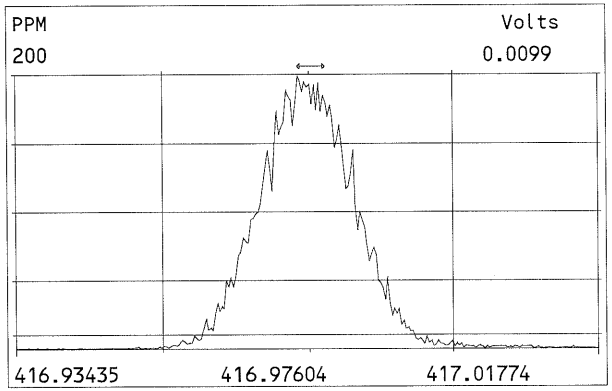


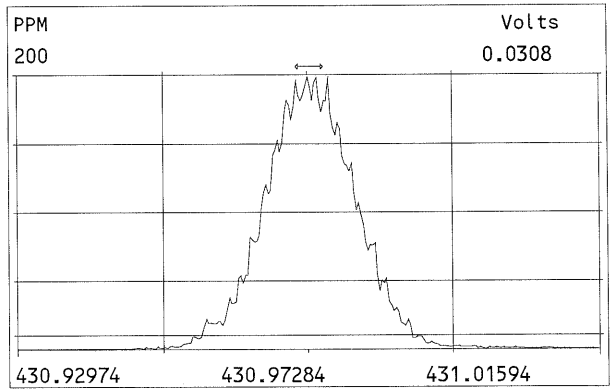


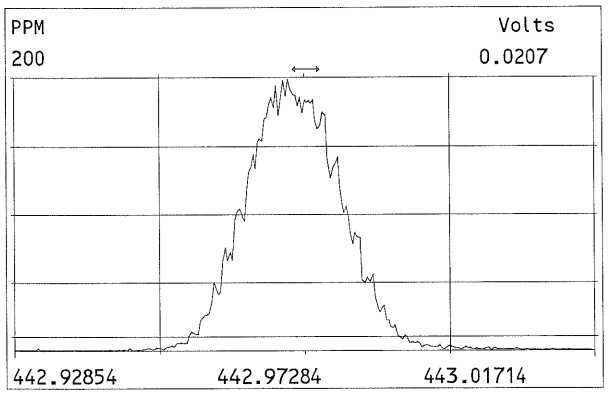


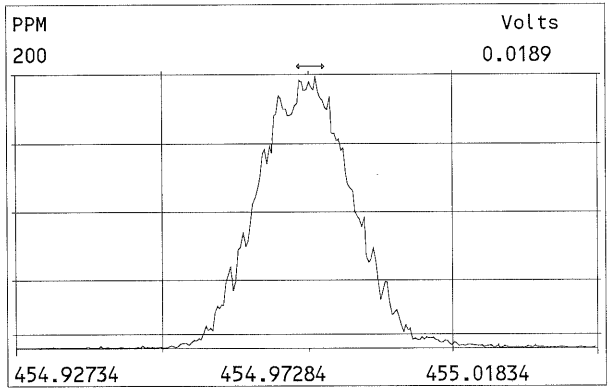
Peak Locate Examination:12-MAY-2011:22:49 File:12MAY11M_RES_CHECK
Experiment:OCDD Function:4 Reference:PFK

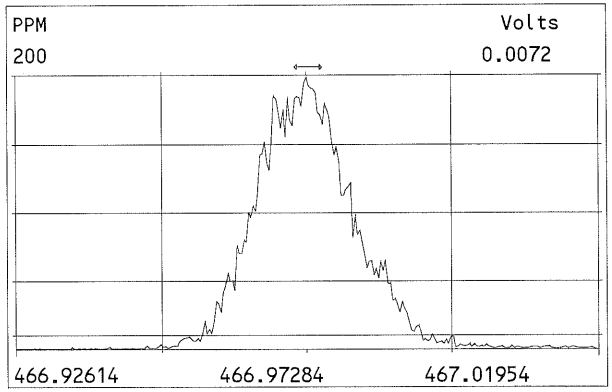


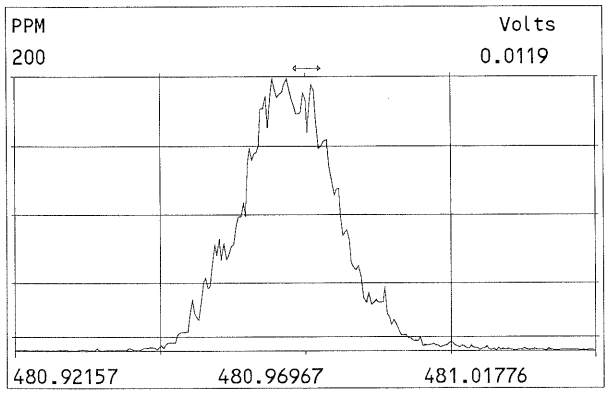




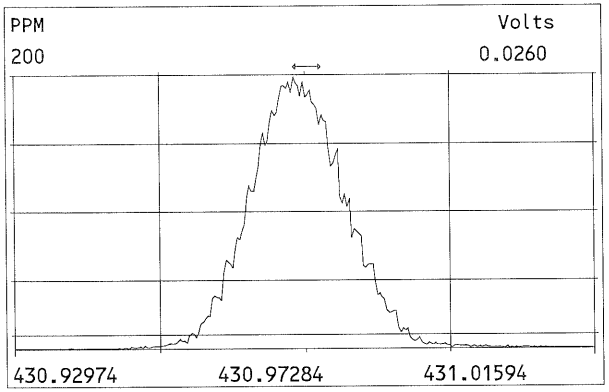


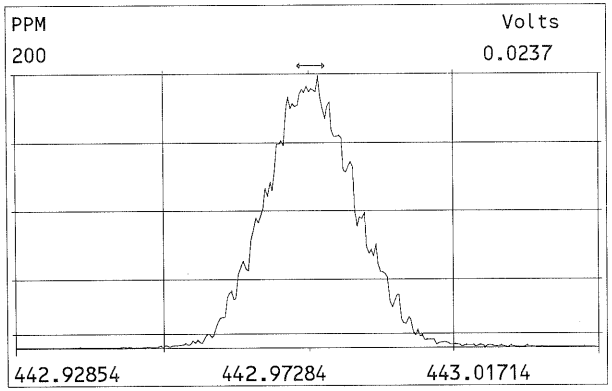


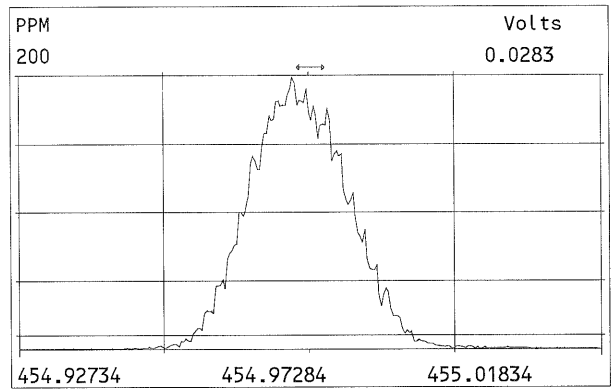


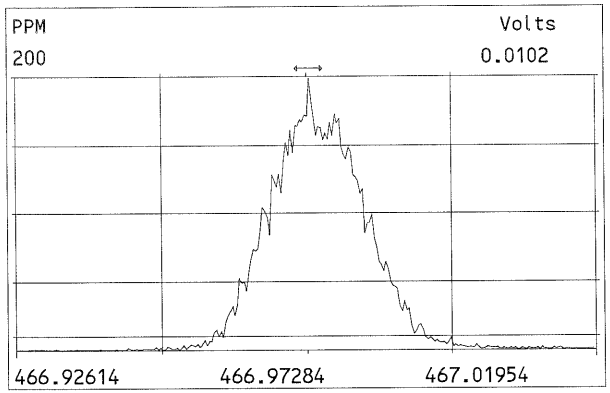


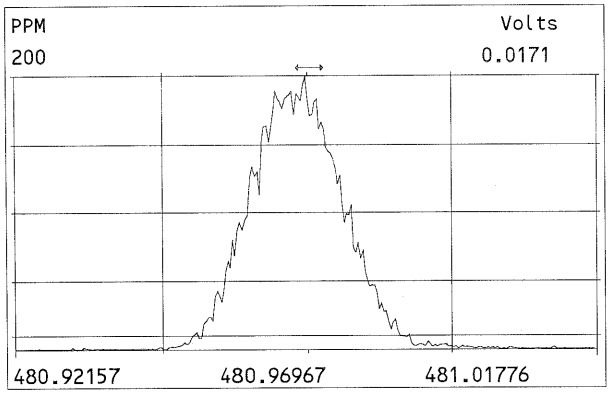
Peak Locate Examination:12-MAY-2011:22:51 File:12MAY11M_RES_CHECK
Experiment:OCDD Function:5 Reference:PFK

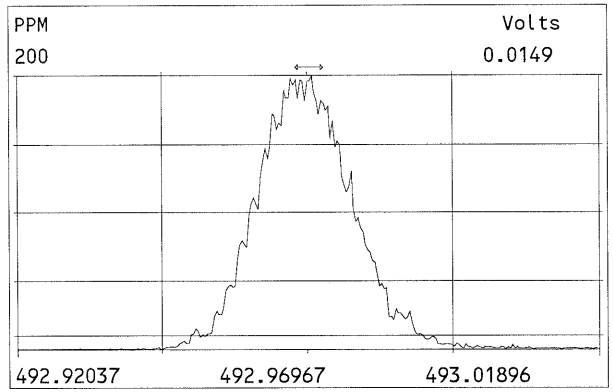


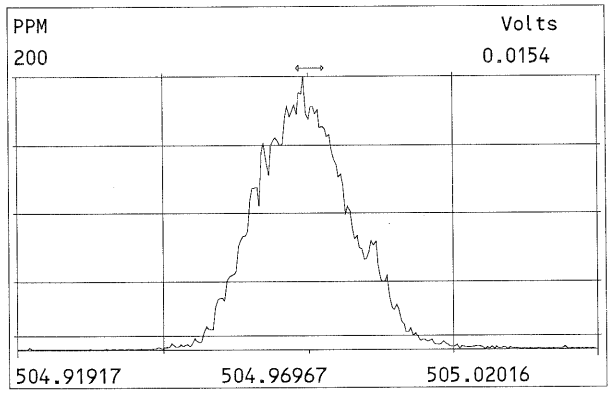


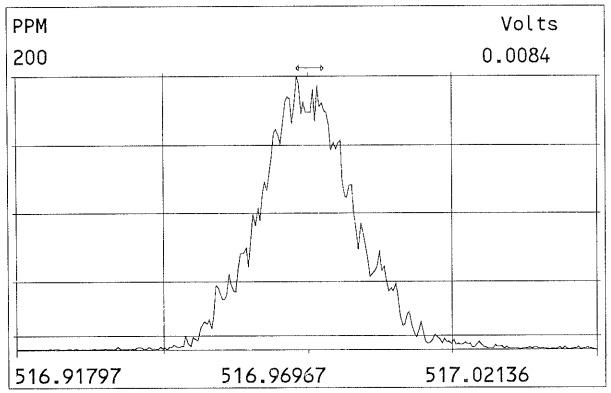












USEPA - ITD

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 3/7/11

Instrument ID: FAL3 GC Column ID: DB5

VER Data Filename: 12MAY11M Sam:14 Analysis Date: 12-MAY-11 21:46:48

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	ACCEPT	CONC. FOUND	CONC. RANGE (ng/mL) (3)
2,3,7,8-TCDD	M/M+2	0.80	0.65-0.89	y	11.0	7.80 - 12.9
1,2,3,7,8-PeCDD	M+2/M+4	1.53	1.32-1.78	y	50.4	39.0 - 65.0
1,2,3,4,7,8-HxCDD	M+2/M+4	1.32	1.05-1.43	y	51.1	39.0 - 64.0
1,2,3,6,7,8-HxCDD	M+2/M+4	1.30	1.05-1.43	y	50.5	39.0 - 64.0
1,2,3,7,8,9-HxCDD	M+2/M+4	1.32	1.05-1.43	y	52.4	41.0 - 61.0
1,2,3,4,6,7,8-HpCDD	M+2/M+4	0.93	0.88-1.20	y	50.9	43.0 - 58.0
OCDD	M+2/M+4	0.94	0.76-1.02	y	103	79.0 - 126
2,3,7,8-TCDF	M/M+2	0.69	0.65-0.89	y	11.3	8.40 - 12.0
1,2,3,7,8-PeCDF	M+2/M+4	1.54	1.32-1.78	y	51.6	41.0 - 60.0
2,3,4,7,8-PeCDF	M+2/M+4	1.52	1.32-1.78	y	50.3	41.0 - 60.0
1,2,3,4,7,8-HxCDF	M+2/M+4	1.21	1.05-1.43	y	47.1	45.0 - 56.0
1,2,3,6,7,8-HxCDF	M+2/M+4	1.25	1.05-1.43	y	47.5	44.0 - 57.0
2,3,4,6,7,8-HxCDF	M+2/M+4	1.22	1.05-1.43	y	46.4	44.0 - 57.0
1,2,3,7,8,9-HxCDF	M+2/M+4	1.23	1.05-1.43	y	47.3	45.0 - 56.0
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.00	0.88-1.20	y	46.8	45.0 - 55.0
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.02	0.88-1.20	y	48.6	43.0 - 58.0
OCDF	M+2/M+4	0.93	0.76-1.02	y	96.5	63.0 - 159

(1) See Table 8, Method 1613, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613.

(3) Contract-required concentration range as specified in Table 6, Method 1613.

Analyst: _____ Date: 5/13/11

USEPA - ITD

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 3/7/11

Instrument ID: FAL3 GC Column ID: DB5

VER Data Filename: 12MAY11M Sam:14 Analysis Date: 12-MAY-11 21:46:48

	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	ACCEPT	CONC. FOUND	CONC. RANGE (ng/mL) (3)
LABELED COMPOUNDS						
13C-2,3,7,8-TCDD	M/M+2	0.74	0.65-0.89	y	91.8	82.0 - 121
13C-1,2,3,7,8-PeCDD	M+2/M+4	1.73	1.32-1.78	y	97.5	62.0 - 160
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	y	97.1	85.0 - 117
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	y	101	85.0 - 118
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.02	0.88-1.20	y	103	72.0 - 138
13C-OCDD	M+2/M+4	1.01	0.76-1.02	y	166	96.0 - 415
13C-2,3,7,8-TCDF	M/M+2	0.88	0.65-0.89	y	94.0	71.0 - 140
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.68	1.32-1.78	y	102	76.0 - 130
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.68	1.32-1.78	y	99.1	77.0 - 130
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.49	0.43-0.59	y	108	76.0 - 131
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.49	0.43-0.59	y	109	70.0 - 143
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.49	0.43-0.59	y	102	73.0 - 137
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.51	0.43-0.59	y	96.6	74.0 - 135
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.43	0.37-0.51	y	105	78.0 - 129
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.44	0.37-0.51	y	100.0	77.0 - 129
13C-OCDF	M+2/M+4	0.97	0.76-1.02	y	165	96.0 - 415
CLEANUP STANDARD (4)						
37Cl-2,3,7,8-TCDD					8.75	7.80 - 12.8

(1) See Table 8, Method 1613, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613.

(3) Contract-required concentration range as specified in Table 6, Method 1613.

(4) No ion abundance ratio; report concentration found.

Analyst: _____ Date: 5/13/11

FORM 5

PCDD/PCDF RT WINDOW AND ISOMER SPECIFICITY STANDARDS

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Instrument ID: FAL3 Initial Calibration Date: 3/7/11

RT Window Data Filename: 12MAY11M Sam:14 Analysis Date: 12-MAY-11 Time: 21:46:48

DB-5 IS Data Filename: 12MAY11M Sam:14 Analysis Date: 12-MAY-11 Time: 21:46:48

DB-225 IS Date Filename: Analysis Date: Time:

DB-5 RT WINDOW DEFINING STANDARDS RESULTS

ISOMERS	ABSOLUTE RT	ISOMERS	ABSOLUTE RT
1,3,6,8-TCDD (F)	24:22	1,3,6,8-TCDF (F)	23:01
1,2,8,9-TCDD (L)	28:18	1,2,8,9-TCDF (L)	28:24
1,2,4,7,9-PeCDD (F)	30:13	1,3,4,6,8-PeCDF (F)	28:23
1,2,3,8,9-PeCDD (L)	33:46	1,2,3,8,9-PeCDF (L)	34:10
1,2,4,6,7,9-HxCDD (F)	36:04	1,2,3,4,6,8-HxCDF (F)	35:12
1,2,3,7,8,9-HxCDD (L)	39:09	1,2,3,7,8,9-HxCDF (L)	39:43
1,2,3,4,6,7,9-HpCDD (F)	42:45	1,2,3,4,6,7,8-HpCDF (F)	42:14
1,2,3,4,6,7,8-HpCDD (L)	44:09	1,2,3,4,7,8,9-HpCDF (L)	45:03

(F) = First eluting iosmer (DB-5); (L) = Last eluting isomer (DB-5)

==========

ISOMER SPECIFICITY (IS) TEST STANDARD RESULTS

COMPARED PEAKS (1)	% VALLEY HEIGHT BETWEEN
	<25%

(1) To meet contract requirement, %Valley Height Between Compared Peaks shall not exceed 25% (section 15.4.2.2, Method 1613).

Analyst: _____ Date: 5/13/11

USEPA - ITD

FORM 6A
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.: Init. Cal. Date: 3/7/11

Instrument ID: FAL3 GC Column ID: DB5

Analysis Date: 12-MAY-11 21:46:48 CS3 or VER Data Filename: 12MAY11M Sam:14

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS (1)
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999-1.002
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999-1.003
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.001	0.999-1.002
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.001	0.999-1.002
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.001	0.999-1.002
LABELED COMPOUNDS			
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.021	0.989-1.052
13C-2,3,7,8-TCDD		1.021	0.976-1.043
13C-2,3,7,8-TCDF		0.993	0.923-1.103
13C-1,2,3,7,8-PeCDD		1.238	1.000-1.567
13C-1,2,3,7,8-PeCDF		1.173	0.923-1.203
13C-2,3,4,7,8-PeCDF		1.222	0.923-1.303

(1) Contract-required limits for Relative Retention Times (RRT) as specified in Table 2, Method 1613.

Analyst: _____ Date: 5/13/11

USEPA - ITD

FORM 6B
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.: Init. Cal. Date: 3/7/11

Instrument ID: FAL3 GC Column ID: DB5

Analysis Date: 12-MAY-11 21:46:48 CS3 or VER Data Filename: 12MAY11M Sam:14

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS (1)
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.000	0.999-1.001
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.000	0.998-1.004
1,2,3,7,8,9-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.012	1.000-1.019
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.000	0.999-1.001
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.001	0.997-1.005
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.001	0.999-1.001
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.000	0.999-1.001
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.001	0.999-1.001
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.000	0.999-1.001
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999-1.001
OCDD	13C-OCDD	1.001	0.999-1.001
OCDF	13C-OCDF	1.000	0.999-1.001
LABELED COMPOUNDS			
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.985	0.977-1.000
13C-1,2,3,6,7,8-HxCDD		0.989	0.981-1.003
13C-1,2,3,4,7,8-HxCDF		0.949	0.944-0.970
13C-1,2,3,6,7,8-HxCDF		0.954	0.949-0.975
13C-2,3,4,6,7,8-HxCDF		0.978	0.959-1.021
13C-1,2,3,7,8,9-HxCDF		1.015	0.977-1.047
13C-1,2,3,4,6,7,8-HpCDD		1.127	1.086-1.130
13C-1,2,3,4,6,7,8-HpCDF		1.079	1.043-1.085
13C-1,2,3,4,7,8,9-HpCDF		1.151	1.057-1.154
13C-OCDD		1.269	1.032-1.311
13C-OCDF		1.279	1.000-1.311

(1) Contract-required limits for Relative Retention Times (RRT) as specified in Table 2, Method 1613.

Analyst: _____ Date: 5/13/11

FAL ID: ST051211M2 Filename: 12MAY11M Sam:14 Acquired: 12-MAY-11 21:46:48 ICal: PCDDFAL3-3-7-11
Client ID: 1613 CS3 100511J ConCal: ST051211M1 EndCal: ST051211M2
Results: 6735DIL GC Column: DB5 Amount: 1.000 NATO 1989 Tox: 101
WHO 1998 Tox: 126 WHO 2005 Tox: 115

Name	Resp	RA	RT	RRF	Conc	Qual	Fac	Noise-1	Noise-2	DL
2,3,7,8-TCDD	2.52e+06	0.80 y	27:21	1.13	11.0		2.50	-	-	*
1,2,3,7,8-PeCDD	1.08e+07	1.53 y	33:11	1.02	50.4		2.50	-	-	*
1,2,3,4,7,8-HxCDD	1.13e+07	1.32 y	38:32	1.45	51.1		2.50	-	-	*
1,2,3,6,7,8-HxCDD	9.14e+06	1.30 y	38:42	1.45	50.5		2.50	-	-	*
1,2,3,7,8,9-HxCDD	1.07e+07	1.32 y	39:09	1.47	52.4		2.50	-	-	*
1,2,3,4,6,7,8-HpCDD	7.46e+06	0.93 y	44:09	1.30	50.9		2.50	-	-	*
OCDD	9.93e+06	0.94 y	49:41	1.45	103		2.50	-	-	*
2,3,7,8-TCDF	4.56e+06	0.69 y	26:36	1.15	11.3		2.50	-	-	*
1,2,3,7,8-PeCDF	1.48e+07	1.54 y	31:27	0.89	51.6		2.50	-	-	*
2,3,4,7,8-PeCDF	1.37e+07	1.52 y	32:46	0.89	50.3		2.50	-	-	*
1,2,3,4,7,8-HxCDF	1.25e+07	1.21 y	37:09	1.01	47.1		2.50	-	-	*
1,2,3,6,7,8-HxCDF	1.39e+07	1.25 y	37:21	0.89	47.5		2.50	-	-	*
2,3,4,6,7,8-HxCDF	1.19e+07	1.22 y	38:18	1.02	46.4		2.50	-	-	*
1,2,3,7,8,9-HxCDF	1.32e+07	1.23 y	39:43	1.10	47.3		2.50	-	-	*
1,2,3,4,6,7,8-HpCDF	9.47e+06	1.00 y	42:14	1.48	46.8		2.50	-	-	*
1,2,3,4,7,8,9-HpCDF	7.00e+06	1.02 y	45:03	1.43	48.6		2.50	-	-	*
OCDF	1.03e+07	0.93 y	50:03	0.84	96.5		2.50	-	-	*
										Rec
13C-2,3,7,8-TCDD	2.02e+07	0.74 y	27:20	1.03	91.8					91.8
13C-1,2,3,7,8-PeCDD	2.10e+07	1.73 y	33:10	1.01	97.5					97.5
13C-1,2,3,4,7,8-HxCDD	1.52e+07	1.27 y	38:32	1.19	97.1					97.1
13C-1,2,3,6,7,8-HxCDD	1.24e+07	1.25 y	38:42	0.94	101					101
13C-1,2,3,4,6,7,8-HpCDD	1.13e+07	1.02 y	44:07	0.83	103					103
13C-OCDD	1.33e+07	1.01 y	49:39	0.61	166					83.0
13C-2,3,7,8-TCDF	3.52e+07	0.88 y	26:35	0.98	94.0					94.0
13C-1,2,3,7,8-PeCDF	3.23e+07	1.68 y	31:26	0.83	102					102
13C-2,3,4,7,8-PeCDF	3.05e+07	1.68 y	32:44	0.80	99.1					99.1
13C-1,2,3,4,7,8-HxCDF	2.63e+07	0.49 y	37:08	1.84	108					108
13C-1,2,3,6,7,8-HxCDF	3.29e+07	0.49 y	37:20	2.29	109					109
13C-2,3,4,6,7,8-HxCDF	2.51e+07	0.49 y	38:16	1.86	102					102
13C-1,2,3,7,8,9-HxCDF	2.52e+07	0.51 y	39:42	1.98	96.6					96.6
13C-1,2,3,4,6,7,8-HpCDF	1.37e+07	0.43 y	42:13	0.99	105					105
13C-1,2,3,4,7,8,9-HpCDF	1.01e+07	0.44 y	45:02	0.77	100.0					100.0
13C-OCDF	2.53e+07	0.97 y	50:02	1.17	165					82.3
37Cl-2,3,7,8-TCDD	1.36e+06		27:21	0.73	8.75					87.5
13C-1,2,3,4-TCDD	2.14e+07	0.73 y	26:47	-	56.2					
13C-1,2,3,4-TCDF	3.83e+07	0.88 y	25:31	-	53.2					
13C-1,2,3,7,8,9-HxCDD	1.32e+07	1.26 y	39:08	-	53.1					

							Fac	Noise-1	Noise-2	DL		#Hom
Total Tetra-Dioxins	1.37e+07		24:22	1.13	59.9		2.50	-	-	*		23
Total Penta-Dioxins	2.42e+07		30:13	1.02	113		2.50	-	-	*		11
Total Hexa-Dioxins	3.58e+07		36:04	1.46	178		2.50	-	-	*		19
Total Hepta-Dioxins	1.61e+07		42:45	1.30	110		2.50	-	-	*		22
Total Tetra-Furans	2.28e+07		23:01	1.15	56.3		2.50	-	-	*		13
1st Fn. Tot Penta-Furans	1.63e+07		28:23	0.89	58.5		2.50	-	-	*	PeCDF	7
Total Penta-Furans	4.13e+07		30:09	0.89	148		2.50	-	-	*	206	16
Total Hexa-Furans	6.01e+07		35:12	1.00	220		2.50	-	-	*		12
Total Hepta-Furans	1.71e+07		42:14	1.46	99.0		2.50	-	-	*		25

Analyst: _____ Date: 5/13/11

Frontier Analytical Laboratory - Acquisition Log

Run Name:12MAY11M Instrument: FAL3 GC: DB5 Experiment:OCDD

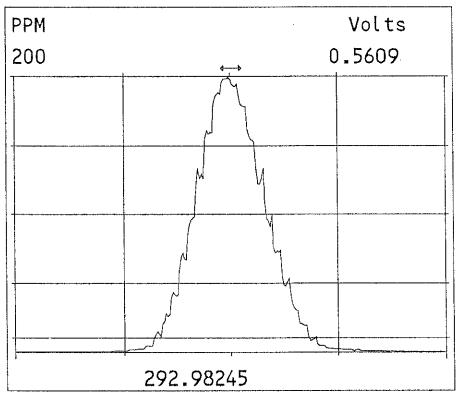
Data File	S	FAL ID	Client ID	Acquired	ConCal	EndCal	Analyst
12MAY11M	1	ST051211M1	1613 CS3 100511J	12-MAY-11 09:47:22	ST051211M1	ST051211M2	BS
12MAY11M	2	6735-008-0001-SA	DMA-TP4-0-1.5-042011 1:¶	12-MAY-11 10:42:41	ST051211M1	ST051211M2	BS
12MAY11M	3	6735-014-0001-SA	DMA-TP3-3-4-042011 1:10	12-MAY-11 11:38:00	ST051211M1	ST051211M2	BS
12MAY11M	4	6735-011-0001-SA	DMA-TP5-1.5-2-042011-D ¶	12-MAY-11 12:33:19	ST051211M1	ST051211M2	BS
12MAY11M	5	6735-010-0001-SA	DMA-TP5-1.5-2-042011 1:¶	12-MAY-11 13:28:38	ST051211M1	ST051211M2	BS
12MAY11M	6	6644-010-0001-SA	B-105@0.0 1:10	12-MAY-11 14:23:57	ST051211M1	ST051211M2	BS
12MAY11M	7	6645-001-0001-SA	B-108@0.0 1:10	12-MAY-11 15:19:19	ST051211M1	ST051211M2	BS
12MAY11M	8	6644-012-0001-SA	B-106@0.0 1:20	12-MAY-11 16:14:42	ST051211M1	ST051211M2	BS
12MAY11M	9	6645-009-0001-SA	B-112@0.0 1:50	12-MAY-11 17:10:05	ST051211M1	ST051211M2	BS
12MAY11M	10	SB051211M1	Solvent Blank	12-MAY-11 18:05:25	ST051211M1	ST051211M2	BS
12MAY11M	11	SB051211M2	Solvent Blank	12-MAY-11 19:00:47	ST051211M1	ST051211M2	BS
12MAY11M	12	SB051211M3	Solvent Blank	12-MAY-11 19:56:06	ST051211M1	ST051211M2	BS
12MAY11M	13	SB051211M4	Solvent Blank	12-MAY-11 20:51:29	ST051211M1	ST051211M2	BS
12MAY11M	14	ST051211M2	1613 CS3 100511J	12-MAY-11 21:46:48	ST051211M1	ST051211M2	BS

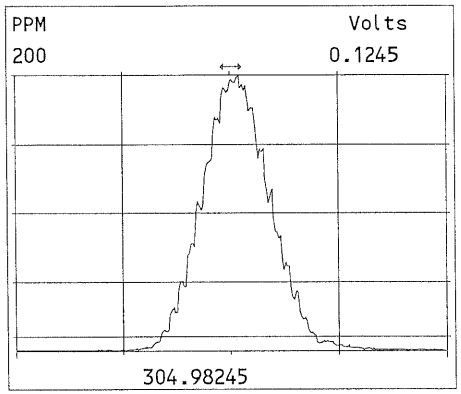
5/13/11

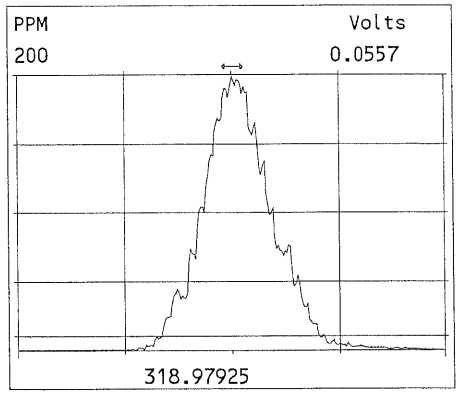
Data Backed Up:_____

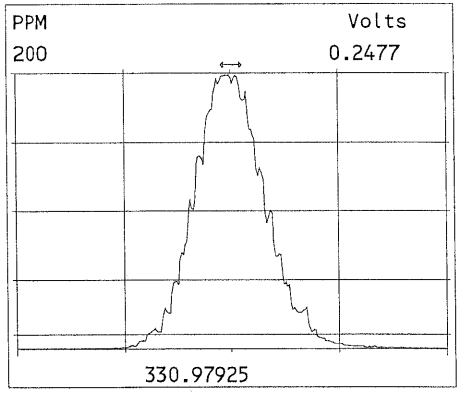
Date:_____

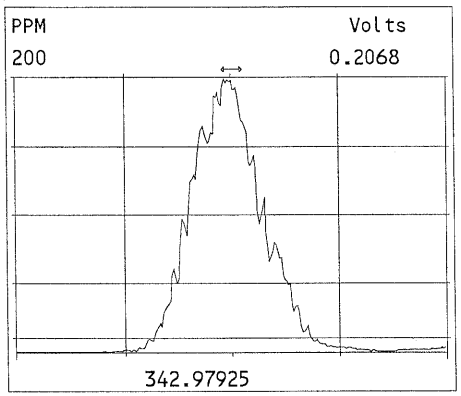
Peak Locate Examination:12-MAY-2011:09:45 File:12MAY11M
Experiment:OCDD Function:1 Reference:PFK

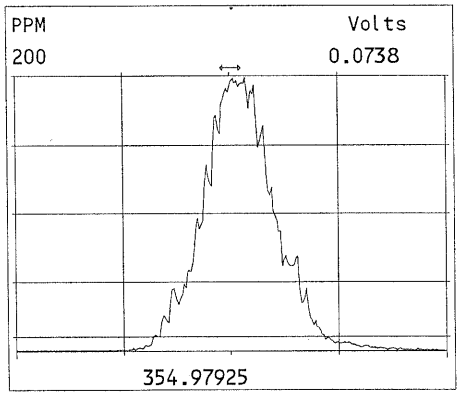


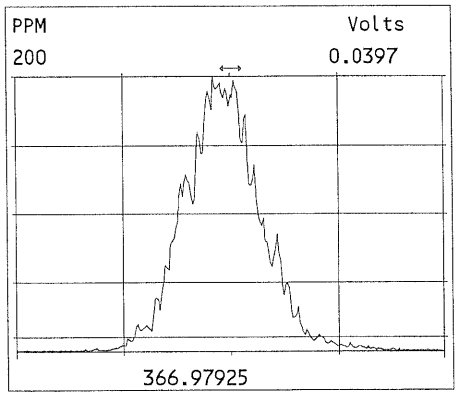


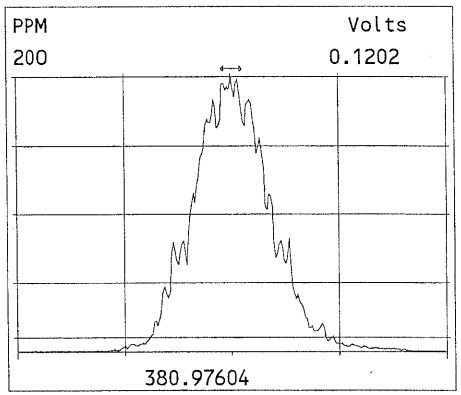


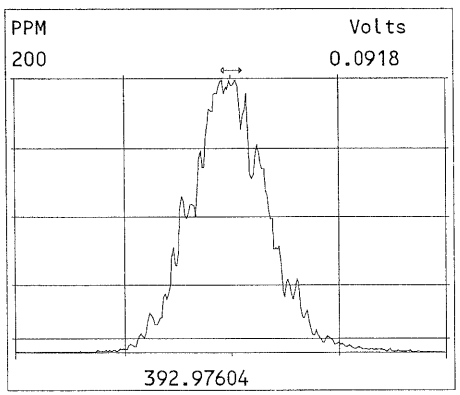


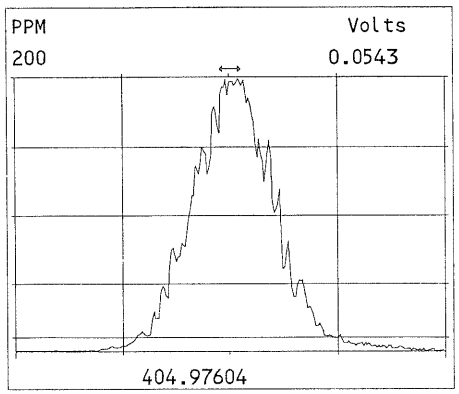


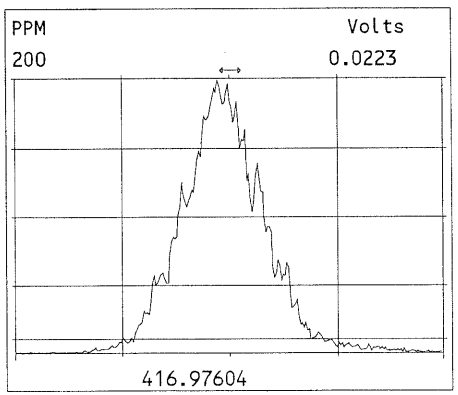




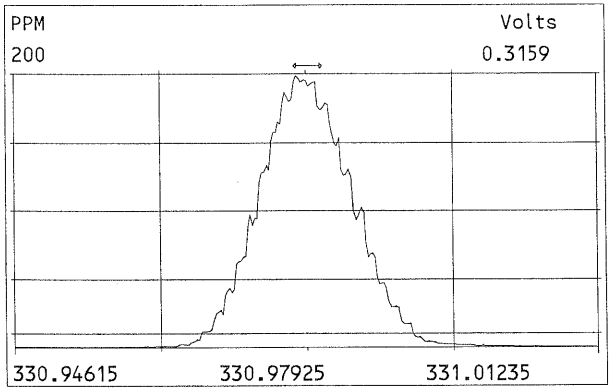


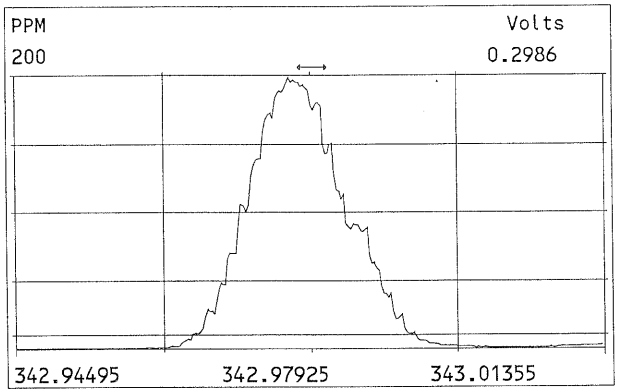


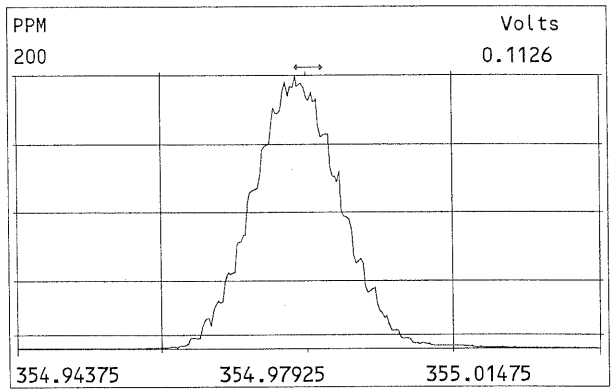


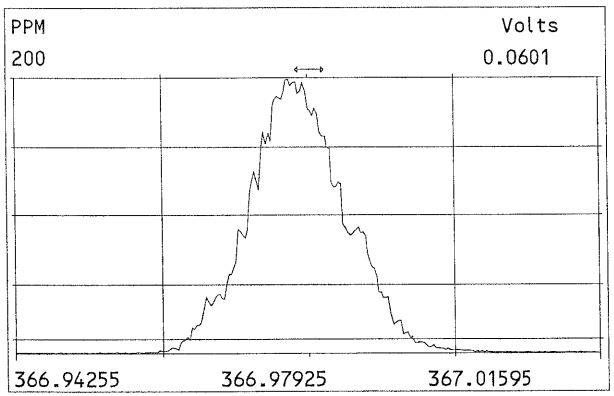


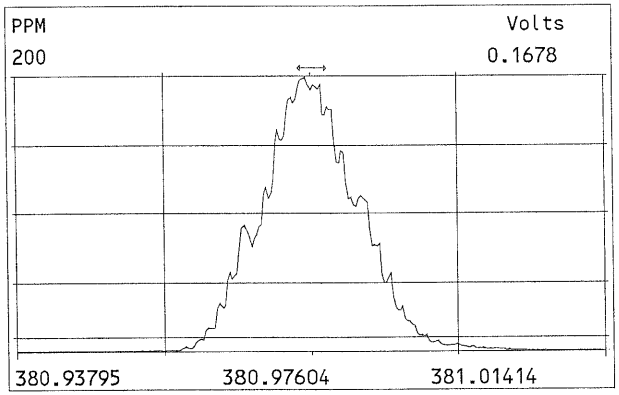
Peak Locate Examination:12-MAY-2011:09:45 File:12MAY11M
Experiment:OCDD Function:2 Reference:PFK

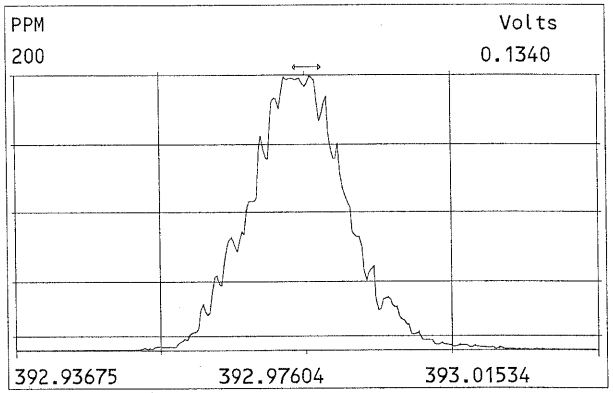


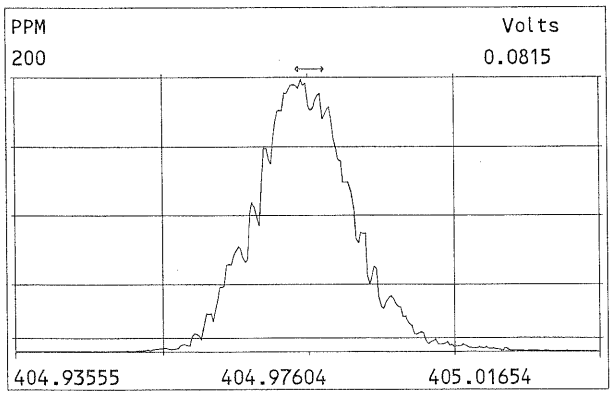


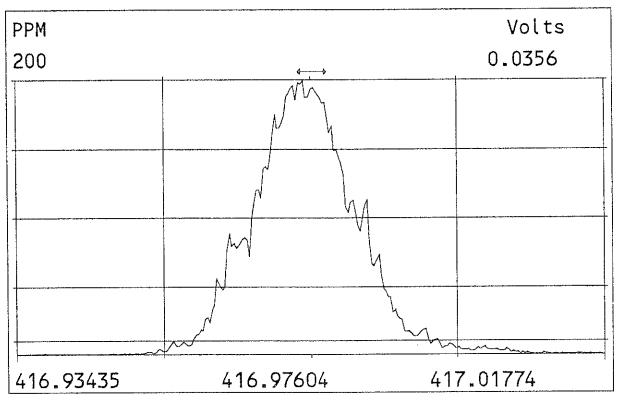




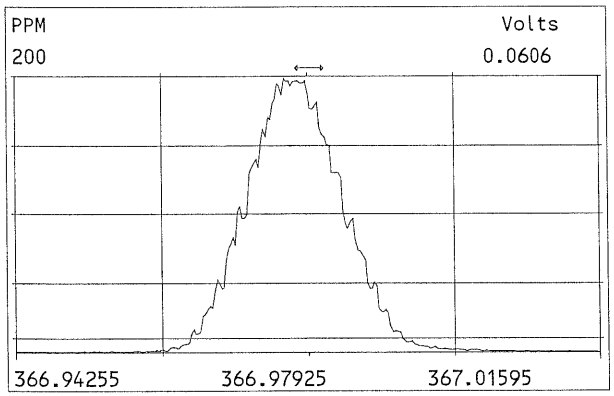


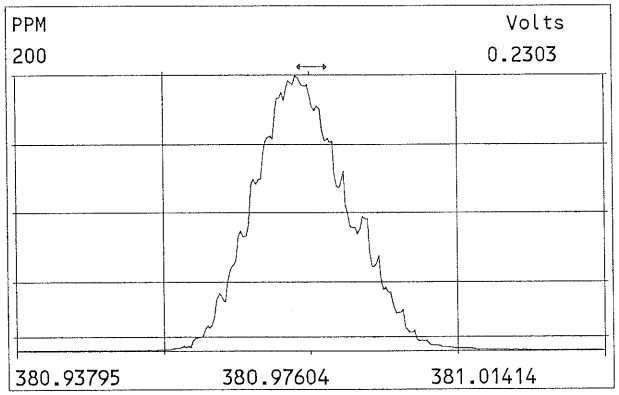


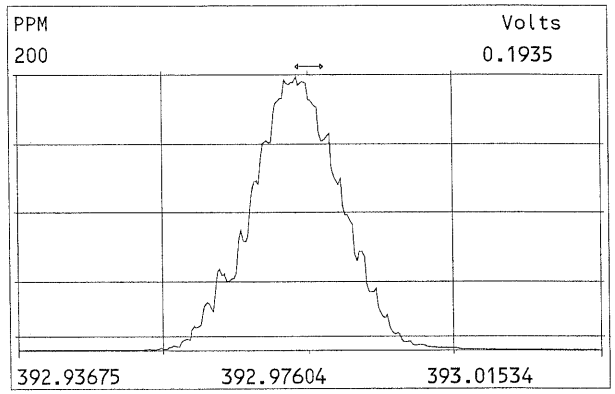


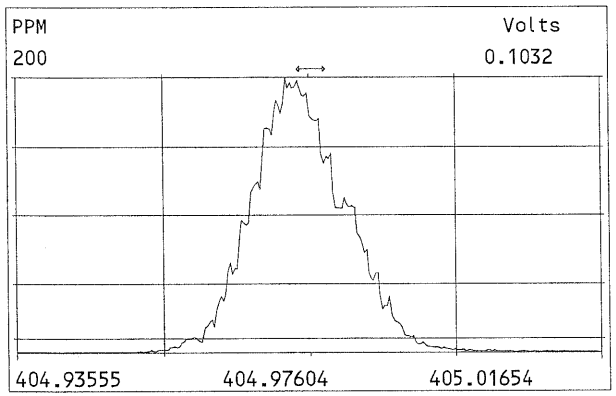


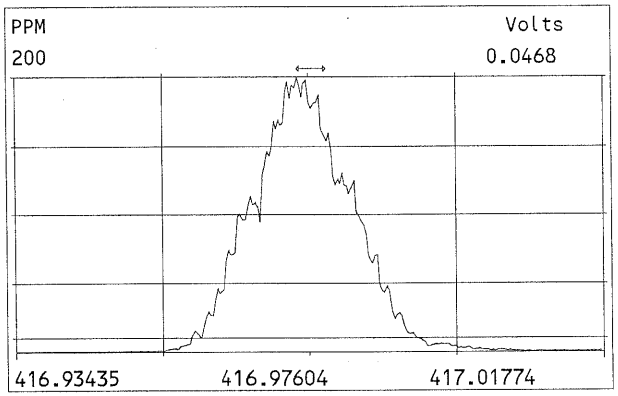
Peak Locate Examination:12-MAY-2011:09:46 File:12MAY11M
Experiment:OCDD Function:3 Reference:PFK

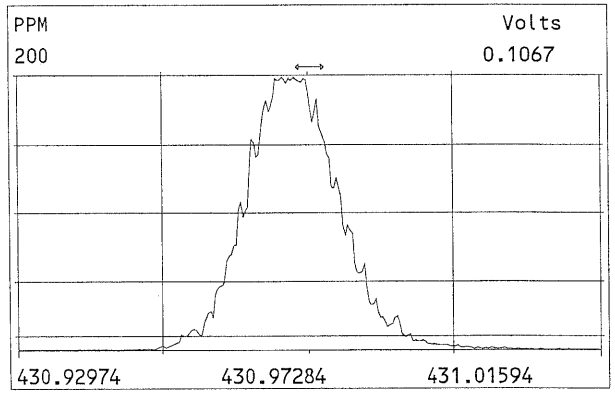


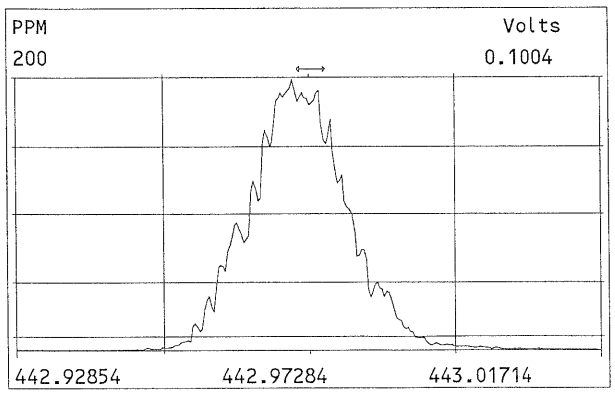


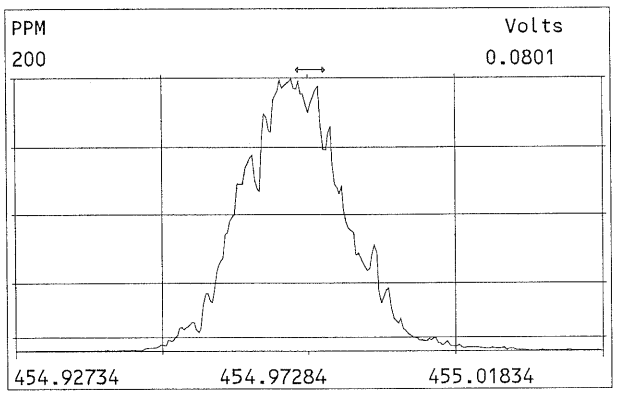




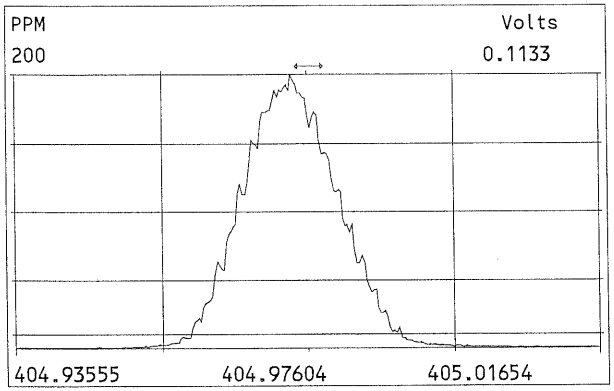


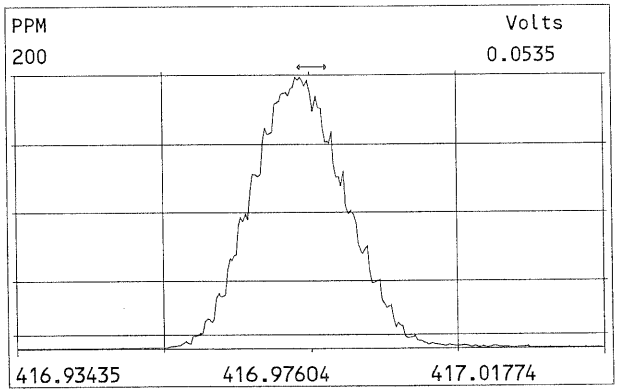


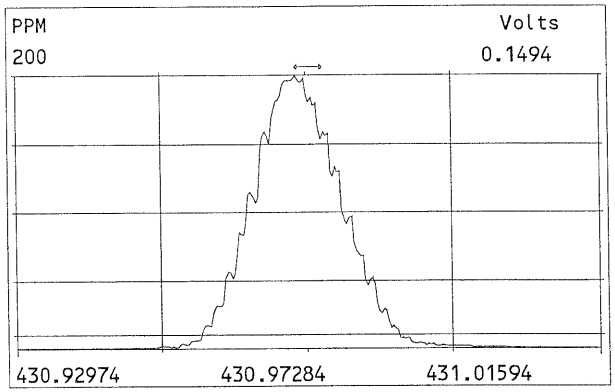


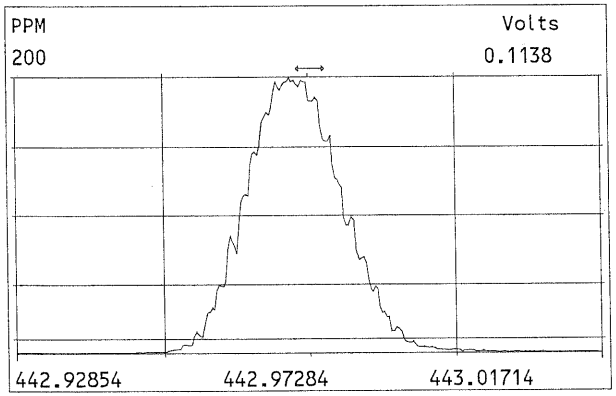


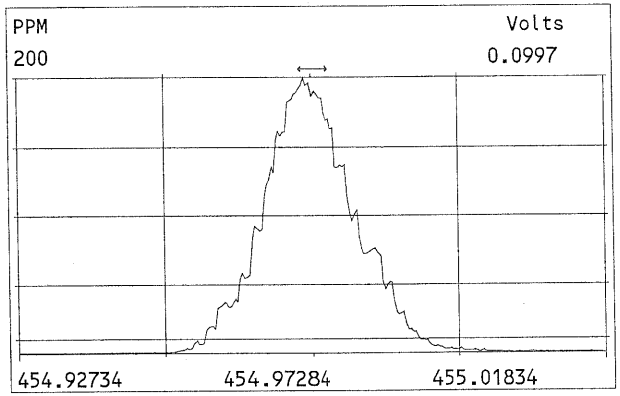
Peak Locate Examination:12-MAY-2011:09:46 File:12MAY11M
Experiment:OCDD Function:4 Reference:PFK

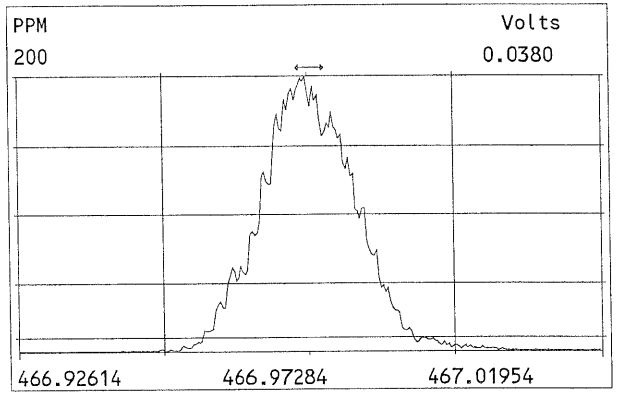


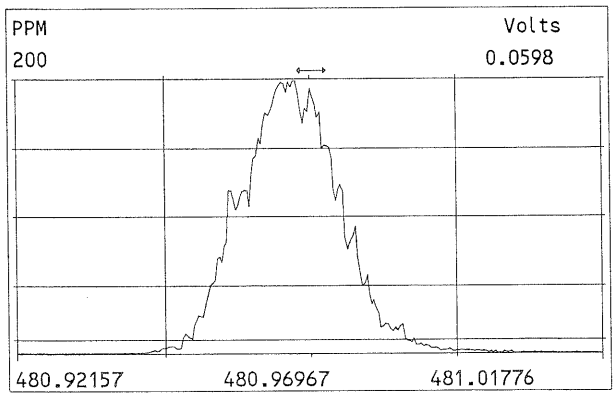




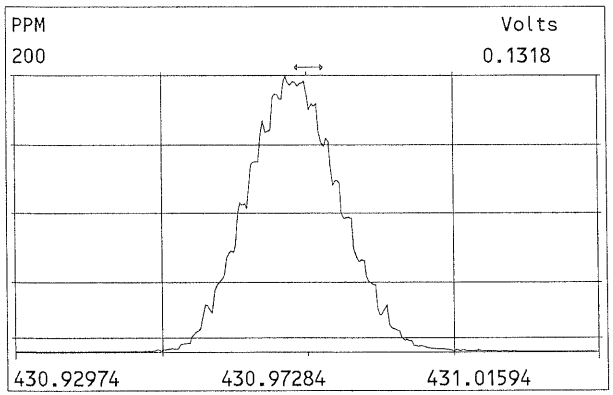


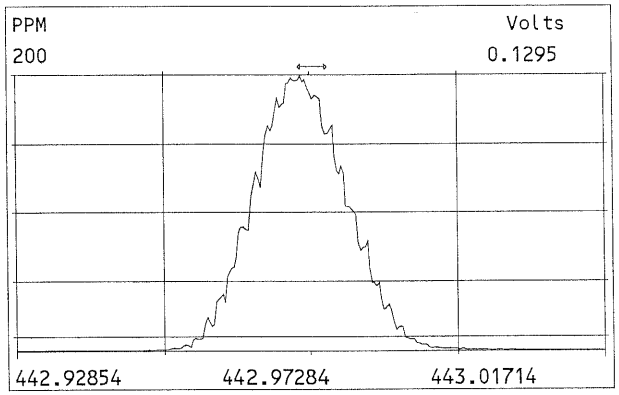


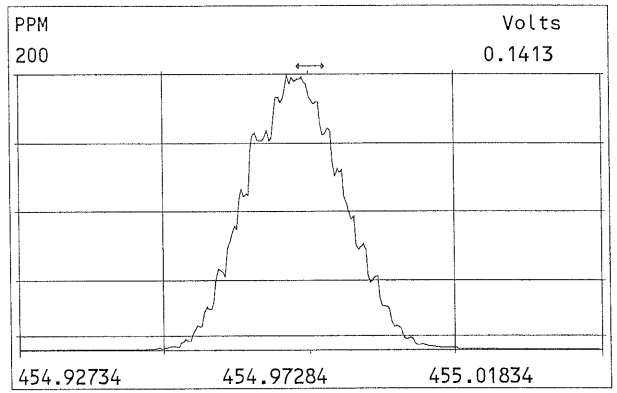


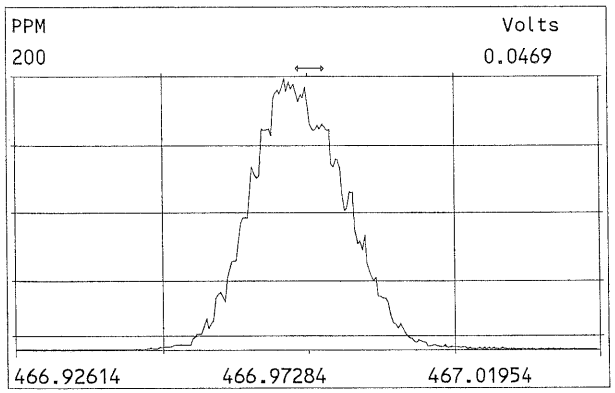


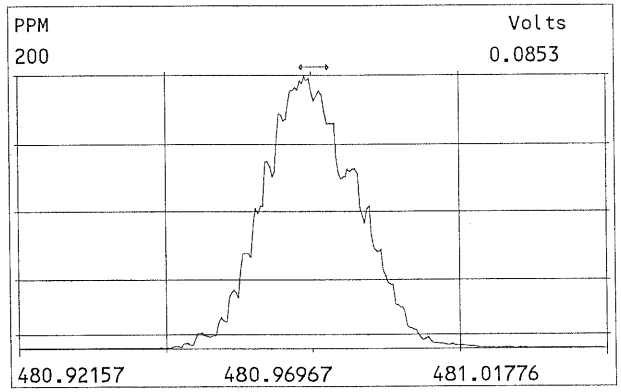
Peak Locate Examination:12-MAY-2011:09:46 File:12MAY11M
Experiment:OCDD Function:5 Reference:PFK

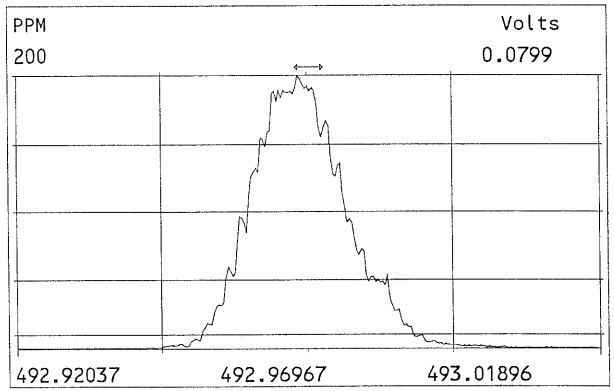


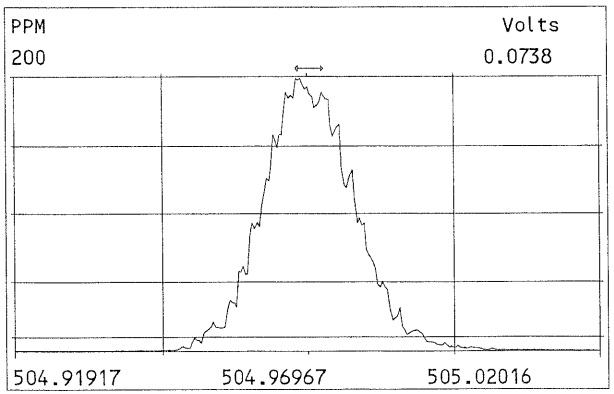


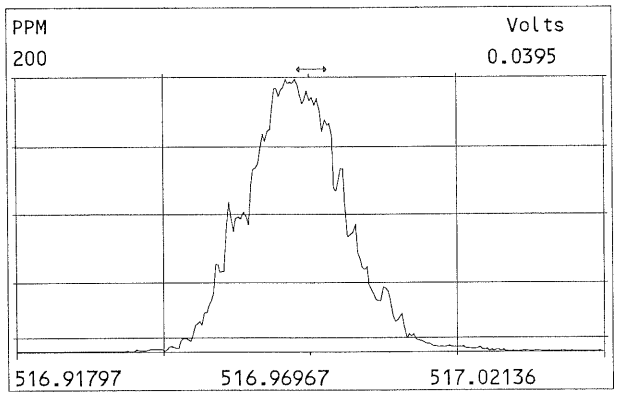




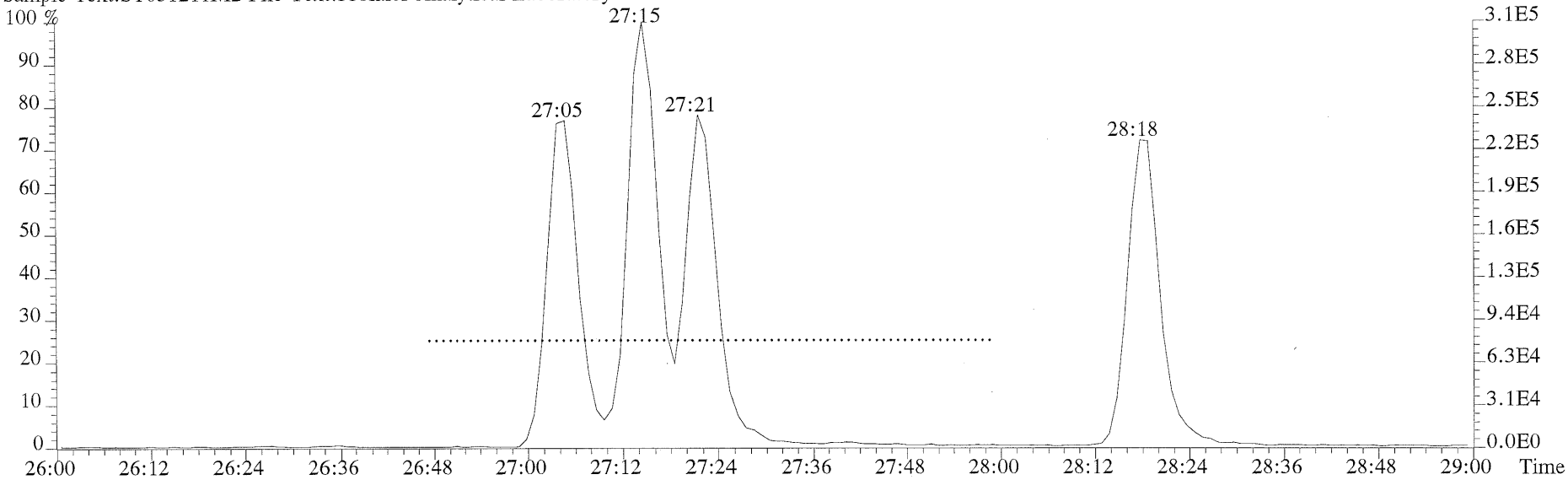




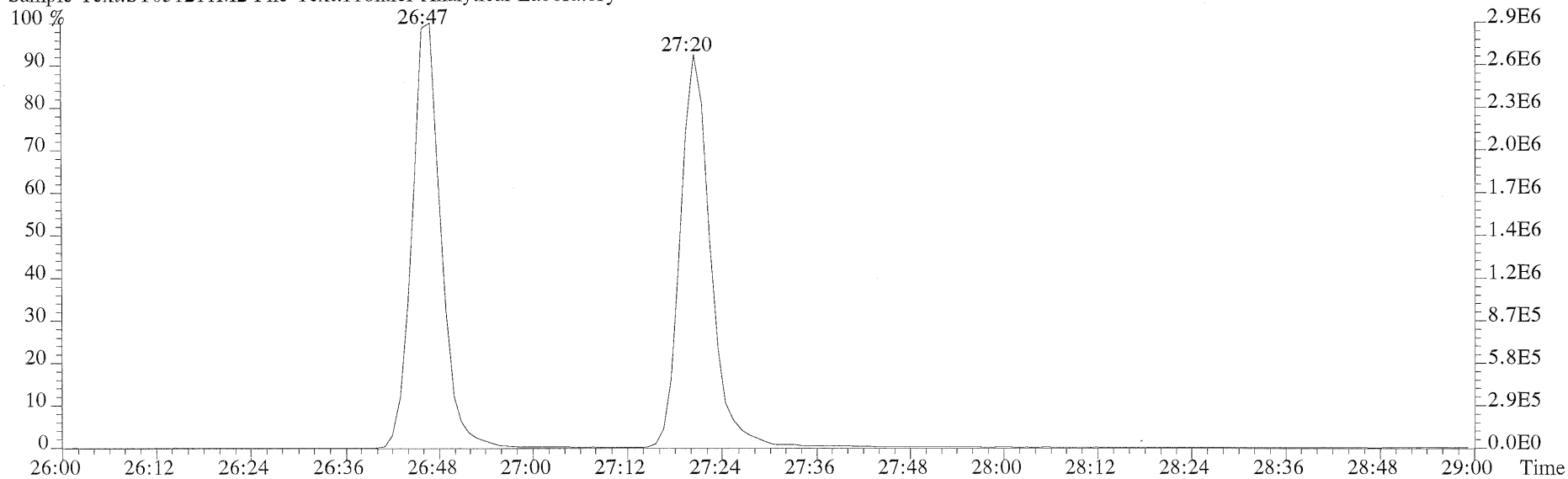




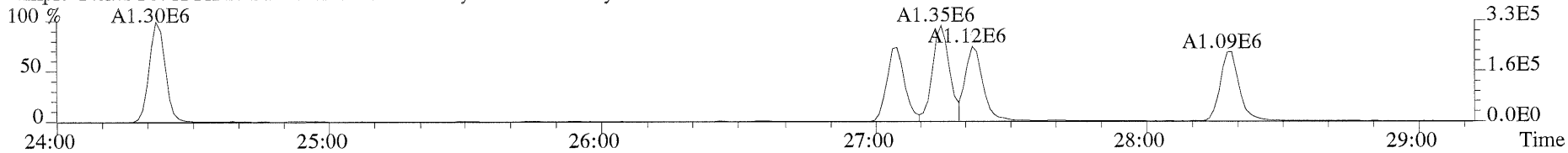
File:12MAY11M #1-426 Acq:12-MAY-2011 21:46:48 GC EI+ Voltage SIR Autospec-Ultima
319.8965 S:14 Exp:OCDD
Sample Text:ST051211M2 File Text:Frontier Analytical Laboratory



File:12MAY11M #1-426 Acq:12-MAY-2011 21:46:48 GC EI+ Voltage SIR Autospec-Ultima
333.9339 S:14 Exp:OCDD
Sample Text:ST051211M2 File Text:Frontier Analytical Laboratory



File:12MAY11M #1-426 Acq:12-MAY-2011 21:46:48 GC EI+ Voltage SIR Autospec-Ultima
319.8965 S:14 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M2 File Text:Frontier Analytical Laboratory



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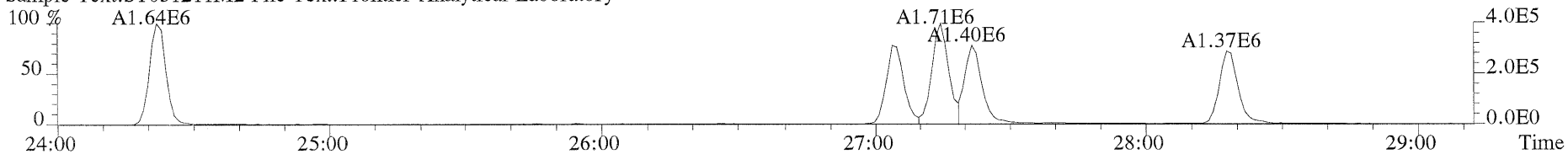
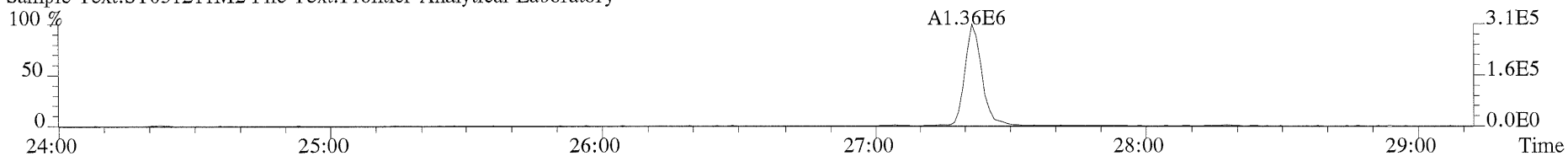
Sample Text:ST051211M2 File Text:Frontier Analytical Laboratory



File:12MAY11M #1-426 Acq:12-MAY-2011 21:46:48 GC EI+ Voltage SIR Autospec-Ultima
327.8847 S:14 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M2 File Text:Frontier Analytical Laboratory



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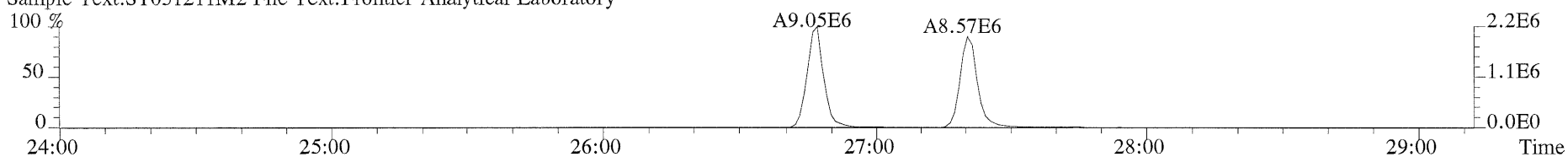
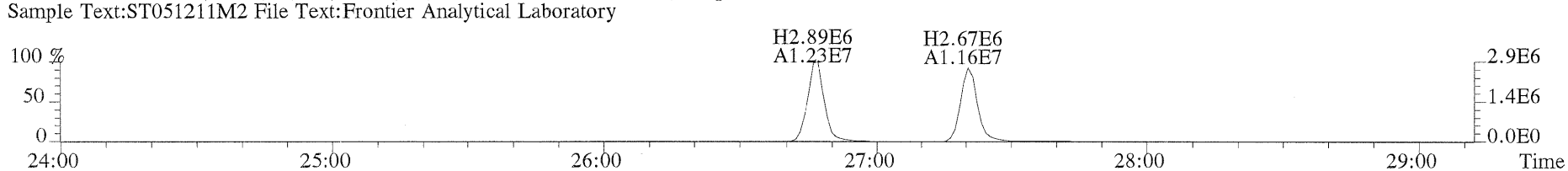
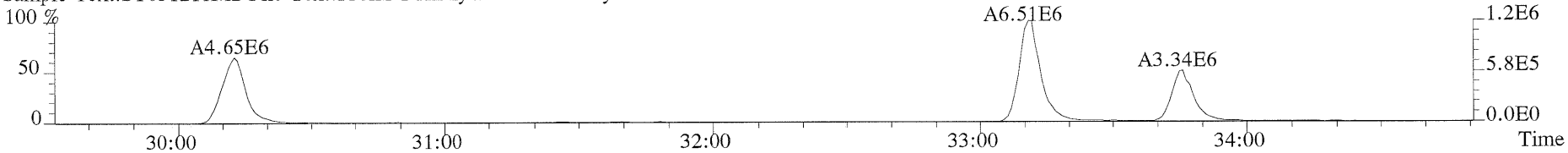
331.9368 S:14 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M2 File Text:Frontier Analytical Laboratory



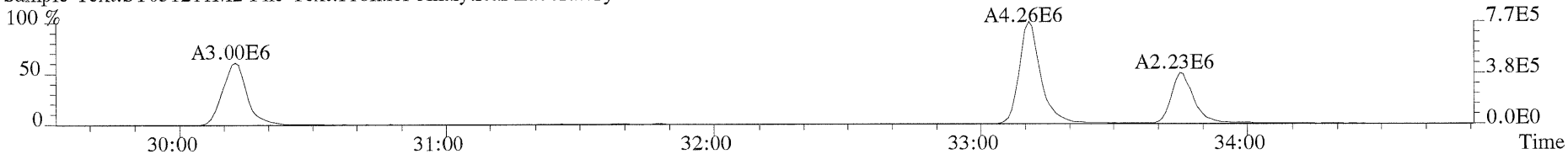
File:12MAY11M #1-426 Acq:12-MAY-2011 21:46:48 GC EI+ Voltage SIR Autospec-Ultima
333.9339 S:14 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M2 File Text:Frontier Analytical Laboratory



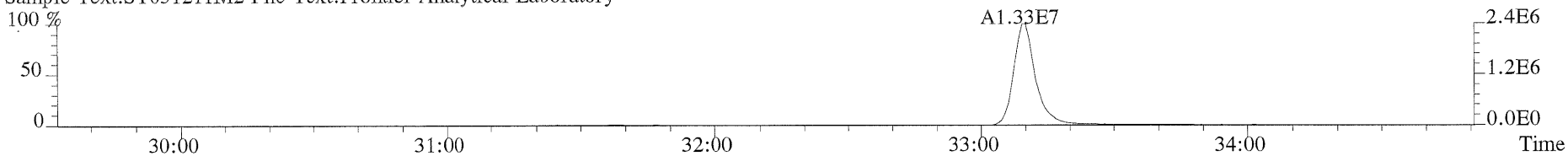
File:12MAY11M #1-412 Acq:12-MAY-2011 21:46:48 GC EI+ Voltage SIR Autospec-Ultima
355.8546 S:14 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M2 File Text:Frontier Analytical Laboratory



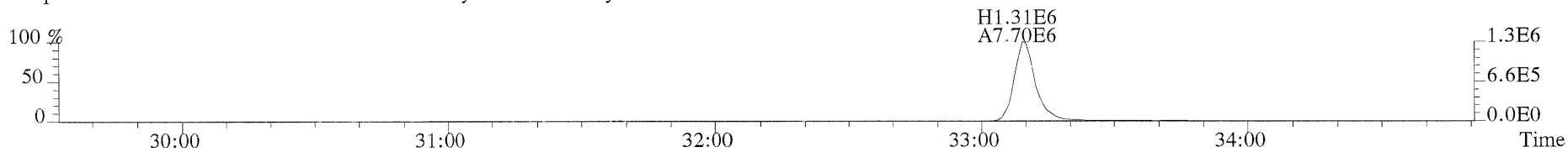
File:12MAY11M #1-412 Acq:12-MAY-2011 21:46:48 GC EI+ Voltage SIR Autospec-Ultima
357.8517 S:14 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M2 File Text:Frontier Analytical Laboratory



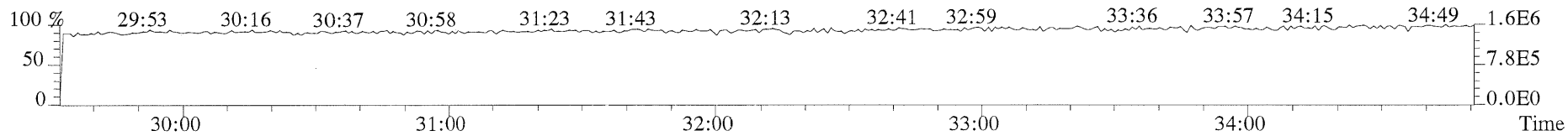
File:12MAY11M #1-412 Acq:12-MAY-2011 21:46:48 GC EI+ Voltage SIR Autospec-Ultima
367.8949 S:14 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M2 File Text:Frontier Analytical Laboratory



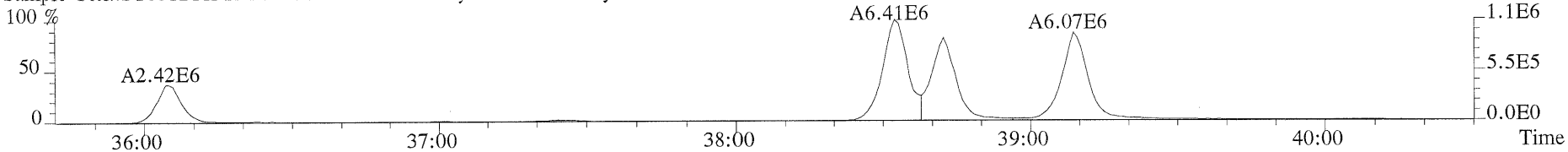
File:12MAY11M #1-412 Acq:12-MAY-2011 21:46:48 GC EI+ Voltage SIR Autospec-Ultima
369.8919 S:14 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M2 File Text:Frontier Analytical Laboratory



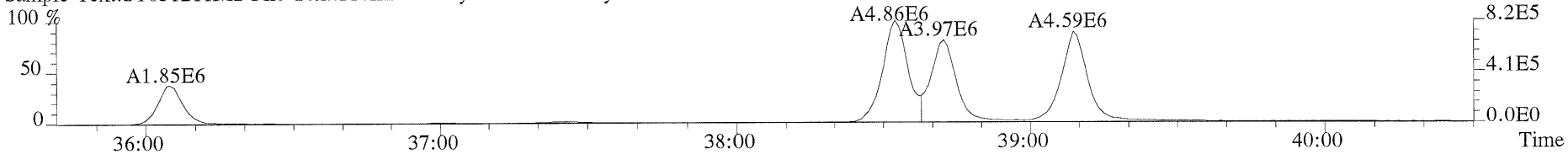
File:12MAY11M #1-412 Acq:12-MAY-2011 21:46:48 GC EI+ Voltage SIR Autospec-Ultima
366.9792 S:14 F:2 Exp:OCDD
Sample Text:ST051211M2 File Text:Frontier Analytical Laboratory



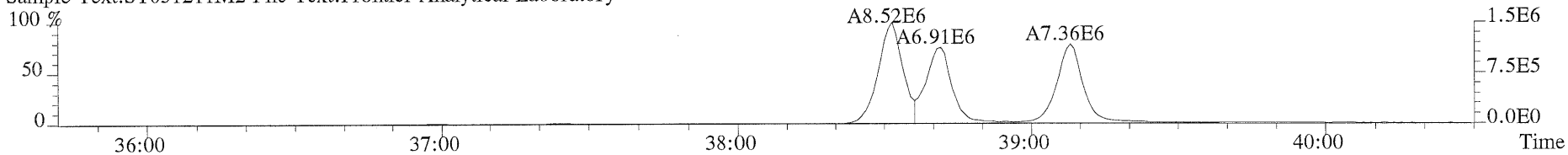
File:12MAY11M #1-476 Acq:12-MAY-2011 21:46:48 GC EI+ Voltage SIR Autospec-Ultima
389.8156 S:14 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M2 File Text:Frontier Analytical Laboratory



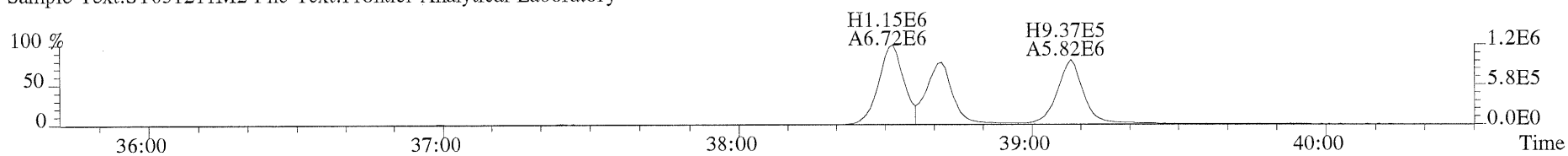
File:12MAY11M #1-476 Acq:12-MAY-2011 21:46:48 GC EI+ Voltage SIR Autospec-Ultima
391.8127 S:14 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M2 File Text:Frontier Analytical Laboratory



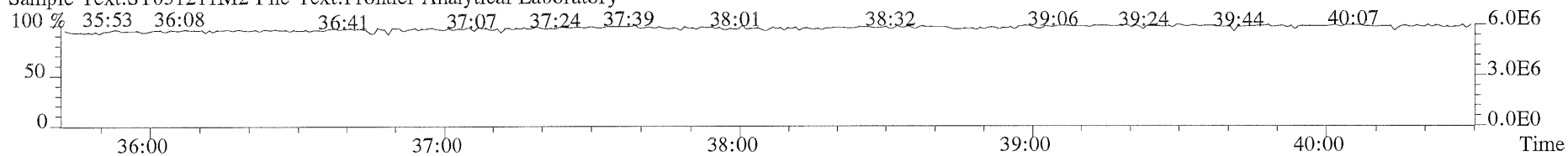
File:12MAY11M #1-476 Acq:12-MAY-2011 21:46:48 GC EI+ Voltage SIR Autospec-Ultima
401.8559 S:14 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M2 File Text:Frontier Analytical Laboratory



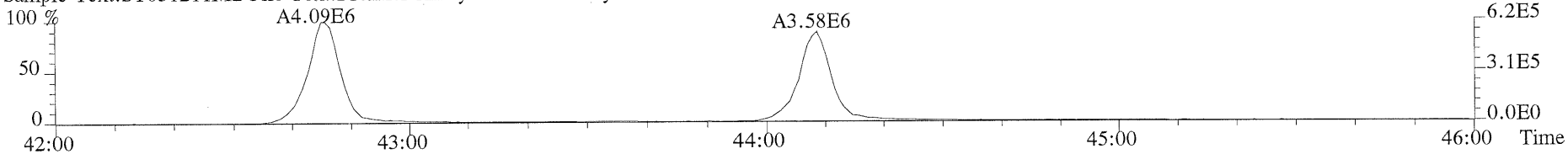
File:12MAY11M #1-476 Acq:12-MAY-2011 21:46:48 GC EI+ Voltage SIR Autospec-Ultima
403.8530 S:14 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M2 File Text:Frontier Analytical Laboratory



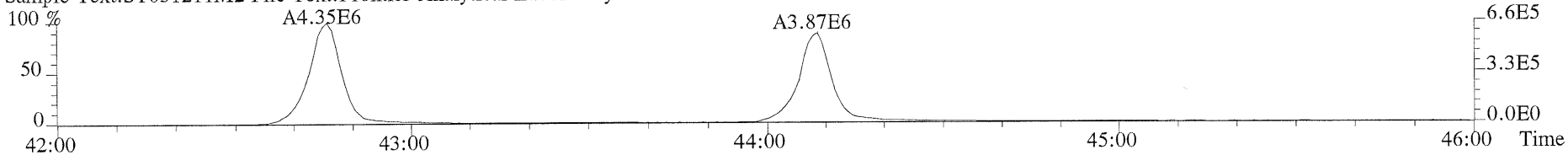
File:12MAY11M #1-476 Acq:12-MAY-2011 21:46:48 GC EI+ Voltage SIR Autospec-Ultima
380.9760 S:14 F:3 Exp:OCDD
Sample Text:ST051211M2 File Text:Frontier Analytical Laboratory



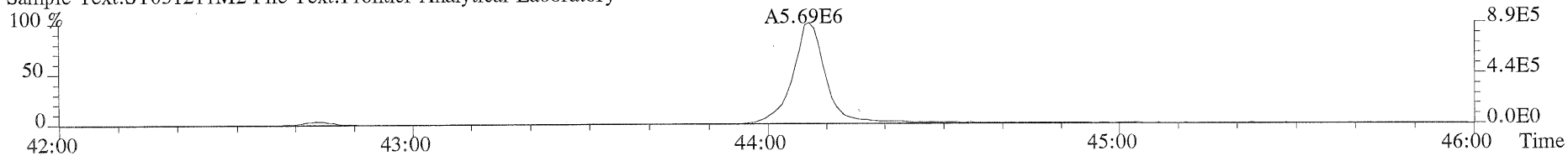
File:12MAY11M #1-541 Acq:12-MAY-2011 21:46:48 GC EI+ Voltage SIR Autospec-Ultima
423.7767 S:14 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M2 File Text:Frontier Analytical Laboratory



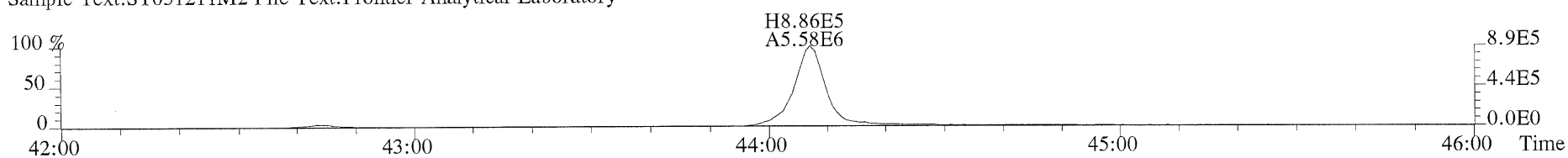
File:12MAY11M #1-541 Acq:12-MAY-2011 21:46:48 GC EI+ Voltage SIR Autospec-Ultima
425.7737 S:14 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M2 File Text:Frontier Analytical Laboratory



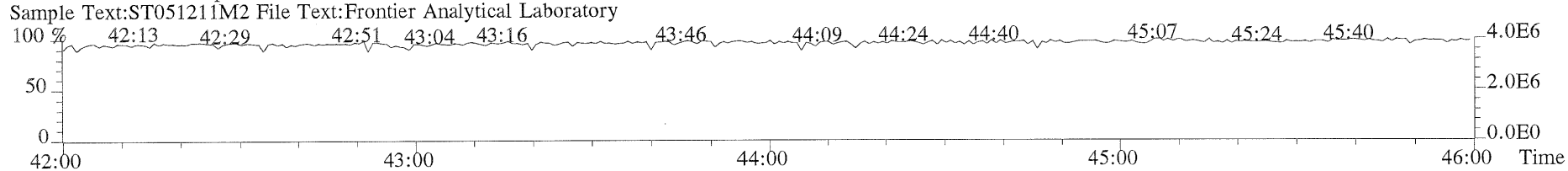
File:12MAY11M #1-541 Acq:12-MAY-2011 21:46:48 GC EI+ Voltage SIR Autospec-Ultima
435.8169 S:14 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M2 File Text:Frontier Analytical Laboratory



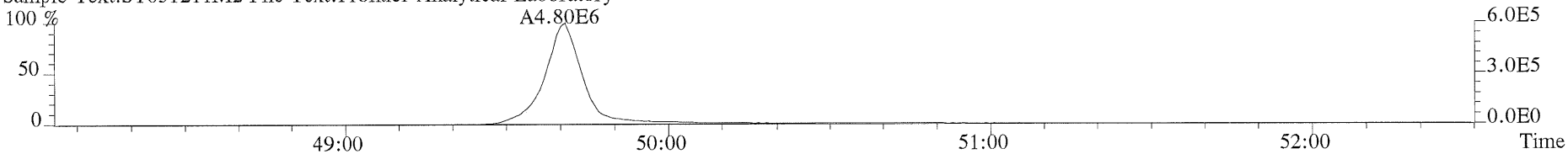
File:12MAY11M #1-541 Acq:12-MAY-2011 21:46:48 GC EI+ Voltage SIR Autospec-Ultima
437.8140 S:14 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M2 File Text:Frontier Analytical Laboratory



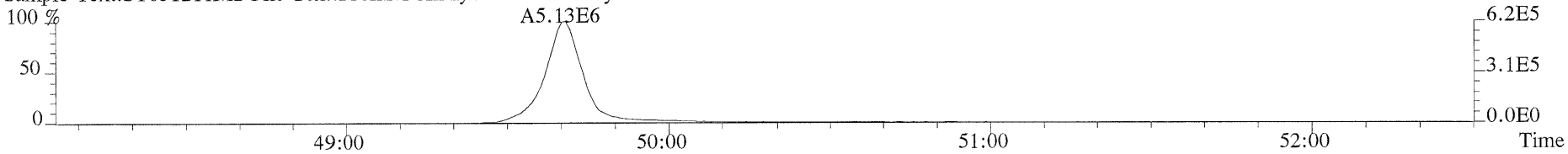
File:12MAY11M #1-541 Acq:12-MAY-2011 21:46:48 GC EI+ Voltage SIR Autospec-Ultima
430.9728 S:14 F:4 Exp:OCDD
Sample Text:ST051211M2 File Text:Frontier Analytical Laboratory



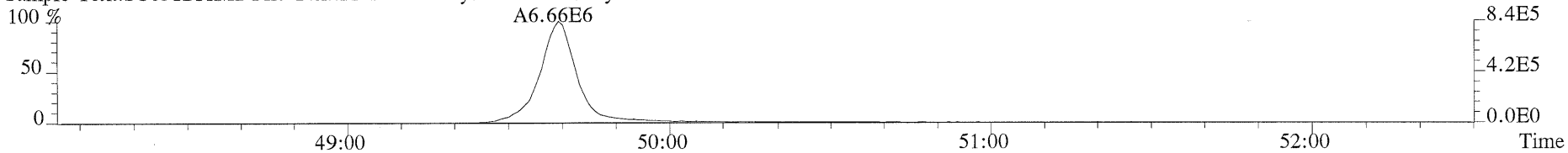
File:12MAY11M #1-348 Acq:12-MAY-2011 21:46:48 GC EI+ Voltage SIR Autospec-Ultima
457.7377 S:14 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M2 File Text:Frontier Analytical Laboratory



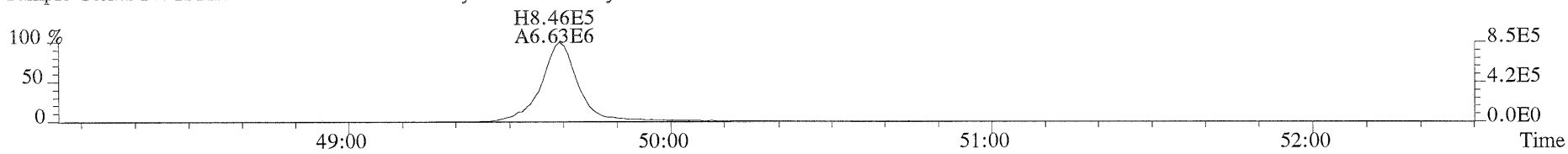
File:12MAY11M #1-348 Acq:12-MAY-2011 21:46:48 GC EI+ Voltage SIR Autospec-Ultima
459.7348 S:14 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M2 File Text:Frontier Analytical Laboratory



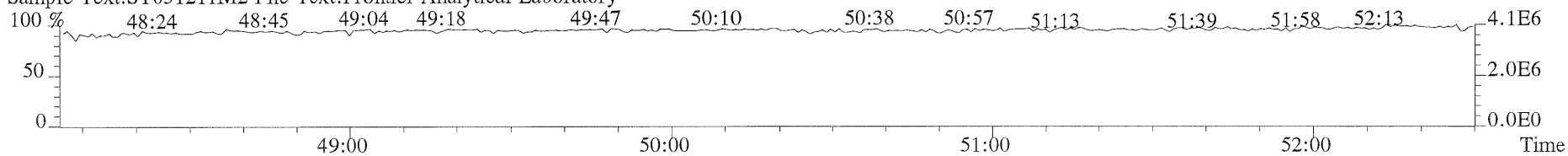
File:12MAY11M #1-348 Acq:12-MAY-2011 21:46:48 GC EI+ Voltage SIR Autospec-Ultima
469.7780 S:14 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M2 File Text:Frontier Analytical Laboratory



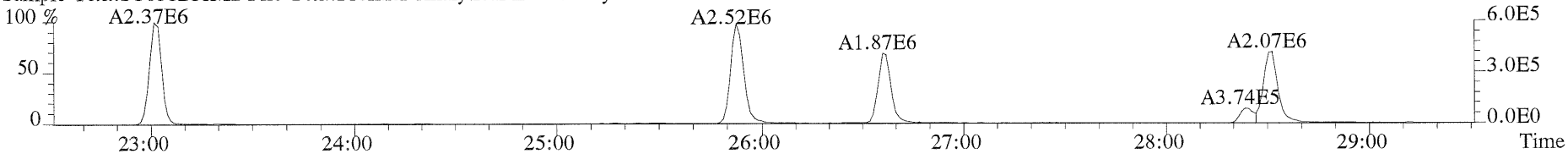
File:12MAY11M #1-348 Acq:12-MAY-2011 21:46:48 GC EI+ Voltage SIR Autospec-Ultima
471.7750 S:14 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M2 File Text:Frontier Analytical Laboratory



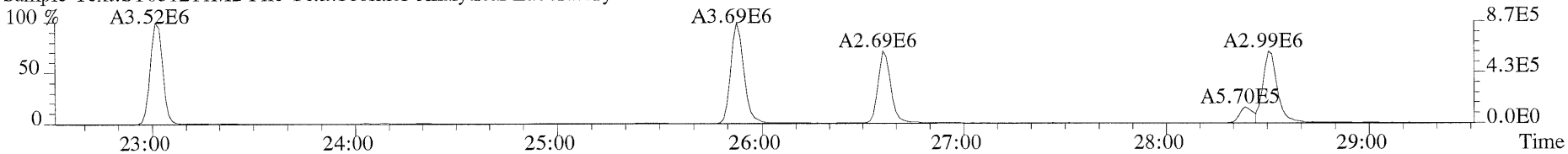
File:12MAY11M #1-348 Acq:12-MAY-2011 21:46:48 GC EI+ Voltage SIR Autospec-Ultima
454.9728 S:14 F:5 Exp:OCDD
Sample Text:ST051211M2 File Text:Frontier Analytical Laboratory



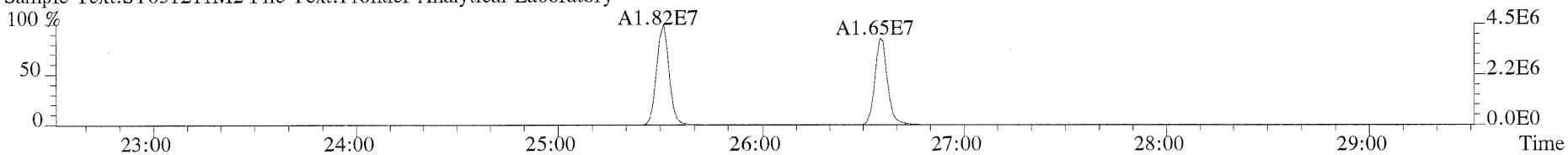
File:12MAY11M #1-426 Acq:12-MAY-2011 21:46:48 GC EI+ Voltage SIR Autospec-Ultima
303.9016 S:14 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M2 File Text:Frontier Analytical Laboratory



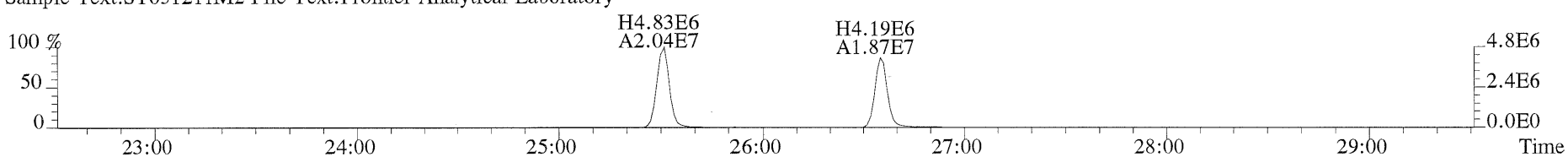
File:12MAY11M #1-426 Acq:12-MAY-2011 21:46:48 GC EI+ Voltage SIR Autospec-Ultima
305.8987 S:14 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M2 File Text:Frontier Analytical Laboratory



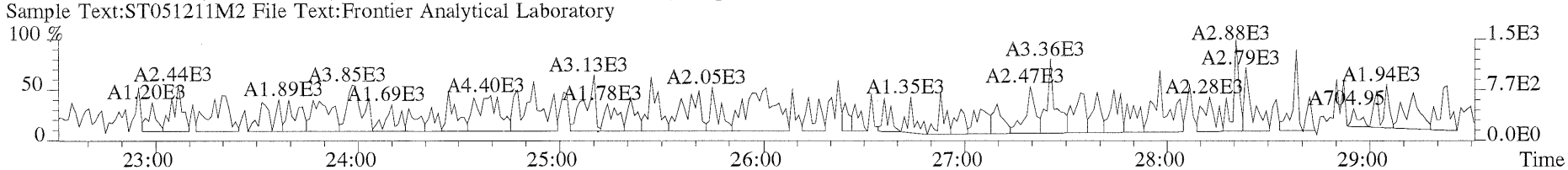
File:12MAY11M #1-426 Acq:12-MAY-2011 21:46:48 GC EI+ Voltage SIR Autospec-Ultima
315.9419 S:14 BSUB(10000,15,33.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M2 File Text:Frontier Analytical Laboratory



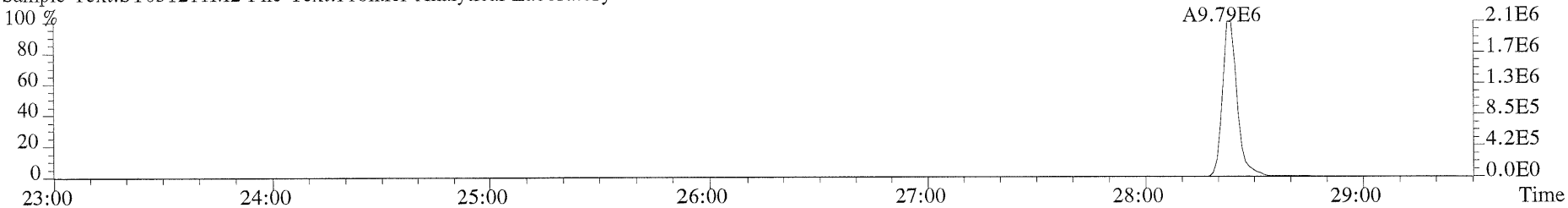
File:12MAY11M #1-426 Acq:12-MAY-2011 21:46:48 GC EI+ Voltage SIR Autospec-Ultima
317.9389 S:14 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M2 File Text:Frontier Analytical Laboratory



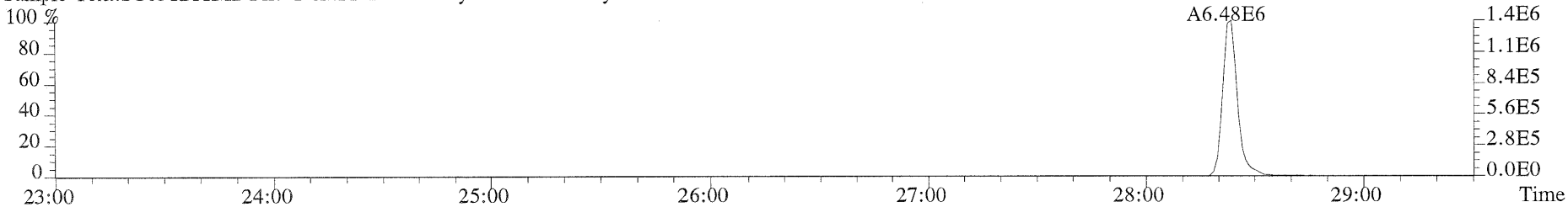
File:12MAY11M #1-426 Acq:12-MAY-2011 21:46:48 GC EI+ Voltage SIR Autospec-Ultima
375.8364 S:14 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M2 File Text:Frontier Analytical Laboratory



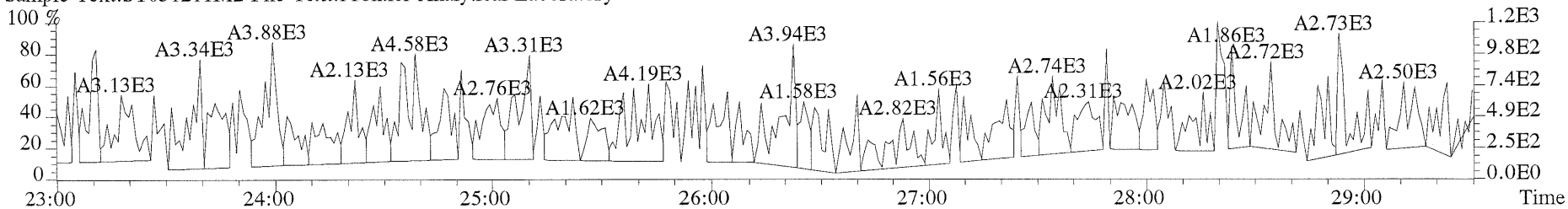
File:12MAY11M #1-426 Acq:12-MAY-2011 21:46:48 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:14 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M2 File Text:Frontier Analytical Laboratory



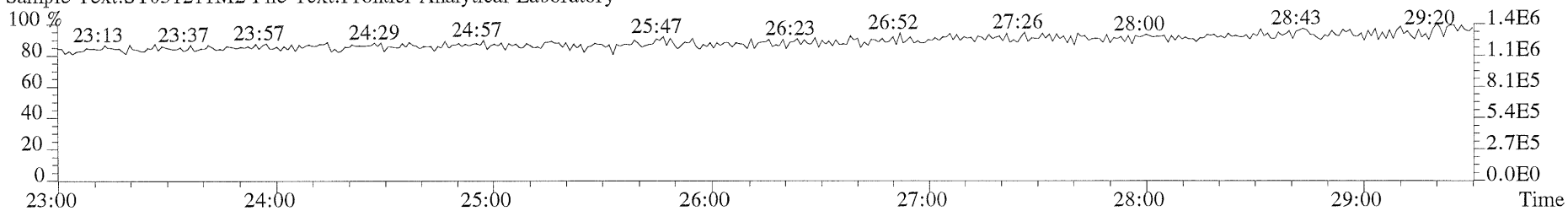
File:12MAY11M #1-426 Acq:12-MAY-2011 21:46:48 GC EI+ Voltage SIR Autospec-Ultima
341.8568 S:14 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M2 File Text:Frontier Analytical Laboratory



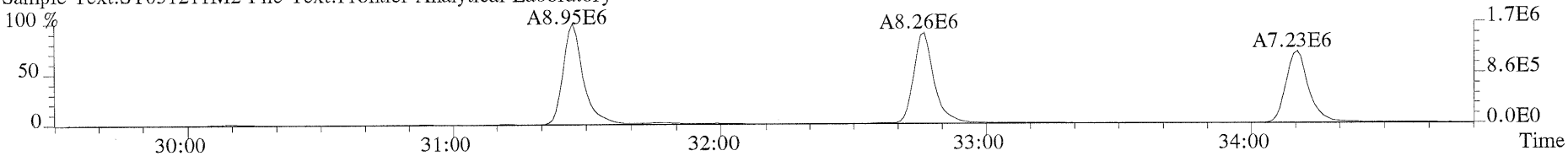
File:12MAY11M #1-426 Acq:12-MAY-2011 21:46:48 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:14 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M2 File Text:Frontier Analytical Laboratory



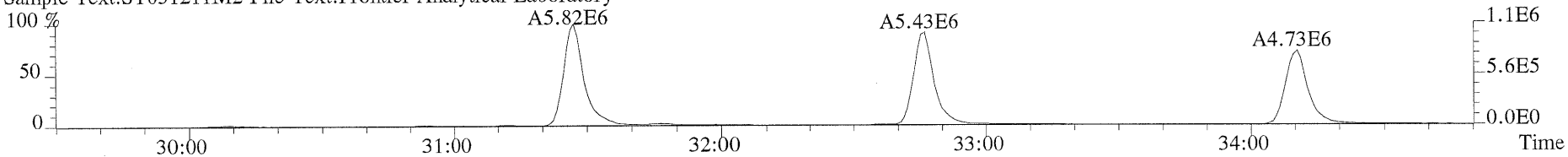
File:12MAY11M #1-426 Acq:12-MAY-2011 21:46:48 GC EI+ Voltage SIR Autospec-Ultima
316.9824 S:14 Exp:OCDD
Sample Text:ST051211M2 File Text:Frontier Analytical Laboratory



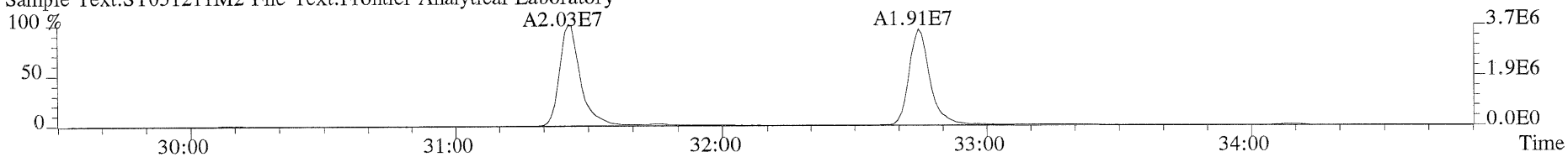
File:12MAY11M #1-412 Acq:12-MAY-2011 21:46:48 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:14 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M2 File Text:Frontier Analytical Laboratory



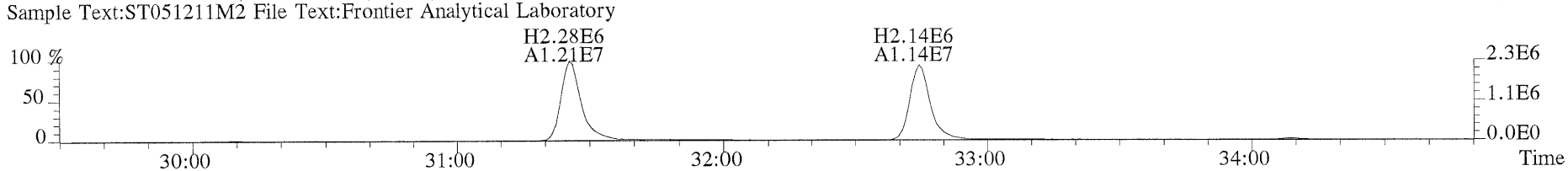
File:12MAY11M #1-412 Acq:12-MAY-2011 21:46:48 GC EI+ Voltage SIR Autospec-Ultima
341.8568 S:14 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M2 File Text:Frontier Analytical Laboratory



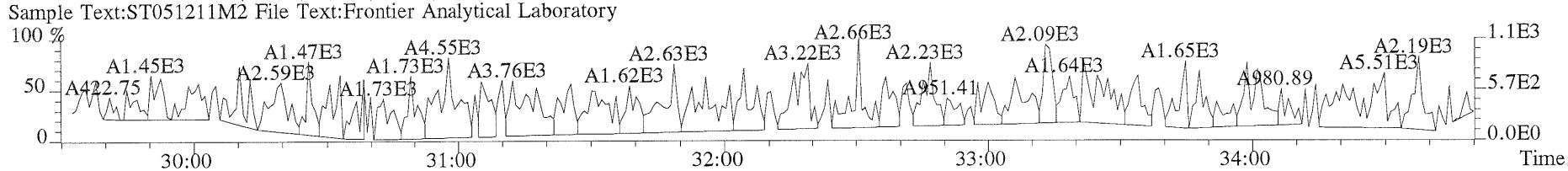
File:12MAY11M #1-412 Acq:12-MAY-2011 21:46:48 GC EI+ Voltage SIR Autospec-Ultima
351.9000 S:14 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M2 File Text:Frontier Analytical Laboratory



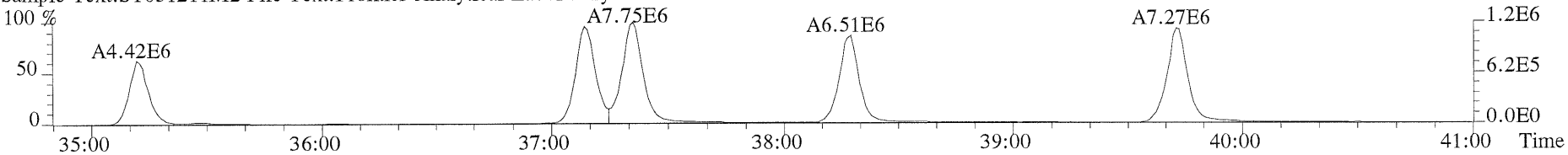
File:12MAY11M #1-412 Acq:12-MAY-2011 21:46:48 GC EI+ Voltage SIR Autospec-Ultima
353.8970 S:14 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M2 File Text:Frontier Analytical Laboratory



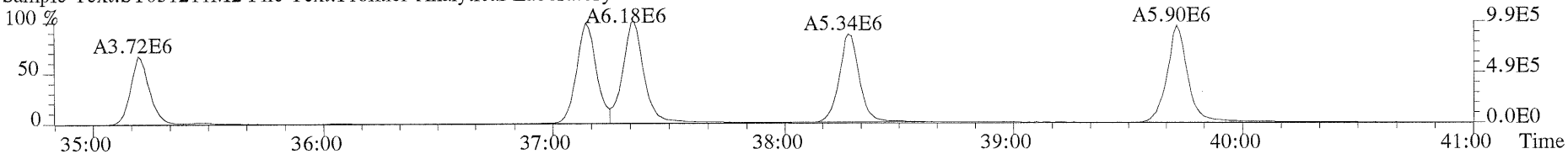
File:12MAY11M #1-412 Acq:12-MAY-2011 21:46:48 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:14 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M2 File Text:Frontier Analytical Laboratory



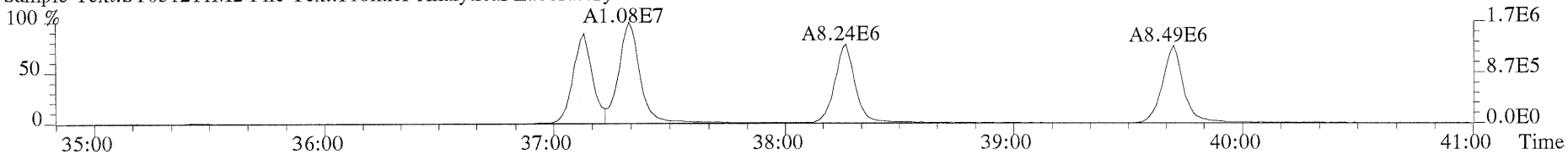
File:12MAY11M #1-476 Acq:12-MAY-2011 21:46:48 GC EI+ Voltage SIR Autospec-Ultima
373.8207 S:14 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M2 File Text:Frontier Analytical Laboratory



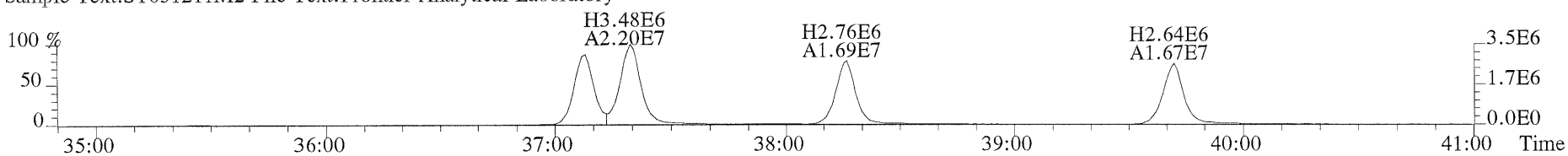
File:12MAY11M #1-476 Acq:12-MAY-2011 21:46:48 GC EI+ Voltage SIR Autospec-Ultima
375.8178 S:14 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M2 File Text:Frontier Analytical Laboratory



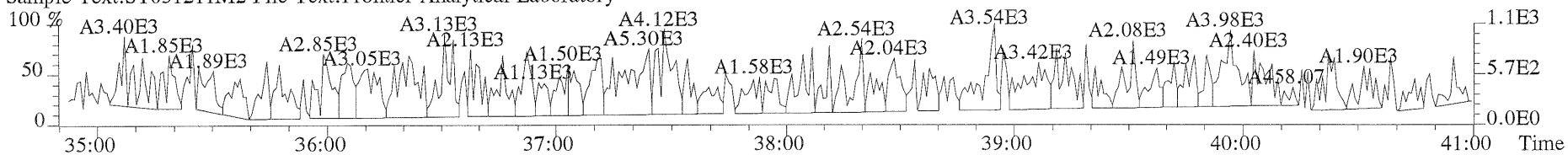
File:12MAY11M #1-476 Acq:12-MAY-2011 21:46:48 GC EI+ Voltage SIR Autospec-Ultima
383.8639 S:14 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M2 File Text:Frontier Analytical Laboratory



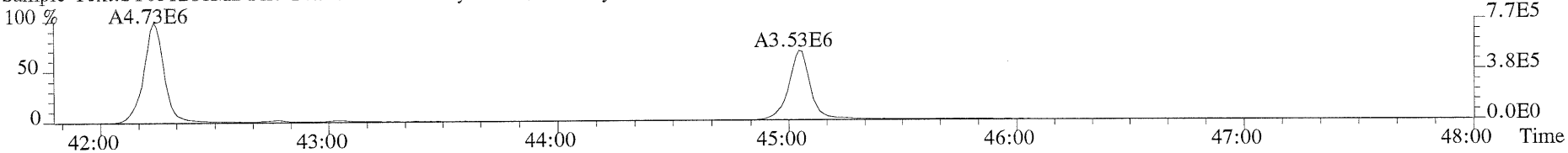
File:12MAY11M #1-476 Acq:12-MAY-2011 21:46:48 GC EI+ Voltage SIR Autospec-Ultima
385.8610 S:14 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M2 File Text:Frontier Analytical Laboratory



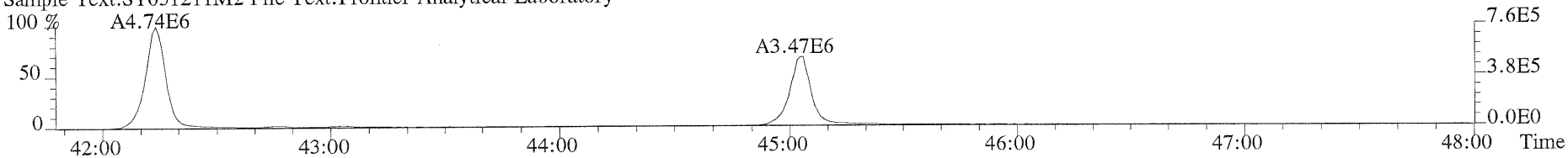
File:12MAY11M #1-476 Acq:12-MAY-2011 21:46:48 GC EI+ Voltage SIR Autospec-Ultima
445.7555 S:14 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M2 File Text:Frontier Analytical Laboratory



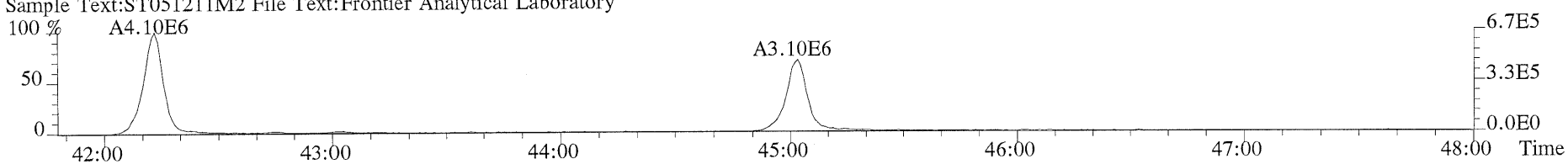
File:12MAY11M #1-541 Acq:12-MAY-2011 21:46:48 GC EI+ Voltage SIR Autospec-Ultima
407.7818 S:14 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M2 File Text:Frontier Analytical Laboratory



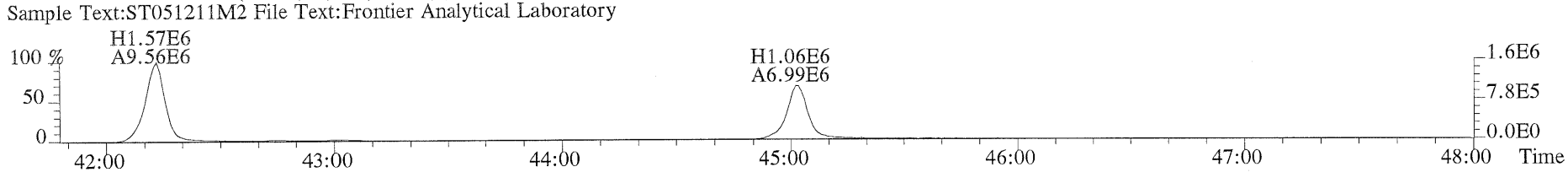
File:12MAY11M #1-541 Acq:12-MAY-2011 21:46:48 GC EI+ Voltage SIR Autospec-Ultima
409.7788 S:14 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M2 File Text:Frontier Analytical Laboratory



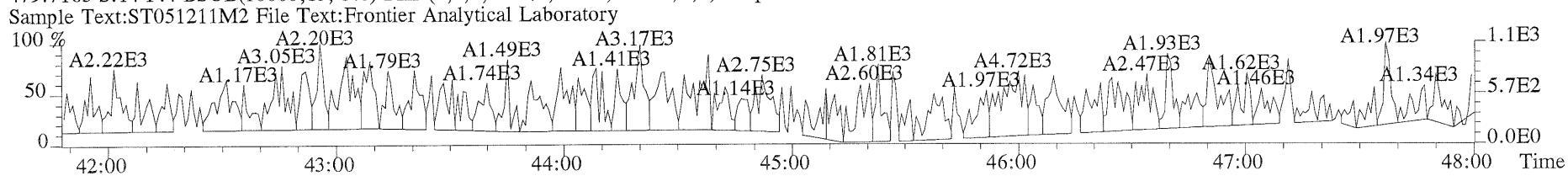
File:12MAY11M #1-541 Acq:12-MAY-2011 21:46:48 GC EI+ Voltage SIR Autospec-Ultima
417.8253 S:14 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M2 File Text:Frontier Analytical Laboratory



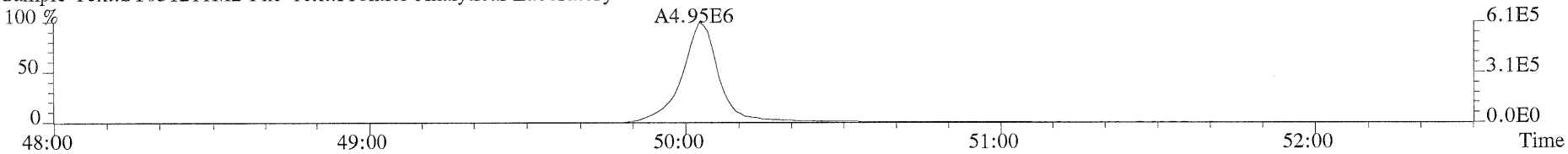
File:12MAY11M #1-541 Acq:12-MAY-2011 21:46:48 GC EI+ Voltage SIR Autospec-Ultima
419.8220 S:14 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M2 File Text:Frontier Analytical Laboratory



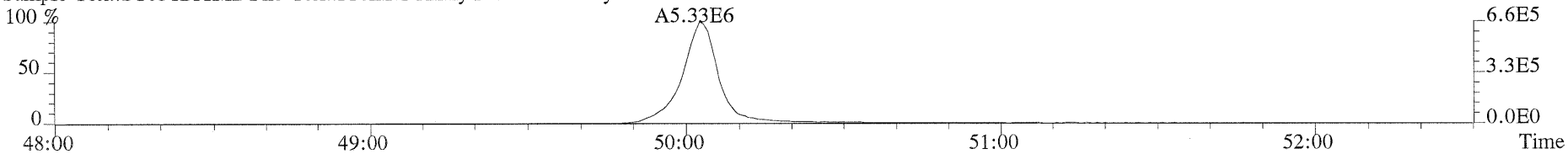
File:12MAY11M #1-541 Acq:12-MAY-2011 21:46:48 GC EI+ Voltage SIR Autospec-Ultima
479.7165 S:14 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M2 File Text:Frontier Analytical Laboratory



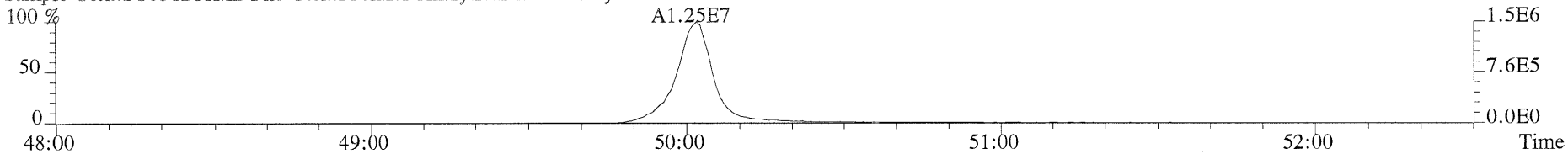
File:12MAY11M #1-348 Acq:12-MAY-2011 21:46:48 GC EI+ Voltage SIR Autospec-Ultima
441.7428 S:14 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M2 File Text:Frontier Analytical Laboratory



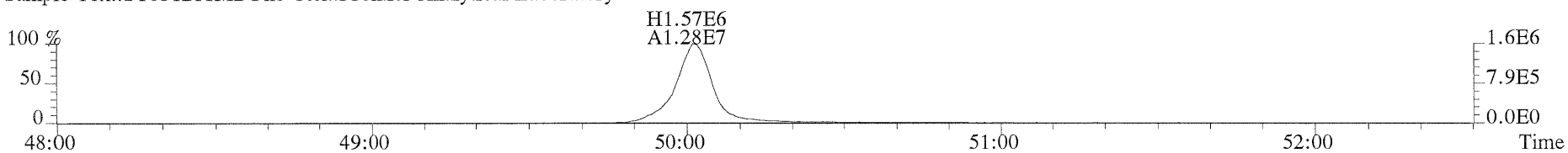
File:12MAY11M #1-348 Acq:12-MAY-2011 21:46:48 GC EI+ Voltage SIR Autospec-Ultima
443.7398 S:14 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M2 File Text:Frontier Analytical Laboratory



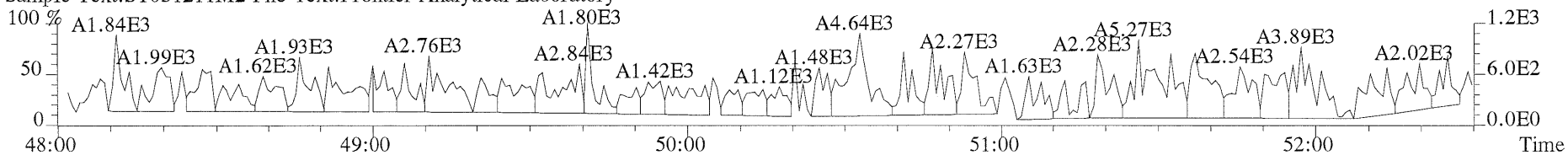
File:12MAY11M #1-348 Acq:12-MAY-2011 21:46:48 GC EI+ Voltage SIR Autospec-Ultima
453.7831 S:14 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M2 File Text:Frontier Analytical Laboratory



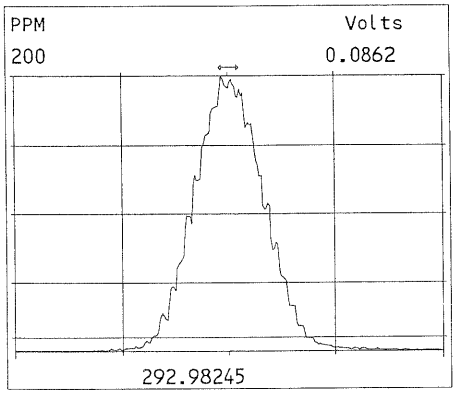
File:12MAY11M #1-348 Acq:12-MAY-2011 21:46:48 GC EI+ Voltage SIR Autospec-Ultima
455.7801 S:14 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M2 File Text:Frontier Analytical Laboratory

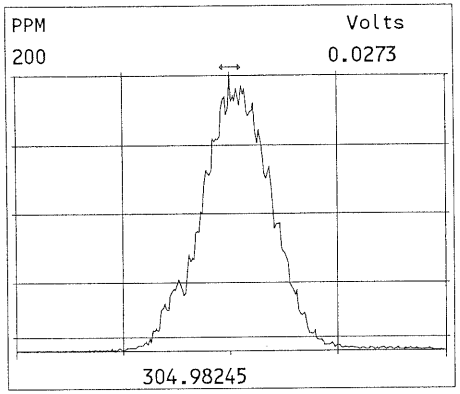


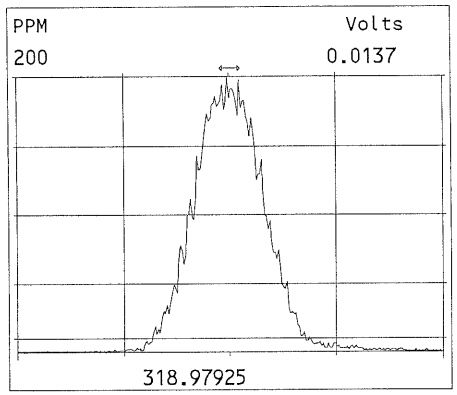
File:12MAY11M #1-348 Acq:12-MAY-2011 21:46:48 GC EI+ Voltage SIR Autospec-Ultima
513.6775 S:14 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST051211M2 File Text:Frontier Analytical Laboratory

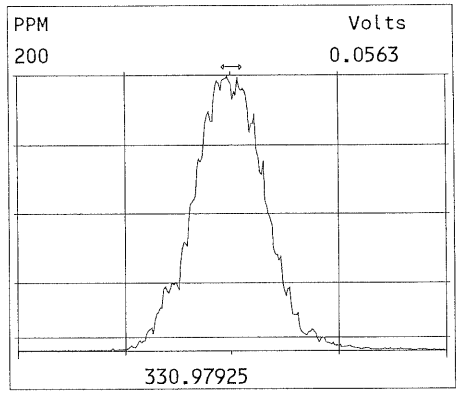


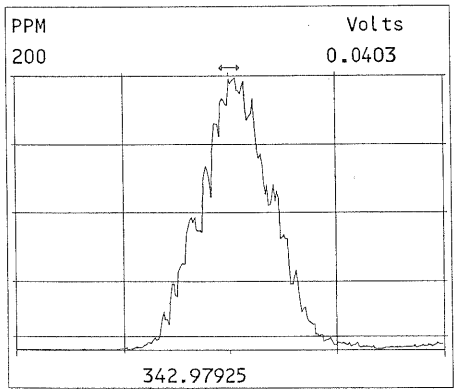
Peak Locate Examination:12-MAY-2011:22:43 File:12MAY11M_RES_CHECK
Experiment:OCDD Function:1 Reference:PFK

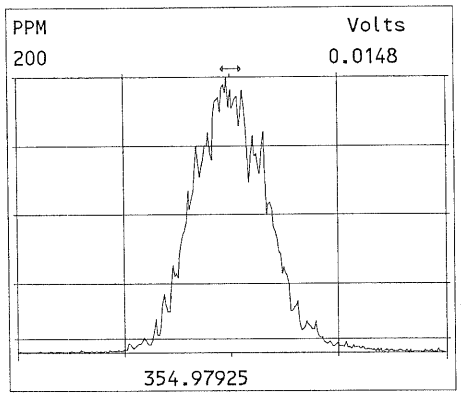


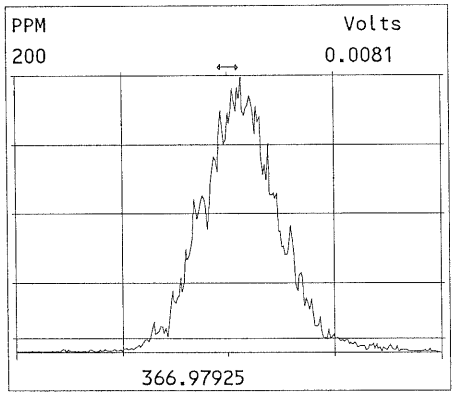


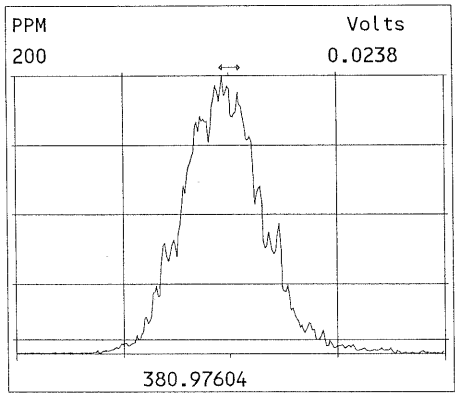


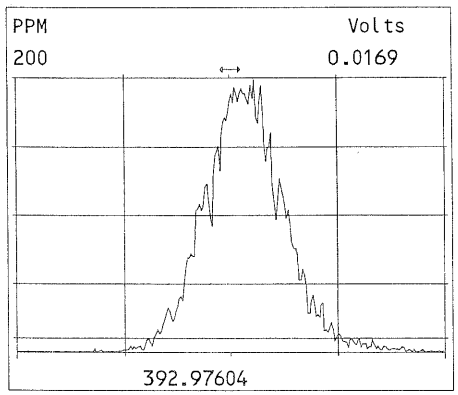


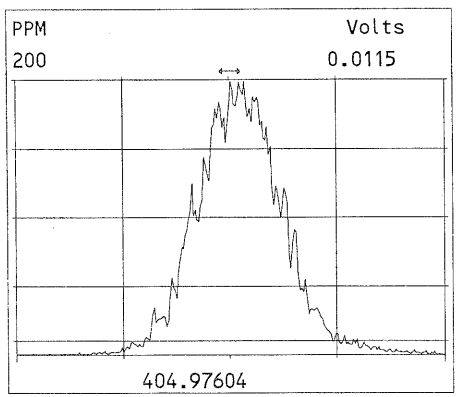


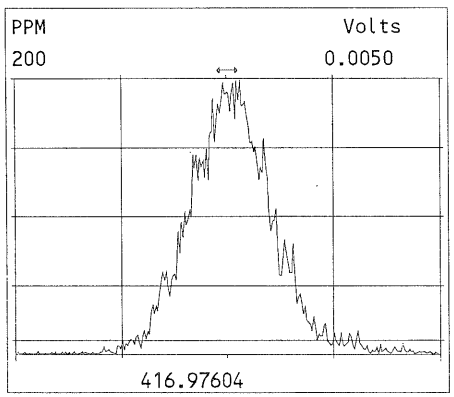




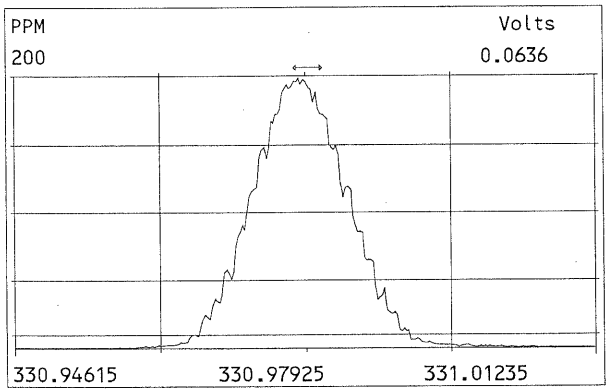


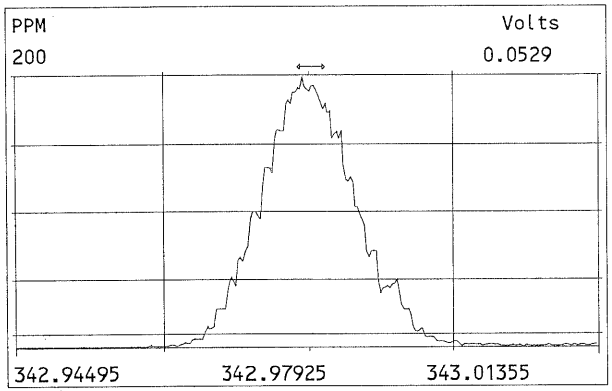


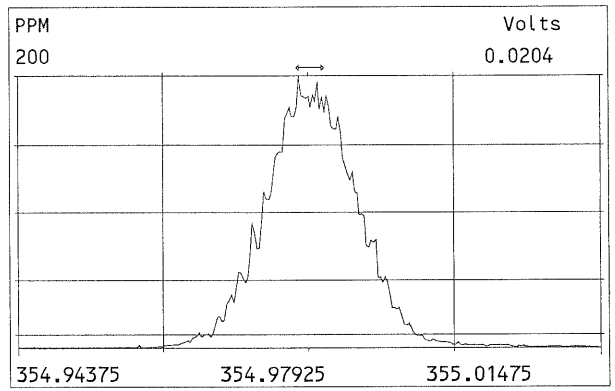


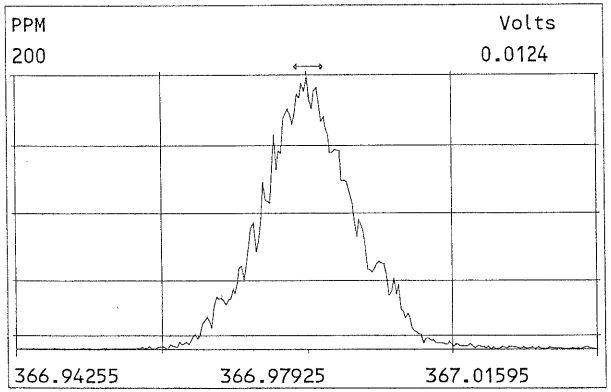


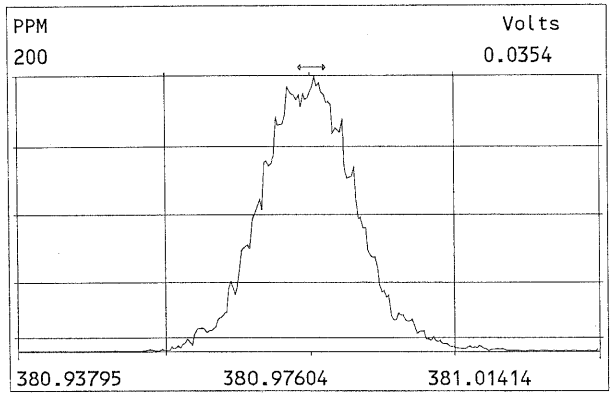
Peak Locate Examination:12-MAY-2011:22:45 File:12MAY11M_RES_CHECK
Experiment:OCDD Function:2 Reference:PFK

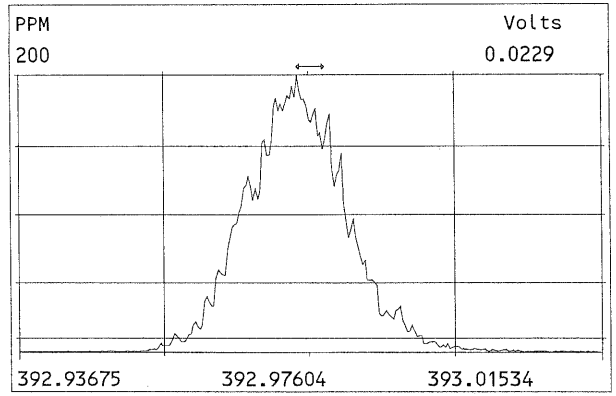


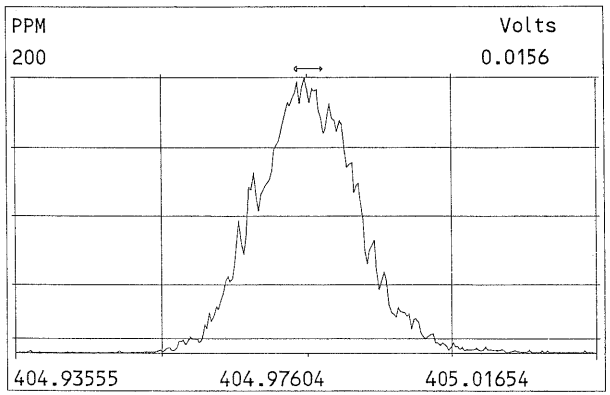


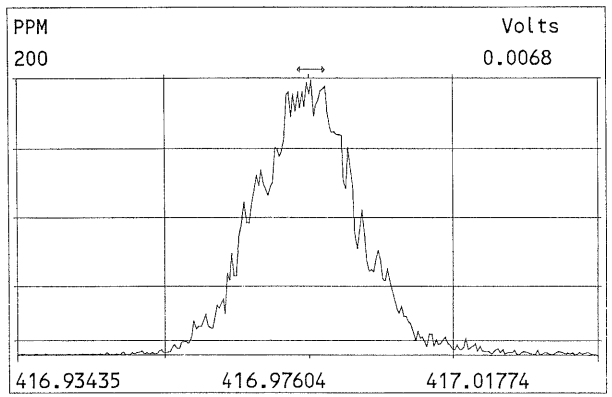




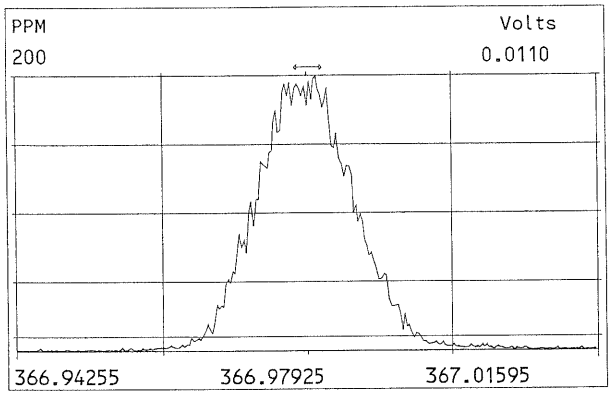


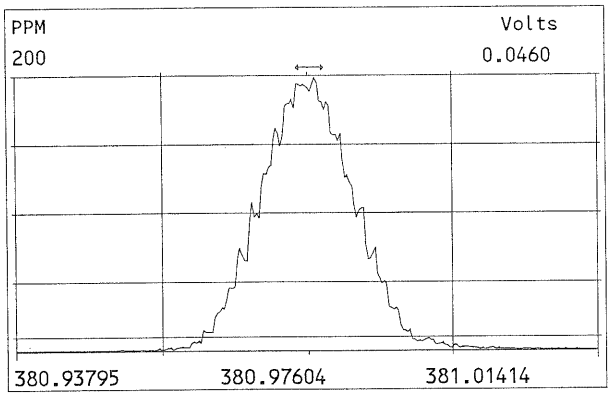


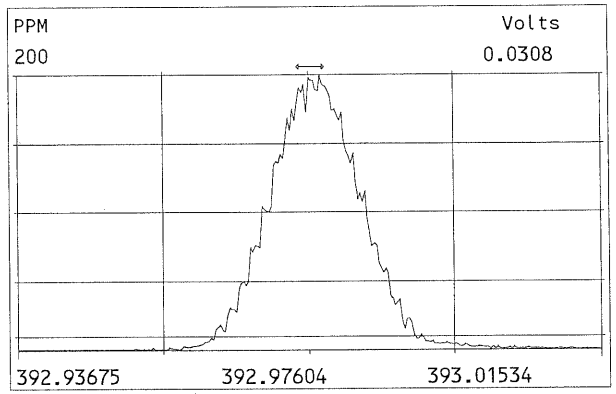


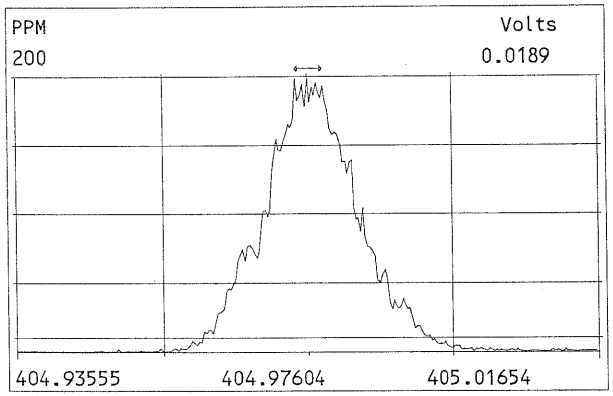


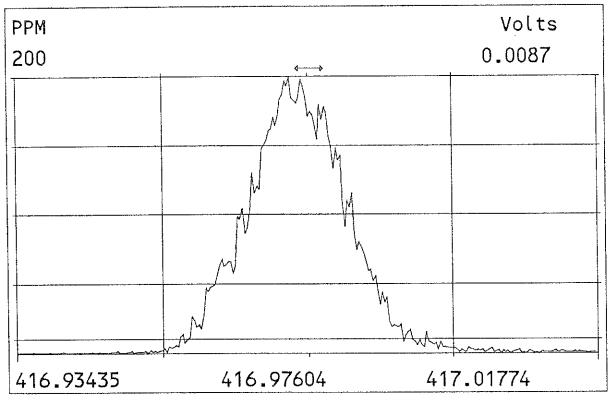
Peak Locate Examination:12-MAY-2011:22:47 File:12MAY11M_RES_CHECK
Experiment:OCDD Function:3 Reference:PFK

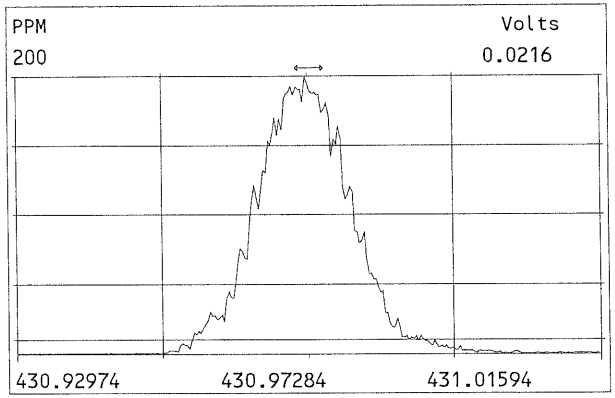


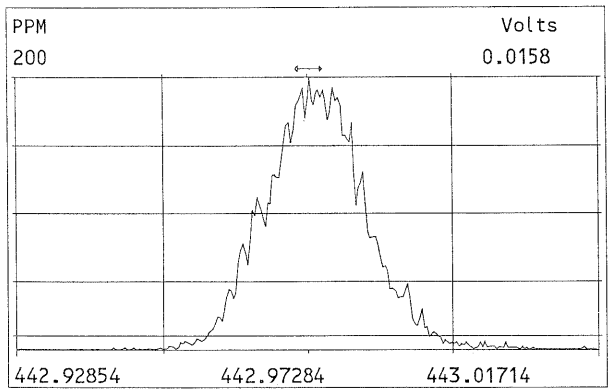


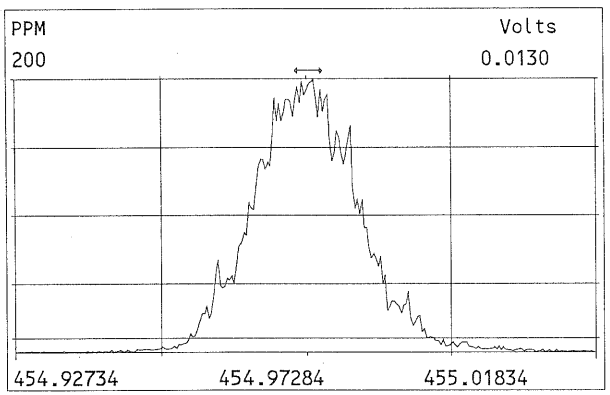




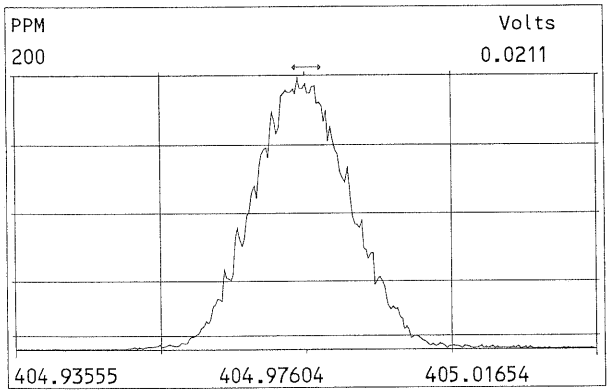


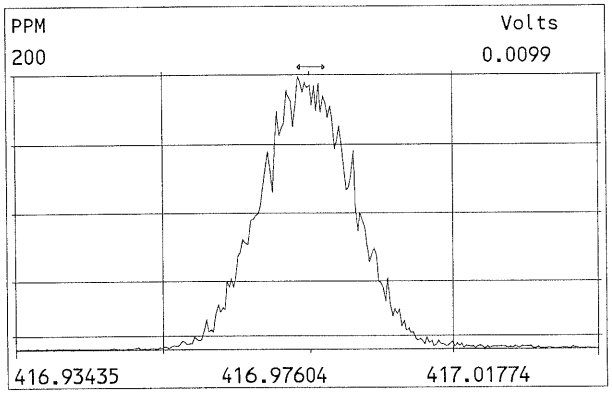


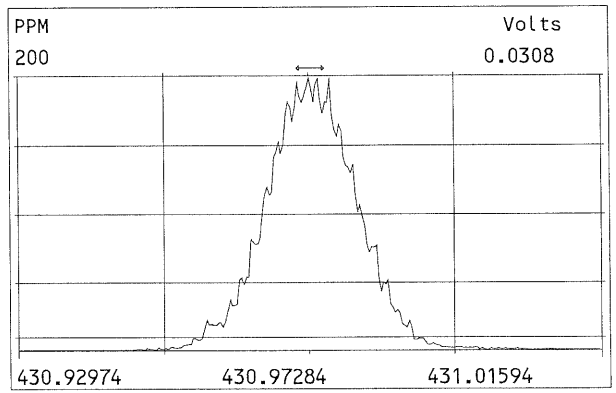


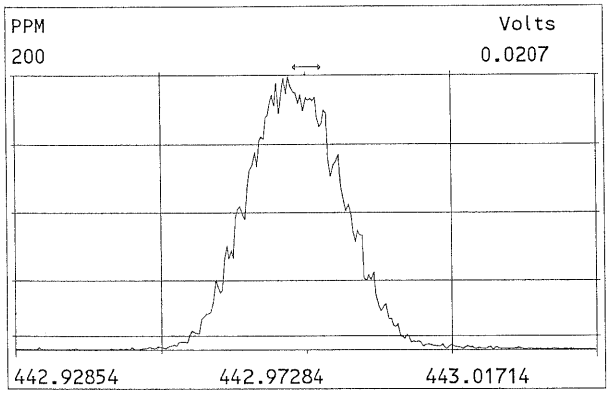


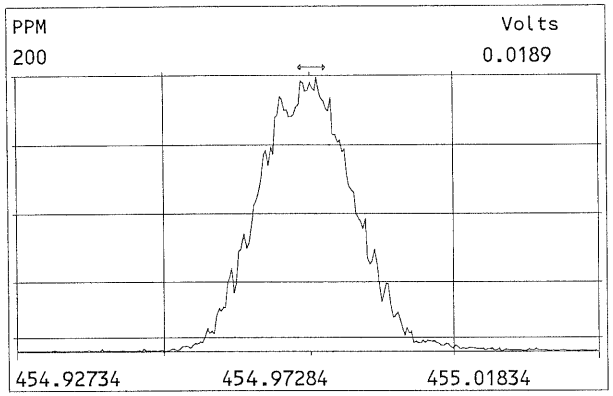
Peak Locate Examination:12-MAY-2011:22:49 File:12MAY11M_RES_CHECK
Experiment:OCDD Function:4 Reference:PFK

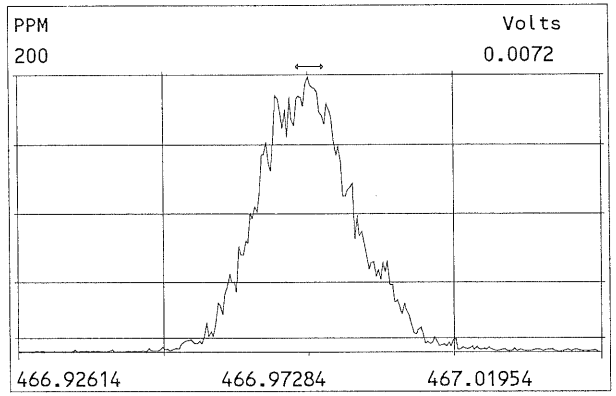


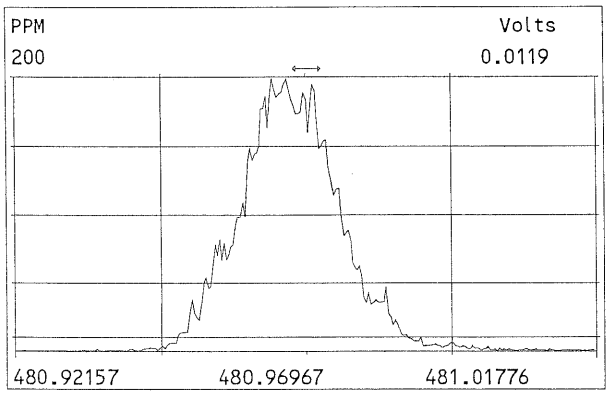




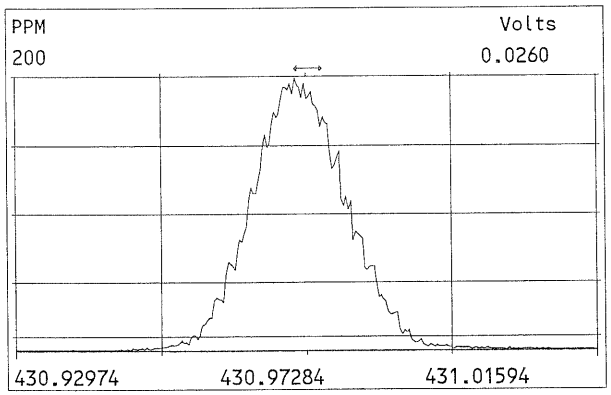


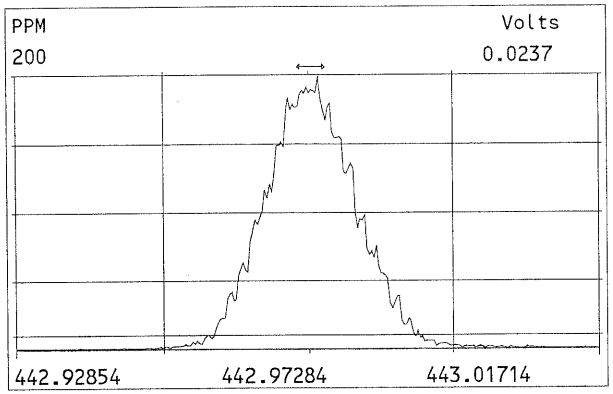


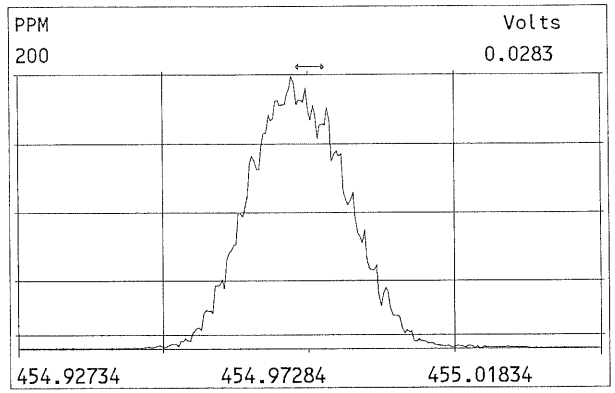


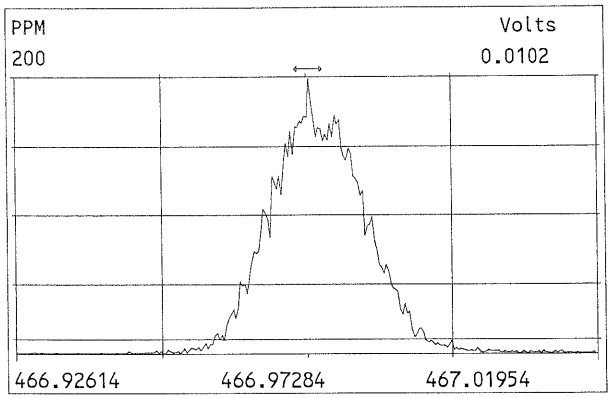


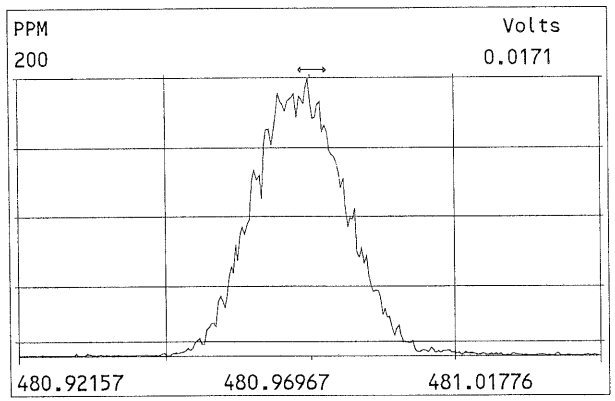
Peak Locate Examination:12-MAY-2011:22:51 File:12MAY11M_RES_CHECK
Experiment:OCDD Function:5 Reference:PFK

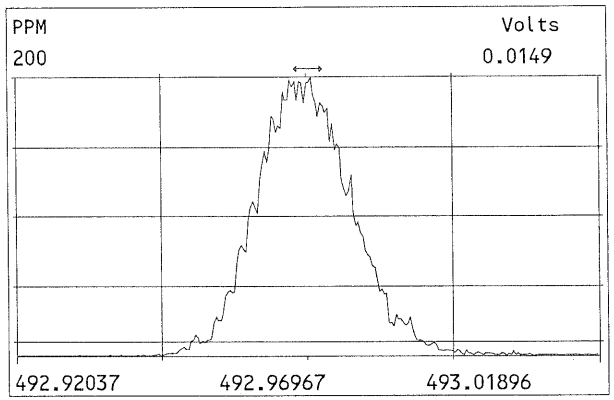


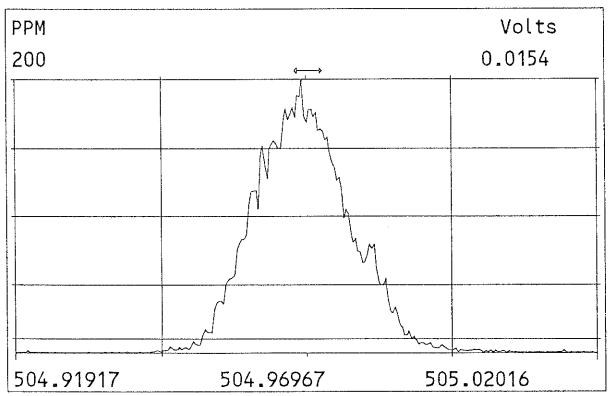


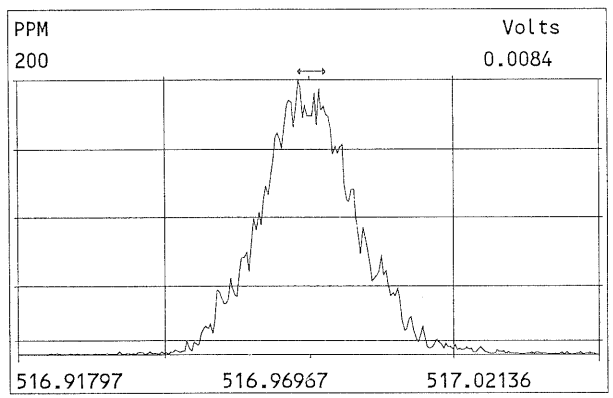












USEPA - ITD

FORM 4A
TCDF CALIBRATION VERIFICATION

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 2/18/11

Instrument ID: FAL1 GC Column ID: DB225

VER Data Filename: 12MAY11A Sam:1 Analysis Date: 12-MAY-11 Time: 08:29:56

	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	ACCEPT	CONC. FOUND	CONC. RANGE (ng/mL) (3)
NATIVE ANALYTES						
2,3,7,8-TCDF	M/M+2	0.80	0.65-0.89	y	8.91	8.40 - 12.0 ✓
LABELED COMPOUNDS						
13C-2,3,7,8-TCDF	M/M+2	0.80	0.65-0.89	y	85.2	71.0 - 140 ✓

(1) See Table 8, Method 1613, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613.

(3) Contract-required concentration range as specified in Table 6A, Method 1613

Analyst: _____ Date: 5/12/11

FAL ID: ST051211A1 Filename: 12MAY11A Sam:1 Acquired: 12-MAY-11 08:29:56 ICal: TCDFFAL1-2-18-11
Client ID: 1613 CS3 100511J ConCal: ST051211A1 EndCal: ST051211A2
Results: GC Column: DB225 Amount: 1.000

Name	Resp	RA	RT	RRF	Conc	Qual	Fac	Noise	DL	#Hom	Rec
2,3,7,8-TCDF	2.04e+07	0.80 y	19:10	1.16	8.91		2.50	-	-	1	
13C-2,3,7,8-TCDF	1.98e+08	0.80 y	19:10	1.05	85.2						85.2
13C-1,2,3,4-TCDF	2.21e+08	0.79 y	16:37	-	125						

Analyst: _____ Date: 5/12/11

Frontier Analytical Laboratory - Acquisition Log

Run Name:12MAY11A Instrument: FAL1 GC: DB225 Experiment:TCDF

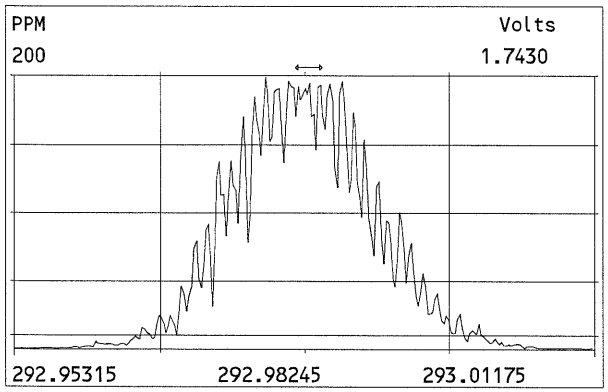
Data File	S	FAL ID	Client ID	Acquired	ConCal	EndCal	Analyst
12MAY11A	1	ST051211A1	1613 CS3 100511J	12-MAY-11 08:29:56	ST051211A1	ST051211A2	TC
12MAY11A	2	6735-008-0001-SA	DMA-TP4-0-1.5-042011	12-MAY-11 09:04:59	ST051211A1	ST051211A2	TC
12MAY11A	3	6735-014-0001-SA	DMA-TP3-3-4-042011	12-MAY-11 09:40:04	ST051211A1	ST051211A2	TC
12MAY11A	4	6735-011-0001-SA	DMA-TP5-1.5-2-042011-D	12-MAY-11 10:15:07	ST051211A1	ST051211A2	TC
12MAY11A	5	6735-010-0001-SA	DMA-TP5-1.5-2-042011	12-MAY-11 10:50:12	ST051211A1	ST051211A2	TC
12MAY11A	6	6644-010-0001-SA	B-105@0.0	12-MAY-11 11:25:15	ST051211A1	ST051211A2	TC
12MAY11A	7	6644-012-0001-SA	B-106@0.0	12-MAY-11 12:00:20	ST051211A1	ST051211A2	TC
12MAY11A	8	6645-001-0001-SA	B-108@0.0	12-MAY-11 12:35:23	ST051211A1	ST051211A2	TC
12MAY11A	9	6645-009-0001-SA	B-112@0.0	12-MAY-11 13:10:28	ST051211A1	ST051211A2	TC
12MAY11A	10	ST051211A2	1613 CS3 100511J	12-MAY-11 13:45:31	ST051211A1	ST051211A2	TC

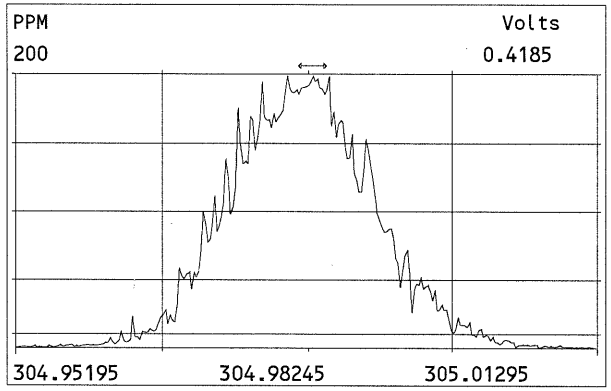
5/12/11

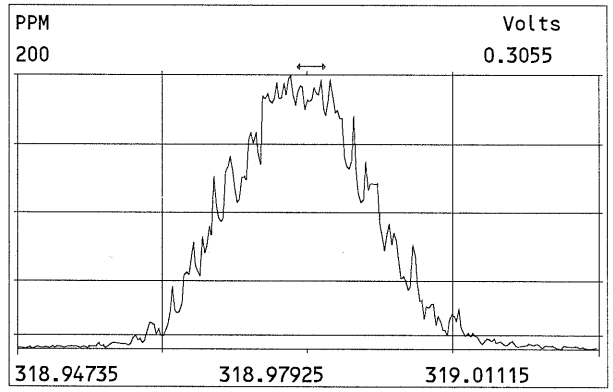
Data Backed Up:_____

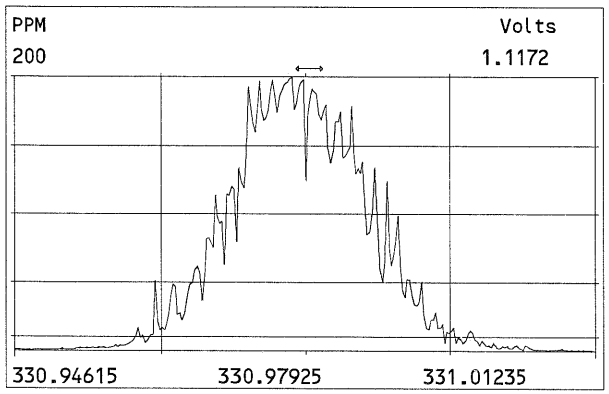
Date:_____

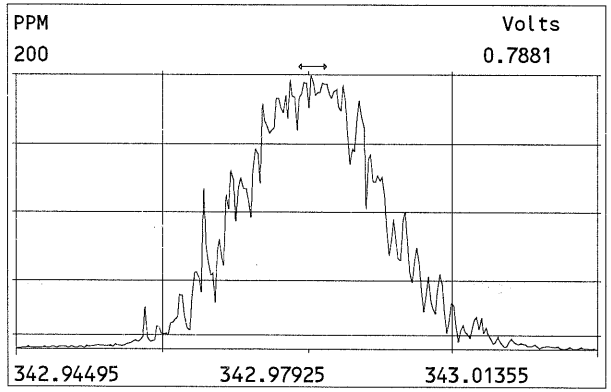
Peak Locate Examination:12-MAY-2011:08:29 File:12MAY11A
Experiment:TCDF Function:1 Reference:PFK

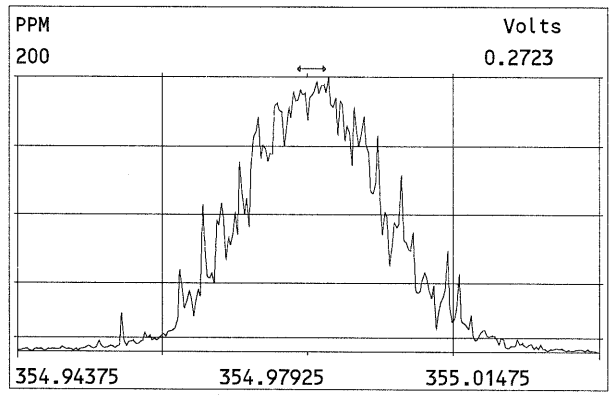


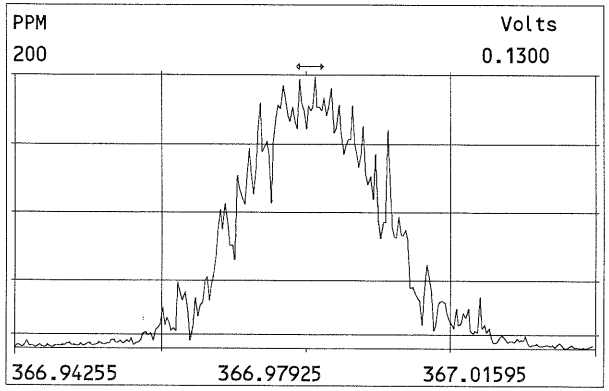


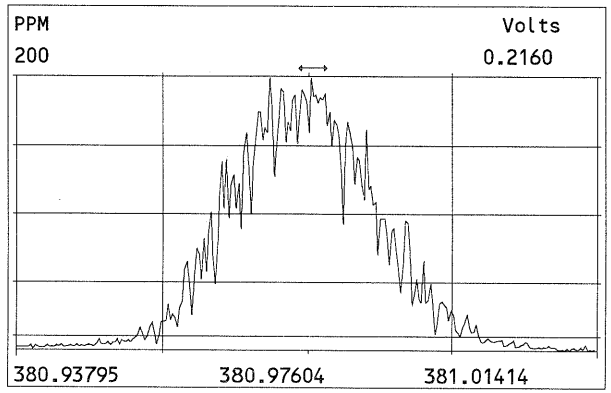












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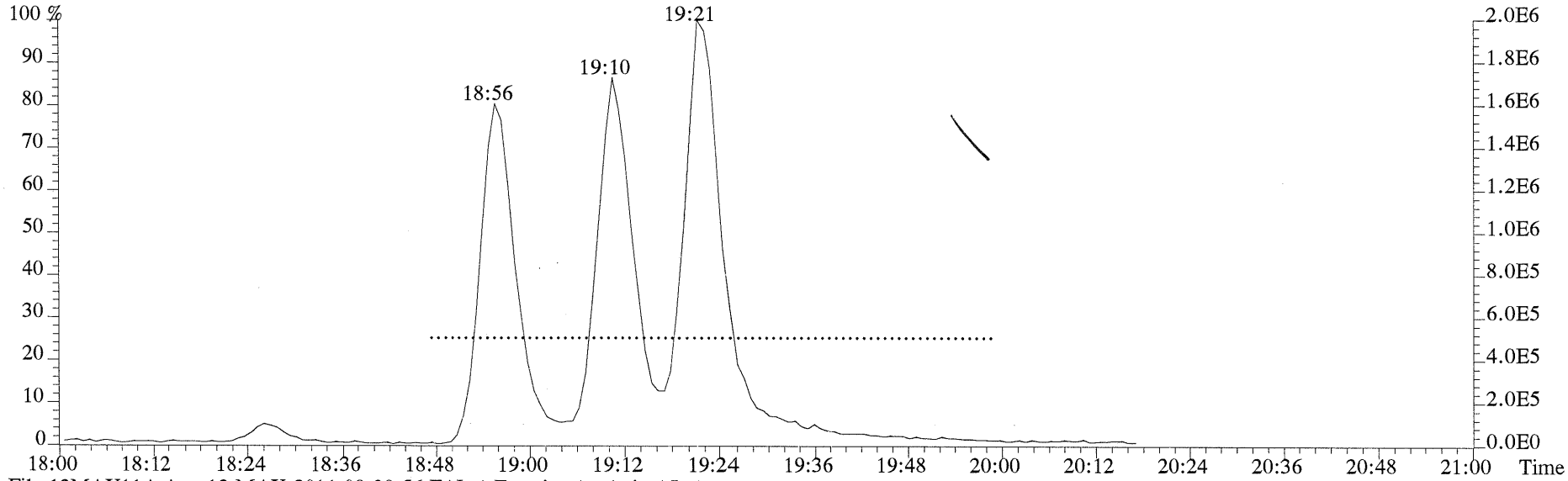
303.9016 Exp:TCDF
FAL ID:ST051211A1



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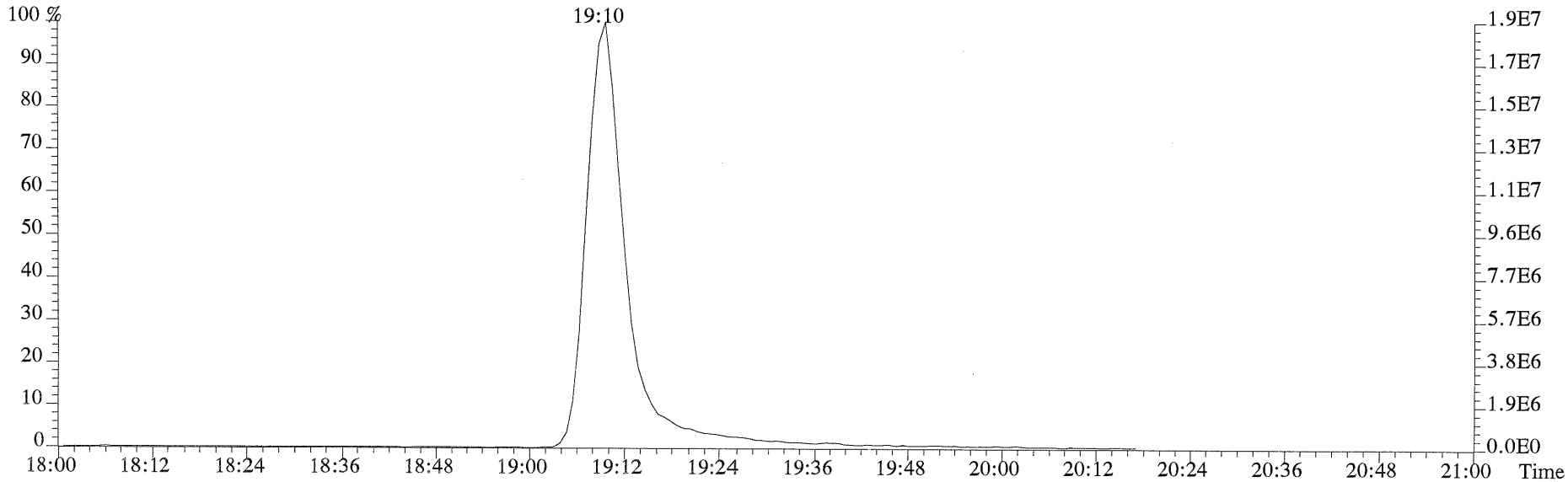
317.9389 Exp:TCDF
FAL ID:ST051211A1



File:12MAY11A Acq:12-MAY-2011 08:29:56 FAL-1 Frontier Analytical Laboratory
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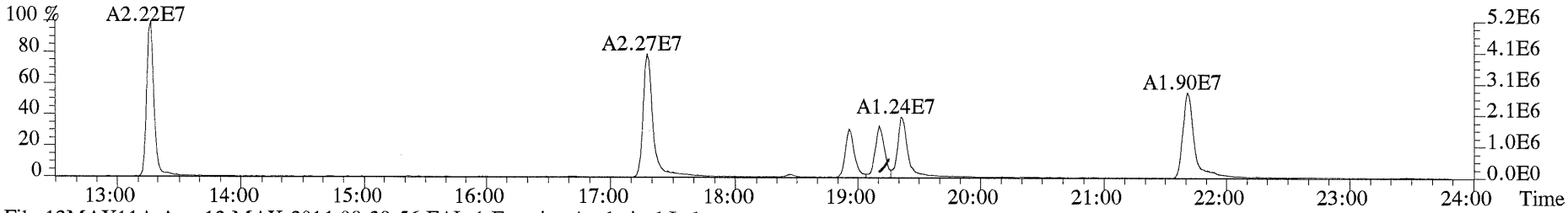
FAL ID:ST051211A1



File:12MAY11A Acq:12-MAY-2011 08:29:56 FAL-1 Frontier Analytical Laboratory
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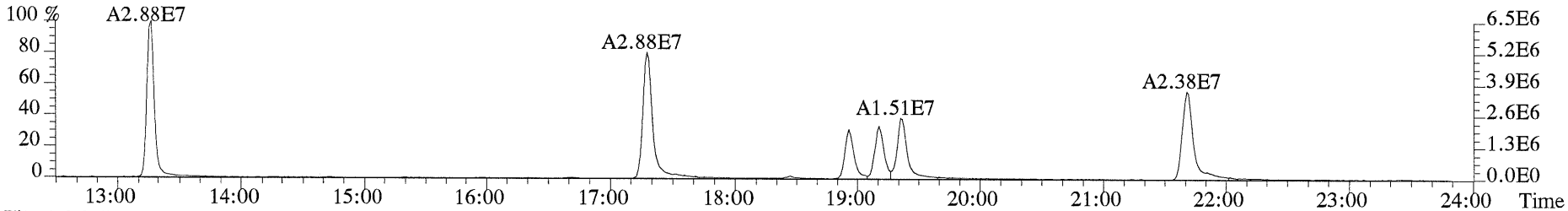
FAL ID:ST051211A1



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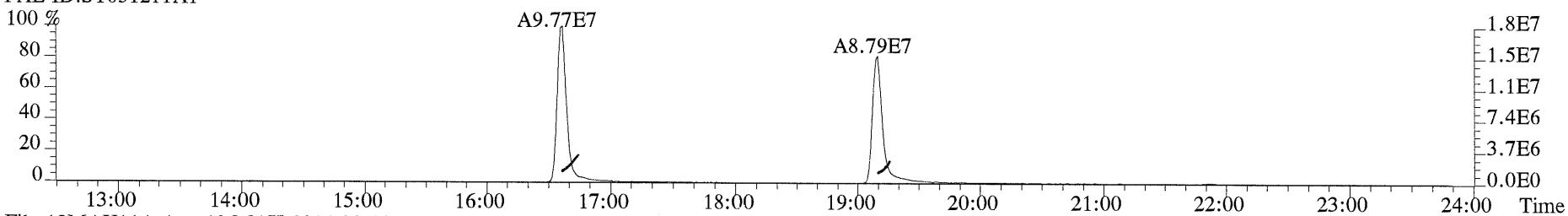
FAL ID:ST051211A1



File:12MAY11A Acq:12-MAY-2011 08:29:56 FAL-1 Frontier Analytical Laboratory
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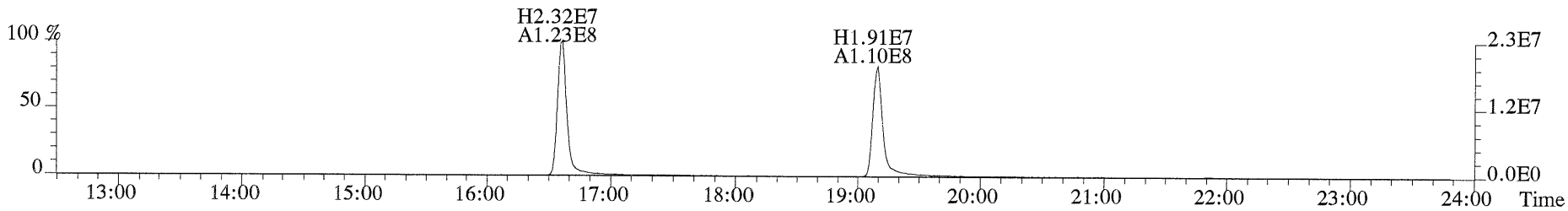
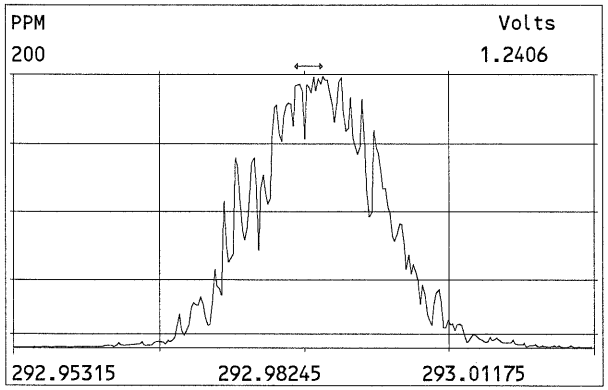
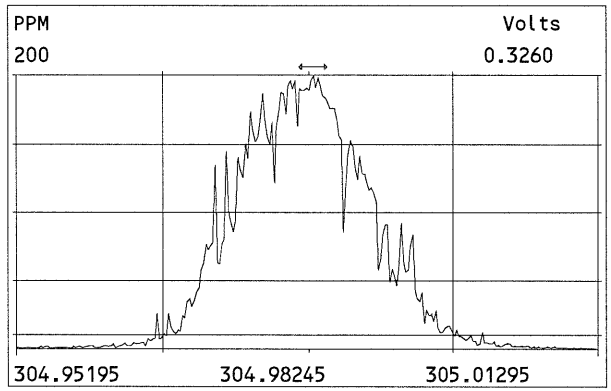
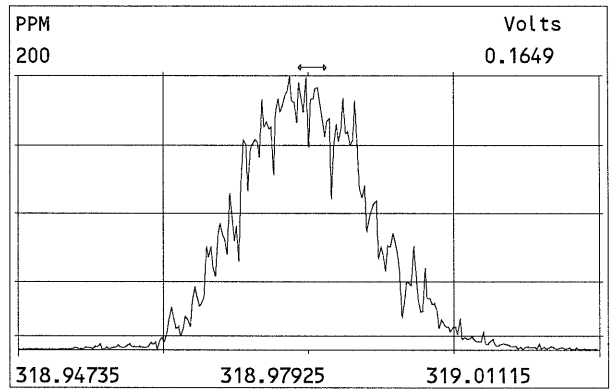
FAL ID:ST051211A1

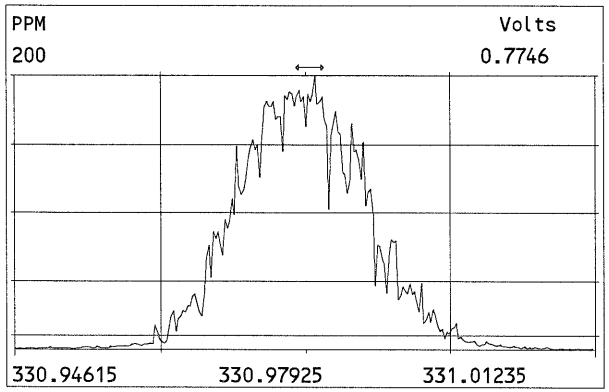


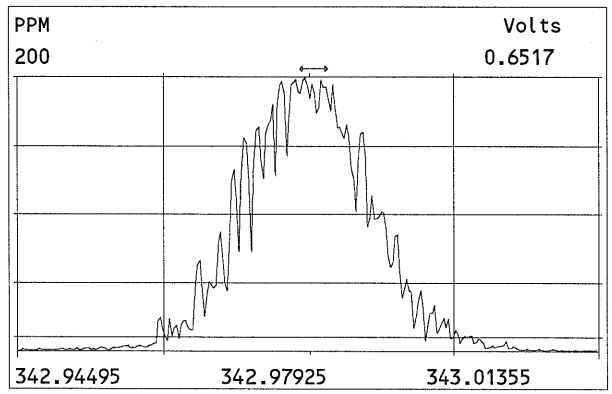
Peak Locate Examination:12-MAY-2011:14:27 File:12MAY11A_RES_CHECK
Experiment:TCDF Function:1 Reference:PFK

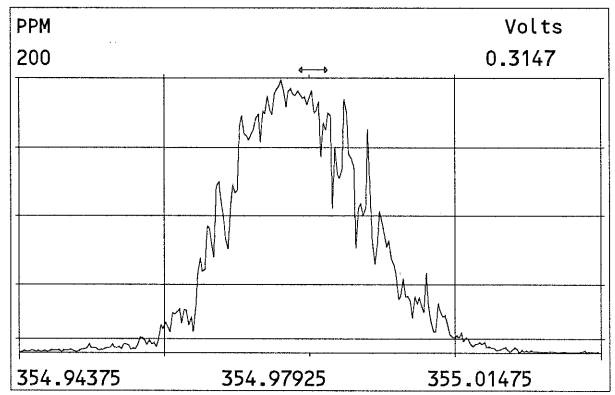


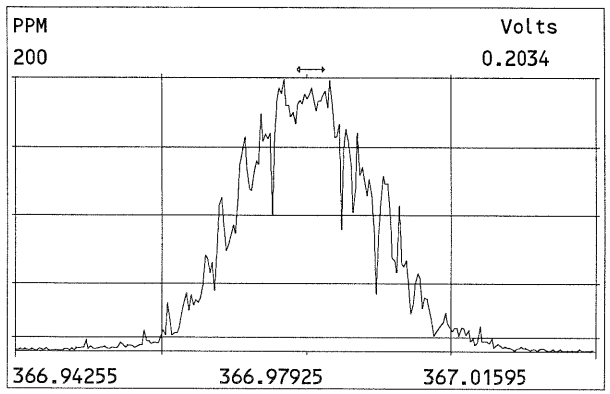


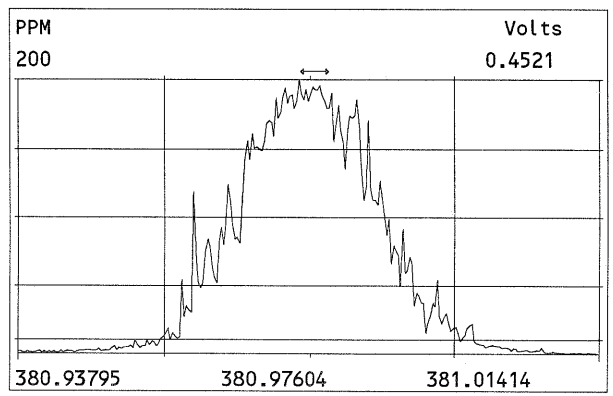












USEPA - ITD

FORM 4A
TCDF CALIBRATION VERIFICATION

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 2/18/11

Instrument ID: FAL1 GC Column ID: DB225

VER Data Filename: 12MAY11A Sam:10 Analysis Date: 12-MAY-11 Time: 13:45:31

	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	ACCEPT	CONC. FOUND	CONC. RANGE (ng/mL) (3)
NATIVE ANALYTES						
2,3,7,8-TCDF	M/M+2	0.76	0.65-0.89	y	11.5	8.40 - 12.0
LABELED COMPOUNDS						
13C-2,3,7,8-TCDF	M/M+2	0.79	0.65-0.89	y	92.5	71.0 - 140

(1) See Table 8, Method 1613, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613.

(3) Contract-required concentration range as specified in Table 6A, Method 1613

Analyst: _____ Date: 5/12/11

FAL ID: ST051211A2 Filename: 12MAY11A Sam:10 Acquired: 12-MAY-11 13:45:31 ICal: TCDFFAL1-2-18-11
Client ID: 1613 CS3 100511J ConCal: ST051211A1 EndCal: ST051211A2
Results: GC Column: DB225 Amount: 1.000

Name	Resp	RA	RT	RRF	Conc	Qual	Fac	Noise	DL	#Hom	Rec
2,3,7,8-TCDF	2.52e+07	0.76 y	19:09	1.16	11.5		2.50	-	-	1	
13C-2,3,7,8-TCDF	1.89e+08	0.79 y	19:07	1.05	92.5						92.5
13C-1,2,3,4-TCDF	1.94e+08	0.78 y	16:35	-	110						

Analyst: _____ Date: 5/12/11

Frontier Analytical Laboratory - Acquisition Log

Run Name:12MAY11A Instrument: FAL1 GC: DB225 Experiment:TCDF

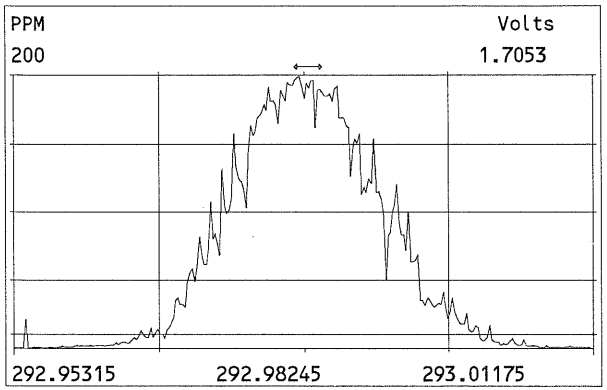
Data File	S	FAL ID	Client ID	Acquired	ConCal	EndCal	Analyst
12MAY11A	1	ST051211A1	1613 CS3 100511J	12-MAY-11 08:29:56	ST051211A1	ST051211A2	TC
12MAY11A	2	6735-008-0001-SA	DMA-TP4-0-1.5-042011	12-MAY-11 09:04:59	ST051211A1	ST051211A2	TC
12MAY11A	3	6735-014-0001-SA	DMA-TP3-3-4-042011	12-MAY-11 09:40:04	ST051211A1	ST051211A2	TC
12MAY11A	4	6735-011-0001-SA	DMA-TP5-1.5-2-042011-D	12-MAY-11 10:15:07	ST051211A1	ST051211A2	TC
12MAY11A	5	6735-010-0001-SA	DMA-TP5-1.5-2-042011	12-MAY-11 10:50:12	ST051211A1	ST051211A2	TC
12MAY11A	6	6644-010-0001-SA	B-105@0.0	12-MAY-11 11:25:15	ST051211A1	ST051211A2	TC
12MAY11A	7	6644-012-0001-SA	B-106@0.0	12-MAY-11 12:00:20	ST051211A1	ST051211A2	TC
12MAY11A	8	6645-001-0001-SA	B-108@0.0	12-MAY-11 12:35:23	ST051211A1	ST051211A2	TC
12MAY11A	9	6645-009-0001-SA	B-112@0.0	12-MAY-11 13:10:28	ST051211A1	ST051211A2	TC
12MAY11A	10	ST051211A2	1613 CS3 100511J	12-MAY-11 13:45:31	ST051211A1	ST051211A2	TC

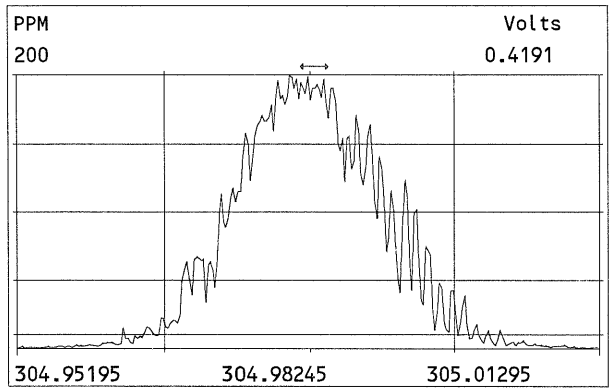
5/12/11

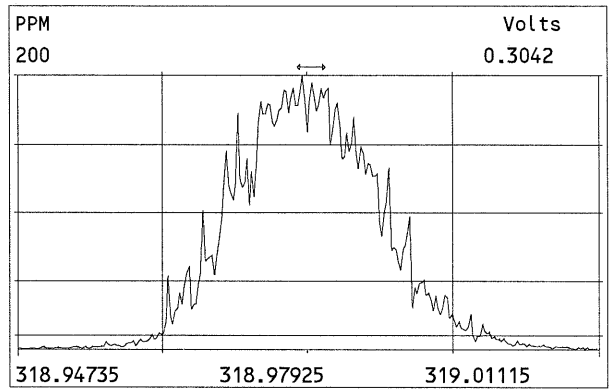
Data Backed Up:_____

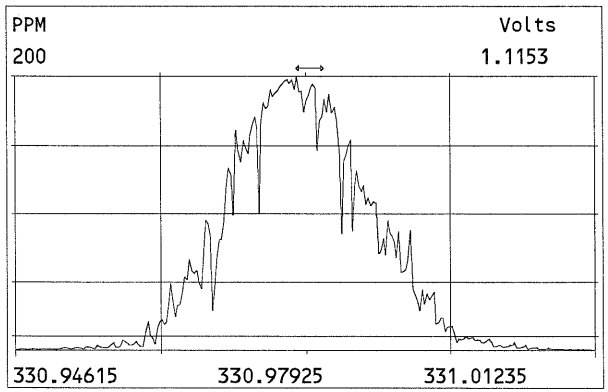
Date:_____

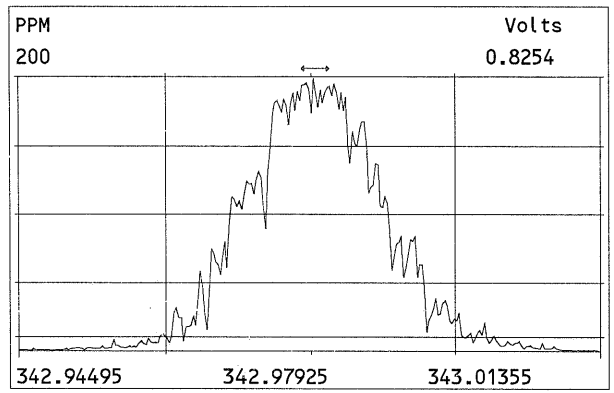
Peak Locate Examination:12-MAY-2011:08:29 File:12MAY11A
Experiment:TCDF Function:1 Reference:PFK

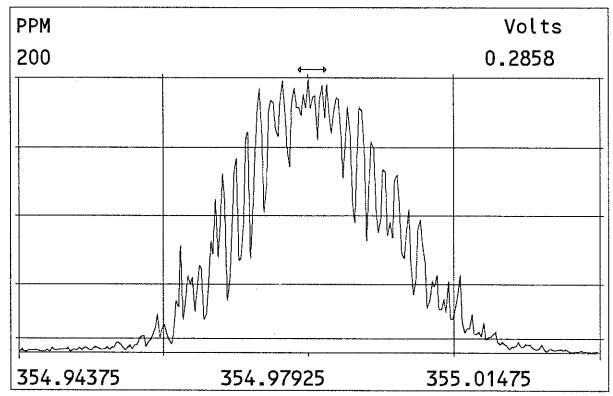


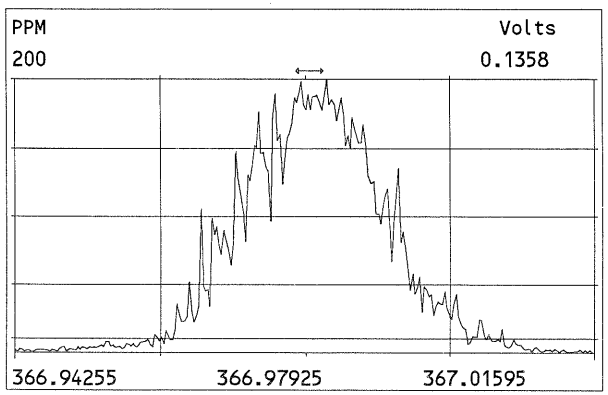


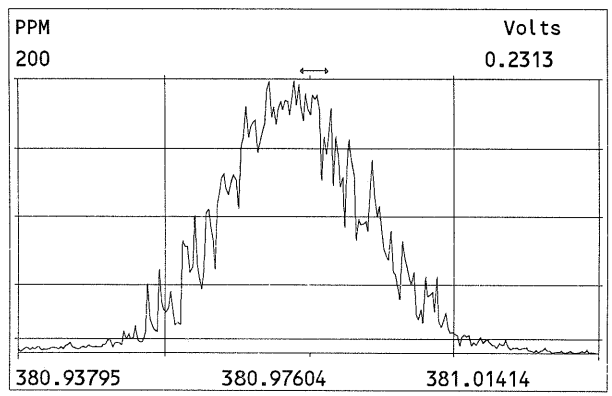












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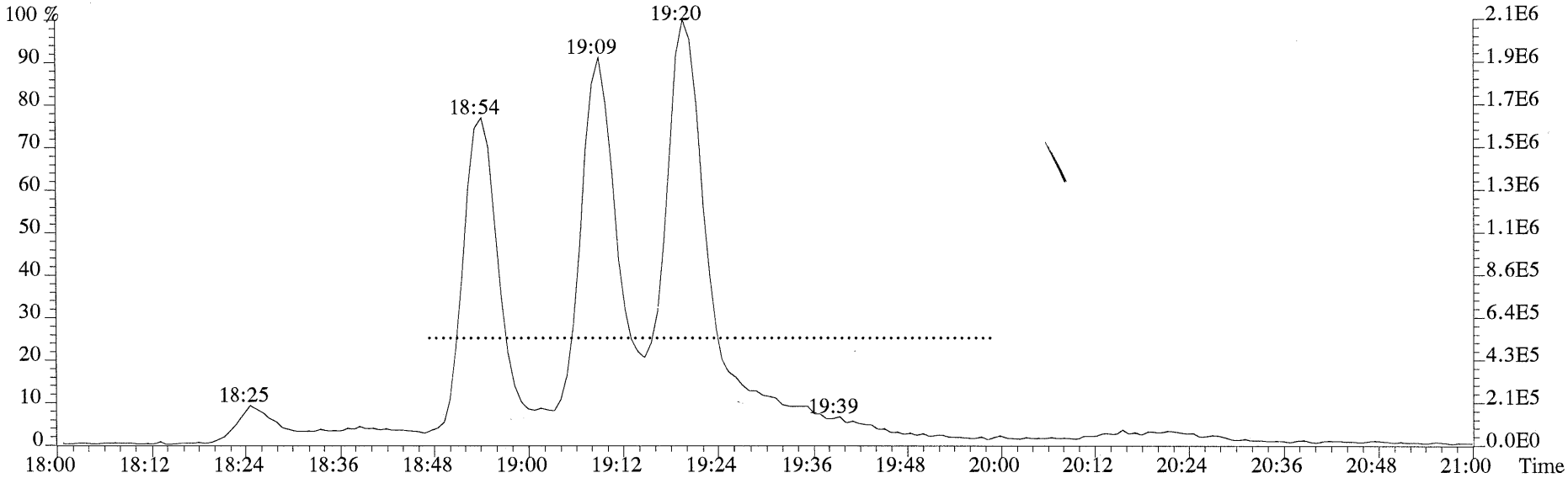
FAL ID:ST051211A2



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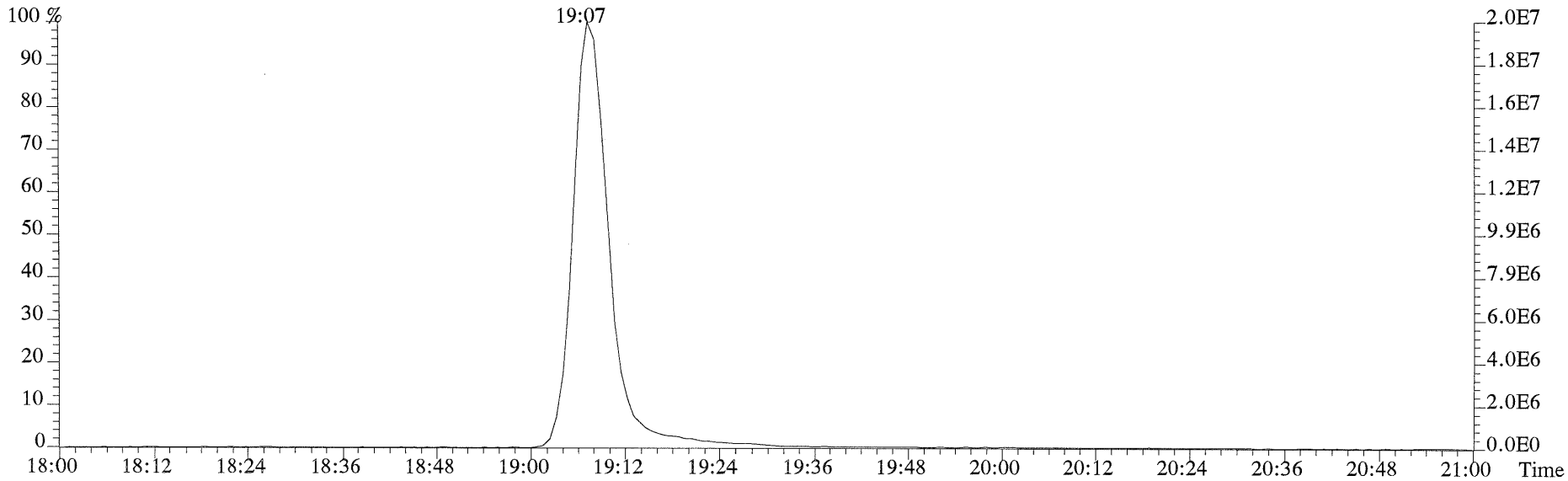
FAL ID:ST051211A2



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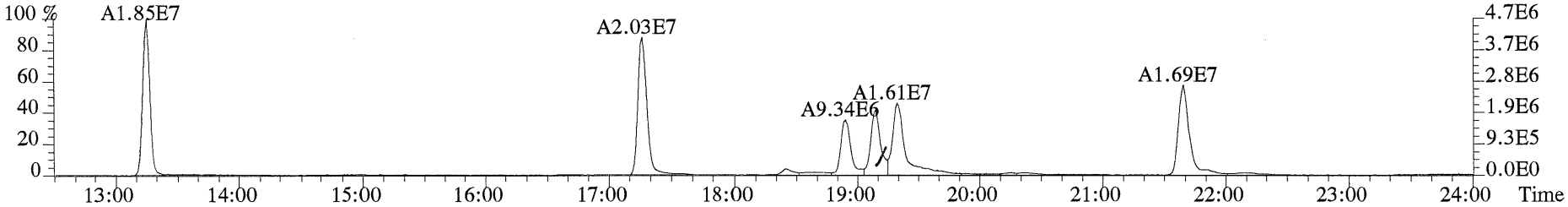

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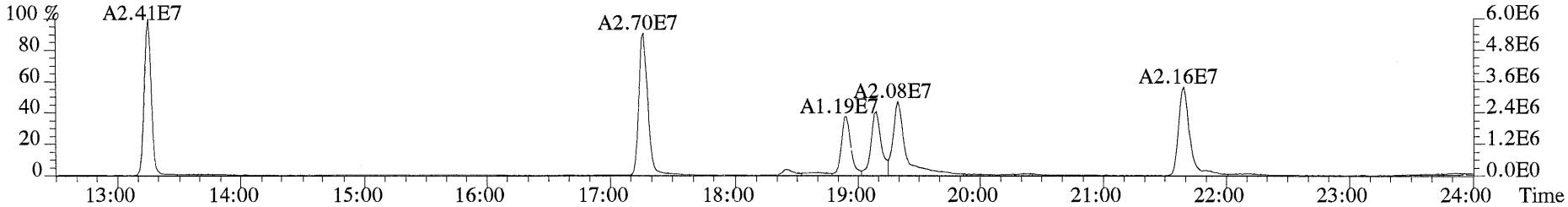
FAL ID:ST051211A2



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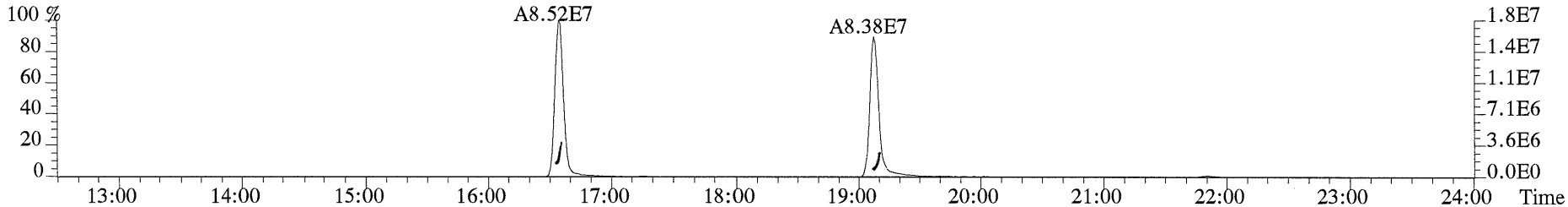
FAL ID:ST051211A2



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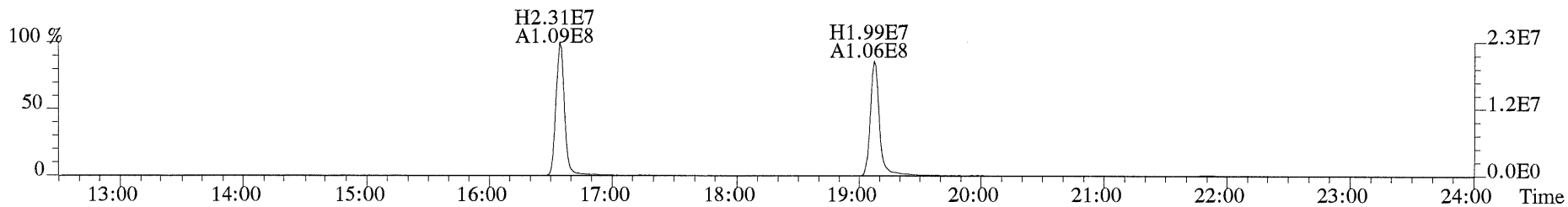
FAL ID:ST051211A2



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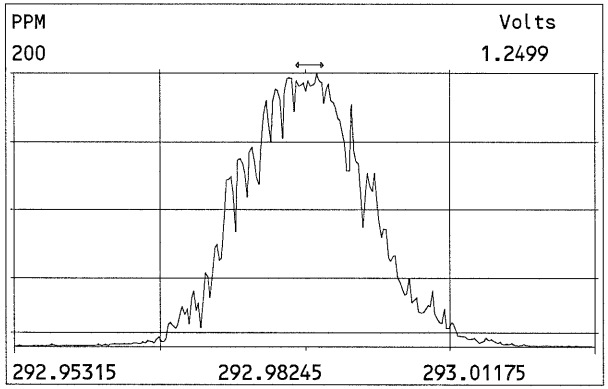
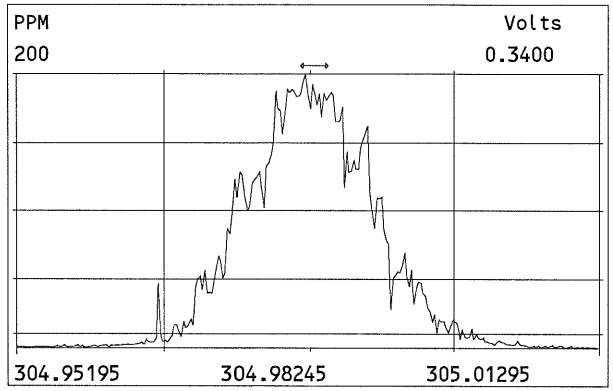
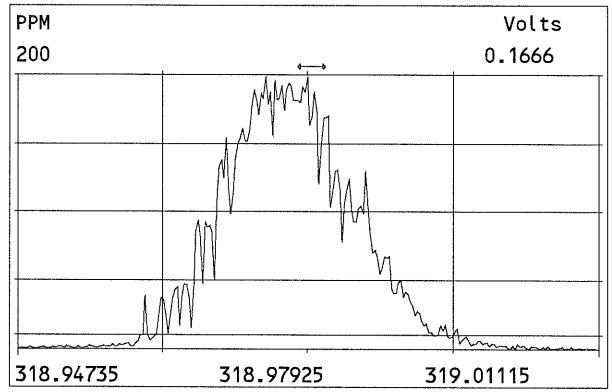
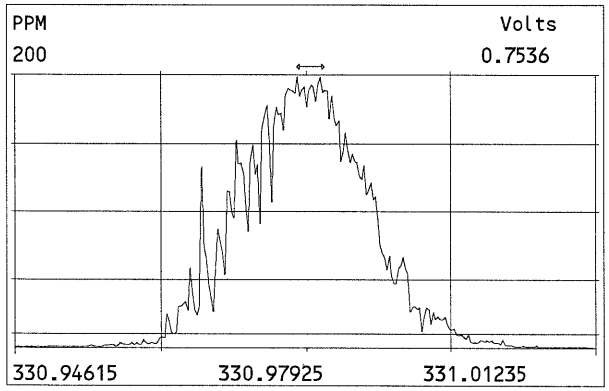
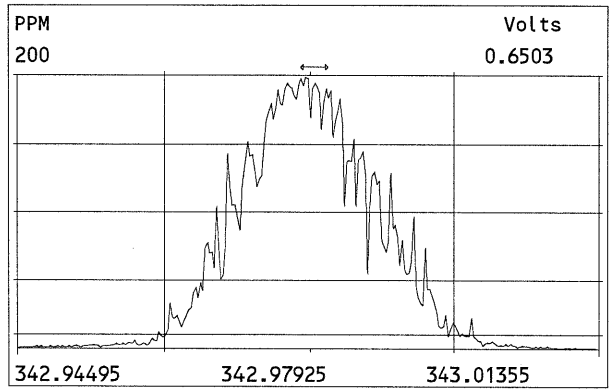
Experiment:TCDF Function:1 Reference:PFK

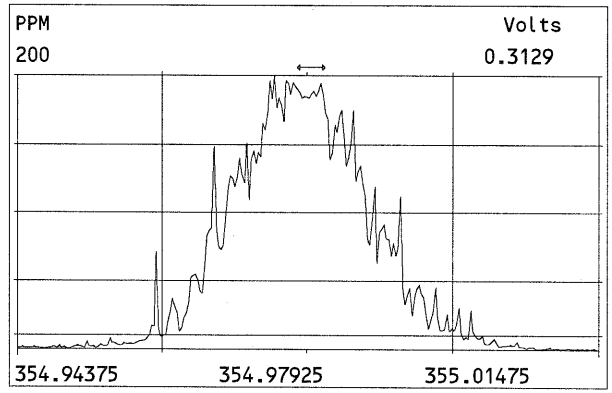


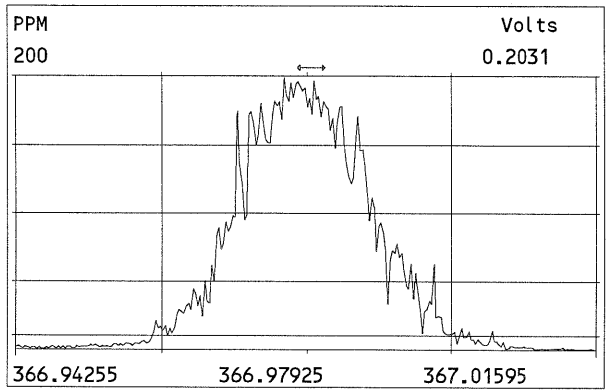












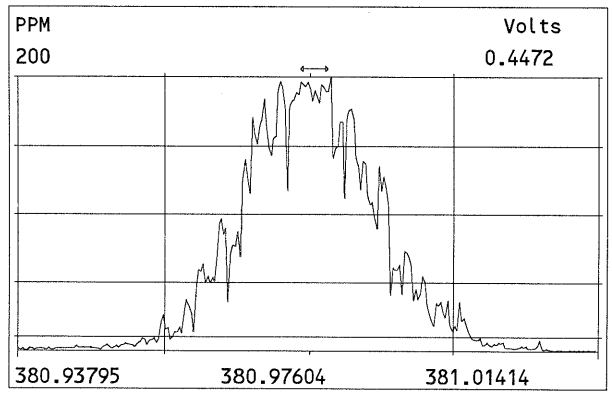


Table of Contents: ARI Job SU53, SU73, SU74

Client: Floyd Snider

Project: POS-LL.4010 Lora Lake Parcel

Signature

May-16-2011
Date

Table of Contents: ARI Job SU53, SU73, SU74

Client: Floyd Snider

Project: POS-LL.4010 Lora Lake Parcel

Signature

May-16-2011
Date

Analytical Resources, Incorporated
Analytical Chemists and Consultants

May 27, 2011

Megan McCullough
Floyd-Snider Inc.
601 Union Street, Suite 600
Seattle, WA 98101-2341

RE: Lora Lake Parcel, POS-LL 4010
ARI Jobs: SU53, SU73 & SU74

Dear Megan:

Please find enclosed the original Chain-of-Custody (COC) records, sample receipt documentation, and the final data package for samples from the project referenced above.

Sample receipt and detail of these analyses are discussed in the Case Narrative.

An electronic copy of this package will remain on file with ARI. Should you have any questions or problems, please feel free to contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Susan D. Dunnihoo
Director, Client Services
sue@arilabs.com
206-695-6207

Enclosures

cc: eFile SU53

4611 South 134th Place, Suite 100 • Tukwila WA 98168 • **206-695-6200** • **206-695-6201** fax

Chain of Custody Documentation

ARI Job ID: SU53, SU73, SU74

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: SU53	Turn-around Requested: std	Page: 1 of 1	
ARI Client Company: Floyd | Snider	Phone:	Date: 4/28/11	Ice Present? Y
Client Contact: Megan McCullough		No. of Coolers: 3	Cooler Temps: 5.6, 3.8, 5.2
Client Project Name: Cora Lake Apts RI			
Client Project #: KDS-LLA t4010	Samplers: L. Graziola/K Anderson		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No Containers	Analysis Requested: cPAH/PCP (8270D-SIM/8041)	TPH-Dx	TPH-G	BTEX (8021)	VOC (8260C SIM + 8260C)	TSS (SM 2540D)	pH (150.1)	Dionex/Aniom (EWB)	Notes/Comments: Diss As
MW-5 042811	4/28/11	915	GW	16	X	X	X	X	X	X	X	X	X
MW1 042811	4/28/11	1115	GW	12	X	X	X	X	X	X	X		
MW4 042811	4/28/11	~~1330~~ 1305	GW	16	X	X	X	X	X	X	X	X	X
MW17 042811	4/28/11	1405	GW	12	X	X	X	X	X	X	X		
MW14 042811	4/28/11	~~1510~~ 1310	GW	16	X	X	X	X	X	X	X	X	X
MW16 042811	4/28/11	1630	GW	12	X	X	X	X	X	X	X		
TB-042811	4/7/11	000	W	2					X				

* See project specific VOC list

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: Kristin Anderson	Printed Name: A. Vobgardsen	Printed Name	Printed Name.
	Company: Floyd | Snider	Company: ARI	Company	Company
	Date & Time: 4/28/11 1800	Date & Time: 4/29/11 1800	Date & Time.	Date & Time.

SU53 : ESUS

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Floyd Snider
Project Name: Lora lake Apt RI
COC No(s): _____ (NA)
Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____
Assigned ARI Job No: SU53
Tracking No: _____ (NA)

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler?	YES	(NO)
Were custody papers included with the cooler?	(YES)	NO
Were custody papers properly filled out (ink, signed, etc.)	(YES)	NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry): 5.6 3.2 5.2 ___
If cooler temperature is out of compliance fill out form 00070F
Temp Gun ID#: 90411679

Cooler Accepted by: AV Date: 4/28/11 Time: 1800

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		YES	(NO)
What kind of packing material was used? ... Bubble Wrap (Wet Ice) Gel Packs Baggies Foam Block Paper Other: _____			
Was sufficient ice used (if appropriate)?	NA	(YES)	NO
Were all bottles sealed in individual plastic bags?		(YES)	NO
Did all bottles arrive in good condition (unbroken)?		(YES)	NO
Were all bottle labels complete and legible?		(YES)	NO
Did the number of containers listed on COC match with the number of containers received?		(YES)	NO
Did all bottle labels and tags agree with custody papers?		(YES)	NO
Were all bottles used correct for the requested analyses?		(YES)	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)...	NA	YES	(NO)
Were all VOC vials free of air bubbles?	NA	(YES)	NO
Was sufficient amount of sample sent in each bottle?		(YES)	NO
Date VOC Trip Blank was made at ARI	NA	4/7/11	

Was Sample Split by ARI : (NA) YES Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by: [signature] Date: 4/29/11 Time: 0900.

***** Notify Project Manager of discrepancies or concerns *****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC
MW5042911	MW5042911		
MW4042811	MW4042811		

Additional Notes, Discrepancies, & Resolutions: for
13 containers were sent for MW15, MW14, MW16 each; IOC reads reads 12.

By: Date:

Small Air Bubbles ~2mm	Peabubbles 2-4 mm	LARGE Air Bubbles > 4 mm
• • •	• • • •	● ● ●

Small → "sm"
Peabubbles → "pb"
Large → "lg"
Headspace → "hs"

PRESERVATION VERIFICATION 04/29/11
Page 1 of 1

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: **SU53**

PC: Sue D.
VTSR: 04/28/11

Inquiry Number: NONE
Analysis Requested: 04/29/11
Contact: McCullough, Megan
Client: Floyd Snider
Logged by: MM
Sample Set Used: Yes-482
Validatable Package:
Deliverables:

Project #: POS-LLA
Project: Lora Lake Apts RI
Sample Site:
SDG No:
Analytical Protocol: In-house

LOGNUM ARI ID	CLIENT ID	CN >12	WAD >12	NH3 <2	COD <2	FOG <2	MET <2	PHEN <2	PHOS <2	TKN <2	NO23 <2	TOC <2	S2 >9	AK102 <2	Fe2+ <2	DMET FLT	DOC FLT	PARAMETER	ADJUSTED TO	LOT NUMBER	AMOUNT ADDED	DATE/BY
11-9621 **SU53A**	MW5042811						DIS NP									N						
11-9622 **SU53B**	MW15042811																					
11-9623 **SU53C**	MW4042811						DIS NP									N						
11-9624 **SU53D**	MW17042811																					
11-9625 **SU53E**	MW14042811						DIS NP									N						
11-9626 **SU53F**	MW16042811																					

NP - Not Preserved

Filtered + Preserved In Lab (HNO_3 → I6167)
MH 5/02/11

SU53 : 00005

2526

Checked By MM Date 4/29/11

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: SU73	Turn-around Requested: Standard	Page: 1 of 1	
ARI Client Company: Floyd|Snider	Phone: 206-292-2078	Date: 4/29/11	Ice Present? Y
Client Contact: Megan McCullough		No. of Coolers: 3	Cooler Temps: 3.9, 4.7, 3.2
Client Project Name: Lora Lake Apts RI			
Client Project #: POS-LLA.4010	Samplers: Erin Murray/Tucker Stems		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: cPAH/PCP (8270D-SIM/8041)	NWTPH-Dx	NWTPH-Gx	BTEX (8021)	Diss. Pb/As (200.8)	VOCs* (8260C-SIM/8260C)	TSS (SM 2540D)	pH (150.1)	Dioxin (1613)	Notes/Comments
MW-01-042911	4/29/11	0955	W	16	X	X	X	X	X	X	X	X	X	* See project specific VOC list.
MW-01-D42911-D	4/29/11	1000	W	16	X	X	X	X	X	X	X	X	X	
TB-042911	4/29/11	~~9m~~	W	2						X				

Comments/Special Instructions	Relinquished by: (Signature)	Received by (Signature)	Relinquished by. (Signature)	Received by (Signature)
	Printed Name: Erin Murray	Printed Name: A. Volgardsen	Printed Name	Printed Name:
	Company: Floyd|Snider	Company: ARI	Company	Company:
	Date & Time: 4/29/11 1625	Date & Time: 4/29/11 1625	Date & Time:	Date & Time

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Floyd Snider

Project Name: Lora Lake Apts RI

COC No(s): _____ (NA)

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: SU53

Tracking No: _____ (NA)

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler?	YES	(NO)
Were custody papers included with the cooler?	(YES)	NO
Were custody papers properly filled out (ink, signed, etc.)	(YES)	NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)..... 3.9 4.7 3.2 ___

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 90941619

Cooler Accepted by: AV Date: 4/29/11 Time: 1625

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		YES	NO
What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: _____			
Was sufficient ice used (if appropriate)?	NA	YES	NO
Were all bottles sealed in individual plastic bags?		YES	NO
Did all bottles arrive in good condition (unbroken)?		YES	NO
Were all bottle labels complete and legible?		YES	NO
Did the number of containers listed on COC match with the number of containers received?		YES	NO
Did all bottle labels and tags agree with custody papers?		YES	NO
Were all bottles used correct for the requested analyses?		YES	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)...	NA	YES	NO
Were all VOC vials free of air bubbles?	NA	YES	NO
Was sufficient amount of sample sent in each bottle?		YES	NO
Date VOC Trip Blank was made at ARI	NA	4/26/11	

Was Sample Split by ARI : NA YES Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by: _____ Date: _____ Time: _____

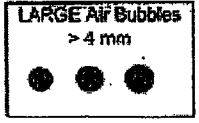
***** Notify Project Manager of discrepancies or concerns *****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

Trip Blank on Lora Lakes Apt RI Job MW-01-042911-D = sm in 1 of 6.

By: AV Date: 4/29/11

Small Air Bubbles ~2mm	Peabubbles 2-4 mm	LARGE Air Bubbles > 4 mm
		

Small → "sm"
Peabubbles → "pb"
Large → "lg"
Headspace → "hs"

PRESERVATION VERIFICATION 04/29/11
Page 1 of 1

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: **SU73**

Inquiry Number: NONE
Analysis Requested: 05/02/11
Contact: McCullough, Megan
Client: Floyd Snider
Logged by: JM
Sample Set Used: Yes-481
Validatable Package: Yes
Deliverables:

PC: Sue D.
VTSR: 04/29/11

Project #: POS-LLA.4010
Project: Lora Lake Apts RI
Sample Site:
SDG No:
Analytical Protocol: In-house

LOGNUM ARI ID	CLIENT ID	CN >12	WAD >12	NH3 <2	COD <2	FOG <2	MET <2	PHEN <2	PHOS <2	TKN <2	NO23 <2	TOC <2	S2 >9	AK102 <2	Fe2+ <2	DMET FLT	DOC FLT	PARAMETER	ADJUSTED TO	LOT NUMBER	AMOUNT ADDED	DATE/BY
11-9762 **SU73A**	MW-01-042911						DIS pad									Y						
11-9763 **SU73B**	MW-01-042911-D						DIS									Y						

SU73 : 00008 2529

Checked By JM Date ~~4/28/11~~ 4/29/11

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: SU74	Turn-around Requested: Standard	Page: 1 of 1	
ARI Client Company: Floyd|Snider	Phone: 206-292-2078	Date: 04/29/11	Ice Present?
Client Contact: Megan McCullough		No. of Coolers:	Cooler Temps:
Client Project Name: Lora Lake Parcel			
Client Project #: POS-LM.4010	Samplers: Erin Murray|Tucker Stevens		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No Containers	cPAH/PCB (8270D-SIM / 8082)	NWTPH-Dx	NW-TPH-Gx	BTEX (8021)	DiOx. PB/HS (200.8)	VOCs* (8260C-SIM+ 8260C)	TSS (SM 2540D)	pH (150.1)	Dioxin (1613)	Notes/Comments
B312-042911	4/29/11	1230	W	16	X	X	X	X	X	X	X	X	X	* See project specific VOC list.
B310-042911	4/29/11	1345	W	16	X	X	X	X	X	X	X	X	X	
B311-042911	4/29/11	1455	W	16	X	X	X	X	X	X	X	X	X	

Comments/Special Instructions	Relinquished by (Signature)	Received by: (Signature)	Relinquished by. (Signature)	Received by. (Signature)
	Printed Name: Erin Murray	Printed Name: A. Volgardsen	Printed Name	Printed Name.
	Company: Floyd|Snider	Company ARI	Company	Company:
	Date & Time 4/29/11 1625	Date & Time 4/29/11 1625	Date & Time:	Date & Time.

SU74:SSS 6000

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Floyd Snider
Project Name: Lora Lake Apt RI
COC No(s): _____ (NA)
Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____
Assigned ARI Job No: SU74
Tracking No: _____ (NA)

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler?	YES	(NO)
Were custody papers included with the cooler?	(YES)	NO
Were custody papers properly filled out (ink, signed, etc.)	(YES)	NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)..... 3.9 4.7 3.2 ___
If cooler temperature is out of compliance fill out form 00070F
Temp Gun ID#: 90941619

Cooler Accepted by: AV Date: 4/29/11 Time: 1625

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		YES	(NO)
What kind of packing material was used? ...	Bubble Wrap (Wet Ice) Gel Packs Baggies (Foam Block) Paper Other: _____		
Was sufficient ice used (if appropriate)?	NA	(YES)	NO
Were all bottles sealed in individual plastic bags?		YES	(NO)
Did all bottles arrive in good condition (unbroken)?		(YES)	NO
Were all bottle labels complete and legible?		(YES)	NO
Did the number of containers listed on COC match with the number of containers received?		(YES)	NO
Did all bottle labels and tags agree with custody papers?		(YES)	NO
Were all bottles used correct for the requested analyses?		(YES)	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)...	NA	(YES)	NO
Were all VOC vials free of air bubbles?	NA	(YES)	NO
Was sufficient amount of sample sent in each bottle?		(YES)	NO
Date VOC Trip Blank was made at ARI	(NA)		

Was Sample Split by ARI : (NA) YES Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by: JM Date: 4/27/11 Time: 1734

***** Notify Project Manager of discrepancies or concerns *****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:
Trip Blank on Lora Lakes Apt RI Job

By: AV Date: 4/29/11

Small Air Bubbles ~2mm	Peabubbles 2-4 mm	LARGE Air Bubbles > 4 mm
		

Small → "sm"
Peabubbles → "pb"
Large → "lg"
Headspace → "hs"

PRESERVATION VERIFICATION 04/29/11
Page 1 of 1

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: **SU74**

Inquiry Number: NONE
Analysis Requested: 05/02/11
Contact: McCullough, Megan
Client: Floyd Snider
Logged by: JM
Sample Set Used: Yes-481
Validatable Package: Yes
Deliverables:

PC: Sue D.
VTSR: 04/29/11

Project #: POS-LL.4010
Project: Lora Lake Parcel
Sample Site:
SDG No:
Analytical Protocol: In-house

LOGNUM ARI ID	CLIENT ID	CN >12	WAD >12	NH3 <2	COD <2	FOG <2	MET <2	PHEN <2	PHOS <2	TKN <2	NO23 <2	TOC <2	S2 >9	AK102 <2	Fe2+ <2	DMET FLT	DOC FLT	PARAMETER	ADJUSTED TO	LOT NUMBER	AMOUNT ADDED	DATE/BY
11-9772 **SU74A**	B312-042911						DIS									Y						
11-9773 **SU74B**	B310-042911						DIS									Y						
11-9774 **SU74C**	B311-042911						DIS									Y						

SU53:00011 2532

Checked By JM Date 4/29/11

Case Narrative, Data Qualifiers, Control Limits

ARI Job ID: SU53, SU73, SU74

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Case Narrative

Client: Floyd Snider
Project: Lora Lake Parcel, POS-LL 4010
ARI Job No.: SU53, SU73, SU74

Sample receipt

Analytical Resources, Inc. (ARI) accepted six groundwater samples and one trip blank on April 28, 2011 under ARI job SU53. The cooler temperatures measured by IR thermometer following ARI SOP were between 3.8 and 5.6°C.

Five additional samples and one trip blank were accepted on April 29, 2011 under ARI jobs SU73 and SU74. The cooler temperatures measured by IR thermometer following ARI SOP were between 3.2 and 4.7°C. For details regarding sample receipt, please refer to the enclosed Cooler Receipt Form.

Dioxin/Furan analyses were subcontracted to Frontier Analytical Laboratory in El Dorado Hills, CA. The dioxin data on CD as generated by Frontier is forwarded with this package.

Volatiles by SW8260-SIM

The samples and associated laboratory QC were analyzed within method recommended holding times.

Initial and continuing calibrations were within method requirements for requested compounds. Internal standard areas were within limits.

The surrogate percent recoveries were within limits.

The method blanks were clean at the reporting limit. The LCS and LCSD percent recoveries were within control limits, with an allowed outlier for cis-1,2-Dichloroethene in the 05/03/11 LCSD at 79.4% (limit 80%).

The batch matrix spike and matrix spike duplicate percent recoveries were within advisory control limits for sample **MW06-042611** (ARI Job ST98). A copy of the summary form is included here.

SIM PAHs by SW8270D

The samples and associated laboratory QC were extracted and analyzed within the method recommended holding times.

Initial and continuing calibrations were within method requirements. The internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

The method blanks were clean at the reporting limits. The LCS and LCSD percent recoveries were within control limits.

The matrix spike and matrix spike duplicate percent recoveries were within advisory control limits.

The 'total' benzofluoranthenes result includes the response of the b, k and j isomers.

Pentachlorophenol by SW8041

The samples and associated laboratory QC were extracted and analyzed within the method recommended holding times.

Initial and continuing calibrations were within method requirements.

The surrogate percent recoveries were within control limits.

The method blanks were clean at the reporting limit. The LCS and LCSD percent recoveries were within control limits.

The matrix spike and matrix spike duplicate percent recoveries were within advisory control limits.

Acid/Silica Cleaned NWTPH-Dx

The samples and associated laboratory QC were extracted and analyzed within the method recommended holding times.

Initial and continuing calibrations were within method requirements.

The surrogate percent recoveries were within control limits.

The method blanks were clean at the reporting limit. The LCS and LCSD percent recoveries were within control limits.

The matrix spike and spike duplicate percent recoveries were within advisory control limits.

NWTPH-Gx and BETX by SW8021

The samples and associated laboratory QC were analyzed within the method recommended holding times.

Initial and continuing calibrations were within method requirements.

The surrogate percent recoveries were within control limits.

The method blank was clean at the reporting limit. The LCS and LCSD percent recoveries were within control limits.

The batch matrix spike and matrix spike duplicate (run under ARI Job ST98) had percent recoveries were within advisory control limits. A copy of the summary form is included in this report.

Total Arsenic and Lead by EPA 200.8

The samples and associated laboratory QC were digested and analyzed within the method recommended holding time.

Calibrations were within control limits.

The method blanks were clean at the reporting limits. The LCS percent recoveries were within control limits.

The matrix spike percent recoveries and duplicate RPDs were within control limits.

General Chemistry

The samples and associated laboratory QC were prepared and analyzed within the method recommended holding time.

The method blanks were clean at the reporting limits.

The LCS percent recoveries were within control limits.

The matrix replicate RSDs were within control limits.

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: SU53
Client: Floyd Snider
Project Event: POS-LLA
Project Name: Lora Lake Apts RI

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	MW5042811	SU53A	11-9621	Groundwater	04/28/11 09:15	04/28/11 18:00
2.	MW15042811	SU53B	11-9622	Groundwater	04/28/11 11:15	04/28/11 18:00
3.	MW4042811	SU53C	11-9623	Groundwater	04/28/11 13:30	04/28/11 18:00
4.	MW17042811	SU53D	11-9624	Groundwater	04/28/11 14:05	04/28/11 18:00
5.	MW14042811	SU53E	11-9625	Groundwater	04/28/11 15:10	04/28/11 18:00
6.	MW16042811	SU53F	11-9626	Groundwater	04/28/11 16:30	04/28/11 18:00
7.	TB-042811	SU53G	11-9627	Water	04/28/11	04/28/11 18:00

Printed 04/29/11

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: SU73
Client: Floyd Snider
Project Event: POS-LLA.4010
Project Name: Lora Lake Apts RI

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	MW-01-042911	SU73A	11-9762	Water	04/29/11 09:55	04/29/11 16:24
2.	MW-01-042911-D	SU73B	11-9763	Water	04/29/11 10:00	04/29/11 16:24
3.	TB-042911	SU73C	11-9764	Water	04/29/11	04/29/11 16:24

Printed 04/29/11

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: SU74
Client: Floyd Snider
Project Event: POS-LL.4010
Project Name: Lora Lake Parcel

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	B312-042911	SU74A	11-9772	Water	04/29/11 12:30	04/29/11 16:25
2.	B310-042911	SU74B	11-9773	Water	04/29/11 13:45	04/29/11 16:25
3.	B311-042911	SU74C	11-9774	Water	04/29/11 14:55	04/29/11 16:25

Printed 04/29/11

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Data Reporting Qualifiers

Effective 2/14/2011

Inorganic Data

U	Indicates that the target analyte was not detected at the reported concentration
*	Duplicate RPD is not within established control limits
B	Reported value is less than the CRDL but ≥ the Reporting Limit
N	Matrix Spike recovery not within established control limits
NA	Not Applicable, analyte not spiked
H	The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible
L	Analyte concentration is ≤5 times the Reporting Limit and the replicate control limit defaults to ±1 RL instead of the normal 20% RPD

Organic Data

U	Indicates that the target analyte was not detected at the reported concentration
*	Flagged value is not within established control limits
B	Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.
J	Estimated concentration when the value is less than ARI's established reporting limits
D	The spiked compound was not detected due to sample extract dilution
E	Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.
Q	Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20%Drift or minimum RRF).

S Indicates an analyte response that has saturated the detector. The calculated concentration is not valid; a dilution is required to obtain valid quantification of the analyte

NA The flagged analyte was not analyzed for

NR Spiked compound recovery is not reported due to chromatographic interference

NS The flagged analyte was not spiked into the sample

M Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters. This flag is used only for GC-MS analyses

M2 The sample contains PCB congeners that do not match any standard Aroclor pattern. The PCBs are identified and quantified as the Aroclor whose pattern most closely matches that of the sample. The reported value is an estimate.

N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"

Y The analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a raised reporting limit.

EMPC Estimated Maximum Possible Concentration (EMPC) defined in EPA Statement of Work DLM02.2 as a value "calculated for 2,3,7,8-substituted isomers for which the quantitation and /or confirmation ion(s) has signal to noise in excess of 2.5, but does not meet identification criteria" **(Dioxin/Furan analysis only)**

C The analyte was positively identified on only one of two chromatographic columns. Chromatographic interference prevented a positive identification on the second column

P The analyte was detected on both chromatographic columns but the quantified values differ by ≥40% RPD with no obvious chromatographic interference

X Analyte signal includes interference from polychlorinated diphenyl ethers. **(Dioxin/Furan analysis only)**

Z Analyte signal includes interference from the sample matrix or perfluorokerosene ions. **(Dioxin/Furan analysis only)**

Geotechnical Data

A	The total of all fines fractions. This flag is used to report total fines when only sieve analysis is requested and balances total grain size with sample weight.
F	Samples were frozen prior to particle size determination
SM	Sample matrix was not appropriate for the requested analysis. This normally refers to samples contaminated with an organic product that interferes with the sieving process and/or moisture content, porosity and saturation calculations
SS	Sample did not contain the proportion of "fines" required to perform the pipette portion of the grain size analysis
W	Weight of sample in some pipette aliquots was below the level required for accurate weighting

SURR SOLUTIONS

LABEL	SOLN ID	TEST	CONC. UG/ML	SOLVENT	EXP.
A	1824-2	ABN	100/150	MEOH	07/22/11
B	1834-6	SIM PNA	15/75	ACETONE	10/05/11
C	NA	SIM ABN	25/37.5	MEOH	03/08/11
D	1795-4	LOW PCB	0.2	ACETONE	12/16/11
E	1771-3	HERB	62.5	MEOH	10/06/11
F	1791-3	PCP	12.5	ACETONE	12/09/11
G	1824-1	d8-DIOXANE	100	MEOH	08/14/11
H	1847-2	OP-PEST	25	ACETONE	03/23/12
I	1835-1	LOW S. PNA	1.5	ACETONE	10/05/11
J	1787-2	TBT-PORE	0.125	MECL2	11/27/11
K	1795-2	MED PCB	20	ACETONE	12/16/11
L	1785-4	TBT	2.5	MECL2	11/27/11
M	1767-1	EPH	1500	MECL2	06/02/11
N	1795-3	PCB	2	ACETONE	12/16/11
O	1821-3	TPH	450	MECL2	09/07/11
P	1813-2	HCID	2250	MECL2	08/05/11
Q	NA	EDB	1	MEOH	NA
R	1757-3	RESIN ACID	250	ACETONE	08/14/11
S*	NA	PBDE	.25	MEOH	NA
T	1768-2	ALKYL PNA	10	MEOH	07/22/11
U	NA	CONGENER	2.5	ACETONE	NA
V	1791-4	LOW PCP	1.25	ACETONE	12/09/11
*reverified solution					

LCS SOLUTIONS

LABL	SOLN ID	TEST	CONC. UG/ML	SOLVENT	EXP.
1	1837-2	PCB 1660	20	ACETONE	01/01/12
2#	NA	BCOC PEST	10	ACETONE	NA
3	1793-3	PEST	01/02/10	ACETONE	12/15/11
4	1806-2	LOW PEST	.1/.2/1	ACETONE	12/15/11
5	1779-1	EPH	1500	MECL2	11/11/11
6	1791-5	PCP	12.5/125	ACETONE	12/10/11
7	1834-4	ABN	100	MEOH	08/21/11
8	1785-3	TBT	2.5	MECL2	11/27/11
9	1786-3	PORE TBT	.125/.25	MECL2	11/27/11
10	1790-1	ABN ACID	100/200	MEOH	06/07/11
11	1777-2	TPHD	15000	ACETONE	11/01/11
12	1790-2	ABN BASE	200	MEOH	06/07/11
13	1838-4	LOW PCB	2	ACETONE	01/31/12
14	1822-2	LOW ABN ACID	10/20	MEOH	06/07/11
15	1814-2	SIM PNA	15/75	MEOH	01/04/12
16	1834-5	1,4-DIOXANE	100	MEOH	08/25/11
17	1772-3	1248 PCB	10	ACETONE	05/01/11
18	1814-3	LOW SIM PNA	1.5	ACETONE	01/04/12
19	1815-2	AK103	7500	ACETONE	06/02/11
20	1843-3	PNA	100	ACETONE	08/14/11
21	1844-3	SKY/BHT	100	MEOH	09/24/11
22	1781-1	HERB	05 to 4000	MEOH	04/15/11
23	1822-3	LW ABN BASE	20	MEOH	06/07/11
24	1822-4	LOW ABN	10	ACETONE	10/01/11
25#	NA	DIPHENYL	100	MEOH	NA
26	1823-1	OP-PEST	25	MEOH	07/01/11
27	NA	STEROLS	200	MEOH	NA
28#	1807-1	ADD. PEST	2	ACETONE	08/31/11
29#	NA	DECANES	100	MEOH	NA

LCS SOLUTIONS

30	NA	EDB/DBCP	0.2	MEOH	NA
31	1835-2	TERPINEOL	100	MEOH	09/02/11
32	NA	GUAIACOL	50-200	ACETONE	NA
33	NA	RETENE	100	MEOH	NA
34	1842-1	CONGENERS	0.5	ACETONE	03/14/12
35	NA	ALKYL PNA A	10	MEOH	NA
36	NA	ALKYL PNA B	10	MEOH	NA
37	1773-1	CAR/PERY	100	ACETONE	10/14/11
38	1846-2	ABN ACID	200-450	MEOH	09/25/11
50	1757-4	FULL RESIN	250	ACETONE	08/14/11
51	1772-1	DDTS	0.01	ACETONE	04/24/11
52	NA	1232 PCB	20	ACETONE	NA
53	1780-1	DALAPON	50	MEOH	05/07/11
54	1753-1	T-CHLORDANE	10	ACETONE	07/21/11
55	1753-2	TOXAPHENE	50	ACETONE	07/21/11
56	1846-3	ABN BASE	50-200	MEOH	09/25/11
#=PROJECT SPECIFIC SOLUTION					
	*=REVERIFIED SOLUTION				

Spike Recovery Control Limits for SIM VOA
EPA Method SW-846-8260C [1,2]

Effective 8/30/2010

Control limits are updated periodically. Assure that you have ARI's current control limits by downloading the files at the time of use.
http://www.arilabs.com/portal/downloads/ARI-CLs.zip

Sample Matrix:	Water
Purge Volume:	10 mL
LCS Spike Recovery [3]	
Vinyl Chloride	76 - **120**
1,1-Dichloroethene	**80** - **120**
1,2-Dichloroethane	**80** - 128
cis-1,2-Dichloroethene	**80** - **120**
trans-1,2-Dichloroethene	**80** - **120**
Trichloroethene	**80** - **120**
Benzene	**80** - **120**
Tetrachloroethene	**80** - 122
1,1,2,2-Tetrachloroethane	**80** - 128
Method Blank/LCS Surrogate Recovery	
d4-1,2-Dichloroethane	78 - 126
d8-Toluene	**80** - **120**
Sample Surrogate Recovery	
d4-1,2-Dichloroethane	**80** - 129
d8-Toluene	**80** - **120**

(1) Control limits calculated using historic data collected from 1/1/10 to 8/23/10
(2) Highlighted control limits (**bold font**) adjusted from the calculated values as follows:

a) ARI does not use control limits < 10
b) Control limits for analyzes with no separate preparation procedure are adjusted to reflect the minimum uncertainty in the calibration of the instrument allowed by the referenced analytical method.

(3) Laboratory Control Sample (LCS) spike recovery control limits also used as advisory control limits for sample matrix spike (MS) analyzes. MS recovery values are advisory and not used to assess the acceptability of an analytical batch.

Analytical Resources,Incorporated
Analytical Chemists and Consultants

Spike Recovery Control Limits for Polycyclic Aromatic Hydrocarbons Selected Ion Monitoring (SIM) EPA Method SW-846-8270D-Modified Low Level Aqueous Samples[1,7]

Effective 5/1/09

Control limits are updated periodically. Assure that you have ARI's current control limits by downloading the files at the time of use. http://www.arilabs.com/portal/downloads/ARI-CLs.zip

Sample Volume / Final Volume	500 mL to 0.5 mL	
	Control Limits	ME Limits [2]
LCS Spike Recovery [6]		
Napthalene	41 - 101	31 - 111
2-Methylnapthalene	47 - **100**	39 - 103
1-Methylnapthalene	30 - 160 [3]	30 - 160 [3]
Acenaphthylene	35 - **100**	25 - 104
Acenapthene	43 - 104	33 - 114
Dibenzofuran	37 - **100**	27 - 108
Fluorene	51 - 103	42 - 112
Phenanthrene	55 - 109	46 - 118
Anthracene	30 - 101	18 - 113
Fluoranthene	49 - 123	37 - 135
Pyrene	48 - 120	36 - 132
Benz(a)anthracene	43 - 113	31 - 125
Chrysene	59 - 112	50 - 121
Benzofluoranthene(s) (Total)	30 - 160[8]	30 - 160[8]
Benzo(a)pyrene	**10** - **100**	**10** - 109
Indeno(1,2,3-cd)pyrene	43 - 112	32 - 124
Dibenzo(a,h)anthracene	42 - 114	30 - 126
Benzo(g,h,i)perylene	31 - 118	17 - 133
MB / LCS Surrogate Recovery		
d10-2-Methylnaphthalene	42 - **100**	(4)
d14-Dibenzo(a,h)anthracene	40 - 125	(4)
Sample Surrogate Recovery		
d10-2-Methylnaphthalene	31 - 109	(4)
d14-Dibenzo(a,h)anthracene	**10** - 133	(4)

(1) ARI's Control limits calculated using all available spike recovery data from 1/1/08 through 12/1/08.
(2) **ME** = A **marginal exceedance** defined in the NELAC Standard [5] as beyond the LCS-CL but still within the ME limits. ME limits are between 3 and 4 standard deviations around the mean. A maximum of one marginal exceedance is acceptable. Two or more marginal exceedances require corrective action.
(3) 30 – 160 are default, advisory control limits used when there is insufficient data to calculate historic control limits. **DO NOT** use these limits as the sole reason to reject the data from a batch of analyses.
(4) Marginal Exceedances not allowed for surrogate standards.
(5) **2003 NELAC Standard (EPA/600/R-04/003), July 2003**, Chapter 5, pages 251-252.
(6)Laboratory Control Sample (LCS) spike recovery control limits also used as advisory control limits for sample matrix spike (MS) analyzes. MS recovery values are advisory and not used to assess the acceptability of an analytical batch.
(7) Highlighted control limits (**bold font**) adjusted to demonstrate that ARI does not use control limits < 10 for the lower limit or < 100 for the upper limit.
(8) Default limits pending generation of historic limits for total benzofluoranthrenes (7/29/10)

Analytical Resources,Incorporated
Analytical Chemists and Consultants

Spike Recovery Control Limits for Chlorinated Phenols
EPA Method SW-846-8041[1,2]
Effective 5/1/09

Control limits are updated periodically. Assure that you have ARI's current control limits by downloading the files at the time of use. http://www.arilabs.com/portal/downloads/ARI-CLs.zip

	ARI's Calculated Control Limits	
Sample Matrix:	Water	Soil / Sediment
Sample Amount / Final Volume:	500 / 50 mL	10 g / 25 mL
LCS Spike Recovery [3]		
Pentachlorophenol	27 - 115	**10** - 162
Method Blank/LCS Surrogate Recovery		
2,4,6-Tribromophenol	40 - 130	50 - 115
Sample Surrogate Recovery		
2,4,6-Tribromophenol	11 - 156	**10** - 146

(1) ARI's Control limits calculated using all available spike recovery data from 1/1/08 through 12/1/08.
(2) Highlighted control limits (**bold font**) adjusted to demonstrate that ARI does not use control limits < 10.
(3) Laboratory Control Sample (LCS) spike recovery control limits also used as advisory control limits for sample matrix spike (MS) analyzes. MS recovery values are advisory and not used to assess the acceptability of an analytical batch.

Analytical Resources,Incorporated
Analytical Chemists and Consultants

Spike Recovery Control Limits Hydrocarbon Identification (NWTPH-HCID) and Diesel Range Petroleum Hydrocarbons (NWTPH-D & AK-102) [1]

Effective 10/4/10

Control limits are updated periodically. Assure that you have ARI's current control limits by downloading the files at the time of use. http://www.arilabs.com/portal/downloads/ARI-CLs.zip

Method:	NWTPH-HCID [2]	NWTPH-D		AK102 [2]
Sample Matrix:	Water& Soil	Water [3]	Soil [4]	Water & Soil
Preparation:	500 to 1 mL	500 to 1 mL	10g to 1 mL	500 to 1 mL or 10g to 1 mL
LCS Spike Recovery [5]				
Diesel	-	60 - 111	64 - 116	75 - 125
Diesel with Acid & Silica Clean-up	-	49 - 107	59 - 108	(6)
Diesel with Silica Clean-up		49 - 107	59 - 108	75 - 125
Method Blank/LCS Surrogate Recovery				
o-Terphenyl	-	56 - 130	64 - 134	60 - 120
o-Terphenyl with Acid & Silica Clean-up	-	53 - 123	59 - 134	(6)
o-Terphenyl Silica Clean-up		53 - 123	59 - 134	60 - 120
Sample Surrogate Recovery				
o-Terphenyl	50 - 150	52 - 134	52 - 130	50 - 150
o-Terphenyl with Acid & Silica Clean-up	-	49 - 118	43 - 137	(6)
o-Terphenyl with Silica Clean-up	-	49 - 118	43 - 137	50 - 150

1. Control Limits calculated using all data generated 1/1/10 through 9/1/10
2. Method specified, non-prescriptive limits. The NWTPH-HCID Method does not include LCS or MS analyses.
3. Separatory Funnel Extraction – EPA Method 3510C
4. Microwave Extraction – EPA Method 3546
5. Laboratory Control Sample (LCS) spike recovery control limits also used as advisory control limits for sample matrix spike (MS) analyzes. MS recovery values are advisory and not used to assess the acceptability of an analytical batch.
6. Alaska State UST Methods do not allow acid cleanup of sample extracts.

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Spike Recovery Control Limits BTEX – EPA Method 8021 & Gasoline – Methods NWTPH-G and AK101[1,2]

Effective 5/1/09

Control limits are updated periodically. Assure that you have ARI's current control limits by downloading the files at the time of use. http://www.arilabs.com/portal/downloads/ARI-CLs.zip

Sample Matrix:	**Aqueous Samples**		**Soil / Sediment Samples**	
Analytical Method:	Method 8021B	NWTPH-G AK-101	Method 8021B	NWTPH-G AK-101
LCS Spike Recovery [3]				
Benzene	73 - **120**		72 - **120**	
Toluene	73 - **120**		72 - **120**	
Ethyl benzene	69 - **120**		71 - **120**	
m,p-Xylenes	72 - **120**		72 - **120**	
o-Xlyene	73 - **120**		72 - **120**	
MTBE	30 - 182		40 - 163	
Gasoline		75 - 124		74 - 124
Method Blank/LCS Surrogate Recovery				
Trifluorotoluene (TFT)	79 - **120**	**80 - 120**	80 - **120**	**80 - 120**
Bromobenzene	79 - **120**	**80 - 120**	77 - **120**	**80 - 120**
Sample Surrogate Recovery				
Trifluorotoluene (TFT)	**80 - 120**	**80** - 120	68 - 124	66 - 123
Bromobenzene	**80 - 120**	**80** - 120	62 - 134	62 - 130

(1) Control Limits calculated using all data generated 1/1/08 through 12/31/08.
(2) Highlighted control limits (bold font) are adjusted from the calculated values as follows:
a) Highlighted control limits (**bold font**) adjusted to demonstrate that ARI does not use control limits < 10 for the lower limit or < 100 for the upper limit.
b) Control limits for analytes with no separate preparation procedure are adjusted to reflect the minimum uncertainty in the calibration of the instrument allowed by the referenced analytical method.
(3) Laboratory Control Sample (LCS) spike recovery control limits also used as advisory control limits for sample matrix spike (MS) analyzes. MS recovery values are advisory and not used to assess the acceptability of an analytical batch.

Summary of Laboratory Control Limits Metals Analyses (All Methods & Sample Matrices)

Effective 5/1/09

Control limits are updated periodically. Assure that you have ARI's current control limits by downloading the files at the time of use. http://www.arilabs.com/portal/downloads/ARI-CLs.zip

Element	Matrix Spike Recovery	LCS Recovery	Replicate RPD
Aluminum	75 - 125	80 - 120	≤ 20%
Antimony	75 - 125	80 - 120	≤ 20%
Arsenic	75 - 125	80 - 120	≤ 20%
Barium	75 - 125	80 - 120	≤ 20%
Beryllium	75 - 125	80 - 120	≤ 20%
Boron	75 - 125	80 - 120	≤ 20%
Cadmium	75 - 125	80 - 120	≤ 20%
Calcium	75 - 125	80 - 120	≤ 20%
Chromium	75 - 125	80 - 120	≤ 20%
Cobalt	75 - 125	80 - 120	≤ 20%
Copper	75 - 125	80 - 120	≤ 20%
Iron	75 - 125	80 - 120	≤ 20%
Lead	75 - 125	80 - 120	≤ 20%
Magnesium	75 - 125	80 - 120	≤ 20%
Manganese	75 - 125	80 - 120	≤ 20%
Mercury	75 - 125	80 - 120	≤ 20%
Nickel	75 - 125	80 - 120	≤ 20%
Potassium	75 - 125	80 - 120	≤ 20%
Selenium	75 - 125	80 - 120	≤ 20%
Silica	75 - 125	80 - 120	≤ 20%
Silver	75 - 125	80 - 120	≤ 20%
Sodium	75 - 125	80 - 120	≤ 20%
Strontium	75 - 125	80 - 120	≤ 20%
Thallium	75 - 125	80 - 120	≤ 20%
Vanadium	75 - 125	80 - 120	≤ 20%
Zinc	75 - 125	80 - 120	≤ 20%

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Spike Recovery Control Limits for Conventional Wet Chemistry

Effective 5/1/09

Control limits are updated periodically. Assure that you have ARI's current control limits by downloading the files at the time of use. http://www.arilabs.com/portal/downloads/ARI-CLs.zip

	ARI's Control Limits	
Sample Matrix:	Water	Soil / Sediment
Matrix Spike Recoveries	% Recovery	% Recovery
Ammonia	75 - 125	75 - 125
Bromide	75 125	75 - 125
Chloride	75 125	75 - 125
Cyanide	75 - 125	75 - 125
Ferrous Iron	75 - 125	75 - 125
Fluoride	75 - 125	75 - 125
Formaldehyde	75 - 125	75 - 125
Hexane Extractable Material	-- - --	78 - 114
Hexavalent Chromium	75 - 125	75 - 125
Nitrate/Nitrite	75 - 125	75 - 125
Oil and Grease	75 - 125	75 - 125
Phenol	75 - 125	75 - 125
Phosphorous	75 - 125	75 - 125
Sulfate	75 - 125	75 - 125
Sulfide	75 - 125	75 - 125
Total Kjeldahl Nitrogen	75 - 125	75 - 125
Total Organic Carbon	75 - 125	75 - 125
Duplicate RPDs		
Acidity	±20%	±20%
Alkalinity	±20%	±20%
BOD	±20%	±20%
Cation Exchange	±20%	±20%
COD	±20%	±20%
Conductivity	±20%	±20%
Salinity	±20%	±20%
Solids	±20%	±20%
Turbidity	±20%	±20%

SIM Volatile Analysis
Report and Summary QC Forms

ARI Job ID: SU53, SU73, SU74

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C-SIM **Sample ID: MW5042811**
Page 1 of 1 **SAMPLE**

Lab Sample ID: SU53A
LIMS ID: 11-9621
Matrix: Groundwater
Data Release Authorized:
Reported: 05/05/11

QC Report No: SU53-Floyd Snider
Project: Lora Lake Apts RI
POS-LLA
Date Sampled: 04/28/11
Date Received: 04/28/11

Instrument/Analyst: NT7/PKC
Date Analyzed: 05/04/11 14:55

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
107-06-2	1,2-Dichloroethane	0.020	< 0.020	U
156-59-2	cis-1,2-Dichloroethene	0.020	< 0.020	U
156-60-5	trans-1,2-Dichloroethene	0.020	< 0.020	U
79-01-6	Trichloroethene	0.020	< 0.020	U
127-18-4	Tetrachloroethene	0.020	< 0.020	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	105%
d8-Toluene	97.9%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C-SIM **Sample ID: MW15042811**
Page 1 of 1 **SAMPLE**

Lab Sample ID: SU53B
LIMS ID: 11-9622
Matrix: Groundwater
Data Release Authorized:
Reported: 05/05/11

QC Report No: SU53-Floyd Snider
Project: Lora Lake Apts RI
POS-LLA
Date Sampled: 04/28/11
Date Received: 04/28/11

Instrument/Analyst: NT7/PKC
Date Analyzed: 05/03/11 20:39

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
107-06-2	1,2-Dichloroethane	0.020	< 0.020	U
156-59-2	cis-1,2-Dichloroethene	0.020	< 0.020	U
156-60-5	trans-1,2-Dichloroethene	0.020	< 0.020	U
79-01-6	Trichloroethene	0.020	< 0.020	U
127-18-4	Tetrachloroethene	0.020	< 0.020	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	99.0%
d8-Toluene	96.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C-SIM **Sample ID: MW4042811**
Page 1 of 1 **SAMPLE**

Lab Sample ID: SU53C
LIMS ID: 11-9623
Matrix: Groundwater
Data Release Authorized:
Reported: 05/05/11

QC Report No: SU53-Floyd Snider
Project: Lora Lake Apts RI
POS-LLA
Date Sampled: 04/28/11
Date Received: 04/28/11

Instrument/Analyst: NT7/PKC
Date Analyzed: 05/03/11 21:04

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
107-06-2	1,2-Dichloroethane	0.020	< 0.020	U
156-59-2	cis-1,2-Dichloroethene	0.020	< 0.020	U
156-60-5	trans-1,2-Dichloroethene	0.020	< 0.020	U
79-01-6	Trichloroethene	0.020	< 0.020	U
127-18-4	Tetrachloroethene	0.020	< 0.020	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	98.1%
d8-Toluene	95.1%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C-SIM **Sample ID: MW17042811**
Page 1 of 1 **SAMPLE**

Lab Sample ID: SU53D
LIMS ID: 11-9624
Matrix: Groundwater
Data Release Authorized:
Reported: 05/05/11

QC Report No: SU53-Floyd Snider
Project: Lora Lake Apts RI
POS-LLA
Date Sampled: 04/28/11
Date Received: 04/28/11

Instrument/Analyst: NT7/PKC
Date Analyzed: 05/03/11 21:30

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
107-06-2	1,2-Dichloroethane	0.020	< 0.020	U
156-59-2	cis-1,2-Dichloroethene	0.020	< 0.020	U
156-60-5	trans-1,2-Dichloroethene	0.020	< 0.020	U
79-01-6	Trichloroethene	0.020	< 0.020	U
127-18-4	Tetrachloroethene	0.020	< 0.020	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	105%
d8-Toluene	95.9%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C-SIM **Sample ID: MW14042811**
Page 1 of 1 **SAMPLE**

Lab Sample ID: SU53E
LIMS ID: 11-9625
Matrix: Groundwater
Data Release Authorized:
Reported: 05/05/11

QC Report No: SU53-Floyd Snider
Project: Lora Lake Apts RI
POS-LLA
Date Sampled: 04/28/11
Date Received: 04/28/11

Instrument/Analyst: NT7/PKC
Date Analyzed: 05/03/11 21:56

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
107-06-2	1,2-Dichloroethane	0.020	< 0.020	U
156-59-2	cis-1,2-Dichloroethene	0.020	< 0.020	U
156-60-5	trans-1,2-Dichloroethene	0.020	< 0.020	U
79-01-6	Trichloroethene	0.020	< 0.020	U
127-18-4	Tetrachloroethene	0.020	< 0.020	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	101%
d8-Toluene	95.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C-SIM **Sample ID: MW16042811**
Page 1 of 1 **SAMPLE**

Lab Sample ID: SU53F
LIMS ID: 11-9626
Matrix: Groundwater
Data Release Authorized:
Reported: 05/05/11

QC Report No: SU53-Floyd Snider
Project: Lora Lake Apts RI
POS-LLA
Date Sampled: 04/28/11
Date Received: 04/28/11

Instrument/Analyst: NT7/PKC
Date Analyzed: 05/04/11 16:09

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
107-06-2	1,2-Dichloroethane	0.020	< 0.020	U
156-59-2	cis-1,2-Dichloroethene	0.020	< 0.020	U
156-60-5	trans-1,2-Dichloroethene	0.020	< 0.020	U
79-01-6	Trichloroethene	0.020	< 0.020	U
127-18-4	Tetrachloroethene	0.020	< 0.020	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	94.7%
d8-Toluene	96.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C-SIM **Sample ID: TB-042811**
Page 1 of 1 **Trip Blank**

Lab Sample ID: SU53G
LIMS ID: 11-9627
Matrix: Water
Data Release Authorized:
Reported: 05/05/11

QC Report No: SU53-Floyd Snider
Project: Lora Lake Apts RI
POS-LLA
Date Sampled: 04/28/11
Date Received: 04/28/11

Instrument/Analyst: NT7/PKC
Date Analyzed: 05/03/11 14:40

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
107-06-2	1,2-Dichloroethane	0.020	< 0.020	U
156-59-2	cis-1,2-Dichloroethene	0.020	< 0.020	U
156-60-5	trans-1,2-Dichloroethene	0.020	< 0.020	U
79-01-6	Trichloroethene	0.020	< 0.020	U
127-18-4	Tetrachloroethene	0.020	< 0.020	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	99.0%
d8-Toluene	99.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C-SIM **Sample ID: MW-01-042911**
Page 1 of 1 **SAMPLE**

Lab Sample ID: SU73A
LIMS ID: 11-9762
Matrix: Water
Data Release Authorized:
Reported: 05/05/11

QC Report No: SU73-Floyd Snider
Project: Lora Lake Apts RI
POS-LLA.4010
Date Sampled: 04/29/11
Date Received: 04/29/11

Instrument/Analyst: NT7/PKC
Date Analyzed: 05/04/11 16:35

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
107-06-2	**1,2-Dichloroethane**	**0.020**	**0.028**	
156-59-2	**cis-1,2-Dichloroethene**	**0.020**	**0.16**	
156-60-5	**trans-1,2-Dichloroethene**	**0.020**	**0.041**	
79-01-6	**Trichloroethene**	**0.020**	**0.12**	
127-18-4	Tetrachloroethene	0.020	< 0.020	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	97.4%
d8-Toluene	98.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C-SIM **Sample ID: MW-01-042911-D**
Page 1 of 1 **SAMPLE**

Lab Sample ID: SU73B
LIMS ID: 11-9763
Matrix: Water
Data Release Authorized:
Reported: 05/05/11

QC Report No: SU73-Floyd Snider
Project: Lora Lake Apts RI
POS-LLA.4010
Date Sampled: 04/29/11
Date Received: 04/29/11

Instrument/Analyst: NT7/PKC
Date Analyzed: 05/04/11 17:01

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
107-06-2	**1,2-Dichloroethane**	**0.020**	**0.026**	
156-59-2	**cis-1,2-Dichloroethene**	**0.020**	**0.16**	
156-60-5	**trans-1,2-Dichloroethene**	**0.020**	**0.042**	
79-01-6	**Trichloroethene**	**0.020**	**0.12**	
127-18-4	Tetrachloroethene	0.020	< 0.020	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	99.2%
d8-Toluene	94.9%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C-SIM **Sample ID: TB-042911**
Page 1 of 1 **SAMPLE**

Lab Sample ID: SU73C
LIMS ID: 11-9764
Matrix: Water
Data Release Authorized:
Reported: 05/05/11

QC Report No: SU73-Floyd Snider
Project: Lora Lake Apts RI
POS-LLA.4010
Date Sampled: 04/29/11
Date Received: 04/29/11

Instrument/Analyst: NT7/PKC
Date Analyzed: 05/04/11 13:12

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
107-06-2	1,2-Dichloroethane	0.020	< 0.020	U
156-59-2	cis-1,2-Dichloroethene	0.020	< 0.020	U
156-60-5	trans-1,2-Dichloroethene	0.020	< 0.020	U
79-01-6	Trichloroethene	0.020	< 0.020	U
127-18-4	Tetrachloroethene	0.020	< 0.020	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	97.6%
d8-Toluene	99.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C-SIM **Sample ID: B312-042911**
Page 1 of 1 **SAMPLE**

Lab Sample ID: SU74A
LIMS ID: 11-9772
Matrix: Water
Data Release Authorized:
Reported: 05/05/11

QC Report No: SU74-Floyd Snider
Project: Lora Lake Parcel
POS-LL.4010
Date Sampled: 04/29/11
Date Received: 04/29/11

Instrument/Analyst: NT7/PKC
Date Analyzed: 05/04/11 17:26

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
107-06-2	1,2-Dichloroethane	0.020	< 0.020	U
156-59-2	cis-1,2-Dichloroethene	0.020	< 0.020	U
156-60-5	trans-1,2-Dichloroethene	0.020	< 0.020	U
79-01-6	Trichloroethene	0.020	< 0.020	U
127-18-4	Tetrachloroethene	0.020	< 0.020	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	90.3%
d8-Toluene	96.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C-SIM **Sample ID: B310-042911**
Page 1 of 1 **SAMPLE**

Lab Sample ID: SU74B
LIMS ID: 11-9773
Matrix: Water
Data Release Authorized:
Reported: 05/05/11

QC Report No: SU74-Floyd Snider
Project: Lora Lake Parcel
POS-LL.4010
Date Sampled: 04/29/11
Date Received: 04/29/11

Instrument/Analyst: NT7/PKC
Date Analyzed: 05/04/11 17:52

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
107-06-2	1,2-Dichloroethane	0.020	< 0.020	U
156-59-2	cis-1,2-Dichloroethene	0.020	< 0.020	U
156-60-5	trans-1,2-Dichloroethene	0.020	< 0.020	U
79-01-6	Trichloroethene	0.020	< 0.020	U
127-18-4	Tetrachloroethene	0.020	< 0.020	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	92.8%
d8-Toluene	97.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C-SIM **Sample ID: B311-042911**
Page 1 of 1 **SAMPLE**

Lab Sample ID: SU74C
LIMS ID: 11-9774
Matrix: Water
Data Release Authorized:
Reported: 05/05/11

QC Report No: SU74-Floyd Snider
Project: Lora Lake Parcel
POS-LL.4010
Date Sampled: 04/29/11
Date Received: 04/29/11

Instrument/Analyst: NT7/PKC
Date Analyzed: 05/04/11 18:18

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
107-06-2	1,2-Dichloroethane	0.020	< 0.020	U
156-59-2	cis-1,2-Dichloroethene	0.020	< 0.020	U
156-60-5	trans-1,2-Dichloroethene	0.020	< 0.020	U
79-01-6	Trichloroethene	0.020	< 0.020	U
127-18-4	Tetrachloroethene	0.020	< 0.020	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	97.4%
d8-Toluene	97.0%

ANALYTICAL RESOURCES INCORPORATED

SW8260-SIM SURROGATE RECOVERY SUMMARY

Matrix: Groundwater

QC Report No: SU53-Floyd Snider
Project: Lora Lake Apts RI
POS-LLA

Client ID	DCE	TOL	TOT OUT
MB-050411	104%	97.4%	0
LCS-050411	87.8%	99.6%	0
LCSD-050411	84.8%	98.4%	0
MW5042811	105%	97.9%	0
MB-050311	90.8%	95.2%	0
LCS-050311	86.0%	98.7%	0
LCSD-050311	86.6%	99.7%	0
MW15042811	99.0%	96.4%	0
MW4042811	98.1%	95.1%	0
MW17042811	105%	95.9%	0
MW14042811	101%	95.8%	0
MW16042811	94.7%	96.8%	0
TB-042811	99.0%	99.6%	0

	LCS/MB LIMITS	QC LIMITS
(DCE) = d4-1,2-Dichloroethane	(78-126)	(80-129)
(TOL) = d8-Toluene	(80-120)	(80-120)

Prep Method: SW5030
Log Number Range: 11-9621 to 11-9627

ANALYTICAL RESOURCES INCORPORATED

SW8260-SIM SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: SU73-Floyd Snider
Project: Lora Lake Apts RI
POS-LLA.4010

Client ID	DCE	TOL	TOT OUT
MB-050411	104%	97.4%	0
LCS-050411	87.8%	99.6%	0
LCSD-050411	84.8%	98.4%	0
MW-01-042911	97.4%	98.8%	0
MW-01-042911-D	99.2%	94.9%	0
TB-042911	97.6%	99.2%	0

	LCS/MB LIMITS	QC LIMITS
(DCE) = d4-1,2-Dichloroethane	(78-126)	(80-129)
(TOL) = d8-Toluene	(80-120)	(80-120)

Prep Method: SW5030
Log Number Range: 11-9762 to 11-9764

ANALYTICAL RESOURCES INCORPORATED

SW8260-SIM SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: SU74-Floyd Snider
Project: Lora Lake Parcel
POS-LL.4010

Client ID	DCE	TOL	TOT OUT
MB-050411	104%	97.4%	0
LCS-050411	87.8%	99.6%	0
LCSD-050411	84.8%	98.4%	0
B312-042911	90.3%	96.0%	0
B310-042911	92.8%	97.2%	0
B311-042911	97.4%	97.0%	0

	LCS/MB LIMITS	QC LIMITS
(DCE) = d4-1,2-Dichloroethane	(78-126)	(80-129)
(TOL) = d8-Toluene	(80-120)	(80-120)

Prep Method: SW5030
Log Number Range: 11-9772 to 11-9774

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C-SIM Sample ID: MW06-042611
Page 1 of 1 **MATRIX SPIKE**

Lab Sample ID: ST98D
LIMS ID: 11-9412
Matrix: Water
Data Release Authorized:
Reported: 05/05/11

QC Report No: ST98-Floyd Snider
Project: Lora Lake Apts RI
POS-LLA T.4010
Date Sampled: 04/26/11
Date Received: 04/26/11

Instrument/Analyst MS: NT7/PKC
MSD: NT7/PKC
Date Analyzed MS: 05/03/11 16:48
MSD: 05/03/11 17:14

Sample Amount MS: 10.0 mL
MSD: 10.0 mL
Purge Volume MS: 10.0 mL
MSD: 10.0 mL

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
1,2-Dichloroethane	< 0.020 U	0.919	1.00	91.9%	0.868	1.00	86.8%	5.7%
cis-1,2-Dichloroethene	< 0.020 U	0.839	1.00	83.9%	0.822	1.00	82.2%	2.0%
trans-1,2-Dichloroethene	< 0.020 U	0.884	1.00	88.4%	0.869	1.00	86.9%	1.7%
Trichloroethene	< 0.020 U	0.956	1.00	95.6%	0.933	1.00	93.3%	2.4%
Tetrachloroethene	< 0.020 U	0.989	1.00	98.9%	0.933	1.00	93.3%	5.8%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C-SIM Sample ID: LCS-050311
 LAB CONTROL SAMPLE

Lab Sample ID: LCS-050311
LIMS ID: 11-9622
Matrix: Groundwater
Data Release Authorized:
Reported: 05/05/11

QC Report No: SU53-Floyd Snider
Project: Lora Lake Apts RI
POS-LLA
Date Sampled: NA
Date Received: NA

Instrument/Analyst LCS: NT7/PKC
LCSD: NT7/PKC
Date Analyzed LCS: 05/03/11 12:06
LCSD: 05/03/11 12:32

Sample Amount LCS: 10.0 mL
LCSD: 10.0 mL
Purge Volume LCS: 10.0 mL
LCSD: 10.0 mL

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
1,2-Dichloroethane	0.948	1.00	94.8%	0.872	1.00	87.2%	8.4%
cis-1,2-Dichloroethene	0.838	1.00	83.8%	0.794	1.00	79.4%	5.4%
trans-1,2-Dichloroethene	0.908	1.00	90.8%	0.832	1.00	83.2%	8.7%
Trichloroethene	0.986	1.00	98.6%	0.896	1.00	89.6%	9.6%
Tetrachloroethene	0.850	1.00	85.0%	0.867	1.00	86.7%	2.0%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

Volatile Surrogate Recovery

	LCS	LCSD
d4-1,2-Dichloroethane	86.0%	86.6%
d8-Toluene	98.7%	99.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C-SIM Sample ID: LCS-050411
 LAB CONTROL SAMPLE

Lab Sample ID: LCS-050411
LIMS ID: 11-9621
Matrix: Groundwater
Data Release Authorized:
Reported: 05/05/11

QC Report No: SU53-Floyd Snider
Project: Lora Lake Apts RI
POS-LLA
Date Sampled: NA
Date Received: NA

Instrument/Analyst LCS: NT7/PKC
LCSD: NT7/PKC
Date Analyzed LCS: 05/04/11 11:21
LCSD: 05/04/11 11:47

Sample Amount LCS: 10.0 mL
LCSD: 10.0 mL
Purge Volume LCS: 10.0 mL
LCSD: 10.0 mL

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
1,2-Dichloroethane	1.17	1.00	117%	0.894	1.00	89.4%	26.7%
cis-1,2-Dichloroethene	1.08	1.00	108%	0.827	1.00	82.7%	26.5%
trans-1,2-Dichloroethene	1.15	1.00	115%	0.887	1.00	88.7%	25.8%
Trichloroethene	1.18	1.00	118%	0.947	1.00	94.7%	21.9%
Tetrachloroethene	1.16	1.00	116%	0.945	1.00	94.5%	20.4%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

Volatile Surrogate Recovery

	LCS	LCSD
d4-1,2-Dichloroethane	87.8%	84.8%
d8-Toluene	99.6%	98.4%

4A

VOLATILE METHOD BLANK SUMMARY

Method Blank ID.

MB0503

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD SNIDER

ARI Job No: SU21

Project: LORA LAKE APARTMENTS RI

Lab File ID: MB0503A

Lab Sample ID: MB0503

Date Analyzed: 05/03/11

Time Analyzed: 1323

Instrument ID: NT7

Heated Purge: (Y/N) N

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	LCS0503	LCS0503	LCS0503A	1206
02	LCS0503	LCS0503	LCS0503B	1232
03	TB-042611	ST98E	ST98E	1348
04	TB-042711	SU21G	SU21G	1414
05	TB-042811	SU53G	SU53G	1440
06	MW02-042611	ST98A	ST98A	1505
07	MW03-042611	ST98B	ST98B	1531
08	MW13-042611	ST98C	ST98C	1557
09	MW06-042611	ST98D	ST98D	1622
10	MW06-042611	ST98DMS	ST98DMS	1648
11	MW06-042611	ST98DMSD	ST98DMSD	1714
12	MW07-042711	SU21A	SU21A	1739
13	MW10-042711	SU21C	SU21C	1831
14	MW09-042711	SU21D	SU21D	1856
15	MW12-042711	SU21F	SU21F	1947
16	MW15042811	SU53B	SU53B	2039
17	MW4042811	SU53C	SU53C	2104
18	MW17042811	SU53D	SU53D	2130
19	MW14042811	SU53E	SU53E	2156
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COMMENTS:

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C-SIM **Sample ID: MB-050311**
Page 1 of 1 **METHOD BLANK**

Lab Sample ID: MB-050311
LIMS ID: 11-9622
Matrix: Groundwater
Data Release Authorized:
Reported: 05/05/11

QC Report No: SU53-Floyd Snider
Project: Lora Lake Apts RI
POS-LLA
Date Sampled: NA
Date Received: NA

Instrument/Analyst: NT7/PKC
Date Analyzed: 05/03/11 13:23

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
107-06-2	1,2-Dichloroethane	0.020	< 0.020	U
156-59-2	cis-1,2-Dichloroethene	0.020	< 0.020	U
156-60-5	trans-1,2-Dichloroethene	0.020	< 0.020	U
79-01-6	Trichloroethene	0.020	< 0.020	U
127-18-4	Tetrachloroethene	0.020	< 0.020	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	90.8%
d8-Toluene	95.2%

4A

VOLATILE METHOD BLANK SUMMARY

Method Blank ID.

MB0504

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD SNIDER

ARI Job No: SU21

Project: LORA LAKE APARTMENTS RI

Lab File ID: MB0504

Lab Sample ID: MB0504

Date Analyzed: 05/04/11

Time Analyzed: 1213

Instrument ID: NT7

Heated Purge: (Y/N) N

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	LCS0504	LCS0504	LCS0504X	1121
02	LCS0504	LCS0504	LCS0504Y	1147
03	TB-042911	SU73C	SU73C	1312
04	MW11-042711	SU21B	SU21B2	1403
05	MW08-042711	SU21E	SU21E2	1429
06	MW5042811	SU53A	SU53A2	1455
07	MW16042811	SU53F	SU53F3	1609
08	MW-01-042911	SU73A	SU73A	1635
09	MW-01-042911	SU73B	SU73B	1701
10	B312-042911	SU74A	SU74A	1726
11	B310-042911	SU74B	SU74B	1752
12	B311-042911	SU74C	SU74C	1818
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COMMENTS:

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C-SIM **Sample ID: MB-050411**
Page 1 of 1 **METHOD BLANK**

Lab Sample ID: MB-050411
LIMS ID: 11-9621
Matrix: Groundwater
Data Release Authorized:
Reported: 05/05/11

QC Report No: SU53-Floyd Snider
Project: Lora Lake Apts RI
POS-LLA
Date Sampled: NA
Date Received: NA

Instrument/Analyst: NT7/PKC
Date Analyzed: 05/04/11 12:13

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
107-06-2	1,2-Dichloroethane	0.020	< 0.020	U
156-59-2	cis-1,2-Dichloroethene	0.020	< 0.020	U
156-60-5	trans-1,2-Dichloroethene	0.020	< 0.020	U
79-01-6	Trichloroethene	0.020	< 0.020	U
127-18-4	Tetrachloroethene	0.020	< 0.020	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	104%
d8-Toluene	97.4%

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: ANALYTICAL RESOURCES, INC Contract: FLOYD SNIDER

Lab Code: ARI Case No.: LORA LAKE APARTMENTS RI SDG No.: SU21

Lab File ID: 0426001 BFB Injection Date: 04/26/11

Instrument ID: NT7 BFB Injection Time: 0607

GC Column: RTXVMS ID: 0.18 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	22.9
75	30.0 - 66.0% of mass 95	55.1
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.9
173	Less than 2.0% of mass 174	0.3 (0.4)1
174	50.0 - 101.0% of mass 95	63.8
175	4.0 - 9.0% of mass 174	4.7 (7.4)1
176	93.0 - 101.0% of mass 174	60.1 (94.2)1
177	5.0 - 9.0% of mass 176	4.3 (7.1)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	50	00500426	0426011	04/26/11	1130
02	100	01000426	0426012	04/26/11	1155
03	500	05000426	0426013	04/26/11	1221
04	1000	1000426	0426014	04/26/11	1247
05	2000	20000426	0426016	04/26/11	1337
06	4000	40000426	0426017	04/26/11	1403
07	ICV	ICV0426	0426018	04/26/11	1429
08	20	00200426	0426019	04/26/11	1500
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5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: ANALYTICAL RESOURCES, INC Contract: FLOYD SNIDER

Lab Code: ARI Case No.: LORA LAKE APARTMENTS RI SDG No.: SU21

Lab File ID: BFB0503 BFB Injection Date: 05/03/11

Instrument ID: NT7 BFB Injection Time: 1025

GC Column: RTXVMS ID: 0.18 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	23.9
75	30.0 - 66.0% of mass 95	51.7
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.0
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 101.0% of mass 95	59.2
175	4.0 - 9.0% of mass 174	4.4 (7.4)1
176	93.0 - 101.0% of mass 174	57.1 (96.5)1
177	5.0 - 9.0% of mass 176	3.2 (5.6)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	CC0503	CC0503	CC0503A	05/03/11	1129
02	LCS0503	LCS0503	LCS0503A	05/03/11	1206
03	LCS0503	LCS0503	LCS0503B	05/03/11	1232
04	MB0503	MB0503	MB0503A	05/03/11	1323
05	TB-042611	ST98E	ST98E	05/03/11	1348
06	TB-042711	SU21G	SU21G	05/03/11	1414
07	TB-042811	SU53G	SU53G	05/03/11	1440
08	MW02-042611	ST98A	ST98A	05/03/11	1505
09	MW03-042611	ST98B	ST98B	05/03/11	1531
10	MW13-042611	ST98C	ST98C	05/03/11	1557
11	MW06-042611	ST98D	ST98D	05/03/11	1622
12	MW06-042611 MS	ST98DMS	ST98DMS	05/03/11	1648
13	MW06-042611 MSD	ST98DMSD	ST98DMSD	05/03/11	1714
14	MW07-042711	SU21A	SU21A	05/03/11	1739
15	MW10-042711	SU21C	SU21C	05/03/11	1831
16	MW09-042711	SU21D	SU21D	05/03/11	1856
17	MW12-042711	SU21F	SU21F	05/03/11	1947
18	MW15042811	SU53B	SU53B	05/03/11	2039
19	MW4042811	SU53C	SU53C	05/03/11	2104
20	MW17042811	SU53D	SU53D	05/03/11	2130
21	MW14042811	SU53E	SU53E	05/03/11	2156
22					

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: ANALYTICAL RESOURCES, INC Contract: FLOYD SNIDER

Lab Code: ARI Case No.: LORA LAKE APARTMENTS RI SDG No.: SU21

Lab File ID: BFB0504 BFB Injection Date: 05/04/11

Instrument ID: NT7 BFB Injection Time: 0918

GC Column: RTXVMS ID: 0.18 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	26.2
75	30.0 - 66.0% of mass 95	53.9
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.8
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 101.0% of mass 95	62.6
175	4.0 - 9.0% of mass 174	5.0 (8.0)1
176	93.0 - 101.0% of mass 174	61.8 (98.7)1
177	5.0 - 9.0% of mass 176	3.6 (5.9)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	CC0504	CC0504	CC0504B	05/04/11	1045
02	LCS0504	LCS0504	LCS0504X	05/04/11	1121
03	LCS0504	LCS0504	LCS0504Y	05/04/11	1147
04	MB0504	MB0504	MB0504	05/04/11	1213
05	TB-042911	SU73C	SU73C	05/04/11	1312
06	MW11-042711	SU21B	SU21B2	05/04/11	1403
07	MW08-042711	SU21E	SU21E2	05/04/11	1429
08	MW5042811	SU53A	SU53A2	05/04/11	1455
09	MW16042811	SU53F	SU53F3	05/04/11	1609
10	MW-01-042911	SU73A	SU73A	05/04/11	1635
11	MW-01-042911-D	SU73B	SU73B	05/04/11	1701
12	B312-042911	SU74A	SU74A	05/04/11	1726
13	B310-042911	SU74B	SU74B	05/04/11	1752
14	B311-042911	SU74C	SU74C	05/04/11	1818
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FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES, INC Client: FLOYD SNIDER

ARI Job No: SU21 Project: LORA LAKE APARTMENTS RI

Instrument ID: NT7 Calibration Date: 04/26/11

LAB FILE ID: RF20: 0426019 RF50: 0426011 RF100: 0426012
RF500: 0426013 RF1000: 0426014

COMPOUND	RF20	RF50	RF100	RF500	RF1000
Vinyl Chloride	1.072	1.110	1.234	1.281	1.136
1,1-Dichloroethene	0.842	0.928	1.000	1.047	0.878
cis-1,2-dichloroethene	0.750	0.995	1.083	1.158	0.998
Benzene	2.663	2.358	2.527	2.587	2.276
Trichloroethene	0.399	0.419	0.418	0.454	0.391
Tetrachloroethene	0.277	0.294	0.345	0.364	0.317
1,1,2,2-Tetrachloroethane	0.319	0.370	0.363	0.427	0.397
Trans-1,2-Dichloroethene	0.946	0.892	0.992	1.053	0.881
1,2-Dichloroethane	1.298	1.424	1.544	1.780	1.482
d4-1,2-Dichloroethane	0.874	0.934	0.949	0.942	0.893
d8-Toluene	1.238	1.284	1.259	1.277	1.285

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES, INC Client: FLOYD SNIDER

ARI Job No: SU21 Project: LORA LAKE APARTMENTS RI

Instrument ID: NT7 Calibration Date: 04/26/11

LAB FILE ID: RF2000: 0426016 RF4000: 0426017

COMPOUND	TYPE	RF	CURVE OR R^2	AVE	%RSD
Vinyl Chloride	0.973	0.897	AVRG	1.100	12.3
1,1-Dichloroethene	0.749	0.684	AVRG	0.876	14.8
cis-1,2-dichloroethene	0.859	0.805	AVRG	0.950	15.8
Benzene	1.919	1.696	AVRG	2.289	15.7
Trichloroethene	0.340	0.323	AVRG	0.392	11.8
Tetrachloroethene	0.272	0.249	AVRG	0.302	13.7
1,1,2,2-Tetrachloroethane	0.339	0.321	AVRG	0.362	11.0
Trans-1,2-Dichloroethene	0.750	0.714	AVRG	0.890	13.8
1,2-Dichloroethane	1.256	1.185	AVRG	1.424	14.2
d4-1,2-Dichloroethane	0.869	0.847	AVRG	0.901	4.5
d8-Toluene	1.280	1.295	AVRG	1.274	1.5

<- Indicates value outside QC limits:
(%RSD < 20% or R^2 > 0.990)

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES, INC Client: FLOYD SNIDER

ARI Job No: SU21 Project: LORA LAKE APARTMENTS RI

Instrument ID: NT7 Cont. Calib. Date: 05/03/11

Init. Calib. Date: 04/26/11 Cont. Calib. Time: 1129

COMPOUND	CalAmt or ARF	CC Amt 1000	MIN RRF	CURVE TYPE	%D or Drift
Vinyl Chloride	1.100	0.991	0.010	AVRG	-9.9
1,1-Dichloroethene	0.875	0.749	0.010	AVRG	-14.4
cis-1,2-dichloroethene	0.950	0.773	0.010	AVRG	-18.6
Benzene	2.289	1.976	0.010	AVRG	-13.7
Trichloroethene	0.392	0.359	0.010	AVRG	-8.4
Tetrachloroethene	0.302	0.255	0.010	AVRG	-15.6
1,1,2,2-Tetrachloroethane	0.362	0.340	0.300	AVRG	-6.1
Trans-1,2-Dichloroethene	0.890	0.771	0.010	AVRG	-13.4
1,2-Dichloroethane	1.424	1.259	0.010	AVRG	-11.6
d4-1,2-Dichloroethane	0.901	0.784	0.010	AVRG	-13.0
d8-Toluene	1.274	1.302	0.010	AVRG	2.2

<- Exceeds QC limit of 20% D

* RF less than minimum RF

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES, INC Client: FLOYD SNIDER

ARI Job No: SU21 Project: LORA LAKE APARTMENTS RI

Instrument ID: NT7 Cont. Calib. Date: 05/04/11

Init. Calib. Date: 04/26/11 Cont. Calib. Time: 1045

COMPOUND	CalAmt or ARF	CC Amt 1000	MIN RRF	CURVE TYPE	%D or Drift
Vinyl Chloride	1.100	1.132	0.010	AVRG	2.9
1,1-Dichloroethene	0.875	0.896	0.010	AVRG	2.4
cis-1,2-dichloroethene	0.950	0.904	0.010	AVRG	-4.8
Benzene	2.289	2.260	0.010	AVRG	-1.3
Trichloroethene	0.392	0.423	0.010	AVRG	7.9
Tetrachloroethene	0.302	0.313	0.010	AVRG	3.6
1,1,2,2-Tetrachloroethane	0.362	0.379	0.300	AVRG	4.7
Trans-1,2-Dichloroethene	0.890	0.917	0.010	AVRG	3.0
1,2-Dichloroethane	1.424	1.470	0.010	AVRG	3.2
d4-1,2-Dichloroethane	0.901	0.786	0.010	AVRG	-12.8
d8-Toluene	1.274	1.281	0.010	AVRG	0.5

<- Exceeds QC limit of 20% D
* RF less than minimum RF

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC Client: FLOYD SNIDER

ARI Job No: SU21 Project: LORA LAKE APARTMENTS RI

Ical Midpoint ID: 0426013 Ical Date: 04/26/11

Instrument ID: NT7 Project Run Date: 04/26/11

		IS1(PFB) AREA #	RT #	IS2(DFB) AREA #	RT #	AREA #	RT #
	ICAL MIDPT	310955	5.32	577506	5.76		
	UPPER LIMIT	621910	5.82	1155012	6.26		
	LOWER LIMIT	155478	4.82	288753	5.26		
	Sample ID						
01	ICV	428287	5.33	783828	5.75		
02							
03							
04							
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS1 (PFB) = Pentafluorobenzene
IS2 (DFB) = 1,4-Difluorobenzene

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Ical midpoint
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Ical midpoint

* Values outside of QC limits.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC Client: FLOYD SNIDER

ARI Job No: SU21 Project: LORA LAKE APARTMENTS RI

Ical Midpoint ID: 0426013 Ical Date: 04/26/11

Instrument ID: NT7 Project Run Date: 05/03/11

		IS1(PFB) AREA #	RT #	IS2(DFB) AREA #	RT #	AREA #	RT #
	ICAL MIDPT	310955	5.32	577506	5.76		
	UPPER LIMIT	621910	5.82	1155012	6.26		
	LOWER LIMIT	155478	4.82	288753	5.26		
	Sample ID						
01	LCS0503	371235	5.32	691618	5.75		
02	LCS0503	368545	5.32	688280	5.76		
03	MB0503	374268	5.33	671582	5.75		
04	TB-042611	360193	5.33	635546	5.75		
05	TB-042711	342984	5.32	622310	5.76		
06	TB-042811	334355	5.33	617379	5.75		
07	MW02-042611	337272	5.33	605168	5.75		
08	MW03-042611	345206	5.32	603420	5.76		
09	MW13-042611	332326	5.33	598780	5.77		
10	MW06-042611	329307	5.33	596467	5.75		
11	MW06-042611	381200	5.32	696898	5.76		
12	MW06-042611	412190	5.33	751697	5.75		
13	MW07-042711	396604	5.32	753683	5.76		
14	MW10-042711	354061	5.33	661517	5.77		
15	MW09-042711	378093	5.32	644456	5.77		
16	MW12-042711	266113	5.33	458881	5.77		
17	MW15042811	320598	5.33	566633	5.77		
18	MW4042811	324280	5.33	565886	5.77		
19	MW17042811	291433	5.33	551688	5.77		
20	MW14042811	307760	5.33	551825	5.77		
21							
22							

IS1 (PFB) = Pentafluorobenzene
IS2 (DFB) = 1,4-Difluorobenzene

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Ical midpoint
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Ical midpoint

* Values outside of QC limits.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC Client: FLOYD SNIDER

ARI Job No: SU21 Project: LORA LAKE APARTMENTS RI

Ical Midpoint ID: 0426013 Ical Date: 04/26/11

Instrument ID: NT7 Project Run Date: 05/04/11

		IS1(PFB) AREA #	RT #	IS2(DFB) AREA #	RT #	AREA #	RT #
	ICAL MIDPT	310955	5.32	577506	5.76		
	UPPER LIMIT	621910	5.82	1155012	6.26		
	LOWER LIMIT	155478	4.82	288753	5.26		
	Sample ID						
01	LCS0504	262777	5.32	496109	5.76		
02	LCS0504	332174	5.33	613837	5.75		
03	MB0504	288519	5.32	540873	5.76		
04	TB-042911	318932	5.32	579037	5.75		
05	MW11-042711	314236	5.33	566832	5.77		
06	MW08-042711	306214	5.32	555326	5.77		
07	MW5042811	284721	5.32	537725	5.77		
08	MW16042811	329558	5.32	559059	5.77		
09	MW-01-042911	327319	5.32	616507	5.77		
10	MW-01-042911	358815	5.32	671821	5.77		
11	B312-042911	376103	5.32	682816	5.77		
12	B310-042911	361270	5.32	654245	5.77		
13	B311-042911	341470	5.33	625591	5.77		
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS1 (PFB) = Pentafluorobenzene
IS2 (DFB) = 1,4-Difluorobenzene

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Ical midpoint
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Ical midpoint

* Values outside of QC limits.

SIM PAH Analysis
Report and Summary QC Forms

ARI Job ID: SU53, SU73, SU74

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS **Sample ID: MW5042811**
Page 1 of 1 **SAMPLE**

Lab Sample ID: SU53A
LIMS ID: 11-9621
Matrix: Groundwater
Data Release Authorized: MW
Reported: 05/20/11

QC Report No: SU53-Floyd Snider
Project: Lora Lake Apts RI
Event: POS-LLA
Date Sampled: 04/28/11
Date Received: 04/28/11

Date Extracted: 05/04/11
Date Analyzed: 05/16/11 15:58
Instrument/Analyst: NT11/YZ

Sample Amount: 500 mL
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	0.010	< 0.010 U
218-01-9	Chrysene	0.010	< 0.010 U
50-32-8	Benzo(a)pyrene	0.010	< 0.010 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U
53-70-3	Dibenz(a,h)anthracene	0.010	< 0.010 U
TOTBFA	Total Benzofluoranthenes	0.010	< 0.010 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	56.7%
d14-Dibenzo(a,h)anthracene	65.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS **Sample ID: MW15042811**
Page 1 of 1 **SAMPLE**

Lab Sample ID: SU53B
LIMS ID: 11-9622
Matrix: Groundwater
Data Release Authorized:
Reported: 05/20/11

QC Report No: SU53-Floyd Snider
Project: Lora Lake Apts RI
Event: POS-LLA
Date Sampled: 04/28/11
Date Received: 04/28/11

Date Extracted: 05/04/11
Date Analyzed: 05/16/11 16:23
Instrument/Analyst: NT11/YZ

Sample Amount: 500 mL
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	0.010	< 0.010 U
218-01-9	Chrysene	0.010	< 0.010 U
50-32-8	Benzo(a)pyrene	0.010	< 0.010 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U
53-70-3	Dibenz(a,h)anthracene	0.010	< 0.010 U
TOTBFA	Total Benzofluoranthenes	0.010	< 0.010 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	54.7%
d14-Dibenzo(a,h)anthracene	61.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS **Sample ID: MW4042811**
Page 1 of 1 **SAMPLE**

Lab Sample ID: SU53C
LIMS ID: 11-9623
Matrix: Groundwater
Data Release Authorized:
Reported: 05/20/11

QC Report No: SU53-Floyd Snider
Project: Lora Lake Apts RI
Event: POS-LLA
Date Sampled: 04/28/11
Date Received: 04/28/11

Date Extracted: 05/04/11
Date Analyzed: 05/16/11 16:47
Instrument/Analyst: NT11/YZ

Sample Amount: 500 mL
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	0.010	< 0.010 U
218-01-9	Chrysene	0.010	< 0.010 U
50-32-8	Benzo(a)pyrene	0.010	< 0.010 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U
53-70-3	Dibenz(a,h)anthracene	0.010	< 0.010 U
TOTBFA	Total Benzofluoranthenes	0.010	< 0.010 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	58.3%
d14-Dibenzo(a,h)anthracene	57.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS **Sample ID: MW17042811**
Page 1 of 1 **SAMPLE**

Lab Sample ID: SU53D
LIMS ID: 11-9624
Matrix: Groundwater
Data Release Authorized: MW
Reported: 05/20/11

QC Report No: SU53-Floyd Snider
Project: Lora Lake Apts RI
Event: POS-LLA
Date Sampled: 04/28/11
Date Received: 04/28/11

Date Extracted: 05/04/11
Date Analyzed: 05/16/11 18:00
Instrument/Analyst: NT11/YZ

Sample Amount: 500 mL
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	0.010	< 0.010 U
218-01-9	Chrysene	0.010	< 0.010 U
50-32-8	Benzo(a)pyrene	0.010	< 0.010 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U
53-70-3	Dibenz(a,h)anthracene	0.010	< 0.010 U
TOTBFA	Total Benzofluoranthenes	0.010	< 0.010 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	64.0%
d14-Dibenzo(a,h)anthracene	69.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS **Sample ID: MW14042811**
Page 1 of 1 **SAMPLE**

Lab Sample ID: SU53E
LIMS ID: 11-9625
Matrix: Groundwater
Data Release Authorized:
Reported: 05/20/11

QC Report No: SU53-Floyd Snider
Project: Lora Lake Apts RI
Event: POS-LLA
Date Sampled: 04/28/11
Date Received: 04/28/11

Date Extracted: 05/04/11
Date Analyzed: 05/16/11 18:24
Instrument/Analyst: NT11/YZ

Sample Amount: 500 mL
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	0.010	< 0.010 U
218-01-9	Chrysene	0.010	< 0.010 U
50-32-8	Benzo(a)pyrene	0.010	< 0.010 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U
53-70-3	Dibenz(a,h)anthracene	0.010	< 0.010 U
TOTBFA	Total Benzofluoranthenes	0.010	< 0.010 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	54.0%
d14-Dibenzo(a,h)anthracene	61.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS **Sample ID: MW16042811**
Page 1 of 1 **SAMPLE**

Lab Sample ID: SU53F
LIMS ID: 11-9626
Matrix: Groundwater
Data Release Authorized: MW
Reported: 05/20/11

QC Report No: SU53-Floyd Snider
Project: Lora Lake Apts RI
Event: POS-LLA
Date Sampled: 04/28/11
Date Received: 04/28/11

Date Extracted: 05/04/11
Date Analyzed: 05/16/11 18:48
Instrument/Analyst: NT11/YZ

Sample Amount: 500 mL
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	0.010	< 0.010 U
218-01-9	Chrysene	0.010	< 0.010 U
50-32-8	Benzo(a)pyrene	0.010	< 0.010 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U
53-70-3	Dibenz(a,h)anthracene	0.010	< 0.010 U
TOTBFA	Total Benzofluoranthenes	0.010	< 0.010 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	64.0%
d14-Dibenzo(a,h)anthracene	69.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS **Sample ID: MW-01-042911**
Page 1 of 1 **SAMPLE**

Lab Sample ID: SU73A
LIMS ID: 11-9762
Matrix: Water
Data Release Authorized:
Reported: 05/23/11

QC Report No: SU73-Floyd Snider
Project: Lora Lake Apts RI
Event: POS-LLA.4010
Date Sampled: 04/29/11
Date Received: 04/29/11

Date Extracted: 05/05/11
Date Analyzed: 05/19/11 14:25
Instrument/Analyst: NT11/VTS

Sample Amount: 500 mL
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	0.010	< 0.010 U
218-01-9	**Chrysene**	**0.010**	**0.0080 J**
50-32-8	**Benzo(a)pyrene**	**0.010**	**0.0057 J**
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U
53-70-3	Dibenz(a,h)anthracene	0.010	< 0.010 U
TOTBFA	Total Benzofluoranthenes	0.010	< 0.010 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	62.0%
d14-Dibenzo(a,h)anthracene	64.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS **Sample ID: MW-01-042911-D**
Page 1 of 1 **SAMPLE**

Lab Sample ID: SU73B
LIMS ID: 11-9763
Matrix: Water
Data Release Authorized:
Reported: 05/23/11

QC Report No: SU73-Floyd Snider
Project: Lora Lake Apts RI
Event: POS-LLA.4010
Date Sampled: 04/29/11
Date Received: 04/29/11

Date Extracted: 05/05/11
Date Analyzed: 05/19/11 14:49
Instrument/Analyst: NT11/VTS

Sample Amount: 500 mL
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
56-55-3	**Benzo(a)anthracene**	**0.010**	**0.0058 J**
218-01-9	**Chrysene**	**0.010**	**0.011**
50-32-8	**Benzo(a)pyrene**	**0.010**	**0.0086 J**
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U
53-70-3	Dibenz(a,h)anthracene	0.010	< 0.010 U
TOTBFA	Total Benzofluoranthenes	0.010	< 0.010 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	62.0%
d14-Dibenzo(a,h)anthracene	65.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS **Sample ID: B312-042911**
Page 1 of 1 **SAMPLE**

Lab Sample ID: SU74A
LIMS ID: 11-9772
Matrix: Water
Data Release Authorized:
Reported: 05/23/11

QC Report No: SU74-Floyd Snider
Project: Lora Lake Parcel
Event: POS-LL.4010
Date Sampled: 04/29/11
Date Received: 04/29/11

Date Extracted: 05/05/11
Date Analyzed: 05/19/11 15:13
Instrument/Analyst: NT11/VTS

Sample Amount: 500 mL
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	0.010	< 0.010 U
218-01-9	Chrysene	0.010	< 0.010 U
50-32-8	Benzo(a)pyrene	0.010	< 0.010 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U
53-70-3	Dibenz(a,h)anthracene	0.010	< 0.010 U
TOTBFA	Total Benzofluoranthenes	0.010	< 0.010 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	55.3%
d14-Dibenzo(a,h)anthracene	70.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS **Sample ID: B310-042911**
Page 1 of 1 **SAMPLE**

Lab Sample ID: SU74B
LIMS ID: 11-9773
Matrix: Water
Data Release Authorized:
Reported: 05/23/11

QC Report No: SU74-Floyd Snider
Project: Lora Lake Parcel
Event: POS-LL.4010
Date Sampled: 04/29/11
Date Received: 04/29/11

Date Extracted: 05/05/11
Date Analyzed: 05/19/11 16:26
Instrument/Analyst: NT11/VTS

Sample Amount: 500 mL
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	0.010	< 0.010 U
218-01-9	Chrysene	0.010	< 0.010 U
50-32-8	Benzo(a)pyrene	0.010	< 0.010 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U
53-70-3	Dibenz(a,h)anthracene	0.010	< 0.010 U
TOTBFA	Total Benzofluoranthenes	0.010	< 0.010 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	63.0%
d14-Dibenzo(a,h)anthracene	71.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS **Sample ID: B311-042911**
Page 1 of 1 **SAMPLE**

Lab Sample ID: SU74C
LIMS ID: 11-9774
Matrix: Water
Data Release Authorized:
Reported: 05/23/11

QC Report No: SU74-Floyd Snider
Project: Lora Lake Parcel
Event: POS-LL.4010
Date Sampled: 04/29/11
Date Received: 04/29/11

Date Extracted: 05/05/11
Date Analyzed: 05/19/11 16:50
Instrument/Analyst: NT11/VTS

Sample Amount: 500 mL
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	0.010	< 0.010 U
218-01-9	Chrysene	0.010	< 0.010 U
50-32-8	Benzo(a)pyrene	0.010	< 0.010 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U
53-70-3	Dibenz(a,h)anthracene	0.010	< 0.010 U
TOTBFA	Total Benzofluoranthenes	0.010	< 0.010 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	66.0%
d14-Dibenzo(a,h)anthracene	71.7%

ANALYTICAL RESOURCES INCORPORATED

SIM SW8270 SURROGATE RECOVERY SUMMARY

Matrix: Groundwater

QC Report No: SU53-Floyd Snider
Project: Lora Lake Apts RI
POS-LLA

Client ID	MNP	DBA	TOT OUT
MW5042811	56.7%	65.7%	0
MW15042811	54.7%	61.3%	0
MB-050411	58.7%	74.3%	0
LCS-050411	59.0%	67.7%	0
LCSD-050411	65.7%	76.3%	0
MW4042811	58.3%	57.0%	0
MW4042811 MS	58.3%	65.7%	0
MW4042811 MSD	61.0%	69.7%	0
MW17042811	64.0%	69.3%	0
MW14042811	54.0%	61.3%	0
MW16042811	64.0%	69.0%	0

	LCS/MB LIMITS	QC LIMITS
(MNP) = d10-2-Methylnaphthalene	(42-100)	(31-109)
(DBA) = d14-Dibenzo(a,h)anthracene	(40-125)	(10-133)

Prep Method: SW3510C
Log Number Range: 11-9621 to 11-9626

ANALYTICAL RESOURCES INCORPORATED

SIM SW8270 SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: SU73-Floyd Snider
Project: Lora Lake Apts RI
POS-LLA.4010

Client ID	MNP	DBA	TOT OUT
MB-050511	67.0%	64.3%	0
LCS-050511	57.7%	59.7%	0
MW-01-042911	62.0%	64.3%	0
MW-01-042911-D	62.0%	65.3%	0

	LCS/MB LIMITS	QC LIMITS
(MNP) = d10-2-Methylnaphthalene	(42-100)	(31-109)
(DBA) = d14-Dibenzo(a,h)anthracene	(40-125)	(10-133)

Prep Method: SW3510C
Log Number Range: 11-9762 to 11-9763

ANALYTICAL RESOURCES INCORPORATED

SIM SW8270 SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: SU74-Floyd Snider
Project: Lora Lake Parcel
POS-LL.4010

Client ID	MNP	DBA	TOT OUT
MB-050511	67.0%	64.3%	0
LCS-050511	57.7%	59.7%	0
B312-042911	55.3%	70.3%	0
B312-042911 MS	53.7%	71.3%	0
B312-042911 MSD	53.3%	70.3%	0
B310-042911	63.0%	71.7%	0
B311-042911	66.0%	71.7%	0

	LCS/MB LIMITS	QC LIMITS
(MNP) = d10-2-Methylnaphthalene	(42-100)	(31-109)
(DBA) = d14-Dibenzo(a,h)anthracene	(40-125)	(10-133)

Prep Method: SW3510C
Log Number Range: 11-9772 to 11-9774

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS **Sample ID: MW4042811**
Page 1 of 1 **MATRIX SPIKE**

Lab Sample ID: SU53C
LIMS ID: 11-9623
Matrix: Groundwater
Data Release Authorized:
Reported: 05/20/11

QC Report No: SU53-Floyd Snider
Project: Lora Lake Apts RI
Event: POS-LLA
Date Sampled: 04/28/11
Date Received: 04/28/11

Date Extracted MS/MSD: 05/04/11

Sample Amount MS: 500 mL
MSD: 500 mL
Date Analyzed MS: 05/16/11 17:11
MSD: 05/16/11 17:36
Final Extract Volume MS: 0.50 mL
MSD: 0.50 mL
Instrument/Analyst MS: NT11/YZ
MSD: NT11/YZ
Dilution Factor MS: 1.00
MSD: 1.00

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Benzo(a)anthracene	< 0.0100 U	0.194	0.300	64.7%	0.209	0.300	69.7%	7.4%
Chrysene	< 0.0100 U	0.194	0.300	64.7%	0.213	0.300	71.0%	9.3%
Benzo(a)pyrene	< 0.0100 U	0.164	0.300	54.7%	0.175	0.300	58.3%	6.5%
Indeno(1,2,3-cd)pyrene	< 0.0100 U	0.193	0.300	64.3%	0.209	0.300	69.7%	8.0%
Dibenz(a,h)anthracene	< 0.0100 U	0.196	0.300	65.3%	0.210	0.300	70.0%	6.9%
Total Benzofluoranthenes	< 0.0100 U	0.394	0.600	65.7%	0.422	0.600	70.3%	6.9%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS **Sample ID: MW4042811**
Page 1 of 1 **MATRIX SPIKE**

Lab Sample ID: SU53C
LIMS ID: 11-9623
Matrix: Groundwater
Data Release Authorized:
Reported: 05/20/11

QC Report No: SU53-Floyd Snider
Project: Lora Lake Apts RI
Event: POS-LLA
Date Sampled: 04/28/11
Date Received: 04/28/11

Date Extracted: 05/04/11
Date Analyzed: 05/16/11 17:11
Instrument/Analyst: NT11/YZ

Sample Amount: 500 mL
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	0.010	---
218-01-9	Chrysene	0.010	---
50-32-8	Benzo(a)pyrene	0.010	---
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	---
53-70-3	Dibenz(a,h)anthracene	0.010	---
TOTBFA	Total Benzofluoranthenes	0.010	---

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	58.3%
d14-Dibenzo(a,h)anthracene	65.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS **Sample ID: MW4042811**
Page 1 of 1 **MATRIX SPIKE DUPLICATE**

Lab Sample ID: SU53C
LIMS ID: 11-9623
Matrix: Groundwater
Data Release Authorized: MW
Reported: 05/20/11

QC Report No: SU53-Floyd Snider
Project: Lora Lake Apts RI
Event: POS-LLA
Date Sampled: 04/28/11
Date Received: 04/28/11

Date Extracted: 05/04/11
Date Analyzed: 05/16/11 17:36
Instrument/Analyst: NT11/YZ

Sample Amount: 500 mL
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	0.010	---
218-01-9	Chrysene	0.010	---
50-32-8	Benzo(a)pyrene	0.010	---
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	---
53-70-3	Dibenz(a,h)anthracene	0.010	---
TOTBFA	Total Benzofluoranthenes	0.010	---

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	61.0%
d14-Dibenzo(a,h)anthracene	69.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS **Sample ID: B312-042911**
Page 1 of 1 **MATRIX SPIKE**

Lab Sample ID: SU74A
LIMS ID: 11-9772
Matrix: Water
Data Release Authorized:
Reported: 05/23/11

QC Report No: SU74-Floyd Snider
Project: Lora Lake Parcel
Event: POS-LL.4010
Date Sampled: 04/29/11
Date Received: 04/29/11

Date Extracted MS/MSD: 05/05/11

Date Analyzed MS: 05/19/11 15:38
MSD: 05/19/11 16:02
Instrument/Analyst MS: NT11/VTS
MSD: NT11/VTS

Sample Amount MS: 500 mL
MSD: 500 mL
Final Extract Volume MS: 0.50 mL
MSD: 0.50 mL
Dilution Factor MS: 1.00
MSD: 1.00

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Benzo(a)anthracene	< 0.0100 U	0.212	0.300	70.7%	0.216	0.300	72.0%	1.9%
Chrysene	< 0.0100 U	0.209	0.300	69.7%	0.216	0.300	72.0%	3.3%
Benzo(a)pyrene	< 0.0100 U	0.187	0.300	62.3%	0.185	0.300	61.7%	1.1%
Indeno(1,2,3-cd)pyrene	< 0.0100 U	0.204	0.300	68.0%	0.207	0.300	69.0%	1.5%
Dibenz(a,h)anthracene	< 0.0100 U	0.205	0.300	68.3%	0.212	0.300	70.7%	3.4%
Total Benzofluoranthenes	< 0.0100 U	0.422	0.600	70.3%	0.437	0.600	72.8%	3.5%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS **Sample ID: B312-042911**
Page 1 of 1 **MATRIX SPIKE**

Lab Sample ID: SU74A
LIMS ID: 11-9772
Matrix: Water
Data Release Authorized:
Reported: 05/23/11

QC Report No: SU74-Floyd Snider
Project: Lora Lake Parcel
Event: POS-LL.4010
Date Sampled: 04/29/11
Date Received: 04/29/11

Date Extracted: 05/05/11
Date Analyzed: 05/19/11 15:38
Instrument/Analyst: NT11/VTS

Sample Amount: 500 mL
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	0.010	---
218-01-9	Chrysene	0.010	---
50-32-8	Benzo(a)pyrene	0.010	---
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	---
53-70-3	Dibenz(a,h)anthracene	0.010	---
TOTBFA	Total Benzofluoranthenes	0.010	---

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	53.7%
d14-Dibenzo(a,h)anthracene	71.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS **Sample ID: B312-042911**
Page 1 of 1 **MATRIX SPIKE DUPLICATE**

Lab Sample ID: SU74A
LIMS ID: 11-9772
Matrix: Water
Data Release Authorized:
Reported: 05/23/11

QC Report No: SU74-Floyd Snider
Project: Lora Lake Parcel
Event: POS-LL.4010
Date Sampled: 04/29/11
Date Received: 04/29/11

Date Extracted: 05/05/11
Date Analyzed: 05/19/11 16:02
Instrument/Analyst: NT11/VTS

Sample Amount: 500 mL
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	0.010	---
218-01-9	Chrysene	0.010	---
50-32-8	Benzo(a)pyrene	0.010	---
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	---
53-70-3	Dibenz(a,h)anthracene	0.010	---
TOTBFA	Total Benzofluoranthenes	0.010	---

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	53.3%
d14-Dibenzo(a,h)anthracene	70.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS **Sample ID: LCS-050411**
 LAB CONTROL SAMPLE

Lab Sample ID: LCS-050411
LIMS ID: 11-9623
Matrix: Groundwater
Data Release Authorized:
Reported: 05/20/11

QC Report No: SU53-Floyd Snider
Project: Lora Lake Apts RI
Event: POS-LLA
Date Sampled: NA
Date Received: NA

Date Extracted LCS/LCSD: 05/04/11

Date Analyzed LCS: 05/16/11 12:44
LCSD: 05/16/11 13:08
Instrument/Analyst LCS: NT11/YZ
LCSD: NT11/YZ

Sample Amount LCS: 500 mL
LCSD: 500 mL
Final Extract Volume LCS: 0.50 mL
LCSD: 0.50 mL
Dilution Factor LCS: 1.00
LCSD: 1.00

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Benzo(a)anthracene	0.202	0.300	67.3%	0.231	0.300	77.0%	13.4%
Chrysene	0.209	0.300	69.7%	0.233	0.300	77.7%	10.9%
Benzo(a)pyrene	0.172	0.300	57.3%	0.201	0.300	67.0%	15.5%
Indeno(1,2,3-cd)pyrene	0.190	0.300	63.3%	0.220	0.300	73.3%	14.6%
Dibenz(a,h)anthracene	0.196	0.300	65.3%	0.226	0.300	75.3%	14.2%
Total Benzofluoranthenes	0.399	0.600	66.5%	0.457	0.600	76.2%	13.6%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

SIM Semivolatile Surrogate Recovery

	LCS	LCSD
d10-2-Methylnaphthalene	59.0%	65.7%
d14-Dibenzo(a,h)anthracene	67.7%	76.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS **Sample ID: LCS-050511**
Page 1 of 1 **LAB CONTROL SAMPLE**

Lab Sample ID: LCS-050511
LIMS ID: 11-9762
Matrix: Water
Data Release Authorized:
Reported: 05/23/11

QC Report No: SU73-Floyd Snider
Project: Lora Lake Apts RI
Event: POS-LLA.4010
Date Sampled: NA
Date Received: NA

Date Extracted LCS/LCSD: 05/05/11
Date Analyzed LCS: 05/19/11 13:36
Instrument/Analyst LCS: NT11/VTS

Sample Amount LCS: 500 mL
Final Extract Volume LCS: 0.50 mL
Dilution Factor LCS: 1.00

Analyte	LCS	Spike Added	Recovery
Benzo(a)anthracene	0.179	0.300	59.7%
Chrysene	0.194	0.300	64.7%
Benzo(a)pyrene	0.0905	0.300	30.2%
Indeno(1,2,3-cd)pyrene	0.166	0.300	55.3%
Dibenz(a,h)anthracene	0.176	0.300	58.7%
Total Benzofluoranthenes	0.390	0.600	65.0%

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	57.7%
d14-Dibenzo(a,h)anthracene	59.7%