Texaco Exploration & Production, Inc.

1546 China Grade Loop
Bakersfield, CA 93308
Tel (661) 392-2432
Fax (661) 392-2208

Bruce L. Niemeyer
Kern River Area Manager

ChevronTexaco

March 28, 2002

California Regional Water Quality Control Board
Central Valley Region
3614 East Ashlan Ave.
Fresno, CA 93726

Re: CODE SECTION 13267 REQUEST TO SUBMIT MONITORING DATA TO COMPLY WITH THE POLICY OR IMPLEMENTATION OF TOXICS STANDARDS FOR INLAND SURFACE WATERS

Attention: **Mr. Bert Van Voris**
Supervising Engineer

Dear Mr. Van Voris:

Enclosed you will find the monitoring data to comply with the *Policy for Implementation of Toxics Standards for Inland Surface Waters.*

The dioxin monitoring data is for Kern River's NPDES discharge points established under Order No. 95-031, NPDES Permit No. CA0082295. Analytical data was prepared and completed by Precision Analytical Laboratories in Bakersfield, California. This is the wet weather dioxin effluent testing results requested per your letter of February 27, 2001.

If there are any questions regarding this report please contact Mr. S.K. Browning at (661) 392-2808.

Sincerely,

For Bruce L. Niemeyer
Kern River Area Manager

cc: M. Lambert – City of Bakersfield
D. Munn – North Kern Water District
J. Beck – Kern County Water Agency
J. Waldron – ChevronTexaco
J. Jones – Cawelo Water District

Attachments

Enclosure C

PRIORITY POLLUTANT MONITORING FORM TRANSMITTAL

For February (Month) 2002 (Year)

Discharger Name	TEXACO EXPLORATION & PRODUCTION, INC.
NPDES Permit number	CA0082295
Discharger contact name	Steve Merritt
Discharger contact telephone	(661) 633-4446
Discharger contact e-mail address	
Laboratory name	Pacific Analytical
ELAP number	1466
Laboratory contact name	Elana Colby
Laboratory contact telephone	(760) 438-3100
Laboratory contact e-mail address	
Sample Date	02/15/02

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

G.C Hall
Print name

Signature

3/28/02
Date

Priority Pollutant Reporting Monitoring Form
for _X_ Discharge Effluent or ____ Receiving Water (check one)

DIOXIN

CTR No.	Name of Constituent	Date Sample Collected	Date Sample Analyzed	USEPA Method Used	Analytical Results (PG/L)	ML (PG/L)	MDL (PG/L)	RDL (PG/L)	Comments
16a	2,3,7,8-TCDD	02/15/02	03/11/02	1613	ND	10	3	10	
16b	1,2,3,7,8-PeCDD	02/15/02	03/11/02	1613	ND	50	2	50	
16c	1,2,3,4,7,8-HxCDD	02/15/02	03/11/02	1613	ND	50	8	50	
16d	1,2,3,6,7,8-HxCDD	02/15/02	03/11/02	1613	ND	50	3	50	
16e	1,2,3,7,8,9-HxCDD	02/15/02	03/11/02	1613	ND	50	12	50	
16f	1,2,3,4,6,7,8-HpCDD	02/15/02	03/11/02	1613	ND	50	5	50	
16g	OCDD	02/15/02	03/11/02	1613	ND	100	8	100	
16h	2,3,7,8-TCDF	02/15/02	03/11/02	1613	ND	10	10	10	
16j	1,2,3,7,8-PeCDF	02/15/02	03/11/02	1613	ND	50	5	50	
16k	2,3,4,7,8-PeCDF	02/15/02	03/11/02	1613	ND	50	9	50	
16l	1,2,3,4,7,8-HxCDF	02/15/02	03/11/02	1613	ND	50	7	50	
16m	1,2,3,6,7,8-HxCDF	02/15/02	03/11/02	1613	ND	50	11	50	
16n	1,2,3,7,8,9-HxCDF	02/15/02	03/11/02	1613	ND	50	10	50	
16o	2,3,4,6,7,8-HxCDF	02/15/02	03/11/02	1613	ND	50	12	50	
16p	1,2,3,4,6,7,8-HpCDF	02/15/02	03/11/02	1613	ND	50	12	50	
16q	1,2,3,4,7,8,9-HpCDF	02/15/02	03/11/02	1613	ND	50	16	50	
16r	OCDF	02/15/02	03/11/02	1613	ND	100	16	100	

RWQCB-CVR

USEPA - ITD

FORM 1A
PCDD/PCDF ANALYSIS DATA SHEET
Use for Sample and Blank Results

T001A

Lab Name: Pacific Analytical, Inc. Episode:
Contract No.: SAS No.: Lab ID: 622-001

Matrix (aqueous/solid/leachate): AQUEOUS Sample Wt/Vol: 1000.0000 g/mL: ML

Sample Receipt Date: 02/18/02 Initial Calibration Date: 03/04/02

Ext. Date: 02/22/02 Shift: 0800 Instrument ID: VG#5

Analysis Date: 03/11/02 Time: 1437 GC Column ID: DB5 60M

Extract Volume (uL): 20 Sample Data Filename: 5C1105

Injection Volume (uL): 1 Blank Data Filename: B1707

Dilution Factor: 1.0 Cal. Ver. Data Filename: 5C1102

Concentration Units (pg/L or ng/Kg dry weight): PG/L %Solids: 0.0

ANALYTE	CONCENTRATION FOUND	DETECTION LIMIT	ION ABUND. RATIO (1)	RRT (1)
2378-TCDD	not detected	10		
12378-PeCDD	not detected	50		
123478-HxCDD	not detected	50		
123678-HxCDD	not detected	50		
123789-HxCDD	not detected	50		
1234678-HpCDD	not detected	50		
OCDD	not detected	100		
2378-TCDF	not detected	10		
12378-PeCDF	not detected	50		
23478-PeCDF	not detected	50		
123478-HxCDF	not detected	50		
123678-HxCDF	not detected	50		
123789-HxCDF	not detected	50		
234678-HxCDF	not detected	50		
1234678-HpCDF	not detected	50		
1234789-HpCDF	not detected	50		
OCDF	not detected	100		
Total TCDD		10		
Total PeCDD		50		
Total HxCDD		50		
Total HpCDD		50		
Total TCDF		10		
Total PeCDF		50		
Total HxCDF		50		
Total HpCDF		50		

(1) Contract-required limits for RRTs and ion abundance ratios are specified in Tables 2 and 9, respectively, Method 1613.

USEPA - ITD

FORM 1T
PCDD/PCDF TOXICITY EQUIVALENCE SUMMARY

EPA SAMPLE NO.
T001A

Lab Name: Pacific Analytical, Inc. Episode No.:

Contract No.: SAS No.: Lab Sample ID: 622-001

Matrix (aqueous/solid/leachate): AQUEOUS Sample Wt/Vol: 1000.0 g or mL: ML

Sample Receipt Date: 02/18/02 Initial Calibration Date: 03/04/02

Ext. Date: 02/22/02 Shift: 0800 Instrument ID: VG#5

Analysis Date: 03/11/02 Time: 1437 GC Column ID: DB5 60M

Extract Volume (uL): 20 Sample Data Filename: 5C1105

Injection Volume (uL): 1 Blank Data Filename: B1707

Dilution Factor: 1.0 Cal. Ver. Data Filename: 5C1102

Concentration Units (pg/L or ng/Kg dry weight): PG/L %Solids: 0.0

ANALYTE	CONCENTRATION FOUND	TEF	TEF-ADJUSTED CONCENTRATION
2378-TCDD	0.000	1.0	0.000
12378-PeCDD	0.000	1.0	0.000
123478-HxCDD	0.000	0.1	0.000
123678-HxCDD	0.000	0.1	0.000
123789-HxCDD	0.000	0.1	0.000
1234678-HpCDD	0.000	0.01	0.000
OCDD	0.000	0.0001	0.000
2378-TCDF	0.000	0.1	0.000
12378-PeCDF	0.000	0.05	0.000
23478-PeCDF	0.000	0.5	0.000
123478-HxCDF	0.000	0.1	0.000
123678-HxCDF	0.000	0.1	0.000
123789-HxCDF	0.000	0.1	0.000
234678-HxCDF	0.000	0.1	0.000
1234678-HpCDF	0.000	0.01	0.000
1234789-HpCDF	0.000	0.01	0.000
OCDF	0.000	0.0001	0.000
		TOTAL =	0.000

TEFs for 2,3,7,8-TCDD equivalents, Policy for Implementation of Toxics, Standard for Inland Surface Waters, Enclosed Bays and estuaries of California, Adopted March 2,2000

USEPA - ITD

FORM 2
PCDD/PCDF LABELED COMPOUND AND
CLEANUP STANDARD RECOVERIES

T001A

Lab Name: Pacific Analytical, Inc. Episode:
Contract No.: SAS No.: Lab ID: 622-001

Matrix (aqueous/solid/leachate): AQUEOUS Sample Wt/Vol: 1000.0000 g/mL: ML

Sample Receipt Date: 02/18/02 Initial Calibration Date: 03/04/02

Ext. Date: 02/22/02 Shift: 0800 Instrument ID: VG#5

Analysis Date: 03/11/02 Time: 1437 GC Column ID: DB5 60M

Extract Volume (uL): 20 Sample Data Filename: 5C1105

Injection Volume (uL): 1 Blank Data Filename: B1707

Dilution Factor: 1.0 Cal. Ver. Data Filename: 5C1102

Concentration Units (pg/L or ng/Kg dry weight): PG/L %Solids: 0.0

	SPIKE CONC.	CONC. FOUND	R(%) (1)	ION ABUND. RATIO (2)	RRT (2)
LABELED COMPOUNDS					
13C-2378-TCDD	2000	1400	70	0.81	1.008
13C-12378-PeCDD	2000	1400	70	1.57	1.203
13C-123478-HxCDD	2000	1900	95	1.24	0.988
13C-123678-HxCDD	2000	1900	95	1.27	0.991
13C-1234678-HpCDD	2000	1900	95	1.03	1.090
13C-OCDD	4000	3800	95	0.91	1.206
13C-2378-TCDF	2000	1500	75	0.86	0.977
13C-12378-PeCDF	2000	1500	75	1.57	1.158
13C-23478-PeCDF	2000	1400	70	1.51	1.190
13C-123478-HxCDF	2000	2000	100	0.55	0.967
13C-123678-HxCDF	2000	2200	110	0.56	0.969
13C-123789-HxCDF	2000	2000	100	0.55	0.984
13C-234678-HxCDF	2000	1900	95	0.56	1.007
13C-1234678-HpCDF	2000	2000	100	0.43	1.056
13C-1234789-HpCDF	2000	1800	90	0.48	1.104
CLEANUP STANDARD					
37Cl4-2378-TCDD	200	150	75		1.001

JKW

Texaco Exploration & Production, Inc.

Bruce L. Niemeyer
Kern River Area Manager

1546 China Grade Loop
Bakersfield, CA 93308
Tel (661) 392-2432
Fax (661) 392-2208

March 28, 2002

ChevronTexaco

ENGINEERING REPORT REVIEW

Engineer _____

Compliance _____ yes _____ no

Date Reviewed _____

California Regional Water Quality Control Board
Central Valley Region
3614 East Ashlan Ave.
Fresno, CA 93726

Re: CODE SECTION 13267 REQUEST TO SUBMIT MONITORING DATA TO COMPLY WITH THE POLICY OR IMPLEMENTATION OF TOXICS STANDARDS FOR INLAND SURFACE WATERS

Attention: **Mr. Bert Van Voris**
Supervising Engineer

Dear Mr. Van Voris:

Enclosed you will find the monitoring data to comply with the *Policy for Implementation of Toxics Standards for Inland Surface Waters.*

The Priority Pollutant monitoring data is for Kern River's NPDES discharge points established under Order No. 95-031, NPDES Permit No. CA0082295. Analytical data was prepared and completed by Precision Analytical Laboratories in Bakersfield, California

If there are any questions regarding this report please contact Mr. S.K. Browning at (661) 392-2808.

Sincerely,

for Bruce L. Niemeyer
Kern River Area Manager

RECEIVED
APR 0 2 2002
RWQCB-CVR
FRESNO, CALIF.

cc: M. Lambert – City of Bakersfield
D. Munn – North Kern Water District
J. Beck – Kern County Water Agency
J. Waldron – ChevronTexaco
J. Jones – Cawelo Water District

Attachments

PACIFIC ANALYTICAL 1613 PCDD/PCDF QUANTITATION SUMMARY

Lab File ID: 5I2509 Sample: T001A 405-004
Cal File: 5I20D Dil: 1.0 Sample Size (Dry if Solid): 1.0000
Nanograms Label Added (IS): 2.0 Nanograms RS Added: 2.0 Units: pg/L

Compound	Ratio	RRT	Response Factor	Extract ng/ml	Sample Conc.	Label Rec.
13C-2,3,7,8-TCDF	0.81	0.977	1.692		1029.62	51.48
2,3,7,8-TCDF	0.00	0.977	1.203	N.D.< CRQL		
13C-2,3,7,8-TCDD	0.79	1.008	1.157		1096.56	54.83
2,3,7,8-TCDD	0.00	1.008	0.847	N.D.< CRQL		
37Cl-2,3,7,8-TCDD	1.00	1.000	2.409		111.26	5.56
13C-1,2,3,7,8-PeCDF	1.59	1.158	1.863		1007.76	50.39
1,2,3,7,8-PeCDF	0.00	1.158	1.004	N.D.< CRQL		
13C-2,3,4,7,8-PeCDF	1.58	1.190	1.825		1060.14	53.01
2,3,4,7,8-PeCDF	0.00	1.190	1.056	N.D.< CRQL		
13C-1,2,3,7,8-PeCDD	1.59	1.202	1.137		1095.22	54.76
1,2,3,7,8-PeCDD	0.00	1.202	1.037	N.D.< CRQL		
13C-1,2,3,4,7,8-HxCDF	0.52	0.967	1.133		1505.97	75.30
1,2,3,4,7,8-HxCDF	0.00	0.967	1.255	N.D.< CRQL		
13C-1,2,3,6,7,8-HxCDF	0.50	0.970	1.210		1585.04	79.25
1,2,3,6,7,8-HxCDF	0.00	0.970	1.219	N.D.< CRQL		
13C-1,2,3,7,8,9-HxCDF	0.53	0.985	1.110		1591.96	79.60
1,2,3,7,8,9-HxCDF	0.00	0.985	1.214	N.D.< CRQL		
13C-2,3,4,6,7,8-HxCDF	0.53	1.007	1.119		1457.56	72.88
2,3,4,6,7,8-HxCDF	0.00	1.007	1.151	N.D.< CRQL		
13C-1,2,3,4,7,8-HxCDD	1.23	0.988	0.819		1584.46	79.22
1,2,3,4,7,8-HxCDD	0.00	0.988	1.003	N.D.< CRQL		
13C-1,2,3,6,7,8-HxCDD	1.20	0.991	0.967		1552.95	77.65
1,2,3,6,7,8-HxCDD	0.00	0.991	0.878	N.D.< CRQL		
13C-1,2,3,7,8,9-HxCDD	0.00	0.991	0.000	N.D.< CRQL		
1,2,3,7,8,9-HxCDD	0.00	0.991	1.014	N.D.< CRQL		
13C-1,2,3,4,6,7,8-HpCDF	0.45	1.057	1.031		1273.13	63.66
1,2,3,4,6,7,8-HpCDF	0.00	1.057	1.330	N.D.< CRQL		
13C-1,2,3,4,7,8,9-HpCDF	0.44	1.105	0.945		1352.08	67.60
1,2,3,4,7,8,9-HpCDF	0.00	1.105	1.234	N.D.< CRQL		
13C-1,2,3,4,6,7,8-HpCDD	1.07	1.090	0.797		1514.64	75.73
1,2,3,4,6,7,8-HpCDD	0.00	1.090	1.096	N.D.< CRQL		
13C-OCDD	0.89	1.206	0.678		3082.66	77.07
OCDF	0.00	1.206	1.348	N.D.< CRQL		
OCDD	0.83	1.000	1.057	1.37	27.44	

Pacific Analytical Inc.
PCDD/PCDF Targetting Summary

Lab File ID: \VG\DIOXIN\5I2509.DAT Target File: :\VG\DIOXIN\1613.TRG

Compound	Flag	QM1	QM2	Ratio	OK	Pred. RT	Act. Rt	Area
13C-1,2,3,4-TCDD	R	332	334	0.76	Y	28.083	28.083	148624000
13C-2,3,7,8-TCDF	I	316	318	0.81	Y	27.457	27.433	129460000
2,3,7,8-TCDF	U	304	306	0.00	N	27.452	0.000	No Trace Found
13C-2,3,7,8-TCDD	I	332	334	0.79	Y	28.330	28.300	94281000
2,3,7,8-TCDD	U	320	322	0.00	N	28.317	0.000	No Trace Found
37Cl-2,3,7,8-TCDD	I	328	328	1.00	Y	28.317	28.300	19917000
13C-1,2,3,7,8-PeCDF	I	352	354	1.59	Y	32.472	32.533	139518000
1,2,3,7,8-PeCDF	U	340	342	0.00	N	32.549	0.000	No Trace Found
13C-2,3,4,7,8-PeCDF	I	352	354	1.58	Y	33.278	33.417	143776000
2,3,4,7,8-PeCDF	U	340	342	0.00	N	33.434	0.000	No Trace Found
13C-1,2,3,7,8-PeCDD	I	368	370	1.59	Y	33.624	33.767	92538000
1,2,3,7,8-PeCDD	U	356	358	0.00	N	33.784	0.000	No Trace Found
13C-1,2,3,7,8,9-HxCDD	R	402	404	1.27	Y	37.517	37.517	117765000
13C-1,2,3,4,7,8-HxCDF	I	384	386	0.52	Y	36.324	36.283	100469000
1,2,3,4,7,8-HxCDF	U	374	376	0.00	N	36.301	0.000	No Trace Found
13C-1,2,3,6,7,8-HxCDF	I	384	386	0.50	Y	36.425	36.400	112931000
1,2,3,6,7,8-HxCDF	U	374	376	0.00	N	36.418	0.000	No Trace Found
13C-1,2,3,7,8,9-HxCDF	I	384	386	0.53	Y	36.988	36.950	104050000
1,2,3,7,8,9-HxCDF	U	374	376	0.00	N	36.968	0.000	No Trace Found
13C-2,3,4,6,7,8-HxCDF	I	384	386	0.53	Y	37.813	37.783	96038000
2,3,4,6,7,8-HxCDF	U	374	376	0.00	N	37.798	0.000	No Trace Found
13C-1,2,3,4,7,8-HxCDD	I	402	404	1.23	Y	37.119	37.083	76410000
1,2,3,4,7,8-HxCDD	U	390	392	0.00	N	37.102	0.000	No Trace Found
13C-1,2,3,6,7,8-HxCDD	I	402	404	1.20	Y	37.202	37.167	88424000
1,2,3,6,7,8-HxCDD	U	390	392	0.00	N	37.182	0.000	No Trace Found
13C-1,2,3,7,8,9-HxCDD	N	402	404	0.00	N	37.517	0.000	No Trace Found
1,2,3,7,8,9-HxCDD	U	390	392	0.00	N	37.566	0.000	No Trace Found
13C-1,2,3,4,6,7,8-HpCDF	I	418	420	0.45	Y	39.719	39.650	77289000
1,2,3,4,6,7,8-HpCDF	U	408	410	0.00	N	39.666	0.000	No Trace Found
13C-1,2,3,4,7,8,9-HpCDF	I	418	420	0.44	Y	41.524	41.450	75235000
1,2,3,4,7,8,9-HpCDF	U	408	410	0.00	N	41.467	0.000	No Trace Found
13C-1,2,3,4,6,7,8-HpCDD	I	436	438	1.07	Y	40.961	40.883	71081000
1,2,3,4,6,7,8-HpCDD	U	424	426	0.00	N	40.899	0.000	No Trace Found
13C-OCDD	I	470	472	0.89	Y	45.429	45.250	123067000
OCDF	U	442	444	0.00	N	45.499	0.000	No Trace Found
OCDD	U	458	460	0.83	Y	45.268	45.250	892200

PACIFIC ANALYTICAL

PCDD/PCDF TOTALS SUMMARY OF NON-2,3,7,8 CONGENERS

Lab File: 5I2509 Sample: T001A Lab ID: 405-004

Cal File: 5I20D Sample Size: 1.0000

Nanograms Label Added (IS): 2.0 Nanograms RS Added: 2.0

Analyte	Number of Peaks	Sample Conc. pg/L	Total Area	Area IS	RRF
TCDD	0	0.00	0	94281000	0.847
PeCDD	0	0.00	0	92538000	1.037
HxCDD	0	0.00	0	82417000	0.965
HpCDD	0	0.00	0	71081000	1.096
TCDF	0	0.00	0	129460000	1.203
PeCDF	0	0.00	0	141647008	1.030
HxCDF	0	0.00	0	103372000	1.210
HpCDF	0	0.00	0	76262000	1.282

PACIFIC ANALYTICAL
PCDD/PCDF PEAK SUMMARY

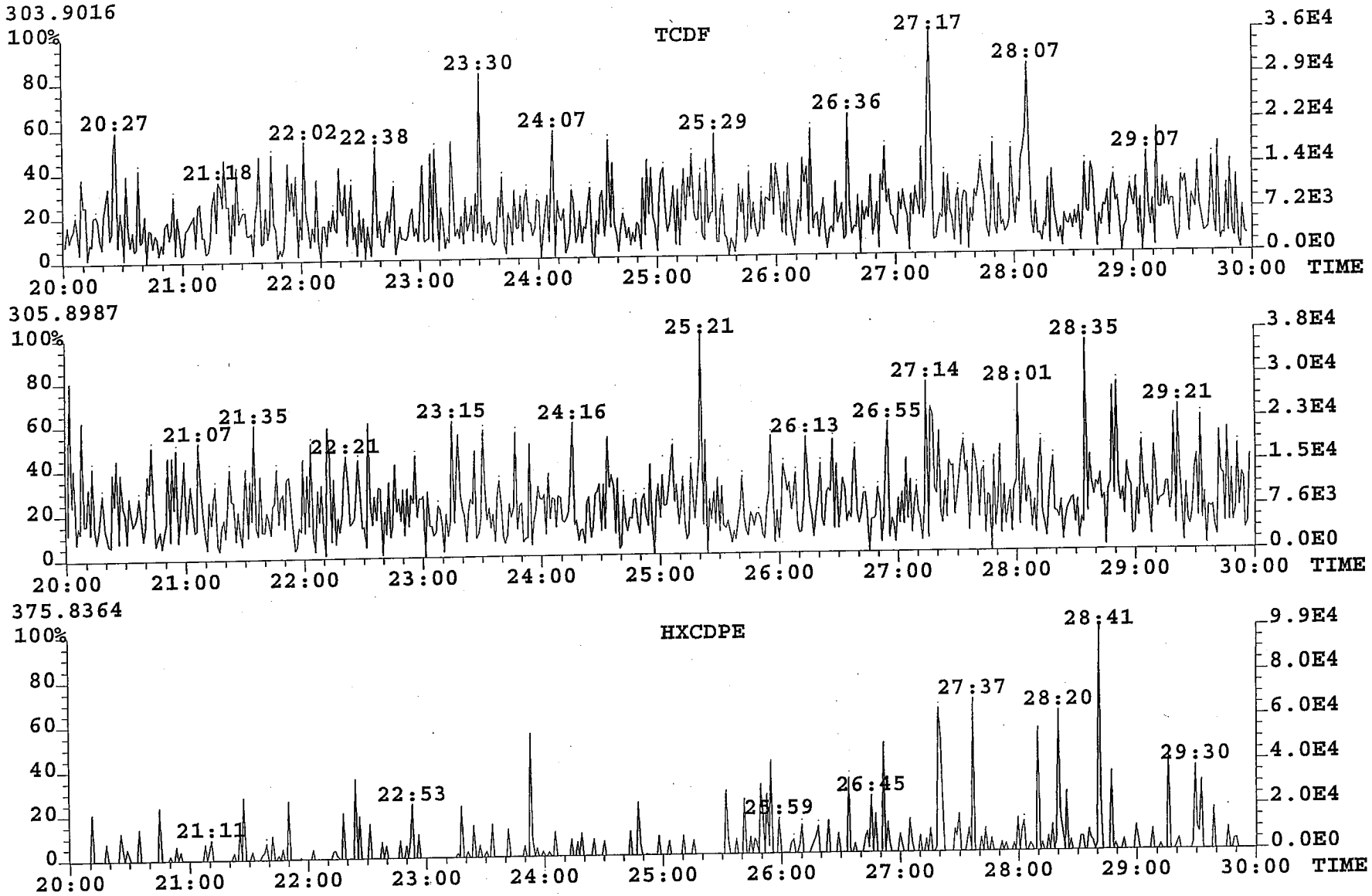
Lab File: 5I2509 Sample: T001A Lab ID: 405-004

Entry No.	Match	Level Flag	QM	RT	AREA	HEIGHT	COMPOUND
1	2	I 4	315.9419	27.433	58056000	14888000	13C-2,3,7,8-TCDF
2	1	I 4	317.9389	27.433	71404000	17341000	13C-2,3,7,8-TCDF
3	0	X 6	375.8364	27.317	142660	63696	
4	0	X 6	375.8364	28.683	124300	99392	
5	7	R 4	331.9368	28.067	63963000	15964000	13C-1,2,3,4-TCDD
6	8	I 4	331.9368	28.300	41504000	10554000	13C-2,3,7,8-TCDD
7	5	R 4	333.9339	28.083	84661000	21301000	13C-1,2,3,4-TCDD
8	6	I 4	333.9339	28.300	52777000	13174000	13C-2,3,7,8-TCDD
9	9	C 0	327.8847	21.200	168330	41625	
10	10	C 0	327.8847	22.267	269970	66755	
11	11	C 0	327.8847	22.633	277920	101320	
12	12	C 0	327.8847	22.933	138860	29750	
13	13	C 0	327.8847	23.283	1638900	428140	
14	14	C 0	327.8847	24.817	128860	85999	
15	15	C 0	327.8847	24.983	724210	139400	
16	16	C 0	327.8847	26.733	288380	69685	
17	17	I 0	327.8847	28.300	9958500	2271900	37Cl-2,3,7,8-TCDD
18	0	X 5	341.8568	33.083	118770	28852	
19	0	X 5	341.8568	33.750	112620	36417	
20	0	X 5	341.8568	34.117	106780	30477	
21	0	X 5	341.8568	34.783	177930	43489	
22	0	X 5	341.8568	34.950	125530	40795	
23	25	I 5	351.9000	32.550	85721000	23028000	13C-1,2,3,7,8-PeCD
24	26	I 5	351.9000	33.417	88015000	26702000	13C-2,3,4,7,8-PeCD
25	23	I 5	353.8970	32.533	53797000	14600000	13C-1,2,3,7,8-PeCD
26	24	I 5	353.8970	33.417	55761000	17435000	13C-2,3,4,7,8-PeCD
27	0	X 5	355.8546	34.367	128100	21232	
28	0	X 5	355.8546	34.967	152720	40685	
29	0	X 5	357.8517	31.583	123280	41736	
30	31	I 5	367.8949	33.767	56763000	18793000	13C-1,2,3,7,8-PeCD
31	30	I 5	369.8919	33.767	35775000	11954000	13C-1,2,3,7,8-PeCD
32	0	X 6	373.8207	37.017	176790	35656	
33	0	X 6	373.8207	37.567	144700	26510	
34	36	O 6	373.8207	37.733	125380	29901	
35	0	X 6	373.8207	38.383	116820	76906	
36	34	O 6	375.8178	37.717	145850	33335	
37	0	X 6	375.8178	38.483	101050	35426	
38	42	I 6	383.8639	36.283	34283000	12283000	13C-1,2,3,4,7,8-Hx
39	43	I 6	383.8639	36.400	37836000	12013000	13C-1,2,3,6,7,8-Hx
40	44	I 6	383.8639	36.950	36060000	11364000	13C-1,2,3,7,8,9-Hx
41	45	I 6	383.8639	37.783	33155000	9539100	13C-2,3,4,6,7,8-Hx
42	38	I 6	385.8610	36.283	66186000	24289000	13C-1,2,3,4,7,8-Hx
43	39	I 6	385.8610	36.400	75095000	23094000	13C-1,2,3,6,7,8-Hx
44	40	I 6	385.8610	36.950	67990000	21345000	13C-1,2,3,7,8,9-Hx
45	41	I 6	385.8610	37.783	62883000	17889000	13C-2,3,4,6,7,8-Hx
46	0	X 6	389.8156	36.183	104170	26311	
47	0	X 6	389.8156	36.483	114640	29333	
48	0	X 6	389.8156	37.467	107610	33055	
49	0	X 6	389.8156	38.150	132280	29382	
50	0	X 6	389.8156	38.217	101520	23115	
51	0	X 6	391.8127	36.317	123180	26482	
52	0	X 6	391.8127	36.933	132450	35836	
53	0	X 6	391.8127	37.100	109410	23057	

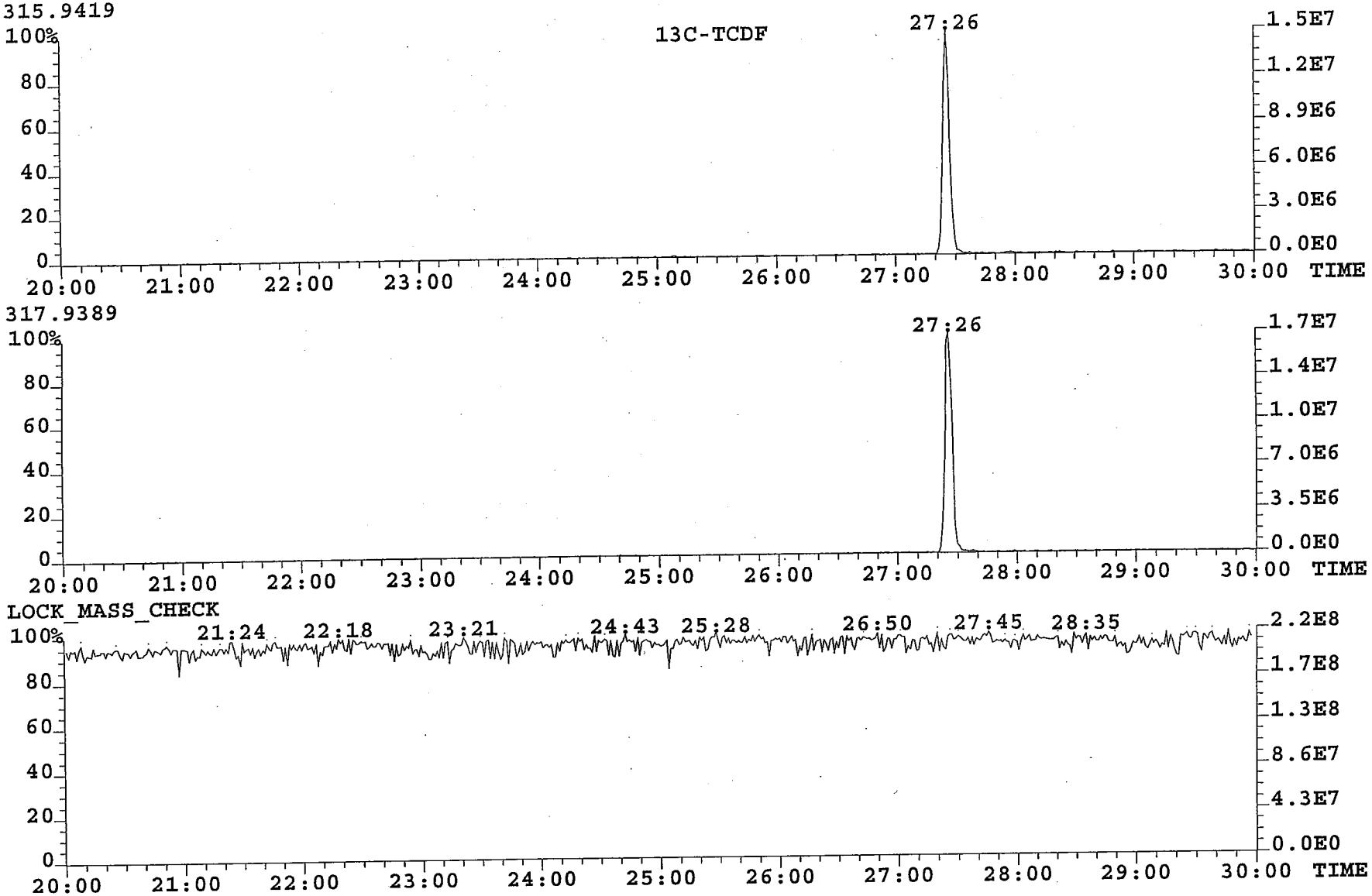
54	0	X 6	391.8127	37.883	107740	24910	
55	58	I 6	401.8559	37.083	42192000	14513000	13C-1,2,3,4,7,8-Hx
56	59	I 6	401.8559	37.167	48261000	14981000	13C-1,2,3,6,7,8-Hx
57	60	R 6	401.8559	37.517	65872000	21704000	13C-1,2,3,7,8,9-Hx
58	55	I 6	403.8529	37.083	34218000	11207000	13C-1,2,3,4,7,8-Hx
59	56	I 6	403.8529	37.167	40163000	12906000	13C-1,2,3,6,7,8-Hx
60	57	R 6	403.8529	37.517	51893000	16835000	13C-1,2,3,7,8,9-Hx
61	0	X 7	407.7818	39.617	122870	33404	
62	0	X 7	407.7818	39.683	100290	24704	
63	0	X 7	407.7818	40.350	160130	30721	
64	0	X 7	407.7818	41.500	120520	28757	
65	0	X 7	407.7818	42.567	153060	27360	
66	0	X 7	407.7818	42.850	134640	25719	
67	0	X 7	407.7818	43.767	119030	34748	
68	71	I 7	417.8253	39.650	23934000	6280900	13C-1,2,3,4,6,7,8-
69	0	X 7	417.8253	39.850	231540	81631	
70	72	I 7	417.8253	41.467	22840000	5054200	13C-1,2,3,4,7,8,9-
71	68	I 7	419.8220	39.650	53355000	14396000	13C-1,2,3,4,6,7,8-
72	70	I 7	419.8220	41.450	52395000	11520000	13C-1,2,3,4,7,8,9-
73	0	X 7	423.7766	40.900	143540	31287	
74	76	O 7	435.8169	40.017	434100	137500	
75	77	I 7	435.8169	40.883	36691000	8776600	13C-1,2,3,4,6,7,8-
76	74	O 7	437.8140	40.017	360030	93524	
77	75	I 7	437.8140	40.883	34390000	8549200	13C-1,2,3,4,6,7,8-
78	0	X 8	443.7399	48.000	112770	32004	
79	0	X 8	443.7399	49.583	142540	24894	
80	81	U 8	457.7377	45.267	404660	89596	OCDD
81	80	U 8	459.7348	45.250	487540	97578	OCDD
82	0	X 8	459.7348	45.700	114440	22198	
83	84	I 8	469.7780	45.250	57816000	11154000	13C-OCDD
84	83	I 8	471.7750	45.250	65251000	13326000	13C-OCDD

File:5I2509 #1-1160 Acq:25-SEP-2001 18:13:59 GC EI+ Voltage SIR 70S

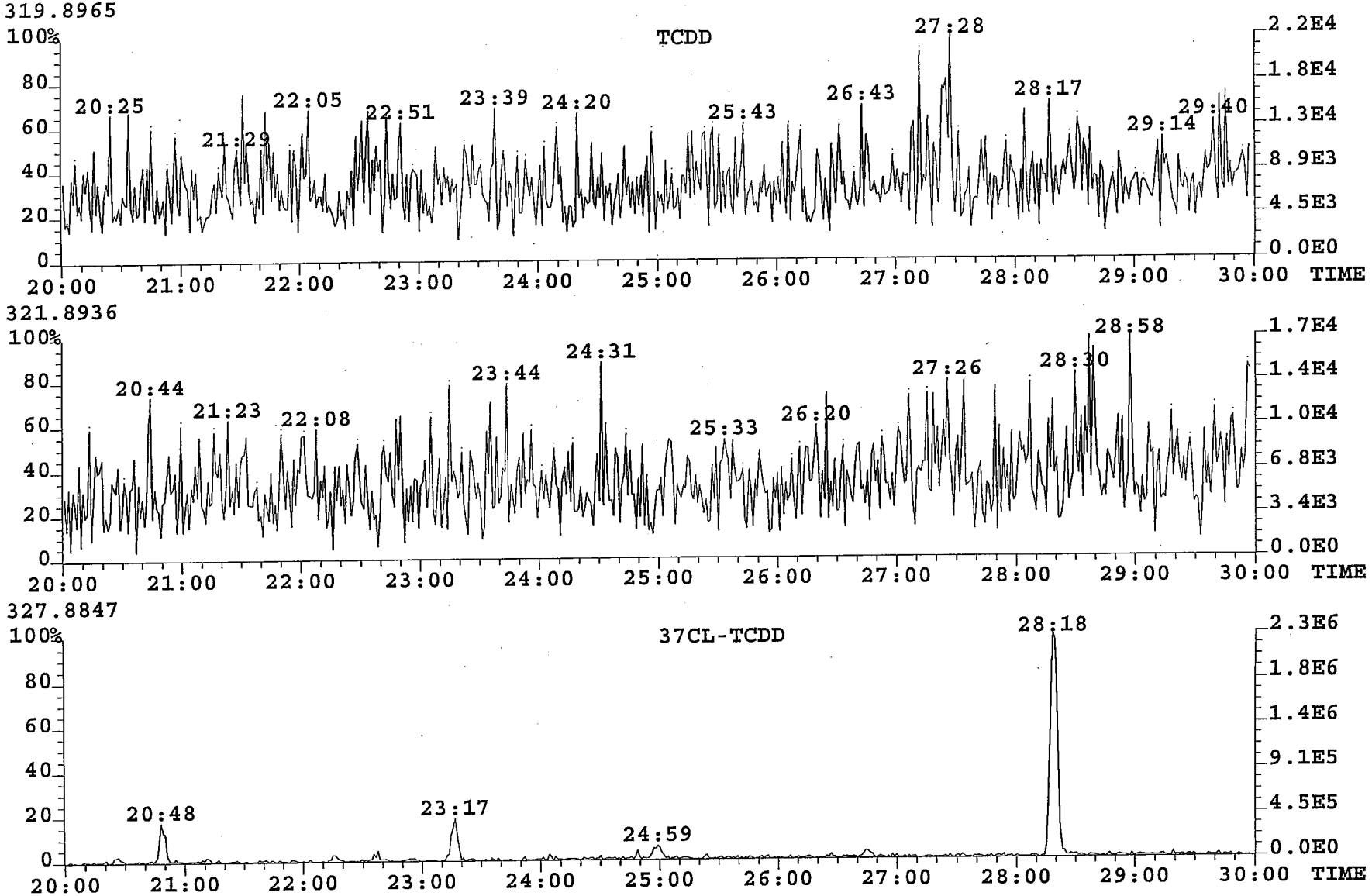
VMS;2 Sample#1 File Text:T001A_405-004 Exp:1613



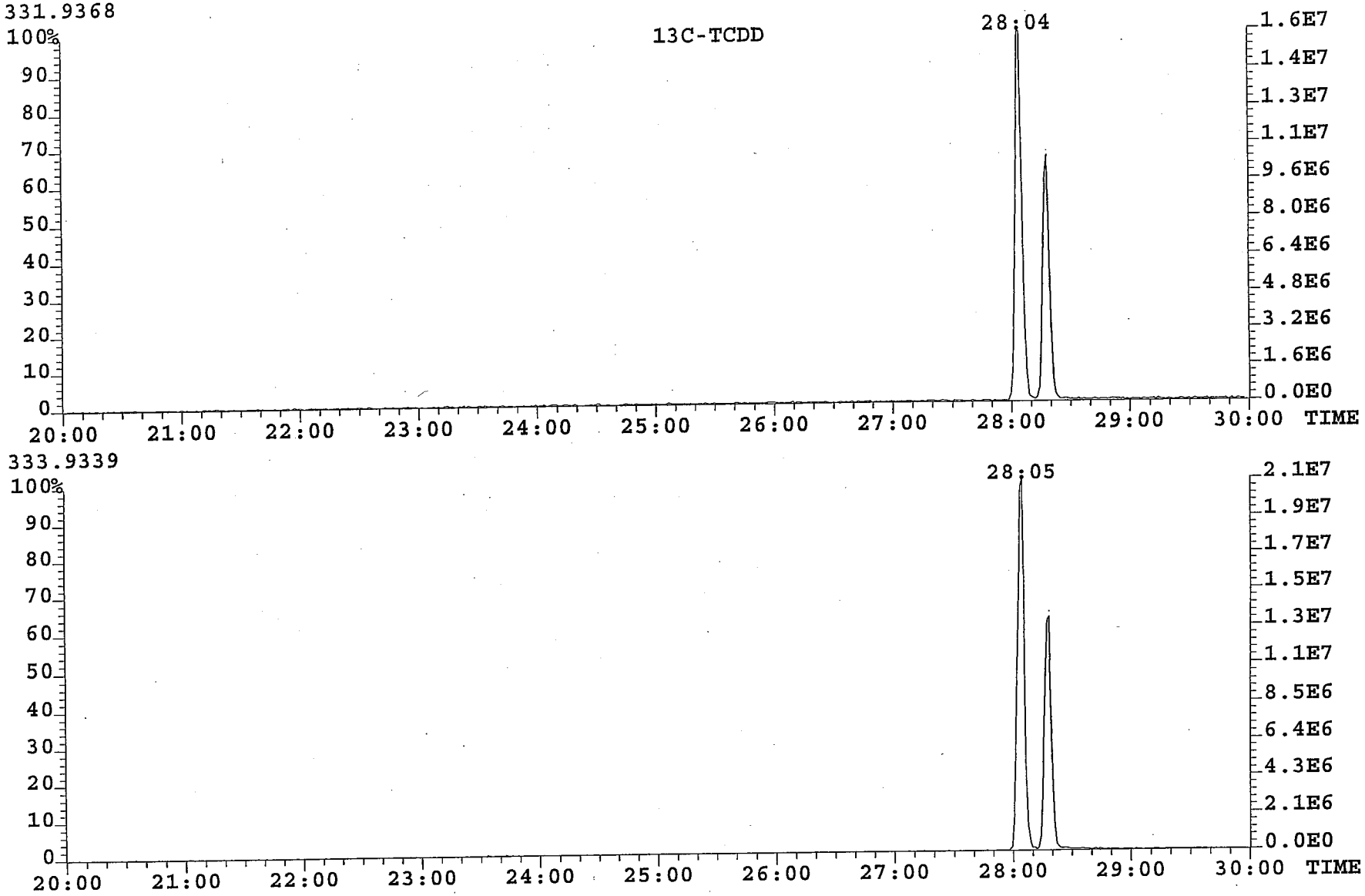
File:5I2509 #1-1160 Acq:25-SEP-2001 18:13:59 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:T001A_405-004 Exp:1613



File:5I2509 #1-1160 Acq:25-SEP-2001 18:13:59 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:T001A_405-004 Exp:1613

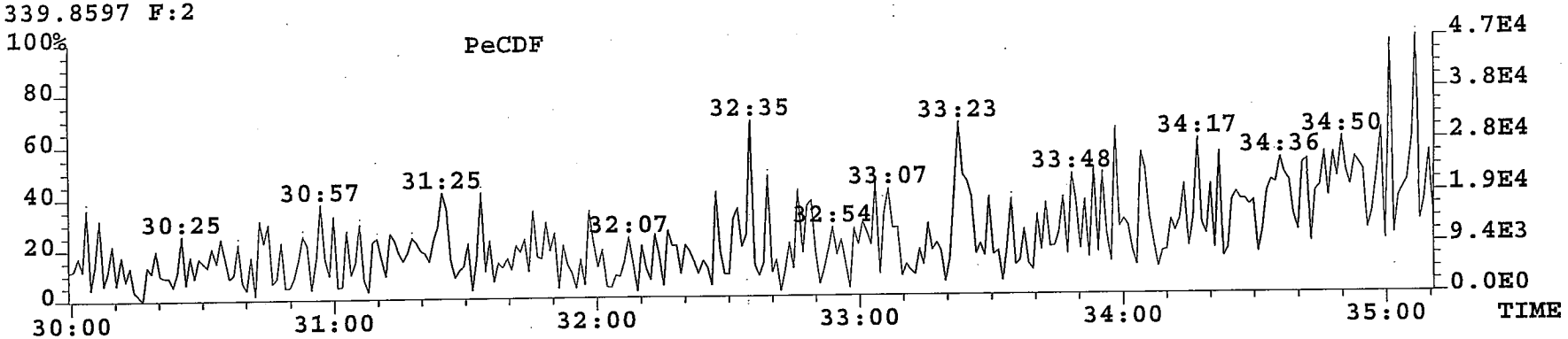


File:5I2509 #1-1160 Acq:25-SEP-2001 18:13:59 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:T001A_405-004 Exp:1613

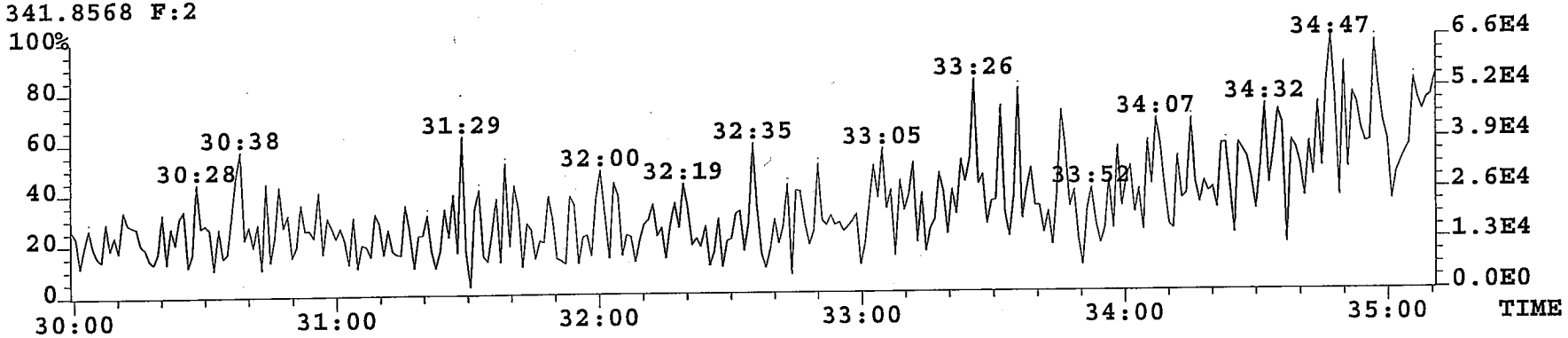


File:5I2509 #1-315 Acq:25-SEP-2001 18:13:59 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:T001A_405-004 Exp:1613

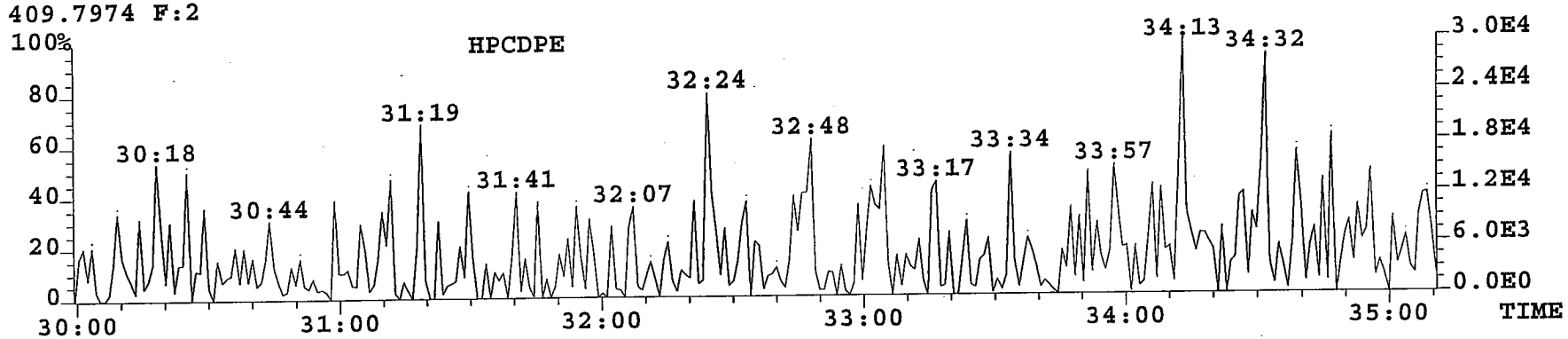
339.8597 F:2



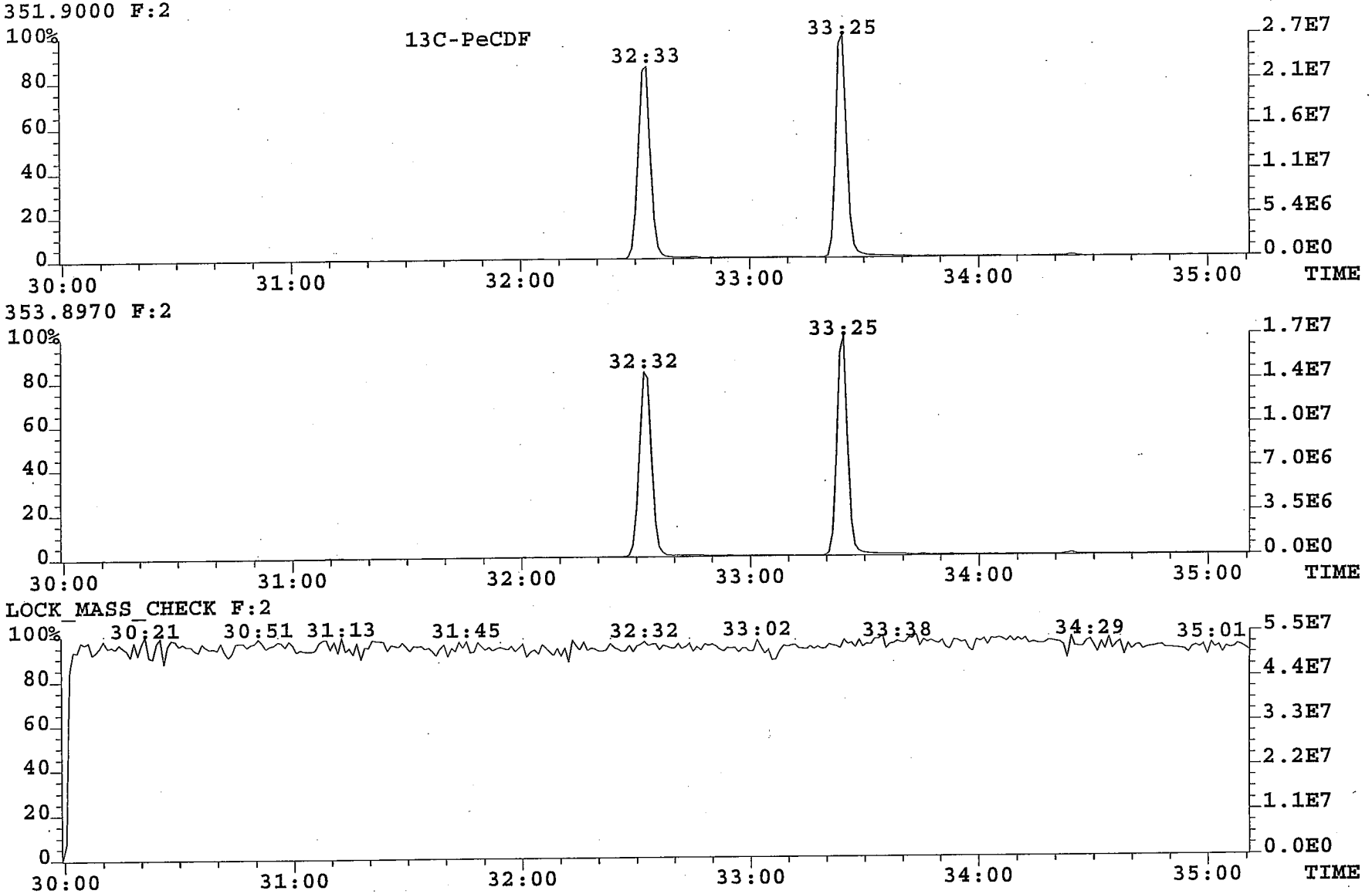
341.8568 F:2



409.7974 F:2

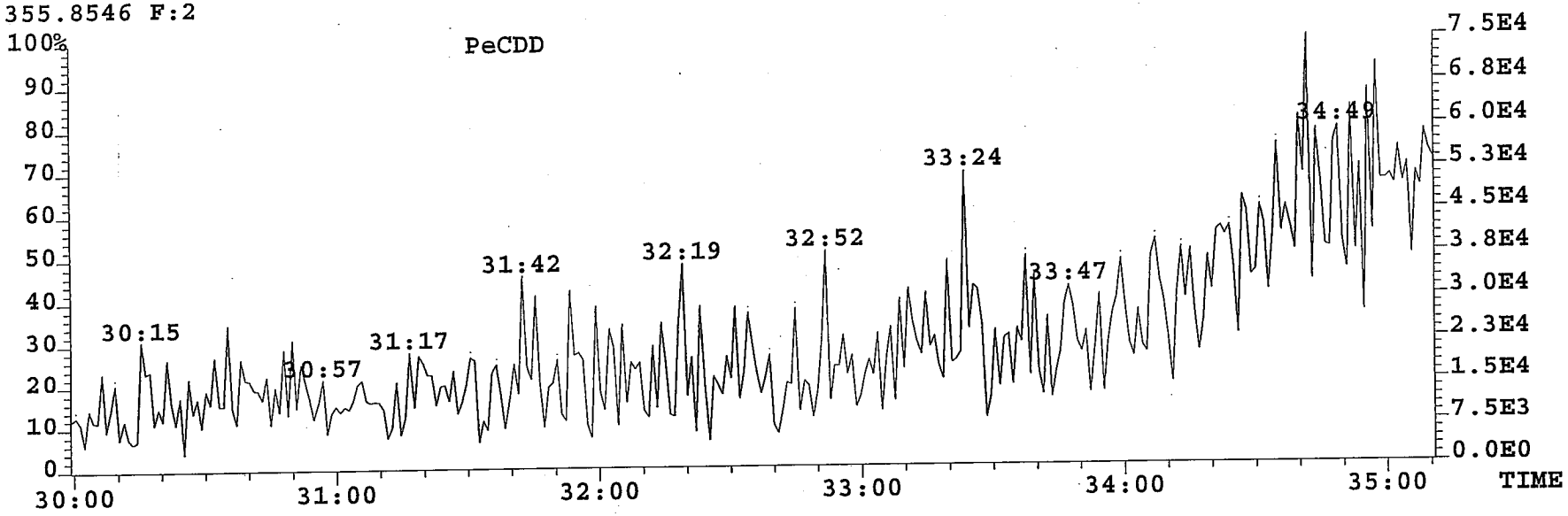


File:5I2509 #1-315 Acq:25-SEP-2001 18:13:59 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:T001A_405-004 Exp:1613

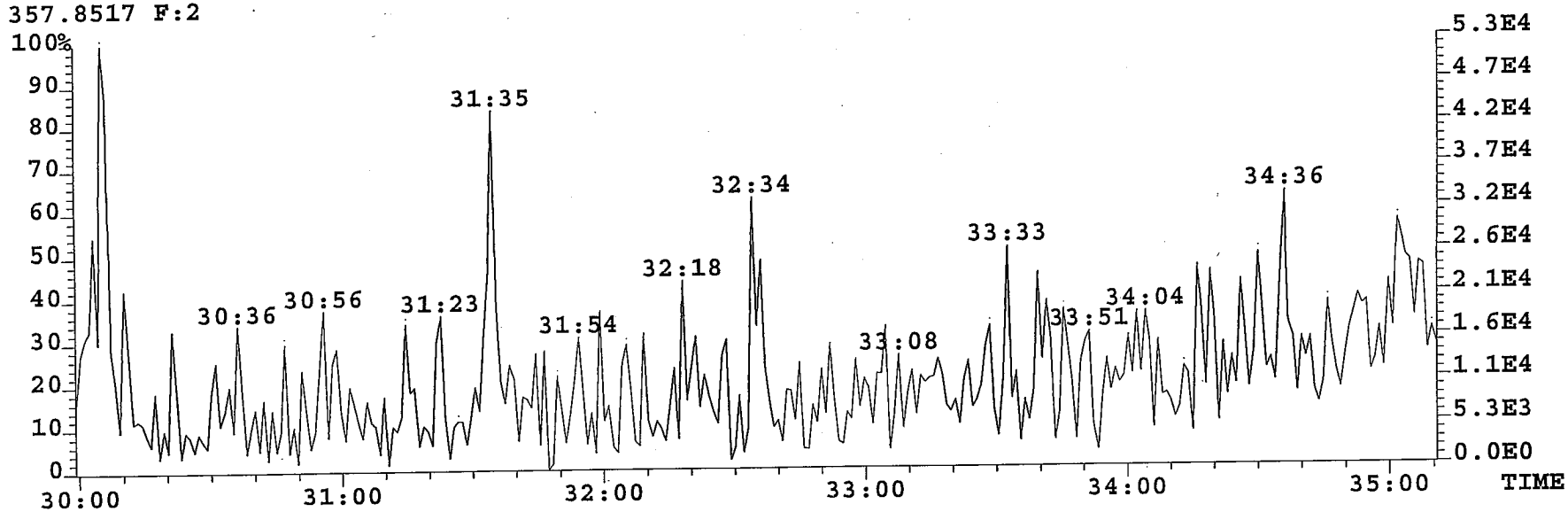


File:5I2509 #1-315 Acq:25-SEP-2001 18:13:59 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:T001A_405-004 Exp:1613

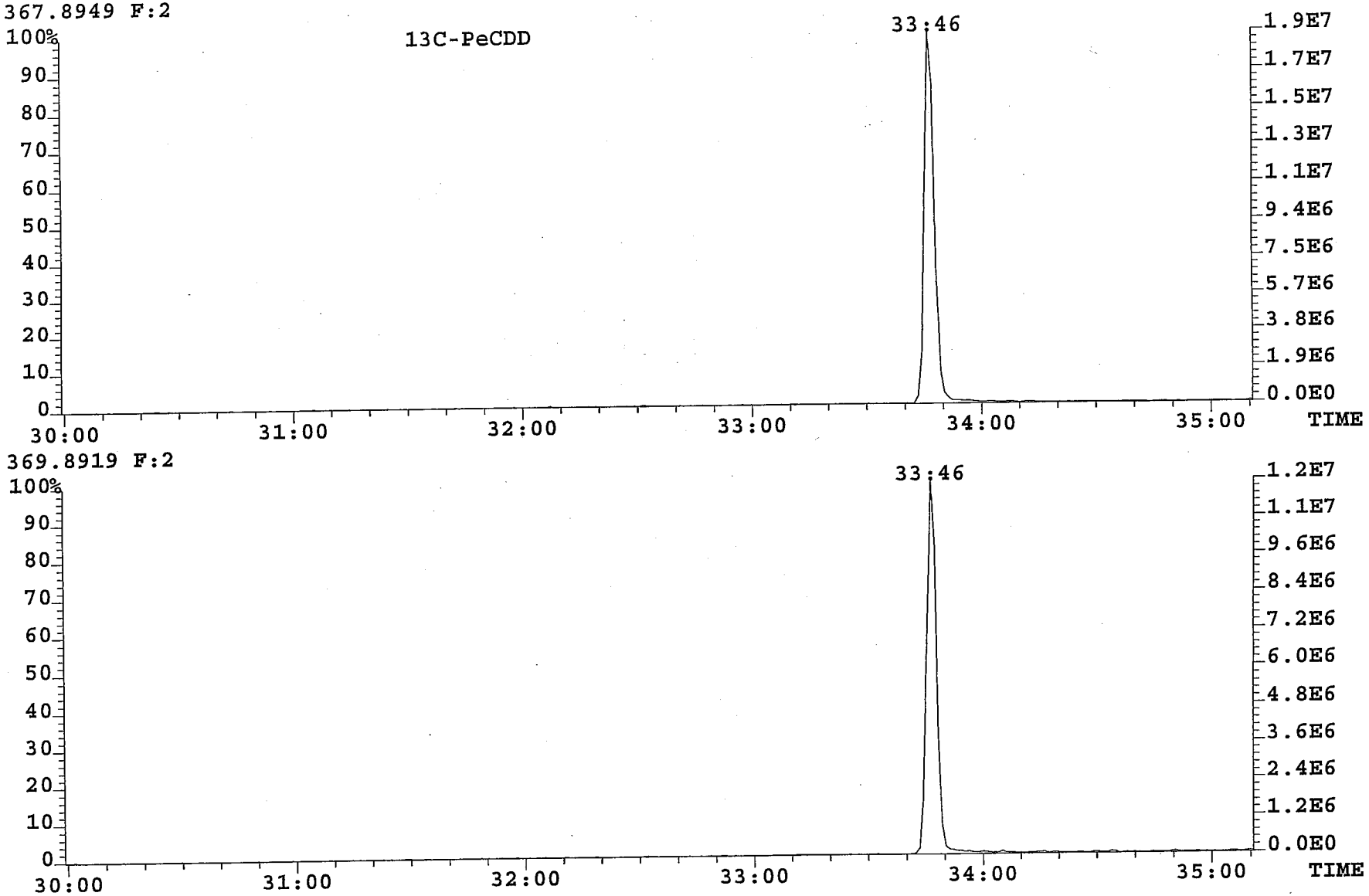
355.8546 F:2



357.8517 F:2

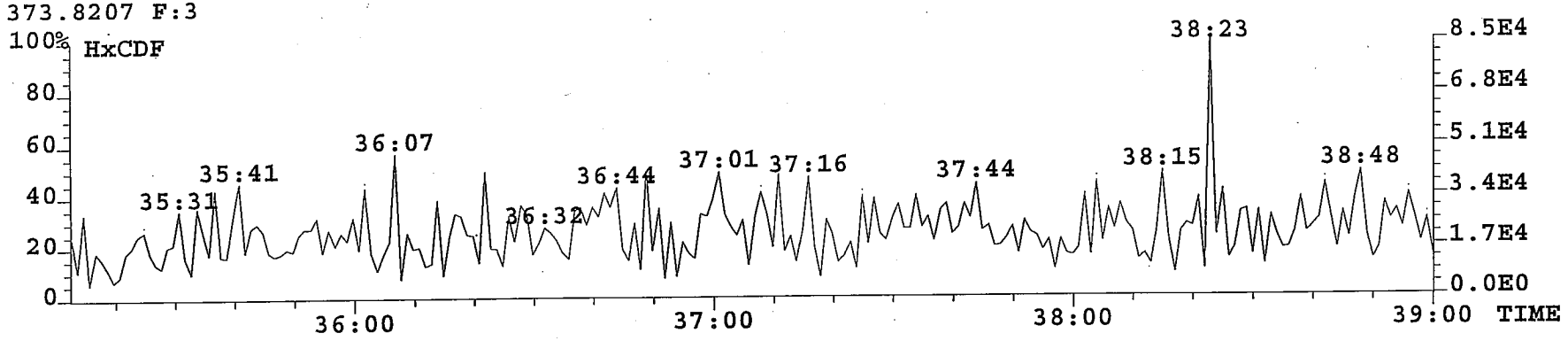


File:5I2509 #1-315 Acq:25-SEP-2001 18:13:59 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:T001A_405-004 Exp:1613

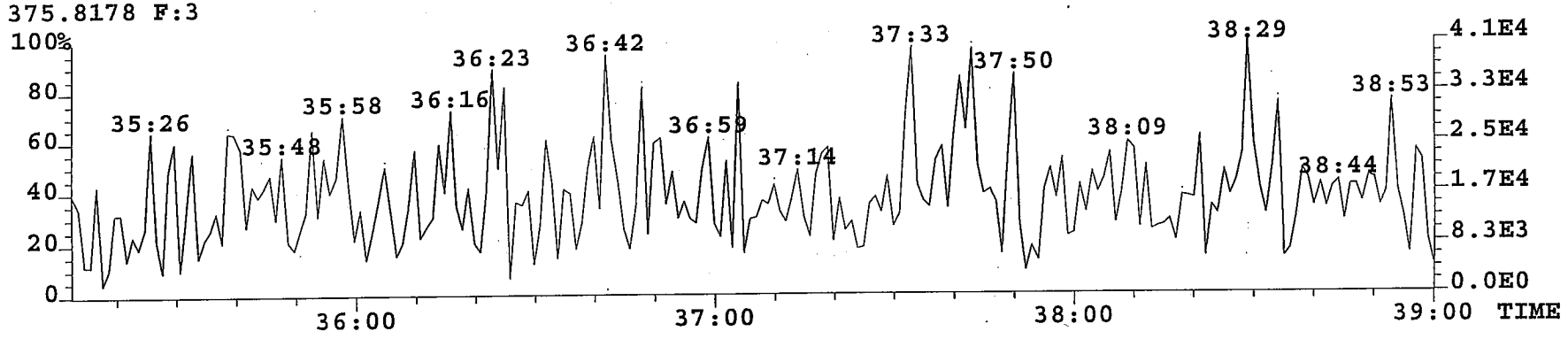


File:5I2509 #1-228 Acq:25-SEP-2001 18:13:59 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:T001A_405-004 Exp:1613

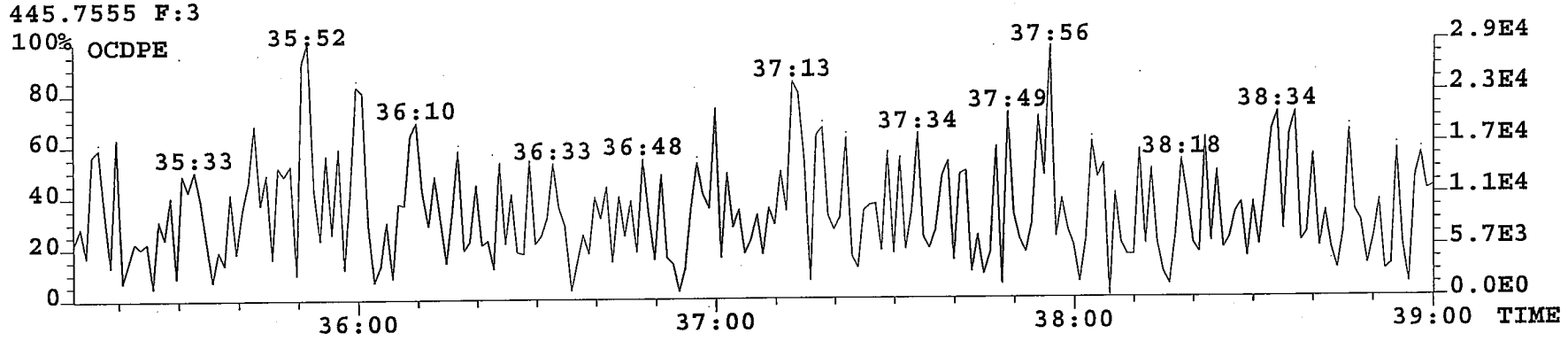
373.8207 F:3



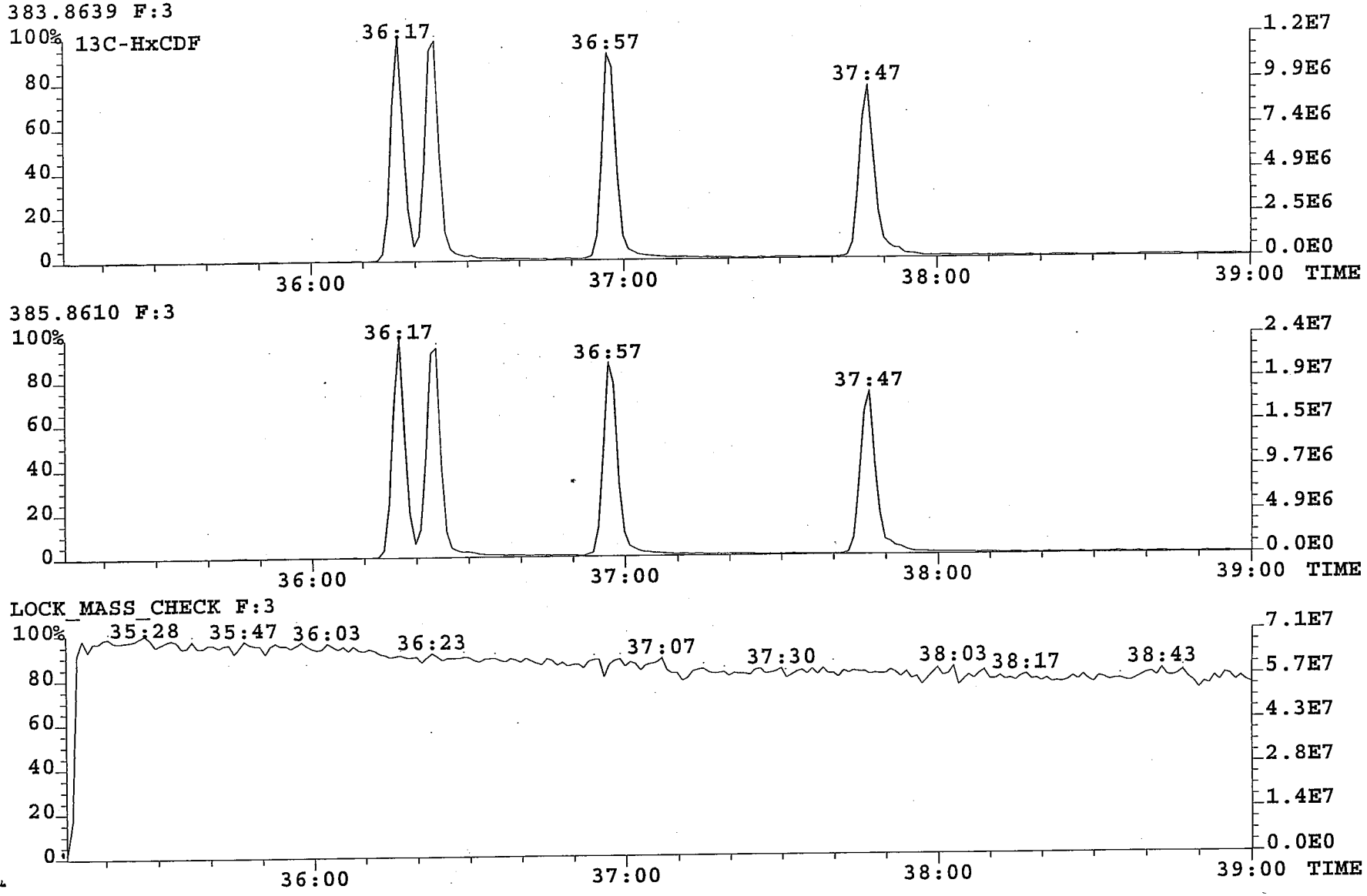
375.8178 F:3



445.7555 F:3

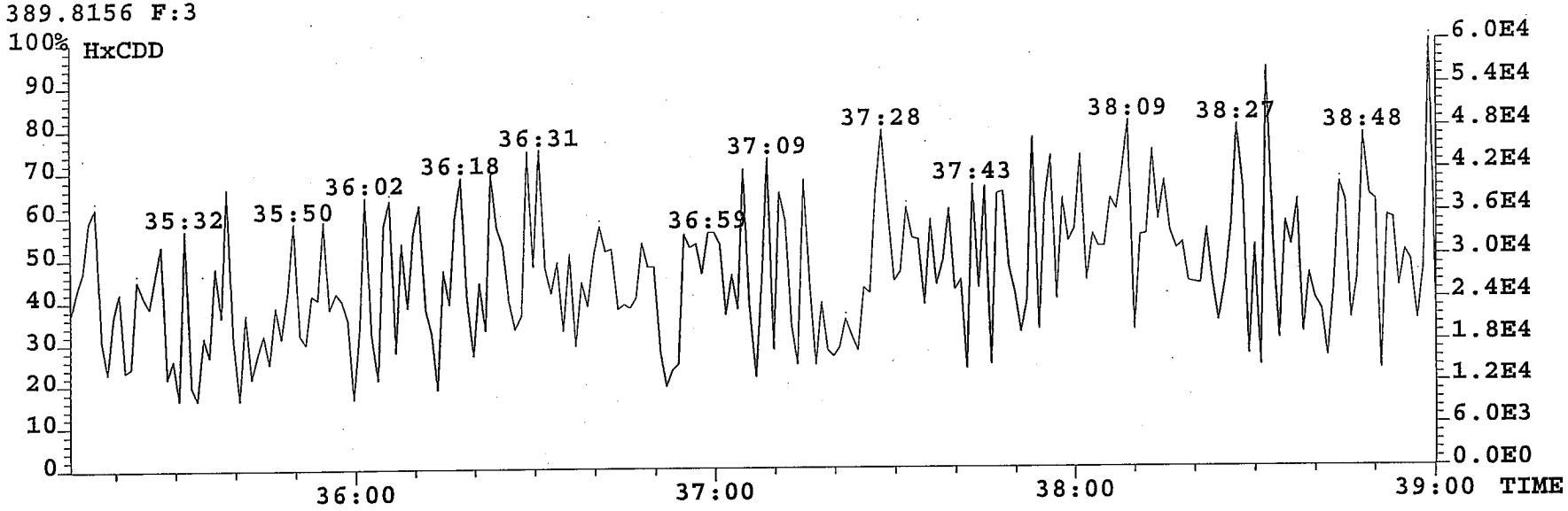


File:5I2509 #1-228 Acq:25-SEP-2001 18:13:59 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:T001A_405-004 Exp:1613

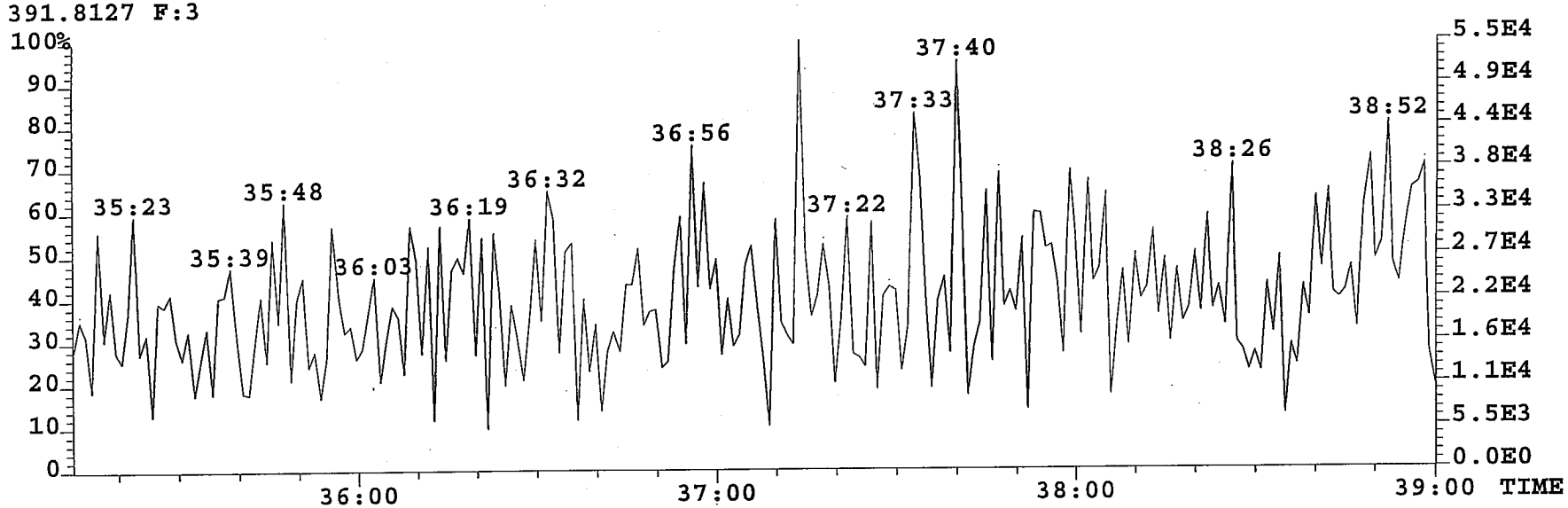


File:5I2509 #1-228 Acq:25-SEP-2001 18:13:59 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:T001A_405-004 Exp:1613

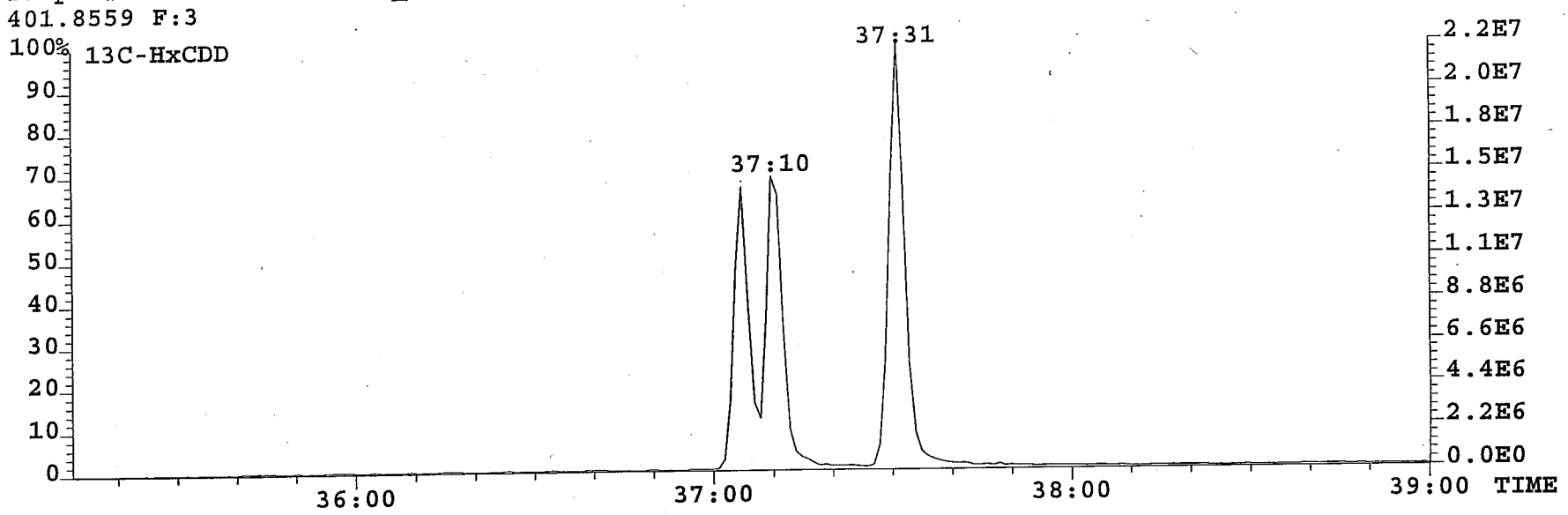
389.8156 F:3

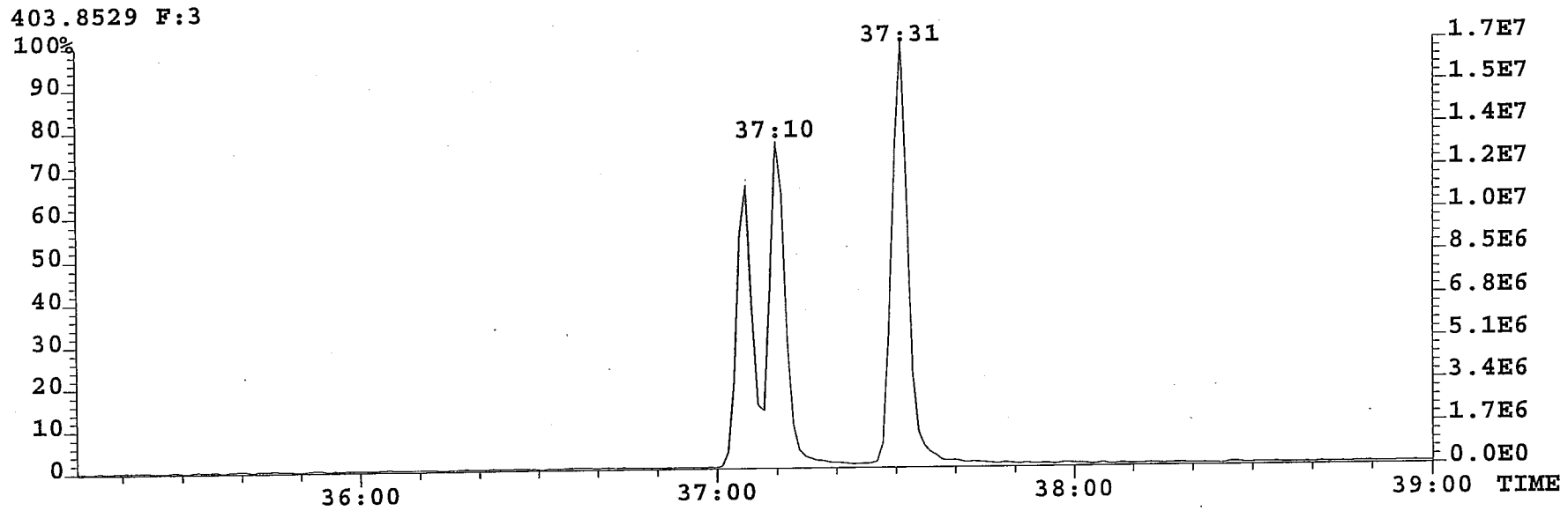


391.8127 F:3

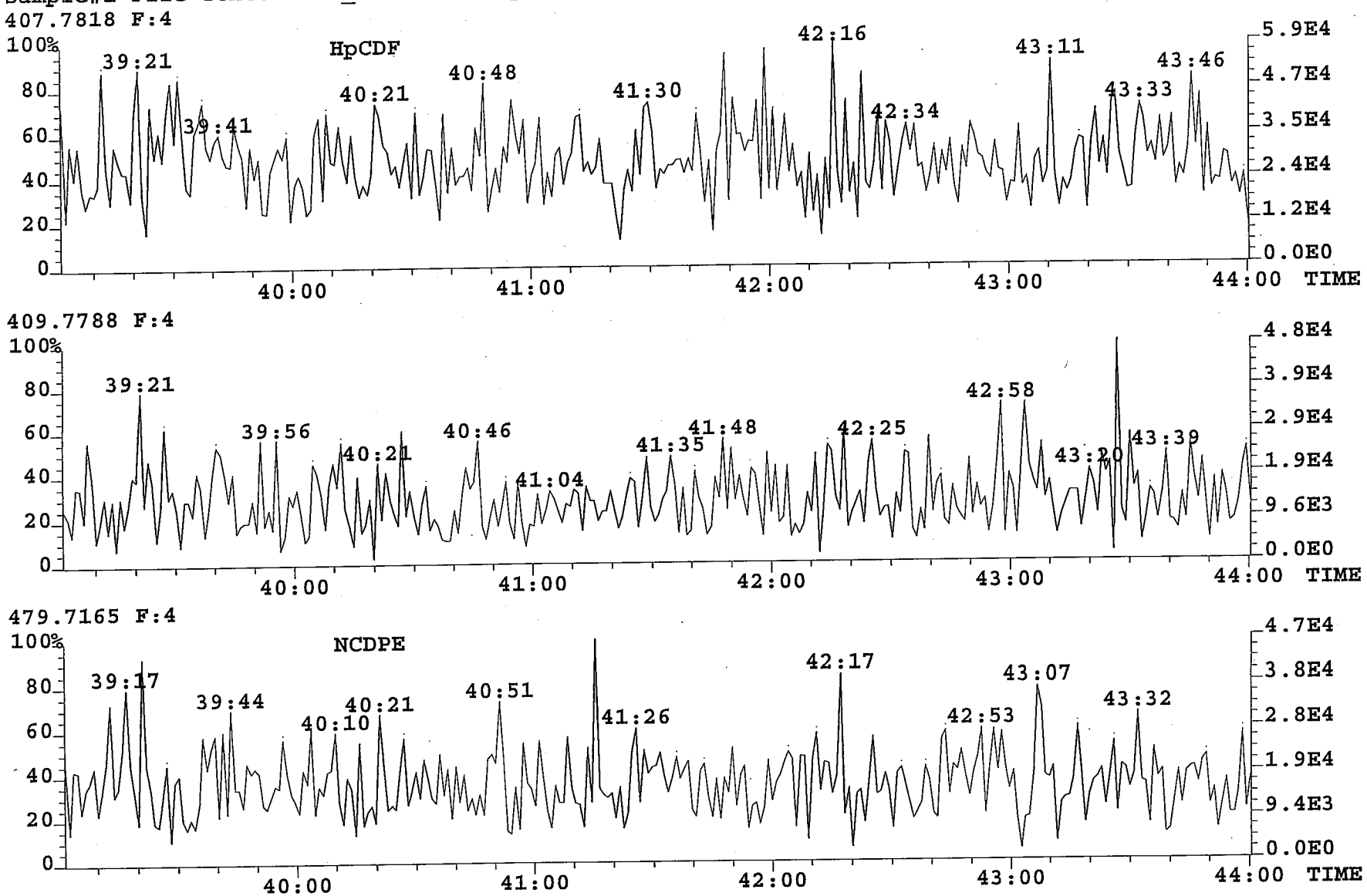


File:5I2509 #1-228 Acq:25-SEP-2001 18:13:59 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:T001A_405-004 Exp:1613

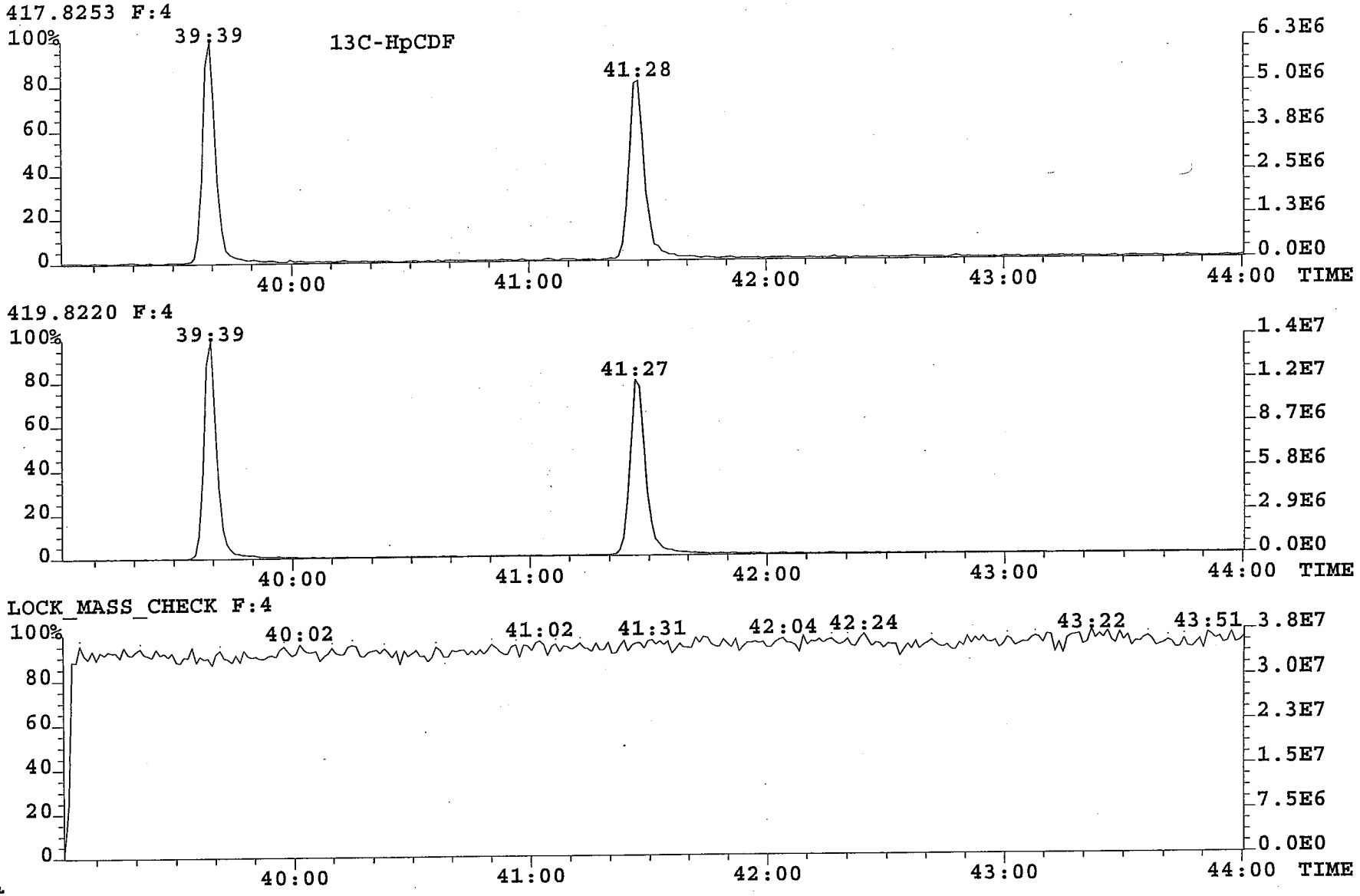




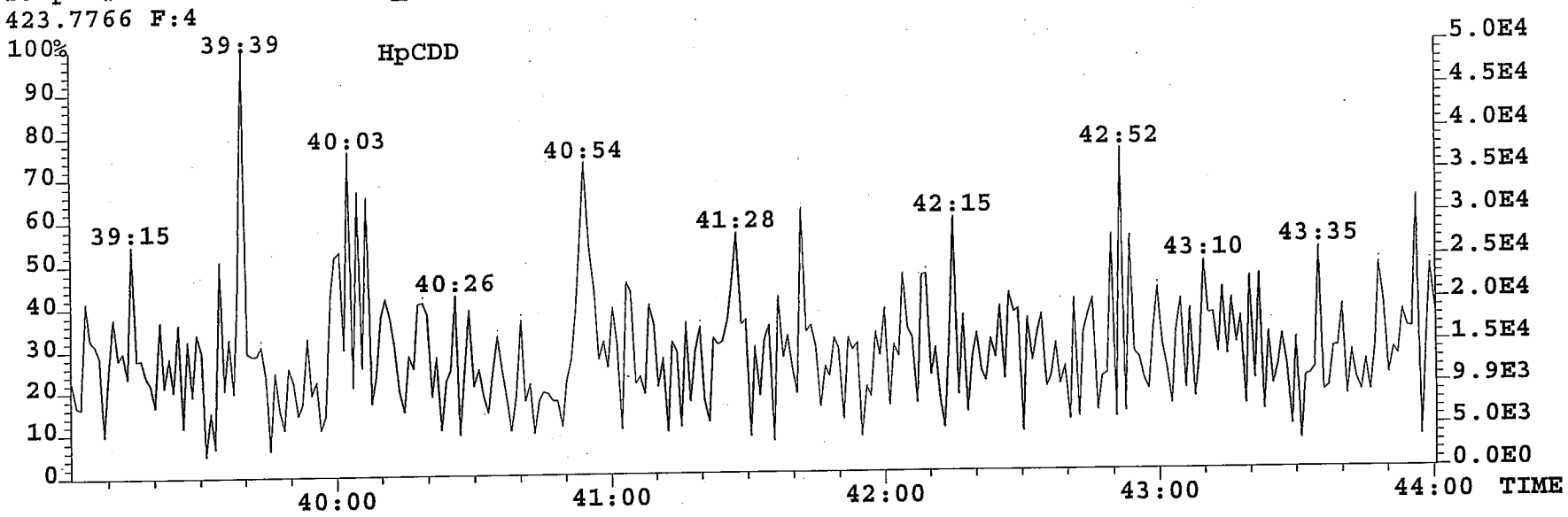
File:5I2509 #1-296 Acq:25-SEP-2001 18:13:59 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:T001A_405-004 Exp:1613

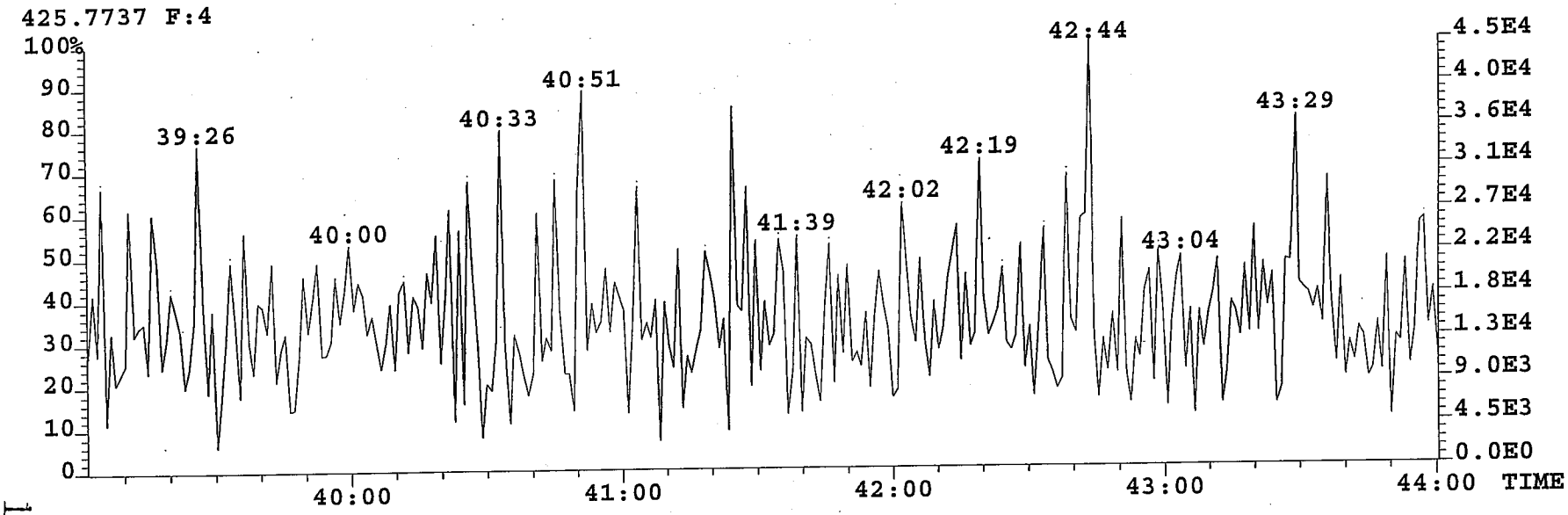


File:5I2509 #1-296 Acq:25-SEP-2001 18:13:59 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:T001A_405-004 Exp:1613

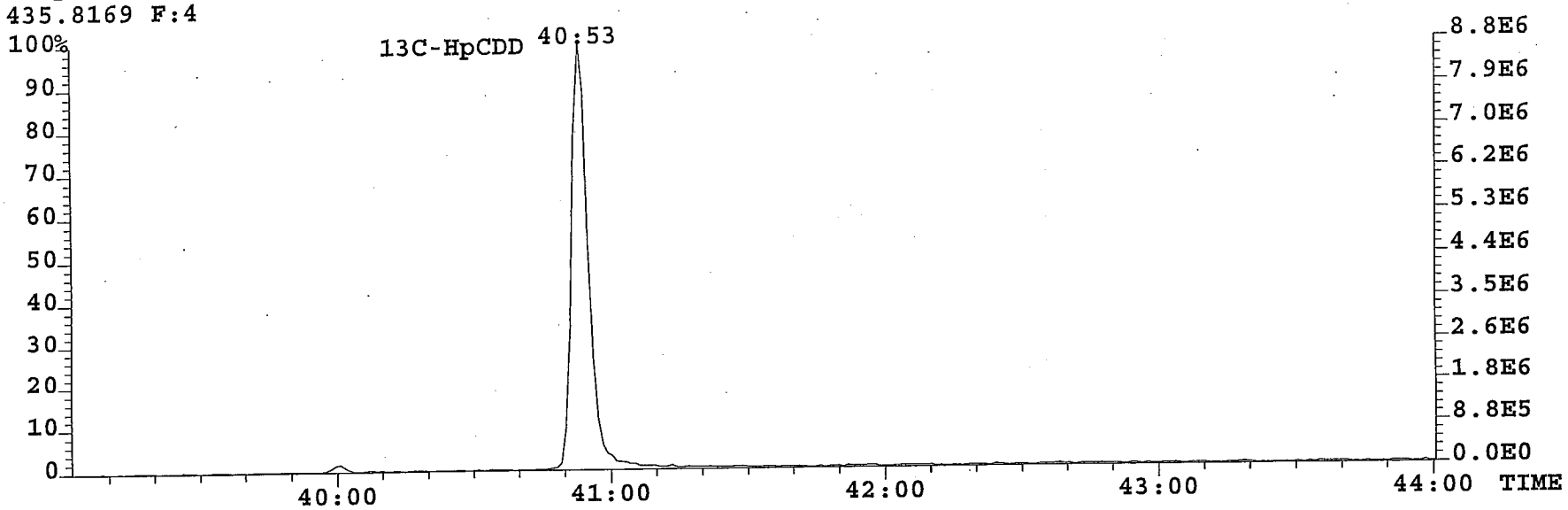


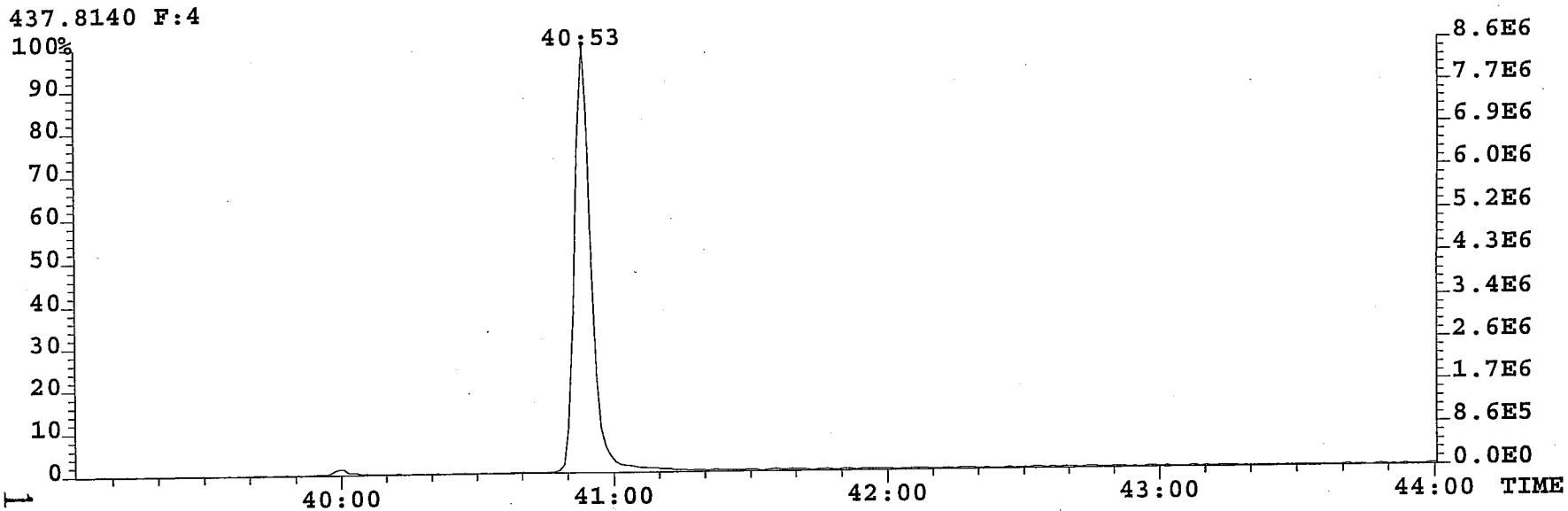
File:5I2509 #1-296 Acq:25-SEP-2001 18:13:59 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:T001A_405-004 Exp:1613





File:5I2509 #1-296 Acq:25-SEP-2001 18:13:59 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:T001A_405-004 Exp:1613

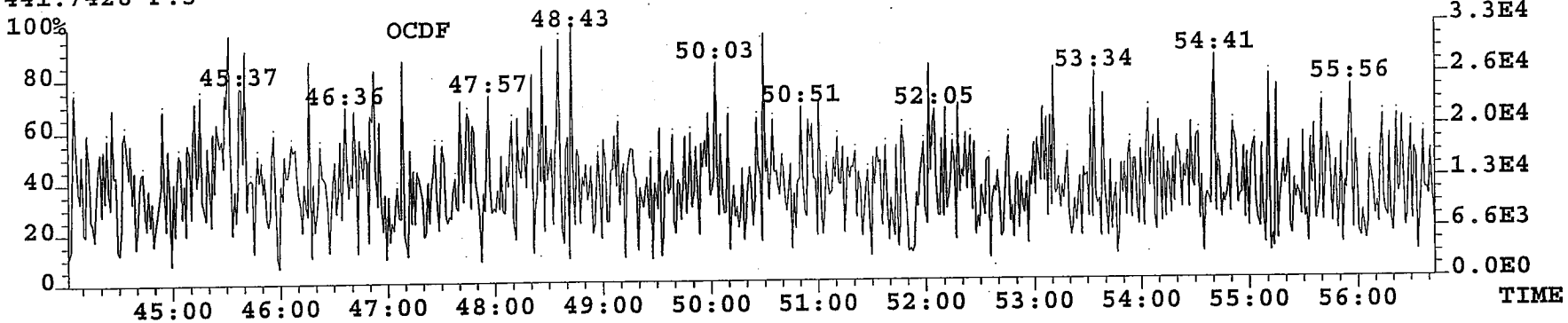




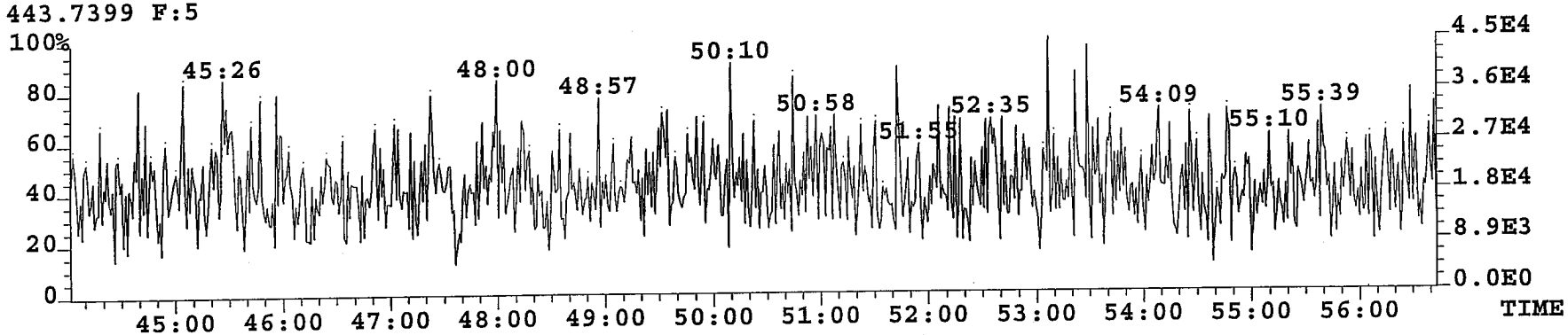
File:5I2509 #1-761 Acq:25-SEP-2001 18:13:59 GC EI+ Voltage SIR 70S

VMS;2 Sample#1 File Text:T001A_405-004 Exp:1613

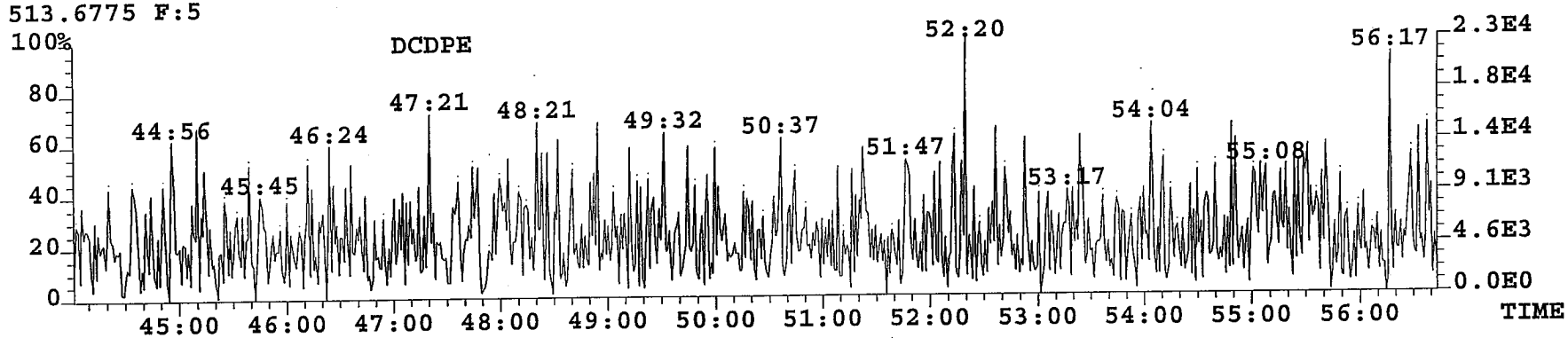
441.7428 F:5



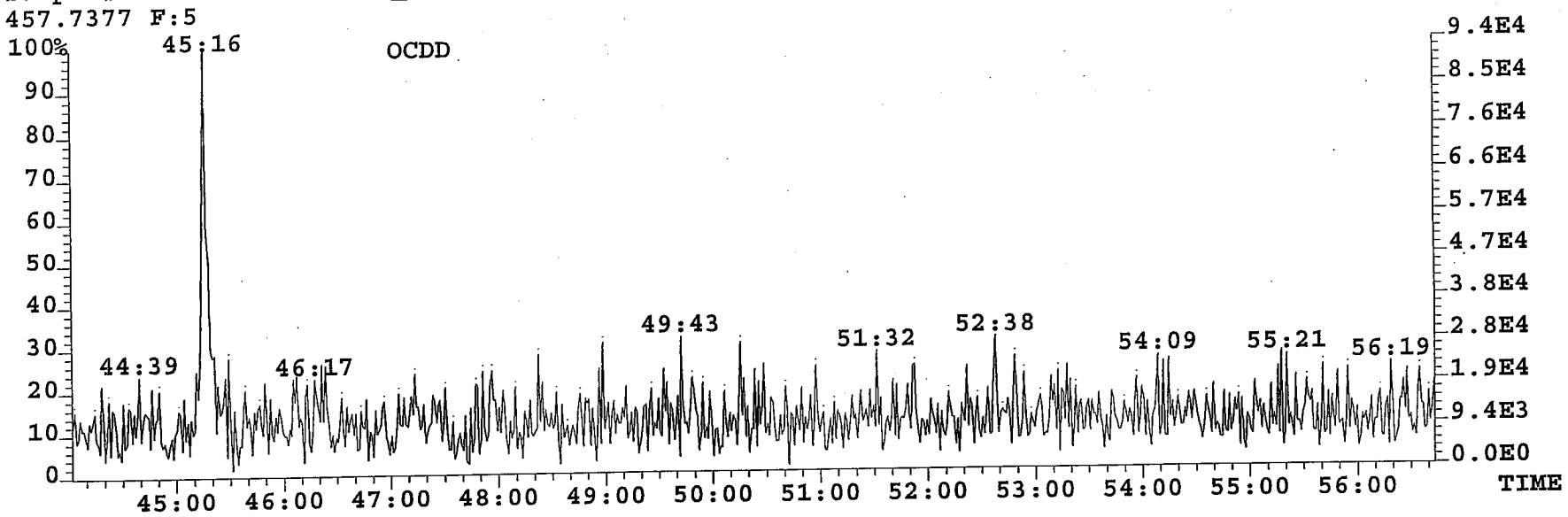
443.7399 F:5

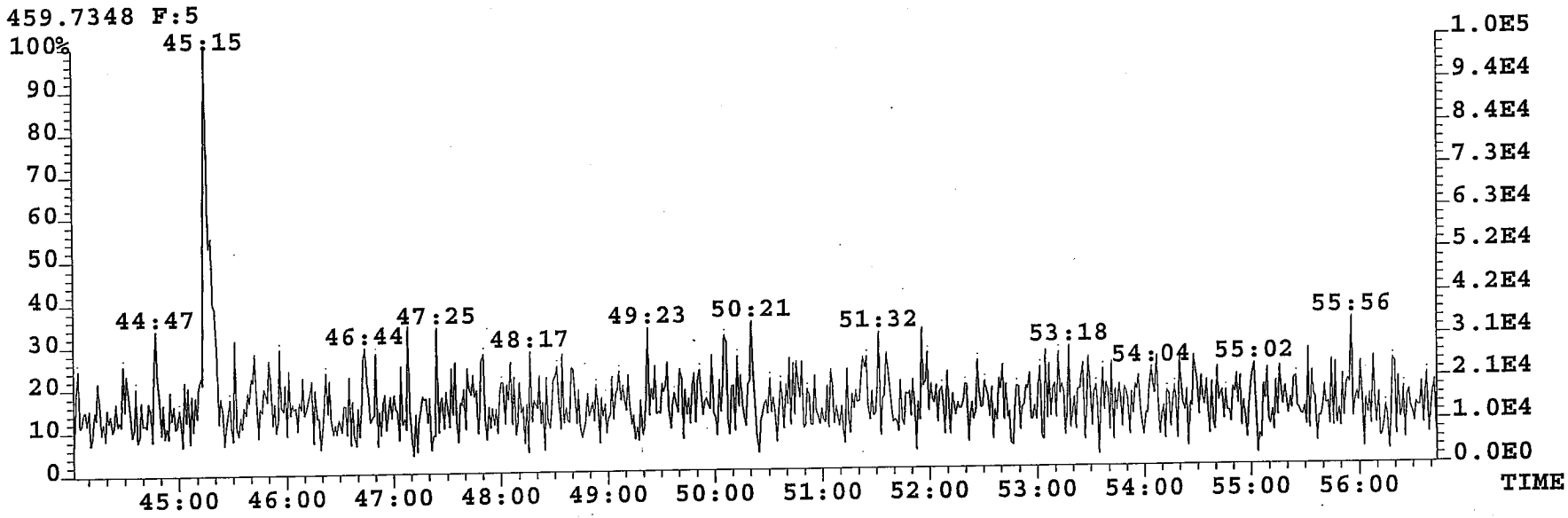


513.6775 F:5



File:5I2509 #1-761 Acq:25-SEP-2001 18:13:59 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:T001A_405-004 Exp:1613

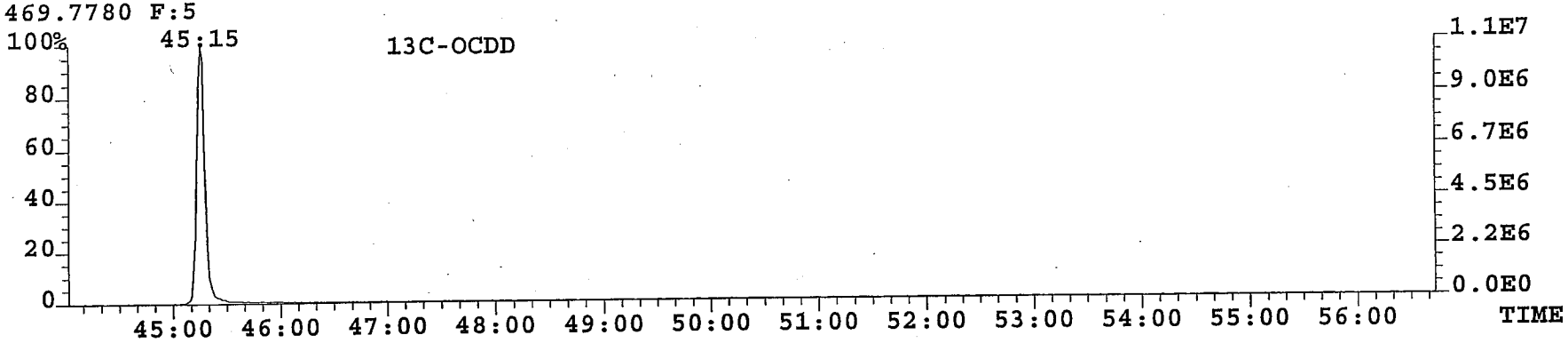




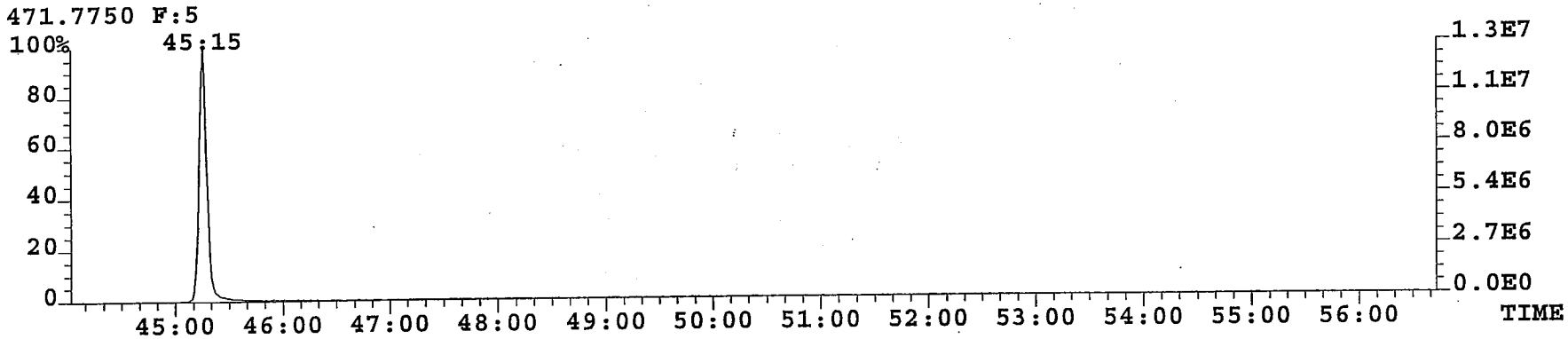
File:5I2509 #1-761 Acq:25-SEP-2001 18:13:59 GC EI+ Voltage SIR 70S

VMS;2 Sample#1 File Text:T001A_405-004 Exp:1613

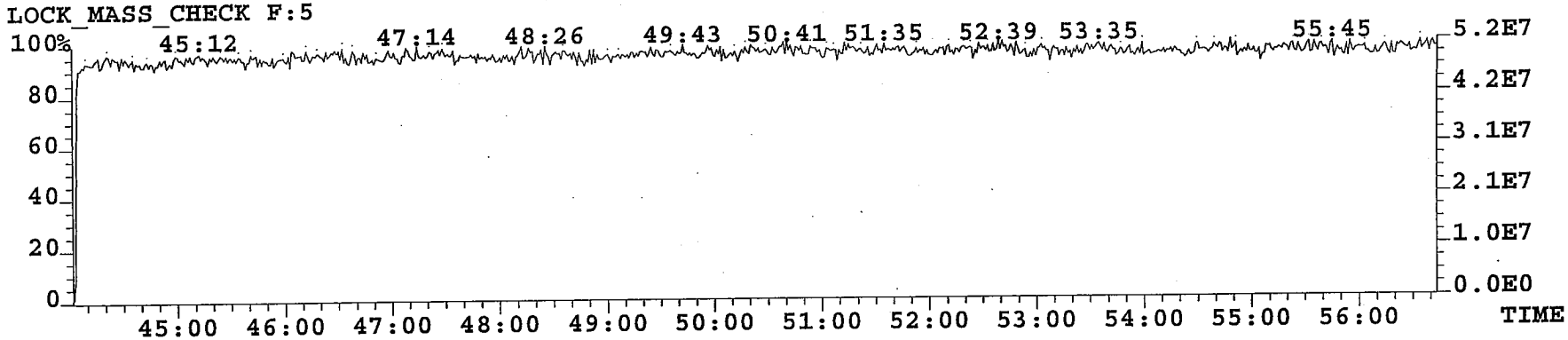
469.7780 F:5



471.7750 F:5



LOCK_MASS_CHECK F:5



USEPA - ITD

FORM 1A
PCDD/PCDF ANALYSIS DATA SHEET
Use for Sample and Blank Results

TB001A

Lab Name: Pacific Analytical, Inc. Episode:
Contract No.: SAS No.: Lab ID: 405-001

Matrix (aqueous/solid/leachate): AQUEOUS Sample Wt/Vol: 1000.0000 g/mL: ML

Sample Receipt Date: 08/30/01 Initial Calibration Date: 09/20/01

Ext. Date: 09/06/01 Shift: 0800 Instrument ID: VG#5

Analysis Date: 09/25/01 Time: 1508 GC Column ID: DB5 60M

Extract Volume (uL): 20 Sample Data Filename: 5I2506

Injection Volume (uL): 1 Blank Data Filename: B1604

Dilution Factor: 1.0 Cal. Ver. Data Filename: 5I2502

Concentration Units (pg/L or ng/Kg dry weight): PG/L %Solids: 0.0

ANALYTE	CONCENTRATION FOUND	DETECTION LIMIT	ION ABUND. RATIO (1)	RRT (1)
2378-TCDD	not detected	10	____	____
12378-PeCDD	not detected	50	____	____
123478-HxCDD	not detected	50	____	____
123678-HxCDD	not detected	50	____	____
123789-HxCDD	not detected	50	____	____
1234678-HpCDD	not detected	50	____	____
OCDD	not detected	100	____	____
2378-TCDF	not detected	10	____	____
12378-PeCDF	not detected	50	____	____
23478-PeCDF	not detected	50	____	____
123478-HxCDF	not detected	50	____	____
123678-HxCDF	not detected	50	____	____
123789-HxCDF	not detected	50	____	____
234678-HxCDF	not detected	50	____	____
1234678-HpCDF	not detected	50	____	____
1234789-HpCDF	not detected	50	____	____
OCDF	not detected	100	____	____
Total TCDD	____	10	____	____
Total PeCDD	____	50	____	____
Total HxCDD	____	50	____	____
Total HpCDD	____	50	____	____
Total TCDF	____	10	____	____
Total PeCDF	____	50	____	____
Total HxCDF	____	50	____	____
Total HpCDF	____	50	____	____

(1) Contract-required limits for RRTs and ion abundance ratios are specified in Tables 2 and 9, respectively, Method 1613.

USEPA - ITD

FORM 1T

PCDD/PCDF TOXICITY EQUIVALENCE SUMMARY

EPA SAMPLE NO.

TB001A

Lab Name: Pacific Analytical, Inc. Episode No.:

Contract No.: SAS No.: Lab Sample ID: 405-001

Matrix (aqueous/solid/leachate): AQUEOUS Sample Wt/Vol: 1000.0 g or mL: ML

Sample Receipt Date: 08/30/01 Initial Calibration Date: 09/20/01

Ext. Date: 09/06/01 Shift: 0800 Instrument ID: VG#5

Analysis Date: 09/25/01 Time: 1508 GC Column ID: DB5 60M

Extract Volume (uL): 20 Sample Data Filename: 5I2506

Injection Volume (uL): 1 Blank Data Filename: B1604

Dilution Factor: 1.0 Cal. Ver. Data Filename: 5I2502

Concentration Units (pg/L or ng/Kg dry weight): PG/L %Solids: 0.0

ANALYTE	CONCENTRATION FOUND	TEF	TEF-ADJUSTED CONCENTRATION
2378-TCDD	0.000	1.0	0.000
12378-PeCDD	0.000	1.0	0.000
123478-HxCDD	0.000	0.1	0.000
123678-HxCDD	0.000	0.1	0.000
123789-HxCDD	0.000	0.1	0.000
1234678-HpCDD	0.000	0.01	0.000
OCDD	0.000	0.0001	0.000
2378-TCDF	0.000	0.1	0.000
12378-PeCDF	0.000	0.05	0.000
23478-PeCDF	0.000	0.5	0.000
123478-HxCDF	0.000	0.1	0.000
123678-HxCDF	0.000	0.1	0.000
123789-HxCDF	0.000	0.1	0.000
234678-HxCDF	0.000	0.1	0.000
1234678-HpCDF	0.000	0.01	0.000
1234789-HpCDF	0.000	0.01	0.000
OCDF	0.000	0.0001	0.000
		TOTAL =	0.000

TEFs for 2,3,7,8-TCDD equivalents, Policy for Implementation of Toxics, Standard for Inland Surface Waters, Enclosed Bays and estuaries of California, Adopted March 2,2000

USEPA - ITD

FORM 2
PCDD/PCDF LABELED COMPOUND AND
CLEANUP STANDARD RECOVERIES

TB001A

Lab Name: Pacific Analytical, Inc. Episode:
Contract No.: SAS No.: Lab ID: 405-001

Matrix (aqueous/solid/leachate): AQUEOUS Sample Wt/Vol: 1000.0000 g/mL: ML

Sample Receipt Date: 08/30/01 Initial Calibration Date: 09/20/01

Ext. Date: 09/06/01 Shift: 0800 Instrument ID: VG#5

Analysis Date: 09/25/01 Time: 1508 GC Column ID: DB5 60M

Extract Volume (uL): 20 Sample Data Filename: 5I2506

Injection Volume (uL): 1 Blank Data Filename: B1604

Dilution Factor: 1.0 Cal. Ver. Data Filename: 5I2502

Concentration Units (pg/L or ng/Kg dry weight): PG/L %Solids: 0.0

	SPIKE CONC.	CONC. FOUND	R(%) (1)	ION ABUND. RATIO (2)	RRT (2)
LABELED COMPOUNDS					
13C-2378-TCDD	2000	1100	55	0.79	1.008
13C-12378-PeCDD	2000	1100	55	1.58	1.202
13C-123478-HxCDD	2000	1700	85	1.30	0.988
13C-123678-HxCDD	2000	1600	80	1.33	0.991
13C-1234678-HpCDD	2000	1600	80	1.00	1.090
13C-OCDD	4000	3500	88	0.89	1.207
13C-2378-TCDF	2000	980	49	0.83	0.977
13C-12378-PeCDF	2000	1100	55	1.61	1.159
13C-23478-PeCDF	2000	1100	55	1.57	1.189
13C-123478-HxCDF	2000	1700	85	0.54	0.967
13C-123678-HxCDF	2000	1800	90	0.54	0.970
13C-123789-HxCDF	2000	1700	85	0.53	0.985
13C-234678-HxCDF	2000	1500	75	0.54	1.008
13C-1234678-HpCDF	2000	1500	75	0.46	1.057
13C-1234789-HpCDF	2000	1500	75	0.46	1.105
CLEANUP STANDARD					
37Cl4-2378-TCDD	200	110	55		1.001

PACIFIC ANALYTICAL 1613 PCDD/PCDF QUANTITATION SUMMARY

Lab File ID: 5I2506 Sample: TB001A 405-001
Cal File: 5I20D Dil: 1.0 Sample Size (Dry if Solid): 1.0000
Nanograms Label Added (IS): 2.0 Nanograms RS Added: 2.0 Units: pg/L

Compound	Ratio	RRT	Response Factor	Extract ng/ml	Sample Conc.	Label Rec.
13C-2,3,7,8-TCDF	0.83	0.977	1.692		976.13	48.81
2,3,7,8-TCDF	0.00	0.977	1.203	N.D.< CRQL		
13C-2,3,7,8-TCDD	0.79	1.008	1.157		1125.25	56.26
2,3,7,8-TCDD	0.00	1.008	0.847	N.D.< CRQL		
37Cl-2,3,7,8-TCDD	1.00	1.001	2.409		110.69	5.53
13C-1,2,3,7,8-PeCDF	1.61	1.159	1.863		1103.11	55.16
1,2,3,7,8-PeCDF	0.00	1.159	1.004	N.D.< CRQL		
13C-2,3,4,7,8-PeCDF	1.57	1.189	1.825		1128.12	56.41
2,3,4,7,8-PeCDF	0.00	1.189	1.056	N.D.< CRQL		
13C-1,2,3,7,8-PeCDD	1.58	1.202	1.137		1106.35	55.32
1,2,3,7,8-PeCDD	0.00	1.202	1.037	N.D.< CRQL		
13C-1,2,3,4,7,8-HxCDF	0.54	0.967	1.133		1712.43	85.62
1,2,3,4,7,8-HxCDF	0.00	0.967	1.255	N.D.< CRQL		
13C-1,2,3,6,7,8-HxCDF	0.54	0.970	1.210		1770.62	88.53
1,2,3,6,7,8-HxCDF	0.00	0.970	1.219	N.D.< CRQL		
13C-1,2,3,7,8,9-HxCDF	0.53	0.985	1.110		1678.41	83.92
1,2,3,7,8,9-HxCDF	0.00	0.985	1.214	N.D.< CRQL		
13C-2,3,4,6,7,8-HxCDF	0.54	1.008	1.119		1478.03	73.90
2,3,4,6,7,8-HxCDF	0.00	1.008	1.151	N.D.< CRQL		
13C-1,2,3,4,7,8-HxCDD	1.30	0.988	0.819		1652.45	82.62
1,2,3,4,7,8-HxCDD	0.00	0.988	1.003	N.D.< CRQL		
13C-1,2,3,6,7,8-HxCDD	1.33	0.991	0.967		1637.41	81.87
1,2,3,6,7,8-HxCDD	0.00	0.991	0.878	N.D.< CRQL		
13C-1,2,3,7,8,9-HxCDD	0.00	0.991	0.000	N.D.< CRQL		
1,2,3,7,8,9-HxCDD	0.00	0.991	1.014	N.D.< CRQL		
13C-1,2,3,4,6,7,8-HpCDF	0.46	1.057	1.031		1485.04	74.25
1,2,3,4,6,7,8-HpCDF	0.00	1.057	1.330	N.D.< CRQL		
13C-1,2,3,4,7,8,9-HpCDF	0.46	1.105	0.945		1510.56	75.53
1,2,3,4,7,8,9-HpCDF	0.00	1.105	1.234	N.D.< CRQL		
13C-1,2,3,4,6,7,8-HpCDD	1.00	1.090	0.797		1626.59	81.33
1,2,3,4,6,7,8-HpCDD	0.00	1.090	1.096	N.D.< CRQL		
13C-OCDD	0.89	1.207	0.678		3537.53	88.44
OCDF	0.00	1.207	1.348	N.D.< CRQL		
OCDD	0.85	1.000	1.057	1.57	31.47	

Pacific Analytical Inc.
PCDD/PCDF Targetting Summary

Lab File ID: \VG\DIOXIN\5I2506.DAT Target File: :\VG\DIOXIN\1613.TRG

Compound	Flag	QM1	QM2	Ratio	OK	Pred. RT	Act. Rt	Area
13C-1,2,3,4-TCDD	R	332	334	0.80	Y	28.117	28.117	150514000
13C-2,3,7,8-TCDF	I	316	318	0.83	Y	27.490	27.467	124295000
2,3,7,8-TCDF	U	304	306	0.00	N	27.486	0.000	No Trace Found
13C-2,3,7,8-TCDD	I	332	334	0.79	Y	28.364	28.350	97978000
2,3,7,8-TCDD	U	320	322	0.00	N	28.367	0.000	No Trace Found
37Cl-2,3,7,8-TCDD	I	328	328	1.00	Y	28.367	28.367	20068000
13C-1,2,3,7,8-PeCDF	I	352	354	1.61	Y	32.512	32.583	154660000
1,2,3,7,8-PeCDF	U	340	342	0.00	N	32.599	0.000	No Trace Found
13C-2,3,4,7,8-PeCDF	I	352	354	1.57	Y	33.319	33.433	154941000
2,3,4,7,8-PeCDF	U	340	342	0.00	N	33.450	0.000	No Trace Found
13C-1,2,3,7,8-PeCDD	I	368	370	1.58	Y	33.664	33.800	94667000
1,2,3,7,8-PeCDD	U	356	358	0.00	N	33.817	0.000	No Trace Found
13C-1,2,3,7,8,9-HxCDD	R	402	404	1.28	Y	37.533	37.533	109229000
13C-1,2,3,4,7,8-HxCDF	I	384	386	0.54	Y	36.339	36.300	105962000
1,2,3,4,7,8-HxCDF	U	374	376	0.00	N	36.318	0.000	No Trace Found
13C-1,2,3,6,7,8-HxCDF	I	384	386	0.54	Y	36.441	36.417	117009000
1,2,3,6,7,8-HxCDF	U	374	376	0.00	N	36.435	0.000	No Trace Found
13C-1,2,3,7,8,9-HxCDF	I	384	386	0.53	Y	37.004	36.967	101749000
1,2,3,7,8,9-HxCDF	U	374	376	0.00	N	36.985	0.000	No Trace Found
13C-2,3,4,6,7,8-HxCDF	I	384	386	0.54	Y	37.830	37.817	90328000
2,3,4,6,7,8-HxCDF	U	374	376	0.00	N	37.832	0.000	No Trace Found
13C-1,2,3,4,7,8-HxCDD	I	402	404	1.30	Y	37.135	37.100	73913000
1,2,3,4,7,8-HxCDD	U	390	392	0.00	N	37.119	0.000	No Trace Found
13C-1,2,3,6,7,8-HxCDD	I	402	404	1.33	Y	37.218	37.200	86475000
1,2,3,6,7,8-HxCDD	U	390	392	0.00	N	37.215	0.000	No Trace Found
13C-1,2,3,7,8,9-HxCDD	N	402	404	0.00	N	37.533	0.000	No Trace Found
1,2,3,7,8,9-HxCDD	U	390	392	0.00	N	37.582	0.000	No Trace Found
13C-1,2,3,4,6,7,8-HpCDF	I	418	420	0.46	Y	39.736	39.683	83619000
1,2,3,4,6,7,8-HpCDF	U	408	410	0.00	N	39.699	0.000	No Trace Found
13C-1,2,3,4,7,8,9-HpCDF	I	418	420	0.46	Y	41.542	41.483	77961000
1,2,3,4,7,8,9-HpCDF	U	408	410	0.00	N	41.500	0.000	No Trace Found
13C-1,2,3,4,6,7,8-HpCDD	I	436	438	1.00	Y	40.979	40.917	70802000
1,2,3,4,6,7,8-HpCDD	U	424	426	0.00	N	40.933	0.000	No Trace Found
13C-OCDD	I	470	472	0.89	Y	45.449	45.300	130990000
OCDF	U	442	444	0.00	N	45.549	0.000	No Trace Found
OCDD	U	458	460	0.85	Y	45.318	45.317	1089380

PACIFIC ANALYTICAL
PCDD/PCDF TOTALS SUMMARY OF NON-2,3,7,8 CONGENERS

Lab File: 5I2506 Sample: TB001A Lab ID: 405-001
Cal File: 5I20D Sample Size: 1.0000
Nanograms Label Added (IS): 2.0 Nanograms RS Added: 2.0

Analyte	Number of Peaks	Sample Conc. pg/L	Total Area	Area IS	RRF
TCDD	0	0.00	0	97978000	0.847
PeCDD	0	0.00	0	94667000	1.037
HxCDD	0	0.00	0	80194000	0.965
HpCDD	0	0.00	0	70802000	1.096
TCDF	0	0.00	0	124295000	1.203
PeCDF	0	0.00	0	154800496	1.030
HxCDF	~~1~~	A+B 9-28-01 ~~4.62~~	~~290300~~	103762000	1.210
HpCDF	0	0.00	0	80790000	1.282

PACIFIC ANALYTICAL
PCDD/PCDF PEAK SUMMARY

Lab File: 5I2506 Sample: TB001A Lab ID: 405-001

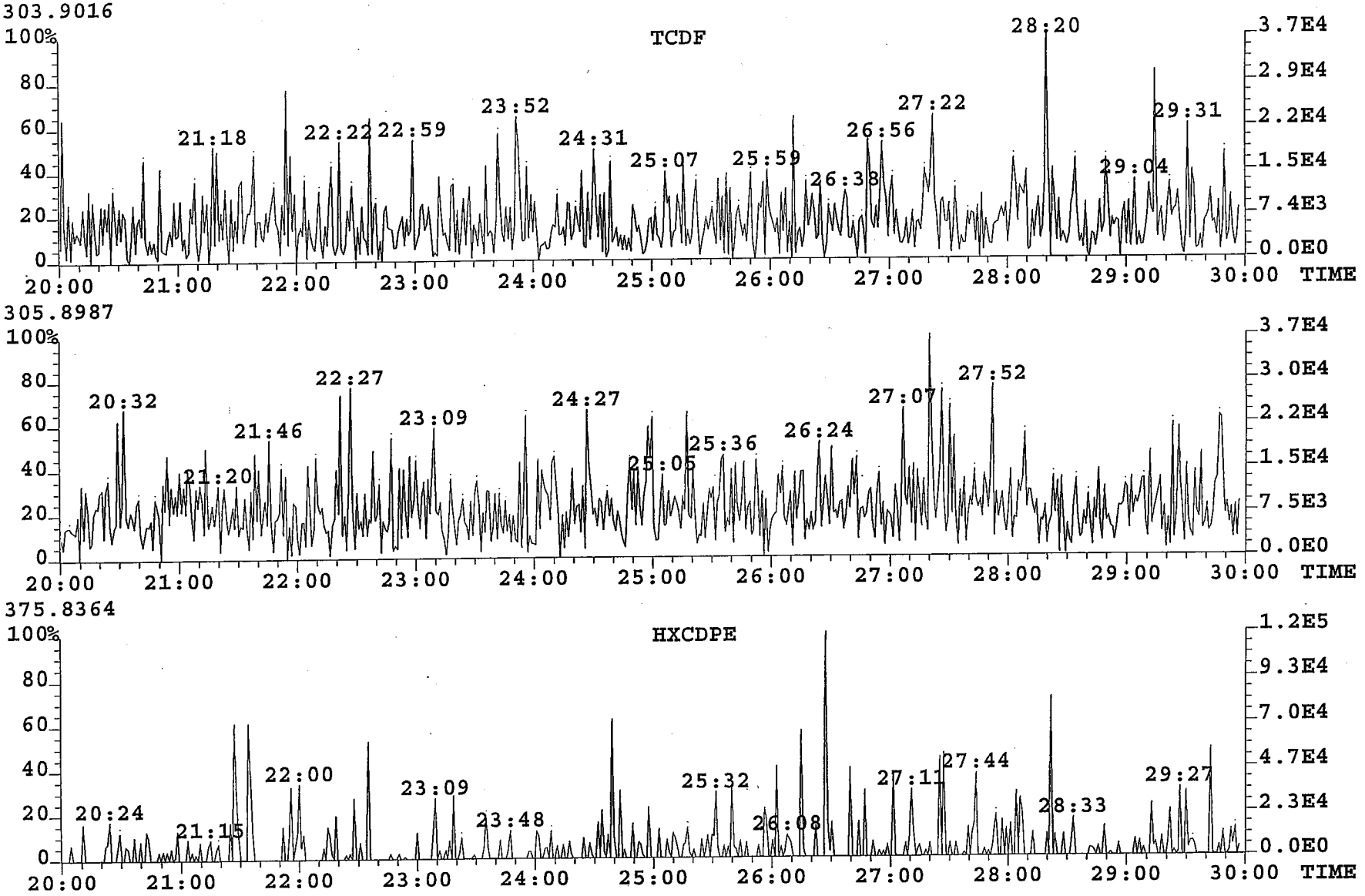
Entry No.	Match	Level Flag	QM	RT	AREA	HEIGHT	COMPOUND
1	0	X 4	305.8987	29.783	100600	20877	
2	3	I 4	315.9419	27.467	56513000	14829000	13C-2,3,7,8-TCDF
3	2	I 4	317.9389	27.467	67782000	16535000	13C-2,3,7,8-TCDF
4	0	X 6	375.8364	21.450	122990	71392	
5	0	X 6	375.8364	21.567	126950	71680	
6	0	X 6	375.8364	26.450	135870	116510	
7	9	R 4	331.9368	28.117	66834000	17058000	13C-1,2,3,4-TCDD
8	10	I 4	331.9368	28.350	43137000	11210000	13C-2,3,7,8-TCDD
9	7	R 4	333.9339	28.117	83680000	22632000	13C-1,2,3,4-TCDD
10	8	I 4	333.9339	28.350	54841000	13955000	13C-2,3,7,8-TCDD
11	11	C 0	327.8847	21.217	335540	94323	
12	12	C 0	327.8847	22.317	244040	72544	
13	13	C 0	327.8847	22.650	400640	108310	
14	14	C 0	327.8847	22.950	190630	42189	
15	15	C 0	327.8847	23.333	1644000	435640	
16	16	C 0	327.8847	24.083	176350	41998	
17	17	C 0	327.8847	24.900	128650	39338	
18	18	C 0	327.8847	25.033	621910	194950	
19	19	C 0	327.8847	25.367	108620	45880	
20	20	I 0	327.8847	28.367	10034000	2736200	37Cl-2,3,7,8-TCDD
21	0	X 0	327.8847	29.150	112470	47744	
22	0	X 0	327.8847	29.433	107540	28936	
23	0	X 0	327.8847	29.633	125940	46127	
24	0	X 5	339.8597	33.467	102840	41649	
25	0	X 5	339.8597	34.533	125490	37275	
26	0	X 5	341.8568	31.450	118710	22047	
27	0	X 5	341.8568	33.883	118060	32860	
28	0	X 5	341.8568	34.350	108260	29004	
29	0	X 5	341.8568	34.600	104660	40839	
30	0	X 5	341.8568	34.683	111530	36858	
31	0	X 5	341.8568	34.767	116270	47954	
32	0	X 5	341.8568	34.883	121600	35789	
33	0	X 5	341.8568	34.983	135310	45039	
34	36	I 5	351.9000	32.583	95467000	27587000	13C-1,2,3,7,8-PeCD
35	37	I 5	351.9000	33.433	94637000	30303000	13C-2,3,4,7,8-PeCD
36	34	I 5	353.8970	32.583	59193000	17518000	13C-1,2,3,7,8-PeCD
37	35	I 5	353.8970	33.433	60304000	20038000	13C-2,3,4,7,8-PeCD
38	0	X 5	355.8546	33.433	143920	55219	
39	0	X 5	355.8546	34.233	100970	37767	
40	0	X 5	355.8546	34.450	121150	28774	
41	0	X 5	355.8546	34.650	101130	40233	
42	0	X 5	355.8546	34.767	183420	33872	
43	0	X 5	355.8546	34.867	116450	55145	
44	0	X 5	355.8546	34.967	145920	34898	
45	0	X 5	355.8546	35.100	119610	32729	
46	0	X 5	357.8517	30.133	200100	45689	
47	0	X 5	357.8517	31.617	196490	41476	
48	49	I 5	367.8949	33.817	57936000	18554000	13C-1,2,3,7,8-PeCD
49	48	I 5	369.8919	33.800	36731000	11892000	13C-1,2,3,7,8-PeCD
50	0	X 6	373.8207	35.467	134750	36116	
51	61	C 6	373.8207	36.000	154610	36713	
52	0	X 6	373.8207	36.333	125300	32324	
53	0	X 6	373.8207	36.483	150480	44662	

54	0	X 6	373.8207	36.733	342340	111320	
55	0	X 6	373.8207	36.900	127120	23070	
56	0	X 6	373.8207	37.033	127770	51221	
57	0	X 6	373.8207	37.100	111900	22641	
58	0	X 6	373.8207	37.400	118280	35611	
59	0	X 6	373.8207	38.733	107230	26340	
60	0	X 6	375.8178	35.917	111350	30514	
61	51	C 6	375.8178	36.017	135690	28877	
62	0	X 6	375.8178	36.567	114500	33815	
63	0	X 6	375.8178	37.817	100100	29332	
64	69	I 6	383.8639	36.300	37055000	12593000	13C-1,2,3,4,7,8-Hx
65	70	I 6	383.8639	36.417	40911000	13216000	13C-1,2,3,6,7,8-Hx
66	0	X 6	383.8639	36.517	1536600	313980	
67	71	I 6	383.8639	36.967	35274000	10933000	13C-1,2,3,7,8,9-Hx
68	72	I 6	383.8639	37.817	31589000	9672300	13C-2,3,4,6,7,8-Hx
69	64	I 6	385.8610	36.300	68907000	23740000	13C-1,2,3,4,7,8-Hx
70	65	I 6	385.8610	36.417	76098000	23629000	13C-1,2,3,6,7,8-Hx
71	67	I 6	385.8610	36.967	66475000	20506000	13C-1,2,3,7,8,9-Hx
72	68	I 6	385.8610	37.817	58739000	17637000	13C-2,3,4,6,7,8-Hx
73	0	X 0	445.7555	36.700	100250	25291	
74	0	X 0	445.7555	38.383	112390	40810	
75	0	X 6	389.8156	35.600	107660	28755	
76	0	X 6	389.8156	35.767	108380	25862	
77	0	X 6	389.8156	35.967	137100	24774	
78	0	X 6	389.8156	36.117	156490	31585	
79	0	X 6	389.8156	36.283	109380	40750	
80	0	X 6	389.8156	36.317	147560	42986	
81	0	X 6	389.8156	36.950	169580	49866	
82	0	X 6	389.8156	37.067	103220	40970	
83	0	X 6	389.8156	37.433	100610	35866	
84	0	X 6	389.8156	37.750	222990	62366	
85	0	X 6	389.8156	38.033	133340	37279	
86	0	X 6	389.8156	38.133	112570	37217	
87	0	X 6	389.8156	38.250	101740	41333	
88	0	X 6	389.8156	38.350	166080	34202	
89	0	X 6	389.8156	38.900	115660	52390	
90	93	I 6	401.8559	37.100	41834000	13707000	13C-1,2,3,4,7,8-Hx
91	94	I 6	401.8559	37.200	49296000	15761000	13C-1,2,3,6,7,8-Hx
92	95	R 6	401.8559	37.533	61251000	19348000	13C-1,2,3,7,8,9-Hx
93	90	I 6	403.8529	37.100	32079000	10386000	13C-1,2,3,4,7,8-Hx
94	91	I 6	403.8529	37.200	37179000	12107000	13C-1,2,3,6,7,8-Hx
95	92	R 6	403.8529	37.533	47978000	15620000	13C-1,2,3,7,8,9-Hx
96	104	O 7	407.7818	39.400	183670	46665	
97	0	X 7	407.7818	40.417	126170	45492	
98	0	X 7	407.7818	40.483	135850	51714	
99	0	X 7	407.7818	41.333	168960	37590	
100	0	X 7	407.7818	41.783	118390	34024	
101	0	X 7	407.7818	42.800	112470	27452	
102	0	X 7	407.7818	42.917	108940	55071	
103	0	X 7	407.7818	43.200	112480	21121	
104	96	O 7	409.7788	39.383	139120	53661	
105	0	X 7	409.7788	39.700	126330	41352	
106	0	X 7	409.7788	40.167	155310	49007	

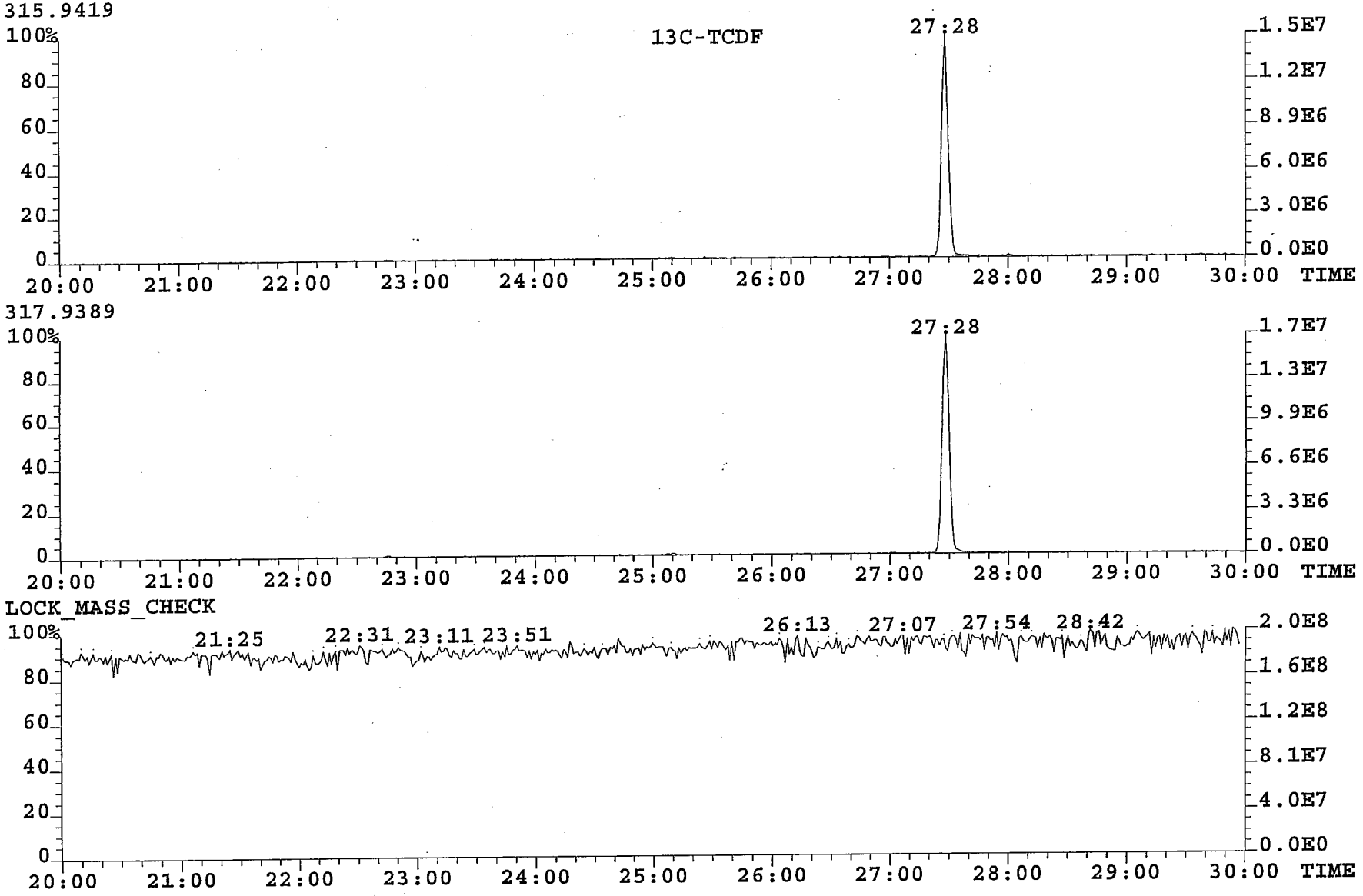
107	109	I 7	417.8253	39.683	26320000	7229600	13C-1,2,3,4,6,7,8-
108	110	I 7	417.8253	41.483	24459000	5620700	13C-1,2,3,4,7,8,9-
109	107	I 7	419.8220	39.683	57299000	16117000	13C-1,2,3,4,6,7,8-
110	108	I 7	419.8220	41.483	53502000	12637000	13C-1,2,3,4,7,8,9-
111	0	X 0	479.7165	41.917	128640	37317	
112	114	O 7	423.7766	40.050	178300	39231	
113	115	O 7	423.7766	40.933	162720	53471	
114	112	O 7	425.7737	40.050	132130	43132	
115	113	O 7	425.7737	40.933	214730	56099	
116	118	O 7	435.8169	40.033	390030	123900	
117	119	I 7	435.8169	40.933	35352000	8910600	13C-1,2,3,4,6,7,8-
118	116	O 7	437.8140	40.017	487750	149230	
119	117	I 7	437.8140	40.917	35450000	9295800	13C-1,2,3,4,6,7,8-
120	0	X 8	443.7399	44.467	109000	18379	
121	0	X 8	443.7399	45.567	104230	28370	
122	123	U 8	457.7377	45.317	499480	96798	OCDD
123	122	U 8	459.7348	45.317	589900	127970	OCDD
124	125	I 8	469.7780	45.300	61686000	12331000	13C-OCDD
125	124	I 8	471.7750	45.300	69304000	14531000	13C-OCDD

File:5I2506 #1-1159 Acq:25-SEP-2001 15:08:44 GC EI+ Voltage SIR 70S

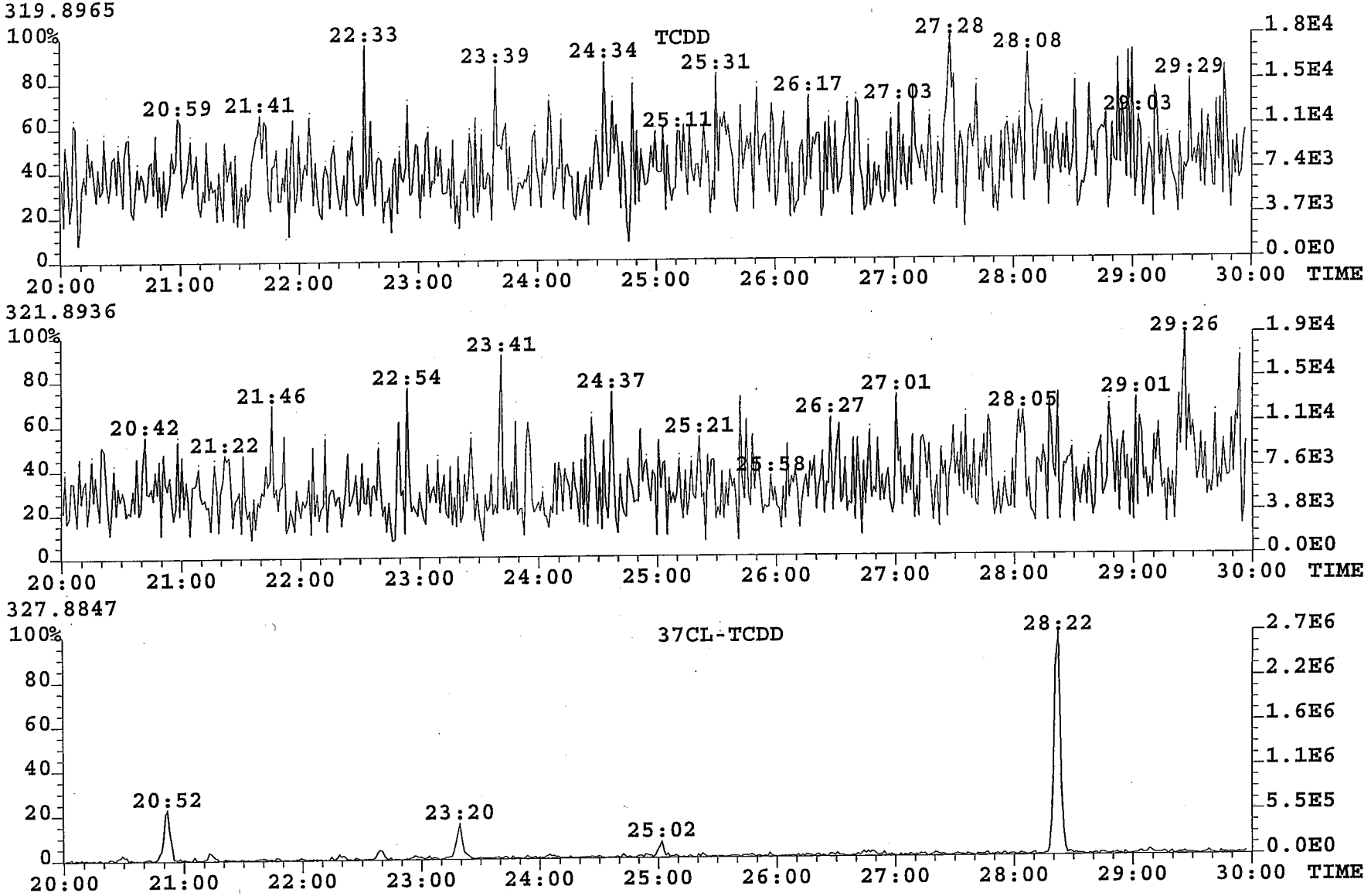
VMS;2 Sample#1 File Text:TB001A_405-001 Exp:1613



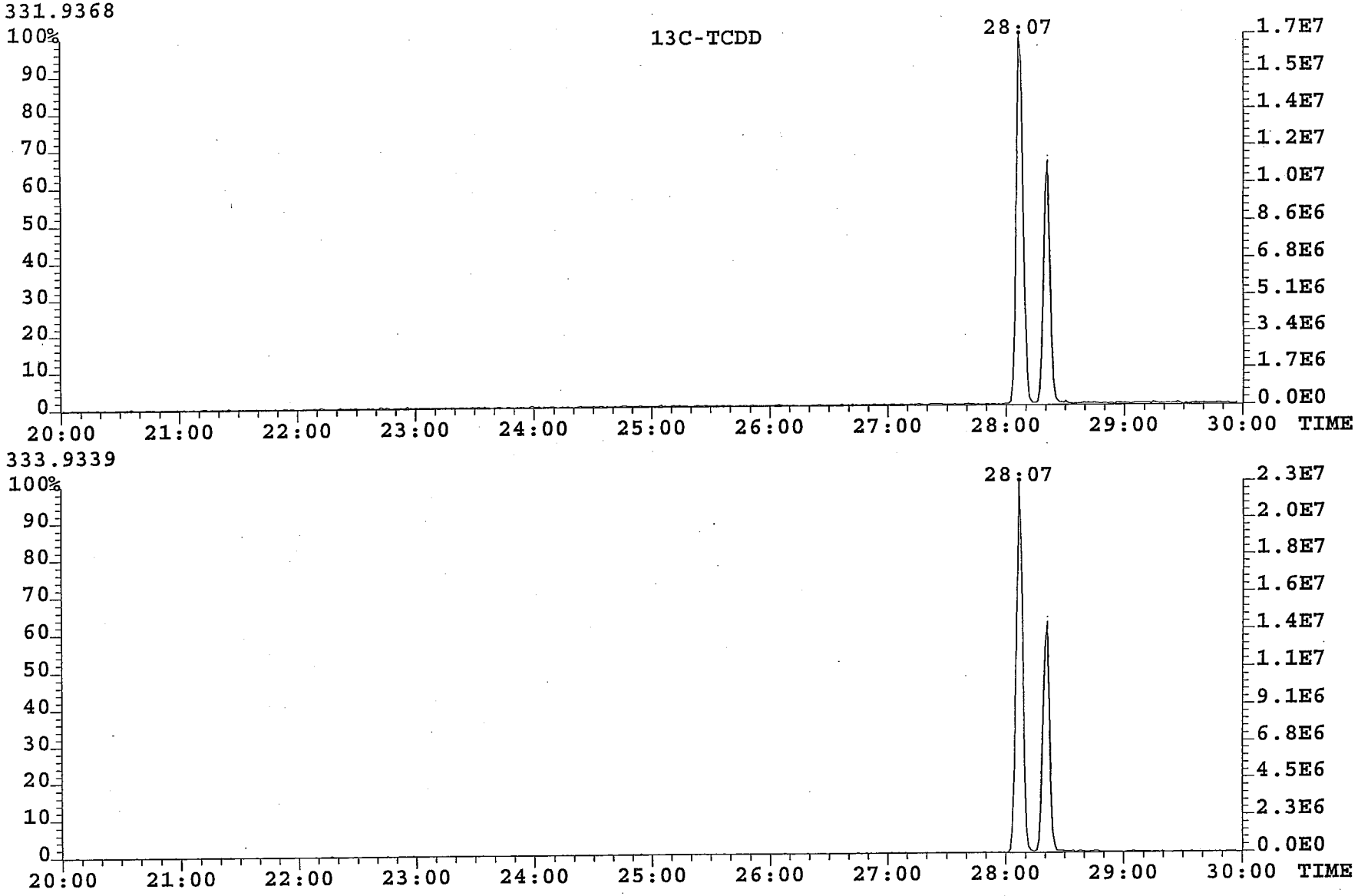
File:5I2506 #1-1159 Acq:25-SEP-2001 15:08:44 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:TB001A_405-001 Exp:1613



File:5I2506 #1-1159 Acq:25-SEP-2001 15:08:44 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:TB001A_405-001 Exp:1613

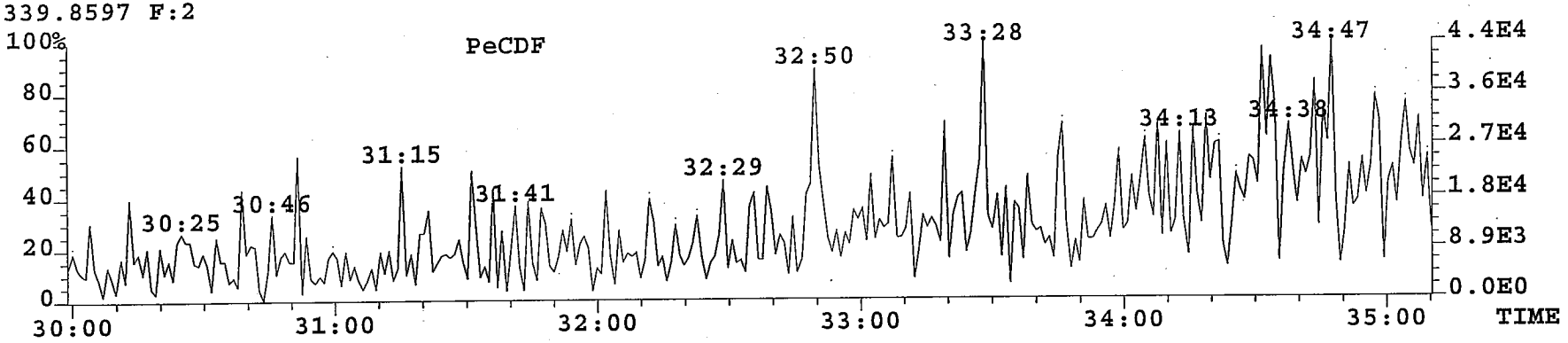


File:5I2506 #1-1159 Acq:25-SEP-2001 15:08:44 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:TB001A_405-001 Exp:1613

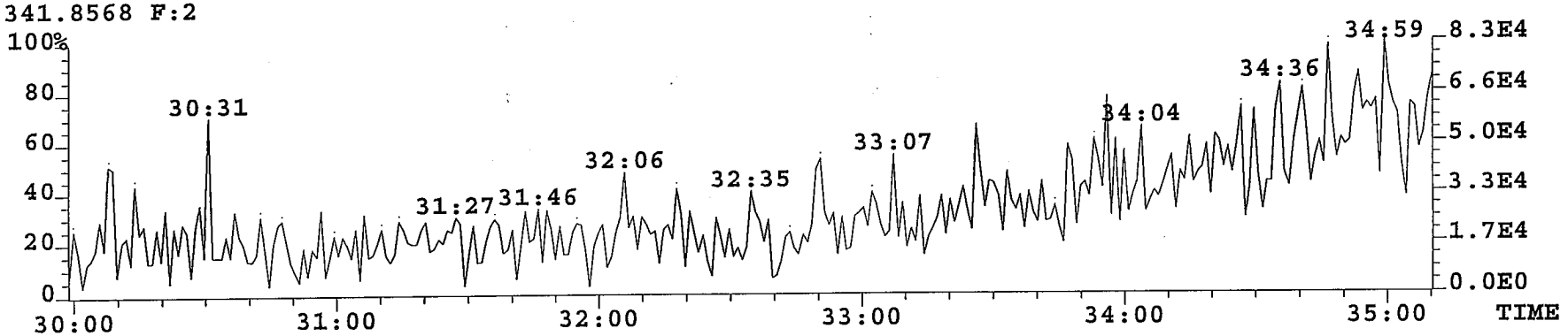


File:5I2506 #1-315 Acq:25-SEP-2001 15:08:44 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:TB001A_405-001 Exp:1613

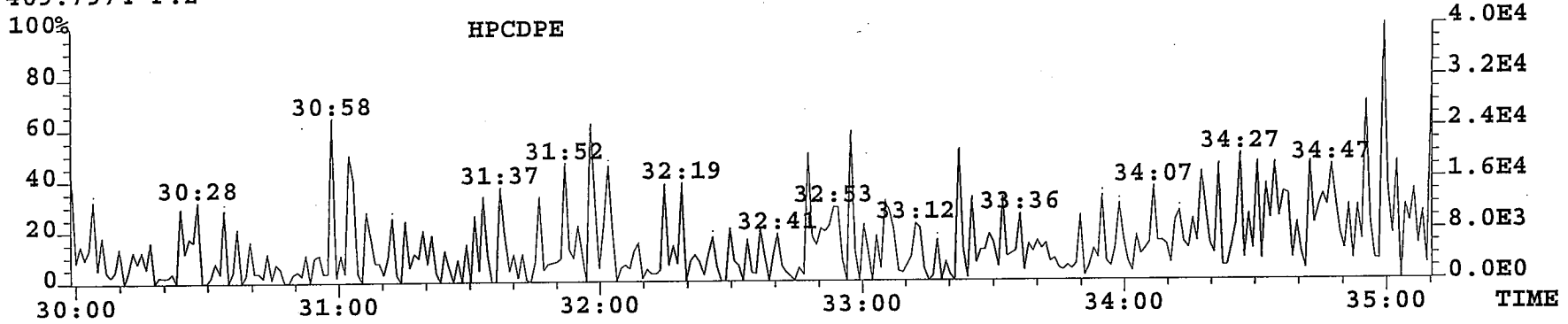
339.8597 F:2



341.8568 F:2

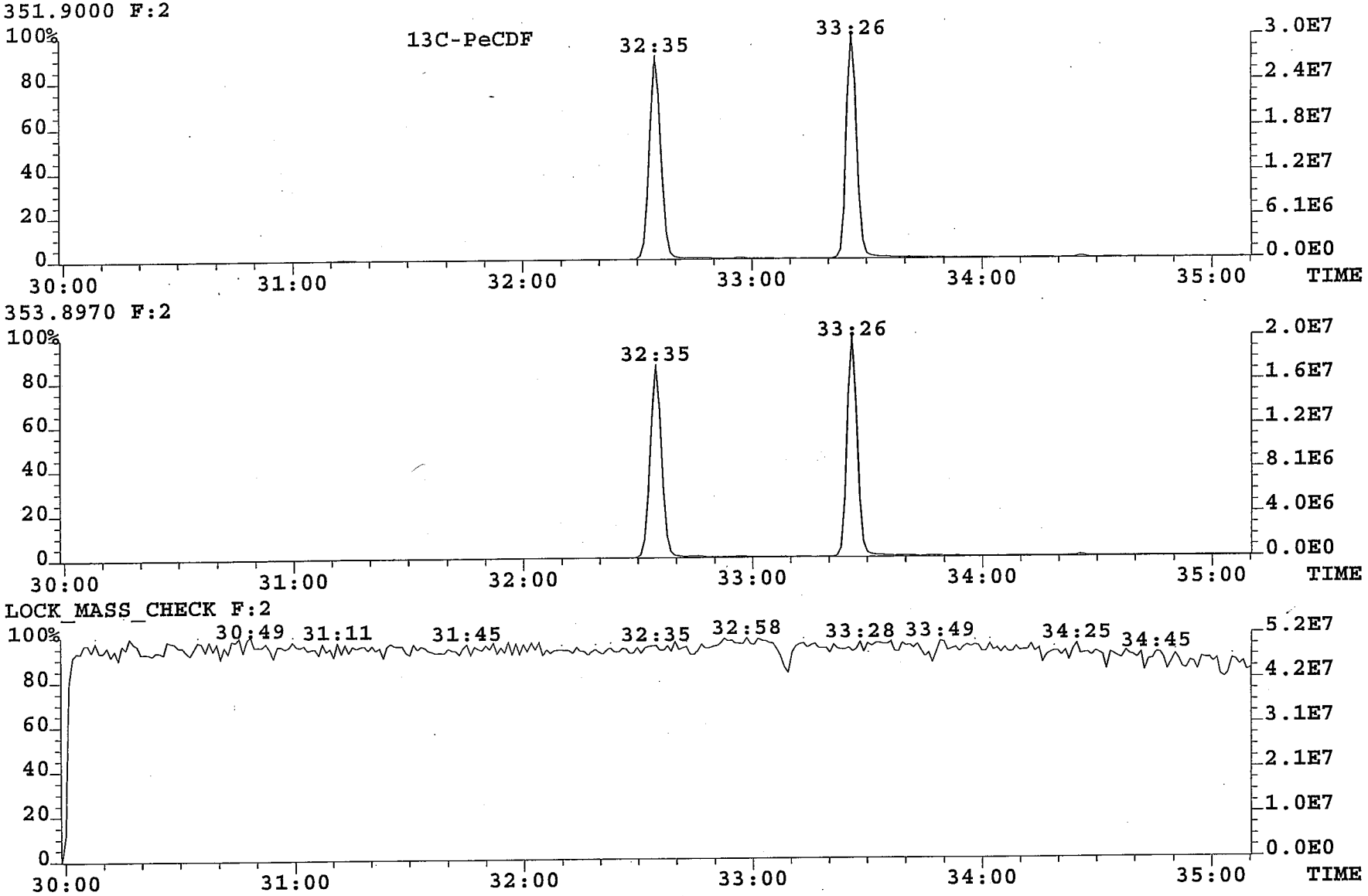


409.7974 F:2



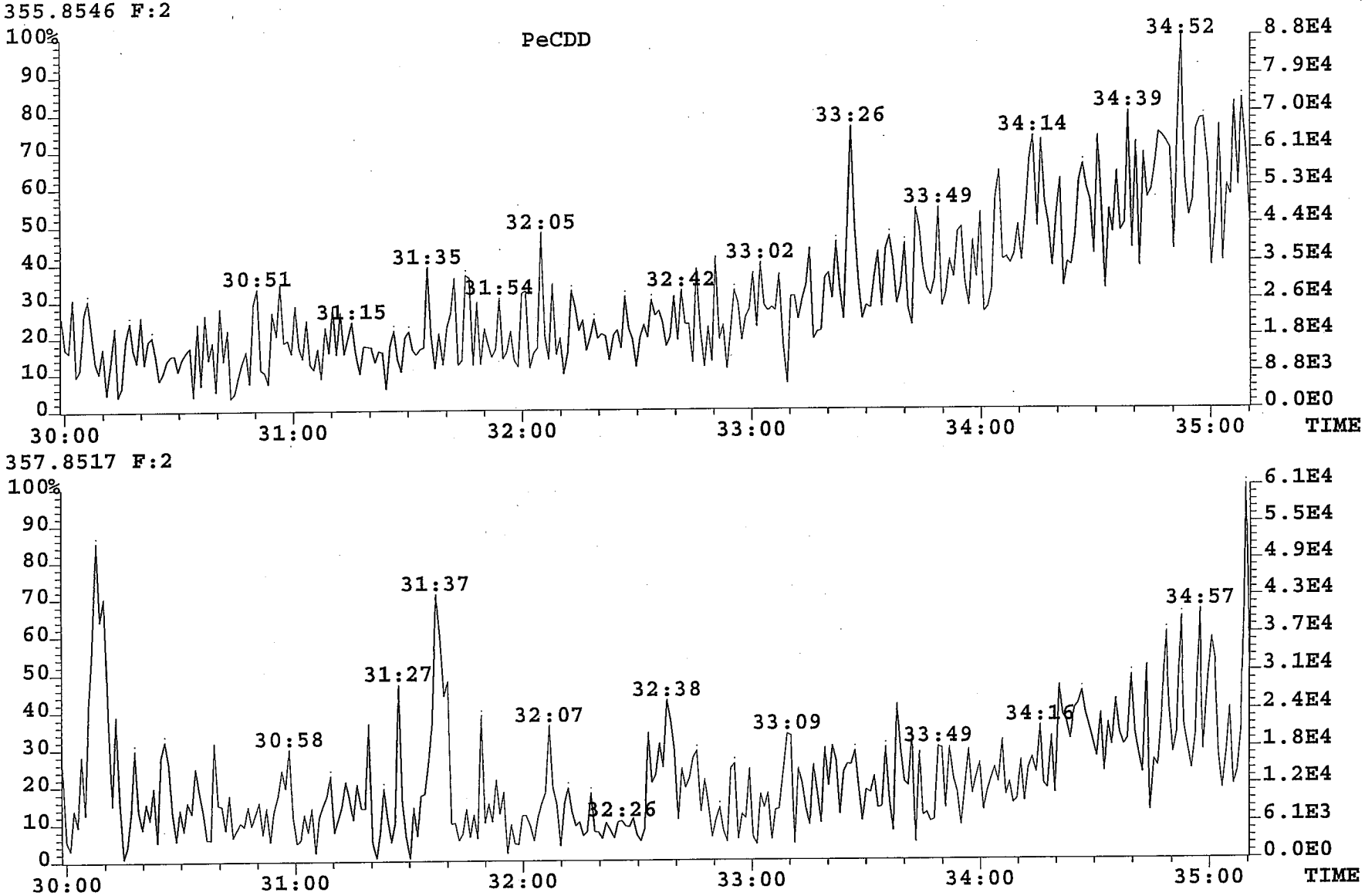
CI

File:5I2506 #1-315 Acq:25-SEP-2001 15:08:44 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:TB001A_405-001 Exp:1613

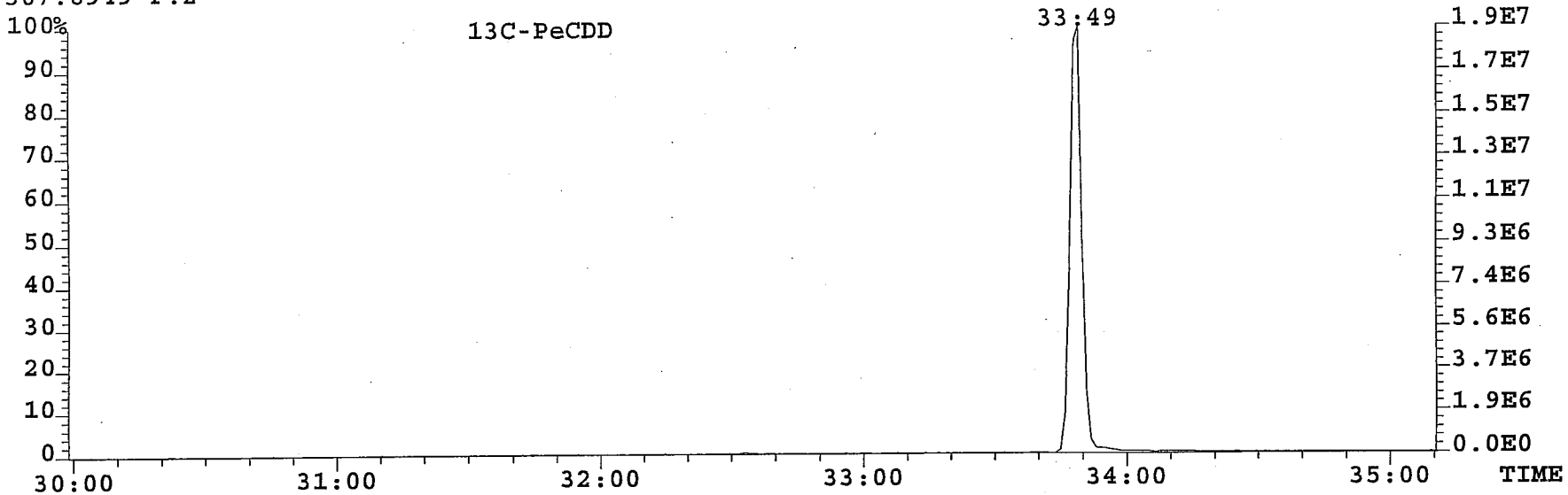


16

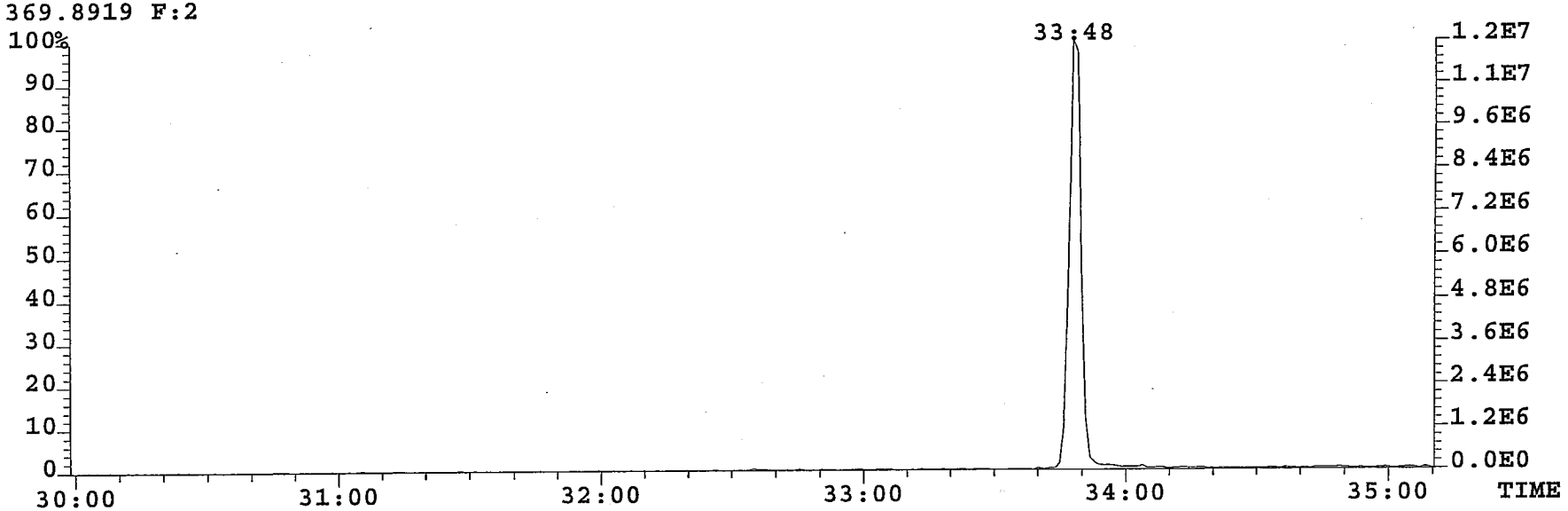
File:5I2506 #1-315 Acq:25-SEP-2001 15:08:44 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:TB001A_405-001 Exp:1613



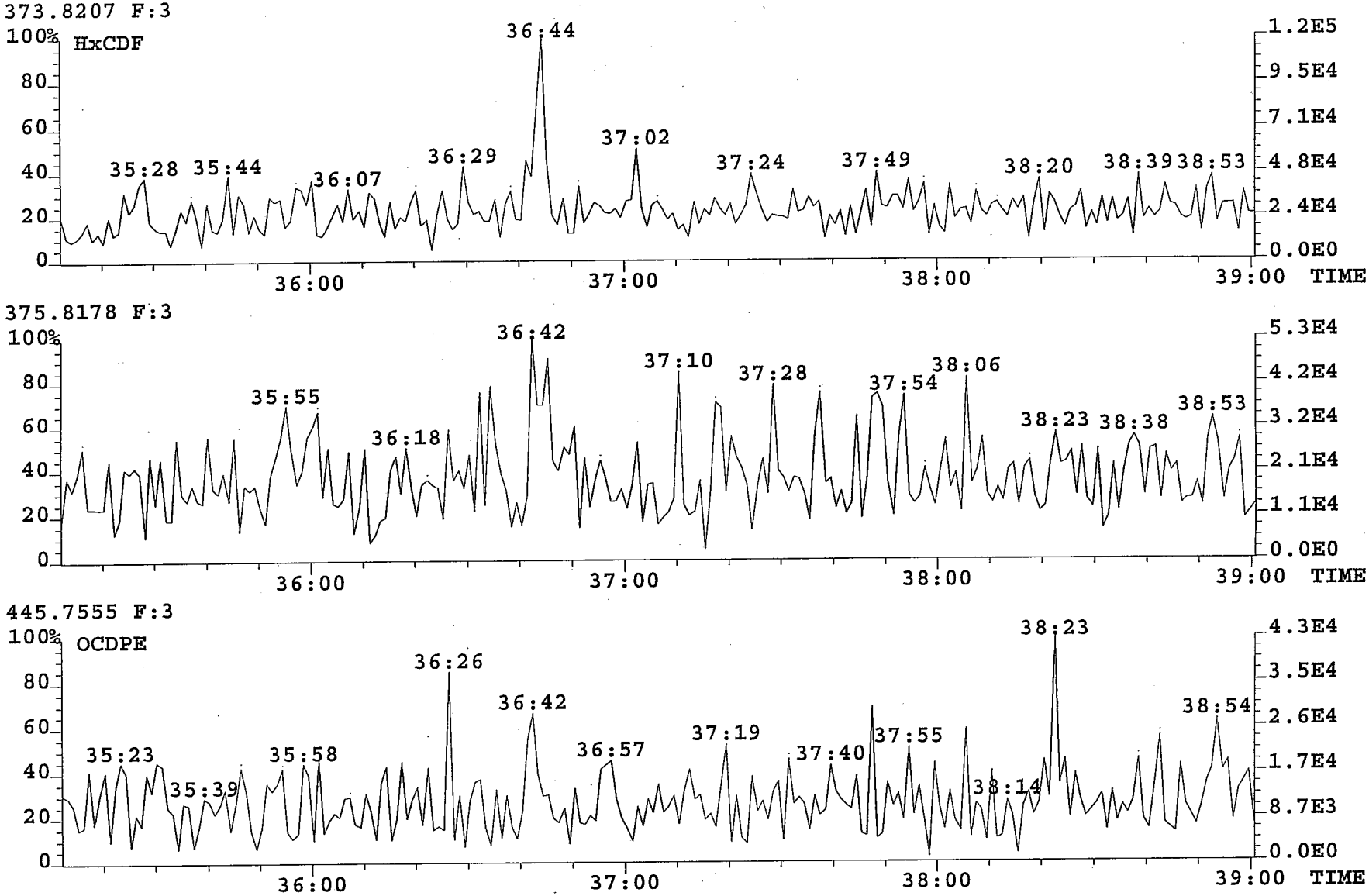
File:5I2506 #1-315 Acq:25-SEP-2001 15:08:44 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:TB001A_405-001 Exp:1613
367.8949 F:2



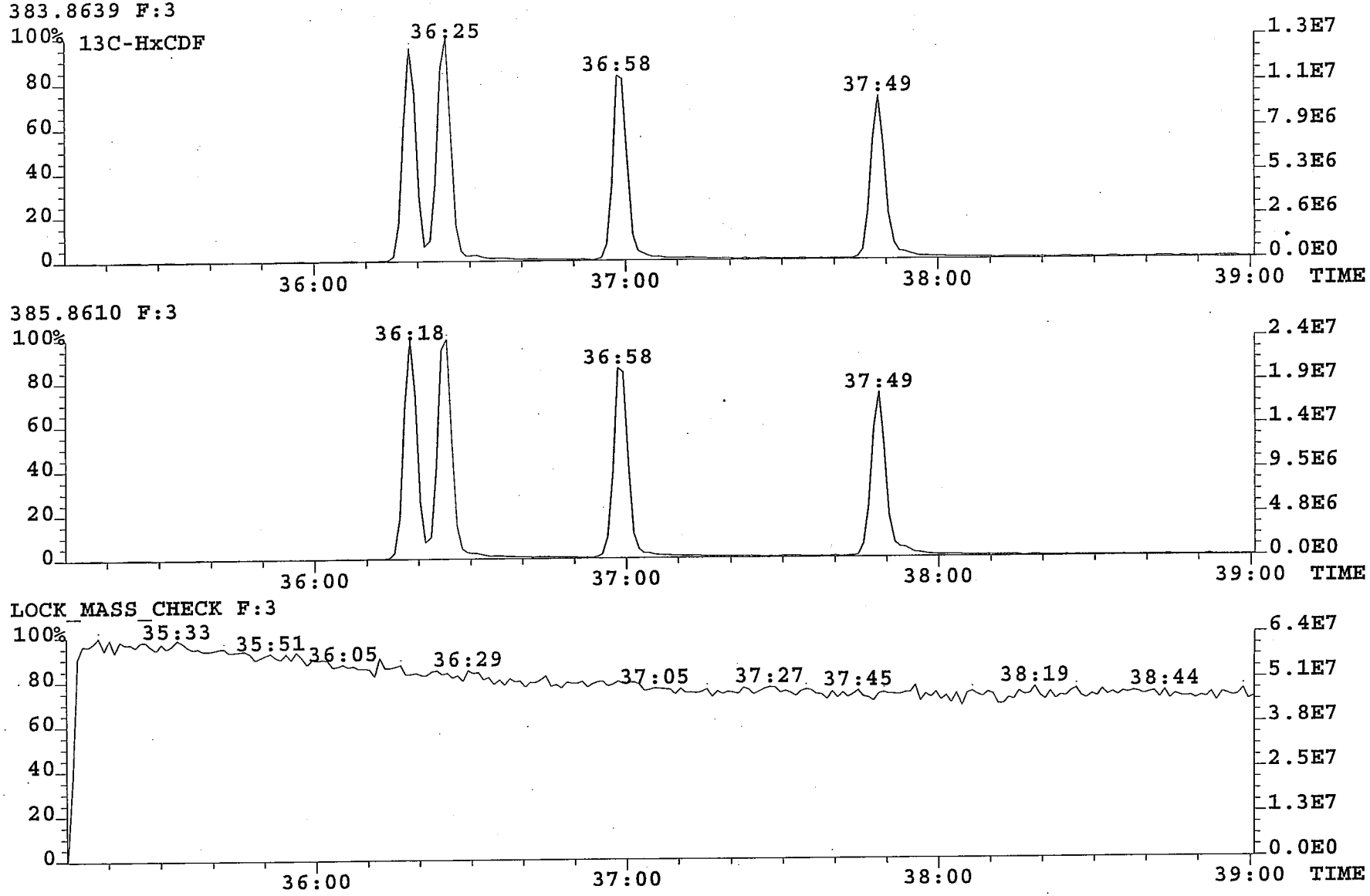
369.8919 F:2



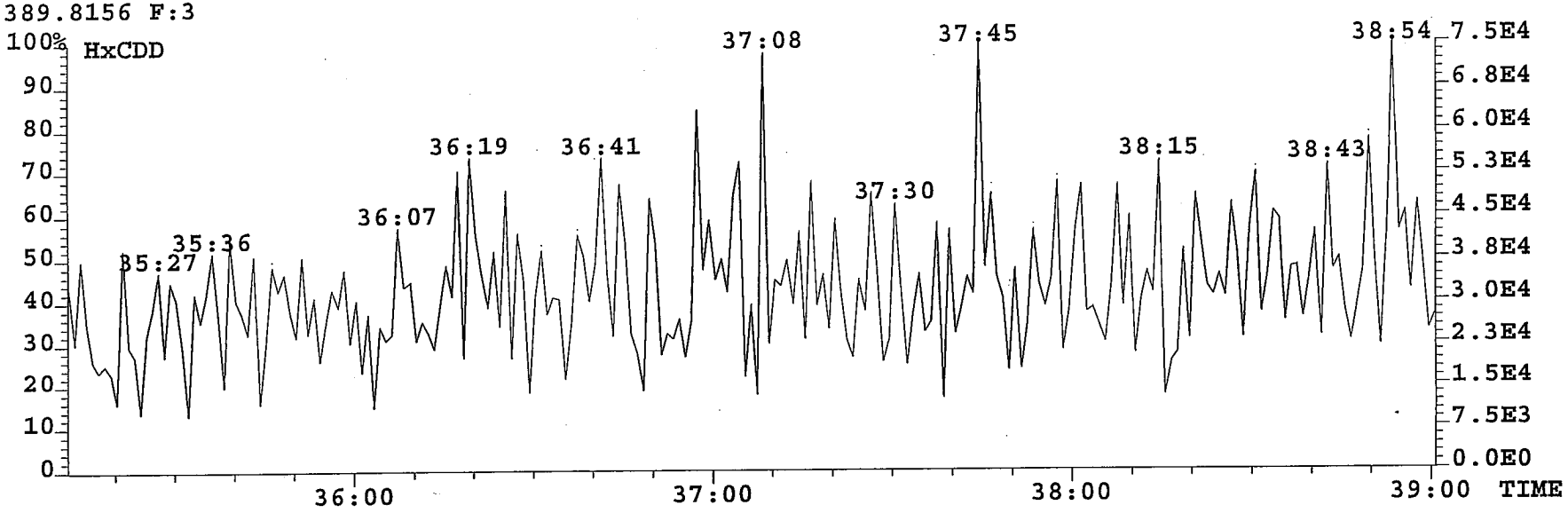
File:5I2506 #1-229 Acq:25-SEP-2001 15:08:44 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:TB001A_405-001 Exp:1613

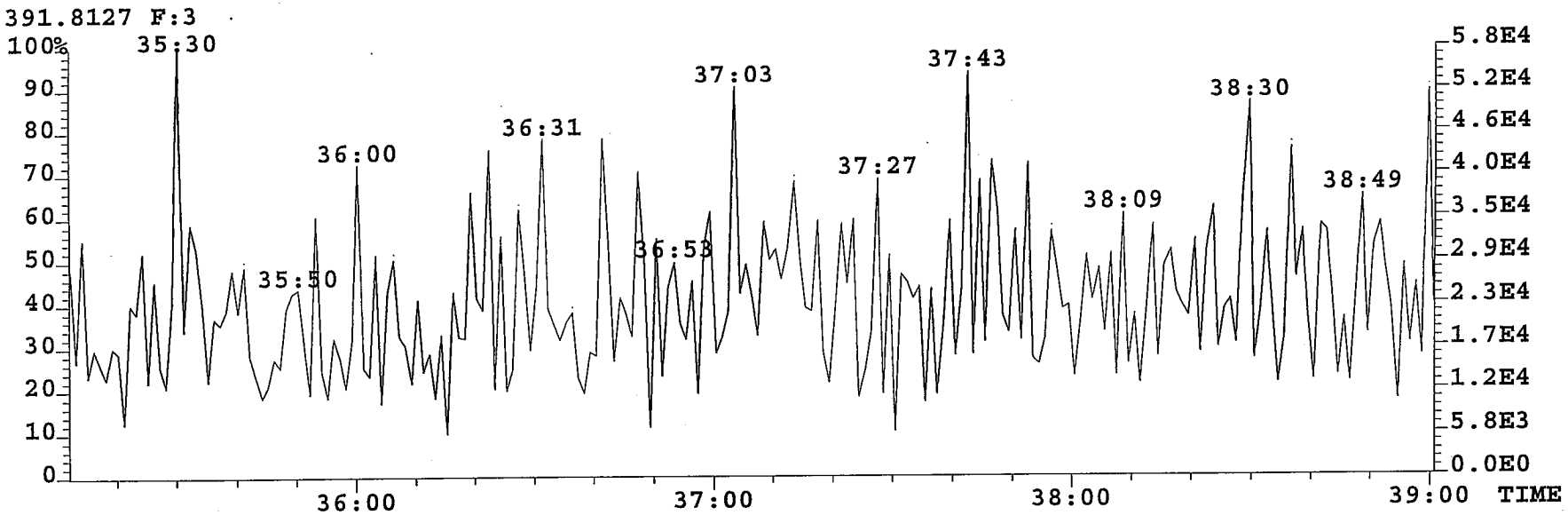


File:5I2506 #1-229 Acq:25-SEP-2001 15:08:44 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:TB001A_405-001 Exp:1613

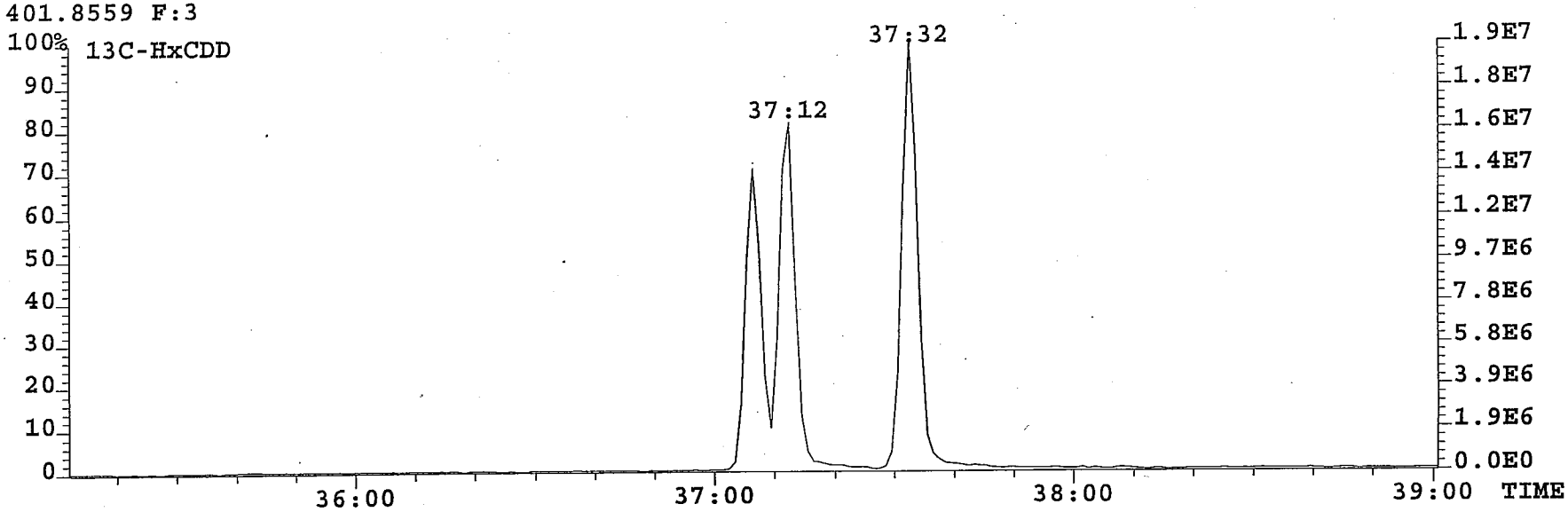


File:5I2506 #1-229 Acq:25-SEP-2001 15:08:44 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:TB001A_405-001 Exp:1613

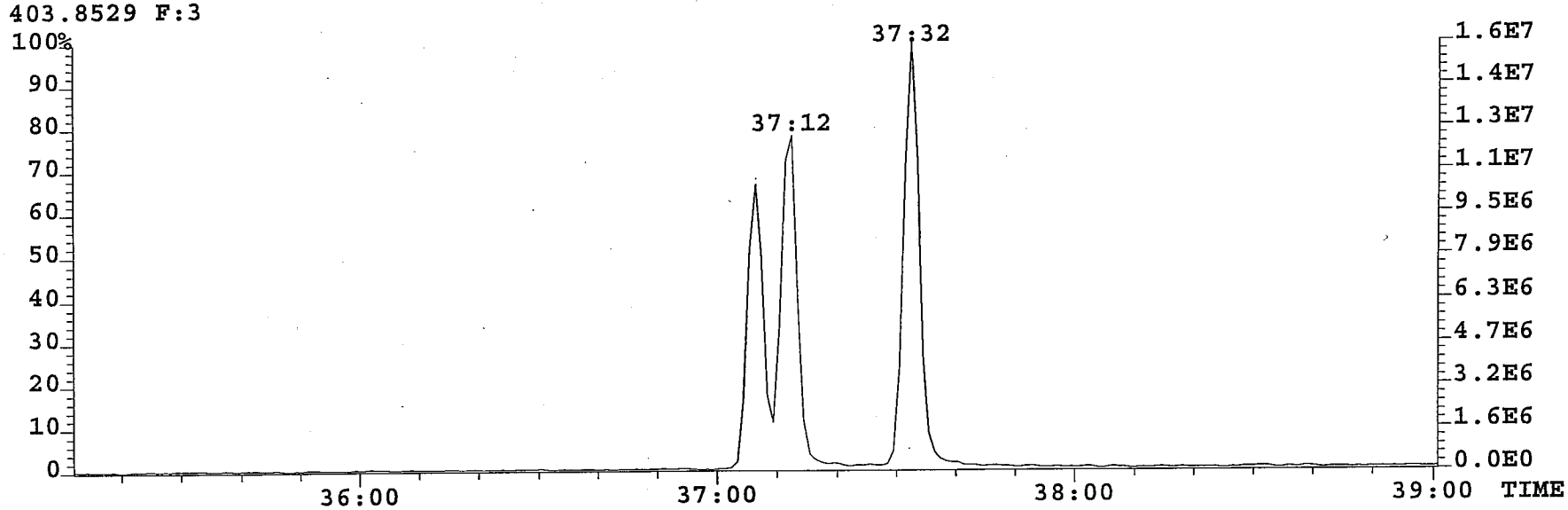




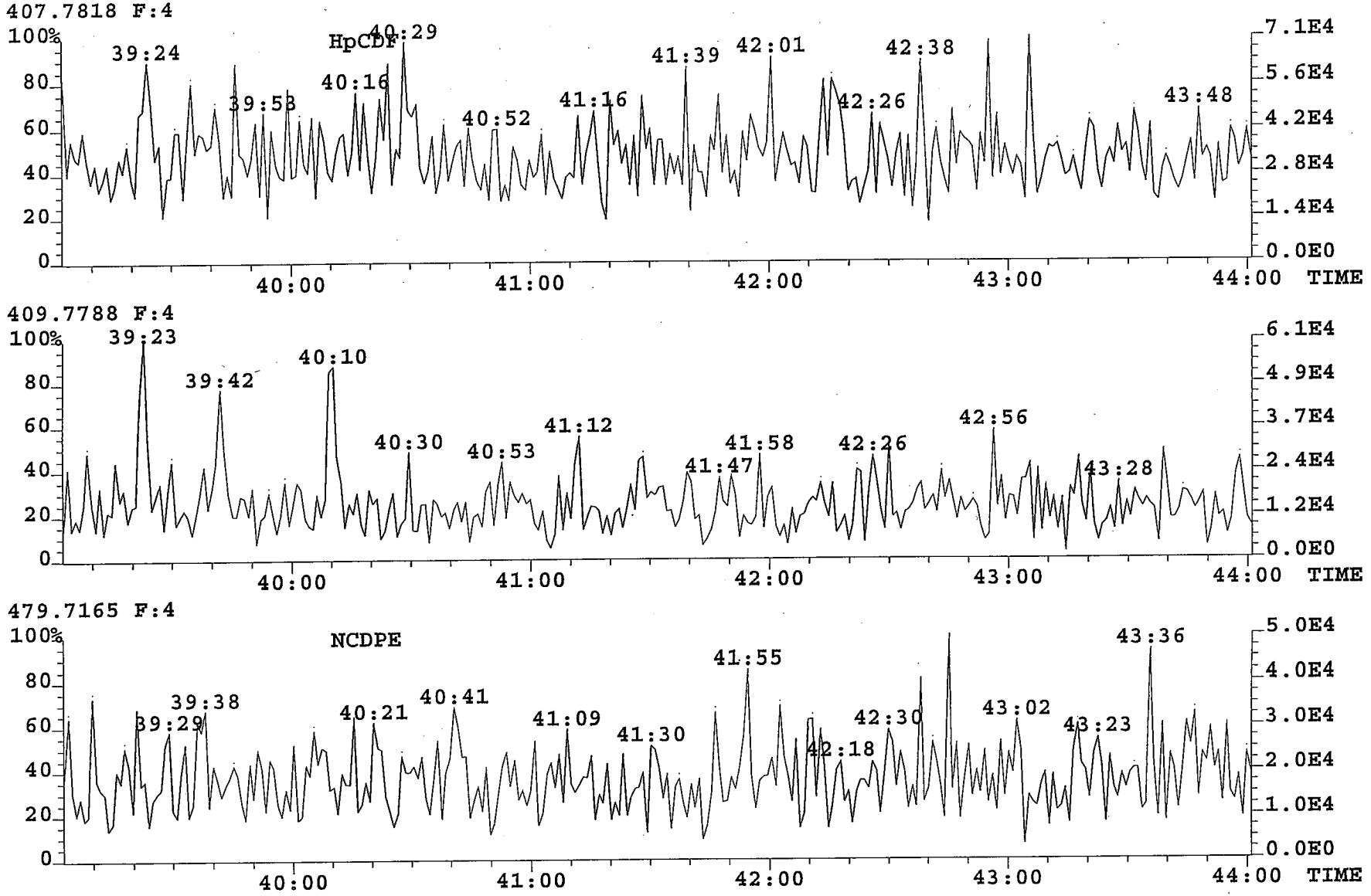
File:5I2506 #1-229 Acq:25-SEP-2001 15:08:44 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:TB001A_405-001 Exp:1613
401.8559 F:3



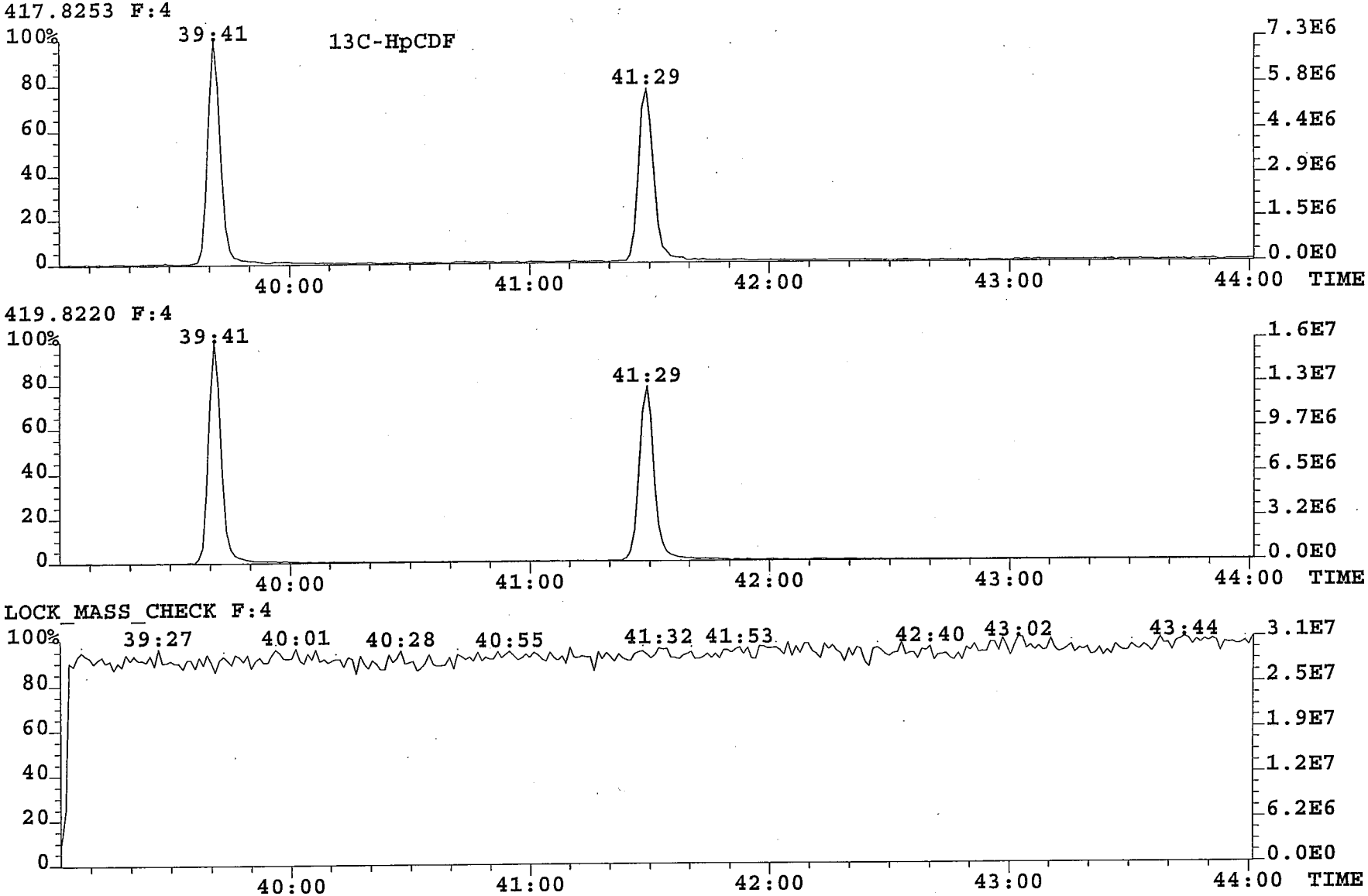
403.8529 F:3



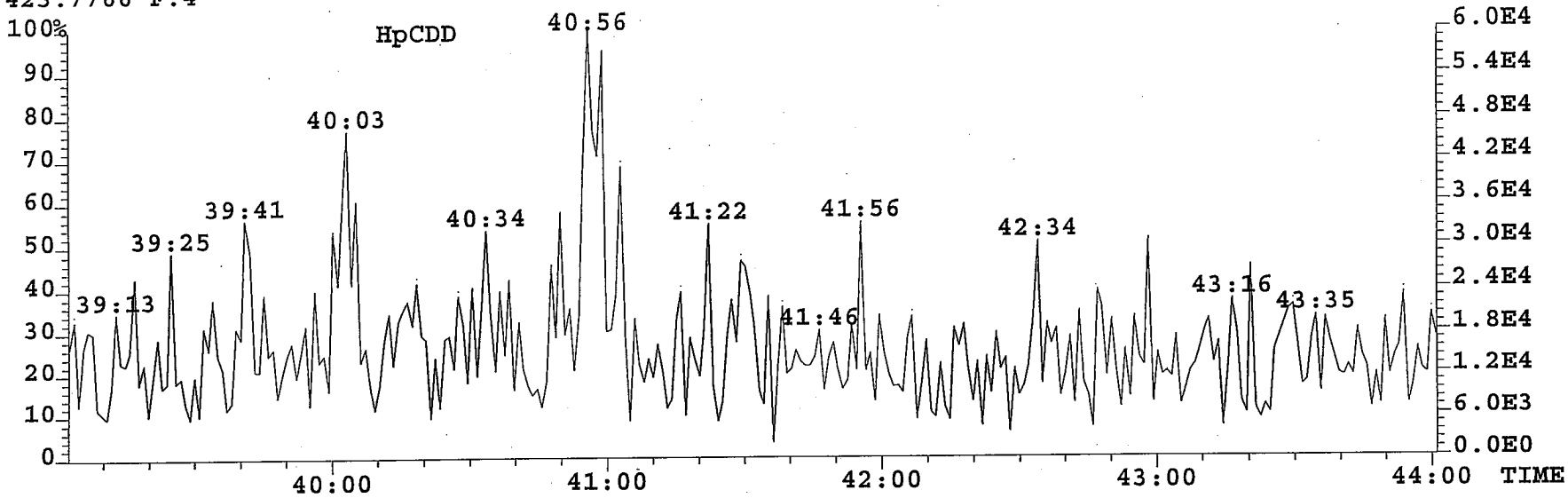
File:5I2506 #1-296 Acq:25-SEP-2001 15:08:44 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:TB001A_405-001 Exp:1613



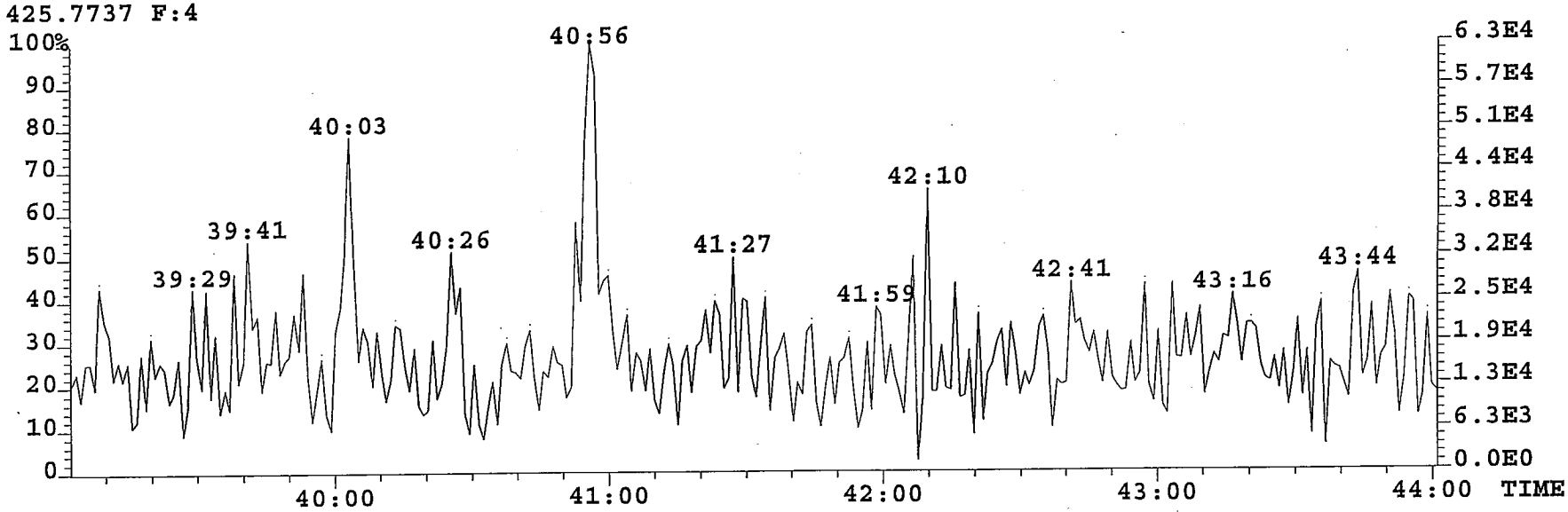
File:5I2506 #1-296 Acq:25-SEP-2001 15:08:44 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:TB001A_405-001 Exp:1613



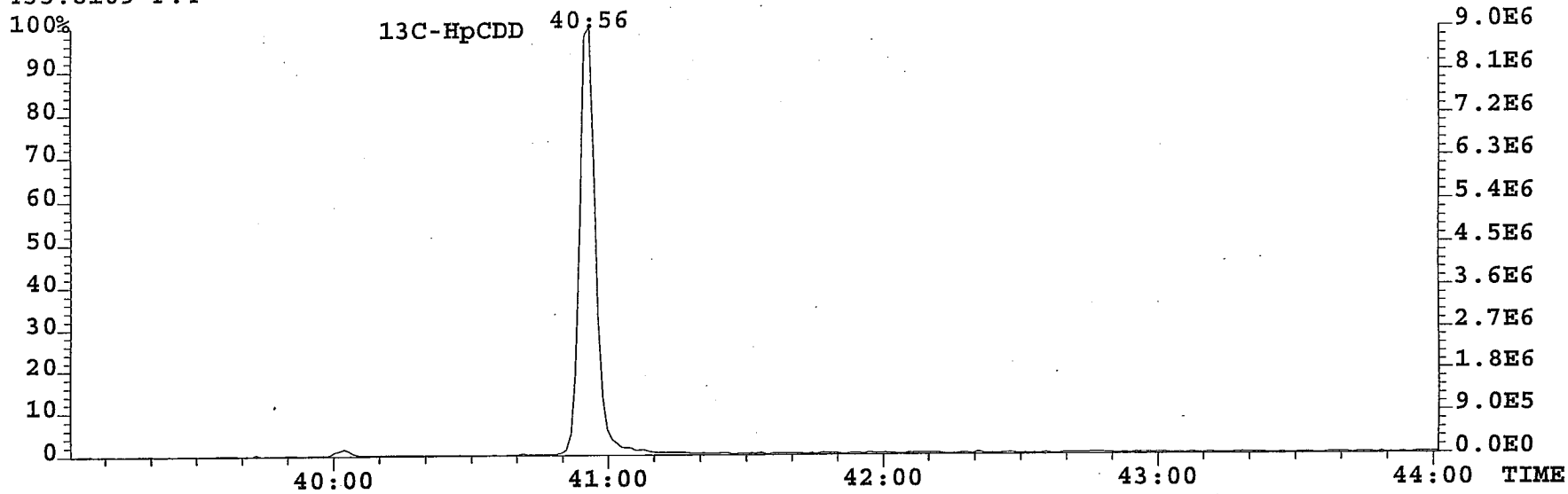
File:5I2506 #1-296 Acq:25-SEP-2001 15:08:44 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:TB001A_405-001 Exp:1613
423.7766 F:4



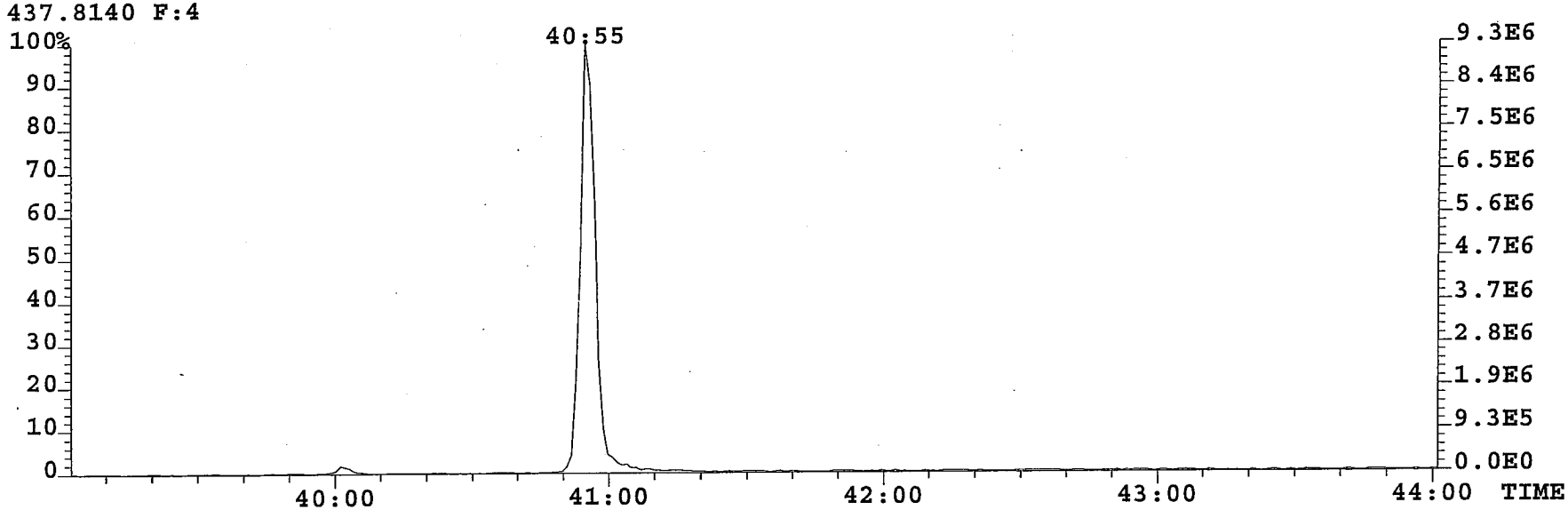
425.7737 F:4

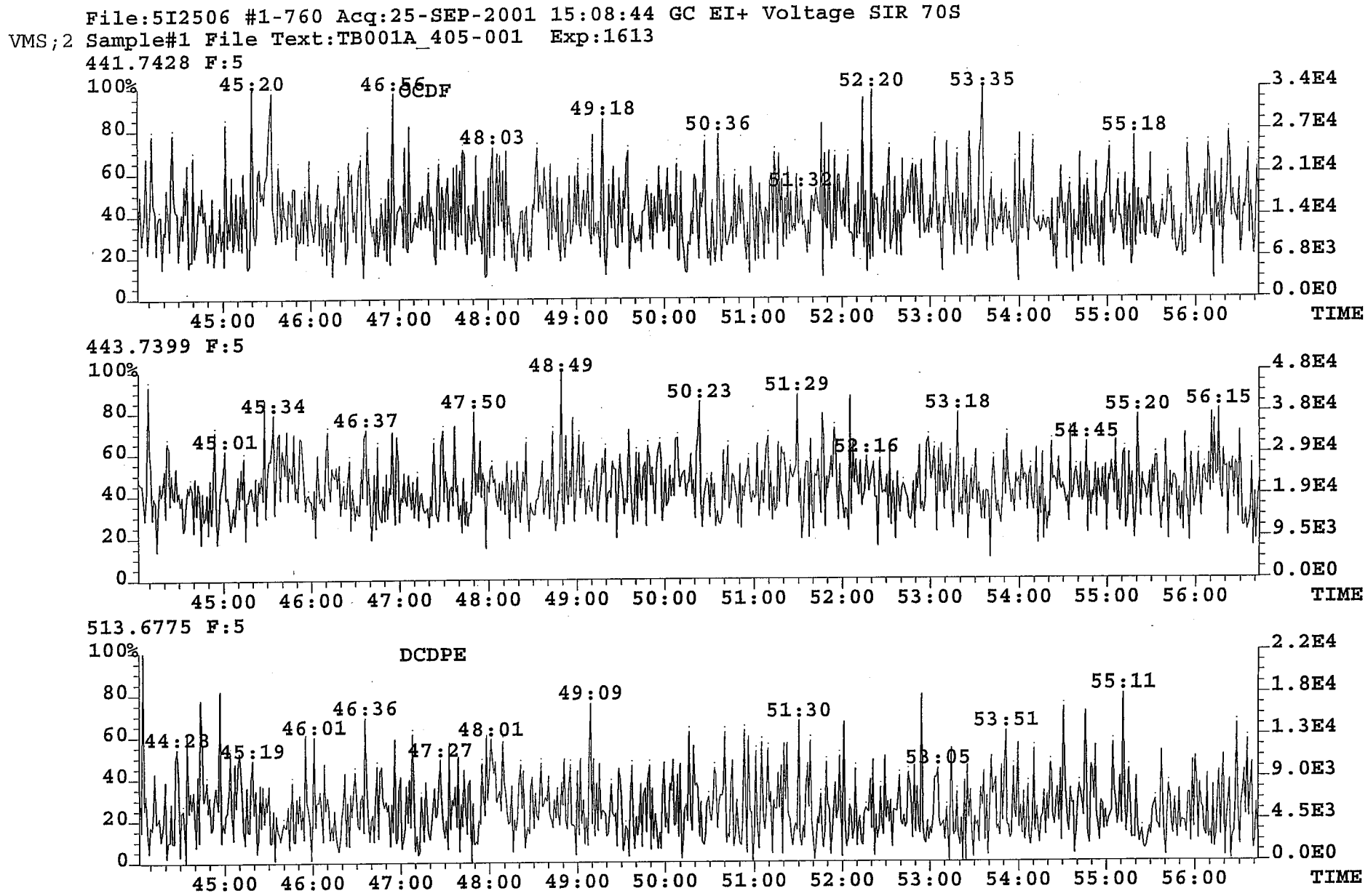


File:5I2506 #1-296 Acq:25-SEP-2001 15:08:44 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:TB001A_405-001 Exp:1613
435.8169 F:4



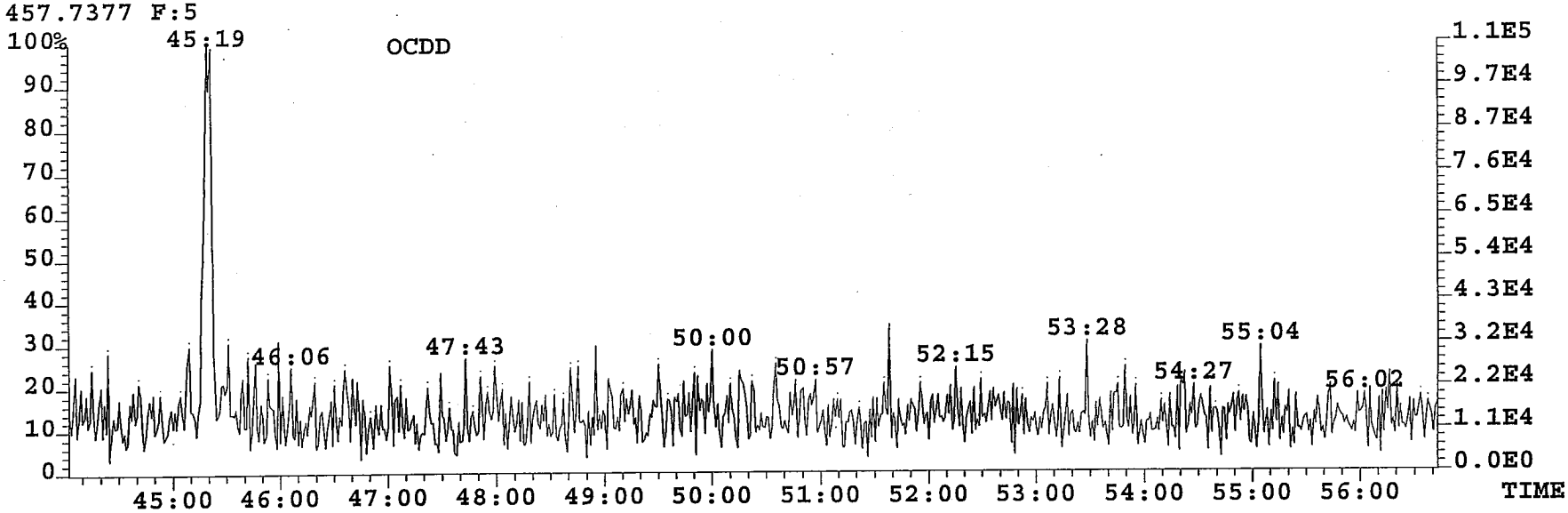
437.8140 F:4



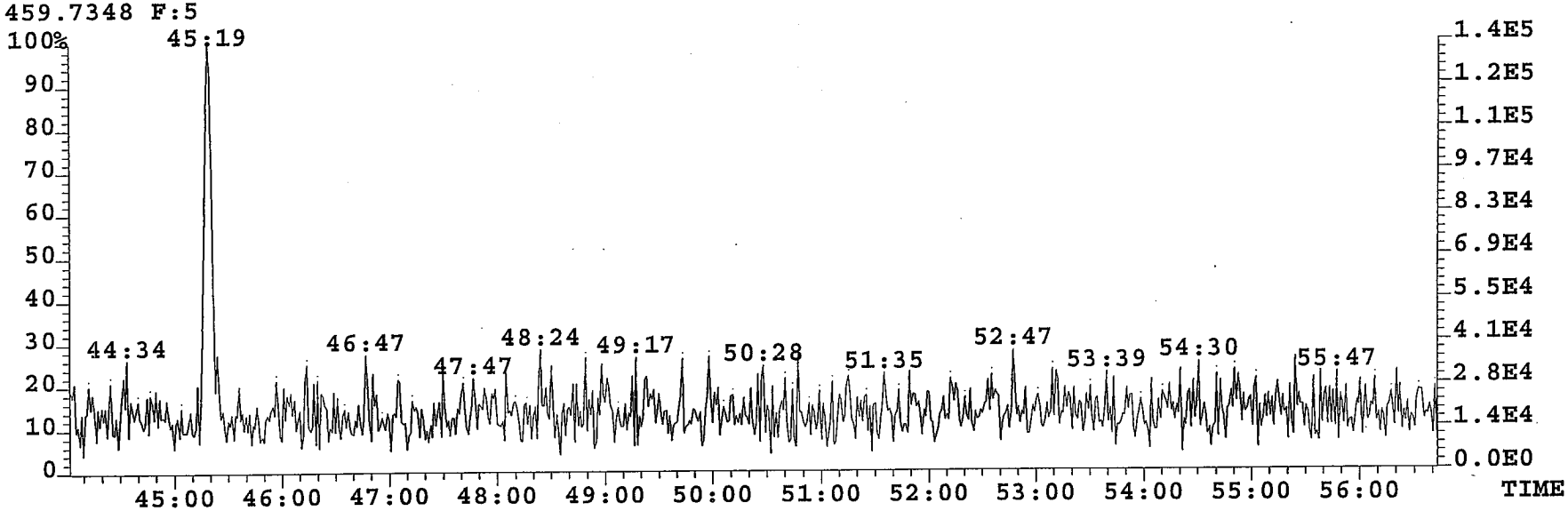

File:5I2506 #1-760 Acq:25-SEP-2001 15:08:44 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:TB001A_405-001 Exp:1613
441.7428 F:5
OCDF
45:20
46:56
48:03
49:18
50:36
51:32
52:20
53:35
55:18
443.7399 F:5
45:01
45:34
46:37
47:50
48:49
50:23
51:29
52:16
53:18
54:45
55:20
56:15
513.6775 F:5
DCDPE
44:28
45:19
46:01
46:36
47:27
48:01
49:09
51:30
53:05
53:51
55:11
100%
80
60
40
20
0
3.4E4
2.7E4
2.1E4
1.4E4
6.8E3
0.0E0
4.8E4
3.8E4
2.9E4
1.9E4
9.5E3
2.2E4
1.8E4
1.3E4
9.0E3
4.5E3
45:00 46:00 47:00 48:00 49:00 50:00 51:00 52:00 53:00 54:00 55:00 56:00
TIME

File:5I2506 #1-760 Acq:25-SEP-2001 15:08:44 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:TB001A_405-001 Exp:1613

457.7377 F:5

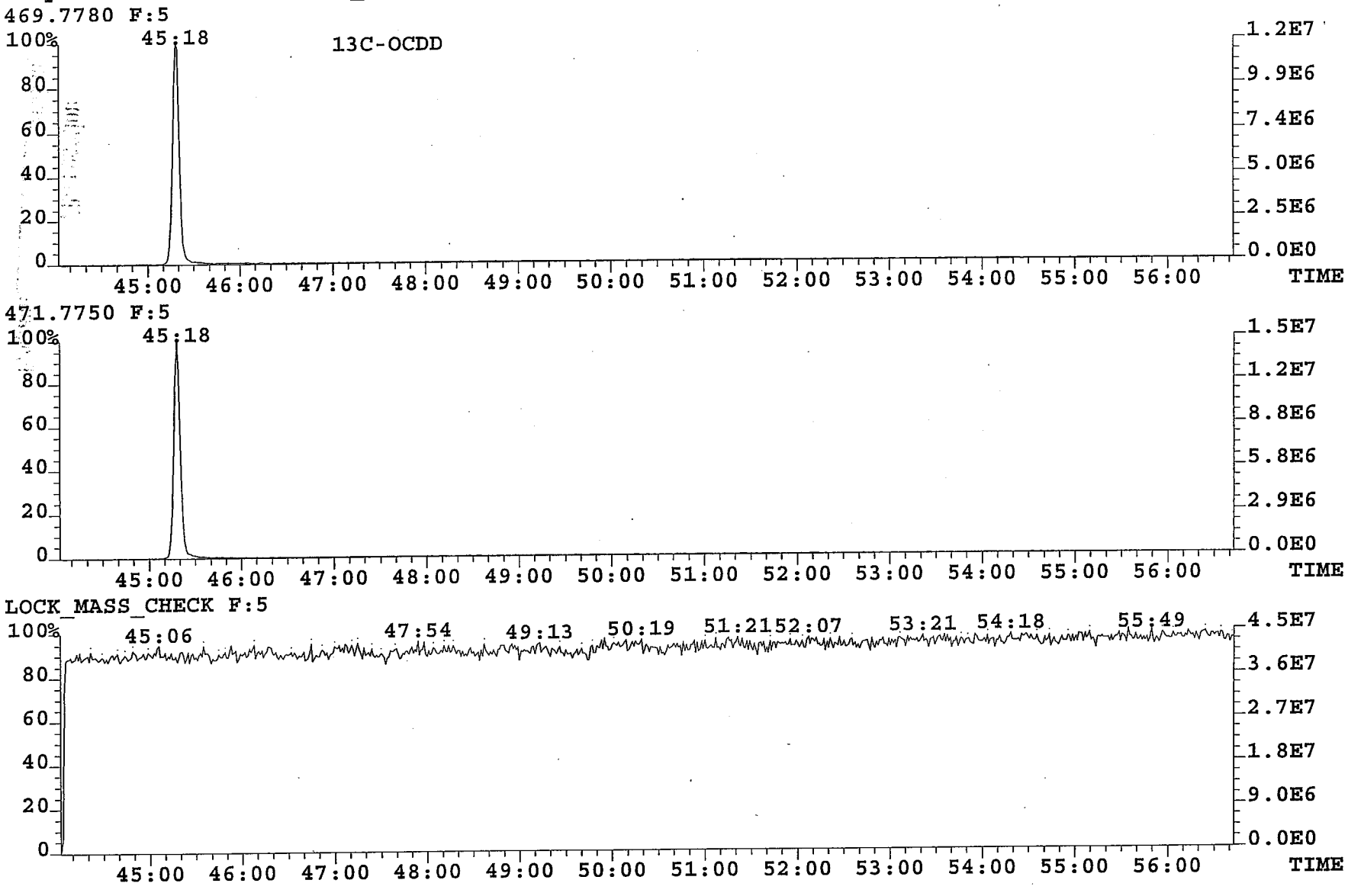


459.7348 F:5



File:5I2506 #1-760 Acq:25-SEP-2001 15:08:44 GC EI+ Voltage SIR 70S

VMS;2 Sample#1 File Text:TB001A_405-001 Exp:1613



PACIFIC ANALYTICAL 1613 PCDD/PCDF QUANTITATION SUMMARY

Lab File ID: 5C1105 Sample: T001A 622-001
Cal File: 5C04D Dil: 1.0 Sample Size (Dry if Solid): 1.0000
Nanograms Label Added (IS): 2.0 Nanograms RS Added: 2.0 Units: pg/L

Compound	Ratio	RRT	Response Factor	Extract ng/ml	Sample Conc.	Label Rec.
13C-2,3,7,8-TCDF	0.86	0.977	1.528		1458.70	72.93
2,3,7,8-TCDF	0.00	0.977	1.104	N.D.< CRQL		
13C-2,3,7,8-TCDD	0.81	1.008	1.189		1412.54	70.63
2,3,7,8-TCDD	0.00	1.008	0.849	N.D.< CRQL		
37Cl-2,3,7,8-TCDD	1.00	1.001	2.342		145.63	7.28
13C-1,2,3,7,8-PeCDF	1.57	1.158	1.441		1510.72	75.54
1,2,3,7,8-PeCDF	0.00	1.158	0.936	N.D.< CRQL		
13C-2,3,4,7,8-PeCDF	1.51	1.190	1.425		1414.97	70.75
2,3,4,7,8-PeCDF	0.00	1.190	0.961	N.D.< CRQL		
13C-1,2,3,7,8-PeCDD	1.57	1.203	0.961		1441.73	72.09
1,2,3,7,8-PeCDD	0.00	1.203	0.973	N.D.< CRQL		
13C-1,2,3,4,7,8-HxCDF	0.55	0.967	1.049		2028.89	101.44
1,2,3,4,7,8-HxCDF	1.35	1.000	1.176	0.31	6.14	
13C-1,2,3,6,7,8-HxCDF	0.56	0.969	1.171		2198.05	109.90
1,2,3,6,7,8-HxCDF	0.00	0.969	1.141	N.D.< CRQL		
13C-1,2,3,7,8,9-HxCDF	0.55	0.984	0.980		1958.06	97.90
1,2,3,7,8,9-HxCDF	0.00	0.984	1.186	N.D.< CRQL		
13C-2,3,4,6,7,8-HxCDF	0.56	1.007	0.957		1915.73	95.79
2,3,4,6,7,8-HxCDF	0.00	1.007	1.073	N.D.< CRQL		
13C-1,2,3,4,7,8-HxCDD	1.24	0.988	0.826		1884.90	94.24
1,2,3,4,7,8-HxCDD	0.00	0.988	0.927	N.D.< CRQL		
13C-1,2,3,6,7,8-HxCDD	1.27	0.991	1.009		1864.08	93.20
1,2,3,6,7,8-HxCDD	0.00	0.991	0.837	N.D.< CRQL		
13C-1,2,3,7,8,9-HxCDD	0.00	0.991	0.000	N.D.< CRQL		
1,2,3,7,8,9-HxCDD	0.00	0.991	0.925	N.D.< CRQL		
13C-1,2,3,4,6,7,8-HpCDF	0.43	1.056	0.881		1985.22	99.26
1,2,3,4,6,7,8-HpCDF	0.00	1.056	1.218	N.D.< CRQL		
13C-1,2,3,4,7,8,9-HpCDF	0.48	1.104	0.794		1820.58	91.03
1,2,3,4,7,8,9-HpCDF	0.00	1.104	1.141	N.D.< CRQL		
13C-1,2,3,4,6,7,8-HpCDD	1.03	1.090	0.718		1949.23	97.46
1,2,3,4,6,7,8-HpCDD	0.00	1.090	1.027	N.D.< CRQL		
13C-OCDD	0.91	1.206	0.619		3750.22	93.76
OCDF	0.81	1.005	1.232	0.85	17.01	
OCDD	0.98	1.001	1.021	3.15	62.93	

Pacific Analytical Inc.
PCDD/PCDF Targetting Summary

Lab File ID: \VG\DIOXIN\5C1105.DAT Target File: :\VG\DIOXIN\1613.TRG

Compound	Flag	QM1	QM2	Ratio	OK	Pred. RT	Act. Rt	Area
13C-1,2,3,4-TCDD	R	332	334	0.76	Y	28.083	28.083	162784000
13C-2,3,7,8-TCDF	I	316	318	0.86	Y	27.417	27.450	181414000
2,3,7,8-TCDF	U	304	306	0.00	N	27.480	0.000	No Trace Found
13C-2,3,7,8-TCDD	I	332	334	0.81	Y	28.310	28.300	136699000
2,3,7,8-TCDD	U	320	322	0.00	N	28.314	0.000	No Trace Found
37Cl-2,3,7,8-TCDD	I	328	328	1.00	Y	28.314	28.333	27760000
13C-1,2,3,7,8-PeCDF	I	352	354	1.57	Y	32.470	32.533	177186000
1,2,3,7,8-PeCDF	U	340	342	0.00	N	32.553	0.000	No Trace Found
13C-2,3,4,7,8-PeCDF	I	352	354	1.51	Y	33.295	33.417	164113000
2,3,4,7,8-PeCDF	U	340	342	0.00	N	33.437	0.000	No Trace Found
13C-1,2,3,7,8-PeCDD	I	368	370	1.57	Y	33.643	33.783	112769000
1,2,3,7,8-PeCDD	U	356	358	0.00	N	33.800	0.000	No Trace Found
13C-1,2,3,7,8,9-HxCDD	R	402	404	1.24	Y	37.550	37.550	110284000
13C-1,2,3,4,7,8-HxCDF	I	384	386	0.55	Y	36.318	36.300	117359000
1,2,3,4,7,8-HxCDF	U	374	376	1.35	Y	36.318	36.317	423660
13C-1,2,3,6,7,8-HxCDF	I	384	386	0.56	Y	36.416	36.400	141931000
1,2,3,6,7,8-HxCDF	U	374	376	0.00	N	36.418	0.000	No Trace Found
13C-1,2,3,7,8,9-HxCDF	I	384	386	0.55	Y	36.979	36.967	105812000
1,2,3,7,8,9-HxCDF	U	374	376	0.00	N	36.985	0.000	No Trace Found
13C-2,3,4,6,7,8-HxCDF	I	384	386	0.56	Y	37.802	37.800	101095000
2,3,4,6,7,8-HxCDF	U	374	376	0.00	N	37.819	0.000	No Trace Found
13C-1,2,3,4,7,8-HxCDD	I	402	404	1.24	Y	37.111	37.100	85852000
1,2,3,4,7,8-HxCDD	U	390	392	0.00	N	37.119	0.000	No Trace Found
13C-1,2,3,6,7,8-HxCDD	I	402	404	1.27	Y	37.216	37.200	103714000
1,2,3,6,7,8-HxCDD	U	390	392	0.00	N	37.219	0.000	No Trace Found
13C-1,2,3,7,8,9-HxCDD	N	402	404	0.00	N	37.550	0.000	No Trace Found
1,2,3,7,8,9-HxCDD	U	390	392	0.00	N	37.550	0.000	No Trace Found
13C-1,2,3,4,6,7,8-HpCDF	I	418	420	0.43	Y	39.724	39.667	96442000
1,2,3,4,6,7,8-HpCDF	U	408	410	0.00	N	39.687	0.000	No Trace Found
13C-1,2,3,4,7,8,9-HpCDF	I	418	420	0.48	Y	41.481	41.467	79710000
1,2,3,4,7,8,9-HpCDF	U	408	410	0.00	N	41.488	0.000	No Trace Found
13C-1,2,3,4,6,7,8-HpCDD	I	436	438	1.03	Y	40.918	40.917	77174000
1,2,3,4,6,7,8-HpCDD	U	424	426	0.00	N	40.937	0.000	No Trace Found
13C-OCDD	I	470	472	0.91	Y	45.372	45.283	128006000
OCDF	U	442	444	0.81	Y	45.546	45.517	670520
OCDD	U	458	460	0.98	Y	45.301	45.317	2056000

PACIFIC ANALYTICAL
PCDD/PCDF TOTALS SUMMARY OF NON-2,3,7,8 CONGENERS

Lab File: 5C1105 Sample: T001A Lab ID: 622-001
Cal File: 5C04D Sample Size: 1.0000
Nanograms Label Added (IS): 2.0 Nanograms RS Added: 2.0

Analyte	Number of Peaks	Sample Conc. pg/L	Total Area	Area IS	$\overline{RRF}$
TCDD	0	0.00	0	136699008	0.849
PeCDD	0	0.00	0	112769000	0.973
HxCDD	0	0.00	0	94783000	0.896
HpCDD	0	0.00	0	77174000	1.027
TCDF	0	0.00	0	181414000	1.104
PeCDF	0	0.00	0	170649504	0.948
HxCDF	2	7.82	521270	116549256	1.144
HpCDF	0	0.00	0	88076000	1.179

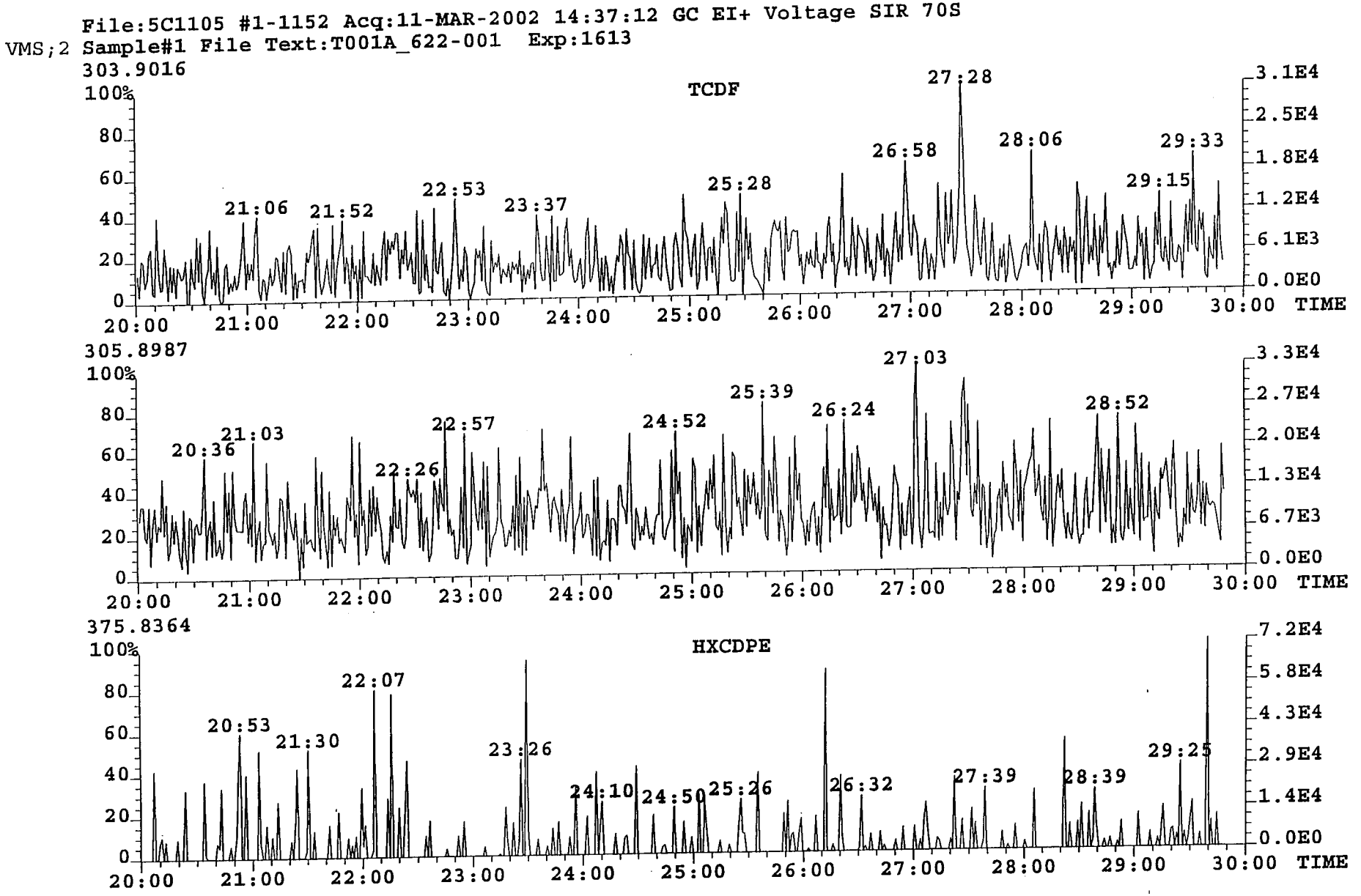
PACIFIC ANALYTICAL
PCDD/PCDF PEAK SUMMARY

Lab File: 5C1105 Sample: T001A Lab ID: 622-001

Entry No.	Match	Level Flag	QM	RT	AREA	HEIGHT	COMPOUND
1	0	X 4	305.8987	27.483	122090	26740	
2	3	I 4	315.9419	27.450	83773000	22049000	13C-2,3,7,8-TCDF
3	2	I 4	317.9389	27.450	97641000	24178000	13C-2,3,7,8-TCDF
4	0	X 4	319.8965	27.417	267330	71249	
5	7	R 4	331.9368	28.083	70268000	17337000	13C-1,2,3,4-TCDD
6	8	I 4	331.9368	28.300	61170000	15961000	13C-2,3,7,8-TCDD
7	5	R 4	333.9339	28.083	92516000	23686000	13C-1,2,3,4-TCDD
8	6	I 4	333.9339	28.300	75529000	19459000	13C-2,3,7,8-TCDD
9	9	C 0	327.8847	21.217	295110	71520	
10	10	C 0	327.8847	22.283	308640	56215	
11	11	C 0	327.8847	22.650	328860	121660	
12	12	C 0	327.8847	22.933	138870	49357	
13	13	C 0	327.8847	23.300	1584200	409200	
14	14	C 0	327.8847	24.083	212460	50729	
15	15	C 0	327.8847	24.650	155030	37343	
16	16	C 0	327.8847	24.983	1044200	254320	
17	17	C 0	327.8847	25.517	103550	72079	
18	18	C 0	327.8847	26.767	642360	144030	
19	19	I 0	327.8847	28.333	13880000	3534300	37Cl-2,3,7,8-TCDD
20	0	X 0	327.8847	28.467	126630	55804	
21	24	O 5	339.8597	32.567	138930	39937	
22	0	X 5	339.8597	33.417	135250	32085	
23	0	X 5	341.8568	31.433	111760	26922	
24	21	O 5	341.8568	32.567	116700	26419	
25	0	X 5	341.8568	32.817	114640	30768	
26	28	I 5	351.9000	32.533	108310000	30637000	13C-1,2,3,7,8-PeCD
27	29	I 5	351.9000	33.417	98723000	30772000	13C-2,3,4,7,8-PeCD
28	26	I 5	353.8970	32.533	68876000	19411000	13C-1,2,3,7,8-PeCD
29	27	I 5	353.8970	33.417	65390000	19122000	13C-2,3,4,7,8-PeCD
30	0	X 5	355.8546	32.533	193940	43529	
31	0	X 5	355.8546	33.417	184770	54030	
32	0	X 5	355.8546	33.783	125240	52955	
33	0	X 5	355.8546	33.950	101350	26080	
34	0	X 5	355.8546	34.200	125150	39130	
35	0	X 5	355.8546	34.683	152470	40973	
36	0	X 5	355.8546	34.733	111320	35427	
37	38	I 5	367.8949	33.783	68965000	23093000	13C-1,2,3,7,8-PeCD
38	37	I 5	369.8919	33.783	43804000	15023000	13C-1,2,3,7,8-PeCD
39	0	X 6	373.8207	35.750	112550	34755	
40	0	X 6	373.8207	35.983	146620	44733	
41	50	U 6	373.8207	36.300	243190	58069	1,2,3,4,7,8-HxCDF
42	51	O 6	373.8207	36.417	219590	47791	
43	52	C 6	373.8207	36.717	235550	80423	
44	52	C 6	373.8207	36.783	108300	35227	
45	0	X 6	373.8207	36.983	207240	54245	
46	0	X 6	373.8207	37.450	169200	31505	
47	0	X 6	373.8207	37.817	182270	51981	
48	0	X 6	373.8207	38.083	166350	32795	
49	0	X 6	375.8178	35.550	101210	18179	
50	41	U 6	375.8178	36.317	180470	47334	1,2,3,4,7,8-HxCDF
51	42	O 6	375.8178	36.433	152110	45221	
52	44	C 6	375.8178	36.733	177420	48253	
53	57	I 6	383.8639	36.300	41721000	14100000	13C-1,2,3,4,7,8-Hx

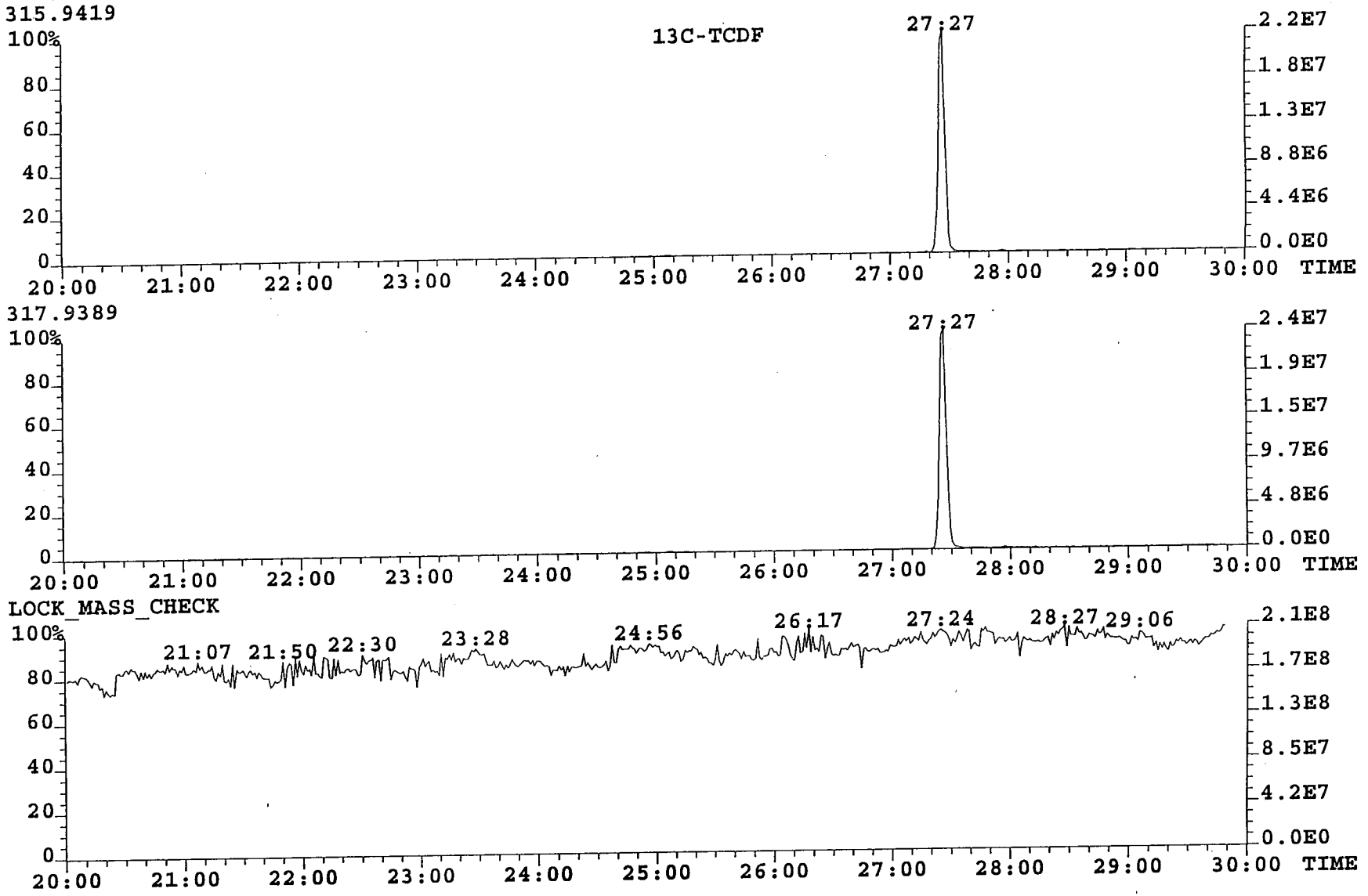
54	58	I 6	383.8639	36.400	50746000	16218000	13C-1,2,3,6,7,8-Hx
55	59	I 6	383.8639	36.967	37596000	11934000	13C-1,2,3,7,8,9-Hx
56	60	I 6	383.8639	37.800	36112000	9869100	13C-2,3,4,6,7,8-Hx
57	53	I 6	385.8610	36.300	75638000	24699000	13C-1,2,3,4,7,8-Hx
58	54	I 6	385.8610	36.400	91185000	29983000	13C-1,2,3,6,7,8-Hx
59	55	I 6	385.8610	36.967	68216000	22573000	13C-1,2,3,7,8,9-Hx
60	56	I 6	385.8610	37.800	64983000	18000000	13C-2,3,4,6,7,8-Hx
61	0	X 6	389.8156	35.200	131100	51750	
62	0	X 6	389.8156	36.083	103070	21280	
63	72	O 6	389.8156	36.300	271720	73132	
64	0	X 6	389.8156	36.400	272550	86295	
65	73	O 6	389.8156	36.567	113070	38876	
66	0	X 6	389.8156	36.733	108420	36261	
67	75	O 6	389.8156	36.950	167270	53688	
68	0	X 6	389.8156	37.250	130590	43986	
69	0	X 6	389.8156	37.817	292930	70606	
70	0	X 6	389.8156	38.133	174360	35485	
71	0	X 6	389.8156	38.550	114490	34304	
72	63	O 6	391.8127	36.300	146510	45721	
73	65	O 6	391.8127	36.533	124510	33461	
74	0	X 6	391.8127	36.633	133280	28228	
75	67	O 6	391.8127	36.967	103890	35295	
76	0	X 6	391.8127	37.133	130510	28398	
77	80	I 6	401.8559	37.100	47482000	15446000	13C-1,2,3,4,7,8-Hx
78	81	I 6	401.8559	37.200	57989000	17413000	13C-1,2,3,6,7,8-Hx
79	82	R 6	401.8559	37.550	61037000	18878000	13C-1,2,3,7,8,9-Hx
80	77	I 6	403.8529	37.100	38370000	12443000	13C-1,2,3,4,7,8-Hx
81	78	I 6	403.8529	37.200	45725000	14355000	13C-1,2,3,6,7,8-Hx
82	79	R 6	403.8529	37.550	49247000	14952000	13C-1,2,3,7,8,9-Hx
83	0	X 7	407.7818	39.100	215950	41354	
84	95	O 7	407.7818	39.400	164010	72115	
85	0	X 7	407.7818	39.567	140160	39237	
86	96	O 7	407.7818	39.667	168580	53699	
87	0	X 7	407.7818	40.000	240220	39158	
88	97	O 7	407.7818	40.167	314610	81574	
89	0	X 7	407.7818	40.533	101250	33433	
90	0	X 7	407.7818	41.100	106830	30369	
91	0	X 7	407.7818	41.433	131870	41860	
92	0	X 7	407.7818	41.483	138620	42646	
93	0	X 7	407.7818	41.650	123900	22573	
94	0	X 7	407.7818	42.000	102570	26122	
95	84	O 7	409.7788	39.367	187850	47179	
96	86	O 7	409.7788	39.700	129810	34144	
97	88	O 7	409.7788	40.167	236480	53411	
98	0	X 7	409.7788	42.617	110190	21734	
99	102	I 7	417.8253	39.667	29171000	7016400	13C-1,2,3,4,6,7,8-
100	0	X 7	417.8253	39.917	207290	87102	
101	103	I 7	417.8253	41.467	25728000	6194100	13C-1,2,3,4,7,8,9-
102	99	I 7	419.8220	39.667	67271000	16733000	13C-1,2,3,4,6,7,8-
103	101	I 7	419.8220	41.467	53982000	13316000	13C-1,2,3,4,7,8,9-
104	0	X 0	479.7165	40.417	109180	31492	
105	0	X 0	479.7165	41.500	117850	31157	
106	0	X 0	479.7165	41.967	175890	32624	

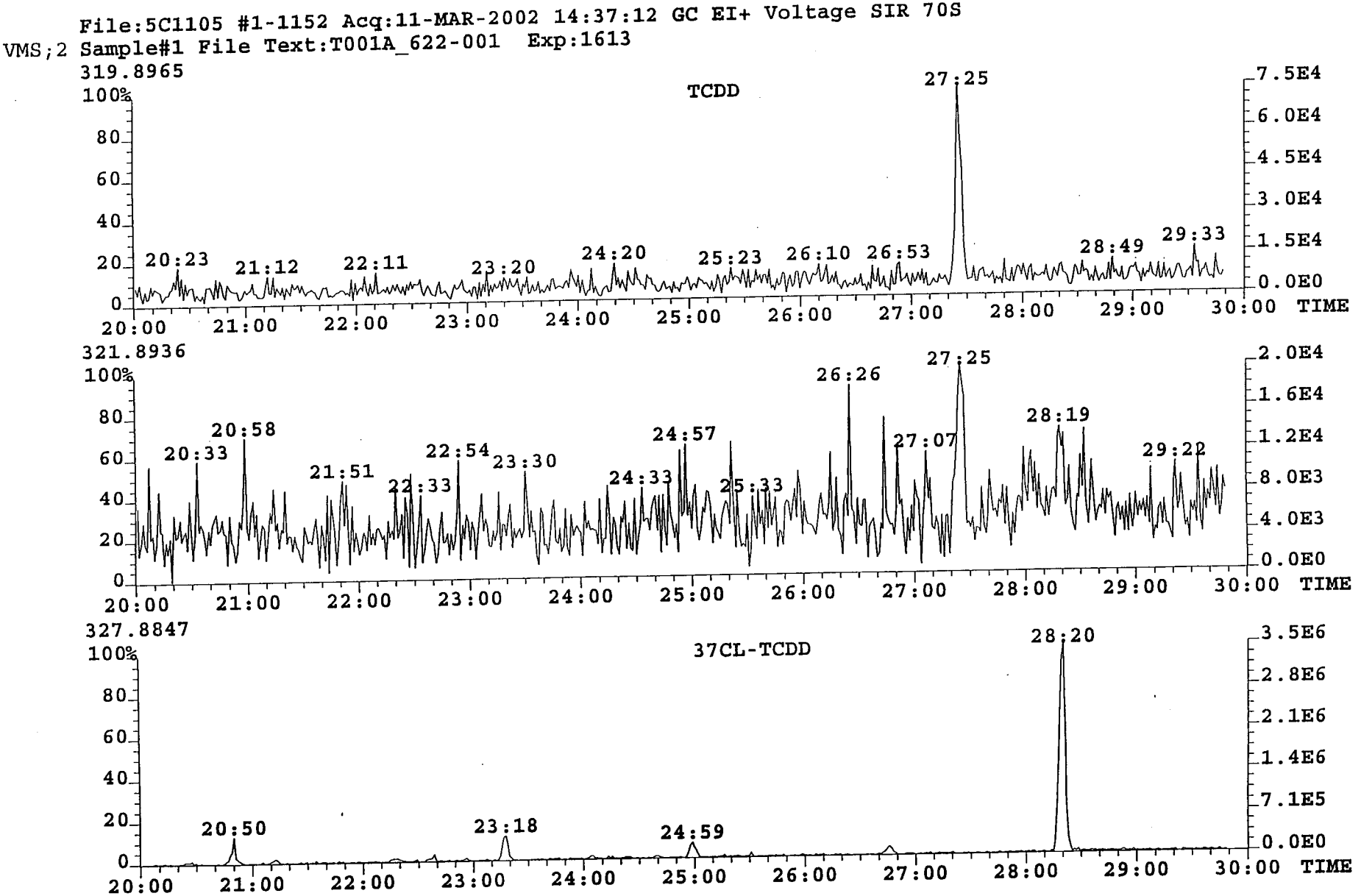
107	111	O	7	423.7766	39.667	358850	89908
108	0	X	7	423.7766	40.033	152700	36628
109	112	O	7	423.7766	40.933	293000	41765
110	0	X	7	423.7766	41.450	320000	62284
111	107	O	7	425.7737	39.667	153180	52766
112	109	O	7	425.7737	40.917	230560	49618
113	115	Y	7	435.8169	40.017	570800	159170
114	116	I	7	435.8169	40.917	39076000	9539200 13C-1,2,3,4,6,7,8-
115	113	Y	7	437.8140	40.017	554600	135950
116	114	I	7	437.8140	40.917	38098000	9124000 13C-1,2,3,4,6,7,8-
117	119	U	8	441.7428	45.533	300740	78507 OCDF
118	0	X	8	443.7399	44.733	134240	31010
119	117	U	8	443.7399	45.517	369780	58673 OCDF
120	0	X	8	443.7399	48.483	120340	21815
121	122	U	8	457.7377	45.283	1016900	165550 OCDD
122	121	U	8	459.7348	45.317	1039100	208860 OCDD
123	124	I	8	469.7780	45.283	61025000	11552000 13C-OCDD
124	123	I	8	471.7750	45.283	66981000	12143000 13C-OCDD

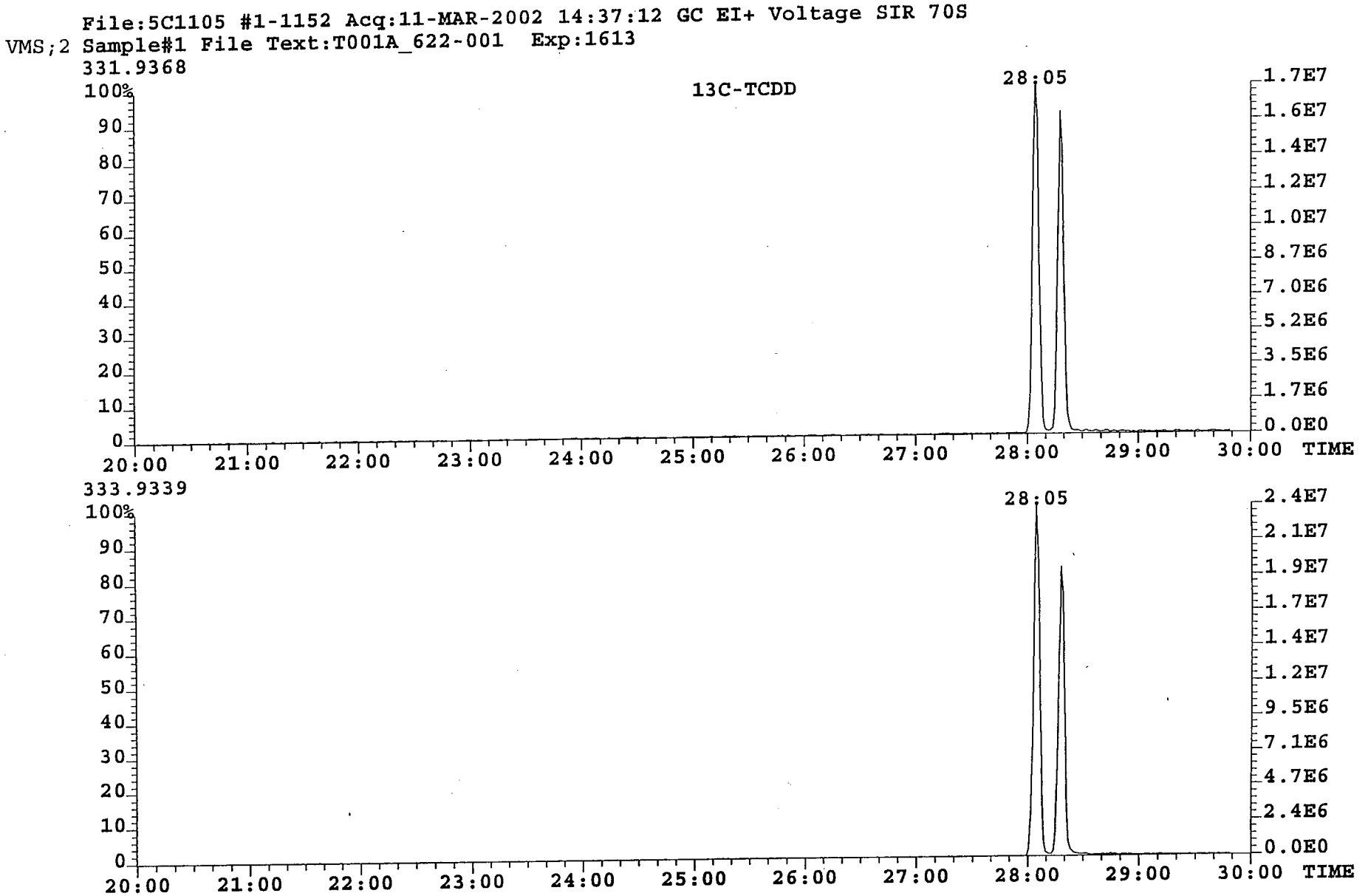

File:5C1105 #1-1152 Acq:11-MAR-2002 14:37:12 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:T001A_622-001 Exp:1613
303.9016
TCDF
21:06
21:52
22:53
23:37
25:28
26:58
27:28
28:06
29:15
29:33
305.8987
20:36
21:03
22:26
22:57
24:52
25:39
26:24
27:03
28:52
375.8364
HXCDPE
20:53
21:30
22:07
23:26
24:10
24:50
25:26
26:32
27:39
28:39
29:25
100%
80
60
40
20
0
20:00
21:00
22:00
23:00
24:00
25:00
26:00
27:00
28:00
29:00
30:00
TIME
3.1E4
2.5E4
1.8E4
1.2E4
6.1E3
0.0E0
3.3E4
2.7E4
2.0E4
1.3E4
6.7E3
0.0E0
7.2E4
5.8E4
4.3E4
2.9E4
1.4E4
0.0E0

File:5C1105 #1-1152 Acq:11-MAR-2002 14:37:12 GC EI+ Voltage SIR 70S

VMS;2 Sample#1 File Text:T001A_622-001 Exp:1613

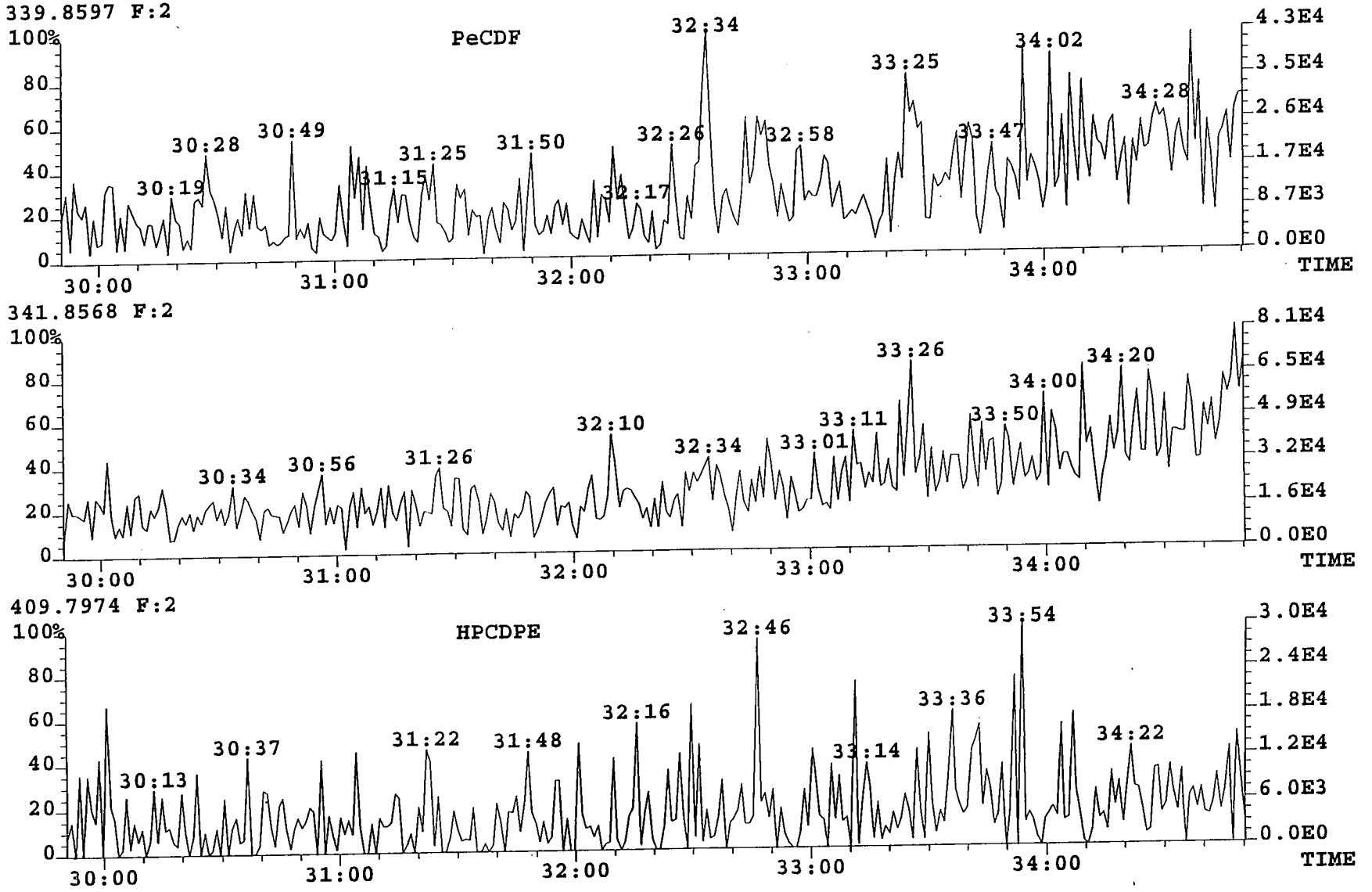



File:5C1105 #1-1152 Acq:11-MAR-2002 14:37:12 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:T001A_622-001 Exp:1613
319.8965
TCDD
27:25
20:23
21:12
22:11
23:20
24:20
25:23
26:10
26:53
28:49
29:33
321.8936
20:58
20:33
21:51
22:54
22:33
23:30
24:57
24:33
25:33
26:26
27:25
27:07
28:19
29:22
327.8847
37CL-TCDD
28:20
20:50
23:18
24:59
TIME

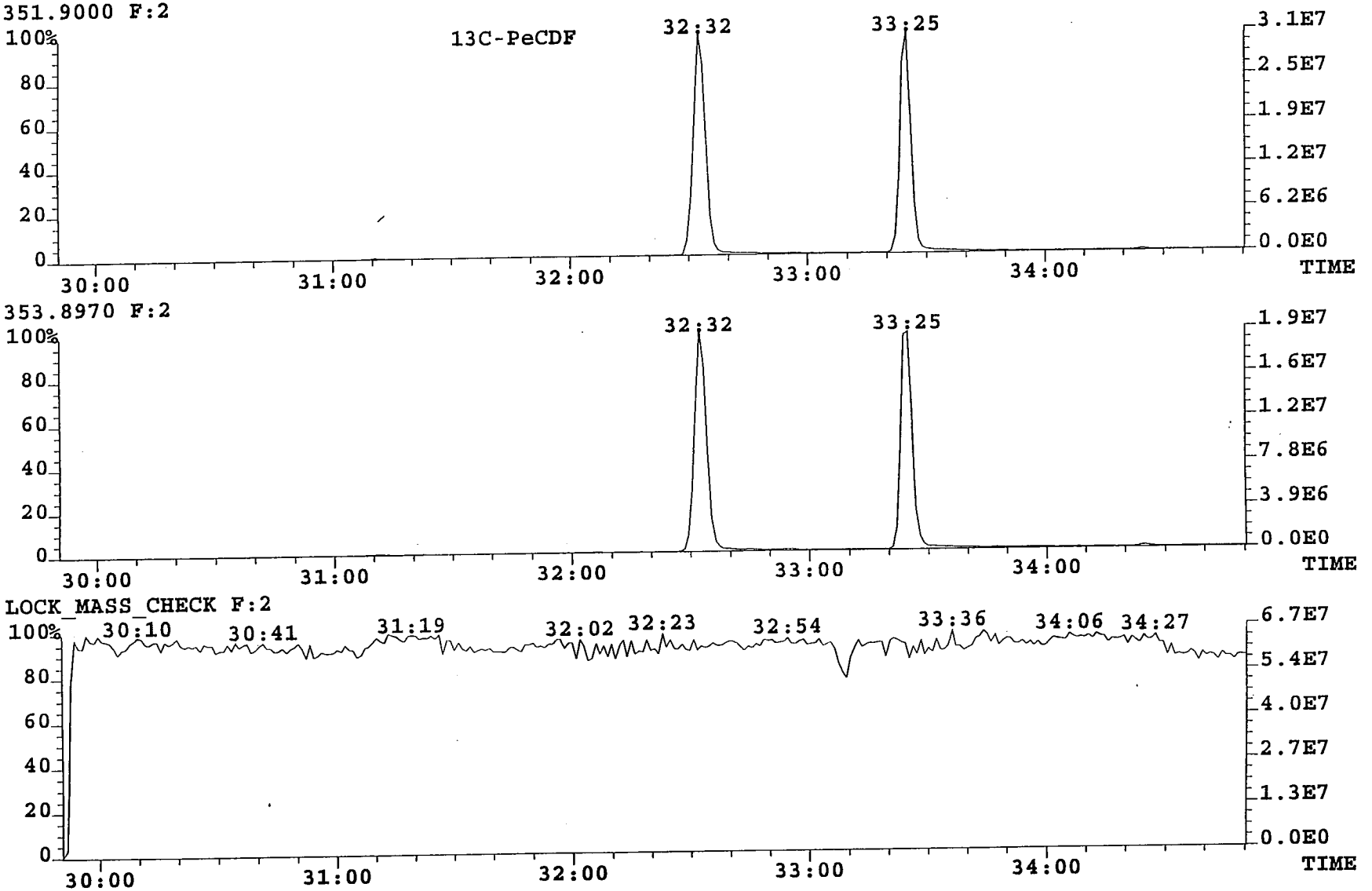

File:5C1105 #1-1152 Acq:11-MAR-2002 14:37:12 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:T001A_622-001 Exp:1613
331.9368
13C-TCDD
28:05
333.9339
28:05
TIME

File:5C1105 #1-303 Acq:11-MAR-2002 14:37:12 GC EI+ Voltage SIR 70S

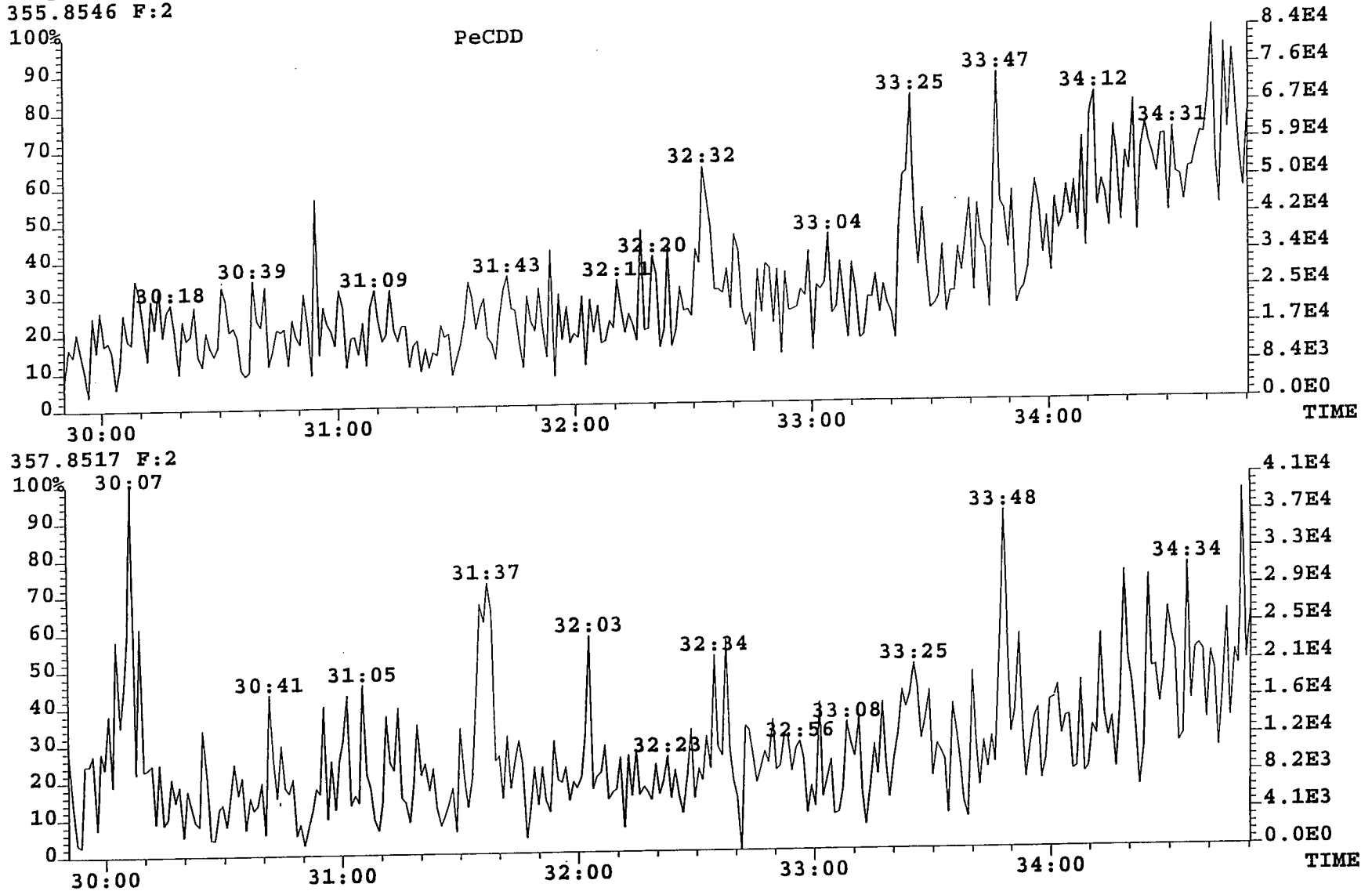
VMS;2 Sample#1 File Text:T001A_622-001 Exp:1613



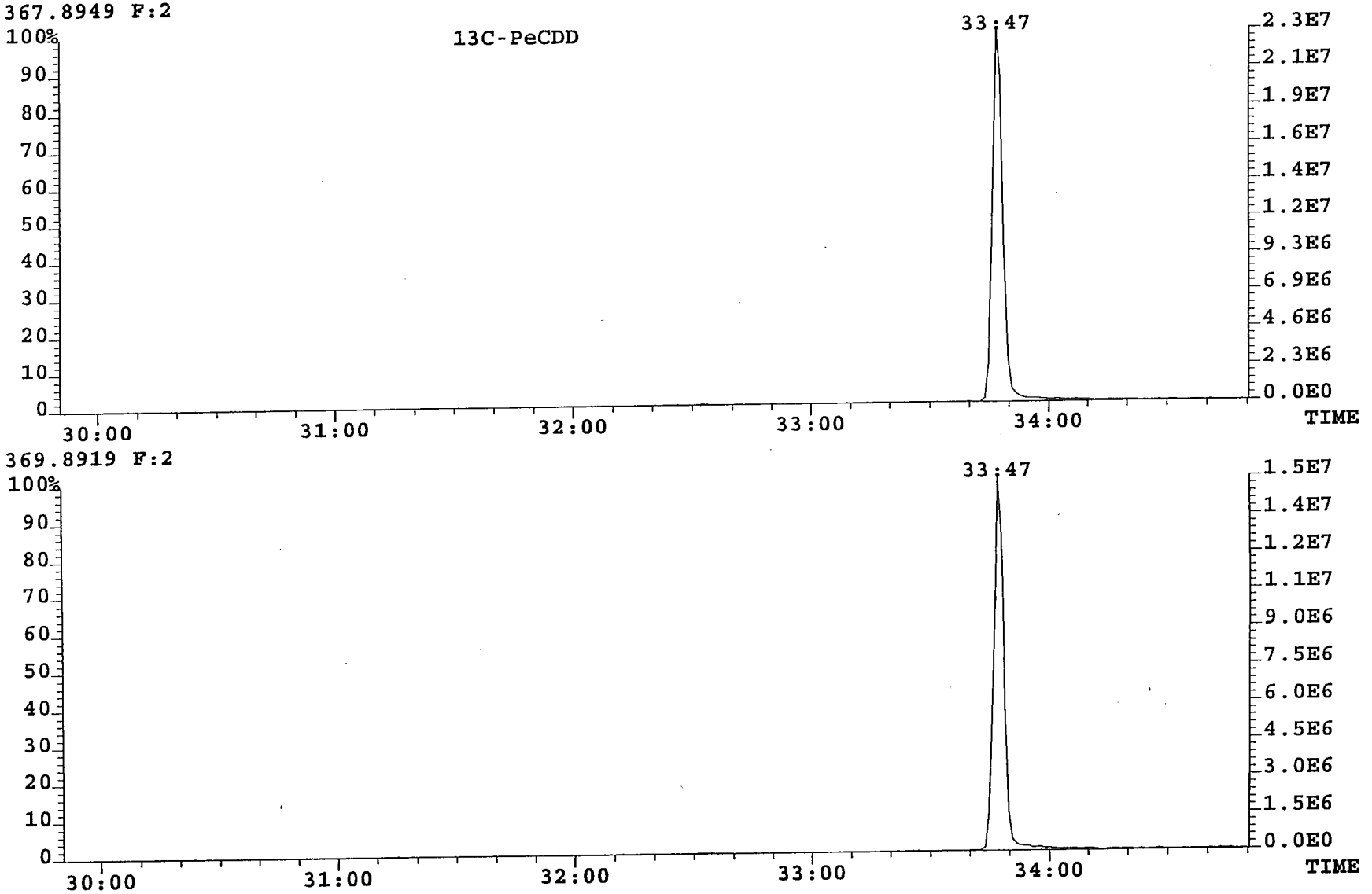
File:5C1105 #1-303 Acq:11-MAR-2002 14:37:12 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:T001A_622-001 Exp:1613



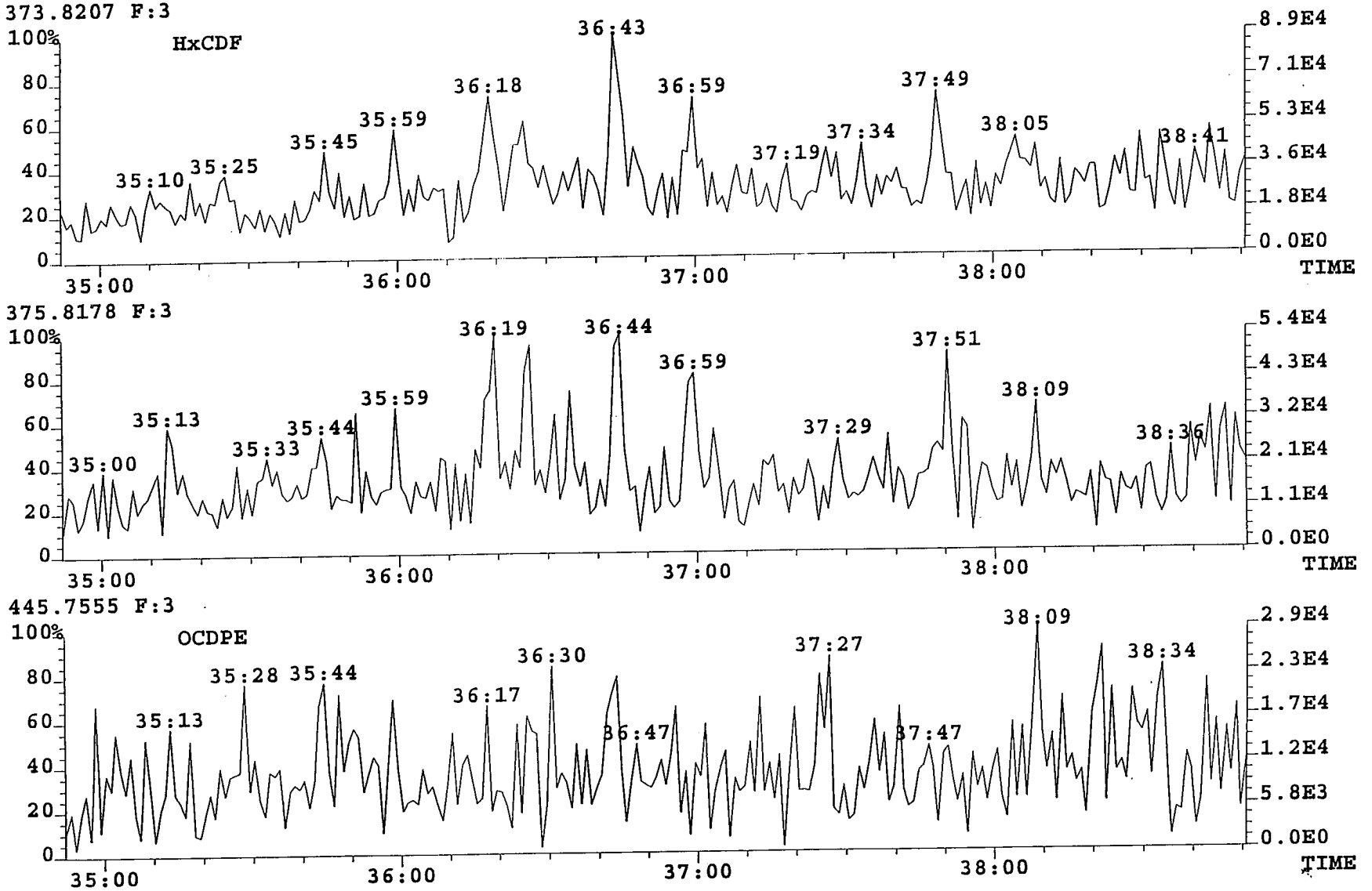
File:5C1105 #1-303 Acq:11-MAR-2002 14:37:12 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:T001A_622-001 Exp:1613



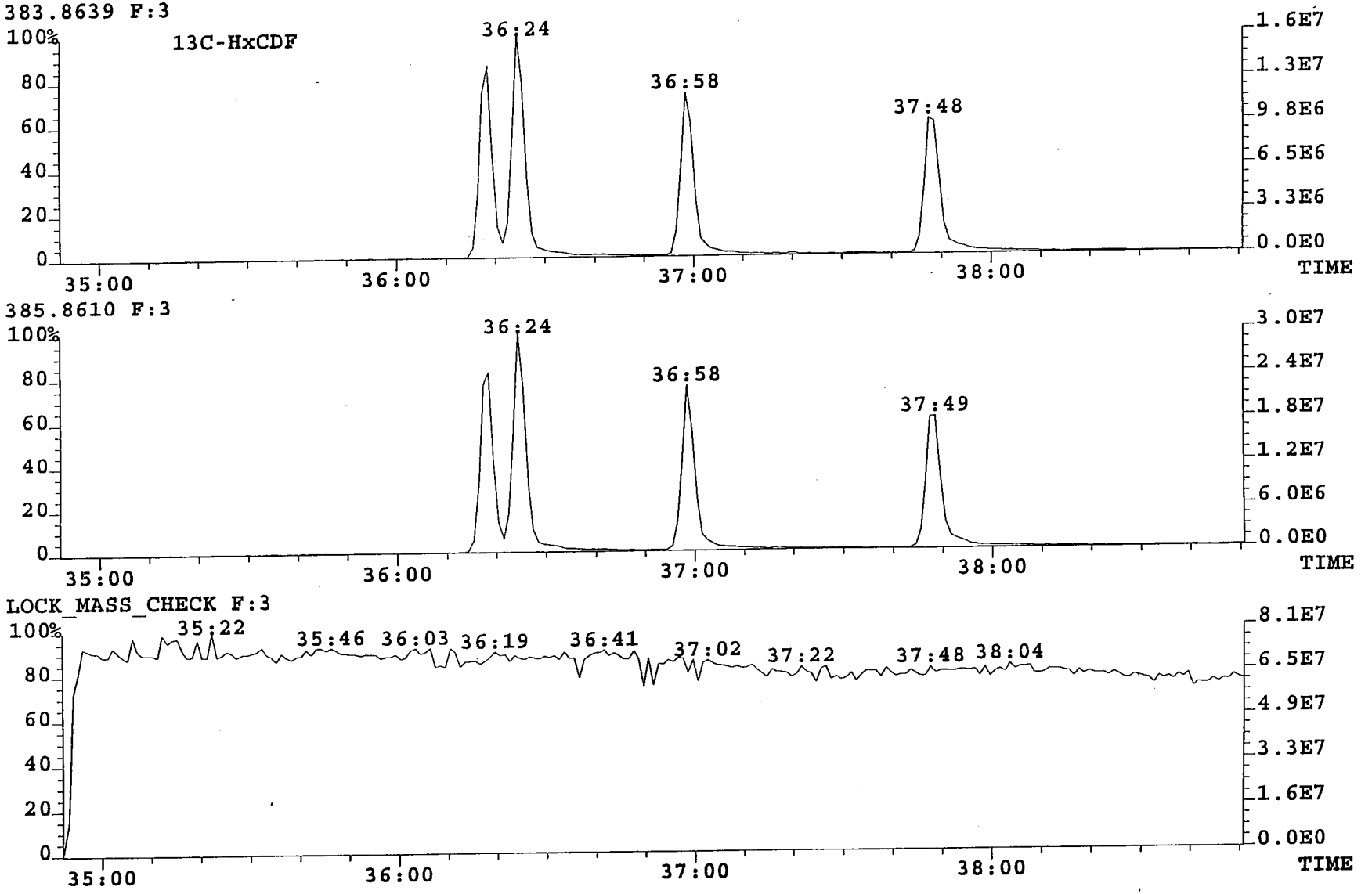
File:5C1105 #1-303 Acq:11-MAR-2002 14:37:12 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:T001A_622-001 Exp:1613

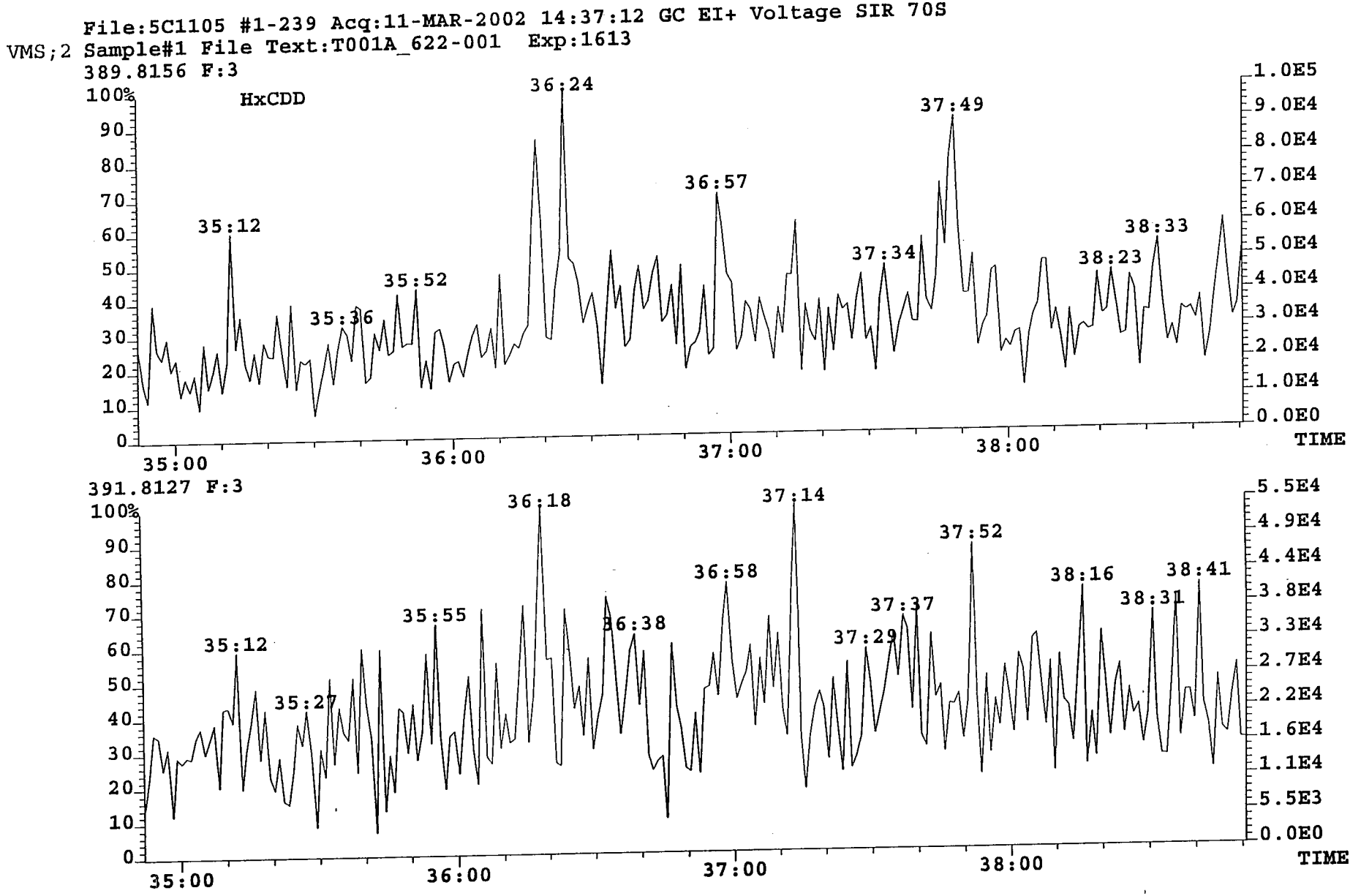


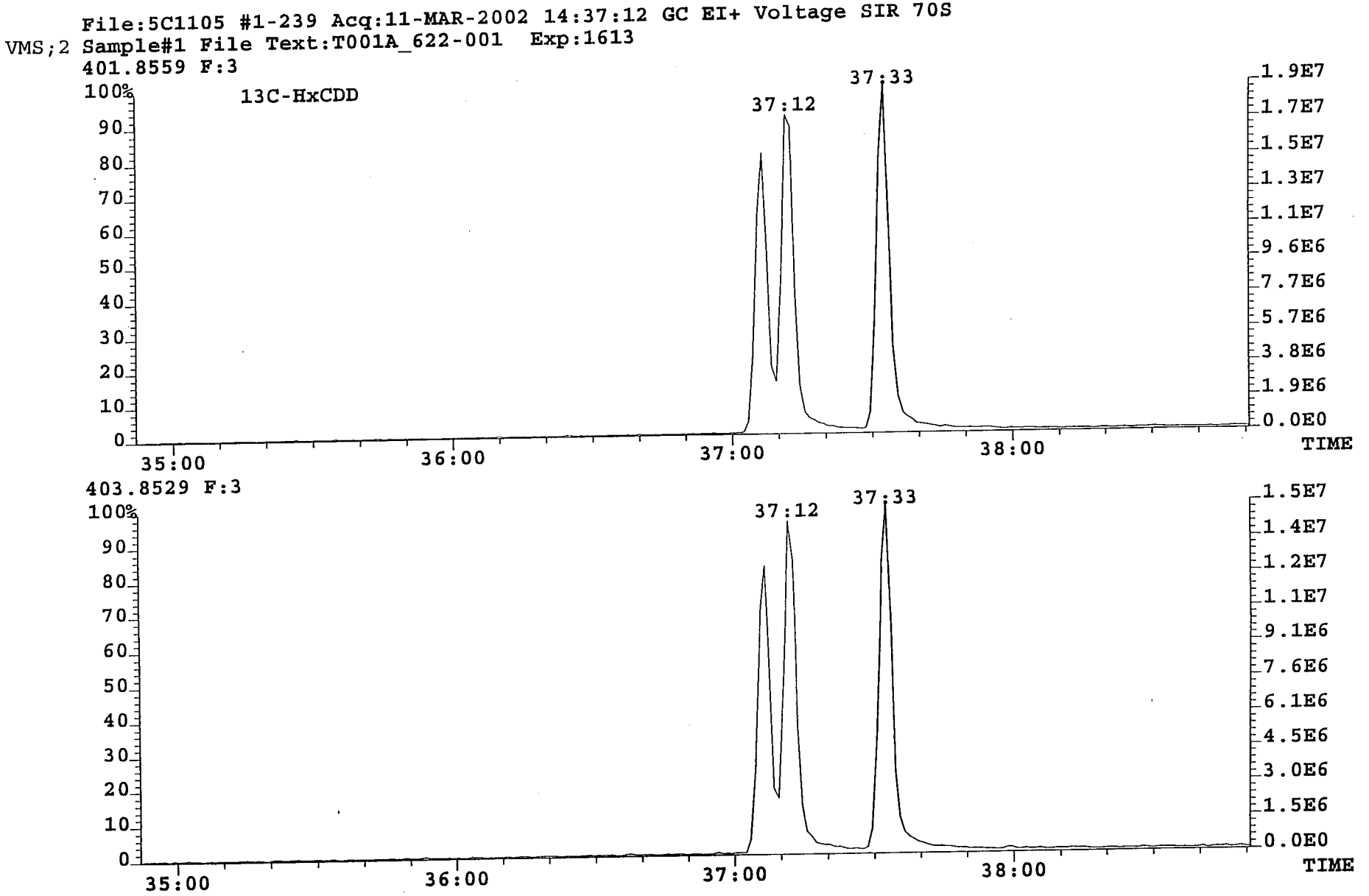
File:5C1105 #1-239 Acq:11-MAR-2002 14:37:12 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:T001A_622-001 Exp:1613



File:5C1105 #1-239 Acq:11-MAR-2002 14:37:12 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:T001A_622-001 Exp:1613

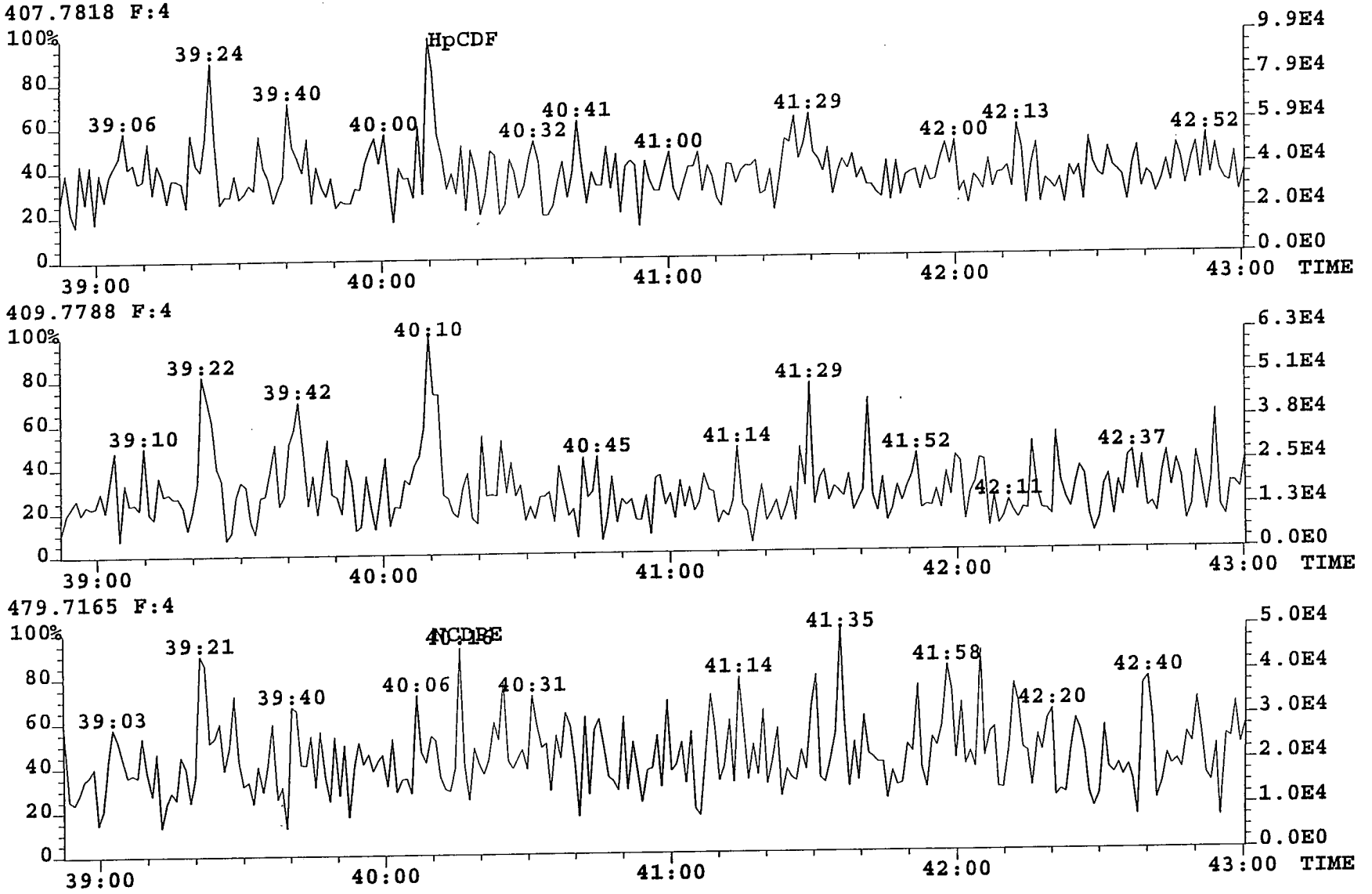


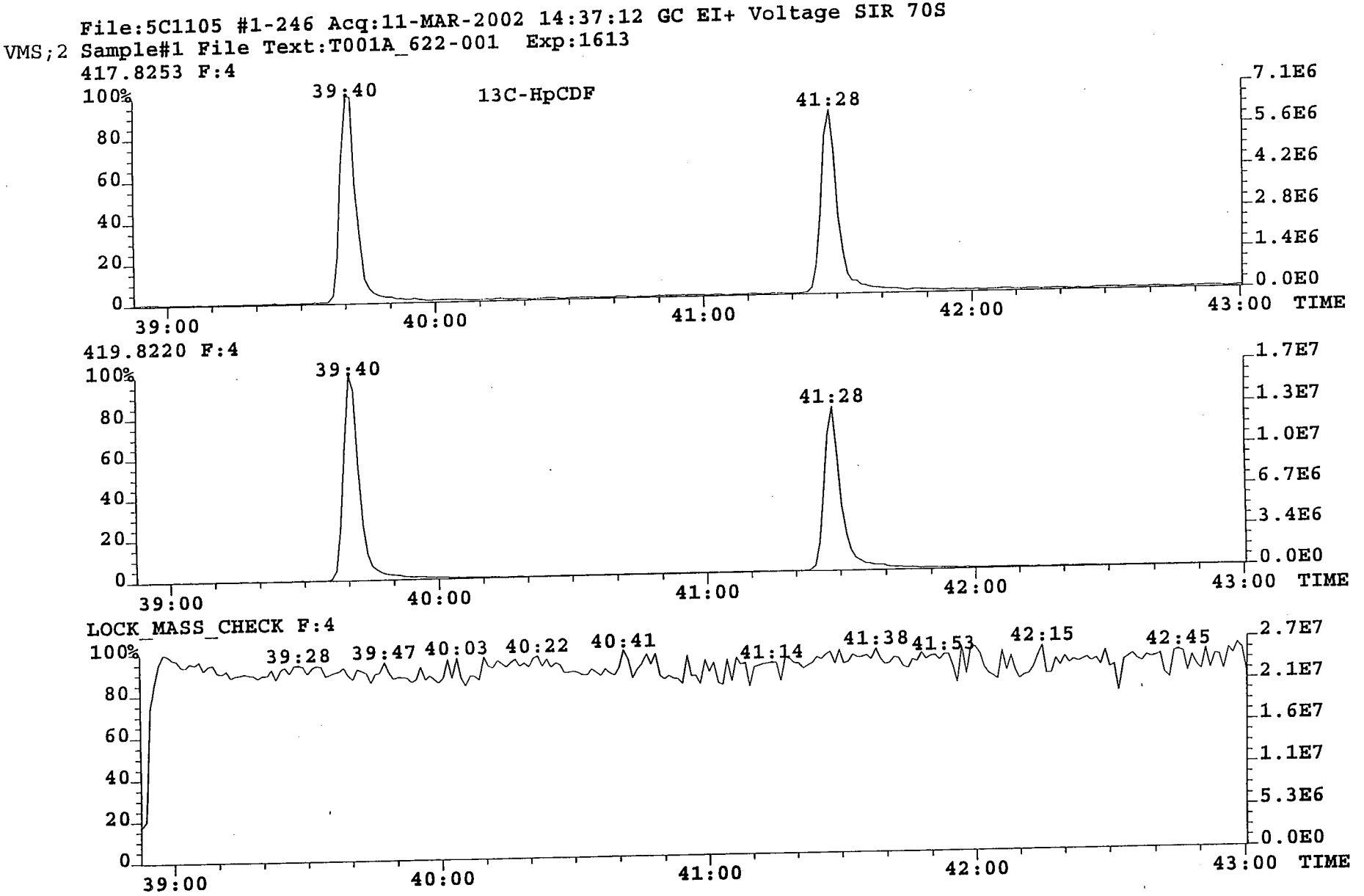

File:5C1105 #1-239 Acq:11-MAR-2002 14:37:12 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:T001A_622-001 Exp:1613
389.8156 F:3
HxCDD
35:12
35:36
35:52
36:24
36:57
37:34
37:49
38:23
38:33
391.8127 F:3
35:12
35:27
35:55
36:18
36:38
36:58
37:14
37:29
37:37
37:52
38:16
38:31
38:41
TIME
35:00
36:00
37:00
38:00


File:5C1105 #1-239 Acq:11-MAR-2002 14:37:12 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:T001A_622-001 Exp:1613
401.8559 F:3
13C-HxCDD
37:12
37:33
100%
90
80
70
60
50
40
30
20
10
0
35:00
36:00
37:00
38:00
TIME
1.9E7
1.7E7
1.5E7
1.3E7
1.1E7
9.6E6
7.7E6
5.7E6
3.8E6
1.9E6
0.0E0
403.8529 F:3
37:12
37:33
100%
90
80
70
60
50
40
30
20
10
0
35:00
36:00
37:00
38:00
TIME
1.5E7
1.4E7
1.2E7
1.1E7
9.1E6
7.6E6
6.1E6
4.5E6
3.0E6
1.5E6
0.0E0

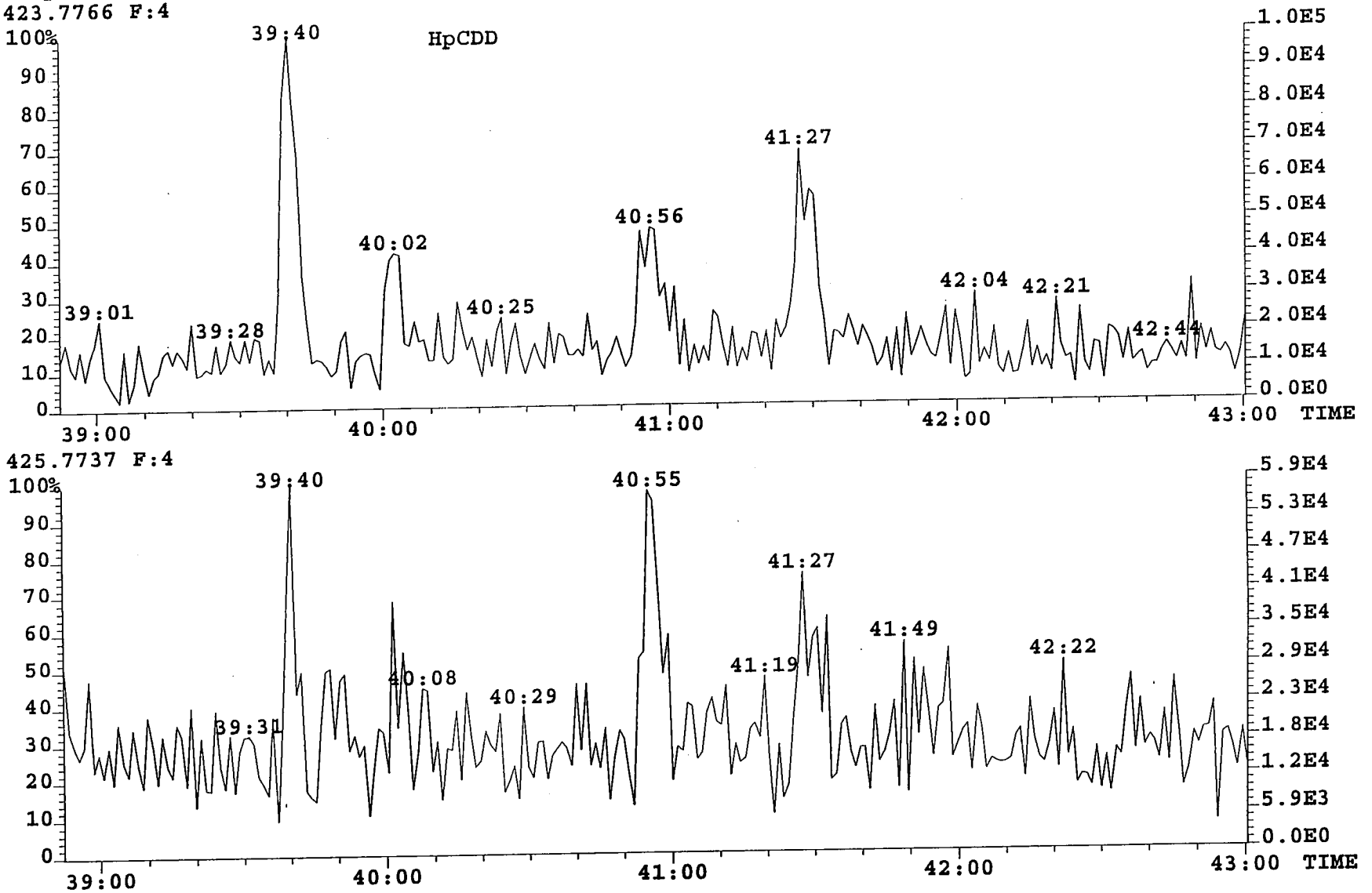
File:5C1105 #1-246 Acq:11-MAR-2002 14:37:12 GC EI+ Voltage SIR 70S

VMS;2 Sample#1 File Text:T001A_622-001 Exp:1613

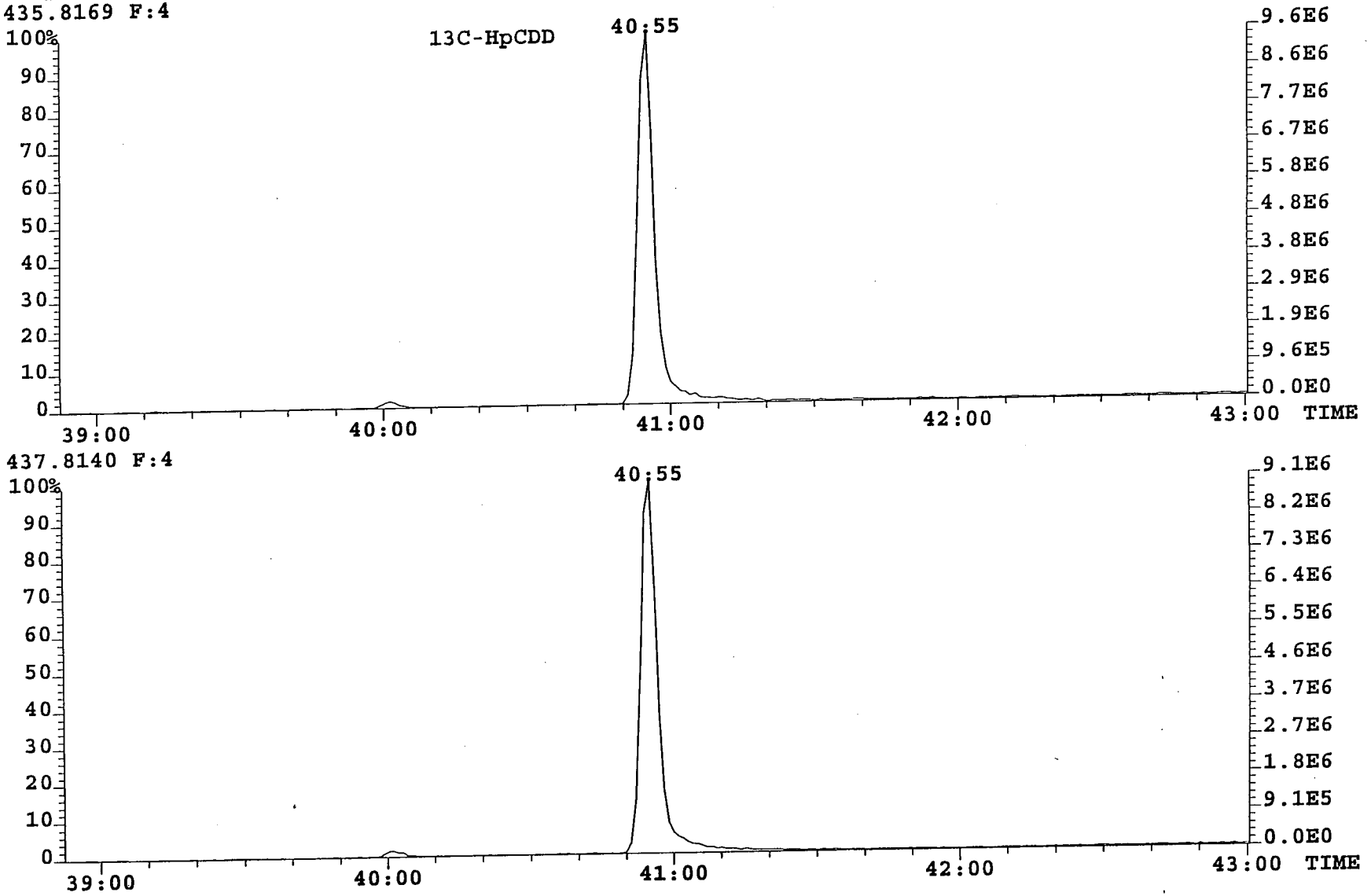


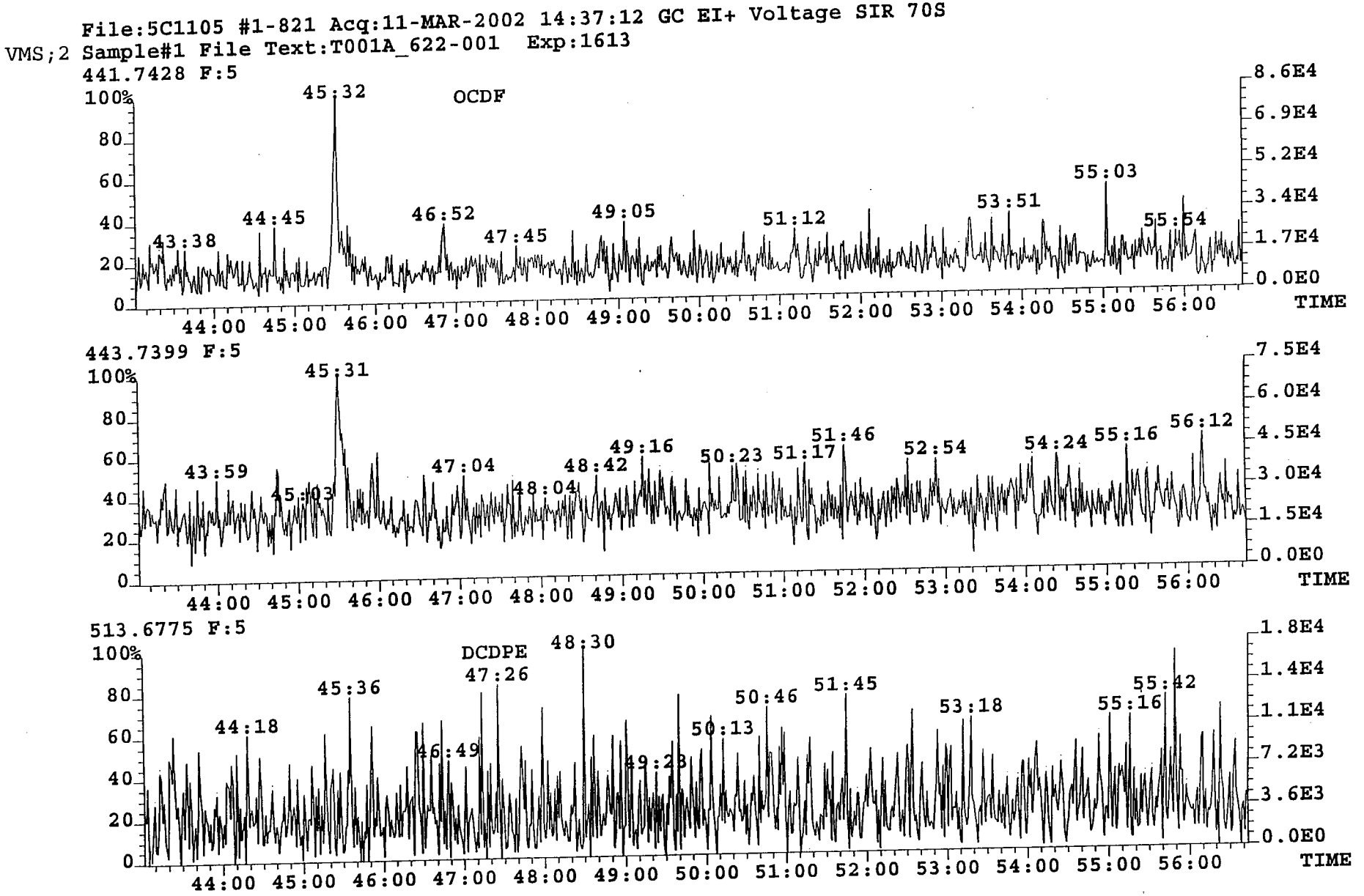

File:5C1105 #1-246 Acq:11-MAR-2002 14:37:12 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:T001A_622-001 Exp:1613
417.8253 F:4
13C-HpCDF
39:40
41:28
7.1E6
5.6E6
4.2E6
2.8E6
1.4E6
0.0E0
100%
80
60
40
20
0
39:00
40:00
41:00
42:00
43:00 TIME
419.8220 F:4
39:40
41:28
1.7E7
1.3E7
1.0E7
6.7E6
3.4E6
0.0E0
LOCK_MASS_CHECK F:4
39:28
39:47
40:03
40:22
40:41
41:14
41:38
41:53
42:15
42:45
2.7E7
2.1E7
1.6E7
1.1E7
5.3E6
0.0E0

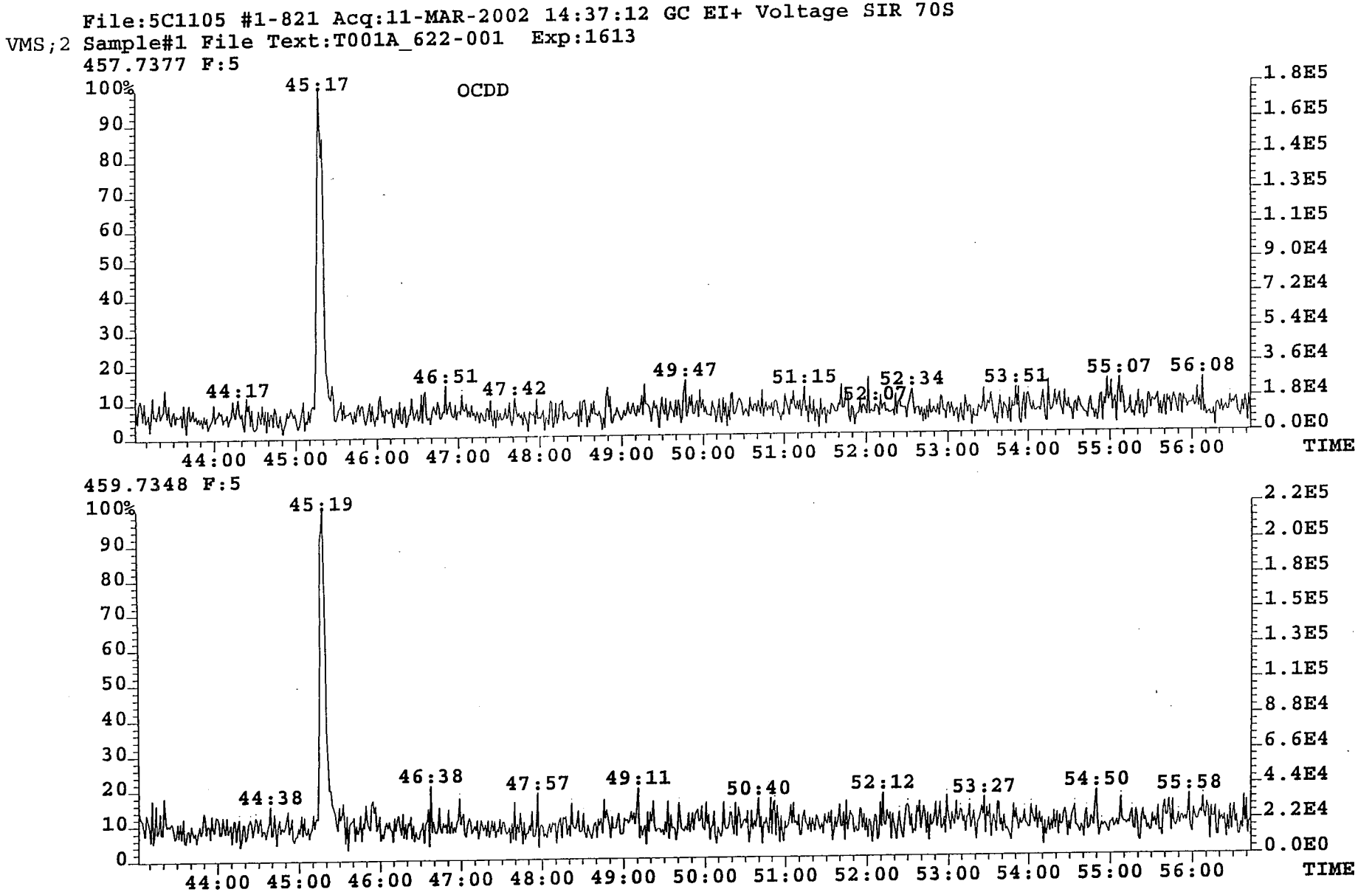
File:5C1105 #1-246 Acq:11-MAR-2002 14:37:12 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:T001A_622-001 Exp:1613

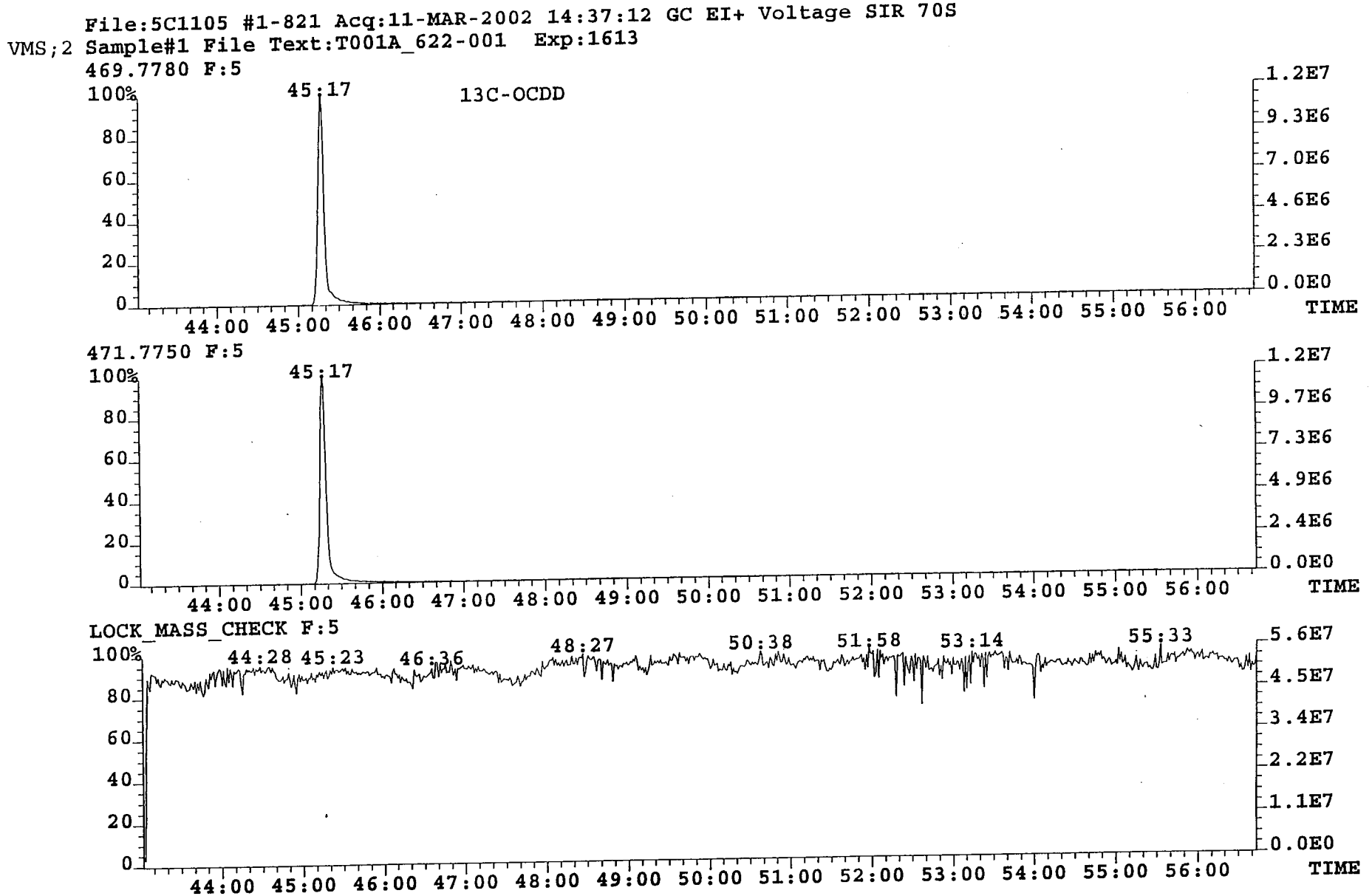


File:5C1105 #1-246 Acq:11-MAR-2002 14:37:12 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:T001A_622-001 Exp:1613




File:5C1105 #1-821 Acq:11-MAR-2002 14:37:12 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:T001A_622-001 Exp:1613
441.7428 F:5
OCDF
45:32
44:45
43:38
46:52
47:45
49:05
51:12
53:51
55:03
55:54
443.7399 F:5
45:31
43:59
45:03
47:04
48:04
48:42
49:16
50:23
51:17
51:46
52:54
54:24
55:16
56:12
513.6775 F:5
DCDPE
48:30
47:26
45:36
44:18
46:49
49:23
50:13
50:46
51:45
53:18
55:16
55:42
100%
80
60
40
20
0
8.6E4
6.9E4
5.2E4
3.4E4
1.7E4
0.0E0
7.5E4
6.0E4
4.5E4
3.0E4
1.5E4
1.8E4
1.4E4
1.1E4
7.2E3
3.6E3
44:00 45:00 46:00 47:00 48:00 49:00 50:00 51:00 52:00 53:00 54:00 55:00 56:00
TIME


File:5C1105 #1-821 Acq:11-MAR-2002 14:37:12 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:T001A_622-001 Exp:1613
457.7377 F:5
100%
45:17
OCDD
44:17
46:51
47:42
49:47
51:15
52:34
52:07
53:51
55:07
56:08
1.8E5
1.6E5
1.4E5
1.3E5
1.1E5
9.0E4
7.2E4
5.4E4
3.6E4
1.8E4
0.0E0
TIME
44:00 45:00 46:00 47:00 48:00 49:00 50:00 51:00 52:00 53:00 54:00 55:00 56:00
459.7348 F:5
100%
45:19
44:38
46:38
47:57
49:11
50:40
52:12
53:27
54:50
55:58
2.2E5
2.0E5
1.8E5
1.5E5
1.3E5
1.1E5
8.8E4
6.6E4
4.4E4
2.2E4
0.0E0
TIME
44:00 45:00 46:00 47:00 48:00 49:00 50:00 51:00 52:00 53:00 54:00 55:00 56:00


File:5C1105 #1-821 Acq:11-MAR-2002 14:37:12 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:T001A_622-001 Exp:1613
469.7780 F:5
45:17
13C-OCDD
471.7750 F:5
45:17
LOCK_MASS_CHECK F:5
44:28 45:23 46:36 48:27 50:38 51:58 53:14 55:33
100%
80
60
40
20
0
1.2E7
9.3E6
7.0E6
4.6E6
2.3E6
0.0E0
9.7E6
7.3E6
4.9E6
2.4E6
5.6E7
4.5E7
3.4E7
2.2E7
1.1E7
44:00 45:00 46:00 47:00 48:00 49:00 50:00 51:00 52:00 53:00 54:00 55:00 56:00
TIME

USEPA - ITD

FORM 1A
PCDD/PCDF ANALYSIS DATA SHEET
Use for Sample and Blank Results

C001A

Lab Name: Pacific Analytical, Inc. Episode:
Contract No.: SAS No.: Lab ID: 622-003

Matrix (aqueous/solid/leachate): AQUEOUS Sample Wt/Vol: 1000.0000 g/mL: ML

Sample Receipt Date: 02/18/02 Initial Calibration Date: 03/04/02

Ext. Date: 02/22/02 Shift: 0800 Instrument ID: VG#5

Analysis Date: 03/11/02 Time: 1653 GC Column ID: DB5 60M

Extract Volume (uL): 20 Sample Data Filename: 5C1107

Injection Volume (uL): 1 Blank Data Filename: B1707

Dilution Factor: 1.0 Cal. Ver. Data Filename: 5C1102

Concentration Units (pg/L or ng/Kg dry weight): PG/L %Solids: 0.0

ANALYTE	CONCENTRATION FOUND	DETECTION LIMIT	ION ABUND. RATIO (1)	RRT (1)
2378-TCDD	not detected	10	____	____
12378-PeCDD	not detected	50	____	____
123478-HxCDD	not detected	50	____	____
123678-HxCDD	not detected	50	____	____
123789-HxCDD	not detected	50	____	____
1234678-HpCDD	not detected	50	____	____
OCDD	not detected	100	____	____
2378-TCDF	not detected	10	____	____
12378-PeCDF	not detected	50	____	____
23478-PeCDF	not detected	50	____	____
123478-HxCDF	not detected	50	____	____
123678-HxCDF	not detected	50	____	____
123789-HxCDF	not detected	50	____	____
234678-HxCDF	not detected	50	____	____
1234678-HpCDF	not detected	50	____	____
1234789-HpCDF	not detected	50	____	____
OCDF	not detected	100	____	____
Total TCDD	____	10	____	____
Total PeCDD	____	50	____	____
Total HxCDD	____	50	____	____
Total HpCDD	____	50	____	____
Total TCDF	____	10	____	____
Total PeCDF	____	50	____	____
Total HxCDF	____	50	____	____
Total HpCDF	____	50	____	____

(1) Contract-required limits for RRTs and ion abundance ratios are specified in Tables 2 and 9, respectively, Method 1613.

USEPA - ITD

FORM 1T
PCDD/PCDF TOXICITY EQUIVALENCE SUMMARY

EPA SAMPLE NO.
C001A

Lab Name: Pacific Analytical, Inc. Episode No.:

Contract No.: SAS No.: Lab Sample ID: 622-003

Matrix (aqueous/solid/leachate): AQUEOUS Sample Wt/Vol: 1000.0 g or mL: ML

Sample Receipt Date: 02/18/02 Initial Calibration Date: 03/04/02

Ext. Date: 02/22/02 Shift: 0800 Instrument ID: VG#5

Analysis Date: 03/11/02 Time: 1653 GC Column ID: DB5 60M

Extract Volume (uL): 20 Sample Data Filename: 5C1107

Injection Volume (uL): 1 Blank Data Filename: B1707

Dilution Factor: 1.0 Cal. Ver. Data Filename: 5C1102

Concentration Units (pg/L or ng/Kg dry weight): PG/L %Solids: 0.0

ANALYTE	CONCENTRATION FOUND	TEF	TEF-ADJUSTED CONCENTRATION
2378-TCDD	0.000	1.0	0.000
12378-PeCDD	0.000	1.0	0.000
123478-HxCDD	0.000	0.1	0.000
123678-HxCDD	0.000	0.1	0.000
123789-HxCDD	0.000	0.1	0.000
1234678-HpCDD	0.000	0.01	0.000
OCDD	0.000	0.0001	0.000
2378-TCDF	0.000	0.1	0.000
12378-PeCDF	0.000	0.05	0.000
23478-PeCDF	0.000	0.5	0.000
123478-HxCDF	0.000	0.1	0.000
123678-HxCDF	0.000	0.1	0.000
123789-HxCDF	0.000	0.1	0.000
234678-HxCDF	0.000	0.1	0.000
1234678-HpCDF	0.000	0.01	0.000
1234789-HpCDF	0.000	0.01	0.000
OCDF	0.000	0.0001	0.000
		TOTAL =	0.000

TEFs for 2,3,7,8-TCDD equivalents, Policy for Implementation of Toxics, Standard for Inland Surface Waters, Enclosed Bays and estuaries of California, Adopted March 2,2000

USEPA - ITD

FORM 2
PCDD/PCDF LABELED COMPOUND AND
CLEANUP STANDARD RECOVERIES

C001A

Lab Name: Pacific Analytical, Inc. Episode:
Contract No.: SAS No.: Lab ID: 622-003

Matrix (aqueous/solid/leachate): AQUEOUS Sample Wt/Vol: 1000.0000 g/mL: ML

Sample Receipt Date: 02/18/02 Initial Calibration Date: 03/04/02

Ext. Date: 02/22/02 Shift: 0800 Instrument ID: VG#5

Analysis Date: 03/11/02 Time: 1653 GC Column ID: DB5 60M

Extract Volume (uL): 20 Sample Data Filename: 5C1107

Injection Volume (uL): 1 Blank Data Filename: B1707

Dilution Factor: 1.0 Cal. Ver. Data Filename: 5C1102

Concentration Units (pg/L or ng/Kg dry weight): PG/L %Solids: 0.0

	SPIKE CONC.	CONC. FOUND	R(%) (1)	ION ABUND. RATIO (2)	RRT (2)
LABELED COMPOUNDS					
13C-2378-TCDD	2000	1100	55	0.80	1.008
13C-12378-PeCDD	2000	1300	65	1.64	1.203
13C-123478-HxCDD	2000	1700	85	1.24	0.988
13C-123678-HxCDD	2000	1800	90	1.25	0.991
13C-1234678-HpCDD	2000	1900	95	1.08	1.090
13C-OCDD	4000	3700	92	0.91	1.206
13C-2378-TCDF	2000	1100	55	0.81	0.977
13C-12378-PeCDF	2000	1300	65	1.57	1.158
13C-23478-PeCDF	2000	1300	65	1.59	1.190
13C-123478-HxCDF	2000	1800	90	0.54	0.967
13C-123678-HxCDF	2000	1900	95	0.54	0.970
13C-123789-HxCDF	2000	1800	90	0.56	0.985
13C-234678-HxCDF	2000	1900	95	0.53	1.007
13C-1234678-HpCDF	2000	2000	100	0.44	1.057
13C-1234789-HpCDF	2000	1900	95	0.47	1.105
CLEANUP STANDARD					
37Cl4-2378-TCDD	200	110	55		1.001

PACIFIC ANALYTICAL 1613 PCDD/PCDF QUANTITATION SUMMARY

Lab File ID: 5C1107 Sample: C001A 622-003
Cal File: 5C04D Dil: 1.0 Sample Size (Dry if Solid): 1.0000
Nanograms Label Added (IS): 2.0 Nanograms RS Added: 2.0 Units: pg/L

Compound	Ratio	RRT	Response Factor	Extract ng/ml	Sample Conc.	Label Rec.
13C-2,3,7,8-TCDF	0.81	0.977	1.528		1108.22	55.41
2,3,7,8-TCDF	0.00	0.977	1.104	N.D.< CRQL		
13C-2,3,7,8-TCDD	0.80	1.008	1.189		1051.25	52.56
2,3,7,8-TCDD	0.00	1.008	0.849	N.D.< CRQL		
37Cl-2,3,7,8-TCDD	1.00	1.001	2.342		109.20	5.46
13C-1,2,3,7,8-PeCDF	1.57	1.158	1.441		1348.76	67.44
1,2,3,7,8-PeCDF	0.00	1.158	0.936	N.D.< CRQL		
13C-2,3,4,7,8-PeCDF	1.59	1.190	1.425		1283.95	64.20
2,3,4,7,8-PeCDF	0.00	1.190	0.961	N.D.< CRQL		
13C-1,2,3,7,8-PeCDD	1.64	1.203	0.961		1307.21	65.36
1,2,3,7,8-PeCDD	0.00	1.203	0.973	N.D.< CRQL		
13C-1,2,3,4,7,8-HxCDF	0.54	0.967	1.049		1812.11	90.61
1,2,3,4,7,8-HxCDF	0.00	0.967	1.176	N.D.< CRQL		
13C-1,2,3,6,7,8-HxCDF	0.54	0.970	1.171		1919.78	95.99
1,2,3,6,7,8-HxCDF	0.00	0.970	1.141	N.D.< CRQL		
13C-1,2,3,7,8,9-HxCDF	0.56	0.985	0.980		1834.55	91.73
1,2,3,7,8,9-HxCDF	0.00	0.985	1.186	N.D.< CRQL		
13C-2,3,4,6,7,8-HxCDF	0.53	1.007	0.957		1880.31	94.02
2,3,4,6,7,8-HxCDF	0.00	1.007	1.073	N.D.< CRQL		
13C-1,2,3,4,7,8-HxCDD	1.24	0.988	0.826		1705.66	85.28
1,2,3,4,7,8-HxCDD	0.00	0.988	0.927	N.D.< CRQL		
13C-1,2,3,6,7,8-HxCDD	1.25	0.991	1.009		1793.24	89.66
1,2,3,6,7,8-HxCDD	0.00	0.991	0.837	N.D.< CRQL		
13C-1,2,3,7,8,9-HxCDD	0.00	0.991	0.000	N.D.< CRQL		
1,2,3,7,8,9-HxCDD	0.00	0.991	0.925	N.D.< CRQL		
13C-1,2,3,4,6,7,8-HpCDF	0.44	1.057	0.881		1958.88	97.94
1,2,3,4,6,7,8-HpCDF	0.00	1.057	1.218	N.D.< CRQL		
13C-1,2,3,4,7,8,9-HpCDF	0.47	1.105	0.794		1934.00	96.70
1,2,3,4,7,8,9-HpCDF	0.00	1.105	1.141	N.D.< CRQL		
13C-1,2,3,4,6,7,8-HpCDD	1.08	1.090	0.718		1933.47	96.67
1,2,3,4,6,7,8-HpCDD	0.00	1.090	1.027	N.D.< CRQL		
13C-OCDD	0.91	1.206	0.619		3744.38	93.61
OCDF	0.93	1.006	1.232	0.30	6.01	
OCDD	0.00	1.006	1.021	N.D.< CRQL		

Pacific Analytical Inc.
PCDD/PCDF Targetting Summary

Lab File ID: \VG\DIOXIN\5C1107.DAT Target File: :\VG\DIOXIN\1613.TRG

Compound	Flag	QM1	QM2	Ratio	OK	Pred. RT	Act. Rt	Area
13C-1,2,3,4-TCDD	R	332	334	0.79	Y	28.083	28.083	138898000
13C-2,3,7,8-TCDF	I	316	318	0.81	Y	27.417	27.433	117602000
2,3,7,8-TCDF	U	304	306	0.00	N	27.463	0.000	No Trace Found
13C-2,3,7,8-TCDD	I	332	334	0.80	Y	28.310	28.317	86807000
2,3,7,8-TCDD	U	320	322	0.00	N	28.331	0.000	No Trace Found
37Cl-2,3,7,8-TCDD	I	328	328	1.00	Y	28.331	28.333	17761600
13C-1,2,3,7,8-PeCDF	I	352	354	1.57	Y	32.470	32.533	134979000
1,2,3,7,8-PeCDF	U	340	342	0.00	N	32.553	0.000	No Trace Found
13C-2,3,4,7,8-PeCDF	I	352	354	1.59	Y	33.295	33.417	127066000
2,3,4,7,8-PeCDF	U	340	342	0.00	N	33.437	0.000	No Trace Found
13C-1,2,3,7,8-PeCDD	I	368	370	1.64	Y	33.643	33.783	87244000
1,2,3,7,8-PeCDD	U	356	358	0.00	N	33.800	0.000	No Trace Found
13C-1,2,3,7,8,9-HxCDD	R	402	404	1.26	Y	37.533	37.533	98612000
13C-1,2,3,4,7,8-HxCDF	I	384	386	0.54	Y	36.302	36.300	93726000
1,2,3,4,7,8-HxCDF	U	374	376	0.00	N	36.318	0.000	No Trace Found
13C-1,2,3,6,7,8-HxCDF	I	384	386	0.54	Y	36.400	36.417	110843000
1,2,3,6,7,8-HxCDF	U	374	376	0.00	N	36.435	0.000	No Trace Found
13C-1,2,3,7,8,9-HxCDF	I	384	386	0.56	Y	36.962	36.983	88645000
1,2,3,7,8,9-HxCDF	U	374	376	0.00	N	37.001	0.000	No Trace Found
13C-2,3,4,6,7,8-HxCDF	I	384	386	0.53	Y	37.784	37.800	88724000
2,3,4,6,7,8-HxCDF	U	374	376	0.00	N	37.819	0.000	No Trace Found
13C-1,2,3,4,7,8-HxCDD	I	402	404	1.24	Y	37.094	37.100	69466000
1,2,3,4,7,8-HxCDD	U	390	392	0.00	N	37.119	0.000	No Trace Found
13C-1,2,3,6,7,8-HxCDD	I	402	404	1.25	Y	37.199	37.200	89213000
1,2,3,6,7,8-HxCDD	U	390	392	0.00	N	37.219	0.000	No Trace Found
13C-1,2,3,7,8,9-HxCDD	N	402	404	0.00	N	37.533	0.000	No Trace Found
1,2,3,7,8,9-HxCDD	U	390	392	0.00	N	37.533	0.000	No Trace Found
13C-1,2,3,4,6,7,8-HpCDF	I	418	420	0.44	Y	39.706	39.683	85091000
1,2,3,4,6,7,8-HpCDF	U	408	410	0.00	N	39.703	0.000	No Trace Found
13C-1,2,3,4,7,8,9-HpCDF	I	418	420	0.47	Y	41.463	41.467	75714000
1,2,3,4,7,8,9-HpCDF	U	408	410	0.00	N	41.488	0.000	No Trace Found
13C-1,2,3,4,6,7,8-HpCDD	I	436	438	1.08	Y	40.900	40.917	68448000
1,2,3,4,6,7,8-HpCDD	U	424	426	0.00	N	40.937	0.000	No Trace Found
13C-OCDD	I	470	472	0.91	Y	45.351	45.267	114280000
OCDF	U	442	444	0.93	Y	45.530	45.517	211410
OCDD	U	458	460	0.00	N	45.285	0.000	No Trace Found

PACIFIC ANALYTICAL
PCDD/PCDF TOTALS SUMMARY OF NON-2,3,7,8 CONGENERS

Lab File: 5C1107 Sample: C001A Lab ID: 622-003
Cal File: 5C04D Sample Size: 1.0000
Nanograms Label Added (IS): 2.0 Nanograms RS Added: 2.0

Analyte	Number of Peaks	Sample Conc. pg/L	Total Area	Area IS	RRF
TCDD	0	0.00	0	86807000	0.849
PeCDD	0	0.00	0	87244000	0.973
HxCDD	~~1~~ Ap 03-12-02	~~8.88~~	~~315730~~	79339504	0.896
HpCDD	0	0.00	0	68448000	1.027
TCDF	0	0.00	0	117602000	1.104
PeCDF	0	0.00	0	131022504	0.948
HxCDF	0	0.00	0	95484496	1.144
HpCDF	0	0.00	0	80402496	1.179

PACIFIC ANALYTICAL
PCDD/PCDF PEAK SUMMARY

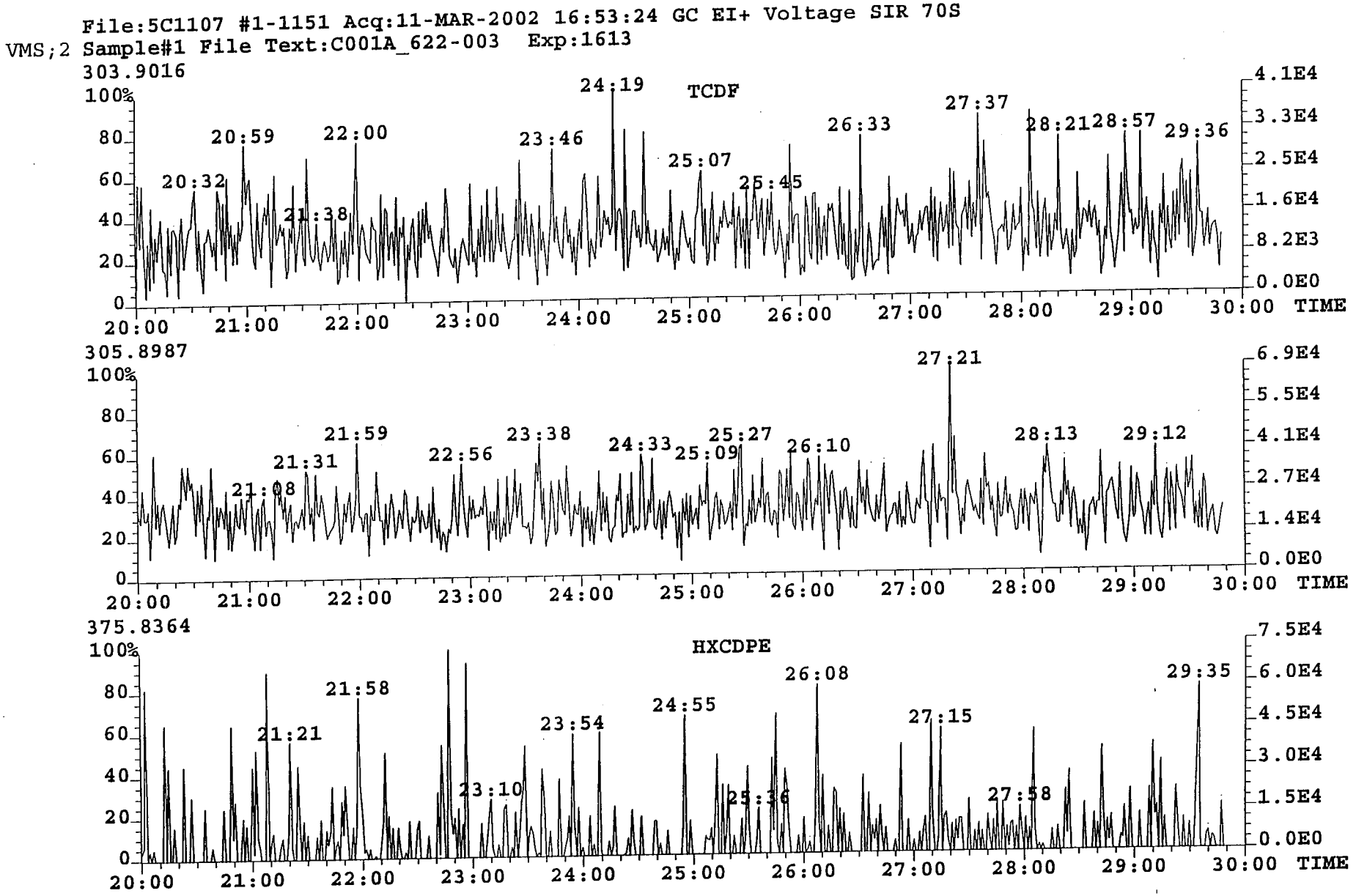
Lab File: 5C1107 Sample: C001A Lab ID: 622-003

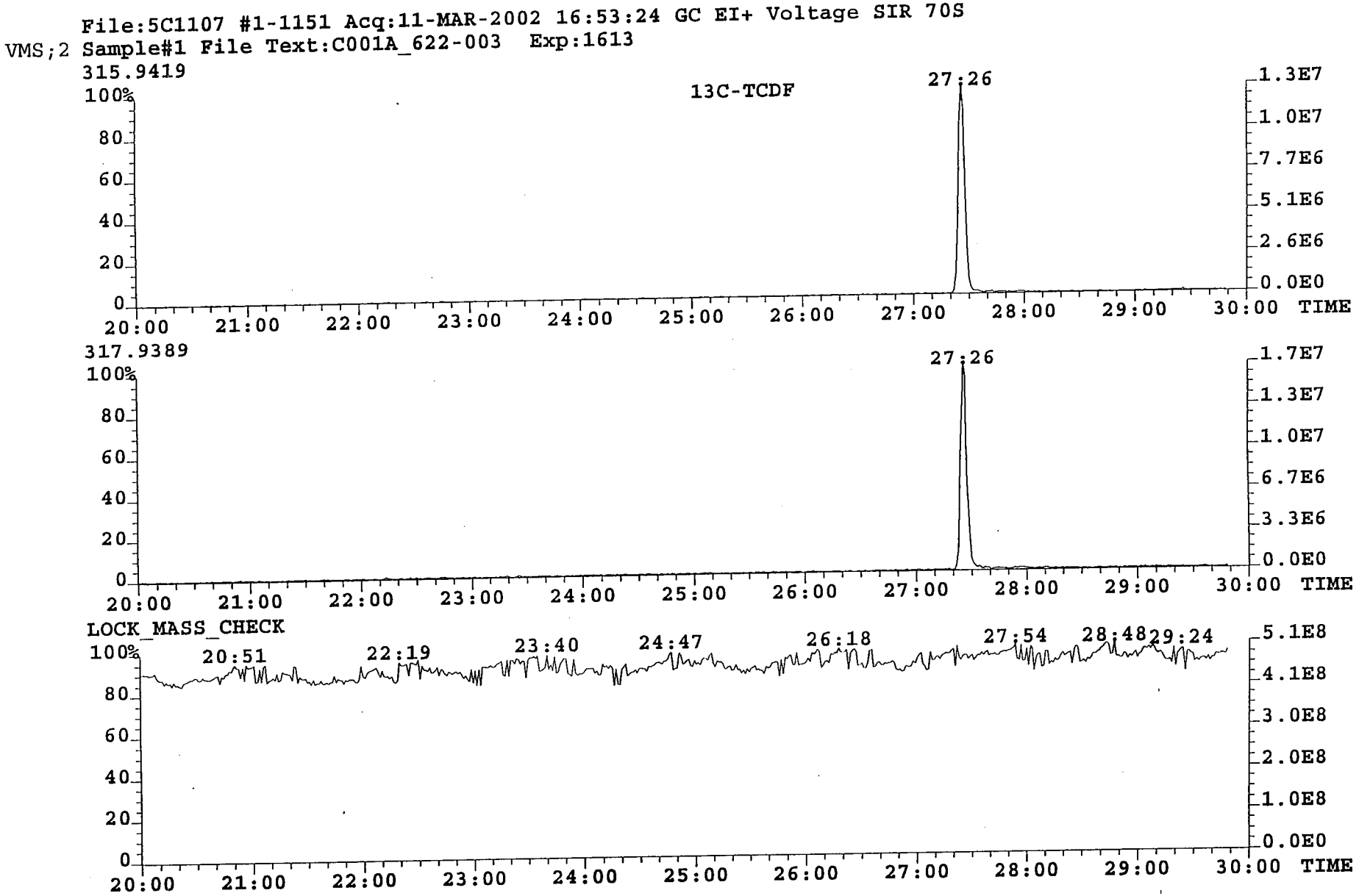
Entry No.	Match	Flag	Level QM	RT	AREA	HEIGHT	COMPOUND
1	0	X 4	303.9016	22.633	122180	18118	
2	0	X 4	303.9016	29.467	126310	22692	
3	0	X 4	305.8987	21.250	124270	26277	
4	0	X 4	305.8987	23.133	131950	22754	
5	0	X 4	305.8987	23.633	148800	36032	
6	0	X 4	305.8987	28.217	180590	34974	
7	0	X 4	305.8987	28.383	103040	27473	
8	0	X 4	305.8987	28.817	110890	21790	
9	10	I 4	315.9419	27.433	52739000	12735000	13C-2,3,7,8-TCDF
10	9	I 4	317.9389	27.433	64863000	16543000	13C-2,3,7,8-TCDF
11	0	X 6	375.8364	22.783	115780	75040	
12	0	X 6	375.8364	29.583	104280	58992	
13	0	X 4	319.8965	27.417	201250	42585	
14	16	R 4	331.9368	28.083	61331000	15627000	13C-1,2,3,4-TCDD
15	17	I 4	331.9368	28.317	38624000	9613600	13C-2,3,7,8-TCDD
16	14	R 4	333.9339	28.083	77567000	19520000	13C-1,2,3,4-TCDD
17	15	I 4	333.9339	28.317	48183000	11949000	13C-2,3,7,8-TCDD
18	18	C 0	327.8847	21.200	185390	88647	
19	19	C 0	327.8847	22.267	122960	51113	
20	20	C 0	327.8847	22.650	211590	69070	
21	21	C 0	327.8847	22.950	149500	37194	
22	22	C 0	327.8847	23.300	617740	206590	
23	23	C 0	327.8847	24.400	198860	71087	
24	24	C 0	327.8847	24.967	575090	156730	
25	26	O 0	327.8847	26.750	248340	75327	
26	26	C 0	327.8847	26.800	109620	52042	
27	27	C 0	327.8847	27.317	159050	39997	
28	28	I 0	327.8847	28.333	8880800	2347800	37Cl-2,3,7,8-TCDD
29	0	X 0	327.8847	28.450	232190	61252	
30	0	X 0	327.8847	28.750	175180	59728	
31	42	O 5	339.8597	34.250	101310	25567	
32	0	X 5	341.8568	31.083	120300	26550	
33	0	X 5	341.8568	33.100	123100	27808	
34	0	X 5	341.8568	33.183	183280	43125	
35	0	X 5	341.8568	33.333	113150	29841	
36	0	X 5	341.8568	33.367	109590	32530	
37	0	X 5	341.8568	33.433	138520	42387	
38	0	X 5	341.8568	33.717	111850	35884	
39	0	X 5	341.8568	34.017	118140	41451	
40	0	X 5	341.8568	34.133	102200	27538	
41	0	X 5	341.8568	34.167	121800	35052	
42	31	O 5	341.8568	34.250	142090	49206	
43	45	I 5	351.9000	32.550	82361000	22514000	13C-1,2,3,7,8-PeCD
44	46	I 5	351.9000	33.417	78059000	25498000	13C-2,3,4,7,8-PeCD
45	43	I 5	353.8970	32.533	52618000	14104000	13C-1,2,3,7,8-PeCD
46	44	I 5	353.8970	33.417	49007000	15956000	13C-2,3,4,7,8-PeCD
47	0	X 5	355.8546	30.400	101880	31768	
48	0	X 5	355.8546	30.617	104610	26040	
49	0	X 5	355.8546	31.067	111600	30158	
50	0	X 5	355.8546	32.167	119410	25141	
51	0	X 5	355.8546	32.533	106710	26179	
52	0	X 5	355.8546	34.000	124390	30906	
53	0	X 5	355.8546	34.167	138810	40954	

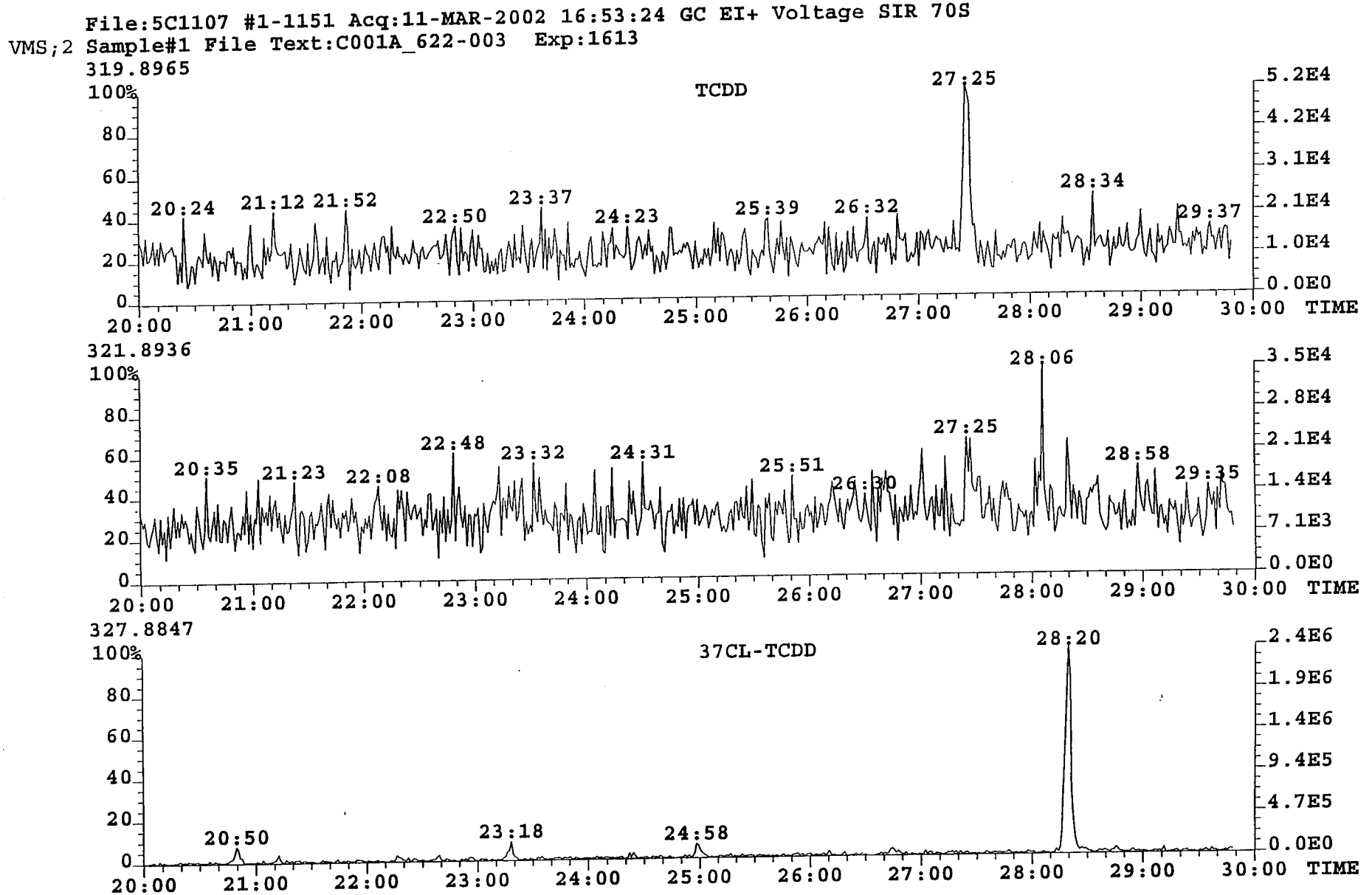
54	0	X	5	355.8546	34.250	117120	41138	
55	0	X	5	355.8546	34.433	122240	45090	
56	0	X	5	355.8546	34.467	153220	49242	
57	0	X	5	355.8546	34.550	114530	48156	
58	0	X	5	355.8546	34.633	108060	37726	
59	0	X	5	355.8546	34.817	148280	37020	
60	0	X	5	357.8517	31.583	107940	26594	
61	0	X	5	357.8517	34.733	117790	30603	
62	63	I	5	367.8949	33.783	54210000	18157000	13C-1,2,3,7,8-PeCD
63	62	I	5	369.8919	33.783	33034000	11406000	13C-1,2,3,7,8-PeCD
64	0	X	5	369.8919	33.933	521190	137450	
65	0	X	6	373.8207	35.333	127350	37661	
66	0	X	6	373.8207	35.683	105860	39802	
67	0	X	6	373.8207	35.750	100590	29908	
68	0	X	6	373.8207	36.000	102610	30854	
69	0	X	6	373.8207	36.083	100840	22066	
70	0	X	6	373.8207	36.550	101200	25572	
71	0	X	6	373.8207	36.733	101430	33799	
72	0	X	6	373.8207	36.967	143610	46273	
73	0	X	6	373.8207	37.300	130600	34793	
74	0	X	6	373.8207	37.467	143200	41220	
75	0	X	6	373.8207	37.867	106930	32893	
76	0	X	6	373.8207	38.533	167650	55217	
77	0	X	6	375.8178	36.283	108970	60866	
78	82	I	6	383.8639	36.300	33036000	12826000	13C-1,2,3,4,7,8-Hx
79	83	I	6	383.8639	36.417	38718000	11583000	13C-1,2,3,6,7,8-Hx
80	84	I	6	383.8639	36.983	31712000	9573800	13C-1,2,3,7,8,9-Hx
81	85	I	6	383.8639	37.800	30861000	8530800	13C-2,3,4,6,7,8-Hx
82	78	I	6	385.8610	36.300	60690000	22624000	13C-1,2,3,4,7,8-Hx
83	79	I	6	385.8610	36.417	72125000	20669000	13C-1,2,3,6,7,8-Hx
84	80	I	6	385.8610	36.983	56933000	17057000	13C-1,2,3,7,8,9-Hx
85	81	I	6	385.8610	37.800	57863000	15550000	13C-2,3,4,6,7,8-Hx
86	0	X	0	445.7555	37.917	120680	30475	
87	0	X	6	389.8156	35.117	131230	38412	
88	0	X	6	389.8156	35.317	146750	44306	
89	0	X	6	389.8156	35.600	103290	29220	
90	98	C	6	389.8156	36.317	182090	48990	
91	98	O	6	389.8156	36.417	292680	88005	
92	0	X	6	389.8156	36.983	182450	64787	
93	102	Y	6	389.8156	37.783	154720	43140	
94	0	X	6	389.8156	37.883	115720	33679	
95	0	X	6	389.8156	38.167	146250	36749	
96	0	X	6	391.8127	35.383	104600	31872	
97	90	C	6	391.8127	36.300	133640	62506	
98	91	O	6	391.8127	36.367	101460	33197	
99	0	X	6	391.8127	36.733	117080	28566	
100	0	X	6	391.8127	37.133	118330	32796	
101	0	X	6	391.8127	37.567	135790	36078	
102	93	Y	6	391.8127	37.783	108850	40847	
103	0	X	6	391.8127	38.350	100040	37906	
104	0	X	6	391.8127	38.433	228620	32346	
105	109	I	6	401.8559	37.100	38444000	12805000	13C-1,2,3,4,7,8-Hx
106	110	I	6	401.8559	37.200	49504000	14692000	13C-1,2,3,6,7,8-Hx

107	111	R	6	401.8559	37.533	54983000	16356000	13C-1,2,3,7,8,9-Hx
108	0	X	6	401.8559	37.783	657410	191860	
109	105	I	6	403.8529	37.100	31022000	10532000	13C-1,2,3,4,7,8-Hx
110	106	I	6	403.8529	37.200	39709000	11608000	13C-1,2,3,6,7,8-Hx
111	107	R	6	403.8529	37.533	43629000	13134000	13C-1,2,3,7,8,9-Hx
112	126	O	7	407.7818	39.383	147660	75077	
113	0	X	7	407.7818	39.483	152510	34371	
114	0	X	7	407.7818	39.683	115360	41062	
115	0	X	7	407.7818	40.083	102420	27512	
116	0	X	7	407.7818	40.383	114600	34898	
117	0	X	7	407.7818	40.533	121920	38531	
118	0	X	7	407.7818	41.283	107230	44570	
119	0	X	7	407.7818	41.383	123220	30144	
120	0	X	7	407.7818	41.583	110470	26491	
121	0	X	7	407.7818	41.850	124130	31632	
122	0	X	7	407.7818	41.983	141700	43695	
123	0	X	7	407.7818	42.033	102640	39255	
124	0	X	7	407.7818	42.117	123850	37885	
125	0	X	7	407.7818	42.500	102900	26954	
126	112	O	7	409.7788	39.400	103160	27505	
127	130	I	7	417.8253	39.683	25885000	6783200	13C-1,2,3,4,6,7,8-
128	131	I	7	417.8253	41.467	24047000	5217600	13C-1,2,3,4,7,8,9-
129	0	X	7	417.8253	41.717	319830	85821	
130	127	I	7	419.8220	39.683	59206000	14965000	13C-1,2,3,4,6,7,8-
131	128	I	7	419.8220	41.467	51667000	11638000	13C-1,2,3,4,7,8,9-
132	0	X	0	479.7165	40.750	166720	38093	
133	0	X	0	479.7165	41.200	127880	30220	
134	0	X	0	479.7165	41.767	116620	23567	
135	0	X	0	479.7165	42.467	119090	22177	
136	138	O	7	423.7766	39.683	378120	92328	
137	140	O	7	423.7766	41.483	212670	57404	
138	136	O	7	425.7737	39.683	203510	41120	
139	0	X	7	425.7737	40.933	146130	29775	
140	137	O	7	425.7737	41.467	105090	26187	
141	143	Y	7	435.8169	40.017	484720	139590	
142	144	I	7	435.8169	40.917	35510000	8874300	13C-1,2,3,4,6,7,8-
143	141	Y	7	437.8140	40.033	425510	131180	
144	142	I	7	437.8140	40.917	32938000	8617100	13C-1,2,3,4,6,7,8-
145	148	U	8	441.7428	45.467	101590	22014	OCDF
146	0	X	8	443.7399	43.517	104450	26064	
147	0	X	8	443.7399	43.717	105980	25328	
148	145	U	8	443.7399	45.517	109820	35784	OCDF
149	0	X	8	443.7399	45.767	130500	55587	
150	0	X	8	443.7399	45.867	114760	30010	
151	0	X	8	443.7399	46.483	109960	26090	
152	0	X	8	443.7399	46.767	143450	29352	
153	0	X	8	443.7399	46.933	111380	34913	
154	0	X	8	443.7399	48.217	126520	31886	
155	158	O	8	457.7377	45.283	206280	40897	
156	0	X	8	457.7377	45.467	107690	32158	
157	0	X	8	457.7377	49.633	105480	29691	
158	155	O	8	459.7348	45.267	113820	51277	
159	0	X	8	459.7348	47.667	105690	21987	

160	0	X	8	459.7348	49.900	113630	24868	
161	163	I	8	469.7780	45.267	54479000	10660000	13C-OCDD
162	0	X	8	469.7780	45.517	555930	203280	
163	161	I	8	471.7750	45.267	59801000	12140000	13C-OCDD

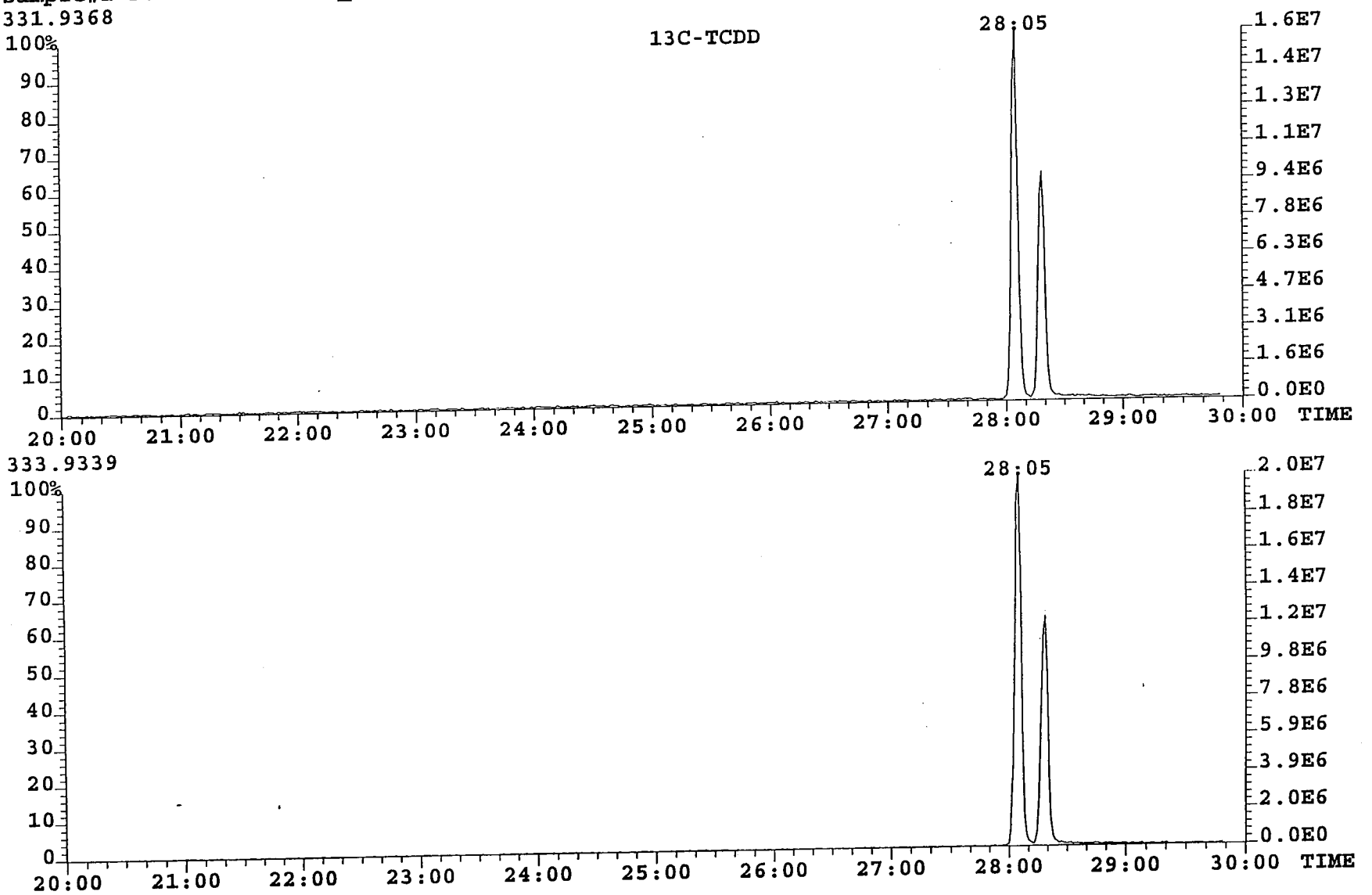

File:5C1107 #1-1151 Acq:11-MAR-2002 16:53:24 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:C001A_622-003 Exp:1613
303.9016
TCDF
305.8987
375.8364
HXCDPE
TIME

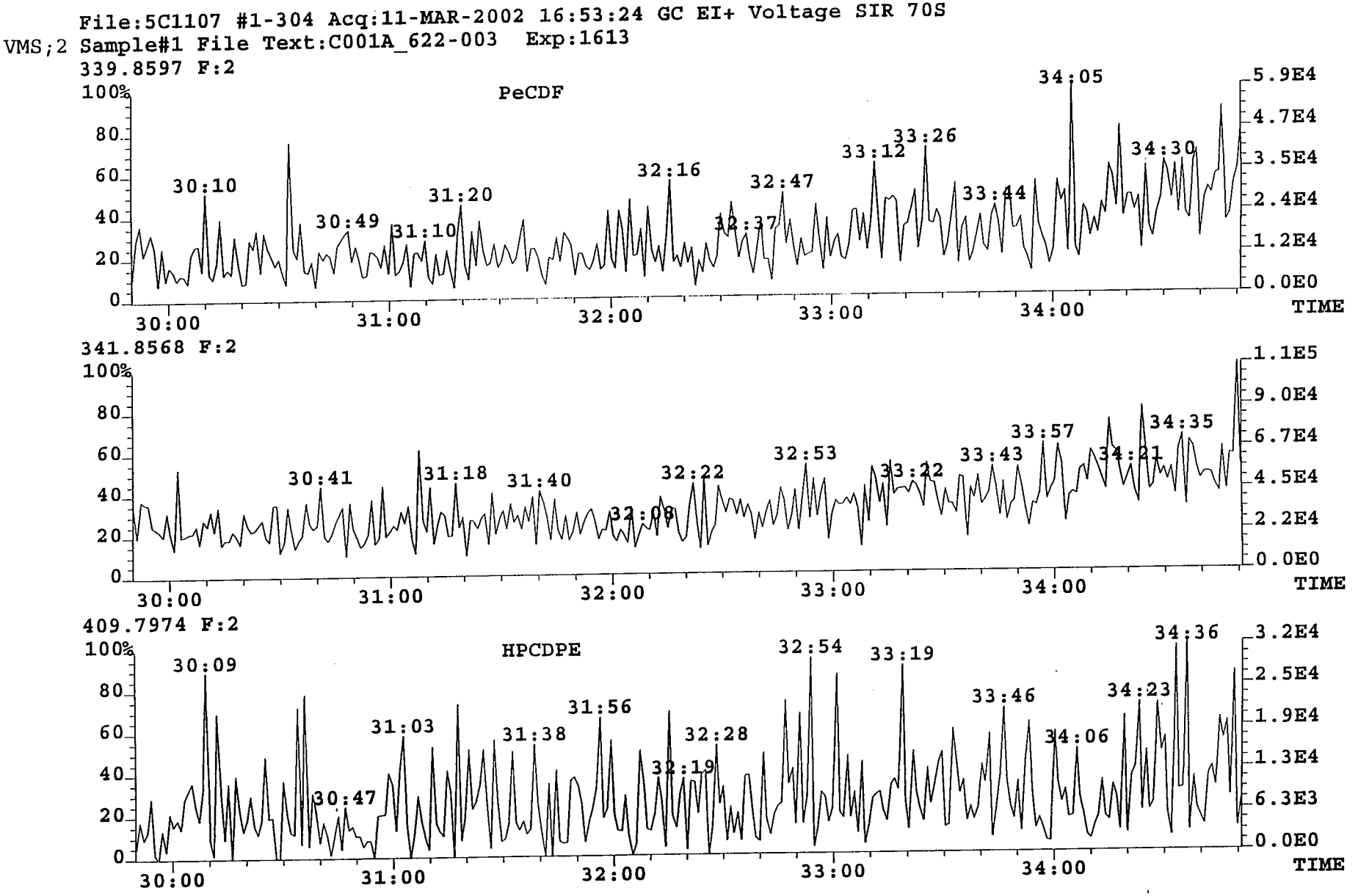

File:5C1107 #1-1151 Acq:11-MAR-2002 16:53:24 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:C001A_622-003 Exp:1613
315.9419
13C-TCDF
27:26
317.9389
27:26
LOCK_MASS_CHECK
20:51
22:19
23:40
24:47
26:18
27:54
28:48
29:24
TIME

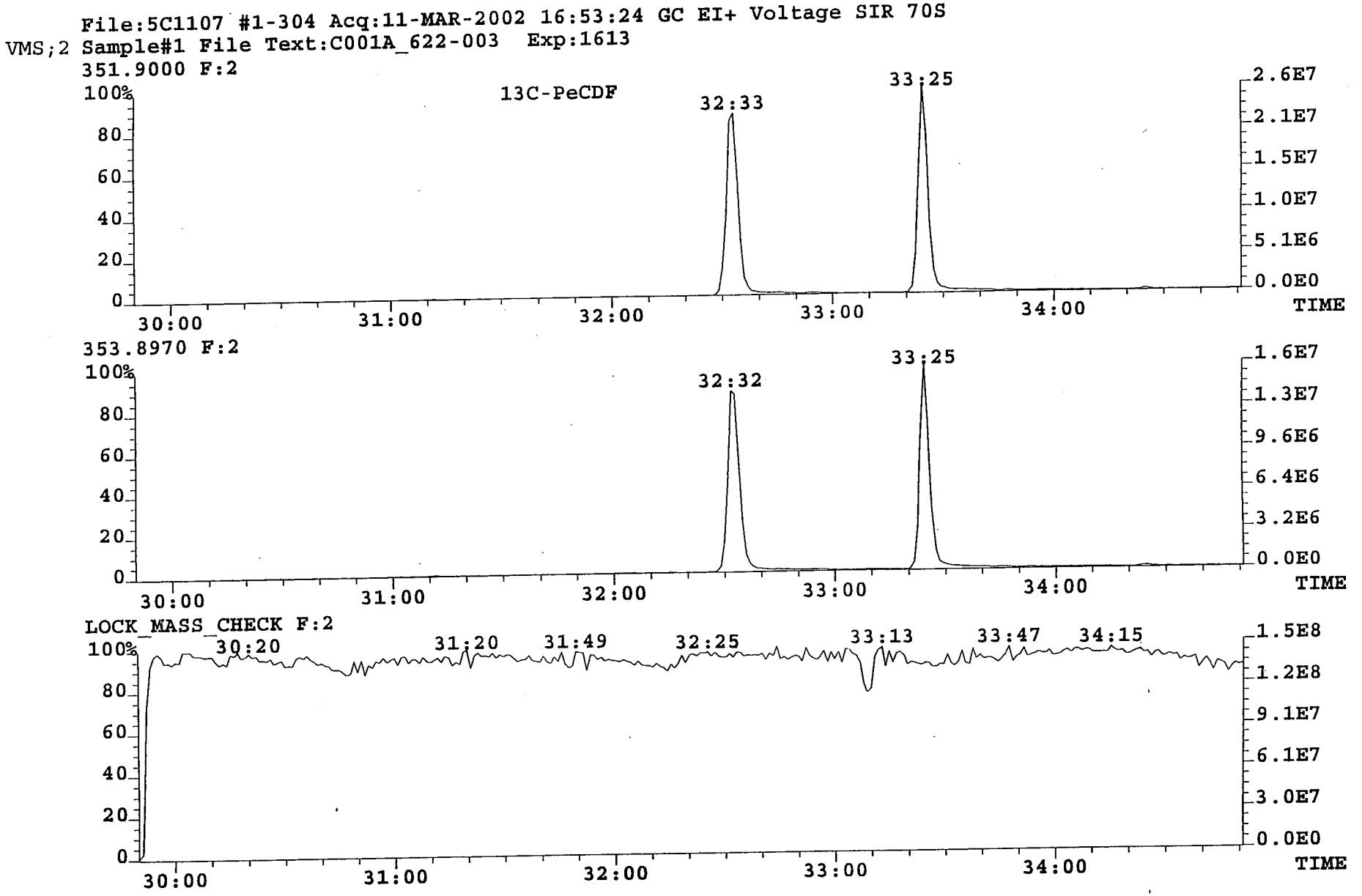

File:5C1107 #1-1151 Acq:11-MAR-2002 16:53:24 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:C001A_622-003 Exp:1613
319.8965
TCDD
27:25
28:34
20:24
21:12
21:52
22:50
23:37
24:23
25:39
26:32
29:37
321.8936
28:06
22:48
20:35
21:23
22:08
23:32
24:31
25:51
26:30
27:25
28:58
29:35
327.8847
37CL-TCDD
28:20
20:50
23:18
24:58
100%
80
60
40
20
0
20:00
21:00
22:00
23:00
24:00
25:00
26:00
27:00
28:00
29:00
30:00
TIME
5.2E4
4.2E4
3.1E4
2.1E4
1.0E4
0.0E0
3.5E4
2.8E4
2.1E4
1.4E4
7.1E3
0.0E0
2.4E6
1.9E6
1.4E6
9.4E5
4.7E5
0.0E0

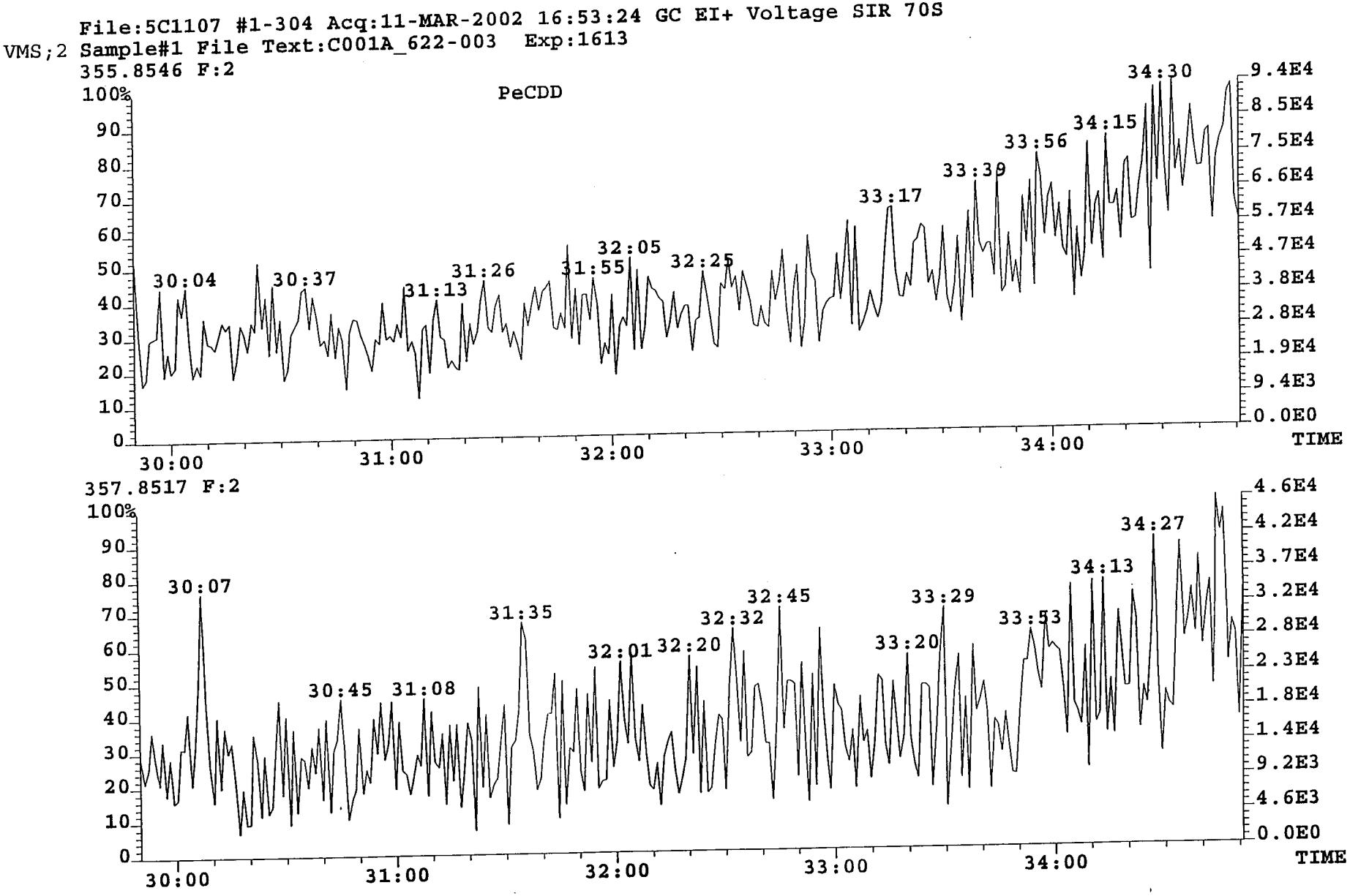
File:5C1107 #1-1151 Acq:11-MAR-2002 16:53:24 GC EI+ Voltage SIR 70S

VMS;2 Sample#1 File Text:C001A_622-003 Exp:1613

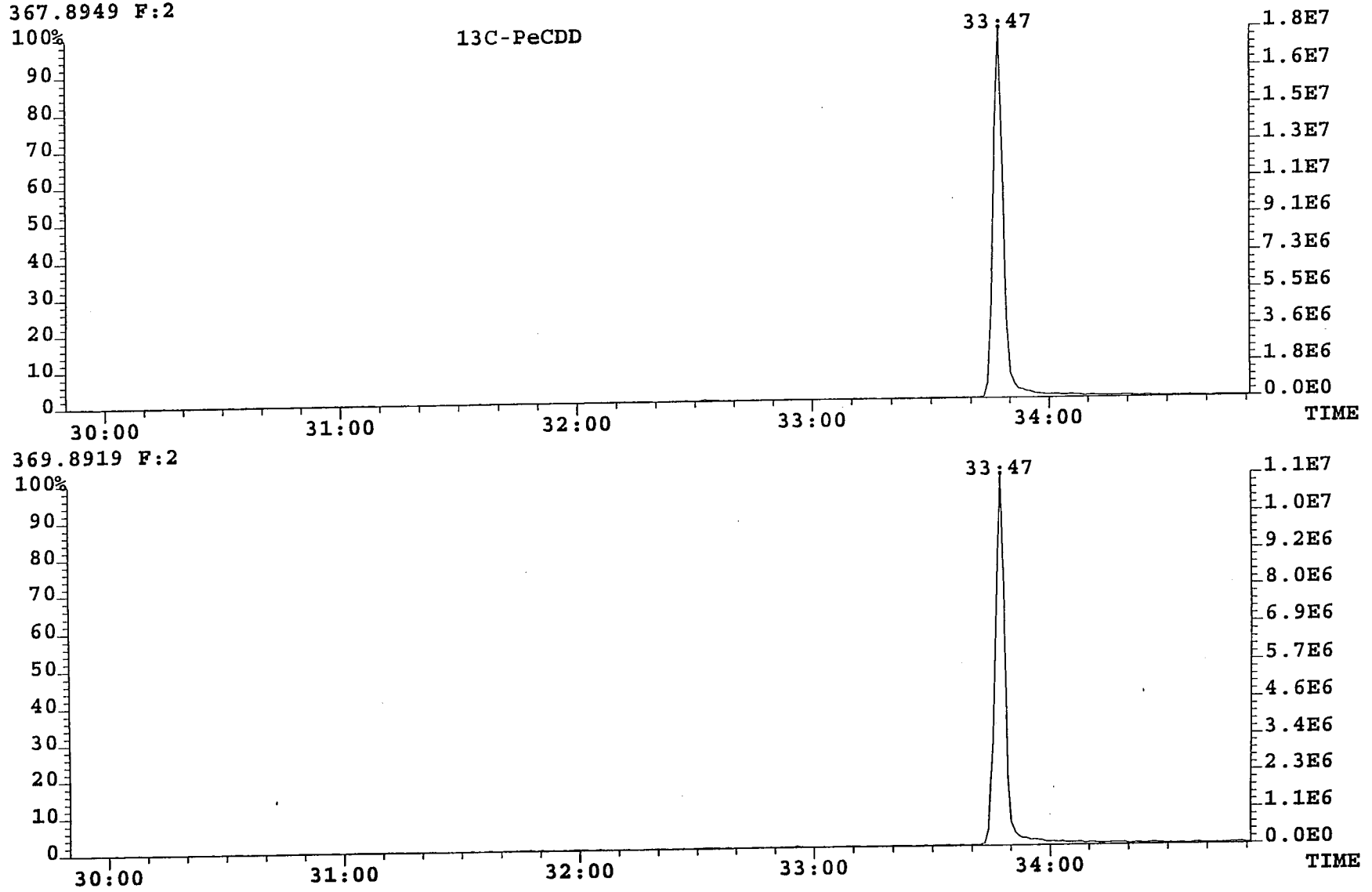


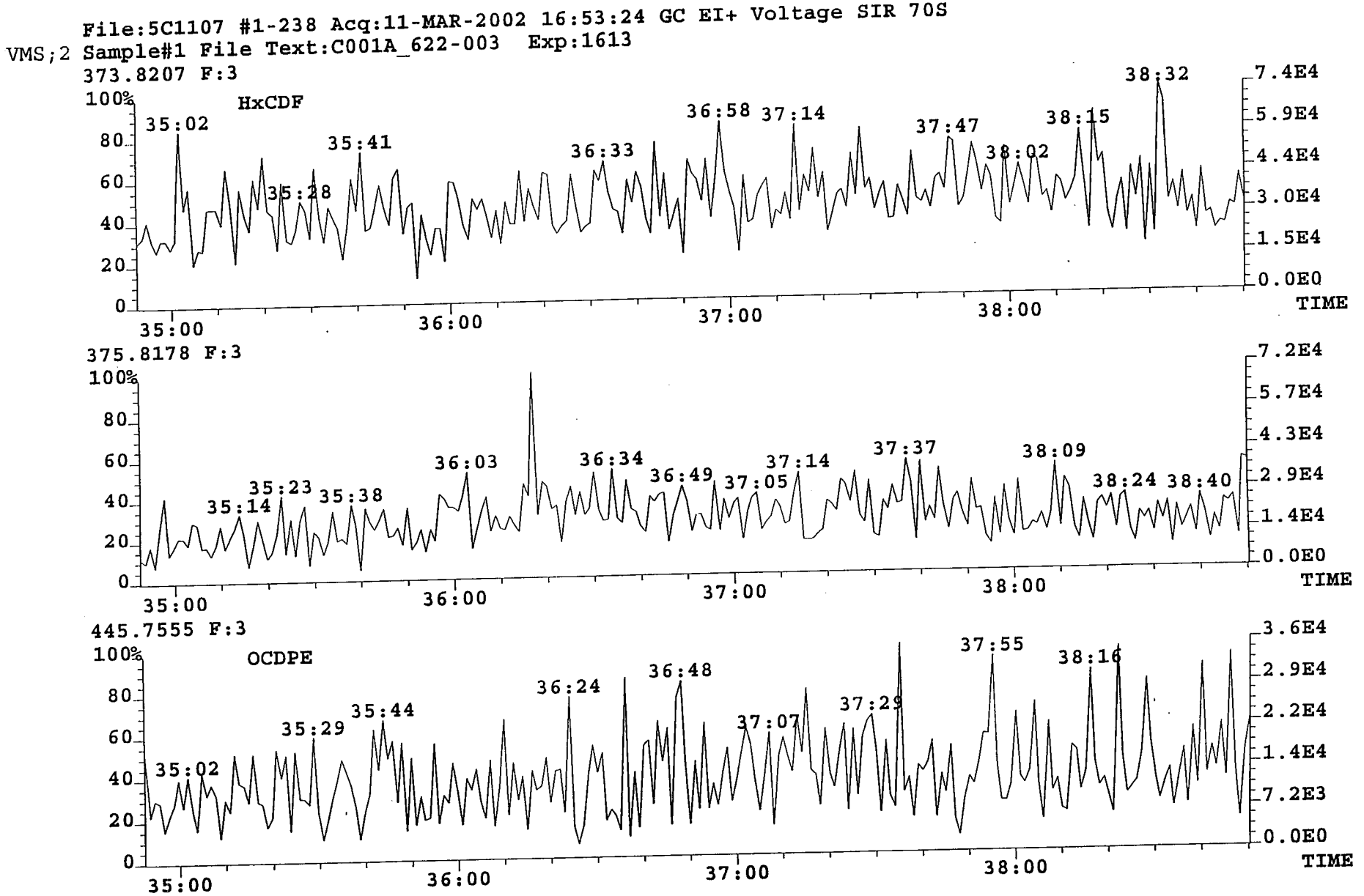

File:5C1107 #1-304 Acq:11-MAR-2002 16:53:24 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:C001A_622-003 Exp:1613
339.8597 F:2
PeCDF
30:10
30:49
31:10
31:20
32:16
32:37
32:47
33:12
33:26
33:44
34:05
34:30
5.9E4
4.7E4
3.5E4
2.4E4
1.2E4
0.0E0
TIME
341.8568 F:2
30:41
31:18
31:40
32:08
32:22
32:53
33:22
33:43
33:57
34:21
34:35
1.1E5
9.0E4
6.7E4
4.5E4
2.2E4
0.0E0
TIME
409.7974 F:2
HPCDPE
30:09
30:47
31:03
31:38
31:56
32:19
32:28
32:54
33:19
33:46
34:06
34:23
34:36
3.2E4
2.5E4
1.9E4
1.3E4
6.3E3
0.0E0
TIME
100%
80
60
40
20
0
30:00
31:00
32:00
33:00
34:00


File:5C1107 #1-304 Acq:11-MAR-2002 16:53:24 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:C001A_622-003 Exp:1613
351.9000 F:2
13C-PeCDF
32:33
33:25
353.8970 F:2
32:32
33:25
LOCK_MASS_CHECK F:2
30:20
31:20
31:49
32:25
33:13
33:47
34:15
TIME

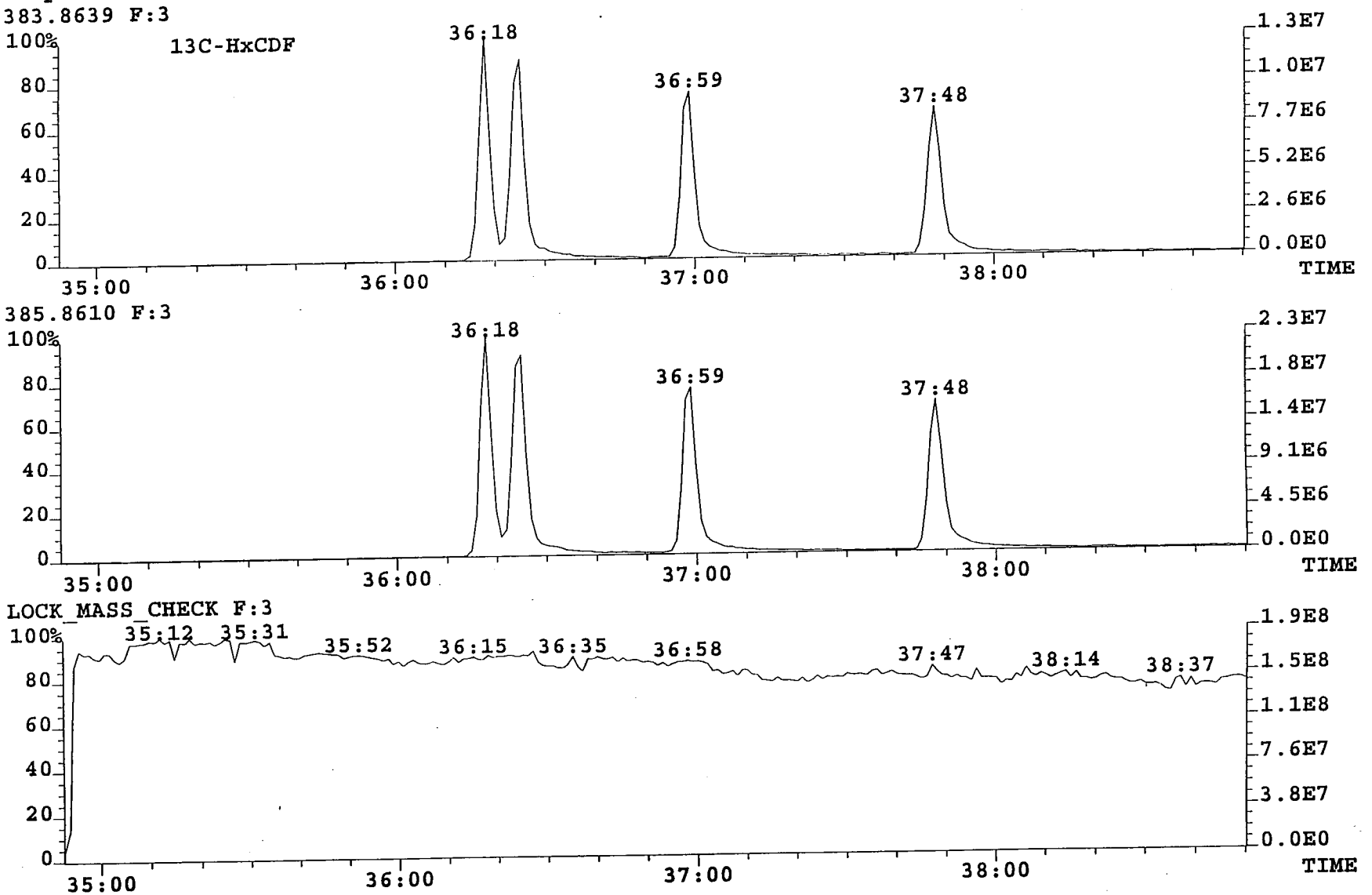

File:5C1107 #1-304 Acq:11-MAR-2002 16:53:24 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:C001A_622-003 Exp:1613
355.8546 F:2
PeCDD
30:04
30:37
31:13
31:26
31:55
32:05
32:25
33:17
33:39
33:56
34:15
34:30
TIME
357.8517 F:2
30:07
30:45
31:08
31:35
32:01
32:20
32:32
32:45
33:20
33:29
33:53
34:13
34:27
TIME

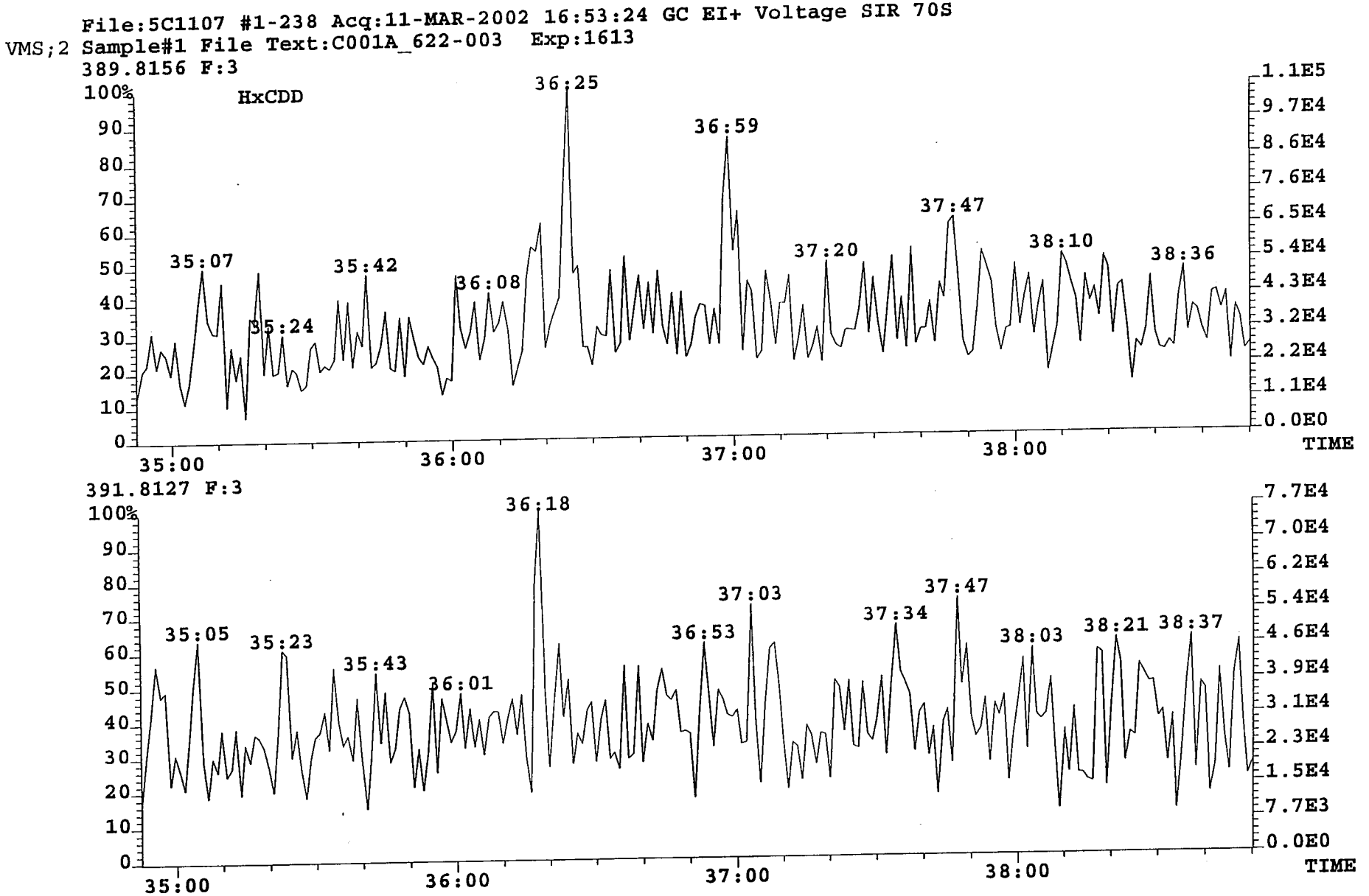
File:5C1107 #1-304 Acq:11-MAR-2002 16:53:24 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:C001A_622-003 Exp:1613



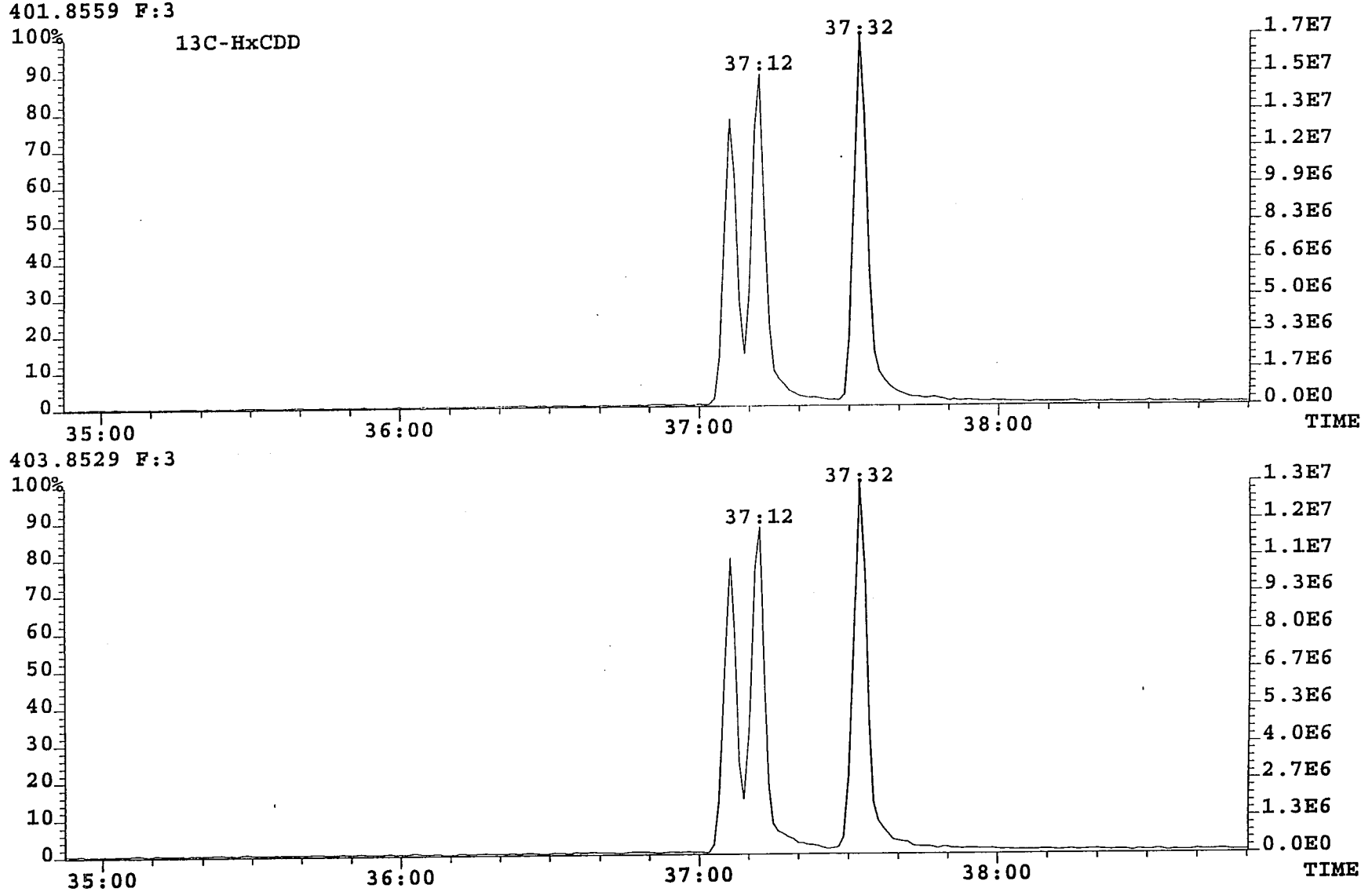

File:5C1107 #1-238 Acq:11-MAR-2002 16:53:24 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:C001A_622-003 Exp:1613
373.8207 F:3
HxCDF
35:02
35:28
35:41
36:33
36:58
37:14
37:47
38:02
38:15
38:32
7.4E4
5.9E4
4.4E4
3.0E4
1.5E4
0.0E0
TIME
35:00
36:00
37:00
38:00
375.8178 F:3
35:14
35:23
35:38
36:03
36:34
36:49
37:05
37:14
37:37
38:09
38:24
38:40
7.2E4
5.7E4
4.3E4
2.9E4
1.4E4
0.0E0
TIME
445.7555 F:3
OCDPE
35:02
35:29
35:44
36:24
36:48
37:07
37:29
37:55
38:16
3.6E4
2.9E4
2.2E4
1.4E4
7.2E3
0.0E0
TIME

File:5C1107 #1-238 Acq:11-MAR-2002 16:53:24 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:C001A_622-003 Exp:1613

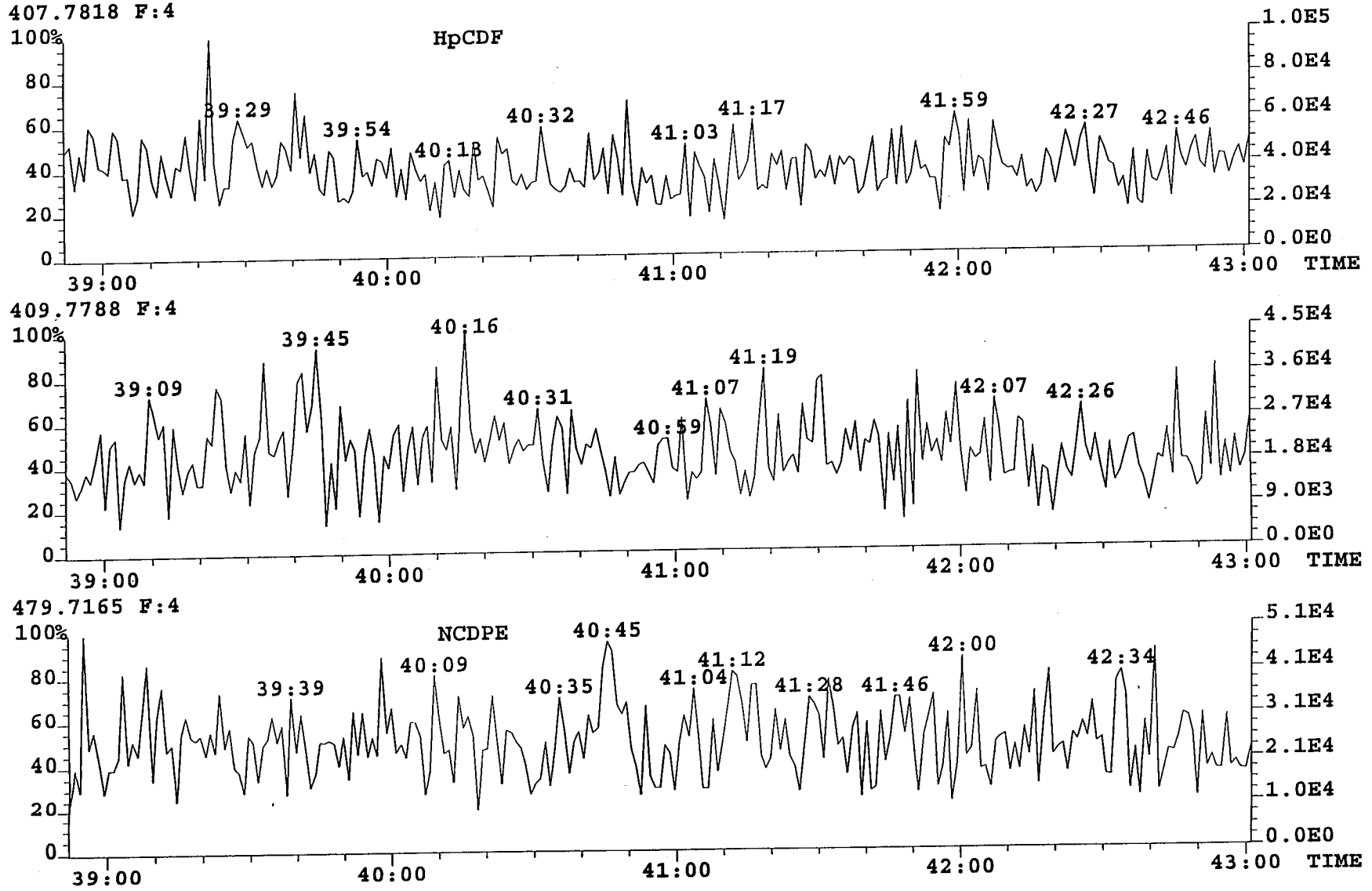



File:5C1107 #1-238 Acq:11-MAR-2002 16:53:24 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:C001A_622-003 Exp:1613
389.8156 F:3
HxCDD
35:07
35:24
35:42
36:08
36:25
36:59
37:20
37:47
38:10
38:36
35:00
36:00
37:00
38:00
TIME
391.8127 F:3
35:05
35:23
35:43
36:01
36:18
36:53
37:03
37:34
37:47
38:03
38:21
38:37
35:00
36:00
37:00
38:00
TIME

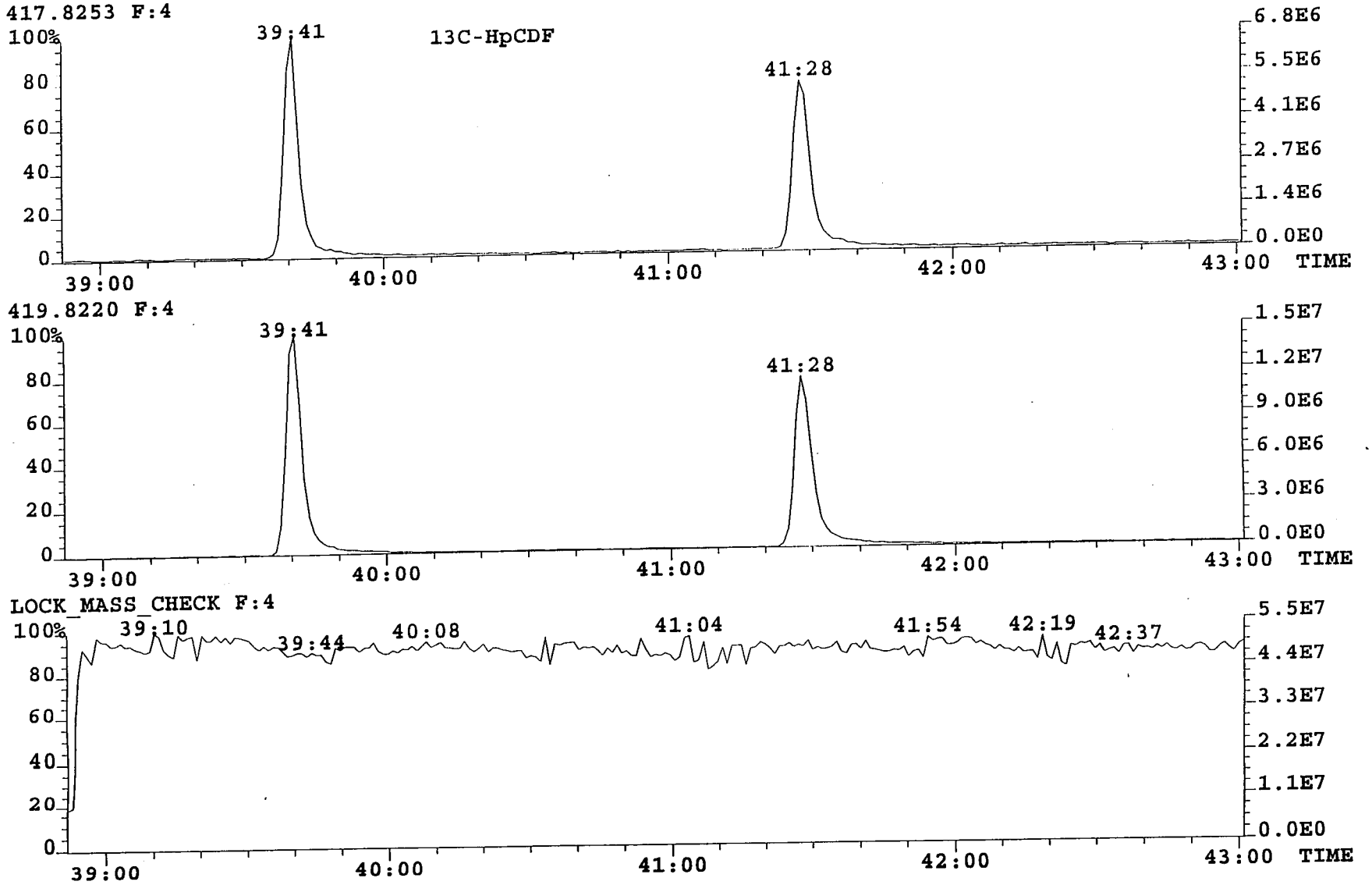
File:5C1107 #1-238 Acq:11-MAR-2002 16:53:24 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:C001A_622-003 Exp:1613

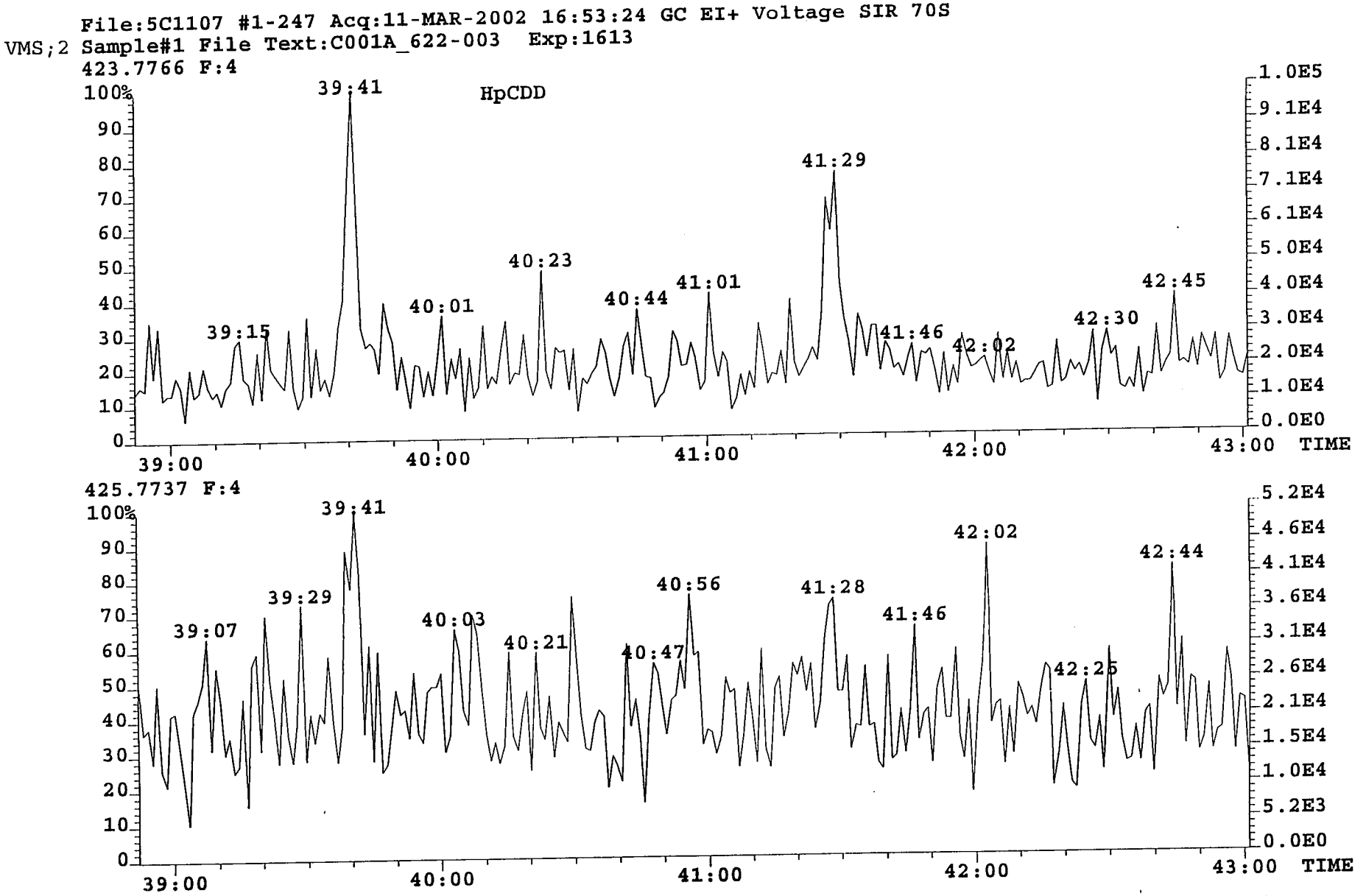


File:5C1107 #1-247 Acq:11-MAR-2002 16:53:24 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:C001A_622-003 Exp:1613

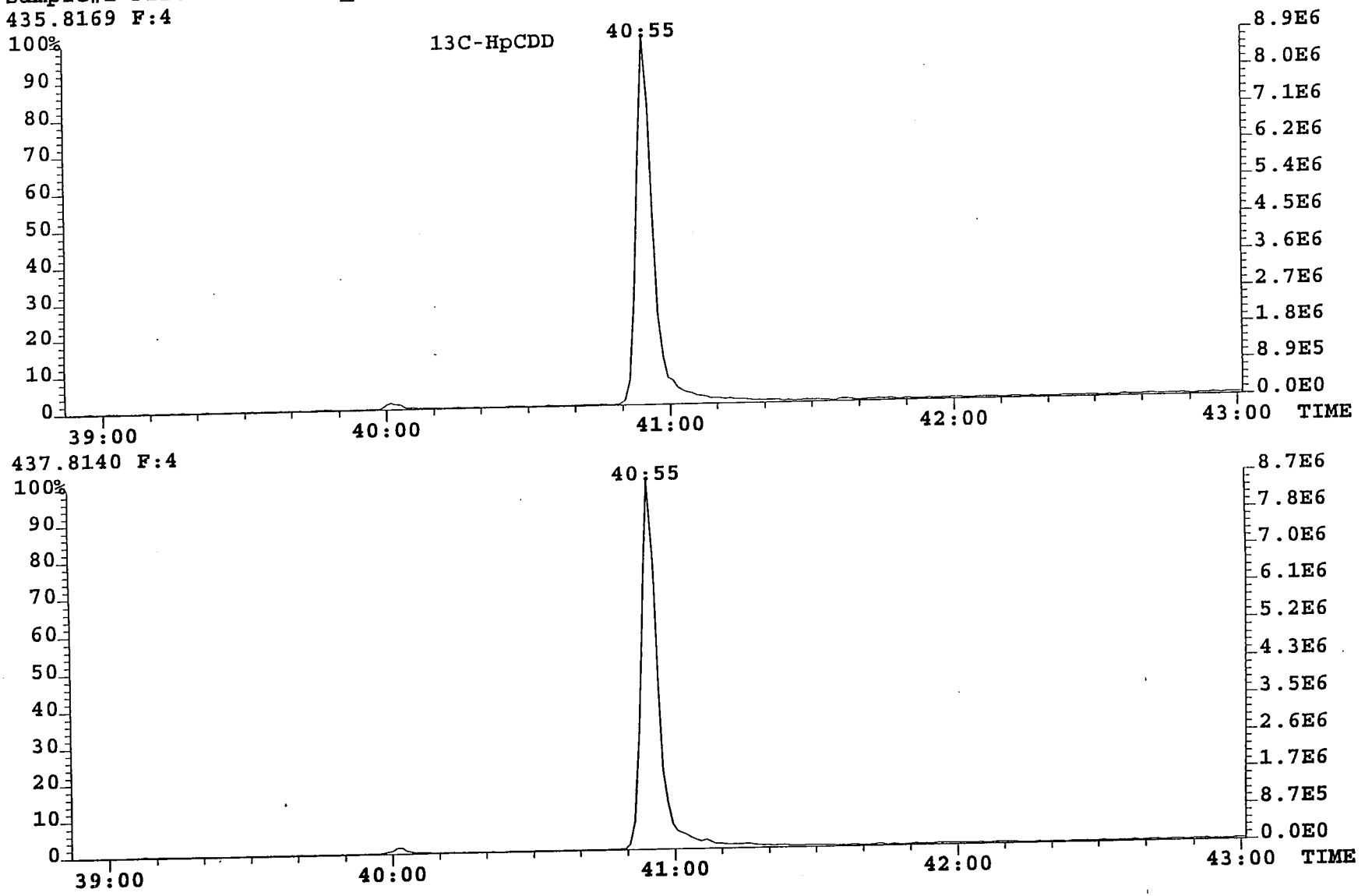


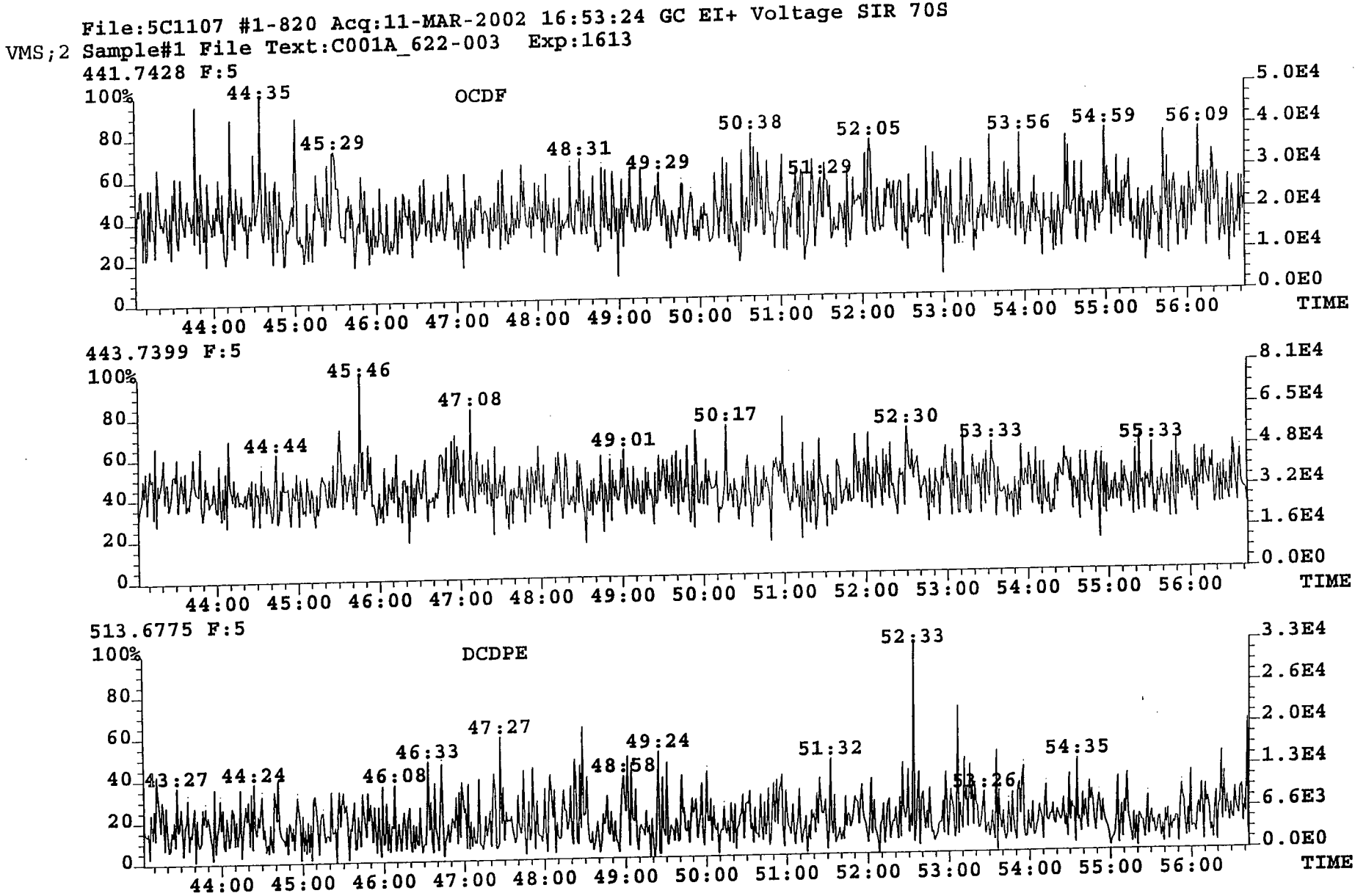
File:5C1107 #1-247 Acq:11-MAR-2002 16:53:24 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:C001A_622-003 Exp:1613

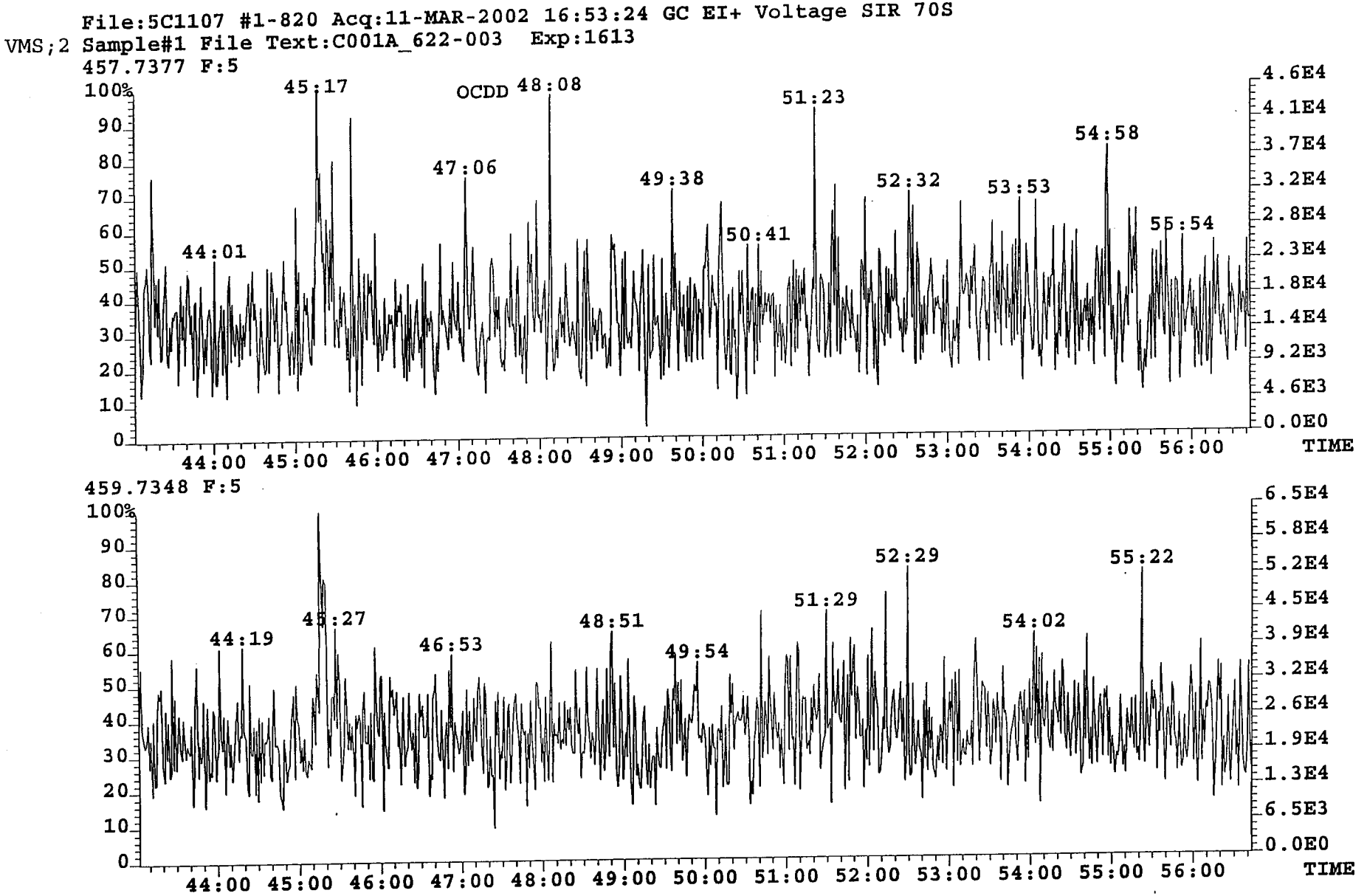


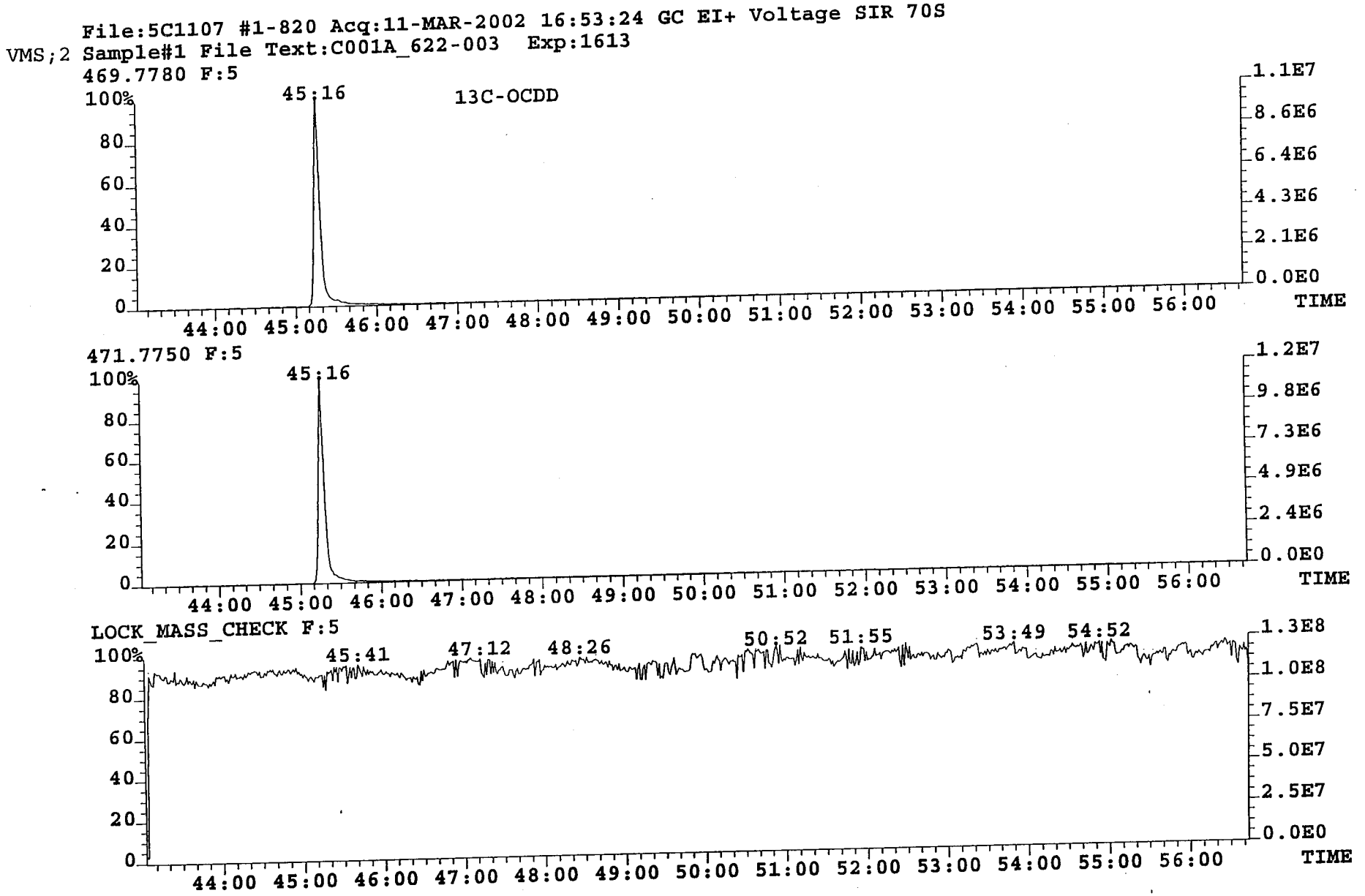

File:5C1107 #1-247 Acq:11-MAR-2002 16:53:24 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:C001A_622-003 Exp:1613
423.7766 F:4
HpCDD
39:41
41:29
40:23
40:01
41:01
40:44
42:45
39:15
41:46
42:02
42:30
425.7737 F:4
39:41
42:02
42:44
40:56
41:28
39:29
41:46
39:07
40:03
40:21
40:47
42:25
39:00
40:00
41:00
42:00
43:00
TIME

File:5C1107 #1-247 Acq:11-MAR-2002 16:53:24 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:C001A_622-003 Exp:1613




File:5C1107 #1-820 Acq:11-MAR-2002 16:53:24 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:C001A_622-003 Exp:1613
441.7428 F:5
OCDF
44:35
45:29
48:31
49:29
50:38
51:29
52:05
53:56
54:59
56:09
443.7399 F:5
44:44
45:46
47:08
49:01
50:17
52:30
53:33
55:33
513.6775 F:5
DCDPE
43:27
44:24
46:08
46:33
47:27
48:58
49:24
51:32
52:33
53:26
54:35
TIME


File:5C1107 #1-820 Acq:11-MAR-2002 16:53:24 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:C001A_622-003 Exp:1613
457.7377 F:5
45:17
OCDD 48:08
51:23
54:58
47:06
49:38
52:32
53:53
44:01
50:41
55:54
4.6E4
4.1E4
3.7E4
3.2E4
2.8E4
2.3E4
1.8E4
1.4E4
9.2E3
4.6E3
0.0E0
TIME
459.7348 F:5
52:29
55:22
45:27
51:29
48:51
44:19
46:53
49:54
54:02
6.5E4
5.8E4
5.2E4
4.5E4
3.9E4
3.2E4
2.6E4
1.9E4
1.3E4
6.5E3
0.0E0
TIME


File:5C1107 #1-820 Acq:11-MAR-2002 16:53:24 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:C001A_622-003 Exp:1613
469.7780 F:5
45:16
13C-OCDD
471.7750 F:5
45:16
LOCK_MASS_CHECK F:5
45:41
47:12
48:26
50:52
51:55
53:49
54:52
TIME

USEPA - ITD

FORM 1A
PCDD/PCDF ANALYSIS DATA SHEET
Use for Sample and Blank Results

TB001A

Lab Name: Pacific Analytical, Inc. Episode:
Contract No.: SAS No.: Lab ID: 622-004

Matrix (aqueous/solid/leachate): AQUEOUS Sample Wt/Vol: 1000.0000 g/mL: ML

Sample Receipt Date: 02/18/02 Initial Calibration Date: 03/04/02

Ext. Date: 02/22/02 Shift: 0800 Instrument ID: VG#5

Analysis Date: 03/11/02 Time: 1752 GC Column ID: DB5 60M

Extract Volume (uL): 20 Sample Data Filename: 5C1108

Injection Volume (uL): 1 Blank Data Filename: B1707

Dilution Factor: 1.0 Cal. Ver. Data Filename: 5C1102

Concentration Units (pg/L or ng/Kg dry weight): PG/L %Solids: 0.0

ANALYTE	CONCENTRATION FOUND	DETECTION LIMIT	ION ABUND. RATIO (1)	RRT (1)
2378-TCDD	not detected	10		
12378-PeCDD	not detected	50		
123478-HxCDD	not detected	50		
123678-HxCDD	not detected	50		
123789-HxCDD	not detected	50		
1234678-HpCDD	not detected	50		
OCDD	not detected	100		
2378-TCDF	not detected	10		
12378-PeCDF	not detected	50		
23478-PeCDF	not detected	50		
123478-HxCDF	not detected	50		
123678-HxCDF	not detected	50		
123789-HxCDF	not detected	50		
234678-HxCDF	not detected	50		
1234678-HpCDF	not detected	50		
1234789-HpCDF	not detected	50		
OCDF	not detected	100		
Total TCDD		10		
Total PeCDD		50		
Total HxCDD		50		
Total HpCDD		50		
Total TCDF		10		
Total PeCDF		50		
Total HxCDF		50		
Total HpCDF		50		

(1) Contract-required limits for RRTs and ion abundance ratios are specified in Tables 2 and 9, respectively, Method 1613.

USEPA - ITD

FORM 1T
PCDD/PCDF TOXICITY EQUIVALENCE SUMMARY

EPA SAMPLE NO.
TB001A

Lab Name: Pacific Analytical, Inc. Episode No.:

Contract No.: SAS No.: Lab Sample ID: 622-004

Matrix (aqueous/solid/leachate): AQUEOUS Sample Wt/Vol: 1000.0 g or mL: ML

Sample Receipt Date: 02/18/02 Initial Calibration Date: 03/04/02

Ext. Date: 02/22/02 Shift: 0800 Instrument ID: VG#5

Analysis Date: 03/11/02 Time: 1752 GC Column ID: DB5 60M

Extract Volume (uL): 20 Sample Data Filename: 5C1108

Injection Volume (uL): 1 Blank Data Filename: B1707

Dilution Factor: 1.0 Cal. Ver. Data Filename: 5C1102

Concentration Units (pg/L or ng/Kg dry weight): PG/L %Solids: 0.0

ANALYTE	CONCENTRATION FOUND	TEF	TEF-ADJUSTED CONCENTRATION
2378-TCDD	0.000	1.0	0.000
12378-PeCDD	0.000	1.0	0.000
123478-HxCDD	0.000	0.1	0.000
123678-HxCDD	0.000	0.1	0.000
123789-HxCDD	0.000	0.1	0.000
1234678-HpCDD	0.000	0.01	0.000
OCDD	0.000	0.0001	0.000
2378-TCDF	0.000	0.1	0.000
12378-PeCDF	0.000	0.05	0.000
23478-PeCDF	0.000	0.5	0.000
123478-HxCDF	0.000	0.1	0.000
123678-HxCDF	0.000	0.1	0.000
123789-HxCDF	0.000	0.1	0.000
234678-HxCDF	0.000	0.1	0.000
1234678-HpCDF	0.000	0.01	0.000
1234789-HpCDF	0.000	0.01	0.000
OCDF	0.000	0.0001	0.000
		TOTAL =	0.000

TEFs for 2,3,7,8-TCDD equivalents, Policy for Implementation of Toxics, Standard for Inland Surface Waters, Enclosed Bays and estuaries of California, Adopted March 2,2000

USEPA - ITD

FORM 2
PCDD/PCDF LABELED COMPOUND AND
CLEANUP STANDARD RECOVERIES

TB001A

Lab Name: Pacific Analytical, Inc. Episode:
Contract No.: SAS No.: Lab ID: 622-004

Matrix (aqueous/solid/leachate): AQUEOUS Sample Wt/Vol: 1000.0000 g/mL: ML

Sample Receipt Date: 02/18/02 Initial Calibration Date: 03/04/02

Ext. Date: 02/22/02 Shift: 0800 Instrument ID: VG#5

Analysis Date: 03/11/02 Time: 1752 GC Column ID: DB5 60M

Extract Volume (uL): 20 Sample Data Filename: 5C1108

Injection Volume (uL): 1 Blank Data Filename: B1707

Dilution Factor: 1.0 Cal. Ver. Data Filename: 5C1102

Concentration Units (pg/L or ng/Kg dry weight): PG/L %Solids: 0.0

	SPIKE CONC.	CONC. FOUND	R(%) (1)	ION ABUND. RATIO (2)	RRT (2)
LABELED COMPOUNDS					
13C-2378-TCDD	2000	1300	65	0.74	1.008
13C-12378-PeCDD	2000	1400	70	1.69	1.204
13C-123478-HxCDD	2000	1800	90	1.33	0.988
13C-123678-HxCDD	2000	2100	110	1.25	0.991
13C-1234678-HpCDD	2000	1900	95	1.02	1.090
13C-OCDD	4000	3900	98	0.90	1.206
13C-2378-TCDF	2000	1300	65	0.76	0.977
13C-12378-PeCDF	2000	1500	75	1.51	1.159
13C-23478-PeCDF	2000	1400	70	1.60	1.190
13C-123478-HxCDF	2000	2000	100	0.53	0.967
13C-123678-HxCDF	2000	2300	120	0.54	0.970
13C-123789-HxCDF	2000	2000	100	0.52	0.985
13C-234678-HxCDF	2000	1900	95	0.58	1.007
13C-1234678-HpCDF	2000	2000	100	0.46	1.056
13C-1234789-HpCDF	2000	2000	100	0.45	1.105
CLEANUP STANDARD					
37Cl4-2378-TCDD	200	140	70		1.001

PACIFIC ANALYTICAL 1613 PCDD/PCDF QUANTITATION SUMMARY

Lab File ID: 5C1108 Sample: TB001A 622-004
Cal File: 5C04D Dil: 1.0 Sample Size (Dry if Solid): 1.0000
Nanograms Label Added (IS): 2.0 Nanograms RS Added: 2.0 Units: pg/L

Compound	Ratio	RRT	Response Factor	Extract ng/ml	Sample Conc.	Label Rec.
13C-2,3,7,8-TCDF	0.76	0.977	1.528		1298.15	64.91
2,3,7,8-TCDF	0.00	0.977	1.104	N.D.< CRQL		
13C-2,3,7,8-TCDD	0.74	1.008	1.189		1326.49	66.32
2,3,7,8-TCDD	0.00	1.008	0.849	N.D.< CRQL		
37Cl-2,3,7,8-TCDD	1.00	1.001	2.342		136.05	6.80
13C-1,2,3,7,8-PeCDF	1.51	1.159	1.441		1465.99	73.30
1,2,3,7,8-PeCDF	0.00	1.159	0.936	N.D.< CRQL		
13C-2,3,4,7,8-PeCDF	1.60	1.190	1.425		1428.23	71.41
2,3,4,7,8-PeCDF	0.00	1.190	0.961	N.D.< CRQL		
13C-1,2,3,7,8-PeCDD	1.69	1.204	0.961		1391.55	69.58
1,2,3,7,8-PeCDD	0.00	1.204	0.973	N.D.< CRQL		
13C-1,2,3,4,7,8-HxCDF	0.53	0.967	1.049		2045.63	102.28
1,2,3,4,7,8-HxCDF	0.00	0.967	1.176	N.D.< CRQL		
13C-1,2,3,6,7,8-HxCDF	0.54	0.970	1.171		2280.67	114.03
1,2,3,6,7,8-HxCDF	0.00	0.970	1.141	N.D.< CRQL		
13C-1,2,3,7,8,9-HxCDF	0.52	0.985	0.980		1985.47	99.27
1,2,3,7,8,9-HxCDF	0.00	0.985	1.186	N.D.< CRQL		
13C-2,3,4,6,7,8-HxCDF	0.58	1.007	0.957		1855.23	92.76
2,3,4,6,7,8-HxCDF	0.00	1.007	1.073	N.D.< CRQL		
13C-1,2,3,4,7,8-HxCDD	1.33	0.988	0.826		1785.41	89.27
1,2,3,4,7,8-HxCDD	0.00	0.988	0.927	N.D.< CRQL		
13C-1,2,3,6,7,8-HxCDD	1.25	0.991	1.009		2094.00	104.70
1,2,3,6,7,8-HxCDD	0.00	0.991	0.837	N.D.< CRQL		
13C-1,2,3,7,8,9-HxCDD	0.00	0.991	0.000	N.D.< CRQL		
1,2,3,7,8,9-HxCDD	0.00	0.991	0.925	N.D.< CRQL		
13C-1,2,3,4,6,7,8-HpCDF	0.46	1.056	0.881		1981.02	99.05
1,2,3,4,6,7,8-HpCDF	0.00	1.056	1.218	N.D.< CRQL		
13C-1,2,3,4,7,8,9-HpCDF	0.45	1.105	0.794		2027.34	101.37
1,2,3,4,7,8,9-HpCDF	0.00	1.105	1.141	N.D.< CRQL		
13C-1,2,3,4,6,7,8-HpCDD	1.02	1.090	0.718		1938.28	96.91
1,2,3,4,6,7,8-HpCDD	1.14	1.000	1.027	1.22	24.37	
13C-OCDD	0.90	1.206	0.619		3878.11	96.95
OCDF	0.82	1.004	1.232	1.06	21.15	
OCDD	0.89	1.000	1.021	2.84	56.84	

Pacific Analytical Inc.
PCDD/PCDF Targetting Summary

Lab File ID: \VG\DIOXIN\5C1108.DAT Target File: :\VG\DIOXIN\1613.TRG

Compound	Flag	QM1	QM2	Ratio	OK	Pred. RT	Act. Rt	Area
13C-1,2,3,4-TCDD	R	332	334	0.80	Y	28.050	28.050	148297000
13C-2,3,7,8-TCDF	I	316	318	0.76	Y	27.385	27.400	147079000
2,3,7,8-TCDF	U	304	306	0.00	N	27.430	0.000	No Trace Found
13C-2,3,7,8-TCDD	I	332	334	0.74	Y	28.277	28.267	116947000
2,3,7,8-TCDD	U	320	322	0.00	N	28.281	0.000	No Trace Found
37Cl-2,3,7,8-TCDD	I	328	328	1.00	Y	28.281	28.283	23626000
13C-1,2,3,7,8-PeCDF	I	352	354	1.51	Y	32.431	32.517	156638000
1,2,3,7,8-PeCDF	U	340	342	0.00	N	32.537	0.000	No Trace Found
13C-2,3,4,7,8-PeCDF	I	352	354	1.60	Y	33.256	33.383	150909000
2,3,4,7,8-PeCDF	U	340	342	0.00	N	33.403	0.000	No Trace Found
13C-1,2,3,7,8-PeCDD	I	368	370	1.69	Y	33.604	33.767	99157000
1,2,3,7,8-PeCDD	U	356	358	0.00	N	33.784	0.000	No Trace Found
13C-1,2,3,7,8,9-HxCDD	R	402	404	1.18	Y	37.517	37.517	100596000
13C-1,2,3,4,7,8-HxCDF	I	384	386	0.53	Y	36.286	36.283	107933000
1,2,3,4,7,8-HxCDF	U	374	376	0.00	N	36.301	0.000	No Trace Found
13C-1,2,3,6,7,8-HxCDF	I	384	386	0.54	Y	36.384	36.400	134329000
1,2,3,6,7,8-HxCDF	U	374	376	0.00	N	36.418	0.000	No Trace Found
13C-1,2,3,7,8,9-HxCDF	I	384	386	0.52	Y	36.947	36.967	97868000
1,2,3,7,8,9-HxCDF	U	374	376	0.00	N	36.985	0.000	No Trace Found
13C-2,3,4,6,7,8-HxCDF	I	384	386	0.58	Y	37.768	37.783	89302000
2,3,4,6,7,8-HxCDF	U	374	376	0.00	N	37.802	0.000	No Trace Found
13C-1,2,3,4,7,8-HxCDD	I	402	404	1.33	Y	37.078	37.083	74177000
1,2,3,4,7,8-HxCDD	U	390	392	0.00	N	37.102	0.000	No Trace Found
13C-1,2,3,6,7,8-HxCDD	I	402	404	1.25	Y	37.183	37.183	106272000
1,2,3,6,7,8-HxCDD	U	390	392	0.00	N	37.202	0.000	No Trace Found
13C-1,2,3,7,8,9-HxCDD	N	402	404	0.00	N	37.517	0.000	No Trace Found
1,2,3,7,8,9-HxCDD	U	390	392	0.00	N	37.517	0.000	No Trace Found
13C-1,2,3,4,6,7,8-HpCDF	I	418	420	0.46	Y	39.689	39.633	87784000
1,2,3,4,6,7,8-HpCDF	U	408	410	0.00	N	39.653	0.000	No Trace Found
13C-1,2,3,4,7,8,9-HpCDF	I	418	420	0.45	Y	41.445	41.450	80965000
1,2,3,4,7,8,9-HpCDF	U	408	410	0.00	N	41.471	0.000	No Trace Found
13C-1,2,3,4,6,7,8-HpCDD	I	436	438	1.02	Y	40.882	40.883	69999000
1,2,3,4,6,7,8-HpCDD	U	424	426	1.14	Y	40.903	40.900	875900
13C-OCDD	I	470	472	0.90	Y	45.332	45.250	120743000
OCDF	U	442	444	0.82	Y	45.512	45.450	786610
OCDD	U	458	460	0.89	Y	45.268	45.250	1751900

PACIFIC ANALYTICAL
PCDD/PCDF TOTALS SUMMARY OF NON-2,3,7,8 CONGENERS

Lab File: 5C1108 Sample: TB001A Lab ID: 622-004
Cal File: 5C04D Sample Size: 1.0000
Nanograms Label Added (IS): 2.0 Nanograms RS Added: 2.0

Analyte	Number of Peaks	Sample Conc. pg/L	Total Area	Area IS	RRF
TCDD	0	0.00	0	116947000	0.849
PeCDD	0	0.00	0	99157000	0.973
HxCDD	1	8.56	346130	90224496	0.896
HpCDD	0	0.00	0	69999000	1.027
TCDF	0	0.00	0	147079008	1.104
PeCDF	~~2~~ AMO 03-12-02	~~5.01~~	~~365360~~	153773504	0.948
HxCDF	3	25.62	1573290	107358000	1.144
HpCDF	0	0.00	0	84374496	1.179

PACIFIC ANALYTICAL
PCDD/PCDF PEAK SUMMARY

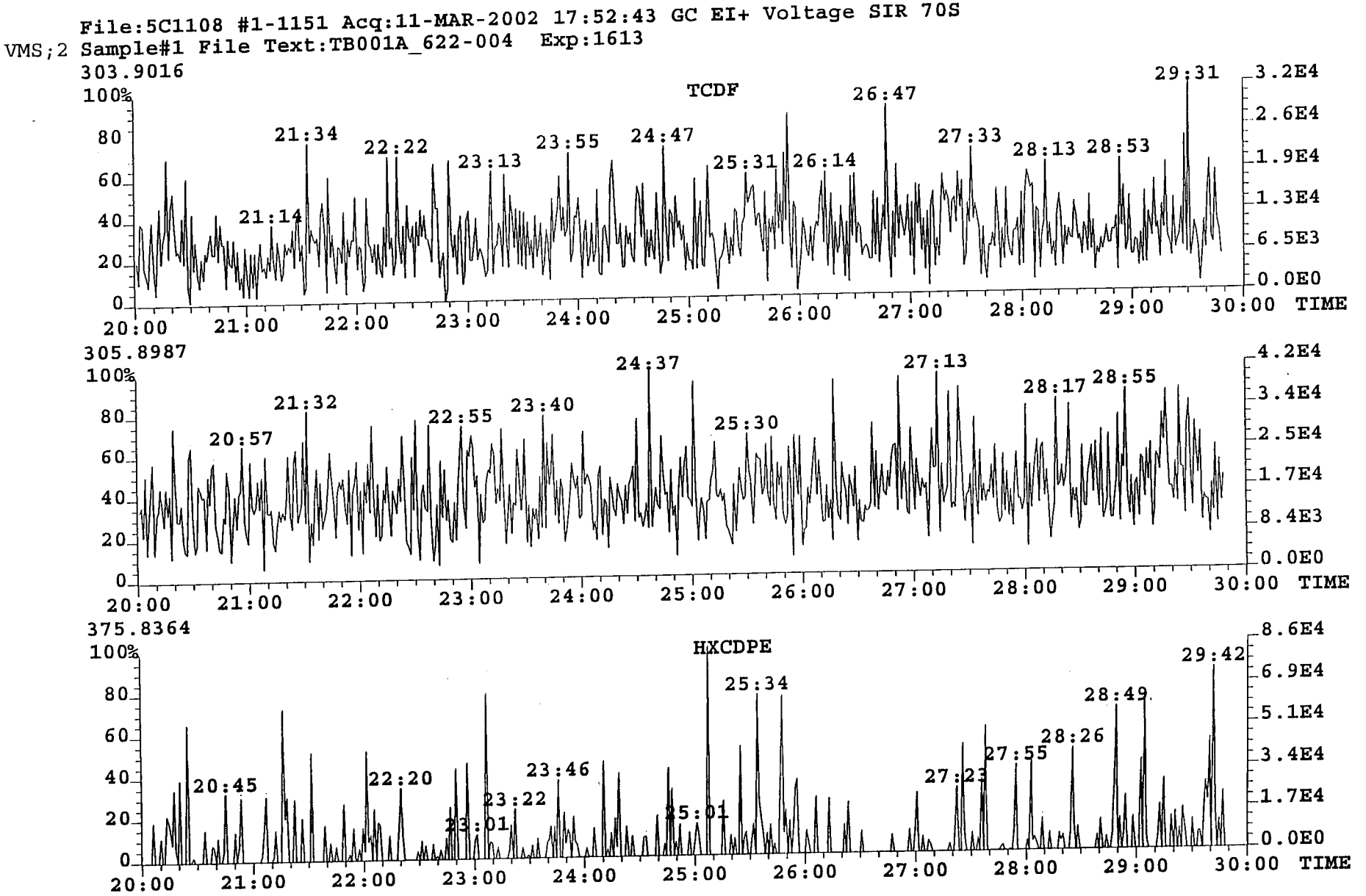
Lab File: 5C1108 Sample: TB001A Lab ID: 622-004

Entry No.	Match	Level Flag	QM	RT	AREA	HEIGHT	COMPOUND
1	0	X 4	305.8987	22.917	104540	28393	
2	0	X 4	305.8987	23.000	135490	26355	
3	0	X 4	305.8987	23.200	118120	23661	
4	0	X 4	305.8987	29.283	126060	27692	
5	6	I 4	315.9419	27.400	63347000	16138000	13C-2,3,7,8-TCDF
6	5	I 4	317.9389	27.400	83732000	21597000	13C-2,3,7,8-TCDF
7	0	X 6	375.8364	21.267	108710	62688	
8	0	X 6	375.8364	25.567	113410	65568	
9	0	X 6	375.8364	25.800	122930	64960	
10	0	X 6	375.8364	29.667	107560	45024	
11	0	X 4	319.8965	27.417	254790	61171	
12	14	R 4	331.9368	28.050	66060000	17026000	13C-1,2,3,4-TCDD
13	15	I 4	331.9368	28.267	49656000	12746000	13C-2,3,7,8-TCDD
14	12	R 4	333.9339	28.050	82237000	20529000	13C-1,2,3,4-TCDD
15	13	I 4	333.9339	28.267	67291000	17438000	13C-2,3,7,8-TCDD
16	16	C 0	327.8847	21.133	138630	89317	
17	17	C 0	327.8847	21.183	209050	78738	
18	18	C 0	327.8847	21.800	115900	43081	
19	19	C 0	327.8847	22.250	253160	109030	
20	20	C 0	327.8847	22.583	513810	119350	
21	21	C 0	327.8847	22.900	159370	67488	
22	22	C 0	327.8847	23.250	1909800	459670	
23	23	C 0	327.8847	24.367	120240	41345	
24	24	C 0	327.8847	24.600	115080	51873	
25	25	C 0	327.8847	24.950	1660900	426100	
26	26	C 0	327.8847	25.633	141430	44346	
27	27	C 0	327.8847	26.717	447200	180180	
28	28	I 0	327.8847	28.283	11813000	2974800	37Cl-2,3,7,8-TCDD
29	0	X 0	327.8847	28.483	165980	50256	
30	0	X 0	327.8847	28.567	104240	41546	
31	0	X 0	327.8847	28.633	202780	75435	
32	0	X 0	327.8847	28.983	141700	51828	
33	35	O 5	339.8597	32.800	179620	47086	
34	38	C 5	339.8597	33.050	154220	50339	
35	33	O 5	341.8568	32.800	142000	43930	
36	0	X 5	341.8568	32.917	141300	27148	
37	34	C 5	341.8568	33.033	103690	34535	
38	34	C 5	341.8568	33.067	107450	33338	
39	0	X 5	341.8568	33.400	101500	26938	
40	0	X 5	341.8568	33.467	149560	66880	
41	0	X 5	341.8568	34.300	120130	40284	
42	0	X 5	341.8568	34.533	104190	31658	
43	0	X 5	341.8568	34.683	116240	29481	
44	46	I 5	351.9000	32.517	94321000	25279000	13C-1,2,3,7,8-PeCD
45	47	I 5	351.9000	33.383	92802000	30272000	13C-2,3,4,7,8-PeCD
46	44	I 5	353.8970	32.517	62317000	17257000	13C-1,2,3,7,8-PeCD
47	45	I 5	353.8970	33.383	58107000	18244000	13C-2,3,4,7,8-PeCD
48	0	X 7	409.7974	32.767	108890	34265	
49	0	X 5	355.8546	32.167	108240	29999	
50	0	X 5	355.8546	32.517	190430	54311	
51	0	X 5	355.8546	33.417	212040	40587	
52	0	X 5	355.8546	33.767	111790	35210	
53	0	X 5	355.8546	33.950	115980	32108	

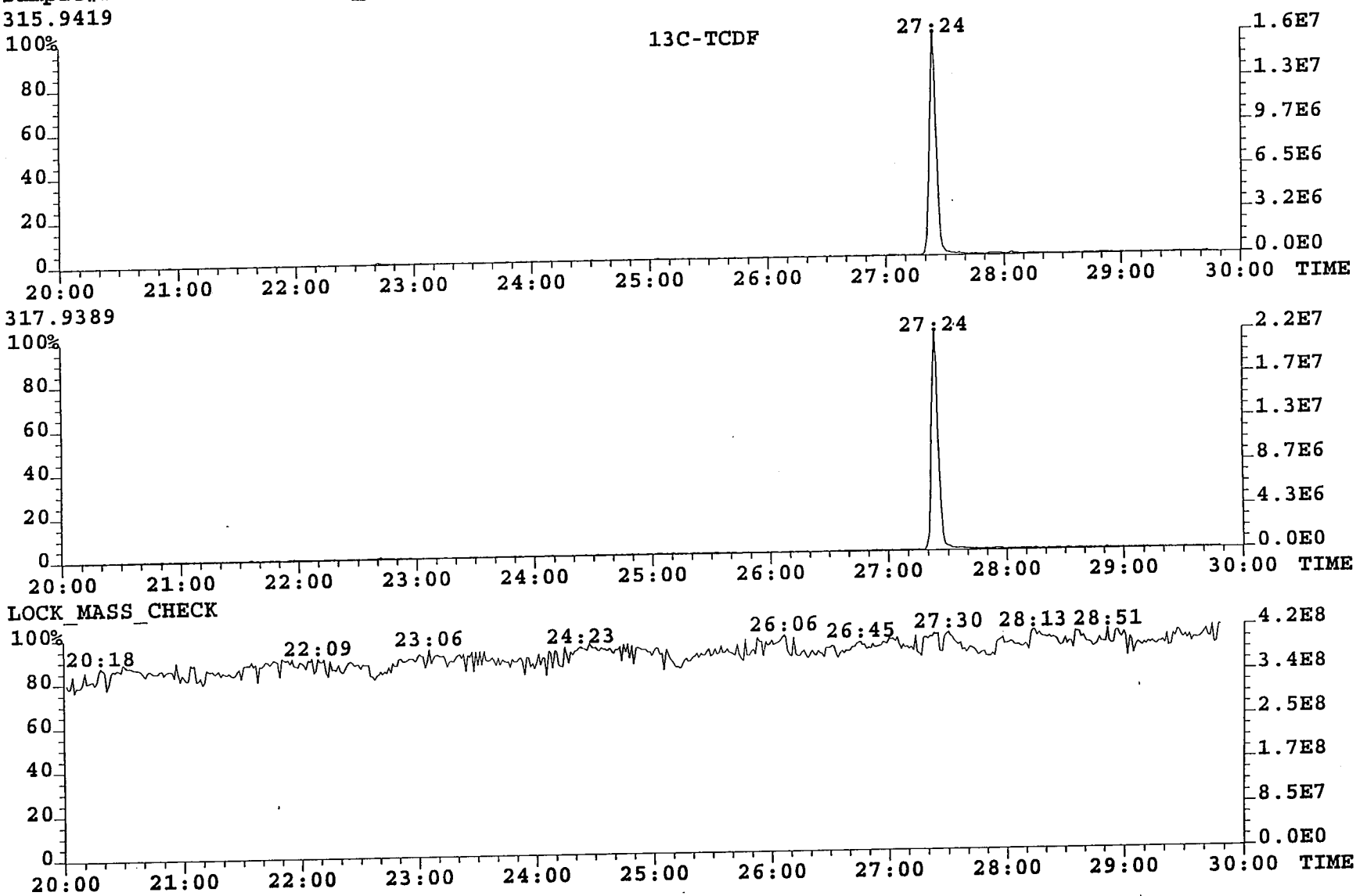
54	0	X 5	355.8546	34.067	113020	34880	
55	0	X 5	355.8546	34.267	223390	53147	
56	0	X 5	355.8546	34.433	110300	27690	
57	0	X 5	355.8546	34.667	155650	52280	
58	0	X 5	357.8517	30.083	348220	70930	
59	0	X 5	357.8517	31.550	201060	56101	
60	61	I 5	367.8949	33.767	62254000	19681000	13C-1,2,3,7,8-PeCD
61	60	I 5	369.8919	33.767	36903000	11318000	13C-1,2,3,7,8-PeCD
62	0	X 6	373.8207	35.250	146150	65196	
63	74	C 6	373.8207	35.433	151150	46556	
64	75	O 6	373.8207	35.717	205680	58470	
65	0	X 6	373.8207	35.883	177660	58960	
66	76	C 6	373.8207	35.967	157490	56920	
67	78	C 6	373.8207	36.717	587310	168430	
68	0	X 6	373.8207	37.017	130570	31195	
69	0	X 6	373.8207	37.883	151110	31768	
70	0	X 6	373.8207	37.983	105300	23901	
71	0	X 6	373.8207	38.167	112120	43646	
72	0	X 6	373.8207	38.483	167440	56686	
73	0	X 6	373.8207	38.600	209110	39079	
74	63	C 6	375.8178	35.417	137380	29321	
75	64	O 6	375.8178	35.717	133990	32634	
76	66	C 6	375.8178	35.983	125550	48301	
77	0	X 6	375.8178	36.400	114460	38995	
78	67	C 6	375.8178	36.700	414410	124610	
79	83	I 6	383.8639	36.283	37313000	13963000	13C-1,2,3,4,7,8-Hx
80	84	I 6	383.8639	36.383	47143000	13092000	13C-1,2,3,6,7,8-Hx
81	85	I 6	383.8639	36.967	33691000	10849000	13C-1,2,3,7,8,9-Hx
82	86	I 6	383.8639	37.783	32610000	9536500	13C-2,3,4,6,7,8-Hx
83	79	I 6	385.8610	36.283	70620000	25837000	13C-1,2,3,4,7,8-Hx
84	80	I 6	385.8610	36.400	87186000	25206000	13C-1,2,3,6,7,8-Hx
85	81	I 6	385.8610	36.967	64177000	19417000	13C-1,2,3,7,8,9-Hx
86	82	I 6	385.8610	37.783	56692000	16742000	13C-2,3,4,6,7,8-Hx
87	0	X 0	445.7555	36.700	156710	40446	
88	0	X 0	445.7555	37.267	103950	26835	
89	0	X 6	389.8156	35.267	124540	34663	
90	0	X 6	389.8156	36.267	162240	58378	
91	0	X 6	389.8156	36.717	142690	27923	
92	103	C 6	389.8156	36.967	198840	69370	
93	0	X 6	389.8156	37.050	117720	39824	
94	0	X 6	389.8156	37.183	113480	31196	
95	0	X 6	389.8156	37.267	108080	38065	
96	104	O 6	389.8156	37.450	118200	39956	
97	0	X 6	389.8156	37.683	106460	41907	
98	106	Y 6	389.8156	37.800	248580	47585	
99	0	X 6	389.8156	38.100	119930	28654	
100	0	X 6	389.8156	38.483	131670	25184	
101	0	X 6	391.8127	35.150	180250	46980	
102	0	X 6	391.8127	36.783	132690	35072	
103	92	C 6	391.8127	36.983	147290	45025	
104	96	O 6	391.8127	37.417	152980	35015	
105	98	Y 6	391.8127	37.767	179540	32136	
106	98	O 6	391.8127	37.833	119730	22290	

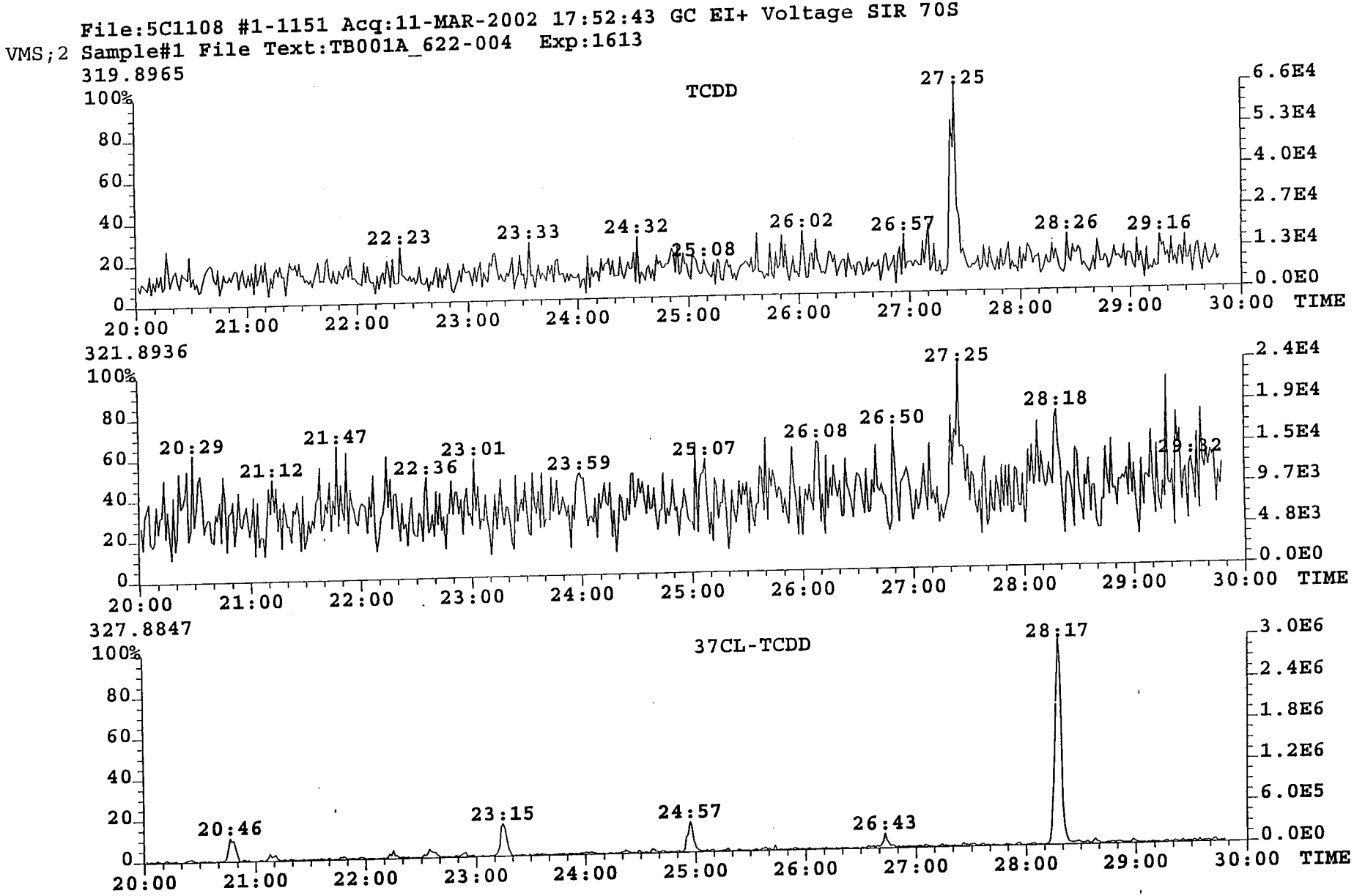
107	110	I 6	401.8559	37.083	42406000	14547000	13C-1,2,3,4,7,8-Hx
108	111	I 6	401.8559	37.183	59060000	17041000	13C-1,2,3,6,7,8-Hx
109	112	R 6	401.8559	37.517	54551000	16616000	13C-1,2,3,7,8,9-Hx
110	107	I 6	403.8529	37.083	31771000	10916000	13C-1,2,3,4,7,8-Hx
111	108	I 6	403.8529	37.183	47212000	13717000	13C-1,2,3,6,7,8-Hx
112	109	R 6	403.8529	37.517	46045000	14043000	13C-1,2,3,7,8,9-Hx
113	0	X 7	407.7818	39.000	110480	30161	
114	0	X 7	407.7818	39.100	104440	37362	
115	0	X 7	407.7818	39.183	114830	27721	
116	128	O 7	407.7818	39.383	297540	88744	
117	129	O 7	407.7818	39.650	449160	85335	
118	0	X 7	407.7818	39.833	133550	33545	
119	130	O 7	407.7818	40.133	695950	133870	
120	0	X 7	407.7818	40.367	173550	42117	
121	0	X 7	407.7818	40.783	111780	25451	
122	0	X 7	407.7818	41.767	155060	38090	
123	0	X 7	407.7818	41.850	112920	40598	
124	0	X 7	407.7818	41.950	142260	37122	
125	0	X 7	407.7818	42.267	116490	44026	
126	133	Y 7	407.7818	42.417	110670	26217	
127	0	X 7	407.7818	42.667	146860	37492	
128	116	O 7	409.7788	39.367	375370	92758	
129	117	O 7	409.7788	39.650	219440	42014	
130	119	O 7	409.7788	40.133	574730	125230	
131	0	X 7	409.7788	40.250	115400	33869	
132	0	X 7	409.7788	40.467	106820	31420	
133	126	Y 7	409.7788	42.433	109710	30208	
134	136	I 7	417.8253	39.650	27830000	6947400	13C-1,2,3,4,6,7,8-
135	137	I 7	417.8253	41.450	25089000	5661100	13C-1,2,3,4,7,8,9-
136	134	I 7	419.8220	39.633	59954000	14890000	13C-1,2,3,4,6,7,8-
137	135	I 7	419.8220	41.450	55876000	11906000	13C-1,2,3,4,7,8,9-
138	0	X 0	479.7165	39.350	204900	61523	
139	0	X 0	479.7165	39.517	187750	36670	
140	0	X 0	479.7165	39.683	223250	26769	
141	0	X 0	479.7165	40.083	137600	45000	
142	0	X 0	479.7165	40.183	190480	36728	
143	0	X 0	479.7165	40.350	136100	30179	
144	0	X 0	479.7165	40.433	102590	31601	
145	0	X 0	479.7165	40.883	106460	23938	
146	0	X 0	479.7165	41.567	108780	32068	
147	0	X 0	479.7165	41.683	129970	30011	
148	0	X 0	479.7165	41.833	105130	20791	
149	0	X 0	479.7165	42.417	120580	22309	
150	156	Y 7	423.7766	39.633	234050	69030	
151	157	O 7	423.7766	40.017	209980	62365	
152	0	X 7	423.7766	40.067	107160	28223	
153	158	U 7	423.7766	40.900	466600	113130	1,2,3,4,6,7,8-HpCD
154	0	X 7	423.7766	41.450	266450	48497	
155	0	X 7	423.7766	41.683	118630	27392	
156	150	Y 7	425.7737	39.650	206530	53647	
157	151	O 7	425.7737	40.000	259890	54188	
158	153	U 7	425.7737	40.900	409300	99913	1,2,3,4,6,7,8-HpCD
159	162	Y 7	435.8169	40.017	415510	143730	

160	163	I	7	435.8169	40.883	35335000	8525700	13C-1,2,3,4,6,7,8-
161	0	X	7	435.8169	41.117	235810	125410	
162	159	Y	7	437.8140	40.000	427330	133020	
163	160	I	7	437.8140	40.883	34664000	8356000	13C-1,2,3,4,6,7,8-
164	172	U	8	441.7428	45.467	354380	56729	OCDF
165	0	X	8	443.7399	43.317	242440	40875	
166	0	X	8	443.7399	43.933	135750	33384	
167	0	X	8	443.7399	44.117	131200	27232	
168	0	X	8	443.7399	44.883	115230	37156	
169	0	X	8	443.7399	45.017	134750	38547	
170	0	X	8	443.7399	45.100	116580	37664	
171	0	X	8	443.7399	45.317	110120	23126	
172	164	U	8	443.7399	45.450	432230	75151	OCDF
173	0	X	8	443.7399	45.633	146320	27666	
174	0	X	8	443.7399	49.517	104500	21237	
175	0	X	8	443.7399	49.933	107090	21015	
176	177	U	8	457.7377	45.267	824270	138670	OCDD
177	176	U	8	459.7348	45.250	927630	160520	OCDD
178	180	I	8	469.7780	45.250	57063000	10911000	13C-OCDD
179	0	X	8	469.7780	45.517	1535500	237940	
180	178	I	8	471.7750	45.250	63680000	11736000	13C-OCDD
181	0	X	8	471.7750	45.517	1204700	231560	

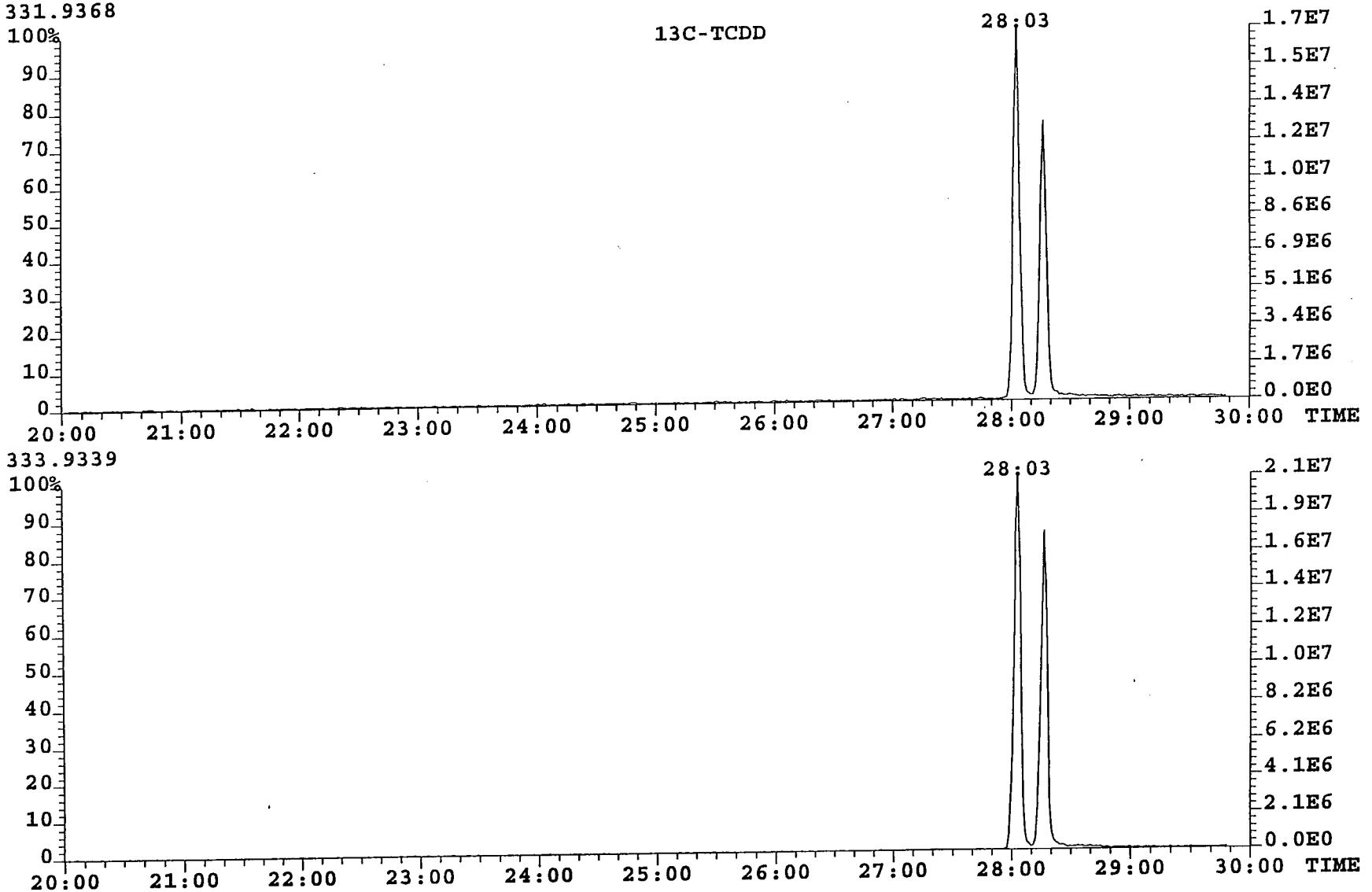

File:5C1108 #1-1151 Acq:11-MAR-2002 17:52:43 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:TB001A_622-004 Exp:1613
303.9016
TCDF
21:14
21:34
22:22
23:13
23:55
24:47
25:31
26:14
26:47
27:33
28:13
28:53
29:31
305.8987
20:57
21:32
22:55
23:40
24:37
25:30
27:13
28:17
28:55
375.8364
HXCDPE
20:45
22:20
23:01
23:22
23:46
25:01
25:34
27:23
27:55
28:26
28:49
29:42
TIME

File:5C1108 #1-1151 Acq:11-MAR-2002 17:52:43 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:TB001A_622-004 Exp:1613

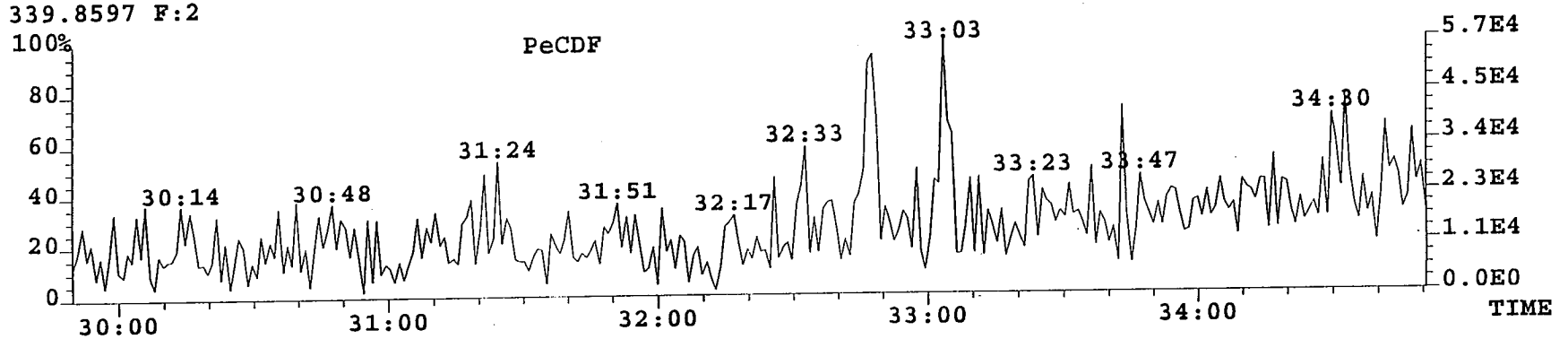


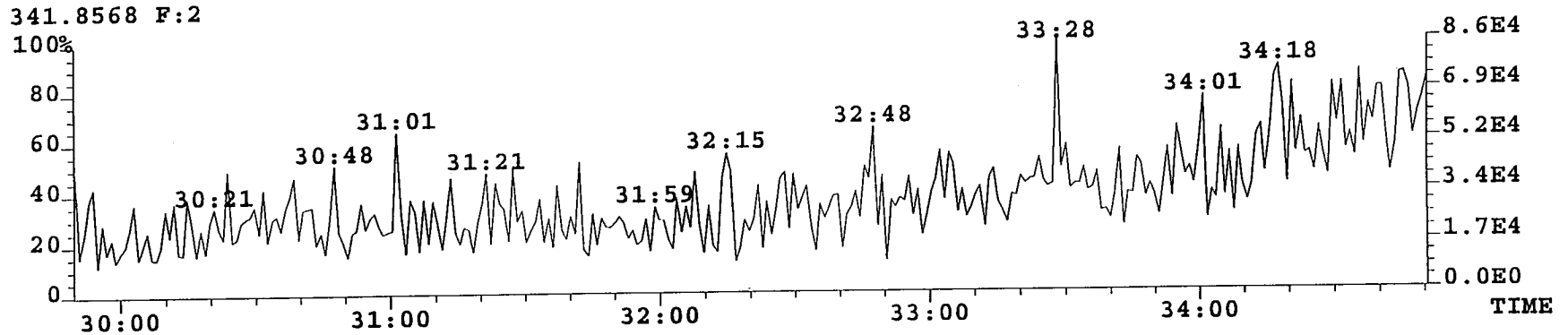

File:5C1108 #1-1151 Acq:11-MAR-2002 17:52:43 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:TB001A_622-004 Exp:1613
319.8965
TCDD
321.8936
327.8847
37CL-TCDD
TIME

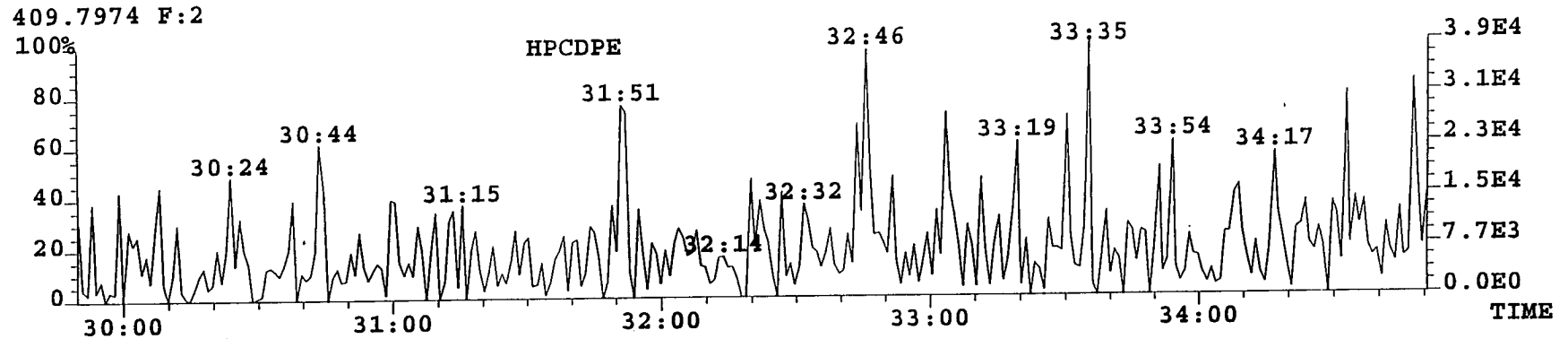
File:5C1108 #1-1151 Acq:11-MAR-2002 17:52:43 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:TB001A_622-004 Exp:1613



File:5C1108 #1-304 Acq:11-MAR-2002 17:52:43 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:TB001A_622-004 Exp:1613

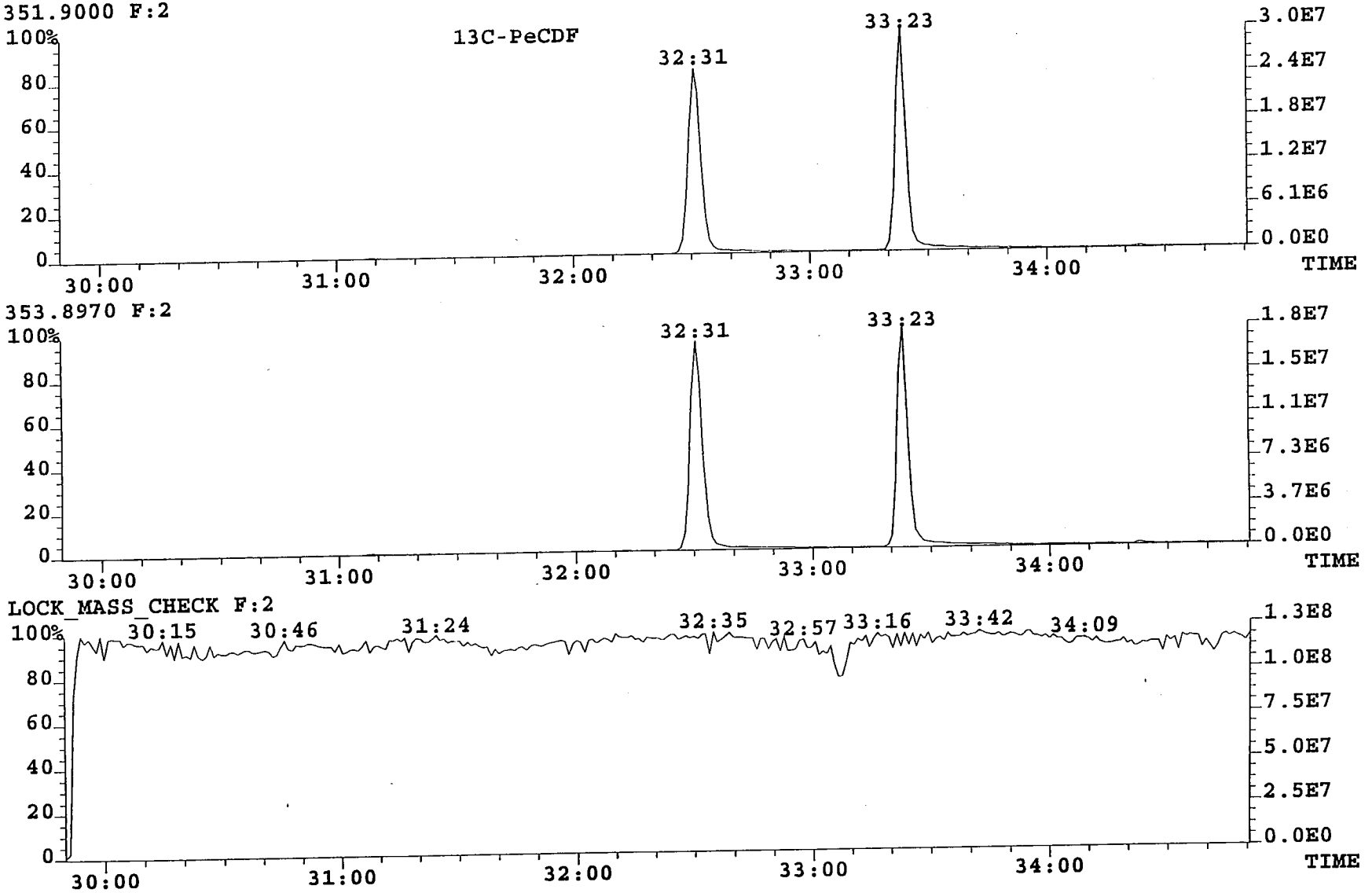




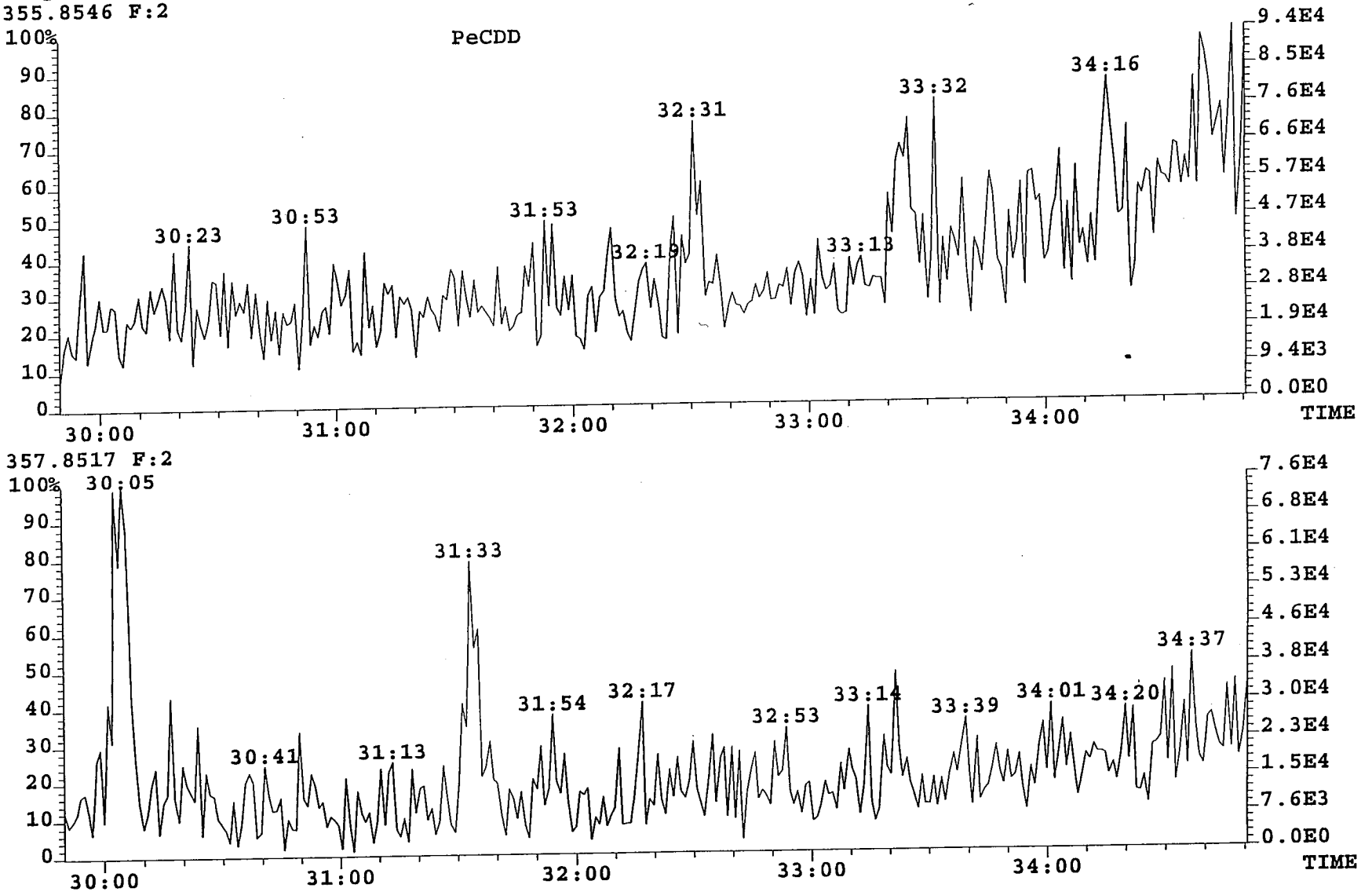


100

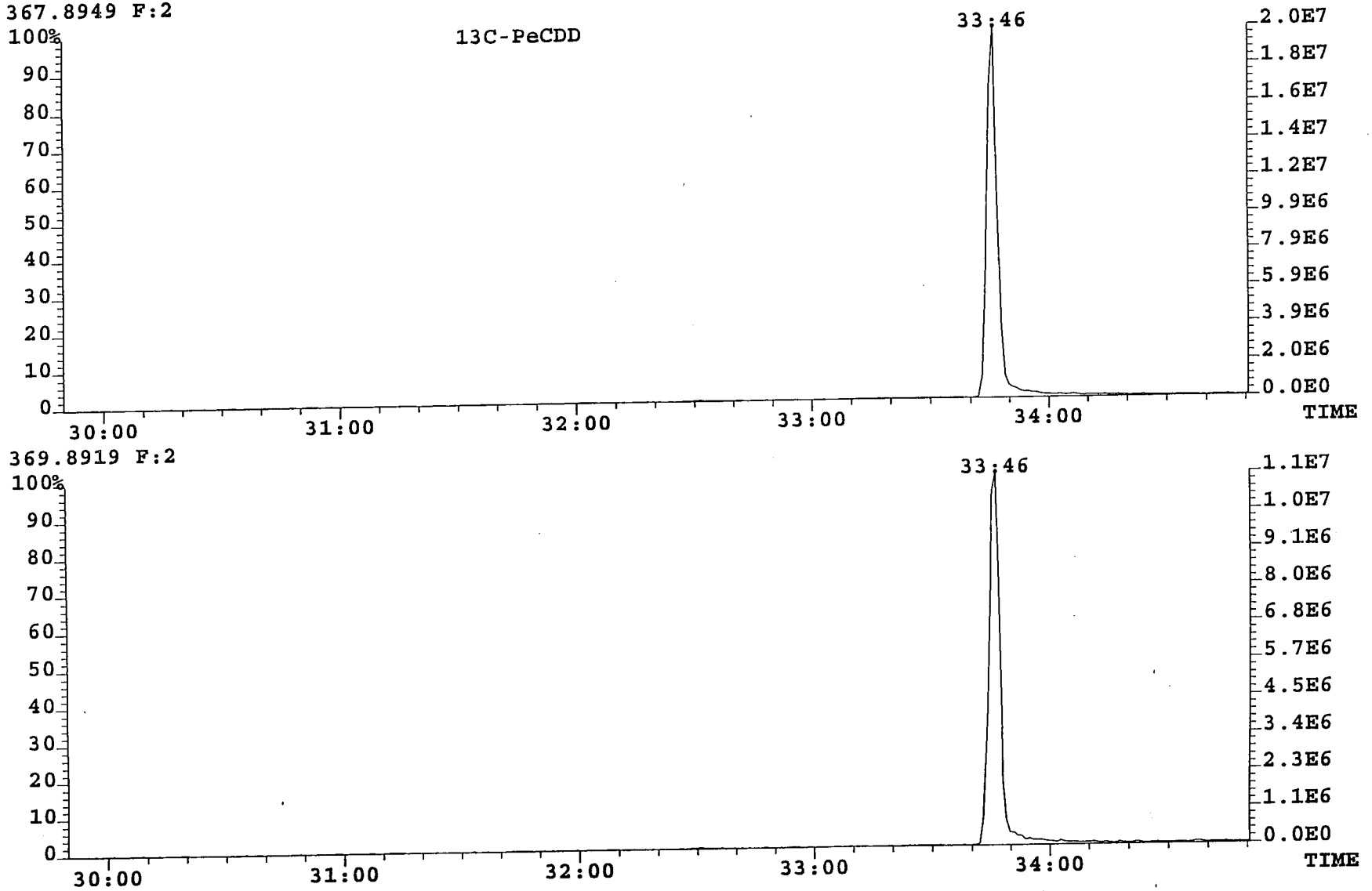
File:5C1108 #1-304 Acq:11-MAR-2002 17:52:43 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:TB001A_622-004 Exp:1613

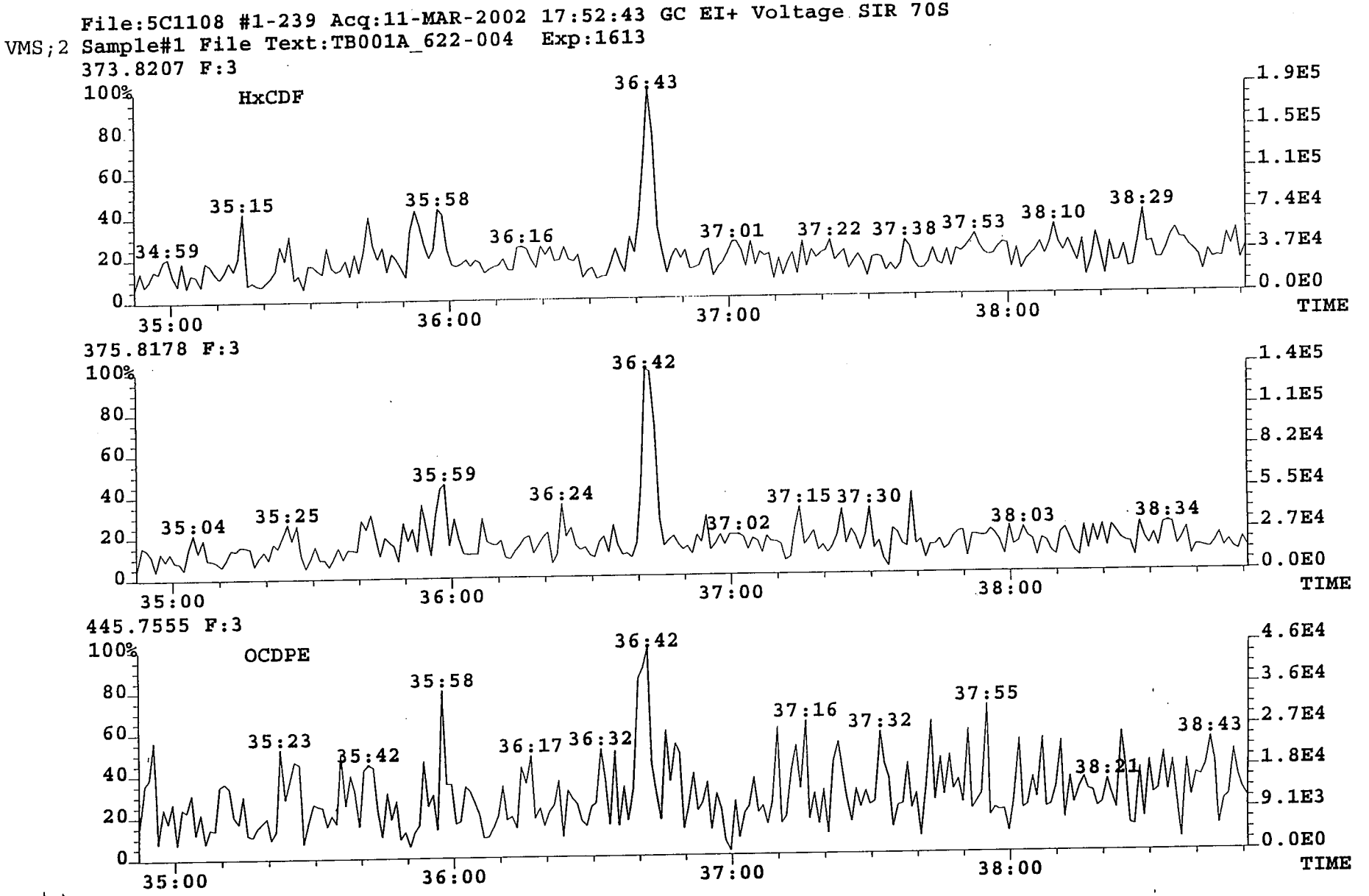


File:5C1108 #1-304 Acq:11-MAR-2002 17:52:43 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:TB001A_622-004 Exp:1613

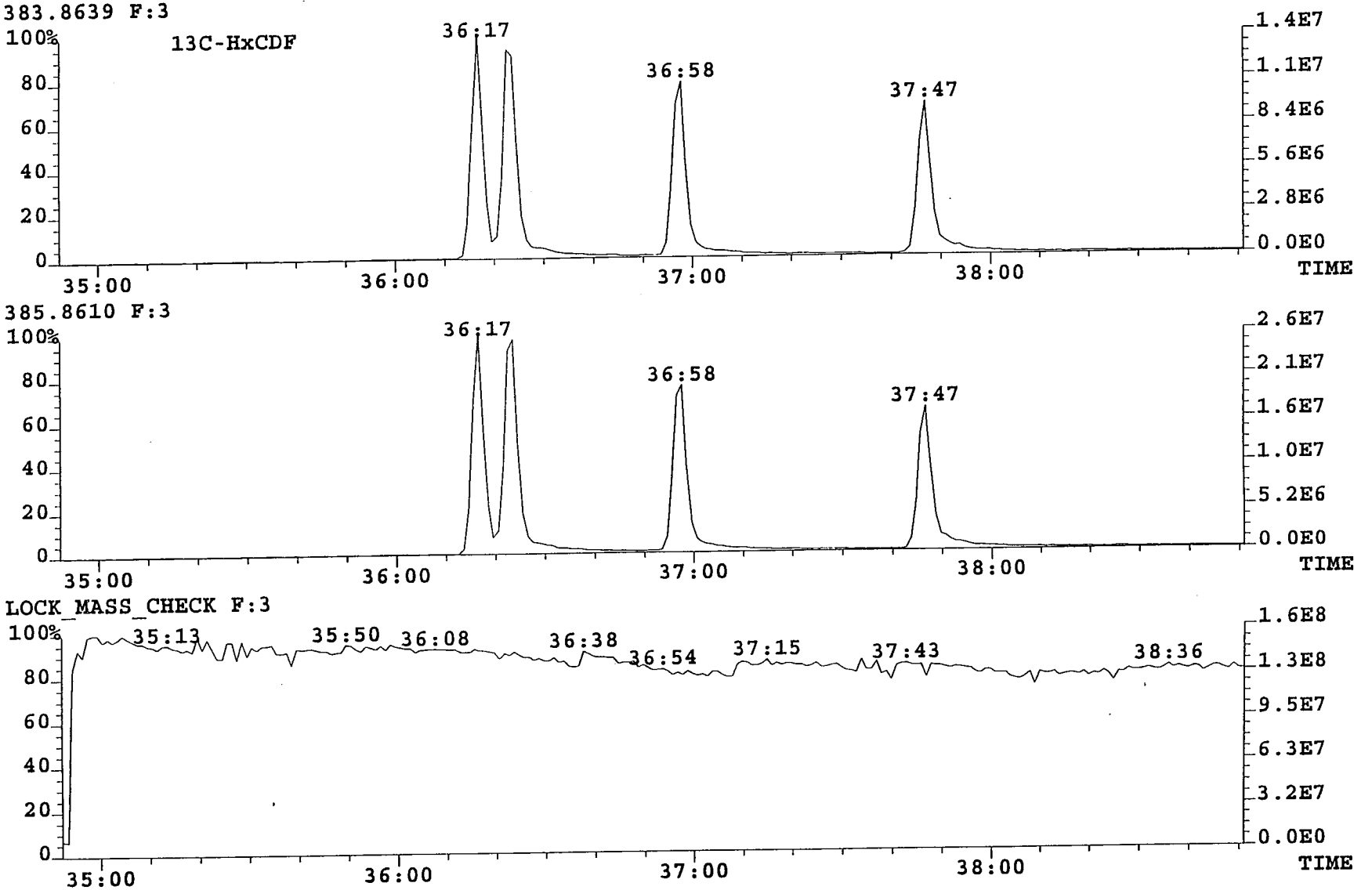


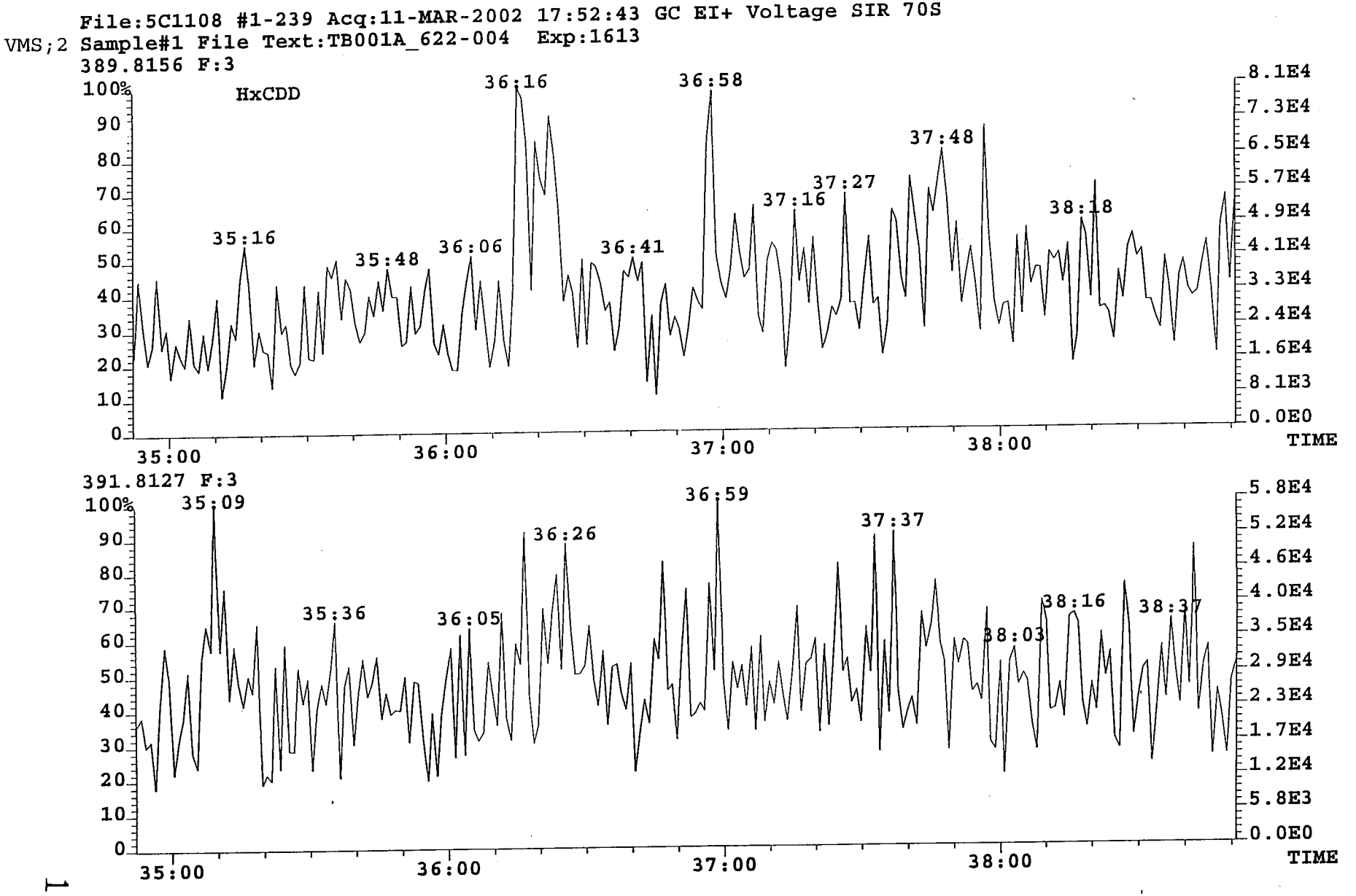
File:5C1108 #1-304 Acq:11-MAR-2002 17:52:43 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:TB001A_622-004 Exp:1613



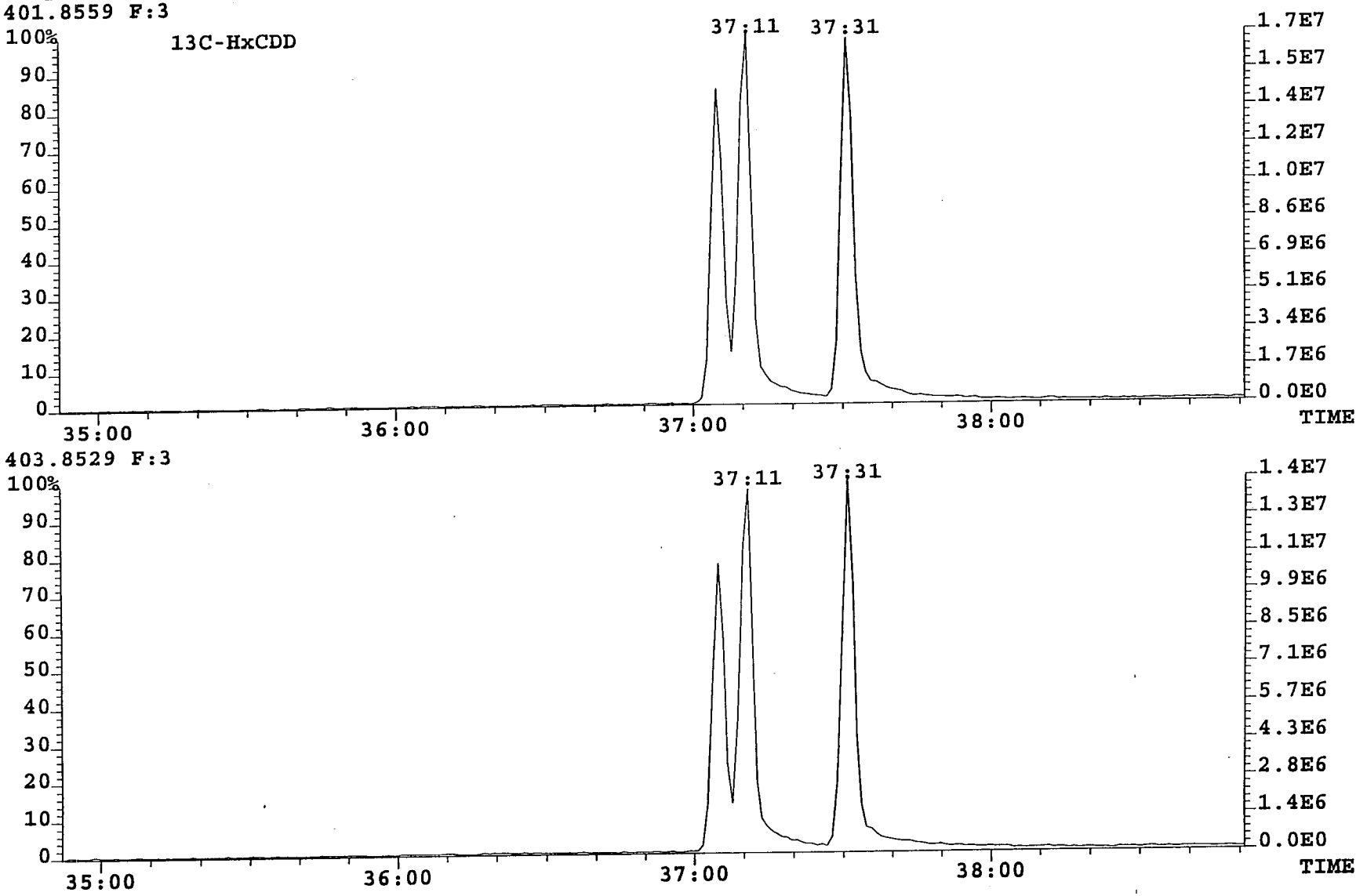

File:5C1108 #1-239 Acq:11-MAR-2002 17:52:43 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:TB001A_622-004 Exp:1613
373.8207 F:3
HxCDF
36:43
35:15
35:58
34:59
36:16
37:01
37:22
37:38
37:53
38:10
38:29
375.8178 F:3
36:42
35:59
35:04
35:25
36:24
37:02
37:15
37:30
38:03
38:34
445.7555 F:3
OCDPE
36:42
35:58
35:23
35:42
36:17
36:32
37:16
37:32
37:55
38:43
38:21
TIME
35:00
36:00
37:00
38:00

File:5C1108 #1-239 Acq:11-MAR-2002 17:52:43 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:TB001A_622-004 Exp:1613

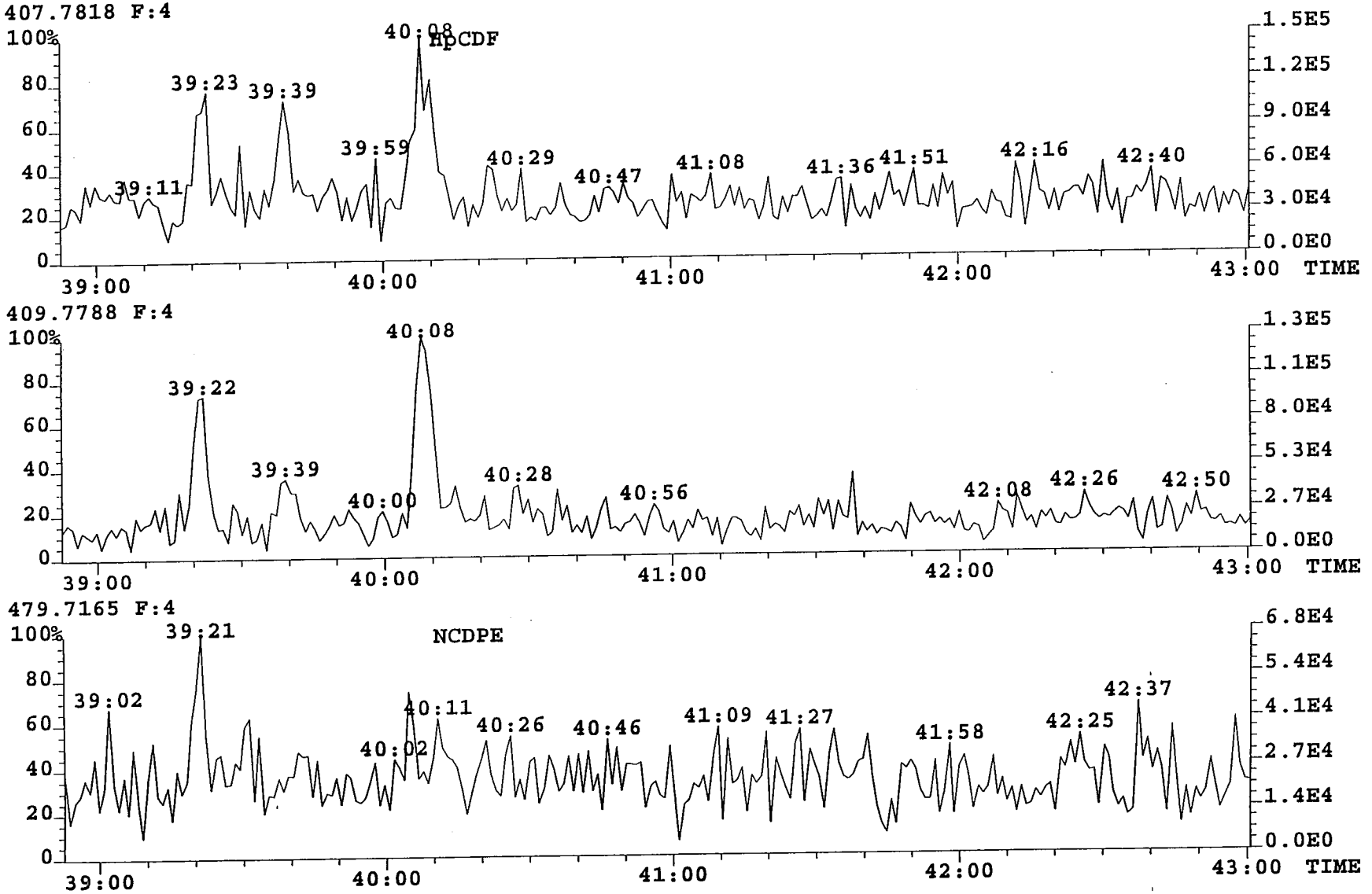



File:5C1108 #1-239 Acq:11-MAR-2002 17:52:43 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:TB001A_622-004 Exp:1613
389.8156 F:3
HxCDD
35:16
35:48
36:06
36:16
36:41
36:58
37:16
37:27
37:48
38:18
391.8127 F:3
35:09
35:36
36:05
36:26
36:59
37:37
38:03
38:16
38:37
TIME
35:00
36:00
37:00
38:00

File:5C1108 #1-239 Acq:11-MAR-2002 17:52:43 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:TB001A_622-004 Exp:1613

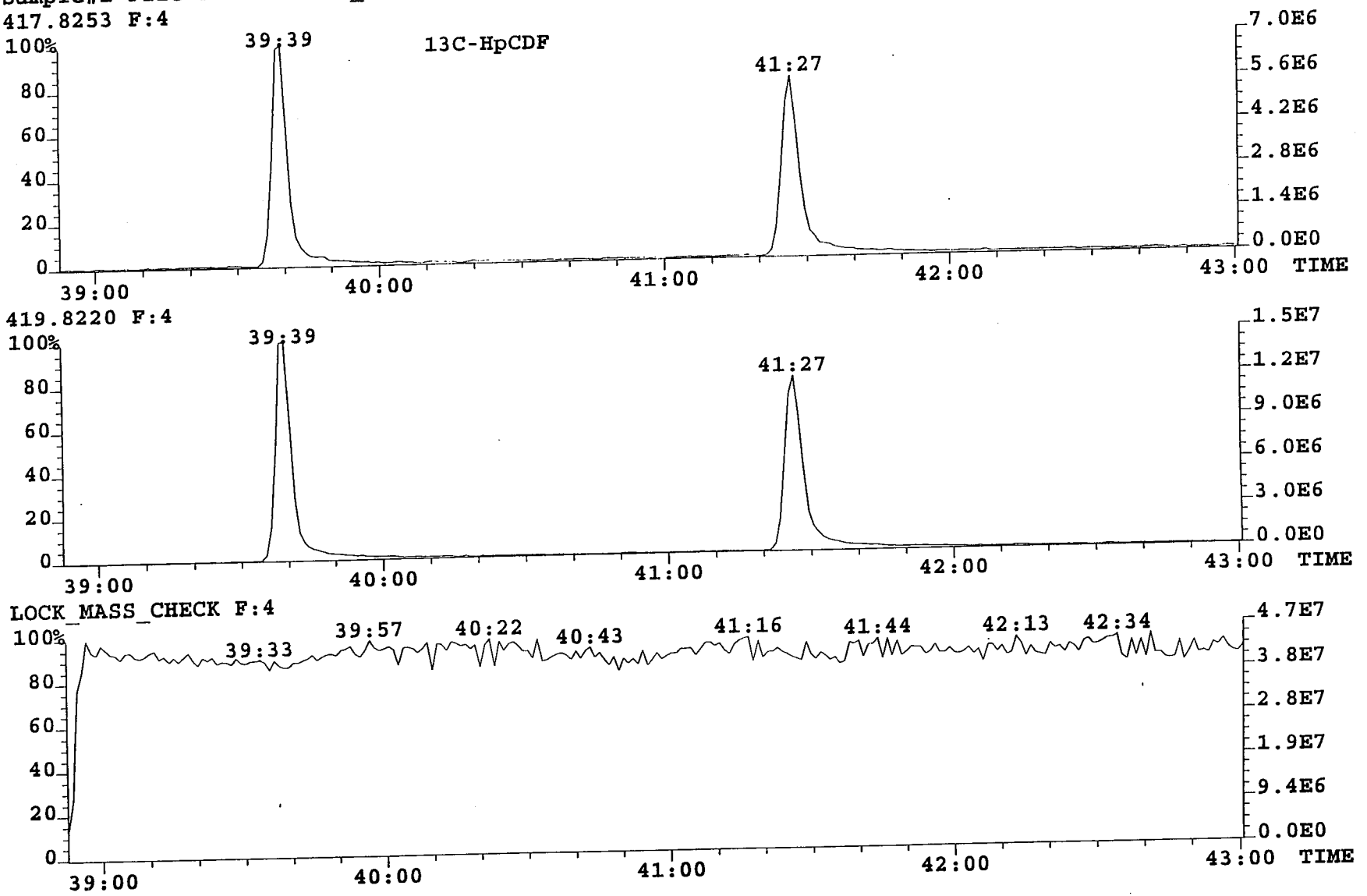


File:5C1108 #1-246 Acq:11-MAR-2002 17:52:43 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:TB001A_622-004 Exp:1613

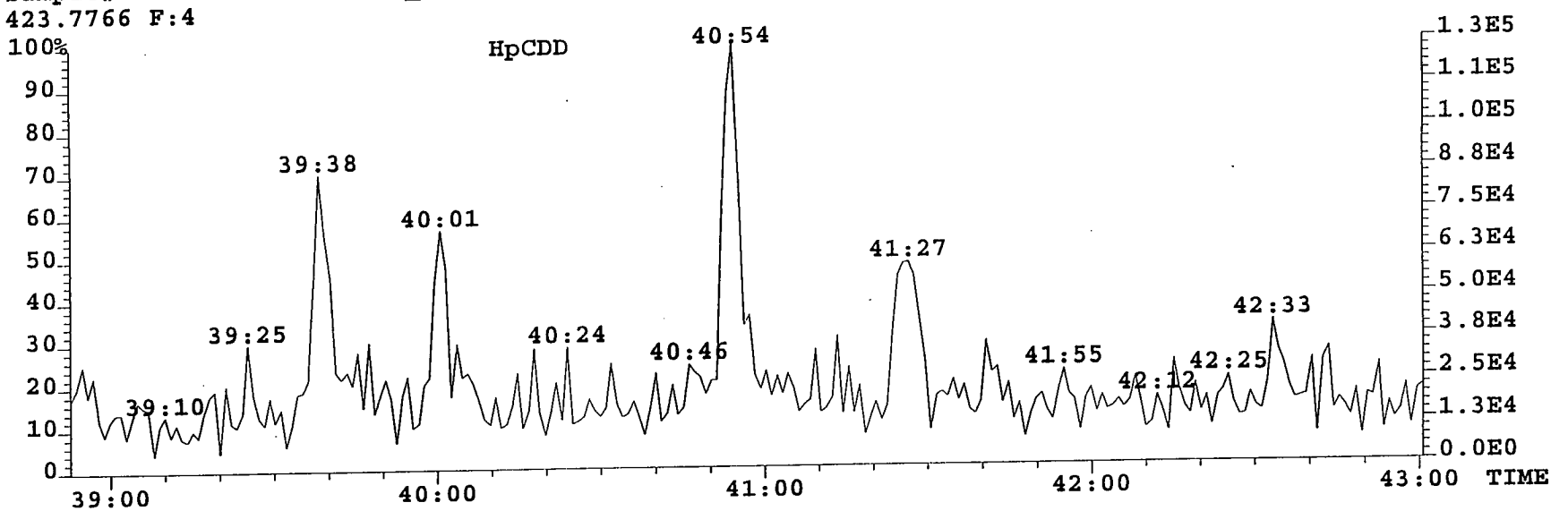


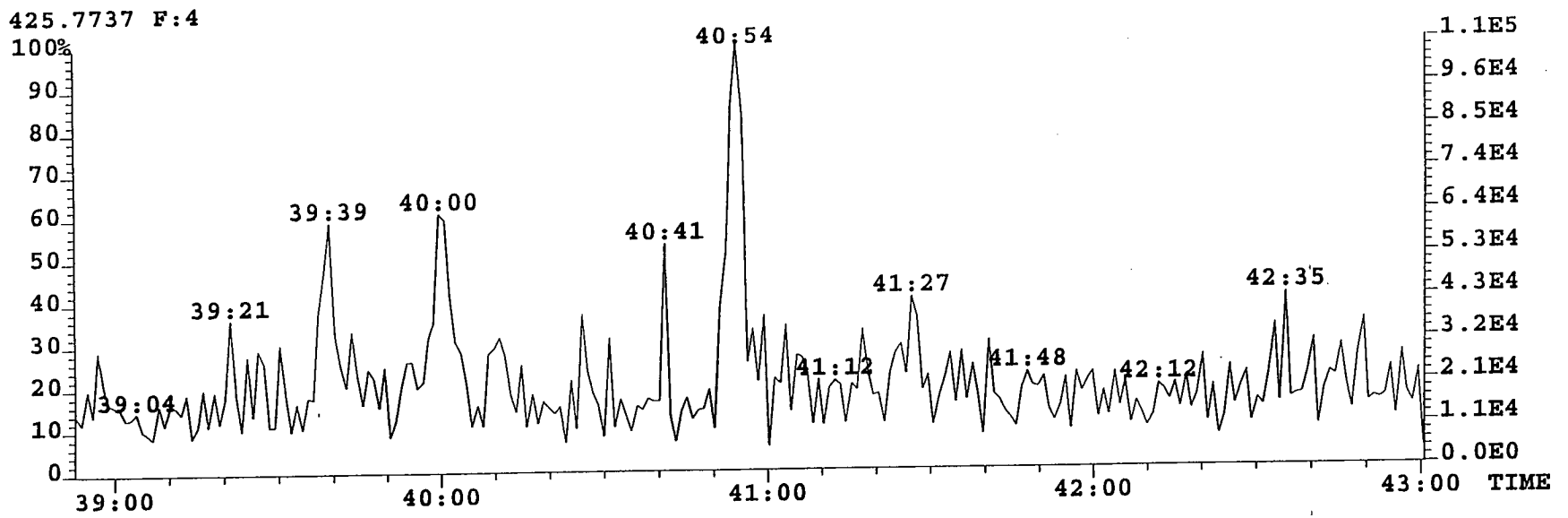
File:5C1108 #1-246 Acq:11-MAR-2002 17:52:43 GC EI+ Voltage SIR 70S

VMS;2 Sample#1 File Text:TB001A_622-004 Exp:1613

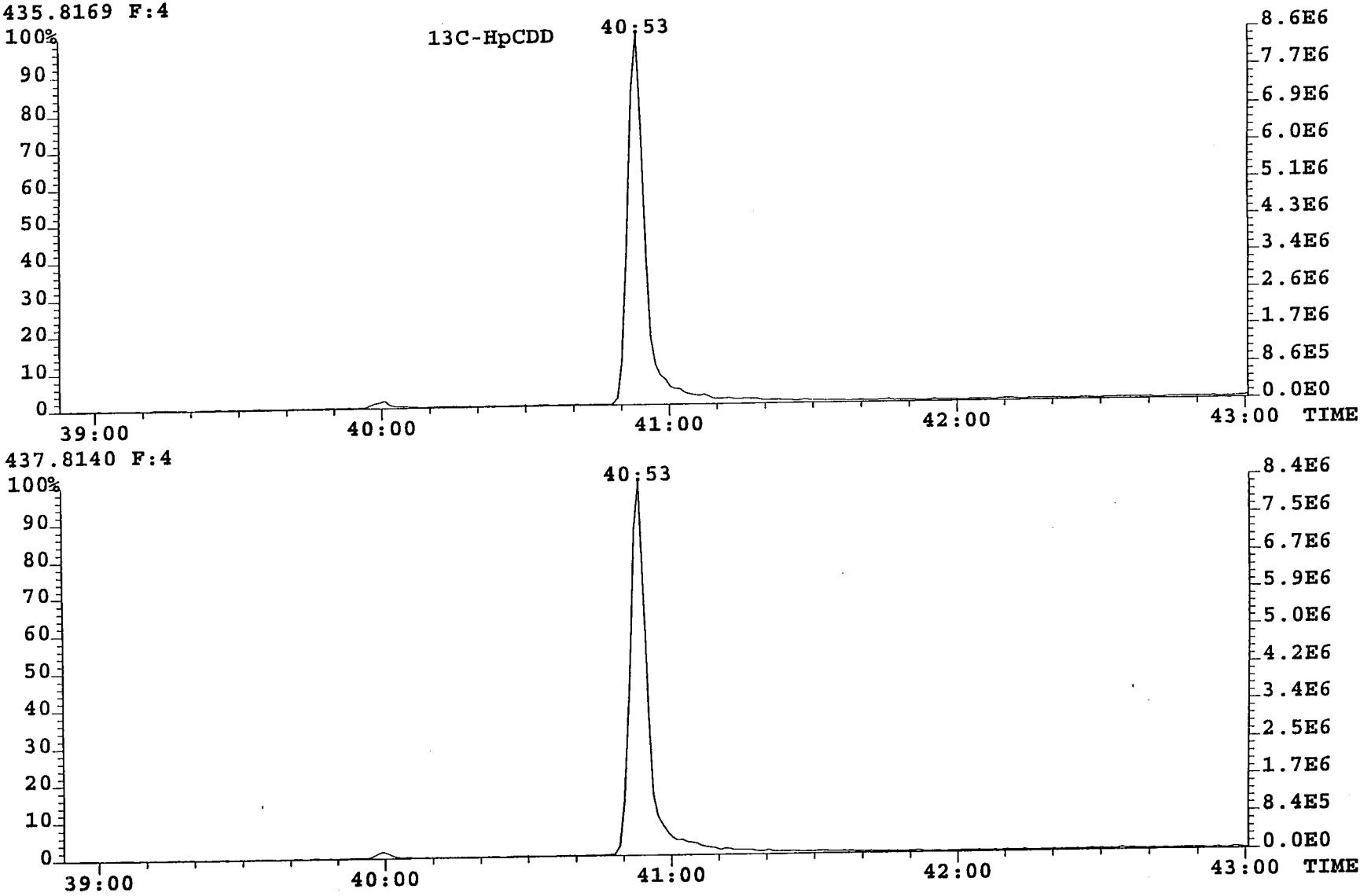


File:5C1108 #1-246 Acq:11-MAR-2002 17:52:43 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:TB001A_622-004 Exp:1613

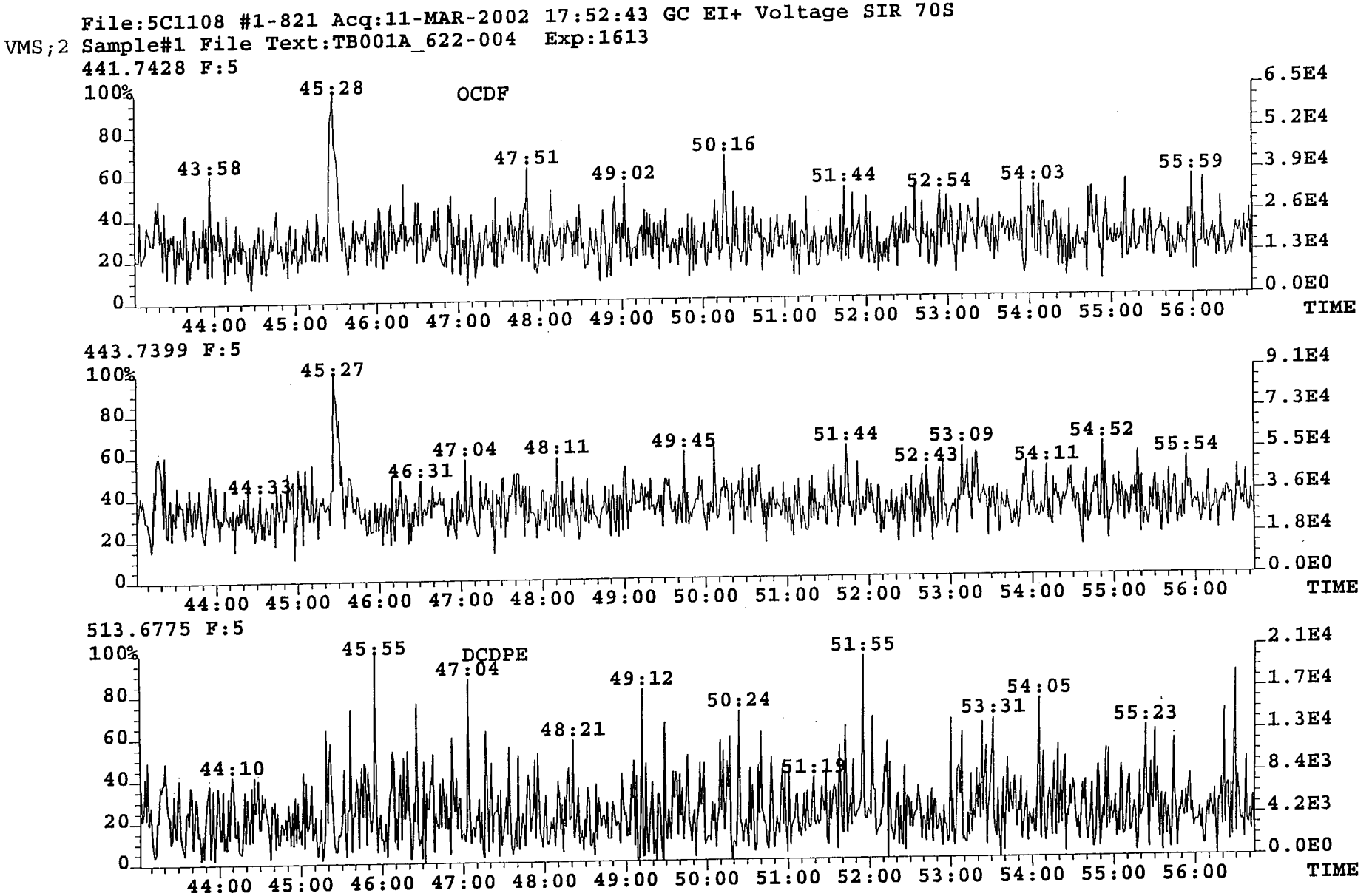


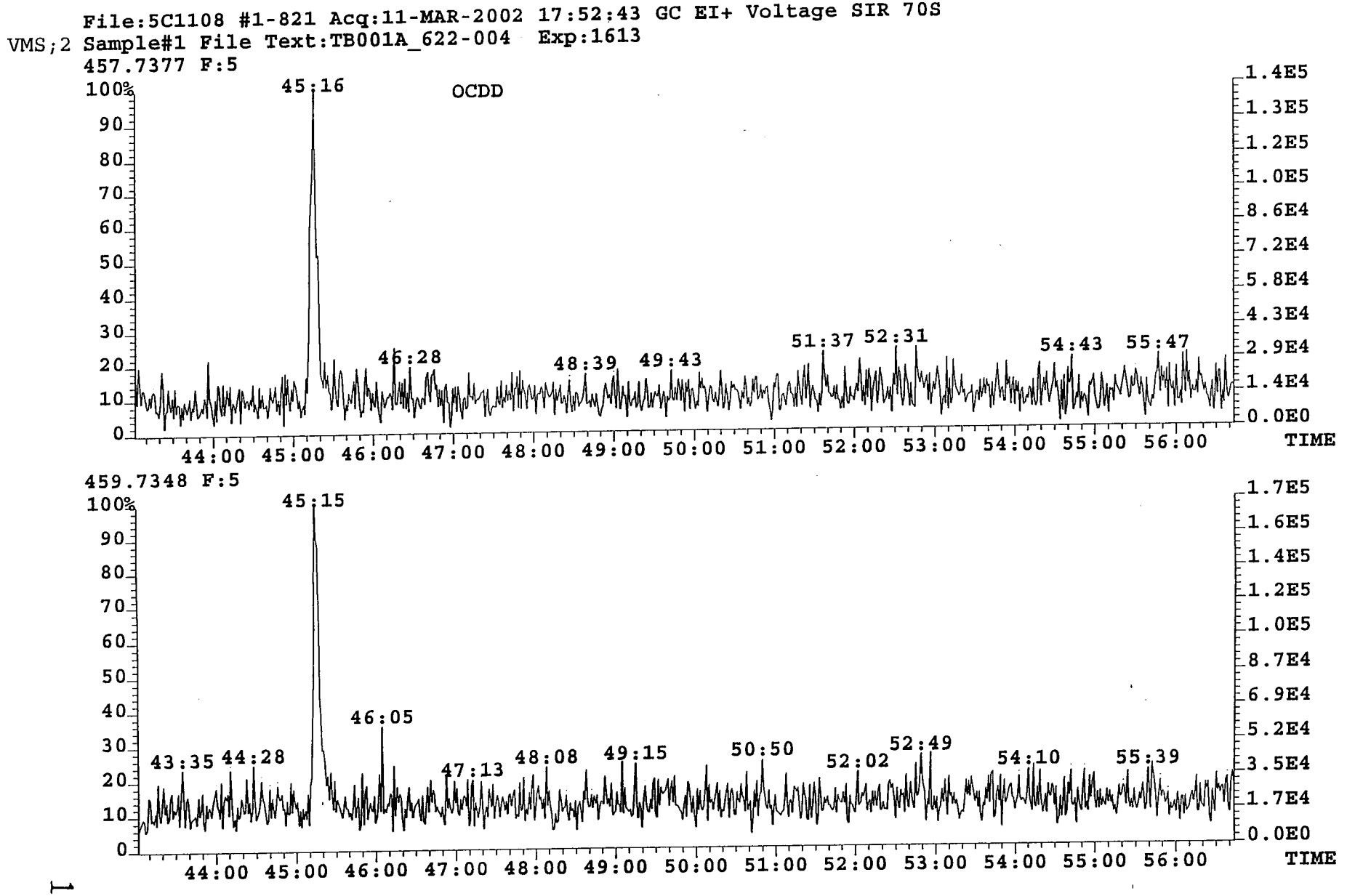


File:5C1108 #1-246 Acq:11-MAR-2002 17:52:43 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:TB001A_622-004 Exp:1613

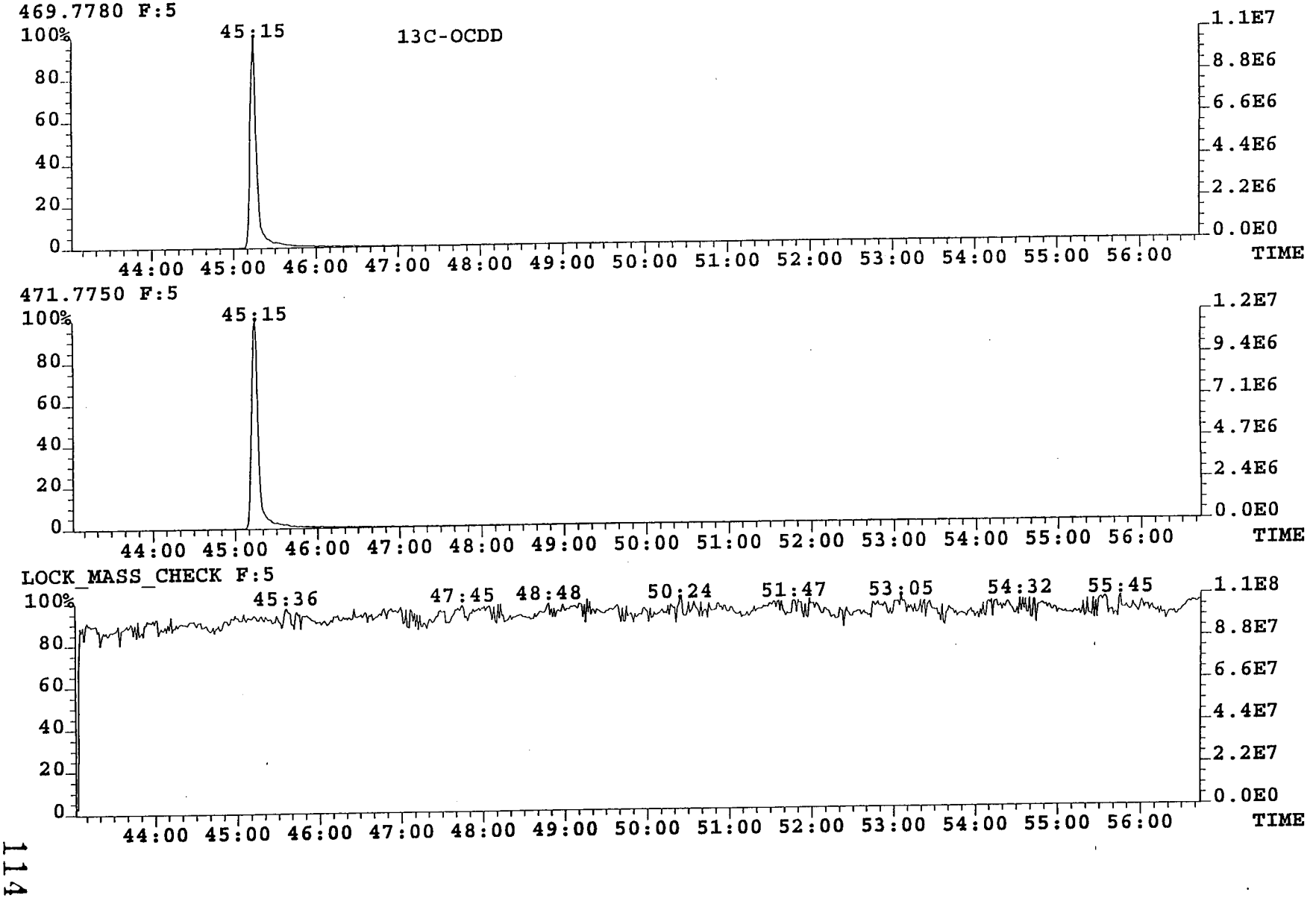


1111


File:5C1108 #1-821 Acq:11-MAR-2002 17:52:43 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:TB001A_622-004 Exp:1613
441.7428 F:5
45:28
OCDF
43:58
47:51
49:02
50:16
51:44
52:54
54:03
55:59
443.7399 F:5
45:27
44:33
46:31
47:04
48:11
49:45
51:44
52:43
53:09
54:11
54:52
55:54
513.6775 F:5
45:55
DCDPE
47:04
48:21
49:12
50:24
51:19
51:55
53:31
54:05
55:23
44:10
TIME


File:5C1108 #1-821 Acq:11-MAR-2002 17:52:43 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:TB001A_622-004 Exp:1613
457.7377 F:5
45:16
OCDD
46:28
48:39
49:43
51:37
52:31
54:43
55:47
459.7348 F:5
45:15
46:05
43:35
44:28
47:13
48:08
49:15
50:50
52:02
52:49
54:10
55:39
TIME

File:5C1108 #1-821 Acq:11-MAR-2002 17:52:43 GC EI+ Voltage SIR 70S
VMS;2 Sample#1 File Text:TB001A_622-004 Exp:1613



CHAIN OF CUSTODY RECORD

PACIFIC ANALYTICAL, INC.
6349 Paseo Del Lago, Carlsbad, CA 92009
(760) 931-1766 FAX (760) 931-9479

ORIGINAL FIELD SAMPLES

COMPANY NAME PRECISION ANALYTICAL	CONTACT STEVE HARRIS	PO #
Street Address 1117 W. COLUMBUS ST #B	PHONE 661 323 1682	Shipped By: AIRBORNE EXPRESS
City, State, Zip BAKERSFIELD, CA 93301	FAX 661 323 1684	Airbill # 550836534 3

CUSTOMER SAMPLE #	SAMPLED BY	DATE	TIME	# OF CONTAINERS	MATRIX	ANALYSIS REQUESTED	REMARKS
TD01A	S. HARRIS	2/15/02	1442	1	WATER	DIOXIN	
VWD01A	S. HARRIS	2/15/02	1442	1	WATER	DIOXIN	
CD01A	S. HARRIS	2/15/02	1520	1	WATER	DIOXIN	
TBD01A	S. HARRIS	2/15/02	1535	1	WATER	DIOXIN	

Sampled by: (Print) STEVE HARRIS	Sampled by: (Sign) S. Harris	Date 2/15/02	Time 1630	Secured by: (Print) STEVE HARRIS	Secured by: (Sign) S. Harris	Date 2/15/02	Time 1630
Received at PA by: (Print)	Received at PA by: (Sign)	Date	Time	Relinquished by: (Print)	Relinquished by: (Sign)	Date	Time
Condition upon recipt:				Remarks:			