SDMS US EPA REGION V -1

SOME IMAGES WITHIN THIS DOCUMENT MAY BE ILLEGIBLE DUE TO BAD SOURCE DOCUMENTS.

SUBSURFACE SOIL ORGANICS

158270

CASE NARRATIVE

EXTRA PAGES MISSING?

May 12, 1987

Job # U-4906; U-4928; U-4971; U-4989

Sample #					
	DC-P1-53	DC-I12-58	DC-05-63	DC-GB-68	DC-09-73
	DC-P2-54	DC-01-59	DC-05-64	DC-G7-69	DC-010-74
	DC-P5-55	DC-02-60	DC-0B-65	DC-G8-70	DC-010-75
	DC-P5-56	DC-03-61	DC-06-66	DC-G9-71	
	DC-I12-57	DC-04-62	DC-G6-67	DC-09-72	

CASE NARRATIVE

Enclosed are the organic analytical results for samples received on February 14, February 19, February 26, and February 28, 1987. All samples were received in good condition.

All results are reported on a net weight (as received) basis. Percent moisture values have been provided on Form I.

All samples for semi-volatile and Pesticide/PCB analyses were initially extracted utilizing 3 grams. Some of the samples which were not contaminated at a 3 gram level were re-extracted at 30 grams and their results are included in this report (DC-P2-54, DC-P5-55, DC-P5-56, DC-I12-57, DC-I12-58). Additionally, the following samples have been re-extracted and their results will be provided at a later date:

DC-03-61
DC-GB-75
DC-0B-65

Due to the level of contaminants in the Pesticide/PCB fractions, extracts required dilutions preventing the determination of surrogate recoveries.

As agreed upon in a November 24, 1986 conversation with Ron Trupin of IEPA, PCB second column confirmation was not performed on all samples. A few samples were selected and the PCBs confirmed. The initial analyses were deemed sufficiently similar to justify the minimal number of second column confirmation.

Compounds are reported as UNKNOWN if, in the judgment of our mass spectral specialist, no valid tentative identification can be made.

Results flagged "E" indicate an approximate concentration. The amount detected in the analysis exceeds the calibrated range. True value are possibly underestimated.

Vinyl chloride in the continuing calibration check on March 4, 1987, exceeded the allowed relative percent difference. As vinyl chloride was not observed in any of the samples analyzed that day, the data have not been compromised.

On March 5, 1987, three BNA analyses exceeded the 12-hour tune clock, but all analyses were within the 24-hour tune clock allowed by other EPA methodology (600 series, SW-846).

PCB-1268 was detected in sample DC-G8-70 and is reported in PCB 1260.

The percent relative standard deviation (% RSD) for 4,4'DDT in the March 3, 1987 evaluation check for linearity exceeded 10%. Since 4,4'-DDT was not detected in samples associated with this standard, we feel data quality has not been affected.

All results are expressed on as "as received" basis. To convert these results to a dry weight concentration, all values reported (including U or "less than" values but excluding pH values) should be multiplied by a factor equal to:

$$\frac{1}{(1 - M)}$$

where M is the moisture percentage expressed as a decimal. (10% moisture, M = 0.1).

For this case, factors are as follows:

Field ID	Lab ID	% Moisture	Multiply By
DC-P1-53	1032	20	1.25
DC-P2-54	1033	16	1.19
DC-P5-55	1034	19	1.23
DC-P5-56	1035	20	1.25
DC-I12-57	1036	11	1.12
DC-I12-58	1037	18	1.22
DC-01-59	1110	13	1.15
DC-02-60	1111	22	1.28
DC-03-61	1112	16	1.19
DC-04-62	1113	22	1.28
DC-05-63	1114	18	1.22

Field ID	Lab ID	% Moisture	Multiply By
DC-05-64	1115	18	1.22
DC-0B-65	1116	21	1.27
DC-06-66	1117	19	1.23
DC-G6-67	1274	15	1.18
DC-GB-68	1275	21	1.27
DC-G7-69	1276	35	1.54
DC-G8-70	1277	30	1.43
DC-G9-71	1278	14	1.16
DC-09-72	1427	18	1.22
DC-09-73	1428	19	1.23
DC-010-74	1429	22	1.28
DC-010-75	1430	12	1.14

If you have any questions, please contact me at (716)-631-0360.

Andrew P. Clifton

Andrew P. Clifton
Director of Analytical Services

APC/drb
Enclosures

ecology and environment, inc.
195 SUGG ROAD, P.O. BOX D, BUFFALO, N.Y., 14225, TEL. 716-632-4491
International Specialists in the Environment

CHAIN-OF-CUSTODY RECORD

Project No.:	Project Name:	Project Manager:
IL 3140	DEAD CREEK / SAUGET SITES	MIKE MILLER
Samplers: (Signatures) Daniel T. Sewall		Field Team Leader: DAN SEWALL

STATION NUMBER	DATE	TIME	SAMPLE TYPE COMP	GRAB	AIR	SAMPLE INFORMATION EXPECTED COMPOUNDS (Concentration)*	STATION LOCATION	NUMBER OF CONTAINERS	VOL ORGANICS - 90%	METALS & CYANIDE - 90%	VOLATILE ORGANICS - 120ml				REMARKS
DC-66-67	2-23-87	1215	X			UNKNOWN / OVA SCREEN >1000 PPM	BORING G-6 20'-30'	4	1	1	2				STRONG HYDROCARBON ODOR
DC-68-68	2-24-87	0900	X			UNKNOWN / BLANK (EXPECTED LOW)	SOIL BLANK	4	1	1	2				
DC-67-69	2-24-87	0915	X			UNKNOWN / OVA SCREEN >1000 PPM	BORING G-7, 10'-25'	4	1	1	2				VERY STRONG ORGANIC ODOR
DC-68-70	2-24-87	1200	X			UNKNOWN / OVA SCREEN >1000 PPM	BORING G-8, 10'-20'	4	1	1	2				VERY STRONG ORGANIC ODOR
DC-69-71	2-24-87	1545	X			UNKNOWN / OVA SCREEN >1000 PPM	BORING G-9, 35'-40'	4	1	1	2				STRONG ORGANIC ODOR

Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	Ship Via:
Daniel T. Sewall	2-25-87/1730	FEDERAL EXPRESS				FEDERAL EXPRESS
Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	BL/Airbill Number: 2285199081
Relinquished By: (Signature) Fed. Express	Date/Time: 2-26-87/0845	Received For Laboratory By: (Signature) William H. Howard	Relinquished By: (Signature)	Date/Time:	Received For Laboratory By: (Signature)	Date: 2/25/87

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*See CONCENTRATION RANGE on back of form.

234055

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CHAIN-OF-CUSTODY RECORD

Project No.:	Project Name:	Project Manager:
1L 3140	DEAD CREEK / SAUGET SITES	MIKE MILLER
Samplers: (Signatures) Daniel T Sewall		Field Team Leader: DAN SEWALL

STATION NUMBER	DATE	TIME	SAMPLE TYPE: COMP	GRAB	AIR	SAMPLE INFORMATION: EXPECTED COMPOUNDS (Concentration)*	STATION LOCATION	NUMBER OF CONTAINERS	VOL ORGANICS - 8.0	METALS & CYANIDE - 8.0	VOLATILE ORGANICS - 120 ML				REMARKS
DC-01-59	2-6-87	1445	X			UNKNOWN / OVA SCREEN 85 PPM	BORING 0-1, 15'-25'	4	1	1	2				
DC-02-60	2-17-87	1000	X			UNKNOWN / OVA SCREEN 740 PPM	BORING 0-2, 20'-30'	4	1	1	2				SLIGHT ORGANIC ODOR
DC-03-61	2-17-87	1300	X			UNKNOWN / OVA SCREEN - 420 PPM	BORING 0-3, 10'-20'	4	1	1	2				SLIGHT ORGANIC ODOR
DC-04-62	2-17-87	1500	X			UNKNOWN / OVA SCREEN - >1000 PPM	BORING 0-4, 0'-10'	4	1	1	2				STRONG ORGANIC ODOR
DC-05-63	2-17-87	1630	X			UNKNOWN / OVA SCREEN - >1000 PPM	BORING 0-5, 8.5'-20'	4	1	1	2				STRONG ORGANIC ODOR
DC-05-64	2-17-87	1630	X			UNKNOWN / OVA SCREEN >1000 PPM	BORING 0-5, 8.5'-20'	4	1	1	2				DUPLICATE OF DC-05-63
DC-06-65	2-18-87	0900	X			UNKNOWN / BLANK	SOIL BLANK	4	1	1	2				
DC-06-66	2-18-87	1400	X			UNKNOWN / NOT SCREENED (LOW)	BORING 0-6 15'-25'	4	1	1	2				

Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	Ship Via:
Daniel T Sewall	2-18-87/1700	FEDERAL EXPRESS				FEDERAL EXPRESS
Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	BL/Airbill Number: 2285199070
Relinquished By: (Signature) Fed. Express	Date/Time: 2-19-87/0845	Received For Laboratory By: (Signature) William H. Howard	Relinquished By: (Signature)	Date/Time:	Received For Laboratory By: (Signature)	Date: 2-18-87

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CHAIN-OF-CUSTODY RECORD

Project No.:	Project Name:	Project Manager:
IL 3140	DEAD CREEK / SPLEAT SITES	MIKE MILLER
Samplers: (Signatures) Daniel T Sewall		Field Team Leader: DAN SEWALL

STATION NUMBER	DATE	TIME	SAMPLE TYPE: COMP	GRAB	AIR	SAMPLE INFORMATION: EXPECTED COMPOUNDS (Concentration)*	STATION LOCATION	NUMBER OF CONTAINERS	HSL ORGANICS (8 oz)	METALS & CYANIDE (8 oz)	VOLATILE ORGANICS (120 ml)				REMARKS
DC-N-53	2-4-87	0930	X			UNKNOWN / OVA SCREEN >1000 PPM	BORINGS P1-P4 0'-10'	4	1	1	2				SCREEN POSSIBLY DUE TO METHANE
DC-P2-54	2-4-87	1030	X			UNKNOWN / OVA SCREEN 260 PPM	BORINGS P1-P4 25'-35'	4	1	1	2				SLIGHT ORGANIC ODOR
DC-P5-55	2-12-87	1230	X			UNKNOWN / OVA SCREEN 180 PPM	BORING P-5 10'-25'	4	1	1	2				SLIGHT ORGANIC ODOR
DC-P5-56	2-12-87	1230	X			UNKNOWN / OVA SCREEN 180 PPM	BORING P-5 10'-25'	4	1	1	2				DUPLICATE OF DC-P5-55
DC-D2-57	2-13-87	0800	X			UNKNOWN - SUSPECTED LOW	BORING I-12 3½-12½ FT	4	1	1	2				BACKGROUND LOCATION
DC-D2-58	2-13-87	0830	X			UNKNOWN - SUSPECTED LOW	BORING I-12 18½-27½ FT	4	1	1	2				BACKGROUND LOCATION

Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	Ship Via:
Daniel T Sewall	2-13-87/1400	FEDERAL EXPRESS				FEDERAL EXPRESS
Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	BL/Airbill Number: 2285199066
Relinquished By: (Signature) Fed Express	Date/Time: 2-14-87/1000	Received For Laboratory By: (Signature) [signature]	Relinquished By: (Signature)	Date/Time:	Received For Laboratory By: (Signature)	Date: 2-13-87

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CHAIN-OF-CUSTODY RECORD

Project No.: 1L3140
Project Name: ALAS CREEK / SANGER SITES
Project Manager: MIKE MILLER
Samplers: (Signatures) [signature]
Field Team Leader: DAN SENNEC

STATION NUMBER	DATE	TIME	SAMPLE TYPE COMP	GRAB	AIR	SAMPLE INFORMATION / EXPECTED COMPOUNDS (Concentration)*	STATION LOCATION	NUMBER OF CONTAINERS	Volatile Halogenated Organics - 8010	Volatile Aromatics - 8020	VOC's - 1200 ppm			REMARKS	EFE
AC-09-12	2-26-87	1430	X			UNKNOWN / OVA SCREEN 2200 ppm	BORING 0-9 0'-10'	4	1	1	2				1431
AC-09-13	2-26-87	1545	X			UNKNOWN / OVA SCREEN 6200 ppm	BORING 0-9 10'-15'	4	1	1	2				1429
AC-10-14	2-26-87	1620	X			UNKNOWN / OVA SCREEN >1000 ppm	BORING 0-10 5'-10'	4	1	1	2			STRONG ORGANIC ODOR	1429
AC-10-15	2-26-87	1700	X			UNKNOWN / OVA SCREEN 840 ppm	BORING 0-10 10'-15'	4	1	1	2			ORGANIC ODOR	1430

Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	Ship Via:
[signature]	2-27-87 1130	FEDERAL EXPRESS				FEDERAL EXPRESS
Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	BL/Airbill Number: 2285199092 — Date: 2-27-87
Relinquished By: (Signature)	Date/Time: 2-28-87	Received For Laboratory By: (Signature) [signature]	Relinquished By: (Signature)	Date/Time:	Received For Laboratory By: (Signature)	

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files
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234056

SURROGATE PERCENT RECOVERY SUMMARY

SOIL SURROGATE PERCENT RECOVERY SUMMARY

Case No. U-4906, 4928, U-4971, 4989 Contract Laboratory Ecology & Environment Contract No. IL-3140

Low X Medium _____

SMO TRAFFIC NO.	VOLATILE: TOLUENE-D8 (81-117)	VOLATILE: BFB (74-121)	VOLATILE: 1,2 DICHLOROETHANE-D4 (70-121)	SEMI-VOLATILE: NITROBENZENE-D5 (23-120)	SEMI-VOLATILE: 2-FLUOROBIPHENYL (30-116)	SEMI-VOLATILE: TERPHENYL-D14 (18-137)			SEMI-VOLATILE: PHENOL-D5 (24-113)	SEMI-VOLATILE: 2-FLUOROPHENOL (25-121)	SEMI-VOLATILE: 2,4,6 TRIBROMOPHENOL (19-122)	PESTICIDE: DIBUTYL-CHLORENDATE ** (20-150)
DC-P1-53	97	74	89									
DC-P2-54	96	88	84									
DC-P5-55	97	87	87									
DC-P5-56	112	97	94									
DC-D12-57	113	104	100									
DC-D12-58	87	89	87									
DC-01-59	88	87	93									
DC-02-60	101	95	106									
DC-03-61	99	97	92									
DC-05-63	100	98	97									
DC-05-64	103	99	99									
DC-08-65	108	87	103									
DC-06-66	100	96	99									
DC-GB-68	116	106	107									
C6894	93	87	82									
C6941	108	102	105									
C7040	93	90	98									
DC-P5-55MS	88	79	74									
DC-P5-55MSD	89	79	79									

* VALUES ARE OUTSIDE OF CONTRACT REQUIRED QC LIMITS

**ADVISORY LIMITS ONLY

Volatiles: 0 out of 57 ; outside of QC limits

Semi-Volatiles: _____ out of _____ ; outside of QC limits

Pesticides: _____ out of _____ ; outside of QC limits

7/85

Comments: _____

FORM II

SOIL SURROGATE PERCENT RECOVERY SUMMARY

Case No. U-4906, 4928 U-4971, 4989 Contract Laboratory Ecology & Environment Contract No. IL-3140

Low _____ Medium X

SMO Traffic No.	VOLATILE: Toluene-D8 (81-117)	VOLATILE: BFB (74-121)	VOLATILE: 1,2 Dichloroethane-D4 (70-121)	SEMI-VOLATILE: Nitrobenzene-D5 (23-120)	SEMI-VOLATILE: 2-Fluorobiphenyl (30-115)	SEMI-VOLATILE: Terphenyl-D14 (18-137)			SEMI-VOLATILE: Phenol-D5 (24-113)	SEMI-VOLATILE: 2-Fluorophenol (25-121)	SEMI-VOLATILE: 2,4,6 Tribromophenol (19-122)	PESTICIDE: Dibutyl Chlorendate** (20-150)
DC-04-62	90	95	86	DL	93	99			52	DL	DL	DL
DC-G6-67	98	96	98	(122)DL	(159)DL	(148)DL			112	118	91	DL
DC-G7-69	110	113	96	DL	DL	DL			DL	DL	DL	DL
DC-G8-70	97	97	95	DL	DL	DL			DL	DL	DL	DL
DC-G9-71	100	106	96	113	143*	109			106	108	63	DL
DC-09-72	94	89	84	91	120*	107			82	79	69	DL
DC-09-73	99	97	93	88	92	90			76	71	59	124
DC-010-74	85	83	82	113	140*	126			98	84	75	DL
DC-010-75	87	86	84	77	91	83			72	68	68	INF
DC-010-75R	—	—	—	81	86	76			73	75	65	INF
~~C6894~~	CW											
C6920	86	82	86									
C6964	97	97	105									
C7138	97	90	93									
DC-G8-70MS	96	95	95									
DC-G8-70MSD	94	100	100									
DC-P1-53	—	—	—	76	99	89			74	93	DL	DL
DC-P2-54	—	—	—	51	52	45			46	46	40	144
DC-P5-55	—	—	—	47	50	46			41	44	36	132
DC-P5-56	—	—	—	94	93	117			86	83	81	155**
DC-I12-57	—	—	—	46	51	48			43	42	39	143
DC-I12-58	—	—	—	52	58	52			48	46	40	151**
DC-01-59	—	—	—	73	72	82			30	46	17*	148

* VALUES ARE OUTSIDE OF CONTRACT REQUIRED QC LIMITS

**ADVISORY LIMITS ONLY

DL = Diluted Out

Volatiles: 0 out of 42 ; outside of QC limits

Semi-Volatiles: 4 out of 83 ; outside of QC limits

Pesticides: 2 out of 7 ; outside of QC limits

7/85

Comments: INF = Interference

FORM II

SOIL SURROGATE PERCENT RECOVERY SUMMARY

Case No. U-4906, 4928 / U-4971, 4989 Contract Laboratory Ecology & Environment Contract No. IL-3140

Low _____ Medium X

SMO TRAFFIC NO.	VOLATILE: TOLUENE-D8 (81-117)	VOLATILE: BFB (74-121)	VOLATILE: 1,2 DICHLORO-ETHANE-D4 (70-121)	SEMI-VOLATILE: NITRO-BENZENE-D5 (23-120)	SEMI-VOLATILE: 2-FLUORO-BIPHENYL (30-115)	SEMI-VOLATILE: TERPHENYL-D14 (18-137)			SEMI-VOLATILE: PHENOL-D5 (24-113)	SEMI-VOLATILE: 2-FLUORO-PHENOL (25-121)	SEMI-VOLATILE: 2,4,6 TRIBROMO PHENOL (19-122)	PESTICIDE: DIBUTYL-CHLORENDATE ** (20-150)	
DC-02-60	—	—	—	88	102	121			67	110	16 *	153 *	
DC-03-61	—	—	—	70	76	82			33	52	28	179 *	
DC-05-63	—	—	—	64	69	75			46	88	35	166 *	
DC-05-64	—	—	—	73	90	92			58	88	50	125	
DC-08-65	—	—	—	69	77	101			55	93	32	164 *	
DC-06-66	—	—	—	64	78	89			44	53	27	147	
DC-GB-68	—	—	—	76	90	100			61	100	47	112	
DC-I12-57MS	—	—	—	54	55	59			47	48	53	142	
DC-I12-57MSD	—	—	—	58	62	56			55	51	51	149	
D1885	—	—	—	92	90	101			62	66	32	137	2/16
D1898	—	—	—	99	100	110			80	143 *	64	140	2/19
D2020	—	—	—	79	91	66			70	70	171 *	96	2/26
D2021	—	—	—	81	90	88			71	71	104	92	3/3
	—	—	—	—	—	—			—	—	—		
	—	—	—	—	—	—			—	—	—		

* VALUES ARE OUTSIDE OF CONTRACT REQUIRED QC LIMITS

** ADVISORY LIMITS ONLY

Volatiles: ____ out of ____ ; outside of QC limits

Semi-Volatiles: 3 out of 78 ; outside of QC limits

Pesticides: 4 out of 13 ; outside of QC limits

7/85

Comments: _____

FORM II

MS/MSD SUMMARY

SOIL MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Case No. U-4906, 4928 U-4971, 4989 Contractor Ecology & Environment Inc. Contract No. IL-3140

Low Level X Medium Level ____

FRACTION	COMPOUND	CONC. SPIKE ADDED (ug/Kg)	SAMPLE RESULT	CONC. MS	% REC	CONC. MSD	% REC	RPD	QC LIMITS* RPD	QC LIMITS* RECOVERY
VOA SMO SAMPLE NO. DC-P5-55	1,1-Dicholorethene	60	0	52	87	55	92	6	22	59-172
	Trichloroethene			34	57*	40	67	16	24	62-137
	Chlorobenzene			46	77	49	78	2	21	60-133
	Toluene			45	75	47	78	6	21	59-139
	Benzene			43	72	49	82	13	21	66-142
B/N SMO SAMPLE NO. ____	1,2,4-Trichlorobenzene								23	38-107
	Acenaphthene								19	31-137
	2,4 Dinitrotoluene								47	28-89
	Pyrene								36	35-142
	N-Nitrosodi-n-Propylamine								38	41-126
	1,4-Dichlorobenzene								27	28-104
ACID SMO SAMPLE NO. ____	Pentachlorophenol								47	17-109
	Phenol								35	26-90
	2-Chlorophenol								50	25-102
	4-Chloro-3-Methylphenol								33	26-103
	4-Nitrophenol								50	11-114
PEST SMO SAMPLE NO. ____	Lindane								50	46-127
	Heptachlor								31	35-130
	Aldrin								43	34-132
	Dieldrin								38	31-134
	Endrin								45	42-139
	4,4'-DDT								50	23-134

*ASTERISKED VALUES ARE OUTSIDE QC LIMITS.

RPD: VOAs 0 out of 5; outside QC limits
B/N ____ out of ____; outside QC limits
ACID ____ out of ____; outside QC limits
PEST ____ out of ____; outside QC limits

RECOVERY: VOAs 1 out of 10; outside QC limits
B/N ____ out of ____; outside QC limits
ACID ____ out of ____; outside QC limits
PEST ____ out of ____; outside QC limits

Comments: ____

FORM III

7/85

495095

SOIL MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Case No. U-4906, 4928, U-4971, 4989 Contractor ECOLOGY & ENVIRONMENT INC. Contract No. IL-3140

Low Level _____ Medium Level X

FRACTION	COMPOUND	CONC. SPIKE ADDED (ug/Kg)	SAMPLE RESULT	CONC. MS	% REC	CONC. MSD	% REC	RPD	QC LIMITS* RPD	QC LIMITS* RECOVERY
VOA SMO SAMPLE NO. DC-G8-70	1,1-Dicholorethene	5800	0	5200	90	4800	83	8	22	59-172
	Trichloroethene		1400	6700	91	6500	88	3	24	62-137
	Chlorobenzene		70,000	76,000	103	81,000	190*	6	21	60-133
	Toluene		8500	14000	95	14000	95	0	21	59-139
	Benzene		3600	9400	100	9100	95	3	21	66-142
B/N SMO SAMPLE NO. DC-I12-57	1,2,4-Trichlorobenzene	33000	0	15000	45	16000	48	6	23	38-107
	Acenaphthene			17000	52	18000	55	6	19	31-137
	2,4 Dinitrotoluene			18000	55	17000	52	6	47	28-89
	Pyrene			18000	55	17000	52	6	36	35-142
	N-Nitrosodi-n-Propylamine			16000	48	16000	48	0	38	41-126
	1,4-Dichlorobenzene			13000	39	13000	39	0	27	28-104
ACID SMO SAMPLE NO. DC-I12-57	Pentachlorophenol	66000		30000	45	30000	45	0	47	17-109
	Phenol			28000	42	31000	47	10	35	26-90
	2-Chlorophenol			31000	47	33000	50	6	50	25-102
	4-Chloro-3-Methylphenol			26000	39	26000	39	0	33	26-103
	4-Nitrophenol			20000	30	19000	29	5	50	11-114
PEST SMO SAMPLE NO. DC-I12-57	Lindane	267	0	264	99	267	100	1.1	50	46-127
	Heptachlor	267		283	106	325	122	14	31	35-130
	Aldrin	267		281	105	296	111	5.2	43	34-132
	Dieldrin	667		631	95	636	95	0.8	38	31-134
	Endrin	667		710	106	717	107	1.0	45	42-139
	4,4'-DDT	667		742	111	758	114	2.1	50	23-134

*ASTERISKED VALUES ARE OUTSIDE QC LIMITS.

RPD: VOAs 0 out of 5; outside QC limits
B/N 0 out of 6; outside QC limits
ACID 0 out of 5; outside QC limits
PEST 0 out of 6; outside QC limits

RECOVERY: VOAs 1 out of 10; outside QC limits
B/N 0 out of 12; outside QC limits
ACID 0 out of 10; outside QC limits
PEST 0 out of 12; outside QC limits

Comments: _____

FORM III

7/85

495095

STANDARDS DATA

INITIAL CALIBRATION DATA

VOLATILE HSL Compounds

Case No: U-4906 ; U-4928 U-4971 ; U-4989

Instrument ID: HP-5995C

Contractor: E & EM INC.

Calibration Date: 07/14/86

Contract No: IL-3140

Minimum $\overline{RF}$ for SPCC is .3 Maximum % RSD for CCC is 30%

Laboratory ID:	>C3505	>C3500	>C3501	>C3502	>C3503					
	RF	RF	RF	RF	RF					
Compound	100.00	250.00	500.00	750.00	1000.00	$\overline{RF}$	% RSD	CCC	SPCC	
CHLOROMETHANE 50	1.83030	2.98119	2.68303	1.98464	2.03565	2.30296	21.718		**	
BROMOMETHANE 94	1.12916	2.03110	1.78724	1.13974	1.07212	1.43187	31.072			
VINYL CHLORIDE 62	1.29793	2.25090	1.81480	1.33200	1.32627	1.60438	26.217	*		
CHLOROETHANE 64	.63087	.90688	.69912	.60274	.61992	.69191	18.156			
METHYLENE CHLORIDE 84	2.02322	1.43855	1.20025	1.26031	.97834	1.38013	28.644			
ACETONE 43	1.82548	2.34411	1.47396	1.33672	1.11317	1.61869	29.708			
TRICHLOROFLUOROMETHANE 101	3.86178	3.31082	2.95608	2.88263	2.68368	3.13900	14.758			
CARBON DISULFIDE 76	4.78482	3.89176	3.40709	3.72181	3.34401	3.82990	15.125			
1,1-DICHLOROETHENE 61	3.28335	3.33314	3.06918	2.76682	2.68799	3.02810	9.682	*		
1,1-DICHLOROETHANE 63	3.41019	3.92213	3.61341	2.93357	2.94262	3.36439	12.773		**	
TRANS-1,2-DICHLOROETHENE 96	1.57932	1.84750	1.68174	1.33898	1.34149	1.55781	14.152			
CHLOROFORM 83	3.76351	4.28933	3.89481	2.94600	2.94612	3.56796	16.810	*		
1,2-DICHLOROETHANE 62	3.71406	4.39110	3.91144	2.88767	2.87971	3.55680	18.611			
1,2-DICHLOROETHANE-D4(SURR) 65	2.49928	3.43723	3.57775	2.73884	2.73981	2.99858	15.920			(Conc=250.0,250.0,250.0,2
2-BUTANONE 72	.08583	.06613	.07162	.05146	.06484	.06798	18.283			
1,1,1-TRICHLOROETHANE 97	.80804	.54601	.53518	.59001	.51014	.59787	20.236			
CARBON TETRACHLORIDE 117	.80174	.53704	.52968	.57726	.50644	.59043	20.469			
VINYL ACETATE 43	1.11275	1.25689	1.26570	1.09893	1.21686	1.19023	6.667			
BROMODICHLOROMETHANE 83	.84389	.62463	.59798	.63866	.57245	.65552	16.525			
1,2-DICHLOROPROPANE 63	.49204	.49341	.47136	.44626	.44491	.46960	5.026	*		
TRANS-1,3-DICHLOROPROPENE 75	.81912	.69538	.68300	.69776	.62213	.70348	10.178			
TRICHLOROETHENE 130	.44634	.42371	.39853	.38452	.36368	.40336	8.047			
DIBROMOCHLOROMETHANE 129	.71128	.56494	.52585	.53419	.45559	.55837	16.903			
1,1,2-TRICHLOROETHANE 97	.44527	.37334	.34812	.35174	.29571	.36284	14.939			
BENZENE 78	1.33421	1.20242	1.13581	1.12616	1.03138	1.16600	9.612			
CIS-1,3-DICHLOROPROPENE 75	.67756	.52506	.49322	.50605	.42953	.52628	17.453			
2-CHLOROETHYLVINYLETHER 63	.35845	.34245	.33476	.30801	.31038	.33081	6.505			
BROMOFORM 173	.66385	.64313	.63732	.57829	.58969	.62246	5.895		**	
4-METHYL-2-PENTANONE 43	.90759	1.26859	1.32155	.96430	1.15534	1.12348	16.246			
2-HEXANONE 43	.77024	1.05625	1.09202	.77051	.95286	.92838	16.482			
TETRACHLOROETHENE 164	.50876	.52353	.48547	.41857	.41486	.47024	10.787			
1,1,2,2-TETRACHLOROETHANE 83	.87842	.82654	.81458	.77936	.70534	.80085	8.008		**	
TOLUENE-D8 (SURR) 98	1.32339	1.38280	1.45130	1.33957	1.31679	1.36277	4.093			(Conc=250.0,250.0,250.0,2
TOLUENE 92	1.05387	.94123	.86637	.82455	.79257	.89572	11.662	*		
CHLOROBENZENE 112	1.29244	1.13242	1.05881	1.03357	1.00289	1.10402	10.480		**	
ETHYLBENZENE 91	2.21736	1.84487	1.78724	1.76922	1.65807	1.85535	11.501	*		

RF - Response Factor (Subscript is amount in NGS)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

VOLATILE HSL Compounds

Case No: V-4906; V-4928 V-4971; V-4989

Instrument ID: HP-5995C

Contractor: E & EM INC.

Calibration Date: 07/14/86

Contract No: IL-3140

Minimum $\overline{RF}$ for SPCC is .3 Maximum % RSD for CCC is 30%

Laboratory ID:	>C3505	>C3500	>C3501	>C3502	>C3503					
Compound	RF 100.00	RF 250.00	RF 500.00	RF 750.00	RF 1000.00	$\overline{RF}$	% RSD	CCC	SPCC	
4-BROMOFLUOROBENZENE(SURR) 95	.70434	.69639	.76293	.69405	.69743	.71103	4.116			(Conc=250.0,250.0,250.0,25
STYRENE 104	1.16847	.95414	.94402	.94119	.90518	.98260	10.741			
TOTAL XYLENES 91	1.72862	1.35739	1.34084	1.33821	1.30097	1.41320	12.562			

RF - Response Factor (Subscript is amount in NGS)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Initial Calibration Data
HSL Compounds

se No: U-4906, 4928, 4971, 4989 Instrument ID: HP-5995C

ntr. r: E & E, INC. Calibration Date: ~~01-23-87~~ 1-27-87

ontract No: IL-3140

Minimum $\overline{RF}$ for SPCC is .3 Maximum % RSD for CCC is 30%

Laboratory ID:		>C6596	>C6597	>C6598	>C6601	>C6600					
		RF	RF	RF	RF	RF					
Compound		20.00	50.00	100.00	150.00	200.00	$\overline{RF}$	% RSD	CCC	SPCC	
HLOROMETHANE	50	2.12447	2.61562	2.64220	2.23683	2.53305	2.43043	9.666		**	
ROMOMETHANE	94	1.37360	.85090	1.49079	.78242	1.03971	1.10748	28.333	*		
INYL CHLORIDE	62	1.26378	1.91741	1.62120	1.07270	1.02484	1.37999	27.619	*		
HLOROETHANE	64	.71412	1.06725	.91401	.88431	.99939	.91582	14.608			
ETHYLENE CHLORIDE	84	2.02390	1.82978	1.87682	1.82862	1.84614	1.88105	4.369			
CETONE	43	.59984	.54514	.58876	.48302	.59266	.56188	8.724			
~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~			
ARBON DISULFIDE	76	5.41111	5.19185	5.31658	5.22865	5.51722	5.33308	2.500			
,1-DICHLOROETHENE	61	3.52165	3.34397	3.38225	3.31844	3.46913	3.40709	2.518	*		
,1-DICHLOROETHANE	63	3.87093	3.60100	3.72198	3.74062	3.77956	3.74282	2.615		**	
RANS-1,2-DICHLOROETHENE	96	1.75784	1.64597	1.69829	1.66798	1.72785	1.69959	2.642			
HLOROFORM	83	2.62984	2.50538	2.52604	2.50948	2.49531	2.53321	2.177	*		
,2-DICHLOROETHANE	62	3.20370	3.18262	3.20115	3.20444	3.12406	3.18319	1.076			
~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~			(Conc=50.0,50.0,50.0,50.0,50.0)
-BUTANONE	72	.04995	.04035	.03750	.03895	.03268	.03989	15.859			
,1,1-TRICHLOROETHANE	97	.64838	.63406	.61422	.64709	.64371	.63749	2.222			
ARBON TETRACHLORIDE	117	.69068	.66160	.64699	.67838	.67099	.66973	2.474			
INYL ACETATE	43	.73237	.73455	.65905	.82546	.59143	.70857	12.440			
ROMODICHLOROMETHANE	83	.65377	.65186	.63465	.68810	.65161	.65600	2.979			
,2-DICHLOROPROPANE	63	.44836	.43485	.42752	.46544	.44045	.44332	3.277	*		
RANS-1,3-DICHLOROPROPENE	75	.77151	.78890	.76792	.84197	.79552	.79316	3.736			
RICHLOROETHENE	130	.44261	.41135	.40221	.41760	.41742	.41824	3.586			
IBROMOCHLOROMETHANE	129	.48132	.49985	.48904	.52508	.48709	.49648	3.493			
,1,2-TRICHLOROETHANE	97	.32534	.32254	.30479	.32191	.29501	.31392	4.241			
ENZENE	78	1.25996	1.20022	1.17115	1.20860	1.18181	1.20435	2.858			
IS-1,3-DICHLOROPROPENE	75	.42302	.42904	.41924	.45784	.42248	.43032	3.668			
-CHLOROETHYLVINYLETHER	63	.16774	.16872	.15971	.16061	.13746	.15885	7.950			
ROMOFORM	173	.34305	.37308	.37652	.43733	.39129	.38425	8.968		**	
-METHYL-2-PENTANONE	43	.39722	.44457	.43898	.49417	.44329	.44365	7.752			
-HEXANONE	43	.29447	.32074	.32552	.35942	.32311	.32465	7.121			
ETRACHLOROETHENE	164	.52835	.47793	.46854	.49696	.48933	.49222	4.656			
,1,2,2-TETRACHLOROETHANE	83	.49533	.54849	.53286	.58165	.52036	.53574	6.011		**	
~~[illegible] (SUR)~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~			(Conc=50.0,50.0,50.0,50.0,50.0)
OLUENE	92	1.05082	.96957	.93706	.97526	.95948	.97844	4.396	*		
HLOROBENZENE	112	1.24962	1.18677	1.15142	1.21144	1.17467	1.19479	3.141		**	
THYLBENZENE	91	2.19363	2.05718	1.98682	2.05409	2.05733	2.06981	3.646	*		

F - Response Factor (Subscript is amount in UG/L)

$\overline{F}$ - Average Response Factor

RSD - Percent Relative Standard Deviation

Initial Calibration Data
VOLATILE HSL Compounds

se No: U-4906; U-4928 U-4971; U-4989 Instrument ID: HP-5995C

ntractor: E & E, INC. Calibration Date: 1/27/87

ntract No: IL-3140

Minimum $\overline{RF}$ for SPCC is .3 Maximum % RSD for CCC is 30%

Laboratory ID:	>C6596 RF 20.00	>C6597 RF 50.00	>C6598 RF 100.00	>C6601 RF 150.00	>C6600 RF 200.00	$\overline{RF}$	% RSD	CCC	SPCC	
-BROMOFLUOROBENZENE(SURR) 95	.72568	.71423	.80065	.73269	.63746	.72214	8.051			(Conc=50.0,50.0,50.0,50.0,50.0)
TYRENE 104	1.28684	1.24583	1.20802	1.24619	1.22491	1.24236	2.377			
OTAL XYLENES 91	1.88691	1.75995	1.70230	1.72756	1.73928	1.76320	4.096			

RF Response Factor (Subscript is amount in UG/L)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

HSL Compounds

ase No: V-4906; 4928; 4971; 4989. Instrument ID: HP-59700

tractor: E & E, INC. Calibration Date: 06/20/86 6-19-86

ont. . No: IL-3140

Minimum $\overline{RF}$ for SPCC is .05 Maximum % RSD for CCC is 30%

Compound		Laboratory ID: >00036 RF 20.00	>00037 RF 50.00	>00038 RF 80.00	>00039 RF 120.00	>00040 RF 160.00	$\overline{RF}$	% RSD	CCC	SPCC
HENOL-D5	(SURR) 99	1.45905	1.41913	1.41915	1.33738	1.36821	1.40059	3.415		
ENTAFLUOROPHENOL	184	-	-	-	-	-	-	-		
-FLUOROPHENOL	(SURR) 112	.92276	.93267	.97441	.89171	.88493	.92130	3.895		
HENOL	94	1.27336	1.40484	1.36645	1.32617	1.33444	1.34105	3.646	*	
-METHYL PHENOL	108	.94183	1.07660	1.05407	1.08273	1.00266	1.03158	5.743		
-CHLOROPHENOL	128	1.07483	1.16854	1.16604	1.17284	1.10940	1.13833	3.865		
-METHYL PHENOL	108	.96587	1.08143	1.13309	1.12036	1.07834	1.07582	6.129		
-NITROPHENOL	139	.17264	.20916	.21365	.21306	.20457	.20262	8.462	*	
,4-DIMETHYLPHENOL	122	.26750	.29889	.30065	.29911	.27965	.28916	5.145		
ENZOIC ACID	105	-	.15595	.20240	.22265	.23506	.20401	17.036		
,4-DICHLOROPHENOL	162	.28939	.33168	.32894	.32204	.30635	.31568	5.601	*	
-CHLORO-3-METHYLPHENOL	107	.29459	.33844	.35108	.35646	.33826	.33577	7.252	*	
,4,6-TRICHLOROPHENOL	196	.42290	.47918	.46473	.45782	.45268	.45546	4.555	*	
,4,5-TRICHLOROPHENOL	196	-	.49037	.49512	.49589	.47584	.48930	1.901		
4,6-TRIBROMOPHENOL	(SURR) 330	.29588	.32928	.34498	.31993	.33911	.32584	5.917		
,4-DINITROPHENOL	184	-	.13902	.16374	.19064	.18943	.17071	14.351		**
-NITROPHENOL	139	-	.28898	.31865	.33700	.34792	.32314	7.977		**
,6-DINITRO-2-METHYLPHENOL	198	-	.10474	.11556	.12900	.13233	.12041	10.560		
ENTACHLOROPHENOL	266	-	.17917	.18989	.19137	.19048	.18773	3.054	*	

F - Response Factor (Subscript is amount in UG/L)

- Average Response Factor

RSD - Percent Relative Standard Deviation

CC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

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Initial Calibration Data
HSL Compounds

.e No: U-4906; 4928; 4971; 4989 Instrument ID: HP-5970D

Contractor: E & E, INC. Calibration Date: 10/17/86

Contract No: IL-3140

Minimum $\overline{RF}$ for SPCC is .05 Maximum % RSD for CCC is 30%

Compound		RF 20.00	RF 50.00	RF 80.00	RF 120.00	RF 160.00	$\overline{RF}$	% RSD	CCC	SPCC
Laboratory ID:		>00965	>00966	>00967	>00968	>00969				
ANILINE	93	1.44667	1.40722	1.59651	1.68331	1.56844	1.54043	7.321		
BIS(-2-CHLOROETHYL)ETHER	93	1.24523	1.09828	1.23677	1.16323	1.17789	1.18428	5.058		
1,3-DICHLOROBENZENE	146	1.57666	1.39985	1.51213	1.50440	1.38815	1.47624	5.436		
1,4-DICHLOROBENZENE	146	1.61777	1.38930	1.48504	1.45121	1.40035	1.46374	6.256	*	
BENZYL ALCOHOL	79	1.01010	1.00872	1.21875	1.21807	1.21800	1.13473	10.082		
1,2-DICHLOROBENZENE	146	1.63938	1.36507	1.53750	1.47276	1.44493	1.49193	6.908		
BIS(2-CHLOROISOPROPYL)ETHER	45	2.68736	2.47650	2.77020	2.69646	2.77634	2.68137	4.535		
N-NITROSO-DI-N-PROPYLAMINE	70	1.12218	1.08234	1.21987	1.19548	1.28596	1.18117	6.816		**
HEXACHLOROETHANE	117	.74389	.66875	.73696	.70875	.68371	.70841	4.605		
NITROBENZENE-D5 (SURR)	82	.35564	.33927	.38027	.40789	.38878	.37437	7.253		
NITROBENZENE	77	.39592	.35266	.39754	.39299	.35937	.37969	5.744		
ISOPHORONE	82	.79161	.70915	.78705	.75762	.73425	.75594	4.631		
BIS(-2-CHLOROETHOXY)METHANE	93	.40059	.38692	.42170	.42353	.43054	.41266	4.415		
1,2,4-TRICHLOROBENZENE	180	.41095	.34484	.39226	.39897	.37509	.38442	6.671		
NAPHTHALENE	128	1.07749	.91373	.97630	.97339	.89249	.96668	7.446		
4-CHLOROANILINE	127	.33401	.32798	.42540	.44310	.35932	.37796	14.044		
HEXACHLOROBUTADIENE	225	.29443	.24392	.26045	.25805	.23855	.25909	8.420	*	
2-METHYLNAPHTHALENE	142	.67945	.60785	.66493	.68192	.59005	.64424	6.646		
HEXACHLOROCYCLOPENTADIENE	237	.56264	.50376	.58602	.60451	.58378	.56814	6.952		**
2-FLUOROBIPHENYL (SURR)	172	1.70967	1.49275	1.58507	1.65769	1.62088	1.61321	5.059		
2-CHLORONAPHTHALENE	162	1.47542	1.23459	1.36421	1.37148	1.41834	1.37281	6.493		
2-NITROANILINE	65	.43757	.43867	.51133	.51859	.47610	.47645	8.082		*
DIMETHYL PHTHALATE	163	1.83005	1.68051	1.71649	1.69378	1.67688	1.71954	3.704		
4-NITROANILINE	138	.23949	.23631	.27642	.27327	.26589	.25828	7.365		
DIBENZOFURAN	168	2.04488	1.83571	1.94866	1.91782	1.79656	1.90873	5.115		
ACENAPHTHYLENE	152	2.24178	1.99625	2.09922	2.09094	2.07505	2.10065	4.229		
FLUORENE	166	1.55490	1.33626	1.34395	1.28944	1.20896	1.34670	9.518		
3-NITROANILINE	138	-	.04883	.11452	.11792	.08856	.09246	34.506		
ACENAPHTHENE	153	1.52777	1.33286	1.39452	1.37214	1.26556	1.37857	7.016	*	
2,4-DINITROTOLUENE	165	.35967	.32328	.34179	.32754	.30831	.33212	5.867		
2,6-DINITROTOLUENE	165	.38599	.35678	.37953	.36730	.36597	.37112	3.126		
DIETHYLPHTHALATE	149	1.88063	1.62618	1.53368	1.45917	1.43355	1.58664	11.393		
4-CHLOROPHENYL-PHENYLETHER	204	.78893	.66962	.70193	.69165	.66856	.70414	7.032		
N-NITROSODIPHENYLAMINE	169	.51567	.44734	.53097	.55655	.53802	.51771	8.111	*	
4-BROMOPHENYL-PHENYL ETHER	248	.31338	.30437	.33954	.35732	.35891	.33482	7.486		
HEXACHLOROBENZENE	284	.46739	.39403	.43794	.45763	.43251	.43791	6.471		

RF - Response Factor (Subscript is amount in UG/L)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

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Initial Calibration Data
HSL Compounds

No: U-4906; 4928; 4971; 4989 Instrument ID: HP-5970D

Contractor: E & E, INC. Calibration Date: 10/17/86

Contract No: IL-3140

Minimum $\overline{RF}$ for SPCC is .05 Maximum % RSD for CCC is 30%

Laboratory ID:		D0965	D0966	D0967	D0968	D0969				
		RF	RF	RF	RF	RF				
Compound		20.00	50.00	80.00	120.00	160.00	$\overline{RF}$	% RSD	CCC	SPCC
PHENANTHRENE	178	1.06803	.96082	1.02609	1.02304	.99723	1.01505	3.896		
ANTHRACENE	178	1.03628	.92880	1.01124	1.03132	.98608	.99874	4.387		
DI-N-BUTYLPHTHALATE	149	1.16959	.91435	.95835	.92928	.88461	.97124	11.741		
FLUORANTHENE	202	.74009	.58463	.63445	.60617	.54197	.62146	11.974	*	
BENZIDINE		-	.65247	-	-	-	.65247	-		
PYRENE	202	2.67187	2.75714	2.57294	2.60959	2.82056	2.68642	3.814		
TERPHENYL-D14 (SURR)	244	1.42937	1.47810	1.43384	1.50928	1.55799	1.48172	3.638		
BUTYLBENZYLPHTHALATE	149	.62104	.62940	.71297	.68630	.76414	.68277	8.728		
3,3'DICHLOROBENZIDINE	252	.08557	.07185	.16233	.19359	.14980	.13263	39.182		
BENZO(A)ANTHRACENE	228	.79361	.77498	.97287	1.00315	1.03158	.91524	13.276		
BIS(2-ETHYLHEXYL)PHTHALATE	149	.78298	.70108	.85062	.83155	.91270	.81579	9.708		
CHRYSENE	228	1.34326	1.12613	1.17809	1.12675	1.18262	1.19137	7.479		
DI-N-OCTYL PHTHALATE	149	1.37470	1.35508	1.83002	1.65900	1.98983	1.64173	16.968	*	
BENZO(B)FLUORANTHENE	252	.92969	.97296	1.14091	1.25304	1.37734	1.13479	16.551		
BENZO(K)FLUORANTHENE	252	1.68215	1.48612	1.68304	1.46335	1.43849	1.55063	7.844		
BENZO(A)PYRENE	252	1.05637	.98495	1.15488	1.16496	1.18217	1.10877	7.641	*	
INDENO(1,2,3-CD)PYRENE	276	.67773	.93612	1.09730	1.40393	.87647	.99032	28.681		
DIBENZ(A,H)ANTHRACENE	278	.73019	.64673	.79793	.98482	.89827	.81159	16.475		
BENZO(G,H,I)PERYLENE	276	1.11119	1.00417	1.06321	1.25211	1.11363	1.10886	8.264		

RF - Response Factor (Subscript is amount in UG/L)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

recycled paper

ecology and environment

CONTINUING CALIBRATION DATA

Continuing Calibration Check
HSL Compounds

Case No: U-4906; U-4928 U-4971; U-4989

Calibration Date: 02/20/87

Co. actor: E & EM INC.

Time: 11:04

Contract No: IL-3140

Laboratory ID: >C6893

Instrument ID: HP-5995C

Initial Calibration Date: 07/14/86

Minimum $\overline{RF}$ for SPCC is .3

Maximum % Diff for CCC is 25%

Compound		$\overline{RF}$	RF	%Diff	CCC	SPCC
CHLOROMETHANE	50	2.30296	1.80863	21.47		**
BROMOMETHANE	94	1.43187	1.93909	35.42		
VINYL CHLORIDE	62	1.60438	1.83648	14.47	*	
CHLOROETHANE	64	.69191	1.14637	65.68		
METHYLENE CHLORIDE	84	1.38013	1.73721	25.87		
ACETONE	43	1.61869	3.09368	91.12		
TRICHLOROFLUOROMETHANE	101	3.13900	2.41083	23.20		
CARBON DISULFIDE	76	3.82990	2.62471	31.47		
1,1-DICHLOROETHENE	61	3.02810	2.85559	5.70	*	
1,1-DICHLOROETHANE	63	3.36439	4.25873	26.58		**
TRANS-1,2-DICHLOROETHENE	96	1.55781	1.76606	13.37		
CHLOROFORM	83	3.56796	2.95065	17.30	*	
1,2-DICHLOROETHANE	62	3.55680	4.17976	17.51		
1,2-DICHLOROETHANE-D4(SURR)	65	2.99858	3.43472	14.54		
2-BUTANONE	72	.06798	.12800	88.30		
1,1,1-TRICHLOROETHANE	97	.59787	.60722	1.56		
CARBON TETRACHLORIDE	117	.59043	.61253	3.74		
VINYL ACETATE	43	1.19023	1.23834	4.04		
BROMODICHLOROMETHANE	83	.65552	.68989	5.24		
1,2-DICHLOROPROPANE	63	.46960	.50689	7.94	*	
TRANS-1,3-DICHLOROPROPENE	75	.70348	.83119	18.15		
TRICHLOROETHENE	130	.40336	.50837	26.16		
DIBROMOCHLOROMETHANE	129	.55837	.56802	1.73		
1,1,2-TRICHLOROETHANE	97	.36284	.46592	28.41		
BENZENE	78	1.16600	1.36693	17.23		
CIS-1,3-DICHLOROPROPENE	75	.52628	.49714	5.54		
2-CHLOROETHYLVINYLETHER	63	.33081	.32125	2.89		
BROMOFORM	173	.62246	.50728	18.50		**
4-METHYL-2-PENTANONE	43	1.12348	1.22611	9.14		
2-HEXANONE	43	.92838	.98119	5.69		
TETRACHLOROETHENE	164	.47024	.53360	13.47		
1,1,2,2-TETRACHLOROETHANE	83	.80085	.80388	.38		**
TOLUENE-D8 (SURR)	98	1.36277	1.43151	5.04		
TOLUENE	92	.89572	1.07616	20.14	*	
CHLOROBENZENE	112	1.10402	1.31368	18.99		**
ETHYLBENZENE	91	1.85535	2.23227	20.32	*	

RF - Response Factor from daily standard file at 250.00 NGS

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

Case No: U-4906; U-4928 U-4971; U-4989

Calibration Date: 02/20/87

Con ctor: E & EM INC.

Time: 11:04

Contract No: IL-3140

Laboratory ID: >C6893

Instrument ID: HP-5995C

Initial Calibration Date: 07/14/86

Minimum $\overline{RF}$ for SPCC is .3

Maximum % Diff for CCC is 25%

Compound		$\overline{RF}$	RF	%Diff	CCC	SPCC
4-BROMOFLUOROBENZENE(SURR)	95	.71103	.81505	14.63		
STYRENE	104	.98260	1.32557	34.90		
TOTAL XYLENES	91	1.41320	1.84837	30.79		

Continuing Calibration Check
HSL Compounds

Case No: V-4906, V-4928 V-4971, V-4989

Calibration Date: 02/23/87

Contractor: E & E, INC.

Time: 12:40

Contract No: IL-3140

Laboratory ID: >C6910

Instrument ID: HP-5995C

Initial Calibration Date: ~~01/28/87~~ 1/27/87

Minimum $\overline{RF}$ for SPCC is .3

Maximum % Diff for CCC is 25%

Compound		$\overline{RF}$	RF	%Diff	CCC	SPCC
CHLOROMETHANE	50	2.43043	1.36878	43.68		**
BROMOMETHANE	94	1.10748	1.26845	14.53		
VINYL CHLORIDE	62	1.37999	1.09548	20.62	*	
CHLOROETHANE	64	.91582	.86217	5.86		
METHYLENE CHLORIDE	84	1.88105	2.00734	6.71		
ACETONE	43	.56188	.92399	64.44		
TRICHLOROFLUOROMETHANE	101	3.74934	2.56152	31.68		
CARBON DISULFIDE	76	5.33308	3.00678	43.62		
1,1-DICHLOROETHENE	61	3.40709	2.59144	23.94	*	
1,1-DICHLOROETHANE	63	3.74282	3.70795	.93		**
TRANS-1,2-DICHLOROETHENE	96	1.69959	1.62655	4.30		
CHLOROFORM	83	2.53321	2.78166	9.81	*	
1,2-DICHLOROETHANE	62	3.18319	3.57950	12.45		
1,2-DICHLOROETHANE-D4(SURR)	65	2.69697	2.82910	4.90		
2-BUTANONE	72	.03989	.04150	4.05		
1,1,1-TRICHLOROETHANE	97	.63749	.62800	1.49		
CARBON TETRACHLORIDE	117	.66973	.70690	5.55		
VINYL ACETATE	43	.70857	.63033	11.04		
BROMODICHLOROMETHANE	83	.65600	.75647	15.32		
1,2-DICHLOROPROPANE	63	.44332	.47014	6.05	*	
TRANS-1,3-DICHLOROPROPENE	75	.79316	.89276	12.56		
TRICHLOROETHENE	130	.41824	.44984	7.56		
DIBROMOCHLOROMETHANE	129	.49648	.55316	11.42		
1,1,2-TRICHLOROETHANE	97	.31392	.37328	18.91		
BENZENE	78	1.20435	1.27659	6.00		
CIS-1,3-DICHLOROPROPENE	75	.43032	.50192	16.64		
2-CHLOROETHYLVINYLETHER	63	.15885	.18865	18.76		
BROMOFORM	173	.38425	.40878	6.38		**
4-METHYL-2-PENTANONE	43	.44365	.43116	2.82		
2-HEXANONE	43	.32465	.32147	.98		
TETRACHLOROETHENE	164	.49222	.48705	1.05		
1,1,2,2-TETRACHLOROETHANE	83	.53574	.56504	5.47		**
TOLUENE-D8 (SURR)	98	1.41330	1.38864	1.74		
TOLUENE	92	.97844	1.02147	4.40	*	
CHLOROBENZENE	112	1.19479	1.26079	5.52		**
ETHYLBENZENE	91	2.06981	2.21296	6.92	*	

RF - Response Factor from daily standard file at 50.00 UG/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

Case No: V-4906; V-4928 V-4971; V-4989

Calibration Date: 02/23/87

Contractor: E & E, INC.

Time: 12:40

Contract No: IL-3140

Laboratory ID: >C6910

Instrument ID: HP-5995C

Initial Calibration Date: ~~01/28/87~~ 1/27/87

Minimum $\overline{RF}$ for SPCC is .3

Maximum % Diff for CCC is 25%

Compound		$\overline{RF}$	RF	%Diff	CCC	SPCC
4-BROMOFLUOROBENZENE(SURR)	95	.72214	.73687	2.04		
STYRENE	104	1.24236	1.35623	9.17		
TOTAL XYLENES	91	1.76320	1.89487	7.47		

RF - Response Factor from daily standard file at 50.00 UG/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

Case No: U-4906; U-4928 U-4971; U-4989

Calibration Date: 02/24/87

Contractor: E & EM INC.

Time: 14:54

Contract No: IL-3140

Laboratory ID: >C6940

Instrument ID: HP-5995C

Initial Calibration Date: 07/14/86

Minimum $\overline{RF}$ for SPCC is .3

Maximum % Diff for CCC is 25%

Compound		$\overline{RF}$	RF	%Diff	CCC	SPCC
CHLOROMETHANE	50	2.30296	1.57104	31.78		**
BROMOMETHANE	94	1.43187	1.59751	11.57		
VINYL CHLORIDE	62	1.60438	1.50198	6.38	*	
CHLOROETHANE	64	.69191	.98151	41.86		
METHYLENE CHLORIDE	84	1.38013	1.50636	9.15		
ACETONE	43	1.61869	1.44518	10.72		
TRICHLOROFLUOROMETHANE	101	3.13900	2.00381	36.16		
CARBON DISULFIDE	76	3.82990	2.25823	41.04		
1,1-DICHLOROETHENE	61	3.02810	2.46221	18.69	*	
1,1-DICHLOROETHANE	63	3.36439	3.51873	4.59		**
TRANS-1,2-DICHLOROETHENE	96	1.55781	1.44988	6.93		
CHLOROFORM	83	3.56796	2.49720	30.01	*	
1,2-DICHLOROETHANE	62	3.55630	3.28365	7.68		
1,2-DICHLOROETHANE-D4(SURR)	65	2.99858	2.60977	12.97		
2-BUTANONE	72	.06798	.07019	3.25		
1,1,1-TRICHLOROETHANE	97	.59787	.53040	11.29		
CARBON TETRACHLORIDE	117	.59043	.53136	10.01		
VINYL ACETATE	43	1.19023	.88040	26.03		
BROMODICHLOROMETHANE	83	.65552	.60988	6.96		
1,2-DICHLOROPROPANE	63	.46960	.44530	5.18	*	
TRANS-1,3-DICHLOROPROPENE	75	.70348	.73562	4.57		
TRICHLOROETHENE	130	.40336	.39404	2.31		
DIBROMOCHLOROMETHANE	129	.55837	.46153	17.34		
1,1,2-TRICHLOROETHANE	97	.36284	.36457	.48		
BENZENE	78	1.16600	1.15219	1.18		
CIS-1,3-DICHLOROPROPENE	75	.52628	.39136	25.64		
2-CHLOROETHYLVINYLETHER	63	.33081	.23078	30.24		
BROMOFORM	173	.62246	.38122	38.76		**
4-METHYL-2-PENTANONE	43	1.12348	.82297	26.75		
2-HEXANONE	43	.92838	.63516	31.58		
TETRACHLOROETHENE	164	.47024	.45628	2.97		
1,1,2,2-TETRACHLOROETHANE	83	.80085	.70217	12.32		**
TOLUENE-D8 (SURR)	98	1.36277	1.25597	7.84		
TOLUENE	92	.89572	.93165	4.01	*	
CHLOROBENZENE	112	1.10402	1.10885	.44		**
ETHYLBENZENE	91	1.85535	1.97067	6.22	*	

RF - Response Factor from daily standard file at 250.00 NGS

$\overline{R}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

Case No: U-4906; U-4928 U-4971; U-4989

Calibration Date: 02/24/87

Contractor: E & EM INC.

Time: 14:54

Contract No: IL-3140

Laboratory ID: >C6940

Instrument ID: HP-5995C

Initial Calibration Date: 07/14/86

Minimum $\overline{RF}$ for SPCC is .3

Maximum % Diff for CCC is 25%

Compound		$\overline{RF}$	RF	%Diff	CCC	SPCC
4-BROMOFLUOROBENZENE(SURR)	95	.71103	.69748	1.90		
STYRENE	104	.98260	1.14449	16.48		
TOTAL XYLENES	91	1.41320	1.65217	16.91		

RF - Response Factor from daily standard file at 250.00 NGS

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

ase V-4906, V-4928 V-4971, V-4989

Calibration Date: 02/26/87

ontractor: E & E, INC.

Time: 14:00

ontract No: IL-3140

Laboratory ID: XC6963

nstrument ID: HP-5995C

Initial Calibration Date: ~~01/28/87~~ RGK 1/27/87

Minimum $\overline{RF}$ for SPCC is .3 Maximum % Diff for CCC is 25%

Compound		$\overline{RF}$	RF	%Diff	CCC	SPCC
HLOROMETHANE	50	2.43043	1.38811	42.89		**
ROMOMETHANE	94	1.10748	1.52053	37.30		
INYL CHLORIDE	62	1.37999	1.44532	4.73	*	
HLOROETHANE	64	.91582	.92353	.84		
ETHYLENE CHLORIDE	84	1.88105	1.72788	8.14		
CETONE	43	.56188	.89036	58.46		
RICHLOROFLUOROMETHANE	101	3.74934	3.86132	2.99		
ARBON DISULFIDE	76	5.33308	5.30649	.50		
,1-DICHLOROETHENE	61	3.40709	3.17447	6.83	*	
,1-DICHLOROETHANE	63	3.74282	3.27332	12.54		**
RANS-1,2-DICHLOROETHENE	96	1.69959	1.61050	5.24		
HLOROFORM	83	2.53321	2.35097	7.19	*	
,2-DICHLOROETHANE	62	3.18319	3.06470	3.72		
,2-DICHLOROETHANE-D4(SURR)	65	2.69697	2.44146	9.47		
-BUTANONE	72	.03989	.04478	12.27		
,1,1-TRICHLOROETHANE	97	.63749	.65792	3.20		
ARBON TETRACHLORIDE	117	.66973	.67774	1.20		
INYL ACETATE	43	.70857	.56820	19.81		
ROMODICHLOROMETHANE	83	.65600	.64980	.94		
,2-DICHLOROPROPANE	63	.44332	.40112	9.52	*	
RANS-1,3-DICHLOROPROPENE	75	.79316	.77290	2.56		
RICHLOROETHENE	130	.41824	.40108	4.10		
IBROMOCHLOROMETHANE	129	.49648	.47087	5.16		
,1,2-TRICHLOROETHANE	97	.31392	.30953	1.40		
ENZENE	78	1.20435	1.20423	.01		
IS-1,3-DICHLOROPROPENE	75	.43032	.42630	.94		
-CHLOROETHYLVINYLETHER	63	.15885	.15464	2.65		
ROMOFORM	173	.38425	.34279	10.79		**
-METHYL-2-PENTANONE	43	.44365	.35345	20.33		
-HEXANONE	43	.32465	.30629	5.65		
ETRACHLOROETHENE	164	.49222	.43575	11.47		
,1,2,2-TETRACHLOROETHANE	83	.53574	.49263	8.05		**
OLUENE-D8 (SURR)	98	1.41330	1.29745	8.20		
OLUENE	92	.97844	.91401	6.58	*	
HLOROBENZENE	112	1.19479	1.06016	11.27		**
THYLBENZENE	91	2.06981	1.97256	4.70	*	

F - Response Factor from daily standard file at 50.00 UG/L

$\overline{F}$ - Average Response Factor from Initial Calibration Form VI

Diff - % Difference from original average or curve

Continuing Calibration Check
HSL Compounds

U-4906; U-4928

ase U-4971; U-4989 Calibration Date: 02/26/87

ontractor: E & E, INC. Time: 14:00

ontract No: IL-3140 Laboratory ID: >C6963

nstrument ID: HP-5995C Initial Calibration Date: ~~01/28/87~~ BJL 1/27/87

Minimum $\overline{RF}$ for SPCC is .3 Maximum % Diff for CCC is 25%

Compound		$\overline{RF}$	RF	%Diff	CCC	SPCC
4-BROMOFLUOROBENZENE(SURR)	95	.72214	.67854	6.04		
STYRENE	104	1.24236	1.14376	7.94		
TOTAL XYLENES	91	1.76320	1.61522	8.39		

RF - Response Factor from daily standard file at 50.00 UG/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

Continuing Calibration Check
HSL Compounds

Case No: U-4906; U-4928 U-4971; U-4989

Calibration Date: 03/04/87

Contractor: E & EM INC.

Time: 09:42

Contract No: IL-3140

Laboratory ID: >C7038

Instrument ID: HP-5995C

Initial Calibration Date: 07/14/86

Minimum $\overline{RF}$ for SPCC is .3

Maximum % Diff for CCC is 25%

Compound		$\overline{RF}$	RF	%Diff	CCC	SPCC
CHLOROMETHANE	50	2.30296	1.06652	53.69		**
BROMOMETHANE	94	1.43187	.73716	48.52		
VINYL CHLORIDE	62	1.60438	1.12382	29.95	*	
CHLOROETHANE	64	.69191	.84946	22.77		
METHYLENE CHLORIDE	84	1.38013	1.77840	28.86		
ACETONE	43	1.61869	1.22653	24.23		
TRICHLOROFLUOROMETHANE	101	3.13900	3.66594	16.79		
CARBON DISULFIDE	76	3.82990	5.26752	37.54		
1,1-DICHLOROETHENE	61	3.02810	3.07012	1.39	*	
1,1-DICHLOROETHANE	63	3.36439	3.22058	4.27		**
TRANS-1,2-DICHLOROETHENE	96	1.55721	1.79942	15.51		
CHLOROFORM	83	3.56796	3.50665	1.72	*	
1,2-DICHLOROETHANE	62	3.55680	2.87829	19.06		
1,2-DICHLOROETHANE-D4(SURR)	65	2.99858	2.39776	20.04		
2-BUTANONE	72	.06798	.07021	3.28		
1,1,1-TRICHLOROETHANE	97	.59787	.61162	2.30		
CARBON TETRACHLORIDE	117	.59043	.67081	13.61		
VINYL ACETATE	43	1.19023	.72658	38.95		
BROMODICHLOROMETHANE	83	.65552	.63945	2.45		
1,2-DICHLOROPROPANE	63	.46960	.41212	12.24	*	
TRANS-1,3-DICHLOROPROPENE	75	.70349	.78026	10.91		
TRICHLOROETHENE	130	.40336	.42680	5.81		
DIBROMOCHLOROMETHANE	129	.55837	.54018	3.26		
1,1,2-TRICHLOROETHANE	97	.36234	.34701	4.36		
BENZENE	78	1.16600	1.21633	4.32		
CIS-1,3-DICHLOROPROPENE	75	.52628	.43300	17.73		
2-CHLOROETHYLVINYLETHER	63	.33081	.20804	37.11		
BROMOFORM	173	.62246	.46463	25.35		**
4-METHYL-2-PENTANONE	43	1.12348	.57096	49.18		
2-HEXANONE	43	.92838	.51827	44.17		
TETRACHLOROETHENE	164	.47024	.47865	1.79		
1,1,2,2-TETRACHLOROETHANE	83	.80085	.63189	21.10		**
TOLUENE-D8 (SURR)	98	1.36277	1.36466	.14		
TOLUENE	92	.89572	1.00248	11.92	*	
CHLOROBENZENE	112	1.10402	1.15054	4.21		**
ETHYLBENZENE	91	1.85535	1.94857	5.02	*	

RF - Response Factor from daily standard file at 250.00 NGS

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

Case No: V-4906, V-4923 V-4921, V-4989

Calibration Date: 03/04/87

Cor tor: E & EM INC.

Time: 09:42

Contract No: IL-3140

Laboratory ID: >C7038

Instrument ID: HP-5995C

Initial Calibration Date: 07/14/86

Minimum $\overline{RF}$ for SPCC is .3

Maximum % Diff for CCC is 25%

Compound		$\overline{RF}$	RF	%Diff	CCC	SPCC
4-BROMOFLUOROBENZENE(SURR)	95	.71103	.74076	4.18		
STYRENE	104	.98260	1.18691	20.79		
TOTAL XYLENES	91	1.41320	1.60160	13.33		

RF - Response Factor from daily standard file at 250.00 NGS

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

Case No: U-4906, U-4928, U-4971, U-4989

Calibration Date: 03/09/87

Contractor: E & E, INC.

Time: 11:26

Contract No: IL-3140

Laboratory ID: >C7137

Instrument ID: HP-5995C

Initial Calibration Date: ~~01/28/87~~ 1/27/87

Minimum $\overline{RF}$ for SPCC is .3

Maximum % Diff for CCC is 25%

Compound		$\overline{RF}$	RF	%Diff	CCC	SPCC
CHLOROMETHANE	50	2.43043	1.66818	31.36		**
BROMOMETHANE	94	1.10748	1.62667	46.88		
VINYL CHLORIDE	62	1.37999	1.58988	15.21	*	
CHLOROETHANE	64	.91582	.93653	2.26		
METHYLENE CHLORIDE	84	1.88105	1.96792	4.62		
ACETONE	43	.56188	.99489	77.06		
TRICHLOROFLUOROMETHANE	101	3.74934	4.43021	18.16		
CARBON DISULFIDE	76	5.33308	6.03883	13.23		
1,1-DICHLOROETHENE	61	3.40709	3.49492	2.58	*	
1,1-DICHLOROETHANE	63	3.74282	3.67349	1.85		**
TRANS-1,2-DICHLOROETHENE	96	1.69959	1.98139	16.58		
CHLOROFORM	83	2.53321	2.66134	5.06	*	
1,2-DICHLOROETHANE	62	3.18319	3.17693	.20		
1,2-DICHLOROETHANE-D4(SURR)	65	2.69697	2.60976	3.23		
2-BUTANONE	72	.03989	.04598	15.28		
1,1,1-TRICHLOROETHANE	97	.63749	.74662	17.12		
CARBON TETRACHLORIDE	117	.66973	.78265	16.86		
VINYL ACETATE	43	.70857	.57191	19.29		
BROMODICHLOROMETHANE	83	.65600	.70070	6.81		
1,2-DICHLOROPROPANE	63	.44332	.43278	2.38	*	
TRANS-1,3-DICHLOROPROPENE	75	.79316	.85544	7.85		
TRICHLOROETHENE	130	.41824	.47459	13.47		
DIBROMOCHLOROMETHANE	129	.49648	.53452	7.66		
1,1,2-TRICHLOROETHANE	97	.31392	.34554	10.07		
BENZENE	78	1.20435	1.32216	9.78		
CIS-1,3-DICHLOROPROPENE	75	.43032	.46228	7.43		
2-CHLOROETHYLVINYLETHER	63	.15885	.18709	17.78		
BROMOFORM	173	.38425	.39103	1.76		**
4-METHYL-2-PENTANONE	43	.44365	.34887	21.36		
2-HEXANONE	43	.32465	.31027	4.43		
TETRACHLOROETHENE	164	.49222	.52056	5.76		
1,1,2,2-TETRACHLOROETHANE	83	.53574	.49227	8.11		**
TOLUENE-D8 (SURR)	98	1.41330	1.52238	7.72		
TOLUENE	92	.97844	1.06102	8.44	*	
CHLOROBENZENE	112	1.19479	1.24503	4.21		**
ETHYLBENZENE	91	2.06981	2.22346	7.42	*	

RF - Response Factor from daily standard file at 50.00 UG/L

$\overline{}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

V-4906; V-4928

Case No: V-4971; V-4989 Calibration Date: 03/09/87

Contractor: E & E, INC. Time: 11:26

Contract No: IL-3140 Laboratory ID: >C7137

Instrument ID: HP-5995C Initial Calibration Date: ~~01/28/87~~ BJK 1/27/87

Minimum $\overline{RF}$ for SPCC is .3 Maximum % Diff for CCC is 25%

Compound		$\overline{RF}$	RF	%Diff	CCC	SPCC
4-BROMOFLUOROBENZENE(SURR)	95	.72214	.77488	7.30		
STYRENE	104	1.24236	1.39227	12.07		
TOTAL XYLENES	91	1.76320	1.89607	7.54		

- Response Factor from daily standard file at 50.00 UG/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

Case No: U-4906, 4928, 4971, 4989

Calibration Date: 03/04/87

Contractor: E & E, INC.

Time: 12:27

Contract No: II-3140

Laboratory ID: >D1880

Instrument ID: HP-5970D

Initial Calibration Date: 10/17/86

Minimum $\overline{RF}$ for SPCC is .05

Maximum % Diff for CCC is 25%

Compound		$\overline{RF}$	RF	%Diff	CCC	SPCC
ANILINE	93	1.54043	.13889	90.98		
BIS(-2-CHLOROETHYL)ETHER	93	1.18428	1.17304	.95		
1,3-DICHLOROBENZENE	146	1.47624	1.44687	1.99		
1,4-DICHLOROBENZENE	146	1.46874	1.48636	1.20	*	
BENZYL ALCOHOL	79	1.13473	.96852	14.65		
1,2-DICHLOROBENZENE	146	1.49193	1.44904	2.87		
BIS(2-CHLOROISOPROPYL)ETHER	45	2.68137	3.34288	24.67		
N-NITROSO-DI-N-PROPYLAMINE	70	1.18117	1.22732	3.91		**
HEXACHLOROETHANE	117	.70841	.69192	2.33		
NITROBENZENE-D5 (SURR)	82	.37437	.39725	6.11		
NITROBENZENE	77	.37969	.42161	11.04		
ISOPHORONE	82	.75594	.79418	5.06		
BIS(-2-CHLOROETHOXY)METHANE	93	.41266	.43937	6.47		
1,2,4-TRICHLOROBENZENE	180	.38442	.35108	8.67		
NAPHTHALENE	128	.96668	1.00317	3.78		
4-CHLOROANILINE	127	.37796	.25629	32.19		
HEXACHLOROBUTADIENE	225	.25908	.24284	6.27	*	
2-METHYLNAPHTHALENE	142	.64484	.57785	10.39		
HEXACHLOROCYCLOPENTADIENE	237	.56814	.49669	12.58		**
2-FLUOROBIPHENYL (SURR)	172	1.61321	1.51663	5.99		
2-CHLORONAPHTHALENE	162	1.37281	1.28543	6.37		
2-NITROANILINE	65	.47645	.34834	26.89		
DIMETHYL PHTHALATE	163	1.71954	1.03955	39.55		
4-NITROANILINE	138	.25828	.12894	50.08		
DIBENZOFURAN	168	1.90873	1.36795	28.33		
ACENAPHTHYLENE	152	2.10065	1.78977	14.80		
FLUORENE	166	1.34670	.91843	31.80		
3-NITROANILINE	138	.09246	.03527	61.85		
ACENAPHTHENE	153	1.37857	1.15093	16.51	*	
2,4-DINITROTOLUENE	165	.33212	.16072	51.61		
2,6-DINITROTOLUENE	165	.37112	.21932	40.90		
DIETHYLPHTHALATE	149	1.58664	.82515	47.99		
4-CHLOROPHENYL-PHENYLETHER	204	.70414	.43473	38.26		
N-NITROSODIPHENYLAMINE	169	.51771	.50778	1.92	*	
4-BROMOPHENYL-PHENYL ETHER	248	.33482	.31400	6.22		
HEXACHLOROBENZENE	284	.43791	.37770	13.75		

* - Response Factor from daily standard file at 50.00 UG/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

Continuing Calibration Check
HSL Compounds

Case No: V-4906, 4928, 4971, 4989

Calibration Date: 03/04/87

(tractor: E & E, INC.

Time: 12:27

Contract No: IL-3140

Laboratory ID: >D1880

Instrument ID: HP-5970D

Initial Calibration Date: 10/17/86

Minimum $\overline{RF}$ for SPCC is .05

Maximum % Diff for CCC is 25%

Compound		$\overline{RF}$	RF	%Diff	CCC	SPCC
PHENANTHRENE	178	1.01505	1.00378	1.11		
ANTHRACENE	178	.99874	.96419	3.46		
DI-N-BUTYLPHTHALATE	149	.97124	.88620	8.76		
FLUORANTHENE	202	.62146	.74958	20.62	*	
BENZIDINE		.65247	.21826	66.55		
PYRENE	202	2.68642	1.39955	47.90		
TERPHENYL-D14 (SURR)	244	1.48172	.79741	46.18		
BUTYLBENZYLPHTHALATE	149	.68277	.47132	30.97		
3,3'DICHLOROBENZIDINE	252	.13263	.23417	76.56		
BENZO(A)ANTHRACENE	228	.91524	.94337	3.07		
BIS(2-ETHYLHEXYL)PHTHALATE	149	.81579	.66916	17.97		
CHRYSENE	228	1.19137	1.06133	10.92		
DI-N-OCTYL PHTHALATE	149	1.64173	1.22563	25.35	*	
BENZO(B)FLUORANTHENE	252	1.13479	1.28150	12.93		
BENZO(K)FLUORANTHENE	252	1.55063	1.16902	24.61		
BENZO(A)PYRENE	252	1.10877	1.08726	1.94	*	
INDENO(1,2,3-CD)PYRENE	276	.99032	1.08629	9.69		
DIBENZ(A,H)ANTHRACENE	278	.81159	1.06637	31.39		
BENZO(G,H,I)PERYLENE	276	1.10886	1.23250	11.15		

RF - Response Factor from daily standard file at 50.00 UG/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

Continuing Calibration Check
HSL Compounds

Case No: U-4906, 4928, 4971, 4989

Calibration Date: 03/04/87

Contractor: E & E, INC.

Time: 13:26

Contract No: IL-3140

Laboratory ID: >D1881

Instrument ID: HP-5970D

Initial Calibration Date: ~~06/20/86~~ 6/19/86

Minimum $\overline{RF}$ for SPCC is .05

Maximum % Diff for CCC is 25%

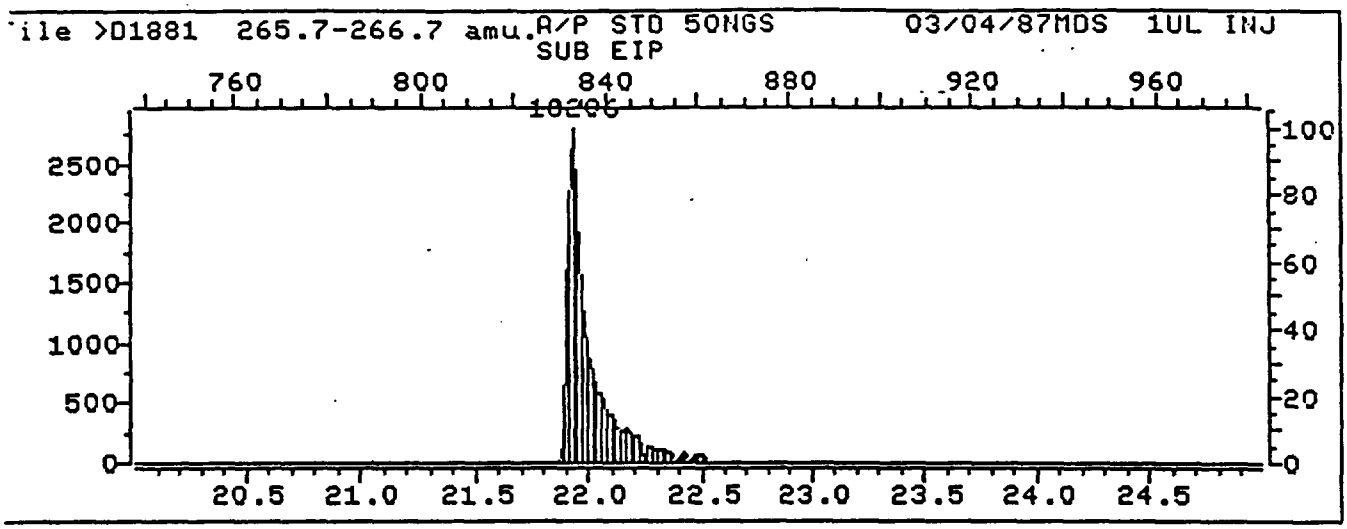
Compound		$\overline{RF}$	RF	%Diff	CCC	SPCC
PHENOL-D5	(SURR) 99	1.40059	1.40569	.36		
PENTAFLUOROPHENOL	184	-	-	-		
2-FLUOROPHENOL	(SURR) 112	.92130	.95140	3.27		
PHENOL	94	1.34105	1.53177	14.22	*	
2-METHYL PHENOL	108	1.03158	1.12703	9.25		
2-CHLOROPHENOL	128	1.13833	1.15859	1.78		
4-METHYL PHENOL	108	1.07582	1.10895	3.08		
2-NITROPHENOL	139	.20262	.18667	7.87	*	
2,4-DIMETHYLPHENOL	122	.28916	.25540	11.67		
BENZOIC ACID	105	.20401	.13089	35.84		
2,4-DICHLOROPHENOL	162	.31568	.26479	16.12	*	
4-CHLORO-3-METHYLPHENOL	107	.33577	.25939	22.75	*	
2,4,6-TRICHLOROPHENOL	196	.45546	.40082	12.00	*	
2,4,5-TRICHLOROPHENOL	196	.48930	.38115	22.10		
2,4,6-TRIBROMOPHENOL	(SURR) 330	.32584	.17456	46.43		
2,4-DINITROPHENOL	184	.17071	.06858	59.83		**
4-NITROPHENOL	139	.32314	.06039	81.31		**
4,6-DINITRO-2-METHYLPHENOL	198	.12041	.11043	8.29		
PENTACHLOROPHENOL	266	.18773	~~.13716~~	~~26.93~~	*	
			.14762	21.36	see manual integ.	

This RF was used to Recalc.

RF - Response Factor from daily standard file at 50.00 UG/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve



Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	21.937	828	833	864	2808	18206	18206	100.00	100.000

Sum of corrected areas: 18206.

:TR

Manual Integration of Pentachlorophenol GK

Continuing Calibration Check
HSL Compounds

Case No: U-4906, 4928, 4971, 4989

Calibration Date: 03/05/87

(tractor: E & E, INC.

Time: 15:56

Contract No: IL-3140

Laboratory ID: >D1897

Instrument ID: HP-5970D

Initial Calibration Date: 10/17/86

Minimum $\overline{RF}$ for SPCC is .05

Maximum % Diff for CCC is 25%

Compound		$\overline{RF}$	RF	%Diff	CCC	SPCC
ANILINE	93	1.54043	1.37050	11.03		
BIS(-2-CHLOROETHYL)ETHER	93	1.18428	1.14803	3.06		
1,3-DICHLOROBENZENE	146	1.47624	1.44052	2.42		
1,4-DICHLOROBENZENE	146	1.46874	1.47877	.68	*	
BENZYL ALCOHOL	79	1.13473	1.04867	7.58		
1,2-DICHLOROBENZENE	146	1.49193	1.46202	2.00		
BIS(2-CHLOROISOPROPYL)ETHER	45	2.68137	3.38522	26.25		
N-NITROSO-DI-N-PROPYLAMINE	70	1.18117	1.22084	3.36		**
HEXACHLOROETHANE	117	.70841	.69553	1.82		
NITROBENZENE-D5 (SURR)	82	.37437	.42609	13.82		
NITROBENZENE	77	.37969	.44739	17.83		
ISOPHORONE	82	.75594	.80365	6.31		
BIS(-2-CHLOROETHOXY)METHANE	93	.41266	.45715	10.78		
1,2,4-TRICHLOROBENZENE	180	.38442	.35072	8.77		
NAPHTHALENE	128	.96668	.99838	3.28		
4-CHLOROANILINE	127	.37796	.29431	22.13		
HEXACHLOROBUTADIENE	225	.25908	.23308	10.03	*	
2-METHYLNAPHTHALENE	142	.64484	.56216	12.82		
HEXACHLOROCYCLOPENTADIENE	237	.56814	.46548	18.07		**
2-FLUOROBIPHENYL (SURR)	172	1.61321	1.61533	.13		
2-CHLORONAPHTHALENE	162	1.37281	1.30106	5.23		
2-NITROANILINE	65	.47645	.37781	20.70		
DIMETHYL PHTHALATE	163	1.71954	1.17031	31.94		
4-NITROANILINE	138	.25828	.13665	47.09		
DIBENZOFURAN	168	1.90873	1.38060	27.67		
ACENAPHTHYLENE	152	2.10065	1.81211	13.74		
FLUORENE	166	1.34670	.92261	31.49		
3-NITROANILINE	138	.09246	.01738	81.20		
ACENAPHTHENE	153	1.37857	1.14663	16.82	*	
2,4-DINITROTOLUENE	165	.33212	.17280	47.97		
2,6-DINITROTOLUENE	165	.37112	.23510	36.65		
DIETHYLPHTHALATE	149	1.58664	.87280	44.99		
4-CHLOROPHENYL-PHENYLETHER	204	.70414	.42817	39.19		
N-NITROSODIPHENYLAMINE	169	.51771	.57163	10.41	*	
4-BROMOPHENYL-PHENYL ETHER	248	.33482	.30591	8.64		
HEXACHLOROBENZENE	284	.43791	.34406	21.43		

RF - Response Factor from daily standard file at 50.00 UG/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

Continuing Calibration Check
HSL Compounds

Case No: U-4906; 4928; 4971; 4989

Calibration Date: 03/05/87

C .tractor: E & E, INC.

Time: 15:56

Contract No: IL-3140

Laboratory ID: >D1897

Instrument ID: HP-5970D

Initial Calibration Date: 10/17/86

Minimum $\overline{RF}$ for SPCC is .05

Maximum % Diff for CCC is 25%

Compound		$\overline{RF}$	RF	%Diff	CCC	SPCC
PHENANTHRENE	178	1.01505	.95084	6.33		
ANTHRACENE	178	.99874	.94201	5.68		
DI-N-BUTYLPHTHALATE	149	.97124	.94088	3.13		
FLUORANTHENE	202	.62146	.69431	11.72	*	
BENZIDINE		.65247	.23942	63.31		
PYRENE	202	2.68642	1.32992	50.49		
TERPHENYL-D14 (SURR)	244	1.48172	.78510	47.01		
BUTYLBENZYLPHTHALATE	149	.68277	.52169	23.59		
3,3'DICHLOROBENZIDINE	252	.13263	.25588	92.93		
BENZO(A)ANTHRACENE	228	.91524	.98745	7.89		
BIS(2-ETHYLHEXYL)PHTHALATE	149	.81579	.74287	8.94		
CHRYSENE	228	1.19137	1.03189	13.39		
DI-N-OCTYL PHTHALATE	149	1.64173	1.40043	14.70	*	
BENZO(B)FLUORANTHENE	252	1.13479	1.16636	2.78		
BENZO(K)FLUORANTHENE	252	1.55063	1.30185	16.04		
BENZO(A)PYRENE	252	1.10877	1.13135	2.04	*	
INDENO(1,2,3-CD)PYRENE	276	.99032	1.05633	6.67		
DIBENZ(A,H)ANTHRACENE	278	.81159	1.02577	26.39		
BENZO(G,H,I)PERYLENE	276	1.10886	1.17447	5.92		

- Response Factor from daily standard file at 50.00 UG/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

Continuing Calibration Check
HSL Compounds

Case No: V-4906; 4928; 4971; 4989

Calibration Date: 03/05/87

.ntractor: E & E, INC.

Time: 11:47

Contract No: IL-3140

Laboratory ID: >D1893

Instrument ID: HP-5970D

Initial Calibration Date: ~~06/20/86~~ 6/19/86

Minimum $\overline{RF}$ for SPCC is .05

Maximum % Diff for CCC is 25%

Compound		$\overline{RF}$	RF	%Diff	CCC	SPCC
PHENOL-D5 (SURR)	99	1.40059	1.52194	8.66		
PENTAFLUOROPHENOL	184	-	-	-		
2-FLUOROPHENOL (SURR)	112	.92130	.68556	25.59		
PHENOL	94	1.34105	1.61233	20.23	*	
2-METHYL PHENOL	108	1.03158	1.07849	4.55		
2-CHLOROPHENOL	128	1.13833	1.12917	.80		
4-METHYL PHENOL	108	1.07582	1.11766	3.89		
2-NITROPHENOL	139	.20262	.20014	1.22	*	
2,4-DIMETHYLPHENOL	122	.28916	.25711	11.08		
BENZOIC ACID	105	.20401	.16339	19.91		
2,4-DICHLOROPHENOL	162	.31568	.26707	15.40	*	
4-CHLORO-3-METHYLPHENOL	107	.33577	.26260	21.79	*	
2,4,6-TRICHLOROPHENOL	196	.45546	.41237	9.46	*	
2,4,5-TRICHLOROPHENOL	196	.48930	.36471	25.46		
2,4,6-TRIBROMOPHENOL(SURR)	330	.32584	.18635	42.81		
2,4-DINITROPHENOL	184	.17071	.08233	51.77		**
4-NITROPHENOL	139	.32314	.09192	71.56		**
4,6-DINITRO-2-METHYLPHENOL	198	.12041	.12369	2.72		
PENTACHLOROPHENOL	266	.18773	.15717	16.28	*	

- Response Factor from daily standard file at 50.00 UG/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

Continuing Calibration Check
HSL Compounds

Case No: U-4906, 4928, 4971, 4989

Calibration Date: 03/17/87

Contractor: E & E, INC.

Time: 13:41

Contract No: IL-3140

Laboratory ID: >D2017

Instrument ID: HP-5970D

Initial Calibration Date: 10/17/86

Minimum $\overline{RF}$ for SPCC is .05

Maximum % Diff for CCC is 25%

Compound		$\overline{RF}$	RF	%Diff	CCC	SPCC
ANILINE	93	1.54043	.80678	47.63		
BIS(-2-CHLOROETHYL)ETHER	93	1.18428	1.28491	8.50		
1,3-DICHLOROBENZENE	146	1.47624	1.39381	5.58		
1,4-DICHLOROBENZENE	146	1.46874	1.45048	1.24	*	
BENZYL ALCOHOL	79	1.13473	1.01643	10.43		
1,2-DICHLOROBENZENE	146	1.49193	1.44503	3.14		
BIS(2-CHLOROISOPROPYL)ETHER	45	2.68137	3.46212	29.12		
N-NITROSO-DI-N-PROPYLAMINE	70	1.18117	1.31859	11.63		**
HEXACHLOROETHANE	117	.70841	.72417	2.22		
NITROBENZENE-D5 (SURR)	82	.37437	.39440	5.35		
NITROBENZENE	77	.37969	.40856	7.60		
ISOPHORONE	82	.75594	.79220	4.80		
BIS(-2-CHLOROETHOXY)METHANE	93	.41266	.46056	11.61		
1,2,4-TRICHLOROBENZENE	180	.38442	.36049	6.23		
NAPHTHALENE	128	.96668	.99040	2.45		
4-CHLOROANILINE	127	.37796	.26011	31.18		
HEXACHLOROBUTADIENE	225	.25908	.23685	8.58	*	
2-METHYLNAPHTHALENE	142	.64484	.66800	3.59		
HEXACHLOROCYCLOPENTADIENE	237	.56814	.28895	49.14		**
2-FLUOROBIPHENYL (SURR)	172	1.61321	1.19801	25.74		
2-CHLORONAPHTHALENE	162	1.37281	1.04770	23.68		
2-NITROANILINE	65	.47645	.46503	2.40		
DIMETHYL PHTHALATE	163	1.71954	1.31151	23.73		
4-NITROANILINE	138	.25828	.24159	6.46		
DIBENZOFURAN	168	1.90873	1.58777	16.82		
ACENAPHTHYLENE	152	2.10065	1.69024	19.54		
FLUORENE	166	1.34670	1.21050	10.11		
3-NITROANILINE	138	.09246	.13452	45.50		
ACENAPHTHENE	153	1.37857	1.10134	20.11	*	
2,4-DINITROTOLUENE	165	.33212	.32473	2.23		
2,6-DINITROTOLUENE	165	.37112	.31671	14.66		
DIETHYLPHTHALATE	149	1.58664	1.35557	14.56		
4-CHLOROPHENYL-PHENYLETHER	204	.70414	.58408	17.05		
N-NITROSODIPHENYLAMINE	169	.51771	.45273	12.55	*	
4-BROMOPHENYL-PHENYL ETHER	248	.33482	.27299	18.47		
HEXACHLOROBENZENE	284	.43791	.31869	27.23		

-- - Response Factor from daily standard file at 50.00 UG/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

Continuing Calibration Check
HSL Compounds

Case No: U-4906;4928;4971;4989

Calibration Date: 03/17/87

Contractor: E & E, INC.

Time: 13:41

Contract No: IL-3140

Laboratory ID: >D2017

Instrument ID: HP-5970D

Initial Calibration Date: 10/17/86

Minimum $\overline{RF}$ for SPCC is .05

Maximum % Diff for CCC is 25%

Compound		$\overline{RF}$	RF	%Diff	CCC	SPCC
PHENANTHRENE	178	1.01505	.98556	2.91		
ANTHRACENE	178	.99874	.90470	9.42		
DI-N-BUTYLPHTHALATE	149	.97124	1.04233	7.32		
FLUORANTHENE	202	.62146	.72281	16.31	*	
BENZIDINE		.65247	.42369	35.06		
PYRENE	202	2.68642	2.34226	12.81		
TERPHENYL-D14 (SURR)	244	1.48172	1.23090	16.93		
BUTYLBENZYLPHTHALATE	149	.68277	.68596	.47		
3,3'DICHLOROBENZIDINE	252	.13263	.01886	85.78		
BENZO(A)ANTHRACENE	228	.91524	1.07047	16.96		
BIS(2-ETHYLHEXYL)PHTHALATE	149	.81579	1.13532	39.17		
CHRYSENE	228	1.19137	1.01690	14.64		
DI-N-OCTYL PHTHALATE	149	1.64173	1.86802	13.78	*	
BENZO(B)FLUORANTHENE	252	1.13479	1.26188	11.20		
BENZO(K)FLUORANTHENE	252	1.55063	1.27335	17.88		
BENZO(A)PYRENE	252	1.10877	1.12351	1.33	*	
INDENO(1,2,3-CD)PYRENE	276	.99032	1.06362	7.40		
DIBENZ(A,H)ANTHRACENE	278	.81159	.99858	23.04		
BENZO(G,H,I)PERYLENE	276	1.10886	1.12460	1.42		

RF - Response Factor from daily standard file at 50.00 UG/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

Continuing Calibration Check
HSL Compounds

Case No: U-4906;4928;4971;4989

Calibration Date: 03/17/87

Contractor: E & E, INC.

Time: 14:45

Contract No: II-3140

Laboratory ID: >D2018

Instrument ID: HP-5970D

Initial Calibration Date: ~~06/20/86~~ BJM 6/19/86

Minimum $\overline{RF}$ for SPCC is .05

Maximum % Diff for CCC is 25%

Compound		$\overline{RF}$	RF	%Diff	CCC	SPCC
PHENOL-D5 (SURR)	99	1.40059	1.50519	7.47		
PENTAFLUOROPHENOL	184	-	-	-		
2-FLUOROPHENOL (SURR)	112	.92130	.95578	3.74		
PHENOL	94	1.34105	1.64761	22.86	*	
2-METHYL PHENOL	108	1.03158	1.23520	19.74		
2-CHLOROPHENOL	128	1.13833	1.21845	7.04		
4-METHYL PHENOL	108	1.07582	1.31002	21.77		
2-NITROPHENOL	139	.20262	.20480	1.08	*	
2,4-DIMETHYLPHENOL	122	.28916	.27403	5.23		
BENZOIC ACID	105	.20401	.22454	10.06		
2,4-DICHLOROPHENOL	162	.31568	.30521	3.32	*	
4-CHLORO-3-METHYLPHENOL	107	.33577	.33931	1.06	*	
2,4,6-TRICHLOROPHENOL	196	.45546	.39807	12.60	*	
,4,5-TRICHLOROPHENOL	196	.48930	.39815	18.63		
,4,6-TRIBROMOPHENOL(SURR)	330	.32584	.23854	26.79		
,4-DINITROPHENOL	184	.17071	.17875	4.71		**
-NITROPHENOL	139	.32314	.18872	41.60		**
,6-DINITRO-2-METHYLPHENOL	198	.12041	.14988	24.48		
ENTACHLOROPHENOL	266	.18773	.18346	2.27	*	

- Response Factor from daily standard file at 50.00 UG/L

Average Response Factor from Initial Calibration Form VI

ff - % Difference from original average or curve

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Continuing Calibration Check
HSL Compounds

Case No: U-4906; 4928; 4971; 4989

Calibration Date: 03/18/87

Contractor: E & E, INC.

Time: 13:04

Contract No: IL-3140

Laboratory ID: >D2040

Instrument ID: HP-5970D

Initial Calibration Date: 10/17/86

Minimum $\overline{RF}$ for SPCC is .05

Maximum % Diff for CCC is 25%

Compound		$\overline{RF}$	RF	%Diff	CCC	SPCC
ANILINE	93	1.54043	.86072	44.12		
BIS(-2-CHLOROETHYL)ETHER	93	1.18428	1.20606	1.84		
1,3-DICHLOROBENZENE	146	1.47624	1.36618	7.45		
1,4-DICHLOROBENZENE	146	1.46874	1.46988	.08	*	
BENZYL ALCOHOL	79	1.13473	1.02034	10.08		
1,2-DICHLOROBENZENE	146	1.49193	1.41761	4.98		
BIS(2-CHLOROISOPROPYL)ETHER	45	2.68137	3.60582	34.48		
N-NITROSO-DI-N-PROPYLAMINE	70	1.18117	1.36440	15.51		**
HEXACHLOROETHANE	117	.70841	.69964	1.24		
NITROBENZENE-D5 (SURR)	82	.37437	.38976	4.11		
NITROBENZENE	77	.37969	.41242	8.62		
ISOPHORONE	82	.75594	.81813	8.23		
BIS(-2-CHLOROETHOXY)METHANE	93	.41266	.46639	13.02		
1,2,4-TRICHLOROBENZENE	180	.38442	.35270	8.25		
NAPHTHALENE	128	.96668	.98606	2.01		
4-CHLOROANILINE	127	.37796	.25036	33.76		
HEXACHLOROBUTADIENE	225	.25908	.22398	13.55	*	
2-METHYLNAPHTHALENE	142	.64484	.65289	1.25		
HEXACHLOROCYCLOPENTADIENE	237	.56814	.28460	49.91		**
2-FLUOROBIPHENYL (SURR)	172	1.61321	1.21854	24.46		
2-CHLORONAPHTHALENE	162	1.37281	1.07649	21.58		
2-NITROANILINE	65	.47645	.45644	4.20		
DIMETHYL PHTHALATE	163	1.71954	1.30121	24.33		
4-NITROANILINE	138	.25828	.23169	10.30		
DIBENZOFURAN	168	1.90873	1.52754	19.97		
ACENAPHTHYLENE	152	2.10065	1.73065	17.61		
FLUORENE	166	1.34670	1.12181	16.70		
3-NITROANILINE	138	.09246	.13118	41.88		
ACENAPHTHENE	153	1.37857	1.11415	19.18	*	
2,4-DINITROTOLUENE	165	.33212	.30830	7.17		
2,6-DINITROTOLUENE	165	.37112	.30915	16.70		
DIETHYLPHTHALATE	149	1.58664	1.27355	19.73		
4-CHLOROPHENYL-PHENYLETHER	204	.70414	.54694	22.33		
N-NITROSODIPHENYLAMINE	169	.51771	.47535	8.18	*	
4-BROMOPHENYL-PHENYL ETHER	248	.33482	.26245	21.61		
HEXACHLOROBENZENE	284	.43791	.30747	29.79		

R - Response Factor from daily standard file at 50.00 UG/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

Continuing Calibration Check
HSL Compounds

Case No: U-4906; 4928; 4971; 4989

Calibration Date: 03/18/87

Contractor: E & E, INC.

Time: 13:04

Contract No: IL-3140

Laboratory ID: >D2040

Instrument ID: HP-5970D

Initial Calibration Date: 10/17/86

Minimum $\overline{RF}$ for SPCC is .05

Maximum % Diff for CCC is 25%

Compound		$\overline{RF}$	RF	%Diff	CCC	SPCC
PHENANTHRENE	178	1.01505	.98761	2.70		
ANTHRACENE	178	.99874	.92228	7.66		
DI-N-BUTYLPHTHALATE	149	.97124	1.08410	11.62		
FLUORANTHENE	202	.62146	.73387	18.09	*	
BENZIDINE		.65247	-	-		
PYRENE	202	2.68642	2.04417	23.91		
TERPHENYL-D14 (SURR)	244	1.48172	1.06672	28.01		
BUTYLBENZYLPHTHALATE	149	.68277	.68023	.37		
3,3'DICHLOROBENZIDINE	252	.13263	.12540	5.45		
BENZO(A)ANTHRACENE	228	.91524	1.06881	16.78		
BIS(2-ETHYLHEXYL)PHTHALATE	149	.81579	.86828	6.43		
CHRYSENE	228	1.19137	1.01461	14.84		
DI-N-OCTYL PHTHALATE	149	1.64173	1.93782	18.04	*	
BENZO(B)FLUORANTHENE	252	1.13479	1.54878	36.48		
BENZO(K)FLUORANTHENE	252	1.55063	1.09609	29.31		
BENZO(A)PYRENE	252	1.10877	1.12128	1.13	*	
INDENO(1,2,3-CD)PYRENE	276	.99032	.99013	.02		
DIBENZ(A,H)ANTHRACENE	278	.81159	.92550	14.04		
BENZO(G,H,I)PERYLENE	276	1.10886	1.01244	8.70		

R - Response Factor from daily standard file at 50.00 UG/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

Continuing Calibration Check
HSL Compounds

Case No: U-4906; 4928; 4971; 4989

Calibration Date: 03/18/87

Contractor: E & E, INC.

Time: 12:02

Contract No: IL-3140

Laboratory ID: >D2039

Instrument ID: HP-5970D

Initial Calibration Date: ~~06/20/86~~ BJR 6/19/86

Minimum $\overline{RF}$ for SPCC is .05

Maximum % Diff for CCC is 25%

Compound		$\overline{RF}$	RF	%Diff	CCC	SPCC
PHENOL-D5 (SURR)	99	1.40059	1.44167	2.93		
PENTAFLUOROPHENOL	184	-	-	-		
2-FLUOROPHENOL (SURR)	112	.92130	.92631	.54		
PHENOL	94	1.34105	1.60945	20.01	*	
2-METHYL PHENOL	108	1.03158	1.20517	16.83		
2-CHLOROPHENOL	128	1.13833	1.18720	4.29		
4-METHYL PHENOL	108	1.07582	1.20517	12.02		
2-NITROPHENOL	139	.20262	.20797	2.64	*	
2,4-DIMETHYLPHENOL	122	.28916	.27866	3.63		
BENZOIC ACID	105	.20401	.21524	5.51		
2,4-DICHLOROPHENOL	162	.31568	.30150	4.49	*	
4-CHLORO-3-METHYLPHENOL	107	.33577	.33327	.74	*	
2,4,6-TRICHLOROPHENOL	196	.45546	.39089	14.18	*	
2,4,5-TRICHLOROPHENOL	196	.48930	.41145	15.91		
2,4,6-TRIBROMOPHENOL(SURR)	330	.32584	.18104	44.44		
2,4-DINITROPHENOL	184	.17071	.15038	11.91		**
4-NITROPHENOL	139	.32314	.14503	55.12		**
4,6-DINITRO-2-METHYLPHENOL	198	.12041	.14598	21.24		
PENTACHLOROPHENOL	266	.18773	.14946	20.38	*	

- Response Factor from daily standard file at 50.00 UG/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

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Continuing Calibration Check
HSL Compounds

Case No: V-4906; 4928; 4971; 4989

Calibration Date: 03/26/87

Contractor: E & E, INC.

Time: 11:51

Contract No: IL-3140

Laboratory ID: >D2108

Instrument ID: HP-5970D

Initial Calibration Date: 10/17/86

Minimum $\overline{RF}$ for SPCC is .05

Maximum % Diff for CCC is 25%

Compound		$\overline{RF}$	RF	%Diff	CCC	SPCC
ANILINE	93	1.54043	.94774	38.48		
BIS(-2-CHLOROETHYL)ETHER	93	1.18428	.85837	27.52		
1,3-DICHLOROBENZENE	146	1.47624	1.42204	3.67		
1,4-DICHLOROBENZENE	146	1.46874	1.45891	.67	*	
BENZYL ALCOHOL	79	1.13473	.63347	44.17		
1,2-DICHLOROBENZENE	146	1.49193	1.46740	1.64		
BIS(2-CHLOROISOPROPYL)ETHER	45	2.68137	2.01836	24.73		
N-NITROSO-DI-N-PROPYLAMINE	70	1.18117	.79774	32.46		**
HEXACHLOROETHANE	117	.70841	.58763	17.05		
NITROBENZENE-D5 (SURR)	82	.37437	.26680	28.73		
NITROBENZENE	77	.37969	.27319	28.05		
ISOPHORONE	82	.75594	.53065	29.80		
BIS(-2-CHLOROETHOXY)METHANE	93	.41266	.34415	16.60		
1,2,4-TRICHLOROBENZENE	180	.38442	.40828	6.21		
NAPHTHALENE	128	.96668	.94755	1.98		
4-CHLOROANILINE	127	.37796	.33429	11.56		
HEXACHLOROBUTADIENE	225	.25908	.26177	1.04	*	
2-METHYLNAPHTHALENE	142	.64484	.66478	3.09		
HEXACHLOROCYCLOPENTADIENE	237	.56814	.30097	47.03		**
2-FLUOROBIPHENYL (SURR)	172	1.61321	1.34075	16.89		
2-CHLORONAPHTHALENE	162	1.37281	1.13158	17.57		
2-NITROANILINE	65	.47645	.24249	49.10		
DIMETHYL PHTHALATE	163	1.71954	1.22070	29.01		
4-NITROANILINE	138	.25828	.21125	18.21		
DIBENZOFURAN	168	1.90873	1.54979	18.81		
ACENAPHTHYLENE	152	2.10065	1.64771	21.56		
FLUORENE	166	1.34670	1.12034	16.81		
3-NITROANILINE	138	.09246	.13361	44.51		
ACENAPHTHENE	153	1.37857	1.10786	19.64	*	
2,4-DINITROTOLUENE	165	.33212	.24693	25.65		
2,6-DINITROTOLUENE	165	.37112	.27530	25.82		
DIETHYLPHTHALATE	149	1.58664	1.08762	31.45		
4-CHLOROPHENYL-PHENYLETHER	204	.70414	.54872	22.07		
N-NITROSODIPHENYLAMINE	169	.51771	.49756	3.89	*	
4-BROMOPHENYL-PHENYL ETHER	248	.33482	.26230	21.66		
HEXACHLOROBENZENE	284	.43791	.27231	37.81		

RF - Response Factor from daily standard file at 50.00 UG/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

Continuing Calibration Check
HSL Compounds

Case No: V-4906;4928;4971;4989 Calibration Date: 03/26/87

Contractor: E & E, INC. Time: 11:51

Contract No: IL-3140 Laboratory ID: >D2108

Instrument ID: HP-5970D Initial Calibration Date: 10/17/86

Minimum $\overline{RF}$ for SPCC is .05 Maximum % Diff for CCC is 25%

Compound		$\overline{RF}$	RF	%Diff	CCC	SPCC
PHENANTHRENE	178	1.01505	.99956	1.53		
ANTHRACENE	178	.99874	.94130	5.75		
DI-N-BUTYLPHTHALATE	149	.97124	.81498	16.09		
FLUORANTHENE	202	.62146	.60303	2.97	*	
BENZIDINE		.65247	.54895	15.87		
PYRENE	202	2.68642	2.55645	4.84		
TERPHENYL-D14 (SURR)	244	1.48172	1.24071	16.27		
BUTYLBENZYLPHTHALATE	149	.68277	.58574	14.21		
3,3'DICHLOROBENZIDINE	252	.13263	.20293	53.01		
BENZO(A)ANTHRACENE	228	.91524	1.04070	13.71		
BIS(2-ETHYLHEXYL)PHTHALATE	149	.81579	.73621	9.76		
CHRYSENE	228	1.19137	1.07856	9.47		
DI-N-OCTYL PHTHALATE	149	1.64173	1.43057	12.86	*	
BENZO(B)FLUORANTHENE	252	1.13479	1.41016	24.27		
BENZO(K)FLUORANTHENE	252	1.55063	1.19133	23.17		
BENZO(A)PYRENE	252	1.10877	1.09798	.97	*	
INDENO(1,2,3-CD)PYRENE	276	.99032	1.11592	12.68		
DIBENZ(A,H)ANTHRACENE	278	.81159	1.05015	29.39		
BENZO(G,H,I)PERYLENE	276	1.10886	1.19417	7.69		

RF - Response Factor from daily standard file at 50.00 UG/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

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Continuing Calibration Check
HSL Compounds

Case No: V-4906; 4928; 4971; 4989

Calibration Date: 03/26/87

Contractor: E & E, INC.

Time: 10:53

Contract No: IL-3140

Laboratory ID: >D2107

Instrument ID: HP-5970D

Initial Calibration Date: ~~06/20/86~~ 6/19/86

Minimum $\overline{RF}$ for SPCC is .05

Maximum % Diff for CCC is 25%

Compound		$\overline{RF}$	RF	%Diff	CCC	SPCC
PHENOL-D5 (SURR)	99	1.40059	1.15366	17.63		
PENTAFLUOROPHENOL	184	-	-	-		
2-FLUOROPHENOL (SURR)	112	.92130	.76118	17.38		
PHENOL	94	1.34105	1.15351	13.98	*	
2-METHYL PHENOL	108	1.03158	.96432	6.52		
2-CHLOROPHENOL	128	1.13833	1.09120	4.14		
4-METHYL PHENOL	108	1.07582	1.02124	5.07		
2-NITROPHENOL	139	.20262	.21010	3.70	*	
2,4-DIMETHYLPHENOL	122	.28916	.25046	13.38		
BENZOIC ACID	105	.20401	.18465	9.49		
2,4-DICHLOROPHENOL	162	.31568	.33418	5.86	*	
4-CHLORO-3-METHYLPHENOL	107	.33577	.27825	17.13	*	
2,4,6-TRICHLOROPHENOL	196	.45546	.40157	11.83	*	
2,4,5-TRICHLOROPHENOL	196	.48930	.41433	15.32		
2,4,6-TRIBROMOPHENOL(SURR)	330	.32584	.17534	46.19		
2,4-DINITROPHENOL	184	.17071	.17084	.08		**
4-NITROPHENOL	139	.32314	.17765	45.02		**
4,6-DINITRO-2-METHYLPHENOL	198	.12041	.14318	18.91		
PENTACHLOROPHENOL	266	.18773	.14902	20.62	*	

- Response Factor from daily standard file at 50.00 UG/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

PESTICIDE STANDARDS

1. FORM VIII
2. FORM IX
3. FORM X

Pesticide Evaluation Standards Summary

U-4906; 4928; 4971; 4989 (Page 1)

Case No: _____ Region: _____

Contract No: IL-3140

Date of Analysis: 2/23/87 2/24/87

Laboratory: ECOLOGY AND ENVIRONMENT, INC.

GC Column: OV-1

Instrument ID: VARIAN 6000 GC#2

Evaluation Check for Linearity

Laboratory ID	RUN 1	RUN 2	RUN 3	
Pesticide	Calibration Factor Eval. Mix A	Calibration Factor Eval. Mix B	Calibration Factor Eval. Mix C	% RSD (≤10%)
Aldrin	673	648	660	1.9
Endrin	640	613	597	3.5
4,4'- DDT(1)	370	385	401	4.0
Dibutyl Chlorendate	486	473	488	1.7

Evaluation Check for 4,4'- DDT/Endrin Breakdown

(percent breakdown expressed as total degradation)

	Laboratory I.D.	Time of Analysis	Endrin	4,4'- DDT	Combined(2)
Eval Mix B 72 Hour					
Eval Mix B	RUN 2	9:32	NA	NA	13.2
Eval Mix B	RUN 19	0:16	NA	NA	8.6
Eval Mix B					
Eval Mix B					
Eval Mix B					
Eval Mix B					
Eval Mix B					
Eval Mix B					
Eval Mix B					
Eval Mix B					
Eval Mix B					

(1) See Exhibit E, Section 7 5 4

(2) See Exhibit E, Section 7 3 1 2 2 1

Pesticide Evaluation Standards Summary
(Page 2)
Evaluation of Retention Time Shift for Dibutyl Chlorendate
Report all standards, blanks and samples

SMO Sample No	Lab I D	Time of Analysis	Percent Diff.	SMO Sample No.	Lab I.D.	Time of Analysis	Percent Diff.
EVAL A	RUN 1	8:56	—				
EVAL B	2	9:32	0.04				
EVAL C	3	10:08	0.04				
IND A	4	10:48	0.14				
IND B	5	11:46	0.07				
TOXAPHENE	6	13:29	0.18				
CHLORDANE	7	12:23	0.11				
PCB 1016/1260	8	15:01	0.81				
PCB 1221	9	15:38	0.11				
PCB 1232	10	16:13	0.21				
PCB 1242	11	16:49	0.25				
PCB 1248	12	17:25	0.21				
PCB 1254	13	18:00	0.32				
0900	14	18:49	DL				
0901	15	19:57	DL				
BLANK 2-16	16	21:03	0.35				
1032	17	22:07	DL				
1033	18	23:11	0.64				
EVAL B	19	0:16	1.02				
1034	20	1:19	1.3				
1035	21	2:23	1.3				
1036	22	3:28	1.5				
1036 MS	23	4:32	1.6				
1036 MSD	24	5:36	1.5				
1037	25	8:32	0.46				
IND A	26	9:19	0.49				
IND B	27	9:55	0.38				

Pesticide Evaluation Standards Summary

U-4906; 4928; 4971; 4989 (Page 1)

Case No: _____ Region: _____

Contract No: IL-3140

Date of Analysis: 2-24/2-25-87

Laboratory: ECOLOGY AND ENVIRONMENT, INC

GC Column: OV-1

Instrument ID: VARIAN

Evaluation Check for Linearity

Laboratory ID	RUN 1	RUN 2	RUN 3	
Pesticide	Calibration Factor Eval. Mix A	Calibration Factor Eval Mix B	Calibration Factor Eval. Mix C	% RSD (≤10%)
Aldrin	650	659	664	1.1
Endrin	652	665	641	1.8
4,4'- DDT(1)	384	422	427	5.7
Dibutyl Chlorendate	461	481	490	3.1

Evaluation Check for 4,4'- DDT/Endrin Breakdown

(percent breakdown expressed as total degradation)

	Laboratory I.D.	Time of Analysis	Endrin	4,4'- DDT	Combined(2)
Eval Mix B 72 Hour					
Eval Mix B	RUN 2	13:24	NA	NA	9.4
Eval Mix B	RUN 19	3:48	NA	NA	7.5
Eval Mix B					
Eval Mix B					
Eval Mix B					
Eval Mix B					
Eval Mix B					
Eval Mix B					
Eval Mix B					
Eval Mix B					
Eval Mix B					

(1) See Exhibit E, Section 7.5.4

(2) See Exhibit E, Section 7.3.1.2.2.1

Pesticide Evaluation Standards Summary
(Page 2)
Evaluation of Retention Time Shift for Dibutyl Chlorendate
Report all standards, blanks and samples

SMO Sample No	Lab ID	Time of Analysis	Percent Diff	SMO Sample No.	Lab ID	Time of Analysis	Percent Diff
EVAL A	Run 1	11:55	—				
EVAL B	2	13:24	0.04				
EVAL C	3	14:02	0.04				
IND A	4	15:01	0.14				
IND B	5	15:40	0				
TOXAPHENE	6	16:16	0.14				
CHLORDANE	7	17:45	0.04				
PCB 1016/1260	8	18:24	0.77				
PCB 1221	9	19:03	0.07				
PCB 1232	10	19:42	0.07				
PCB 1242	11	20:21	0.11				
PCB 1248	12	20:59	0.18				
PCB 1254	13	21:37	0.39				
BLANK	14	22:36	0.21				
1110	15	23:30	0.25				
1111	16	0:35	0.42				
1112	17	1:39	0.46				
1112 MS	18	2:44	0.53				
EVAL B	19	3:48	0.35				
1112 MSD	20	4:53	0.35				
1113	21	5:57	DL				
1114	22	7:01	0.11				
1115	23	8:06	0.60				
1116	24	9:11	0.32				
1117	25	10:16	0.21				
IND A	26	11:20	0.18				
IND B	27	11:59	0.18				

Form VIII (Continued)

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Pesticide Evaluation Standards Summary

(Page 1)

U-4906; 4928; 4971; 4989

Case No: _____ Region: _____

Contract No: IL-3140

Date of Analysis: 3-3-87

Laboratory: Ecology and Environment, Inc.

GC Column: SP2250/SP2401

Instrument ID: VARIAN 6000 #2

Evaluation Check for Linearity

Laboratory ID	RUN 1	RUN 2	RUN 3	
Pesticide	Calibration Factor Eval Mix A	Calibration Factor Eval Mix B	Calibration Factor Eval Mix C	% RSD (≤ 10%)
Aldrin	881	889	943	3.7
Endrin	693	717	780	6.2
4,4'- DDT(1)	362	412	510	18
Dibutyl Chlorendate	623	643	721	7.8

Evaluation Check for 4,4'- DDT/Endrin Breakdown

(percent breakdown expressed as total degradation)

	Laboratory I.D	Time of Analysis	Endrin	4,4'- DDT	Combined(2)
Eval Mix B 72 Hour					
Eval Mix B	RUN 2	10:43	9.5	17	NA
Eval Mix B					
Eval Mix B					
Eval Mix B					
Eval Mix B					
Eval Mix B					
Eval Mix B					
Eval Mix B					
Eval Mix B					
Eval Mix B					
Eval Mix B					

(1) See Exhibit E Section 7.5.4

(2) See Exhibit E, Section 7.3.1.2.2.1

Pesticide Evaluation Standards Summary
(Page 2)
Evaluation of Retention Time Shift for Dibutyl Chlorendate
Report all standards, blanks and samples

SMO Sample No	Lab I D	Time of Analysis	Percent Diff	SMO Sample No.	Lab I.D.	Time of Analysis	Percent Diff
EVALA	RUN 1	10:04	—				
EVALB	2	10:43	0.21				
EVALC	3	11:22	0.21				
PCB1016/1260	4	12:01	0.38				
PCB1232	5	12:40	0.30				
PCB1242	6	13:19	0.13				
BLANK	7	14:05	0.13				
1114	8	15:37	DL				
1115	9	16:41	DL				
1113	10	17:46	DL				
PCB 1242	11	18:51	0.13				

Pesticide Evaluation Standards Summary

(Page 1)

U-4906; 4928; 4971; 4989

Case No: _____ Region: _____

Contract No: IL-3140

Date of Analysis: 3-11-87, 3-12-87

Laboratory: Ecology & Environment, Inc

GC Column: OV-1

Instrument ID: VARIAN 6000 GC #2

Evaluation Check for Linearity

Laboratory ID	RUN 1	RUN 2	RUN 3	
Pesticide	Calibration Factor Eval. Mix A	Calibration Factor Eval Mix B	Calibration Factor Eval. Mix C	% RSD (≤10%)
Aldrin	715	703	714	0.94
Endrin	665	685	679	1.5
*4,4'- DDT(1)	155	175	185	8.9
Dibutyl Chlorendate	502	485	562	7.8

Evaluation Check for 4,4'- DDT/Endrin Breakdown

(percent breakdown expressed as total degradation)

	Laboratory I.D.	Time of Analysis	Endrin	4,4'- DDT	Combined(2)
Eval Mix B 72 Hour					
Eval Mix B	RUN#2	12:06	NA	NA	14
Eval Mix B	RUN#19	2:57	NA	NA	10
* Eval Mix B	RUN#31	16:47	NA	NA	9.5
Eval Mix B					
Eval Mix B					
Eval Mix B					
Eval Mix B					
Eval Mix B					
Eval Mix B					
Eval Mix B					
Eval Mix B					

(1) See Exhibit E, Section 7 5 4

(2) See Exhibit E, Section 7 3 1 2 2 1

* Peak Height

Pesticide Evaluation Standards Summary
(Page 2)
Evaluation of Retention Time Shift for Dibutyl Chlorendate
Report all standards, blanks and samples

SMO Sample No	Lab ID	Time of Analysis	Percent Diff	SMO Sample No	Lab ID	Time of Analysis	Percent Diff
EVAL A	1	11:32	—				
EVAL B	2	12:06	0.14				
EVAL C	3	13:38	0.04				
IND A	4	14:34	0.26				
IND B	5	15:12	0.42				
TOXAPHENE	6	15:51	0.18				
CHLORDANE	7	16:30	0.40				
PCB 1016/1260	8	17:09	1.5				
PCB 1221	9	17:48	0.56				
PCB 1232	10	18:27	0.32				
PCB 1242	11	19:06	0.28				
PCB 1248	12	19:45	0.32				
PCB 1254	13	20:24	0.28				
BLANK 2-26	14	21:27	0.18				
1274	15	22:37	D.L.				
1275	16	23:43	0.32				
1275 MS	17	0:48	0.14				
1275 MSD	18	1:52	0.11				
EVAL B	19	2:57	0.04				
1276	20	4:01	D.L.				
1277	21	5:08	D.L.				
1278	22	6:12	D.L.				
BLANK 3-3	23	7:17	—				
1427	24	8:22	D.L.				
PCB 1016/1260	25	9:25	1.3				
1428	26	10:13	D.L.				
1429	27	11:43	D.L.				
1430	28	12:48	D.L.				
1427	29	14:38	D.L.				
1428	30	15:43	0.28				
EVAL B	31	16:47	0.28				
1429	32	17:51	D.L.				
1430	33	18:56	INF				
1430 A1	34	20:01	INF				
IND MIX A	35	21:04	0.18				
IND MIX B	36	22:08	0.18				

1 DI = DILUTED OUT

INF = INTERFERENCE

Pesticide Evaluation Standards Summary

(Page 1)

U-4906; 4928; 4971; 4989

Case No: _____ Region: _____

Contract No: IL-3140

Date of Analysis: 3/16/87 3/17/87

Laboratory: Ecology & Environment, Inc

GC Column: SP 2250 / SP 2401

Instrument ID: VARIAN 6000 GC#2

Evaluation Check for Linearity

Laboratory ID	RUN 1	RUN 2	RUN 3	
Pesticide	Calibration Factor Eval. Mix A	Calibration Factor Eval Mix B	Calibration Factor Eval Mix C	% RSD (≤10%)
Aldrin	885*	879	938	3.6
Endrin	941	985	1050	5.5
4,4'- DDT(1)	475	510	556	7.9
Dibutyl Chlorendate	565	569	635	6.7

Evaluation Check for 4,4'- DDT/Endrin Breakdown

(percent breakdown expressed as total degradation)

	Laboratory I.D.	Time of Analysis	Endrin	4,4'- DDT	Combined(2)
Eval Mix B 72 Hour					
Eval Mix B	RUN 2	22:03	<1.0	5.4	NA
Eval Mix B	RUN 19	16:03	<1.0	5.1	NA
Eval Mix B					
Eval Mix B					
Eval Mix B					
Eval Mix B					
Eval Mix B					
Eval Mix B					
Eval Mix B					
Eval Mix B					
Eval Mix B					

(1) See Exhibit E, Section 7.5.4

Pesticide Evaluation Standards Summary
(Page 2)
Evaluation of Retention Time Shift for Dibutyl Chlorendate
Report all standards, blanks and samples

SMO Sample No	Lab ID	Time of Analysis	Percent Diff	SMO Sample No	Lab ID	Time of Analysis	Percent Diff
EVAL A	RUN 1	20:02	0				
EVAL B	2	22:03	0.13				
EVAL C	3	23:08	0.13				
IND A	4	0:12	0.55				
IND B	5	1:17	0.89				
PCB 1016/1260	6	2:22	0.63				
PCB 1242	7	3:27	0.72				
PCB 1248	8	4:32	0.55				
BLANK 2/66	9	5:37	0.25				
1274.03.19A1	10	6:41	DL				
1276.03.19A1	11	7:46	DL				
1277.03.19A1	12	8:50	DL				
1278.03.19A1	13	9:55	DL				
PCB 1016/1260	14	11:02	0.46				
BLANK 3/3	15	12:08	0.38				
1427.03.19A1	16	13:12	DL				
1276.03.19A1	17	14:22	DL				
1277.03.19A1	18	14:58	DL				
EVAL B	19	16:03	0.38				
IND A	20	17:54	0.08				
IND B	21	18:41	0.25				

PESTICIDE/PCB STANDARDS SUMMARY

Case No. U-4906, 4928, 4971, 4989 Laboratory Ecology & Environment Inc.

Contract No. IL-3140 GC Column OV-1 GC Instrument ID VARIAN 6000 #2

	DATE OF ANALYSIS 2-23-87 TIME OF ANALYSIS 1048 → 1800 LABORATORY ID RUN 4 → RUN 13				DATE OF ANALYSIS 2/24/87 TIME OF ANALYSIS 919 – 955 LABORATORY ID RUN 26 – RUN 27			
COMPOUND	RT	RETENTION TIME WINDOW	CALIBRATION FACTOR	CONF. OR QUANT.	RT	CALIBRATION FACTOR	CONF. OR QUANT.	PERCENT DIFF.**
alpha-BHC	2.24	2.21-2.27	728		2.25	757		4.0
beta-BHC	2.38	2.35-2.41	229		2.39	245		7.0
delta-BHC	2.68	2.65-2.71	628		2.69	667		6.2
gamma-BHC	2.60	2.57-2.63	614		2.61	639		4.1
Heptachlor	4.12	4.08-4.16	561		4.13	585		4.3
Aldrin	5.06	5.02-5.10	652		5.08	666		2.1
Heptachlor Epoxide	6.12	6.07-6.17	611		6.14	625		2.3
Endosulfan I	7.58	7.52-7.64	577		7.60	598		3.6
Dieldrin	8.81	8.74-8.88	621		8.84	638		2.7
4,4'-DDE	8.70	8.63-8.77	593		8.73	618		4.3
Endrin	9.82	9.74-9.90	473		9.84	526		11
Endosulfan II	10.01	9.92-10.10	578		10.04	583		0.87
4,4'-DDD	10.91	10.82-11.00	550		10.92	550		0
Endosulfan Sulfate	12.78	12.68-12.88	446		12.81	456		2.2
4,4'-DDT	14.20	14.10-14.30	395		14.24	393		0.51
Methoxychlor	20.81	20.67-20.95	209		20.87	215		2.9
Endrin Ketone	16.35	16.21-16.49	635		16.39	659		3.8
Tech. Chlordane								
alpha-Chlordane*								
gamma-Chlordane*								
Toxaphene	14.22	14.12-14.32	45.3					
Aroclor - 1016	3.66	3.55-3.65	30.5					
Aroclor - 1221	2.26	2.23-2.29	11.3					
Aroclor - 1232	3.60	3.55-3.65	17.7					
Aroclor - 1242	3.60	3.55-3.65	21.4					
Aroclor - 1248	6.24	6.18-6.30	38.8					
Aroclor - 1254	14.69	14.63-14.75	33.8					
Aroclor - 1260	23.24	22.92-23.56	71					

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* SEE EXHIBIT E, PART 7

** CONF. = CONFIRMATION (<20% DIFFERENCE)
QUANT. = QUANTITATION (<15% DIFFERENCE)

504095

FORM IX

PESTICIDE/PCB STANDARDS SUMMARY

Case No. V-4906; 4928; 4971; 4989 Laboratory ECOLOGY AND ENVIRONMENT, INC.
Contract No. IL-3140 GC Column OV-1 GC Instrument ID VARIAN 6000 GC #2

	DATE OF ANALYSIS 2-24-87 TIME OF ANALYSIS 15:01 - 21:37 LABORATORY ID RUN 4 - RUN 13				DATE OF ANALYSIS 2-25-87 TIME OF ANALYSIS 11:20-11:59 LABORATORY ID RUN 25 - RUN 27			
COMPOUND	RT	RETENTION TIME WINDOW	CALIBRATION FACTOR	CONF. OR QUANT.	RT	CALIBRATION FACTOR	CONF. OR QUANT.	PERCENT DIFF. **
alpha BHC	2.25	2.22-2.28	708		2.25	766		8.2
beta-BHC	2.39	2.36-2.42	228		2.39	252		11
delta-BHC	2.69	2.66-2.72	618		2.69	674		9.1
gamma-BHC	2.61	2.58-2.64	606		2.62	667		10
Heptachlor	4.13	4.09-4.17	561		4.13	605		7.8
Aldrin	5.08	5.04-5.12	632		5.08	697		10
Heptachlor Epoxide	6.14	6.09-6.19	594		6.14	652		9.8
Endosulfan I	7.60	7.54-7.66	566		7.61	620		9.5
Dieldrin	8.84	8.77-8.91	602		8.86	658		9.3
4,4'-DDE	8.74	8.67-8.81	571		8.75	624		9.3
Endrin	9.85	9.77-9.93	475		9.87	543		14
Endosulfan II	10.05	9.96-10.14	558		10.05	609		9.1
4,4'-DDD	10.94	10.85-11.03	524		10.96	555		5.9
Endosulfan Sulfate	12.84	12.74-12.94	410		12.84	424		3.4
4,4'-DDT	14.25	14.15-14.35	403		14.27	424		5.2
Methoxychlor	20.90	20.76-21.04	216		20.92	236		9.3
Endrin Ketone	16.41	16.27-16.55	611		16.43	659		7.9
Tech. Chlordane	7.01	6.92-7.10	843					
alpha-Chlordane*								
gamma-Chlordane*								
Toxaphene	14.27	14.17-14.37	10.3 *					
Aroclor - 1016	3.61	3.56-3.66	31.8					
Aroclor - 1221	2.27	2.24-2.30	11.6					
Aroclor - 1232	3.61	3.56-3.66	17.8	QUANT.				
Aroclor - 1242	3.61	3.56-3.66	21.5	QUANT.				
Aroclor - 1248	6.27	6.21-6.33	40					
Aroclor - 1254	14.77	14.71-14.83	56					
Aroclor - 1260	22.33	23.01-23.65	71.8	QUANT.				

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* SEE EXHIBIT E, PART 7

** CONF. = CONFIRMATION (<20% DIFFERENCE)
QUANT. = QUANTITATION (<15% DIFFERENCE)

* PEAK HEIGHT

FORM IX

PESTICIDE/PCB STANDARDS SUMMARY

Case No. U-4906;4928;4971;4989 Laboratory ECOLOGY & ENVIRONMENT, INC.
Contract No. IL-3140 GC Column SP2250/SP2401 GC Instrument ID VARIAN 6000 #2

	DATE OF ANALYSIS 3-3-87 TIME OF ANALYSIS 12:01 → 13:19 LABORATORY ID RUN 4 → RUN 6				DATE OF ANALYSIS 3-3-87 TIME OF ANALYSIS 18:51 LABORATORY ID RUN 11			
COMPOUND	RT	RETENTION TIME WINDOW	CALIBRATION FACTOR	CONF. OR QUANT.	RT	CALIBRATION FACTOR	CONF. OR QUANT.	PERCENT DIFF.**
alpha-BHC								
beta-BHC								
delta-BHC								
gamma-BHC								
Heptachlor								
Aldrin								
Heptachlor Epoxide								
Endosulfan I								
Dieldrin								
4,4'-DDE								
Endrin								
Endosulfan II								
4,4'-DDD								
Endosulfan Sulfate								
4,4'-DDT								
Methoxychlor								
Endrin Ketone								
Tech. Chlordane								
alpha-Chlordane*								
gamma-Chlordane*								
Toxaphene								
Aroclor - 1016								
Aroclor - 1221								
Aroclor - 1232	2.70	2.68-2.72	20.0	CONF.				
Aroclor - 1242	2.71	2.68-2.74	25.7	CONF.	2.70	25.7		0
Aroclor - 1248								
Aroclor - 1254								
Aroclor - 1260	20.37	20.14-20.60	110	CONF.				

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* SEE EXHIBIT E, PART 7

** CONF. = CONFIRMATION (<20% DIFFERENCE)
QUANT. = QUANTITATION (<15% DIFFERENCE)

FORM IX

PESTICIDE/PCB STANDARDS SUMMARY

Case No. U-4906; 4928; 4971; 4989 Laboratory ECOLOGY + ENVIRONMENT, INC

Contract No. IL-3140 GC Column OV-1 GC Instrument ID VARIAN 6000 GC #2

	DATE OF ANALYSIS 3-11-87 TIME OF ANALYSIS 14:34 → 20:24 LABORATORY ID RUN 4 → 13				DATE OF ANALYSIS 3-12-87 TIME OF ANALYSIS 9:25 LABORATORY ID RUN 25			
COMPOUND	RT	RETENTION TIME WINDOW	CALIBRATION FACTOR	CONF. OR QUANT.	RT	CALIBRATION FACTOR	CONF. OR QUANT.	PERCENT DIFF. **
alpha-BHC	2.24	2.21 → 2.27	750					
beta-BHC	2.38	2.35 → 2.41	236					
delta-BHC	2.68	2.65 → 2.71	641					
gamma-BHC	2.61	2.58 - 2.64	687					
Heptachlor	4.13	4.09 → 4.17	612					
Aldrin	5.07	5.03 → 5.11	710					
Heptachlor Epoxide	6.14	6.09 → 6.19	669					
Endosulfan I	7.60	7.54 → 7.66	631					
Dieldrin	8.84	8.77 → 8.91	665					
4,4'-DDE	8.72	8.65 → 8.79	605	QUANT.				
Endrin	9.83	9.75 → 9.91	483					
Endosulfan II	10.05	9.96 → 10.14	614					
4,4'-DDD	10.93	10.84 → 11.02	555					
Endosulfan Sulfate	12.83	12.73 → 12.93	402					
4,4'-DDT	14.23	14.13 → 14.33	397					
Methoxychlor	20.89	20.75 → 21.03	223					
Endrin Ketone	16.39	16.25 → 16.53	646					
Tech. Chlordane	7.00	6.91 → 7.09	95.5					
alpha-Chlordane*								
gamma-Chlordane*								
Toxaphene	14.23	14.13 → 14.33	71.8					
Aroclor - 1016	3.60	3.55 → 3.65	33.0		3.60	32.2		2.4
Aroclor - 1221	2.26	2.23 → 2.29	12.4					
Aroclor - 1232	3.60	3.55 → 3.65	18.8					
Aroclor - 1242	3.60	3.55 → 3.65	23.7	QUANT.				
Aroclor - 1248	6.25	6.19 → 6.31	41.9	QUANT.				
Aroclor - 1254	10.72	10.66 → 10.78	40.7					
Aroclor - 1260	23.26	22.94 → 23.58	75.6	QUANT.	23.30	73.8		2.4

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* SEE EXHIBIT E, PART 7

** CONF. = CONFIRMATION (<20% DIFFERENCE)
QUANT. = QUANTITATION (<15% DIFFERENCE)

FORM IX

PESTICIDE/PCB STANDARDS SUMMARY

Case No. U-4906; 4928; 4971; 4989 Laboratory ECOLOGY + ENVIRONMENT, INC

Contract No. IL-3140 GC Column OV-1 GC Instrument ID VARIAN 6000 GC #2

	DATE OF ANALYSIS 3-11-87 TIME OF ANALYSIS 14:34 → 20:24 LABORATORY ID RUN 4 → 13				DATE OF ANALYSIS 3-12-87 TIME OF ANALYSIS 21:04 → 22:09 LABORATORY ID RUN 35 → 36			
COMPOUND *	RT	RETENTION TIME WINDOW	CALIBRATION FACTOR	CONF. OR QUANT.	RT	CALIBRATION FACTOR	CONF. OR QUANT.	PERCENT DIFF. **
alpha-BHC	2.24	2.21 → 2.27	750		2.24	742		1.1
beta-BHC	2.38	2.35 → 2.41	236		2.39	241		2.1
delta-BHC	2.68	2.65 → 2.71	641		2.69	641		0
gamma-BHC	2.61	2.58 - 2.64	687		2.62	639		7.0
Heptachlor	4.13	4.09 → 4.17	612		4.13	587		4.1
Aldrin	5.07	5.03 → 5.11	710		5.08	668		5.9
Heptachlor Epoxide	6.14	6.09 → 6.19	669		6.15	626		6.4
Endosulfan I	7.60	7.54 → 7.66	631		7.62	596		5.5
Dieldrin	8.84	8.77 → 8.91	665		8.87	635		4.5
4,4'-DDE	8.72	8.65 → 8.79	605	QUANT.	8.76	604		0.17
Endrin	9.83	9.75 → 9.91	483		9.87	473		2.1
Endosulfan II	10.05	9.96 → 10.14	614		10.08	579		5.7
4,4'-DDD	10.93	10.84 → 11.02	555		10.98	562		1.3
Endosulfan Sulfate	12.83	12.73 → 12.93	402		12.88	399		0.75
4,4'-DDT	14.23	14.13 → 14.33	397		14.29	396		0.25
Methoxychlor	20.89	20.75 → 21.03	223		20.96	216		3.1
Endrin Ketone	16.39	16.25 → 16.53	646		16.48	639		1.1
Tech. Chlordane	7.00	6.91 → 7.09	95.5					
alpha-Chlordane*								
gamma-Chlordane*								
Toxaphene	14.23	14.13 → 14.33	71.8					
Aroclor - 1016	3.60	3.55 → 3.65	33.0					
Aroclor - 1221	2.26	2.23 → 2.29	12.4					
Aroclor - 1232	3.60	3.55 → 3.65	18.8					
Aroclor - 1242	3.60	3.55 → 3.65	23.7	QUANT.				
Aroclor - 1248	6.25	6.19 → 6.31	41.9	QUANT.				
Aroclor - 1254	10.72	10.66 → 10.78	40.7					
Aroclor - 1260	23.26	22.94 → 23.58	75.6	QUANT.				

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* SEE EXHIBIT E, PART 7

** CONF. = CONFIRMATION (<20% DIFFERENCE)
QUANT. = QUANTITATION (<15% DIFFERENCE)

FORM III

PESTICIDE/PCB STANDARDS SUMMARY

Case No. U-4906;4928;4971;4989 Laboratory ECOLOGY AND ENVIRONMENT, INC.
Contract No. IL-3140 GC Column SP2250/SP2401 GC Instrument ID VARIAN 6000 GC#2

	DATE OF ANALYSIS 3/16/87 TIME OF ANALYSIS 0:12 → 4:32 LABORATORY ID RUN 4 → RUN 8				DATE OF ANALYSIS 3/17/87 TIME OF ANALYSIS 11:02 LABORATORY ID RUN 14			
COMPOUND	RT	RETENTION TIME WINDOW	CALIBRATION FACTOR	CONF. OR QUANT.	RT	CALIBRATION FACTOR	CONF. OR QUANT.	PERCENT DIFF. **
alpha-BHC	1.79	1.76-1.82	1096					
beta-BHC	2.56	2.53-2.59	350					
delta-BHC	2.99	2.96-3.02	763					
gamma-BHC	2.25	2.22-2.28	873					
Heptachlor	2.77	2.73-2.81	807					
Aldrin	3.35	3.31-3.39	866					
Heptachlor Epoxide	5.01	4.96-5.06	776					
Endosulfan I	6.31	6.25-6.37	732					
Dieldrin	7.70	7.63-7.77	794					
4,4'-DDE	7.28	7.21-7.35	758	CONF.				
Endrin	9.36	9.28-9.44	672					
Endosulfan II	11.33	11.23-11.43	705					
4,4'-DDD	11.14	11.04-11.24	606					
Endosulfan Sulfate	17.87	17.72-18.02	390					
4,4'-DDT	13.45	13.30-13.60	497					
Methoxychlor	25.84	25.60-26.08	234					
Endrin Ketone	23.87	23.65-24.09	602					
Tech. Chlordane								
alpha-Chlordane*								
gamma-Chlordane*								
Toxaphene								
Aroclor - 1016	2.73	2.70-2.76	42.3		2.70	38.0		10
Aroclor - 1221								
Aroclor - 1232								
Aroclor - 1242	2.73	2.70-2.76	24.3	CONF.				
Aroclor - 1248	5.13	5.07-5.19	43.3	CONF.				
Aroclor - 1254								
Aroclor - 1260	20.67	20.44-20.90	114	CONF.	20.45	110		3.5

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** CONF. = CONFIRMATION (<20% DIFFERENCE)
QUANT. = QUANTITATION (<15% DIFFERENCE)

PESTICIDE/PCB STANDARDS SUMMARY

Case No. U-4906; 4928; 4971; 4989 Laboratory Ecology & Environment Inc.
Contract No. IL-3140 GC Column SP2250/SP2401 GC Instrument ID VARIAN 6000 #2

	DATE OF ANALYSIS 3-16-87 TIME OF ANALYSIS 012 - 432 LABORATORY ID RUN 4 - RUN 8				DATE OF ANALYSIS 3-17-87 TIME OF ANALYSIS 1754 - 1841 LABORATORY ID RUN 20 - RUN 21			
COMPOUND	RT	RETENTION TIME WINDOW	CALIBRATION FACTOR	CONF. OR QUANT.	RT	CALIBRATION FACTOR	CONF. OR QUANT.	PERCENT DIFF.**
alpha-BHC	1.79	1.76-1.82	1096		1.77	1079		1.6
beta-BHC	2.56	2.53-2.59	350		2.55	346		1.1
delta-BHC	2.99	2.96-3.02	763		2.97	758		0.66
gamma-BHC	2.25	2.22-2.28	873		2.24	896		2.6
Heptachlor	2.77	2.73-2.81	807		2.76	847		5.0
Aldrin	3.35	3.31-3.39	866		3.33	886		2.3
Heptachlor Epoxide	5.01	4.96-5.06	776		4.98	784		1.0
Endosulfan I	6.31	6.25-6.37	732		6.26	747		2.0
Dieldrin	7.70	7.63-7.77	794		7.65	812		2.3
4,4'-DDE	7.28	7.21-7.35	758	CONF	7.24	745		1.7
Endrin	9.36	9.28-9.44	672		9.30	649		3.4
Endosulfan II	11.33	11.23-11.43	705		11.24	717		1.7
4,4'-DDD	11.14	11.04-11.24	606		11.07	592		2.3
Endosulfan Sulfate	17.87	17.72-18.02	390		17.77	381		2.3
4,4'-DDT	13.45	13.30-13.60	497		13.34	511		2.8
Methoxychlor	25.84	25.60-26.08	234		25.64	245		4.7
Endrin Ketone	23.87	23.65-24.09	602		23.72	592		1.7
Tech. Chlordane								
alpha-Chlordane*								
gamma-Chlordane*								
Toxaphene								
Aroclor - 1016	2.73	2.70-2.76	42.3					
Aroclor - 1221								
Aroclor - 1232								
Aroclor - 1242	2.73	2.70-2.76	24.3	CONF.				
Aroclor - 1248	5.13	5.07-5.19	43.3	CONF.				
Aroclor - 1254								
Aroclor - 1260	20.67	20.44-20.90	114	CONF.				

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* SEE EXHIBIT E, PART 7

** CONF. = CONFIRMATION (<20% DIFFERENCE)
QUANT. = QUANTITATION (<15% DIFFERENCE)

504095

FORM IX

Pesticide/PCB Identification

Case No. V-4906, 4928, 4971, 4989

Laboratory ECOLOGY AND ENVIRONMENT, INC.

Contract No. IL-3140

SAMPLE ID	PRIMARY COLUMN	PESTICIDE/ PCB	RT OF TENTATIVE ID	RT WINDOW OF APPROPRIATE STANDARD	CONFIRMATION COLUMN	RT ON CONFIRMATORY COLUMN	RT WINDOW OF APPROPRIATE STANDARD	GC/MS CONFIRMED (Y or N)
1113	OV-1	1242	3.61	3.56-3.66	SP2250/SP2401	2.70	2.68-2.74	Y
1114	↓	1232	3.61	3.56-3.66	↓	2.71	2.68-2.72	Y
1114		1260	23.36	23.01-23.65		20.41	20.14-20.60	Y
1115		1232	3.62	3.56-3.66		2.70	2.68-2.72	N
1115	↓	1260	23.51	23.01-23.65	↓	20.39	20.14-20.60	N

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505095

FORM X

Pesticide/PCB Identification

Case No. V-4906, 4928, 4971, 4989

Laboratory Ecology and Environment, Inc.

Contract No. IL-3140

SAMPLE ID	PRIMARY COLUMN	PESTICIDE/ PCB	RT OF TENTATIVE ID	RT WINDOW OF APPROPRIATE STANDARD	CONFIRMATION COLUMN	RT ON CONFIRMATORY COLUMN	RT WINDOW OF APPROPRIATE STANDARD	GC/MS CONFIRMED (Y or N)
1274	OV-1	4,4'DDE	8.74	8.65-8.79	SP2250/SP2401	7.25	7.21-7.35	N
1274		1260	23.32	22.94-23.58		20.56	20.44-20.90	N
1276		4,4'DDE	8.76	8.65-8.79		7.23	7.21-7.35	N
1276		1260	23.36	22.94-23.58		20.45	20.44-20.90	N
1277		1260	23.37	22.94-23.58		20.46	20.44-20.90	N
1278		1248	6.28	6.19-6.31		5.10	5.07-5.19	Y
1278		1260	23.38	22.94-23.58		20.51	20.44-20.90	Y
1427		1242	3.60	3.55-3.65		2.71	2.70-2.76	Y
1428		1242	3.60	3.55-3.65				N
1429		1242	3.59	3.55-3.65				N
1430		1242	3.60	3.55-3.65				N
1430RI	OV-1	1242	3.61	3.55-3.65				N

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FORM X

GC/MS TUNING

1. DFTPP FORM V

2. BFB FORM V

GC/MS TUNING AND MASS CALIBRATION

U-4906; 4928 Decafluorotriphenylphosphine (DFTPP)

Case No. 4971; 4989 Contractor Ecology & Environment Inc. Contract No. IL-3140

Instrument ID HP5970D Date 6-19-86 Time 1436

Lab ID D0034 Data Release Authorized By: C Swiatowicz

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE	
51	30.0 - 60.0% of mass 198	56.4	
68	less than 2.0% of mass 69	0	(0)[1]
69	mass 69 relative abundance	67.0	
70	less than 2.0% of mass 69	0.21	(0.31)[1]
127	40.0 - 60.0% of mass 198	46.9	
197	less than 1.0% of mass 198	0	
198	base peak, 100% relative abundance	100	
199	5.0 - 9.0% of mass 198	6.93	
275	10.0 - 30.0% of mass 198	21.0	
365	greater than 1.00% of mass 198	2.47	
441	present, but less than mass 443	9.97	
442	greater than 40.0% of mass 198	68.1	
443	17.0 - 23.0% of mass 442	13.0	(19.1)[2]

THIS PERFORMANCE TUNE APPLIES TO THE FOLLOWING SAMPLES, BLANKS AND STANDARDS.

[1] Value in parenthesis is % mass 69
[2] Value in parenthesis is % mass 442

SAMPLE ID	LAB ID		DATE OF ANALYSIS	TIME OF ANALYSIS
	AP STD - 20 ug/L	D0036	6-19-86	1632
	50 ug/L	D0037		1736
	80 ug/L	D0038		1836
	120 ug/L	D0039		1928
	160 ug/L	D0040		2024

FORM V

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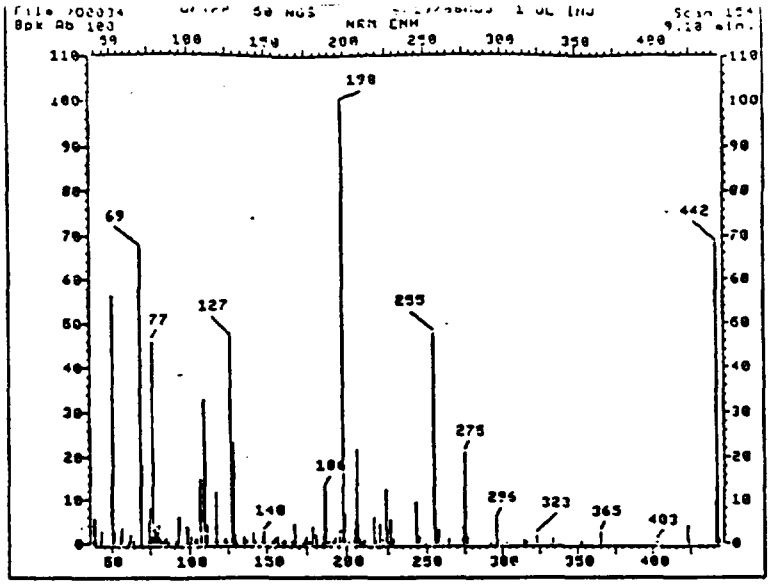

>00034 DFTPP 50 NGS 6/19/86MDS 1 UL INJ
154 NRM ENH

File: >D0034 Scan #: 154 Retn. time: 9.10

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
37.95	.85	88.00	.15	140.90	2.50	187.05	3.60	244.05	9.39
38.95	5.95	91.00	.79	142.00	.76	188.05	.18	245.05	1.11
39.95	1.12	92.00	.77	143.00	.54	188.95	.65	245.95	1.70
42.95	.73	93.00	6.11	146.10	.22	190.95	.47	248.95	.23
43.95	2.79	96.90	.15	147.00	1.32	191.95	.88	254.95	47.84
50.05	16.29	98.00	4.02	148.00	2.71	193.05	1.32	255.95	7.03
51.05	56.44	99.00	3.31	149.00	.51	195.95	3.12	257.05	.55
51.95	2.66	100.00	.23	151.00	.22	197.95	100.00	257.95	2.94
55.05	.23	101.00	1.74	153.00	.73	198.95	6.93	264.95	.97
55.95	1.77	103.00	.67	154.00	.53	200.05	.26	272.95	1.38
56.95	3.87	104.00	1.30	155.00	1.49	201.35	.40	273.95	3.92
61.05	.42	104.90	1.19	156.00	1.90	203.05	.68	274.95	21.00
61.90	.64	107.00	14.80	157.80	.22	203.95	3.15	275.95	2.42
63.00	2.24	108.00	2.15	159.00	.38	205.05	5.24	276.95	1.62
64.10	.20	110.00	32.99	160.00	.68	206.05	21.54	292.75	.38
65.00	.66	111.00	4.57	160.90	.87	207.05	4.61	295.95	5.75
69.00	67.05	111.90	.29	164.90	.82	208.05	1.11	296.85	.76
70.00	.21	116.00	.83	166.00	.71	208.75	.12	302.85	.58
73.10	.90	117.00	11.76	167.00	4.52	210.05	.17	314.90	.61
74.00	4.82	118.00	.87	168.00	2.21	210.95	.79	314.00	.38
[illegible].00	8.23	122.00	.85	171.80	.17	216.95	5.98	323.10	1.91
76.10	1.92	123.00	1.52	172.90	.45	217.95	.60	334.00	.99
77.00	46.20	123.90	.70	174.00	1.01	220.95	4.54	352.00	.46
78.10	2.96	124.80	.57	175.00	1.81	222.95	1.57	353.00	.49
79.00	4.13	127.00	46.89	176.00	.31	224.05	12.35	365.00	2.47
80.00	2.58	128.00	3.90	177.00	.77	225.05	3.21	402.90	.57
81.00	4.32	129.00	23.30	177.90	.16	225.95	.20	423.00	3.98
81.90	1.06	129.90	2.11	178.90	3.64	226.95	5.42	423.80	.60
83.10	.34	130.80	.38	180.00	2.16	227.95	.79	441.05	9.97
84.00	.38	134.00	.49	180.90	.97	228.95	.96	442.05	68.07
85.00	1.30	135.00	1.64	184.05	.18	233.85	.14	443.05	13.00
86.00	1.03	136.10	.61	185.05	2.02	237.05	.18	444.05	1.14
86.90	.40	137.10	.66	186.05	13.07	242.05	.54		

MS data file header from : >D0034

Sample: DFTPP 50 NGS Operator: MANAGER MS 6/19/86 14:36
Misc : 6/19/86MDS 1 UL INJ
Sys. #: 1 MS model: 70 SW/HW rev.: CA ALS # :***
Method file: DFTPPD Tuning file: MTDON3 No. of extra records: 1
Source temp.: 0 Analyzer temp.: 275 Transfer line temp. : 20

Chromatographic temperatures : 120. 280. 0. 0. 0.
Chromatographic times, min. : 0.0 10.0 0.0 0.0 0.0
Chromatographic rate, deg/min: 10.0 0.0 0.0 0.0 0.0

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GC/MS TUNING AND MASS CALIBRATION

U-4906; 4923 Decafluorotriphenylphosphine (DFTPP)

Case No. 4971; 4989 Contractor Ecology & Environment Inc. Contract No. IL-3140

Instrument ID HP5970D Date 10-17-86 Time 1108

Lab ID D0960 Data Release Authorized By: C Hoytowicz

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	58.2
68	less than 2.0% of mass 69	0 (0)[1]
69	mass 69 relative abundance	68.4
70	less than 2.0% of mass 69	0 (0)[1]
127	40.0 - 60.0% of mass 198	42.6
197	less than 1.0% of mass 198	0
198	base peak, 100% relative abundance	100
199	5.0 - 9.0% of mass 198	6.46
275	10.0 - 30.0% of mass 198	21.2
365	greater than 1.00% of mass 198	2.03
441	present, but less than mass 443	8.55
442	greater than 40.0% of mass 198	50.1
443	17.0 - 23.0% of mass 442	9.72 (19.4)[2]

THIS PERFORMANCE TUNE APPLIES TO THE FOLLOWING SAMPLES, BLANKS AND STANDARDS.

[1] Value in parenthesis is % mass 69
[2] Value in parenthesis is % mass 442

SAMPLE ID	LAB ID		DATE OF ANALYSIS	TIME OF ANALYSIS
	BN STD -20 ug/L	D0965	10-17-86	1554
	-50 ug/L	D0966		1652
	80 ug/L	D0967		1747
	120 ug/L	D0968		1839
	160 ug/L	D0969		1931

FORM V

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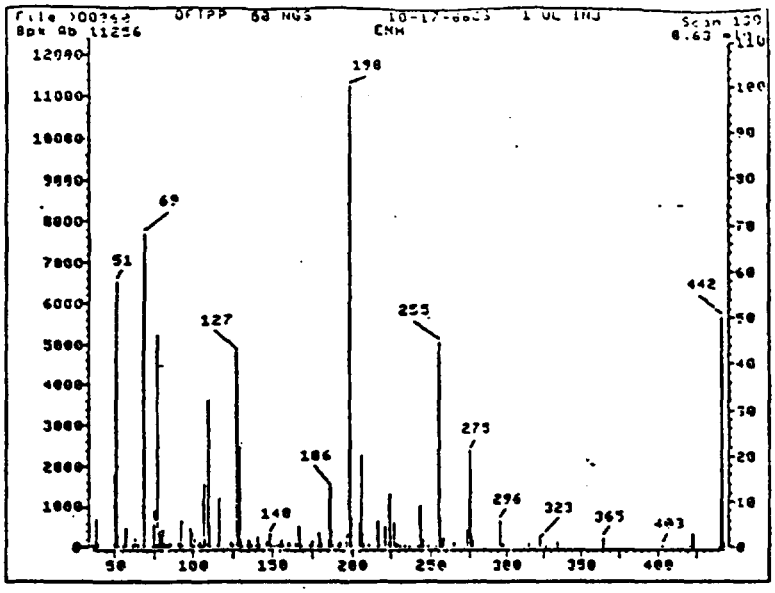


>00960 DFTPP 50 NGS 10-17-86CS 1 UL INJ
130 NRM ENH

File: >00960 Scan #: 130 Retn. time: 8.63

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
36.05	1.16	86.05	1.06	141.00	2.41	192.05	.93	248.80	.36
37.05	.11	91.00	.97	142.10	.82	197.95	1.34	253.20	.38
38.05	1.42	91.90	.80	142.70	.07	196.05	2.84	255.00	44.75
39.05	6.27	93.00	5.85	146.15	.43	197.95	100.00	254.00	6.54
39.95	.92	93.90	.45	146.95	1.26	198.95	6.46	256.90	.49
40.15	.32	98.00	4.29	147.95	2.82	202.55	.07	258.00	2.44
49.05	1.18	99.00	3.39	149.05	.55	204.05	3.39	264.95	.97
50.00	15.98	100.00	.44	151.35	.45	205.10	5.41	273.15	1.45
51.00	58.17	101.00	1.91	152.95	.83	206.00	20.24	273.95	3.85
52.10	2.54	103.00	.66	153.95	.54	207.10	3.06	275.05	21.18
52.80	.06	104.10	1.26	155.05	1.26	208.00	.73	276.05	2.69
55.10	.28	105.10	1.12	156.05	1.66	211.00	.84	276.95	1.72
56.10	1.70	105.90	.12	156.75	.32	216.20	.17	296.00	5.89
57.00	4.39	107.10	13.81	159.95	.92	217.00	5.97	297.10	.81
61.00	.82	107.95	1.96	161.05	1.05	218.00	.65	314.95	.60
62.10	.81	110.05	32.14	165.05	.94	221.10	4.61	315.15	.12
63.10	2.02	111.05	4.47	167.00	4.55	221.80	.19	323.00	1.62
65.10	.76	116.05	.75	168.00	2.08	223.00	1.50	326.70	.38
68.95	68.36	117.05	10.78	168.90	.45	224.05	11.74	334.10	.93
73.05	.54	122.95	1.38	173.00	.60	225.05	2.51	365.00	2.03
74.05	4.85	124.05	.68	174.00	.93	227.05	5.44	401.90	.39
74.95	8.24	125.05	.60	175.00	1.61	228.05	.62	403.10	.40
76.05	.59	127.00	42.62	177.80	.11	229.05	.93	420.75	.36
77.05	46.36	128.10	3.57	178.00	.40	230.95	.38	421.05	.08
78.15	3.18	129.00	21.86	179.00	3.29	234.05	.32	422.95	3.01
79.05	3.88	130.00	1.67	180.10	1.87	236.75	.38	423.95	.58
80.05	2.68	131.00	.42	181.10	1.09	241.95	.67	439.40	.20
81.05	3.98	134.10	.63	185.05	1.78	242.25	.11	439.80	.07
82.05	.91	135.10	1.72	186.05	13.11	242.90	.15	441.00	8.55
83.05	.85	136.00	.74	187.05	3.55	244.00	9.07	442.00	50.14
84.05	.53	136.90	.68	188.05	.36	245.00	1.13	443.00	9.72
84.95	1.02	140.00	.29	191.15	.49	246.00	1.80	444.10	.94

MS data file header from : >00960

Sample: DFTPP 50 NGS Operator: USER6 MS 10/17/86 11:08
Misc : 10-17-86CS 1 UL INJ BTL# 1
Sys. #: 1 MS model: 70 SW/HW rev.: CA ALS # : 0
Method file: DFTPPO Tuning file: MTDON2 No. of extra records: 1
Source temp.: 0 Analyzer temp.: 275 Transfer line temp. : 20

Chromatographic temperatures :	120.	280.	0.	0.	0.
Chromatographic times, min. :	0.0	10.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	10.0	0.0	0.0	0.0	0.0

GC/MS TUNING AND MASS CALIBRATION
Decafluorotriphenylphosphine (DFTPP)

Case No. U-4906, 4928 4971, 4989 Contractor Ecology & Environment Contract No. IL-3140

Instrument ID HP5970D Date 03-04-87 Time 12:03

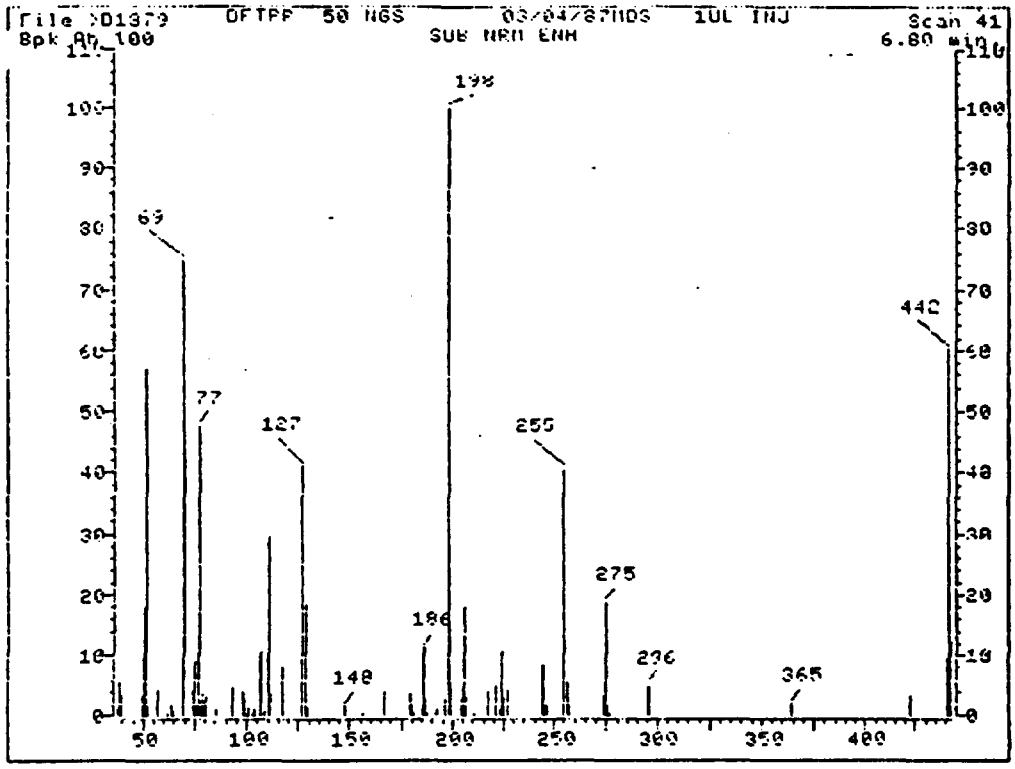
Lab ID D1879 Data Release Authorized By: C Stojtowicz

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	57.09
68	less than 2.0% of mass 69	0.00 (0.00)[1]
69	mass 69 relative abundance	74.89
70	less than 2.0% of mass 69	0.00 (0.00)[1]
127	40.0 - 60.0% of mass 198	40.91
197	less than 1.0% of mass 198	0.00
198	base peak, 100% relative abundance	100.00
199	5.0 - 9.0% of mass 198	5.51
275	10.0 - 30.0% of mass 198	18.66
365	greater than 1.00% of mass 198	1.95
441	present, but less than mass 443	9.68
442	greater than 40.0% of mass 198	60.27
443	17.0 - 23.0% of mass 442	12.32 (20.43)[2]

THIS PERFORMANCE TUNE APPLIES TO THE FOLLOWING SAMPLES, BLANKS AND STANDARDS.

[1] Value in parenthesis is % mass 69
[2] Value in parenthesis is % mass 442

SAMPLE ID	LAB ID	DATE OF ANALYSIS	TIME OF ANALYSIS
	Cont Calib Check B/N D1880	03-04-87	12:27
	Cont Calib Check A/P D1881	03-04-87	13:26
D1885	Method Blank (2/16)	03-04-87	17:43



>D1879 DFTPP 50 NGS 03/04/87MDS 1UL INJ
41 SUB NRM ENH

File: >D1879 Scan #: 41 Retn. time: 6.80

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
38.05	.92	78.05	2.36	117.05	8.08	188.05	.27	226.95	4.17
39.05	5.99	79.15	3.47	127.00	40.91	191.75	.36	244.00	8.43
40.05	3.17	79.85	2.35	128.10	3.36	192.95	1.12	245.80	1.59
43.95	.16	80.95	3.14	129.00	18.48	195.95	2.64	255.00	40.57
49.05	3.19	85.95	1.18	129.70	1.21	198.05	100.00	256.10	5.49
50.00	18.07	93.00	4.62	147.55	.46	199.05	5.51	257.80	1.87
51.00	57.09	98.00	3.81	147.95	1.62	204.05	2.79	273.95	3.21
51.90	2.34	98.90	2.63	155.95	.44	204.90	4.52	275.05	18.66
57.00	4.37	100.00	.27	167.00	3.81	206.10	17.87	275.75	1.58
61.40	.32	101.00	1.23	179.00	3.57	207.10	2.94	276.05	.54
63.20	2.14	102.70	.29	180.00	2.09	210.40	.40	296.00	5.00
65.00	.78	104.00	1.15	181.00	.39	217.00	3.92	364.80	1.95
68.95	74.89	107.00	10.62	184.95	1.17	220.90	4.84	422.95	3.31
73.95	4.18	108.15	.80	186.05	11.26	223.00	1.19	441.00	9.68
74.95	9.05	109.95	29.60	186.85	2.64	224.05	10.52	442.00	60.27
76.05	2.03	111.05	3.63	187.05	1.16	225.05	2.83	443.00	12.32
77.05	47.57								

MS data file header from : >D1879

Sample: DFTPP 50 NGS Operator: USER6 MS 3/04/87 12:03
Misc : 03/04/87MDS 1UL INJ BTL# 1
Sys. #: 1 MS model: 70 SW/HW rev.: CA ALS # : 0
Method file: DFTPPO Tuning file: MTDIN No. of extra records: 1
Source temp.: 0 Analyzer temp.: 275 Transfer line temp. : 20

Chromatographic temperatures :	150.	280.	0.	0.	0.
Chromatographic times, min. :	0.0	10.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	5.0	0.0	0.0	0.0	0.0

GC/MS TUNING AND MASS CALIBRATION

U-4906; 4928 **Decafluorotriphenylphosphine (DFTPP)**

Case No. 4971; 4989 Contractor Ecology & Environment Contract No. IL-3140

Instrument ID HP5970 D Date 03-05-87 Time 11:13

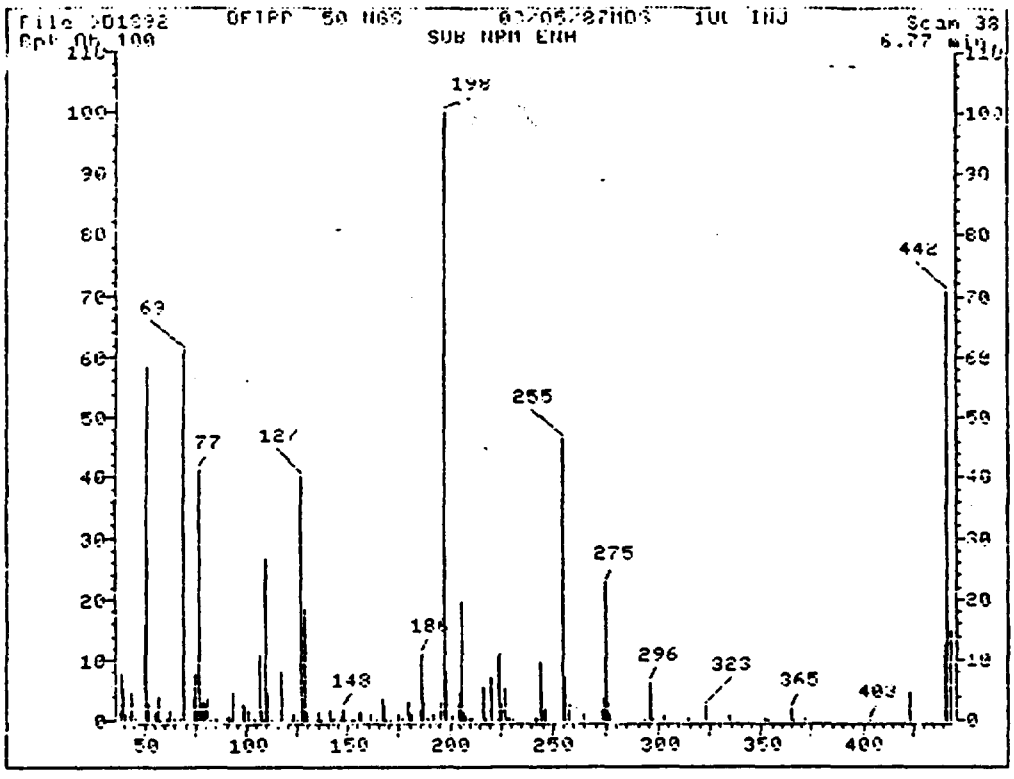
Lab ID >D 1892 Data Release Authorized By: C Hoytowicz

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	58.25
68	less than 2.0% of mass 69	0.32 (0.53)[1]
69	mass 69 relative abundance	61.21
70	less than 2.0% of mass 69	0.02 (0.03)[1]
127	40.0 - 60.0% of mass 198	40.04
197	less than 1.0% of mass 198	0.00
198	base peak, 100% relative abundance	100.00
199	5.0 - 9.0% of mass 198	8.23
275	10.0 - 30.0% of mass 198	22.79
365	greater than 1.00% of mass 198	1.92
441	present, but less than mass 443	12.58
442	greater than 40.0% of mass 198	70.73
443	17.0 - 23.0% of mass 442	14.86 (21.01)[2]

THIS PERFORMANCE TUNE APPLIES TO THE FOLLOWING SAMPLES, BLANKS AND STANDARDS.

[1] Value in parenthesis is % mass 69.
[2] Value in parenthesis is % mass 442

SAMPLE ID	LAB ID	DATE OF ANALYSIS	TIME OF ANALYSIS
	Cont Calib Check A/P D1893	03-05-87	11:47
	Cont Calib Check B/N D1897	03-05-87	15:56
D1898	Method Blank	03-05-87	17:00
DC-P1-53	#1032 D1900	03-05-87	18:46
DC-01-59	#1110 D1908	03-06-87	10:05
DC-05-63	#1114 D1901	03-05-87	19:38
DC-05-64	#1115 D1902	03-05-87	20:31
DC-04-62	#1113 D1903	03-05-87	21:24
DC-03-61	#1112 D1904	03-05-87	22:17
DC-08-65	#1116 D1905	03-05-87	23:10
DC-02-60	#1111 D1906	03-06-87	00:03
DC-06-66	#1117 D1907	03-06-87	09:13
DC-GB-68	#1275 D1909	03-06-87	10:57



>D1892 DFTPP 50 NGS 03/05/87MDS 1UL INJ
38 SUB NRM ENH

File: >D1892 Scan #: 38 Retn. time: 6.77

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
38.05	1.33	83.15	.04	135.90	.22	191.95	.99	255.00	46.40
39.15	7.91	85.05	.25	137.00	.04	196.05	2.95	256.00	7.01
39.95	5.09	85.25	.03	141.00	1.74	197.95	100.00	258.00	2.57
41.05	1.15	90.80	.28	141.90	.04	198.95	8.23	264.85	.96
43.05	.66	91.80	.59	143.10	.49	201.45	.57	272.95	1.53
43.95	4.66	92.10	.05	146.25	.02	204.10	2.56	274.05	3.58
45.15	.30	92.30	.05	147.05	.85	205.00	4.44	275.05	22.79
50.00	15.85	93.00	4.59	147.95	2.14	206.00	19.59	275.95	3.06
51.00	58.25	98.00	2.61	149.05	.02	207.10	1.41	277.05	1.10
52.10	2.77	99.10	2.44	151.25	.02	207.80	.75	292.90	.03
54.90	1.51	101.00	1.54	152.25	.02	210.10	.35	296.00	6.32
56.10	1.46	104.00	.45	153.85	.02	210.40	.03	297.00	.34
57.00	3.93	107.00	11.00	155.05	1.28	211.00	.46	302.95	.85
57.90	.02	107.85	1.69	156.05	1.32	217.00	5.48	314.05	.02
61.10	.38	108.65	.02	161.05	1.16	218.00	.42	314.75	.49
62.20	.48	109.95	26.76	164.05	.02	221.00	7.17	323.00	2.22
63.00	1.82	110.95	4.43	166.90	3.56	223.10	.43	334.00	.85
64.80	.54	112.05	.04	167.80	2.38	224.05	10.86	352.05	.40
67.90	.32	116.05	.03	169.00	.03	224.95	2.78	352.75	.03
68.95	61.21	117.05	8.02	170.70	.03	226.95	5.11	353.95	.03
69.75	.02	122.15	.05	175.10	.93	227.95	.55	364.90	1.92
73.95	3.93	123.05	1.03	176.90	.33	228.95	.47	365.90	.03
74.95	7.75	125.15	.04	179.00	2.92	230.95	.19	372.10	.37
76.05	1.88	127.00	40.04	180.00	1.18	241.85	.32	403.00	.03
77.05	41.07	128.10	3.42	181.10	1.16	242.90	.48	423.05	4.58
78.05	3.09	129.00	18.22	184.95	1.75	244.00	9.61	441.00	17.58
78.95	3.42	130.00	1.41	185.95	11.00	244.90	.79	442.00	70.73
80.05	2.80	134.00	.20	186.85	2.84	246.00	2.08	443.00	14.86
81.15	3.67	135.00	1.29	188.85	.35	252.80	.02	443.80	1.53
81.85	.54								

GC/MS PERFORMANCE STANDARD

Decafluorotriphenylphospine (DFTPP)

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
51	30-60% of mass 198	58.25	58.25	Ok
68	Less then 2% of mass 69	.32	.53	Ok
69	(reference only)	61.21	61.21	Ok
70	Less then 2% of mass 69	.02	.03	Ok
127	40-60% of mass 198	40.04	40.04	Ok
197	Less then 1% of mass 198	0.00	0.00	Ok
198	Base peak, 100% relative abundance	100.00	100.00	Ok
199	5-9% of mass 198	8.23	8.23	Ok
275	10-30% of mass 198	22.79	22.79	Ok
365	Greater then 1% of mass 198	1.92	1.92	Ok
441	Less then mass 443	12.58	84.69	Ok
442	Greater then 40% of mass 198	70.73	70.73	Ok
443	17-23% of mass 442	14.86	21.01	Ok

Injection Date: 03/05/87
Injection Time: 11:13
Data File: >D1892
Scan: 38

U-4906; 4928;

Decafluorotriphenylphosphine (DFTPP)

Case No. 4971; 4989 Contractor Ecology & Environment Contract No. IL-3140

Instrument ID HP5970D Date 03-17-87 Time 13:20

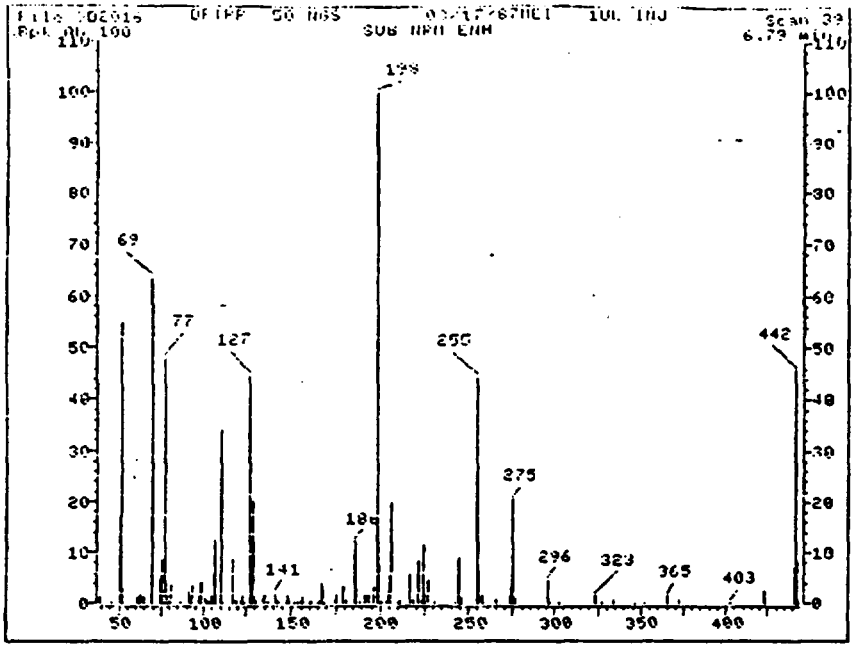
Lab ID >D2016 Data Release Authorized By: C. Hightower

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	54.96
68	less than 2.0% of mass 69	0.00 (0.00)[1]
69	mass 69 relative abundance	63.58
70	less than 2.0% of mass 69	0.00 (0.00)[1]
127	40.0 - 60.0% of mass 198	44.31
197	less than 1.0% of mass 198	0.00
198	base peak, 100% relative abundance	100.00
199	5.0 - 9.0% of mass 198	7.52
275	10.0 - 30.0% of mass 198	20.52
365	greater than 1.00% of mass 198	1.65
441	present, but less than mass 443	7.18
442	greater than 40.0% of mass 198	45.75
443	17.0 - 23.0% of mass 442	8.36 (18.27)[2]

THIS PERFORMANCE TUNE APPLIES TO THE FOLLOWING SAMPLES, BLANKS AND STANDARDS.

[1] Value in parenthesis is % mass 69
[2] Value in parenthesis is % mass 442

SAMPLE ID	LAB ID	DATE OF ANALYSIS	TIME OF ANALYSIS
	Cont Calib Check B/N >D2017	03-17-87	13:41
	Cont Calib Check A/P >D2018	03-17-87	14:45
D2021	Method Blank 3/3 >D2021	03-17-87	17:44
DC-09-73	1428 >D2022	03-17-87	18:49
DC-010-75	1430 >D2023	03-17-87	20:15
DC-09-72	1427 >D2025	03-17-87	22:08
D2020	method blank 2/26 >D2020	03-17-87	16:48
DC-G9-71	1278 >D2027	03-18-87	00:03
DC-G6-67	1274 >D2028	03-18-87	01:02
DC-G8-70	1277 >D2029	03-18-87	02:00



>D2016 DFTPP 50 NGS 03/17/87MEI 1UL INJ
39 SUB NRM ENH

File: >D2016 Scan #: 39 Retn. time: 6.79

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
39.05	1.49	101.00	1.27	147.00	.26	198.90	7.52	258.95	.23
45.05	.39	101.90	.67	148.10	1.70	199.90	.50	265.00	.74
50.05	16.97	103.00	.58	149.10	.62	200.75	.16	273.00	1.29
51.05	54.96	103.90	.55	151.60	.40	201.35	.51	274.10	3.39
52.05	3.10	105.00	2.08	153.10	.51	203.05	.32	275.00	20.52
60.90	1.22	106.10	.29	154.90	.81	203.95	2.19	276.00	1.47
62.20	.33	107.00	12.60	156.10	1.37	204.95	5.57	277.10	1.00
62.90	2.16	108.00	2.06	157.80	.21	205.95	20.02	295.95	4.70
65.10	1.23	110.00	33.89	159.75	.48	210.05	.18	296.75	.26
69.00	63.58	110.90	3.63	161.05	.66	210.75	.83	302.85	.28
74.00	4.84	111.90	.40	164.65	.40	216.95	5.73	323.00	1.60
74.95	8.87	117.05	8.70	165.95	.56	218.65	.56	327.05	.26
75.75	2.73	118.65	.56	167.05	3.88	221.05	8.41	334.15	.66
76.95	47.84	122.05	.77	167.95	2.54	221.70	.89	345.95	.14
78.05	4.27	122.95	1.73	168.85	.13	222.70	.81	351.90	.18
78.95	1.76	123.95	.46	174.05	.30	224.00	11.68	365.00	1.65
79.85	.84	126.95	44.31	175.05	1.63	225.00	2.08	365.80	.23
80.05	.84	127.95	3.57	179.05	3.23	226.90	4.50	372.05	.66
80.95	3.71	128.95	19.83	181.00	.78	230.80	.33	402.00	.13
86.95	.47	129.95	1.30	186.00	12.10	241.90	.54	403.10	.26
90.95	2.20	130.95	.78	187.00	2.89	243.95	9.07	423.05	2.36
91.95	.95	133.95	1.05	189.00	.37	244.95	1.18	424.05	.23
92.95	3.63	135.05	1.56	191.40	.20	245.95	1.21	441.10	7.18
93.75	.60	136.85	.44	191.90	1.65	254.95	44.38	442.00	45.75
96.70	1.58	140.90	2.12	193.10	1.79	256.05	6.02	443.00	8.36
97.90	4.30	142.00	.68	196.00	3.51	257.95	1.91	444.10	.59
98.90	4.40	143.00	.46	198.00	100.00				

MS data file header from : >D2016

Sample: DFTPP 50 NGS Operator: USER8 MS 3/17/87 13:20
Misc : 03/17/87MEI 1UL INJ BIL# 1
Sys. #: 1 MS model: 70 SW/HW rev.: CA ALS # : 0
Method file: DFTPPD Tuning file: MTOUN No. of extra records: 1
Source temp.: 0 Analyzer temp.: 275 Transfer line temp. : 20

Chromatographic temperatures : 150. 280. 0. 0. 0.
Chromatographic times, min. : 0.0 10.0 0.0 0.0 0.0
Chromatographic rate, deg/min: 5.0 0.0 0.0 0.0 0.0

GC/MS TUNING AND MASS CALIBRATION

U-4906; 4928 **Decafluorotriphenylphosphine (DFTPP)**

Case No. 4971; 4989 Contractor Ecology & Environment Contract No. IL-3140

Instrument ID HP 5995C Date 03-18-87 Time 11:08.

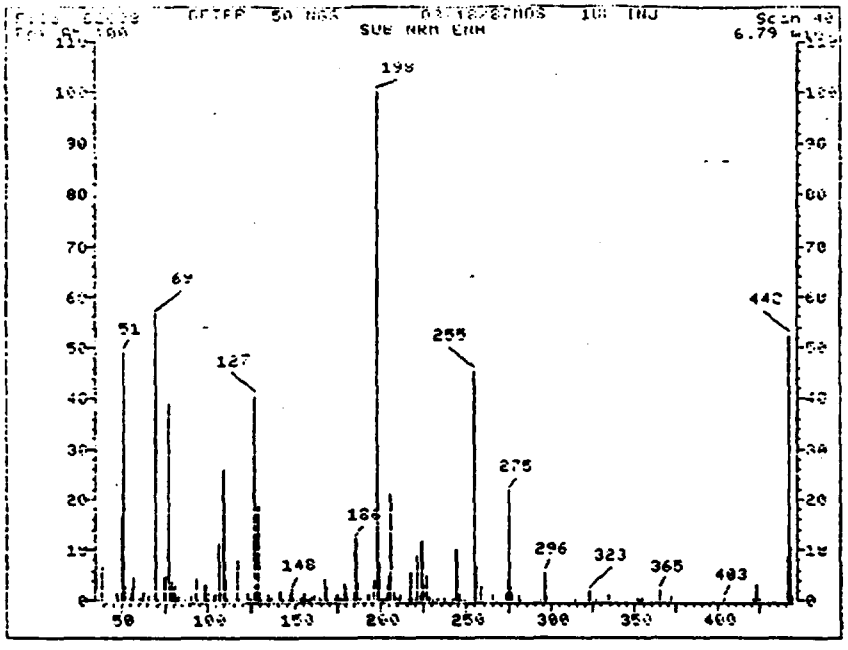
Lab ID >D2038 Data Release Authorized By: C Hojtowicz

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	49.22
68	less than 2.0% of mass 69	0.00 (0.00)[1]
69	mass 69 relative abundance	56.62
70	less than 2.0% of mass 69	0.36 (0.63)[1]
127	40.0 - 60.0% of mass 198	40.46
197	less than 1.0% of mass 198	0.00
198	base peak, 100% relative abundance	100.00
199	5.0 - 9.0% of mass 198	7.10
275	10.0 - 30.0% of mass 198	21.80
365	greater than 1.00% of mass 198	2.13
441	present, but less than mass 443	8.56
442	greater than 40.0% of mass 198	52.38
443	17.0 - 23.0% of mass 442	10.21 (19.4)[2]

THIS PERFORMANCE TUNE APPLIES TO THE FOLLOWING SAMPLES, BLANKS AND STANDARDS.

[1] Value in parenthesis is % mass 69
[2] Value in parenthesis is % mass 442

SAMPLE ID	LAB ID		DATE OF ANALYSIS	TIME OF ANALYSIS
	Cont Calib Check A/P	D2039	03-18-87	12:02
	Cont Calib Check B/N	D2040	03-18-87	13:04
D2041	Method Blank	D2041	03-18-87	14:04
DC-I12-57	1036	D2042	03-18-87	15:00
DC-I12-57 MS	1036 MS	D2043	03-18-87	15:56
DC-I12-57 MSD	1036 MSD	D2044	03-18-87	16:52
DC-I12-58	1037	D2045	03-18-87	17:48
DC-P5-55	1034	D2046	03-18-87	18:44
DC-P2-54	1033	D2048	03-18-87	20:37
DC-G7-69	1276	D2049	03-18-87	21:42
DC-010-74	1429	D2050	03-18-87	22:39



>D2038 DFTPP 50 NGS 03/18/87MDS 1UL INJ
-0 SUB NRM ENH

File: >D2038 Scan #: 40 Retn. time: 6.79

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
36.95	.14	103.90	1.01	153.10	.17	201.05	.30	258.45	.23
39.05	6.42	105.00	1.22	154.00	.30	201.55	.21	265.00	1.08
40.85	1.55	107.00	11.40	154.50	.13	203.25	.45	273.00	1.45
42.85	.46	107.90	1.90	155.00	1.27	204.05	3.03	274.10	3.98
50.05	16.68	110.00	25.95	156.10	1.33	205.05	4.84	275.00	21.80
51.05	49.22	111.10	4.35	157.10	.20	206.05	21.23	276.00	2.59
52.05	2.72	112.00	.27	157.30	.08	207.95	2.10	277.00	1.44
54.80	.59	114.80	.07	158.85	.11	208.95	.71	280.80	1.09
56.00	2.33	116.10	.61	159.85	.57	210.25	.55	281.10	.14
57.00	4.61	116.95	8.10	161.05	.90	210.55	.23	292.65	.22
61.00	.87	118.05	.35	164.75	.56	211.05	.99	295.95	5.61
62.10	.41	123.05	1.29	164.95	.15	216.05	.44	296.95	.71
63.10	1.79	124.95	.31	166.95	4.41	216.95	5.67	314.10	.15
65.10	.92	126.95	40.46	167.95	2.57	218.05	.54	321.90	.12
69.00	56.62	127.95	3.41	169.05	.17	219.95	.08	323.10	1.87
70.00	.36	128.95	18.54	173.15	.34	221.05	8.65	326.65	.15
74.10	4.55	129.95	1.67	174.05	.93	223.00	1.09	327.05	.09
74.95	4.92	130.75	.09	174.85	1.25	224.00	11.62	334.05	.95
76.95	39.22	130.95	.09	176.05	.51	224.90	2.91	351.90	.54
78.05	3.05	133.95	.41	176.75	.71	227.00	4.77	352.20	.09
78.95	3.91	134.25	.09	178.15	.20	227.80	.43	353.00	.20
79.85	2.75	134.95	1.40	178.95	3.14	228.00	.13	354.10	.52
80.95	3.60	136.05	.31	180.00	2.23	229.00	.66	365.00	2.13
81.05	.76	137.05	.67	180.90	.66	230.90	.17	372.05	.83
82.85	1.02	141.00	2.03	182.60	.06	234.00	.26	402.00	.10
87.05	.13	142.20	.51	185.00	1.56	237.00	.33	403.10	.50
90.95	.95	142.80	.37	186.00	12.12	242.05	.34	420.95	.40
93.05	4.63	143.00	.08	186.90	3.42	243.95	9.90	422.15	.20
93.65	.06	146.40	.16	188.10	.31	244.95	1.05	423.05	3.07
97.95	.09	147.00	1.43	191.90	.97	245.95	1.34	424.15	.45
98.00	3.43	148.00	2.21	193.10	1.06	247.05	.18	441.10	8.56
99.00	3.58	149.10	.26	196.00	3.94	249.05	.24	442.10	52.38
99.80	.37	150.20	.07	198.00	100.00	254.95	45.30	443.00	10.21
101.00	1.76	151.00	.07	199.00	7.10	256.05	6.60	444.10	.74
103.50	.10	152.80	.33	200.00	.20	258.05	2.76		

MS data file header from : >D2038

Sample: DFTPP 50 NGS Operator: USERB MS 3/18/87 11:08
Disc : 03/18/87MS 1UL INJ BTL# 1
Sys. #: 1 MS model: 70 SW/HW rev.: CA ALS # : 0
Method file: DFTPPD Tuning file: MTDUN No. of extra records: 1
Source temp.: 0 Analyzer temp.: 275 Transfer line temp. : 20

Chromatographic temperatures : 150. 280. 0. 0. 0.
Chromatographic times, min. : 0.0 10.0 0.0 0.0 0.0
Chromatographic rate, deg/min: 5.0 0.0 0.0 0.0 0.0

GC/MS TUNING AND MASS CALIBRATION

Decafluorotriphenylphosphine (DFTPP)

U-4906; 4928;

Case No. 4971; 4989 Contractor Ecology & Environment Contract No. IL-3140

Instrument ID HP5970 D Date 03-26-87 Time 10:28

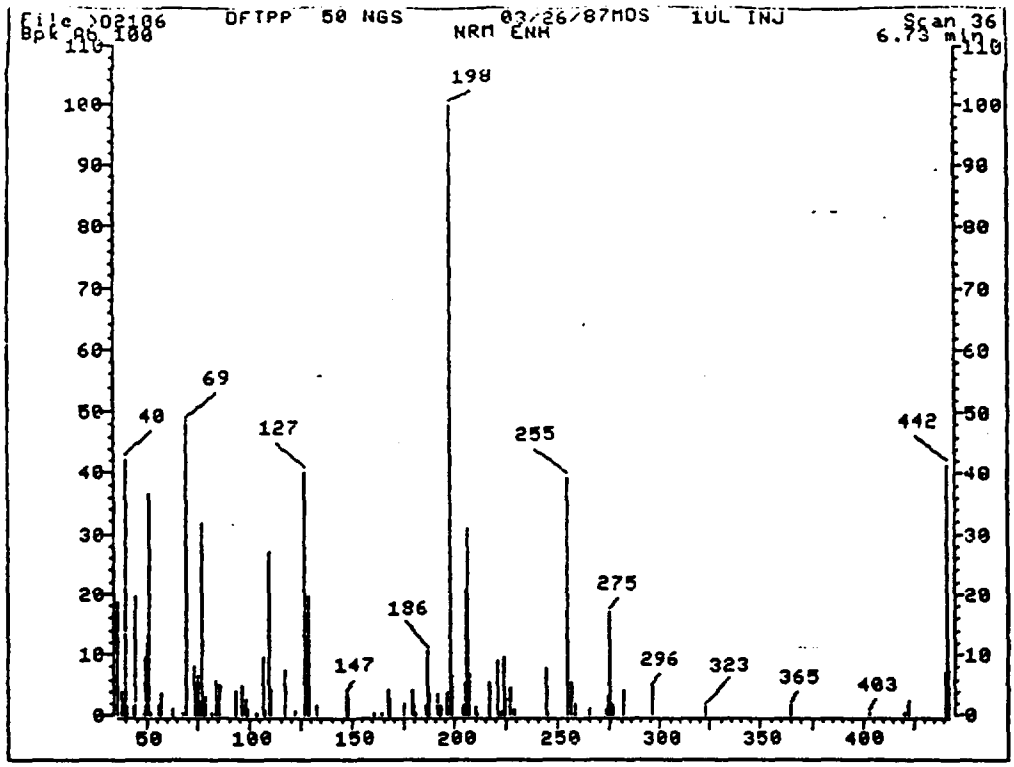
Lab ID D2106 Data Release Authorized By: C Slojtowicz

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	36.49
68	less than 2.0% of mass 69	0.34 (0.70)[1]
69	mass 69 relative abundance	48.30
70	less than 2.0% of mass 69	0.00 (0.00)[1]
127	40.0 - 60.0% of mass 198	40.20
197	less than 1.0% of mass 198	0.00
198	base peak, 100% relative abundance	100.00
199	5.0 - 9.0% of mass 198	6.36
275	10.0 - 30.0% of mass 198	17.05
365	greater than 1.00% of mass 198	1.56
441	present, but less than mass 443	7.14
442	greater than 40.0% of mass 198	41.46
443	17.0 - 23.0% of mass 442	7.42 (17.89)[2]

THIS PERFORMANCE TUNE APPLIES TO THE FOLLOWING SAMPLES, BLANKS AND STANDARDS.

[1] Value in parenthesis is % mass 69
[2] Value in parenthesis is % mass 442

SAMPLE ID	LAB ID	DATE OF ANALYSIS	TIME OF ANALYSIS
	Cont Calib Std A/P D2107	03-26-87	10:53
	Cont Calib Std B/N D2108	03-26-87	11:51
DC-P5-56	1035 D2111	03-26-87	15:07



>D2106 DFTPP 50 NGS 03/26/87MDS 1UL INJ
36 NRM ENH

File: >D2106 Scan #: 36 Retn. time: 6.73

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
35.95	18.76	77.05	31.87	129.00	19.71	198.85	6.36	256.90	.44
37.75	3.77	78.05	3.04	132.80	1.58	204.05	1.80	258.00	1.89
38.85	2.63	78.95	2.93	147.15	3.53	205.00	5.07	264.75	.93
40.05	42.07	81.85	.33	147.95	3.04	206.00	20.60	264.95	.30
40.95	1.42	83.85	5.88	160.35	.33	207.00	30.89	272.95	1.04
43.05	1.21	84.85	3.10	164.55	.27	208.00	6.78	273.95	3.21
43.95	19.50	85.95	4.83	166.90	4.30	210.30	1.28	275.05	17.05
47.95	.31	92.90	3.84	168.00	2.61	211.60	.34	276.05	2.14
49.05	9.80	95.90	4.86	174.70	1.86	217.00	5.40	277.05	1.68
49.90	11.78	98.00	2.55	179.00	4.20	221.10	9.09	281.05	4.37
51.10	36.49	98.80	1.13	179.90	1.96	221.80	.55	296.00	4.47
51.80	.48	103.30	.33	180.80	.29	223.00	.86	322.90	1.25
56.10	1.98	103.50	.35	185.15	1.61	223.95	9.80	364.80	1.56
57.10	3.46	107.10	9.83	185.95	10.61	225.15	2.64	402.90	.34
62.80	1.11	107.85	.80	187.05	3.71	226.95	4.41	420.95	.26
67.80	.34	110.05	27.10	190.95	3.54	229.05	1.01	422.15	.38
68.95	48.30	111.05	4.33	191.85	.48	244.00	7.87	422.95	2.39
73.05	8.24	116.95	7.32	193.05	1.78	244.70	.31	441.00	7.14
73.95	3.55	121.75	.62	196.05	3.77	255.00	39.25	442.00	41.46
75.05	6.51	127.00	40.20	197.95	100.00	256.00	5.62	443.00	7.42
76.25	2.25								

MS data file header from : >D2106

Sample: DFTPP 50 NGS Operator: USER6 MS 3/26/87 10:28
Misc : 03/26/87MDS 1UL INJ BTL# 1
Sys. #: 1 MS model: 70 SW/HW rev.: CA ALS # : 0
Method file: DFTPPD Tuning file: MTDON No. of extra records: 1
Source temp.: 0 Analyzer temp.: 275 Transfer line temp. : 20

Chromatographic temperatures : 150. 280. 0. 0. 0.
Chromatographic times, min. : 0.0 10.0 0.0 0.0 0.0
Chromatographic rate, deg/min: 5.0 0.0 0.0 0.0 0.0

GC/MS TUNING AND MASS CALIBRATION

Bromofluorobenzene (BFB)

Case No. U-4906; 4928; 4971; 4989 Contractor Ecology & Environment Inc. Contract No. IL-3140

Instrument ID HP5995C Date 7-14-86 Time 1426

Lab ID C3498 Data Release Authorized By: C Sojtowicz

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE	
50	15.0 - 40.0% of the base peak	28.2	
75	30.0 - 60.0% of the base peak	54.4	
95	Base peak, 100% relative abundance	100	
96	5.0 - 9.0% of the base peak	8.01	
173	Less than 1.0% of the base peak	NONE PRESENT	
174	Greater than 50.0% of the base peak	92.7	
175	5.0 - 9.0% of mass 174	7.74	(8.35)[1]
176	Greater than 95.0%, but less than 101.0% of mass 174	90.9	(98.0)[1]
177	5.0 - 9.0% of mass 176	6.77	(7.45)[2]

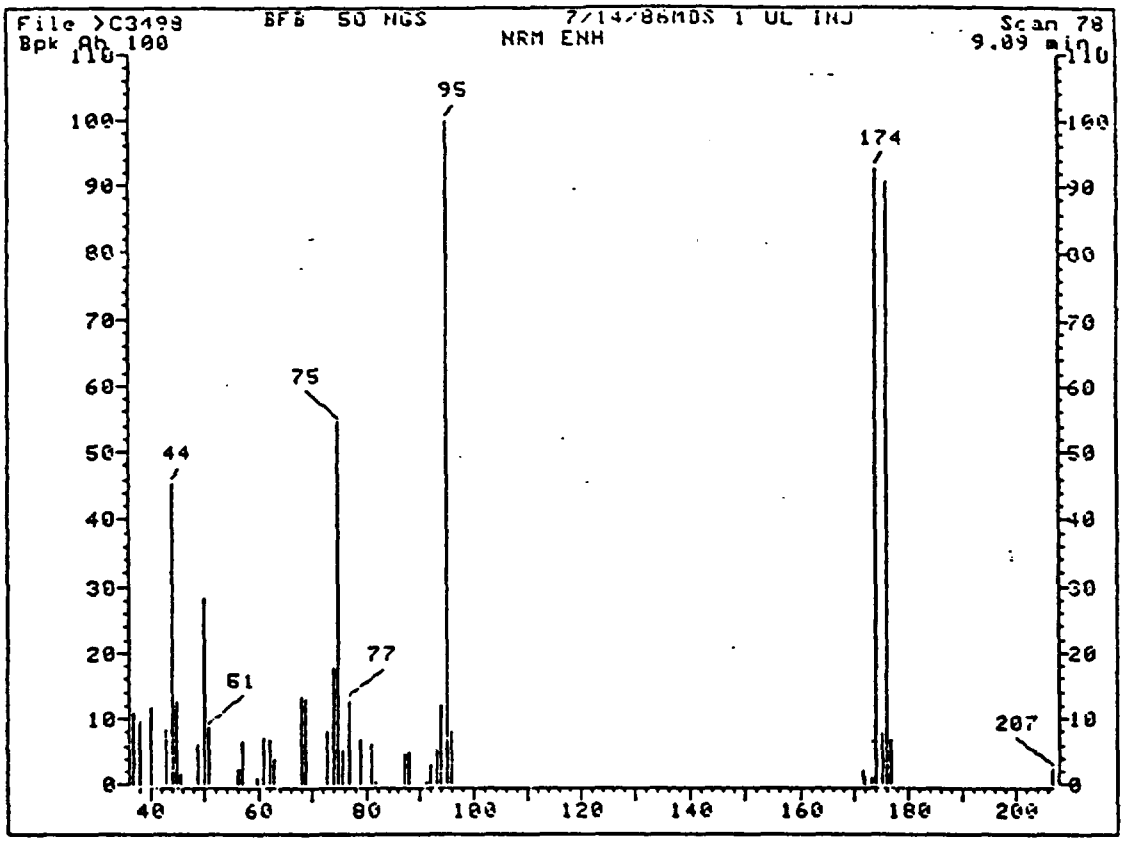
THIS PERFORMANCE TUNE APPLIES TO THE FOLLOWING SAMPLES, BLANKS AND STANDARDS.

[1] Value in parenthesis is % mass 174.
[2] Value in parenthesis is % mass 176.

SAMPLE ID	LAB ID	DATE OF ANALYSIS	TIME OF ANALYSIS
–	VOA STD - 250 ng C3500	7-14-86	1553
–	- 500 ng C3501		1649
–	- 750 ng C3502		1744
–	- 1000 ng C3503		1839
–	- 100 ng C3505		2051

FORM V

7/85 89
497095



>C3498 BFB 50 NGS 7/14/86MDS 1 UL INJ
78 NRM ENH

File: >C3498 Scan #: 78 Retn. time: 9.09

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
37.00	11.06	51.05	8.60	73.15	8.12	87.00	4.44	171.70	2.10
38.10	9.79	55.95	2.40	74.05	17.82	88.00	4.79	172.00	1.15
40.00	11.49	57.05	6.57	75.05	54.39	91.20	.35	173.00	.89
43.10	8.50	59.95	.91	75.95	5.13	92.00	2.89	173.90	92.72
44.00	45.24	61.05	7.01	76.95	12.72	93.00	5.31	175.00	7.74
45.00	12.63	62.05	6.81	78.95	6.69	94.00	11.83	175.90	90.86
45.90	1.68	62.85	3.98	80.95	6.07	95.00	100.00	176.90	6.77
49.10	6.23	68.05	13.30	81.95	.49	96.00	8.01	206.95	2.20
50.00	28.25	69.05	12.87						

MS data file header from : >C3498

Sample: BFB 50 NGS Operator: USER8 MS 7/14/86 14:2
Misc : 7/14/86MDS 1 UL INJ
Sys. #: 1 MS model: 96 SW/HW rev.: CA ALS #: 0
Method file: BFB001 Tuning file: MTCU4 No. of extra records: 1
Source temp.: 200 Analyzer temp.: 220 Transfer line temp. : 200

Chromatographic temperatures :	220.	225.	0.	0.	0.
Chromatographic times, min. :	10.0	10.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	5.0	0.0	0.0	0.0	0.0

GC/MS PERFORMANCE STANDARD

GC/MS TUNING AND MASS CALIBRATION

Bromofluorobenzene (BFB)

Case No. U-4906; 4928 4971; 4989 Contractor: Ecology & Environment Inc. Contract No. IL-3140

Instrument ID HP5995C Date 1-27-87 Time 1409

Lab ID C6595 Data Release Authorized By: C Bogtowicz

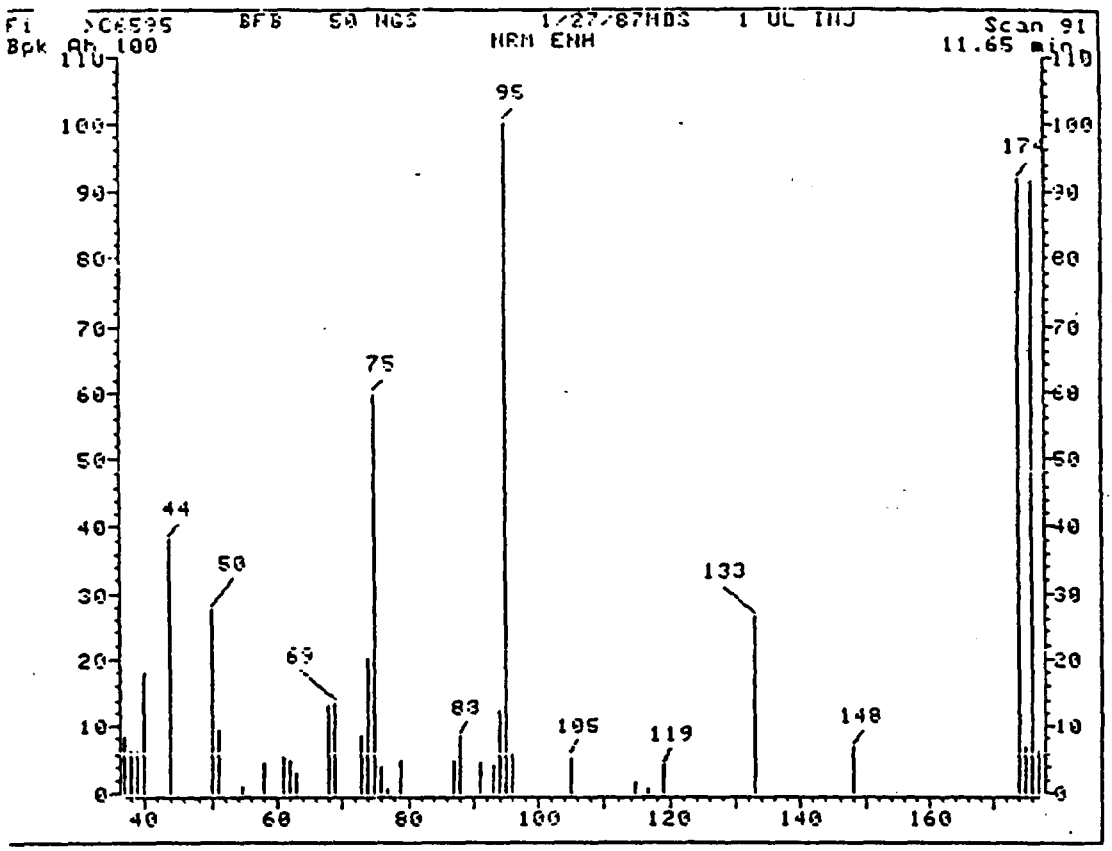
m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
50	15.0 - 40.0% of the base peak	27.6
75	30.0 - 60.0% of the base peak	59.7
95	Base peak, 100% relative abundance	100
96	5.0 - 9.0% of the base peak	5.79
173	Less than 1.0% of the base peak	0
174	Greater than 50.0% of the base peak	91.9
175	5.0 - 9.0% of mass 174	6.70 (7.29) [1]
176	Greater than 95.0%, but less than 101.0% of mass 174	91.7 (99.8) [1]
177	5.0 - 9.0% of mass 176	6.16 (6.72) [2]

THIS PERFORMANCE TUNE APPLIES TO THE FOLLOWING SAMPLES, BLANKS AND STANDARDS.

[1] Value in parenthesis is % mass 174.
[2] Value in parenthesis is % mass 176.

SAMPLE ID	LAB ID		DATE OF ANALYSIS	TIME OF ANALYSIS
	VOA STD - 20 ug/L	C6596	1-27-87	1434
	- 50 ug/L	C6597		1527
	- 100 ug/L	C6598		1621
	- 200 ug/L	C6600		1808
	- 150 ug/L	C6601		1903

FORM V 7/85



>C6595 BFB 50 NGS 1/27/87MDS 1 UL INJ
91 NRM ENH

File: >C6595 Scan #: 91 Retn. time: 11.65

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
37.00	8.53	57.90	4.55	74.95	59.65	92.95	4.25	119.10	4.09
37.90	6.05	60.85	5.69	75.85	3.85	94.05	12.16	133.10	26.21
39.00	6.26	61.95	4.99	76.85	.76	95.05	100.00	148.15	6.77
40.00	17.86	62.95	2.96	78.95	5.01	96.05	5.79	173.95	91.93
44.00	38.11	68.05	13.32	86.95	5.03	104.90	5.35	174.95	6.70
50.00	27.56	68.95	13.50	88.05	8.26	114.90	1.59	175.95	91.72
51.10	9.39	73.05	8.26	91.05	4.70	116.90	.64	176.95	6.16
54.90	.89	73.95	20.12						

MS data file header from : >C6595

Sample: BFB 50 NGS Operator: USER8 MS 1/27/87 14:09
Misc : 1/27/87MDS 1 UL INJ
Sys. #: 1 MS model: 96 SW/HW rev.: CA ALS # : 0
Method file: BFB001 Tuning file: MTCU4 No. of extra records: 1
Source temp.: 200 Analyzer temp.: 220 Transfer line temp. : 200

Chromatographic temperatures :	220.	225.	0.	0.	0.
Chromatographic times, min. :	5.0	10.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	5.0	0.0	0.0	0.0	0.0

GC/MS TUNING AND MASS CALIBRATION

Bromofluorobenzene (BFB)

Case No. u-4906,4928 4971, 4989 Contractor Ecology & Environment Contract No. IL-3140

Instrument ID HP5995C Date 2/20/87 Time 10:33

Lab ID >C6892 Data Release Authorized By: C Hoytowicz

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
50	15.0 - 40.0% of the base peak	27.21
75	30.0 - 60.0% of the base peak	57.59
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of the base peak	5.32
173	Less than 1.0% of the base peak	0.00
174	Greater than 50.0% of the base peak	83.85
175	5.0 - 9.0% of mass 174	4.76 (5.67)[1]
176	Greater than 95.0%, but less than 101.0% of mass 174	83.70 (99.82)[1]
177	5.0 - 9.0% of mass 176	5.12 (6.12)[2]

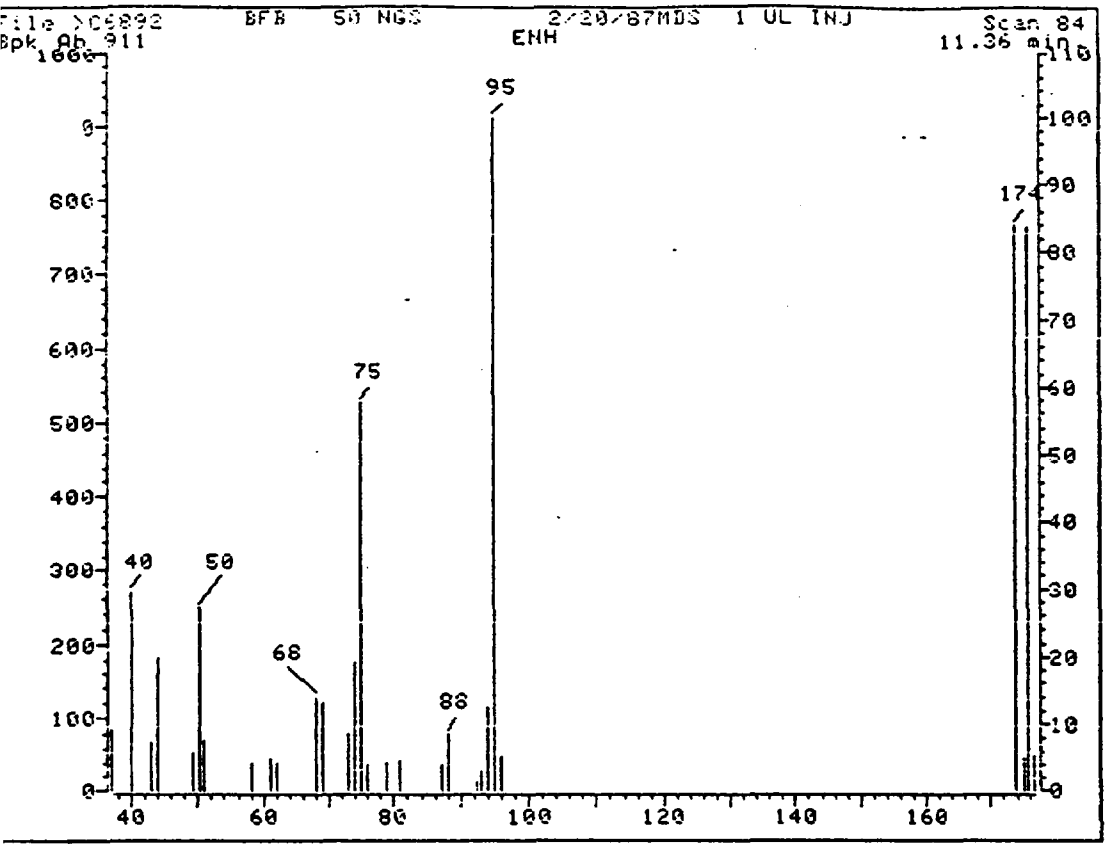
THIS PERFORMANCE TUNE APPLIES TO THE FOLLOWING SAMPLES, BLANKS AND STANDARDS.

[1] Value in parenthesis is % mass 174.
[2] Value in parenthesis is % mass 176.

SAMPLE ID	LAB ID	DATE OF ANALYSIS	TIME OF ANALYSIS
	Cont Calib Check >C6893	2-20-87	11:04
C6894	Method Blank	2-20-87	12:16
DC-P5-55	1034 >C6895	2-20-87	13:08
DC-P5-56	1035 >C6896	2-20-87	14:00
DC-P2-54	1033 >C6897	2-20-87	14:52
DC-I12-58	1037 >C6898	2-20-87	16:04
DC-I12-57	1036 >C6899	2-20-87	16:56
DC-P5-55 MS	1034 MS >C6900	2-20-87	17:48
DC-P5-55 MSD	1034 MSD >C6901	2-20-87	18:40
DC-P1-53	1032 >C6902	2-20-87	19:36

FORM V 7/85

497095



>C6892 BFB 50 NGS 2/20/87MDS 1 UL INJ
84 ENH

File: >C6892 Scan #: 84 Retn. time: 11.36

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
37.10	86.65	51.00	69.65	73.05	81.01	87.05	36.68	96.00	48.46
40.10	270.09	58.15	38.26	74.05	175.63	88.05	78.44	173.90	764.29
43.10	66.56	61.05	44.30	75.05	524.90	92.25	11.05	175.00	43.36
44.10	181.88	62.15	40.15	76.05	35.00	93.00	27.41	175.90	762.91
49.10	52.11	68.05	126.49	79.05	38.22	94.10	113.97	176.90	46.67
50.10	247.99	69.05	119.67	80.95	42.38	95.10	911.48		

MS data file header from : >C6892

Sample: BFB 50 NGS Operator: USER8 MS 2/20/87 10:33
Misc : 2/20/87MDS 1 UL INJ
Sys. #: 1 MS model: 96 SW/HW rev.: CA ALS # : 0
Method file: BFB001 Tuning file: MTCV4 No. of extra records: 1
Source temp.: 200 Analyzer temp.: 220 Transfer line temp. : 200

Chromatographic temperatures :	220.	225.	0.	0.	0.
Chromatographic times, min. :	5.0	10.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	5.0	0.0	0.0	0.0	0.0

GC/MS TUNING AND MASS CALIBRATION

Bromofluorobenzene (BFB)

Case No. 4971, 4989 (4-4906,4928) Contractor Ecology & Environment Contract No. IL-3140

Instrument ID 11P5995C Date 2/23/87 Time 12:12

Lab ID >C 6909 Data Release Authorized By: C Hoytowicz

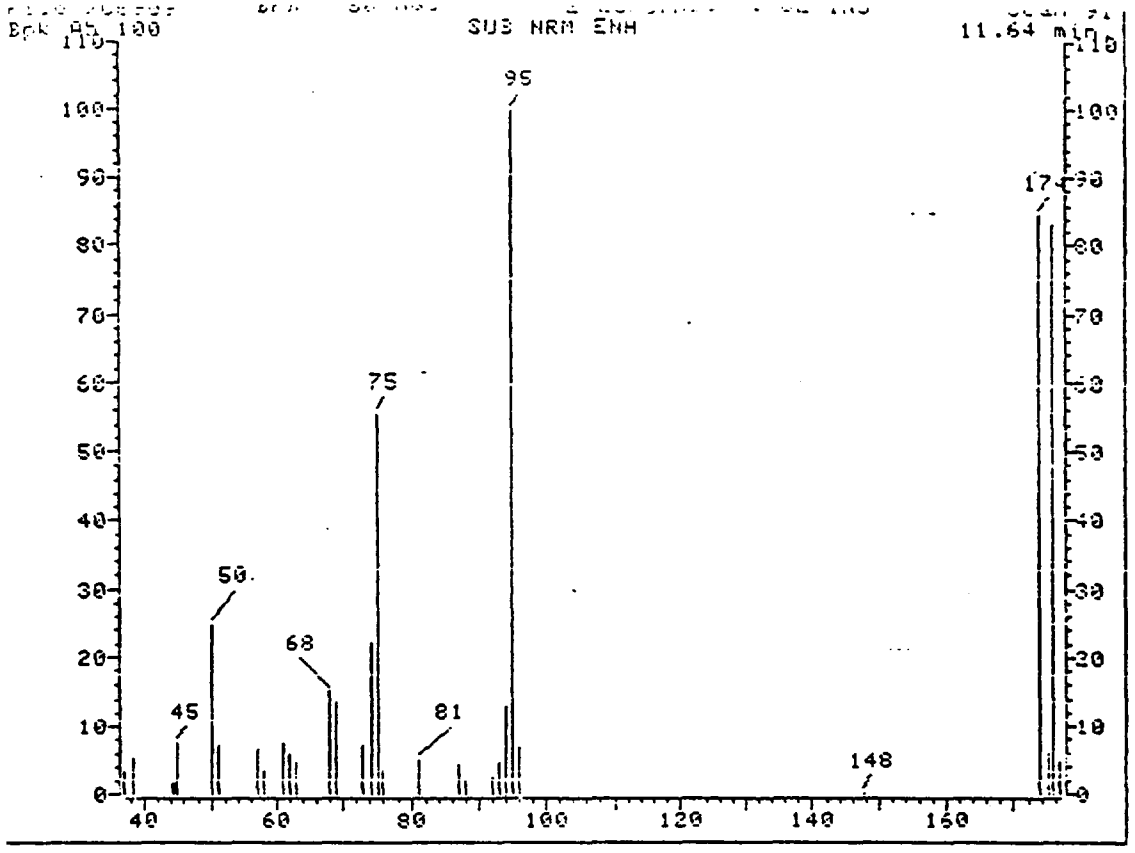
m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
50	15.0 - 40.0% of the base peak	24.82
75	30.0 - 60.0% of the base peak	55.54
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of the base peak	6.89
173	Less than 1.0% of the base peak	0.00
174	Greater than 50.0% of the base peak	84.64
175	5.0 - 9.0% of mass 174	5.90 (6.97)[1]
176	Greater than 95.0%, but less than 101.0% of mass 174	83.37 (98.5)[1]
177	5.0 - 9.0% of mass 176	4.72 (5.66)[2]

THIS PERFORMANCE TUNE APPLIES TO THE FOLLOWING SAMPLES, BLANKS AND STANDARDS.

[1] Value in parenthesis is % mass 174.
[2] Value in parenthesis is % mass 176.

SAMPLE ID	LAB ID	DATE OF ANALYSIS	TIME OF ANALYSIS
	Cont Calib Check >C6910	2-23-87	12:40
C 6920	Method Blank	2-23-87	22:07
DC-04-62	1113 >C6921	2-23-87	23:01

FORM V 7/85
497035



>C6909 BFB 50 NGS 2/23/87MDS 1 UL INJ
91 SUB NRM ENH

File: >C6909 Scan #: 91 Retn. time: 11.64

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
37.00	3.36	58.15	3.39	72.75	1.52	87.05	4.36	96.00	6.89
38.10	5.34	61.05	7.45	72.95	7.25	88.15	2.06	147.75	.19
44.10	1.55	61.95	5.83	74.05	22.13	91.90	2.22	173.90	84.64
45.00	7.58	62.85	4.50	75.05	55.54	93.00	4.51	175.00	5.90
50.00	24.82	67.95	15.04	75.95	3.20	94.10	13.04	175.90	83.37
51.10	7.06	69.05	13.50	81.05	5.03	95.00	100.00	176.90	4.72
56.95	6.63								

MS data file header from : >C6909

Sample: BFB 50 NGS Operator: USER8 MS 2/23/87 12:12
Misc : 2/23/87MDS 1 UL INJ
Sys. #: 1 MS model: 96 SW/HW rev.: CA ALS # : 0
Method file: BFB001 Tuning file: MTCU4 No. of extra records: 1
Source temp.: 200 Analyzer temp.: 220 Transfer line temp. : 200

Chromatographic temperatures :	220.	225.	0.	0.	0.
Chromatographic times, min. :	5.0	10.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	5.0	0.0	0.0	0.0	0.0

GC/MS TUNING AND MASS CALIBRATION

Bromofluorobenzene (BFB)

Case No. U-4906, 4928 4971, 4989 Contractor Ecology & Environment Contract No. IL-3140

Instrument ID 11P5995C Date 2/24/87 Time 14:31

Lab ID >C6939 Data Release Authorized By: C Stojtowicz

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE	
50	15.0 - 40.0% of the base peak	25.66	
75	30.0 - 60.0% of the base peak	57.63	
95	Base peak, 100% relative abundance	100.00	
96	5.0 - 9.0% of the base peak	7.23	
173	Less than 1.0% of the base peak	0.00	
174	Greater than 50.0% of the base peak	87.57	
175	5.0 - 9.0% of mass 174	6.08	(6.94)[1]
176	Greater than 95.0%, but less than 101.0% of mass 174	85.97	(98.17)[1]
177	5.0 - 9.0% of mass 176	5.13	(5.97)[2]

THIS PERFORMANCE TUNE APPLIES TO THE FOLLOWING SAMPLES, BLANKS AND STANDARDS.

[1] Value in parenthesis is % mass 174.
[2] Value in parenthesis is % mass 176.

SAMPLE ID	LAB ID	DATE OF ANALYSIS	TIME OF ANALYSIS
	Cont Calib Check >C6940	2-24-87	14:54
C6941	Method Blank >C6941	2-24-87	15:53
DC-01-59	1110 >C6942	2-24-87	16:45
DC-08-65	1116 >C6943	2-24-87	17:39
DC-06-66	1117 >C6944	2-24-87	18:31
DC-03-61	1112 >C6945	2-24-87	19:33
DC-02-60	1111 >C6946	2-24-87	20:25
DC-05-63	1114 >C6948	2-24-87	22:27
DC-05-64	1115 >C6951	2-25-87	01:02

97

FORM V

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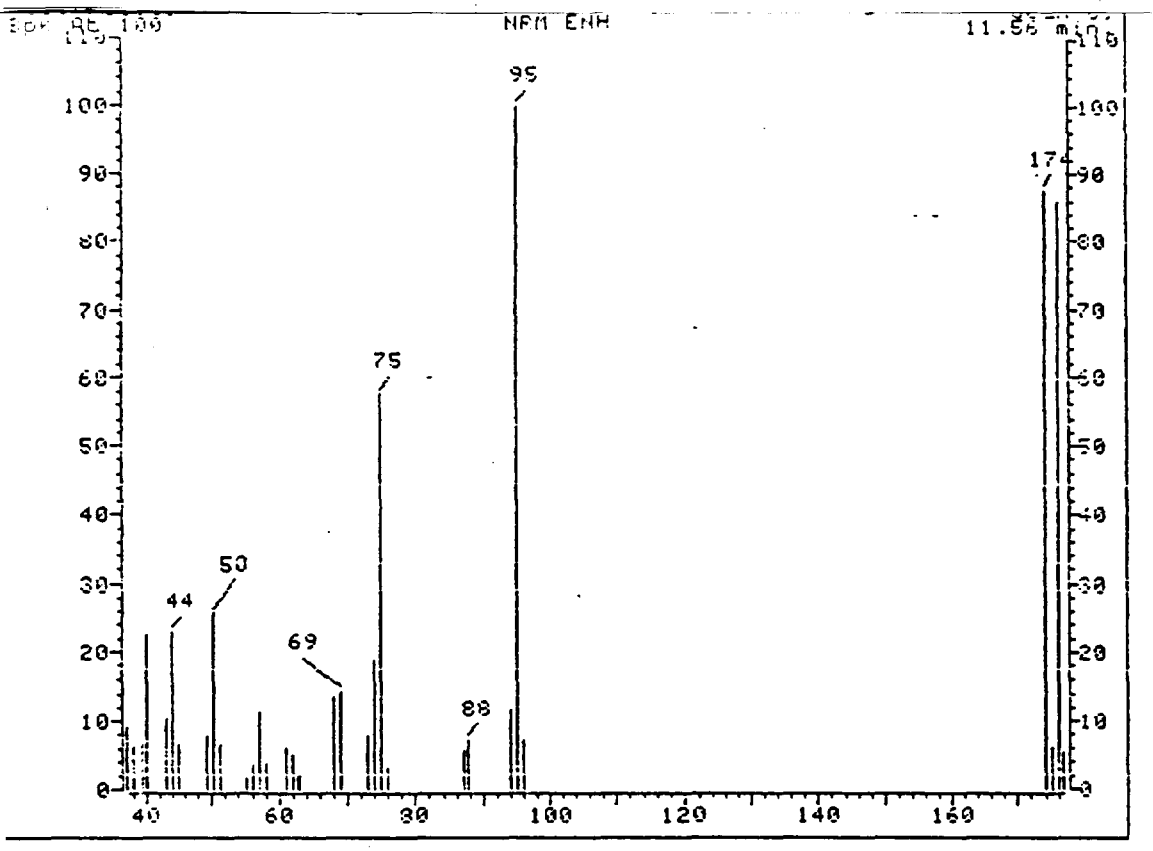
497095



>C6939 BFB 50 NGS 2/24/87MDS 1 UL INJ
89 NRM ENH

File: >C6939 Scan #: 89 Retn. time: 11.56

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
37.10	9.19	49.10	7.71	60.95	5.82	74.05	18.50	95.10	100.00
38.10	6.19	50.20	25.66	61.95	4.90	75.05	57.63	96.10	7.23
39.20	6.34	51.10	6.52	62.75	1.92	76.05	2.93	174.00	87.57
40.00	22.63	55.20	1.83	62.95	1.93	87.05	5.51	175.10	6.08
43.10	10.44	56.15	3.27	68.05	13.55	87.95	7.26	176.00	85.97
44.10	22.83	57.05	11.26	69.05	14.21	94.00	11.57	176.90	5.13
45.10	6.35	58.25	3.50	73.05	7.77				

MS data file header from : >C6939

Sample: BFB 50 NGS Operator: USER8 MS 2/24/87 14:31
Misc : 2/24/87MDS 1 UL INJ
Sys. #: 1 MS model: 96 SW/HW rev.: CA ALS # : 0
Method file: BFB001 Tuning file: MTCU4 No. of extra records: 1
Source temp.: 200 Analyzer temp.: 220 Transfer line temp. : 200

Chromatographic temperatures :	220.	225.	0.	0.	0.
Chromatographic times, min. :	5.0	10.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	5.0	0.0	0.0	0.0	0.0

GC/MS TUNING AND MASS CALIBRATION

Bromofluorobenzene (BFB)

Case No. U-4906, 4928 4971, 4989 Contractor Ecology & Environment Contract No. IL-3140

Instrument ID 11P5995C Date 2/26/87 Time 13:25

Lab ID >C6962 Data Release Authorized By: C Stojtowicz

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE	
50	15.0 - 40.0% of the base peak	27.28	
75	30.0 - 60.0% of the base peak	59.02	
95	Base peak, 100% relative abundance	100.00	
96	5.0 - 9.0% of the base peak	6.13	
173	Less than 1.0% of the base peak	0.00	
174	Greater than 50.0% of the base peak	86.77	
175	5.0 - 9.0% of mass 174	5.72	(6.59) [1]
176	Greater than 95.0%, but less than 101.0% of mass 174	86.96	(100.22) [1]
177	5.0 - 9.0% of mass 176	5.38	(6.19) [2]

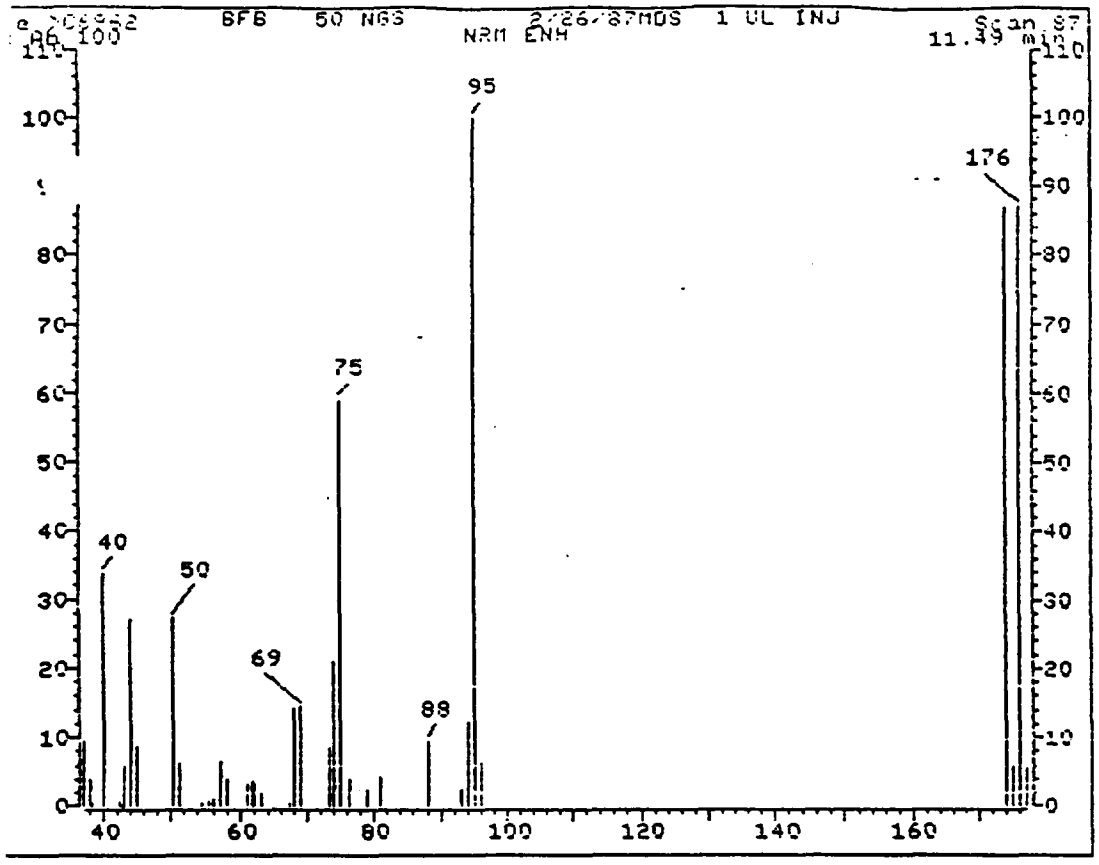
THIS PERFORMANCE TUNE APPLIES TO THE FOLLOWING SAMPLES, BLANKS AND STANDARDS.

[1] Value in parenthesis is % mass 174.
[2] Value in parenthesis is % mass 176.

SAMPLE ID	LAB ID	DATE OF ANALYSIS	TIME OF ANALYSIS
	Cont Calib Check >C6963	2-26-87	14:00
C6964	Method Blank	2-26-87	14:52
DC-G6-67	1274 >C6966	2-26-87	16:53
DC-G7-69	1276 >C6967	2-26-87	17:45
DC-G9-71	1278 >C6969	2-26-87	19:33
DC-G8-70	1277 >C6970	2-26-87	20:39
DC-G8-70MS	1277 MS >C6972	2-26-87	22:23
DC-G8-70MSD	1277 MSD >C6973	2-26-87	23:15

FORM V

7/85
497095



C6962 BFB 50 NGS 2/26/87MDS 1 UL INJ
87 NRM ENH

ile: >C6962 Scan #: 87 Retn. time: 11.49

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
57.10	9.63	45.10	8.89	61.15	3.40	74.05	21.04	94.00	12.27
58.00	3.82	50.10	27.28	61.75	3.50	75.05	59.02	95.10	100.00
58.20	.56	51.20	6.24	62.05	3.41	76.15	3.78	96.10	6.13
40.10	33.78	54.50	.25	63.05	2.13	79.05	2.25	174.00	86.77
42.20	.60	55.65	.82	67.35	.24	81.05	4.19	175.00	5.72
42.60	.21	56.25	.94	68.05	14.28	88.05	9.52	176.00	86.96
43.10	5.87	57.15	6.60	69.15	14.42	93.00	2.37	177.00	5.38
44.10	26.85	58.05	3.92	73.15	8.32				

3 data file header from : >C6962

ample: BFB 50 NGS Operator: USER8 MS 2/26/87 13:25
isc : 2/26/87MDS 1 UL INJ
ps. #: 1 MS model: 96 SW/HW rev.: CA ALS # : 0
Method file: BFB001 Tuning file: MTCU4 No. of extra records: 1
Source temp.: 200 Analyzer temp.: 220 Transfer line temp. : 200

Chromatographic temperatures :	220.	225.	0.	0.	0.
Chromatographic times, min. :	5.0	10.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	5.0	0.0	0.0	0.0	0.0

GC/MS TUNING AND MASS CALIBRATION

Bromofluorobenzene (BFB)

Case No. u-4906,4928 4971, 4989 Contractor Ecology & Environment Contract No. IL-3140

Instrument ID HP5995C Date 3/4/87 Time 09:10

Lab ID >C7037 Data Release Authorized By: C Slojtowicz

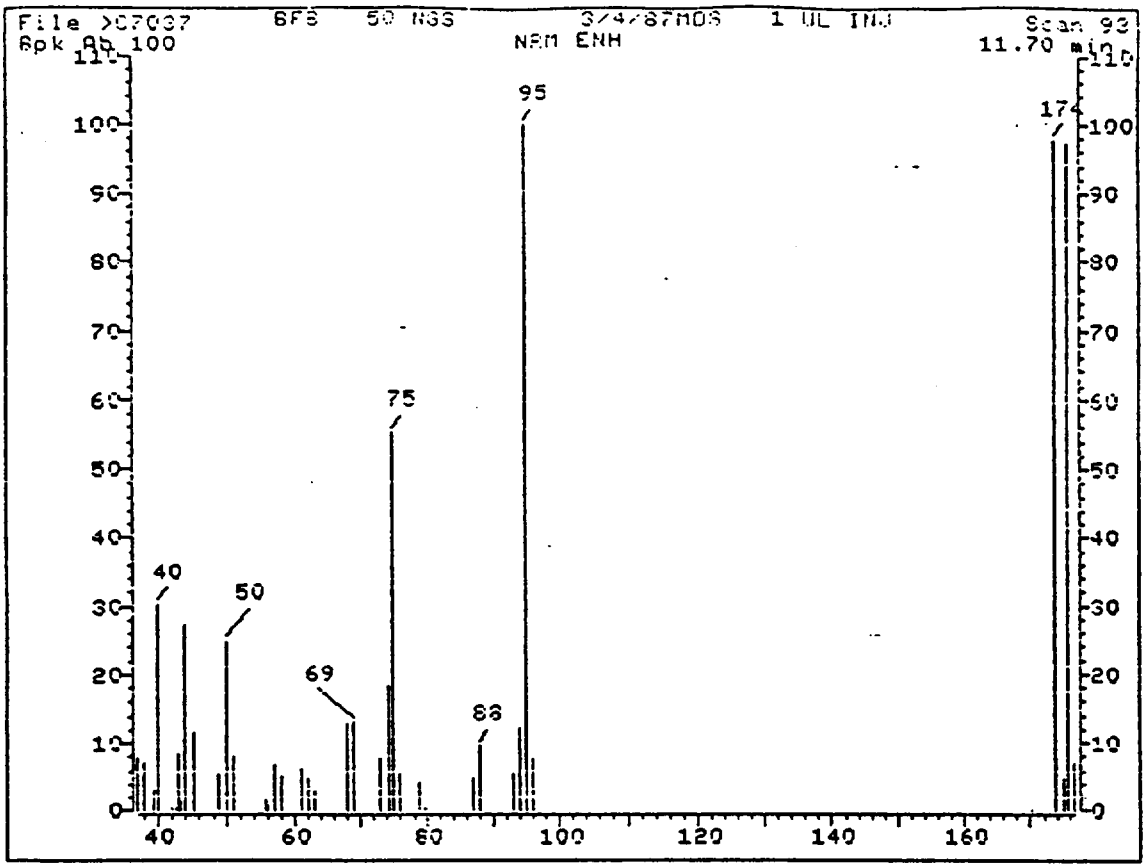
m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
50	15.0 - 40.0% of the base peak	24.90
75	30.0 - 60.0% of the base peak	55.36
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of the base peak	7.83
173	Less than 1.0% of the base peak	0.00
174	Greater than 50.0% of the base peak	97.80
175	5.0 - 9.0% of mass 174	4.92 (5.03) [1]
176	Greater than 95.0%, but less than 101.0% of mass 174	97.31 (99.50) [1]
177	5.0 - 9.0% of mass 176	7.08 (7.27) [2]

THIS PERFORMANCE TUNE APPLIES TO THE FOLLOWING SAMPLES, BLANKS AND STANDARDS.

[1] Value in parenthesis is % mass 174.
[2] Value in parenthesis is % mass 176.

SAMPLE ID	LAB ID	DATE OF ANALYSIS	TIME OF ANALYSIS
	Cont Calib Check >C7038	3-4-87	09:42
C7040	Method Blank	3-4-87	11:32
DC-GB-68	1275 >C7041	3-4-87	12:33

FORM V 7/85
497095



>C7037 BFB 50 NGS 3/4/87MDS 1 UL INJ
93 NRM ENH

File: >C7037 Scan #: 93 Retn. time: 11.70

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
37.00	7.92	44.00	27.35	58.05	5.26	74.95	55.36	95.00	100.00
38.00	7.00	45.10	11.48	60.95	6.28	75.95	5.38	96.00	7.83
39.20	2.94	48.90	5.66	62.05	4.87	78.95	4.09	170.30	.16
40.00	30.28	50.05	24.90	62.85	3.11	79.95	.27	173.90	97.80
42.00	.51	51.05	8.13	67.95	12.95	87.00	4.98	175.00	4.92
42.40	.38	55.65	1.78	69.05	13.19	88.00	9.56	175.90	97.31
43.00	8.30	55.95	.76	72.95	7.66	93.00	5.52	176.90	7.08
43.20	1.34	56.95	6.77	74.05	18.26	94.10	12.16		

MS data file header from : >C7037

Sample: BFB 50 NGS Operator: USER8 MS 3/04/87 9:10
Misc : 3/4/87MDS 1 UL INJ
Sys. #: 1 MS model: 96 SW/HW rev.: CA ALS # : 0
Method file: BFB001 Tuning file: MTCV4 No. of extra records: 1
Source temp.: 200 Analyzer temp.: 220 Transfer line temp. : 200

Chromatographic temperatures :	220.	225.	0.	0.	0.
Chromatographic times, min. :	5.0	10.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	5.0	0.0	0.0	0.0	0.0

GC/MS TUNING AND MASS CALIBRATION

Bromofluorobenzene (BFB)

Case No. U-4906,4928 4971, 4989 Contractor Ecology & Environment Contract No. IL-3140

Instrument ID 11P5995C Date 3-09-87 Time 10:02

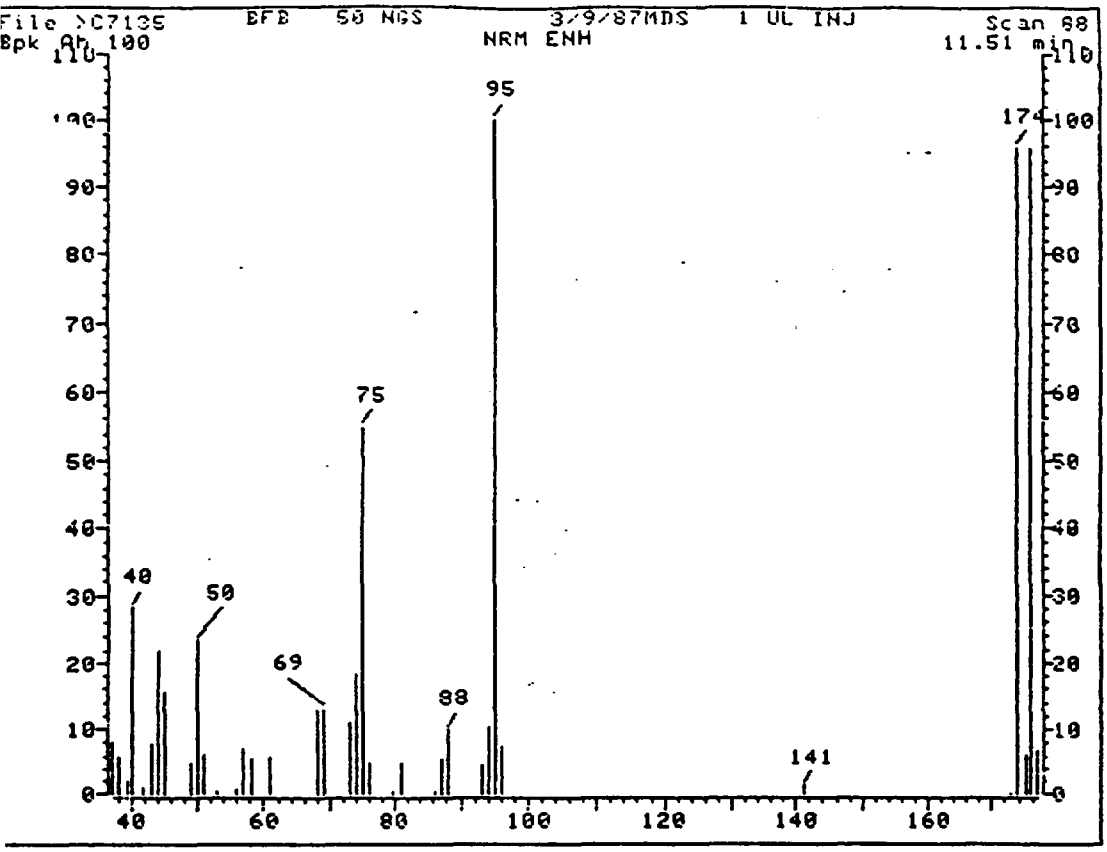
Lab ID >C7135 Data Release Authorized By: C Skytowicz

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
50	15.0 - 40.0% of the base peak	23.39
75	30.0 - 60.0% of the base peak	54.94
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of the base peak	7.50
173	Less than 1.0% of the base peak	0.24
174	Greater than 50.0% of the base peak	95.88
175	5.0 - 9.0% of mass 174	6.17 (6.44) [1]
176	Greater than 95.0%, but less than 101.0% of mass 174	95.82 (99.93) [1]
177	5.0 - 9.0% of mass 176	6.78 (7.08) [2]

THIS PERFORMANCE TUNE APPLIES TO THE FOLLOWING SAMPLES, BLANKS AND STANDARDS.

[1] Value in parenthesis is % mass 174.
[2] Value in parenthesis is % mass 176.

SAMPLE ID	LAB ID	DATE OF ANALYSIS	TIME OF ANALYSIS
	Cont Calib Check >C7137	3-09-87	11:26
C 7138	Method Blank	3-09-87	12:18
DC-09-73	1428 >C7139	3-09-87	13:54
DC-09-72	1427 >C7140	3-09-87	14:46
DC-010-75	1430 >C7141	3-09-87	15:38
DC-010-74	1429 >C7143	3-09-87	17:23



C7135 BFB 50 NGS 3/9/87MDS 1 UL INJ
88 NRM ENH

ile: >C7135 Scan #: 88 Retn. time: 11.51

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
37.20	7.98	49.00	4.87	67.95	12.87	80.95	4.81	96.10	7.50
38.00	5.86	50.10	23.39	68.95	13.00	86.35	.43	141.05	1.21
39.30	1.97	51.00	6.15	73.05	10.89	87.05	5.45	172.70	.24
40.00	28.13	53.10	.41	74.05	18.48	88.05	9.97	173.90	95.88
41.80	1.16	55.75	.74	75.05	54.94	93.00	4.66	175.00	6.17
42.90	7.67	57.05	7.05	76.05	5.03	94.20	10.48	175.90	95.82
44.10	21.74	58.05	5.67	79.75	.48	95.00	100.00	176.90	6.78
45.10	15.31	60.95	5.97						

S data file header from : >C7135

ample: BFB 50 NGS Operator: USER8 MS 3/09/87 10:02
isc : 3/9/87MDS 1 UL INJ
ys. #: 1 MS model: 96 SW/HW rev.: CA ALS # : 0
Mr t file: BFB001 Tuning file: MTCV4 No. of extra records: 1
Source temp.: 200 Analyzer temp.: 220 Transfer line temp. : 200

Chromatographic temperatures : 220. 225. 0. 0. 0.
Chromatographic times, min. : 5.0 10.0 0.0 0.0 0.0
Chromatographic rate, deg/min: 5.0 0.0 0.0 0.0 0.0

SAMPLE NUMBER DC-J12-57

481095

DC-I12-57

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ecology and environment, inc.

Case No: U-4906, 4928, 4971, 4989.

Lab Sample ID No: 1036

QC Report No:

Sample Matrix: Soil

Contract No: IL-3140

Data Release Authorized By: CStojtowicz

Date Sample Received: 2-14-87

Volatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 2-20-87

Conc/Dil Factor: 1 pH 8.3

Percent Moisture: (Not Decanted) 11

Concentrations reported "as received"

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	10u
74-83-9	Bromomethane	10u
75-01-4	Vinyl Chloride	10u
75-00-3	Chloroethane	10u
75-09-2	Methylene Chloride	15 B
67-64-1	Acetone	1300 BE
75-15-0	Carbon Disulfide	5u
75-35-4	1, 1-Dichloroethene	5u
75-34-3	1, 1-Dichloroethane	5u
156-60-5	Trans-1, 2-Dichloroethene	5u
67-66-3	Chloroform	5u
107-06-2	1, 2-Dichloroethane	5u
78-93-3	2-Butanone	11 B
71-55-6	1, 1, 1-Trichloroethane	5u
56-23-5	Carbon Tetrachloride	5u
108-05-4	Vinyl Acetate	10u
75-27-4	Bromodichloromethane	5u

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	5u
10061-02-6	Trans-1, 3-Dichloropropene	5u
79-01-6	Trichloroethene	5u
124-48-1	Dibromochloromethane	5u
79-00-5	1, 1, 2-Trichloroethane	5u
71-43-2	Benzene	5u
10061-01-5	cis-1, 3-Dichloropropene	5u
110-75-8	2-Chloroethylvinylether	10u
75-25-2	Bromoform	5u
108-10-1	4-Methyl-2-Pentanone	10u
591-78-6	2-Hexanone	10u
127-18-4	Tetrachloroethene	5u
79-34-5	1, 1, 2, 2-Tetrachloroethane	5u
108-88-3	Toluene	5u
108-90-7	Chlorobenzene	5u
100-41-4	Ethylbenzene	5u
100-42-5	Styrene	5u
	Total Xylenes	5u

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g., 10U) based on necessary concentration/dilution action. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g., 10J). If limit of detection is 10 µg/l and a concentration of 3 µg/l is calculated, report as 3J.

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/ul in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

E This flag indicates an approximate concentration. The amount detected in the analysis exceeds the calibrated range.

Laboratory Name Ecology & Environment, Inc

Case No IL-3140

Sample Number
DC-I12-57

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared 03-05-87

Date Analyzed: 03-18-87

Conc/Dil Factor: 2

Percent Moisture (Decanted) 11

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

Concentrations reported "as received" basis

CAS Number		ug/l or (ug/Kg) (Circle One)
108-95-2	Phenol	330u
111-44-4	bis(-2-Chloroethyl)Ether	330u
95-57-8	2-Chlorophenol	330u
541-73-1	1 3-Dichlorobenzene	330u
106-46-7	1. 4-Dichlorobenzene	330u
100-51-6	Benzyl Alcohol	330u
95-50-1	1. 2-Dichlorobenzene	330u
95-48-7	2-Methylphenol	330u
39638-32-9	bis(2-chloroisopropyl)Ether	330u
106-44-5	4-Methylphenol	330u
621-64-7	N-Nitroso-Di-n-Propylamine	330u
67-72-1	Hexachloroethane	330u
98-95-3	Nitrobenzene	330u
78-59-1	Isophorone	330u
88-75-5	2-Nitrophenol	330u
105-67-9	2. 4-Dimethylphenol	330u
65-85-0	Benzoic Acid	1600u
111-91-1	bis(-2-Chloroethoxy)Methane	330u
120-83-2	2. 4-Dichlorophenol	330u
120-82-1	1. 2. 4-Trichlorobenzene	330u
91-20-3	Naphthalene	330u
106-47-8	4-Chloroaniline	330u
87-68-3	Hexachlorobutadiene	330u
59-50-7	4-Chloro-3-Methylphenol	330u
91-57-6	2-Methylnaphthalene	330u
77-47-4	Hexachlorocyclopentadiene	330u
88-06-2	2 4 6-Trichlorophenol	330u
95-95-4	2. 4 5-Trichlorophenol	1600u
91-58-7	2-Chloronaphthalene	330u
88-74-4	2-Nitroaniline	1600u
131-11-3	Dimethyl Phthalate	330u
208-96-8	Acenaphthylene	330u
99-09-2	3-Nitroaniline	1600u

CAS Number		ug/l or (ug/Kg) (Circle One)
83-32-9	Acenaphthene	330u
51-28-5	2. 4-Dinitrophenol	1600u
100-02-7	4-Nitrophenol	1600u
132-64-9	Dibenzofuran	330u
121-14-2	2 4-Dinitrotoluene	330u
606-20-2	2 6-Dinitrotoluene	330u
84-66-2	Diethylphthalate	330u
7005-72-3	4-Chlorophenyl-phenylether	330u
86-73-7	Fluorene	330u
100-01-6	4-Nitroaniline	1600u
534-52-1	4. 6-Dinitro-2-Methylphenol	1600u
86-30-6	N-Nitrosodiphenylamine (1)	330u
101-55-3	4-Bromophenyl-phenylether	330u
118-74-1	Hexachlorobenzene	330u
87-86-5	Pentachlorophenol	1600u
85-01-8	Phenanthrene	330u
120-12-7	Anthracene	330u
84-74-2	Di-n-Butylphthalate	330u
206-44-0	Fluoranthene	330u
129-00-0	Pyrene	330u
85-68-7	Butylbenzylphthalate	330u
91-94-1	3. 3 -Dichlorobenzidine	660u
56-55-3	Benzo(a)Anthracene	330u
117-81-7	bis(2-Ethylhexyl)Phthalate	330u
218-01-9	Chrysene	330u
117-84-0	Di-n-Octyl Phthalate	330u
205-99-2	Benzo(b)Fluoranthene	330u
207-08-9	Benzo(k)Fluoranthene	330u
50-32-8	Benzo(a)Pyrene	330u
193-39-5	Indeno(1, 2, 3-cd)Pyrene	330u
53-70-3	Dibenz(a, h)Anthracene	330u
191-24-2	Benzo(g, h, i)Perylene	330u

(1)-Cannot be separated from diphenylamine

Laboratory Name ecology and environment, inc.

Case No U-4906, 4928, 4971, 4989

Sample Number DC-I12-57

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 2-16-87

Date Analyzed 2-24-87

Conc/Dil Factor 2

Percent Moisture (decanted) 11

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)
319-84-6	Alpha-BHC	160 U
319-85-7	Beta-BHC	160 U
319-86-8	Delta-BHC	160 U
58-89-9	Gamma-BHC (Lindane)	160 U
76-44-8	Heptachlor	160 U
309-00-2	Aldrin	160 U
1024-57-3	Heptachlor Epoxide	160 U
959-98-8	Endosulfan I	160 U
60-57-1	Dieldrin	320 U
72-55-9	4,4'-DDE	320 U
72-20-8	Endrin	320 U
33213-65-9	Endosulfan II	320 U
72-54-8	4,4'-DDD	320 U
1031-07-8	Endosulfan Sulfate	320 U
50-29-3	4,4'-DDT	320 U
72-43-5	Methoxychlor	1600 U
53494-70-5	Endrin Ketone	320 U
57-74-9	Chlordane	1600 U
8001-35-2	Toxaphene	3200 U
12674-11-2	Aroclor-1016	1600 U
11104-28-2	Aroclor-1221	1600 U
11141-16-5	Aroclor-1232	1600 U
53469-21-9	Aroclor-1242	1600 U
12672-29-6	Aroclor-1248	1600 U
11097-69-1	Aroclor-1254	3200 U
11096-82-5	Aroclor-1260	3200 U

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s _____ or W_s 3 V_t 1,000 V_i 4

Form 1

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491039

Laboratory Name Ecology & Environment Inc.

Case No U-4906, 4928, 4971, 4989

Sample Number DC-I12-57

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number nec.n.	Estimated Concentration (ug/l or ug/kg)
1.	Hexane isomer	VOA	21.2	12 BJ
2.	Unknown alcohol (?)	VOA	23.7	7 ~~B~~ cwt J
3.				
4.	No TIC's in BNA fraction			
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30				

SAMPLE NUMBER DC-I/2-58

DC-I-12-58

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ecology and environment, inc.

Case No: U-4906, 4928, 4971, 4989.

Lab Sample ID No: 1037

QC Report No:

Sample Matrix: Soil

Contract No: IL-3140

Data Release Authorized By: [signature]

Date Sample Received: 2-14-87

Volatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 2-20-87

Conc/Dil Factor: 1 pH 8.3

Percent Moisture: (Not Decanted) 18

Concentrations reported "as received"

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	10u
74-83-9	Bromomethane	10u
75-01-4	Vinyl Chloride	10u
75-00-3	Chloroethane	10u
75-09-2	Methylene Chloride	14 B
67-64-1	Acetone	450 BE
75-15-0	Carbon Disulfide	5u
75-35-4	1, 1-Dichloroethene	5u
75-34-3	1, 1-Dichloroethane	5u
156-60-5	Trans-1, 2-Dichloroethene	5u
67-66-3	Chloroform	5u
107-06-2	1, 2-Dichloroethane	5u
78-93-3	2-Butanone	22 B
71-55-6	1, 1, 1-Trichloroethane	5u
56-23-5	Carbon Tetrachloride	5u
108-05-4	Vinyl Acetate	10u
75-27-4	Bromodichloromethane	5u

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	5u
10061-02-6	Trans-1, 3-Dichloropropene	5u
79-01-6	Trichloroethene	5u
124-48-1	Dibromochloromethane	5u
79-00-5	1, 1, 2-Trichloroethane	5u
71-43-2	Benzene	5u
10061-01-5	cis-1, 3-Dichloropropene	5u
110-75-8	2-Chloroethylvinylether	10u
75-25-2	Bromoform	5u
108-10-1	4-Methyl-2-Pentanone	1 BJ
591-78-6	2-Hexanone	10u
127-18-4	Tetrachloroethene	5u
79-34-5	1, 1, 2, 2-Tetrachloroethane	5u
108-88-3	Toluene	5u
108-90-7	Chlorobenzene	5u
100-41-4	Ethylbenzene	5u
100-42-5	Styrene	5u
	Total Xylenes	5u

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g., 10U) based on necessary concentration/dilution action. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g., 10J). If limit of detection is 10 µg/L and a concentration of 3 µg/L is calculated, report as 3J.

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/µl in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

E This flag indicates an approximate concentration. The amount detected in the analysis exceeds the calibrated range.

Laboratory Name Ecology & Environment, Inc

Case No IL-3140

Sample Number
DC-I12-58

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared 03-05-87

Date Analyzed: 03-18-87

Conc/Dil Factor: 2

Percent Moisture (Decanted) 18

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

Concentrations reported "as received" basis

CAS Number		ug/l or (ug/Kg) (Circle One)
108-95-2	Phenol	330u
111-44-4	bis(2-Chloroethyl)Ether	330u
95-57-8	2-Chlorophenol	330u
541-73-1	1,3-Dichlorobenzene	330u
106-46-7	1,4-Dichlorobenzene	330u
100-51-6	Benzyl Alcohol	330u
95-50-1	1,2-Dichlorobenzene	330u
95-48-7	2-Methylphenol	330u
39638-32-9	bis(2-chloroisopropyl)Ether	330u
106-44-5	4-Methylphenol	330u
621-64-7	N-Nitroso-Di-n-Propylamine	330u
67-72-1	Hexachloroethane	330u
98-95-3	Nitrobenzene	330u
78-59-1	Isophorone	330u
88-75-5	2-Nitrophenol	330u
105-67-9	2,4-Dimethylphenol	330u
65-85-0	Benzoic Acid	1600u
111-91-1	bis(2-Chloroethoxy)Methane	330u
120-83-2	2,4-Dichlorophenol	330u
120-82-1	1,2,4-Trichlorobenzene	330u
91-20-3	Naphthalene	330u
106-47-8	4-Chloroaniline	330u
87-68-3	Hexachlorobutadiene	330u
59-50-7	4-Chloro-3-Methylphenol	330u
91-57-6	2-Methylnaphthalene	330u
77-47-4	Hexachlorocyclopentadiene	330u
88-06-2	2,4,6-Trichlorophenol	330u
95-95-4	2,4,5-Trichlorophenol	1600u
91-58-7	2-Chloronaphthalene	330u
88-74-4	2-Nitroaniline	1600u
131-11-3	Dimethyl Phthalate	330u
208-96-8	Acenaphthylene	330u
99-09-2	3-Nitroaniline	1600u

CAS Number		ug/l or (ug/Kg) (Circle One)
83-32-9	Acenaphthene	330u
51-28-5	2,4-Dinitrophenol	1600u
100-02-7	4-Nitrophenol	1600u
132-64-9	Dibenzofuran	330u
121-14-2	2,4-Dinitrotoluene	330u
606-20-2	2,6-Dinitrotoluene	330u
84-66-2	Diethylphthalate	330u
7005-72-3	4-Chlorophenyl-phenylether	330u
86-73-7	Fluorene	330u
100-01-6	4-Nitroaniline	1600u
534-52-1	4,6-Dinitro-2-Methylphenol	1600u
86-30-6	N-Nitrosodiphenylamine (1)	330u
101-55-3	4-Bromophenyl-phenylether	330u
118-74-1	Hexachlorobenzene	330u
87-86-5	Pentachlorophenol	1600u
85-01-8	Phenanthrene	330u
120-12-7	Anthracene	330u
84-74-2	Di-n-Butylphthalate	110 J
206-44-0	Fluoranthene	330u
129-00-0	Pyrene	330u
85-68-7	Butylbenzylphthalate	330u
91-94-1	3,3'-Dichlorobenzidine	660u
56-55-3	Benzo(a)Anthracene	330u
117-81-7	bis(2-Ethylhexyl)Phthalate	330u
218-01-9	Chrysene	330u
117-84-0	Di-n-Octyl Phthalate	330u
205-99-2	Benzo(b)Fluoranthene	330u
207-08-9	Benzo(k)Fluoranthene	330u
50-32-8	Benzo(a)Pyrene	330u
193-39-5	Indeno(1,2,3-cd)Pyrene	330u
53-70-3	Dibenz(a,h)Anthracene	330u
191-24-2	Benzo(g,h,i)Perylene	330u

(1)-Cannot be separated from diphenylamine

Laboratory Name ecology and environment, inc.

Case No U-4906, 4928, 4971, 4989

Sample Number DC-I/2-58

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 2-16-87

Date Analyzed 2-24-87

Conc/Dil Factor 1

Percent Moisture (decanted) 18

GPC Cleanup ☐Yes ☑No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or (ug/Kg) (Circle One)
319-84-6	Alpha-BHC	80 u
319-85-7	Beta-BHC	80 u
319-86-8	Delta-BHC	80 u
58-89-9	Gamma-BHC (Lindane)	80 u
76-44-8	Heptachlor	80 u
309-00-2	Aldrin	80 u
1024-57-3	Heptachlor Epoxide	80 u
959-98-8	Endosulfan I	80 u
60-57-1	Dieldrin	160 u
72-55-9	4,4'-DDE	160 u
72-20-8	Endrin	160 u
33213-65-9	Endosulfan II	160 u
72-54-8	4,4'-DDD	160 u
1031-07-8	Endosulfan Sulfate	160 u
50-29-3	4,4'-DDT	160 u
72-43-5	Methoxychlor	800 u
53494-70-5	Endrin Ketone	160 u
57-74-9	Chlordane	800 u
8001-35-2	Toxaphene	1600 u
12674-11-2	Aroclor-1016	800 u
11104-28-2	Aroclor-1221	800 u
11141-16-5	Aroclor-1232	800 u
53469-21-9	Aroclor-1242	800 u
12672-29-6	Aroclor-1248	800 u
11097-69-1	Aroclor-1254	1600 u
11096-82-5	Aroclor-1260	1600 u

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s _____ or W_s 3 V_t 1,000 V_i 4

Form 1

7 85
491005

Laboratory Name Ecology & Environment Inc.

Case No U-4906, 4928, 4971, 4989

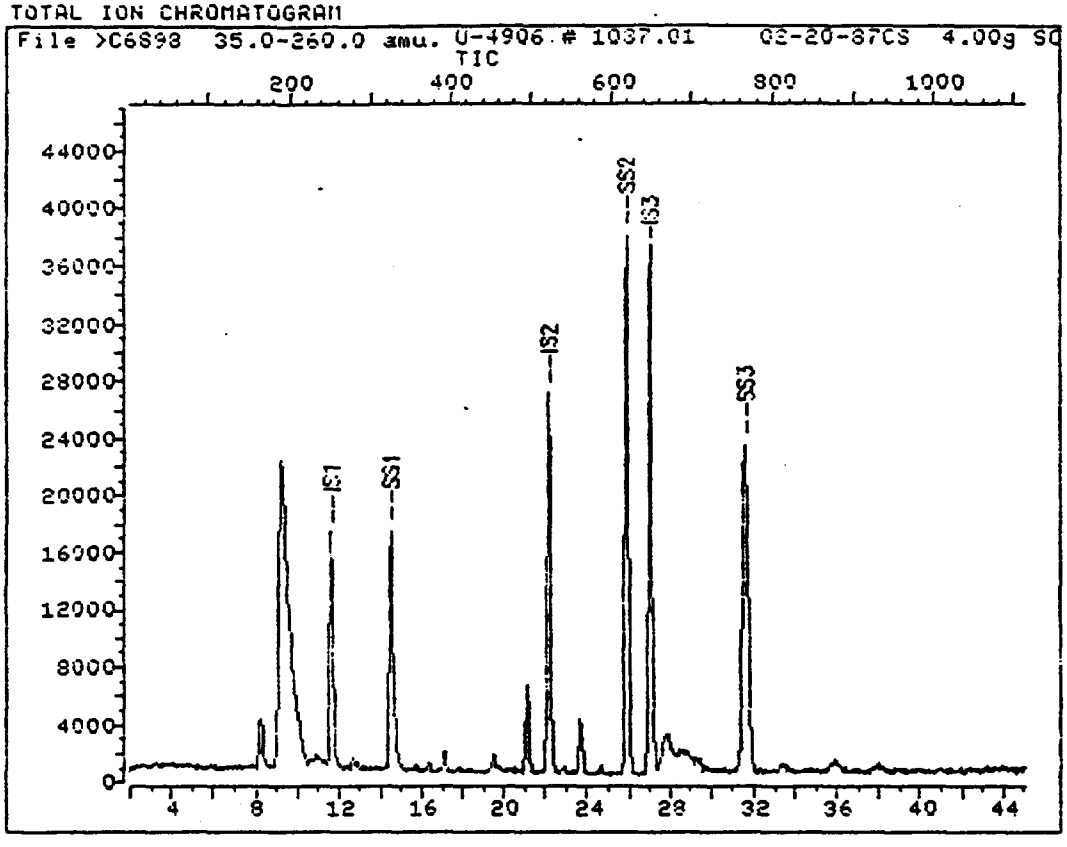
Sample Number DC-I12-58

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number min	Estimated Concentration (ug/l or ug/kg)
1.	Hexane isomer	VOA	21.1	14 BJ
2.	Unknown alcohol (?)	VOA	23.7	9 J
3.	Unknown	VOA	27.8	10 J
4.				
5.	No TIC's in BNA fraction			
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30				

TOTAL ION CHROMATOGRAM

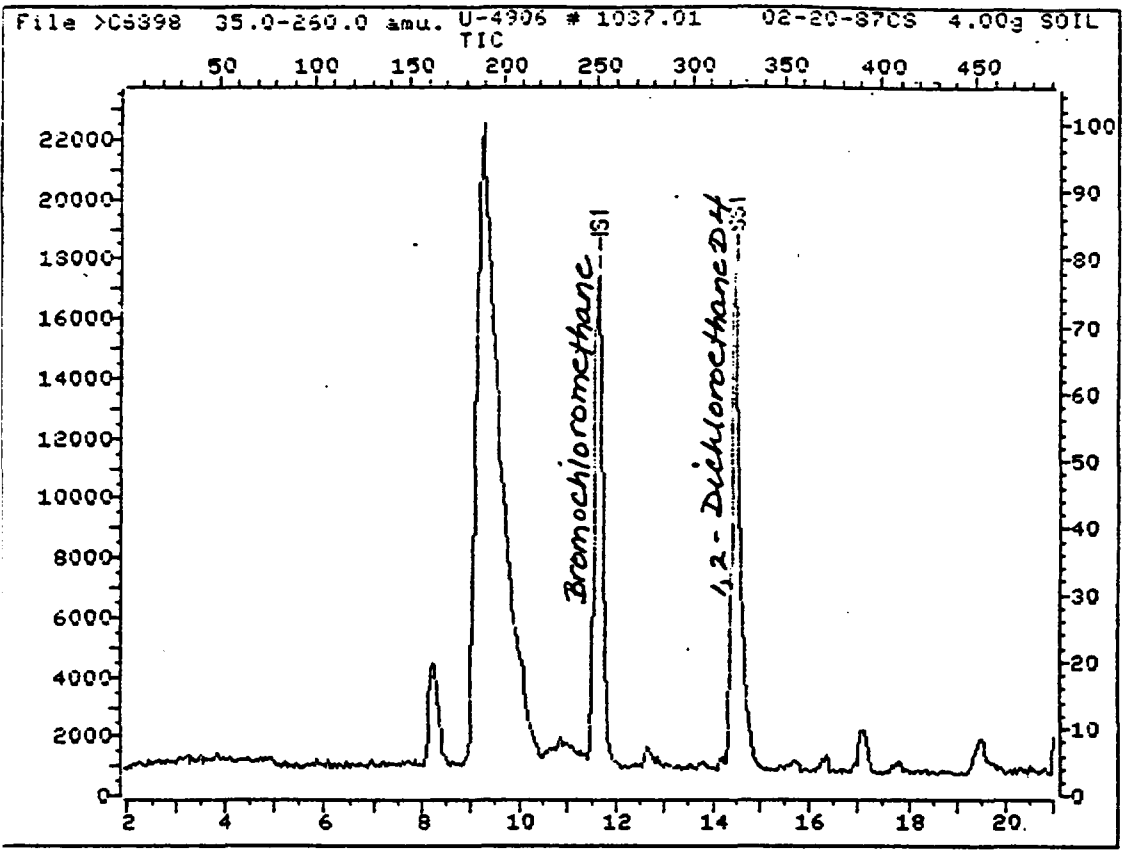


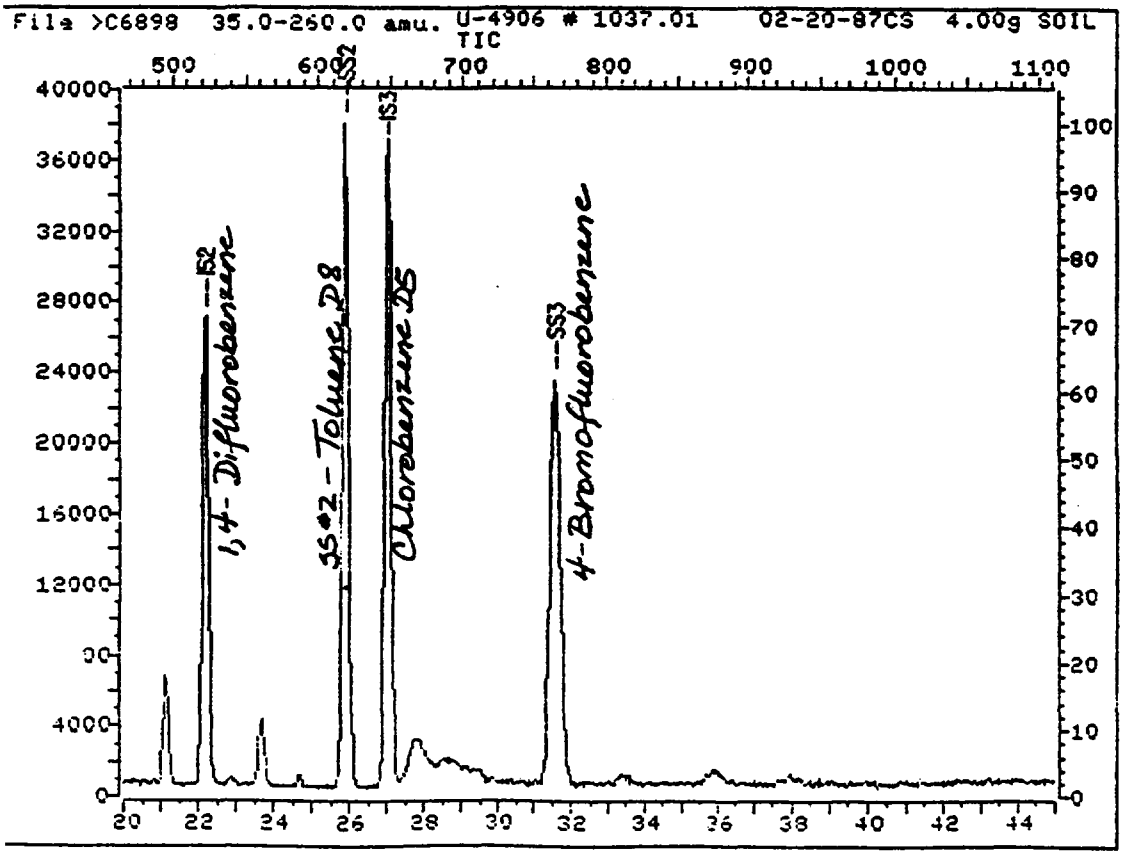
Data File: >C6898::D3
Name: U-4906 # 1037.01 DC-112-58
Misc: 02-20-87CS 4.00g SOIL IN 5ML DI + 10UL IS/SS

Id File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 870220 12:09

Operator ID: USER8
Quant Time: 870220 16:50
Injected at: 870220 16:04

DC-I12-58


File >C6898 35.0-260.0 amu. U-4906 # 1037.01 02-20-87CS 4.00g SOIL
TIC
Bromochloromethane
IS1
1,2-Dichloroethane D4
SS1


File >C6898 35.0-260.0 amu. U-4906 # 1037.01 02-20-87CS 4.00g SOIL
TIC
IS2
1,4-Difluorobenzene
SS2
Toluene D8
IS3
Chlorobenzene D5
SS3
4-Bromofluorobenzene

QUANT REPORT

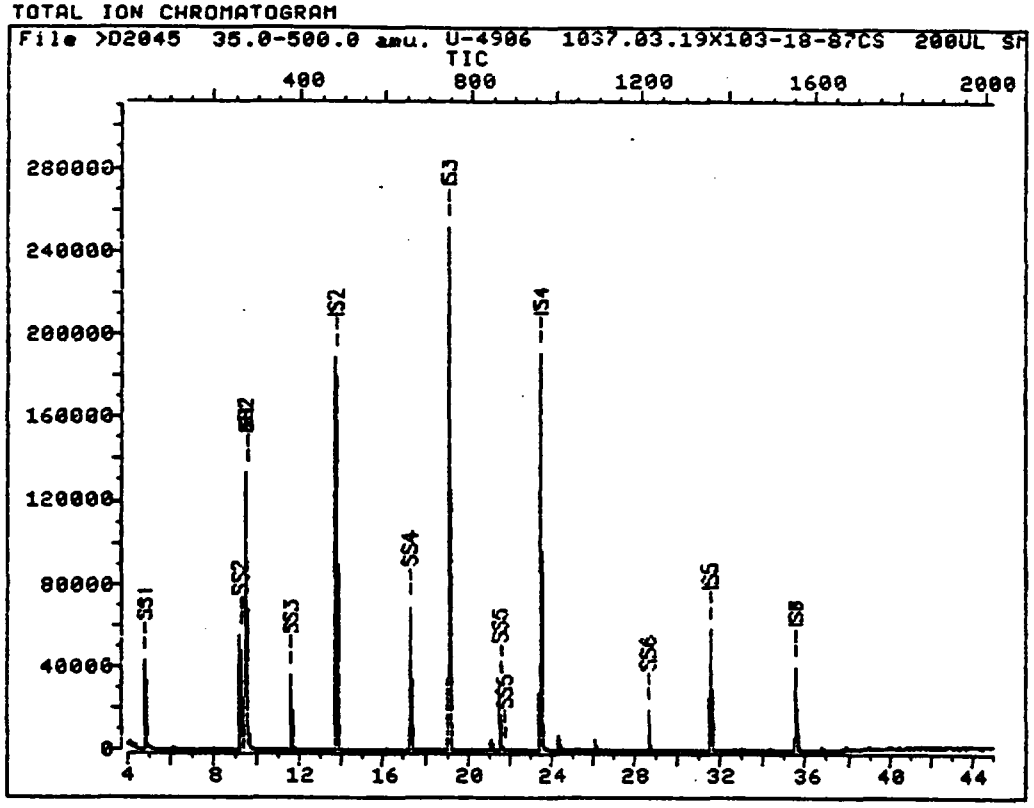
Operator ID: USER8 Quant Rev: 4 Quant Time: 870220 16:50
Output File: ^C6898::Q2 Injected at: 870220 16:04
Data File: >C6898::D3 Dilution Factor: 1.00
Name: U-4906 # 1037.01 DC-I12-58
Misc: 02-20-87CS 4.00g SOIL IN 5ML DI + 10UL IS/SS

ID File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 870220 12:09

	Compound		R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	(IS) 128	11.61	250	22581	250.00	NGS	100
6)	METHYLENE CHLORIDE	84	8.23	163	8769	55.88	NGS	100
7)	ACETONE	43	9.24	189	502281	1797.50	NGS E 87	100
15)	1,2-DICHLOROETHANE-D4	(SURR) 65	14.48	324	67811	218.58	NGS	84 ✓
16)	*1,4-DIFLUOROBENZENE	(IS) 114	22.16	522	112535	250.00	NGS	100
17)	2-BUTANONE	72	14.67	329	5096	88.44	NGS	100
31)	*CHLOROBENZENE-D5	(IS) 117	27.01	647	111363	250.00	NGS	100
32)	4-METHYL-2-PENTANONE	43	22.86	540	2381	4.36	NGS	93
~~32)~~	~~4-METHYL-2-PENTANONE~~	~~43~~	~~23.67~~	~~561~~	~~7738~~	~~14.17~~	~~NGS~~ no CW	67
~~33)~~	~~2-HEXANONE~~	~~43~~	~~23.67~~	~~561~~	~~7738~~	~~17.78~~	~~NGS~~ 87	100
36)	TOLUENE-D8	(SURR) 98	25.89	618	138903	217.83	NGS	91 ✓
40)	4-BROMOFLUOROBENZENE	(SURR) 95	31.60	765	81041	223.21	NGS 89	100 ✓

* Compound is ISTD

TOTAL ION CHROMATOGRAM

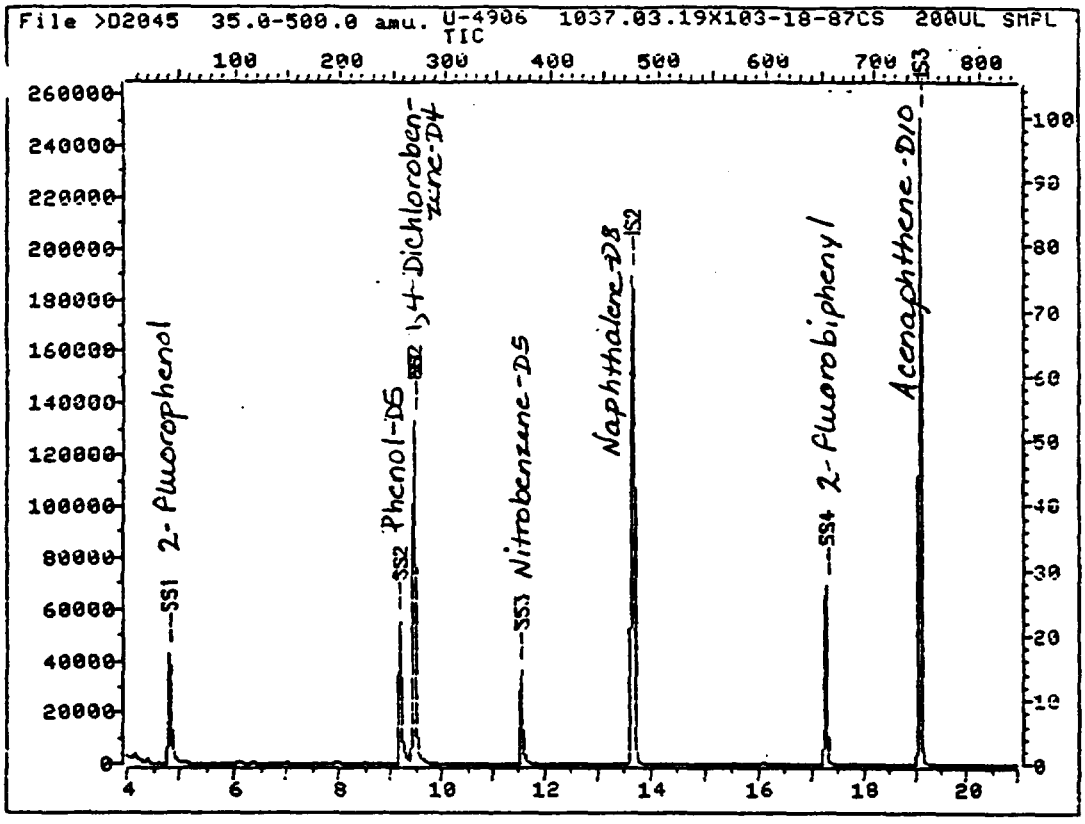


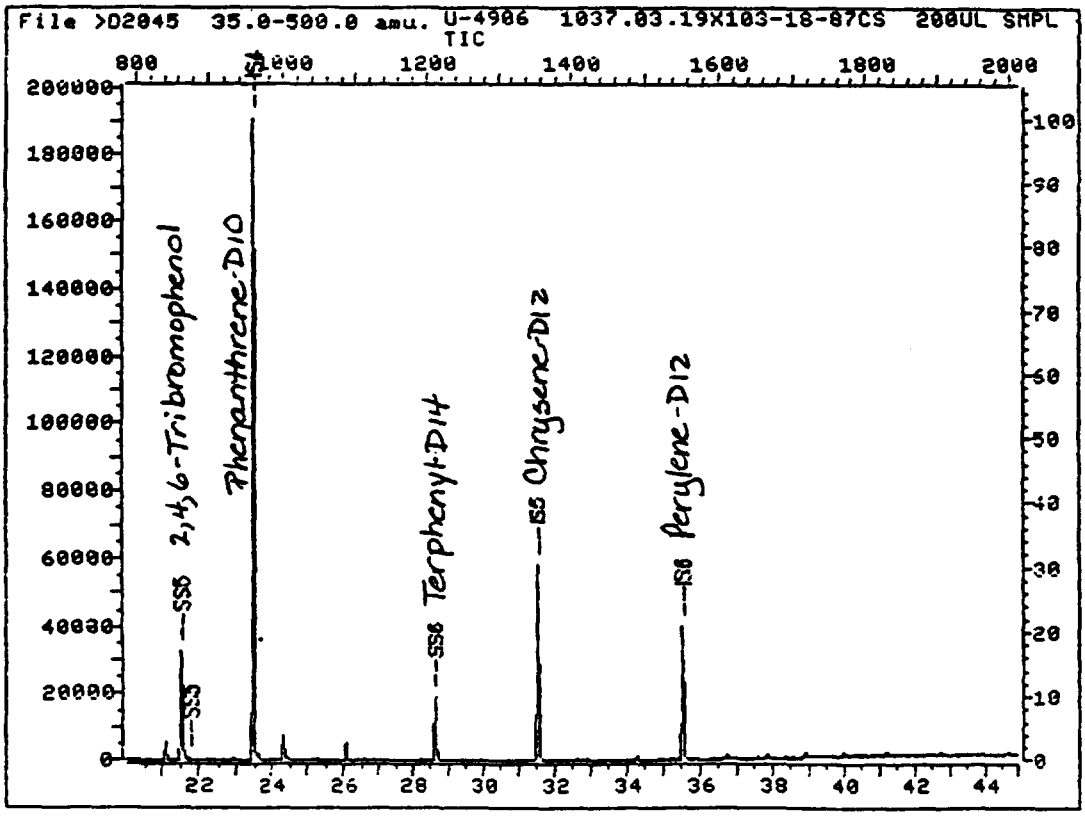
Data File: >D2045::D1
Name: U-4906 1037.03.19X1 DC-I12-58
Misc: 03-18-87CS 200UL SMPL + 200UL A/P + 4UL IS (2X) BTL# 4

Id File: BNADR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870318 14:12

Operator ID: USER8
Quant Time: 870318 18:35
Injected at: 870318 17:48

DC-I12-58


File >D2045 35.0-500.0 amu. U-4906 1037.03.19X103-18-87CS 200UL SMPL
TIC
2-Fluorophenol
Phenol-D5
1,4-Dichlorobenzene-D4
Nitrobenzene-D5
Naphthalene-D8
2-Fluorobiphenyl
Acenaphthene-D10


File >D2045 35.0-500.0 amu. U-4906 1037.03.19X103-18-87CS 200UL SMPL
TIC
2,4,6-Tribromophenol
Phenanthrene-D10
Terphenyl-D14
Chrysene-D12
Perylene-D12

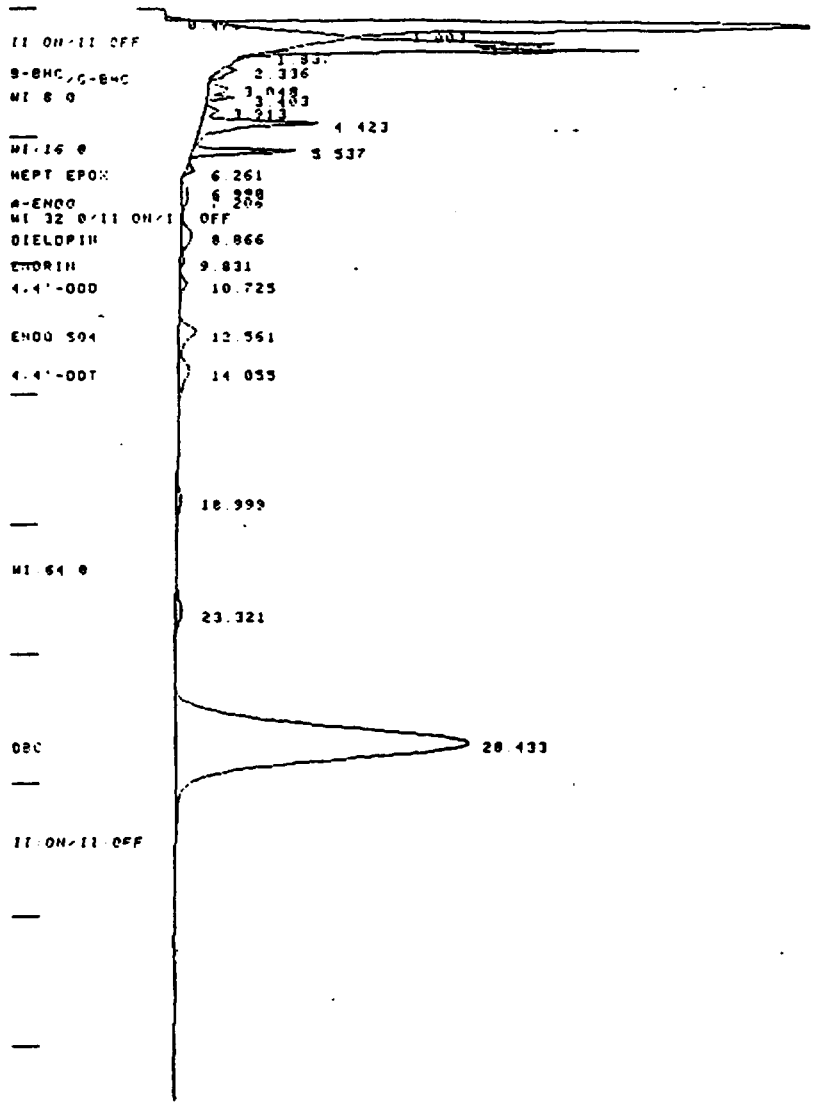
QUANT REPORT

Operator ID: USER8 Quant Rev: 4 Quant Time: 870318 18:35
Output File: ^D2045::Q2 Injected at: 870318 17:48
Data File: >D2045::D1 Dilution Factor: 2.00
Name: U-4906 1037.03.19X1 DC-I12-58
Misc: 03-18-87CS 200UL SMPL + 200UL A/P + 4UL IS (2X) BTL# 4

ID File: BNADR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870318 14:12

	Compound		R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	9.47	270	71759	40.00 UG/L	87
2)	PHENOL-D5	(SURR)	99	9.18	256	59199	45.78 UG/L	99
2)	PHENOL-D5	(SURR)	99	9.47	270	2427	1.88 UG/L	69
5)	2-FLUOROPHENOL	(SURR)	112	4.78	40	38086	45.84 UG/L	84
17)	~~N-NITROSO-DI-N-PROPYLAMINE~~		~~70~~	~~11.55~~	~~372~~	~~5538~~	~~4.53 UG/L~~ aw	91
19)	*NAPHTHALENE-D8	(IS)	136	13.67	476	260584	40.00 UG/L	100
20)	NITROBENZENE-D5	(SURR)	82	11.55	372	33210	26.16 UG/L	92
34)	*ACENAPHTHENE-D10	(IS)	162	19.10	743	147335	40.00 UG/L	96
38)	2-FLUOROBIPHENYL	(SURR)	172	17.29	654	65509	29.19 UG/L	96
41)	~~DIMETHYL PHTHALATE~~		~~163~~	~~19.10~~	~~743~~	~~28265~~	~~11.79 UG/L~~ aw	100
48)	2,4,6-TRIBROMOPHENOL	(SURR)	330	21.53	862	13193	39.57 UG/L	95
48)	~~2,4,6-TRIBROMOPHENOL~~	~~(SURR)~~	~~330~~	~~21.77~~	~~874~~	~~68~~	~~.20 UG/L~~ aw	93
52)	~~2,6-DINITROTOLUENE~~		~~165~~	~~19.10~~	~~743~~	~~20083~~	~~35.27 UG/L~~	100
55)	*PHENANTHRENE-D10	(IS)	188	23.48	958	201598	40.00 UG/L	94
63)	DI-N-BUTYLPHTHALATE		149	26.09	1086	9185	3.36 UG/L ps	98
65)	*CHRYSENE-D12	(IS)	240	31.53	1353	64576	40.00 UG/L	100
68)	TERPHENYL-D14	(SURR)	244	28.64	1211	22231	25.82 UG/L	100
74)	*PERYLENE-D12	(IS)	264	35.54	1550	45937	40.00 UG/L	100

* Compound is ISTD



CHANNEL: 1A - 1 TITLE: RUN# 25 8:32 24 FEB 87

DC-I12-58

SAMPLE: 1037 METHOD: CEPA CALCULATION: CS - ANALYS

PEAK NO	PEAK NAME	RESULT UG/Kg	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1		0.0000	1.278		159284	BV	4.19
2		0.0000	1.427		181400	VV	4.25
3		0.0000	1.566		411611	VV	4.63
4		0.0000	3.048		28596	BV	? 9.38
5		0.0000	3.403		25122	VB	7.38
6		0.0000	3.913		22587	BV	12.19
7		0.0000	4.423		254689	VV	15.13
8		0.0000	5.537		140645	VB	11.75
9	~~DIELDRIN~~	12.6520	8.866	0.056	47289	BV	40.25
10	~~4,4'-DDD~~	7.3841	10.725	-0.175	24385	VV	38.69
11	~~ENDO SO4~~	27.0009	12.561	-0.219	72483	VV	33.63
12	~~4,4'-DDT~~	27.7718	14.055	-0.135	65810	VB	46.00
13		0.0000	18.999		30562	BB	54.00
14		0.0000	23.321		44087	BB	53.25
15	DBC	1008.406	28.433	0.123	2913737	BB	81.56

TOTALS: 1083.295 -0.358 4350127

DETECTED PKS: 29 REJECTED PKS: 13

DIVISOR: 0.15000 MULTIPLIER: 1000.00000

NOISE: 11.4 OFFSET: -17

PREX: 2 COAL: 10 INJ: 1

Laboratory Name ecology and environment, inc.

Case No U-4906, 4928, 4971, 4989

Sample Number BLANK (2/16)

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared: 2-16-87

Date Analyzed: 2/23/87

Conc/Dil Factor: 1

Percent Moisture (decanted) _____

GPC Cleanup ☐Yes ☑No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)
319-84-6	Alpha-BHC	80 u
319-85-7	Beta-BHC	80 u
319-86-8	Delta-BHC	80 u
58-89-9	Gamma-BHC (Lindane)	80 u
76-44-8	Heptachlor	80 u
309-00-2	Aldrin	80 u
1024-57-3	Heptachlor Epoxide	80 u
959-98-8	Endosulfan I	80 u
60-57-1	Dieldrin	160 u
72-55-9	4, 4'-DDE	160 u
72-20-8	Endrin	160 u
33213-65-9	Endosulfan II	160 u
72-54-8	4, 4'-DDD	160 u
1031-07-8	Endosulfan Sulfate	160 u
50-29-3	4, 4'-DDT	160 u
72-43-5	Methoxychlor	800 u
53494-70-5	Endrin Ketone	160 u
57-74-9	Chlordane	800 u
8001-35-2	Toxaphene	1600 u
12674-11-2	Aroclor-1016	800 u
11104-28-2	Aroclor-1221	800 u
11141-16-5	Aroclor-1232	800 u
53469-21-9	Aroclor-1242	800 u
12672-29-6	Aroclor-1248	800 u
11097-69-1	Aroclor-1254	1600 u
11096-82-5	Aroclor-1260	1600 u

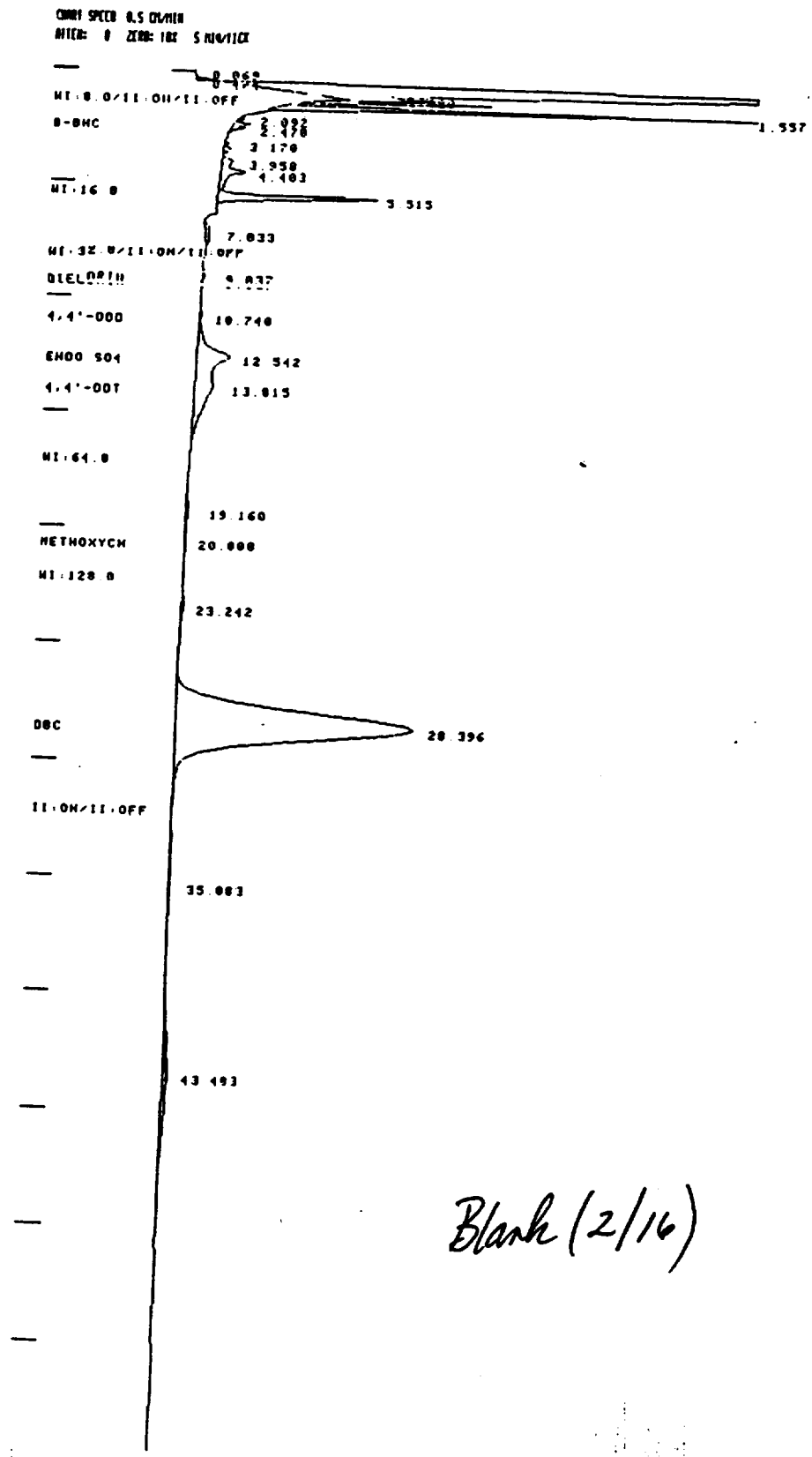
V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s _____ or W_s 3 V_t 1,000 V_i 4



Blank (2/16)

CHANNEL: 10 - 1 TITLE: 0000 16 21:03 23 FEB 87

CHANNEL: 10 - 1 TITLE: [illegible] 16 21:03 23 FEB 87

SAMPLE: BLANK 2-16 METHOD: CEPA CALCULATION: CS - ANALYS

PEAK NO	PEAK NAME	RESULT UG/[illegible]	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1		0.0000	1.273		102510	BB	4.00
2		0.0000	1.557		310071	BB	5.00
3	[illegible]	7.2746	3.950	-0.162	24966	BB	? 13.44
4		0.0000	4.401		74496	BV	14.01
5		0.0000	5.515		277914	VB	12.19
6		0.0000	7.033		25200	BB	? 61.69
7	[illegible]	94.7009	12.542	-0.238	253212	VV	96.00
8	[illegible]	81.4954	13.815	-0.375	193117	VB	? 96.00
9	BBC	916.7631	28.396	0.006	2640957	BB	84.00
10		0.0000	35.083		32212	BB	172.00
11		0.0000	43.403		132740	BB	240.00

TOTALS: 1100.241 -0.609 4113170

DETECTED PKS: 27 REJECTED PKS: 16

DIVISOR: 0.15000 MULTIPLIED: 1000.0000

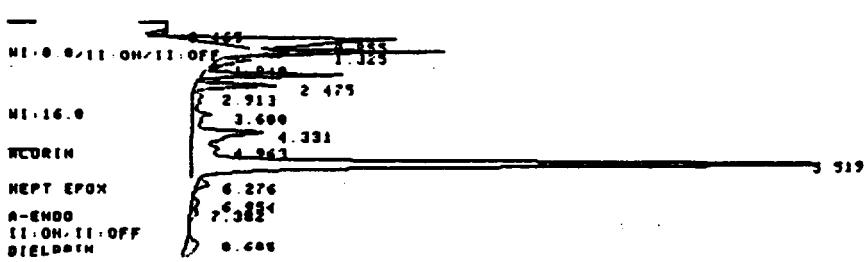
NOISE: 11.1 OFFSET: 6

BACK: 2 VIAL: 1 INJ: 1

NOTES:
NOTEBOOK:259-115,116 ANALYST: RICHARD SAWSON
SECURE AREA: B JOB:B-4072,1986
INST: HP5890 GOODW 20 ECD 10BX
COLUMN: 6' GLASS 4% LB 100/120 SUPELCOPORT
LIQUID PHASE: 3% OV-1
CARRIER GAS: N2 @ 60 ML/MIN
DET: 300 C INJ: 220 C
200 C ISOTHERMAL 1 UL INJECTION

POST RUN:
SAVE FILE: AAA DC1100

CHART SPEED 0.5 CM/MIN
ATTEN: 8 ZERO: 10% 5 MV/TICK



Laboratory Name ecology and environment, inc.

Case No U-4906, 4928, 4971, 4989

Sample Number
BLANK (2/19)

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 2-19-87

Date Analyzed 2-24-87

Conc/Dil Factor 1

Percent Moisture (decanted) _____

GPC Cleanup ☐Yes ☑No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or (ug/Kg) (Circle One)
319-84-6	Alpha-BHC	80 u
319-85-7	Beta-BHC	80 u
319-86-8	Delta-BHC	80 u
58-89-9	Gamma-BHC (Lindane)	80 u
76-44-8	Heptachlor	80 u
309-00-2	Aldrin	80 u
1024-57-3	Heptachlor Epoxide	80 u
959-98-8	Endosulfan I	80 u
60-57-1	Dieldrin	160 u
72-55-9	4,4'-DDE	160 u
72-20-8	Endrin	160 u
33213-65-9	Endosulfan II	160 u
72-54-8	4,4'-DDD	160 u
1031-07-8	Endosulfan Sulfate	160 u
50-29-3	4,4'-DDT	160 u
72-43-5	Methoxychlor	800 u
53494-70-5	Endrin Ketone	160 u
57-74-9	Chlordane	800 u
8001-35-2	Toxaphene	1600 u
12674-11-2	Aroclor-1016	800 u
11104-28-2	Aroclor-1221	800 u
11141-16-5	Aroclor-1232	800 u
53469-21-9	Aroclor-1242	800 u
12672-29-6	Aroclor-1248	800 u
11097-69-1	Aroclor-1254	1600 u
11096-82-5	Aroclor-1260	1600 u

V_i = Volume of extract injected (ul)

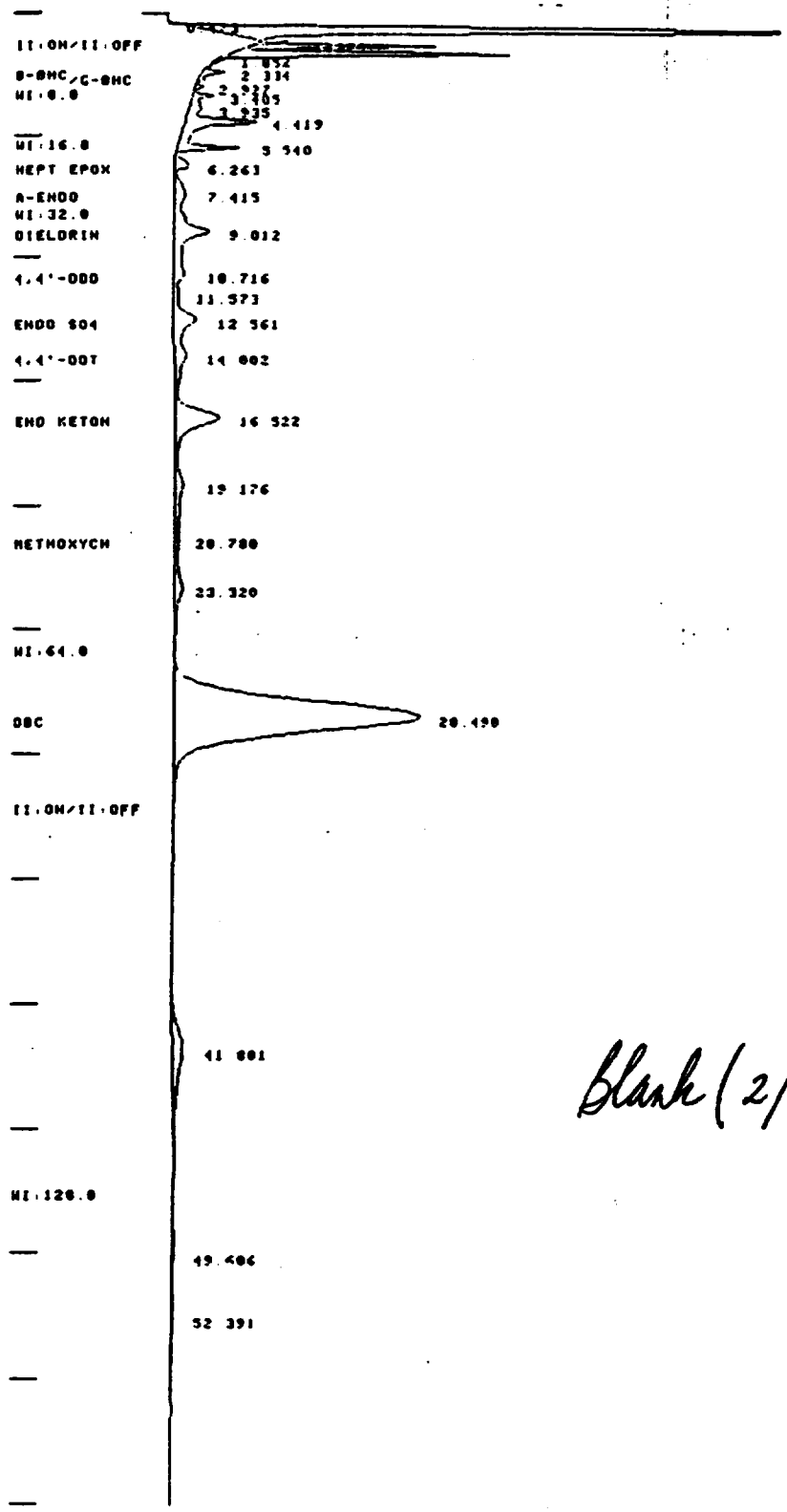
V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s _____ or W_s 3 V_t 1000 V_i 4

CHART SPEED 0.5 CM/MIN
ATTEN: 8 ZERO: 10% 5 MIN/TICK



Blank (2/19)

CHANNEL: 1A - 1 TITLE: RUN# 14 22:26 24 FEB 87

SAMPLE: BLK METHOD: CEPA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/KG	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1		0.0000	1.279		128937	BV	4.25

CHANNEL: 1A - 1 TITLE: RUN# 14 22:26 24 FEB 87

SAMPLE: BLK METHOD: CEPA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/K$_2$	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1		0.0000	1.279		128937	BV	4.25
2		0.0000	1.566		331923	VB	5.00
3		0.0000	3.405		26158	VV	8.38
4	~~HEPT-EPOX~~	7.6123	3.935	-0.195	26804	VV	? 16.81
5		0.0000	4.419		191614	VV	13.81
6		0.0000	5.540		102669	VV	10.94
7	~~HEPT-EPOX~~	12.2480	6.263	0.123	43639	VV	27.56
8	~~A-ENDO~~	20.9546	7.415	-0.185	71113	VV	? 67.94
9	~~DIELDRIN~~	53.0913	9.012	0.172	191435	VV	30.44
10	~~4,4'-DDD~~	21.1674	10.716	-0.224	66564	VV	? 54.56
11	~~ENDO SO4~~	53.8611	12.561	-0.289	132881	VV	42.19
12	~~4,4'-DDT~~	43.5673	14.002	-0.248	105235	VV	?115.25
13	~~ENDO KETON~~	75.3683	16.522	0.112	276412	VV	44.56
14		0.0000	19.176		104410	VV	? 70.19
15	~~METHOXYCHLOR~~	30.2533	20.780	-0.120	39290	VV	?
16		0.0000	23.320		81411	VB	? 87.31
17	DBC #49	932.1072	28.498	0.018	2598812	BB	81.25
18		0.0000	41.801		169072	BB	163.38
19		0.0000	52.391		22503	VB	?117.63

TOTALS: 1250.231 -0.836 4710882

DETECTED PKS: 31 REJECTED PKS: 12

DIVISOR: 0.15000 MULTIPLIER: 1000.00000

NOISE: 11.4 OFFSET: 10

RACK: 1 VIAL: 14 INJ: 1

NOTES:
NOTEBOOK:259-117,118 ANALYST:RICHARD SAMSON
SECURE AREA: D JOB#:U-4928
INST: VARIAN 6000# 2A ECD 10X1
COLUMN: 6' GLASS 4MM ID 100/120 SUPELCOPORT
LIQUID PHASE: 3% OV-1
CARRIER GAS: N2 @ 60 ML/MIN
DET: 300 C INJ: 220 C
200 C ISOTHERMAL 4 UL INJECTION

POST RUN:
SAVE FILE: RAW TURK212

CHART SPEED 0.5 CM/MIN
ATTEN: 0 ZERO: 10% 5 MIN/TICK

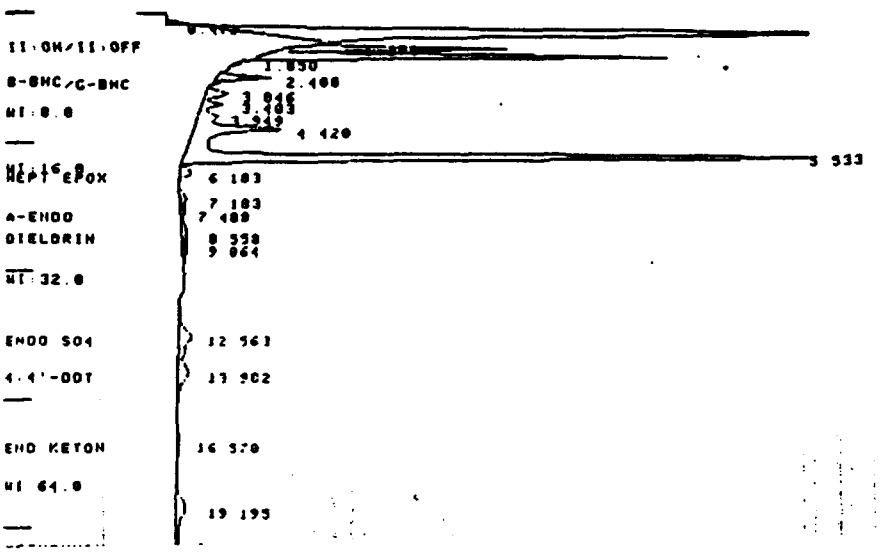
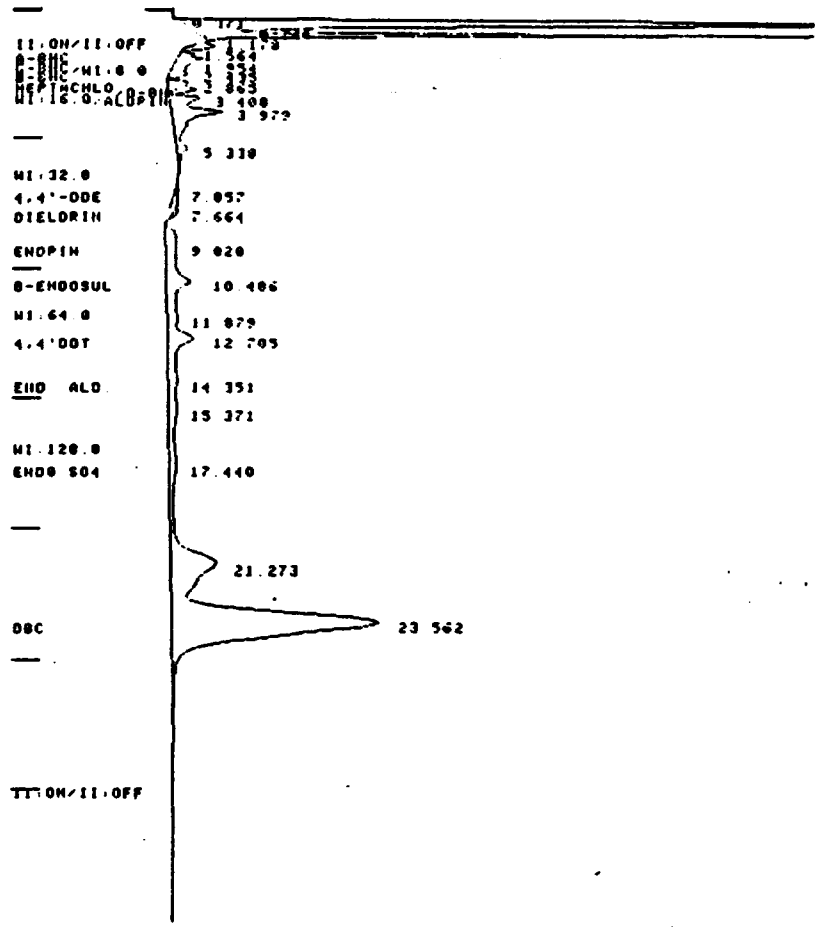


CHART SPEED 0.5 CM/MIN
ATTEN: 16 ZERO: 10% 5 MIN/TICK



CHANNEL: 1B - 1 TITLE: RUN# 7 14:05 3 MAR 87

SAMPLE: BLK.19 2/19 METHOD: PEPA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT MG/KG	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	WI/2 (SEC)
1		0.0000	1.273		23303	BV	3.44
2		0.0000	1.414		20020	VV	? 2.13
3		0.0000	1.639		24184	VV	? 6.81
4	~~A-BHC~~	0.0000	1.842	0.082	62455	VV	6.63
5		0.0000	1.954		33181	VV	? 10.44
6	~~G-BHC~~	0.0000	2.237	0.027	36936	VV	? 8.50
7	~~B-BHC~~	0.0000	2.435	-0.105	52670	VV	5.25
8	~~D-BHC~~	0.0000	2.865	-0.095	62214	VV	? 17.25
9		0.0000	3.087		85020	VV	? 17.81
10	~~ALDRIN~~	0.0000	3.408	0.108	136338	VV	? 10.63
11		0.0000	3.979		322079	VV	20.56
12		0.0000	5.338		71262	VB	? 36.63
13	~~4,4'-DDE~~	0.0000	7.057	-0.133	81192	BV	17.13
14	~~ENDRIN~~	0.0000	9.028	-0.222	182114	VV	? 59.50
15	~~B-ENDOSUL~~	0.0000	10.486	0.086	265946	VV	49.50
16		0.0000	11.879		139957	VV	? 78.13
17	~~[illegible]~~	0.0000	12.705	-0.545	264797	VV	42.19
18	~~[illegible]~~	0.0000	14.351	-0.369	141561	VV	?134.44
19		0.0000	15.371		154227	VV	?108.06
20	~~ENDO SO4~~	0.0000	17.440	-0.250	182049	VV	?152.25
21		0.0000	21.273		871534	VV	92.81
22	DBC	0.0000	23.562	0.002	2965949	VB	57.88
TOTALS:		0.0000		-1.404	6172588		

DETECTED PKS: 32 REJECTED PKS: 10

Laboratory Name ecology and environment, inc.

Case No U-4906, 4928, 4971, 4989

Sample Number BLANK (2/26)

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 2-26-87

Date Analyzed 3-11-87

Conc/Dil Factor: 1.0

Percent Moisture (decanted) _____

GPC Cleanup ☐Yes ☑No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or (ug/Kg) (Circle One)
319-84-6	Alpha-BHC	80u
319-85-7	Beta-BHC	80u
319-86-8	Delta-BHC	80u
58-89-9	Gamma-BHC (Lindane)	80u
76-44-8	Heptachlor	80u
309-00-2	Aldrin	80u
1024-57-3	Heptachlor Epoxide	80u
959-98-8	Endosulfan I	80u
60-57-1	Dieldrin	160u
72-55-9	4, 4'-DDE	160u
72-20-8	Endrin	160u
33213-65-9	Endosulfan II	160u
72-54-8	4, 4'-DDD	160u
1031-07-8	Endosulfan Sulfate	160u
50-29-3	4 4 -DDT	160u
72-43-5	Methoxychlor	800u
53494-70-5	Endrin Ketone	160u
57-74-9	Chlordane	800u
8001-35-2	Toxaphene	1,600u
12674-11-2	Aroclor-1016	800u
11104-28-2	Aroclor-1221	800u
11141-16-5	Aroclor-1232	800u
53469-21-9	Aroclor-1242	800u
12672-29-6	Aroclor-1248	800u
11097-69-1	Aroclor-1254	1,600u
11096-82-5	Aroclor-1260	1,600u

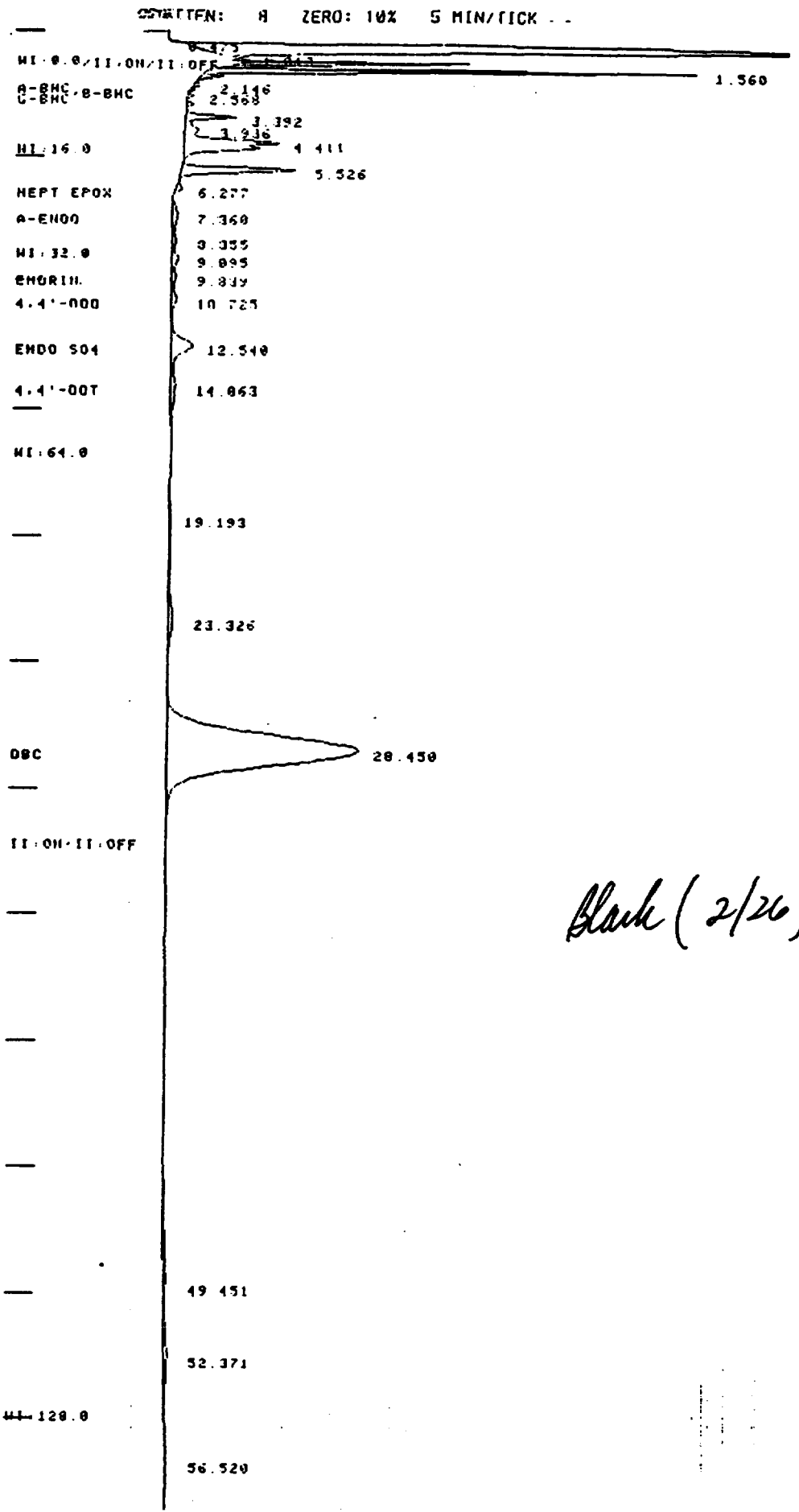
V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s _____ or W_s 3 V_t 1000 V_i 4


ZERO: 10%
5 MIN/TICK
WI:0.0/II:ON/II:OFF
1.560
A-BHC
C-BHC
B-BHC
2.146
2.568
3.392
3.916
WI:16.0
4.411
5.526
HEPT EPOX
6.277
A-ENDO
7.360
WI:32.0
9.095
ENDRIN
9.839
4,4'-DDD
10.725
ENDO SO4
12.540
4,4'-DDT
14.063
WI:64.0
19.193
23.326
DBC
28.450
II:ON-II:OFF
49.451
52.371
WI:128.0
56.520

Blank (2/26)

CHANNEL: 1A - 1 TITLE: RUN# 14 21:27 11 MAR 87

SAMPLE: BLANK 2-26 METHOD: CEPA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/Kg	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1		0.0000	1.270		138226	BB	4.38
2		0.0000	1.559		325166	BV	5.25
3		0.0000	1.809		20191	T	7.00
4		0.0000	3.392		59899	VV	8.94
5	~~HEPTACHLO~~	9.2644	3.936	-0.184	34021	VV	? 18.44
6		0.0000	4.411		182049	VV	? 15.56
7		0.0000	4.656		113313	VB	? 16.81
8		0.0000	5.526		182387	BB	12.44
9	~~A-ENDO~~	9.7589	7.360	-0.230	36942	VV	? 77.00
10	~~DIELDRIN~~	6.3018	9.095	0.255	25150	VV	36.63
11	~~4,4'-DDD~~	8.1193	10.725	-0.205	27041	VV	? 45.56
12	~~ENDO-SO4~~	41.2154	12.540	-0.280	99338	VV	35.69
13	~~4,4'-DDT~~	15.7714	14.063	-0.167	37571	VB	? 87.44
14		0.0000	23.326		61404	VB	87.00
15	DBC 96%	639.2430	28.450	0.070	1932882	BB	79.13
16		0.0000	49.451		65654	BV	?123.25
17		0.0000	52.371		66044	VV	?218.50
18		0.0000	56.520		39625	VV	241.88

TOTALS: 729.6741 -0.741 3446903

DETECTED PKS: 30 REJECTED PKS: 12

DIVISOR: 0.15000 MULTIPLIER: 1000.00000

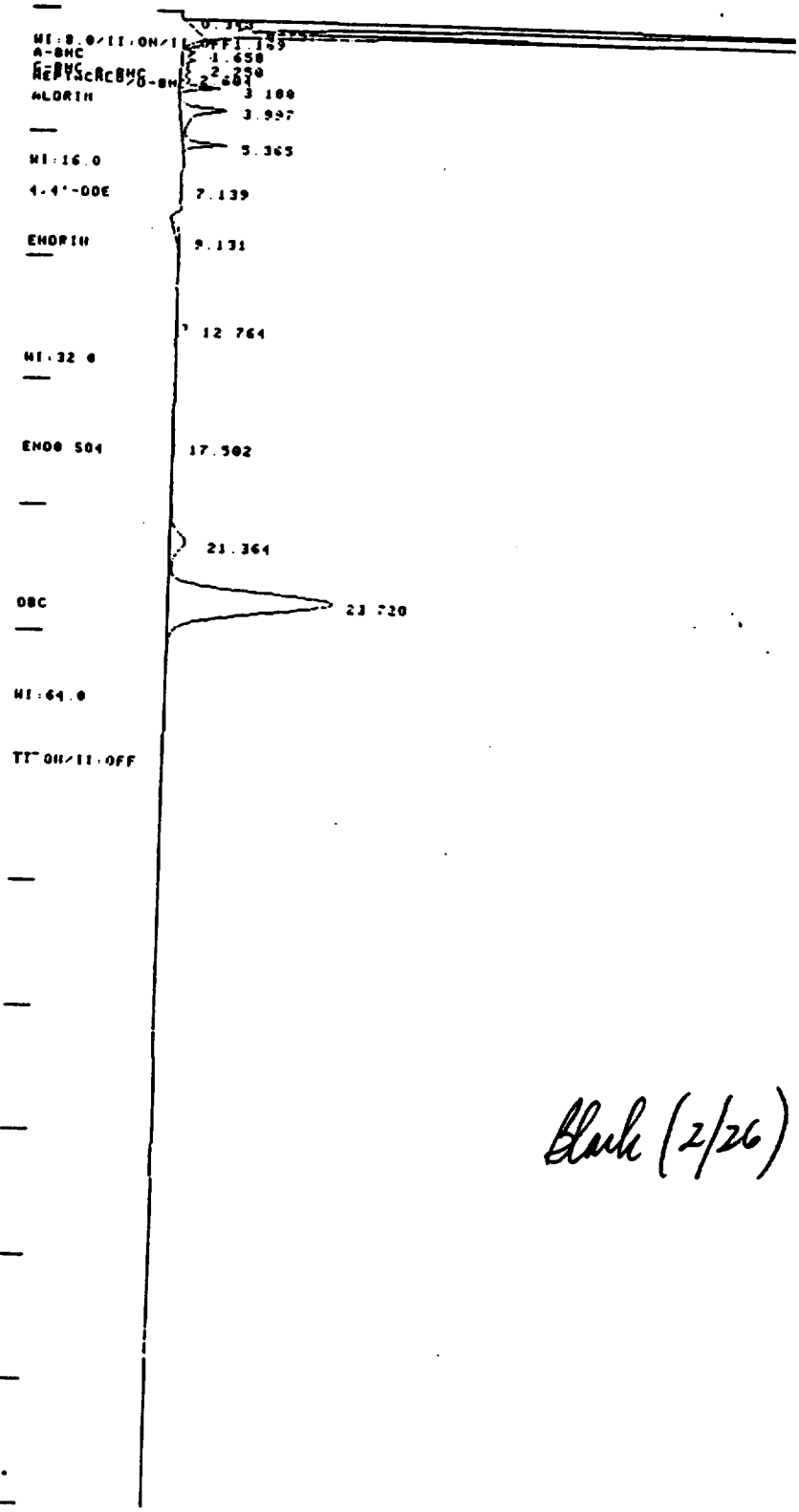
NOISE: 11.4 OFFSET: 10

RACK: 1 VIAL: 14 INJ: 1

NOTES:
NOTERBOOK:259-146,147 ANALYST: RICHARD SAMSON
SECURE AREA: D JOB#'S U-4971,4989
INST: VARIAN 6000# 2A ECD 10X1
COLUMN: 6' GLASS 4MM ID 100/120 SUPELCOPORT
LIQUID PHASE: 3% OV-1
CARRIER GAS: N2 @ 60 ML/MIN
DET: 300 C INJ: 220 C
200 C ISOTHERMAL 4 UL INJECTION
DEAD CREEK PRIMARY ANALYSIS
AUTOSAMPLER

POST RUN:
SAVE FILE: RAW S.CROP386

CHART SPEED 0.5 CM/MIN
ATTEN: 16 ZERO: 10% 5 MIN/TICK



Blank (2/26)

CHANNEL: 1B - 1 TITLE: RUN# 9 5:37 17 MAR 87

CALCULATION: ES - ANALYS

532

CHANNEL: 18 - 1 TITLE: RUN# 9 5:37 17 MAR 87

SAMPLE: BK.19C 2/26 METHOD: PEPA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT MG/KG	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1		0.0000	1.282		30521	BV	3.38
2	A-BHC	4.0858	1.658	-0.122	26869	VV	? 12.00
3		0.0000	2.012		29052	VV	7.44
4	G-BHC	10.3567	2.434	-0.126	21734	VV	8.19
5	HEPTACHLOR	7.2120	2.833	0.063	34934	VV	? 10.00
6	G-BHC	20.3670	3.108	0.128	93249	VV	7.69
7		0.0000	3.997		252666	VV	14.50
8		0.0000	5.365		155796	VB	13.94
9	ENDRIN	15.1483	9.131	-0.219	61070	BB	? 22.88
10	4,4'-DDT	27.0143	12.764	-0.676	80567	BB	28.00
11	ENDO SO4	8.5781	17.502	-0.358	20070	BD	? 44.44
12		0.0000	21.364		205131	BV	49.81
13	DBC	673.8265	23.720	-0.070	2334158	VB	55.75
TOTALS:		766.5888		-1.380	3345817		

DETECTED PKS: 26 REJECTED PKS: 13

DIVISOR: 0.15000 MULTIPLIER: 1000.00000

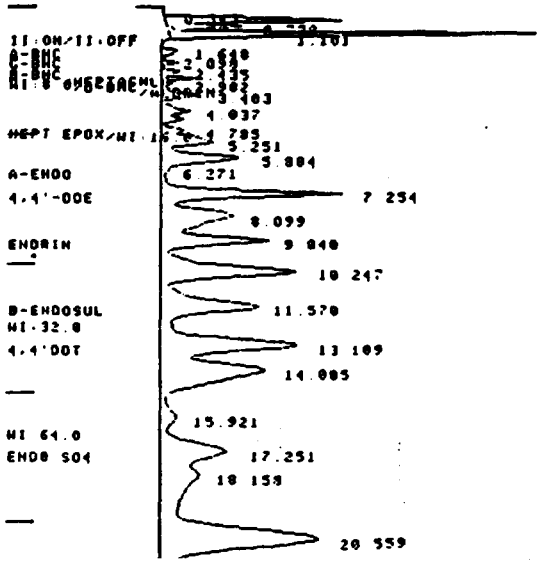
NOISE: 365.7 OFFSET: 5

RACK: 1 VIAL: 9 INJ: 1

NOTES:
NOTEBOOK:259-154 ANALYST:RICHARD SAMSON
SECURE AREA D JOB #U-4971, U-4989
INST: VARIAN 6000#2 B ECD 10X1 ATT:16
COLUMN: 6' GLASS 4MM ID 100/120 SUPELCOPORT
PHASE:1.5% SP2250/1.95% SP2401
CARRIER GAS: N2 @ 60 ML/MIN.
DET:300 C INJ:220 C
200 C ISOTHERMAL 4 UL INJECTION
CONFIRMATION RUNS AUTOSAMPLER

POST RUN:
SAVE FILE: RAW D.CRK.102

CHART SPEED 0.5 CM/MIN
ATTEN: 16 ZERO: 10% 5 MIN/TICK



Laboratory Name ecology and environment, inc.

Case No U-4906, 4928, 4971, 4989

Sample Number BLANK (3/3)

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared: 3-3-87

Date Analyzed: 3-12-87

Conc/Dil Factor: 1

Percent Moisture (decanted) _____

GPC Cleanup ☐Yes ☑No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)
319-84-6	Alpha-BHC	80u
319-85-7	Beta-BHC	80u
319-86-8	Delta-BHC	80u
58-89-9	Gamma-BHC (Lindane)	80u
76-44-8	Heptachlor	80u
309-00-2	Aldrin	80u
1024-57-3	Heptachlor Epoxide	80u
959-98-8	Endosulfan I	80u
60-57-1	Dieldrin	160u
72-55-9	4, 4'-DDE	160u
72-20-8	Endrin	160u
33213-65-9	Endosulfan II	160u
72-54-8	4, 4'-DDD	160u
1031-07-8	Endosulfan Sulfate	160u
50-29-3	4 4'-DDT	160u
72-43-5	Methoxychlor	800u
53494-70-5	Endrin Ketone	160u
57-74-9	Chlordane	800u
8001-35-2	Toxaphene	1,600u
12674-11-2	Aroclor-1016	800u
11104-28-2	Aroclor-1221	800u
11141-16-5	Aroclor-1232	800u
53469-21-9	Aroclor-1242	800u
12672-29-6	Aroclor-1248	800u
11097-69-1	Aroclor-1254	1,600u
11096-82-5	Aroclor-1260	1,600u

V_i = Volume of extract injected (ul)

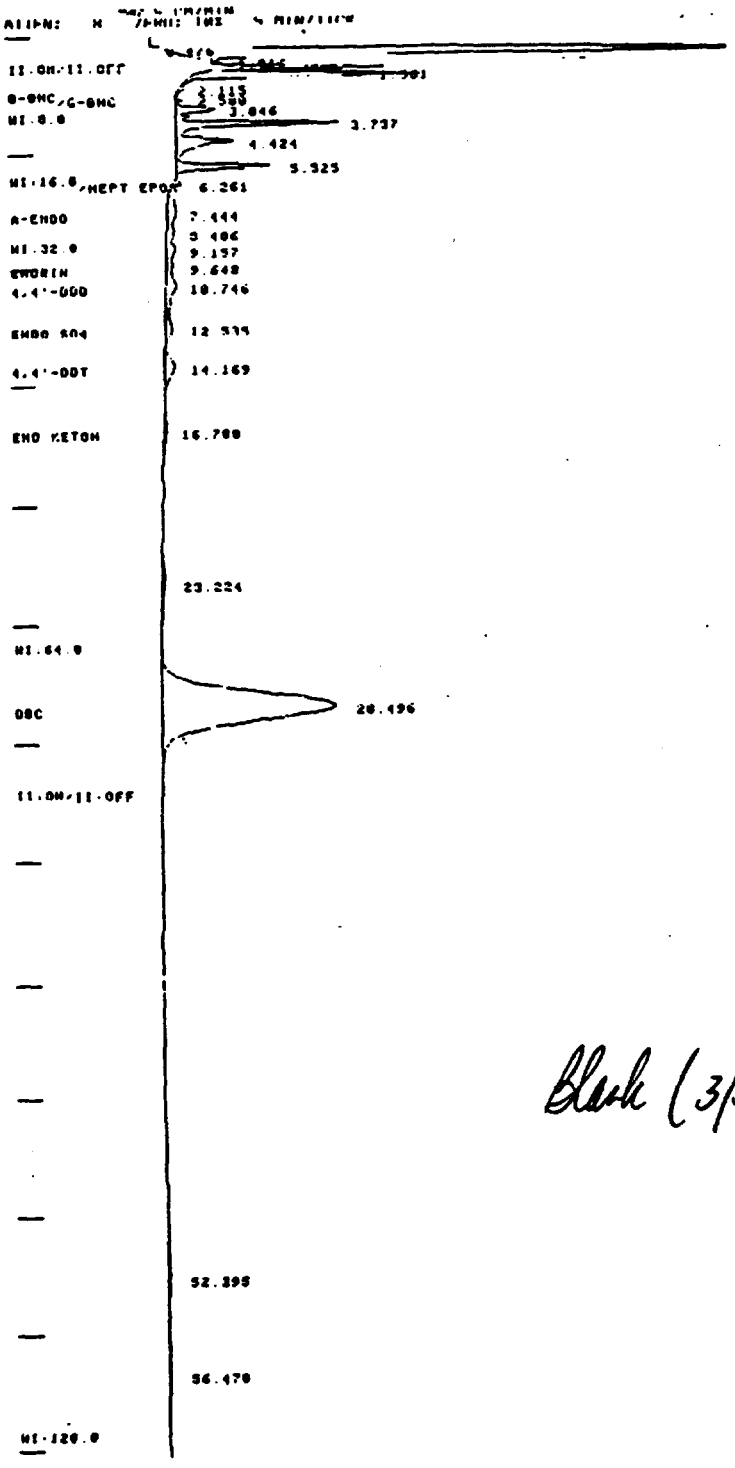
V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s _____ or W_s 3 V_t 1000 V_i 4

534



II.ON/II.OFF
B-BHC/G-BHC
HI.8.0
3.846
3.737
4.424
5.525
HI.16.0/HEPT EPOX
6.261
A-ENDO
7.444
HI.32.0
9.157
ENDRIN
9.648
4,4'-DDD
10.746
ENDO SO4
12.535
4,4'-DDT
14.169
END KETON
16.700
23.224
HI.64.0
DBC
28.496
II.ON/II.OFF
52.395
56.470
HI.128.0

Blank (3/3)

CHANNEL: 1A - 1 TITLE: RUN# 23 7:17 12 MAR 87

SAMPLE: BLANK3-3 METHOD: CEPA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/Kg	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1		0.0000	1.272		144382	BB	4.44
2		0.0000	1.561		310116	BV	5.13
3		0.0000	3.046		65989	VV	8.56
4		0.0000	3.737		238880	VV	9.94
5		0.0000	4.424		160256	VV	16.25
6		0.0000	5.525		163198	VB	12.81
7	~~A-ENDO~~	17.9241	7.444	-0.146	67851	VV	? 56.56
8	~~4,4'-DDE~~	8.0347	8.406	-0.314	29142	VV	? 42.00
9	~~DIELDRIN~~	10.1476	9.157	0.317	40498	VV	? 49.50
10	~~4,4'-DDD~~	23.7654	10.746	-0.184	79150	VV	42.44
11	~~ENDO-SO4~~	16.4284	12.535	-0.285	39596	VV	30.00
12	~~4,4'-DDT~~	27.7732	14.169	-0.061	66162	VB	45.63
13	~~ENDO-KETON~~	5.7914	16.780	0.390	22448	BB	46.00
14		0.0000	23.224		35427	BB	? 75.81
15	DBC	615.4536	28.496	0.116	1860950	BB	79.13
16		0.0000	52.395		29940	BV	130.00
17		0.0000	56.470		37245	VV	?143.31
TOTALS:		725.3184		-0.167	3391230		

DETECTED PKS: 29 REJECTED PKS: 12

DIVISOR: 0.15000 MULTIPLIER: 1000.00000

NOISE: 11.4 OFFSET: 19

RACK: 2 VIAL: 8 INJ: 1

NOTES:
NOTERBOOK:259-146,147 ANALYST: RICHARD SAMSON
SECURE AREA: D JOB#'S U-4971,4989
INST: VARIAN 6000# 2A ECD 10X1
COLUMN: 6' GLASS 4MM ID 100/120 SUPELCOPORT
LIQUID PHASE: 3% OV-1
CARRIER GAS: N2 @ 60 ML/MIN
DET: 300 C INJ: 220 C
200 C ISOTHERMAL 4 UL INJECTION
DEAD CREEK PRIMARY ANALYSIS
AUTOSAMPLER

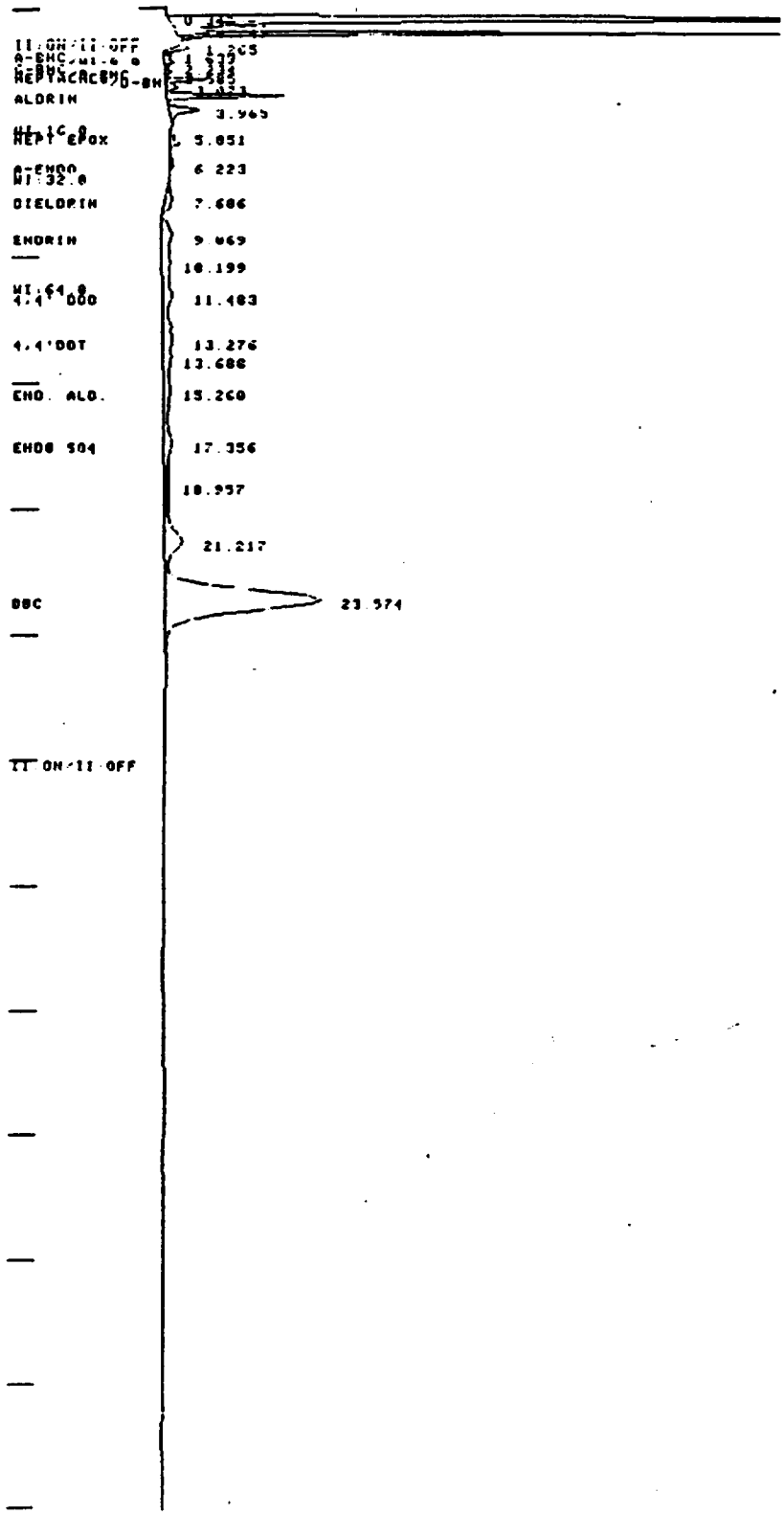
POST RUN:
SAVE FILE: RAW S.CROP395

recycled paper ecology and environment

SAVE FILE: RAW D.CRK.107

Blank (3/3)

CHART SPEED 0.5 CM/MIN
ATTEN: 16 ZERO: 10% 5 MIN/TICK



CHANNEL: 18 - 1 TITLE: RUN# 16 12:08 17 MAR 87

SAMPLE: BK.19 3-3 METHOD: PEPA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT MG/KG	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1		0.0000	1.265		20352	BV	2.88
2		0.0000	1.987		24292	VV	7.44
3	~~HEPTACHLO~~	17.1584	2.778	0.000	83113	VV	7.13
4	~~B-BHC~~	6.8940	3.073	0.093	31564	VV	12.50
5	~~ALDRIN~~	43.9220	3.377	0.027	228121	VV	7.50
6		0.0000	3.965		112649	VB	14.25
7	~~HEPT EPOX~~	7.1870	5.330	0.320	33474	VV	13.44
8	~~A-ENDS~~	5.8215	6.223	-0.077	25567	VB	25.25
9	~~DIELDRIN~~	18.3584	7.606	-0.094	87411	BV	35.56
10	~~ENDRIN~~	32.3249	9.069	-0.281	130317	VV	? 65.00
11		0.0000	10.199		157734	VV	? 66.00
12	~~B-ENDRIN~~	38.8438	11.483	0.163	130465	VV	? 75.00
13	~~4,4'DDT~~	57.9248	13.276	-0.164	172754	VV	?115.13
14		0.0000	13.688		107895	VV	?
15	~~END. ALD.~~	42.0915	15.260	0.450	138160	VV	?118.44
16	~~ENDO SO4~~	63.2414	17.356	-0.504	147964	VV	? 84.81
17		0.0000	18.957		92754	VV	?169.50
18		0.0000	21.217		292844	VV	73.31
19	DBC	647.1210	23.574	-0.216	2241649	VB	57.25
TOTALS:		972.0887		-0.275	4259079		

DETECTED PKS: 35 REJECTED PKS: 16

DIVISOR: 0.15000 MULTIPLIER: 1000.00000

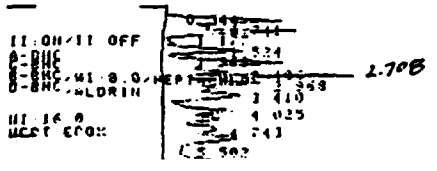
NOISE: 365.7 OFFSET: 0

RACK: 1 VIAL: 15 INJ: 1

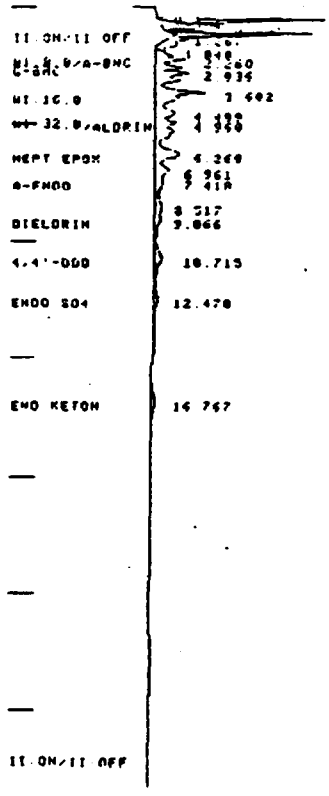
NOTES:
NOTEBOOK:259-154 ANALYST:RICHARD SAMSON
SECURE AREA D JOB #U-4971, U-4989
INST: VARIAN 6000#2 @ ECD 10X1 ATT:16
COLUMN: 6' GLASS 4MM ID 100/120 SUPELCOPORT
PHASE:1.5% SP2250/1.95% SP2401
CARRIER GAS: N2 @ 60 ML/MIN.
DET:300 C INJ:220 C
200 C ISOTHERMAL 4 UL INJECTION
CONFIRMATION RUNS AUTOSAMPLER

POST RUN:
SAVE FILE: RAW D.CRK.108

CHART SPEED 0.5 CM/MIN
ATTEN: 16 ZERO: 10% 5 MIN/TICK



ATTEN: 8 ZERO: 10% 5 MIN/TICK



24

SEE RUN29

RECALCULATE ON FILE: S.CROP396

CHANNEL: 1A - 1 TITLE: RUN# 24 8:22 12 MAR 87

SAMPLE: 1427 DC-09-72 METHOD: CASE1 CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/Kg	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	WI/2 (SEC)
1		0.0000	2.017		22548	VV	? 9.06
2	~~A-BHC~~	7986.284	2.260	0.020	35939	VV	9.13
3	~~B-BHC~~	10006.49	2.584	-0.026	41232	VV	10.75
4		0.0000	2.836		48218	VV	11.00
5		0.0000	3.110		48038	VV	? 13.69
6		0.0000	3.602		88548	VV	12.44
7		0.0000	3.840		58909	VV	? 29.44
8		0.0000	4.489		65109	VV	? 29.81
9	~~ALDRIN~~	11349.89	4.960	-0.100	47640	VV	? 24.81
10		0.0000	5.310		63336	VV	? 29.81
11	~~HEPT EPOXI~~	22625.51	6.268	0.138	90821	VV	27.44
12		0.0000	6.961		50097	VV	? 27.81
13	~~A-ENDO~~	9622.593	7.418	-0.172	36426	VV	? 62.38
14	~~4,4'-DDE~~	9529.851	8.517	-0.203	34565	VV	? 47.63
15	~~DIELDRIN~~	8790.484	9.066	0.226	35002	VV	? 38.44
16	~~4,4'-DDD~~	17426.98	10.715	-0.215	58040	VV	46.81
17	~~END KETONE~~	6574.129	16.767	0.377	25402	BB	43.00

TOTALS: 103912.2 0.045 842022

DETECTED PKS: 27 REJECTED PKS: 10

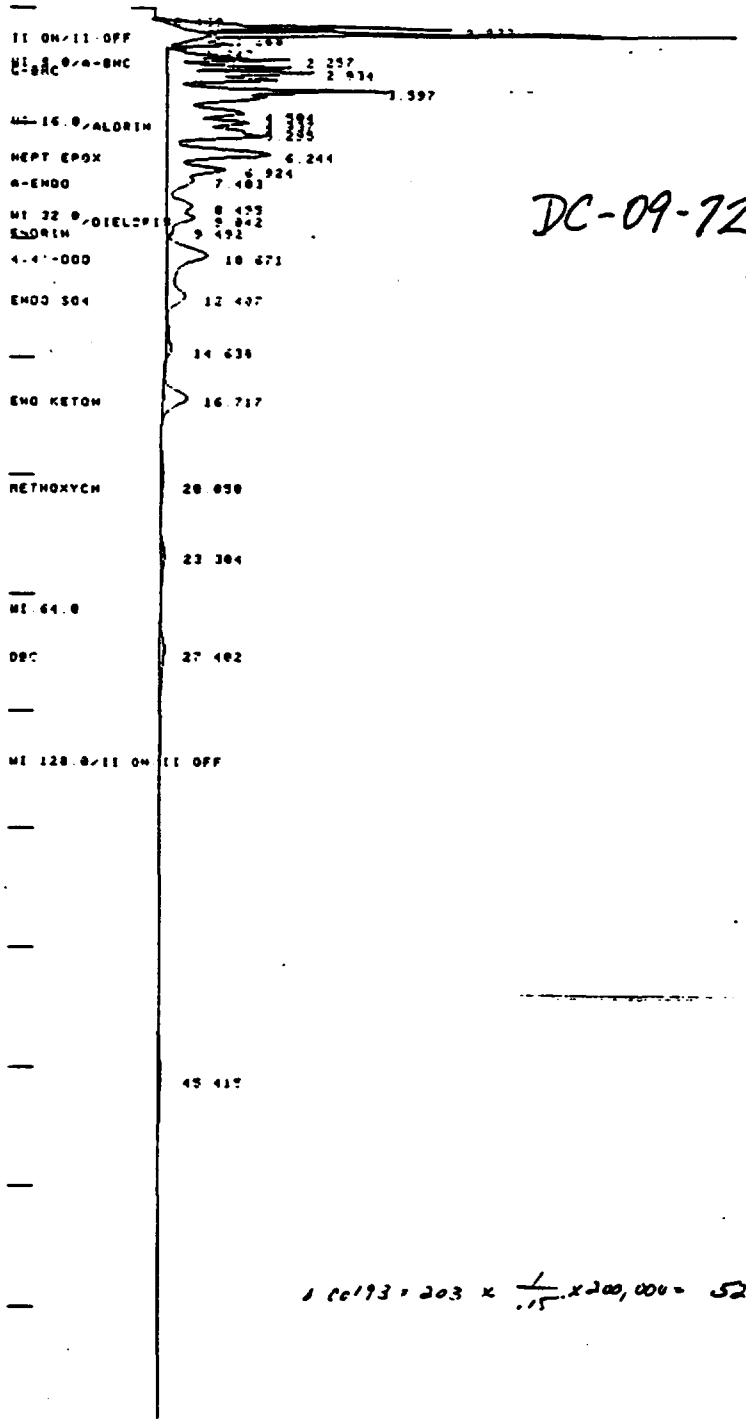
DIVISOR: 0.15000 MULTIPLIER: 1000000.00

NOISE: 11.4 OFFSET: -5

RACK: 2 VIAL: 9 INJ: 1

NOTES:
NOTEBOOK:259-146,147 ANALYST: RICHARD SAMSON
SECURE AREA: D JOB#'S U-4971,4989
INST: VARIAN 6000# ZA ECD 10X1
COLUMN: 6' GLASS 4MM ID 100/120 SUPELCOPORT
LIQUID PHASE: 3% OV-1
CARRIER GAS: N2 @ 60 ML/MIN
DET: 300 C INJ: 220 C
200 C ISOTHERMAL 4 UL INJECTION
CEAO CREEK PRIMARY ANALYSIS
AUTOSAMPLER

CHART SPEED 0.5 CM/MIN
ATTEN: 8 ZERO: 10% 5 MIN/TICK



DC-09-72

1 cc/93 = 203 x $\frac{1}{.15}$ x 200,000 = 520,000 ug/kg
1242

CHANNEL: 1A - 1 TITLE: RUN# 29 14:38 12 MAR 87

SAMPLE: 1427DC-09-72 METHOD: CEPA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/Kg	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1		0.0000	1.527		39304	VB	4.56
2		0.0000	2.016		66072	VV	? 7.31
3	~~A-BHC~~	5464.201	2.257	0.017	122947	VV	7.63
4	~~G-BHC~~	7412.212	2.582	-0.028	152711	VV	8.38
5		0.0000	2.834		192541	VV	9.75
6		0.0000	3.104		149246	VV	? 11.94
7		0.0000	*3.597 PCB1242 203		362759	VV	11.56
8		0.0000	3.832		210616	VV	? 21.25
9		0.0000	4.504		229526	VV	? 27.69
10	~~ALDRIN~~	7813.609	4.937	-0.123	163984	VV	? 17.31
11		0.0000	5.295		114377	VV	? 19.00
12		0.0000	~~5.488~~		~~184204~~	VV	? 17.94
13	~~HEPT EPOX~~	16546.88	6.244	0.114	332104	VV	24.38
14		0.0000	6.924		162534	VV	21.44
15	~~A-ENDO~~	4813.040	7.403	-0.187	91098	VV	? 43.00
16	~~4,4'-DDE~~	5431.836	8.495	-0.225	98507	VV	? 31.31
17	~~DIELDRIN~~	4556.659	9.042	0.202	90926	VV	? 32.19
18	~~4,4'-DDD~~	15225.60	10.671	-0.259	253542	VV	42.19
19	~~ENDO SO4~~	8467.864	12.407	-0.413	102047	VV	42.38
20	~~4,4'-DDT~~	3184.085	14.638	0.408	37926	VB	45.63
21	~~END KETON~~	7011.012	16.717	0.327	135877	BB	40.06
22	~~METHOXYCH~~	5041.001	20.050	-0.830	33657	BV	?103.75
23		0.0000	23.304		43287	VB	66.00
24	~~DDD~~	4203.122	27.402	-0.978	63545	BB	99.19
25		0.0000	45.415		36080	BB	108.00

TOTALS: 95171.14 -1.975 3479417

DETECTED PKS: 33 REJECTED PKS: 8

DIVISOR: 0.15000 MULTIPLIER: 200000.000

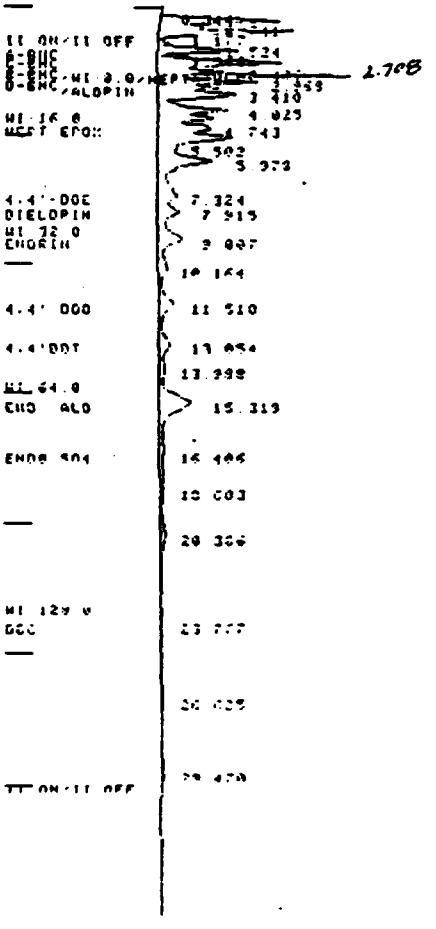
NOISE: 11.4 OFFSET: 9

RACK: 2 VIAL: 14 INJ: 1

NOTES:
NOTERBOOK:259-146,147 ANALYST: RICHARD SAMSON
SECURE AREA: D JOB#'S U-4971,4989
INST: VARIAN 6000# 2A ECD 10X1
COLUMN: 6' GLASS 4MM ID 100/120 SUPELCOPORT
LIQUID PHASE: 3% OV-1
CARRIER GAS: N2 @ 60 ML/MIN
DET: 300 C INJ: 220 C
200 C ISOTHERMAL 4 UL INJECTION
DEAD CREEK PRIMARY ANALYSIS
AUTOSAMPLER

POST RUN:
SAVE FILE: RAW S.CROP401

CHART SPEED 0.5 CM/MIN
ATTEN: 16 ZERO: 10% 5 MIN/TICK



DC-09-72

CHANNEL: 18 - 1 TITLE: RUN# 16 13:12 17 MAR 87

SAMPLE: 1427 METHOD: PEPA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT MG/KG	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1		0.0000	1.449		23368	VV	? 3.44
2		0.0000	1.524		56182	VV	? 4.31
3	[illegible]	4974.305	1.637	-0.143	163558	VV	4.25
4		0.0000	1.968		154536	VV	4.88
5		0.0000	2.092		169987	VV	5.56
6	[illegible]	2592.470	2.246	-0.004	67880	VV	? 8.56
7	[illegible]	14361.64	2.406	-0.154	150693	VV	? 11.81
8	[illegible]	16098.60	[illegible]	-0.062	389897	VV	6.75
9	[illegible]	9081.819	2.968	-0.012	207903	VV	8.94
10		0.0000	3.170		120595	VV	? 11.13
11	[illegible]	10909.85	3.410	0.060	283317	VV	16.44
12		0.0000	4.025		244187	VV	13.50
13		0.0000	4.313		174415	VV	? 15.88
14		0.0000	4.743		248380	VV	? 26.81
15	[illegible]	14376.29	5.072	0.062	334838	VV	19.63
16		0.0000	5.502		58038	VV	? 29.31
17	[illegible]	15764.44	5.978	-0.322	346175	VV	20.69
18	[illegible]	8782.970	7.324	0.044	199710	VV	? 47.75
19	[illegible]	6644.782	7.915	0.215	158191	VV	? 29.31
20	[illegible]	9632.213	9.007	-0.343	194160	VV	34.38
21		0.0000	10.164		103476	VV	? 63.19
22	[illegible]	7457.018	11.510	0.190	157711	VV	39.56
23	[illegible]	8241.460	13.054	-0.386	122896	VV	54.25
24		0.0000	13.988		65446	VV	? 85.88
25	[illegible]	21905.88	15.319	0.509	359513	VV	46.25
26		0.0000	16.405		84618	VV	?
27	[illegible]	6135.908	18.603	0.743	71780	VV	?132.63
28		0.0000	20.386		117060	VV	?106.69
29	[illegible]	1510.377	23.777	-0.013	26160	VV	?186.81
30	[illegible]	6209.854	26.625	0.795	43547	VV	?222.63
TOTALS:		164691.7		1.179	4898217		

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SAMPLE NUMBER DC-09-23

DC-09-73

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ecology and environment, inc.

Case No: U-4906, 4928, 4971, 4989

Lab Sample ID No: 1428

QC Report No:

Sample Matrix: Soil

Contract No: IL-3140

Data Release Authorized By: [signature]

Date Sample Received: 2-28-87

Volatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 3-09-87

Conc/Dil Factor: 1 pH 7.6

Percent Moisture: (Not Decanted) 19

Concentrations reported "as received"

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	1000U
74-83-9	Bromomethane	1000U
75-01-4	Vinyl Chloride	1000U
75-00-3	Chloroethane	1000U
75-09-2	Methylene Chloride	420 BJ
67-64-1	Acetone	2100 B
75-15-0	Carbon Disulfide	500U
75-35-4	1, 1-Dichloroethene	500U
75-34-3	1, 1-Dichloroethane	500U
156-60-5	Trans-1, 2-Dichloroethene	500U
67-66-3	Chloroform	500U
107-06-2	1, 2-Dichloroethane	500U
78-93-3	2-Butanone	3600 B
71-55-6	1, 1, 1-Trichloroethane	500U
56-23-5	Carbon Tetrachloride	500U
108-05-4	Vinyl Acetate	1000U
75-27-4	Bromodichloromethane	500U

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	500U
10061-02-6	Trans-1, 3-Dichloropropene	500U
79-01-6	Trichloroethene	500U
124-48-1	Dibromochloromethane	500U
79-00-5	1, 1, 2-Trichloroethane	500U
71-43-2	Benzene	500U
10061-01-5	cis-1, 3-Dichloropropene	500U
110-75-8	2-Chloroethylvinylether	1000U
75-25-2	Bromoform	500U
108-10-1	4-Methyl-2-Pentanone	1000U
591-78-6	2-Hexanone	1000U
127-18-4	Tetrachloroethene	500U
79-34-5	1, 1, 2, 2-Tetrachloroethane	500U
108-88-3	Toluene	500U
108-90-7	Chlorobenzene	500U
100-41-4	Ethylbenzene	60 J
100-42-5	Styrene	500U
	Total Xylenes	190 J

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g., 10U) based on necessary concentration/dilution action. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g., 10J). If limit of detection is 10 µg/l and a concentration of 3 µg/l is calculated, report as 3J.

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/ul in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

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E This flag indicates an approximate concentration. The amount detected in the analysis exceeds the calibrated range.

Laboratory Name Ecology & Environment

Case No V-4906, 4928, 4971, 4989

Sample Number DC-09-73

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 03-03-87

Date Analyzed: 03-17-87

Conc/Dil Factor: 2

Percent Moisture (Decanted) 19

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	3300u
111-44-4	bis(2-Chloroethyl)Ether	3300u
95-57-8	2-Chlorophenol	3300u
541-73-1	1,3-Dichlorobenzene	3300u
106-46-7	1,4-Dichlorobenzene	3300u
100-51-6	Benzyl Alcohol	3300u
95-50-1	1,2-Dichlorobenzene	3300u
95-48-7	2-Methylphenol	3300u
39638-32-9	bis(2-chloroisopropyl)Ether	3300u
106-44-5	4-Methylphenol	3300u
621-64-7	N-Nitroso-Di-n-Propylamine	3300u
67-72-1	Hexachloroethane	3300u
98-95-3	Nitrobenzene	3300u
78-59-1	Isophorone	3300u
88-75-5	2-Nitrophenol	3300u
105-67-9	2,4-Dimethylphenol	3300u
65-85-0	Benzoic Acid	16000u
111-91-1	bis(2-Chloroethoxy)Methane	3300u
120-83-2	2,4-Dichlorophenol	3300u
120-82-1	1,2,4-Trichlorobenzene	3300u
91-20-3	Naphthalene	3300u
106-47-8	4-Chloroaniline	3300u
87-68-3	Hexachlorobutadiene	3300u
59-50-7	4-Chloro-3-Methylphenol	3300u
91-57-6	2-Methylnaphthalene	3300u
77-47-4	Hexachlorocyclopentadiene	3300u
88-06-2	2,4,6-Trichlorophenol	3300u
95-95-4	2,4,5-Trichlorophenol	16000u
91-58-7	2-Chloronaphthalene	3300u
88-74-4	2-Nitroaniline	16000u
131-11-3	Dimethyl Phthalate	3300u
208-96-8	Acenaphthylene	3300u
99-09-2	3-Nitroaniline	16000u

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	3300u
51-28-5	2,4-Dinitrophenol	16000u
100-02-7	4-Nitrophenol	16000u
132-64-9	Dibenzofuran	3300u
121-14-2	2,4-Dinitrotoluene	3300u
606-20-2	2,6-Dinitrotoluene	3300u
84-66-2	Diethylphthalate	3300u
7005-72-3	4-Chlorophenyl-phenylether	3300u
86-73-7	Fluorene	3300u
100-01-6	4-Nitroaniline	16000u
534-52-1	4,6-Dinitro-2-Methylphenol	16000u
86-30-6	N-Nitrosodiphenylamine (1)	3300u
101-55-3	4-Bromophenyl-phenylether	3300u
118-74-1	Hexachlorobenzene	3300u
87-86-5	Pentachlorophenol	5200 J
85-01-8	Phenanthrene	380 J
120-12-7	Anthracene	3300u
84-74-2	Di-n-Butylphthalate	4900
206-44-0	Fluoranthene	3300u
129-00-0	Pyrene	1300 J
85-68-7	Butylbenzylphthalate	3300u
91-94-1	3,3'-Dichlorobenzidine	6600u
56-55-3	Benzo(a)Anthracene	3300u
117-81-7	bis(2-Ethylhexyl)Phthalate	740 J
218-01-9	Chrysene	1300 J
117-84-0	Di-n-Octyl Phthalate	3300u
205-99-2	Benzo(b)Fluoranthene	3300u
207-08-9	Benzo(k)Fluoranthene	3300u
50-32-8	Benzo(a)Pyrene	3300u
193-39-5	Indeno(1,2,3-cd)Pyrene	3300u
53-70-3	Dibenz(a,h)Anthracene	3300u
191-24-2	Benzo(g,h,i)Perylene	3300u

(1)-Cannot be separated from diphenylamine

Laboratory Name ecology and environment, inc.

Case No V-4906, 4928, 4971, 4989

Sample Number DC-09-73

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 3-3-87

Date Analyzed 3-12-87

Conc/Dil Factor 10

Percent Moisture (decanted) 19

GPC Cleanup ☐Yes ☑No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or (ug/Kg) (Circle One)
319-84-6	Alpha-BHC	900 u
319-85-7	Beta-BHC	900 u
319-86-8	Delta-BHC	800 u
58-89-9	Gamma-BHC (Lindane)	800 u
76-44-8	Heptachlor	800 u
309-00-2	Aldrin	800 u
1024-57-3	Heptachlor Epoxide	800 u
959-98-8	Endosulfan I	800 u
60-57-1	Dieldrin	1,600 u
72-55-9	4,4'-DDE	1,600 u
72-20-8	Endrin	1,600 u
33213-65-9	Endosulfan II	1,600 u
72-54-8	4,4'-DDD	1,600 u
1031-07-8	Endosulfan Sulfate	1,600 u
50-29-3	4,4'-DDT	1,600 u
72-43-5	Methoxychlor	1,600 u
53494-70-5	Endrin Ketone	1,600 u
57-74-9	Chlordane	800 u
8001-35-2	Toxaphene	16,000 u
12674-11-2	Aroclor-1016	8,000 u
11104-28-2	Aroclor-1221	8,000 u
11141-16-5	Aroclor-1232	8,000 u
53469-21-9	Aroclor-1242	20,000
12672-29-6	Aroclor-1248	8,000 u
11097-69-1	Aroclor-1254	160,000 u
11096-82-5	Aroclor-1260	160,000 u

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s _____ or W_s 3 V_t 1000 V_i 4

Laboratory Name Ecology & Environment Inc.

Case No U-4906, 4928, 4971, 4989

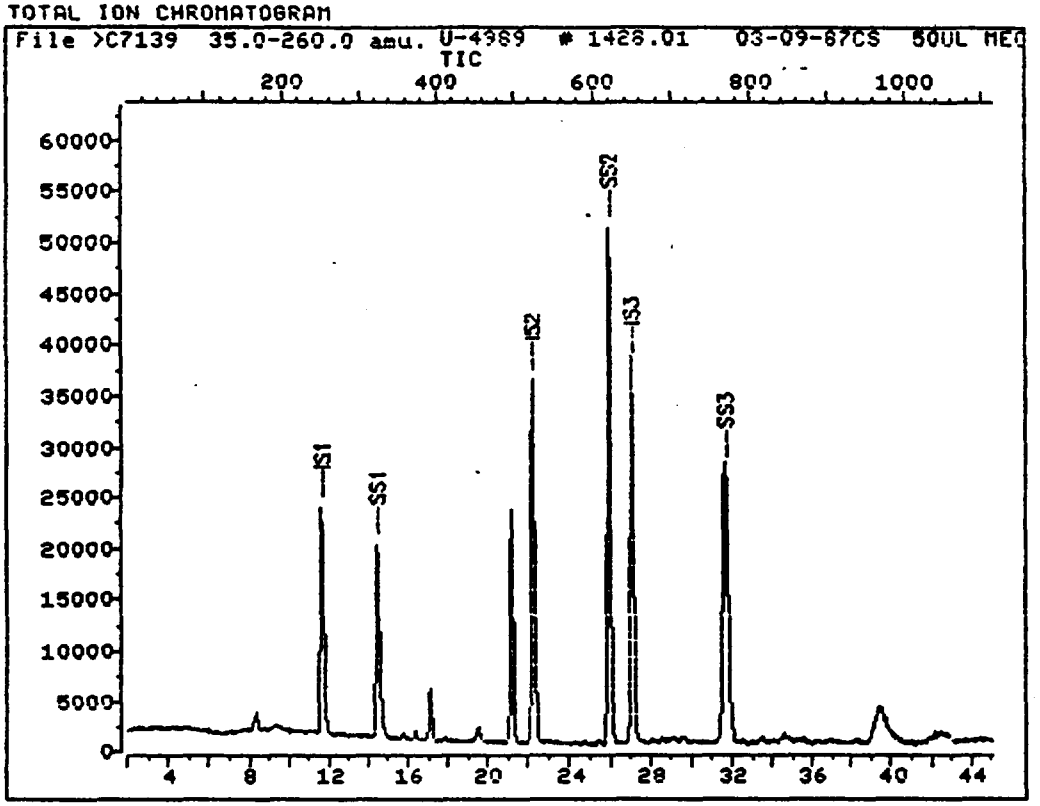
Sample Number DC-09-73

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number MCLC	Estimated Concentration (ug/l or ug/kg)
1.	Hexene isomer	VOA	17.1	840 BJ
2.	Hexane isomer	VOA	21.2	3600 BJ
3.				
4.				
5.	Unknown hydrocarbon	BNA	19.59	2200 J
6.	Unknown		21.10	5500 JB
7. 4537159	Benzene, (1-butylheptyl)-		21.63	2600 J
8.	Unknown hydrocarbon		22.58	4500 J
9. 2719622	Benzene, (1-pentylheptyl)-		22.99	4500 J
10. 2719633	Benzene, (1-butyloctyl)-		23.05	3400 J
11. 2719644	Benzene, (1-propylnonyl)-		23.22	3100 J
12.	Unknown hydrocarbon		23.97	2300 J
13. 2719611	Benzene, (1-methylundecyl)-		24.03	2800 J
14. 4534490	Benzene, (1-pentyloctyl)-		24.34	13000 J
15. 4534503	Benzene, (1-butylnonyl)-		24.42	3200 J
16. 4534514	Benzene, (1-propyldecyl)-		24.58	2500 J
17. 4534525	Benzene, (1-ethylundecyl)-		24.89	2900 J
18.	Unknown hydrocarbon		25.30	2900 J
19.	Substituted benzene		25.64	3000 J
20.	Unknown hydrocarbon		26.56	2300 J
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30				

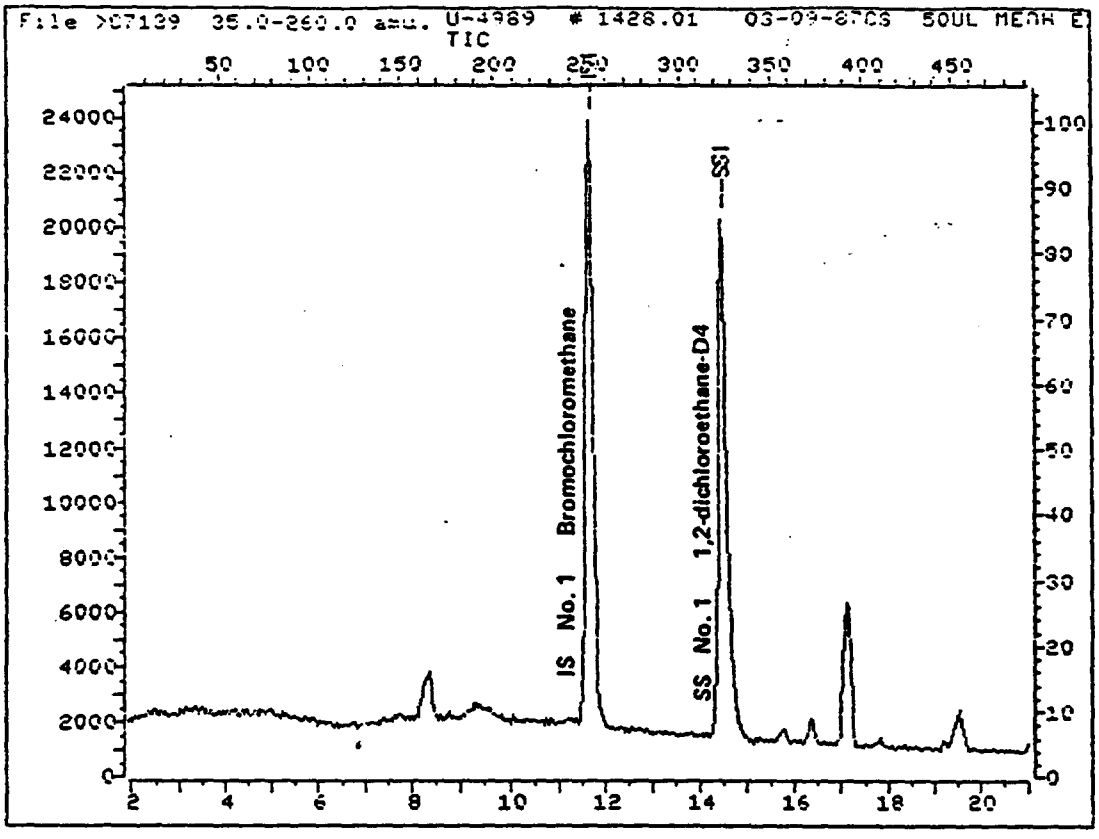
TOTAL ION CHROMATOGRAM



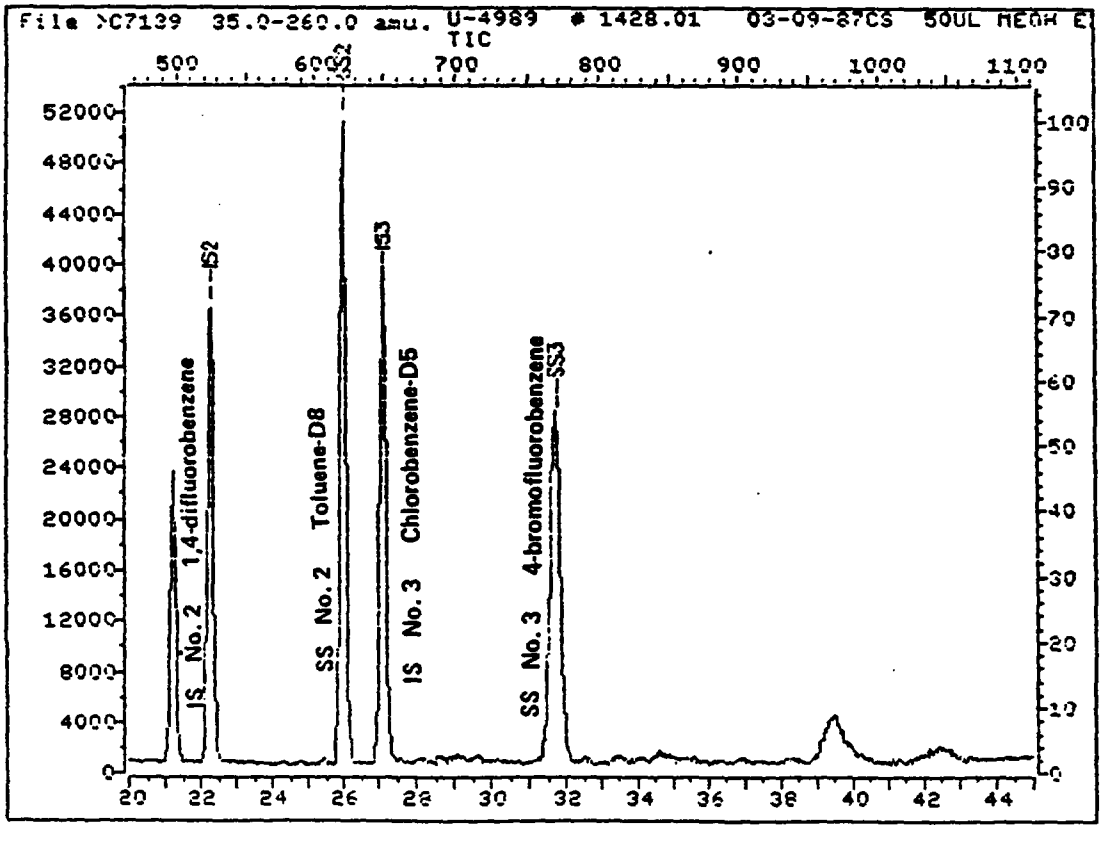
Data File: >C7139::D3
Name: U-4989 # 1428.01 DC-09-73
Misc: 03-09-87CS 50UL MEOH EXT (8.31g/10ML)+ 5ML DI + 10UL

Id File: VOACR::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 870309 12:26

Operator ID: USER8
Quant Time: 870309 14:40
Injected at: 870309 13:54


File >C7139 35.0-260.0 amu. U-4989 # 1428.01 03-09-87CS 50UL MEOH E
TIC
IS No. 1 Bromochloromethane
SS No. 1 1,2-dichloroethane-D4
SS1

DC-09-73


File >C7139 35.0-260.0 amu. U-4989 # 1428.01 03-09-87CS 50UL MEOH E
TIC
IS No. 2 1,4-difluorobenzene
IS2
SS No. 2 Toluene-D8
SS2
IS No. 3 Chlorobenzene-D5
IS3
SS No. 3 4-bromofluorobenzene
SS3

QUANT REPORT

Operator ID: USER8 Quant Rev: 4 Quant Time: 870309 14:40
Output File: ^C7139::Q1 Injected at: 870309 13:54
Data File: >C7139::D3 Dilution Factor: 1.00
Name: U-4989 # 1428.01 DC-09-73
Misc: 03-09-87CS 50UL MEOH EXT (8.31g/10ML)+ 5ML DI + 10UL

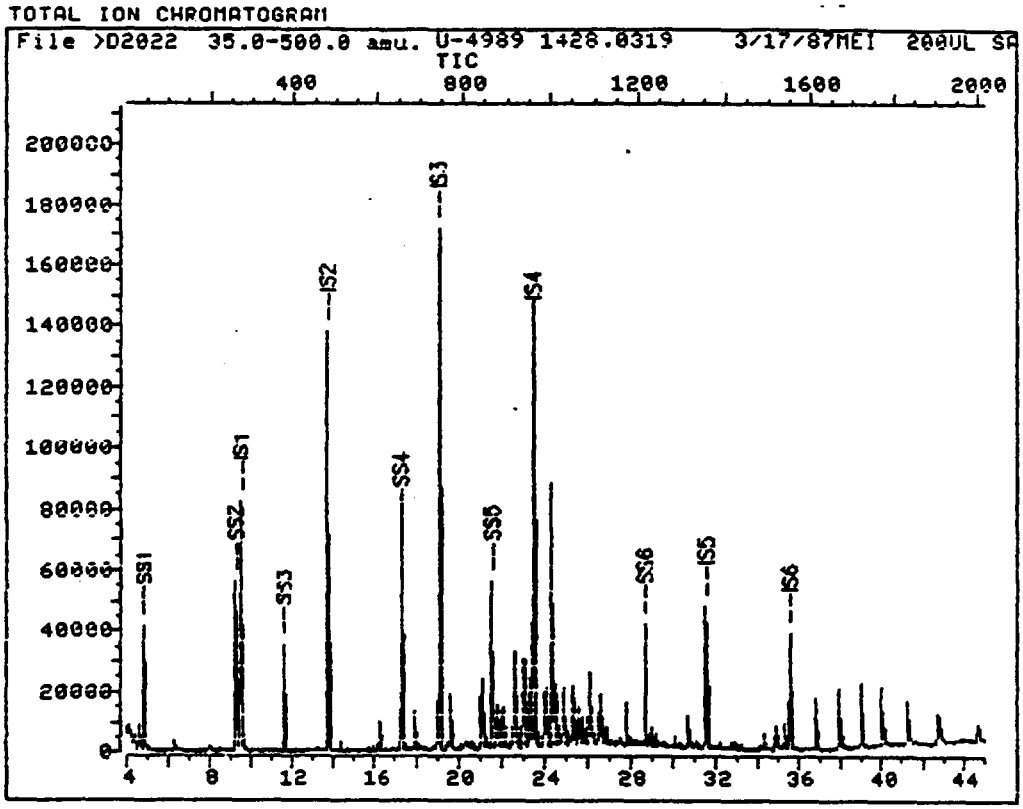
ID File: VOACR::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 870309 12:26

	Compound		R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	(IS)	128	11.65	251	32187	50.00 UG/L	100
6)	METHYLENE CHLORIDE		84	8.31	165	4460	3.52 UG/L	100
7)	ACETONE		43	9.32	191	11193	17.48 UG/L	100
15)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.48	324	78531	46.74 UG/L 94	87
16)	*1,4-DIFLUOROBENZENE	(IS)	114	22.24	524	156581	50.00 UG/L	100
17)	2-BUTANONE		72	14.67	329	4314	29.96 UG/L	100
31)	*CHLOROBENZENE-D5	(IS)	117	27.09	649	130435	50.00 UG/L	100
36)	TOLUENE-D8	(SURR)	98	25.96	620	197321	49.69 UG/L 100	95
39)	ETHYLBENZENE		91	29.23	704	2970	.51 UG/L	98
40)	4-BROMOFLUOROBENZENE	(SURR)	95	31.71	768	97983	48.47 UG/L 96	100
42)	TOTAL XYLENES		91	34.66	844	7868	1.59 UG/L	100
43)	1,3-DICHLOROBENZENE		146	39.36	965	16684	16684.00 NO CALIB	100
44)	1,2-DICLHLOROBENZENE		146	39.36	965	16684	16684.00 NO CALIB	100
45)	1,4-DICHLOROBENZENE		146	39.36	965	16684	16684.00 NO CALIB	100

* Compound is ISTD

OK CW

TOTAL ION CHROMATOGRAM

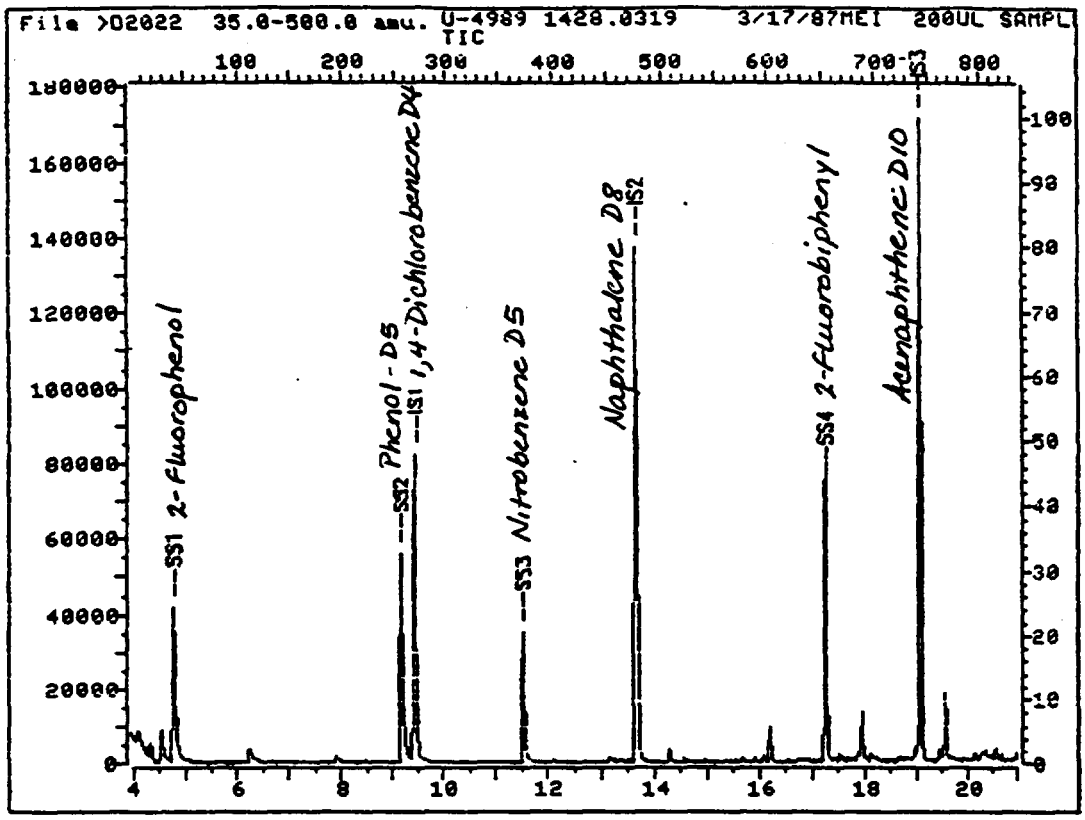


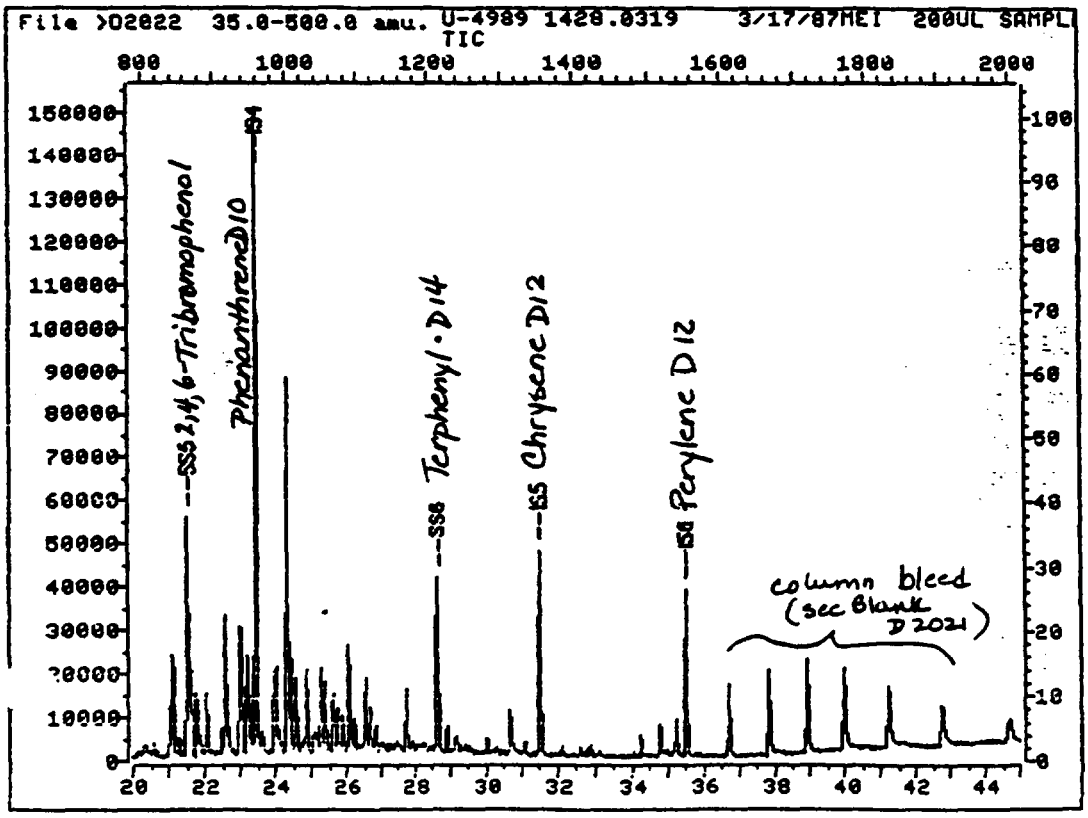
Data File: >D2022::D3
Name: U-4989 1428.0319 DC-09-73
Misc: 3/17/87MEI 200UL SAMPLE/200UL MECL2 + 4UL IS(2X) BTL# 3

Id File: BNAOR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870414 09:44

Operator ID: USER8
Quant Time: 870414 09:49
Injected at: 870317 18:49

DC-09-73


File >02022 35.0-500.0 amu. U-4989 1428.0319 3/17/87MEI 200UL SAMPL
TIC
SS1 2-Fluorophenol
SS2 Phenol-D5
IS1 1,4-Dichlorobenzene D4
SS3 Nitrobenzene D5
IS2 Naphthalene D8
SS4 2-Fluorobiphenyl
IS3 Acenaphthene D10


File >02022 35.0-500.0 amu. U-4989 1428.0319 3/17/87MEI 200UL SAMPL
TIC
SS5 2,4,6-Tribromophenol
IS4 Phenanthrene D10
SS6 Terphenyl-D14
IS5 Chrysene D12
IS6 Perylene D12
column bleed (see Blank D2021)

QUANT REPORT

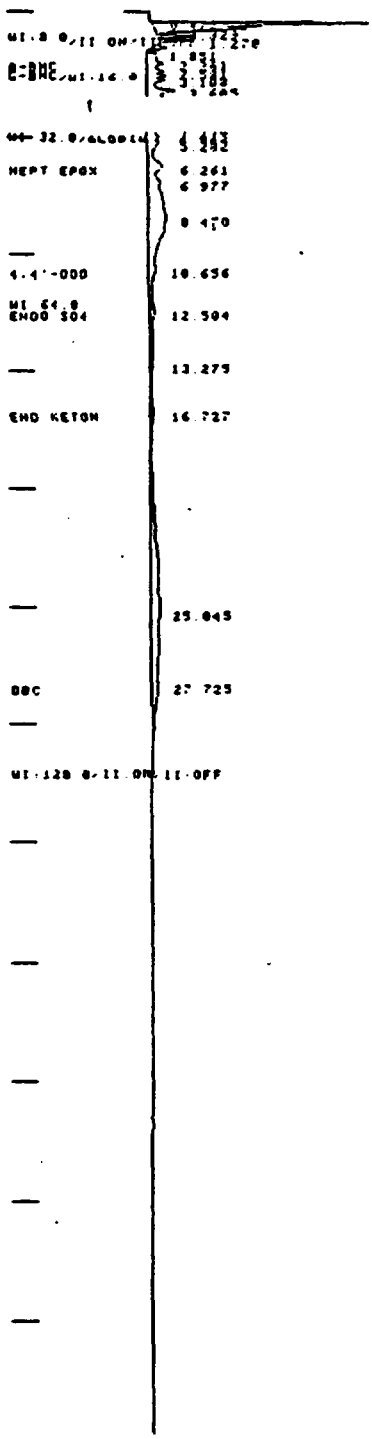
Operator ID: USER8 Quant Rev: 4 Quant Time: 870414 09:49
Output File: ^D2022::Q2 Injected at: 870317 18:49
Data File: >D2022::D3 Dilution Factor: 2.00
Name: U-4989 1428.0319 DC-09-73
Misc: 3/17/87MEI 200UL SAMPLE/200UL MECL2 + 4UL IS(2X) BTL# 3

ID File: BNADR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870414 09:44

	Compound		R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	9.46	270	41770	40.00 UG/L	87
2)	PHENOL-D5	(SURR)	99	9.18	256	59916	76.24 UG/L 76	97
5)	2-FLUOROPHENOL	(SURR)	112	4.78	40	35382	70.90 UG/L 71	80
17)	~~N-NITROSO-DI-N-PROPYLAMINE~~		~~70~~	~~11.54~~	~~372~~	~~5614~~	~~8.15 UG/L~~	97
19)	*NAPHTHALENE-D8	(IS)	136	13.66	476	158475	40.00 UG/L	100
20)	NITROBENZENE-D5	(SURR)	82	11.54	372	34342	43.96 UG/L 88	92
34)	*ACENAPHTHENE-D10	(IS)	162	19.08	742	103454	40.00 UG/L	94
38)	2-FLUOROBIPHENYL	(SURR)	172	17.27	653	71344	46.05 UG/L 92	95
41)	~~DIMETHYL PHTHALATE~~		~~163~~	~~19.08~~	~~742~~	~~19579~~	~~11.54 UG/L~~	100
48)	2,4,6-TRIBROMOPHENOL	(SURR)	330	21.52	862	18128	58.77 UG/L 59	99
52)	~~2,6-DINITROTOLUENE~~		~~165~~	~~19.08~~	~~742~~	~~14039~~	~~34.28 UG/L~~	100
55)	*PHENANTHRENE-D10	(IS)	188	23.46	957	157509	40.00 UG/L	96
60)	PENTACHLOROPHENOL		266	23.28	948	5782	16.01 UG/L yes	100
61)	PHENANTHRENE		178	23.52	960	2237	1.15 UG/L yes	97
62)	~~ANTHRACENE~~		~~178~~	~~23.52~~	~~960~~	~~2237~~	~~1.26 UG/L~~	97
63)	DI-N-BUTYLPHTHALATE		149	26.07	1085	30390	14.81 UG/L yes	98
65)	*CHRYSENE-D12	(IS)	240	31.52	1352	53498	40.00 UG/L	100
67)	PYRENE		202	27.74	1167	6256	3.99 UG/L yes	86
68)	TERPHENYL-D14	(SURR)	244	28.64	1211	37215	45.21 UG/L 90	100
71)	~~BENZO(A)ANTHRACENE~~		~~228~~	~~31.60~~	~~1356~~	~~2675~~	~~3.74 UG/L~~ NO	91
72)	BIS(2-ETHYLHEXYL)PHTHALATE		149	32.62	1406	1710	2.25 UG/L yes	94
73)	CHRYSENE		228	31.60	1356	2675	3.93 UG/L yes	92
74)	*PERYLENE-D12	(IS)	264	35.53	1549	33116	40.00 UG/L	100

* Compound is ISTD

CHART SPEED 0.5 CM/MIN
ATTEN: 8 ZERO: 10% 5 MIN/TICK



DC-09-23

SEE RUN 30

CHANNEL: 1A - 1 TITLE: RUN# 26 10:13 12 MAR 87

SAMPLE: 1428 DC-09-73 METHOD: CEPA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/kg	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1	~~A-BHC~~	530.4338	2.261	0.021	23870	VV	? 13.44
2	~~G-BHC~~	700.1537	2.581	-0.029	28850	VV	? 19.38
3		0.0000	2.839		30768	VV	? 12.63
4		0.0000	3.108		30440	VV	? 15.31
5		0.0000	3.605		58338	VV	15.06
6		0.0000	3.839		38617	VV	? 34.50
7		0.0000	4.442		47837	VV	? 26.13
8	~~ALDRIN~~	706.4859	4.942	-0.118	29654	VV	? 27.69
9		0.0000	5.282		39088	VV	? 47.13
10	~~HEPT EPOX~~	1549.390	6.261	0.131	62194	VV	? 34.44
11		0.0000	6.977		41206	VV	? 34.25
12	~~4,4' DDE~~	8512.681	8.470	-0.250	308757	VV	?141.56
13	~~4,4' DDD~~	1651.449	10.656	-0.274	55001	VV	? 73.31
14	~~ENDO SO4~~	1870.162	12.504	-0.316	45075	VV	? 72.38
15		0.0000	13.275		49126	VV	?
16	~~ENDO KETON~~	1260.338	16.727	0.337	48852	VV	? 94.31
17		0.0000	25.045		399650	VV	76.75
18	~~DDT~~	3031.777	27.725	-0.655	91672	VB	?256.00
TOTALS:		19812.87		-1.153	1428995		

DETECTED PKS: 27 REJECTED PKS: 9

DIVISOR: 0.15000 MULTIPLIER: 100000.000

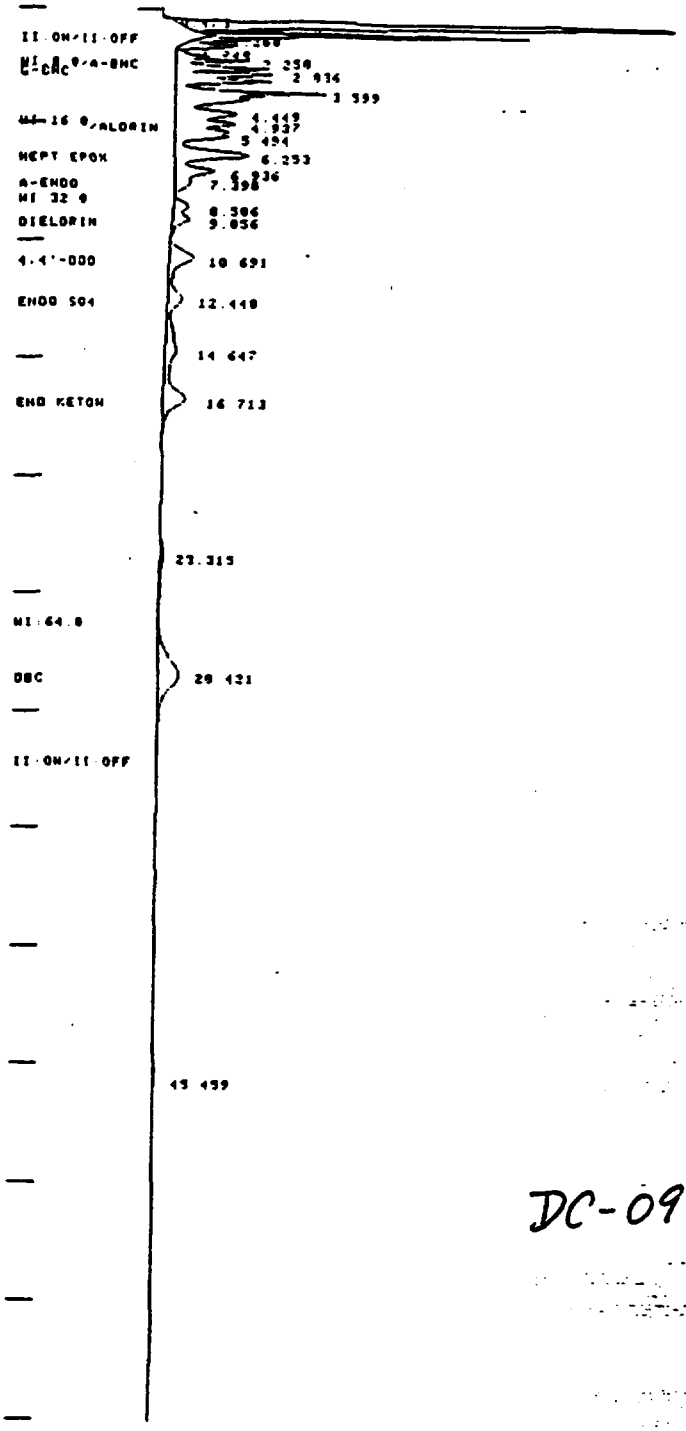
NOISE: 22.9 OFFSET: -26

RACK: 2 VIAL: 11 INJ: 1

NOTES:
NOTERBOOK:259-146,147 ANALYST: RICHARD SAMSON
SECURE AREA: D JOB#'S U-4971,4989
INST: VARIAN 6000# 2A ECD 10X1
COLUMN: 6' GLASS 4MM ID 100/120 SUPELCOPORT
LIQUID PHASE: 3% OV-1
CARRIER GAS: N2 @ 60 ML/MIN
DET: 300 C INJ: 220 C
200 C ISOTHERMAL 4 UL INJECTION
DEAD CREEK PRIMARY ANALYSIS
AUTOSAMPLER

POST RUN:
SAVE FILE: RAW S.CROP398

CHART SPEED 0.5 CM/MIN
ATTEN: 8 ZERO: 10% 5 MIN/TICK



DC-09-23

CHANNEL: 1A - 1 TITLE: RUN# 30 15:43 12 MAR 87

SAMPLE: 1428DC-09-73 METHOD: CEPA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/Kg	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1		0.0000	1.268		48094	BV	4.31
2		0.0000	1.548		69682	VV	5.56
3		0.0000	2.017		34108	VV	? 7.19
4	~~A-BHC~~	159.4390	2.258	0.018	71749	VV	7.50
5	~~G-BHC~~	278.1273	2.582	-0.028	114603	VV	8.56
6		0.0000	2.836		124031	VV	9.69
7		0.0000	3.104		124763	VV	10.44
8		0.0000	*3.599		243956	VV	11.63
9		0.0000	3.833		157587	VV	? 22.25
10		0.0000	4.449		182096	VV	? 27.13
11	~~ALDRIN~~	290.1657	4.937	-0.123	121794	VV	? 23.31
12		0.0000	5.285		94806	VV	? 17.75
13		0.0000	~~5.494~~		~~92747~~	VV	? 18.06
14	~~HEPT EPOX~~	585.9078	6.253	0.123	235189	VV	24.25
15		0.0000	6.936		105730	VV	20.31
16	~~A-ENDO~~	129.8995	~~7.398~~	-0.192	~~49173~~	VB	? 39.50
17	~~4,4'-DDE~~	130.6636	8.506	-0.214	47392	BV	? 25.94
18	~~DIELDRIN~~	142.3411	9.056	0.216	56807	VV	? 23.88
19	~~4,4'-DDD~~	417.8482	10.691	-0.239	139163	VV	36.75
20	~~ENDO SOP~~	363.0999	12.448	-0.372	87515	VV	38.63
21	~~4,4'-DDT~~	543.7612	14.647	0.417	129536	VV	? 79.25
22	~~END KETON~~	429.1812	16.713	0.323	166355	VB	40.13
23		0.0000	23.315		35115	BB	59.00
24	~~DBC~~ DBC	824.6407	28.421	0.041	249347	BB	87.56
TOTALS:		4295.075		-0.030	2781338		

PCB1242

158

124

20,335

$\frac{1}{518} + 158 + \frac{1}{.15} + 10,000 = 20,000$

DETECTED PKS: 32 REJECTED PKS: 8

DIVISOR: 0.15000 MULTIPLIER: 10000.0000

NOISE: 11.4 OFFSET: 0

RACK: 2 VIAL: 15 INJ: 1

NOTES:
NOTERBOOK:259-146,147 ANALYST: RICHARD SAMSON
SECURE AREA: D JOB#'S U-4971,4989
INST: VARIAN 6000# 2A ECD 10X1
COLUMN: 6' GLASS 4MM ID 100/120 SUPELCOPORT
LIQUID PHASE: 3% OV-1
CARRIER GAS: N2 @ 60 ML/MIN
DET: 300 C INJ: 220 C
200 C ISOTHERMAL 4 UL INJECTION
DEAD CREEK PRIMARY ANALYSIS
AUTOSAMPLER

POST RUN:
SAVE FILE: RAW S.CROP402

SAMPLE NUMBER DC-010-74

DC-010-74

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ecology and environment, inc.

Case No: U-4906, 4928, 4971, 4989.

Lab Sample ID No: 1429

QC Report No:

Sample Matrix: Soil

Contract No: IL-3140

Data Release Authorized By: [signature]

Date Sample Received: 2-28-87

Volatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 3-09-87

Conc/Dil Factor: 2 pH 7.8

Percent Moisture: (Not Decanted) 22

Concentrations reported "as received"

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	2000U
74-83-9	Bromomethane	2000U
75-01-4	Vinyl Chloride	2000U
75-00-3	Chloroethane	2000U
75-09-2	Methylene Chloride	570 BJ
67-64-1	Acetone	3000 B
75-15-0	Carbon Disulfide	1000U
75-35-4	1, 1-Dichloroethene	1000U
75-34-3	1, 1-Dichloroethane	1000U
156-60-5	Trans-1, 2-Dichloroethene	1000U
67-66-3	Chloroform	1000U
107-06-2	1, 2-Dichloroethane	1000U
78-93-3	2-Butanone	5800 B
71-55-6	1, 1, 1-Trichloroethane	1000U
56-23-5	Carbon Tetrachloride	1000U
108-05-4	Vinyl Acetate	2000U
75-27-4	Bromodichloromethane	1000U

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	1000U
10061-02-6	Trans-1, 3-Dichloropropene	1000U
79-01-6	Trichloroethene	1000U
124-48-1	Dibromochloromethane	1000U
79-00-5	1, 1, 2-Trichloroethane	1000U
71-43-2	Benzene	1400
10061-01-5	cis-1, 3-Dichloropropene	1000U
110-75-8	2-Chloroethylvinylether	2000U
75-25-2	Bromoform	1000U
108-10-1	4-Methyl-2-Pentanone	2000U
591-78-6	2-Hexanone	2000U
127-18-4	Tetrachloroethene	1000U
79-34-5	1, 1, 2, 2-Tetrachloroethane	1000U
108-88-3	Toluene	3400
108-90-7	Chlorobenzene	46000
100-41-4	Ethylbenzene	7100
100-42-5	Styrene	1000U
	Total Xylenes	23000

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g., 10U) based on necessary concentration/dilution action. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g., 10J). If limit of detection is 10 µg/l and a concentration of 3 µg/l is calculated, report as 3J.

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/ul in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

E This flag indicates an approximate concentration. The amount detected in the analysis exceeds the calibrated range.

Laboratory Name Ecology & Environment

Case No U-4906, 4928, 4971, 4989

Sample Number DC-010-74

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 03-03-87

Date Analyzed: 03-18-87

Conc/Dil Factor: 20

Percent Moisture (Decanted) 22

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	33000u
111-44-4	bis(2-Chloroethyl)Ether	33000u
95-57-8	2-Chlorophenol	33000u
541-73-1	1, 3-Dichlorobenzene	33000u
106-46-7	1, 4-Dichlorobenzene	88,000
100-51-6	Benzyl Alcohol	33000u
95-50-1	1, 2-Dichlorobenzene	78000
95-48-7	2-Methylphenol	33000u
39638-32-9	bis(2-chloroisopropyl)Ether	33000u
106-44-5	4-Methylphenol	33000u
621-64-7	N-Nitroso-Di-n-Propylamine	33000u
67-72-1	Hexachloroethane	33000u
98-95-3	Nitrobenzene	33000u
78-59-1	Isophorone	33000u
88-75-5	2-Nitrophenol	33000u
105-67-9	2, 4-Dimethylphenol	33000u
65-85-0	Benzoic Acid	160000u
111-91-1	bis(2-Chloroethoxy)Methane	33000u
120-83-2	2, 4-Dichlorophenol	33000u
120-82-1	1, 2, 4-Trichlorobenzene	33000u
91-20-3	Naphthalene	33000u
106-47-8	4-Chloroaniline	33000u
87-68-3	Hexachlorobutadiene	33000u
59-50-7	4-Chloro-3-Methylphenol	33000u
91-57-6	2-Methylnaphthalene	5700J
77-47-4	Hexachlorocyclopentadiene	33000u
88-06-2	2, 4, 6-Trichlorophenol	33000u
95-95-4	2, 4, 5-Trichlorophenol	160,000u
91-58-7	2-Chloronaphthalene	33,000u
88-74-4	2-Nitroaniline	160,000u
131-11-3	Dimethyl Phthalate	33,000u
208-96-8	Acenaphthylene	33000u
99-09-2	3-Nitroaniline	160000u

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	33000u
51-28-5	2, 4-Dinitrophenol	160000u
100-02-7	4-Nitrophenol	160000u
132-64-9	Dibenzofuran	33000u
121-14-2	2, 4-Dinitrotoluene	33000u
606-20-2	2, 6-Dinitrotoluene	33000u
84-66-2	Diethylphthalate	33000u
7005-72-3	4-Chlorophenyl-phenylether	33000u
86-73-7	Fluorene	33000u
100-01-6	4-Nitroaniline	160000u
534-52-1	4, 6-Dinitro-2-Methylphenol	160000u
86-30-6	N-Nitrosodiphenylamine (1)	33000u
101-55-3	4-Bromophenyl-phenylether	33000u
118-74-1	Hexachlorobenzene	33000u
87-86-5	Pentachlorophenol	88000 J
85-01-8	Phenanthrene	33000
120-12-7	Anthracene	33000u
84-74-2	Di-n-Butylphthalate	33000u
206-44-0	Fluoranthene	8600 J
129-00-0	Pyrene	64000 J
85-68-7	Butylbenzylphthalate	3,000,000E
91-94-1	3, 3'-Dichlorobenzidine	66000u
56-55-3	Benzo(a)Anthracene	33000u
117-81-7	bis(2-Ethylhexyl)Phthalate	33000u
218-01-9	Chrysene	64000
117-84-0	Di-n-Octyl Phthalate	33000u
205-99-2	Benzo(b)Fluoranthene	33000u
207-08-9	Benzo(k)Fluoranthene	33000u
50-32-8	Benzo(a)Pyrene	33000u
193-39-5	Indeno(1, 2, 3-cd)Pyrene	33000u
53-70-3	Dibenzo(a, h)Anthracene	33000u
191-24-2	Benzo(g, h, i)Perylene	33000u

(1)-Cannot be separated from diphenylamine

Laboratory Name ecology and environment, inc.

Case No V-4906, 4928, 4971, 4989

Sample Number

DC-010-74

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 3-3-87

Date Analyzed 3-12-87

Conc/Dil Factor 200

Percent Moisture (decanted) 22

GPC Cleanup ☐Yes ☑No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)
319-84-6	Alpha-BHC	16,000u
319-85-7	Beta-BHC	16,000u
319-86-8	Delta-BHC	16,000u
58-89-9	Gamma-BHC (Lindane)	16,000u
76-44-8	Heptachlor	16,000u
309-00-2	Aldrin	16,000u
1024-57-3	Heptachlor Epoxide	16,000u
959-98-8	Endosulfan I	16,000u
60-57-1	Dieldrin	32,000u
72-55-9	4,4'-DDE	32,000u
72-20-8	Endrin	32,000u
33213-65-9	Endosulfan II	32,000u
72-54-8	4,4'-DDD	32,000u
1031-07-8	Endosulfan Sulfate	32,000u
50-29-3	4,4'-DDT	32,000u
72-43-5	Methoxychlor	160,000u
53494-70-5	Endrin Ketone	32,000u
57-74-9	Chlordane	160,000u
8001-35-2	Toxaphene	320,000u
12674-11-2	Aroclor-1016	160,000u
11104-28-2	Aroclor-1221	160,000u
11141-16-5	Aroclor-1232	160,000u
53469-21-9	Aroclor-1242	360,000
12672-29-6	Aroclor-1248	160,000u
11097-69-1	Aroclor-1254	320,000u
11096-82-5	Aroclor-1260	320,000u

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s _____ or W_s 3 V_t 1000 V_i 4

400

Laboratory Name Ecology & Environment Inc.

Case No U-4906, 4928, 4971, 4989

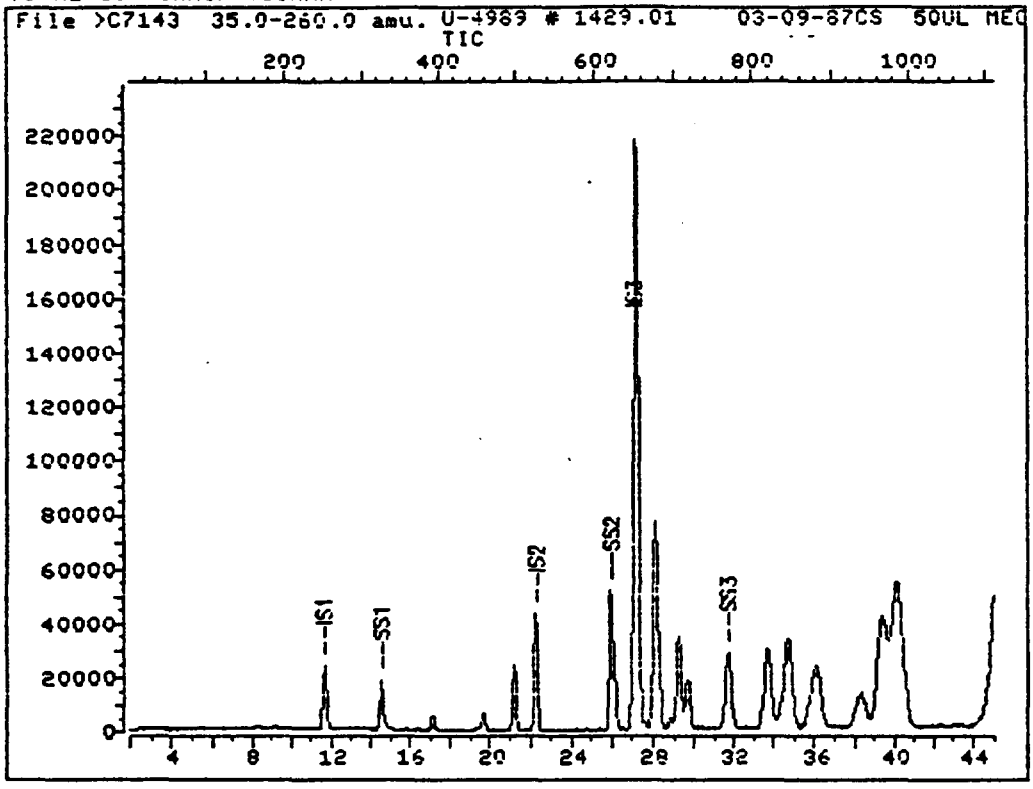
Sample Number DC-010-74

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	Hexene isomer	VOA	17.2	1700 BJ
2.	Hexane isomer	VOA	21.2	7300 BJ
3.	Unknown hydrocarbon	VOA	28.1	39000 J
4.	Unknown hydrocarbon	VOA	29.7	8400 J
5.	Chlorotoluene isomer	VOA	36.1	22000 J
6.	Chlorotoluene isomer	VOA	38.2	5700 J
7.	Dichlorobenzene isomer	VOA	38.4	6400 J
8.	Dichlorobenzene isomer	VOA	39.4	38000 J
9.				
10.				
11. 99876	Benzene, 1-methyl-4-(1-methylethyl)-	BNA	10.02	190,000 J
12. 615601	Benzene, 4-chloro-1,2-dimethyl-		10.91	22,000 J
13. 1124056	Benzene, 1,4-dichloro-2,5-dimethyl-		14.74	20,000 J
14. 100005	Benzene, 1-chloro-4-nitro		14.93	79,000 J
15.	Dichloro-nitro-benzene isomer		17.66	19,000 J
16. 629629	Pentadecane		19.59	90,000 J
17.	Unknown hydrocarbon		21.02	72,000 J
18. 544763	Hexadecane		21.14	190,000 J
19. 4537159	Benzene, (1-butylheptyl)-		21.65	110,000 J
20. 4536883	Benzene (1-methyldecyl)-		22.61	220,000 J
21. 2719622	Benzene, (1-pentylheptyl)-		23.00	140,000 J
22. 2719633	Benzene, (1-butyloctyl)-		23.06	120,000 J
23. 2719644	Benzene, (1-propylnonyl)-		23.23	130,000 J
24 629787	Heptadecane		23.98	170,000 J
25. 4534490	Benzene, (1-pentyloctyl)-		24.35	150,000 J
26. 4534503	Benzene, (1-butylnonyl)-		24.45	85,000 J
27. 4534514	Benzene, (1-propyldecyl)-		24.59	80,000 J
28.	Unknown hydrocarbon		25.31	120,000 J
29. 4534536	Benzene, (1-methyldodecyl)-		25.41	78000 J
30 10544500	Molecular Sulfur		26.72	100,000 J

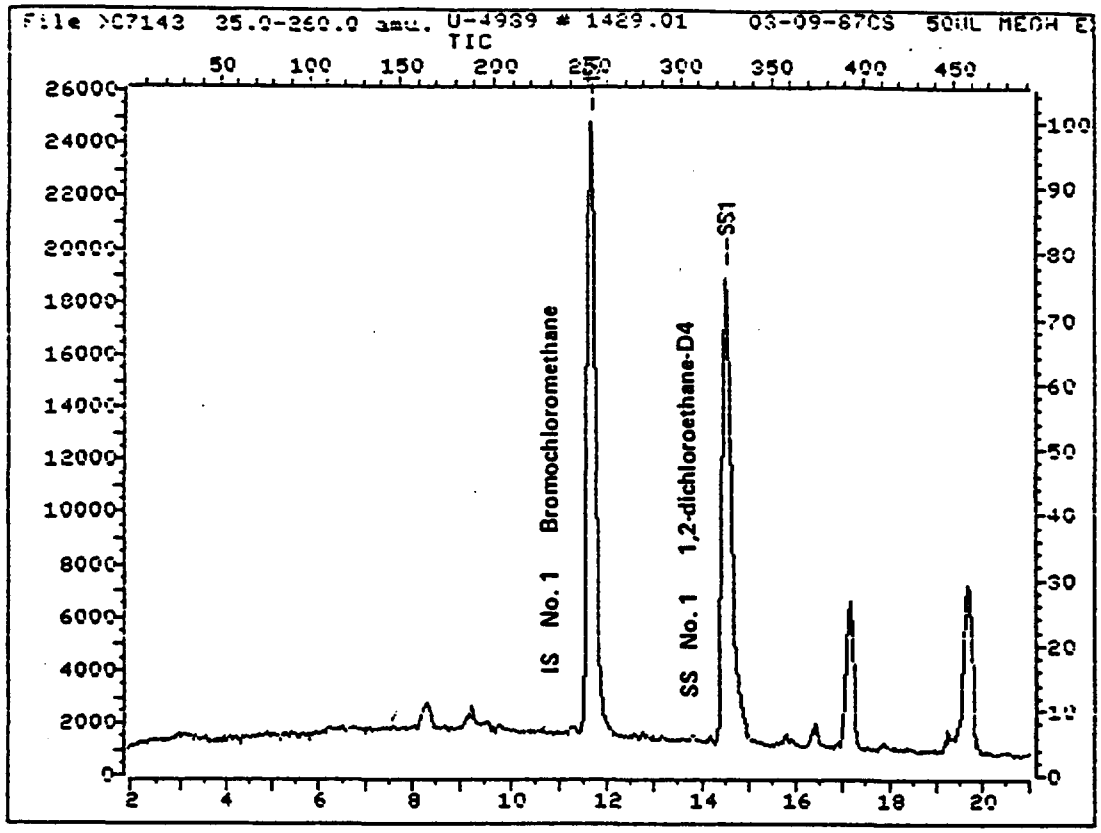
TOTAL ION CHROMATOGRAM



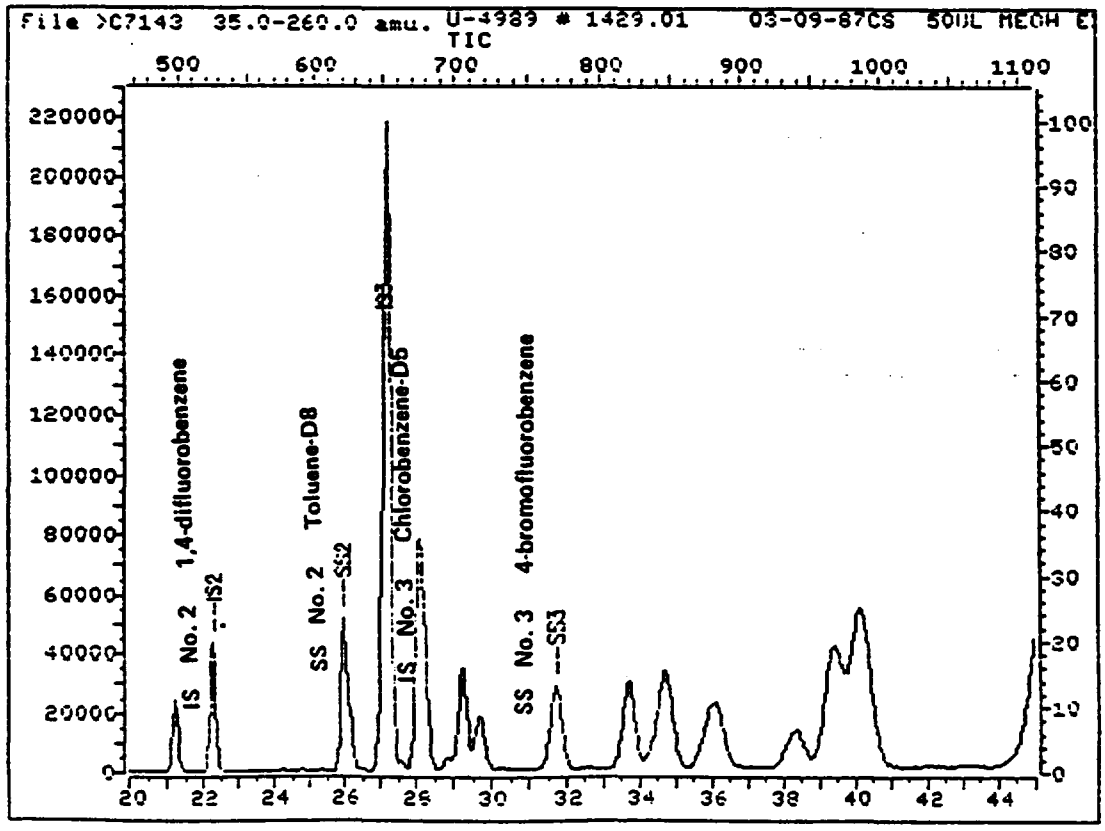
Data File: >C7143::D3
Name: U-4989 # 1429.01 DC-010-74
Misc: 03-09-87CS 50UL MEOH EXT (3.81g/10ML) + 5ML DI + 10UL

Id File: VOACR::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 870309 12:26

Operator ID: USER8
Quant Time: 870309 18:09
Injected at: 870309 17:23


File >C7143 35.0-260.0 amu. U-4939 # 1429.01 03-09-87CS 50UL MEOH E
TIC
IS No. 1 Bromochloromethane
SS No. 1 1,2-dichloroethane-D4
SS1

DC-010-74


File >C7143 35.0-260.0 amu. U-4939 # 1429.01 03-09-87CS 50UL MEOH E
TIC
IS No. 2 1,4-difluorobenzene
IS2
SS No. 2 Toluene-D8
SS2
IS No. 3 Chlorobenzene-D5
SS3
SS No. 3 4-bromofluorobenzene

QUANT REPORT

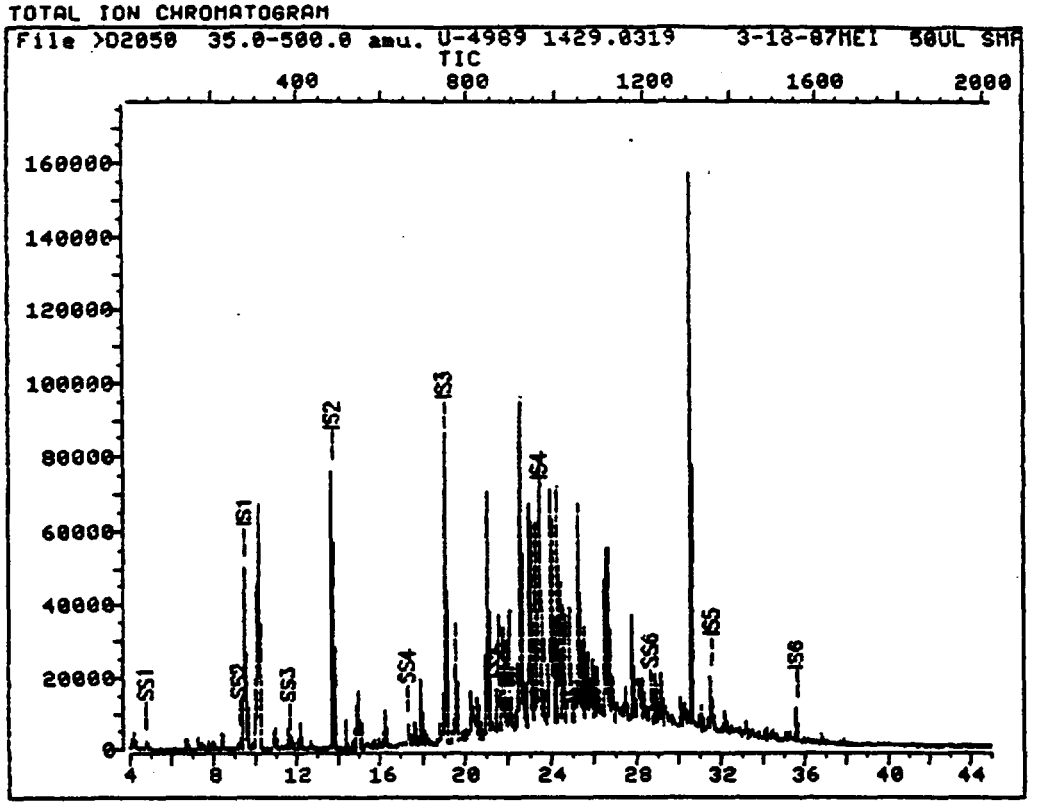
Operator ID: USER8 Quant Rev: 4. Quant Time: 870309.18:09
Output File: ^C7143::Q2 Injected at: 870309 17:23
Data File: >C7143::D3 Dilution Factor: 1.00
Name: U-4989 # 1429.01 DC-010-74
Misc: 03-09-87CS 50UL MEOH EXT (3.81g/10ML) + 5ML DI + 10UL

ID File: VOACR::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 870309 12:26

	Compound		R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE (IS)	128	11.65	251	37963	50.00	UG/L	100
6)	METHYLENE CHLORIDE	84	8.31	165	3275	2.19	UG/L	100
7)	ACETONE	43	9.20	188	8625	11.42	UG/L	100
15)	1,2-DICHLOROETHANE-D4(SURR)	65	14.52	325	81314	41.04	UG/L 82	87 ✓
16)	*1,4-DIFLUOROBENZENE (IS)	114	22.28	525	188094	50.00	UG/L	100
17)	2-BUTANONE	72	14.71	330	3825	22.11	UG/L	100
27)	BENZENE	78	19.68	458	27448	5.52	UG/L	100
31)	*CHLOROBENZENE-D5 (IS)	117	27.13	650	155101	50.00	UG/L	100
36)	TOLUENE-D8 (SURR)	98	25.96	620	200422	42.44	UG/L 85	95 ✓
37)	TOLUENE	92	26.16	625	42359	12.87	UG/L	97
~~37)~~	~~TOLUENE~~	~~92~~	~~27.05~~	~~640~~	~~21869~~	~~6.64~~	~~UG/L~~ 10 CW	84
38)	CHLOROBENZENE	112	27.25	653	670573	173.63	UG/L	96
39)	ETHYLBENZENE	91	29.27	705	187340	27.16	UG/L	96
40)	4-BROMOFLUOROBENZENE(SURR)	95	31.72	768	100028	41.61	UG/L 83	100 ✓
~~41)~~	~~STYRENE~~	~~104~~	~~33.74~~	~~820~~	~~3189~~	~~.74~~	~~UG/L~~ 10 CW	100
~~41)~~	~~STYRENE~~	~~104~~	~~34.67~~	~~844~~	~~4074~~	~~.94~~	~~UG/L~~	100
42)	TOTAL XYLENES	91	33.70	819	227986	38.76	UG/L	100
42)	TOTAL XYLENES	91	34.71	845	291454	49.55	UG/L	100
~~42)~~	~~TOTAL XYLENES~~	~~91~~	~~36.11~~	~~881~~	~~197478~~	~~33.58~~	~~UG/L~~ 10 CW	100
43)	1,3-DICHLOROBENZENE	146	38.40	940	50548	50548.00	NO CALIB	100
43)	1,3-DICHLOROBENZENE	146	39.37	965	231201	231201.0	NO CALIB	100
44)	1,2-DICLHLOROBENZENE	146	38.40	940	50548	50548.00	NO CALIB	100
44)	1,2-DICLHLOROBENZENE	146	39.37	965	231201	231201.0	NO CALIB	100
45)	1,4-DICHLOROBENZENE	146	38.40	940	50548	50548.00	NO CALIB	100
45)	1,4-DICHLOROBENZENE	146	39.37	965	231201	231201.0	NO CALIB	100

* Compound is ISTD

TOTAL ION CHROMATOGRAM

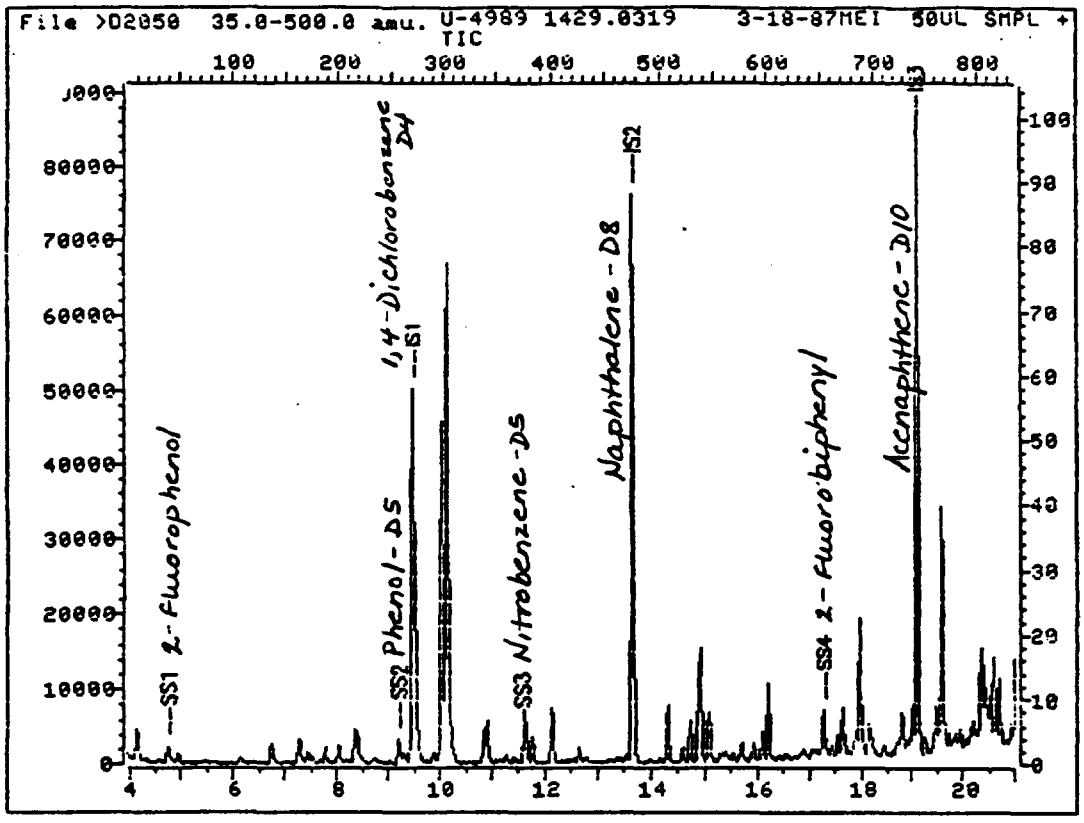


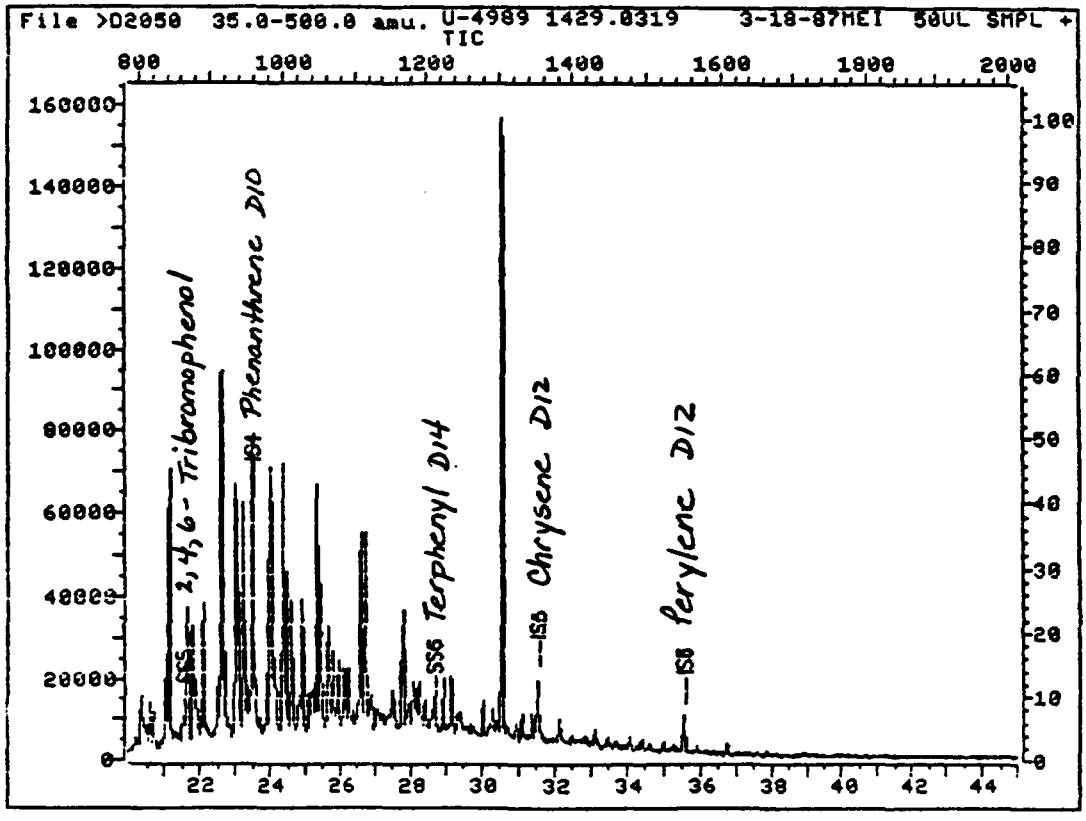
Data File: >D2050::D1
Name: U-4989 1429.0319 DC-010-74
Misc: 3-18-87MEI 50UL SMPL + 950UL MECL2 +10UL IS (20X) BTL# 2

Id File: BNADR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870318 14:12

Operator ID: USER8
Quant Time: 870318 23:27
Injected at: 870318 22:39

DC-010-74


File >02050 35.0-500.0 amu. U-4989 1429.0319 3-18-87MEI 50UL SMPL +
TIC
SS1 2-Fluorophenol
SS2 Phenol-D5
1,4-Dichlorobenzene D4
IS1
SS3 Nitrobenzene-D5
Naphthalene-D8
IS2
SS4 2-Fluorobiphenyl
Acenaphthene-D10
IS3


File >02050 35.0-500.0 amu. U-4989 1429.0319 3-18-87MEI 50UL SMPL +
TIC
SS5 2,4,6-Tribromophenol
IS4 Phenanthrene D10
SS6 Terphenyl D14
IS5 Chrysene D12
IS6 Perylene D12

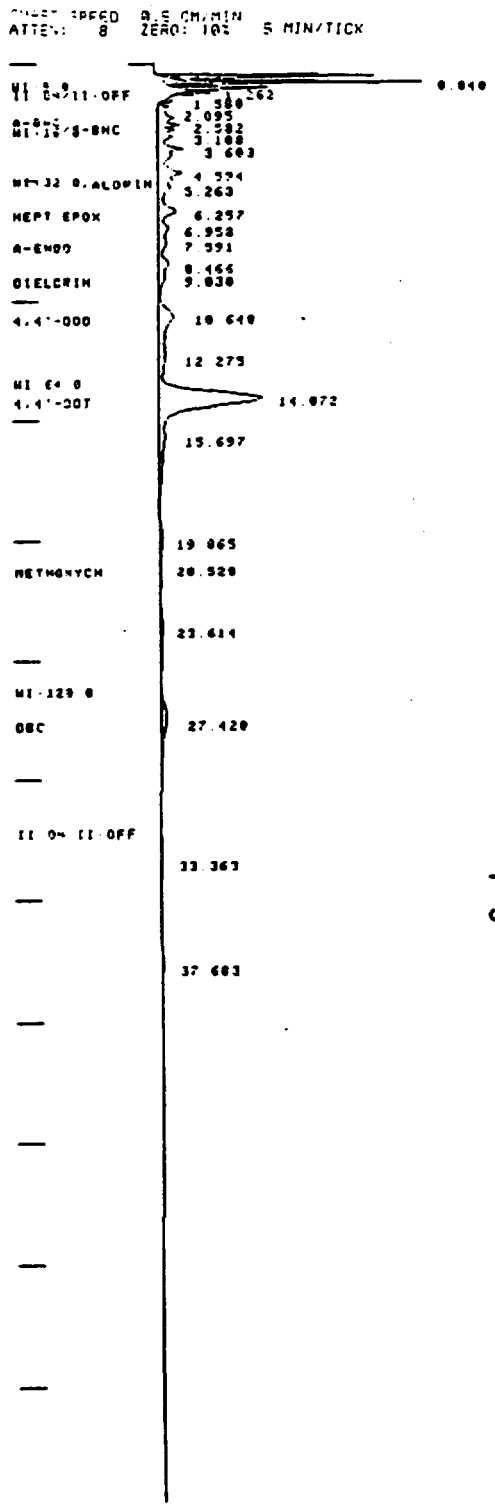
QUANT REPORT

Operator ID: USER8 Quant Rev: 4 Quant Time: 870318 23:27
Output File: ^D2050::Q2 Injected at: 870318 22:39
Data File: >D2050::D1 Dilution Factor: 20.00
Name: U-4989 1429.0319 DC-010-74
Misc: 3-18-87MEI 50UL SMPL + 950UL MECL2 +10UL IS (20X) BTL# 2

ID File: BNADR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870318 14:12

	Compound		R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	9.47	270	24278	40.00 UG/L	90
2)	PHENOL-D5	(SURR)	99	9.20	257	4275	97.71 UG/L 98	97
5)	2-FLUOROPHENOL	(SURR)	112	4.74	38	2357	83.85 UG/L 84	71
~~9)~~	~~1,3-DICHLOROBENZENE~~		~~146~~	~~9.53~~	~~273~~	~~11725~~	~~282.80 UG/L~~	~~99~~
10)	1,4-DICHLOROBENZENE		146	9.53	273	11725	262.85 UG/L yes	98
12)	1,2-DICHLOROBENZENE		146	10.14	303	10014	232.77 UG/L yes	99
19)	*NAPHTHALENE-D8	(IS)	136	13.66	476	89063	40.00 UG/L	100
20)	NITROBENZENE-D5	(SURR)	82	11.57	373	2458	56.65 UG/L 114	92
33)	2-METHYLNAPHTHALENE		142	15.93	587	1248	17.17 UG/L yes	80
34)	*ACENAPHTHENE-D10	(IS)	162	19.08	742	52027	40.00 UG/L	97
38)	2-FLUOROBIPHENYL	(SURR)	172	17.29	654	5559	70.15 UG/L 140	88 H
~~41)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~19.18~~	~~743~~	~~9632~~	~~113.82 UG/L~~	~~100~~
48)	2,4,6-TRIBROMOPHENOL	(SURR)	330	21.55	863	886	75.25 UG/L 75	89
~~52)~~	~~2,6-DINITROTOLUENE~~		~~165~~	~~19.08~~	~~742~~	~~7189~~	~~353.59 UG/L~~	~~100~~
55)	*PHENANTHRENE-D10	(IS)	188	23.47	957	58210	40.00 UG/L	91
60)	PENTACHLOROPHENOL		266	23.31	949	2880	264.82 UG/L yes	100
61)	PHENANTHRENE		178	23.53	960	7221	100.49 UG/L yes	97
~~62)~~	~~ANTHRACENE~~		~~178~~	~~23.53~~	~~960~~	~~7221~~	~~107.60 UG/L~~	~~97~~
~~63)~~	~~DI-N-BUTYLPHTHALATE~~		~~149~~	~~26.08~~	~~1085~~	~~2771~~	~~35.13 UG/L~~ NO	~~87~~
64)	FLUORANTHENE		202	27.15	1137	1374	25.73 UG/L yes	74
65)	*CHRYSENE-D12	(IS)	240	31.53	1352	14359	40.00 UG/L	100
67)	PYRENE		202	27.74	1166	7068	192.64 UG/L yes	95
68)	TERPHENYL-D14	(SURR)	244	28.66	1211	1210	63.20 UG/L 126	100
69)	BUTYLBENZYLPHTHALATE		149	30.55	1304	110630	9061.19 UG/L yes	95
~~71)~~	~~BENZO(A)ANTHRACENE~~		~~228~~	~~31.59~~	~~1355~~	~~3481~~	~~181.45 UG/L~~	~~96~~
73)	CHRYSENE		228	31.59	1355	3481	191.15 UG/L yes	97
74)	*PERYLENE-D12	(IS)	264	35.55	1549	9667	40.00 UG/L	100

* Compound is ISTD


SPEED 0.5 CM/MIN
ATTEN: 8 ZERO: 10% 5 MIN/TICK
0.040
1.262
1.580
2.095
2.582
3.108
3.603
4.594
5.263
HEPT EPOX
6.257
6.958
A-ENDO
7.591
8.466
DIELDRIN
9.030
4,4'-DDD
10.640
12.275
4,4'-DDT
14.072
15.697
19.865
METHOXYCH
20.520
23.614
DBC
27.420
II ON II OFF
33.363
37.683

DC-010-74

SEE RUN 32

CHANNEL: 1A - 1 TITLE: RUN# 27 11:43 12 MAR 87

SAMPLE: 1429DC-010-74 METHOD: CEPA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/Kg	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1	~~A-BHC~~	5546.777	2.273	0.033	24961	VV	? 12.88
2	~~G-BHC~~	7720.862	2.582	-0.028	31814	VV	12.75
3		0.0000	2.841		24389	VV	? 12.00
4		0.0000	3.108		27194	VV	? 16.81
5		0.0000	3.603		49086	VV	13.81
6		0.0000	3.850		37695	VV	? 28.69
7		0.0000	4.594		70461	VV	? 30.38
8	~~ALDRIN~~	8026.408	4.927	-0.133	33690	VV	? 29.75
9		0.0000	5.268		39835	VV	? 41.00
10	~~HEPT EPOX~~	17388.72	6.257	0.127	69800	VV	28.19
11		0.0000	6.958		41867	VV	? 28.00
12	~~A-ENDO~~	10181.30	7.591	0.001	38541	VV	? 48.13
13	~~4,4'-DDE~~	12858.20	8.466	-0.254	46637	VV	? 34.38
14	~~DIELDRIN~~	8636.384	9.030	0.190	34467	VV	? 44.88
15	~~4,4'-DDD~~	37986.55	10.648	-0.282	126513	VV	64.50
16	~~ENDO SUL~~	27113.31	12.275	-0.545	65349	VV	?104.50
17	~~4,4'-DDT~~	243544.0	14.072	-0.158	580176	VV	40.13
18	~~ENDO KETONE~~	23073.17	15.697	-0.693	89434	VV	?188.69
19		0.0000	19.865		28297	VV	? 60.88
20	~~METHOXYCH~~	18715.22	20.528	-0.352	24991	VV	?171.56
21		0.0000	23.614		46391	VV	?142.00
22	~~DDD~~	25816.34	27.420	-0.960	78061	VB	86.00
TOTALS:		446607.3		-3.054	1609649		

DETECTED PKS: 33 REJECTED PKS: 11

DIVISOR: 0.15000 MULTIPLIER: 1000000.00

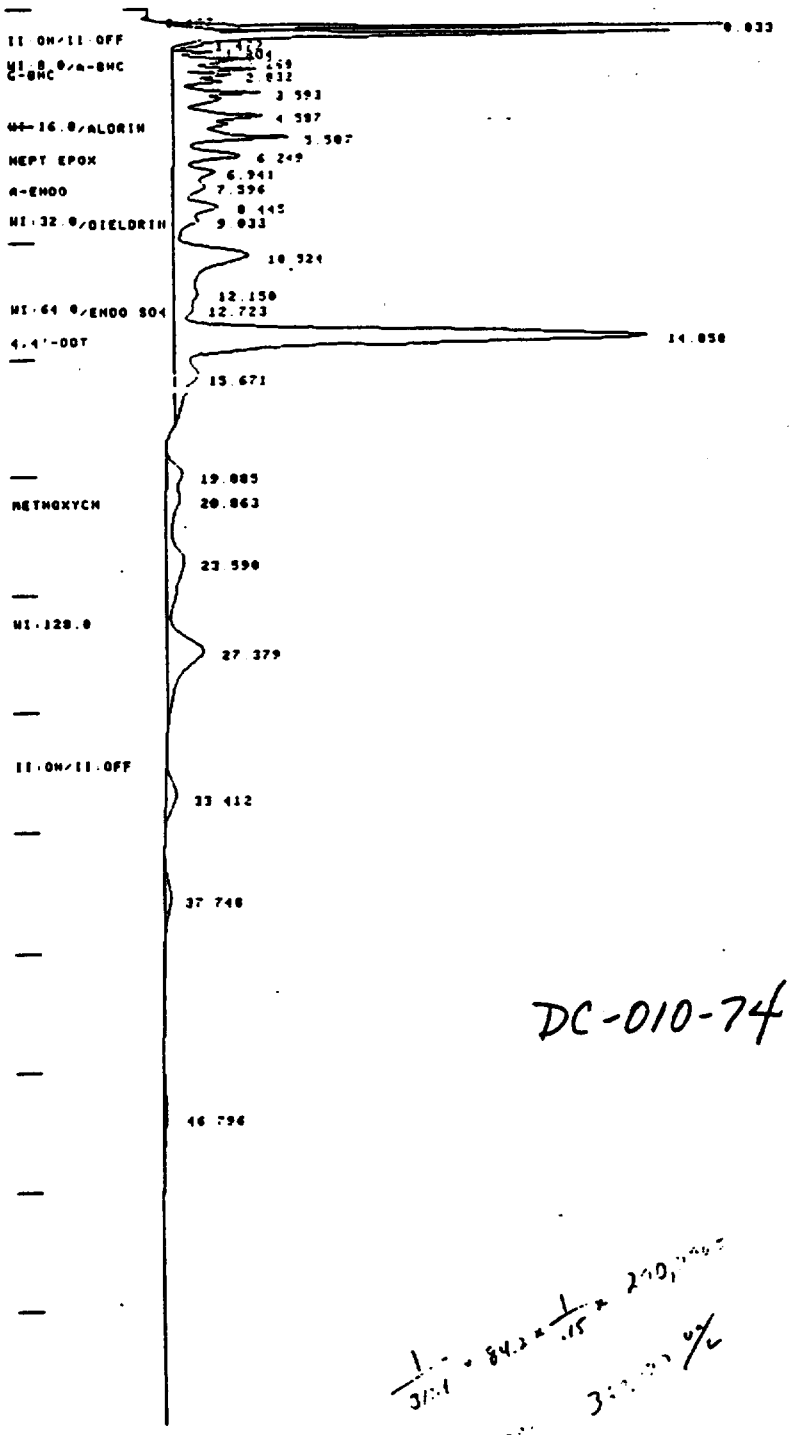
NOISE: 11.4 OFFSET: -14

RACK: 2 VIAL: 12 INJ: 1

NOTES:
NOTERBOOK:259-146,147 ANALYST: RICHARD SAMSON
SECURE AREA: D JOB#'S U-4971,4989
INST: VARIAN 6000# 2A ECD 10X1
COLUMN: 6' GLASS 4MM ID 100/120 SUPELCOPORT
LIQUID PHASE: 3% OV-1
CARRIER GAS: N2 @ 60 ML/MIN
DET: 300 C INJ: 220 C
200 C ISOTHERMAL 4 UL INJECTION
DEAD CREEK PRIMARY ANALYSIS
AUTOSAMPLER

POST RUN:
SAVE FILE: RAW S.CROP399

ATTEN: 8 ZERO: 10% 5 MIN/TICK



DC-010-74

CHANNEL: 1A - 1 TITLE: RUN# 32 17:51 12 MAR 87

SAMPLE: 1429 DC-010-74 METHOD: CEPA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/L	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1		0.0000	1.804		37443	BV	6.56
2		0.0000	2.084		78694	VV	6.38
3	~~A-ENS~~	3043.494	2.268	0.028	68480	VV	? 12.00
4	~~G-BHC~~	5265.738	2.579	-0.031	108488	VV	9.38
5		0.0000	2.832		75963	VV	10.19
6		0.0000	3.099		79747	VV	? 13.31
7		0.0000	*3.593	PCB 1242	157420	VV	11.81
8		0.0000	3.841		118171	VV	? 22.31
9		0.0000	~~4.587~~ ?		~~240832~~	VV	? 20.50
10	~~ALDRIN~~	5750.377	~~4.929~~	-0.131	~~120683~~	VV	? 25.75
11		0.0000	~~5.507~~		~~215597~~	VV	15.94
12	~~HEPT EPOX~~	11725.77	6.249	0.119	842 235342	VV	25.63
13		0.0000	6.941		154140	VV	? 23.56
14	~~A-ENDO~~	7358.143	7.596	0.006	139270	VV	? 51.25
15	~~4,4'-DDE~~	10139.93	8.445	-0.275	183889	VV	32.94
16	~~DIELDRIN~~	4897.884	9.033	0.193	97735	VV	? 38.50
17	~~4,4'-DDD~~	34634.23	10.524	-0.406	576741	VV	51.88
18		0.0000	12.150		128348	VV	? 78.13
19	~~ENDS SO4~~	6186.328	12.723	-0.097	74552	VV	?110.94
20	~~4,4'-DDT~~	216748.9	14.050	-0.180	2581721	VV	39.06
21	~~END KETON~~	10382.59	15.671	-0.719	201220	VB	? 64.63
22		0.0000	19.885		112504	BV	? 54.44
23	~~METHOXYCH~~	19458.11	20.863	-0.017	129915	VV	?114.75
24		0.0000	23.590		270259	VV	112.63
25	~~DDC~~	28382.86	27.379	-1.001	429107	VB	82.69
26		0.0000	33.412		103366	BV	73.38
27		0.0000	37.748		91390	VB	93.31
28		0.0000	46.796		45377	BB	117.31
TOTALS:		363974.5		-2.511	6956194		

DETECTED PKS: 33 REJECTED PKS: 5

DIVISOR: 0.15000 MULTIPLIER: 200000.000

NOISE: 11.4 OFFSET: 2

RACK: 3 VIAL: 2 INJ: 1

NOTES:
NOTERBOOK:259-146,147 ANALYST: RICHARD SAMSON
SECURE AREA: D JOB#'S U-4971,4989
INST: VARIAN 6000# 2A ECD 10X1
COLUMN: 6' GLASS 4MM ID 100/120 SUPELCOPORT
LIQUID PHASE: 3% OV-1
CARRIER GAS: N2 @ 60 ML/MIN
DET: 300 C INJ: 220 C
200 C ISOTHERMAL 4 UL INJECTION
DEAD CREEK PRIMARY ANALYSIS
AUTOSAMPLER

POST RUN:
SAVE FILE: RAW S.CROP404

SAMPLE NUMBER DC-010-75

481095

412

DC-010-75

.Organics Analysis Data Sheet
(Page 1)

.aboratory.Name: ecology and environment, inc.

Case No: U-4906, 4928, 4971, 4989.

Lab Sample ID No: 1430

QC Report No:

Sample Matrix: Soil

Contract No: IL-3140

Data Release Authorized By: [signature]

Date Sample Received: 2-28-87

Volatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 3-09-87

Conc/Dil Factor: 2 pH 7.8

Percent Moisture: (Not Decanted) 12

Concentrations reported "as received"

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	2000U
74-83-9	Bromomethane	2000U
75-01-4	Vinyl Chloride	2000U
75-00-3	Chloroethane	2000U
75-09-2	Methylene Chloride	300 BJ
67-64-1	Acetone	2300 B
75-15-0	Carbon Disulfide	1000U
75-35-4	1, 1-Dichloroethene	1000U
75-34-3	1, 1-Dichloroethane	1000U
156-60-5	Trans-1, 2-Dichloroethene	1000U
67-66-3	Chloroform	1000U
107-06-2	1, 2-Dichloroethane	1000U
78-93-3	2-Butanone	5900 B
71-55-6	1, 1, 1-Trichloroethane	1000U
56-23-5	Carbon Tetrachloride	1000U
108-05-4	Vinyl Acetate	2000U
75-27-4	Bromodichloromethane	1000U

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	1000U
10061-02-6	Trans-1, 3-Dichloropropene	1000U
79-01-6	Trichloroethene	1000U
124-48-1	Dibromochloromethane	1000U
79-00-5	1, 1, 2-Trichloroethane	1000U
71-43-2	Benzene	1000U
10061-01-5	cis-1, 3-Dichloropropene	1000U
110-75-8	2-Chloroethylvinylether	2000U
75-25-2	Bromoform	1000U
108-10-1	4-Methyl-2-Pentanone	2000U
591-78-6	2-Hexanone	2000U
127-18-4	Tetrachloroethene	1000U
79-34-5	1, 1, 2, 2-Tetrachloroethane	1000U
108-88-3	Toluene	1000U
108-90-7	Chlorobenzene	1100
100-41-4	Ethylbenzene	300 J
100-42-5	Styrene	1000U
	Total Xylenes	980 J

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g., 10U) based on necessary concentration/dilution action. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g., 10J). If limit of detection is 10 µg/l and a concentration of 3 µg/l is calculated, report as 3J.

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/ul in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

E This flag indicates an approximate concentration. The amount detected in the analysis exceeds the calibrated range.

Laboratory Name Ecology & Environment

Case No. U-4906, 4928, 4971, 4989

Sample Number DC-010-75

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 03-03-87

Date Analyzed: 03-17-87

Conc/Dil Factor: 2

Percent Moisture (Decanted) 12

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	3300u
111-44-4	bis(2-Chloroethyl)Ether	3300u
95-57-8	2-Chlorophenol	3300u
541-73-1	1,3-Dichlorobenzene	3300u
106-46-7	1,4-Dichlorobenzene	3300u
100-51-6	Benzyl Alcohol	3300u
95-50-1	1,2-Dichlorobenzene	3300u
95-48-7	2-Methylphenol	3300u
39638-32-9	bis(2-chloroisopropyl)Ether	3300u
106-44-5	4-Methylphenol	3300u
621-64-7	N-Nitroso-Di-n-Propylamine	3300u
67-72-1	Hexachloroethane	3300u
98-95-3	Nitrobenzene	3300u
78-59-1	Isophorone	3300u
88-75-5	2-Nitrophenol	3300u
105-67-9	2,4-Dimethylphenol	3300u
65-85-0	Benzoic Acid	16000u
111-91-1	bis(2-Chloroethoxy)Methane	3300u
120-83-2	2,4-Dichlorophenol	3300u
120-82-1	1,2,4-Trichlorobenzene	3300u
91-20-3	Naphthalene	3300u
106-47-8	4-Chloroaniline	3300u
87-68-3	Hexachlorobutadiene	3300u
59-50-7	4-Chloro-3-Methylphenol	3300u
91-57-6	2-Methylnaphthalene	3300u
77-47-4	Hexachlorocyclopentadiene	3300u
88-06-2	2,4,6-Trichlorophenol	3300u
95-95-4	2,4,5-Trichlorophenol	16000u
91-58-7	2-Chloronaphthalene	3300u
88-74-4	2-Nitroaniline	16000u
131-11-3	Dimethyl Phthalate	3300u
208-96-8	Acenaphthylene	3300u
99-09-2	3-Nitroaniline	16000u

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	3300u
51-28-5	2,4-Dinitrophenol	16000u
100-02-7	4-Nitrophenol	16000u
132-64-9	Dibenzofuran	3300u
121-14-2	2,4-Dinitrotoluene	3300u
606-20-2	2,6-Dinitrotoluene	3300u
84-66-2	Diethylphthalate	3300u
7005-72-3	4-Chlorophenyl-phenylether	3300u
86-73-7	Fluorene	3300u
100-01-6	4-Nitroaniline	16000u
534-52-1	4,6-Dinitro-2-Methylphenol	16000u
86-30-6	N-Nitrosodiphenylamine (1)	3300u
101-55-3	4-Bromophenyl-phenylether	3300u
118-74-1	Hexachlorobenzene	3300u
87-86-5	Pentachlorophenol	6300 J
85-01-8	Phenanthrene	760 J
120-12-7	Anthracene	3300u
84-74-2	Di-n-Butylphthalate	4400 J
206-44-0	Fluoranthene	3300u
129-00-0	Pyrene	1300 J
85-68-7	Butylbenzylphthalate	59000
91-94-1	3,3'-Dichlorobenzidine	6600u
56-55-3	Benzo(a)Anthracene	3300u
117-81-7	bis(2-Ethylhexyl)Phthalate	950 J
218-01-9	Chrysene	1600 J
117-84-0	Di-n-Octyl Phthalate	3300u
205-99-2	Benzo(b)Fluoranthene	3300u
207-08-9	Benzo(k)Fluoranthene	3300u
50-32-8	Benzo(a)Pyrene	3300u
193-39-5	Indeno(1,2,3-cd)Pyrene	3300u
53-70-3	Dibenz(a,h)Anthracene	3300u
191-24-2	Benzo(g,h,i)Perylene	3300u

(1)-Cannot be separated from diphenylamine

Laboratory Name ecology and environment, inc.

Case No

Sample Number
DC-010-75

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 3-3-87

Date Analyzed 3-12-87

Conc/Dil Factor 10

Percent Moisture (decanted) 12

GPC Cleanup ☐Yes ☑No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or (ug/Kg) (Circle One)
319-84-6	Alpha-BHC	800u
319-85-7	Beta-BHC	800u
319-86-8	Delta-BHC	800u
58-89-9	Gamma-BHC (Lindane)	800u
76-44-8	Heptachlor	800u
309-00-2	Aldrin	800u
1024-57-3	Heptachlor Epoxide	800u
959-98-8	Endosulfan I	800u
60-57-1	Dieldrin	1600u
72-55-9	4,4'-DDE	1600u
72-20-8	Endrin	1600u
33213-65-9	Endosulfan II	1600u
72-54-8	4,4'-DDD	1600u
1031-07-8	Endosulfan Sulfate	1600u
50-29-3	4,4'-DDT	1600u
72-43-5	Methoxychlor	8,000u
53494-70-5	Endrin Ketone	1600u
57-74-9	Chlordane	8,000u
8001-35-2	Toxaphene	16,000u
12674-11-2	Aroclor-1016	8,000u
11104-28-2	Aroclor-1221	8,000u
11141-16-5	Aroclor-1232	8,000u
53469-21-9	Aroclor-1242	10,000
12672-29-6	Aroclor-1248	8,000u
11097-69-1	Aroclor-1254	16,000u
11096-82-5	Aroclor-1260	16,000u

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s _____ or W_s 3 V_t 1000 V_i 4

Laboratory Name Ecology & Environment Inc.

Case No U-4906, 4928, 4971, 4989

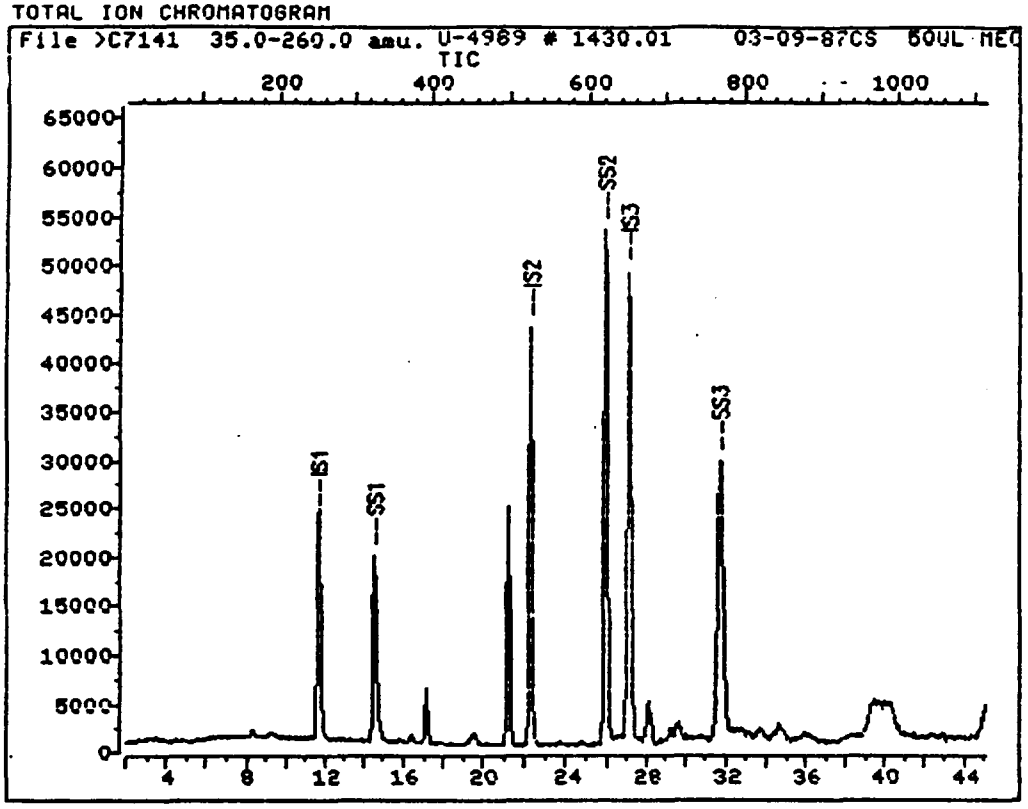
Sample Number DC-010-7.5

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	Hexene isomer	VOA	17.2	1500 BJ
2.	Hexane isomer	VOA	21.2	6500 BJ
3.				
4.	Unknown hydrocarbon	BNA	21.13	7600 BJ
5. 4536861	Benzene, (1-propyloctyl)		21.78	2000 J
6. 4536872	Benzene, (1-ethylnonyl)		22.06	2000 J
7.	Unknown hydrocarbon		22.59	7200 J
8. 2719622	Benzene, (1-pentylheptyl)		23.00	4400 J
9. 2719633	Benzene, (1-butyloctyl)		23.06	4200 J
10. 2719644	Benzene, (1-propylnonyl)		23.23	4400 J
11.	Unknown hydrocarbons		23.98	4800 J
12. 2719611	Benzene, (1-methylundecyl)		24.02	4300 J
13.	Unknown		24.25	7800 J
14. 4534490	Benzene, (1-pentyloctyl)		24.35	9800 J
15. 4534503	Benzene, (1-butylnonyl)		24.43	3600 J
16. 4534514	Benzene, (1-propyldecyl)		24.59	2900 J
17. 4534525	Benzene, (1-ethylundecyl)		24.90	3000 J
18.	Unknown hydrocarbon		25.31	4900 J
19. 4534536	Benzene, (1-methyldodecyl)		25.39	3200 J
20.	Substituted benzene		25.66	3300 J
21.	Unknown hydrocarbon		26.55	3800 J
22. 10544500	Molecular Sulfur		26.70	2900 J
23.	Unknown		35.26	5700 J
24.				
25.				
26.				
27.				
28.				
29.				
30				

TOTAL ION CHROMATOGRAM

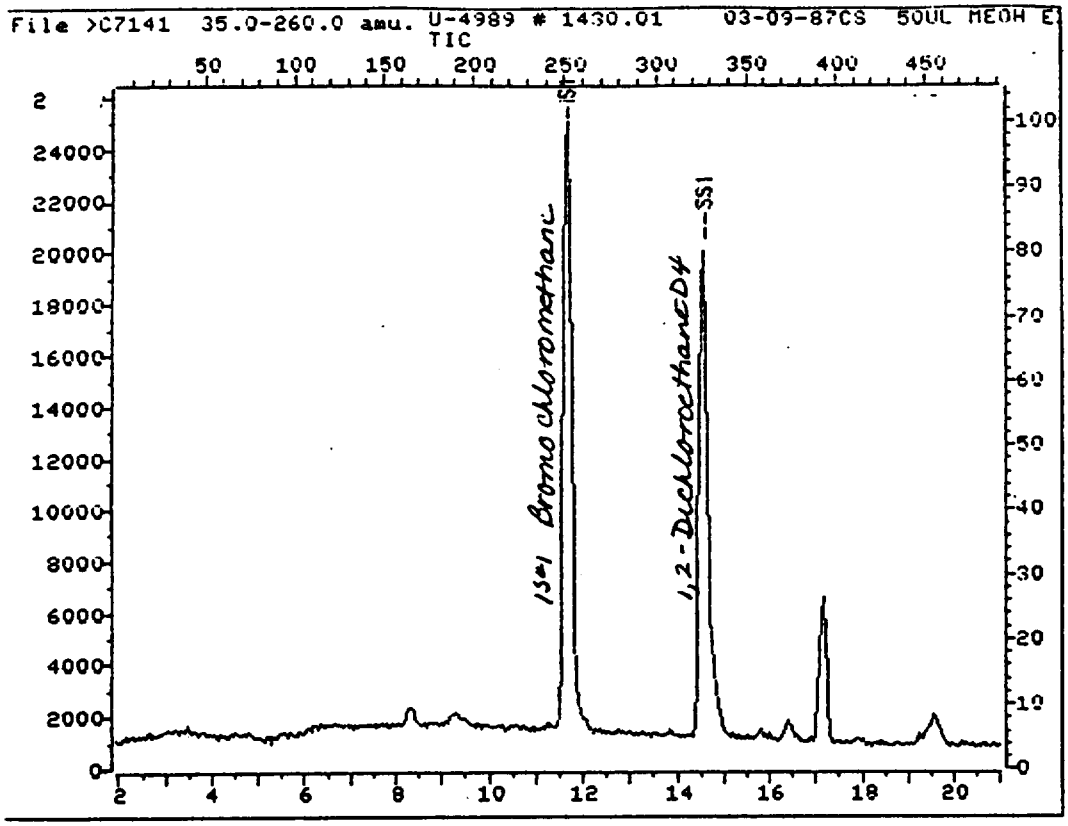


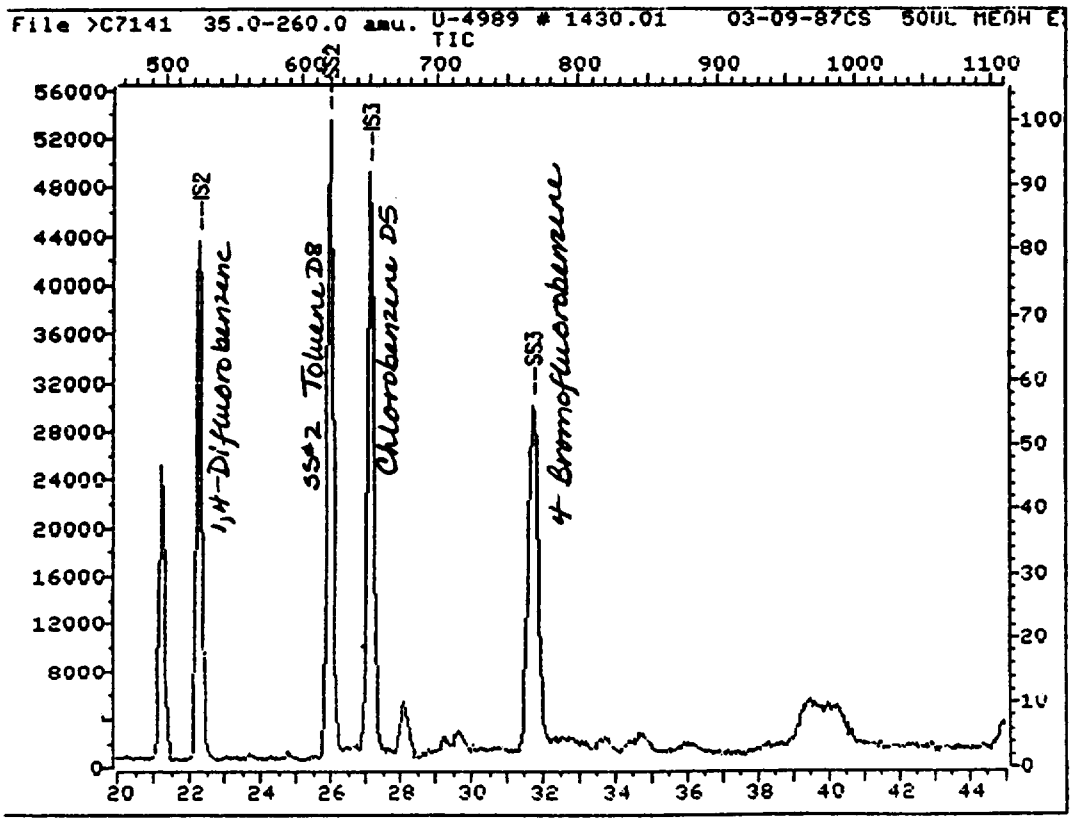
Data File: >C7141::D3
Name: U-4989 # 1430.01 DC-010-75
Misc: 03-09-87CS 50UL MEOH EXT (4.14g/10ML) + 5ML DI + 10UL

Id File: VOACR::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 870309 12:26

Operator ID: USER8
Quant Time: 870309 16:24
Injected at: 870309 15:38

DC-010-75


File >C7141 35.0-260.0 amu. U-4989 # 1430.01 03-09-87CS 50UL MEOH E
TIC
IS#1 Bromochloromethane
1,2-Dichloroethane D4
--IS2
--SS1


File >C7141 35.0-260.0 amu. U-4989 # 1430.01 03-09-87CS 50UL MEOH E
TIC
--IS2
1,4-Difluorobenzene
SS#2 Toluene D8
--IS3
Chlorobenzene D5
--SS3
4-Bromofluorobenzene

QUANT REPORT

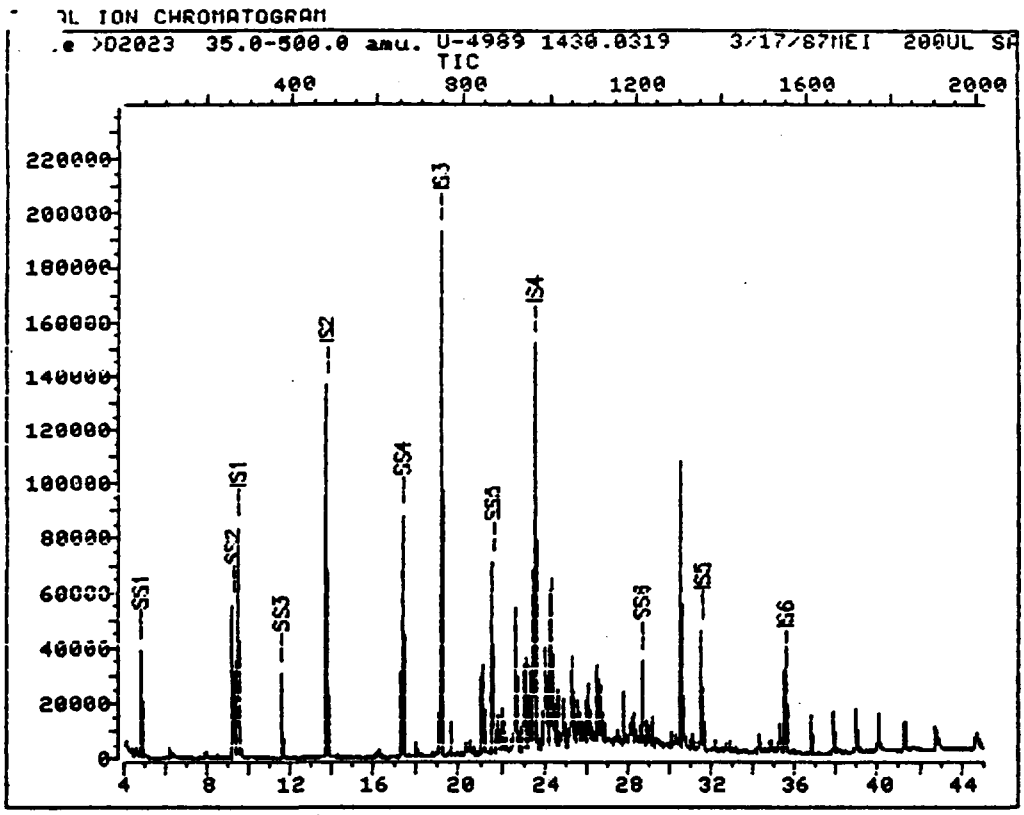
Operator ID: USER8 Quant Rev: 4 Quant Time: 870309 16:24
Input File: ^C7141::Q1 Injected at: 870309 15:38
Data File: >C7141::D3 Dilution Factor: 1.00
Name: U-4989 # 1430.01 DC-010-75
Misc: 03-09-87CS 50UL MEOH EXT (4.14g/10ML) + 5ML DI + 10UL

ID File: VOACR::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 870309 12:26

	Compound		R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	(IS)	128 11.65	251	38898	50.00	UG/L	100
6)	METHYLENE CHLORIDE		84 8.31	165	1932	1.26	UG/L	100
7)	ACETONE		43 9.32	191	7270	9.39	UG/L	100
15)	1,2-DICHLOROETHANE-D4	(SURR)	65 14.56	326	85704	42.21	UG/L 84	84
16)	*1,4-DIFLUOROBENZENE	(IS)	114 22.28	525	189891	50.00	UG/L	100
17)	2-BUTANONE		72 14.71	330	4254	24.36	UG/L	100
31)	*CHLOROBENZENE-D5	(IS)	117 27.13	650	158503	50.00	UG/L	100
36)	TOLUENE-D8	(SURR)	98 25.96	620	209884	43.49	UG/L 86	96
38)	CHLOROBENZENE		112 27.26	653	18217	4.62	UG/L	98
39)	ETHYLBENZENE		91 29.27	705	8651	1.23	UG/L	97
40)	4-BROMOFLUOROBENZENE	(SURR)	95 31.72	768	105092	42.78	UG/L 86	100
42)	TOTAL XYLENES		91 33.70	819	10967	1.82	UG/L	100
42)	TOTAL XYLENES		91 34.71	845	13530	2.25	UG/L	100
43)	1,3-DICHLOROBENZENE		146 39.40	966	14022	14022.00	NO CALIB	100
44)	1,2-DICLHLOROBENZENE		146 39.40	966	14022	14022.00	NO CALIB	100
45)	1,4-DICHLOROBENZENE		146 39.40	966	14022	14022.00	NO CALIB	100

* Compound is ISTD

no rerun required CSF

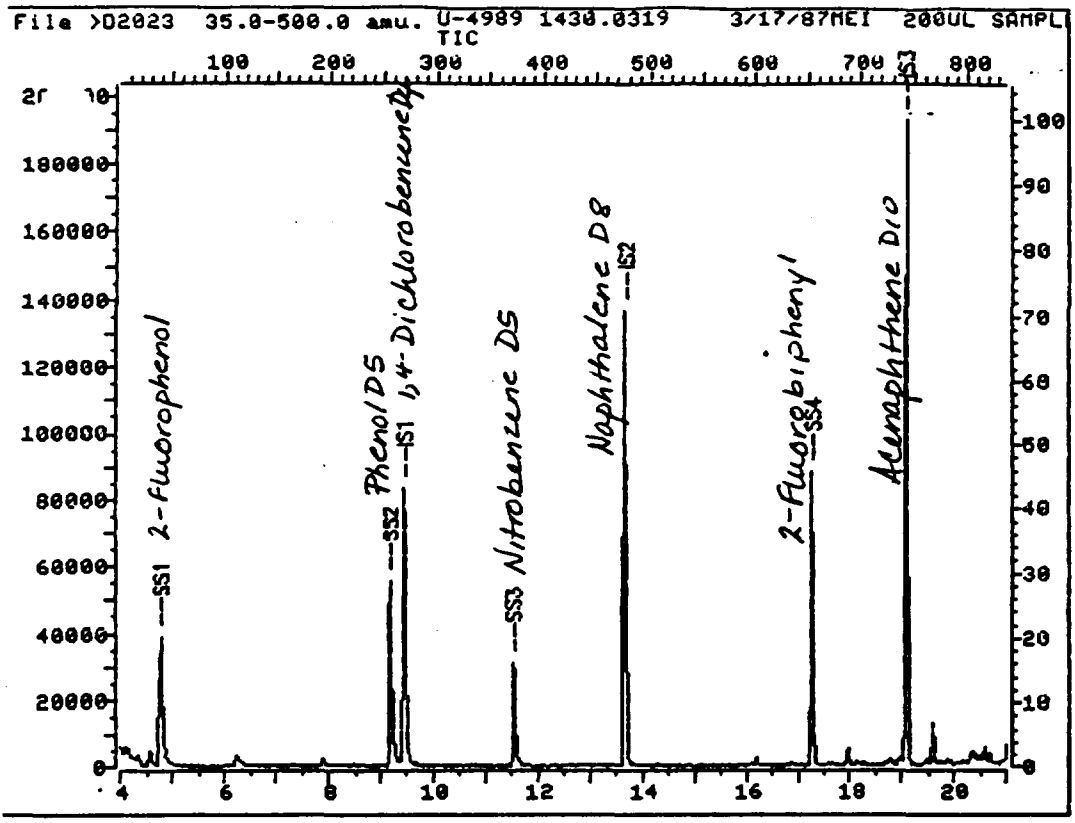


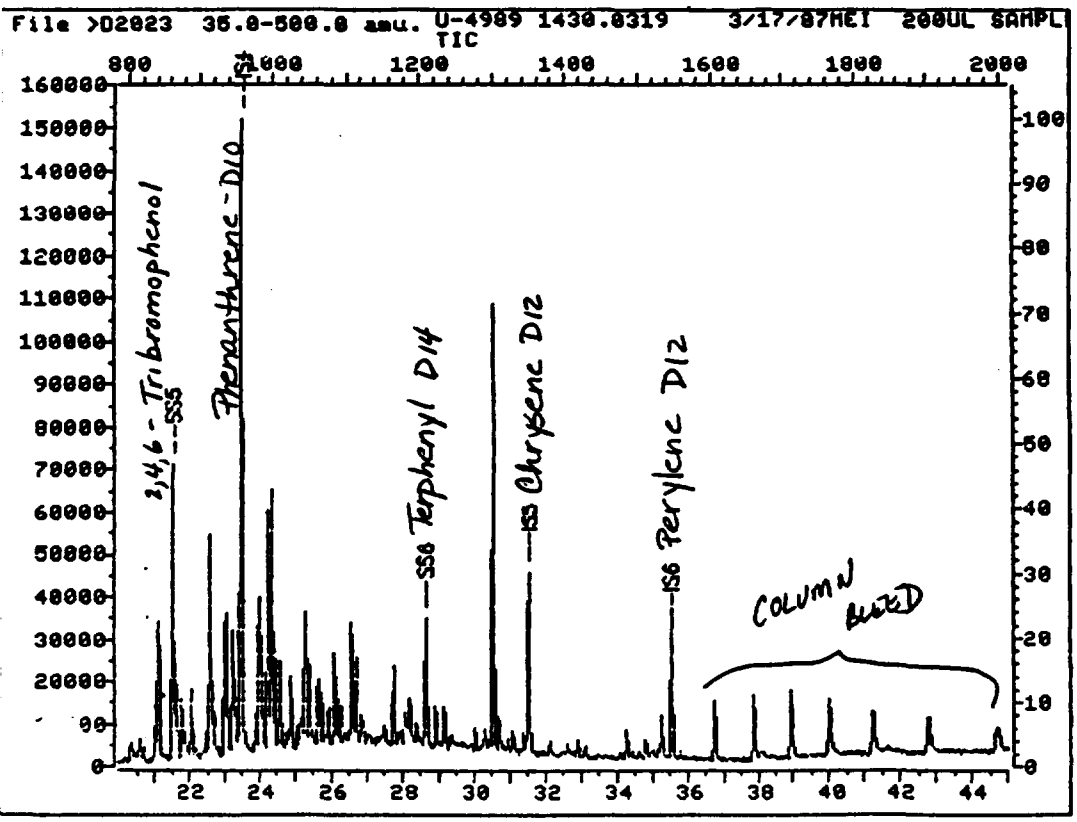
Data File: >D2023::D3
Name: U-4989 1430.0319 DC-010-75
Misc: 3/17/87MEI 200UL SAMPLE/200UL MECL2 + 4UL IS(2X) BTL# 4

Id File: BNADR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870414 09:44

Operator ID: USER8
Quant Time: 870414 09:52
Injected at: 870317 20:15

DC-010-75


File >D2023 35.0-500.0 amu. U-4989 1430.0319 3/17/87MEI 200UL SAMPL
TIC
2-Fluorophenol
SS1
Phenol D5
SS2
1,4-Dichlorobenzene
IS1
Nitrobenzene D5
SS3
Naphthalene D8
IS2
2-Fluorobiphenyl
SS4
Acenaphthene D10
IS3


File >D2023 35.0-500.0 amu. U-4989 1430.0319 3/17/87MEI 200UL SAMPL
TIC
2,4,6-Tribromophenol
SS5
Phenanthrene-D10
SS6 Terphenyl D14
IS5 Chrysene D12
IS6 Perylene D12
COLUMN BLEED

QUANT REPORT

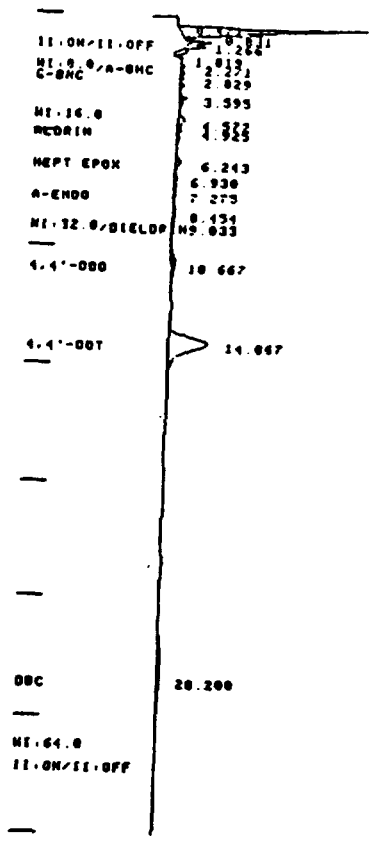
Operator ID: USER8 Quant Rev: 4 Quant Time: 870414 09:52
Output File: ^D2023::Q2 Injected at: 870317 20:15
Data File: >D2023::D3 Dilution Factor: 2.00
Name: U-4989 1430.0319 DC-010-75
Misc: 3/17/87MEI 200UL SAMPLE/200UL MECL2 + 4UL IS(2X) BTL# 4

ID File: BNADR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870414 09:44

	Compound		R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	9.45	269	44165	40.00 UG/L	87
2)	PHENOL-D5	(SURR)	99	9.19	256	59478	71.58 UG/L 72	94
5)	2-FLUOROPHENOL	(SURR)	112	4.77	39	35774	67.80 UG/L 68	75
17)	~~N-NITROSO-DI-N-PROPYLAMINE~~		~~70~~	~~11.53~~	~~371~~	~~5379~~	~~7.39 UG/L~~	81
19)	*NAPHTHALENE-D8	(IS)	136	13.67	476	165401	40.00 UG/L	100
20)	NITROBENZENE-D5	(SURR)	82	11.53	371	31236	38.31 UG/L 76	95
34)	*ACENAPHTHENE-D10	(IS)	162	19.09	742	102994	40.00 UG/L	95
38)	2-FLUOROBIPHENYL	(SURR)	172	17.28	653	69970	45.37 UG/L 90	93
41)	~~DIMETHYL PHTHALATE~~		~~163~~	~~19.09~~	~~742~~	~~19888~~	~~11.77 UG/L~~	100
48)	2,4,6-TRIBROMOPHENOL	(SURR)	330	21.53	862	20914	68.10 UG/L 68	96
52)	~~2,6-DINITROTOLUENE~~		~~165~~	~~19.09~~	~~742~~	~~13972~~	~~34.27 UG/L~~	100
55)	*PHENANTHRENE-D10	(IS)	188	23.47	957	144637	40.00 UG/L	91
60)	PENTACHLOROPHENOL		266	23.29	948	6387	19.26 UG/L yes	100
61)	PHENANTHRENE		178	23.53	960	4126	2.32 UG/L yes	97
62)	~~ANTHRACENE~~		~~178~~	~~23.53~~	~~960~~	~~4126~~	~~2.52 UG/L~~	97
63)	DI-N-BUTYLPHTHALATE		149	26.08	1085	25334	13.44 UG/L yes	99
65)	*CHRYSENE-D12	(IS)	240	31.53	1352	44115	40.00 UG/L	100
67)	PYRENE		202	27.74	1166	5088	3.94 UG/L yes	92
68)	TERPHENYL-D14	(SURR)	244	28.63	1210	28281	41.67 UG/L	100
69)	BUTYLBENZYLPHTHALATE		149	30.55	1304	67613	178.75 UG/L yes	86
71)	~~BENZO(A)ANTHRACENE~~		~~228~~	~~31.59~~	~~1355~~	~~2711~~	~~4.59 UG/L~~	98
72)	BIS(2-ETHYLHEXYL)PHTHALATE		149	32.61	1405	1822	2.91 UG/L yes	97
73)	CHRYSENE		228	31.59	1355	2711	4.83 UG/L yes	98
74)	*PERYLENE-D12	(IS)	264	35.53	1548	28291	40.00 UG/L	100

* Compound is ISTD

CHART SPEED 0.5 CM/MIN
ATTEN: 8 ZERO: 10% 5 MIN/TICK



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See Run 33

CHANNEL: 1A - 1 TITLE: RUN# 28 12:48 12 MAR 87

RECALCULATE ON FILE: S.CROP400

CHANNEL: 1A - 1 TITLE: RUN# 28 12:48 12 MAR 87

SAMPLE: 1430DC-010-7S METHOD: CASE1 CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/L	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1	~~4,4'-DDE~~	897.0018	10.667	-0.263	29901	BV	46.50
2	~~4,4'-DDT~~	10494.36	14.067	-0.163	249999	VV	39.00
3	DDD*	1700.334	20.200	-0.172	51655	BB	7115.30
TOTALS:		13100.49		-0.598	331555		

DETECTED PKS: 27 REJECTED PKS: 24

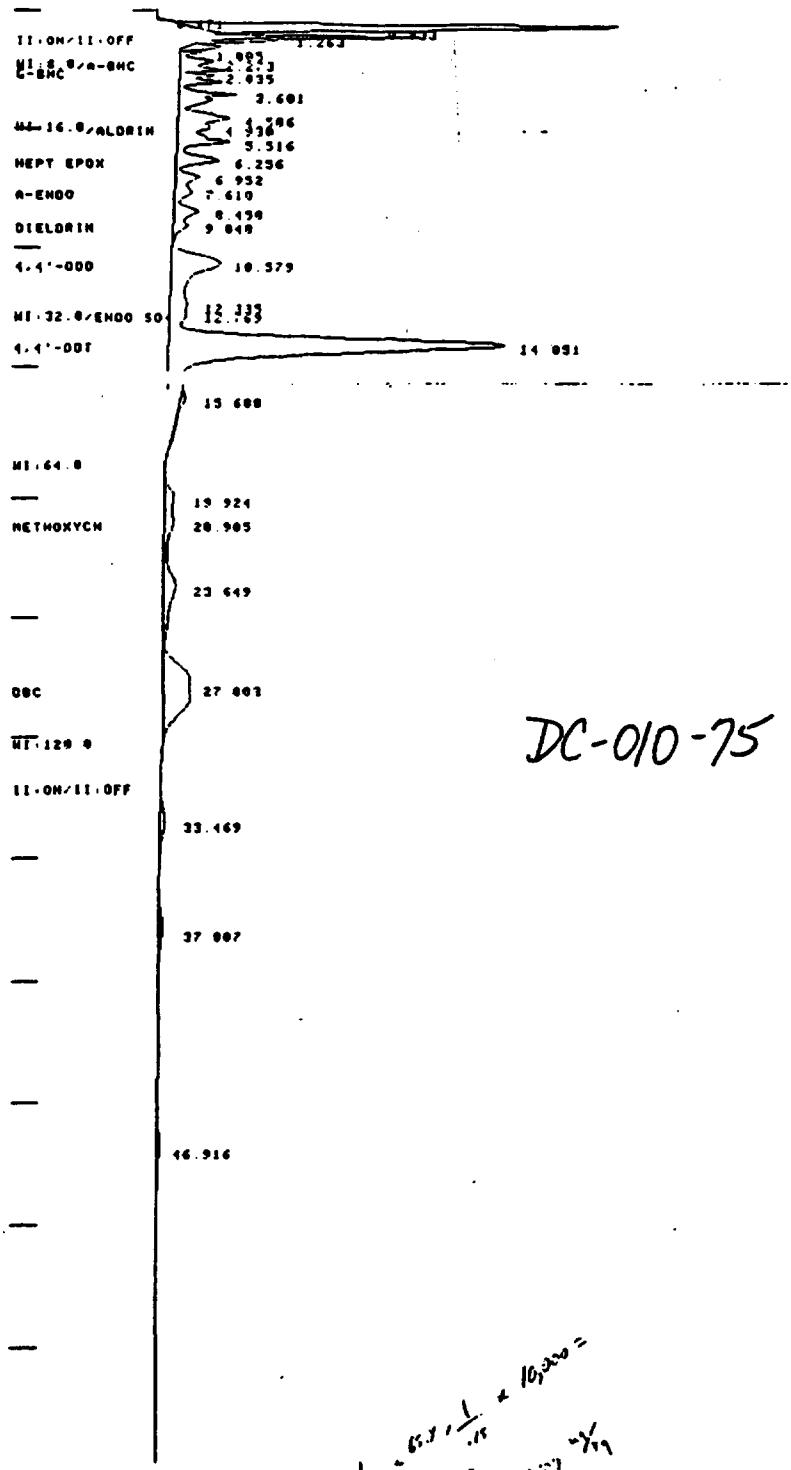
DIVISOR: 0.15000 MULTIPLIER: 100000.000

NOISE: 11.4 OFFSET: -17

RACK: 2 VIAL: 13 INJ: 1

NOTES:
NOTEBOOK:259-146,147 ANALYST: RICHARD SAMSON
SECURE AREA: D JOBS'S U-4971,4989
INST: VARIAN 6000# 2A ECD 10X1
COLUMN: 6' GLASS 4MM ID 100/120 SUPELCOPORT
LIQUID PHASE: 3% OV-1
CARRIER GAS: N2 @ 60 ML/MIN
DET: 300 C INJ: 220 C
200 C ISOTHERMAL 4 UL INJECTION
DEAD CREEK PRIMARY ANALYSIS
AUTOSAMPLER

CHART SPEED 0.5 CM/MIN
ATTEN: 8 ZERO: 10% 5 MIN/TICK



33

DC-010-75

CHANNEL: 1A - 1 TITLE: RUN# 33 18:56 12 MAR 87

SAMPLE: 1430DC-010-75 METHOD: CEPA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/KG	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1		0.0000	1.263		32652	BB	3.75
2		0.0000	1.554		46712	BV	5.13
3		0.0000	2.087		29106	VV	6.44
4	~~A-BHC~~	88.6916	2.273	0.033	38912	VV	? 9.63
5	~~G-BHC~~	150.8279	2.582	-0.028	62149	VV	11.63
6		0.0000	2.835		40746	VV	9.00
7		0.0000	3.101		60527	VV	9.81
8		0.0000	*3.601 PCB 1242	63.6	98487	VV	11.19
9		0.0000	3.839		76915	VV	? 21.56
10		0.0000	~~4.586~~		~~161672~~	VV	? 28.38
11	~~ALDRIN~~	169.3694	4.930	-0.130	71091	VV	? 28.00
12		0.0000	~~5.616~~		~~161086~~	VV	21.81
13	~~HEPT EPOX~~	331.2676	6.256	0.126	132974	VV	21.56
14		0.0000	6.952		75973	VV	20.06
15	~~A-ENDO~~	178.2053	7.610	0.020	67459	VV	? 29.50
16	~~4,4'-DDE~~	239.0472	8.450	-0.270	86703	VV	23.13
17	~~DIELDRIN~~	130.4616	9.048	0.208	52066	VV	? 22.44
18	~~4,4'-DDD~~	1097.590	10.579	-0.351	365549	VV	? 52.31
19		0.0000	12.335		84524	VV	? 34.25
20	~~ENDO SO4~~	297.8237	12.769	-0.051	71782	VV	? 62.88
21	~~4,4'-DDT~~	8399.956	14.051	-0.179	2001056	VV	39.19
22	~~END KETON~~	104.8270	15.688	-0.702	40632	T	? 81.81
23		0.0000	19.900		64591	BV	? 54.00
24	~~METHOXYCH~~	607.1832	20.905	0.025	81079	VV	? 99.94
25		0.0000	23.649		161150	VV	95.44
26	~~DDG~~ INF	1474.902	27.803	-0.577	445967	VB	131.31
27		0.0000	33.469		51227	BV	72.63
28		0.0000	37.807		46879	VB	91.19
29		0.0000	46.916		34813	BB	120.00
TOTALS:		13270.15		-1.876	4725479		

DETECTED PKS: 35 REJECTED PKS: 6

DIVISOR: 0.15000 MULTIPLIER: 10000.0000

NOISE: 11.4 OFFSET: -11

RACK: 3 VIAL: 3 INJ: 1

NOTES:
NOTERBOOK:259-146,147 ANALYST: RICHARD SAMSON
SECURE AREA: D JOB#'S U-4971,4989
INST: VARIAN 6000# 2A ECD 10X1
COLUMN: 6' GLASS 4MM ID 100/120 SUPELCOPORT
LIQUID PHASE: 3% OV-1
CARRIER GAS:-N2 @ 60 ML/MIN
DET: 300 C INJ: 220 C
200 C ISOTHERMAL 4 UL INJECTION
DEAD CREEK PRIMARY ANALYSIS
AUTOSAMPLER

POST RUN:
SAVE FILE: RAW S.CROP405

SAMPLE NUMBER DC-010-75R

481095

Laboratory Name Ecology & Environment

Case No: V-4906, 4928, 4971, 4989

Sample Number
DC-010-75R

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 03-03-87

Date Analyzed: 03-17-87

Conc/Dil Factor: 2

Percent Moisture (Decanted) 12

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	3300u
111-44-4	bis(-2-Chloroethyl)Ether	3300u
95-57-8	2-Chlorophenol	3300u
541-73-1	1 3-Dichlorobenzene	3300u
106-46-7	1 4-Dichlorobenzene	3300u
100-51-6	Benzyl Alcohol	3300u
95-50-1	1 2-Dichlorobenzene	3300u
95-48-7	2-Methylphenol	3300u
39638-32-9	bis(2-chloroisopropyl)Ether	3300u
106-44-5	4-Methylphenol	3300u
621-64-7	N-Nitroso-Di-n-Propylamine	3300u
67-72-1	Hexachloroethane	3300u
98-95-3	Nitrobenzene	3300u
78-59-1	Isophorone	3300u
88-75-5	2-Nitrophenol	3300u
105-67-9	2. 4-Dimethylphenol	3300u
65-85-0	Benzoic Acid	16000u
111-91-1	bis(-2-Chloroethoxy)Methane	3300u
120-83-2	2. 4-Dichlorophenol	3300u
120-82-1	1. 2. 4-Trichlorobenzene	3300u
91-20-3	Naphthalene	3300u
106-47-8	4-Chloroaniline	3300u
87-68-3	Hexachlorobutadiene	3300u
59-50-7	4-Chloro-3-Methylphenol	3300u
91-57-6	2-Methylnaphthalene	3300u
77-47-4	Hexachlorocyclopentadiene	3300u
88-06-2	2 4. 6-Trichlorophenol	3300u
95-95-4	2 4. 5-Trichlorophenol	16000u
91-58-7	2-Chloronaphthalene	3300u
88-74-4	2-Nitroaniline	16000u
131-11-3	Dimethyl Phthalate	3300u
208-96-8	Acenaphthylene	3300u
99-09-2	3-Nitroaniline	16000u

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	3300u
51-28-5	2. 4-Dinitrophenol	16000u
100-02-7	4-Nitrophenol	16000u
132-64-9	Dibenzofuran	3300u
121-14-2	2 4-Dinitrotoluene	3300u
606-20-2	2. 6-Dinitrotoluene	3300u
84-66-2	Diethylphthalate	3300u
7005-72-3	4-Chlorophenyl-phenylether	3300u
86-73-7	Fluorene	3300u
100-01-6	4-Nitroaniline	16000u
534-52-1	4. 6-Dinitro-2-Methylphenol	16000u
86-30-6	N-Nitrosodiphenylamine (1)	3300u
101-55-3	4-Bromophenyl-phenylether	3300u
118-74-1	Hexachlorobenzene	3300u
87-86-5	Pentachlorophenol	51000 J
85-01-8	Phenanthrene	660 J
120-12-7	Anthracene	3300u
84-74-2	Di-n-Butylphthalate	4300
206-44-0	Fluoranthene	3300u
129-00-0	Pyrene	1100 J
85-68-7	Butylbenzylphthalate	51000
91-94-1	3. 3'-Dichlorobenzidine	6600u
56-55-3	Benzo(a)Anthracene	3300u
117-81-7	bis(2-Ethylhexyl)Phthalate	460 J
218-01-9	Chrysene	1300 J
117-84-0	Di-n-Octyl Phthalate	3300u
205-99-2	Benzo(b)Fluoranthene	3300u
207-08-9	Benzo(k)Fluoranthene	3300u
50-32-8	Benzo(a)Pyrene	3300u
193-39-5	Indeno(1 2. 3-cd)Pyrene	3300u
53-70-3	Dibenz(a h)Anthracene	3300u
191-24-2	Benzo(g h i)Perylene	3300u

(1)-Cannot be separated from diphenylamine

Laboratory Name ecology and environment, inc.

Case No V-4906, 4928, 4971, 4989

Sample Number

DC-010-75R

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 3-3-87

Date Analyzed 3-12-87

Conc/Dil Factor 10

Percent Moisture (decanted) 12

GPC Cleanup ☐Yes ☑No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or (ug/Kg) (Circle One)
319-84-6	Alpha-BHC	800u
319-85-7	Beta-BHC	800u
319-86-8	Delta-BHC	800u
58-89-9	Gamma-BHC (Lindane)	800u
76-44-8	Heptachlor	800u
309-00-2	Aldrin	800u
1024-57-3	Heptachlor Epoxide	800u
959-98-8	Endosulfan I	800u
60-57-1	Dieldrin	1600u
72-55-9	4,4'-DDE	1600u
72-20-8	Endrin	1600u
33213-65-9	Endosulfan II	1600u
72-54-8	4,4'-DDD	1600u
1031-07-8	Endosulfan Sulfate	1600u
50-29-3	4,4'-DDT	1600u
72-43-5	Methoxychlor	8,000u
53494-70-5	Endrin Ketone	1,600u
57-74-9	Chlordane	8,000u
8001-35-2	Toxaphene	16,000u
12674-11-2	Aroclor-1016	8,000u
11104-28-2	Aroclor-1221	8,000u
11141-16-5	Aroclor-1232	8,000u
53469-21-9	Aroclor-1242	10,000
12672-29-6	Aroclor-1248	8,000u
11097-69-1	Aroclor-1254	16,000u
11096-82-5	Aroclor-1260	16,000u

V_i = Volume of extract injected (ul)

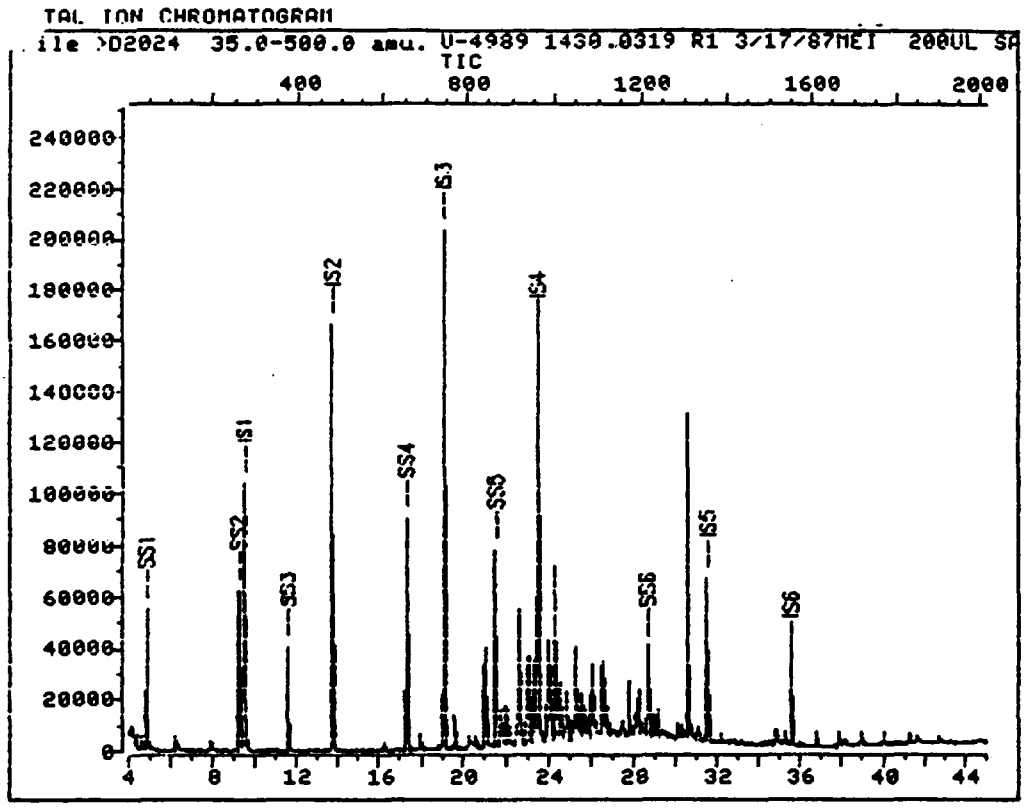
V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s _____ or W_s 3 V_t 1000 V_i 4

DC-010-75R

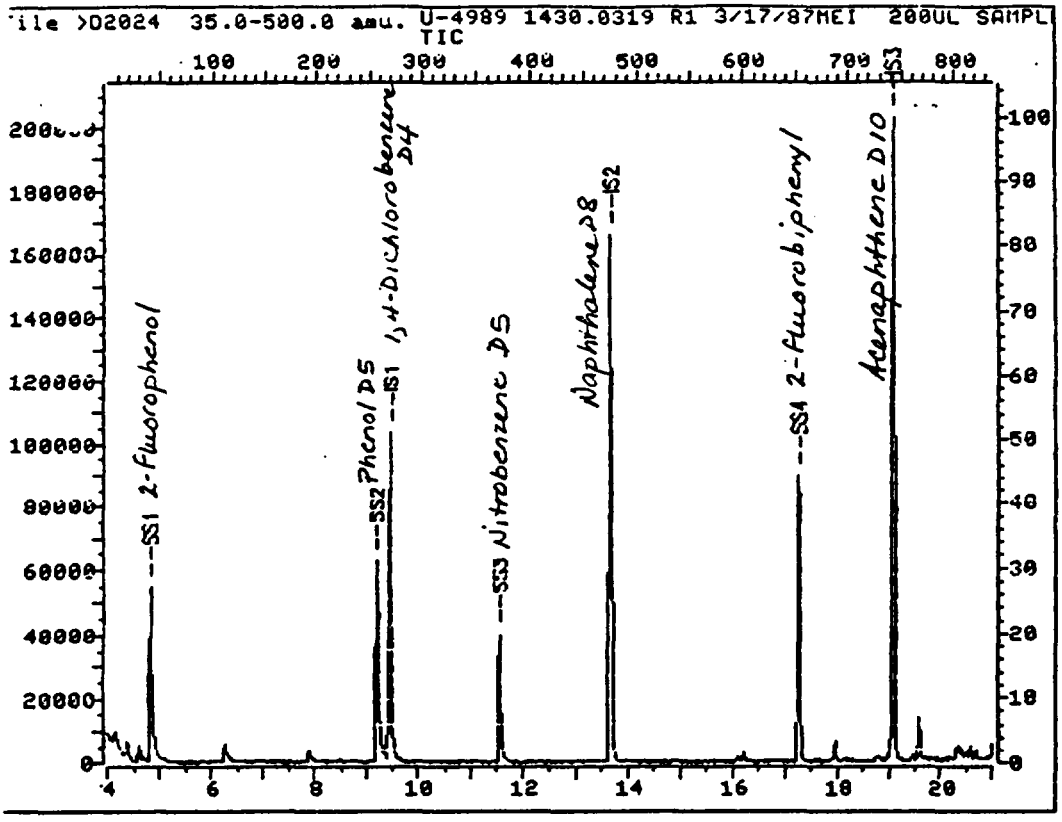


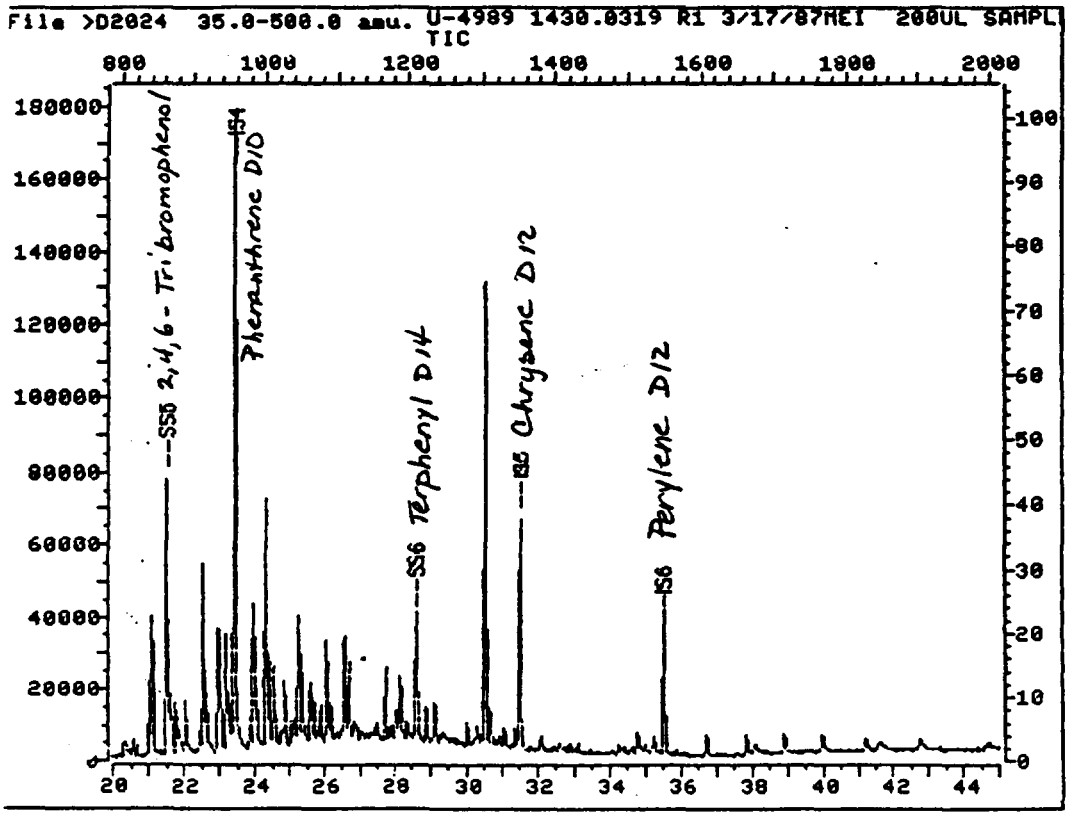
Data File: >D2024::D3
Name: U-4989 1430.0319 R1
Misc: 3/17/87MEI 200UL SAMPLE/200UL MECL2 + 4UL IS(2X) BTL# 5

Id File: BNADR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870414 09:44

Operator ID: USER8
Quant Time: 870414 09:55
Injected at: 870317 21:12

DC-010-75R


File >D2024 35.0-500.0 amu. U-4989 1430.0319 R1 3/17/87MEI 200UL SAMPL
TIC
SS1 2-Fluorophenol
SS2 Phenol D5
IS1 1,4-Dichlorobenzene D4
SS3 Nitrobenzene D5
IS2 Naphthalene D8
SS4 2-Fluorobiphenyl
IS3 Acenaphthene D10


File >D2024 35.0-500.0 amu. U-4989 1430.0319 R1 3/17/87MEI 200UL SAMPL
TIC
SS5 2,4,6-Tribromophenol
IS4 Phenanthrene D10
SS6 Terphenyl D14
IS5 Chrysene D12
IS6 Perylene D12

QUANT REPORT

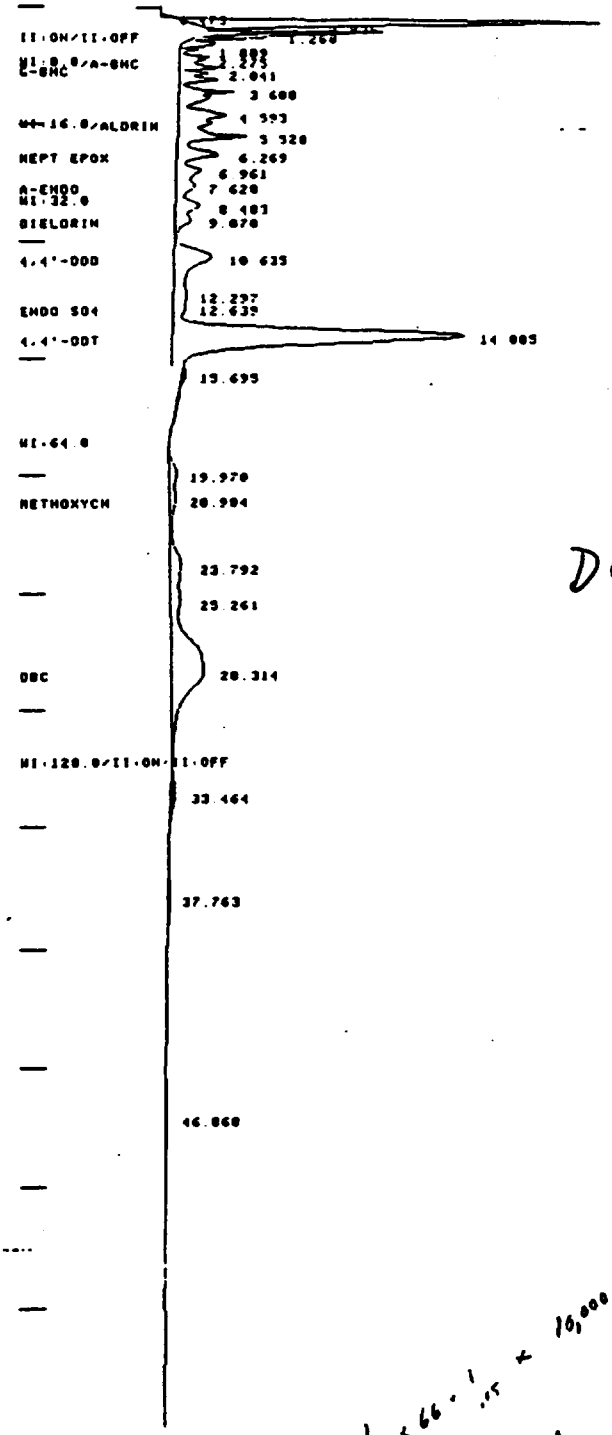
Operator ID: USER8 Quant Rev: 4 Quant Time: 870414 09:55
Output File: ^D2024::Q2 Injected at: 870317 21:12
Data File: >D2024::D3 Dilution Factor: 2.00
Name: U-4989 1430.0319 R1 DC-010-75R
Misc: 3/17/87MEI 200UL SAMPLE/200UL MECL2 + 4UL IS(2X) BTL# 5

ID File: BNAOR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870414 09:44

	Compound		R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	9.47	270	50841	40.00 UG/L	86
2)	PHENOL-D5	(SURR)	99	9.18	256	69357	72.51 UG/L 72	99
5)	2-FLUOROPHENOL	(SURR)	112	4.80	41	45420	74.78 UG/L 75	78
17)	~~N-NITROSO-DI-N-PROPYLAMINE~~		~~70~~	~~11.55~~	~~372~~	~~6437~~	~~7.68 UG/L~~ CW	94
19)	*NAPHTHALENE-D8	(IS)	136	13.66	476	196392	40.00 UG/L	100
20)	NITROBENZENE-D5	(SURR)	82	11.55	372	39217	40.50 UG/L 81	93
34)	*ACENAPHTHENE-D10	(IS)	162	19.08	742	125650	40.00 UG/L	93
38)	2-FLUOROBIPHENYL	(SURR)	172	17.27	653	80960	43.03 UG/L 86	93
41)	~~DIMETHYL PHTHALATE~~		~~163~~	~~19.08~~	~~742~~	~~23718~~	~~11.51 UG/L~~ CW	100
48)	2,4,6-TRIBROMOPHENOL	(SURR)	330	21.53	862	24200	64.59 UG/L 65	98
52)	~~2,6-DINITROTOLUENE~~		~~165~~	~~19.08~~	~~742~~	~~17035~~	~~34.25 UG/L~~ CW	100
53)	~~DIETHYLPHTHALATE~~		~~149~~	~~21.04~~	~~838~~	~~1971~~	~~.74 UG/L~~	92
55)	*PHENANTHRENE-D10	(IS)	188	23.47	957	183056	40.00 UG/L	96
60)	PENTACHLOROPHENOL		266	23.28	948	7098	16.91 UG/L	100
61)	PHENANTHRENE		178	23.53	960	4563	2.02 UG/L	92
62)	~~ANTHRACENE~~		~~178~~	~~23.53~~	~~960~~	~~4563~~	~~2.20 UG/L~~ CW	92
63)	DI-N-BUTYLPHTHALATE		149	26.08	1085	31098	13.04 UG/L	98
65)	*CHRYSENE-D12	(IS)	240	31.53	1352	62653	40.00 UG/L	100
67)	PYRENE		202	27.73	1166	5873	3.20 UG/L	94
68)	TERPHENYL-D14	(SURR)	244	28.63	1210	36760	38.13 UG/L 76	100
69)	BUTYLBENZYLPHTHALATE		149	30.55	1304	82532	153.63 UG/L	91
71)	~~BENZO(A)ANTHRACENE~~		~~228~~	~~31.59~~	~~1355~~	~~3153~~	~~3.76 UG/L~~ CW	94
72)	BIS(2-ETHYLHEXYL)PHTHALATE		149	32.61	1405	1253	1.41 UG/L	86
73)	CHRYSENE		228	31.59	1355	3153	3.96 UG/L	95
74)	*PERYLENE-D12	(IS)	264	35.52	1548	39462	40.00 UG/L	100
~~75)~~	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~34.40~~	~~1493~~	~~1224~~	~~1.33 UG/L~~ CW	100
~~75)~~	~~DI-N-OCTYL PHTHALATE~~		~~149~~	~~34.60~~	~~1503~~	~~1976~~	~~2.14 UG/L~~	100

* Compound is ISTD

CHART SPEED 0.5 CM/MIN
ATTEN: 8 ZERO: 10% 5 MIN/TICK



DC-010-75R

1/32 x 66 = 1/.5 x 10,000

AB 12 Yr 10,000 Y/kg

RECALCULATE ON FILE: S.CROP406

CHANNEL: 1A - 1 TITLE: RUN# 34 20:01 12 MAR 87

SAMPLE: 1430R1 METHOD: CEPA CALCULATION: ES - ANALYS
DC-010-75 R1

PEAK NO	PEAK NAME	RESULT UG/L	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1		0.0000	1.268		34687	BB	3.81
2		0.0000	1.557		44947	BV	5.00
3		0.0000	2.091		26058	VV	6.50
4	~~A-BHC~~	77.4962	2.275	0.035	34874	VV	11.69
5	~~G-BHC~~	136.8151	2.586	-0.024	56375	VV	11.50
6		0.0000	2.841		36951	VV	9.38
7		0.0000	3.107		53772	VV	10.06
8		0.0000	* 3.608	RB1242	91748	VV	11.56
9		0.0000	3.846		73424	VV	? 22.00
10		0.0000	~~4.593~~		147505	VV	? 24.50
11	~~ALDRIN~~	202.6662	4.933	-0.127	85067	VV	? 26.81
12		0.0000	~~5.528~~		183459	VV	15.44
13	~~HEPT EPOX~~	352.0419	6.269	0.139	141313	VV	23.56
14		0.0000	6.961		87122	VV	28.56
15	~~A-ENDO~~	210.8485	7.628	0.038	79816	VV	? 38.63
16	~~4,4'-DDE~~	280.1746	8.483	-0.237	101620	VV	26.13
17	~~DIELDRIN~~	158.6983	9.070	0.230	63335	VV	? 25.69
18	~~4,4'-DDD~~	833.3633	10.635	-0.295	277549	VV	47.56
19		0.0000	12.297		73773	VV	? 45.75
20	~~ENDO SO4~~	221.7849	12.639	-0.181	53455	VV	?
21	~~4,4'-DDT~~	7387.027	14.085	-0.145	1759754	VV	39.31
22	~~ENB KETON~~	76.0274	15.695	-0.695	29469	T	? 60.88
23		0.0000	19.947		58435	BV	? 54.88
24	~~METHOXYCH~~	555.1961	20.984	0.104	74137	VV	?129.56
25		0.0000	23.792		129386	VV	? 94.06
26		0.0000	25.261		79944	VV	?177.25
27	DBC INF	2212.438	28.314	-0.066	668976	VB	?165.94
28		0.0000	33.464		43682	BB	61.31
29		0.0000	37.763		31435	BB	78.00
30		0.0000	46.868		27782	BB	124.00
TOTALS:		12704.57		-1.224	4649850		

DETECTED PKS: 36 REJECTED PKS: 6

DIVISOR: 0.15000 MULTIPLIER: 10000.0000

NOISE: 11.4 OFFSET: -12

RACK: 3 VIAL: 4 INJ: 1

NOTES:
NOTERBOOK:259-146,147 ANALYST: RICHARD SAMSON
SECURE AREA: D JOB#'S U-4971,4989
INST: VARIAN 6000# 2A ECD 10X1
COLUMN: 6' GLASS 4MM ID 100/120 SUPELCOPORT
LIQUID PHASE: 3% OV-1
CARRIER GAS: N2 @ 60 ML/MIN
DET: 300 C INJ: 220 C
200 C ISOTHERMAL 4 UL INJECTION
DEAD CREEK PRIMARY ANALYSIS
AUTOSAMPLER

MATRIX SPIKE DATA

1. FORM I OF NON-SPIKED COMPOUNDS
2. RAW DATA VOA, S-V, PESTICIDES
   (a) RIC AND QUANT REPORTS (GC/MS)
   (b) CHROMATOGRAMS AND LISTING (GC)

DC-G8-70 MS

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ecology and environment, inc.

Case No: U-4906, 4928, 4971, 4989

Lab Sample ID No: 1277 MS

QC Report No:

Sample Matrix: Soil

Contract No: IL-3140

Data Release Authorized By: C Woytowicz

Date Sample Received: 2-26-87

Volatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 2-26-87

Conc/Dil Factor: ~~2~~ 4 pH 7.4

Percent Moisture: (Not Decanted) 30

Concentrations reported "as received"

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	4000u
74-83-9	Bromomethane	4000u
75-01-4	Vinyl Chloride	4000u
75-00-3	Chloroethane	4000u
75-09-2	Methylene Chloride	570BJ
67-64-1	Acetone	7600 B
75-15-0	Carbon Disulfide	2000u
75-35-4	1, 1-Dichloroethene	SPIKE
75-34-3	1, 1-Dichloroethane	2000u
156-60-5	Trans-1, 2-Dichloroethene	250 J
67-66-3	Chloroform	2000u
107-06-2	1, 2-Dichloroethane	2000u
78-93-3	2-Butanone	8900 BCW
71-55-6	1, 1, 1-Trichloroethane	2000u
56-23-5	Carbon Tetrachloride	2000u
108-05-4	Vinyl Acetate	4000u
75-27-4	Bromodichloromethane	2000u

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	2000u
10061-02-6	Trans-1, 3-Dichloropropene	2000u
79-01-6	Trichloroethene	SPIKE
124-48-1	Dibromochloromethane	2000u
79-00-5	1, 1, 2-Trichloroethane	2000u
71-43-2	Benzene	SPIKE
10061-01-5	cis-1, 3-Dichloropropene	2000u
110-75-8	2-Chloroethylvinylether	4000u
75-25-2	Bromoform	2000u
108-10-1	4-Methyl-2-Pentanone	5600
591-78-6	2-Hexanone	4000u
127-18-4	Tetrachloroethene	39000
79-34-5	1, 1, 2, 2-Tetrachloroethane	2000u
108-88-3	Toluene	SPIKE
108-90-7	Chlorobenzene	SPIKE
100-41-4	Ethylbenzene	11,000
100-42-5	Styrene	2000u
	Total Xylenes	25,000

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g., 10U) based on necessary concentration-dilution action. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but [illegible]

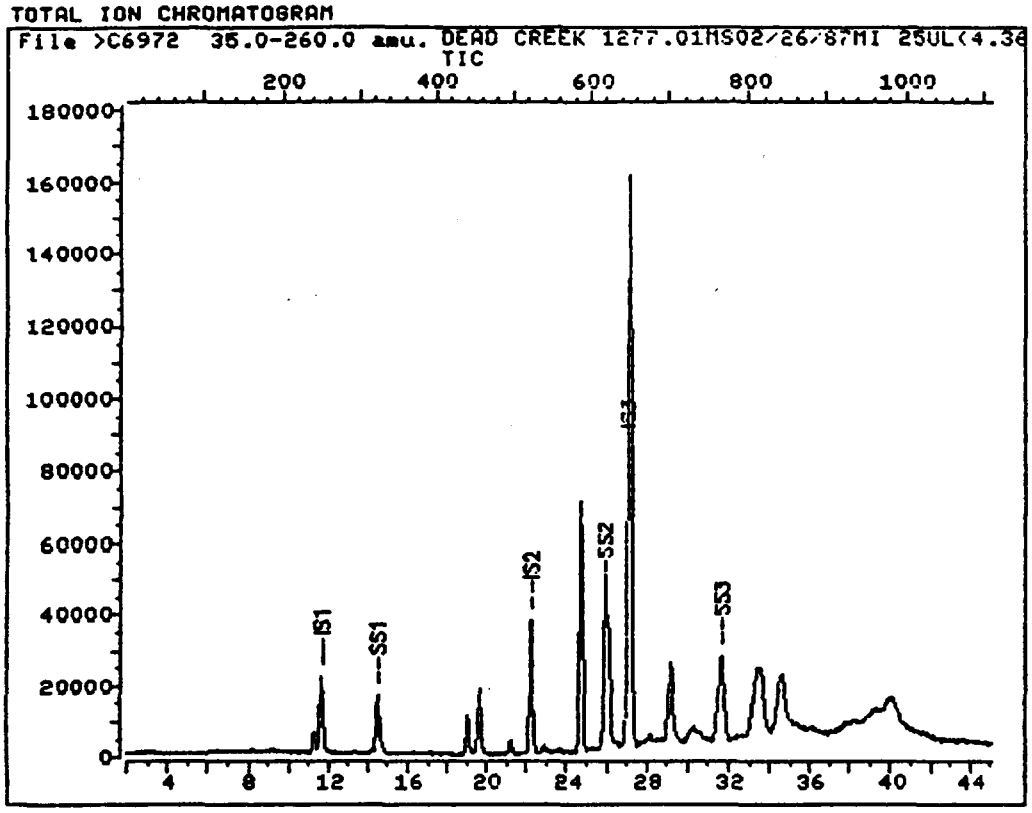
C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/ul in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

E This flag indicates an approximate concentration. The amount detected in the

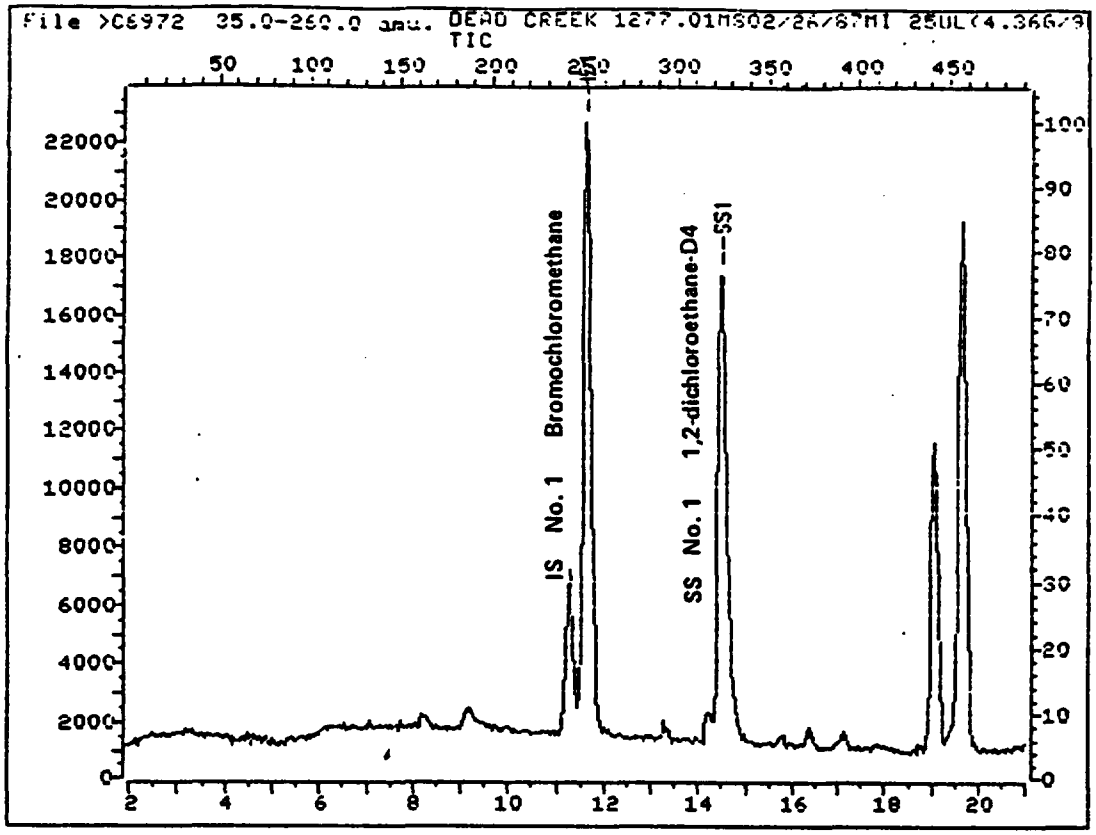
TOTAL ION CHROMATOGRAM



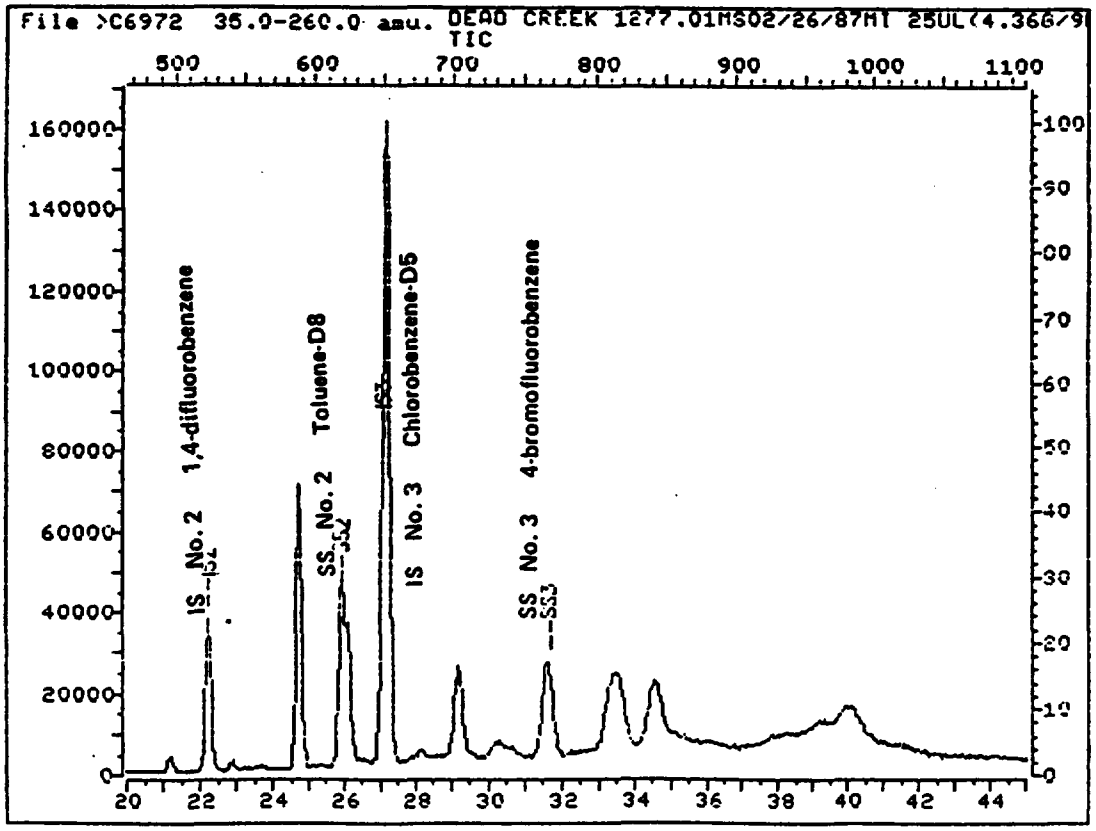
Data File: >C6972::D3
Name: DEAD CREEK 1277.01MS DC-G8-7D MS
Misc: 02/26/87MI 25UL(4.36G/9ML MEOH/1ML MS) + 10UL IS/SS

Id File: VOACR::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 870226 14:59

Operator ID: USER8
Quant Time: 870226 23:09
Injected at: 870226 22:23


File >C6972 35.0-260.0 amu. DEAD CREEK 1277.01MS02/26/87MI 25UL(4.366/9
TIC
IS No. 1 Bromochloromethane
SS No. 1 1,2-dichloroethane-D4
SS1

DC-G8-70MS


File >C6972 35.0-260.0 amu. DEAD CREEK 1277.01MS02/26/87MI 25UL(4.366/9
TIC
IS No. 2 1,4-difluorobenzene
SS No. 2 Toluene-D8
IS No. 3 Chlorobenzene-D5
SS No. 3 4-bromofluorobenzene
SS3

QUANT REPORT

Operator ID: USER8 Quant Rev: 4 Quant Time: 870226 23:09
Output File: ^C6972::Q2 Injected at: 870226 22:23
Data File: >C6972::D3 Dilution Factor: 1.00
Name: DEAD CREEK 1277.01MS DC-G8-70 MS
Misc: 02/26/87MI 25UL(4.36G/9ML MEOH/1ML MS) + 10UL IS/SS

ID File: VOACR::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 870226 14:59

	Compound		R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE (IS)	128	11.62	250	31039	50.00	UG/L	100
6)	METHYLENE CHLORIDE	84	8.28	164	1340	1.25	UG/L	100
7)	ACETONE	43	9.17	187	9116	16.49	UG/L	100
10)	1,1-DICHLOROETHENE	61	11.27	241	22234	11.28	UG/L 90%	96
12)	TRANS-1,2-DICHLOROETHENE	96	13.25	292	544	.54	UG/L	1
15)	1,2-DICHLOROETHANE-D4(SURR)	65	14.49	324	72003	47.51	UG/L 96	87
16)	*1,4-DIFLUOROBENZENE (IS)	114	22.21	523	159107	50.00	UG/L	100
17)	2-BUTANONE	72	14.64	328	2773	19.46	UG/L	100
24)	TRICHLOROETHENE	130	19.07	442	18334	14.37	UG/L 91%	79
27)	BENZENE	78	19.65	457	77845	20.31	UG/L 99%	100
~~29)~~	~~2-CHLOROETHYLVINYLETHER~~	~~63~~	~~21.32~~	~~508~~	~~246~~	~~.58~~	~~UG/L~~ 70 CWT	100
31)	*CHLOROBENZENE-D5 (IS)	117	27.06	648	130389	50.00	UG/L	100
32)	4-METHYL-2-PENTANONE	43	22.91	541	11241	12.20	UG/L	86
34)	TETRACHLOROETHENE	164	24.69	587	95742	84.25	UG/L	93
~~35)~~	~~1,1,2,2-TETRACHLOROETHANE~~	~~83~~	~~24.69~~	~~587~~	~~2674~~	~~2.88~~	~~UG/L~~ 90 CWT	100
36)	TOLUENE-D8 (SURR)	98	25.90	618	162231	47.95	UG/L 96	91
37)	TOLUENE	92	26.09	623	73285	30.75	UG/L 95%	96
38)	CHLOROBENZENE	112	27.18	651	450392	162.91	UG/L 90%	97
39)	ETHYLBENZENE	91	29.21	703	121401	23.60	UG/L	95
40)	4-BROMOFLUOROBENZENE(SURR)	95	31.65	766	83836	47.38	UG/L 94	100
42)	TOTAL XYLENES	91	33.63	817	93235	22.13	UG/L	100
42)	TOTAL XYLENES	91	34.57	841	135287	32.12	UG/L	100
43)	1,3-DICHLOROBENZENE	146	39.19	960	12214	12214.00	NO CALIB	100
43)	1,3-DICHLOROBENZENE	146	40.00	981	65214	65214.00	NO CALIB	100
44)	1,2-DICLHLOROBENZENE	146	39.19	960	12214	12214.00	NO CALIB	100
44)	1,2-DICLHLOROBENZENE	146	40.00	981	65214	65214.00	NO CALIB	100
45)	1,4-DICHLOROBENZENE	146	39.19	960	12214	12214.00	NO CALIB	100
45)	1,4-DICHLOROBENZENE	146	40.00	981	65214	65214.00	NO CALIB	100

* Compound is ISTD

DC-P5-55MS

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ecology and environment, inc.

Case No: IL-4906, 4928, 4971, 4989.

Lab Sample ID No: 1034 MS

QC Report No:

Sample Matrix: Soil

Contract No: IL-3140

Data Release Authorized By: [signature]

Date Sample Received: 2-14-87

Volatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 2-20-87

Conc/Dil Factor: 1 pH 8.3

Percent Moisture: (Not Decanted) 19

Concentrations reported "as received"

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	10u
74-83-9	Bromomethane	10u
75-01-4	Vinyl Chloride	10u
75-00-3	Chloroethane	10u
75-09-2	Methylene Chloride	6 B
67-64-1	Acetone	320 B
75-15-0	Carbon Disulfide	5u
75-35-4	1, 1-Dichloroethene	SPIKE
75-34-3	1, 1-Dichloroethane	5u
156-60-5	Trans-1, 2-Dichloroethene	5u
67-66-3	Chloroform	5u
107-06-2	1, 2-Dichloroethane	5u
78-93-3	2-Butanone	25 B
71-55-6	1, 1, 1-Trichloroethane	5u
56-23-5	Carbon Tetrachloride	5u
108-05-4	Vinyl Acetate	10u
75-27-4	Bromodichloromethane	5u

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	5u
10061-02-6	Trans-1, 3-Dichloropropene	5u
79-01-6	Trichloroethene	SPIKE
124-48-1	Dibromochloromethane	5u
79-00-5	1, 1, 2-Trichloroethane	5u
71-43-2	Benzene	SPIKE
10061-01-5	cis-1, 3-Dichloropropene	5u
110-75-8	2-Chloroethylvinylether	10u
75-25-2	Bromoform	5u
108-10-1	4-Methyl-2-Pentanone	10u
591-78-6	2-Hexanone	10u
127-18-4	Tetrachloroethene	5u
79-34-5	1, 1, 2, 2-Tetrachloroethane	5u
108-88-3	Toluene	SPIKE
108-90-7	Chlorobenzene	SPIKE
100-41-4	Ethylbenzene	5u
100-42-5	Styrene	5u
	Total Xylenes	5u

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g., 10U) based on necessary concentration/dilution action. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g., 10J). If limit of detection is 10 ug/l and a

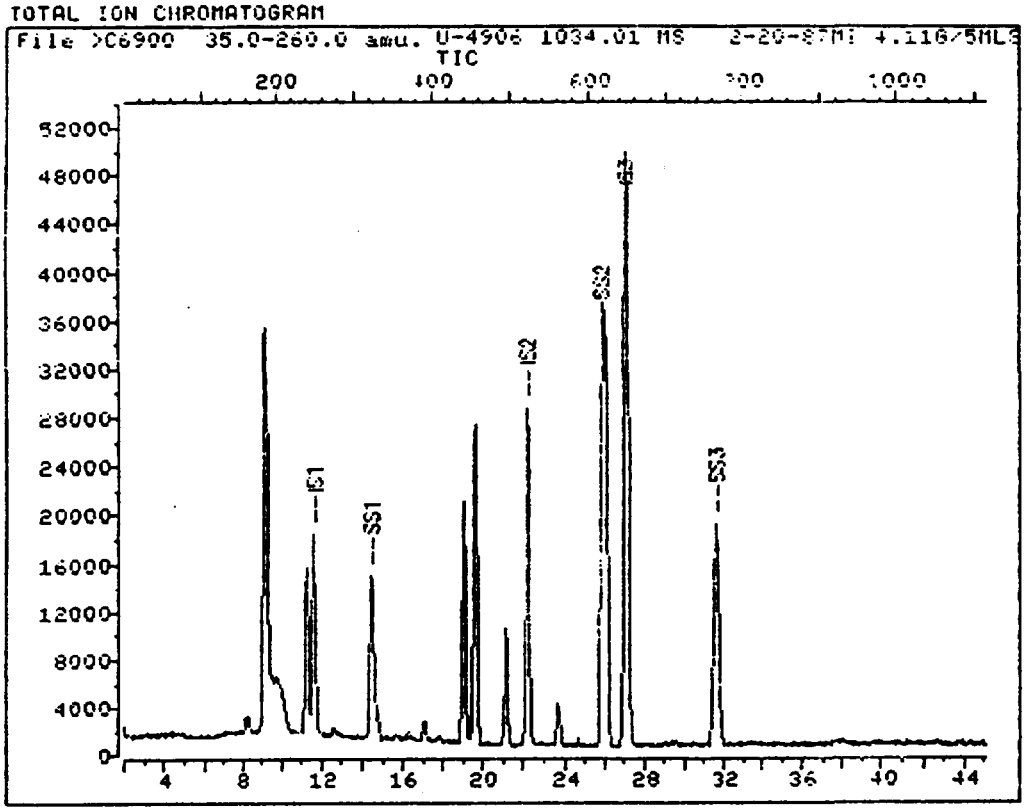
C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/ul in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

E This flag indicates an approximate concentration. The amount detected in the

TOTAL ION CHROMATOGRAM

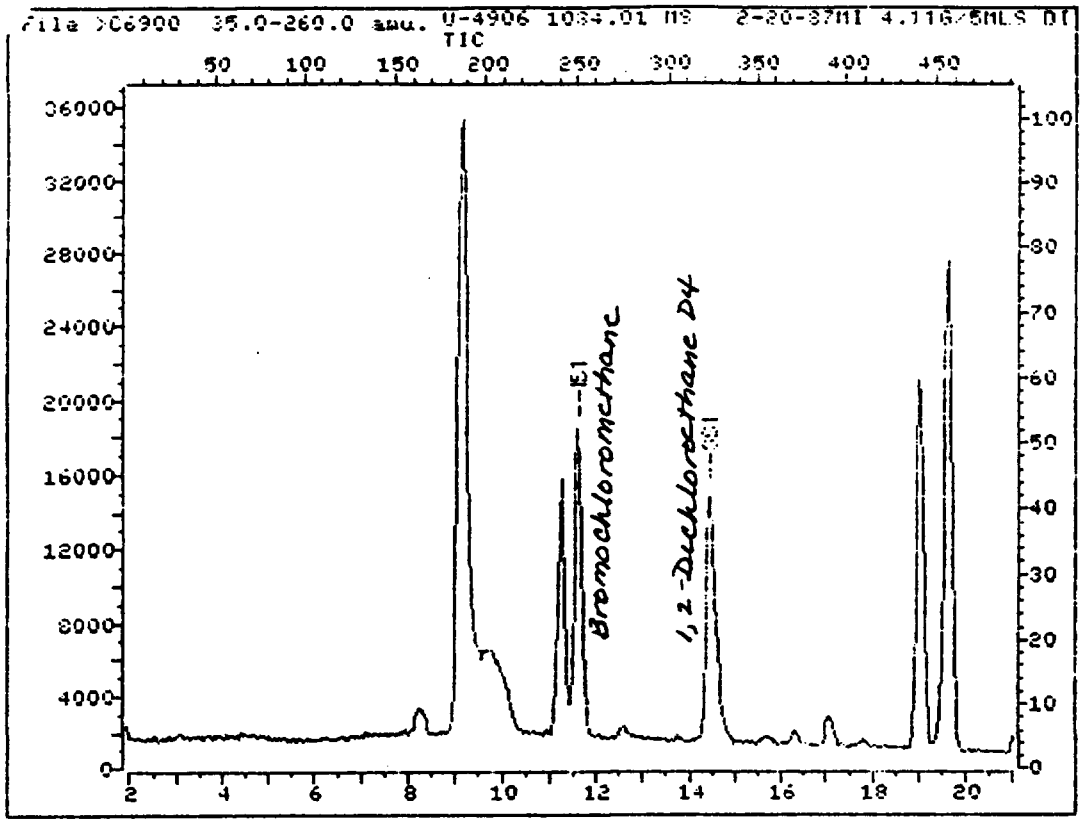


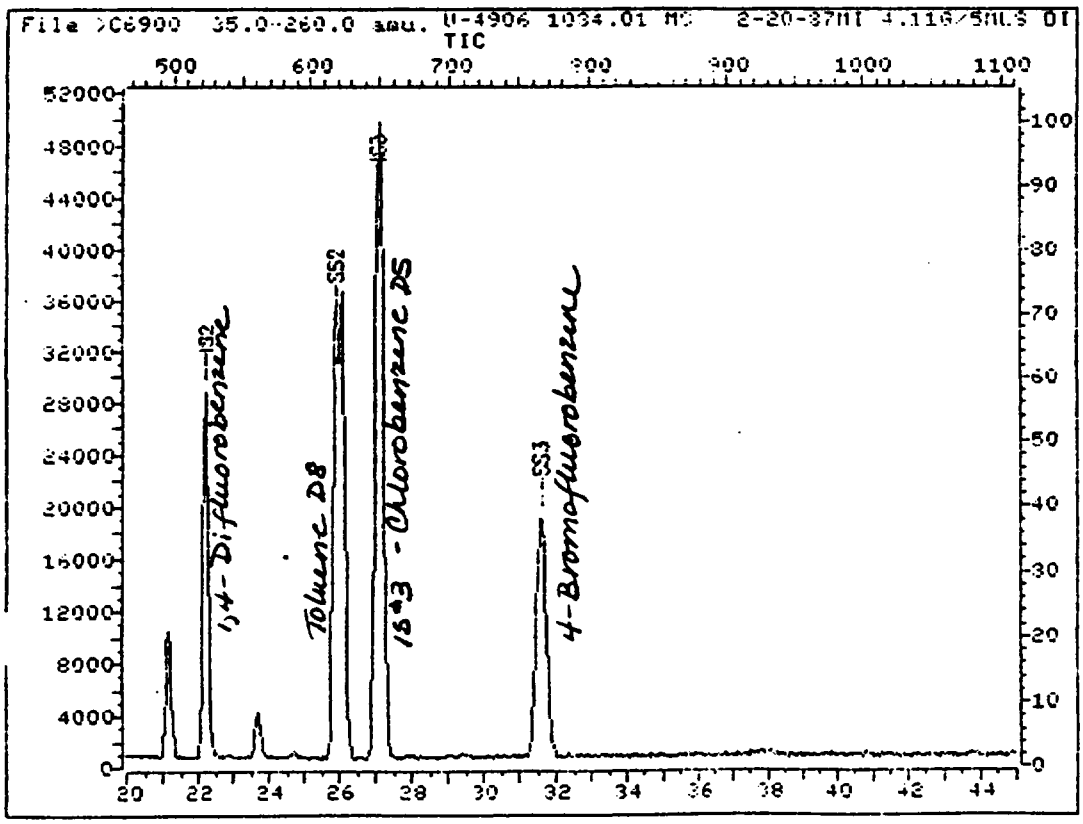
Data File: >C6900::D3
Name: U-4906 1034.01 MS DC-P5-55-MS
Misc: 2-20-87MI 4.11G/5MLS DI + 10UL IS/SS/MS

Id File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CHL.)
Last Calibration: 870220 12:09

Operator ID: USER8
Quant Time: 870220 18:34
Injected at: 870220 17:48

DC-P5-55 MS


File >C6900 35.0-260.0 amu. U-4906 1034.01 MS 2-20-87MI 4.116/5MLS DI
TIC
Bromochloromethane
1,2-Dichloroethane D4


File >C6900 35.0-260.0 amu. U-4906 1034.01 MS 2-20-87MI 4.116/5MLS DI
TIC
1,4-Difluorobenzene
Toluene D8
1,4-Chlorobenzene D5
4-Bromofluorobenzene

QUANT REPORT

Operator ID: USER8 Quant Rev: 4 Quant Time: 870220 18:34
Output File: ^C6900::Q2 Injected at: 870220 17:48
Data File: >C6900::D3 Dilution Factor: 1.00
Name: U-4906 1034.01 MS DC-P5-55 MS
Misc: 2-20-87MI 4.11G/5MLS DI + 10UL IS/SS/MS

ID File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 870220 12:09

	Compound		R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	(IS) 128	11.61	250	22152	250.00	NGS	100
6)	METHYLENE CHLORIDE	84	8.23	163	3769	24.49	NGS	100
7)	ACETONE	43	9.16	187	362418	1322.09	NGS	100
7)	ACETONE	43	9.74	202	88394	322.46	NGS	100
10)	1,1-DICHLOROETHENE	61	11.26	241	55732	220.26	NGS 88%	92 ✓
15)	1,2-DICHLOROETHANE-D4	(SURR) 65	14.44	323	56555	185.83	NGS 74	84 ✓
16)	*1,4-DIFLUOROBENZENE	(IS) 114	22.20	523	115618	250.00	NGS	100
17)	2-BUTANONE	72	14.63	329	6172	104.26	NGS	100
24)	TRICHLOROETHENE	130	19.02	441	33786	143.56	NGS 57%	85
27)	BENZENE	78	19.64	457	115141	182.14	NGS 73%	100
31)	*CHLOROBENZENE-D5	(IS) 117	27.05	648	101324	250.00	NGS	100
~~33)~~	~~2-HEXANONE~~	~~43~~	~~23.71~~	~~562~~	~~6737~~	~~16.94~~	~~NGS~~ 76 cw	100
36)	TOLUENE-D8	(SURR) 98	25.88	618	127719	220.13	NGS 88	98 ✓
37)	TOLUENE	92	26.08	623	81628	187.15	NGS 75%	96
38)	CHLOROBENZENE	112	27.17	651	102687	192.87	NGS 77%	98
40)	4-BROMOFLUOROBENZENE	(SURR) 95	31.60	765	65085	197.03	NGS 79	100 ✓

* Compound is ISTD

Laboratory Name Ecology & Environment, Inc

Case No IL-3140

Sample Number
DC-I12-57 MS

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: ~~Low~~ Medium (Circle One)

Date Extracted/Prepared: 02-16-87

Date Analyzed: 03-18-87

Conc/Dil Factor: 2

Percent Moisture (Decanted) 11

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

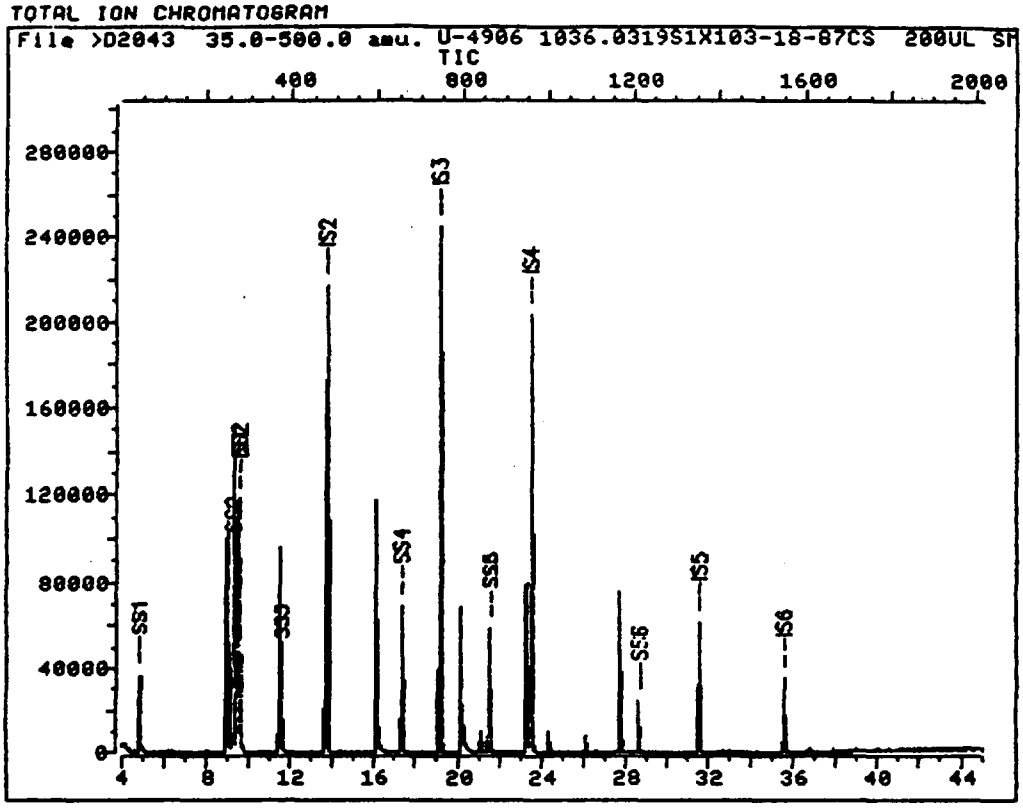
Concentrations reported "as received" basis

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	SPIKE
111-44-4	bis(-2-Chloroethyl)Ether	3300u
95-57-8	2-Chlorophenol	SPIKE
541-73-1	1 3-Dichlorobenzene	3300u
106-46-7	1. 4-Dichlorobenzene	SPIKE
100-51-6	Benzyl Alcohol	3300u
95-50-1	1. 2-Dichlorobenzene	3300u
95-48-7	2-Methylphenol	3300u
39638-32-9	bis(2-chloroisopropyl)Ether	3300u
106-44-5	4-Methylphenol	3300u
621-64-7	N-Nitroso-Di-n-Propylamine	SPIKE
67-72-1	Hexachloroethane	3300u
98-95-3	Nitrobenzene	3300u
78-59-1	Isophorone	3300u
88-75-5	2-Nitrophenol	3300u
105-67-9	2. 4-Dimethylphenol	3300u
65-85-0	Benzoic Acid	16000u
111-91-1	bis(-2-Chloroethoxy)Methane	3300u
120-83-2	2. 4-Dichlorophenol	3300u
120-82-1	1 2. 4-Trichlorobenzene	SPIKE
91-20-3	Naphthalene	3300u
106-47-8	4-Chloroaniline	3300u
87-68-3	Hexachlorobutadiene	3300u
59-50-7	4-Chloro-3-Methylphenol	SPIKE
91-57-6	2-Methylnaphthalene	3300u
77-47-4	Hexachlorocyclopentadiene	3300u
88-06-2	2 4. 6-Trichlorophenol	3300u
95-95-4	2. 4. 5-Trichlorophenol	16000u
91-58-7	2-Chloronaphthalene	3300u
88-74-4	2-Nitroaniline	16000u
131-11-3	Dimethyl Phthalate	3300u
208-96-8	Acenaphthylene	3300u
99-09-2	3-Nitroaniline	16000u

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	SPIKE
51-28-5	2. 4-Dinitrophenol	16000u
100-02-7	4-Nitrophenol	SPIKE
132-64 9	Dibenzofuran	3300u
121-14-2	2 4-Dinitrotoluene	SPIKE
606-20-2	2 6-Dinitrotoluene	3300u
84-66-2	Diethylphthalate	3300u
7005-72-3	4-Chlorophenyl-phenylether	3300u
86-73-7	Fluorene	3300u
100-01-6	4-Nitroaniline	16000u
534-52-1	4. 6-Dinitro-2-Methylphenol	16000u
86-30-6	N-Nitrosodiphenylamine (1)	3300u
101-55-3	4-Bromophenyl-phenylether	3300u
118-74-1	Hexachlorobenzene	3300u
87-86-5	Pentachlorophenol	SPIKE
85-01-8	Phenanthrene	3300u
120-12-7	Anthracene	3300u
84-74-2	Di-n-Butylphthalate	1200 BJ
206-44-0	Fluoranthene	3300u
129-00-0	Pyrene	SPIKE
95-68-7	Butylbenzylphthalate	3300u
91-94-1	3 3'-Dichlorobenzidine	6600u
56-55-3	Benzo(a)Anthracene	3300u
117-81-7	bis(2-Ethylhexyl)Phthalate	3300u
218-01-9	Chrysene	3300u
117-84-0	Di-n-Octyl Phthalate	3300u
205-99-2	Benzo(b)Fluoranthene	3300u
207-08-9	Benzo(k)Fluoranthene	3300u
50-32-8	Benzo(a)Pyrene	3300u
193-39 5	Indeno(1, 2, 3-cd)Pyrene	3300u
53-70-3	Dibenz(a, h)Anthracene	3300u
191-24 2	Benzo(g, h, i)Perylene	3300u

(1)-Cannot be separated from diphenylamine

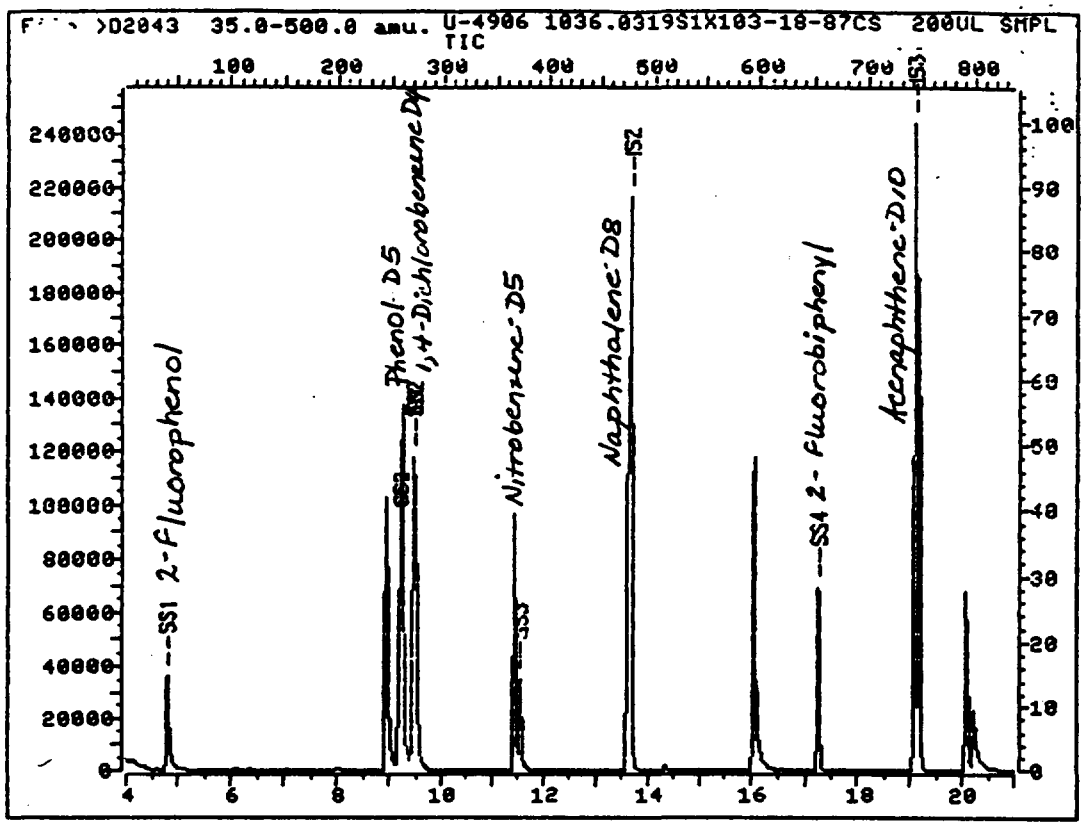
TOTAL ION CHROMATOGRAM



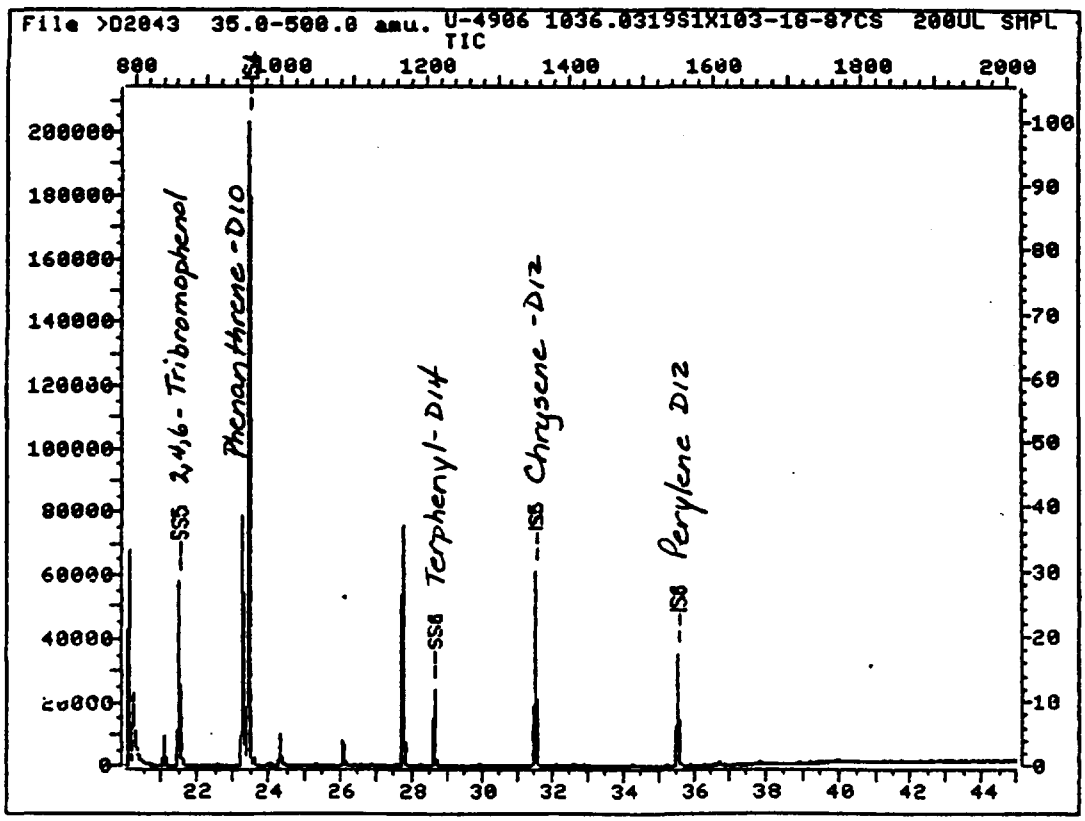
Data File: >D2043::D1
Name: U-4906 1036.0319S1X1 DC-112-57 MS
Misc: 03-18-87CS 200UL SMPL + 200UL A/P + 4UL IS (2X) BTL# 2

Id File: BNADR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870318 14:12

Operator ID: USER8
Quant Time: 870318 16:44
Injected at: 870318 15:56


File >D2043 35.0-500.0 amu. U-4906 1036.0319S1X103-18-87CS 200UL SMPL
TIC
SS1 2-Fluorophenol
Phenol-D5
1,4-Dichlorobenzene-D4
Nitrobenzene-D5
Naphthalene-D8
IS2
SS4 2-Fluorobiphenyl
Acenaphthene-D10
IS3

DC-I12-57MS


File >D2043 35.0-500.0 amu. U-4906 1036.0319S1X103-18-87CS 200UL SMPL
TIC
SS5 2,4,6-Tribromophenol
Phenanthrene-D10
SS6 Terphenyl-D14
IS5 Chrysene-D12
IS6 Perylene D12

QUANT REPORT

Operator ID: USER8 Quant Rev: 4 Quant Time: 870318 16:44
Output File: ^D2043::Q2 Injected at: 870318 15:56
Data File: >D2043::D1 Dilution Factor: 2.00
Name: U-4906 1036.0319S1X1 DC-I12-57MS
Misc: 03-18-87CS 200UL SMPL + 200UL A/P + 4UL IS (2X) BTL# 2

ID File: BNADR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870318 14:12

	Compound		R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	9.49	271	67718	40.00 UG/L	87
2)	PHENOL-D5	(SURR)	99	9.23	258	55699	45.64 UG/L 47 ✓	99
2)	PHENOL-D5	(SURR)	99	9.49	271	1301	1.07 UG/L	90
5)	2-FLUOROPHENOL	(SURR)	112	4.79	40	37995	48.46 UG/L 48 ✓	86
6)	PHENOL		94	9.27	260	113569	83.36 UG/L 42%	58
7)	~~ANILINE~~		~~93~~	~~8.96~~	~~245~~	~~2013~~	~~2.76 UG/L~~ CW	26
9)	~~1,3-DICHLOROBENZENE~~		~~146~~	~~9.53~~	~~273~~	~~49241~~	~~42.58 UG/L~~	99
10)	1,4-DICHLOROBENZENE		146	9.53	273	49241	39.58 UG/L 40%	99
15)	2-CHLOROPHENOL		128	8.94	244	93399	92.94 UG/L 46%	95
17)	N-NITROSO-DI-N-PROPYLAMINE		70	11.45	367	54558	47.24 UG/L 47%	90
17)	~~N-NITROSO-DI-N-PROPYLAMINE~~		~~70~~	~~11.55~~	~~372~~	~~7986~~	~~6.91 UG/L~~ CW	95
19)	*NAPHTHALENE-D8	(IS)	136	13.69	477	245211	40.00 UG/L	100
20)	NITROBENZENE-D5	(SURR)	82	11.55	372	32260	27.00 UG/L 54 ✓	95
28)	1,2,4-TRICHLOROBENZENE		180	13.63	474	50274	46.50 UG/L 47%	100
32)	4-CHLORO-3-METHYLPHENOL		107	16.09	595	80475	78.78 UG/L 39%	96
33)	~~2-METHYLNAPHTHALENE~~		~~142~~	~~16.07~~	~~594~~	~~60678~~	~~30.32 UG/L~~ CW	19
34)	*ACENAPHTHENE-D10	(IS)	162	19.11	743	154883	40.00 UG/L	95
38)	2-FLUOROBIPHENYL	(SURR)	172	17.27	653	65682	27.84 UG/L 56 ✓	96
41)	~~DIMETHYL PHTHALATE~~		~~163~~	~~19.11~~	~~743~~	~~29617~~	~~11.76 UG/L~~ CW	100
47)	ACENAPHTHENE		153	19.19	747	110413	51.19 UG/L 51%	95
48)	2,4,6-TRIBROMOPHENOL	(SURR)	330	21.53	862	18613	53.11 UG/L 53 ✓	97
50)	4-NITROPHENOL		139	20.21	797	17053	60.73 UG/L 30%	100
51)	2,4-DINITROTOLUENE		165	20.09	791	32971	55.24 UG/L 55%	100
52)	~~2,6-DINITROTOLUENE~~		~~165~~	~~19.11~~	~~743~~	~~20736~~	~~34.65 UG/L~~ CW	100
55)	*PHENANTHRENE-D10	(IS)	188	23.49	958	224830	40.00 UG/L	94
60)	PENTACHLOROPHENOL		266	23.28	948	37973	90.40 UG/L 45%	100
63)	DI-N-BUTYLPHTHALATE		149	26.07	1085	11108	3.65 UG/L	99
65)	*CHRYSENE-D12	(IS)	240	31.53	1353	62153	40.00 UG/L	100
67)	PYRENE		202	27.75	1167	87179	54.89 UG/L 54% ✓	93
68)	TERPHENYL-D14	(SURR)	244	28.64	1211	24723	29.83 UG/L 60	100
74)	*PERYLENE-D12	(IS)	264	35.55	1550	39438	40.00 UG/L	100

* Compound is ISTD

Laboratory Name ecology and environment, inc.

Case No 11-4906, 4928, 4971, 4989

Sample Number
DC-I12-57 MS

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 2-16-87

Date Analyzed 2-24-87

Conc/Dil Factor 2

Percent Moisture (decanted) 11

GPC Cleanup ☐Yes ☑No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or (ug/Kg) (Circle One)
319-84-6	Alpha-BHC	160 U
319-85-7	Beta-BHC	160 U
319-86-8	Delta-BHC	160 U
58-89-9	Gamma-BHC (Lindane)	264 S
76-44-8	Heptachlor	283 S
309-00-2	Aldrin	281 S
1024-57-3	Heptachlor Epoxide	160 U
959-98-8	Endosulfan I	160 U
60-57-1	Dieldrin	631 S
72-55-9	4,4'-DDE	320 U
72-20-8	Endrin	710 S
33213-65-9	Endosulfan II	320 U
72-54-8	4,4'-DDD	320 U
1031-07-8	Endosulfan Sulfate	320 U
50-29-3	4,4'-DDT	742 S
72-43-5	Methoxychlor	1600 U
53494-70-5	Endrin Ketone	320 U
57-74-9	Chlordane	1600 U
8001-35-2	Toxaphene	2200 U
12674-11-2	Aroclor-1016	1600 U
11104-28-2	Aroclor-1221	1600 U
11141-16-5	Aroclor-1232	1600 U
53469-21-9	Aroclor-1242	1600 U
12672-29-6	Aroclor-1248	1600 U
11097-69-1	Aroclor-1254	3200 U
11096-82-5	Aroclor-1260	3200 U

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s _____ or W_s 3 V_t 1000 V_i 4

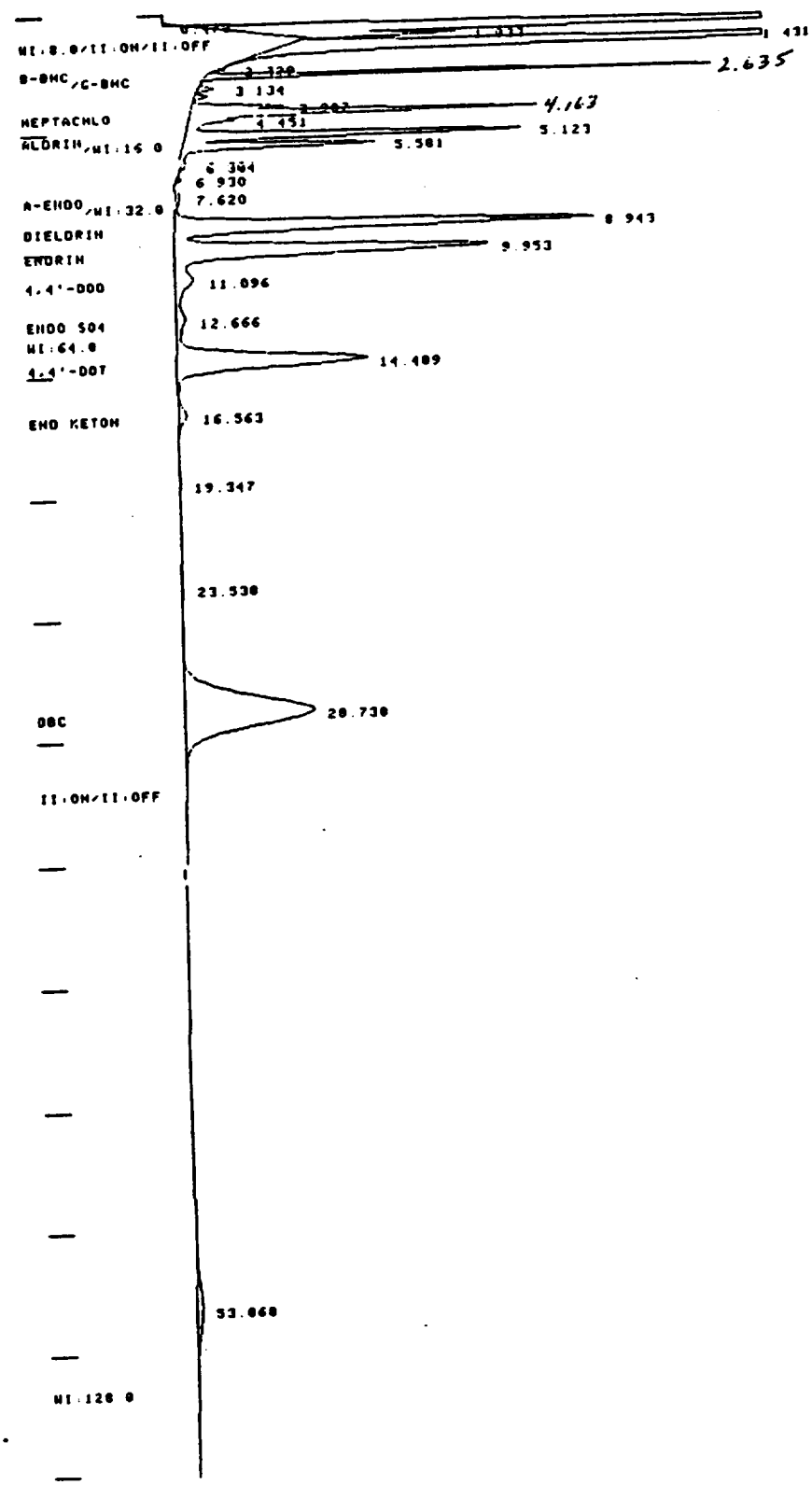
447

S = Spiked Compound

Form 1

7 85
491095

CHART SPEED 0.5 CM/MIN
ATTEN: 8 ZERO: 10% 5 MIN/TICK



448

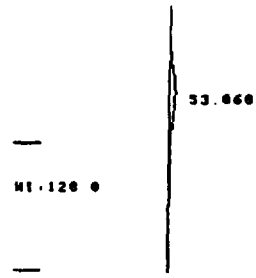
DC-I12-57MS

RECALCULATE ON FILE: DC1195

CHANNEL: 1A - 1 TITLE: RUN# 23 4:32 24 FEB 87

SAMPLE: 1036 MS METHOD: CEPA CALCULATION: ES - ANALYS

PEAK	PEAK	RESULT	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)



RECALCULATE ON FILE: OC1195

CHANNEL: 1A - 1 TITLE: RUN# 23 4:32 24 FEB 87 DC-I12-57MS

SAMPLE: 1036 MS METHOD: CEPA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/ng	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE		W1/2 (SEC)
1		0.0000	1.289		48804	BV	?	4.31
2		0.0000	1.431		11123381	VB		5.56
3	G-BHC	264.4176	2.635	0.035	487256	VB		6.75
4		0.0000	3.907		102340	VV	?	9.69
5	HEPTACHLO	283.0696	4.163	0.043	476014	VV		10.44
6		0.0000	4.451		88684	VV	?	15.75
7	ALDRIN	280.5166	5.123	0.063	547884	VV		12.31
8		0.0000	5.581		340366	VV		12.06
9	DIELDRIN	631.2734	8.943	0.133	1177749	VV		21.75
10	~~[illegible]~~ ENDRIN	~~[illegible]~~ 710	9.953	-0.057	1006365	VV		24.56
11	~~[illegible]~~	74.6987	11.096	0.086	113639	VV	?	52.44
12	~~[illegible]~~	49.4101	12.666	-0.114	66051	VV		50.50
13	4,4'-DDT	741.6177	14.409	0.219	878694	VV		34.63
14	~~[illegible]~~	22.0161	16.563	0.223	41935	T		37.56
15	DBC	949.0347	28.738	0.428	1371092	BB		81.88
16		0.0000	53.068		94112	BB		126.00

TOTALS: 3877.062 1.059 17964366

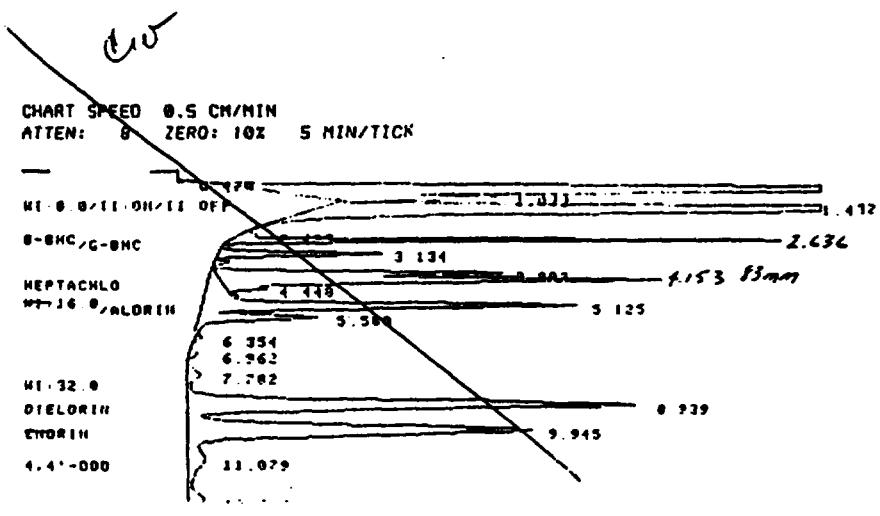
DETECTED PKS: 30 REJECTED PKS: 14

DIVISOR: 0.15000 MULTIPLIER: 2000.00000

NOISE: 11.4 OFFSET: 1

RACK: 2 VIAL: 8 INJ: 1

NOTES:
NOTEBOOK:259-115,116 ANALYST: RICHARD SAMSON
SECURE AREA: D JOB#:U-4872,4906
INST: VARIAN 6000# 2A ECD 10X1
COLUMN: 6' GLASS 4MM ID 100/120 SUPELCOPORT
LIQUID PHASE: 3% OV-1
CARRIER GAS: N2 @ 60 ML/MIN
DET: 300 C INJ: 220 C
200 C ISOTHERMAL 4 UL INJECTION



MATRIX SPIKE DUPLICATE DATA

1. FORM I OF NON-SPIKED COMPOUNDS
2. RAW DATA VOA, S-V, PESTICIDES
   (a) RIC AND QUANT REPORTS (GC/MS)
   (b) CHROMATOGRAMS AND LISTING (GC)

DC-G8-70 MSD

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ecology and environment, inc.
Case No: IL-4906, 4928, 4971, 4989.
Lab Sample ID No: 1277 MSD
QC Report No:
Sample Matrix: Soil
Contract No. IL-3140
Data Release Authorized By: C Hoytowicz
Date Sample Received: 2-26-87

Volatile Compounds

Concentration: Low (Medium) (Circle One)

Date Extracted/Prepared:

Date Analyzed: 2-26-87

Conc/Dil Factor: 4 pH 7.4

Percent Moisture: (Not Decanted) 30

Concentrations reported "as received"

CAS Number		ug/l or (ug/Kg) (Circle One)
74-87-3	Chloromethane	4000u
74-83-9	Bromomethane	4000u
75-01-4	Vinyl Chloride	4000u
75-00-3	Chloroethane	4000u
75-09-2	Methylene Chloride	600 BJ
67-64-1	Acetone	7300 B
75-15-0	Carbon Disulfide	2000u
75-35-4	1, 1-Dichloroethene	SPIKE
75-34-3	1, 1-Dichloroethane	2000u
156-60-5	Trans-1, 2-Dichloroethene	220 J
67-66-3	Chloroform	2000u
107-06-2	1, 2-Dichloroethane	2000u
78-93-3	2-Butanone	12000
71-55-6	1, 1, 1-Trichloroethane	2000u
56-23-5	Carbon Tetrachloride	2000u
108-05-4	Vinyl Acetate	4000u
75-27-4	Bromodichloromethane	2000u

CAS Number		ug/l or (ug/Kg) (Circle One)
78-87-5	1, 2-Dichloropropane	2000u
10061-02-6	Trans-1, 3-Dichloropropene	2000u
79-01-6	Trichloroethene	SPIKE
124-48-1	Dibromochloromethane	2000u
79-00-5	1, 1, 2-Trichloroethane	2000u
71-43-2	Benzene	SPIKE
10061-01-5	cis-1, 3-Dichloropropene	2000u
110-75-8	2-Chloroethylvinylether	4000u
75-25-2	Bromoform	2000u
108-10-1	4-Methyl-2-Pentanone	5700
591-78-6	2-Hexanone	4000u
127-18-4	Tetrachloroethene	41,000
79-34-5	1, 1, 2, 2-Tetrachloroethane	2000u
108-88-3	Toluene	SPIKE
108-90-7	Chlorobenzene	SPIKE
100-41-4	Ethylbenzene	12000
100-42-5	Styrene	2000u
	Total Xylenes	34000

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g., 10U) based on necessary concentration/dilution action. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but

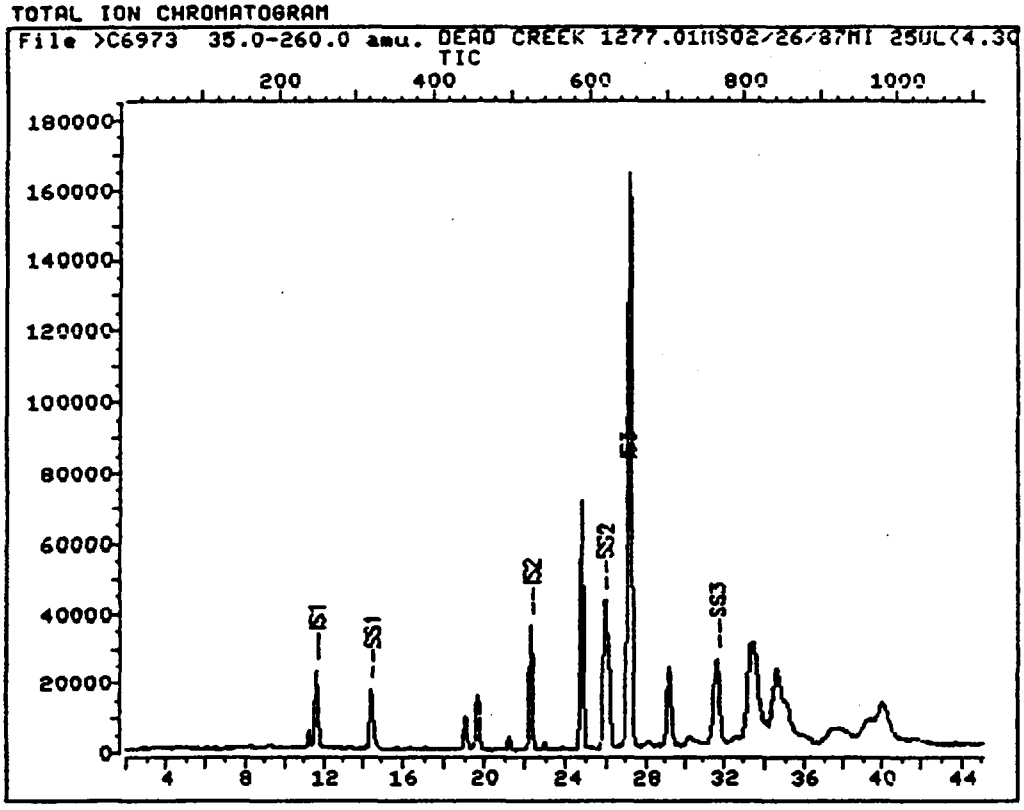
C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/ul in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

E This flag indicates an approximate concentration. The amount detected in the

TOTAL ION CHROMATOGRAM

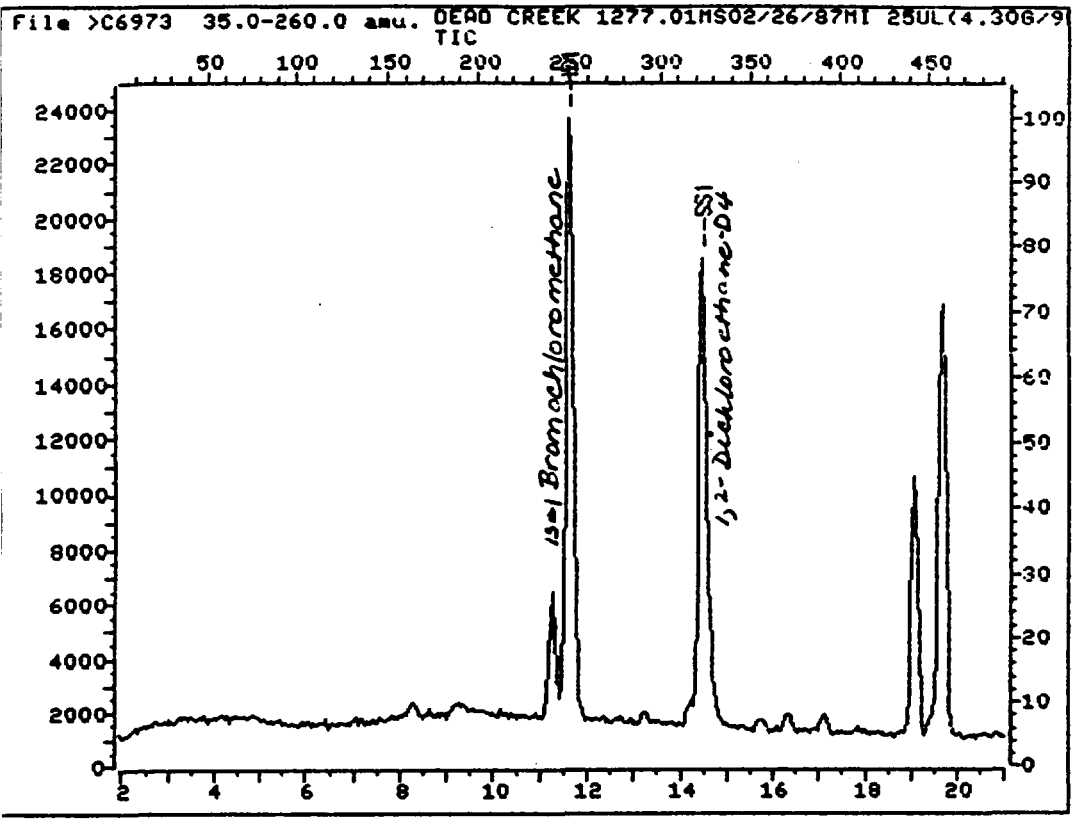


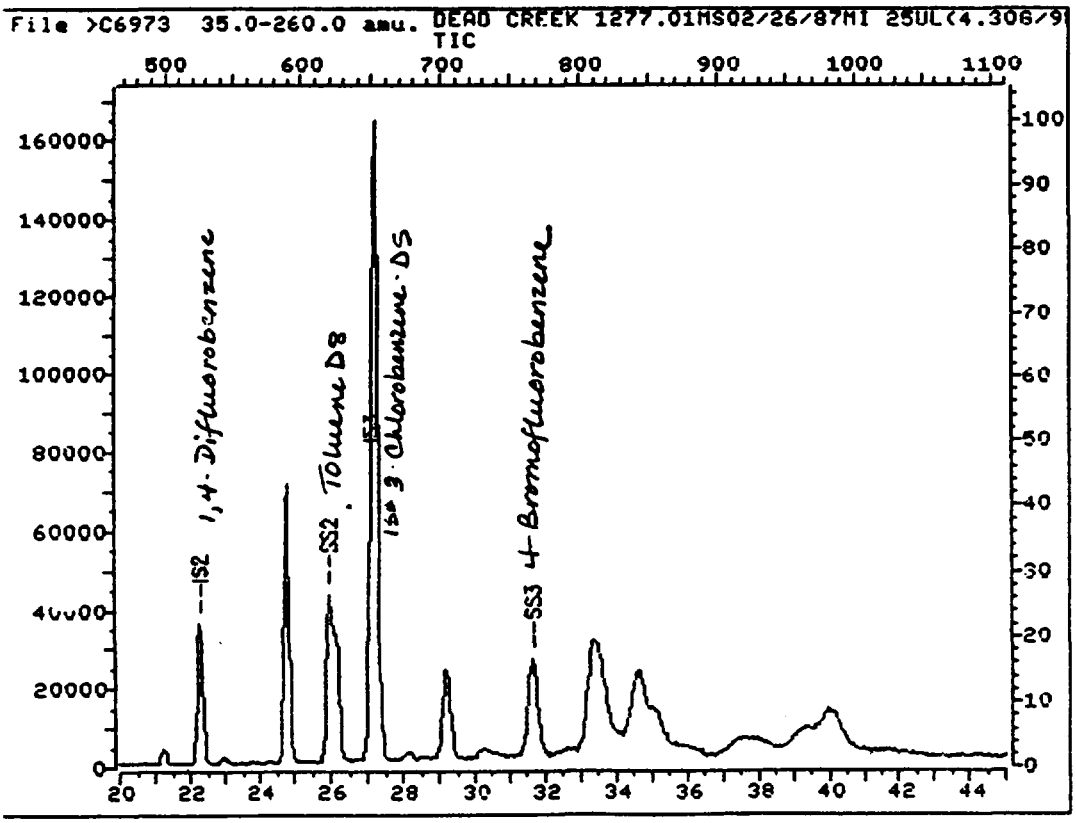
Data File: >C6973::D3
Name: DEAD CREEK 1277.01MSD-DC-G8-70 MSD
Misc: 02/26/87MI 25UL(4.30G/9ML MEOH/1ML MS) + 10UL IS/SS

Id File: VOACR::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 870226 14:59

Operator ID: USER8
Quant Time: 870227 00:01
Injected at: 870226 23:15

DC-G8-70MSD


File >C6973 35.0-260.0 amu. DEAD CREEK 1277.01MS02/26/87MI 25UL(4.306/9
TIC
Isa 1 Bromochloromethane
--SS1
1,2-Dichloroethane-D4


File >C6973 35.0-260.0 amu. DEAD CREEK 1277.01MS02/26/87MI 25UL(4.306/9
TIC
--IS2
1,4-Difluorobenzene
--SS2
Toluene D8
IS3
Isa 3 Chlorobenzene-D5
--SS3
4-Bromofluorobenzene

QUANT REPORT

Operator ID: USER8 Quant Rev: 4 Quant Time: 870227 00:01
Output File: ^C6973::Q2 Injected at: 870226 23:15
Data File: >C6973::D3 Dilution Factor: 1.00
Name: DEAD CREEK 1277.01MS D~ DC-G8-70 MSD
Misc: 02/26/87MI 25UL(4.30G/9ML MEOH/1ML MS) + 10UL IS/SS

ID File: VOACR::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 870226 14:59

	Compound		R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE (IS)	128	11.61	250	28849	50.00	UG/L	100
6)	METHYLENE CHLORIDE	84	8.27	164	1294	1.30	UG/L	100
7)	ACETONE	43	9.24	189	8057	15.68	UG/L	100
10)	1,1-DICHLOROETHENE	61	11.26	241	18854	10.29	UG/L	97
12)	TRANS-1,2-DICHLOROETHENE	96	13.28	293	444	.48	UG/L	84
15)	1,2-DICHLOROETHANE-D4(SURR)	65	14.48	324	70705	50.19	UG/L/80	82
16)	*1,4-DIFLUOROBENZENE (IS)	114	22.28	525	142658	50.00	UG/L	100
17)	2-BUTANONE	72	14.67	329	3322	26.00	UG/L	100
24)	TRICHLOROETHENE	130	19.06	442	16045	14.02	UG/L	83
27)	BENZENE	78	19.68	458	67362	19.61	UG/L	100
31)	*CHLOROBENZENE-D5 (IS)	117	27.09	649	123763	50.00	UG/L	100
32)	4-METHYL-2-PENTANONE	43	22.98	543	10799	12.34	UG/L	87
33)	~~2-HEXANONE~~	~~43~~	~~23.83~~	~~565~~	~~3834~~	~~5.86~~	~~UG/L~~ CW	100
34)	TETRACHLOROETHENE	164	24.80	590	95144	88.21	UG/L	90
36)	TOLUENE-D8 (SURR)	98	25.97	620	151587	47.20	UG/L 94	95
37)	TOLUENE	92	26.16	625	68203	30.15	UG/L	97
38)	CHLOROBENZENE	112	27.21	652	457878	174.48	UG/L	98
39)	ETHYLBENZENE	91	29.19	703	126480	25.90	UG/L	97
40)	4-BROMOFLUOROBENZENE(SURR)	95	31.68	767	84064	50.05	UG/L/50	100
42)	TOTAL XYLENES	91	33.58	816	113310	28.34	UG/L	100
42)	TOTAL XYLENES	91	34.63	843	175548	43.91	UG/L	100
43)	1,3-DICHLOROBENZENE	146	39.29	963	17487	17487.00	NO CALIB	100
43)	1,3-DICHLOROBENZENE	146	39.99	981	7946	7946.00	NO CALIB	100
44)	1,2-DICLHLOROBENZENE	146	39.29	963	17487	17487.00	NO CALIB	100
44)	1,2-DICLHLOROBENZENE	146	39.99	981	7946	7946.00	NO CALIB	100
45)	1,4-DICHLOROBENZENE	146	39.29	963	17487	17487.00	NO CALIB	100
45)	1,4-DICHLOROBENZENE	146	39.99	981	7946	7946.00	NO CALIB	100

* Compound is ISTD

DC-P5-55 MSD

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ecology and environment, inc.
Case No: U-4906, 4928, 4971, 4989.
Lab Sample ID No: 1034 MSD
QC Report No:
Sample Matrix: Soil
Contract No: IL-3140
Data Release Authorized By: C Hoytowicz
Date Sample Received: 2-14-87

Volatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 2-20-87

Conc/Dil Factor: 1 pH 8.3

Percent Moisture: (Not Decanted) 19

Concentrations reported "as received"

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	10u
74-83-9	Bromomethane	10u
75-01-4	Vinyl Chloride	10u
75-00-3	Chloroethane	10u
75-09-2	Methylene Chloride	5 B
67-64-1	Acetone	300 B
75-15-0	Carbon Disulfide	5u
75-35-4	1, 1-Dichloroethene	SPIKE
75-34-3	1, 1-Dichloroethane	5u
156-60-5	Trans-1, 2-Dichloroethene	5u
67-66-3	Chloroform	5u
107-06-2	1, 2-Dichloroethane	5u
78-93-3	2-Butanone	23 B
71-55-6	1, 1, 1-Trichloroethane	5u
56-23-5	Carbon Tetrachloride	5u
108-05-4	Vinyl Acetate	10u
75-27-4	Bromodichloromethane	5u

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	5u
10061-02-6	Trans-1, 3-Dichloropropene	5u
79-01-6	Trichloroethene	SPIKE
124-48-1	Dibromochloromethane	5u
79-00-5	1, 1, 2-Trichloroethane	5u
71-43-2	Benzene	SPIKE
10061-01-5	cis-1, 3-Dichloropropene	5u
110-75-8	2-Chloroethylvinylether	10u
75-25-2	Bromoform	5u
108-10-1	4-Methyl-2-Pentanone	10u
591-78-6	2-Hexanone	10u
127-18-4	Tetrachloroethene	5u
79-34-5	1, 1, 2, 2-Tetrachloroethane	5u
108-88-3	Toluene	SPIKE
108-90-7	Chlorobenzene	SPIKE
100-41-4	Ethylbenzene	5u
100-42-5	Styrene	5u
	Total Xylenes	5u

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g., 10U) based on necessary concentration/dilution action. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g., 10J). If limit of detection is 10 µg/l and a

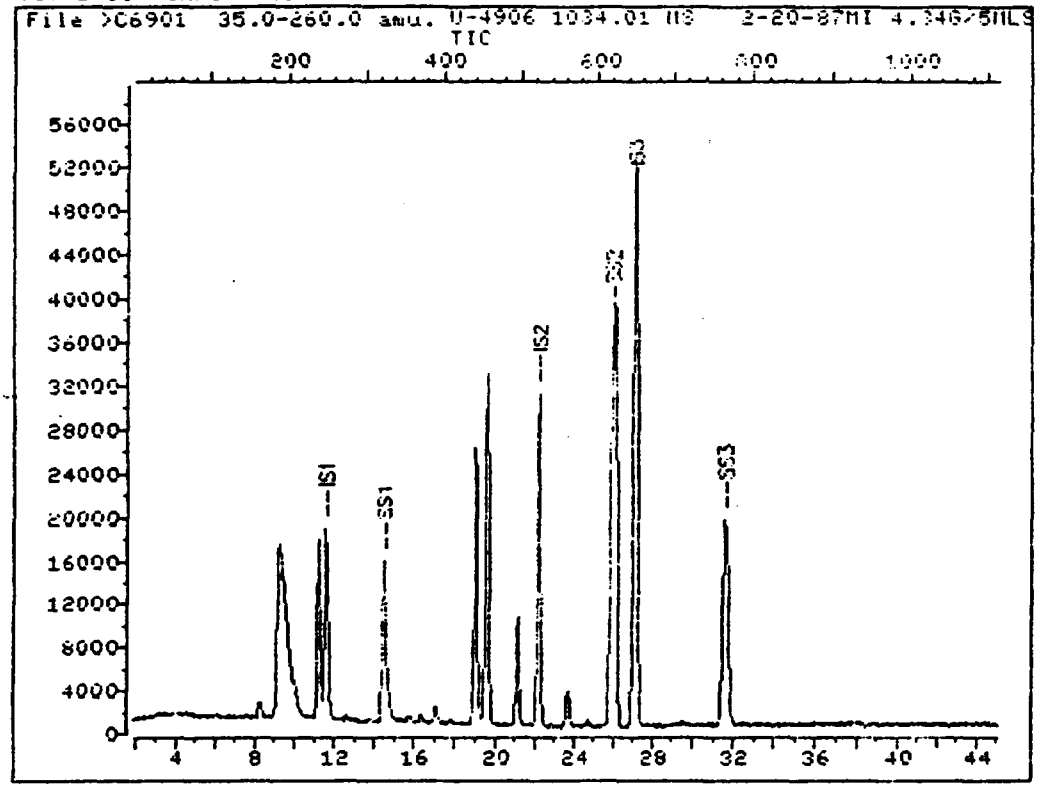
C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/ul in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

E This flag indicates an approximate concentration. The amount detected in the analysis exceeds the

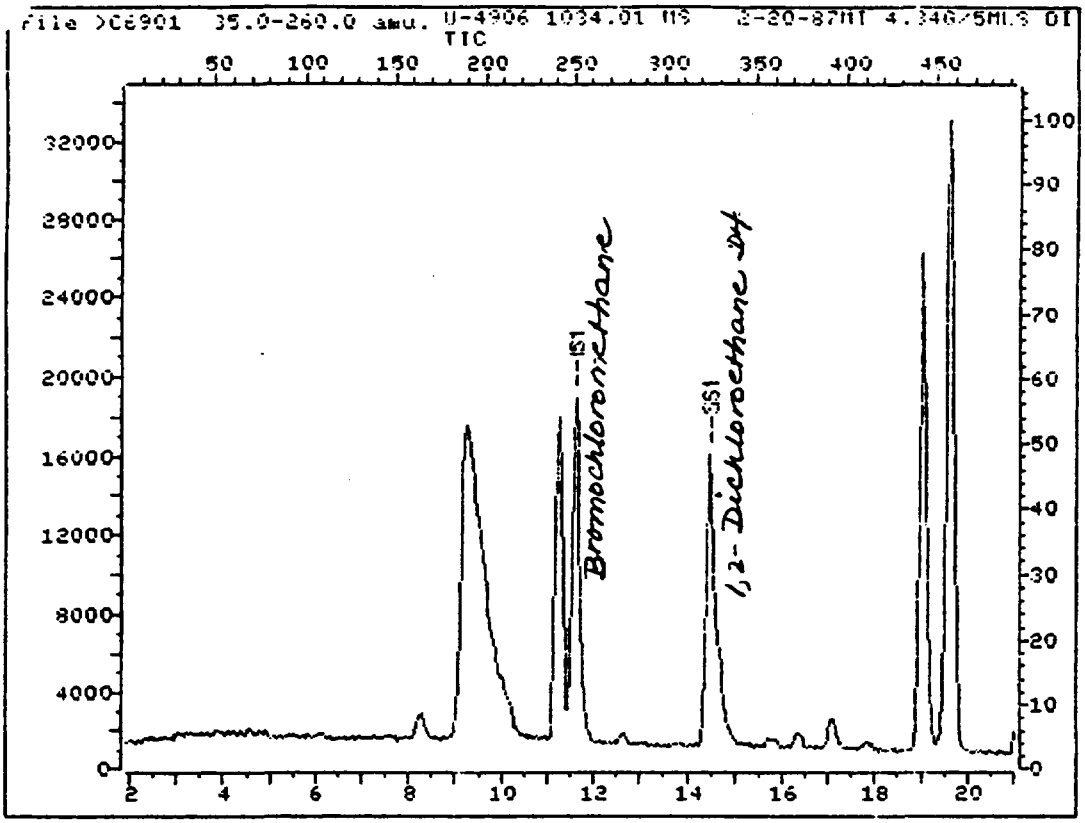
TOTAL ION CHROMATOGRAM



Data File: >C6901::D3
Name: U-4906 1034.01 MS DC-P5-55 MSD
Misc: 2-20-87MI 4.34G/5MLS DI + 10UL IS/SS/MS

Id File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 870220 12:09

Operator ID: USER8
Quant Time: 870220 19:25
Injected at: 870220 18:40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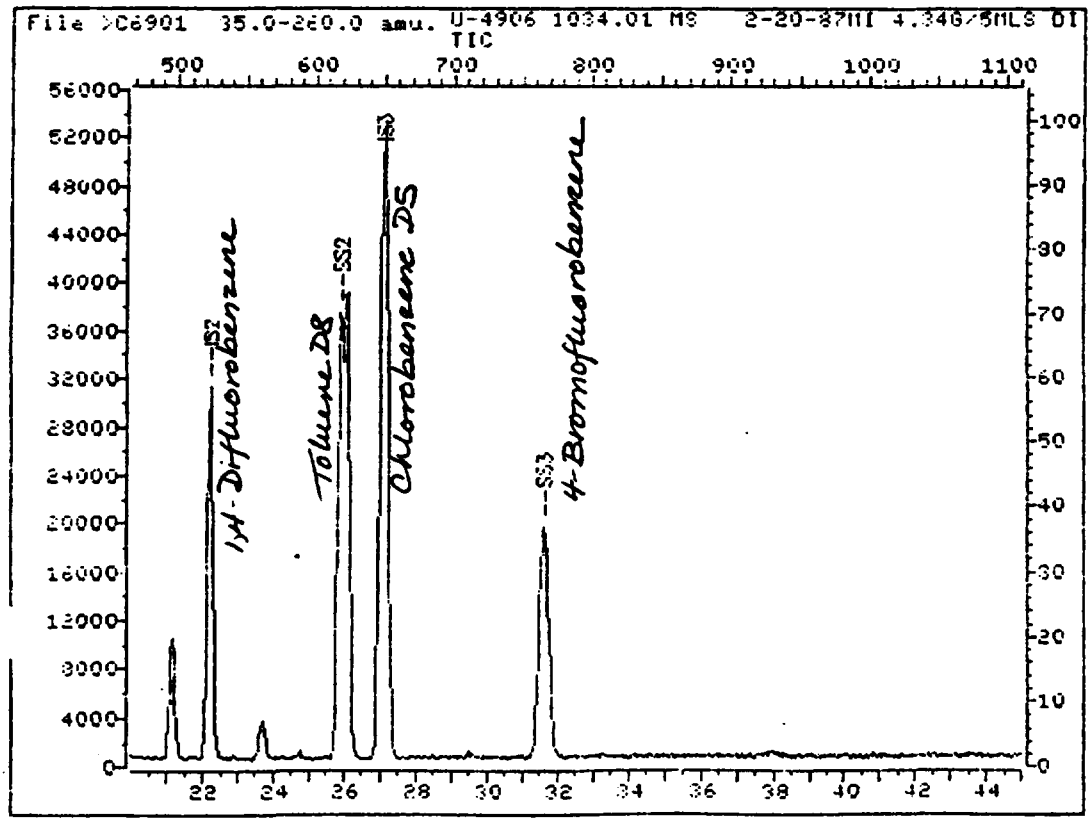
TIC
IS1
Bromochloromethane
SS1
1,2-Dichloroethane D4

DC-P5-55 MSD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TIC
IS2
1,4-Difluorobenzene
SS2
Toluene D8
IS3
Chlorobenzene D5
SS3
4-Bromofluorobenzene

QUANT REPORT

Operator ID: USER8 Quant Rev: 4 Quant Time: 870220 19:26
Output File: ^C6901::02 Injected at: 870220 18:40
Data File: >C6901::03 Dilution Factor: 1.00
Name: U-4906 1034.01 MS DC-P5-55 MSD
Misc: 2-20-87MI 4.34G/5MLS DI + 10UL IS/SS/MS

ID File: VOACPS::02
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 870220 12:09

	Compound		R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	(IS)	128	11.62	251	24806	250.00 NGS	100
6)	METHYLENE CHLORIDE		84	8.24	164	4048	23.48 NGS	100
7)	ACETONE		43	9.25	190	395211	1287.47 NGS	100
10)	1,1-DICHLOROETHENE		61	11.27	242	65619	231.59 NGS 92%	96
15)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.49	325	67271	197.39 NGS 79	83
16)	*1,4-DIFLUOROBENZENE	(IS)	114	22.22	524	125390	250.00 NGS	100
17)	2-BUTANONE		72	14.69	330	6538	101.84 NGS	100
24)	TRICHLOROETHENE		130	19.04	442	43029	168.59 NGS 68%	83
27)	BENZENE		78	19.62	457	140128	204.39 NGS 82%	100
28)	~~CIS-1,3-DICHLOROPROPENE~~		~~75~~	~~19.62~~	~~457~~	~~2852~~	~~11.44 NGS~~ NO CW	100
31)	*CHLOROBENZENE-D5	(IS)	117	27.07	649	105426	250.00 NGS	100
33)	~~2-HEXANONE~~		~~43~~	~~23.73~~	~~563~~	~~5420~~	~~13.10 NGS~~ NO CW	100
36)	TOLUENE-D8	(SURR)	98	25.90	619	134107	222.15 NGS 89	93
37)	TOLUENE		92	26.10	624	89298	196.77 NGS 79%	97
38)	CHLOROBENZENE		112	27.19	652	110407	199.30 NGS 80%	99
40)	4-BROMOFLUOROBENZENE	(SURR)	95	31.62	766	67659	196.85 NGS 79	100

* Compound is ISTD

Laboratory Name Ecology & Environment, Inc

Case No IL-3140

Sample Number
DC-I12-57-MSD

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared 02-16-87

Date Analyzed: 03-18-87

Conc/Dil Factor: 2

Percent Moisture (Decanted) 11

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

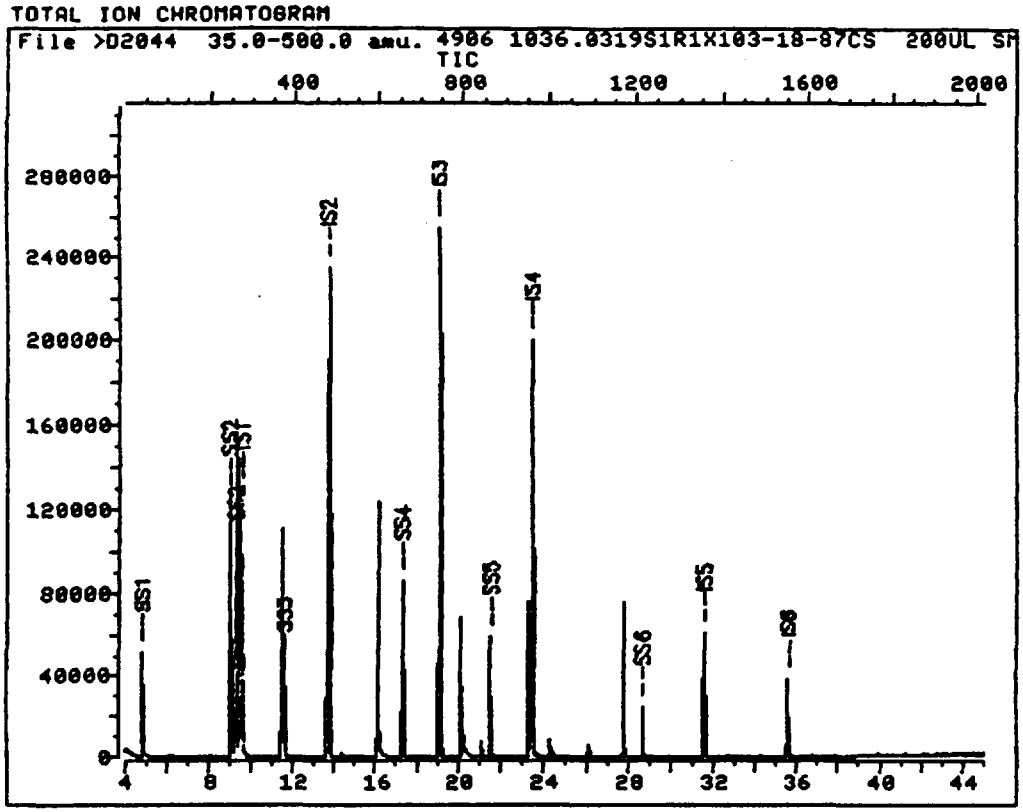
Concentrations reported "as received" basis

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	SPIKE
111-44-4	bis(-2-Chloroethyl)Ether	3300u
95-57-8	2-Chlorophenol	SPIKE
541-73-1	1 3-Dichlorobenzene	3300u
106-46-7	1 4-Dichlorobenzene	SPIKE
100-51-6	Benzyl Alcohol	3300u
95-50-1	1 2-Dichlorobenzene	3300u
95-48-7	2-Methylphenol	3300u
39638-32-9	bis(2-chloroisopropyl)Ether	3300u
106-44-5	4-Methylphenol	3300u
621-64-7	N-Nitroso-Di-n-Propylamine	SPIKE
67-72-1	Hexachloroethane	3300u
98-95-3	Nitrobenzene	3300u
78-59-1	Isophorone	3300u
88-75-5	2-Nitrophenol	3300u
105-67-9	2 4-Dimethylphenol	3300u
65-85-0	Benzoic Acid	16000u
111-91-1	bis(-2-Chloroethoxy)Methane	3300u
120-83-2	2 4-Dichlorophenol	3300u
120-82-1	1 2 4-Trichlorobenzene	SPIKE
91-20-3	Naphthalene	3300u
106-47-8	4-Chloroaniline	3300u
87-68-3	Hexachlorobutadiene	3300u
59-50-7	4-Chloro-3-Methylphenol	SPIKE
91-57-6	2-Methylnaphthalene	3300u
77-47-4	Hexachlorocyclopentadiene	3300u
88-06-2	2 4 6-Trichlorophenol	3300u
95-95-4	2 4 5-Trichlorophenol	16000u
91-58-7	2-Chloronaphthalene	3300u
18-74-4	2-Nitroaniline	16000u
131-11-3	Dimethyl Phthalate	3300u
208-96-8	Acenaphthylene	3300u
99-09-2	3-Nitroaniline	16000u

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	SPIKE
51-28-5	2 4-Dinitrophenol	16000u
100-02-7	4-Nitrophenol	SPIKE
132-64-9	Dibenzofuran	3300u
121-14-2	2 4-Dinitrotoluene	SPIKE
606-20-2	2 6-Dinitrotoluene	3300u
84-66-2	Diethylphthalate	3300u
7005-72-3	4-Chlorophenyl-phenylether	3300u
86-73-7	Fluorene	3300u
100-01-6	4-Nitroaniline	16000u
534-52-1	4 6-Dinitro-2-Methylphenol	16000u
86-30-6	N-Nitrosodiphenylamine (1)	3300u
101-55-3	4-Bromophenyl-phenylether	3300u
118-74-1	Hexachlorobenzene	3300u
87-86-5	Pentachlorophenol	SPIKE
85-01-8	Phenanthrene	3300u
120-12-7	Anthracene	3300u
84-74-2	Di-n-Butylphthalate	1100 BJ
206-44-0	Fluoranthene	3300u
129-00-0	Pyrene	SPIKE
85-68-7	Butylbenzylphthalate	3300u
91-94-1	3 3'-Dichlorobenzidine	6600u
56-55-3	Benzo(a)Anthracene	3300u
117-81-7	bis(2-Ethylhexyl)Phthalate	3300u
218-01-9	Chrysene	3300u
117-84-0	Di-n-Octyl Phthalate	3300u
205-99-2	Benzo(b)Fluoranthene	3300u
207-08-9	Benzo(k)Fluoranthene	3300u
50-32-8	Benzo(a)Pyrene	3300u
193-39-5	Indeno(1,2,3-cd)Pyrene	3300u
53-70-3	Dibenz(a,h)Anthracene	3300u
191-24-2	Benzo(g,h,i)Perylene	3300u

(1)-Cannot be separated from diphenylamine

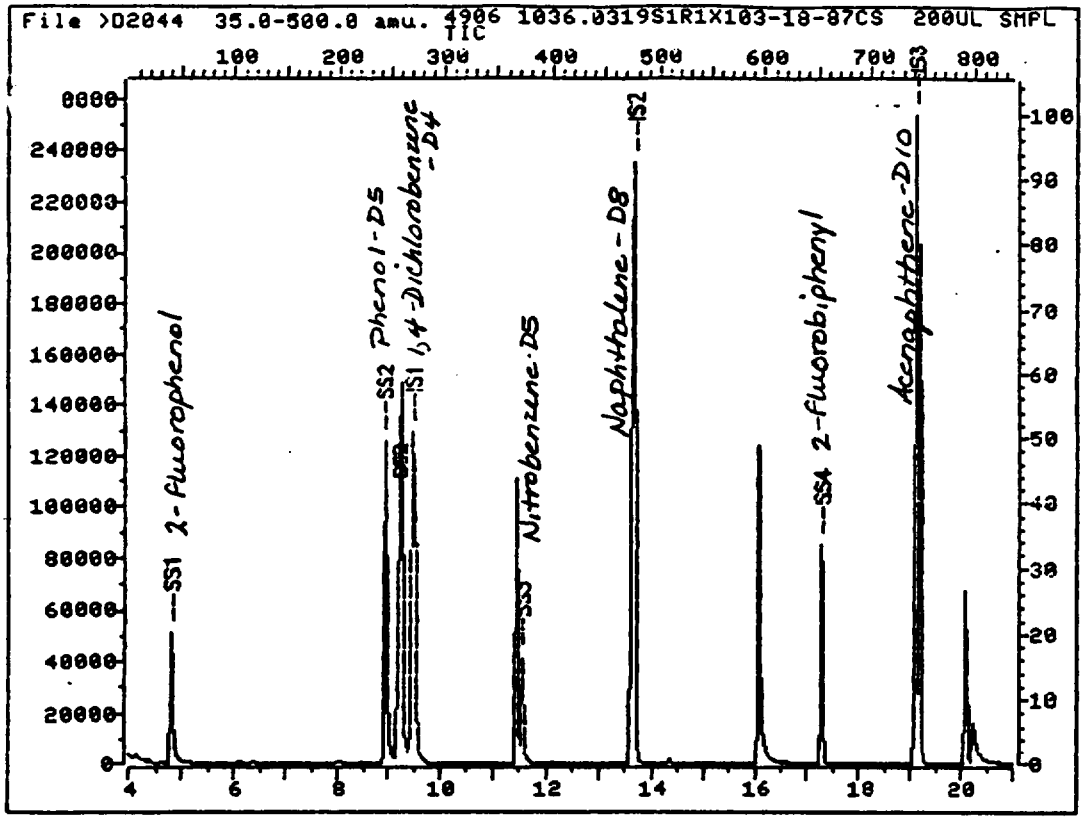
TOTAL ION CHROMATOGRAM



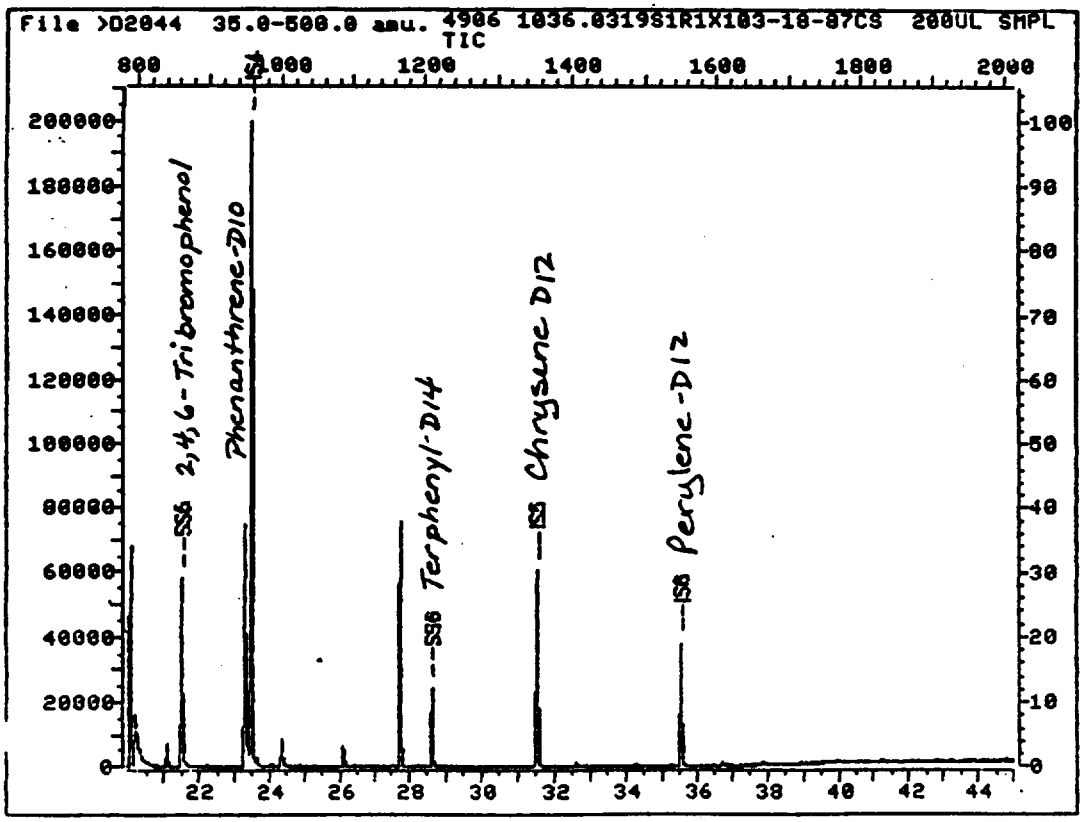
Data File: >D2044::D1
Name: 4906 1036.0319S1R1X1 DC-I12-51 MSD
Misc: 03-18-87CS 200UL SMPL + 200UL A/P + 4UL IS (2X) BTL# 3

Id File: BNADR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870318 14:12

Operator ID: USER8
Quant Time: 870318 17:40
Injected at: 870318 16:52


File >D2044 35.0-500.0 amu. 4906 1036.0319S1R1X103-18-87CS 200UL SMPL
TIC
SS1 2-Fluorophenol
SS2 Phenol-D5
IS1 1,4-Dichlorobenzene-D4
Nitrobenzene-D5
IS2 Naphthalene-D8
SS4 2-Fluorobiphenyl
IS3 Acenaphthene-D10

DC-I12-57-MSD


File >D2044 35.0-500.0 amu. 4906 1036.0319S1R1X103-18-87CS 200UL SMPL
TIC
SS5 2,4,6-Tribromophenol
Phenanthrene-D10
SS6 Terphenyl-D14
IS5 Chrysene-D12
IS6 Perylene-D12

QUANT REPORT

Operator ID: USER8 Quant Rev: 4 Quant Time: 870318 17:40
Output File: ^D2044::Q2 Injected at: 870318 16:52
Data File: >D2044::D1 Dilution Factor: 2.00
Name: 4906 1036.0319S1R1X1 DC-I12-57 MSD
Misc: 03-18-87CS 200UL SMPL + 200UL A/P + 4UL IS (2X) BTL# 3

ID File: BNADR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870318 14:12

	Compound		R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	9.49	271	75503	40.00 UG/L	87
2)	PHENOL-D5	(SURR)	99	8.94	244	5361	3.94 UG/L 55 ✓	42
2)	PHENOL-D5	(SURR)	99	9.23	258	69773	51.28 UG/L	96
5)	2-FLUOROPHENOL	(SURR)	112	4.79	40	44299	50.67 UG/L 51 ✓	78
6)	PHENOL		94	9.27	260	140838	92.72 UG/L 46%	59
~~7)~~	~~ANILINE~~		~~93~~	~~8.96~~	~~245~~	~~2357~~	~~2.98 UG/L~~ CW	37
~~9)~~	~~1,3-DICHLOROBENZENE~~		~~146~~	~~9.53~~	~~273~~	~~55904~~	~~43.36 UG/L~~	98
10)	1,4-DICHLOROBENZENE		146	9.53	273	55904	40.30 UG/L 40%	99
15)	2-CHLOROPHENOL		128	8.94	244	110140	98.30 UG/L 49%	95
17)	N-NITROSO-DI-N-PROPYLAMINE		70	11.45	367	63388	49.23 UG/L 49%	88
~~17)~~	~~N-NITROSO-DI-N-PROPYLAMINE~~		~~70~~	~~11.55~~	~~372~~	~~9268~~	~~7.20 UG/L~~ CW	98
19)	*NAPHTHALENE-D8	(IS)	136	13.69	477	272909	40.00 UG/L	100
20)	NITROBENZENE-D5	(SURR)	82	11.55	372	38661	29.08 UG/L 58 ✓	94
28)	1,2,4-TRICHLOROBENZENE		180	13.63	474	59119	49.13 UG/L 49%	100
32)	4-CHLORO-3-METHYLPHENOL		107	16.07	594	88078	77.47 UG/L 39%	98
~~33)~~	~~2-METHYLNAPHTHALENE~~		~~142~~	~~16.07~~	~~594~~	~~68346~~	~~38.69 UG/L~~ CW	19
34)	*ACENAPHTHENE-D10	(IS)	162	19.11	743	161896	40.00 UG/L	97
38)	2-FLUOROBIPHENYL	(SURR)	172	17.28	653	76182	30.89 UG/L 62 ✓	94
~~41)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~19.11~~	~~743~~	~~31282~~	~~11.88 UG/L~~ CW	100
47)	ACENAPHTHENE		153	19.19	747	119326	52.92 UG/L 53%	95
48)	2,4,6-TRIBROMOPHENOL	(SURR)	330	21.53	862	18828	51.39 UG/L 51 ✓	97
50)	4-NITROPHENOL		139	20.21	797	16944	57.73 UG/L 29%	100
~~50)~~	~~4-NITROPHENOL~~		~~139~~	~~20.76~~	~~824~~	~~259~~	~~.88 UG/L~~ CW	100
51)	2,4-DINITROTOLUENE		165	20.09	791	32100	51.45 UG/L 51%	100
~~52)~~	~~2,6-DINITROTOLUENE~~		~~165~~	~~19.11~~	~~743~~	~~21804~~	~~34.85 UG/L~~ CW	100
55)	*PHENANTHRENE-D10	(IS)	188	23.49	958	205478	40.00 UG/L	90
60)	PENTACHLOROPHENOL		266	23.29	948	34667	90.30 UG/L 45%	100
63)	DI-N-BUTYLPHTHALATE		149	26.08	1085	9280	3.33 UG/L	99
65)	*CHRYSENE-D12	(IS)	240	31.54	1353	64059	40.00 UG/L	100
67)	PYRENE		202	27.75	1167	85405	52.18 UG/L 52%	94
68)	TERPHENYL-D14	(SURR)	244	28.64	1211	24084	28.20 UG/L 56 ✓	100
74)	*PERYLENE-D12	(IS)	264	35.55	1550	43352	40.00 UG/L	100

* Compound is ISTD

Laboratory Name ecology and environment, inc.

Case No U-4906, 4928, 4971, 4989

Sample Number DC-I12-57MSD

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared: 2-16-87

Date Analyzed: 2-24-87

Conc/Dil Factor: 2

Percent Moisture (decanted) 11

GPC Cleanup ☐Yes ☑No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or (ug/Kg) (Circle One)
319-84-6	Alpha-BHC	160 U
319-85-7	Beta-BHC	160 U
319-86-8	Delta-BHC	160 U
58-89-9	Gamma-BHC (Lindane)	267 S
76-44-8	Heptachlor	325 S
309-00-2	Aldrin	296 S
1024-57-3	Heptachlor Epoxide	160 U
959-98-8	Endosulfan I	160 U
60-57-1	Dieldrin	636 S
72-55-9	4,4'-DDE	320 U
72-20-8	Endrin	717 S
33213-65-9	Endosulfan II	320 U
72-54-8	4,4'-DDD	320 U
1031-07-8	Endosulfan Sulfate	320 U
50-29-3	4,4'-DDT	758 S
72-43-5	Methoxychlor	1600 U
53494-70-5	Endrin Ketone	320 U
57-74-9	Chlordane	1600 U
8001-35-2	Toxaphene	3200 U
12674-11-2	Aroclor-1016	1600 U
11104-28-2	Aroclor-1221	1600 U
11141-16-5	Aroclor-1232	1600 U
53469-21-9	Aroclor-1242	1600 U
12672-29-6	Aroclor-1248	1600 U
11097-69-1	Aroclor-1254	3200 U
11096-82-5	Aroclor-1260	3200 U

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

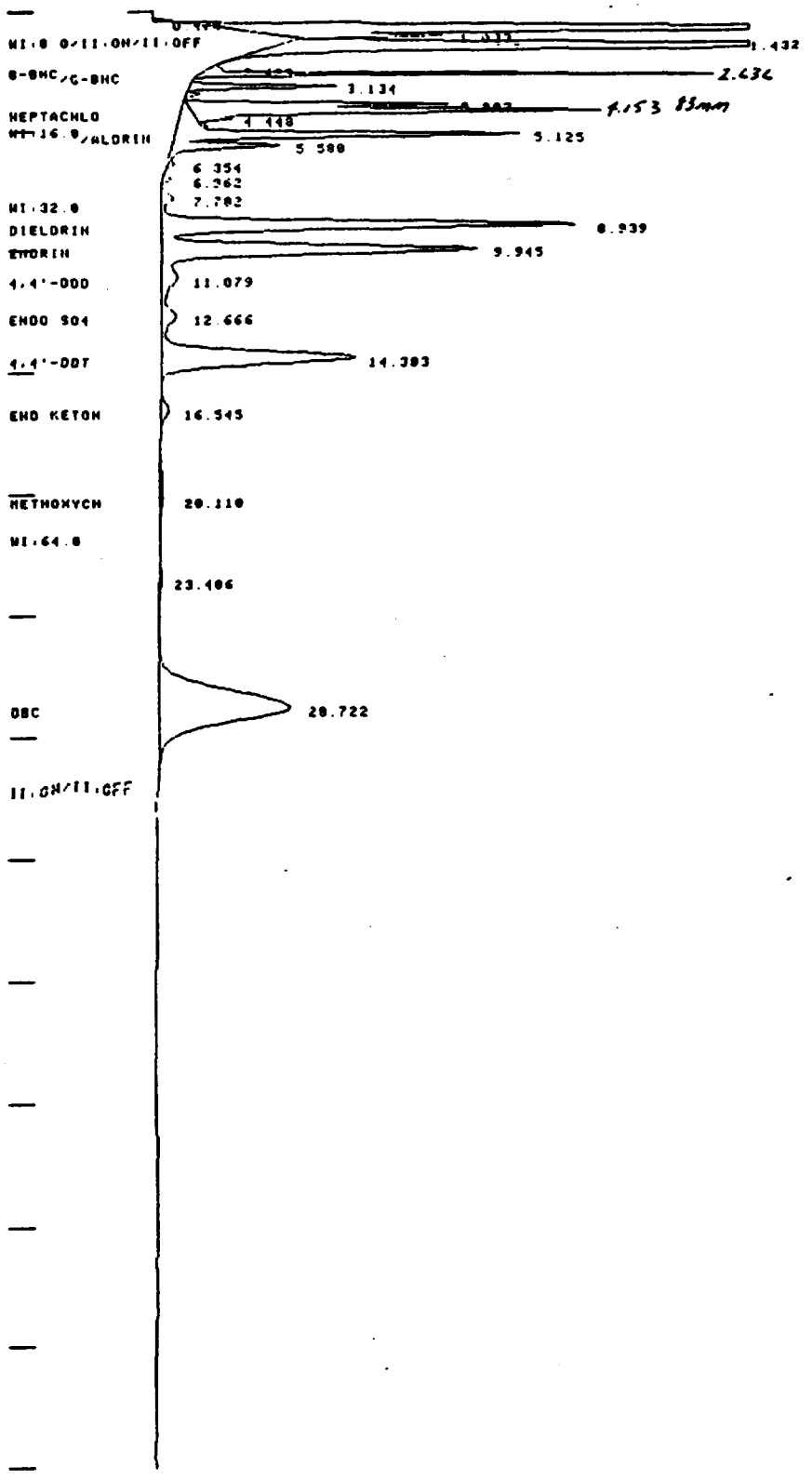
V_s _____ or W_s 3 V_t 1,000 V_i 4

S = Spiked Compound

Form 1

7 85
491095

CHART SPEED 0.5 CM/MIN
ATTEN: 8 ZERO: 10% 5 MIN/TICK



DC-I12-57 MSD

RECALCULATE ON FILE: DC1196

CHANNEL: 1A - 1 TITLE: RUN# 24 5:36 24 FEB 87

SAMPLE: 1036 MSD METHOD: CEPA CALCULATION: ES - ANALYS

464

PEAK NO	PEAK NAME	RESULT UG/KG	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE		WI/2 (SEC)
1		0.0000	1.288		81903	BV	?	4.56
2		0.0000	1.432		11427369	VB		5.63

DC-I12-57 MSD

RECALCULATE ON FILE: DC1196

CHANNEL: 1A - 1 TITLE: RUN# 24 5:36 24 FEB 87

SAMPLE: 1036 MSD METHOD: CEPA CALCULATION: ES - ANALYS

PEAK NO	PEAK NAME	RESULT UG/Kg	TIME (MIN)	TIME OFFSET	AREA COUNTS	SEP CODE	W1/2 (SEC)
1		0.0000	1.288		81903	BV ?	4.56
2		0.0000	1.432		11427369	VB	5.63
3	G-BHC	266.7983	2.636	0.036	491643	VB	6.63
4		0.0000	3.134		170082	BV	8.00
5		0.0000	3.903		329962	VV ?	9.94
6	HEPTACHLO	~~361.0700~~ 325	4.153	0.033	607194	85 mm	11.44
7		0.0000	4.448		85076	VV ?	16.69
8		0.0000	4.779		44712	VV ?	13.56
9	ALDRIN	295.7891	5.125	0.065	577713	VV	12.38
10		0.0000	5.580		192514	VV	11.50
11	~~A-ENDO~~	23.6072	7.782	0.212	40890	VV	28.25
12	DIELDRIN	636.3864	8.939	0.129	1187288	VV	21.94
13	~~B-ENDO~~ Endrin	~~807.2733~~ 717	9.945	-0.065	1017117	VV	24.44
14	~~ENB-AL-D~~	72.2429	11.079	0.069	109903	VV ?	64.25
15	~~ENDO-SO4~~	65.9034	12.666	-0.114	88099	VV	42.44
16	4,4'-DDT	757.6250	14.383	0.193	897660	VB	34.63
17	~~ETHO METHAN~~	22.5490	16.545	0.205	42950	BB	38.56
18	~~METHOXYCH~~	54.0485	20.110	-0.690	33865	BB ?	94.63
19	DBC	996.2340	28.722	0.412	1439282	BB	82.31

TOTALS: 4139.477 0.485 18865224

DETECTED PKS: 30 REJECTED PKS: 11

DIVISOR: 0.15000 MULTIPLIER: 2000.00000

NOISE: 11.4 OFFSET: -9

RACK: 2 VIAL: 9 INJ: 1

NOTES:
NOTEBOOK:259-115,116 ANALYST: RICHARD SAMSON
SECURE AREA: D JOB#:U-4872,4906
INST: VARIAN 6000# 2A ECD 10X1
COLUMN: 6' GLASS 4MM ID 100/120 SUPELCOPORT
LIQUID PHASE: 3% OV-1
CARRIER GAS: N2 @ 60 ML/MIN
DET: 300 C INJ: 220 C
200 C ISOTHERMAL 4 UL INJECTION

BLANK DATA

1. FORM I PAGES 1 THROUGH 4
2. RAW DATA VOA, S-V, PESTICIDES
   (a) RIC AND QUANT REPORTS (GC/MS)
   (b) CHROMATOGRAMS AND LISTINGS (GC)

C6894

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ecology and environment, inc.

Case No: K-4906, 4928, 4971, 4989.

Lab Sample ID No: Method Blank

QC Report No:

Sample Matrix: ~~Soil~~ Water for Soil

Contract No: IL-3140

Data Release Authorized By: O Stojowicz

Date Sample Received:

Volatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 2-20-87

Conc/Dil Factor: 1 pH

Percent Moisture: (Not Decanted)

Concentrations reported "as received"

CAS Number		ug/L or ug/Kg (Circle One)
74-87-3	Chloromethane	10u
74-83-9	Bromomethane	10u
75-01-4	Vinyl Chloride	10u
75-00-3	Chloroethane	10u
75-09-2	Methylene Chloride	3 J
67-64-1	Acetone	25
75-15-0	Carbon Disulfide	5u
75-35-4	1, 1-Dichloroethene	5u
75-34-3	1, 1-Dichloroethane	5u
156-60-5	Trans-1, 2-Dichloroethene	5u
67-66-3	Chloroform	5u
107-06-2	1, 2-Dichloroethane	5u
78-93-3	2-Butanone	12
71-55-6	1, 1, 1-Trichloroethane	5u
56-23-5	Carbon Tetrachloride	5u
108-05-4	Vinyl Acetate	10u
75-27-4	Bromodichloromethane	5u

CAS Number		ug/L or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	5u
10061-02-6	Trans-1, 3-Dichloropropene	5u
79-01-6	Trichloroethene	5u
124-48-1	Dibromochloromethane	5u
79-00-5	1, 1, 2-Trichloroethane	5u
71-43-2	Benzene	5u
10061-01-5	cis-1, 3-Dichloropropene	5u
110-75-8	2-Chloroethylvinylether	10u
75-25-2	Bromoform	5u
108-10-1	4-Methyl-2-Pentanone	1 J
591-78-6	2-Hexanone	1 J
127-18-4	Tetrachloroethene	5u
79-34-5	1, 1, 2, 2-Tetrachloroethane	5u
108-88-3	Toluene	5u
108-90-7	Chlorobenzene	5u
100-41-4	Ethylbenzene	5u
100-42-5	Styrene	5u
	Total Xylenes	5u

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g., 10U based on necessary concentration/dilution action. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g., 10J). If limit of detection is 10 µg/L and a

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/ul in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

467

E This flag indicates an approximate concentration. The amount detected in the analysis exceeds the

Laboratory Name Ecology & Environment Inc.

Case No U-4906, 4928, 4971, 4989

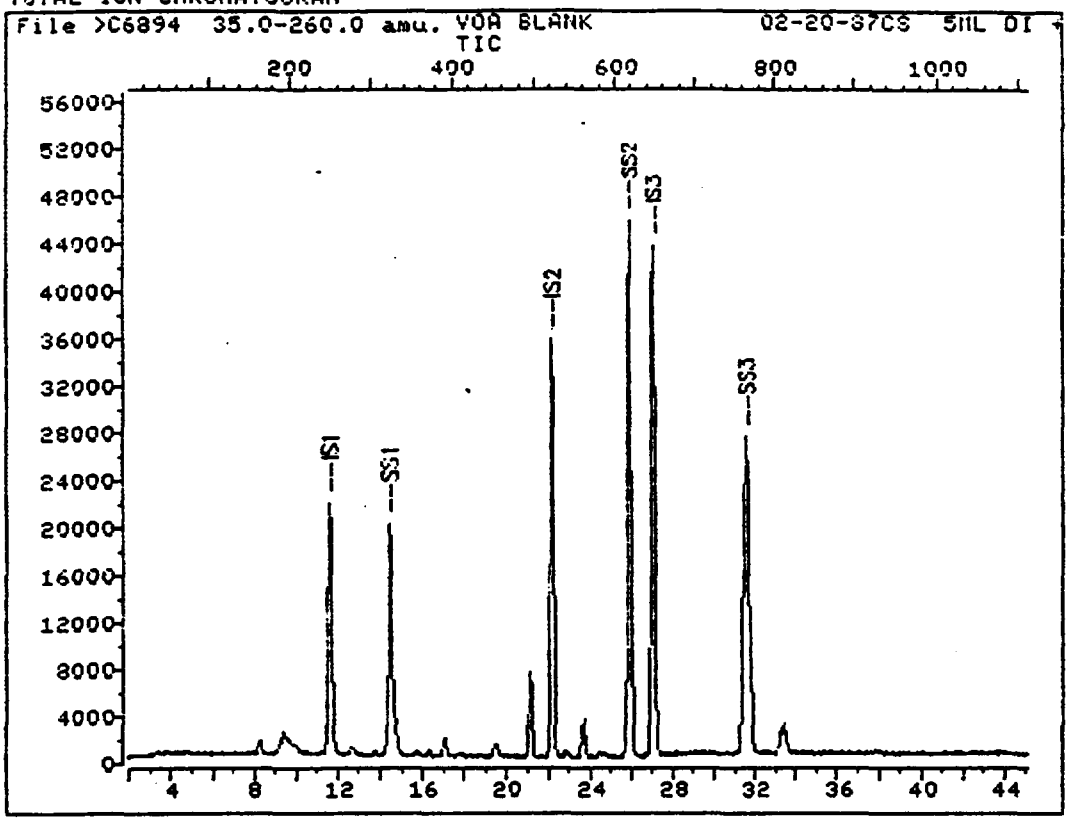
Sample Number C6894

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	Hexene isomer	VOA	17.1	2 J
2.	Hexane isomer	VOA	21.2	10 J
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24				
25.				
26.				
27.				
28.				
29.				
0				

TOTAL ION CHROMATOGRAM

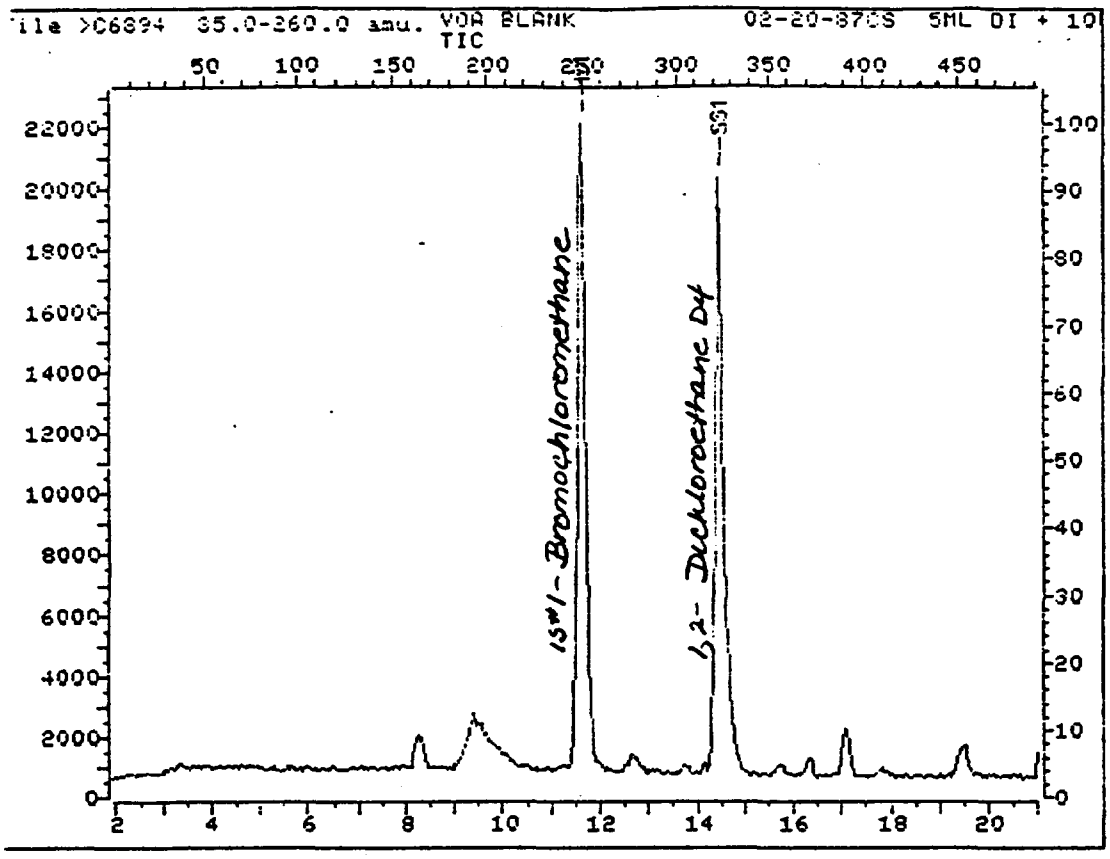


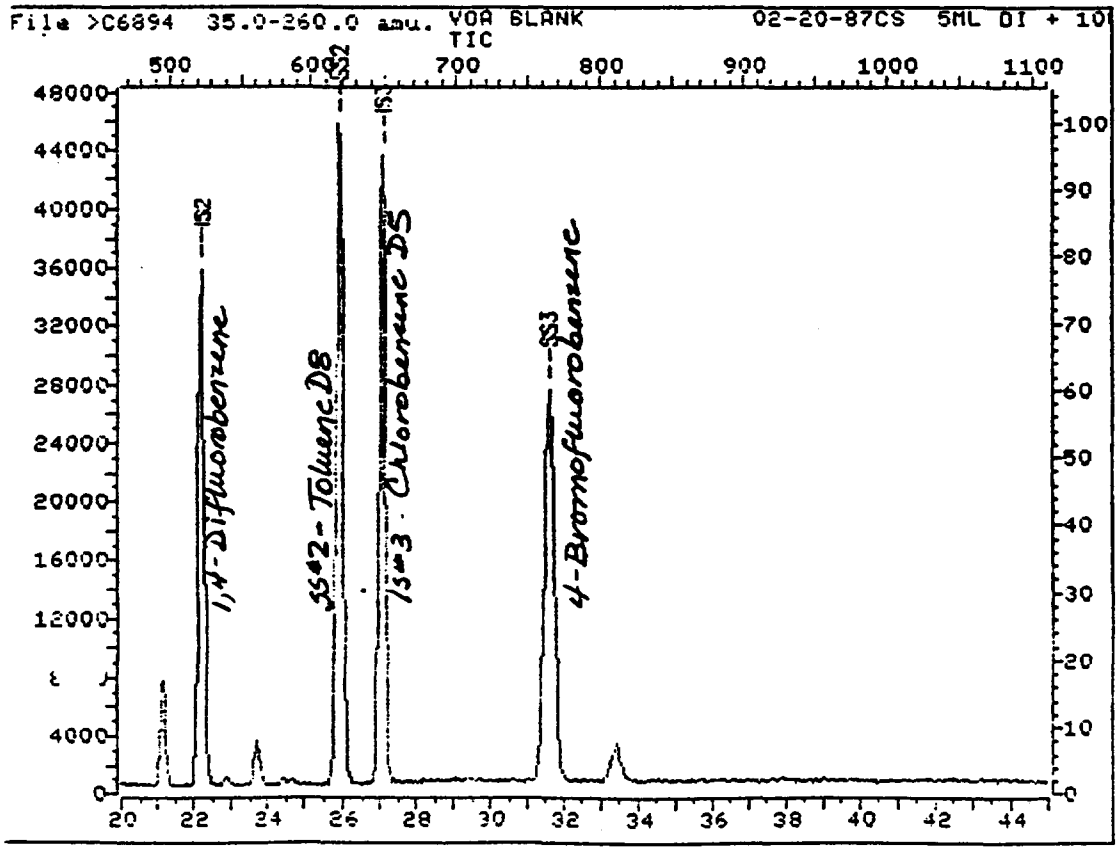
Data File: >C6894::D3
Name: VOA BLANK
Misc: 02-20-87CS 5ML DI + 10UL IS/SS

Id File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 870220 12:09

Operator ID: USER8
Quant Time: 870220 13:02
Injected at: 870220 12:16

C6894.


File >C6894 35.0-260.0 amu. VOA BLANK 02-20-87CS 5ML DI + 10
TIC
IS#1- Bromochloromethane
1,2- Dichloroethane D4
SS1


File >C6894 35.0-260.0 amu. VOA BLANK 02-20-87CS 5ML DI + 10
TIC
IS2
1,4-Difluorobenzene
SS#2- Toluene D8
IS#3- Chlorobenzene D5
SS3
4-Bromofluorobenzene

QUANT REPORT

Operator ID: USER8 Quant Rev: 4 Quant Time: 870220 13:02
Output File: ^C6894::02 Injected at: 870220 12:16
Data File: >C6894::D3 Dilution Factor: 1.00
Name: VOA BLANK
Misc: 02-20-87CS 5ML DI - 10UL IS/SS

ID File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 870220 12:09

	Compound			R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	(IS)	128	11.61	250	29949	250.00	NGS	100
6)	METHYLENE CHLORIDE		84	8.27	164	3235	15.54	NGS	100
7)	ACETONE		43	9.40	193	46636	125.84	NGS	100
15)	1,2-DICHLOROETHANE-D4	(SUPR)	65	14.44	323	84196	204.62	NGS 82	83
16)	*1,4-DIFLUOROBENZENE	(IS)	114	22.20	523	144286	250.00	NGS	100
17)	2-BUTANONE		72	14.64	328	4596	62.21	NGS	100
31)	*CHLOROBENZENE-D5	(IS)	117	27.05	648	129534	250.00	NGS	100
32)	4-METHYL-2-PENTANONE		43	22.86	540	3289	5.18	NGS	85
~~32)~~	~~4-METHYL-2-PENTANONE~~		~~43~~	~~23.72~~	~~562~~	~~6590~~	~~10.37~~	~~NGS~~	69
~~33)~~	~~2-HEXANONE~~		~~43~~	~~23.72~~	~~562~~	~~6590~~	~~12.96~~	~~NGS~~	100
33)	2-HEXANONE		43	24.42	580	2975	5.85	NGS	100
36)	TOLUENE-D8	(SUPR)	98	25.89	618	171844	231.68	NGS 93	95
40)	4-BROMOFLUOROBENZENE	(SUPR)	95	31.56	764	91791	217.36	NGS 87	100

re cut

* Compound is ISTD

C6920

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ecology and environment, inc.

Case No: U-4906, 4928, 4971, 4989.

Lab Sample ID No: Method Blank

QC Report No:

Sample Matrix: ~~Soil~~ cw Water for Soil

Contract No. IL-3140

Data Release Authorized By: C Sojtowicz

Date Sample Received:

Volatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 2-23-87

Conc/Dil Factor: 2 pH

Percent Moisture: (Not Decanted)

Concentrations reported "as received"

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	2000u
74-83-9	Bromomethane	2000u
75-01-4	Vinyl Chloride	2000u
75-00-3	Chloroethane	2000u
75-09-2	Methylene Chloride	680 J
67-64-1	Acetone	4200
75-15-0	Carbon Disulfide	1000u
75-35-4	1, 1-Dichloroethene	1000u
75-34-3	1, 1-Dichloroethane	1000u
156-60-5	Trans-1, 2-Dichloroethene	1000u
67-66-3	Chloroform	1000u
107-06-2	1, 2-Dichloroethane	1000u
78-93-3	2-Butanone	8900
71-55-6	1, 1, 1-Trichloroethane	1000u
56-23-5	Carbon Tetrachloride	1000u
108-05-4	Vinyl Acetate	2000u
75-27-4	Bromodichloromethane	1000u

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	1000u
10061-02-6	Trans-1, 3-Dichloropropene	1000u
79-01-6	Trichloroethene	1000u
124-48-1	Dibromochloromethane	1000u
79-00-5	1, 1, 2-Trichloroethane	1000u
71-43-2	Benzene	1000u
10061-01-5	cis-1, 3-Dichloropropene	1000u
110-75-8	2-Chloroethylvinylether	2000u
75-25-2	Bromoform	1000u
108-10-1	4-Methyl-2-Pentanone	2000u
591-78-6	2-Hexanone	2000u
127-18-4	Tetrachloroethene	1000u
79-34-5	1, 1, 2, 2-Tetrachloroethane	1000u
108-88-3	Toluene	1000u
108-90-7	Chlorobenzene	1000u
100-41-4	Ethylbenzene	1000u
100-42-5	Styrene	1000u
	Total Xylenes	1000u

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g. 10U) based on necessary concentration/dilution action. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g. 10J). If limit of detection is 10 ug/l and a

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/ul in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

E This flag indicates an approximate concentration. The amount detected in the

Laboratory Name Ecology & Environment Inc.

Case No U-4906, 4928, 4971, 4989

Sample Number C6920

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number MLC.R.	Estimated Concentration (ug/l or ug/kg)
1.	Hexene Isomer	VOA	17.1	560 J
2.	Hexane Isomer	VOA	21.2	2800 J
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
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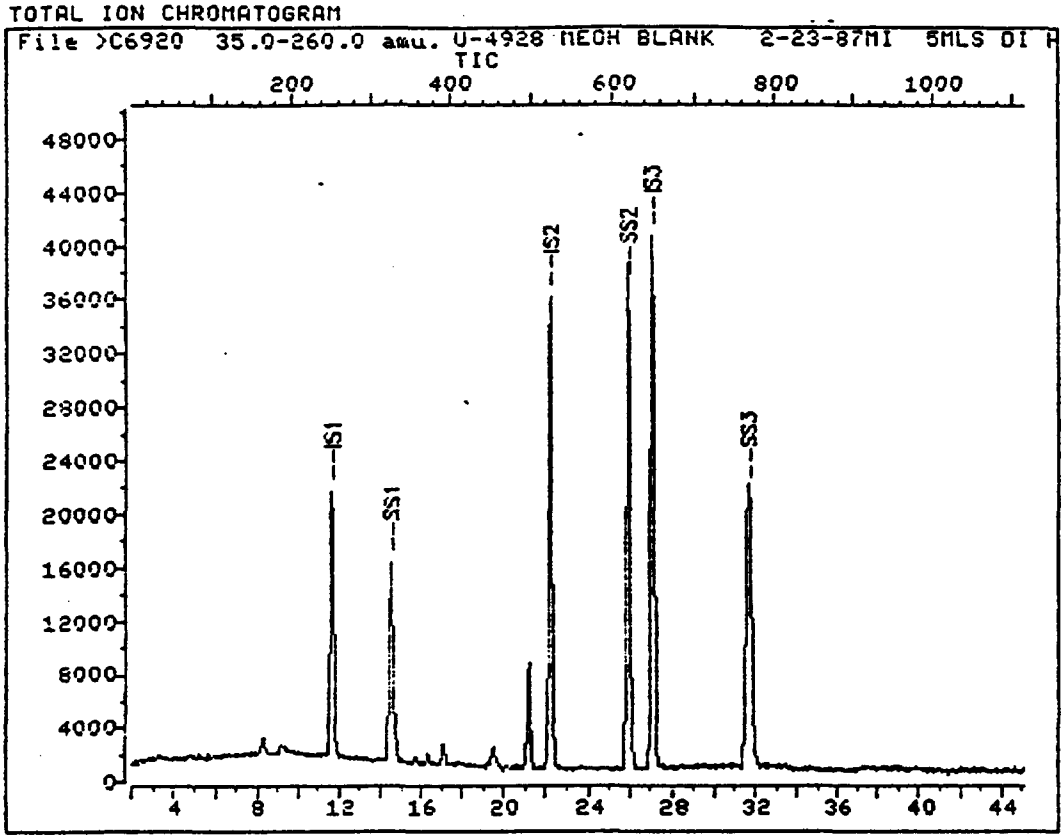
24.				
25.				
26.				
27.				
28.				
29.				
30				

TOTAL ION CHROMATOGRAM

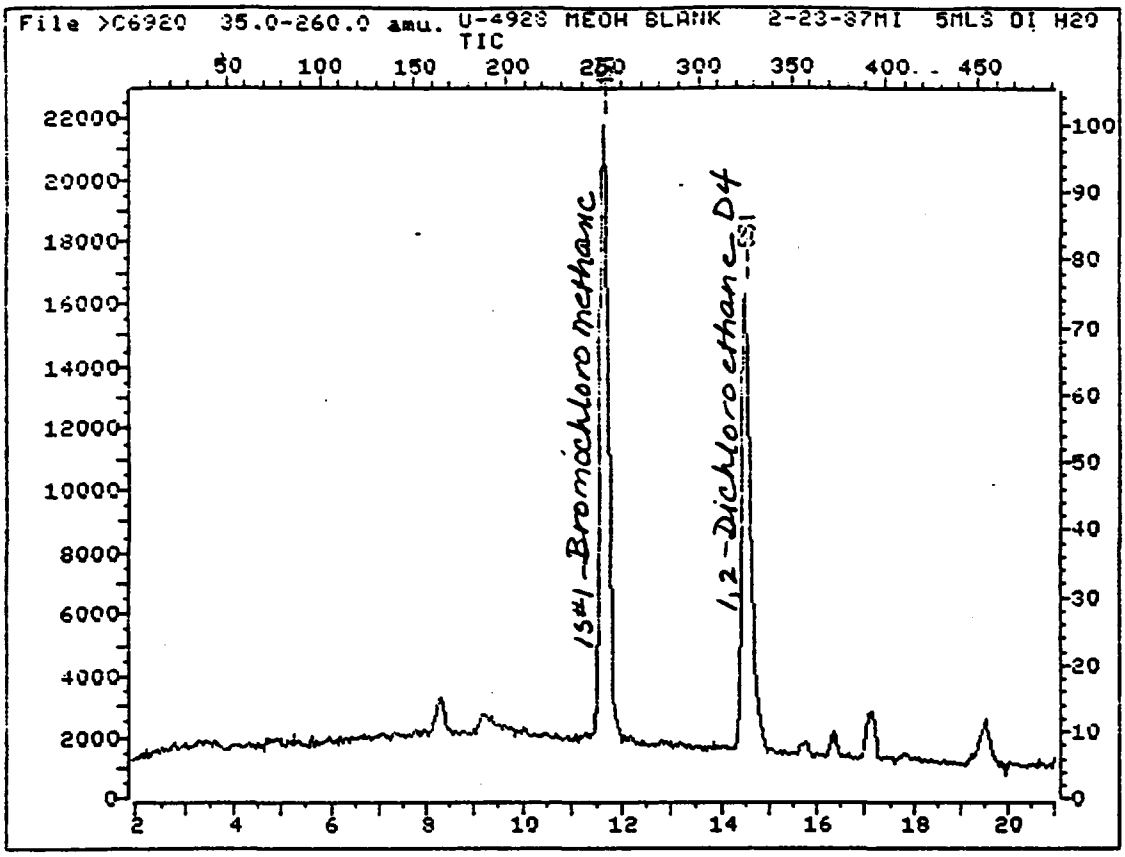


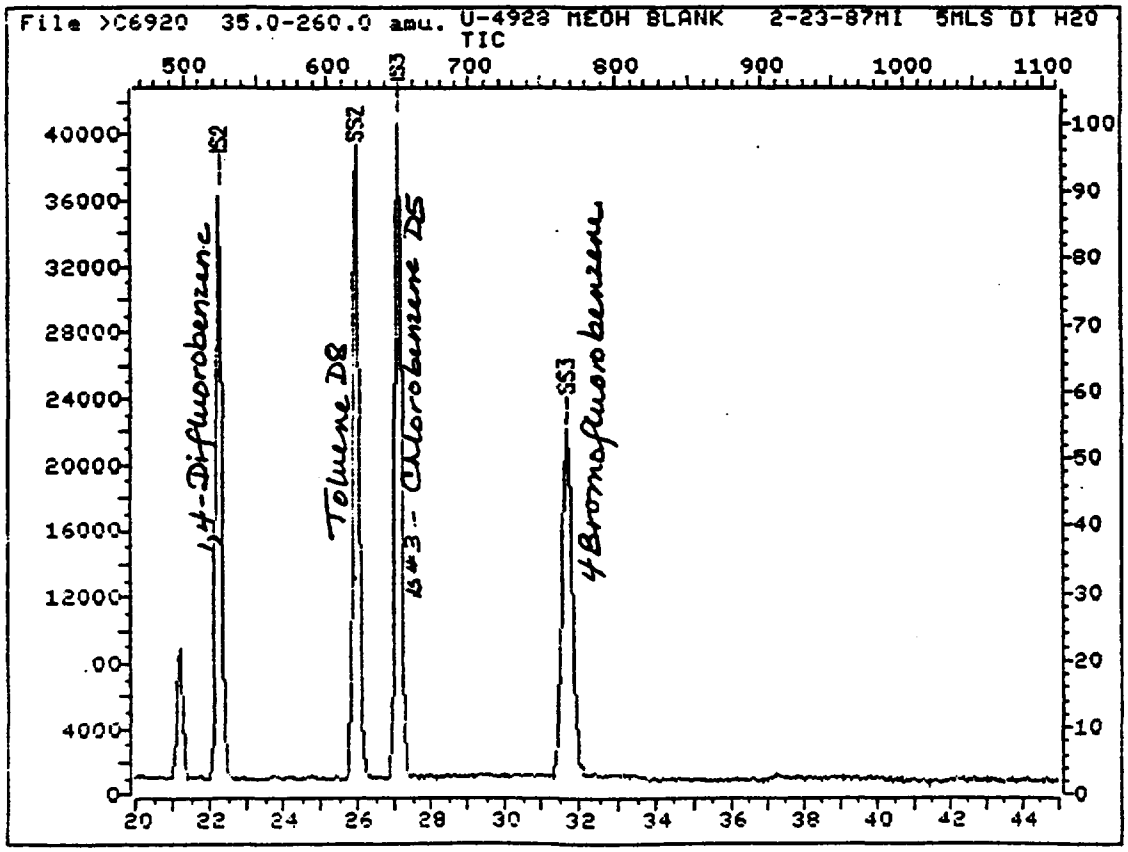
Data File: >C6920::D1
Name: U-4928 MEOH BLANK
Misc: 2-23-87MI 5MLS DI H20 + 10UL IS/SS + 50UL MEOH

Id File: VOACR::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 870223 13:31

Operator ID: USER8
Quant Time: 870223 22:53
Injected at: 870223 22:07

C6920


File >C6920 35.0-260.0 amu. U-4928 MEOH BLANK 2-23-87MI 5MLS DI H2O
TIC
1,4-Bromochloromethane
1,2-Dichloroethane D4
SS1


File >C6920 35.0-260.0 amu. U-4928 MEOH BLANK 2-23-87MI 5MLS DI H2O
TIC
1,4-Difluorobenzene
SS2
Toluene D8
SS2
1,4-3-Chlorobenzene D5
SS3
4-Bromofluorobenzene

QUANT REPORT

Operator ID: USER3 Quant Rev: 4 Quant Time: 870223 22:53
Output File: ^C6920::Q2 Injected at: 870223 22:07
Data File: >C6920::D1 Dilution Factor: 1.00
Name: U-4928 MEOH BLANK
Misc: 2-23-87MI 5MLS DI H20 + 10UL IS/SS + 50UL MEOH

ID File: VOACR::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 870223 13:31

	Compound		R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	(IS)	128	11.64	251	27382	50.00 UG/L	100
6)	METHYLENE CHLORIDE		84	8.27	164	2975	2.71 UG/L	100
7)	ACETONE		43	9.24	189	8527	16.85 UG/L	100
15)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.52	325	63504	40.99 UG/L 82	83
16)	*1,4-DIFLUOROBENZENE	(IS)	114	22.24	524	141829	50.00 UG/L	100
17)	2-BUTANONE		72	14.67	329	4202	35.70 UG/L	100
31)	*CHLOROBENZENE-D5	(IS)	117	27.09	649	120037	50.00 UG/L	100
36)	TOLUENE-D8	(SURR)	98	25.92	619	142180	42.65 UG/L 86	94
40)	4-BROMOFLUOROBENZENE	(SURR)	95	31.67	767	71824	40.60 UG/L 82	100

* Compound is ISTD

C6941

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ecology and environment, inc.

Case No: IL-4906, 4928, 4971, 4989.

Lab Sample ID No: Method Blank

QC Report No:

Sample Matrix: ~~Soil~~ water for Soil

Contract No: IL-3140

Data Release Authorized By: C Slojtowicz

Date Sample Received:

Volatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 2-24-87

Conc/Dil Factor: 1 pH

Percent Moisture: (Not Decanted)

Concentrations reported "as received"

CAS Number		ug/l or (ug/Kg) (Circle One)
74-87-3	Chloromethane	10u
74-83-9	Bromomethane	10u
75-01-4	Vinyl Chloride	10u
75-00-3	Chloroethane	10u
75-09-2	Methylene Chloride	5u
67-64-1	Acetone	16
75-15-0	Carbon Disulfide	5u
75-35-4	1, 1-Dichloroethene	5u
75-34-3	1, 1-Dichloroethane	5u
156-60-5	Trans-1, 2-Dichloroethene	5u
67-66-3	Chloroform	5u
107-06-2	1, 2-Dichloroethane	5u
78-93-3	2-Butanone	20
71-55-6	1, 1, 1-Trichloroethane	5u
56-23-5	Carbon Tetrachloride	5u
108-05-4	Vinyl Acetate	10u
75-27-4	Bromodichloromethane	5u

CAS Number		ug/l or (ug/Kg) (Circle One)
78-87-5	1, 2-Dichloropropane	5u
10061-02-6	Trans-1, 3-Dichloropropene	5u
79-01-6	Trichloroethene	5u
124-48-1	Dibromochloromethane	5u
79-00-5	1, 1, 2-Trichloroethane	5u
71-43-2	Benzene	5u
10061-01-5	cis-1, 3-Dichloropropene	5u
110-75-8	2-Chloroethylvinylether	10u
75-25-2	Bromoform	5u
108-10-1	4 Methyl-2-Pentanone	2 J
591-78-6	2-Hexanone	10u
127-18-4	Tetrachloroethyde	5u
79-34-5	1, 1, 2, 2-Tetrachloroethane	5u
108-88-3	Toluene	5u
108-90-7	Chlorobenzene	5u
100-41-4	Ethylbenzene	5u
100-42-5	Styrene	5u
	Total Xylenes	5u

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g. 10U) based on necessary concentration/dilution action. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g. 10J). If limit of detection is 10 µg/l and a

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/ul in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

E This flag indicates an approximate concentration. The amount detected in the

477

Laboratory Name Ecology & Environment Inc.

Case No U-4906, 4928, 4971, 4989

Sample Number C6941

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	No TIC's in VOA fraction			
2.				
3.				
4.				
5.				
6.				
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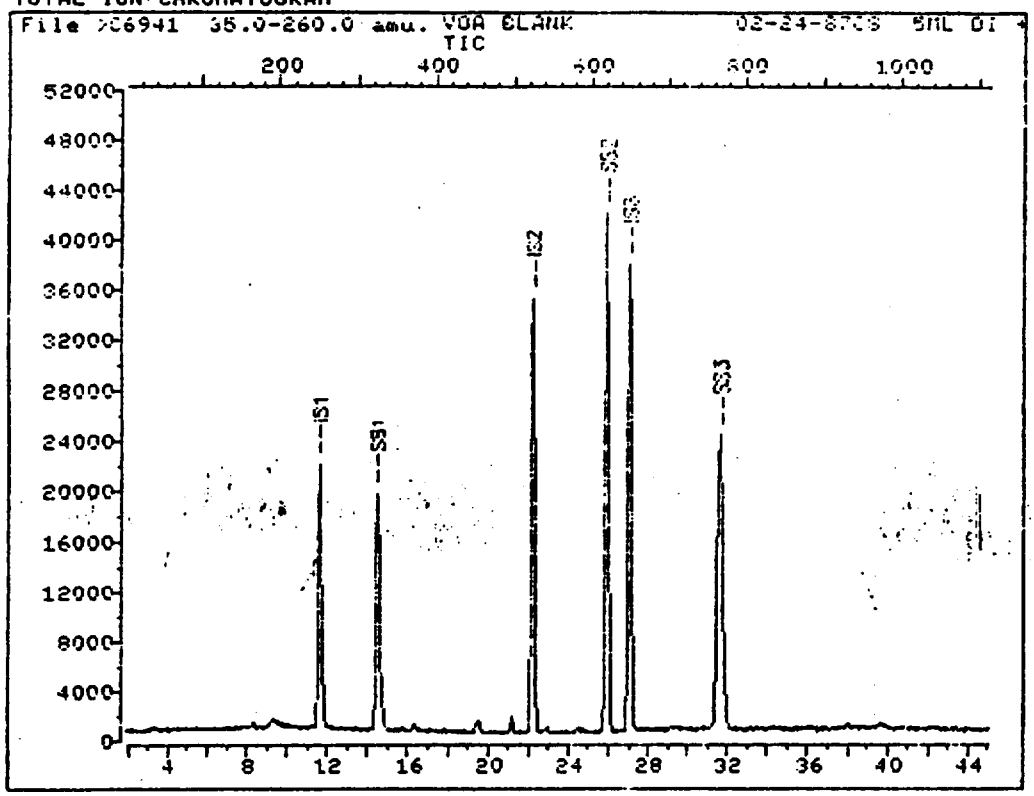
25.				
26.				
27.				
28.				
29.				
0				

TOTAL ION CHROMATOGRAM

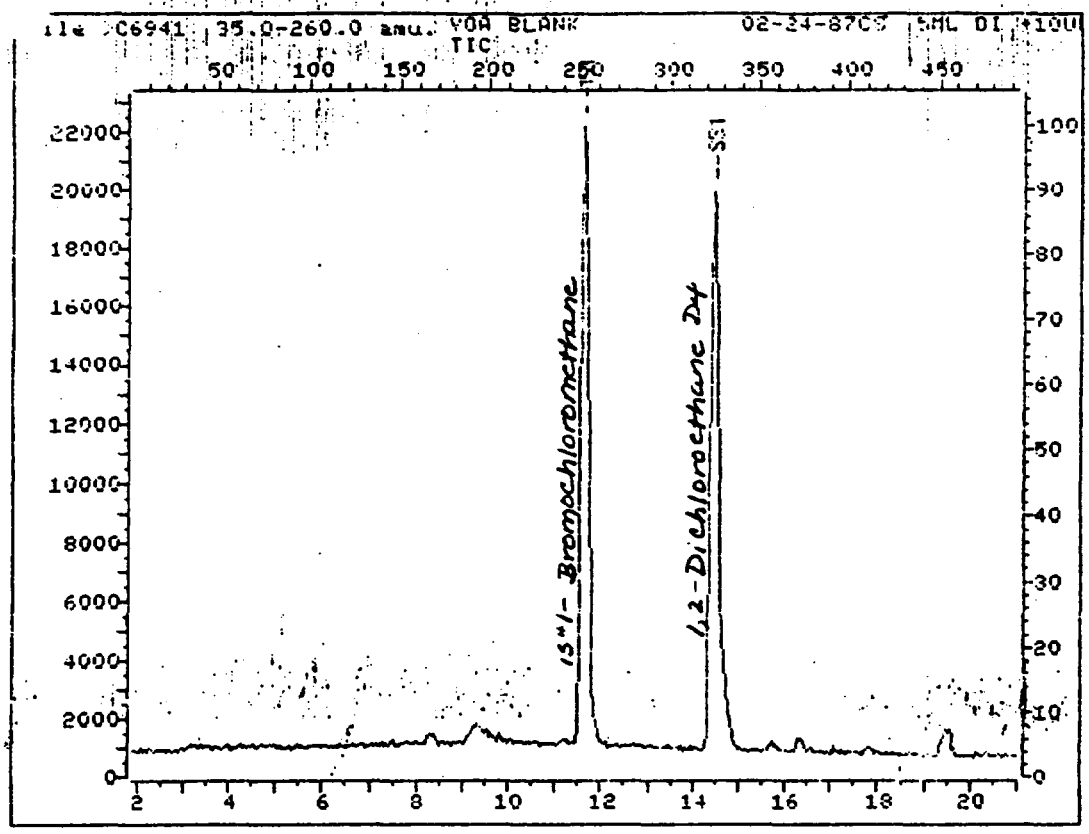


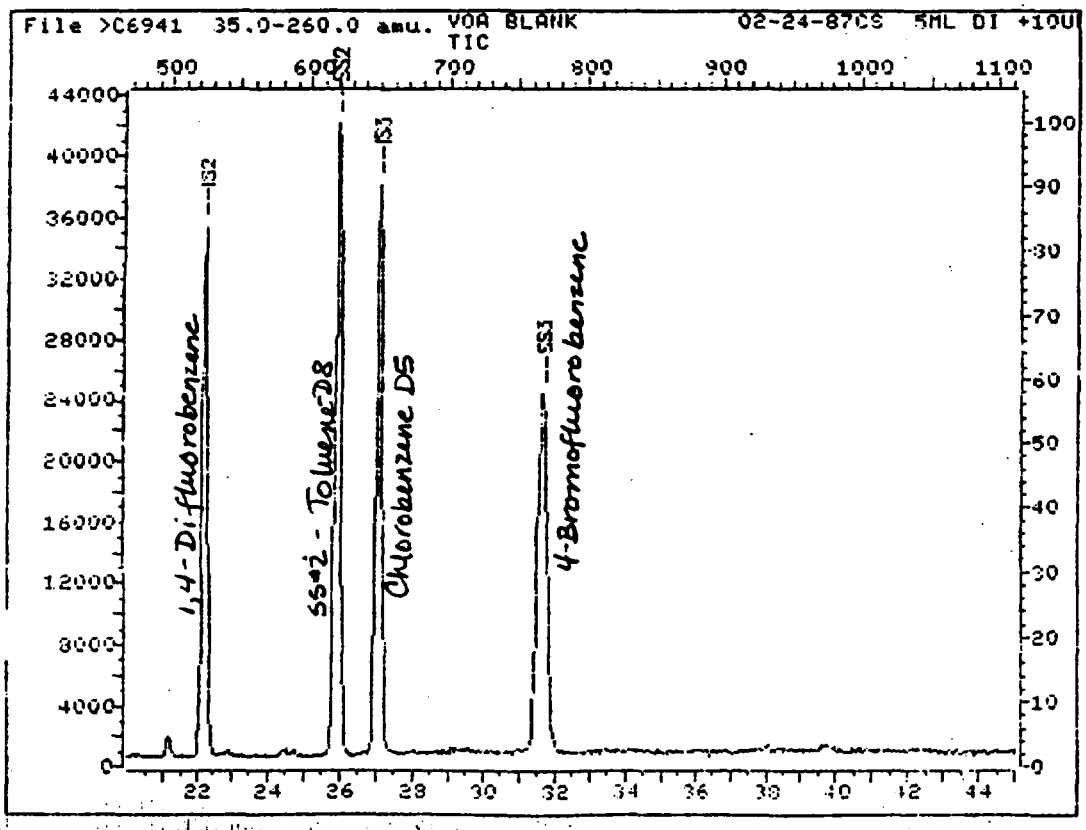
Data File: >C6941::D1
Name: VOA BLANK
Misc: 02-24-87CS 5ML DI +10UL IS/SS

Id File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 870224 15:45

Operator ID: USER8
Quant Time: 870224 16:38
Injected at: 870224 15:53

C6941


File >C6941 35.0-260.0 amu. VOA BLANK 02-24-87CS 5ML DI +10U
TIC
IS#1- Bromochloromethane
1,2-Dichloroethane D4
SS1


File >C6941 35.0-260.0 amu. VOA BLANK 02-24-87CS 5ML DI +10U
TIC
IS2
1,4-Difluorobenzene
SS#2 - Toluene D8
IS3
Chlorobenzene D5
SS3
4-Bromofluorobenzene

QUANT REPORT

Operator ID: USER8 Quant Rev: 4 Quant Time: 870224 16:38
Output File: ^C6941::Q2 Injected at: 870224 15:53
Data File: >C6941::D1 Dilution Factor: 1.00
Name: VOA BLANK
Misc: 02-24-87CS 5ML DI +10UL IS/SS

ID File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 870224 15:45

	Compound			R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	(IS)	128	11.63	252	29092	250.00	NGS	100
7)	ACETONE		43	9.30	192	13425	79.83	NGS 96	100 ✓
15)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.46	325	79430	261.55	NGS 105	83
16)	*1,4-DIFLUOROBENZENE	(IS)	114	22.22	525	140145	250.00	NGS 96	100
17)	2-BUTANONE		72	14.65	330	3841	97.62	NGS	100
30)	~~BROMOFORM~~		~~173~~	~~20.13~~	~~524~~	~~228~~	~~1.07~~	NGS No Out	100
31)	*CHLOROBENZENE-D5	(IS)	117	27.07	650	115956	250.00	NGS	100
32)	4-METHYL-2-PENTANONE		43	22.92	543	3780	9.90	NGS 96	70
~~33)~~	~~2-HEXANONE~~		~~43~~	~~24.43~~	~~582~~	~~3391~~	~~11.91~~	NGS No Out	100 ✓
36)	TOLUENE-D8	(SURR)	98	25.91	620	156524	268.69	NGS 108	98
40)	4-BROMOFLUOROBENZENE	(SURR)	95	31.66	768	82782	255.89	NGS 102	100 ✓

* Compound is ISTD

C6964

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ecology and environment, inc.

Case No: U-4906, 4928, 4971, 4989.

Lab Sample ID No: Method Blank

QC Report No:

Sample Matrix: ~~Soil~~ Water for Soil

Contract No: IL-3140

Data Release Authorized By: C Stojowicz

Date Sample Received:

Volatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 2-26-87

Conc/Dil Factor: 1 pH

Percent Moisture: (Not Decanted)

Concentrations reported "as received"

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	2000u
74-83-9	Bromomethane	2000u
75-01-4	Vinyl Chloride	2000u
75-00-3	Chloroethane	2000u
75-09-2	Methylene Chloride	670 J
67-64-1	Acetone	8300
75-15-0	Carbon Disulfide	1000u
75-35-4	1, 1-Dichloroethene	1000u
75-34-3	1, 1-Dichloroethane	1000u
156-60-5	Trans-1, 2-Dichloroethene	1000u
67-66-3	Chloroform	1000u
107-06-2	1, 2-Dichloroethane	1000u
78-93-3	2-Butanone	12000
71-55-6	1, 1, 1-Trichloroethane	1000u
56-23-5	Carbon Tetrachloride	1000u
108-05-4	Vinyl Acetate	2000u
75-27-4	Bromodichloromethane	1000u

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	1000u
10061-02-6	Trans-1, 3-Dichloropropene	1000u
79-01-6	Trichloroethene	1000u
124-48-1	Dibromochloromethane	1000u
79-00-5	1, 1, 2-Trichloroethane	1000u
71-43-2	Benzene	1000u
10061-01-5	cis-1, 3-Dichloropropene	1000u
110-75-8	2-Chloroethylvinylether	2000u
75-25-2	Bromoform	1000u
108-10-1	4-Methyl-2-Pentanone	2000u
591-78-6	2-Hexanone	1000 J
127-18-4	Tetrachloroethene	1000u
79-34-5	1, 1, 2, 2-Tetrachloroethane	1000u
108-88-3	Toluene	1000u
108-90-7	Chlorobenzene	1000u
100-41-4	Ethylbenzene	1000u
100-42-5	Styrene	1000u
	Total Xylenes	720 J

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g., 10U) based on necessary concentration/dilution action. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g., 10J). If limit of detection is 10 µg/l and a

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/µl in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

E This flag indicates an approximate concentration. The amount detected in the

Laboratory Name Ecology & Environment Inc.

ase No U-4906, 4928, 4971, 4989

Sample Number
C6964

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	No TIC's in VOA fraction			
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
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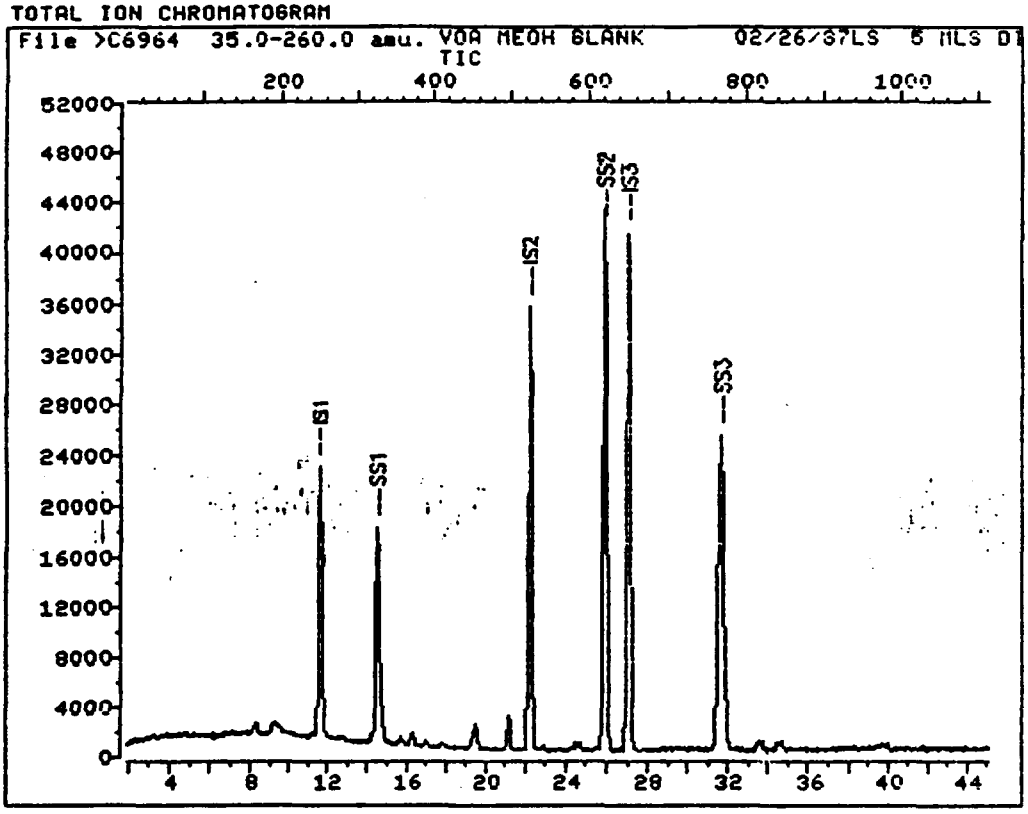
25.				
26.				
27.				
28.				
29.				
0				

TOTAL ION CHROMATOGRAM

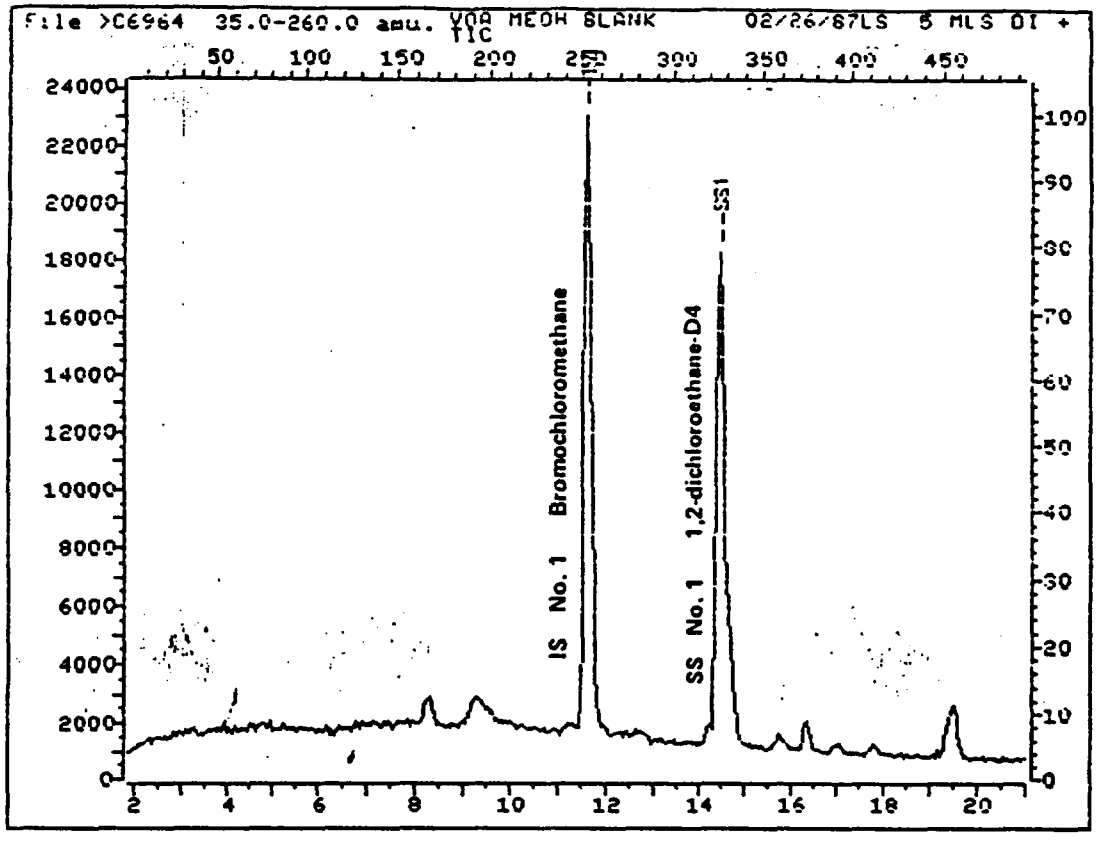


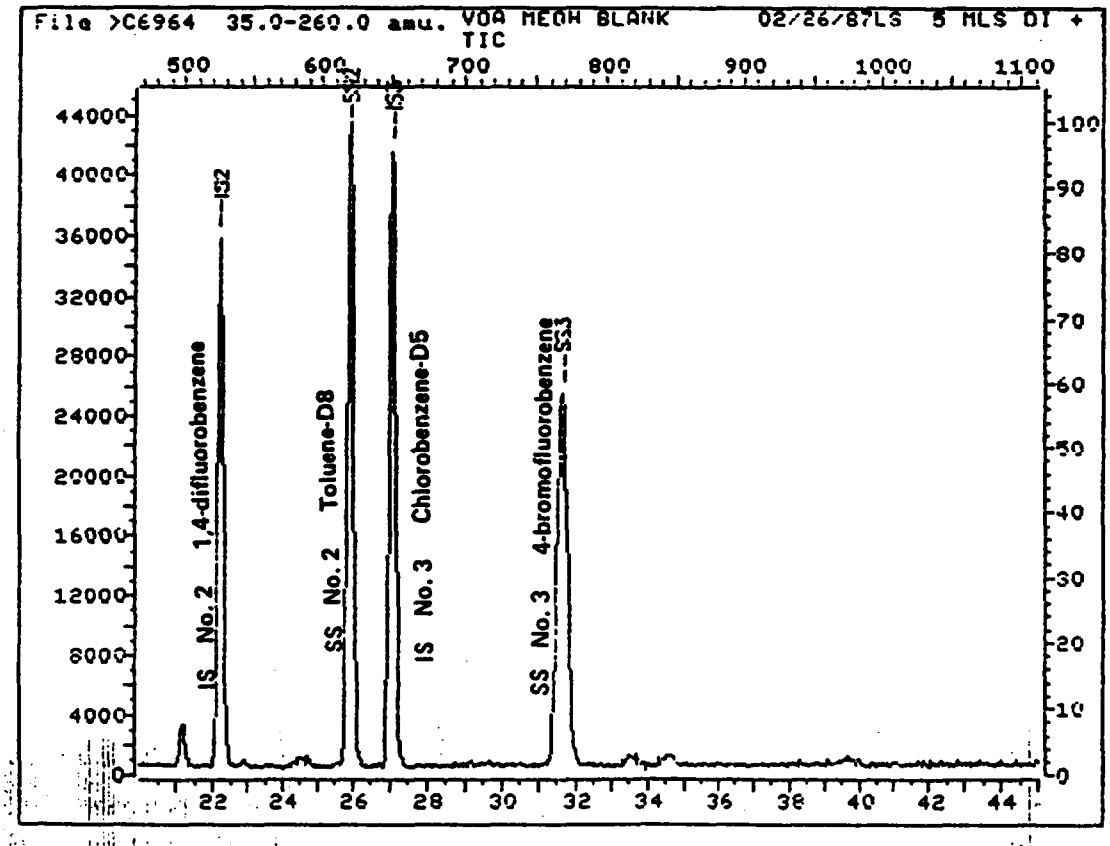
Data File: >C6964::D3
Name: VOA MEOH BLANK
Misc: 02/26/87LS 5 MLS DI + 10 ULS IS/SS + 50 ULS MEOH

Id File: VOACR::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 870226 14:59

Operator ID: USER8
Quant Time: 870226 15:37
Injected at: 870226 14:52

C6964


File >C6964 35.0-260.0 amu. VOA MEOH BLANK 02/26/87LS 5 MLS DI +
TIC
IS No. 1 Bromochloromethane
SS No. 1 1,2-dichloroethane-D4
SS1


File >C6964 35.0-260.0 amu. VOA MEOH BLANK 02/26/87LS 5 MLS DI +
TIC
IS No. 2 1,4-difluorobenzene
IS2
SS No. 2 Toluene-D8
SS2
IS No. 3 Chlorobenzene-D5
IS3
SS No. 3 4-bromofluorobenzene
SS3

QUANT REPORT

Operator ID: USER8 Quant Rev: 4 Quant Time: 870226 15:37
Output File: ^C6964::Q2 Injected at: 870226 14:52
Data File: >C6964::D3 Dilution Factor: 1.00
Name: VOA MEOH BLANK
Misc: 02/26/87LS 5 MLS DI + 10 ULS IS/SS + 50 ULS MEOH

ID File: VOACR::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 870226 14:59

	Compound		R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	(IS)	128	11.62	252	28625	50.00 UG/L	100
6)	METHYLENE CHLORIDE		84	8.29	166	2646	2.67 UG/L	100
7)	ACETONE		43	9.30	192	16823	33.00 UG/L	100
15)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.49	326	73454	52.55 UG/L 105	~~80~~ ✓
16)	*1,4-DIFLUOROBENZENE	(IS)	114	22.22	525	146323	50.00 UG/L	100
17)	2-BUTANONE		72	14.69	331	6460	49.30 UG/L	100
31)	*CHLOROBENZENE-D5	(IS)	117	27.07	650	134164	50.00 UG/L	100
33)	2-HEXANONE		43	24.43	582	3354	4.08 UG/L	100
36)	TOLUENE-D8	(SURR)	98	25.90	620	168480	48.39 UG/L 97	93 ✓
40)	4-BROMOFLUOROBENZENE	(SURR)	95	31.65	768	88732	48.73 UG/L 97	100 ✓
42)	TOTAL XYLENES		91	33.59	818	5138	1.19 UG/L	100
42)	TOTAL XYLENES		91	34.60	844	7326	1.69 UG/L	100

* Compound is ISTD

C7040

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ecology and environment, inc.

Case No: IL-4906, 4928, 4971, 4989.

Lab Sample ID No: Method Blank

QC Report No:

Sample Matrix: ~~Soil~~ water for Soil

Contract No. IL-3140

Data Release Authorized By: [illegible]

Date Sample Received:

Volatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 3-04-87

Conc/Dil Factor: 1 pH

Percent Moisture: (Not Decanted)

Concentrations reported "as received"

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	10u
74-83-9	Bromomethane	10u
75-01-4	Vinyl Chloride	10u
75-00-3	Chloroethane	10u
75-09-2	Methylene Chloride	1J
67-64-1	Acetone	10
75-15-0	Carbon Disulfide	5u
75-35-4	1, 1-Dichloroethene	5u
75-34-3	1, 1-Dichloroethane	5u
156-60-5	Trans-1, 2-Dichloroethene	2J
67-66-3	Chloroform	5u
107-06-2	1, 2-Dichloroethane	5u
78-93-3	2-Butanone	18
71-55-6	1, 1, 1-Trichloroethane	5u
56-23-5	Carbon Tetrachloride	5u
108-05-4	Vinyl Acetate	10u
75-27-4	Bromodichloromethane	5u

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	5u
10061-02-6	Trans-1, 3-Dichloropropene	5u
79-01-6	Trichloroethene	5u
124-48-1	Dibromochloromethane	5u
79-00-5	1, 1, 2-Trichloroethane	5u
71-43-2	Benzene	5u
10061-01-5	cis-1, 3-Dichloropropene	5u
110-75-8	2-Chloroethylvinylether	10u
75-25-2	Bromoform	5u
108-10-1	4-Methyl-2-Pentanone	2J
591-78-6	2-Hexanone	2J
127-18-4	Tetrachloroethene	5u
79-34-5	1, 1, 2, 2-Tetrachloroethane	5u
108-88-3	Toluene	5u
108-90-7	Chlorobenzene	5u
100-41-4	Ethylbenzene	5u
100-42-5	Styrene	5u
	Total Xylenes	5u

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g., 10U) based on necessary concentration/dilution action. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/ul in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

487

E This flag indicates an approximate concentration. The amount detected in the

Laboratory Name Ecology & Environment Inc.

Case No U-4906, 4928, 4971, 4989

Sample Number C7040

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	No TIC's in VOA fraction			
2.				
3.				
4.				
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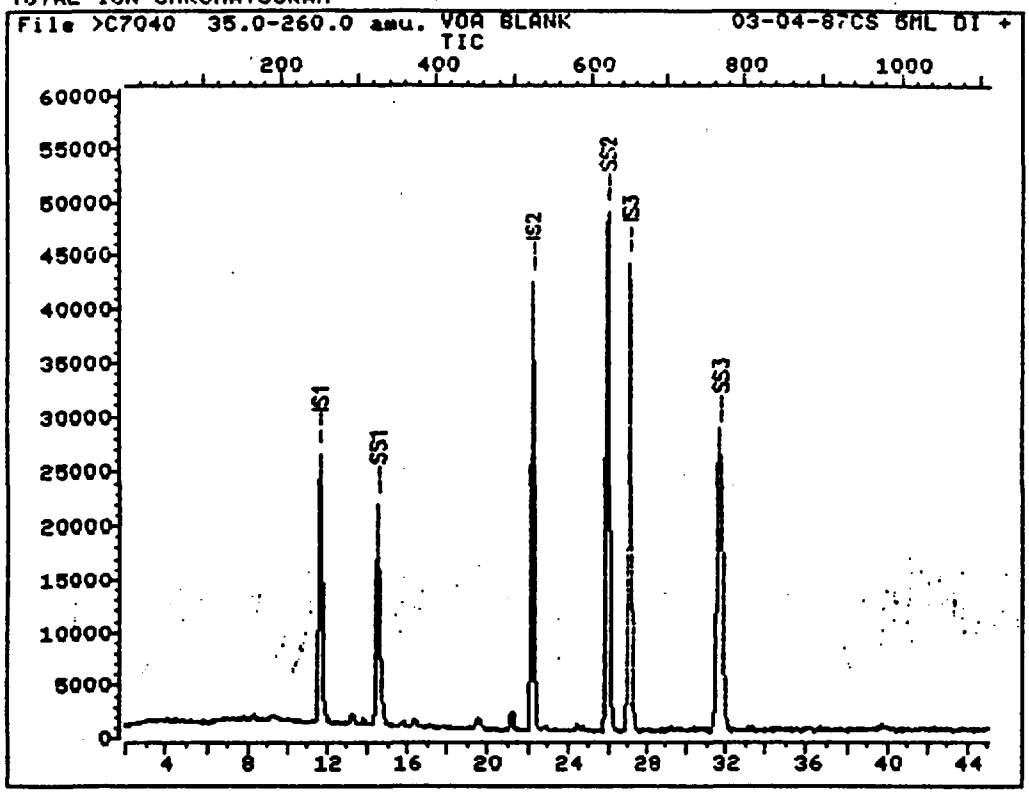
27.				
28.				
29.				
0				

TOTAL ION CHROMATOGRAM

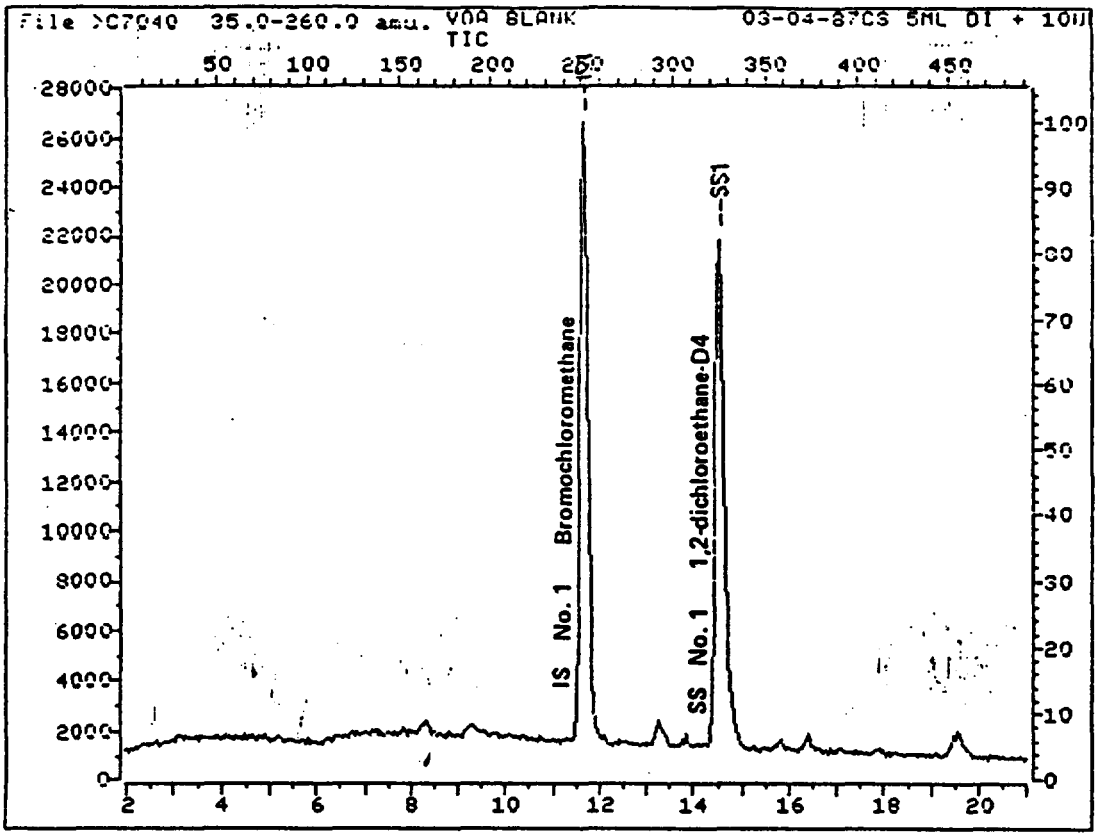


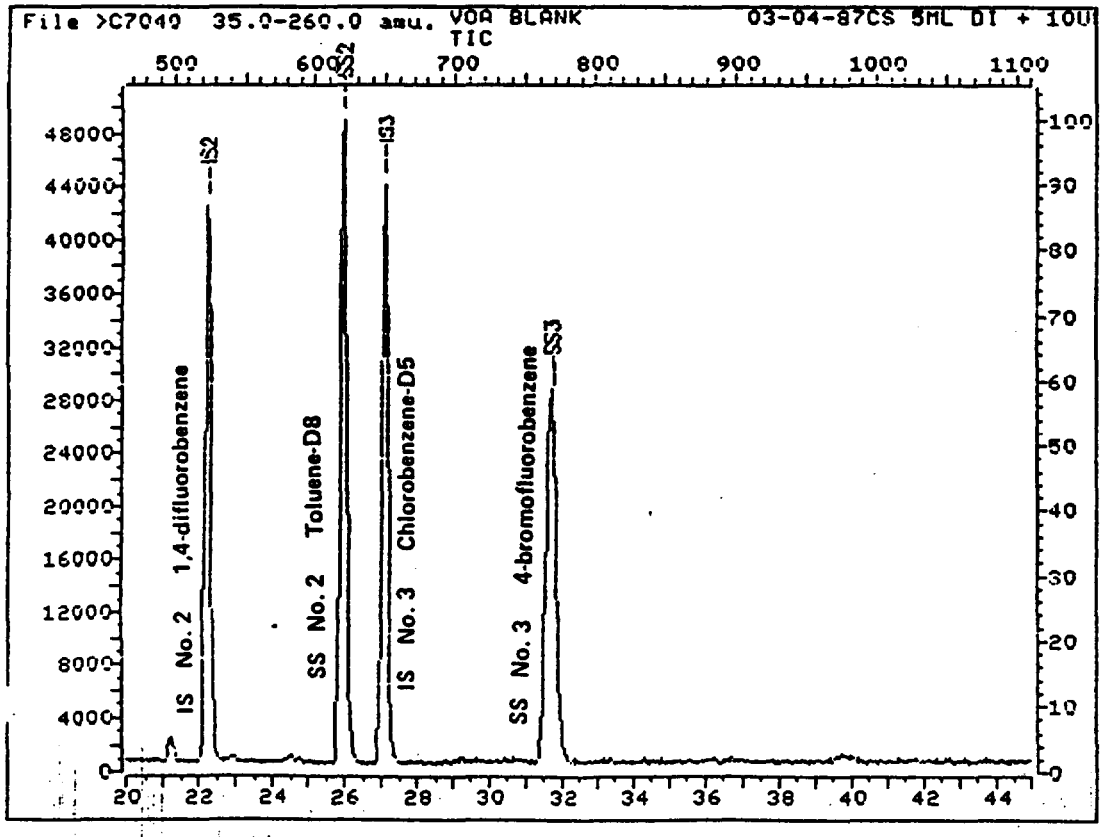
Data File: >C7040::D1
Name: VOA BLANK
Misc: 03-04-87CS 5ML DI + 10UL IS/SS

Id File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 870304 11:54

Operator ID: USER8
Quant Time: 870304 12:18
Injected at: 870304 11:32

C7040


File >C7040 35.0-260.0 amu. VOA BLANK 03-04-87CS 5ML DI + 10U
TIC
IS No. 1 Bromochloromethane
SS No. 1 1,2-dichloroethane-D4
SS1


File >C7040 35.0-260.0 amu. VOA BLANK 03-04-87CS 5ML DI + 10U
TIC
IS No. 2 1,4-difluorobenzene
SS No. 2 Toluene-D8
IS No. 3 Chlorobenzene-D5
SS No. 3 4-bromofluorobenzene
IS2
SS2
IS3
SS3

QUANT REPORT

Operator ID: USER8 Quant Rev: 4 Quant Time: 870304 12:18
Output File: ^C7040::Q2 Injected at: 870304 11:32
Data File: >C7040::D1 Dilution Factor: 1.00
Name: VOA BLANK
Misc: 03-04-87CS 5ML DI + 10UL IS/SS

ID File: VOACRS::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 870304 11:54

	Compound		R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	(IS)	128	11.65	251	38429	250.00 NGS	100
6)	METHYLENE CHLORIDE		84	8.32	165	1278	4.68 NGS	100
7)	ACETONE		43	9.29	190	9521	50.50 NGS	100
12)	TRANS-1,2-DICHLOROETHENE		96	13.25	292	2819	10.19 NGS +	85
15)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.53	325	89928	243.99 NGS	85
16)	*1,4-DIFLUOROBENZENE	(IS)	114	22.25	524	182868	250.00 NGS	100
17)	2-BUTANONE		72	14.72	330	4568	88.95 NGS	100
31)	*CHLOROBENZENE-D5	(IS)	117	27.10	649	153369	250.00 NGS	100
32)	4-METHYL-2-PENTANONE		43	22.91	541	2656	7.58 NGS +	92
33)	2-HEXANONE		43	24.50	582	3398	10.69 NGS +	100
36)	TOLUENE-D8	(SURR)	98	25.97	620	194355	232.15 NGS	95
40)	4-BROMOFLUOROBENZENE	(SURR)	95	31.72	768	102726	226.05 NGS	100

* Compound is ISTD

+ carryover - 2 standards preceeded this blank

C 7138

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ecology and environment, inc.

Case No: IL-4906, 4928, 4971, 4989.

Lab Sample ID No: Method Blank

QC Report No:

Sample Matrix: ~~Soil~~ Water for Soil

Contract No: IL-3140

Data Release Authorized By: [illegible]

Date Sample Received:

Volatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared:

Date Analyzed: 3-09-87

Conc/Dil Factor: 2 pH

Percent Moisture: (Not Decanted)

Concentrations reported "as received"

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	2000u
74-83-9	Bromomethane	2000u
75-01-4	Vinyl Chloride	2000u
75-00-3	Chloroethane	2000u
75-09-2	Methylene Chloride	320 J
67-64-1	Acetone	3200
75-15-0	Carbon Disulfide	1000u
75-35-4	1, 1-Dichloroethene	1000u
75-34-3	1, 1-Dichloroethane	1000u
156-60-5	Trans-1, 2-Dichloroethene	1000u
67-66-3	Chloroform	1000u
107-06-2	1, 2-Dichloroethane	1000u
78-93-3	2-Butanone	5600
71-55-6	1, 1, 1-Trichloroethane	1000u
56-23-5	Carbon Tetrachloride	1000u
108-05-4	Vinyl Acetate	2000u
75-27-4	Bromodichloromethane	1000u

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	1000u
10061-02-6	Trans-1, 3-Dichloropropene	1000u
79-01-6	Trichloroethene	1000u
124-48-1	Dibromochloromethane	1000u
79-00-5	1, 1, 2-Trichloroethane	1000u
71-43-2	Benzene	1000u
10061-01-5	cis-1, 3-Dichloropropene	1000u
110-75-8	2-Chloroethylvinylether	2000u
75-25-2	Bromoform	1000u
108-10-1	4-Methyl-2-Pentanone	2000u
591-78-6	2-Hexanone	2000u
127-18-4	Tetrachloroethene	1000u
79-34-5	1, 1, 2, 2-Tetrachloroethane	1000u
108-88-3	Toluene	1000u
108-90-7	Chlorobenzene	1000u
100-41-4	Ethylbenzene	1000u
100-42-5	Styrene	1000u
	Total Xylenes	1000u

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g., 10U) based on necessary concentration/dilution action. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero.

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/ul in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

E This flag indicates an approximate concentration.

Laboratory Name Ecology & Environment Inc.

ase No U-4906, 4928, 4971, 4989

Sample Number C7138

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number min	Estimated Concentration (ug/l or ug/kg)
1.	Hexene isomer	VOA	17.2	1700 J
2.	Hexane isomer	VOA	21.2	7800 J
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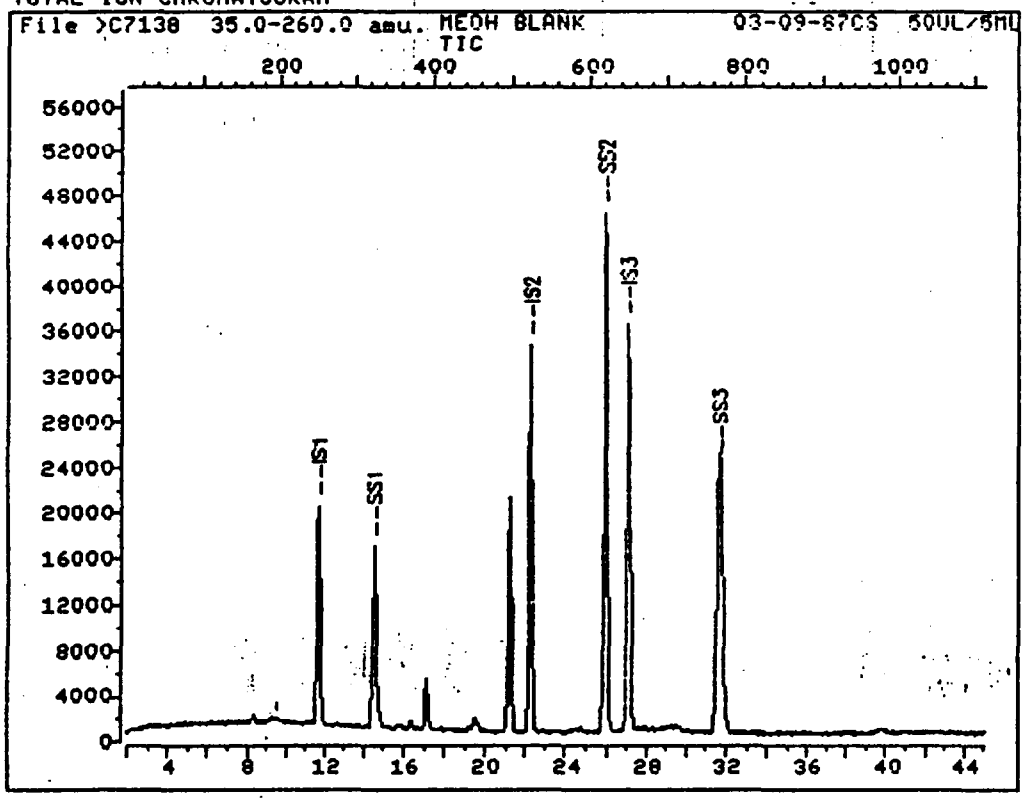
TOTAL ION CHROMATOGRAM

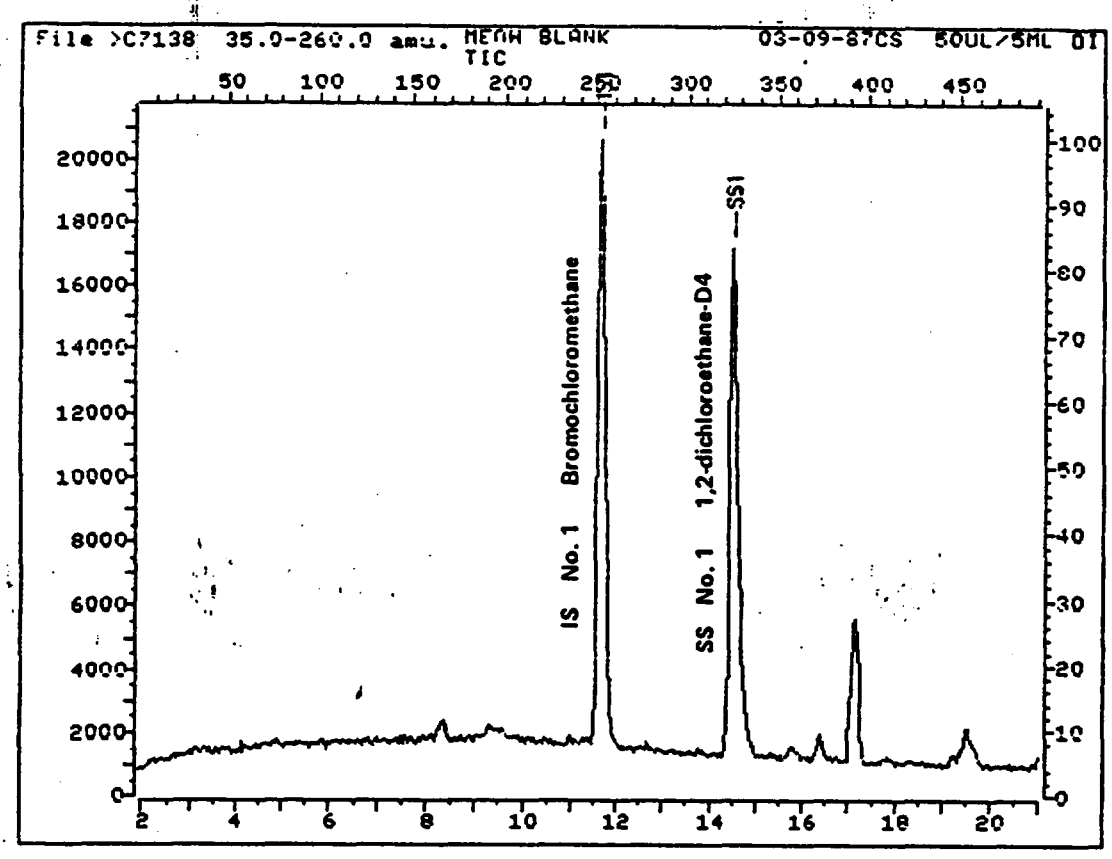


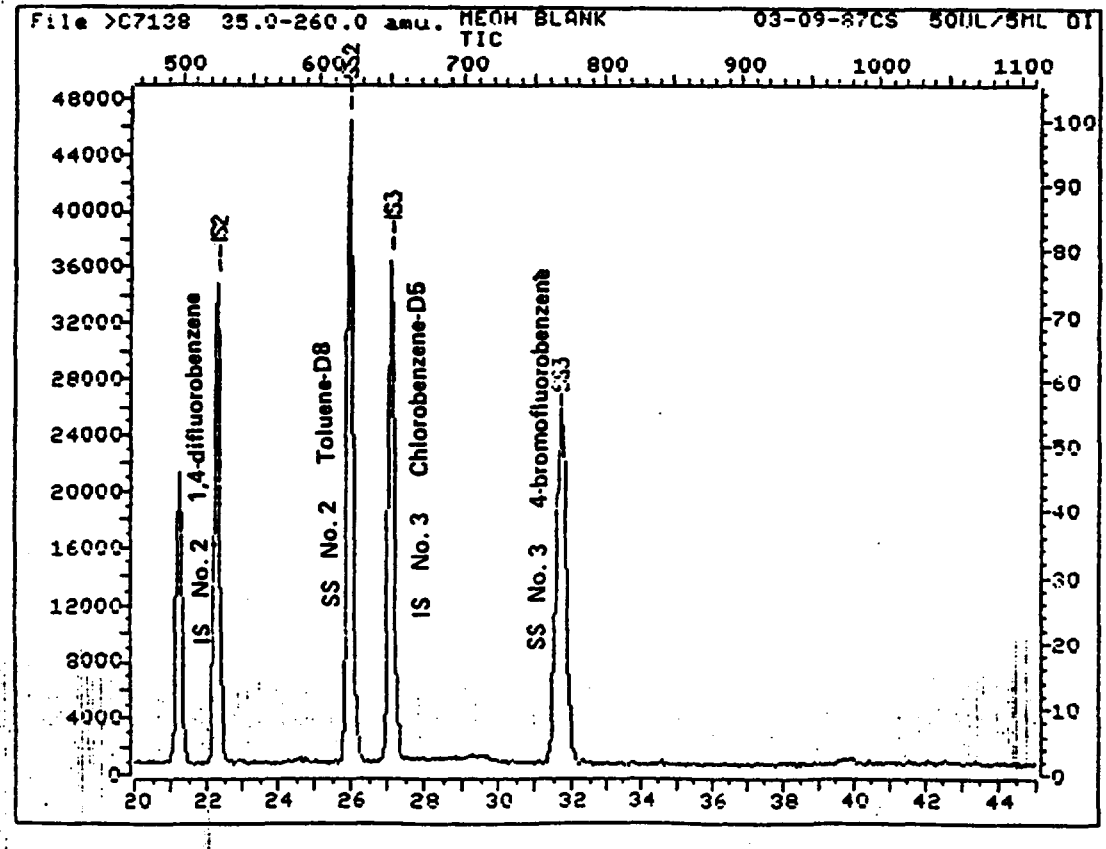
Data File: >C7138::D3
Name: MEOH BLANK
Misc: 03-09-87CS 50UL/5ML DI + 10UL IS/SS

Id File: VOACR::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 870309 12:26

Operator ID: USER8
Quant Time: 870309 13:04
Injected at: 870309 12:18

C7138


File >C7138 35.0-260.0 amu. MEOH BLANK 03-09-87CS 50UL/5ML 01
TIC
IS No. 1 Bromochloromethane
SS No. 1 1,2-dichloroethane-D4
SS1


File >C7138 35.0-260.0 amu. MEOH BLANK 03-09-87CS 50UL/5ML 01
TIC
IS No. 2 1,4-difluorobenzene
IS2
SS No. 2 Toluene-D8
SS2
IS No. 3 Chlorobenzene-D5
IS3
SS No. 3 4-bromofluorobenzene
SS3

:LSTGA

QUANT REPORT

Operator ID: USER8 Quant Rev: 4 Quant Time: 870309 13:04
Output File: ^C7138::Q2 Injected at: 870309 12:18
Data File: >C7138::D3 Dilution Factor: 1.00
Name: MEOH BLANK
Misc: 03-09-87CS 50UL/5ML DI + 10UL IS/SS

ID File: VOACR::D2
Title: VOA ID FILE FOR HP-5995 (CONT. CAL.)
Last Calibration: 870309 12:26

	Compound		R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	(IS)	128	11.69	252	28371	50.00 UG/L	100
6)	METHYLENE CHLORIDE		84	8.35	166	1769	1.58 UG/L	100
7)	ACETONE		43	9.43	194	8993	15.93 UG/L	100
15)	1,2-DICHLOROETHANE-D4	(SURR)	65	14.52	325	68917	46.54 UG/L 94 ✓	86
16)	*1,4-DIFLUOROBENZENE	(IS)	114	22.28	525	144946	50.00 UG/L	100
17)	2-BUTANONE		72	14.71	330	3727	27.96 UG/L	100
31)	*CHLOROBENZENE-D5	(IS)	117	27.13	650	122780	50.00 UG/L	100
36)	TOLUENE-D8	(SURR)	98	25.96	620	181482	48.55 UG/L 98 ✓	93
40)	4-BROMOFLUOROBENZENE	(SURR)	95	31.68	767	86173	45.29 UG/L 90 ✓	100

* Compound is ISTD

Laboratory Name Ecology & Environment, Inc

Case No IL-3140

Sample Number D1885

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared 02-16-87

Date Analyzed: 03-04-87

Conc/Dil Factor: 2

Percent Moisture (Decanted) _____

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

Concentrations reported "as received" basis

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	3300u
111-44-4	bis(-2-Chloroethyl)Ether	3300u
95-57-8	2-Chlorophenol	3300u
541-73-1	1 3-Dichlorobenzene	3300u
106-46-7	1. 4-Dichlorobenzene	3300u
100-51-6	Benzyl Alcohol	3300u
95-50-1	1. 2-Dichlorobenzene	3300u
95-48-7	2-Methylphenol	3300u
39638-32-9	bis(2-chloroisopropyl)Ether	3300u
106-44-5	4-Methylphenol	3300u
621-64-7	N-Nitroso-Di-n-Propylamine	3300u
67-72-1	Hexachloroethane	3300u
98-95-3	Nitrobenzene	3300u
78-59-1	Isophorone	3300u
88-75-5	2-Nitrophenol	3300u
105-67-9	2. 4-Dimethylphenol	3300u
65-85-0	Benzoic Acid	16000u
111-91-1	bis(-2-Chloroethoxy)Methane	3300u
120-83-2	2. 4-Dichlorophenol	3300u
120-82-1	1. 2. 4-Trichlorobenzene	3300u
91-20-3	Naphthalene	3300u
106-47-8	4-Chloroaniline	3300u
87-68-3	Hexachlorobutadiene	3300u
59-50-7	4-Chloro-3-Methylphenol	3300u
91-57-6	2-Methylnaphthalene	3300u
77-47-4	Hexachlorocyclopentadiene	3300u
88-06-2	2 4 6-Trichlorophenol	3300u
95-95-4	2. 4 5-Trichlorophenol	16000u
91-58-7	2-Chloronaphthalene	3300u
88-74-4	2-Nitroaniline	16000u
131-11-3	Dimethyl Phthalate	3300u
208-96-8	Acenaphthylene	3300u
99-09-2	3-Nitroaniline	16000u

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	3300u
51-28-5	2. 4-Dinitrophenol	16000u
100-02-7	4-Nitrophenol	16000u
132-64-9	Dibenzofuran	3300u
121-14-2	2 4-Dinitrotoluene	3300u
606-20-2	2 6-Dinitrotoluene	3300u
84-66-2	Diethylphthalate	3300u
7005-72-3	4-Chlorophenyl-phenylether	3300u
86-73-7	Fluorene	3300u
100-01-6	4-Nitroaniline	16000u
534-52-1	4. 6-Dinitro-2-Methylphenol	16000u
86-30-6	N-Nitrosodiphenylamine (1)	3300u
101-55-3	4-Bromophenyl-phenylether	3300u
118-74-1	Hexachlorobenzene	3300u
87-86-5	Pentachlorophenol	16000u
85-01-8	Phenanthrene	3300u
120-12-7	Anthracene	3300u
84-74-2	Di-n-Butylphthalate	3300u
206-44-0	Fluoranthene	3300u
129-00-0	Pyrene	3300u
95-68-7	Butylbenzylphthalate	3300u
91-94-1	3 3 -Dichlorobenzidine	6600u
56-55-3	Benzo(a)Anthracene	3300u
117-81-7	bis(2-Ethylhexyl)Phthalate	3300u
218-01-9	Chrysene	3300u
117-84-0	Di-n-Octyl Phthalate	3300u
205-99-2	Benzo(b)Fluoranthene	3300u
207-08-9	Benzo(k)Fluoranthene	3300u
50-32-8	Benzo(a)Pyrene	3300u
193-39-5	Indeno(1, 2, 3-cd)Pyrene	3300u
53-70-3	Dibenz(a, h)Anthracene	3300u
191-24-2	Benzo(g, h, i)Perylene	3300u

(1)-Cannot be separated from diphenylamine

Laboratory Name Ecology & Environment

Case No 4-4906,4928, 4971, 4989

Sample Number D1885

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	No TIC's in BNA fraction			
2.				
3.				
4.				
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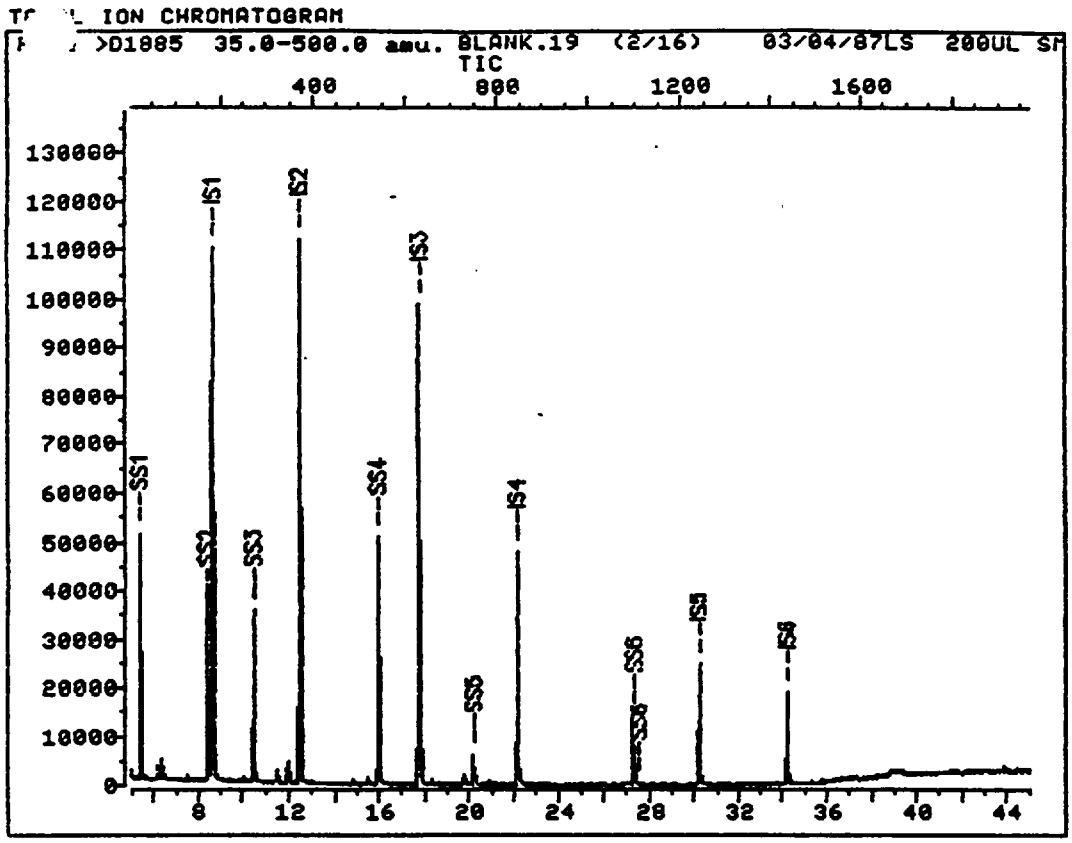
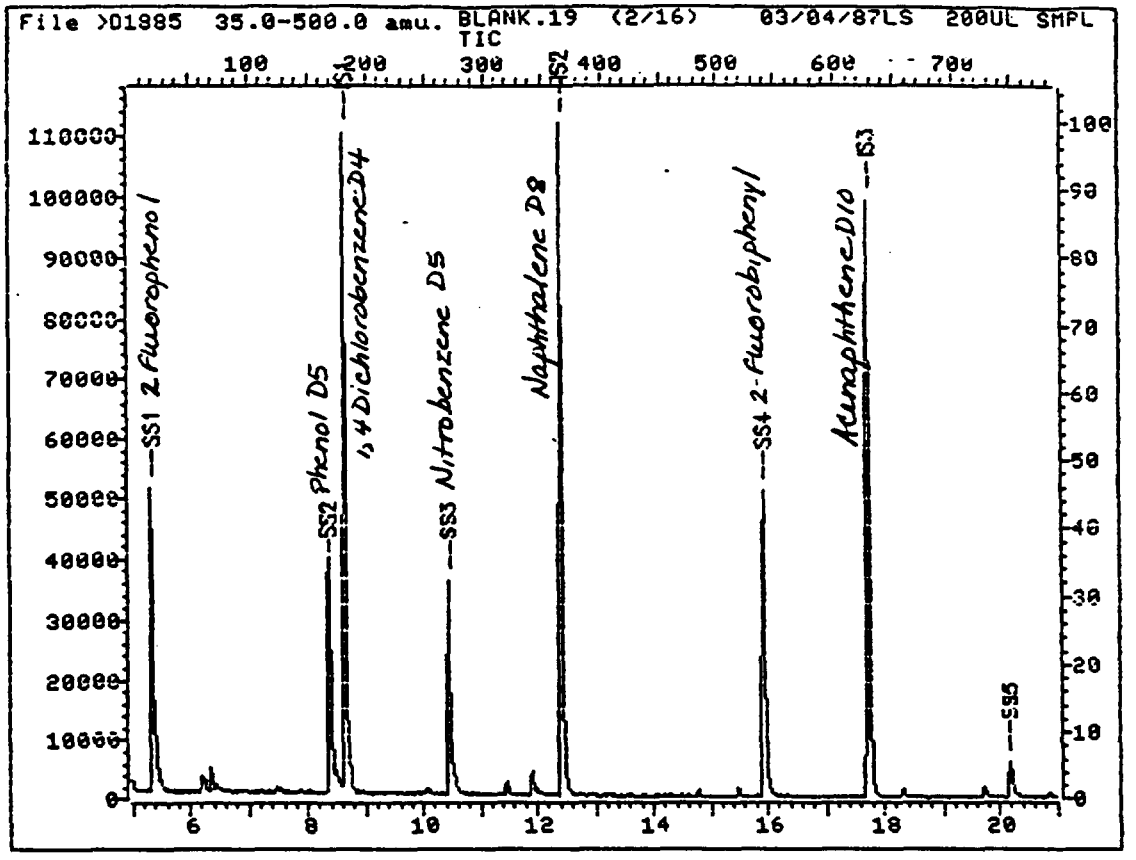
26.				
27.				
28.				
29.				
30				



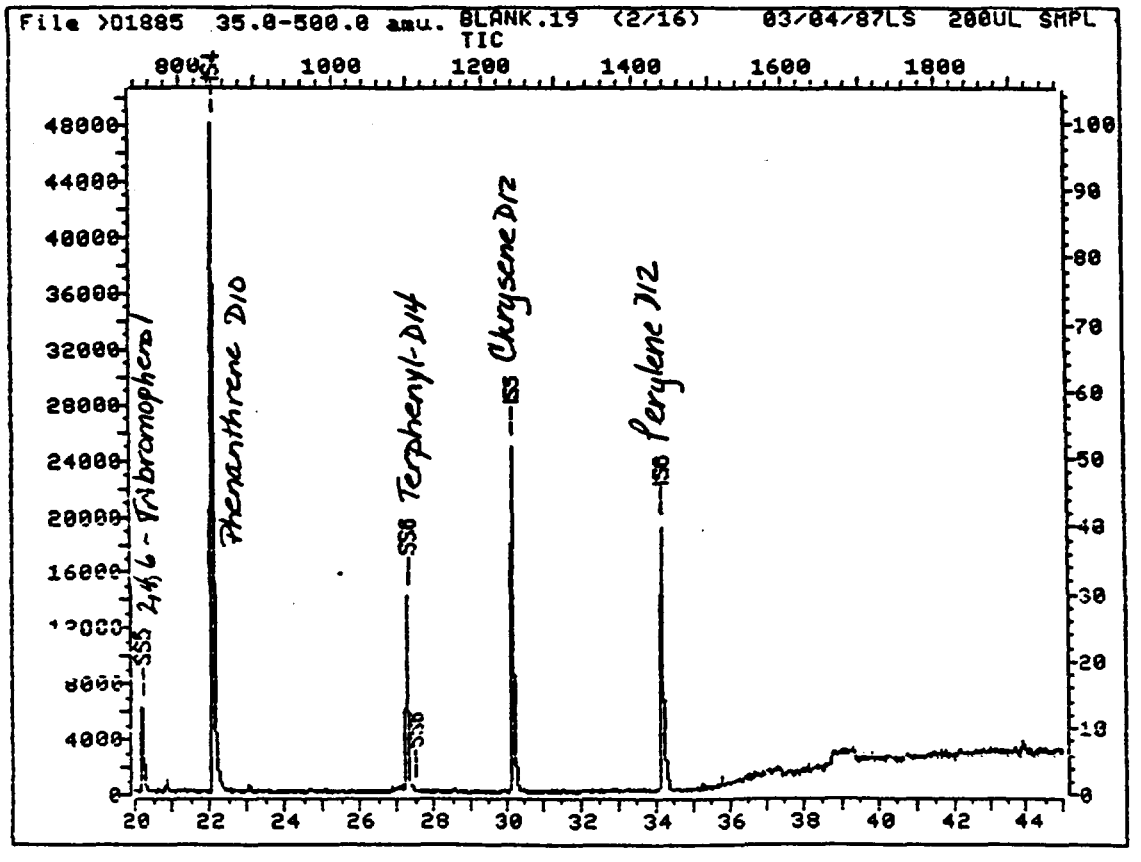
Data File: >D1885::D3
Name: BLANK.19 (2/16)
Misc: 03/04/87LS 200UL SMPL + 200UL MECL2 + 4UL IS (2X) BTL# 1

Id File: BNADR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870304 18:41

Operator ID: USER6
Quant Time: 870304 20:19
Injected at: 870304 17:43


File >01885 35.0-500.0 amu. BLANK.19 (2/16) 03/04/87LS 200UL SMPL
TIC
SS1 2 Fluorophenol
SS2 Phenol D5
1,4 Dichlorobenzene-D4
SS3 Nitrobenzene D5
Naphthalene D8
SS4 2-Fluorobiphenyl
Acenaphthene-D10
SS5

D1885


File >01885 35.0-500.0 amu. BLANK.19 (2/16) 03/04/87LS 200UL SMPL
TIC
SS5 2,4,6-Tribromophenol
Phenanthrene D10
SS6 Terphenyl-D14
Chrysene D12
Perylene D12

U-4906

QUANT REPORT

Operator ID: USER6 Quant Rev: 4 Quant Time: 870304 20:19
Output File: ^D1885::Q2 Injected at: 870304 17:43
Data File: >D1885::D3 Dilution Factor: 2.00
Name: BLANK.19 (2/16)
Misc: 03/04/87LS 200UL SMPL + 200UL MECL2 + 4UL IS (2X) BTL# 1

ID File: BNADR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870304 18:41

	Compound		R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	8.65	181	49052	40.00 UG/L	85
2)	PHENOL-D5	(SURR)	99	8.34	166	53455	62.02 UG/L	91
5)	2-FLUOROPHENOL	(SURR)	112	5.33	18	38508	66.01 UG/L	70
17)	~~N-NITROSO-DI-N-PROPYLAMINE~~	~~70~~	~~10.44~~	~~269~~	~~5717~~	~~7.60~~	~~UG/L~~	90
19)	*NAPHTHALENE-D8	(IS)	136	12.42	366	155691	40.00 UG/L	100
20)	NITROBENZENE-D5	(SURR)	82	10.44	269	35441	45.84 UG/L	93
34)	*ACENAPHTHENE-D10	(IS)	162	17.74	627	63544	40.00 UG/L	95
38)	2-FLUOROBIPHENYL	(SURR)	172	15.94	539	54311	45.08 UG/L	90
41)	~~DIMETHYL PHTHALATE~~		~~163~~	~~17.74~~	~~627~~	~~12030~~	~~14.57~~	~~UG/L~~ 100
48)	2,4,6-TRIBROMOPHENOL	(SURR)	330	20.18	747	4377	31.57 UG/L	98
52)	~~2,6-DINITROTOLUENE~~		~~165~~	~~17.74~~	~~627~~	~~8319~~	~~47.75~~	~~UG/L~~ 100
55)	*PHENANTHRENE-D10	(IS)	188	22.11	842	66233	40.00 UG/L	86
65)	*CHRYSENE-D12	(IS)	240	30.16	1237	40274	40.00 UG/L	100
68)	TERPHENYL-D14	(SURR)	244	27.29	1096	20292	50.55 UG/L	100
68)	TERPHENYL-D14	(SURR)	244	27.51	1107	86	.21 UG/L	100
74)	*PERYLENE-D12	(IS)	264	34.17	1434	32640	40.00 UG/L	100

* Compound is ISTD

Laboratory Name Ecology & Environment
Case No: U-4906, 4928, 4971, 4989

Sample Number
D1898

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)
Date Extracted/Prepared: 02-19-87
Date Analyzed: 03-05-87
Conc/Dil Factor: 2
Percent Moisture (Decanted) _____

GPC Cleanup ☐Yes ☒No
Separatory Funnel Extraction ☐Yes
Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	3300u
111-44-4	bis(2-Chloroethyl)Ether	3300u
95-57-8	2-Chlorophenol	3300u
541-73-1	1,3-Dichlorobenzene	3300u
106-46-7	1,4-Dichlorobenzene	3300u
100-51-6	Benzyl Alcohol	3300u
95-50-1	1,2-Dichlorobenzene	3300u
95-48-7	2-Methylphenol	3300u
39638-32-9	bis(2-chloroisopropyl)Ether	3300u
106-44-5	4-Methylphenol	3300u
621-64-7	N-Nitroso-Di-n-Propylamine	3300u
67-72-1	Hexachloroethane	3300u
98-95-3	Nitrobenzene	3300u
78-59-1	Isophorone	3300u
88-75-5	2-Nitrophenol	3300u
105-67-9	2,4-Dimethylphenol	3300u
65-85-0	Benzoic Acid	16000u
111-91-1	bis(2-Chloroethoxy)Methane	3300u
120-83-2	2,4-Dichlorophenol	3300u
120-82-1	1,2,4-Trichlorobenzene	3300u
91-20-3	Naphthalene	3300u
106-47-8	4-Chloroaniline	3300u
87-68-3	Hexachlorobutadiene	3300u
59-50-7	4-Chloro-3-Methylphenol	3300u
91-57-6	2-Methylnaphthalene	3300u
77-47-4	Hexachlorocyclopentadiene	3300u
88-06-2	2,4,6-Trichlorophenol	3300u
95-95-4	2,4,5-Trichlorophenol	16000u
91-58-7	2-Chloronaphthalene	3300u
88-74-4	2-Nitroaniline	16000u
131-11-3	Dimethyl Phthalate	3300u
208-96-8	Acenaphthylene	3300u
99-09-2	3-Nitroaniline	16000u

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	3300u
51-28-5	2,4-Dinitrophenol	16000u
100-02-7	4-Nitrophenol	16000u
132-64-9	Dibenzofuran	3300u
121-14-2	2,4-Dinitrotoluene	3300u
606-20-2	2,6-Dinitrotoluene	3300u
84-66-2	Diethylphthalate	1200 J
7005-72-3	4-Chlorophenyl-phenylether	3300u
86-73-7	Fluorene	3300u
100-01-6	4-Nitroaniline	16000u
534-52-1	4,6-Dinitro-2-Methylphenol	16000u
86-30-6	N-Nitrosodiphenylamine (1)	3300u
101-55-3	4-Bromophenyl-phenylether	3300u
118-74-1	Hexachlorobenzene	3300u
87-86-5	Pentachlorophenol	16000u
85-01-8	Phenanthrene	3300u
120-12-7	Anthracene	3300u
84-74-2	Di-n-Butylphthalate	3300u
206-44-0	Fluoranthene	3300u
129-00-0	Pyrene	3300u
85-68-7	Butylbenzylphthalate	3300u
91-94-1	3,3'-Dichlorobenzidine	6600u
56-55-3	Benzo(a)Anthracene	3300u
117-81-7	bis(2-Ethylhexyl)Phthalate	1500 J
218-01-9	Chrysene	3300u
117-84-0	Di-n-Octyl Phthalate	3300u
205-99-2	Benzo(b)Fluoranthene	3300u
207-08-9	Benzo(k)Fluoranthene	3300u
50-32-8	Benzo(a)Pyrene	3300u
193-39-5	Indeno(1,2,3-cd)Pyrene	3300u
53-70-3	Dibenz(a,h)Anthracene	3300u
191-24-2	Benzo(g,h,i)Perylene	3300u

(1)-Cannot be separated from diphenylamine

Laboratory Name Ecology & Environment

Case No U-4906, 4928, 4971, 4989

Sample Number D1898

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	No TIC's in BNA fraction			
2.				
3.				
4.				
5.				
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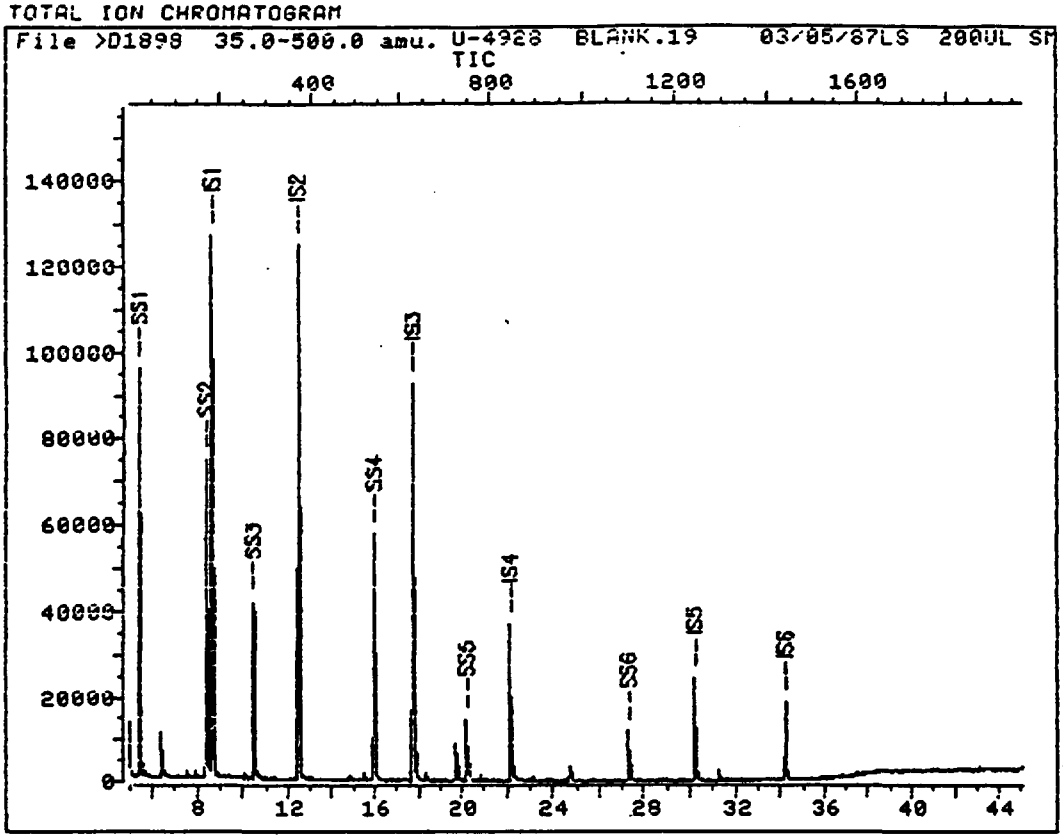
29.				
30				

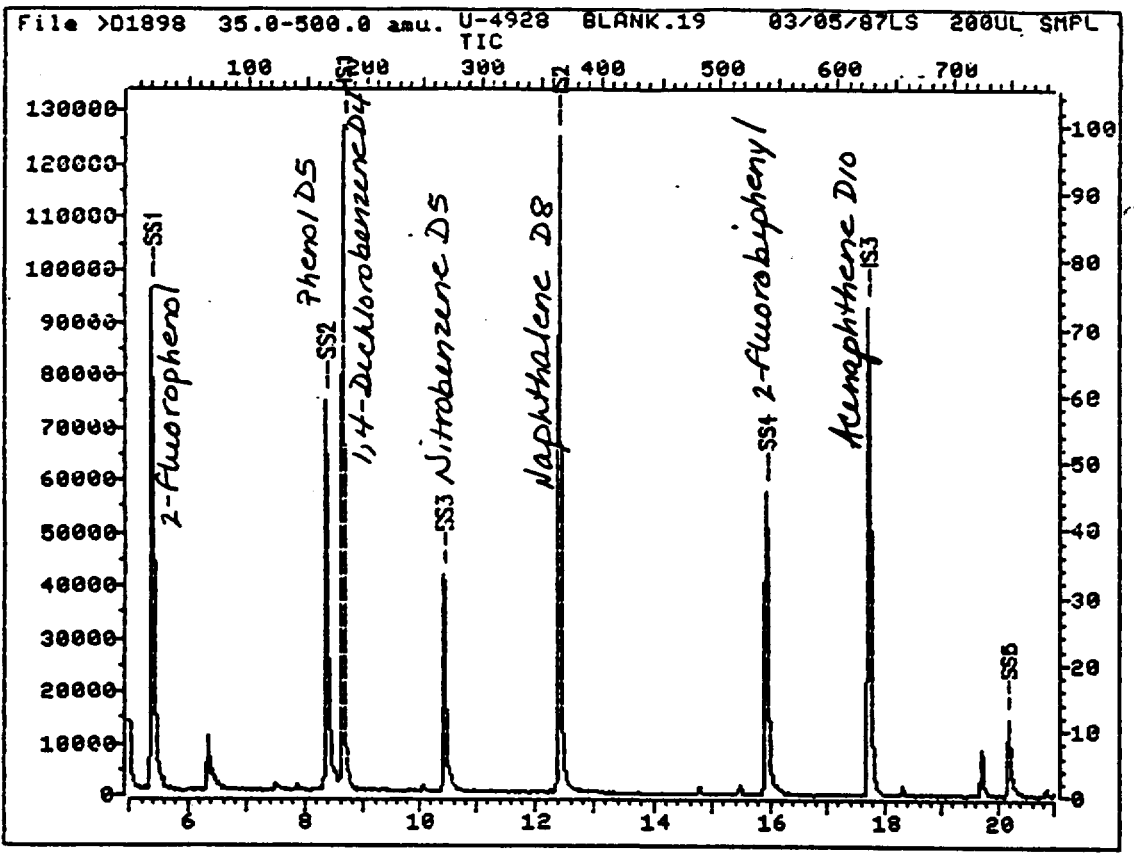
TOTAL ION CHROMATOGRAM



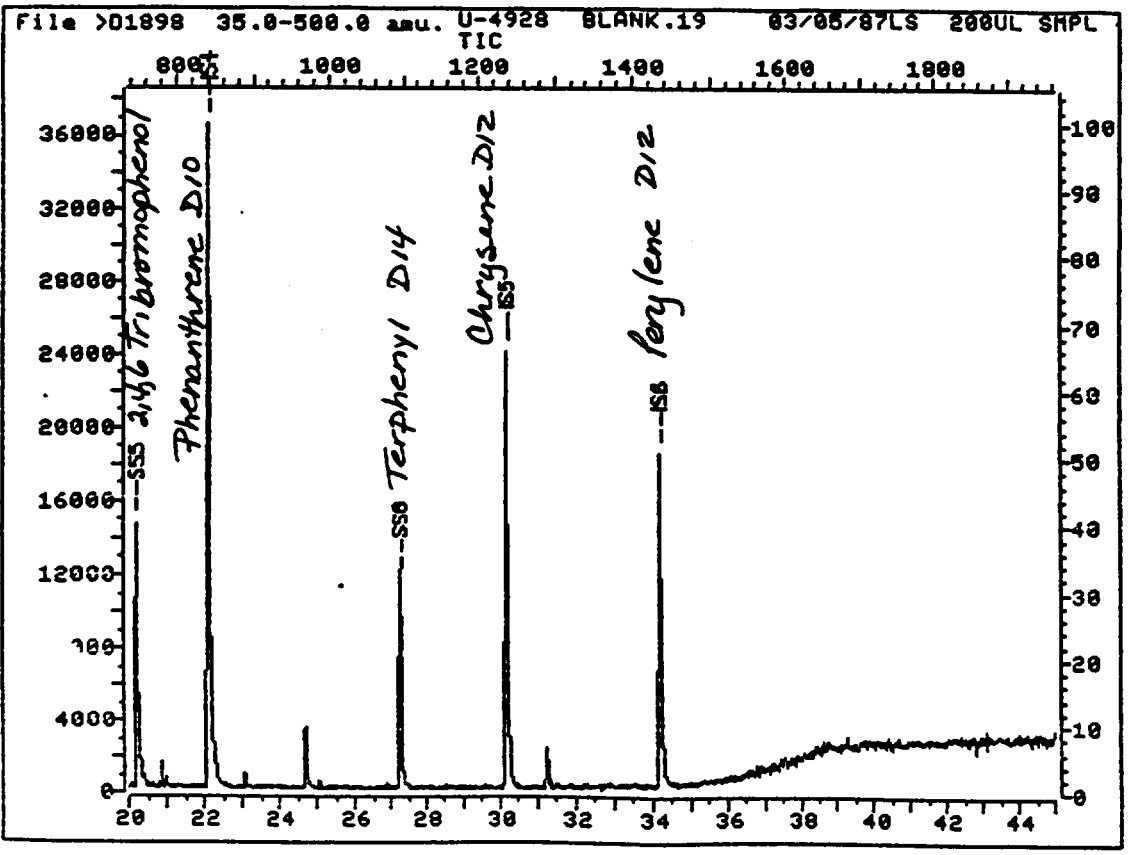
Data File: >D1898::D3
Name: U-4928 BLANK.19
Misc: 03/05/87LS 200UL SMPL + 200UL MECL2 + 4UL IS (2X) BTL# 1

Id File: BNADR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870305 17:22

Operator ID: USER6
Quant Time: 870305 17:48
Injected at: 870305 17:00


File >D1898 35.0-500.0 amu. U-4928 BLANK.19 03/05/87LS 200UL SMPL
TIC
2-Fluorophenol
Phenol D5
1,4-Dichlorobenzene D4
Nitrobenzene D5
Naphthalene D8
2-Fluorobiphenyl
Acenaphthene D10
SS1
SS2
SS3
SS4
SS5
IS1
IS3

D1898


File >D1898 35.0-500.0 amu. U-4928 BLANK.19 03/05/87LS 200UL SMPL
TIC
2,4,6 Tribromophenol
Phenanthrene D10
Terphenyl D14
Chrysene D12
Perylene D12
SS5
SS6
IS5
IS6

QUANT REPORT

Operator ID: USER6 Quant Rev: 4 Quant Time: 870305 17:48
Output File: ^D1898::Q2 Injected at: 870305 17:00
Data File: >D1898::D3 Dilution Factor: 2.00
Name: U-4928 BLANK.19
Misc: 03/05/87LS 200UL SMPL + 200UL MECL2 + 4UL IS (2X) BTL# 1

ID File: BNADR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870305 17:22

	Compound		R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	8.65	188	53808	40.00 UG/L	85
2)	PHENOL-D5	(SURR)	99	8.36	166	81693	79.81 UG/L ✓	88
5)	2-FLUOROPHENOL	(SURR)	112	5.39	20	66141	143.44 UG/L HIGH	64
~~17)~~	~~N-NITROSO-DI-N-PROPYLAMINE~~		~~70~~	~~10.44~~	~~268~~	~~8398~~	~~10.23 UG/L~~	~~80~~
19)	*NAPHTHALENE-D8	(IS)	136	12.41	365	182332	40.00 UG/L	100
20)	NITROBENZENE-D5	(SURR)	82	10.44	268	48061	49.49 UG/L 99 ✓	96
34)	*ACENAPHTHENE-D10	(IS)	162	17.73	626	65883	40.00 UG/L	95
38)	2-FLUOROBIPHENYL	(SURR)	172	15.94	538	66719	50.15 UG/L 100 ✓	97
~~41)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~17.73~~	~~626~~	~~12409~~	~~12.88 UG/L~~	~~100~~
48)	2,4,6-TRIBROMOPHENOL	(SURR)	330	20.19	747	9781	63.73 UG/L ✓	94
~~52)~~	~~2,6-DINITROTOLUENE~~		~~165~~	~~17.73~~	~~626~~	~~8422~~	~~43.50 UG/L~~	~~100~~
53)	DIETHYLPHTHALATE		149	19.71	723	2573	3.58 UG/L YES	90
55)	*PHENANTHRENE-D10	(IS)	188	22.11	841	63731	40.00 UG/L	93
65)	*CHRYSENE-D12	(IS)	240	30.18	1237	40340	40.00 UG/L	100
68)	TERPHENYL-D14	(SURR)	244	27.28	1095	21701	54.82 UG/L 110 ✓	100
72)	BIS(2-ETHYLHEXYL)PHTHALATE		149	31.25	1290	1722	4.60 UG/L YES	93
74)	*PERYLENE-D12	(IS)	264	34.19	1434	32245	40.00 UG/L	100

* Compound is ISTD

Laboratory Name Ecology & Environment

Case No U-4906, 4928, 4991, 4989

Sample Number D 20 20

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 02-26-87

Date Analyzed: 03-17-87

Conc/Dil Factor: 2

Percent Moisture (Decanted) _____

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	3300u
111-44-4	bis(2-Chloroethyl)Ether	3300u
95-57-8	2-Chlorophenol	3300u
541-73-1	1,3-Dichlorobenzene	3300u
106-46-7	1,4-Dichlorobenzene	3300u
100-51-6	Benzyl Alcohol	3300u
95-50-1	1,2-Dichlorobenzene	3300u
95-48-7	2-Methylphenol	3300u
39638-32-9	bis(2-chloroisopropyl)Ether	3300u
106-44-5	4-Methylphenol	3300u
621-64-7	N-Nitroso-Di-n-Propylamine	3300u
67-72-1	Hexachloroethane	3300u
98-95-3	Nitrobenzene	3300u
78-59-1	Isophorone	3300u
88-75-5	2-Nitrophenol	3300u
105-67-9	2,4-Dimethylphenol	3300u
65-85-0	Benzoic Acid	16000u
111-91-1	bis(2-Chloroethoxy)Methane	3300u
120-83-2	2,4-Dichlorophenol	3300u
120-82-1	1,2,4-Trichlorobenzene	3300u
91-20-3	Naphthalene	3300u
106-47-8	4-Chloroaniline	3300u
87-68-3	Hexachlorobutadiene	3300u
59-50-7	4-Chloro-3-Methylphenol	3300u
91-57-6	2-Methylnaphthalene	3300u
77-47-4	Hexachlorocyclopentadiene	3300u
88-06-2	2,4,6-Trichlorophenol	3300u
95-95-4	2,4,5-Trichlorophenol	16000u
91-58-7	2-Chloronaphthalene	3300u
88-74-4	2-Nitroaniline	16000u
131-11-3	Dimethyl Phthalate	3300u
208-96-8	Acenaphthylene	3300u
99-09-2	3-Nitroaniline	16000u

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	3300u
51-28-5	2,4-Dinitrophenol	16000u
100-02-7	4-Nitrophenol	16000u
132-64-9	Dibenzofuran	3300u
121-14-2	2,4-Dinitrotoluene	3300u
606-20-2	2,6-Dinitrotoluene	3300u
84-66-2	Diethylphthalate	3300u
7005-72-3	4-Chlorophenyl-phenylether	3300u
86-73-7	Fluorene	3300u
100-01-6	4-Nitroaniline	16000u
534-52-1	4,6-Dinitro-2-Methylphenol	16000u
86-30-6	N-Nitrosodiphenylamine (1)	3300u
101-55-3	4-Bromophenyl-phenylether	3300u
118-74-1	Hexachlorobenzene	3300u
87-86-5	Pentachlorophenol	16000u
85-01-8	Phenanthrene	3300u
120-12-7	Anthracene	3300u
84-74-2	Di-n-Butylphthalate	6500
206-44-0	Fluoranthene	3300u
129-00-0	Pyrene	3300u
85-68-7	Butylbenzylphthalate	3300u
91-94-1	3,3'-Dichlorobenzidine	6600u
56-55-3	Benzo(a)Anthracene	3300u
117-81-7	bis(2-Ethylhexyl)Phthalate	3300u
218-01-9	Chrysene	3300u
117-84-0	Di-n-Octyl Phthalate	3300u
205-99-2	Benzo(b)Fluoranthene	3300u
207-08-9	Benzo(k)Fluoranthene	3300u
50-32-8	Benzo(a)Pyrene	3300u
193-39-5	Indeno(1,2,3-cd)Pyrene	3300u
53-70-3	Dibenz(a,h)Anthracene	3300u
191-24-2	Benzo(g,h,i)Perylene	3300u

(1)-Cannot be separated from diphenylamine

Laboratory Name Ecology & Environment

ıse No V-4906, 4928, 4971, 4989

Sample Number D2020

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number min	Estimated Concentration (ug/l or ug/kg)
1. 544638	Tetradecanoic acid	BNA	24.34	6100 J
2.				
3.				
4.				
5.				
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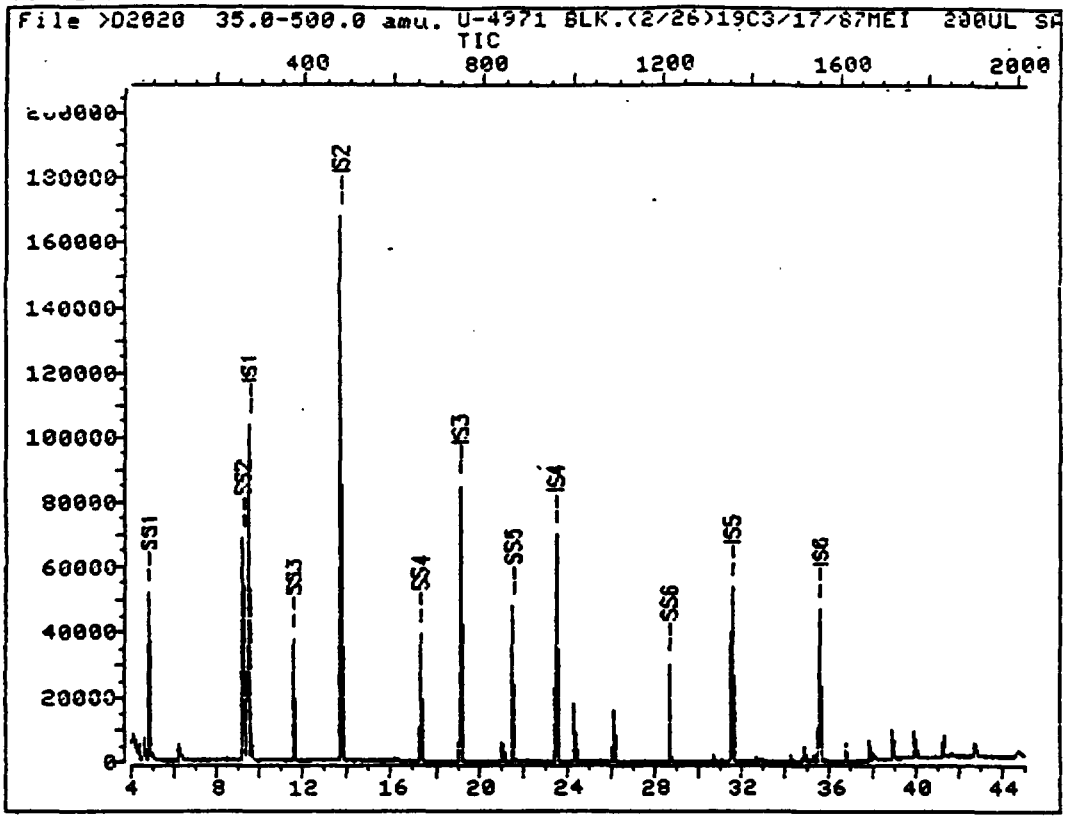
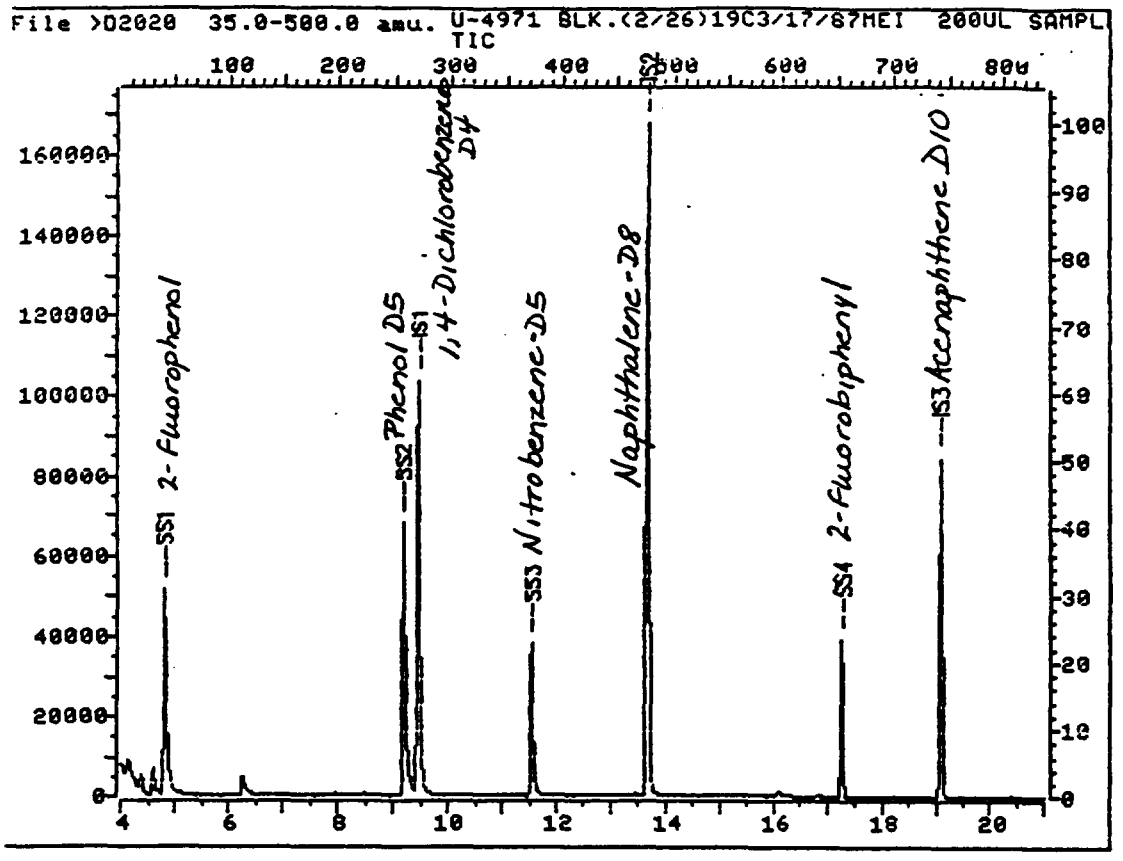
TOTAL ION CHROMATOGRAM



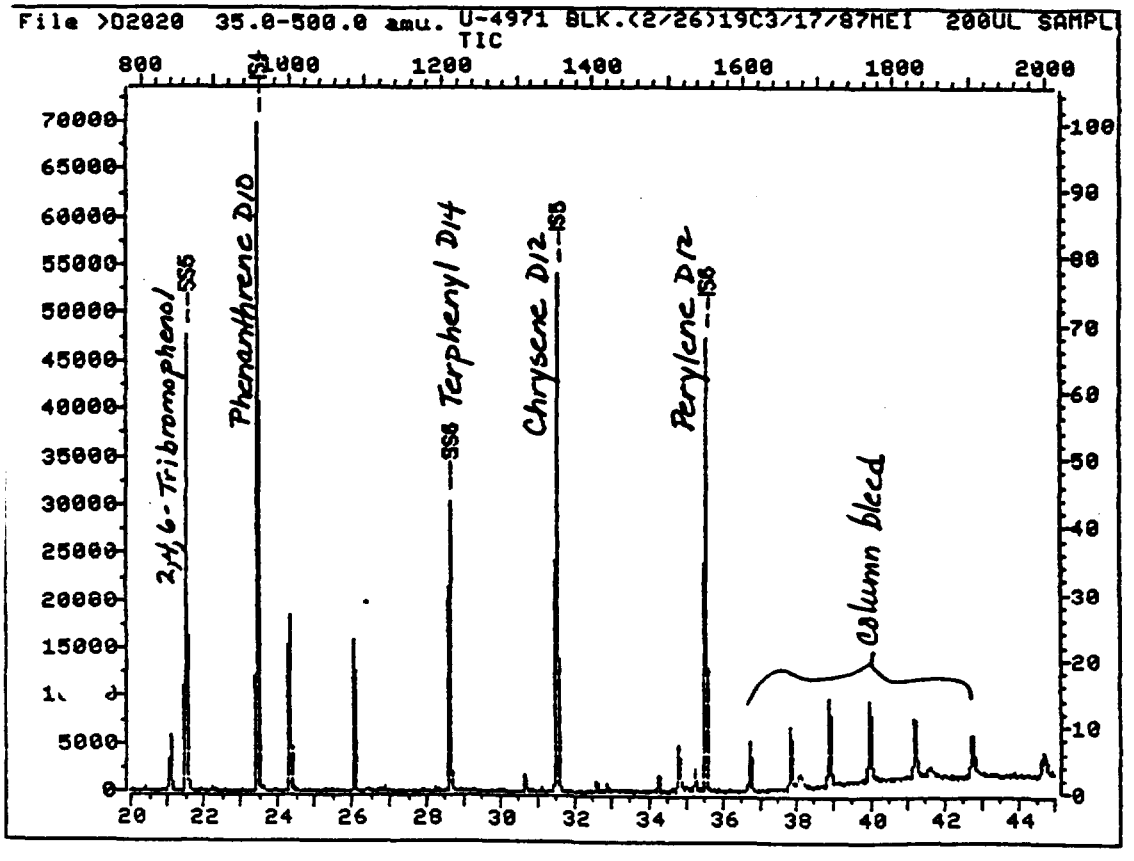
Data File: >D2020::D1
Name: U-4971 BLK.(2/26)19C
Misc: 3/17/87MEI 200UL SAMPLE/200UL MECL2 + 4UL IS(2X) BTL# 1

Id File: BNADR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870317 16:30

Operator ID: USER8
Quant Time: 870317 17:35
Injected at: 870317 16:48


File >D2020 35.0-500.0 amu. U-4971 BLK.(2/26)19C3/17/87MEI 200UL SAMPL
TIC
SS1 2-Fluorophenol
SS2 Phenol D5
IS1 1,4-Dichlorobenzene D4
SS3 Nitrobenzene-D5
Naphthalene-D8
SS4 2-Fluorobiphenyl
IS3 Acenaphthene D10

D-2020


File >D2020 35.0-500.0 amu. U-4971 BLK.(2/26)19C3/17/87MEI 200UL SAMPL
TIC
SS5 2,4,6-Tribromophenol
Phenanthrene D10
SS6 Terphenyl D14
IS5 Chrysene D12
IS6 Perylene D12
column bleed

QUANT REPORT

Operator ID: USER8 Quant Rev: 4 Quant Time: 870317 17:35
Output File: ^D2020::Q2 Injected at: 870317 16:48
Data File: >D2020::D1 Dilution Factor: 2.00
Name: U-4971 BLK.(2/26)19C
Misc: 3/17/87MEI 200UL SAMPLE/200UL MECL2 + 4UL IS(2X) BTL# 1

ID File: BNADR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870317 16:30

	Compound		R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	9.47	270	54467	40.00 UG/L	86
2)	PHENOL-D5	(SURR)	99	9.18	256	71701	69.97 UG/L 70%	95
5)	2-FLUOROPHENOL	(SURR)	112	4.78	40	45758	70.32 UG/L 70%	80
~~17)~~	~~N-NITROSO-DI-N-PROPYLAMINE~~		~~70~~	~~11.55~~	~~372~~	~~6330~~	~~7.05 UG/L~~	~~94~~
19)	*NAPHTHALENE-D8	(IS)	136	13.66	476	202540	40.00 UG/L	100
20)	NITROBENZENE-D5	(SURR)	82	11.55	372	39268	39.33 UG/L 78	91
34)	*ACENAPHTHENE-D10	(IS)	162	19.08	742	52687	40.00 UG/L	94
38)	2-FLUOROBIPHENYL	(SURR)	172	17.27	653	35915	45.52 UG/L 92	92
~~41)~~	~~DIMETHYL PHTHALATE~~		~~163~~	~~19.08~~	~~742~~	~~10776~~	~~12.48 UG/L~~	~~100~~
48)	2,4,6-TRIBROMOPHENOL	(SURR)	330	21.53	862	26878	171.09 UG/L 171%	97 High
~~52)~~	~~2,6-DINITROTOLUENE~~		~~165~~	~~19.08~~	~~742~~	~~6902~~	~~33.09 UG/L~~	~~100~~
55)	*PHENANTHRENE-D10	(IS)	188	23.46	957	89012	40.00 UG/L	92
63)	DI-N-BUTYLPHTHALATE		149	26.07	1085	22463	19.37 UG/L 4	99
65)	*CHRYSENE-D12	(IS)	240	31.53	1353	74469	40.00 UG/L	100
68)	TERPHENYL-D14	(SURR)	244	28.64	1211	37909	33.09 UG/L 66	100
74)	*PERYLENE-D12	(IS)	264	35.54	1550	66132	40.00 UG/L	100

* Compound is ISTD

Laboratory Name Ecology & Environment

Case No U-4906, 4928, 4971, 4989

Sample Number D2021

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low (Medium) (Circle One)

Date Extracted/Prepared: 03-03-87

Date Analyzed: 03-17-87

Conc/Dil Factor: 2

Percent Moisture (Decanted) _____

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or (ug/Kg) (Circle One)
108-95-2	Phenol	3300u
111-44-4	bis(-2-Chloroethyl)Ether	3300u
95-57-8	2-Chlorophenol	3300u
541-73-1	1,3-Dichlorobenzene	3300u
106-46-7	1,4-Dichlorobenzene	3300u
100-51-6	Benzyl Alcohol	3300u
95-50-1	1,2-Dichlorobenzene	3300u
95-48-7	2-Methylphenol	3300u
39638-32-9	bis(2-chloroisopropyl)Ether	3300u
106-44-5	4-Methylphenol	3300u
621-64-7	N-Nitroso-Di-n-Propylamine	3300u
67-72-1	Hexachloroethane	3300u
98-95-3	Nitrobenzene	3300u
78-59-1	Isophorone	3300u
88-75-5	2-Nitrophenol	3300u
105-67-9	2,4-Dimethylphenol	3300u
65-85-0	Benzoic Acid	16000u
111-91-1	bis(-2-Chloroethoxy)Methane	3300u
120-83-2	2,4-Dichlorophenol	3300u
120-82-1	1,2,4-Trichlorobenzene	3300u
91-20-3	Naphthalene	3300u
106-47-8	4-Chloroaniline	3300u
87-68-3	Hexachlorobutadiene	3300u
59-50-7	4-Chloro-3-Methylphenol	3300u
91-57-6	2-Methylnaphthalene	3300u
77-47-4	Hexachlorocyclopentadiene	3300u
88-06-2	2,4,6-Trichlorophenol	3300u
95-95-4	2,4,5-Trichlorophenol	16000u
91-58-7	2-Chloronaphthalene	3300u
88-74-4	2-Nitroaniline	16000u
131-11-3	Dimethyl Phthalate	3300u
208-96-8	Acenaphthylene	3300u
99-09-2	3-Nitroaniline	16000u

CAS Number		ug/l or (ug/Kg) (Circle One)
83-32-9	Acenaphthene	3300u
51-28-5	2,4-Dinitrophenol	16000u
100-02-7	4-Nitrophenol	16000u
132-64-9	Dibenzofuran	3300u
121-14-2	2,4-Dinitrotoluene	3300u
606-20-2	2,6-Dinitrotoluene	3300u
84-66-2	Diethylphthalate	3300u
7005-72-3	4-Chlorophenyl-phenylether	3300u
86-73-7	Fluorene	3300u
100-01-6	4-Nitroaniline	16000u
534-52-1	4,6-Dinitro-2-Methylphenol	16000u
86-30-6	N-Nitrosodiphenylamine (1)	3300u
101-55-3	4-Bromophenyl-phenylether	3300u
118-74-1	Hexachlorobenzene	3300u
87-86-5	Pentachlorophenol	16000u
85-01-8	Phenanthrene	3300u
120-12-7	Anthracene	3300u
84-74-2	Di-n-Butylphthalate	4000
206-44-0	Fluoranthene	3300u
129-00-0	Pyrene	3300u
85-68-7	Butylbenzylphthalate	3300u
91-94-1	3,3'-Dichlorobenzidine	6600u
56-55-3	Benzo(a)Anthracene	3300u
117-81-7	bis(2-Ethylhexyl)Phthalate	3300u
218-01-9	Chrysene	3300u
117-84-0	Di-n-Octyl Phthalate	3300u
205-99-2	Benzo(b)Fluoranthene	3300u
207-08-9	Benzo(k)Fluoranthene	3300u
50-32-8	Benzo(a)Pyrene	3300u
193-39-5	Indeno(1,2,3-cd)Pyrene	3300u
53-70-3	Dibenz(a,h)Anthracene	3300u
191-24-2	Benzo(g,h,i)Perylene	3300u

(1)-Cannot be separated from diphenylamine

Laboratory Name Ecology & Environment

Case No U-4906, 4928, 4971, 4989

Sample Number D2021

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number min	Estimated Concentration (ug/l or ug/kg)
1.	Unknown	BNA	21.10	6200 J
2.	Unknown	BNA	24.34	8200 J
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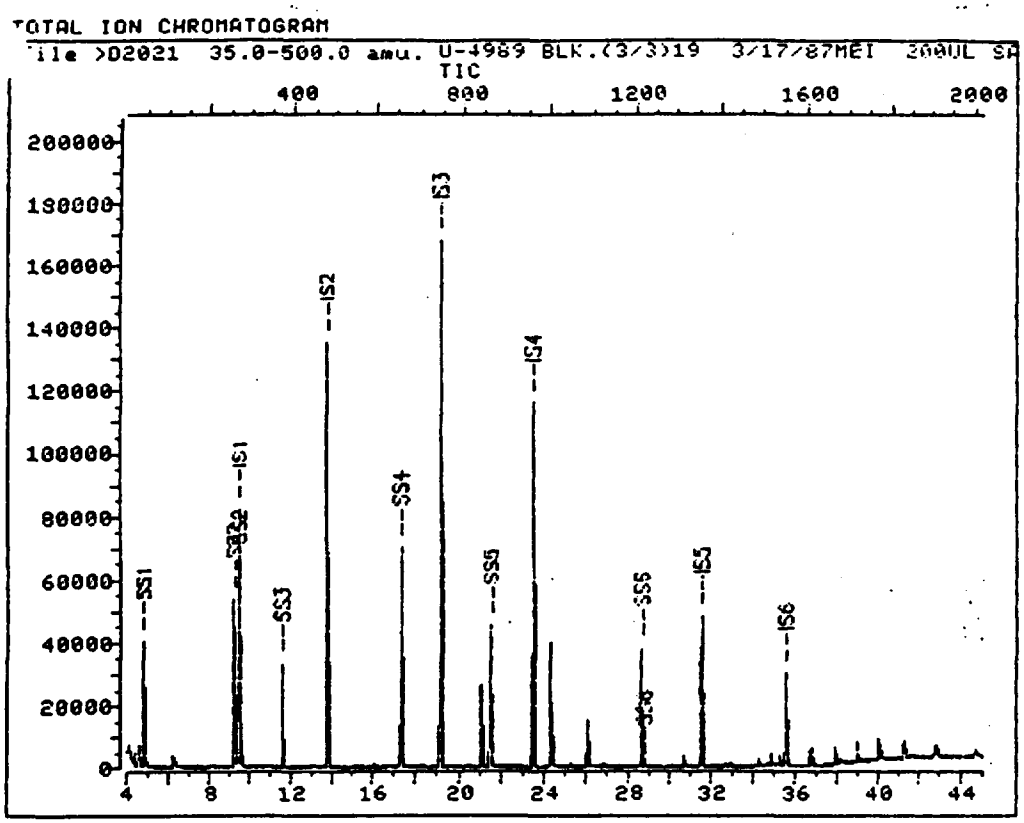
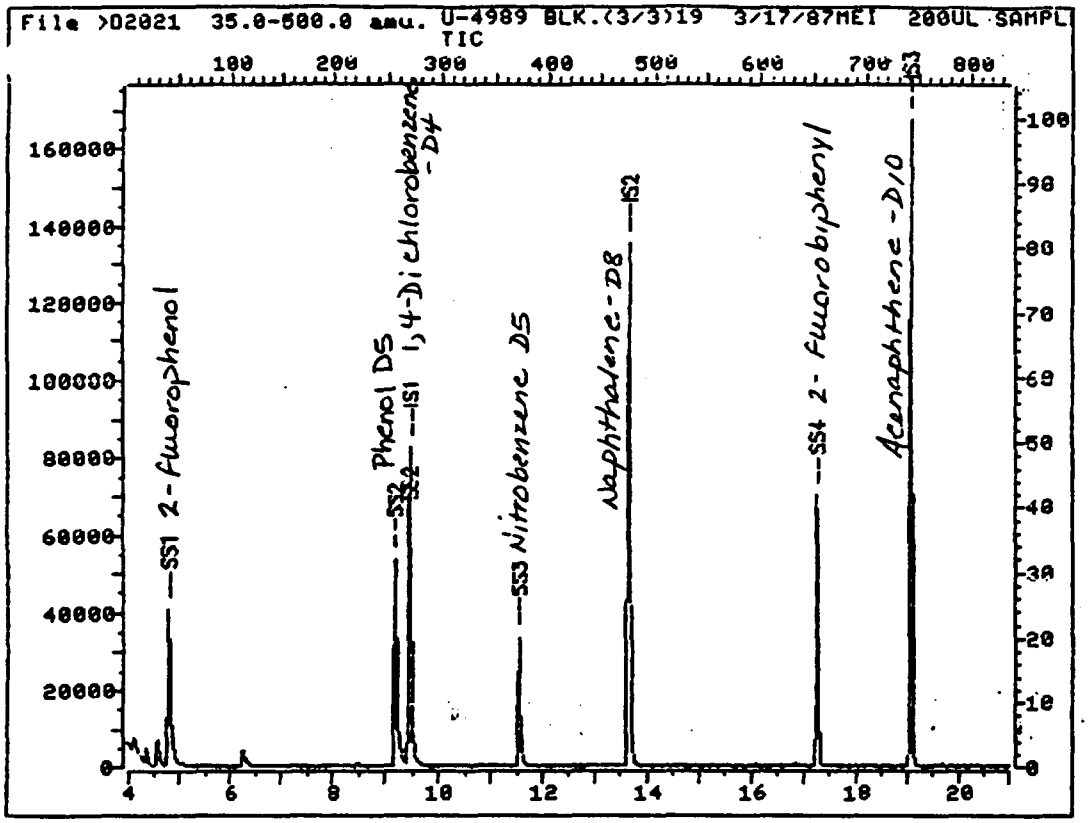


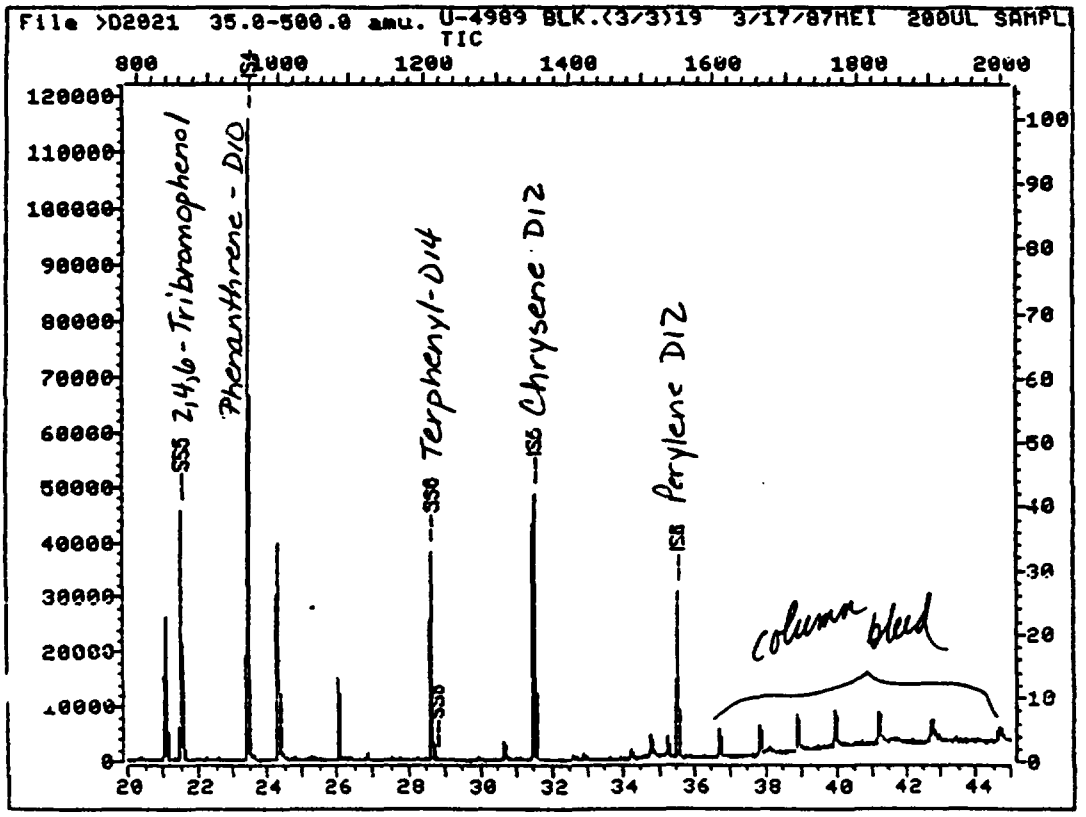
Data File: >D2021::D1
Name: U-4989 BLK.(3/3)19
Misc: 3/17/87MEI 200UL SAMPLE/200UL MECL2 + 4UL IS(2X) BTL# 2

Id File: BNADR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870317 16:30

Operator ID: USER8
Quant Time: 870317 18:32
Injected at: 870317 17:44

D2021


File >D2021 35.0-500.0 amu. U-4989 BLK.(3/3)19 3/17/87HEI 200UL SAMPL
TIC
SS1 2-Fluorophenol
SS2 Phenol D5
IS1 1,4-Dichlorobenzene-D4
SS3 Nitrobenzene D5
IS2 Naphthalene-D8
SS4 2-Fluorobiphenyl
IS3 Acenaphthene-D10


File >D2021 35.0-500.0 amu. U-4989 BLK.(3/3)19 3/17/87HEI 200UL SAMPL
TIC
SS5 2,4,6-Tribromophenol
IS4 Phenanthrene-D10
SS6 Terphenyl-D14
IS6 Chrysene D12
IS8 Perylene D12
column bleed

QUANT REPORT

Operator ID: USER8 Quant Rev: 4 Quant Time: 870317 18:32
Output File: ^D2021::Q2 Injected at: 870317 17:44
Data File: >D2021::D1 Dilution Factor: 2.00
Name: U-4989 BLK.(3/3)19
Misc: 3/17/87MEI 200UL SAMPLE/200UL MECL2 + 4UL IS(2X) BTL# 2

ID File: BNADR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870317 16:30

	Compound		R.T.	Scan#	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	9.47	270	42463	40.00 UG/L	87
2)	PHENOL-D5	(SURR)	99	9.18	256	56332	70.51 UG/L	99
2)	PHENOL-D5	(SURR)	99	9.45	269	1926	2.41 UG/L	91
5)	2-FLUOROPHENOL	(SURR)	112	4.78	40	36000	70.96 UG/L	77
17)	~~N-NITROSO-DI-N-PROPYLAMINE~~		~~70~~	~~11.55~~	~~372~~	~~5193~~	~~7.42 UG/L~~	96
19)	*NAPHTHALENE-D8	(IS)	136	13.66	476	155885	40.00 UG/L	100
20)	NITROBENZENE-D5	(SURR)	82	11.55	372	31189	40.58 UG/L	92
34)	*ACENAPHTHENE-D10	(IS)	162	19.08	742	94936	40.00 UG/L	94
38)	2-FLUOROBIPHENYL	(SURR)	172	17.27	653	63916	44.96 UG/L	94
41)	~~DIMETHYL PHTHALATE~~		~~163~~	~~19.08~~	~~742~~	~~18331~~	~~11.78 UG/L~~	100
48)	2,4,6-TRIBROMOPHENOL	(SURR)	330	21.53	862	14750	52.11 UG/L	97
52)	~~2,6-DINITROTOLUENE~~		~~165~~	~~19.08~~	~~742~~	~~12492~~	~~33.24 UG/L~~	100
55)	*PHENANTHRENE-D10	(IS)	188	23.46	957	132322	40.00 UG/L	96
63)	DI-N-BUTYLPHTHALATE		149	26.07	1085	20728	12.02 UG/L yes	98
65)	*CHRYSENE-D12	(IS)	240	31.53	1353	52636	40.00 UG/L	100
68)	TERPHENYL-D14	(SURR)	244	28.63	1211	35574	43.93 UG/L	100
68)	~~TERPHENYL-D14~~	~~(SURR)~~	~~244~~	~~28.76~~	~~1217~~	~~70~~	~~.09 UG/L~~	100
74)	*PERYLENE-D12	(IS)	264	35.54	1550	30252	40.00 UG/L	100

* Compound is ISTD

Laboratory Name Ecology & Environment, Inc

Case No IL-3140

Sample Number
D 2041

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared 3-5-87

Date Analyzed: 3-17-87

Conc/Dil Factor: 2

Percent Moisture (Decanted) _____

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

Concentrations reported "as received" basis

CAS Number		ug/l or (ug/Kg) (Circle One)
108-95-2	Phenol	330µ
111-44-4	bis(-2-Chloroethyl)Ether	330µ
95-57-8	2-Chlorophenol	330µ
541-73-1	1 3-Dichlorobenzene	330µ
106-46-7	1. 4-Dichlorobenzene	330µ
100-51-6	Benzyl Alcohol	330µ
95-50-1	1. 2-Dichlorobenzene	330µ
95-48-7	2-Methylphenol	330µ
39638-32-9	bis(2-chloroisopropyl)Ether	330µ
106-44-5	4-Methylphenol	330µ
621-64-7	N-Nitroso-Di-n-Propylamine	330µ
67-72-1	Hexachloroethane	330µ
98-95-3	Nitrobenzene	330µ
78-59-1	Isophorone	330µ
88-75-5	2-Nitrophenol	330µ
105-67-9	2. 4-Dimethylphenol	330µ
65-85-0	Benzoic Acid	1600µ
111-91-1	bis(-2-Chloroethoxy)Methane	330µ
120-83-2	2. 4-Dichlorophenol	330µ
120-82-1	1. 2. 4-Trichlorobenzene	330µ
91-20-3	Naphthalene	330µ
106-47-8	4-Chloroaniline	330µ
87-68-3	Hexachlorobutadiene	330µ
59-50-7	4-Chloro-3-Methylphenol	330µ
91-57-6	2-Methylnaphthalene	330µ
77-47-4	Hexachlorocyclopentadiene	330µ
88-06-2	2 4. 6-Trichlorophenol	330µ
95-95-4	2. 4. 5-Trichlorophenol	1600µ
91-58-7	2-Chlorohaphthalene	330µ
88-74-4	2-Nitroaniline	1600µ
131-11-3	Dimethyl Phthalate	330µ
208-96-8	Acenaphthylene	330µ
99-09-2	3-Nitroaniline	1600µ

CAS Number		ug/l or (ug/Kg) (Circle One)
83-32-9	Acenaphthene	330µ
51-28-5	2. 4-Dinitrophenol	1600µ
100-02-7	4-Nitrophenol	1600µ
132-64-9	Dibenzofuran	330µ
121-14-2	2 4-Dinitrotoluene	330µ
606-20-2	2. 6-Dinitrotoluene	330µ
84-66-2	Diethylphthalate	330µ
7005-72-3	4-Chlorophenyl-phenylether	330µ
86-73-7	Fluorene	330µ
100-01-6	4-Nitroaniline	1600µ
534-52-1	4. 6-Dinitro-2-Methylphenol	1600µ
86-30-6	N-Nitrosodiphenylamine (1)	330µ
101-55-3	4-Bromophenyl-phenylether	330µ
118-74-1	Hexachlorobenzene	330µ
87-86-5	Pentachlorophenol	1600µ
85-01-8	Phenanthrene	330µ
120-12-7	Anthracene	330µ
84-74-2	Di-n-Butylphthalate	330µ
206-44-0	Fluoranthene	330µ
129-00-0	Pyrene	330µ
85-68-7	Butylbenzylphthalate	330µ
91-94-1	3. 3'-Dichlorobenzidine	660µ
56-55-3	Benzo(a)Anthracene	330µ
117-81-7	bis(2-Ethylhexyl)Phthalate	330µ
218-01-9	Chrysene	330µ
117-84-0	Di-n-Octyl Phthalate	330µ
205-99-2	Benzo(b)Fluoranthene	330µ
207-08-9	Benzo(k)Fluoranthene	330µ
50-32-8	Benzo(a)Pyrene	330µ
193-39-5	Indeno(1,2,3-cd)Pyrene	330µ
53-70-3	Dibenz(a,h)Anthracene	330µ
191-24-2	Benzo(g,h,i)Perylene	330µ

(1)-Cannot be separated from diphenylamine

Laboratory Name Ecology & Environment

Case No V-4906, 4928, 4971, 4989

Sample Number D2041

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	No TIC's in BNA fraction			
2.				
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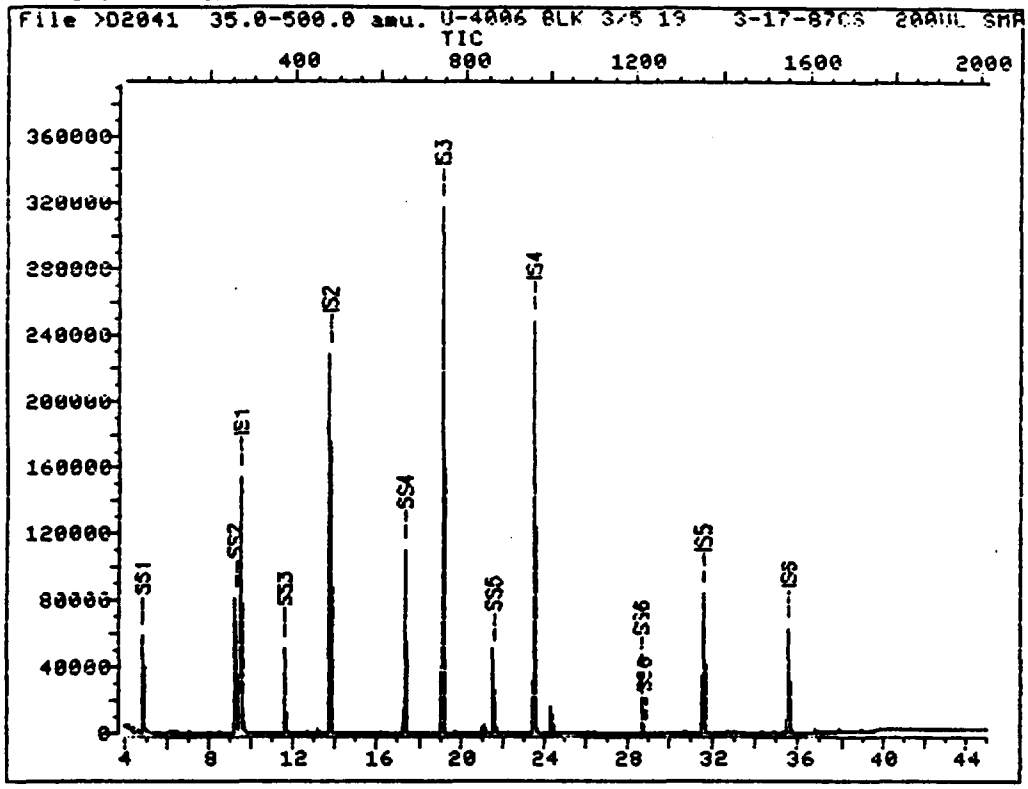
TOTAL ION CHROMATOGRAM

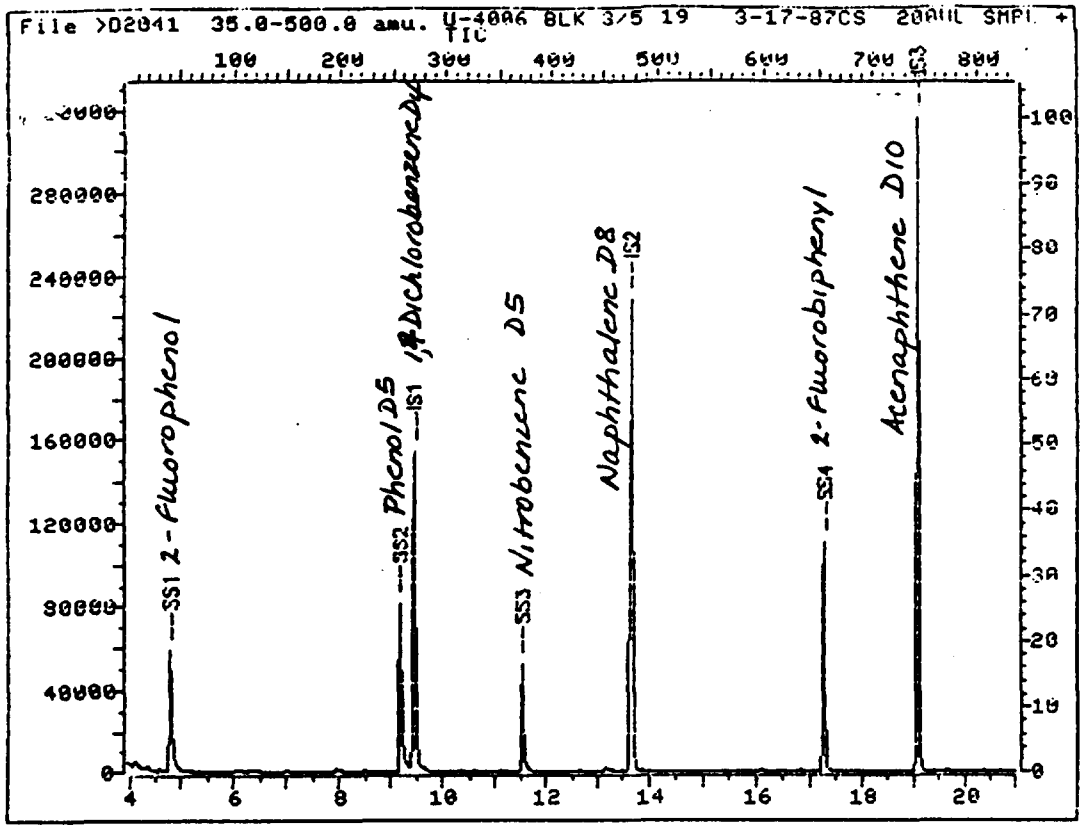


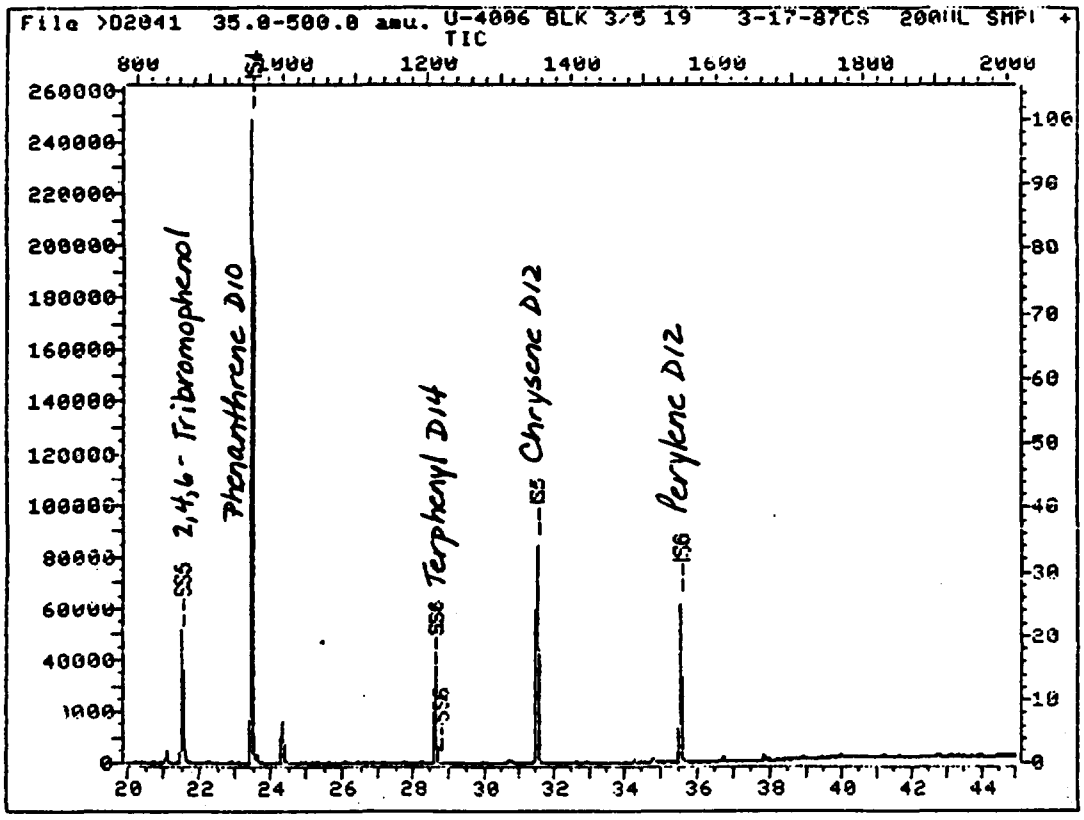
Data File: >D2041
Name: U-4006 BLK 3/5 19
Misc: 3-17-87CS 200UL SMPL + 200UL MECL2 + 4UL IS (2X) BTL# 1

Id File: BNAUR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870318 14:12

Operator ID: USER8
Quant Time: 870318 14:52
Injected at: 870318 14:04

D 2041


File >D2041 35.0-500.0 amu. U-4006 BLK 3/5 19 3-17-87CS 20AUL SMPI +
TIC
SS1 2-Fluorophenol
SS2 Phenol D5
IS1 1,4 Dichlorobenzene D4
SS3 Nitrobenzene D5
IS2 Naphthalene D8
SS4 2-Fluorobiphenyl
IS3 Acenaphthene D10


File >D2041 35.0-500.0 amu. U-4006 BLK 3/5 19 3-17-87CS 20AUL SMPI +
TIC
SS5 2,4,6-Tribromophenol
IS4 Phenanthrene D10
SS6 Terphenyl D14
IS5 Chrysene D12
IS6 Perylene D12

QUANT REPORT

Operator ID: USER8 Quant Rev: 4 Quant Time: 870318 14:52
Output File: ^D2041::D3 Injected at: 870318 14:04
Data File: >D2041::D1 Dilution Factor: 2.00
Name: U-4006 BLK 3/5 19
Misc: 3-17-87CS 200UL SMPL + 200UL MECL2 + 4UL IS (2X) BIL# 1

ID File: BNAUR::D2
Title: BNA ID FILE FOR THE HP 5970 (B)
Last Calibration: 870318 14:12

	Compound		R.T.	Scan#	Area	Conc	Units		q
1)	*1,4-DICHLOROBENZENE-D4	(IS)	152	9.47	270	78233	40.00	UG/L	86
2)	PHENOL-D5	(SURR)	99	9.18	256	84220	59.74	UG/L	60 99
5)	2-FLUOROPHENOL	(SURR)	112	4.78	40	49669	54.83	UG/L	55 77
~~12)~~	~~N-NITROSO-DI-N-PROPYLAMINE~~		~~70~~	~~11.54~~	~~372~~	~~8102~~	~~6.07~~	~~UG/L~~	NCW ~~98~~
19)	*NAPHTHALENE-D8	(IS)	136	13.66	476	288910	40.00	UG/L	70 100
20)	NITROBENZENE-D5	(SURR)	82	11.54	372	48981	34.80	UG/L	91
34)	*ACENAPHTHENE-D10	(IS)	162	19.10	743	180252	40.00	UG/L	97
38)	2-FLUOROBIPHENYL	(SURR)	172	17.29	654	98179	35.76	UG/L	72 92
~~41)~~	~~DIMETHYL-PHTHALATE~~		~~163~~	~~19.10~~	~~743~~	~~34160~~	~~11.65~~	~~UG/L~~	NCW ~~100~~
48)	2,4,6-TRIBROMOPHENOL	(SURR)	330	21.53	862	19633	48.13	UG/L	48 98
~~52)~~	~~2,6-DINITROTOLUENE~~		~~165~~	~~19.10~~	~~743~~	~~26908~~	~~34.32~~	~~UG/L~~	NCW ~~100~~
55)	*PHENANTHRENE-D10	(IS)	188	23.48	958	259377	40.00	UG/L	93
65)	*CHRYSENE-D12	(IS)	240	31.53	1353	93753	40.00	UG/L	100
68)	TERPHENYL-D14	(SURR)	244	28.63	1211	40612	32.49	UG/L	65 100
68)	TERPHENYL-D14	(SURR)	244	28.78	1218	113	.09	UG/L	100
74)	*PERYLENE-D12	(IS)	264	35.54	1550	68908	40.00	UG/L	100

* Compound is ISTD