



LABORATORIES, INC.

March 6, 1989

Mr. John Tomik
O'Brien & Gere Engineers, Inc.
1304 Buckley Road
Syracuse, New York, 13221

Re: Conklin Data
File: 3362-001-517

Dear John:

Enclosed is the raw data from the gas chromatographic analysis(EPA Methods 5030, 8010, 8020) for the monitoring well, leachate, and sediment samples collected from the Town of Conklin between 1-19-88 and 1-22-88. There is other GC analysis on monitoring well samples not included in this package because the samples were reanalyzed by EPA Method 8240. The reanalysis was at Engineers request.

The raw data is separated into analytical runs with each run organized as follows:

Carbon Column(Method) Blank
Single Point Calibration Standard
Samples
Reference Spike

Each run is separated by an instrument injection log which acts as a table of contents. The reference spike is required by New York State Department of Health and is prepared from stock solutions purchased from Supelco Inc. Chain of custody records are included in the original data package.

Should you have further questions please feel free to contact us.

Very truly yours,

OBG Laboratories, Inc.

David R. Hill
Vice President

DATE 1-28-95 INSTRUMENT Tracer 540/Tekmar ^{ALS} LSG-2
COLUMN 1% SP1000 on Carbowack B ^{60/80 mesh}
8' x 2mm I.D.

DETECTOR/MODE HECD-PED

DETECTOR TEMP 250 °C

INJ TEMP 200 °C TRANSFER LINE ≈ 90 °C

FURNACE TEMP 800/Boae 250 °C

TEMP PROGRAM: Oven 45 °C TO 220 °C At 8 °C/min

SOLVENT/FLOW ≈ 0.4 ml/min

INITIAL HOLD 5 min FINAL HOLD 23 min

CARRIER FLOW 1/2 ≈ 33 ml/min

GAS 1/FLOW H₂ ≈ 45 ml/min

GAS 2/FLOW _____ ml/min

COMMENTS: Turn of Combline soils via direct sprayer

NOTE INJ# Pnt#	Project # Client/Job	Phase	Sample #	Sample Description	Inj. Volume	Conductivity Attenuation	Comments
10	3342	001	517	B11C C.C. H ₂ O B11C	5.0ml	1000X2 HECD 1X1 PED	
10				STD V49/STX#334 GAS STD#329	5.0ml		
9							
10				F0019 Sediment #23	1.01g 4mls H ₂ O		
10				F0020 Sediment #24	1.01g 4mls H ₂ O		
10				F0021 Sediment #25	1.08g 4mls H ₂ O		
9	✓	✓	✓	F0025 Leachate MW-14	0.5ml	XF	

10	✓	✓	✓		Rel. Spk #335	5.0ml	✓	

ARGAS NO. _____

SIGNATURE(S) _____

Tim Gifford



I.D. #	DATE	PARAMETER	WEIGHTS	SOLVENT & VOLUME	CONC. (UNITS)	SOURCE OF STANDARD	INT.
327	1-7-88	Surrogate STD - See opposite page				Bottom	TSG
328	1-7-88	See opposite ^{NEXT} page (back)					CMC
329	1-7-88	Tare CaH ₅ CL CH ₂ CHCL	18.4427 18.4492 18.4575	Stock in 10ml Vol. flask w/ malinkrodt mech Lot # 3018 K353 6 ul stock → 200 ml C.C. 1420	19.5 ppb 24.9 ppb	Chem Serv O-677 Total Gas 119-49	TSG TAR
330	1-8-88	t-butyl hydro- peroxide tare	16.8507 g 16.5425 g <u>3082 g</u> X .9 purity 27,200 PPM	10ml vol flask Mech Mall # 3018 K353 5 ul → 200 ml CCH ₂ O	700 ppb	Aldrich Lot # 00204DT	TAR
331	1-8-88	t-butyl alcohol tare	18.1005 g 18.0784 g <u>1.0221 g</u> 2210 PPM	10ml vol flask Mech Mall # 3018 K353 5 ul → 200 ml CCH ₂ O	55.3 ppb	?	TAR
332	1-11-88	1,1 Dichloroethane Benzene Tetrachloro- ethylene Chlorobenzene Ethyl Benzene	@ 5500 ug/ml CAS # 75-34-3 @ 10,000 ug/ml CAS # 71-42-2 @ 10,000 ug/ml CAS # 127-18-4 @ 10,000 ug/ml CAS # 108-90-7 @ 10,000 ug/ml CAS # 100-41-4	20 ul 2 all Compounds except 1,1 Dichloroethane is 40 ul → 10 ml mech mallinkrodt Lot # 3018 K353	All Compounds 20 ppb except 1,1 Dichloroethane is 22 ppb	Chem Serv ✓	TSG
333	1-14-88	Tare 1,2 Dichloro Benzene	17.8448 17.8637 10189 g	Stock in 10ml Vol. flask w/ malinkrodt mech Lot # 3018 K353 3 ul stock → 200 ml C.C. 1420	28.4 ppb	Chem Serv. Lot # O-677	TSG

NOTES: 1 - SEPERATE EACH ID STOCK SOLUTION WITH BOLD LINE
 2 - TRANSFER STOCK SOLUTION FROM VOLUMETRIC TO VIAL FOR STORAGE.
 LABEL WITH ID#, DATE AND PARAMETER



I.D. #	DATE	PARAMETER	WEIGHTS	SOLVENT & VOLUME	CONC. (UNITS)	SOURCE OF STANDARD	INT.
334	1-14-88	1-14-88					TAX
STD. # 334							
				STOCK	Working		
		Wgt(g)	Net Wgt(g)	PAM	PPB	SOURCE	LOT#
tare		47.4753					
MEK		47.5002	0.0249	996	24.9	Chem Serv	9-198
MTBK		47.5264	0.0262	1048	26.2	Chem Serv	4-85
ACETONE		47.6453	0.1189	4756	118.9	Mall	0018KXKT
BENZ		47.6646	0.0193	772	19.3	Chem Serv	19-13E
TOLUENE		47.6844	0.0198	792	19.8	Mall	802KXKT
CHLOROBE		47.7041	0.0197	788	19.7	Chem Serv	0-669
ETHYLENE		47.7247	0.0206	824	20.6	Chem Serv	0-770
M-XYL		47.7445	0.0198	792	19.8	Chem Serv	9-22W
O-XYL		47.7662	0.0217	868	21.7	Chem Serv	0-779
CH2CL2		47.7891	0.0229	916	22.9	Mall	3023KXSVB
DCLEN11		47.8093	0.0202	808	20.2	Supelco	LA11049
DCETAN11		47.8280	0.0187	748	18.7	Chem Serv	5-11E
DCLEN12		47.8488	0.0208	832	20.8	Supelco	LA10938
FREON113		47.8701	0.0213	852	21.3	Chem Serv	8255-C
DCETAN12		47.8933	0.0232	928	23.2	MCB	6J13
CL3CCH3		47.9115	0.0182	728	18.2	MCB	AL125
CL3C2H		47.9354	0.0239	956	23.9	MCB	92
CL4C2		47.9546	0.0192	768	19.2	MCB	12J05
STOCK 25ml vol. flask; Mech-Mallinckrodt Spectra lot# 5015KXVB							
Working Std 5 μ l STOCK $\rightarrow$ 200ml C.C. H ₂ O							
335	1-19-88	Supelco	Std. See Back	of this	page		TSC
336	1-20-88	See Next	page				Cme

NOTES: 1 - SEPERATE EACH ID STOCK SOLUTION WITH BOLD LINE
 2 - TRANSFER STOCK SOLUTION FROM VOLUMETRIC TO VIAL FOR STORAGE.
 LABEL WITH ID#, DATE AND PARAMETER

Purgeable A Mixture

Catalog Number 4-8851

This mixture contains 200 µg/ml each of the following components in methanol:

Methylene chloride	Trichloroethylene
Trichlorofluoromethane	1,1,2-Trichloroethane
1,1-Dichloroethylene	Dibromochloromethane
1,1-Dichloroethane	2-Chloroethyl vinyl ether*
Chloroform	Tetrachloroethylene
Carbon tetrachloride	Chlorobenzene
1,2-Dichloropropane	

*Due to the instability of 2-chloroethyl vinyl ether, we cannot guarantee concentration of this component.

Purgeable C (Gases)

Catalog Number 4-8853

This mixture contains the following constituents, each at 200 µg/ml in methanol:

Chloromethane
Bromomethane
Vinyl chloride
Chloroethane

NOTE: Before opening, place the container in dry ice for ten minutes. After opening, transfer contents immediately to appropriate container and seal.

Store this mixture at -18°C.



SUPELCO, INC.

Supelco Park • Bellefonte, PA 16823-0048
Phone (814) 359-3441 • (814) 359-3446
TWX 510-670-3800

Cat no 4-8853
Storage-FREEZE
Lot no- LA15567

FOR RESEARCH
USE ONLY

Purgeable C
1ml methanol

CAUTION-IRRITANT IF SWALLOWED.

DANGER-EXTREMELY FLAMMABLE.

May be fatal if swallowed. May cause headache, nausea, blindness.

Purgeable B

Catalog Number 4-8852

Each constituent, except as noted, at 200 µg/ml in methanol

trans-1,2-Dichloroethylene	Benzene
1,2-Dichloroethane	Bromoform
1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane
Bromodichloromethane	Toluene
trans-1,3-Dichloropropene [▲]	Ethylbenzene
cis-1,3-Dichloropropene [▲]	

[▲]400 µg/ml total dichloropropene, composed of:

38 percent trans-1,3-dichloropropene

62 percent cis-1,3-dichloropropene as determined by FID.

Supelco
STD
#335



SUPELCO

SUBSIDIARY OF ROHM AND HAAS COMPANY

Cat no 4-8851
Storage-REFRIGERATE
Lot no- LA16772

FOR RESEARCH
USE ONLY

Purgeable A
1ml methanol

CAUTION-IRRITANT IF SWALLOWED.

DANGER-EXTREMELY FLAMMABLE.

May be fatal if swallowed. May cause headache, nausea, blindness.



SUPELCO, INC.

Bellefonte, PA

814-359-3441

Cat no 4-8852
Storage-REFRIGERATE
Lot no- LA16677

FOR RESEARCH
USE ONLY

Purgeable B
1ml methanol

CAUTION-IRRITANT IF SWALLOWED.

DANGER-EXTREMELY FLAMMABLE.

May be fatal if swallowed. May cause headache, nausea, blindness.



Purgeable Priority Pollutants

CLIENT Town of Conkling JOB NO. 3362.001.517
DESCRIPTION Reference Spike #335
DATE COLLECTED - DATE REC'D. - DATE ANALYZED 1-28-88

DESCRIPTION:	Actual Conc. (ppb)	Theoretical Conc. (ppb)	% Rec		
SAMPLE NO.:					
Chloromethane					
Bromomethane					
Vinyl chloride	16.	20.	80.		
Chloroethane	17.	20.	85.		
Methylene chloride	20.	20.	100.		
1,1-Dichloroethene	20.	20.	100.		
1,1-Dichloroethane	19.	20.	95.		
t-1,2-Dichloroethene	19.	20.	95.		
Chloroform					
1,2-Dichloroethane	20.	20.	100.		
1,1,1-Trichloroethane	15.	20.	75.		
Carbon tetrachloride					
Bromodichloromethane					
1,2-Dichloropropane					
t-1,3-Dichloropropene					
Trichloroethene	24.	20.	120.		
Benzene	19.	20.	95.		
Dibromochloromethane					
1,1,2-Trichloroethane					
c-1,3-Dichloropropene					
2-Chloroethylvinyl ether					
Bromoform					
1,1,2,2-Tetrachloroethane					
Tetrachloroethene	18.	20.	90.		
Toluene	20.	20.	100.		
Chlorobenzene	19.	20.	95.		
Ethylbenzene	19.	20.	95.		
Xylenes					

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Units: $\mu\text{g/l}$ (ppb) unless otherwise noted

Comments:

Authorized: Thomas C. Alexander

Date: 3-3-89 05



Town of Conklin

JOB NO.

3362.001-517

DESCRIPTION

DESCRIPTION 0 Sediment Samples - Leachate Sample
Surrogate Standard Recovery Summary

DATE COLLECTED 10/1/80

1-20-88

DATE REC'D.

1-2158

DATE ANALYZED

1-25-88

Methodology: Federal Register — 40 CFR, Part 136, October 26, 1984

Units: mg/l (ppm) unless otherwise noted**Comments:**

OBG Laboratories, Inc.
Box 4942 / 1304 Buckley Rd. / Syracuse, NY / 13221 / (315) 457-1494

Authorized:

ed: Thomas P. Alexander

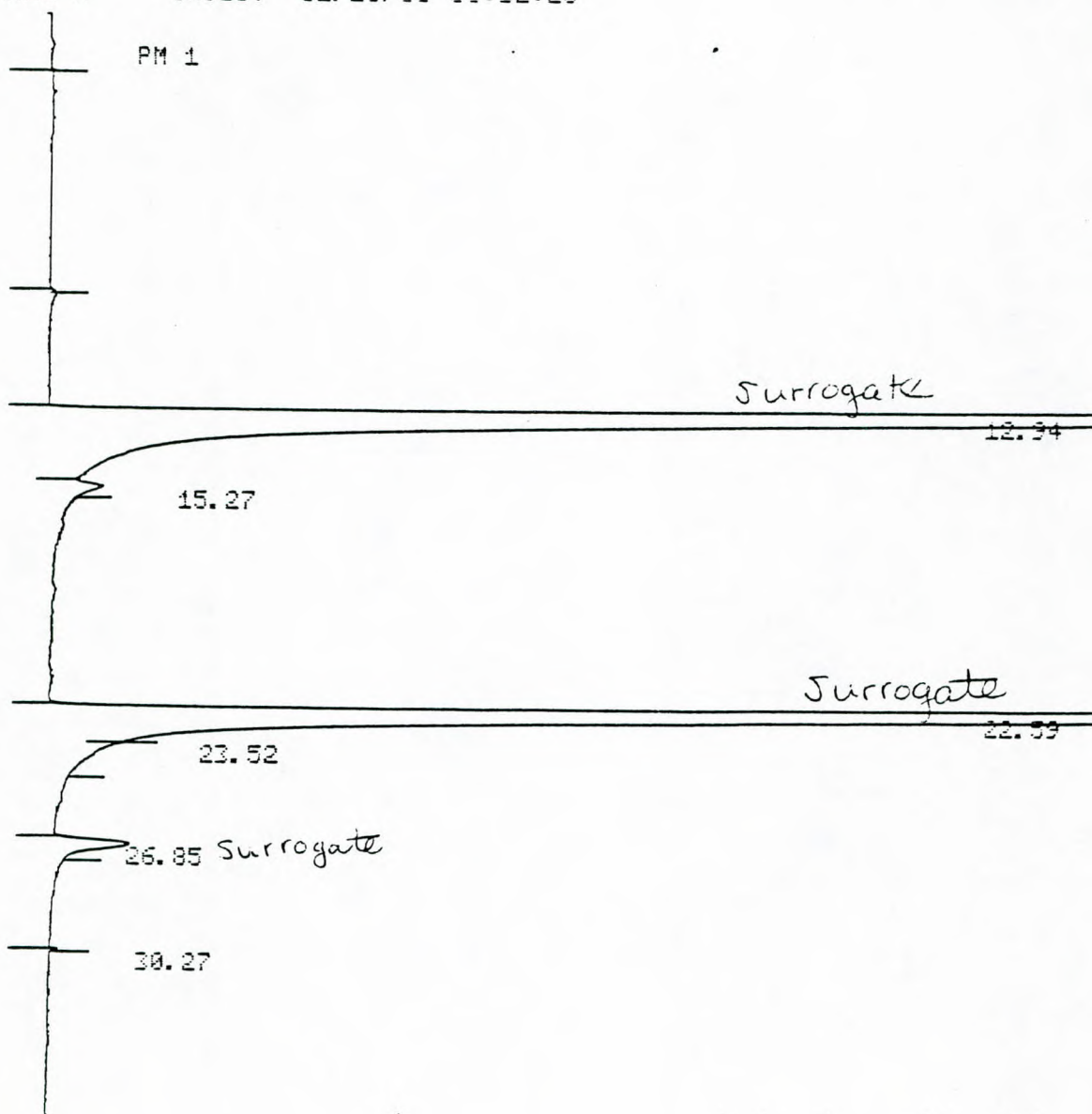
Date:

3-3-89...-06

SAMPLE I.D. organic free
water Blank
 DATE 1-28-88 INJ. VOL. 5.0 ml
 COLUMN 1% SP-1000 on Carboxack B
60/80 Mesh 8' x 2mm ID
 INSTRUMENT Tracor 540* ^{ALS} Tekmar 1502
HPLC

SAMPLE TABLE...
 ANALYST:AN=" "
 INJECTIONS/SAMPLE:RA=
 SAMPLES BETWEEN CALIB:CI=
 CONC UNITS:CU=" "
 SAM IDX NAME SAM AMT SCALE FACTOR
 SI= 1 SN=" BLANK SA= XF= 1
 SI=
 END OF DIALOG

CHANNEL A INJECT 01/28/88 08:32:26



SAMPLE I.D. organic free
Water Blank cont.

DATE 1-28-88 INJ. VOL. 5.0 ml

COLUMN 1% SP-1000 on Carbowack B

60/80 Mesh 8' x 2mm ID

INSTRUMENT Tracor 540⁷² ^{ALS} Tekmar LSC²

ER 0

VHO

01/28/88 08:32:26

CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 13 INDEX 1

ANALYST: TSH

SAMPLE 1 BLANK

SA 0. IS 0. XF 1.

NAME	PPB	RT	AREA BC	RF	RRT
BRCLCH2	379.655	12.94	370243 08	975.21	1.
FREON113	0.435	15.27	1414 05	3250.	1.
BRCLC3H6	422.751	22.59	311225 09	736.19	1.
CL4C2	1.081	26.85	4810 01	4450.	1.
TOTALS	803.922		687692		

SAMPLE TABLE...

ANALYST:AN="

INJECTIONS/SAMPLE:RA=

SAMPLES BETWEEN CALIB:

CONC UNITS:CU="

SAM IDX NAME

SI= 1 SN=" STD

SI=

END OF DIALOG

CHANNEL A INJECT 01/28/88 09:47:43

PM 1

2.57

5.02

Vinylchloride

Chloroethane

5.78

methylene chloride

8.38

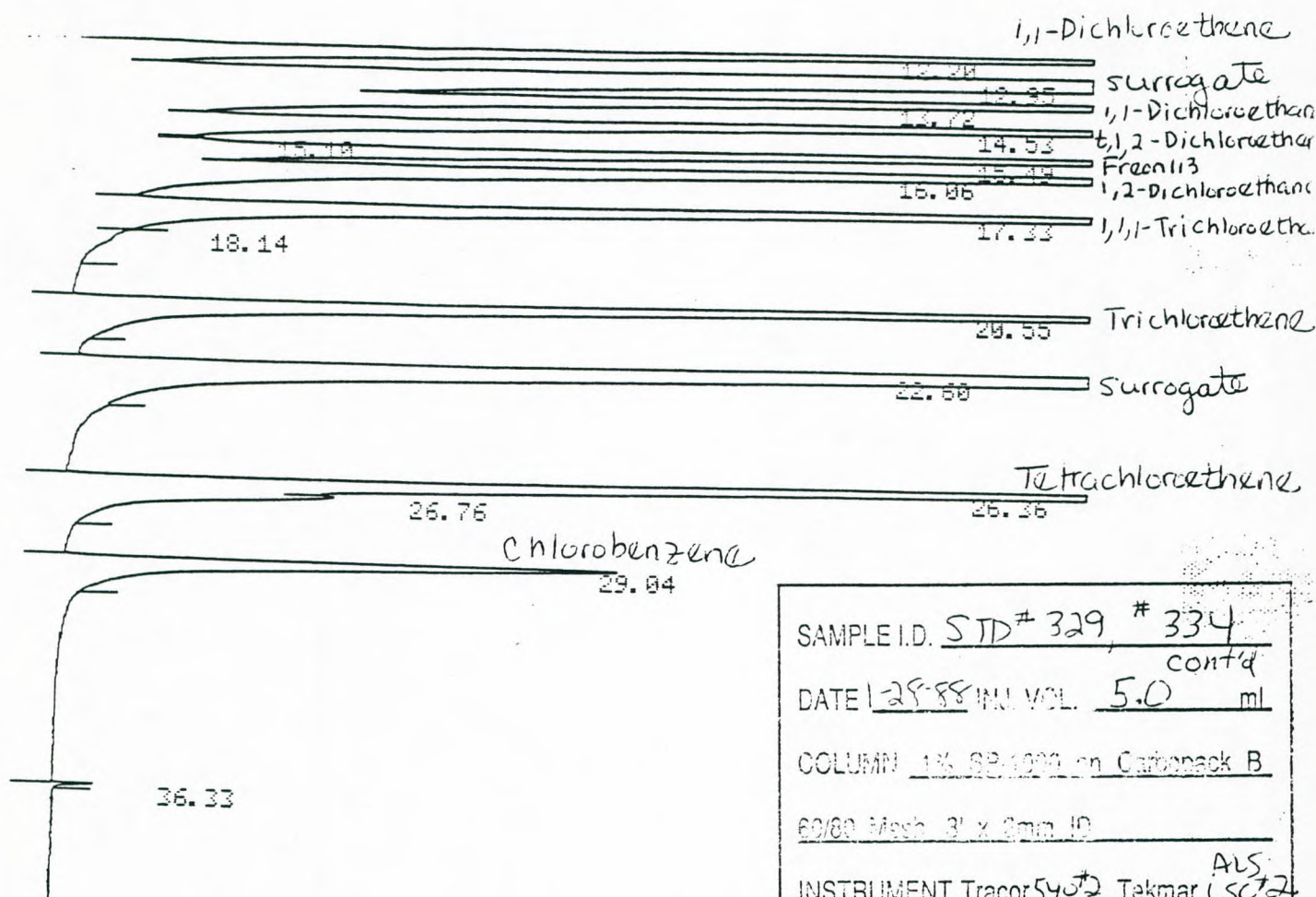
SAMPLE I.D. Standard [#] 329.334

DATE 1-28-88 INJ. VOL. 5.0 ml

COLUMN 1% SP-1000 on Carbowack B

60/80 Mesh 8' x 2mm ID

INSTRUMENT Tracor 540⁷² ^{ALS} Tekmar LSC²
HOLD



SAMPLE I.D. STD # 329, # 334
 DATE 1-28-88 INJ. VOL. 5.0 ml
 COLUMN 1% SP-1000 on Carbowack B
60/80 Mesh 3' x 3mm ID
 INSTRUMENT Tracor 540 Tekmar ALC
HECD

VHD 01/28/88 09:47:43 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 14 INDEX 1

ANALYST: TSH

SAMPLE 1 STD

SA 0. IS 0. XF 1.

NAME	PPB	RT	AREA	BC	RF	RRT
1	0.	2.57	742	01		0.602
CH2CHCL	24.031	4.27	79302	02	3300.	1.
3	0.	5.02	2856	02		0.869
C2H5CL	20.479	5.78	70653	03	3450.	1.
CH2CL2	26.469	8.98	134990	01	5100.	1.
DCLEN11	21.752	12.2	82658	02	3800.	1.
BRCLCH2	387.965	12.95	378348	02	975.21	1.
DCETAM11	22.116	13.72	105048	02	4750.	1.
DCLEN12	23.124	14.53	104061	02	4500.	1.
10	0.	15.1	1891	02		0.975
FREON113	26.919	15.49	87484	02	3250.	1.
DCETAM12	27.968	16.06	120263	02	4300.	1.
CL3OCH3	24.654	17.33	108480	09	4400.	1.
CL3O2H	21.688	20.55	96511	01	4450.	1.
BRCLC3H6	416.27	22.6	306454	01	736.19	1.
CL4O2	23.275	26.36	103574	02	4450.	1.
CL08Z	12.934	26.76	14137	03	1480	1.045

18	0.	29.04	37053 01	0.039
19	0.	36.33	523 01	1.251
TOTALS	1079.641		1840028	

SAMPLE I.D. STD # 329 334
 DATE 1-28-88 INJ. VOL. 5.0 ml
 COLUMN 1% SP-1000 on Carbowack B
60/80 Mesh 8' x 2mm ID
 INSTRUMENT Tracor 540² Tekmar LSC 2
 HIELD

ER 0

WHO 01/28/88 10:42:44 CH= "A" PS= 1.

FILE 1 METHOD 5. RUN 15 INDEX 1

ANALYST: TSH

SAMPLE 1 F0040

SA 0. IS 0. XF 1.

NAME	PPB	RT	AREA	BC	RF	RRT
1	0.	2.64	1711	03		0.292
CH2CL2	0.234	9.04	1192	01	5100.	1.
FREON113	28.742	15.24	93413	09	3250.	1.
CL3CCH3	2.218	18.42	10645	01	4800.	1.
CL3C2H	0.146	21.41	648	01	4450.	1.
TOTALS	31.34		107609			

SAMPLE TABLE...

ANALYST:AN="

INJECTIONS/SAMPLE:RA=

SAMPLES BETWEEN CALIB:CI=

CONC UNITS:CU="

SAM IDX NAME SAM AMT

SI= 1 SN=" F0019

SA=

SCALE FACTOR
XF= 5

SI=
END OF DIALOG

CHANNEL A INJECT 01/28/88 11:51:30

PM 1

30

Unknown

SAMPLE I.D. F0019 Sediment #23

DATE 1-28-88 1.01g soil
INJ. VOL. 4 CC H₂O ml

COLUMN 1% SP-1000 on Carborack B

60/80 Mesh 8' x 2mm ID

INSTRUMENT Tracor 5402 Tekmar

WELD

11

5.06 methylene chloride

Surrogate

14.03

12.37

17.71

Surrogate

23.53

22.81

26.85 Surrogate

SAMPLE I.D. F0019 Sediment # 23 cont'd

1.01 g Soil
DATE 1-28-88 INJ. VOL. 4 μ l H₂O ml

COLUMN 1% SP-1000 on Carbowack B

60/80 Mesh 8' x 2mm ID

INSTRUMENT Tracor 5402 Tekmar ALS
HECD

ER 0 PM 0

WHO

01/28/88 11:51:30

CH= "A" PS= 1.

FILE 1.

METHOD 5.

RUN 16

INDEX 1

ANALYST: TSH

SAMPLE 1

1

F0019

SA

IS

XF

NAME	PPB	RT	AREA BC	RF	RRT
CH2CL2	0.581	9.06	593 01	5100.	1.
BRCLCH2	74 1402.139	12.97	273476 09	975.21	1.
BRCLC3H6	73 1533.518	22.61	225792 09	736.19	1.
CL4C2	4.052	26.85	3890 01	4800.	1.
TOTALS	2940.29		503751		

SAMPLE TABLE...

ANALYST:AN="

INJECTIONS/SAMPLE:RA=

SAMPLES BETWEEN CALIB:CI=

CONC UNITS:CU="

SAM IDX NAME

SAM AMT

SCALE FACTOR

SI= 1 SN=" F0020

SA=

KF= 5

SI=

END OF DIALOG

CHANNEL A INJECT 01/28/88 12:53:41

PM 1
1.93 unknown
2.82
3.21

methylene chloride
9.06

SAMPLE I.D. F0020 Sediment #24

1.01 g soil

DATE 1-28-88 INJ. VOL. 4 cc H₂O ml

COLUMN 1% SP-1000 on Carbowack B

60/80 Mesh 8' x 5/8" ID

INSTRUMENT Tracor 5402 Tekmar ^{ALS} _{LS2}

Surrogate

12.96

14.22

15.01

20.31

Surrogate

22.60

23.49

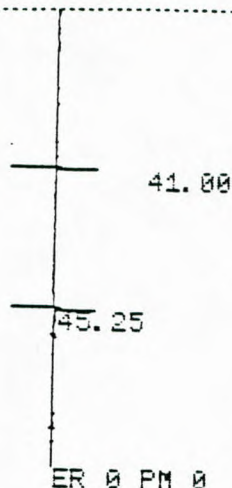
24.98

Surrogate
26.85

28.08

32.54

34.01



SAMPLE I.D. F0020 Sediment #24 cont
 1.01 g soil
 DATE 1-28-88 INJ. VOL. 4. cc H₂O ml
 COLUMN 1% SP-1000 on Carbowack B
 60/80 Mesh 8' x 2mm ID
 INSTRUMENT Tracor 540 #2 Tekmar ALS LSCD

VHO 01/28/88 12:53:41 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 17 INDEX 1

ANALYST: TSH

SAMPLE 1 F0020

SA 0. IS 0. XF 5.

NAME	PPB	RT	AREA	BC	RF	RRT
1	0.	1.93	1134	01		0.213
CH2CL2	0.675	9.06	689	01	5100.	1.
BRCLCH2	1681.12	12.96	327889	09	975.21	1.
BRCLC3H6	1834.629	22.6	270127	09	736.19	1.
CL4C2	4.04	26.85	3879	01	4800.	1.

TOTALS 3520.464 603718

SAMPLE TABLE...

ANALYST:AN="

INJECTIONS/SAMPLE:RA=

SAMPLES BETWEEN CALIB:CI=

CONC UNITS:CU="

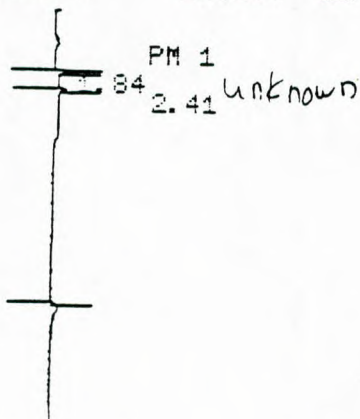
SAM IDX NAME SAM AMT SCALE FACTOR

SI= 1 SN=" F0021 SA= XF= 5

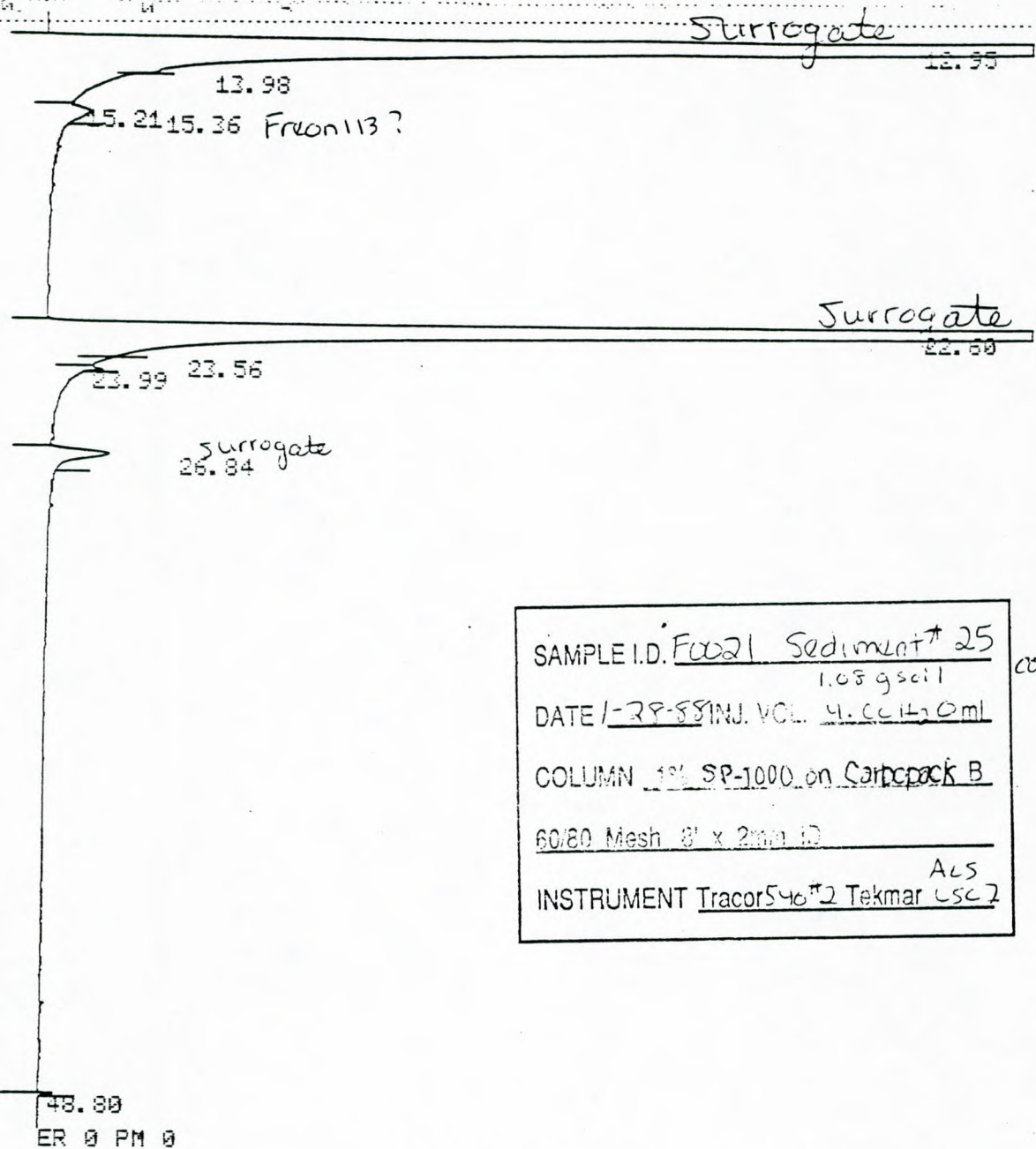
SI=

END OF DIALOG

CHANNEL A INJECT 01/28/88 13:54:15



SAMPLE I.D. F0021 Sediment #25
 1.05 g soil
 DATE 1-28-88 INJ. VOL. 4. cc H₂O ml
 COLUMN 1% SP-1000 on Carbowack B
 60/80 Mesh 8' x 2mm ID
 INSTRUMENT Tracor 540 #2 Tekmar ALS LSCD



SAMPLE I.D. F0021 Sediment # 25
 1.05 g soil
 DATE 1-28-88 INJ. VOL. 4.00 μ l
 COLUMN 1% SP-1000 on Carbowack B
60/80 Mesh 8' x 2mm ID
 INSTRUMENT Tracor 540 #2 Tekmar LSC 2 ALS

cont'd

VHO 01/28/88 13:55:15 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 18 INDEX 1

ANALYST: TSH

SAMPLE 1 F0021

SA 0. IS 0. XF 5.

NAME	PPB	RT	AREA BC	RF	RRT
BRCLCH2	1606.936	12.95	313420 09	975.21	1.
FREON113	2.274	15.36	1478 07	3250.	1.
BRCLCH6	1727.312	22.6	254326 09	736.19	1.
CL402	4.186	26.84	4019 01	4800.	1.



unknown

46.91

ER 0

WHO

01/28/88

FILE 1. METHOD 5. RUN 19

ANALYST: TSH

SAMPLE 1 F0025

SA 0. IS 0. XF 10.

NAME	PPB	RT	AREA BC	RF	RRT
1	0.	2.47	9505 01		0.592
CH2CHCL	9.855	4.17	3252 01	3300.	1.
C2H5CL	4.258	5.81	1469 01	3450.	1.
4	0.	7.88	757 01		0.87
CH2CL2	1.562	9.06	797 01	5100.	1.
DCLEN11	1.982	11.58	753 01	3800.	1.
BRCLCH2	59.228	13.04	5776 01	975.21	1.
DCLEN12	2.602	14.66	1171 02	4500.	1.
FREON113	61.933	15.23	20128 03	3250.	1.
CL3C2H	1.218	19.76	542 01	4450.	1.
CLOBZ	137.094	29.03	20290 01	1480.	1.
12	0.	46.91	14702 01		1.616
TOTALS	279.732		79142		

SAMPLE TABLE...

ANALYST:AN="

INJECTIONS/SAMPLE:RA=

SAMPLES BETWEEN CALIB:CI=

CONC UNITS:CU="

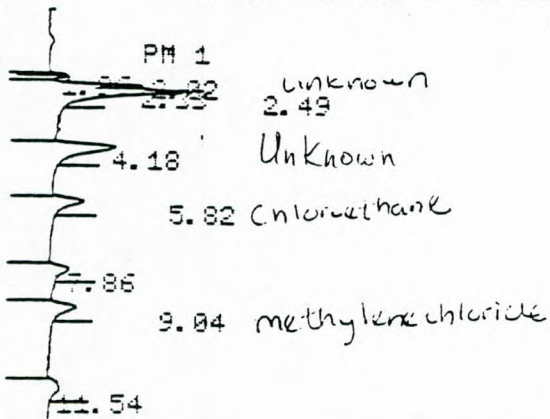
SAM IDX NAME SAM AMT SCALE FACTOR

SI= 1 SN=" F0025 SA= XF= 10

SI=

END OF DIALOG

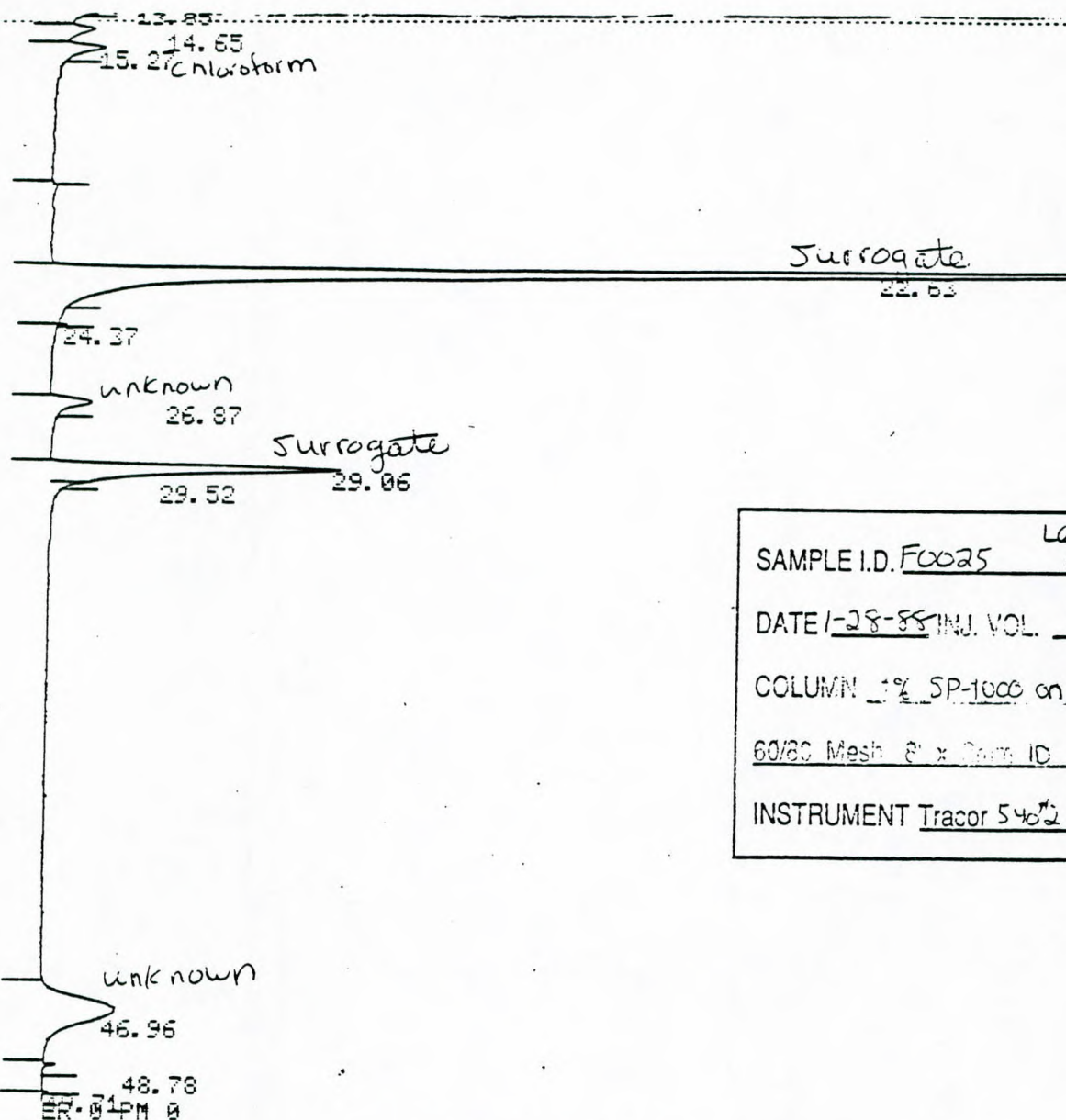
CHANNEL A INJECT 01/28/88 16:10:56



SAMPLE I.D. F0025 Leachate
mw-14
DATE 1-28-88 INJ. VOL. 0.5 ml
COLUMN 1% SP-1000 on Carbowack B
60/80 Mesh 6' x 2mm ID
INSTRUMENT Tracor 54072 Tekmar ALS
LSC-2
HICD

Surrogate

10.82



SAMPLE I.D. F0025 Loachate
mw-14 com
DATE 1-28-88 INJ. VOL. 0.5 ml
COLUMN 1% SP-1000 on Carbi pack B
60/80 Mesh 8' x 1/8" ID
INSTRUMENT Tracor 5402 Tekmar ALS
1x ECD

VHO 01/28/88 16:10:56 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 20 INDEX 1

ANALYST: TSH

SAMPLE 1 F0025

SA 0. IS 0. XF 10.

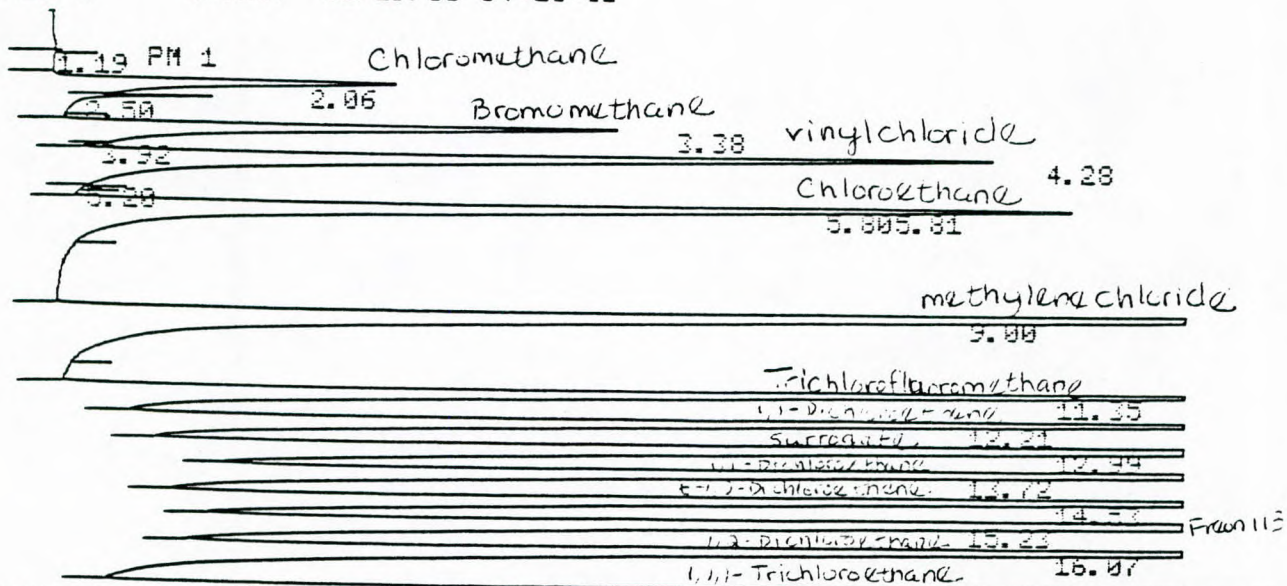
NAME	PPB	RT	AREA BC	RF	RRT
1	0.	2.33	2090 02		0.557
2	0.	2.49	5733 03		0.596
CH2CHCL	40.494	4.18	3463 01	3300.	1.
C2H5CL	4.119	5.82	1421 01	3450.	1.
5	0.	7.86	834 01		0.869
CH2CL2	2.408	9.04	1228 01	5100.	1.
DCLEN11	2.084	11.54	792 01	3800.	1.
BROLOH2	1084.115	12.02	105724 08	975.21	1.

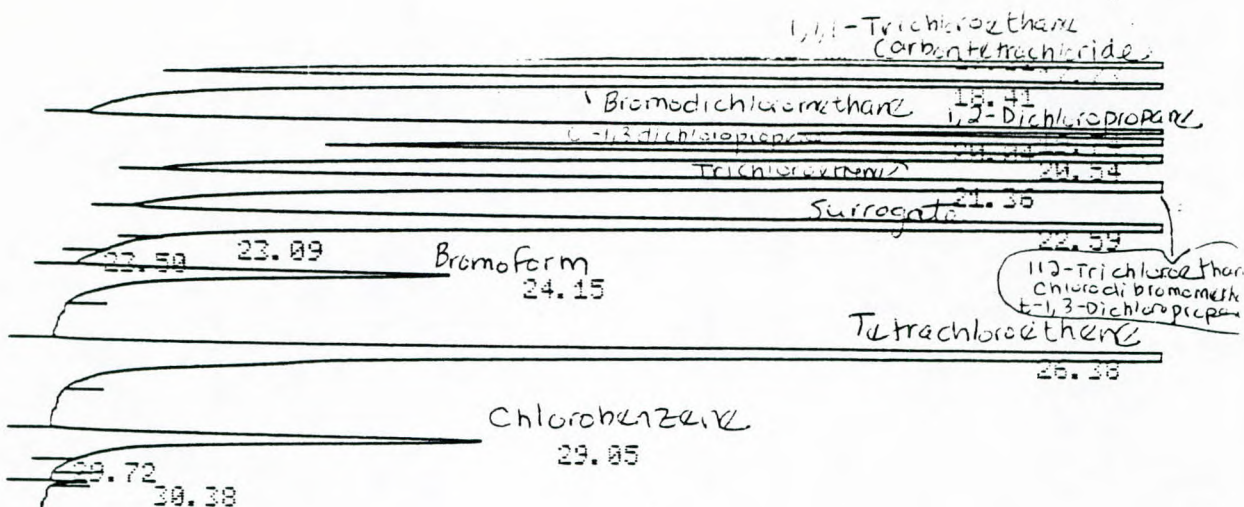
DCETAM11	1.545	13.85	734 05	4750.	1.
DCLEN12	2.887	14.65	1299 02	4500.	1.
FREON113	6.991	15.27	2272 03	3250.	1.
BRCLC3H6	1093.739	22.63	80520 01	736.19	1.
CL4C2	5.402	26.87	2593 01	4800.	1.
CLOBZ	127.831	29.06	18919 02	1480.	1.
15	0.	29.52	674 03		1.016
16	0.	46.96	14809 03		1.616
TOTALS	2341.615		243105		

SAMPLE I.D. F0025 ^{Leachate} _{mw-14}
 DATE 1-28-88 INJ. VOL. 0.5 ^{cont'd} ml
 COLUMN 1% SP-1000 on Coropak B
60/80 Mesh 8' x 2.5" ID
 INSTRUMENT Tracor 540 #2 ^{ALS} _{Tekmar LSC2}
 I+EC

SAMPLE I.D. Reference Spike # 335
 DATE 1-28-88 INJ. VOL. 5.0 ml
 COLUMN 1% SP-1000 on Poropak B
60/80 Mesh 6' x 2mm ID
 INSTRUMENT Tracor 5402 Tekmar ALS
6562
HIELD

INJECT 01/29/88 04:28:03





SAMPLE ID: Reference Spike #335

DATE: 1-28-88 INJ. VOL: 5.0 ml

COLUMN: 10% SP-1000 on Carbowack B

INSTRUMENT: Tracor 5402 Tekmar ALS

141500

ER 0 PM 0

VH0 01/29/88 04:29:03 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 11 INDEX 1

ANALYST: TSH

SAMPLE 10 REF. SPK.

SA 0. IS 0. XF 1.

Ref 335

NAME	PPB	RT	AREA	BC	RF	RRT
1	0.	2.06	16007	02		0.481
2	0.	2.5	2935	03		0.584
3	0.	3.38	27708	02		0.79
4	0.	3.92	604	02		0.916
CH2CHCL	16.406	4.28	54141	09	3300.	1.
6	0.	5.8	23495	02		0.998
C2H5CL	10.083	5.81	34785	03	3450.	1.
CH2CL2	19.506	9.	99481	01	5100.	1.
9	0.	11.35	72500	02		0.93
DCLEN11	19.972	12.21	75893	02	3800.	1.
BRCLCH2	102.784	12.99	100236	02	975.21	1.
DCETAM11	19.086	13.72	90659	02	4750	1.

NAME	PPB	RT	AREA BC	RF
DOLEN12	18.798	14.53	84187 02	4500.
FREON112	36.678	15.03	119292 02	3250.
DCETAN12	19.956	16.07	95792 02	4800.
16	0.	17.22	73728 02	0.977
CL3CCH3	22.141	17.73	106275 02	4800.
18	0.	18.41	86393 02	1.038
19	0.	19.74	57953 02	0.924
20	0.	20.04	82754 02	0.938
21	0.	20.54	105422 02	0.962
CL3C2H	42.401	21.36	138682 02	4450.
BRCLC3H6	150.458	22.59	110766 02	736.19
24	0.	23.09	5142 02	1.022
25	0.	23.5	1879 02	1.04
26	0.	24.15	23075 02	0.915
CL4C2	31.127	26.38	149409 01	4800.
CL0B2	18.252	29.05	27013 02	1480.
29	0.	29.72	675 02	1.023
TOTALS	527.558		1916791	

CHANNEL A INJECT 01/29/88 07:35:47

SAMPLE ID. Reference Spike #32
 DATE 1-28-88 VOL. 5.0 cont'd

PM 1 .00

COLUMN 11 SP-1000 Carboxack F

60/60 Mesh 6' x 2mm ID

VHO

01/29/88 07:35:47

FILE 1.

METHOD 5.

RUN 12

INDEX

ANALYST: TSH

SAMPLE 11

INSTRUMENT "A" PS-1 Agilent 5402 Tekmar 152

HECT

NAME	PPB	RT	AREA BC	RF
1	0.	0.65	2864 02	
2	0.	0.72	29614 03	
TOTALS	0.		32478	

BTX

01/28/88 07:39:14

CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 12 INDEX 11

ANALYST: TSH

SAMPLE 11

NAME	PPS	RT	AREA BC	RF
------	-----	----	---------	----

TOTALS 0.

SAMPLE TABLE...

ANALYST:AN="

INJECTIONS/SAMPLE:RA=

SAMPLES BETWEEN CALIB:CI=

CONC UNITS:CU="

SAM IDX NAME

SAM AMT

SCALE FACTOR

SI= 1 SN=" BLANK

SA=

XF= 1

SI=

END OF DIALOG

CHANNEL A INJECT 01/28/88 08:31:21

PM 1

SAMPLE I.D.	<u>Organic free</u> <u>Water Blank</u>
DATE <u>1-28-88</u>	INJ. VOL. <u>5.0</u> ml
COLUMN <u>1% SP-1000 on Carbowack B</u>	
<u>60/80 Mesh 8' x 2mm ID</u>	
INSTRUMENT <u>Tracor 5402</u>	<u>ALS</u> <u>Tekmar LSC-2</u> <u>PID</u>

Surrogate

26.83

organic free
 SAMPLE I.D. water Blank control
 DATE 1-28-88 INJ. VOL. 5.0 ml
 COLUMN 1% SP-1000 on Carbowack B
60/80 Mesh 8' x 2mm ID
 INSTRUMENT Tracor 540² Tekmar ^{ALS} LSC2

ER 0 PM 0

BTX 01/28/88 08:31:21 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 13 INDEX 12

ANALYST: TSH

SAMPLE 1 BLANK

SA 0. IS 0. XF 1.

NAME	PPB	RT	AREA BC	RF
F307	365.765	26.83	14605 01	39.93
TOTALS	365.765		14605	

SAMPLE TABLE...

ANALYST:AN="

INJECTIONS/SAMPLE:RA=

SAMPLES BETWEEN CALIB:CI=

CONC UNITS:CU="

SAM IDX NAME

SI= 1 SN=" STD

SAM AMT

SA=

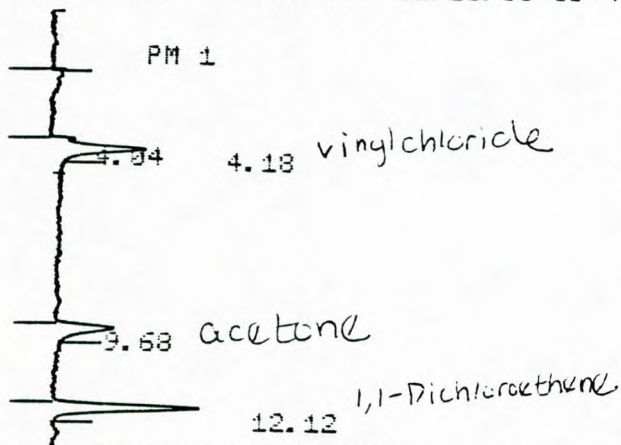
SCALE FACTOR

XF= 1

SI=

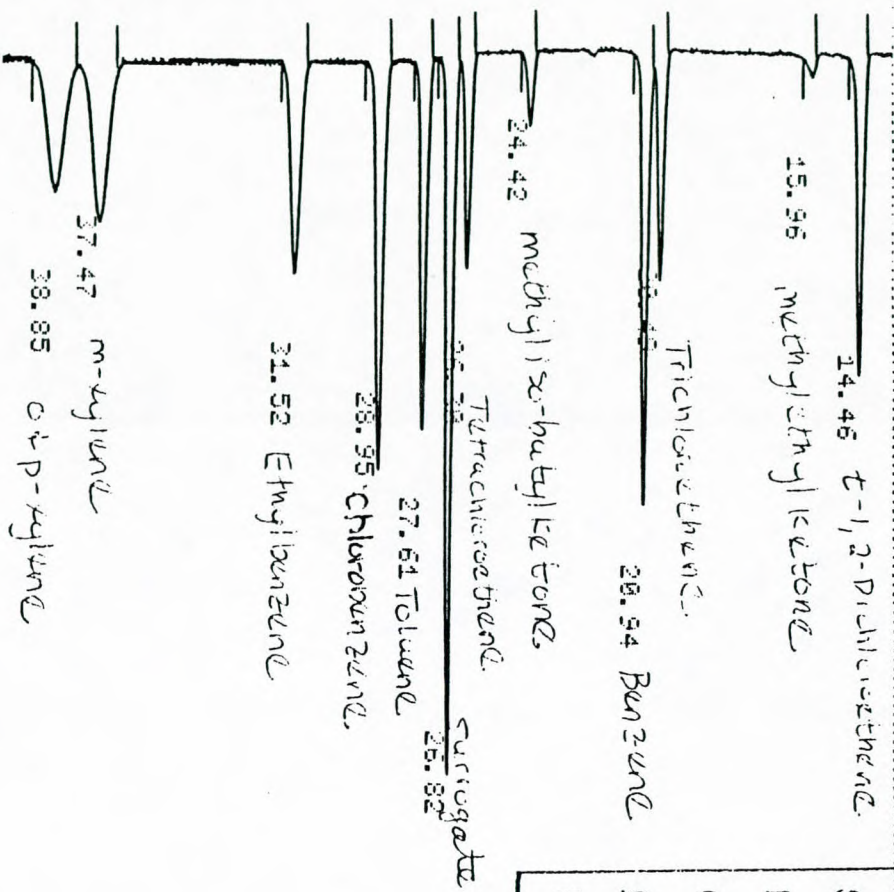
END OF DIALOG

CHANNEL A INJECT 01/28/88 09:46:39



SAMPLE I.D. Standard # 329 # 334
 DATE 1-28-88 INJ. VOL. 5.0 ml
 COLUMN 1% SP-1000 on Carbowack B
60/80 Mesh 8' x 2mm ID
 INSTRUMENT Tracor 540² Tekmar ^{ALS} LSC2

SAMPLE I.D.	S. Janclo	329	334
DATE	1-25-88	VOL.	5.0 ml
COLUMN	1% 25-1000	or	Chromoback B
60/60 Mesh	8' x 6mm ID		
INSTRUMENT	Tracor 5402	Tekmar	ALS
	PIP		



BTX 01/28/88 09:46:39 CH= "R" PS= 1.

FILE 1. METHOD 5. RUN 14 INDEX 13

ANALYST: TSH

SAMPLE 1 STD

GR 0. IS 0. XF 1.

NAME	PPB	RT	AREA	BC	RF
CH2CHCL	4.862	4.04	389	02	80.
2	0.	4.18	1994	03	
ACETONE	77.754	9.68	1336	01	17.193
DCEM11	22.88	12.12	2920	01	127.624
DCEM12	21.445	14.46	6643	01	309.76
MEK	14.94	15.96	378	01	25.301
CL302	21.489	20.49	4349	02	202.385
BENZ	20.265	20.94	8693	03	428.964
MIBK	22.468	24.42	1314	01	55.992
CL402	23.664	26.7	4129	02	174.479
ESCT	354.491	26.82	14035	03	39.93
TOLUENE	19.375	27.61	7389	01	381.364
CLOROBZ	25.368	28.95	9886	01	374.924
ETHBENZ	20.486	31.52	6650	01	341.612
E-XYL	22.371	32.47	7977	02	307.313
O-XYL	23.24	38.85	7155	03	
TOTALS	696.098		85234		

ER 0 PM 0

BTX

01/28/88 19:41:39

CH= "A" PS= 1.

FILE 1. METHOD 5.

RUN 15 INDEX 14

ANALYST: TSH

SAMPLE 1 F0040

SA 0. IS 0. XF 1.

NAME PPB RT AREA BC RF

TOTALS 0.

SAMPLE TABLE...

ANALYST:AN="

INJECTIONS/SAMPLE:RA=

SAMPLES BETWEEN CALIB:CI=

CONC UNITS:CU="

SAM IDX NAME

SI= 1 SN=" F0019

SAM AMT

SA=

SCALE FACTOR

XF= 5

SI=

END OF DIALOG

CHANNEL A

INJECT 01/28/88 11:50:25

Unknown
PM 1
1.86

Acetone
9.68

SAMPLE I.D. F0019 Sediment #23
DATE 1-28-88 INJ. VOL 1.01 g soil
COLUMN 1% SP-1000 on Carbowack B
60/80 Mesh 8' x 2mm ID
INSTRUMENT Tracor 540 Takmar ALS
PED

Surrogate

26.84

SAMPLE I.D. F0019 Sediment #23
1.01 g soil cont'd
DATE 1-28-88 INJ. VOL. 4 cc 160 ml
COLUMN 1% SP-1000 on Carbowack B
60/80 Mesh 8' x 2mm ID
INSTRUMENT Traceor 5402 Tekmar ALS
PID

EM 0

BTX

01/28/88 11:50:25

CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 16 INDEX 15

ANALYST: TSH

SAMPLE 1 F0019

SA 0. IS 0. XF 5.

NAME	PPB	RT	AREA BC	RF
1	0.	1.8	254 02	
2	0.	1.86	184 03	
ACETONE	452.786	9.68	1556 01	17.183
F307	1335.462	26.84	10665 01	39.93
TOTALS	1788.248		12659	

SAMPLE TABLE...

ANALYST:AN="

INJECTIONS/SAMPLE:RA=

SAMPLES BETWEEN CALIB:CI=

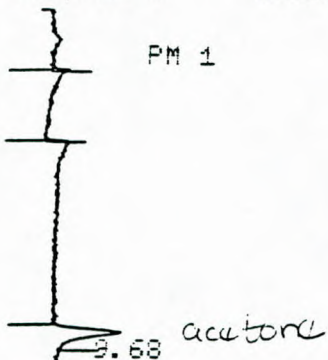
CONC UNITS:CU="

SAM IDX NAME SAM AMT SCALE FACTOR
SI= 1 SN=" F0020 SA= XF= 5

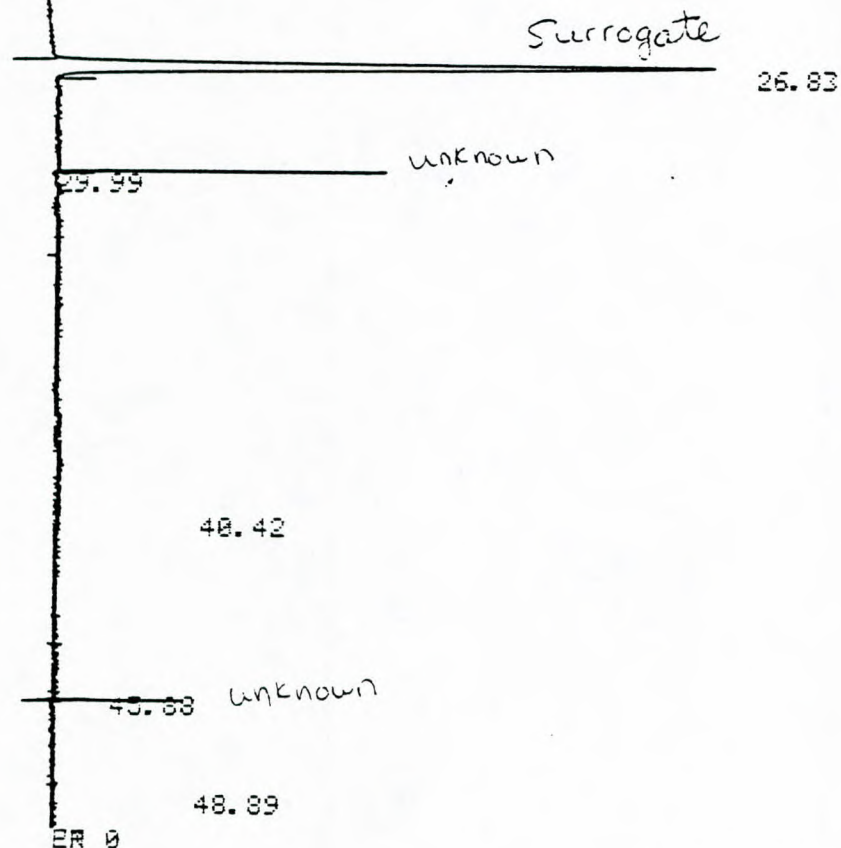
BT=

END OF DIALOG

CHANNEL A INJECT 01/28/88 12:52:36



SAMPLE I.D. F0020 Sediment #24
DATE 1-28-88 INJ. VOL. 1.015 µl
COLUMN 1% SF-1000 on Carbowack B
60/80 Mesh 6' x 2mm ID
INSTRUMENT Tracor 540 Tekmar ALS
PID



BTX

01/28/88 12:52:36

CH= "A" PG= 1

FILE 1. METHOD 5. RUN 17

ANALYST: TSH

SAMPLE 1 F0020

SA 0. IS 0. XF 5.

NAME	PPB	RT	AREA	BC	RF
ACETONE	484.795	9.68	1666	01	17.183
F307	1589.657	26.83	12695	01	39.93
CLOROBZ	3.174	29.99	238	01	374.924
TOTALS	2077.626		14599		

SAMPLE TABLE...

ANALYST:AN="

INJECTIONS/SAMPLE:RA=

SAMPLES BETWEEN CALIB:

CONC UNITS:CU="

SAM IDX NAME

SI= 1 SN=" F0021

SAM AMT

SA=

SCALE FACTOR

XF= 5

SI=

END OF DIALOG

CHANNEL A INJECT 01/28/88 13:53:10

PM 1

9.68 acetone

Surrogate

26.82

SAMPLE I.D. F0020 Sediment #24
1.01 g soil conc
DATE 1-28-88 INJ. VOL. 4. cc 140 ml
COLUMN 1% SP-1000 on Carboxack B
60/80 Mesh 8' x 2mm ID
INSTRUMENT Tracor 540 #2 Tekmar ALS
LSC2
PID

SAMPLE I.D. F0021 Sediment #25
1.08 g soil
DATE 1-28-88 INJ. VOL. 4 cc 140 ml
COLUMN 1% SP-1000 on Carboxack B
60/80 Mesh 8' x 2mm ID
INSTRUMENT Tracor 540 #2 Tekmar ALS
LSC2
PID

SAMPLE I.D. F0021 Sediment #25
 1.08 g soil
 DATE 01-28-88 INJ. VOL. 4.00 ml
 COLUMN 1% SP-1000 on Carbowack B
60/80 Mesh 8' x 2mm ID
 INSTRUMENT Tracor 540 #2 Tekmar ALS
 PID

46.97

ER 0 PM 0

BTX 01/28/88 13:53:10 CH= "A" PS= 1

FILE 1. METHOD 5. RUN 18 INDEX 17

ANALYST: TSH

SAMPLE 1 F0021

SA 0. IS 0. XF 5.

NAME	PPB	RT	AREA BC	RF
ACETONE	216.79	9.68	745 01	17.183
F307	1513.9	26.82	12090 01	39.93
TOTALS	1730.69		12835	

SAMPLE TABLE...

ANALYST:AN="

INJECTIONS/SAMPLE:RA=

SAMPLES BETWEEN CALIB:CI=

CONC UNITS:CU="

SAM IDX NAME SAM AMT SCALE FACTOR

SI= 1 SN=" F0025 SA= XF= 10

SI=

END OF DIALOG

CHANNEL A INJECT 01/28/88 14:55:49

PM 1

2	0.	13.78	922 01	
DOLN12	228.887	14.74	7090 01	309.76
MEK	80.629	15.98	204 01	25.301
BENZ	30.492	20.95	1308 01	428.964
MIBK	56.079	23.65	314 01	55.992
F3C7	50.088	26.72	200 01	39.93
TOLUENE	1349.866	27.6	51479 01	381.364
CLOROBZ	142.883	28.96	5357 01	374.924
10	0.	30.25	153 01	
11	0.	30.52	444 01	
ETHBENZ	135.269	31.53	4391 01	324.612
13	0.	33.68	573 01	
14	0.	36.22	756 02	
M-XYL	170.313	37.44	5813 02	341.313
O-XYL	116.441	38.88	3585 03	307.88
17	0.	46.83	1825 01	
TOTALS	3907.287		87071	

SAMPLE TABLE...

ANALYST:AN="

INJECTIONS/SAMPLE:RA=

SAMPLES BETWEEN CALIB:CI=

CONC UNITS:CU="

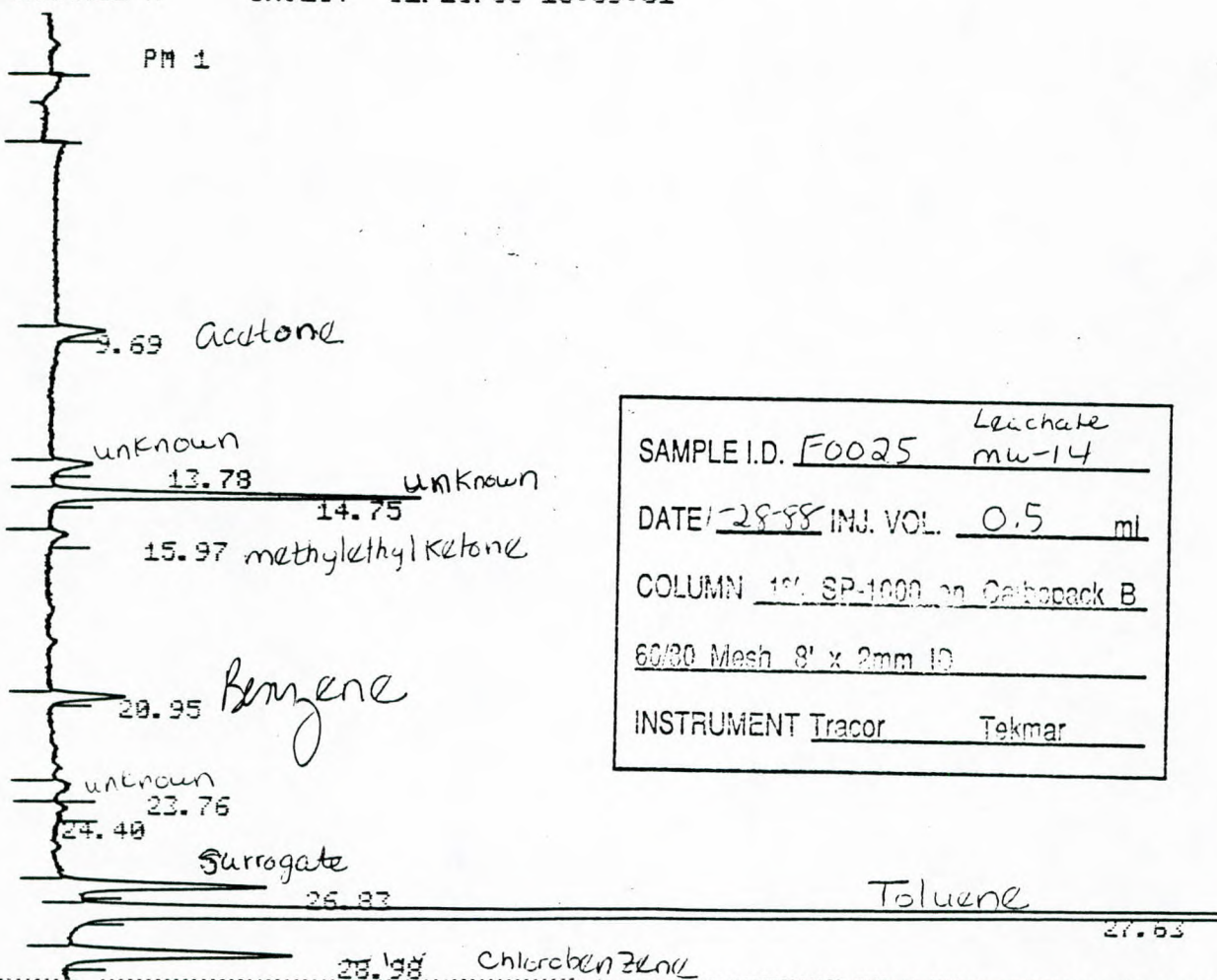
SAM IDX NAME SAM AMT SCALE FACTOR

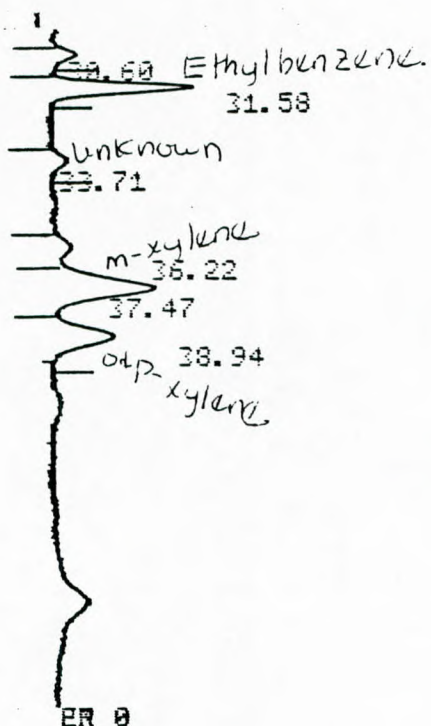
SI= 1 SN=" F0025 SA= XF= 10

SI=

END OF DIALOG

CHANNEL A INJECT 01/28/88 16:09:51





SAMPLE I.D. <u>F0025</u>	<u>Leachate</u> <u>mw-14</u>
DATE <u>1-28-88</u>	INJ. VOL. <u>0.5</u> ml
COLUMN <u>1% SP-1000 on Carbowack B</u>	
<u>60/80 Mesh 8' x 2mm ID</u>	
INSTRUMENT <u>Tracor 540</u> <u>Tekmar</u> <u>ALS</u> <u>LSC2</u> <u>PID</u>	

BTX 01/28/88 16:09:51 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 20 INDEX 19

ANALYST: TSH

SAMPLE 1 F0025

SA 0. IS 0. XF 10.

NAME	PPB	RT	AREA BC	RF
ACETONE	561.036	9.69	964 01	17.183
2	0.	13.78	850 01	
DCEM12	224.044	14.75	6940 01	309.76
MEK	143.472	15.97	363 01	25.301
BENZ	31.937	20.95	1370 01	428.964
6	0.	23.76	393 01	
MIBK	22.682	24.4	127 01	55.992
F3C7	1009.517	26.83	4031 01	39.93
TOLUENE	1379.418	27.63	52606 01	381.364
CLOROZ	145.149	28.98	5442 01	374.924
11	0.	30.6	614 01	
ETHBENZ	137.118	31.58	4451 01	324.612
13	0.	33.71	618 01	
14	0.	36.22	879 02	
M-XYL	186.369	37.47	6361 02	341.313
O-XYL	115.824	38.94	3566 03	307.88

SAMPLE I.D. Reference Spike #335

DATE 1-28-88 INJ. VOL. 5.0 ml

COLUMN 1% SP-1000 on Carbowack B

60/80 Mesh 8' x 2mm ID

INSTRUMENT Tracor 540⁷² Tekmar ALS
LSC-7
PID

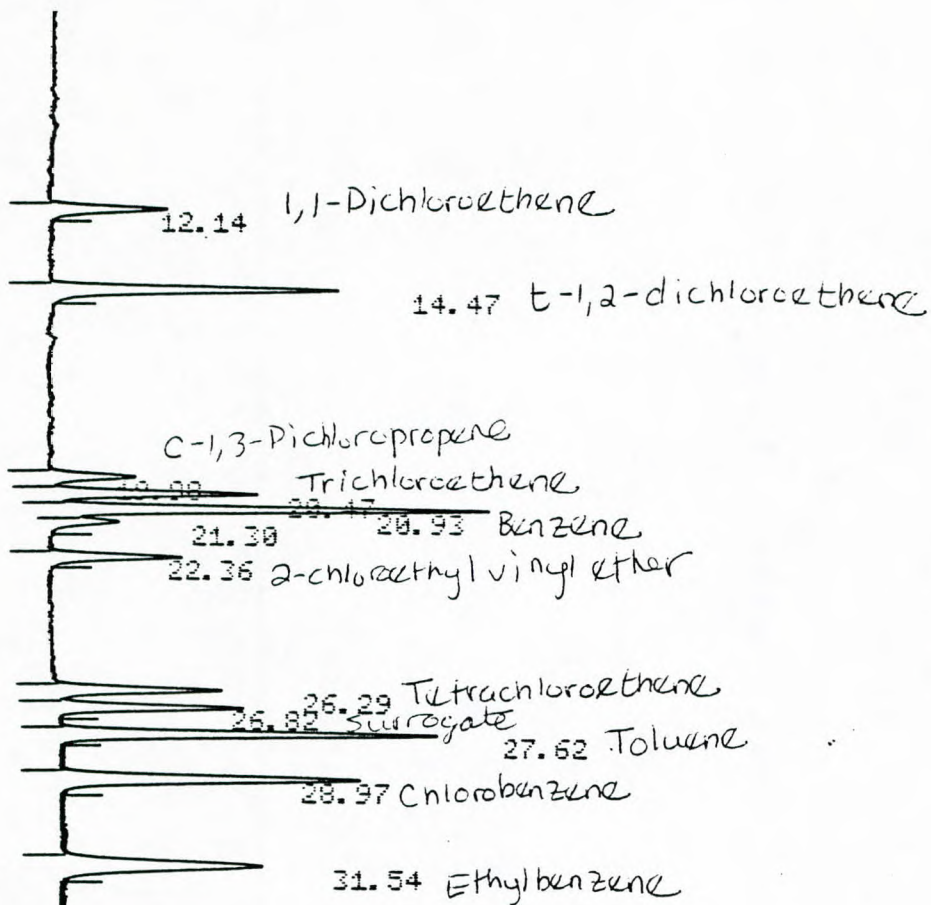
CHANNEL A

INJECT 01/29/88 04:26:58

PM 1



4.22 vinyl chloride



SAMPLE I.D. Reference Spike #335
 DATE 1-28-88 INJ. VOL. 5.0 ^{cont'd} ml
 COLUMN 1% SP-1000 on Carbonack B
60/80 Mesh 8' x 2mm ID
 INSTRUMENT Tracor 540⁷² Tekmar ALS
LSC2
PID

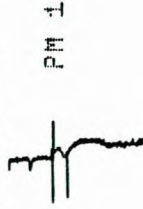
ER 0

BTX 01/29/88 04:26:58 CH= "A" PS= 1.
 FILE 1. METHOD 5. RUN 11 INDEX 10
 ANALYST: TSH
 SAMPLE 10 REF. SPK.
 SA IS XF
 1. 0. 1.

NAME PPR RT AREA RF

NAME	PPB	RT	AREA BC	RF
CH2CHCL	5.437	4.09	435 02	80.
2	0.	4.22	1313 03	
DCLEN11	18.438	12.14	2353 01	127.624
DCLEN12	18.588	14.47	5758 01	309.76
5	0.	19.98	1698 02	
CL302	19.542	20.47	3955 02	202.385
BENZ	19.188	20.93	8231 02	428.964
8	0.	21.3	1371 03	
MIBK	43.47	22.36	2434 01	55.992
CL402	18.129	26.39	3163 02	174.479
F307	92.812	26.82	3706 03	39.93
TOLUENE	19.514	27.62	7442 01	381.364
CLOROBZ	18.94	28.97	7101 01	374.924
ETHBENZ	19.208	31.54	6235 01	324.612
TOTALS	293.266		55195	

CHANNEL A INJECT 01/29/88 07:34:42



BTX

01/29/88 07:34:42 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 12 INDEX 11

ANALYST: TSH

SAMPLE 11

NAME	PPB	RT	AREA BC	RF
TOTALS	0.			

SAMPLE I.D. <u>Reference Spike #335</u>	
DATE <u>1-28-88</u>	INJ. VOL. <u>5.0</u> ml
COLUMN <u>1% SP-1000 on Carbowack-B</u>	
60/80 Mesh 8' x 2mm ID	
INSTRUMENT <u>Tracor 5402</u> Tekmar <u>LSC2</u>	
PID	

DATE 2-1-88 INSTRUMENT TRACOR 540-1/TEKTRONICS

DETECTOR/MODE F-5 F-50

COLUMN 1% SPURR ON CASODUR A 60/80 Mesh 8' x 2mm ID

DETECTOR TEMP 250

IP Temp 20 °C TRANSFER LINE ~90 °C

FURNACE TEMP 800 / base 250 °C

TEMP PROGRAM: Over 45 °C to 220 °C At 6 °C/min.

SOLVENT/FLOW 0.20 ml/min.

INITIAL HOLD 5 min FINAL HOLD 18 min

CARRIER FLOW $N_2 \approx 30$ ml/min

GAS FLOW $H_2 \approx 40$ ml/min

GAS 2/FLOW ml/min.

COMMENTS:

BOTS DATE	Project # Client/Job	Phase	Sample #	Sample Description	Inj. Volume	Conductivity Attenuation $\lambda =$	Comments
1-10				debris dump, bank - down	1000x4 450		
					1x16 p.d.		
9				STD #33+	5ml		1.
9				R-BLK	5ml		1
10	3362:001	517	F0026	LEACHATE #14	2.0ml	2.5	Conklin

[illegible]

CRE: NO.

SIGNATURE(S)

Chemical



ID. #	DATE	PARAMETER	WEIGHTS	SOLVENT & VOLUME	CONC. (UNITS)	SOURCE OF STANDARD	INT.
334	1-14-88	MEK					TAN
STD # 334							
				STOCK	Working		
				PAM	P&B	SOURCE	Lot#
		Wgt(g)	Net Wgt(g)				
		tare					
		47.4353					
		MEK	47.5002	0.0249	996	24.9	Chem Serv 9-19A
		MIBK	47.5264	0.0262	1048	26.2	Chem Serv 4-85
		ACETONE	47.6453	0.1189	4756	118.9	Mall 0018KXKT
		BENZ	47.6646	0.0193	772	19.3	Chem Serv 19-13E
		TOLUENE	47.6844	0.0198	792	19.8	Mall 892KXTD
		CHLOROBE	47.7041	0.0197	788	19.7	Chem Serv 0-669
		ETHABENZ	47.7247	0.0206	824	20.6	Chem Serv 0-770
		M-XYL	47.7445	0.0198	792	19.8	Chem Serv 9-22W
		O-XYL	47.7662	0.0217	868	21.7	Chem Serv 0-779
		CH2CL2	47.7891	0.0229	916	22.9	Mall 3023KXSVB
		DCLENII	47.8093	0.0202	808	20.2	Supelco LA11049
		DCETANII	47.8280	0.0187	748	18.7	Chem Serv 5-11E
		DCLEN12	47.8488	0.0208	832	20.8	Supelco LA10938
		FREON113	47.8701	0.0213	852	21.3	Chem Serv 8255-C
		DCETAN12	47.8933	0.0232	928	23.2	MCB 6J13
		CL3CCH3	47.9115	0.0182	728	18.2	MCB AL25
		CL3C2H	47.9354	0.0239	956	23.9	MCB 92
		CL4C2	47.9546	0.0192	768	19.2	MCB 12J05
STOCK 25ml vol. flask; Mech - Mallinckrodt Spectra Lot# 50158B7B							
WORKING Std 5 μ l STOCK $\rightarrow$ 200ml C.C. H ₂ O							
335	1-19-88	Supelco	Std. See Back of this page				ISC
336	1-20-88	See Next	page				one

NOTES: 1 - SEPERATE EACH ID STOCK SOLUTION WITH BOLD LINE
 2 - TRANSFER STOCK SOLUTION FROM VOLUMETRIC TO VIAL FOR STORAGE.
 LABEL WITH ID#, DATE AND PARAMETER



ID. #	DATE	PARAMETER	WEIGHTS	SOLVENT & VOLUME	CONC. (UNITS)	SOURCE OF STANDARD	INT.
327	1-7-88	Surrogate STD -	See opposite page	Bottom			TSG
328	1-7-88	See opposite ^{NEXT} page (back)					CMC
329	1-7-88	Tare C ₂ H ₅ CL CH ₂ CHCL	18.4427 18.4492 18.4575	Stock in 10ml vol. flask w/ mailing crock mesh Lot # 3018 KBTB 6 ul stock → 200 ml C.C. H ₂ O	19.5 ppb 24.9 ppb	Chem Serv O-677 Equal Gas 119-49	TSG TRG
330	1-8-88	t-butyl hydro- peroxide tare	16.8507g 16.5425g <u>3082g</u> x .9 purity 27700 PPM	10ml vol flask Mesh Mall # 3018 KBTB 5ul → 200ml CCH ₂ O	700 ppb	Aldrich Lot # 00204DT	TGA
331	1-8-88	t-butyl alcohol tare	18.1005g 18.0784g <u>1.0221g</u> 2210 PPM	10ml vol flask Mesh Mall # 3018 KBTB 5ul → 200ml CCH ₂ O	55.3 ppb	?	TGA
332	1-14-88	1,1 Dichloroethane Benzene Tetrachloro- ethylene Chlorobenzene Ethyl Benzene	25500 ug/ml CAS = 75-34-3 @ 10.000 ug/ml CAS = 71-43-2 @ 10.000 ug/ml CAS = 127-18-4 @ 10.000 ug/ml CAS = 108-90-7 @ 10.000 ug/ml CAS = 100-41-4	20 x 2 all Compounds except 1,1 Dichloroethane is 40ul → 10 ml mesh mailing crock Lot # 3018 KBTB	All Compounds 20 ppb except 1,1 Dichloroethane is 22 ppb	Chem Serv	TSG
333	1-14-88	Tare 1,2 Dichloro Benzene	17.8448 17.8637 10189g	Stock in 10ml vol. flask w/ mailing crock mesh Lot # 3018 KBTB 3 ul stock → 200 ml C.C. H ₂ O	28.4 ppb	Chem Serv. Lot # O-677	TSG

NOTES: 1 - SEPERATE EACH ID STOCK SOLUTION WITH BOLD LINE
 2 - TRANSFER STOCK SOLUTION FROM VOLUMETRIC TO VIAL FOR STORAGE.
 LABEL WITH ID#, DATE AND PARAMETER

Purgeable A Mixture

Catalog Number 4-8851

This mixture contains 200 µg/ml each of the following components in methanol:

Methylene chloride
Trichlorofluoromethane
1,1-Dichloroethylene
1,1-Dichloroethane
Chloroform
Carbon tetrachloride
1,2-Dichloropropane

Trichloroethylene
1,1,2-Trichloroethane
Dibromochloromethane
2-Chloroethyl vinyl ether
Tetrachloroethylene
Chlorobenzene

• Due to the instability of 2-chloroethyl vinyl ether, we cannot guarantee the concentration of this component.

Purgeable B

Catalog Number 4-8852

Each constituent, except as noted, at 200 µg/ml in methanol

trans-1,2-Dichloroethylene	Benzene
1,2-Dichloroethane	Bromoform
1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane
Bromodichloromethane	Toluene
trans-1,3-Dichloropropene [▲]	Ethylbenzene
cis-1,3-Dichloropropene [▲]	

[▲]400 µg/ml total dichloropropene, composed of:

38 percent trans-1,3-dichloropropene
62 percent cis-1,3-dichloropropene as determined by FID.

Supelco
STD
#335

Purgeable C (Gases)

Catalog Number 4-8853

This mixture contains the following constituents, each at 200 µg/ml in methanol:

Chloromethane
Bromomethane
Vinyl chloride
Chloroethane

NOTE: Before opening, place the container in dry ice for ten minutes. After opening, transfer contents immediately to appropriate container and seal.

Store this mixture at -18°C.



SUPELCO

SUBSIDIARY OF RHM AND HAAS COMPANY

Cat no 4-8851
Storage-REFRIGERATE
Lot no- LA16772

FOR RESEARCH
USE ONLY

Purgeable A
1ml methanol

CAUTION-IRRITANT IF SWALLOWED.

DANGER-EXTREMELY FLAMMABLE.

May be fatal if swallowed. May cause headache, nausea, blindness.



SUPELCO, INC.

Supelco Park • Bellefonte, PA 16823-0048
Phone (814) 359-3441 • (814) 359-3446
TWX 510-670-3600

Cat no 4-8853
Storage-FREEZE
Lot no- LA15567

FOR RESEARCH
USE ONLY

Purgeable C
1ml methanol

CAUTION-IRRITANT IF SWALLOWED.

DANGER-EXTREMELY FLAMMABLE.

May be fatal if swallowed. May cause headache, nausea, blindness.



SUPELCO, INC.

Bellefonte, PA

814-359-3441

Cat no 4-8852
Storage-REFRIGERATE
Lot no- LA16677

FOR RESEARCH
USE ONLY

Purgeable B
1ml methanol

CAUTION-IRRITANT IF SWALLOWED.

DANGER-EXTREMELY FLAMMABLE.

May be fatal if swallowed. May cause headache, nausea, blindness.



DATE COLLECTED 1-22-88 DATE REC'D. 1-25-88 DATE ANALYZED 2-1-88

Date: 3-3-81 40

SAMPLES BETWEEN CALIBRATION
CONC UNITS:CU="

SAM IDX	NAME	SAM AMT	SCALE FACTOR
SI= 1	SN=" BLANK	SA=	XF=
SI= 1	SN=" BLANK	SA=	XF= 1
SI=			

END OF DIALOG

CHANNEL A INJECT 02/01/88 10:53:38

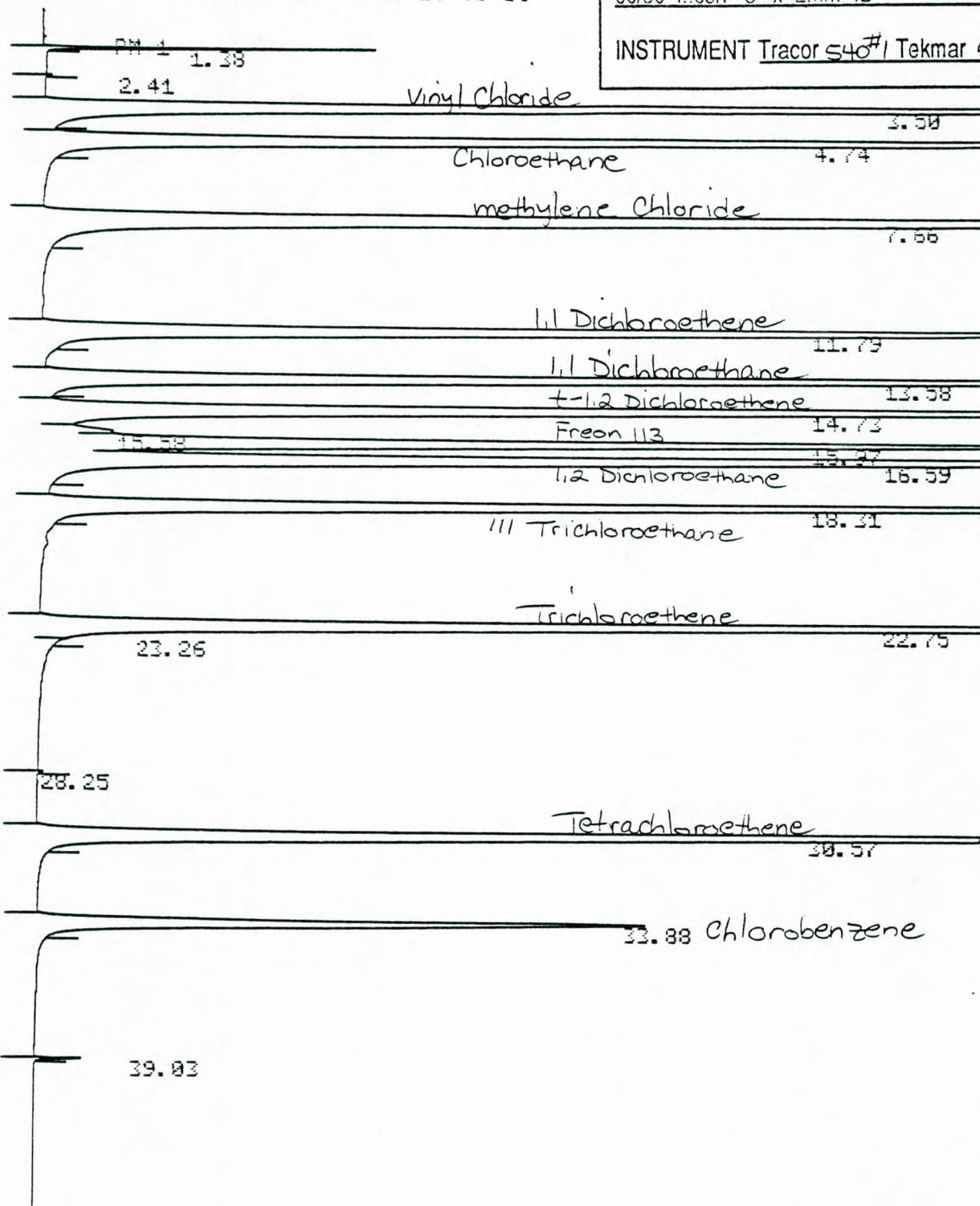
VHO/13TX STD #334
SAMPLE I.D. GAS STD #329

DATE 2-1-88 INJ. VOL. 5.0 mls

COLUMN 1% SP-1000 on Carbopack B

60/80 Mesh 8' x 2mm ID

INSTRUMENT Tracor 540^{ALS} Tekmar LSC#2
HECD



VHO

02/01/88 10:53:38

CH= "A" PS= 1.

FILE 1. METHOD 3. RUN 14

INDEX

ANALYST:

SAMPLE 1 ~~BLANK~~ STD

SA 0. IS 0. XF 1.

NAME	PPB	RT	AREA	BC
1	0.	1.38	7377	01
CH2CHCL	20.632	3.5	203305	01
C2H5CL	16.166	4.74	187385	01
CH2CL2	18.078	7.66	305091	01
DCLEN11	13.002	11.79	175947	01
DCETAN11	13.637	13.58	185906	01
DCLEN12	14.87	14.73	206355	02
8	0.	15.58	6667	02
FREON113	13.697	15.97	152290	02
DCETAN12	17.057	16.59	244289	03
CL3CCH3	13.474	18.31	189226	01
CL3C2H	16.349	22.75	236311	02
BRCLC3H6	0.448	23.26	1105	03
CL4C2	13.844	30.57	209568	01
CLOBZ	14.171	33.88	78278	01
16	0.	39.03	1112	01

TOTALS 185.425 2390212

SAMPLE TABLE...

ANALYST:AN="

INJECTIONS/SAMPLE:RA=

SAMPLES BETWEEN CALIB:CI=

CONC UNITS:CU="

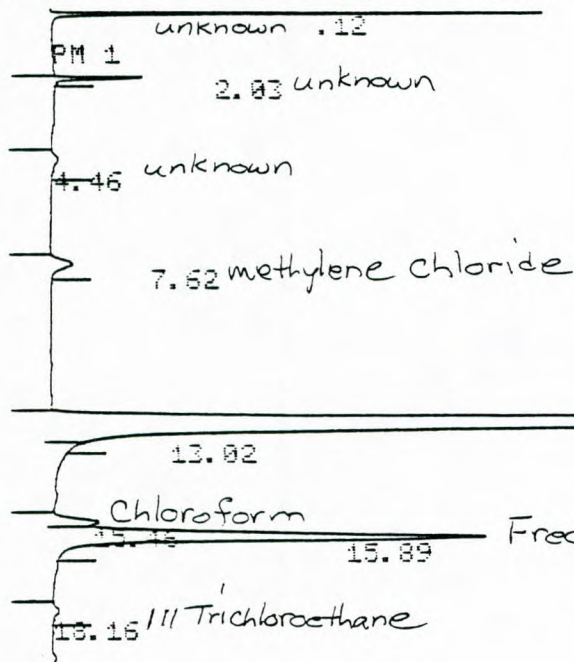
SAM IDX NAME SAM AMT SCALE FACTOR

SI= 1 SN=" BLANK SA= XF= 1

SI=

END OF DIALOG

CHANNEL A INJECT 02/01/88 11:59:19



SAMPLE I.D. Carbon Filtered H2O Blank

DATE 2-1-88 INJ. VOL. 5.0 mls

COLUMN 1% SP-1000 on Carbopack B

60/80 Mesh 8' x 2mm ID

INSTRUMENT Tracor 540#1 Tekmar ALS LSC#2
HECD

22.61 Trichloroethene

Surrogate

25.19

30.45 unknown
31.01 unknown

49.98

SAMPLE I.D. Carbon Filtered H₂O Blank
(cont)

DATE 2-1-88 INJ. VOL. 5.0 mLs

COLUMN 1% SP-1000 on Carboxpack B

60/80 Mesh 8' x 2mm ID

INSTRUMENT Tracor 540# / Tekmar LSC#2
ALS
HEAD

VHO

02/01/88 11:59:19

CH= "A" PS= 1.

FILE 1. METHOD 5.

RUN 15 INDEX 1

ANALYST:

SAMPLE 1 BLANK

SA IS XF
0. 0. 1.

NAME

PPB

RT

AREA BC

RF

RRT

1	0.	0.12	8320 01		0.027
2	0.	2.03	2543 01		0.455
C2H5CL	0.08	4.46	928 01	11591.59	1.
CH2CL2	0.144	7.62	2421 01	16875.852	1.
BRCLCH2	80.297	12.42	263878 02	3286.27	1.
DCETAN11	0.092	13.02	1259 03	13633.155	1.
7	0.	15.46	3713 02		0.973
FREON113	4.237	15.89	47101 03	11117.746	1.
CL3CCH3	0.047	18.16	553 01	14044.176	1.
CL3C2H	0.056	22.61	817 01	14453.556	1.
BRCLC3H6	86.021	25.19	212083 01	2463.5	1.
12	0	49.45	007 00		0.999

CL402	0.308	31.01	4665 03	15137.917	1.
14	0.	49.98	1251 01		1.612

TOTALS 171.282 550565

SAMPLE TABLE...

ANALYST:AN="

INJECTIONS/SAMPLE:RA=

SAMPLES BETWEEN CALIB:CI=

CONC UNITS:CU="

SAM IDX NAME SAM AMT SCALE FACTOR

SI= 1 SN=" F0026

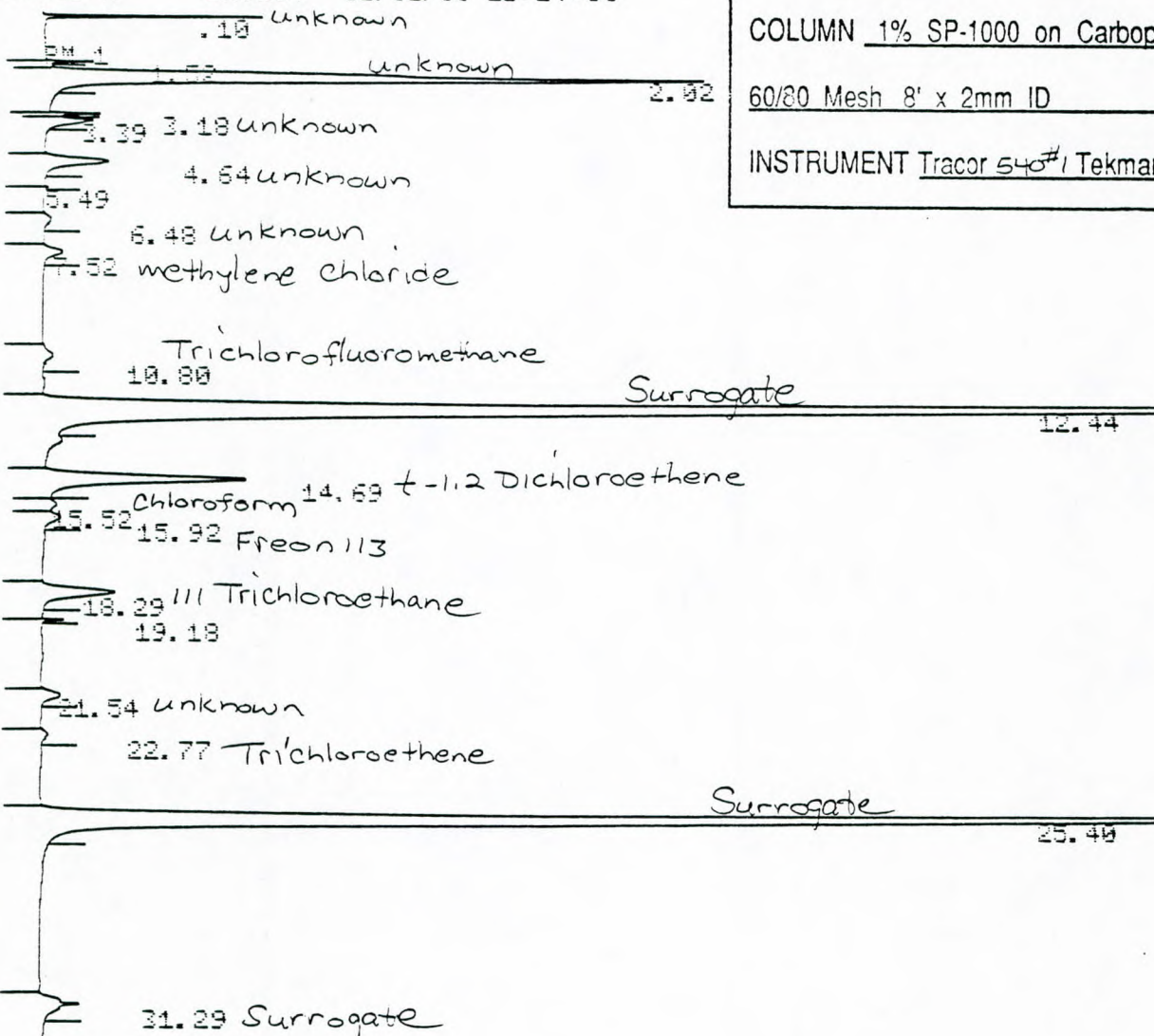
SA=

XF= 2.5

SI=

END OF DIALOG

CHANNEL A INJECT 02/01/88 13:14:00



SAMPLE I.D. # F0026 Leachate #116

DATE 2-1-88 INJ. VOL. 2.0 ml

COLUMN 1% SP-1000 on Carbopack B

60/80 Mesh 8' x 2mm ID

INSTRUMENT Tracor 540#1 Tekmar RLS
LSC#2
HELD

SAMPLE I.D. # F0026 Leachate #16
(Cont)

DATE 2-1-88 INJ. VOL. 2.0 mls

COLUMN 1% SP-1000 on Carbowack B

60/80 Mestech #12mmP50 1.

VHO

02/01/88 13:14

FILE 1. METHOD 5.

RUN 16

INDEX INSTRUMENT Tracor 540# Tekmar ^{ALS} _{LSC#2}

ANALYST:

HECD

SAMPLE 1 F0026

SA 0. IS 0. KF 2.5

NAME	PPB	RT	AREA	BC	RF	RRT
1	0.	0.1	3613	01		0.029
2	0.	1.52	865	01		0.448
3	0.	2.02	63149	01		0.596
4	0.	3.18	1945	01		0.938
CH2CHCL	0.63	3.39	2485	01	9853.855	1.
C2H5CL	1.387	4.64	6428	01	11591.59	1.
7	0.	6.48	852	01		0.862
CH2CL2	0.316	7.52	2134	01	16875.852	1.
DCLEN11	0.252	10.8	1367	01	13532.277	1.
BRCLCH2	154.396	12.44	202954	01	3286.27	1.
DCLEN12	3.957	14.69	21966	01	13877.26	1.
12	0.	15.52	705	02		0.975
FREON113	0.351	15.92	1559	03	11117.746	1.
CL3CCH3	1.569	18.29	8815	01	14044.176	1.
CL3C2H	0.331	21.54	1912	01	14453.556	1.
BRCLC3H6	0.664	22.77	655	01	2465.5	1.057
17	0.	25.4	164497	01		1.
CL4C2	0.691	31.29	4185	01	15137.917	1.
TOTALS	164.544		489186			

ANALYST:AN=" "
INJECTIONS/SAMPLE:RA=
SAMPLES BETWEEN CALIB:CI=
CONC UNITS:CU=" "

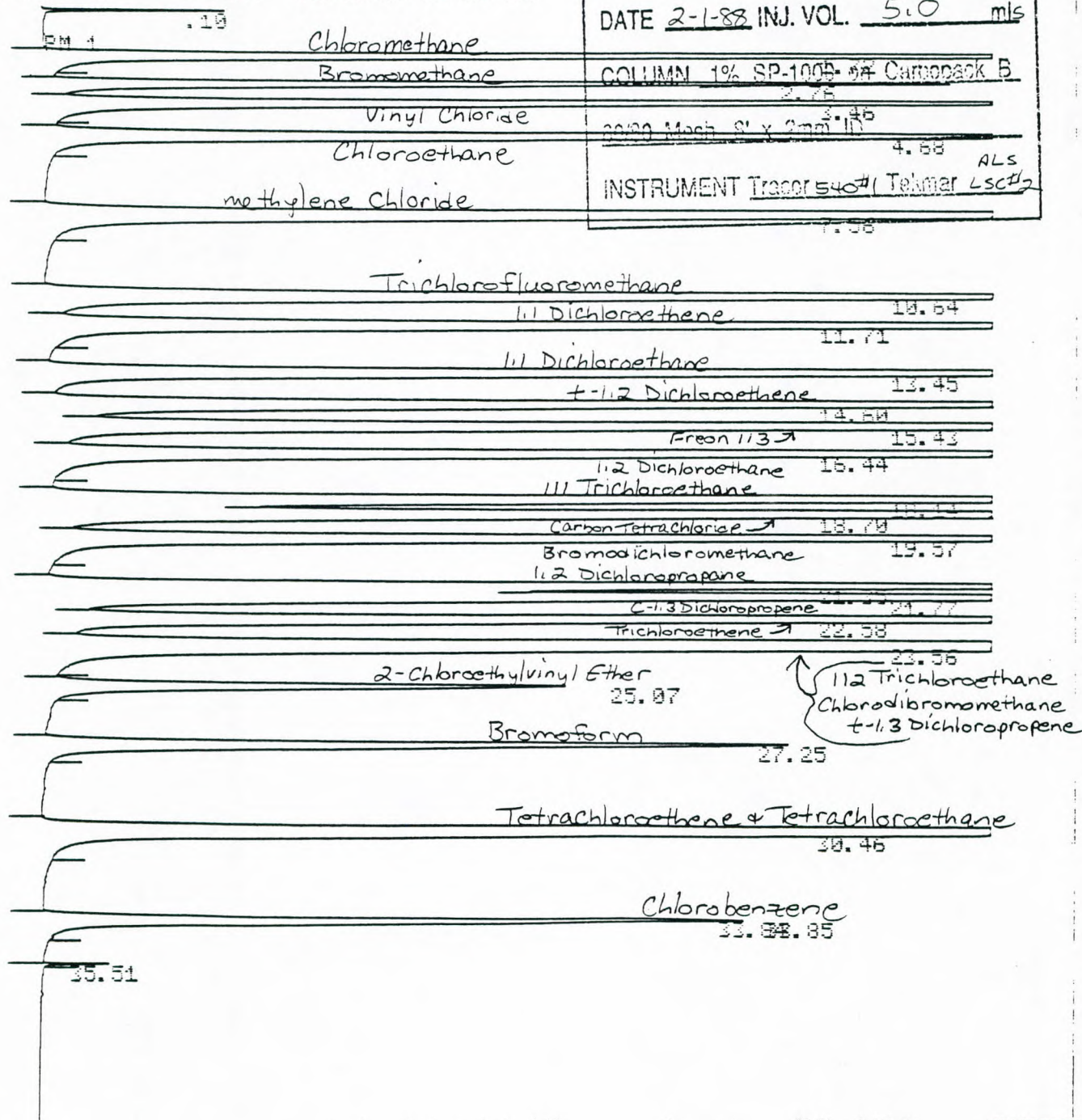
SAM IDX NAME SAM AMT SCALE FACTOR
SI= 1 SN=" G4876 SA= KF= 10
SI=
END OF DIALOG

CHANNEL A INJECT 02/01/88 14:33:40



NAME	REF	RI	AREA	OL	REF	RR1
1	0.	1.57	3950	01		0.208
CH2CL2	9.315	7.56	1572	01	16875.852	1.
3	0.	10.59	509	01		0.907
DCLEN11	5.853	11.68	792	02	13532.277	1.
BRCLCH2	7084.628	12.37	232829	03	3286.27	1.
FREON113	5.064	15.82	563	01	11117.746	1.
CL3CCH3	47.699	18.12	6699	01	14044.176	1.
CL3C2H	47.532	22.53	6870	01	14453.556	1.
BRCLC3H6	7223.565	25.14	178097	01	2465.5	1.
CL4C2	28.313	30.99	4286	03	15137.917	1.
TOTALS	14451.969		436158			

CHANNEL A INJECT 02/02/88 02:30:51



SAMPLE I.D. Reference Spike #335
(Cont)

DATE 2-1-88 INJ. VOL. 5.0 mls

COLUMN 1% SP-1000 on Carbowack B

60/80 Mesh 8' x 2mm ID

INSTRUMENT Trace 540# Tekmar 6802 ^{ALS}

ER 0 PM 0

VHO 92/02/88 02:30:51 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 25 INDEX 1

ANALYST:

SAMPLE 8 ~~84888~~ reference

SA 0. IS 0. KF 1.

NAME	PPB	RT	AREA	BC	RF	RRT
1	0.	0.1	3854	01		0.029
2	0.	1.72	155599	01		0.497
3	0.	2.76	86579	02		0.798
CH2CHCL	14.567	3.46	143545	03	9853.855	1.
C2H5CL	14.125	4.58	163729	01	11591.59	1.
CH2CL2	16.015	7.56	270280	01	16875.852	1.
7	0.	10.64	210903	02		0.909
DCLEN11	16.256	11.71	219977	03	13532.277	1.
DCETAN11	15.812	13.45	215567	02	13633.155	1.
DCLEN12	15.176	14.6	210608	02	13877.26	1.
FREON113	27.368	15.43	304265	02	11117.746	1.
DCETAN12	16.08	16.44	230311	03	14322.328	1.
13	0.	18.14	224921	02		0.97
CL3CCH3	18.24	18.7	256158	02	14044.176	1.
15	0.	19.57	207038	03		1.047
16	0.	21.1	109932	02		0.906
17	0.	21.1	238657	02		0.924
18	0.	22.58	251371	02		0.958
CL3C24	35.037	23.56	506408	03	14453.556	1.
29	0.	25.07	62414	01		0.92
BRCLC3H6	39.528	27.25	97457	01	2465.5	1.
CL4C2	27.375	30.46	414405	01	15137.917	1.
23	0.	33.84	44935	02		1.
CL0BZ	8.593	33.85	47465	03	5523.858	1.
25	0.	35.51	1441	01		1.049
TOTALS	264.173		4747619			

CHANNEL A INJECT 02/02/88 03:50:55

175 PM 1.15

NAME	PPB	RT	AREA	BC	RF	RRT
ACETONE	4.57	8.41	4285	01	937.687	1.
DICLEN11	1.025	11.7	4990	01	4868.168	1.
DICLEN12	0.732	14.66	9583	01	13084.038	1.
MEK	3.835	16.38	7010	01	1828.233	1.
CL302H	0.841	22.66	6673	02	7928.368	1.
BENZ	0.826	23.26	15074	03	18251.606	1.
CL402	0.941	30.53	6169	02	6556.563	1.
F307	91.609	31.2	128645	08	1404.28	1.
TOLUENE	0.634	32.24	10268	05	16206.919	1.
CLOROBZ	0.475	33.84	8238	01	17346.091	1.
ETHBENZ	0.912	36.1	13347	01	14625.534	1.
M-XYLENE	0.59	42.16	9456	02	16040.101	1.
O-XYLENE	0.613	43.42	8204	03	13375.438	1.

TOTALS 107.603 231942

SAMPLE TABLE...

ANALYST:AN="

INJECTIONS/SAMPLE:RA=

SAMPLES BETWEEN CALIB:CI=

CONC UNITS:CU="

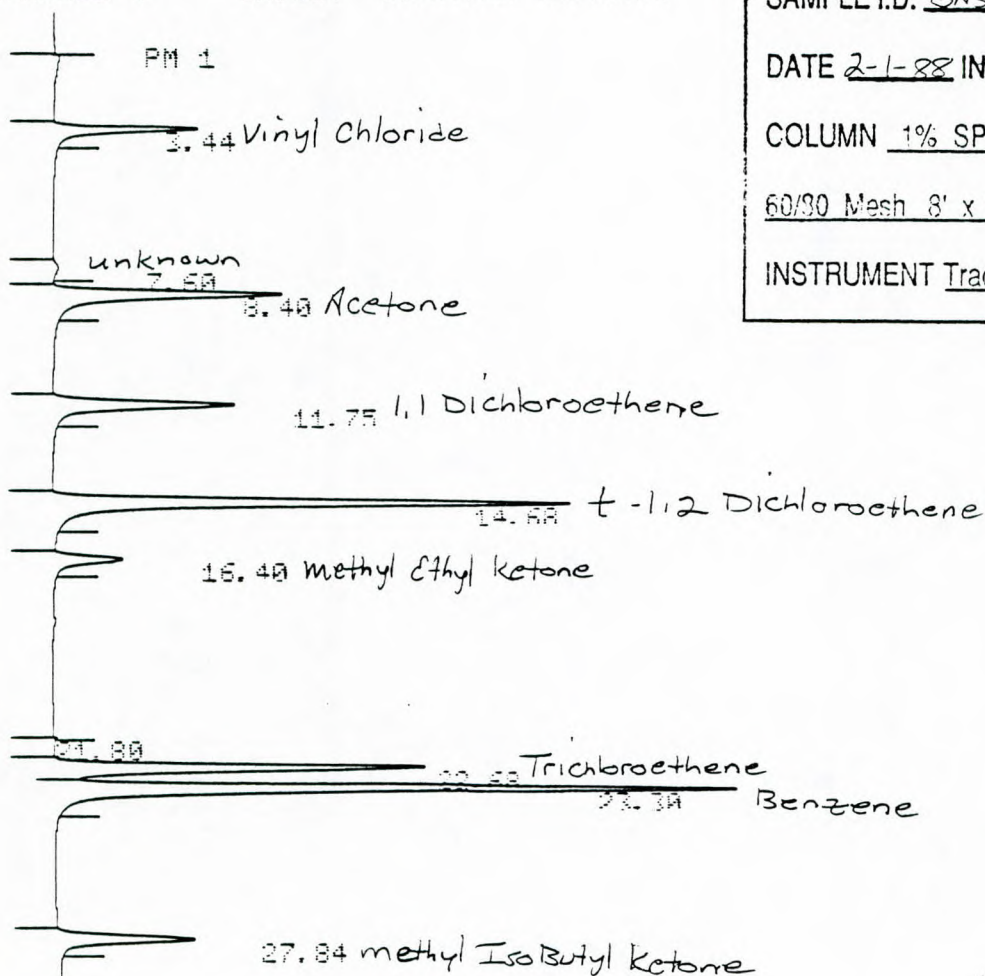
SAM IDX NAME SAM AMT SCALE FACTOR

SI= 1 SN=" BLANK SA= XF= 1

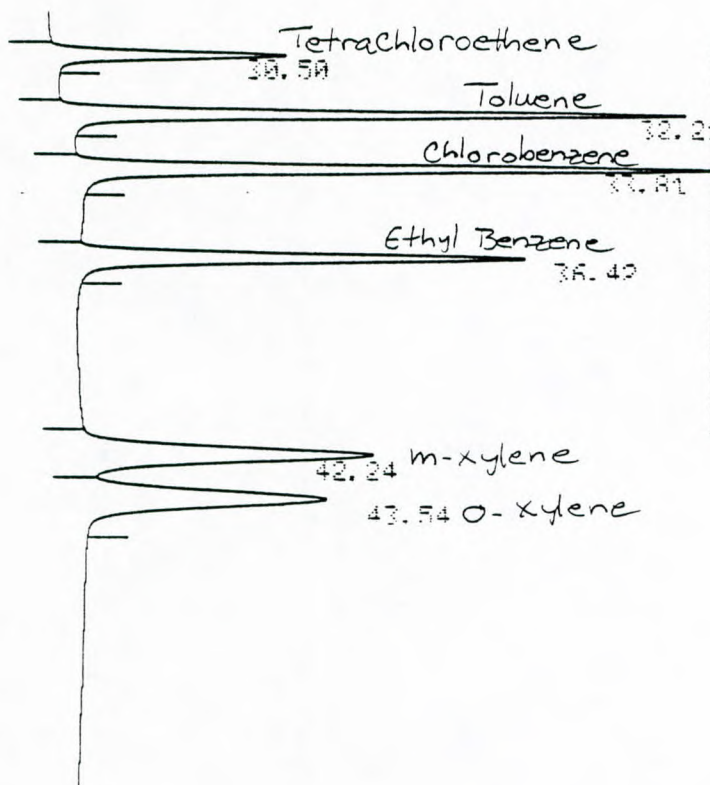
SI=

END OF DIALOG

CHANNEL A INJECT 02/01/88 10:15:26



VH413TX STD #334
 SAMPLE I.D. GAS STD #329
 DATE 2-1-88 INJ. VOL. 5.0 mls
 COLUMN 1% SP-1000 on Carbopack B
 60/80 Mesh 8' x 2mm ID
 INSTRUMENT Tracor 540#1 Tekmar ^{ALS} _{LS#2}
 PID



VHO/BTX STD # 334
 SAMPLE I.D. GAS STD # 329 (Cont)
 DATE 2-1-88 INJ. VOL. 5.0 mls
 COLUMN 1% SP-1000 on Carbopack B
 60/80 Mesh 8' x 2mm ID
 INSTRUMENT Tracor 540 # Tekmar ^{ALS} LSC # 2
 PID

BTX A2/A1/AA 10:15:26 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 14 INDEX 1

ANALYST: PP

SAMPLE 1 ~~BTX~~ STD

SA 0. IS 0. XF 1.

NAME	PPB	RT	AREA	BC	RF	RRT
CH2CHCL	28.011	7.44	42348	01	1511.847	1.
ACETONE	98.588	8.4	92445	01	937.687	1.
DCLEN11	15.119	11.75	73599	01	4868.168	1.
DCLEN12	15.232	14.68	199297	01	13084.038	1.
MEK	13.962	16.4	25527	01	1828.233	1.
CL3C2H	17.489	22.62	138661	02	7928.368	1.
BENZ	13.846	23.3	252702	03	18251.606	1.
MIBK	19.475	27.84	52839	01	2713.092	1.
CL4C2	13.815	30.5	90578	01	6556.563	1.
TOLUENE	14.384	32.21	233117	01	16206.919	1.
CLOROBZ	14.473	33.81	251047	01	17346.091	1.
ETHBENZ	14.258	36.42	208525	01	14625.534	1.
M-XYLENE	13.927	42.24	223399	02	16040.101	1.
O-XYLENE	15.459	43.54	206770	03	13375.438	1.

TOTALS 308.038 2090854

SAMPLE TABLE...

ANALYST:AN="

INJECTIONS/SAMPLE:RA=

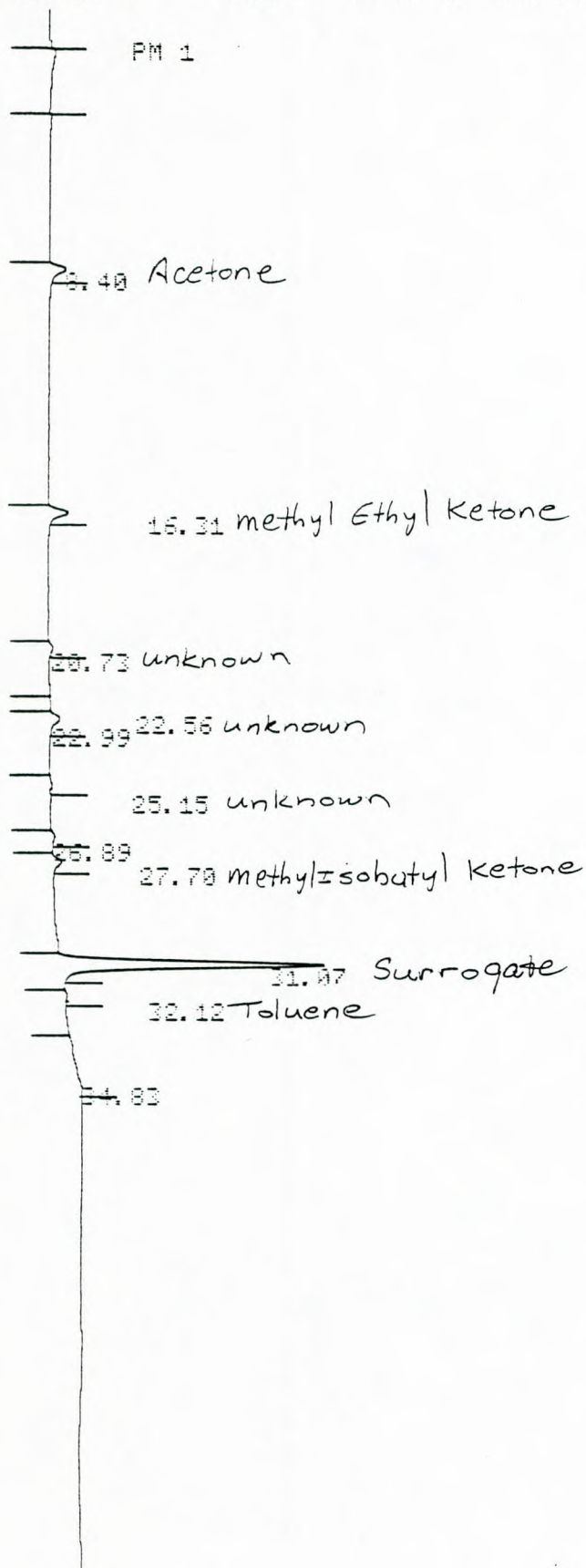
SAMPLES BETWEEN CALIB:CI=

CONC UNITS:CU="

SAM IDX NAME SAM AMT SCALE FACTOR

SI= 1 SN=" BLANK SA= XF= 1
SI=
END OF DIALOG

CHANNEL A INJECT 02/01/88 11:21:07



SAMPLE I.D. Carbon Filtered H₂O Blank

DATE 2-1-88 INJ. VOL. 5.0 ml

COLUMN 1% SP-1000 on Carbopack B

60/80 Mesh 8' x 2mm ID

INSTRUMENT Tracor 540[#] ^{ALS} Tekmar LSCH2
PFD

52.7

BTX

02/01/88 11:21:07

CH= "A" PS= 1.

DATE 2-1-88 INJ. VOL. 5.0 mls

FILE 1. METHOD 5.

RUN 15 INDEX 1

ANALYST: PP

COLUMN 1% SP-1000 on Carbowack B

SAMPLE 1 BLANK

60/80 Mesh 8' x 2mm ID

SA	IS	XF
0.	0.	1.

INSTRUMENT Tracor 540^{#1} Tekmar LS^{#2} PID

NAME	PPB	RT	AREA	BC	RF	RRT
ACETONE	8.138	8.4	7671	01	937.687	1.
MEK	4.477	16.31	8185	01	1828.233	1.
CL3C2H	0.735	22.99	5828	03	7928.368	1.
MIBK	1.549	27.7	4202	01	2713.092	1.
CL4C2	17.426	31.07	114254	01	6556.563	1.
TOTALS	32.325		140100			

SAMPLE TABLE...

ANALYST:AN="

INJECTIONS/SAMPLE:RA=

SAMPLES BETWEEN CALIB:CI=

CONC UNITS:CU="

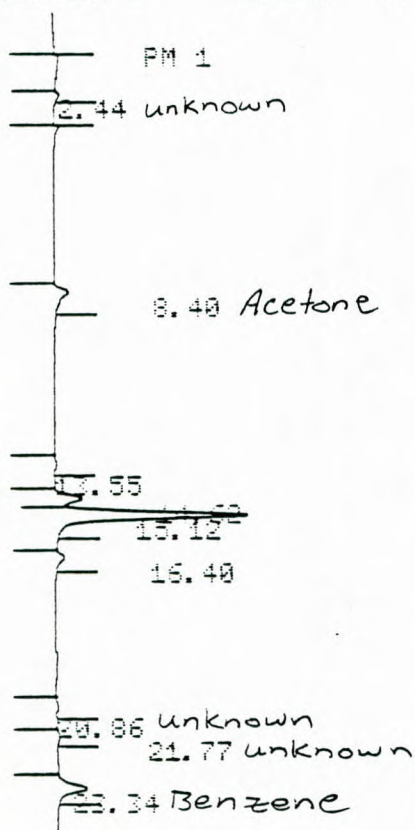
SAM IDX NAME SAM AMT SCALE FACTOR

SI= 1 SN=" F0026 SA= XF= 2.5

SI=

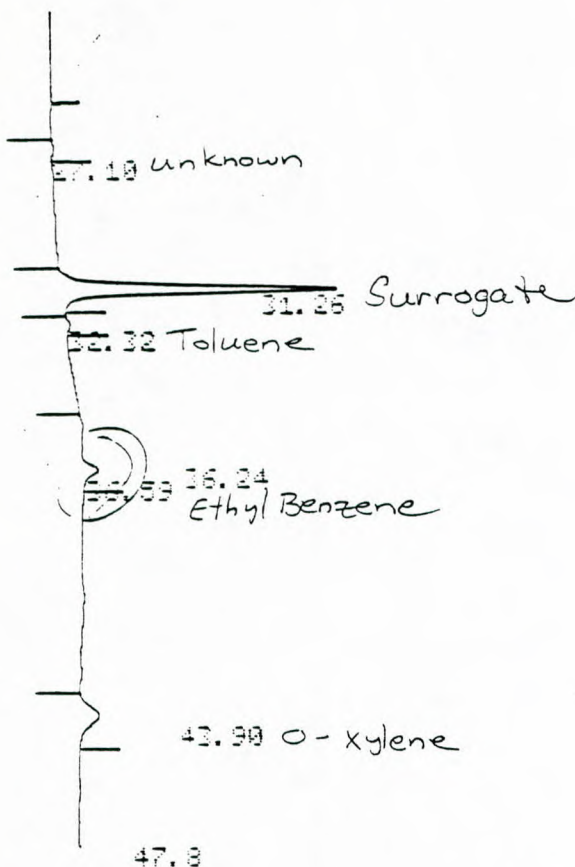
END OF DIALOG

CHANNEL A INJECT 02/01/88 12:35:48

SAMPLE I.D. F0026 Leachate #16DATE 2-1-88 INJ. VOL. 2.0 mlsCOLUMN 1% SP-1000 on Carbowack B

60/80 Mesh 8' x 2mm ID

INSTRUMENT Tracor 540^{#1} Tekmar LS^{#2} PID



SAMPLE I.D. # F0026 Leachate # 16
 (Cont)
 DATE 2-1-88 INJ. VOL. 2.0 mls
 COLUMN 1% SP-1000 on Carboxack B
60/80 Mesh 8' x 2mm ID
 INSTRUMENT Tracor 540 # 1 Tekmar ALS
LSC#2
PID

BTX 02/01/88 12:35:48 CH= "R" PS= 1.

FILE 1. METHOD 5. RUN 16 INDEX 1

ANALYST: PP

SAMPLE 1 F0026

SA 0. IS 0. XF 2.5

NAME	PPB	RT	AREA	BC	RF	RRT
ACETONE	19.148	8.4	7182	01	937.687	1.
2	0.	14.62	10301	02		0.967
DCEM12	13.855	15.12	72509	03	13084.038	1.
MEK	4.641	16.4	3394	01	1828.233	1.
BENZ ? <1	1.809	27.24	13209	01	18251.606	1.
F307	200.177	31.26	112442	01	1404.28	1.
7	0.	36.24	3192	02		0.99
ETHBENZ	1.49	36.59	8717	03	14625.534	1.
O-XYLENE	3.344	43.9	17897	01	13375.438	1.
TOTALS	244.464		248833			

$$\frac{114}{13.8} = \frac{3}{X}$$

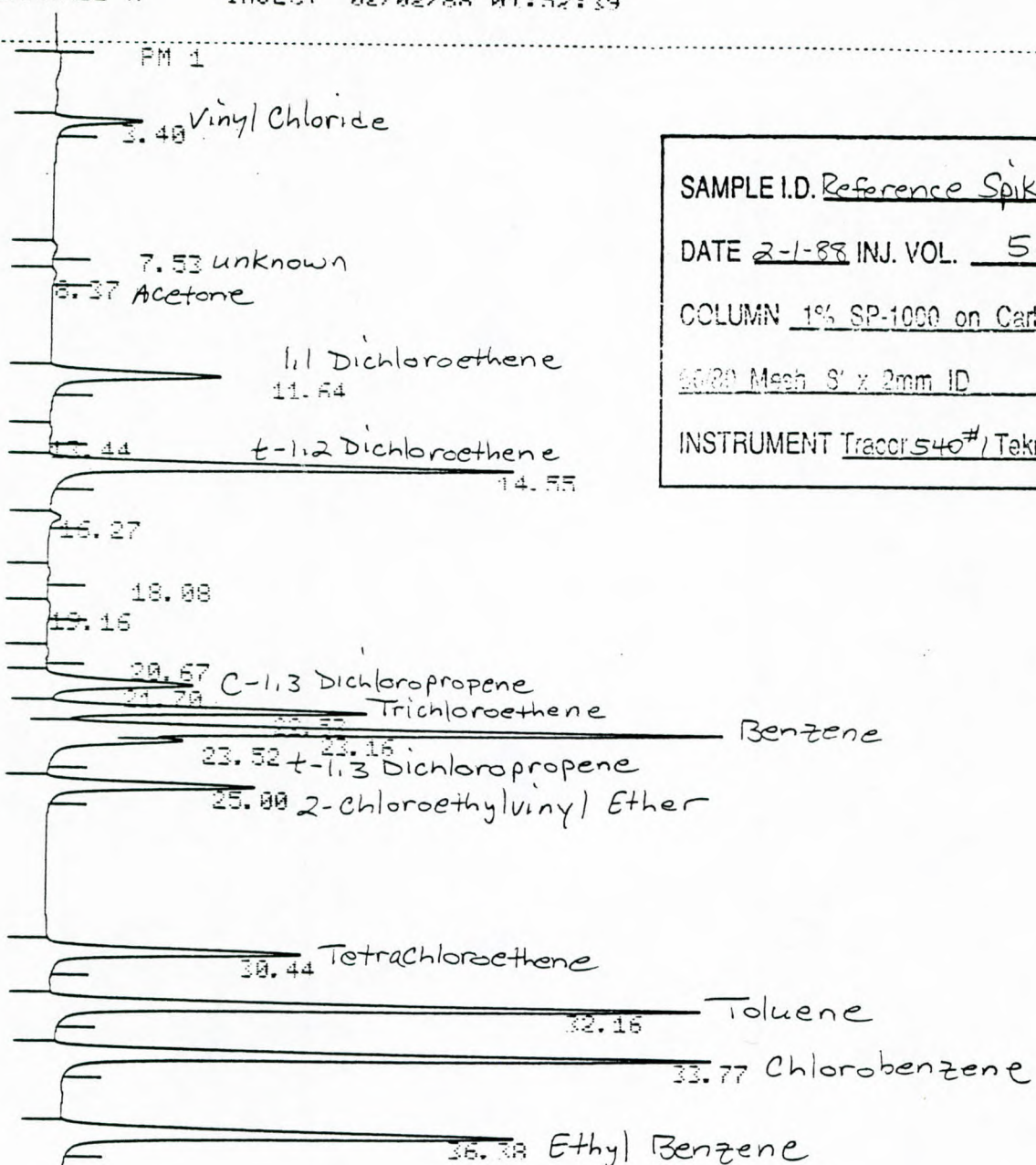
$$\frac{68}{14.2} = \frac{2}{X}$$

ANALYST:AN=""
 INJECTIONS/SAMPLE:RA=
 SAMPLES BETWEEN CALIB:CI=
 CONC UNITS:CU="

SAM IDX NAME SAM AMT SCALE FACTOR
 SI= 1 SN=" 04976 RA= XF= 10

CHANNEL A

INJECT 02/02/88 01:52:39



SAMPLE I.D. Reference Spike #335

DATE 2-1-88 INJ. VOL. 5.0 ml

COLUMN 1% SP-1000 on Carbowack B

60/80 Mesh 5' x 2mm ID

INSTRUMENT Tracer 540# / Tekmar

ALS

LSC#2

PID

BT

02/02/88 01:52:39

Reference Spike # 335
SAMPLE I.D. = "A" PS = 1.

FILE 1. METHOD 5. RUN 25 INDEX 1

ANALYST: PP

SAMPLE 8 ~~8885~~ Reference

SA 0. IS 0. XF 1.

DATE 2-1-88 INJ. VOL. 5.0 mls

COLUMN 1% SP-1000 on Carboxack B

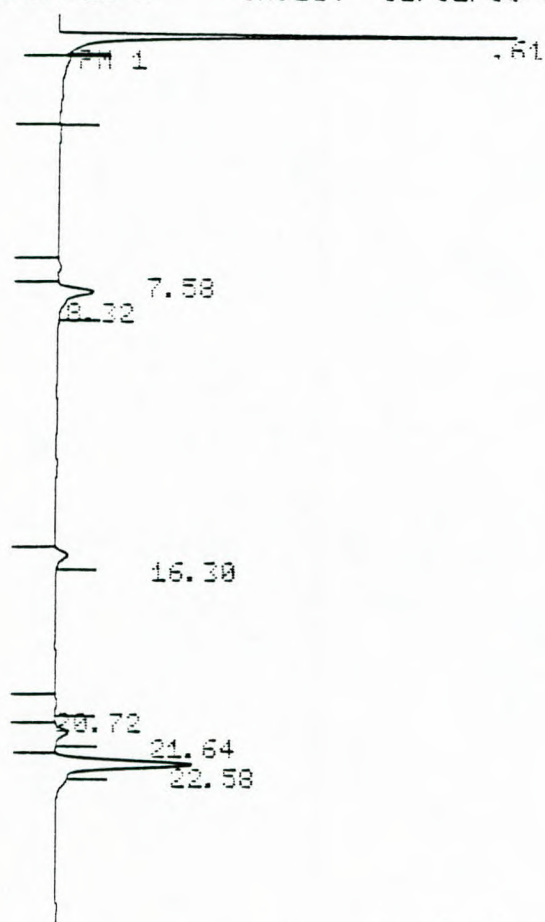
60/80 Mesh 8' x 2mm ID

INSTRUMENT Tracor 540⁴ / Tekmar LSC #2
ALS
PID

NAME	PPB	RT	AREA	BC	RF	RRT
CH2CHCL	18.889	3.4	28557	01	1511.847	1.
DCLEN11	15.339	11.64	74675	01	4868.168	1.
DCLEN12	14.908	14.55	195060	01	13084.038	1.
MEK	2.439	16.27	4459	01	1828.233	1.
5	0.	21.7	70852	02		0.963
CL3C2H	17.056	22.53	135221	02	7928.368	1.
BENZ	15.019	23.16	274130	02	18251.606	1.
8	0.	23.52	54414	03		1.016
MIBK	31.404	25.	85202	01	2713.092	1.079
CL4C2	16.919	30.44	110931	01	6556.563	1.
TOLUENE	16.666	32.16	270096	01	16206.919	1.
CLOROBZ	16.288	33.77	282536	01	17346.091	1.
ETHBENZ	15.583	36.38	227913	01	14625.534	1.

TOTALS 180.51 1814046

CHANNEL A INJECT 02/02/88 03:12:44



I.D. #	DATE	PARAMETER	WEIGHTS	SOLVENT & VOLUME	CONC. (UNITS)	SOURCE OF STANDARD	INT.
327	1-7-88	Surrogate STD -	See opposite page	Bottom			TSG
328	1-7-88	See opposite ^{NEXT} page (back)					CMC
329	1-7-88	Tare CaH ₂ CL CH ₂ CHCL	18.4427 18.4492 18.4575	Stock in 10ml vol flask w/ malinkrodt mech Lot # 3018 K3J3 6 ul stock → 200 ml C.C. H ₂ O	19.5 ppb 24.9 ppb	Chem Serv O-677 Identi Gas 119-49	TSG T.R.
330	1-8-88	t butyl hydro- peroxide tare	16.8507 g 16.5425 g <u>3082 g</u> x .9 purity 27,700 PPM	10ml vol flask Mech Mall # 3018 K3J3 5ul → 200 ml CCH ₂ O	700 ppb	Aldrich Lot # 00204DT	T.R.
331	1-8-88	t-butyl alcohol tare	18.1005 g 18.0784 g <u>1.0221 g</u> 2210 PPM	10ml vol flask Mech Mall # 3018 K3J3 5ul → 200 ml CCH ₂ O	55.3 ppb	?	T.R.
332	1-11-88	1,1 Dichloroethane Benzene Tetrachloro- ethylene Chlorobenzene Ethyl Benzene	@ 5500 ug/ml CAS # 75-34-3 @ 10,000 ug/ml CAS # 71-43-2 @ 10,000 ug/ml CAS # 127-18-4 @ 10,000 ug/ml CAS # 108-90-7 @ 10,000 ug/ml CAS # 100-41-4	20 ul all Compounds except 1,1 Dichloroethane is 40ul → 10 ml's mech mall inkrodt Lot # 3018 K3J3	All Compounds 20 ppb except 1,1 Dichloroethane is 22 ppb	Chem Serv V	TSG
333	1-14-88	Tare 1,2 Dichloro Benzene	17.8448 17.8637 <u>10189 g</u>	Stock in 10ml Vol. flask w/ malinkrodt mech Lot # 3018 K3J3 3 ul stock → 200 ml C.C. H ₂ O	28.4 ppb	Chem Serv. Lot # O-677	TSG

NOTES: 1 - SEPERATE EACH ID STOCK SOLUTION WITH BOLD LINE
2 - TRANSFER STOCK SOLUTION FROM VOLUMETRIC TO VIAL FOR STORAGE.
LABEL WITH ID#, DATE AND PARAMETER



I.D. #	DATE	PARAMETER	WEIGHTS	SOLVENT & VOLUME	CONC. (UNITS)	SOURCE OF STANDARD	INT.
334	1-14-88	1-14-88					TAN
STD. # 334							
				STOCK	Working		
				PAM	PAB	SOURCE	Lot#
		Wgt(g)	Net Wgt(g)				
tare		47.4753					
MEK		47.5002	0.0249	996	24.9	Chem Serv	9-19A
MIBK		47.5264	0.0262	1048	26.2	Chem Serv	4-85
ACETONE		47.6453	0.1189	4756	118.9	Mall	0018KXKT
BENZ		47.6646	0.0193	772	19.3	Chem Serv	19-13E
TOLUENE		47.6844	0.0198	792	19.8	Mall	892KXKT
CHLOROBE		47.7041	0.0197	788	19.7	Chem Serv	0-669
ETHABENZ		47.7247	0.0206	824	20.6	Chem Serv	0-770
M-XYL		47.7445	0.0198	792	19.8	Chem Serv	9-22W
O-XYL		47.7662	0.0217	868	21.7	Chem Serv	0-779
CH2CL2		47.7891	0.0229	916	22.9	Mall	3023KXSVB
DCLEN11		47.8093	0.0202	808	20.2	Supelco	LA11049
DCETAN11		47.8280	0.0187	748	18.7	Chem Serv	5-11E
DCLEN12		47.8488	0.0208	832	20.8	Supelco	LA10938
FREON113		47.8701	0.0213	852	21.3	Chem Serv	8255-C
DCETAN12		47.8933	0.0232	928	23.2	MCB	6J13
CL3CCH3		47.9115	0.0182	728	18.2	MCB	AL25
CL3C2H		47.9354	0.0239	956	23.9	MCB	92
CL4C2		47.9546	0.0192	768	19.2	MCB	12J05
STOCK 25ml vol. flask Mech-Mallinckrodt Spectra Lot# 5018KXSB							
Working Std 5 μ l STOCK $\rightarrow$ 200ml C.C. H ₂ O							
335	1-19-88	Supelco	Std. See Back	of this	page		TSC
336	1-20-88	See Next	page				Cme

NOTES: 1 - SEPERATE EACH ID STOCK SOLUTION WITH BOLD LINE
 2 - TRANSFER STOCK SOLUTION FROM VOLUMETRIC TO VIAL FOR STORAGE.
 LABEL WITH ID#, DATE AND PARAMETER

Purgeable A Mixture

Catalog Number 4-8851

This mixture contains 200 µg/ml each of the following components in methanol:

Methylene chloride	Trichloroethylene
Trichlorofluoromethane	1,1,2-Trichloroethane
1,1-Dichloroethylene	Dibromochloromethane
1,1-Dichloroethane	2-Chloroethyl vinyl ether
Chloroform	Tetrachloroethylene
Carbon tetrachloride	Chlorobenzene
1,2-Dichloropropane	

Due to the instability of 2-chloroethyl vinyl ether, we cannot guarantee the concentration of this component.

Purgeable C (Gases)

Catalog Number 4-8853

This mixture contains the following constituents, each at 200 µg/ml in methanol:

Chloromethane
Bromomethane
Vinyl chloride
Chloroethane

NOTE: Before opening, place the container in dry ice for ten minutes. After opening, transfer contents immediately to appropriate container and seal.

Store this mixture at -18°C.



SUPELCO, INC.

Supelco Park • Bellefonte, PA 16823-0048
Phone (814) 359-3441 • (814) 359-3448
TWX 510-670-3800

Cat no 4-8853
Storage ~~FREEZE~~
Lot no- LA15567

FOR RESEARCH
USE ONLY
CAUTION-IRRITANT IF SWALLOWED.
DANGER-EXTREMELY FLAMMABLE.
May be fatal if swallowed. May cause headache, nausea, blindness.

Purgeable C
1ml methanol

Purgeable B

Catalog Number 4-8852

Each constituent, except as noted, at 200 µg/ml in methanol

trans-1,2-Dichloroethylene	Benzene
1,2-Dichloroethane	Bromoform
1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane
Bromodichloromethane	Toluene
trans-1,3-Dichloropropene [▲]	Ethylbenzene
cis-1,3-Dichloropropene [▲]	

[▲]400 µg/ml total dichloropropene, composed of:

32 percent trans-1,3-dichloropropene

62 percent cis-1,3-dichloropropene as determined by FID.



SUPELCO

SUBSIDIARY OF ROMM AND HAAS COMPANY

Cat no 4-8851

Storage-REFRIGERATE
Lot no- LA16772

FOR RESEARCH

USE ONLY

CAUTION-IRRITANT IF SWALLOWED.

DANGER-EXTREMELY FLAMMABLE.

May be fatal if swallowed. May cause headache, nausea, blindness.

Purgeable A

1ml methanol



SUPELCO, INC.

Bellefonte, PA

814-359-3441

Cat no 4-8852

Storage-REFRIGERATE
Lot no- LA16677

FOR RESEARCH

USE ONLY

CAUTION-IRRITANT IF SWALLOWED.

DANGER-EXTREMELY FLAMMABLE.

May be fatal if swallowed. May cause headache, nausea, blindness.

Purgeable B

1ml methanol



Purgeable Priority Pollutants

CLIENT Town of Conklin JOB NO. 3362.001.517
DESCRIPTION Reference Spike # 335
DATE COLLECTED - DATE REC'D. - DATE ANALYZED 2-2-88

DESCRIPTION:	Actual Conc. (ppb)	Theoretical Conc. (ppb)	% Rec			
SAMPLE NO.:						
Chloromethane						
Bromomethane						
Vinyl chloride	17.	20.	85.			
Chloroethane	16.	20.	80.			
Methylene chloride	21.	20.	105.			
1,1-Dichloroethene	22.	20.	110.			
1,1-Dichloroethane	17.	20.	85.			
t-1,2-Dichloroethene	19.	20.	95.			
Chloroform						
1,2-Dichloroethane	20.	20.	100.			
1,1,1-Trichloroethane	18.	20.	90.			
Carbon tetrachloride						
Bromodichloromethane						
1,2-Dichloropropane						
t-1,3-Dichloropropene						
Trichloroethene	24.	20.	120.			
Benzene	20.	20.	100.			
Dibromochloromethane						
1,1,2-Trichloroethane						
c-1,3-Dichloropropene						
2-Chloroethylvinyl ether						
Bromoform						
1,1,2,2-Tetrachloroethane						
Tetrachloroethene	20.	20.	100.			
Toluene	22.	20.	110.			
Chlorobenzene	21.	20.	105.			
Ethylbenzene	21.	20.	105.			
Xylenes						

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Units: $\mu\text{g/l}$ (ppb) unless otherwise noted

Comments:

Authorized: Thomas A. Alexander

Date: 3-3-88

59



CLIENT Town of Conklin JOB NO. 3362.001-517
DESCRIPTION Monitoring Well Samples
Surrogate Standard Recovery Summary
DATE COLLECTED 1-19-20, 22-88 DATE REC'D. 1-21, 25-88 DATE ANALYZED 2-2-88

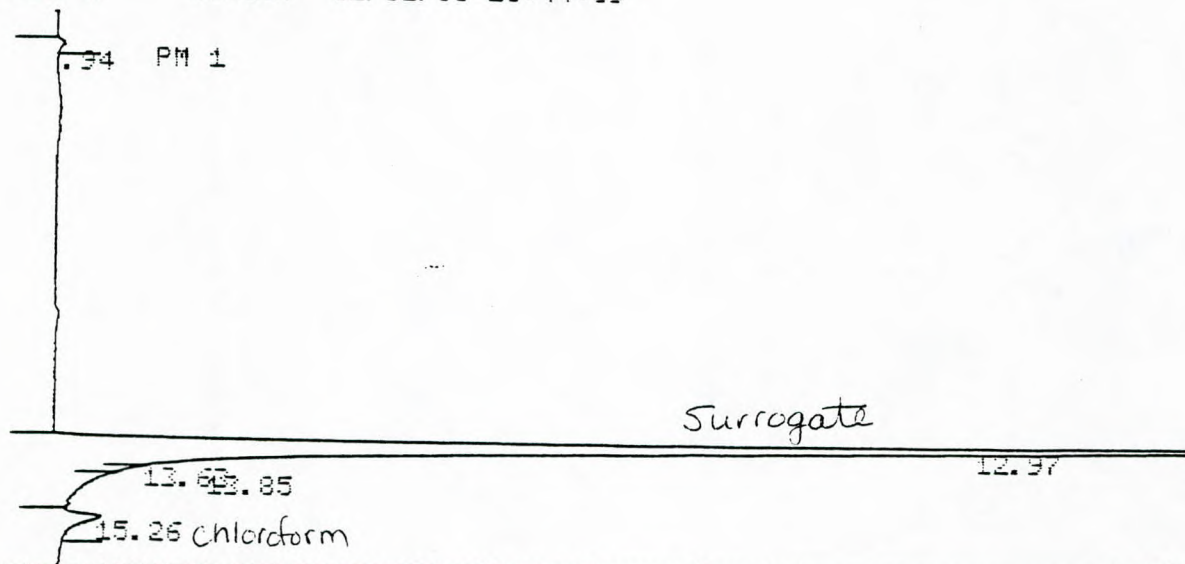
Units: mg/l (ppm) unless otherwise noted

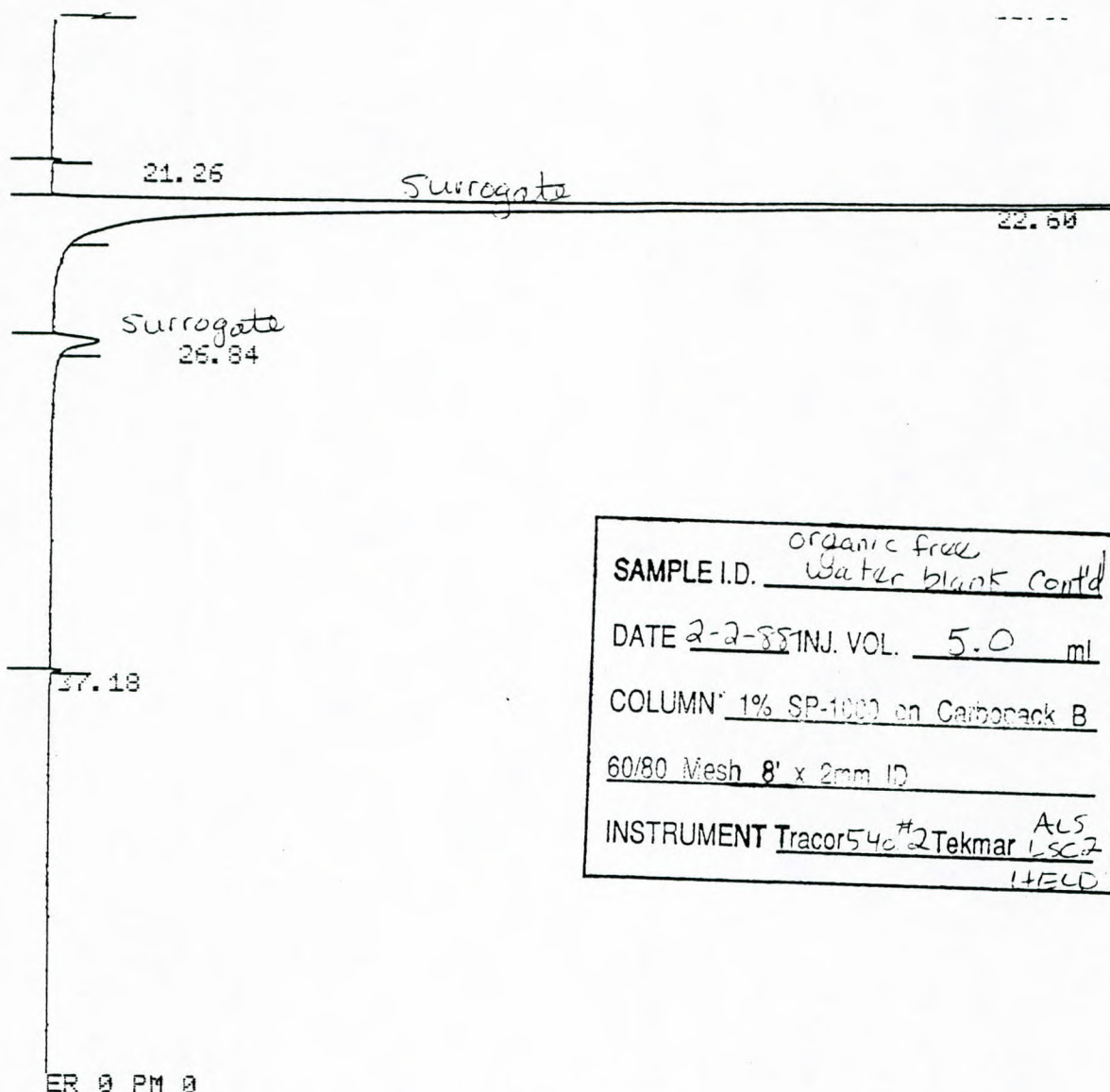
Authorized: Thomas A. Clepper
Date: 3-3-89 20

SAMPLE I.D. Organic free water Blank
 DATE 2-2-88 INJ. VOL. 5.0 ml
 COLUMN 1% SP-1000 on Carbowack B
60/80 Mesh 8' x 2mm ID
 INSTRUMENT Tracor 5402 Tekmar LSC 2 ^{ALS}
 HECB

SAMPLE TABLE...
 ANALYST:AN=" "
 INJECTIONS/SAMPLE:RA=
 SAMPLES BETWEEN CALIB:CI=
 CONC UNITS:CU=" "
 SAM IDX NAME SAM AMT SCALE FACTOR
 SI= 1 SN=" BLANK SA= XF= 1
 SI=
 END OF DIALOG

CHANNEL A INJECT 02/02/88 10:44:59





SAMPLE I.D. Organic free
Water blank Cont'd
 DATE 2-2-88 INJ. VOL. 5.0 ml
 COLUMN 1% SP-1000 on Carborack B
60/80 Mesh 8' x 2mm ID
 INSTRUMENT Tracor 540 #2 Tekmar ALS
LSC-2
14 ELD

VH0 02/02/88 10:45:59 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 31 INDEX 1

ANALYST: TSH

SAMPLE 1 BLANK

SA 0. IS 0. XF 1.

NAME	PPB	RT	AREA	BC	RF	RRT
BRCLCH2	98.575	12.97	83789	02	850.	1.
2	0.	13.63	2947	02		0.984
DCETAM11	1.052	13.85	4996	02	4750.	1.
FREON113	0.821	15.26	2669	03	3250.	1.
BRCLC3H6	109.817	22.6	76872	01	700.	1.
CL4C2	0.525	26.84	2520	01	4800.	1.
TOTALS	210.79		173793			

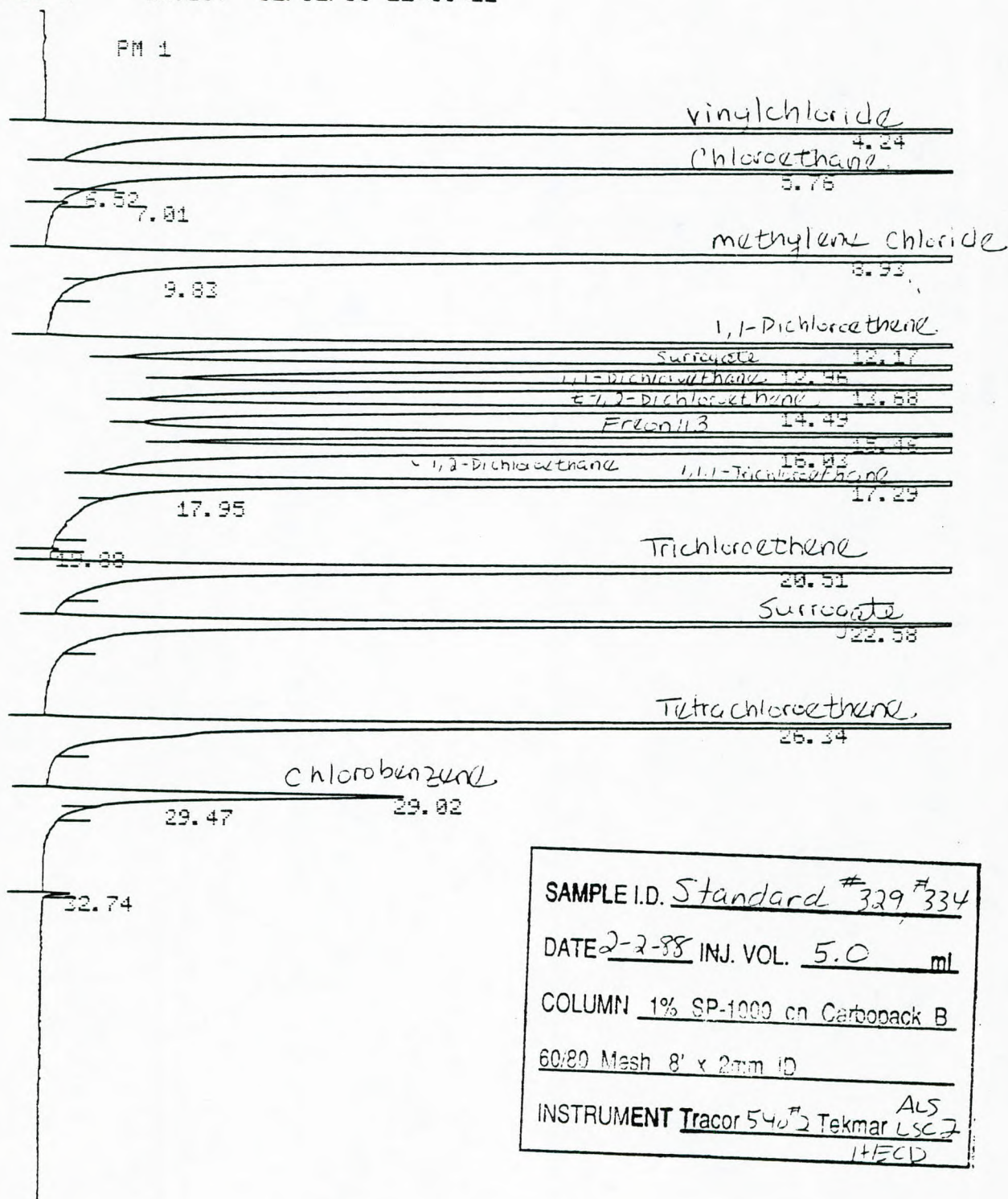
SAMPLE TABLE...

ANALYST:AN="

INJECTIONS/SAMPLE:RA=
SAMPLES BETWEEN CALIB:CI=
CONC UNITS:CU="

SAM IDX NAME SAM AMT SCALE FACTOR
SI= 1 SN=" STD SA= XF= 1
SI=
END OF DIALOG

CHANNEL A INJECT 02/02/88 11:55:12



SAMPLE I.D. Standard #329 #334

DATE 2-2-88 INJ. VOL. 5.0 ml

COLUMN 1% SP-1000 on Carboxack B

60/80 Mesh 8' x 2mm ID

INSTRUMENT Tracor 540 Tekmar LSC7
ALS
HFCD

VHO

02/02/88 11:55:12

CH= "A" PS= 1.

FILE 1 METHOD 5 RUN 70 INDEX 1

ANALYST: TSH

SAMPLE 1 STD

SA 0. IS 0. XF 1.

NAME	PPB	RT	AREA BC	RF	RRT
CH2CHCL	25.685	4.24	84759 02	3300.	1.
C2H5CL	21.04	5.76	72591 09	3450.	1.
CH2CL2	23.093	8.93	117773 02	5100.	1.
4	0.	9.83	3193 03		1.101
DCLEN11	19.764	12.17	75102 02	3800.	1.
BRCLCH2	109.468	12.96	93048 02	850.	1.
DCETAM11	19.093	13.68	90691 02	4750.	1.
DCLEN12	21.65	14.49	97424 02	4500.	1.
FREON113	21.689	15.46	70490 02	3250.	1.
DCETAM12	23.672	16.03	113628 02	4800.	1.
CL3CCH3	19.207	17.29	85468 02	4450.	1.
12	0.	17.95	7301 03		1.038
CL3C2H	24.628	20.51	109594 01	4450.	1.
BRCLC3H6	102.257	22.58	71580 01	700.	1.
CL4C2	18.832	26.34	90394 01	4800.	1.
CLOBZ	17.859	29.02	26431 02	1480.	1.
17	0.	29.47	2070 03		1.016
TOTALS	467.937		1211537		

SAMPLE TABLE...

SAMPLE I.D. Standard #329 #334
 DATE 2-2-88 INJ. VOL. 5.0 ^{CONT.} ml
 COLUMN 1% SP-1000 on Carbowack B
60/80 Mesh 8' x 2mm ID
 INSTRUMENT Tracor 540 #2 ^{ALS} _{LSC2}
14/EC

SAMPLE TABLE...

ANALYST:AN="

INJECTIONS/SAMPLE:RA=

SAMPLES BETWEEN CALIB:CI=

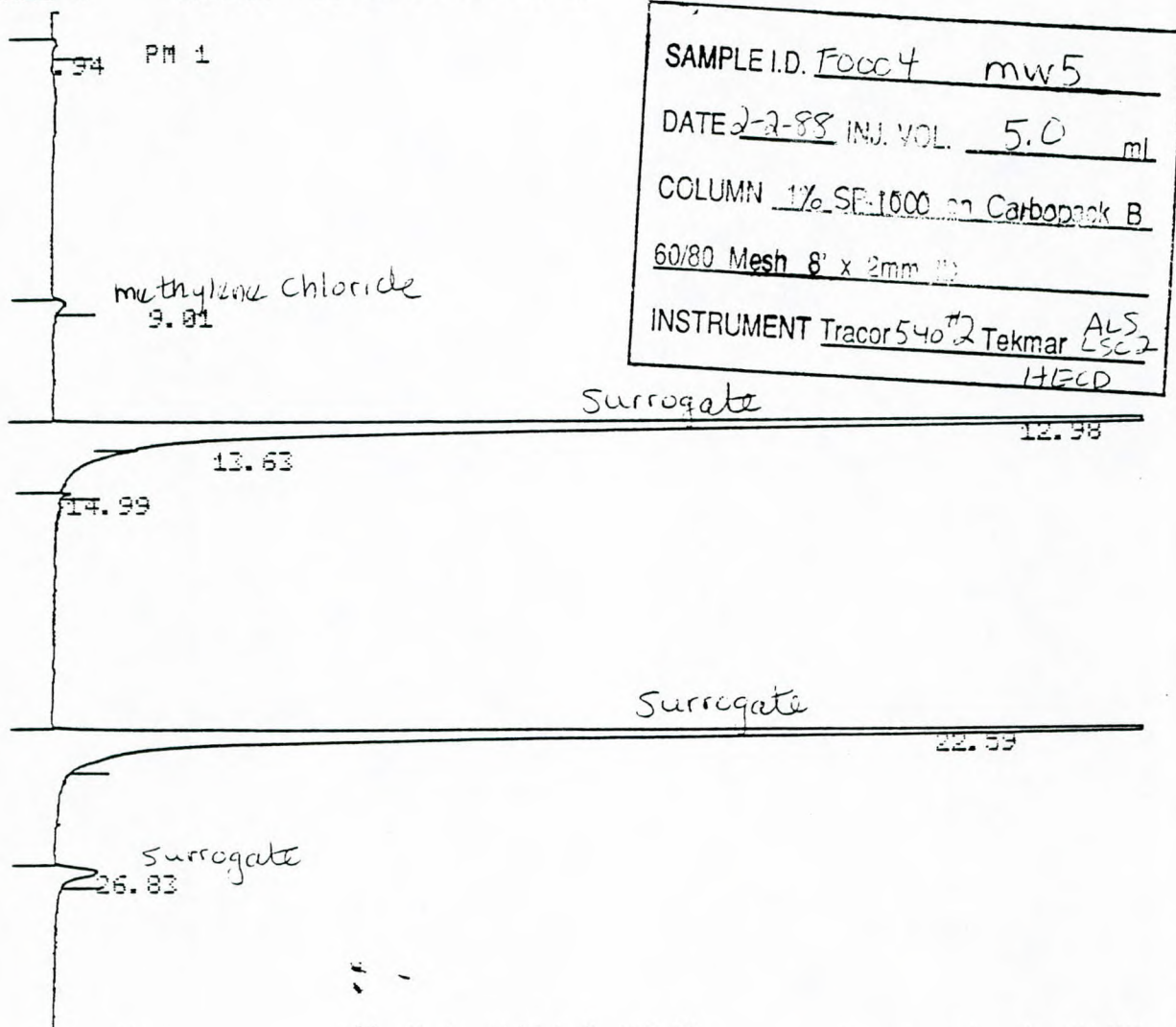
CONC UNITS:CU="

SAM IDX	NAME	SAM AMT	SCALE FACTOR
SI= 1	SN=" F0004	SA=	XF= 1
SI= 2	SN=" F0007	SA=	XF= 1
SI= 3	SN=" F0010	SA=	XF= 1
SI= 4	SN=" F0011	SA=	XF= 1
SI= 5	SN=" F0014	SA=	XF= 1
SI= 6	SN=" F0015	SA=	XF= 1
SI= 7	SN=" F0016	SA=	XF= 1
SI= 8	SN=" F0017	SA=	XF= 1
SI= 9	SN=" F0018	SA=	XF= 1
SI= 10	SN=" 3+REF 3PK	SA=	XF= 1

SI=

END OF DIALOG

CHANNEL A INJECT 02/02/88 18:16:19



SAMPLE I.D. F0004 mw 5 cont'd

DATE 2-2-88 INJ. VOL. 5.0 ml

COLUMN 1% SP-1000 on Carbowack B

60/80 Mesh 8' x 2mm ID

INSTRUMENT Tracor 540⁷² Tekmar ALS
LSG2

ER 0 PM 0

VHO

02/02/88 18:17:19

CH= "A" PS= 1.

FILE 1.

METHOD 5.

RUN 36

INDEX 1

ANALYST: TSH

SAMPLE 1 F0004

SA 0. IS 0. XF 1.

NAME	PPB	RT	AREA	BC	RF	RRT
BRCLCH2	93.449	12.98 ✓	79432	02	850.	1.
DCETAM11 <i>shoulder</i>	1.292	13.63 ✓	6136	03	4750.	1.
BRCLC3H6	99.962	22.59 ✓	69973	01	700.	1.
CL402	0.502	26.83	2409	01	4800.	1.
TOTALS	195.205		157950			

CHANNEL A

INJECT 02/02/88 19:26:53

PM 1

methylene chloride

9.02

Surrogate

13.77

14.94

SAMPLE I.D. F0007 mw 8

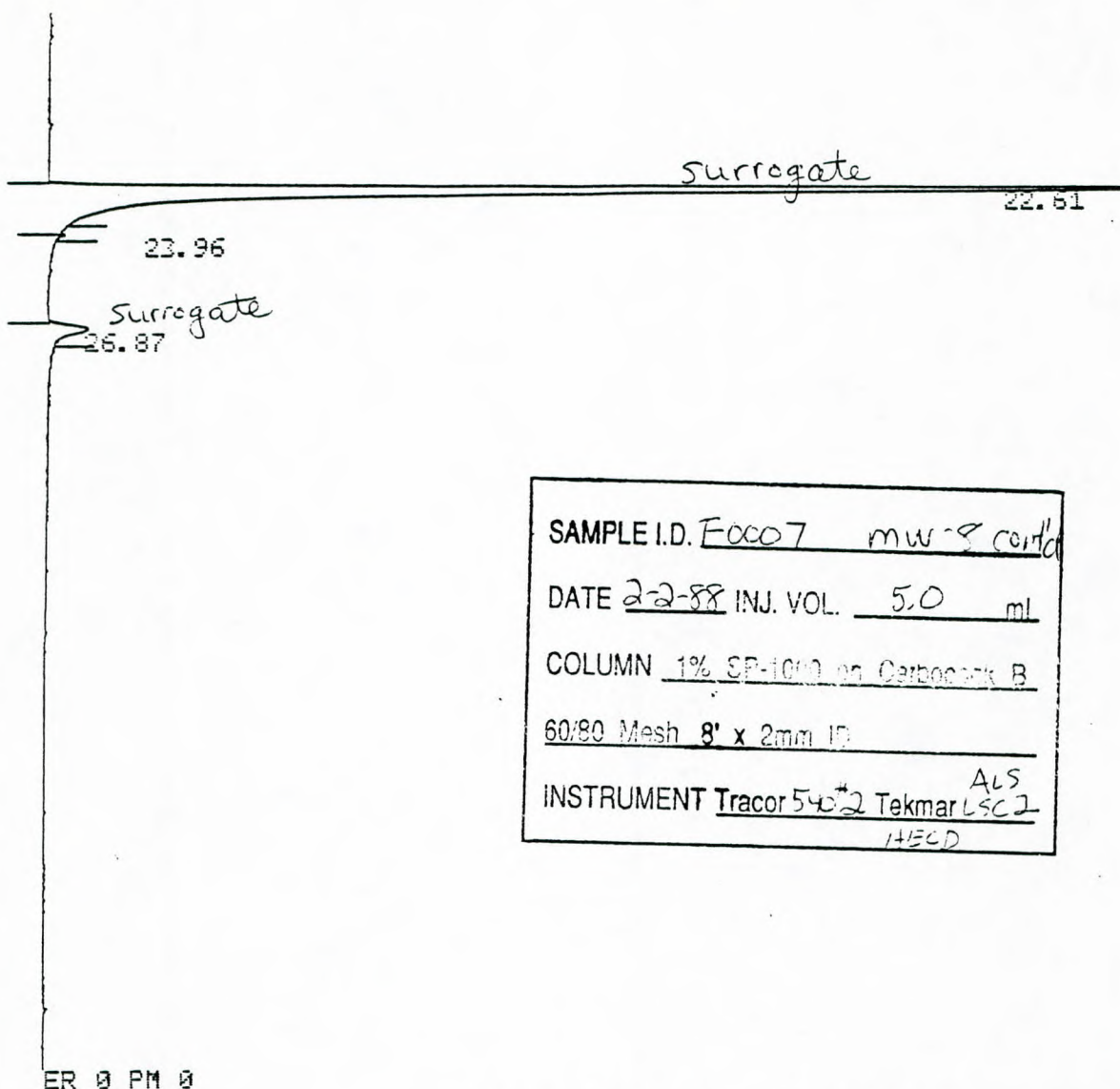
DATE 2-2-88 INJ. VOL. 5.0 ml

COLUMN 1% SP-1000 on Carbowack B

60/80 Mesh 8' x 2mm ID

INSTRUMENT Tracor 540⁷² Tekmar ALS
HECD

12.58



SAMPLE I.D. <u>F0007</u> <u>mw-8 cord</u>	
DATE <u>2-2-88</u>	INJ. VOL. <u>5.0</u> ml
COLUMN <u>1% SP-1000 on Carbowax B</u>	
<u>60/80 Mesh 8' x 2mm ID</u>	
INSTRUMENT <u>Tracor 540-2</u> <u>Tekmar LSC-2</u> ^{ALS} <u>HECD</u>	

ER 0 PM 0

VHO 02/02/88 19:26:53 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 37 INDEX 1

ANALYST: TSH

SAMPLE 2 F0007

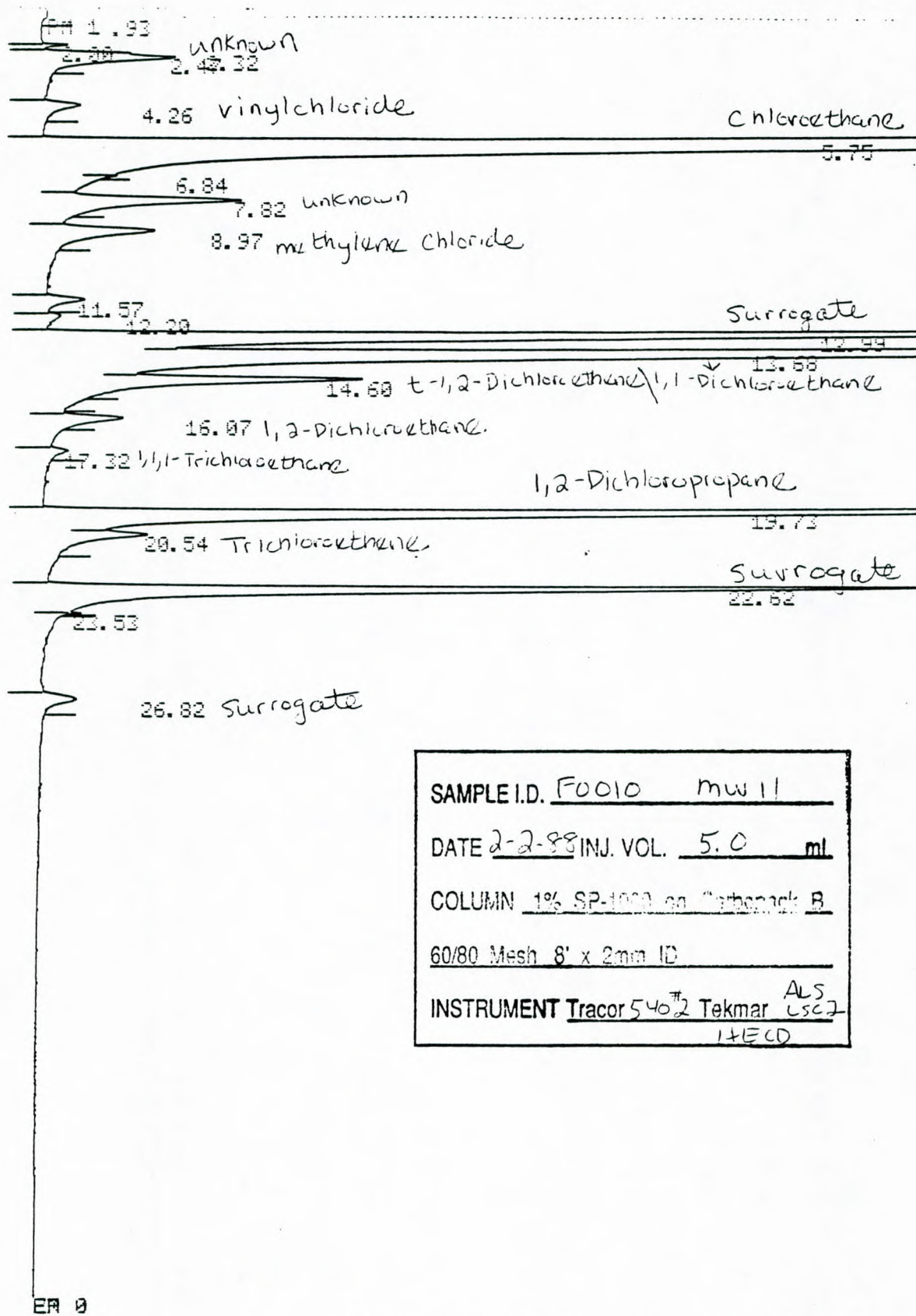
SA	IS	XF
0.	0.	1.

NAME	PPB	RT	AREA BC	RF	RRT
CH2CL2	0.356	9.02✓	1814 01	5100.	1.
BRCLCH2	90.149	12.98✓	76627 02	850.	1.
DCETAM11	0.861	13.77✓	4091 03	4750.	1.
BRCLC3H6	91.886	22.61✓	64320 01	700.	1.
CL4C2	0.482	26.87	2312 01	4800.	1.

TOTALS 183.734 149164

CHANNEL A INJECT 02/02/88 20:37:25

.16



SAMPLE I.D.	F0010	mw 11
DATE	2-2-88	INJ. VOL. 5.0 ml
COLUMN	1% SP-1000 on Carbowack B	
	60/80 Mesh 8' x 2mm ID	
INSTRUMENT	Tracor 540 ²	Tekmar ALS LSC2 1+ECD

VHO

02/02/88 20:37:25

CH= "A" PS= 1.

FILE 1.

METHOD 5.

RUN 38

INDEX 1

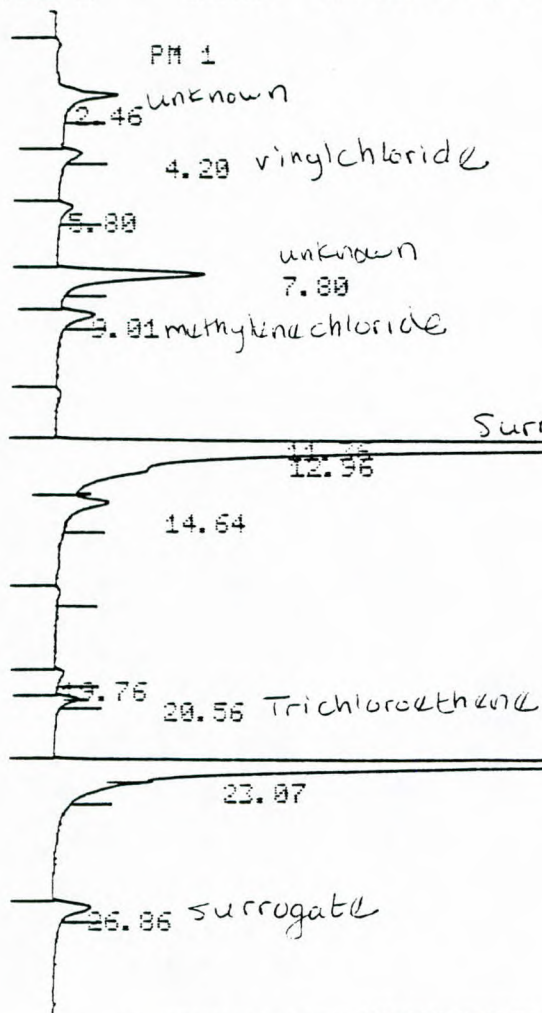
ANALYST: TSH

SAMPLE 2 F0010

SA 0. IS 0. XF 1.

NAME	PPB	RT	AREA	BC	RF	RRT
1	0.	2.32	2527	02		0.545
2	0.	2.47	8253	03		0.58
CH2CHCL	0.751	4.26✓	2479	01	3300.	1.
C2H5CL 170.	172.037	5.75✓	593526	09	3450.	1.
5	0.	7.82	13322	05		0.872
CH2CL2 2.	1.58	8.97✓	8057	01	5100.	1.
DCLEN11	41. 0.591 ←	11.57	2247	01	3800.	1.
8	0.	12.2	845	02		0.939
BRCLCH2	116.908	12.99✓	99372	02	850.	1.
DCETAM11 44.	43.743	13.68✓	207779	08	4750.	1.
DCLEN12 4.	3.702	14.6✓	16657	05	4500.	1.
DCETAN12	0.838	16.07✓	4022	01	4800.	1.
CL3CCH3	0.2	17.32✓	894	01	4450.	1.
CL3C2H PCPAN12 34.23	34.23 127	19.73	102913	02	4450. 2986	1.
BRCLC3H6 57%	13.02 ←	20.54	9114	03	700.	1.041
16	0.	22.62	60587	09		1.
CL402	0.573	26.82	2750	01	4800.	1.
TOTALS	377.07		1135344			

CHANNEL A INJECT 02/02/88 21:48:07



SAMPLE I.D. F0011 mw 12
 DATE 2-2-88 INJ. VOL. 5.0 ml
 COLUMN 1% BP-1000 on Carbowack B
 60/80 Mesh 8' x 2mm ID
 INSTRUMENT Tracor 540 Tekmar ALS LSC7

SAMPLE I.D. F0011 mw 12 cont'd
DATE 2-2-88 INJ. VOL. 5.0 ml
COLUMN 1% SP-1000 on Carboxack B
60/80 Mesh 8' x 2mm ID
INSTRUMENT Tracor 540² Tekmar ^{ALS} LSC2
HIELD

ER 0 PM 0

VH0 02/02/88 21:48:07 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 39 INDEX 1

ANALYST: TSH

SAMPLE 4 F0011

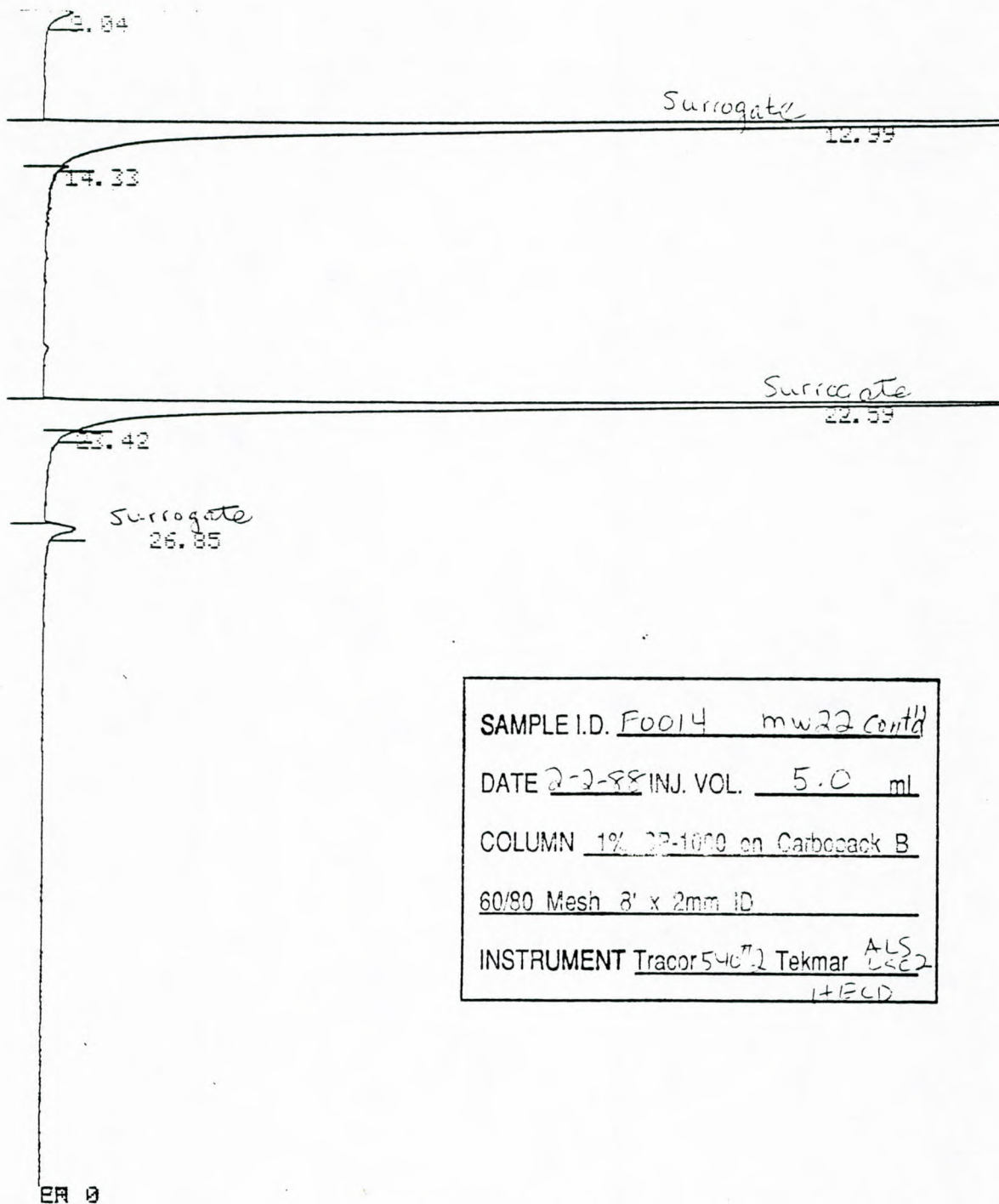
SA 0. IS 0. XF 1.

NAME	PPB	RT	AREA	BC	RF	RRT
1	0.	2.46	2728	01		0.586
CH2CHCL	0.242	4.2✓	798	01	3300.	1.
C2H5CL	0.187	5.8✓	647	01	3450.	1.
4	0.	7.8	8367	01		0.866
CH2CL2	0.311	9.01✓	1586	01	5100.	1.
BRCLCH2	97.77	12.96✓	83104	02	850.	1.
DCLEN12	0.806	14.64✓	3627	03	4500.	1.
CL3C2H	0.164	20.56✓	731	01	4450.	1.
BRCLC3H6	84.83	22.59✓	59381	02	700.	1.
10	0.	23.07	4344	03		1.021
CL4C2	0.381	26.06	1828	01	4800.	1.
TOTALS	184.691		167141			

CHANNEL A INJECT 02/02/88 22:58:44

PM 1

SAMPLE I.D. F0014 mw 22
DATE 2-2-88 INJ. VOL. 5.0 ml
COLUMN 1% SP-1000 on Carboxack B
60/80 Mesh 8' x 2mm ID
INSTRUMENT Tracor 540² Tekmar ^{ALS} LSC2
HIELD



SAMPLE I.D. F0014 mw22 cont'd
 DATE 2-2-88 INJ. VOL. 5.0 ml
 COLUMN 1% 22-1000 on Carbowack B
60/80 Mesh 3' x 2mm ID
 INSTRUMENT Tracor 540 Tekmar ALS
LEED

ER 0

VHO 02/02/88 22:58:44 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 40 INDEX 1

ANALYST: TSH

SAMPLE 5 F0014

SA 0. IS 0. XF 1.

NAME	PPB	RT	AREA BC	RF	RRT
CH2CL2	0.341	9.04✓	1737 01	5100.	1.
BROCLCH2	98.02	12.99✓	83317 09	850.	1.

BRILLSHB	101.36	22.33	1739 01	4800.	1.
CL 482	0.362	26.85			
TOTALS	200.283	157885			

CHANNEL A INJECT 02/03/88 00:09:33

PM 1

9.94 methylene chloride

Surrogate

12.98

14.79

Surrogate

22.60

23.27

24.70

26.85 Surrogate

SAMPLE I.D. F0015 mw-36

DATE 2-2-88 INJ. VOL. 5.0 ml

COLUMN 1% SP-1001 on Carbowack B

60/80 Mesh 8' x 2mm ID

INSTRUMENT Tracor 54072 Tekmar ALS
LSC2
HECD

ER 0 PM 0

VHO

02/03/88 01:05:53

FILE 1. METHOD 5. RUN 41

ANALYST: TSH

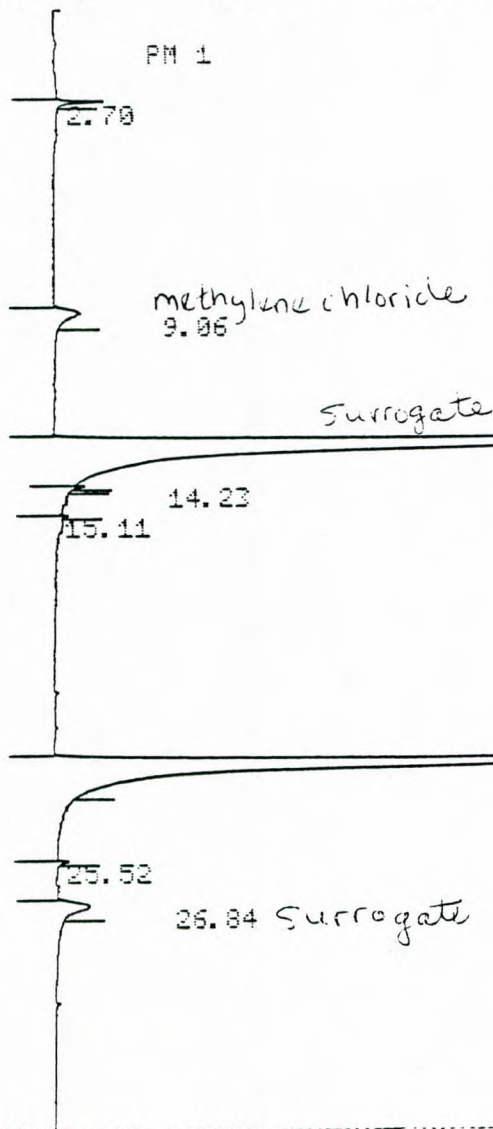
SAMPLE 6 F0015

SA 1. IS 0. XF 1.

SAMPLE I.D. F0015 mw 36
 CH= "A" PS= 1.
 DATEX 1 INJ. VOL. 5.0 ml
 COLUMN 1% SP-1000 on Carbo-pack B
60/80 Mesh 8' x 2mm ID
 INSTRUMENT Tracor 5402 Tekmar ALS
LSC2

NAME	PPB	RT	AREA BC	RF	RRT
CH2CL2	0.156	9.04✓	795 01	5100.	1.
BRCLCH2	90.847	12.98✓	77220 01	850.	1.
BRCLC3H6	87.827	22.6✓	61479 02	700.	1.
4	0.	23.27	2113 03		1.03
CL402	0.417	26.86	2003 01	4800.	1.
TOTALS	179.247		143610		

CHANNEL A INJECT 02/03/88 01:20:06



SAMPLE I.D. F0016 MW37
 DATE 2-2-88 INJ. VOL. 5.0 ml
 COLUMN 1% SP-1000 on Carbo-pack B
60/80 Mesh 8' x 2mm ID
 INSTRUMENT Tracor 5402 Tekmar ALS
HECD

SAMPLE I.D. F0016 mw 37 cont'd
 DATE 2-2-88 INJ. VOL. 5.0 ml
 COLUMN 1' 80-100 on Carborack B
60/80 Mesh 8' x 2mm ID
 INSTRUMENT Tracor 540² Tekmar ALS
LSC2
HSCD

ER 0
 VHO 02/03/88 01:20:06 CH= "A" PS= 1.
 FILE 1. METHOD 5. RUN 42 INDEX 1
 ANALYST: TSH
 SAMPLE 7 F0016

SA 0. IS 0. XF 1.

NAME	PPB	RT	AREA BC	RF	RRT
1	0.	2.7	556 01		0.298
CH2CL2	0.235	9.06✓	1199 01	5100.	1.
BRCLCH2	80.075	12.99✓	68064 09	850.	1.
BRCLC3H6	77.283	22.6✓	54098 01	700.	1.
CL402	0.337	26.84	1615 01	4800.	1.
TOTALS	157.93		125532		

CHANNEL A INJECT 02/03/88 02:30:35

PM 1

5.78

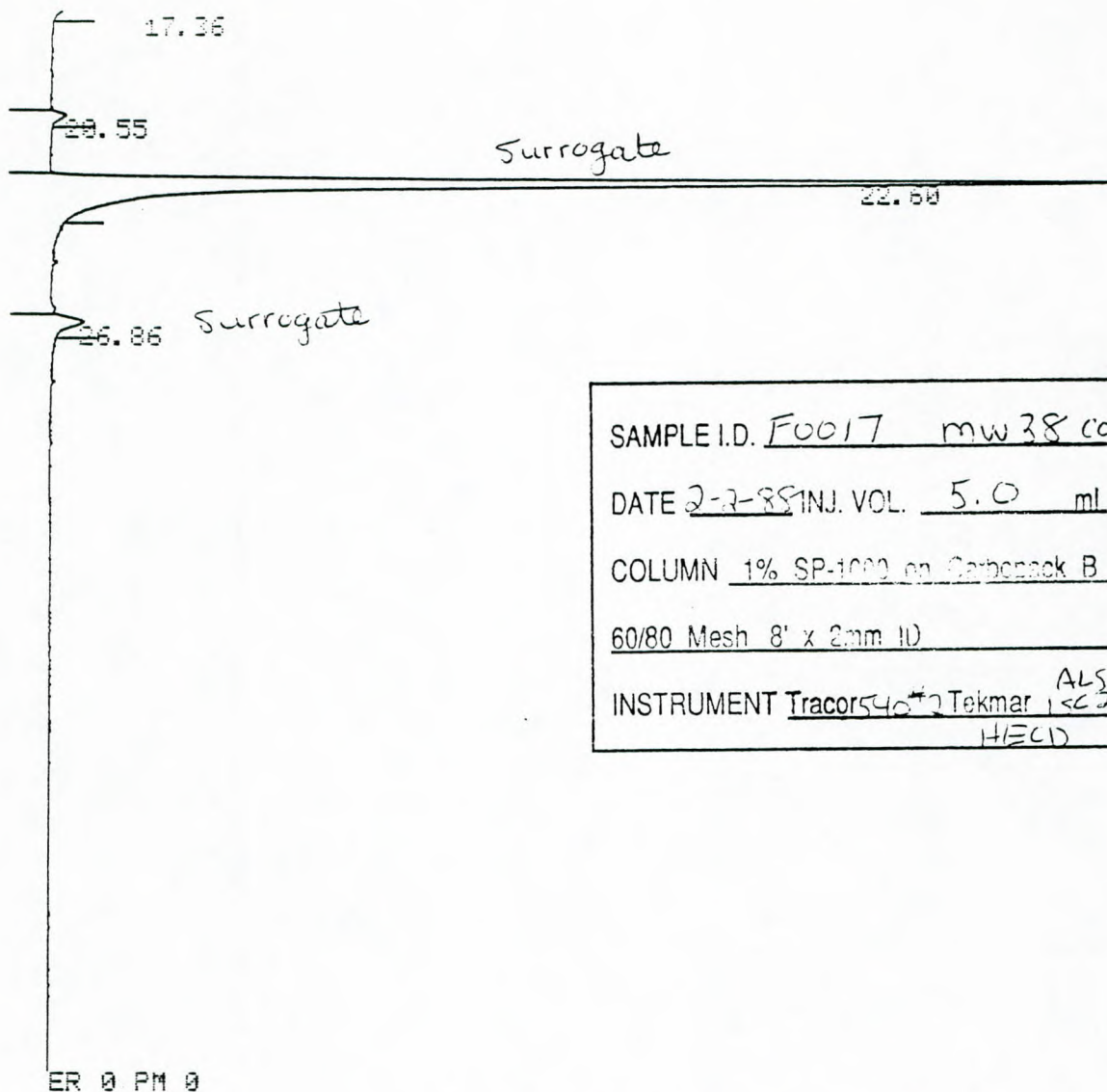
9.02 methylene chloride

Surrogate

13.77 13.81 13.45
 14.46

12.98

SAMPLE I.D. F0017 mw 38
 DATE 2-2-88 INJ. VOL. 5.0 ml
 COLUMN 1' 80-100 on Carborack B
60/80 Mesh 8' x 2mm ID
 INSTRUMENT Tracor 540² Tekmar ALS
LSC2



SAMPLE I.D. F0017 mw 38 cont'd
 DATE 2-2-88 INJ. VOL. 5.0 ml
 COLUMN 1% SP-1000 on Carbowack B
60/80 Mesh 8' x 2mm ID
 INSTRUMENT Tracor 540 Tekmar ^{ALS} ₁₅₀₂
H/ECD

ER 0 PM 0

VH0 02/03/88 02:31:35 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 43 INDEX 1

ANALYST: TSH

SAMPLE 8 F0017

SA 0. IS 0. XF 1.

NAME	PPB	RT	AREA	BC	RF	RRT
CH2CL2	0.364	9.02✓	1855	01	5100.	1.
BRCLCH2	79.302	12.98✓	67407	02	850.	1.
DCETAM11	cl. 1.008 ←	13.45	4786	02	4750.	1.
4	0.	13.77	811	02		1.024
DCETAM12	0.587	13.81	2641	03	4500.	1.027
CL3C2H	0.131	20.55✓	585	01	4450.	1.
BRCLC3H6	87.941	22.6✓	61559	01	700.	1.
CL402	0.354	26.86	1698	01	4800.	1.
TOTALS	169.687		141342			

CHANNEL A

INJECT 02/03/88 03:41:15

PM 1

3.05 methylene chloride

Surrogate

11.98

12.58

17.33 1,1,1-Trichloroethane

20.58 Trichloroethene

Surrogate

22.60

26.85

surrogate

SAMPLE I.D. F0018 mw 38 shallow

DATE 2-2-88 INJ. VOL. 5.0 ml

COLUMN 1% SP-1000 on Carbowack B

60/80 Mesh 8' x 2mm ID

INSTRUMENT Tracor 540 ^{ALS} Tekmar _{LSC2}
H E C D

ER 0 PM 0

WHO

02/03/88 03:41:15

CH= "A" PS= 1.

FILE 1.

METHOD 5.

RUN 44

INDEX 1

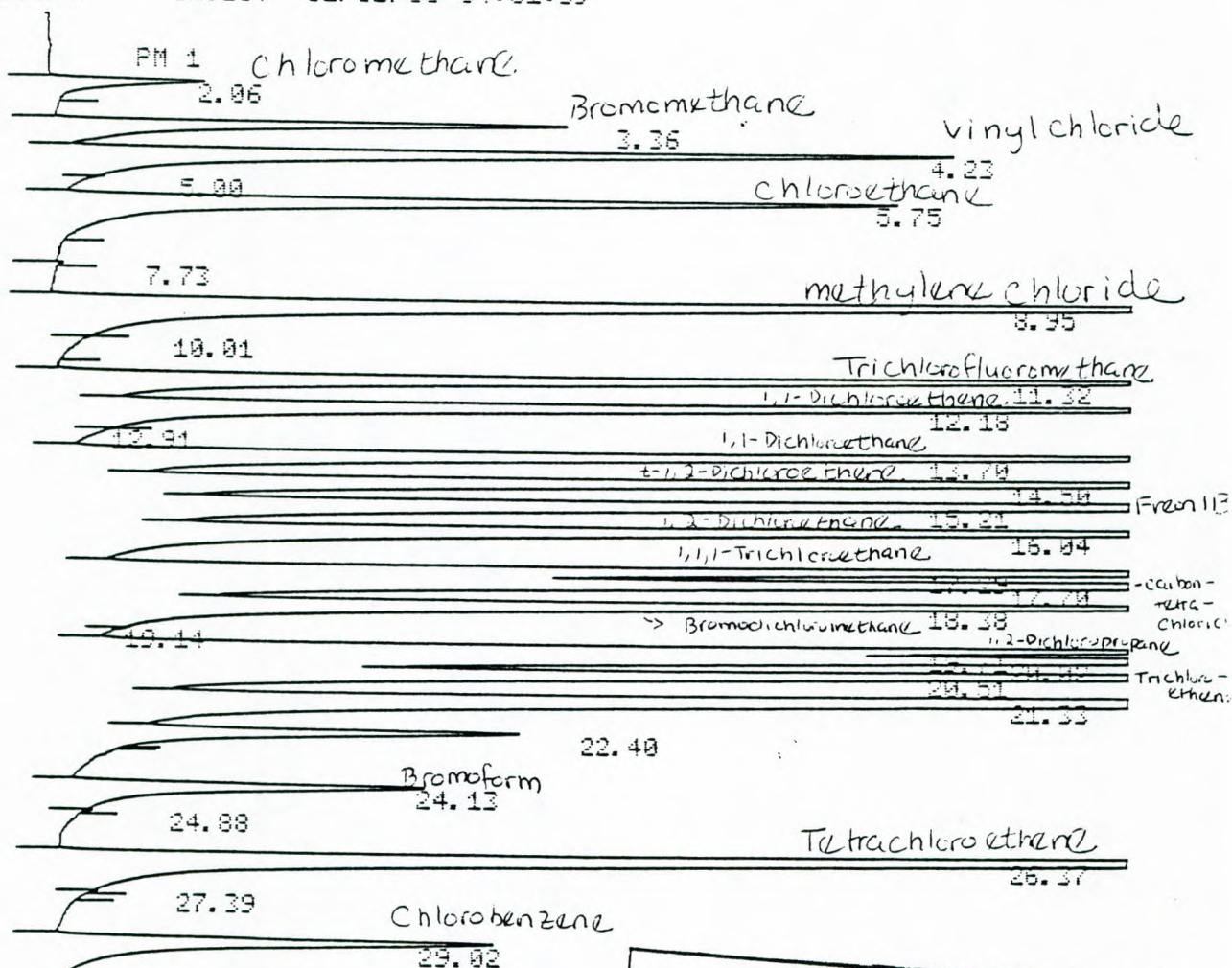
ANALYST: TSH

SAMPLE 9 F0010

SA 0. IS 0. XF 1.

NAME	PPB	RT	AREA	BC	RF	RRT
CH2CL2	0.353	9.05✓	1801	01	5100.	1.
BRCLCH2	89.562	12.98✓	76128	09	850.	1.
CL3CCH3	0.136	17.33✓	604	01	4450.	1.
CL3C2H	0.233	20.58✓	1038	01	4450.	1.
BRCLC3H6	92.068	22.6✓	64447	01	700.	1.
CL4C2	0.369	26.85	1772	01	4800.	1.
TOTALS	182.721		145790			

CHANNEL A INJECT 02/03/88 04:51:39



SAMPLE I.D. Reference Spike #335

DATE 2-2-88 INJ. VOL. 5.0 ml

COLUMN 1% SP 1000 on Carboxack B

60/80 Mesh 8' x 2mm ID

INSTRUMENT Tracor 540 #2 Tekmar ALS
+SC-7
+ECD

SAMPLE I.D. F0018 mw 38 ^{Shallow} _{Cont'd}
 DATE 2-2-88 INJ. VOL. 5.0 ml
 COLUMN 1% SP-1000 on Carbowack B
60/80 Mesh 8' x 2mm ID
 INSTRUMENT Tracor 540¹² Tekmar ^{ALS} _{LSC2}
 PID

ER 0 PM 0

BTX 02/03/88 03:40:06 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 45 INDEX 12

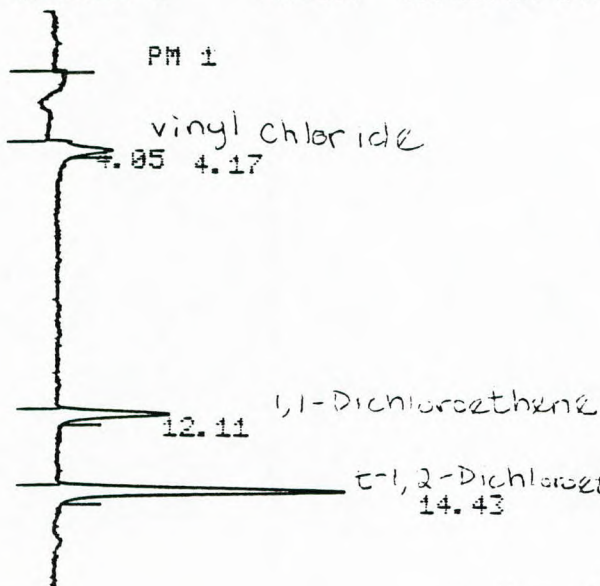
ANALYST: TSH

SAMPLE 9 F0018

SA 0. IS 0. XF 1.

NAME	PPB	RT	AREA BC	RF
F307	87.267	26.8 ✓	2858 01	32.75
TOTALS	87.267		2858	

CHANNEL A INJECT 02/03/88 04:50:31



SAMPLE I.D. Reference Spike #335
 DATE 2-2-88 INJ. VOL. 5.0 ml
 COLUMN 1% SP-1000 on Carbowack B
60/80 Mesh 8' x 2mm ID
 INSTRUMENT Tracor 540¹² Tekmar ^{ALS} _{LSC2}
 PID

SAMPLE I.D. Reference Spike #335 cont'd
 DATE 2-2-88 INJ. VOL. 5.0 ml
 COLUMN 1% SP-1000 on Carbowack B.
60/80 Mesh 8' x 2mm ID
 INSTRUMENT Tracor 540 ^{A LS} / Tekmar 1502
HELD

ER 0 PM 0

VHO 02/03/88 04:51:39 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 45 INDEX 1

ANALYST: TSH

SAMPLE 10 REF SPK

SA 0. IS 0. XF 1.

NAME	PPB	RT	AREA BC	RF	RRT
1	0.	2.06	7452 01		0.487
2	0.	3.36	27387 02		0.794
CH2CHCL	16.994	4.23✓	56080 02	3300.	1.
4	0.	5.	1825 02		0.87
C2H5CL	15.668	5.75✓	54056 03	3450.	1.
CH2CL2	21.039	8.95✓	107297 09	5100.	1.
7	0.	11.32	74256 02		0.929
DCLEN11	22.057	12.18✓	83815 09	3800.	1.
DCETAM11	16.671	13.7✓	79190 02	4750.	1.
DCLEN12	18.94	14.5✓	85229 02	4500.	1.
FREON113	38.162	15.21✓	124028 02	3250.	1.
DCETAN12	19.918	16.04✓	95605 02	4800.	1.
13	0.	17.29	80116 02		0.977
CL3CCH3	24.233 ← 19	17.7	107835 02	4450.	1.
15	0.	18.38	83726 02		1.038
16	0.	19.14	655 02		0.897
17 DC PAN 12	0.	19.71	59727 02	2986	0.924
18	0.	20.02	90174 02		0.939
19	0.	20.51	105121 02		0.962
CL3C2H	24.85 ← 24	21.33	199586 08	4450.	1.
21	0.	22.4	18808 05		0.928
BRCLSHG	31.779	24.13	22245 03	700.	1.
CL4C2	30.597	26.37✓	146866 09	4800.	1.
CL0BZ	20.726	29.02✓	30675 01	1480.	1.
TOTALS	321.634		1741754		

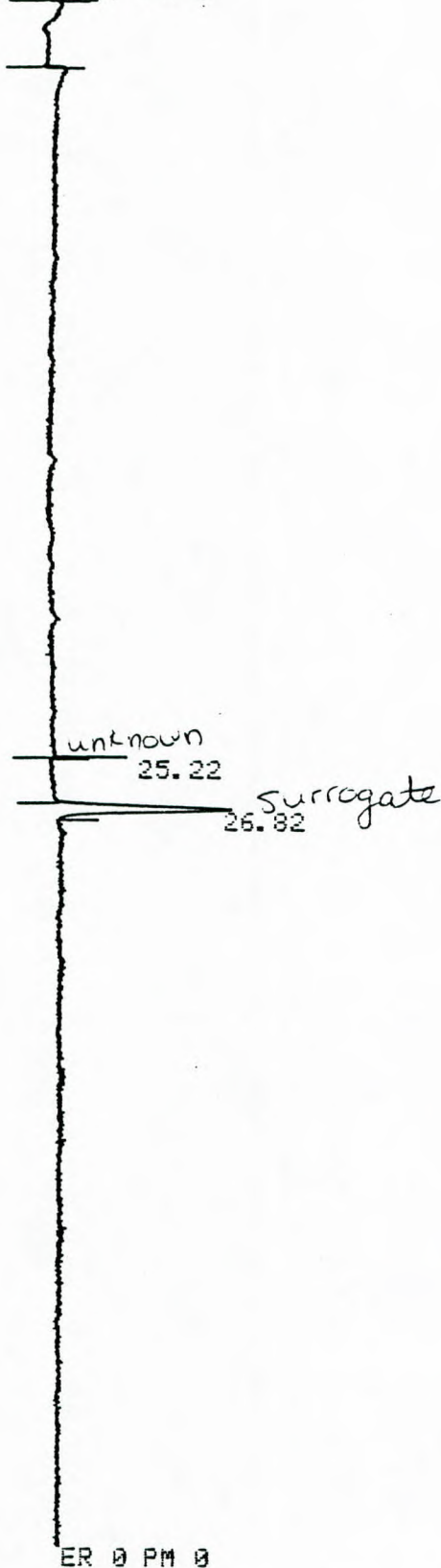
CHANNEL A INJECT 02/03/88 09:21:18

PM 1

SAM IDX NAME SAM AMT SCALE FACTOR
SI= 1 SN= BLANK SA= XP= 1
SI=
END OF DIALOG

CHANNEL A INJECT 02/02/88 10:43:51

PM 1



SAMPLE I.D.	organic free water Blank
DATE	2-2-88
INJ. VOL.	5.0 ml
COLUMN	1% SP-1000 on Carbowack B
	60/80 Mesh 8' x 2mm ID
INSTRUMENT	Tracor 540*2 Tekmar ^{ALS} LSCD
	PID

BIT

02/02/88 10:43:51

CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 31 INDEX 12

ANALYST: TSH

SAMPLE 1 BLANK

SA 0. IS 0. XF 1.

NAME	PPB	RT	AREA BC	RF
1	0.	0.88	193 01	
F307	102.647	26.82	3490 01	34.
TOTALS	102.647		3683	

SAMPLE TABLE...

ANALYST:AN="

INJECTIONS/SAMPLE:RA=

SAMPLES BETWEEN CALIB:CI=

CONC UNITS:CU="

SAM IDX NAME

SAM AMT

SCALE FACTOR

SI= 1 SN=" STD

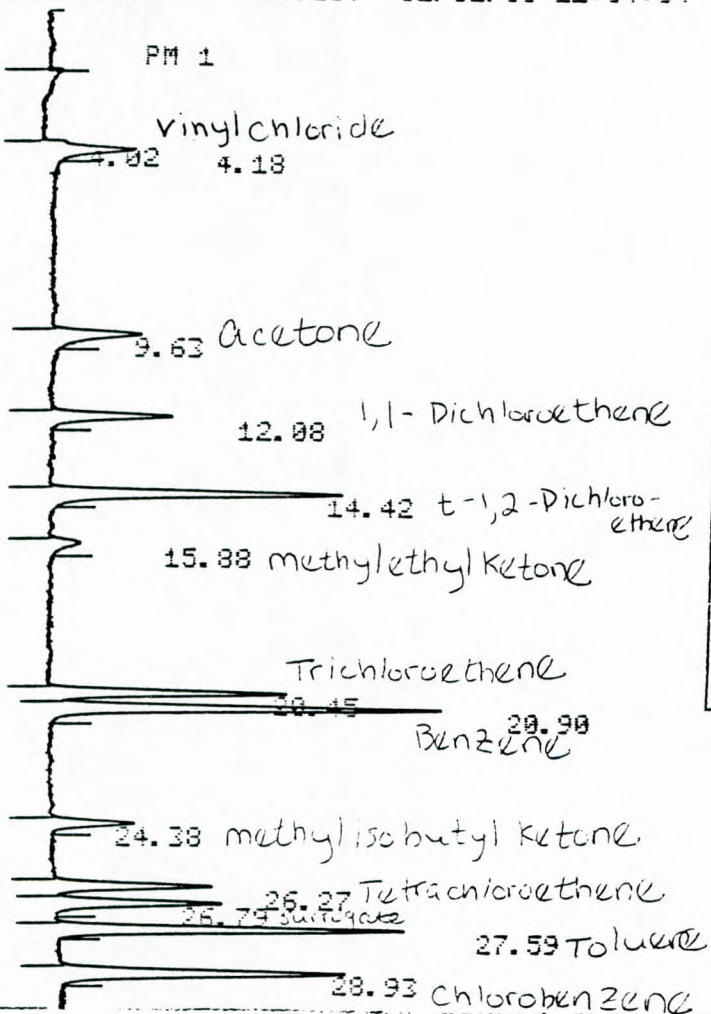
SA=

XF= 1

SI=

END OF DIALOG

CHANNEL A INJECT 02/02/88 11:54:04



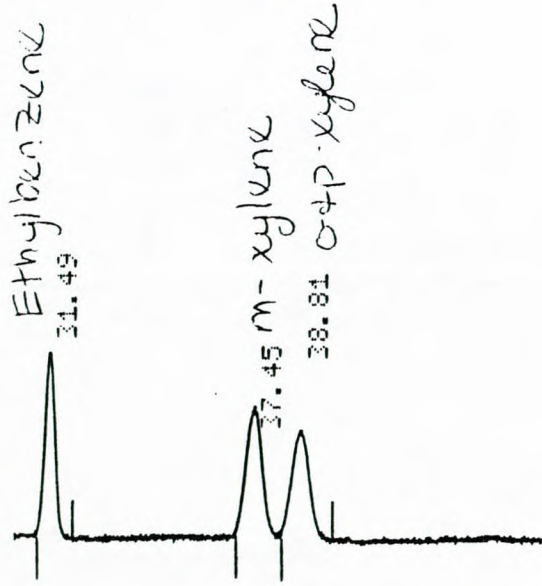
SAMPLE I.D. Standard # 329 + 334

DATE 2-2-88 INJ. VOL. 5.0 ml

COLUMN 1% SP-1010 on Carbowack B

60/80 Mesh 8' x 2mm ID

INSTRUMENT Tracor 540 Tekmar ALS
PID



SAMPLE I.D. Standard # 329 # 334 cont'd
 DATE 2-2-88 INJ. VOL. 5.0 ml
 COLUMN 1% SP-1000 on Carbowack P
 60/80 Mesh 8' x 2mm ID
 INSTRUMENT Traco 5402 Tekmar LSC 2
 ALS
 PFD

BTX 02/02/88 11:54:04 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 32 INDEX 13

ANALYST: TSH

SAMPLE 1 STD

SA 0. IS 0. XF 1.

NAME	PPB	RT	AREA BC	RF
CH2CHCL 2	3.687	4.02	295 02	80.
ACETONE	0.	4.18	1759 03	
DCLEN11	116.048	9.63	1994 01	17.183
DCLEN12	18.742	12.08	2392 01	127.624
MEK	18.818	14.42	5829 01	309.76
CL3C2H	23.833	15.88	603 01	25.301
BENZ	21.365	20.45	4324 02	202.385
MIBK	17.396	20.9	7462 03	428.964
CL4C2	27.646	24.38	1548 01	55.992
F3C7	16.977	26.27	2962 02	174.479
TOLUENE	96.323	26.79	3275 03	34.
CLOROBZ	17.629	27.59	6723 01	381.364
ETHBENZ	17.254	28.93	6469 01	374.924
M-XYL	18.382	31.49	5967 01	324.612
O-XYL	19.167	37.45	6542 02	341.313
	20.079	38.81	6182 03	307.88

TOTALS 64326

CR= 1

BTX 02/02/88 11:54:04 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 33 INDEX 1 CALIB

ANALYST: TSH

NAME	PPB	RT	AREA BC	RF
CH2CHCL	24.9	4.02	295 02	11.847

NAME	RF	RT	Area	Height
ACETONE	11.847	4.02	1759	03
DCLENA11	16.77	9.62	1994	01
DCLENA12	118.416	12.08	2392	01
MEK	24.9	14.42	5829	01
CL3C2	23.9	15.88	603	01
BENZ	26.9	20.45	4324	02
MIBK	26.2	20.9	7462	03
CL4C2	19.2	24.38	1548	01
F3C7	100.	26.27	2962	02
TOLUENE	19.8	26.79	3275	03
CLOROBZ	19.7	27.59	6723	01
ETHBENZ	20.6	28.93	6469	01
M-XYL	19.8	31.49	5967	01
O-XYL	21.7	37.45	6542	02
TOTALS	499.9	38.81	6182	03

NEW FILE:

NAME	RF	RT
CH2CHCL	11.847	4.02
ACETONE	16.77	9.62
DCLENA11	118.416	12.08
DCLENA12	24.9	14.42
MEK	24.217	15.89
CL3C2	180.921	20.46
BENZ	386.632	20.91
MIBK	59.084	24.39
CL4C2	154.271	26.28
F3C7	32.75	26.8
TOLUENE	339.545	27.6
CLOROBZ	328.376	28.94
ETHBENZ	289.66	31.51
M-XYL	330.404	37.45
O-XYL	284.885	38.8

SAMPLE ID. Standard #329 334
DATE 2-2-82 INJ. VOL. 5.0 ml
COLUMN 1% SP-1000 on Carbowax B
60/80 Mesh 8' x 2mm ID
INSTRUMENT Tracor 540 2 Takmar LSC-2
ALC
PID

SAMPLE TABLE...

ANALYST:AN="

INJECTIONS/SAMPLE:RA=

SAMPLES BETWEEN CALIB:CI=

CONC UNITS:CU="

SAM IDX	NAME	SAM AMT	SCALE FACTOR
SI= 1	SN=" F0004	SA=	XF= 1
SI= 2	SN=" F0007	SA=	XF= 1
SI= 3	SN=" E+F00010	SA=	XF= 1
SI= 4	SN=" F0011	SA=	XF= 1
SI= 5	SN=" F0014	SA=	XF= 1
SI= 6	SN=" F0015	SA=	XF= 1
SI= 7	SN=" F0016	SA=	XF= 1
SI= 8	SN=" F0017	SA=	XF= 1
SI= 9	SN=" F0019 ++8	SA=	XF= 1
SI= 10	SN=" REF SPK	SA=	XF= 1

SI=
END OF DIALOG

CHANNEL A INJECT 02/02/88 18:15:12

PM 1



Surrogate
26.82

SAMPLE I.D.	F0004	mw5
DATE	2-2-88	INJ. VOL. 5.0 ml
COLUMN	1% SP-1000, 60 Carbowack B	
	60/80 Mesh 8' x 2mm ID	
INSTRUMENT	Tracor 440 2 Tekmar ALS	
	PID	

SAMPLE I.D. F0004 MW 5 cond
 DATE 2-2-88 INJ. VOL. 5.0 ml
 COLUMN 1% SP-1000 on Carbowack B
60/80 Mesh 8' x 2mm ID
 INSTRUMENT Tracor 540⁷² Tekmar ALS
LSC2
PED

ER 0 PM 0

BTX 02/02/88 18:15:12 CH= "A" PS= 1.
 FILE 1. METHOD 5. RUN 37 INDEX 4

ANALYST: TSH

SAMPLE 1 F0004

SA 0. IS 0. XF 1.

NAME	PPB	RT	AREA BC	RF
F307	91.511	26.82 ✓	2997 01	32.75
TOTALS	91.511		2997	

CHANNEL A INJECT 02/02/88 19:25:45

PM 1
 2.97

SAMPLE I.D. F0007 mw 8
 DATE 2-2-88 INJ. VOL. 5.0 ml
 COLUMN 1% SP-1000 on Carbowack B
60/80 Mesh 8' x 2mm ID
 INSTRUMENT Tracor 540⁷² Tekmar ALS
LSC2
PED



Surrogate
26.83

SAMPLE I.D. F0007 mw 8 cont'd
 DATE 2-2-88 INJ. VOL. 5.0 ml
 COLUMN 1% SP-1000 on Carbowack B
60/80 Mesh 8' x 2mm ID
 INSTRUMENT Tracor 540 #2 Tekmar ALS
 PID

BTX

02/02/88 19:25:45

CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 38 INDEX 5

ANALYST: TSH

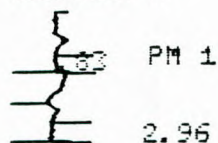
SAMPLE 2 F0007

SA 0. IS 0. XF 1.

NAME	PPB	RT	AREA BC	RF
CH2CHCL	7.294	3.97 ✓	496 01	68.
F3C7	88.825	26.83 ✓	2909 01	32.75
TOTALS	96.119		3405	

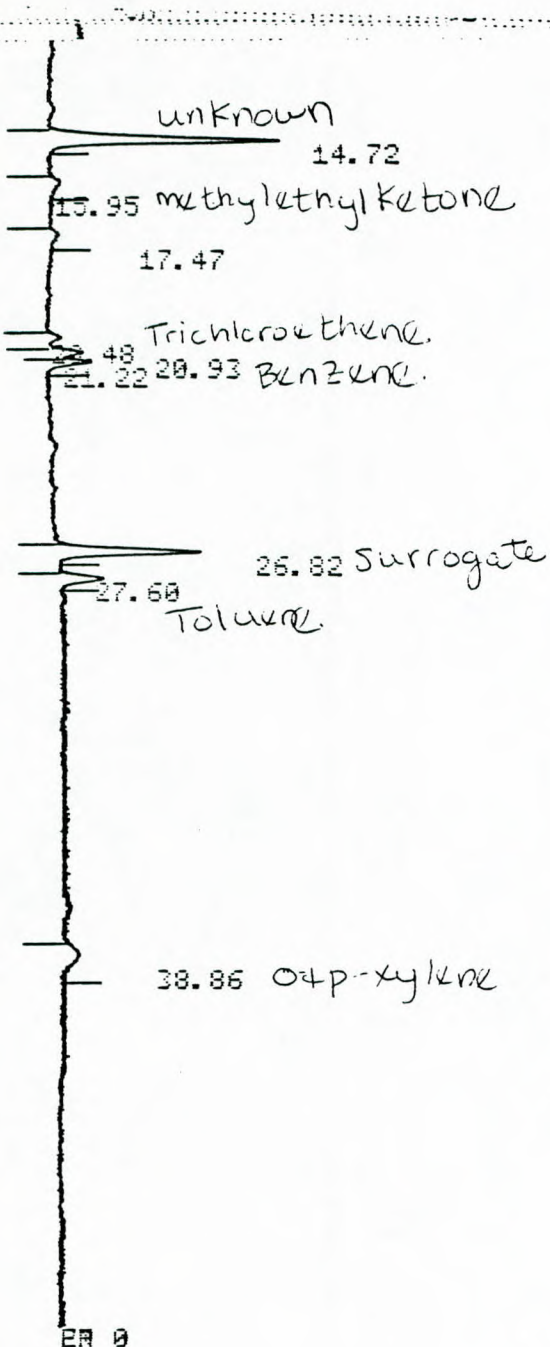
not on HECID-
not a true
peak

CHANNEL A INJECT 02/02/88 20:36:17



SAMPLE I.D. F0016 mw 11
 DATE 2-2-88 INJ. VOL. 5.0 ml
 COLUMN 1% SP-1000 on Carbowack B
60/80 Mesh 8' x 2mm ID
 INSTRUMENT Tracor 540 #2 Tekmar ALS
 PID

unknown
11.84



SAMPLE I.D. F0010 mW 11 COT'd
 DATE 2-2-88 INJ. VOL. 5.0 ml
 COLUMN 17 SP 1000 60/80 60/80 Mesh 8' x 2mm ID
 INSTRUMENT Tracor 540 #2 Tekmar ALS
PTD

BTX 02/02/88 20:36:17 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 39 INDEX 6

ANALYST: TSH

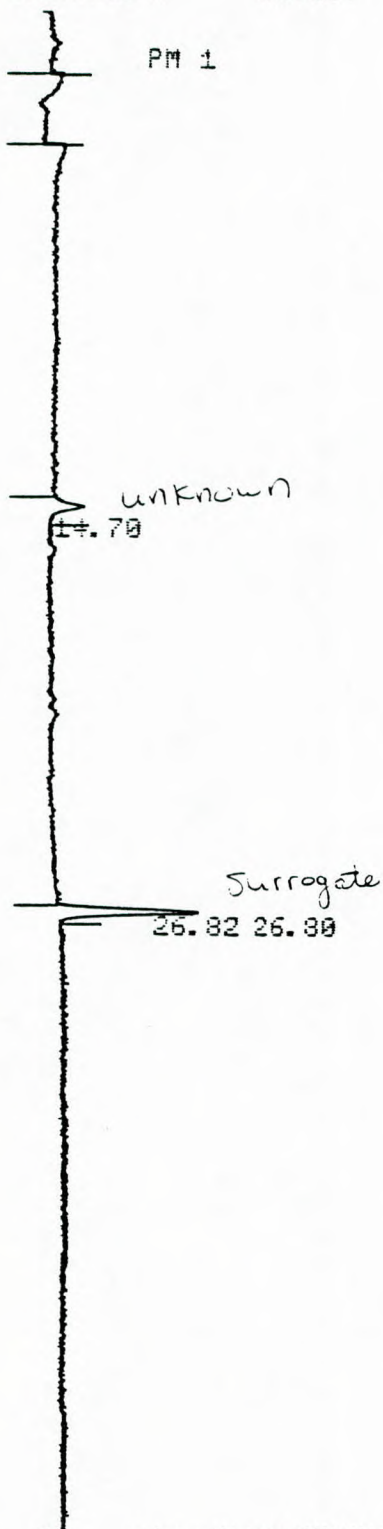
SAMPLE 3 F00010

SA 0. IS 0. XF 1.

NAME	PPB	RT	AREA BC	RF
1	0.	0.83	246 01	
2	0.	2.96	126 01	
30LEN11	84.473	11.04	10003 01	118.416
30LEN12	17.236	14.72	4830 01	280.24
				24.217

CL302	0.	17.47	168 01	
BENZ	1.503	20.48✓	272 02	180.921
9	1.814	20.93✓	701 02	386.632
F307	0.	21.22	831 03	
TOLUENE	85.648	26.82✓	2805 01	32.75
O-XYL	2.589	27.6✓	879 01	339.545
	2.545	38.86/	725 01	284.885
TOTALS	207.535		21870	

CHANNEL A INJECT 02/02/88 21:46:59



SAMPLE I.D. F0011 mw 12
 DATE 2-2-88 INJ. VOL. 5.0 ml
 COLUMN 1% SP-1000 on Carboxack B
60/80 Mesh 8' x 2mm ID.
 INSTRUMENT Tracor 540 #2 Tekmar ALS
LS2
PED

ER 0 PM 0

BTX

02/02/88 21:46:59

CH= "A" PS= 1.

FILE 1.

METHOD 5.

RUN 40

INDEX 7

ANALYST: TSH

SAMPLE 4 F0011

SA
0.

IS
0.

KF
1.

NAME	PPB	RT	AREA BC	RF
BOLEMI2	2.466	14.7	691 01	280.24
F3C7	44.549	26.8 ✓	1459 02	32.75
TOLUENE	3.57	26.82	1212 03	339.545
TOTALS	50.585		3362	

CHANNEL A

INJECT 02/02/88 22:57:36

PM 1

SAMPLE I.D. F0014 mw22
DATE 2-2-88 INJ. VOL. 5.0 ml
COLUMN 1% SP-1000 on Carbowack B
60/80 Mesh 8' x 2mm ID
INSTRUMENT Tracor 5402 Tekmar AUS
PID

Surrogate

26.81

SAMPLE I.D. F0014 mw 22
 DATE 2-2-88 INJ. VOL. 5.0 ml
 COLUMN 1% SP-1000 on Carbowack B
60/80 Mesh 8' x 2mm ID
 INSTRUMENT Tracor 5402 Tekmar ALS
LSC-2
PID

ER 0 PM 0

BTX 02/02/88 22:57:36 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 41 INDEX 8

ANALYST: TSH

SAMPLE 5 F0014

SA 0. IS 0. XF 1.

NAME	PPB	RT	AREA BC	RF
F307	91.878	26.81 ✓	3009 01	32.75
TOTALS	91.878		3009	

CHANNEL A INJECT 02/03/88 00:08:25



SAMPLE I.D. F0015 mw 36
 DATE 2-2-88 INJ. VOL. 5.0 ml
 COLUMN 1% SP-1000 on Carbowack B
60/80 Mesh 8' x 2mm ID
 INSTRUMENT Tracor 5402 Tekmar ALS
LSC-2
PID



SAMPLE I.D. F0015 mw 36 cont'd
 DATE 2-2-88 INJ. VOL. 5.0 ml
 COLUMN 1% SP-1000 on Carbowack B
60/80 Mesh 8' x 2mm ID
 INSTRUMENT Tracor 540⁷² Tekmar ALS
PID

BTX 02/03/88 00:08:25 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 42 INDEX 9

ANALYST: TSH

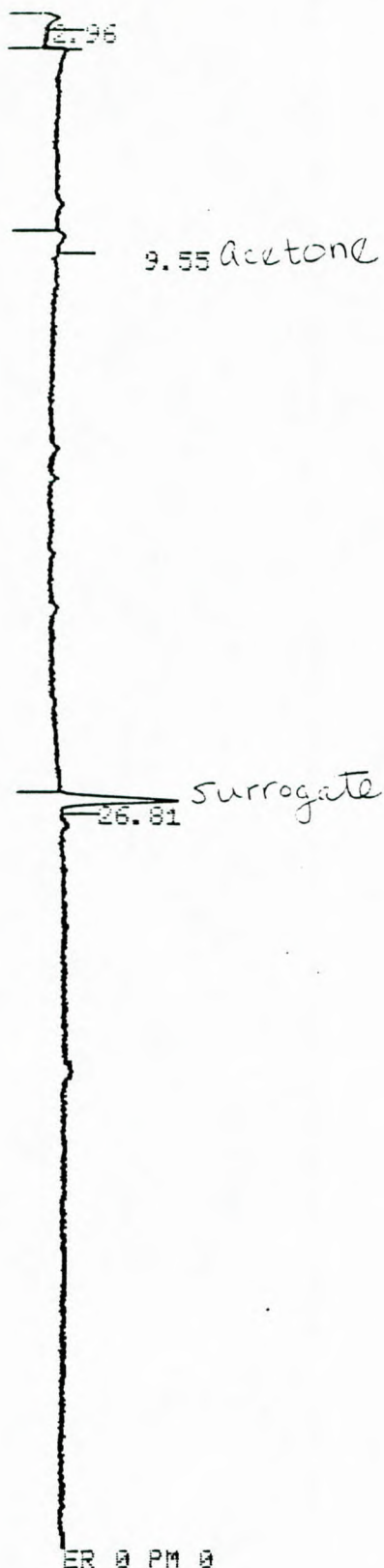
SAMPLE 6 F0015

SA 0. IS 0. XF 1.

NAME	PPB	RT	AREA	BC	RF
ACETONE	35.658	9.66✓	598	01	16.77
MEK	17.921	15.96✓	434	01	24.217
F3C7	45.069	26.81✓	1476	02	32.75
TOLUENE	3.717	26.83	1262	03	339.545
TOTALS	102.365		3770		

CHANNEL A INJECT 02/03/88 01:18:58

PM 1

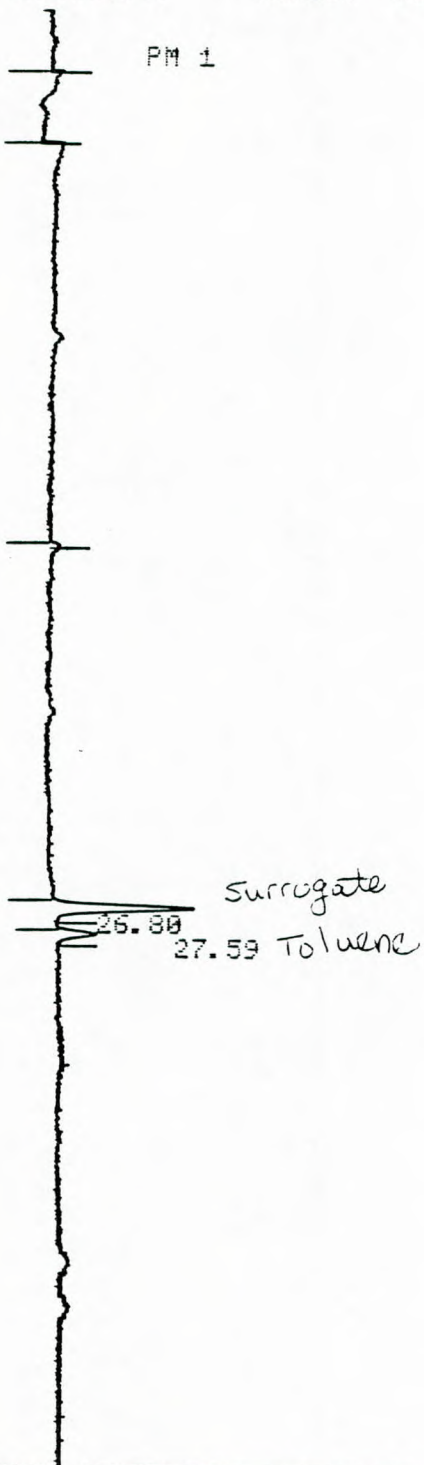


SAMPLE I.D. F0016 mw-37
DATE 2-2-88 INJ. VOL. 5.0 ml
COLUMN 1% SP-1000 on Subpack E
60/80 Mesh 8' x 2mm ID
INSTRUMENT Tracor 540 ALS
2 Tekmar LSC
PID

ER 0 PM 0
BTX 02/03/88 01:18:58 CH= "A" PS= 1.
FILE 1. METHOD 5. RUN 43 INDEX 10
ANALYST: TSH
SAMPLE 7 F0016

NAME	PPB	RT	AREA BC	RF
1	0.	2.96	327 01	
ACETONE	12.224	9.55 ✓	205 01	16.77
F3C7	72.794	26.81 ✓	2384 01	32.75
TOTALS	85.018		2916	

CHANNEL A INJECT 02/03/88 02:29:27



SAMPLE I.D. F0017 mw 38
 DATE 2-2-88 INJ. VOL. 5.0 ml
 COLUMN 1% SP-1020 on Carbowack B
60/80 Mesh 8' x 2mm ID
 INSTRUMENT Tracor 540² Tekmar ALS
LSC 2
PED

ER 0

BTX

02/03/88 02:29:27

CH= "A" PS= 1.

FILE 1.

METHOD 5.

RUN 44

INDEX 11

ANALYST: TSH

SAMPLE 8 F0017

SA 0. IS 0. XF 1.

NAME	PPB	RT	AREA BC	RF
F307	86.351	26.8✓	2828 01	32.75
TOLUENE	2.168	27.59✓	736 01	339.545
TOTALS	88.519		3564	

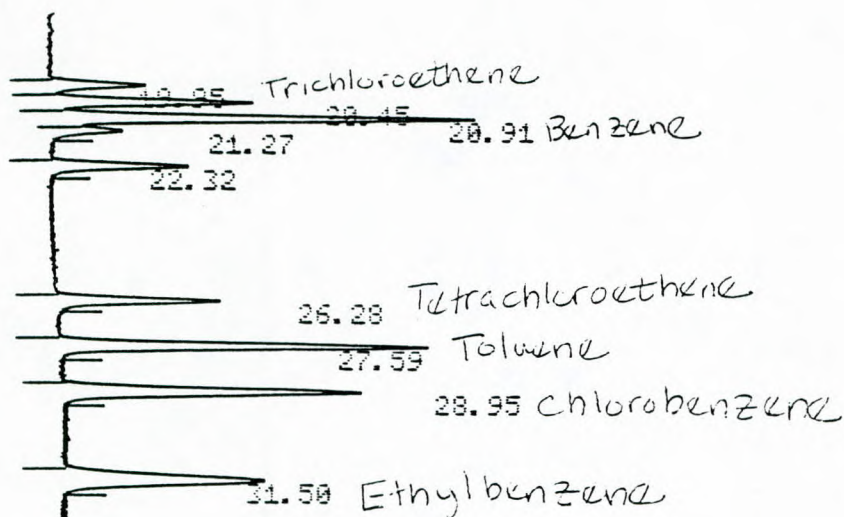
CHANNEL A INJECT 02/03/88 03:40:06

PM 1

SAMPLE I.D. F0018 mw 38 Shallow
DATE 2-2-88 INJ. VOL. 5.0 ml
COLUMN 1% SP-1000 on Carbowack B
60/80 Mesh 8' x 2mm ID
INSTRUMENT Tracor 540#2-Tekmar ALS
PID

surrogate

26.80



SAMPLE I.D. Reference Spike #335
 DATE 2-2-88 INJ. VOL. 5.0 ml
 COLUMN 1% BP-1000 on Carbowack D
60/80 Mesh 8' x 2mm ID
 INSTRUMENT Tracor 540 #2 Tekmar ^{ALS}
LSC-2
PID

ER 0 PM 0

BTX 02/03/88 04:50:31 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 46 INDEX 13

ANALYST: TSH

SAMPLE 10 REF SPK

SA IS XF
 1. 0. 1.

NAME	PPB	RT	AREA BC	RF
CH2CHCL	5.132	4.05✓	349 02	68.
2	0.	4.17	868 03	
DCLEN11	17.895	12.11✓	2119 01	118.416
DCLEN12	20.065	14.43✓	5623 01	280.24
5	0.	19.95	1689 02	
CL3C2	20.589	20.45✓	3725 02	180.921
BENZ	20.479	20.91✓	7918 02	386.632
8	0.	21.27	1362 03	
MIBK	43.345	22.32	2561 01	59.084
CL4C2	19.518	26.28✓	3011 01	154.271
TOLUENE	21.694	27.59✓	7366 01	339.545
CLOROBZ	21.125	28.95✓	6937 01	328.376

ETHEENZ

21.042

31.5 ✓

6095 01

289.66

TOTALS

210.884

49623

SAMPLE I.D. Reference Spike #335 cont'd

DATE 2-2-88 INJ. VOL. 5.0 ml

COLUMN 1% SP-1000 on Carbonack B

60/80 Mesh 3' x 2mm ID

INSTRUMENT Tracor 540 #2 Tekmar ^{ALS}
_{LSC-2}
P.E.D.

