FRONTIER
ANALYTICAL LABORATORY

EPA Region 5 Records Ctr.
325305

March 4, 2009

SDG Narrative

SDG No.: SDG E3YC9
Contract No: EP08W001564
Case No: EPA05-2008-01

Ms. Terese Van Donsel
US EPA Region 5
77 W. Jackson Blvd.
Chicago, IL 60604

Dear Ms. Donsel,

Enclosed are the results for SDG No.: **SDG E3YC9**. This SDG is associated with Frontier Analytical Laboratory project **5340**. The one soil sample received on 2/11/2009 included the first and last sample of SDG No.: SDG E3YC9. As per your chain of custody instructions, we extracted and analyzed a duplicate sample from the same sample jar. Both soil samples in SDG E3YC9 were extracted and analyzed by EPA Method DLM02.0 for tetra through octa chlorinated dibenzo dioxins and furans.

Please note that this sample was received at a temperature of eighteen degrees Celsius. EPA Method DLM02.0 requires us to notify the SMO if a sample is received above a temperature of ten degrees Celsius. We reported the sample receipt temperature in the sample receipt confirmation paperwork e-mailed to you on 2/12/2009.

In addition, please note that there were matrix interferences throughout several of the dioxin channels; most likely due to high levels of PCBs present in the samples. We were forewarned of the potential high levels of compounds and therefore decided to extract and analyze one gram of each sample. Even with this reduced sample size, the interferences were present. In the case of sample 5340-001-0001-SA (EPA Sample ID: E3YC9), the following is attributed to these interferences and should be noted accordingly. 1,2,3,7,8-PeCDD and 1,2,3,4,7,8-HxCDD have an higher than anticipated EDLs of 12.9 ng/kg and 2.81 ng/kg respectively. 1,2,3,6,7,8 HxCDD has a theoretical ion abundance ratio that is outside the recommended range. Areas from both m/z channels were added and an EMPC is reported. The ion ratio has been qualified with an "*", the concentration qualified with the "X" for both the individual target analyte as well as the homologue. In both cases the result has been classified as an EMPC and not as a concentration. In addition, the EMPC value has not been included in the calculation of the TEQ. In the case of sample 5340-002-0001-SA (EPA Sample ID: E3YD0) the following is attributed to these interferences and should be noted accordingly. 2,3,7,8-TCDD, 1,2,3,7,8-PeCDD and 1,2,3,4,7,8-HxCDD have an higher than anticipated EDLs of 1.58 ng/kg, 6.31 ng/kg, and 3.85 ng/kg respectively. 1,2,3,6,7,8 HxCDD as well as some of the PeCDD totals have a theoretical ion abundance ratio that is outside the

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recommended range. Areas from both m/z channels were added and an EMPC is reported. The ion ratio has been qualified with an "*", the concentration qualified with the "X" for both the individual target analyte as well as the homologue. In both cases the result has been classified as an EMPC and not as a concentration. In addition, the EMPC value has not been included in the calculation of the TEQ.

This SDG used the following GC column; a J&W Scientific/Agilent DB-5 column; 0.25mm ID, 60 meters in length, a Phenyl Arylene polymer coating virtually equivalent to a (5%-Phenyl)-methylpolysiloxane, and a film thickness of 0.25 um. In addition, a second column confirmation was utilized for all samples that had a positive detection of 2,3,7,8-TCDF above the ML. The confirmation column was a J & W Scientific/Agilent DB-225 column; 0.25mm ID, 30 meters in length, a (50%-Cyanopropylphenyl)-dimethylpolysiloxane with a film thickness of 0.25um.

The following are instructions on how to perform the calculations associated with this SDG.

Response Factor Calculations

$$RF = \frac{(A1_l + A2_l)\, C_r}{(A1_r + A2_r)\, C_l}$$

Where:

C_r = The concentration of the labeled compound in the recovery standard.
C_l = The concentration of the labeled compound in the internal standard.
$A1_r + A2_r$ = The areas of the primary and secondary m/z's for the labeled compound in the recovery standard.
$A1_l + A2_l$ = The areas of the primary and secondary m/z's for the labeled compound in the internal standard.
RF = The corresponding average response factor derived from the ICAL.

Concentration Calculations

$$C_n = \frac{(A1_n + A2_n)\, C_l}{(A1_l + A2_l)\, RRF(V)}$$

Where:

C_n = The concentration of each PCDD/F in the sample.
C_l = The amount of the labeled compound (internal standard) spiked into the sample.
$A1_n + A2_n$ = The areas of the primary and secondary m/z's for the PCDD/F.
$A1_l + A2_l$ = The areas of the primary and secondary m/z's for the labeled compound.
RRF = The corresponding average relative response factor derived from the ICAL.
V = Volume, weight, or amount of sample extracted.

Detection Limit Calculations

$$DL = \frac{2.5\,(H_{n1} + H_{n2})\,C_l}{H_{i1} + H_{i2}\,(RRF)\,V}$$

Where:

DL = Detection limit of each PCDD/F in the sample.
H_{n1} = Peak to peak noise height of the primary m/z for the PCDD/F.
H_{n2} = Peak to peak noise height of the primary m/z for the PCDD/F.
C_l = The amount of the labeled compound (internal standard) spiked into the sample.
H_{i1} = The internal standard peak height of the primary m/z for the PCDD/F.
H_{i2} = The internal standard peak height of the primary m/z for the PCDD/F.
RRF = The corresponding average relative response factor derived from the ICAL.
V = Volume, weight, or amount of sample extracted.

Standard Recovery Calculations

$$\%\ Recovery = \frac{(A1_l + A2_l)\,C_r}{(A1_r + A2_r)\,(C_l)RF} \times 100$$

Where:

C_r = The amount of the labeled compound (recovery standard) spiked into the extract.
C_l = The amount of the labeled compound (internal standard) spiked into the sample.
$A1_r + A2_r$ = The areas of the primary and secondary m/z's for the labeled compound in the recovery standard.
$A1_l + A2_l$ = The areas of the primary and secondary m/z's for the labeled compound in the internal standard.
RF = The corresponding average response factor derived from the ICAL.

Percent Recovery

$$\%\ Recovery = \frac{A_f - A_b}{A_s} \times 100$$

Where:

A_f = Amount of native found.
A_b = Amount of background native.
A_s = Amount of native spiked.

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Relative Percent Difference

$$RPD = \frac{(\%R_1 - \%R_2)}{\frac{(\%R_1 + \%R_2)}{2}} \times 100$$

Where:

R_1 = Recovery of analyte in sample one.
R_2 = Recovery of analyte in sample two.

If you have any questions regarding SDG No.: SDG E3YC9, Frontier Analytical Laboratory project **5340**, please contact me at (916) 934-0900. The enclosed results are specifically for the samples referenced in this report only. These results meet all NELAC requirements and shall not be reproduced except in full. Thank you for choosing Frontier Analytical Laboratory for your analytical testing needs.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Sincerely,

Bradley B. Silverbush
Director of Operations
March 4, 2009

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1DFA - FORM I-HR CDD-1
CDD/CDF SAMPLE DATA SUMMARY
HIGH RESOLUTION

SAMPLE No.
E3YC9

LAB NAME: FRONTIER ANALYTICAL LAB CONTRACT: EP08W001564
LAB CODE: FALE CASE NO.: EPA05-2008-01 TO NO.: SDG NO.: SDG E3YC9
MATRIX: (SOIL/WATER/ASH/TISSUE/OIL) SOIL LAB SAMPLE ID: 5340-001-0001-SA
SAMPLE wt/vol: 1.000 (g/mL): g LAB FILE ID: 24FEB09M Sam: 14
WATER SAMPLE PREP: SPE (SEPF/SPE) DATE RECEIVED: 11-FEB-09
CONCENTRATED EXTRACT VOLUME: 20 (uL) DATE EXTRACTED: 18-FEB-09
INJECTION VOLUME: 2 (uL) % SOLIDS/LIPIDS: 75.15 DATE ANALYZED: 24-FEB-09
GC COLUMN: DB5 ID: 0.25 (mm) DILUTION FACTOR: 1
CONCENTRATION UNITS: (pg/L or ng/kg) ng/kg

TARGET ANALYTE	SELECTED IONS	PEAK RT	ION RATIO #	CONCENTRATION	Q	EMPC/EDL
2,3,7,8-TCDD	320/322	27:33	0.67	2.01	J	*
2,3,7,8-TCDF	304/306	26:49	0.68	55.7		*
1,2,3,7,8-PeCDF	340/342	31:40	1.63	155		*
1,2,3,7,8-PeCDD	356/358	NotFnd	*	*	U	12.9
2,3,4,7,8-PeCDF	340/342	32:59	1.54	33.6		*
1,2,3,4,7,8-HxCDF	374/376	37:20	1.26	336		*
1,2,3,6,7,8-HxCDF	374/376	37:32	1.27	154		*
1,2,3,4,7,8-HxCDD	390/392	NotFnd	*	*	U	2.81
1,2,3,6,7,8-HxCDD	390/392	38:53	0.11 *	*	X	116
1,2,3,7,8,9-HxCDD	390/392	39:21	1.07	10.5	J	*
2,3,4,6,7,8-HxCDF	374/376	38:29	1.27	26.1		*
1,2,3,7,8,9-HxCDF	374/376	39:58	1.23	48.0		*
1,2,3,4,6,7,8-HpCDF	408/410	42:24	1.02	646		*
1,2,3,4,6,7,8-HpCDD	424/426	44:18	1.06	132		*
1,2,3,4,7,8,9-HpCDF	408/410	45:14	0.99	184		*
OCDD	458/460	49:54	0.89	10600		*
OCDF	442/444	50:16	0.88	9420		*

NOTE: Concentrations, Estimated Maximum Possible Concentrations (EMPCs), and Estimated Detection Levels (EDLs) for solid samples are calculated on a dry weight basis (except tissues, which are reported on a wet weight basis with % Lipids).

LABELED COMPOUNDS	SELECTED IONS	PEAK RT	ION RATIO #	ION RATIO LIMITS	% REC #	RECOVERY LIMITS
13C-2,3,7,8-TCDD	332/334	27:32	0.77	0.65-0.89	101	25-164
13C-1,2,3,7,8-PeCDD	368/370	33:21	1.75	1.32-1.78	111	25-181
13C-1,2,3,4,7,8-HxCDD	402/404	38:43	1.29	1.05-1.43	86.8	32-141
13C-1,2,3,6,7,8-HxCDD	402/404	38:53	1.29	1.05-1.43	85.9	28-130
13C-1,2,3,4,6,7,8-HpCDD	436/438	44:17	1.06	0.88-1.20	87.7	23-140
13C-OCDD	470/472	49:52	0.92	0.76-1.02	76.7	17-157
13C-2,3,7,8-TCDF	316/318	26:48	0.85	0.65-0.89	101	24-169
13C-1,2,3,7,8-PeCDF	352/354	31:39	1.66	1.32-1.78	101	24-185
13C-2,3,4,7,8-PeCDF	352/354	32:57	1.66	1.32-1.78	99.9	21-178
13C-1,2,3,4,7,8-HxCDF	384/386	37:19	0.53	0.43-0.59	80.2	26-152
13C-1,2,3,6,7,8-HxCDF	384/386	37:31	0.53	0.43-0.59	79.6	26-123
13C-1,2,3,7,8,9-HxCDF	384/386	39:53	0.54	0.43-0.59	93.7	29-147
13C-2,3,4,6,7,8-HxCDF	384/386	38:27	0.53	0.43-0.59	81.6	28-136
13C-1,2,3,4,6,7,8-HpCDF	418/420	42:23	0.44	0.37-0.51	75.3	28-143
13C-1,2,3,4,7,8,9-HpCDF	418/420	45:12	0.44	0.37-0.51	95.5	26-138
13C-OCDF	454/456	50:15	0.91	0.76-1.02	75.4	17-157
37Cl-2,3,7,8-TCDD	328/NA	27:35	NA	NA	114	35-197

Column to be used to flag values outside (QC) limits.

ANALYST: JC DATE: 3/2/09

1DFA - FORM I-HR CDD-1
CDD/CDF SAMPLE DATA SUMMARY
HIGH RESOLUTION

SAMPLE No.
E3YD0

LAB NAME: FRONTIER ANALYTICAL LAB CONTRACT: EP08W001564
LAB CODE: FALE CASE NO.: EPA05-2008-01 TO NO.: NA SDG NO.: SDG E3YC9
MATRIX: (SOIL/WATER/ASH/TISSUE/OIL) SOIL LAB SAMPLE ID: 5340-002-0001-SA
SAMPLE wt/vol: 1.010 (g/mL): g LAB FILE ID: 24FEB09M Sam: 15
WATER SAMPLE PREP: SPE (SEPF/SPE) DATE RECEIVED: 11-FEB-09
CONCENTRATED EXTRACT VOLUME: 20 (uL) DATE EXTRACTED: 18-FEB-09
INJECTION VOLUME: 2 (uL) % SOLIDS/LIPIDS: 75.15 DATE ANALYZED: 24-FEB-09
GC COLUMN: DB5 ID: 0.25 (mm) DILUTION FACTOR: 1
CONCENTRATION UNITS: (pg/L or ng/kg) ng/kg

TARGET ANALYTE	SELECTED IONS	PEAK RT	ION RATIO #	CONCENTRATION	Q	EMPC/EDL
2,3,7,8-TCDD	320/322	27:34	0.66	1.99	J	*
2,3,7,8-TCDF	304/306	26:48	0.69	39.7		*
1,2,3,7,8-PeCDF	340/342	31:39	1.53	113		*
1,2,3,7,8-PeCDD	356/358	NotFnd	*	*	U	6.31
2,3,4,7,8-PeCDF	340/342	32:57	1.59	25.7		*
1,2,3,4,7,8-HxCDF	374/376	37:20	1.27	247		*
1,2,3,6,7,8-HxCDF	374/376	37:31	1.27	110		*
1,2,3,4,7,8-HxCDD	390/392	NotFnd	*	*	U	3.85
1,2,3,6,7,8-HxCDD	390/392	38:52	0.08	*	X	109
1,2,3,7,8,9-HxCDD	390/392	39:18	1.06	8.91	J	*
2,3,4,6,7,8-HxCDF	374/376	38:28	1.23	17.6	J	*
1,2,3,7,8,9-HxCDF	374/376	39:57	1.26	34.1		*
1,2,3,4,6,7,8-HpCDF	408/410	42:24	1.03	475		*
1,2,3,4,6,7,8-HpCDD	424/426	44:18	1.09	99.8		*
1,2,3,4,7,8,9-HpCDF	408/410	45:13	1.04	133		*
OCDD	458/460	49:53	0.89	8050		*
OCDF	442/444	50:16	0.89	6930		*

NOTE: Concentrations, Estimated Maximum Possible Concentrations (EMPCs), and Estimated Detection Levels (EDLs) for solid samples are calculated on a dry weight basis (except tissues, which are reported on a wet weight basis with % Lipids).

LABELED COMPOUNDS	SELECTED IONS	PEAK RT	ION RATIO #	ION RATIO LIMITS	% REC #	RECOVERY LIMITS
13C-2,3,7,8-TCDD	332/334	27:32	0.78	0.65-0.89	102	25-164
13C-1,2,3,7,8-PeCDD	368/370	33:20	1.77	1.32-1.78	109	25-181
13C-1,2,3,4,7,8-HxCDD	402/404	38:41	1.30	1.05-1.43	88.1	32-141
13C-1,2,3,6,7,8-HxCDD	402/404	38:51	1.29	1.05-1.43	86.2	28-130
13C-1,2,3,4,6,7,8-HpCDD	436/438	44:17	1.08	0.88-1.20	87.8	23-140
13C-OCDD	470/472	49:52	0.92	0.76-1.02	74.1	17-157
13C-2,3,7,8-TCDF	316/318	26:47	0.84	0.65-0.89	101	24-169
13C-1,2,3,7,8-PeCDF	352/354	31:37	1.67	1.32-1.78	105	24-185
13C-2,3,4,7,8-PeCDF	352/354	32:56	1.66	1.32-1.78	99.4	21-178
13C-1,2,3,4,7,8-HxCDF	384/386	37:17	0.53	0.43-0.59	78.3	26-152
13C-1,2,3,6,7,8-HxCDF	384/386	37:30	0.53	0.43-0.59	77.1	26-123
13C-1,2,3,7,8,9-HxCDF	384/386	39:52	0.54	0.43-0.59	91.1	29-147
13C-2,3,4,6,7,8-HxCDF	384/386	38:26	0.54	0.43-0.59	82.3	28-136
13C-1,2,3,4,6,7,8-HpCDF	418/420	42:23	0.44	0.37-0.51	74.2	28-143
13C-1,2,3,4,7,8,9-HpCDF	418/420	45:12	0.45	0.37-0.51	95.5	26-138
13C-OCDF	454/456	50:15	0.92	0.76-1.02	73.2	17-157
37Cl-2,3,7,8-TCDD	328/NA	27:33	NA	NA	108	35-197

Column to be used to flag values outside (QC) limits.

ANALYST: _____ DATE: 3/6/09

1DFB - FORM I-HR CDD-2
CDD/CDF TOXICITY EQUIVALENCE SUMMARY
HIGH RESOLUTION

SAMPLE No.
E3YC9

LAB NAME: FRONTIER ANALYTICAL LAB CONTRACT: EP08W001564

LAB CODE: FALE CASE NO.: EPA05-2008-01 TO NO.: SDG NO.: SDG E3YC9

MATRIX: (SOIL/WATER/ASH/TISSUE/OIL) SOIL LAB SAMPLE ID: 5340-001-0001-SA

SAMPLE wt/vol: 1.000 (g/mL): g LAB FILE ID: 24FEB09M Sam: 14

WATER SAMPLE PREP: SPE (SEPF/SPE) DATE RECEIVED: 11-FEB-09

CONCENTRATED EXTRACT VOLUME: 20 (uL) DATE EXTRACTED: 18-FEB-09

INJECTION VOLUME: 2 (uL) % SOLIDS/LIPIDS: 75.15 DATE ANALYZED: 24-FEB-09

GC COLUMN: DB5 ID: 0.25 (mm) DILUTION FACTOR: 1

CONCENTRATION UNITS: (pg/L or ng/kg) ng/kg

TARGET ANALYTE	CONCENTRATION	TEF*		TEF-ADJUSTED CONCENTRATION
2,3,7,8-TCDD	2.01	x 1.0	=	2.01
2,3,7,8-TCDF	55.7	x 0.1	=	5.57
1,2,3,7,8-PeCDF	155	x 0.05	=	7.75
1,2,3,7,8-PeCDD	*	x 0.5	=	*
2,3,4,7,8-PeCDF	33.6	x 0.5	=	16.8
1,2,3,4,7,8-HxCDF	336	x 0.1	=	33.6
1,2,3,6,7,8-HxCDF	154	x 0.1	=	15.4
1,2,3,4,7,8-HxCDD	*	x 0.1	=	*
1,2,3,6,7,8-HxCDD	*	x 0.1	=	*
1,2,3,7,8,9-HxCDD	10.5	x 0.1	=	1.05
2,3,4,6,7,8-HxCDF	26.1	x 0.1	=	2.61
1,2,3,7,8,9-HxCDF	48.0	x 0.1	=	4.80
1,2,3,4,6,7,8-HpCDF	646	x 0.01	=	6.46
1,2,3,4,6,7,8-HpCDD	132	x 0.01	=	1.32
1,2,3,4,7,8,9-HpCDF	184	x 0.01	=	1.84
OCDD	10600	x 0.001	=	10.6
OCDF	9420	x 0.001	=	9.42
		Total	=	119

* TEF - Toxicity Equivalent Factors from EPA/625/3-89/016 March 1989 - Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxins and Chlorinated Dibenzofurans (CDDs and CDFs) and 1989 Update

ANALYST: DATE: 3/2/09

1DFB - FORM I-HR CDD-2
CDD/CDF TOXICITY EQUIVALENCE SUMMARY
HIGH RESOLUTION

SAMPLE No.
E3YD0

LAB NAME: FRONTIER ANALYTICAL LAB CONTRACT: EP08W001564

LAB CODE: FALE CASE NO.: EPA05-2008-01 TO NO.: NA SDG NO.: SDG E3YC9

MATRIX: (SOIL/WATER/ASH/TISSUE/OIL) SOIL LAB SAMPLE ID: 5340-002-0001-SA

SAMPLE wt/vol: 1.010 (g/mL): g LAB FILE ID: 24FEB09M Sam: 15

WATER SAMPLE PREP: SPE (SEPF/SPE) DATE RECEIVED: 11-FEB-09

CONCENTRATED EXTRACT VOLUME: 20 (uL) DATE EXTRACTED: 18-FEB-09

INJECTION VOLUME: 2 (uL) % SOLIDS/LIPIDS: 75.15 DATE ANALYZED: 24-FEB-09

GC COLUMN: DB5 ID: 0.25 (mm) DILUTION FACTOR: 1

CONCENTRATION UNITS: (pg/L or ng/kg) ng/kg

TARGET ANALYTE	CONCENTRATION	TEF*		TEF-ADJUSTED CONCENTRATION
2,3,7,8-TCDD	1.99	x 1.0	=	1.99
2,3,7,8-TCDF	39.7	x 0.1	=	3.97
1,2,3,7,8-PeCDF	113	x 0.05	=	5.65
1,2,3,7,8-PeCDD	*	x 0.5	=	*
2,3,4,7,8-PeCDF	25.7	x 0.5	=	12.9
1,2,3,4,7,8-HxCDF	247	x 0.1	=	24.7
1,2,3,6,7,8-HxCDF	110	x 0.1	=	11.0
1,2,3,4,7,8-HxCDD	*	x 0.1	=	*
1,2,3,6,7,8-HxCDD	*	x 0.1	=	*
1,2,3,7,8,9-HxCDD	8.91	x 0.1	=	0.891
2,3,4,6,7,8-HxCDF	17.6	x 0.1	=	1.76
1,2,3,7,8,9-HxCDF	34.1	x 0.1	=	3.41
1,2,3,4,6,7,8-HpCDF	475	x 0.01	=	4.75
1,2,3,4,6,7,8-HpCDD	99.8	x 0.01	=	0.998
1,2,3,4,7,8,9-HpCDF	133	x 0.01	=	1.33
OCDD	8050	x 0.001	=	8.05
OCDF	6930	x 0.001	=	6.93
		Total	=	88.3

* TEF - Toxicity Equivalent Factors from EPA/625/3-89/016 March 1989 - Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxins and Chlorinated Dibenzofurans (CDDs and CDFs) and 1989 Update

ANALYST: DATE: 3/2/09

1DFC - FORM I-HR CDD-3
CDF SECOND COLUMN CONFIRMATION
HIGH RESOLUTION

SAMPLE No.
E3YC9

LAB NAME: FRONTIER ANALYTICAL LAB CONTRACT: EP08W001564

LAB CODE: FALE CASE NO.: EPA05-2008-01 TO NO.: SDG NO.: SDG E3YC9

MATRIX: (SOIL/WATER/ASH/TISSUE/OIL) SOIL LAB SAMPLE ID: 5340-001-0001-SA

SAMPLE wt/vol: 1.000 (g/ml) g LAB FILE ID: 04MAR09A Sam: 3

WATER SAMPLE PREP: SPE (SEPF/SPE) DATE RECEIVED: 11-FEB-09

CONCENTRATED EXTRACT VOLUME: 20 (uL) DATE EXTRACTED: 18-FEB-09

INJECTION VOLUME: 2 (uL) % SOLIDS/LIPIDS: 75.15 DATE ANALYZED: 4-MAR-09

GC COLUMN: DB225 ID: 0.25 (mm) DILUTION FACTOR: 1

CONCENTRATION UNITS: (pg/L or ng/kg) ng/kg

ANALYTE	SELECTED IONS	PEAK RT	ION RATIO #	CONCENTRATION	Q	EMPC/EDL
2,3,7,8-TCDF	304/306	19:28	0.77	68.5		6.64

NOTE: Concentrations, Estimated Maximum Possible Concentrations (EMPCs), and Estimated Detection Limits (EDLs) for solid samples are calculated on a dry weight basis (except tissues, which are reported on a wet weight basis with % Lipids).

LABELED COMPOUNDS	SELECTED IONS	PEAK RT	ION RATIO #	ION RATIO LIMITS	% REC #	RECOVERY LIMITS
13C-2,3,7,8-TCDF	316/318	19:26	0.81	0.65-0.89	96.2	24-169

Column to be used to flag values outside Quality Control (QC) limits.

ANALYST: [signature] DATE: 3/4/09

1DFC - FORM I-HR CDD-3
CDF SECOND COLUMN CONFIRMATION
HIGH RESOLUTION

SAMPLE No.
E3YD0

LAB NAME: FRONTIER ANALYTICAL LAB CONTRACT: EP08W001564

LAB CODE: FALE CASE NO.: EPA05-2008-01 TO NO.: SDG NO.: SDG E3YC9

MATRIX: (SOIL/WATER/ASH/TISSUE/OIL) SOIL LAB SAMPLE ID: 5340-002-0001-SA

SAMPLE wt/vol: 1.010 (g/ml) g LAB FILE ID: 04MAR09A Sam: 4

WATER SAMPLE PREP: SPE (SEPF/SPE) DATE RECEIVED: 11-FEB-09

CONCENTRATED EXTRACT VOLUME: 20 (uL) DATE EXTRACTED: 18-FEB-09

INJECTION VOLUME: 2 (uL) % SOLIDS/LIPIDS: 75.15 DATE ANALYZED: 4-MAR-09

GC COLUMN: DB225 ID: 0.25 (mm) DILUTION FACTOR: 1

CONCENTRATION UNITS: (pg/L or ng/kg) ng/kg

ANALYTE	SELECTED IONS	PEAK RT	ION RATIO #	CONCENTRATION	Q	EMPC/EDL
2,3,7,8-TCDF	304/306	19:27	0.78	47.7		-

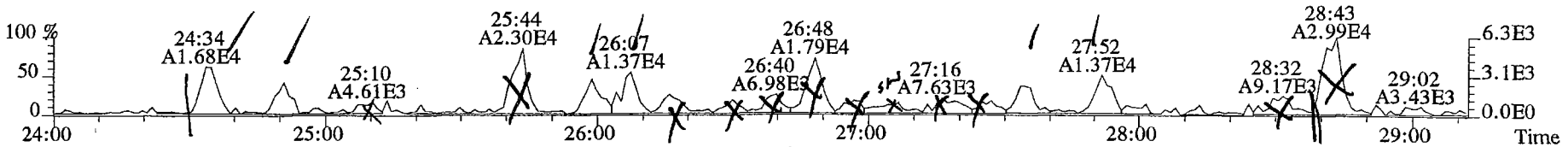
NOTE: Concentrations, Estimated Maximum Possible Concentrations (EMPCs), and Estimated Detection Limits (EDLs) for solid samples are calculated on a dry weight basis (except tissues, which are reported on a wet weight basis with % Lipids).

LABELED COMPOUNDS	SELECTED IONS	PEAK RT	ION RATIO #	ION RATIO LIMITS	% REC #	RECOVERY LIMITS
13C-2,3,7,8-TCDF	316/318	19:26	0.80	0.65-0.89	98.1	24-169

Column to be used to flag values outside Quality Control (QC) limits.

ANALYST: _____ DATE: 3/4/09

File:24FEB09M #1-390 Acq:24-FEB-2009 01:35:56 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:PCDD
Sample Text:5340-001-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



File:24FEB09M #1-390 Acq:24-FEB-2009 01:35:56 GC EI+ Voltage SIR Autospec-Ultima
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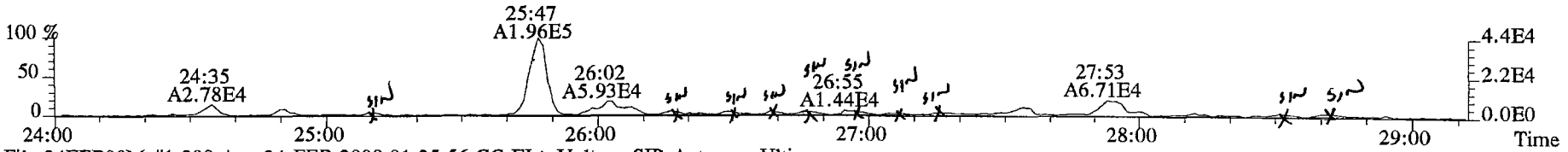

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327.8847 S:14 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
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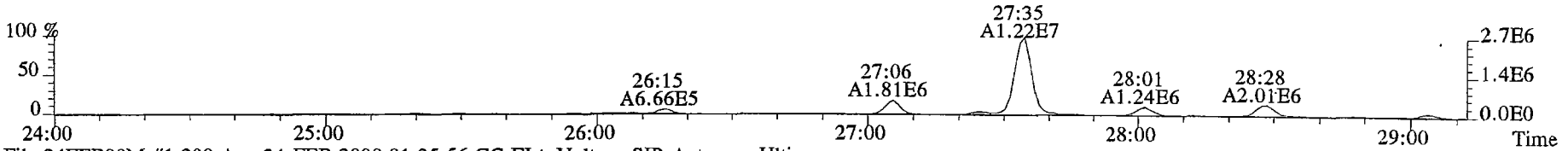
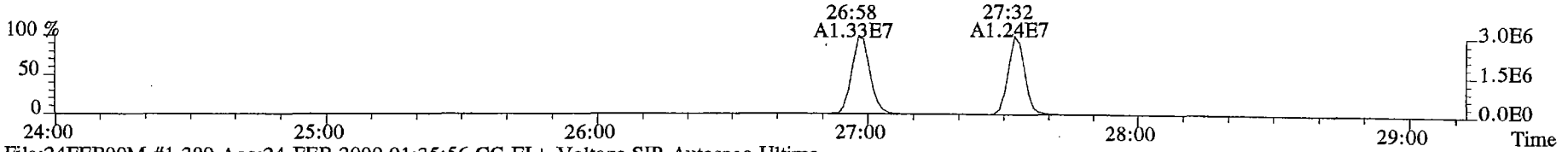


File:24FEB09M #1-390 Acq:24-FEB-2009 01:35:56 GC EI+ Voltage SIR Autospec-Ultima
331.9368 S:14 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:5340-001-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



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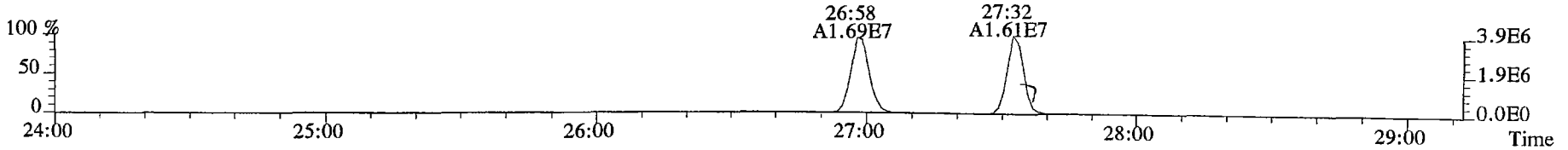

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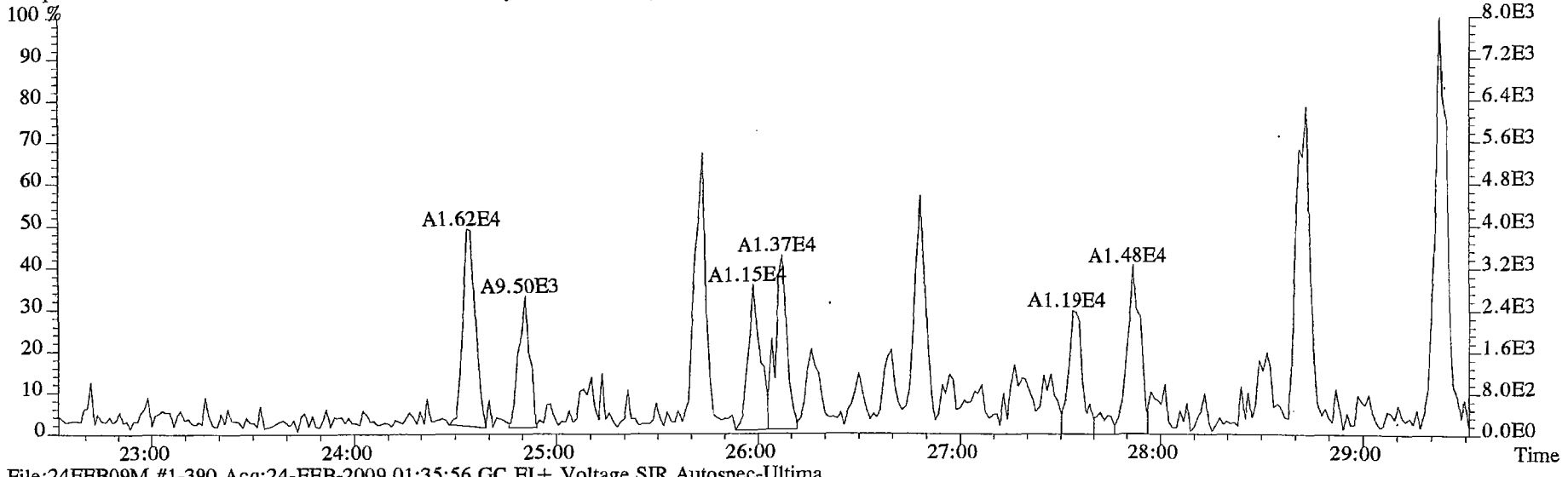
Sample Text:5340-001-0001-SA File Text:Frontier Analytical Laboratory



File:24FEB09M #1-390 Acq:24-FEB-2009 01:35:56 GC EI+ Voltage SIR Autospec-Ultima
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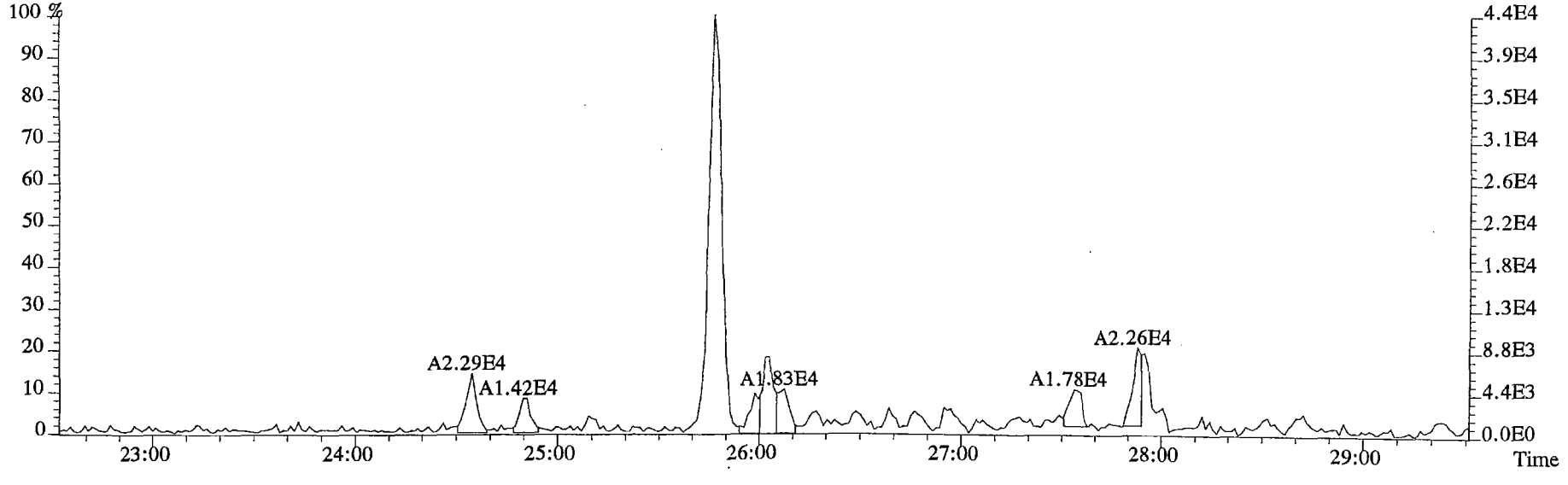
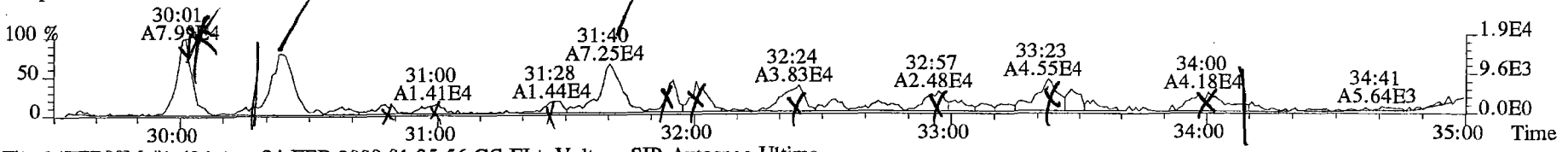
Sample Text:5340-001-0001-SA File Text:Frontier Analytical Laboratory



File:24FEB09M #1-424 Acq:24-FEB-2009 01:35:56 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:PCDD
Sample Text:5340-001-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



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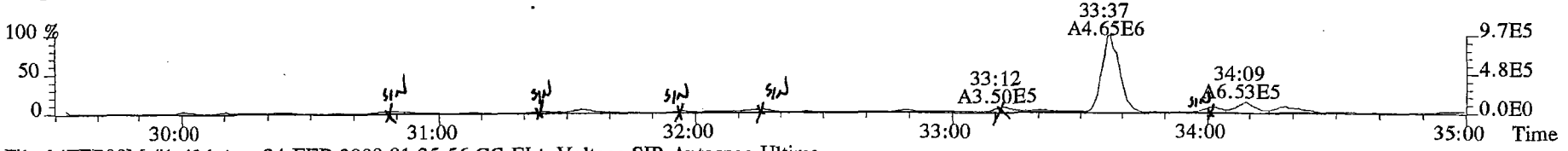
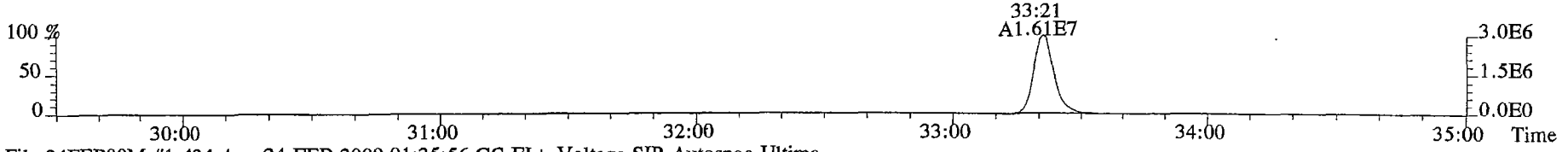
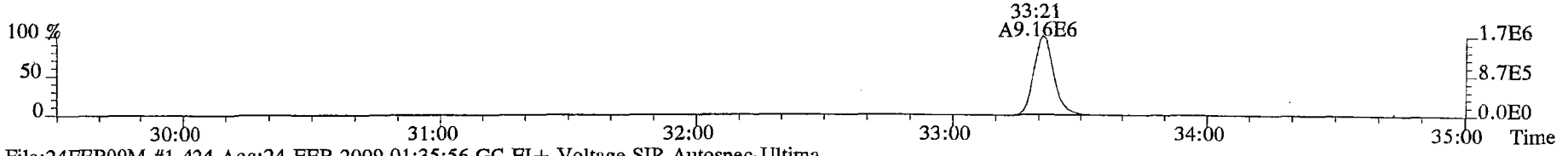
357.8517 S:14 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:5340-001-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



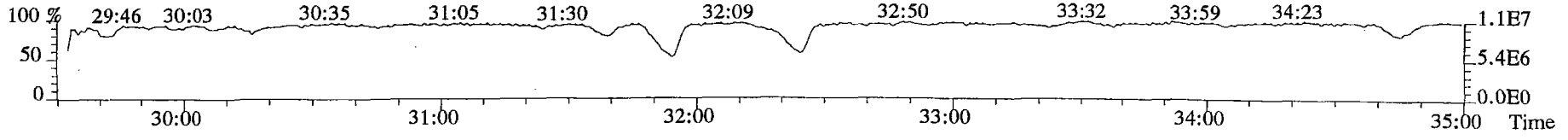
File:24FEB09M #1-424 Acq:24-FEB-2009 01:35:56 GC EI+ Voltage SIR Autospec-Ultima
367.8949 S:14 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:5340-001-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



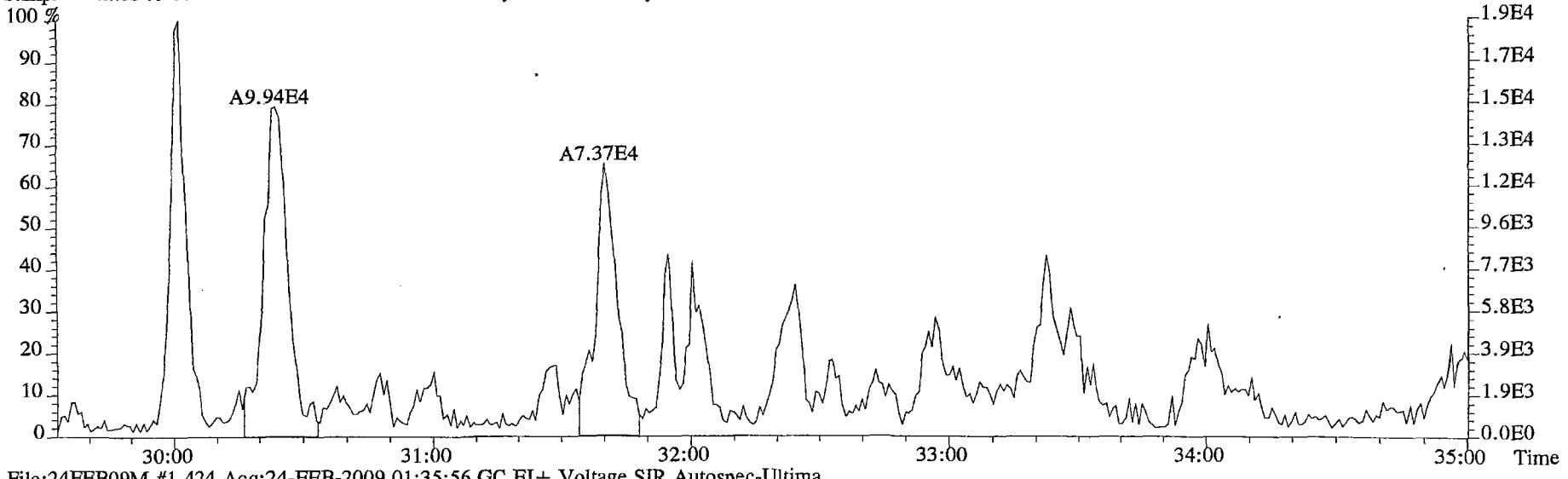
File:24FEB09M #1-424 Acq:24-FEB-2009 01:35:56 GC EI+ Voltage SIR Autospec-Ultima
369.8919 S:14 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:5340-001-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



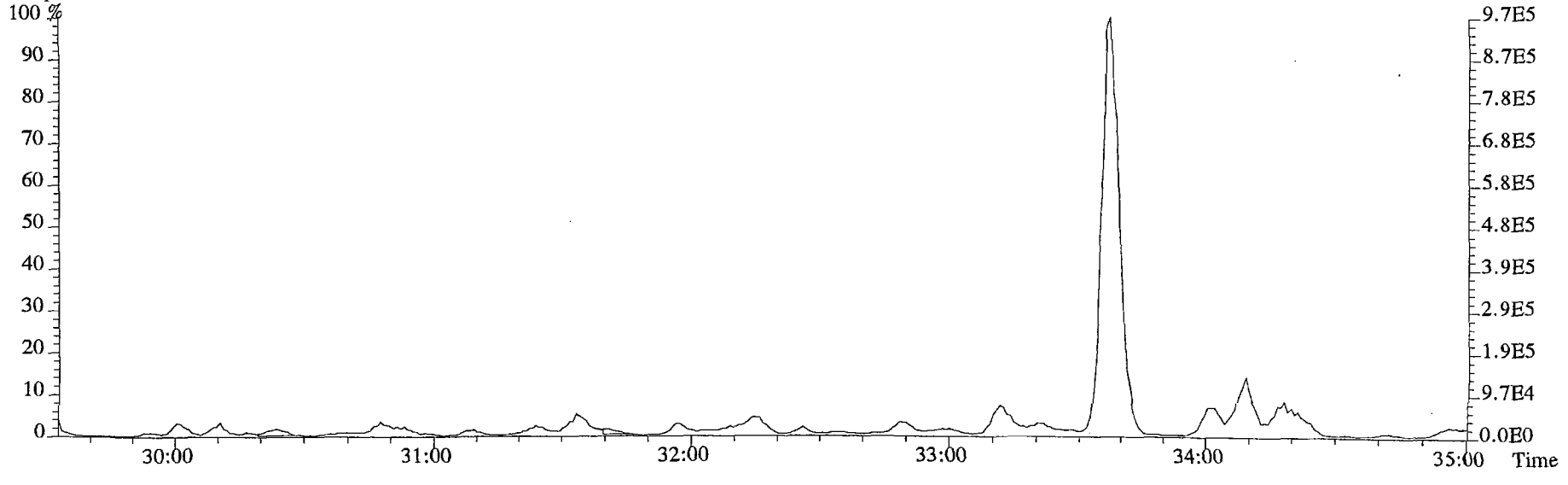
File:24FEB09M #1-424 Acq:24-FEB-2009 01:35:56 GC EI+ Voltage SIR Autospec-Ultima
366.9792 S:14 F:2 Exp:PCDD
Sample Text:5340-001-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



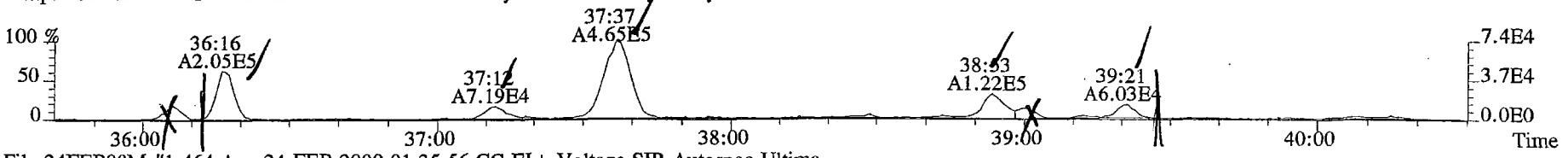
File:24FEB09M #1-424 Acq:24-FEB-2009 01:35:56 GC EI+ Voltage SIR Autospec-Ultima
355.8546 S:14 F:2 BSUB(10000,15,-3.0) Exp:PCDD
Sample Text:5340-001-0001-SA File Text:Frontier Analytical Laboratory



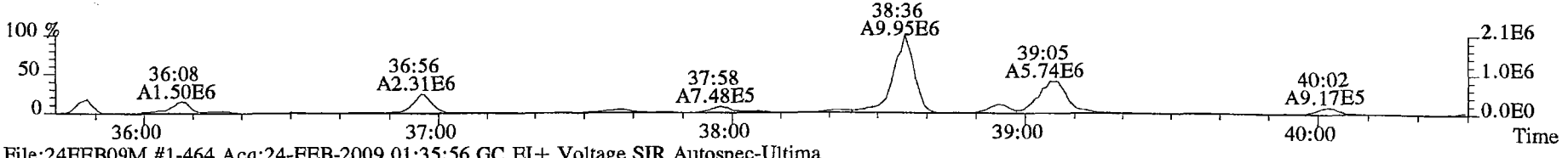
File:24FEB09M #1-424 Acq:24-FEB-2009 01:35:56 GC EI+ Voltage SIR Autospec-Ultima
357.8517 S:14 F:2 BSUB(10000,15,-3.0) Exp:PCDD
Sample Text:5340-001-0001-SA File Text:Frontier Analytical Laboratory



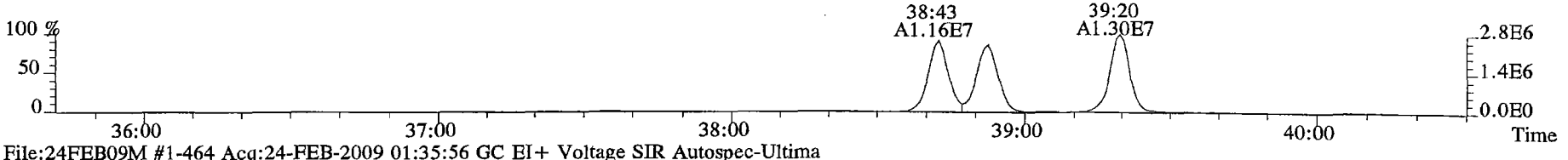
File:24FEB09M #1-464 Acq:24-FEB-2009 01:35:56 GC EI+ Voltage SIR Autospec-Ultima
389.8156 S:14 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:5340-001-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



File:24FEB09M #1-464 Acq:24-FEB-2009 01:35:56 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:PCDD
Sample Text:5340-001-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



File:24FEB09M #1-464 Acq:24-FEB-2009 01:35:56 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:PCDD
Sample Text:5340-001-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



File:24FEB09M #1-464 Acq:24-FEB-2009 01:35:56 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:PCDD
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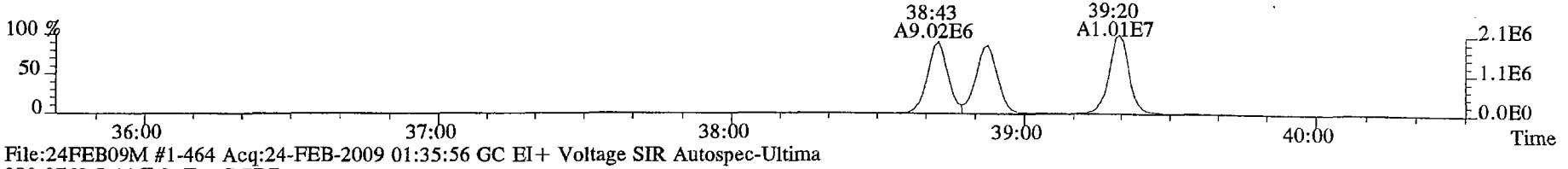
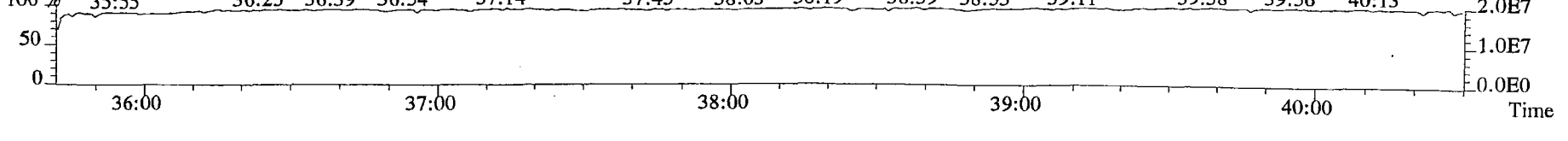


File:24FEB09M #1-464 Acq:24-FEB-2009 01:35:56 GC EI+ Voltage SIR Autospec-Ultima
380.9760 S:14 F:3 Exp:PCDD
Sample Text:5340-001-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



File:24FEB09M #1-464 Acq:24-FEB-2009 01:35:56 GC EI+ Voltage SIR Autospec-Ultima
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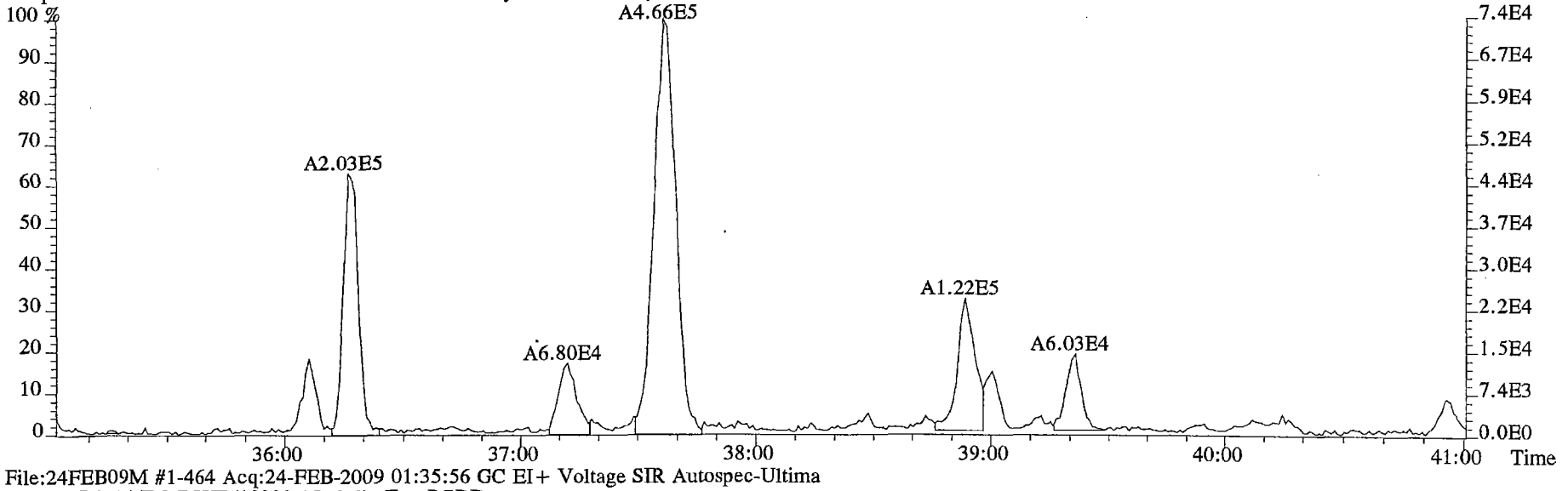
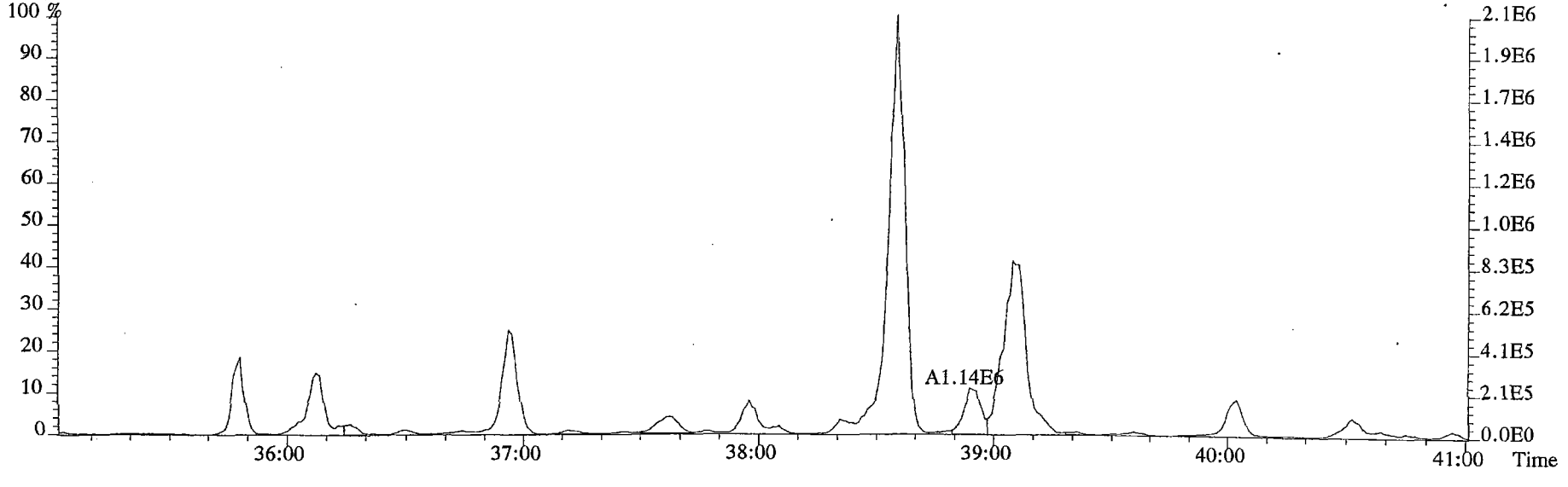
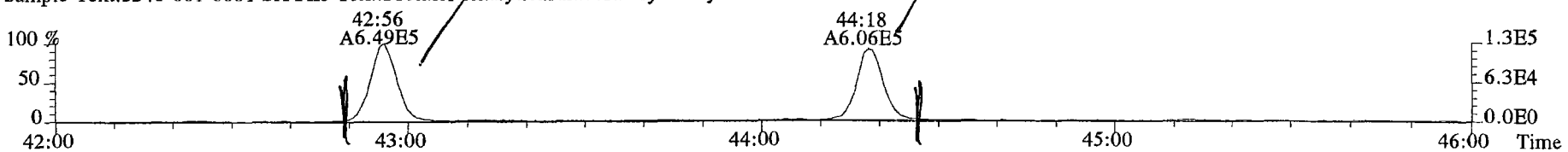
Sample Text:5340-001-0001-SA File Text:Frontier Analytical Laboratory



File:24FEB09M #1-464 Acq:24-FEB-2009 01:35:56 GC EI+ Voltage SIR Autospec-Ultima
391.8127 S:14 F:3 BSUB(10000,15,-3.0) Exp:PCDD
Sample Text:5340-001-0001-SA File Text:Frontier Analytical Laboratory



File:24FEB09M #1-541 Acq:24-FEB-2009 01:35:56 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:PCDD
Sample Text:5340-001-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



File:24FEB09M #1-541 Acq:24-FEB-2009 01:35:56 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:PCDD
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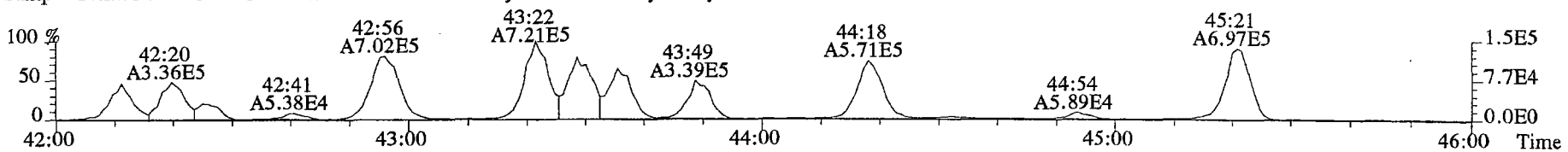

File:24FEB09M #1-541 Acq:24-FEB-2009 01:35:56 GC EI+ Voltage SIR Autospec-Ultima
435.8169 S:14 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
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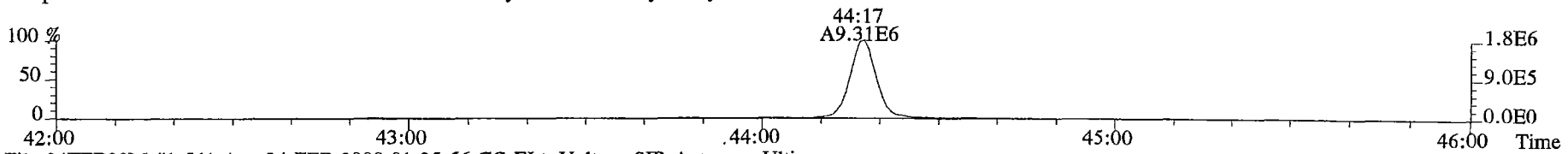

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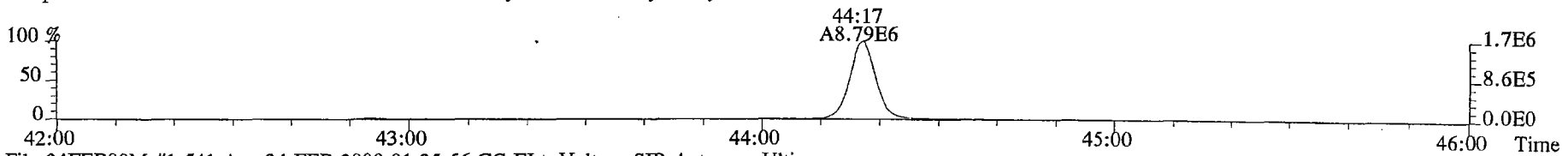
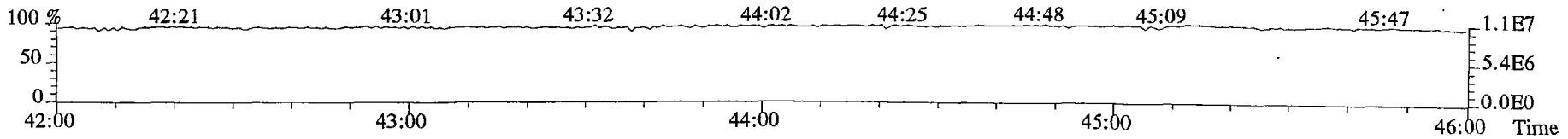
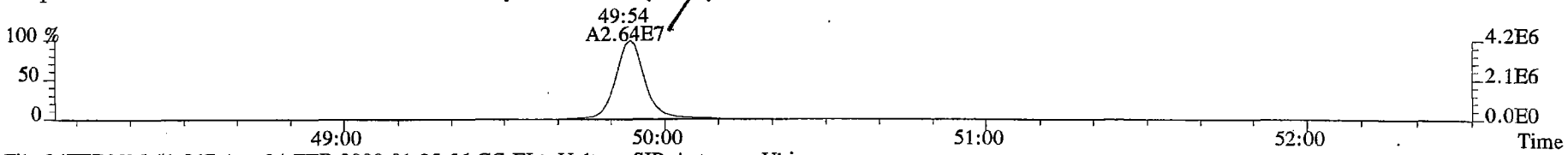
437.8140 S:14 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:5340-001-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



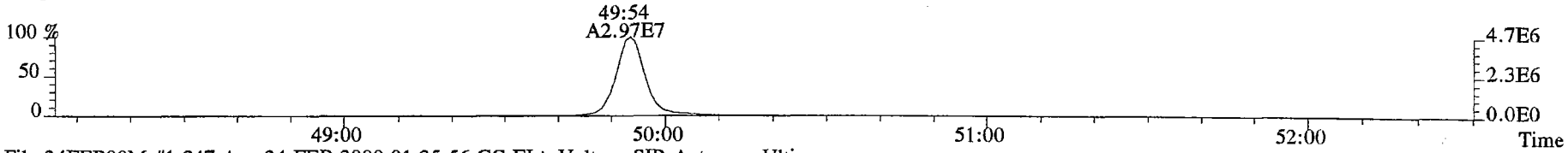
File:24FEB09M #1-541 Acq:24-FEB-2009 01:35:56 GC EI+ Voltage SIR Autospec-Ultima
430.9728 S:14 F:4 Exp:PCDD
Sample Text:5340-001-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



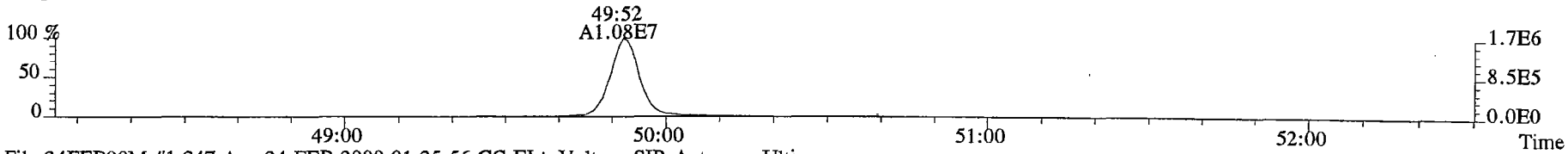
File:24FEB09M #1-347 Acq:24-FEB-2009 01:35:56 GC EI+ Voltage SIR Autospec-Ultima
457.7377 S:14 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:5340-001-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



File:24FEB09M #1-347 Acq:24-FEB-2009 01:35:56 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:PCDD
Sample Text:5340-001-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



File:24FEB09M #1-347 Acq:24-FEB-2009 01:35:56 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:PCDD
Sample Text:5340-001-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



File:24FEB09M #1-347 Acq:24-FEB-2009 01:35:56 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:PCDD
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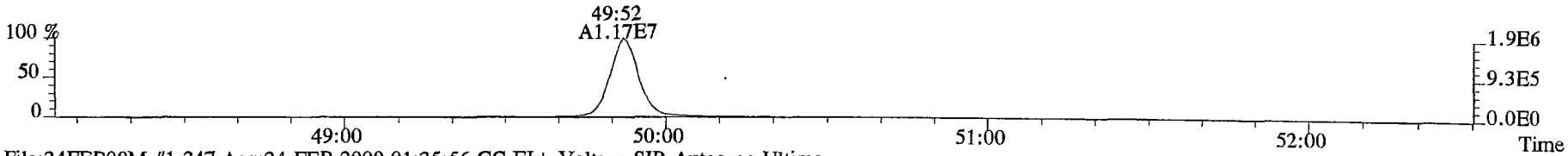

File:24FEB09M #1-347 Acq:24-FEB-2009 01:35:56 GC EI+ Voltage SIR Autospec-Ultima
454.9728 S:14 F:5 Exp:PCDD
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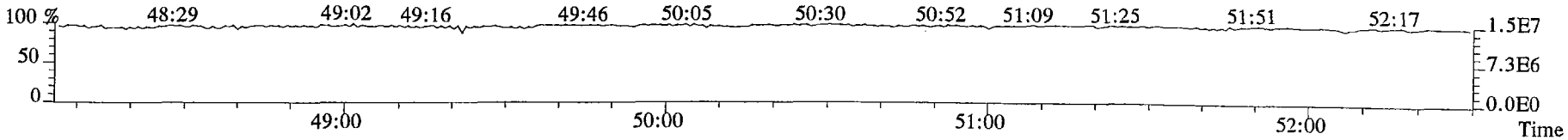
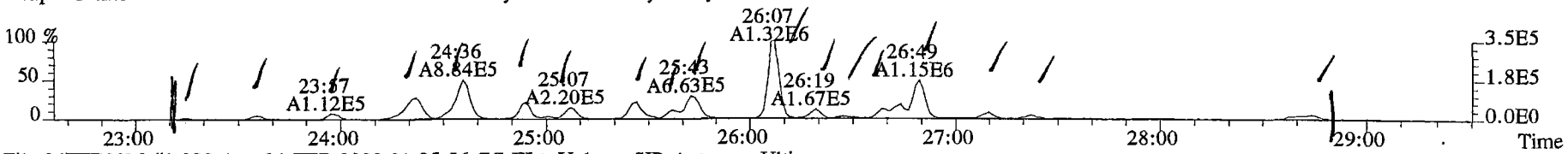


File:24FEB09M #1-390 Acq:24-FEB-2009 01:35:56 GC EI+ Voltage SIR Autospec-Ultima
303.9016 S:14 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:5340-001-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



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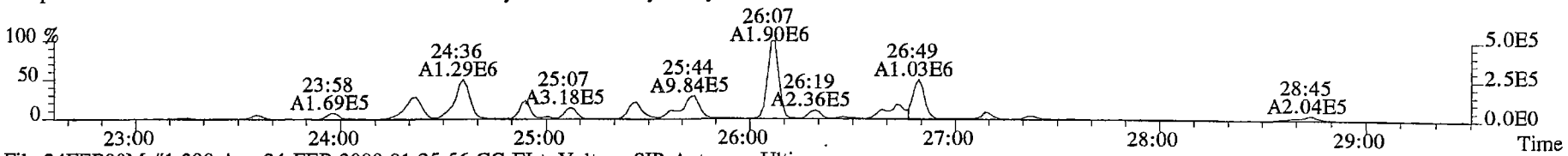
305.8987 S:14 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:5340-001-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



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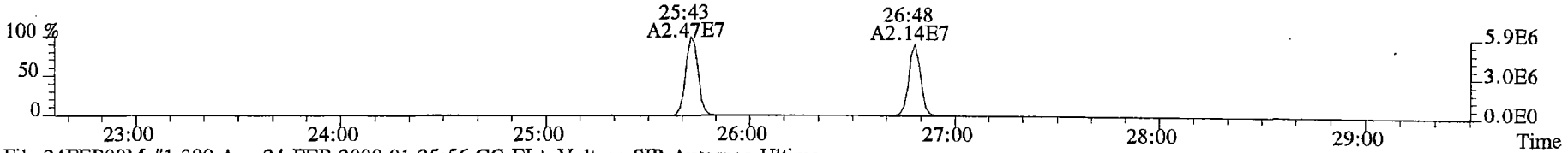

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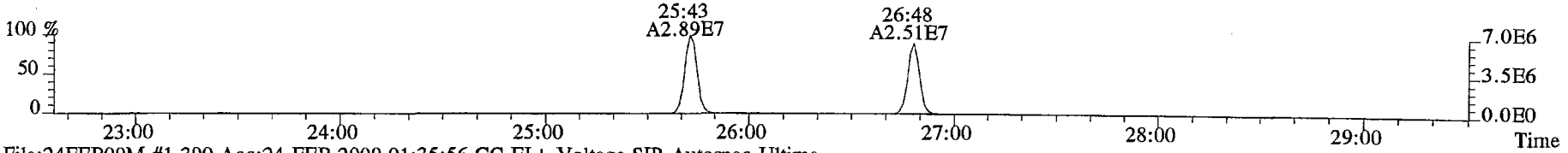

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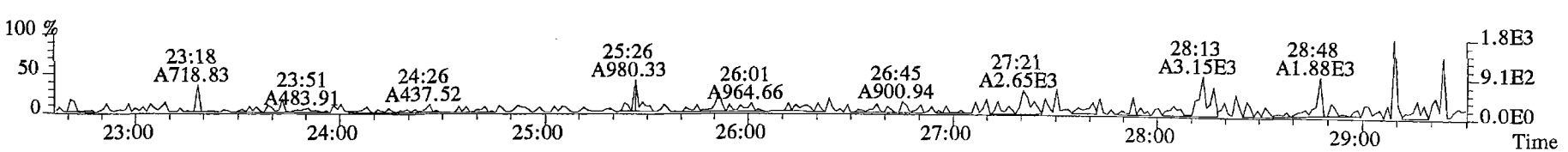

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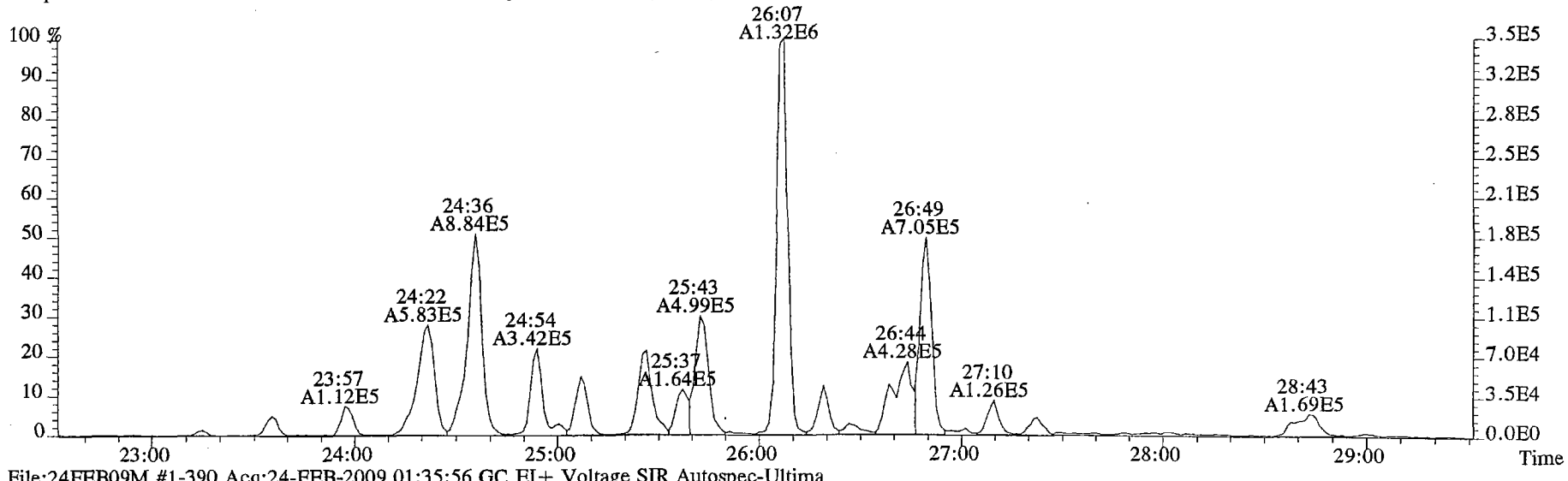
Sample Text:5340-001-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



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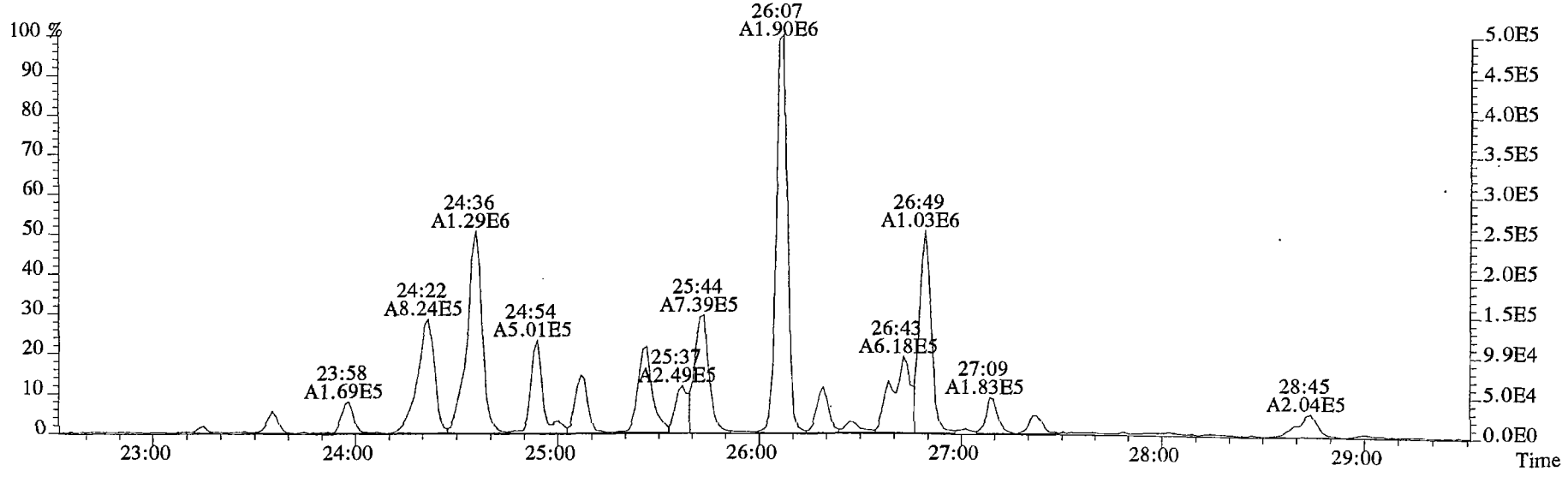
Sample Text:5340-001-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



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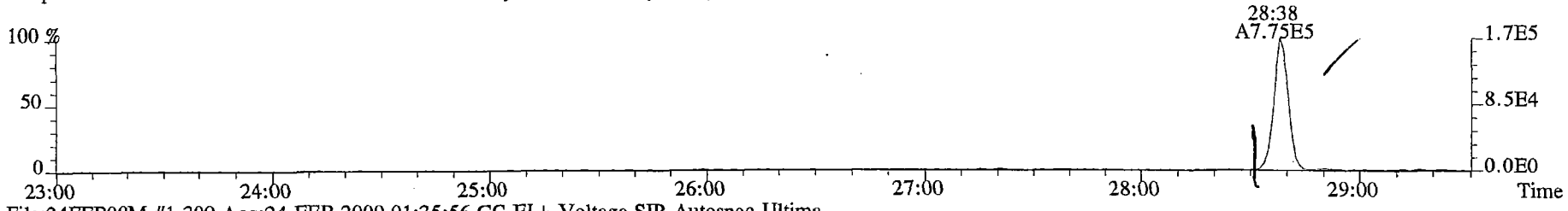
339.8597 S:14 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:5340-001-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



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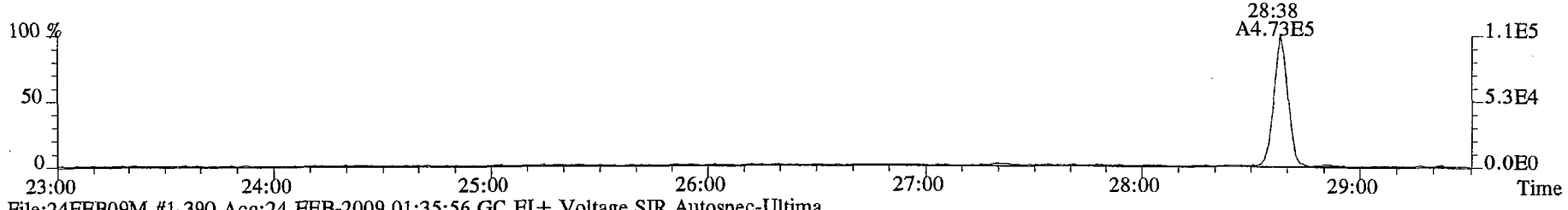
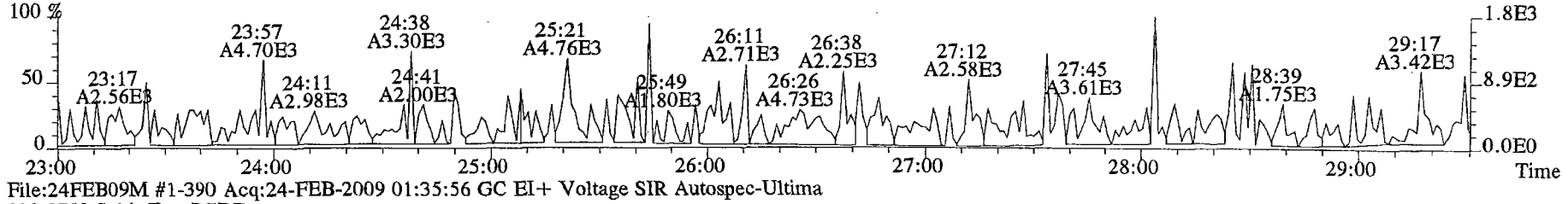
341.8568 S:14 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:5340-001-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



File:24FEB09M #1-390 Acq:24-FEB-2009 01:35:56 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:PCDD
Sample Text:5340-001-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



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330.9792 S:14 Exp:PCDD
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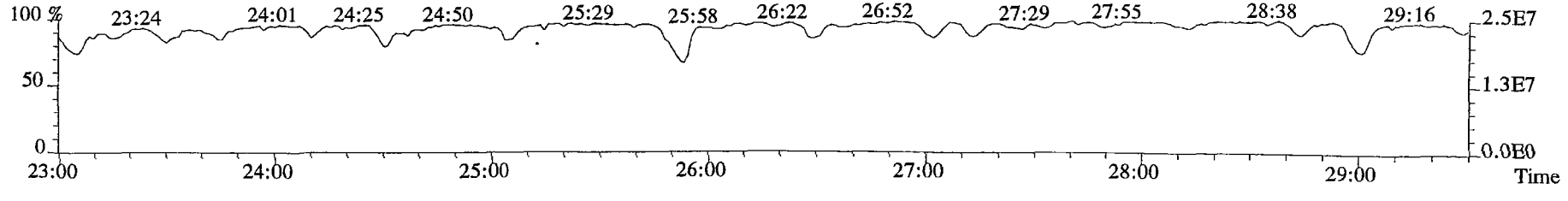

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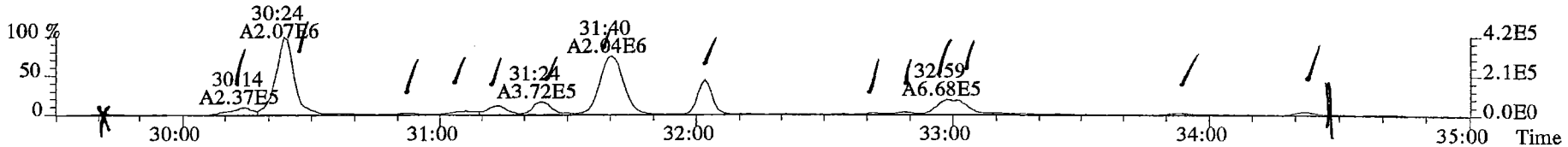
Sample Text:5340-001-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



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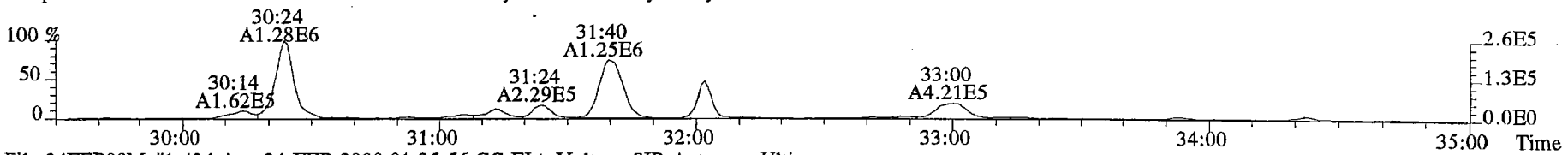
Sample Text:5340-001-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



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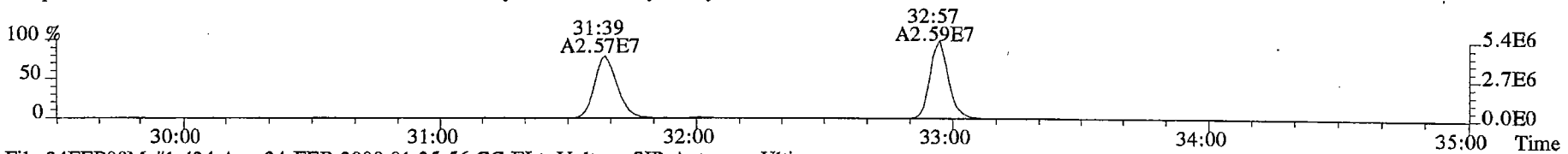
Sample Text:5340-001-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



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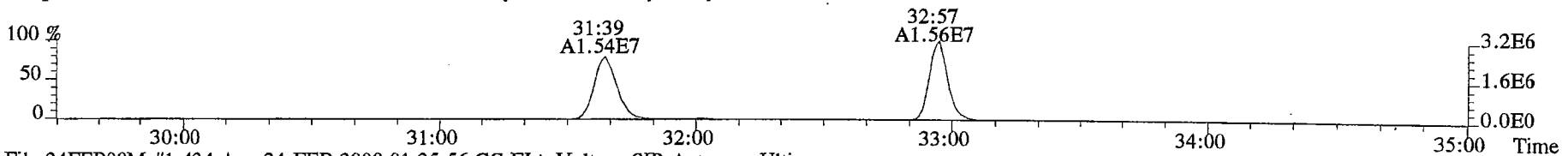
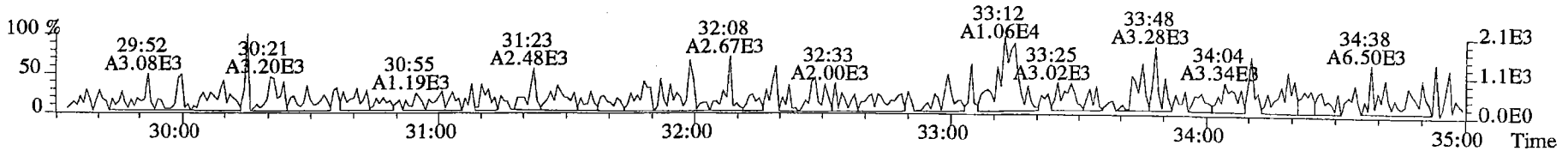
Sample Text:5340-001-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



File:24FEB09M #1-424 Acq:24-FEB-2009 01:35:56 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:PCDD
Sample Text:5340-001-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



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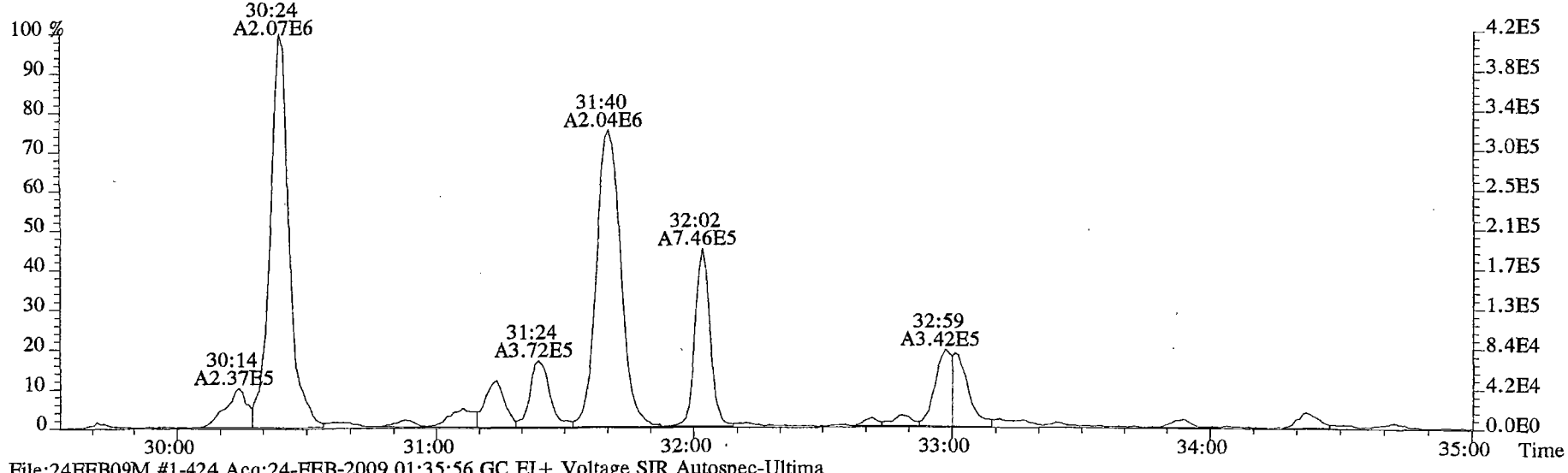
Sample Text:5340-001-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



File:24FEB09M #1-424 Acq:24-FEB-2009 01:35:56 GC EI+ Voltage SIR Autospec-Ultima
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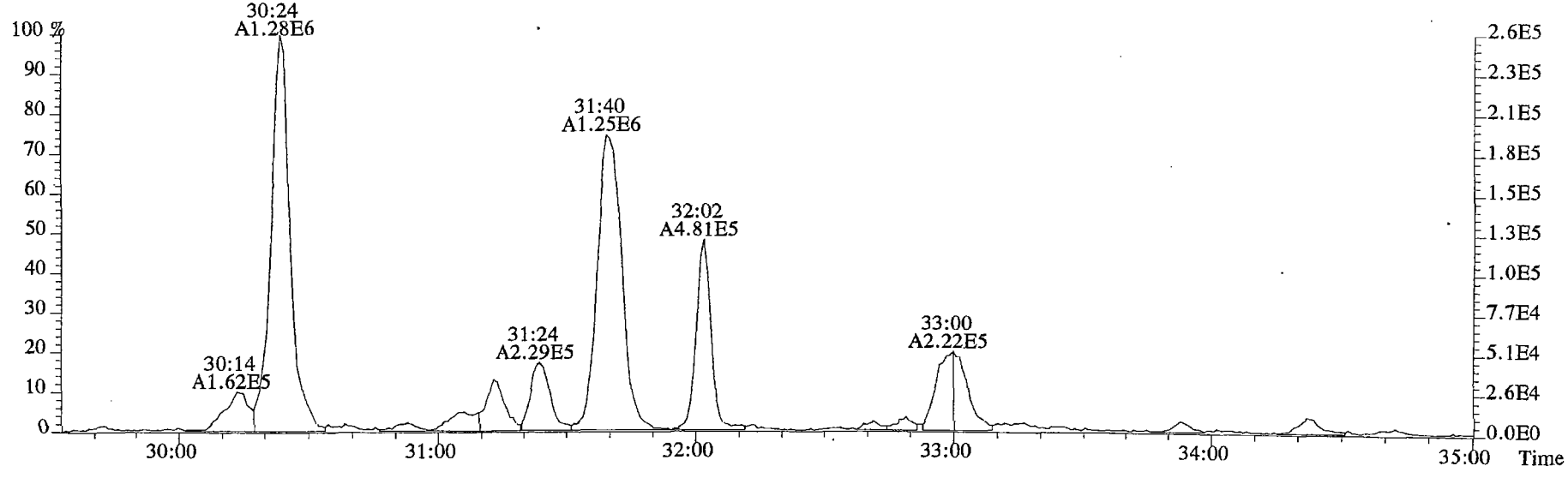
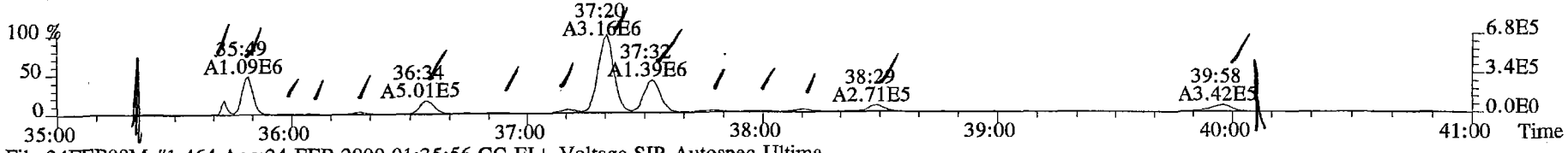
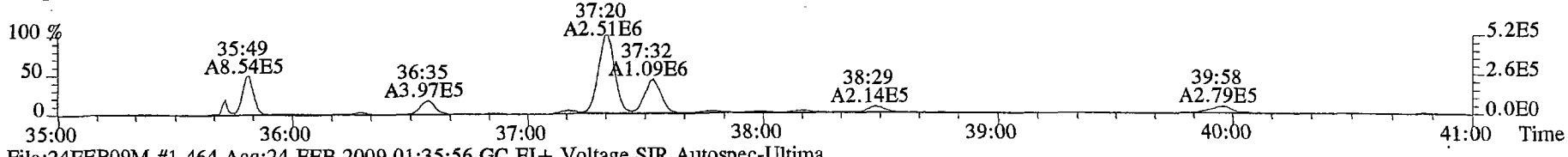
Sample Text:5340-001-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



File:24FEB09M #1-464 Acq:24-FEB-2009 01:35:56 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:PCDD
Sample Text:5340-001-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



File:24FEB09M #1-464 Acq:24-FEB-2009 01:35:56 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:PCDD
Sample Text:5340-001-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



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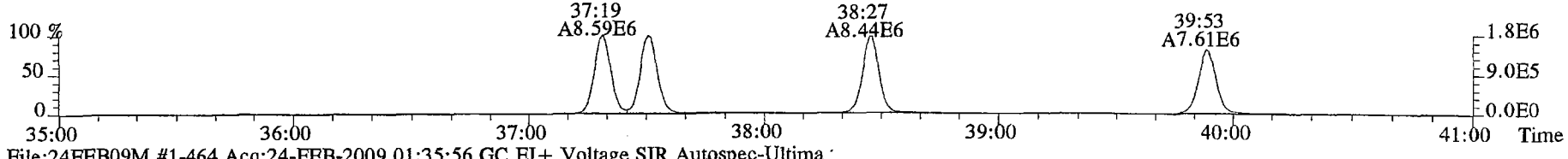
383.8639 S:14 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:5340-001-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



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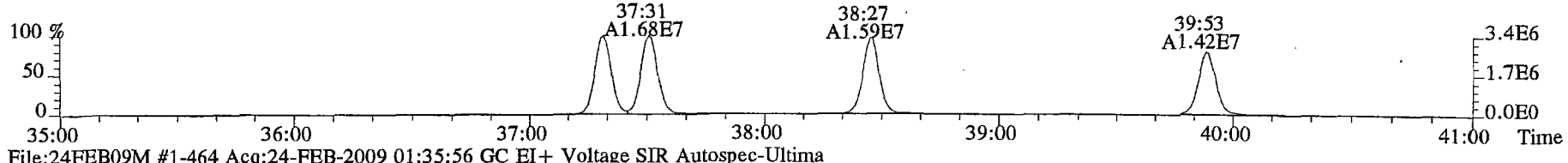
Sample Text:5340-001-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



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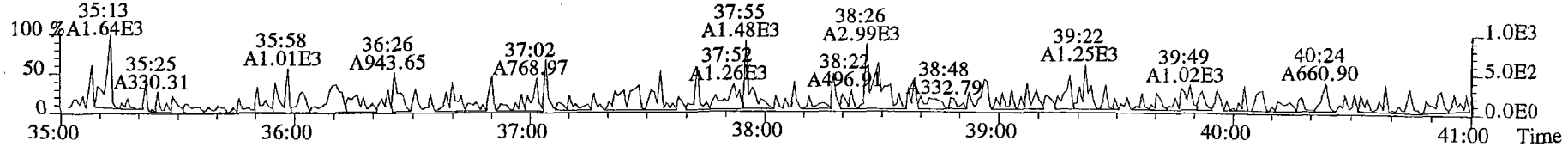
445.7555 S:14 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:5340-001-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



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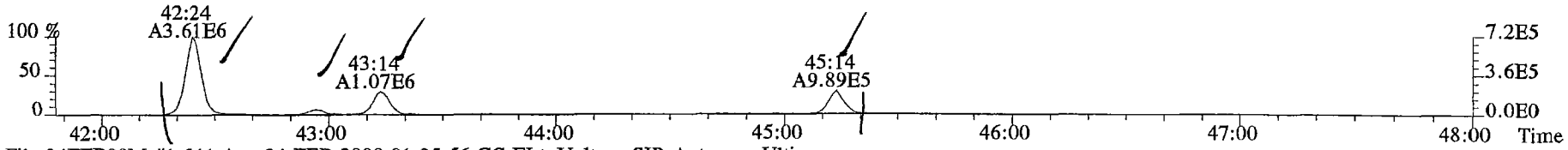
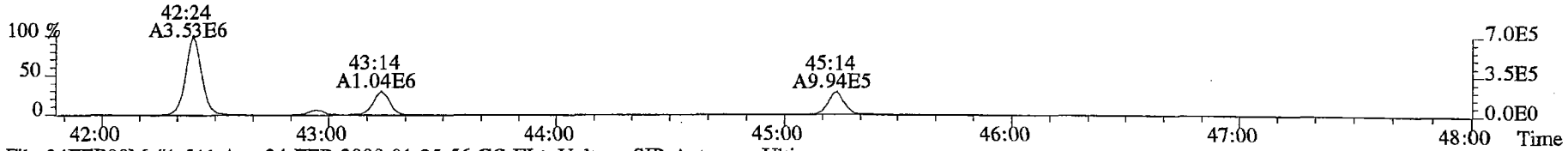
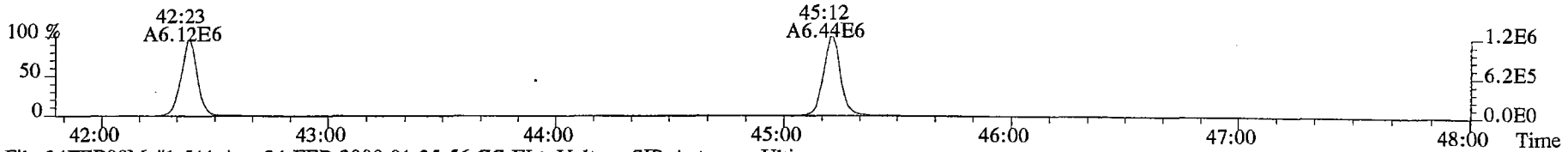
407.7818 S:14 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:5340-001-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



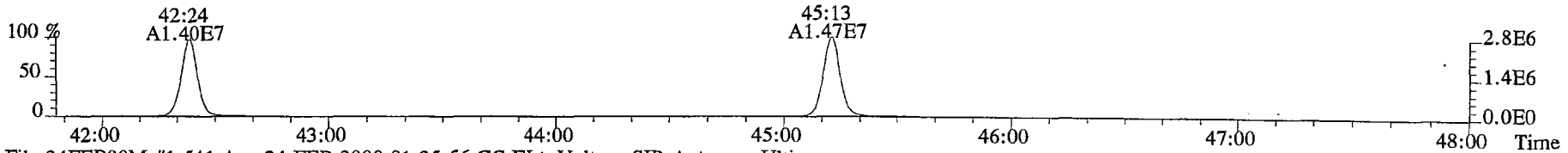
File:24FEB09M #1-541 Acq:24-FEB-2009 01:35:56 GC EI+ Voltage SIR Autospec-Ultima
409.7788 S:14 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:5340-001-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



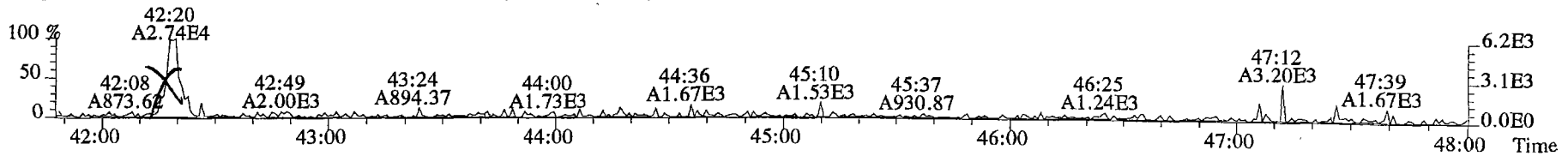
File:24FEB09M #1-541 Acq:24-FEB-2009 01:35:56 GC EI+ Voltage SIR Autospec-Ultima
417.8253 S:14 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:5340-001-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



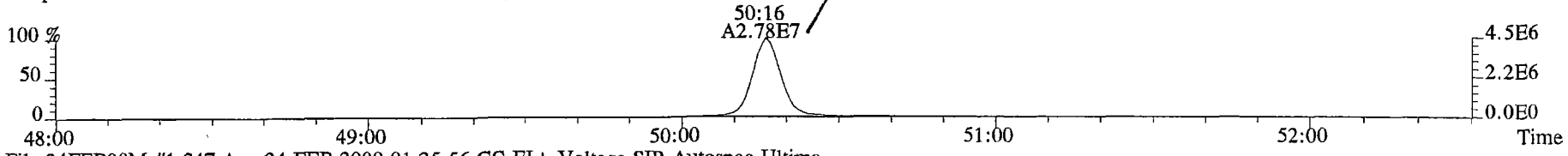
File:24FEB09M #1-541 Acq:24-FEB-2009 01:35:56 GC EI+ Voltage SIR Autospec-Ultima
419.8220 S:14 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:5340-001-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



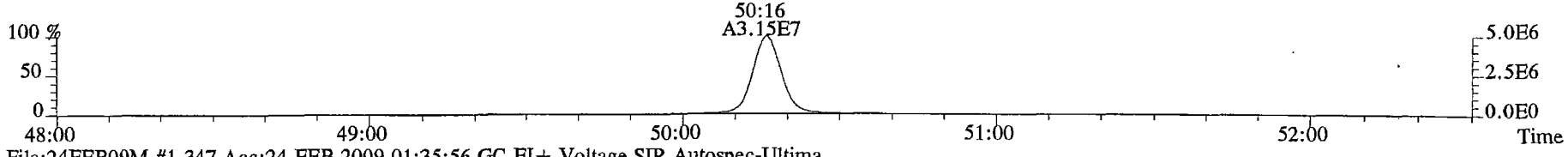
File:24FEB09M #1-541 Acq:24-FEB-2009 01:35:56 GC EI+ Voltage SIR Autospec-Ultima
479.7165 S:14 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:5340-001-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



File:24FEB09M #1-347 Acq:24-FEB-2009 01:35:56 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:PCDD
Sample Text:5340-001-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



File:24FEB09M #1-347 Acq:24-FEB-2009 01:35:56 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:PCDD
Sample Text:5340-001-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



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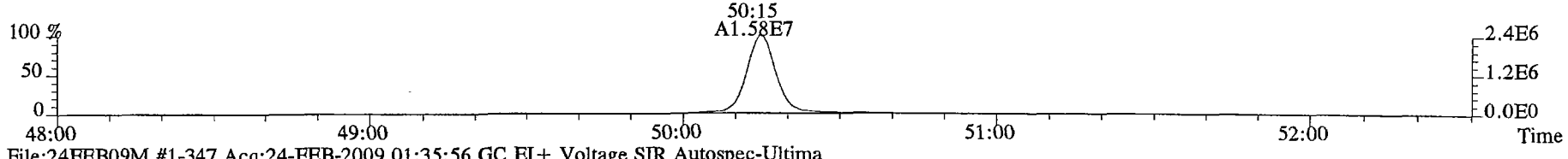
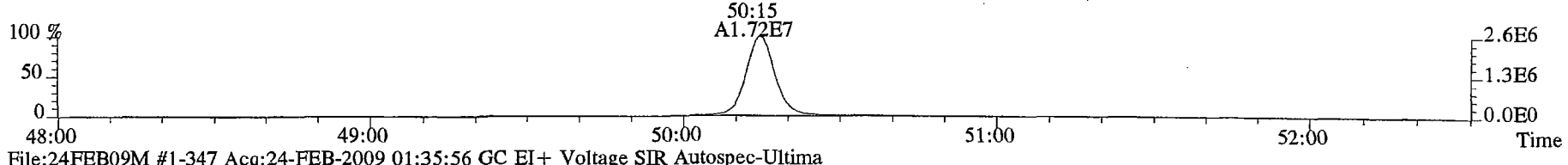
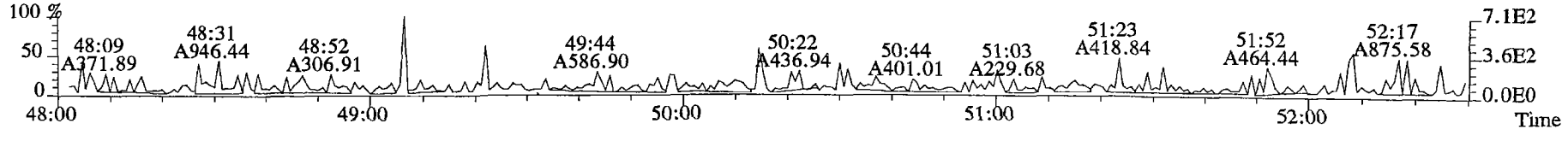
453.7831 S:14 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:5340-001-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



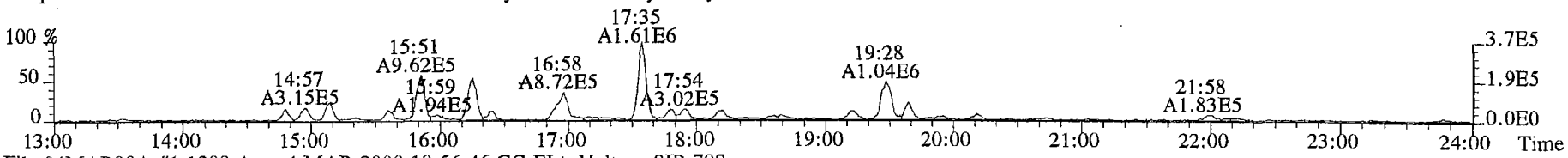
File:24FEB09M #1-347 Acq:24-FEB-2009 01:35:56 GC EI+ Voltage SIR Autospec-Ultima
455.7801 S:14 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:5340-001-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



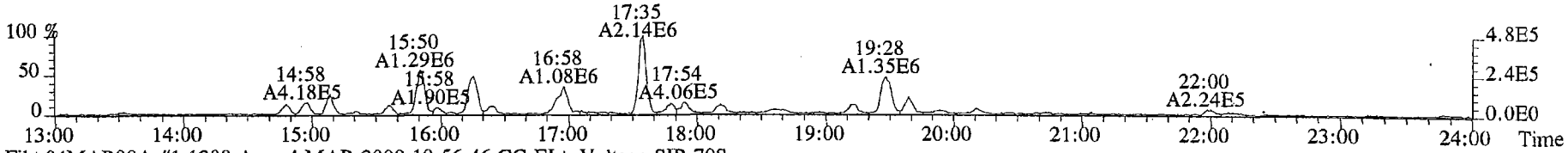
File:24FEB09M #1-347 Acq:24-FEB-2009 01:35:56 GC EI+ Voltage SIR Autospec-Ultima
513.6775 S:14 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:5340-001-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



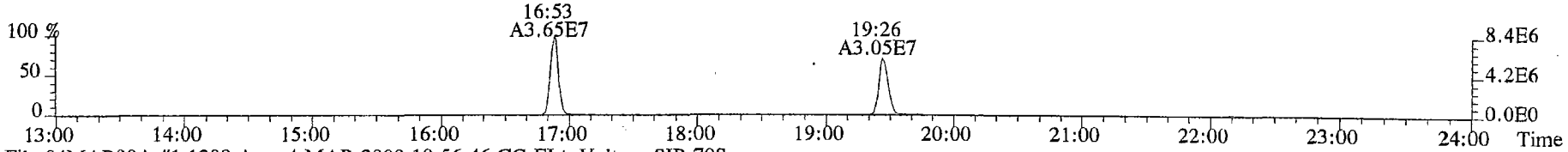
File:04MAR09A #1-1388 Acq: 4-MAR-2009 10:56:46 GC EI+ Voltage SIR 70S
303.9016 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:TCDF
Sample Text:5340-001-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:BS



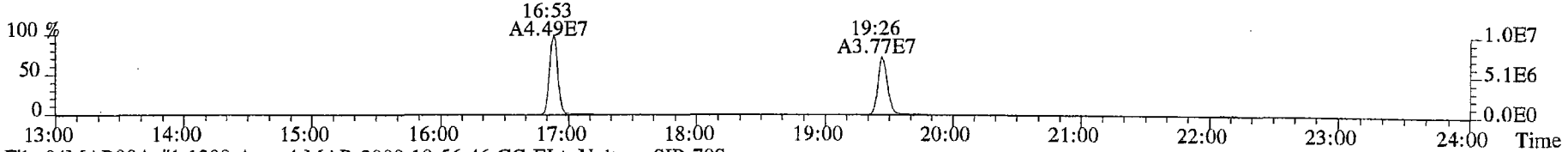
File:04MAR09A #1-1388 Acq: 4-MAR-2009 10:56:46 GC EI+ Voltage SIR 70S
305.8987 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:TCDF
Sample Text:5340-001-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:BS



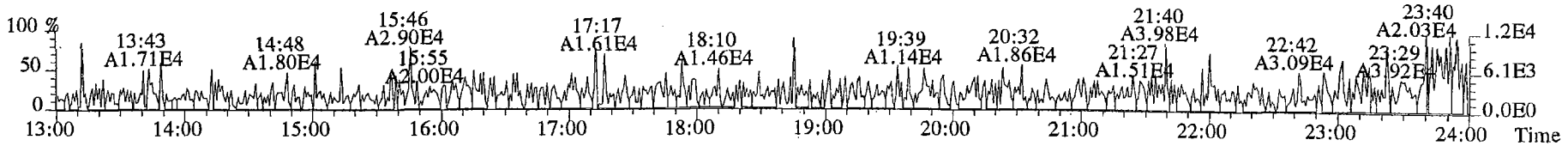
File:04MAR09A #1-1388 Acq: 4-MAR-2009 10:56:46 GC EI+ Voltage SIR 70S
315.9419 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:TCDF
Sample Text:5340-001-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:BS



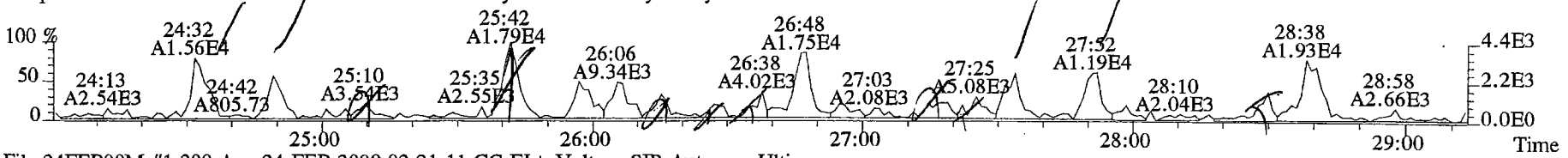
File:04MAR09A #1-1388 Acq: 4-MAR-2009 10:56:46 GC EI+ Voltage SIR 70S
317.9389 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:TCDF
Sample Text:5340-001-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:BS



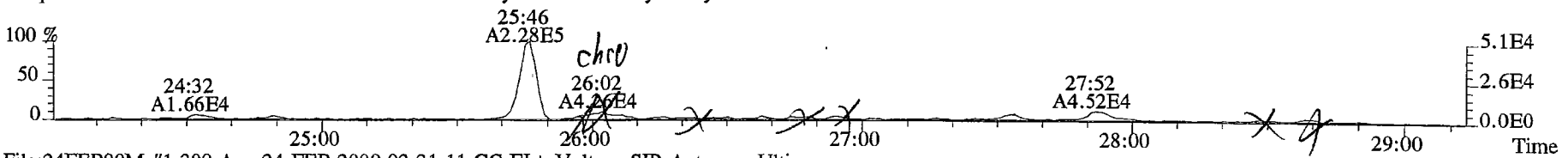
File:04MAR09A #1-1388 Acq: 4-MAR-2009 10:56:46 GC EI+ Voltage SIR 70S
375.8364 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:TCDF
Sample Text:5340-001-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:BS



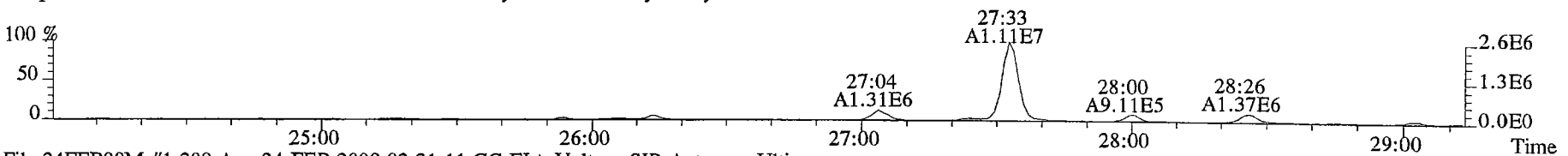
File:24FEB09M #1-390 Acq:24-FEB-2009 02:31:11 GC EI+ Voltage SIR Autospec-Ultima
319.8965 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:5340-002-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



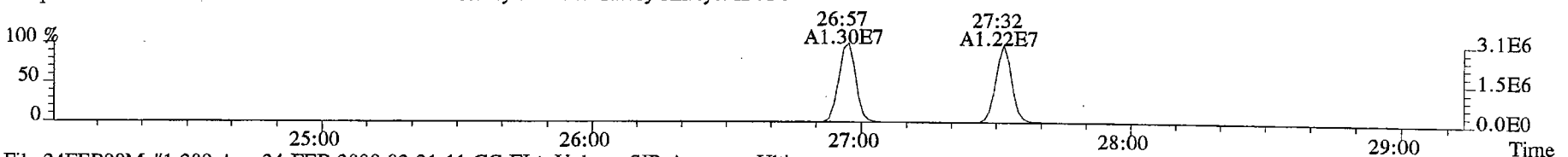
File:24FEB09M #1-390 Acq:24-FEB-2009 02:31:11 GC EI+ Voltage SIR Autospec-Ultima
321.8936 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:5340-002-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



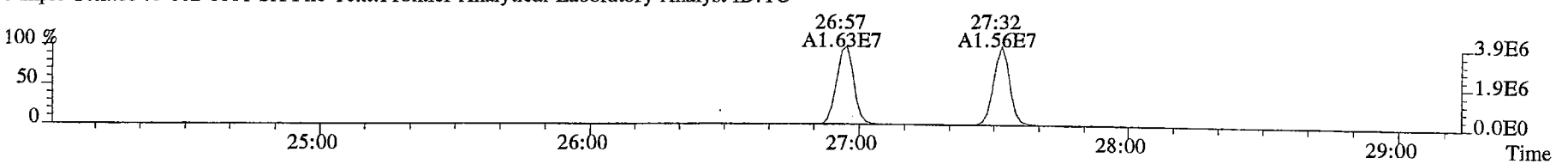
File:24FEB09M #1-390 Acq:24-FEB-2009 02:31:11 GC EI+ Voltage SIR Autospec-Ultima
327.8847 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:5340-002-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



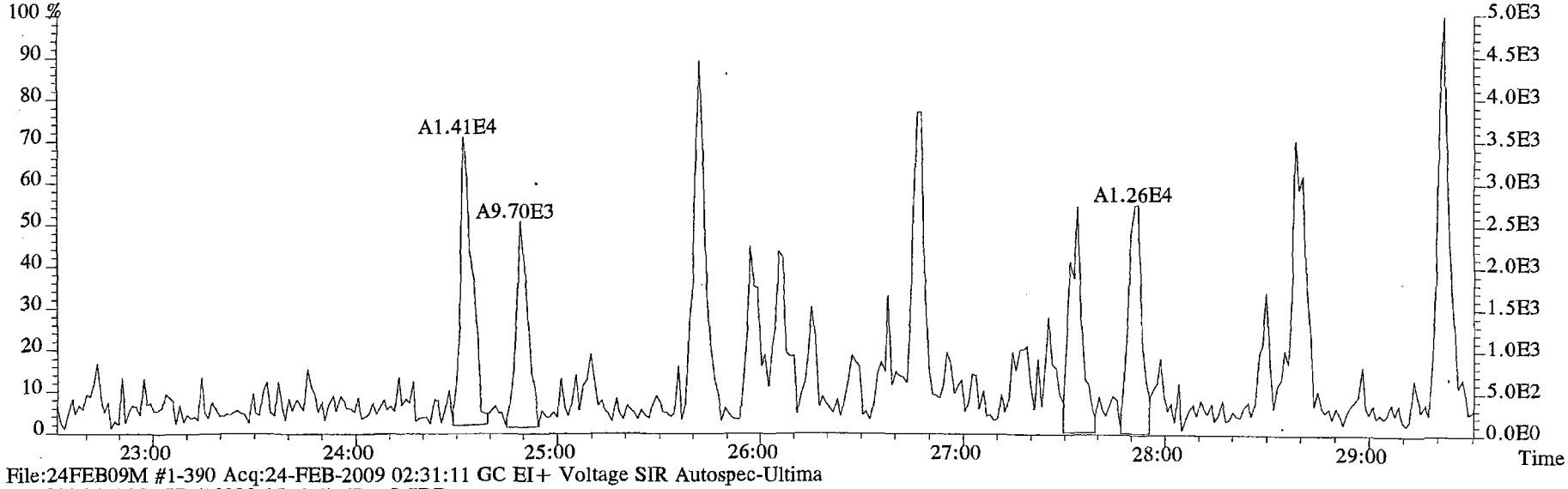
File:24FEB09M #1-390 Acq:24-FEB-2009 02:31:11 GC EI+ Voltage SIR Autospec-Ultima
331.9368 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:5340-002-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



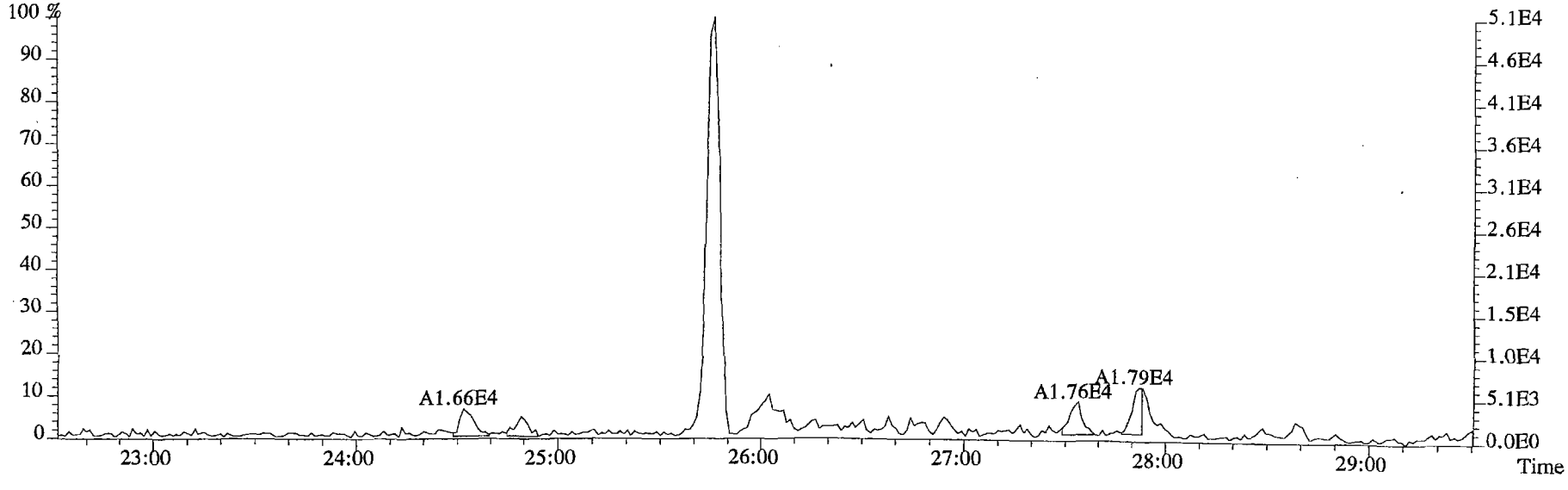
File:24FEB09M #1-390 Acq:24-FEB-2009 02:31:11 GC EI+ Voltage SIR Autospec-Ultima
333.9339 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:5340-002-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



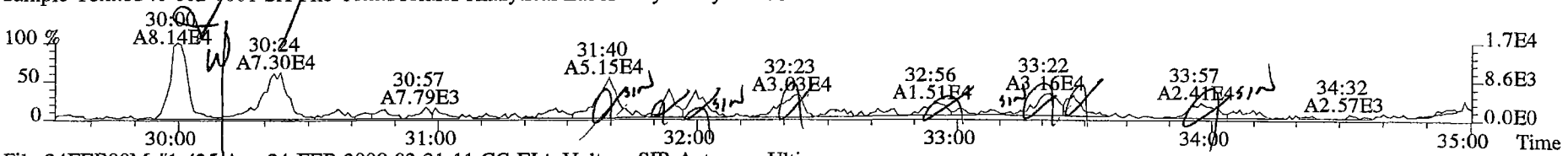
File:24FEB09M #1-390 Acq:24-FEB-2009 02:31:11 GC EI+ Voltage SIR Autospec-Ultima
319.8965 S:15 BSUB(10000,15,-3.0) Exp:PCDD
Sample Text:5340-002-0001-SA File Text:Frontier Analytical Laboratory



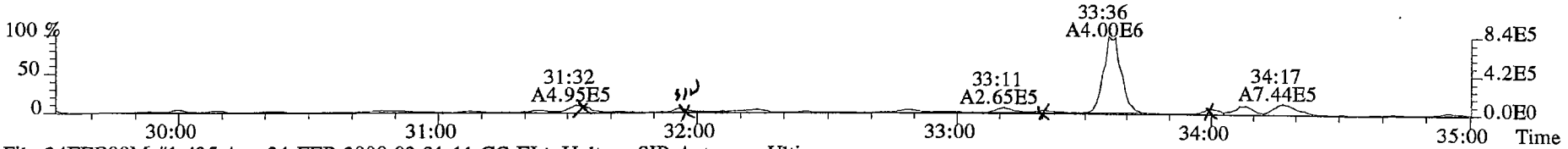
File:24FEB09M #1-390 Acq:24-FEB-2009 02:31:11 GC EI+ Voltage SIR Autospec-Ultima
321.8936 S:15 BSUB(10000,15,-3.0) Exp:PCDD
Sample Text:5340-002-0001-SA File Text:Frontier Analytical Laboratory



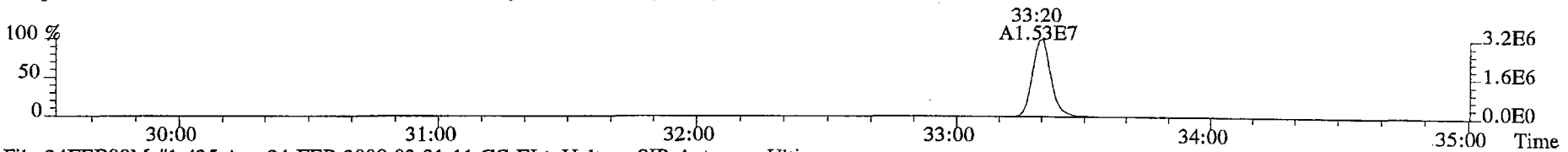
File:24FEB09M #1-425 Acq:24-FEB-2009 02:31:11 GC EI+ Voltage SIR Autospec-Ultima
355.8546 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:5340-002-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



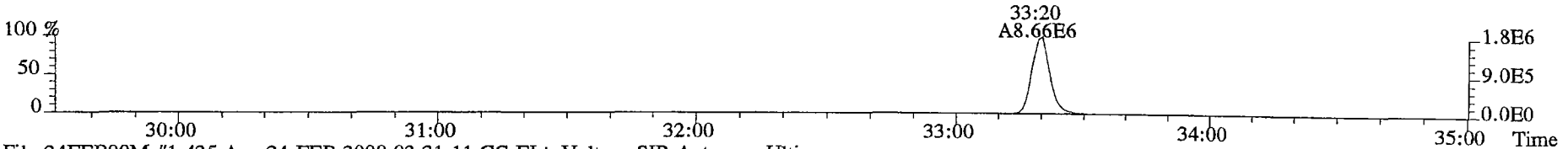
File:24FEB09M #1-425 Acq:24-FEB-2009 02:31:11 GC EI+ Voltage SIR Autospec-Ultima
357.8517 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:5340-002-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



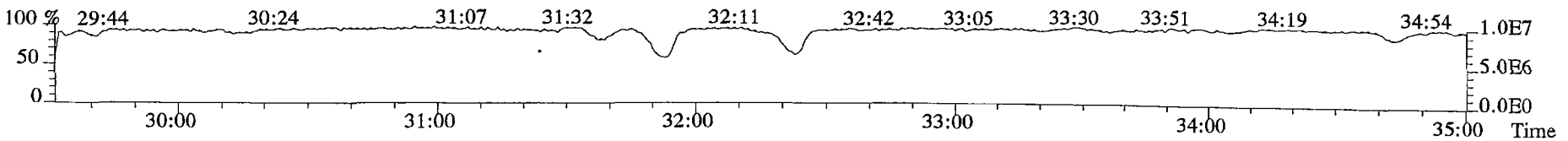
File:24FEB09M #1-425 Acq:24-FEB-2009 02:31:11 GC EI+ Voltage SIR Autospec-Ultima
367.8949 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:5340-002-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



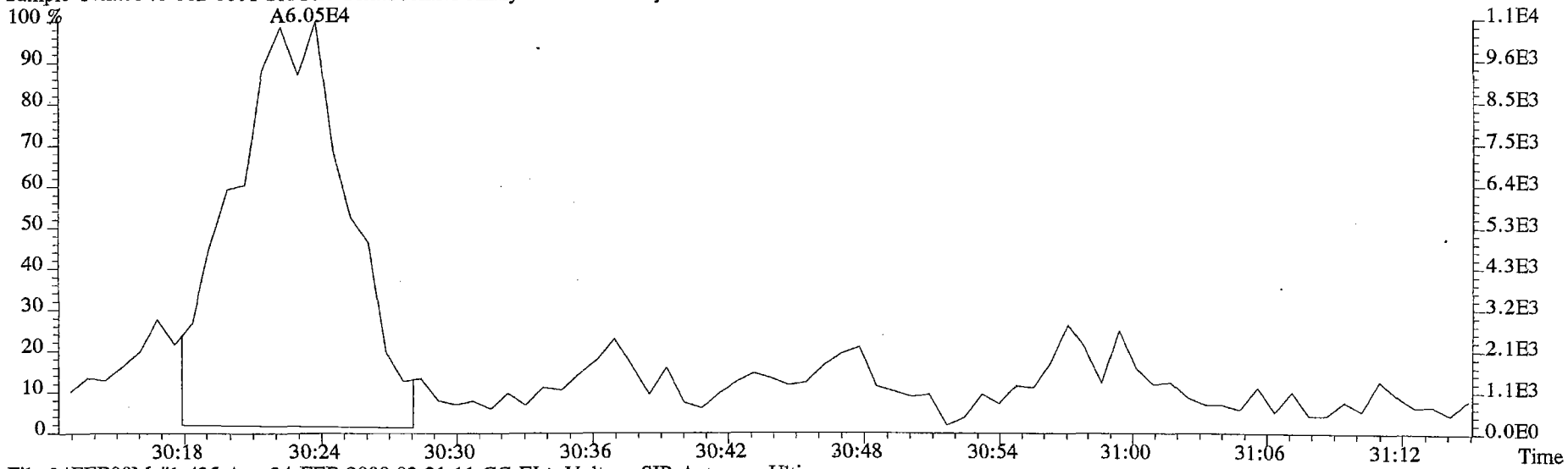
File:24FEB09M #1-425 Acq:24-FEB-2009 02:31:11 GC EI+ Voltage SIR Autospec-Ultima
369.8919 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:5340-002-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



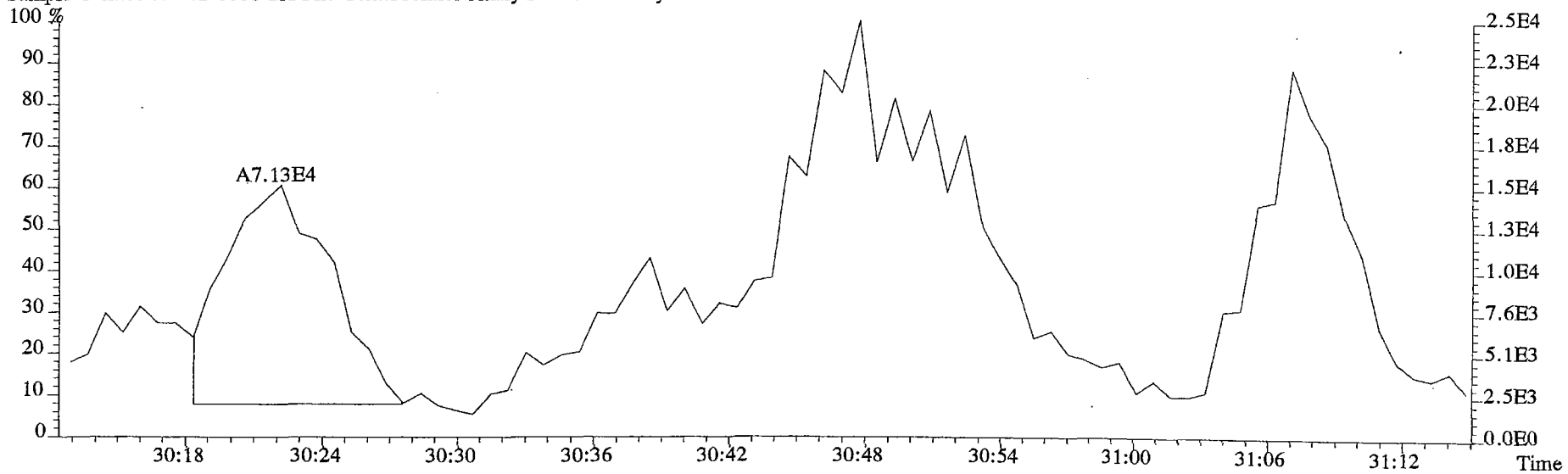
File:24FEB09M #1-425 Acq:24-FEB-2009 02:31:11 GC EI+ Voltage SIR Autospec-Ultima
366.9792 S:15 F:2 Exp:PCDD
Sample Text:5340-002-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



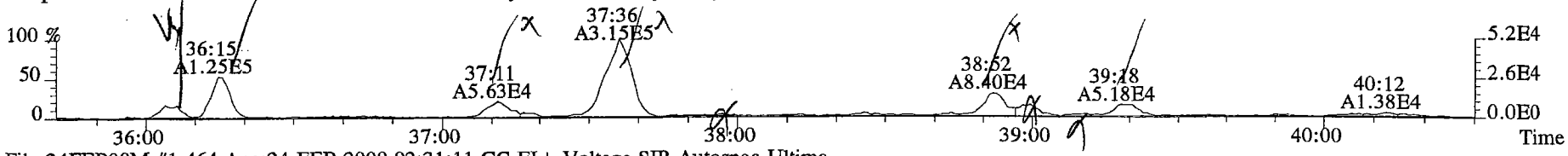
File:24FEB09M #1-425 Acq:24-FEB-2009 02:31:11 GC EI+ Voltage SIR Autospec-Ultima
355.8546 S:15 F:2 BSUB(10000,15,-3.0) Exp:PCDD
Sample Text:5340-002-0001-SA File Text:Frontier Analytical Laboratory



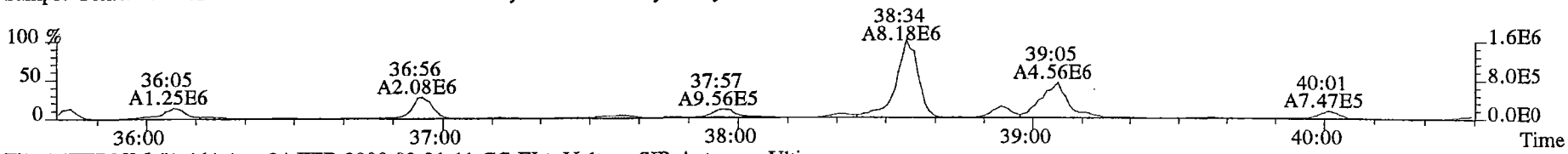
File:24FEB09M #1-425 Acq:24-FEB-2009 02:31:11 GC EI+ Voltage SIR Autospec-Ultima
357.8517 S:15 F:2 BSUB(10000,15,-3.0) Exp:PCDD
Sample Text:5340-002-0001-SA File Text:Frontier Analytical Laboratory



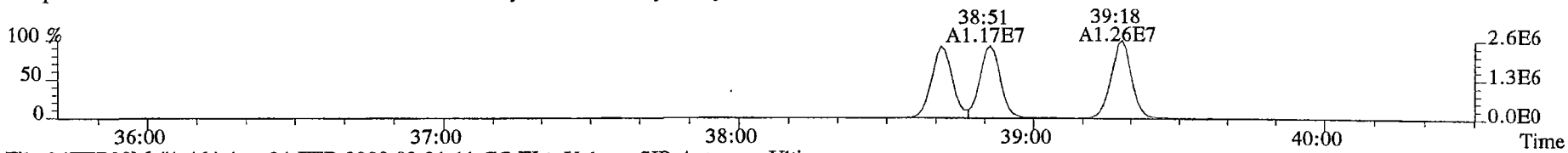
File:24FEB09M #1-464 Acq:24-FEB-2009 02:31:11 GC EI+ Voltage SIR Autospec-Ultima
389.8156 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:5340-002-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



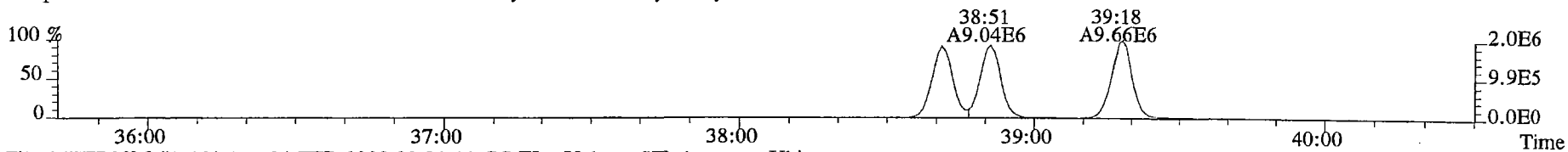
File:24FEB09M #1-464 Acq:24-FEB-2009 02:31:11 GC EI+ Voltage SIR Autospec-Ultima
391.8127 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:5340-002-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



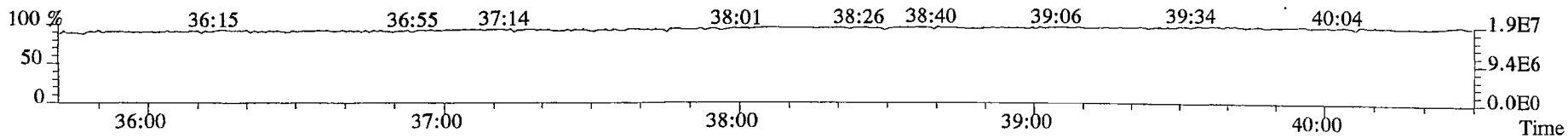
File:24FEB09M #1-464 Acq:24-FEB-2009 02:31:11 GC EI+ Voltage SIR Autospec-Ultima
401.8559 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:5340-002-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



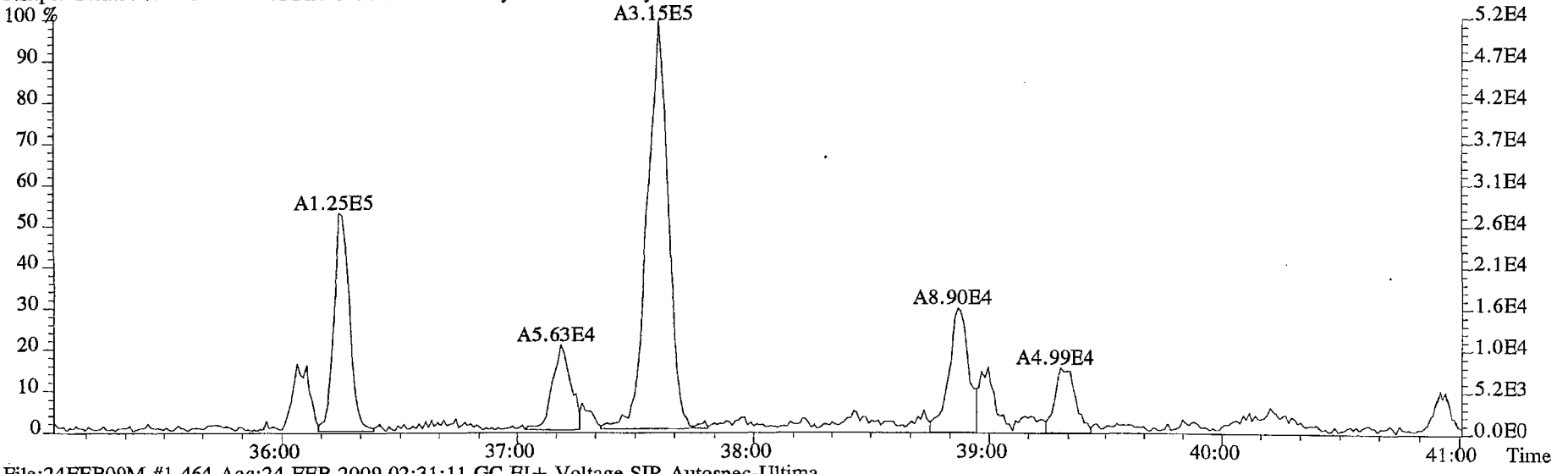
File:24FEB09M #1-464 Acq:24-FEB-2009 02:31:11 GC EI+ Voltage SIR Autospec-Ultima
403.8530 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:5340-002-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



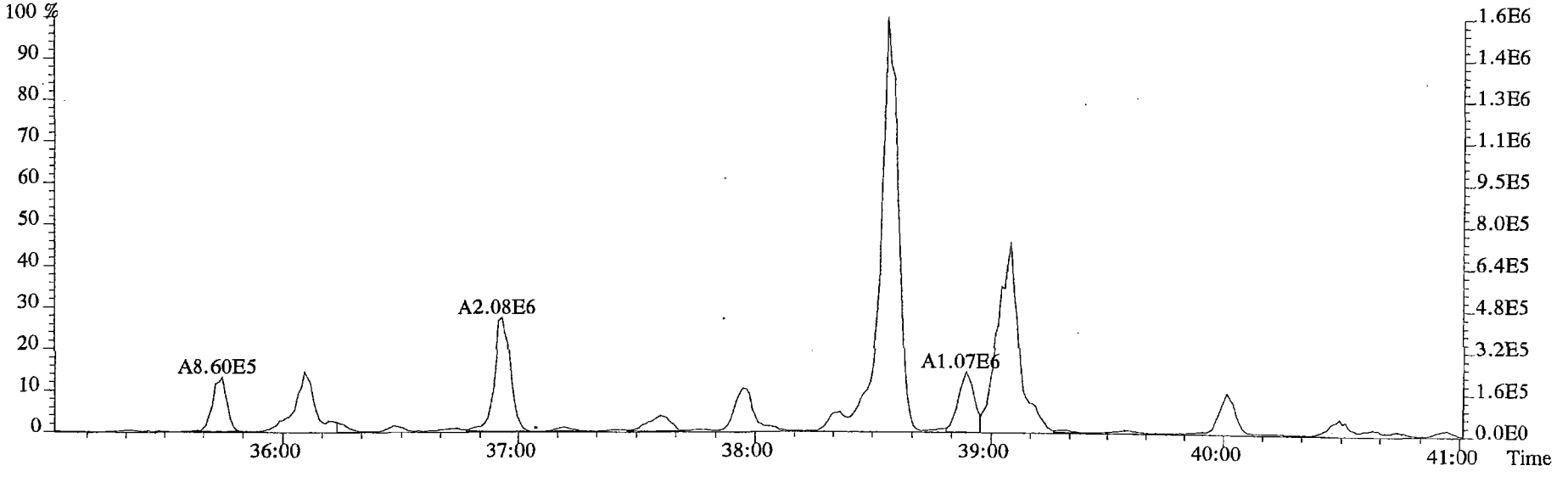
File:24FEB09M #1-464 Acq:24-FEB-2009 02:31:11 GC EI+ Voltage SIR Autospec-Ultima
380.9760 S:15 F:3 Exp:PCDD
Sample Text:5340-002-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



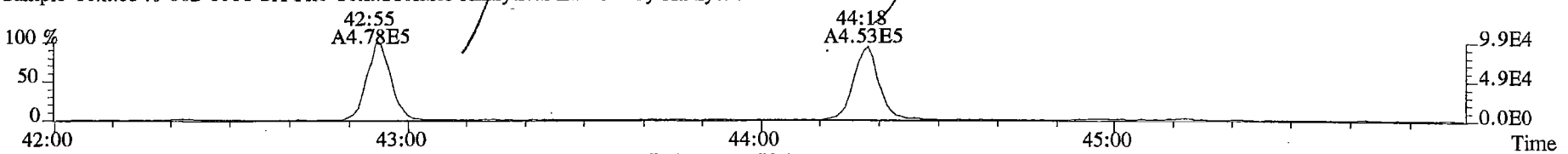
File:24FEB09M #1-464 Acq:24-FEB-2009 02:31:11 GC EI+ Voltage SIR Autospec-Ultima
389.8156 S:15 F:3 BSUB(10000,15,-3.0) Exp:PCDD
Sample Text:5340-002-0001-SA File Text:Frontier Analytical Laboratory



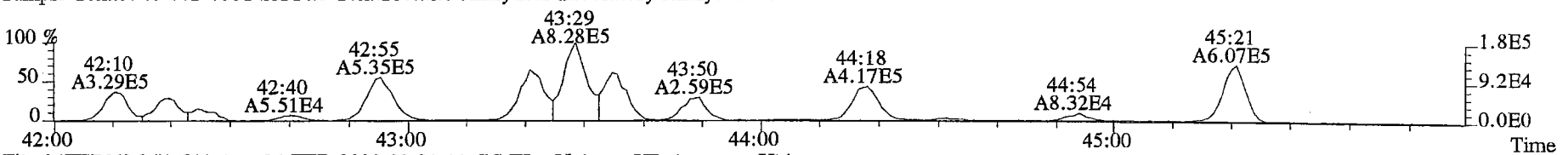
File:24FEB09M #1-464 Acq:24-FEB-2009 02:31:11 GC EI+ Voltage SIR Autospec-Ultima
391.8127 S:15 F:3 BSUB(10000,15,-3.0) Exp:PCDD
Sample Text:5340-002-0001-SA File Text:Frontier Analytical Laboratory



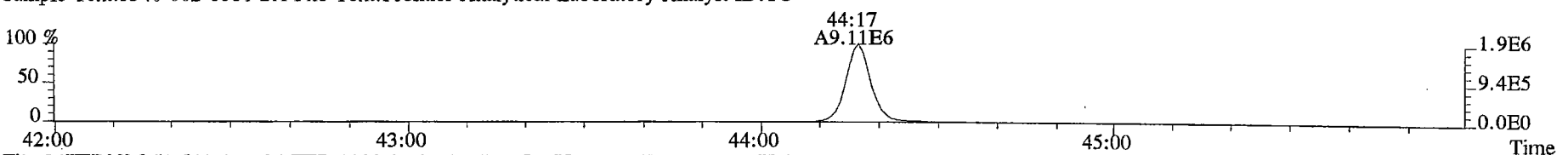
File:24FEB09M #1-541 Acq:24-FEB-2009 02:31:11 GC EI+ Voltage SIR Autospec-Ultima
423.7767 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:5340-002-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



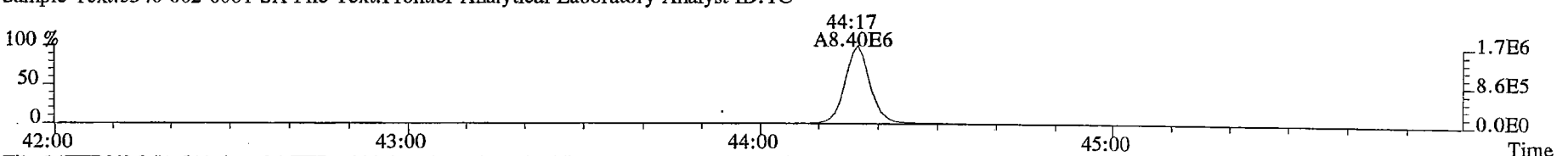
File:24FEB09M #1-541 Acq:24-FEB-2009 02:31:11 GC EI+ Voltage SIR Autospec-Ultima
425.7737 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:5340-002-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



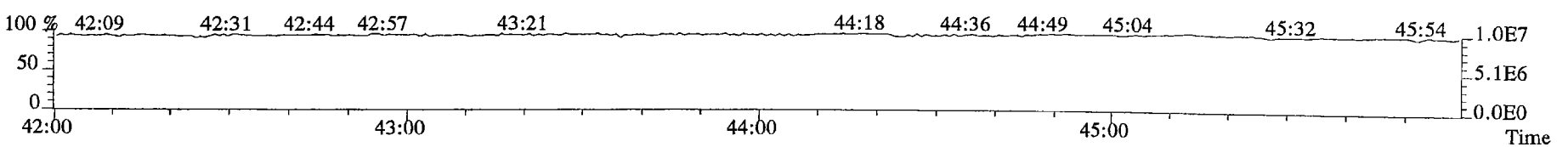
File:24FEB09M #1-541 Acq:24-FEB-2009 02:31:11 GC EI+ Voltage SIR Autospec-Ultima
435.8169 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:5340-002-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



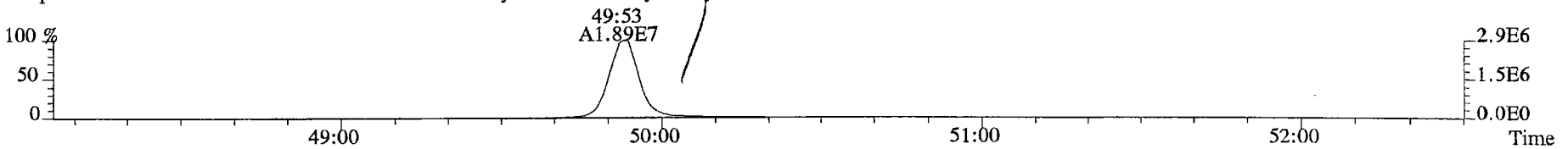
File:24FEB09M #1-541 Acq:24-FEB-2009 02:31:11 GC EI+ Voltage SIR Autospec-Ultima
437.8140 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:5340-002-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



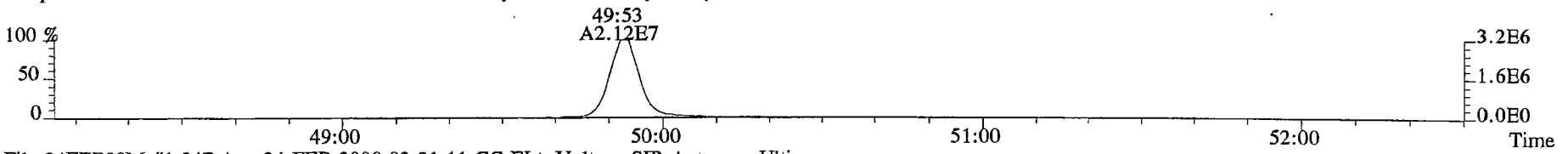
File:24FEB09M #1-541 Acq:24-FEB-2009 02:31:11 GC EI+ Voltage SIR Autospec-Ultima
430.9728 S:15 F:4 Exp:PCDD
Sample Text:5340-002-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



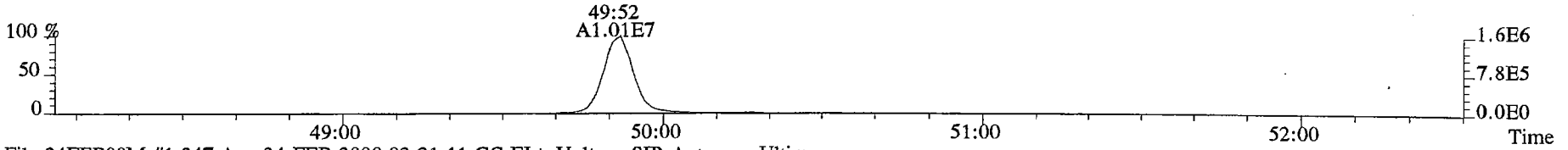
File:24FEB09M #1-347 Acq:24-FEB-2009 02:31:11 GC EI+ Voltage SIR Autospec-Ultima
457.7377 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:5340-002-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



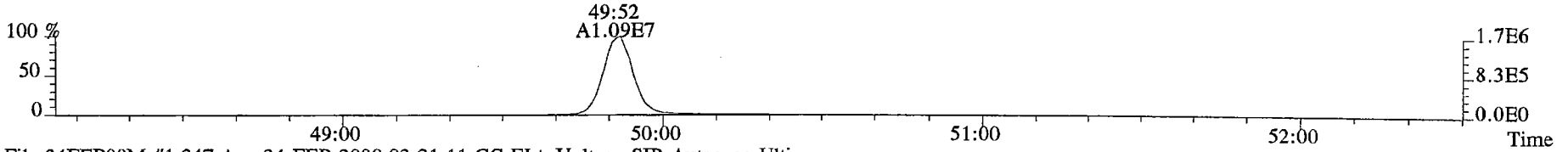
File:24FEB09M #1-347 Acq:24-FEB-2009 02:31:11 GC EI+ Voltage SIR Autospec-Ultima
459.7348 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:5340-002-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



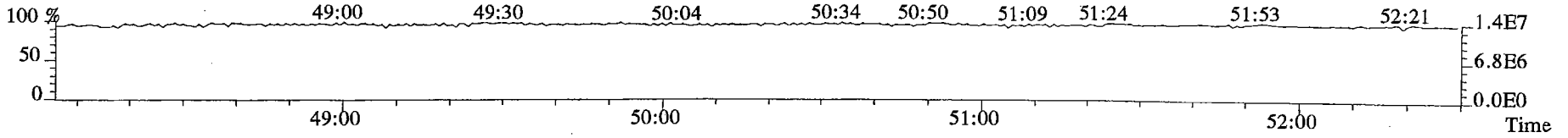
File:24FEB09M #1-347 Acq:24-FEB-2009 02:31:11 GC EI+ Voltage SIR Autospec-Ultima
469.7780 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:5340-002-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



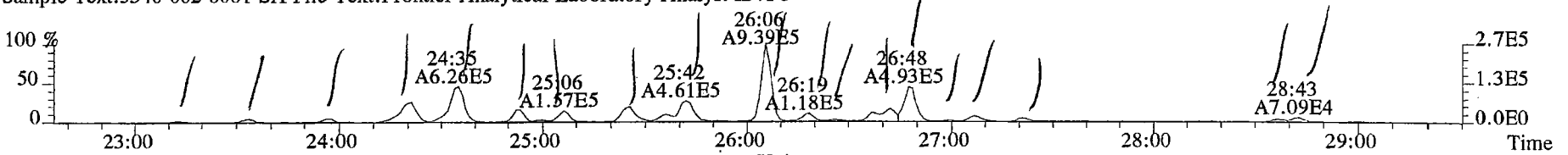
File:24FEB09M #1-347 Acq:24-FEB-2009 02:31:11 GC EI+ Voltage SIR Autospec-Ultima
471.7750 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:5340-002-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



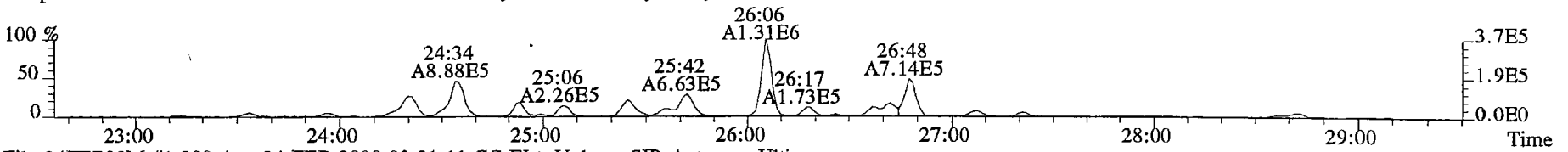
File:24FEB09M #1-347 Acq:24-FEB-2009 02:31:11 GC EI+ Voltage SIR Autospec-Ultima
454.9728 S:15 F:5 Exp:PCDD
Sample Text:5340-002-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



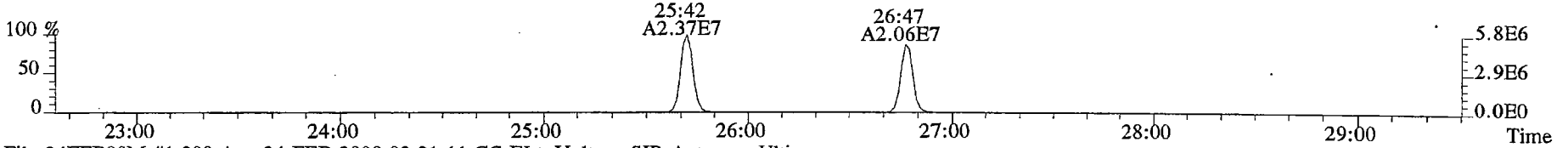
File:24FEB09M #1-390 Acq:24-FEB-2009 02:31:11 GC EI+ Voltage SIR Autospec-Ultima
303.9016 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:5340-002-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



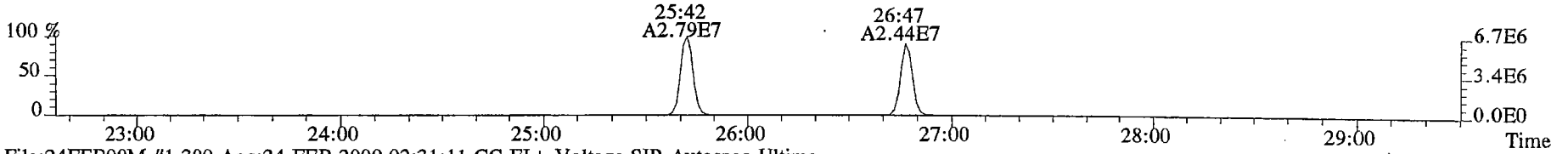
File:24FEB09M #1-390 Acq:24-FEB-2009 02:31:11 GC EI+ Voltage SIR Autospec-Ultima
305.8987 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:5340-002-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



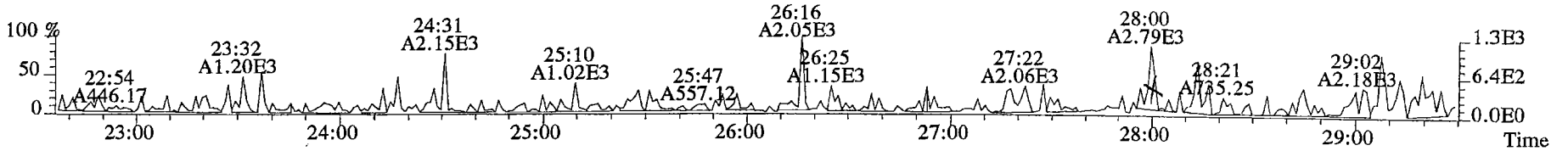
File:24FEB09M #1-390 Acq:24-FEB-2009 02:31:11 GC EI+ Voltage SIR Autospec-Ultima
315.9419 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:5340-002-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



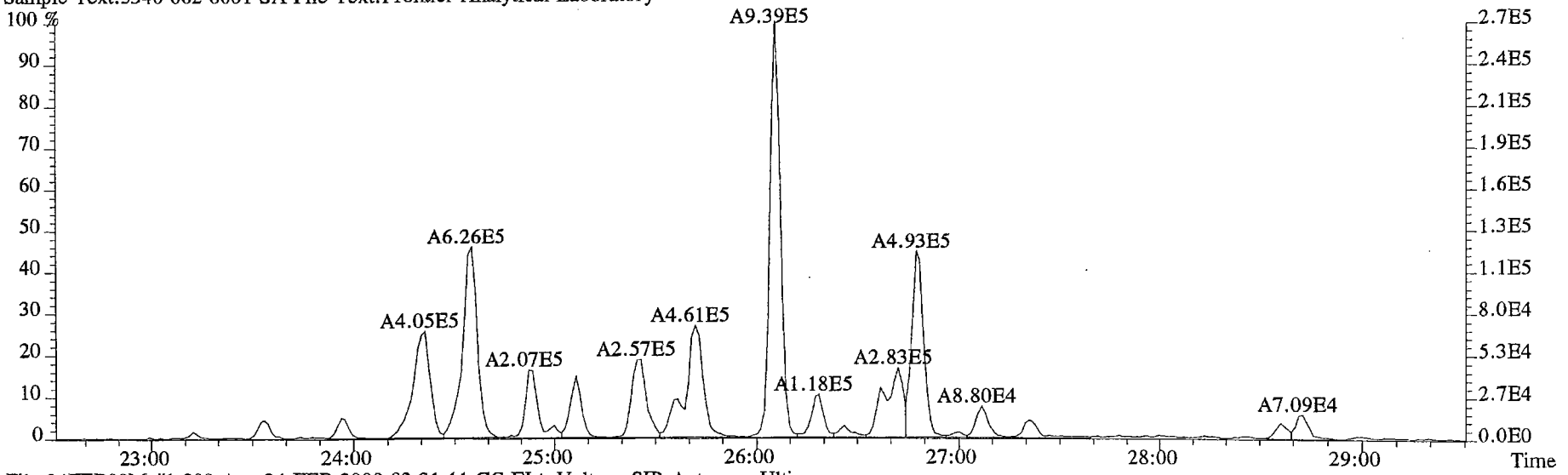
File:24FEB09M #1-390 Acq:24-FEB-2009 02:31:11 GC EI+ Voltage SIR Autospec-Ultima
317.9389 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:5340-002-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



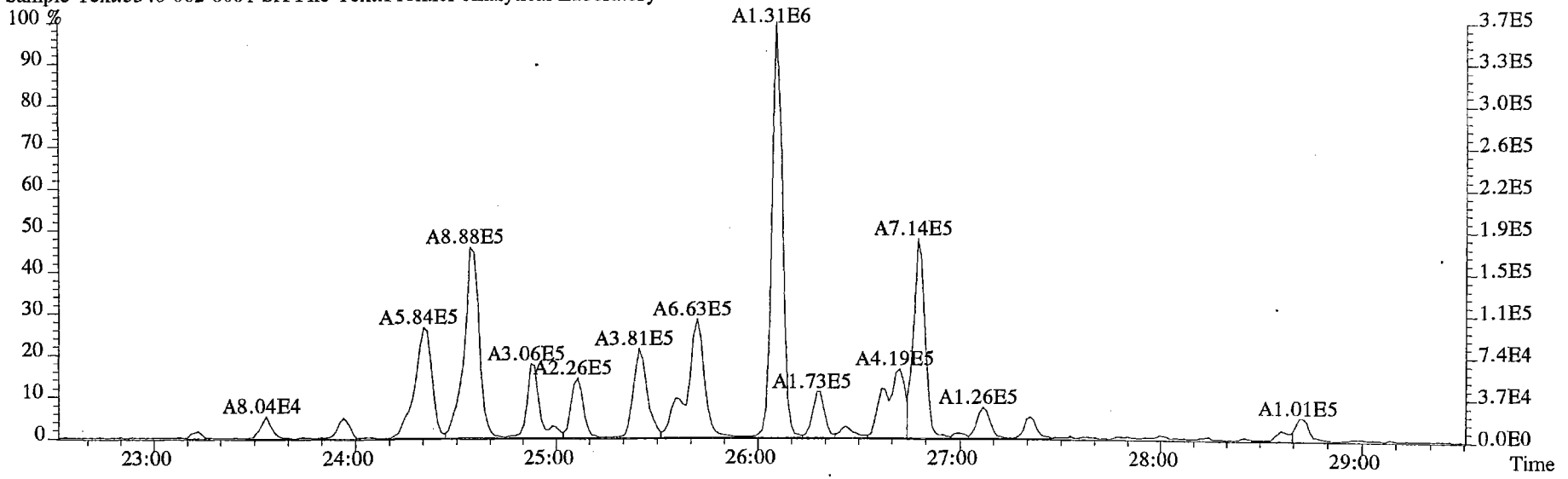
File:24FEB09M #1-390 Acq:24-FEB-2009 02:31:11 GC EI+ Voltage SIR Autospec-Ultima
375.8364 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:5340-002-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



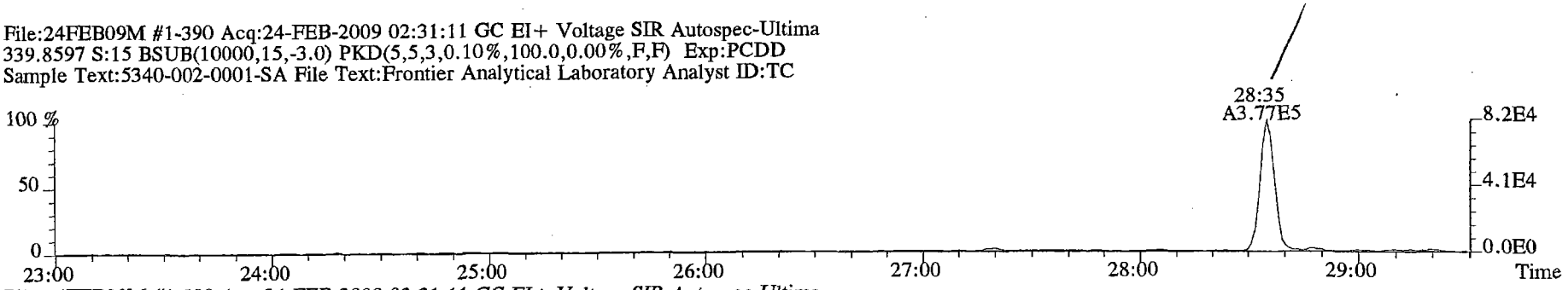
File:24FEB09M #1-390 Acq:24-FEB-2009 02:31:11 GC EI+ Voltage SIR Autospec-Ultima
303.9016 S:15 BSUB(10000,15,-3.0) Exp:PCDD
Sample Text:5340-002-0001-SA File Text:Frontier Analytical Laboratory



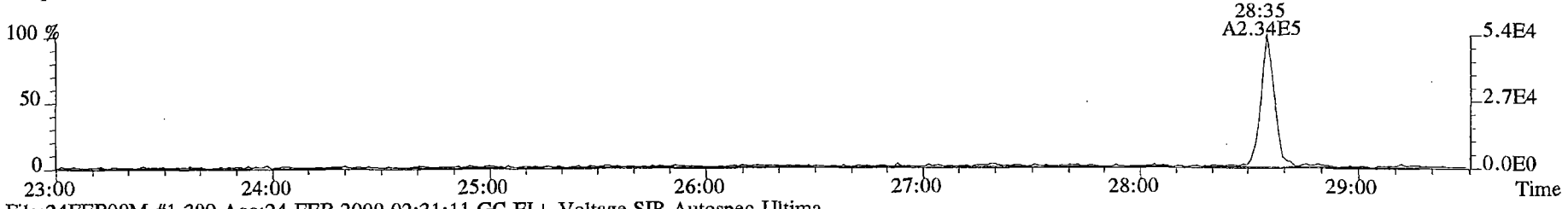
File:24FEB09M #1-390 Acq:24-FEB-2009 02:31:11 GC EI+ Voltage SIR Autospec-Ultima
305.8987 S:15 BSUB(10000,15,-3.0) Exp:PCDD
Sample Text:5340-002-0001-SA File Text:Frontier Analytical Laboratory



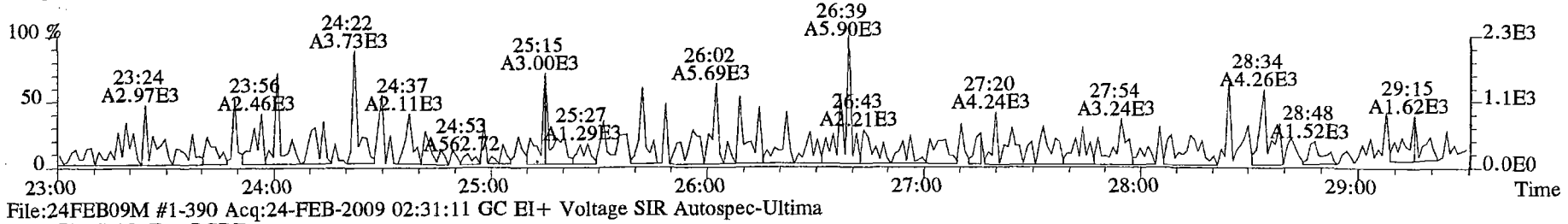
File:24FEB09M #1-390 Acq:24-FEB-2009 02:31:11 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:5340-002-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



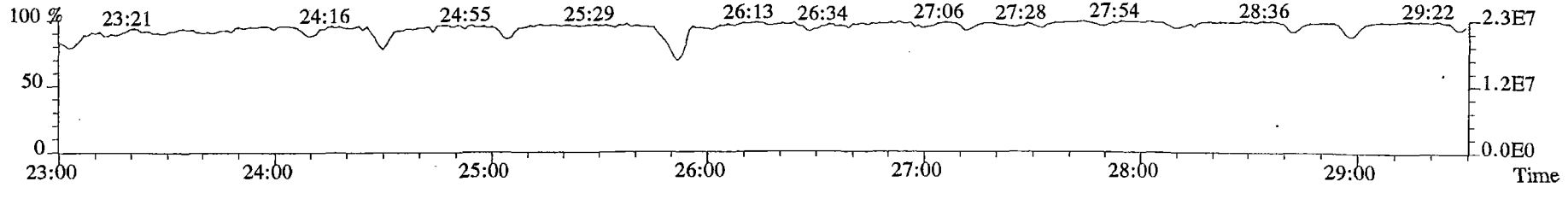
File:24FEB09M #1-390 Acq:24-FEB-2009 02:31:11 GC EI+ Voltage SIR Autospec-Ultima
341.8568 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:5340-002-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



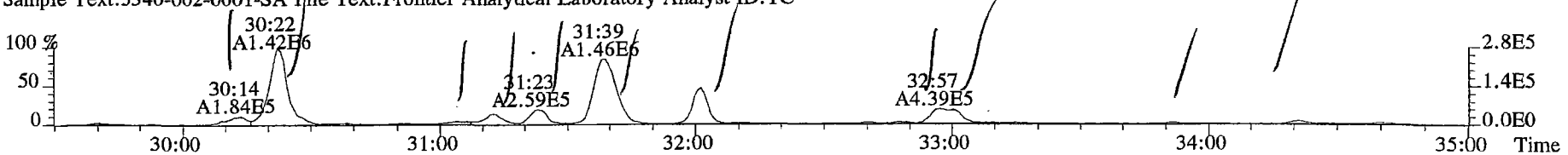
File:24FEB09M #1-390 Acq:24-FEB-2009 02:31:11 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:5340-002-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



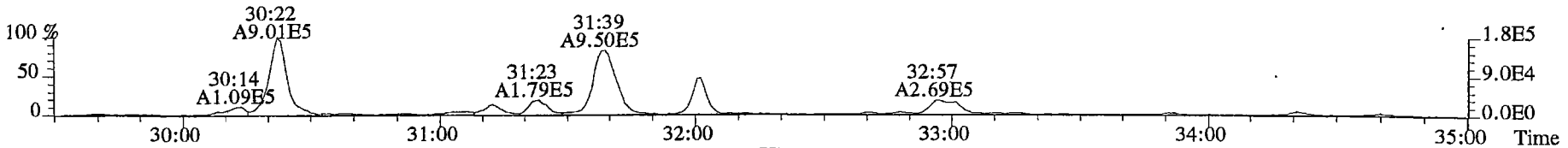
File:24FEB09M #1-390 Acq:24-FEB-2009 02:31:11 GC EI+ Voltage SIR Autospec-Ultima
330.9792 S:15 Exp:PCDD
Sample Text:5340-002-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



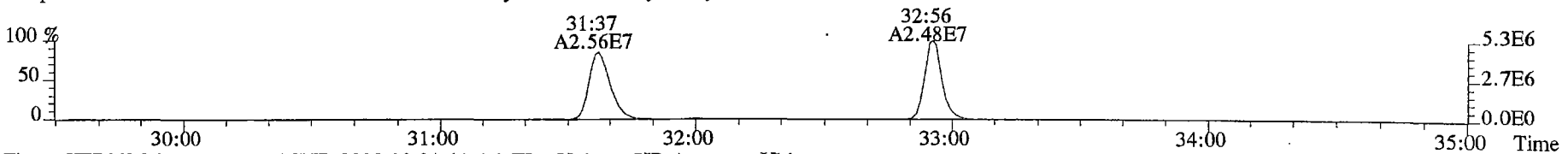
File:24FEB09M #1-425 Acq:24-FEB-2009 02:31:11 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:5340-002-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



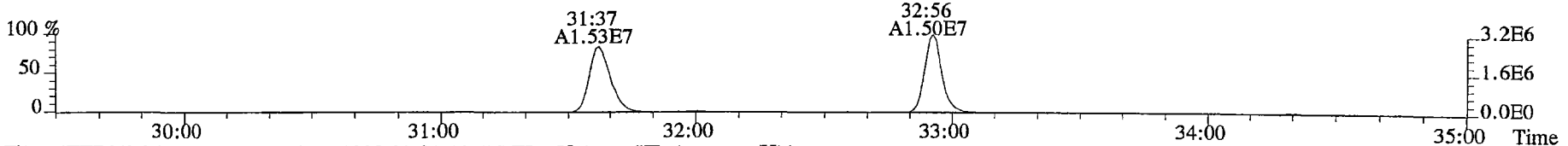
File:24FEB09M #1-425 Acq:24-FEB-2009 02:31:11 GC EI+ Voltage SIR Autospec-Ultima
341.8568 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:5340-002-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



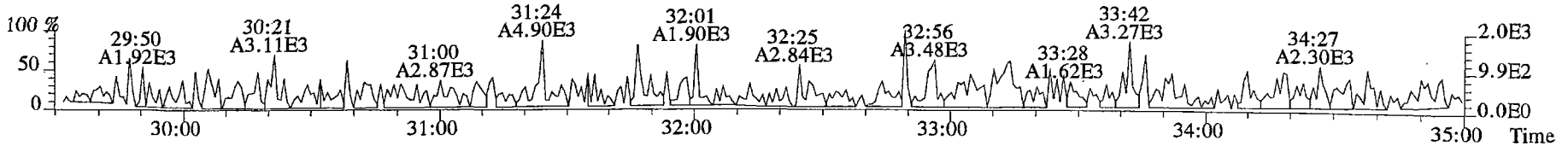
File:24FEB09M #1-425 Acq:24-FEB-2009 02:31:11 GC EI+ Voltage SIR Autospec-Ultima
351.9000 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:5340-002-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



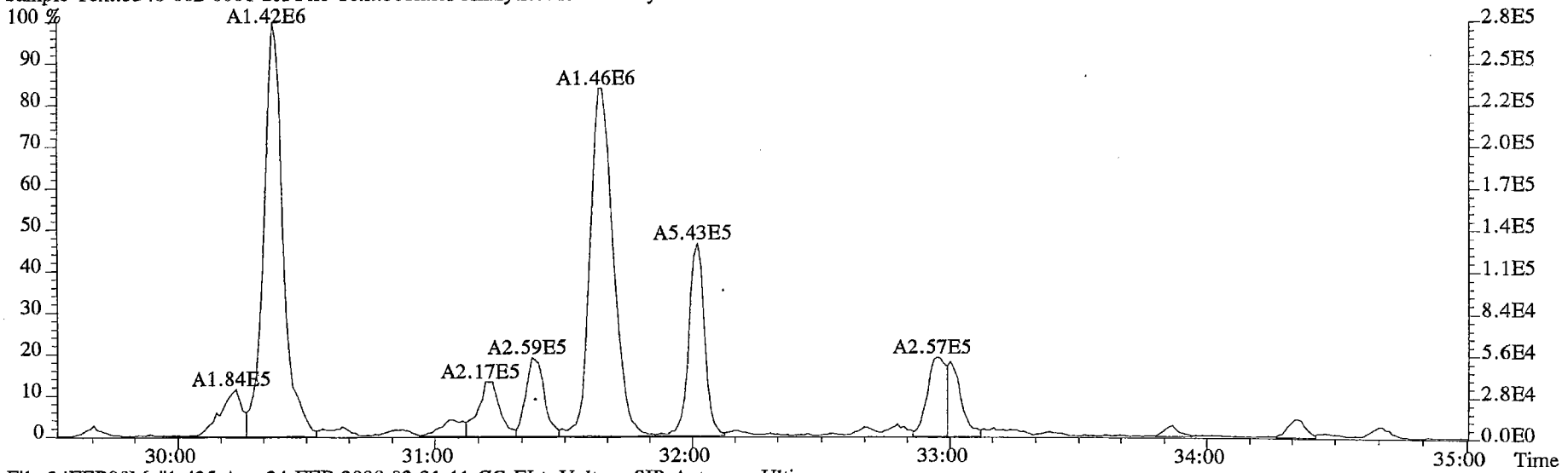
File:24FEB09M #1-425 Acq:24-FEB-2009 02:31:11 GC EI+ Voltage SIR Autospec-Ultima
353.8970 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:5340-002-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



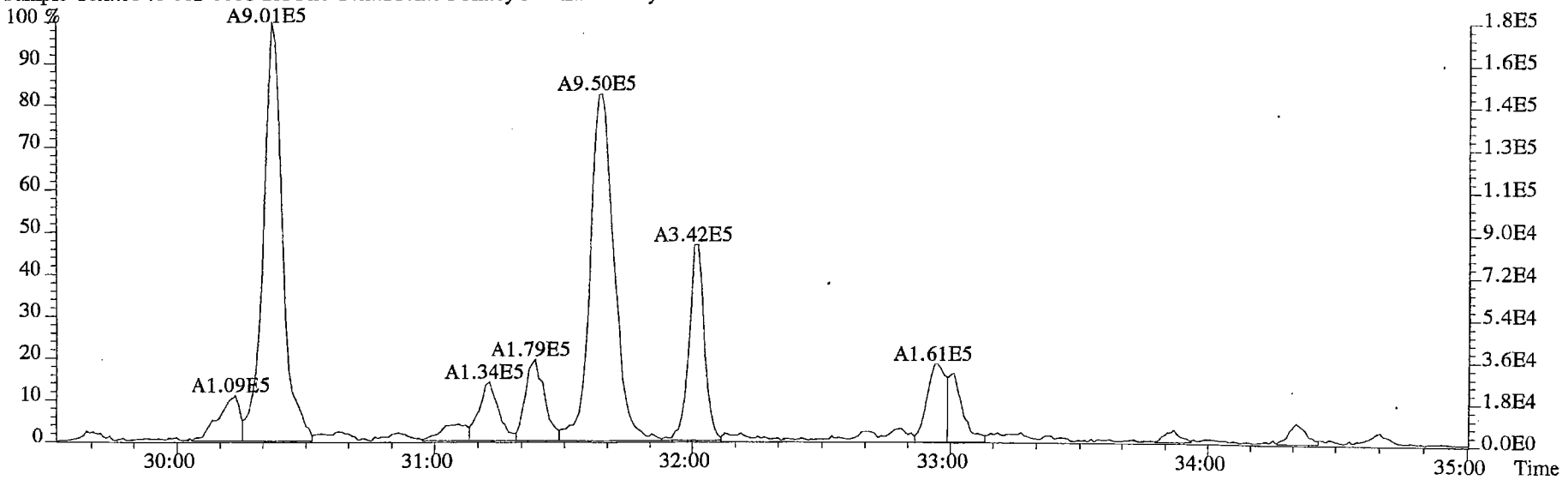
File:24FEB09M #1-425 Acq:24-FEB-2009 02:31:11 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:5340-002-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



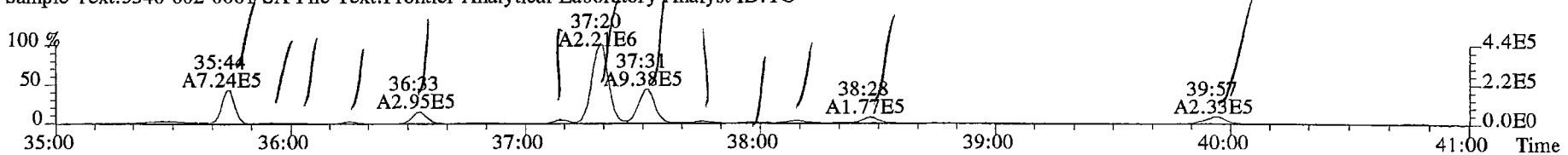
File:24FEB09M #1-425 Acq:24-FEB-2009 02:31:11 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:15 F:2 BSUB(10000,15,-3.0) Exp:PCDD
Sample Text:5340-002-0001-SA File Text:Frontier Analytical Laboratory



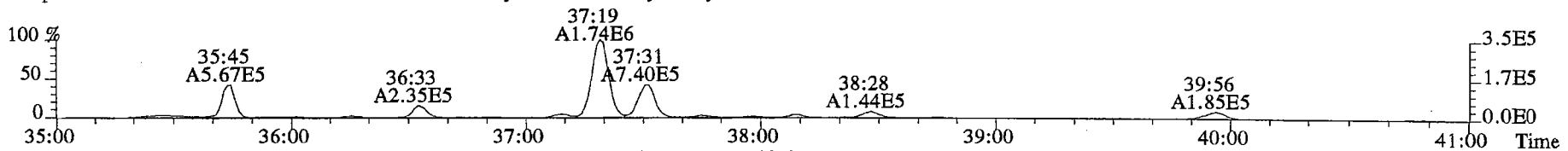
File:24FEB09M #1-425 Acq:24-FEB-2009 02:31:11 GC EI+ Voltage SIR Autospec-Ultima
341.8568 S:15 F:2 BSUB(10000,15,-3.0) Exp:PCDD
Sample Text:5340-002-0001-SA File Text:Frontier Analytical Laboratory



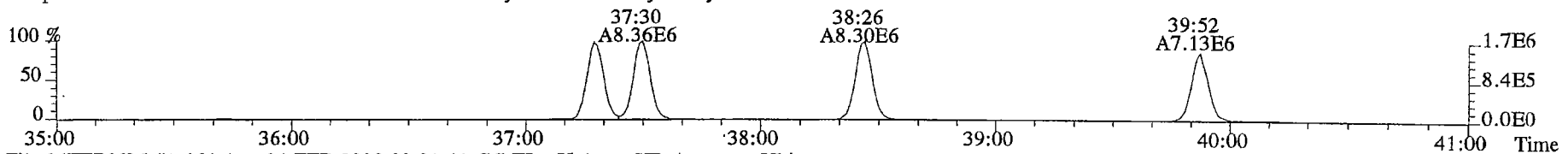
File:24FEB09M #1-464 Acq:24-FEB-2009 02:31:11 GC EI+ Voltage SIR Autospec-Ultima
373.8207 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:5340-002-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



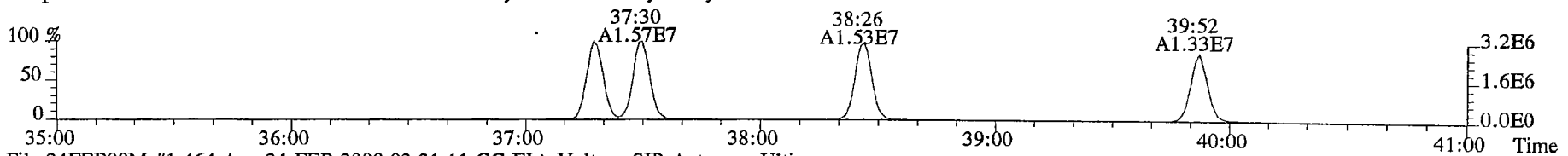
File:24FEB09M #1-464 Acq:24-FEB-2009 02:31:11 GC EI+ Voltage SIR Autospec-Ultima
375.8178 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:5340-002-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



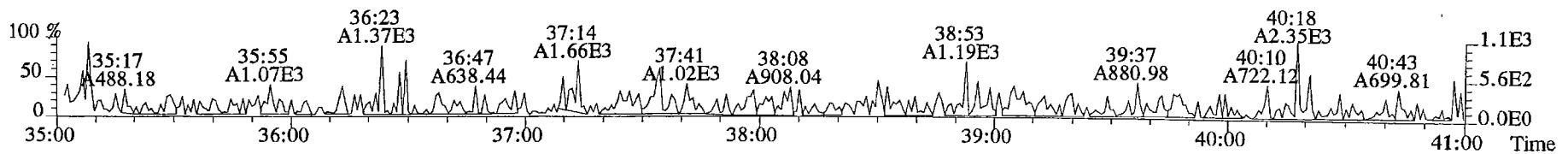
File:24FEB09M #1-464 Acq:24-FEB-2009 02:31:11 GC EI+ Voltage SIR Autospec-Ultima
383.8639 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:5340-002-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



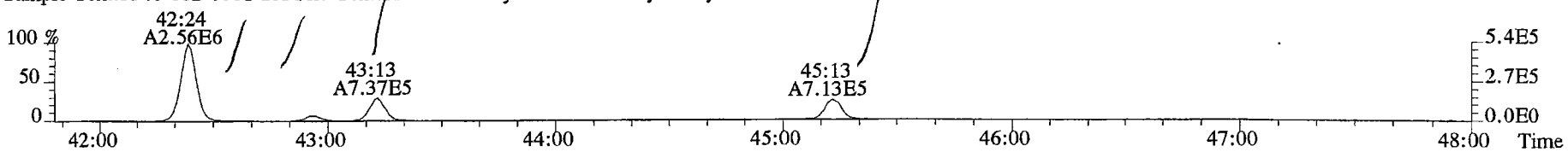
File:24FEB09M #1-464 Acq:24-FEB-2009 02:31:11 GC EI+ Voltage SIR Autospec-Ultima
385.8610 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:5340-002-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



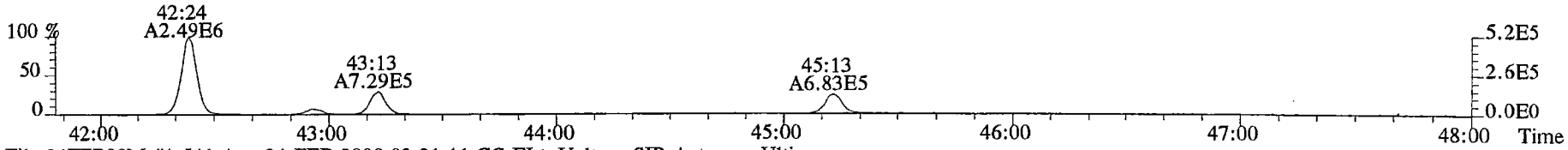
File:24FEB09M #1-464 Acq:24-FEB-2009 02:31:11 GC EI+ Voltage SIR Autospec-Ultima
445.7555 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:5340-002-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



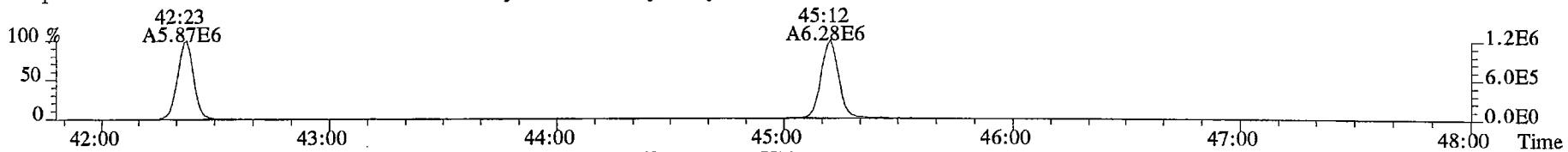
File:24FEB09M #1-541 Acq:24-FEB-2009 02:31:11 GC EI+ Voltage SIR Autospec-Ultima
407.7818 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:5340-002-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



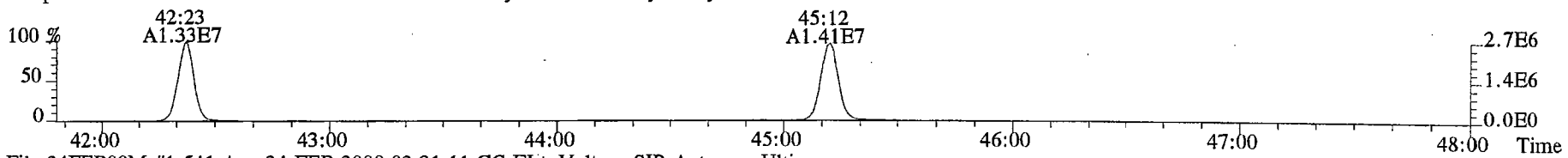
File:24FEB09M #1-541 Acq:24-FEB-2009 02:31:11 GC EI+ Voltage SIR Autospec-Ultima
409.7788 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:5340-002-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



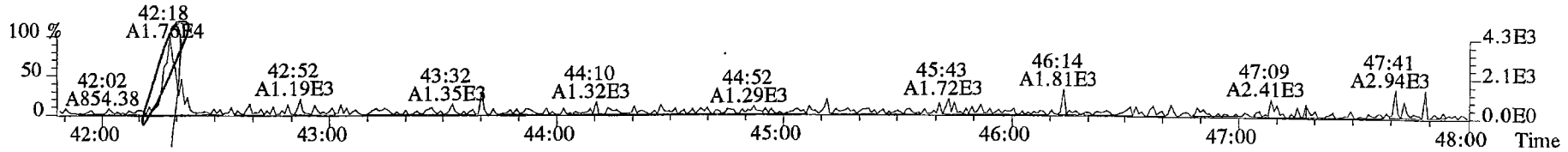
File:24FEB09M #1-541 Acq:24-FEB-2009 02:31:11 GC EI+ Voltage SIR Autospec-Ultima
417.8253 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:5340-002-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



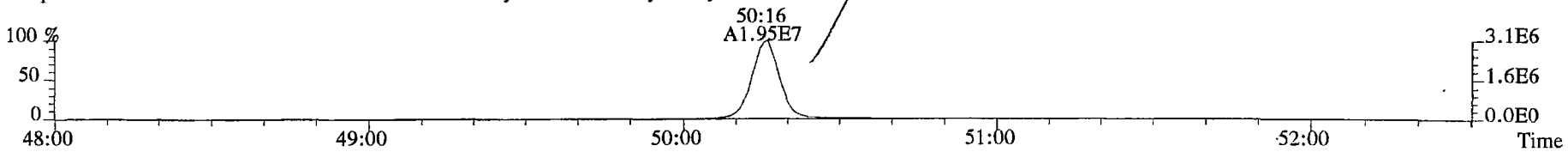
File:24FEB09M #1-541 Acq:24-FEB-2009 02:31:11 GC EI+ Voltage SIR Autospec-Ultima
419.8220 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:5340-002-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



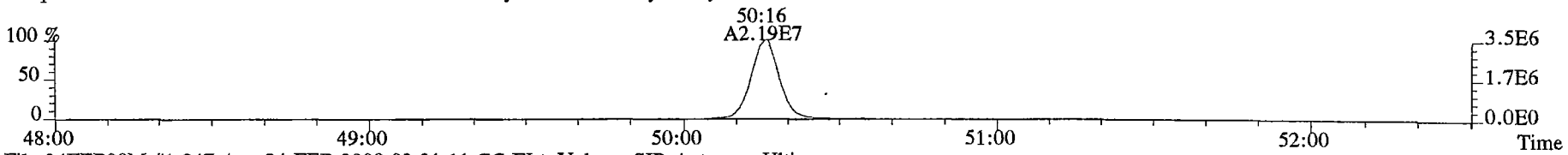
File:24FEB09M #1-541 Acq:24-FEB-2009 02:31:11 GC EI+ Voltage SIR Autospec-Ultima
479.7165 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:5340-002-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



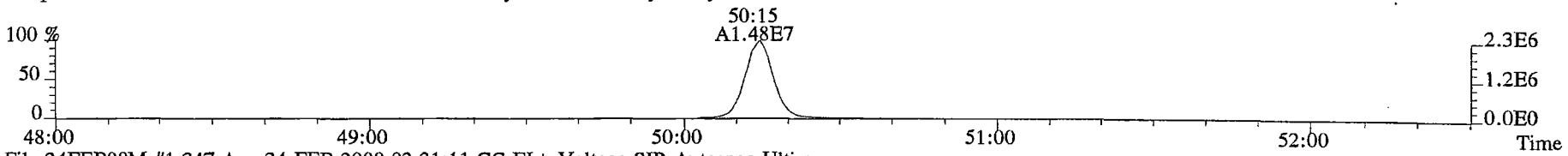
File:24FEB09M #1-347 Acq:24-FEB-2009 02:31:11 GC EI+ Voltage SIR Autospec-Ultima
441.7428 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:5340-002-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



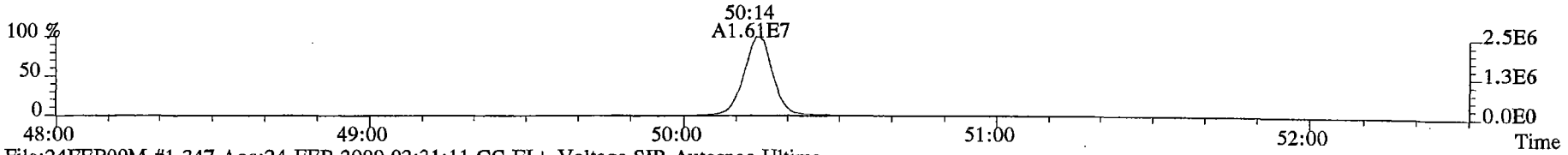
File:24FEB09M #1-347 Acq:24-FEB-2009 02:31:11 GC EI+ Voltage SIR Autospec-Ultima
443.7398 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:5340-002-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



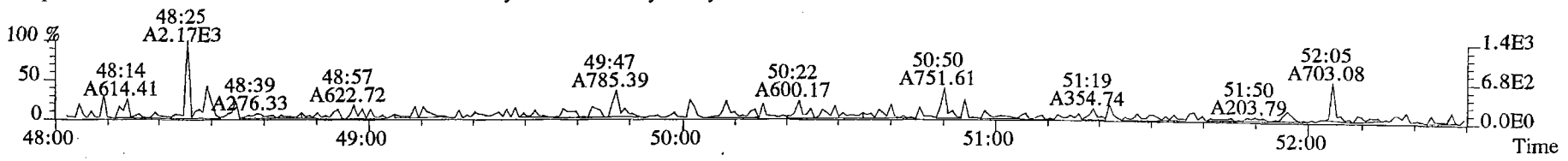
File:24FEB09M #1-347 Acq:24-FEB-2009 02:31:11 GC EI+ Voltage SIR Autospec-Ultima
453.7831 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:5340-002-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



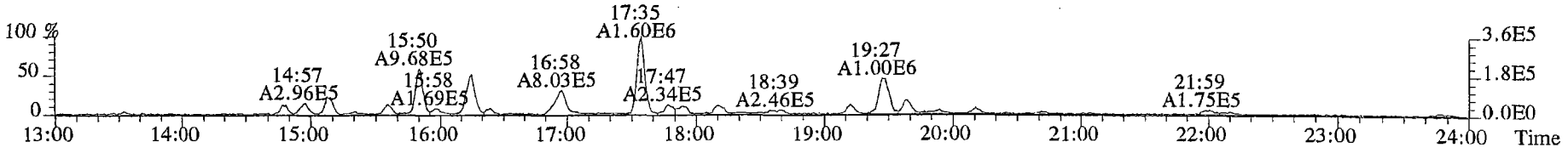
File:24FEB09M #1-347 Acq:24-FEB-2009 02:31:11 GC EI+ Voltage SIR Autospec-Ultima
455.7801 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:5340-002-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



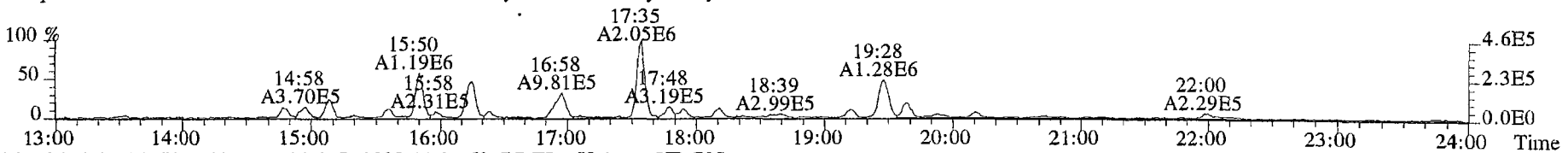
File:24FEB09M #1-347 Acq:24-FEB-2009 02:31:11 GC EI+ Voltage SIR Autospec-Ultima
513.6775 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:5340-002-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:TC



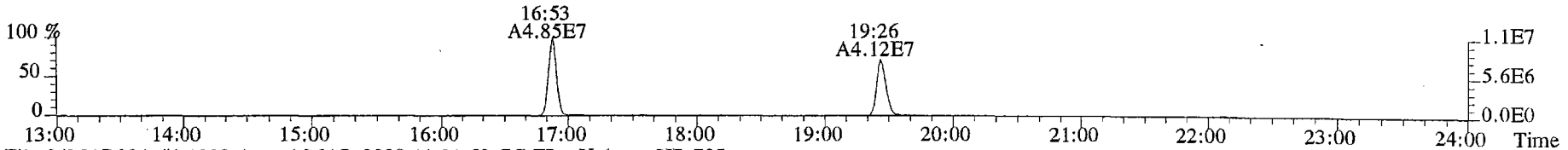
File:04MAR09A #1-1388 Acq: 4-MAR-2009 11:31:50 GC EI+ Voltage SIR 70S
303.9016 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:TCDF
Sample Text:5340-002-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:BS



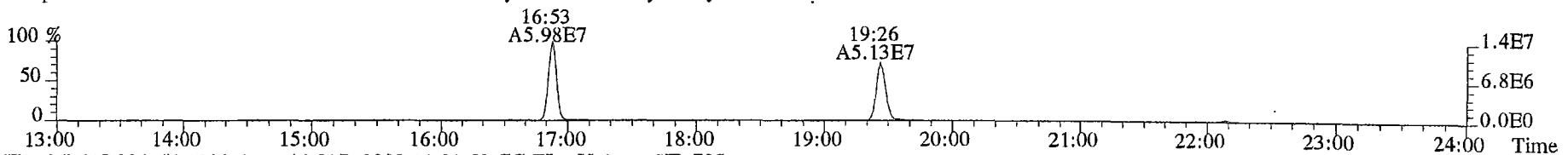
File:04MAR09A #1-1388 Acq: 4-MAR-2009 11:31:50 GC EI+ Voltage SIR 70S
305.8987 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:TCDF
Sample Text:5340-002-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:BS



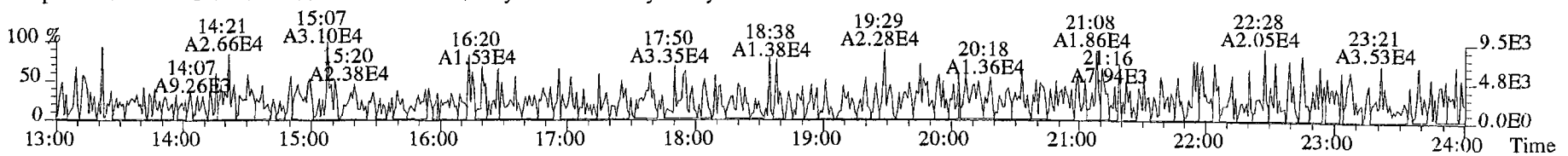
File:04MAR09A #1-1388 Acq: 4-MAR-2009 11:31:50 GC EI+ Voltage SIR 70S
315.9419 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:TCDF
Sample Text:5340-002-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:BS



File:04MAR09A #1-1388 Acq: 4-MAR-2009 11:31:50 GC EI+ Voltage SIR 70S
317.9389 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:TCDF
Sample Text:5340-002-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:BS



File:04MAR09A #1-1388 Acq: 4-MAR-2009 11:31:50 GC EI+ Voltage SIR 70S
375.8364 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:TCDF
Sample Text:5340-002-0001-SA File Text:Frontier Analytical Laboratory Analyst ID:BS



FAL ID: 5340-001-0001-SA Filename: 24FEB09M Sam:14 Acquired: 24-FEB-09 01:35:56 ICal: PCDDFAL3-2-5-09
Client ID: E3YC9 ConCal: ST022409M3 EndCal: ST022409M4 EPA TEQ 119
Results: 5340 GC Column: DB5 Amount: 1.000 NATO 1989 Tox: ~~121~~
WHO 1998 Tox: ~~103~~ WHO 2005 Tox: ~~97.4~~

Name	Resp	RA	RT	RRF	Conc	Qual	Fac	Noise-1	Noise-2	DL
2,3,7,8-TCDD	2.97e+04	0.67 y	27:33	1.04	2.01	J	2.50	-	-	*
1,2,3,7,8-PeCDD	*	* n	NotFnd	0.90	*	U	2.50	2620	8480	12.9
1,2,3,4,7,8-HxCDD	*	* n	NotFnd	1.43	*	U	2.50	1430	2130	2.81
1,2,3,6,7,8-HxCDD	2.21e+05	0.11 n	38:53	1.02	116	X	2.50	-	-	*
1,2,3,7,8,9-HxCDD	1.17e+05	1.07 y	39:21	1.05	10.5	J	2.50	-	-	*
1,2,3,4,6,7,8-HpCDD	1.18e+06	1.06 y	44:18	0.99	132		2.50	-	-	*
OCDD	5.61e+07	0.89 y	49:54	0.94	10600		2.50	-	-	*
2,3,7,8-TCDF	1.74e+06	0.68 y	26:49	1.34	55.7		2.50	-	-	*
1,2,3,7,8-PeCDF	3.28e+06	1.63 y	31:40	1.03	155		2.50	-	-	*
2,3,4,7,8-PeCDF	5.64e+05	1.54 y	32:59	0.81	33.6		2.50	-	-	*
1,2,3,4,7,8-HxCDF	5.66e+06	1.26 y	37:20	1.35	336		2.50	-	-	*
1,2,3,6,7,8-HxCDF	2.48e+06	1.27 y	37:32	1.25	154		2.50	-	-	*
2,3,4,6,7,8-HxCDF	4.85e+05	1.27 y	38:29	1.53	26.1		2.50	-	-	*
1,2,3,7,8,9-HxCDF	6.20e+05	1.23 y	39:58	1.19	48.0		2.50	-	-	*
1,2,3,4,6,7,8-HpCDF	7.14e+06	1.02 y	42:24	1.10	646		2.50	-	-	*
1,2,3,4,7,8,9-HpCDF	1.98e+06	0.99 y	45:14	1.02	184		2.50	-	-	*
OCDF	5.93e+07	0.88 y	50:16	0.76	9420		2.50	-	-	*
										Rec
13C-2,3,7,8-TCDD	2.85e+07	0.77 y	27:32	0.94	2010					101
13C-1,2,3,7,8-PeCDD	2.52e+07	1.75 y	33:21	0.75	2210					111
13C-1,2,3,4,7,8-HxCDD	2.06e+07	1.29 y	38:43	1.03	1740					86.8
13C-1,2,3,6,7,8-HxCDD	2.14e+07	1.29 y	38:53	1.08	1720					85.9
13C-1,2,3,4,6,7,8-HpCDD	1.81e+07	1.06 y	44:17	0.89	1750					87.7
13C-OCDD	2.25e+07	0.92 y	49:52	0.64	3070					76.7
13C-2,3,7,8-TCDF	4.66e+07	0.85 y	26:48	0.86	2010					101
13C-1,2,3,7,8-PeCDF	4.11e+07	1.66 y	31:39	0.76	2020					101
13C-2,3,4,7,8-PeCDF	4.15e+07	1.66 y	32:57	0.78	2000					99.9
13C-1,2,3,4,7,8-HxCDF	2.49e+07	0.53 y	37:19	1.34	1600					80.2
13C-1,2,3,6,7,8-HxCDF	2.58e+07	0.53 y	37:31	1.40	1590					79.6
13C-2,3,4,6,7,8-HxCDF	2.43e+07	0.53 y	38:27	1.29	1630					81.6
13C-1,2,3,7,8,9-HxCDF	2.18e+07	0.54 y	39:53	1.01	1870					93.7
13C-1,2,3,4,6,7,8-HpCDF	2.01e+07	0.44 y	42:23	1.16	1510					75.3
13C-1,2,3,4,7,8,9-HpCDF	2.11e+07	0.44 y	45:12	0.96	1910					95.5
13C-OCDF	3.30e+07	0.91 y	50:15	0.95	3010					75.4
37Cl-2,3,7,8-TCDD	1.22e+07		27:35	0.88	915					114
13C-1,2,3,4-TCDD	3.03e+07	0.79 y	26:58	-	81.4					
13C-1,2,3,4-TCDF	5.36e+07	0.86 y	25:43	-	89.5					
13C-1,2,3,7,8,9-HxCDD	2.31e+07	1.28 y	39:20	-	115					

							Fac	Noise-1	Noise-2	DL		#Hom
Total Tetra-Dioxins	1.87e+05		24:34	1.04	12.6		2.50	-	-	*		6
Total Penta-Dioxins	2.94e+05		30:24	0.90	25.9		2.50	-	-	*		2
Total Hexa-Dioxins	1.69e+06		36:16	1.16	142	X	2.50	-	-	*		5
Total Hepta-Dioxins	2.53e+06		42:56	0.99	283		2.50	-	-	*		2
Total Tetra-Furans	1.54e+07		23:15	1.34	494		2.50	-	-	*		18
1st Fn. Tot Penta-Furans	1.25e+06		28:38	0.92	65.8		2.50	-	-	*	PeCDF	1
Total Penta-Furans	1.11e+07		30:14	0.92	569		2.50	-	-	*	635	14
Total Hexa-Furans	1.34e+07		35:43	1.34	822		2.50	-	-	*		15
Total Hepta-Furans	1.17e+07		42:24	1.06	1060		2.50	-	-	*		4

Analyst: _____ Date: 3/3/09

Totals class: Total Tetra-Dioxins Entry #: 38

Run: 11 File: 24FEB09M S: 14 I: 1 F: 1
Acquired: 24-FEB-09 01:35:56

Total Concentration: 12.6 Unnamed Concentration: 10.634

RT	ml Resp	m2 Resp	RA		Resp	Concentration	Name
24:34	1.62e+04	2.29e+04	0.71	y	3.92e+04	2.65	
24:51	9.50e+03	1.42e+04	0.67	y	2.37e+04	1.60	
25:59	1.15e+04	1.38e+04	0.83	y	2.52e+04	1.70	
26:07	1.37e+04	1.83e+04	0.75	y	3.20e+04	2.16	
27:33	1.19e+04	1.78e+04	0.67	y	2.97e+04	2.01	2,3,7,8-TCDD
27:52	1.48e+04	2.26e+04	0.65	y	3.74e+04	2.53	

Totals class: Total Penta-Dioxins Entry #: 39

Run: 11 File: 24FEB09M S: 14 I: 1 F: 2
Acquired: 24-FEB-09 01:35:56

Total Concentration: 25.9 Unnamed Concentration: 25.908

RT	ml Resp	m2 Resp	RA		Resp	Concentration	Name
30:24	9.94e+04	7.47e+04	1.33	y	1.74e+05	15.3	
31:40	7.37e+04	4.66e+04	1.58	y	1.20e+05	10.6	

Totals class: Total Hexa-Dioxins Entry #: 40

Run: 11 File: 24FEB09M S: 14 I: 1 F: 3
Acquired: 24-FEB-09 01:35:56

Total Concentration: 254 Unnamed Concentration: 127.000

RT	ml Resp	m2 Resp	RA		Resp	Concentration	Name
36:16	2.03e+05	1.88e+05	1.08	y	3.91e+05	32.0	
37:12	6.80e+04	1.02e+05	0.67	n	1.23e+05	14.0	
37:37	4.66e+05	5.20e+05	0.90	n	8.43e+05	81.0	
38:53	1.22e+05	1.14e+06	0.11	n	2.21e+05	116	1,2,3,6,7,8-HxCDD
39:21	6.03e+04	5.63e+04	1.07	y	1.17e+05	10.5	1,2,3,7,8,9-HxCDD

Totals class: Total Hepta-Dioxins Entry #: 41

Run: 11 File: 24FEB09M S: 14 I: 1 F: 4
Acquired: 24-FEB-09 01:35:56

Total Concentration: 283 Unnamed Concentration: 151.330

RT	ml Resp	m2 Resp	RA	Resp	Concentration	Name
42:56	6.49e+05	7.02e+05	0.92 y	1.35e+06	151	
44:18	6.06e+05	5.71e+05	1.06 y	1.18e+06	132	1,2,3,4,6,7,8-HpCDD

Totals class: Total Tetra-Furans Entry #: 42

Run: 11 File: 24FEB09M S: 14 I: 1 F: 1
Acquired: 24-FEB-09 01:35:56

Total Concentration: 494 Unnamed Concentration: 438.762

RT	m1 Resp	m2 Resp	RA		Resp	Concentration	Name
23:15	1.83e+04	2.53e+04	0.73	y	4.36e+04	1.40	
23:36	7.16e+04	1.03e+05	0.70	y	1.75e+05	5.60	
23:57	1.12e+05	1.69e+05	0.66	y	2.81e+05	9.03	
24:22	5.83e+05	8.24e+05	0.71	y	1.41e+06	45.1	
24:36	8.84e+05	1.29e+06	0.68	y	2.18e+06	69.8	
24:54	3.42e+05	5.01e+05	0.68	y	8.43e+05	27.0	
25:07	2.20e+05	3.18e+05	0.69	y	5.38e+05	17.3	
25:26	3.64e+05	5.34e+05	0.68	y	8.99e+05	28.8	
25:37	1.64e+05	2.49e+05	0.66	y	4.13e+05	13.2	
25:43	4.99e+05	7.39e+05	0.68	y	1.24e+06	39.7	
26:07	1.32e+06	1.90e+06	0.70	y	3.22e+06	103	
26:19	1.67e+05	2.36e+05	0.71	y	4.03e+05	12.9	
26:27	5.38e+04	7.36e+04	0.73	y	1.27e+05	4.09	
26:44	4.28e+05	6.18e+05	0.69	y	1.05e+06	33.6	
26:49	7.05e+05	1.03e+06	0.68	y	1.74e+06	55.7	2,3,7,8-TCDF
27:10	1.26e+05	1.83e+05	0.69	y	3.09e+05	9.92	
27:23	7.50e+04	1.13e+05	0.67	y	1.88e+05	6.02	
28:43	1.69e+05	2.04e+05	0.83	y	3.73e+05	12.0	

Totals class: 1st Fn. Tot Penta-Furans Entry #: 43

Run: 11 File: 24FEB09M S: 14 I: 1 F: 1
Acquired: 24-FEB-09 01:35:56

Total Concentration: 65.8 Unnamed Concentration: 65.769

RT	m1 Resp	m2 Resp	RA	Resp	Concentration	Name
28:38	7.75e+05	4.73e+05	1.64 y	1.25e+06	65.8	

Totals class: Total Penta-Furans Entry #: 44

Run: 11 File: 24FEB09M S: 14 I: 1 F: 2
Acquired: 24-FEB-09 01:35:56

Total Concentration: 569 Unnamed Concentration: 380.423

RT	ml Resp	m2 Resp	RA		Resp	Concentration	Name
30:14	2.37e+05	1.62e+05	1.47	y	3.99e+05	21.0	
30:24	2.07e+06	1.28e+06	1.62	y	3.35e+06	177	
30:53	4.24e+04	3.13e+04	1.35	y	7.37e+04	3.88	
31:06	1.29e+05	8.78e+04	1.47	y	2.17e+05	11.4	
31:14	2.66e+05	1.67e+05	1.60	y	4.32e+05	22.8	
31:24	3.72e+05	2.29e+05	1.63	y	6.01e+05	31.7	
31:40	2.04e+06	1.25e+06	1.63	y	3.28e+06	155	1,2,3,7,8-PeCDF
32:02	7.46e+05	4.81e+05	1.55	y	1.23e+06	64.7	
32:42	3.22e+04	2.32e+04	1.39	y	5.54e+04	2.92	
32:48	6.29e+04	3.61e+04	1.74	y	9.90e+04	5.22	
32:59	3.42e+05	2.22e+05	1.54	y	5.64e+05	33.6	2,3,4,7,8-PeCDF
33:01	3.25e+05	1.93e+05	1.68	y	5.18e+05	27.3	
33:54	5.64e+04	3.27e+04	1.73	y	8.91e+04	4.70	
34:22	9.30e+04	6.32e+04	1.47	y	1.56e+05	8.23	

Totals class: Total Hexa-Furans Entry #: 45

Run: 11 File: 24FEB09M S: 14 I: 1 F: 3
Acquired: 24-FEB-09 01:35:56

Total Concentration: 822 Unnamed Concentration: 257.688

RT	ml Resp	m2 Resp	RA		Resp	Concentration	Name
35:43	2.19e+05	1.81e+05	1.21	y	4.00e+05	24.8	
35:49	1.09e+06	8.54e+05	1.27	y	1.94e+06	120	
35:59	2.07e+04	1.80e+04	1.15	y	3.87e+04	2.39	
36:05	2.70e+04	1.97e+04	1.37	y	4.67e+04	2.89	
36:17	6.94e+04	5.28e+04	1.32	y	1.22e+05	7.55	
36:34	5.01e+05	3.97e+05	1.26	y	8.97e+05	55.5	
36:53	2.55e+04	1.93e+04	1.32	y	4.48e+04	2.77	
37:10	1.36e+05	1.05e+05	1.29	y	2.41e+05	14.9	
37:20	3.16e+06	2.51e+06	1.26	y	5.66e+06	336	1,2,3,4,7,8-HxCDF
37:32	1.39e+06	1.09e+06	1.27	y	2.48e+06	154	1,2,3,6,7,8-HxCDF
37:47	8.37e+04	6.69e+04	1.25	y	1.51e+05	9.31	
37:58	4.66e+04	3.74e+04	1.25	y	8.40e+04	5.20	
38:10	1.09e+05	8.96e+04	1.22	y	1.99e+05	12.3	
38:29	2.71e+05	2.14e+05	1.27	y	4.85e+05	26.1	2,3,4,6,7,8-HxCDF
39:58	3.42e+05	2.79e+05	1.23	y	6.20e+05	48.0	1,2,3,7,8,9-HxCDF

Totals class: Total Hepta-Furans Entry #: 46

Run: 11 File: 24FEB09M S: 14 I: 1 F: 4
Acquired: 24-FEB-09 01:35:56

Total Concentration: 1060 Unnamed Concentration: 234.757

RT	ml Resp	m2 Resp	RA		Resp	Concentration	Name
42:24	3.61e+06	3.53e+06	1.02	y	7.14e+06	646	1,2,3,4,6,7,8-HpCDF
42:57	2.52e+05	2.18e+05	1.16	y	4.70e+05	42.8	
43:14	1.07e+06	1.04e+06	1.02	y	2.11e+06	192	
45:14	9.89e+05	9.94e+05	0.99	y	1.98e+06	184	1,2,3,4,7,8,9-HpCDF

FAL ID: 5340-001-0001-SA Filename: 04MAR09A Sam:3 Acquired: 4-MAR-09 10:56:46 ICal: TCDFFAL1-1-13-09
Client ID: E3YC9 ConCal: ST030409A1 EndCal: ST030409A2
Results: GC Column: DB225 Amount: 1.000

Name	Resp	RA	RT	RRF	Conc	Qual	Fac	Noise	DL	#Hom	Rec
2,3,7,8-TCDF	2.39e+06	0.77 y	19:28	1.03	68.5		2.50	-	-	1	
13C-2,3,7,8-TCDF	6.81e+07	0.81 y	19:26	0.87	1920						96.2
13C-1,2,3,4-TCDF	8.13e+07	0.81 y	16:53	-	43.7						

Analyst: _____ Date: 3/4/09

FAL ID: 5340-002-0001-SA Filename: 24FEB09M Sam:15 Acquired: 24-FEB-09 02:31:11 ICal: PCDDFAL3-2-5-09 EPA
Client ID: E3YD0 ConCal: ST022409M3 EndCal: ST022409M4 TIP 88.3
Results: 5340 GC Column: DB5 Amount: 1.010 NATO 1989 Tox: 89.8
WHO 1998 Tox: 76.3 WHO 2005 Tox: 71.9

Name	Resp	RA		RT	RRF	Conc	Qual	Fac	Noise-1	Noise-2	DL
2,3,7,8-TCDD	2.92e+04	0.66	y	27:34	1.04	1.99	J	2.50	-	-	*
1,2,3,7,8-PeCDD	*	*	n	NotFnd	0.90	*	U	2.50	1390	4330	6.31
1,2,3,4,7,8-HxCDD	*	*	n	NotFnd	1.43	*	U	2.50	776	3860	3.85
1,2,3,6,7,8-HxCDD	1.61e+05	0.08	n	38:52	1.02	109	X	2.50	-	-	*
1,2,3,7,8,9-HxCDD	9.68e+04	1.06	y	39:18	1.05	8.91	J	2.50	-	-	*
1,2,3,4,6,7,8-HpCDD	8.70e+05	1.09	y	44:18	0.99	99.8		2.50	-	-	*
OCDD	4.01e+07	0.89	y	49:53	0.94	8050		2.50	-	-	*
2,3,7,8-TCDF	1.21e+06	0.69	y	26:48	1.34	39.7		2.50	-	-	*
1,2,3,7,8-PeCDF	2.41e+06	1.53	y	31:39	1.03	113		2.50	-	-	*
2,3,4,7,8-PeCDF	4.18e+05	1.59	y	32:57	0.81	25.7		2.50	-	-	*
1,2,3,4,7,8-HxCDF	3.96e+06	1.27	y	37:20	1.35	247		2.50	-	-	*
1,2,3,6,7,8-HxCDF	1.68e+06	1.27	y	37:31	1.25	110		2.50	-	-	*
2,3,4,6,7,8-HxCDF	3.22e+05	1.23	y	38:28	1.53	17.6	J	2.50	-	-	*
1,2,3,7,8,9-HxCDF	4.18e+05	1.26	y	39:57	1.19	34.1		2.50	-	-	*
1,2,3,4,6,7,8-HpCDF	5.04e+06	1.03	y	42:24	1.10	475		2.50	-	-	*
1,2,3,4,7,8,9-HpCDF	1.40e+06	1.04	y	45:13	1.02	133		2.50	-	-	*
OCDF	4.13e+07	0.89	y	50:16	0.76	6930		2.50	-	-	*
											Rec
13C-2,3,7,8-TCDD	2.78e+07	0.78	y	27:32	0.94	2010					102
13C-1,2,3,7,8-PeCDD	2.40e+07	1.77	y	33:20	0.75	2150					109
13C-1,2,3,4,7,8-HxCDD	2.02e+07	1.30	y	38:41	1.03	1740					88.1
13C-1,2,3,6,7,8-HxCDD	2.07e+07	1.29	y	38:51	1.08	1710					86.2
13C-1,2,3,4,6,7,8-HpCDD	1.75e+07	1.08	y	44:17	0.89	1740					87.8
13C-OCDD	2.10e+07	0.92	y	49:52	0.64	2940					74.1
13C-2,3,7,8-TCDF	4.50e+07	0.84	y	26:47	0.86	2000					101
13C-1,2,3,7,8-PeCDF	4.09e+07	1.67	y	31:37	0.76	2070					105
13C-2,3,4,7,8-PeCDF	3.98e+07	1.66	y	32:56	0.78	1970					99.4
13C-1,2,3,4,7,8-HxCDF	2.35e+07	0.53	y	37:17	1.34	1550					78.3
13C-1,2,3,6,7,8-HxCDF	2.41e+07	0.53	y	37:30	1.40	1530					77.1
13C-2,3,4,6,7,8-HxCDF	2.36e+07	0.54	y	38:26	1.29	1630					82.3
13C-1,2,3,7,8,9-HxCDF	2.04e+07	0.54	y	39:52	1.01	1800					91.1
13C-1,2,3,4,6,7,8-HpCDF	1.92e+07	0.44	y	42:23	1.16	1470					74.2
13C-1,2,3,4,7,8,9-HpCDF	2.04e+07	0.45	y	45:12	0.96	1890					95.5
13C-OCDF	3.09e+07	0.92	y	50:15	0.95	2900					73.2
37Cl-2,3,7,8-TCDD	1.11e+07			27:33	0.88	853					108
13C-1,2,3,4-TCDD	2.93e+07	0.79	y	26:57	-	78.0					
13C-1,2,3,4-TCDF	5.16e+07	0.85	y	25:42	-	85.3					
13C-1,2,3,7,8,9-HxCDD	2.23e+07	1.31	y	39:18	-	110					

								Fac	Noise-1	Noise-2	DL	#Hom
Total Tetra-Dioxins	1.11e+05			24:32	1.04	7.61		2.50	-	-	*	4
Total Penta-Dioxins	9.95e+04			30:24	0.90	9.11	X	2.50	-	-	*	1
Total Hexa-Dioxins	1.17e+06			36:15	1.16	99.8	X	2.50	-	-	*	5
Total Hepta-Dioxins	1.88e+06			42:55	0.99	216		2.50	-	-	*	2
Total Tetra-Furans	1.07e+07			23:12	1.34	351		2.50	-	-	*	19
1st Fn. Tot Penta-Furans	6.10e+05			28:35	0.92	32.6		2.50	-	-	* PeCDF	1
Total Penta-Furans	7.69e+06			30:14	0.92	398		2.50	-	-	* 431	11
Total Hexa-Furans	8.85e+06			35:44	1.34	569		2.50	-	-	*	13
Total Hepta-Furans	8.25e+06			42:24	1.06	777		2.50	-	-	*	4

Analyst: _____ Date: 3/3/09

Totals class: Total Tetra-Dioxins Entry #: 38

Run: 12 File: 24FEB09M S: 15 I: 1 F: 1
Acquired: 24-FEB-09 02:31:11

Total Concentration: 7.61 Unnamed Concentration: 5.613

RT	m1 Resp	m2 Resp	RA		Resp	Concentration	Name
24:32	1.41e+04	1.66e+04	0.85	y	3.07e+04	2.10	
24:49	9.70e+03	1.12e+04	0.86	y	2.09e+04	1.43	
27:34	1.16e+04	1.76e+04	0.66	y	2.92e+04	1.99	2,3,7,8-TCDD
27:52	1.26e+04	1.79e+04	0.71	y	3.05e+04	2.08	

Totals class: Total Penta-Dioxins Entry #: 39

Run: 12 File: 24FEB09M S: 15 I: 1 F: 2
Acquired: 24-FEB-09 02:31:11

Total Concentration: 12.1 Unnamed Concentration: 12.100

RT	ml Resp	m2 Resp	RA		Resp	Concentration	Name
30:24	6.05e+04	7.13e+04	0.85	n	1.32e+05	12.1	

Totals class: Total Hexa-Dioxins Entry #: 40

Run: 12 File: 24FEB09M S: 15 I: 1 F: 3
Acquired: 24-FEB-09 02:31:11

Total Concentration: 209 Unnamed Concentration: 91.000

RT	ml Resp	m2 Resp	RA		Resp	Concentration	Name
36:15	1.25e+05	1.16e+05	1.07	y	2.41e+05	20.0	
37:11	5.63e+04	7.77e+04	0.72	n	1.34e+05	11.2	
37:36	3.15e+05	4.00e+05	0.79	n	7.15e+05	59.8	
38:52	8.90e+04	1.07e+06	0.08	n	1.16e+06	109	1,2,3,6,7,8-HxCDD
39:18	4.99e+04	4.69e+04	1.06	y	9.68e+04	8.91	1,2,3,7,8,9-HxCDD

Totals class: Total Hepta-Dioxins Entry #: 41

Run: 12 File: 24FEB09M S: 15 I: 1 F: 4
Acquired: 24-FEB-09 02:31:11

Total Concentration: 216 Unnamed Concentration: 116.116

RT	ml Resp	m2 Resp	RA		Resp	Concentration	Name
42:55	4.78e+05	5.35e+05	0.89	y	1.01e+06	116	
44:18	4.53e+05	4.17e+05	1.09	y	8.70e+05	99.8	1,2,3,4,6,7,8-HpCDD

Totals class: Total Tetra-Furans Entry #: 42

Run: 12 File: 24FEB09M S: 15 I: 1 F: 1
Acquired: 24-FEB-09 02:31:11

Total Concentration: 351 Unnamed Concentration: 311.338

RT	ml Resp	m2 Resp	RA		Resp	Concentration	Name
23:12	1.88e+04	2.50e+04	0.75	y	4.38e+04	1.44	
23:34	5.38e+04	8.04e+04	0.67	y	1.34e+05	4.41	
23:56	5.67e+04	8.15e+04	0.70	y	1.38e+05	4.54	
24:21	4.05e+05	5.84e+05	0.69	y	9.89e+05	32.5	
24:35	6.26e+05	8.88e+05	0.70	y	1.51e+06	49.7	
24:52	2.07e+05	3.06e+05	0.68	y	5.13e+05	16.9	
25:06	1.57e+05	2.26e+05	0.70	y	3.84e+05	12.6	
25:26	2.57e+05	3.81e+05	0.68	y	6.38e+05	21.0	
25:42	4.61e+05	6.63e+05	0.70	y	1.12e+06	37.0	
26:06	9.39e+05	1.31e+06	0.72	y	2.25e+06	74.0	
26:19	1.18e+05	1.73e+05	0.68	y	2.91e+05	9.56	
26:26	3.69e+04	4.99e+04	0.74	y	8.67e+04	2.85	
26:42	2.83e+05	4.19e+05	0.67	y	7.02e+05	23.1	
26:48	4.93e+05	7.14e+05	0.69	y	1.21e+06	39.7	2,3,7,8-TCDF
26:59	1.56e+04	2.01e+04	0.78	y	3.56e+04	1.17	
27:07	8.80e+04	1.26e+05	0.70	y	2.14e+05	7.03	
27:21	6.85e+04	8.50e+04	0.81	y	1.53e+05	5.04	
28:36	4.22e+04	4.81e+04	0.88	y	9.03e+04	2.97	
28:43	7.09e+04	1.01e+05	0.70	y	1.72e+05	5.66	

Totals class: 1st Fn. Tot Penta-Furans Entry #: 43

Run: 12 File: 24FEB09M S: 15 I: 1 F: 1
Acquired: 24-FEB-09 02:31:11

Total Concentration: 32.6 Unnamed Concentration: 32.600

RT	ml Resp	m2 Resp	RA		Resp	Concentration	Name
28:35	3.77e+05	2.34e+05	1.61	y	6.10e+05	32.6	

Totals class: Total Penta-Furans

Run: 12 File: 24FEB09M Entry #: 44

Acquired: 24-FEB-09 02:31:11 S: 15 I: 1 F: 2

Total Concentration: 398

Unnamed Concentration: 259.667

RT	m1 Resp	m2 Resp	RA		Resp	Concentration	Name
30:14	1.84e+05	1.09e+05	1.69	y	2.93e+05	15.6	
30:22	1.42e+06	9.01e+05	1.57	y	2.32e+06	124	
31:03	7.01e+04	5.02e+04	1.40	y	1.20e+05	6.42	
31:12	2.17e+05	1.34e+05	1.62	y	3.50e+05	18.7	
31:23	2.59e+05	1.79e+05	1.45	y	4.37e+05	23.4	
31:39	1.46e+06	9.50e+05	1.53	y	2.41e+06	113	1,2,3,7,8-PeCDF
32:01	5.43e+05	3.42e+05	1.59	y	8.86e+05	47.3	
32:57	2.57e+05	1.61e+05	1.59	y	4.18e+05	25.7	2,3,4,7,8-PeCDF
33:00	1.86e+05	1.16e+05	1.60	y	3.02e+05	16.1	
33:52	3.24e+04	2.27e+04	1.43	y	5.50e+04	2.94	
34:21	6,11e+04	4.05e+04	1.51	y	1.02e+05	5.43	

Totals class: Total Hexa-Furans Entry #: 45

Run: 12 File: 24FEB09M S: 15 I: 1 F: 3
Acquired: 24-FEB-09 02:31:11

Total Concentration: 569 Unnamed Concentration: 159.800

RT	ml Resp	m2 Resp	RA		Resp	Concentration	Name
35:44	7.24e+05	5.67e+05	1.28	y	1.29e+06	83.5	
35:55	2.18e+04	1.54e+04	1.41	y	3.73e+04	2.41	
36:02	2.05e+04	1.68e+04	1.22	y	3.73e+04	2.41	
36:16	4.80e+04	3.79e+04	1.27	y	8.59e+04	5.55	
36:33	2.95e+05	2.35e+05	1.25	y	5.30e+05	34.3	
37:09	9.59e+04	7.74e+04	1.24	y	1.73e+05	11.2	
37:20	2.21e+06	1.74e+06	1.27	y	3.96e+06	247	1,2,3,4,7,8-HxCDF
37:31	9.38e+05	7.40e+05	1.27	y	1.68e+06	110	1,2,3,6,7,8-HxCDF
37:46	6.26e+04	4.85e+04	1.29	y	1.11e+05	7.18	
37:59	3.25e+04	2.90e+04	1.12	y	6.15e+04	3.98	
38:09	7.71e+04	6.71e+04	1.15	y	1.44e+05	9.33	
38:28	1.77e+05	1.45e+05	1.23	y	3.22e+05	17.6	2,3,4,6,7,8-HxCDF
39:57	2.33e+05	1.85e+05	1.26	y	4.18e+05	34.1	1,2,3,7,8,9-HxCDF

Totals class: Total Hepta-Furans Entry #: 46

Run: 12 File: 24FEB09M S: 15 I: 1 F: 4
Acquired: 24-FEB-09 02:31:11

Total Concentration: 777 Unnamed Concentration: 170.208

RT	m1 Resp	m2 Resp	RA	Resp	Concentration	Name
42:24	2.56e+06	2.49e+06	1.03 y	5.04e+06	475	1,2,3,4,6,7,8-HpCDF
42:55	1.69e+05	1.73e+05	0.98 y	3.42e+05	32.2	
43:13	7.37e+05	7.29e+05	1.01 y	1.47e+06	138	
45:13	7.13e+05	6.83e+05	1.04 y	1.40e+06	133	1,2,3,4,7,8,9-HpCDF

FAL ID: 5340-002-0001-SA Filename: 04MAR09A Sam:4 Acquired: 4-MAR-09 11:31:50 ICal: TCDFFAL1-1-13-09
Client ID: E3YD0 ConCal: ST030409A1 EndCal: ST030409A2
Results: GC Column: DB225 Amount: 1.010

Name	Resp	RA	RT	RRF	Conc	Qual	Fac	Noise	DL	#Hom	Rec
2,3,7,8-TCDF	2.29e+06	0.78 y	19:27	1.03	47.7		2.50	-	-	1	
13C-2,3,7,8-TCDF	9.25e+07	0.80 y	19:26	0.87	1940						98.1
13C-1,2,3,4-TCDF	1.08e+08	0.81 y	16:53	-	57.6						

Analyst: _____ Date: 3/4/09

2DF - FORM II-HR CDD
CDD/CDF TOTAL HOMOLOGUE CONCENTRATION SUMMARY
HIGH RESOLUTION

SAMPLE No.
E3YC9

LAB NAME: FRONTIER ANALYTICAL LAB CONTRACT: EP08W001564

LAB CODE: FALE CASE NO.: EPA05-2008-01 TO NO.: SDG NO.: SDG E3YC9

MATRIX: (SOIL/WATER/ASH/TISSUE/OIL) SOIL LAB SAMPLE ID: 5340-001-0001-SA

SAMPLE wt/vol: 1.000 (g/mL): g LAB FILE ID: 24FEB09M Sam: 14

WATER SAMPLE PREP: SPE (SEPF/SPE) DATE RECEIVED: 11-FEB-09

CONCENTRATED EXTRACT VOLUME: 20 (uL) DATE EXTRACTED: 18-FEB-09

INJECTION VOLUME: 2 (uL) % SOLIDS/LIPIDS: 75.15 DATE ANALYZED: 24-FEB-09

GC COLUMN: DB5 ID: 0.25 (mm) DILUTION FACTOR: 1

CONCENTRATION UNITS: (pg/L or ng/kg) ng/kg

HOMOLOGUE	PEAKS	CONCENTRATION	Q	EMPC/EDL
DIOXINS				
Total TCDD	6	12.6		*
Total PeCDD	2	25.9		*
Total HxCDD	5	*	X	254
Total HpCDD	2	283		*
FURANS				
Total TCDF	18	494		*
Total PeCDF	15	635		*
Total HxCDF	15	822		*
Total HpCDF	4	1060		*

NOTE: Concentrations, Estimated Maximum Possible Concentrations (EMPCs), and Estimated Detection Limits (EDLs) for solid samples are calculated on a dry weight basis (except tissues, which are reported on a wet weight basis with % Lipids). The total homologue concentrations do not affect the TEF (Toxicity Equivalent Factor) calculations.

ANALYST: DATE: 3/2/09

2DF - FORM II-HR CDD
CDD/CDF TOTAL HOMOLOGUE CONCENTRATION SUMMARY
HIGH RESOLUTION

SAMPLE No.
E3YD0

LAB NAME: FRONTIER ANALYTICAL LAB CONTRACT: EP08W001564

LAB CODE: FALE CASE NO.: EPA05-2008-01 TO NO.: NA SDG NO.: SDG E3YC9

MATRIX: (SOIL/WATER/ASH/TISSUE/OIL) SOIL LAB SAMPLE ID: 5340-002-0001-SA

SAMPLE wt/vol: 1.010 (g/mL): g LAB FILE ID: 24FEB09M Sam: 15

WATER SAMPLE PREP: SPE (SEPF/SPE) DATE RECEIVED: 11-FEB-09

CONCENTRATED EXTRACT VOLUME: 20 (uL) DATE EXTRACTED: 18-FEB-09

INJECTION VOLUME: 2 (uL) % SOLIDS/LIPIDS: 75.15 DATE ANALYZED: 24-FEB-09

GC COLUMN: DB5 ID: 0.25 (mm) DILUTION FACTOR: 1

CONCENTRATION UNITS: (pg/L or ng/kg) ng/kg

HOMOLOGUE	PEAKS	CONCENTRATION	Q	EMPC/EDL
DIOXINS				
Total TCDD	4	7.61		*
Total PeCDD	1	*	X	12.1
Total HxCDD	5	*	X	209
Total HpCDD	2	216		*
FURANS				
Total TCDF	19	351		*
Total PeCDF	12	431		*
Total HxCDF	13	569		*
Total HpCDF	4	777		*

NOTE: Concentrations, Estimated Maximum Possible Concentrations (EMPCs), and Estimated Detection Limits (EDLs) for solid samples are calculated on a dry weight basis (except tissues, which are reported on a wet weight basis with % Lipids). The total homologue concentrations do not affect the TEF (Toxicity Equivalent Factor) calculations.

ANALYST: DATE: 3/2/09

CDD/CDF COMPLETE SDG FILE (CSF) INVENTORY SHEET

LABORATORY NAME Frontier Analytical Laboratory
CITY/STATE El Dorado Hills CA
CASE NO EPADF-2007-01 SDG NO SDG E3419 SDG NOS. TO FOLLOW _____ _____ _____
TASK ORDER NO. _____
CONTRACT NO. EP08W001564
SOW NO. _____

All documents delivered in the Complete SDG File must be original documents where possible. (Reference - Exhibit B Section 2.6)

	PAGE NOs. FROM	PAGE NOs. TO	CHECK LAB	CHECK EPA
1. **Inventory Sheet** (DC-2) (Do not number)	NA	NA	✓	
2. **SDG Narrative**	1	4	✓	
3. **Traffic Report**	5	9	✓	
4. **CDD/CDF Data**				
a. Sample Data				
Sample Data Summary (FORM I-HR CDD-1)	10	11	✓	
Toxicity Equivalence Summary (FORM I-HR CDD-2)	12	13	✓	
Second Column confirmation Summary (FORM I-HR CDD-3)	14	15	✓	
Selected Ion Current Profile (SICP) for each sample	16	49	✓	
Quantitation Reports and Area Summaries	50	71	✓	
Total Homologue Concentration Summary (FORM II-HR CDD)	72	73	✓	
b. Quality Control Data				
Lab Control Sample Summary (FORM III-HR CDD-1)	74	74	✓	
Lab Control Sample Duplicate Summary (FORM III-HR CDD-2)	NA	NA	✓	
Method Blank Summary (FORM IV-HR CDD)	75	75	✓	
Window Defining Mix Summary (FORM V-HR CDD-1)	76	79	✓	
Chromatographic Resolution Summary (FORM V-HR CDD-2)	80	83	✓	
Analytical Sequence Summary (FORM V-HR CDD-3)	84	85	✓	
c. Calibration Data				
Initial Calibration Data (FORM VI-HR CDD-1 and FORM VI-HR CDD-2), PFK mass resolution, CDD/CDF standard(s) SICPs, Quantitation Reports, and Area Summaries for the initial (five-point) calibration	86	189	✓	
Continuing Calibration Data (FORM VII-HR CDD-1 and FORM VII-HR CDD-2), PFK mass resolution, SICPs, Quantitation Reports, and Area Summaries	190	241	✓	
d. Raw Quality Control Data				
Blank Data FORM I-HR CDD-1, CDD-2, CDD-3 (if applicable)	242	243	✓	
Blank Data including SICPs, Quantitation Reports, and Area Summaries for each blank analyzed	244	~~255~~ 256	✓	
LCS FORM I-HR CDD-1 and CDD-2	~~255~~ 257	257	✓	

	PAGE NOs. FROM	TO	CHECK LAB	EPA
LCS Data including SICPs, Quantitation Reports, and Area Summaries	258	269	✓	
5. Miscellaneous Data				
Original preparation and analysis forms or copies of preparation and analysis logbook pages	270	273	✓	
Internal sample and sample extract transfer Chain of Custody Records	274	274	✓	
Screening records	NA	NA	✓	
All instrument output, including strip charts from screening activities (describe or list)	NA	NA	✓	
6. EPA Shipping/Receiving Documents				
Airbills (No. of shipments 1)	275	275	✓	
Chain of Custody Records	276	276	✓	
Sample Tags	NA	NA	✓	
Sample Log-In Sheet (Lab & DC-1)	277	277	✓	
Traffic Report Cover Sheet	NA	NA	✓	
Miscellaneous Shipping/Receiving Records (describe or list)	NA	NA	✓	
7. Internal Lab Sample Transfer Records and Tracking Sheets				
(Describe or list)	NA	NA	✓	
8. Other Records (describe or list)				
Telephone Communication Log Email	278	278	✓	

9. **Comments:**

Completed by:

(CLP Lab) (Signature) Brad Silversmith Director of Operations (Print Name & Title) 3/5/05 (Date)

Audited by:

(USEPA) (Signature) (Print Name & Title) (Date)

FRONTIER
ANALYTICAL LABORATORY

February 11, 2009

FAL Project ID: 5340

Ms. Terese A Van Donsel
USEPA Region 5
77 W. Jackson Blvd.
Chicago IL, 60604

Dear Ms. Donsel,

This letter confirms the receipt of two soil samples at Frontier Analytical Laboratory on February 11, 2009. We received two soil samples and a total of 1 bottle. The bottle arrived in good condition. The samples will be extracted and analyzed using EPA Method DLM02.0 for tetra through octa chlorinated dibenzo dioxins and furans. These samples are associated with EPA Order/Contract No.: **EP08W001564**. This project has a turnaround time of fourteen calendar days at $900/sample. The following e-mail is a PDF copy of the completed Chain-of-Custody/Traffic Report. The samples have been assigned a Frontier Analytical Laboratory project number **5340** and SDG Number **SDG E3YC9** In order to expedite inquiries, please reference our project number.

These samples represent the first and last samples in SDG Number **SDG E3YC9.**

If you have any questions regarding this project, please feel free to contact us at your convenience.

Thank you for choosing Frontier Analytical Laboratory for your analytical testing needs.

Sincerely,

Benjamin Miller

FRONTIER ANALYTICAL LABORATORY
5172 Hillsdale Circle • El Dorado Hills, CA 95762
Tel (916) 934-0900 • Fax (916) 934-0999
www.frontieranalytical.com

EPA USEPA Contract Laboratory Program
Organic Traffic Report & Chain of Custody Record

5340 / 18°C

Analysis under PO# EP08W001564

1. Case No.: PO# EP08W001564
DAS No.:
SDG No.: SDG E3YC9

L

2. Date Shipped: 2/6/2009	3. Chain of Custody Record	Sampler Signature: Jacey Rauch	4. For Lab Use Only
Carrier Name: FedEx	Relinquished By: (Date/Time)	Received By: (Date/Time)	Lab Contract No: EP08W001564
Airbill: 8637 0504 4404	1) [signature] 2/6/09 1600	[signature] 2/11/09 10:45AM	Unit Price: $900
Shipped To: Frontier Analytical Labs, 5172 Hillsdale Circle, El Dorado Hills, CA 95762	2)		Transfer To:
	3)		Lab Contract No:
	4)		Unit Price:

5. ORGANIC SAMPLE No.	6. MATRIX/ SAMPLER	7. TYPE	8. ANALYSIS/ TURNAROUND	9. TAG No./ PRESERVATIVE/Bottles	10. STATION LOCATION	11. SAMPLE COLLECT DATE/TIME	12. INORGANIC SAMPLE No.	13. FOR LAB USE ONLY Sample Condition On Receipt
E3YC9	SOIL/ PRODUCT	GRAB	Dioxins/ Furans	1 ~~BGA~~ 8oz jar		January 13, 2009 1330		good, 2/11/09, 10:45 5340-001-SA First
E3YD0	SOIL/ PRODUCT	GRAB	Dioxins/ Furans	~~1 8oz jar~~ GA Please run a duplicate from same jar		1/13/2009 1330		good, 2/11/09, 10:45 5340-002-SA Last

14. Shipment for Case Complete? Y	15. Sample(s) to be used for laboratory QC: E3YC9	16. Additional Sampler Signature(s):	17. Cooler Temperature Upon Receipt: 18°C	18. Chain of Custody Seal Number:
19. Analysis Key:	Type: Comp, Grab (from Box 7)		20. Custody Seal Intact? Y	21. Shipment Iced? N

22. TR Number:

PR provides preliminary results. Requests for preliminary results will increase analytical costs.
Send Copy to: Sample Management Office, Attn: Heather Bauer, 15000 Conference Center Dr., Chantilly, VA 20151 Phone 703/818-4200 Fax 703/995-4415

Frontier Analytical Laboratory

Sample Tracking Log

FAL Project ID: **5340**

Received on: **02/11/2009** Project Due: **02/26/2009** Storage: **R1**

FAL Sample ID	Dup	Client Project ID	Client Sample ID	Requested Method	Matrix	Sampling Date	Sampling Time
5340-001-SA	0	EP08W001564	E3YC9	DLM02.0 D/F	Soil	01/13/2009	01:30 pm
5340-002-SA	0	EP08W001564	E3YD0	DLM02.0 D/F	Soil	01/13/2009	01:30 pm

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FRONTIER ANALYTICAL LABORATORY

Frontier Analytical Laboratory

Sample Login Form

FAL Project ID: **5340**

Client:	USEPA Region 5
Client Project ID:	EP08W001564
Date Received:	02/11/2009
Time Received:	10:45 am
Received By:	TC
Logged In By:	BM
# of Samples Received:	2
Duplicates:	0
Storage Location:	R1

Method of Delivery:	Fed-Ex
Tracking Number:	868144787343
Shipping Container Received Intact	Yes
Custody seals(s) present?	Yes
Custody seals(s) intact?	Yes
Sample Arrival Temperature (C)	18
Cooling Method	Other
Chain Of Custody Present?	Yes
Return Shipping Container To Client	No
Test for residual Chlorine	No
Thiosulfate Added	No
Earliest Sample Hold Time Expiration	02/18/2009
Adequate Sample Volume	Yes

Anomalies or additional comments:

Please note that the sample was received at 18 degrees C which is outside the method recommended temperature range of 0 – 4 degrees C. We will proceed with analysis unless instructed otherwise.

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FRONTIER
ANALYTICAL LABORATORY

EPA USEPA Contract Laboratory Program
Organic Traffic Report & Chain of Custody Record

5340 / 18°C

Analysis under PO# EP08W001564

1. Case No.: PO# EP08W001564
DAS No.:
SDG No.: SDG E3YC9 **L**

2. Date Shipped: 2/6/2009	3. Chain of Custody Record	Sampler Signature: Jerry Rauch	4. For Lab Use Only
Carrier Name: FedEx	Relinquished By: (Date/Time)	Received By: (Date/Time)	Lab Contract No: EP08W001564
Airbill: 8637 0504 4404	1) 2/6/09 1600	2/6/09 10:45AM	Unit Price: $900
Shipped To: Frontier Analytical Lab, 5172 Hillsdale Circle, El Dorado Hills, CA 95762	2)		Transfer To:
	3)		Lab Contract No:
	4)		Unit Price:

5. ORGANIC SAMPLE No.	6. MATRIX/ SAMPLER	7. TYPE	8. ANALYSIS/ TURNAROUND	9. TAG No./ PRESERVATIVE/Bottles	10. STATION LOCATION	11. SAMPLE COLLECT DATE/TIME	12. INORGANIC SAMPLE No.	13. FOR LAB USE ONLY Sample Condition On Receipt
E3YC9	SOIL/ PRODUCT	GRAB	Dioxins/ Furans	1 ~~8oz~~ 8oz jar		January 13, 2009 1330		good, 2/11/09, 10:45 5340-001-SA First
E3YD0	SOIL/ PRODUCT	GRAB	Dioxins/ Furans	~~1 8oz jar~~ Please run a duplicate from same jar		1/13/2009 1330		good, 2/11/09, 10:45 5340-002-SA Last

14. Shipment for Case Complete? Y	15. Sample(s) to be used for laborato	17. Cooler Temperature upon Receipt: 18°C	18. Chain of Custody Seal Number:
19. Analysis Key:	Type: Comp, Grab (from Box 7)	20. Custody Seal Intact? Y	21. Shipment Iced? N

22. TR Number:
PR provides preliminary results. Requests for preliminary results will
Send Copy to: Sample Management Office, Attn: Heather Bauer, 150

LABORATORY COPY

Fax 703/995-4415

Page 1 of 1

Frontier Analytical Laboratory
5340-002-SA
Client ID: E3YD0
Storage: R1
(01 of 01)

Frontier Analytical Laboratory
5340-001-SA
Client ID: E3YC9
Storage: R1
(01 of 01)

E3YC9
DATE 1/13/09
TIME 1330
PRESERVATIVE None
CLIENT USEPA

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3DFA - FORM III-HR CDD
CDD/CDF LAB CONTROL SAMPLE SUMMARY
HIGH RESOLUTION

SAMPLE No.
DLCS01

LAB NAME: FRONTIER ANALYTICAL LAB CONTRACT: EP08W001564

LAB CODE: FALE CASE NO.: EPA05-2008-01 TO NO.: SDG NO.: SDG E3YC9

MATRIX: (SOIL/WATER/ASH/TISSUE/OIL) SOIL LAB SAMPLE ID: 1652-001-0001-OPR

SAMPLE wt/vol: 1.000 (g/mL): g LAB FILE ID: 24FEB09M Sam: 12

WATER SAMPLE PREP: SPE (SEPF/SPE) DATE RECEIVED: 18-FEB-09

CONCENTRATED EXTRACT VOLUME: 20 (uL) DATE EXTRACTED: 18-FEB-09

INJECTION VOLUME: 2 (uL) DATE ANALYZED: 23-FEB-09

GC COLUMN: DB5 ID: 0.25 (mm) DILUTION FACTOR: 1

CONCENTRATION UNITS: (pg/L or ng/kg) ng/kg

SPIKE ANALYTE	SPIKE ADDED	AMOUNT RECOVERED	PERCENT RECOVERY	#	QC LIMITS
2,3,7,8-TCDD	10	9.67	96.7		67-158
2,3,7,8-TCDF	10	8.38	83.8		75-158
1,2,3,7,8-PeCDF	50	46.1	92.3		80-134
1,2,3,7,8-PeCDD	50	50.1	100		70-142
2,3,4,7,8-PeCDF	50	46.4	92.7		68-160
1,2,3,4,7,8-HxCDF	50	51.1	102		72-134
1,2,3,6,7,8-HxCDF	50	50.5	101		84-130
1,2,3,4,7,8-HxCDD	50	47.0	94.1		70-164
1,2,3,6,7,8-HxCDD	50	46.0	92.1		76-134
1,2,3,7,8,9-HxCDD	50	46.2	92.4		64-162
2,3,4,6,7,8-HxCDF	50	50.1	100		70-156
1,2,3,7,8,9-HxCDF	50	50.4	101		78-130
1,2,3,4,6,7,8-HpCDF	50	50.8	102		82-132
1,2,3,4,6,7,8-HpCDD	50	43.4	86.8		70-140
1,2,3,4,7,8,9-HpCDF	50	51.8	104		78-138
OCDD	100	89.2	89.2		78-144
OCDF	100	94.3	94.3		63-170

Column to be used to flag values outside Quality Control (QC) Limits.

Laboratory Control Sample Recovery: 0 Outside limits of 17 total.

ANALYST: DATE: 3/2/09

4DF - FORM IV-HR CDD
CDD/CDF METHOD BLANK SUMMARY
HIGH RESOLUTION

SAMPLE No.
DFBLK01

LAB NAME: FRONTIER ANALYTICAL LAB CONTRACT: EP08W001564

LAB CODE: FALE CASE NO.: EPA05-2008-01 TO NO.: SDG NO.: SDG E3YC9

MATRIX: (SOIL/WATER/ASH/TISSUE/OIL) SOIL LAB SAMPLE ID: 1652-001-0001-MB

WATER SAMPLE PREP: SPE (SEPF/SPE) LAB FILE ID: 24FEB09M Sam: 13

GC COLUMN: DB5 ID: 0.25 (mm) DATE EXTRACTED: 18-FEB-09

INSTRUMENT ID: FAL3 DATE ANALYZED: 24-FEB-09

THIS METHOD BLANK APPLIES TO LABORATORY CONTROL SAMPLES (LCSs).

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
OPR	1652-001-0001-OPR	24FEB09M 12	23-FEB-09
Method Blank	1652-001-0001-MB	24FEB09M 13	24-FEB-09
E3YC9	5340-001-0001-SA	24FEB09M 14	24-FEB-09
E3YD0	5340-002-0001-SA	24FEB09M 15	24-FEB-09

ANALYST: DATE: 3/2/09

5DFA - FORM V-HR CDD-1
CDD/CDF WINDOW DEFINING MIX (WDM) SUMMARY
HIGH RESOLUTION

SAMPLE No.
1613 CS3 (080827J)

LAB NAME: FRONTIER ANALYTICAL LAB CONTRACT: EP08W001564

LAB CODE: FALE CASE NO.: EPA05-2008-01 TO NO.: SDG NO.: SDG E3YC9

GC COLUMN: DB5 ID: 0.25 (mm) LAB FILE ID: 24FEB09M Sam: 11

INSTRUMENT ID: FAL3 DATE ANALYZED: 23-FEB-09

TIME ANALYZED: 22:50:13

CDD/CDF	RT FIRST ELUTING	RT LAST ELUTING
TCDD	24:31	28:28
TCDF	23:10	28:42
PeCDD	30:21	33:55
PeCDF	28:32	34:21
HxCDD	36:14	39:18
HxCDF	35:21	39:52
HpCDD	42:55	44:17
HpCDF	42:24	45:13

ANALYST: _____ DATE: 3/2/09

5DFA - FORM V-HR CDD-1
CDD/CDF WINDOW DEFINING MIX (WDM) SUMMARY
HIGH RESOLUTION

SAMPLE No.
1613 CS3 (080827J)

LAB NAME: FRONTIER ANALYTICAL LAB CONTRACT: EP08W001564

LAB CODE: FALE CASE NO.: EPA05-2008-01 TO NO.: SDG NO.: SDG E3YC9

GC COLUMN: DB5 ID: 0.25 (mm) LAB FILE ID: 24FEB09M Sam: 18

INSTRUMENT ID: FAL3 DATE ANALYZED: 24-FEB-09

TIME ANALYZED: 05:17:02

CDD/CDF	RT FIRST ELUTING	RT LAST ELUTING
TCDD	24:30	28:27
TCDF	23:09	28:41
PeCDD	30:21	33:55
PeCDF	28:31	34:19
HxCDD	36:13	39:18
HxCDF	35:20	39:53
HpCDD	42:54	44:17
HpCDF	42:22	45:13

ANALYST: DATE: 3/2/09

5DFA - FORM V-HR CDD-1
TCDF WINDOW DEFINING MIX (WDM) SUMMARY
HIGH RESOLUTION

SAMPLE No.
1613 CS3 (080827J)

LAB NAME: FRONTIER ANALYTICAL LAB CONTRACT: EP08W001564

LAB CODE: FALE CASE NO.: EPA05-2008-01 TO NO.: SDG NO.: SDG E3YC9

GC COLUMN: DB225 ID: 0.25 (mm) LAB FILE ID: 04MAR09A Sam: 1

INSTRUMENT ID: FAL1 DATE ANALYZED: 4-MAR-09

TIME ANALYZED: 09:46:39

CDD/CDF	RT FIRST ELUTING	RT LAST ELUTING
TCDF	13:37	22:07

ANALYST: [illegible] DATE: 3/4/09

5DFA - FORM V-HR CDD-1
TCDF WINDOW DEFINING MIX (WDM) SUMMARY
HIGH RESOLUTION

SAMPLE No.
1613 CS3 (080827J)

LAB NAME: FRONTIER ANALYTICAL LAB CONTRACT: EP08W001564

LAB CODE: FALE CASE NO.: EPA05-2008-01 TO NO.: SDG NO.: SDG E3YC9

GC COLUMN: DB225 ID: 0.25 (mm) LAB FILE ID: 04MAR09A Sam: 5

INSTRUMENT ID: FAL1 DATE ANALYZED: 4-MAR-09

TIME ANALYZED: 12:09:12

CDD/CDF	RT FIRST ELUTING	RT LAST ELUTING
TCDF	13:31	22:02

ANALYST: [signature] DATE: 3/4/09

5DFB - FORM V-HR CDD-2
CDD/CDF CHROMATOGRAPHIC RESOLUTION SUMMARY
HIGH RESOLUTION

SAMPLE No.
1613 CS3 (080827J)

LAB NAME: FRONTIER ANALYTICAL LAB CONTRACT: EP08W001564

LAB CODE: FALE CASE NO.: EPA05-2008-01 TO NO.: SDG NO.: SDG E3YC9

GC COLUMN: DB5 ID: 0.25 (mm) LAB FILE ID: 24FEB09M Sam: 11

INSTRUMENT ID: FAL3 DATE ANALYZED: 23-FEB-09

TIME ANALYZED: 22:50:13

Percent Valley determination for DB-5 (or equivalent) column-
For the column performance solution beginning the 12-hour period:

1238-TCDD/2378-TCDD: 15.2 %

QUALITY CONTROL (QC) LIMITS:

Percent Valley between the TCDD isomers must be less than or equal to 25%.

Percent Valley determination for DB-225 (or equivalent) column-
For the column performance solution beginning the 12-hour period:

2347-TCDF/2378-TCDF: NA

QC Limits:

Percent Valley between the TCDD/TCDF isomers must be less than or equal to 25%.

ANALYST: DATE: 3/2/09

5DFB - FORM V-HR CDD-2
CDD/CDF CHROMATOGRAPHIC RESOLUTION SUMMARY
HIGH RESOLUTION

SAMPLE No.
1613 CS3 (080827J)

LAB NAME: FRONTIER ANALYTICAL LAB CONTRACT: EP08W001564

LAB CODE: FALE CASE NO.: EPA05-2008-01 TO NO.: SDG NO.: SDG E3YC9

GC COLUMN: DB5 ID: 0.25 (mm) LAB FILE ID: 24FEB09M Sam: 18

INSTRUMENT ID: FAL3 DATE ANALYZED: 24-FEB-09

TIME ANALYZED: 05:17:02

Percent Valley determination for DB-5 (or equivalent) column-
For the column performance solution beginning the 12-hour period:

1238-TCDD/2378-TCDD: 13.8 %

QUALITY CONTROL (QC) LIMITS:

Percent Valley between the TCDD isomers must be less than or equal to 25%.

Percent Valley determination for DB-225 (or equivalent) column-
For the column performance solution beginning the 12-hour period:

2347-TCDF/2378-TCDF: NA

QC Limits:

Percent Valley between the TCDD/TCDF isomers must be less than or equal to 25%.

ANALYST: [signature] DATE: 3/2/09

5DFB - FORM V-HR CDD-2
TCDF CHROMATOGRAPHIC RESOLUTION SUMMARY
HIGH RESOLUTION

SAMPLE No.
1613 CS3 (080827J)

LAB NAME: FRONTIER ANALYTICAL LAB CONTRACT: EP08W001564

LAB CODE: FALE CASE NO.: EPA05-2008-01 TO NO.: SDG NO.: SDG E3YC9

GC COLUMN: DB225 ID: 0.25 (mm) LAB FILE ID: 04MAR09A Sam: 1

INSTRUMENT ID: FAL1 DATE ANALYZED: 4-MAR-09

TIME ANALYZED: 09:46:39

Percent Valley determination for DB-5 (or equivalent) column-
For the column performance solution beginning the 12-hour period:

1238-TCDD/2378-TCDD: NA

QUALITY CONTROL (QC) LIMITS:

Percent Valley between the TCDD isomers must be less than or equal to 25%.

Percent Valley determination for DB-225 (or equivalent) column-
For the column performance solution beginning the 12-hour period:

2347-TCDF/2378-TCDF: 7.25 %

QC Limits:

Percent Valley between the TCDD/TCDF isomers must be less than or equal to 25%.

ANALYST: [signature] DATE: 3/4/09

5DFB - FORM V-HR CDD-2
TCDF CHROMATOGRAPHIC RESOLUTION SUMMARY
HIGH RESOLUTION

SAMPLE No.
1613 CS3 (080827J)

LAB NAME: FRONTIER ANALYTICAL LAB CONTRACT: EP08W001564

LAB CODE: FALE CASE NO.: EPA05-2008-01 TO NO.: SDG NO.: SDG E3YC9

GC COLUMN: DB225 ID: 0.25 (mm) LAB FILE ID: 04MAR09A Sam: 5

INSTRUMENT ID: FAL1 DATE ANALYZED: 4-MAR-09

TIME ANALYZED: 12:09:12

Percent Valley determination for DB-5 (or equivalent) column-
For the column performance solution beginning the 12-hour period:

1238-TCDD/2378-TCDD: NA

QUALITY CONTROL (QC) LIMITS:

Percent Valley between the TCDD isomers must be less than or equal to 25%.

Percent Valley determination for DB-225 (or equivalent) column-
For the column performance solution beginning the 12-hour period:

2347-TCDF/2378-TCDF: 5.80 %

QC Limits:

Percent Valley between the TCDD/TCDF isomers must be less than or equal to 25%.

ANALYST: DATE: 3/4/09

5DFC - FORM V-HR CDD-3
CDD/CDF ANALYTICAL SEQUENCE SUMMARY
HIGH RESOLUTION

LAB NAME: FRONTIER ANALYTICAL LAB CONTRACT: EP08W001564

LAB CODE: FALE CASE NO.: EPA05-2008-01 TO NO.: SDG NO.: SDG E3YC9

GC COLUMN: DB5 ID: 0.25 (mm) INSTRUMENT ID: FAL3

INIT. CALIB. DATE (S) : 5-FEB-09

INIT. CALIB. TIMES: 16:15:11, 17:10:30, 18:05:53, 15:20:00, 19:01:11, 19:56:22

THE ANALYTICAL SEQUENCE OF STANDARDS, SAMPLES, BLANKS, AND LABORATORY CONTROL SAMPLES (LCSs) IS AS FOLLOWS:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
ZZZZ	ZZZZ	24FEB09M	23-FEB-09	13:37:17
ZZZZ	ZZZZ	24FEB09M	23-FEB-09	14:32:35
ZZZZ	ZZZZ	24FEB09M	23-FEB-09	15:27:54
ZZZZ	ZZZZ	24FEB09M	23-FEB-09	16:23:13
ZZZZ	ZZZZ	24FEB09M	23-FEB-09	17:18:27
ZZZZ	ZZZZ	24FEB09M	23-FEB-09	18:13:42
ZZZZ	ZZZZ	24FEB09M	23-FEB-09	19:09:01
ZZZZ	ZZZZ	24FEB09M	23-FEB-09	20:04:20
ZZZZ	ZZZZ	24FEB09M	23-FEB-09	20:59:39
ZZZZ	ZZZZ	24FEB09M	23-FEB-09	21:54:57
1613 CS3 (080827J)	ST024109M3	24FEB09M	23-FEB-09	22:50:13
OPR	1652-001-0001-OPR	24FEB09M	23-FEB-09	23:45:23
Method Blank	1652-001-0001-MB	24FEB09M	24-FEB-09	00:40:37
E3YC9	5340-001-0001-SA	24FEB09M	24-FEB-09	01:35:56
E3YD0	5340-002-0001-SA	24FEB09M	24-FEB-09	02:31:11
ZZZZ	ZZZZ	24FEB09M	24-FEB-09	03:26:28
ZZZZ	ZZZZ	24FEB09M	24-FEB-09	04:21:47
1613 CS3 (080827J)	ST022409M4	24FEB09M	24-FEB-09	05:17:02

ANALYST: _____ DATE: 3/2/09

5DFC - FORM V-HR CDD-3
TCDF ANALYTICAL SEQUENCE SUMMARY
HIGH RESOLUTION

LAB NAME: FRONTIER ANALYTICAL LAB CONTRACT: EP08W001564

LAB CODE: FALE CASE NO.: EPA05-2008-01 TO NO.: SDG NO.: SDG E3YC9

GC Column: DB225 ID: 0.25 (mm) INSTRUMENT ID: FAL1

INIT. CALIB. DATE (S) : 13-JAN-09

INIT. CALIB. TIMES: 11:41:31, 12:16:35, 11:06:28, 12:51:39, 13:26:43

THE ANALYTICAL SEQUENCE OF STANDARDS, SAMPLES, BLANKS, AND LABORATORY CONTROL SAMPLES (LCSs) IS AS FOLLOWS:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1613 CS3 (080827J)	ST030409A1	04MAR09A	4-MAR-09	09:46:39
ZZZZ	ZZZZ	04MAR09A	4-MAR-09	10:21:42
E3YC9	5340-001-0001-SA	04MAR09A	4-MAR-09	10:56:46
E3YD0	5340-002-0001-SA	04MAR09A	4-MAR-09	11:31:50
1613 CS3 (080827J)	ST030409A2	04MAR09A	4-MAR-09	12:09:12

ANALYST: [signature] DATE: 3/4/09

6DFA - FORM VI-HR CDD-1
CDD/CDF INITIAL CALIBRATION RESPONSE FACTOR SUMMARY
HIGH RESOLUTION

LAB NAME: FRONTIER ANALYTICAL LAB CONTRACT: EP08W001564

LAB CODE: FALE CASE NO.: EPA05-2008-01 TO NO.: NA SDG NO.: SDG E3YC9

GC COLUMN: DB5 ID: 0.25 (mm) INSTRUMENT ID: FAL3

INIT. CALIB. DATE(S): 5-FEB-09 5-FEB-09 5-FEB-09 5-FEB-09 5-FEB-09 5-FEB-09

INIT. CALIB. TIMES: 16:15:11 17:10:30 18:05:53 15:20:00 19:01:11 19:56:22

TARGET ANALYTES	RR/RRF CS0	CS1	CS2	CS3	CS4	CS5	MEAN RR/RRF	%RSD	QC LIMITS
2,3,7,8-TCDD	1.06	1.08	0.98	0.98	1.04	1.10	1.04	4.83	+/-20%
2,3,7,8-TCDF	1.51	1.43	1.29	1.24	1.25	1.31	1.34	8.09	+/-20%
1,2,3,7,8-PeCDF	1.01	0.97	1.01	1.03	1.08	1.08	1.03	4.26	+/-20%
1,2,3,7,8-PeCDD	0.90	0.90	0.87	0.88	0.92	0.94	0.90	3.00	+/-20%
2,3,4,7,8-PeCDF	0.84	0.76	0.80	0.77	0.83	0.86	0.81	4.85	+/-20%
1,2,3,4,7,8-HxCDF	1.29	1.29	1.30	1.33	1.44	1.47	1.35	5.94	+/-20%
1,2,3,6,7,8-HxCDF	1.18	1.22	1.21	1.23	1.31	1.35	1.25	5.32	+/-20%
1,2,3,4,7,8-HxCDD	1.45	1.42	1.40	1.38	1.43	1.49	1.43	2.75	+/-20%
1,2,3,6,7,8-HxCDD	1.04	1.04	1.00	0.97	1.03	1.04	1.02	2.92	+/-20%
1,2,3,7,8,9-HxCDD (1)	1.13	1.07	1.02	1.02	1.01	1.06	1.05	4.39	+/-20%
2,3,4,6,7,8-HxCDF	1.46	1.50	1.46	1.51	1.60	1.65	1.53	5.12	+/-20%
1,2,3,7,8,9-HxCDF	1.17	1.15	1.13	1.14	1.24	1.28	1.19	5.21	+/-20%
1,2,3,4,6,7,8-HpCDF	1.04	1.07	1.05	1.07	1.16	1.21	1.10	6.18	+/-20%
1,2,3,4,6,7,8-HpCDD	1.03	1.01	0.96	0.93	0.98	1.01	0.99	3.97	+/-20%
1,2,3,4,7,8,9-HpCDF	0.98	1.00	0.97	1.00	1.08	1.12	1.02	6.07	+/-20%
OCDD	0.97	0.94	0.90	0.90	0.95	0.97	0.94	3.39	+/-20%
OCDF	0.87	0.71	0.76	0.70	0.76	0.79	0.76	7.87	+/-20%
LABELED COMPOUNDS									
13C-2,3,7,8-TCDD	0.91	0.91	0.94	0.91	0.96	0.98	0.94	3.42	+/-35%
13C-1,2,3,7,8-PeCDD	0.70	0.72	0.71	0.75	0.80	0.86	0.75	8.16	+/-35%
13C-1,2,3,4,7,8-HxCDD	0.99	1.03	1.03	1.03	1.05	1.03	1.03	1.78	+/-35%
13C-1,2,3,6,7,8-HxCDD	1.05	1.06	1.11	1.07	1.09	1.10	1.08	2.30	+/-35%
13C-1,2,3,4,6,7,8-HpCDD	0.90	0.87	0.89	0.93	0.88	0.90	0.89	2.39	+/-35%
13C-OCDD	0.64	0.61	0.61	0.67	0.61	0.67	0.64	4.42	+/-35%
13C-2,3,7,8-TCDF	0.85	0.87	0.85	0.86	0.86	0.88	0.86	1.26	+/-35%
13C-1,2,3,7,8-PeCDF	0.69	0.76	0.71	0.75	0.77	0.87	0.76	8.30	+/-35%
13C-2,3,4,7,8-PeCDF	0.73	0.77	0.72	0.77	0.79	0.87	0.78	6.96	+/-35%
13C-1,2,3,4,7,8-HxCDF	1.35	1.35	1.37	1.36	1.34	1.29	1.34	2.16	+/-35%
13C-1,2,3,6,7,8-HxCDF	1.37	1.39	1.43	1.41	1.43	1.37	1.40	1.93	+/-35%
13C-1,2,3,7,8,9-HxCDF	1.01	0.99	1.02	1.00	0.99	1.02	1.01	1.19	+/-35%
13C-2,3,4,6,7,8-HxCDF	1.26	1.28	1.33	1.28	1.30	1.28	1.29	1.75	+/-35%
13C-1,2,3,4,6,7,8-HpCDF	1.16	1.15	1.18	1.16	1.16	1.13	1.16	1.33	+/-35%
13C-1,2,3,4,7,8,9-HpCDF	0.96	0.94	0.96	0.98	0.93	0.98	0.96	2.06	+/-35%
13C-OCDF	0.93	0.91	0.93	0.97	0.93	1.02	0.95	4.34	+/-35%
37Cl-2,3,7,8-TCDD	1.01	0.80	0.83	0.79	0.88	0.96	0.88	9.92	+/-35%

(1) The Relative Response (RR) is calculated based on the labeled analogs of the other two HxCDDs.

Analyst: [signature] Date: 3/2/09

6DFB - FORM VI-HR CDD-2
CDD/CDF INITIAL CALIBRATION ION ABUNDANCE RATIO SUMMARY
HIGH RESOLUTION

LAB NAME: FRONTIER ANALYTICAL LAB CONTRACT: EP08W001564

LAB CODE: FALE CASE NO.: EPA05-2008-01 TO NO.: NA SDG NO.: SDG E3YC9

GC COLUMN: DB5 ID: 0.25 (mm) INSTRUMENT ID: FAL3

INIT. CALIB. DATE(S): 5-FEB-09 5-FEB-09 5-FEB-09 5-FEB-09 5-FEB-09 5-FEB-09

INIT. CALIB. TIMES: 16:15:11 17:10:30 18:05:53 15:20:00 19:01:11 19:56:22

TARGET ANALYTES	SELECTED IONS	ION ABUNDANCE RATIO CS0	CS1	CS2	CS3	CS4	CS5	FLAG	ION RATIO QC LIMITS
2,3,7,8-TCDD	320/322	0.75	0.81	0.71	0.76	0.75	0.76		0.65-0.89
2,3,7,8-TCDF	304/306	0.68	0.68	0.71	0.72	0.73	0.73		0.65-0.89
1,2,3,7,8-PeCDF	340/342	1.42	1.44	1.47	1.53	1.51	1.52		1.32-1.78
1,2,3,7,8-PeCDD	356/358	1.77	1.64	1.66	1.63	1.63	1.61		1.32-1.78
2,3,4,7,8-PeCDF	340/342	1.36	1.38	1.45	1.51	1.53	1.51		1.32-1.78
1,2,3,4,7,8-HxCDF	374/376	1.26	1.25	1.26	1.26	1.25	1.26		1.05-1.43
1,2,3,6,7,8-HxCDF	374/376	1.29	1.28	1.22	1.25	1.25	1.24		1.05-1.43
1,2,3,4,7,8-HxCDD	390/392	1.26	1.36	1.30	1.32	1.30	1.30		1.05-1.43
1,2,3,6,7,8-HxCDD	390/392	1.25	1.25	1.32	1.32	1.31	1.30		1.05-1.43
1,2,3,7,8,9-HxCDD	390/392	1.20	1.33	1.29	1.30	1.32	1.30		1.05-1.43
2,3,4,6,7,8-HxCDF	374/376	1.23	1.24	1.26	1.26	1.25	1.24		1.05-1.43
1,2,3,7,8,9-HxCDF	374/376	1.24	1.28	1.27	1.26	1.25	1.26		1.05-1.43
1,2,3,4,6,7,8-HpCDF	408/410	0.97	1.04	1.03	1.03	1.03	1.03		0.88-1.20
1,2,3,4,6,7,8-HpCDD	424/426	1.08	1.10	1.04	1.03	1.04	1.04		0.88-1.20
1,2,3,4,7,8,9-HpCDF	408/410	0.96	1.00	1.02	1.03	1.05	1.04		0.88-1.20
OCDD	458/460	0.94	0.91	0.91	0.91	0.90	0.90		0.76-1.02
OCDF	442/444	0.85	0.91	0.91	0.90	0.91	0.91		0.76-1.02
LABELED COMPOUNDS									
13C-2,3,7,8-TCDD	332/334	0.79	0.79	0.78	0.78	0.79	0.79		0.65-0.89
13C-1,2,3,7,8-PeCDD	368/370	1.76	1.76	1.78	1.77	1.77	1.76		1.32-1.78
13C-1,2,3,4,7,8-HxCDD	402/404	1.25	1.26	1.28	1.27	1.30	1.26		1.05-1.43
13C-1,2,3,6,7,8-HxCDD	402/404	1.24	1.26	1.25	1.26	1.24	1.25		1.05-1.43
13C-1,2,3,4,6,7,8-HpCDD	436/438	1.11	1.11	1.12	1.10	1.10	1.10		0.88-1.20
13C-OCDD	470/472	0.91	0.90	0.90	0.92	0.91	0.91		0.76-1.02
13C-2,3,7,8-TCDF	316/318	0.82	0.82	0.82	0.81	0.82	0.82		0.65-0.89
13C-1,2,3,7,8-PeCDF	352/354	1.68	1.68	1.70	1.69	1.71	1.68		1.32-1.78
13C-2,3,4,7,8-PeCDF	352/354	1.69	1.67	1.69	1.70	1.71	1.68		1.32-1.78
13C-1,2,3,4,7,8-HxCDF	384/386	0.53	0.53	0.53	0.53	0.53	0.53		0.43-0.59
13C-1,2,3,6,7,8-HxCDF	384/386	0.53	0.53	0.53	0.53	0.54	0.54		0.43-0.59
13C-1,2,3,7,8,9-HxCDF	384/386	0.53	0.53	0.54	0.54	0.53	0.54		0.43-0.59
13C-2,3,4,6,7,8-HxCDF	384/386	0.53	0.54	0.53	0.53	0.53	0.53		0.43-0.59
13C-1,2,3,4,6,7,8-HpCDF	418/420	0.43	0.43	0.42	0.43	0.43	0.43		0.37-0.51
13C-1,2,3,4,7,8,9-HpCDF	418/420	0.42	0.43	0.42	0.42	0.43	0.43		0.37-0.51
13C-OCDF	454/456	0.91	0.91	0.91	0.91	0.92	0.92		0.76-1.02
INTERNAL STANDARDS									
13C-1,2,3,4-TCDD	332/334	0.80	0.79	0.79	0.79	0.79	0.80		0.65-0.89
13C-1,2,3,4-TCDF	316/318	0.82	0.82	0.82	0.82	0.82	0.83		0.65-0.89
13C-1,2,3,7,8,9-HxCDD	402/404	1.25	1.25	1.26	1.27	1.25	1.24		1.05-1.43

Quality Control (QC) limits represent +/-15% window around the theoretical ion abundance ratio. The laboratory must flag any analyte in any calibration solution which does not meet the ion abundance ratio QC limit by placing an asterik in the flag column Analyst: [signature] Date: 3/3/09

5DFC - FORM V-HR CDD-3
CDD/CDF ANALYTICAL SEQUENCE SUMMARY
HIGH RESOLUTION

LAB NAME: FRONTIER ANALYTICAL LAB CONTRACT: EP08W001564

LAB CODE: FALE CASE NO.: EPA05-2008-01 TO NO.: SDG NO.: SDG E3YC9

GC COLUMN: DB5 ID: 0.25 (mm) INSTRUMENT ID: FAL3

INIT. CALIB. DATE (S) : 5-FEB-09

INIT. CALIB. TIMES: 16:15:11, 17:10:30, 18:05:53, 15:20:00, 19:01:11, 19:56:22

THE ANALYTICAL SEQUENCE OF STANDARDS, SAMPLES, BLANKS, AND LABORATORY CONTROL SAMPLES (LCSs) IS AS FOLLOWS:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1613 CS3 (080827J)	ST020509M3	05FEB09M	5-FEB-09	15:20:00
1613 CS0 (080827J)	ST020509M0	05FEB09M	5-FEB-09	16:15:11
1613 CS1 (080827J)	ST020509M1	05FEB09M	5-FEB-09	17:10:30
1613 CS2 (080827J)	ST020509M2	05FEB09M	5-FEB-09	18:05:53
1613 CS4 (080827J)	ST020509M4	05FEB09M	5-FEB-09	19:01:11
1613 CS5 (080827J)	ST020509M5	05FEB09M	5-FEB-09	19:56:22
ZZZZ	ZZZZ	05FEB09M	5-FEB-09	20:51:38
ZZZZ	ZZZZ	05FEB09M	5-FEB-09	21:47:01
ZZZZ	ZZZZ	05FEB09M	5-FEB-09	22:42:20
ZZZZ	ZZZZ	05FEB09M	5-FEB-09	23:37:31
ZZZZ	ZZZZ	05FEB09M	6-FEB-09	00:32:42
ZZZZ	ZZZZ	05FEB09M	6-FEB-09	01:27:56
ZZZZ	ZZZZ	05FEB09M	6-FEB-09	02:23:11
ZZZZ	ZZZZ	05FEB09M	6-FEB-09	03:18:26
ZZZZ	ZZZZ	05FEB09M	6-FEB-09	04:13:45
ZZZZ	ZZZZ	05FEB09M	6-FEB-09	05:09:07
ZZZZ	ZZZZ	05FEB09M	6-FEB-09	06:04:26
ZZZZ	ZZZZ	05FEB09M	6-FEB-09	06:59:45
ZZZZ	ZZZZ	05FEB09M	6-FEB-09	07:55:04
ZZZZ	ZZZZ	05FEB09M	6-FEB-09	08:50:22
ZZZZ	ZZZZ	05FEB09M	6-FEB-09	09:45:41

ANALYST: DATE: 3/2/09

Frontier Analytical Laboratory

Data Filename: 05FEB09M

Analyte: Cal: PCDDFAL3-2-5-09

Name	RRF	S. D.	%RSD	S2 RRF#1	S3 RRF#2	S4 RRF#3	S1 RRF#4	S5 RRF#5	S6 RRF#6
2,3,7,8-TCDD	1.04	0.0502	4.83 %	1.06	1.08	0.98	0.98	1.04	1.10
1,2,3,7,8-PeCDD	0.90	0.0270	3.00 %	0.90	0.90	0.87	0.88	0.92	0.94
1,2,3,4,7,8-HxCDD	1.43	0.0393	2.75 %	1.45	1.42	1.40	1.38	1.43	1.49
1,2,3,6,7,8-HxCDD	1.02	0.0297	2.92 %	1.04	1.04	1.00	0.97	1.03	1.04
1,2,3,7,8,9-HxCDD	1.05	0.0462	4.39 %	1.13	1.07	1.02	1.02	1.01	1.06
1,2,3,4,6,7,8-HpCDD	0.99	0.0392	3.97 %	1.03	1.01	0.96	0.93	0.98	1.01
OCDD	0.94	0.0319	3.39 %	0.97	0.94	0.90	0.90	0.95	0.97
2,3,7,8-TCDF	1.34	0.108	8.09 %	1.51	1.43	1.29	1.24	1.25	1.31
1,2,3,7,8-PeCDF	1.03	0.0439	4.26 %	1.01	0.97	1.01	1.03	1.08	1.08
2,3,4,7,8-PeCDF	0.81	0.0392	4.85 %	0.84	0.76	0.80	0.77	0.83	0.86
1,2,3,4,7,8-HxCDF	1.35	0.0805	5.94 %	1.29	1.29	1.30	1.33	1.44	1.47
1,2,3,6,7,8-HxCDF	1.25	0.0665	5.32 %	1.18	1.22	1.21	1.23	1.31	1.35
2,3,4,6,7,8-HxCDF	1.53	0.0784	5.12 %	1.46	1.50	1.46	1.51	1.60	1.65
1,2,3,7,8,9-HxCDF	1.19	0.0618	5.21 %	1.17	1.15	1.13	1.14	1.24	1.28
1,2,3,4,6,7,8-HpCDF	1.10	0.0678	6.18 %	1.04	1.07	1.05	1.07	1.16	1.21
1,2,3,4,7,8,9-HpCDF	1.02	0.0621	6.07 %	0.98	1.00	0.97	1.00	1.08	1.12
OCDF	0.76	0.0600	7.87 %	0.87	0.71	0.76	0.70	0.76	0.79
13C-2,3,7,8-TCDD	0.94	0.0320	3.42 %	0.91	0.91	0.94	0.91	0.96	0.98
13C-1,2,3,7,8-PeCDD	0.75	0.0615	8.16 %	0.70	0.72	0.71	0.75	0.80	0.86
13C-1,2,3,4,7,8-HxCDD	1.03	0.0183	1.78 %	0.99	1.03	1.03	1.03	1.05	1.03
13C-1,2,3,6,7,8-HxCDD	1.08	0.0248	2.30 %	1.05	1.06	1.11	1.07	1.09	1.10
13C-1,2,3,4,6,7,8-HpCDD	0.89	0.0213	2.39 %	0.90	0.87	0.89	0.93	0.88	0.90
13C-OCDD	0.64	0.0281	4.42 %	0.64	0.61	0.61	0.67	0.61	0.67
13C-2,3,7,8-TCDF	0.86	0.0109	1.26 %	0.85	0.87	0.85	0.86	0.86	0.88
13C-1,2,3,7,8-PeCDF	0.76	0.0629	8.30 %	0.69	0.76	0.71	0.75	0.77	0.87
13C-2,3,4,7,8-PeCDF	0.78	0.0540	6.96 %	0.73	0.77	0.72	0.77	0.79	0.87
13C-1,2,3,4,7,8-HxCDF	1.34	0.0290	2.16 %	1.35	1.35	1.37	1.36	1.34	1.29
13C-1,2,3,6,7,8-HxCDF	1.40	0.0270	1.93 %	1.37	1.39	1.43	1.41	1.43	1.37
13C-2,3,4,6,7,8-HxCDF	1.29	0.0225	1.75 %	1.26	1.28	1.33	1.28	1.30	1.28
13C-1,2,3,7,8,9-HxCDF	1.01	0.0120	1.19 %	1.01	0.99	1.02	1.00	0.99	1.02
13C-1,2,3,4,6,7,8-HpCDF	1.16	0.0154	1.33 %	1.16	1.15	1.18	1.16	1.16	1.13
13C-1,2,3,4,7,8,9-HpCDF	0.96	0.0197	2.06 %	0.96	0.94	0.96	0.98	0.93	0.98
13C-OCDF	0.95	0.0411	4.34 %	0.93	0.91	0.93	0.97	0.93	1.02
37Cl-2,3,7,8-TCDD	0.88	0.0873	9.92 %	1.01	0.80	0.83	0.79	0.88	0.96
13C-1,2,3,4-TCDD	-	-	- %	-	-	-	-	-	-
13C-1,2,3,4-TCDF	-	-	- %	-	-	-	-	-	-
13C-1,2,3,7,8,9-HxCDD	-	-	- %	-	-	-	-	-	-
Total Tetra-Dioxins	1.04	0.0502	4.83 %	1.06	1.08	0.98	0.98	1.04	1.10
Total Penta-Dioxins	0.90	0.0270	3.00 %	0.90	0.90	0.87	0.88	0.92	0.94
Total Hexa-Dioxins	1.16	0.0326	2.81 %	1.20	1.17	1.13	1.12	1.15	1.19
Total Hepta-Dioxins	0.99	0.0392	3.97 %	1.03	1.01	0.96	0.93	0.98	1.01
Total Tetra-Furans	1.34	0.108	8.09 %	1.51	1.43	1.29	1.24	1.25	1.31
1st Fn. Tot Penta-Furans	0.92	0.0382	4.16 %	0.92	0.86	0.90	0.90	0.95	0.97
Total Penta-Furans	0.92	0.0382	4.16 %	0.92	0.86	0.90	0.90	0.95	0.97
Total Hexa-Furans	1.34	0.0713	5.34 %	1.28	1.29	1.29	1.31	1.41	1.45
Total Hepta-Furans	1.06	0.0648	6.09 %	1.01	1.04	1.01	1.04	1.12	1.17

Analyst: [signature] Date: 2/4/09

Run #1 Filename 05FEB09M S: 2 Acquired: 5-FEB-09 16:15:11 Cal: PCDDFAL3-2-5-09
Client ID: ST020509MO Analyte: FAL ID: 1613 CSO (080827J)

	Typ	Name	Amount	Resp	RA	RT	RF	RRF	
1	Unk	2,3,7,8-TCDD	0.25	8.65e+04	0.75 y	27:27	-	1.06	y
2	Unk	1,2,3,7,8-PeCDD	1.25	2.81e+05	1.77 y	33:15	-	0.897	y
3	Unk	1,2,3,4,7,8-HxCDD	1.25	3.23e+05	1.26 y	38:36	-	1.45	y
4	Unk	1,2,3,6,7,8-HxCDD	1.25	2.46e+05	1.25 y	38:47	-	1.04	y
5	Unk	1,2,3,7,8,9-HxCDD	1.25	2.59e+05	1.20 y	39:12	-	1.13	y
6	Unk	1,2,3,4,6,7,8-HpCDD	1.25	2.09e+05	1.08 y	44:10	-	1.03	y
7	Unk	OCDD	2.50	2.79e+05	0.94 y	49:43	-	0.974	y
8	Unk	2,3,7,8-TCDF	0.25	1.85e+05	0.68 y	26:42	-	1.51	y
9	Unk	1,2,3,7,8-PeCDF	1.25	5.04e+05	1.42 y	31:32	-	1.01	y
10	Unk	2,3,4,7,8-PeCDF	1.25	4.39e+05	1.36 y	32:50	-	0.839	y
11	Unk	1,2,3,4,7,8-HxCDF	1.25	3.92e+05	1.26 y	37:12	-	1.29	y
12	Unk	1,2,3,6,7,8-HxCDF	1.25	3.65e+05	1.29 y	37:25	-	1.18	y
13	Unk	2,3,4,6,7,8-HxCDF	1.25	4.14e+05	1.23 y	38:20	-	1.46	y
14	Unk	1,2,3,7,8,9-HxCDF	1.25	2.64e+05	1.24 y	39:47	-	1.17	y
15	Unk	1,2,3,4,6,7,8-HpCDF	1.25	2.71e+05	0.97 y	42:18	-	1.04	y
16	Unk	1,2,3,4,7,8,9-HpCDF	1.25	2.10e+05	0.96 y	45:06	-	0.975	y
17	Unk	OCDF	2.50	3.63e+05	0.85 y	50:06	-	0.868	y
18	IS/RT	13C-2,3,7,8-TCDD	100.00	3.25e+07	0.79 y	27:25	-	0.908	y
19	IS	13C-1,2,3,7,8-PeCDD	100.00	2.50e+07	1.76 y	33:13	-	0.700	y
20	IS	13C-1,2,3,4,7,8-HxCDD	100.00	1.79e+07	1.25 y	38:35	-	0.993	y
21	IS	13C-1,2,3,6,7,8-HxCDD	100.00	1.89e+07	1.24 y	38:45	-	1.05	y
22	IS	13C-1,2,3,4,6,7,8-HpCDD	100.00	1.62e+07	1.11 y	44:10	-	0.903	y
23	IS	13C-OCDD	200.00	2.29e+07	0.91 y	49:42	-	0.637	y
24	IS	13C-2,3,7,8-TCDF	100.00	4.90e+07	0.82 y	26:41	-	0.848	y
25	IS	13C-1,2,3,7,8-PeCDF	100.00	4.00e+07	1.68 y	31:30	-	0.694	y
26	IS	13C-2,3,4,7,8-PeCDF	100.00	4.19e+07	1.69 y	32:49	-	0.725	y
27	IS	13C-1,2,3,4,7,8-HxCDF	100.00	2.43e+07	0.53 y	37:11	-	1.35	y
28	IS	13C-1,2,3,6,7,8-HxCDF	100.00	2.46e+07	0.53 y	37:23	-	1.37	y
29	IS	13C-2,3,4,6,7,8-HxCDF	100.00	2.26e+07	0.53 y	38:20	-	1.26	y
30	IS	13C-1,2,3,7,8,9-HxCDF	100.00	1.81e+07	0.53 y	39:46	-	1.01	y
31	IS	13C-1,2,3,4,6,7,8-HpCDF	100.00	2.09e+07	0.43 y	42:16	-	1.16	y
32	IS	13C-1,2,3,4,7,8,9-HpCDF	100.00	1.72e+07	0.42 y	45:05	-	0.958	y
33	IS	13C-OCDF	200.00	3.34e+07	0.91 y	50:05	-	0.930	y
34	C/Up	37Cl-2,3,7,8-TCDD	0.25	9.03e+04		27:26	-	1.01	y
35	RS	13C-1,2,3,4-TCDD	100.00	3.58e+07	0.80 y	26:50	3.58e+05	-	n
36	RS	13C-1,2,3,4-TCDF	100.00	5.77e+07	0.82 y	25:35	5.77e+05	-	n
37	RS/RT	13C-1,2,3,7,8,9-HxCDD	100.00	1.80e+07	1.25 y	39:11	1.80e+05	-	n
38	Tot	Total Tetra-Dioxins	0.00	-	- n	-	-	1.06	y
39	Tot	Total Penta-Dioxins	0.00	-	- n	-	-	0.897	y
40	Tot	Total Hexa-Dioxins	0.00	-	- n	-	-	1.20	y
41	Tot	Total Hepta-Dioxins	0.00	-	- n	-	-	1.03	y
42	Tot	Total Tetra-Furans	0.00	-	- n	-	-	1.51	y
43	Tot	1st Fn. Tot Penta-Furans	0.00	-	- n	-	-	0.921	y
44	Tot	Total Penta-Furans	0.00	-	- n	-	-	0.921	y
45	Tot	Total Hexa-Furans	0.00	-	- n	-	-	1.28	y
46	Tot	Total Hepta-Furans	0.00	-	- n	-	-	1.01	y

Analyst: _____ Date: 2/6/09

Run #2 Filename 05FEB09M S: 3 Acquired: 5-FEB-09 17:10:30 Cal: PCDDFAL3-2-5-09
Client ID: ST020509M1 Analyte: FAL ID: 1613 CS1 (080827J)

	Typ	Name	Amount	Resp	RA	RT	RF	RRF	
1	Unk	2,3,7,8-TCDD	0.50	1.95e+05	0.81 y	27:28	-	1.08	y
2	Unk	1,2,3,7,8-PeCDD	2.50	6.46e+05	1.64 y	33:15	-	0.903	y
3	Unk	1,2,3,4,7,8-HxCDD	2.50	7.35e+05	1.36 y	38:36	-	1.42	y
4	Unk	1,2,3,6,7,8-HxCDD	2.50	5.52e+05	1.25 y	38:46	-	1.04	y
5	Unk	1,2,3,7,8,9-HxCDD	2.50	5.65e+05	1.33 y	39:12	-	1.07	y
6	Unk	1,2,3,4,6,7,8-HpCDD	2.50	4.40e+05	1.10 y	44:11	-	1.01	y
7	Unk	OCDD	5.00	5.77e+05	0.91 y	49:43	-	0.939	y
8	Unk	2,3,7,8-TCDF	0.50	3.89e+05	0.68 y	26:42	-	1.43	y
9	Unk	1,2,3,7,8-PeCDF	2.50	1.15e+06	1.44 y	31:31	-	0.974	y
10	Unk	2,3,4,7,8-PeCDF	2.50	9.17e+05	1.38 y	32:50	-	0.757	y
11	Unk	1,2,3,4,7,8-HxCDF	2.50	8.71e+05	1.25 y	37:13	-	1.29	y
12	Unk	1,2,3,6,7,8-HxCDF	2.50	8.49e+05	1.28 y	37:25	-	1.22	y
13	Unk	2,3,4,6,7,8-HxCDF	2.50	9.66e+05	1.24 y	38:21	-	1.50	y
14	Unk	1,2,3,7,8,9-HxCDF	2.50	5.77e+05	1.28 y	39:47	-	1.15	y
15	Unk	1,2,3,4,6,7,8-HpCDF	2.50	6.17e+05	1.04 y	42:17	-	1.07	y
16	Unk	1,2,3,4,7,8,9-HpCDF	2.50	4.70e+05	1.00 y	45:06	-	0.999	y
17	Unk	OCDF	5.00	6.51e+05	0.91 y	50:07	-	0.710	y
18	IS/RT	13C-2,3,7,8-TCDD	100.00	3.62e+07	0.79 y	27:26	-	0.909	y
19	IS	13C-1,2,3,7,8-PeCDD	100.00	2.86e+07	1.76 y	33:14	-	0.718	y
20	IS	13C-1,2,3,4,7,8-HxCDD	100.00	2.08e+07	1.26 y	38:35	-	1.03	y
21	IS	13C-1,2,3,6,7,8-HxCDD	100.00	2.13e+07	1.26 y	38:45	-	1.06	y
22	IS	13C-1,2,3,4,6,7,8-HpCDD	100.00	1.75e+07	1.11 y	44:09	-	0.867	y
23	IS	13C-OCDD	200.00	2.46e+07	0.90 y	49:42	-	0.611	y
24	IS	13C-2,3,7,8-TCDF	100.00	5.45e+07	0.82 y	26:41	-	0.869	y
25	IS	13C-1,2,3,7,8-PeCDF	100.00	4.74e+07	1.68 y	31:31	-	0.755	y
26	IS	13C-2,3,4,7,8-PeCDF	100.00	4.84e+07	1.67 y	32:50	-	0.772	y
27	IS	13C-1,2,3,4,7,8-HxCDF	100.00	2.71e+07	0.53 y	37:12	-	1.35	y
28	IS	13C-1,2,3,6,7,8-HxCDF	100.00	2.79e+07	0.53 y	37:23	-	1.39	y
29	IS	13C-2,3,4,6,7,8-HxCDF	100.00	2.58e+07	0.54 y	38:19	-	1.28	y
30	IS	13C-1,2,3,7,8,9-HxCDF	100.00	2.00e+07	0.53 y	39:46	-	0.995	y
31	IS	13C-1,2,3,4,6,7,8-HpCDF	100.00	2.32e+07	0.43 y	42:15	-	1.15	y
32	IS	13C-1,2,3,4,7,8,9-HpCDF	100.00	1.88e+07	0.43 y	45:05	-	0.935	y
33	IS	13C-OCDF	200.00	3.67e+07	0.91 y	50:05	-	0.910	y
34	C/Up	37Cl-2,3,7,8-TCDD	0.50	1.60e+05		27:28	-	0.805	y
35	RS	13C-1,2,3,4-TCDD	100.00	3.98e+07	0.79 y	26:51	3.98e+05	-	n
36	RS	13C-1,2,3,4-TCDF	100.00	6.27e+07	0.82 y	25:36	6.27e+05	-	n
37	RS/RT	13C-1,2,3,7,8,9-HxCDD	100.00	2.01e+07	1.25 y	39:11	2.01e+05	-	n
38	Tot	Total Tetra-Dioxins	0.00	-	- n	-	-	1.08	y
39	Tot	Total Penta-Dioxins	0.00	-	- n	-	-	0.903	y
40	Tot	Total Hexa-Dioxins	0.00	-	- n	-	-	1.17	y
41	Tot	Total Hepta-Dioxins	0.00	-	- n	-	-	1.01	y
42	Tot	Total Tetra-Furans	0.00	-	- n	-	-	1.43	y
43	Tot	1st Fn. Tot Penta-Furans	0.00	-	- n	-	-	0.864	y
44	Tot	Total Penta-Furans	0.00	-	- n	-	-	0.864	y
45	Tot	Total Hexa-Furans	0.00	-	- n	-	-	1.29	y
46	Tot	Total Hepta-Furans	0.00	-	- n	-	-	1.04	y

Analyst: _____ Date: 2/6/09

Run #3 Filename 05FEB09M S: 4 Acquired: 5-FEB-09 18:05:53 Cal: PCDDFAL3-2-5-09
Client ID: ST020509M2 Analyte: FAL ID: 1613 CS2 (080827J)

	Typ	Name	Amount	Resp	RA	RT	RF	RRF	
1	Unk	2,3,7,8-TCDD	2.00	6.37e+05	0.71 y	27:26	-	0.980	y
2	Unk	1,2,3,7,8-PeCDD	10.00	2.12e+06	1.66 y	33:16	-	0.870	y
3	Unk	1,2,3,4,7,8-HxCDD	10.00	2.53e+06	1.30 y	38:36	-	1.40	y
4	Unk	1,2,3,6,7,8-HxCDD	10.00	1.95e+06	1.32 y	38:47	-	1.00	y
5	Unk	1,2,3,7,8,9-HxCDD	10.00	1.91e+06	1.29 y	39:12	-	1.02	y
6	Unk	1,2,3,4,6,7,8-HpCDD	10.00	1.50e+06	1.04 y	44:11	-	0.962	y
7	Unk	OCDD	20.00	1.95e+06	0.91 y	49:44	-	0.905	y
8	Unk	2,3,7,8-TCDF	2.00	1.25e+06	0.71 y	26:42	-	1.29	y
9	Unk	1,2,3,7,8-PeCDF	10.00	4.09e+06	1.47 y	31:32	-	1.01	y
10	Unk	2,3,4,7,8-PeCDF	10.00	3.28e+06	1.45 y	32:50	-	0.797	y
11	Unk	1,2,3,4,7,8-HxCDF	10.00	3.13e+06	1.26 y	37:13	-	1.30	y
12	Unk	1,2,3,6,7,8-HxCDF	10.00	3.04e+06	1.22 y	37:25	-	1.21	y
13	Unk	2,3,4,6,7,8-HxCDF	10.00	3.41e+06	1.26 y	38:21	-	1.46	y
14	Unk	1,2,3,7,8,9-HxCDF	10.00	2.02e+06	1.27 y	39:47	-	1.13	y
15	Unk	1,2,3,4,6,7,8-HpCDF	10.00	2.17e+06	1.03 y	42:17	-	1.05	y
16	Unk	1,2,3,4,7,8,9-HpCDF	10.00	1.62e+06	1.02 y	45:06	-	0.966	y
17	Unk	OCDF	20.00	2.46e+06	0.91 y	50:05	-	0.757	y
18	IS/RT	13C-2,3,7,8-TCDD	100.00	3.25e+07	0.78 y	27:25	-	0.940	y
19	IS	13C-1,2,3,7,8-PeCDD	100.00	2.44e+07	1.78 y	33:14	-	0.706	y
20	IS	13C-1,2,3,4,7,8-HxCDD	100.00	1.81e+07	1.28 y	38:35	-	1.03	y
21	IS	13C-1,2,3,6,7,8-HxCDD	100.00	1.95e+07	1.25 y	38:45	-	1.11	y
22	IS	13C-1,2,3,4,6,7,8-HpCDD	100.00	1.56e+07	1.12 y	44:10	-	0.888	y
23	IS	13C-OCDD	200.00	2.16e+07	0.90 y	49:42	-	0.615	y
24	IS	13C-2,3,7,8-TCDF	100.00	4.86e+07	0.82 y	26:41	-	0.855	y
25	IS	13C-1,2,3,7,8-PeCDF	100.00	4.05e+07	1.70 y	31:30	-	0.713	y
26	IS	13C-2,3,4,7,8-PeCDF	100.00	4.12e+07	1.69 y	32:49	-	0.724	y
27	IS	13C-1,2,3,4,7,8-HxCDF	100.00	2.40e+07	0.53 y	37:11	-	1.37	y
28	IS	13C-1,2,3,6,7,8-HxCDF	100.00	2.51e+07	0.53 y	37:24	-	1.43	y
29	IS	13C-2,3,4,6,7,8-HxCDF	100.00	2.33e+07	0.53 y	38:19	-	1.33	y
30	IS	13C-1,2,3,7,8,9-HxCDF	100.00	1.79e+07	0.54 y	39:45	-	1.02	y
31	IS	13C-1,2,3,4,6,7,8-HpCDF	100.00	2.07e+07	0.42 y	42:16	-	1.18	y
32	IS	13C-1,2,3,4,7,8,9-HpCDF	100.00	1.68e+07	0.42 y	45:05	-	0.957	y
33	IS	13C-OCDF	200.00	3.25e+07	0.91 y	50:05	-	0.928	y
34	C/Up	37Cl-2,3,7,8-TCDD	2.00	5.74e+05		27:26	-	0.831	y
35	RS	13C-1,2,3,4-TCDD	100.00	3.46e+07	0.79 y	26:51	3.46e+05	-	n
36	RS	13C-1,2,3,4-TCDF	100.00	5.68e+07	0.82 y	25:35	5.68e+05	-	n
37	RS/RT	13C-1,2,3,7,8,9-HxCDD	100.00	1.75e+07	1.26 y	39:11	1.75e+05	-	n
38	Tot	Total Tetra-Dioxins	0.00	-	- n	-	-	0.980	y
39	Tot	Total Penta-Dioxins	0.00	-	- n	-	-	0.870	y
40	Tot	Total Hexa-Dioxins	0.00	-	- n	-	-	1.13	y
41	Tot	Total Hepta-Dioxins	0.00	-	- n	-	-	0.962	y
42	Tot	Total Tetra-Furans	0.00	-	- n	-	-	1.29	y
43	Tot	1st Fn. Tot Penta-Furans	0.00	-	- n	-	-	0.902	y
44	Tot	Total Penta-Furans	0.00	-	- n	-	-	0.902	y
45	Tot	Total Hexa-Furans	0.00	-	- n	-	-	1.29	y
46	Tot	Total Hepta-Furans	0.00	-	- n	-	-	1.01	y

Analyst: _____ Date: 2/6/09

Run #4 Filename 05FEB09M S: 1 Acquired: 5-FEB-09 15:20:00 Cal: PCDDFAL3-2-5-09
Client ID: ST020509M3 Analyte: FAL ID: 1613 CS3 (080827J)

	Typ	Name	Amount	Resp	RA	RT	RF	RRF	
1	Unk	2,3,7,8-TCDD	10.00	3.52e+06	0.76 y	27:26	-	0.982	y
2	Unk	1,2,3,7,8-PeCDD	50.00	1.28e+07	1.63 y	33:15	-	0.877	y
3	Unk	1,2,3,4,7,8-HxCDD	50.00	1.47e+07	1.32 y	38:37	-	1.38	y
4	Unk	1,2,3,6,7,8-HxCDD	50.00	1.06e+07	1.32 y	38:46	-	0.967	y
5	Unk	1,2,3,7,8,9-HxCDD	50.00	1.10e+07	1.30 y	39:12	-	1.02	y
6	Unk	1,2,3,4,6,7,8-HpCDD	50.00	8.87e+06	1.03 y	44:11	-	0.925	y
7	Unk	OCDD	100.00	1.25e+07	0.91 y	49:43	-	0.899	y
8	Unk	2,3,7,8-TCDF	10.00	6.70e+06	0.72 y	26:41	-	1.24	y
9	Unk	1,2,3,7,8-PeCDF	50.00	2.41e+07	1.53 y	31:31	-	1.03	y
10	Unk	2,3,4,7,8-PeCDF	50.00	1.86e+07	1.51 y	32:50	-	0.773	y
11	Unk	1,2,3,4,7,8-HxCDF	50.00	1.88e+07	1.26 y	37:13	-	1.33	y
12	Unk	1,2,3,6,7,8-HxCDF	50.00	1.79e+07	1.25 y	37:25	-	1.23	y
13	Unk	2,3,4,6,7,8-HxCDF	50.00	1.99e+07	1.26 y	38:21	-	1.51	y
14	Unk	1,2,3,7,8,9-HxCDF	50.00	1.18e+07	1.26 y	39:47	-	1.14	y
15	Unk	1,2,3,4,6,7,8-HpCDF	50.00	1.28e+07	1.03 y	42:17	-	1.07	y
16	Unk	1,2,3,4,7,8,9-HpCDF	50.00	1.01e+07	1.03 y	45:06	-	0.999	y
17	Unk	OCDF	100.00	1.40e+07	0.90 y	50:06	-	0.703	y
18	IS/RT	13C-2,3,7,8-TCDD	100.00	3.58e+07	0.78 y	27:25	-	0.914	y
19	IS	13C-1,2,3,7,8-PeCDD	100.00	2.93e+07	1.77 y	33:14	-	0.747	y
20	IS	13C-1,2,3,4,7,8-HxCDD	100.00	2.13e+07	1.27 y	38:35	-	1.03	y
21	IS	13C-1,2,3,6,7,8-HxCDD	100.00	2.20e+07	1.26 y	38:45	-	1.07	y
22	IS	13C-1,2,3,4,6,7,8-HpCDD	100.00	1.92e+07	1.10 y	44:10	-	0.928	y
23	IS	13C-OCDD	200.00	2.77e+07	0.92 y	49:42	-	0.671	y
24	IS	13C-2,3,7,8-TCDF	100.00	5.39e+07	0.81 y	26:40	-	0.864	y
25	IS	13C-1,2,3,7,8-PeCDF	100.00	4.67e+07	1.69 y	31:31	-	0.749	y
26	IS	13C-2,3,4,7,8-PeCDF	100.00	4.82e+07	1.70 y	32:50	-	0.772	y
27	IS	13C-1,2,3,4,7,8-HxCDF	100.00	2.81e+07	0.53 y	37:12	-	1.36	y
28	IS	13C-1,2,3,6,7,8-HxCDF	100.00	2.92e+07	0.53 y	37:23	-	1.41	y
29	IS	13C-2,3,4,6,7,8-HxCDF	100.00	2.64e+07	0.53 y	38:20	-	1.28	y
30	IS	13C-1,2,3,7,8,9-HxCDF	100.00	2.07e+07	0.54 y	39:46	-	1.00	y
31	IS	13C-1,2,3,4,6,7,8-HpCDF	100.00	2.39e+07	0.43 y	42:16	-	1.16	y
32	IS	13C-1,2,3,4,7,8,9-HpCDF	100.00	2.02e+07	0.42 y	45:05	-	0.977	y
33	IS	13C-OCDF	200.00	3.99e+07	0.91 y	50:05	-	0.967	y
34	C/Up	37Cl-2,3,7,8-TCDD	10.00	3.11e+06		27:26	-	0.794	y
35	RS	13C-1,2,3,4-TCDD	100.00	3.92e+07	0.79 y	26:51	3.92e+05	-	n
36	RS	13C-1,2,3,4-TCDF	100.00	6.24e+07	0.82 y	25:35	6.24e+05	-	n
37	RS/RT	13C-1,2,3,7,8,9-HxCDD	100.00	2.07e+07	1.27 y	39:12	2.07e+05	-	n
38	Tot	Total Tetra-Dioxins	0.00	-	- n	-	-	0.982	y
39	Tot	Total Penta-Dioxins	0.00	-	- n	-	-	0.877	y
40	Tot	Total Hexa-Dioxins	0.00	-	- n	-	-	1.12	y
41	Tot	Total Hepta-Dioxins	0.00	-	- n	-	-	0.925	y
42	Tot	Total Tetra-Furans	0.00	-	- n	-	-	1.24	y
43	Tot	1st Fn. Tot Penta-Furans	0.00	-	- n	-	-	0.901	y
44	Tot	Total Penta-Furans	0.00	-	- n	-	-	0.901	y
45	Tot	Total Hexa-Furans	0.00	-	- n	-	-	1.31	y
46	Tot	Total Hepta-Furans	0.00	-	- n	-	-	1.04	y

Analyst: _____ Date: 2/6/09

Run #5 Filename 05FEB09M S: 5 Acquired: 5-FEB-09 19:01:11 Cal: PCDDFAL3-2-5-09
Client ID: ST020509M4 Analyte: FAL ID: 1613 CS4 (080827J)

	Typ	Name	Amount	Resp	RA	RT	RF	RRF	
1	Unk	2,3,7,8-TCDD	40.00	1.56e+07	0.75 y	27:27	-	1.04	y
2	Unk	1,2,3,7,8-PeCDD	200.00	5.68e+07	1.63 y	33:16	-	0.917	y
3	Unk	1,2,3,4,7,8-HxCDD	200.00	6.57e+07	1.30 y	38:36	-	1.43	y
4	Unk	1,2,3,6,7,8-HxCDD	200.00	4.90e+07	1.31 y	38:46	-	1.03	y
5	Unk	1,2,3,7,8,9-HxCDD	200.00	4.72e+07	1.32 y	39:13	-	1.01	y
6	Unk	1,2,3,4,6,7,8-HpCDD	200.00	3.76e+07	1.04 y	44:11	-	0.979	y
7	Unk	OCDD	400.00	5.10e+07	0.90 y	49:44	-	0.954	y
8	Unk	2,3,7,8-TCDF	40.00	2.77e+07	0.73 y	26:42	-	1.25	y
9	Unk	1,2,3,7,8-PeCDF	200.00	1.07e+08	1.51 y	31:32	-	1.08	y
10	Unk	2,3,4,7,8-PeCDF	200.00	8.40e+07	1.53 y	32:51	-	0.826	y
11	Unk	1,2,3,4,7,8-HxCDF	200.00	8.43e+07	1.25 y	37:13	-	1.44	y
12	Unk	1,2,3,6,7,8-HxCDF	200.00	8.18e+07	1.25 y	37:25	-	1.31	y
13	Unk	2,3,4,6,7,8-HxCDF	200.00	9.09e+07	1.25 y	38:21	-	1.60	y
14	Unk	1,2,3,7,8,9-HxCDF	200.00	5.40e+07	1.25 y	39:47	-	1.24	y
15	Unk	1,2,3,4,6,7,8-HpCDF	200.00	5.85e+07	1.03 y	42:17	-	1.16	y
16	Unk	1,2,3,4,7,8,9-HpCDF	200.00	4.42e+07	1.05 y	45:06	-	1.08	y
17	Unk	OCDF	400.00	6.13e+07	0.91 y	50:06	-	0.755	y
18	IS/RT	13C-2,3,7,8-TCDD	100.00	3.76e+07	0.79 y	27:26	-	0.965	y
19	IS	13C-1,2,3,7,8-PeCDD	100.00	3.10e+07	1.77 y	33:14	-	0.795	y
20	IS	13C-1,2,3,4,7,8-HxCDD	100.00	2.29e+07	1.30 y	38:35	-	1.05	y
21	IS	13C-1,2,3,6,7,8-HxCDD	100.00	2.38e+07	1.24 y	38:45	-	1.09	y
22	IS	13C-1,2,3,4,6,7,8-HpCDD	100.00	1.92e+07	1.10 y	44:10	-	0.878	y
23	IS	13C-OCDD	200.00	2.67e+07	0.91 y	49:42	-	0.611	y
24	IS	13C-2,3,7,8-TCDF	100.00	5.54e+07	0.82 y	26:41	-	0.861	y
25	IS	13C-1,2,3,7,8-PeCDF	100.00	4.93e+07	1.71 y	31:30	-	0.765	y
26	IS	13C-2,3,4,7,8-PeCDF	100.00	5.09e+07	1.71 y	32:49	-	0.790	y
27	IS	13C-1,2,3,4,7,8-HxCDF	100.00	2.93e+07	0.53 y	37:12	-	1.34	y
28	IS	13C-1,2,3,6,7,8-HxCDF	100.00	3.12e+07	0.54 y	37:24	-	1.43	y
29	IS	13C-2,3,4,6,7,8-HxCDF	100.00	2.83e+07	0.53 y	38:19	-	1.30	y
30	IS	13C-1,2,3,7,8,9-HxCDF	100.00	2.17e+07	0.53 y	39:46	-	0.994	y
31	IS	13C-1,2,3,4,6,7,8-HpCDF	100.00	2.53e+07	0.43 y	42:16	-	1.16	y
32	IS	13C-1,2,3,4,7,8,9-HpCDF	100.00	2.04e+07	0.43 y	45:05	-	0.934	y
33	IS	13C-OCDF	200.00	4.06e+07	0.92 y	50:05	-	0.927	y
34	C/Up	37Cl-2,3,7,8-TCDD	40.00	1.37e+07		27:27	-	0.880	y
35	RS	13C-1,2,3,4-TCDD	100.00	3.90e+07	0.79 y	26:50	3.90e+05	-	n
36	RS	13C-1,2,3,4-TCDF	100.00	6.44e+07	0.82 y	25:36	6.44e+05	-	n
37	RS/RT	13C-1,2,3,7,8,9-HxCDD	100.00	2.19e+07	1.25 y	39:11	2.19e+05	-	n
38	Tot	Total Tetra-Dioxins	0.00	-	- n	-	-	1.04	y
39	Tot	Total Penta-Dioxins	0.00	-	- n	-	-	0.917	y
40	Tot	Total Hexa-Dioxins	0.00	-	- n	-	-	1.15	y
41	Tot	Total Hepta-Dioxins	0.00	-	- n	-	-	0.979	y
42	Tot	Total Tetra-Furans	0.00	-	- n	-	-	1.25	y
43	Tot	1st Fn. Tot Penta-Furans	0.00	-	- n	-	-	0.953	y
44	Tot	Total Penta-Furans	0.00	-	- n	-	-	0.953	y
45	Tot	Total Hexa-Furans	0.00	-	- n	-	-	1.41	y
46	Tot	Total Hepta-Furans	0.00	-	- n	-	-	1.12	y

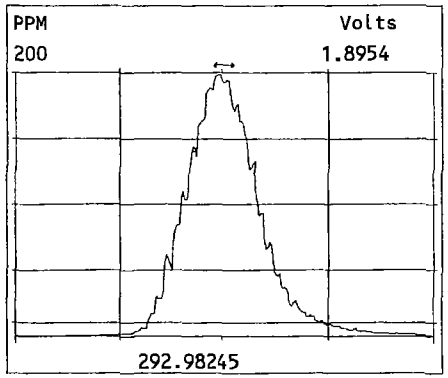
Analyst: _____ Date: 2/6/09

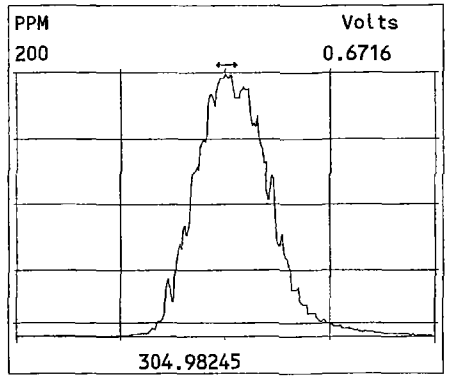
Run #6 Filename 05FEB09M S: 6 Acquired: 5-FEB-09 19:56:22 Cal: PCDDFAL3-2-5-09
Client ID: ST020509M5 Analyte: FAL ID: 1613 CS5 (080827J)

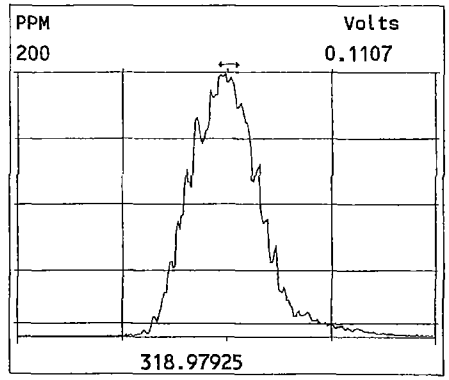
	Typ	Name	Amount	Resp	RA	RT	RF	RRF	
1	Unk	2,3,7,8-TCDD	200.00	7.46e+07	0.76 y	27:27	-	1.10	y
2	Unk	1,2,3,7,8-PeCDD	1000.00	2.79e+08	1.61 y	33:15	-	0.944	y
3	Unk	1,2,3,4,7,8-HxCDD	1000.00	3.45e+08	1.30 y	38:36	-	1.49	y
4	Unk	1,2,3,6,7,8-HxCDD	1000.00	2.55e+08	1.30 y	38:46	-	1.04	y
5	Unk	1,2,3,7,8,9-HxCDD	1000.00	2.52e+08	1.30 y	39:13	-	1.06	y
6	Unk	1,2,3,4,6,7,8-HpCDD	1000.00	2.04e+08	1.04 y	44:11	-	1.01	y
7	Unk	OCDD	2000.00	2.89e+08	0.90 y	49:45	-	0.969	y
8	Unk	2,3,7,8-TCDF	200.00	1.28e+08	0.73 y	26:41	-	1.31	y
9	Unk	1,2,3,7,8-PeCDF	1000.00	5.23e+08	1.52 y	31:32	-	1.08	y
10	Unk	2,3,4,7,8-PeCDF	1000.00	4.14e+08	1.51 y	32:51	-	0.858	y
11	Unk	1,2,3,4,7,8-HxCDF	1000.00	4.25e+08	1.26 y	37:13	-	1.47	y
12	Unk	1,2,3,6,7,8-HxCDF	1000.00	4.16e+08	1.24 y	37:25	-	1.35	y
13	Unk	2,3,4,6,7,8-HxCDF	1000.00	4.75e+08	1.24 y	38:21	-	1.65	y
14	Unk	1,2,3,7,8,9-HxCDF	1000.00	2.93e+08	1.26 y	39:47	-	1.28	y
15	Unk	1,2,3,4,6,7,8-HpCDF	1000.00	3.07e+08	1.03 y	42:17	-	1.21	y
16	Unk	1,2,3,4,7,8,9-HpCDF	1000.00	2.46e+08	1.04 y	45:06	-	1.12	y
17	Unk	OCDF	2000.00	3.60e+08	0.91 y	50:07	-	0.786	y
18	IS/RT	13C-2,3,7,8-TCDD	100.00	3.39e+07	0.79 y	27:25	-	0.984	y
19	IS	13C-1,2,3,7,8-PeCDD	100.00	2.96e+07	1.76 y	33:15	-	0.857	y
20	IS	13C-1,2,3,4,7,8-HxCDD	100.00	2.31e+07	1.26 y	38:35	-	1.03	y
21	IS	13C-1,2,3,6,7,8-HxCDD	100.00	2.46e+07	1.25 y	38:45	-	1.10	y
22	IS	13C-1,2,3,4,6,7,8-HpCDD	100.00	2.01e+07	1.10 y	44:10	-	0.898	y
23	IS	13C-OCDD	200.00	2.99e+07	0.91 y	49:43	-	0.667	y
24	IS	13C-2,3,7,8-TCDF	100.00	4.87e+07	0.82 y	26:39	-	0.880	y
25	IS	13C-1,2,3,7,8-PeCDF	100.00	4.84e+07	1.68 y	31:31	-	0.874	y
26	IS	13C-2,3,4,7,8-PeCDF	100.00	4.83e+07	1.68 y	32:50	-	0.871	y
27	IS	13C-1,2,3,4,7,8-HxCDF	100.00	2.88e+07	0.53 y	37:12	-	1.29	y
28	IS	13C-1,2,3,6,7,8-HxCDF	100.00	3.07e+07	0.54 y	37:23	-	1.37	y
29	IS	13C-2,3,4,6,7,8-HxCDF	100.00	2.88e+07	0.53 y	38:20	-	1.28	y
30	IS	13C-1,2,3,7,8,9-HxCDF	100.00	2.28e+07	0.54 y	39:46	-	1.02	y
31	IS	13C-1,2,3,4,6,7,8-HpCDF	100.00	2.54e+07	0.43 y	42:16	-	1.13	y
32	IS	13C-1,2,3,4,7,8,9-HpCDF	100.00	2.19e+07	0.43 y	45:05	-	0.980	y
33	IS	13C-OCDF	200.00	4.58e+07	0.92 y	50:06	-	1.02	y
34	C/Up	37Cl-2,3,7,8-TCDD	200.00	6.61e+07		27:27	-	0.958	y
35	RS	13C-1,2,3,4-TCDD	100.00	3.45e+07	0.80 y	26:50	3.45e+05	-	n
36	RS	13C-1,2,3,4-TCDF	100.00	5.54e+07	0.83 y	25:35	5.54e+05	-	n
37	RS/RT	13C-1,2,3,7,8,9-HxCDD	100.00	2.24e+07	1.24 y	39:12	2.24e+05	-	n
38	Tot	Total Tetra-Dioxins	0.00	-	- n	-	-	1.10	y
39	Tot	Total Penta-Dioxins	0.00	-	- n	-	-	0.944	y
40	Tot	Total Hexa-Dioxins	0.00	-	- n	-	-	1.19	y
41	Tot	Total Hepta-Dioxins	0.00	-	- n	-	-	1.01	y
42	Tot	Total Tetra-Furans	0.00	-	- n	-	-	1.31	y
43	Tot	1st Fn. Tot Penta-Furans	0.00	-	- n	-	-	0.969	y
44	Tot	Total Penta-Furans	0.00	-	- n	-	-	0.969	y
45	Tot	Total Hexa-Furans	0.00	-	- n	-	-	1.45	y
46	Tot	Total Hepta-Furans	0.00	-	- n	-	-	1.17	y

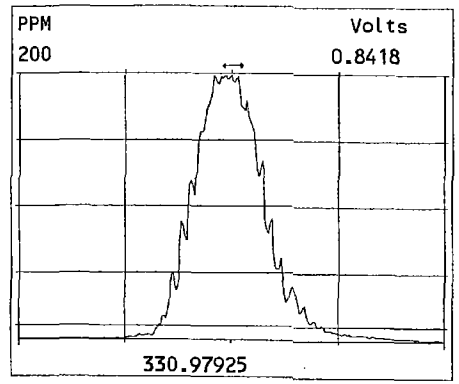
Analyst: _____ Date: 2/6/09

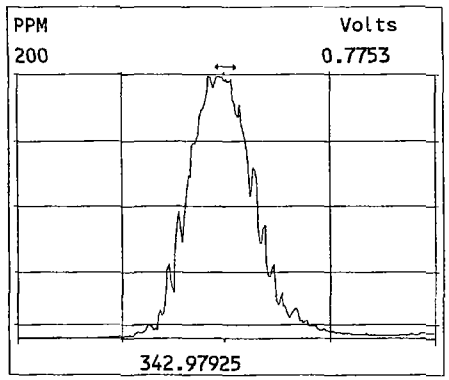
Peak Locate Examination: 5-FEB-2009:15:18 File:05FEB09M
Experiment:PCDD Function:1 Reference:PFK

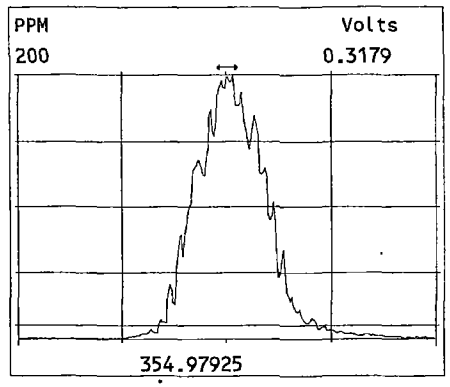


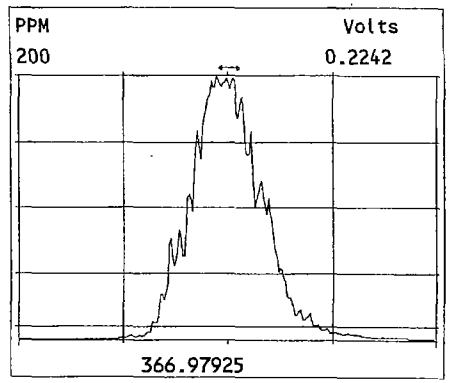


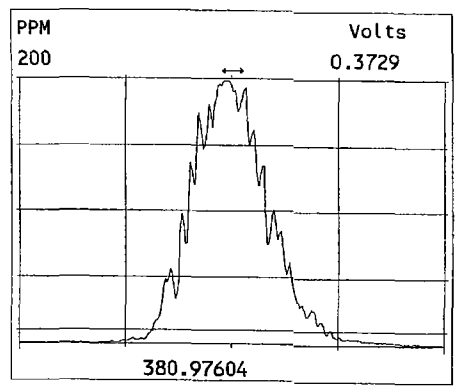


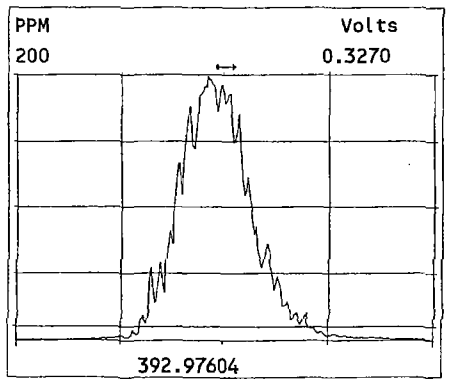


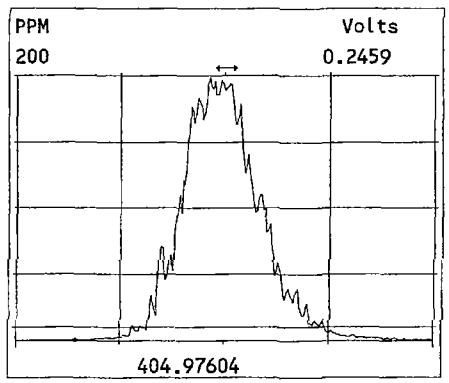


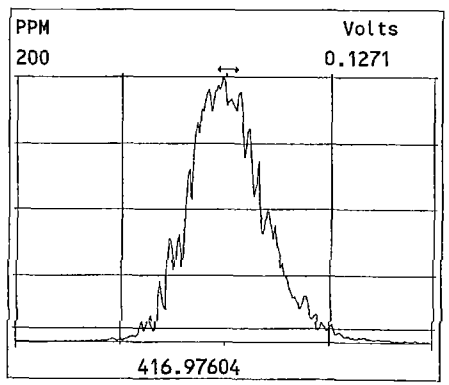




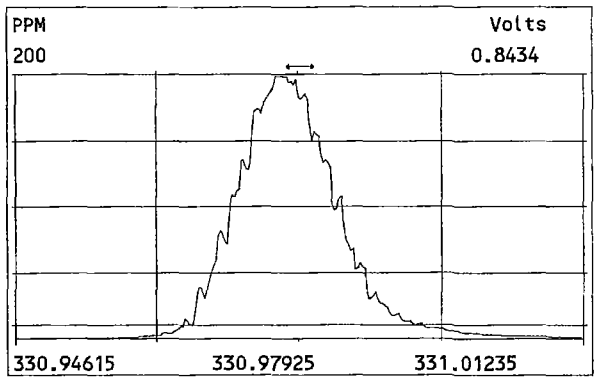


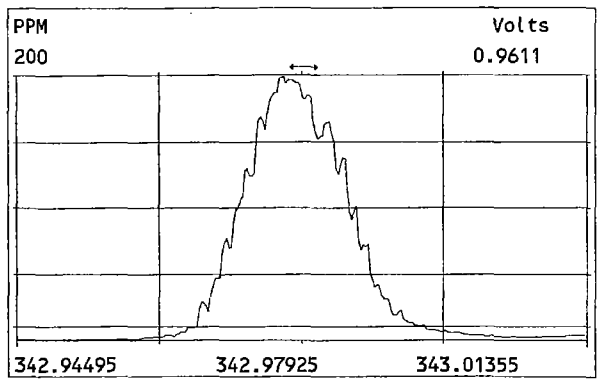


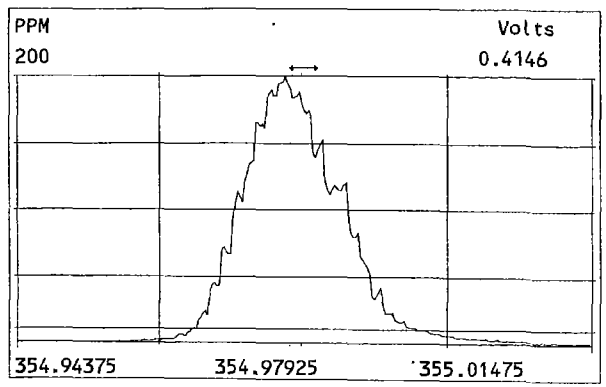


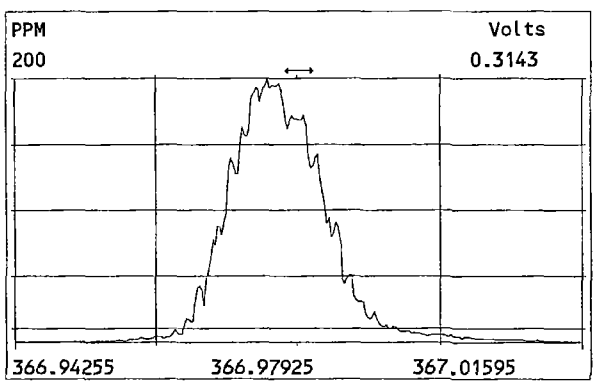


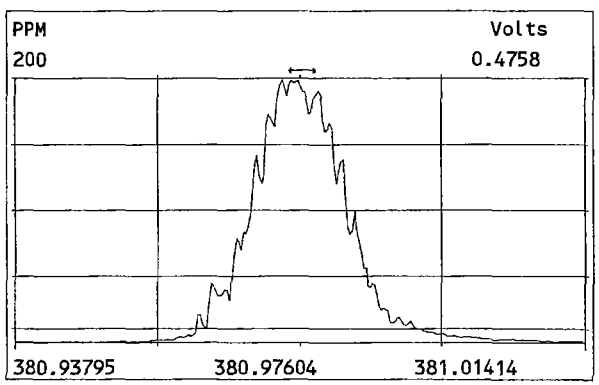
Peak Locate Examination: 5-FEB-2009:15:18 File:05FEB09M
Experiment:PCDD Function:2 Reference:PFK

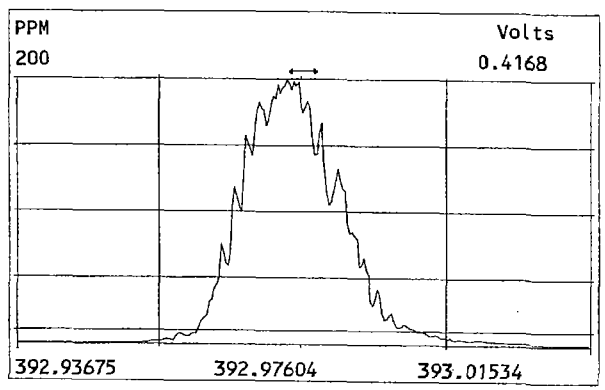


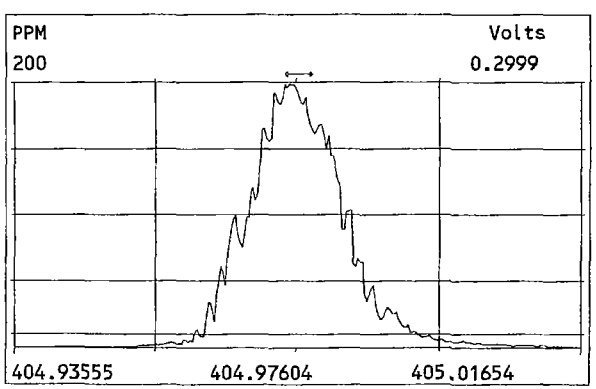


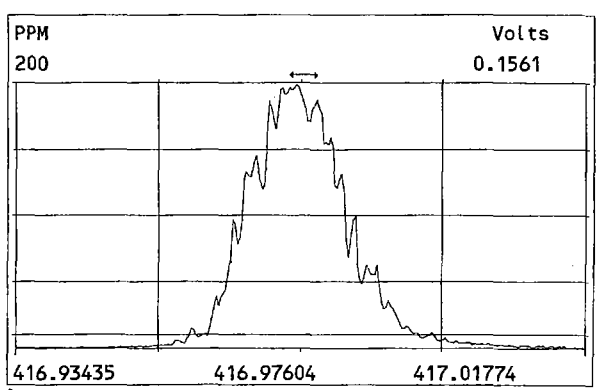




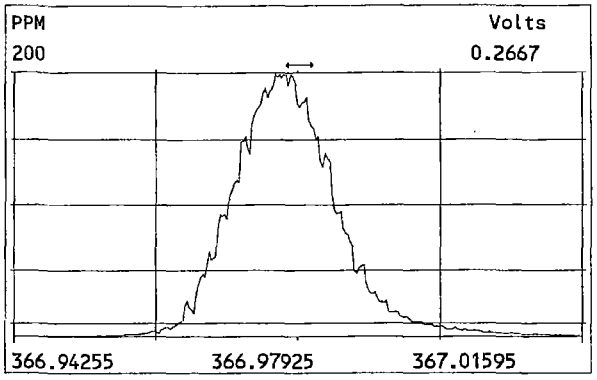


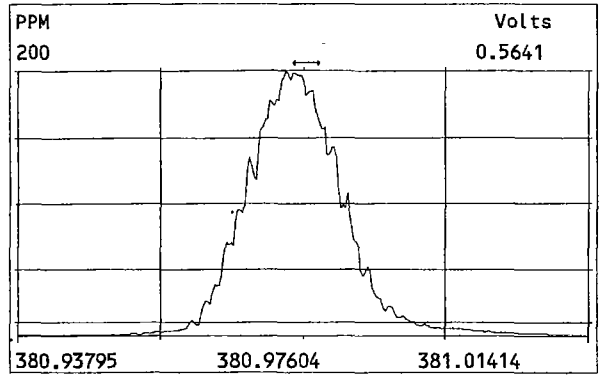


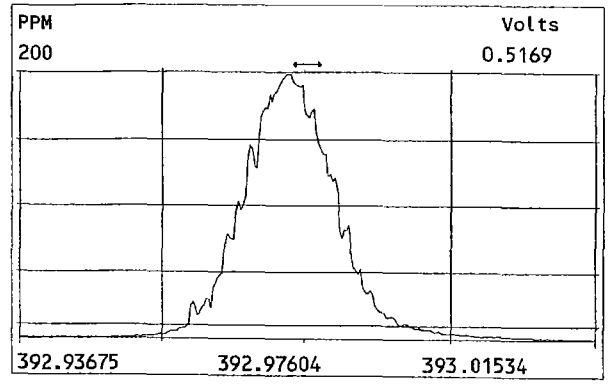


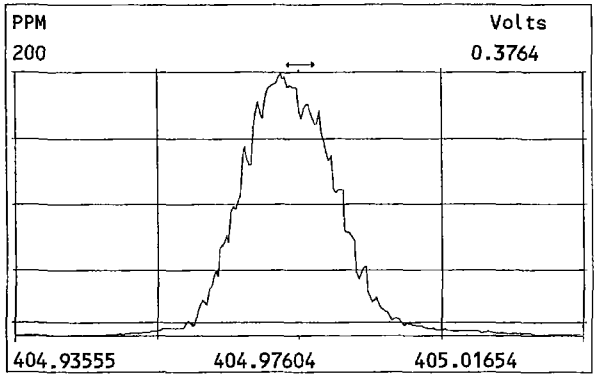


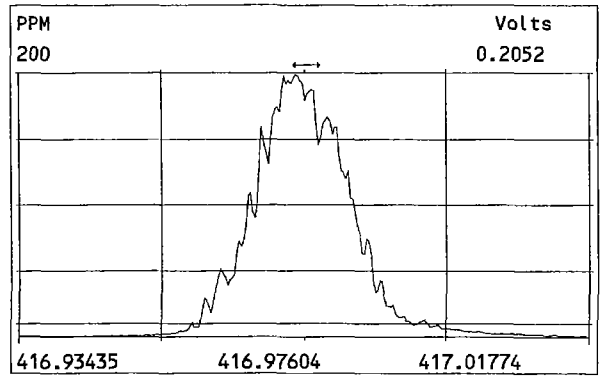
Peak Locate Examination: 5-FEB-2009:15:18 File:05FEB09M
Experiment:PCDD Function:3 Reference:PFK

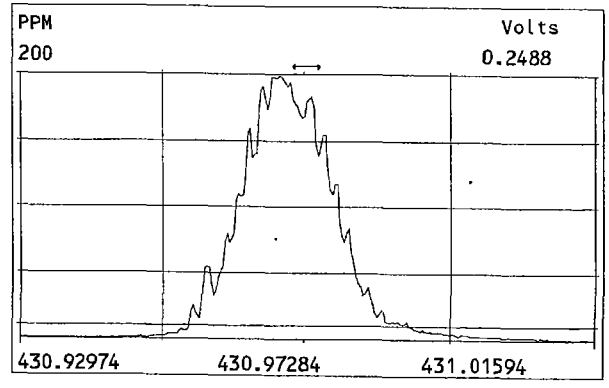


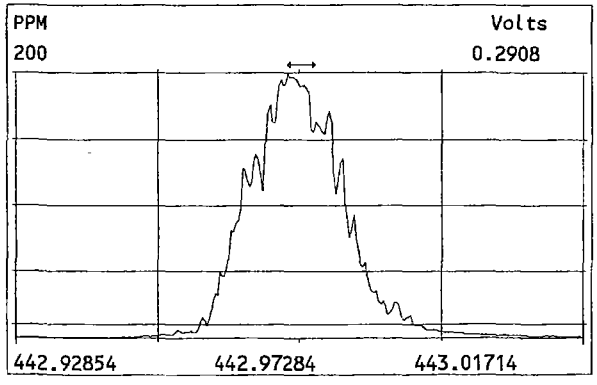


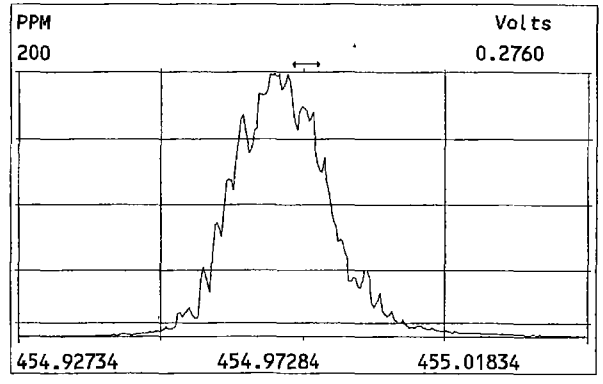




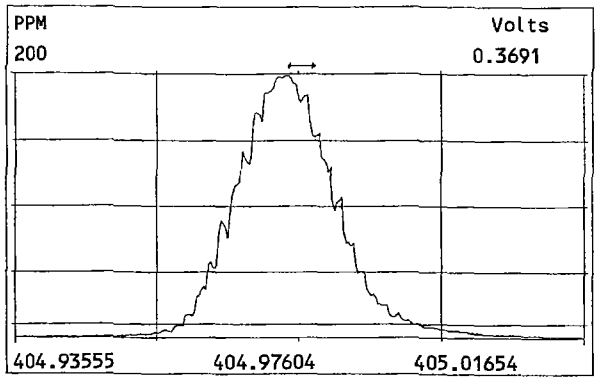


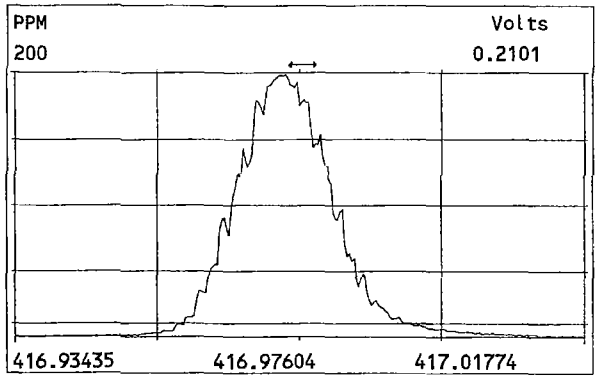


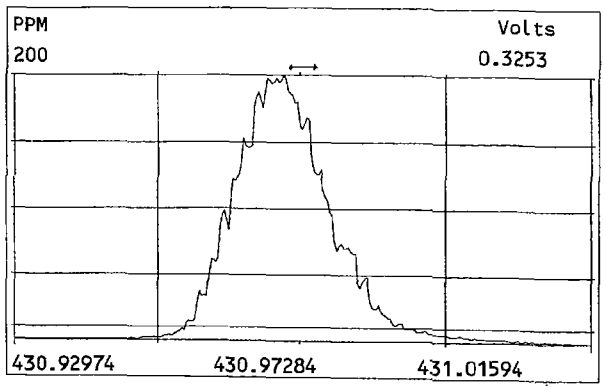


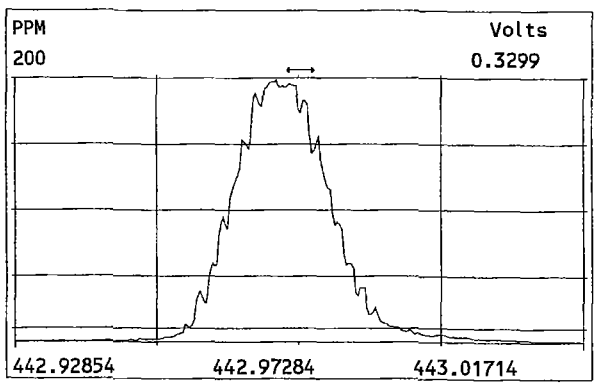


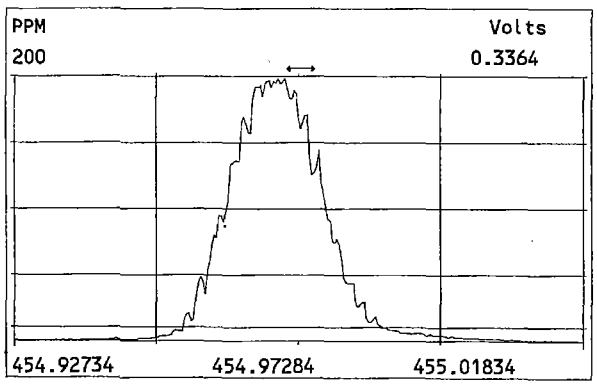
Peak Locate Examination: 5-FEB-2009:15:19 File:05FEB09M
Experiment:PCDD Function:4 Reference:PFK

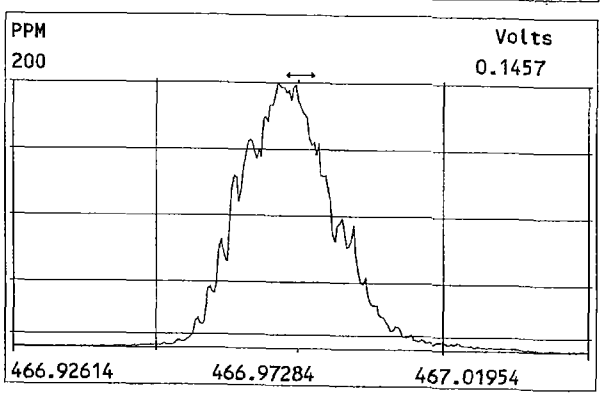


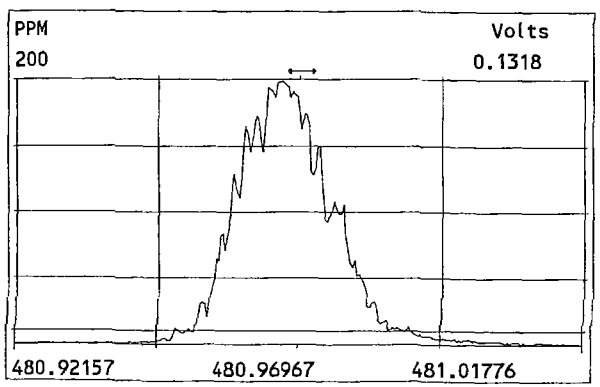




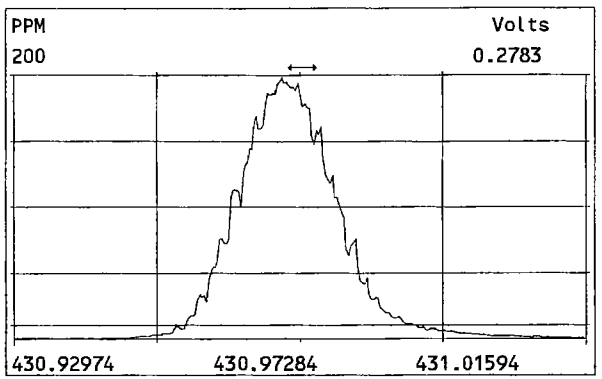


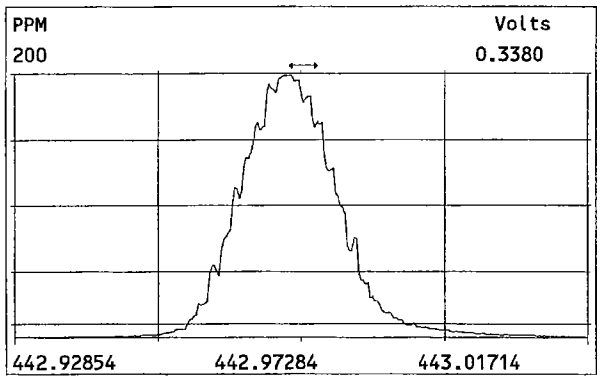


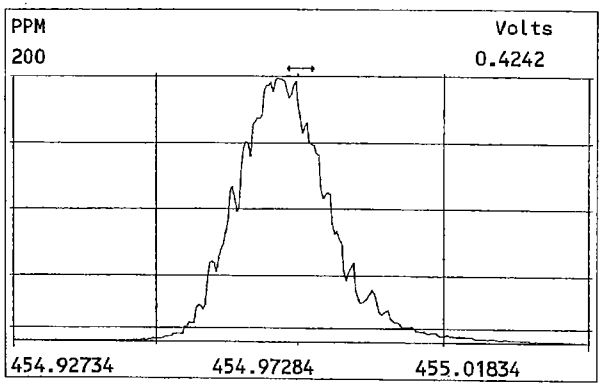


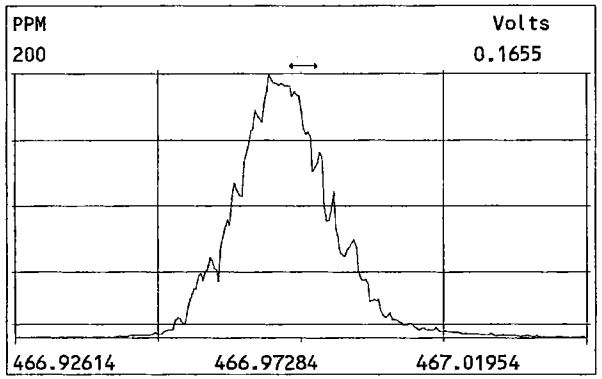


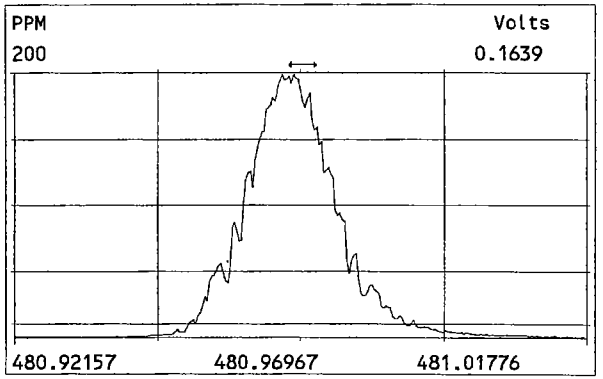
Peak Locate Examination: 5-FEB-2009:15:19 File:05FEB09M
Experiment:PCDD Function:5 Reference:PFK

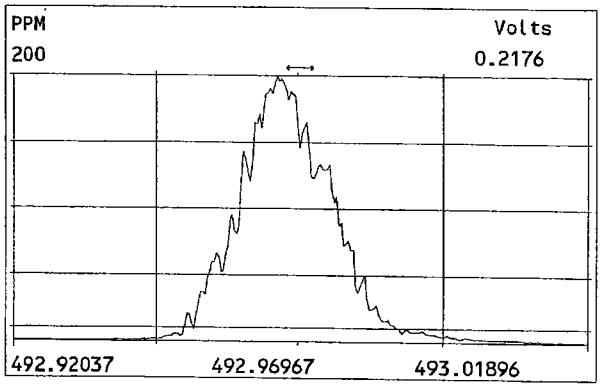


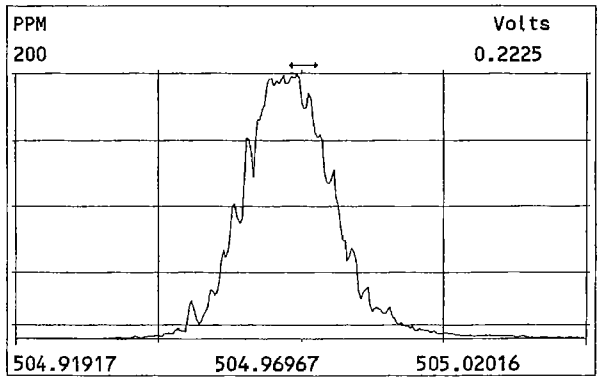


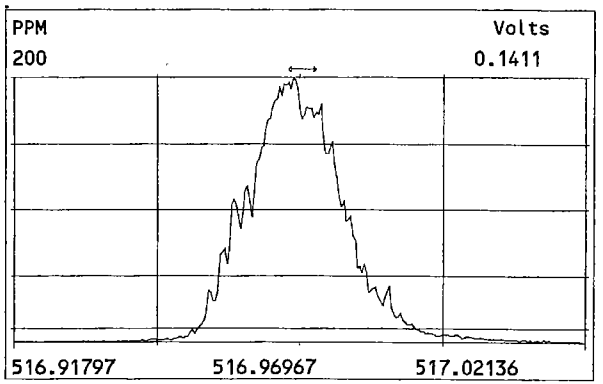




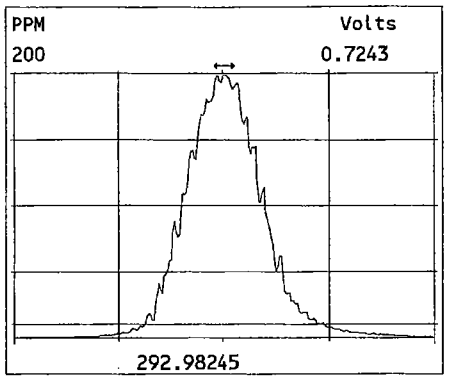


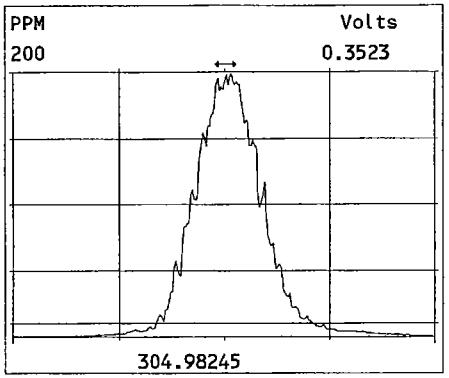


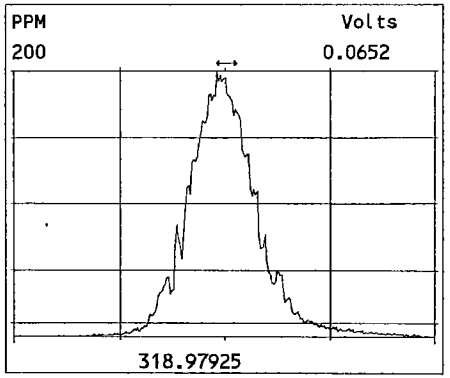


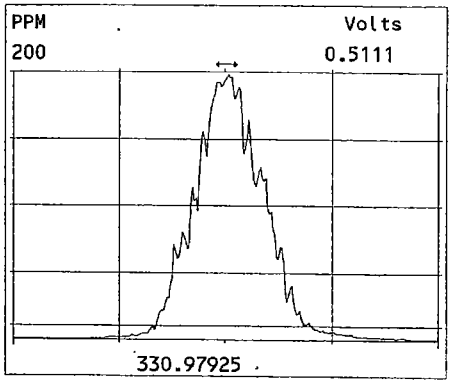


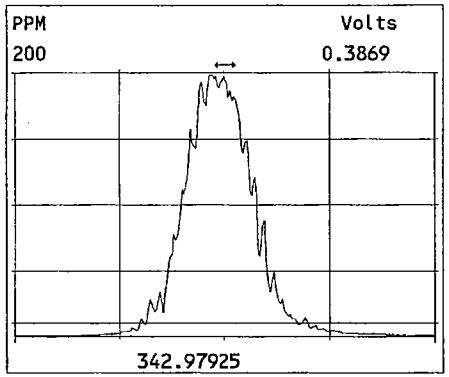
Peak Locate Examination: 6-FEB-2009:10:59 File:05FEB09M_RES_CHECK
Experiment:PCDD Function:1 Reference:PFK

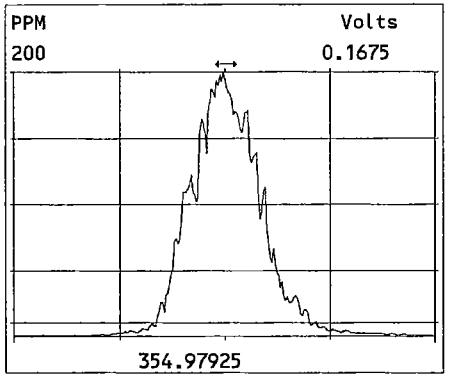


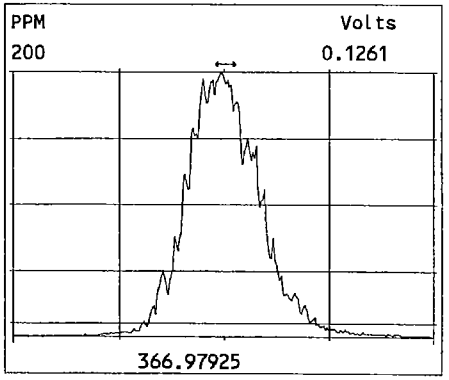


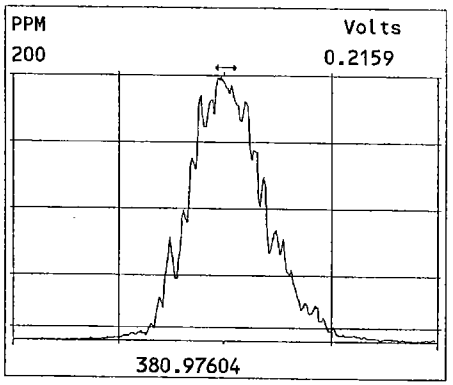


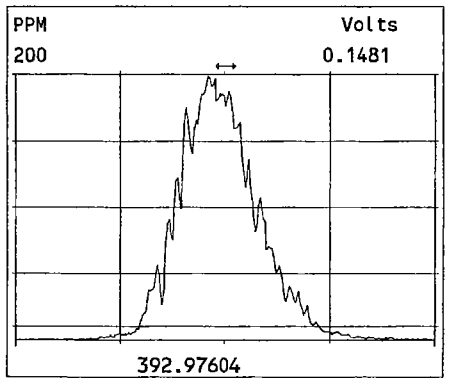


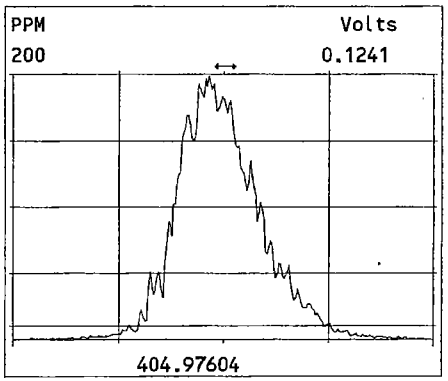


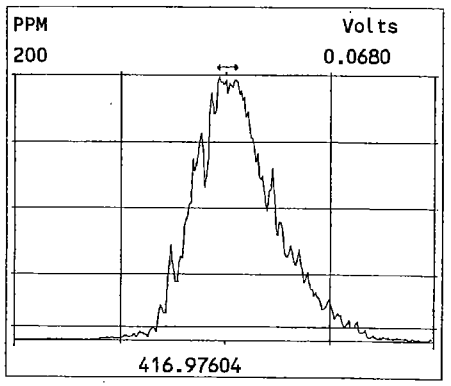




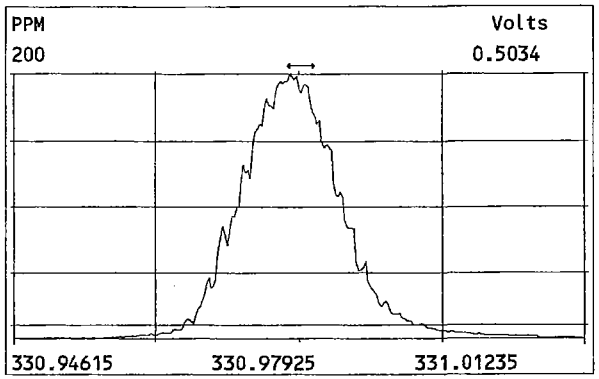


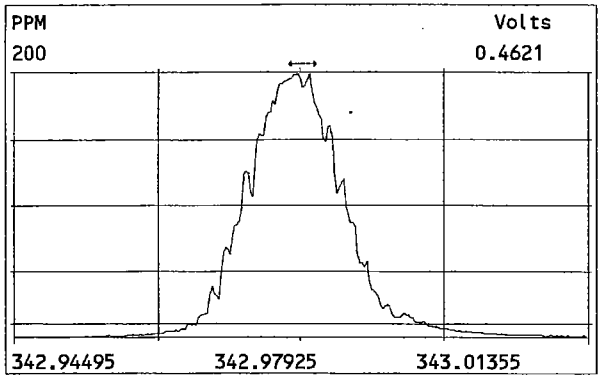


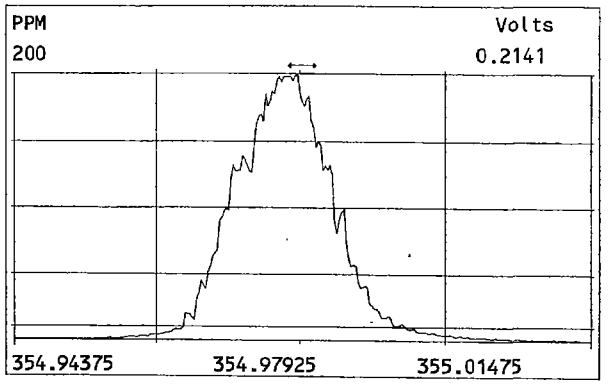


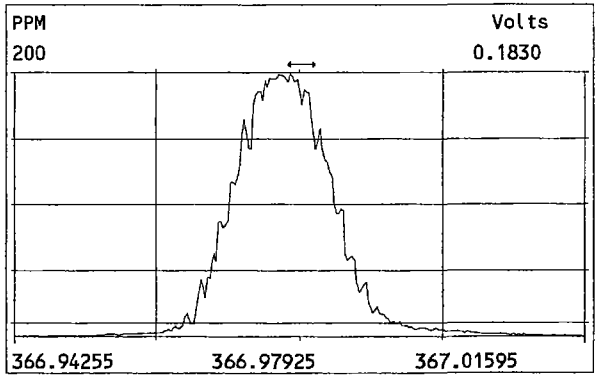


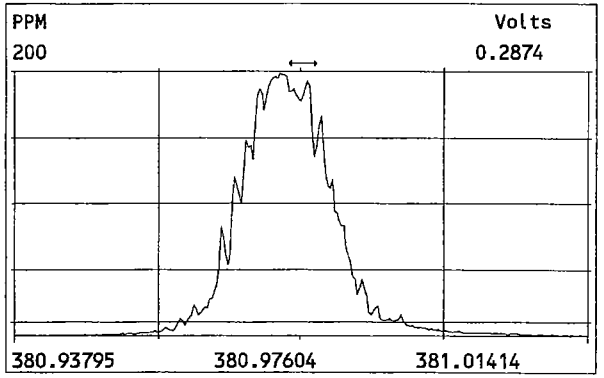
Peak Locate Examination: 6-FEB-2009:11:00 File:05FEB09M_RES_CHECK
Experiment:PCDD Function:2 Reference:PFK

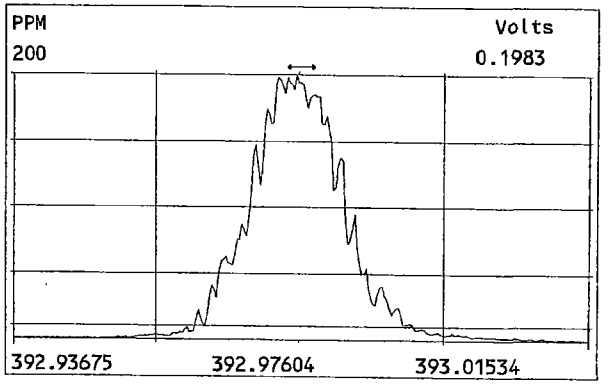


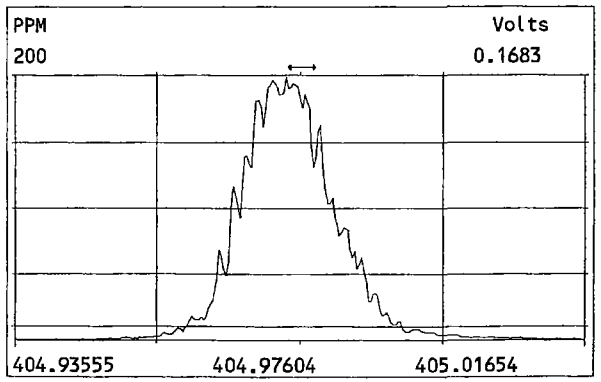


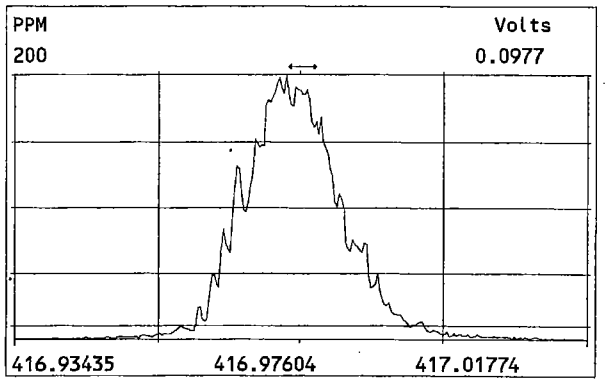




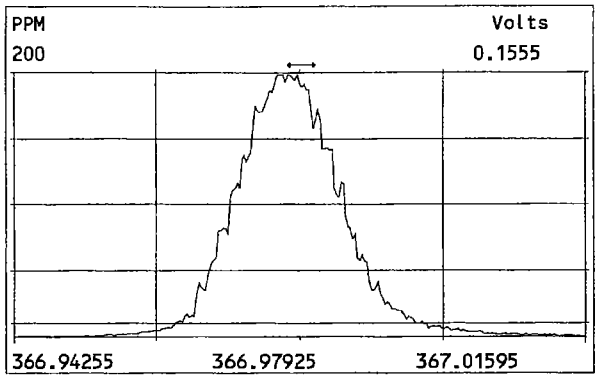


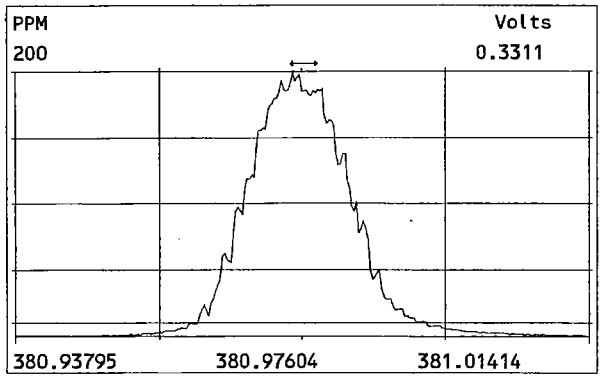


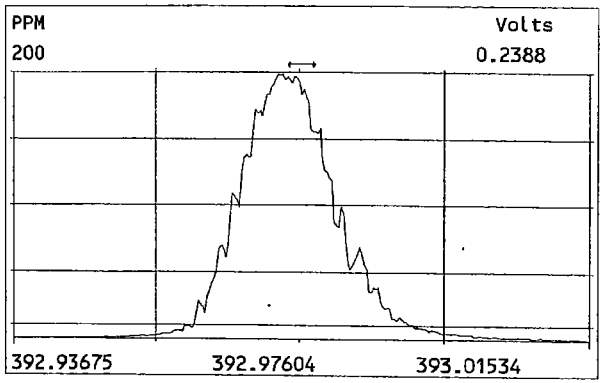


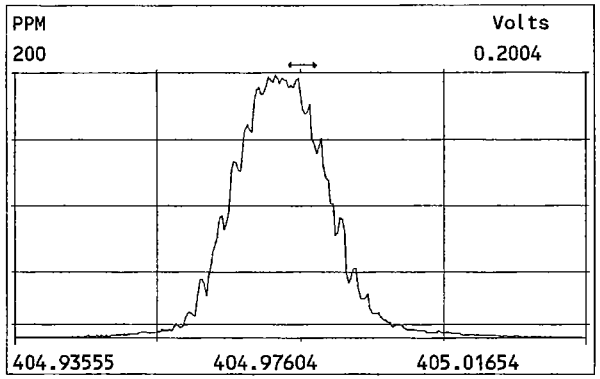


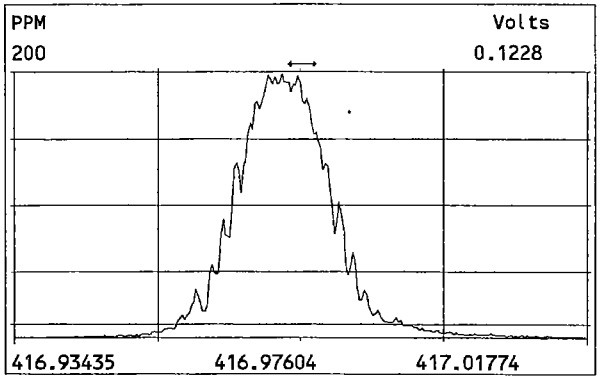
Peak Locate Examination: 6-FEB-2009:11:00 File:05FEB09M_RES_CHECK
Experiment:PCDD Function:3 Reference:PFK

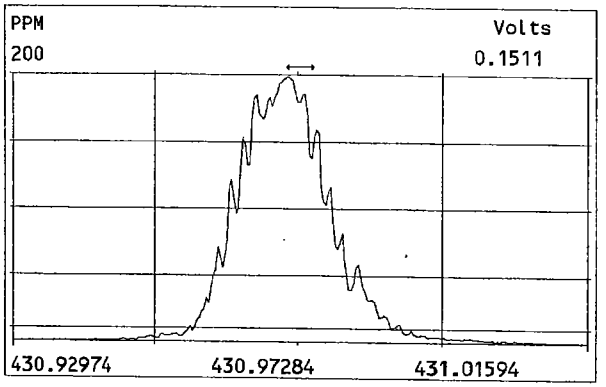


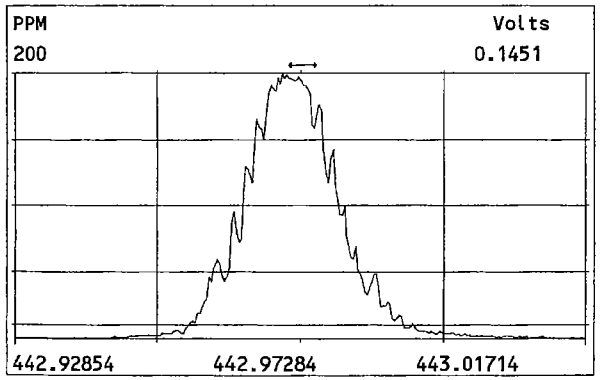


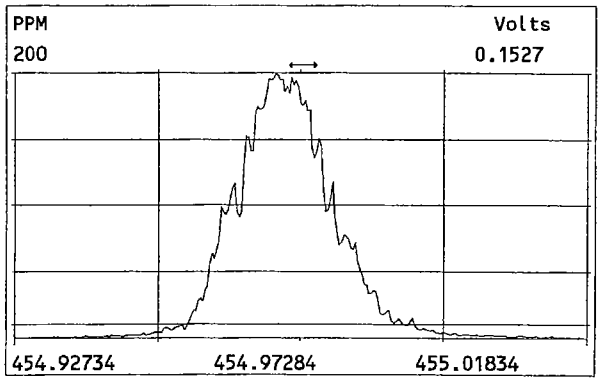




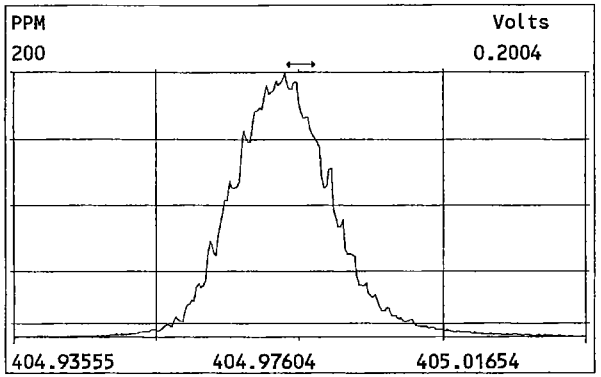


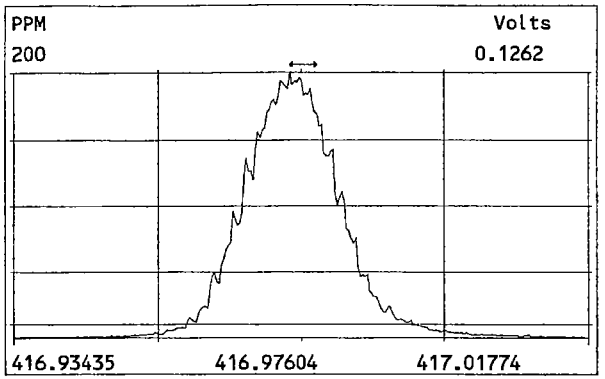


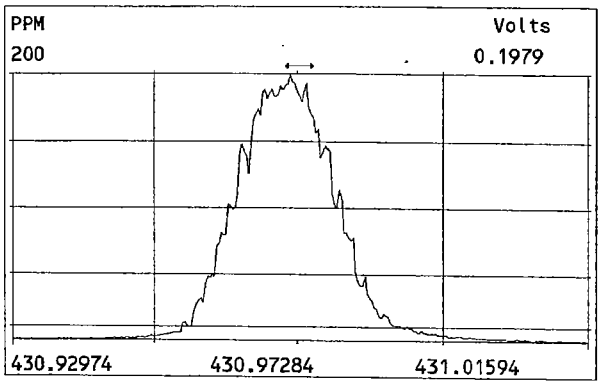


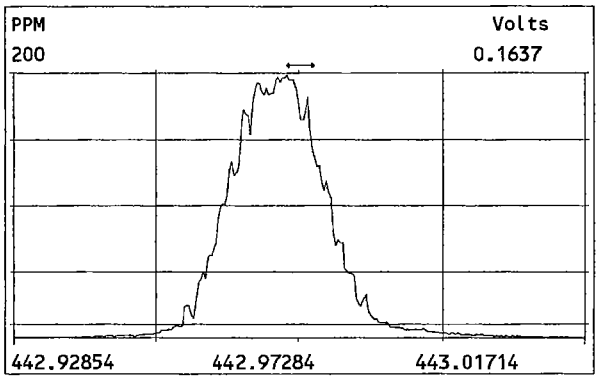


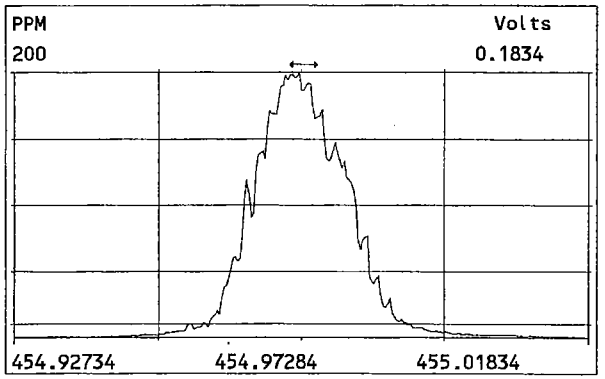
Peak Locate Examination: 6-FEB-2009:11:01 File:05FEB09M_RES_CHECK
Experiment:PCDD Function:4 Reference:PFK

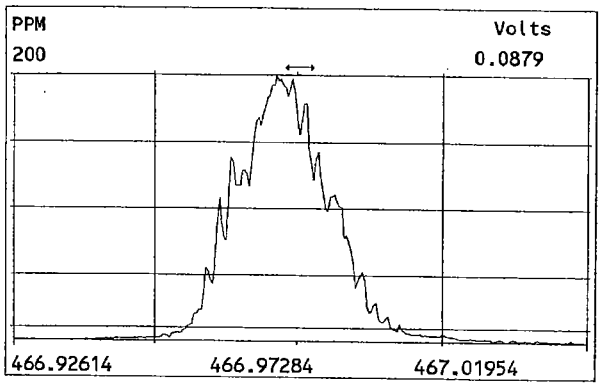


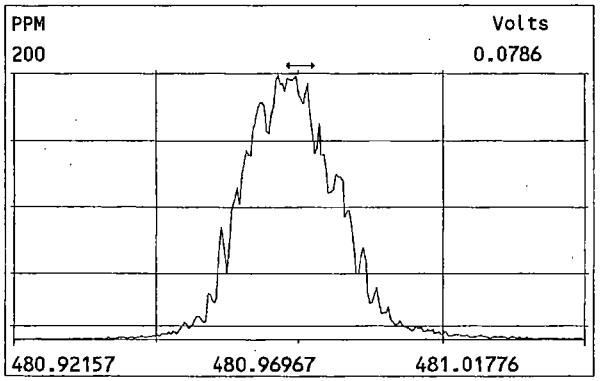




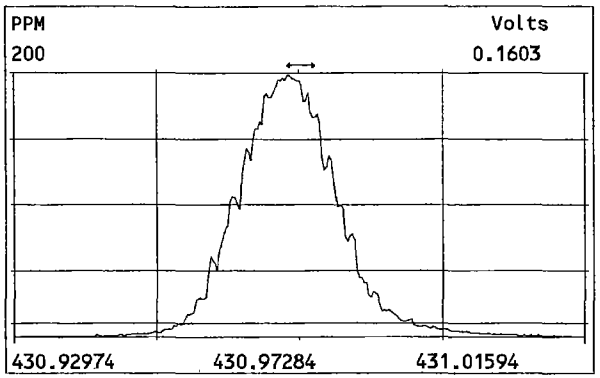


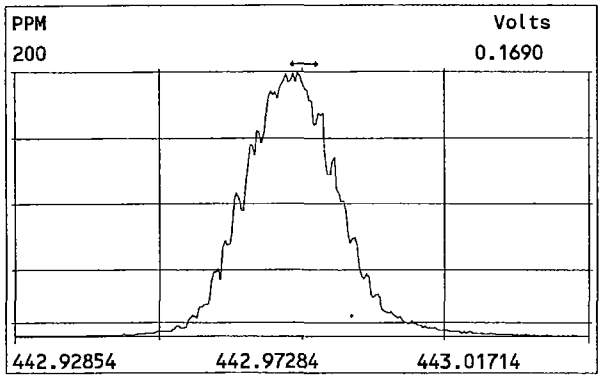


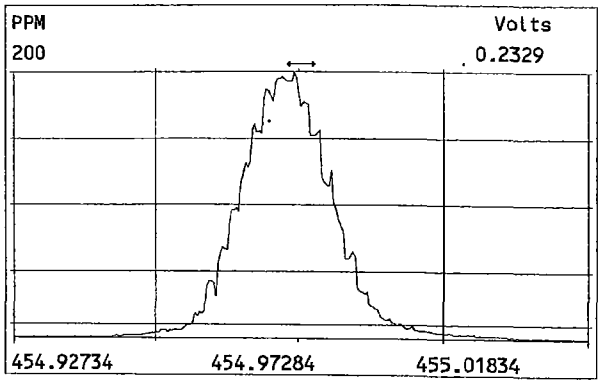


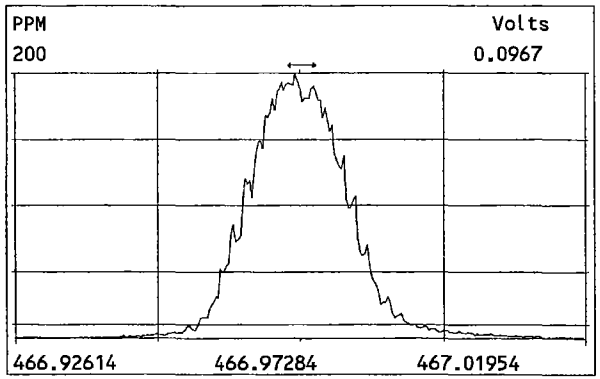


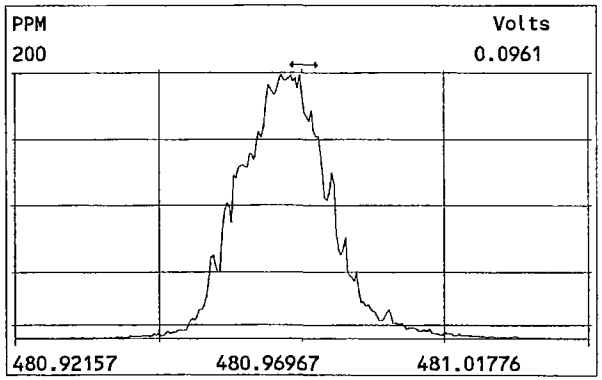
Peak Locate Examination: 6-FEB-2009:11:01 File:05FEB09M_RES_CHECK
Experiment:PCDD Function:5 Reference:PFK

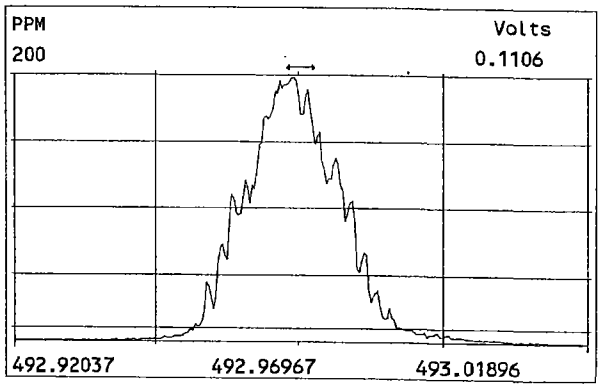


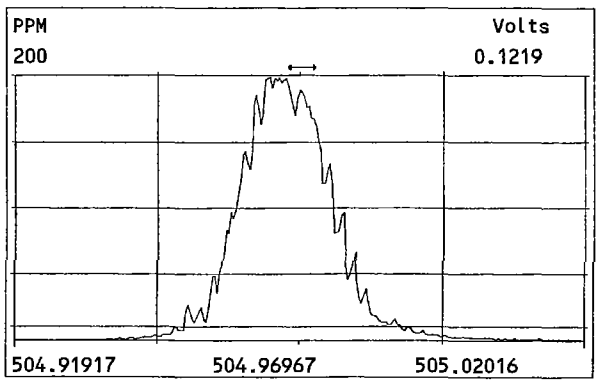


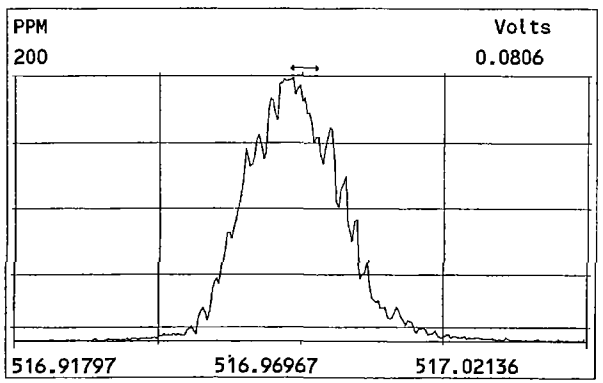




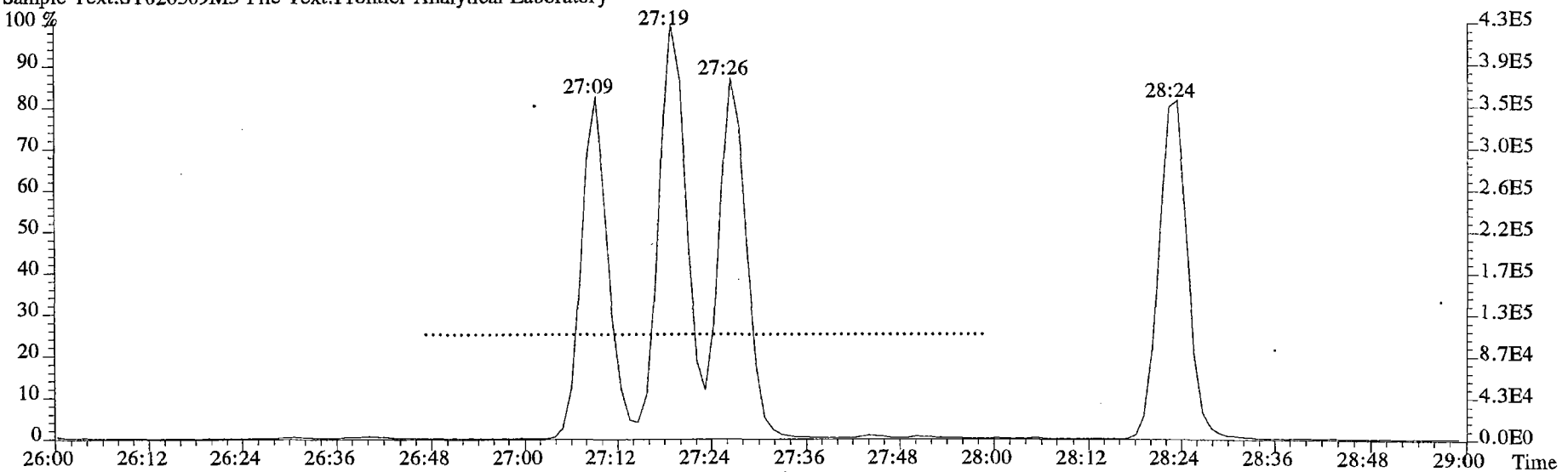




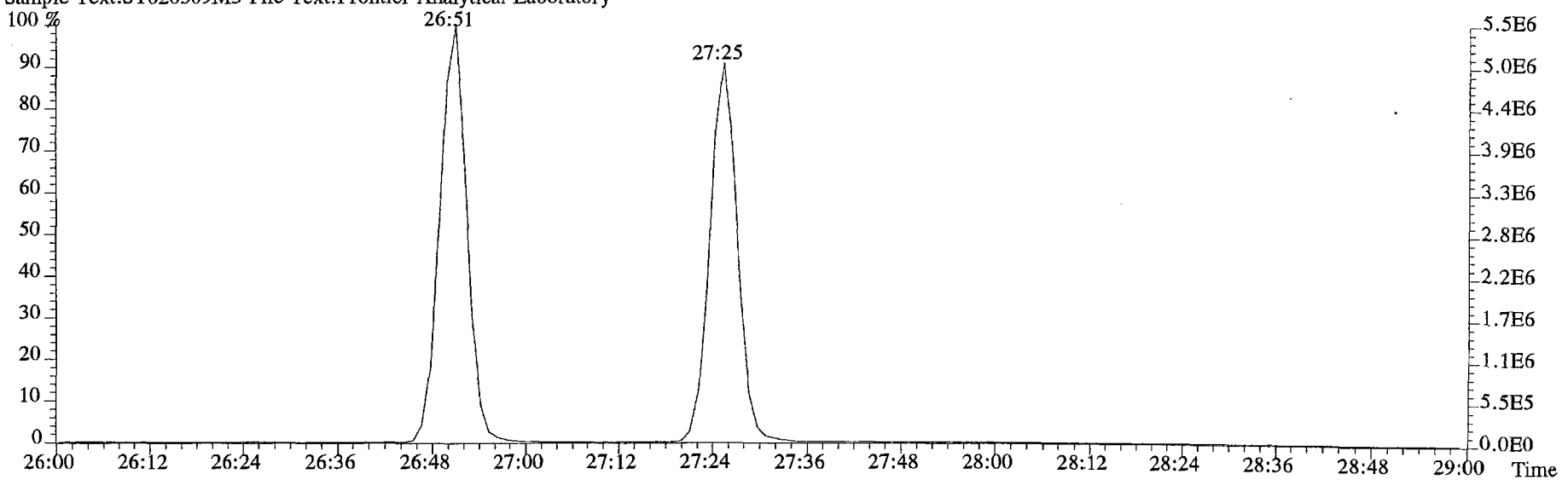




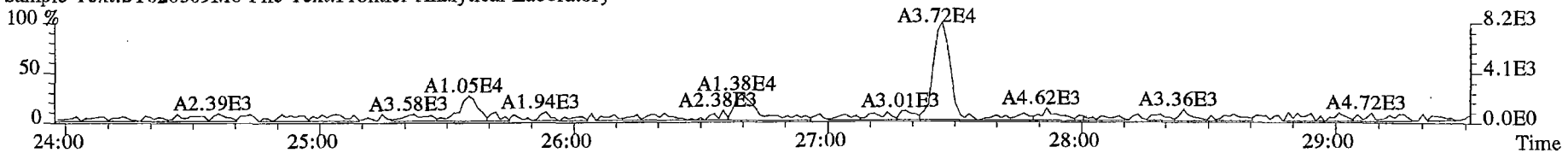
File:05FEB09M #1-390 Acq: 5-FEB-2009 15:20:00 GC EI+ Voltage SIR Autospec-Ultima
319.8965 Exp:PCDD
Sample Text:ST020509M3 File Text:Frontier Analytical Laboratory



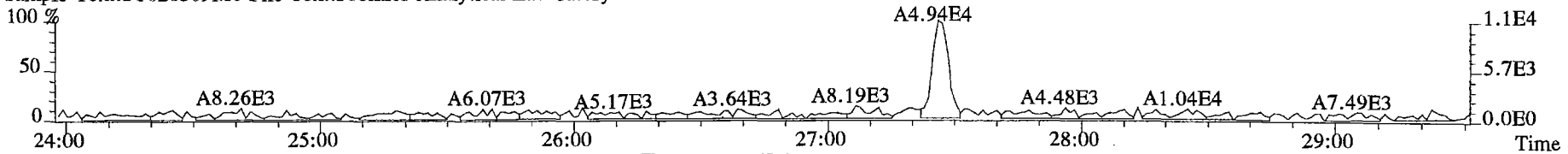
File:05FEB09M #1-390 Acq: 5-FEB-2009 15:20:00 GC EI+ Voltage SIR Autospec-Ultima
333.9339 Exp:PCDD
Sample Text:ST020509M3 File Text:Frontier Analytical Laboratory



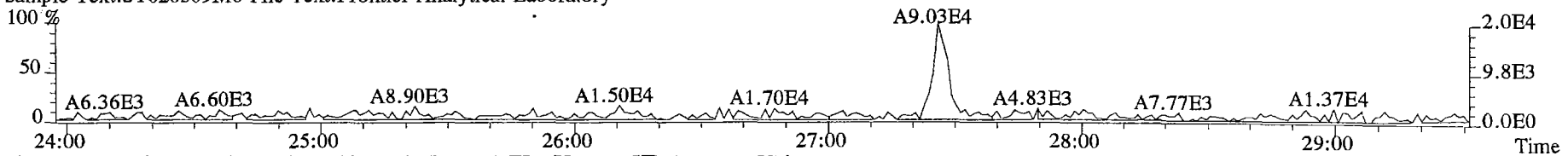
File:05FEB09M #1-391 Acq: 5-FEB-2009 16:15:11 GC EI+ Voltage SIR Autospec-Ultima
319.8965 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M0 File Text:Frontier Analytical Laboratory



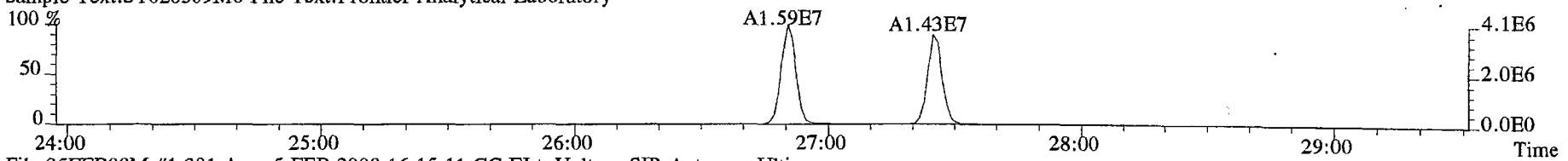
File:05FEB09M #1-391 Acq: 5-FEB-2009 16:15:11 GC EI+ Voltage SIR Autospec-Ultima
321.8936 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M0 File Text:Frontier Analytical Laboratory



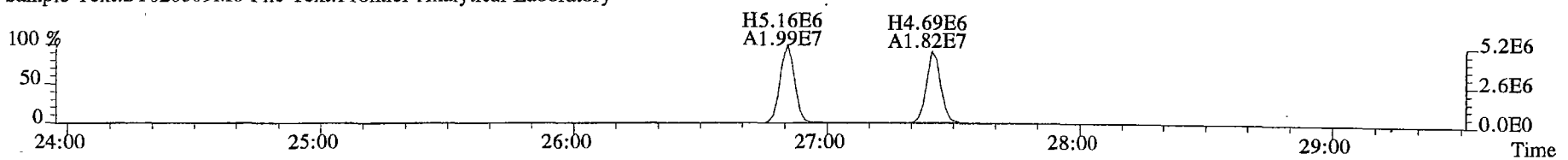
File:05FEB09M #1-391 Acq: 5-FEB-2009 16:15:11 GC EI+ Voltage SIR Autospec-Ultima
327.8847 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M0 File Text:Frontier Analytical Laboratory



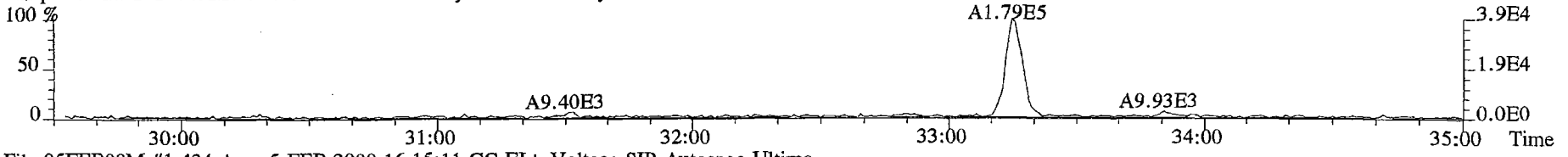
File:05FEB09M #1-391 Acq: 5-FEB-2009 16:15:11 GC EI+ Voltage SIR Autospec-Ultima
331.9368 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M0 File Text:Frontier Analytical Laboratory



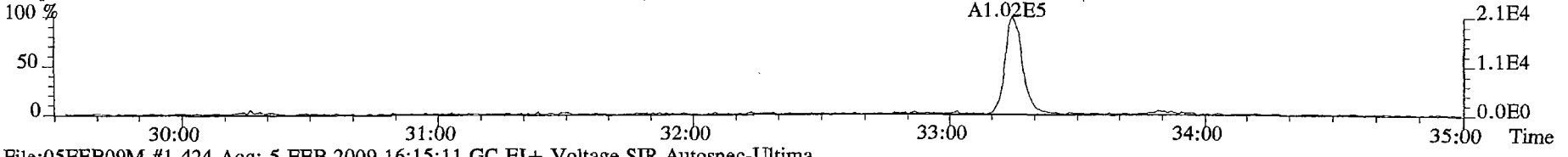
File:05FEB09M #1-391 Acq: 5-FEB-2009 16:15:11 GC EI+ Voltage SIR Autospec-Ultima
333.9339 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M0 File Text:Frontier Analytical Laboratory



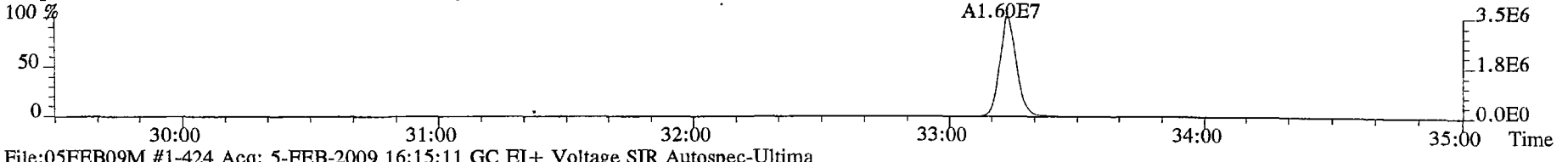
File:05FEB09M #1-424 Acq: 5-FEB-2009 16:15:11 GC EI+ Voltage SIR Autospec-Ultima
355.8546 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M0 File Text:Frontier Analytical Laboratory



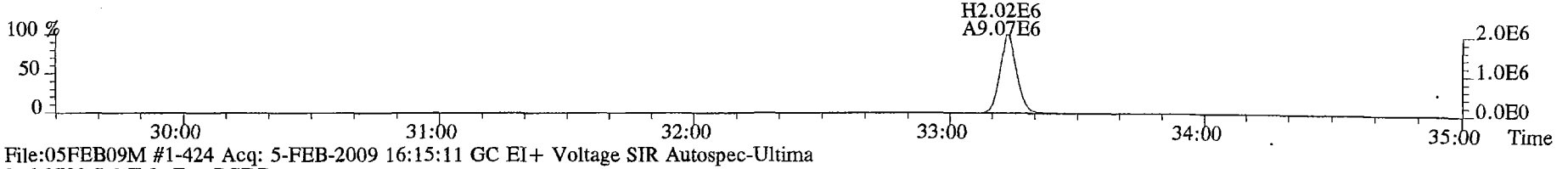
File:05FEB09M #1-424 Acq: 5-FEB-2009 16:15:11 GC EI+ Voltage SIR Autospec-Ultima
357.8517 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M0 File Text:Frontier Analytical Laboratory



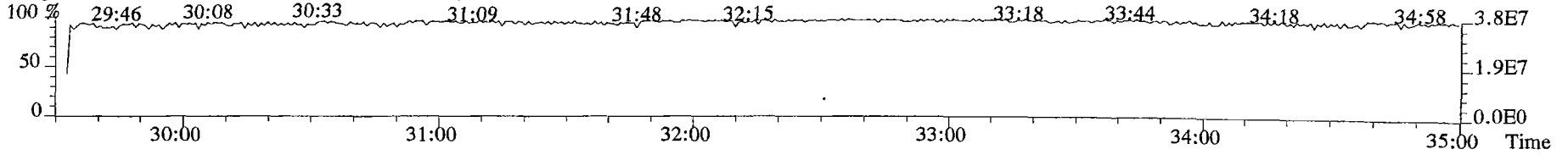
File:05FEB09M #1-424 Acq: 5-FEB-2009 16:15:11 GC EI+ Voltage SIR Autospec-Ultima
367.8949 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M0 File Text:Frontier Analytical Laboratory



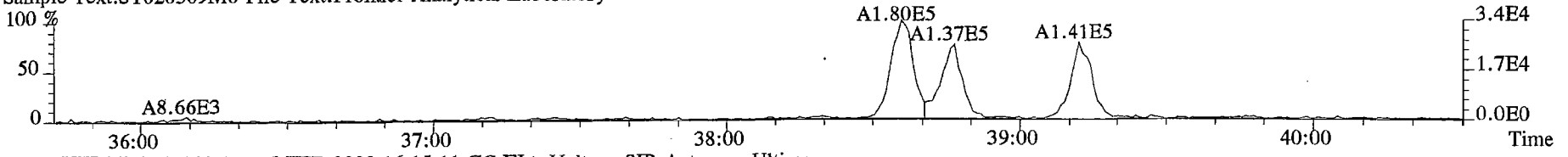
File:05FEB09M #1-424 Acq: 5-FEB-2009 16:15:11 GC EI+ Voltage SIR Autospec-Ultima
369.8919 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M0 File Text:Frontier Analytical Laboratory



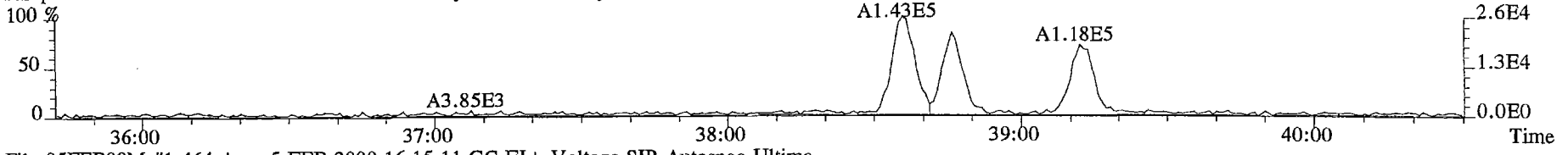
File:05FEB09M #1-424 Acq: 5-FEB-2009 16:15:11 GC EI+ Voltage SIR Autospec-Ultima
366.9792 S:2 F:2 Exp:PCDD
Sample Text:ST020509M0 File Text:Frontier Analytical Laboratory



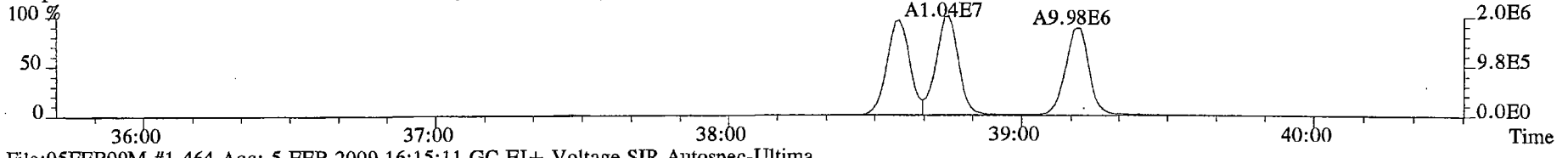
File:05FEB09M #1-464 Acq: 5-FEB-2009 16:15:11 GC EI+ Voltage SIR Autospec-Ultima
389.8156 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M0 File Text:Frontier Analytical Laboratory



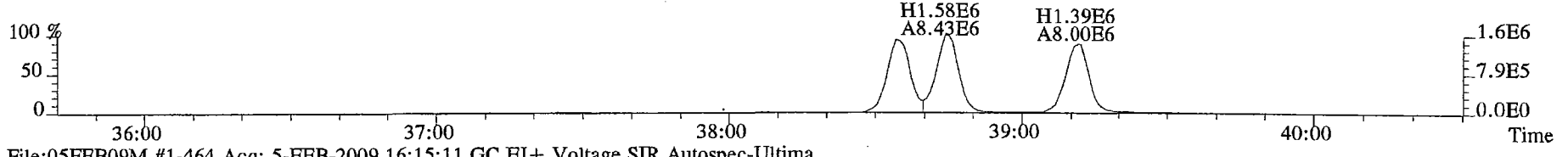
File:05FEB09M #1-464 Acq: 5-FEB-2009 16:15:11 GC EI+ Voltage SIR Autospec-Ultima
391.8127 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M0 File Text:Frontier Analytical Laboratory



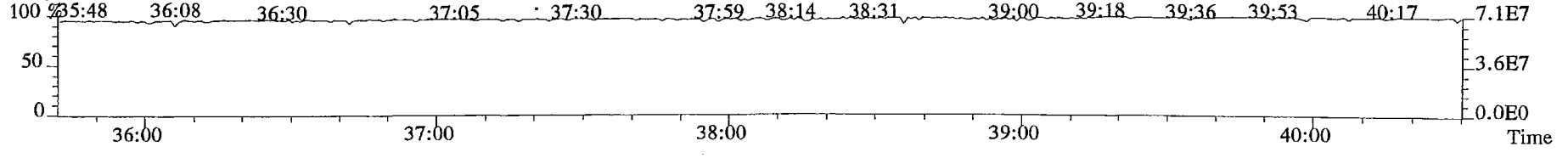
File:05FEB09M #1-464 Acq: 5-FEB-2009 16:15:11 GC EI+ Voltage SIR Autospec-Ultima
401.8559 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M0 File Text:Frontier Analytical Laboratory



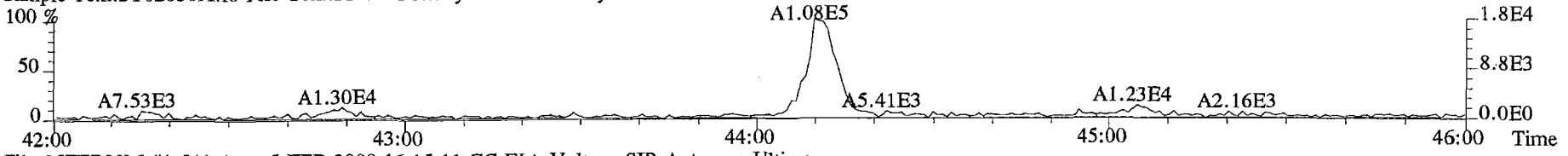
File:05FEB09M #1-464 Acq: 5-FEB-2009 16:15:11 GC EI+ Voltage SIR Autospec-Ultima
403.8530 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M0 File Text:Frontier Analytical Laboratory



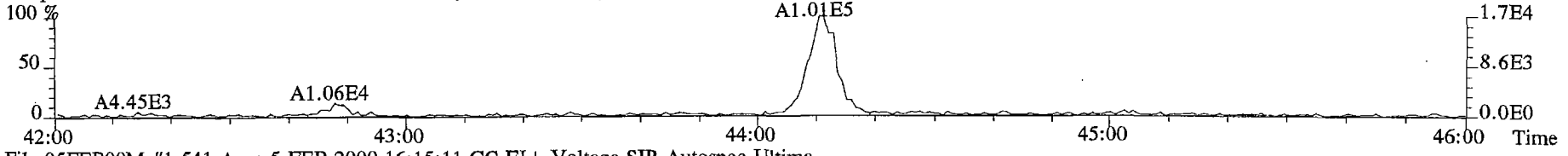
File:05FEB09M #1-464 Acq: 5-FEB-2009 16:15:11 GC EI+ Voltage SIR Autospec-Ultima
380.9760 S:2 F:3 Exp:PCDD
Sample Text:ST020509M0 File Text:Frontier Analytical Laboratory



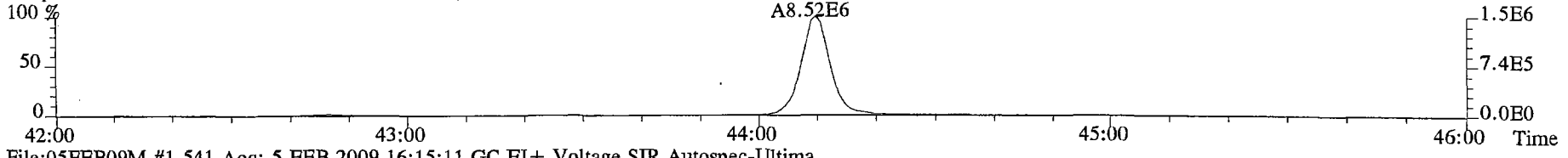
File:05FEB09M #1-541 Acq: 5-FEB-2009 16:15:11 GC EI+ Voltage SIR Autospec-Ultima
423.7767 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M0 File Text:Frontier Analytical Laboratory



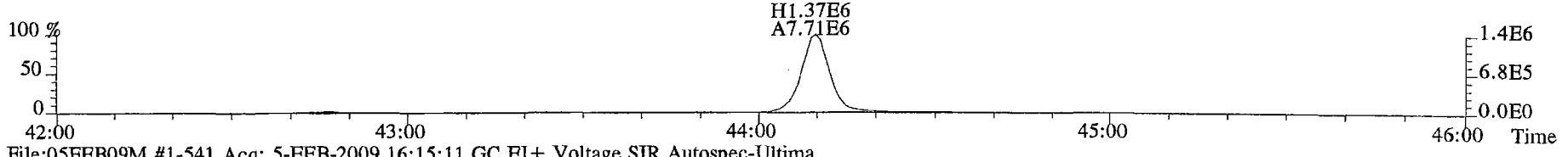
File:05FEB09M #1-541 Acq: 5-FEB-2009 16:15:11 GC EI+ Voltage SIR Autospec-Ultima
425.7737 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M0 File Text:Frontier Analytical Laboratory



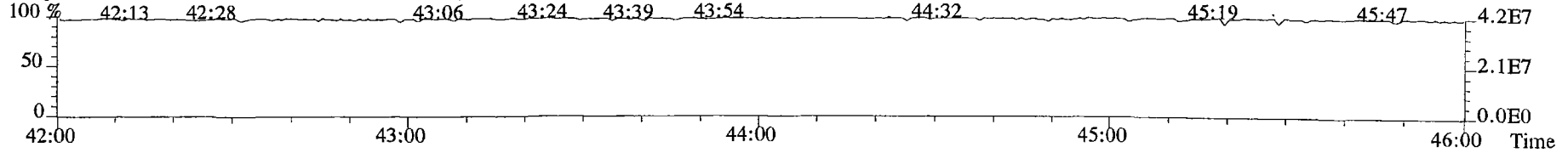
File:05FEB09M #1-541 Acq: 5-FEB-2009 16:15:11 GC EI+ Voltage SIR Autospec-Ultima
435.8169 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M0 File Text:Frontier Analytical Laboratory



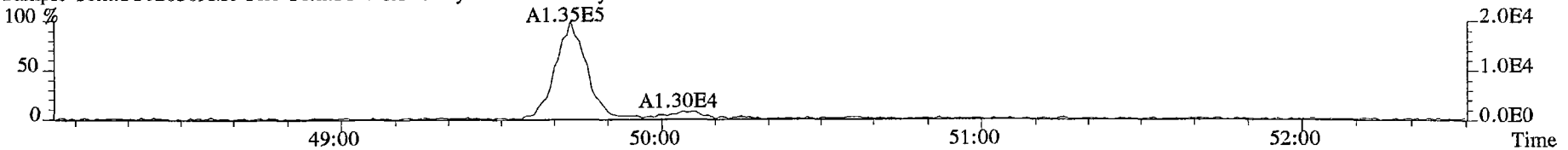
File:05FEB09M #1-541 Acq: 5-FEB-2009 16:15:11 GC EI+ Voltage SIR Autospec-Ultima
437.8140 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M0 File Text:Frontier Analytical Laboratory



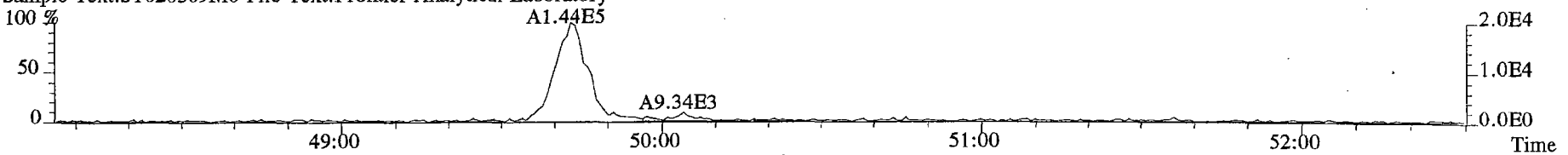
File:05FEB09M #1-541 Acq: 5-FEB-2009 16:15:11 GC EI+ Voltage SIR Autospec-Ultima
430.9728 S:2 F:4 Exp:PCDD
Sample Text:ST020509M0 File Text:Frontier Analytical Laboratory



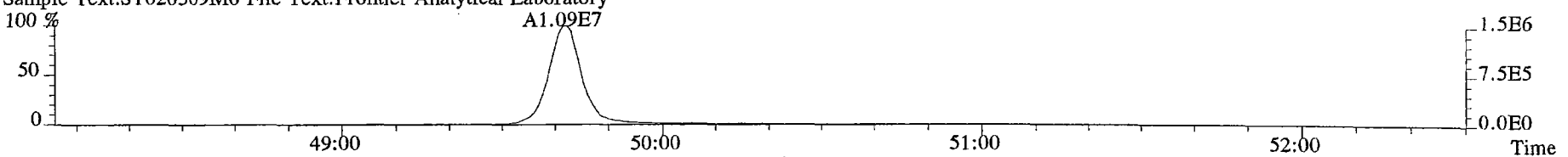
File:05FEB09M #1-347 Acq: 5-FEB-2009 16:15:11 GC EI+ Voltage SIR Autospec-Ultima
457.7377 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M0 File Text:Frontier Analytical Laboratory



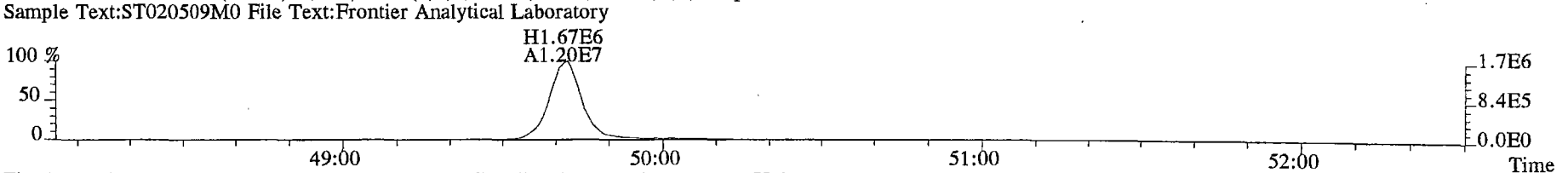
File:05FEB09M #1-347 Acq: 5-FEB-2009 16:15:11 GC EI+ Voltage SIR Autospec-Ultima
459.7348 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M0 File Text:Frontier Analytical Laboratory



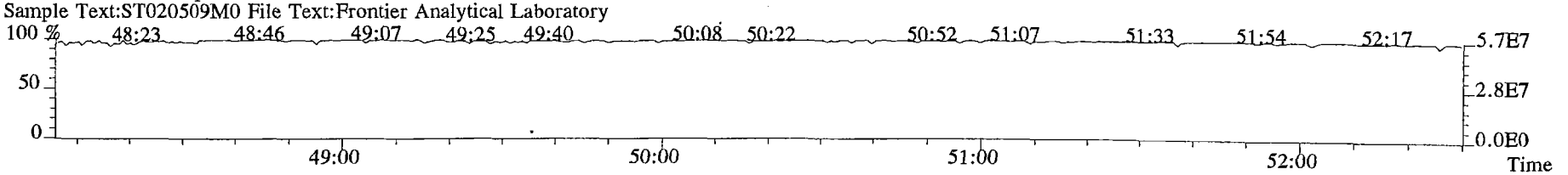
File:05FEB09M #1-347 Acq: 5-FEB-2009 16:15:11 GC EI+ Voltage SIR Autospec-Ultima
469.7780 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M0 File Text:Frontier Analytical Laboratory



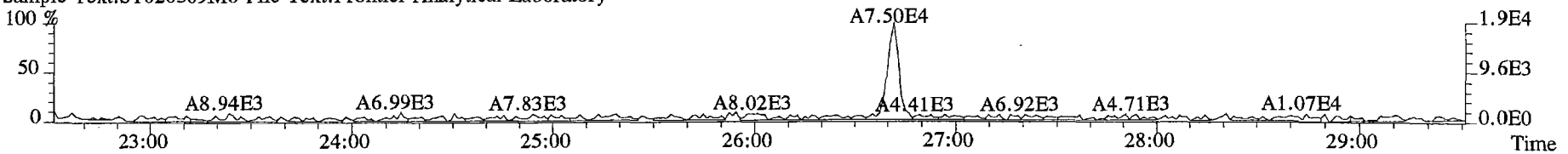
File:05FEB09M #1-347 Acq: 5-FEB-2009 16:15:11 GC EI+ Voltage SIR Autospec-Ultima
471.7750 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M0 File Text:Frontier Analytical Laboratory



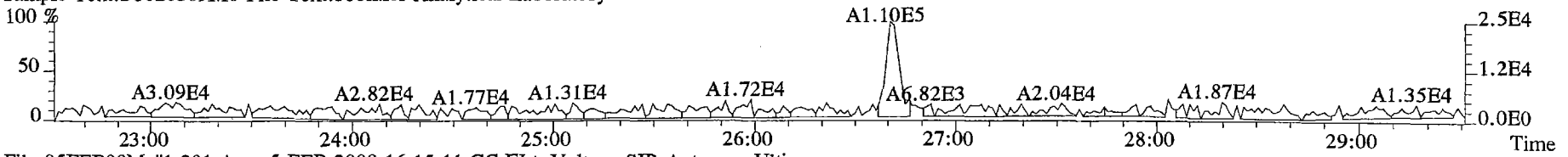
File:05FEB09M #1-347 Acq: 5-FEB-2009 16:15:11 GC EI+ Voltage SIR Autospec-Ultima
454.9728 S:2 F:5 Exp:PCDD
Sample Text:ST020509M0 File Text:Frontier Analytical Laboratory



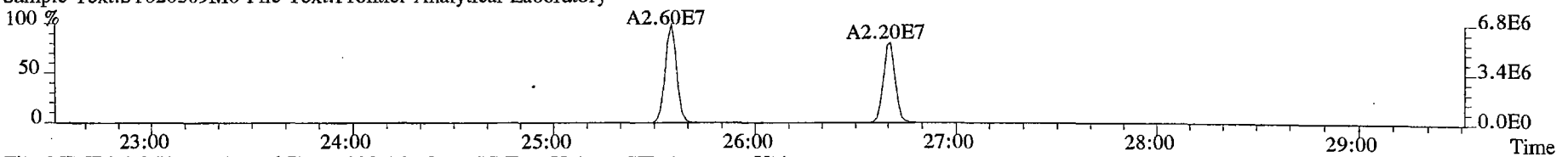
File:05FEB09M #1-391 Acq: 5-FEB-2009 16:15:11 GC EI+ Voltage SIR Autospec-Ultima
303.9016 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M0 File Text:Frontier Analytical Laboratory



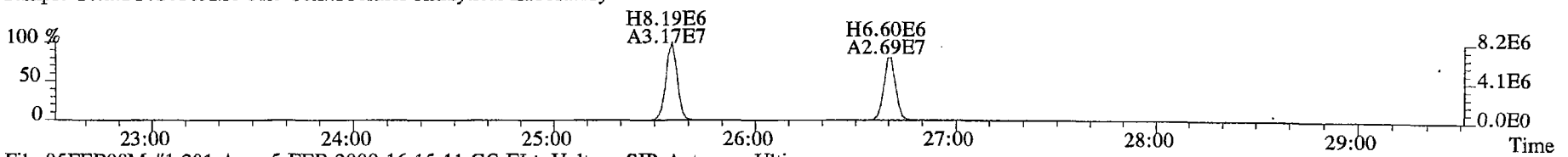
File:05FEB09M #1-391 Acq: 5-FEB-2009 16:15:11 GC EI+ Voltage SIR Autospec-Ultima
305.8987 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M0 File Text:Frontier Analytical Laboratory



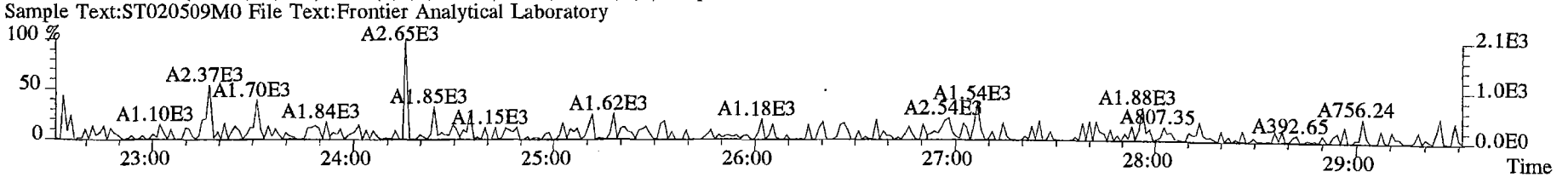
File:05FEB09M #1-391 Acq: 5-FEB-2009 16:15:11 GC EI+ Voltage SIR Autospec-Ultima
315.9419 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M0 File Text:Frontier Analytical Laboratory



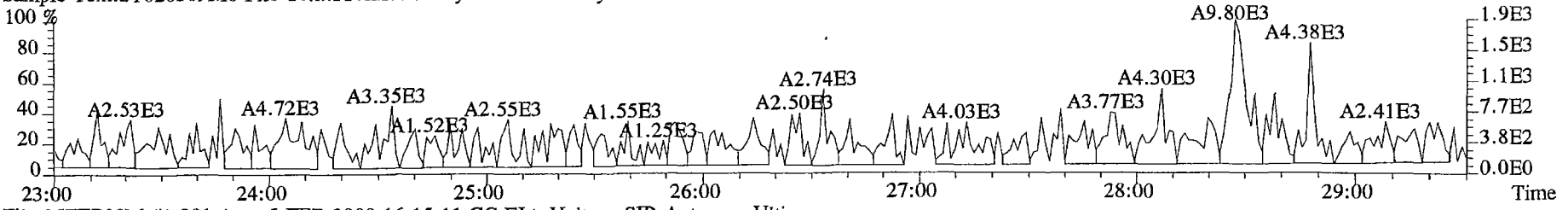
File:05FEB09M #1-391 Acq: 5-FEB-2009 16:15:11 GC EI+ Voltage SIR Autospec-Ultima
317.9389 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M0 File Text:Frontier Analytical Laboratory



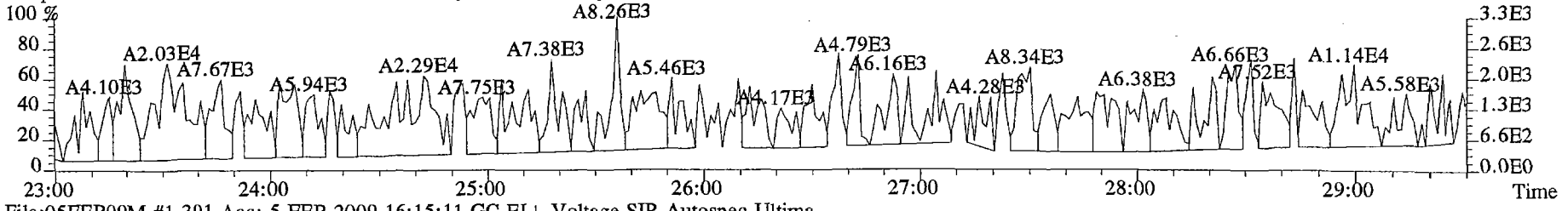
File:05FEB09M #1-391 Acq: 5-FEB-2009 16:15:11 GC EI+ Voltage SIR Autospec-Ultima
375.8364 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M0 File Text:Frontier Analytical Laboratory



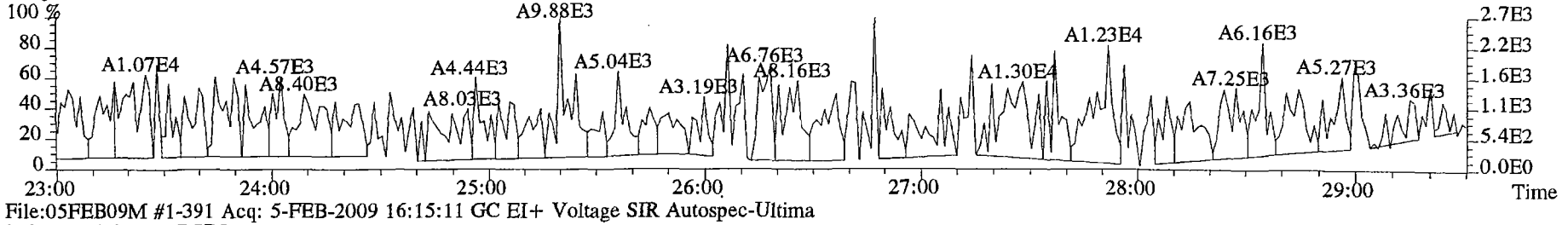
File:05FEB09M #1-391 Acq: 5-FEB-2009 16:15:11 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M0 File Text:Frontier Analytical Laboratory



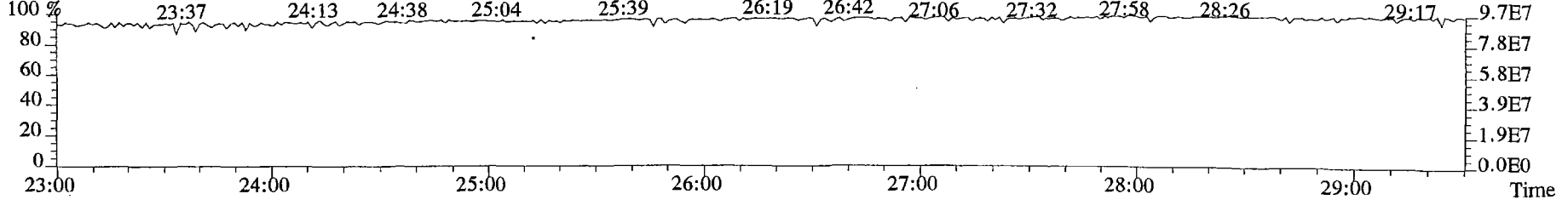
File:05FEB09M #1-391 Acq: 5-FEB-2009 16:15:11 GC EI+ Voltage SIR Autospec-Ultima
341.8568 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M0 File Text:Frontier Analytical Laboratory



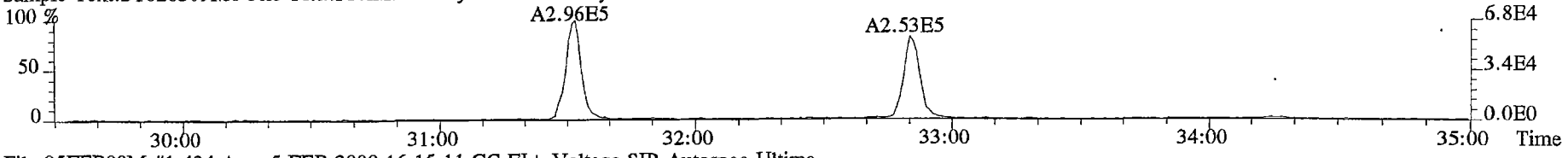
File:05FEB09M #1-391 Acq: 5-FEB-2009 16:15:11 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M0 File Text:Frontier Analytical Laboratory



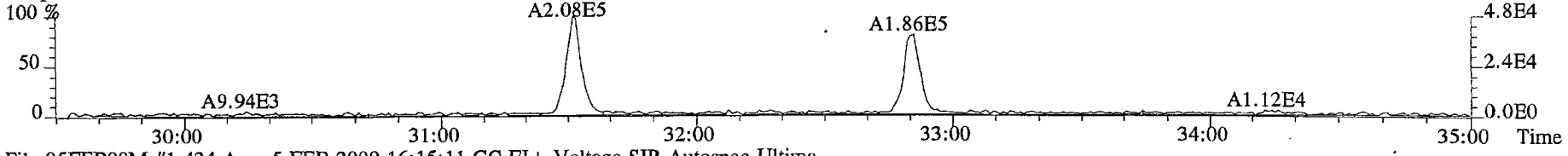
File:05FEB09M #1-391 Acq: 5-FEB-2009 16:15:11 GC EI+ Voltage SIR Autospec-Ultima
330.9792 S:2 Exp:PCDD
Sample Text:ST020509M0 File Text:Frontier Analytical Laboratory



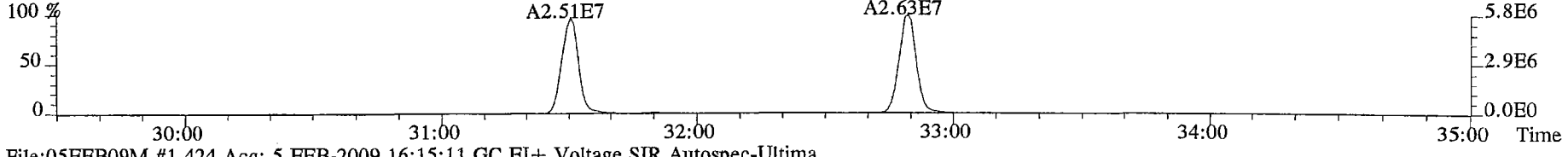
File:05FEB09M #1-424 Acq: 5-FEB-2009 16:15:11 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M0 File Text:Frontier Analytical Laboratory



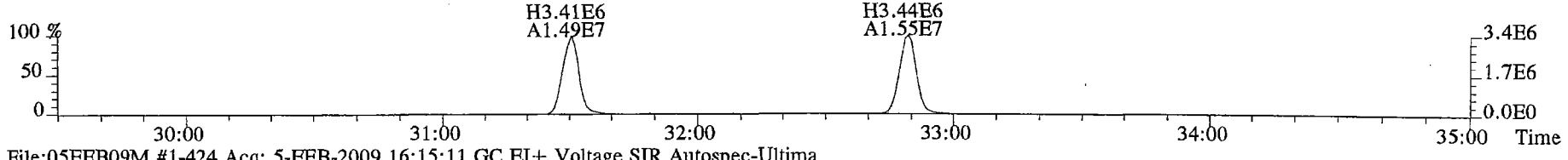
File:05FEB09M #1-424 Acq: 5-FEB-2009 16:15:11 GC EI+ Voltage SIR Autospec-Ultima
341.8568 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M0 File Text:Frontier Analytical Laboratory



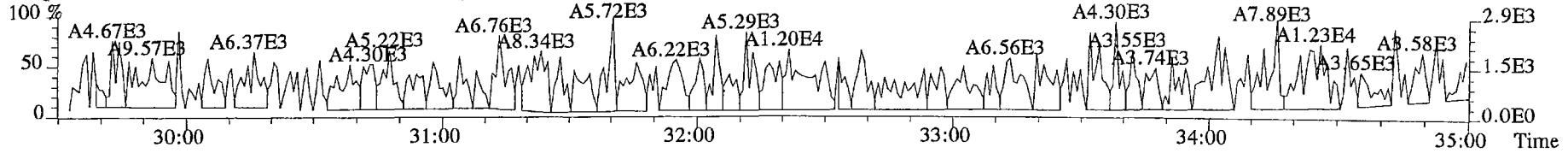
File:05FEB09M #1-424 Acq: 5-FEB-2009 16:15:11 GC EI+ Voltage SIR Autospec-Ultima
351.9000 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M0 File Text:Frontier Analytical Laboratory



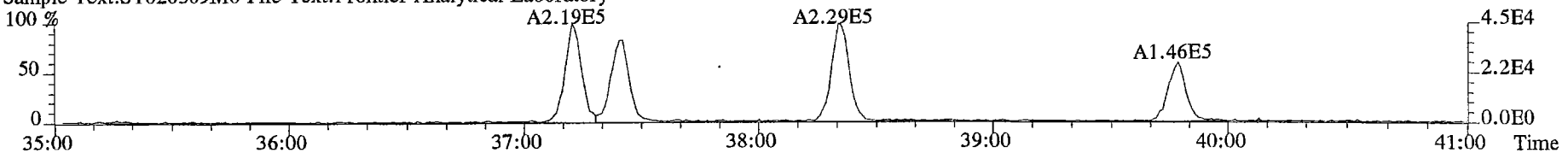
File:05FEB09M #1-424 Acq: 5-FEB-2009 16:15:11 GC EI+ Voltage SIR Autospec-Ultima
353.8970 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M0 File Text:Frontier Analytical Laboratory



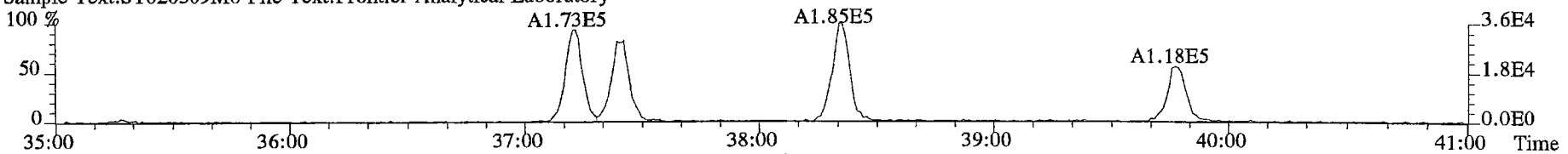
File:05FEB09M #1-424 Acq: 5-FEB-2009 16:15:11 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M0 File Text:Frontier Analytical Laboratory



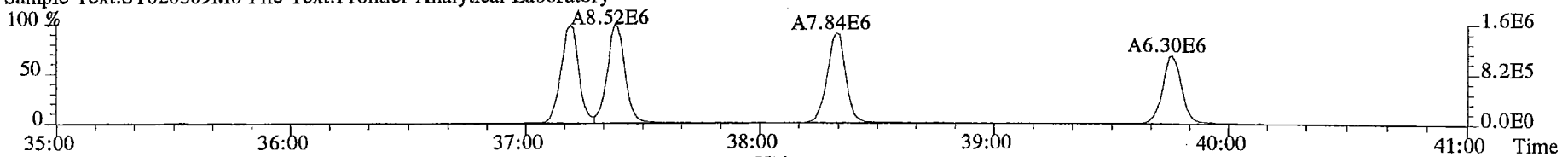
File:05FEB09M #1-464 Acq: 5-FEB-2009 16:15:11 GC EI+ Voltage SIR Autospec-Ultima
373.8207 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M0 File Text:Frontier Analytical Laboratory



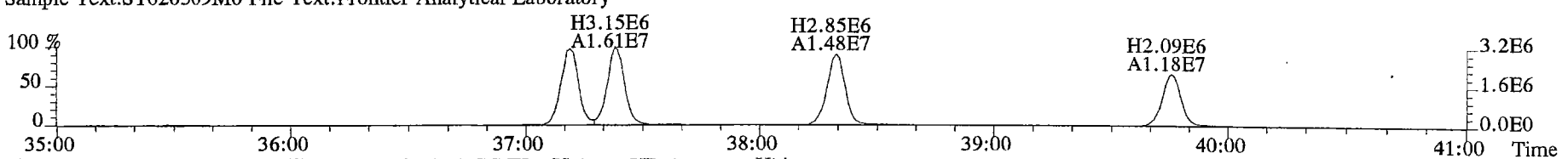
File:05FEB09M #1-464 Acq: 5-FEB-2009 16:15:11 GC EI+ Voltage SIR Autospec-Ultima
375.8178 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M0 File Text:Frontier Analytical Laboratory



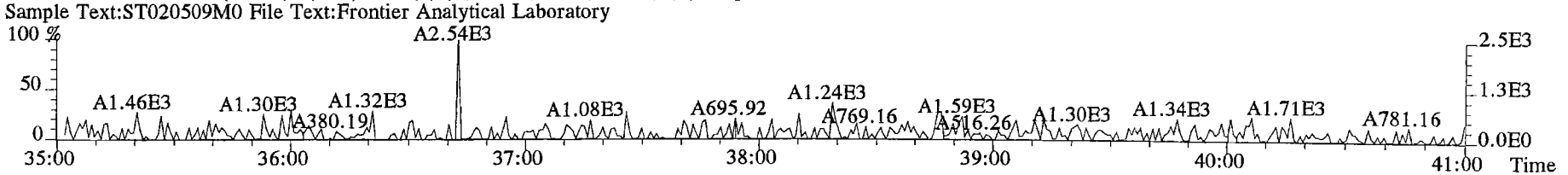
File:05FEB09M #1-464 Acq: 5-FEB-2009 16:15:11 GC EI+ Voltage SIR Autospec-Ultima
383.8639 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M0 File Text:Frontier Analytical Laboratory



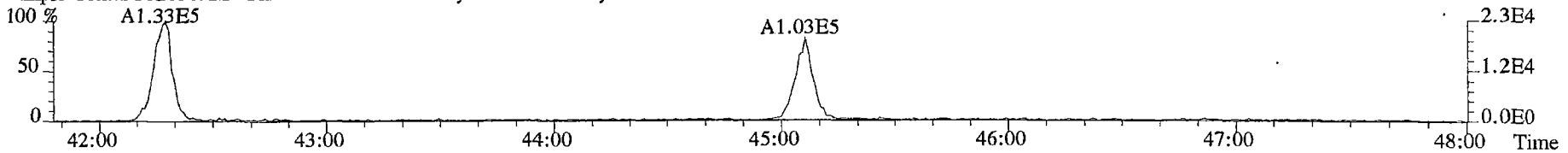
File:05FEB09M #1-464 Acq: 5-FEB-2009 16:15:11 GC EI+ Voltage SIR Autospec-Ultima
385.8610 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M0 File Text:Frontier Analytical Laboratory



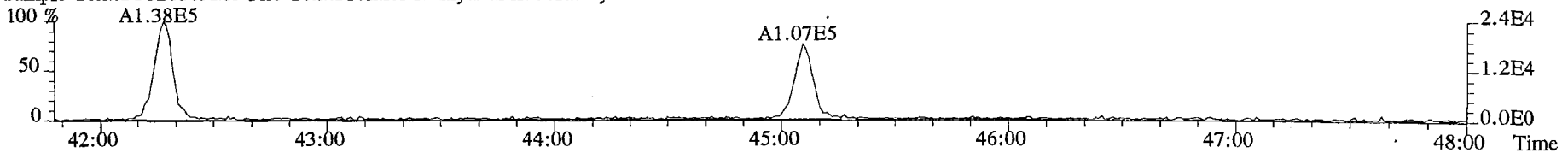
File:05FEB09M #1-464 Acq: 5-FEB-2009 16:15:11 GC EI+ Voltage SIR Autospec-Ultima
445.7555 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M0 File Text:Frontier Analytical Laboratory



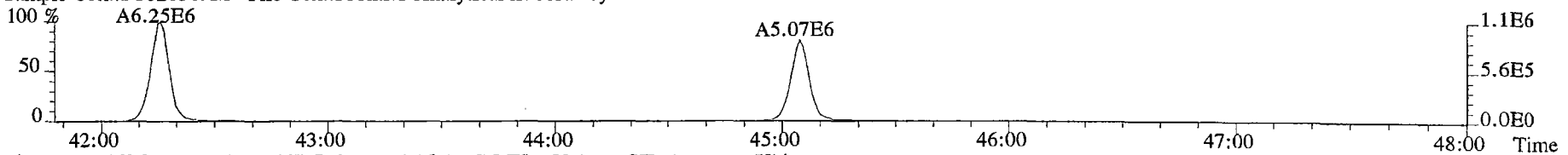
File:05FEB09M #1-541 Acq: 5-FEB-2009 16:15:11 GC EI+ Voltage SIR Autospec-Ultima
407.7818 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M0 File Text:Frontier Analytical Laboratory



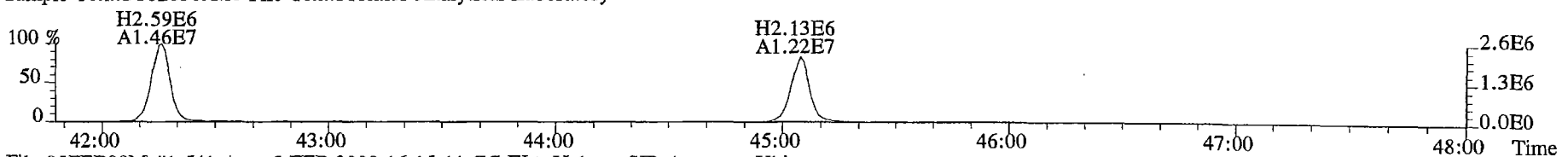
File:05FEB09M #1-541 Acq: 5-FEB-2009 16:15:11 GC EI+ Voltage SIR Autospec-Ultima
409.7788 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M0 File Text:Frontier Analytical Laboratory



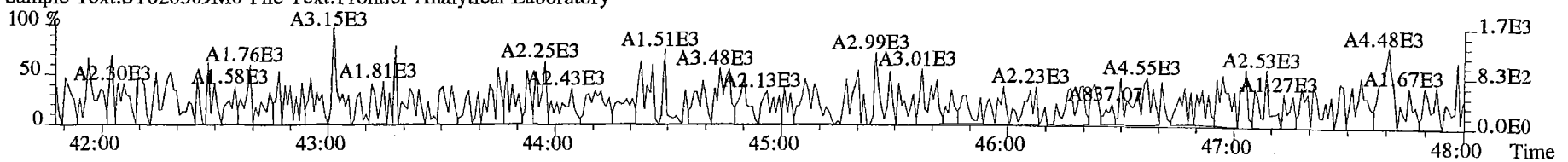
File:05FEB09M #1-541 Acq: 5-FEB-2009 16:15:11 GC EI+ Voltage SIR Autospec-Ultima
417.8253 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M0 File Text:Frontier Analytical Laboratory



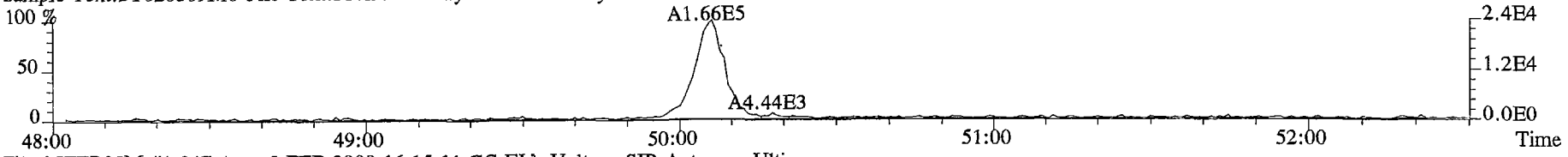
File:05FEB09M #1-541 Acq: 5-FEB-2009 16:15:11 GC EI+ Voltage SIR Autospec-Ultima
419.8220 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M0 File Text:Frontier Analytical Laboratory



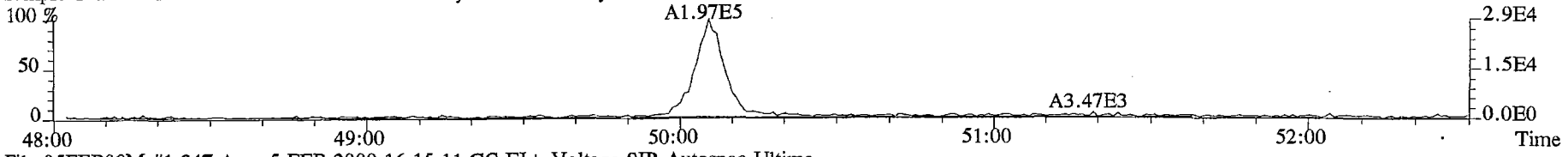
File:05FEB09M #1-541 Acq: 5-FEB-2009 16:15:11 GC EI+ Voltage SIR Autospec-Ultima
479.7165 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M0 File Text:Frontier Analytical Laboratory



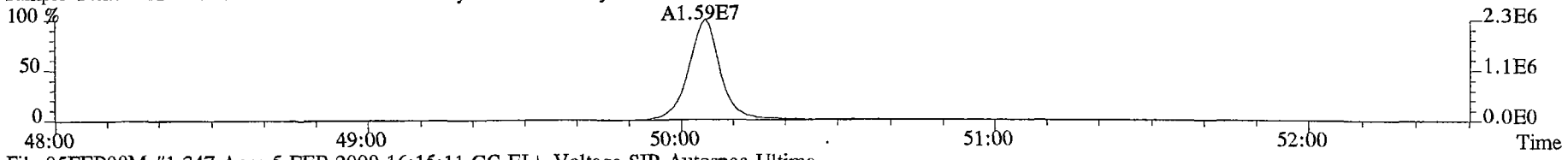
File:05FEB09M #1-347 Acq: 5-FEB-2009 16:15:11 GC EI+ Voltage SIR Autospec-Ultima
441.7428 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M0 File Text:Frontier Analytical Laboratory



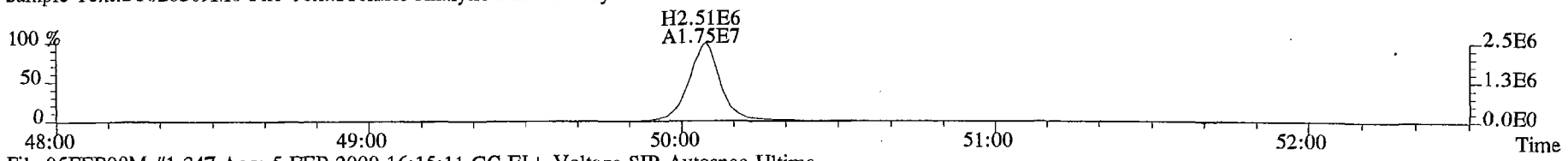
File:05FEB09M #1-347 Acq: 5-FEB-2009 16:15:11 GC EI+ Voltage SIR Autospec-Ultima
443.7398 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M0 File Text:Frontier Analytical Laboratory



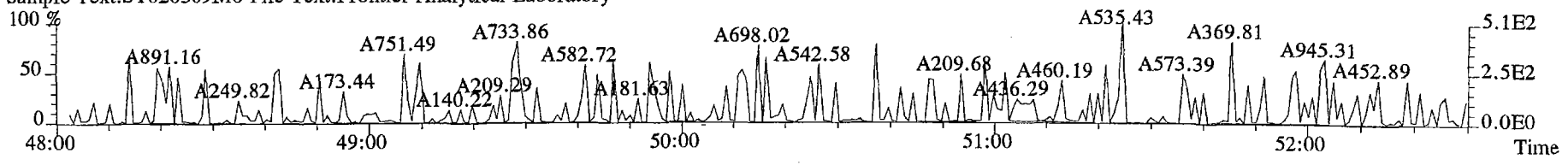
File:05FEB09M #1-347 Acq: 5-FEB-2009 16:15:11 GC EI+ Voltage SIR Autospec-Ultima
453.7831 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M0 File Text:Frontier Analytical Laboratory



File:05FEB09M #1-347 Acq: 5-FEB-2009 16:15:11 GC EI+ Voltage SIR Autospec-Ultima
455.7801 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M0 File Text:Frontier Analytical Laboratory

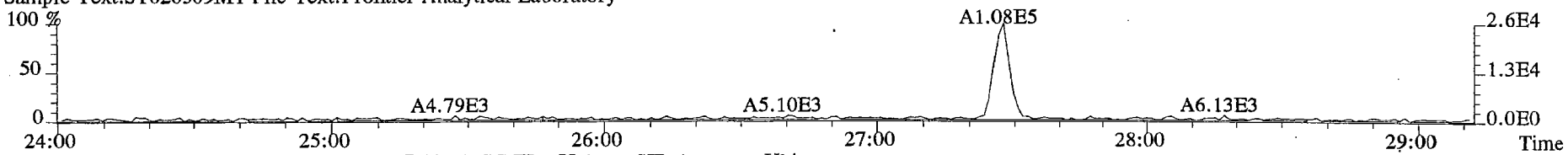


File:05FEB09M #1-347 Acq: 5-FEB-2009 16:15:11 GC EI+ Voltage SIR Autospec-Ultima
513.6775 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M0 File Text:Frontier Analytical Laboratory

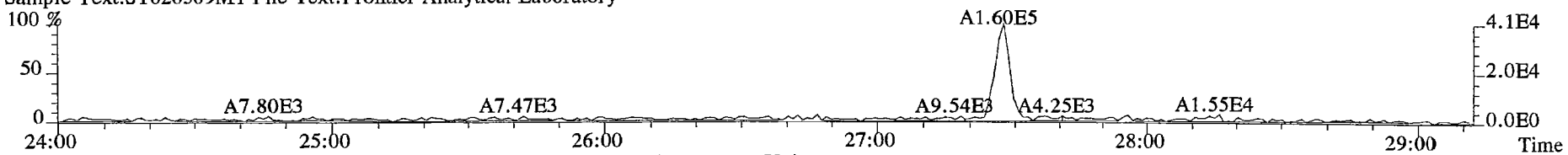


File:05FEB09M #1-390 Acq: 5-FEB-2009 17:10:30 GC EI+ Voltage SIR Autospec-Ultima
319.8965 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M1 File Text:Frontier Analytical Laboratory

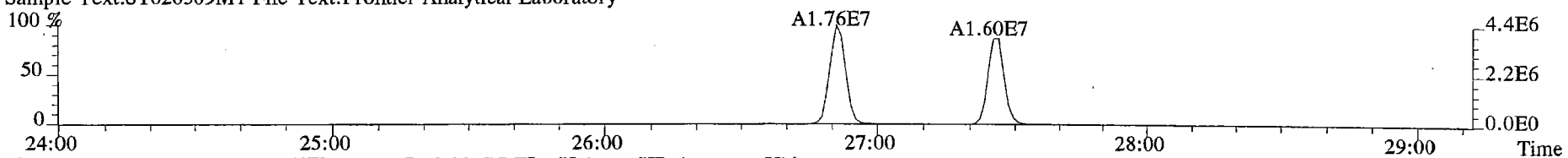
File:05FEB09M #1-390 Acq: 5-FEB-2009 17:10:30 GC EI+ Voltage SIR Autospec-Ultima
321.8936 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M1 File Text:Frontier Analytical Laboratory



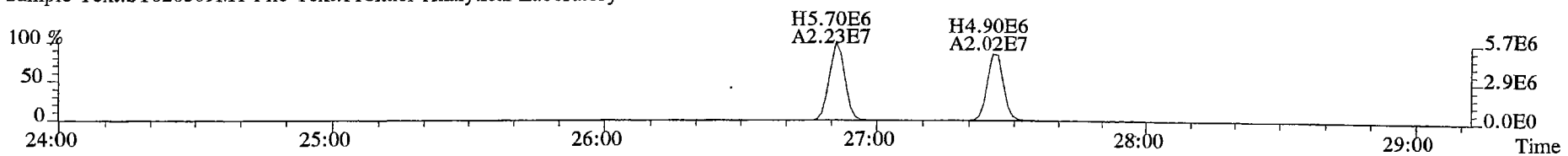
File:05FEB09M #1-390 Acq: 5-FEB-2009 17:10:30 GC EI+ Voltage SIR Autospec-Ultima
327.8847 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M1 File Text:Frontier Analytical Laboratory



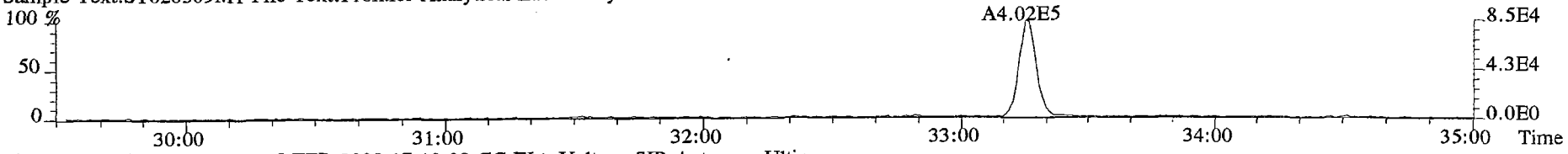
File:05FEB09M #1-390 Acq: 5-FEB-2009 17:10:30 GC EI+ Voltage SIR Autospec-Ultima
331.9368 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M1 File Text:Frontier Analytical Laboratory



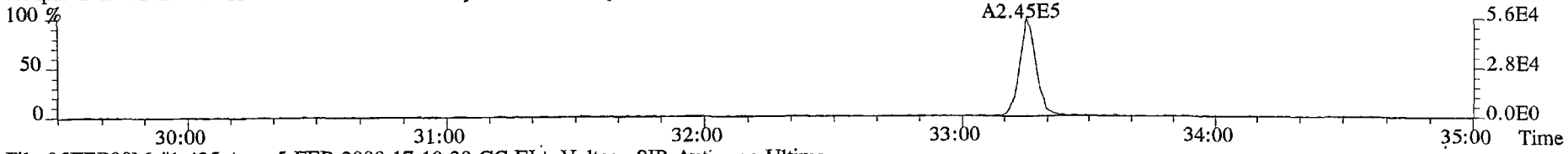
File:05FEB09M #1-390 Acq: 5-FEB-2009 17:10:30 GC EI+ Voltage SIR Autospec-Ultima
333.9339 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M1 File Text:Frontier Analytical Laboratory



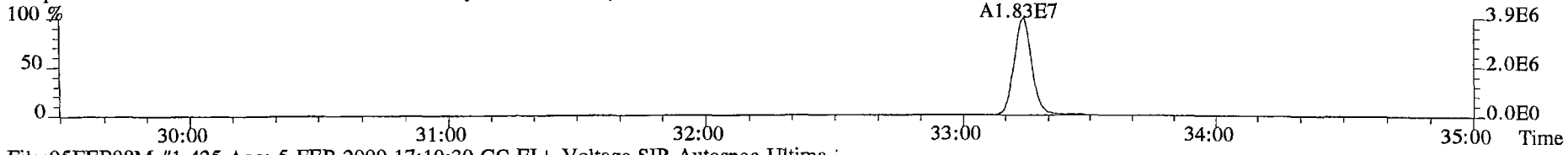
File:05FEB09M #1-425 Acq: 5-FEB-2009 17:10:30 GC EI+ Voltage SIR Autospec-Ultima
355.8546 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M1 File Text:Frontier Analytical Laboratory



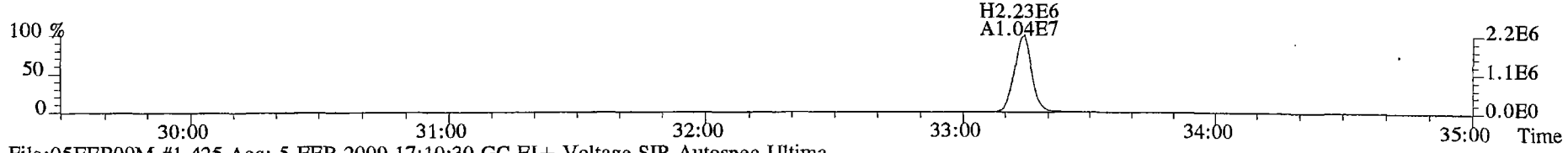
File:05FEB09M #1-425 Acq: 5-FEB-2009 17:10:30 GC EI+ Voltage SIR Autospec-Ultima
357.8517 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M1 File Text:Frontier Analytical Laboratory



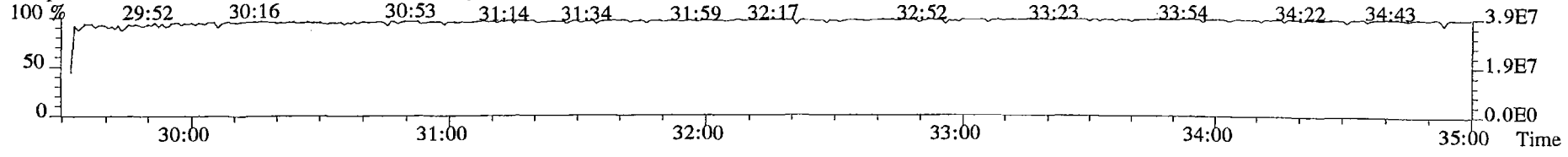
File:05FEB09M #1-425 Acq: 5-FEB-2009 17:10:30 GC EI+ Voltage SIR Autospec-Ultima
367.8949 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M1 File Text:Frontier Analytical Laboratory



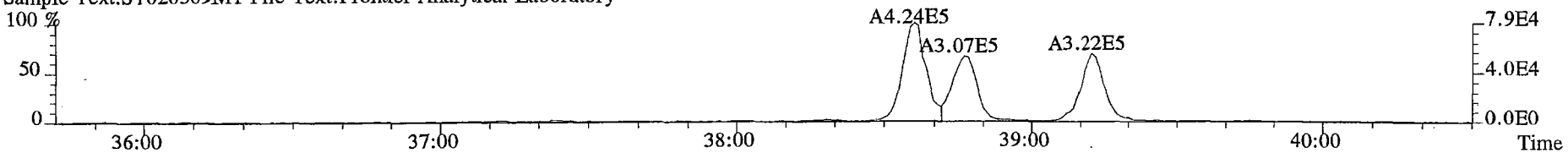
File:05FEB09M #1-425 Acq: 5-FEB-2009 17:10:30 GC EI+ Voltage SIR Autospec-Ultima
369.8919 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M1 File Text:Frontier Analytical Laboratory



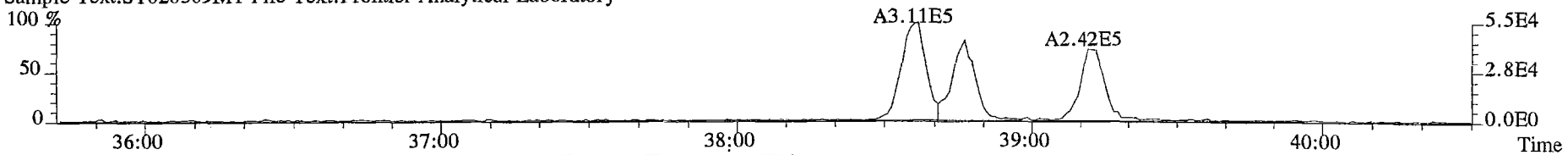
File:05FEB09M #1-425 Acq: 5-FEB-2009 17:10:30 GC EI+ Voltage SIR Autospec-Ultima
366.9792 S:3 F:2 Exp:PCDD
Sample Text:ST020509M1 File Text:Frontier Analytical Laboratory



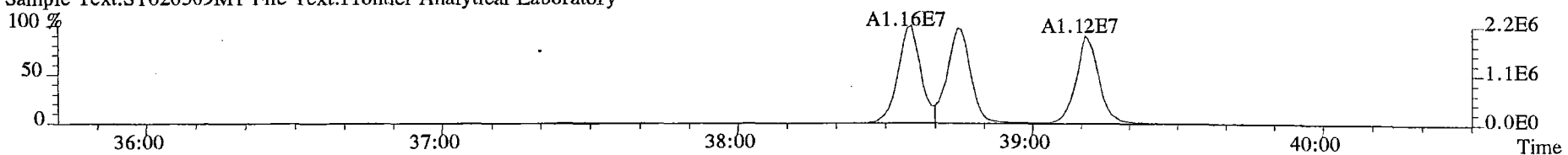
File:05FEB09M #1-463 Acq: 5-FEB-2009 17:10:30 GC EI+ Voltage SIR Autospec-Ultima
389.8156 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M1 File Text:Frontier Analytical Laboratory



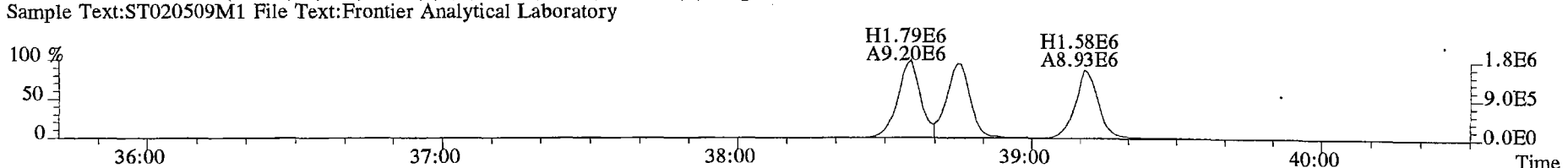
File:05FEB09M #1-463 Acq: 5-FEB-2009 17:10:30 GC EI+ Voltage SIR Autospec-Ultima
391.8127 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M1 File Text:Frontier Analytical Laboratory



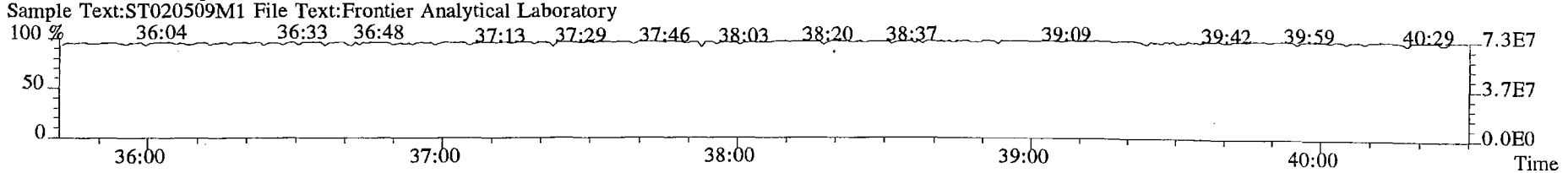
File:05FEB09M #1-463 Acq: 5-FEB-2009 17:10:30 GC EI+ Voltage SIR Autospec-Ultima
401.8559 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M1 File Text:Frontier Analytical Laboratory



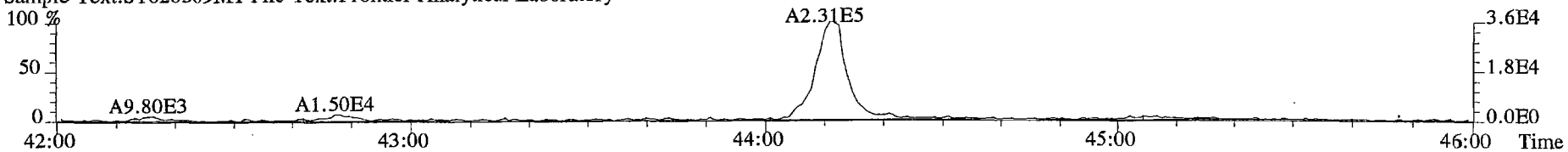
File:05FEB09M #1-463 Acq: 5-FEB-2009 17:10:30 GC EI+ Voltage SIR Autospec-Ultima
403.8530 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M1 File Text:Frontier Analytical Laboratory



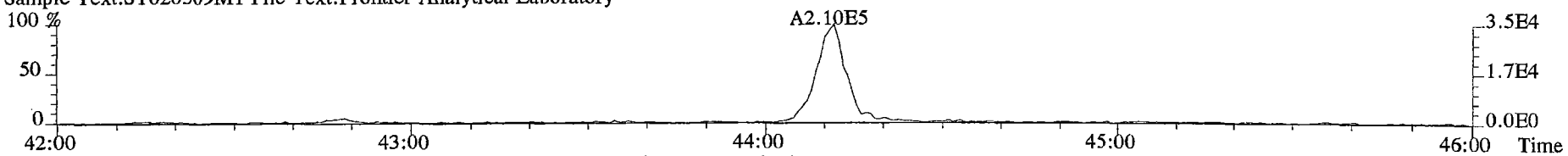
File:05FEB09M #1-463 Acq: 5-FEB-2009 17:10:30 GC EI+ Voltage SIR Autospec-Ultima
380.9760 S:3 F:3 Exp:PCDD
Sample Text:ST020509M1 File Text:Frontier Analytical Laboratory



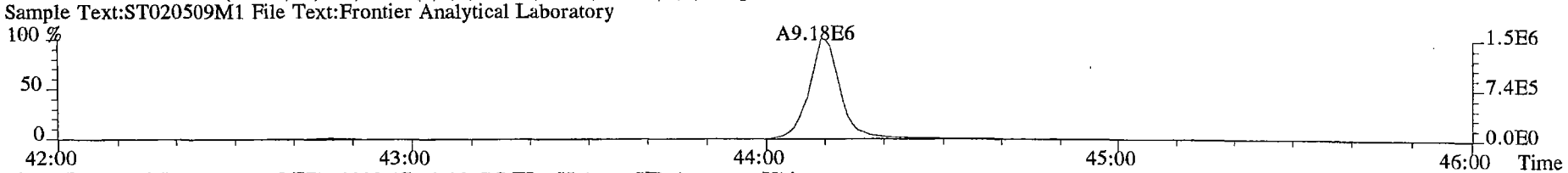
File:05FEB09M #1-541 Acq: 5-FEB-2009 17:10:30 GC EI+ Voltage SIR Autospec-Ultima
423.7767 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M1 File Text:Frontier Analytical Laboratory



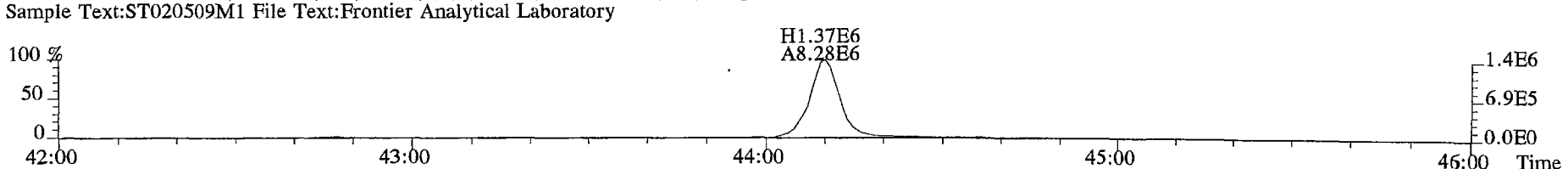
File:05FEB09M #1-541 Acq: 5-FEB-2009 17:10:30 GC EI+ Voltage SIR Autospec-Ultima
425.7737 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M1 File Text:Frontier Analytical Laboratory



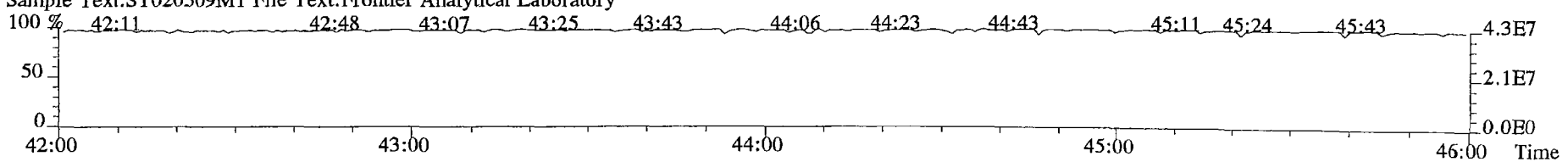
File:05FEB09M #1-541 Acq: 5-FEB-2009 17:10:30 GC EI+ Voltage SIR Autospec-Ultima
435.8169 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M1 File Text:Frontier Analytical Laboratory



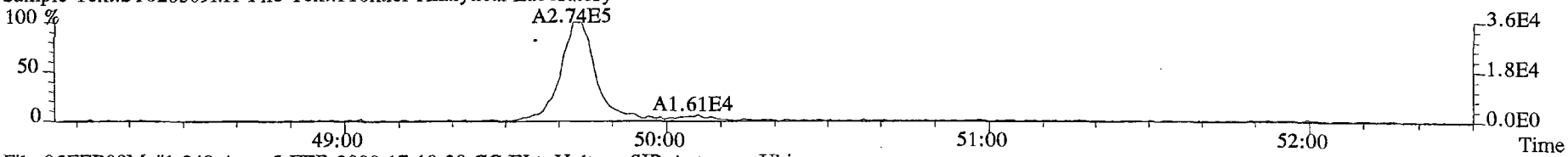
File:05FEB09M #1-541 Acq: 5-FEB-2009 17:10:30 GC EI+ Voltage SIR Autospec-Ultima
437.8140 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M1 File Text:Frontier Analytical Laboratory



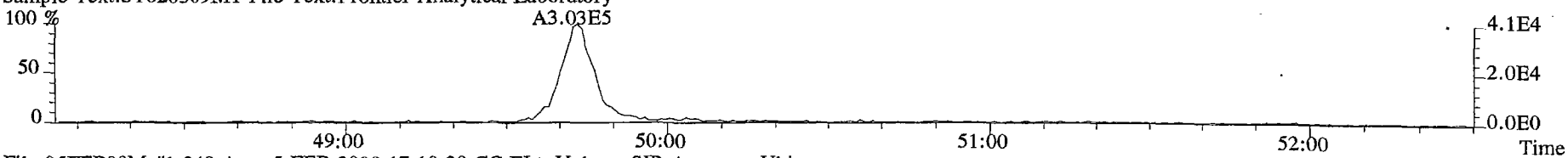
File:05FEB09M #1-541 Acq: 5-FEB-2009 17:10:30 GC EI+ Voltage SIR Autospec-Ultima
430.9728 S:3 F:4 Exp:PCDD
Sample Text:ST020509M1 File Text:Frontier Analytical Laboratory



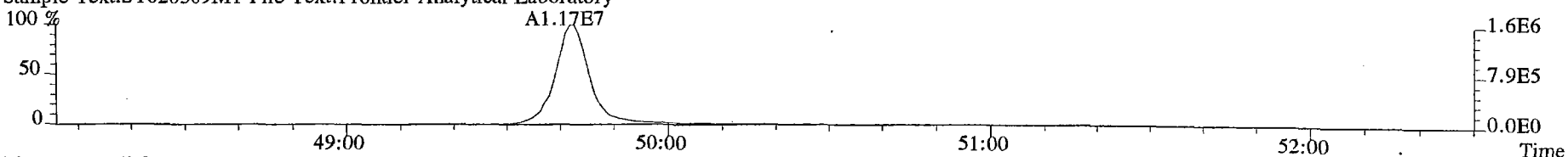
File:05FEB09M #1-348 Acq: 5-FEB-2009 17:10:30 GC EI+ Voltage SIR Autospec-Ultima
457.7377 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M1 File Text:Frontier Analytical Laboratory



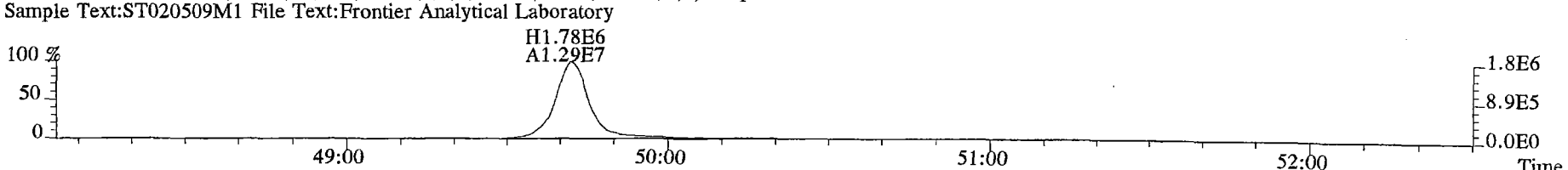
File:05FEB09M #1-348 Acq: 5-FEB-2009 17:10:30 GC EI+ Voltage SIR Autospec-Ultima
459.7348 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M1 File Text:Frontier Analytical Laboratory



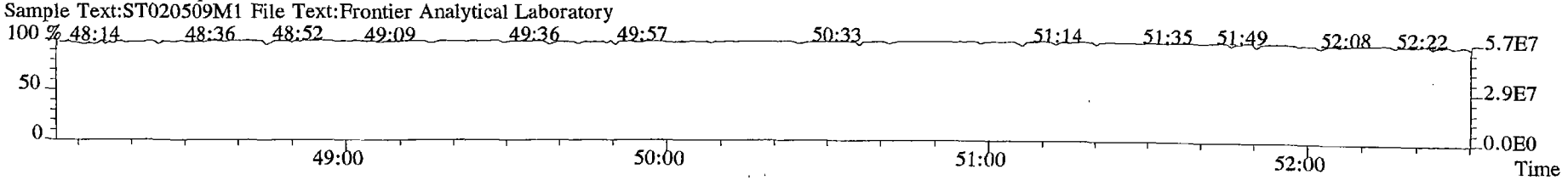
File:05FEB09M #1-348 Acq: 5-FEB-2009 17:10:30 GC EI+ Voltage SIR Autospec-Ultima
469.7780 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M1 File Text:Frontier Analytical Laboratory



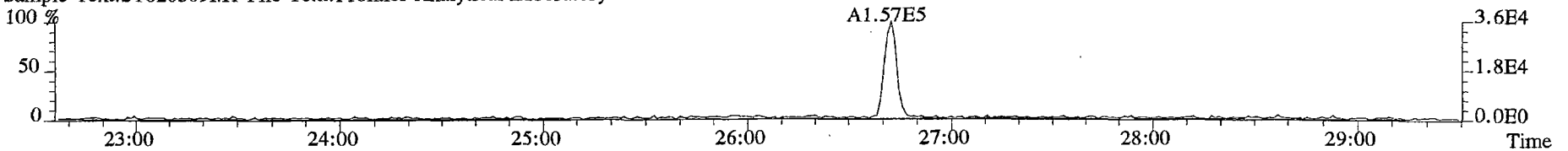
File:05FEB09M #1-348 Acq: 5-FEB-2009 17:10:30 GC EI+ Voltage SIR Autospec-Ultima
471.7750 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M1 File Text:Frontier Analytical Laboratory



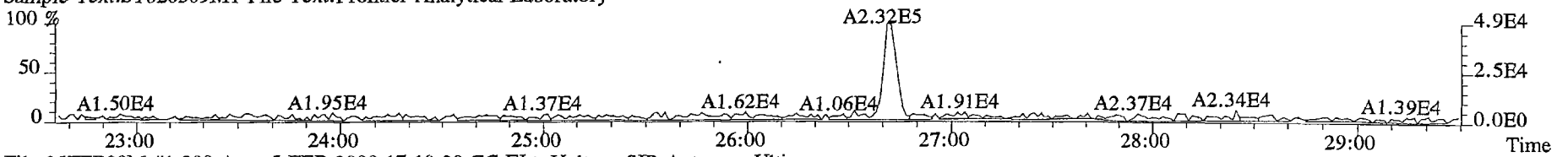
File:05FEB09M #1-348 Acq: 5-FEB-2009 17:10:30 GC EI+ Voltage SIR Autospec-Ultima
454.9728 S:3 F:5 Exp:PCDD
Sample Text:ST020509M1 File Text:Frontier Analytical Laboratory



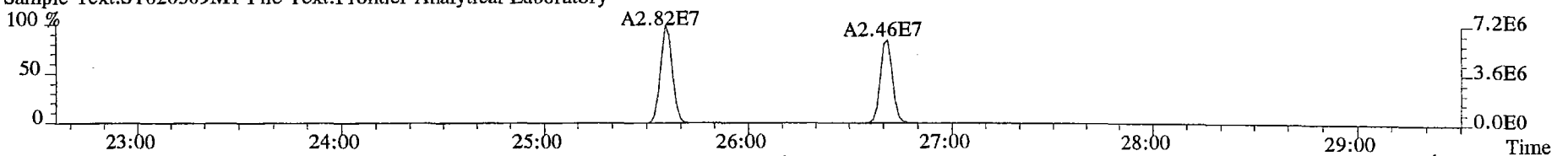
File:05FEB09M #1-390 Acq: 5-FEB-2009 17:10:30 GC EI+ Voltage SIR Autospec-Ultima
303.9016 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M1 File Text:Frontier Analytical Laboratory



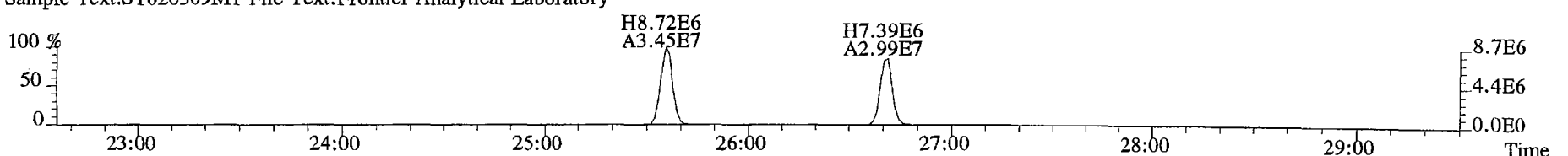
File:05FEB09M #1-390 Acq: 5-FEB-2009 17:10:30 GC EI+ Voltage SIR Autospec-Ultima
305.8987 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M1 File Text:Frontier Analytical Laboratory



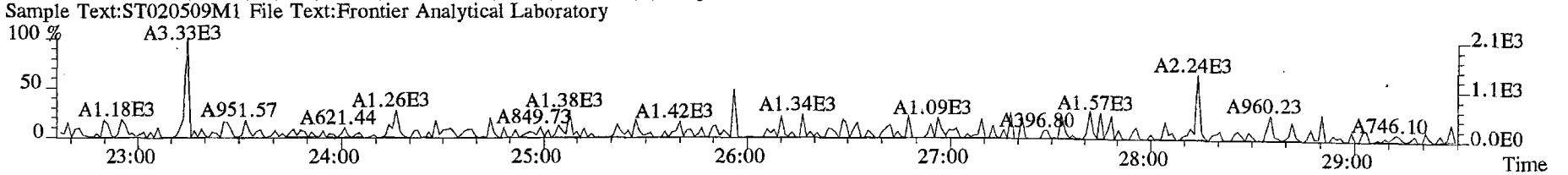
File:05FEB09M #1-390 Acq: 5-FEB-2009 17:10:30 GC EI+ Voltage SIR Autospec-Ultima
315.9419 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M1 File Text:Frontier Analytical Laboratory



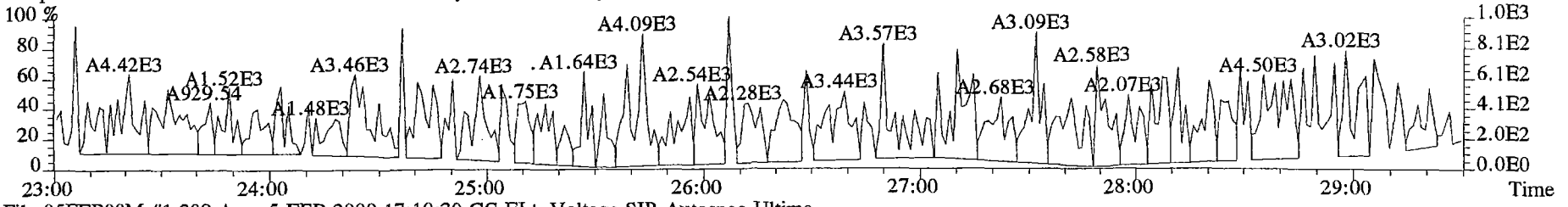
File:05FEB09M #1-390 Acq: 5-FEB-2009 17:10:30 GC EI+ Voltage SIR Autospec-Ultima
317.9389 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M1 File Text:Frontier Analytical Laboratory



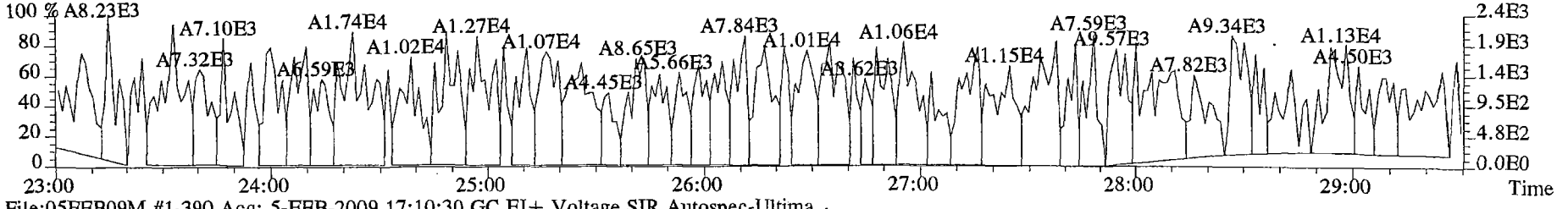
File:05FEB09M #1-390 Acq: 5-FEB-2009 17:10:30 GC EI+ Voltage SIR Autospec-Ultima
375.8364 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M1 File Text:Frontier Analytical Laboratory



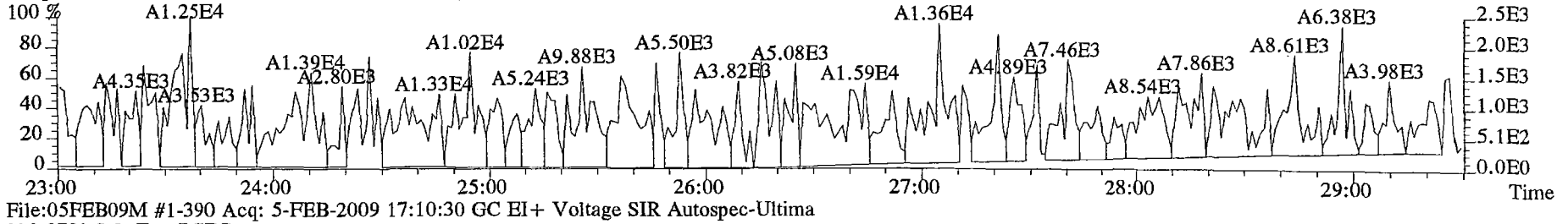
File:05FEB09M #1-390 Acq: 5-FEB-2009 17:10:30 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M1 File Text:Frontier Analytical Laboratory



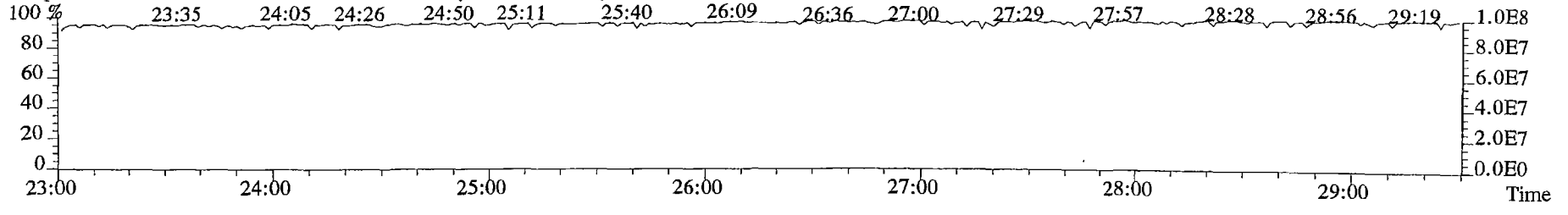
File:05FEB09M #1-390 Acq: 5-FEB-2009 17:10:30 GC EI+ Voltage SIR Autospec-Ultima
341.8568 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M1 File Text:Frontier Analytical Laboratory



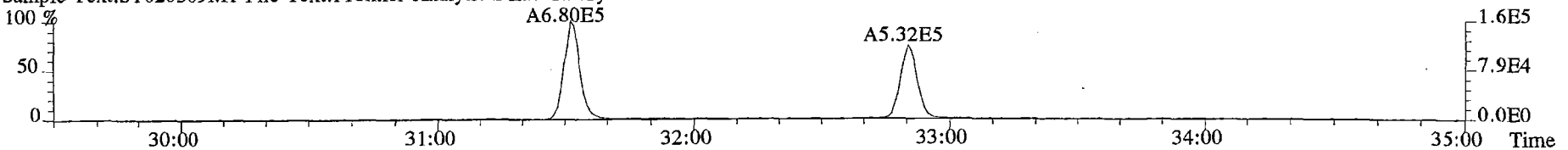
File:05FEB09M #1-390 Acq: 5-FEB-2009 17:10:30 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M1 File Text:Frontier Analytical Laboratory



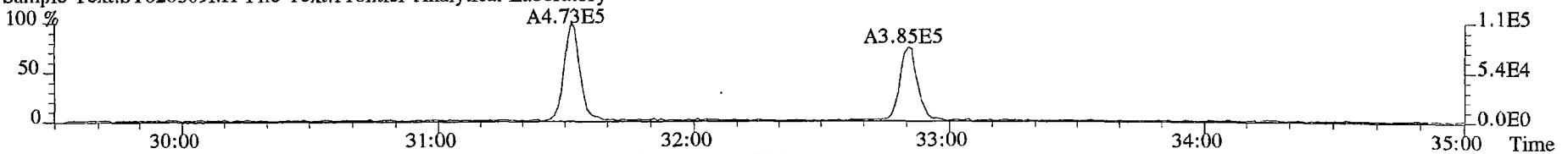
File:05FEB09M #1-390 Acq: 5-FEB-2009 17:10:30 GC EI+ Voltage SIR Autospec-Ultima
330.9792 S:3 Exp:PCDD
Sample Text:ST020509M1 File Text:Frontier Analytical Laboratory



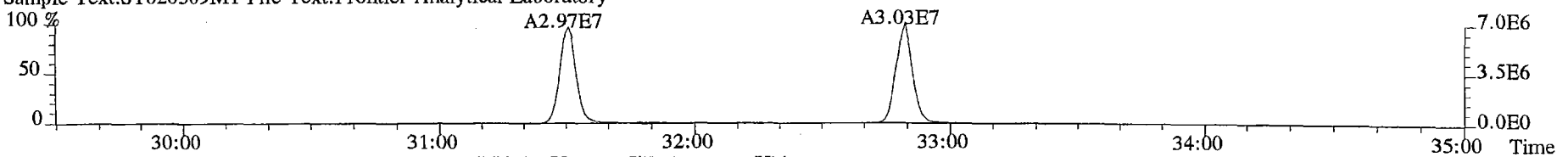
File:05FEB09M #1-425 Acq: 5-FEB-2009 17:10:30 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M1 File Text:Frontier Analytical Laboratory



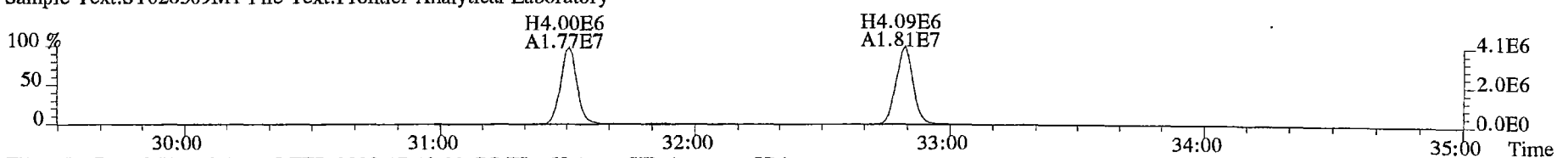
File:05FEB09M #1-425 Acq: 5-FEB-2009 17:10:30 GC EI+ Voltage SIR Autospec-Ultima
341.8568 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M1 File Text:Frontier Analytical Laboratory



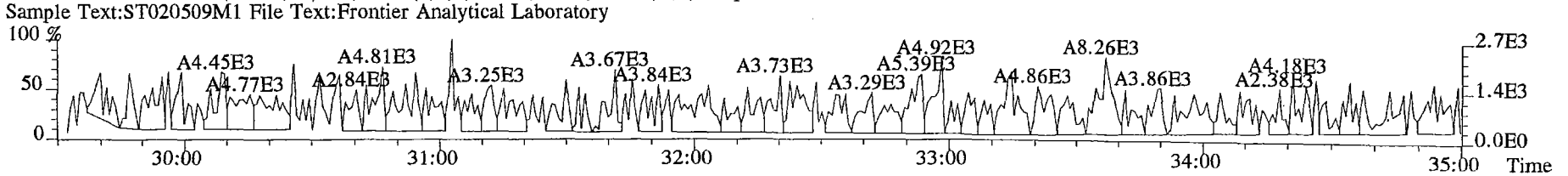
File:05FEB09M #1-425 Acq: 5-FEB-2009 17:10:30 GC EI+ Voltage SIR Autospec-Ultima
351.9000 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M1 File Text:Frontier Analytical Laboratory



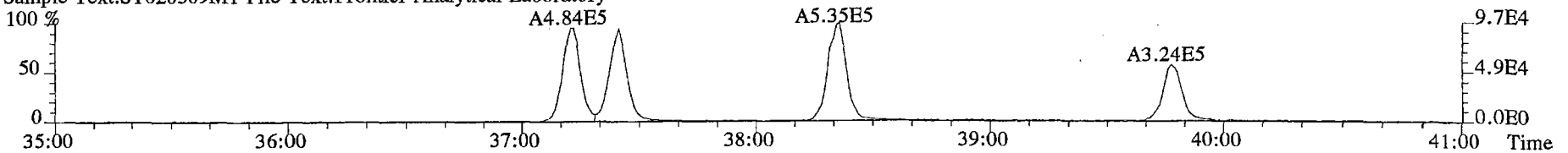
File:05FEB09M #1-425 Acq: 5-FEB-2009 17:10:30 GC EI+ Voltage SIR Autospec-Ultima
353.8970 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M1 File Text:Frontier Analytical Laboratory



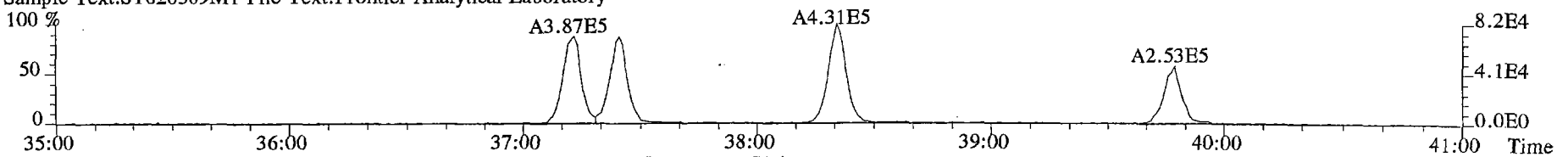
File:05FEB09M #1-425 Acq: 5-FEB-2009 17:10:30 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M1 File Text:Frontier Analytical Laboratory



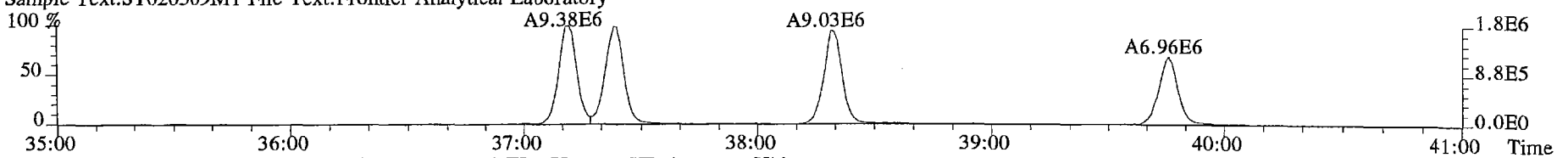
File:05FEB09M #1-463 Acq: 5-FEB-2009 17:10:30 GC EI+ Voltage SIR Autospec-Ultima
373.8207 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M1 File Text:Frontier Analytical Laboratory



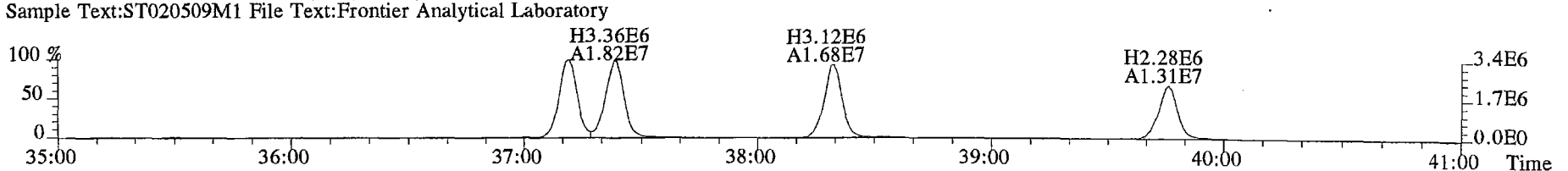
File:05FEB09M #1-463 Acq: 5-FEB-2009 17:10:30 GC EI+ Voltage SIR Autospec-Ultima
375.8178 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M1 File Text:Frontier Analytical Laboratory



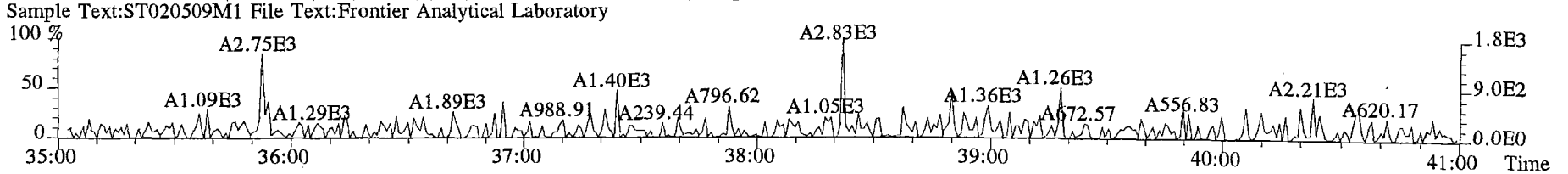
File:05FEB09M #1-463 Acq: 5-FEB-2009 17:10:30 GC EI+ Voltage SIR Autospec-Ultima
383.8639 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M1 File Text:Frontier Analytical Laboratory



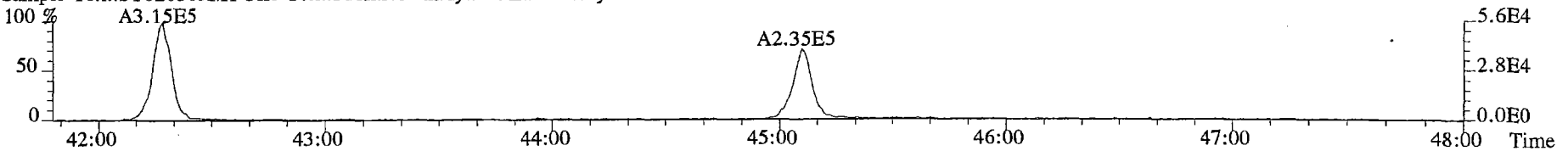
File:05FEB09M #1-463 Acq: 5-FEB-2009 17:10:30 GC EI+ Voltage SIR Autospec-Ultima
385.8610 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M1 File Text:Frontier Analytical Laboratory



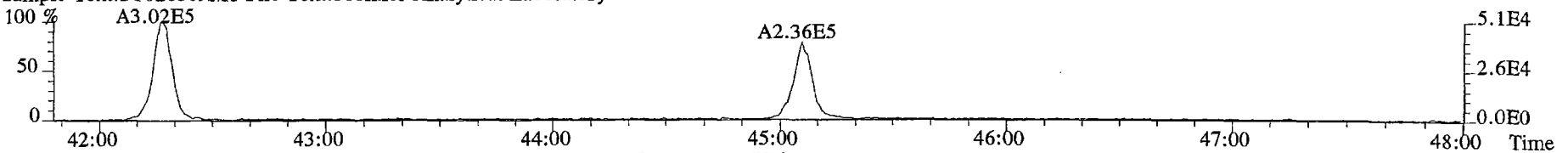
File:05FEB09M #1-463 Acq: 5-FEB-2009 17:10:30 GC EI+ Voltage SIR Autospec-Ultima
445.7555 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M1 File Text:Frontier Analytical Laboratory



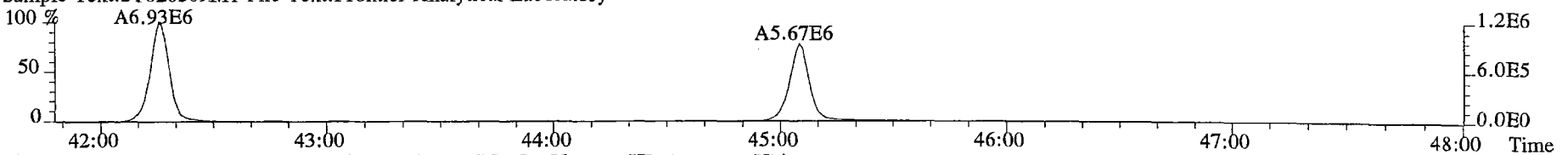
File:05FEB09M #1-541 Acq: 5-FEB-2009 17:10:30 GC EI+ Voltage SIR Autospec-Ultima
407.7818 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M1 File Text:Frontier Analytical Laboratory



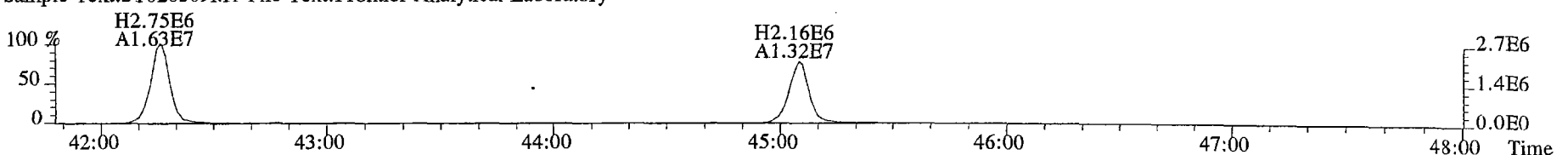
File:05FEB09M #1-541 Acq: 5-FEB-2009 17:10:30 GC EI+ Voltage SIR Autospec-Ultima
409.7788 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M1 File Text:Frontier Analytical Laboratory



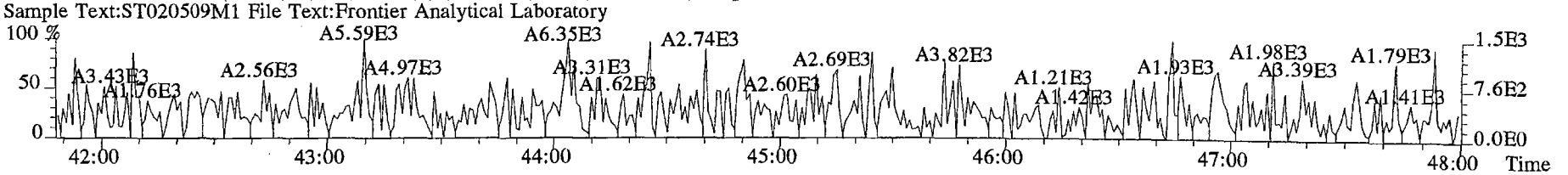
File:05FEB09M #1-541 Acq: 5-FEB-2009 17:10:30 GC EI+ Voltage SIR Autospec-Ultima
417.8253 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M1 File Text:Frontier Analytical Laboratory



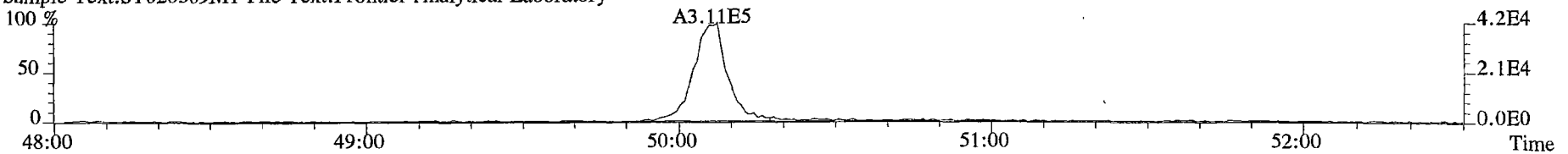
File:05FEB09M #1-541 Acq: 5-FEB-2009 17:10:30 GC EI+ Voltage SIR Autospec-Ultima
419.8220 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M1 File Text:Frontier Analytical Laboratory



File:05FEB09M #1-541 Acq: 5-FEB-2009 17:10:30 GC EI+ Voltage SIR Autospec-Ultima
479.7165 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M1 File Text:Frontier Analytical Laboratory

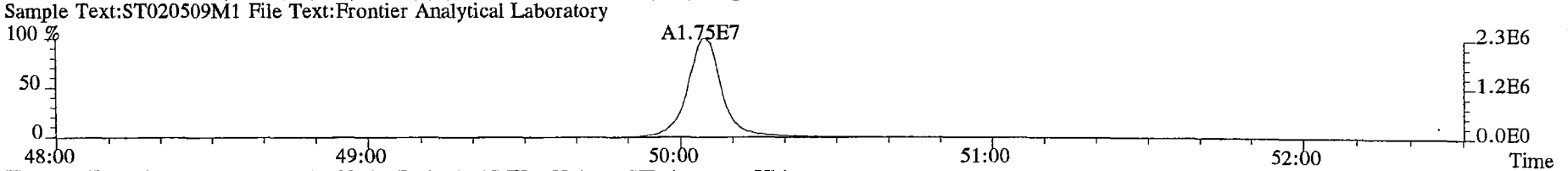


File:05FEB09M #1-348 Acq: 5-FEB-2009 17:10:30 GC EI+ Voltage SIR Autospec-Ultima
441.7428 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M1 File Text:Frontier Analytical Laboratory

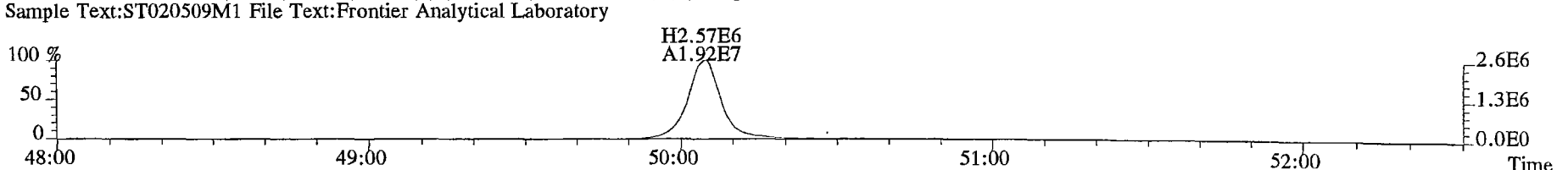


File:05FEB09M #1-348 Acq: 5-FEB-2009 17:10:30 GC EI+ Voltage SIR Autospec-Ultima
443.7398 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M1 File Text:Frontier Analytical Laboratory

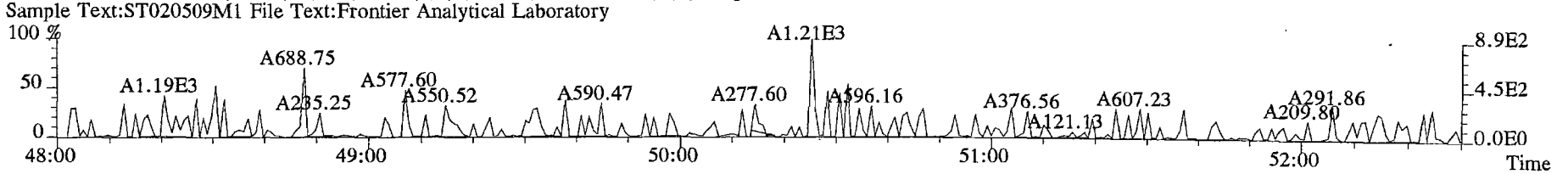
File:05FEB09M #1-348 Acq: 5-FEB-2009 17:10:30 GC EI+ Voltage SIR Autospec-Ultima
453.7831 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M1 File Text:Frontier Analytical Laboratory



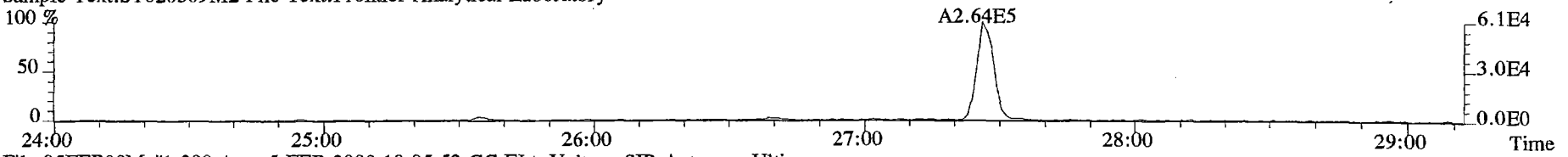
File:05FEB09M #1-348 Acq: 5-FEB-2009 17:10:30 GC EI+ Voltage SIR Autospec-Ultima
455.7801 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M1 File Text:Frontier Analytical Laboratory



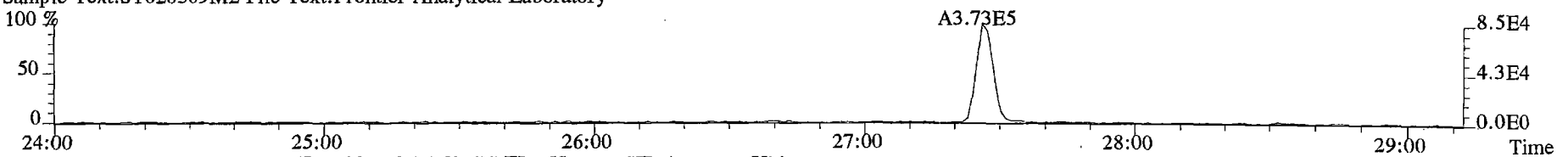
File:05FEB09M #1-348 Acq: 5-FEB-2009 17:10:30 GC EI+ Voltage SIR Autospec-Ultima
513.6775 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M1 File Text:Frontier Analytical Laboratory



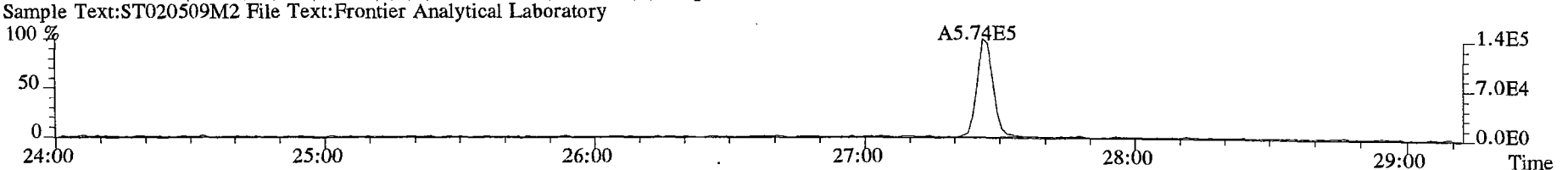
File:05FEB09M #1-390 Acq: 5-FEB-2009 18:05:53 GC EI+ Voltage SIR Autospec-Ultima
319.8965 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M2 File Text:Frontier Analytical Laboratory



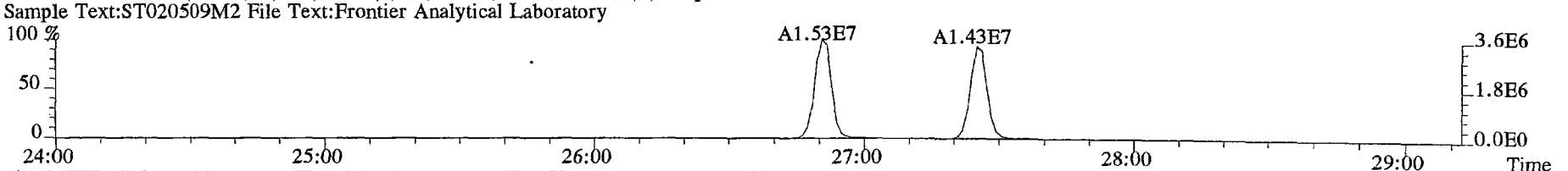
File:05FEB09M #1-390 Acq: 5-FEB-2009 18:05:53 GC EI+ Voltage SIR Autospec-Ultima
321.8936 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M2 File Text:Frontier Analytical Laboratory



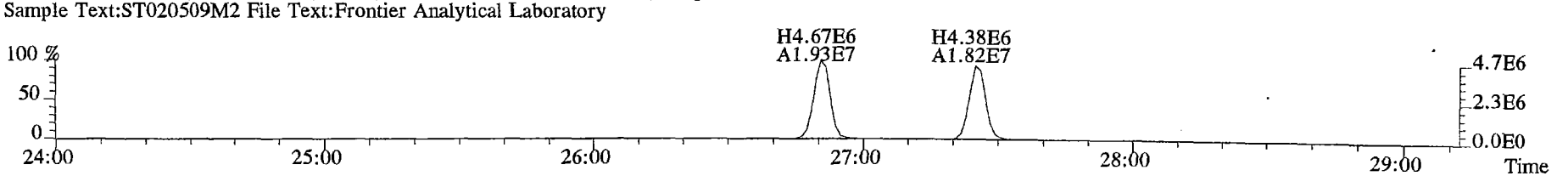
File:05FEB09M #1-390 Acq: 5-FEB-2009 18:05:53 GC EI+ Voltage SIR Autospec-Ultima
327.8847 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M2 File Text:Frontier Analytical Laboratory



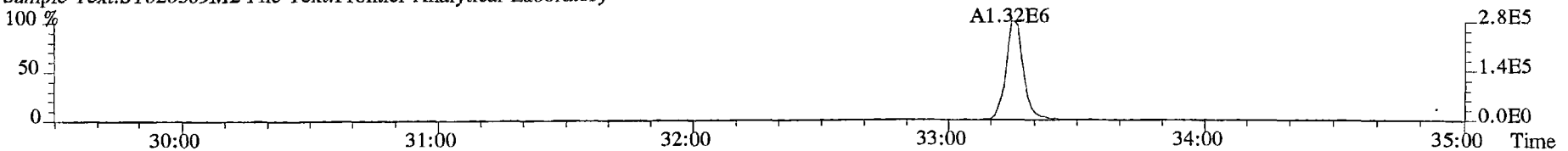
File:05FEB09M #1-390 Acq: 5-FEB-2009 18:05:53 GC EI+ Voltage SIR Autospec-Ultima
331.9368 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M2 File Text:Frontier Analytical Laboratory



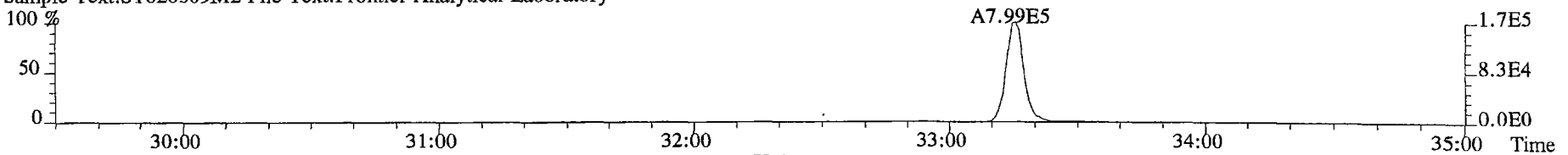
File:05FEB09M #1-390 Acq: 5-FEB-2009 18:05:53 GC EI+ Voltage SIR Autospec-Ultima
333.9339 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M2 File Text:Frontier Analytical Laboratory



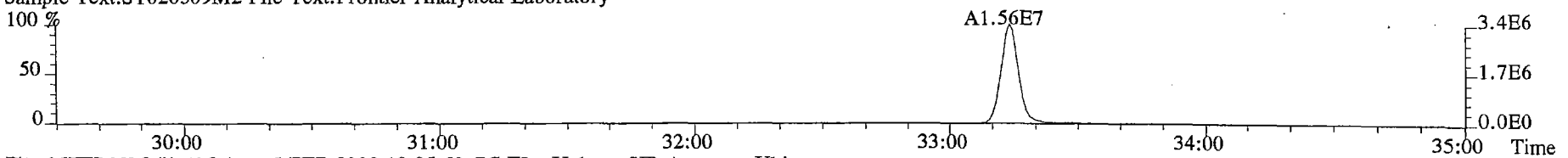
File:05FEB09M #1-425 Acq: 5-FEB-2009 18:05:53 GC EI+ Voltage SIR Autospec-Ultima
355.8546 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M2 File Text:Frontier Analytical Laboratory



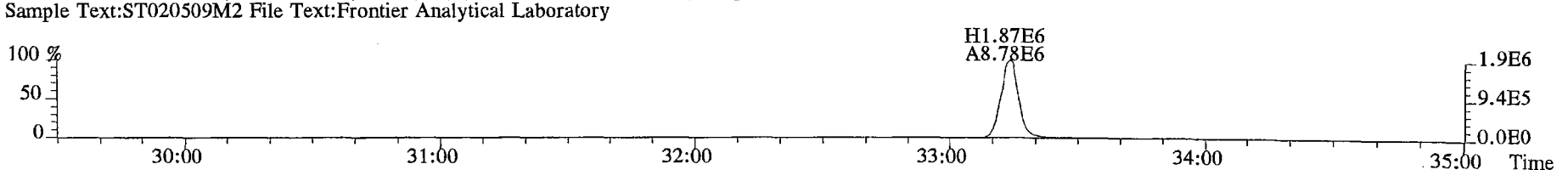
File:05FEB09M #1-425 Acq: 5-FEB-2009 18:05:53 GC EI+ Voltage SIR Autospec-Ultima
357.8517 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M2 File Text:Frontier Analytical Laboratory



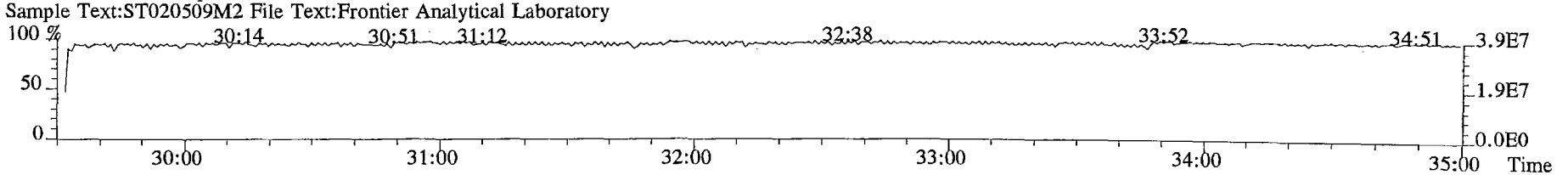
File:05FEB09M #1-425 Acq: 5-FEB-2009 18:05:53 GC EI+ Voltage SIR Autospec-Ultima
367.8949 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M2 File Text:Frontier Analytical Laboratory



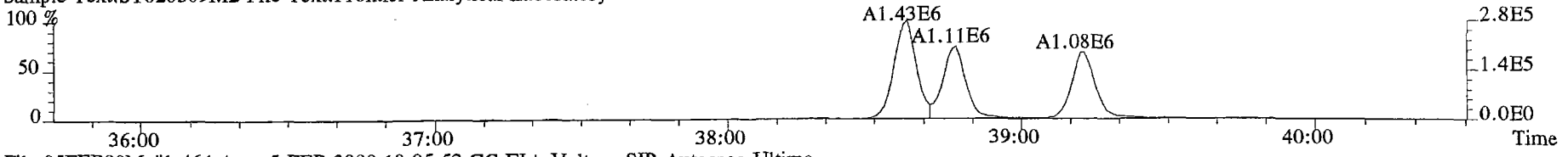
File:05FEB09M #1-425 Acq: 5-FEB-2009 18:05:53 GC EI+ Voltage SIR Autospec-Ultima
369.8919 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M2 File Text:Frontier Analytical Laboratory



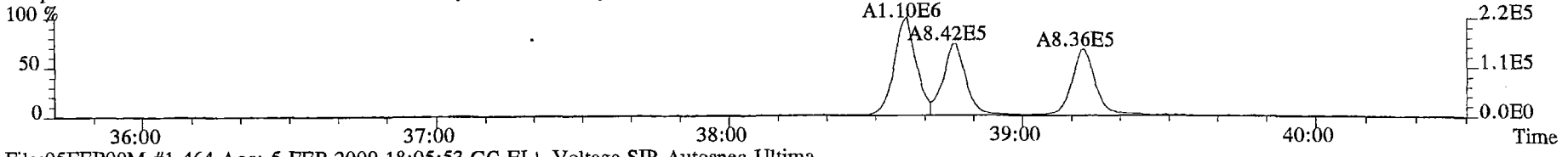
File:05FEB09M #1-425 Acq: 5-FEB-2009 18:05:53 GC EI+ Voltage SIR Autospec-Ultima
366.9792 S:4 F:2 Exp:PCDD
Sample Text:ST020509M2 File Text:Frontier Analytical Laboratory



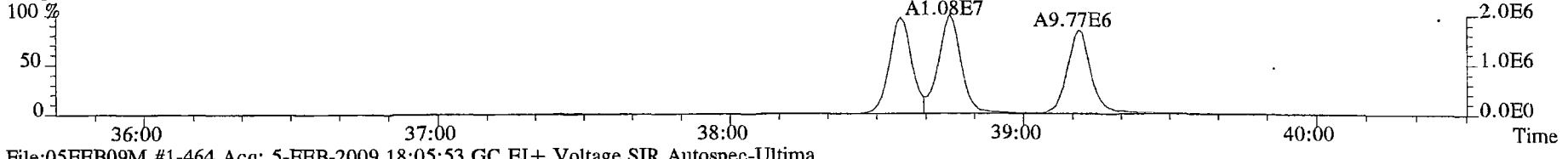
File:05FEB09M #1-464 Acq: 5-FEB-2009 18:05:53 GC EI+ Voltage SIR Autospec-Ultima
389.8156 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M2 File Text:Frontier Analytical Laboratory



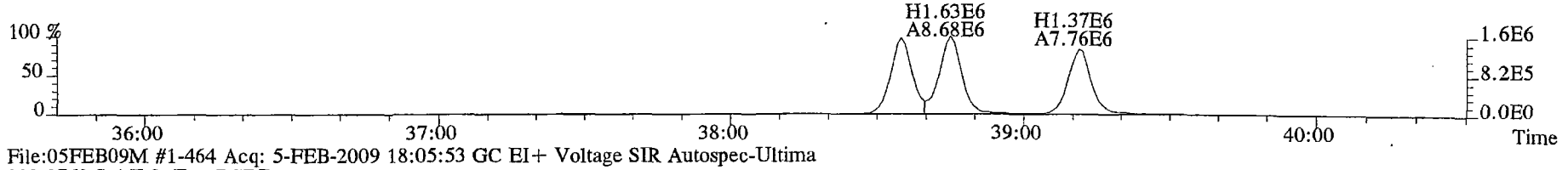
File:05FEB09M #1-464 Acq: 5-FEB-2009 18:05:53 GC EI+ Voltage SIR Autospec-Ultima
391.8127 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M2 File Text:Frontier Analytical Laboratory



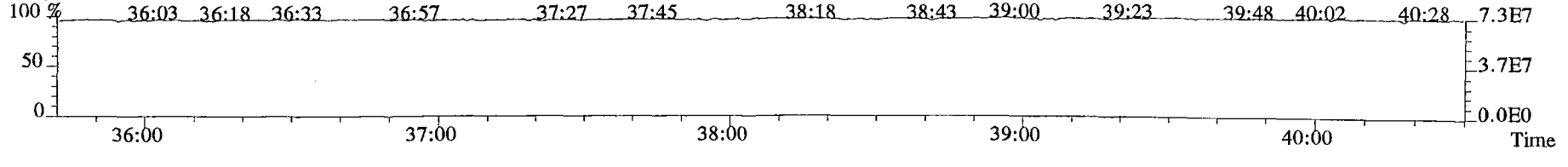
File:05FEB09M #1-464 Acq: 5-FEB-2009 18:05:53 GC EI+ Voltage SIR Autospec-Ultima
401.8559 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M2 File Text:Frontier Analytical Laboratory



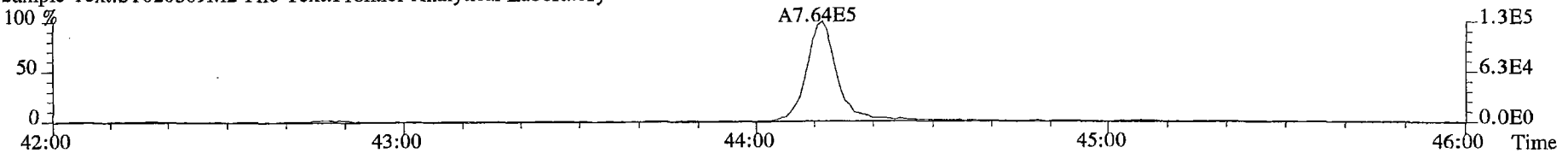
File:05FEB09M #1-464 Acq: 5-FEB-2009 18:05:53 GC EI+ Voltage SIR Autospec-Ultima
403.8530 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M2 File Text:Frontier Analytical Laboratory



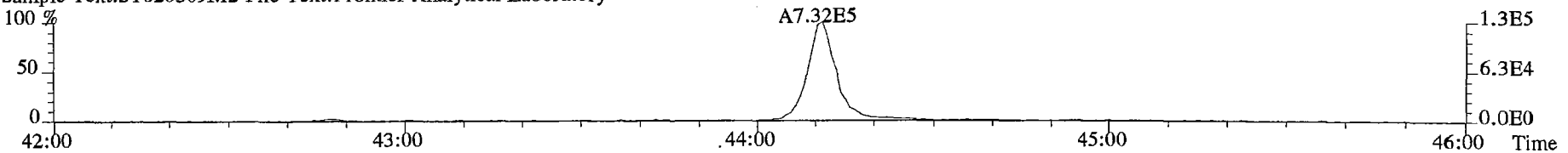
File:05FEB09M #1-464 Acq: 5-FEB-2009 18:05:53 GC EI+ Voltage SIR Autospec-Ultima
380.9760 S:4 F:3 Exp:PCDD
Sample Text:ST020509M2 File Text:Frontier Analytical Laboratory



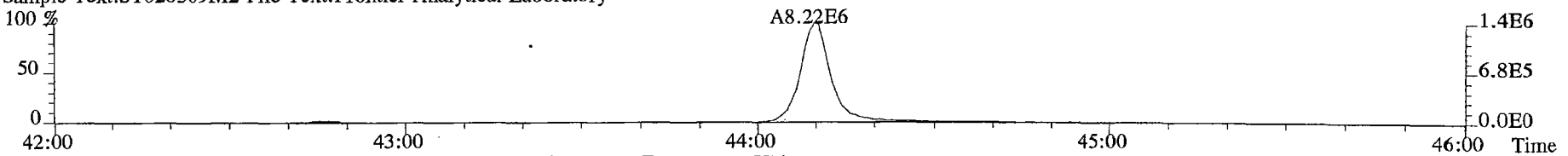
File:05FEB09M #1-541 Acq: 5-FEB-2009 18:05:53 GC EI+ Voltage SIR Autospec-Ultima
423.7767 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M2 File Text:Frontier Analytical Laboratory



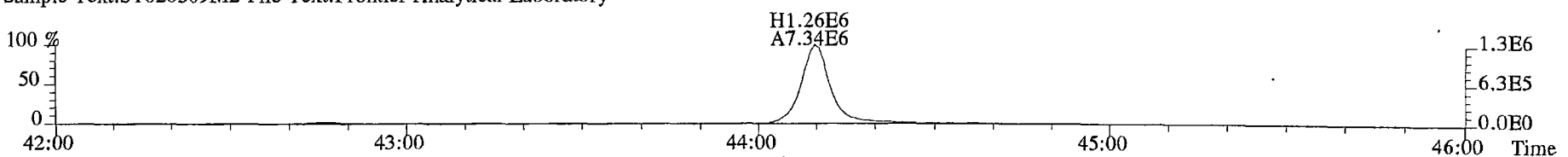
File:05FEB09M #1-541 Acq: 5-FEB-2009 18:05:53 GC EI+ Voltage SIR Autospec-Ultima
425.7737 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M2 File Text:Frontier Analytical Laboratory



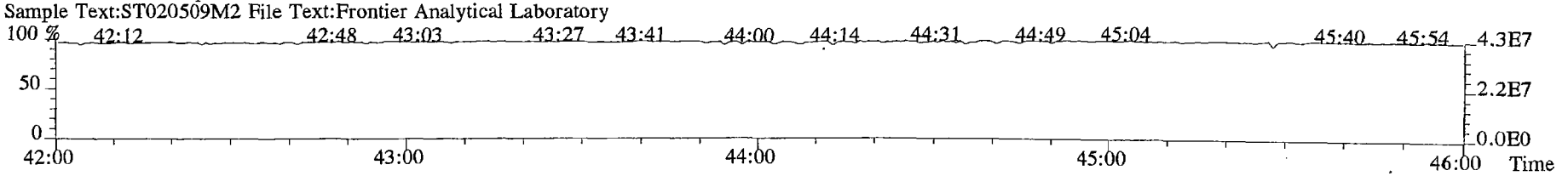
File:05FEB09M #1-541 Acq: 5-FEB-2009 18:05:53 GC EI+ Voltage SIR Autospec-Ultima
435.8169 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M2 File Text:Frontier Analytical Laboratory



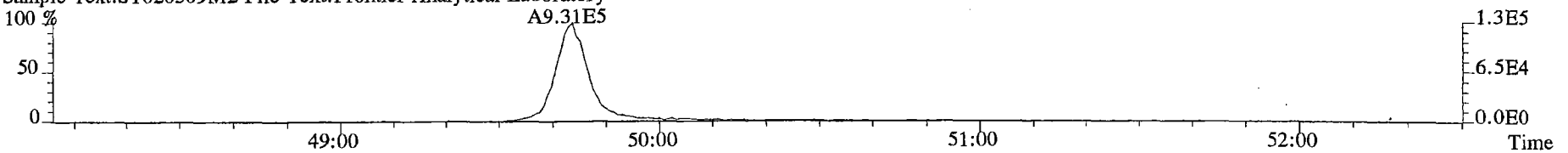
File:05FEB09M #1-541 Acq: 5-FEB-2009 18:05:53 GC EI+ Voltage SIR Autospec-Ultima
437.8140 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M2 File Text:Frontier Analytical Laboratory



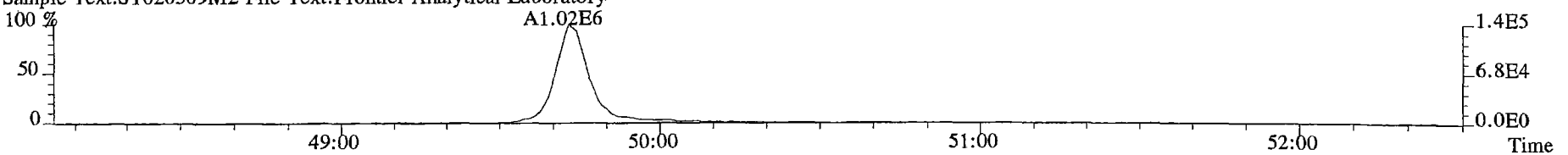
File:05FEB09M #1-541 Acq: 5-FEB-2009 18:05:53 GC EI+ Voltage SIR Autospec-Ultima
430.9728 S:4 F:4 Exp:PCDD
Sample Text:ST020509M2 File Text:Frontier Analytical Laboratory



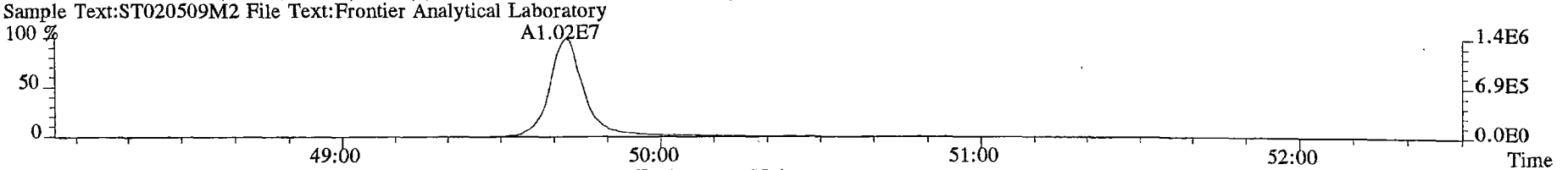
File:05FEB09M #1-347 Acq: 5-FEB-2009 18:05:53 GC EI+ Voltage SIR Autospec-Ultima
457.7377 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M2 File Text:Frontier Analytical Laboratory



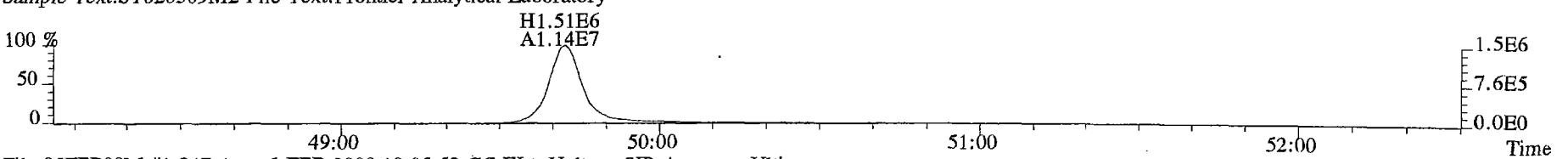
File:05FEB09M #1-347 Acq: 5-FEB-2009 18:05:53 GC EI+ Voltage SIR Autospec-Ultima
459.7348 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M2 File Text:Frontier Analytical Laboratory



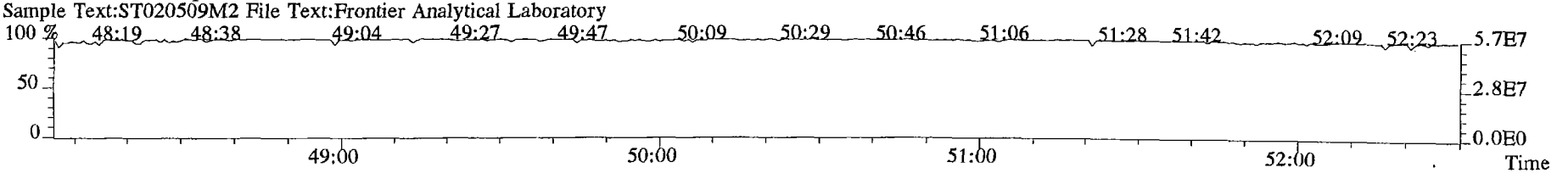
File:05FEB09M #1-347 Acq: 5-FEB-2009 18:05:53 GC EI+ Voltage SIR Autospec-Ultima
469.7780 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M2 File Text:Frontier Analytical Laboratory



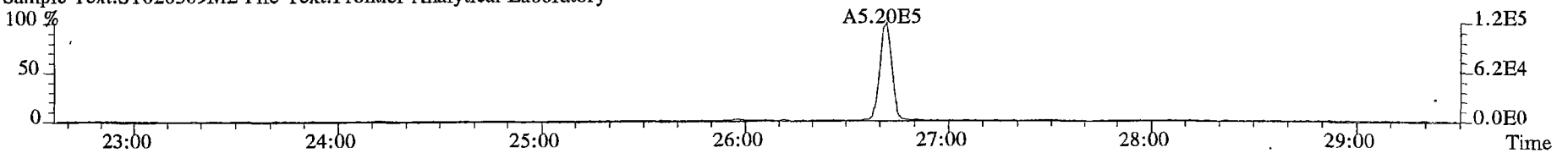
File:05FEB09M #1-347 Acq: 5-FEB-2009 18:05:53 GC EI+ Voltage SIR Autospec-Ultima
471.7750 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M2 File Text:Frontier Analytical Laboratory



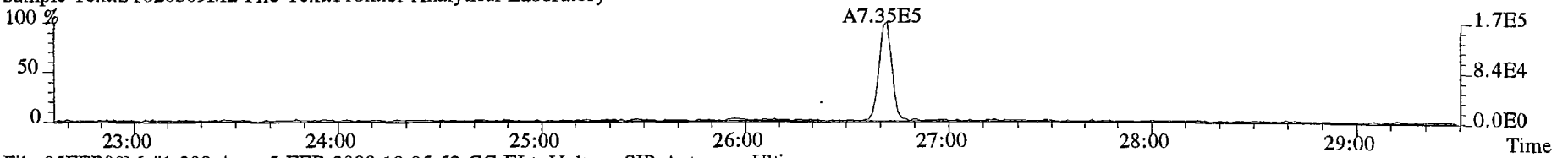
File:05FEB09M #1-347 Acq: 5-FEB-2009 18:05:53 GC EI+ Voltage SIR Autospec-Ultima
454.9728 S:4 F:5 Exp:PCDD
Sample Text:ST020509M2 File Text:Frontier Analytical Laboratory



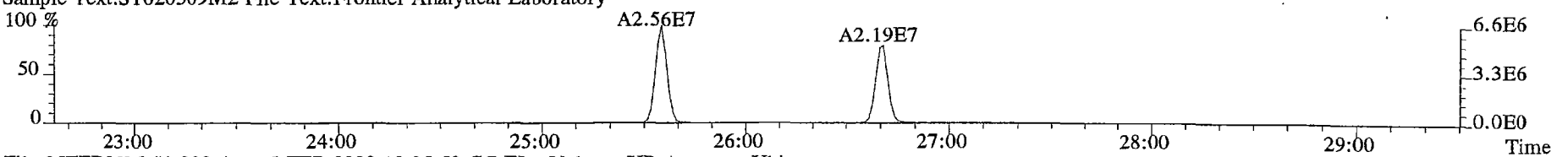
File:05FEB09M #1-390 Acq: 5-FEB-2009 18:05:53 GC EI+ Voltage SIR Autospec-Ultima
303.9016 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M2 File Text:Frontier Analytical Laboratory



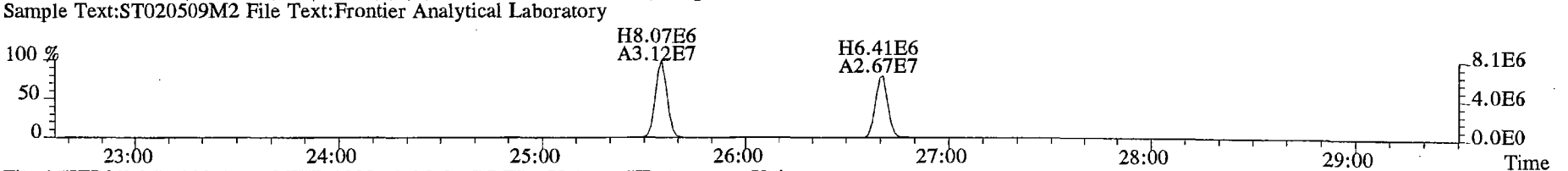
File:05FEB09M #1-390 Acq: 5-FEB-2009 18:05:53 GC EI+ Voltage SIR Autospec-Ultima
305.8987 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M2 File Text:Frontier Analytical Laboratory



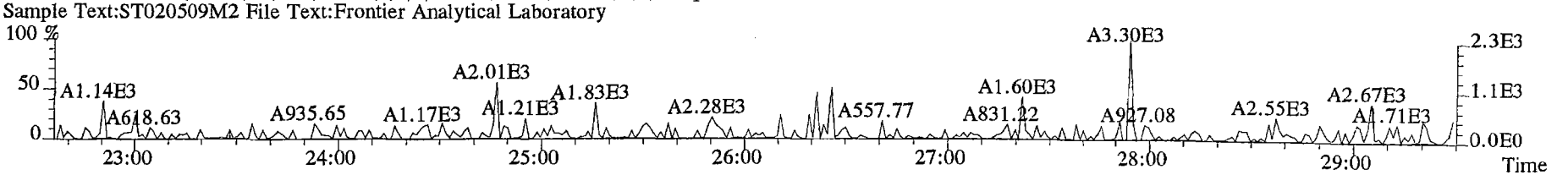
File:05FEB09M #1-390 Acq: 5-FEB-2009 18:05:53 GC EI+ Voltage SIR Autospec-Ultima
315.9419 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M2 File Text:Frontier Analytical Laboratory



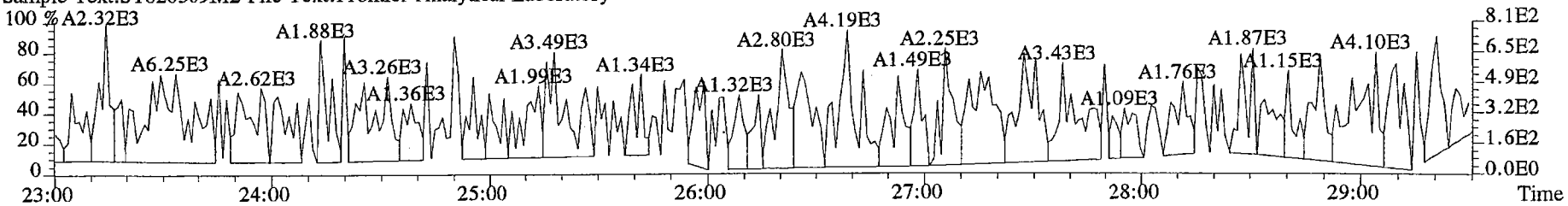
File:05FEB09M #1-390 Acq: 5-FEB-2009 18:05:53 GC EI+ Voltage SIR Autospec-Ultima
317.9389 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M2 File Text:Frontier Analytical Laboratory



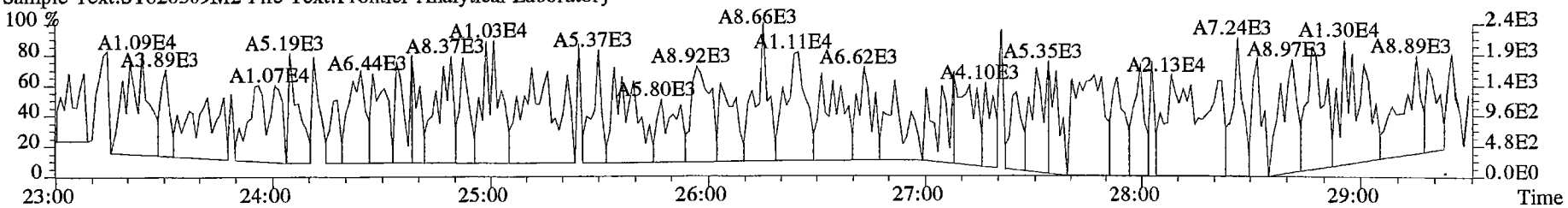
File:05FEB09M #1-390 Acq: 5-FEB-2009 18:05:53 GC EI+ Voltage SIR Autospec-Ultima
375.8364 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M2 File Text:Frontier Analytical Laboratory



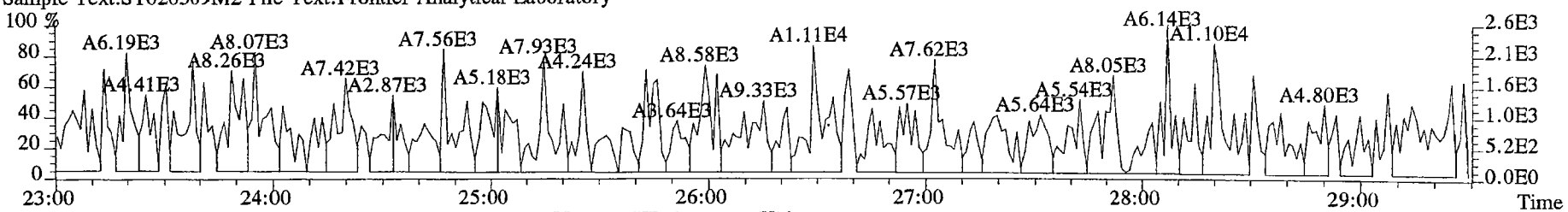
File:05FEB09M #1-390 Acq: 5-FEB-2009 18:05:53 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M2 File Text:Frontier Analytical Laboratory



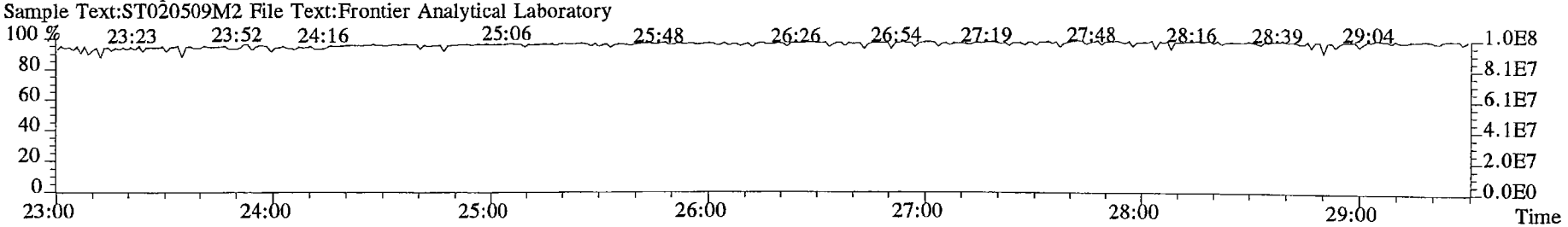
File:05FEB09M #1-390 Acq: 5-FEB-2009 18:05:53 GC EI+ Voltage SIR Autospec-Ultima
341.8568 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M2 File Text:Frontier Analytical Laboratory



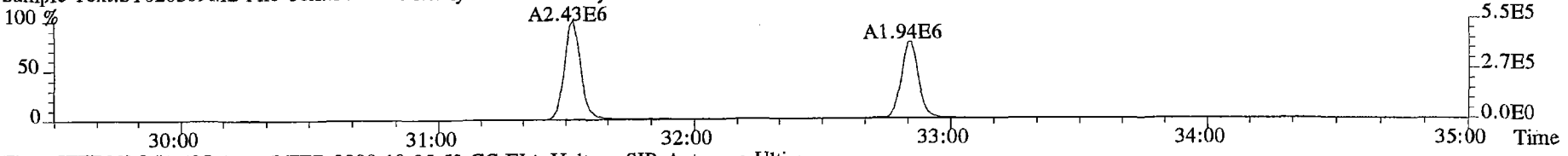
File:05FEB09M #1-390 Acq: 5-FEB-2009 18:05:53 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M2 File Text:Frontier Analytical Laboratory



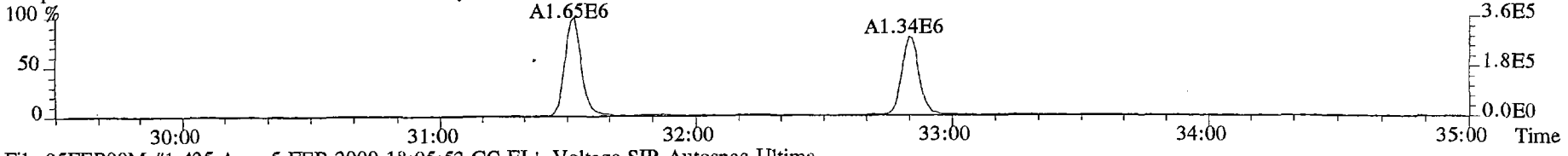
File:05FEB09M #1-390 Acq: 5-FEB-2009 18:05:53 GC EI+ Voltage SIR Autospec-Ultima
330.9792 S:4 Exp:PCDD
Sample Text:ST020509M2 File Text:Frontier Analytical Laboratory



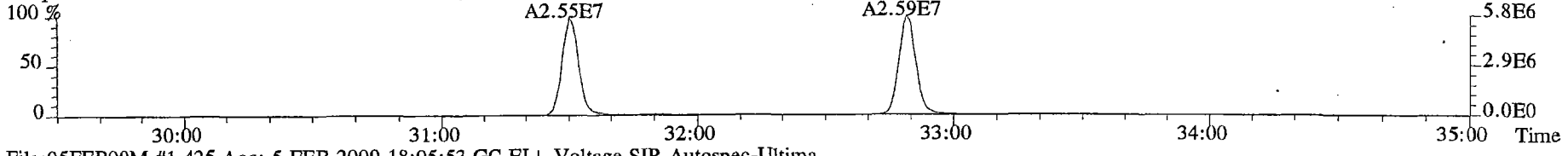
File:05FEB09M #1-425 Acq: 5-FEB-2009 18:05:53 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M2 File Text:Frontier Analytical Laboratory



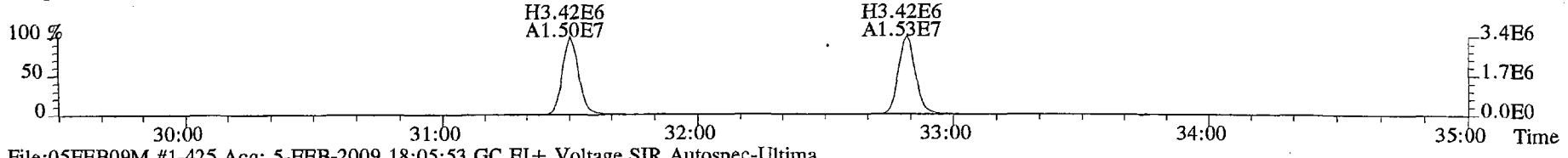
File:05FEB09M #1-425 Acq: 5-FEB-2009 18:05:53 GC EI+ Voltage SIR Autospec-Ultima
341.8568 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M2 File Text:Frontier Analytical Laboratory



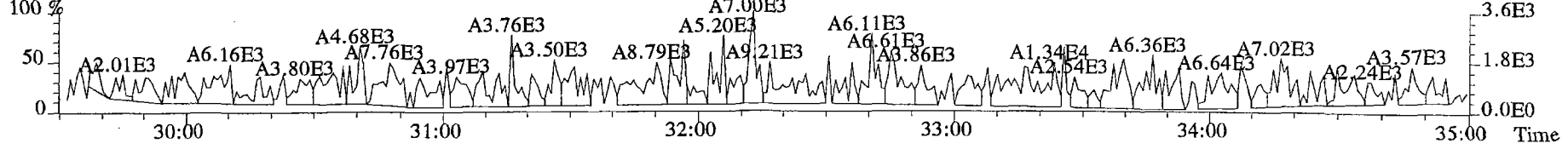
File:05FEB09M #1-425 Acq: 5-FEB-2009 18:05:53 GC EI+ Voltage SIR Autospec-Ultima
351.9000 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M2 File Text:Frontier Analytical Laboratory



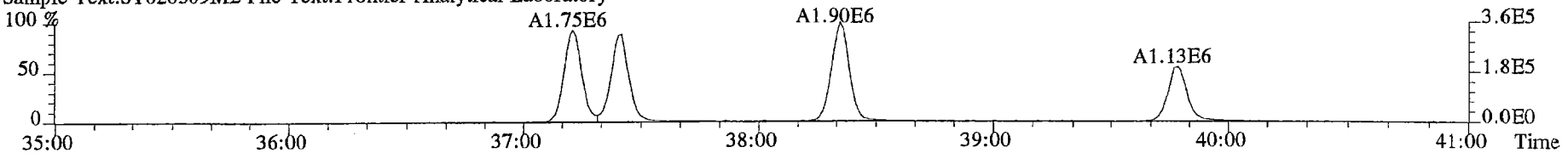
File:05FEB09M #1-425 Acq: 5-FEB-2009 18:05:53 GC EI+ Voltage SIR Autospec-Ultima
353.8970 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M2 File Text:Frontier Analytical Laboratory



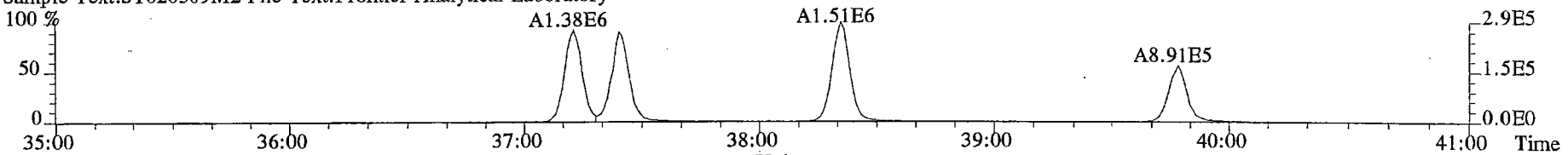
File:05FEB09M #1-425 Acq: 5-FEB-2009 18:05:53 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M2 File Text:Frontier Analytical Laboratory



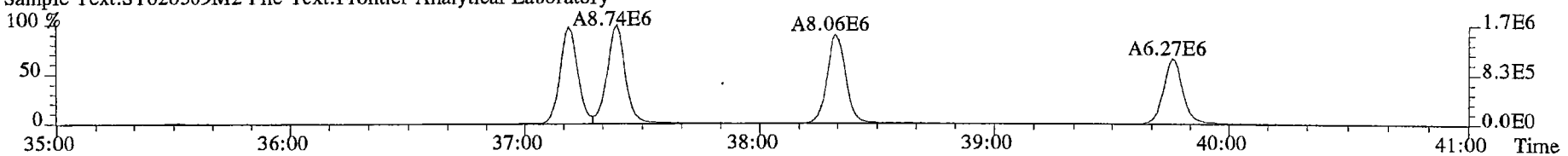
File:05FEB09M #1-464 Acq: 5-FEB-2009 18:05:53 GC EI+ Voltage SIR Autospec-Ultima
373.8207 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M2 File Text:Frontier Analytical Laboratory



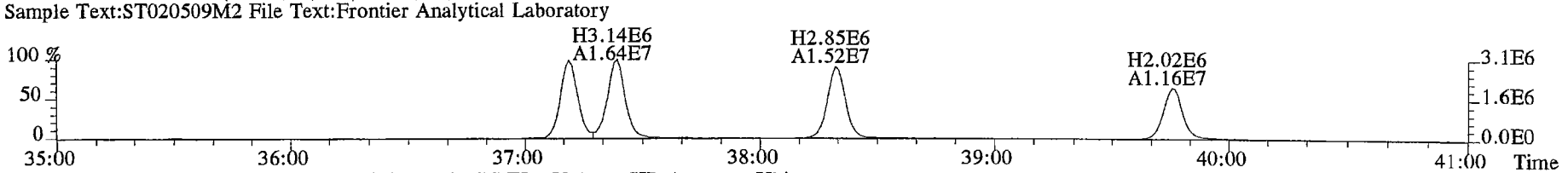
File:05FEB09M #1-464 Acq: 5-FEB-2009 18:05:53 GC EI+ Voltage SIR Autospec-Ultima
375.8178 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M2 File Text:Frontier Analytical Laboratory



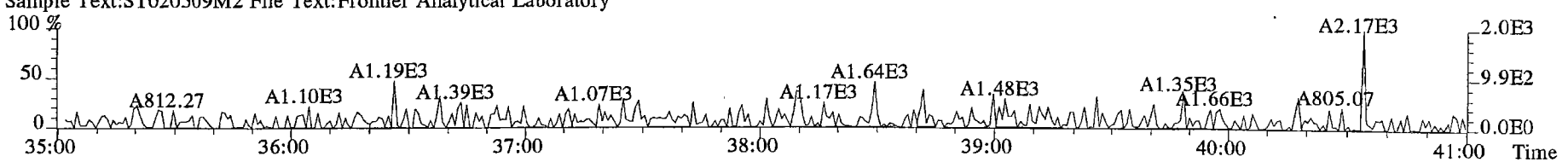
File:05FEB09M #1-464 Acq: 5-FEB-2009 18:05:53 GC EI+ Voltage SIR Autospec-Ultima
383.8639 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M2 File Text:Frontier Analytical Laboratory



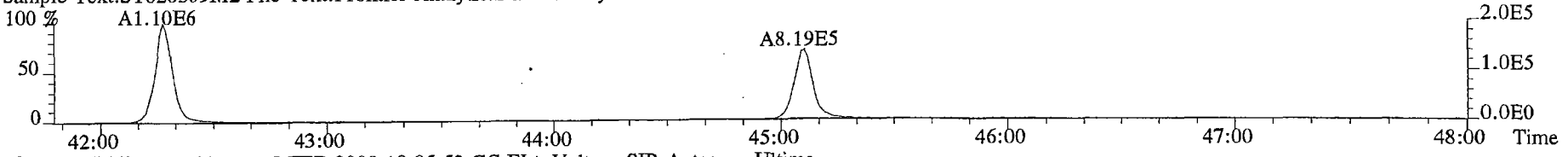
File:05FEB09M #1-464 Acq: 5-FEB-2009 18:05:53 GC EI+ Voltage SIR Autospec-Ultima
385.8610 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M2 File Text:Frontier Analytical Laboratory



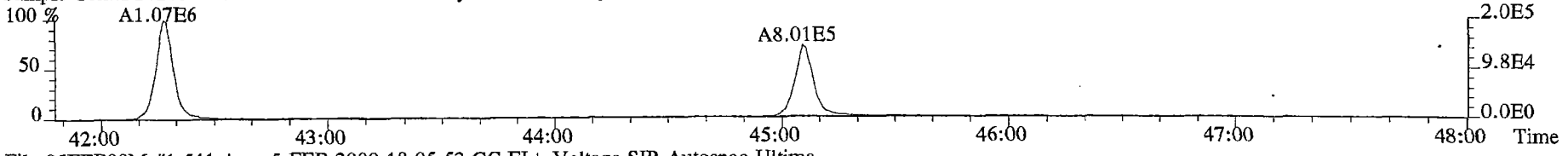
File:05FEB09M #1-464 Acq: 5-FEB-2009 18:05:53 GC EI+ Voltage SIR Autospec-Ultima
445.7555 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M2 File Text:Frontier Analytical Laboratory



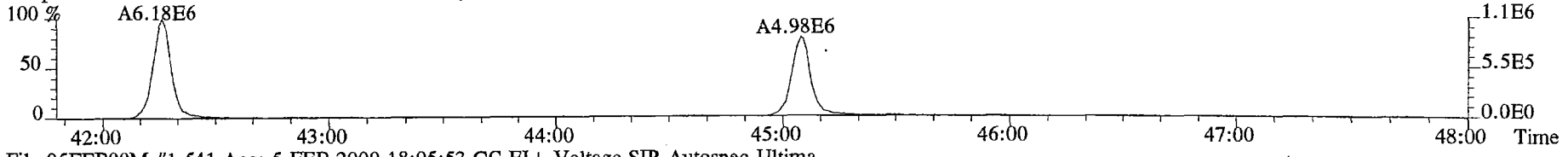
File:05FEB09M #1-541 Acq: 5-FEB-2009 18:05:53 GC EI+ Voltage SIR Autospec-Ultima
407.7818 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M2 File Text:Frontier Analytical Laboratory



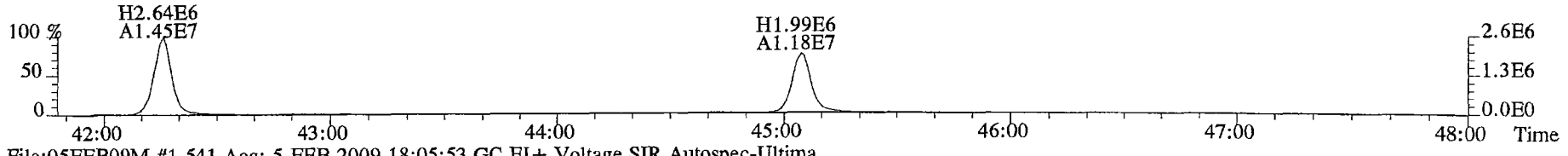
File:05FEB09M #1-541 Acq: 5-FEB-2009 18:05:53 GC EI+ Voltage SIR Autospec-Ultima
409.7788 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M2 File Text:Frontier Analytical Laboratory



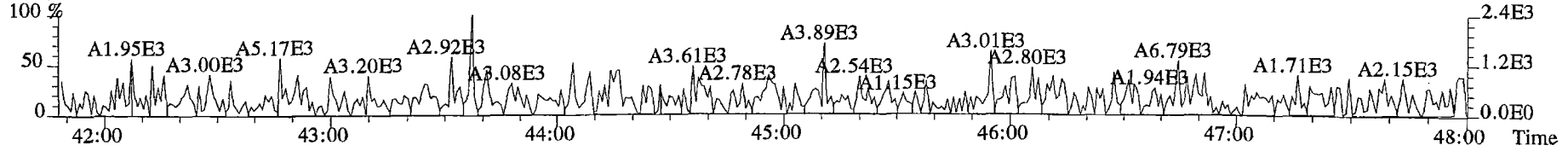
File:05FEB09M #1-541 Acq: 5-FEB-2009 18:05:53 GC EI+ Voltage SIR Autospec-Ultima
417.8253 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M2 File Text:Frontier Analytical Laboratory



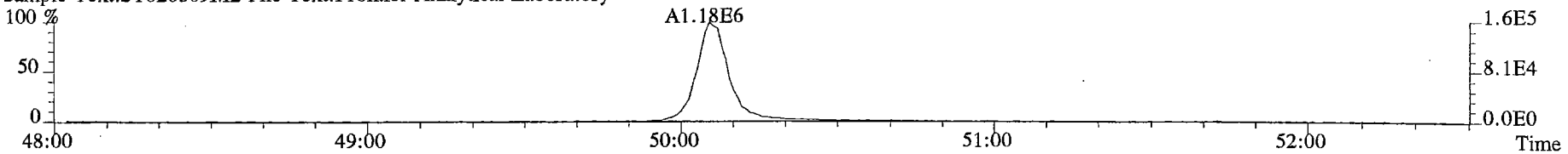
File:05FEB09M #1-541 Acq: 5-FEB-2009 18:05:53 GC EI+ Voltage SIR Autospec-Ultima
419.8220 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M2 File Text:Frontier Analytical Laboratory



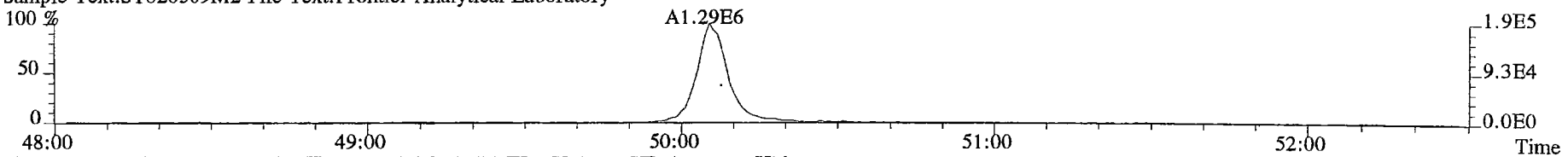
File:05FEB09M #1-541 Acq: 5-FEB-2009 18:05:53 GC EI+ Voltage SIR Autospec-Ultima
479.7165 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M2 File Text:Frontier Analytical Laboratory



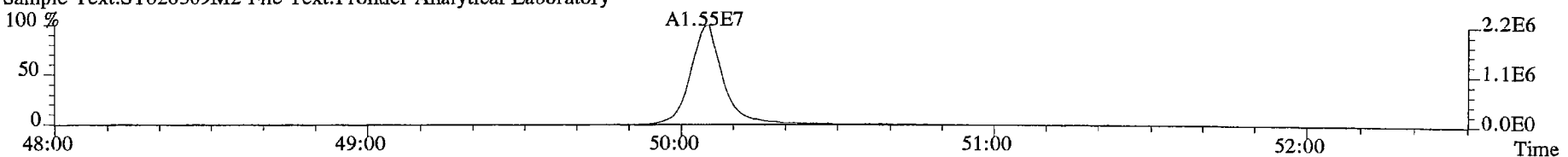
File:05FEB09M #1-347 Acq: 5-FEB-2009 18:05:53 GC EI+ Voltage SIR Autospec-Ultima
441.7428 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M2 File Text:Frontier Analytical Laboratory



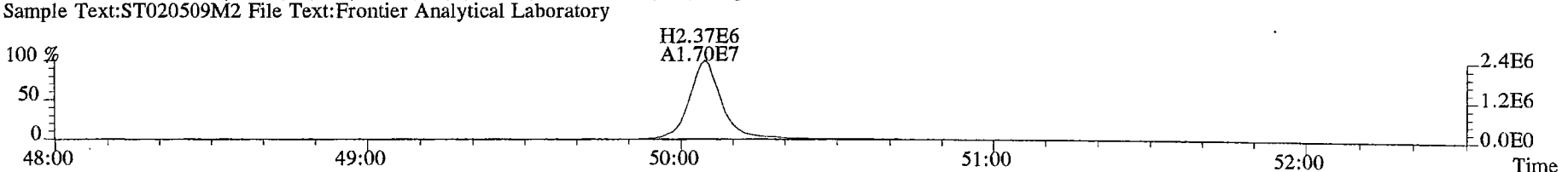
File:05FEB09M #1-347 Acq: 5-FEB-2009 18:05:53 GC EI+ Voltage SIR Autospec-Ultima
443.7398 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M2 File Text:Frontier Analytical Laboratory



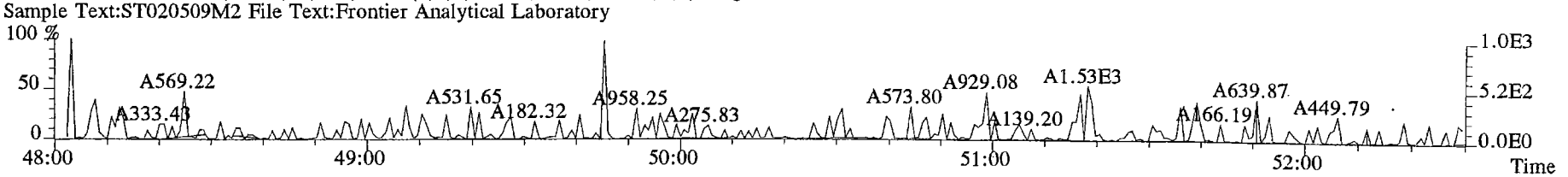
File:05FEB09M #1-347 Acq: 5-FEB-2009 18:05:53 GC EI+ Voltage SIR Autospec-Ultima
453.7831 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M2 File Text:Frontier Analytical Laboratory



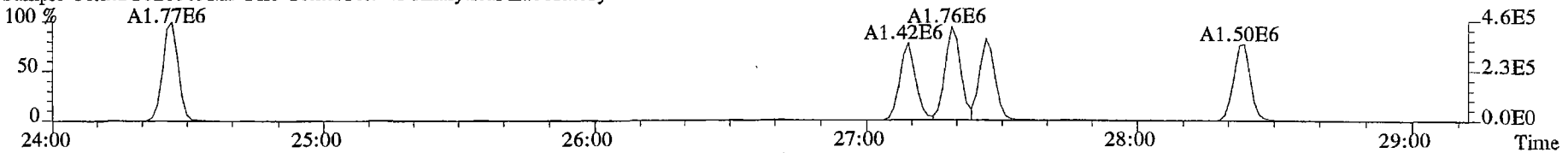
File:05FEB09M #1-347 Acq: 5-FEB-2009 18:05:53 GC EI+ Voltage SIR Autospec-Ultima
455.7801 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M2 File Text:Frontier Analytical Laboratory



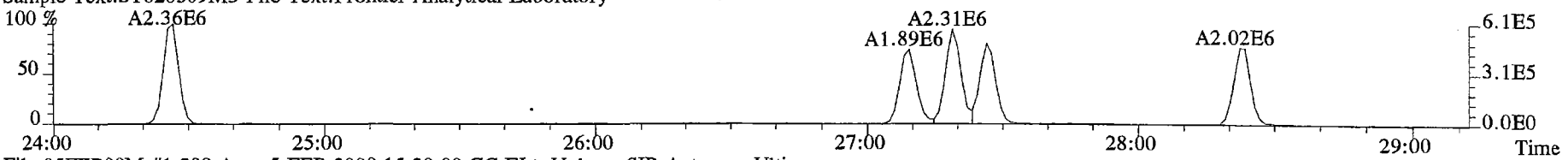
File:05FEB09M #1-347 Acq: 5-FEB-2009 18:05:53 GC EI+ Voltage SIR Autospec-Ultima
513.6775 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M2 File Text:Frontier Analytical Laboratory



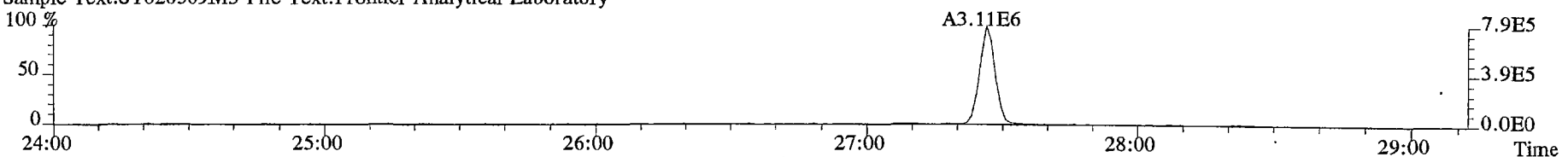
File:05FEB09M #1-390 Acq: 5-FEB-2009 15:20:00 GC EI+ Voltage SIR Autospec-Ultima
319.8965 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M3 File Text:Frontier Analytical Laboratory



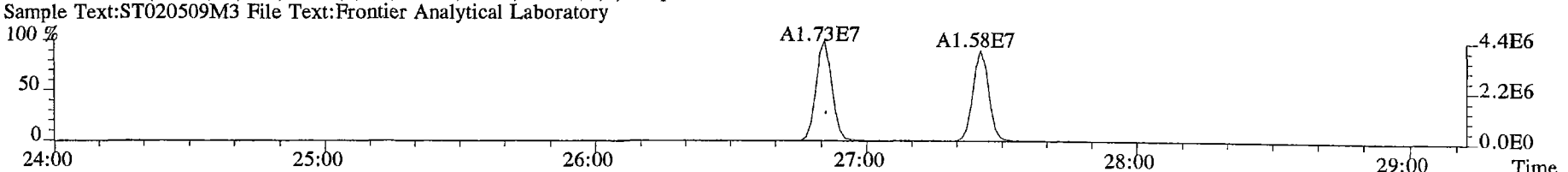
File:05FEB09M #1-390 Acq: 5-FEB-2009 15:20:00 GC EI+ Voltage SIR Autospec-Ultima
321.8936 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M3 File Text:Frontier Analytical Laboratory



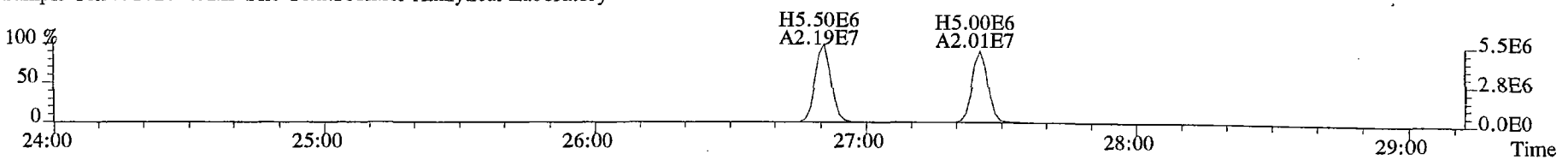
File:05FEB09M #1-390 Acq: 5-FEB-2009 15:20:00 GC EI+ Voltage SIR Autospec-Ultima
327.8847 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M3 File Text:Frontier Analytical Laboratory



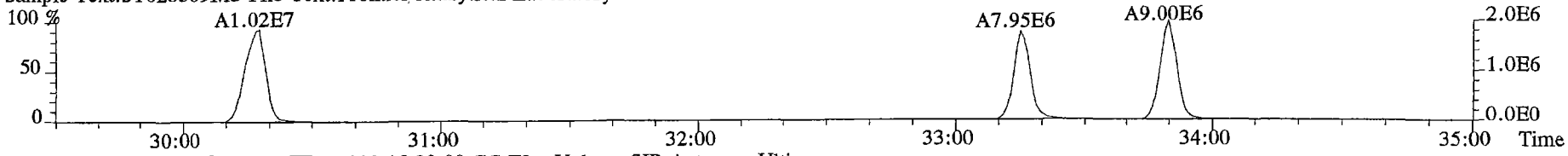
File:05FEB09M #1-390 Acq: 5-FEB-2009 15:20:00 GC EI+ Voltage SIR Autospec-Ultima
331.9368 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M3 File Text:Frontier Analytical Laboratory



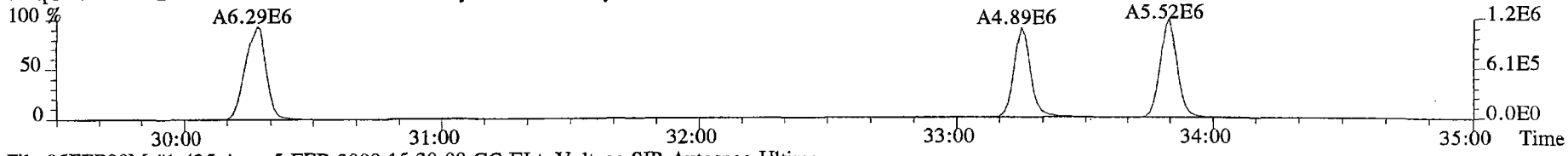
File:05FEB09M #1-390 Acq: 5-FEB-2009 15:20:00 GC EI+ Voltage SIR Autospec-Ultima
333.9339 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M3 File Text:Frontier Analytical Laboratory



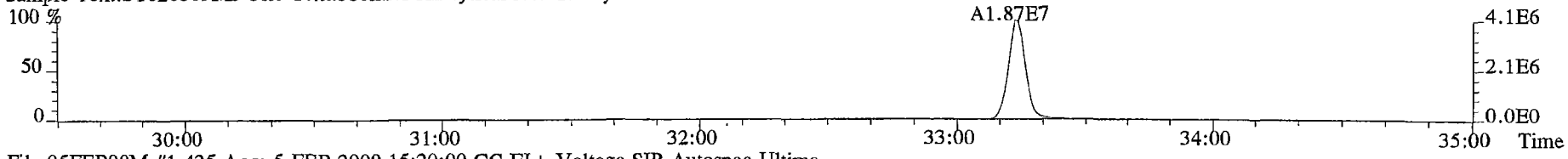
File:05FEB09M #1-425 Acq: 5-FEB-2009 15:20:00 GC EI+ Voltage SIR Autospec-Ultima
355.8546 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M3 File Text:Frontier Analytical Laboratory



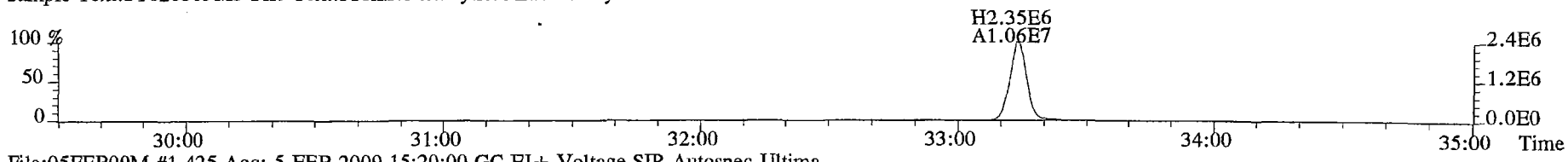
File:05FEB09M #1-425 Acq: 5-FEB-2009 15:20:00 GC EI+ Voltage SIR Autospec-Ultima
357.8517 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M3 File Text:Frontier Analytical Laboratory



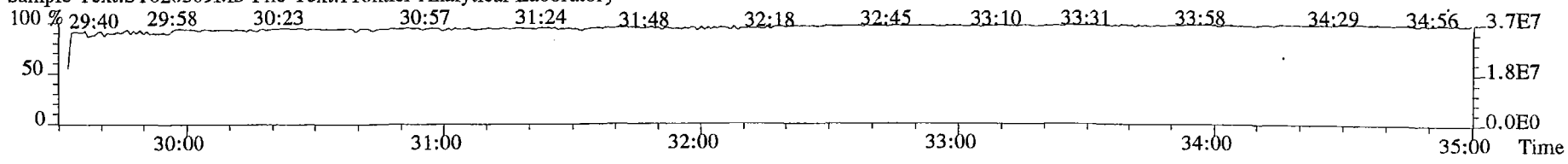
File:05FEB09M #1-425 Acq: 5-FEB-2009 15:20:00 GC EI+ Voltage SIR Autospec-Ultima
367.8949 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M3 File Text:Frontier Analytical Laboratory



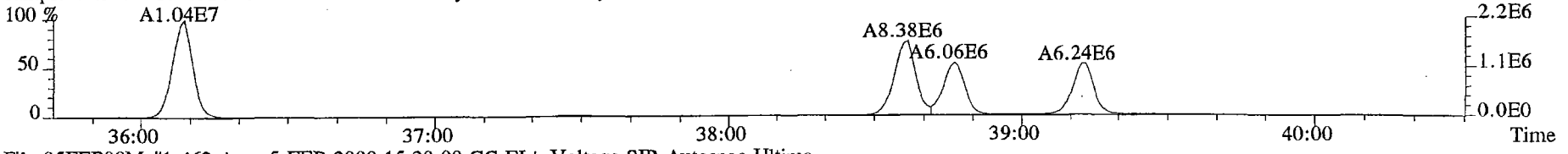
File:05FEB09M #1-425 Acq: 5-FEB-2009 15:20:00 GC EI+ Voltage SIR Autospec-Ultima
369.8919 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M3 File Text:Frontier Analytical Laboratory



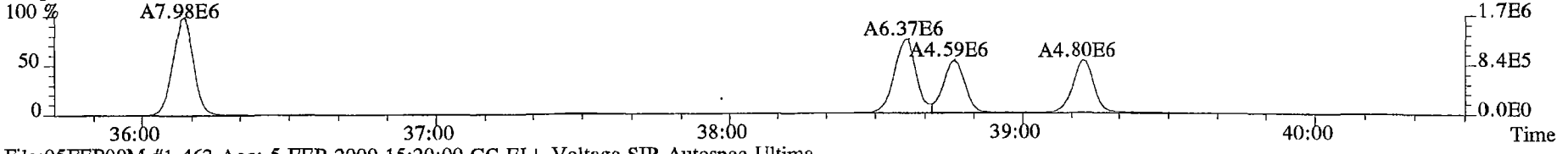
File:05FEB09M #1-425 Acq: 5-FEB-2009 15:20:00 GC EI+ Voltage SIR Autospec-Ultima
366.9792 F:2 Exp:PCDD
Sample Text:ST020509M3 File Text:Frontier Analytical Laboratory



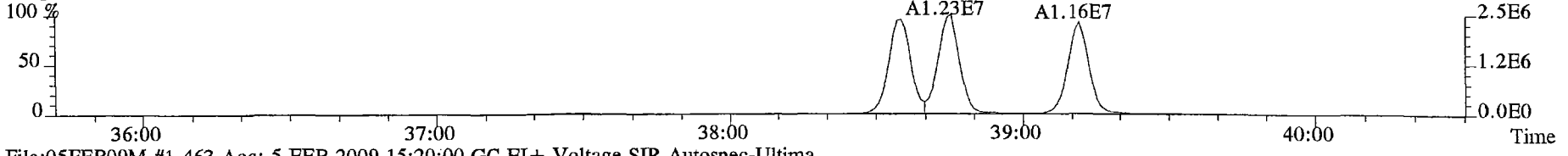
File:05FEB09M #1-463 Acq: 5-FEB-2009 15:20:00 GC EI+ Voltage SIR Autospec-Ultima
389.8156 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M3 File Text:Frontier Analytical Laboratory



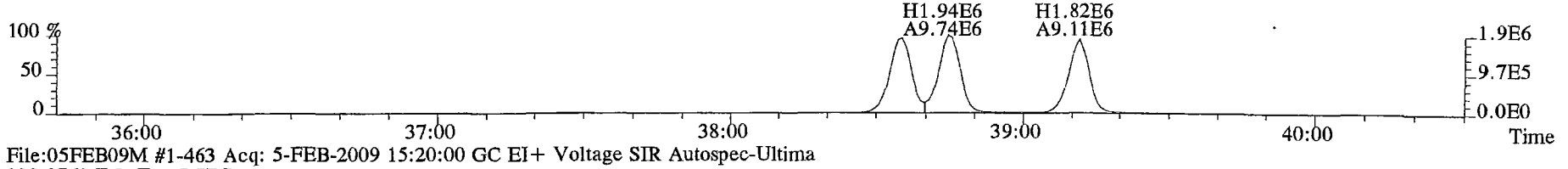
File:05FEB09M #1-463 Acq: 5-FEB-2009 15:20:00 GC EI+ Voltage SIR Autospec-Ultima
391.8127 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M3 File Text:Frontier Analytical Laboratory



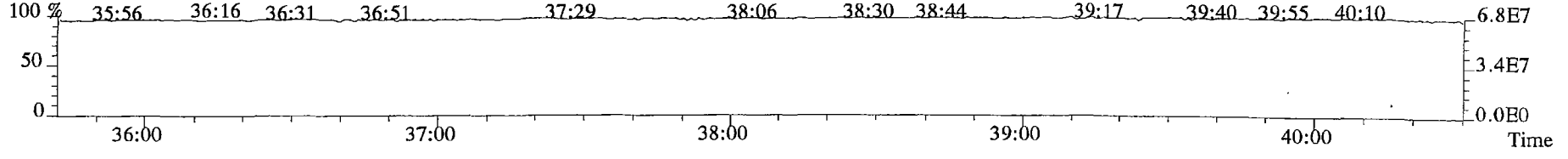
File:05FEB09M #1-463 Acq: 5-FEB-2009 15:20:00 GC EI+ Voltage SIR Autospec-Ultima
401.8559 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M3 File Text:Frontier Analytical Laboratory



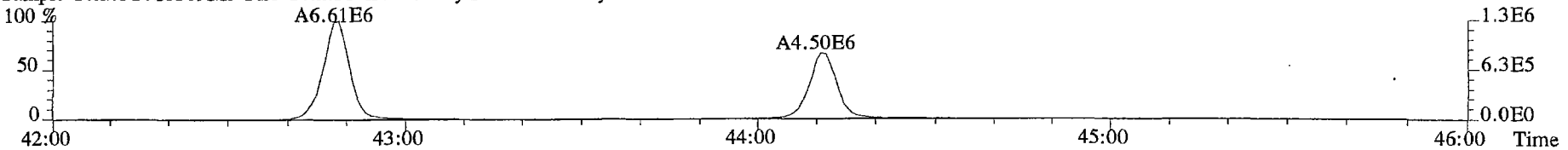
File:05FEB09M #1-463 Acq: 5-FEB-2009 15:20:00 GC EI+ Voltage SIR Autospec-Ultima
403.8530 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M3 File Text:Frontier Analytical Laboratory



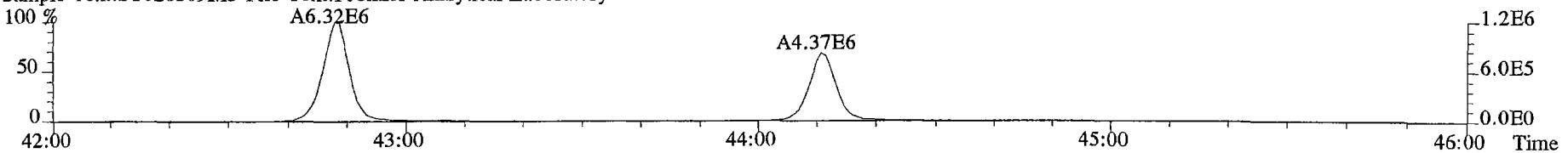
File:05FEB09M #1-463 Acq: 5-FEB-2009 15:20:00 GC EI+ Voltage SIR Autospec-Ultima
380.9760 F:3 Exp:PCDD
Sample Text:ST020509M3 File Text:Frontier Analytical Laboratory



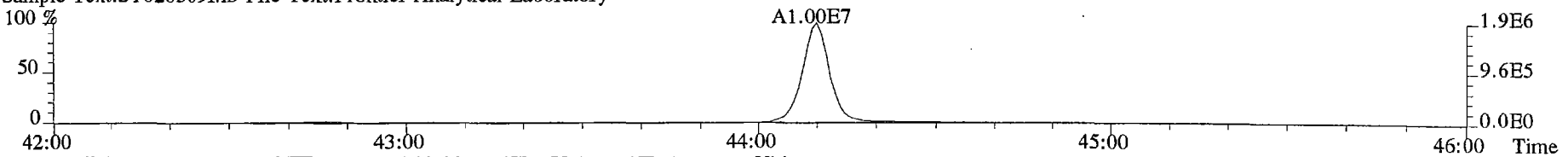
File:05FEB09M #1-541 Acq: 5-FEB-2009 15:20:00 GC EI+ Voltage SIR Autospec-Ultima
423.7767 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M3 File Text:Frontier Analytical Laboratory



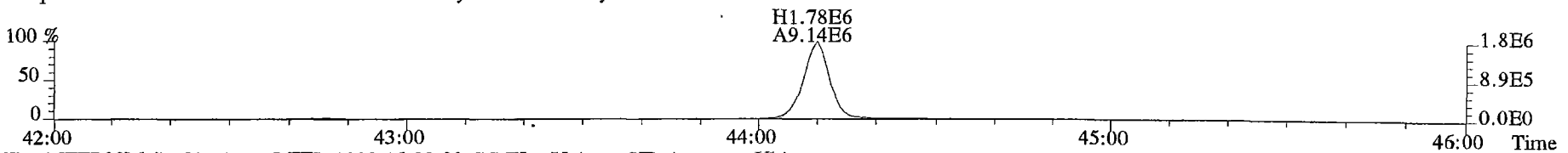
File:05FEB09M #1-541 Acq: 5-FEB-2009 15:20:00 GC EI+ Voltage SIR Autospec-Ultima
425.7737 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M3 File Text:Frontier Analytical Laboratory



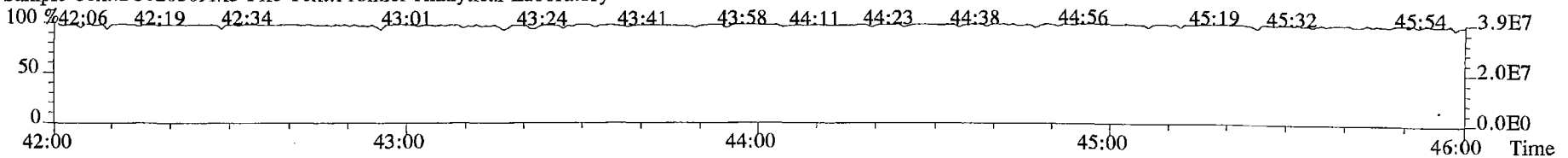
File:05FEB09M #1-541 Acq: 5-FEB-2009 15:20:00 GC EI+ Voltage SIR Autospec-Ultima
435.8169 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M3 File Text:Frontier Analytical Laboratory



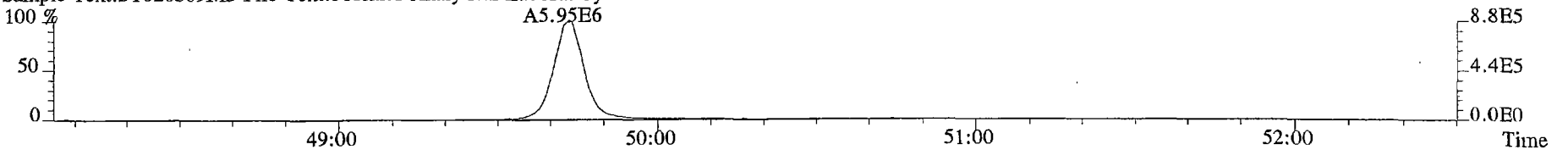
File:05FEB09M #1-541 Acq: 5-FEB-2009 15:20:00 GC EI+ Voltage SIR Autospec-Ultima
437.8140 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M3 File Text:Frontier Analytical Laboratory



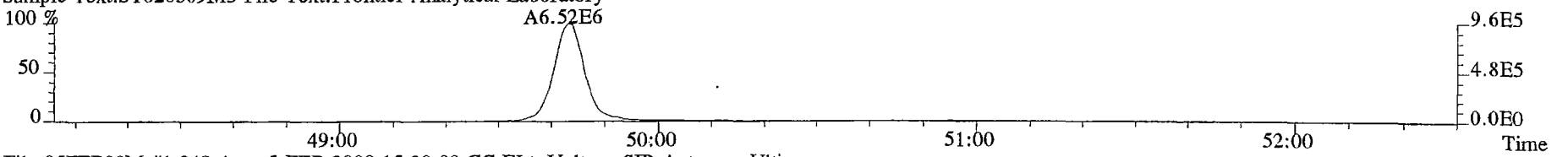
File:05FEB09M #1-541 Acq: 5-FEB-2009 15:20:00 GC EI+ Voltage SIR Autospec-Ultima
430.9728 F:4 Exp:PCDD
Sample Text:ST020509M3 File Text:Frontier Analytical Laboratory



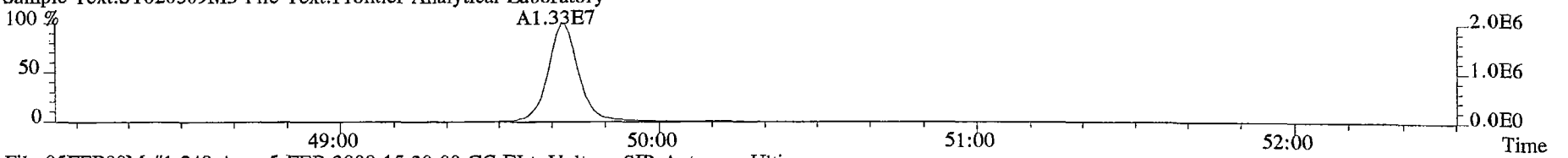
File:05FEB09M #1-348 Acq: 5-FEB-2009 15:20:00 GC EI+ Voltage SIR Autospec-Ultima
457.7377 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M3 File Text:Frontier Analytical Laboratory



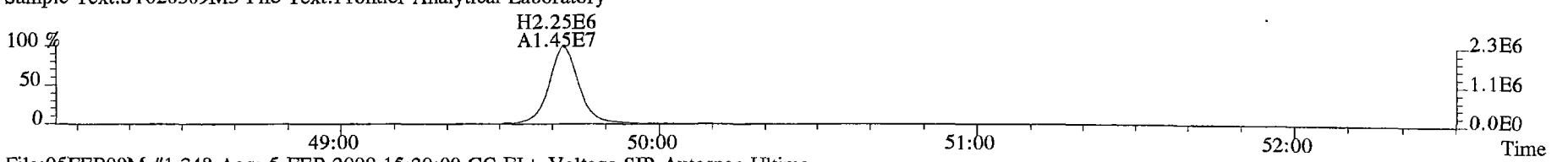
File:05FEB09M #1-348 Acq: 5-FEB-2009 15:20:00 GC EI+ Voltage SIR Autospec-Ultima
459.7348 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M3 File Text:Frontier Analytical Laboratory



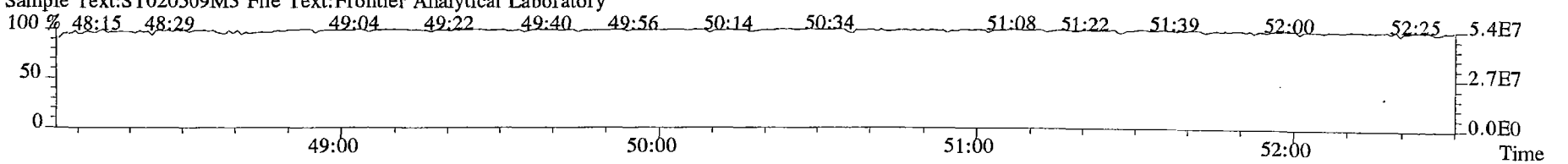
File:05FEB09M #1-348 Acq: 5-FEB-2009 15:20:00 GC EI+ Voltage SIR Autospec-Ultima
469.7780 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M3 File Text:Frontier Analytical Laboratory



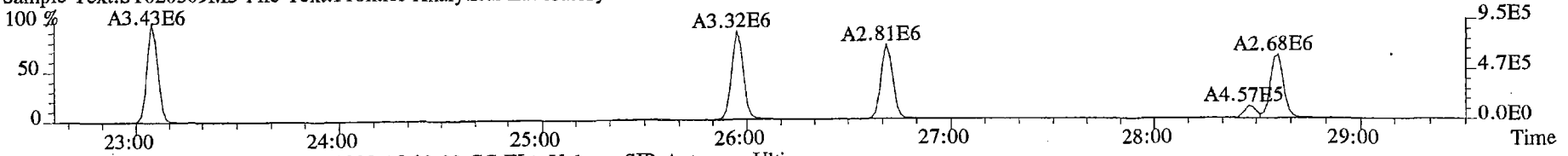
File:05FEB09M #1-348 Acq: 5-FEB-2009 15:20:00 GC EI+ Voltage SIR Autospec-Ultima
471.7750 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M3 File Text:Frontier Analytical Laboratory



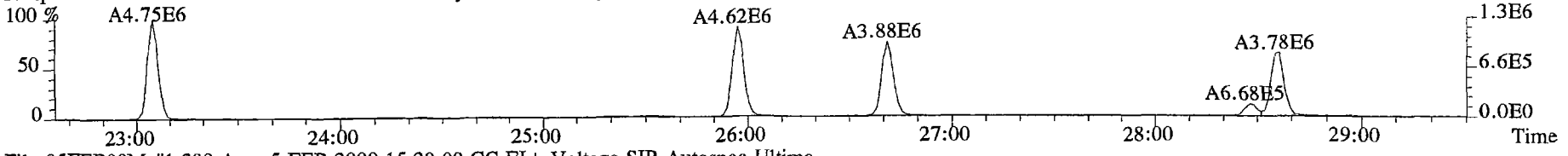
File:05FEB09M #1-348 Acq: 5-FEB-2009 15:20:00 GC EI+ Voltage SIR Autospec-Ultima
454.9728 F:5 Exp:PCDD
Sample Text:ST020509M3 File Text:Frontier Analytical Laboratory



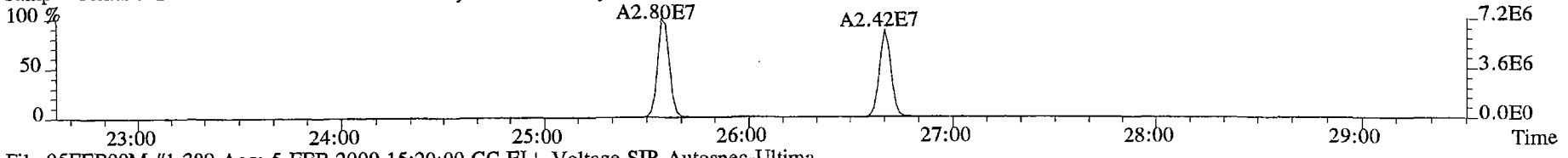
File:05FEB09M #1-390 Acq: 5-FEB-2009 15:20:00 GC EI+ Voltage SIR Autospec-Ultima
303.9016 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M3 File Text:Frontier Analytical Laboratory



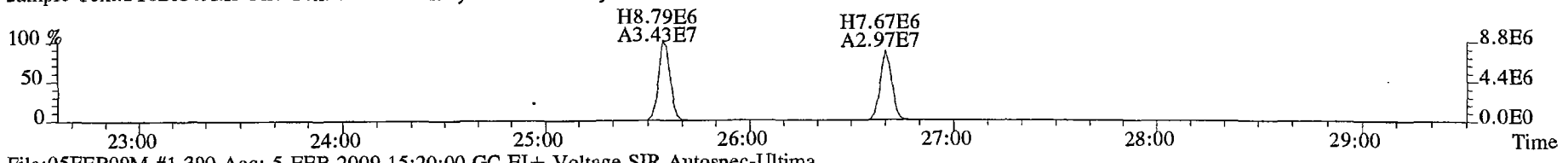
File:05FEB09M #1-390 Acq: 5-FEB-2009 15:20:00 GC EI+ Voltage SIR Autospec-Ultima
305.8987 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M3 File Text:Frontier Analytical Laboratory



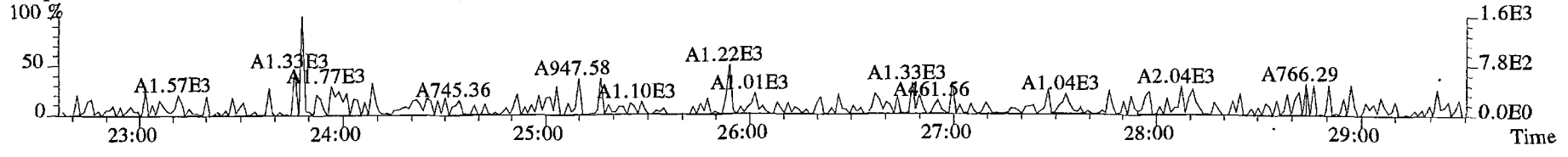
File:05FEB09M #1-390 Acq: 5-FEB-2009 15:20:00 GC EI+ Voltage SIR Autospec-Ultima
315.9419 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M3 File Text:Frontier Analytical Laboratory



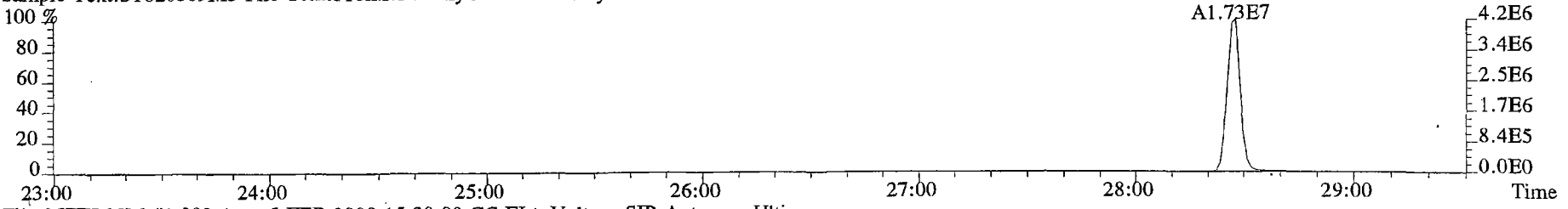
File:05FEB09M #1-390 Acq: 5-FEB-2009 15:20:00 GC EI+ Voltage SIR Autospec-Ultima
317.9389 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M3 File Text:Frontier Analytical Laboratory



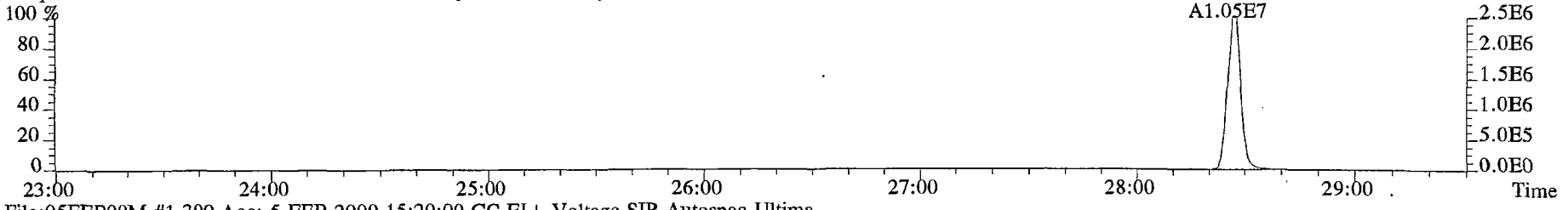
File:05FEB09M #1-390 Acq: 5-FEB-2009 15:20:00 GC EI+ Voltage SIR Autospec-Ultima
375.8364 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M3 File Text:Frontier Analytical Laboratory



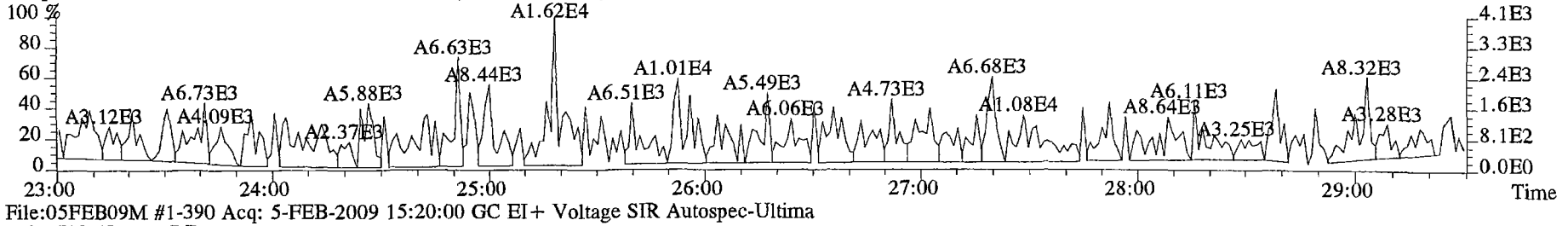
File:05FEB09M #1-390 Acq: 5-FEB-2009 15:20:00 GC EI+ Voltage SIR Autospec-Ultima
339.8597 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M3 File Text:Frontier Analytical Laboratory



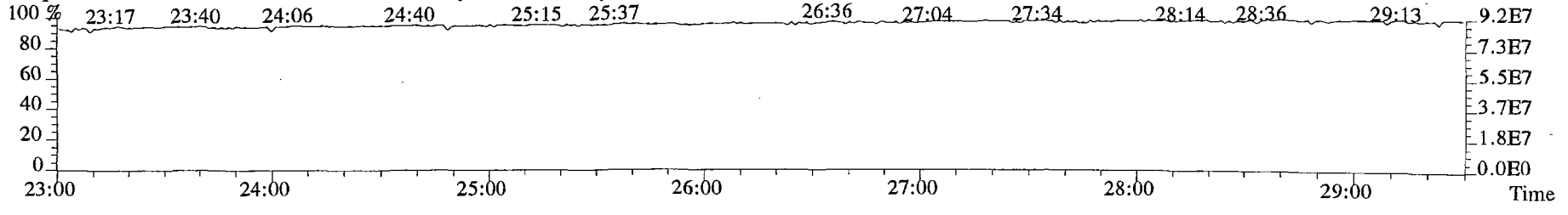
File:05FEB09M #1-390 Acq: 5-FEB-2009 15:20:00 GC EI+ Voltage SIR Autospec-Ultima
341.8568 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M3 File Text:Frontier Analytical Laboratory



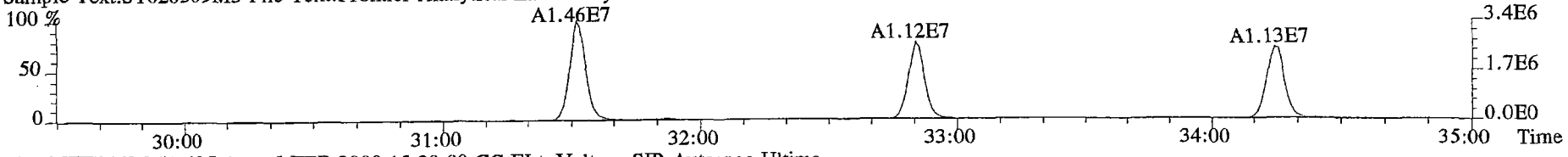
File:05FEB09M #1-390 Acq: 5-FEB-2009 15:20:00 GC EI+ Voltage SIR Autospec-Ultima
409.7974 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M3 File Text:Frontier Analytical Laboratory



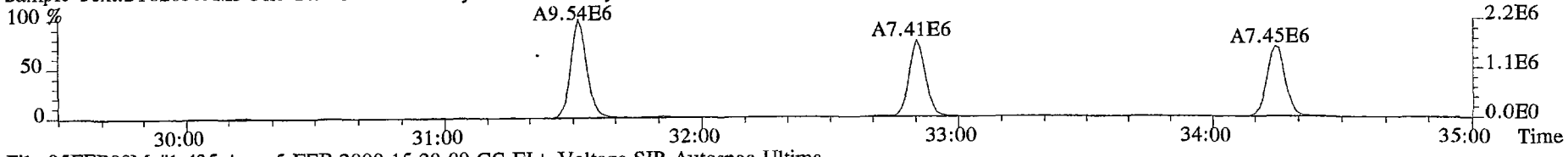
File:05FEB09M #1-390 Acq: 5-FEB-2009 15:20:00 GC EI+ Voltage SIR Autospec-Ultima
330.9792 Exp:PCDD
Sample Text:ST020509M3 File Text:Frontier Analytical Laboratory



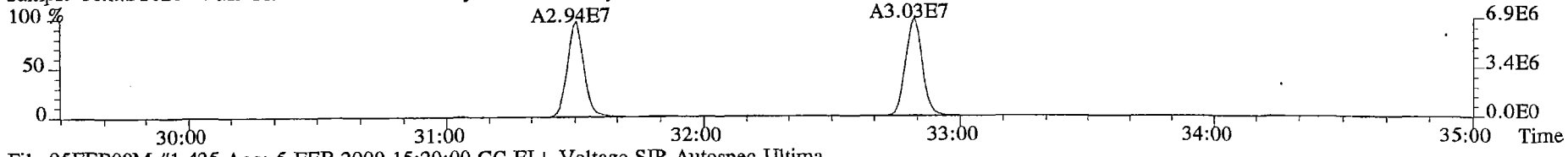
File:05FEB09M #1-425 Acq: 5-FEB-2009 15:20:00 GC EI+ Voltage SIR Autospec-Ultima
339.8597 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M3 File Text:Frontier Analytical Laboratory



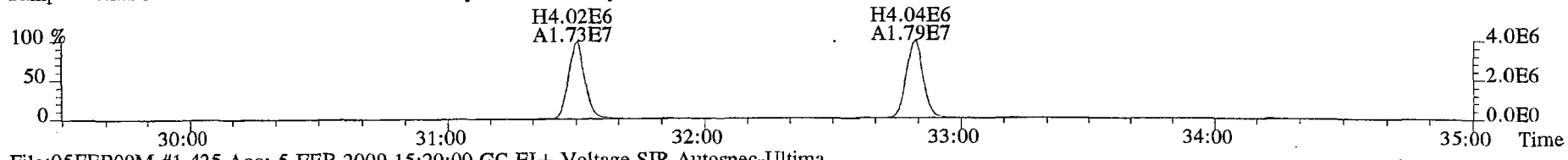
File:05FEB09M #1-425 Acq: 5-FEB-2009 15:20:00 GC EI+ Voltage SIR Autospec-Ultima
341.8568 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M3 File Text:Frontier Analytical Laboratory



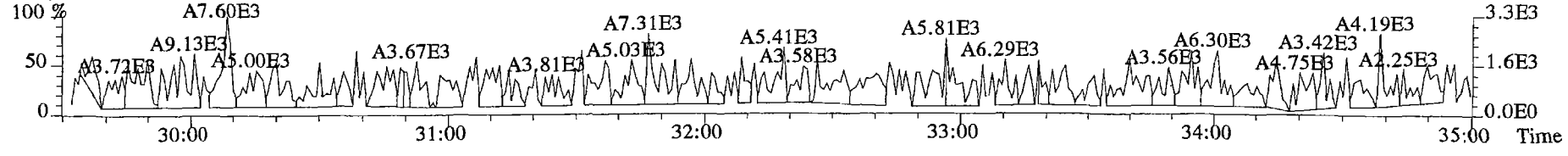
File:05FEB09M #1-425 Acq: 5-FEB-2009 15:20:00 GC EI+ Voltage SIR Autospec-Ultima
351.9000 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M3 File Text:Frontier Analytical Laboratory



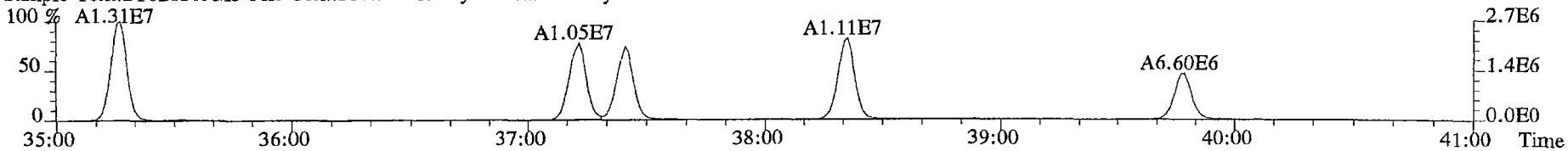
File:05FEB09M #1-425 Acq: 5-FEB-2009 15:20:00 GC EI+ Voltage SIR Autospec-Ultima
353.8970 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M3 File Text:Frontier Analytical Laboratory



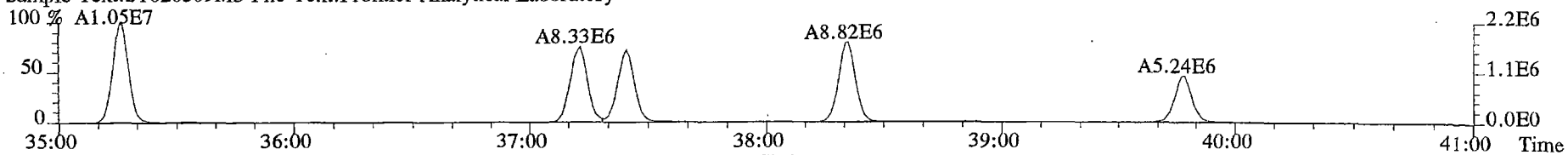
File:05FEB09M #1-425 Acq: 5-FEB-2009 15:20:00 GC EI+ Voltage SIR Autospec-Ultima
409.7974 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M3 File Text:Frontier Analytical Laboratory



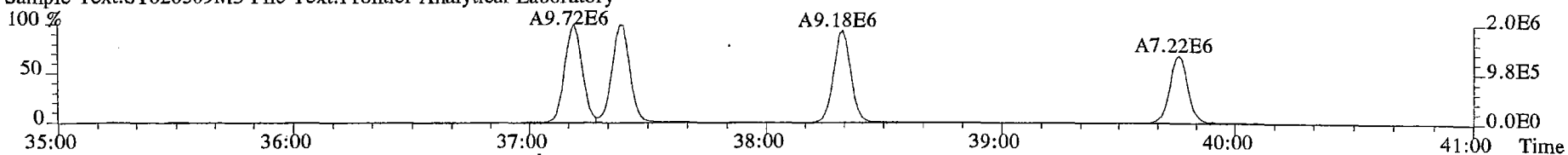
File:05FEB09M #1-463 Acq: 5-FEB-2009 15:20:00 GC EI+ Voltage SIR Autospec-Ultima
373.8207 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M3 File Text:Frontier Analytical Laboratory



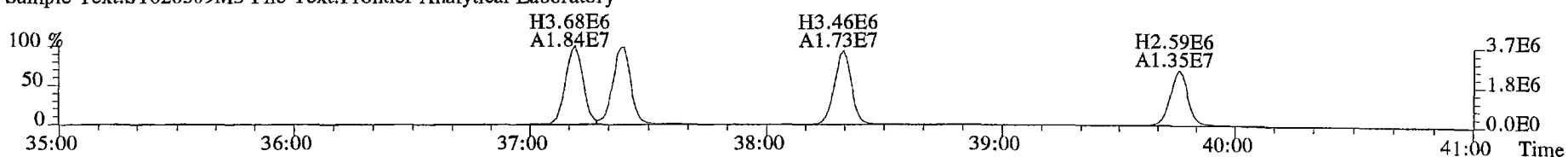
File:05FEB09M #1-463 Acq: 5-FEB-2009 15:20:00 GC EI+ Voltage SIR Autospec-Ultima
375.8178 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M3 File Text:Frontier Analytical Laboratory



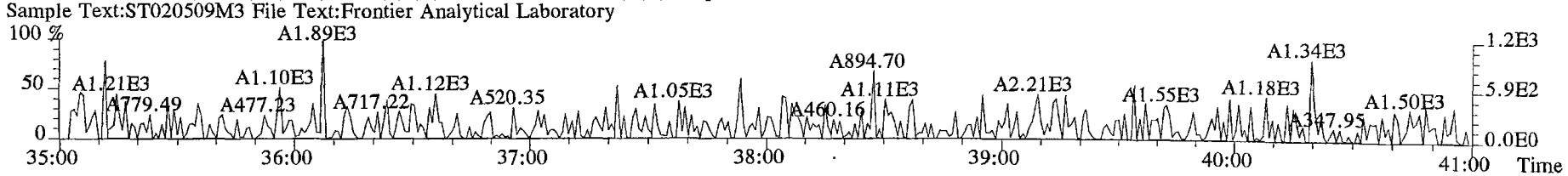
File:05FEB09M #1-463 Acq: 5-FEB-2009 15:20:00 GC EI+ Voltage SIR Autospec-Ultima
383.8639 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M3 File Text:Frontier Analytical Laboratory



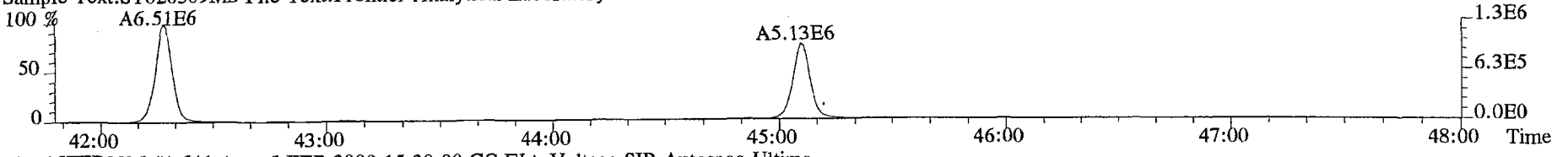
File:05FEB09M #1-463 Acq: 5-FEB-2009 15:20:00 GC EI+ Voltage SIR Autospec-Ultima
385.8610 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M3 File Text:Frontier Analytical Laboratory



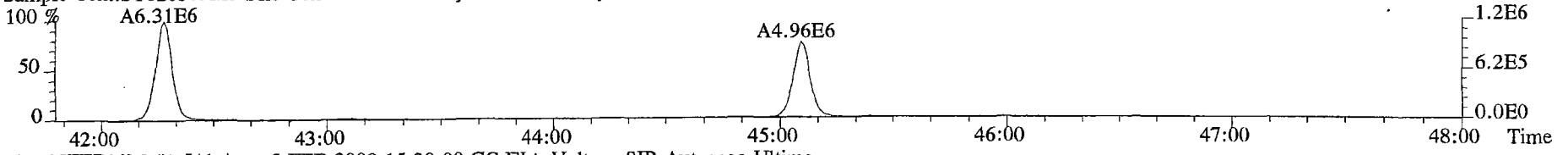
File:05FEB09M #1-463 Acq: 5-FEB-2009 15:20:00 GC EI+ Voltage SIR Autospec-Ultima
445.7555 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M3 File Text:Frontier Analytical Laboratory



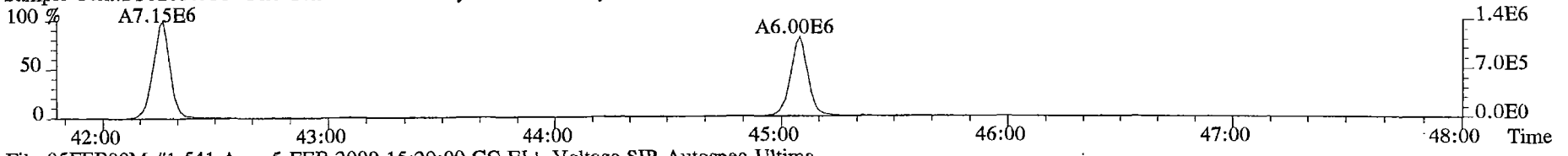
File:05FEB09M #1-541 Acq: 5-FEB-2009 15:20:00 GC EI+ Voltage SIR Autospec-Ultima
407.7818 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M3 File Text:Frontier Analytical Laboratory



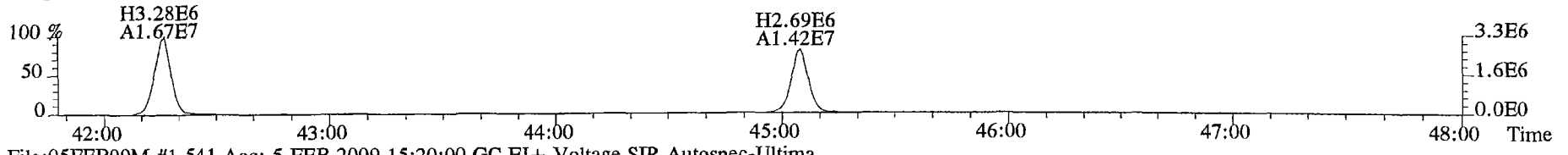
File:05FEB09M #1-541 Acq: 5-FEB-2009 15:20:00 GC EI+ Voltage SIR Autospec-Ultima
409.7788 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M3 File Text:Frontier Analytical Laboratory



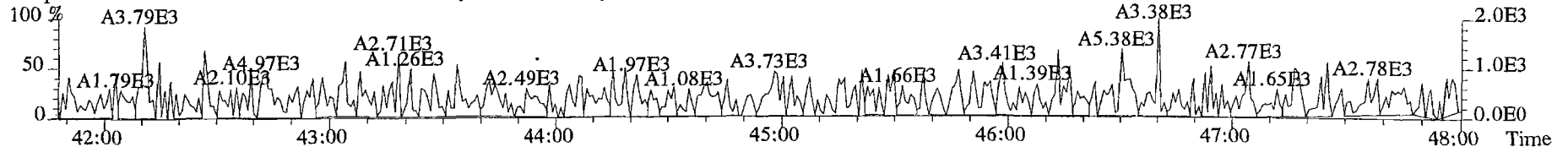
File:05FEB09M #1-541 Acq: 5-FEB-2009 15:20:00 GC EI+ Voltage SIR Autospec-Ultima
417.8253 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M3 File Text:Frontier Analytical Laboratory



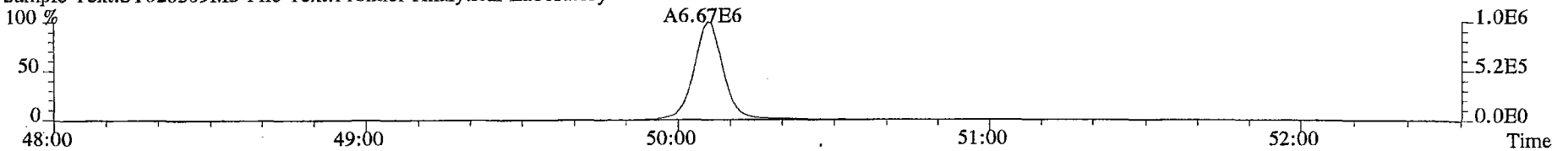
File:05FEB09M #1-541 Acq: 5-FEB-2009 15:20:00 GC EI+ Voltage SIR Autospec-Ultima
419.8220 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M3 File Text:Frontier Analytical Laboratory



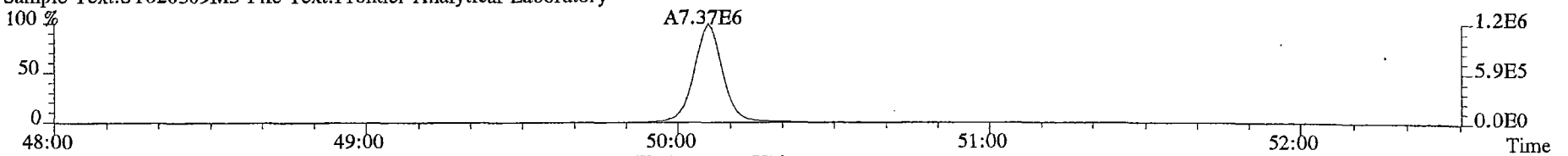
File:05FEB09M #1-541 Acq: 5-FEB-2009 15:20:00 GC EI+ Voltage SIR Autospec-Ultima
479.7165 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M3 File Text:Frontier Analytical Laboratory



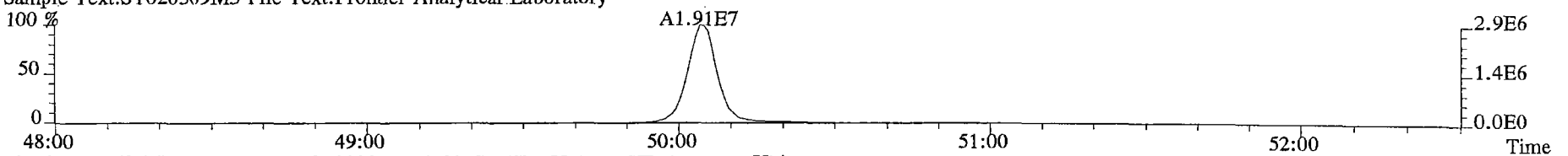
File:05FEB09M #1-348 Acq: 5-FEB-2009 15:20:00 GC EI+ Voltage SIR Autospec-Ultima
441.7428 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M3 File Text:Frontier Analytical Laboratory



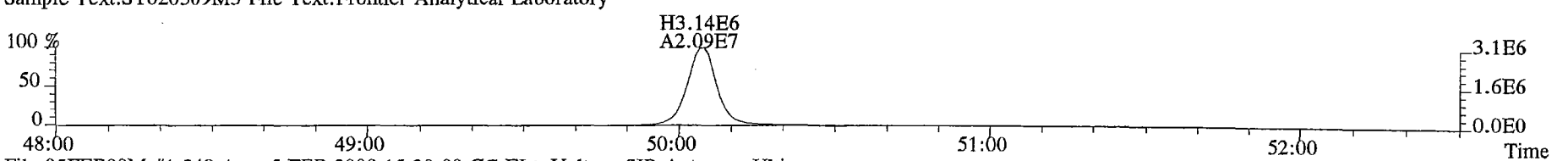
File:05FEB09M #1-348 Acq: 5-FEB-2009 15:20:00 GC EI+ Voltage SIR Autospec-Ultima
443.7398 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M3 File Text:Frontier Analytical Laboratory



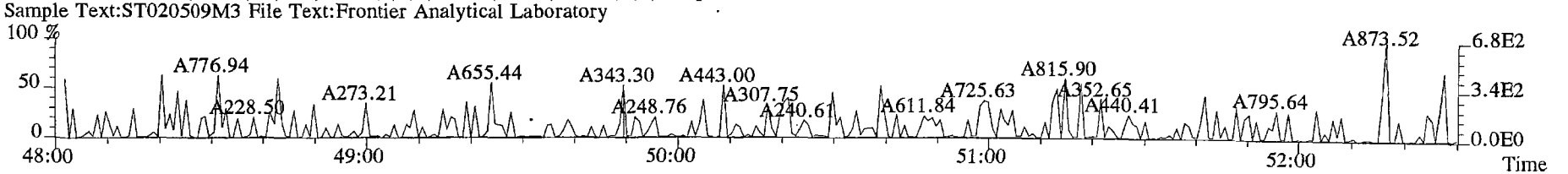
File:05FEB09M #1-348 Acq: 5-FEB-2009 15:20:00 GC EI+ Voltage SIR Autospec-Ultima
453.7831 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M3 File Text:Frontier Analytical Laboratory



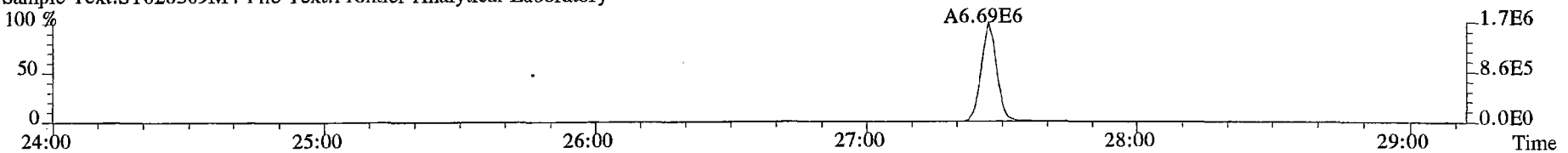
File:05FEB09M #1-348 Acq: 5-FEB-2009 15:20:00 GC EI+ Voltage SIR Autospec-Ultima
455.7801 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M3 File Text:Frontier Analytical Laboratory



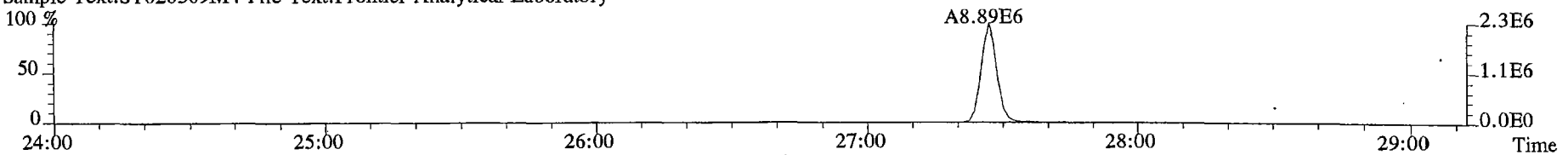
File:05FEB09M #1-348 Acq: 5-FEB-2009 15:20:00 GC EI+ Voltage SIR Autospec-Ultima
513.6775 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M3 File Text:Frontier Analytical Laboratory



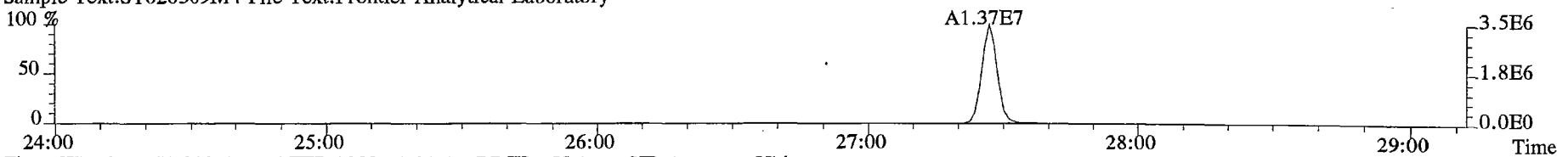
File:05FEB09M #1-390 Acq: 5-FEB-2009 19:01:11 GC EI+ Voltage SIR Autospec-Ultima
319.8965 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M4 File Text:Frontier Analytical Laboratory



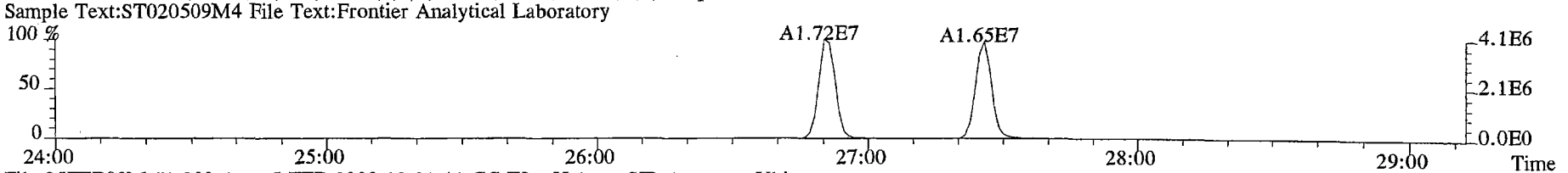
File:05FEB09M #1-390 Acq: 5-FEB-2009 19:01:11 GC EI+ Voltage SIR Autospec-Ultima
321.8936 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M4 File Text:Frontier Analytical Laboratory



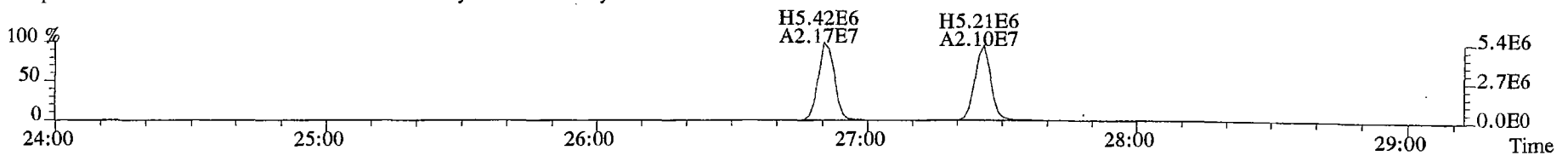
File:05FEB09M #1-390 Acq: 5-FEB-2009 19:01:11 GC EI+ Voltage SIR Autospec-Ultima
327.8847 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M4 File Text:Frontier Analytical Laboratory



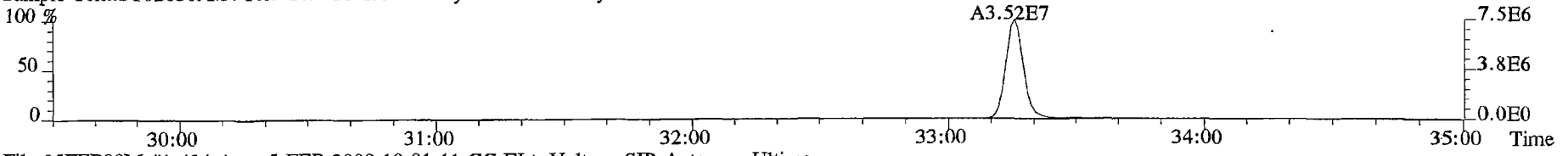
File:05FEB09M #1-390 Acq: 5-FEB-2009 19:01:11 GC EI+ Voltage SIR Autospec-Ultima
331.9368 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M4 File Text:Frontier Analytical Laboratory



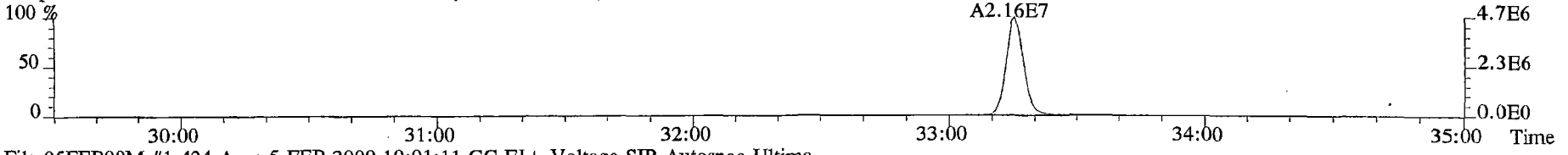
File:05FEB09M #1-390 Acq: 5-FEB-2009 19:01:11 GC EI+ Voltage SIR Autospec-Ultima
333.9339 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M4 File Text:Frontier Analytical Laboratory



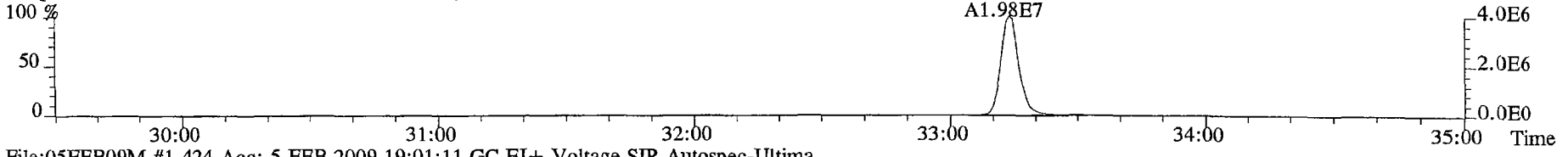
File:05FEB09M #1-424 Acq: 5-FEB-2009 19:01:11 GC EI+ Voltage SIR Autospec-Ultima
355.8546 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M4 File Text:Frontier Analytical Laboratory



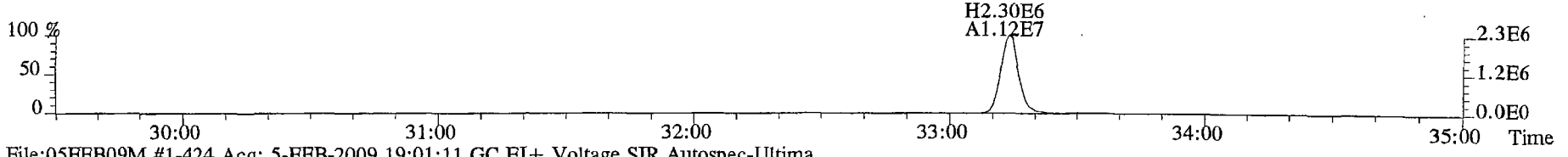
File:05FEB09M #1-424 Acq: 5-FEB-2009 19:01:11 GC EI+ Voltage SIR Autospec-Ultima
357.8517 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M4 File Text:Frontier Analytical Laboratory



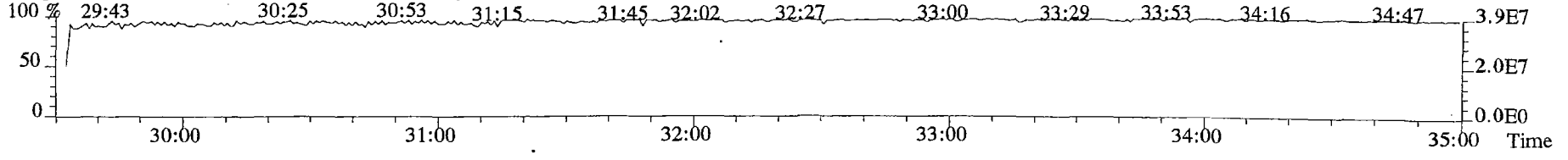
File:05FEB09M #1-424 Acq: 5-FEB-2009 19:01:11 GC EI+ Voltage SIR Autospec-Ultima
367.8949 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M4 File Text:Frontier Analytical Laboratory



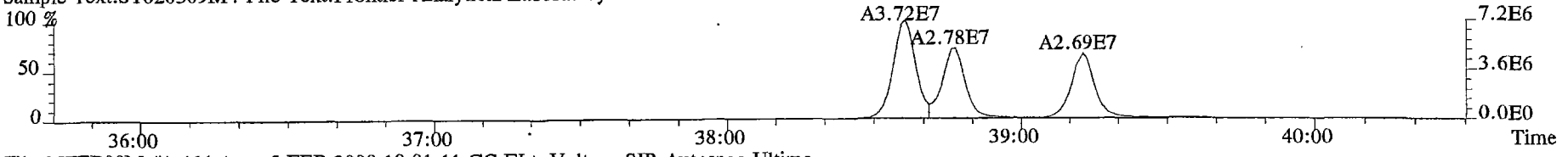
File:05FEB09M #1-424 Acq: 5-FEB-2009 19:01:11 GC EI+ Voltage SIR Autospec-Ultima
369.8919 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M4 File Text:Frontier Analytical Laboratory



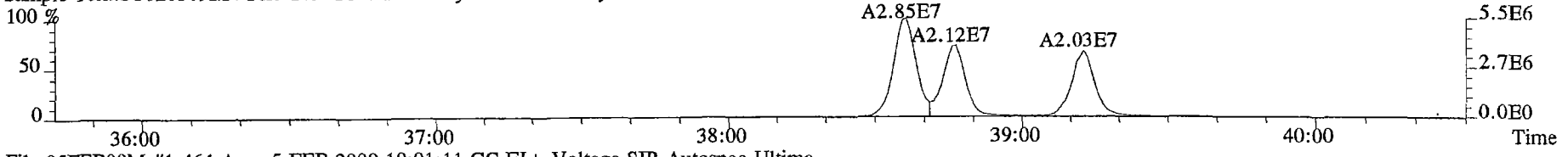
File:05FEB09M #1-424 Acq: 5-FEB-2009 19:01:11 GC EI+ Voltage SIR Autospec-Ultima
366.9792 S:5 F:2 Exp:PCDD
Sample Text:ST020509M4 File Text:Frontier Analytical Laboratory



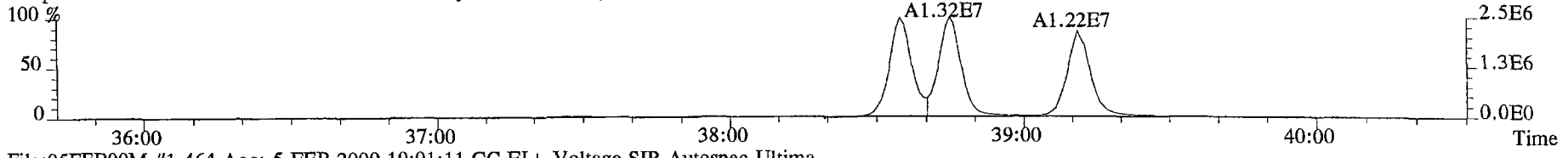
File:05FEB09M #1-464 Acq: 5-FEB-2009 19:01:11 GC EI+ Voltage SIR Autospec-Ultima
389.8156 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M4 File Text:Frontier Analytical Laboratory



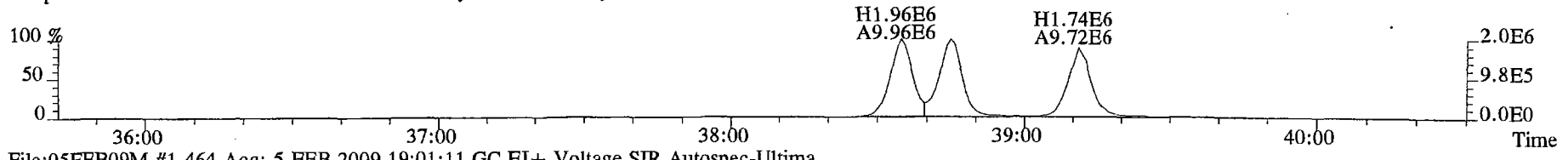
File:05FEB09M #1-464 Acq: 5-FEB-2009 19:01:11 GC EI+ Voltage SIR Autospec-Ultima
391.8127 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M4 File Text:Frontier Analytical Laboratory



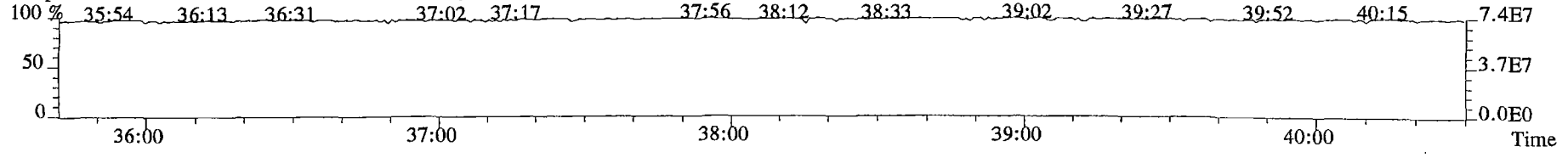
File:05FEB09M #1-464 Acq: 5-FEB-2009 19:01:11 GC EI+ Voltage SIR Autospec-Ultima
401.8559 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M4 File Text:Frontier Analytical Laboratory



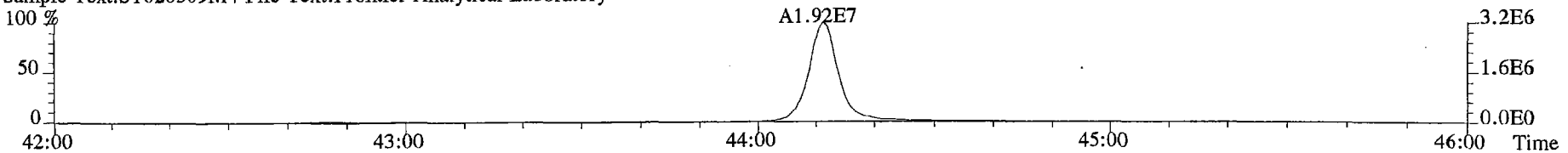
File:05FEB09M #1-464 Acq: 5-FEB-2009 19:01:11 GC EI+ Voltage SIR Autospec-Ultima
403.8530 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M4 File Text:Frontier Analytical Laboratory



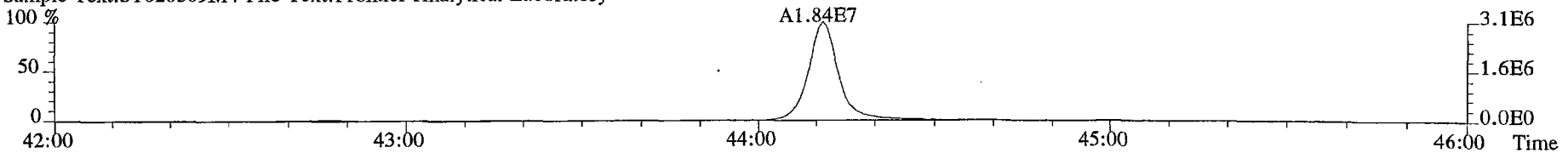
File:05FEB09M #1-464 Acq: 5-FEB-2009 19:01:11 GC EI+ Voltage SIR Autospec-Ultima
380.9760 S:5 F:3 Exp:PCDD
Sample Text:ST020509M4 File Text:Frontier Analytical Laboratory



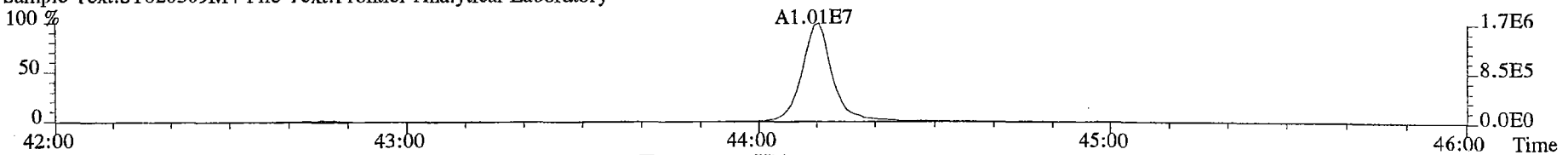
File:05FEB09M #1-541 Acq: 5-FEB-2009 19:01:11 GC EI+ Voltage SIR Autospec-Ultima
423.7767 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M4 File Text:Frontier Analytical Laboratory



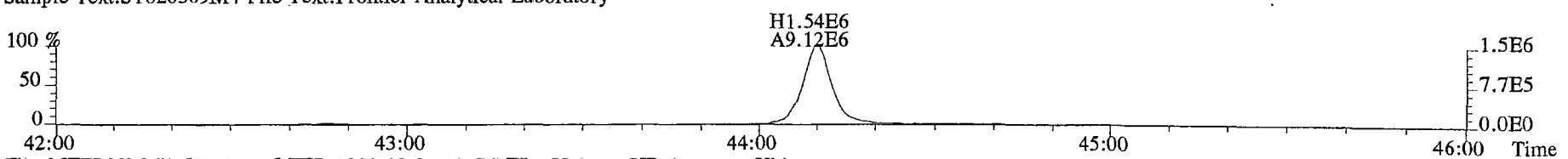
File:05FEB09M #1-541 Acq: 5-FEB-2009 19:01:11 GC EI+ Voltage SIR Autospec-Ultima
425.7737 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M4 File Text:Frontier Analytical Laboratory



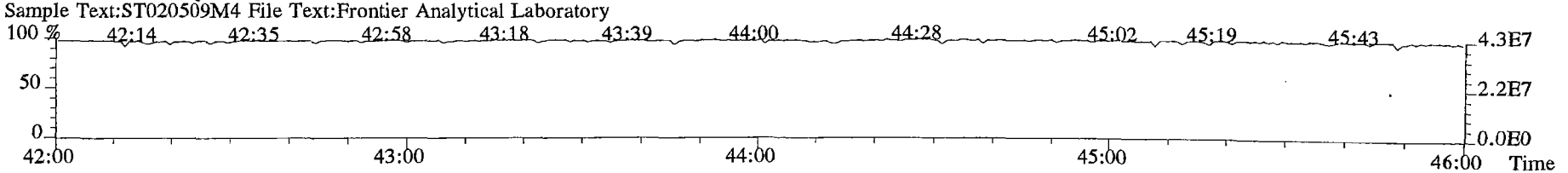
File:05FEB09M #1-541 Acq: 5-FEB-2009 19:01:11 GC EI+ Voltage SIR Autospec-Ultima
435.8169 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%;100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M4 File Text:Frontier Analytical Laboratory



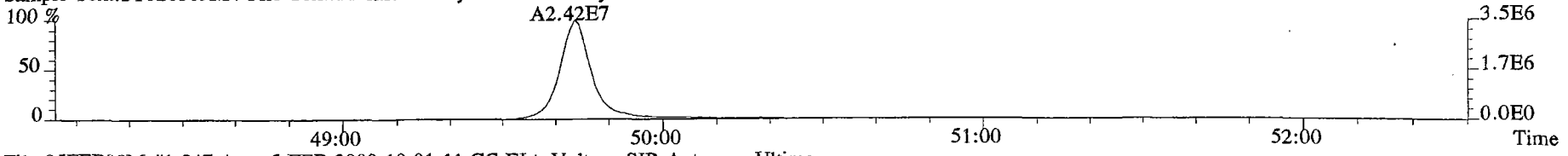
File:05FEB09M #1-541 Acq: 5-FEB-2009 19:01:11 GC EI+ Voltage SIR Autospec-Ultima
437.8140 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M4 File Text:Frontier Analytical Laboratory



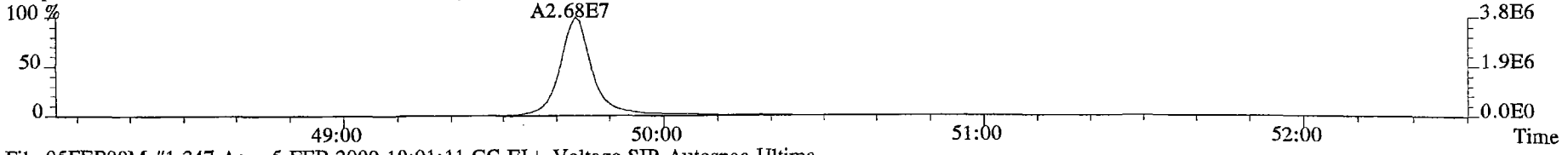
File:05FEB09M #1-541 Acq: 5-FEB-2009 19:01:11 GC EI+ Voltage SIR Autospec-Ultima
430.9728 S:5 F:4 Exp:PCDD
Sample Text:ST020509M4 File Text:Frontier Analytical Laboratory



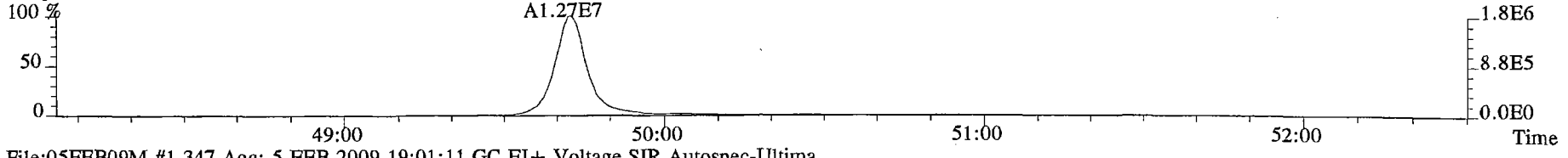
File:05FEB09M #1-347 Acq: 5-FEB-2009 19:01:11 GC EI+ Voltage SIR Autospec-Ultima
457.7377 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M4 File Text:Frontier Analytical Laboratory



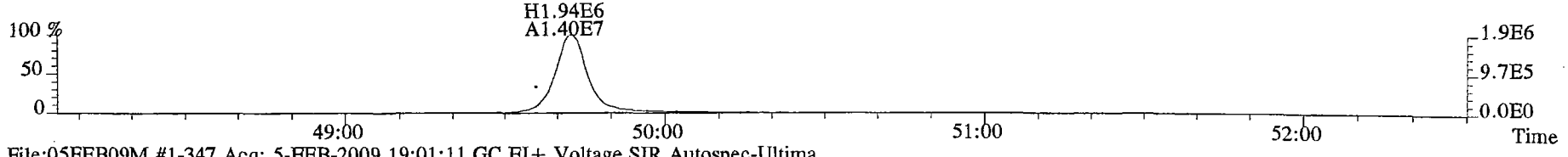
File:05FEB09M #1-347 Acq: 5-FEB-2009 19:01:11 GC EI+ Voltage SIR Autospec-Ultima
459.7348 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M4 File Text:Frontier Analytical Laboratory



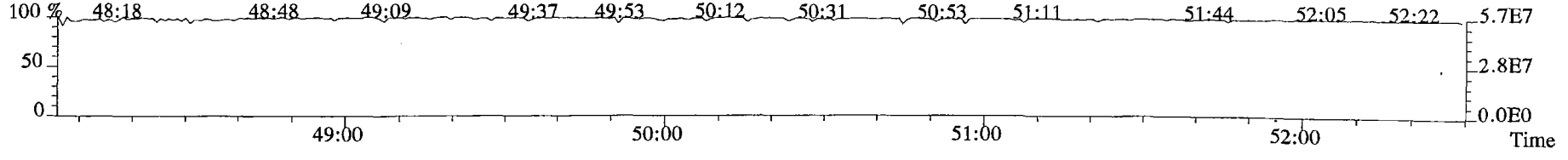
File:05FEB09M #1-347 Acq: 5-FEB-2009 19:01:11 GC EI+ Voltage SIR Autospec-Ultima
469.7780 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M4 File Text:Frontier Analytical Laboratory



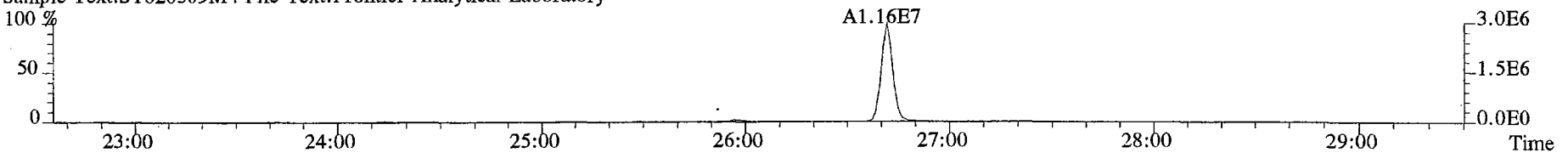
File:05FEB09M #1-347 Acq: 5-FEB-2009 19:01:11 GC EI+ Voltage SIR Autospec-Ultima
471.7750 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M4 File Text:Frontier Analytical Laboratory



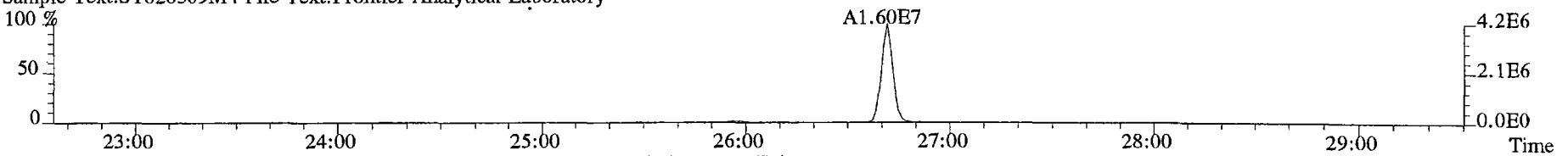
File:05FEB09M #1-347 Acq: 5-FEB-2009 19:01:11 GC EI+ Voltage SIR Autospec-Ultima
454.9728 S:5 F:5 Exp:PCDD
Sample Text:ST020509M4 File Text:Frontier Analytical Laboratory



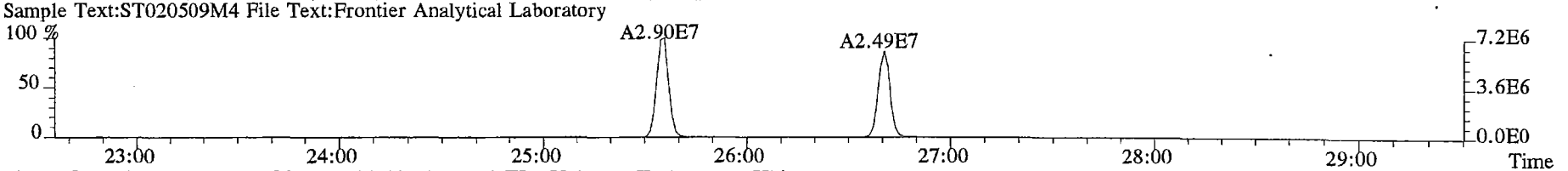
File:05FEB09M #1-390 Acq: 5-FEB-2009 19:01:11 GC EI+ Voltage SIR Autospec-Ultima
303.9016 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M4 File Text:Frontier Analytical Laboratory



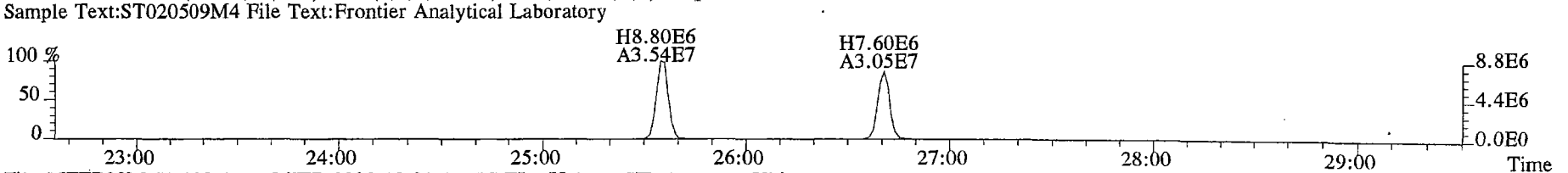
File:05FEB09M #1-390 Acq: 5-FEB-2009 19:01:11 GC EI+ Voltage SIR Autospec-Ultima
305.8987 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M4 File Text:Frontier Analytical Laboratory



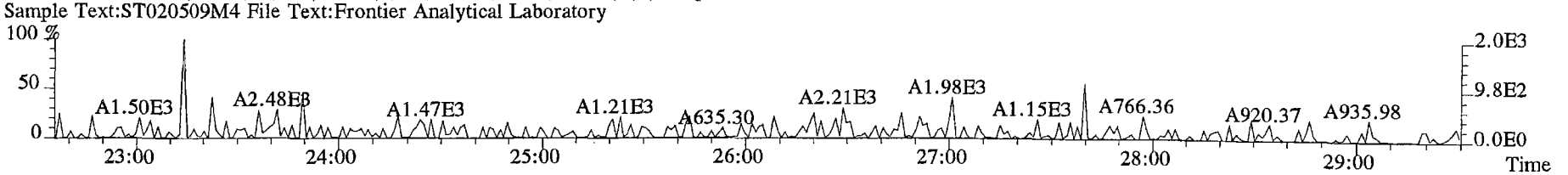
File:05FEB09M #1-390 Acq: 5-FEB-2009 19:01:11 GC EI+ Voltage SIR Autospec-Ultima
315.9419 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M4 File Text:Frontier Analytical Laboratory



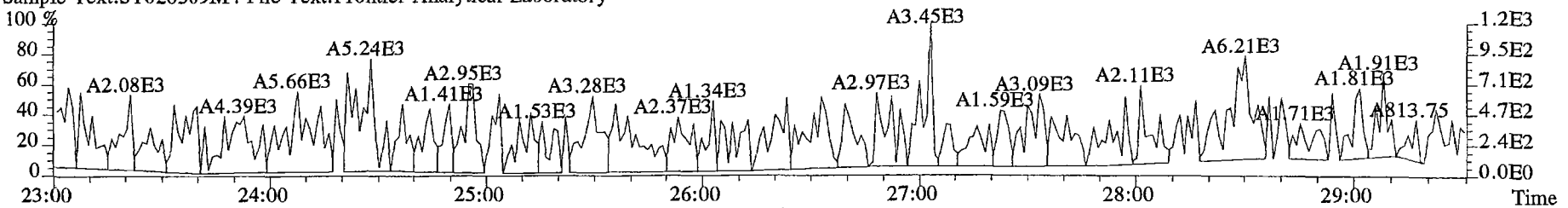
File:05FEB09M #1-390 Acq: 5-FEB-2009 19:01:11 GC EI+ Voltage SIR Autospec-Ultima
317.9389 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M4 File Text:Frontier Analytical Laboratory



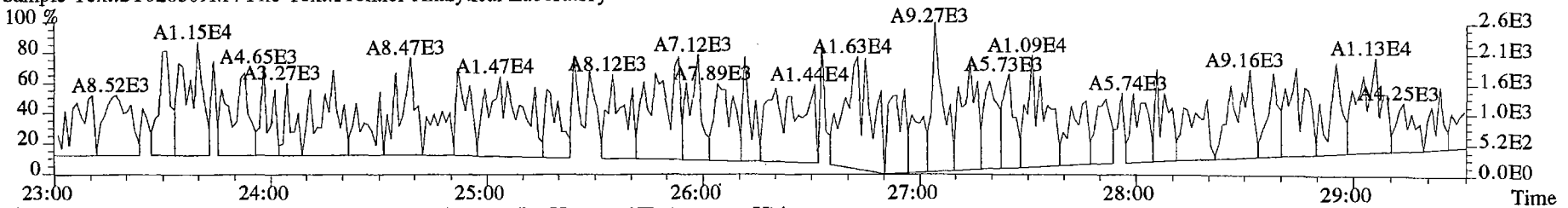
File:05FEB09M #1-390 Acq: 5-FEB-2009 19:01:11 GC EI+ Voltage SIR Autospec-Ultima
375.8364 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M4 File Text:Frontier Analytical Laboratory



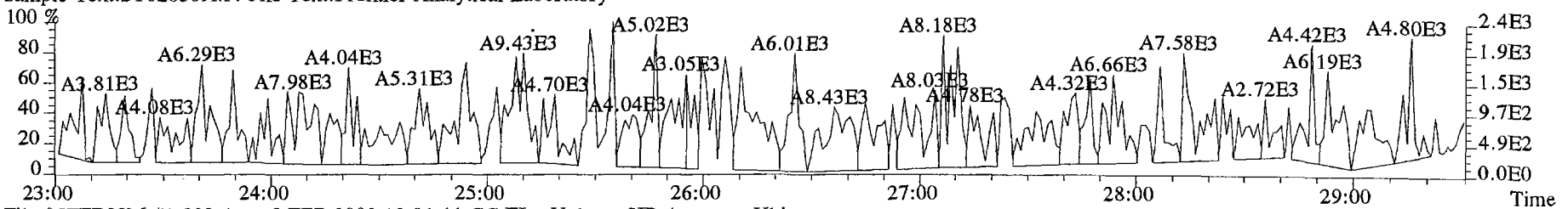
File:05FEB09M #1-390 Acq: 5-FEB-2009 19:01:11 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M4 File Text:Frontier Analytical Laboratory



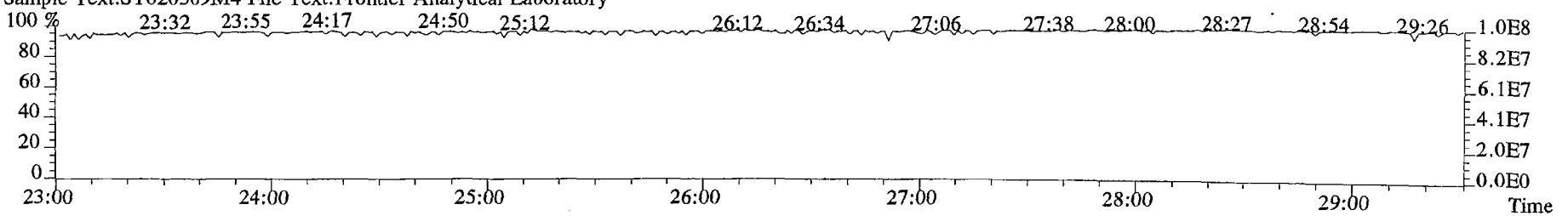
File:05FEB09M #1-390 Acq: 5-FEB-2009 19:01:11 GC EI+ Voltage SIR Autospec-Ultima
341.8568 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M4 File Text:Frontier Analytical Laboratory



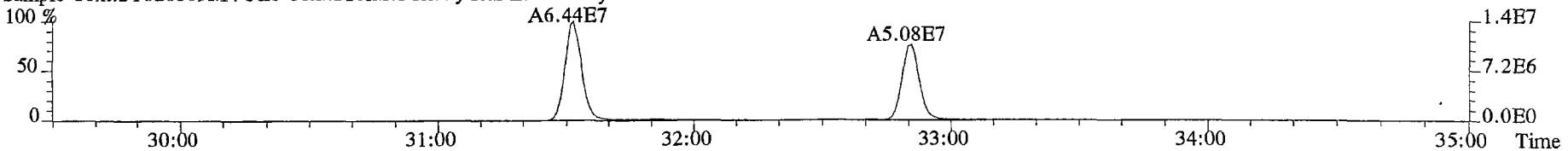
File:05FEB09M #1-390 Acq: 5-FEB-2009 19:01:11 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M4 File Text:Frontier Analytical Laboratory



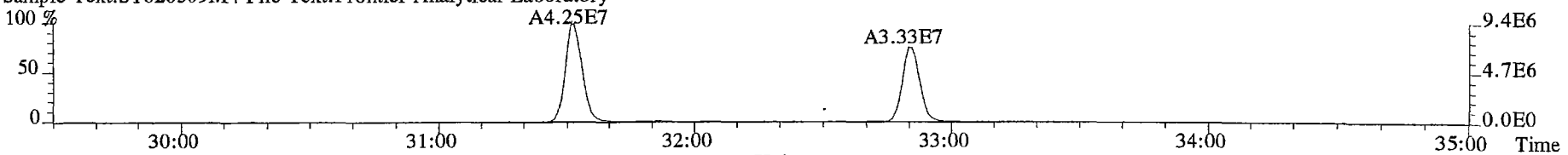
File:05FEB09M #1-390 Acq: 5-FEB-2009 19:01:11 GC EI+ Voltage SIR Autospec-Ultima
330.9792 S:5 Exp:PCDD
Sample Text:ST020509M4 File Text:Frontier Analytical Laboratory



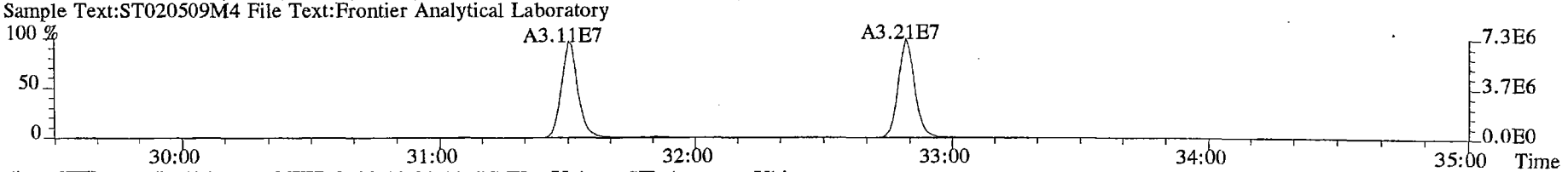
File:05FEB09M #1-424 Acq: 5-FEB-2009 19:01:11 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M4 File Text:Frontier Analytical Laboratory



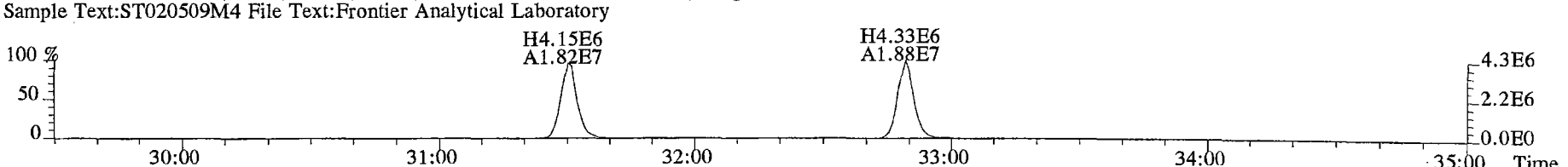
File:05FEB09M #1-424 Acq: 5-FEB-2009 19:01:11 GC EI+ Voltage SIR Autospec-Ultima
341.8568 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M4 File Text:Frontier Analytical Laboratory



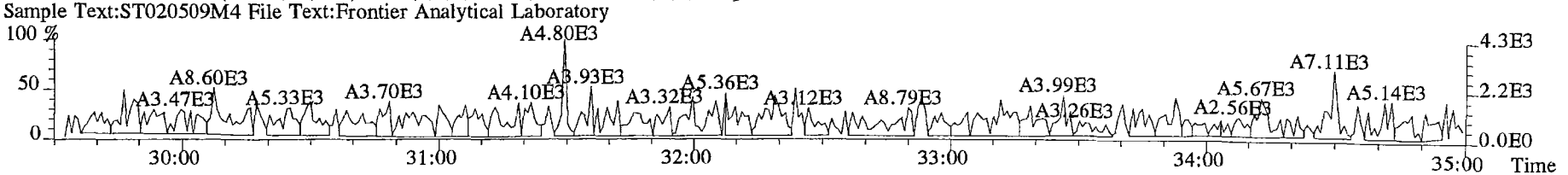
File:05FEB09M #1-424 Acq: 5-FEB-2009 19:01:11 GC EI+ Voltage SIR Autospec-Ultima
351.9000 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M4 File Text:Frontier Analytical Laboratory



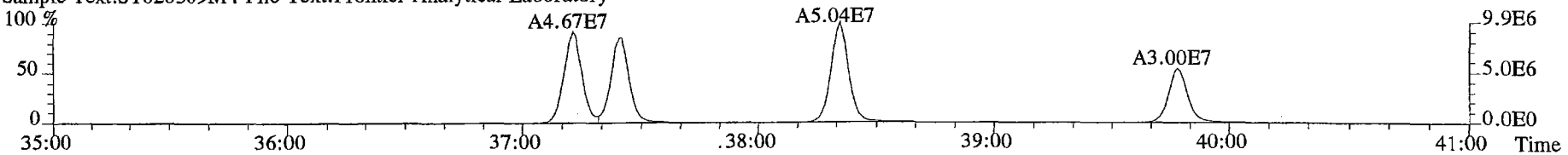
File:05FEB09M #1-424 Acq: 5-FEB-2009 19:01:11 GC EI+ Voltage SIR Autospec-Ultima
353.8970 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M4 File Text:Frontier Analytical Laboratory



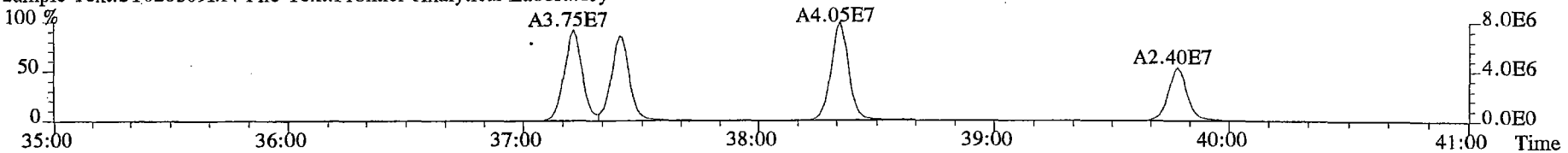
File:05FEB09M #1-424 Acq: 5-FEB-2009 19:01:11 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M4 File Text:Frontier Analytical Laboratory



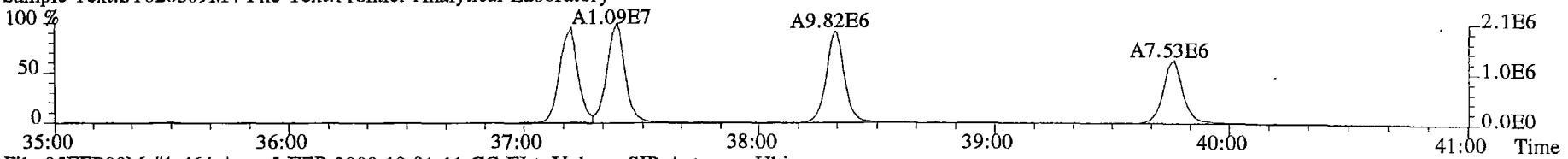
File:05FEB09M #1-464 Acq: 5-FEB-2009 19:01:11 GC EI+ Voltage SIR Autospec-Ultima
373.8207 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M4 File Text:Frontier Analytical Laboratory



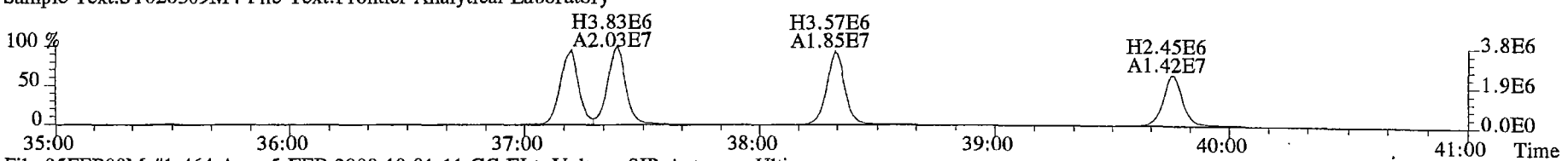
File:05FEB09M #1-464 Acq: 5-FEB-2009 19:01:11 GC EI+ Voltage SIR Autospec-Ultima
375.8178 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M4 File Text:Frontier Analytical Laboratory



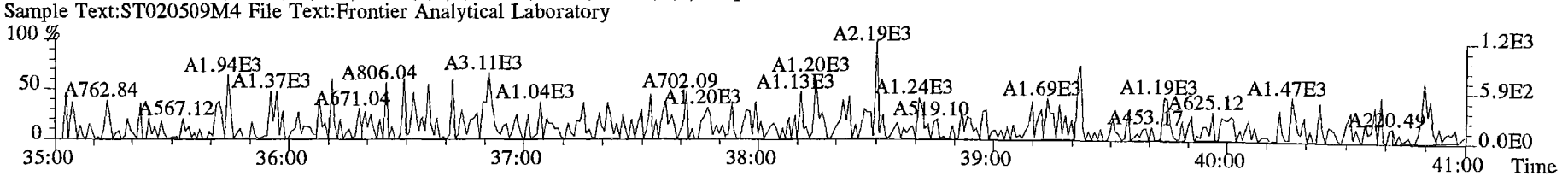
File:05FEB09M #1-464 Acq: 5-FEB-2009 19:01:11 GC EI+ Voltage SIR Autospec-Ultima
383.8639 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M4 File Text:Frontier Analytical Laboratory



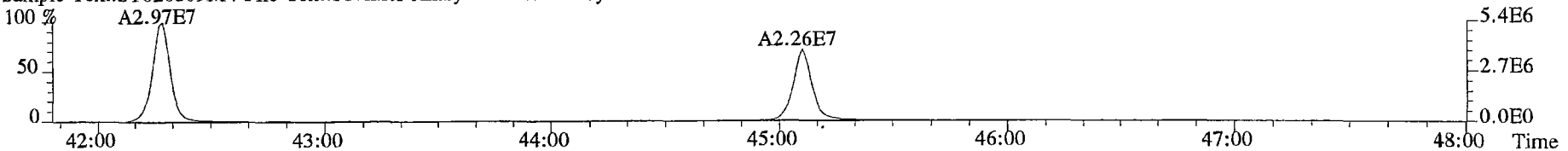
File:05FEB09M #1-464 Acq: 5-FEB-2009 19:01:11 GC EI+ Voltage SIR Autospec-Ultima
385.8610 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M4 File Text:Frontier Analytical Laboratory



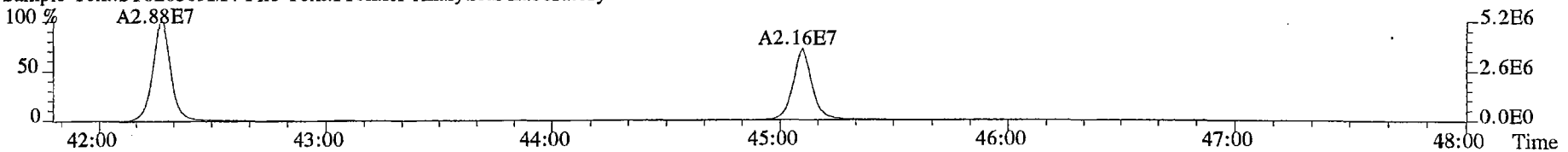
File:05FEB09M #1-464 Acq: 5-FEB-2009 19:01:11 GC EI+ Voltage SIR Autospec-Ultima
445.7555 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M4 File Text:Frontier Analytical Laboratory



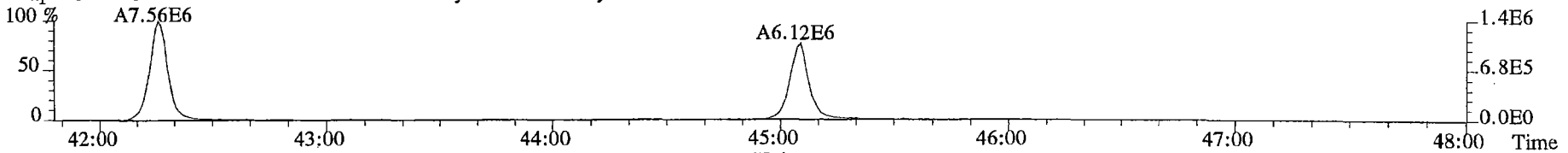
File:05FEB09M #1-541 Acq: 5-FEB-2009 19:01:11 GC EI+ Voltage SIR Autospec-Ultima
407.7818 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M4 File Text:Frontier Analytical Laboratory



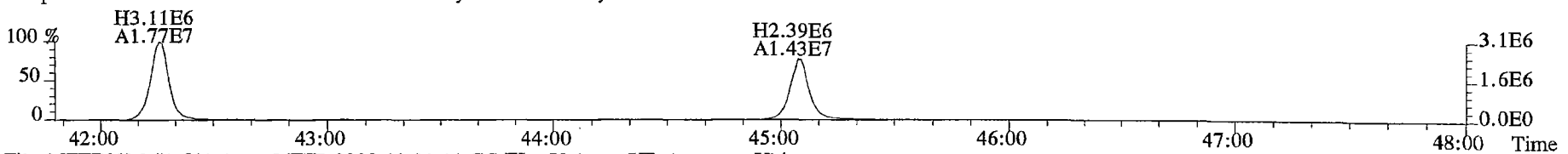
File:05FEB09M #1-541 Acq: 5-FEB-2009 19:01:11 GC EI+ Voltage SIR Autospec-Ultima
409.7788 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M4 File Text:Frontier Analytical Laboratory



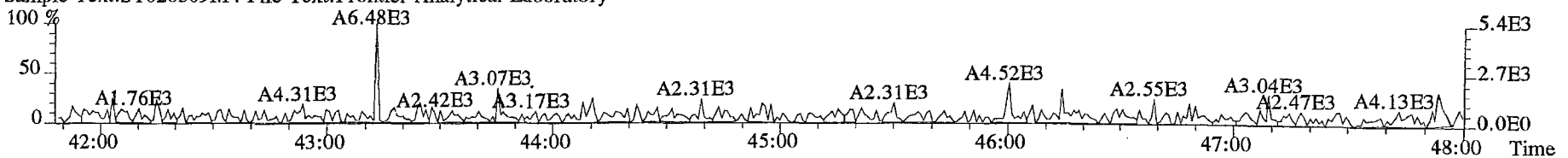
File:05FEB09M #1-541 Acq: 5-FEB-2009 19:01:11 GC EI+ Voltage SIR Autospec-Ultima
417.8253 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M4 File Text:Frontier Analytical Laboratory



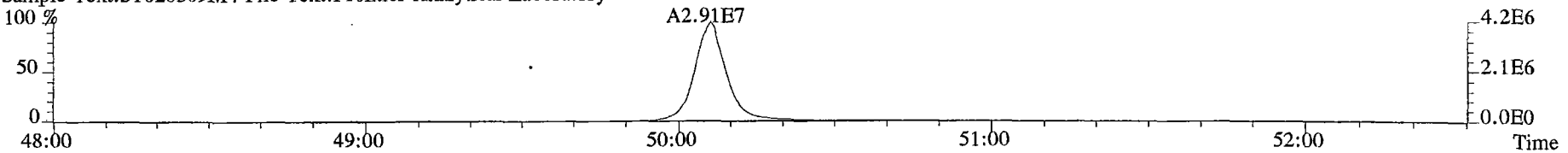
File:05FEB09M #1-541 Acq: 5-FEB-2009 19:01:11 GC EI+ Voltage SIR Autospec-Ultima
419.8220 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M4 File Text:Frontier Analytical Laboratory



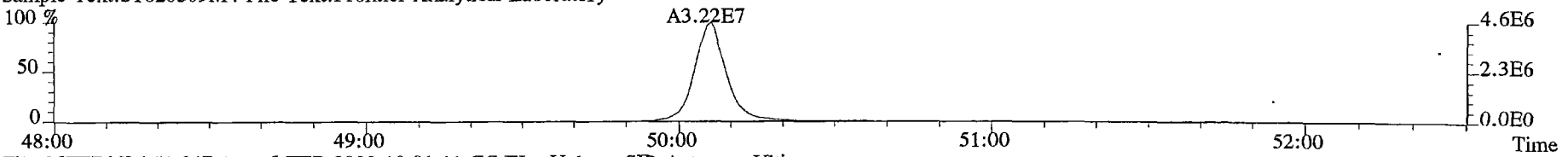
File:05FEB09M #1-541 Acq: 5-FEB-2009 19:01:11 GC EI+ Voltage SIR Autospec-Ultima
479.7165 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M4 File Text:Frontier Analytical Laboratory



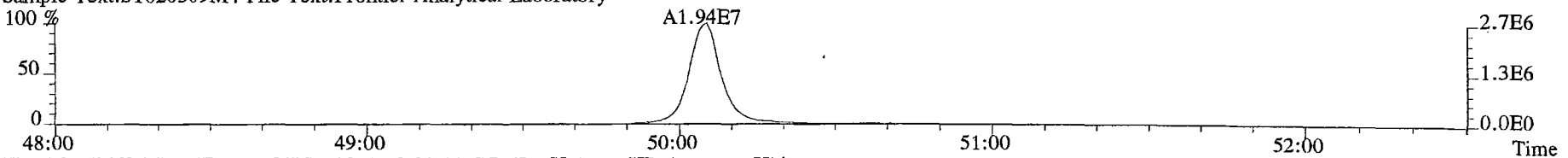
File:05FEB09M #1-347 Acq: 5-FEB-2009 19:01:11 GC EI+ Voltage SIR Autospec-Ultima
441.7428 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M4 File Text:Frontier Analytical Laboratory



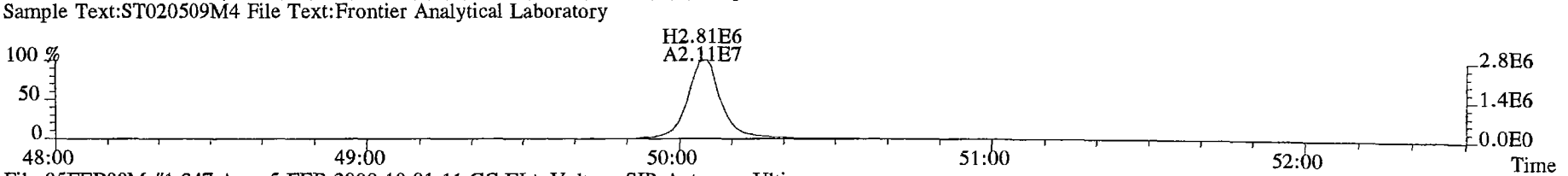
File:05FEB09M #1-347 Acq: 5-FEB-2009 19:01:11 GC EI+ Voltage SIR Autospec-Ultima
443.7398 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M4 File Text:Frontier Analytical Laboratory



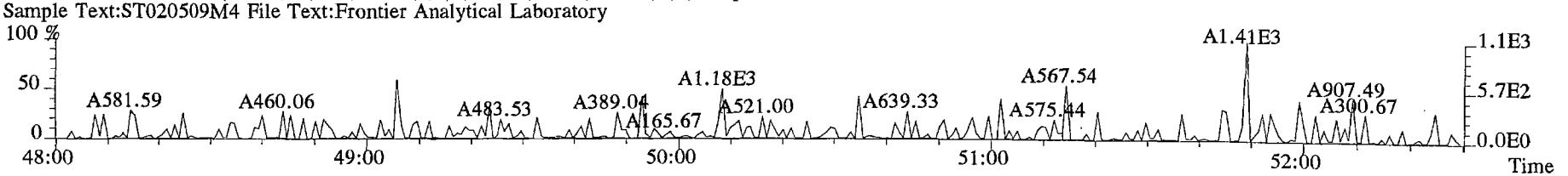
File:05FEB09M #1-347 Acq: 5-FEB-2009 19:01:11 GC EI+ Voltage SIR Autospec-Ultima
453.7831 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M4 File Text:Frontier Analytical Laboratory



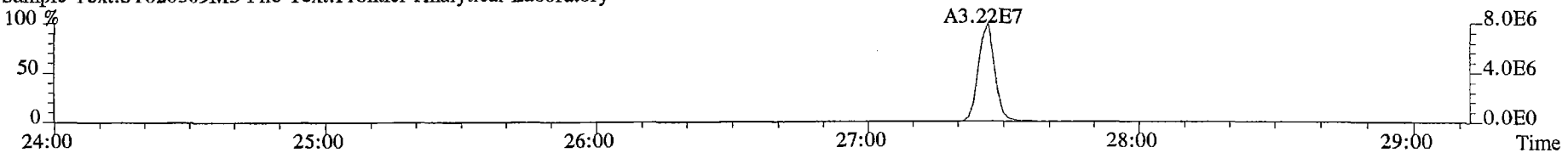
File:05FEB09M #1-347 Acq: 5-FEB-2009 19:01:11 GC EI+ Voltage SIR Autospec-Ultima
455.7801 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M4 File Text:Frontier Analytical Laboratory



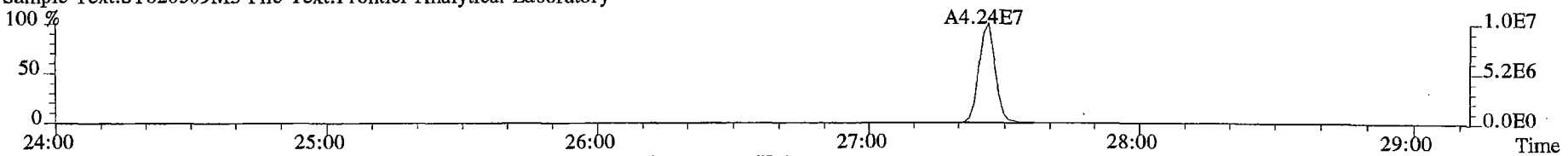
File:05FEB09M #1-347 Acq: 5-FEB-2009 19:01:11 GC EI+ Voltage SIR Autospec-Ultima
513.6775 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M4 File Text:Frontier Analytical Laboratory



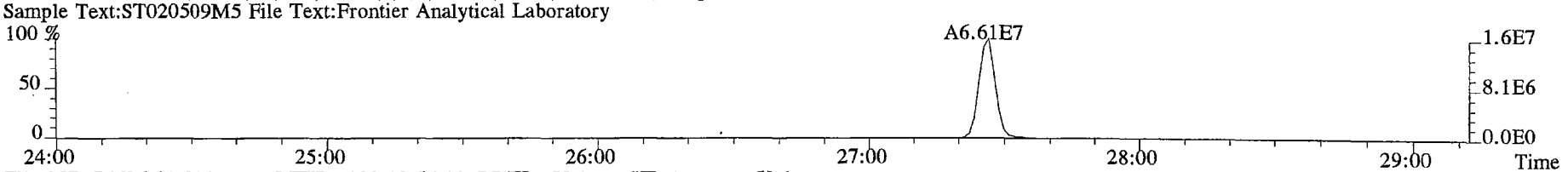
File:05FEB09M #1-390 Acq: 5-FEB-2009 19:56:22 GC EI+ Voltage SIR Autospec-Ultima
319.8965 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M5 File Text:Frontier Analytical Laboratory



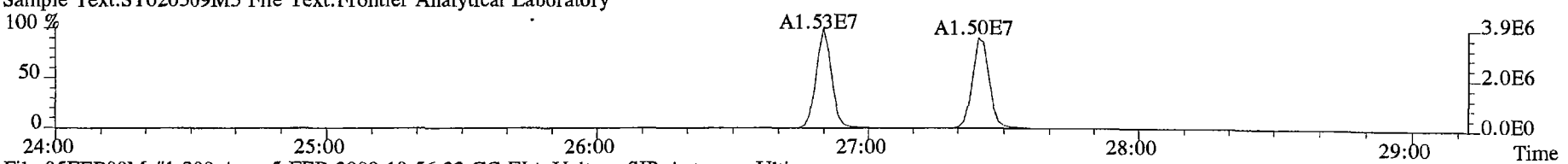
File:05FEB09M #1-390 Acq: 5-FEB-2009 19:56:22 GC EI+ Voltage SIR Autospec-Ultima
321.8936 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M5 File Text:Frontier Analytical Laboratory



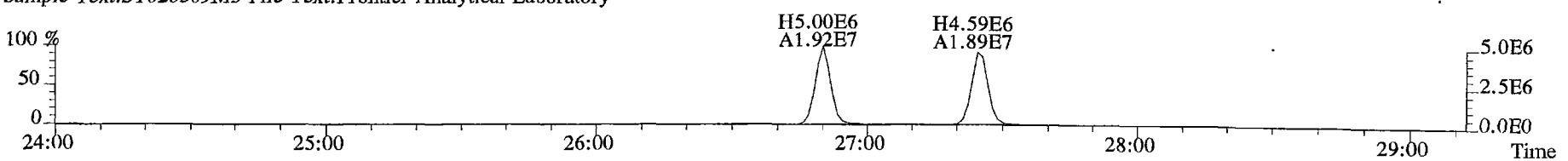
File:05FEB09M #1-390 Acq: 5-FEB-2009 19:56:22 GC EI+ Voltage SIR Autospec-Ultima
327.8847 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M5 File Text:Frontier Analytical Laboratory



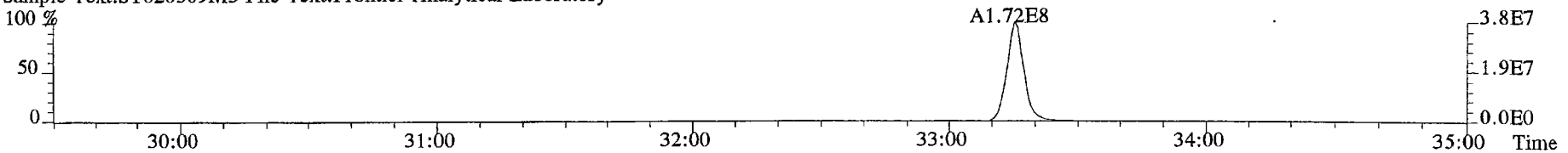
File:05FEB09M #1-390 Acq: 5-FEB-2009 19:56:22 GC EI+ Voltage SIR Autospec-Ultima
331.9368 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M5 File Text:Frontier Analytical Laboratory



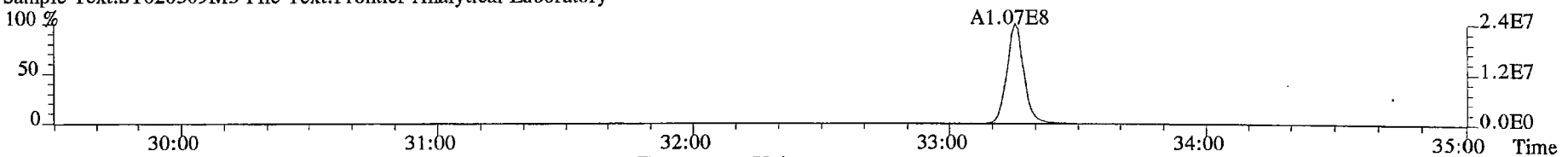
File:05FEB09M #1-390 Acq: 5-FEB-2009 19:56:22 GC EI+ Voltage SIR Autospec-Ultima
333.9339 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M5 File Text:Frontier Analytical Laboratory



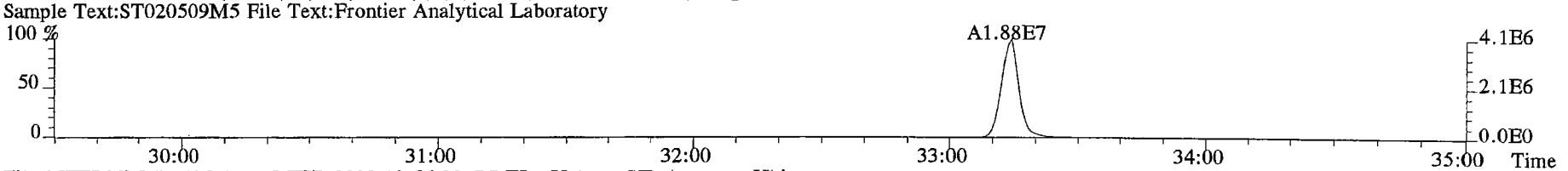
File:05FEB09M #1-425 Acq: 5-FEB-2009 19:56:22 GC EI+ Voltage SIR Autospec-Ultima
355.8546 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M5 File Text:Frontier Analytical Laboratory



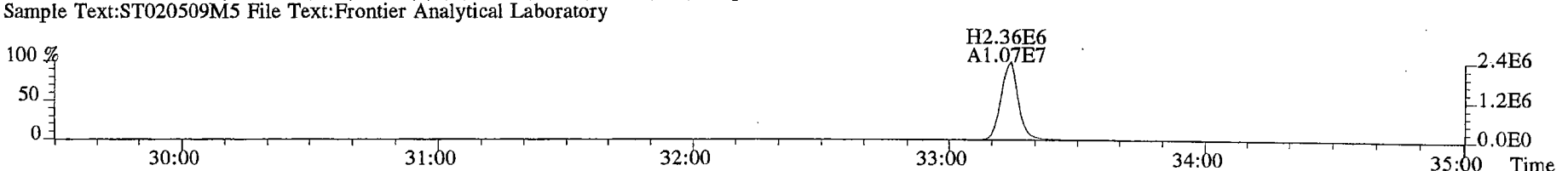
File:05FEB09M #1-425 Acq: 5-FEB-2009 19:56:22 GC EI+ Voltage SIR Autospec-Ultima
357.8517 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M5 File Text:Frontier Analytical Laboratory



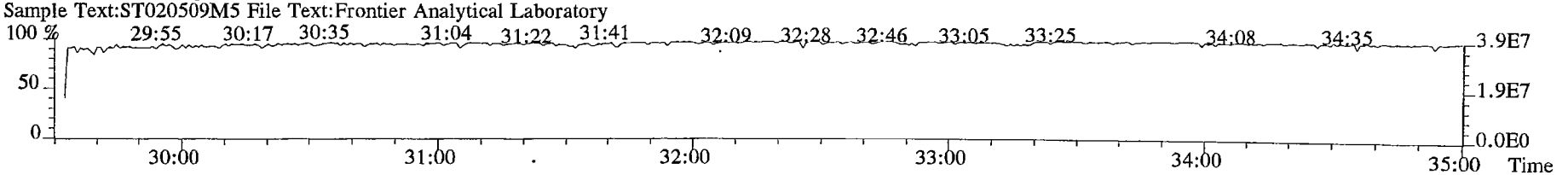
File:05FEB09M #1-425 Acq: 5-FEB-2009 19:56:22 GC EI+ Voltage SIR Autospec-Ultima
367.8949 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M5 File Text:Frontier Analytical Laboratory



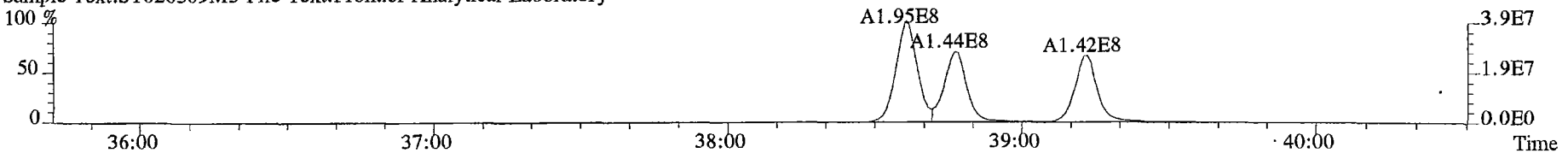
File:05FEB09M #1-425 Acq: 5-FEB-2009 19:56:22 GC EI+ Voltage SIR Autospec-Ultima
369.8919 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M5 File Text:Frontier Analytical Laboratory



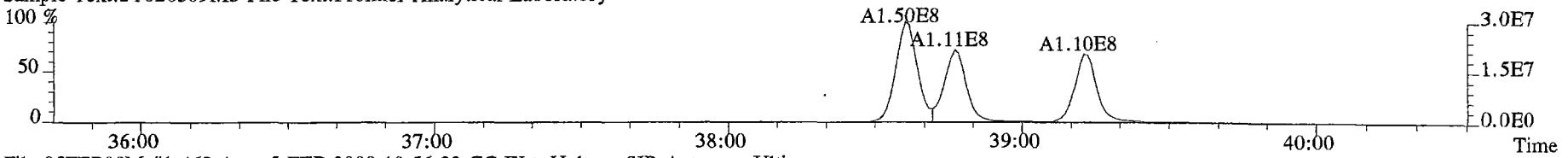
File:05FEB09M #1-425 Acq: 5-FEB-2009 19:56:22 GC EI+ Voltage SIR Autospec-Ultima
366.9792 S:6 F:2 Exp:PCDD
Sample Text:ST020509M5 File Text:Frontier Analytical Laboratory



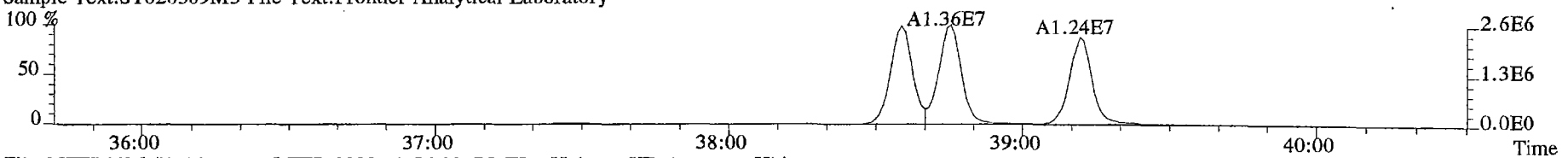
File:05FEB09M #1-463 Acq: 5-FEB-2009 19:56:22 GC EI+ Voltage SIR Autospec-Ultima
389.8156 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M5 File Text:Frontier Analytical Laboratory



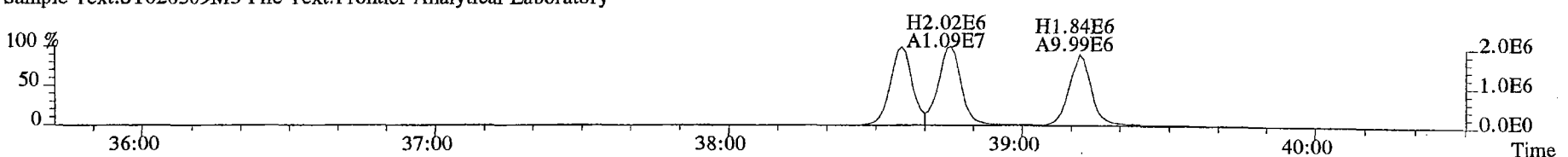
File:05FEB09M #1-463 Acq: 5-FEB-2009 19:56:22 GC EI+ Voltage SIR Autospec-Ultima
391.8127 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M5 File Text:Frontier Analytical Laboratory



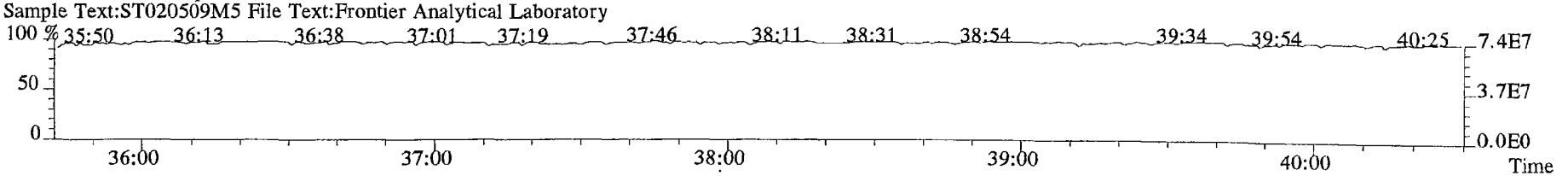
File:05FEB09M #1-463 Acq: 5-FEB-2009 19:56:22 GC EI+ Voltage SIR Autospec-Ultima
401.8559 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M5 File Text:Frontier Analytical Laboratory



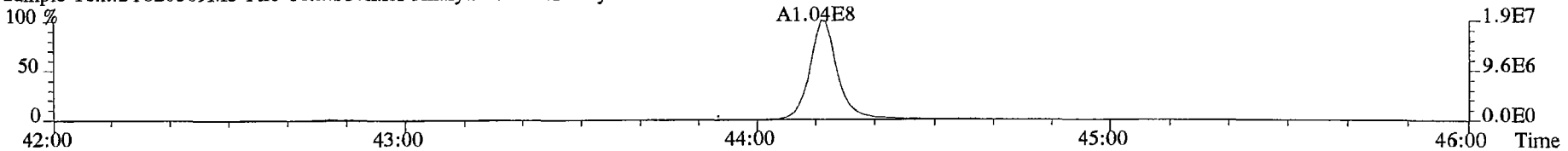
File:05FEB09M #1-463 Acq: 5-FEB-2009 19:56:22 GC EI+ Voltage SIR Autospec-Ultima
403.8530 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M5 File Text:Frontier Analytical Laboratory



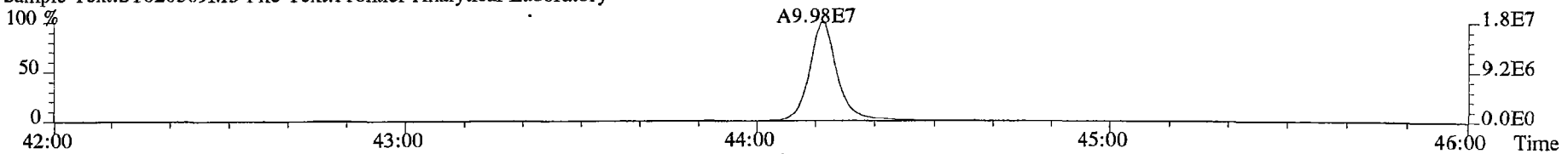
File:05FEB09M #1-463 Acq: 5-FEB-2009 19:56:22 GC EI+ Voltage SIR Autospec-Ultima
380.9760 S:6 F:3 Exp:PCDD
Sample Text:ST020509M5 File Text:Frontier Analytical Laboratory



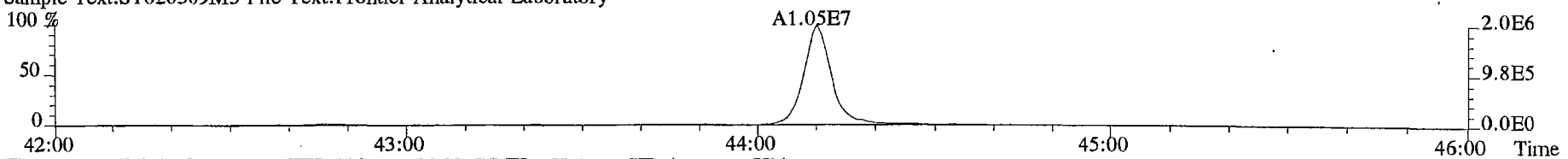
File:05FEB09M #1-541 Acq: 5-FEB-2009 19:56:22 GC EI+ Voltage SIR Autospec-Ultima
423.7767 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M5 File Text:Frontier Analytical Laboratory



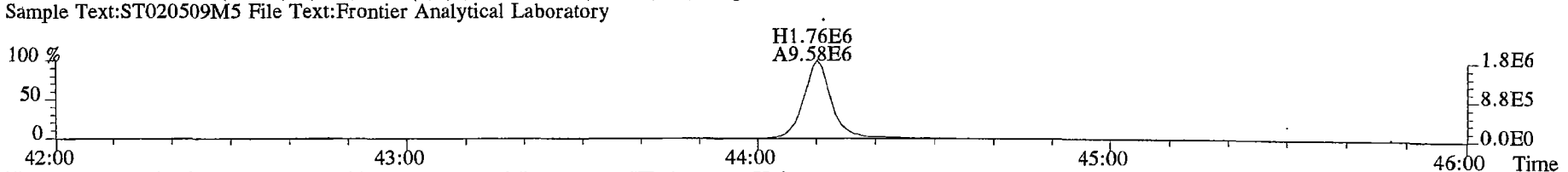
File:05FEB09M #1-541 Acq: 5-FEB-2009 19:56:22 GC EI+ Voltage SIR Autospec-Ultima
425.7737 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M5 File Text:Frontier Analytical Laboratory



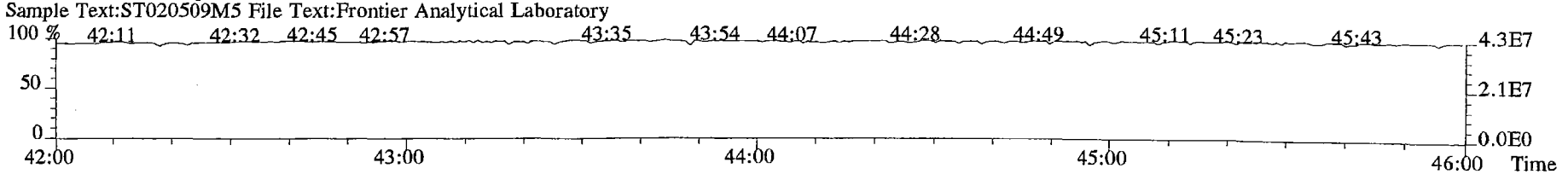
File:05FEB09M #1-541 Acq: 5-FEB-2009 19:56:22 GC EI+ Voltage SIR Autospec-Ultima
435.8169 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M5 File Text:Frontier Analytical Laboratory



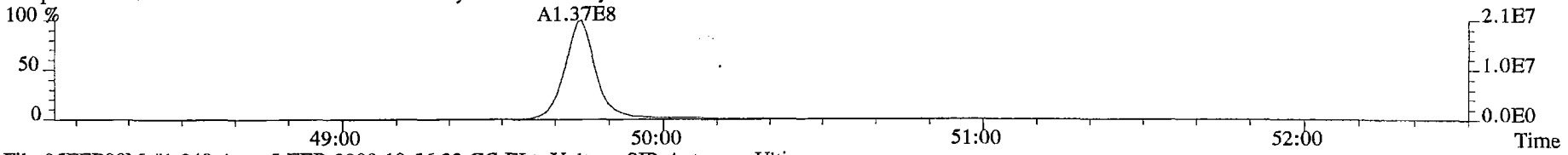
File:05FEB09M #1-541 Acq: 5-FEB-2009 19:56:22 GC EI+ Voltage SIR Autospec-Ultima
437.8140 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M5 File Text:Frontier Analytical Laboratory



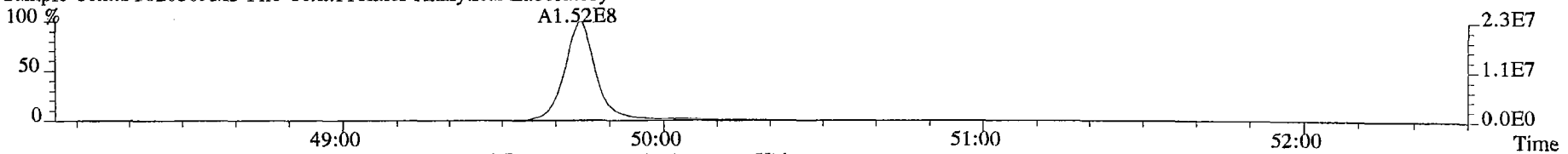
File:05FEB09M #1-541 Acq: 5-FEB-2009 19:56:22 GC EI+ Voltage SIR Autospec-Ultima
430.9728 S:6 F:4 Exp:PCDD
Sample Text:ST020509M5 File Text:Frontier Analytical Laboratory



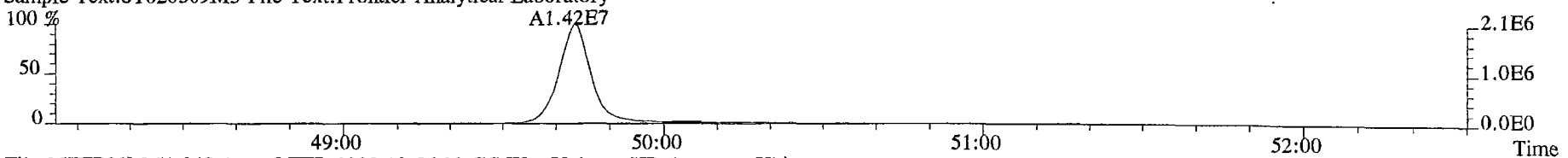
File:05FEB09M #1-348 Acq: 5-FEB-2009 19:56:22 GC EI+ Voltage SIR Autospec-Ultima
457.7377 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M5 File Text:Frontier Analytical Laboratory



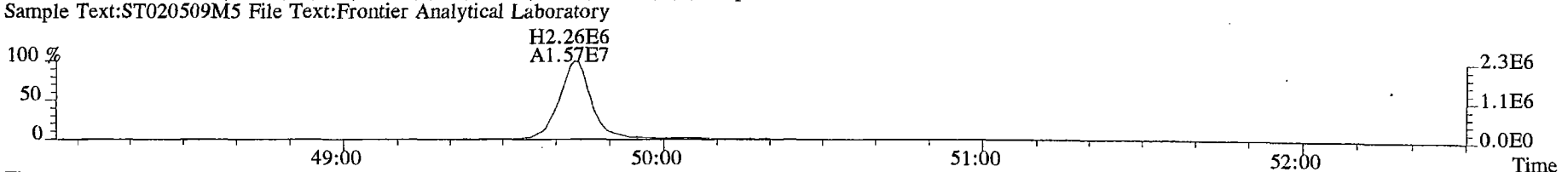
File:05FEB09M #1-348 Acq: 5-FEB-2009 19:56:22 GC EI+ Voltage SIR Autospec-Ultima
459.7348 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M5 File Text:Frontier Analytical Laboratory



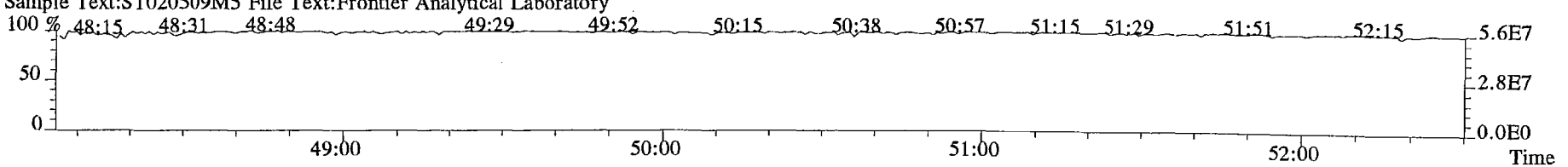
File:05FEB09M #1-348 Acq: 5-FEB-2009 19:56:22 GC EI+ Voltage SIR Autospec-Ultima
469.7780 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M5 File Text:Frontier Analytical Laboratory



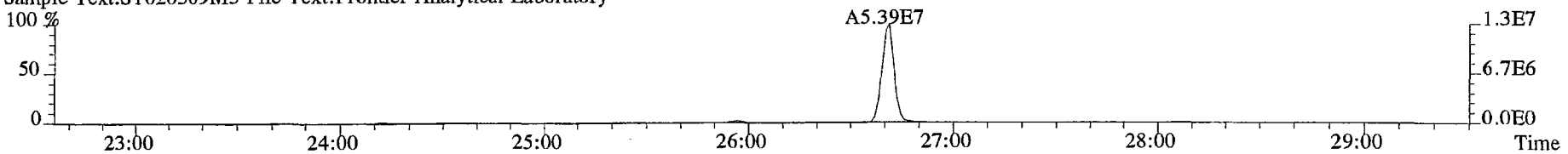
File:05FEB09M #1-348 Acq: 5-FEB-2009 19:56:22 GC EI+ Voltage SIR Autospec-Ultima
471.7750 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M5 File Text:Frontier Analytical Laboratory



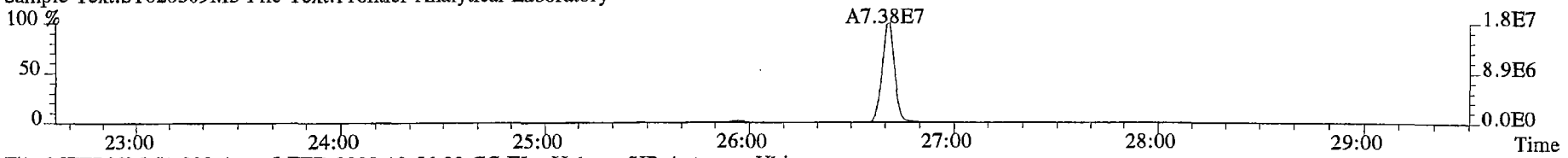
File:05FEB09M #1-348 Acq: 5-FEB-2009 19:56:22 GC EI+ Voltage SIR Autospec-Ultima
454.9728 S:6 F:5 Exp:PCDD
Sample Text:ST020509M5 File Text:Frontier Analytical Laboratory



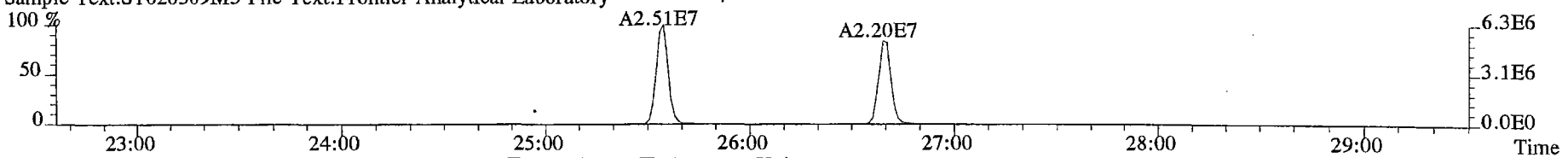
File:05FEB09M #1-390 Acq: 5-FEB-2009 19:56:22 GC EI+ Voltage SIR Autospec-Ultima
303.9016 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M5 File Text:Frontier Analytical Laboratory



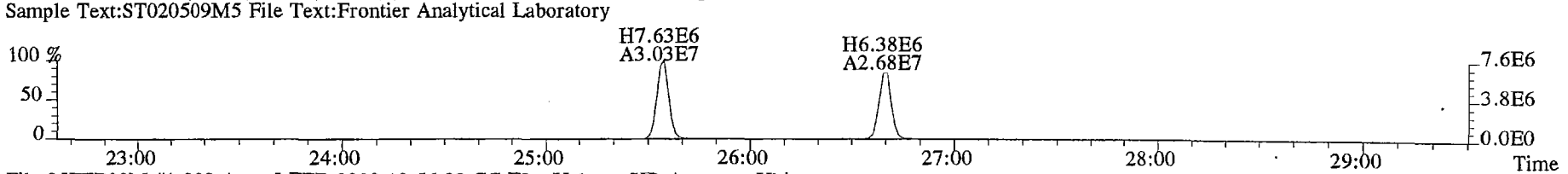
File:05FEB09M #1-390 Acq: 5-FEB-2009 19:56:22 GC EI+ Voltage SIR Autospec-Ultima
305.8987 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M5 File Text:Frontier Analytical Laboratory



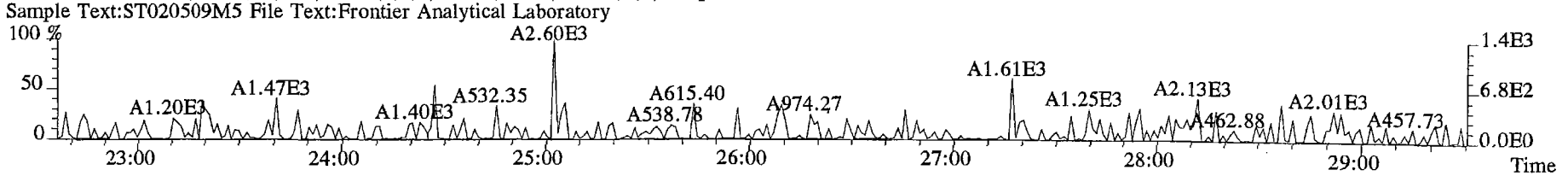
File:05FEB09M #1-390 Acq: 5-FEB-2009 19:56:22 GC EI+ Voltage SIR Autospec-Ultima
315.9419 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M5 File Text:Frontier Analytical Laboratory



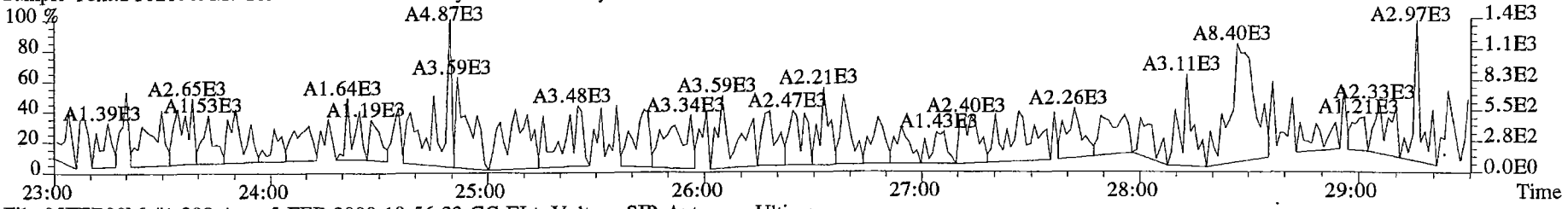
File:05FEB09M #1-390 Acq: 5-FEB-2009 19:56:22 GC EI+ Voltage SIR Autospec-Ultima
317.9389 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M5 File Text:Frontier Analytical Laboratory



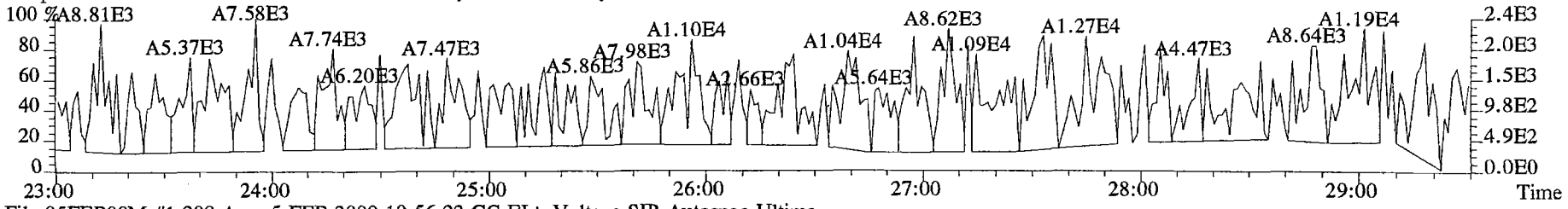
File:05FEB09M #1-390 Acq: 5-FEB-2009 19:56:22 GC EI+ Voltage SIR Autospec-Ultima
375.8364 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M5 File Text:Frontier Analytical Laboratory



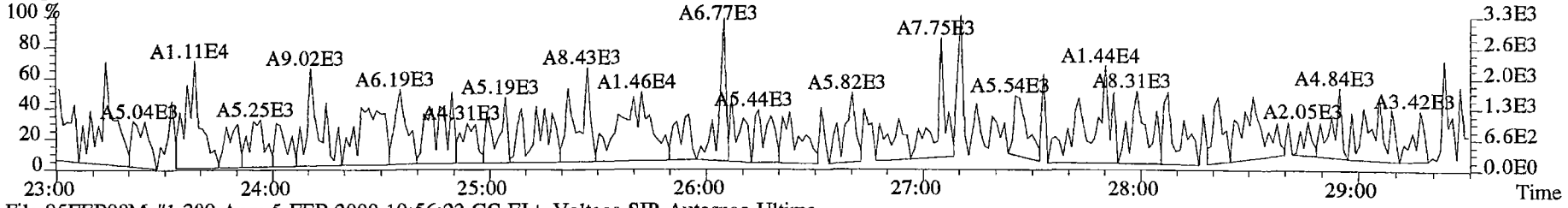
File:05FEB09M #1-390 Acq: 5-FEB-2009 19:56:22 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M5 File Text:Frontier Analytical Laboratory



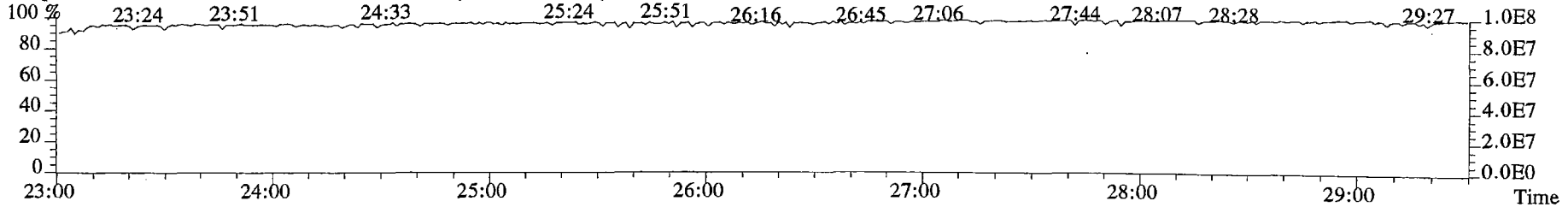
File:05FEB09M #1-390 Acq: 5-FEB-2009 19:56:22 GC EI+ Voltage SIR Autospec-Ultima
341.8568 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M5 File Text:Frontier Analytical Laboratory



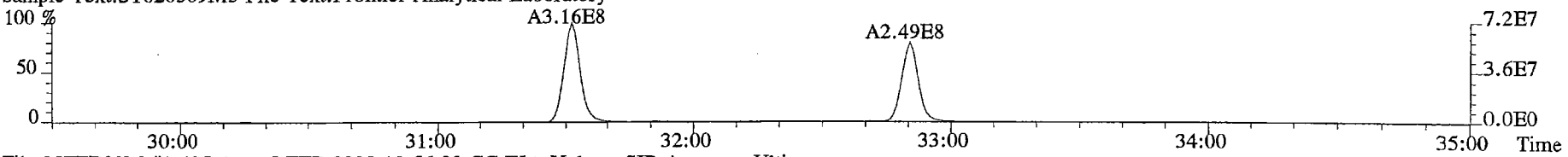
File:05FEB09M #1-390 Acq: 5-FEB-2009 19:56:22 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M5 File Text:Frontier Analytical Laboratory



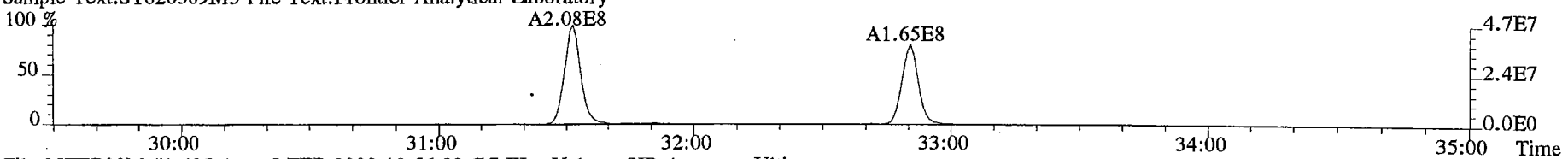
File:05FEB09M #1-390 Acq: 5-FEB-2009 19:56:22 GC EI+ Voltage SIR Autospec-Ultima
330.9792 S:6 Exp:PCDD
Sample Text:ST020509M5 File Text:Frontier Analytical Laboratory



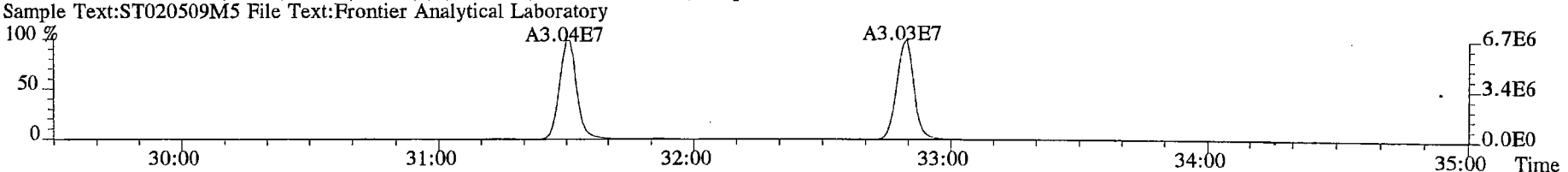
File:05FEB09M #1-425 Acq: 5-FEB-2009 19:56:22 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M5 File Text:Frontier Analytical Laboratory



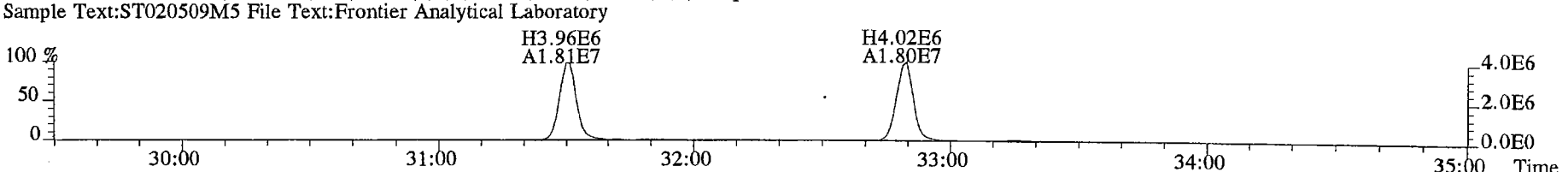
File:05FEB09M #1-425 Acq: 5-FEB-2009 19:56:22 GC EI+ Voltage SIR Autospec-Ultima
341.8568 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M5 File Text:Frontier Analytical Laboratory



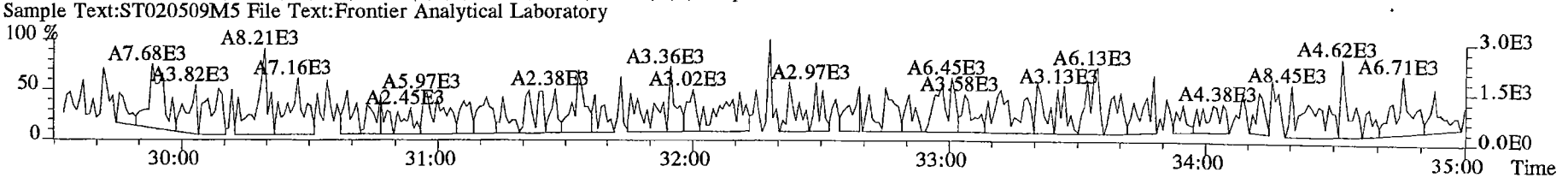
File:05FEB09M #1-425 Acq: 5-FEB-2009 19:56:22 GC EI+ Voltage SIR Autospec-Ultima
351.9000 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M5 File Text:Frontier Analytical Laboratory



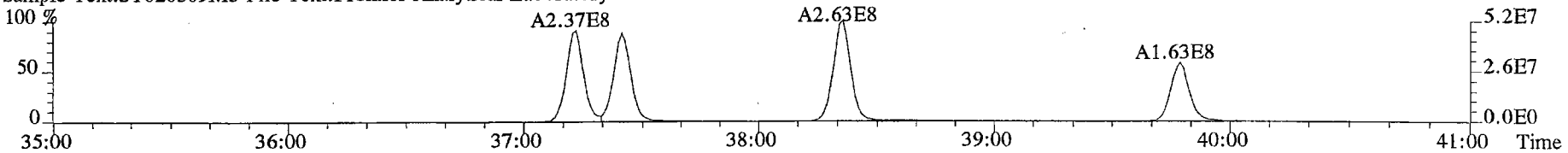
File:05FEB09M #1-425 Acq: 5-FEB-2009 19:56:22 GC EI+ Voltage SIR Autospec-Ultima
353.8970 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M5 File Text:Frontier Analytical Laboratory



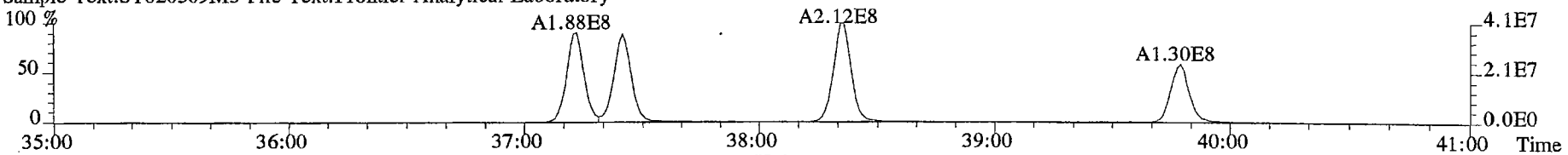
File:05FEB09M #1-425 Acq: 5-FEB-2009 19:56:22 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M5 File Text:Frontier Analytical Laboratory



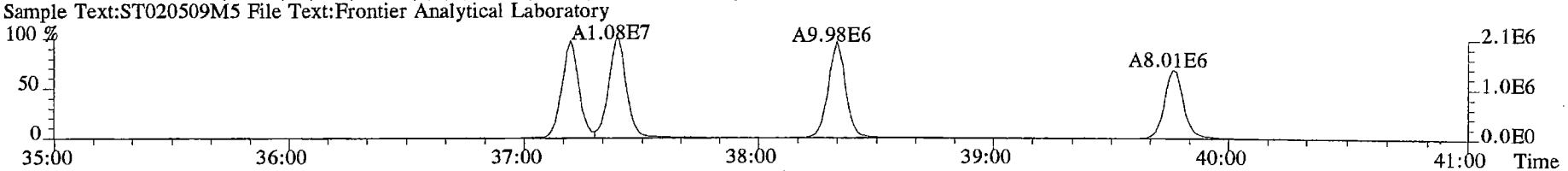
File:05FEB09M #1-463 Acq: 5-FEB-2009 19:56:22 GC EI+ Voltage SIR Autospec-Ultima
373.8207 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M5 File Text:Frontier Analytical Laboratory



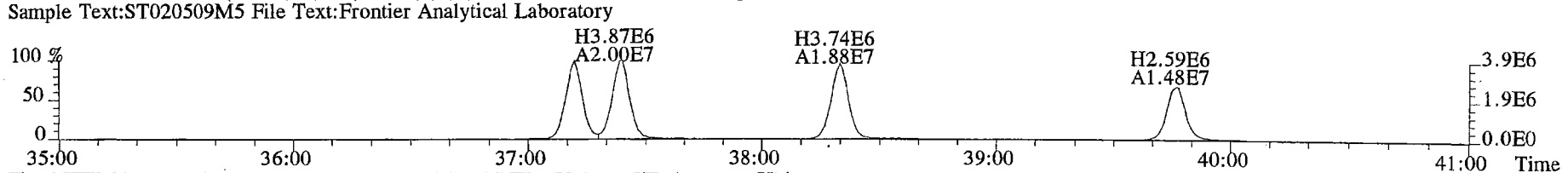
File:05FEB09M #1-463 Acq: 5-FEB-2009 19:56:22 GC EI+ Voltage SIR Autospec-Ultima
375.8178 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M5 File Text:Frontier Analytical Laboratory



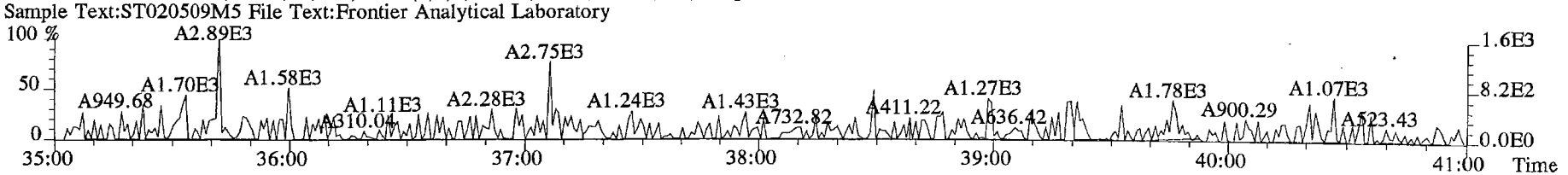
File:05FEB09M #1-463 Acq: 5-FEB-2009 19:56:22 GC EI+ Voltage SIR Autospec-Ultima
383.8639 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M5 File Text:Frontier Analytical Laboratory



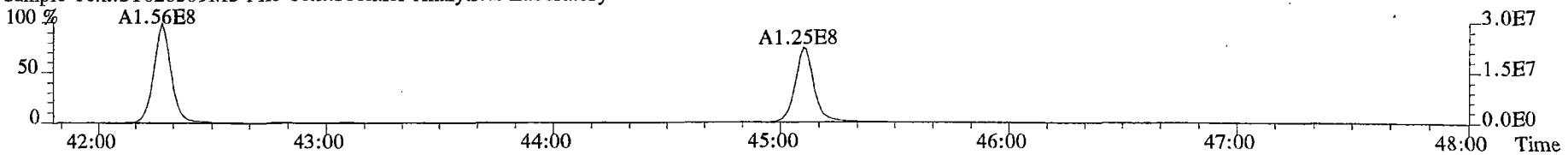
File:05FEB09M #1-463 Acq: 5-FEB-2009 19:56:22 GC EI+ Voltage SIR Autospec-Ultima
385.8610 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M5 File Text:Frontier Analytical Laboratory



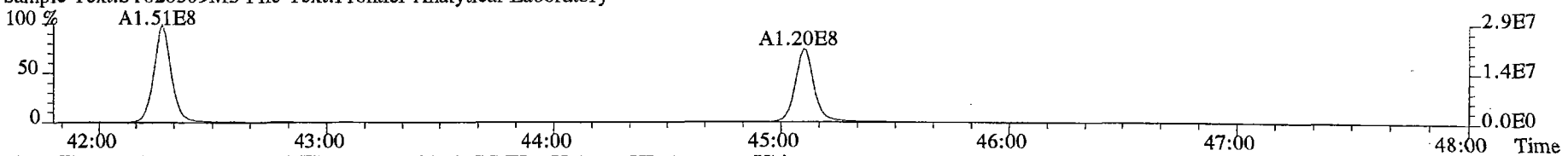
File:05FEB09M #1-463 Acq: 5-FEB-2009 19:56:22 GC EI+ Voltage SIR Autospec-Ultima
445.7555 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M5 File Text:Frontier Analytical Laboratory



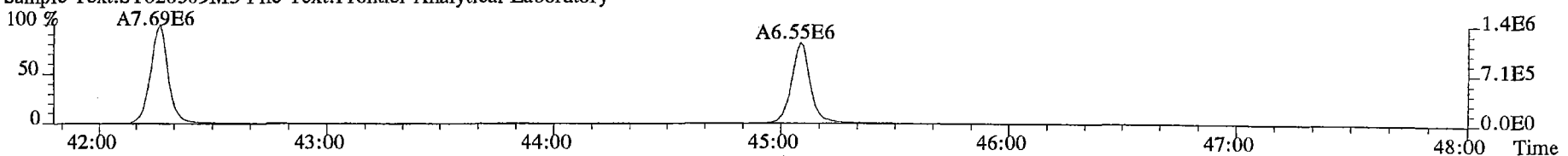
File:05FEB09M #1-541 Acq: 5-FEB-2009 19:56:22 GC EI+ Voltage SIR Autospec-Ultima
407.7818 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M5 File Text:Frontier Analytical Laboratory



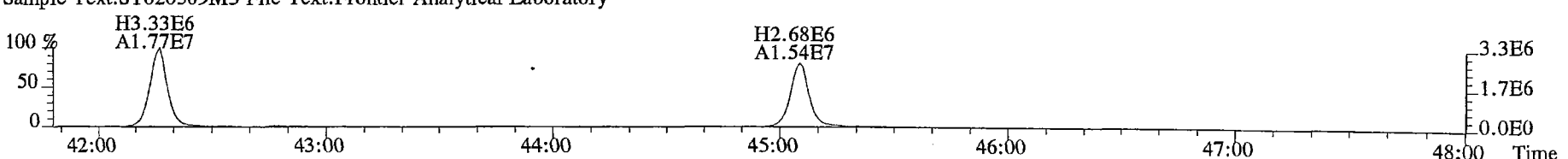
File:05FEB09M #1-541 Acq: 5-FEB-2009 19:56:22 GC EI+ Voltage SIR Autospec-Ultima
409.7788 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M5 File Text:Frontier Analytical Laboratory



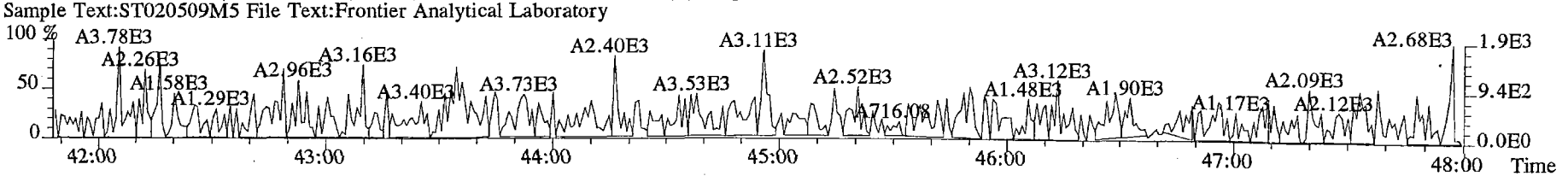
File:05FEB09M #1-541 Acq: 5-FEB-2009 19:56:22 GC EI+ Voltage SIR Autospec-Ultima
417.8253 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M5 File Text:Frontier Analytical Laboratory



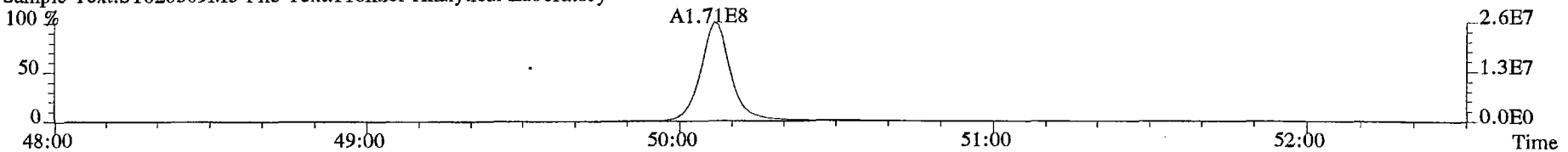
File:05FEB09M #1-541 Acq: 5-FEB-2009 19:56:22 GC EI+ Voltage SIR Autospec-Ultima
419.8220 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M5 File Text:Frontier Analytical Laboratory



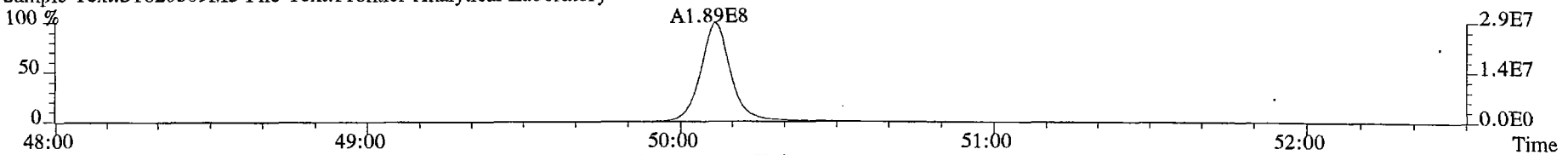
File:05FEB09M #1-541 Acq: 5-FEB-2009 19:56:22 GC EI+ Voltage SIR Autospec-Ultima
479.7165 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M5 File Text:Frontier Analytical Laboratory



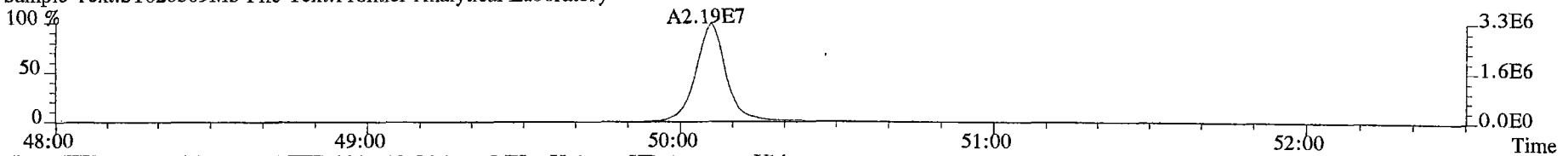
File:05FEB09M #1-348 Acq: 5-FEB-2009 19:56:22 GC EI+ Voltage SIR Autospec-Ultima
441.7428 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M5 File Text:Frontier Analytical Laboratory



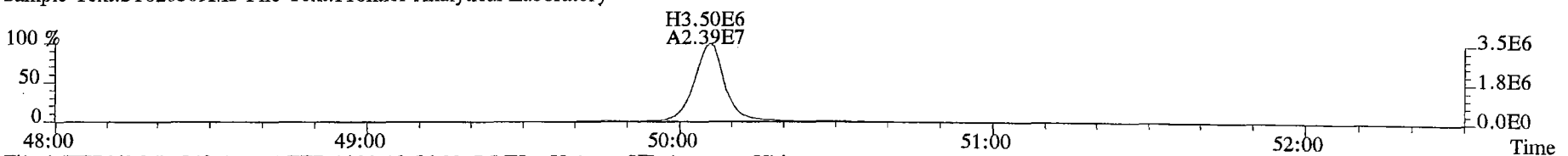
File:05FEB09M #1-348 Acq: 5-FEB-2009 19:56:22 GC EI+ Voltage SIR Autospec-Ultima
443.7398 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M5 File Text:Frontier Analytical Laboratory



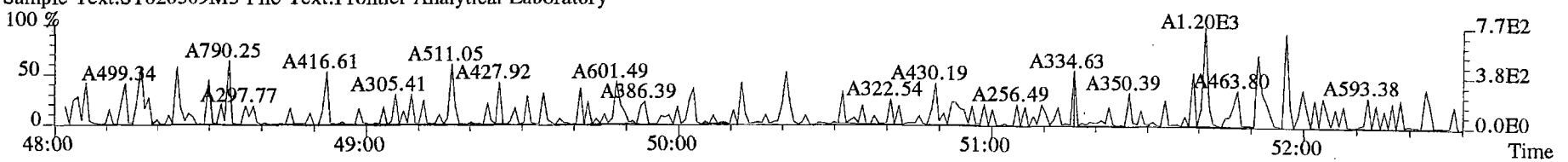
File:05FEB09M #1-348 Acq: 5-FEB-2009 19:56:22 GC EI+ Voltage SIR Autospec-Ultima
453.7831 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M5 File Text:Frontier Analytical Laboratory



File:05FEB09M #1-348 Acq: 5-FEB-2009 19:56:22 GC EI+ Voltage SIR Autospec-Ultima
455.7801 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M5 File Text:Frontier Analytical Laboratory



File:05FEB09M #1-348 Acq: 5-FEB-2009 19:56:22 GC EI+ Voltage SIR Autospec-Ultima
513.6775 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST020509M5 File Text:Frontier Analytical Laboratory



6DFA - FORM VI-HR CDD-1
TCDF INITIAL CALIBRATION RESPONSE FACTOR SUMMARY
HIGH RESOLUTION

LAB NAME: FRONTIER ANALYTICAL LAB CONTRACT: EP08W001564

LAB CODE: FALE CASE NO.: EPA05-2008-01 TO NO.: SDG NO.: SDG E3YC9

GC COLUMN: DB225 ID: 0.25 (mm) INSTRUMENT ID: FAL1

INIT. CALIB. DATE(S): 13-JAN-09 13-JAN-09 13-JAN-09 13-JAN-09 13-JAN-09

INIT. CALIB. TIMES: 11:41:31 12:16:35 11:06:28 12:51:39 13:26:43

	RR/RRF					MEAN		QC
TARGET ANALYTES	CS1	CS2	CS3	CS4	CS5	RR/RRF	%RSD	LIMITS
2,3,7,8-TCDF	1.12	0.97	1.06	1.00	0.98	1.03	6.35	+/-20%
LABELED COMPOUNDS								
13C-2,3,7,8-TCDF	0.84	0.82	0.94	0.87	0.88	0.87	5.47	+/-35%

Analyst: _____ Date: 3/4/09

6DFB - FORM VI-HR CDD-2
TCDF INITIAL CALIBRATION ION ABUNDANCE RATIO SUMMARY
HIGH RESOLUTION

LAB NAME: FRONTIER ANALYTICAL LAB CONTRACT: EP08W001564

LAB CODE: FALE CASE NO.: EPA05-2008-01 TO NO.: SDG NO.: SDG E3YC9

GC COLUMN: DB225 ID: 0.25 (mm) INSTRUMENT ID: FAL1

INIT. CALIB. DATE(S): 13-JAN-09 13-JAN-09 13-JAN-09 13-JAN-09 13-JAN-09

INIT. CALIB. TIMES: 11:41:31 12:16:35 11:06:28 12:51:39 13:26:43

TARGET ANALYTES	SELECTED IONS	ION ABUNDANCE RATIO CS1	CS2	CS3	CS4	CS5	FLAG	ION RATIO QC LIMITS
2,3,7,8-TCDF	304/306	0.78	0.75	0.78	0.75	0.75		0.65-0.89
LABELED COMPOUNDS								
13C-2,3,7,8-TCDF	316/318	0.80	0.80	0.79	0.79	0.79		0.65-0.89
INTERNAL STANDARDS								
13C-1,2,3,4-TCDF	316/318	0.79	0.79	0.80	0.79	0.79		0.65-0.89

Quality Control (QC) limits represent +/-15% window around the theoretical ion abundance ratio. The laboratory must flag any analyte in any calibration solution which does not meet the ion abundance ratio QC limit by placing an asterik in the flag column Analyst: [illegible] Date: 3/4/09

5DFC - FORM V-HR CDD-3
TCDF ANALYTICAL SEQUENCE SUMMARY
HIGH RESOLUTION

LAB NAME: FRONTIER ANALYTICAL LAB CONTRACT: EP08W001564

LAB CODE: FALE CASE NO.: EPA08-2008-01 TO NO.: SDG NO.: SDG E3YC9

GC Column: DB225 ID: 0.25 (mm) INSTRUMENT ID: FAL1

INIT. CALIB. DATE (S) : 13-JAN-09

INIT. CALIB. TIMES: 11:41:31, 12:16:35, 11:06:28, 12:51:39, 13:26:43

THE ANALYTICAL SEQUENCE OF STANDARDS, SAMPLES, BLANKS, AND LABORATORY CONTROL SAMPLES (LCSs) IS AS FOLLOWS:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1613 CS3 080827J	ST011309A3	13JAN09A	13-JAN-09	11:06:28
1613 CS1 080827H	ST011309A1	13JAN09A	13-JAN-09	11:41:31
1613 CS2 080827I	ST011309A2	13JAN09A	13-JAN-09	12:16:35
1613 CS4 080827K	ST011309A4	13JAN09A	13-JAN-09	12:51:39
1613 CS5 080827L	ST011309A5	13JAN09A	13-JAN-09	13:26:43
ZZZZ	ZZZZ	13JAN09A	13-JAN-09	14:01:47

ANALYST: _____ DATE: 3/4/09

Frontier Analytical Laboratory

Data Filename: 13JAN09A

Analyte: TCDFFAL1-1-13-09 Cal: TCDFFAL1-1-13-09

Name	RRF	S. D.	%RSD	S2 RRF#1	S3 RRF#2	S1 RRF#3	S4 RRF#4	S5 RRF#5	S5 RRF#6
2,3,7,8-TCDF	1.03	0.0651	6.35 %	1.12	0.97	1.06	1.00	0.98	0.98
13C-2,3,7,8-TCDF	0.87	0.0477	5.47 %	0.84	0.82	0.94	0.87	0.88	0.88
13C-1,2,3,4-TCDF	-	-	- %	-	-	-	-	-	-

Analyst: [signature] Date: 1/13/09

Run #1 Filename 13JAN09A S: 2 Acquired: 13-JAN-09 11:41:31 Cal: TCDFFAL1-1-13-09
Client ID: ST011309A1 Analyte: FAL ID: 1613 CS1 080827H

	Typ	Name	Amount	Resp	RA	RT	RF	RRF	
1	Unk	2,3,7,8-TCDF	0.50	9.58e+05	0.78 y	19:39	-	1.12	y
2	IS	13C-2,3,7,8-TCDF	100.00	1.71e+08	0.80 y	19:39	-	0.840	y
3	RS	13C-1,2,3,4-TCDF	100.00	2.04e+08	0.79 y	17:05	2.04e+06	-	n

Analyst: [illegible] Date: 1/13/09

Run #2 Filename 13JAN09A S: 3 Acquired: 13-JAN-09 12:16:35 Cal: TCDFFAL1-1-13-09
Client ID: ST011309A2 Analyte: FAL ID: 1613 CS2 080827I

	Typ	Name	Amount	Resp	RA		RT	RF	RRF	
1	Unk	2,3,7,8-TCDF	2.00	2.82e+06	0.75	y	19:38	-	0.967	y
2	IS	13C-2,3,7,8-TCDF	100.00	1.46e+08	0.80	y	19:37	-	0.819	y
3	RS	13C-1,2,3,4-TCDF	100.00	1.78e+08	0.79	y	17:03	1.78e+06	-	n

Analyst: E Date: 1/13/09

Run #3 Filename 13JAN09A S: 1 Acquired: 13-JAN-09 11:06:28 Cal: TCDFFAL1-1-13-09
Client ID: ST011309A3 Analyte: FAL ID: 1613 CS3 080827J

	Typ	Name	Amount	Resp	RA		RT	RF	RRF	
1	Unk	2,3,7,8-TCDF	10.00	1.70e+07	0.78	y	19:42	-	1.06	y
2	IS	13C-2,3,7,8-TCDF	100.00	1.60e+08	0.79	y	19:40	-	0.944	y
3	RS	13C-1,2,3,4-TCDF	100.00	1.69e+08	0.80	y	17:06	1.69e+06	-	n

Analyst: Date: 4/13/09

Run #4 Filename 13JAN09A S: 4 Acquired: 13-JAN-09 12:51:39 Cal: TCDFFAL1-1-13-09
Client ID: ST011309A4 Analyte: FAL ID: 1613 CS4 080827K

	Typ	Name	Amount	Resp	RA		RT	RF	RRF	
1	Unk	2,3,7,8-TCDF	40.00	6.46e+07	0.75	y	19:39	-	1.00	y
2	IS	13C-2,3,7,8-TCDF	100.00	1.61e+08	0.79	y	19:37	-	0.872	y
3	RS	13C-1,2,3,4-TCDF	100.00	1.85e+08	0.79	y	17:04	1.85e+06	-	n

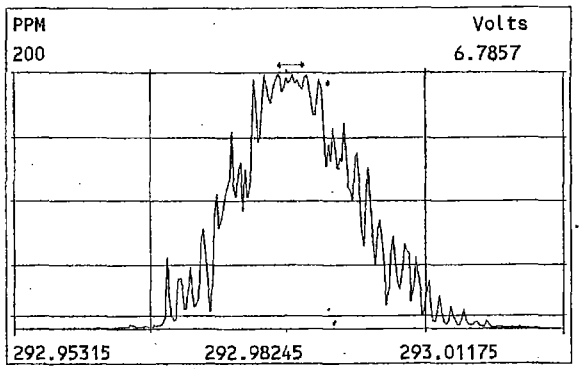
Analyst: E Date: 1/13/09

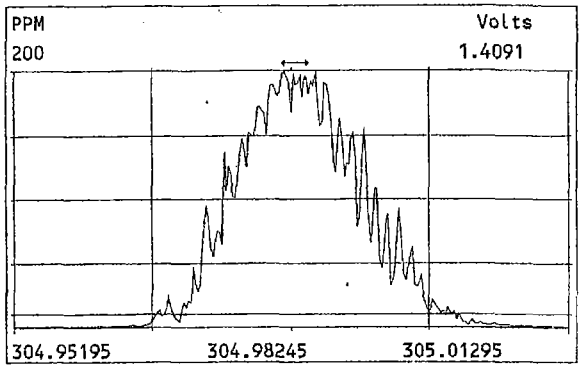
Run #5 Filename 13JAN09A S: 5 Acquired: 13-JAN-09 13:26:43 Cal: TCDFFAL1-1-13-09
Client ID: ST011309A5 Analyte: TCDFFAL1-1-13-09 FAL ID: 1613 CS5 080827L

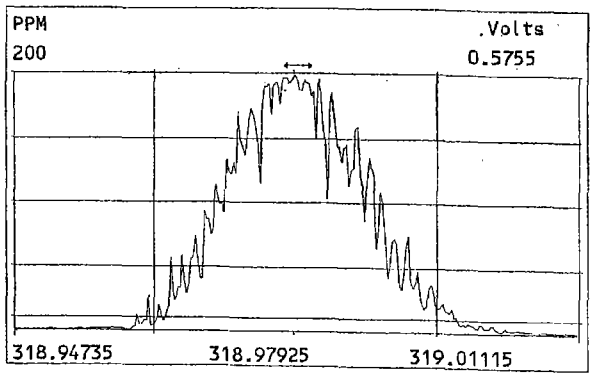
	Typ	Name	Amount	Resp	RA	RT	RF	RRF	
1	Unk	2,3,7,8-TCDF	200.00	3.34e+08	0.75 y	19:39	-	0.976	y
2	IS	13C-2,3,7,8-TCDF	100.00	1.71e+08	0.79 y	19:38	-	0.881	y
3	RS	13C-1,2,3,4-TCDF	100.00	1.94e+08	0.79 y	17:06	1.94e+06	-	n

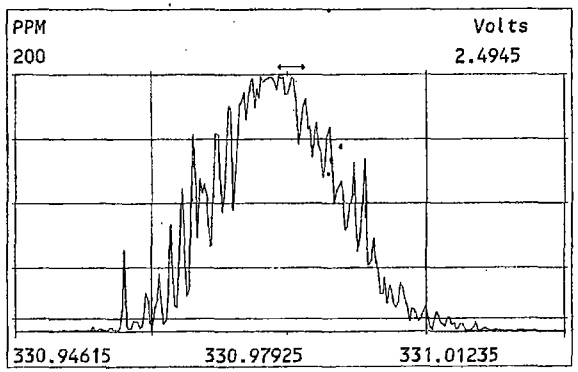
Analyst: _____ Date: 1/13/09

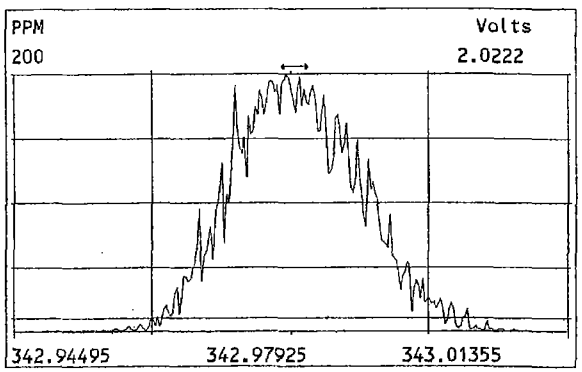
Peak Locate Examination:13-JAN-2009:11:05 File:13JAN09A
Experiment:TCDF Function:1 Reference:PFK

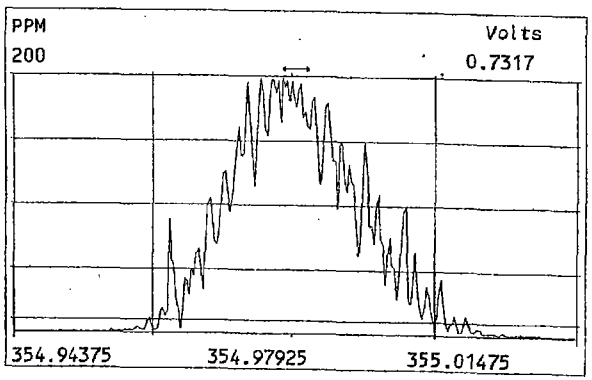


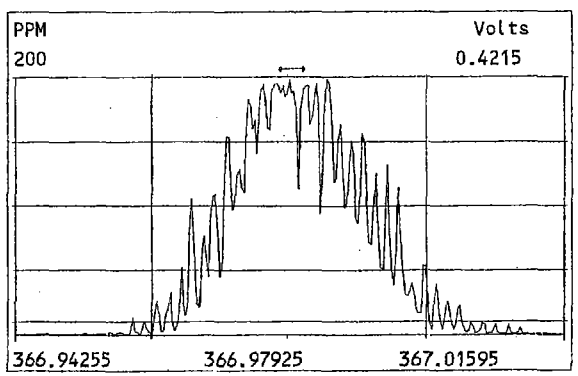


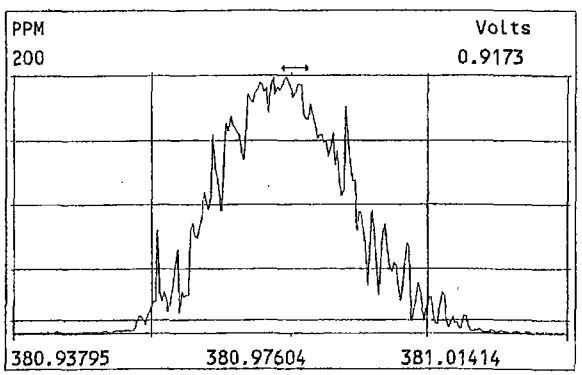




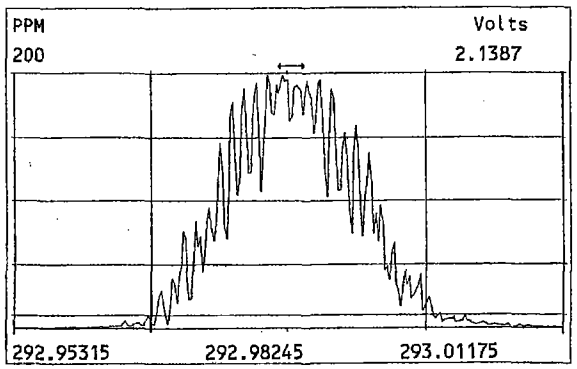


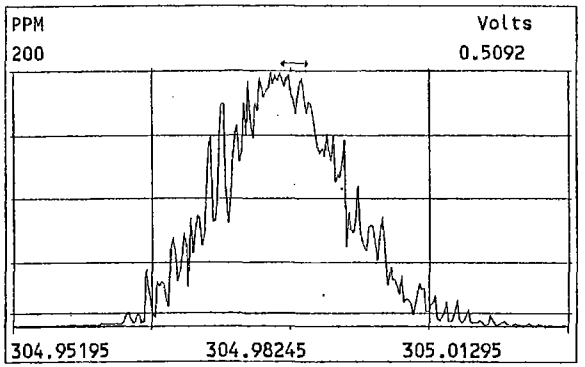


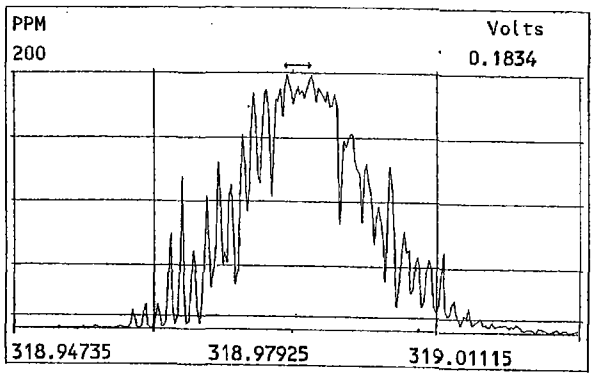


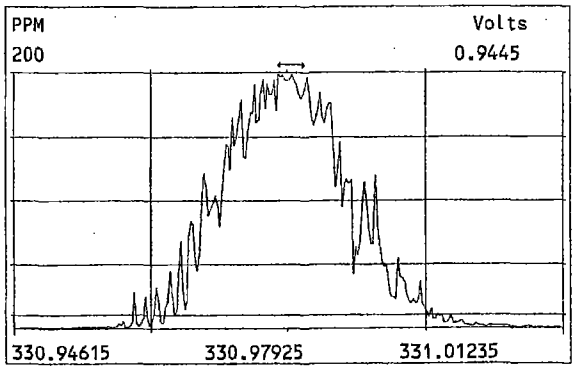


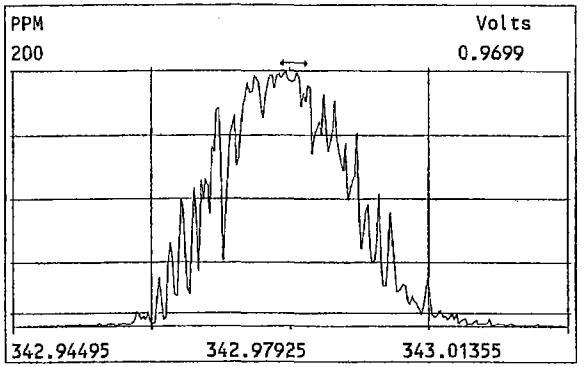
Peak Locate Examination:13-JAN-2009:14:38 File:13JAN09A_RES_CHECK
Experiment:TCDF Function:1 Reference:PFK

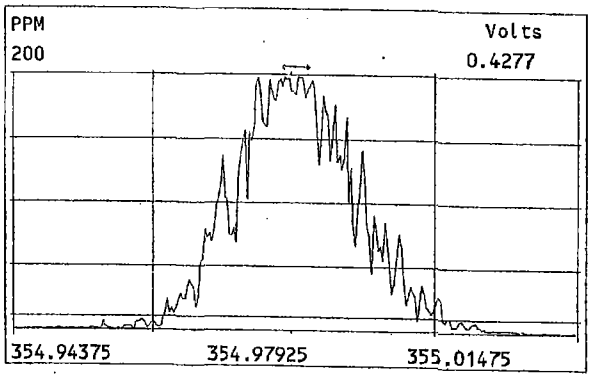


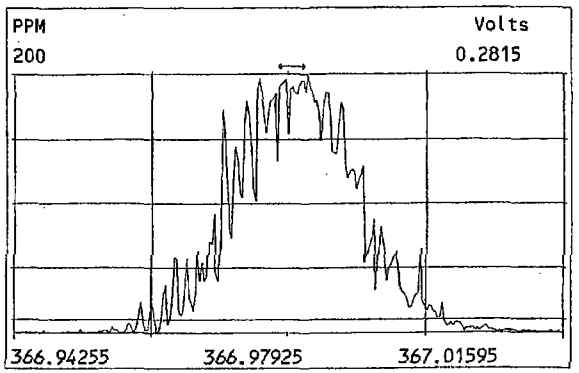


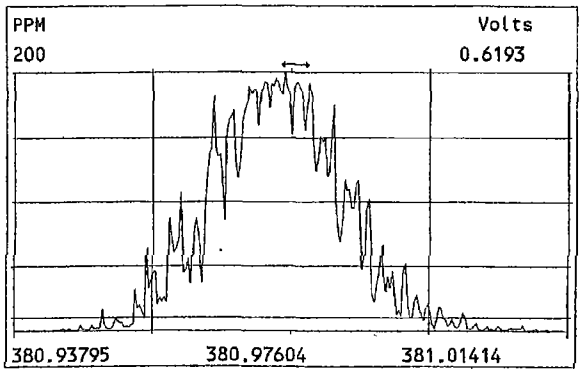












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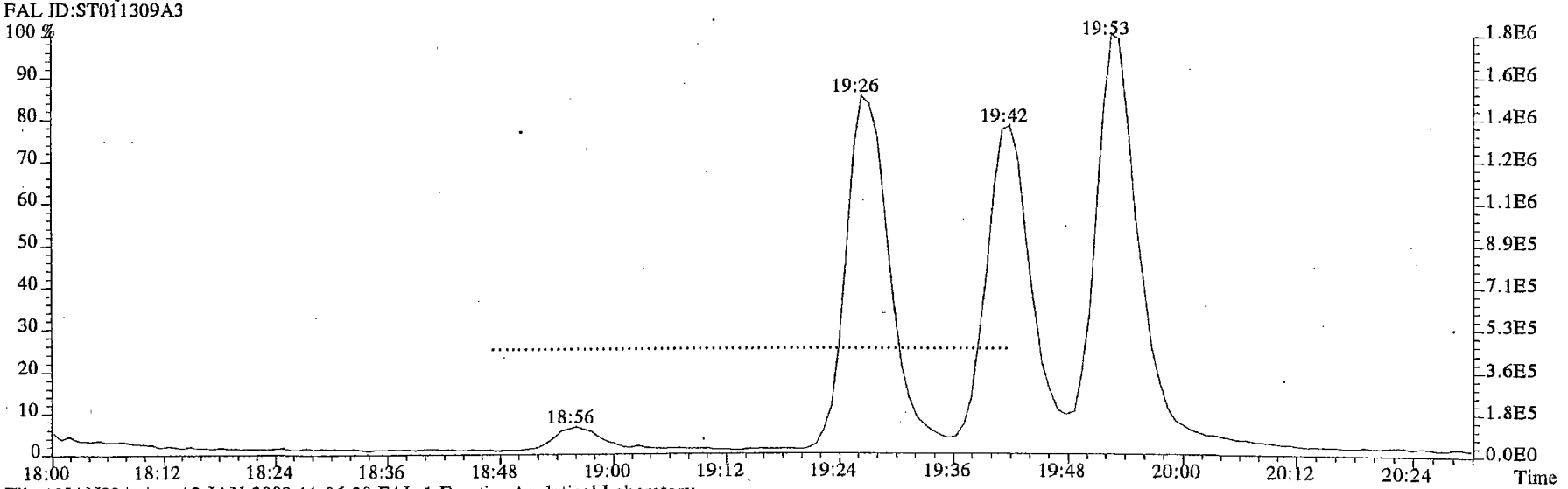
303.9016 Exp:TCDF
FAL ID:ST011309A3



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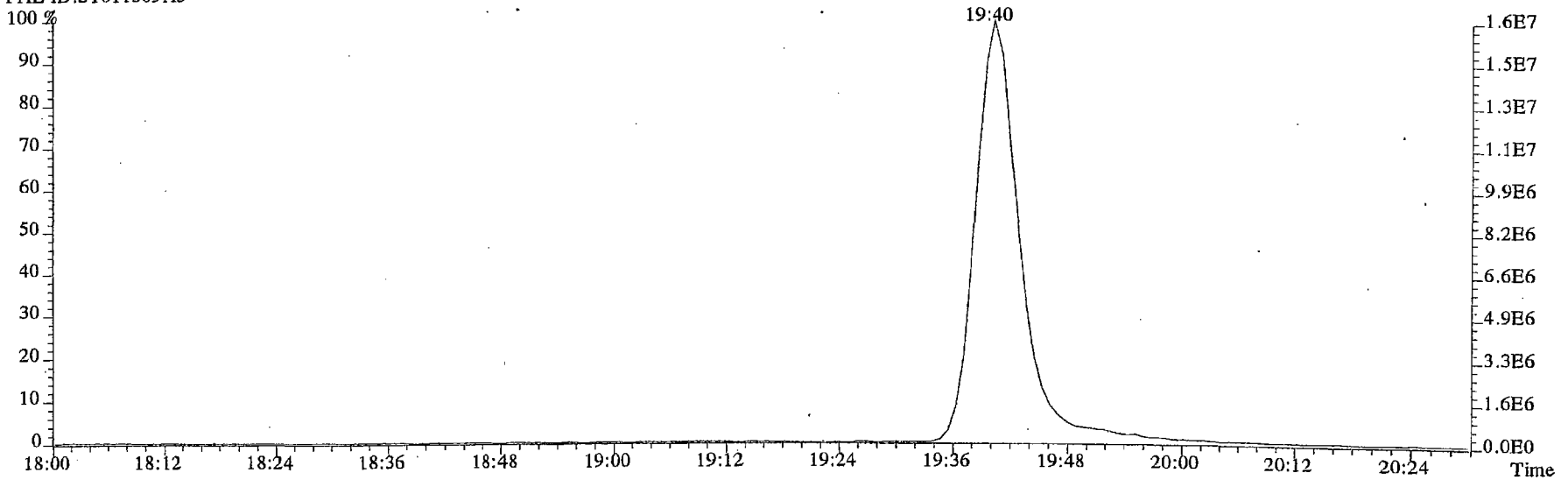

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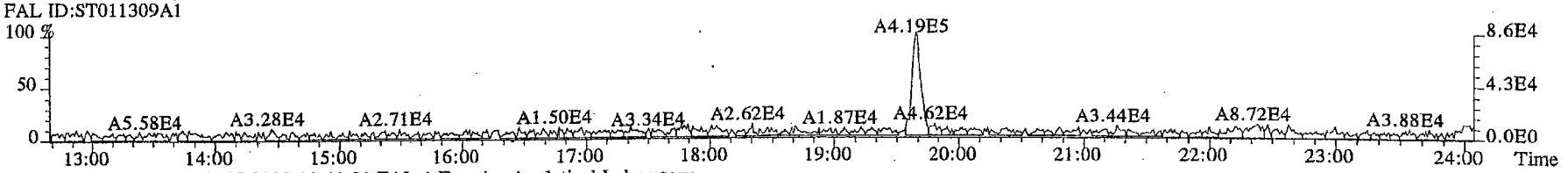

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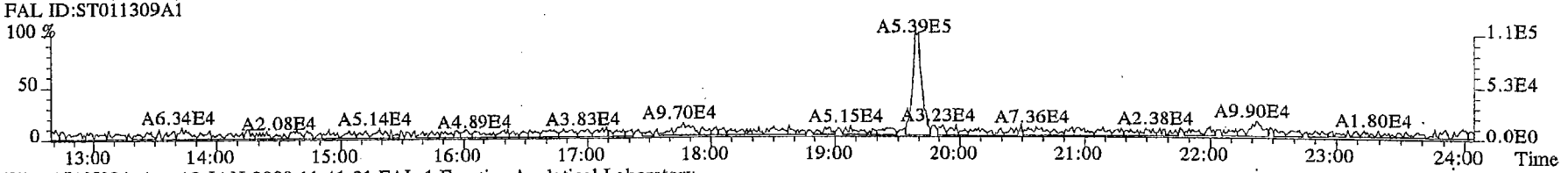

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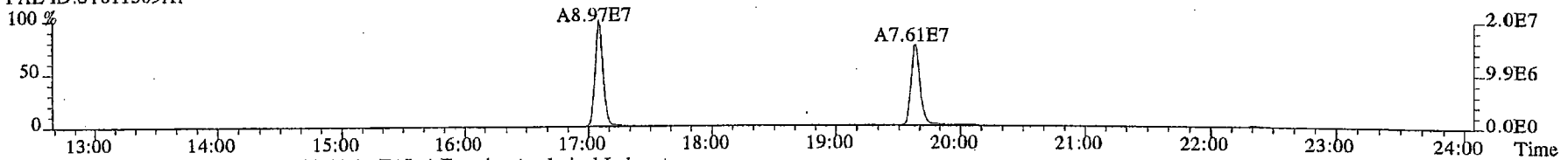

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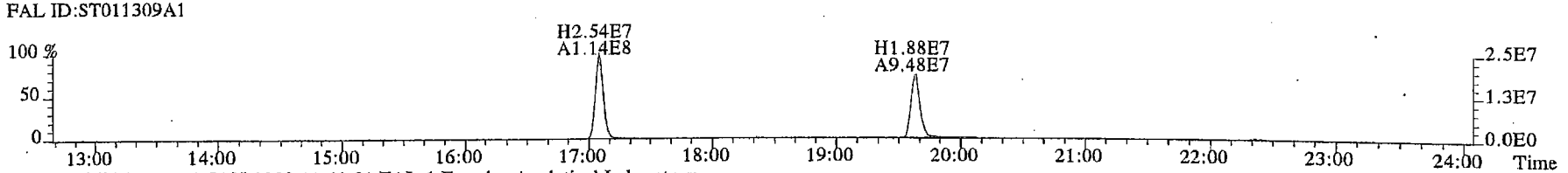

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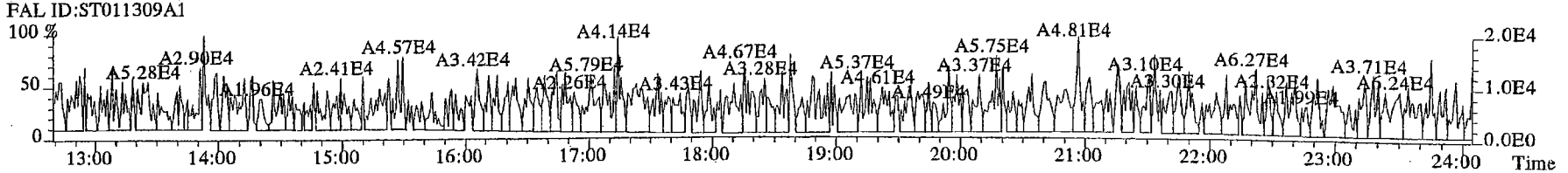

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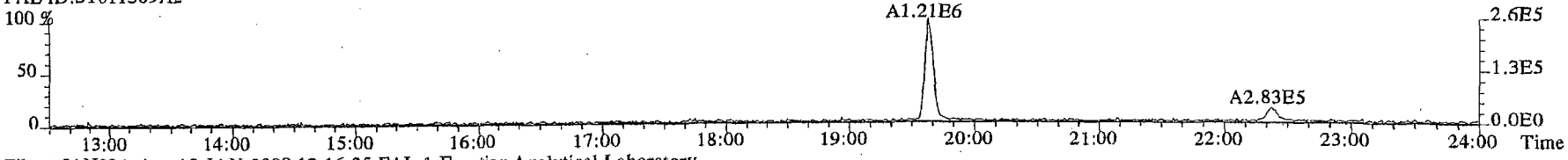

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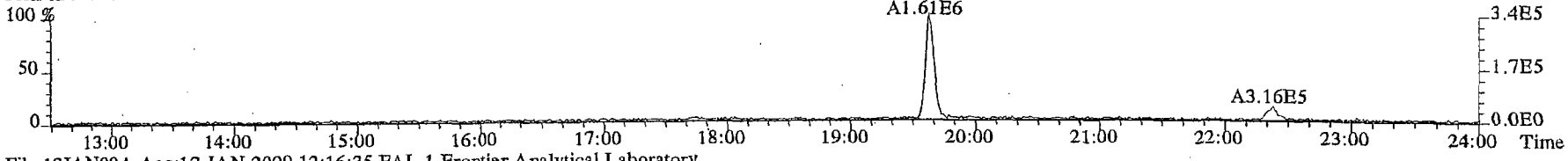

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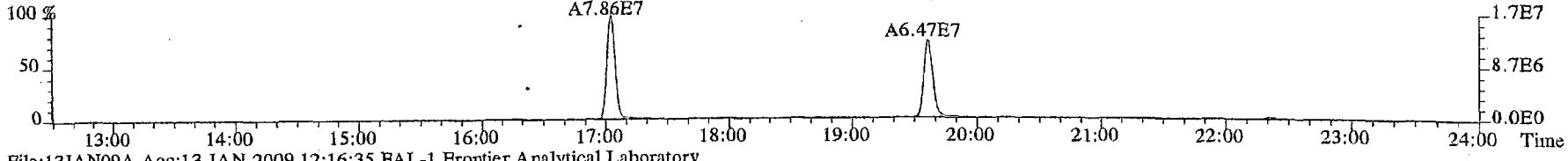

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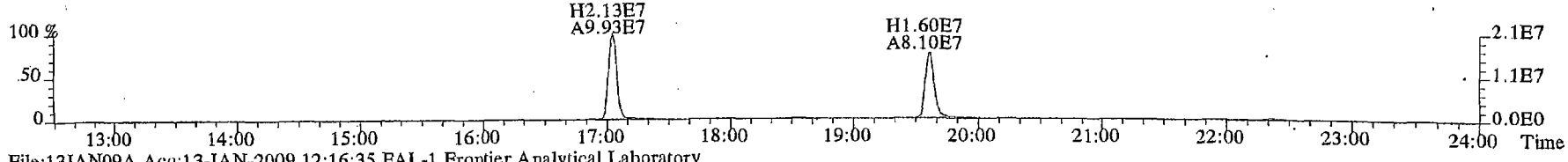

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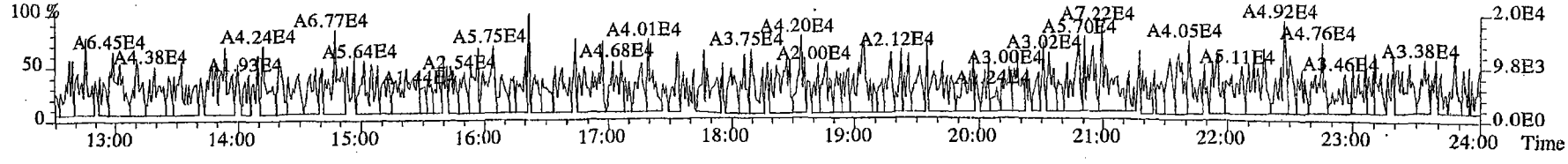

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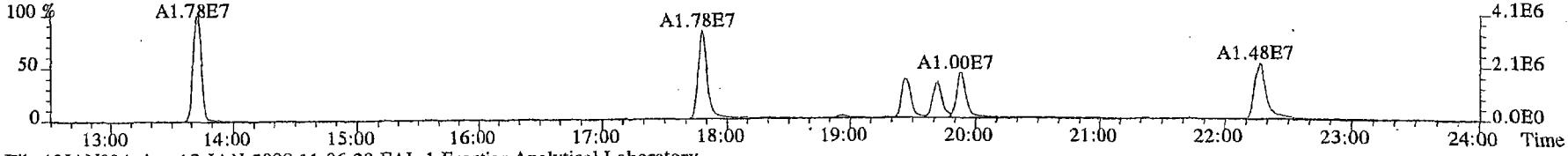

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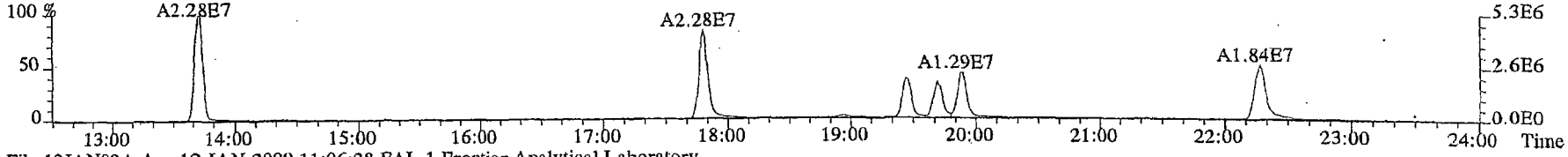

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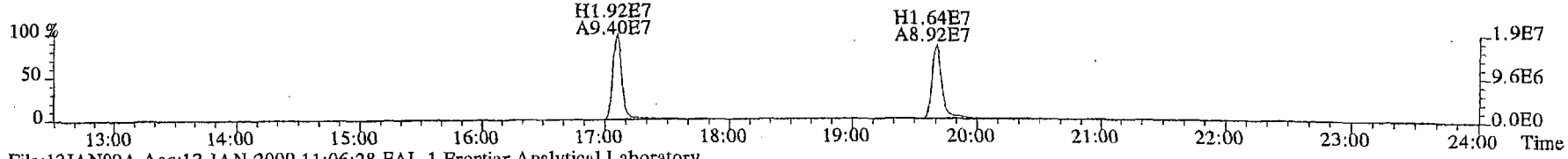

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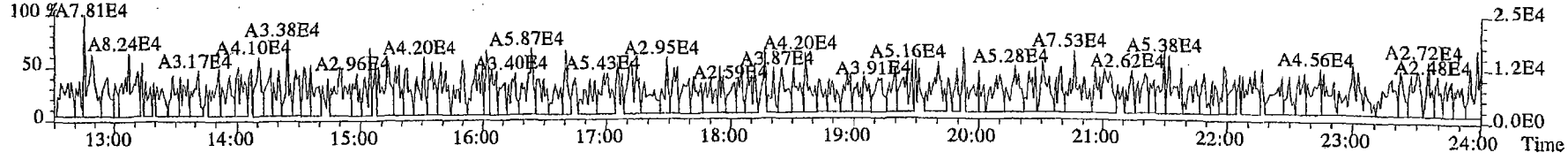

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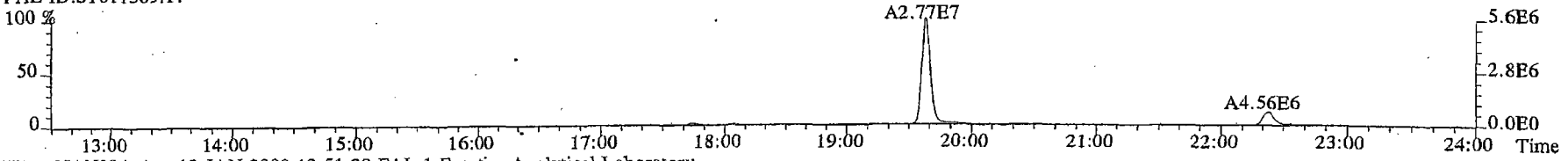

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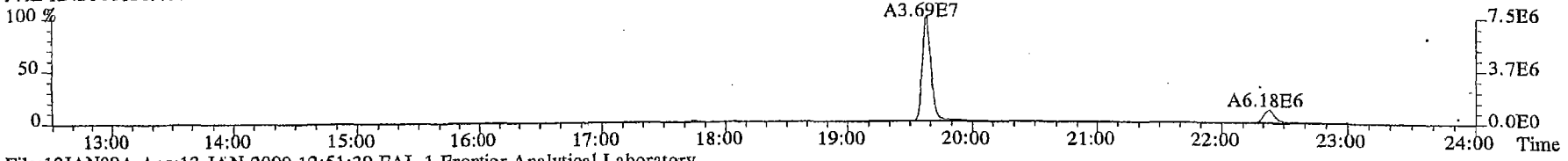

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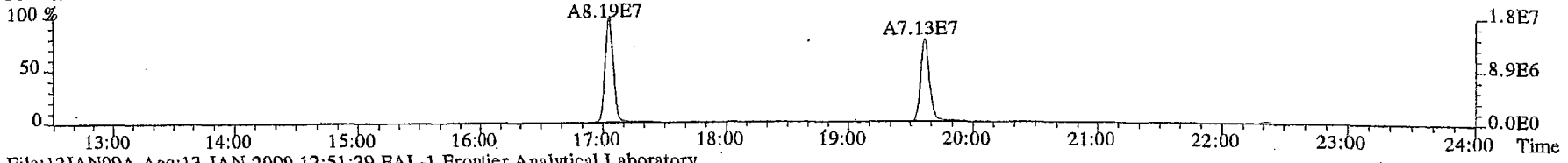

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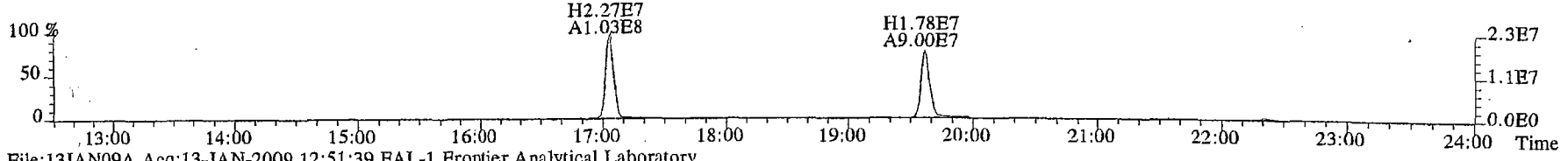

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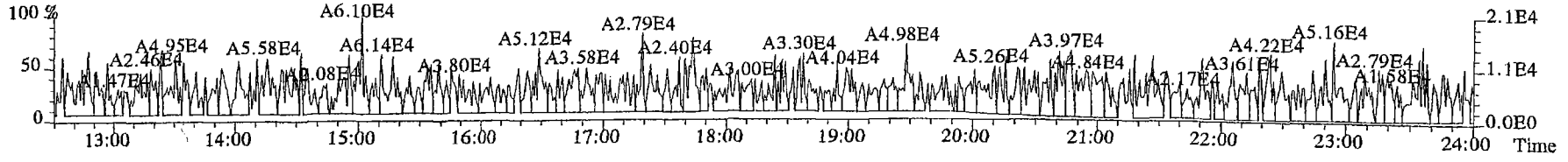

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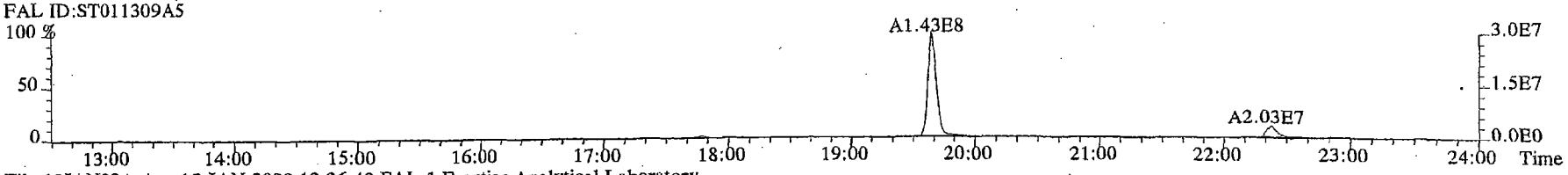

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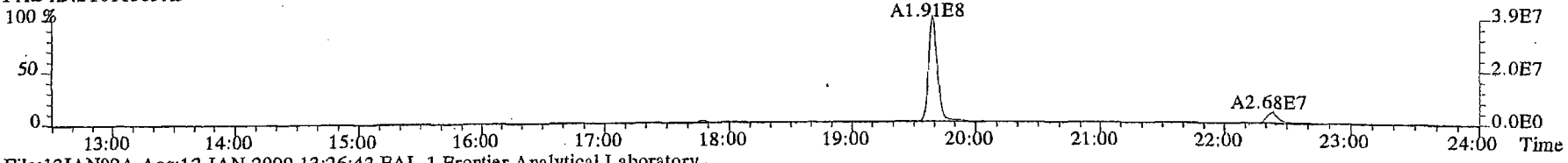

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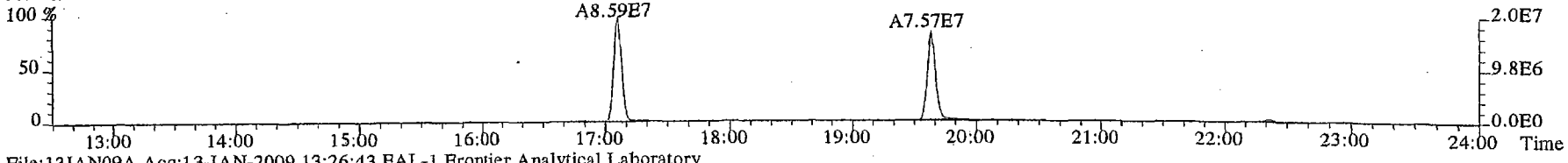

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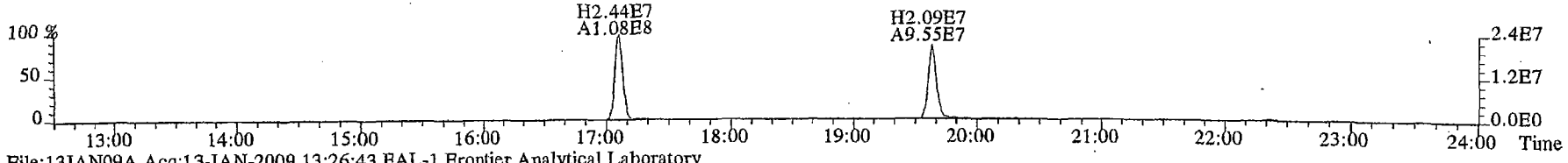

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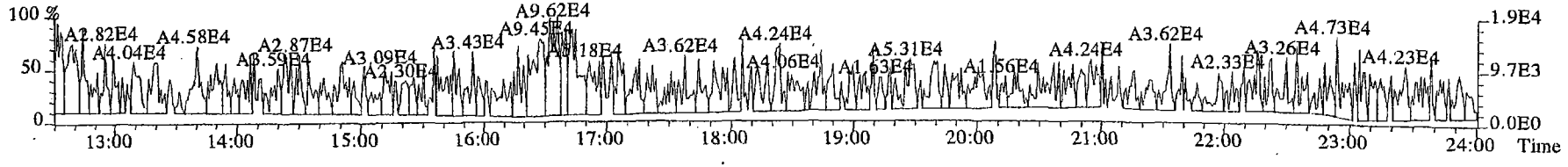


7DFA - Form VII-HR CDD-1
CDD/CDF CONTINUING CALIBRATION SUMMARY
HIGH RESOLUTION

LAB NAME: FRONTIER ANALYTICAL LAB CONTRACT: EP08W001564

LAB CODE: FALE CASE NO.: EPA05-2008-01 TO NO.: SDG NO.: SDG E3YC9

GC COLUMN: DB5 ID: 0.25 (mm) INSTRUMENT ID: FAL3

LAB FILE ID: 24FEB09M Sam: 11 DATE ANALYZED: 23-FEB-09 TIME ANALYZED: 22:50:13

INIT. CALIB. TIMES: 16:15:11 INIT. CALIB. DATE(S): 5-FEB-09

TARGET ANALYTES	SELECTED IONS	RR/ RRF	MEAN RR/ RRF	%D	%D FLAG	ION RATIO	ION RATIO FLAG	ION RATIO QC LIMITS
2,3,7,8-TCDD	320/322	1.07	1.04	2.69		0.79		0.65-0.89
2,3,7,8-TCDF	304/306	1.19	1.34	-11.4		0.72		0.65-0.89
1,2,3,7,8-PeCDF	340/342	1.02	1.03	-0.790		1.61		1.32-1.78
1,2,3,7,8-PeCDD	356/358	0.966	0.901	7.16		1.57		1.32-1.78
2,3,4,7,8-PeCDF	340/342	0.779	0.808	-3.64		1.60		1.32-1.78
1,2,3,4,7,8-HxCDF	374/376	1.44	1.35	6.20		1.28		1.05-1.43
1,2,3,6,7,8-HxCDF	374/376	1.32	1.25	5.72		1.28		1.05-1.43
1,2,3,4,7,8-HxCDD	390/392	1.37	1.43	-3.77		1.30		1.05-1.43
1,2,3,6,7,8-HxCDD	390/392	0.975	1.02	-4.34		1.25		1.05-1.43
1,2,3,7,8,9-HxCDD	390/392	1.08	1.05	2.36		1.25		1.05-1.43
2,3,4,6,7,8-HxCDF	374/376	1.58	1.53	3.52		1.27		1.05-1.43
1,2,3,7,8,9-HxCDF	374/376	1.22	1.19	2.60		1.27		1.05-1.43
1,2,3,4,6,7,8-HpCDF	408/410	1.17	1.10	6.07		1.03		0.88-1.20
1,2,3,4,6,7,8-HpCDD	424/426	0.884	0.987	-10.4		1.05		0.88-1.20
1,2,3,4,7,8,9-HpCDF	408/410	1.08	1.02	5.52		1.02		0.88-1.20
OCDD	458/460	0.884	0.940	-5.96		0.90		0.76-1.02
OCDF	442/444	0.747	0.763	-2.13		0.91		0.76-1.02
LABELED COMPOUNDS								
13C-2,3,7,8-TCDD	332/334	0.952	0.937	1.67		0.77		0.65-0.89
13C-1,2,3,7,8-PeCDD	368/370	0.902	0.754	19.6		1.78		1.32-1.78
13C-1,2,3,4,7,8-HxCDD	402/404	0.980	1.03	-4.66		1.30		1.05-1.43
13C-1,2,3,6,7,8-HxCDD	402/404	1.01	1.08	-6.05		1.29		1.05-1.43
13C-1,2,3,4,6,7,8-HpCDD	436/438	0.913	0.894	2.23		1.08		0.88-1.20
13C-OCDD	470/472	0.614	0.635	-3.30		0.93		0.76-1.02
13C-2,3,7,8-TCDF	316/318	0.889	0.863	3.10		0.85		0.65-0.89
13C-1,2,3,7,8-PeCDF	352/354	0.814	0.758	7.35		1.66		1.32-1.78
13C-2,3,4,7,8-PeCDF	352/354	0.844	0.776	8.73		1.67		1.32-1.78
13C-1,2,3,4,7,8-HxCDF	384/386	1.24	1.34	-7.60		0.53		0.43-0.59
13C-1,2,3,6,7,8-HxCDF	384/386	1.28	1.40	-8.23		0.53		0.43-0.59
13C-1,2,3,7,8,9-HxCDF	384/386	0.993	1.01	-1.29		0.54		0.43-0.59
13C-2,3,4,6,7,8-HxCDF	384/386	1.22	1.29	-5.62		0.54		0.43-0.59
13C-1,2,3,4,6,7,8-HpCDF	418/420	1.03	1.16	-11.2		0.44		0.37-0.51
13C-1,2,3,4,7,8,9-HpCDF	418/420	0.898	0.957	-6.12		0.44		0.37-0.51
13C-OCDF	454/456	0.843	0.947	-11.1		0.91		0.76-1.02
CLEAN-UP								
37Cl-2,3,7,8-TCDD	328/NA	0.847	0.879	-3.73		NA	NA	NA
INTERNAL STANDARDS								
13C-1,2,3,4-TCDD	332/334	NA	NA	NA	NA	0.79		0.65-0.89
13C-1,2,3,4-TCDF	316/318	NA	NA	NA	NA	0.86		0.65-0.89
13C-1,2,3,7,8,9-HxCDD	402/404	NA	NA	NA	NA	1.29		1.05-1.43

The laboratory must flag any analyte which does not meet criteria for Percent Difference (%D) or ion abundance ratio by placing an asterik in the appropriate flag column

Analyst: C Date: 3/3/09

7DFA - Form VII-HR CDD-1
CDD/CDF CONTINUING CALIBRATION SUMMARY
HIGH RESOLUTION

LAB NAME: FRONTIER ANALYTICAL LAB CONTRACT: EP08W001564

LAB CODE: FALE CASE NO.: EPA05-2008-01 TO NO.: SDG NO.: SDG E3YC9

GC COLUMN: DB5 ID: 0.25 (mm) INSTRUMENT ID: FAL3

LAB FILE ID: 24FEB09M Sam: 18 DATE ANALYZED: 24-FEB-09 TIME ANALYZED: 05:17:02

INIT. CALIB. TIMES: 16:15:11 INIT. CALIB. DATE(S): 5-FEB-09

TARGET ANALYTES	SELECTED IONS	RR/ RRF	MEAN RR/ RRF	%D	%D FLAG	ION RATIO	ION RATIO FLAG	ION RATIO QC LIMITS
2,3,7,8-TCDD	320/322	1.02	1.04	-2.17		0.81		0.65-0.89
2,3,7,8-TCDF	304/306	1.18	1.34	-12.1		0.71		0.65-0.89
1,2,3,7,8-PeCDF	340/342	1.02	1.03	-0.664		1.62		1.32-1.78
1,2,3,7,8-PeCDD	356/358	0.925	0.901	2.66		1.56		1.32-1.78
2,3,4,7,8-PeCDF	340/342	0.770	0.808	-4.71		1.60		1.32-1.78
1,2,3,4,7,8-HxCDF	374/376	1.44	1.35	6.20		1.26		1.05-1.43
1,2,3,6,7,8-HxCDF	374/376	1.31	1.25	4.86		1.25		1.05-1.43
1,2,3,4,7,8-HxCDD	390/392	1.39	1.43	-2.78		1.27		1.05-1.43
1,2,3,6,7,8-HxCDD	390/392	0.974	1.02	-4.44		1.29		1.05-1.43
1,2,3,7,8,9-HxCDD	390/392	1.10	1.05	4.37		1.29		1.05-1.43
2,3,4,6,7,8-HxCDF	374/376	1.56	1.53	2.02		1.25		1.05-1.43
1,2,3,7,8,9-HxCDF	374/376	1.22	1.19	3.12		1.28		1.05-1.43
1,2,3,4,6,7,8-HpCDF	408/410	1.16	1.10	5.50		1.02		0.88-1.20
1,2,3,4,6,7,8-HpCDD	424/426	0.892	0.987	-9.60		1.04		0.88-1.20
1,2,3,4,7,8,9-HpCDF	408/410	1.11	1.02	8.01		1.03		0.88-1.20
OCDD	458/460	0.878	0.940	-6.54		0.88		0.76-1.02
OCDF	442/444	0.746	0.763	-2.24		0.91		0.76-1.02
LABELED COMPOUNDS								
13C-2,3,7,8-TCDD	332/334	0.963	0.937	2.81		0.78		0.65-0.89
13C-1,2,3,7,8-PeCDD	368/370	0.903	0.754	19.8		1.77		1.32-1.78
13C-1,2,3,4,7,8-HxCDD	402/404	0.953	1.03	-7.31		1.29		1.05-1.43
13C-1,2,3,6,7,8-HxCDD	402/404	1.02	1.08	-5.08		1.28		1.05-1.43
13C-1,2,3,4,6,7,8-HpCDD	436/438	0.858	0.894	-3.92		1.06		0.88-1.20
13C-OCDD	470/472	0.592	0.635	-6.80		0.93		0.76-1.02
13C-2,3,7,8-TCDF	316/318	0.890	0.863	3.14		0.85		0.65-0.89
13C-1,2,3,7,8-PeCDF	352/354	0.791	0.758	4.36		1.65		1.32-1.78
13C-2,3,4,7,8-PeCDF	352/354	0.810	0.776	4.45		1.66		1.32-1.78
13C-1,2,3,4,7,8-HxCDF	384/386	1.25	1.34	-6.95		0.53		0.43-0.59
13C-1,2,3,6,7,8-HxCDF	384/386	1.29	1.40	-7.53		0.54		0.43-0.59
13C-1,2,3,7,8,9-HxCDF	384/386	0.996	1.01	-0.990		0.54		0.43-0.59
13C-2,3,4,6,7,8-HxCDF	384/386	1.20	1.29	-6.87		0.53		0.43-0.59
13C-1,2,3,4,6,7,8-HpCDF	418/420	1.02	1.16	-11.6		0.44		0.37-0.51
13C-1,2,3,4,7,8,9-HpCDF	418/420	0.853	0.957	-10.9		0.45		0.37-0.51
13C-OCDF	454/456	0.802	0.947	-15.4		0.92		0.76-1.02
CLEAN-UP								
37Cl-2,3,7,8-TCDD	328/NA	0.877	0.879	-0.271		NA	NA	NA
INTERNAL STANDARDS								
13C-1,2,3,4-TCDD	332/334	NA	NA	NA	NA	0.79		0.65-0.89
13C-1,2,3,4-TCDF	316/318	NA	NA	NA	NA	0.84		0.65-0.89
13C-1,2,3,7,8,9-HxCDD	402/404	NA	NA	NA	NA	1.28		1.05-1.43

The laboratory must flag any analyte which does not meet criteria for Percent Difference (%D) or ion abundance ratio by placing an asterik in the appropriate flag column Analyst: Date: 3/6/09

7DFA - Form VII-HR CDD-1
TCDF CONTINUING CALIBRATION SUMMARY
HIGH RESOLUTION

LAB NAME: FRONTIER ANALYTICAL LAB CONTRACT: EP08W001564

LAB CODE: FALE CASE NO.: EPA05-2008-01 TO NO.: SDG NO.: SDG E3YC9

GC COLUMN: DB225 ID: 0.25 (mm) INSTRUMENT ID: FAL1

LAB FILE ID: 04MAR09A DATE ANALYZED: 4-MAR-09 TIME ANALYZED: 09:46:39

INIT. CALIB. TIMES: 11:41:31 INIT. CALIB. DATE(S): 13-JAN-09

TARGET ANALYTES	SELECTED IONS	RR/ RRF	MEAN RR/ RRF	%D	%D FLAG	ION RATIO	ION RATIO FLAG	ION RATIO QC LIMITS
2,3,7,8-TCDF	304/306	0.918	1.03	-10.6		0.78		0.65-0.89
LABELED COMPOUNDS								
13C-2,3,7,8-TCDF	316/318	0.909	0.871	4.35		0.79		0.65-0.89
CLEAN-UP								
	328/NA	NA	NA	NA	NA	NA	NA	NA
INTERNAL STANDARDS								
13C-1,2,3,4-TCDF	316/318	NA	NA	NA	NA	0.79		0.65-0.89

The laboratory must flag any analyte which does not meet criteria for Percent Difference (%D) or ion abundance ratio by placing an asterik in the appropriate flag column

Analyst: [signature] Date: 3/4/09

7DFA - Form VII-HR CDD-1
TCDF CONTINUING CALIBRATION SUMMARY
HIGH RESOLUTION

LAB NAME: FRONTIER ANALYTICAL LAB CONTRACT: EP08W001564

LAB CODE: FALE CASE NO.: EPA05-2008-01 TO NO.: SDG NO.: SDG E3YC9

GC COLUMN: DB225 ID: 0.25 (mm) INSTRUMENT ID: FAL1

LAB FILE ID: 04MAR09A DATE ANALYZED: 4-MAR-09 TIME ANALYZED: 12:09:12

INIT. CALIB. TIMES: 11:41:31 INIT. CALIB. DATE(S): 13-JAN-09

TARGET ANALYTES	SELECTED IONS	RR/ RRF	MEAN RR/ RRF	%D	%D FLAG	ION RATIO	ION RATIO FLAG	ION RATIO QC LIMITS
2,3,7,8-TCDF	304/306	0.841	1.03	-18.0		0.79		0.65-0.89
LABELED COMPOUNDS								
13C-2,3,7,8-TCDF	316/318	0.811	0.871	-6.93		0.78		0.65-0.89
CLEAN-UP								
	328/NA	NA	NA	NA	NA	NA	NA	NA
INTERNAL STANDARDS								
13C-1,2,3,4-TCDF	316/318	NA	NA	NA	NA	0.78		0.65-0.89

The laboratory must flag any analyte which does not meet criteria for Percent Difference (%D) or ion abundance ratio by placing an asterik in the appropriate flag column Analyst: [illegible] Date: 3/4/09

7DFB - Form VII-HR CDD-2
CDD/CDF CONTINUING CALIBRATION RETENTION TIME SUMMARY
HIGH RESOLUTION

LAB NAME: FRONTIER ANALYTICAL LAB CONTRACT: EP08W001564

LAB CODE: FALE CASE NO.: EPA05-2008-01 TO NO.: SDG NO.: SDG E3YC9

GC COLUMN: DB5 ID: 0.25 (mm) INSTRUMENT ID: FAL3

DATE ANALYZED: 23-FEB-09 TIME ANALYZED: 22:50:13

LAB FILE ID: 24FEB09M Sam: 11

INIT. CALIB. TIMES: 16:15:11 INIT. CALIB. DATE(S): 5-FEB-09

TARGET ANALYTES	RRT	RT
2,3,7,8-TCDD	1.001	27:32
2,3,7,8-TCDF	1.001	26:46
1,2,3,7,8-PeCDF	1.001	31:37
1,2,3,7,8-PeCDD	1.001	33:20
2,3,4,7,8-PeCDF	1.000	32:55
1,2,3,4,7,8-HxCDF	1.001	37:18
1,2,3,6,7,8-HxCDF	1.001	37:31
1,2,3,4,7,8-HxCDD	1.001	38:42
1,2,3,6,7,8-HxCDD	1.001	38:52
1,2,3,7,8,9-HxCDD	1.012	39:18
2,3,4,6,7,8-HxCDF	1.000	38:26
1,2,3,7,8,9-HxCDF	1.000	39:52
1,2,3,4,6,7,8-HpCDF	1.001	42:24
1,2,3,4,6,7,8-HpCDD	1.000	44:17
1,2,3,4,7,8,9-HpCDF	1.001	45:13
OCDD	1.001	49:52
OCDF	1.001	50:15
LABELED COMPOUNDS		
13C-2,3,7,8-TCDD	1.022	27:30
13C-1,2,3,7,8-PeCDD	1.238	33:19
13C-1,2,3,4,7,8-HxCDD	0.985	38:40
13C-1,2,3,6,7,8-HxCDD	0.989	38:50
13C-1,2,3,4,6,7,8-HpCDD	1.127	44:17
13C-OCDD	1.269	49:51
13C-2,3,7,8-TCDF	0.994	26:45
13C-1,2,3,7,8-PeCDF	1.173	31:35
13C-2,3,4,7,8-PeCDF	1.223	32:55
13C-1,2,3,4,7,8-HxCDF	0.949	37:17
13C-1,2,3,6,7,8-HxCDF	0.954	37:29
13C-1,2,3,7,8,9-HxCDF	1.015	39:52
13C-2,3,4,6,7,8-HxCDF	0.978	38:26
13C-1,2,3,4,6,7,8-HpCDF	1.079	42:22
13C-1,2,3,4,7,8,9-HpCDF	1.151	45:12
13C-OCDF	1.279	50:14
CLEAN-UP STANDARD		
37Cl-2,3,7,8-TCDD	1.023	27:32
INTERNAL STANDARD		
13C-1,2,3,4-TCDD	NA	26:55
13C-1,2,3,4-TCDF	NA	25:40
13C-1,2,3,7,8,9-HxCDD	NA	39:17

Analyst: Date: 3/2/09

7DFB - Form VII-HR CDD-2
CDD/CDF CONTINUING CALIBRATION RETENTION TIME SUMMARY
HIGH RESOLUTION

LAB NAME: FRONTIER ANALYTICAL LAB CONTRACT: EP08W001564

LAB CODE: FALE CASE NO.: EPA05-2008-01 TO NO.: SDG NO.: SDG E3YC9

GC COLUMN: DB5 ID: 0.25 (mm) INSTRUMENT ID: FAL3

DATE ANALYZED: 24-FEB-09 TIME ANALYZED: 05:17:02

LAB FILE ID: 24FEB09M Sam: 18

INIT. CALIB. TIMES: 16:15:11 INIT. CALIB. DATE(S): 5-FEB-09

TARGET ANALYTES	RRT	RT
2,3,7,8-TCDD	1.001	27:31
2,3,7,8-TCDF	1.001	26:46
1,2,3,7,8-PeCDF	1.001	31:36
1,2,3,7,8-PeCDD	1.001	33:20
2,3,4,7,8-PeCDF	1.001	32:55
1,2,3,4,7,8-HxCDF	1.001	37:18
1,2,3,6,7,8-HxCDF	1.000	37:29
1,2,3,4,7,8-HxCDD	1.001	38:41
1,2,3,6,7,8-HxCDD	1.000	38:51
1,2,3,7,8,9-HxCDD	1.012	39:18
2,3,4,6,7,8-HxCDF	1.001	38:26
1,2,3,7,8,9-HxCDF	1.001	39:53
1,2,3,4,6,7,8-HpCDF	1.001	42:22
1,2,3,4,6,7,8-HpCDD	1.001	44:17
1,2,3,4,7,8,9-HpCDF	1.001	45:13
OCDD	1.001	49:52
OCDF	1.001	50:15
LABELED COMPOUNDS		
13C-2,3,7,8-TCDD	1.022	27:30
13C-1,2,3,7,8-PeCDD	1.238	33:18
13C-1,2,3,4,7,8-HxCDD	0.985	38:40
13C-1,2,3,6,7,8-HxCDD	0.989	38:50
13C-1,2,3,4,6,7,8-HpCDD	1.127	44:15
13C-OCDD	1.269	49:50
13C-2,3,7,8-TCDF	0.994	26:45
13C-1,2,3,7,8-PeCDF	1.174	31:34
13C-2,3,4,7,8-PeCDF	1.222	32:53
13C-1,2,3,4,7,8-HxCDF	0.949	37:16
13C-1,2,3,6,7,8-HxCDF	0.954	37:29
13C-1,2,3,7,8,9-HxCDF	1.015	39:51
13C-2,3,4,6,7,8-HxCDF	0.978	38:24
13C-1,2,3,4,6,7,8-HpCDF	1.078	42:21
13C-1,2,3,4,7,8,9-HpCDF	1.151	45:11
13C-OCDF	1.279	50:13
CLEAN-UP STANDARD		
37Cl-2,3,7,8-TCDD	1.023	27:31
INTERNAL STANDARD		
13C-1,2,3,4-TCDD	NA	26:54
13C-1,2,3,4-TCDF	NA	25:39
13C-1,2,3,7,8,9-HxCDD	NA	39:16

Analyst: AC Date: 3/3/09

7DFB - Form VII-HR CDD-2
TCDF CONTINUING CALIBRATION RETENTION TIME SUMMARY
HIGH RESOLUTION

LAB NAME: FRONTIER ANALYTICAL LAB CONTRACT: EP08W001564

LAB CODE: FALE CASE NO.: EPA05-2008-01 TO NO.: SDG NO.: SDG E3YC9

GC COLUMN: DB225 ID: 0.25 (mm) INSTRUMENT ID: FAL1

DATE ANALYZED: 4-MAR-09 TIME ANALYZED: 09:46:39

LAB FILE ID: 04MAR09A

INIT. CALIB. TIMES: 11:41:31 INIT. CALIB. DATE(S): 13-JAN-09

TARGET ANALYTES	RRT	RT
2,3,7,8-TCDF	1.001	19:34

LABELED COMPOUNDS		
13C-2,3,7,8-TCDF	NA	19:33

CLEAN-UP STANDARD

INTERNAL STANDARD		
13C-1,2,3,4-TCDF	NA	16:59

Analyst: [signature] Date: 3/4/09

7DFB - Form VII-HR CDD-2
TCDF CONTINUING CALIBRATION RETENTION TIME SUMMARY
HIGH RESOLUTION

LAB NAME: FRONTIER ANALYTICAL LAB CONTRACT: EP08W001564

LAB CODE: FALE CASE NO.: EPA05-2008-01 TO NO.: SDG NO.: SDG E3YC9

GC COLUMN: DB225 ID: 0.25 (mm) INSTRUMENT ID: FAL1

DATE ANALYZED: 4-MAR-09 TIME ANALYZED: 12:09:12

LAB FILE ID: 04MAR09A

INIT. CALIB. TIMES: 11:41:31 INIT. CALIB. DATE(S): 13-JAN-09

TARGET ANALYTES	RRT	RT
2,3,7,8-TCDF	1.002	19:29

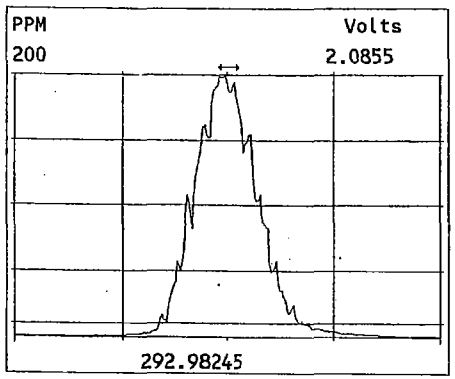
LABELED COMPOUNDS		
13C-2,3,7,8-TCDF	NA	19:27

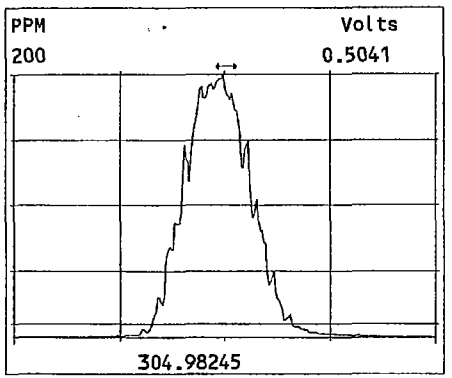
CLEAN-UP STANDARD

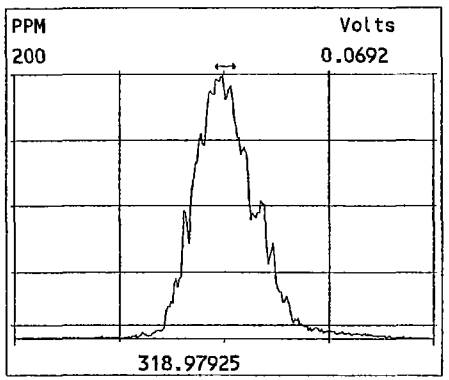
INTERNAL STANDARD		
13C-1,2,3,4-TCDF	NA	16:54

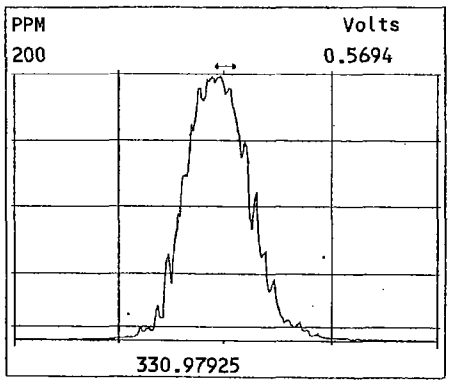
Analyst: [illegible] Date: 3/4/09

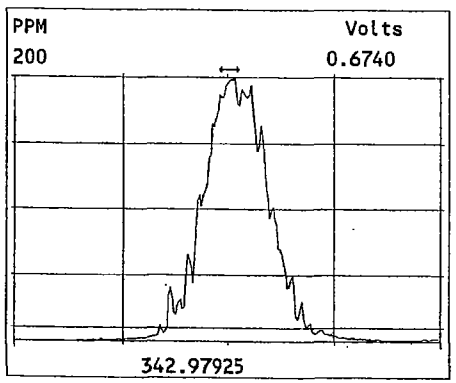
Peak Locate Examination:23-FEB-2009:13:35 File:24FEB09M
Experiment:PCDD Function:1 Reference:PFK

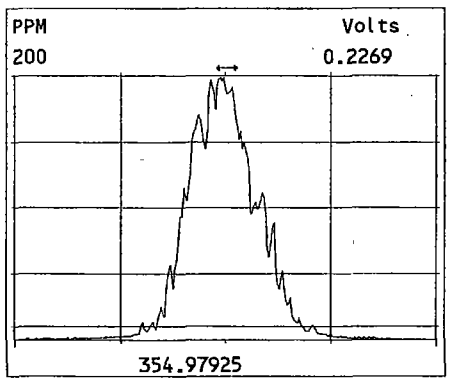


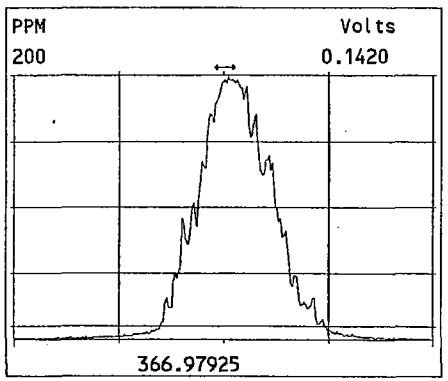


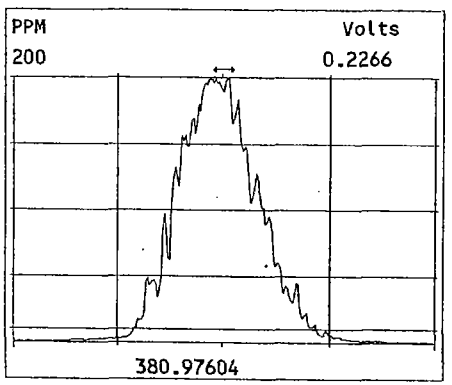


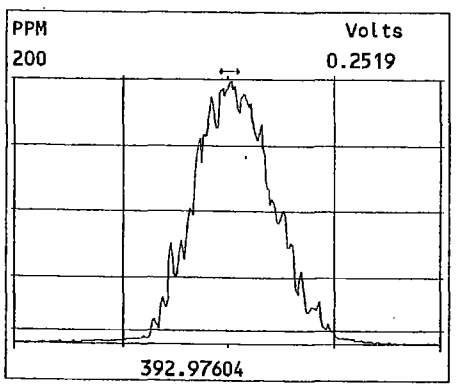


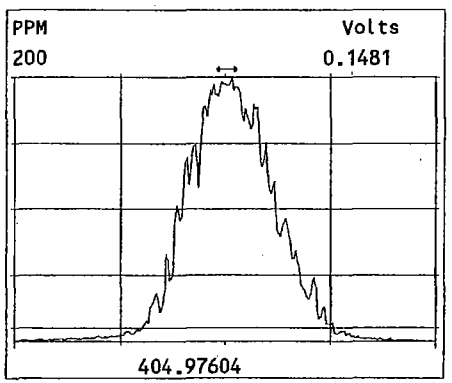


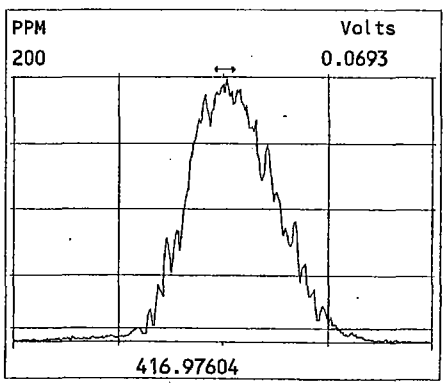




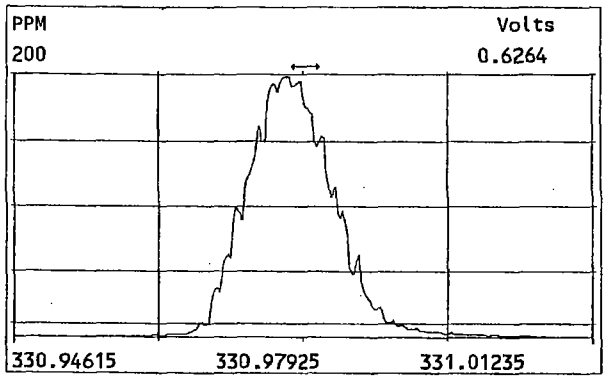


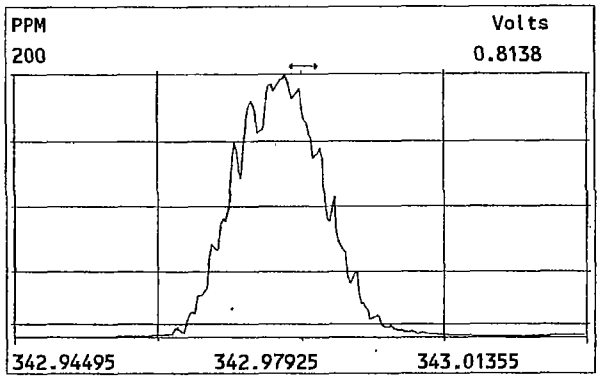


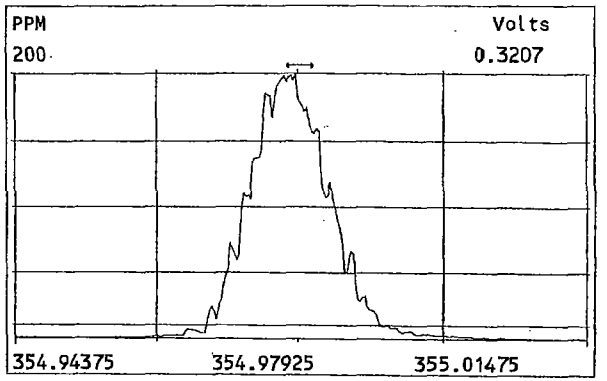


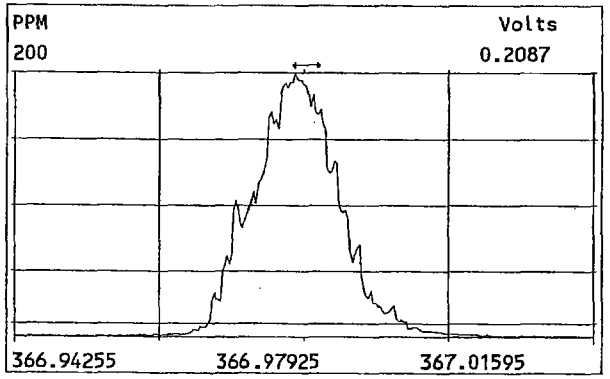


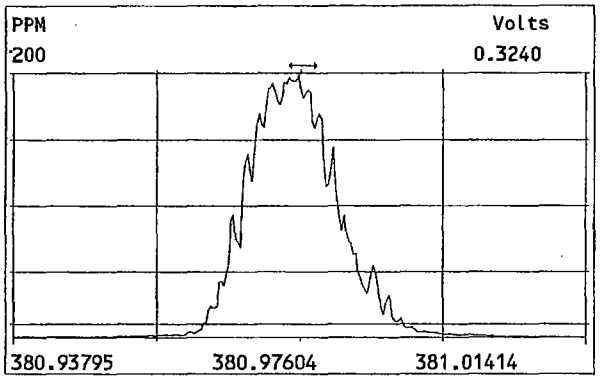
Peak Locate Examination:23-FEB-2009:13:35 File:24FEB09M
Experiment:PCDD Function:2 Reference:PFK

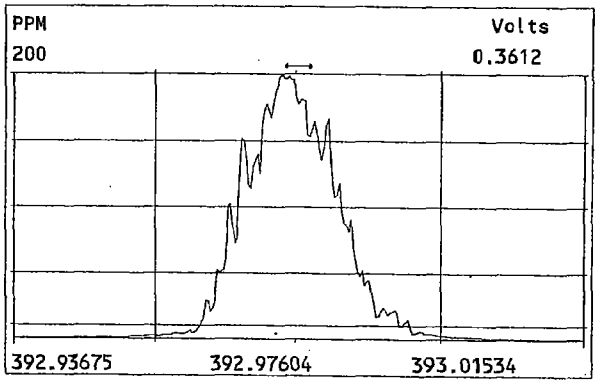


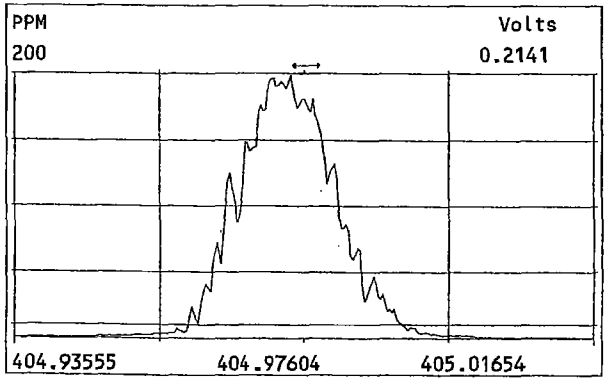


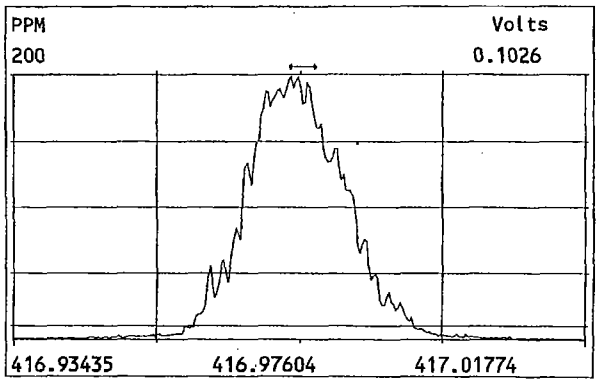




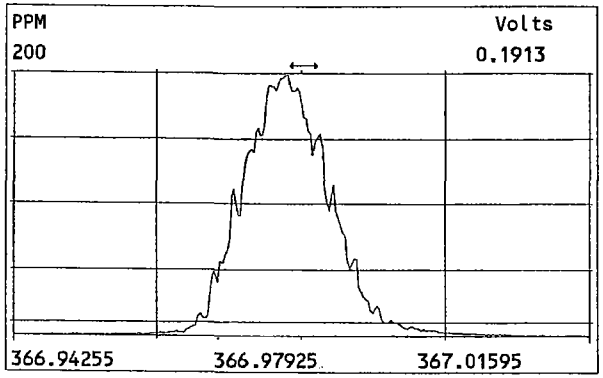


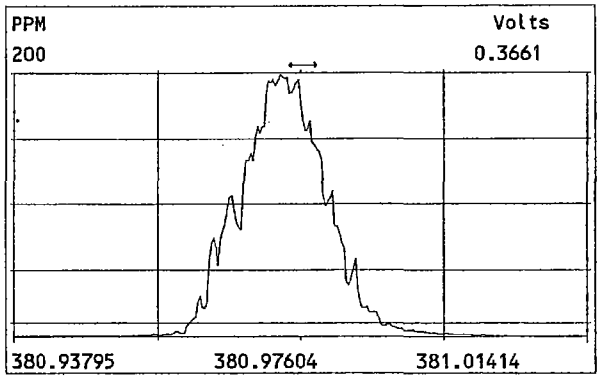


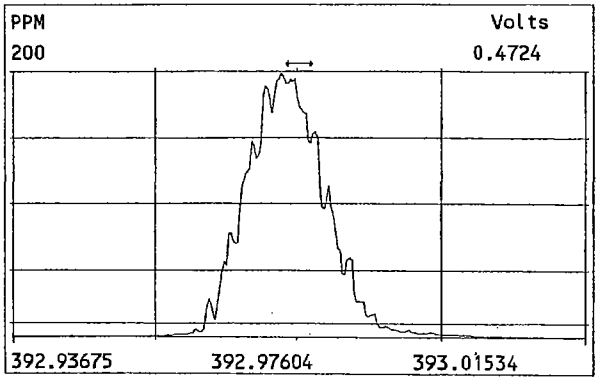


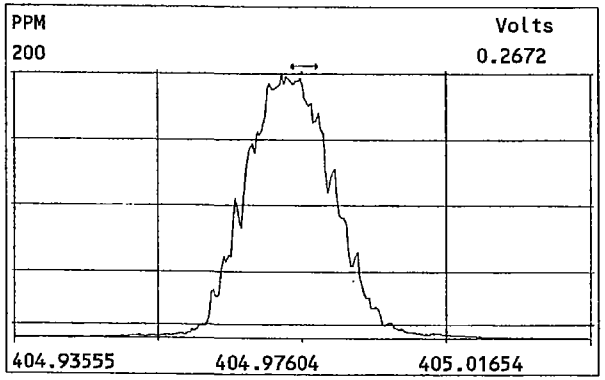


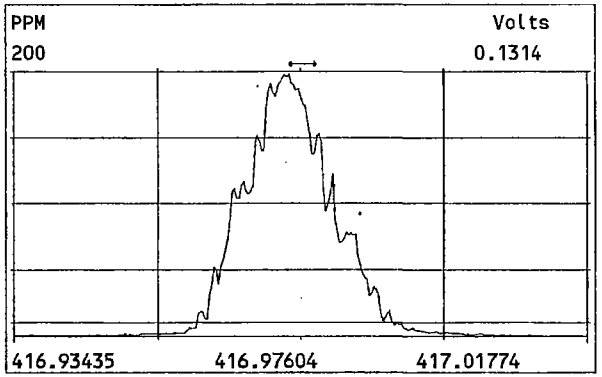
Peak Locate Examination:23-FEB-2009:13:36 File:24FEB09M
Experiment:PCDD Function:3 Reference:PFK

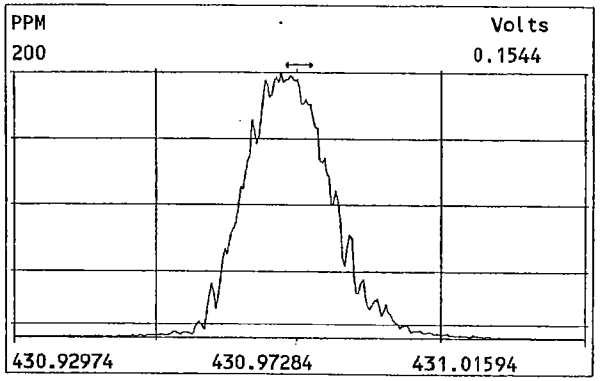


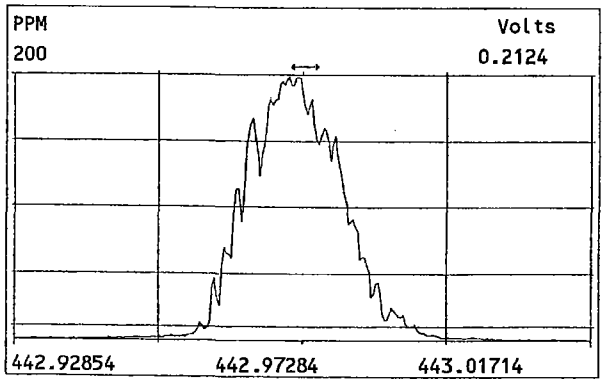


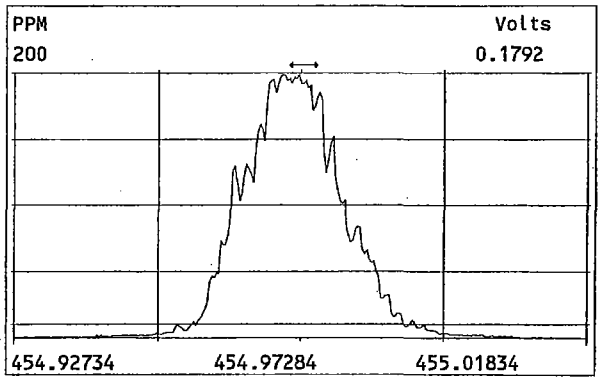




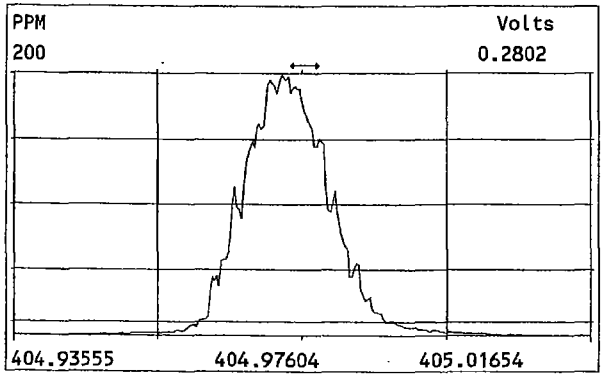


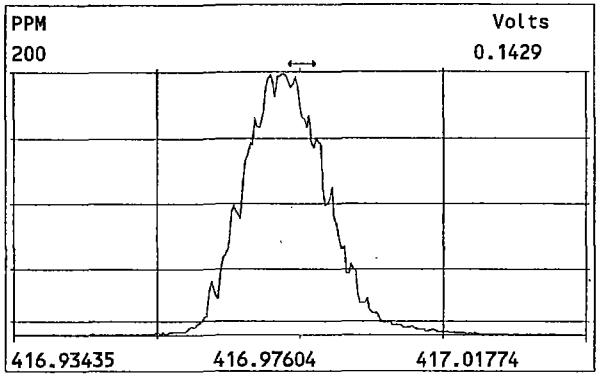


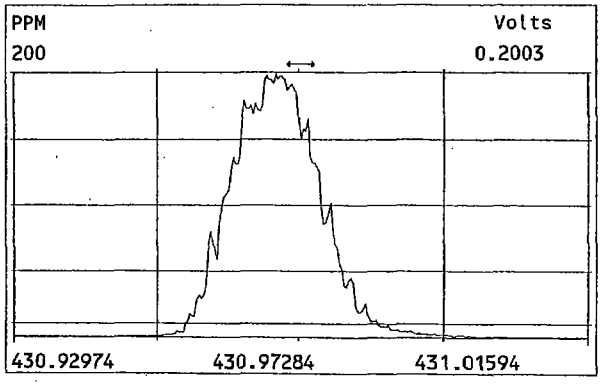


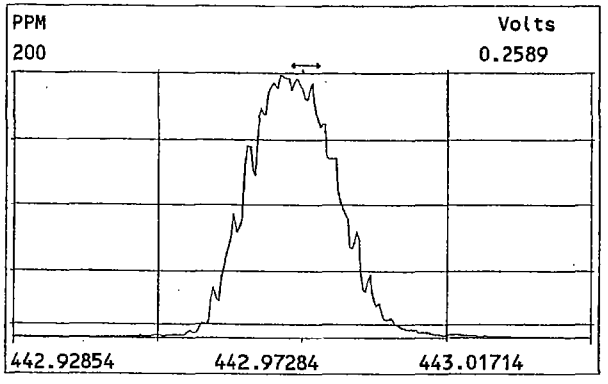


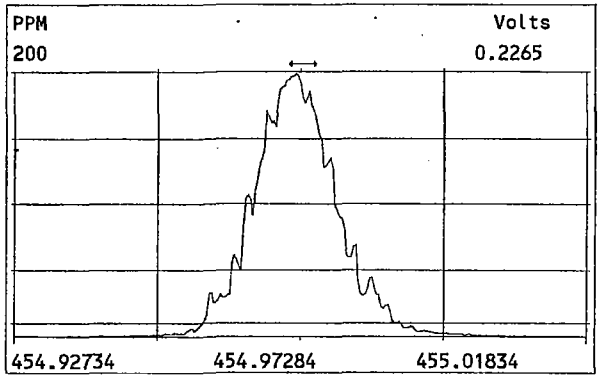
Peak Locate Examination:23-FEB-2009:13:36 File:24FEB09M
Experiment:PCDD Function:4 Reference:PFK

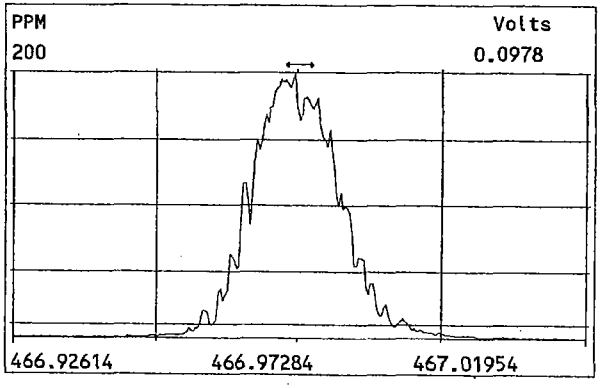


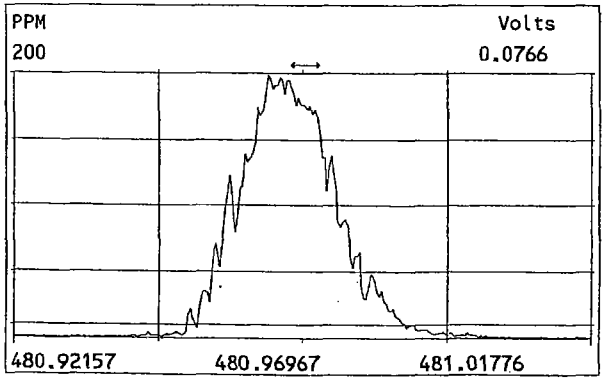




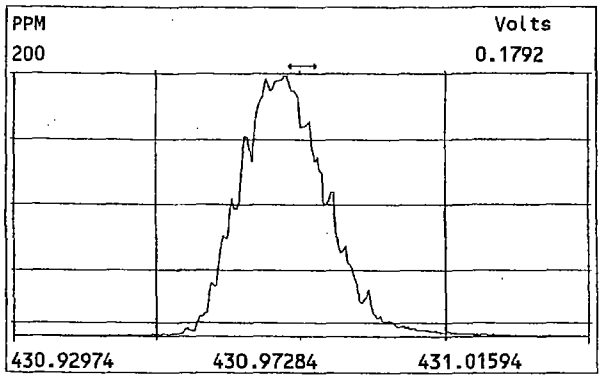


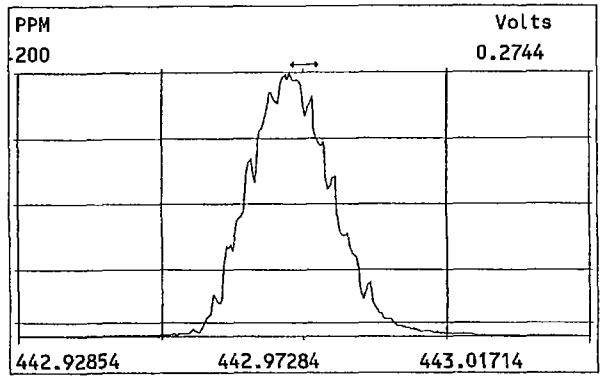


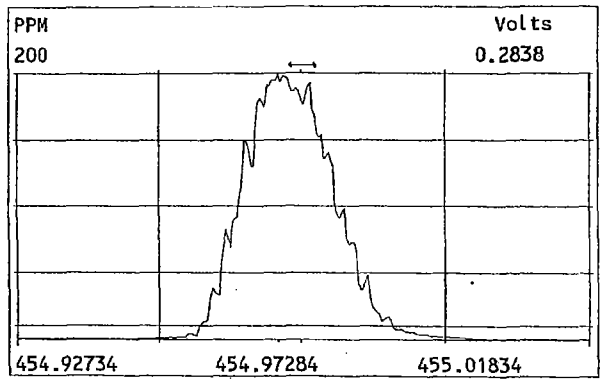


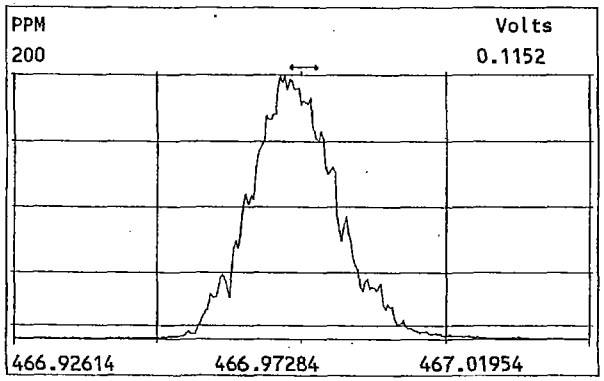


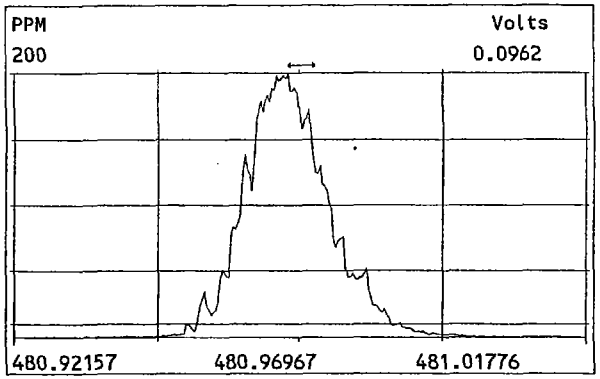
Peak Locate Examination:23-FEB-2009:13:36 File:24FEB09M
Experiment:PCDD Function:5 Reference:PFK

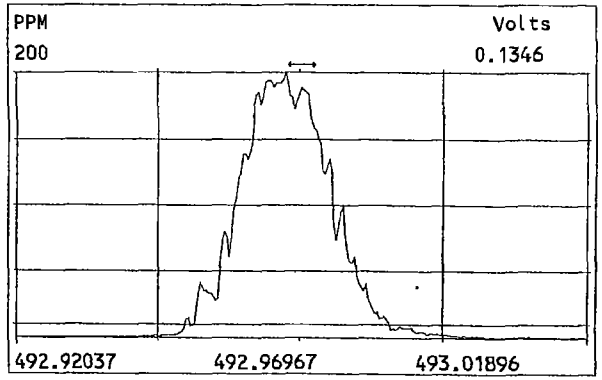


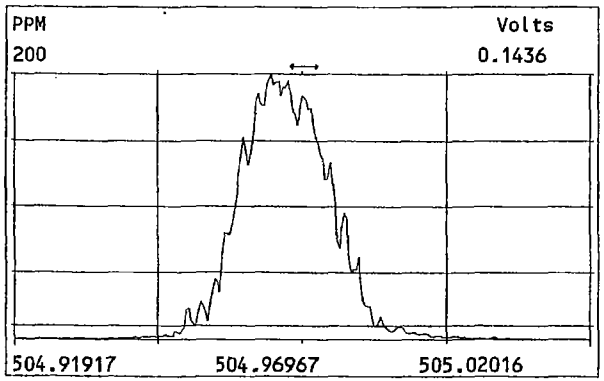


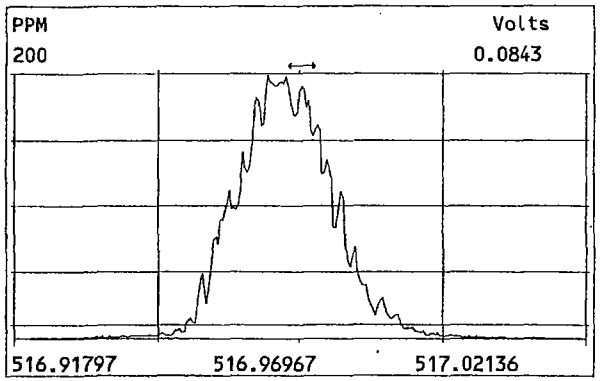




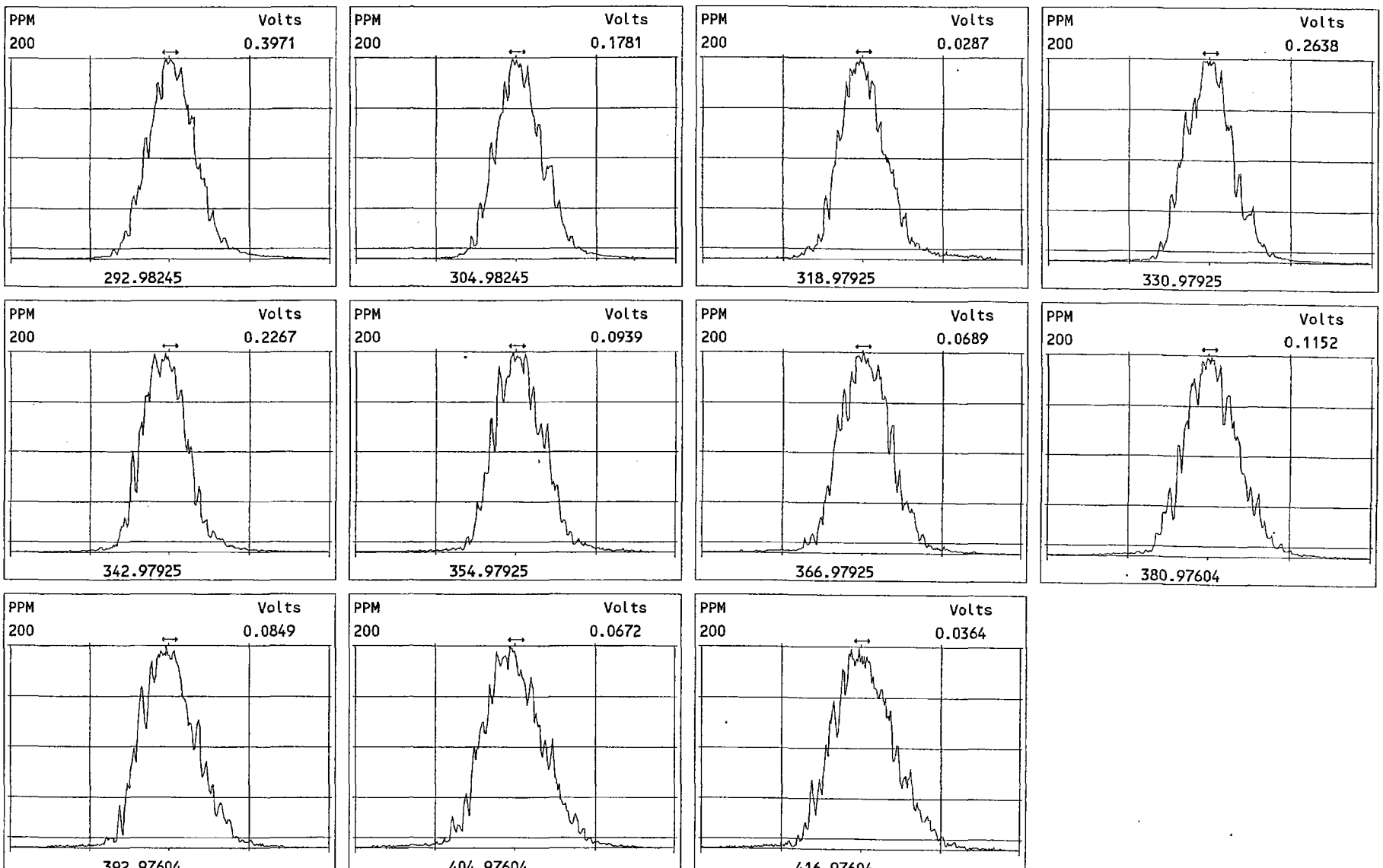




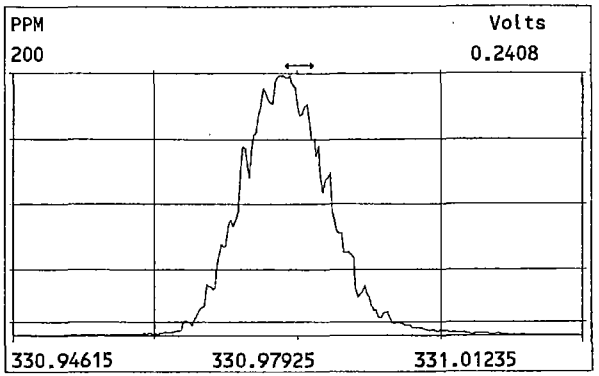


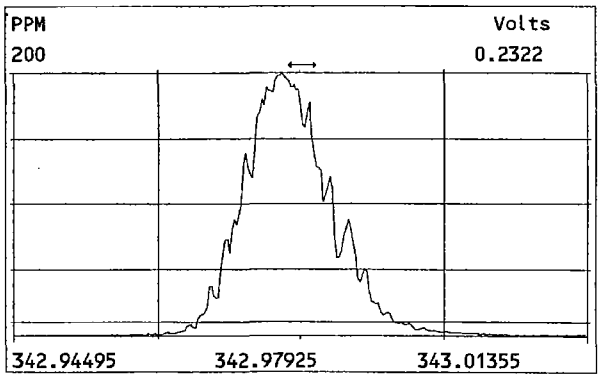


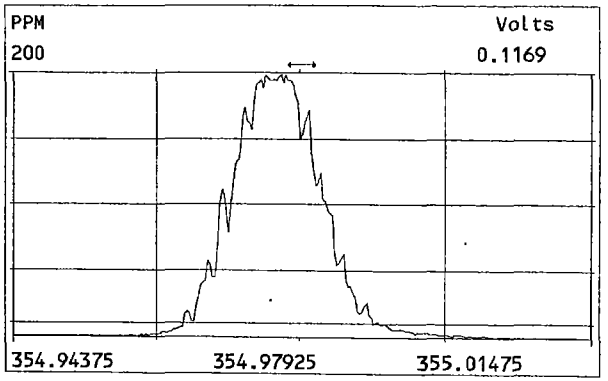
Peak Locate Examination:24-FEB-2009:07:47 File:24FEB09M_RES_CHECK
Experiment:PCDD Function:1 Reference:PFK

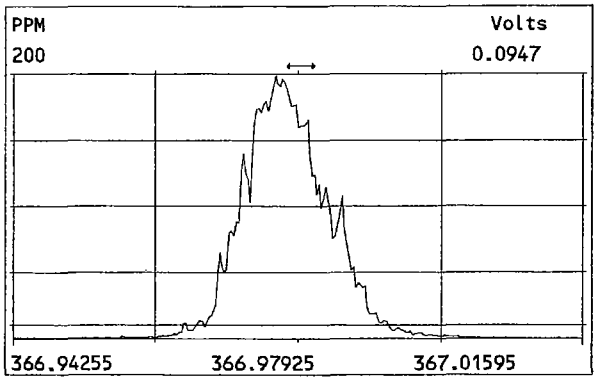


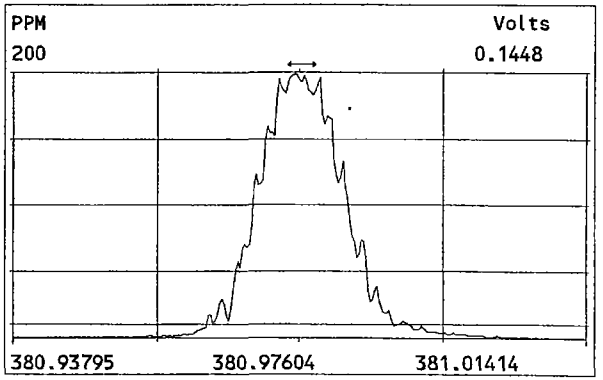
Peak Locate Examination:24-FEB-2009:07:47 File:24FEB09M_RES_CHECK
Experiment:PCDD Function:2 Reference:PFK

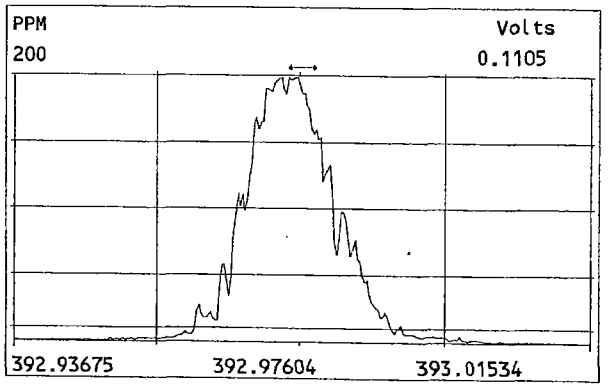


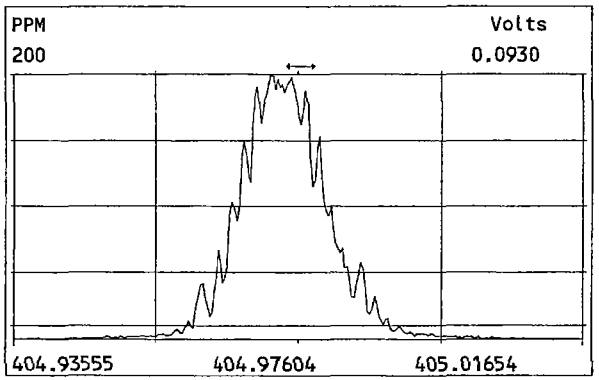


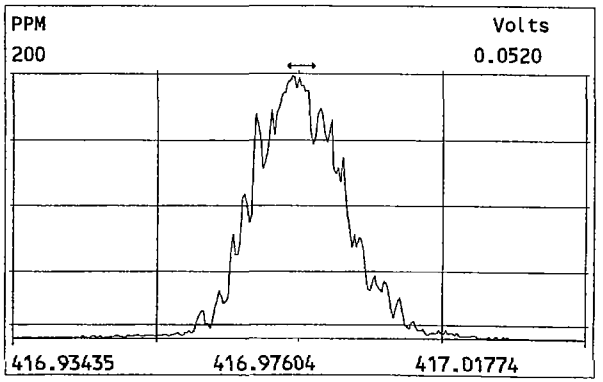




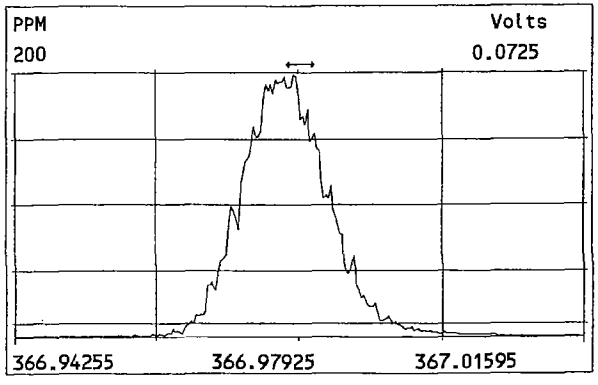


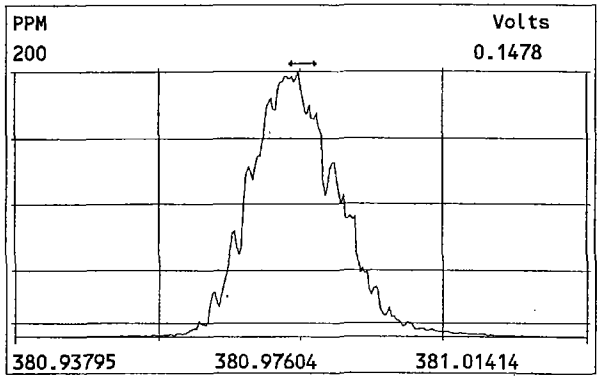


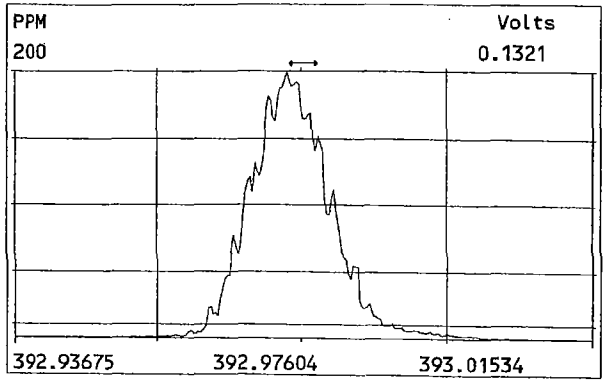


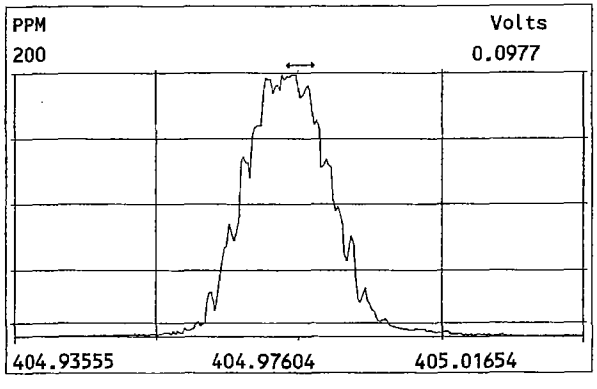


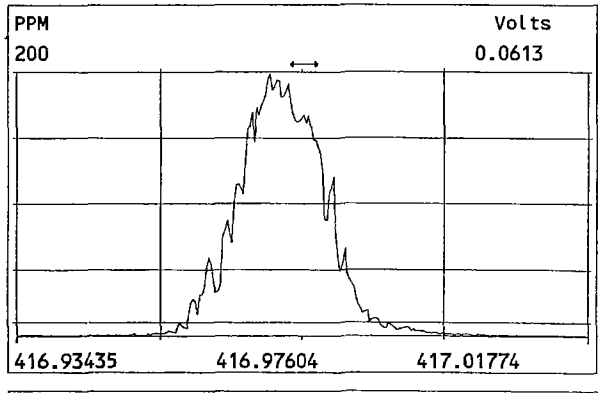
Peak Locate Examination:24-FEB-2009:07:48 File:24FEB09M_RES_CHECK
Experiment:PCDD Function:3 Reference:PFK

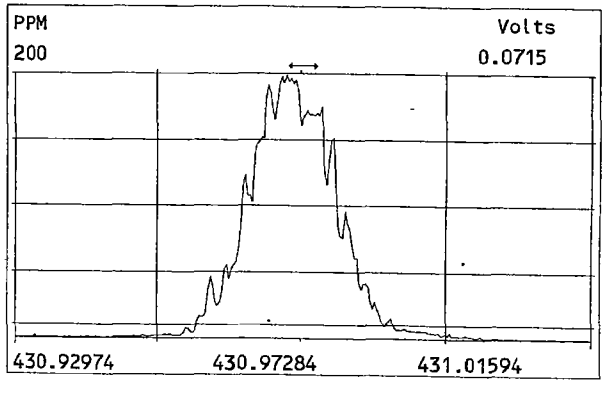


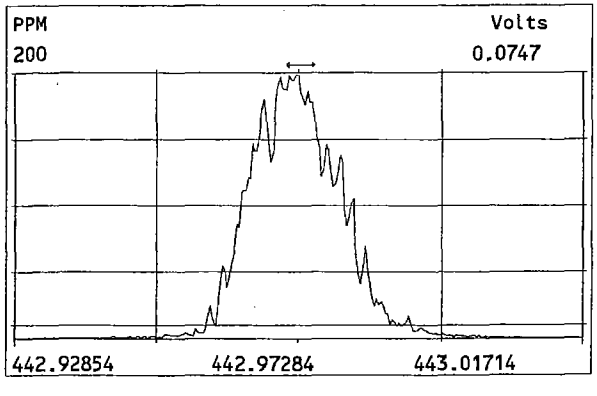


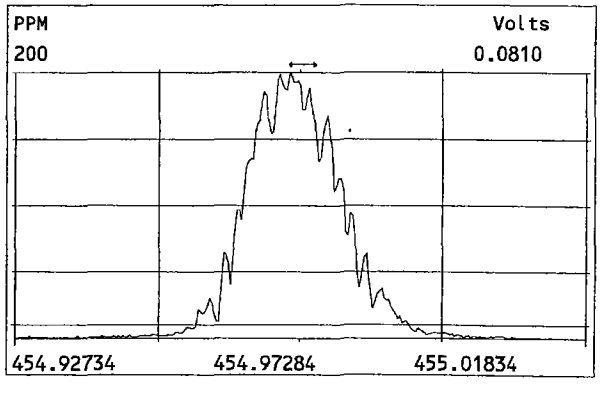




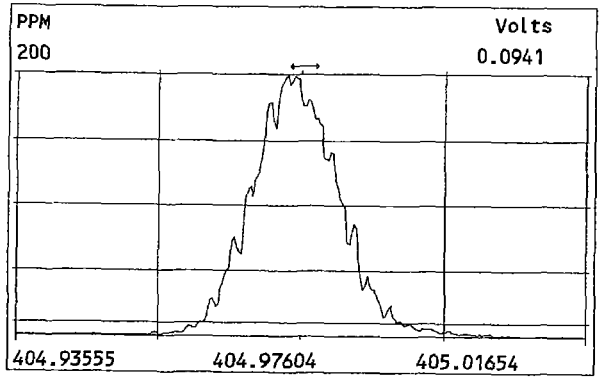


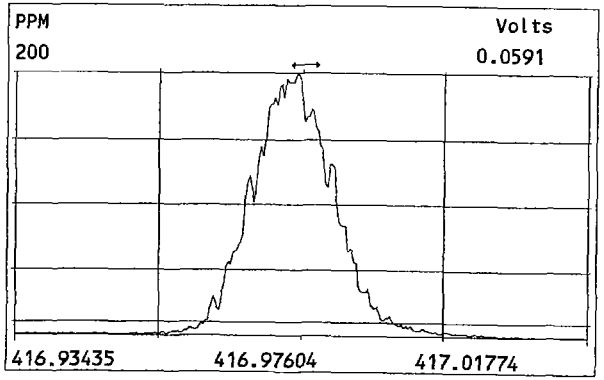


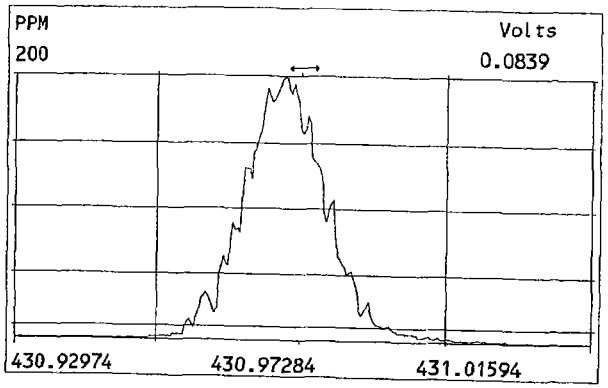


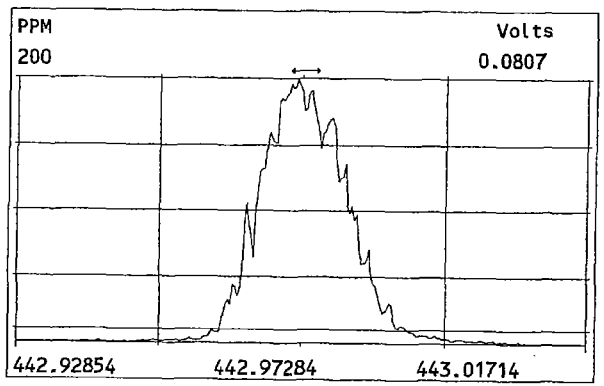


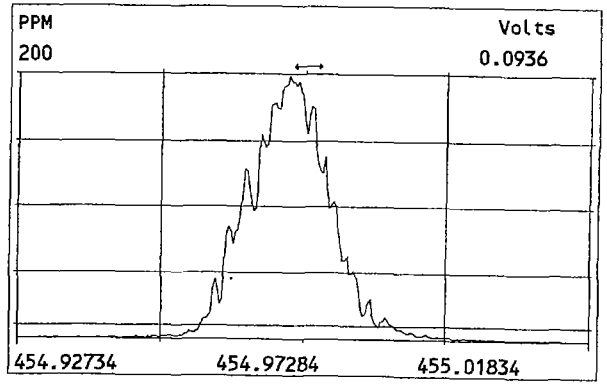
Peak Locate Examination:24-FEB-2009:07:48 File:24FEB09M_RES_CHECK
Experiment:PCDD Function:4 Reference:PFK

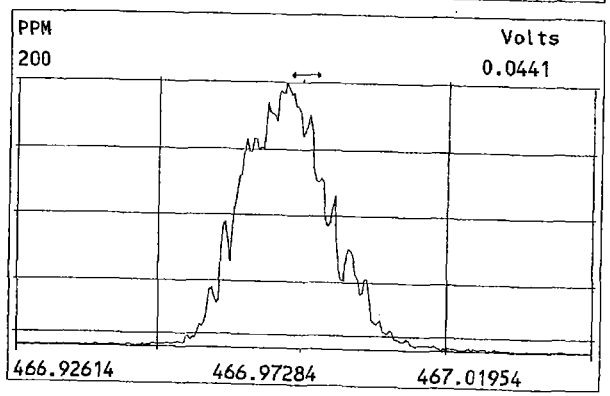


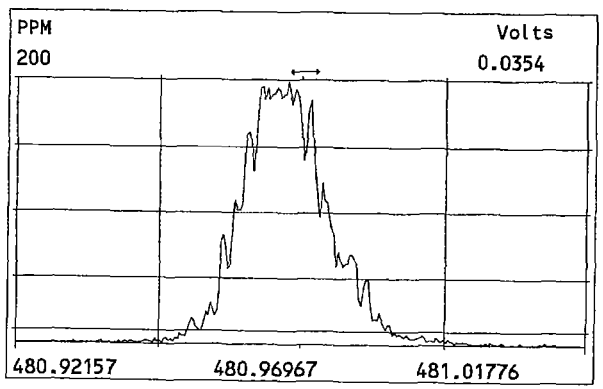




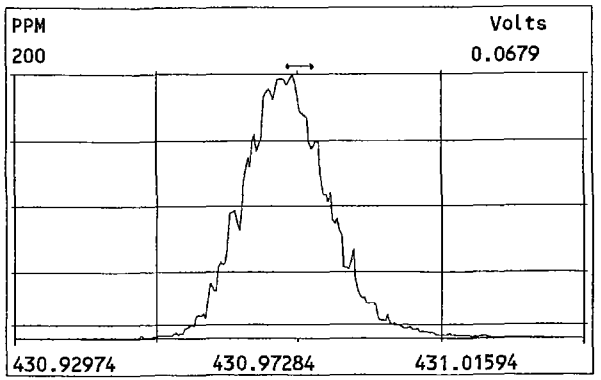


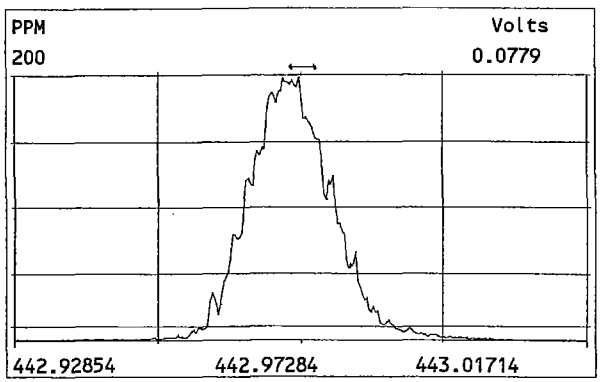


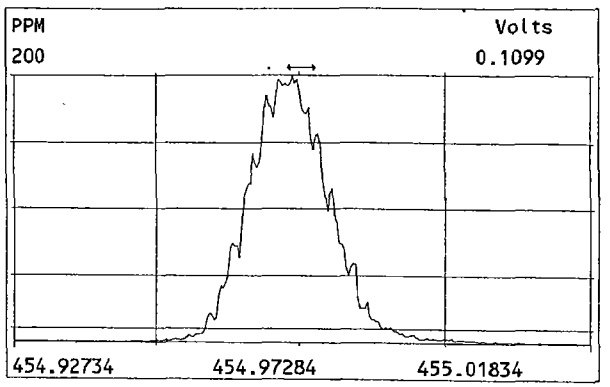


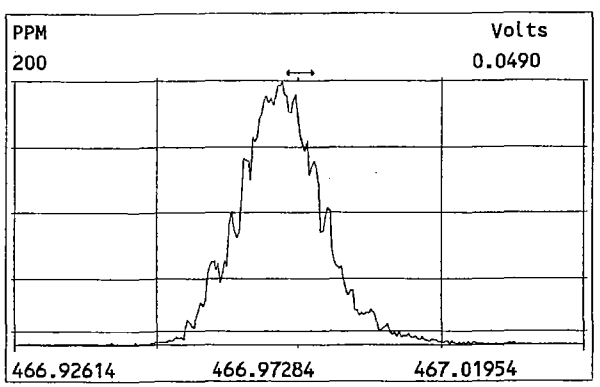


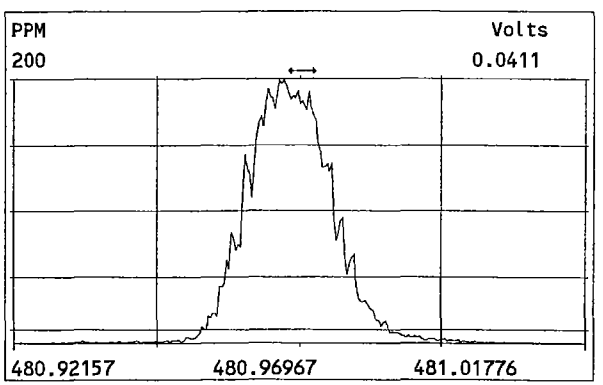
Peak Locate Examination:24-FEB-2009:07:49 File:24FEB09M_RES_CHECK
Experiment:PCDD Function:5 Reference:PFK

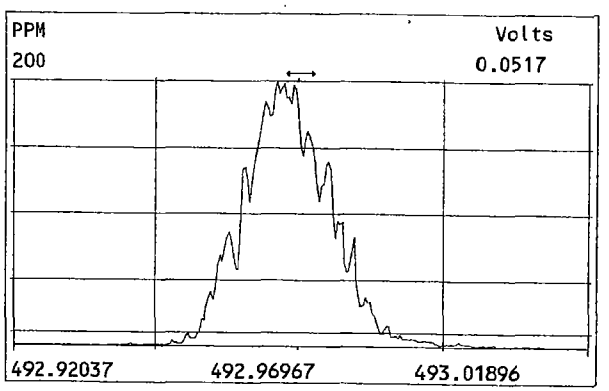


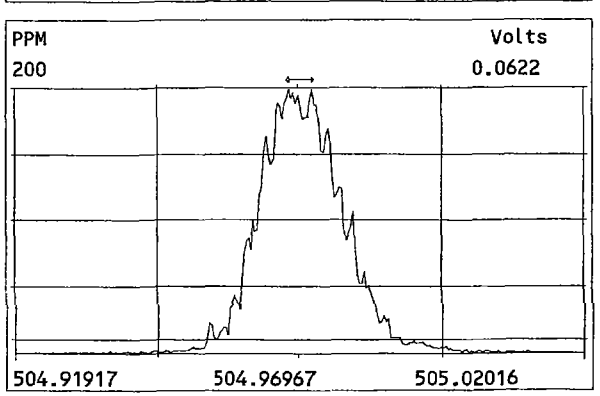


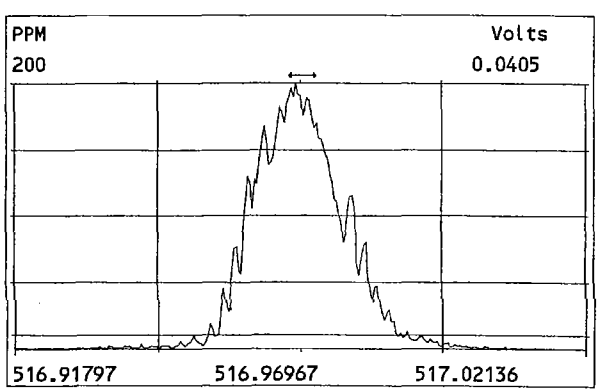




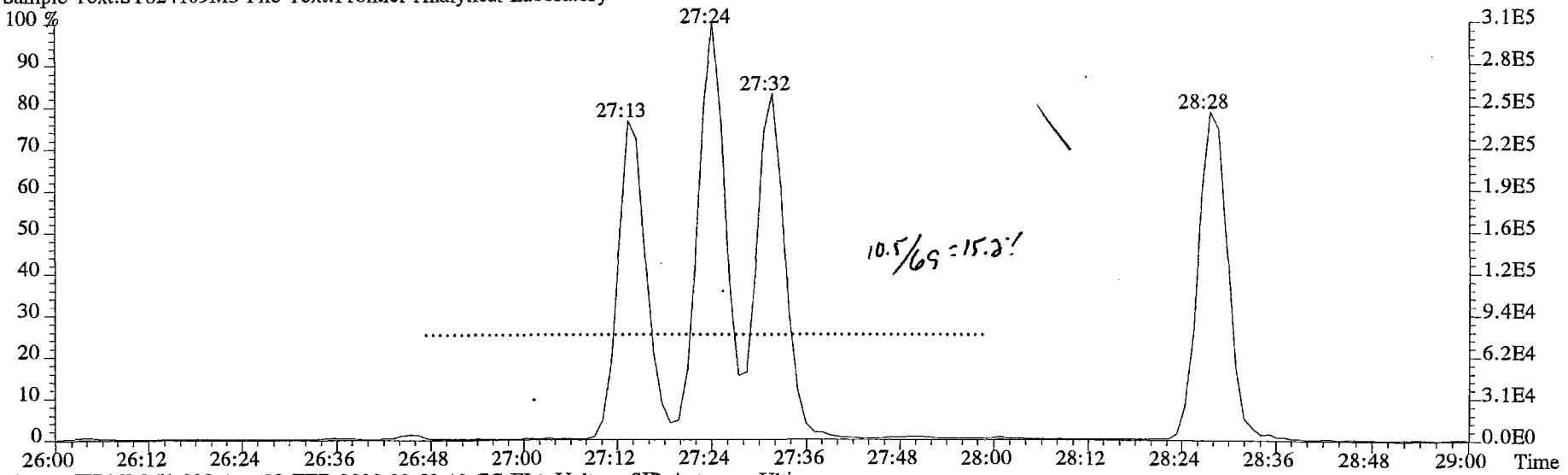




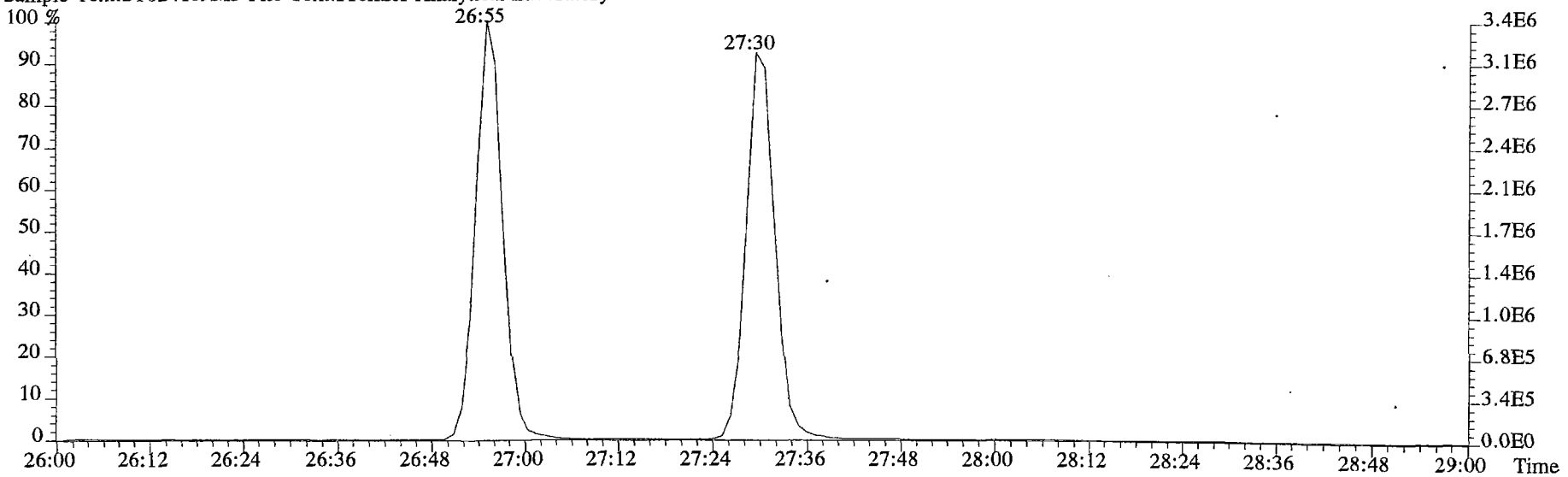




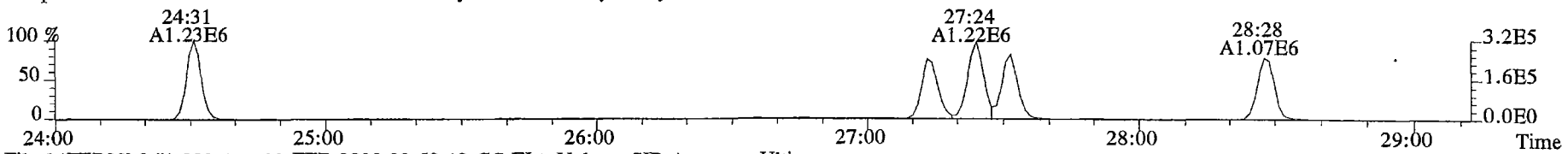
File:24FEB09M #1-390 Acq:23-FEB-2009 22:50:13 GC EI+ Voltage SIR Autospec-Ultima
319.8965 S:11 Exp:PCDD
Sample Text:ST024109M3 File Text:Frontier Analytical Laboratory



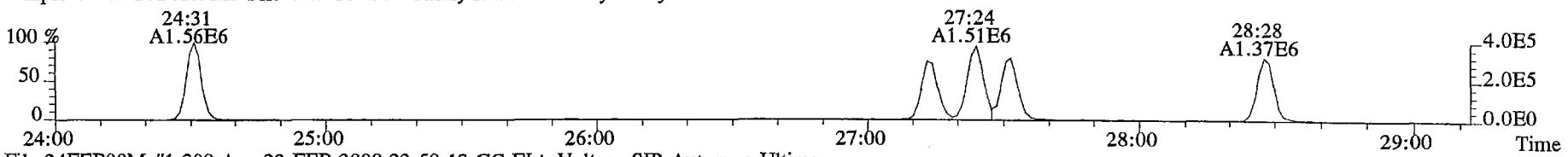
File:24FEB09M #1-390 Acq:23-FEB-2009 22:50:13 GC EI+ Voltage SIR Autospec-Ultima
333.9339 S:11 Exp:PCDD
Sample Text:ST024109M3 File Text:Frontier Analytical Laboratory



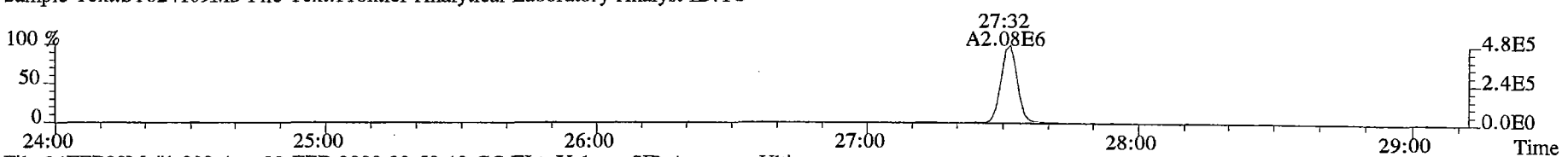
File:24FEB09M #1-390 Acq:23-FEB-2009 22:50:13 GC EI+ Voltage SIR Autospec-Ultima
319.8965 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST024109M3 File Text:Frontier Analytical Laboratory Analyst ID:TC



File:24FEB09M #1-390 Acq:23-FEB-2009 22:50:13 GC EI+ Voltage SIR Autospec-Ultima
321.8936 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST024109M3 File Text:Frontier Analytical Laboratory Analyst ID:TC



File:24FEB09M #1-390 Acq:23-FEB-2009 22:50:13 GC EI+ Voltage SIR Autospec-Ultima
327.8847 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST024109M3 File Text:Frontier Analytical Laboratory Analyst ID:TC



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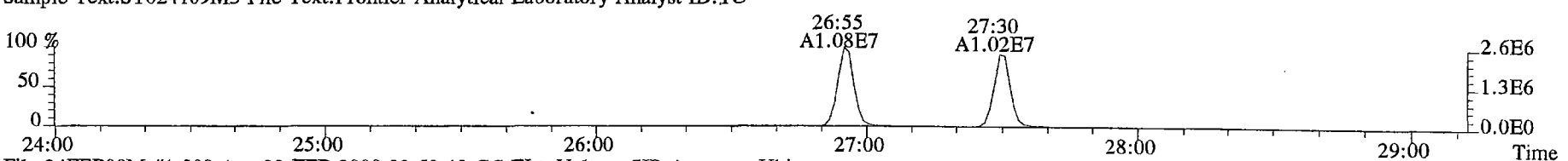
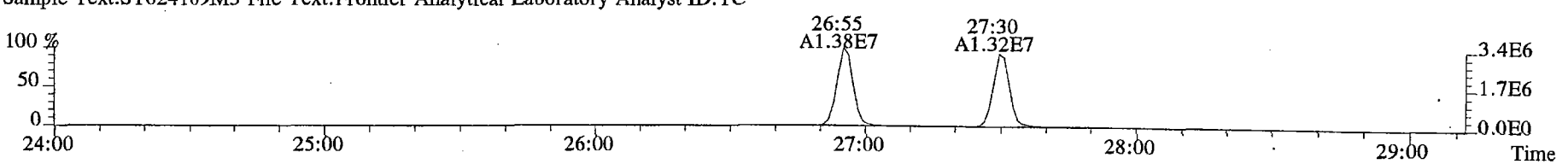
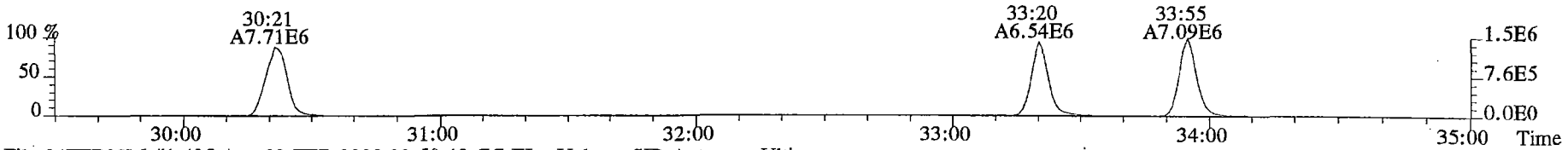
331.9368 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST024109M3 File Text:Frontier Analytical Laboratory Analyst ID:TC



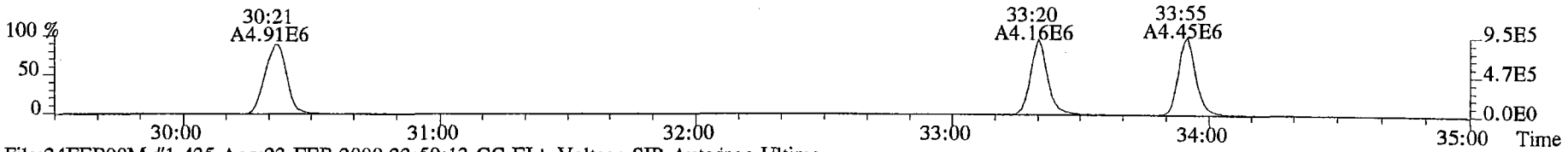
File:24FEB09M #1-390 Acq:23-FEB-2009 22:50:13 GC EI+ Voltage SIR Autospec-Ultima
333.9339 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST024109M3 File Text:Frontier Analytical Laboratory Analyst ID:TC



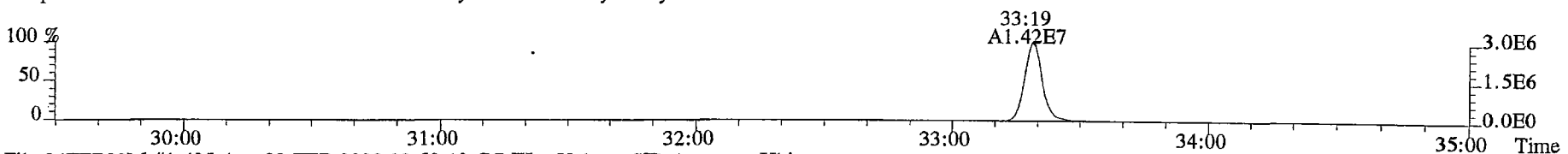
File:24FEB09M #1-425 Acq:23-FEB-2009 22:50:13 GC EI+ Voltage SIR Autospec-Ultima
355.8546 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST024109M3 File Text:Frontier Analytical Laboratory Analyst ID:TC



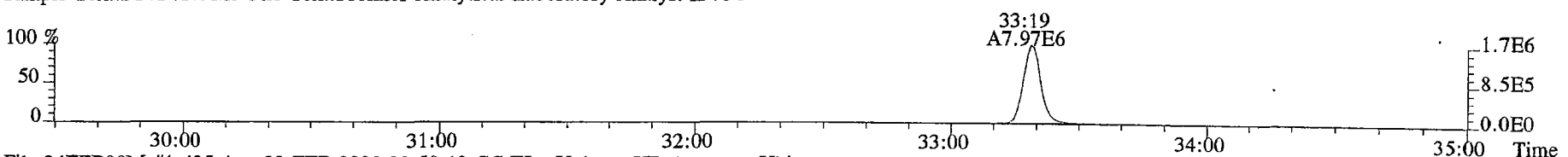
File:24FEB09M #1-425 Acq:23-FEB-2009 22:50:13 GC EI+ Voltage SIR Autospec-Ultima
357.8517 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST024109M3 File Text:Frontier Analytical Laboratory Analyst ID:TC



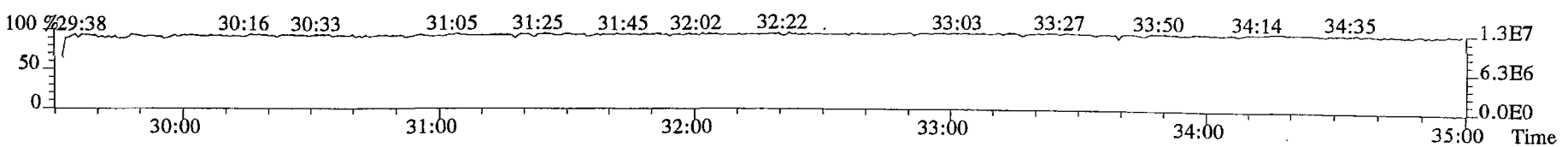
File:24FEB09M #1-425 Acq:23-FEB-2009 22:50:13 GC EI+ Voltage SIR Autospec-Ultima
367.8949 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST024109M3 File Text:Frontier Analytical Laboratory Analyst ID:TC



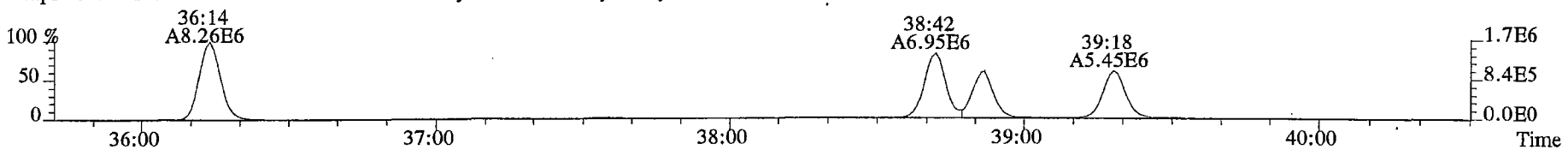
File:24FEB09M #1-425 Acq:23-FEB-2009 22:50:13 GC EI+ Voltage SIR Autospec-Ultima
369.8919 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST024109M3 File Text:Frontier Analytical Laboratory Analyst ID:TC



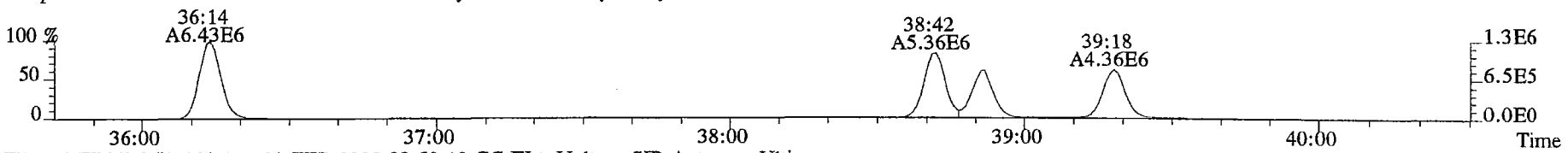
File:24FEB09M #1-425 Acq:23-FEB-2009 22:50:13 GC EI+ Voltage SIR Autospec-Ultima
366.9792 S:11 F:2 Exp:PCDD
Sample Text:ST024109M3 File Text:Frontier Analytical Laboratory Analyst ID:TC



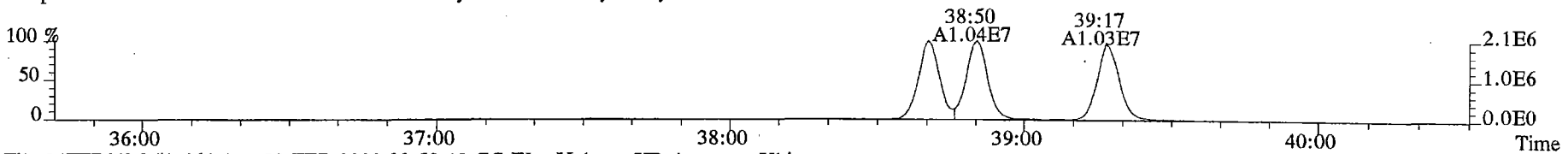
File:24FEB09M #1-464 Acq:23-FEB-2009 22:50:13 GC EI+ Voltage SIR Autospec-Ultima
389.8156 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST024109M3 File Text:Frontier Analytical Laboratory Analyst ID:TC



File:24FEB09M #1-464 Acq:23-FEB-2009 22:50:13 GC EI+ Voltage SIR Autospec-Ultima
391.8127 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST024109M3 File Text:Frontier Analytical Laboratory Analyst ID:TC



File:24FEB09M #1-464 Acq:23-FEB-2009 22:50:13 GC EI+ Voltage SIR Autospec-Ultima
401.8559 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST024109M3 File Text:Frontier Analytical Laboratory Analyst ID:TC



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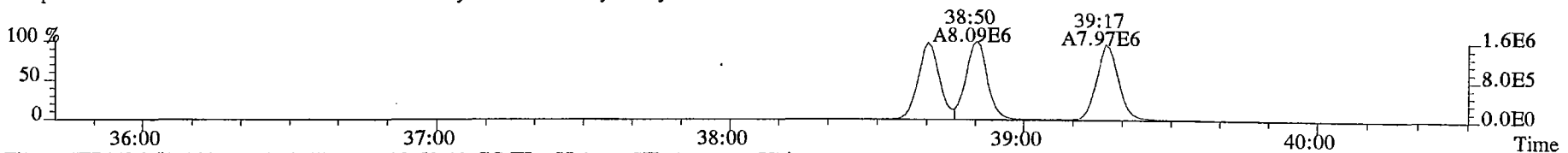
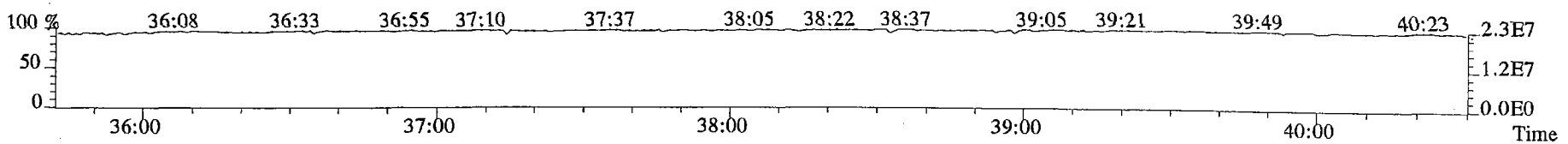
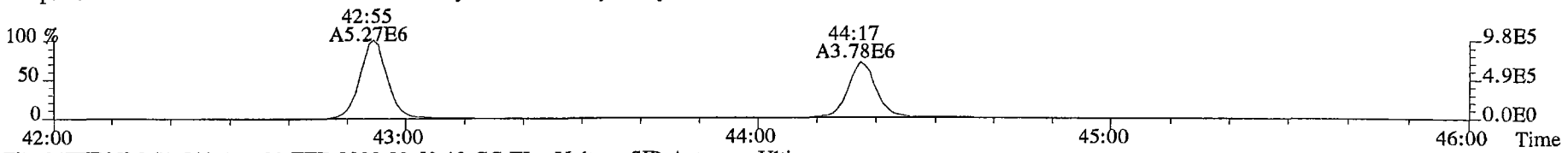
403.8530 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST024109M3 File Text:Frontier Analytical Laboratory Analyst ID:TC



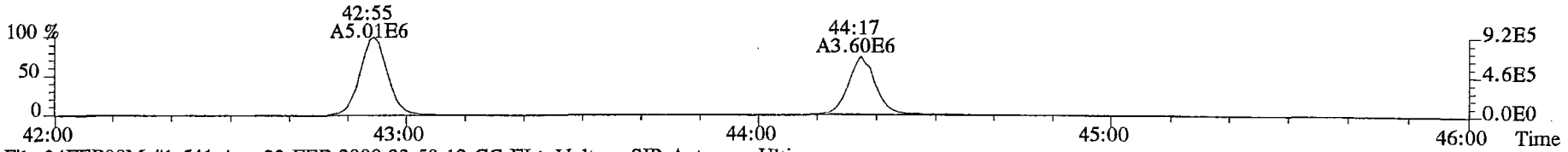
File:24FEB09M #1-464 Acq:23-FEB-2009 22:50:13 GC EI+ Voltage SIR Autospec-Ultima
380.9760 S:11 F:3 Exp:PCDD
Sample Text:ST024109M3 File Text:Frontier Analytical Laboratory Analyst ID:TC



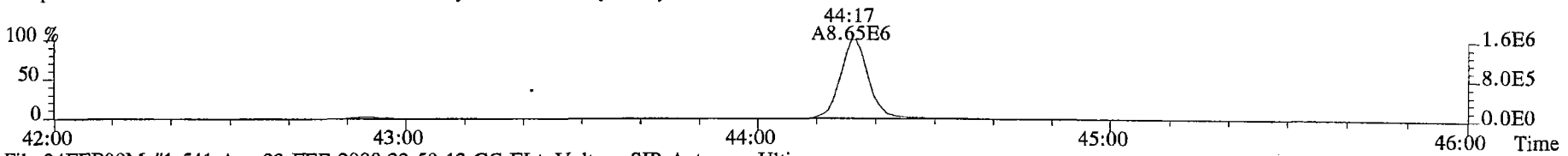
File:24FEB09M #1-541 Acq:23-FEB-2009 22:50:13 GC EI+ Voltage SIR Autospec-Ultima
423.7767 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST024109M3 File Text:Frontier Analytical Laboratory Analyst ID:TC



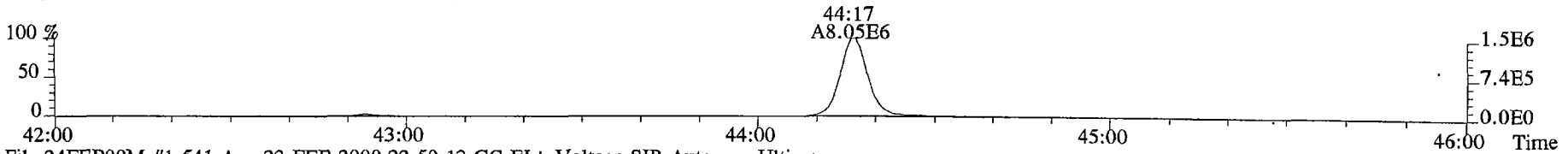
File:24FEB09M #1-541 Acq:23-FEB-2009 22:50:13 GC EI+ Voltage SIR Autospec-Ultima
425.7737 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST024109M3 File Text:Frontier Analytical Laboratory Analyst ID:TC



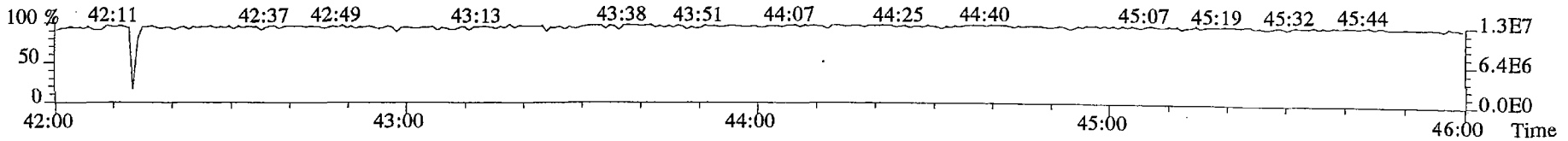
File:24FEB09M #1-541 Acq:23-FEB-2009 22:50:13 GC EI+ Voltage SIR Autospec-Ultima
435.8169 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST024109M3 File Text:Frontier Analytical Laboratory Analyst ID:TC



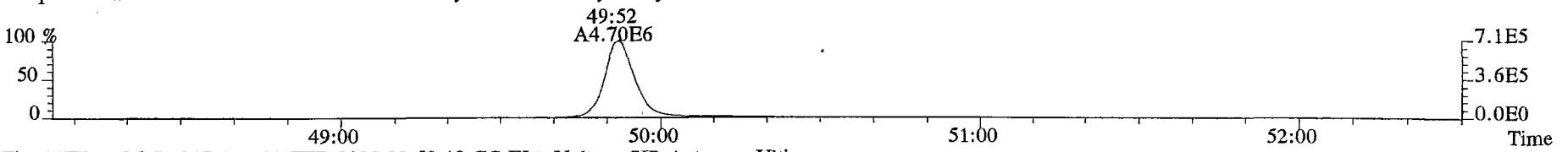
File:24FEB09M #1-541 Acq:23-FEB-2009 22:50:13 GC EI+ Voltage SIR Autospec-Ultima
437.8140 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST024109M3 File Text:Frontier Analytical Laboratory Analyst ID:TC



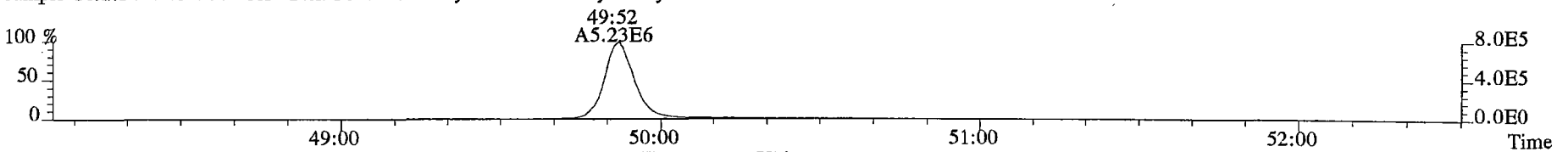
File:24FEB09M #1-541 Acq:23-FEB-2009 22:50:13 GC EI+ Voltage SIR Autospec-Ultima
430.9728 S:11 F:4 Exp:PCDD
Sample Text:ST024109M3 File Text:Frontier Analytical Laboratory Analyst ID:TC



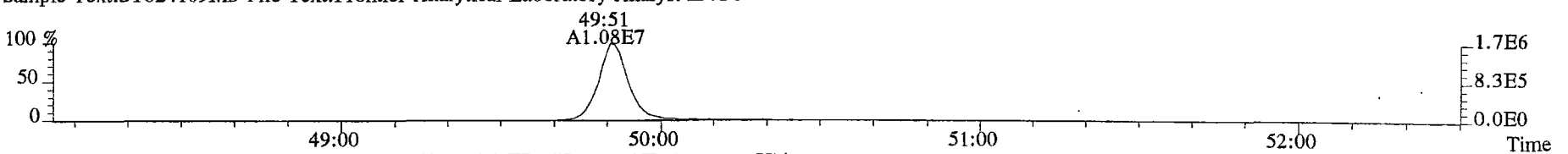
File:24FEB09M #1-347 Acq:23-FEB-2009 22:50:13 GC EI+ Voltage SIR Autospec-Ultima
457.7377 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST024109M3 File Text:Frontier Analytical Laboratory Analyst ID:TC



File:24FEB09M #1-347 Acq:23-FEB-2009 22:50:13 GC EI+ Voltage SIR Autospec-Ultima
459.7348 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST024109M3 File Text:Frontier Analytical Laboratory Analyst ID:TC



File:24FEB09M #1-347 Acq:23-FEB-2009 22:50:13 GC EI+ Voltage SIR Autospec-Ultima
469.7780 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST024109M3 File Text:Frontier Analytical Laboratory Analyst ID:TC



File:24FEB09M #1-347 Acq:23-FEB-2009 22:50:13 GC EI+ Voltage SIR Autospec-Ultima
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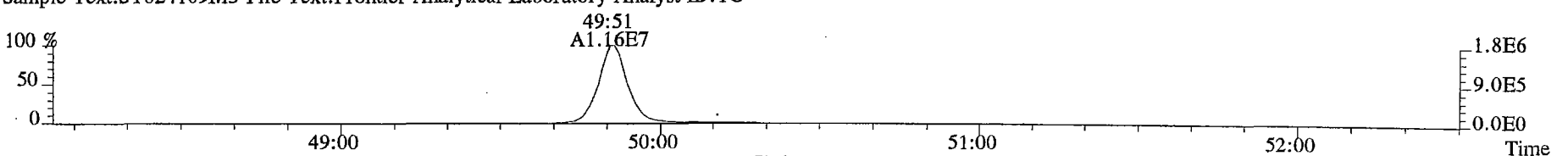
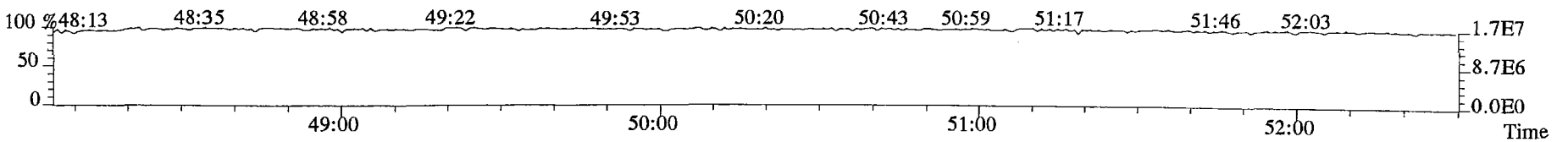
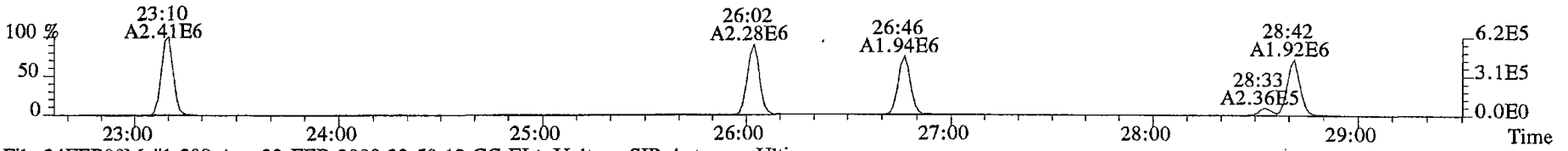
Sample Text:ST024109M3 File Text:Frontier Analytical Laboratory Analyst ID:TC



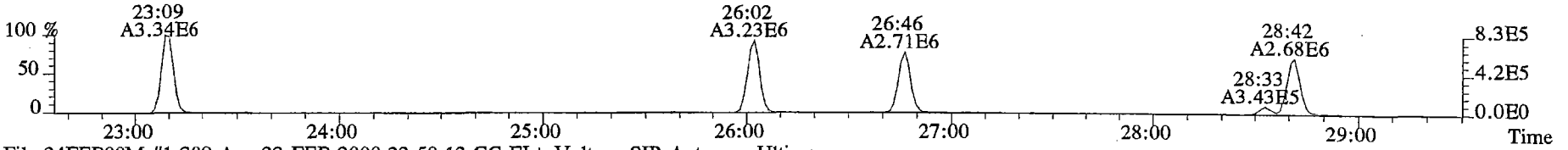
File:24FEB09M #1-347 Acq:23-FEB-2009 22:50:13 GC EI+ Voltage SIR Autospec-Ultima
454.9728 S:11 F:5 Exp:PCDD
Sample Text:ST024109M3 File Text:Frontier Analytical Laboratory Analyst ID:TC



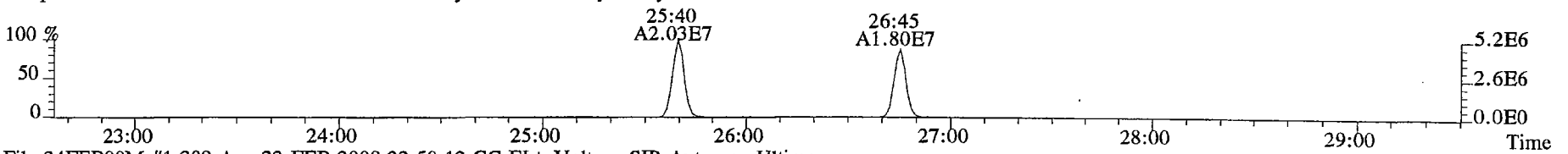
File:24FEB09M #1-390 Acq:23-FEB-2009 22:50:13 GC EI+ Voltage SIR Autospec-Ultima
303.9016 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST024109M3 File Text:Frontier Analytical Laboratory Analyst ID:TC



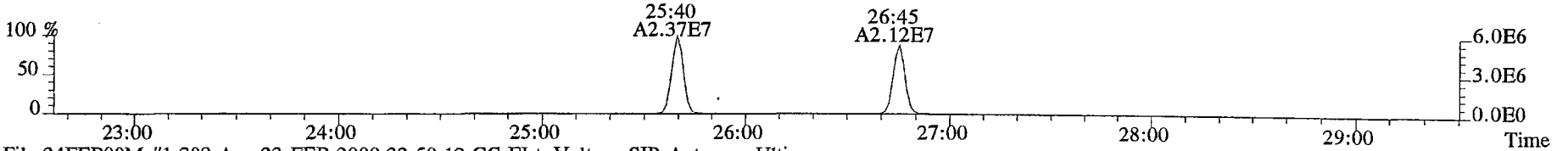
File:24FEB09M #1-390 Acq:23-FEB-2009 22:50:13 GC EI+ Voltage SIR Autospec-Ultima
305.8987 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST024109M3 File Text:Frontier Analytical Laboratory Analyst ID:TC



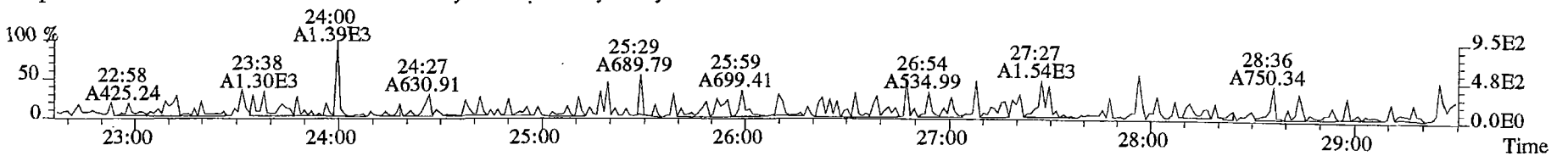
File:24FEB09M #1-390 Acq:23-FEB-2009 22:50:13 GC EI+ Voltage SIR Autospec-Ultima
315.9419 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST024109M3 File Text:Frontier Analytical Laboratory Analyst ID:TC



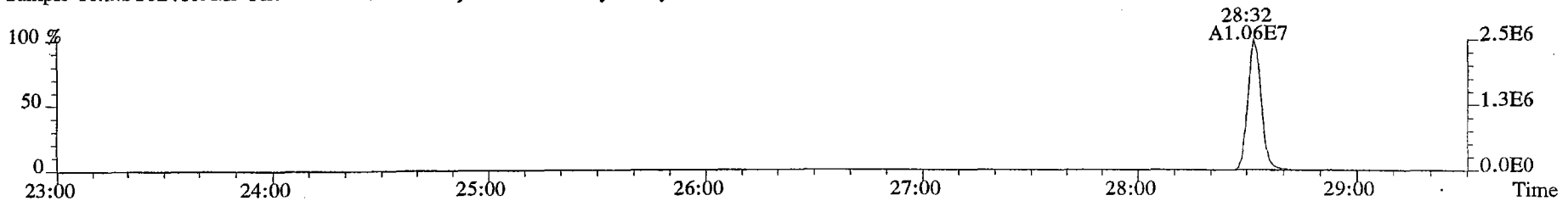
File:24FEB09M #1-390 Acq:23-FEB-2009 22:50:13 GC EI+ Voltage SIR Autospec-Ultima
317.9389 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST024109M3 File Text:Frontier Analytical Laboratory Analyst ID:TC



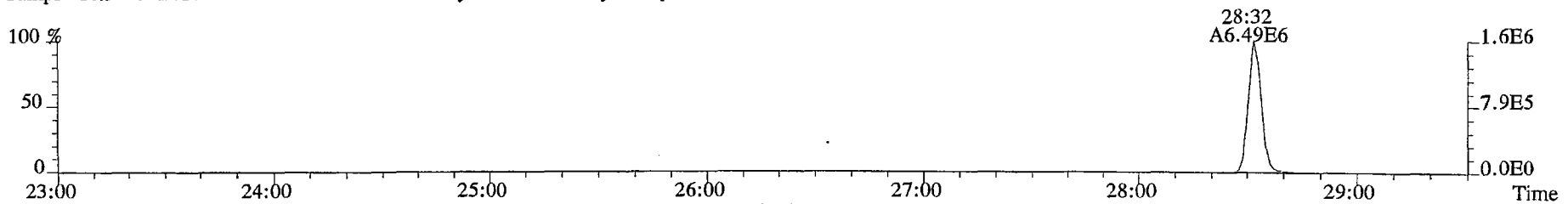
File:24FEB09M #1-390 Acq:23-FEB-2009 22:50:13 GC EI+ Voltage SIR Autospec-Ultima
375.8364 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST024109M3 File Text:Frontier Analytical Laboratory Analyst ID:TC



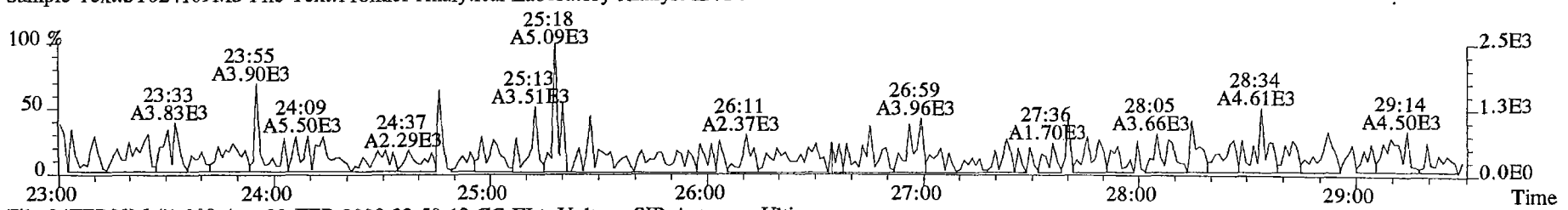
File:24FEB09M #1-390 Acq:23-FEB-2009 22:50:13 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST024109M3 File Text:Frontier Analytical Laboratory Analyst ID:TC



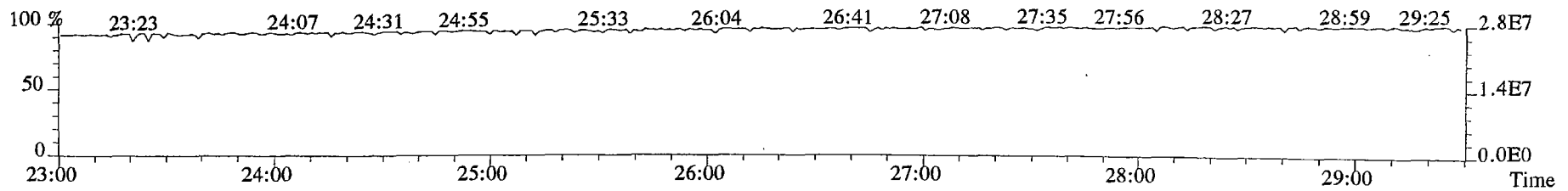
File:24FEB09M #1-390 Acq:23-FEB-2009 22:50:13 GC EI+ Voltage SIR Autospec-Ultima
341.8568 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST024109M3 File Text:Frontier Analytical Laboratory Analyst ID:TC



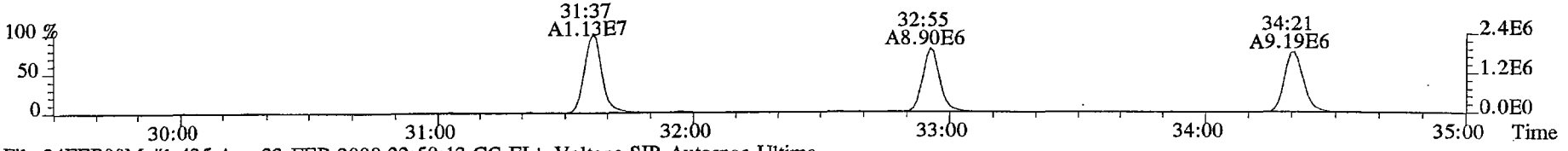
File:24FEB09M #1-390 Acq:23-FEB-2009 22:50:13 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST024109M3 File Text:Frontier Analytical Laboratory Analyst ID:TC



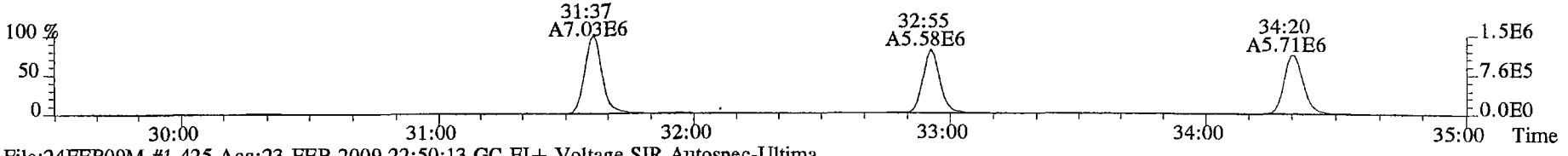
File:24FEB09M #1-390 Acq:23-FEB-2009 22:50:13 GC EI+ Voltage SIR Autospec-Ultima
330.9792 S:11 Exp:PCDD
Sample Text:ST024109M3 File Text:Frontier Analytical Laboratory Analyst ID:TC



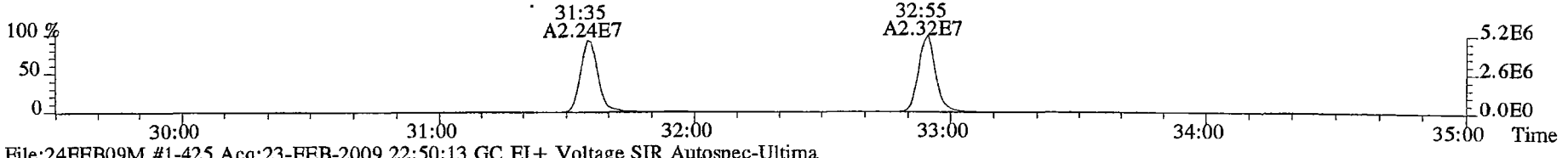
File:24FEB09M #1-425 Acq:23-FEB-2009 22:50:13 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST024109M3 File Text:Frontier Analytical Laboratory Analyst ID:TC



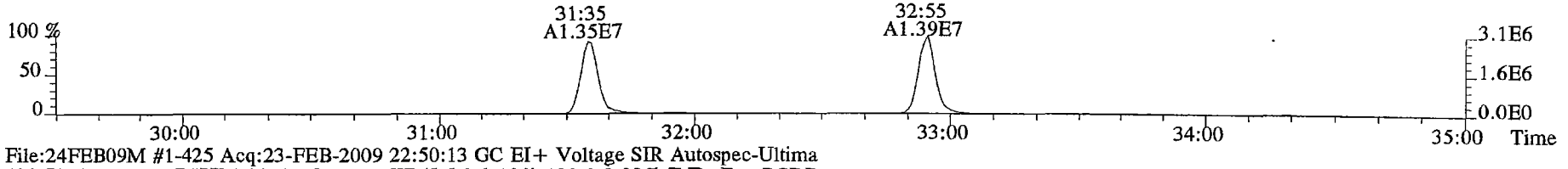
File:24FEB09M #1-425 Acq:23-FEB-2009 22:50:13 GC EI+ Voltage SIR Autospec-Ultima
341.8568 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST024109M3 File Text:Frontier Analytical Laboratory Analyst ID:TC



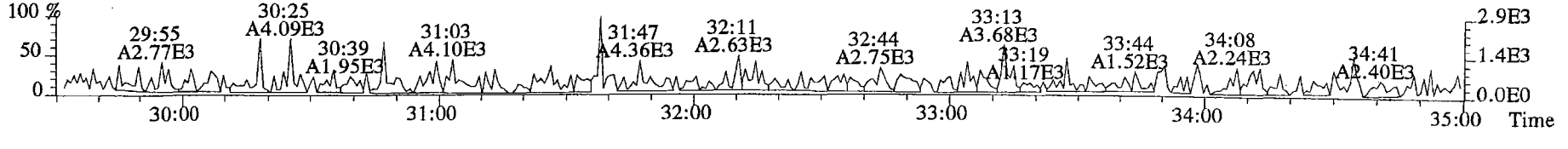
File:24FEB09M #1-425 Acq:23-FEB-2009 22:50:13 GC EI+ Voltage SIR Autospec-Ultima
351.9000 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST024109M3 File Text:Frontier Analytical Laboratory Analyst ID:TC



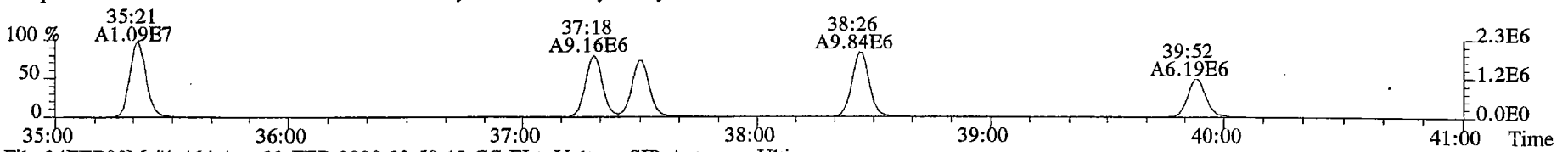
File:24FEB09M #1-425 Acq:23-FEB-2009 22:50:13 GC EI+ Voltage SIR Autospec-Ultima
353.8970 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST024109M3 File Text:Frontier Analytical Laboratory Analyst ID:TC



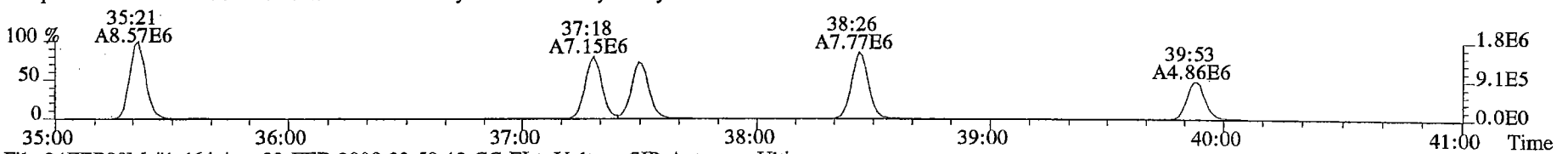
File:24FEB09M #1-425 Acq:23-FEB-2009 22:50:13 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST024109M3 File Text:Frontier Analytical Laboratory Analyst ID:TC



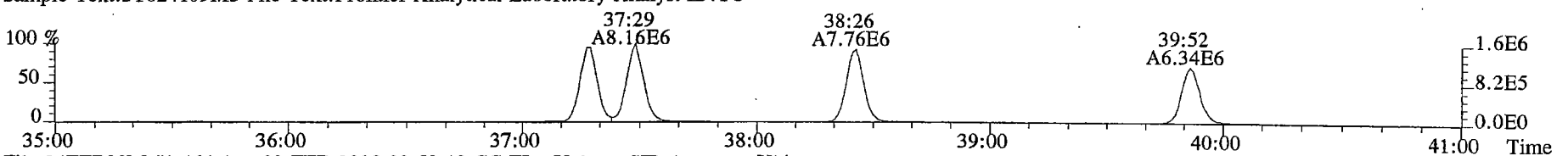
File:24FEB09M #1-464 Acq:23-FEB-2009 22:50:13 GC EI+ Voltage SIR Autospec-Ultima
373.8207 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST024109M3 File Text:Frontier Analytical Laboratory Analyst ID:TC



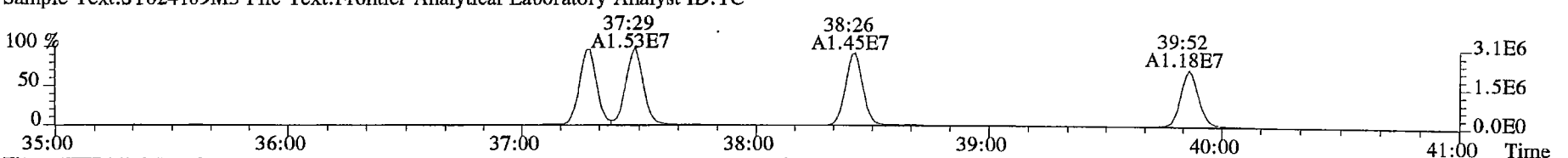
File:24FEB09M #1-464 Acq:23-FEB-2009 22:50:13 GC EI+ Voltage SIR Autospec-Ultima
375.8178 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST024109M3 File Text:Frontier Analytical Laboratory Analyst ID:TC



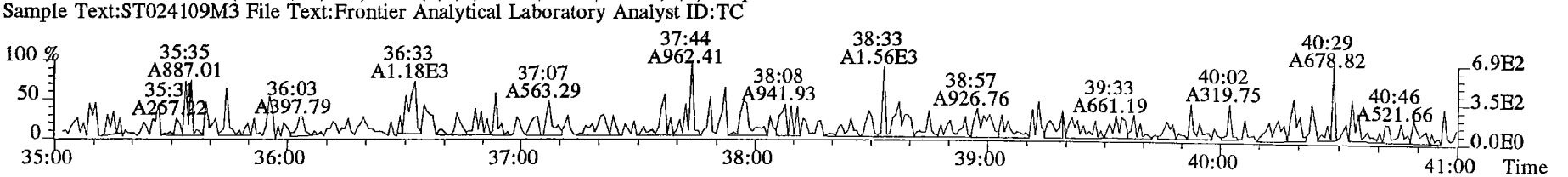
File:24FEB09M #1-464 Acq:23-FEB-2009 22:50:13 GC EI+ Voltage SIR Autospec-Ultima
383.8639 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST024109M3 File Text:Frontier Analytical Laboratory Analyst ID:TC



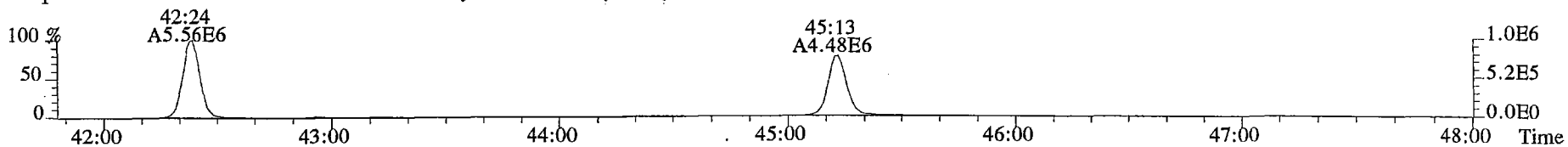
File:24FEB09M #1-464 Acq:23-FEB-2009 22:50:13 GC EI+ Voltage SIR Autospec-Ultima
385.8610 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST024109M3 File Text:Frontier Analytical Laboratory Analyst ID:TC



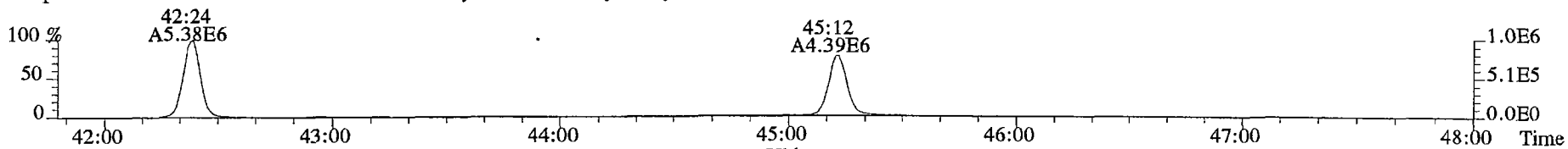
File:24FEB09M #1-464 Acq:23-FEB-2009 22:50:13 GC EI+ Voltage SIR Autospec-Ultima
445.7555 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST024109M3 File Text:Frontier Analytical Laboratory Analyst ID:TC



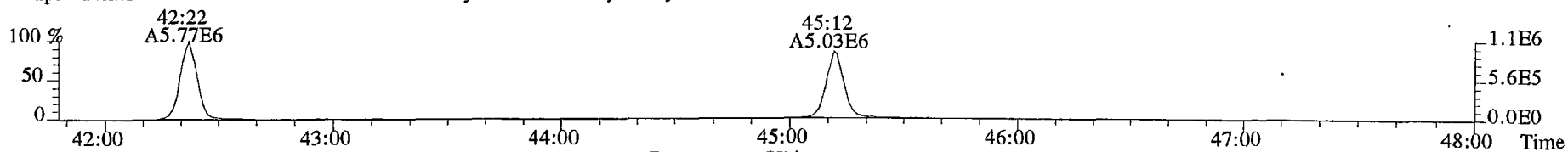
File:24FEB09M #1-541 Acq:23-FEB-2009 22:50:13 GC EI+ Voltage SIR Autospec-Ultima
407.7818 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST024109M3 File Text:Frontier Analytical Laboratory Analyst ID:TC



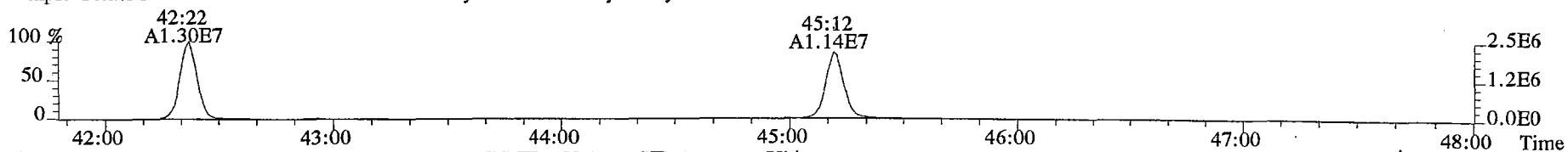
File:24FEB09M #1-541 Acq:23-FEB-2009 22:50:13 GC EI+ Voltage SIR Autospec-Ultima
409.7788 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST024109M3 File Text:Frontier Analytical Laboratory Analyst ID:TC



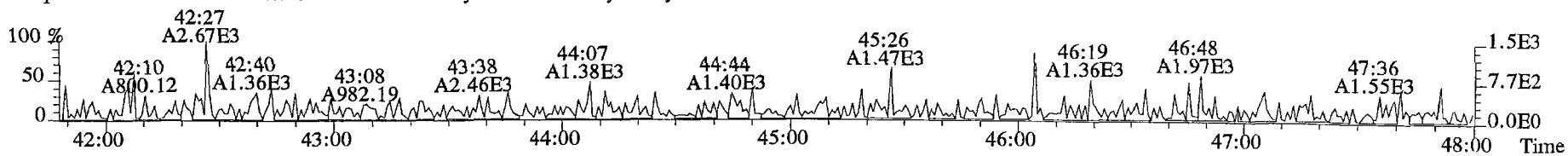
File:24FEB09M #1-541 Acq:23-FEB-2009 22:50:13 GC EI+ Voltage SIR Autospec-Ultima
417.8253 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST024109M3 File Text:Frontier Analytical Laboratory Analyst ID:TC



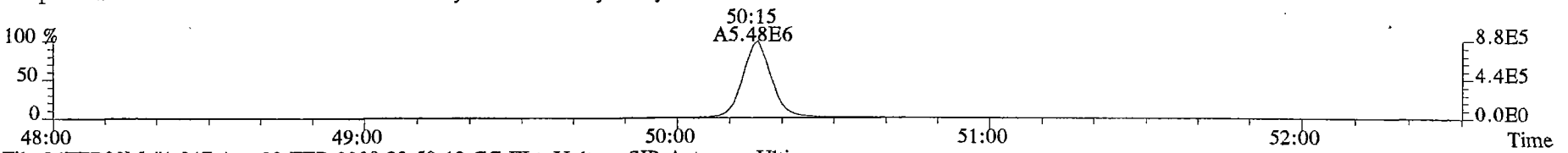
File:24FEB09M #1-541 Acq:23-FEB-2009 22:50:13 GC EI+ Voltage SIR Autospec-Ultima
419.8220 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST024109M3 File Text:Frontier Analytical Laboratory Analyst ID:TC



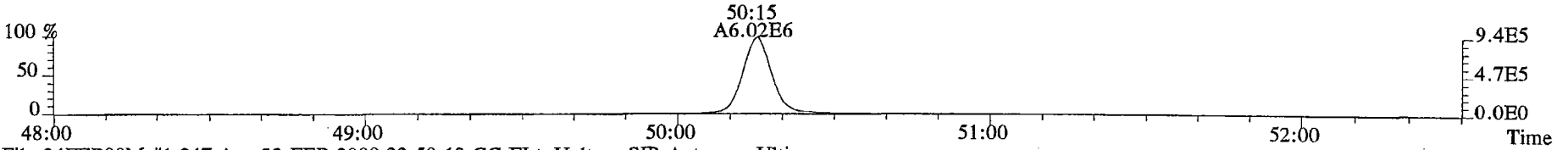
File:24FEB09M #1-541 Acq:23-FEB-2009 22:50:13 GC EI+ Voltage SIR Autospec-Ultima
479.7165 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST024109M3 File Text:Frontier Analytical Laboratory Analyst ID:TC



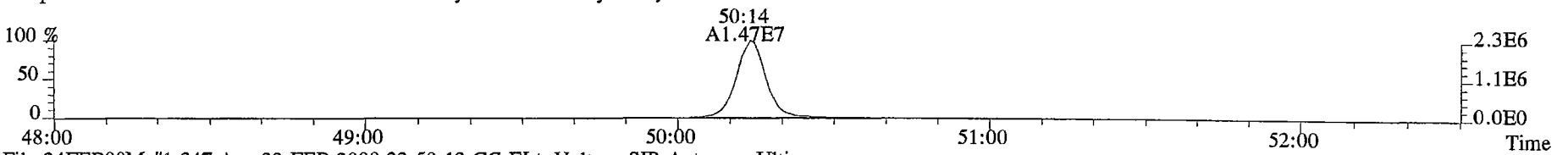
File:24FEB09M #1-347 Acq:23-FEB-2009 22:50:13 GC EI+ Voltage SIR Autospec-Ultima
441.7428 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST024109M3 File Text:Frontier Analytical Laboratory Analyst ID:TC



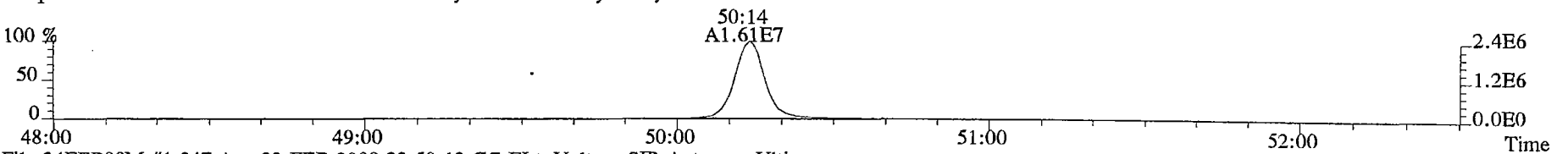
File:24FEB09M #1-347 Acq:23-FEB-2009 22:50:13 GC EI+ Voltage SIR Autospec-Ultima
443.7398 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST024109M3 File Text:Frontier Analytical Laboratory Analyst ID:TC



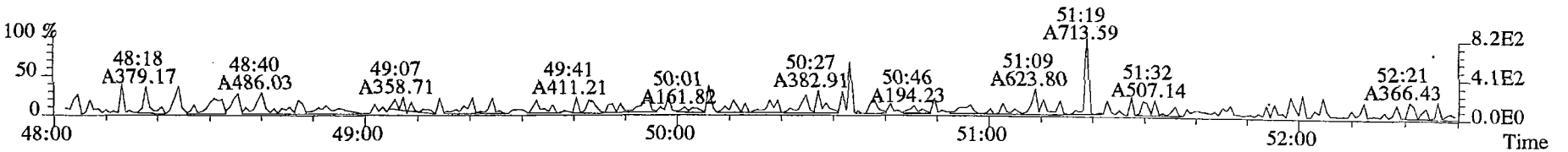
File:24FEB09M #1-347 Acq:23-FEB-2009 22:50:13 GC EI+ Voltage SIR Autospec-Ultima
453.7831 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST024109M3 File Text:Frontier Analytical Laboratory Analyst ID:TC



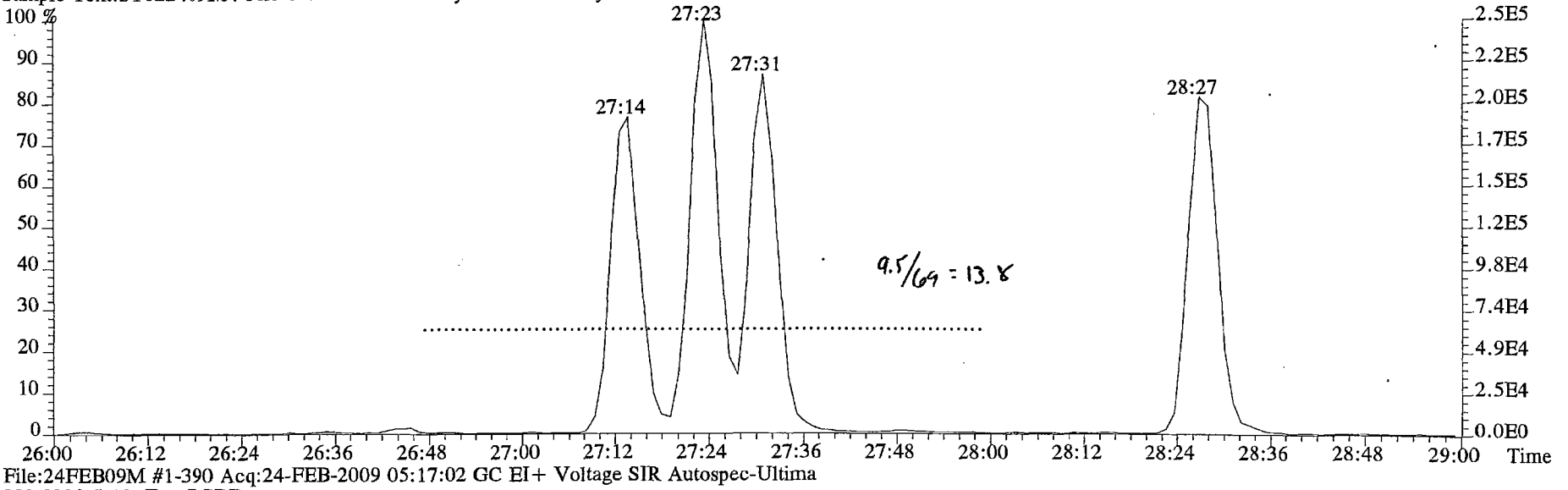
File:24FEB09M #1-347 Acq:23-FEB-2009 22:50:13 GC EI+ Voltage SIR Autospec-Ultima
455.7801 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST024109M3 File Text:Frontier Analytical Laboratory Analyst ID:TC



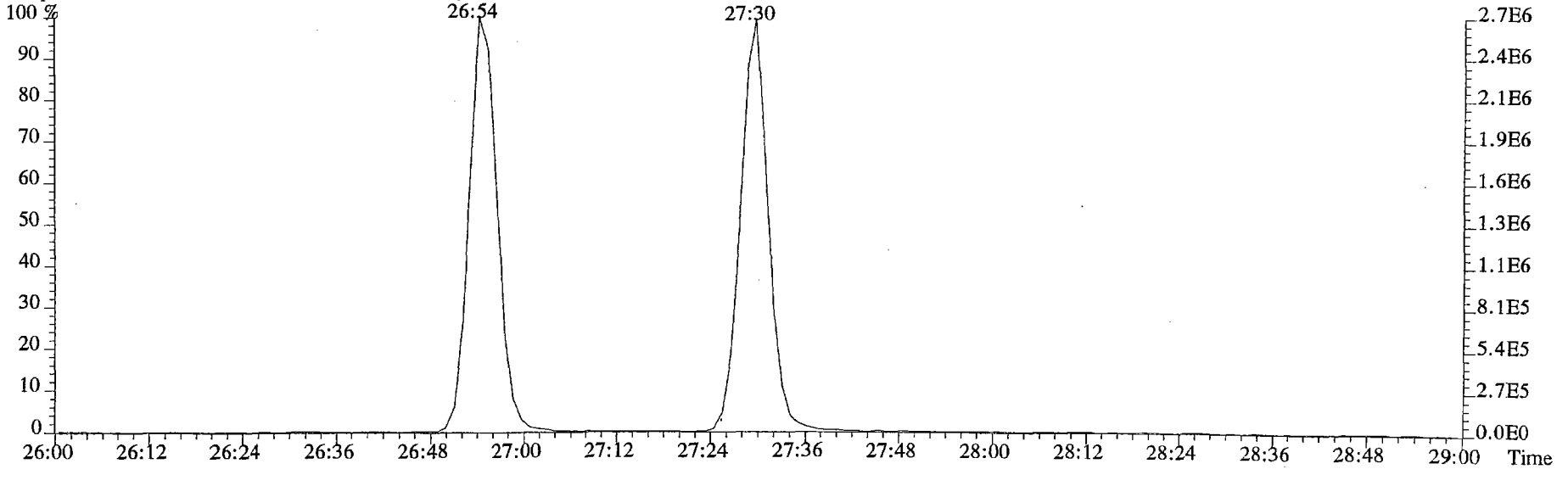
File:24FEB09M #1-347 Acq:23-FEB-2009 22:50:13 GC EI+ Voltage SIR Autospec-Ultima
513.6775 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST024109M3 File Text:Frontier Analytical Laboratory Analyst ID:TC



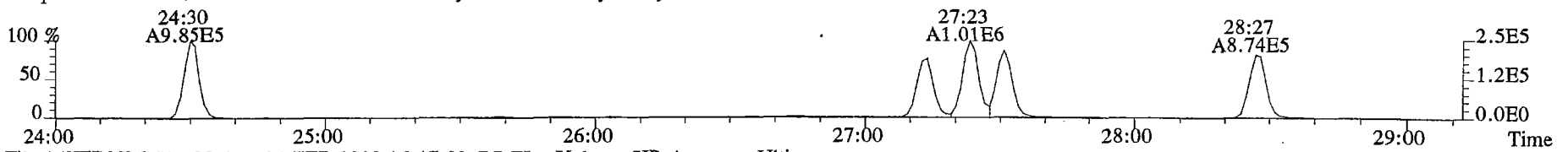
File:24FEB09M #1-390 Acq:24-FEB-2009 05:17:02 GC EI+ Voltage SIR Autospec-Ultima
319.8965 S:18 Exp:PCDD
Sample Text:ST022409M4 File Text:Frontier Analytical Laboratory



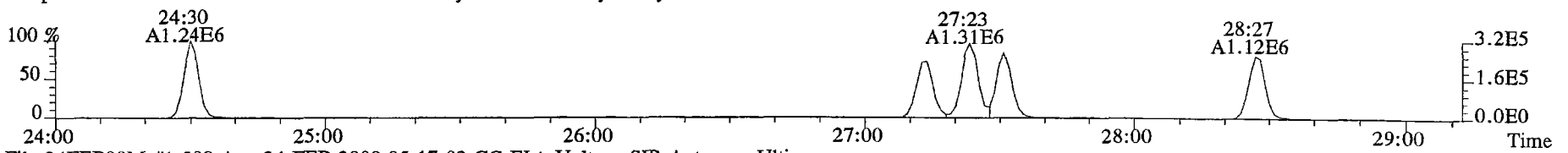
File:24FEB09M #1-390 Acq:24-FEB-2009 05:17:02 GC EI+ Voltage SIR Autospec-Ultima
333.9339 S:18 Exp:PCDD
Sample Text:ST022409M4 File Text:Frontier Analytical Laboratory



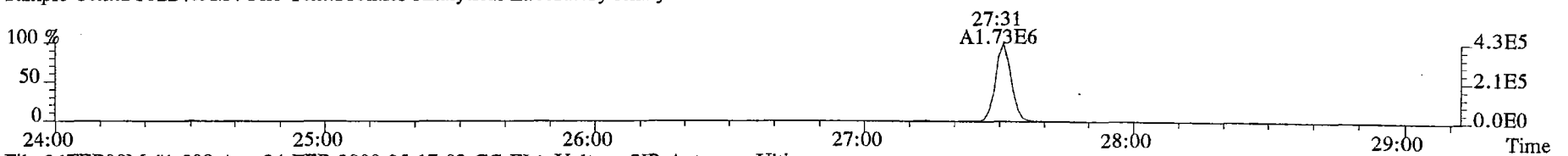
File:24FEB09M #1-390 Acq:24-FEB-2009 05:17:02 GC EI+ Voltage SIR Autospec-Ultima
319.8965 S:18 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST022409M4 File Text:Frontier Analytical Laboratory Analyst ID:TC



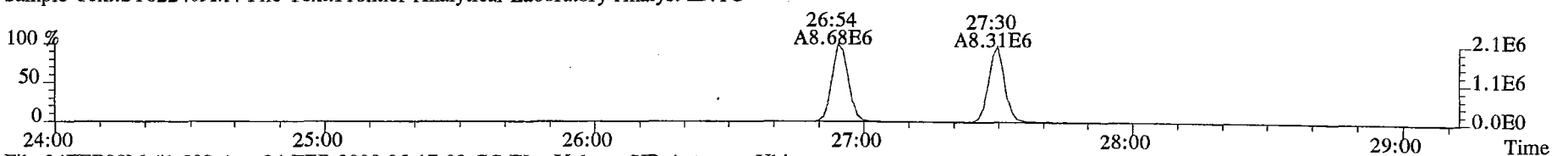
File:24FEB09M #1-390 Acq:24-FEB-2009 05:17:02 GC EI+ Voltage SIR Autospec-Ultima
321.8936 S:18 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST022409M4 File Text:Frontier Analytical Laboratory Analyst ID:TC



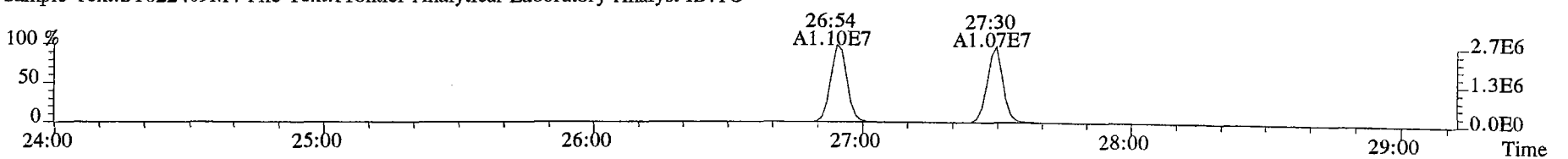
File:24FEB09M #1-390 Acq:24-FEB-2009 05:17:02 GC EI+ Voltage SIR Autospec-Ultima
327.8847 S:18 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST022409M4 File Text:Frontier Analytical Laboratory Analyst ID:TC



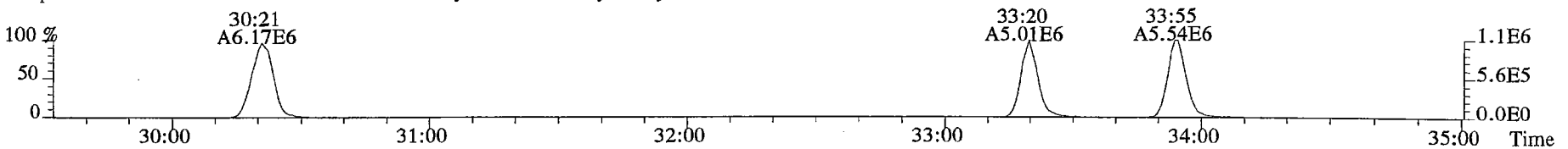
File:24FEB09M #1-390 Acq:24-FEB-2009 05:17:02 GC EI+ Voltage SIR Autospec-Ultima
331.9368 S:18 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST022409M4 File Text:Frontier Analytical Laboratory Analyst ID:TC



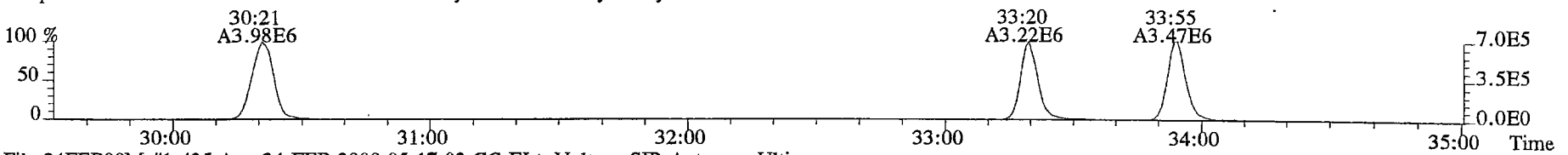
File:24FEB09M #1-390 Acq:24-FEB-2009 05:17:02 GC EI+ Voltage SIR Autospec-Ultima
333.9339 S:18 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST022409M4 File Text:Frontier Analytical Laboratory Analyst ID:TC



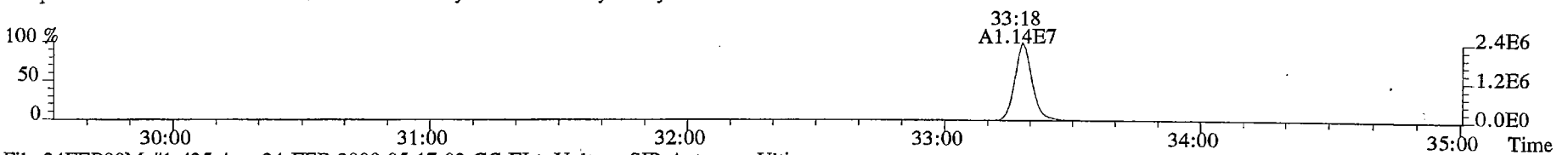
File:24FEB09M #1-425 Acq:24-FEB-2009 05:17:02 GC EI+ Voltage SIR Autospec-Ultima
355.8546 S:18 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST022409M4 File Text:Frontier Analytical Laboratory Analyst ID:TC



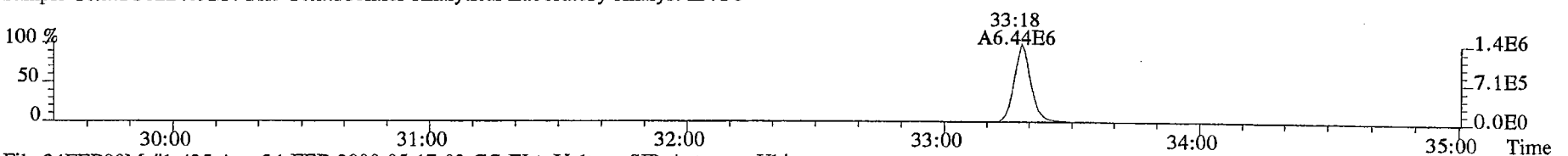
File:24FEB09M #1-425 Acq:24-FEB-2009 05:17:02 GC EI+ Voltage SIR Autospec-Ultima
357.8517 S:18 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST022409M4 File Text:Frontier Analytical Laboratory Analyst ID:TC



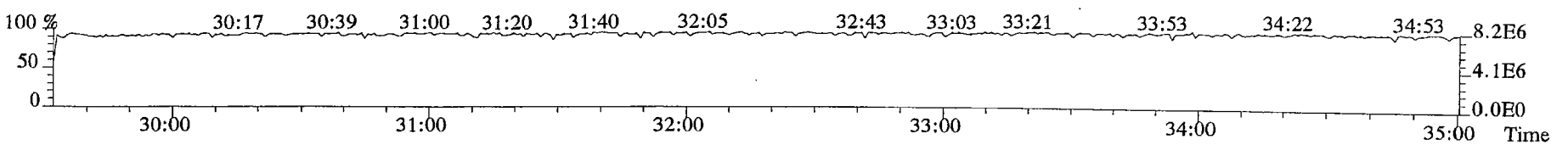
File:24FEB09M #1-425 Acq:24-FEB-2009 05:17:02 GC EI+ Voltage SIR Autospec-Ultima
367.8949 S:18 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST022409M4 File Text:Frontier Analytical Laboratory Analyst ID:TC



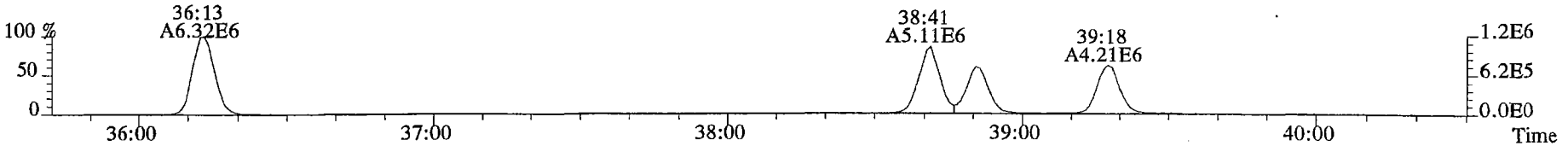
File:24FEB09M #1-425 Acq:24-FEB-2009 05:17:02 GC EI+ Voltage SIR Autospec-Ultima
369.8919 S:18 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST022409M4 File Text:Frontier Analytical Laboratory Analyst ID:TC



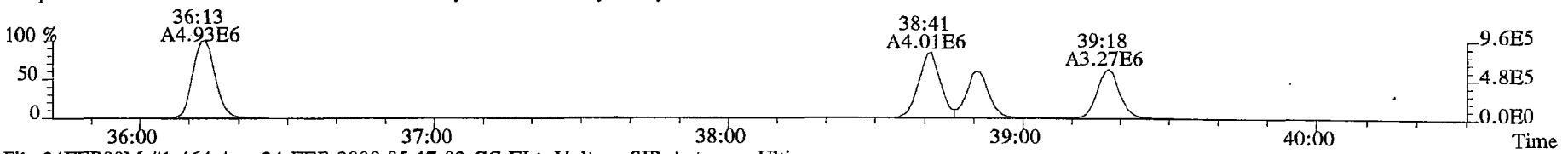
File:24FEB09M #1-425 Acq:24-FEB-2009 05:17:02 GC EI+ Voltage SIR Autospec-Ultima
366.9792 S:18 F:2 Exp:PCDD
Sample Text:ST022409M4 File Text:Frontier Analytical Laboratory Analyst ID:TC



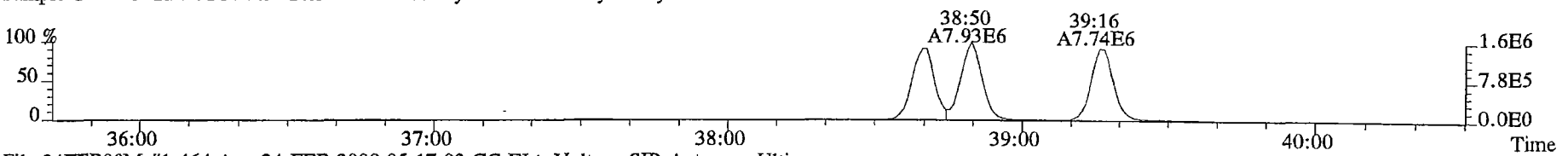
File:24FEB09M #1-464 Acq:24-FEB-2009 05:17:02 GC EI+ Voltage SIR Autospec-Ultima
389.8156 S:18 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST022409M4 File Text:Frontier Analytical Laboratory Analyst ID:TC



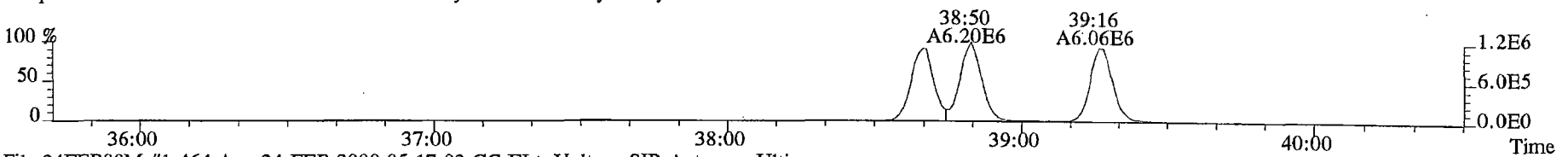
File:24FEB09M #1-464 Acq:24-FEB-2009 05:17:02 GC EI+ Voltage SIR Autospec-Ultima
391.8127 S:18 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD.
Sample Text:ST022409M4 File Text:Frontier Analytical Laboratory Analyst ID:TC



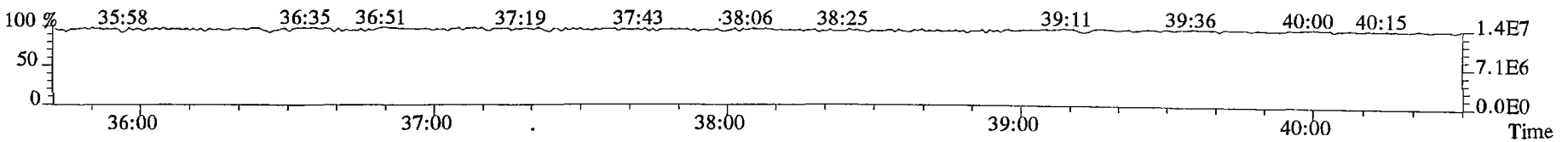
File:24FEB09M #1-464 Acq:24-FEB-2009 05:17:02 GC EI+ Voltage SIR Autospec-Ultima
401.8559 S:18 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST022409M4 File Text:Frontier Analytical Laboratory Analyst ID:TC



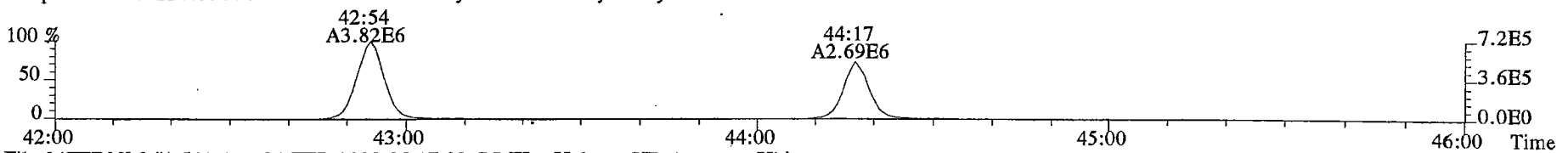
File:24FEB09M #1-464 Acq:24-FEB-2009 05:17:02 GC EI+ Voltage SIR Autospec-Ultima
403.8530 S:18 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST022409M4 File Text:Frontier Analytical Laboratory Analyst ID:TC



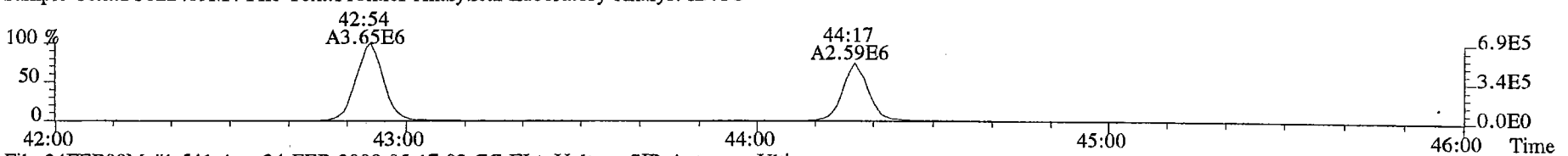
File:24FEB09M #1-464 Acq:24-FEB-2009 05:17:02 GC EI+ Voltage SIR Autospec-Ultima
380.9760 S:18 F:3 Exp:PCDD
Sample Text:ST022409M4 File Text:Frontier Analytical Laboratory Analyst ID:TC



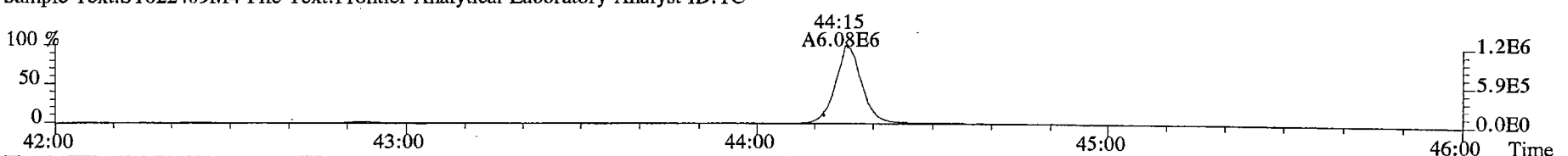
File:24FEB09M #1-541 Acq:24-FEB-2009 05:17:02 GC EI+ Voltage SIR Autospec-Ultima
423.7767 S:18 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST022409M4 File Text:Frontier Analytical Laboratory Analyst ID:TC



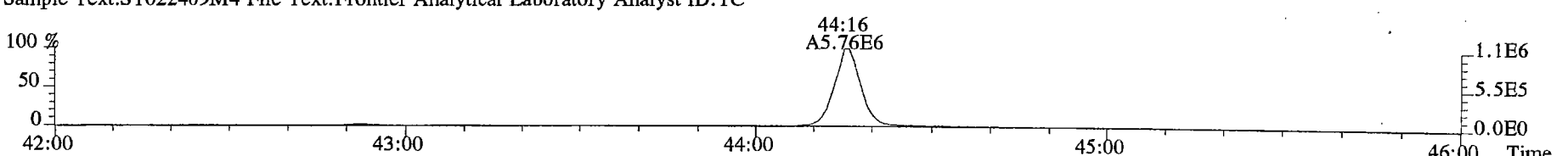
File:24FEB09M #1-541 Acq:24-FEB-2009 05:17:02 GC EI+ Voltage SIR Autospec-Ultima
425.7737 S:18 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST022409M4 File Text:Frontier Analytical Laboratory Analyst ID:TC



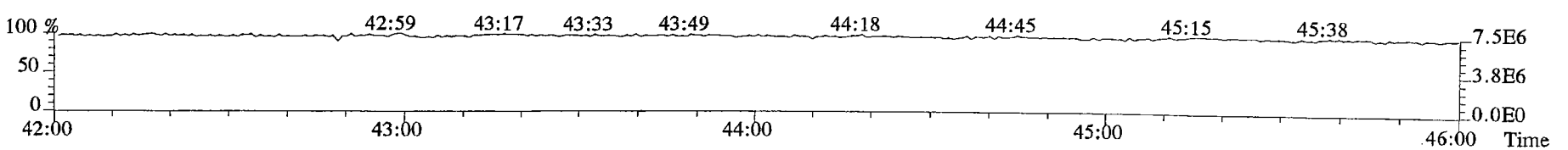
File:24FEB09M #1-541 Acq:24-FEB-2009 05:17:02 GC EI+ Voltage SIR Autospec-Ultima
435.8169 S:18 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST022409M4 File Text:Frontier Analytical Laboratory Analyst ID:TC



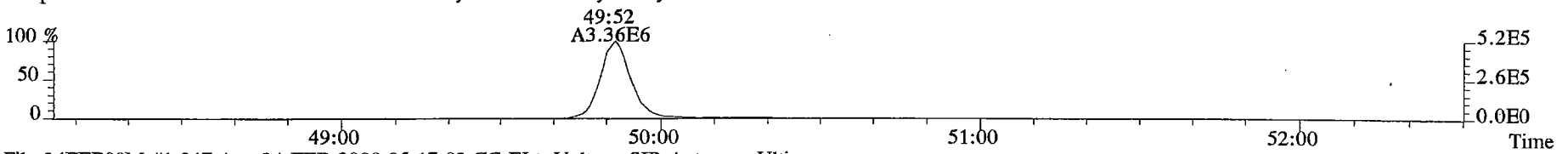
File:24FEB09M #1-541 Acq:24-FEB-2009 05:17:02 GC EI+ Voltage SIR Autospec-Ultima
437.8140 S:18 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST022409M4 File Text:Frontier Analytical Laboratory Analyst ID:TC



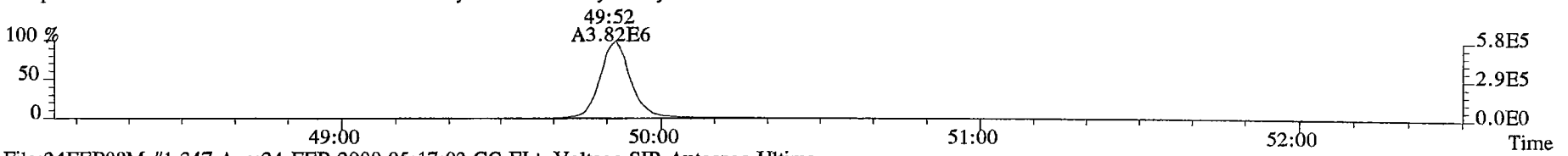
File:24FEB09M #1-541 Acq:24-FEB-2009 05:17:02 GC EI+ Voltage SIR Autospec-Ultima
430.9728 S:18 F:4 Exp:PCDD
Sample Text:ST022409M4 File Text:Frontier Analytical Laboratory Analyst ID:TC



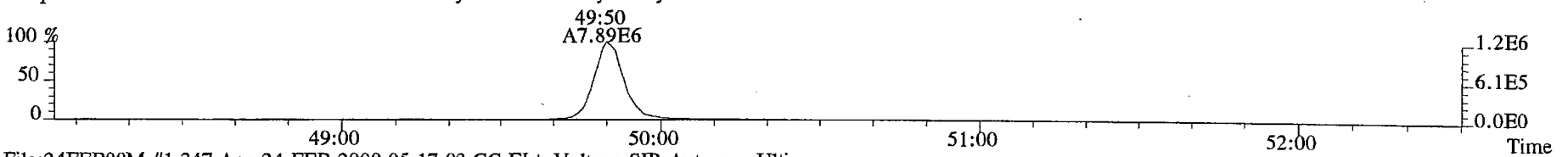
File:24FEB09M #1-347 Acq:24-FEB-2009 05:17:02 GC EI+ Voltage SIR Autospec-Ultima
457.7377 S:18 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST022409M4 File Text:Frontier Analytical Laboratory Analyst ID:TC



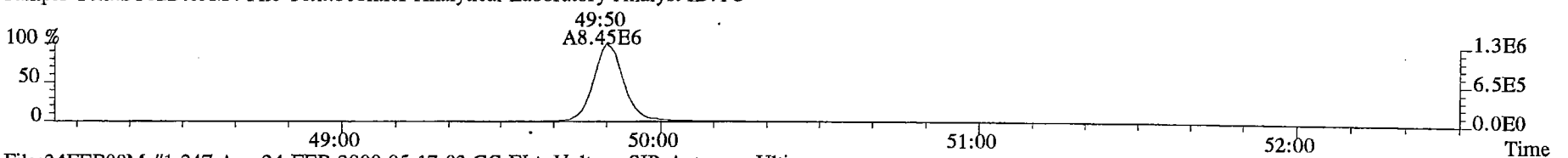
File:24FEB09M #1-347 Acq:24-FEB-2009 05:17:02 GC EI+ Voltage SIR Autospec-Ultima
459.7348 S:18 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST022409M4 File Text:Frontier Analytical Laboratory Analyst ID:TC



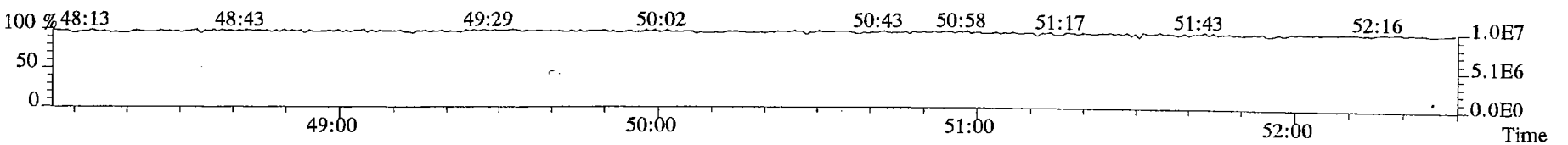
File:24FEB09M #1-347 Acq:24-FEB-2009 05:17:02 GC EI+ Voltage SIR Autospec-Ultima
469.7780 S:18 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST022409M4 File Text:Frontier Analytical Laboratory Analyst ID:TC



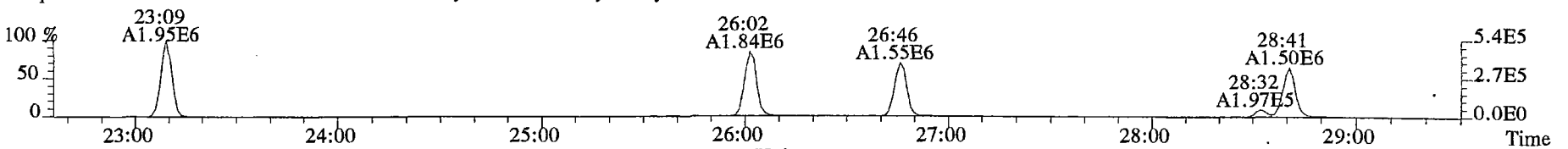
File:24FEB09M #1-347 Acq:24-FEB-2009 05:17:02 GC EI+ Voltage SIR Autospec-Ultima
471.7750 S:18 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST022409M4 File Text:Frontier Analytical Laboratory Analyst ID:TC



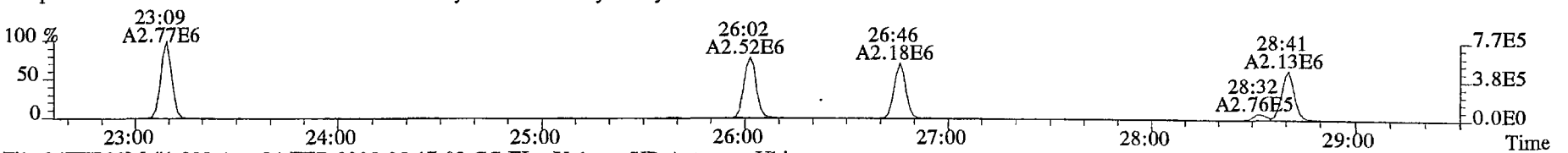
File:24FEB09M #1-347 Acq:24-FEB-2009 05:17:02 GC EI+ Voltage SIR Autospec-Ultima
454.9728 S:18 F:5 Exp:PCDD
Sample Text:ST022409M4 File Text:Frontier Analytical Laboratory Analyst ID:TC



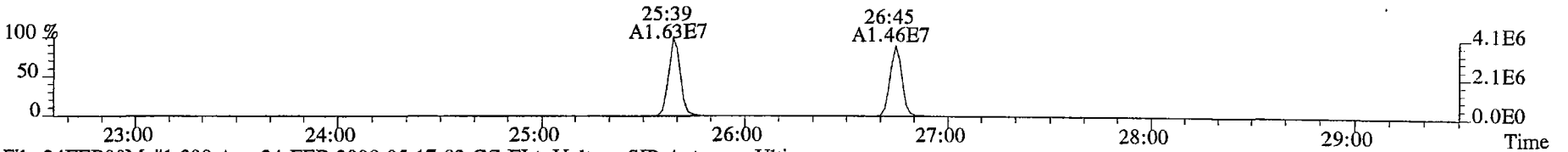
File:24FEB09M #1-390 Acq:24-FEB-2009 05:17:02 GC EI+ Voltage SIR Autospec-Ultima
303.9016 S:18 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST022409M4 File Text:Frontier Analytical Laboratory Analyst ID:TC



File:24FEB09M #1-390 Acq:24-FEB-2009 05:17:02 GC EI+ Voltage SIR Autospec-Ultima
305.8987 S:18 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST022409M4 File Text:Frontier Analytical Laboratory Analyst ID:TC



File:24FEB09M #1-390 Acq:24-FEB-2009 05:17:02 GC EI+ Voltage SIR Autospec-Ultima
315.9419 S:18 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST022409M4 File Text:Frontier Analytical Laboratory Analyst ID:TC



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317.9389 S:18 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
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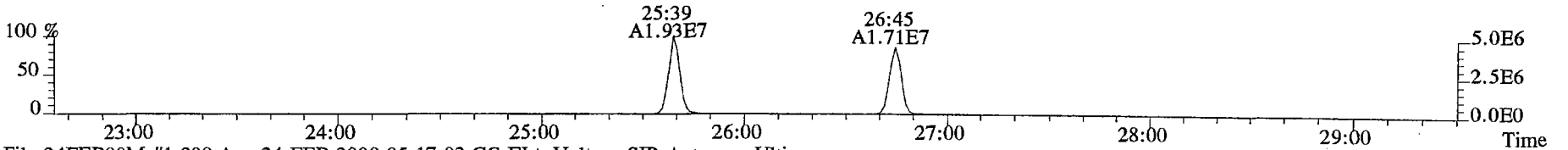
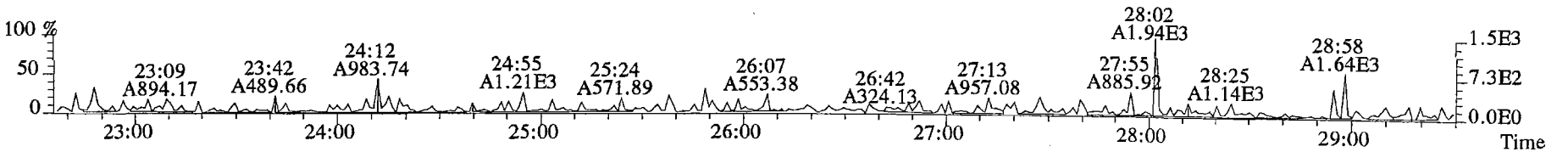
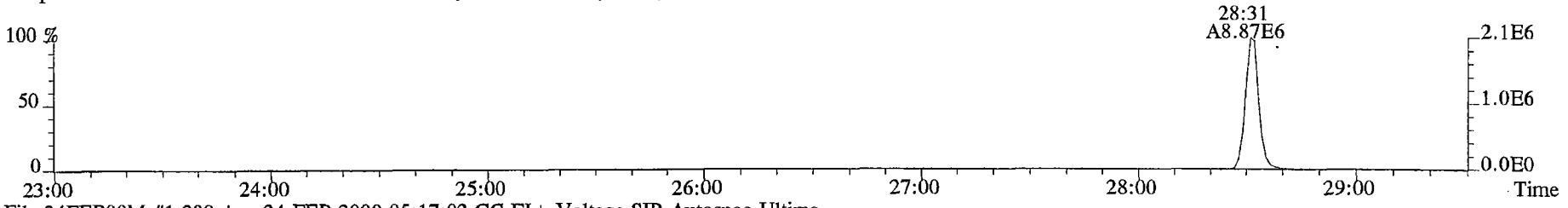


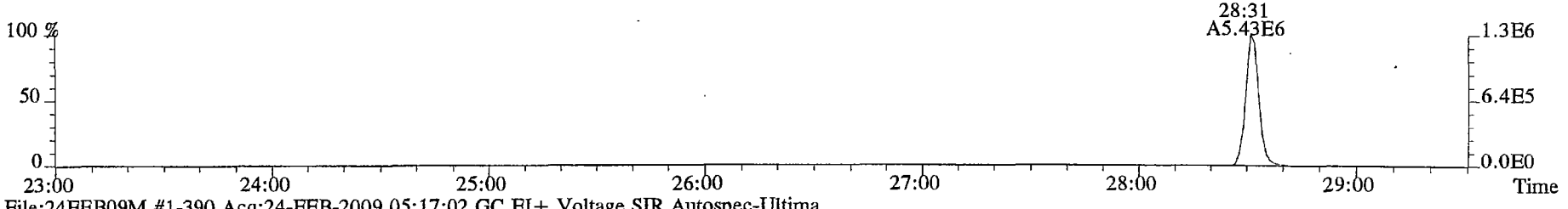
File:24FEB09M #1-390 Acq:24-FEB-2009 05:17:02 GC EI+ Voltage SIR Autospec-Ultima
375.8364 S:18 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST022409M4 File Text:Frontier Analytical Laboratory Analyst ID:TC



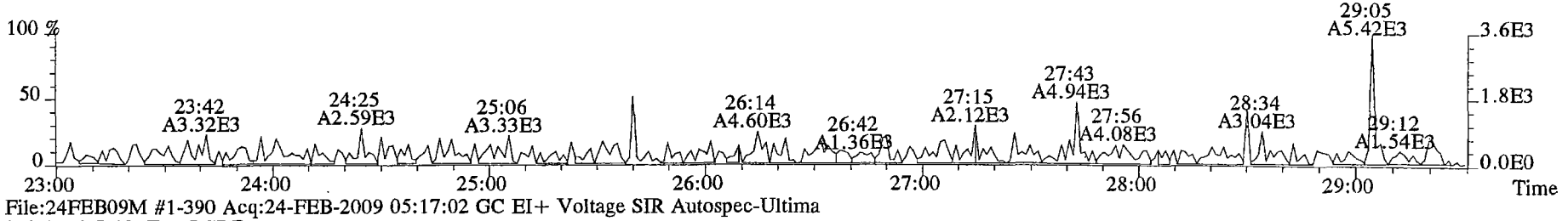
File:24FEB09M #1-390 Acq:24-FEB-2009 05:17:02 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:18 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST022409M4 File Text:Frontier Analytical Laboratory Analyst ID:TC



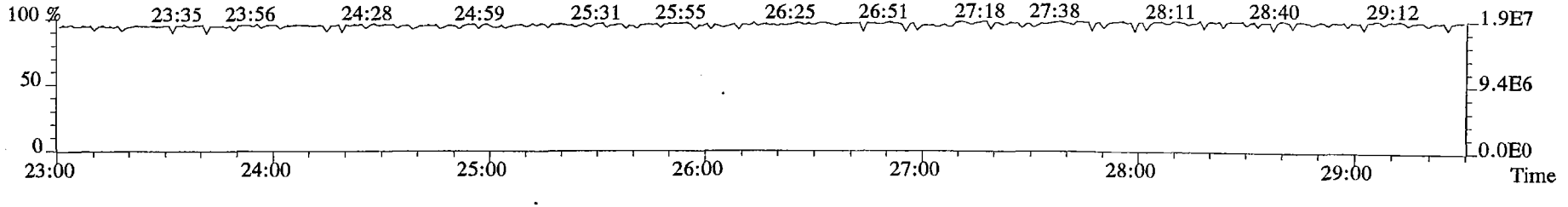
File:24FEB09M #1-390 Acq:24-FEB-2009 05:17:02 GC EI+ Voltage SIR Autospec-Ultima
341.8568 S:18 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST022409M4 File Text:Frontier Analytical Laboratory Analyst ID:TC



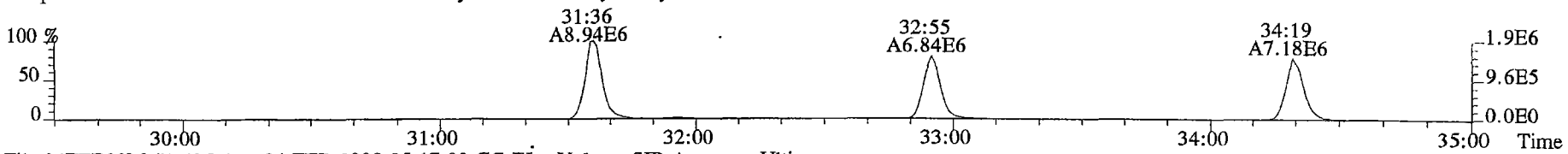
File:24FEB09M #1-390 Acq:24-FEB-2009 05:17:02 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:18 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST022409M4 File Text:Frontier Analytical Laboratory Analyst ID:TC



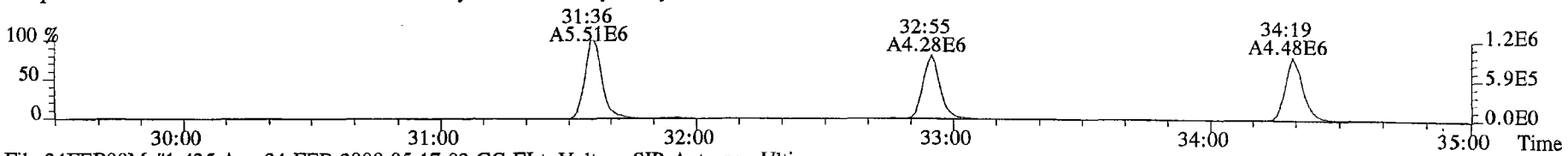
File:24FEB09M #1-390 Acq:24-FEB-2009 05:17:02 GC EI+ Voltage SIR Autospec-Ultima
330.9792 S:18 Exp:PCDD
Sample Text:ST022409M4 File Text:Frontier Analytical Laboratory Analyst ID:TC



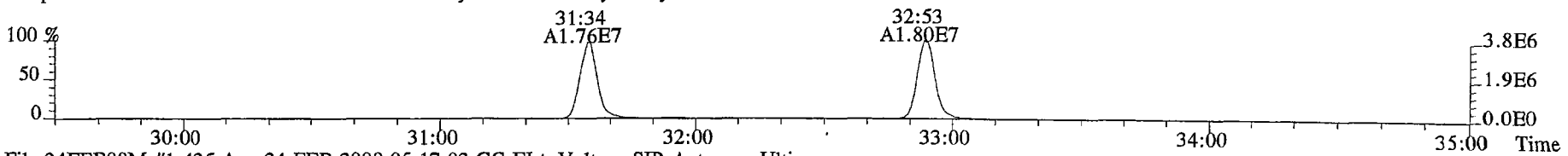
File:24FEB09M #1-425 Acq:24-FEB-2009 05:17:02 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:18 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST022409M4 File Text:Frontier Analytical Laboratory Analyst ID:TC



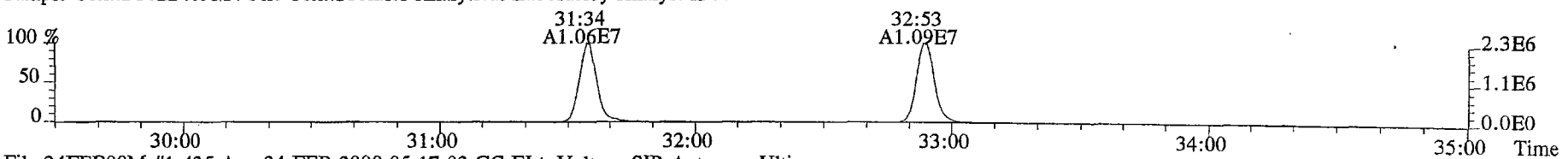
File:24FEB09M #1-425 Acq:24-FEB-2009 05:17:02 GC EI+ Voltage SIR Autospec-Ultima
341.8568 S:18 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST022409M4 File Text:Frontier Analytical Laboratory Analyst ID:TC



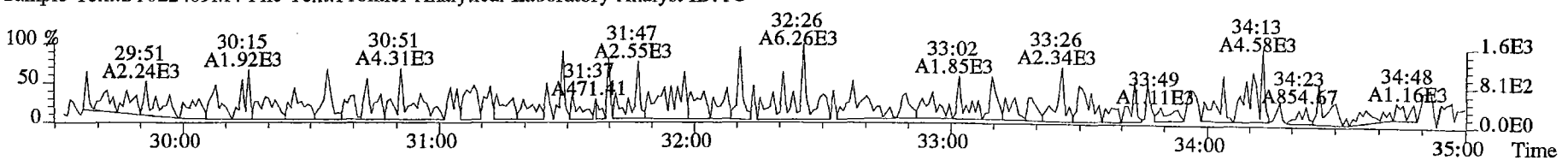
File:24FEB09M #1-425 Acq:24-FEB-2009 05:17:02 GC EI+ Voltage SIR Autospec-Ultima
351.9000 S:18 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST022409M4 File Text:Frontier Analytical Laboratory Analyst ID:TC



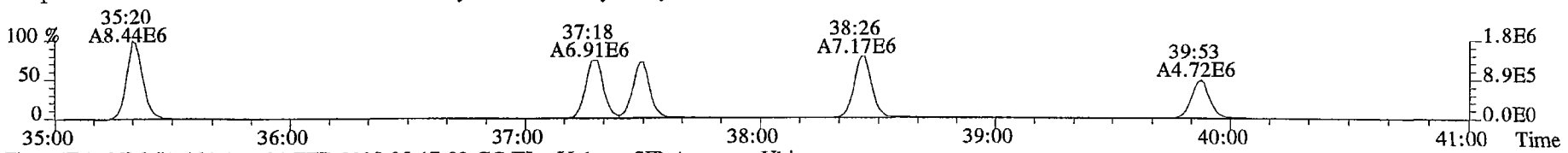
File:24FEB09M #1-425 Acq:24-FEB-2009 05:17:02 GC EI+ Voltage SIR Autospec-Ultima
353.8970 S:18 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST022409M4 File Text:Frontier Analytical Laboratory Analyst ID:TC



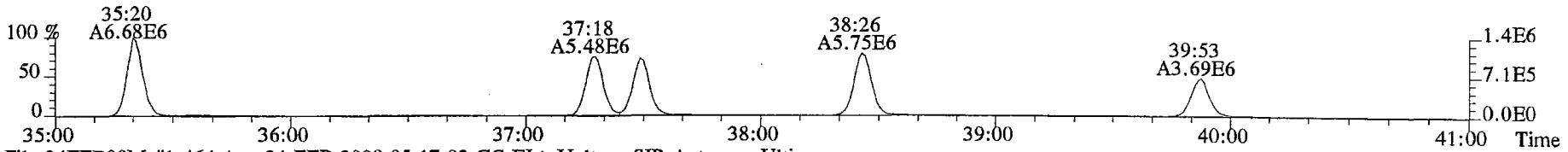
File:24FEB09M #1-425 Acq:24-FEB-2009 05:17:02 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:18 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST022409M4 File Text:Frontier Analytical Laboratory Analyst ID:TC



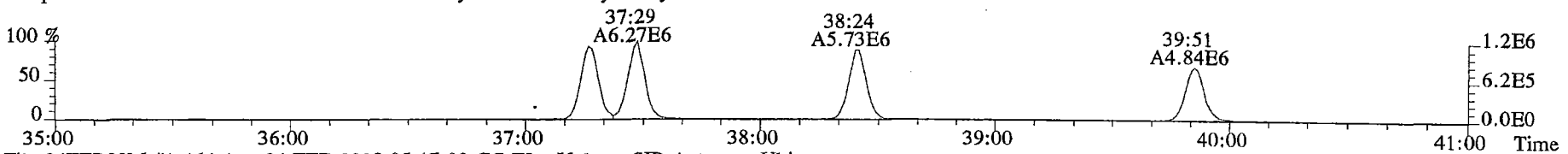
File:24FEB09M #1-464 Acq:24-FEB-2009 05:17:02 GC EI+ Voltage SIR Autospec-Ultima
373.8207 S:18 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST022409M4 File Text:Frontier Analytical Laboratory Analyst ID:TC



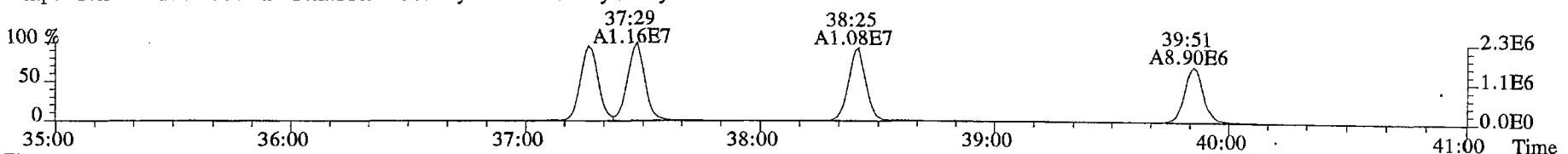
File:24FEB09M #1-464 Acq:24-FEB-2009 05:17:02 GC EI+ Voltage SIR Autospec-Ultima
375.8178 S:18 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST022409M4 File Text:Frontier Analytical Laboratory Analyst ID:TC



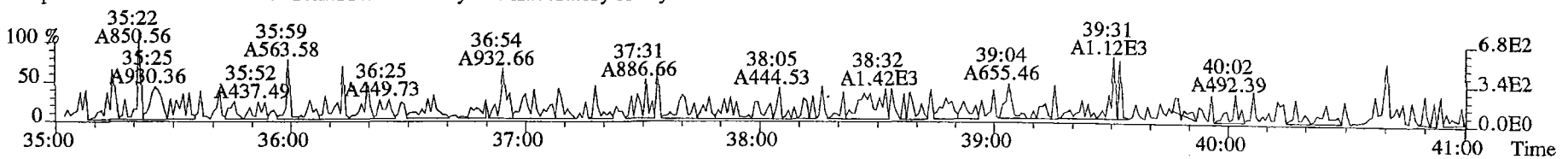
File:24FEB09M #1-464 Acq:24-FEB-2009 05:17:02 GC EI+ Voltage SIR Autospec-Ultima
383.8639 S:18 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST022409M4 File Text:Frontier Analytical Laboratory Analyst ID:TC



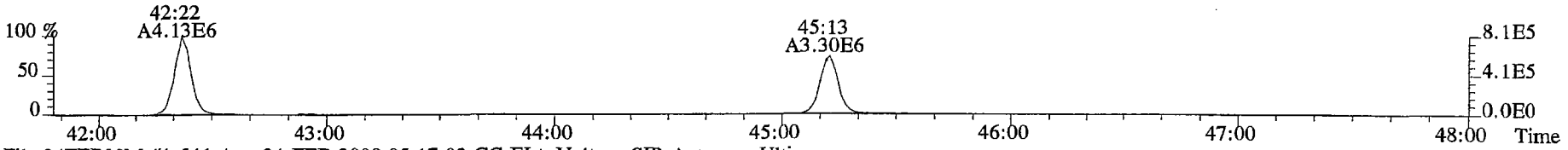
File:24FEB09M #1-464 Acq:24-FEB-2009 05:17:02 GC EI+ Voltage SIR Autospec-Ultima
385.8610 S:18 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST022409M4 File Text:Frontier Analytical Laboratory Analyst ID:TC



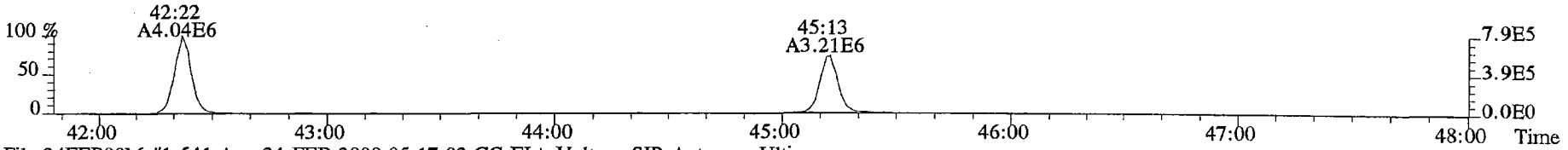
File:24FEB09M #1-464 Acq:24-FEB-2009 05:17:02 GC EI+ Voltage SIR Autospec-Ultima
445.7555 S:18 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST022409M4 File Text:Frontier Analytical Laboratory Analyst ID:TC



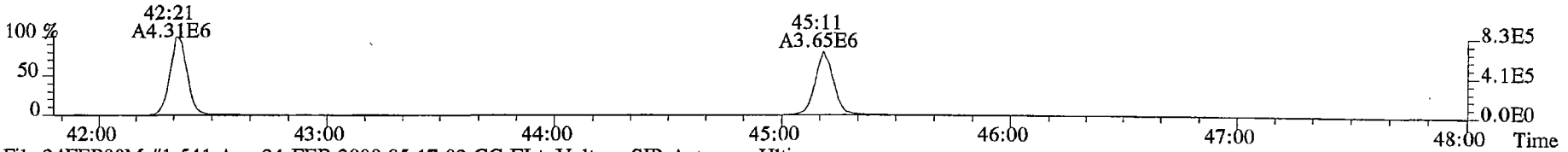
File:24FEB09M #1-541 Acq:24-FEB-2009 05:17:02 GC EI+ Voltage SIR Autospec-Ultima
407.7818 S:18 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST022409M4 File Text:Frontier Analytical Laboratory Analyst ID:TC



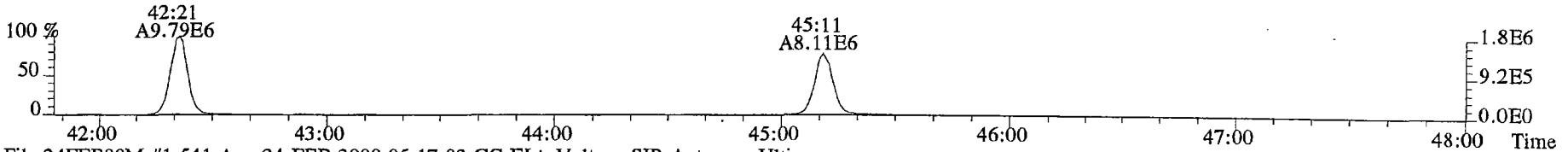
File:24FEB09M #1-541 Acq:24-FEB-2009 05:17:02 GC EI+ Voltage SIR Autospec-Ultima
409.7788 S:18 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST022409M4 File Text:Frontier Analytical Laboratory Analyst ID:TC



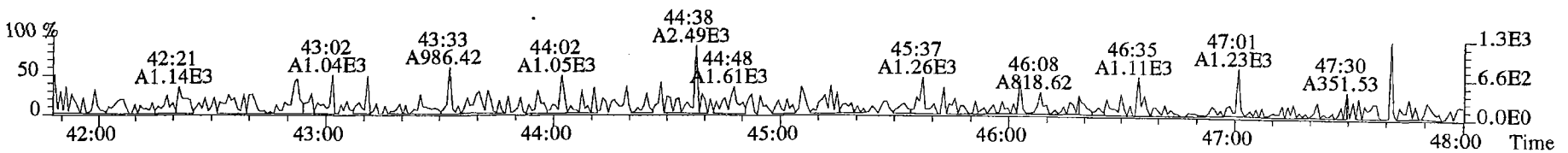
File:24FEB09M #1-541 Acq:24-FEB-2009 05:17:02 GC EI+ Voltage SIR Autospec-Ultima
417.8253 S:18 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST022409M4 File Text:Frontier Analytical Laboratory Analyst ID:TC



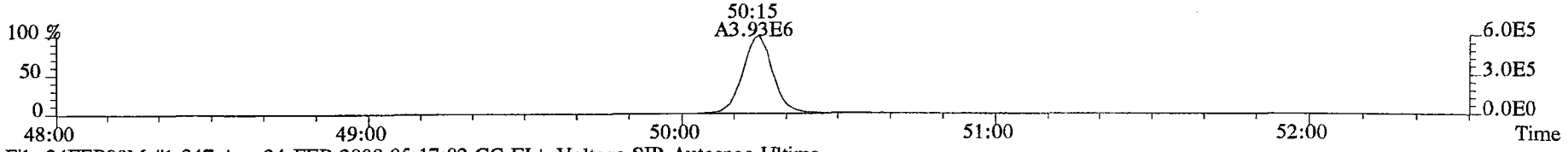
File:24FEB09M #1-541 Acq:24-FEB-2009 05:17:02 GC EI+ Voltage SIR Autospec-Ultima
419.8220 S:18 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST022409M4 File Text:Frontier Analytical Laboratory Analyst ID:TC



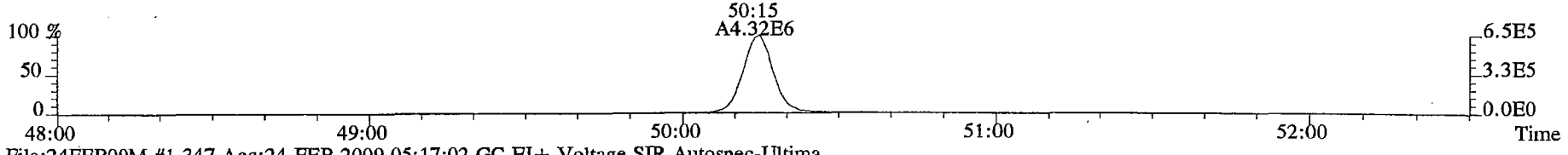
File:24FEB09M #1-541 Acq:24-FEB-2009 05:17:02 GC EI+ Voltage SIR Autospec-Ultima
479.7165 S:18 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST022409M4 File Text:Frontier Analytical Laboratory Analyst ID:TC



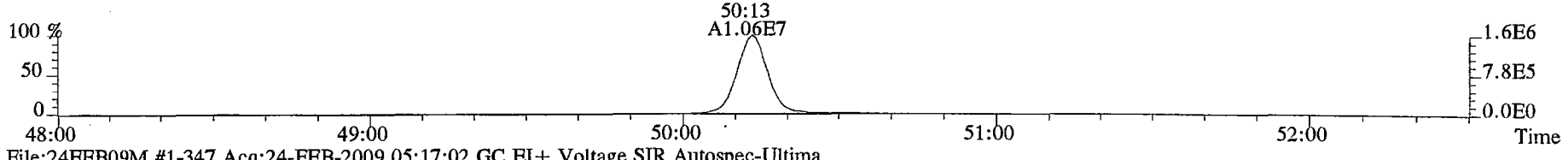
File:24FEB09M #1-347 Acq:24-FEB-2009 05:17:02 GC EI+ Voltage SIR Autospec-Ultima
441.7428 S:18 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST022409M4 File Text:Frontier Analytical Laboratory Analyst ID:TC



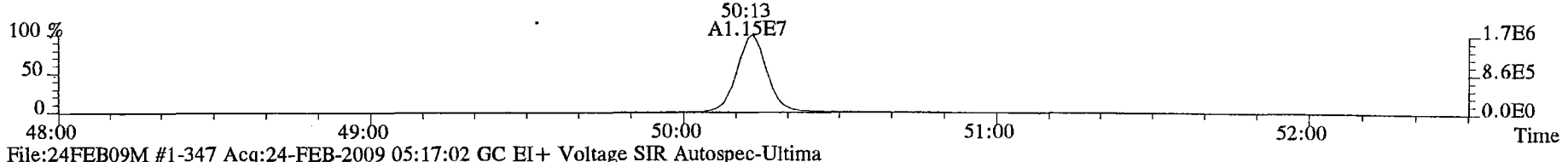
File:24FEB09M #1-347 Acq:24-FEB-2009 05:17:02 GC EI+ Voltage SIR Autospec-Ultima
443.7398 S:18 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST022409M4 File Text:Frontier Analytical Laboratory Analyst ID:TC



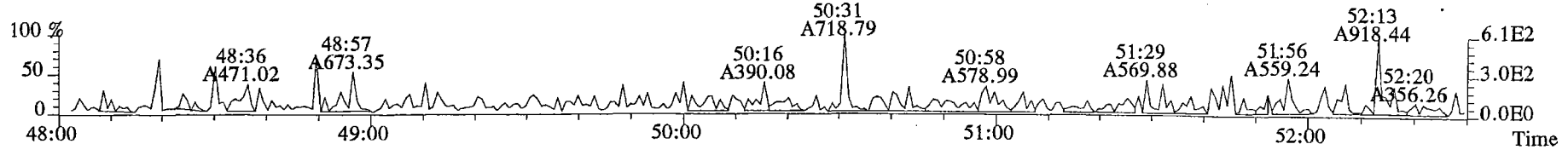
File:24FEB09M #1-347 Acq:24-FEB-2009 05:17:02 GC EI+ Voltage SIR Autospec-Ultima
453.7831 S:18 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST022409M4 File Text:Frontier Analytical Laboratory Analyst ID:TC



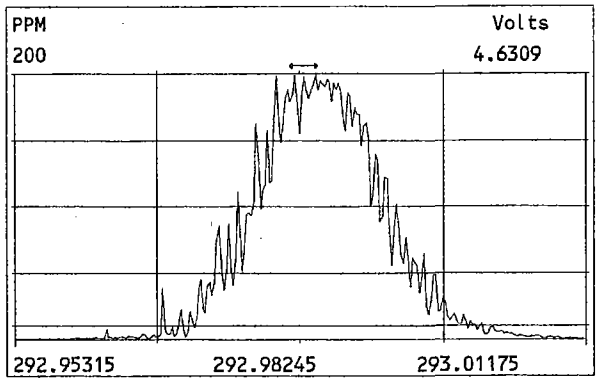
File:24FEB09M #1-347 Acq:24-FEB-2009 05:17:02 GC EI+ Voltage SIR Autospec-Ultima
455.7801 S:18 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST022409M4 File Text:Frontier Analytical Laboratory Analyst ID:TC

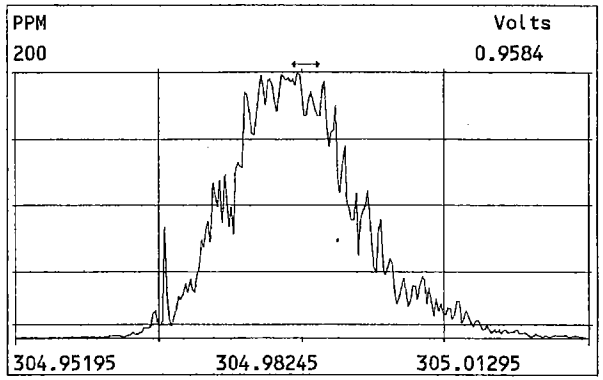


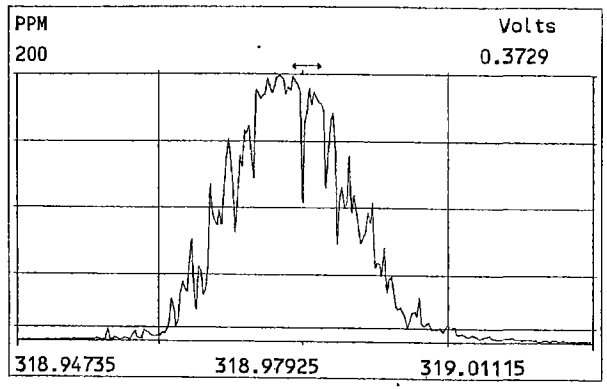
File:24FEB09M #1-347 Acq:24-FEB-2009 05:17:02 GC EI+ Voltage SIR Autospec-Ultima
513.6775 S:18 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST022409M4 File Text:Frontier Analytical Laboratory Analyst ID:TC

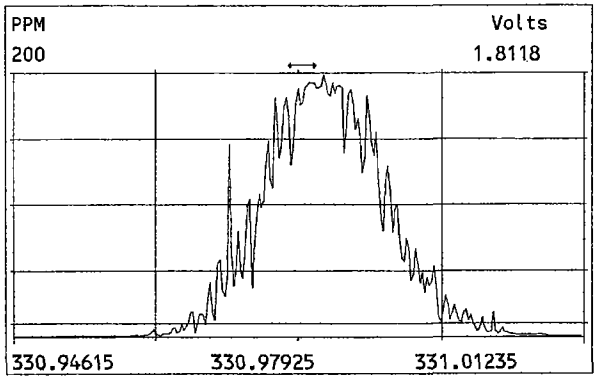


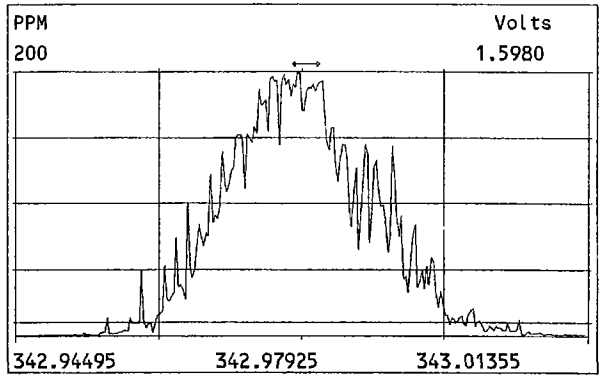
Peak Locate Examination: 4-MAR-2009:09:46 File:04MAR09A
Experiment:TCDF Function:1 Reference:PFK

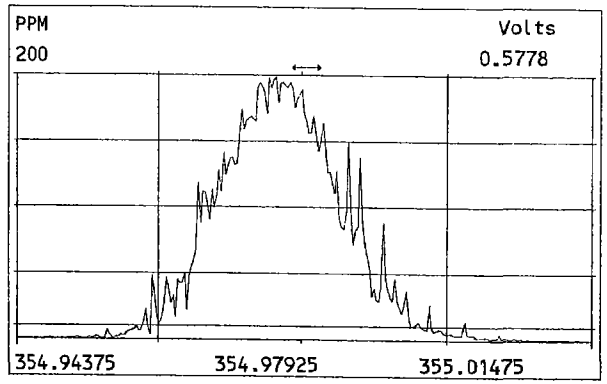


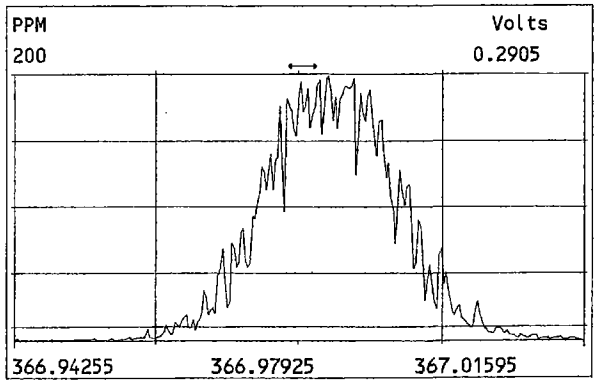


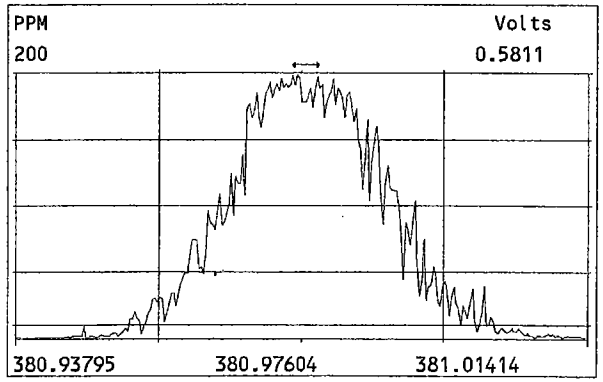




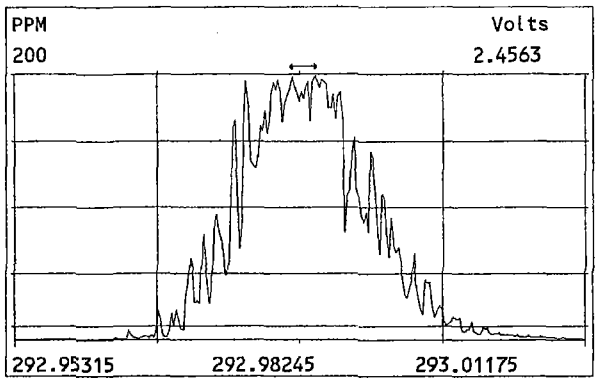


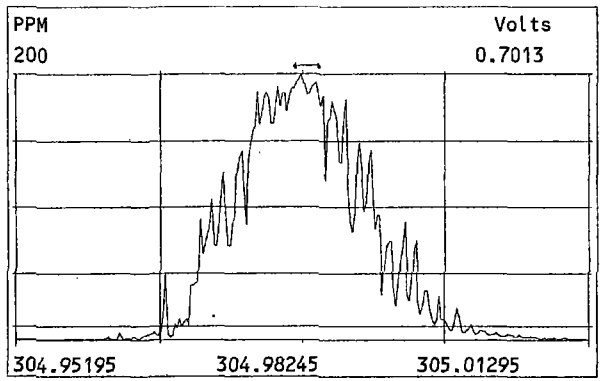


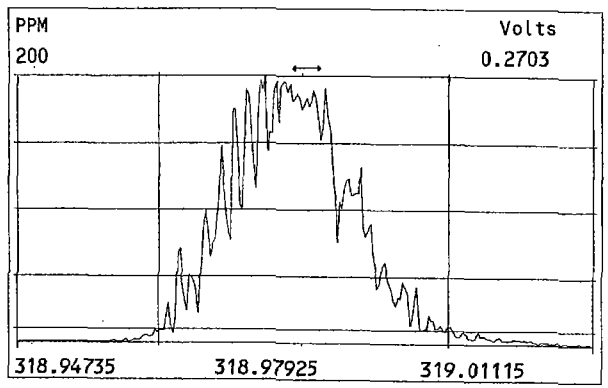


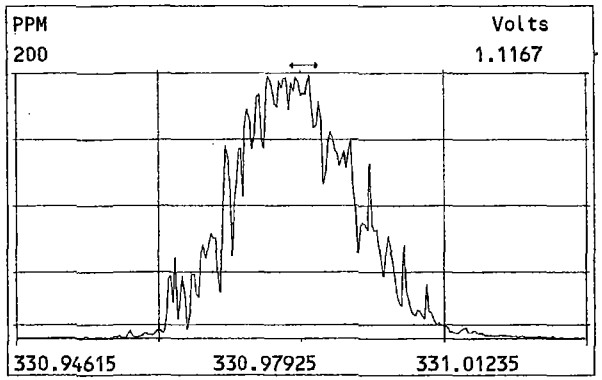


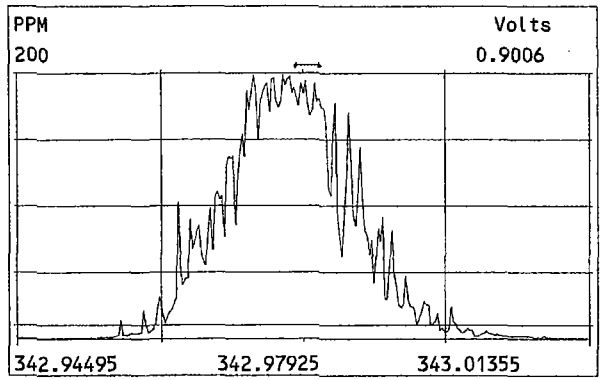
Peak Locate Examination: 4-MAR-2009:12:50 File:04MAR09A_RES_CHECK
Experiment:TCDF Function:1 Reference:PFK

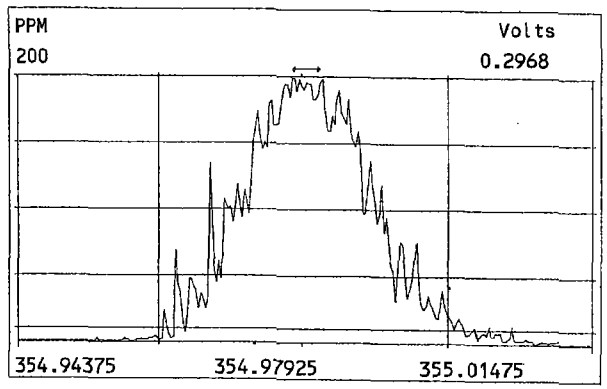


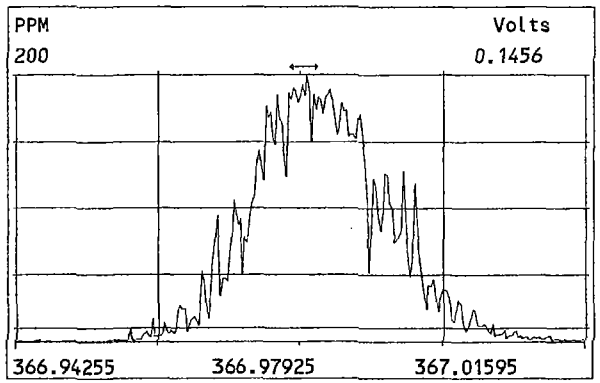


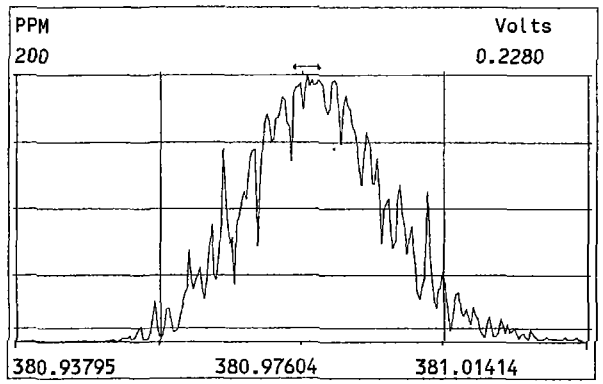




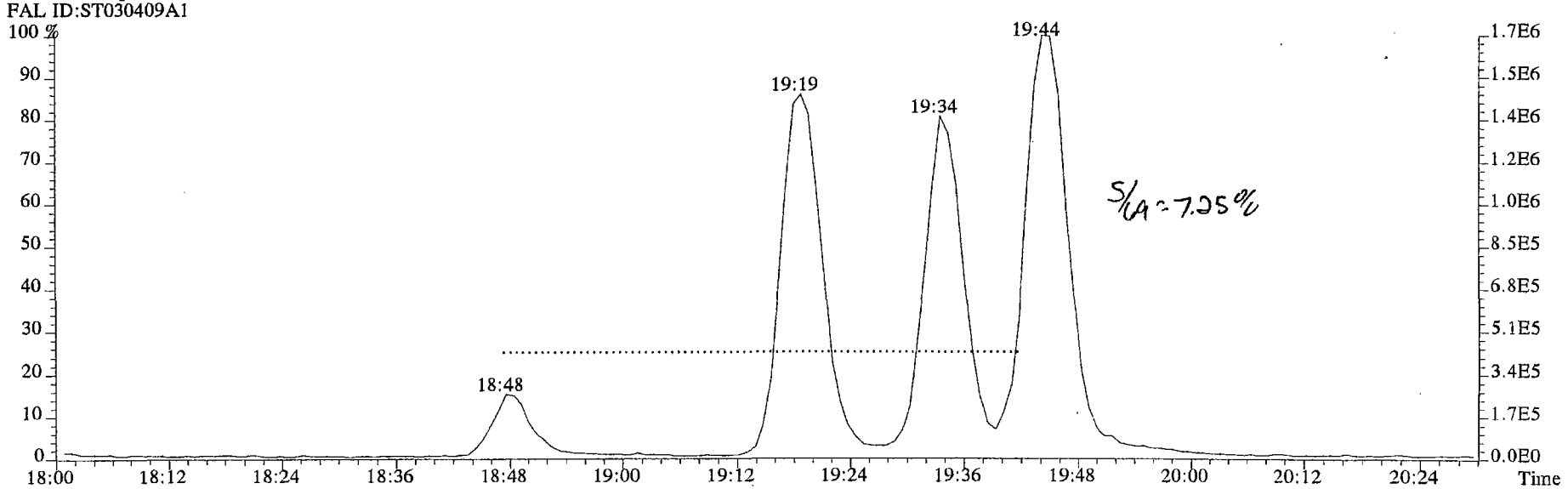




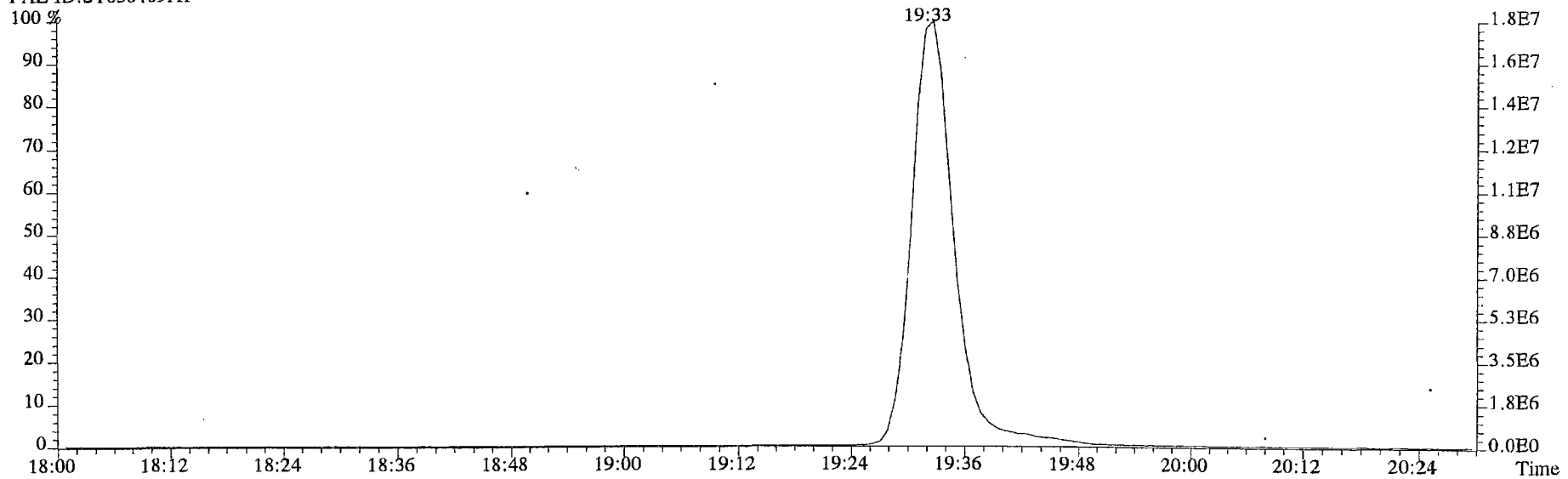




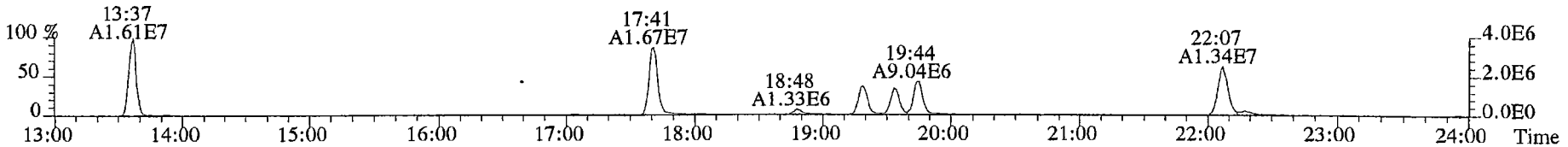
File:04MAR09A Acq: 4-MAR-2009 09:46:39 FAL-1 Frontier Analytical Laboratory
303.9016 Exp:TCDF
FAL ID:ST030409A1



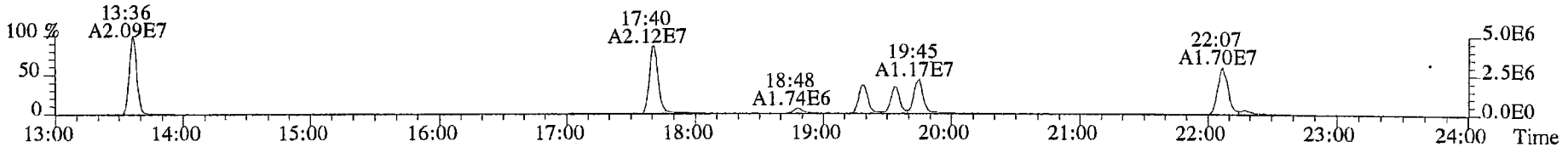
File:04MAR09A Acq: 4-MAR-2009 09:46:39 FAL-1 Frontier Analytical Laboratory
317.9389 Exp:TCDF
FAL ID:ST030409A1



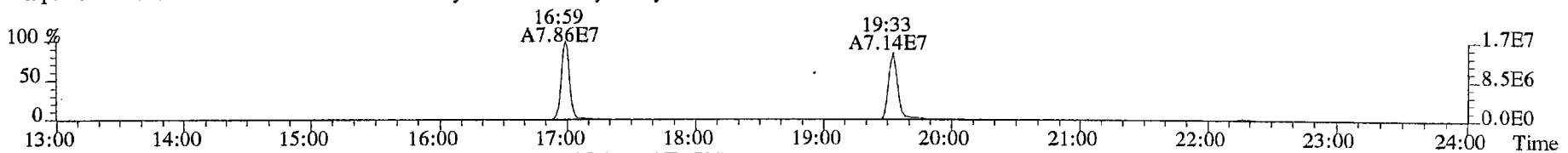
File:04MAR09A #1-1388 Acq: 4-MAR-2009 09:46:39 GC EI+ Voltage SIR 70S
303.9016 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:TCDF
Sample Text:ST030409A1 File Text:Frontier Analytical Laboratory Analyst ID:BS



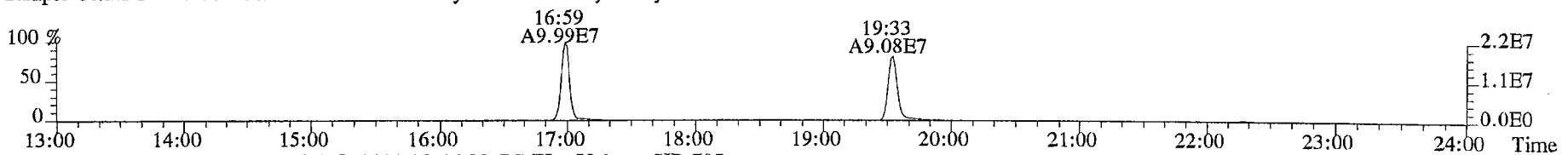
File:04MAR09A #1-1388 Acq: 4-MAR-2009 09:46:39 GC EI+ Voltage SIR 70S
305.8987 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:TCDF
Sample Text:ST030409A1 File Text:Frontier Analytical Laboratory Analyst ID:BS



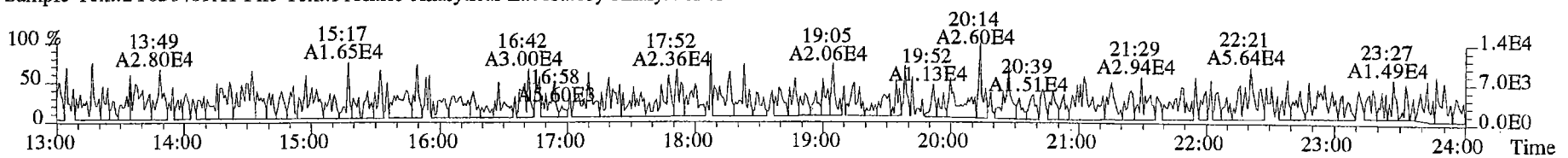
File:04MAR09A #1-1388 Acq: 4-MAR-2009 09:46:39 GC EI+ Voltage SIR 70S
315.9419 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:TCDF
Sample Text:ST030409A1 File Text:Frontier Analytical Laboratory Analyst ID:BS



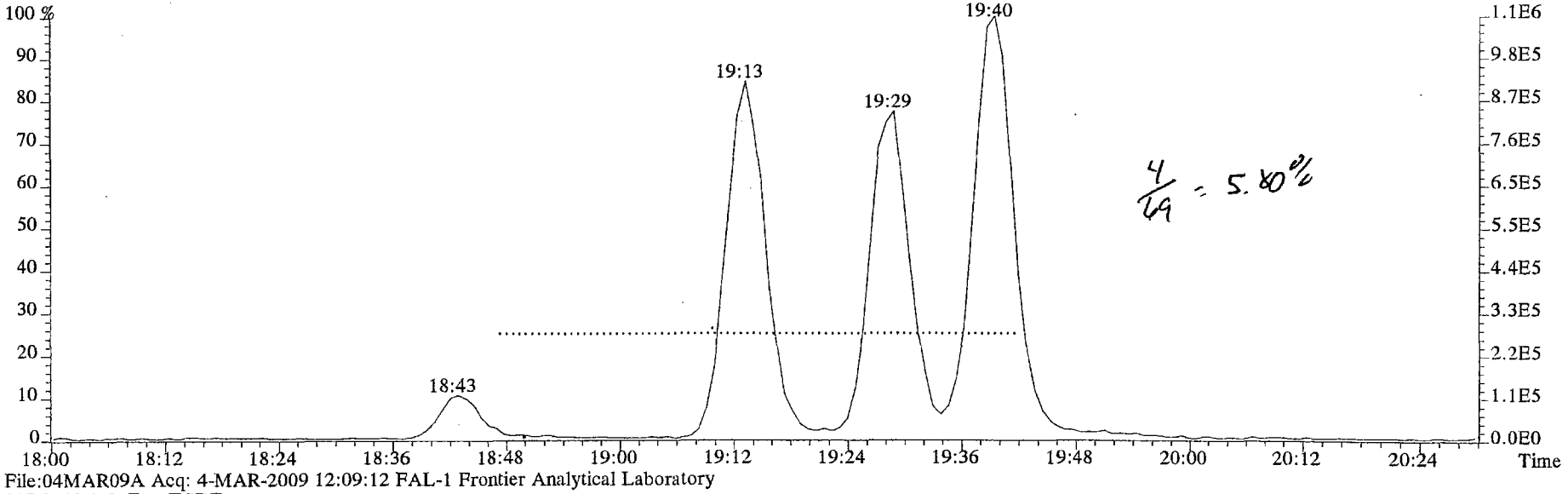
File:04MAR09A #1-1388 Acq: 4-MAR-2009 09:46:39 GC EI+ Voltage SIR 70S
317.9389 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:TCDF
Sample Text:ST030409A1 File Text:Frontier Analytical Laboratory Analyst ID:BS



File:04MAR09A #1-1388 Acq: 4-MAR-2009 09:46:39 GC EI+ Voltage SIR 70S
375.8364 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:TCDF
Sample Text:ST030409A1 File Text:Frontier Analytical Laboratory Analyst ID:BS

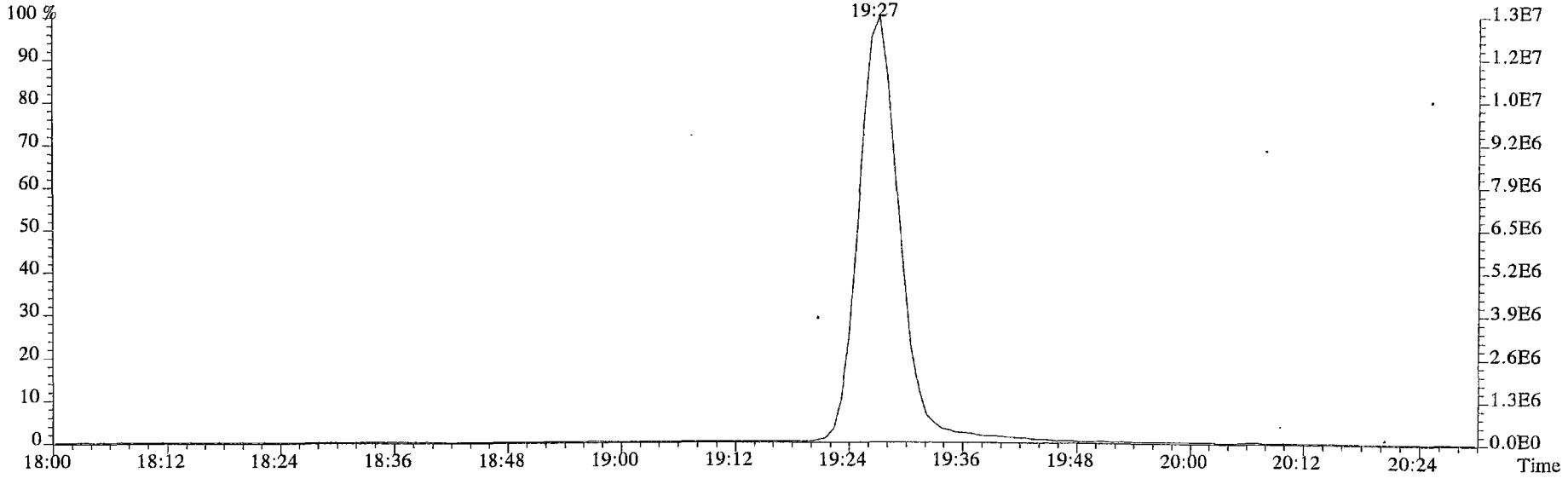


File:04MAR09A Acq: 4-MAR-2009 12:09:12 FAL-1 Frontier Analytical Laboratory
303.9016 S:5 Exp:TCDF
FAL ID:ST030409A2

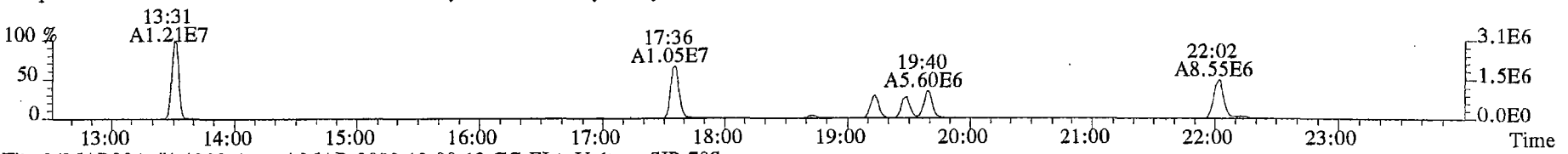


$\frac{4}{69} = 5.80\%$

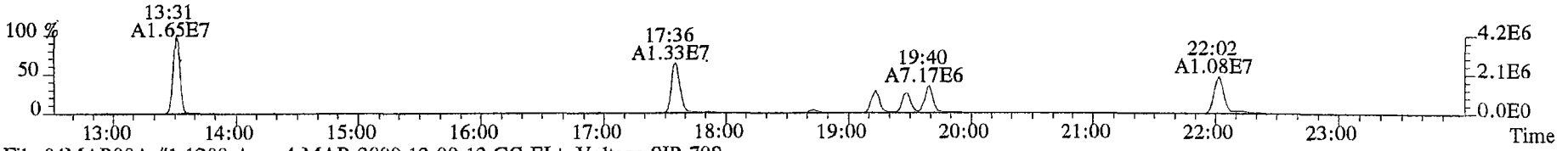
File:04MAR09A Acq: 4-MAR-2009 12:09:12 FAL-1 Frontier Analytical Laboratory
317.9389 S:5 Exp:TCDF
FAL ID:ST030409A2



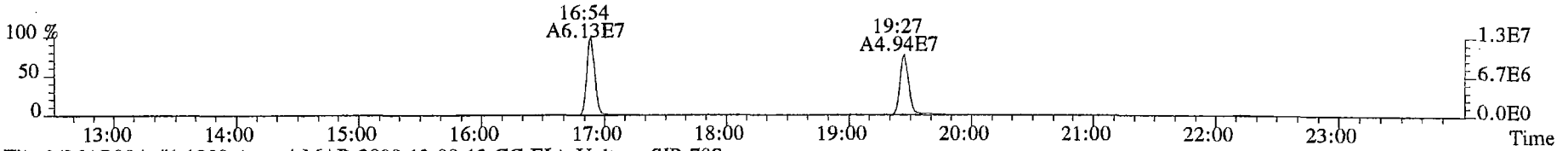
File:04MAR09A #1-1388 Acq: 4-MAR-2009 12:09:12 GC EI+ Voltage SIR 70S
303.9016 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:TCDF
Sample Text:ST030409A2 File Text:Frontier Analytical Laboratory Analyst ID:BS



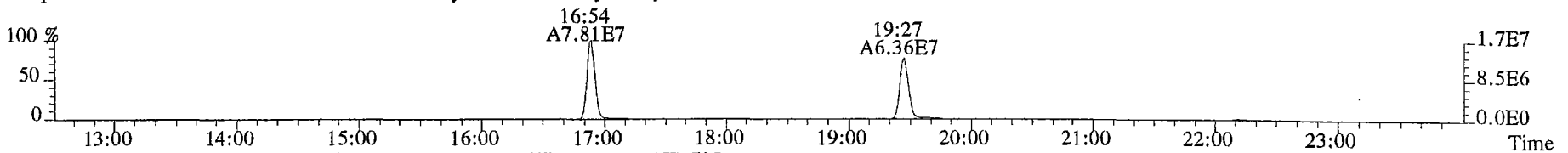
File:04MAR09A #1-1388 Acq: 4-MAR-2009 12:09:12 GC EI+ Voltage SIR 70S
305.8987 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:TCDF
Sample Text:ST030409A2 File Text:Frontier Analytical Laboratory Analyst ID:BS



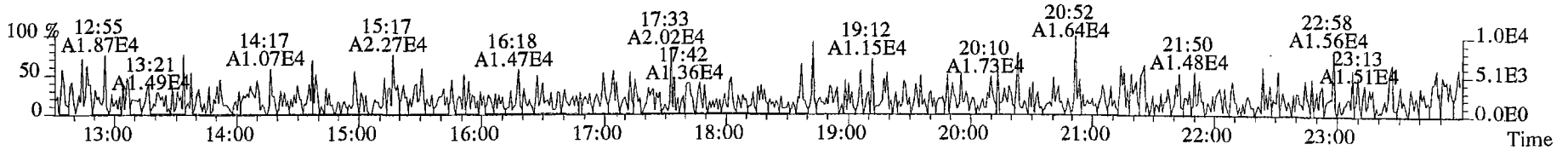
File:04MAR09A #1-1388 Acq: 4-MAR-2009 12:09:12 GC EI+ Voltage SIR 70S
315.9419 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:TCDF
Sample Text:ST030409A2 File Text:Frontier Analytical Laboratory Analyst ID:BS



File:04MAR09A #1-1388 Acq: 4-MAR-2009 12:09:12 GC EI+ Voltage SIR 70S
317.9389 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:TCDF
Sample Text:ST030409A2 File Text:Frontier Analytical Laboratory Analyst ID:BS



File:04MAR09A #1-1388 Acq: 4-MAR-2009 12:09:12 GC EI+ Voltage SIR 70S
375.8364 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:TCDF
Sample Text:ST030409A2 File Text:Frontier Analytical Laboratory Analyst ID:BS



FAL ID: ST024109M3 Filename: 24FEB09M Sam:11 Acquired: 23-FEB-09 22:50:13 ICal: PCDDFAL3-2-5-09
Client ID: 1613 CS3 (080827J) ConCal: ST022409M3 EndCal: ST022409M4
Results: 5340 GC Column: DB5 Amount: 1.000 NATO 1989 Tox: 102
WHO 1998 Tox: 128 WHO 2005 Tox: 118

Name	Resp	RA		RT	RRF	Conc	Qual	Fac	Noise-1	Noise-2	DL
2,3,7,8-TCDD	2.50e+06	0.79	y	27:32	1.04	10.3		2.50	-	-	*
1,2,3,7,8-PeCDD	1.07e+07	1.57	y	33:20	0.90	53.6		2.50	-	-	*
1,2,3,4,7,8-HxCDD	1.23e+07	1.30	y	38:42	1.43	48.1		2.50	-	-	*
1,2,3,6,7,8-HxCDD	9.03e+06	1.25	y	38:52	1.02	47.8		2.50	-	-	*
1,2,3,7,8,9-HxCDD	9.81e+06	1.25	y	39:18	1.05	51.2		2.50	-	-	*
1,2,3,4,6,7,8-HpCDD	7.39e+06	1.05	y	44:17	0.99	44.8		2.50	-	-	*
OCDD	9.93e+06	0.90	y	49:52	0.94	94.0		2.50	-	-	*
2,3,7,8-TCDF	4.65e+06	0.72	y	26:46	1.34	8.86		2.50	-	-	*
1,2,3,7,8-PeCDF	1.83e+07	1.61	y	31:37	1.03	49.6		2.50	-	-	*
2,3,4,7,8-PeCDF	1.45e+07	1.60	y	32:55	0.81	48.2		2.50	-	-	*
1,2,3,4,7,8-HxCDF	1.63e+07	1.28	y	37:18	1.35	53.1		2.50	-	-	*
1,2,3,6,7,8-HxCDF	1.55e+07	1.28	y	37:31	1.25	52.9		2.50	-	-	*
2,3,4,6,7,8-HxCDF	1.76e+07	1.27	y	38:26	1.53	51.8		2.50	-	-	*
1,2,3,7,8,9-HxCDF	1.11e+07	1.27	y	39:52	1.19	51.3		2.50	-	-	*
1,2,3,4,6,7,8-HpCDF	1.09e+07	1.03	y	42:24	1.10	53.0		2.50	-	-	*
1,2,3,4,7,8,9-HpCDF	8.87e+06	1.02	y	45:13	1.02	52.8		2.50	-	-	*
OCDF	1.15e+07	0.91	y	50:15	0.76	97.9		2.50	-	-	*
											Rec
13C-2,3,7,8-TCDD	2.34e+07	0.77	y	27:30	0.94	102					102
13C-1,2,3,7,8-PeCDD	2.22e+07	1.78	y	33:19	0.75	120					120
13C-1,2,3,4,7,8-HxCDD	1.79e+07	1.30	y	38:40	1.03	95.3					95.3
13C-1,2,3,6,7,8-HxCDD	1.85e+07	1.29	y	38:50	1.08	94.0					94.0
13C-1,2,3,4,6,7,8-HpCDD	1.67e+07	1.08	y	44:17	0.89	102					102
13C-OCDD	2.25e+07	0.93	y	49:51	0.64	193					96.7
13C-2,3,7,8-TCDF	3.92e+07	0.85	y	26:45	0.86	103					103
13C-1,2,3,7,8-PeCDF	3.59e+07	1.66	y	31:35	0.76	107					107
13C-2,3,4,7,8-PeCDF	3.72e+07	1.67	y	32:55	0.78	109					109
13C-1,2,3,4,7,8-HxCDF	2.27e+07	0.53	y	37:17	1.34	92.4					92.4
13C-1,2,3,6,7,8-HxCDF	2.35e+07	0.53	y	37:29	1.40	91.8					91.8
13C-2,3,4,6,7,8-HxCDF	2.22e+07	0.54	y	38:26	1.29	94.4					94.4
13C-1,2,3,7,8,9-HxCDF	1.82e+07	0.54	y	39:52	1.01	98.7					98.7
13C-1,2,3,4,6,7,8-HpCDF	1.88e+07	0.44	y	42:22	1.16	88.8					88.8
13C-1,2,3,4,7,8,9-HpCDF	1.64e+07	0.44	y	45:12	0.96	93.9					93.9
13C-OCDF	3.08e+07	0.91	y	50:14	0.95	178					88.9
37Cl-2,3,7,8-TCDD	2.08e+06			27:32	0.88	9.63					96.3
13C-1,2,3,4-TCDD	2.46e+07	0.79	y	26:55	-	66.1					
13C-1,2,3,4-TCDF	4.41e+07	0.86	y	25:40	-	73.6					
13C-1,2,3,7,8,9-HxCDD	1.83e+07	1.29	y	39:17	-	91.0					
								Fac	Noise-1	Noise-2	DL	#Hom
Total Tetra-Dioxins	1.28e+07			23:03	1.04	52.8		2.50	-	-	*	20
Total Penta-Dioxins	3.50e+07			30:21	0.90	175		2.50	-	-	*	10
Total Hexa-Dioxins	4.61e+07			36:14	1.16	217		2.50	-	-	*	8
Total Hepta-Dioxins	1.77e+07			42:55	0.99	108		2.50	-	-	*	10
Total Tetra-Furans	2.13e+07			23:10	1.34	40.6		2.50	-	-	*	16
1st Fn. Tot Penta-Furans	1.71e+07			28:32	0.92	51.0		2.50	-	-	* PeCDF	1
Total Penta-Furans	4.85e+07			30:18	0.92	145		2.50	-	-	* 196	13
Total Hexa-Furans	8.03e+07			35:21	1.34	277		2.50	-	-	*	12
Total Hepta-Furans	2.00e+07			42:24	1.06	107		2.50	-	-	*	11

Analyst: JC Date: 3/3/09

FAL ID: ST022409M4 Filename: 24FEB09M Sam:18 Acquired: 24-FEB-09 05:17:02 ICal: PCDDFAL3-2-5-09
Client ID: 1613 CS3 (080827J) ConCal: ST022409M3 EndCal: ST022409M4
Results: 5340 GC Column: DB5 Amount: 1.000 NATO 1989 Tox: 100
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	1.93e+06	0.81 y	27:31	1.04	9.78		2.50	-	-	*		
1,2,3,7,8-PeCDD	8.24e+06	1.56 y	33:20	0.90	51.3		2.50	-	-	*		
1,2,3,4,7,8-HxCDD	9.13e+06	1.27 y	38:41	1.43	48.6		2.50	-	-	*		
1,2,3,6,7,8-HxCDD	6.88e+06	1.29 y	38:51	1.02	47.8		2.50	-	-	*		
1,2,3,7,8,9-HxCDD	7.48e+06	1.29 y	39:18	1.05	52.2		2.50	-	-	*		
1,2,3,4,6,7,8-HpCDD	5.28e+06	1.04 y	44:17	0.99	45.2		2.50	-	-	*		
OCDD	7.18e+06	0.88 y	49:52	0.94	93.5		2.50	-	-	*		
2,3,7,8-TCDF	3.73e+06	0.71 y	26:46	1.34	8.79		2.50	-	-	*		
1,2,3,7,8-PeCDF	1.44e+07	1.62 y	31:36	1.03	49.7		2.50	-	-	*		
2,3,4,7,8-PeCDF	1.11e+07	1.60 y	32:55	0.81	47.6		2.50	-	-	*		
1,2,3,4,7,8-HxCDF	1.24e+07	1.26 y	37:18	1.35	53.1		2.50	-	-	*		
1,2,3,6,7,8-HxCDF	1.17e+07	1.25 y	37:29	1.25	52.4		2.50	-	-	*		
2,3,4,6,7,8-HxCDF	1.29e+07	1.25 y	38:26	1.53	51.0		2.50	-	-	*		
1,2,3,7,8,9-HxCDF	8.41e+06	1.28 y	39:53	1.19	51.6		2.50	-	-	*		
1,2,3,4,6,7,8-HpCDF	8.17e+06	1.02 y	42:22	1.10	52.7		2.50	-	-	*		
1,2,3,4,7,8,9-HpCDF	6.50e+06	1.03 y	45:13	1.02	54.0		2.50	-	-	*		
OCDF	8.25e+06	0.91 y	50:15	0.76	97.8		2.50	-	-	*		
										Rec		
13C-2,3,7,8-TCDD	1.90e+07	0.78 y	27:30	0.94	103					103		
13C-1,2,3,7,8-PeCDD	1.78e+07	1.77 y	33:18	0.75	120					120		
13C-1,2,3,4,7,8-HxCDD	1.31e+07	1.29 y	38:40	1.03	92.7					92.7		
13C-1,2,3,6,7,8-HxCDD	1.41e+07	1.28 y	38:50	1.08	94.9					94.9		
13C-1,2,3,4,6,7,8-HpCDD	1.18e+07	1.06 y	44:15	0.89	96.1					96.1		
13C-OCDD	1.63e+07	0.93 y	49:50	0.64	186					93.2		
13C-2,3,7,8-TCDF	3.17e+07	0.85 y	26:45	0.86	103					103		
13C-1,2,3,7,8-PeCDF	2.82e+07	1.65 y	31:34	0.76	104					104		
13C-2,3,4,7,8-PeCDF	2.89e+07	1.66 y	32:53	0.78	104					104		
13C-1,2,3,4,7,8-HxCDF	1.72e+07	0.53 y	37:16	1.34	93.0					93.0		
13C-1,2,3,6,7,8-HxCDF	1.79e+07	0.54 y	37:29	1.40	92.5					92.5		
13C-2,3,4,6,7,8-HxCDF	1.65e+07	0.53 y	38:24	1.29	93.1					93.1		
13C-1,2,3,7,8,9-HxCDF	1.37e+07	0.54 y	39:51	1.01	99.0					99.0		
13C-1,2,3,4,6,7,8-HpCDF	1.41e+07	0.44 y	42:21	1.16	88.4					88.4		
13C-1,2,3,4,7,8,9-HpCDF	1.18e+07	0.45 y	45:11	0.96	89.1					89.1		
13C-OCDF	2.21e+07	0.92 y	50:13	0.95	169					84.6		
37Cl-2,3,7,8-TCDD	1.73e+06		27:31	0.88	9.97					99.7		
13C-1,2,3,4-TCDD	1.97e+07	0.79 y	26:54	-	53.1							
13C-1,2,3,4-TCDF	3.57e+07	0.84 y	25:39	-	59.5							
13C-1,2,3,7,8,9-HxCDD	1.38e+07	1.28 y	39:16	-	68.6							
							Fac	Noise-1	Noise-2	DL		#Hom
Total Tetra-Dioxins	1.04e+07		23:31	1.04	52.7		2.50	-	-	*		20
Total Penta-Dioxins	2.74e+07		30:21	0.90	171		2.50	-	-	*		8
Total Hexa-Dioxins	3.49e+07		36:13	1.16	220		2.50	-	-	*		9
Total Hepta-Dioxins	1.28e+07		42:21	0.99	109		2.50	-	-	*		9
Total Tetra-Furans	1.71e+07		23:09	1.34	40.4		2.50	-	-	*		20
1st Fn. Tot Penta-Furans	1.43e+07		28:31	0.92	54.6		2.50	-	-	*	PeCDF	1
Total Penta-Furans	3.77e+07		30:17	0.92	144		2.50	-	-	*	198	9
Total Hexa-Furans	6.07e+07		35:20	1.34	278		2.50	-	-	*		7
Total Hepta-Furans	1.48e+07		42:22	1.06	108		2.50	-	-	*		12

Analyst: TC Date: 3/2/09

FAL ID: ST030409A1 Filename: 04MAR09A Sam:1 Acquired: 4-MAR-09 09:46:39 ICal: TCDFFAL1-1-13-09
Client ID: 1613 CS3 (080827J) ConCal: ST030409A1 EndCal: ST030409A2
Results: GC Column: DB225 Amount: 1.000

Name	Resp	RA	RT	RRF	Conc	Qual	Fac	Noise	DL	#Hom	Rec
2,3,7,8-TCDF	1.49e+07	0.78 y	19:34	1.03	8.94		2.50	-	-	1	
13C-2,3,7,8-TCDF	1.62e+08	0.79 y	19:33	0.87	104						104
13C-1,2,3,4-TCDF	1.79e+08	0.79 y	16:59	-	96.0						

Analyst: _____ Date: 3/4/09

FAL ID: ST030409A2 Filename: 04MAR09A Sam:5 Acquired: 4-MAR-09 12:09:12 ICal: TCDFFAL1-1-13-09
Client ID: 1613 CS3 (080827J) ConCal: ST030409A1 EndCal: ST030409A2
Results: 5340TCDF GC Column: DB225 Amount: 1.000

Name	Resp	RA	RT	RRF	Conc	Qual	Fac	Noise	DL	#Hom	Rec
2,3,7,8-TCDF	9.51e+06	0.79 y	19:29	1.03	8.20		2.50	-	-	1	
13C-2,3,7,8-TCDF	1.13e+08	0.78 y	19:27	0.87	93.1						93.1
13C-1,2,3,4-TCDF	1.39e+08	0.78 y	16:54	-	74.9						

Analyst: _____ Date: 3/4/09

1DFA - FORM I-HR CDD-1
CDD/CDF SAMPLE DATA SUMMARY
HIGH RESOLUTION

SAMPLE No.
DFBLK01

LAB NAME: FRONTIER ANALYTICAL LAB CONTRACT: EP08W001564
LAB CODE: FALE CASE NO.: EPA05-2008-01 TO NO.: SDG NO.: SDG E3YC9
MATRIX: (SOIL/WATER/ASH/TISSUE/OIL) SOIL LAB SAMPLE ID: 1652-001-0001-MB
SAMPLE wt/vol: 1.000 (g/mL): g LAB FILE ID: 24FEB09M Sam: 13
WATER SAMPLE PREP: SPE (SEPF/SPE) DATE RECEIVED: 18-FEB-09
CONCENTRATED EXTRACT VOLUME: 20 (uL) DATE EXTRACTED: 18-FEB-09
INJECTION VOLUME: 2 (uL) % SOLIDS/LIPIDS: 100 DATE ANALYZED: 24-FEB-09
GC COLUMN: DB5 ID: 0.25 (mm) DILUTION FACTOR: 1
CONCENTRATION UNITS: (pg/L or ng/kg) ng/kg

TARGET ANALYTE	SELECTED IONS	PEAK RT	ION RATIO #	CONCENTRATION	Q	EMPC/EDL
2,3,7,8-TCDD	320/322	NotFnd	*	*	U	0.605
2,3,7,8-TCDF	304/306	NotFnd	*	*	U	0.483
1,2,3,7,8-PeCDF	340/342	NotFnd	*	*	U	1.05
1,2,3,7,8-PeCDD	356/358	NotFnd	*	*	U	1.15
2,3,4,7,8-PeCDF	340/342	NotFnd	*	*	U	1.41
1,2,3,4,7,8-HxCDF	374/376	NotFnd	*	*	U	0.577
1,2,3,6,7,8-HxCDF	374/376	NotFnd	*	*	U	0.626
1,2,3,4,7,8-HxCDD	390/392	NotFnd	*	*	U	0.964
1,2,3,6,7,8-HxCDD	390/392	NotFnd	*	*	U	1.30
1,2,3,7,8,9-HxCDD	390/392	NotFnd	*	*	U	1.28
2,3,4,6,7,8-HxCDF	374/376	NotFnd	*	*	U	0.533
1,2,3,7,8,9-HxCDF	374/376	NotFnd	*	*	U	0.838
1,2,3,4,6,7,8-HpCDF	408/410	NotFnd	*	*	U	0.817
1,2,3,4,6,7,8-HpCDD	424/426	NotFnd	*	*	U	1.61
1,2,3,4,7,8,9-HpCDF	408/410	NotFnd	*	*	U	0.869
OCDD	458/460	NotFnd	*	*	U	3.93
OCDF	442/444	NotFnd	*	*	U	1.90

NOTE: Concentrations, Estimated Maximum Possible Concentrations (EMPCs), and Estimated Detection Levels (EDLs) for solid samples are calculated on a dry weight basis (except tissues, which are reported on a wet weight basis with % Lipids).

LABELED COMPOUNDS	SELECTED IONS	PEAK RT	ION RATIO #	ION RATIO LIMITS	% REC #	RECOVERY LIMITS
13C-2,3,7,8-TCDD	332/334	27:31	0.78	0.65-0.89	91.0	25-164
13C-1,2,3,7,8-PeCDD	368/370	33:19	1.77	1.32-1.78	101	25-181
13C-1,2,3,4,7,8-HxCDD	402/404	38:40	1.30	1.05-1.43	84.7	32-141
13C-1,2,3,6,7,8-HxCDD	402/404	38:51	1.29	1.05-1.43	83.5	28-130
13C-1,2,3,4,6,7,8-HpCDD	436/438	44:16	1.08	0.88-1.20	88.0	23-140
13C-OCDD	470/472	49:51	0.93	0.76-1.02	72.7	17-157
13C-2,3,7,8-TCDF	316/318	26:46	0.85	0.65-0.89	91.9	24-169
13C-1,2,3,7,8-PeCDF	352/354	31:35	1.66	1.32-1.78	91.4	24-185
13C-2,3,4,7,8-PeCDF	352/354	32:54	1.66	1.32-1.78	90.0	21-178
13C-1,2,3,4,7,8-HxCDF	384/386	37:17	0.53	0.43-0.59	80.0	26-152
13C-1,2,3,6,7,8-HxCDF	384/386	37:28	0.53	0.43-0.59	78.0	26-123
13C-1,2,3,7,8,9-HxCDF	384/386	39:52	0.54	0.43-0.59	88.4	29-147
13C-2,3,4,6,7,8-HxCDF	384/386	38:25	0.54	0.43-0.59	81.0	28-136
13C-1,2,3,4,6,7,8-HpCDF	418/420	42:22	0.44	0.37-0.51	74.8	28-143
13C-1,2,3,4,7,8,9-HpCDF	418/420	45:12	0.45	0.37-0.51	97.1	26-138
13C-OCDF	454/456	50:13	0.92	0.76-1.02	72.9	17-157
37Cl-2,3,7,8-TCDD	328/NA	27:32	NA	NA	94.1	35-197

Column to be used to flag values outside (QC) limits.

ANALYST: DATE: 3/2/09

1DFB - FORM I-HR CDD-2
CDD/CDF TOXICITY EQUIVALENCE SUMMARY
HIGH RESOLUTION

SAMPLE No.
DFBLK01

LAB NAME: FRONTIER ANALYTICAL LAB CONTRACT: EP08W001564

LAB CODE: FALE CASE NO.: EPA05-2008-01 TO NO.: SDG NO.: SDG E3YC9

MATRIX: (SOIL/WATER/ASH/TISSUE/OIL) SOIL LAB SAMPLE ID: 1652-001-0001-MB

SAMPLE wt/vol: 1.000 (g/mL): g LAB FILE ID: 24FEB09M Sam: 13

WATER SAMPLE PREP: SPE (SEPF/SPE) DATE RECEIVED: 18-FEB-09

CONCENTRATED EXTRACT VOLUME: 20 (uL) DATE EXTRACTED: 18-FEB-09

INJECTION VOLUME: 2 (uL) % SOLIDS/LIPIDS: 100 DATE ANALYZED: 24-FEB-09

GC COLUMN: DB5 ID: 0.25 (mm) DILUTION FACTOR: 1

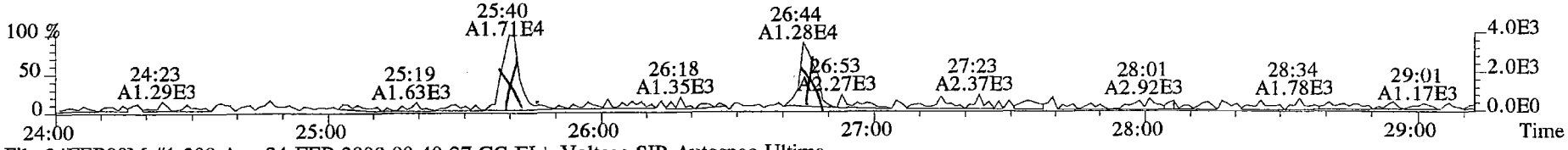
CONCENTRATION UNITS: (pg/L or ng/kg) ng/kg

TARGET ANALYTE	CONCENTRATION	TEF*		TEF-ADJUSTED CONCENTRATION
2,3,7,8-TCDD	*	x 1.0	=	*
2,3,7,8-TCDF	*	x 0.1	=	*
1,2,3,7,8-PeCDF	*	x 0.05	=	*
1,2,3,7,8-PeCDD	*	x 0.5	=	*
2,3,4,7,8-PeCDF	*	x 0.5	=	*
1,2,3,4,7,8-HxCDF	*	x 0.1	=	*
1,2,3,6,7,8-HxCDF	*	x 0.1	=	*
1,2,3,4,7,8-HxCDD	*	x 0.1	=	*
1,2,3,6,7,8-HxCDD	*	x 0.1	=	*
1,2,3,7,8,9-HxCDD	*	x 0.1	=	*
2,3,4,6,7,8-HxCDF	*	x 0.1	=	*
1,2,3,7,8,9-HxCDF	*	x 0.1	=	*
1,2,3,4,6,7,8-HpCDF	*	x 0.01	=	*
1,2,3,4,6,7,8-HpCDD	*	x 0.01	=	*
1,2,3,4,7,8,9-HpCDF	*	x 0.01	=	*
OCDD	*	x 0.001	=	*
OCDF	*	x 0.001	=	*
		Total	=	0.00

* TEF - Toxicity Equivalent Factors from EPA/625/3-89/016 March 1989 - Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxins and Chlorinated Dibenzofurans (CDDs and CDFs) and 1989 Update

ANALYST: DATE: 3/2/09

File:24FEB09M #1-390 Acq:24-FEB-2009 00:40:37 GC EI+ Voltage SIR Autospec-Ultima
319.8965 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1652-001-0001-MB File Text:Frontier Analytical Laboratory Analyst ID:TC



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321.8936 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
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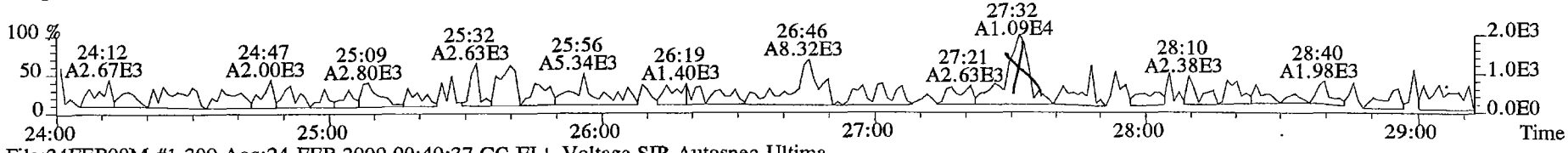

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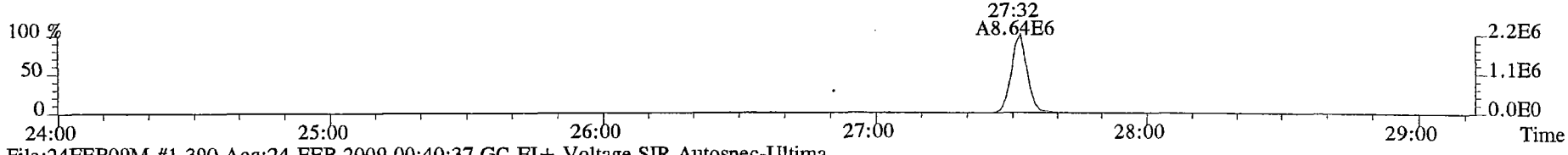

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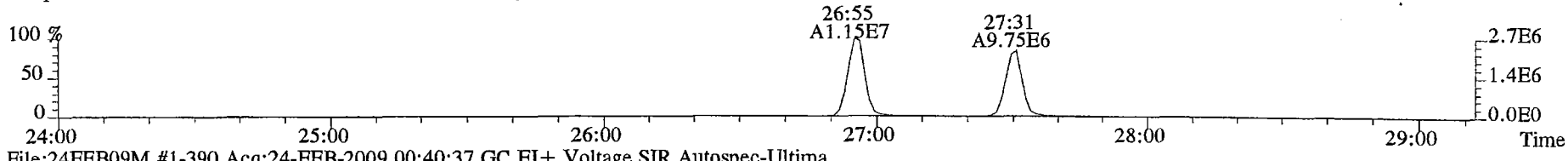

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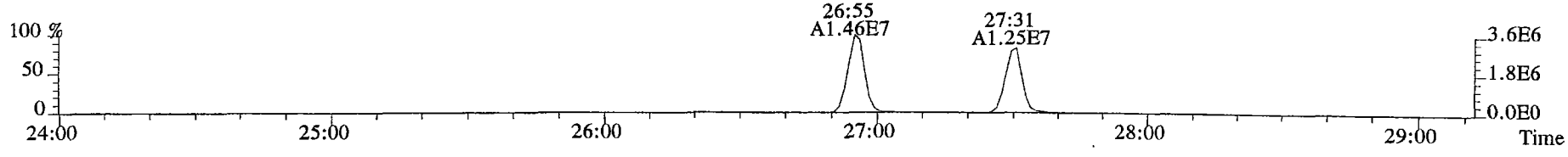

File:24FEB09M #1-425 Acq:24-FEB-2009 00:40:37 GC EI+ Voltage SIR Autospec-Ultima
355.8546 S:13 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
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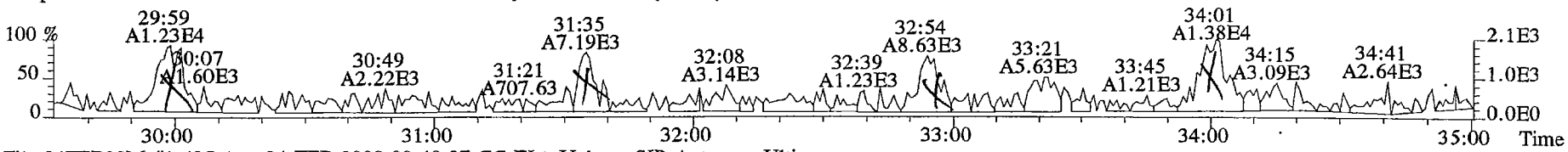

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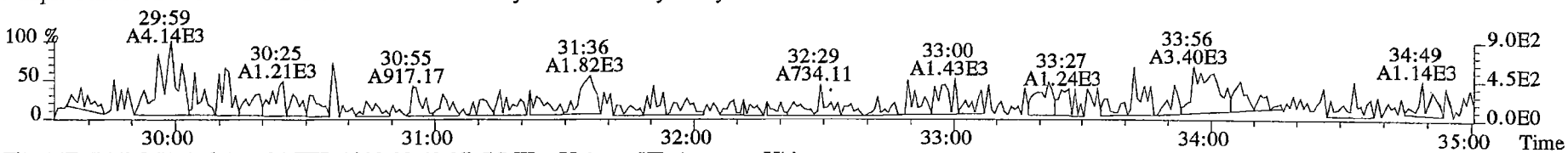

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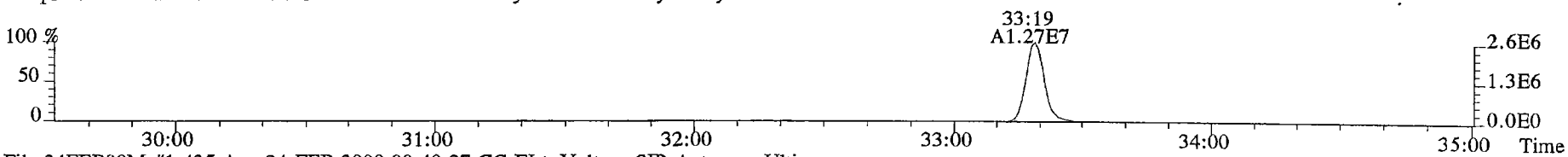

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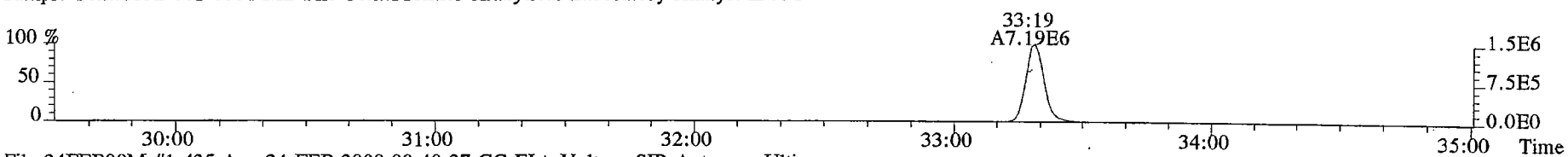
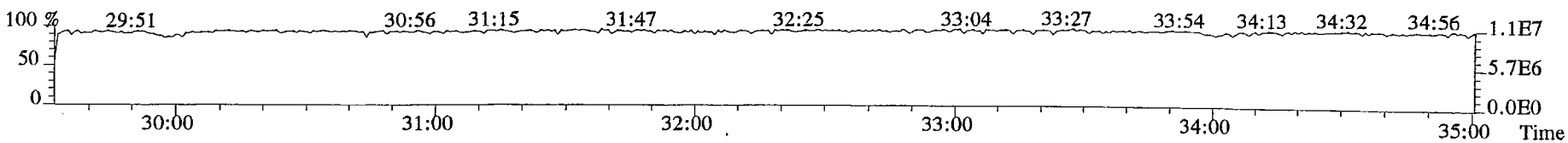


File:24FEB09M #1-425 Acq:24-FEB-2009 00:40:37 GC EI+ Voltage SIR Autospec-Ultima
LOCK_MASS_CHECK S:13 F:2 Exp:PCDD
Sample Text:1652-001-0001-MB File Text:Frontier Analytical Laboratory Analyst ID:TC



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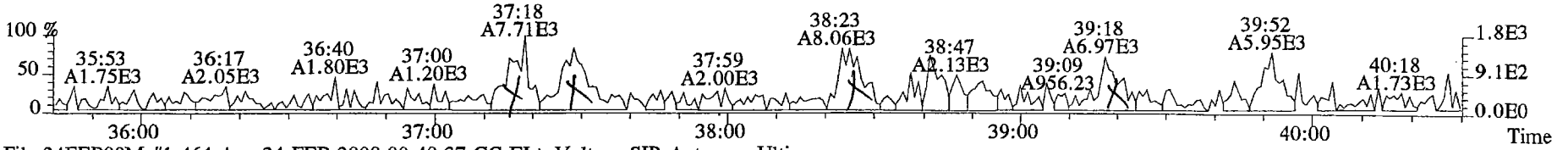
Sample Text:1652-001-0001-MB File Text:Frontier Analytical Laboratory Analyst ID:TC



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391.8127 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
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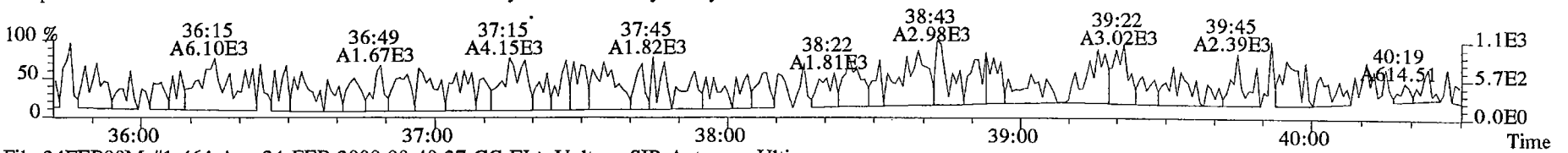

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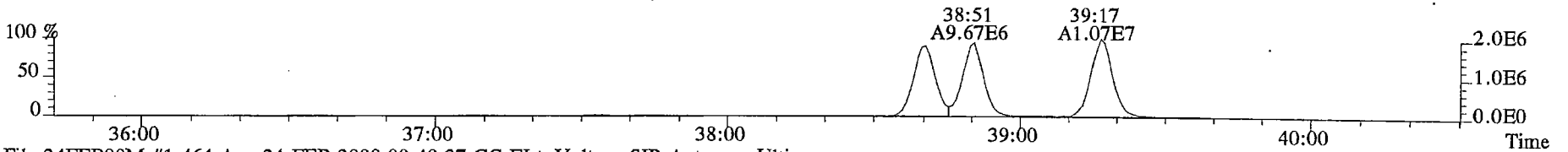

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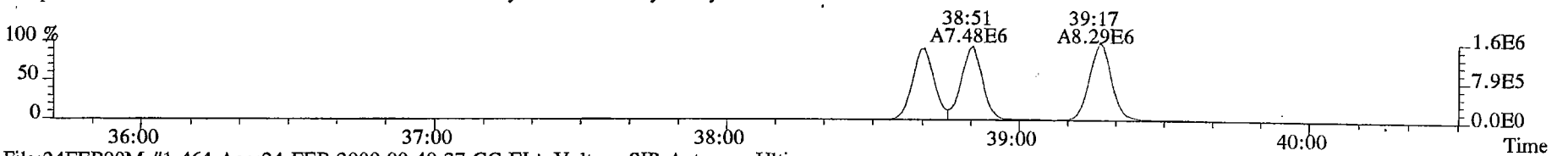

File:24FEB09M #1-464 Acq:24-FEB-2009 00:40:37 GC EI+ Voltage SIR Autospec-Ultima
380.9760 S:13 F:3 Exp:PCDD
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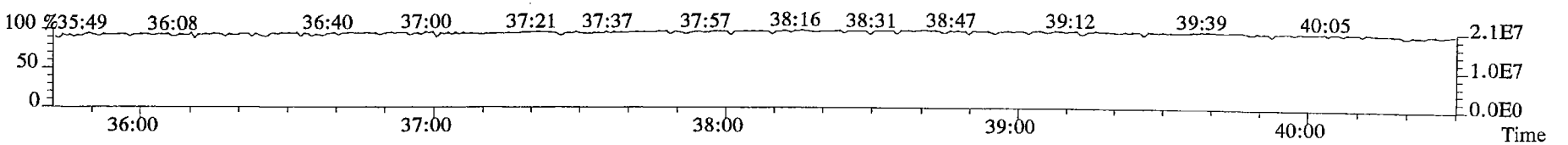

File:24FEB09M #1-541 Acq:24-FEB-2009 00:40:37 GC EI+ Voltage SIR Autospec-Ultima
423.7767 S:13 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
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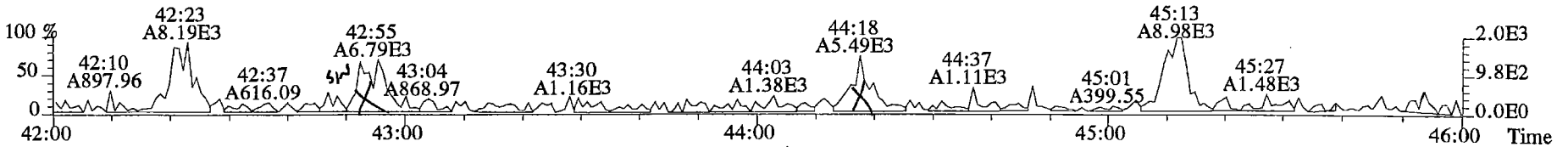

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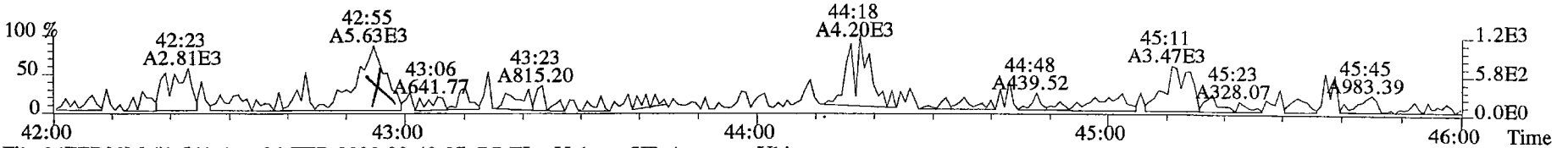
425.7737 S:13 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1652-001-0001-MB File Text:Frontier Analytical Laboratory Analyst ID:TC



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435.8169 S:13 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
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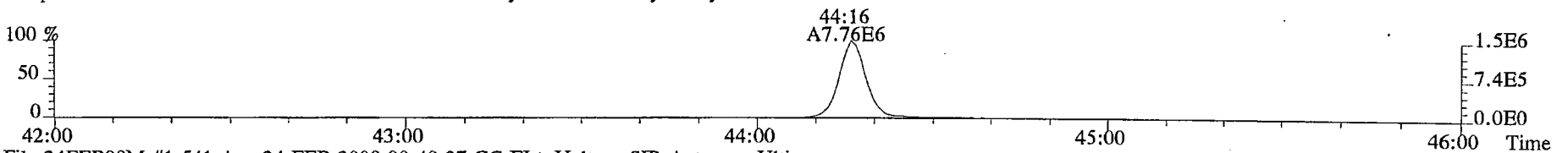

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437.8140 S:13 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
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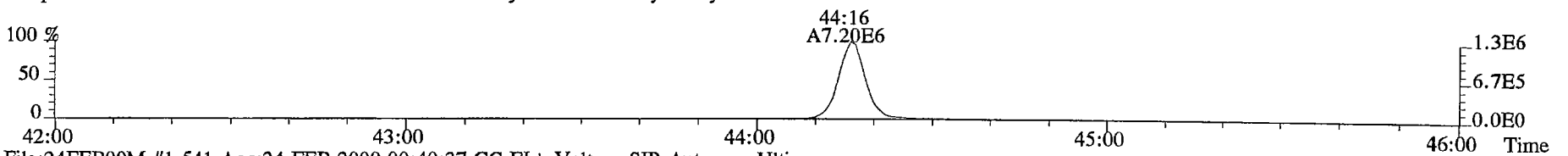

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430.9728 S:13 F:4 Exp:PCDD
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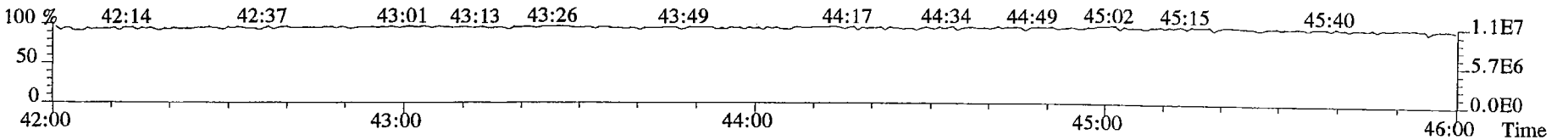

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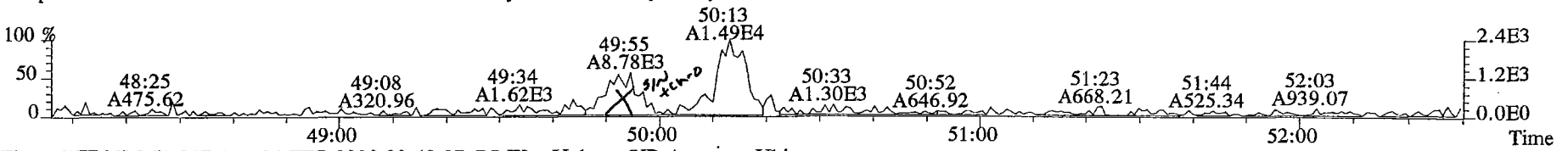

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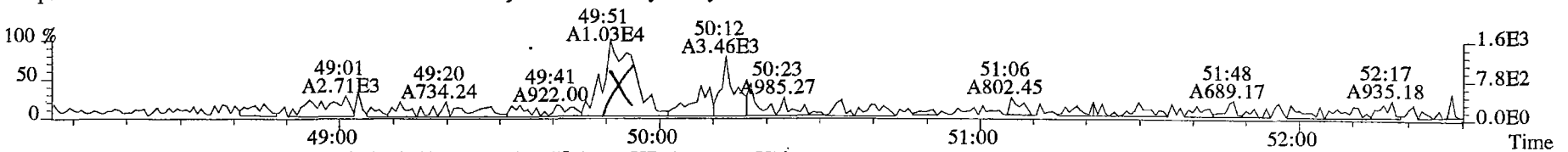

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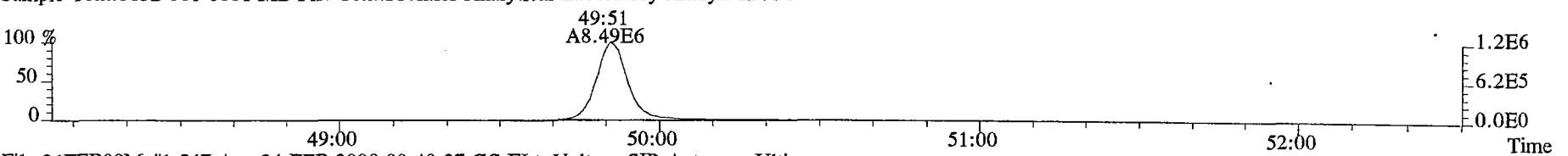

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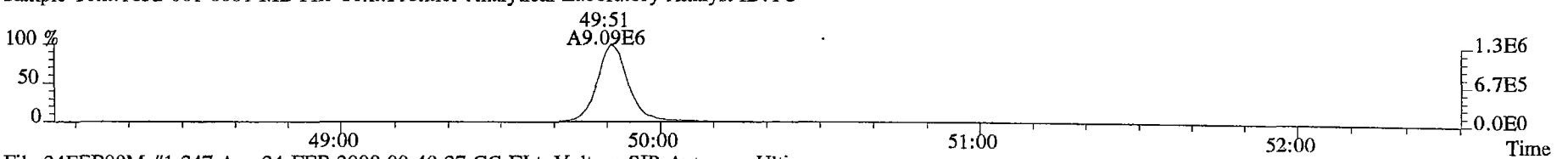

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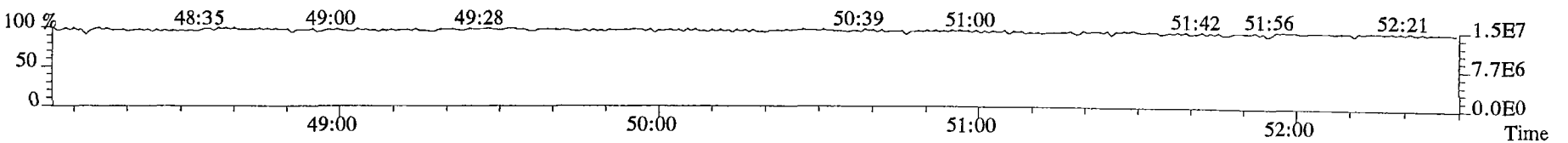

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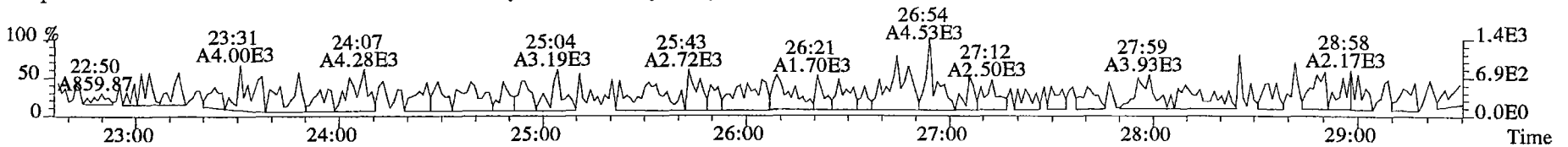

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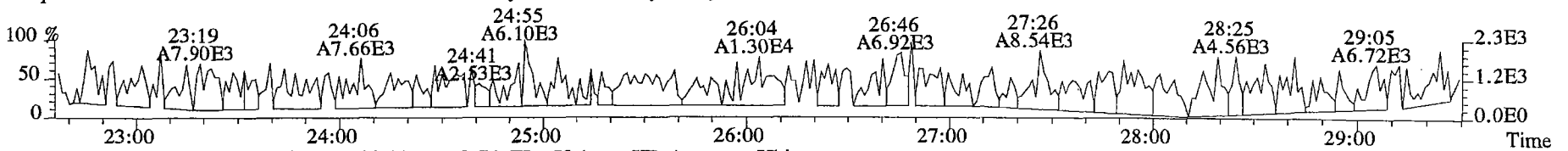

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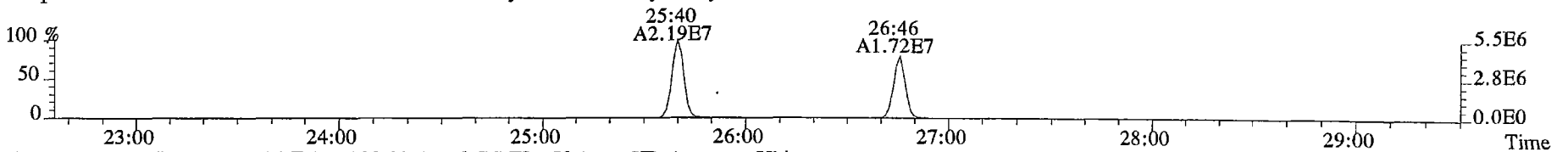

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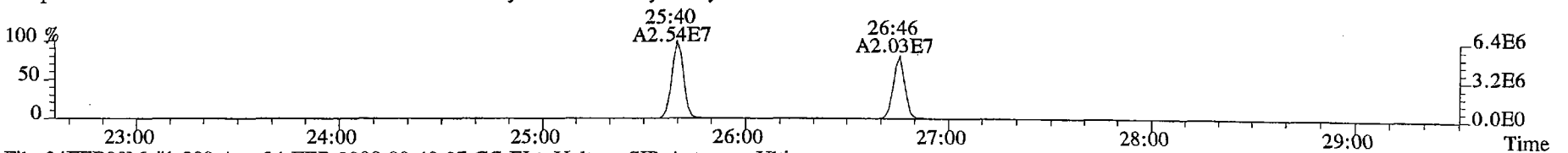

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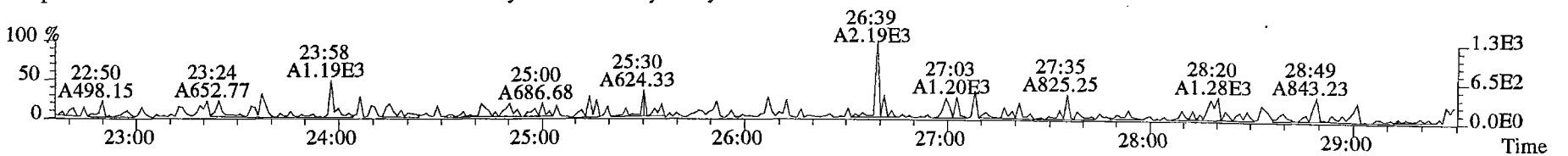

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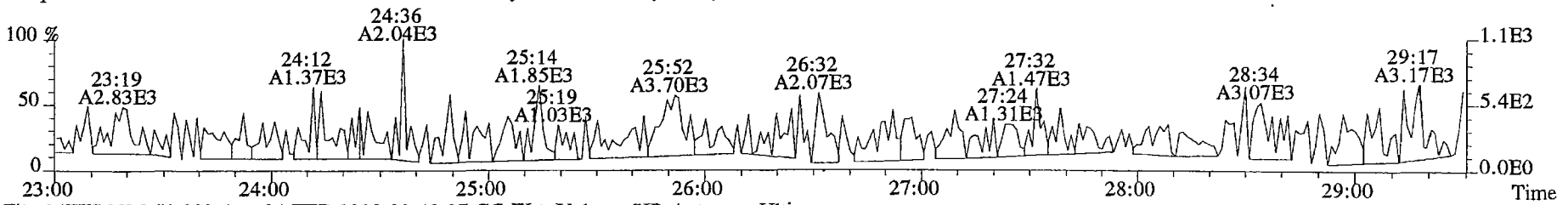
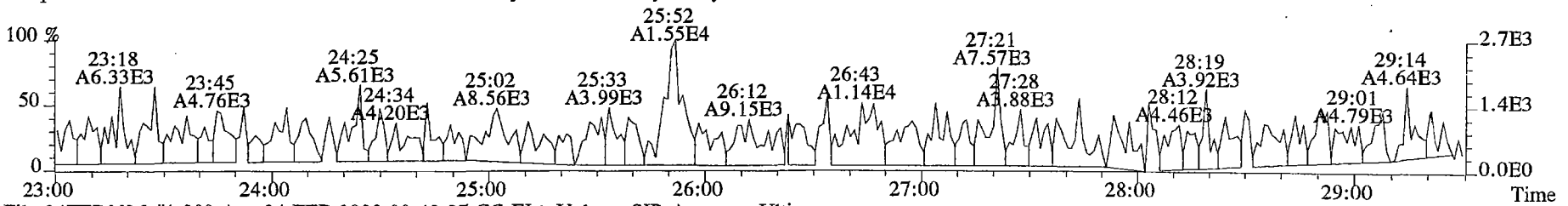
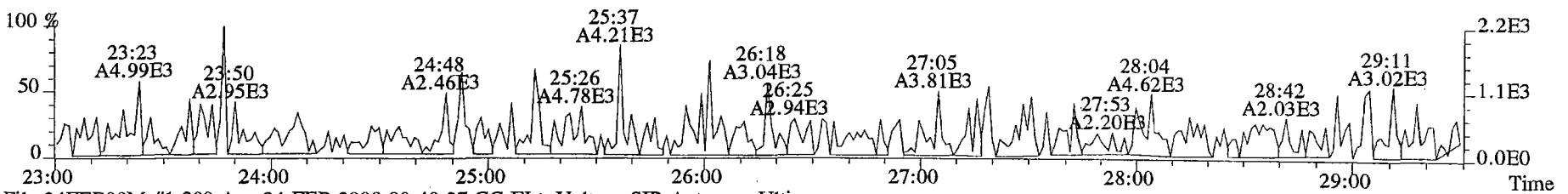
339.8597 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1652-001-0001-MB File Text:Frontier Analytical Laboratory Analyst ID:TC



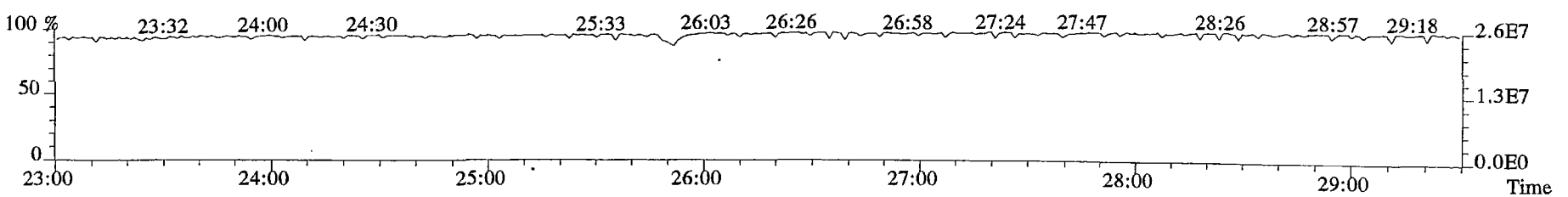
File:24FEB09M #1-390 Acq:24-FEB-2009 00:40:37 GC EI+ Voltage SIR Autospec-Ultima
341.8568 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1652-001-0001-MB File Text:Frontier Analytical Laboratory Analyst ID:TC



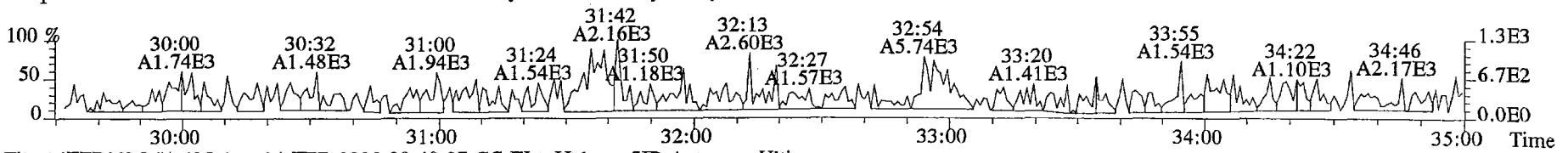
File:24FEB09M #1-390 Acq:24-FEB-2009 00:40:37 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:13 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1652-001-0001-MB File Text:Frontier Analytical Laboratory Analyst ID:TC



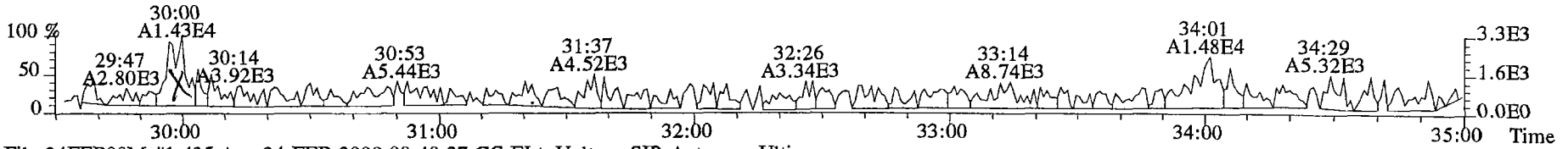
File:24FEB09M #1-390 Acq:24-FEB-2009 00:40:37 GC EI+ Voltage SIR Autospec-Ultima
330.9792 S:13 Exp:PCDD
Sample Text:1652-001-0001-MB File Text:Frontier Analytical Laboratory Analyst ID:TC



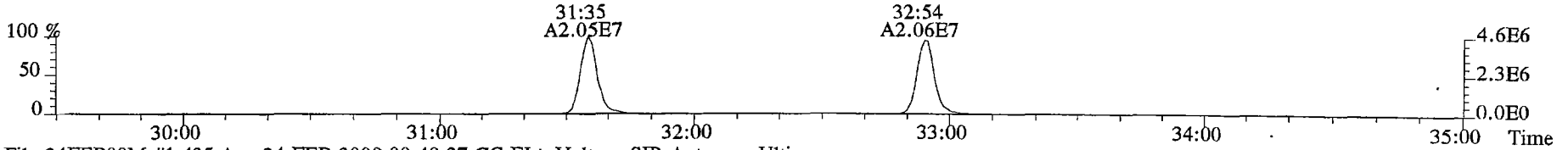
File:24FEB09M #1-425 Acq:24-FEB-2009 00:40:37 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:13 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1652-001-0001-MB File Text:Frontier Analytical Laboratory Analyst ID:TC



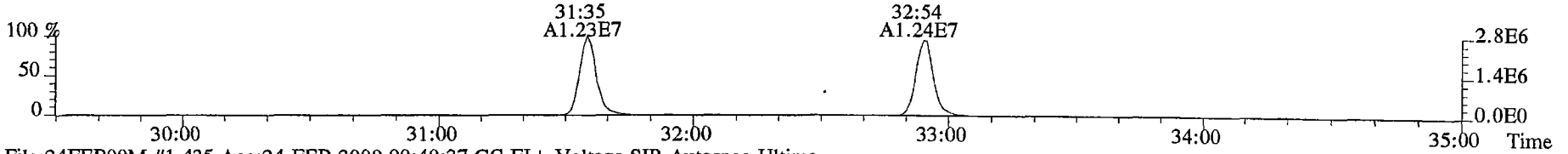
File:24FEB09M #1-425 Acq:24-FEB-2009 00:40:37 GC EI+ Voltage SIR Autospec-Ultima
341.8568 S:13 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1652-001-0001-MB File Text:Frontier Analytical Laboratory Analyst ID:TC



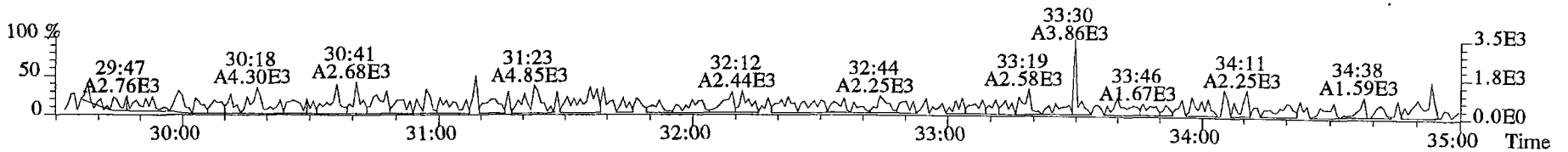
File:24FEB09M #1-425 Acq:24-FEB-2009 00:40:37 GC EI+ Voltage SIR Autospec-Ultima
351.9000 S:13 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1652-001-0001-MB File Text:Frontier Analytical Laboratory Analyst ID:TC



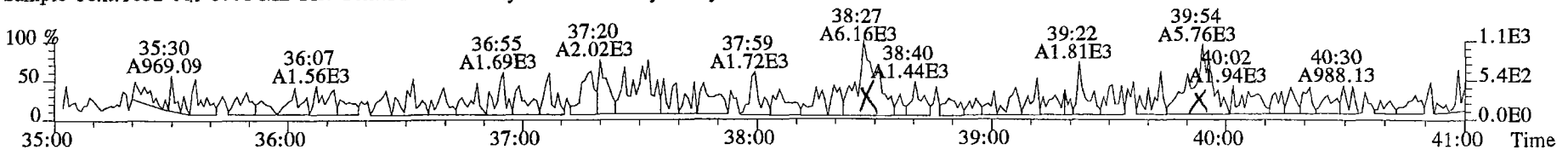
File:24FEB09M #1-425 Acq:24-FEB-2009 00:40:37 GC EI+ Voltage SIR Autospec-Ultima
353.8970 S:13 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1652-001-0001-MB File Text:Frontier Analytical Laboratory Analyst ID:TC



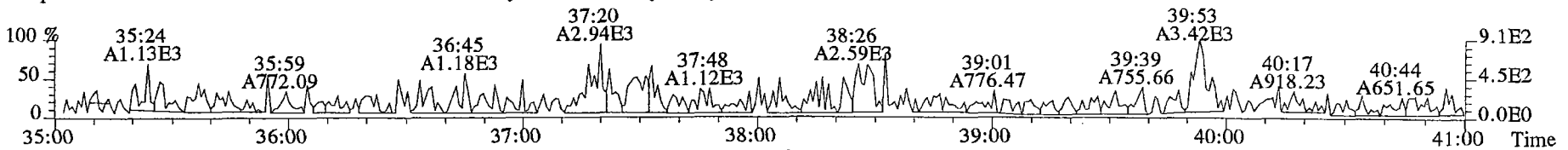
File:24FEB09M #1-425 Acq:24-FEB-2009 00:40:37 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:13 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1652-001-0001-MB File Text:Frontier Analytical Laboratory Analyst ID:TC



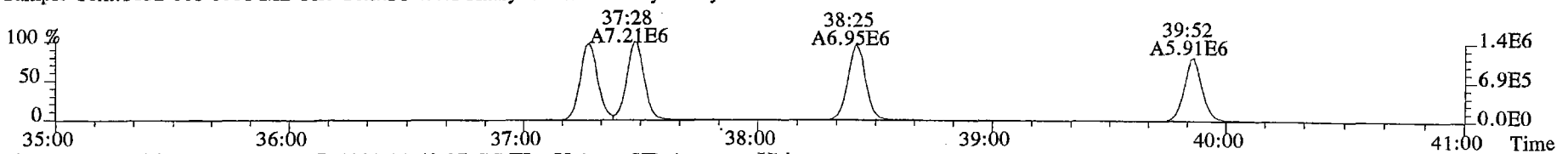
File:24FEB09M #1-464 Acq:24-FEB-2009 00:40:37 GC EI+ Voltage SIR Autospec-Ultima
373.8207 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1652-001-0001-MB File Text:Frontier Analytical Laboratory Analyst ID:TC



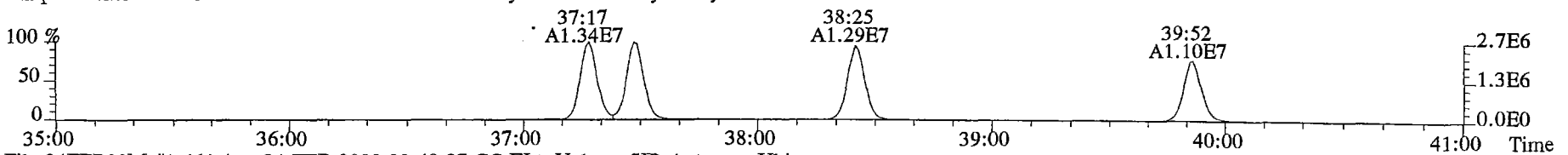
File:24FEB09M #1-464 Acq:24-FEB-2009 00:40:37 GC EI+ Voltage SIR Autospec-Ultima
375.8178 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1652-001-0001-MB File Text:Frontier Analytical Laboratory Analyst ID:TC



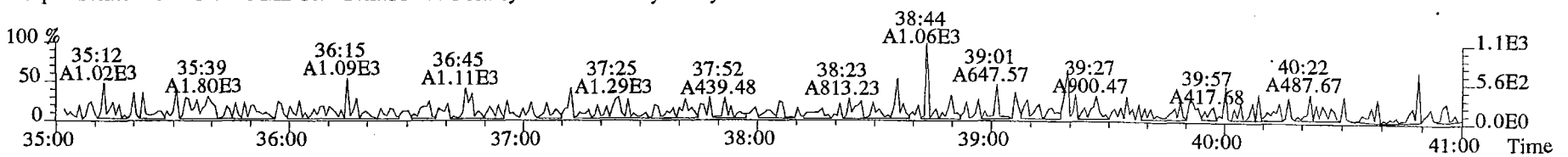
File:24FEB09M #1-464 Acq:24-FEB-2009 00:40:37 GC EI+ Voltage SIR Autospec-Ultima
383.8639 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1652-001-0001-MB File Text:Frontier Analytical Laboratory Analyst ID:TC



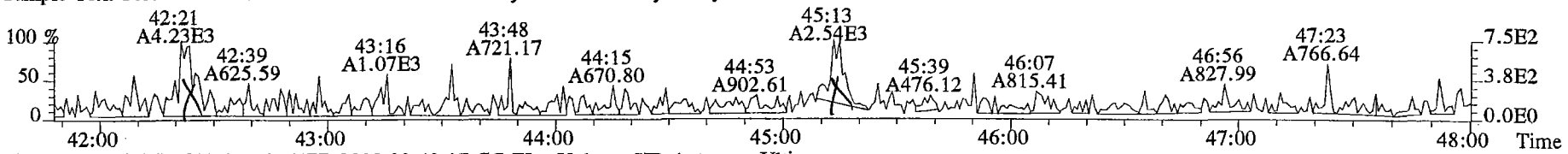
File:24FEB09M #1-464 Acq:24-FEB-2009 00:40:37 GC EI+ Voltage SIR Autospec-Ultima
385.8610 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1652-001-0001-MB File Text:Frontier Analytical Laboratory Analyst ID:TC



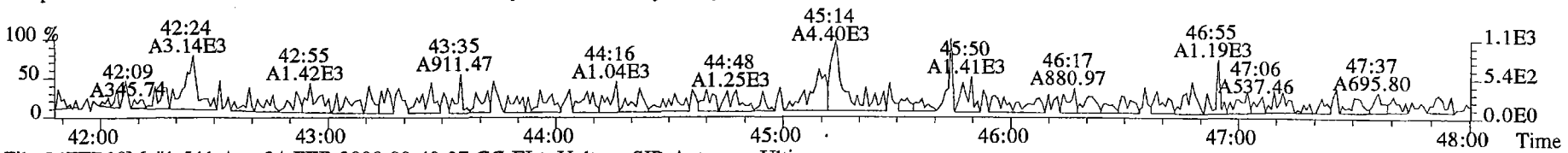
File:24FEB09M #1-464 Acq:24-FEB-2009 00:40:37 GC EI+ Voltage SIR Autospec-Ultima
445.7555 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1652-001-0001-MB File Text:Frontier Analytical Laboratory Analyst ID:TC



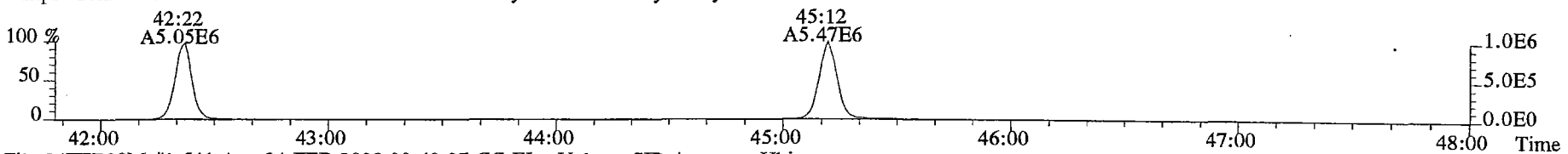
File:24FEB09M #1-541 Acq:24-FEB-2009 00:40:37 GC EI+ Voltage SIR Autospec-Ultima
407.7818 S:13 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1652-001-0001-MB File Text:Frontier Analytical Laboratory Analyst ID:TC



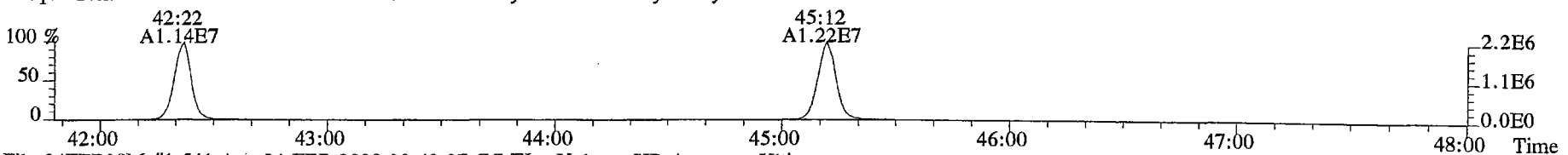
File:24FEB09M #1-541 Acq:24-FEB-2009 00:40:37 GC EI+ Voltage SIR Autospec-Ultima
409.7788 S:13 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1652-001-0001-MB File Text:Frontier Analytical Laboratory Analyst ID:TC



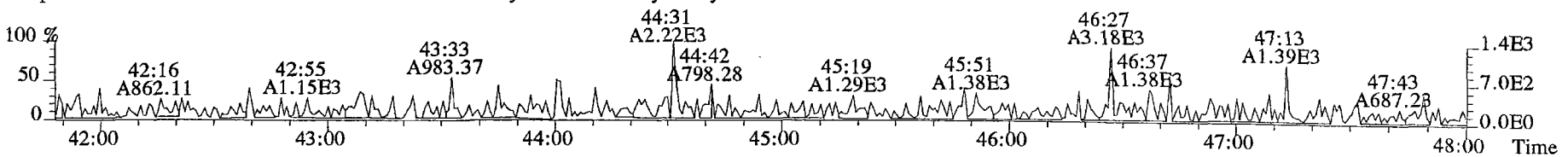
File:24FEB09M #1-541 Acq:24-FEB-2009 00:40:37 GC EI+ Voltage SIR Autospec-Ultima
417.8253 S:13 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1652-001-0001-MB File Text:Frontier Analytical Laboratory Analyst ID:TC



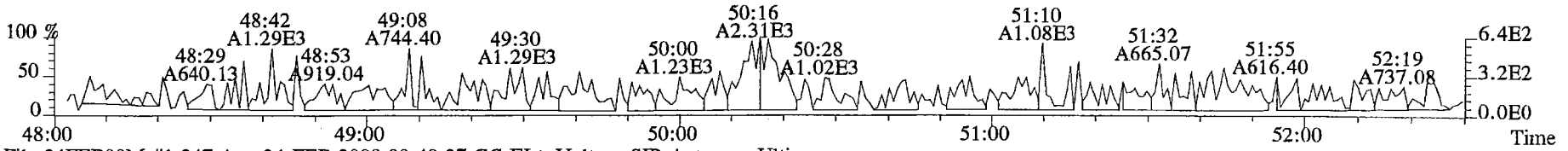
File:24FEB09M #1-541 Acq:24-FEB-2009 00:40:37 GC EI+ Voltage SIR Autospec-Ultima
419.8220 S:13 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1652-001-0001-MB File Text:Frontier Analytical Laboratory Analyst ID:TC



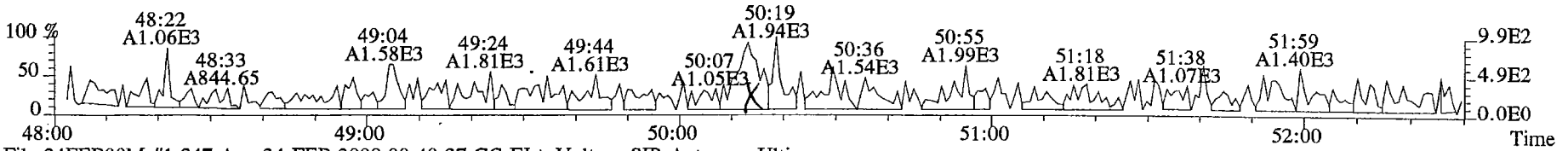
File:24FEB09M #1-541 Acq:24-FEB-2009 00:40:37 GC EI+ Voltage SIR Autospec-Ultima
479.7165 S:13 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1652-001-0001-MB File Text:Frontier Analytical Laboratory Analyst ID:TC



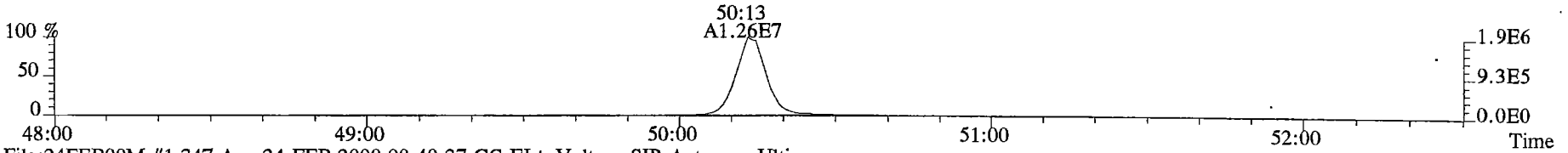
File:24FEB09M #1-347 Acq:24-FEB-2009 00:40:37 GC EI+ Voltage SIR Autospec-Ultima
441.7428 S:13 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1652-001-0001-MB File Text:Frontier Analytical Laboratory Analyst ID:TC



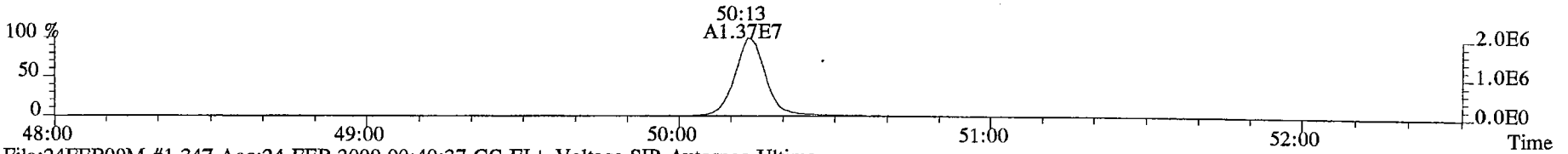
File:24FEB09M #1-347 Acq:24-FEB-2009 00:40:37 GC EI+ Voltage SIR Autospec-Ultima
443.7398 S:13 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1652-001-0001-MB File Text:Frontier Analytical Laboratory Analyst ID:TC



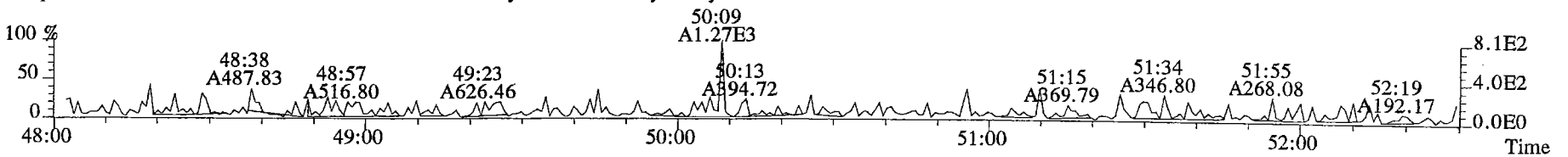
File:24FEB09M #1-347 Acq:24-FEB-2009 00:40:37 GC EI+ Voltage SIR Autospec-Ultima
453.7831 S:13 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1652-001-0001-MB File Text:Frontier Analytical Laboratory Analyst ID:TC



File:24FEB09M #1-347 Acq:24-FEB-2009 00:40:37 GC EI+ Voltage SIR Autospec-Ultima
455.7801 S:13 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1652-001-0001-MB File Text:Frontier Analytical Laboratory Analyst ID:TC



File:24FEB09M #1-347 Acq:24-FEB-2009 00:40:37 GC EI+ Voltage SIR Autospec-Ultima
513.6775 S:13 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1652-001-0001-MB File Text:Frontier Analytical Laboratory Analyst ID:TC



FAL ID: 1652-001-0001-MB Filename: 24FEB09M Sam:13 Acquired: 24-FEB-09 00:40:37 ICal: PCDDFAL3-2-5-09
Client ID: DFBLK01 ConCal: ST022409M3 EndCal: ST022409M4
Results: 5340 GC Column: db5 Amount: 1.000 NATO 1989 Tox: 0.00
WHO 1998 Tox: 0.00 WHO 2005 Tox: 0.00

Name	Resp	RA		RT	RRF	Conc	Qual	Fac	Noise-1	Noise-2	DL
2,3,7,8-TCDD	*	*	n	NotFnd	1.04	*	U	2.50	207	454	0.605
1,2,3,7,8-PeCDD	*	*	n	NotFnd	0.90	*	U	2.50	647	213	1.15
1,2,3,4,7,8-HxCDD	*	*	n	NotFnd	1.43	*	U	2.50	547	357	0.964
1,2,3,6,7,8-HxCDD	*	*	n	NotFnd	1.02	*	U	2.50	547	357	1.30
1,2,3,7,8,9-HxCDD	*	*	n	NotFnd	1.05	*	U	2.50	547	357	1.28
1,2,3,4,6,7,8-HpCDD	*	*	n	NotFnd	0.99	*	U	2.50	510	383	1.61
OCDD	*	*	n	NotFnd	0.94	*	U	2.50	443	511	3.93
2,3,7,8-TCDF	*	*	n	NotFnd	1.34	*	U	2.50	403	835	0.483
1,2,3,7,8-PeCDF	*	*	n	NotFnd	1.03	*	U	2.50	412	1170	1.05
2,3,4,7,8-PeCDF	*	*	n	NotFnd	0.81	*	U	2.50	412	1170	1.41
1,2,3,4,7,8-HxCDF	*	*	n	NotFnd	1.35	*	U	2.50	335	294	0.577
1,2,3,6,7,8-HxCDF	*	*	n	NotFnd	1.25	*	U	2.50	335	294	0.626
2,3,4,6,7,8-HxCDF	*	*	n	NotFnd	1.53	*	U	2.50	335	294	0.533
1,2,3,7,8,9-HxCDF	*	*	n	NotFnd	1.19	*	U	2.50	335	294	0.838
1,2,3,4,6,7,8-HpCDF	*	*	n	NotFnd	1.10	*	U	2.50	244	333	0.817
1,2,3,4,7,8,9-HpCDF	*	*	n	NotFnd	1.02	*	U	2.50	244	333	0.869
OCDF	*	*	n	NotFnd	0.76	*	U	2.50	225	336	1.90

							Rec
13C-2,3,7,8-TCDD	2.23e+07	0.78	y	27:31	0.94	1820	91.0
13C-1,2,3,7,8-PeCDD	1.99e+07	1.77	y	33:19	0.75	2020	101
13C-1,2,3,4,7,8-HxCDD	1.66e+07	1.30	y	38:40	1.03	1690	84.7
13C-1,2,3,6,7,8-HxCDD	1.71e+07	1.29	y	38:51	1.08	1670	83.5
13C-1,2,3,4,6,7,8-HpCDD	1.50e+07	1.08	y	44:16	0.89	1760	88.0
13C-OCDD	1.76e+07	0.93	y	49:51	0.64	2910	72.7
13C-2,3,7,8-TCDF	3.75e+07	0.85	y	26:46	0.86	1840	91.9
13C-1,2,3,7,8-PeCDF	3.28e+07	1.66	y	31:35	0.76	1830	91.4
13C-2,3,4,7,8-PeCDF	3.30e+07	1.66	y	32:54	0.78	1800	90.0
13C-1,2,3,4,7,8-HxCDF	2.04e+07	0.53	y	37:17	1.34	1600	80.0
13C-1,2,3,6,7,8-HxCDF	2.08e+07	0.53	y	37:28	1.40	1560	78.0
13C-2,3,4,6,7,8-HxCDF	1.99e+07	0.54	y	38:25	1.29	1620	81.0
13C-1,2,3,7,8,9-HxCDF	1.69e+07	0.54	y	39:52	1.01	1770	88.4
13C-1,2,3,4,6,7,8-HpCDF	1.65e+07	0.44	y	42:22	1.16	1500	74.8
13C-1,2,3,4,7,8,9-HpCDF	1.77e+07	0.45	y	45:12	0.96	1940	97.1
13C-OCDF	2.63e+07	0.92	y	50:13	0.95	2920	72.9
37Cl-2,3,7,8-TCDD	8.64e+06			27:32	0.88	753	94.1
13C-1,2,3,4-TCDD	2.61e+07	0.79	y	26:55	-	70.3	
13C-1,2,3,4-TCDF	4.73e+07	0.86	y	25:40	-	78.9	
13C-1,2,3,7,8,9-HxCDD	1.90e+07	1.29	y	39:17	-	94.7	

							Fac	Noise-1	Noise-2	DL		#Hom
Total Tetra-Dioxins	*			NotFnd	1.04	*	U	2.50	207	454	0.605		0
Total Penta-Dioxins	*			NotFnd	0.90	*	U	2.50	647	213	1.15		0
Total Hexa-Dioxins	*			NotFnd	1.16	*	U	2.50	547	357	1.30		0
Total Hepta-Dioxins	*			NotFnd	0.99	*	U	2.50	510	383	1.61		0
Total Tetra-Furans	*			NotFnd	1.34	*	U	2.50	403	835	0.483		0
1st Fn. Tot Penta-Furans	*			NotFnd	0.92	*	U	2.50	412	1170	1.41	PeCDF	0
Total Penta-Furans	*			NotFnd	0.92	*	U	2.50	412	1170	1.41	0.00	0
Total Hexa-Furans	*			NotFnd	1.34	*	U	2.50	335	294	0.838		0
Total Hepta-Furans	*			NotFnd	1.06	*	U	2.50	244	333	0.869		0

Analyst: _____ Date: 3/2/09

2DF - FORM II-HR CDD
CDD/CDF TOTAL HOMOLOGUE CONCENTRATION SUMMARY
HIGH RESOLUTION

SAMPLE No.
DFBLK01

LAB NAME: FRONTIER ANALYTICAL LAB CONTRACT: EP08W001564

LAB CODE: FALE CASE NO.: EPA05-2008-01 TO NO.: SDG NO.: SDG E3YC9

MATRIX: (SOIL/WATER/ASH/TISSUE/OIL) SOIL LAB SAMPLE ID: 1652-001-0001-MB

SAMPLE wt/vol: 1.000 (g/mL): g LAB FILE ID: 24FEB09M Sam: 13

WATER SAMPLE PREP: SPE (SEPF/SPE) DATE RECEIVED: 18-FEB-09

CONCENTRATED EXTRACT VOLUME: 20 (uL) DATE EXTRACTED: 18-FEB-09

INJECTION VOLUME: 2 (uL) % SOLIDS/LIPIDS: 100 DATE ANALYZED: 24-FEB-09

GC COLUMN: DB5 ID: 0.25 (mm) DILUTION FACTOR: 1

CONCENTRATION UNITS: (pg/L or ng/kg) ng/kg

HOMOLOGUE	PEAKS	CONCENTRATION	Q	EMPC/EDL
DIOXINS				
Total TCDD	0	*	U	0.605
Total PeCDD	0	*	U	1.15
Total HxCDD	0	*	U	1.30
Total HpCDD	0	*	U	1.61
FURANS				
Total TCDF	0	*	U	0.483
Total PeCDF	0	*	U	1.41
Total HxCDF	0	*	U	0.838
Total HpCDF	0	*	U	0.869

NOTE: Concentrations, Estimated Maximum Possible Concentrations (EMPCs), and Estimated Detection Limits (EDLs) for solid samples are calculated on a dry weight basis (except tissues, which are reported on a wet weight basis with % Lipids). The total homologue concentrations do not affect the TEF (Toxicity Equivalent Factor) calculations.

ANALYST: DATE: 3/2/09

1DFA - FORM I-HR CDD-1
CDD/CDF SAMPLE DATA SUMMARY
HIGH RESOLUTION

SAMPLE No.
DLCS01

LAB NAME: FRONTIER ANALYTICAL LAB CONTRACT: EP08W001564
LAB CODE: FALE CASE NO.: EPA05-2008-01 TO NO.: SDG NO.: SDG E3YC9
MATRIX: (SOIL/WATER/ASH/TISSUE/OIL) SOIL LAB SAMPLE ID: 1652-001-0001-OPR
SAMPLE wt/vol: 1.000 (g/mL): g LAB FILE ID: 24FEB09M Sam: 12
WATER SAMPLE PREP: SPE (SEPF/SPE) DATE RECEIVED: 11-FEB-09
CONCENTRATED EXTRACT VOLUME: 20 (uL) DATE EXTRACTED: 11-FEB-09
INJECTION VOLUME: 2 (uL) % SOLIDS/LIPIDS: 100 DATE ANALYZED: 23-FEB-09
GC COLUMN: DB5 ID: 0.25 (mm) DILUTION FACTOR: 1
CONCENTRATION UNITS: (pg/L or ng/kg) ng/kg

TARGET ANALYTE	SELECTED IONS	PEAK RT	ION RATIO #	CONCENTRATION	Q	EMPC/EDL
2,3,7,8-TCDD	320/322	27:32	0.79	9.67		*
2,3,7,8-TCDF	304/306	26:47	0.70	8.38		*
1,2,3,7,8-PeCDF	340/342	31:36	1.60	46.1		*
1,2,3,7,8-PeCDD	356/358	33:20	1.59	50.1		*
2,3,4,7,8-PeCDF	340/342	32:55	1.60	46.4		*
1,2,3,4,7,8-HxCDF	374/376	37:18	1.27	51.1		*
1,2,3,6,7,8-HxCDF	374/376	37:31	1.26	50.5		*
1,2,3,4,7,8-HxCDD	390/392	38:41	1.28	47.0		*
1,2,3,6,7,8-HxCDD	390/392	38:51	1.27	46.0		*
1,2,3,7,8,9-HxCDD	390/392	39:18	1.27	46.2		*
2,3,4,6,7,8-HxCDF	374/376	38:26	1.27	50.1		*
1,2,3,7,8,9-HxCDF	374/376	39:53	1.28	50.4		*
1,2,3,4,6,7,8-HpCDF	408/410	42:23	1.02	50.8		*
1,2,3,4,6,7,8-HpCDD	424/426	44:17	1.06	43.4		*
1,2,3,4,7,8,9-HpCDF	408/410	45:13	1.03	51.8		*
OCDD	458/460	49:53	0.90	89.2		*
OCDF	442/444	50:15	0.91	94.3		*

NOTE: Concentrations, Estimated Maximum Possible Concentrations (EMPCs), and Estimated Detection Levels (EDLs) for solid samples are calculated on a dry weight basis (except tissues, which are reported on a wet weight basis with % Lipids).

LABELED COMPOUNDS	SELECTED IONS	PEAK RT	ION RATIO #	ION RATIO LIMITS	% REC #	RECOVERY LIMITS
13C-2,3,7,8-TCDD	332/334	27:31	0.78	0.65-0.89	100	25-164
13C-1,2,3,7,8-PeCDD	368/370	33:19	1.78	1.32-1.78	114	25-181
13C-1,2,3,4,7,8-HxCDD	402/404	38:40	1.29	1.05-1.43	93.2	32-141
13C-1,2,3,6,7,8-HxCDD	402/404	38:50	1.28	1.05-1.43	93.0	28-130
13C-1,2,3,4,6,7,8-HpCDD	436/438	44:17	1.07	0.88-1.20	96.9	23-140
13C-OCDD	470/472	49:51	0.93	0.76-1.02	81.2	17-157
13C-2,3,7,8-TCDF	316/318	26:45	0.86	0.65-0.89	101	24-169
13C-1,2,3,7,8-PeCDF	352/354	31:35	1.66	1.32-1.78	103	24-185
13C-2,3,4,7,8-PeCDF	352/354	32:54	1.65	1.32-1.78	101	21-178
13C-1,2,3,4,7,8-HxCDF	384/386	37:17	0.53	0.43-0.59	90.2	26-152
13C-1,2,3,6,7,8-HxCDF	384/386	37:29	0.53	0.43-0.59	88.9	26-123
13C-1,2,3,7,8,9-HxCDF	384/386	39:52	0.53	0.43-0.59	97.2	29-147
13C-2,3,4,6,7,8-HxCDF	384/386	38:26	0.53	0.43-0.59	89.5	28-136
13C-1,2,3,4,6,7,8-HpCDF	418/420	42:22	0.44	0.37-0.51	83.5	28-143
13C-1,2,3,4,7,8,9-HpCDF	418/420	45:12	0.44	0.37-0.51	108	26-138
13C-OCDF	454/456	50:13	0.92	0.76-1.02	82.3	17-157
37Cl-2,3,7,8-TCDD	328/NA	27:32	NA	NA	101	35-197

Column to be used to flag values outside (QC) limits.

ANALYST: _____ DATE: 3/5/09

File:24FEB09M #1-390 Acq:23-FEB-2009 23:45:23 GC EI+ Voltage SIR Autospec-Ultima
319.8965 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
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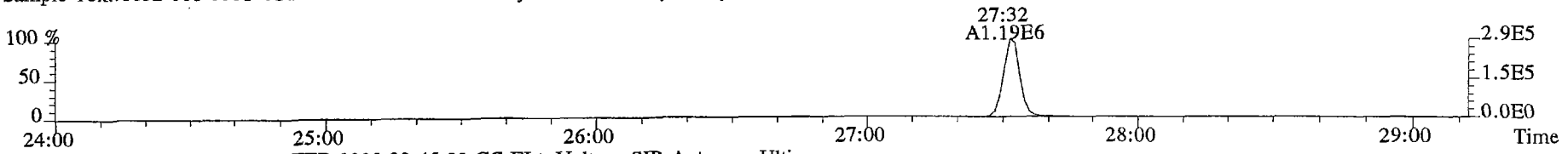

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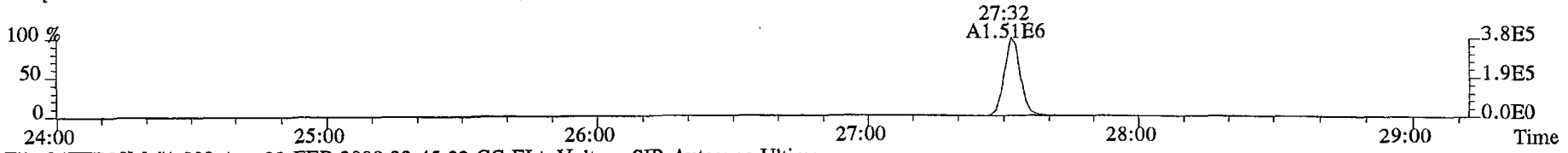

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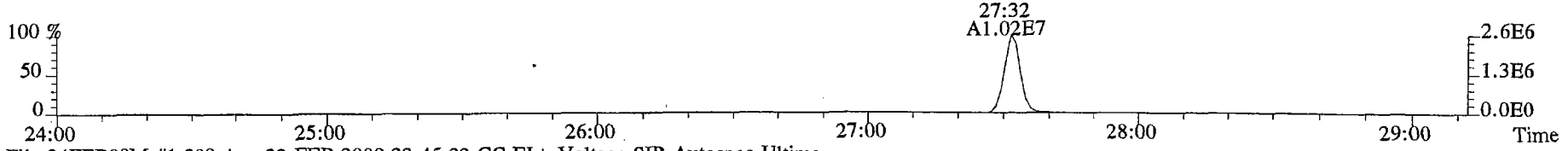

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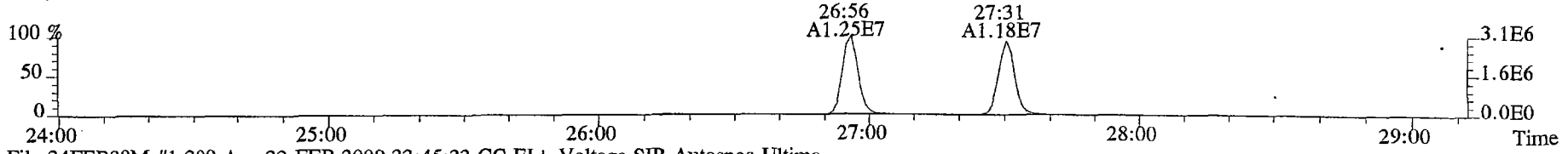

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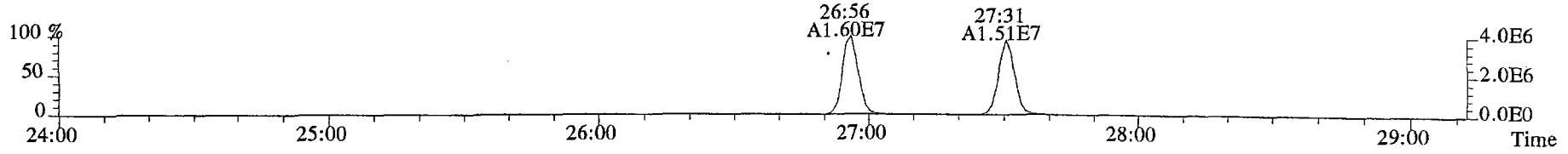

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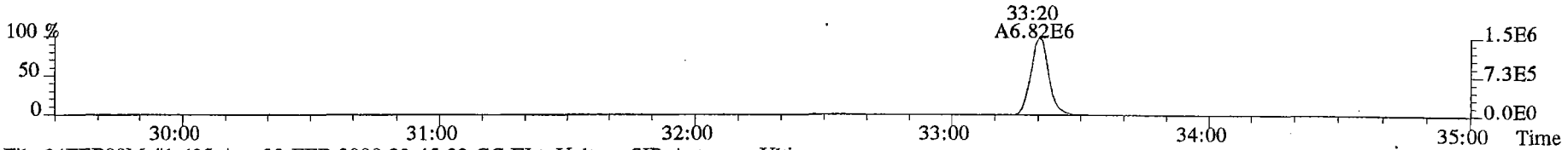

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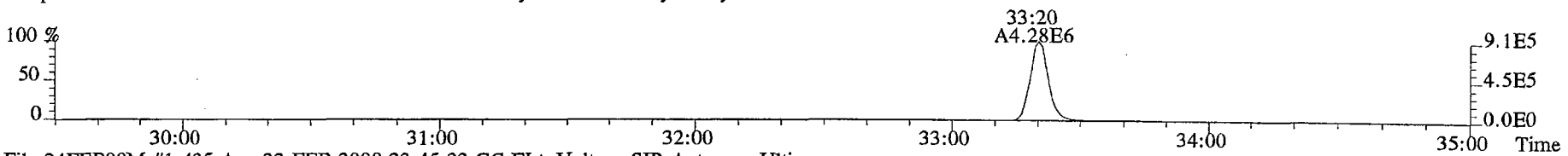

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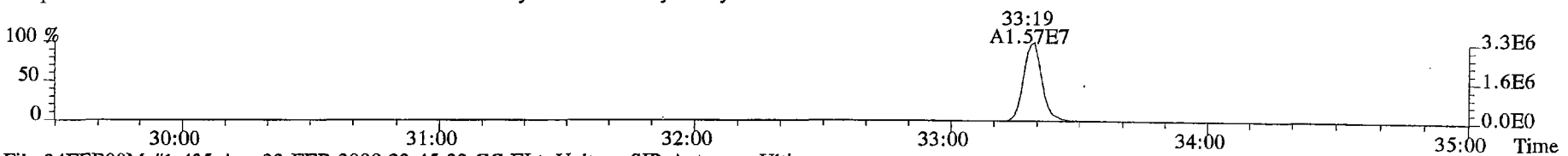

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369.8919 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
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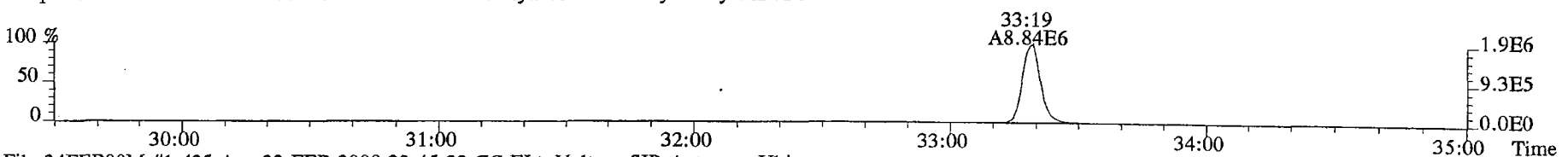

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366.9792 S:12 F:2 Exp:PCDD
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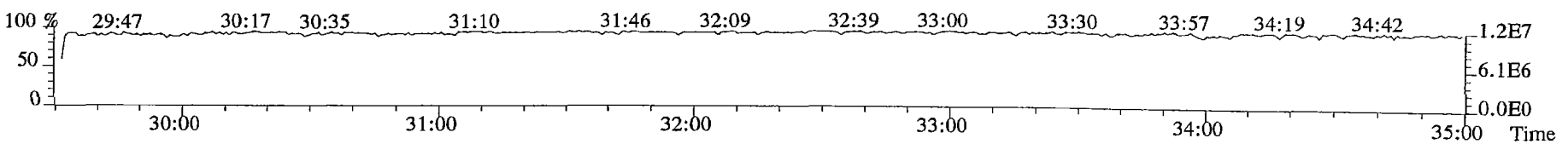

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389.8156 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
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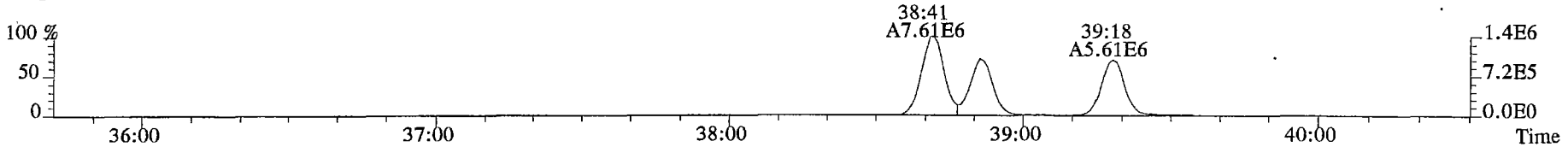

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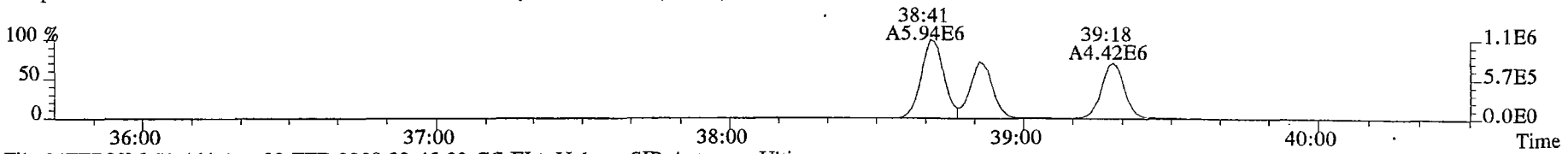

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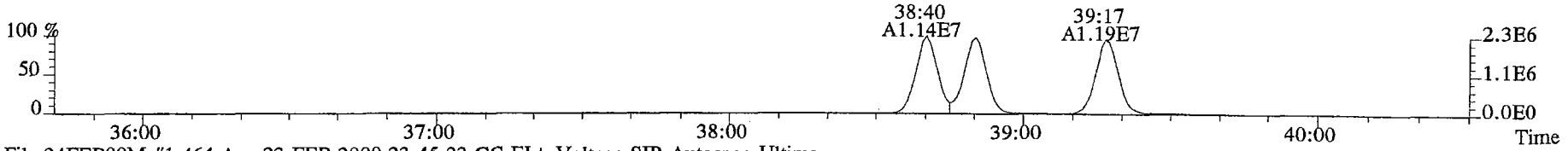

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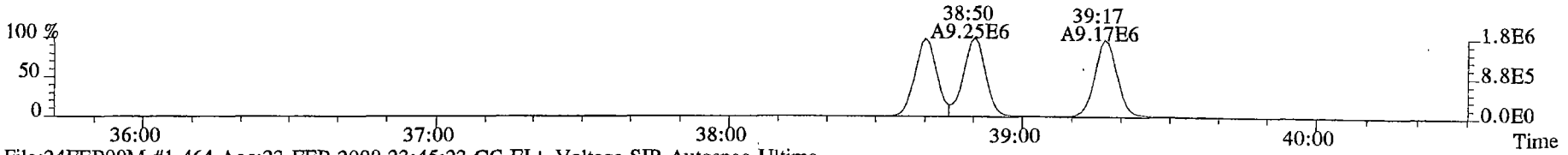

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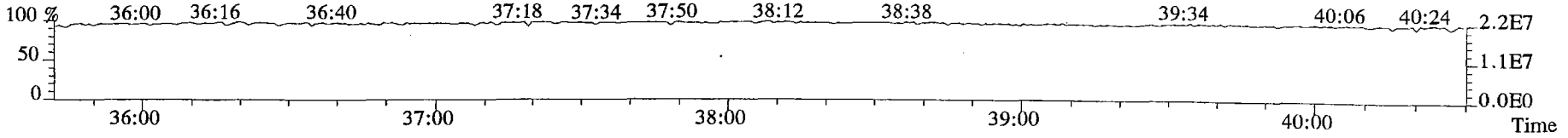

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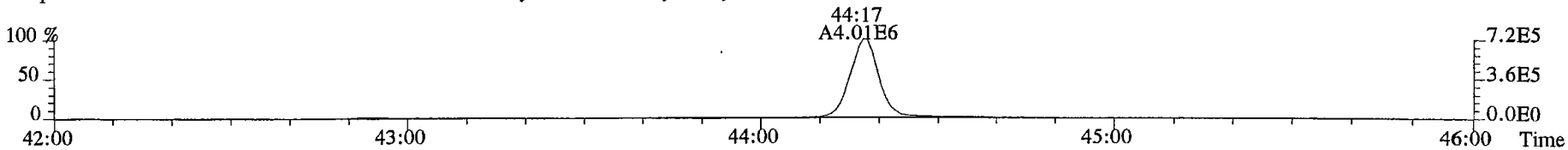

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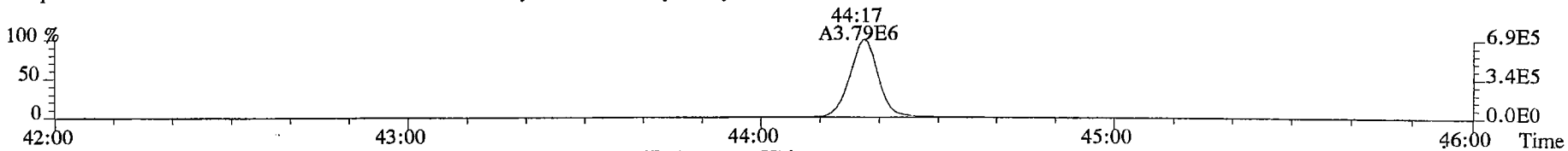

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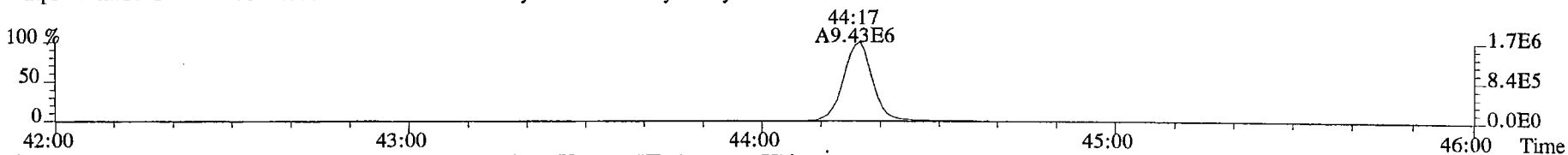

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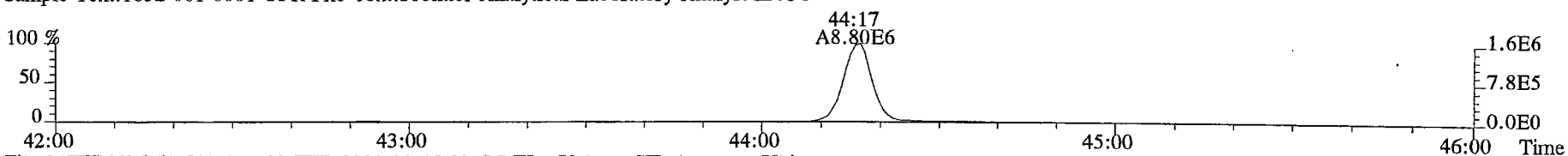

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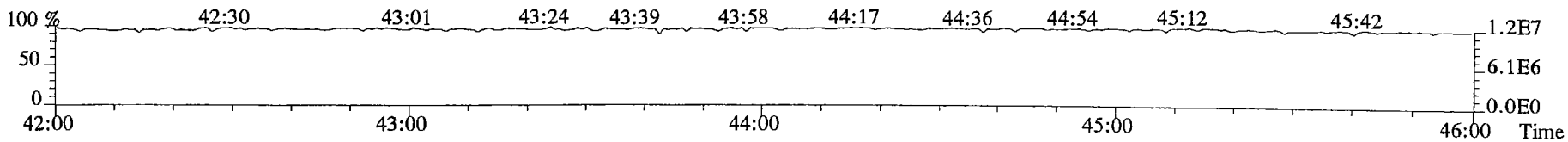

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Sample Text:1652-001-0001-OPR File Text:Frontier Analytical Laboratory Analyst ID:TC

File:24FEB09M #1-347 Acq:23-FEB-2009 23:45:23 GC EI+ Voltage SIR Autospec-Ultima
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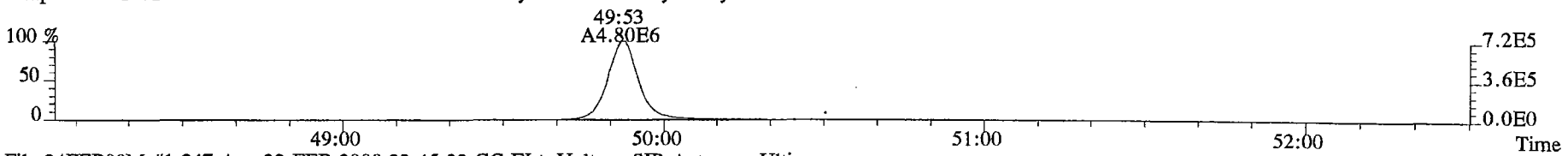

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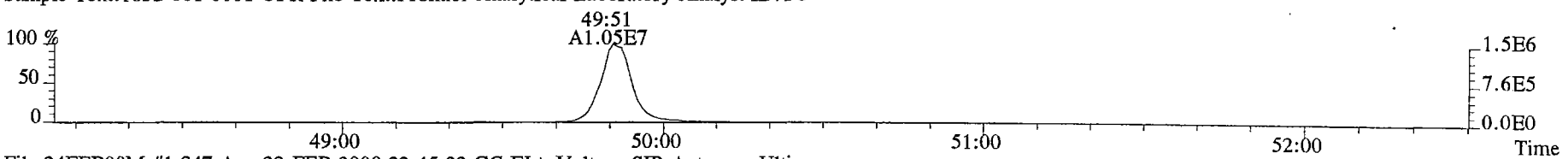

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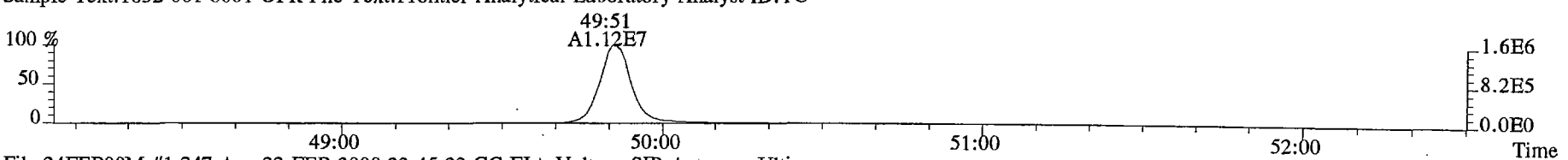
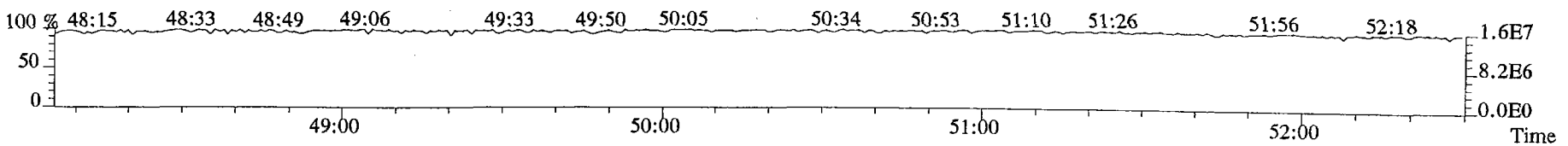
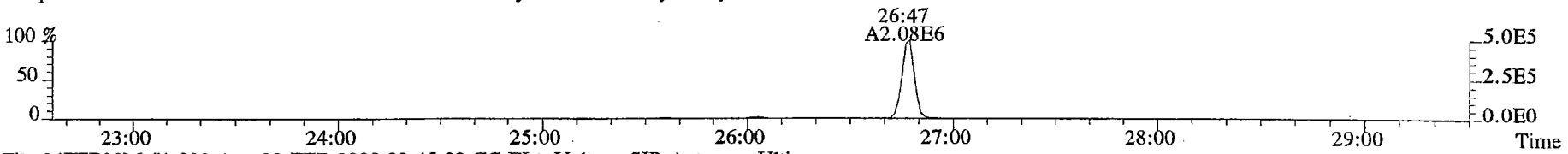


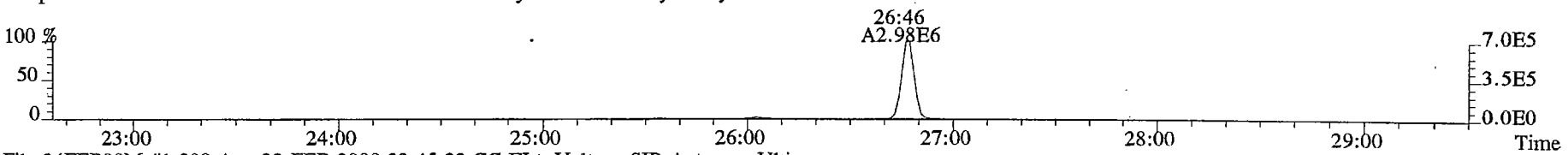
File:24FEB09M #1-347 Acq:23-FEB-2009 23:45:23 GC EI+ Voltage SIR Autospec-Ultima
454.9728 S:12 F:5 Exp:PCDD
Sample Text:1652-001-0001-OPR File Text:Frontier Analytical Laboratory Analyst ID:TC



File:24FEB09M #1-390 Acq:23-FEB-2009 23:45:23 GC EI+ Voltage SIR Autospec-Ultima
303.9016 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1652-001-0001-OPR File Text:Frontier Analytical Laboratory Analyst ID:TC



File:24FEB09M #1-390 Acq:23-FEB-2009 23:45:23 GC EI+ Voltage SIR Autospec-Ultima
305.8987 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1652-001-0001-OPR File Text:Frontier Analytical Laboratory Analyst ID:TC



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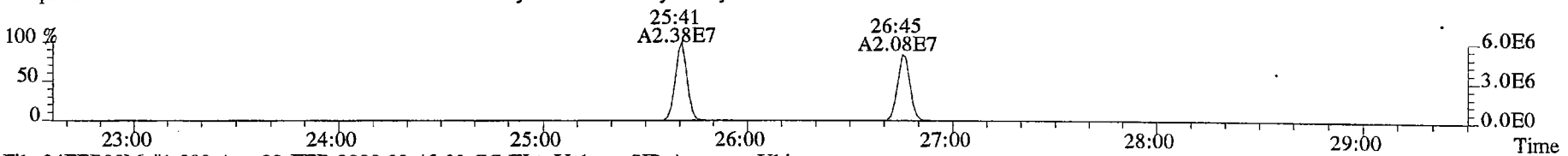
315.9419 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1652-001-0001-OPR File Text:Frontier Analytical Laboratory Analyst ID:TC



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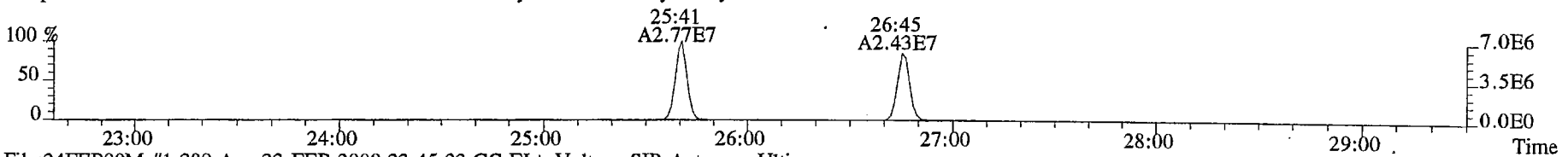
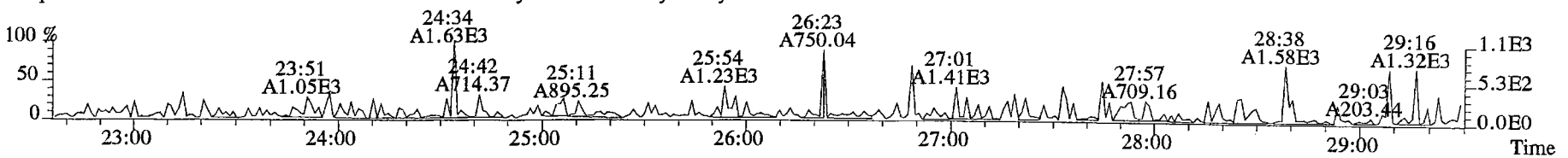
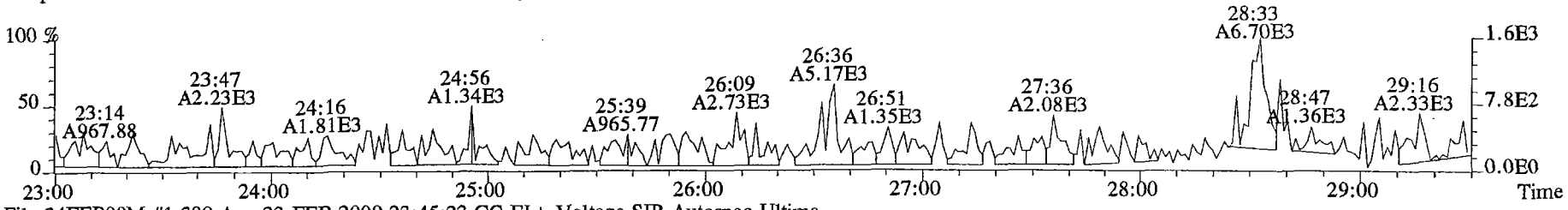
317.9389 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1652-001-0001-OPR File Text:Frontier Analytical Laboratory Analyst ID:TC



File:24FEB09M #1-390 Acq:23-FEB-2009 23:45:23 GC EI+ Voltage SIR Autospec-Ultima
375.8364 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1652-001-0001-OPR File Text:Frontier Analytical Laboratory Analyst ID:TC



File:24FEB09M #1-390 Acq:23-FEB-2009 23:45:23 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1652-001-0001-OPR File Text:Frontier Analytical Laboratory Analyst ID:TC



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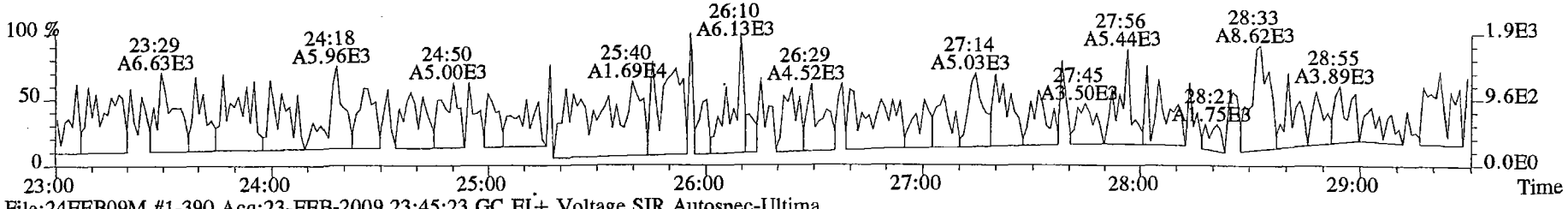
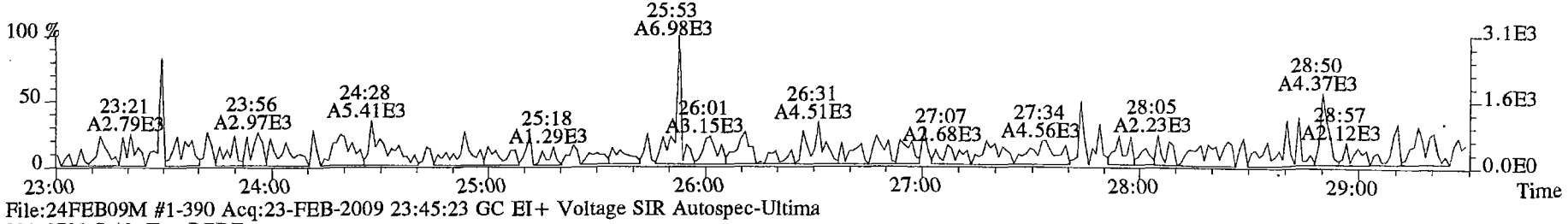
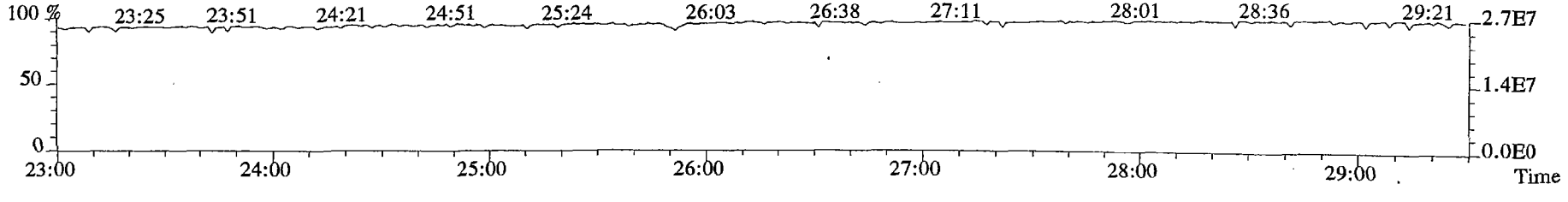
341.8568 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1652-001-0001-OPR File Text:Frontier Analytical Laboratory Analyst ID:TC



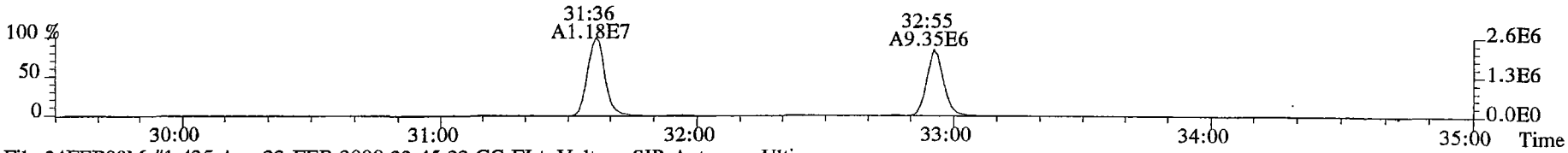
File:24FEB09M #1-390 Acq:23-FEB-2009 23:45:23 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1652-001-0001-OPR File Text:Frontier Analytical Laboratory Analyst ID:TC



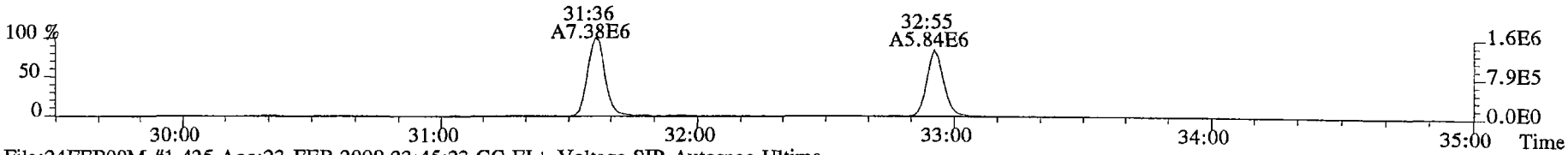
File:24FEB09M #1-390 Acq:23-FEB-2009 23:45:23 GC EI+ Voltage SIR Autospec-Ultima
330.9792 S:12 Exp:PCDD
Sample Text:1652-001-0001-OPR File Text:Frontier Analytical Laboratory Analyst ID:TC



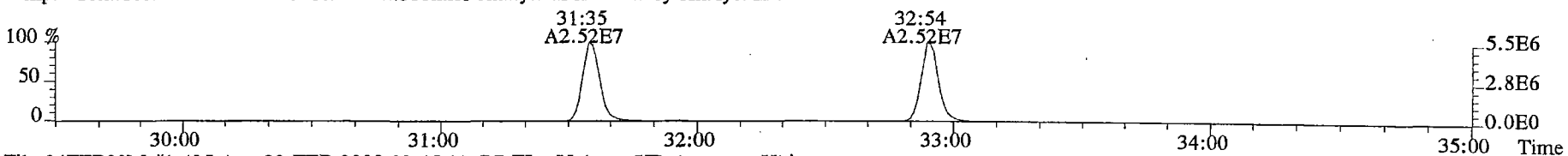
File:24FEB09M #1-425 Acq:23-FEB-2009 23:45:23 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1652-001-0001-OPR File Text:Frontier Analytical Laboratory Analyst ID:TC



File:24FEB09M #1-425 Acq:23-FEB-2009 23:45:23 GC EI+ Voltage SIR Autospec-Ultima
341.8568 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1652-001-0001-OPR File Text:Frontier Analytical Laboratory Analyst ID:TC



File:24FEB09M #1-425 Acq:23-FEB-2009 23:45:23 GC EI+ Voltage SIR Autospec-Ultima
351.9000 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1652-001-0001-OPR File Text:Frontier Analytical Laboratory Analyst ID:TC



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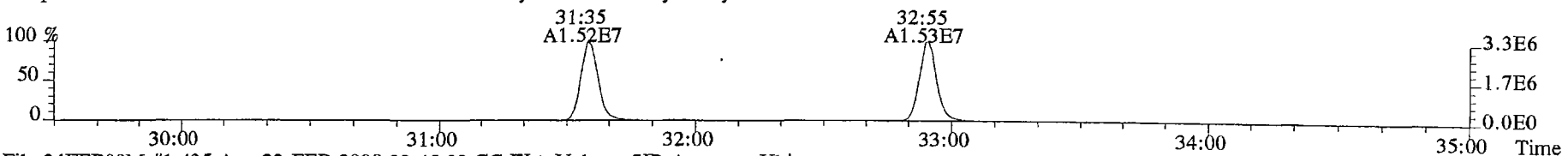
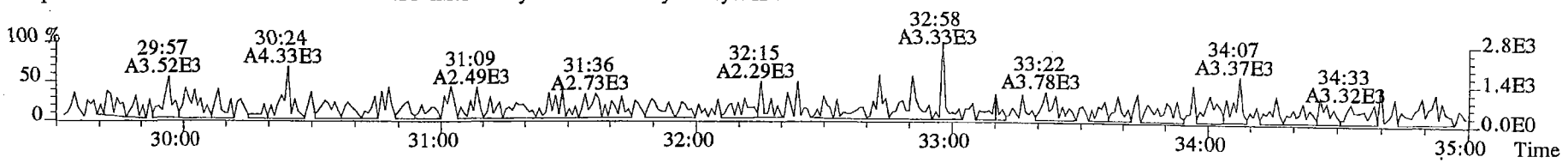
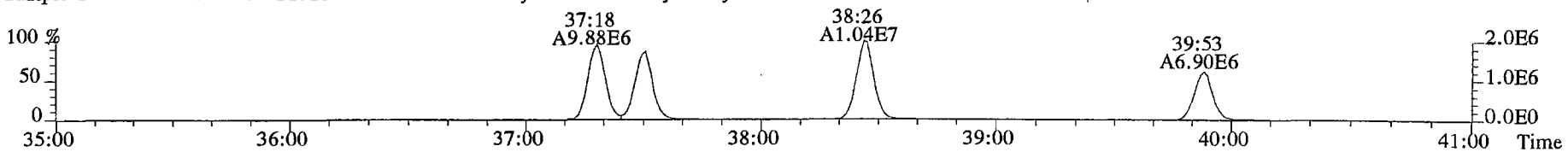
353.8970 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1652-001-0001-OPR File Text:Frontier Analytical Laboratory Analyst ID:TC



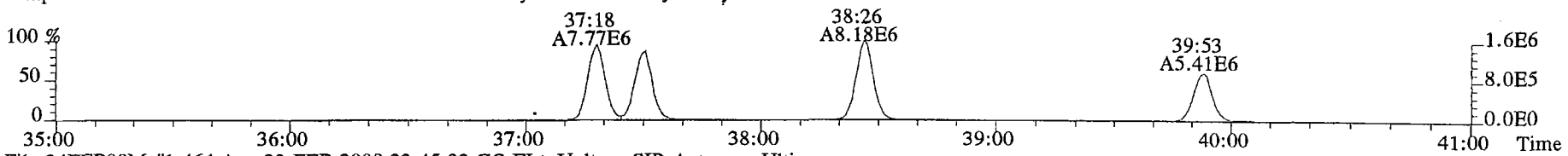
File:24FEB09M #1-425 Acq:23-FEB-2009 23:45:23 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1652-001-0001-OPR File Text:Frontier Analytical Laboratory Analyst ID:TC



File:24FEB09M #1-464 Acq:23-FEB-2009 23:45:23 GC EI+ Voltage SIR Autospec-Ultima
373.8207 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1652-001-0001-OPR File Text:Frontier Analytical Laboratory Analyst ID:TC



File:24FEB09M #1-464 Acq:23-FEB-2009 23:45:23 GC EI+ Voltage SIR Autospec-Ultima
375.8178 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1652-001-0001-OPR File Text:Frontier Analytical Laboratory Analyst ID:TC



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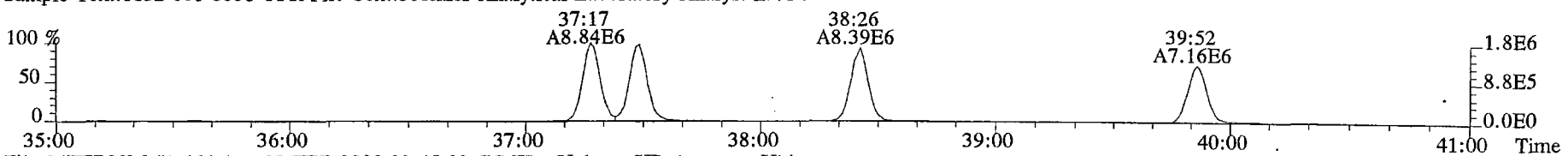
383.8639 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1652-001-0001-OPR File Text:Frontier Analytical Laboratory Analyst ID:TC



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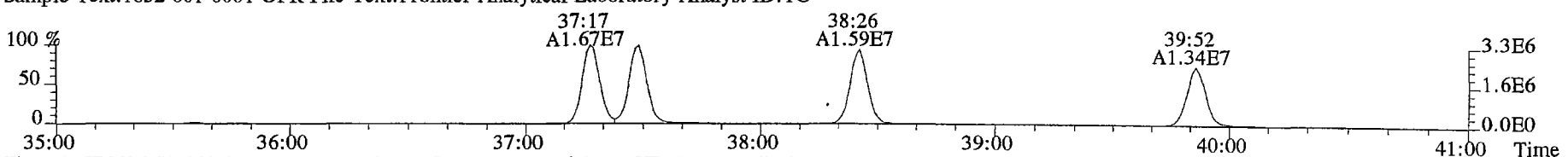
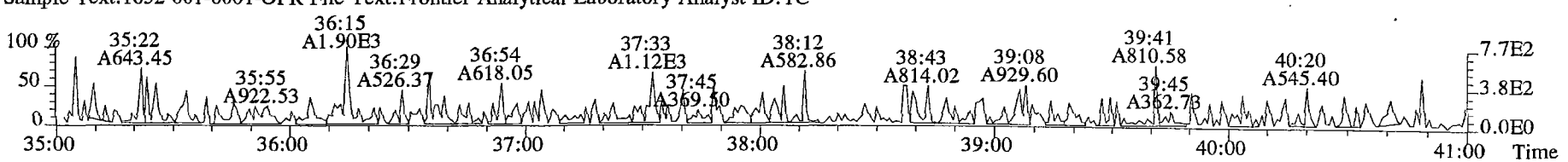
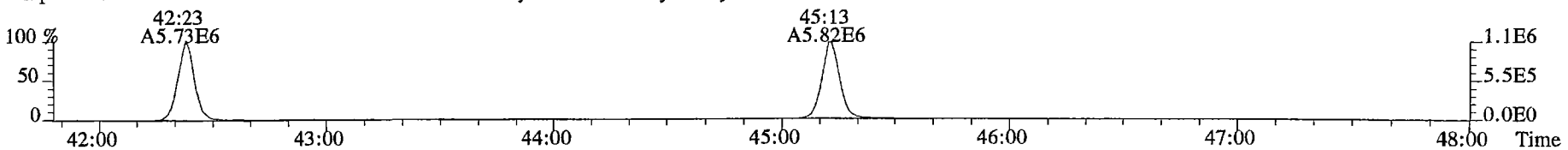
385.8610 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1652-001-0001-OPR File Text:Frontier Analytical Laboratory Analyst ID:TC



File:24FEB09M #1-464 Acq:23-FEB-2009 23:45:23 GC EI+ Voltage SIR Autospec-Ultima
445.7555 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1652-001-0001-OPR File Text:Frontier Analytical Laboratory Analyst ID:TC



File:24FEB09M #1-541 Acq:23-FEB-2009 23:45:23 GC EI+ Voltage SIR Autospec-Ultima
407.7818 S:12 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1652-001-0001-OPR File Text:Frontier Analytical Laboratory Analyst ID:TC



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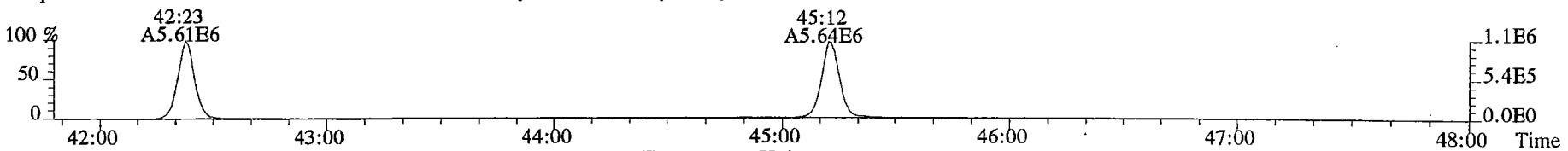
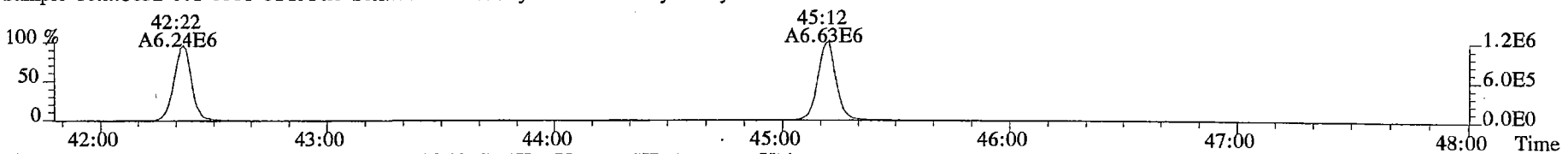
409.7788 S:12 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1652-001-0001-OPR File Text:Frontier Analytical Laboratory Analyst ID:TC



File:24FEB09M #1-541 Acq:23-FEB-2009 23:45:23 GC EI+ Voltage SIR Autospec-Ultima
417.8253 S:12 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1652-001-0001-OPR File Text:Frontier Analytical Laboratory Analyst ID:TC



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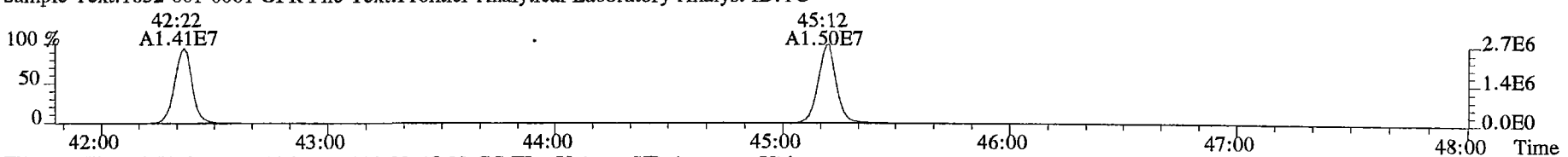
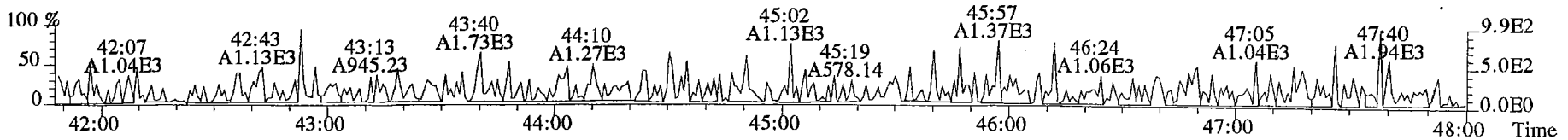
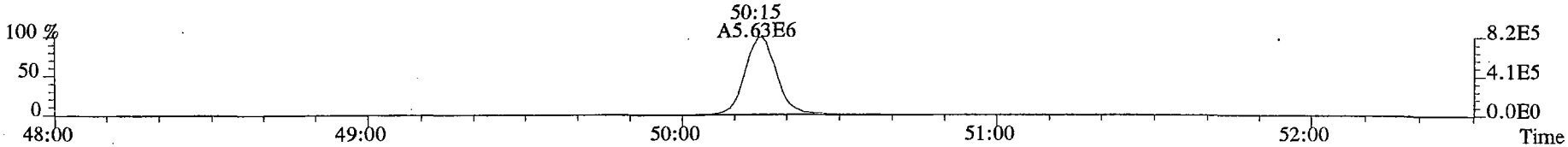
419.8220 S:12 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1652-001-0001-OPR File Text:Frontier Analytical Laboratory Analyst ID:TC



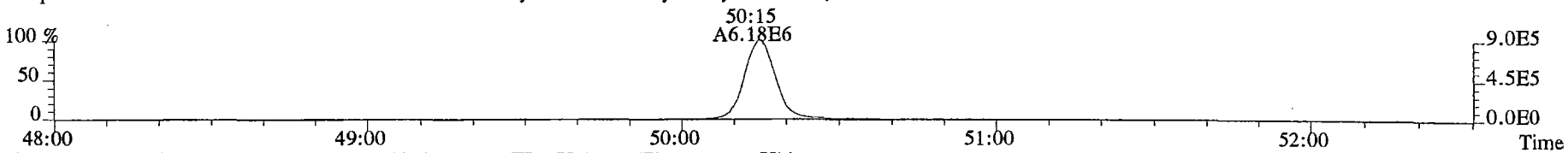
File:24FEB09M #1-541 Acq:23-FEB-2009 23:45:23 GC EI+ Voltage SIR Autospec-Ultima
479.7165 S:12 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1652-001-0001-OPR File Text:Frontier Analytical Laboratory Analyst ID:TC



File:24FEB09M #1-347 Acq:23-FEB-2009 23:45:23 GC EI+ Voltage SIR Autospec-Ultima
441.7428 S:12 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1652-001-0001-OPR File Text:Frontier Analytical Laboratory Analyst ID:TC



File:24FEB09M #1-347 Acq:23-FEB-2009 23:45:23 GC EI+ Voltage SIR Autospec-Ultima
443.7398 S:12 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1652-001-0001-OPR File Text:Frontier Analytical Laboratory Analyst ID:TC



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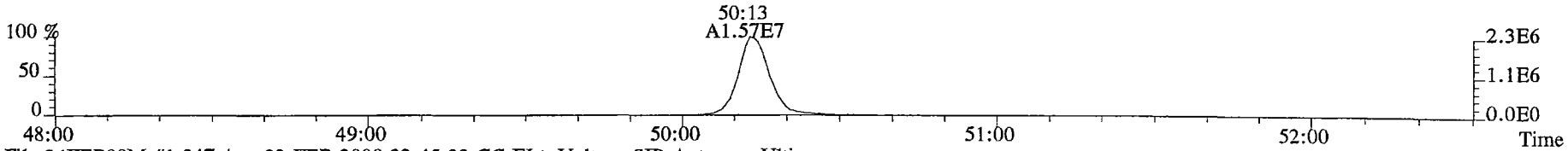
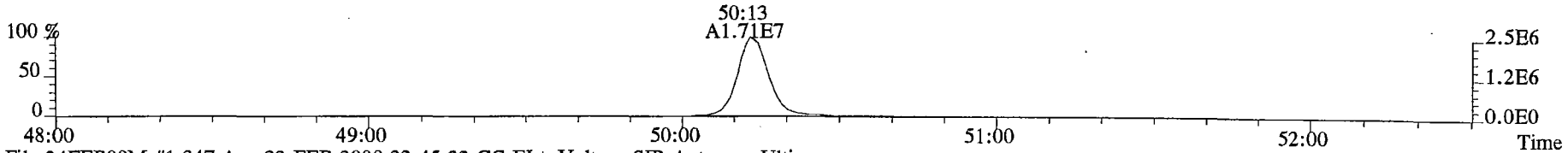
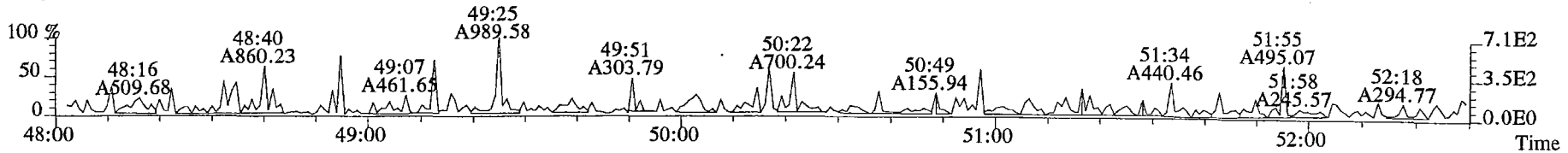
453.7831 S:12 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1652-001-0001-OPR File Text:Frontier Analytical Laboratory Analyst ID:TC



File:24FEB09M #1-347 Acq:23-FEB-2009 23:45:23 GC EI+ Voltage SIR Autospec-Ultima
455.7801 S:12 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1652-001-0001-OPR File Text:Frontier Analytical Laboratory Analyst ID:TC



File:24FEB09M #1-347 Acq:23-FEB-2009 23:45:23 GC EI+ Voltage SIR Autospec-Ultima
513.6775 S:12 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:1652-001-0001-OPR File Text:Frontier Analytical Laboratory Analyst ID:TC



FAL ID: 1652-001-0001-OPR Filename: 24FEB09M Sam:12 Acquired: 23-FEB-09 23:45:23 ICal: PCDDFAL3-2-5-09
Client ID: DLCS01 ConCal: ST022409M3 EndCal: ST022409M4
Results: 5340 GC Column: db5 Amount: 1.000 NATO 1989 Tox: 96.8
WHO 1998 Tox: 122 WHO 2005 Tox: 112

Name	Resp	RA	RT	RRF	Conc	Qual	Fac	Noise-1	Noise-2	DL
2,3,7,8-TCDD	2.70e+06	0.79 y	27:32	1.04	9.67		2.50	-	-	*
1,2,3,7,8-PeCDD	1.11e+07	1.59 y	33:20	0.90	50.1		2.50	-	-	*
1,2,3,4,7,8-HxCDD	1.35e+07	1.28 y	38:41	1.43	47.0		2.50	-	-	*
1,2,3,6,7,8-HxCDD	9.90e+06	1.27 y	38:51	1.02	46.0		2.50	-	-	*
1,2,3,7,8,9-HxCDD	1.00e+07	1.27 y	39:18	1.05	46.2		2.50	-	-	*
1,2,3,4,6,7,8-HpCDD	7.80e+06	1.06 y	44:17	0.99	43.4		2.50	-	-	*
OCDD	9.10e+06	0.90 y	49:53	0.94	89.2		2.50	-	-	*
2,3,7,8-TCDF	5.06e+06	0.70 y	26:47	1.34	8.38		2.50	-	-	*
1,2,3,7,8-PeCDF	1.92e+07	1.60 y	31:36	1.03	46.1		2.50	-	-	*
2,3,4,7,8-PeCDF	1.52e+07	1.60 y	32:55	0.81	46.4		2.50	-	-	*
1,2,3,4,7,8-HxCDF	1.77e+07	1.27 y	37:18	1.35	51.1		2.50	-	-	*
1,2,3,6,7,8-HxCDF	1.66e+07	1.26 y	37:31	1.25	50.5		2.50	-	-	*
2,3,4,6,7,8-HxCDF	1.86e+07	1.27 y	38:26	1.53	50.1		2.50	-	-	*
1,2,3,7,8,9-HxCDF	1.23e+07	1.28 y	39:53	1.19	50.4		2.50	-	-	*
1,2,3,4,6,7,8-HpCDF	1.13e+07	1.02 y	42:23	1.10	50.8		2.50	-	-	*
1,2,3,4,7,8,9-HpCDF	1.15e+07	1.03 y	45:13	1.02	51.8		2.50	-	-	*
OCDF	1.18e+07	0.91 y	50:15	0.76	94.3		2.50	-	-	*
										Rec
13C-2,3,7,8-TCDD	2.69e+07	0.78 y	27:31	0.94	100					100
13C-1,2,3,7,8-PeCDD	2.46e+07	1.78 y	33:19	0.75	114					114
13C-1,2,3,4,7,8-HxCDD	2.02e+07	1.29 y	38:40	1.03	93.2					93.2
13C-1,2,3,6,7,8-HxCDD	2.11e+07	1.28 y	38:50	1.08	93.0					93.0
13C-1,2,3,4,6,7,8-HpCDD	1.82e+07	1.07 y	44:17	0.89	96.9					96.9
13C-OCDD	2.17e+07	0.93 y	49:51	0.64	162					81.2
13C-2,3,7,8-TCDF	4.51e+07	0.86 y	26:45	0.86	101					101
13C-1,2,3,7,8-PeCDF	4.04e+07	1.66 y	31:35	0.76	103					103
13C-2,3,4,7,8-PeCDF	4.05e+07	1.65 y	32:54	0.78	101					101
13C-1,2,3,4,7,8-HxCDF	2.55e+07	0.53 y	37:17	1.34	90.2					90.2
13C-1,2,3,6,7,8-HxCDF	2.62e+07	0.53 y	37:29	1.40	88.9					88.9
13C-2,3,4,6,7,8-HxCDF	2.42e+07	0.53 y	38:26	1.29	89.5					89.5
13C-1,2,3,7,8,9-HxCDF	2.06e+07	0.53 y	39:52	1.01	97.2					97.2
13C-1,2,3,4,6,7,8-HpCDF	2.03e+07	0.44 y	42:22	1.16	83.5					83.5
13C-1,2,3,4,7,8,9-HpCDF	2.17e+07	0.44 y	45:12	0.96	108					108
13C-OCDF	3.28e+07	0.92 y	50:13	0.95	165					82.3
37Cl-2,3,7,8-TCDD	1.02e+07		27:32	0.88	40.4					101
13C-1,2,3,4-TCDD	2.86e+07	0.78 y	26:56	-	76.9					
13C-1,2,3,4-TCDF	5.15e+07	0.86 y	25:41	-	86.0					
13C-1,2,3,7,8,9-HxCDD	2.10e+07	1.29 y	39:17	-	105					

						Fac	Noise-1	Noise-2	DL		#Hom
Total Tetra-Dioxins	2.81e+06		23:08	1.04	10.0	2.50	-	-	*		21
Total Penta-Dioxins	1.11e+07		33:20	0.90	50.2	2.50	-	-	*		7
Total Hexa-Dioxins	3.35e+07		38:41	1.16	139	2.50	-	-	*		7
Total Hepta-Dioxins	7.89e+06		42:55	0.99	43.9	2.50	-	-	*		8
Total Tetra-Furans	5.25e+06		24:19	1.34	8.70	2.50	-	-	*		10
1st Fn. Tot Penta-Furans	7.59e+04		22:41	0.92	0.204	2.50	-	-	*	PeCDF	22
Total Penta-Furans	3.50e+07		30:21	0.92	94.0	2.50	-	-	*	94.2	12
Total Hexa-Furans	6.52e+07		35:37	1.34	202	2.50	-	-	*		14
Total Hepta-Furans	2.29e+07		42:23	1.06	103	2.50	-	-	*		9

Analyst: _____ Date: 3/3/09

PROJECT REQUEST SHEET

Project #:	5340	Sample #:	1 - 2	Client Manager:	BS
Client:	USEPA Region 5			Hold Time:	02/18/2009
Matrix:	Soil	Extraction Batch:	X1652	Due Date:	02/26/2009
Method:	DLM02.0 D/F			Storage:	R1
SOP:	SOPs: EP2C Rev.1 IP2C Rev.2				

COMMENTS/INSTRUCTIONS:

Use 1g equiv.
Propably very high levels.

Results: 5340
5340TCDF

Extract/s located in box: Chips, Dips, Chaths, Whips

Standards: 5340

Instrument:

DB5	FAC-3
DB225	FAC-1
DB1	
Other	

Percent Solids

FAL Project: 5340

Sample ID	Chemist	Date	Wet Sample Weight (g)	Dry Sample Weight (g)	% Solids	10g Equiv
5340-001-0001-SA	GG	2/13/09	4.95	3.72	75.15	13.31
5340-002-0001-SA	↓	↓	↓	↓	↓	↓

% Solids Summary:

Non-Filtered Determination

1. Place an aliquot of sample into a pre-weighed aluminum weighing boat. Use approximately two to ten grams for solid samples, approximately 10 mL for aqueous samples.
2. Record the weight.
3. Dry sample overnight at approximately 110 C.

Filtered Determination

1. Pre-weigh a glass fiber filter of appropriate pore size and pressure filter a sample aliquot (200-1000mL) through it.
2. Air dry the filter and record the dry weight.

% Solids calculation

% solids = aliquot after drying/aliquot before drying x 100

- Samples containing one percent solids or less are prepared as aqueous samples.
- Samples containing greater than one percent solids prepared as solid samples.

EXTRACTION SHEET

Project #: 5340 Extraction Date: 2009-02-18 Extraction Chemist: BM

Method/Analysis: DLM02.0 D/F

Procedure: SOX/SDS Solvent: Toluene

Sample ID	Wet wt. (g/L)	Dry wt. (g/L)	IS Amt: 10.0uL ID: 080827A Vial: 3 Chemist/Witness/Date	NS Amt: 10.0uL ID: 080827B Vial: 3 Chemist/Witness/Date	CSS Amt: 10.0uL ID: 080827C Vial: 3 Chemist/Witness/Date
1652-001-0001-MB	(1.00)	(1.00)	BM GN 2/18/09	NA	BM GN 2/19/09
1652-001-0001-OPR	(1.00)	(1.00)	↓	BM GN 2/18/09	↓
5340-001-0001-SA	1.33	1.00	↓	NA	↓
5340-002-0001-SA	1.35	1.01	↓	↓	↓

AX-21 Charcoal Cleaned	102708	Acetone	48233	Acid Alumina	14003MH	Hexane	48330
Hydrochloric Acid	B08505	Methanol	085079	Methylene Chloride (DCM)	48352	Silica Gel	TA1493434
Sodium Hydroxide	8120	Sodium Sulfate	48094820	Sulfuric Acid	084858	Tetradecane	072385
Toluene	48305	Water	48281	C-18 Empore Discs	320441	Cyclohexane	48149

Comments:

CLEANUP SHEET

Project #: 5340

Method/Analysis: DLM02.0 D/F

Splits: 0 Split Date: N/A Final Volume: 20.0uL

Sample ID	Cleanup 1 MSG/AA	Cleanup 2 CC	Cleanup 3 NA	RS Amt: 10.0uL ID: 080827D Vial: 3
	Chemist/Date	Chemist/Date	Chemist/Date	Chemist/Witness/Date
1652-001-0001-MB	BM 2/19/09	BM 2/19/09	NA	BM GN 2/19/09
1652-001-0001-OPR	↓	↓	↓	↓
5340-001-0001-SA	↓	↓	↓	↓
5340-002-0001-SA	↓	↓	↓	↓

Comments:

EPA
1 Sample Jar

Frontier Analytical Laboratory

Sample Check in/Check out/Disposal Log

FAL Project No. 5340

Check in / Check out

#2 = duplicate sample, take from same jar labeled 5340-001-SA,

Sample Number(s)	Dupes	Check In	Check Out	To/From Location	Date	Time	Entire Sample Used?	Initials
1 - 2*	0	X		R1	2009-02-11	10:45:00		BM
~~1~~			X	R1	2/12/09	16:00		GG 2/12/09
1 (1of1)			X	R1	2/13/09	16:00		GG
1 (1of1)		X		R1	2/13/09	16:15		GG
1 (1of1)			X	R1	2/18/09	13:10		BM
1 (1of1)		X		R1	2/18/09	14:00		BM
1 (1of1)			X	R1	2/25/09	15:20		GG
1 (1of1)		X		R1	2/25/09	16:10		GG

pH

pH Range	Sample Number/s
pH < 4	
4 < pH < 10	NA
10 < pH	

Disposal

Sample Number/s	Over 1ppb*	Under 1ppb	From Location	Disposal Date/Time	Initials

*Samples over 1ppb total of PCDDs/PCDFs , PCBs or PAHs require specialized disposal.
Contact SafetyKleen to arrange disposal of any expired samples over the 1 ppb level.

FedEx Express *US Airbill*

FedEx Tracking Number 8681 4478 7343

Form ID No. 0200

Recipient's Copy

1 From

Date 2-10-09

Sender's Name Greg Hays Phone 517 599 1875

Company Sullivan International Group

Address 2325 Kirkland Ridge Dr. Dept./Floor/Suite/Room

City Lit State MI ZIP 48842

2 Your Internal Billing Reference

3 To

Recipient's Name Sample Receipt Phone

Company Frontier Analytical Laboratory

Recipient's Address 5172 Hillsdale Circle Dept./Floor/Suite/Room

We cannot deliver to P.O. boxes or P.O. ZIP codes.

Address

To request a package be held at a specific FedEx location, print FedEx address here.

City El Dorado Hills State CA ZIP 95762

8681 4478 7343

4a Express Package Service *Packages up to 150 lbs.*

- [x] FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.
- [ ] FedEx First Overnight — Earliest next business morning delivery to select locations.* Saturday Delivery NOT available.
- [ ] FedEx 2Day — Second business day.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

FedEx Envelope rate not available. Minimum charge: One-pound rate.

* To most locations.

4b Express Freight Service *Packages over 150 lbs.*

- [ ] FedEx 1Day Freight* — Next business day.** Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx 2Day Freight — Second business day.** Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx 3Day Freight — Third business day.** Saturday Delivery NOT available.

* Call for Confirmation: ** To most locations.

5 Packaging

- [ ] FedEx Envelope*
- [ ] FedEx Pak* — Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sturdy Pak.
- [ ] FedEx Box
- [ ] FedEx Tube
- [x] Other

* Declared value limit $500.

6 Special Handling — Include FedEx address in Section 3.

- [ ] **SATURDAY Delivery** — Not available for FedEx Standard Overnight, FedEx First Overnight, FedEx Express Saver, or FedEx 3Day Freight.
- [ ] **HOLD Weekday** at FedEx Location — Not available for FedEx First Overnight.
- [ ] **HOLD Saturday** at FedEx Location — Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

Does this shipment contain dangerous goods? One box must be checked.

- [ ] No
- [x] Yes — As per attached Shipper's Declaration.
- [ ] Yes — Shipper's Declaration not required.
- [ ] Dry Ice — Dry ice, 9, UN 1845 ____ x ____ kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging.

- [ ] Cargo Aircraft Only

7 Payment *Bill to:* Enter FedEx Acct. No. or Credit Card No. below.

- [x] Sender — Acct. No. in Section 1 will be billed.
- [ ] Recipient
- [ ] Third Party
- [ ] Credit Card
- [ ] Cash/Check

Obtain Recip. Acct. No. [ ]

Total Packages	Total Weight	Total Declared Value†	Credit Card Auth.
1	3	$ .00	

†Our liability is limited to $100 unless you declare a higher value. See back for details.

8 Residential Delivery Signature Options If you require a signature, check Direct or Indirect.

- [ ] No Signature Required — Package may be left without obtaining a signature for delivery.
- [ ] Direct Signature — Someone at recipient's address may sign for delivery. *Fee applies.*
- [ ] Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. *Fee applies.*

520

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EPA USEPA Contract Laboratory Program
Organic Traffic Report & Chain of Custody Record

5340 / 18°C

Analysis under PO# EP08W001564

1. Case No.: PO# EP08W001564
DAS No.:
SDG No.: SDG E3YC9

L

2. Date Shipped: 2/6/2009	3. Chain of Custody Record	Sampler Signature: Jacey Roach	4. For Lab Use Only
Carrier Name: FedEx	Relinquished By: (Date/Time)	Received By: (Date/Time)	Lab Contract No: EP08W001564
Airbill: 8637 05044404	1) [signature] 2/6/09 1600	[signature] 2/11/09 10:45AM	Unit Price: $900
Shipped To: Frontier Analytical Lab 5172 Hillsdale Circle El Dorado Hills, CA 95762	2)		Transfer To:
	3)		Lab Contract No:
	4)		Unit Price:

5. ORGANIC SAMPLE No.	6. MATRIX/ SAMPLER	7. TYPE	8. ANALYSIS/ TURNAROUND	9. TAG No./ PRESERVATIVE/Bottles	10. STATION LOCATION	11. SAMPLE COLLECT DATE/TIME	12. INORGANIC SAMPLE No.	13. FOR LAB USE ONLY Sample Condition On Receipt
E3YC9	SOIL/ PRODUCT	GRAB	Dioxins/ Furans	1 ~~[illegible]~~ 8oz jar		January 13, 2009 1330		good, 2/11/09, 10:45 5340-001-SA First
E3YD0	SOIL/ PRODUCT	GRAB	Dioxins/ Furans	~~1 8oz jar~~ GA Please run a duplicate from same jar		1/13/2009 1330		good, 2/11/09, 10:45 5340-002-SA Last

14. Shipment for Case Complete?	15. Sample(s) to be used for laboratory QC:	16. Additional Sampler Signature(s):	17. Cooler Temperature Upon Receipt:	18. Chain of Custody Seal Number:
Y	E3YC9		18°C	

19. Analysis Key:	Type: Comp, Grab (from Box 7)	20. Custody Seal Intact? Y	21. Shipment Iced? N

22. TR Number:

LABORATORY COPY

PR provides preliminary results. Requests for preliminary results will increase analytical costs.
Send Copy to: Sample Management Office, Attn: Heather Bauer, 15000 Conference Center Dr., Chantilly, VA 20151 Phone 703/818-4200 Fax 703/995-4415

CB CONGENER
SAMPLE LOG-IN SHEET (DC-1)

Lab Name Frontier Analytical Laboratory	Page 1 of 1
Received By (Print Name) TOM CRABTREE	Log-in Date 2/11/09
Received By (Signature) Tom Crabtree	
Contract No. EP08W001564	TO No.
Case No. EPA05-2008-01	Sample Delivery Group No.

Remarks:

			EPA Sample #	Corresponding Sample Tag #	Corresponding Assigned Lab #	Remarks: Condition of Sample Shipment, etc.
1.	Custody Seal(s)	Present/Absent* Intact/Broken	E3YC9		5340-001-SA	Good, First
2.	Custody Seal Nos.	NA	E3YD0		5340-002-SA	Good, Last
3.	Chain of Custody Records	Present/Absent*				
4.	Traffic Reports or Packing Lists	NA				
5.	Airbill	Airbill/Sticker Present/Absent*				
6.	Airbill No.	868144787343				
7.	Sample Tags	Present/Absent*				
	Sample Tag Numbers	Listed/Not Listed on Chain of Custody Record				
8.	Sample Condition	Intact/Broken*/ Leaking				
9.	Cooler Temperature	18°C				
10.	Does information on custody records and sample tags agree?	Yes/No*				
11.	Date Received at Laboratory	2/11/09				
12.	Time Received	10:45				

Sample Transfer	
Fraction #1	Fraction #1
Area # SC-Prep	Area # Prep-Inst
By BM	By BM
On 2/18/09	On 2/19/09

* Contact SMO and attach record of resolution.

Reviewed By [illegible]	Logbook No.
Date 3/5/09	Logbook Page No.

Gabby Navarro

From: Ben Miller [benm@frontieranalytical.com]
Sent: Thursday, February 12, 2009 2:41 PM
To: 'vandonsel.terese@epamail.epa.gov'
Cc: 'Kathy Zipp'; 'brads@frontieranalytical.com'
Subject: 5340 Sample Receipt EP08W001564 Due: 2/26/2009

Dear Ms. Donsel,

This letter confirms the receipt of two soil samples at Frontier Analytical Laboratory on February 11, 2009. We received two soil samples and a total of 1 bottle. The bottle arrived in good condition. The samples will be extracted and analyzed using EPA Method DLM02.0 for tetra through octa chlorinated dibenzo dioxins and furans. These samples are associated with EPA Order/Contract No.: **EP08W001564**. This project has a turnaround time of fourteen calendar days at $900/sample. The following e-mail is a PDF copy of the completed Chain-of-Custody/Traffic Report. The samples have been assigned a Frontier Analytical Laboratory project number **5340** and SDG Number **SDG E3YC9** In order to expedite inquiries, please reference our project number.

These samples represent the first samples in SDG Number **SDG E3YC9.**

Please note that the samples were received at 18 degrees C which is outside the method recommenc temperature range of 0 – 4 degrees C. We will proceed with analysis unless instructed otherwise.

If you have any questions regarding this project, please feel free to contact us at your convenience.

Thank you for choosing Frontier Analytical Laboratory for your analytical testing needs.

Sincerely,

Benjamin Miller

Sample Control
Frontier Analytical Laboratory
5172 Hillsdale Circle
El Dorado Hills, CA 95762
Tel: (916) 934-0900
Fax: (916) 934-0999
www.frontieranalytical.com

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Gabby Navarro

From: Sample Control [samplecontrol@frontieranalyical.com]
Sent: Thursday, February 12, 2009 2:44 PM
To: 'vandonsel.terese@epamail.epa.gov'
Cc: 'brads@frontieranalytical.com'; 'Kathy Zipp'; 'gabbyn@frontieranalytical.com'
Subject: Dioxin Contract No.EP08W001564

Dear Ms. Donsel,

We received one 8oz jar for sample E3YC9 and E3YDO in good condition on February 11, 2009. We found the following discrepancies:

- The Chain of Custody has hand written Case No. of PO# EP08W001564; however our records show a Case No. of EPA05-2008-01. Is the Case No. the same as the DAS No.?
- We didn't receive sample tags with the samples. Does your region require sample tags?
- Does your region require a Delivery of Analytical Services (DAS) Sample Delivery Group (SDG) Sheet and if so can you send us EPA Region 5's form?
- Does your region require a TR Number? We didn't receive a number with the Chain of Custody ((
- Please note that the Airbill number on the COC of 863205044404 does not match the Airbill numb received of 868144787343.

Please feel free to contact us at your convenience.

Thank you for choosing Frontier Analytical Laboratory for your analytical testing needs.

Sincerely,
Gabby Navarro

Sample Control
Frontier Analytical Laboratory
5172 Hillsdale Circle
El Dorado Hills, CA 95762
Tel: (916) 934-0900
Fax: (916) 934-0999
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